

CONTENTS

● SERIES OF CAPACITORS	2
● SERIES CHART OF CAPACITORS.....	4
● PARTS NUMBER SYSTEM	7
● LEAD STYLE & TAPING AVAILABILITY	
Chip Type	8
Radial Type	10
Terminal Type	14
● USAGE CONDITIONS	17
● SPECIFICATIONS BY SERIES	18
● ELECTROLYTIC CAPACITOR FLOW CHART.....	142
● ASSURANCE CENTER STRUCTURE	143

ALUMINUM ELECTROLYTIC CAPACITORS

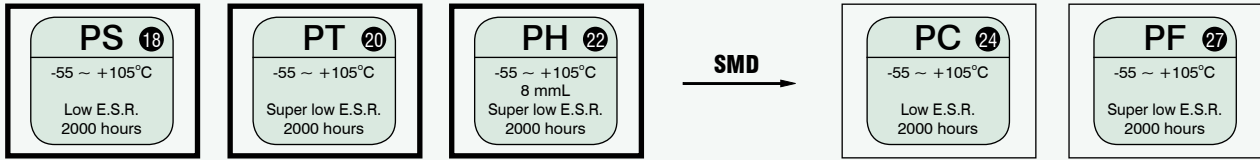
Classification	Series	Features · Application	Standard Type	Miniature Sized	Low Impedance	Long Life	Temperature Range (°C)	Load Life (Hour)	Capacitance Range (μF)	Rated Voltage Range (V.D.C.)	Page		
Aluminum solid electrolytic capacitor with Conductive polymer	PS	Radial type, Low E.S.R.		●	●		-55~+105	2000	100~1200	2.5~16	18		
	PT	Radial type, Super low E.S.R.			●		-55~+105	2000	100~2700	2.5~16	20		
	PH	8mmL, Super low E.S.R.			●		-55~+105	2000	330~1000	2.5~10	22		
	PC	Chip type, Low E.S.R.		●	●		-55~+105	2000	18~820	2.5~16	24		
	PF	Chip type, Super low E.S.R.				●	-55~+105	2000	18~2200	2.5~16	27		
CHIP	Surface Mounting Device	CS	5.4mmL, General purpose	●	●		-40~+85	2000	0.1~220	4~50	29		
		CA	Low leakage current	●	●		-40~+85	2000	0.1~100	6.3~50	31		
		CN	Bi-polar	●	●		-40~+85	1000	0.1~47	6.3~50	33		
		CR	Higher capacitance	●			-40~+85	2000	3.3~1500	4~100	35		
		CT	Wide temperature range	●	●		-55~+105	1000	0.1~1500	6.3~50	37		
		CE	5.4mmL, Low leakage current	●			-40~+105	1000	0.1~100	6.3~50	39		
		CP	5.4mmL, Bi-polar	●			-55~+105	1000	0.1~47	6.3~50	41		
		CH	Wide temperature range, long life	●			●	-55~+105	2000	0.1~470	4~50	43	
		CL	5.4mmL, Low impedance		●	●		-55~+105	1000	1~100	6.3~50	45	
		CF	Super low impedance		●	●	●	-55~+105	1000~2000	1~1500	6.3~50	47	
		CK	Higher ripple & Lower E.S.R.				●	-55~+105	1000~2000	4.7~1500	6.3~50	49	
		CZ	Low impedance, Long life				●	●	-40~+105	3000	10~1000	6.3~50	51
		CB	High temperature 125°C		●			-40~+125	2000	10~330	10~50	53	
RADIAL	Miniature Size	SV	5mmL, General purpose		●		-40~+85	1000	0.1~330	4~50	55		
		ST	5mmL, Wide temperature range		●		-55~+105	1000	0.1~100	4~50	57		
		NT	5mmL, Bi-polar		●			-40~+85	1000	0.1~47	6.3~50	58	
		SS	7mmL, General purpose		●			-40~+85	1000	0.1~330	4~63	59	
		SH	7mmL, Wide temperature range	●	●			-55~+105	1000	0.1~220	6.3~50	60	
		SL	7mmL, Low impedance		●	●		-55~+105	1000	4.7~220	6.3~50	61	
		NS	7mmL, Bi-polar		●			-40~+85	1000	0.1~100	6.3~50	63	
	Standard	SK	General purpose	●				-40~+85	2000	0.47~22000	6.3~450	64	
		SM	Miniature sized		●			-40~+85	1000	10~22000	6.3~100	67	
		TK	Wide temperature range	●				-55~+105	2000	0.1~33000	6.3~450	69	
		TM	High reliability, Wide temperature range				●	-40~+105	2000	0.47~15000	6.3~450	72	
		NK	Bi-polar	●				-40~+85	2000	0.47~6800	6.3~100	75	
		LK	Low leakage current	●				-40~+85	2000	0.1~1000	10~63	77	
	Low Impedance	MZ	Low E.S.R. High ripple current		●	●		-40~+105	2000	470~4700	6.3~25	79	
		TB	Low impedance, long life			●	●	-40~+105	4000~10000	0.47~15000	6.3~100	81	
		WL	Low impedance, miniature sized		●	●		-55~+105	1000~2000	0.47~10000	6.3~50	83	
		WG	Low impedance, high ripple current	●	●	●		-55~+105	2000~3000	47~4700	10~100	87	
		TL	Low impedance, high reliability			●	●	-55~+105	2000~5000	4.7~15000	6.3~63	89	
		TH	Low impedance, high voltage			●	●	-40~+105	2000~3000	2.2~220	160~450	91	
		TX	Low impedance, high voltage, long life			●	●	-40~+105	5000	3.3~330	160~450	93	
		TF	High ripple current, high voltage, long life				●	-40~+105	8000~10000	6.8~220	160~450	95	
Special Equipment	WB	High temperature, 125°C	●				-25~+125	1000~2000	0.47~1000	10~63	97		
	UK	Bi-polar, for horizontal deflection equalization	●				-40~+85	2000	2.2~18	25~50	99		
	NC	Bi-polar, for twinkling light	●				-40~+85	1000	1500~2200	13	100		
	RV	No spark with DC overvoltage		●			-25~+105	2000	22~220	200~400	101		

SERIES OF CAPACITORS

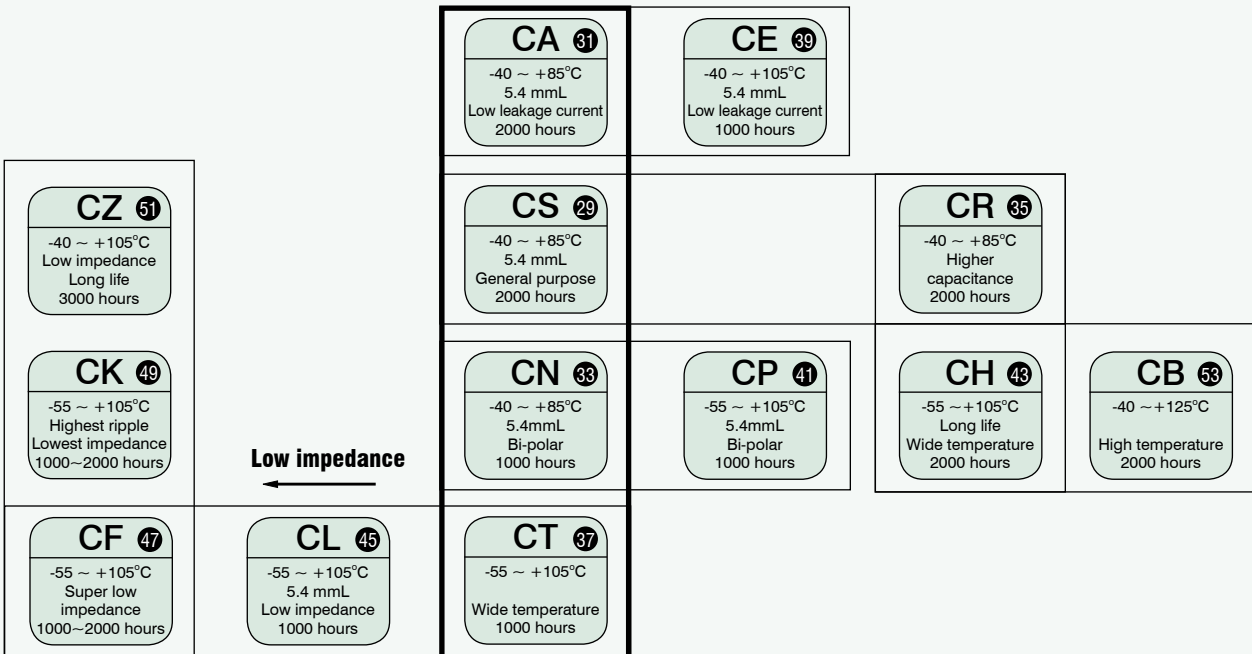
Classification	Series	Features · Application	Standard Type	Miniature Sized	Low Impedance	Long Life	Temperature Range (°C)	Load Life (Hour)	Capacitance Range (μF)	Rated Voltage Range (V.D.C.)	Page		
L A R G E C A N	Snap-in Terminal	LP	General purpose	●				-40~+85	2000	47~68000	10~450	103	
		HP	Wide temperature range	●			●	-40~+105	2000	47~15000	16~400	106	
		LS	Low profile		●				-40~+85	2000	82~33000	16~500	108
		HS	Low profile, wide temperature range		●		●		-40~+105	2000	47~33000	16~500	111
		HM	Small case than HS		●				-25~+105	2000	68~3300	160~450	114
		LT	Long life, high ripple current				●		-40~+85	3000	82~33000	16~450	116
		LL	Long life, high voltage, high ripple current				●		-40~+85	5000	47~2200	160~450	119
		HT	Long life, wide temperature range				●		-40~+105	3000	47~33000	16~450	122
		HV	No sparks with DC overvoltage				●		-25~+105	3000	68~1500	200~400	125
		HL	Long life 5000hrs. wide temperature range			●	●		-40~+105	5000	47~1800	200~450	127
	HF	High voltage, long life				●		-40~+105	7000	47~2200	160~450	129	
	Screw Terminal	KP	High ripple current	●					-40~+85	2000	270~680000	6.3~450	131
		MP	High voltage, high reliability				●		-40~+85	5000	1000~18000	350~450	135
		RP	High ripple, wide temperature range	●					-40~+105	2000	1000~330000	10~450	137
XP		Long life 5000hrs. high reliability			●	●		-40~+105	5000	680~33000	200~450	140	

SERIES CHART OF CAPACITORS

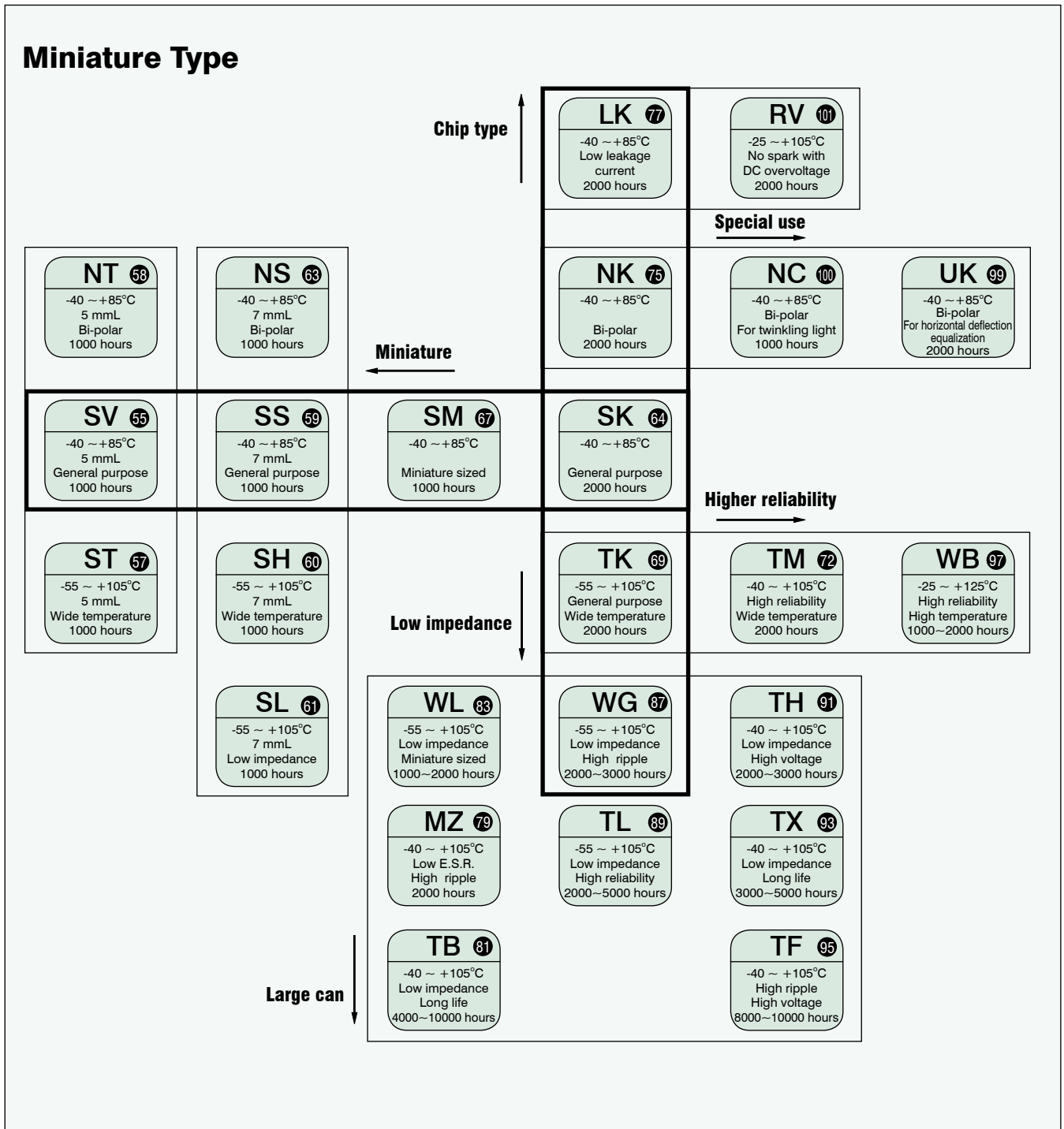
Solid Cap (Aluminum Solid Electrolytic Capacitor With Conductive Polymer)



Chip Type (Surface Mounted Device)



SERIES CHART OF CAPACITORS



SERIES CHART OF CAPACITORS

Large Can Type

<p>Screw terminal</p>	<p>KP 131</p> <p>-40 ~ +85°C Screw terminal General purpose 2000 hours</p>	<p>LS 108</p> <p>-40 ~ +85°C Snap-in terminal Low profile 2000 hours</p>	<p>LP 109</p> <p>-40 ~ +85°C Snap-in terminal General purpose 2000 hours</p>	<p>LT 116</p> <p>-40 ~ +85°C Snap-in terminal High ripple long life 3000 hours</p>	<p>LL 119</p> <p>-40 ~ +85°C Snap-in terminal High voltage 5000 hours</p>	
	<p>MP 135</p> <p>-40 ~ +85°C Screw terminal High reliability 5000 hours</p>	<p>HV 125</p> <p>-25 ~ +105°C Snap-in terminal No sparks with DC overvoltage 3000 hours</p>	<p>HS 111</p> <p>-40 ~ +105°C Snap-in terminal Low profile Wide temperature 2000 hours</p>	<p>HP 106</p> <p>-40 ~ +105°C Snap-in terminal Wide temperature 2000 hours</p>	<p>HT 122</p> <p>-40 ~ +105°C Snap-in terminal High ripple long life 3000 hours</p>	
	<p>RP 137</p> <p>-40 ~ +105°C Screw terminal Wide temperature 2000 hours</p>	<p>HL 127</p> <p>-40 ~ +105°C Snap-in terminal Wide temperature 5000 hours</p>	<p>HM 114</p> <p>-25 ~ +105°C Snap-in terminal Small than HS series 2000 hours</p>	<p>Snap-in terminal</p>		
	<p>XP 140</p> <p>-40 ~ +105°C Screw terminal Wide temperature 5000 hours</p>	<p>HF 129</p> <p>-40 ~ +105°C Snap-in terminal High voltage 7000 hours</p>				

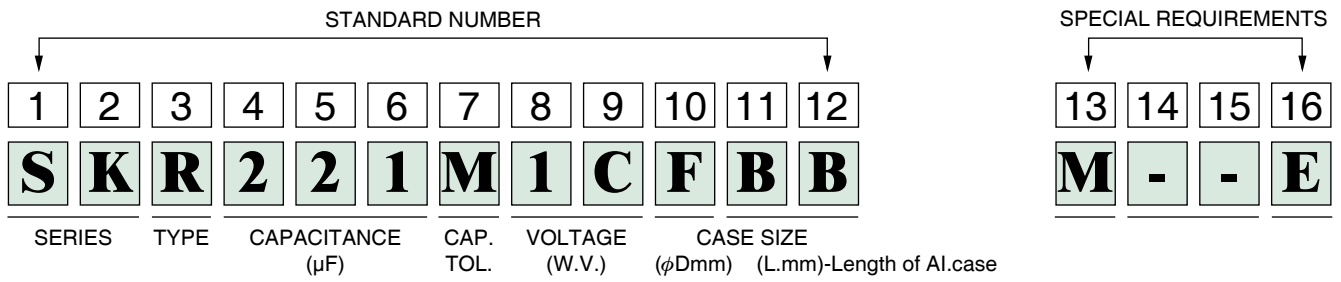
Screw type ←

→ Long life

Screw terminal

Snap-in terminal

PARTS NUMBER SYSTEM

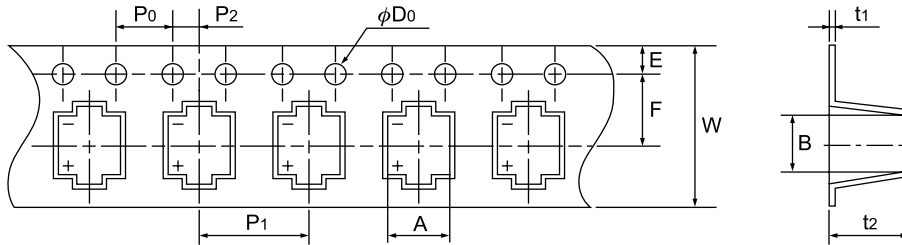


Series			Code	Type	Description	CAP (μF)	Code	Tolerance (%)	Code	Voltage (W.V.)	Code	Diameter (φ)	Code	Length (L)	Code	Code	Description
PS	NS	LT	R	Radial	Bulk	0.1	OR1	+10	K	2.5	0E	3	A	11	11	W	Without Sleeve
PT	SK	LL				0.22	R22	-10		4	0G	3.8	S	11.5	BB		
PH	SM	HT	P	Radial	Taping (Ammo Pack)	0.33	R33	+15	L	6.3	0J	4	C	12.5	BC	1~9	Customer
PC	TK	HV				0.47	R47	-15		10	1A	5	D	31.5	DB	A~Z	Assign
PF	TM	HL	C	Radial	Lead Cut	1	010	+20	M	13	1P	6	W	35.5	DF	a~	Brand
CS	NK	HF				2.2	2R2	-20		16	1C	6.3	E	100	1H		
CA	LK	KP	F	Radial	Lead Forming Cut	3.3	3R3	+100	P	20	1D	7	Y	110	1A		
CN	MZ	MP				4.7	4R7	-0		25	1E	8	F	115	1K		
CR	TB	RP	B	Radial	Lead Forming Only	10	100	+30	Q	35	1V	10	G	120	1B		
CT	WL	XP				22	220	-10		40	1G	12	H	121	1M		
CE	WG		Y	Radial	Lead Snap in	33	330	+20	R	50	1H	12.5	I	130	1C		
CP	TL					47	470	-0		63	1J	13	J	131	1P		
CH	TH		W	Lug	Snap in Terminal	100	101	+50	T	80	1K	16	K	140	1D		
CL	TX					220	221	-10		100	2A	18	L	144	1Q		
CF	TF		G	Lug	G Type Terminal	330	331	+75	U	125	2B	20	M	150	1E		
CK	WB					470	471	-10		160	2C	22	N	155	1N		
CZ	UK		V	Lug	V Type Terminal	1000	102	+20	V	180	2M	25	O	157	1R		
CB	NC					2200	222	-10		200	2D	30	P	160	1F		
SV	RV		S	Screw	Screw Terminal Type	3300	332	+20	H	250	2E	35	Q	170	1G		
ST	LP					4700	472	-5		315	2F	40	R	180	1I		
NT	HP		M	Chip	Surface Mount Type	10000	103	+30	F	330	2U	51	V	190	1J		
SS	LS					22000	223	-0		350	2V	64	1	196	1S		
SH	HS					33000	333	+100	W	400	2G	77	2	215	1L		
SL	HM					47000	473	-10		450	2W	90	3	236	1T		
										500	2H						

LEAD STYLE & TAPING AVAILABILITY

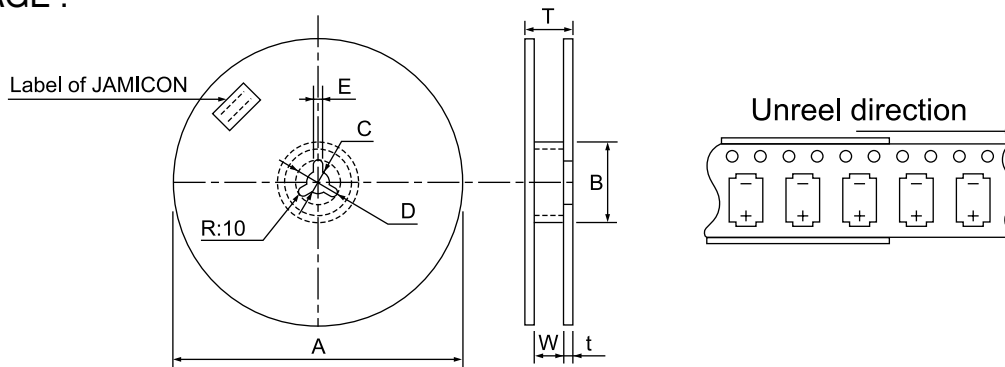
● CHIP TYPE (CS, CA, CN, CR, CT, CE, CP, CH, CL, CF, CK, CZ, CB Series)

● TAPING :



D x L	W ±0.3	A ±0.2	B ±0.2	P0 ±0.1	P1 ±0.1	P2 ±0.1	F ±0.1	ϕD_0 ±0.1	t1 ±0.1	E ±0.1	t2 ±0.2
4x5.4	12.0	4.7	4.7	4.0	8.0	2.0	5.5	1.5	0.4	1.75	5.7
5x5.4	12.0	5.7	5.7	4.0	12.0	2.0	5.5	1.5	0.4	1.75	5.7
6.3x5.4	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	5.7
4x5.8	12.0	4.7	4.7	4.0	8.0	2.0	5.5	1.5	0.4	1.75	6.3
5x5.8	12.0	5.7	5.7	4.0	12.0	2.0	5.5	1.5	0.4	1.75	6.4
6.3x5.8	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	6.4
6.3x7.7	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	8.2
8x6.2	16.0	8.7	8.7	4.0	12.0	2.0	7.5	1.5	0.4	1.75	6.8
8x10.2	24.0	8.7	8.7	4.0	16.0	2.0	11.5	1.5	0.4	1.75	11.0
10x10.2	24.0	10.7	10.7	4.0	16.0	2.0	11.5	1.5	0.4	1.75	11.0

● PACKAGE :

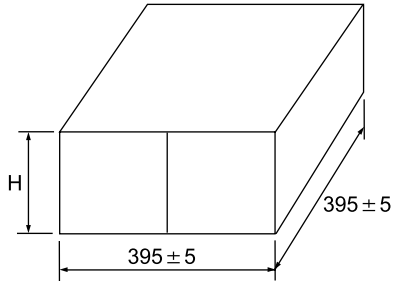


Unit : mm

D x L	A ±2.0	B min	C ±0.5	D ±0.8	E ±0.5	W ±1.0	T ±1.0	t ±0.5
$\phi 4 \phi 5$	380	50	13	21	2.0	14.0	20.0	3.0
$\phi 6.3$	380	50	13	21	2.0	18.0	24.0	3.0
8x6.2	380	50	13	21	2.0	18.0	24.0	3.0
8x10.2	380	50	13	21	2.0	26.0	32.0	3.0
10x10.2	380	50	13	21	2.0	26.0	32.0	3.0

LEAD STYLE & TAPING AVAILABILITY

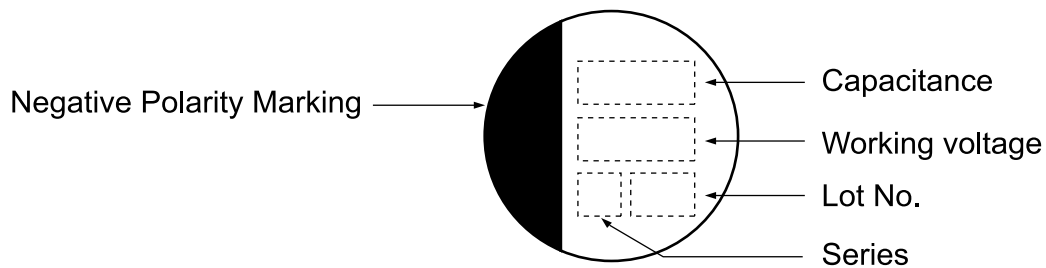
● PACKING VOLUME INNER BOX :



D x L	H
φ4	220
φ5	220
φ6.3	250
8x6.2	250
8x10.2	220
10x10.2	220

D x L	Pcs / Reel	Reel / Inner Box	Pcs / Inner Box
4x5.4	2,000	10	20,000
5x5.4	1,000	10	10,000
6.3x5.4	1,000	10	10,000
4x5.8	2,000	10	20,000
5x5.8	1,000	10	10,000
6.3x5.8	1,000	10	10,000
6.3x7.7	900	10	9,000
8x6.2	1,000	10	10,000
8x10.2	500	6	3,000
10x10.2	500	6	3,000

● MARKING :



● RADIAL TYPE

● SPECIFICATION

Lead taping is designed for automatic insertion equipment. Capacitor with case size of 18mm x 35.5mm or smaller are available in taping type.

■ DIMENSIONS ($\phi 4 \sim \phi 10$)

(mm)

Item	Symbol	Case Size													Tolerance	Remark	
		4x5	5x5	6.3x5	8x5	4x7	5x7	6.3x7	8x7	5x11	6.3x11	8x11.5	10x12.5	10x16			10x18
Lead wire diameter	d	0.45					0.5				0.6				± 0.05		
Body height	A	6.0			8.0				12.5	13	14	17.5	19.5	21.5	max		
Intervals of bodies	P	12.7													± 1.0		
Intervals of punched holes	P ⁰	12.7													± 0.2		
Distance between holes and lead wire	P ₁	3.85													± 0.7	Fig 1. Fig 4.	
		5.35	5.1	5.1			5.35	5.1	5.1			5.1					Fig 2.
		5.6	5.35	5.1	5.1	5.6	5.35	5.1	4.6	5.35	5.1	4.6					Fig 3.
Distance between holes and bodies	P ₂	6.35													± 1.0		
Distance between lead and lead	F	5.0													$+0.8$ -0.2	Fig 1. Fig 4.	
		2.0	2.5	2.5			2.0	2.5	2.5			2.5					Fig 2.F1:5.0
		1.5	2.0	2.5	2.5	1.5	2.0	2.5	3.5	2.0	2.5	3.5					Fig 3.F1:5.0
Base tape width	W	18.0													± 0.5		
Adhesive tape width	W ⁰	12.5													min		
Deviation between holes and base tape	W ¹	9.0													± 0.5		
Deviation between adhesive and base tape	W ²	1.5													max		
Distance between body bottom and tape center	H	17.5					18.5				20.0	18.5				± 0.5	Fig 1. Fig 4.
		17.5					18.5				18.5						Fig 2. Fig 3.
Lead wire clinched height	H ⁰	16.0													± 0.5		
Distance between body top and tape center	H ₁	24.5			27.5				32.5			33.0	36.0	38.0	41.0	max	
Punched hole diameter	D ⁰	4.0													± 0.3		
Length of not good lead slit	L	11.0													max		
Base and adhesive tape thickness	t	0.6													± 0.3		
Deviation of body alignment	Δh	0													± 2.0		
Deviation of body alignment	Δh_1	0													± 1.0		

Fig 1. ($\phi 4 \sim \phi 8$)

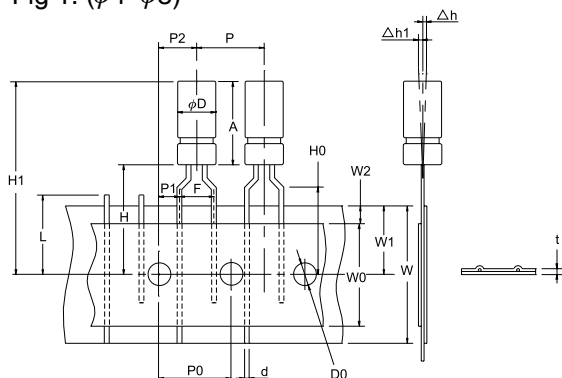
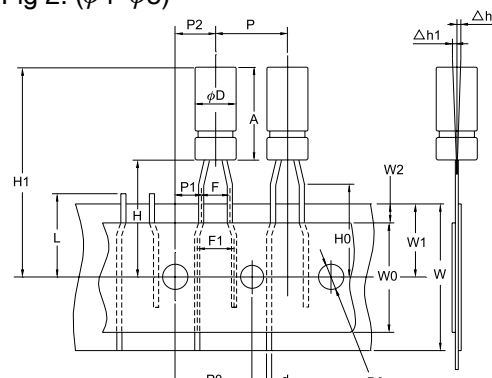
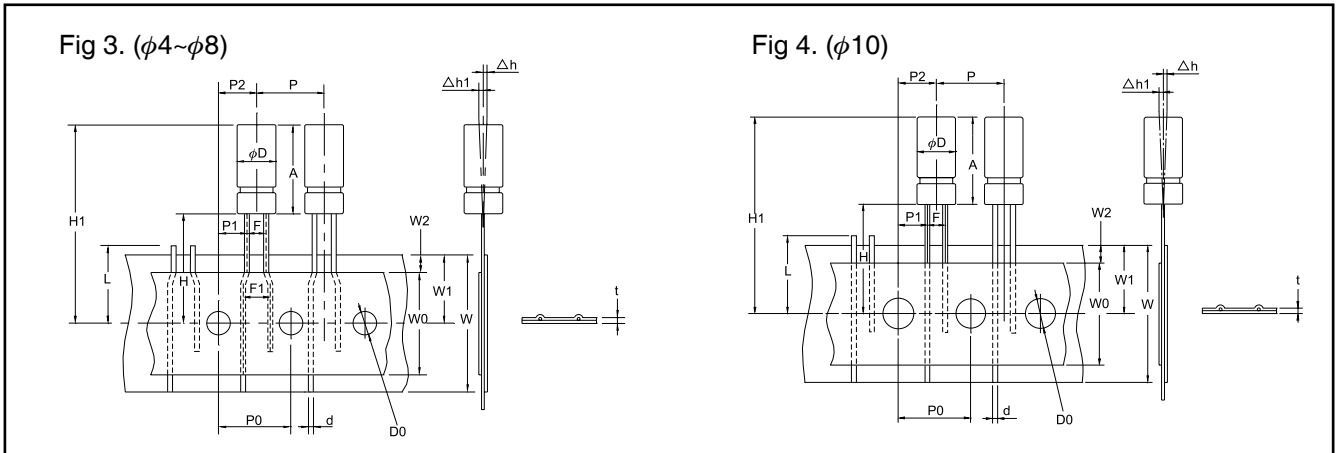


Fig 2. ($\phi 4 \sim \phi 5$)

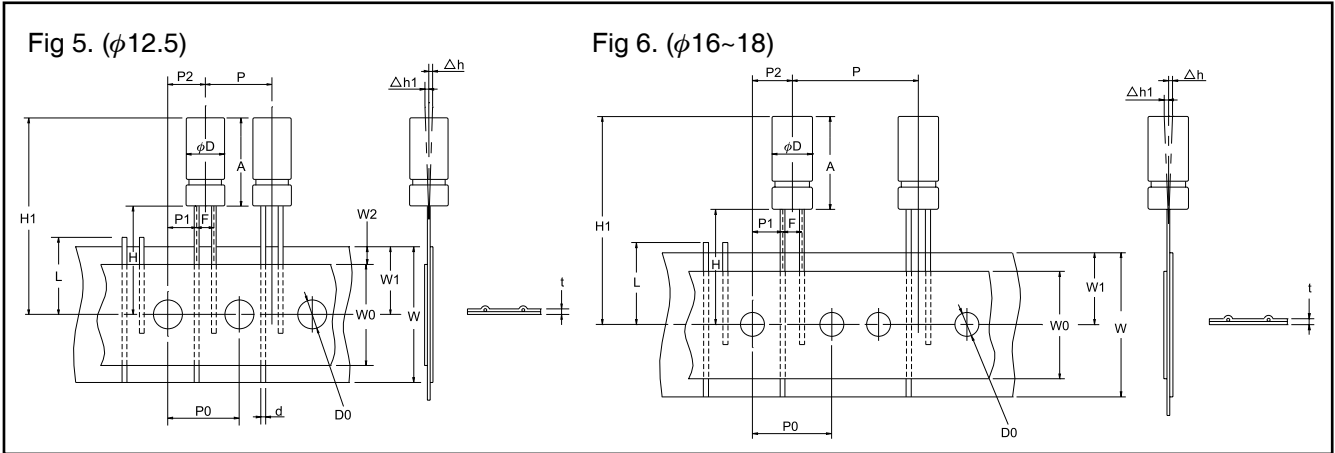




■ DIMENSIONS (φ12.5~φ18)

(mm)

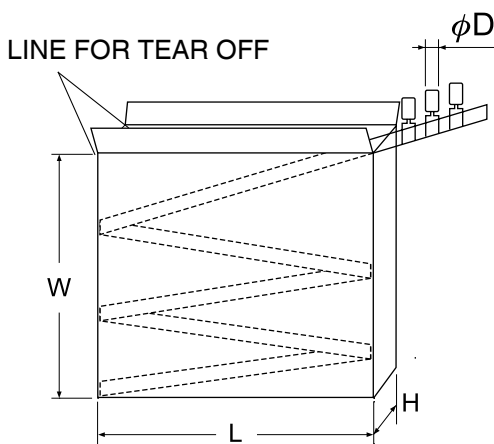
Item	Symbol	Case Size							Tolerance	Remark
		12.5 x 20	12.5 x 25	12.5 x 30	16 x 25	16 x 31.5	16 x 35.5	18 x 35.5		
Lead wire diameter	d	0.6			0.8				± 0.05	
Body height	A	21.5	26.5	31.5	26.5	33	37.0	37.0	max	
Intervals of bodies	P	15.0			30.0				± 1.0	Fig 5. Fig 6.
Intervals of punched holes	P ⁰				15.0				± 0.2	
Distance between holes and lead wire	P ₁	5.0			3.75				± 0.7	
Distance between holes and bodies	P ₂				7.5				± 1.0	
Distance between lead and lead	F	5.0			7.5				+0.8 -0.2	
Base tape width	W				18.0				± 0.5	
Adhesive tape width	W ₀				15.0				min	
Deviation between holes and base tape	W ₁				9.0				± 0.5	
Deviation between adhesive and base tape	W ₂				1.5				max	
Distance between body bottom and tape center	H	16.5			18.5				± 0.5	Fig 5. Fig 6.
Distance between body top and tape center	H ₁	40.5	45.5	50.5	46.5	53.5	56.5	56.5	max	
Punched hole diameter	D ⁰				4.0				± 0.3	
Length of not good lead slit	L				11.0				max	
Base and adhesive tape thickness	t				0.6				± 0.3	
Deviation of body alignment	Δh				0				± 2.0	
Deviation of body alignment	Δh ₁				0				± 1.0	



● PACKING (SYMBOL : P)

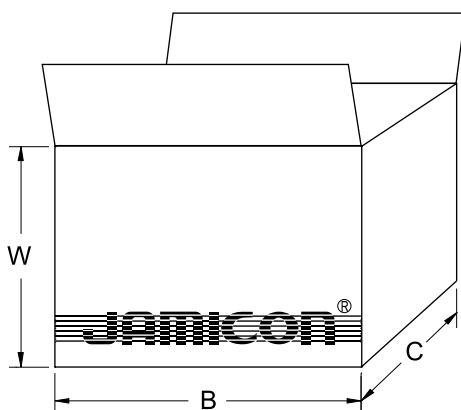
Available for various automatic equipment. Choosing the ordinal the polarity of capacitor's lead depends on customer's request.

