

Ceramic Capacitors Manufacturer



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DONGIL ELECTRONIC CO., LTD.



TYPE DESIGNATION ORDER INFORMATION

DONGIL ceramic capacitors are simple in construction and can be applied to tuning, coupling and by passing from HF to UHF frequency range.

1	2	3	4	5	6	7	8
DS	2E	YE	222	M	F	K	V

1	CLASS AND TYPE	CC : Temperature Compensation Type CG : Semi-conductor Type DA : AC Voltage Type (T.V : 4000V)		CK : High Dielectric Type DS : AC Voltage Type (T.V : 3000V) FNR, DN : G31D, C.R Multiple Type (T.V : 1250V)																																																																									
2	RATED VOLTAGE	<table><tr><td></td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>H</td><td>J</td><td>K</td></tr><tr><td>0</td><td>1V</td><td>1.25V</td><td>1.6V</td><td>2V</td><td>2.5V</td><td>3.15V</td><td>4V</td><td>5V</td><td>6.3V</td><td>8V</td></tr><tr><td>1</td><td>10V</td><td>12.5V</td><td>16V</td><td>20V</td><td>25V</td><td>31.5V</td><td>40V</td><td>50V</td><td>63V</td><td>80V</td></tr><tr><td>2</td><td>100V</td><td>125V</td><td>160V</td><td>200V</td><td>250V</td><td>315V</td><td>400V</td><td>500V</td><td>630V</td><td>800V</td></tr><tr><td>3</td><td>1KV</td><td>1.25KV</td><td>1.6KV</td><td>2KV</td><td>2.5KV</td><td>3.15KV</td><td>4KV</td><td>5KV</td><td>6.3KV</td><td>8.0KV</td></tr><tr><td>4</td><td>10KV</td><td>12.5KV</td><td>16KV</td><td>20KV</td><td>25KV</td><td>31.5KV</td><td>40KV</td><td>50KV</td><td>63KV</td><td>80KV</td></tr></table>											A	B	C	D	E	F	G	H	J	K	0	1V	1.25V	1.6V	2V	2.5V	3.15V	4V	5V	6.3V	8V	1	10V	12.5V	16V	20V	25V	31.5V	40V	50V	63V	80V	2	100V	125V	160V	200V	250V	315V	400V	500V	630V	800V	3	1KV	1.25KV	1.6KV	2KV	2.5KV	3.15KV	4KV	5KV	6.3KV	8.0KV	4	10KV	12.5KV	16KV	20KV	25KV	31.5KV	40KV	50KV	63KV	80KV
	A	B	C	D	E	F	G	H	J	K																																																																			
0	1V	1.25V	1.6V	2V	2.5V	3.15V	4V	5V	6.3V	8V																																																																			
1	10V	12.5V	16V	20V	25V	31.5V	40V	50V	63V	80V																																																																			
2	100V	125V	160V	200V	250V	315V	400V	500V	630V	800V																																																																			
3	1KV	1.25KV	1.6KV	2KV	2.5KV	3.15KV	4KV	5KV	6.3KV	8.0KV																																																																			
4	10KV	12.5KV	16KV	20KV	25KV	31.5KV	40KV	50KV	63KV	80KV																																																																			
3	TEMPERTURE CHARACTERISTICS	CC (CLASE I)	CH : 0 ± 60PPM/℃ – BLACK SL : –1000 – +350PPM/℃ – OMITTED																																																																										
		CK (CLASE II)	B : Y5P(+10 ~ –10%) E : Y5U(+20 ~ –55%) F : Y5V(+30 ~ –80%) BN : Y5P(+10 ~ –10%) R : Y5R(+15 ~ –15%)																																																																										
		CG (CLASE III)	F : Y5V(+30 ~ –80%)																																																																										
4	CAPACITANCE	The first two digits are significant figures of capacitance and third one denotes number of following zeros. OR5 : 0.5pF 150 : 15pF 101 : 100pF 102 : 1,000pF 103 : 10,000pF 224 : 220,000pF																																																																											
5	CAPACITANCE TOLERANCE	C : ±0.25pF D : ±0.5pF J : ±5% K : ±10% M : ±20% P : +100% ~ –0% Z : +80% ~ –20%																																																																											
6	PACKING STYLE	F : Taping B : Bulk C : Cutting																																																																											
7	LEAD VARIATION	S : Straight Type K : Kink Type V : Vertical Crimp Type																																																																											
8	LEAD CUTTING	Cutting Standard : 4.0±0.5mm (Straight / Kink / Vertical Crimp)																																																																											