■ INNER BOX :



ϕD (mm)	$W \pm 5$ (mm)	$L \pm 5$ (mm)	$H \pm 5$ (mm)	Quantity(Pcs)
4	175	335	45	2,000
5	235	335	50	2,000
6.3	280	335	50	2,000
8	235	335	50	1,000
10(L \leq 16)	295	320	50	800
10(L \leq 20)	295	320	55	800
12.5(L \leq 20)	295	320	55	500
12.5(L \leq 25)	295	320	60	500
12.5(L \leq 30)	295	320	70	500
16(L \leq 25)	295	320	60	300
16(L \leq 31.5)	295	320	70	300
16(L \leq 35.5)	300	320	70	300
18(L \leq 35.5)	300	320	70	240

■ PACKING CARTON :



ϕD (mm)	$A \pm 5$ (mm)	$B \pm 5$ (mm)	$C \pm 5$ (mm)	Inner Box	Quantity(Pcs)
4	240	355	185	5	10,000
5	270	355	250	5	10,000
6.3	270	355	300	5	10,000
8	270	355	250	5	5,000
10(L \leq 16)	290	345	320	5	4,000
10(L \leq 20)	315	345	320	5	4,000
12.5(L \leq 20)	315	345	320	4	2,000
12.5(L \leq 25)	340	345	320	4	2,000
12.5(L \leq 30)	370	345	320	4	2,000
16(L \leq 25)	340	345	320	4	1,200
16(L \leq 31.5)	370	345	320	4	1,200
16(L \leq 35.5)	385	345	320	4	1,200
18(L \leq 35.5)	385	345	320	4	960

● Lead Style & taping

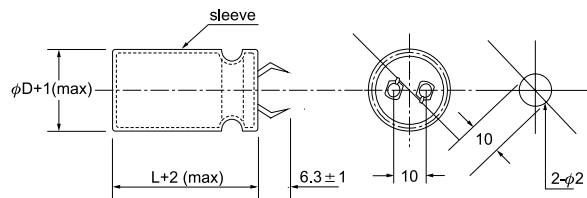
Item List	Code	Lead Diameter (mm)	Case Size DxL(mm)	Range	Dimensions	
Lead Style	Lead Cut	C	0.5~0.8	5 x 11 } 18 x 40	$\phi 5 \sim \phi 18$	
	Lead Forming Cut	F	0.5~0.6	5 x 11 } 8 x 11.5	$\phi 5 \sim \phi 8$	
	Snap-in	Y	0.5~0.8	5 x 11 } 18 x 40	$\phi 5 \sim \phi 8$	
$\phi 10 \sim \phi 18$						
Lead Taping	P	0.45~0.8	4 x 5 } 18 x 35.5	$\leq \phi 18$	$\phi 4 \sim \phi 8$: See Fig 1. (page 8) $\phi 10$: See Fig 4. (page 9) 	

● TERMINAL TYPE

Symbol : W ($\phi 22 \sim 35$)



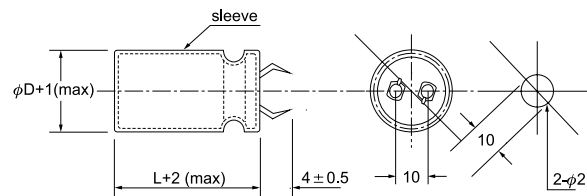
Location of P.C.B. holes



Symbol : Z ($\phi 22 \sim 35$)



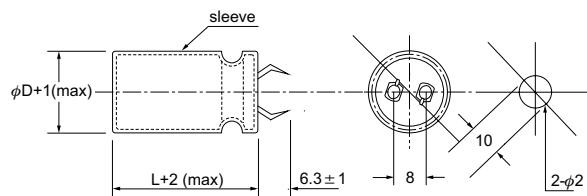
Location of P.C.B. holes



Symbol : Q ($\phi 22 \sim 25$)



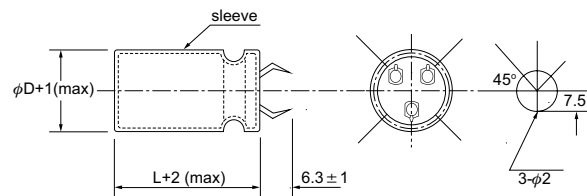
Location of P.C.B. holes



Symbol : U ($\phi 25 \sim 30$)



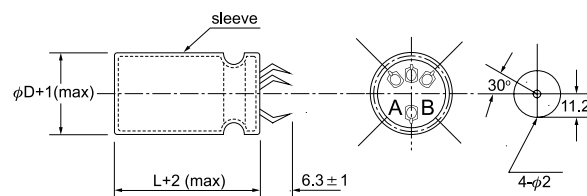
Location of P.C.B. holes



Symbol : U ($\phi 35 \sim 40$)



Location of P.C.B. holes

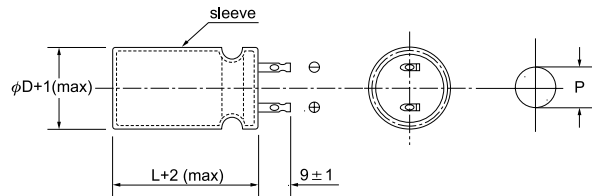


LEAD STYLE & TAPING AVAILABILITY

Symbol : G ($\phi 22 \sim 35$)



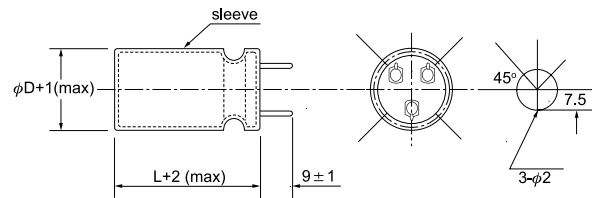
ϕD	22	25	30	35
P	8	10	10	14



Symbol : V ($\phi 25 \sim 30$)



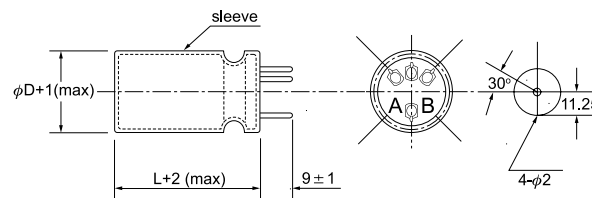
Location of P.C.B. holes



Symbol : V ($\phi 35$)



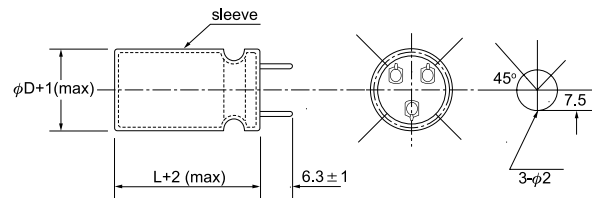
Location of P.C.B. holes



Symbol : V-SF ($\phi 25 \sim 30$)



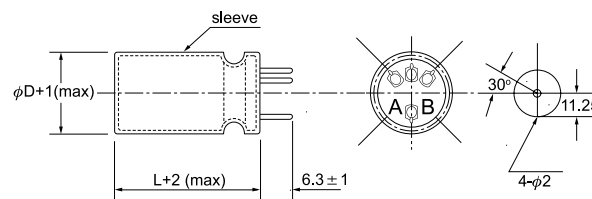
Location of P.C.B. holes



Symbol : V-SF ($\phi 35$)



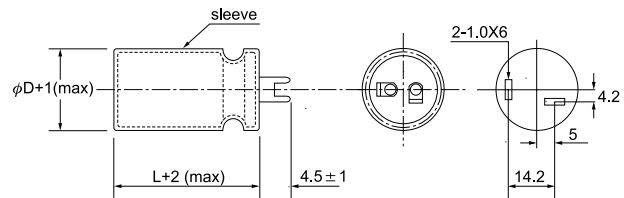
Location of P.C.B. holes



Symbol : D ($\phi 30 \sim 35$)



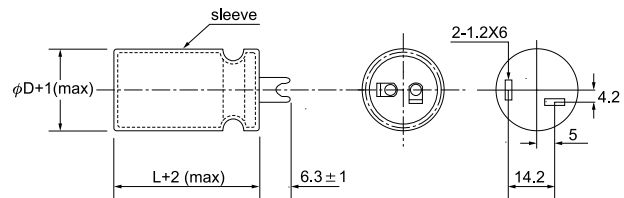
Location of P.C.B. holes



Symbol : I ($\phi 30 \sim 25$)



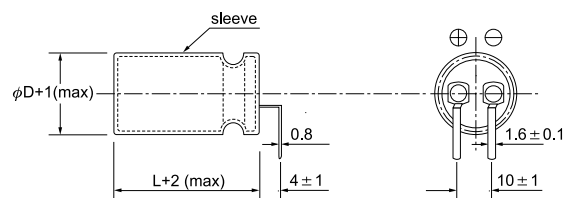
Location of P.C.B. holes



Symbol : P ($\phi 22 \sim 25$)



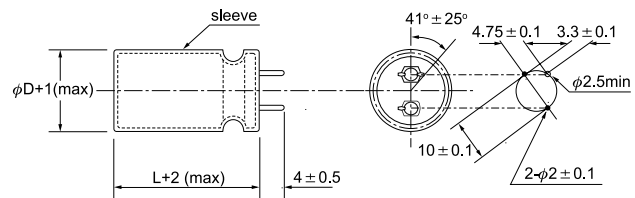
Location of P.C.B. holes



Symbol : X ($\phi 25 \sim 35$)



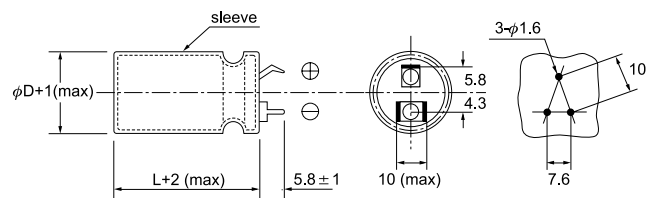
Location of P.C.B. holes



Symbol : T ($\phi 25$)



Location of P.C.B. holes



1. Electrolytic capacitors for D.C. application requires polarity confirming before using. If they are in reversed polarity, the circuit life may be shorten and the capacitors or other components may be damaged. To avoid capacitors exploding abnormally, we have developed the "case vent" (diameter: 6mm and over) and the "rubber vent"(for screw terminal type capacitors).
2. Use electrolytic capacitors according to specified operating temperature range. Do not apply voltage exceeding the rated working voltage .
3. Capacitor tolerance and D.F. should be tested at 120 Hz 20°C. The value of leakage current should be measured at 20°C with rated working voltage applied specified time.
4. Do not place a soldering iron near or on the body of a capacitor to avoid sleeve deforming and cracking.
5. Do not use halogenated hydrocarbon solvent whenever soldering capacitors and cleaning the circuit board to avoid inner damage of capacitors.
6. Be careful with temperature and time when soldering. Dipping must be performed at the soldering temperature (less than 260°C and within 10 seconds), Otherwise the capacitor may be damaged.
7. Capacitors should be stored at low temperature and low humidity for longer storage time.
8. Use the capacitors at rated current values with the permissible ripple range. The flow of ripple current over the permissible ripple current will cause heat of the capacitor, which decrease the life and even damage the capacitor.
9. Capacitors have finite life. Do not reuse or recycle capacitors from used equipment.
10. The electrolytic capacitor is not suitable for circuits in which charge and discharge are frequently repeated.
11. Do not apply excessive force to the terminals and lead wires. The excessive force applied to the terminals and lead wires may break them and loosen the connections of the internal element.
12. If the capacitors are stored for a long time may exhibit an increase in leakage current. To give voltage treatment can be corrected by gradually applying rated voltage in series with resistor of approximately 1kΩ.
13. Satisfy the customers' demand if they require the anti-solvent parts.

Safe	Unsafe
Xylene	1,1,2-Trichloro-1,1,2-Trifluoroethane
Ethyl alcohol	Carbon tetrachloride
Buthyl alcohol	Chloroform
Methyl alcohol	Trichloroethane
Propyl alcohol	Trichloroethylene
Calgonito (detergent)	Methylene chloride

SOLID CAPACITOR

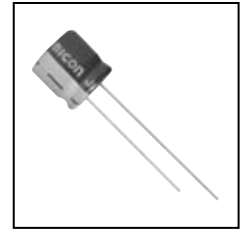
PS Series

Aluminum Solid Electrolytic Capacitor
With Conductive Polymer

JAMICON®

FEATURES:

The capacitor is aluminum electrolytic capacitors that uses conductive polymer, as electrolyte and realized low E.S.R. and high permissible ripple current at high frequencies band, It is very suitable for smoothing circuits of DC-DC converter or high frequencies circuits.

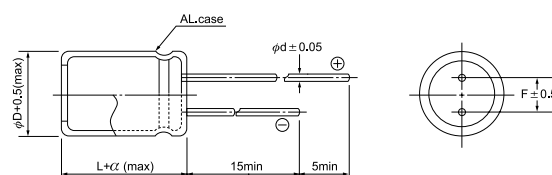


SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-55 ~ +105°C					
Rated Working Voltage	2.5 ~ 16V					
Capacitance Tolerance (120Hz 20°C)	±20%					
Leakage Current (2min)	The initial specified value in Characteristic list					
Surge Voltage (20°C)	W.V.	2.5	4	6.3	10	16
	S.V.	2.8	4.6	7.2	11.5	18.4
Tangent of loss angle (120Hz)	The initial specified value or loss (in Characteristic list)					
Impedance Ratio	Impedance ratio at 100kHz					
	Rated Voltage (V)	2.5	4	6.3	10	16
	-55°C / +20°C	≤ 1.25				
	+105°C / +20°C	≤ 1.25				
Endurance	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits.					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤ 150% of the initial specified value				
	ESR	≤ 150% of the initial specified value				
	Leakage current	≤ initial specified value				
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C, 90 to 95% RH for 1000 hours					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤ 150% of the initial specified value				
	ESR	≤ 150% of the initial specified value				
	Leakage current	≤ initial specified value				
Surge Voltage Test	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤ 150% of the initial specified value				
	ESR	≤ 150% of the initial specified value				
	Leakage current	≤ initial specified value				
Failure Rate	1% per 1000 hours maximum (Confidence level 60% at 105°C)					

DIMENSIONS (mm)

φD	8φ	10φ
F	3.5	5.0
d	0.6	0.6
α	1.5	1.5

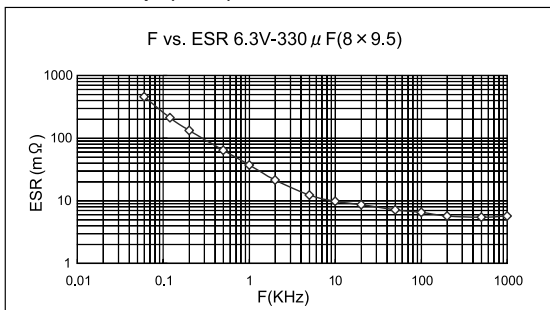


● CASE SIZE & CHARACTERISTICS LIST

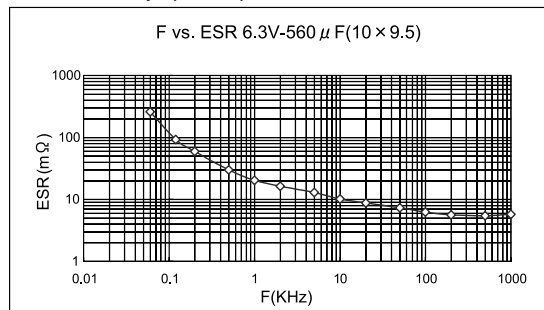
Rated Voltage (V.DC)	Rated Capacitance (μF)	Case size		Leakage Current (μA)	Tangent of loss angle (max)	E. S. R. at 100kHz (mΩ)	Allowable ripple current (mA.rms)	Part Number
		φD	L					
		(mm)						
2.5	820	10.0	12.5	410.0	0.12	8	5500	PSR821M0EGBCW
	1200	10.0	12.5	600.0	0.12	8	5500	PSR122M0EGBCW
4	820	10.0	12.5	656.0	0.12	8	5500	PSR821M0GGBCW
	1200	10.0	12.5	960.0	0.12	8	5500	PSR122M0GGBCW
6.3	150	8.0	8.0	189.0	0.12	20	4800	PSR151M0JF08W
	560	10.0	9.0	705.6	0.12	10	5500	PSR561M0JG09W
	680	10.0	12.5	856.8	0.12	10	5500	PSR681M0JGBCW
10	100	8.0	8.0	200.0	0.12	22	4500	PSR101M1AF08W
	150	8.0	8.0	300.0	0.12	22	4500	PSR151M1AF08W
	470	10.0	9.0	940.0	0.12	12	5300	PSR471M1AG09W
16	100	8.0	11.5	320.0	0.12	25	4400	PSR101M1CFBBW
	150	10.0	9.0	480.0	0.12	15	4000	PSR151M1CG09W
	180	10.0	9.0	576.0	0.12	15	4000	PSR181M1CG09W
	220	10.0	9.0	704.0	0.12	15	4800	PSR221M1CG09W
	270	10.0	9.0	864.0	0.12	15	5100	PSR271M1CG09W
	330	10.0	12.5	1056.0	0.12	12	5300	PSR331M1CGBCW

● FREQUENCY CHARACTERISTICS

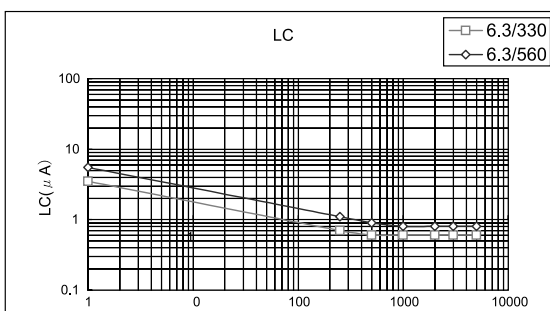
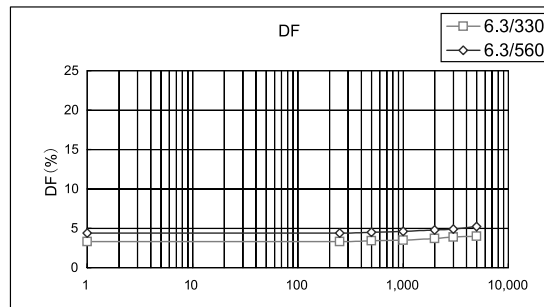
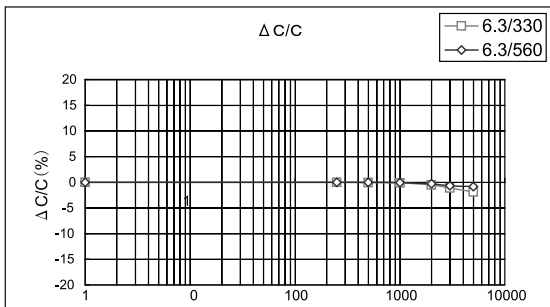
Item: 6.3V-330μF(8x9.5)



Item: 6.3V-560μF(10x9.5)



Endurance



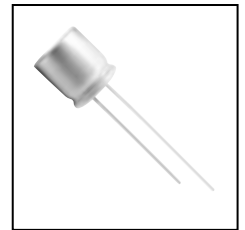
SOLID CAPACITOR

PT Series

Aluminum Solid Electrolytic Capacitor
With Conductive Polymer

JAMICON®

- Super low E.S.R. impedance and high heat resistance.
- Suitable for DC-DC converters, voltage regulators and decoupling applications used for computer motherboards etc.

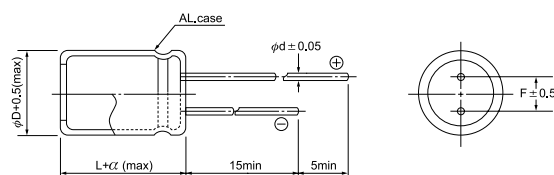


SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-55 ~ +105°C					
Rated Working Voltage	2.5 ~ 16V					
Capacitance Tolerance (120Hz 20°C)	±20%					
Leakage Current (2min)	The initial specified value in Characteristic list					
Surge Voltage (20°C)	W.V.	2.5	4	6.3	10	16
	S.V.	2.8	4.6	7.2	11.5	18.4
Tangent of loss angle (120Hz)	The initial specified value or loss (in Characteristic list)					
Impedance Ratio	Impedance ratio at 100kHz					
	Rated Voltage (V)	2.5	4	6.3	10	16
	-55°C / +20°C	≦ 1.25				
	+105°C / +20°C	≦ 1.25				
Endurance	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits.					
	Capacitance Change	≦ ±20% of the initial measured value				
	Dissipation Factor	≦ 150% of the initial specified value				
	ESR	≦ 150% of the initial specified value				
	Leakage current	≦ initial specified value				
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C, 90 to 95% RH for 1000 hours					
	Capacitance Change	≦ ±20% of the initial measured value				
	Dissipation Factor	≦ 150% of the initial specified value				
	ESR	≦ 150% of the initial specified value				
	Leakage current	≦ initial specified value				
Surge Voltage Test	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.					
	Capacitance Change	≦ ±20% of the initial measured value				
	Dissipation Factor	≦ 150% of the initial specified value				
	ESR	≦ 150% of the initial specified value				
	Leakage current	≦ initial specified value				
Failure Rate	1% per 1000 hours maximum (Confidence level 60% at 105°C)					

DIMENSIONS (mm)

φD	6.3φ	8φ	10φ
F	2.5	3.5	5.0
D	0.5	0.6	0.6
α	1.0	1.5	1.5



● CASE SIZE & CHARACTERISTICS LIST

Rated Voltage (V.DC)	Rated Capacitance (μF)	Case size		Leakage Current (μA)	Tangent of loss angle (max)	E. S. R. at 100kHz (mΩ)	Allowable ripple current (mA.rms)	Part Number
		φD	L					
		(mm)						
2.5	390	6.3	11.5	195	0.06	20	3160	PTR391M0EBBW
	560	8.0	8.0	280	0.06	7	6100	PTR561M0EF08W
	680	8.0	8.0	340	0.06	7	6100	PTR681M0EF08W
	820	8.0	8.0	410	0.06	7	6100	PTR821M0EF08W
	1000	8.0	8.0	500	0.06	7	6100	PTR102M0EF08W
	1200	8.0	8.0	600	0.06	7	6100	PTR122M0EF08W
	820	8.0	11.5	410	0.06	7	6100	PTR821M0EFBBW
	1500	10.0	9.0	750	0.06	7	6100	PTR152M0EG09W
	1800	10.0	9.0	900	0.06	7	6100	PTR182M0EG09W
	2200	10.0	9.0	1100	0.06	7	6100	PTR222M0EG09W
	1500	10.0	12.5	750	0.06	10	4800	PTR152M0EGBCW
	2200	10.0	12.5	1100	0.06	10	4800	PTR222M0EGBCW
2700	10.0	12.5	1350	0.06	8	5500	PTR272M0EGBCW	
4	220	6.3	9.0	176	0.06	15	3500	PTR221M0GE09W
	270	6.3	11.5	216	0.06	20	3160	PTR271M0GEBBW
	390	6.3	11.5	312	0.06	24	3300	PTR391M0GEBBW
	560	8.0	8.0	448	0.06	7	6100	PTR561M0GF08W
	680	8.0	8.0	544	0.06	7	6100	PTR681M0GF08W
	820	8.0	8.0	656	0.06	7	6100	PTR821M0GF08W
	1000	8.0	8.0	800	0.06	7	6100	PTR102M0GF08W
	1200	10.0	9.0	960	0.06	7	6100	PTR122M0GG09W
	1500	10.0	9.0	1200	0.06	7	6100	PTR152M0GG09W
	2200	10.0	12.5	1760	0.06	7	6100	PTR222M0GGBCW
6.3	220	6.3	9.0	277	0.06	15	3500	PTR221M0JE09W
	330	6.3	11.5	416	0.06	28	3190	PTR331M0JEBBW
	330	8.0	8.0	416	0.06	8	5500	PTR331M0JF08W
	390	8.0	8.0	491	0.06	8	5500	PTR391M0JF08W
	470	8.0	8.0	592	0.06	8	5500	PTR471M0JF08W
	560	8.0	8.0	706	0.06	8	5500	PTR561M0JF08W
	680	8.0	8.0	857	0.06	8	5500	PTR681M0JF08W
	820	8.0	11.5	1033	0.06	15	4800	PTR821M0JFBBW
	820	10.0	9.0	1033	0.06	7	6100	PTR821M0JG09W
	1000	10.0	9.0	1260	0.06	7	6100	PTR102M0JG09W
	1200	10.0	12.5	1512	0.06	7	6100	PTR122M0JGBCW
	1500	10.0	12.5	1890	0.06	7	6100	PTR152M0JGBCW
10	120	6.3	9.0	240	0.06	15	3500	PTR121M1AE09W
	100	6.3	11.5	200	0.06	25	2820	PTR101M1AEBBW
	150	6.3	11.5	300	0.06	25	2820	PTR151M1AEBBW
	220	8.0	8.0	440	0.06	12	4000	PTR221M1AF08W
	270	8.0	8.0	540	0.06	10	4500	PTR271M1AF08W
	470	8.0	8.0	940	0.06	10	4800	PTR471M1AF08W
	470	8.0	11.5	940	0.06	15	5000	PTR471M1AFBBW
	680	10.0	9.0	1360	0.06	8	5500	PTR681M1AG09W
	820	10.0	9.0	1640	0.06	8	5500	PTR821M1AG09W
	1000	10.0	12.5	2000	0.06	8	5500	PTR102M1AGBCW
16	100	6.3	9.0	320	0.06	24	2500	PTR101M1CE09W
	180	8.0	11.5	576	0.06	16	4360	PTR181M1CFBBW
	330	10.0	9.0	1056	0.06	12	5100	PTR331M1CG09W
	470	10.0	12.5	1504	0.06	12	5500	PTR471M1CGBCW

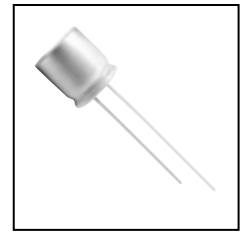
SOLID CAPACITOR

PH Series

Aluminum Solid Electrolytic Capacitor
With Conductive Polymer

JAMICON®

- Height:8mmL
- Super low E.S.R. impedance and high heat resistance.
- Suitable for DC-DC converters, voltage regulators and decoupling applications used for computer motherboards etc.
- Endurance:105°C 2000 hours.

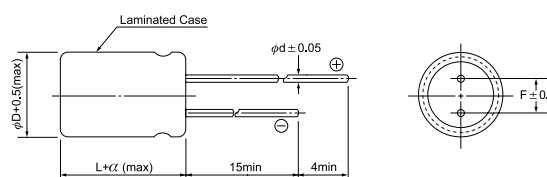


SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-55 ~ +105°C					
Rated Working Voltage	2.5 ~ 16V					
Capacitance Tolerance (120Hz 20°C)	±20%					
Leakage Current (2min)	The initial specified value in Characteristic list					
Surge Voltage (20°C)	W.V.	2.5	4	6.3	10	16
	S.V.	2.8	4.6	7.2	11.5	18.4
Tangent of loss angle (120Hz)	The initial specified value or loss (in Characteristic list)					
Impedance Ratio	Impedance ratio at 100kHz					
	Rated Voltage (V)	2.5	4	6.3	10	16
	-55°C / +20°C	≤1.25				
	+105°C / +20°C	≤1.25				
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤150% of the initial specified value				
	ESR	≤150% of the initial specified value				
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C,90 to 95% RH for 1000 hours					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤150% of the initial specified value				
	ESR	≤150% of the initial specified value				
Surge Voltage Test	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤150% of the initial specified value				
	ESR	≤150% of the initial specified value				
Leakage current	≤ initial specified value					
	Failure Rate					
	1% per 1000 hours maximum (Confidence level 60% at 105°C)					

DIMENSIONS (mm)

φD	8 x 8
F	3.5
D	0.6
α	1.0



● CASE SIZE & CHARACTERISTICS LIST

Rated Voltage (V.DC)	Rated Capacitance (μF)	Case size		Leakage Current (μA)	Tangent of loss angle (max)	E. S. R. at 100kHz (mΩ)	Allowable ripple current (mA.rms)	Part Number
		φD	L					
2.5	560	8.0	8.0	450	0.06	6	6100	PHR561M0EF08W
	820	8.0	8.0	450	0.06	6	6100	PHR821M0EF08W
	1000	8.0	8.0	500	0.06	6	6100	PHR102M0EF08W
4	560	8.0	8.0	450	0.06	6	6100	PHR561M0GF08W
	680	8.0	8.0	544	0.06	6	6100	PHR681M0GF08W
	820	8.0	8.0	656	0.06	6	6100	PHR821M0GF08W
6.3	470	8.0	8.0	592	0.06	7	5700	PHR471M0JF08W
	560	8.0	8.0	706	0.06	7	5700	PHR561M0JF08W
	680	8.0	8.0	857	0.06	7	5700	PHR681M0JF08W
10	330	8.0	8.0	660	0.06	9	5000	PHR331M1AF08W
16	180	8.0	8.0	576	0.06	10	4360	PHR181M1CF08W

SOLID CAPACITOR

PC Series

Aluminum Solid Electrolytic Capacitor
With Conductive Polymer

JAMICON®

FEATURES:

The capacitor is aluminum electrolytic capacitors that uses conductive polymer, as electrolyte and realized low E.S.R. and high permissible ripple current at high frequencies band, It is very suitable for smoothing circuits of DC-DC converter or high frequencies circuits.

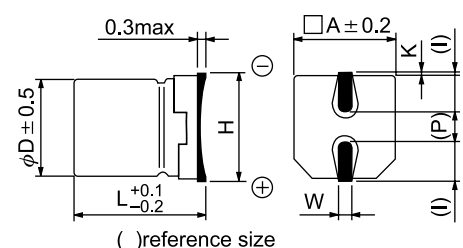


SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-55 ~ +105°C					
Rated Working Voltage	2.5 ~ 16V					
Capacitance Tolerance (120Hz 20°C)	±20%					
Leakage Current (2min)	The initial specified value in Characteristic list					
Surge Voltage (20°C)	W.V.	2.5	4	6.3	10	16
	S.V.	2.8	4.6	7.2	11.5	18.4
Tangent of loss angle (120Hz)	The initial specified value or loss (in Characteristic list)					
Impedance Ratio	Impedance ratio at 100kHz					
	Rated Voltage (V)	2.5	4	6.3	10	16
	-55°C / +20°C	≤ 1.25				
	+105°C / +20°C	≤ 1.25				
Endurance	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits.					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤ 150% of the initial specified value				
	ESR	≤ 150% of the initial specified value				
	Leakage current	≤ initial specified value				
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C, 90 to 95% RH for 1000 hours					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤ 150% of the initial specified value				
	ESR	≤ 150% of the initial specified value				
	Leakage current	≤ initial specified value				
Surge Voltage Test	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.					
	Capacitance Change	≤ ±20% of the initial measured value				
	Dissipation Factor	≤ 150% of the initial specified value				
	ESR	≤ 150% of the initial specified value				
	Leakage current	≤ initial specified value				
Failure Rate	1% per 1000 hours maximum (Confidence level 60% at 105°C)					

DIMENSIONS (mm)

D	L	A	H (max)
5	5.4	5.3	6.5
6.3	5.4	6.6	7.8
8	6.2	8.3	9.5
8	10.0	8.3	9.5
10	6.2	10.3	12.0
10	10.2	10.3	12.0

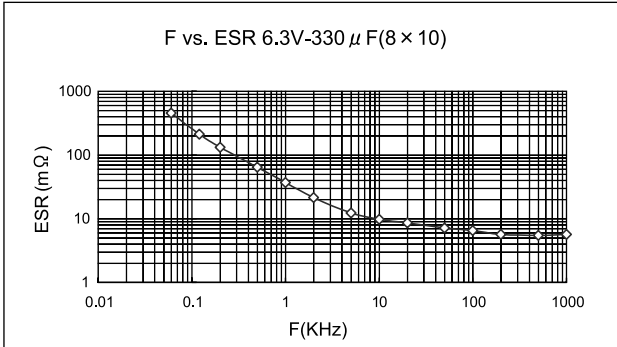


● CASE SIZE & CHARACTERISTICS LIST

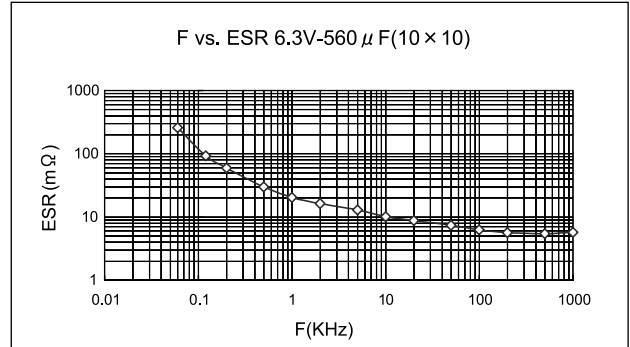
Rated Voltage (V.DC)	Rated Capacitance (μF)	Case size		Leakage Current (μA)	Tangent of loss angle (max)	E. S. R. at 100kHz (mΩ)	Allowable ripple current (mA.rms)	Part Number
		φD	L					
		(mm)						
2.5	56	5.0	5.4	28	0.12	50	1400	PCM560M0ED05W
	120	6.3	5.4	60	0.12	45	1800	PCM121M0EE05W
	220	6.3	5.4	110	0.12	45	1800	PCM221M0EE05W
	220	8.0	6.2	110	0.12	35	2560	PCM221M0EF06W
	470	8.0	10.0	235	0.12	17	4800	PCM471M0EF10W
	390	10.0	6.2	195	0.12	20	3700	PCM391M0EG06W
	820	10.0	10.2	410	0.12	8	5500	PCM821M0EG10W
4	39	5.0	5.4	31	0.12	50	1400	PCM390M0GD05W
	47	5.0	5.4	38	0.12	50	1400	PCM470M0GD05W
	100	6.3	5.4	80	0.12	45	1800	PCM101M0GE05W
	150	6.3	5.4	120	0.12	45	2450	PCM151M0GE05W
	180	8.0	6.2	144	0.12	35	2560	PCM181M0GF06W
	390	8.0	10.0	312	0.12	17	4800	PCM391M0GF10W
	330	10.0	6.2	264	0.12	20	3700	PCM331M0GG06W
	680	10.0	10.2	544	0.12	8	5500	PCM681M0GG10W
6.3	39	5.0	5.4	49	0.12	50	1400	PCM390M0JD05W
	82	6.3	5.4	103	0.12	45	1800	PCM820M0JE05W
	100	6.3	5.4	126	0.12	45	1800	PCM101M0JE05W
	120	6.3	5.4	151	0.12	45	1800	PCM121M0JE05W
	150	8.0	6.2	189	0.12	35	2560	PCM151M0JF06W
	330	8.0	10.0	416	0.12	17	4800	PCM331M0JF10W
	390	8.0	10.0	491	0.12	17	4800	PCM391M0JF10W
	470	8.0	10.0	592	0.12	15	4800	PCM471M0JF10W
	270	10.0	6.2	340	0.12	20	3700	PCM271M0JG06W
	560	10.0	10.2	706	0.12	8	5500	PCM561M0JG10W
	820	10.0	10.2	1033	0.12	8	5500	PCM821M0JG10W
10	33	5.0	5.4	66	0.12	55	1200	PCM330M1AD05W
	47	6.3	5.4	94	0.12	50	1200	PCM470M1AE05W
	68	6.3	5.4	136	0.12	50	1600	PCM680M1AE05W
	120	8.0	6.2	240	0.12	40	2300	PCM121M1AF06W
	150	8.0	6.2	300	0.12	40	2300	PCM151M1AF06W
	270	8.0	10.0	540	0.12	22	4500	PCM271M1AF10W
	220	10.0	6.2	440	0.12	30	3300	PCM221M1AG06W
	470	10.0	10.2	940	0.12	10	5300	PCM471M1AG10W
16	18	5.0	5.4	58	0.12	55	1200	PCM180M1CD05W
	18	6.3	5.4	58	0.12	55	1200	PCM180M1CE05W
	47	6.3	5.4	150	0.12	50	1600	PCM470M1CE05W
	82	8.0	6.2	262	0.12	40	2300	PCM820M1CF06W
	120	8.0	10.0	384	0.12	17	4000	PCM121M1CF10W
	180	8.0	10.0	576	0.12	25	4500	PCM181M1CF10W
	150	10.0	6.2	480	0.12	30	3300	PCM151M1CG06W
	150	10.0	10.2	480	0.12	25	3300	PCM151M1CG10W
	220	10.0	10.2	704	0.12	15	4800	PCM221M1CG10W
	330	10.0	10.2	1056	0.12	12	5300	PCM331M1CG10W

● FREQUENCY CHARACTERISTICS

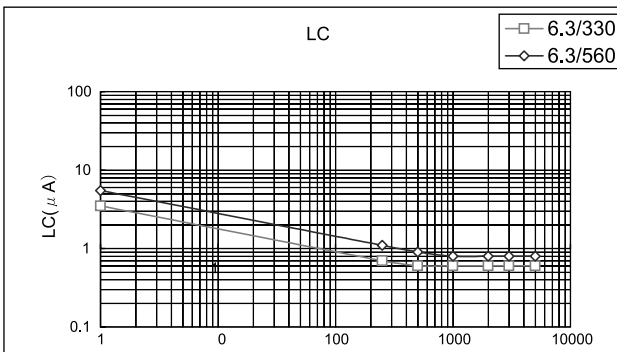
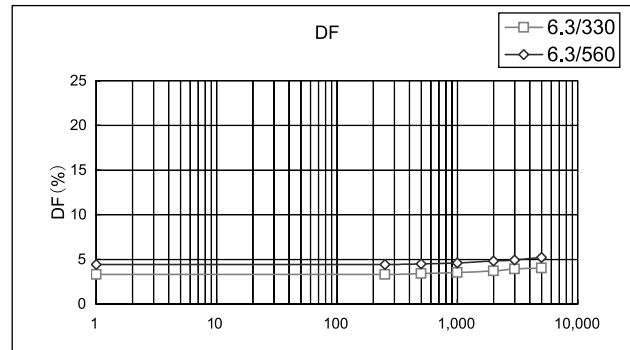
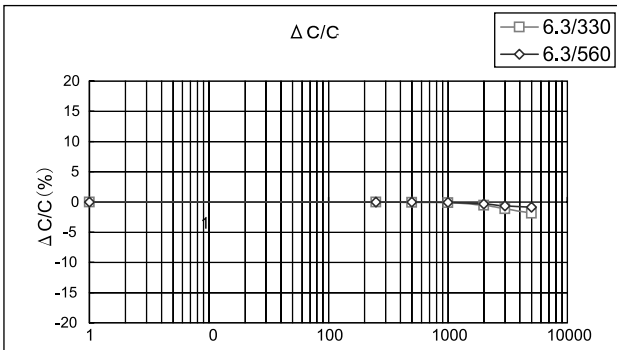
Item:6.3V-330μF(8x10)



Item:6.3V-560μF(10x10.2)



Endurance



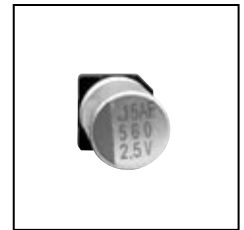
SOLID CAPACITOR

PF Series

Aluminum Solid Electrolytic Capacitor
With Conductive Polymer

JAMICON®

- Super low E.S.R. impedance and high heat resistance.
- Suitable for DC-DC converters, voltage regulators and decoupling applications used for computer motherboards etc.

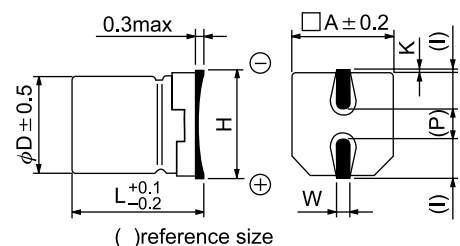


● SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-55 ~ +105°C					
Rated Working Voltage	2.5 ~ 16V					
Capacitance Tolerance (120Hz 20°C)	±20%					
Leakage Current (2min)	The initial specified value in Characteristic list					
Surge Voltage (20°C)	W.V.	2.5	4	6.3	10	16
	S.V.	2.8	4.6	7.2	11.5	18.4
Tangent of loss angle (120Hz)	The initial specified value or loss (in Characteristic list)					
Impedance Ratio	Impedance ratio at 100kHz					
	Rated Voltage (V)	2.5	4	6.3	10	16
	-55°C / +20°C	≤1.25				
	+105°C / +20°C	≤1.25				
Endurance	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits.					
	Capacitance Change	≤±20% of the initial measured value				
	Dissipation Factor	≤150% of the initial specified value				
	ESR	≤150% of the initial specified value				
	Leakage current	≤ initial specified value				
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C, 90 to 95% RH for 1000 hours					
	Capacitance Change	≤±20% of the initial measured value				
	Dissipation Factor	≤150% of the initial specified value				
	ESR	≤150% of the initial specified value				
	Leakage current	≤ initial specified value				
Surge Voltage Test	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.					
	Capacitance Change	≤±20% of the initial measured value				
	Dissipation Factor	≤150% of the initial specified value				
	ESR	≤150% of the initial specified value				
	Leakage current	≤ initial specified value				
Failure Rate	1% per 1000 hours maximum (Confidence level 60% at 105°C)					

● DIMENSIONS (mm)

D	L	A	H (max)	I	W	P	K
5	5.4	5.3	6.5	2.2	0.65	1.50	0.35
6.3	5.4	6.6	6.5	2.6	0.65	2.10	0.35
8	6.2	8.3	9.5	3.4	0.65	2.20	0.35
8	9.0	8.3	10.0	3.4	0.90	3.10	0.70
10	6.2	10.3	12.0	3.5	0.90	4.60	0.70
10	9.0	10.3	12.0	3.5	0.90	4.60	0.70



● CASE SIZE & CHARACTERISTICS LIST

Rated Voltage (V.DC)	Rated Capacitance (μF)	Case size		Leakage Current (μA)	Tangent of loss angle (max)	E. S. R. at 100kHz (mΩ)	Allowable ripple current (mA.rms)	Part Number
		φD	L					
		(mm)						
2.5	56	5.0	5.4	28	0.06	40	1400	PFM560M0ED05W
	120	6.3	5.4	60	0.06	35	1400	PFM121M0EE05W
	220	6.3	5.4	110	0.06	35	2560	PFM221M0EE05W
	220	8.0	6.2	110	0.06	25	2560	PFM221M0EF06W
	470	8.0	10.0	235	0.06	10	4800	PFM471M0EF10W
	560	8.0	10.0	280	0.06	8	5500	PFM561M0EF10W
	680	8.0	10.0	340	0.06	8	5500	PFM681M0EF10W
	820	8.0	10.0	410	0.06	8	5500	PFM821M0EF10W
	1000	8.0	10.0	500	0.06	8	5500	PFM102M0EF10W
	1200	8.0	10.0	600	0.06	8	5500	PFM122M0EF10W
	390	10.0	6.2	195	0.06	15	3700	PFM391M0EG06W
	1500	10.0	10.2	750	0.06	7	6100	PFM152M0EG10W
	1800	10.0	10.2	900	0.06	7	6100	PFM182M0EG10W
2200	10.0	10.2	1100	0.06	7	6100	PFM222M0EG10W	
4	47	5.0	5.4	38	0.06	40	1400	PFM470M0GD05W
	100	6.3	5.4	80	0.06	35	1400	PFM101M0GE05W
	180	8.0	6.2	144	0.06	25	2560	PFM181M0GF06W
	390	8.0	10.0	312	0.06	8	5500	PFM391M0GF10W
	560	8.0	10.0	448	0.06	8	5500	PFM561M0GF10W
	680	8.0	10.0	544	0.06	8	5500	PFM681M0GF10W
	820	8.0	10.0	656	0.06	8	5500	PFM821M0GF10W
	1000	8.0	10.0	800	0.06	8	5500	PFM102M0GF10W
	330	10.0	6.2	264	0.06	15	3700	PFM331M0GG06W
	1200	10.0	10.2	960	0.06	7	6100	PFM122M0GG10W
	1500	10.0	10.2	1200	0.06	7	6100	PFM152M0GG10W
6.3	39	5.0	5.4	49	0.06	45	1400	PFM390M0JD05W
	82	6.3	5.4	103	0.06	40	1400	PFM820M0JE05W
	150	8.0	6.2	189	0.06	30	2560	PFM151M0JF06W
	330	8.0	10.0	416	0.06	13	4800	PFM331M0JF10W
	560	8.0	10.0	706	0.06	8	5500	PFM561M0JF10W
	680	8.0	10.0	857	0.06	8	5500	PFM681M0JF10W
	270	10.0	6.2	340	0.06	17	3700	PFM271M0JG06W
	820	10.0	10.2	1033	0.06	7	6100	PFM821M0JG10W
	1000	10.0	10.2	1260	0.06	7	6100	PFM102M0JG10W
10	33	5.0	5.4	66	0.06	50	1200	PFM330M1AD05W
	68	6.3	5.4	136	0.06	45	1200	PFM680M1AE05W
	120	8.0	6.2	240	0.06	40	2300	PFM121M1AF06W
	270	8.0	10.0	540	0.06	10	4500	PFM271M1AF10W
	470	8.0	10.0	940	0.06	10	4800	PFM471M1AF10W
	220	10.0	6.2	440	0.06	20	3300	PFM221M1AG06W
	680	10.0	10.2	1360	0.06	8	5500	PFM681M1AG10W
	1000	10.0	10.2	2000	0.06	8	5500	PFM102M1AG10W
16	18	5.0	5.4	58	0.06	55	1200	PFM180M1CD05W
	47	6.3	5.4	150	0.06	50	1200	PFM470M1CE05W
	82	8.0	6.2	262	0.06	40	2300	PFM820M1CF06W
	180	8.0	10.0	576	0.06	15	4400	PFM181M1CF10W
	150	10.0	6.2	480	0.06	25	3300	PFM151M1CG06W
	150	10.0	10.2	480	0.06	20	3500	PFM151M1CG10W
	330	10.0	10.2	1056	0.06	12	5100	PFM331M1CG10W

Features

- Height : 5.4mm.
- Load life : 85°C 2000 hours.

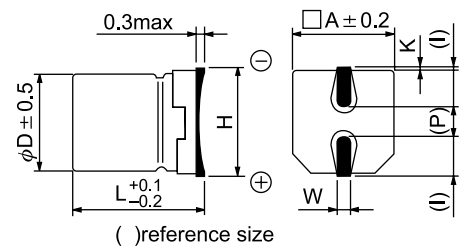


● SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-40 ~ +85°C								
Rated Working Voltage	4 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) *Whichever is greater after 2 minutes						I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)		
Surge Voltage (20°C)	W.V.	4	6.3	10	16	25	35	50	
	S.V.	5	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	4	6.3	10	16	25	35	50	
	tan δ	0.35	0.26	0.20	0.16	0.14	0.12	0.12	
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)		4	6.3	10	16	25	35 ~ 50	
	-25°C / +20°C		7	4	3	2	2	2	
	-40°C / +20°C		15	8	6	4	4	3	
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change		≤ ±20% of initial value						
	Dissipation Factor		≤ 200% of initial specified value						
	Leakage current		≤ initial specified value						
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)								
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.								
	Capacitance Change		≤ ±10% of initial value						
	Dissipation Factor		≤ initial specified value						
	Leakage current		≤ initial specified value						

● DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}

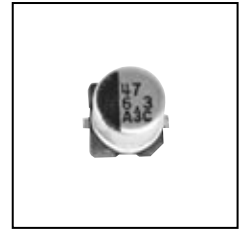


● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code) Code Item	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1													4x5.4	3
0.22	R22													4x5.4	4
0.33	R33													4x5.4	5
0.47	R47													4x5.4	6
1.0	010													4x5.4	9
2.2	2R2													4x5.4	13
3.3	3R3													4x5.4	16
4.7	4R7									4x5.4	17	4x5.4	19	5x5.4	21
10	100							4x5.4	24	5x5.4	29	5x5.4	31	6.3x5.4	36
22	220			4x5.4	27	5x5.4	36	5x5.4	40	6.3x5.4	49	6.3x5.4	55		
33	330	4x5.4	29	5x5.4	38	5x5.4	44	6.3x5.4	55	6.3x5.4	60				
47	470	4x5.4	35	5x5.4	46	6.3x5.4	60	6.3x5.4	65						
100	101	5x5.4	60	6.3x5.4	70	6.3x5.4	80	6.3x5.4	90						
220	221	6.3x5.4	80												

- Height : 5.4mm.
- Load life : 85°C 2000 hours.
- Low leakage current (0.5 μ A to 2.0 μ A max.)

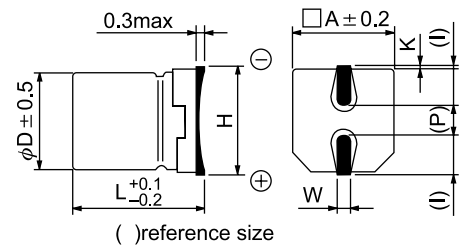


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +85°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.002CV$ or $0.5 (\mu A)$				I : Leakage Current (μA)			
	*Whichever is greater after 2 minutes				C : Rated Capacitance (μF)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	V : Working Voltage (V)
	S.V.	8	13	20	32	44	63	
Dissipation Factor ($\tan \delta$) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	$\tan \delta \phi$	0.24	0.20	0.16	0.14	0.12	0.10	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	4	3	2	2	2	2	
	-40°C / +20°C	8	6	4	4	3	3	
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 25\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	$\leq \pm 10\%$ of initial value						
	Dissipation Factor	\leq initial specified value						
	Leakage current	\leq initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1												4x5.4	1.0
0.22	R22												4x5.4	2.3
0.33	R33												4x5.4	3.5
0.47	R47												4x5.4	5
1.0	010												4x5.4	10
2.2	2R2												4x5.4	15
3.3	3R3												4x5.4	18
4.7	4R7								4x5.4	19	4x5.4	20	5x5.4	23
10	100					4x5.4	25	5x5.4	28	5x5.4	30	6.3x5.4	34	
22	220	4x5.4	31	5x5.4	35	5x5.4	39	6.3x5.4	52	6.3x5.4	54			
33	330	5x5.4	39	5x5.4	43	6.3x5.4	57	6.3x5.4	63					
47	470	5x5.4	47	6.3x5.4	59	6.3x5.4	68							
100	101	6.3x5.4	71	6.3x5.4	76									

CHIP TYPE

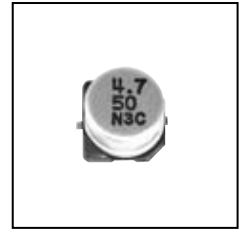
CN

Series

Surface-Mounted Device

JAMICON®

- Height : 5.4mm.
- Load life : 85°C 2000 hours.
- Non polarity series using in polarity circuits

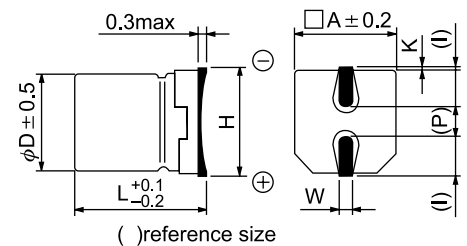


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +85°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.05CV or 10 (μA) *Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δφ	0.26	0.22	0.20	0.20	0.20	0.18	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	4	3	2	2	2	2	
	-40°C / +20°C	8	6	4	4	3	3	
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) (The polarity need to exchange every 250 hours)							
	Capacitance Change	≤ ±25% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	≤ ±10% of initial value						
	Dissipation Factor	≤ initial specified value						
	Leakage current	≤ initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1												4x5.4	2
0.22	R22												4x5.4	3
0.33	R33												4x5.4	4
0.47	R47												4x5.4	5
1.0	010												4x5.4	7
2.2	2R2										4x5.4	10	5x5.4	12
3.3	3R3								5x5.4	13	5x5.4	14	5x5.4	14
4.7	4R7						4x5.4	14	5x5.4	16	5x5.4	17	6.3x5.4	19
10	100			4x5.4	19	5x5.4	23	6.3x5.4	27	6.3x5.4	28			
22	220		5x5.4	29	6.3x5.4	36	6.3x5.4	39						
33	330		6.3x5.4	41	6.3x5.4	45	6.3x5.4	48						
47	470		6.3x5.4	49										

Features

- Higher Capacitance in larger case sizes.
- For general purposes series with 85°C 2000 hours.

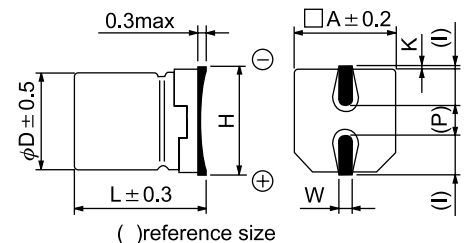


SPECIFICATION

Item	Characteristic									
Operation Temperature Range	-40 ~ +85°C									
Rated Working Voltage	4 ~ 100VDC									
Capacitance Tolerance (120Hz 20°C)	±20%(M)									
Leakage Current (20°C)	$I \leq 0.01CV$ or $3 (\mu A)$									
	*Whichever is greater after 2 minutes									
Surge Voltage (20°C)	W.V.	4	6.3	10	16	25	35	50	63	100
	S.V.	5	8	13	20	32	44	63	79	125
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more then 1000 μF									
	W.V.	4	6.3	10	16	25	35	50	63	100
	tan δ	0.35	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10
Low Temperature Stability	Impedance ratio at 120Hz									
	Rated Voltage (V)	4	6.3	10	16	25	35	50	63	100
	-25°C / +20°C	7	4	3	2	2	2	2	2	2
	-40°C / +20°C	15	8	6	4	4	3	3	3	3
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)									
	Capacitance Change	≤ ±20% of initial value								
	Dissipation Factor	≤ 200% of initial specified value								
	Leakage current	≤ initial specified value								
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)									
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.									
	Capacitance Change	≤ ±10% of initial value								
	Dissipation Factor	≤ initial specified value								
	Leakage current	≤ initial specified value								

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
8.0	6.2	8.3	9.5MAX	3.4	0.65±0.1	2.2	0.35 ^{+0.15} _{-0.20}
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70±0.2
10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70±0.2



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code) Code	Item	4 (0G)		6.3 (0J)		10 (1A)	
			DxL	R.C.	DxL	R.C.	DxL	R.C.
100		101					8x6.2	130
220		221			8x6.2	150	8x6.2	190
330		331	8x6.2	140	8x6.2	180	8x10.2	290
470		471	8x10.2	210	8x10.2	260	10x10.2	420
1000		102	8x10.2	300	10x10.2	460	10x10.2	610
1500		152	10x10.2	440	10x10.2	560		

μF	V(Code) Code	Item	16 (1C)		25 (1E)		35 (1V)	
			DxL	R.C.	DxL	R.C.	DxL	R.C.
33		330					8x6.2	120
47		470			8x6.2	100	8x6.2	140
100		101	8x6.2	140	8x6.2	150	8x10.2	250
220		221	8x10.2	260	8x10.2	270	10x10.2	440
330		331	8x10.2	310	10x10.2	450	10x10.2	540
470		471	10x10.2	450				

μF	V(Code) Code	Item	50 (1H)		63 (1J)		100 (2A)	
			DxL	R.C.	DxL	R.C.	DxL	R.C.
3.3		3R3					8x6.2	41
4.7		4R7					8x10.2	60
10		100					8x10.2	85
22		220	8x6.2	110	8x10.2	120	10x10.2	150
33		330	8x6.2	130	8x10.2	140	10x10.2	180
47		470	8x10.2	190	10x10.2	190		
100		101	10x10.2	310	10x10.2	280		
220		221	10x10.2	460				

Features

- 105°C 1000hours.
- For high density mounting.

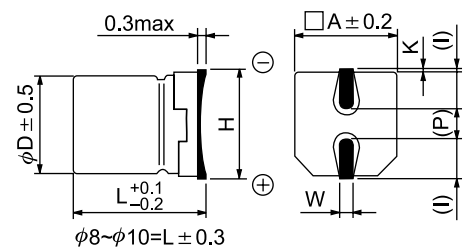


SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-55 ~ +105°C								
Rated Working Voltage	6.3 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA)				I : Leakage Current (μA)				
	*Whichever is greater after 2 minutes				C : Rated Capacitance (μF)				
					V : Working Voltage (V)				
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50		
	S.V.	8	13	20	32	44	63		
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50		
	tan δ	φ4 ~ φ6.3	0.30	0.22	0.16	0.14	0.12	0.12	
		φ8 ~ φ10	0.35	0.26	0.20	0.16	0.14	0.12	
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)		6.3	10	16	25	35	50	
	-25°C / +20°C		4	3	2	2	2	2	
	-40°C / +20°C		8	6	4	4	3	3	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change	≤ ±30% of initial value for 6.3 W.V., ≤ ±25% of initial value for 10~50 W.V.							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)								
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.								
	Capacitance Change	≤ ±10% of initial value							
	Dissipation Factor	≤ initial specified value							
	Leakage current	≤ initial specified value							

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
8.0	6.2	8.3	9.5MAX	3.4	0.65±0.1	2.2	0.35 ^{+0.15} _{-0.20}
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70 ^{+0.15} _{-0.20}
10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70 ^{+0.15} _{-0.20}



() reference size

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code) Code	Item	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
			DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1		0R1											4x5.4	2
0.22		R22											4x5.4	4
0.33		R33											4x5.4	4
0.47		R47											4x5.4	5
1.0		010											4x5.4	8
2.2		2R2											4x5.4	11
3.3		3R3											4x5.4	14
4.7		4R7							4x5.4	14	4x5.4	15	5x5.4	19
10		100				4x5.4	19	5x5.4	23	5x5.4	25	6.3x5.4	31	
22		220	4x5.4	23	5x5.4	29	5x5.4	32	6.3x5.4	39	6.3x5.4	42	8x6.2	60
33		330	5x5.4	32	5x5.4	35	6.3x5.4	45	6.3x5.4	48	6.3x5.4 8x6.2	50 70	8x10.2	90
47		470	5x5.4	38	6.3x5.4	48	6.3x5.4	55	6.3x5.4 8x6.2	60 75	8x10.2	100	8x10.2 10x10.2	110 120
100		101	6.3x5.4	65	6.3x5.4 8x6.2	70 90	6.3x5.4 8x10.2	80 120	8x10.2	140	8x10.2 10x10.2	150 170	8x10.2 10x10.2	160 180
220		221	6.3x5.4	95	8x10.2	160	8x10.2 10x10.2	180 210	8x10.2 10x10.2	200 230	8x10.2 10x10.2	220 250	10x10.2	270
330		331	8x10.2	170			8x10.2 10x10.2	220 260	8x10.2 10x10.2	250 290	10x10.2	300		
470		471			8x10.2 10x10.2	230 270	8x10.2 10x10.2	270 300	10x10.2	340				
1000		102	8x10.2 10x10.2	290 340										
1500		152	10x10.2	410										

CHIP TYPE

CE Series

Aluminum Electrolytic Capacitor Surface Mounted Device

Features

- Height:5.4mm.
- Load life:105°C, 1000hours.
- Low leakage current (0.5μA to 2.0μA max.)

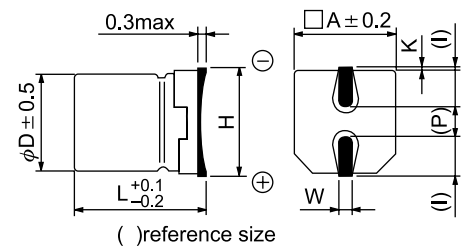


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.002CV or 0.5 (μA)				I : Leakage Current (μA)			
	*Whichever is greater after 2 minutes				C : Rated Capacitance (μF)			
					V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.24	0.20	0.16	0.14	0.12	0.10	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	4	3	2	2	2	2	
	-40°C / +20°C	8	6	4	4	3	3	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±25% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	≤ ±10% of initial value						
	Dissipation Factor	≤ initial specified value						
	Leakage current	≤ initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code) Code Item	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1											4x5.4	3
0.22	R22											4x5.4	4
0.33	R33											4x5.4	5
0.47	R47											4x5.4	5
1.0	010											4x5.4	8
2.2	2R2											4x5.4	12
3.3	3R3											4x5.4	14
4.7	4R7							4x5.4	14	4x5.4	15	5x5.4	19
10	100					4x5.4	20	5x5.4	24	5x5.4	26	6.3x5.4	32
22	220	4x5.4	24	5x5.4	30	5x5.4	33	6.3x5.4	41	6.3x5.4	44		
33	330	5x5.4	33	5x5.4	36	6.3x5.4	46	6.3x5.4	50				
47	470	5x5.4	39	6.3x5.4	50	6.3x5.4	55						
100	101	6.3x5.4	65	6.3x5.4	70								

CHIP TYPE

CP Series

Aluminum Electrolytic Capacitor
Surface Mounted Device

JAMICON®

Features

- Height:5.4mm.
- Load life:105°C, 1000hours.
- CP series is Bi-Polar type

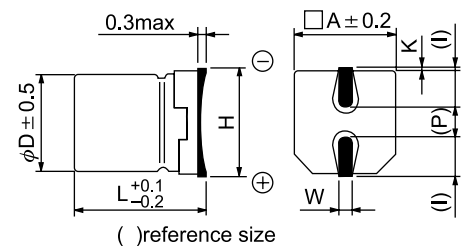


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.05CV or 10 (μA) *Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.26	0.22	0.20	0.20	0.20	0.18	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	4	3	2	2	2	2	
	-40°C / +20°C	8	6	4	4	3	3	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) (The polarity need to exchange every 250 hours)							
	Capacitance Change	≤ ±25% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 500 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	≤ ±10% of initial value						
	Dissipation Factor	≤ initial specified value						
	Leakage current	≤ initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}



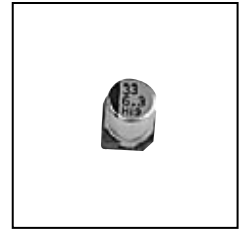
● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code) Code Item	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1											4x5.4	2
0.22	R22											4x5.4	3
0.33	R33											4x5.4	4
0.47	R47											4x5.4	4
1.0	010											4x5.4	6
2.2	2R2									4x5.4	9	5x5.4	10
3.3	3R3							5x5.4	12	5x5.4	13	5x5.4	13
4.7	4R7					4x5.4	12	5x5.4	14	5x5.4	15	6.3x5.4	17
10	100			4x5.4	17	5x5.4	21	6.3x5.4	24	6.3x5.4	25		
22	220	5x5.4	26	6.3x5.4	32	6.3x5.4	35						
33	330	6.3x5.4	36	6.3x5.4	40	6.3x5.4	43						
47	470	6.3x5.4	43										

Features

- Load life : 105°C 2000 hours.

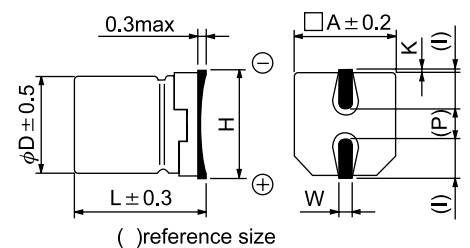


SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-55 ~ +105°C								
Rated Working Voltage	4 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) *Whichever is greater after 2 minutes						I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)		
Surge Voltage (20°C)	W.V.	4	6.3	10	16	25	35	50	
	S.V.	5	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	4	6.3	10	16	25	35	50	
	tan δ	φ4 ~ φ6.3	0.50	0.30	0.22	0.16	0.14	0.12	0.12
		φ8 ~ φ10	0.50	0.35	0.26	0.20	0.16	0.14	0.12
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)		4	6.3	10	16	25	35 ~ 50	
	-25°C / +20°C		7	4	3	2	2	2	
	-40°C / +20°C		15	8	6	4	4	3	
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change	≤ ±25% of initial value (4WV ± 35%)							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)								
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.								
	Capacitance Change	≤ ±10% of initial value							
	Dissipation Factor	≤ initial specified value							
	Leakage current	≤ initial specified value							

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.8	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.8	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.8	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
8.0	6.2	8.3	9.5MAX	3.4	0.65±0.1	2.2	0.35 ^{+0.15} _{-0.20}
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70 ^{+0.15} _{-0.20}
10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70 ^{+0.15} _{-0.20}



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code) Code Item	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.10	0R1													4x5.8	3
0.22	R22													4x5.8	4
0.33	R33													4x5.8	5
0.47	R47													4x5.8	6
1.0	010													4x5.8	8
2.2	2R2													4x5.8	12
3.3	3R3													4x5.8	15
4.7	4R7									4x5.8	15	4x5.8	18	5x5.8	20
6.8	6R8									4x5.8	18	5x5.8	22	5x5.8	24
10	100							4x5.8	20	5x5.8	25	5x5.8	26	6.3x5.8	33
22	220	4x5.8	20	4x5.8	24	5x5.8	30	5x5.8	34	6.3x5.8	42	6.3x5.8	45	8x10.2	75
33	330	4x5.8	25	4x5.8	30	5x5.8	37	6.3x5.8	48	6.3x5.8	50	8x6.2	70	8x10.2	90
47	470	4x5.8	30	5x5.8	41	6.3x5.8	50	6.3x5.8	55	8x6.2	75	8x10.2	100	10x10.2	120
100	101	5x5.8	49	6.3x5.8	70	6.3x5.8	75	8x10.2	120	8x10.2	140	10x10.2	170		
150	151	6.3x5.8	70	8x6.2	95	8x6.2	110	8x10.2	150	8x10.2	170				
220	221	6.3x5.8	85	8x10.2	140	8x10.2	160	10x10.2	210	10x10.2	230				
330	331	8x10.2	140	8x10.2	170	8x10.2	200	10x10.2	260						
470	470	8x10.2	170	8x10.2	200	10x10.2	270								

CHIP TYPE

CL Series

Surface Mounted Device

Features

- Load Life : 105°C 1000hours.
- For high density mounting.
- Low impedance at 100kHz.

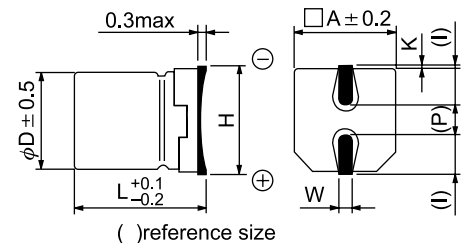


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA)				I : Leakage Current (μA)			
	*Whichever is greater after 2 minutes				C : Rated Capacitance (μF)			
					V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.22	0.19	0.16	0.14	0.12	0.12	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	2	2	2	2	2	2	
	-55 °C / +20°C	5	4	4	3	3	3	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±30% of initial value for 6.3 W.V., ≤ ±20% of initial value for 10-50 W.V.						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	≤ ±10% of initial value						
	Dissipation Factor	≤ initial specified value						
	Leakage current	≤ initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.4	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.4	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code) Item Code	6.3 (0J)			10 (1A)			16 (1C)			25 (1E)			35 (1V)			50 (1H)				
		DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.		
1.0	010															4x5.4	3.9	60	4x5.4	4.9	30
2.2	2R2															4x5.4	3.6	60	4x5.4	4.5	30
3.3	3R3															4x5.4	3.0	60	4x5.4	3.7	30
4.7	4R7											4x5.4	3.1	60	4x5.4	2.5	60	5x5.4	3.1	41	
6.8	6R8											4x5.4	2.7	60	5x5.4	2.2	60	6.3x5.4	2.7	55	
10	100							4x5.4	3.3	60	5x5.4	2.4	65	5x5.4	1.9	70	6.3x5.4	2.4	70		
22	220	4x5.4	3.2	60	5x5.4	2.2	65	5x5.4	1.8	85	6.3x5.4	1.3	110	6.3x5.4	1.0	120					
33	330	5x5.4	2.4	65	5x5.4	1.7	75	6.3x5.4	1.4	120	6.3x5.4	1.0	140								
47	470	5x5.4	2.0	80	6.3x5.4	1.4	110	6.3x5.4	1.1	140											
68	680	6.3x5.4	1.5	110	6.3x5.4	1.1	130														
100	101	6.3x5.4	1.2	130	6.3x5.4	0.9	150														

Features

- Load Life : 105°C 1000~2000 hours.
- For high density mounting.
- Low impedance at 100kHz.

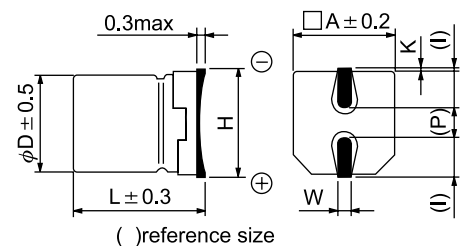


SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-55 ~ +105°C								
Rated Working Voltage	6.3 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA)								
	*Whichever is greater after 2 minutes								
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50		
	S.V.	8	13	20	32	44	63		
	Add 0.02 per 1000 μF for more than 1000 μF								
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.								
	tan δ	φ4 ~ φ6.3	0.24	0.20	0.16	0.14	0.12	0.12	
		φ8 ~ φ10	0.28	0.24	0.20	0.16	0.14	0.14	
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)		6.3	10	16	25	35	50	
	-25°C / +20°C		3	2	2	2	2	2	
	-55°C / +20°C		5	4	4	3	3	3	
Load Life	After hours (φD ≤ 6.3mm 1000 hours, φD ≥ 8mm 2000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change	≤ ±25% of initial value							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)								
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.								
	Capacitance Change	≤ ±10% of initial value							
	Dissipation Factor	≤ initial specified value							
	Leakage current	≤ initial specified value							

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.8	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.8	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.8	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
6.3	7.7	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70±0.2
10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70±0.2



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code) Item Code	6.3 (0J)			10 (1A)			16 (1C)			25 (1E)			35 (1V)			50 (1H)				
		DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.		
1.0	010																4x5.8	5.00	30		
2.2	2R2																4x5.8	5.00	30		
3.3	3R3																4x5.8	5.00	30		
4.7	4R7															4x5.8	1.80	80	5x5.8	1.52	85
6.8	6R8															5x5.8	1.20	120	5x5.8	1.20	120
10	100							4x5.8	1.80	80	4x5.8	1.80	80	5x5.8	0.76	150	6.3x5.8	0.88	165		
15	150							4x5.8	1.80	80	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.88	165		
22	220				4x5.8	1.80	80	5x5.8	0.76	150	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.88	165		
27	270	4x5.8	1.80	80	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.68	185		
33	330	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.68	185		
47	470	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.68	185		
56	560	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.34	300		
68	680	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.34	300		
100	101	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.34	300		
150	151	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.18	670		
220	221	6.3x5.8	0.44	230	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.18	670		
330	331	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.09	670					
470	471	8x10.2	0.17	450	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.09	670								
680	681	8x10.2	0.17	450	10x10.2	0.09	670	10x10.2	0.09	670											
1000	102	8x10.2	0.17	450	10x10.2	0.09	670														
1500	152	10x10.2	0.09	670																	

- Load life : 105°C 1000~2000 hours.
- For high density mounting.
- Impedance Lower than CF series

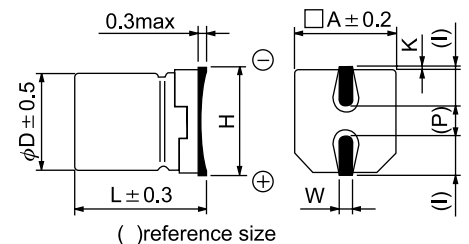


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA)				I : Leakage Current (μA)			
	*Whichever is greater after 2 minutes				C : Rated Capacitance (μF)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF							
	W.V.	6.3	10	16	25	35	50	
	tan δφ	φ4 ~ φ6.3	0.24	0.20	0.16	0.14	0.12	0.12
φ8 ~ φ10		0.28	0.24	0.20	0.16	0.14	0.14	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-40°C / +20°C	3	2	2	2	2	2	
	-55°C / +20°C	5	4	4	3	3	3	
Load Life	After hours (φD ≤ 6.3mm 1000 hours, φD ≥ 8mm 2000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±25% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	≤ ±10% of initial value						
	Dissipation Factor	≤ initial specified value						
	Leakage current	≤ initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.8	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.8	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.8	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
6.3	7.7	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70±0.20
10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70±0.20



Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

● CASE SIZE & MAX RIPPLE CURRENT

μF	V(Code) Item Code	6.3 (0J)			10 (1A)			16 (1C)			25 (1E)			35 (1V)			50 (1H)		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
4.7	4R7													4x5.8	1.45	90	4x5.8	2.55	64
10	100										4x5.8	1.45	90	5x5.8	0.70	170	6.3x5.8	0.52	215
15	150							4x5.8	1.45	90	5x5.8	0.70	170	5x5.8	0.70	170	6.3x5.8	0.52	215
22	220				4x5.8	1.45	90	5x5.8	0.70	170	5x5.8	0.70	170	5x5.8	0.70	170	6.3x5.8	0.52	215
27	270	4x5.8	1.45	90	5x5.8	0.70	170	5x5.8	0.76	150	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.44	243
33	330	5x5.8	0.70	170	5x5.8	0.70	170	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.44	243
47	470	5x5.8	0.70	170	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.44	243
56	560	5x5.8	0.70	170	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.30	300	8x10.2	0.22	400
68	680	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.30	300	8x10.2	0.22	400
100	101	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.30	300	8x10.2	0.15	600	8x10.2	0.22	400
150	151	6.3x5.8	0.39	250	6.3x5.8	0.39	250	6.3x7.7	0.30	300	8x10.2	0.15	600	8x10.2	0.15	600	10x10.2	0.13	585
220	221	6.3x5.8	0.39	250	6.3x7.7	0.30	300	6.3x7.7	0.30	300	8x10.2	0.15	600	8x10.2	0.15	600	10x10.2	0.13	585
330	331	6.3x7.7	0.30	300	8x10.2	0.15	600	8x10.2	0.15	600	8x10.2	0.15	600	10x10.2	0.08	850			
470	471	8x10.2	0.15	600	8x10.2	0.15	600	8x10.2	0.15	600	10x10.2	0.08	850						
680	681	8x10.2	0.15	600	10x10.2	0.08	850	10x10.2	0.08	850									
1000	102	8x10.2	0.15	600	10x10.2	0.08	850												
1500	152	10x10.2	0.08	850															

CHIP TYPE

CZ Series

Aluminum Electrolytic Capacitor Surface Mounted Device

Features

- Load Life : 105°C, 3000hours.
- For high density mounting.
- Low impedance at 100kHz

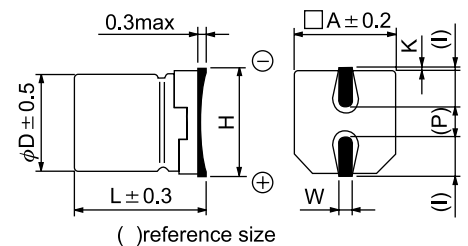


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) *Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.28	0.24	0.22	0.16	0.13	0.12	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)							
	-25°C / +20°C							
	-40°C / +20°C							
Load Life	After 3000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±30% of initial value						
	Dissipation Factor	≤ 300% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.							
	Capacitance Change	≤ ±10% of initial value						
	Dissipation Factor	≤ initial specified value						
	Leakage current	≤ initial specified value						

DIMENSIONS (mm)

D	L	A	H	I	W	P	K
4.0	5.8	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
5.0	5.8	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
6.3	5.8	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
6.3	7.7	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70±0.2
10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70±0.2



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code) Item Code	6.3 (0J)			10 (1A)			16 (1C)			25 (1E)			35 (1V)			50 (1H)		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
10	100													5x5.8	1.30	95	6.3x5.8	2.00	70
22	220							5x5.8	1.30	95				5x5.8	0.70	140	6.3x5.8	2.00	70
33	330				5x5.8	1.30	95	6.3x5.8	0.70	140	6.3x5.8	0.70	140	6.3x7.7	0.70	140	6.3x7.7	1.60	100
														8x10.2	0.70	230			
47	470	5x5.8	1.30	95	6.3x5.8	0.70	140	6.3x5.8	0.70	140	6.3x5.8	0.70	230	6.3x7.7	0.70	230	6.3x7.7	1.60	100
														8x10.2	0.70	230	8x10.2	0.34	350
100	101	6.3x5.8	0.70	140	6.3x5.8	0.70	140	6.3x5.8	0.70	140	6.3x7.7	0.70	230	6.3x7.7	0.70	230	8x10.2	0.34	350
														8x10.2	0.16	600	10x10.2	0.18	670
150	151	6.3x5.8	0.70	140	6.3x5.8	0.70	140	6.3x7.7	0.70	230	8x10.2	0.16	600	8x10.2	0.16	600	10x10.2	0.18	670
220	221	6.3x5.8	0.70	230	6.3x7.7	0.70	230	6.3x7.7	0.70	230	8x10.2	0.16	600	8x10.2	0.16	600	10x10.2	0.18	670
														10x10.2	0.08	850			
330	331	6.3x7.7	0.70	230	8x10.2	0.16	600	8x10.2	0.16	600	8x10.2	0.15	600	10x10.2	0.08	850			
470	471	8x10.2	0.16	600	8x10.2	0.16	600	8x10.2	0.16	600									
1000	102	10x10.2	0.08	850															

Features

- Load Life : 125°C 2000 hours.
- For high density mounting.

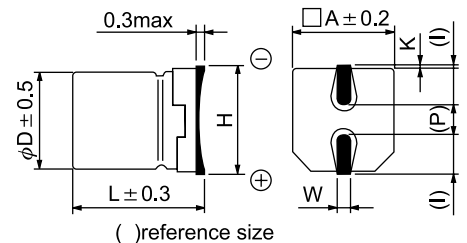


● SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-40 ~ +125°C					
Rated Working Voltage	10 ~ 50VDC					
Capacitance Tolerance (120Hz 20°C)	±20%(M)					
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA)			I : Leakage Current (μA)		
	*Whichever is greater after 2 minutes			C : Rated Capacitance (μF)		
				V : Working Voltage (V)		
Surge Voltage (20°C)	W.V.	10	16	25	35	50
	S.V.	13	20	32	44	63
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	10	16	25	35	50
	tan δ	0.32	0.24	0.21	0.18	0.18
Low Temperature Stability	Impedance ratio at 120Hz					
	Rated Voltage (V)	10	16	25	35	50
	-25°C / +20°C	4	3	2	2	2
	-40°C / +20°C	12	8	6	4	4
Load Life	After 2000 hours application of W.V. and +125°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)					
	Capacitance Change	≤ ±30% of initial value				
	Dissipation Factor	≤ 300% of initial specified value				
	Leakage current	≤ initial specified value				
Shelf Life	At +125°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)					
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.					
	Capacitance Change	≤ ±10% of initial value				
	Dissipation Factor	≤ initial specified value				
	Leakage current	≤ initial specified value				

● DIMENSIONS (mm)

D	L	A	H	I	W	P	K
8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70±0.20
10.0	10.2	8.3	12.0MAX	3.5	0.90±0.2	4.6	0.70±0.20



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 125°C 120Hz

μF	V(Code)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
10	100										8x10.2	34
22	220										8x10.2	50
33	330										8x10.2	60
47	470								8x10.2	75	10x10.2	85
100	101			8x10.2	70	8x10.2	75	10x10.2	120			
220	221		8x10.2	90	10x10.2	120	10x10.2	120				
330	331		10x10.2	120								

RADIAL TYPE

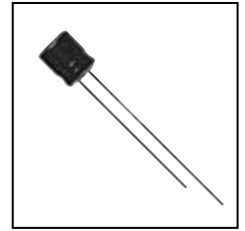
SV

Series

5mmL 85°C, Ultra-Miniature

JAMICON®

- For general purposes series with 5mm height

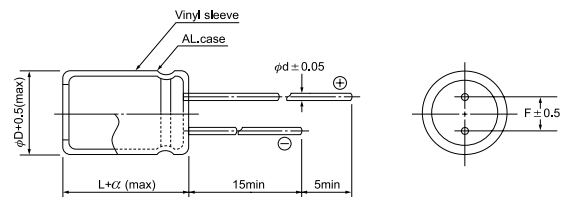


● SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-40 ~ +85°C								
Rated Working Voltage	4 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) *Whichever is greater after 2 minutes						I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)		
Surge Voltage (20°C)	W.V.	4	6.3	10	16	25	35	50	
	S.V.	5	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	4	6.3	10	16	25	35	50	
	tan δ	0.35	0.24	0.20	0.16	0.14	0.12	0.10	
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)	4	6.3	10	16	25	35	50	
	-25°C / +20°C	7	4	3	2	2	2	2	
	-40°C / +20°C	15	8	6	4	4	3	3	
Load Life	After 1000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rated working voltage)								
	Capacitance Change	≤ ±20% of initial value							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At + 85°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)								

● DIMENSIONS (mm)

φD	4	5	6.3	8
F	1.5	2.0	2.5	2.5
d	0.45	0.45	0.45	0.45
α	1.0	1.0	1.0	1.0



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code) Code Item	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1												→	4x5	3
0.15	R15												→	4x5	4
0.22	R22												→	4x5	4
0.33	R33												→	4x5	5
0.47	R47												→	4x5	6
0.68	R68												→	4x5	8
1.0	010												→	4x5	9
1.5	1R5												→	4x5	12
2.2	2R2										→	4x5	13	4x5	14
3.3	3R3								→	4x5	14	4x5	16	4x5	17
4.7	4R7						→	4x5	16	4x5	17	4x5	19	4x5	20
6.8	6R8		→	4x5	19	4x5	17	4x5	19	4x5	21	5x5	26	6.3x5	32
10	100		→	4x5	24	4x5	21	4x5	24	4x5	25	5x5	31	6.3x5	39
15	150		→	4x5	24	4x5	26	5x5	33	5x5	35	6.3x5	44	6.3x5	48
22	220	4x5	24	4x5	29	4x5(5x5)	31(36)	5x5	40	5x5(6.3x5)	43(49)	6.3x5	55	6.3x5(8x5)	60(70)
33	330	4x5	29	4x5(5x5)	35(40)	4x5(5x5)	38(44)	5x5(6.3x5)	49(55)	6.3x5	60	6.3x5(8x5)	65(75)	8x5	85
47	470	4x5	35	5x5	48	5x5(6.3x5)	50(60)	6.3x5	65	6.3x5(8x5)	70(85)	8x5	90		
68	680	5x5	47	6.3x5	65	6.3x5	70	6.3x5	80	8x5	100				
100	101	6.3x5	65	6.3x5	80	6.3x5(8x5)	90(100)	6.3x5(8x5)	100(110)	8x5	120				
220	221	6.3x5	100	8x5	140	8x5	150								
330	331	8x5	140	8x5	170										

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

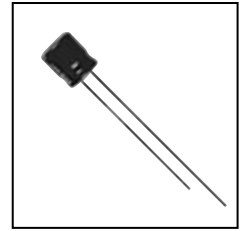
ST

Series

5mmL 105°C, Wide Temperature Range

JAMICON®

- Wide temperature range series with 5mm height.

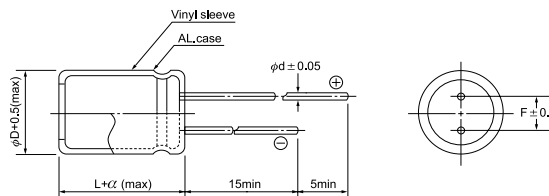


SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-55 ~ +105°C								
Rated Working Voltage	4 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) *Whichever is greater after 2 minutes						I : Leakage Current (μA)	C : Rated Capacitance (μF)	V : Working Voltage (V)
Surge Voltage (20°C)	W.V.	4	6.3	10	16	25	35	50	
	S.V.	5	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	4	6.3	10	16	25	35	50	
	tan δ	0.37	0.28	0.24	0.20	0.16	0.13	0.12	
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)	4	6.3	10	16	25	35	50	
	-25°C / +20°C	6	3	3	2	2	2	2	
	-40°C / +20°C	12	8	5	4	3	3	3	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change	≤ ±25% of initial value							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At + 105°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)								

DIMENSIONS (mm)

φD	4	5	6.3
F	1.5	2.0	2.5
d	0.45	0.45	0.45
α	1.0	1.0	1.0



CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code) Code Item	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1												→	4x5	2
0.22	R22												→	4x5	4
0.33	R33												→	4x5	4
0.47	R47												→	4x5	5
1.0	010												→	4x5	8
2.2	2R2									→	4x5	10	4x5	11	
3.3	3R3									→	4x5	13	4x5	14	
4.7	4R7								→	4x5	14	4x5	15	5x5	19
10	100					→	4x5	19	5x5	23	5x5	25	6.3x5	31	
22	220	4x5	19	4x5	23	5x5	29	5x5	32	6.3x5	39	6.3x5	42		
33	330	5x5	26	5x5	32	5x5	35	6.3x5	45	6.3x5	48				
47	470	5x5	32	5x5	38	6.3x5	48	6.3x5	55						
100	101	6.3x5	55	6.3x5	65										

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

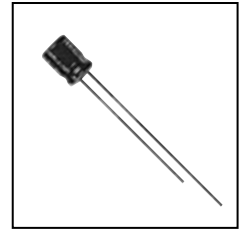
NT

Series

5mmL 85°C, Non Polarity

JAMICON®

- Non polarity series with 5mm height

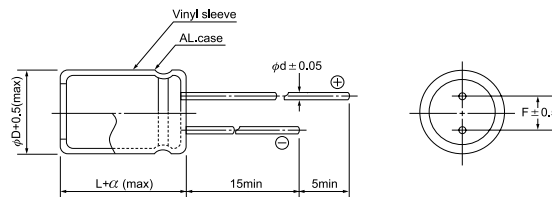


● SPECIFICATION

Item	Characteristic								
Operation Temperature Range	-40 ~ +85°C								
Rated Working Voltage	6.3 ~ 50VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	I ≤ 0.05CV or 10 (μA) *Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)				
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50		
	S.V.	8	13	20	32	44	63		
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50		
	tan δ	0.24	0.20	0.17	0.17	0.15	0.15		
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)		6.3	10	16	25	35	50	
	-25°C / +20°C		4	3	2	2	2	2	
	-40°C / +20°C		10	8	6	4	3	3	
Load Life	After 1000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) (The polarity need to exchange every 250 hours)								
	Capacitance Change	≤ ±20% of initial value							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At +85°C no voltage application after 500 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)								

● DIMENSIONS (mm)

φD	4	5	6.3
F	1.5	2.0	2.5
d	0.45	0.45	0.45
α	1.0	1.0	1.0



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code) Code Item	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	OR1										→	4x5	1
0.22	R22										→	4x5	2
0.33	R33										→	4x5	2.8
0.47	R47										→	4x5	4
1.0	O10										→	4x5	8.4
2.2	2R2								→	4x5	8.4	5x5	13
3.3	3R3						→	5x5	12	5x5	16	5x5	17
4.7	4R7				→	4x5	12	5x5	16	5x5	18	6.3x5	20
10	100	4x5	14	4x5	17	5x5	23	6.3x5	27	6.3x5	29		
22	220	5x5	28	6.3x5	33	6.3x5	37						
33	330	6.3x5	37	6.3x5	41	6.3x5	49						
47	470	6.3x5	45										

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

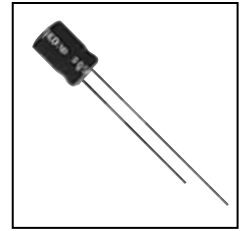
SS

Series

7mmL 85°C, Standard

JAMICON®

- For general purposes series with 7mm height

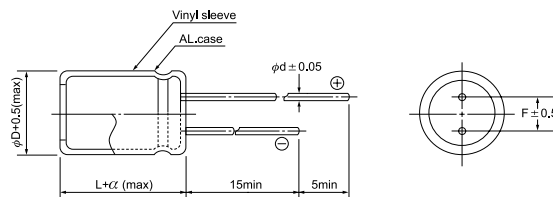


SPECIFICATION

Item	Characteristic									
Operation Temperature Range	-40 ~ +85°C									
Rated Working Voltage	4 ~ 63VDC									
Capacitance Tolerance (120Hz 20°C)	±20%(M)									
Leakage Current (20°C)	$I \leq 0.01CV$ or $3 (\mu A)$ *Whichever is greater after 2 minutes I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)									
Surge Voltage (20°C)	W.V.	4	6.3	10	16	25	35	50	63	
	S.V.	5	8	13	20	32	44	63	79	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	4	6.3	10	16	25	35	50	50~63	
	tan δ	0.35	0.24	0.20	0.16	0.14	0.12	0.10	0.10	
Low Temperature Stability	Impedance ratio at 120Hz									
	Rated Voltage (V)	4	6.3	10	16	25	35	50	50~63	
	-25°C / +20°C	6	4	3	2	2	2	2	2	
	-40°C / +20°C	12	8	6	4	4	4	3	3	
Load Life	After 1000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)									
	Capacitance Change	$\leq \pm 20\%$ of initial value								
	Dissipation Factor	$\leq 200\%$ of initial specified value								
	Leakage current	\leq initial specified value								
Shelf Life	At +85°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)									

DIMENSIONS (mm)

ϕD	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45	0.45	0.45	0.50
α	1.0	1.0	1.0	1.0



CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code) Code	Item	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)	
			DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1																	
0.22	R22												→	4x7	4	4x7	4	
0.33	R33												→	4x7	6	4x7	6	
0.47	R47												→	4x7	7	4x7	7	
1.0	010												→	4x7	8	4x7	8	
2.2	2R2												→	4x7	12	4x7	12	
3.3	3R3												→	4x7	18	4x7	18	
4.7	4R7											→	4x7	20	4x7	22	5x7	25
10	100						→	4x7	30	4x7	32	5x7	39	6.3x7	49	6.3x7	49	
22	220		→	4x7	36	4x7	40	4x7	44	5x7	55	6.3x7	65	8x7	85			
33	330	4x7	37	4x7	44	4x7	49	5x7	60	6.3x7	75	8x7	95	8x7	100			
47	470	4x7	44	5x7	60	5x7	65	5x7	75	8x7	100	8x7	110					
100	101	5x7	70	6.3x7	100	6.3x7	110	6.3x7	120	8x7	150							
220	221	6.3x7	120	8x7	170	8x7	190	8x7	210									
330	331	8x7	170	8x7	210													

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

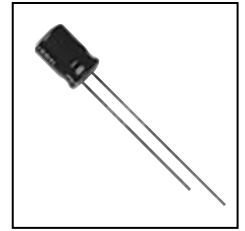
SH

Series

7mmL 105°C, Wide Temperature Range

JAMICON®

- Wide temperature range series with 7mm height.