SAFETY STANDARD RECOGNIZED AC CERAMIC CAPACITORS

Type	Rated voltage	Testing voltage	Standard	File Number
DS X1, Y2	250V AC	AC 3,000V	UL 1414	UL : E128646
			CSA - C - 22.2 No1-98	CSA : LR79291
			DEMKO IEC 384 - 14 2nd	DEMKO IEC : 122325B
			SEMKO IEC 384 - 14 2nd	SEMKO IEC : 9807215
			Nemko IEC 384 - 14 2nd	Nemko IEC : P98100371
			FIMKO IEC 384 - 14 2nd	FIMKO IEC : F110228
			SEV IEC 384 - 14 2nd	SEV IEC : DK504
			VDE IEC 384 - 14 2nd	VDE IEC : 1134833
			K60384-14	SJ03001-2002
DA X1, Y1	400V AC	AC 4,000V	UL 1414	UL : E128646
			CSA - C - 22.2 No1-98	CSA : 1583421/ LR79291
			DEMKO IEC 384 - 14 2nd	DEMKO IEC : 122325A
			SEMKO IEC 384 - 14 2nd	SEMKO IEC : 9807214
			Nemko IEC 384 - 14 2nd	Nemko IEC : P98100372
			FIMKO IEC 384 - 14 2nd	FIMKO IEC : F110228
			SEV IEC 384 - 14 2nd	SEV IEC : DK504
			VDE IEC 384 - 14 2nd	VDE IEC : 104871
			K60384-14	SJ03001-2001

SPECIFICATIONS

- Temp. Range : -25℃ ~ +85℃
- Capacitance : Measured at 1 ± 0.1 KHz, 1Vrms and 20 ± 2 °C
- Dissipation Factor : $\tan\delta(\%)$

T.C	B(Y5P)	E(Y5U)	F(Y5V)
$\tan\delta(\%)$	2.5% Max	2.5% Max	5.0% Max

- Insulation Resistance (M Ω)
10,000M Ω Min at 500 ± 50 V DC, for 1 minute

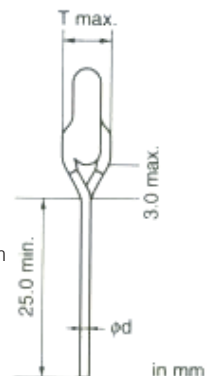
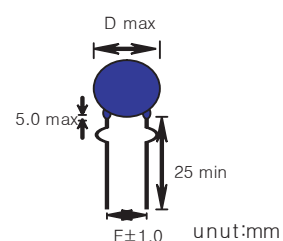
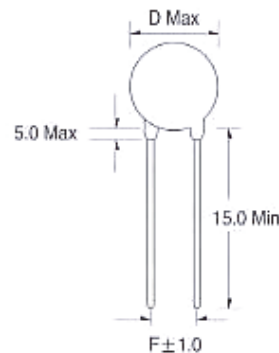
DIMENSIONS

STRAIGHT
FORMING
TYPE

OUT FORMING
TYPE

VERTICAL
CRIMP TYPE

• STRAIGHT LONG TYPE



CAPACITANCE VALUE ACCORDING TO TYPE (pF)

Type	Part Number	Dimensions(mm)				Capacitance(pF)			Marking
		D (Max)	T (Max)	F	dΦ	B	E	F	
DS	DS2E△△□□△□□	8.0	7.0	7.5	0.6	100~470	1000~1500	1000~1500	
	DS2E△△□□△□□	10.0				560	2200	2200~4700	
	DS2E△△□□△□□	12.0				820	3300	6800	
	DS2E△△□□△□□	14.0				-	4700	10000	
DA(Y1)	DA2G△△□□△□□	8.0	8.0	10.0	0.6	100~470	1000	-	
	DA2G△△□□△□□	10.0				-	1500~2200	-	
	DA2G△△□□△□□	14.0				-	3300	-	
	DA2G△△□□△□□	16.0				-	3900~4700	-	

DC LOW LOSS CERAMIC CAPACITORS (R and BN TYPE)

SPECIFICATIONS

– Temp. Range : $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$

– Temperature characteristics

T.C	R(Y5R)	BN(Y5P)
Change Rate(%)	$\pm 15\%$	$\pm 10\%$

– Capacitance : Measured at $1 \pm 0.1\text{KHz}$, 1Vrms and $20 \pm 2^{\circ}\text{C}$