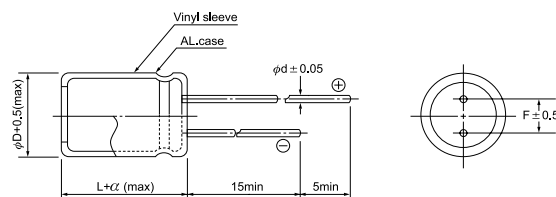


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.01CV$ or $3 (\mu A)$				I : Leakage Current (μA)			
	*Whichever is greater after 2 minutes				C : Rated Capacitance (μF)			
					V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.24	0.21	0.18	0.15	0.13	0.12	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	3	2	2	2	2	2	
	-40°C / +20°C	6	5	4	3	3	3	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 25\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)							

DIMENSIONS (mm)

ϕD	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45	0.45	0.45	0.50
α	1.0	1.0	1.0	1.0



CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code) Item Code	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1									→	4x7	3	
0.22	R22									→	4x7	5	
0.33	R33									→	4x7	6	
0.47	R47									→	4x7	7	
1.0	010									→	4x7	11	
2.2	2R2									→	4x7	19	
3.3	3R3									→	4x7	24	
4.7	4R7							→	4x7	24	5x7	29	
10	100			→	4x7	29	5x7	33	5x7	36	6.3x7	45	
22	220	4x7	34	5x7	41	5x7	46	6.3x7	51	6.3x7	60	8x7	75
33	330	5x7	46	5x7	50	6.3x7	65	6.3x7	70	8x7	85		
47	470	5x7	55	6.3x7	70	6.3x7	75	8x7	95				
100	101	6.3x7	90	6.3x7	100	6.3x7	110						
220	221	8x7	160	8x7	170								

All blank voltage on sleeve marking is the same voltage as " → " point to.

RADIAL TYPE

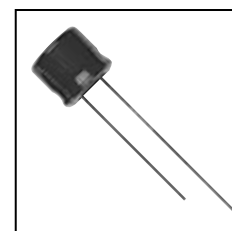
SL

Series

7mmL 105°C, Low Impedance

JAMICON®

- High ripple current, low impedance series with 7mm height.

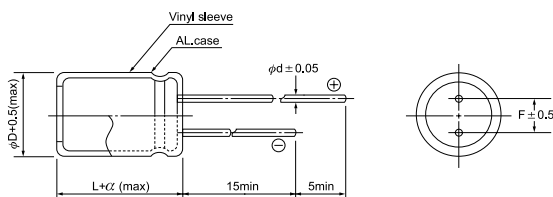


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA)				I : Leakage Current (μA)			
	*Whichever is greater after 3 minutes				C : Rated Capacitance (μF)			
					V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	3	3	3	2	2	2	
	-55°C / +20°C	6	6	6	4	4	4	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)							

DIMENSIONS (mm)

φD	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45	0.45	0.45	0.50
α	1.0	1.0	1.0	1.0



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85	95	105
Multiplier	2.12	1.92	1.69	1.50	1.00

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
6.3~16V	0.45	0.60	0.83	0.94	0.98	1.00
25~35V	0.38	0.50	0.75	0.90	0.97	1.00
50V	0.36	0.46	0.70	0.88	0.94	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

V(Code)		6.3 (0J)				10 (1A)				
μF	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
15	150					→	4x7	1.592	4.775	80
22	220		4x7	1.191	3.572	80	4x7	1.184	3.552	95
27	270		4x7	1.051	3.153	90	4x7	1.045	3.135	100
33	330		4x7	0.926	2.778	100	4x7	0.921	2.763	110
39	390		4x7	0.839	2.518	110	5x7	0.835	2.505	140
47	470		5x7	0.629	1.886	130	5x7	0.568	1.705	160
56	560		5x7	0.561	1.682	150	5x7	0.507	1.521	170
68	680		5x7	0.489	1.467	160	6.3x7	0.442	1.326	210
82	820		6.3x7	0.450	1.351	200	6.3x7	0.407	1.222	230
100	101		6.3x7	0.406	1.219	220	6.3x7	0.367	1.102	260
120	121		6.3x7	0.346	1.039	250	6.3x7	0.313	0.939	280
150	151		6.3x7	0.283	0.850	280	8x7	0.256	0.768	370
180	181		8x7	0.246	0.739	350				
220	221		8x7	0.210	0.630	390				

V(Code)		16 (1C)				25 (1E)				
μF	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
10	100		4x7	1.416	4.249	75	4x7	1.332	3.995	95
15	150		4x7	1.039	3.116	90	4x7	0.977	2.930	110
18	180		4x7	0.897	2.692	100	5x7	0.851	2.552	140
22	220		4x7	0.772	2.317	100	5x7	0.726	2.179	150
27	270		5x7	0.682	2.046	130	6.3x7	0.641	1.923	190
33	330		5x7	0.601	1.802	140	6.3x7	0.565	1.695	210
39	390		6.3x7	0.545	1.634	180	6.3x7	0.512	1.537	220
47	470		6.3x7	0.482	1.446	190	6.3x7	0.453	1.360	250
56	560		6.3x7	0.430	1.290	210	8x7	0.404	1.213	310
68	680		6.3x7	0.375	1.125	230	8x7	0.352	1.057	340
82	820		6.3x7	0.345	1.036	260				
100	101		6.3x7	0.312	0.935	280				

V(Code)		35 (1V)				50 (1H)				
μF	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
4.7	4R7		4x7	2.760	8.280	70	4x7	2.758	8.274	90
6.8	6R8		4x7	2.385	7.154	80	5x7	2.383	7.149	110
10	100		5x7	0.998	2.994	110	6.3x7	0.499	1.496	150
15	150		5x7	0.732	2.195	140	6.3x7	0.366	1.097	180
18	180		6.3x7	0.638	1.913	170	6.3x7	0.319	0.956	200
22	220		6.3x7	0.544	1.633	180	8x7	0.272	0.816	240
27	270		6.3x7	0.480	1.441	200	8x7	0.240	0.720	270
33	330		8x7	0.423	1.270	250	8x7	0.212	0.635	290
39	390		8x7	0.384	1.151	270				
47	470		8x7	0.340	1.019	300				

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

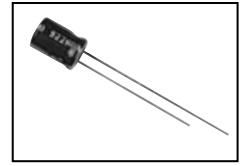
NS

Series

7mmL 85°C, Non Polarity

JAMICON®

- Non polarity series with 7mm height.

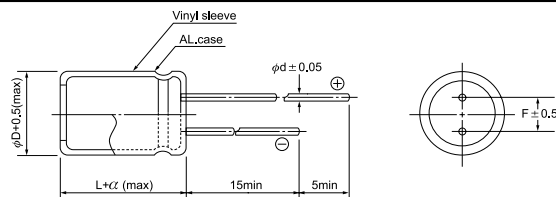


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +85°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.05CV or 10 (μA) *Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.24	0.20	0.17	0.15	0.12	0.12	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	4	3	2	2	2	2	
	-40°C / +20°C	10	8	6	4	3	3	
Load Life	After 500 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) (The polarity need to exchange every 250 hours)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 150% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +85°C no voltage application after 500 hours the capacitor shall meet the following limits. (with voltage treatment)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ 200% of initial specified value						

DIMENSIONS (mm)

φD	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45	0.45	0.45	0.5
α	1.0	1.0	1.0	1.0



CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code) Code Item	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1									→	4x7	3	
0.22	R22									→	4x7	4	
0.33	R33									→	4x7	5	
0.47	R47									→	4x7	6	
1.0	010									→	4x7	9	
2.2	2R2							→	4x7	14	5x7	16	
3.3	3R3						→	4x7	15	5x7	19	5x7	19
4.7	4R7				→	4x7	17	5x7	20	5x7	23	6.3x7	26
10	100		→	4x7	23	5x7	28	6.3x7	34	6.3x7	38	8x7	44
22	220	5x7	35	5x7	38	6.3x7	47	6.3x7	50	8x7	65	8x7	65
33	330	5x7	43	6.3x7	55	6.3x7	60	8x7	70	8x7	80		
47	470	6.3x7	60	6.3x7	65	6.3x7	70	8x7	85				
100	101	8x7	100	8x7	110	8x7	120						

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

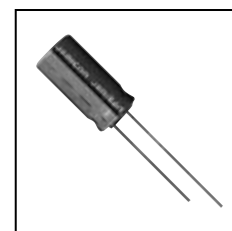
SK

Series

Standard, For General Purposes

JAMICON®

- SK series has high value of CV for general purposes.



SPECIFICATION

Item	Characteristic																
Operation Temperature Range	-40 ~ +85°C								-25 ~ +85°C								
Rated Working Voltage	6.3 ~ 100VDC								160 ~ 450VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)																
Leakage Current (20°C)	6.3~100 VDC I ≤ 0.01CV or 4 (μA)								160~450 VDC I ≤ 0.03CV + 40 (μA)max								
	*Whichever is greater after 3 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)																
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450		
	S.V.	8	13	20	32	44	63	79	125	200	250	300	400	450	500		
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF																
	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450		
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.10	0.08	0.15	0.15	0.15	0.20	0.20	0.20		
Low Temperature Stability	Impedance ratio at 120Hz																
	Rated Voltage (V)	6.3		10		16		25		35~100		160~250		350~400		450	
	-25°C / +20°C	4		3		2		2		2		3		6		15	
	-40°C / +20°C	8		6		4		3		3		6		6		—	
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)																
	Capacitance Change	≤ ±20% of initial value															
	Dissipation Factor	≤ 150% of initial specified value															
	Leakage current	≤ initial specified value															
Shelf Life	At +85°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)																
	Capacitance Change	≤ ±20% of initial value															
	Dissipation Factor	≤ 200% of initial specified value															
	Leakage current	≤ 200% of initial specified value															

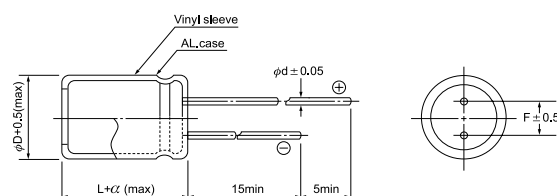
DIMENSIONS (mm)

φD	5	6.3	8	10	12.5	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	12.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0

RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85
Multiplier	1.25	1.14	1.00

Frequency(Hz)	60	120	1k	≥10k
W.V.	Multiplier			
6.3~25V	0.85	1.00	1.10	1.20
35~100V	0.80	1.00	1.15	1.25
160~250V	0.75	1.00	1.25	1.40
350~450V	0.70	1.00	1.30	1.50



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
47	470						5x11	130
100	101		5x11	160	5x11	170	6.3x11	210
220	221		5x11	240	5x11	250	6.3x11	310
			6.3x11	270	6.3x11	290	8x11.5	370
330	331		6.3x11	330	6.3x11	350	8x11.5	450
			8x11.5	380	8x11.5	410	10x12.5	470
470	471		6.3x11	390	6.3x11	420	8x11.5	540
			8x11.5	460	8x11.5	490	10x12.5	560
1000	102		8x11.5	670	10x12.5	760	10x16	920
			10x12.5	700	10x16	840	10x20	1010
2200	222		10x16	1110	10x20	1310	12.5x20	1510
			10x20	1220	12.5x20	1390	12.5x25	1660
3300	332		10x20	1440	12.5x20	1630	12.5x25	1930
			12.5x20	1530	12.5x25	1800	16x25	1940
4700	472		12.5x20	1730	12.5x25	2020	16x25	2160
			12.5x25	1910	16x25	2030	16x31.5	2390
6800	682		12.5x25	2160	16x25	2270	16x31.5	2650
			16x25	2170	16x31.5	2510	18x35.5	2980
8200	822		16x25	2280	16x31.5	2630	16x35.5	2910
			16x31.5	2520	18x35.5	2960	18x40	3280
10000	103		16x25	2390	16x35.5	2900	18x35.5	3230
			16x31.5	3640	18x35.5	3090	18x40	3400
15000	153		16x35.5	3050	18x35.5	3360	22x40	4090
			18x35.5	3260	18x40	3540	22x50	4520
22000	223		18x40	3680	22x50	4650	25x50	5120

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47					→	5x11	16
1	010					→	5x11	24
2.2	2R2					→	5x11	35
3.3	3R3					→	5x11	43
4.7	4R7					→	5x11	50
10	100		5x11	60	5x11	70	5x11	75
22	220		5x11	95	5x11	100	5x11	110
33	330		5x11	110	5x11	120	5x11	140
			6.3x11	130	6.3x11	140	6.3x11	150
47	470		5x11	140	5x11	150	6.3x11	180
			6.3x11	160	6.3x11	170	8x11.5	210
100	101		6.3x11	230	6.3x11	240	8x11.5	310
			8x11.5	260	8x11.5	290	10x12.5	330
220	221		8x11.5	390	8x11.5	420	10x12.5	490
			10x12.5	410	10x12.5	450	10x16	540
330	331		8x11.5	480	10x12.5	550	10x16	670
			10x12.5	510	10x16	610	10x20	730
470	471		10x12.5	600	10x16	720	10x20	820
			10x16	670	10x20	800	12.5x20	930
1000	102		10x20	1080	12.5x20	1240	12.5x25	1500
			12.5x20	1150	12.5x25	1370	16x25	1510
2200	222		12.5x25	1760	16x25	1890	16x35.5	2390
			16x25	1770	16x31.5	2090	18x35.5	2550
3300	332		16x25	2040	16x35.5	2530	18x35.5	2890
			16x31.5	2260	18x35.5	2700	18x40	3050
4700	472		16x31.5	2500	18x35.5	2960	22x45	3880
			18x35.5	2810	18x40	3120		
6800	682		18x35.5	3100	22x45	4020		
			18x40	3270			25x50	4730
8200	822		22x45	4000	22x50	4350		
10000	103		22x50	4330	25x50	4800		
15000	153		25x50	4970				

All blank voltage on sleeve marking is the same voltage as " → " point to.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		63 (1J)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.
0.47	R47			→	5x11	16
1	010			→	5x11	23
2.2	2R2			→	5x11	34
3.3	3R3			→	5x11	42
4.7	4R7			→	5x11	50
10	100		5x11	65	6.3x11	80
22	220		5x11	95	6.3x11	120
			6.3x11	110	8x11.5	140
33	330		6.3x11	130	8x11.5	170
			8x11.5	160	10x12.5	180
47	470		6.3x11	160	10x12.5	220
			8x11.5	190	10x16	240
100	101		10x12.5	290	10x20	390
			10x16	320	12.5x20	420
220	221		10x16	470	12.5x25	680
			10x20	520	16x25	690
330	331		10x20	640	12.5x25	840
			12.5x20	680	16x25	840
470	471		12.5x20	810	16x25	1010
			12.5x25	900	16x31.5	1110
1000	102		16x25	1310	18x40	1930
			16x31.5	1450	22x35	2030
2200	222		22x35	2460	25x50	3390
3300	332		22x50	3270		
4700	472		25x50	3800		

All blank voltage on sleeve marking is the same voltage as " → "point to.

μF	V(Code)		160 (2C)		200 (2D)		250 (2E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47		6.3x11	13	6.3x11	14	6.3x11	15
1	010		6.3x11	19	6.3x11	20	6.3x11	22
2.2	2R2		6.3x11	28	6.3x11	30	6.3x11	33
3.3	3R3		6.3x11	35	6.3x11	37	8x11.5	47
4.7	4R7		6.3x11	41	8x11.5	50	8x11.5	55
10	100		8x11.5	70	10x12.5	80	10x16	95
22	220		10x16	120	10x20	140	12.5x20	170
33	330		10x20	160	12.5x20	190	12.5x20	210
47	470		12.5x20	210	12.5x20	230	12.5x25	270
100	101		12.5x25	340	16x25	360	16x31.5	440
220	221		16x35.5	590	18x40	710		
			22x30	650	22x30	700	22x35	810
330	331		18x40	810				
			22x30	800	22x40	970	22x45	1110
470	471		22x40	1080	22x45	1220	25x45	1430
560	561		22x45	1240	22x50	1400	25x50	1630
680	681		22x50	1430	25x50	1650		
820	821		25x50	1690				

μF	V(Code)		350 (2V)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47		8x11.5	15	8x11.5	16	8x11.5	15
1	010		8x11.5	22	8x11.5	23	8x11.5	22
2.2	2R2		8x11.5	33	8x11.5	34	10x12.5	35
3.3	3R3		10x12.5	43	10x12.5	44	10x16	47
4.7	4R7		10x12.5	50	10x16	60	10x18	60
10	100		10x20	90	12.5x20	100	12.5x20	95
22	220		12.5x20	140	12.5x25	160	16x25	160
33	330		12.5x25	190	16x25	200	16x31.5	220
47	470		16x25	230	16x31.5	270	18x35.5	290
					22x30	310		
100	101		18x35.5	420	18x35.5	440	18x35.5	420
			22x35	470	22x40	520		
150	151		22x40	610	25x50	750		
220	221		22x50	820				

RADIAL TYPE

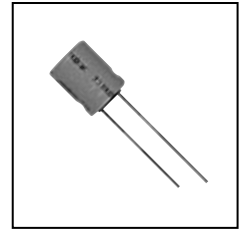
SM

Series

Standard, Miniature Sized

JAMICON®

- One rank smaller case sizes than SK series
- SM series has high value of CV for general purposes.



● SPECIFICATION

Item	Characteristic										
Operation Temperature Range	-40 ~ +85°C										
Rated Working Voltage	6.3 ~ 100VDC										
Capacitance Tolerance (120Hz 20°C)	±20%(M)										
Leakage Current (20°C)	$I \leq 0.03CV$ or $4 (\mu A)$					I : Leakage Current (μA)					
	*Whichever is greater after 3 minutes					C : Rated Capacitance (μF)					
						V : Working Voltage (V)					
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100		
	S.V.	8	13	20	32	44	63	79	125		
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF										
	W.V.	6.3	10	16	25	35	50	63	100		
	tan δ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08		
Low Temperature Stability	Impedance ratio at 120Hz										
	Rated Voltage (V)		6.3	10	16	25	35	50	63	100	
	-25°C / +20°C		5	4	3	2	2	2	2	2	
	-40°C / +20°C		12	10	8	5	4	4	3	3	
Load Life	After 1000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)										
	Capacitance Change	$\leq \pm 20\%$ of initial value									
	Dissipation Factor	$\leq 150\%$ of initial specified value									
	Leakage current	\leq initial specified value									
Shelf Life	At +85°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)										
	Capacitance Change	$\leq \pm 20\%$ of initial value									
	Dissipation Factor	$\leq 200\%$ of initial specified value									
	Leakage current	$\leq 200\%$ of initial specified value									

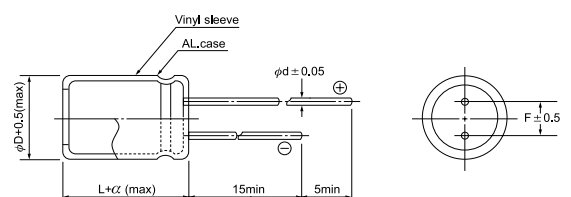
● DIMENSIONS (mm)

ϕD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5

● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85
Multiplier	1.25	1.14	1.00

Frequency(Hz)	60	120	1k	$\geq 10k$
W.V.	Multiplier			
6.3~25V	0.85	1.00	1.10	1.20
35~100V	0.80	1.00	1.15	1.25



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
100	101					→	5x11	180
220	221		5x11	230	5x11	250	6.3x11	300
330	331		6.3x11	310	6.3x11	340	8x11.5	440
470	471		6.3x11	370	6.3x11	410	8x11.5	520
1000	102		8x11.5	640	10x12.5	740	10x16	890
2200	222		10x20	1170	10x20	1280	12.5x20	1470
3300	332		10x20	1390	12.5x20	1600	12.5x25	1880
4700	472		12.5x20	1680	12.5x25	1980	16x25	2110
6800	682		12.5x25	2090	16x25	2240	16x31.5	2600
10000	103		16x25	2330	16x35.5	2860	18x35.5	3180
15000	153		16x35.5	2990	18x35.5	3320		
22000	223		18x40	3620				

All blank voltage on sleeve marking is the same voltage as " → "point to.

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
22	220			→	5x11	100	5x11	110
33	330			→	5x11	120	5x11	130
47	470			→	5x11	150	6.3x11	180
100	101		6.3x11	220	6.3x11	240	8x11.5	300
220	221		8x11.5	380	8x11.5	420	10x12.5	470
330	331		8x11.5	460	10x12.5	550	10x16	630
470	471		10x12.5	580	10x16	720	10x20	830
1000	102		10x20	1040	12.5x20	1240	12.5x25	1430
2200	222		12.5x25	1710	16x25	1890	16x35.5	2290
3300	332		16x25	1990	16x35.5	2530	18x35.5	2790
4700	472		16x31.5	2440	18x35.5	2960		
6800	682		18x35.5	3040				

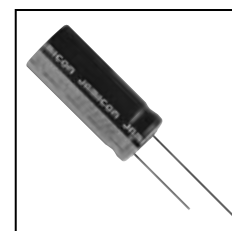
μF	V(Code)		63 (1J)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.
10	100		5x11	75	6.3x11	95
22	220		5x11	110	6.3x11	140
33	330		6.3x11	150	8x11.5	200
47	470		6.3x11	180	10x12.5	250
100	101		10x12.5	330	10x20	450
220	221		10x16	540	12.5x25	790
330	331		10x20	730	12.5x25	960
470	471		12.5x20	930	16x25	1160
1000	102		16x25	1510	18x40	2200

RADIAL TYPE

TK Series

Wide Temperature Range

- High temperature 105°C and high reliability



SPECIFICATION

Item	Characteristic														
Operation Temperature Range	-55 ~ +105°C					-40 ~ +105°C					-25 ~ +105°C				
Rated Working Voltage	6.3 ~ 100VDC					160 ~ 400VDC					450VDC				
Capacitance Tolerance (120Hz 20°C)	±20%(M)														
Leakage Current (20°C)	6.3~100 VDC I ≤ 0.01CV or 4 (μA)					160~450 VDC I ≤ 0.03CV + 40 (μA)max									
	*Whichever is greater after 3 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)														
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	S.V.	8	13	20	32	44	63	79	125	200	250	300	400	450	500
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF														
	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	tan δ	0.24	0.20	0.17	0.15	0.12	0.10	0.10	0.08	0.15	0.15	0.15	0.20	0.20	0.20
Low Temperature Stability	Impedance ratio at 120Hz														
	Rated Voltage (V)	6.3		10	16	25	35~100	160~250	350~400	450					
	-25°C / +20°C	4		3	2	2	2	3	6	15					
	-40°C / +20°C	10		8	6	4	3	4	10	—					
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)														
	Capacitance Change	≤ ±25% of initial value for 6.3~16 W.V., ≤ ±20% of initial value for 25~450 W.V.													
	Dissipation Factor	≤ 200% of initial specified value													
	Leakage current	≤ initial specified value													
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)														

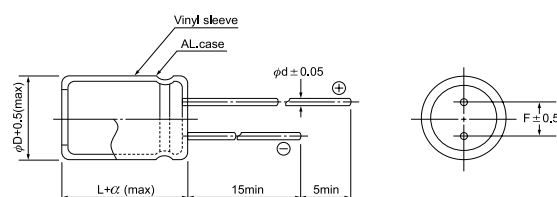
DIMENSIONS (mm)

φD	5	6.3	8	10	12.5	16	18	20	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	1.0	1.0
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0

RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	85	105
Multiplier	1.75	1.40	1.00

Frequency(Hz)	60	120	1k	≥10k
W.V.	Multiplier			
6.3~25V	0.85	1.00	1.10	1.20
35~100V	0.80	1.00	1.15	1.25
160~250V	0.75	1.00	1.25	1.40
350~450V	0.70	1.00	1.30	1.80



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
47	470					→	5x11	90
100	101		5x11	110	5x11	120	5x11	130
220	221		5x11	160	5x11	180	6.3x11	220
330	331		6.3x11	220	6.3x11	250	8x11.5	310
470	471		6.3x11	270	6.3x11	290	8x11.5	370
1000	102		8x11.5	460	10x12.5	530	10x16	630
2200	222		10x16	760	10x20	910	12.5x20	1050
3300	332		10x20	990	12.5x20	1140	12.5x25	1340
4700	472		12.5x20	1200	12.5x25	1420	16x25	1510
6800	682		12.5x25	1500	16x25	1600	16x31.5	1860
10000	103		16x25	1660	16x35.5	2040	18x35.5	2270
15000	153		16x35.5	2140	18x35.5	2370	20x40	2550
22000	223		18x40	2590	20x40	2830	22x50	3380
33000	333		22x50	3390	22x50	3470	25x50	3790

All blank voltage on sleeve marking is the same voltage as" → "point to.

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1					→	5x11	5
0.22	R22					→	5x11	8
0.33	R33					→	5x11	10
0.47	R47					→	5x11	12
1	010					→	5x11	17
2.2	2R2					→	5x11	25
3.3	3R3					→	5x11	31
4.7	4R7					→	5x11	36
10	100		5x11	43	5x11	49	5x11	55
22	220		5x11	65	5x11	70	5x11	80
33	330		5x11	80	5x11	90	5x11	95
47	470		5x11	95	5x11	110	6.3x11	130
100	101		6.3x11	160	6.3x11	170	8x11.5	220
220	221		8x11.5	270	8x11.5	300	10x12.5	350
330	331		8x11.5	330	10x12.5	390	10x16	480
470	471		10x12.5	420	10x16	520	10x20	630
1000	102		10x20	740	12.5x20	890	12.5x25	1070
2200	222		12.5x25	1220	16x25	1350	16x35.5	1700
3300	332		16x25	1420	16x35.5	1810	18x35.5	2060
4700	472		16x31.5	1740	18x35.5	2110		
6800	682		18x35.5	2170				
10000	103		20x40	2610				
15000	153		22x50	3270				
22000	223		25x50	3690				

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code)		63 (1J)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.
0.1	0R1			→	5x11	6
0.22	R22			→	5x11	9
0.33	R33			→	5x11	11
0.47	R47			→	5x11	13
1	010			→	5x11	19
2.2	2R2			→	5x11	28
3.3	3R3			→	5x11	34
4.7	4R7			→	5x11	41
10	100		5x11	55	6.3x11	65
22	220		5x11	80	6.3x11	100
33	330		6.3x11	110	8x11.5	140
47	470		6.3x11	130	10x12.5	180
100	101		10x12.5	240	10x20	320
220	221		10x16	390	12.5x25	560
330	331		10x20	520	12.5x25	690
470	471		12.5x20	670	16x25	830
1000	102		16x25	1080	18x40	1580
2200	222				22x50	2590

All blank voltage on sleeve marking is the same voltage as" → "point to.

μF	V(Code)		160 (2C)		200 (2D)		250 (2E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47		6.3x11	12	6.3x11	13	6.3x11	14
1	010		6.3x11	18	6.3x11	19	6.3x11	21
2.2	2R2		6.3x11	26	6.3x11	28	6.3x11	31
3.3	3R3		6.3x11	32	6.3x11	34	8x11.5	44
4.7	4R7		6.3x11	38	8x11.5	48	8x11.5	50
10	100		8x11.5	65	10x12.5	75	10x16	90
22	220		10x16	110	10x20	130	12.5x20	160
33	330		10x20	150	12.5x20	180	12.5x20	190
47	470		12.5x20	190	12.5x20	210	12.5x25	250
100	101		12.5x25	310	16x25	340	16x31.5	410
220	221		16x35.5	540	18x40	660		
330	331		18x40	750				
470	471		22x40	1000				
1000	102		25x50	1730				

μF	V(Code)		350 (2V)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47		8x11.5	14	8x11.5	15	10x12.5	15
1	010		8x11.5	21	8x11.5	21	10x12.5	22
2.2	2R2		8x11.5	31	10x12.5	33	10x20	39
3.3	3R3		10x12.5	39	10x12.5	41	12.5x20	50
4.7	4R7		10x12.5	47	10x16	55	12.5x20	60
10	100		10x20	85	12.5x20	90	16x25	100
22	220		12.5x25	150	12.5x25	150	16x31.5	160
33	330		16x25	180	16x31.5	210	18x35.5	230
47	470		16x35.5	250	18x35.5	280		
100	101		18x40	410	20x40	450		
220	221		22x50	760				

RADIAL TYPE

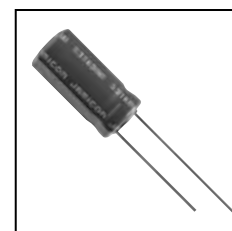
TM

Series

High Reliability, Wide Temperature Range

JAMICON®

- High temperature 105°C and high reliability.
- Good reliability series for communication equipment and industrial measurement instruments.



● SPECIFICATION

Item	Characteristic															
Operation Temperature Range	-40 ~ +105°C								-25 ~ +105°C							
Rated Working Voltage	6.3 ~ 100VDC								160~450VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)								+50% -10%(T)							
Leakage Current (20°C)	$I \leq 0.01CV$ or $4 (\mu A)$								$I \leq 0.03CV + 40 (\mu A)$ max							
	*Whichever is greater after 3 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)															
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	S.V.	8	13	20	32	44	63	79	125	200	250	300	400	450	500	
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF															
	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	tan δ	0.20	0.17	0.15	0.12	0.10	0.09	0.09	0.07	0.15	0.12	0.10	0.15	0.15	0.15	
Low Temperature Stability	Impedance ratio at 120Hz															
	Rated Voltage (V)		6.3		10~16		25~100		160~250		350~400		450			
	-25°C / +20°C		4		3		2		4		8		15			
	-40°C / +20°C		8		6		4		—		—		—			
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)															
	Capacitance Change		$\leq \pm 25\%$ of initial value for 6.3~16W.V., $\leq \pm 20\%$ of initial value for 25~450W.V.													
	Dissipation Factor		$\leq 200\%$ of initial specified value													
	Leakage current		\leq initial specified value													
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)															
	Capacitance Change		$\leq \pm 20\%$ of initial value													
	Dissipation Factor		$\leq 200\%$ of initial specified value													
	Leakage current		$\leq 200\%$ of initial specified value													

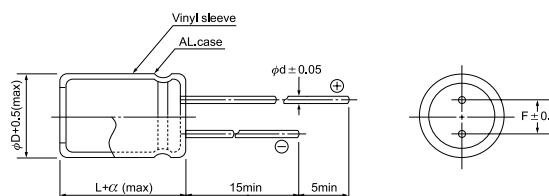
● DIMENSIONS (mm)

ϕD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5

● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	85	105
Multiplier	1.80	1.50	1.00

Frequency(Hz)	60	120	1k	$\geq 10k$
W.V.	Multiplier			
6.3~25V	0.80	1.00	1.15	1.20
35~100V	0.75	1.00	1.30	1.40
160~450V	0.70	1.00	1.40	1.60



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
47	470					→	5x11	85
100	101		6.3x11	120	6.3x11	130	6.3x11	140
220	221		6.3x11	180	6.3x11	190	8x11.5	240
330	331		8x11.5	260	8x11.5	280	10x12.5	310
470	471		8x11.5	310	8x11.5	330	10x12.5	370
1000	102		10x12.5	470	10x16	570	10x20	660
2200	222		10x20	810	12.5x20	930	12.5x25	1090
3300	332		12.5x20	1020	12.5x25	1200	16x25	1270
4700	472		12.5x25	1260	16x25	1350	16x31.5	1560
6800	682		16x25	1430	16x31.5	1660	18x35.5	1940
10000	103		16x31.5	1730	18x35.5	2030	18x40	2200
15000	153		18x35.5	2120	18x40	2310		

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47					→	5x11	11
1	010					→	5x11	16
2.2	2R2					→	5x11	23
3.3	3R3					→	5x11	29
4.7	4R7					→	5x11	34
10	100		5x11	43	5x11	47	5x11	50
22	220		5x11	65	6.3x11	80	6.3x11	85
33	330		6.3x11	90	6.3x11	100	8x11.5	120
47	470		6.3x11	110	8x11.5	140	8x11.5	140
100	101		8x11.5	180	8x11.5	200	10x12.5	220
220	221		10x12.5	280	10x12.5	310	10x16	360
330	331		10x12.5	350	10x16	420	10x20	490
470	471		10x16	460	10x20	560	12.5x20	630
1000	102		12.5x20	790	12.5x25	960	16x25	1010
2200	222		16x25	1210	16x31.5	1440	18x35.5	1700
3300	332		16x31.5	1530	18x35.5	1840	18x40	2020
4700	472		18x35.5	1890	18x40	2100		
6800	682		18x40	2170				

μF	V(Code)		63 (1J)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.
0.47	R47			→	5x11	12
1	010			→	5x11	18
2.2	2R2			→	5x11	27
3.3	3R3			→	5x11	33
4.7	4R7			→	5x11	39
10	100		5x11	50	6.3x11	65
22	220		6.3x11	85	8x11.5	110
33	330		8x11.5	120	10x12.5	140
47	470		10x12.5	150	10x16	190
100	101		10x16	250	12.5x20	330
220	221		10x20	400	16x25	540
330	331		12.5x20	530	16x25	660
470	471		12.5x25	690	16x31.5	870
1000	102		16x31.5	1120		

All blank voltage on sleeve marking is the same voltage as " → "point to.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code)		160 (2C)		200 (2D)		250 (2E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47		6.3x11	13	6.3x11	14	6.3x11	15
1	010		6.3x11	19	6.3x11	20	8x11.5	26
2.2	2R2		6.3x11	28	6.3x11	30	8x11.5	38
3.3	3R3		8x11.5	40	8x11.5	43	10x12.5	49
4.7	4R7		8x11.5	48	10x12.5	55	10x12.5	60
10	100		10x12.5	75	10x16	90	10x20	110
22	220		10x20	140	10x20	140	12.5x20	170
33	330		12.5x20	180	12.5x20	190	12.5x25	220
47	470		12.5x25	230	12.5x25	250	16x25	270
100	101		16x25	340	16x31.5	400	16x35.5	460
220	221		18x35.5	630	18x40	710		

μF	V(Code)		350 (2V)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
1	010		10x12.5	19	10x12.5	20	10x18	20
2.2	2R2		10x16	32	10x18	35	12.5x20	33
3.3	3R3		10x20	43	12.5x20	48	12.5x25	45
4.7	4R7		12.5x20	55	12.5x20	55	16x25	55
10	100		12.5x25	85	12.5x25	90	16x31.5	85
22	220		16x31.5	140	16x31.5	150	16x35.5	140
33	330		18x35.5	200	18x35.5	210	18x40	190
47	470		18x40	250	18x40	260		

RADIAL TYPE

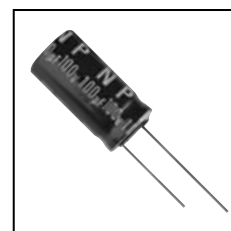
NK

Series

Non Polarity

JAMICON®

- Standard non polarity series for using in polarity reversal circuits.

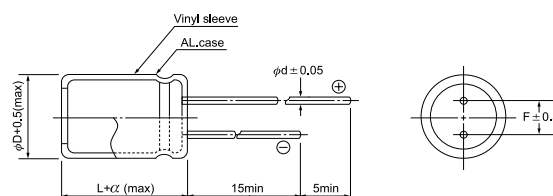


● SPECIFICATION

Item	Characteristic										
Operation Temperature Range	-40 ~ +85°C										
Rated Working Voltage	6.3 ~ 100VDC										
Capacitance Tolerance (120Hz 20°C)	±20%(M)										
Leakage Current (20°C)	$I \leq 0.04CV + 4 (\mu A)$							I : Leakage Current (μA)			
	*Whichever is greater after 5 minutes							C : Rated Capacitance (μF)			
								V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100		
	S.V.	8	13	20	32	44	63	79	125		
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF										
	W.V.	6.3	10	16	25	35	50	63	100		
	tan δ	0.24	0.20	0.17	0.15	0.12	0.12	0.12	0.12	0.12	
Low Temperature Stability	Impedance ratio at 120Hz										
	Rated Voltage (V)		6.3	10	16	25	35	50	63	100	
	-25°C / +20°C		4	3	2	2	2	2	2	2	
	-40°C / +20°C		10	8	6	4	4	3			
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage) (The polarity need to exchange every 250 hours)										
	Capacitance Change	$\leq \pm 20\%$ of initial value									
	Dissipation Factor	$\leq 150\%$ of initial specified value									
	Leakage current	\leq initial specified value									
Shelf Life	At +85°C no voltage application after 500 hours the capacitor shall meet the following limits. (with voltage treatment)										
	Capacitance Change	$\leq \pm 20\%$ of initial value									
	Dissipation Factor	$\leq 200\%$ of initial specified value									
	Leakage current	$\leq 200\%$ of initial specified value									

● DIMENSIONS (mm)

ϕD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
10	100					→	5x11	47
22	220				5x11	65	6.3x11	80
33	330		5x11	70	6.3x11	90	8x11.5	110
47	470		6.3x11	100	6.3x11	110	8x11.5	140
100	101		8x11.5	170	8x11.5	180	10x16	230
220	221		10x12.5	260	10x16	310	10x20	380
330	331		10x16	350	10x20	420	12.5x20	460
470	471		10x20	460	12.5x20	500	12.5x25	600
1000	102		12.5x25	740	16x31.5	950	16x31.5	1030
2200	222		16x31.5	1240	16x35.5	1350	16x31.5	1450
3300	332		16x25	1540	16x31.5	1500	18x35.5	1900
4700	472		16x31.5	1660	18x35.5	2000		
6800	682		18x35.5	2120				

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47	R47					→	5x11	12
1	010					→	5x11	18
2.2	2R2					→	5x11	26
3.3	3R3					→	6.3x11	37
4.7	4R7		5x11	34	5x11	38	6.3x11	44
10	100		6.3x11	55	6.3x11	65	8x11.5	75
22	220		8x11.5	100	8x11.5	110	10x12.5	120
33	330		8x11.5	120	10x12.5	140	10x16	160
47	470		10x12.5	150	10x16	190	10x20	210
100	101		10x20	270	12.5x20	300	12.5x25	330
220	221		12.5x20	400	12.5x25	490	16x31.5	580
330	331		16x25	570	16x25	640	16x35.5	750
470	471		16x31.5	760	16x31.5	840	16x31.5	840
1000	102		16x31.5	1100	16x35.5	1300		
2200	222		18x35.5	1730				

μF	V(Code)		63 (1J)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.
0.47	R47			→	5x11	12
1	010			→	5x11	18
2.2	2R2		5x11	26	6.3x11	30
3.3	3R3		6.3x11	37	8x11.5	43
4.7	4R7		6.3x11	44	8x11.5	50
10	100		8x11.5	75	10x16	85
22	220		10x16	130	12.5x20	140
33	330		10x20	170	12.5x25	190
47	470		12.5x20	210	16x25	240
100	101		16x25	350	16x31.5	390
220	221		16x31.5	580	18x35.5	650
330	331		18x35.5	800	18x35.5	800
470	471		18x35.5	950	18x40	1000

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

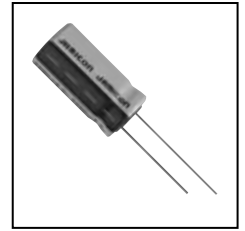
LK

Series

Low Leakage Current

JAMICON®

- Standard low leakage current series.
- Suitable for Hi-Fi pre-amplifiers and TV oscillation loop circuits.

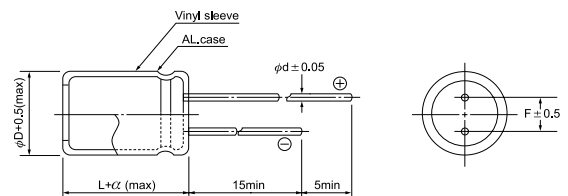


● SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +85°C							
Rated Working Voltage	10 ~ 63VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M) +30% -10%(Q)							
Leakage Current (20°C)	I ≤ 0.004CV or 0.4 (μA) *Under 1kΩ resistor series and rated voltage applied whichever is greater after 1 minute				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
	Surge Voltage (20°C)	W.V.	10	16	25	35	50	63
Dissipation Factor (tan δ) (120Hz 20°C)	S.V.	13	20	32	44	63	79	
	W.V.	10	16	25	35	50	63	
Low Temperature Stability	tan δ	0.20	0.16	0.14	0.12	0.10	0.10	
	Impedance ratio at 120Hz							
	Rated Voltage (V)	10	16	25	35	50	63	
	-25°C / +20°C	4	4	4	4	4	4	
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rated working voltage)							
	Capacitance Change	≤ ± 15% of initial value						
	Dissipation Factor	≤ 150% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +85°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)							

● DIMENSIONS (mm)

φD	5	6.3	8	10	12.5
F	2.0	2.5	3.5	5.0	5.0
d	0.5	0.5	0.6	0.6	0.6
α	1.5	1.5	1.5	1.5	1.5



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		10 (1A)		16 (1C)		25 (1E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
4.7	4R7					→	5x11	36
10	100			→	5x11	48	6.3x11	60
22	220		5x11	65	6.3x11	80	8x11.5	100
33	330		6.3x11	90	6.3x11	100	8x11.5	130
47	470		6.3x11	110	8x11.5	140	10x12.5	160
100	101		8x11.5	180	10x12.5	210	10x16	250
220	221		10x16	310	10x20	390	12.5x20	410
330	331		10x20	420	12.5x20	470	12.5x25	560
470	471		12.5x20	500	12.5x20	560		
1000	102		12.5x25	810				

μF	V(Code)		35 (1V)		50 (1H)		63 (1J)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1	0R1			→	5x11	6	5x11	6
0.22	R22			→	5x11	9	5x11	9
0.33	R33			→	5x11	11	5x11	11
0.47	R47			→	5x11	13	5x11	13
1	010			→	5x11	19	5x11	19
2.2	2R2			→	5x11	29	5x11	29
3.3	3R3			→	5x11	35	5x11	35
4.7	4R7		5x11	38	6.3x11	48	6.3x11	48
10	100		6.3x11	65	8x11.5	80	8x11.5	80
22	220		8x11.5	110	10x12.5	130	10x16	140
33	330		10x12.5	140	10x16	170	10x16	170
47	470		10x12.5	170	10x16	210	10x20	230
100	101		10x20	300	12.5x20	330	12.5x25	360
220	221		12.5x25	490				

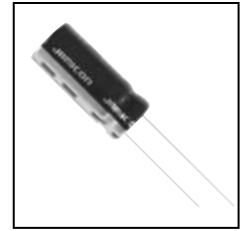
All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

MZ Series

JAMICON®

- Has a high ripple current, low IMP & low ESR and long life characteristics.
- Suitable for output of M/B and switching power supplies.

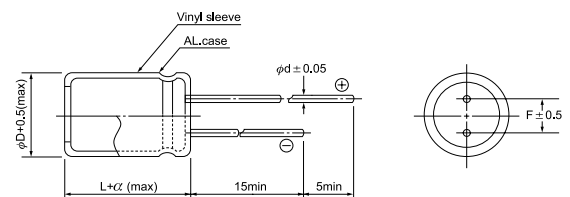


● SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-40 ~ +105°C					
Rated Working Voltage	6.3 ~ 25VDC					
Capacitance Tolerance (120Hz 20°C)	±20%(M)					
Leakage Current (20°C)	I ≤ 0.03CV or 3 (μA) *Whichever is greater after 2 minutes			I : Leakage Current (μA)	C : Rated Capacitance (μF)	V : Working Voltage (V)
Surge Voltage (20°C)	W.V.	6.3	10	16	25	
	S.V.	8	13	20	32	
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF					
	W.V.	6.3	10	16	25	
	tan δ	0.22	0.19	0.16	0.16	
Low Temperature Stability	Impedance ratio at 120Hz					
	Rated Voltage (V)	6.3	10	16	25	
	-25°C / +20°C	2	2	2	2	
	-40°C / +20°C	3	3	3	3	
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)					
	Capacitance Change	≤ ±25% of initial value				
	Dissipation Factor	≤ 200% of initial specified value				
	Leakage current	≤ initial specified value				
Shelf Life	At +105°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)					

● DIMENSIONS (mm)

φD	8	10	12.5
F	3.5	5.0	5.0
d	0.6	0.6	0.6
α	1.5	1.5	1.5



● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	≤65	85	105
Multiplier	2.1	1.7	1.0

Frequency(Hz)	120	1k	10k	≥100k
Multiplier	0.50	0.80	0.90	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max E.S.R. : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code)		6.3 (0J)			10 (1A)		
	Code	Item	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
680	681					8x14	0.036	1230
820	821		8x11.5	0.036	1230			
1000	102		8x16	0.028	1560	8x16	0.028	1660
						10x12.5	0.028	1700
1200	122		8x16	0.028	1710			
1500	152		8x20	0.018	2040	8x20	0.019	2150
			10x12.5	0.020	1760	10x16	0.019	2200
1800	182		10x16	0.018	2140	10x20	0.013	2660
2200	222		10x20	0.015	2530	10x23	0.012	3000
3300	332		10x23	0.012	3110			
3900	392		10x26	0.012	3480			
4700	472		12.5x26	0.014	3810			

μF	V(Code)		16 (1C)			25 (1E)		
	Code	Item	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
470	471		8x11.5	0.036	1160	10x16	0.019	2030
680	681		8x16	0.028	1610			
			10x12.5	0.028	1640			
1000	102		8x20	0.019	2160			
			10x16	0.019	2210			
1500	152		10x20	0.013	2830			
1800	182		10x23	0.012	3300			

RADIAL TYPE

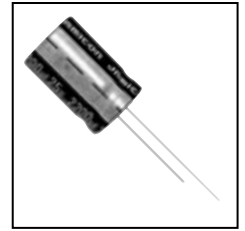
TB

Series

Long Life, Low Impedance, High Reliability

JAMICON®

- Low impedance and long life withstanding 10000 hours load life
- Suitable for electronic ballast, adaptor and switching power



SPECIFICATION

Item	Characteristic										
Operation Temperature Range	-40 ~ +105°C										
Rated Working Voltage	6.3 ~ 100VDC										
Capacitance Tolerance (120Hz 20°C)	±20%(M)										
Leakage Current (20°C)	$I \leq 0.01CV$ or $3 \mu A$										
	*Whichever is greater after 3 minutes										
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100		
	S.V.	8	13	20	32	44	63	79	125		
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF										
	W.V.	6.3	10	16	25	35	50	63	100		
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08		
Low Temperature Stability	Impedance ratio at 120Hz										
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100		
	-25°C / +20°C	4	3	2	2						
	-40°C / +20°C	8	6	4	3						
Load Life	After application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)										
	Rated Voltage (V)	6.3~10					16~100				
	Life Time	$\phi D \leq 6.3mm$ 4000 hours		$\phi D = 10mm$ 6000 hours		$\phi D \geq 12.5mm$ 8000 hours		$\phi D \leq 6.3mm$ 5000 hours		$\phi D = 10mm$ 7000 hours	
	Capacitance Change	$\leq \pm 25\%$ of initial value									
	Dissipation Factor	$\leq 200\%$ of initial specified value									
	Leakage current	\leq initial specified value									
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)										

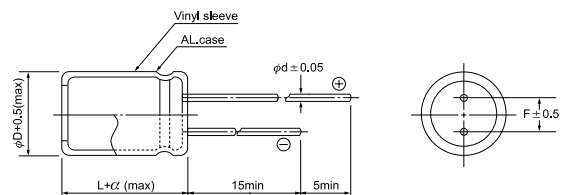
DIMENSIONS (mm)

ϕD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5

RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	≤ 65	85	105
Multiplier	2.12	1.69	1.00

Frequency(Hz)		120	1k	10k	$\geq 100k$
Coefficient	0.47~10 μF	0.42	0.60	0.80	1.00
	22~33 μF	0.55	0.75	0.90	1.00
	47~330 μF	0.70	0.85	0.95	1.00
	470~1000 μF	0.75	0.90	0.98	1.00
	2200~15000 μF	0.80	0.95	1.00	1.00



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF \ V(Code) Code \ Item		6.3 (0J)				10 (1A)				16 (1C)			
		DxL	IMP.		R.C.	DxL	IMP.		R.C.	DxL	IMP.		R.C.
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
47	470									5x11	0.568	1.703	150
100	101	5x11	0.595	1.784	200	5x11	0.482	1.446	210	6.3x11	0.367	1.101	250
220	221	6.3x11	0.307	0.922	340	6.3x11	0.249	0.747	350	8x11.5	0.190	0.569	430
330	331	6.3x11	0.246	0.737	410	8x11.5	0.169	0.507	500	8x11.5	0.152	0.455	520
470	471	8x11.5	0.178	0.534	540	8x11.5	0.138	0.415	560	10x12.5	0.093	0.279	690
1000	102	10x12.5	0.066	0.199	920	10x16	0.063	0.189	1070	10x20	0.060	0.180	1230
2200	222	12.5x20	0.038	0.113	1660	12.5x20	0.036	0.108	1720	12.5x25	0.034	0.103	1960
3300	332	12.5x20	0.032	0.095	1910	12.5x25	0.030	0.090	2170	16x25	0.029	0.086	2570
4700	472	16x25	0.027	0.080	2660	16x25	0.025	0.076	2730	16x31.5	0.024	0.073	3100
6800	682	16x25	0.024	0.071	2920	16x31.5	0.023	0.068	3300	18x35.5	0.022	0.065	3800
10000	103	16x31.5	0.021	0.064	3450	18x35.5	0.020	0.061	3940				
15000	153	18x35.5	0.020	0.061	4130								

μF \ V(Code) Code \ Item		25 (1E)				35 (1V)				50 (1H)			
		DxL	IMP.		R.C.	DxL	IMP.		R.C.	DxL	IMP.		R.C.
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
0.47	R47									5x11	5.658	16.973	25
1	010									5x11	3.989	11.966	36
2.2	2R2									5x11	2.417	7.252	55
3.3	3R3									5x11	2.014	6.043	65
4.7	4R7									5x11	1.697	5.092	80
10	100									5x11	1.330	3.989	110
22	220									5x11	0.725	2.176	140
33	330	5x11	0.672	2.015	150	5x11	0.635	1.905	160	6.3x11	0.564	1.692	200
47	470	5x11	0.539	1.616	170	6.3x11	0.510	1.529	210	6.3x11	0.453	1.358	230
100	101	6.3x11	0.348	1.045	280	8x11.5	0.329	0.988	370	8x14	0.292	0.877	420
220	221	8x11.5	0.180	0.540	480	10x12.5	0.128	0.383	640	10x16	0.113	0.340	760
330	331	10x12.5	0.108	0.324	700	10x16	0.102	0.306	870	10x20	0.091	0.272	1020
470	471	10x16	0.088	0.265	860	10x20	0.084	0.251	1070	12.5x20	0.074	0.223	1290
1000	102	12.5x20	0.057	0.171	1580	12.5x25	0.054	0.162	1940	16x25	0.048	0.144	2390
2200	222	16x25	0.032	0.097	2540	16x31.5	0.031	0.092	3070	18x35.5	0.027	0.082	3650
3300	332	16x31.5	0.027	0.081	3180	18x35.5	0.026	0.077	3870				
4700	472	18x35.5	0.023	0.069	3880								

μF \ V(Code) Code \ Item		63 (1J)				100 (2A)			
		DxL	IMP.		R.C.	DxL	IMP.		R.C.
			20°C	-10°C			20°C	-10°C	
0.47	R47					5x11	5.301	15.902	26
1	010					5x11	3.737	11.211	37
2.2	2R2					5x11	2.265	6.794	55
3.3	3R3					5x11	1.887	5.662	65
4.7	4R7					5x11	1.590	4.771	80
10	100	5x11	1.246	3.737	120	6.3x11	1.246	3.737	130
22	220	6.3x11	0.679	2.038	180	8x11.5	0.679	2.038	190
33	330	8x11.5	0.528	1.585	250	10x12.5	0.317	0.951	270
47	470	8x11.5	0.424	1.272	280	10x16	0.254	0.763	350
100	101	10x16	0.192	0.575	530	12.5x20	0.164	0.493	640
220	221	10x25	0.099	0.297	960	16x25	0.085	0.255	1200
330	331	12.5x25	0.079	0.238	1330	16x25	0.068	0.204	1470
470	471	12.5x30	0.065	0.195	1610				
1000	102	16x35.5	0.042	0.126	2900				

RADIAL TYPE

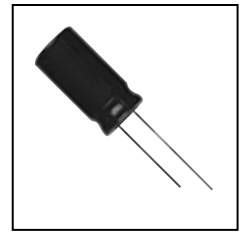
WL

Series

Low Impedance, Miniature Sized

JAMICON®

- Smaller case sizes than WG series.
- Lower impedance at high frequency and high ripple current.
- Suitable for output of Motherboard and Switching power supplies.



● SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.01CV$ or $3 (\mu A)$				I : Leakage Current (μA)			
	*Whichever is greater after 3 minutes				C : Rated Capacitance (μF)			
					V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF							
	W.V.	6.3	10	16	25	35	50	
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3~16			25~50			
	-25°C / +20°C	3			2			
	-55°C / +20°C	6			4			
Load Life	After hours ($\phi D \leq 8mm$ 1000 hours, $\phi D \geq 10mm$ 2000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)							

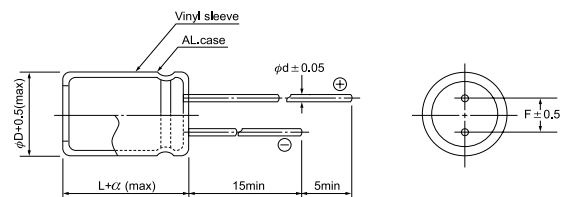
● DIMENSIONS (mm)

ϕD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5

● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85	95	105
Multiplier	2.12	1.92	1.69	1.50	1.00

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
10~16V	0.45	0.60	0.83	0.94	0.98	1.00
25~35V	0.38	0.50	0.75	0.90	0.97	1.00
50V	0.36	0.46	0.70	0.88	0.94	1.00



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code)		6.3 (0J)				10 (1A)			
	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
100	101					→	5x11	0.312	0.937	230
120	121					→	5x11	0.266	0.798	250
150	151		5x11	0.219	0.656	250	5x11	0.218	0.653	280
180	181		5x11	0.190	0.571	270	5x15	0.189	0.568	360
						→	6.3x11	0.189	0.568	350
220	221		5x11	0.162	0.487	300	5x15	0.161	0.484	400
						→	6.3x11	0.161	0.484	390
270	271		5x15	0.148	0.444	380	5x15	0.147	0.442	440
			6.3x11	0.148	0.444	380	6.3x11	0.147	0.442	430
330	331		5x15	0.130	0.389	420	6.3x15	0.129	0.387	550
			6.3x11	0.130	0.389	420	8x11.5	0.129	0.387	560
390	391		6.3x15	0.117	0.351	520	6.3x15	0.116	0.349	600
			8x11.5	0.117	0.351	530	8x11.5	0.116	0.349	610
470	471		6.3x15	0.106	0.319	570	6.3x15	0.106	0.317	660
			8x11.5	0.106	0.319	580	8x11.5	0.106	0.317	670
560	561		6.3x15	0.094	0.283	620	6.3x15	0.094	0.281	720
			8x11.5	0.094	0.283	630	8x11.5	0.094	0.281	730
680	681		6.3x15	0.084	0.252	680	8x15	0.083	0.250	900
			8x11.5	0.084	0.252	700	10x12.5	0.083	0.250	950
820	821		8x15	0.077	0.230	860	8x15	0.076	0.228	990
			10x12.5	0.077	0.230	900	10x12.5	0.076	0.228	1040
1000	102		8x15	0.069	0.206	950	8x20	0.068	0.204	1240
			10x12.5	0.069	0.206	990	10x16	0.068	0.204	1280
1200	122		8x20	0.059	0.178	1180	10x20	0.059	0.177	1540
			10x16	0.059	0.178	1210	12.5x15	0.059	0.148	1480
1500	152		10x20	0.036	0.107	1450	10x25	0.035	0.106	1830
			12.5x15	0.036	0.089	1390	12.5x18	0.035	0.089	1720
1800	182		10x20	0.031	0.094	1590	10x25	0.031	0.094	2000
			12.5x15	0.031	0.078	1520	12.5x18	0.031	0.078	1880
2200	222		10x25	0.028	0.083	1880	10x28	0.027	0.082	2250
			12.5x18	0.028	0.069	1770	16x15	0.027	0.068	1960
2700	272		10x28	0.025	0.075	2140	12.5x20	0.025	0.062	2250
			16x15	0.025	0.063	1870	16x15	0.025	0.062	2100
3300	332		12.5x20	0.023	0.058	2150	12.5x25	0.023	0.057	2650
			16x15	0.023	0.058	2010	18x15	0.023	0.057	2300
3900	392		12.5x25	0.022	0.055	2520	12.5x30	0.022	0.055	3030
			18x15	0.022	0.055	2190	16x20	0.022	0.055	2670
4700	472		12.5x30	0.021	0.053	2860	12.5x35	0.021	0.053	3210
			16x20	0.021	0.053	2520	16x25	0.021	0.053	3050
5600	562		12.5x35	0.020	0.050	3060	12.5x40	0.020	0.049	3550
			16x25	0.020	0.050	2900	18x20	0.020	0.049	2940
6800	682		12.5x40	0.019	0.047	3450	16x31.5	0.019	0.047	3680
			18x20	0.019	0.047	2850	18x25	0.019	0.047	3390
8200	822		16x31.5	0.018	0.045	3540	16x35.5	0.018	0.044	4010
			18x25	0.018	0.045	3260	18x31.5	0.018	0.044	3870
10000	103		16x35.5	0.017	0.043	3880				
			18x31.5	0.017	0.043	3740	18x35.5	0.017	0.042	4190

All blank voltage on sleeve marking is the same voltage as" → "point to.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code)		16 (1C)				25 (1E)			
	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
47	470					→	5x11	0.283	0.085	220
56	560		5x11	0.253	0.759	190	5x11	0.253	0.758	240
68	680		5x11	0.221	0.662	210	5x11	0.220	0.661	270
82	820		5x11	0.203	0.610	230	5x15	0.203	0.609	340
						→	6.3x11	0.203	0.609	330
100	101		5x11	0.183	0.550	250	5x15	0.183	0.549	370
						→	6.3x11	0.183	0.549	370
120	121		5x15	0.156	0.469	320	5x15	0.156	0.468	410
			6.3x11	0.156	0.469	320	6.3x11	0.156	0.468	400
150	151		5x15	0.128	0.383	360	6.3x15	0.128	0.383	510
			6.3x11	0.128	0.383	350	8x11.5	0.128	0.383	520
180	181		5x15	0.111	0.333	390	6.3x15	0.111	0.333	560
			6.3x11	0.111	0.333	390	8x11.5	0.111	0.333	570
220	221		5x15	0.095	0.284	430	6.3x15	0.095	0.284	620
			6.3x11	0.095	0.284	430	8x11.5	0.095	0.284	630
270	271		6.3x15	0.086	0.259	550	8x15	0.086	0.259	790
			8x11.5	0.086	0.259	550	10x12.5	0.086	0.259	830
330	331		6.3x15	0.076	0.227	600	8x15	0.076	0.227	870
			8x11.5	0.076	0.227	610	10x12.5	0.076	0.227	910
390	391		8x15	0.068	0.205	750	8x20	0.068	0.205	1080
			10x12.5	0.068	0.205	790	10x16	0.068	0.205	1100
470	471		8x15	0.062	0.186	820	8x20	0.062	0.186	1180
			10x12.5	0.062	0.186	860	10x16	0.062	0.186	1210
560	561		8x20	0.055	0.165	1020	8x20	0.055	0.165	1290
			10x16	0.055	0.165	1050	10x16	0.055	0.165	1320
680	681		8x20	0.049	0.147	1120	10x20	0.049	0.147	1610
			10x16	0.049	0.147	1150	12.5x15	0.049	0.122	1550
820	821		8x20	0.045	0.134	1230	10x25	0.045	0.134	1950
			10x16	0.045	0.134	1270	12.5x18	0.045	0.112	1830
1000	102		10x20	0.040	0.120	1540	10x28	0.040	0.120	2270
			12.5x15	0.040	0.100	1480	16x15	0.040	0.100	1980
1200	122		10x25	0.035	0.104	1870	12.5x20	0.035	0.104	2320
			12.5x18	0.035	0.087	1750	16x15	0.035	0.087	2170
1500	152		10x28	0.029	0.088	2100	12.5x25	0.029	0.074	2710
			16x15	0.029	0.074	1830	18x15	0.029	0.074	2480
1800	182		12.5x20	0.026	0.065	2140	12.5x30	0.026	0.065	3230
			16x15	0.026	0.065	2000	16x20	0.026	0.065	2840
2200	222		12.5x25	0.023	0.057	2500	12.5x35	0.023	0.057	3470
			18x15	0.023	0.057	2170	16x25	0.023	0.057	3290
2700	272		12.5x30	0.021	0.052	2890	12.5x40	0.021	0.052	3910
			16x20	0.021	0.052	2540	18x20	0.021	0.052	3240
3300	332		12.5x35	0.019	0.048	3130	16x31.5	0.019	0.047	4100
			16x25	0.019	0.048	2970	18x25	0.019	0.047	3770
3900	392		12.5x40	0.018	0.046	3500	16x35.5	0.018	0.046	4530
			18x20	0.018	0.046	2900	18x31.5	0.018	0.046	4360
4700	472		16x31.5	0.016	0.040	3560				
			18x25	0.016	0.040	3280	18x35.5	0.016	0.040	4720
5600	562		16x35.5	0.015	0.038	3880				
			18x31.5	0.015	0.038	3740				

All blank voltage on sleeve marking is the same voltage as " → "point to.

Case size : D x L (mm)
 Max impedance : Ω 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

● CASE SIZE & MAX RIPPLE CURRENT

μF	V(Code)		35 (1V)				50 (1H)			
	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
0.47	R47				→	5x11	3.006	9.017	27	
1	010				→	5x11	2.825	8.476	40	
2.2	2R2				→	5x11	1.511	4.533	60	
3.3	3R3				→	5x11	1.259	3.777	70	
4.7	4R7		5x11	1.062	3.185	75	5x11	1.061	3.182	85
6.8	6R8		5x11	0.917	2.752	90	5x11	0.916	2.749	100
10	100		5x11	0.832	2.495	110	5x11	0.831	2.493	130
15	150		5x11	0.610	1.829	130	5x11	0.609	1.828	150
18	180		5x11	0.531	1.594	150	5x11	0.531	1.593	170
22	220		5x11	0.454	1.361	160	5x11	0.453	1.360	190
27	270		5x11	0.400	1.201	180	5x11	0.400	1.200	210
33	330		5x11	0.353	1.058	200	5x11	0.353	1.058	230
39	390		5x11	0.320	0.096	210	5x15	0.320	0.959	290
					→	6.3x11	0.320	0.959	280	
47	470		5x11	0.283	0.849	230	5x15	0.283	0.849	310
					→	6.3x11	0.283	0.849	310	
56	560		5x15	0.252	0.757	290	5x15	0.252	0.757	340
			6.3x11	0.252	0.757	290	6.3x11	0.252	0.757	340
68	680		5x15	0.220	0.660	320	6.3x15	0.220	0.660	430
			6.3x11	0.220	0.660	320	8x11.5	0.220	0.660	430
82	820		5x15	0.203	0.608	360	6.3x15	0.203	0.608	470
			6.3x11	0.203	0.608	350	8x11.5	0.203	0.608	480
100	101		6.3x15	0.183	0.549	450	8x15	0.183	0.548	590
			8x11.5	0.183	0.549	450	10x12.5	0.183	0.548	620
120	121		6.3x15	0.109	0.327	490	8x15	0.109	0.327	650
			8x11.5	0.109	0.327	500	10x12.5	0.109	0.327	680
150	151		6.3x15	0.089	0.268	550	8x20	0.089	0.268	820
			8x11.5	0.089	0.268	550	10x16	0.089	0.268	840
180	181		8x15	0.078	0.233	680	8x20	0.078	0.233	900
			10x12.5	0.078	0.233	720	10x16	0.078	0.233	920
220	221		8x15	0.066	0.198	750	8x20	0.066	0.198	1000
			10x12.5	0.066	0.198	790	10x16	0.066	0.198	1020
270	271		8x20	0.060	0.181	950	10x20	0.060	0.181	1250
			10x16	0.060	0.181	970	12.5x15	0.060	0.151	1200
330	331		8x20	0.053	0.159	1050	10x25	0.053	0.159	1530
			10x16	0.053	0.159	1080	12.5x18	0.053	0.132	1430
390	391		10x20	0.048	0.143	1290	10x25	0.048	0.143	1660
			12.5x15	0.048	0.119	1240	12.5x18	0.048	0.119	1560
470	471		10x20	0.043	0.130	1420	12.5x20	0.043	0.108	1790
			12.5x15	0.043	0.108	1360	16x15	0.043	0.108	1680
560	561		10x25	0.038	0.115	1710	12.5x25	0.038	0.096	2150
			12.5x18	0.038	0.096	1610	18x15	0.038	0.096	1870
680	681		10x28	0.034	0.103	1990	12.5x30	0.034	0.086	2580
			16x15	0.034	0.086	1730	16x20	0.034	0.086	2260
820	821		10x30	0.031	0.094	2250	12.5x35	0.031	0.078	2880
			16x15	0.031	0.078	1900	16x25	0.031	0.078	2730
1000	102		12.5x25	0.028	0.070	2480	12.5x40	0.028	0.070	3390
			18x15	0.028	0.070	2150	18x20	0.028	0.070	2800
1200	122		12.5x30	0.024	0.061	2940	16x31.5	0.024	0.061	3660
			16x20	0.024	0.061	2590	18x25	0.024	0.061	3370
1500	152		12.5x35	0.021	0.051	3160	16x35.5	0.021	0.051	4040
			16x25	0.021	0.051	3000	18x31.5	0.021	0.051	3890
1800	182		12.5x40	0.018	0.045	3690				
			18x20	0.018	0.045	3050				
2200	222		16x31.5	0.016	0.040	3810				
			18x25	0.016	0.040	3510				

All blank voltage on sleeve marking is the same voltage as" → "point to.

RADIAL TYPE

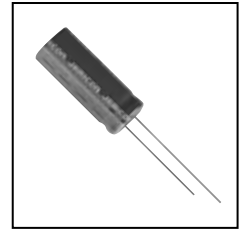
WG

Series

Low Impedance, High Ripple Current

JAMICON®

- High ripple current, low E.S.R. and long life.
- Suitable for output of switching power supplies.

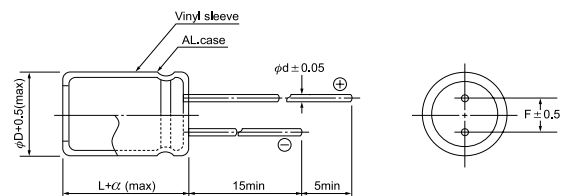


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	10 ~ 100VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M) +50% -10%(T)							
Leakage Current (20°C)	$I \leq 0.01CV$ *after 3 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	10	16	25	35	50	63	100
	S.V.	13	20	32	44	63	79	125
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF							
	W.V.	10	16	25	35	50	63	100
	tan δ	0.12	0.10	0.09	0.08	0.07	0.06	0.06
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	10~16			25~100			
	-25°C / +20°C	3			2			
	-55°C / +20°C	6			4			
Load Life	After hours ($\phi D \leq 8\text{mm}$ 2000 hours, $\phi D \geq 10\text{mm}$ 3000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	$\leq 200\%$ of initial specified value						

DIMENSIONS (mm)

ϕD	8	10	12.5	16	18
F	3.5	5.0	5.0	7.5	7.5
d	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85	95	105
Multiplier	2.12	1.92	1.69	1.50	1.00

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
10~16V	0.45	0.60	0.83	0.94	0.98	1.00
25~35V	0.38	0.50	0.75	0.90	0.97	1.00
50~100V	0.36	0.46	0.70	0.88	0.94	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : A(rms) 105°C 100kHz

μF	V(Code)		10 (1A)			16 (1C)			25 (1E)		
	Code	Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
100	101				→	8x11.5	0.348	0.27	8x11.5	0.330	0.34
220	221		8x11.5	0.190	0.36	8x15	0.180	0.44	10x16	0.170	0.59
330	331		8x15	0.152	0.50	10x16	0.144	0.57	10x18	0.136	0.76
470	471		10x16	0.124	0.62	10x18	0.118	0.71	10x20	0.112	0.95
680	681		10x18	0.098	0.78	10x20	0.093	0.90	12.5x20	0.088	1.21
1000	102		10x20	0.080	1.00	12.5x20	0.076	1.16	12.5x25	0.072	1.62
2200	222		12.5x25	0.046	1.61	12.5x30	0.043	1.89	12.5x40	0.041	2.70
3300	332		12.5x30	0.038	2.00	12.5x40	0.036	2.44	16x40	0.034	3.04
4700	472		12.5x40	0.032	2.50	16x40	0.031	2.64			

All blank voltage on sleeve marking is the same voltage as" → "point to.

μF	V(Code)		35 (1V)			50 (1H)		
	Code	Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.
47	470				→	8x11.5	0.453	0.29
68	680		8x11.5	0.374	0.30	8x15	0.352	0.39
100	101		8x15	0.311	0.40	10x16	0.292	0.49
220	221		10x18	0.161	0.66	10x20	0.151	0.80
330	331		10x25	0.129	0.93	12.5x20	0.121	1.04
470	471		12.5x20	0.105	1.07	12.5x25	0.099	1.37
680	681		12.5x25	0.083	1.42	12.5x30	0.078	1.79
1000	102		12.5x30	0.068	1.87	12.5x40	0.064	2.48
2200	222		16x40	0.039	2.83			

μF	V(Code)		63 (1J)			100 (2A)		
	Code	Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.
47	470		8x15	0.424	0.35	10x25	0.368	0.44
68	680		10x16	0.330	0.43	12.5x20	0.286	0.51
100	101		10x18	0.274	0.55	12.5x25	0.238	0.68
220	221		12.5x20	0.142	0.92	16x35.5	0.123	1.19
330	331		12.5x25	0.113	1.24	18x40	0.098	1.64
470	471		12.5x30	0.093	1.61			
680	681		16x35.5	0.073	2.09			

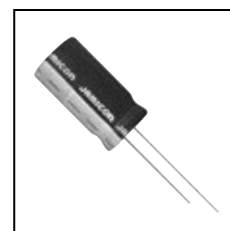
RADIAL TYPE

TL Series

Long Life, Low Impedance, High Reliability

JAMICON®

- Low impedance and long life with standing 5000 hours load life.
- Suitable for electronic ballast, adaptor and switching power.

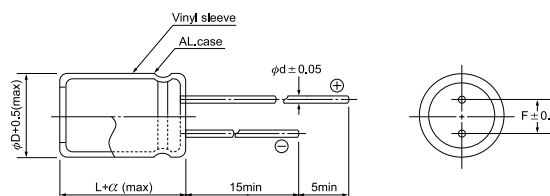


SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 63VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63
	S.V.	8	13	20	32	44	63	79
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF							
	W.V.	6.3	10	16	25	35	50	63
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	63
	-25°C / +20°C	2	2	2	2	2	2	2
	-55°C / +20°C	3	3	3	3	3	3	3
Load Life	After hours (φ5~6.3mm 2000 hours, φ8mm 3000 hours, φD≥10mm 5000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rated working voltage)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At + 105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 150% of initial specified value						
	Leakage current	≤ 200% of initial specified value						

DIMENSIONS (mm)

φD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5



RIPPLE CURRENT COEFFICIENTS

Temperature(°c)	65	75	85	95	105
Multiplier	2.12	1.92	1.69	1.50	1.00

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
6.3~16V	0.45	0.60	0.83	0.94	0.98	1.00
25~35V	0.38	0.50	0.75	0.90	0.97	1.00
50~63V	0.36	0.46	0.70	0.88	0.94	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 100kHz
 Max ripple current : A(rms) 105°C 100kHz

V(Code)		6.3 (0J)				10 (1A)				16 (1C)				
μF	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C			20°C	-10°C	
47		470									5x11	0.568	1.421	0.17
68		680									5x11	0.500	1.250	0.21
100		101					5x11	0.500	1.250	0.24	6.3x11	0.367	0.918	0.29
220		221	6.3x11	0.308	0.769	0.39	6.3x11	0.249	0.623	0.41	8x11.5	0.190	0.474	0.52
330		331	6.3x11	0.246	0.615	0.48	8x11.5	0.169	0.423	0.61	10x12.5	0.114	0.285	0.75
470		471	8x11.5	0.178	0.446	0.70	8x11.5	0.139	0.346	0.73	10x12.5	0.093	0.233	0.90
680		681	10x12.5	0.081	0.203	1.00	10x12.5	0.077	0.194	1.03	10x16	0.074	0.184	1.20
1000		102	8x20	0.066	0.166	1.31	10x16	0.063	0.158	1.39	10x20	0.060	0.150	1.60
1200		122	10x16	0.058	0.144	1.47	10x20	0.055	0.137	1.68	10x25	0.052	0.130	1.94
1500		152	10x20	0.049	0.123	1.75	10x25	0.047	0.116	2.01	12.5x20	0.044	0.111	2.13
2200		222	10x25	0.038	0.094	2.27	12.5x20	0.036	0.090	2.41	12.5x25	0.034	0.086	2.75
3300		332	12.5x20	0.032	0.079	2.69	12.5x25	0.030	0.075	3.05	16x25	0.029	0.057	3.14
4700		472	12.5x30	0.027	0.067	3.56	16x25	0.025	0.051	3.35	16x31.5	0.024	0.048	3.24
6800		682	16x25	0.024	0.048	3.61	16x31.5	0.023	0.045	3.46	18x35.5	0.022	0.043	3.75
10000		103	16x31.5	0.022	0.043	3.64	18x35.5	0.021	0.041	3.92	18x40	0.019	0.039	4.20
15000		153	18x35.5	0.020	0.041	4.12	18x40	0.019	0.039	4.40				

V(Code)		25 (1E)				35 (1V)				
μF	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
4.7		4R7					5x11	1.912	4.781	0.08
10		100					5x11	1.498	3.745	0.11
22		220					5x11	0.817	2.043	0.16
33		330					5x11	0.636	1.589	0.20
47		470	5x11	0.539	1.348	0.18	6.3x11	0.510	1.275	0.27
68		680	6.3x11	0.419	1.049	0.25	6.3x11	0.397	0.991	0.33
100		101	6.3x11	0.349	0.871	0.30	8x11.5	0.330	0.824	0.49
220		221	8x11.5	0.180	0.450	0.54	10x12.5	0.128	0.319	0.85
330		331	10x12.5	0.108	0.270	0.94	10x16	0.102	0.255	1.15
470		471	10x16	0.088	0.221	1.25	10x20	0.084	0.209	1.52
680		681	10x20	0.070	0.175	1.65	12.5x20	0.066	0.165	2.07
1000		102	12.5x20	0.057	0.143	2.27	12.5x25	0.054	0.135	2.77
1200		122	12.5x20	0.050	0.124	2.49	12.5x30	0.047	0.117	3.29
1500		152	12.5x25	0.042	0.105	2.94	16x25	0.040	0.079	3.32
2200		222	16x25	0.032	0.065	3.42	16x31.5	0.031	0.077	3.49
3300		332	16x31.5	0.027	0.054	3.66	18x35.5	0.026	0.064	4.17
4700		472	18x35.5	0.023	0.046	4.23				

V(Code)		50 (1H)				63 (1J)				
μF	Code	Item	DxL	IMP.		R.C.	DxL	IMP.		R.C.
				20°C	-10°C			20°C	-10°C	
4.7		4R7	5x11	1.699	5.096	0.09	5x11	1.699	5.096	0.09
10		100	5x11	1.331	3.992	0.13	5x11	1.331	3.992	0.13
22		220	5x11	0.726	2.177	0.19	6.3x11	0.726	1.814	0.22
33		330	6.3x11	0.564	1.411	0.26	6.3x15	0.564	1.411	0.30
47		470	6.3x11	0.453	1.132	0.31	8x11.5	0.453	1.132	0.38
68		680	8x11.5	0.352	0.880	0.46	10x12.5	0.264	0.660	0.54
100		101	8x20	0.220	0.549	0.71	10x16	0.220	0.549	0.73
220		221	10x16	0.113	0.283	1.09	10x25	0.113	0.283	1.33
330		331	10x20	0.091	0.227	1.47	12.5x20	0.091	0.227	1.66
470		471	12.5x20	0.074	0.186	1.99	12.5x25	0.074	0.186	2.19
680		681	12.5x25	0.059	0.147	2.63	16x25	0.059	0.117	2.63
1000		102	16x25	0.048	0.096	3.19	16x35.5	0.048	0.096	3.17
1200		122	16x31.5	0.042	0.083	3.29	18x35.5	0.042	0.083	3.48
1500		152	16x35.5	0.035	0.071	3.44	18x40	0.035	0.071	3.87
2200		222	18x35.5	0.027	0.055	4.20				
3300		332	18x40	0.023	0.046	4.97				

RADIAL TYPE

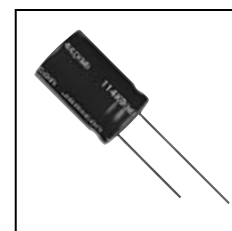
TH

Series

High Ripple Current, High Reliability

JAMICON®

- High ripple current, low E.S.R. and long life
- Suitable for electronic ballast, adaptor and switching power

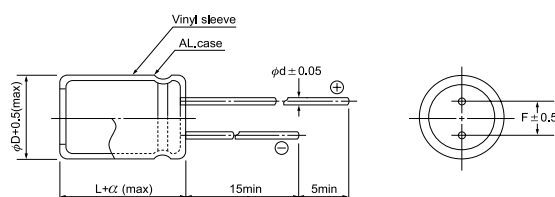


SPECIFICATION

Item	Characteristic						
Operation Temperature Range	-40 ~ +105°C			-25 ~ +105°C			
Rated Working Voltage	160 ~ 400VDC			450VDC			
Capacitance Tolerance (120Hz 20°C)	±20%(M)						
Leakage Current (20°C)	$I \leq 0.06CV + 10 (\mu A)$			I : Leakage Current (μA)			
	Whichever is greater after 2 minutes			C : Rated Capacitance (μF)			
				V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	160	200	250	400	450	
	S.V.	200	250	300	450	500	
Dissipation Factor (tan δ) (120Hz 20 °C)	W.V.	160	200	250	400	450	
	tan δ	0.15	0.15	0.15	0.24	0.24	
Low Temperature Stability	Impedance ratio at 120Hz						
	Rated Voltage (V)		160 ~ 250			400	450
	-25°C / +20°C		3			6	6
	-40°C / +20°C		4			6	—
Load Life	After hours ($\phi D \leq 8mm$ 2000 hours, $\phi D \geq 10mm$ 3000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)						
	Capacitance Change	$\leq \pm 20\%$ of initial value					
	Dissipation Factor	$\leq \pm 200\%$ of initial specified value					
	Leakage current	\leq initial specified value					
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)						

DIMENSIONS (mm)

ϕD	10	12.5	16	18
F	5.0	5.0	7.5	7.5
d	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5



RIPPLE CURRENT COEFFICIENTS

Temperature(°c)	65	75	85	95	105
Multiplier	1.8	1.65	1.50	1.25	1.00

Frequency (Hz)	120	1k	10k	100k	
W.V.	Multiplier				
160~450	$\phi D=10mm$	0.25	0.61	0.88	1.0
	$\phi D>10mm$	0.35	0.66	0.89	1.0

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code) Code	Item	160 (2C)			200 (2D)			250 (2E)		
			DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
4.7		4R7							10x16	3.45	150
10		100	10x16	1.47	220	10x16	1.47	220	10x20	2.70	240
22		220	10x20	0.80	350	10x20	0.80	350	12.5x20	1.47	380
33		330	10x20	0.62	430	12.5x20	0.62	460	12.5x25	1.15	510
47		470	12.5x20	0.50	550	12.5x25	0.50	610	16x25	0.92	610
68		680	12.5x20	0.39	660	12.5x25	0.39	730	16x31.5	0.71	810
100		101	16x25	0.32	890	16x31.5	0.32	980	18x35.5	0.59	1110
220		221	16x35.5	0.17	1540	18x35.5	0.17	1640	18x40	0.31	1730

μF	V(Code) Code	Item	400 (2G)			450 (2W)		
			DxL	IMP.	R.C.	DxL	IMP.	R.C.
2.2		2R2				10x16	4.94	110
3.3		3R3	10x20	2.60	170	10x20	4.11	150
4.7		4R7	10x25	2.20	220	12.5x20	3.47	190
10		100	12.5x25	1.72	340	12.5x25	2.72	300
22		220	16x25	0.94	510	16x31.5	1.48	500
33		330	16x31.5	0.73	690	16x31.5	1.15	620
47		470	16x31.5	0.59	820	18x31.5	0.92	780
68		680	16x31.5	0.46	990			
100		101	18x31.5	0.38	1280			
120		121	18x35.5	0.32	1480			
150		151	18x40	0.26	1740			
180		181	18x40	0.23	1910			

RADIAL TYPE

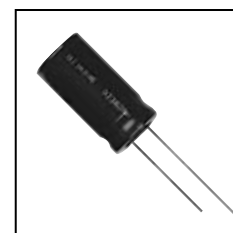
TX

Series

High Ripple Current, High Reliability

JAMICON®

- High ripple current, low E.S.R. and long life
- Suitable for electronic ballast, adaptor and switching power

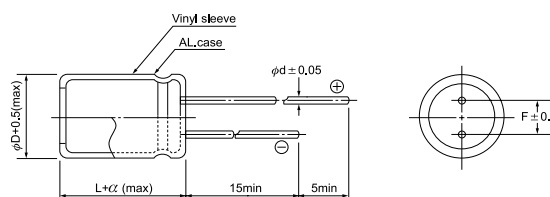


● SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +105°C				-25 ~ +105°C			
Rated Working Voltage	160 ~ 400VDC				450VDC			
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.06CV + 10 (\mu A)$ Whichever is greater after 2 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	160	200	250	350	400	450	
	S.V.	200	250	300	400	450	500	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	160	200	250	350	400	450	
	tan δ	0.15	0.15	0.15	0.24	0.24	0.24	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	160 ~ 250			350 ~ 400		450	
	-25°C / +20°C	3			6		6	
	-40°C / +20°C	4			6		—	
Load Life	After hours ($\phi D \leq 8mm$ 3000 hours $\phi D \geq 10mm$ 5000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq \pm 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At + 105°C no voltage application after 1000 hours. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hrs and not more than 48 hrs before measurement. Cap & DF shall meet the limits for load life characteristics, Leakage current $\leq 500\%$ of the initial specified value							

● DIMENSIONS (mm)

ϕD	10	12.5	16	18
F	5.0	5.0	7.5	7.5
d	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5



● RIPPLE CURRENT COEFFICIENTS

Temperature(°c)	65	75	85	95	105
Multiplier	1.8	1.65	1.50	1.25	1.00

Frequency (Hz)	120	1k	10k	100k	
160~450	Multiplier				
	$\phi D = 10mm$	0.25	0.61	0.88	1.00
	$\phi D > 10mm$	0.35	0.66	0.89	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max impedance : Ω 20°C 100kHz
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code) Code	Item	160 (2C)			200 (2D)			250 (2E)		
			DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
10	100						→	10x20	3.18	240	
22	220		10x20	1.47	350	10x20	1.47	350	12.5x20	1.74	380
33	330		10x20	1.15	430	12.5x20	1.15	460	12.5x25	1.35	510
47	470		12.5x20	0.92	550	12.5x20	0.92	550	12.5x25	1.08	610
68	680		12.5x25	0.71	730	12.5x25	0.71	730	16x25	0.84	730
100	101		16x25	0.59	890	16x25	0.59	890	16x31.5	0.70	980
150	151		16x31.5	0.41	1210	16x31.5	0.41	1210	18x31.5	0.49	1290
220	221		16x31.5	0.31	1460	18x35.5	0.31	1640	18x40	0.36	1730
330	331		18x35.5	0.25	2010						

μF	V(Code) Code	Item	350 (2V)			400 (2G)			450 (2W)		
			DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
3.3	3R3						→	10x20	4.47	150	
4.7	4R7						→	12.5x20	3.77	190	
10	100		10x20	2.94	220	10x20	2.94	290	12.5x25	2.95	300
22	220		12.5x20	1.60	340	12.5x25	1.60	460	16x25	1.61	450
33	330		12.5x25	1.25	460	12.5x25	1.25	620	16x31.5	1.25	620
47	470		16x25	1.00	560	16x25	1.00	740	18x31.5	1.01	780
68	680		16x31.5	0.78	740	16x31.5	0.78	990	18x35.5	0.78	990
100	101		18x35.5	0.65	1010	18x35.5	0.65	1350			

All blank voltage on sleeve marking is the same voltage as " → "point to.

RADIAL TYPE

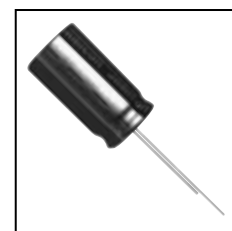
TF

Series

High Ripple Current, Long Life

JAMICON®

- Endurance: 105°C 8,000 to 10,000 Hours
- Suitable for electronic ballast, adaptor and switching power

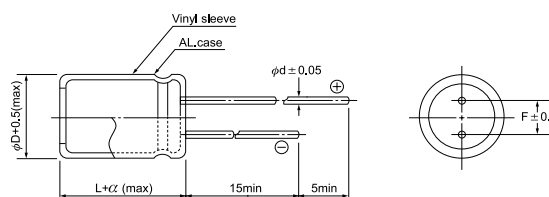


● SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-40 ~ +105°C				-25 ~ +105°C			
Rated Working Voltage	160 ~ 400VDC				450VDC			
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.06CV + 10 (\mu A)$				I : Leakage Current (μA)			
	Whichever is greater after 2 minutes				C : Rated Capacitance (μF)			
					V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	160	200	250	350	400	450	
	S.V.	200	250	300	400	450	500	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	160	200	250	350	400	450	
	tan δ	0.15	0.15	0.15	0.24	0.24	0.24	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	160 ~ 250			350 ~ 400		450	
	-25°C / +20°C	3			6		6	
	-40°C / +20°C	4			6		—	
Load Life	After hours ($\phi D=10\text{mm}$ 8000 hours $\phi D \geq 12.5\text{mm}$ 10000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq \pm 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At + 105°C no voltage application after 1000 hours. the capacitors for load life characteristics. (With voltage treatment)							

● DIMENSIONS (mm)

ϕD	10	12.5	16	18
F	5.0	5.0	7.5	7.5
d	0.6	0.6	0.8	0.8
α	1.5	1.5	1.5	1.5



● RIPPLE CURRENT COEFFICIENTS

Temperature(°c)	65	75	85	95	105
Multiplier	1.80	1.65	1.50	1.25	1.00

Frequency (Hz)	120	1k	10k	100k
W.V.	Multiplier			
160~450	0.50	0.80	0.90	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 100kHz

μF	V(Code)		160 (2C)		200 (2D)		250 (2E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
10	100		10x16	250	10x16	250	10x20	280
22	220		10x20	500	10x20	500	12.5x20	600
33	330		10x20	500	12.5x20	600	12.5x20	600
47	470		12.5x20	660	12.5x20	660	12.5x25	720
							16x20	720
68	680		12.5x25	760	12.5x25	760	16x25	920
			16x20	760	16x20	760	18x20	920
100	101		16x25	1120	16x25	1120	16x31.5	1200
			18x20	1120	18x20	1120	18x25	1200
150	151		16x31.5	1360	16x31.5	1360	18x31.5	1500
			18x25	1360	18x25	1360		
220	221		16x31.5	1400	18x31.5	1700		
			18x25	1400				

μF	V(Code)		350 (2V)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
6.8	6R8		10x16	220	10x16	220	10x20	150
10	100		10x20	280	10x20	280	12.5x20	320
22	220		12.5x20	350	12.5x25	430	16x25	560
					16x20	430	18x20	560
33	330		16x20	500	16x25	640	16x31.5	700
					18x20	640	18x25	700
47	470		16x25	660	16x31.5	840	18x31.5	880
			18x20	660	18x25	840		
68	680		16x31.5	850	18x31.5	1000	18x35.5	1150
			18x25	850				

RADIAL TYPE

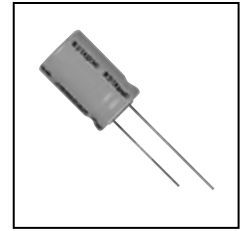
WB

Series

High Temperature, For 125°C

JAMICON®

- High reliability withstanding 2000 hours load life at 125°C.

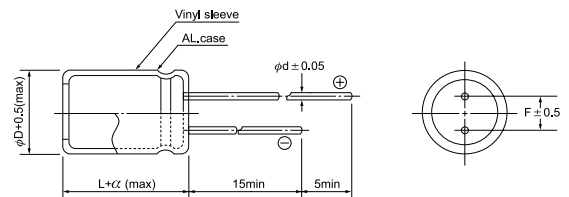


SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-40 ~ +125°C					
Rated Working Voltage	10 ~ 50VDC					
Capacitance Tolerance (120Hz 20°C)	±20%(M)					
Leakage Current (20°C)	$I \leq 0.002CV$ or $2 (\mu A)$ Whichever is greater after 2 minutes			I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)		
Surge Voltage (20°C)	W.V.	10	16	25	35	50
	S.V.	13	20	32	44	63
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	10	16	25	35	50
	tan δ	0.20	0.16	0.14	0.12	0.10
Low Temperature Stability	Impedance ratio at 120Hz					
	Rated Voltage (V)	10	16	25	35	50
	-25°C / +20°C	3	2	2	2	2
	-40°C / +20°C	8	6	4	4	4
Load Life	After 2000 hours application of W.V. and +125°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)					
	Capacitance Change	$\leq \pm 25\%$ of initial value				
	Dissipation Factor	$\leq 200\%$ of initial specified value				
	Leakage current	\leq initial specified value				
Shelf Life	At +125°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)					

DIMENSIONS (mm)

ϕD	6.3	8	10	12.5
F	2.5	3.5	5.0	5.0
d	0.5	0.6	0.6	0.6
α	1.5	1.5	1.5	1.5



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 125°C 120Hz

μF	V(Code)		10 (1A)		16 (1C)		25 (1E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
22	220					→	6.3x11	70
33	330			→	6.3x11	75	8x11.5	110
47	470		6.3x11	80	6.3x11	90	8x11.5	130
100	101		6.3x11	120	8x11.5	170	8x11.5	230
220	221		8x11.5	230	10x12.5	330	10x12.5	460
330	331		10x12.5	360	10x12.5	400	10x16	620
470	471		10x12.5	430	10x16	530	10x20	820
1000	102		10x20	760	12.5x20	970	12.5x25	1170

μF	V(Code)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.
10	100				8x11.5	70
22	220		8x11.5	100	8x11.5	110
33	330		8x11.5	120	8x11.5	130
47	470		8x11.5	140	8x11.5	150
100	101		10x12.5	270	10x12.5	290
220	221		10x16	530	10x20	590
330	331		10x20	720	12.5x20	900
470	471		12.5x20	970	12.5x25	960

All blank voltage on sleeve marking is the same voltage as " → "point to.

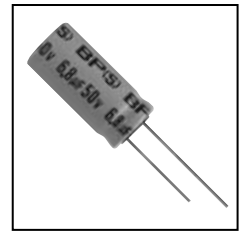
RADIAL TYPE

UK Series

For Horizontal Deflection Equalization
Bi-Polarized

JAMICON®

- Have high frequency and high ripple current characteristics.
- Suitable for equalizing of horizontal deflection of TV sets and terminals.

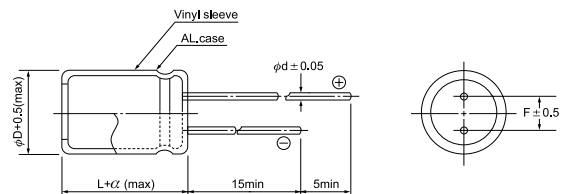


SPECIFICATION

Item	Characteristic			
Operation Temperature Range	-40 ~ +85°C			
Rated Working Voltage	25 ~ 50VDC			
Capacitance Tolerance (120Hz 20°C)	±20%(M) ±10%(K)			
Leakage Current (20°C)	100 (μA) After 5 minutes in both directions. I : Leakage Current (μA) C : Rated Capacitance(μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	25	35	50
	S.V.	32	44	63
Dissipation Factor (tan δ) (120Hz 20°C)	tan δ ≤ 0.05			
Temperature Characteristics	Capacitance change shall be within ±10% of the value at 25°C over operation temperature range.			
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) (The polarity need to exchange every 250 hours)			
	Capacitance Change	≤ ±15% of initial value		
	Dissipation Factor	≤200% of initial specified value		
	Leakage current	≤initial specified value		

DIMENSIONS (mm)

φD	10	12.5	16	18	22
F	5.0	5.0	7.5	7.5	10.0
d	0.6	0.6	0.8	0.8	1.0
α	1.5	1.5	1.5	1.5	2.0



CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
E.S.R. : Ω 20°C 120Hz
Max ripple current : A(P-P) 85°C 15.75kHz

μF	V(Code) Code	Item	25 (1E)			35 (1V)			50 (1H)		
			DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
2.2	2R2		10x20	30.14	2.80	12.5x25	30.14	3.50	12.5x25	30.14	3.50
3.3	3R3		12.5x25	20.10	4.50	16x25	20.10	4.80	16x25	20.10	4.80
4.7	4R7		12.5x25	14.11	5.50	16x31.5	14.11	6.50	16x31.5	14.11	6.50
6.8	6R8		16x31.5	9.75	7.50	16x35.5	9.75	8.00	16x35.5	9.75	8.00
8.2	8R2		16x31.5	8.09	8.50	18x35.5	8.09	9.50	18x35.5	8.09	9.50
10	100		16x35.5	6.63	10.00	18x35.5	6.63	10.50	18x35.5	6.63	10.50
12	120		18x35.5	5.53	11.50	22x40	5.53	12.00	22x40	5.53	12.00
18	180		22x40	3.68	13.00						

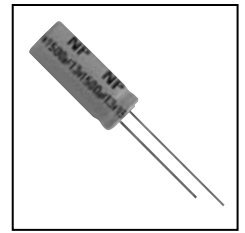
RADIAL TYPE

NC Series

Non Polarity, For Twinkling Light of Automobile



- Suitable for the direction light of automobile and motorcycle.

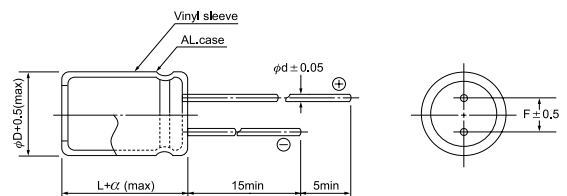


SPECIFICATION

Item	Characteristic
Operation Temperature Range	-40 ~ +85°C
Rated Working Voltage	13VDC
Capacitance Tolerance (120Hz 20°C)	±10%(K) ±20%(M) +20% -10%(V)
Leakage Current (20°C)	$I \leq 1000 (\mu A)$ Under 100Ω resistor series and rated voltage applied whichever after 3 minutes. I : Leakage Current (μA) C : Rated Capacitance(μF) V : Working Voltage (V)
Dissipation Factor (tan δ) (120Hz 20°C)	$\tan \delta \leq 0.50$

DIMENSIONS (mm)

φD	10	12.5
F	5.0	5.0
d	0.6	0.6
α	1.5	1.5



CASE SIZE & MAX RIPPLE CURRENT

Case size: D x L (mm)

μF	V(Code)		13 (1P)
	Code	Item	DxL
1500	152		10x25
1700	172		12.5x20
2200	222		12.5x25

RADIAL TYPE

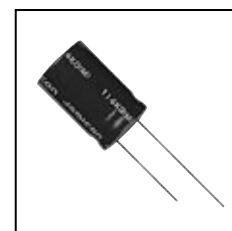
RV

Series

No Sparks With DC Overvoltage

JAMICON®

- No sparks with specified DC overvoltage applied.
- Withstanding 2000 hours application of rate ripple current at 105°C

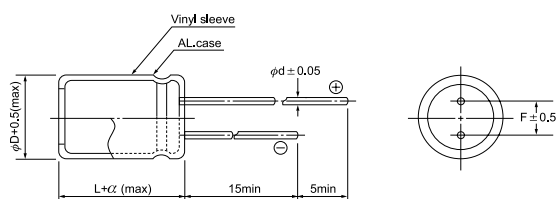


SPECIFICATION

Item	Characteristic		
Operation Temperature Range	-25 ~ +105°C		
Rated Working Voltage	200 ~ 400VDC		
Capacitance Tolerance (120Hz 20°C)	±20%(M)		
Leakage Current (20°C)	$I \leq 0.06CV + 10 \mu A$ *Whichever is greater after 2 minutes		I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)
Surge Voltage (20°C)	W.V.	200	400
	S.V.	250	450
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	200	400
	tan δ	0.15	0.24
Low Temperature Stability	Impedance ratio at 120Hz		
	Rated Voltage (V)	200	400
	-25°C / +20°C	4	6
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)		
	Capacitance Change	≤ ±20% of initial value	
	Dissipation Factor	≤ 200% of initial specified value	
	Leakage current	≤ initial specified value	
Shelf Life	At +105°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)		

DIMENSIONS (mm)

φD	16	18
F	7.5	7.5
d	0.8	0.8
α	1.5	1.5



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	85	105
Multiplier	1.80	1.50	1.00

Frequency(Hz)	60	120	1k	10k	100k
W.V.	Multiplier				
200V	0.80	1.00	1.30	1.40	1.60
400V	0.75	1.00	1.50	1.75	1.85

● **CASE SIZE & MAX RIPPLE CURRENT**

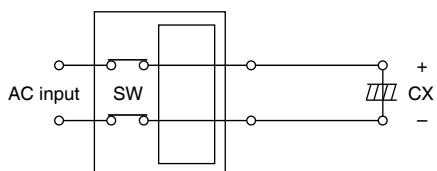
Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

μF	V(Code)		200 (2D)		400 (2G)	
	Code	Item	DxL	R.C.	DxL	R.C.
22	220				16x25	170
33	330				16x25	210
39	390				16x31.5	260
47	470				18x25	250
56	560				16x31.5	280
68	680				16x40	340
82	820				18x31.5	330
100	101		16x25	400	18x35.5	380
120	121		16x31.5	480	18x40	440
			18x25	470		
150	151		16x31.5	540		
			18x25	520		
180	181		16x40	660		
			18x31.5	630		
220	221		18x35.5	730		
			18x40	770		

■ **DC OVERVOLTAGE TEST CONDITION**

The vent will be operated and the capacity shall become an open circuit without burning the material when the following excess DC voltage is applied.

Rated Voltage	Current	Test DC Voltage
200 VDC	4A	300 / 375 VDC
400 VDC	2A	500 / 600 VDC



Constant DC voltage/current power supply

LARGE CAN TYPE

LP

Series

Snap-in Terminal Type, Standard

JAMICON®

- Three kinds of terminal are available for your use.
- Withstanding 2000 hours application of high ripple current at 85°C.

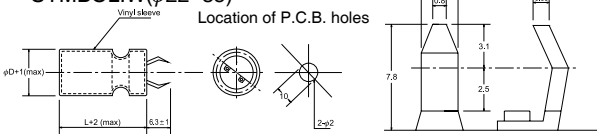


● SPECIFICATION

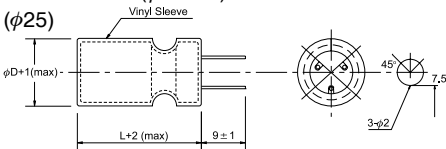
Item	Characteristic													
Operation Temperature Range	-40 ~ +85°C						-25 ~ +85°C							
Rated Working Voltage	10 ~ 100VDC						160 ~ 450VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)													
Leakage Current (20°C)	$I \leq 0.03CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)													
Surge Voltage (20°C)	W.V.	10	16	25	35	50	63	100	160	200	250	350	400	450
	S.V.	13	20	32	44	63	79	125	200	250	300	400	450	500
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)		10	16	25	35	50	63	100	160~250	350~450			
	tan δ	CV ≤ 100,000	0.50	0.40	0.35	0.25	0.25	0.25	0.20	0.20	0.25			
		CV > 100,000	0.60	0.50	0.45	0.35	0.30	0.30	0.25	0.20	0.25			
Low Temperature Stability	Impedance ratio at 120Hz													
	Rated Voltage (V)		10~100			160~250			350~450					
	-25°C / +20°C		4			6			8					
	-40°C / +20°C		15			—			—					
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)													
	Capacitance Change		≤ ±20% of initial value											
	Dissipation Factor		≤ 150% of initial specified value											
	Leakage current		≤ initial specified value											
Shelf Life	At +85°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)													

● TERMINAL TYPE

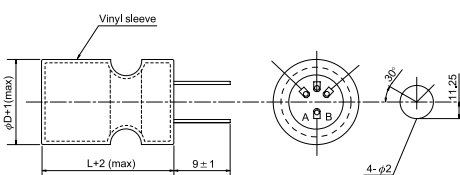
▲ P.C.B. TERMINAL (SNAP IN)
SYMBOL:W(φ22~35)



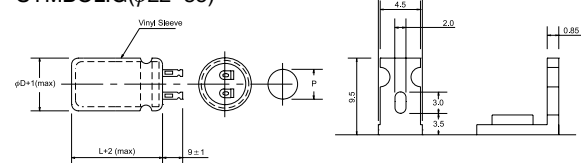
▲ P.C.B. TERMINAL
SYMBOL:V(φ25~35)



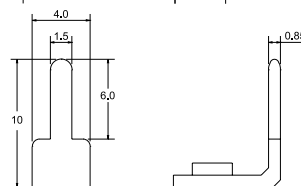
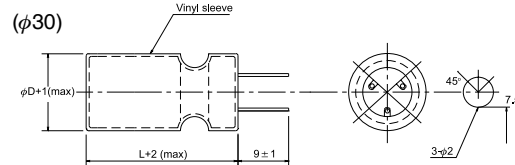
(φ35)
A.B. blank terminals



▲ LUG TERMINAL
SYMBOL:G(φ22~35)



φD	22	25	30	35
P	8	10	10	14



● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	45	60	70	85
Multiplier	1.55	1.30	1.20	1.00

Frequency(Hz)	60	120	1k	10k	100k
W.V.	Multiplier				
10~35V	0.90	1.00	1.05	1.10	1.10
50~100V	0.90	1.00	1.15	1.20	1.20
160~250V	0.80	1.00	1.35	1.45	1.50
350~450V	0.90	1.00	1.30	1.40	1.45

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code Item	10 (1A)		16 (1C)		25 (1E)		35 (1V)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
3300	332					22x25	2.03	22x25	2.04
						25x25	2.09	25x25	2.10
4700	472			22x25	1.81	22x30	2.43	22x30	2.41
				25x25	2.21	25x25	2.31	30x25	2.44
6800	682			22x25	2.40	22x35	2.87	22x40	2.98
				25x25	2.47	30x25	2.72	30x30	2.86
8200	822	22x25	2.39	22x30	2.70	22x40	3.16	22x45	3.25
		25x25	2.46	30x25	2.73	30x30	3.03	35x30	3.42
10000	103	22x30	2.69	22x35	3.00	22x45	3.45	25x45	3.41
		25x25	2.57	30x25	2.84	30x30	3.14	35x30	3.51
12000	123	22x30	2.81	22x40	3.30	22x50	3.74	25x50	3.68
		30x25	2.84	30x30	3.16	35x30	3.75	35x35	3.84
15000	153	22x35	3.14	22x45	3.62	25x45	3.78	30x45	4.08
		30x25	2.97	35x25	3.55	35x30	3.89	35x40	4.47
22000	223	22x45	3.79	25x45	4.25	30x50	4.94	35x45	5.68
		30x30	3.45	35x30	4.37	35x40	5.17		
33000	333	25x45	4.99	30x45	5.48	35x50	6.95	35x70	8.42
		35x30	4.89	35x40	6.01				
47000	473	30x45	5.97	35x45	7.53	35x60	8.97		
		35x40	6.54						
68000	683	35x50	8.64	35x60	10.24				

μF	V(Code) Code Item	50 (1H)		63 (1J)		100 (2A)	
		DxL	R.C.	DxL	R.C.	DxL	R.C.
820	821					22x30	1.55
						25x25	1.54
1000	102			22x25	1.42	22x30	1.71
				25x25	1.46	30x25	2.20
1500	152			22x25	1.74	22x40	2.38
				30x25	1.81	35x30	2.54
2200	222	22x25	1.92	22x30	2.08	25x45	2.77
		25x25	1.98	30x25	2.10	35x30	2.85
3300	332	22x35	2.51	22x45	2.81	30x45	3.27
		30x25	2.38	35x25	2.76	35x35	3.39
4700	472	22x40	2.89	25x45	3.11	35x45	4.01
		35x25	2.99	35x30	3.20		
6800	682	25x45	3.37	30x45	3.54	35x60	4.85
		35x30	3.46	35x35	3.68		
8200	822	25x50	3.62	30x50	3.81	35x70	5.30
		35x35	3.79	35x40	3.99		
10000	103	30x45	3.72	35x50	4.48	35x70	5.49
		35x35	3.86				
12000	123	35x45	4.53	35x60	5.13		
15000	153	35x50	5.30				

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code)		160 (2C)		200 (2D)		250 (2E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
220		221			22x25	0.97	22x30	1.14
					25x25	1.00	25x25	1.09
330		331	22x25	1.11	22x30	1.29	22x40	1.58
			25x25	1.14	25x25	1.23	30x25	1.42
470		471	22x35	1.53	22x40	1.74	22x50	2.09
			30x25	1.45	30x25	1.55	30x35	1.93
560		561	22x35	1.67	22x45	2.00	25x45	2.29
			30x25	1.58	30x30	1.82	35x30	2.22
680		681	22x40	1.95	25x40	2.14	30x40	2.46
			30x30	1.87	30x35	2.14	35x35	2.68
820		821	22x50	2.36	25x50	2.59	30x45	2.83
			30x30	2.05	35x30	2.55	35x40	3.11
1000		102	25x45	2.55	30x45	2.87	35x45	3.60
			35x30	2.62	35x35	2.99		
1500		152	30x45	3.28	35x50	4.24		

μF	V(Code)		350 (2V)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
47		470			22x25	0.43	22x25	0.36
					25x25	0.45	25x25	0.37
100		101	22x30	0.66	22x30	0.68	22x35	0.61
			25x25	0.63	25x25	0.65	25x30	0.59
150		151	22x35	0.86	22x40	0.95	22x50	0.88
			30x25	0.82	30x25	0.85	30x30	0.76
220		221	22x45	1.17	22x50	1.27	25x50	1.08
			30x30	1.06	25x40	1.17	35x35	1.13
330		331	25x50	1.53	30x45	1.59	35x45	1.53
			35x35	1.60	35x35	1.65		
470		471	30x50	1.92	35x45	2.19		
			35x40	2.01				
560		561	35x45	2.31				

LARGE CAN TYPE

HP

Series

Snap-in Terminal, Wide Temperature Range

JAMICON®

- Three kinds of terminal are available for your use.
- High temperature 105°C, high ripple current and high reliability.

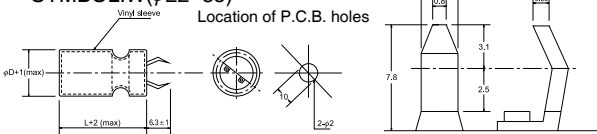


● SPECIFICATION

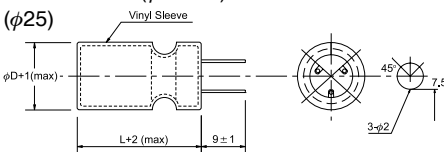
Item	Characteristic											
Operation Temperature Range	-40 ~ +105°C						-25 ~ +105°C					
Rated Working Voltage	16 ~ 100VDC						160 ~ 400VDC					
Capacitance Tolerance (120Hz 20°C)	±20%(M)											
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)											
Surge Voltage (20°C)	W.V.	16	25	35	50	63	100	160	200	250	350	400
	S.V.	20	32	44	63	79	125	200	250	300	400	450
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	16	25	35	50	63	100	160	200	250	350	400
	tan δ	0.45	0.35	0.30	0.25	0.25	0.20	0.15	0.15	0.15	0.20	0.20
Low Temperature Stability	Impedance ratio at 120Hz											
	Rated Voltage (V)	16	25	35	50	63	100	160	250	350	400	
	-25°C / +20°C	6	6	6	4	3	3	4	6			
	-40°C / +20°C	15	15	10	8	6	—	—				
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≦ rate working voltage)											
	Capacitance Change	≦ ±20% of initial value										
	Dissipation Factor	≦ 200% of initial specified value										
	Leakage current	≦ initial specified value										
Shelf Life	At +105°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)											

● TERMINAL TYPE

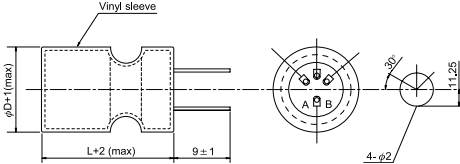
▲ P.C.B. TERMINAL (SNAP IN) SYMBOL:W(φ22~35)



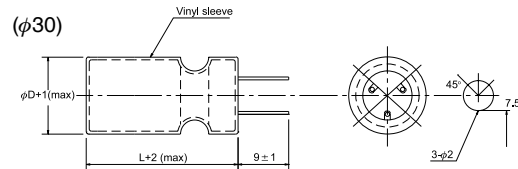
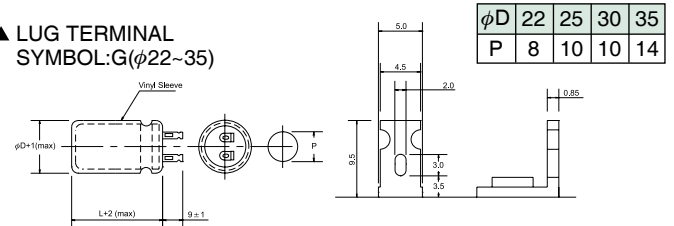
▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)



(φ35) A.B. blank terminals



▲ LUG TERMINAL SYMBOL:G(φ22~35)



● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	45	60	85	105
Multiplier	2.55	2.25	1.65	1.00

Frequency(Hz)	60	120	300	1k	10k	100k
W.V.	Multiplier					
16~50V	0.90	1.00	1.03	1.05	1.10	1.10
63~100V	0.85	1.00	1.07	1.13	1.19	1.20
160~400V	0.80	1.00	1.15	1.25	1.35	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 E.S.R. : Ω 20°C 120Hz
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code)		16 (1C)			25 (1E)			35 (1V)		
	Code	Item	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
1000	102								22x25	0.497	0.86
1500	152								22x25	0.332	1.01
2200	222					22x25	0.264	1.17	22x35	0.226	1.34
3300	332		22x25	0.226	1.23	22x35	0.176	1.54	22x45	0.151	1.70
4700	472		22x30	0.159	1.47	22x40	0.123	1.79	25x45	0.106	1.88
6800	682		22x40	0.110	1.84	25x45	0.085	2.11	25x50	0.073	2.14
8200	822		22x45	0.091	2.02	25x45	0.071	2.18			
10000	103		25x45	0.075	2.14	25x50	0.058	2.35			
12000	123		25x50	0.062	2.32						
15000	153		25x50	0.050	2.40						

μF	V(Code)		50 (1H)			63 (1J)		
	Code	Item	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
470	471							
560	561							
680	681					22x25	0.610	0.75
820	821					22x25	0.505	0.82
1000	102		22x25	0.414	0.91	22x30	0.414	0.98
1500	152		22x30	0.276	1.14	22x35	0.276	1.22
2200	222		22x40	0.188	1.49	25x40	0.188	1.52
3300	332		25x45	0.126	1.81	25x50	0.126	1.89
4700	472		25x50	0.088	2.04			

μF	V(Code)		100 (2A)			160 (2C)			200 (2D)		
	Code	Item	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
150	151								22x30	1.658	0.60
220	221					22x30	1.130	0.66	22x35	1.130	0.78
330	331					22x35	0.754	0.87	22x40	0.754	1.01
470	471		22x30	0.705	0.76	22x40	0.529	1.10	25x40	0.529	1.23
560	561		22x35	0.592	0.89	22x45	0.444	1.26	25x45	0.444	1.41
680	681		22x40	0.488	1.04	25x40	0.366	1.35	30x40	0.366	1.56
820	821		22x45	0.404	1.20	25x50	0.303	1.64	30x45	0.303	1.80
1000	102		25x45	0.332	1.35	30x45	0.249	1.82	30x50	0.249	2.08
1500	152		25x50	0.221	1.63						
2200	222		30x40	0.151	1.78						

μF	V(Code)		250 (2E)			350 (2V)			400 (2G)		
	Code	Item	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
47	470								22x25	7.055	0.30
100	101		22x25	2.487	0.51	22x35	3.316	0.48	22x40	3.316	0.53
150	151		22x35	1.658	0.72	22x45	2.210	0.65	22x50	2.210	0.72
220	221		22x45	1.130	0.97	25x40	1.507	0.77	25x50	1.507	0.89
330	331		25x45	0.754	1.21	30x45	1.005	1.09	30x50	1.005	1.14
470	471		25x50	0.529	1.52						
560	561		30x45	0.444	1.66						
680	681		30x50	0.366	1.92						

LARGE CAN TYPE

LS Series

Snap-in Terminal Type, Miniature Sized

JAMICON®

- Smaller case sized than LP series.
- Withstanding 2000 hours application of high ripple current at 85°C.

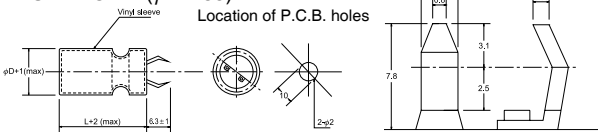


SPECIFICATION

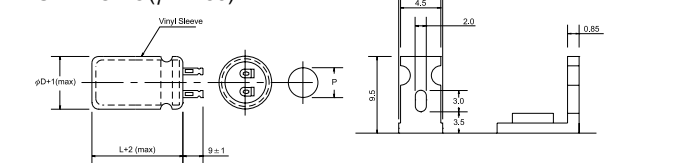
Item	Characteristic																
Operation Temperature Range	-40 ~ +85°C																
Rated Working Voltage	16 ~ 500VDC																
Capacitance Tolerance (120Hz 20°C)	±20%(M)																
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)																
Surge Voltage (20°C)	W.V.	16	25	35	50	63	80	100	160	180	200	250	350	350	400	450	500
	S.V.	20	32	44	63	79	100	125	200	225	250	300	400	400	450	500	550
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)	16	25	35		50		63		80		100		≥160			
	Capacitance	—	—	≤22,000	≥33,000	≤6,800	≥10,000	≤6,800	≥10,000	≤2,200	≥3,300	≤3,300	≥4,700	—			
	tan δ	0.50	0.40	0.35	0.40	0.30	0.35	0.25	0.35	0.20	0.25	0.20	0.25	0.15			
Low Temperature Stability	Impedance ratio at 120Hz																
	Rated Voltage (V)	16~100				160~250				350~500							
	-25°C / +20°C	4				6				8							
	-40°C / +20°C	15				—				—							
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)																
	Capacitance Change	≤ ± 15% of initial value															
	Dissipation Factor	≤ 175% of initial specified value															
	Leakage current	≤ initial specified value															
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)																

TERMINAL TYPE

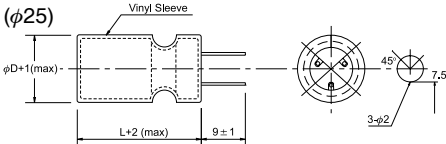
▲ P.C.B. TERMINAL (SNAP IN)
SYMBOL: W (φ22~35)



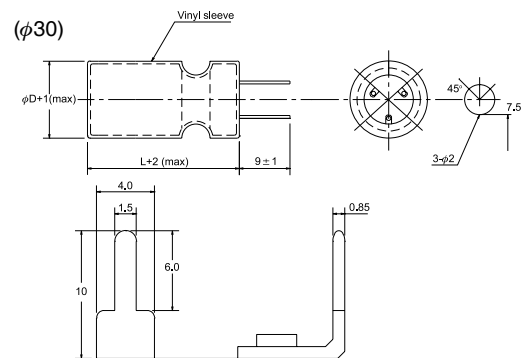
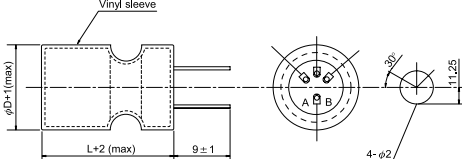
▲ LUG TERMINAL
SYMBOL: G (φ22~35)



▲ P.C.B. TERMINAL
SYMBOL: V (φ25~35)



(φ35)
A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85
Multiplier	1.80	1.40	1.20	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≤100V	0.80	1.00	1.10	1.20	1.20
≥160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code φD	16 (1C)				25 (1E)				35 (1V)			
		22	25	30	35	22	25	30	35	22	25	30	35
3300	332									25			
										2.04			
4700	472					25				30	25		
						2.25				2.41	2.30		
6800	682	25				30	25			35	30	25	
		2.40				2.69	2.56			2.82	2.70	2.66	
10000	103	30	25			35	30	25		45	35	30	25
		2.81	2.67			3.09	2.97	2.92		3.34	3.06	3.04	3.28
15000	153	40	30	25		45	35	30	25		50	35	30
		3.43	3.11	3.07		3.70	3.39	3.37	3.63		4.06	3.67	3.98
22000	223		45	30	25		45	35	30			45	40
			4.25	3.78	4.09		4.48	4.25	4.61			4.94	5.41
33000	333			45	35			50	40			L(mm)	50
				5.48	5.67			6.05	6.33			R.C.	7.27

μF	V(Code) Code φD	50 (1H)				63 (1J)				80 (1K)				100 (2A)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
1000	102									25				30	25		
										1.50				1.71	1.63		
1200	122													35	30		
														2.01	1.93		
1500	152					25				30	25			35	30	25	
						1.66				1.88	1.79			2.11	2.03	2.00	
1800	182													45	35	30	
														2.59	2.37	2.35	
2200	222	25				30	25			40	30	25		50	40	30	25
		1.92				2.08	1.98			2.45	2.22	2.19		2.84	2.64	2.47	2.66
3300	332	30	25			35	30	25		50	40	30	25		50	40	30
		2.35	2.24			2.51	2.41	2.38		3.05	2.83	2.65	2.86		3.25	3.11	3.19
4700	472	35	30	25		45	35	30	25		50	40	30			50	40
		2.72	2.62	2.58		3.04	2.79	2.77	2.99		3.36	3.21	3.30			3.65	3.82
6800	682	50	40	30	25		50	35	30			50	40				50
		3.45	3.20	3.00	3.23		3.53	3.19	3.46			3.80	3.98				4.48
10000	103		50	35	30			45	40								
			3.70	3.35	3.64			3.72	4.08								
15000	153			50	40				50								
				4.61	4.83				5.30								
18000	183				45												
					5.55												
22000	223				50												L(mm)
					6.42												R.C.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code φD	160 (2C)				180 (2M)				200 (2D)				250 (2E)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
220	221									25				25			
										1.25				1.31			
270	271									25				30	25		
										1.67				1.57	1.57		
330	331					25				30	25			35	30		
						1.31				1.66	1.66			1.85	1.87		
390	391	25				30	25			30	25			35	30	25	
		1.44				1.54	1.54			1.80	1.80			2.01	2.03	2.10	
470	471	30	25			30	25			35	30	25		40	35	25	25
		1.70	1.70			1.69	1.69			2.11	2.13	2.21		2.34	2.38	2.31	2.54
560	561	35	30			35	30	25		40	35	25		50	40	30	25
		1.99	2.23			1.97	1.99	2.06		2.44	2.48	2.41		2.82	2.74	2.71	2.78
680	681	40	30	25		40	35	25		45	35	30	25		45	35	30
		2.32	2.21	2.29		2.30	2.34	2.27		2.83	2.73	2.85	2.92		3.19	3.18	3.28
820	821	45	35	30		45	40	30	25		40	30	25		50	40	30
		2.68	2.58	2.70		2.67	2.72	2.68	2.75		3.17	3.13	3.21		3.67	3.69	3.60
1000	102	50	40	30	25		45	35	25		50	35	30			45	35
		3.11	3.02	2.98	3.05		3.16	3.15	3.04		3.87	3.68	3.80			4.28	4.22
1200	122		45	35	30		50	40	30			40	35			50	40
			3.49	3.48	3.59		3.63	3.65	3.56			4.26	4.42			4.91	4.88
1500	152			40	35			45	35				40				50
				4.11	4.26			4.15	4.09				5.02				5.74
1800	182			45	35				40				50				L(mm)
				4.73	4.67				4.73				6.04				R.C.

μF	V(Code) Code φD	350 (2V)				400 (2G)				450 (2W)				500 (2H)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
82	820					25				30	25			35	30	25	
						0.76				0.83	0.83			0.73	0.74	0.76	
100	101	25				30	25			35	30	25		40	30	25	
		0.73				0.91	0.91			0.97	0.98	1.02		0.85	0.81	0.84	
120	121	30	25			30	25			40	30	25		45	35	30	
		0.86	0.86			1.00	1.00			1.13	1.08	1.12		0.99	0.95	0.99	
150	151	30	25			35	30	25		45	35	30		50	40	35	30
		0.96	0.96			1.19	1.20	1.25		1.33	1.28	1.34		1.15	1.12	1.18	1.22
180	181	35	30	25		40	35	25		50	40	30	25		45	40	30
		1.13	1.14	1.18		1.38	1.40	1.37		1.53	1.49	1.47	1.50		1.30	1.37	1.33
220	221	40	35	25		50	40	30	25		45	35	30		50	45	35
		1.32	1.34	1.30		1.69	1.64	1.62	1.66		1.73	1.72	1.78		1.50	1.59	1.57
270	271	50	40	30	25		45	35	30			40	35			50	45
		1.61	1.57	1.55	1.59		1.92	1.91	1.97			2.02	2.10			1.84	1.92
330	331		45	35	30		50	40	30			45	35				45
			1.82	1.82	1.88		2.22	2.23	2.18			2.35	2.32				2.13
390	391		50	40	30			45	35				40				50
			2.08	2.10	2.04			2.55	2.52				2.66				2.42
470	471			40	35				40				45				
				2.30	2.38				2.92				3.07				
560	561			50	40				45								
				2.76	2.75				3.34								
680	681				45				50								L(mm)
					3.18				3.85								R.C.

LARGE CAN TYPE

HS Series

Wide Temperature Range, Miniature Sized

JAMICON®

- Smaller case sized than HP series.
- Withstanding 2000 hours application of high ripple current at 105°C.

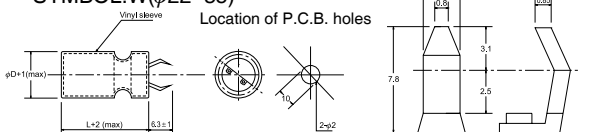


SPECIFICATION

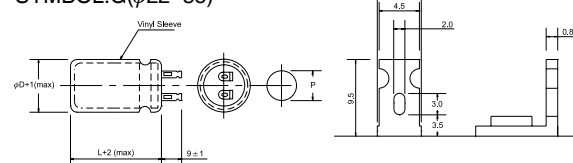
Item	Characteristic															
Operation Temperature Range	-40 ~ +105°C															
Rated Working Voltage	16 ~ 500VDC															
Capacitance Tolerance (120Hz 20°C)	±20%(M)															
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)															
Surge Voltage (20°C)	W.V.	16	25	35	50	63	80	100	160	180	200	250	350	400	450	500
	S.V.	20	32	44	63	79	100	125	200	225	250	300	400	450	500	550
Dissipation Factor ($\tan \delta$) (120Hz 20°C)	Rated Voltage (V)	16	25	35	50		63		80		100		≥160			
	Capacitance	—	—	—	≤6,800	≥10,000	≤6,800	≥10,000	≤3,300	≥4,700	≤3,300	≥4,700	—			
	$\tan \delta$	0.50	0.40	0.35	0.30	0.35	0.25	0.35	0.20	0.25	0.20	0.25	0.20	0.25	0.15	
Low Temperature Stability	Impedance ratio at 120Hz															
	Rated Voltage (V)	16	25	35	50	63~100	160~250	350~500								
	-25°C / +20°C	6	6	6	4	3	4	6								
	-40°C / +20°C	15	15	10	8	6	—	—								
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)															
	Capacitance Change	≤ ±20% of initial value														
	Dissipation Factor	≤ 175% of initial specified value														
	Leakage current	≤ initial specified value														
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)															

TERMINAL TYPE

▲ P.C.B. TERMINAL (SNAP IN)
SYMBOL: W($\phi 22 \sim 35$)

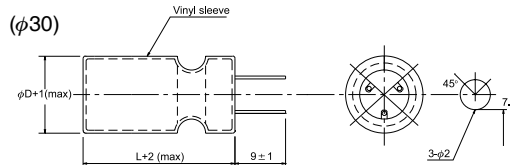
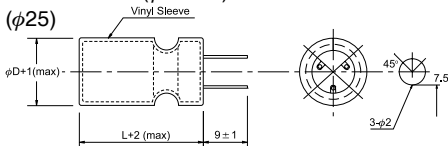


▲ LUG TERMINAL
SYMBOL: G($\phi 22 \sim 35$)

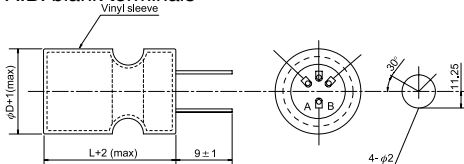


ϕD	22	25	30	35
P	8	10	10	14

▲ P.C.B. TERMINAL
SYMBOL: V($\phi 25 \sim 35$)



($\phi 35$)
A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≤100V	0.80	1.00	1.10	1.20	1.20
≥160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code φD	16 (1C)				25 (1E)				35 (1V)				50 (1H)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
1500	152													25			
														1.05			
2200	222									25				30	25		
										1.17				1.31	1.25		
3300	332					25				30	25			35	30	25	
						1.34				1.43	1.36			1.58	1.52	1.50	
4700	472	25				30	25			35	30	25		45	35	30	25
		1.36				1.58	1.51			1.65	1.58	1.56		1.90	1.74	1.73	1.86
6800	682	35	30			35	30	25		50	40	30	25		50	35	30
		1.74	1.67			1.85	1.78	1.75		2.09	1.94	1.82	1.96		2.19	1.98	2.15
10000	103	45	35	25		45	35	30	25		50	35	30			45	40
		2.09	1.92	1.77		2.19	2.01	2.00	2.15		2.24	2.03	2.2			2.39	2.62
15000	153		45	35	30		45	35	30			50	40				50
			2.29	2.17	2.36		2.54	2.41	2.61			2.79	2.92				3.52
22000	223			45	35			45	40								
				2.86	2.97			3.24	3.55								
33000	333				50				50								L(mm)
				4.21					4.78								R.C.

μF	V(Code) Code φD	63 (1J)				80 (1K)				100 (2A)				160 (2C)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
330	331													25			
														0.88			
390	391													30	25		
														1.03	1.03		
470	471													30	25		
														1.14	1.14		
560	561													35	30	25	
														1.32	1.33	1.38	
680	681													40	35	25	
														1.55	1.57	1.53	
820	821													45	40	30	25
														1.79	1.82	1.80	1.84
1000	102	25				30	25			30	25				45	35	25
		0.91				1.04	0.99			1.11	1.06				2.12	2.12	2.04
1200	122														50	35	30
															2.43	2.32	2.39
1500	152	30	25			35	30	25		40	35	25				45	35
		1.14	1.08			1.28	1.23	1.21		1.44	1.39	1.29				2.88	2.84
1800	182																40
																	3.28
2200	222	35	30	25		50	40	30	25		45	35					
		1.40	1.35	1.33		1.72	1.60	1.50	1.61		1.77	1.68					
3300	332	45	40	30	25		50	40	30			45	35				
		1.77	1.72	1.61	1.73		1.97	1.78	1.93			2.07	2.15				
4700	472		50	35	30			50	40				45				
			2.03	1.84	2.00			2.11	2.32				2.52				
6800	682			45	40				50								
				2.20	2.41				2.72								
10000	103				50												L(mm)
				2.87													R.C.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code	φD	180 (2M)				200 (2D)				250 (2E)			
			22	25	30	35	22	25	30	35	22	25	30	35
220	221					25				30	25			
						0.85				0.91	0.91			
270	271	25				25				35	25			
		0.80				0.94				1.07	1.01			
330	331	30	25			30	25			35	30	25		
		0.95	0.95			1.12	1.12			1.19	1.20	1.24		
390	391	30	25			35	25			40	35	25		
		1.03	1.04			1.31	1.22			1.37	1.39	1.35		
470	471	35	30	25		40	30	25		50	40	30	25	
		1.21	1.22	1.27		1.52	1.45	1.50		1.66	1.61	1.59	1.63	
560	561	40	30	25		45	35	30			45	35	25	
		1.40	1.34	1.39		1.75	1.68	1.76			1.85	1.85	1.78	
680	681	45	35	30	25	50	40	30	25		50	35	30	
		1.63	1.57	1.64	1.68	2.02	1.96	1.94	1.98		2.14	2.04	2.10	
820	821	50	40	30	25		45	35	30			45	35	
		1.88	1.83	1.80	1.85		2.27	2.26	2.33			2.49	2.45	
1000	102		45	35	30		50	40	30				40	
			2.12	2.12	2.18		2.63	2.64	2.58				2.86	
1200	122			40	30			45	35				45	
				2.45	2.39			3.04	3.00				3.29	
1500	152			50	35				45				50	
				2.91	2.74				3.58				3.68	
1800	182				40				50				L(mm)	
					3.17				4.10				R.C.	

μF	V(Code) Code	φD	350 (2V)				400 (2G)				450 (2W)				500 (2H)			
			22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
47	470									25				25				
										0.39				0.27				
68	680					25				30	25			30	25			
						0.47				0.50	0.50			0.35	0.35			
82	820	25				30	25			35	30			35	30			
		0.43				0.56	0.56			0.59	0.60			0.41	0.41			
100	101	30	25			30	25			40	35	25		40	35	30		
		0.51	0.51			0.61	0.61			0.69	0.70	0.68		0.47	0.48	0.50		
120	121	30	25			35	30	25		45	35	30	25	50	40	35	25	
		0.55	0.55			0.72	0.73	0.75		0.80	0.77	0.80	0.82	0.57	0.56	0.59	0.56	
150	151	35	30	25		40	35	30			45	35	30		45	40	30	
		0.66	0.67	0.69		0.85	0.86	0.90			0.96	0.96	0.99		0.66	0.69	0.68	
180	181	40	35	30		45	40	30	25		50	35	30		50	40	35	
		0.77	0.78	0.82		0.98	1.00	0.99	1.01		1.10	1.05	1.08		0.75	0.76	0.79	
220	221	50	40	30	25		45	35	30			40	35			45	40	
		0.94	0.91	0.90	0.92		1.17	1.16	1.20			1.22	1.27			0.88	0.92	
270	271		45	35	30		50	40	30			50	40			50	45	
			1.07	1.06	1.10		1.35	1.36	1.33			1.49	1.48			1.02	1.07	
330	331		50	40	30			45	35				45				50	
			1.23	1.24	1.21			1.58	1.56				1.72				1.23	
390	391			45	35				40				50					
				1.42	1.40				1.79				1.96					
470	471				40				45									
					1.62				2.07									
560	561				45				50								L(mm)	
					1.86				2.36								R.C.	

LARGE CAN TYPE

HM Series

Snap-in Terminal Type, Small Sized

- Small case sized than HS series.
- Withstanding 2000 hours application of high ripple current at 105°C.

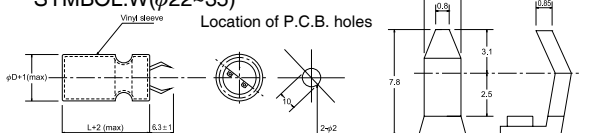


SPECIFICATION

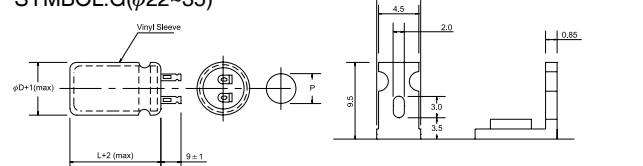
Item	Characteristic							
Operation Temperature Range	-25 ~ +105°C							
Rated Working Voltage	160 ~ 450VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)							
Surge Voltage (20°C)	W.V.	160	200	250	350	400	450	
	S.V.	200	250	300	400	450	500	
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)	160	200	250	350	400	450	
	tan δ	0.15	0.15	0.15	0.15	0.15	0.15	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	160~250			350~450			
	-25°C / +20°C	4			6			
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 175% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							

TERMINAL TYPE

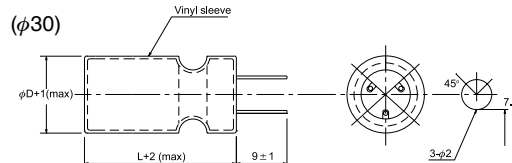
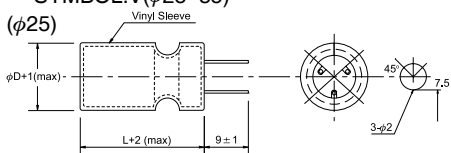
▲ P.C.B. TERMINAL (SNAP IN)
SYMBOL:W(φ22~35)



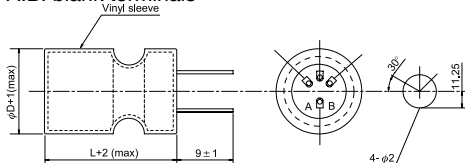
▲ LUG TERMINAL
SYMBOL:G(φ22~35)



▲ P.C.B. TERMINAL
SYMBOL:V(φ25~35)



(φ35)
A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≥ 160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code	φD	160 (2C)				200 (2D)				250 (2E)			
			22	25	30	35	22	25	30	35	22	25	30	35
220	221										25			
											0.89			
270	271										25			
											0.94			
330	331										30	25		
											1.12	1.12		
390	391					25					35	25		
						1.29					1.30	1.21		
470	471		25			30					40	30	25	
			1.44			1.44					1.42	1.36	1.41	
560	561		30			30	25				45	35	25	
			1.48			1.48	1.48				1.54	1.49	1.44	
680	681		30	25		40	30				50	40	30	25
			1.63	1.63		1.84	1.75				1.78	1.73	1.71	1.75
820	821		35	30	25	45	35	25			45	35	30	
			1.84	1.85	1.92	2.05	1.98	1.92			1.93	1.92	1.98	
1000	102		40	35	25	50	45	30	25				40	30
			2.10	2.13	2.07	2.31	2.37	2.22	2.28				2.19	2.13
1200	122		40	30	25	50	35	30					45	35
			2.30	2.27	2.33	2.54	2.42	2.49					2.35	2.32
1500	152		45	35	30		40	30						45
			2.42	2.41	2.49		2.55	2.49						2.56
1800	182		50	40	30		45	40						50
			2.56	2.58	2.52		2.71	2.82						2.71
2200	222				45	35			45					
					2.89	2.85			3.16					
2700	272				50	40								
					3.13	3.11								
3300	332					50								L(mm)
						3.77								R.C.

μF	V(Code) Code	φD	350 (2V)				400 (2G)				450 (2W)			
			22	25	30	35	22	25	30	35	22	25	30	35
68	680										25			
											0.47			
82	820										30			
											0.55			
100	101					25					30	25		
						0.61					0.61	0.61		
120	121		25			30					35	30		
			0.58			0.72					0.71	0.72		
150	151		30			30	25				40	30	25	
			0.71			0.80	0.80				0.85	0.81	0.84	
180	181		30	25		35	30				45	40	30	
			0.73	0.73		0.89	0.90				0.93	0.95	0.93	
220	221		35	30		45	35	25			45	30	25	
			0.87	0.87		1.10	1.06	1.03			1.10	1.03	1.06	
270	271		40	30	25	50	40	30	25		50	40	30	
			0.96	0.92	0.95	1.21	1.18	1.16	1.19		1.21	1.22	1.19	
330	331		45	40	30		45	35	30				45	35
			1.12	1.15	1.13		1.37	1.37	1.41				1.42	1.40
390	391			45	35		50	40	30				50	40
				1.31	1.31		1.56	1.58	1.54				1.61	1.60
470	471			50	35	30		45	35					45
				1.42	1.36	1.40		1.72	1.69					1.75
560	561				45	35		50	40					50
					1.55	1.53		1.85	1.84					1.88
680	681				50	40			45					
					1.79	1.78			2.12					
820	821					45								L(mm)
						1.97								R.C.

LARGE CAN TYPE

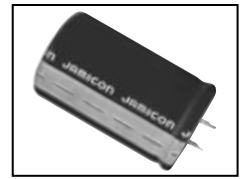
LT

Series

Snap-in Terminal Type, Miniature Sized

JAMICON®

- Same case sized as LS series.
- Withstanding 3000 hours application of high ripple current at 85°C.

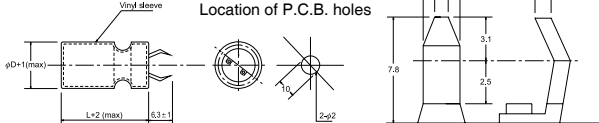


● SPECIFICATION

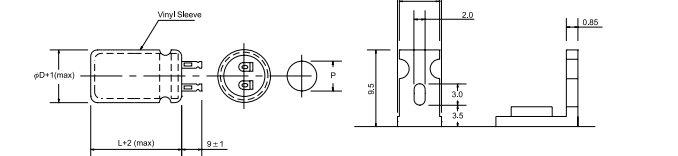
Item	Characteristic														
Operation Temperature Range	-40 ~ +85°C														
Rated Working Voltage	16 ~ 450VDC														
Capacitance Tolerance (120Hz 20°C)	±20%(M)														
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)														
Surge Voltage (20°C)	W.V.	16	25	35	50	63	80	100	160	180	200	250	350	400	450
	S.V.	20	32	44	63	79	100	125	200	225	250	300	400	450	500
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)	16	25	35		50		63		80		100		≥160	
	Capacitance	—	—	≤22,000	≥33,000	≤6,800	≥10,000	≤6,800	≥10,000	≤2,200	≥3,300	≤3,300	≥4,700	—	
	tan δ	0.50	0.40	0.35	0.40	0.30	0.35	0.25	0.35	0.20	0.25	0.20	0.25	0.15	
Low Temperature Stability	Impedance ratio at 120Hz														
	Rated Voltage (V)	16~100				160~250				350~450					
	-25°C / +20°C	4				6				8					
	-40°C / +20°C	15				—				—					
Load Life	After 3000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)														
	Capacitance Change	≤ ±15% of initial value													
	Dissipation Factor	≤175% of initial specified value													
	Leakage current	≤initial specified value													
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)														

● TERMINAL TYPE

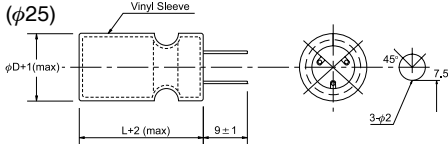
▲ P.C.B. TERMINAL (SNAP IN)
SYMBOL:W(φ22~35)



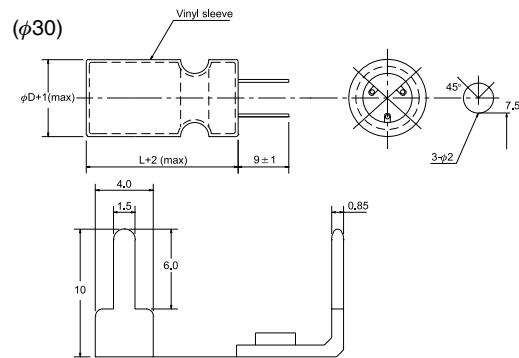
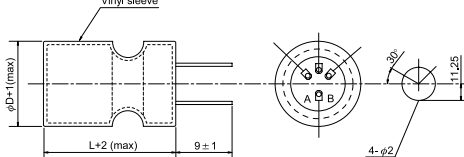
▲ LUG TERMINAL
SYMBOL:G(φ22~35)



▲ P.C.B. TERMINAL
SYMBOL:V(φ25~35)



(φ35)
A.B. blank terminals



● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85
Multiplier	1.80	1.40	1.20	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≤100V	0.80	1.00	1.10	1.20	1.20
≥160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code φD	16 (1C)				25 (1E)				35 (1V)			
		22	25	30	35	22	25	30	35	22	25	30	35
3300	332									25			
4700	472					25				30	25		
						2.25				2.41	2.23		
6800	682	25				30	25			35	30	25	
		2.40				2.69	2.56			2.82	2.70	2.66	
10000	103	30	25			35	30	25		45	35	30	25
		2.81	2.67			3.09	2.97	2.92		3.34	3.06	3.04	3.28
15000	153	40	30	25		45	35	30	25		50	35	30
		3.43	3.11	3.07		3.70	3.39	3.37	3.63		4.06	3.67	3.98
22000	223		45	30	25		45	35	30			45	40
			4.25	3.78	4.09		4.48	4.25	4.61			4.94	5.41
33000	333			45	35			50	40			L(mm)	50
				5.48	5.67			6.05	6.33			R.C.	7.27

μF	V(Code) Code φD	50 (1H)				63 (1J)				80 (1K)				100 (2A)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
1000	102									25				30	25		
										1.50				1.71	1.63		
1200	122													35	30		
														2.01	1.93		
1500	152					25				30	25			35	30	25	
						1.66				1.88	1.79			2.11	2.03	2.00	
1800	182													45	35	30	
														2.59	2.37	2.35	
2200	222	25				30	25			40	30	25		50	40	30	25
		1.92				2.08	1.98			2.45	2.22	2.19		2.84	2.64	2.47	2.42
3300	332	30	25			35	30	25		50	40	30	25	50	40	30	
		2.35	2.24			2.51	2.41	2.38		3.05	2.83	2.65	2.86	3.25	3.11	3.19	
4700	472	35	30	25		45	35	30	25		50	40	30			50	40
		2.72	2.62	2.58		3.04	2.79	2.77	2.99		3.36	3.21	3.30			3.65	3.82
6800	682	50	40	30	25		50	35	30			50	40				50
		3.45	3.20	3.00	3.23		3.53	3.19	3.46			3.80	3.98				4.48
10000	103		50	35	30			45	40								
			3.70	3.35	3.64			3.72	4.08								
15000	153			50	40				50								L(mm)
				4.61	4.83				5.30								R.C.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code φD	160 (2C)				180 (2M)				200 (2D)				250 (2E)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
220	221									25				25			
										1.25				1.31			
270	271									25				30	25		
										1.67				1.57	1.57		
330	331					25				30	25			35	30		
						1.31				1.66	1.66			1.85	1.87		
390	391	25				30	25			30	25			35	30	25	
		1.44				1.54	1.54			1.80	1.80			2.01	2.03	2.10	
470	471	30	25			30	25			35	30	25		40	35	25	25
		1.70	1.70			1.69	1.69			2.11	2.13	2.21		2.34	2.38	2.31	2.54
560	561	35	30			35	30	25		40	35	25		50	40	30	25
		1.99	2.23			1.97	1.99	2.06		2.44	2.48	2.41		2.82	2.74	2.71	2.78
680	681	40	30	25		40	35	25		45	35	30	25		45	35	30
		2.32	2.21	2.29		2.30	2.34	2.27		2.83	2.73	2.85	2.92		3.19	3.18	3.28
820	821	45	35	30		45	40	30	25		40	30	25		50	40	30
		2.68	2.58	2.70		2.67	2.72	2.68	2.75		3.17	3.13	3.21		3.67	3.69	3.60
1000	102	50	40	30	25		45	35	25		50	35	30			45	35
		3.11	3.02	2.98	3.05		3.16	3.15	3.04		3.87	3.68	3.80			4.28	4.22
1200	122		45	35	30		50	40	30			40	35			50	40
			3.49	3.48	3.59		3.63	3.65	3.56			4.26	4.42			4.91	4.88
1500	152			40	35			45	35				40				50
				4.11	4.26			4.15	4.09				5.02				5.74
1800	182			45	35				40				50				L(mm)
				4.73	4.67				4.73				6.04				R.C.

μF	V(Code) Code φD	350 (2V)				400 (2G)				450 (2W)			
		22	25	30	35	22	25	30	35	22	25	30	35
82	820					25				30	25		
						0.76				0.83	0.83		
100	101	25				30	25			35	30	25	
		0.73				0.91	0.91			0.97	0.98	1.02	
120	121	30	25			30	25			40	30	25	
		0.86	0.86			1.00	1.00			1.13	1.08	1.12	
150	151	30	25			35	30	25		45	35	30	
		0.96	0.96			1.19	1.20	1.25		1.33	1.28	1.34	
180	181	35	30	25		40	35	25		50	40	30	25
		1.13	1.14	1.18		1.38	1.40	1.37		1.53	1.49	1.47	1.50
220	221	40	35	25		50	40	30	25		45	35	30
		1.32	1.34	1.30		1.69	1.64	1.62	1.66		1.73	1.72	1.78
270	271	50	40	30	25		45	35	30			40	35
		1.61	1.57	1.55	1.59		1.92	1.91	1.97			2.02	2.10
330	331		45	35	30		50	40	30			45	35
			1.82	1.82	1.88		2.22	2.23	2.18			2.35	2.32
390	391		50	40	30			45	35				40
			2.08	2.10	2.04			2.55	2.52				2.66
470	471			40	35				40				45
				2.30	2.38				2.92				3.07
560	561			50	40				45				
				2.76	2.75				3.34				
680	681				45				50				L(mm)
					3.18				3.85				R.C.

LARGE CAN TYPE



Series

Snap-in Terminal Type, Miniature Sized



- Withstanding 5000 hours application of high ripple current at 85°C.

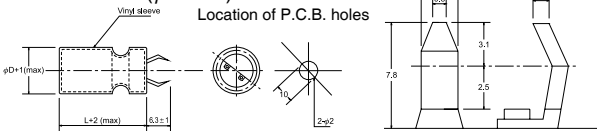


SPECIFICATION

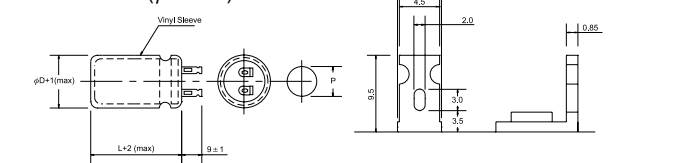
Item	Characteristic								
Operation Temperature Range	-40 ~ +85°C								
Rated Working Voltage	160 ~ 450VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)								
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)								
Surge Voltage (20°C)	W.V.	160	200	250	350	385	400	420	450
	S.V.	200	250	300	400	420	450	470	500
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)	160	200	250	350	385	400	420	450
	tan δ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)	160~250				350~450			
	-25°C / +20°C	4				6			
Load Life	After 5000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change	≤ ±20% of initial value							
	Dissipation Factor	≤ 175% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)								

TERMINAL TYPE

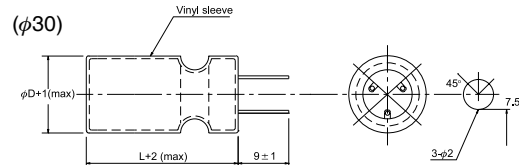
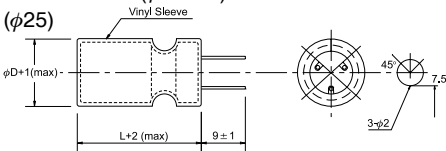
▲ P.C.B. TERMINAL (SNAP IN) SYMBOL:W(φ22~35)



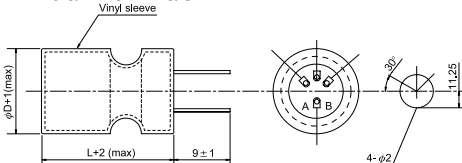
▲ LUG TERMINAL SYMBOL:G(φ22~35)



▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)



▲ A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85
Multiplier	1.80	1.40	1.20	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≥ 160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code φD	160 (2C)				200 (2D)				250 (2E)			
		22	25	30	35	22	25	30	35	22	25	30	35
150	151									25			
										0.94			
220	221	25				25				30	25		
		1.13				1.13				1.24	1.24		
330	331	30				30	25			40	30		
		1.44				1.44	1.55			1.65	1.65		
470	471	35	30			40	30	25		40	30		
		1.85	1.85			1.96	1.96	1.96		2.16	2.06		
560	561									45	35	25	
										2.50	2.50	2.50	
680	681	45	35	30		40	30				40	30	
		2.47	2.47	2.47		2.58	2.47				2.78	2.78	
1000	102		45	35	30		40	35					40
			3.19	3.19	3.19		3.40	3.61					3.71
1500	152			45	40			45					
				4.33	4.33			4.74					
2200	222				50								L(mm)
					5.97								R.C.

μF	V(Code) Code φD	350 (2V)				385 (2X)				400 (2G)			
		22	25	30	35	22	25	30	35	22	25	30	35
68	680	25				25				25			
		0.63				0.63				0.63			
100	101	30	25			30	25			30	25		
		0.81	0.82			0.81	0.82			0.81	0.82		
120	121									35	30		
										0.95	0.95		
150	151	40	30			40	30			40	35	25	
		1.13	1.03			1.13	1.03			1.13	1.13	1.13	
180	181									40	30		
										1.24	1.24		
220	221	50	40	30		50	40	30		40	35		
		1.44	1.44	1.44		1.44	1.44	1.44		1.44	1.55		
270	271									45	35	25	
										1.65	1.65	1.65	
330	331		50	40	30		50	40	30		45	35	
			1.96	1.96	1.96		1.96	1.96	1.96		2.06	2.06	
390	391										50	40	
											2.27	2.27	
470	471			50	40		50	40					45
				2.58	2.58		2.58	2.58					2.68
560	561				45			45					50
					2.88			2.88					2.99
680	681				50			50					L(mm)
					3.12			3.12					R.C.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code	φD	420 (2Y)				450 (2W)			
			22	25	30	35	22	25	30	35
47	470						25			
							0.53			
68	680						30	25		
							0.67	0.68		
100	101		30	25			40	30	25	
			0.81	0.82			0.91	0.89	0.93	
120	121		40	30						
			0.97	0.97						
150	151		45	35	25		50	40	30	
			1.11	1.14	1.15		1.20	1.24	1.13	
180	181		50	35	30			45	35	30
			1.30	1.25	1.30			1.34	1.34	1.34
220	221			40	35				40	30
				1.45	1.50				1.55	1.55
270	271			50	35	30			45	35
				1.70	1.67	1.76			1.85	1.85
330	331				45	35				40
					2.02	2.04				2.16
390	391				50	40				
					2.29	2.29				
470	471					45				50
						2.66				2.78
560	561					50				L(mm)
						3.02				R.C.

LARGE CAN TYPE

HT Series

Snap-in Terminal Type,
Wide Temperature Range

JAMICON®

- Same case sized as HS series.
- Withstanding 3000 hours application of high ripple current at 105°C.

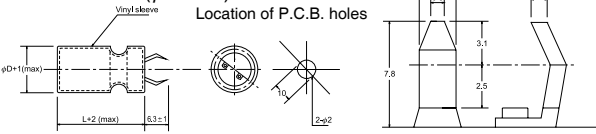


SPECIFICATION

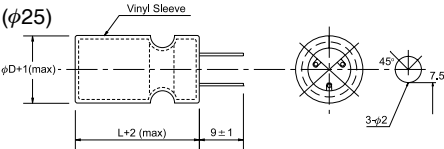
Item	Characteristic														
Operation Temperature Range	-40 ~ +105°C														
Rated Working Voltage	16 ~ 450VDC														
Capacitance Tolerance (120Hz 20°C)	±20%(M)														
Leakage Current (20°C)	I ≤ 0.02CV or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)														
Surge Voltage (20°C)	W.V.	16	25	35	50	63	80	100	160	180	200	250	350	400	450
	S.V.	20	32	44	63	79	100	125	200	225	250	300	400	450	500
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)	16	25	35	50		63		80		100		≥ 160		
	Capacitance	—	—	—	≤ 6,800	≥ 10,000	≤ 6,800	≥ 10,000	≤ 3,300	≥ 4,700	≤ 3,300	≥ 4,700	—		
	tan δ	0.50	0.40	0.35	0.30	0.35	0.25	0.35	0.20	0.25	0.20	0.25	0.15		
Low Temperature Stability	Impedance ratio at 120Hz														
	Rated Voltage (V)	16	25	35	50	63~100		160~250		350~450					
	-25°C / +20°C	6	6	6	4	3		4		6					
	-40°C / +20°C	15	15	10	8	6		—		—					
Load Life	After 3000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)														
	Capacitance Change	≤ ±20% of initial value													
	Dissipation Factor	≤ 175% of initial specified value													
	Leakage current	≤ initial specified value													
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)														

TERMINAL TYPE

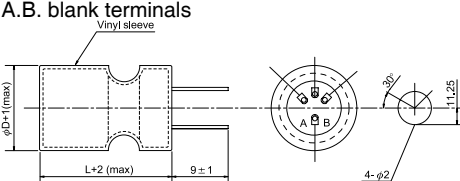
▲ P.C.B. TERMINAL (SNAP IN) SYMBOL:W(φ22~35)



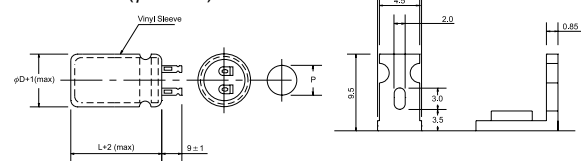
▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)



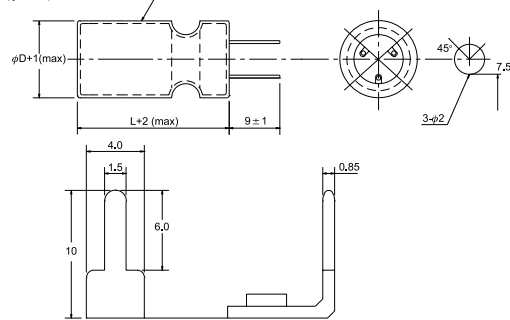
(φ35) A.B. blank terminals



▲ LUG TERMINAL SYMBOL:G(φ22~35)



(φ30)



φD	22	25	30	35
P	8	10	10	14

RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≤ 100V	0.80	1.00	1.10	1.20	1.20
≥ 160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code φD	16 (1C)				25 (1E)				35 (1V)				50 (1H)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
1500	152													25			
														1.05			
2200	222									25				30	25		
										1.17				1.31	1.25		
3300	332					25				30	25			35	30	25	
						1.34				1.43	1.36			1.58	1.52	1.50	
4700	472	25				30	25			35	30	25		45	35	30	25
		1.36				1.58	1.51			1.65	1.58	1.56		1.90	1.74	1.73	1.86
6800	682	35	30			35	30	25		50	40	30	25		50	35	30
		1.74	1.67			1.85	1.78	1.75		2.09	1.94	1.82	1.96		2.19	1.98	2.15
10000	103	45	35	25		45	35	30	25		50	35	30			45	40
		2.09	1.92	1.77		2.19	2.01	2.00	2.15		2.24	2.03	2.20			2.39	2.62
15000	153		45	35	30		45	35	30			50	40				50
			2.29	2.17	2.36		2.54	2.41	2.61			2.79	2.92				3.52
22000	223			45	35			45	40								
				2.86	2.97			3.24	3.55								
33000	333				50				50								L(mm)
					4.21				4.78								R.C.

μF	V(Code) Code φD	63 (1J)				80 (1K)				100 (2A)				160 (2C)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
330	331													25			
														0.88			
390	391													30	25		
														1.03	1.03		
470	471													30	25		
														1.14	1.13		
560	561													35	30	25	
														1.32	1.33	1.38	
680	681													40	35	25	
														1.55	1.57	1.53	
820	821													45	40	30	25
														1.79	1.82	1.80	1.84
1000	102	25				30	25			30	25				45	35	25
		0.91				1.04	0.99			1.11	1.06				2.12	2.12	2.04
1200	122														50	35	30
															2.43	2.32	2.39
1500	152	30	25			35	30	25		40	35	25				45	35
		1.14	1.08			1.28	1.23	1.21		1.44	1.39	1.29				2.88	2.84
1800	182																40
																	3.28
2200	222	35	30	25		50	40	30	25		45	35					
		1.40	1.35	1.33		1.72	1.60	1.50	1.61		1.77	1.68					
3300	332	45	40	30	25		50	40	30			45	35				
		1.77	1.72	1.61	1.73		1.97	1.78	1.93			2.07	2.15				
4700	472		50	35	30			50	40				45				
			2.03	1.84	2.00			2.11	2.32				2.52				
6800	682			45	40				50								
				2.20	2.41				2.72								
10000	103				50												L(mm)
					2.87												R.C.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code φD	180 (2M)				200 (2D)				250 (2E)			
		22	25	30	35	22	25	30	35	22	25	30	35
220	221					25				30	25		
						0.85				0.91	0.91		
270	271	25				25				35	25		
		0.80				0.94				1.07	1.01		
330	331	30	25			30	25			35	30	25	
		0.95	0.95			1.12	1.12			1.19	1.20	1.24	
390	391	30	25			35	25			40	35	25	
		1.03	1.04			1.31	1.22			1.37	1.39	1.35	
470	471	35	30	25		40	30	25		50	40	30	25
		1.21	1.22	1.27		1.52	1.45	1.50		1.66	1.61	1.59	1.63
560	561	40	30	25		45	35	30			45	35	25
		1.40	1.34	1.39		1.75	1.68	1.76			1.85	1.85	1.78
680	681	45	35	30	25	45	40	30	25		50	35	30
		1.63	1.57	1.64	1.68	1.92	1.96	1.94	1.98		2.14	2.04	2.10
820	821	50	40	30	25		45	35	30			45	35
		1.88	1.83	1.80	1.85		2.27	2.26	2.33			2.49	2.45
1000	102		45	35	30		50	40	30				40
			2.12	2.12	2.18		2.63	2.64	2.58				2.86
1200	122			40	30			45	35				45
				2.45	2.39			3.04	3.00				3.29
1500	152			50	35				45				50
				2.91	2.74				3.58				3.68
1800	182				40				50				L(mm)
					3.17				4.10				R.C.

μF	V(Code) Code φD	350 (2V)				400 (2G)				450 (2W)			
		22	25	30	35	22	25	30	35	22	25	30	35
47	470									25			
										0.39			
68	680					25				30	25		
						0.47				0.50	0.50		
82	820	25				30	25			35	30		
		0.43				0.56	0.56			0.59	0.60		
100	101	30	25			30	25			40	35	25	
		0.51	0.51			0.61	0.61			0.69	0.70	0.68	
120	121	30	25			35	30	25		45	35	30	25
		0.55	0.55			0.72	0.73	0.75		0.80	0.77	0.80	0.82
150	151	35	30	25		40	35	30			45	35	30
		0.66	0.67	0.69		0.85	0.86	0.90			0.96	0.96	0.99
180	181	40	35	30		45	40	30	25		50	35	30
		0.77	0.78	0.82		0.98	1.00	0.99	1.01		1.10	1.05	1.08
220	221	50	40	30	25		45	35	30			40	35
		0.94	0.91	0.90	0.92		1.17	1.16	1.20			1.22	1.27
270	271		45	35	30		50	40	30			50	40
			1.07	1.06	1.10		1.35	1.36	1.33			1.49	1.48
330	331		50	40	30			45	35				45
			1.23	1.24	1.21			1.58	1.56				1.72
390	391			45	35				40				50
				1.42	1.40				1.79				1.96
470	471				40				45				
					1.62				2.07				
560	561				45				50				L(mm)
					1.86				2.36				R.C.

LARGE CAN TYPE

HV

Series

No Sparks With DC Overvoltage

JAMICON®

- No sparks with specified DC overvoltage applied.
- Withstanding 3000 hours application of rate ripple current at 105°C.

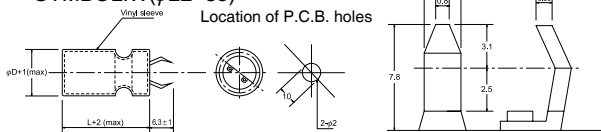


SPECIFICATION

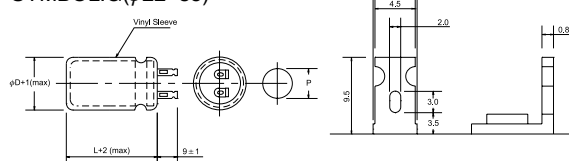
Item	Characteristic		
Operation Temperature Range	-25 ~ +105°C		
Rated Working Voltage	200 , 400VDC		
Capacitance Tolerance (120Hz 20°C)	±20%(M)		
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)		
Surge Voltage (20°C)	W.V.	200	400
	S.V.	250	450
Dissipation Factor (tan δ) (120Hz 20°C)	≤0.15		
Low Temperature Stability	Impedance ratio at 120Hz		
	Rated Voltage (V)	200	400
	-25°C / +20°C	4	6
DC Overvoltage Test	When an excessive DC voltage is applied to the capacitors under the test condition on next page, the vent shall operate and then the capacitors shall become open-circuit without burning material.		
Load Life	After 3000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)		
	Capacitance Change	≤ ±20% of initial value	
	Dissipation Factor	≤ 175% of initial specified value	
	Leakage current	≤ initial specified value	
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)		

TERMINAL TYPE

▲ P.C.B. TERMINAL (SNAP IN) SYMBOL:W(φ22~35)

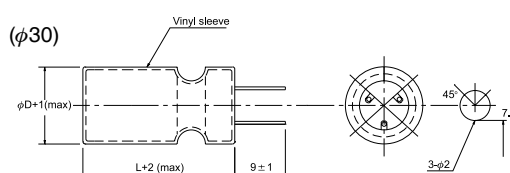
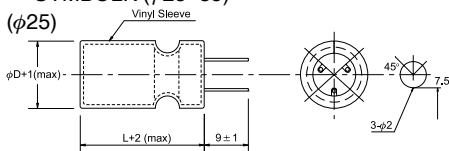


▲ LUG TERMINAL SYMBOL:G(φ22~35)

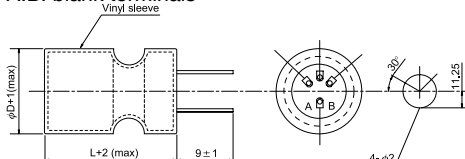


φD	22	25	30	35
P	8	10	10	14

▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)



(φ35) A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
200V	0.80	1.00	1.10	1.30	1.40
400V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code	φD	200 (2D)				400 (2G)			
			22	25	30	35	22	25	30	35
68	680						25			
							0.46			
82	820						30	25		
							0.55	0.52		
100	101						35	30		
							0.65	0.62		
120	121						40	30	25	
							0.76	0.68	0.67	
150	151						45	35	30	
							0.89	0.82	0.81	
180	181						50	40	30	25
							1.03	0.95	0.89	0.91
220	221							45	35	30
								1.11	1.04	1.08
270	271		25					50	40	35
			0.89					1.28	1.22	1.27
330	331		30	25					45	35
			1.06	1.01					1.42	1.40
390	391		35	30					50	40
			1.24	1.18					1.62	1.61
470	471		40	30	25					45
			1.44	1.30	1.34					1.86
560	561		45	35	30					
			1.65	1.51	1.58					
680	681		50	40	35					
			1.91	1.76	1.85					
820	821			50	35	30				
				2.13	2.03	2.03				
1000	102				45	35				
					2.50	2.38				
1200	122				50	40				
					2.86	2.75				
1500	152					45				L(mm)
						3.11				R.C.

● DC Overvoltage Test Condition

The vent will be operated and the capacity shall become an open circuit without burning the material when the following excess DC voltage is applied.

Rated Voltage	Capacitance	Current	Test DC Voltage
200 VDC	< 330 μF	4A	300 / 375 VDC
	330 ≦ C < 470 μF	5A	
	≧ 470 μF	7A	
400 VDC	< 100 μF	2A	500 / 600 VDC
	100 ≦ C < 220 μF	4A	
	≧ 220 μF	7A	

LARGE CAN TYPE

HL Series

Snap-in Terminal Type,
Wide Temperature Range

JAMICON®

- Withstanding 5000 hours application of high ripple current at 105°C.

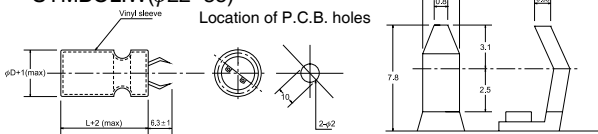


SPECIFICATION

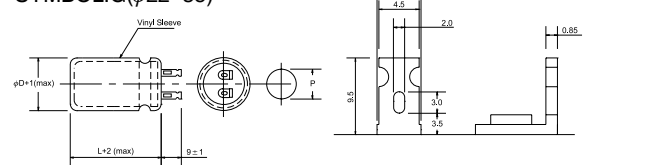
Item	Characteristic				
Operation Temperature Range	-40 ~ +105°C				
Rated Working Voltage	200 ~ 450VDC				
Capacitance Tolerance (120Hz 20°C)	±20%(M)				
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)				
Surge Voltage (20°C)	W.V.	200	250	400	450
	S.V.	250	300	450	500
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage (V)	200	250	400	450
	tan δ	0.15	0.15	0.15	0.15
Low Temperature Stability	Impedance ratio at 120Hz				
	Rated Voltage (V)	200~250		400~450	
	-25°C / +20°C	4		6	
Load Life	After 5000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)				
	Capacitance Change	≤ ±20% of initial value			
	Dissipation Factor	≤ 175% of initial specified value			
	Leakage current	≤ initial specified value			
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)				

TERMINAL TYPE

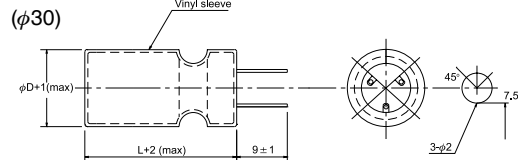
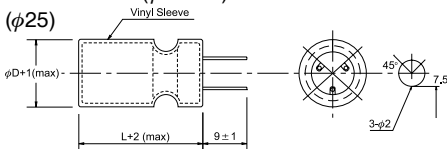
▲ P.C.B. TERMINAL (SNAP IN) SYMBOL:W(φ22~35)



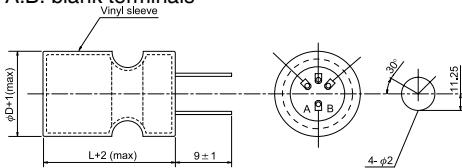
▲ LUG TERMINAL SYMBOL:G(φ22~35)



▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)



A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≥200V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code) Code	φD	200 (2D)				250 (2E)									
			22	25	30	35	22	25	30	35						
150	151								25							
									0.69							
180	181								25	30		25				
									0.76	0.82		0.82				
220	221		25						30	35		30				
			0.85						0.91	0.97		0.98				
270	271		30		25				30	35	25	30				
			1.02		1.02				1.01	1.07	1.01	1.08				
330	331		30	35	25	30			35	40	30	35		25		
			1.12	1.20	1.12	1.21			1.19	1.26	1.20	1.28		1.24		
390	391		35	35	30	35		25	40	45	35	40	30	35		
			1.31	1.31	1.32	1.40		2.5	1.37	1.44	1.39	1.47	1.45	1.54		
470	471		40	45	30	35	25	30			40	45	30	35	25	
			1.52	1.60	1.45	1.54	1.50	1.61			1.61	1.70	1.59	1.69	1.63	
560	561		45	50	35	40	30	35				45		35	40	30
			1.75	1.83	1.68	1.78	1.76	1.87				1.85		1.85	1.95	1.91
680	681				40	50	30	35		25		50		40	45	30
					1.96	2.16	1.94	2.06		1.98		1.94		2.15	2.26	2.10
820	821				45		35	40		30				45	50	35
					2.27		2.26	2.39		2.33				2.49	2.60	2.45
1000	102						40	45	35	35				55		40
							2.64	2.78	2.74	2.74				3.00		2.86
1200	122						45	50	40	45					50	55
							3.04	3.19	3.17	3.33					3.44	3.58
1500	152								45	50					55	
									3.72	3.75					4.00	
1800	182									50						L(mm)
									4.10							R.C.

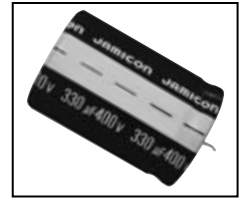
μF	V(Code) Code	φD	400 (2G)				450 (2W)										
			22	25	30	35	22	25	30	35							
47	470									25							
										0.39							
56	560									25	30						
										0.42	0.46						
68	680		25							30	35	25					
			0.47							0.50	0.54	0.50					
82	820		25	30						30	35	25	30				
			0.52	0.56						0.55	0.59	0.55	0.60				
100	101		30	35	25	30				35	40	30	35		25		
			0.62	0.66	0.62	0.66				0.65	0.69	0.66	0.70		0.68		
120	121		35	40	30	35		25		40	50	35	40	25	30	25	
			0.72	0.76	0.73	0.77		0.75		0.76	0.84	0.77	0.81	0.75	0.80	0.82	
150	151		40	45	30	40	25	30		50		40	45	30	35	30	
			0.85	0.90	0.81	0.92	0.84	0.90		0.94		0.91	0.96	0.90	0.96	0.99	
180	181		45	50	35	40	30	35		25		45		35	40	30	
			0.98	1.03	0.95	1.06	0.99	1.06		1.01		1.05		1.05	1.11	1.08	
220	221		50		40	50	30	35		30				40	45	30	35
			1.14		1.11	1.22	1.09	1.16		1.20				1.22	1.29	1.19	1.27
270	271				45		35	45	30	35				45	50	35	40
					1.29		1.29	1.43	1.33	1.41				1.43	1.49	1.41	1.48
330	331						40	50	35	40				50		40	45
							1.51	1.66	1.56	1.65				1.65		1.64	1.72
390	391						45		35	45						45	
							1.72		1.70	1.88						1.87	
470	471								40	50							
									1.97	2.16							
560	561									45							L(mm)
									2.26								R.C.

LARGE CAN TYPE

HF Series



- Withstanding 7000 hours application of high ripple current at 105°C.

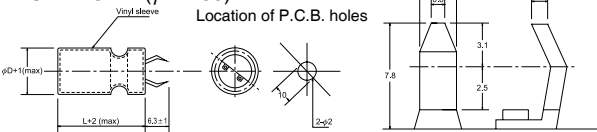


SPECIFICATION

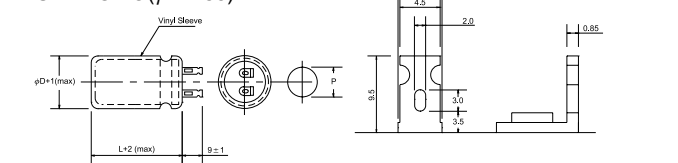
Item	Characteristic							
Operation Temperature Range	-40 ~ +105°C							
Rated Working Voltage	160 ~ 450VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.02CV$ or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(µA) C : Rated Capacitance(µF) V : Working Voltage(V)							
Surge Voltage (20°C)	W.V.	160	200	250	350	400	450	
	S.V.	200	250	300	400	450	500	
Dissipation Factor (tan δ) (120Hz 20°C)	Rated Voltage	160	200	250	350	400	450	
	tan δ	0.15	0.15	0.15	0.15	0.15	0.15	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage	160 ~ 250V			350 ~ 450V			
	-25°C / +20°C	4			6			
Load Life	After 7000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)							
	Capacitance Change	≤ ±20% of initial value						
	Dissipation Factor	≤ 175% of initial specified value						
	Leakage current	≤ initial specified value						
Shelf Life	At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)							

TERMINAL TYPE

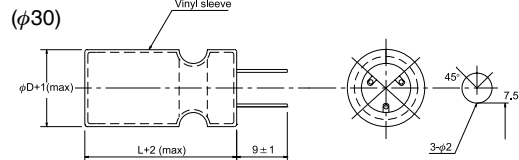
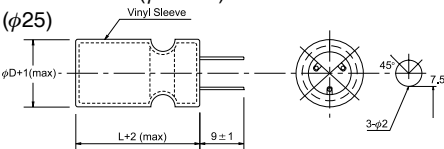
▲ P.C.B. TERMINAL (SNAP IN) SYMBOL:W(φ22~35)



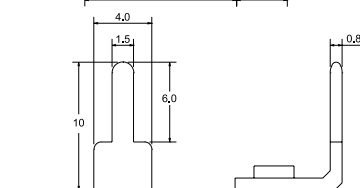
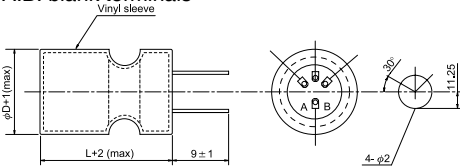
▲ LUG TERMINAL SYMBOL:G(φ22~35)



▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)



A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≥160V	0.80	1.00	1.10	1.30	1.40

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 105°C 120Hz

μF	Code	V(Code) φD	160 (2C)				200 (2D)				250 (2E)			
			22	25	30	35	22	25	30	35	22	25	30	35
180	181									25				
										0.84				
220	221					25				30				
						0.89				0.92				
270	271					30				35	25			
						1.06				1.09	1.02			
330	331	25				30	25			40	30			
		1.13				1.17	1.17			1.27	1.21			
390	391	30				35	30			45	35	25		
		1.27				1.30	1.31			1.39	1.34	1.30		
470	471	30	25			40	30	25		50	40	30		
		1.39	1.39			1.51	1.44	1.49		1.60	1.56	1.54		
560	561	35	30			45	35	30			45	35		
		1.55	1.56			1.65	1.59	1.66			1.70	1.70		
680	681	40	35	25			40	30			50	40	30	
		1.80	1.83	1.78			1.86	1.83			1.97	1.98	1.93	
820	821	50	40	30			45	35				45	35	
		2.08	2.02	2.00			2.04	2.03				2.17	2.14	
1000	102		45	35				45	30				40	
			2.35	2.35				2.50	2.32				2.50	
1200	122		50	40	30			50	40				50	
			2.56	2.57	2.51			2.71	2.70				2.84	
1500	152			45	35				45					
				2.90	2.86				3.04					
1800	182			50	40				50					
				3.32	3.30				3.48					
2200	222				50									
					3.85								L(mm) R.C.	

μF	Code	V(Code) φD	350 (2V)				400 (2G)				450 (2W)			
			22	25	30	35	22	25	30	35	22	25	30	35
47	470									25				
										0.45				
56	560									30				
										0.53				
68	680					25				30	25			
						0.56				0.58	0.58			
82	820					30				35	30			
						0.66				0.68	0.69			
100	101	25				30	25			40	30	25		
		0.63				0.67	0.67			0.74	0.70	0.73		
120	121	30	25			35	30			45	35	30		
		0.74	0.74			0.79	0.80			0.85	0.82	0.85		
150	151	35	30			40	30	25			40	35		
		0.88	0.89			0.94	0.89	0.92			0.97	1.02		
180	181	40	30	25		45	35	30			45	35	30	
		1.02	0.98	1.01		1.08	1.04	1.09			1.12	1.11	1.15	
220	221	45	35	30			40	35				40	35	
		1.09	0.99	1.10			1.12	1.17				1.19	1.24	
270	271		40	35			50	40	30			50	40	
			1.24	1.30			1.36	1.37	1.34			1.46	1.45	
330	331		45	35	30			45	35				45	
			1.44	1.44	1.48			1.60	1.57				1.68	
390	391			40	35			50	40				50	
				1.58	1.63			1.73	1.72				1.82	
470	471			50	40				45					
				1.90	1.89				1.99					
560	561				40				50					
					1.97				2.16					
680	681				50									
					2.38								L(mm) R.C.	

LARGE CAN TYPE

KP

Series

Screw Terminal Type

JAMICON®

- High ripple current characteristic.
- Long life for 2000 hours at 85°C.



● SPECIFICATION

Item	Characteristic																
Operation Temperature Range	-40 ~ +85°C								-25 ~ +85°C								
Rated Working Voltage	6.3 ~ 100VDC								160 ~ 450VDC								
Capacitance Tolerance (120Hz 20°C)	±20%(M)																
Leakage Current (20°C)	$I \leq 0.02CV$ or 5 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)																
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	80	100	160	200	250	350	400	450	
	S.V.	8	13	20	32	44	63	79	100	125	200	250	300	400	450	500	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	63	80	100	160	200	250	350	400	450	
	tan δ	φ35	0.75	0.75	0.60	0.40	0.30	0.25	0.20	0.20	0.15	0.15	0.15	0.15	0.20	0.20	0.20
		φ51	1.00	1.00	0.70	0.50	0.50	0.30	0.25	0.20	0.20	0.15	0.15	0.15	0.20	0.20	0.20
		φ64	1.30	1.30	0.80	0.70	0.60	0.50	0.30	0.25	0.25	0.20	0.20	0.20	0.25	0.25	0.25
		φ77	1.50	1.50	1.00	0.80	0.70	0.60	0.40	0.30	0.25	0.20	0.20	0.20	0.25	0.25	0.25
	φ90	1.50	1.50	1.00	0.80	0.70	0.60	0.40	0.30	0.25	0.20	0.20	0.20	0.25	0.25	0.25	
Low Temperature Stability	Impedance ratio at 120Hz																
	Rated Voltage (V)		10~100								160~450						
	-25°C / +20°C		8														
	-40°C / +20°C		12														
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)																
	Capacitance Change		≤ ± 15% of initial value														
	Dissipation Factor		≤ 175% of initial specified value														
	Leakage current		≤ initial specified value														
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)																

● TERMINAL TYPE

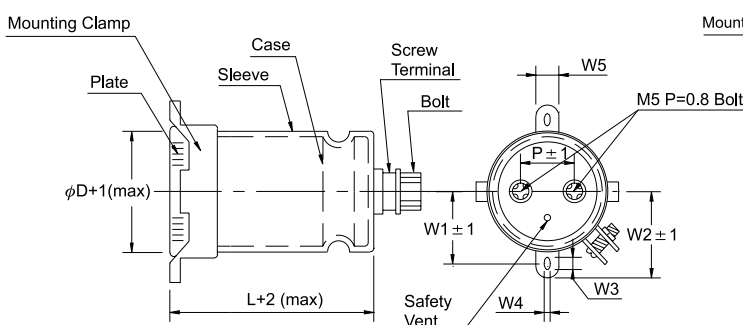
φD	W1	W2	W3	W4	W5	P
35	24.0	30.0	7.0	3.5	10.0	12.7
51	32.5	37.5	4.5	7.0	13.0	21.8
64	38.5	42.8	4.5	7.0	13.0	28.2
77	44.8	49.0	4.5	7.0	13.0	31.4
90	52.3	58.8	5.0	8.0	16.0	31.4

● RIPPLE CURRENT COEFFICIENTS

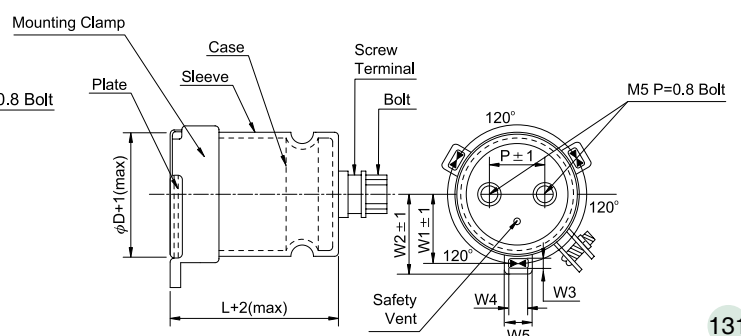
Frequency(Hz)	60	120	1k	10k	100k
W.V.	Multiplier				
6.3 ~ 35V	0.90	1.00	1.05	1.10	1.10
50 ~ 100V	0.90	1.00	1.10	1.15	1.15
160 ~ 450V	0.80	1.00	1.20	1.40	1.40

Temperature(°C)	≤60	70	85
Multiplier	1.80	1.60	1.00

(▲ φ35)



(▲ φ51, φ64, φ77, φ90)



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
22000	223						35x50	4.16
33000	333				35x50	4.14	35x60	5.51
39000	393				35x50	4.50	35x80	6.80
47000	473		35x50	4.94	35x60	5.35	35x80	7.47
56000	563		35x60	4.96	35x80	6.63	35x100	9.03
68000	683		35x60	5.47	35x80	7.31	35x121	9.88
82000	823		35x80	6.82	35x80	8.02	35x121	10.85
100000	104		35x80	7.53	35x121	9.21	51x80	10.86
120000	124		35x121	9.15	51x80	9.23	51x90	11.74
150000	154		51x80	9.51	51x80	10.32	51x121	12.48
180000	184		51x80	10.42	51x90	11.50	51x121	13.67
220000	224		51x100	12.39	51x121	13.66	64x100	14.75
270000	274		64x100	13.68	51x121	15.13	64x115	17.37
330000	334		64x100	15.12	64x121	17.25	77x121	18.19
390000	394		64x121	16.97	64x121	18.75	77x121	19.78
470000	474		64x121	18.63	77x121	19.25		
560000	564		77x121	18.80	77x121	21.01		
680000	684		77x121	20.71				

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
6800	682						35x50	3.26
8200	822						35x50	3.58
10000	103				35x50	3.53	35x60	4.27
12000	123				35x50	3.87	35x60	4.68
15000	153				35x60	3.96	35x80	5.94
18000	183		35x50	3.35	35x60	4.34	35x80	6.51
22000	223		35x60	4.01	35x80	4.93	35x121	6.70
27000	273		35x80	5.04	35x80	5.46	35x121	7.42
33000	333		35x80	5.58	35x121	7.20	51x80	7.55
39000	393		35x80	6.06	35x121	7.83	51x80	8.20
47000	473		35x121	7.54	51x80	8.26	51x100	9.80
56000	563		35x121	8.23	51x80	9.02	51x100	10.70
68000	683		51x100	9.13	51x100	10.35	64x100	11.34
82000	823		51x100	10.03	51x100	11.36	64x100	12.46
100000	104		51x121	11.26	64x100	11.48	64x144	12.81
120000	124		51x121	12.33	64x121	13.13	64x144	14.03
150000	154		64x100	12.68	64x144	15.42	77x144	15.86
180000	184		64x100	13.89	64x144	16.89		
220000	224		64x144	16.05	77x144	17.79		
270000	274		77x115	17.80				
330000	334		77x144	20.38				

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code)		63 (1J)		80 (1K)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
2200	222						35x50	2.15
2700	272						35x50	2.38
3300	332						35x50	2.64
3900	392						35x60	3.10
4700	472				35x50	2.72	35x80	3.87
5600	562		35x50	2.97	35x60	3.22	35x80	4.22
6800	682		35x50	3.28	35x80	4.03	35x100	5.15
8200	822		35x60	3.89	35x80	4.42	35x121	5.83
10000	103		35x80	4.77	35x100	5.41	51x80	6.03
12000	123		35x80	5.23	35x121	6.47	51x80	6.60
15000	153		35x100	5.88	51x80	7.63	51x121	8.86
18000	183		35x121	6.16	51x80	8.35	51x121	9.71
22000	223		51x80	7.73	51x100	8.76	64x100	9.79
27000	273		51x80	8.56	51x100	9.70	64x100	10.85
33000	333		51x100	8.76	64x100	10.22	64x144	12.80
39000	393		51x121	10.22	64x100	11.11	77x115	13.11
47000	473		64x100	11.88	64x144	14.33	77x144	14.81
56000	563		64x100	12.96	64x144	15.64		
68000	683		64x144	13.63	77x144	16.27		
100000	104		77x144	15.86				

μF	V(Code)		160 (2C)		200 (2D)		250 (2E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
470	471						35x50	1.66
560	561						35x50	1.81
680	681				35x50	1.99	35x50	1.99
820	821				35x50	2.19	35x60	2.37
1000	102				35x60	2.62	35x80	2.87
1200	122		35x50	2.64	35x60	2.87	35x80	3.15
1500	152		35x60	3.20	35x80	3.52	35x100	3.49
1800	182		35x70	3.63	35x80	3.85	35x100	3.83
2200	222		35x80	4.26	35x100	4.23	51x70	4.28
2700	272		35x100	4.68	35x121	4.72	51x70	4.74
3300	332		35x121	5.22	51x70	5.24	51x90	5.38
3900	392		51x70	5.70	51x70	5.70	51x115	6.23
4700	472		51x70	6.26	51x90	6.42	64x96	7.06
5600	562		51x90	7.00	51x115	7.47	64x96	7.71
6800	682		51x90	7.72	51x130	8.70	64x115	9.19
8200	822		51x115	9.04	64x96	9.33	64x115	10.09
10000	103		64x96	10.30	64x96	10.30	64x130	11.76
12000	123		64x96	11.29	77x96	12.56	77x115	13.01
15000	153		64x130	13.83	77x96	14.04	77x130	14.70
18000	183		64x130	15.15	77x130	16.80	77x155	17.40
22000	223		77x130	18.57	77x155	20.07	90x157	20.19
27000	273		77x130	20.58	90x131	21.62		
33000	333		90x131	23.90	90x157	25.85		
39000	393		90x157	28.10				

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code)		350 (2V)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
270	271						35x50	1.45
330	331				35x80	1.97	35x80	1.97
390	391		35x50	1.74	35x80	2.14	35x80	2.14
470	471		35x80	2.35	35x80	2.35	35x80	2.35
560	561		35x80	2.57	35x80	2.57	35x100	2.63
680	681		35x80	2.83	35x100	2.90	35x100	2.90
820	821		35x100	3.18	35x100	3.18	51x70	3.26
1000	102		35x100	3.51	51x70	3.60	51x70	3.60
1200	122		51x70	3.94	51x70	3.94	51x90	4.39
1500	152		51x70	4.41	51x90	4.91	51x115	5.17
1800	182		51x90	5.38	51x90	5.38	51x130	5.64
2200	222		51x90	5.95	51x130	6.23	64x96	6.40
2700	272		51x130	6.91	64x96	7.09	64x115	7.25
3300	332		51x130	7.63	64x115	8.01	64x130	8.22
3900	392		64x115	8.71	64x130	8.94	77x115	9.40
4700	472		64x130	9.81	77x115	10.32	77x130	10.88
5600	562		77x115	11.26	77x130	11.87	77x155	12.83
6800	682		77x130	13.08	77x155	14.14	90x157	14.60
8200	822		77x155	15.53	90x157	16.03	90x157	16.03
10000	103		90x157	17.71	90x157	17.71	90x196	19.53
12000	123		90x157	19.40	90x196	21.40	90x236	23.28
15000	153		90x196	23.93	90x236	26.02		
18000	183		90x236	28.51				

LARGE CAN TYPE

MP

Series

Screw Terminal, Wide Temperature Range

JAMICON®

- High temperature 85°C, high ripple current and high reliability.
- Long life for 5000 hours.



● SPECIFICATION

Item	Characteristic			
Operation Temperature Range	-40 ~ +85°C			
Rated Working Voltage	350 ~ 450VDC			
Capacitance Tolerance (120Hz 20°C)	±20%(M)			
Leakage Current (20°C)	I ≤ 0.02CV or 5 (mA) I : Leakage Current (μA)		*Whichever is smaller after 5 minutes C : Rated Capacitance (μF) V : Working Voltage (V)	
Surge Voltage (20°C)	W.V.	350	400	450
	S.V.	400	450	500
Dissipation Factor (tan δ)(MAX) (120Hz 20°C)	W.V.	350	400	450
	tan δ	0.15	0.15	0.15
Low Temperature Stability	Impedance ratio at 120Hz			
	Rated Voltage (V)	350~450		
	-25°C / +20°C	8		
Load Life	After 5000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)			
	Capacitance Change	≤ ±20% of initial value		
	Dissipation Factor	≤ 200% of initial specified value		
	Leakage current	≤ initial specified value		
Shelf Life	At +85°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)			

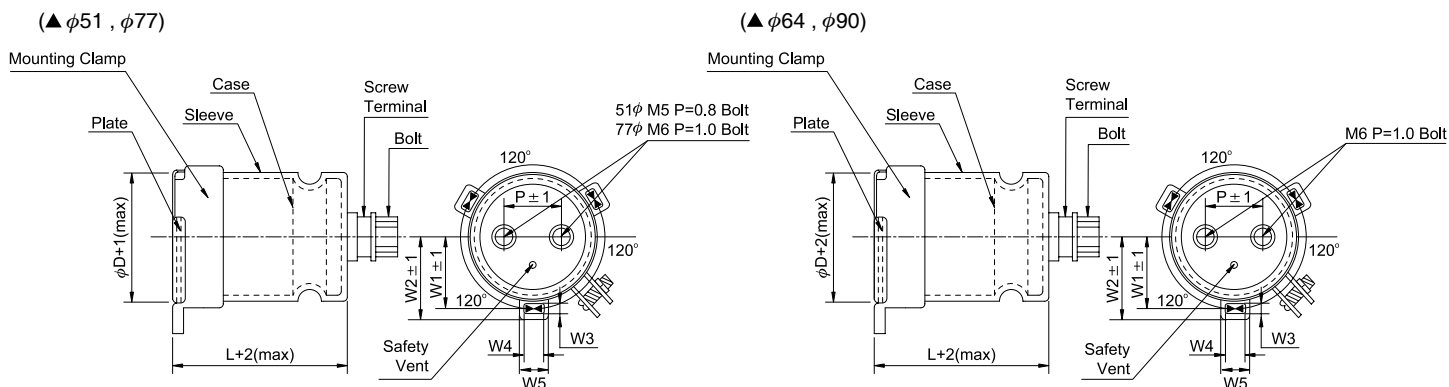
● TERMINAL TYPE

φD	W1	W2	W3	W4	W5	P
51	32.5	37.5	4.5	7.0	13.0	22.0
64	38.5	42.8	4.5	7.0	13.0	28.5
77	44.8	49.0	4.5	7.0	13.0	32.0
90	52.3	58.8	5.0	8.0	16.0	32.0

● RIPPLE CURRENT COEFFICIENTS

Frequency(Hz)	60	120	300	1k	≥10k
Multiplier	0.70	1.00	1.10	1.30	1.40

Temperature(°C)	40	60	85
Multiplier	1.89	1.67	1.00



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 85°C 120Hz

μF	V(Code) Code φD	350 (2V)				400 (2G)				450 (2W)			
		51	64	77	90	51	64	77	90	51	64	77	90
1000	102					75				75			
						4.76				4.99			
1200	122	75				75				96			
		5.21				5.21				6.09			
1500	152	75				96				115			
		5.82				6.48				7.38			
1800	182	96				96				130			
		7.10				7.10				8.54			
2200	222	96				130				96			
		7.85				8.99				8.93			
2700	272	130					96			115			
		9.97					9.64			10.69			
3300	332	130					115			130			
		11.02					11.53			12.48			
3900	392		115				130			155	115		
			12.53				13.23			14.68	13.56		
4700	472		130				155	115		195	130		
			14.53				15.72	14.10		17.91	15.69		
5600	562		155	115			195	130				155	
			17.16	15.39			19.06	16.23				18.51	
6800	682		195	130				155					157
			21.00	17.88				19.33					21.21
8200	822			155					157				157
				21.22					22.64				23.29
10000	103				157				157				196
					25.00				25.00				28.37
12000	123				157				196				236
					27.39				30.22				33.80
15000	153				196				236				
					33.78				36.74				
18000	183				236								L(mm)
					40.25								R.C.

LARGE CAN TYPE

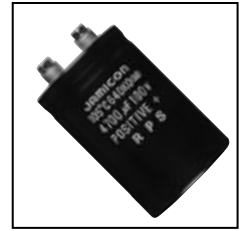
RP

Series

Screw Terminal, Wide Temperature Range

JAMICON®

- High temperature 105°C, high ripple current and high reliability.
- Long life for 2000 hours.



● SPECIFICATION

Item	Characteristic																
Operation Temperature Range	-40 ~ +105°C							-25 ~ +105°C									
Rated Working Voltage	10 ~ 100VDC							160 ~ 450VDC									
Capacitance Tolerance (120Hz 20°C)	±20%(M)																
Leakage Current (20°C)	I ≤ 0.02CV or 5 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)																
Surge Voltage (20°C)	W.V.	10	16	25	35	50	63	100	160	200	250	350	400	450			
	S.V.	13	20	32	44	63	79	125	200	250	300	400	450	500			
Dissipation Factor (tan δ) (120Hz 20°C)	φD	L	W.V.	10	16	25	35	50	63	100	160	200	250	350	400	450	
				φ35	≤96	0.80	0.70	0.35	0.30	0.25	0.20	0.15	0.15	0.15	0.15	0.15	0.15
	φ51	≤100	0.80	0.70	0.40	0.35	0.30	0.25	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
		≤96	1.00	0.90	0.40	0.45	0.35	0.25	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	φ64	≤100	1.00	0.90	0.50	0.50	0.40	0.30	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
		≤96	1.20	1.00	0.60	0.55	0.40	0.30	0.20	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	φ77	≤100	1.20	1.00	0.80	0.60	0.45	0.35	0.20	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
φ90	≤96	2.00	1.20	1.00	0.70	0.50	0.40	0.25	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
Low Temperature Stability	Impedance ratio at 120Hz																
	Rated Voltage (V)		10~100							160~450							
	-25°C / +20°C		12							8							
	-40°C / +20°C									12							
Load Life	After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)																
	Capacitance Change		±20% of initial value														
	Dissipation Factor		≤200% of initial specified value														
	Leakage current		≤initial specified value														
Shelf Life	At +105°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)																

● TERMINAL TYPE

φD	W1	W2	W3	W4	W5	P
35	24.0	30.0	7.0	3.5	10.0	12.7
51	32.5	37.5	4.5	7.0	13.0	21.8
64	38.5	42.8	4.5	7.0	13.0	28.2
77	44.8	49.0	4.5	7.0	13.0	31.4
90	52.3	58.8	5.0	8.0	16.0	31.4

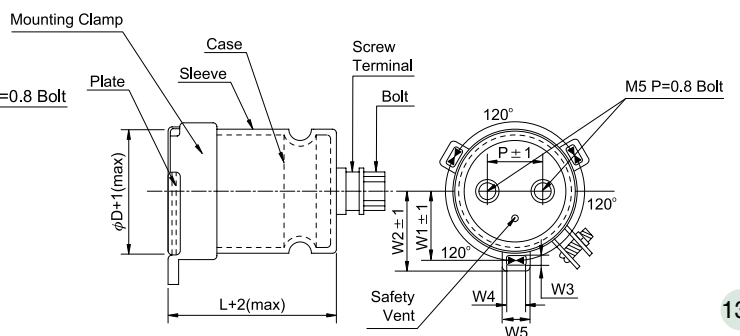
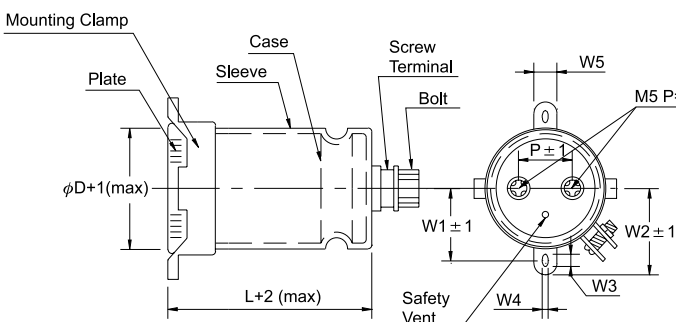
● RIPPLE CURRENT COEFFICIENTS

Frequency(Hz)	60	120	1k	10k	100k
W.V.	Multiplier				
10 ~ 35V	0.90	1.00	1.05	1.10	1.10
50 ~ 100V	0.90	1.00	1.10	1.15	1.15
160 ~ 450V	0.80	1.00	1.20	1.30	1.35

Temperature(°C)	45	55	70	85	105	
Multiplier	≤250V	3.00	2.50	2.00	1.40	1.00
	≥350V	2.50	2.00	1.50	1.20	1.00

(▲ φ35)

(▲ φ51, φ64, φ77, φ90)



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code)		10 (1A)		16 (1C)		25 (1E)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
22000	223				35x50	3.25	35x60	4.59
33000	333		35x50	3.72	35x60	4.31	35x80	6.39
47000	473		35x60	4.81	35x80	5.84	35x90	8.04
56000	563		35x70	5.61	35x90	6.72	51x70	8.31
68000	683		35x80	6.57	51x70	6.66	51x90	10.21
100000	104		51x70	7.67	51x90	9.00	64x96	11.28
150000	154		51x90	10.46	64x96	11.22	64x115	12.94
220000	224		64x96	13.53	64x115	14.69	77x115	14.83
330000	334		64x115	17.92	77x115	18.24	90x131	19.94

μF	V(Code)		35 (1V)		50 (1H)		63 (1J)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
6800	682						35x70	3.31
8200	822				35x60	3.18	35x80	3.86
10000	103				35x70	3.75	35x90	4.50
15000	153		35x60	4.09	35x80	4.88	51x70	4.95
22000	223		35x80	5.63	51x70	5.57	51x90	6.68
33000	333		51x70	6.56	51x90	7.60	64x96	8.73
47000	473		51x80	8.29	64x96	9.48	64x115	10.43
56000	563		51x90	9.53	64x96	10.34	77x96	10.96
68000	683		51x115	11.11	64x115	11.62	77x115	13.03
100000	104		64x115	12.20	77x115	14.14	90x131	17.36
150000	154		77x115	13.90	90x131	19.02		
220000	224		90x131	17.42				

μF	V(Code)		100 (2A)		160 (2C)		200 (2D)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
1000	102				35x50	1.50	35x60	1.62
1500	152				35x60	1.98	35x70	2.12
2200	222				35x70	2.57	35x90	2.88
3300	332				35x90	3.52	51x80	3.49
4700	472				51x80	4.54	51x90	4.38
5600	562		35x90	4.59	51x90	5.22	64x96	5.34
6800	682		51x70	5.16	64x96	5.89	64x115	6.37
8200	822		51x80	6.00	64x96	6.46	77x96	6.85
10000	103		51x90	6.97	77x96	7.56	77x115	8.16
15000	153		64x96	7.57	77x130	10.54	90x131	10.98
22000	223		77x96	8.69	90x131	13.30		
33000	333		77x130	12.11				
47000	473		90x131	15.05				

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : A(rms) 105°C 120Hz

μF	V(Code)		250 (2E)		350 (2V)	
	Code	Item	DxL	R.C.	DxL	R.C.
1000	102		35x70	1.73	51x65	2.40
1500	152		35x90	2.38	51x70	3.03
2200	222		51x70	2.94	51x96	4.21
3300	332		51x90	4.01	64x96	5.47
3900	392		64x96	4.46	64x115	6.43
4700	472		64x115	5.29	64x130	7.45
5600	562		77x96	5.94	77x115	7.94
6800	682		77x115	7.07	77x130	9.23
8200	822		77x130	8.18	77x155	10.95
10000	103		77x155	9.76	90x157	12.25
15000	153		90x157	11.87		

μF	V(Code)		400 (2G)		450 (2W)	
	Code	Item	DxL	R.C.	DxL	R.C.
1000	102		51x70	2.47	51x90	2.94
1500	152		51x90	3.38	51x115	4.02
2200	222		64x96	4.46	64x115	5.17
3300	332		64x130	6.24	64x130	6.69
3900	392		64x155	7.34	77x121	7.82
4700	472		77x130	7.97	77x144	9.26
5600	562		77x155	9.39	90x145	11.06
6800	682		90x157	10.94	90x196	13.93
8200	822		90x157	12.01		
10000	103		90x196	14.64		

LARGE CAN TYPE

XP

Series

Screw Terminal, Wide Temperature Range

JAMICON®

- High temperature 105°C, high ripple current and high reliability.
- Long life for 5000 hours.



● SPECIFICATION

Item	Characteristic					
Operation Temperature Range	-40 ~ +105°C					
Rated Working Voltage	200 ~ 450VDC					
Capacitance Tolerance (120Hz 20°C)	±20%(M)					
Leakage Current (20°C)	$I \leq 0.02CV$ or 5 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)					
Surge Voltage (20°C)	W.V.	200	250	350	400	450
	S.V.	250	300	400	450	500
Dissipation Factor (tan δ)(MAX) (120Hz 20°C)	W.V.	200	250	350	400	450
	tan δ	0.20	0.20	0.15	0.15	0.15
Low Temperature Stability	Impedance ratio at 120Hz					
	Rated Voltage (V)	200~450				
	-25°C / +20°C	8				
Load Life	After 5000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)					
	Capacitance Change	≤ ±20% of initial value				
	Dissipation Factor	≤ 200% of initial specified value				
	Leakage current	≤ initial specified value				
Shelf Life	At +105°C no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (with voltage treatment)					

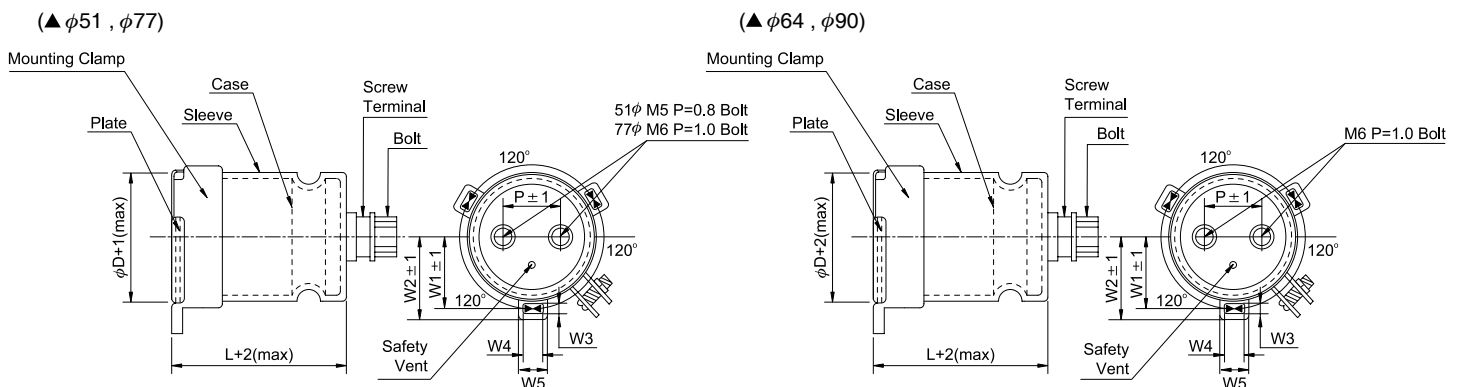
● TERMINAL TYPE

φD	W1	W2	W3	W4	W5	P
51	32.5	37.5	4.5	7.0	13.0	22.0
64	38.5	42.8	4.5	7.0	13.0	28.5
77	44.8	49.0	4.5	7.0	13.0	32.0
90	52.3	58.8	5.0	8.0	16.0	32.0

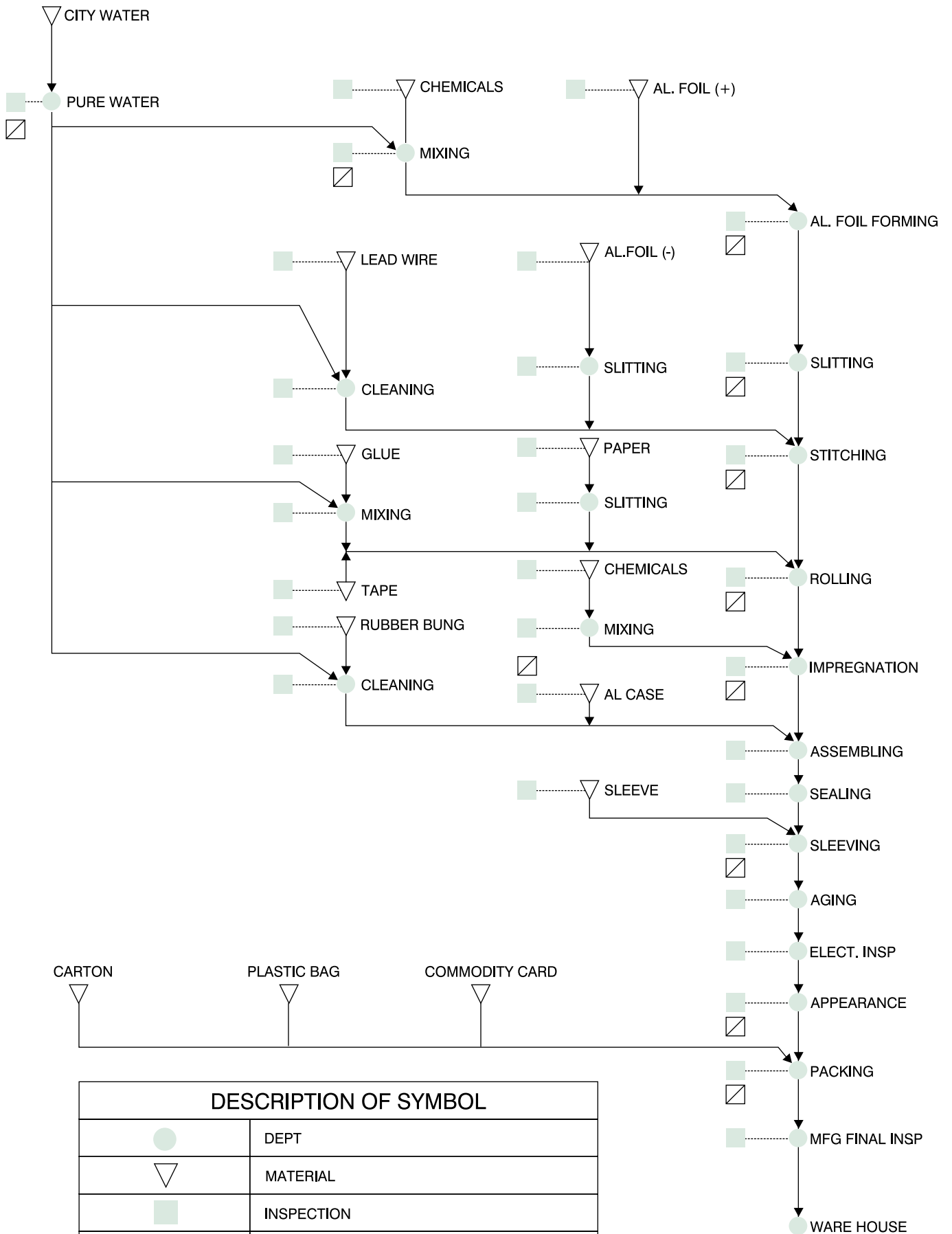
● RIPPLE CURRENT COEFFICIENTS

Frequency(Hz)	60	120	300	1k	≥10k
Multiplier	0.70	1.00	1.10	1.30	1.40

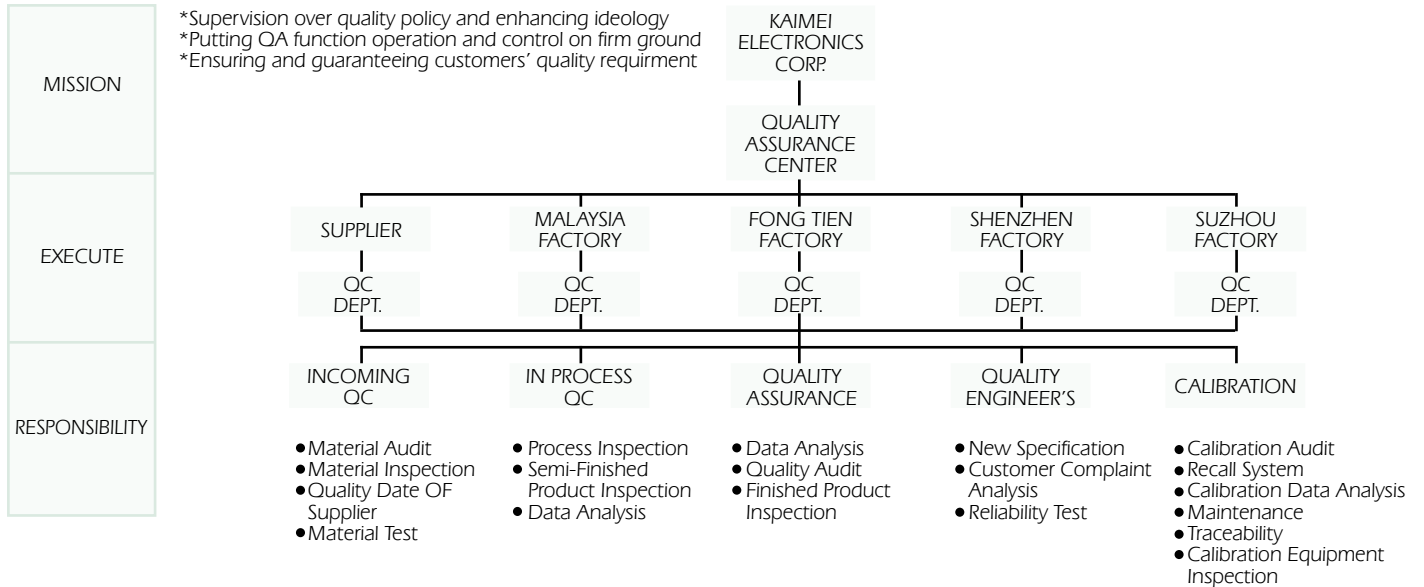
Temperature(°C)	40	60	85	105
Multiplier	2.44	2.16	2.00	1.00



ELECTROLYTIC CAPACITOR FLOW CHART



QUALITY ASSURANCE CENTER ORGANIZATION CHART



CUSTOMER CLAIM HANDLING SYSTEM