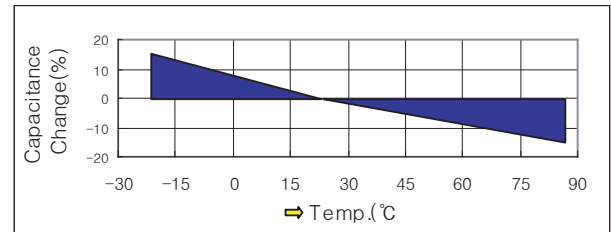
–Dissipation Factor : $\tan\delta(\%)$

T.C	R(Y5R)	BN(Y5P)
$\tan\delta(\%)$	0.2% Max	1.5% Max

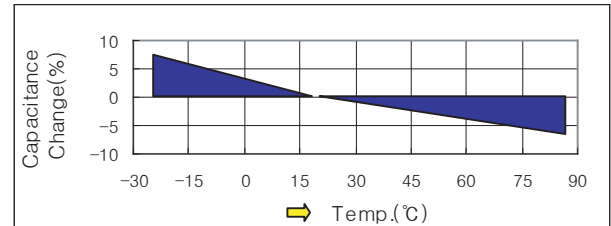
– Test Voltage : at 2times of rated voltage.

– Insulation Resistance : $10,000\text{M}\Omega$ Min
at $500\text{V} \pm 50\text{V}$ DC for 1minute

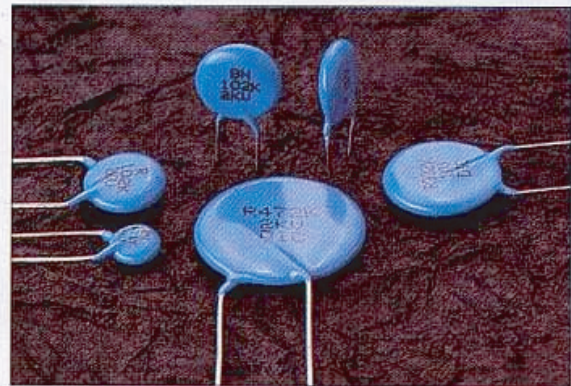
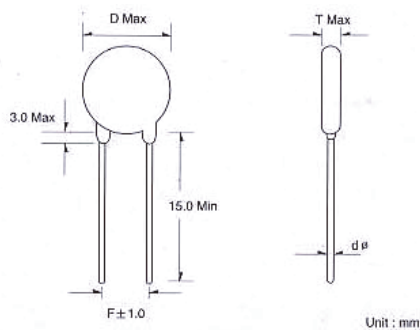
Temperature Characteristic : R(Y5R)



Temperature Characteristic : BN(Y5P)



DIMENSIONS



CAPACITANCE VALUE ACCORDING TO TYPE (pF)

Rated Voltage	Part Number	Dimensions(mm)				Capacitance(pF)		Marking
		D (Max)	T (Max)	F	dφ	R(Y5R)	BN(Y5P)	
1KV DC	CK3A△△□□△□□	7.0	4.5	5.0	0.6	100 ~ 680	100 ~ 470	D < 10
	CK3A△△□□△□□	9.0				820 ~ 1000	560 ~ 1000	
	CK3A△△□□△□□	11.0				1500	1200 ~ 1500	
	CK3A△△□□△□□	13.0				1800 ~ 2200	1800 ~ 2200	
	CK3A△△□□△□□	15.0				2700 ~ 3300	2700 ~ 3300	
	CK3A△△□□△□□	17.0				3900	3900	
	CK3A△△□□△□□	19.0				4700	4700	
2KV DC	CK3D△△□□△□□	7.0	5.0	5.0	0.6	100 ~ 470	100 ~ 390	BN222K 2KV DIC D ≥ 10
	CK3D△△□□△□□	9.0				560 ~ 680	470 ~ 680	
	CK3D△△□□△□□	11.0				820 ~ 1000	820 ~ 1000	
	CK3D△△□□△□□	13.0				1200 ~ 2200	200 ~ 2200	
	CK3D△△□□△□□	15.0				2700	2700	
	CK3D△△□□△□□	17.0				3900	3300	

CLASS I TEMPERATURE COMPENSATION CERAMIC CAPACITOR

SPECIFICATION

- Temp. Range : -25°C ~ +85°C
- Capacitance :
Measured at $1 \pm 0.1\text{MHz}$, 1Vrms and $20 \pm 2^\circ\text{C}$
- Quality Factor : Q

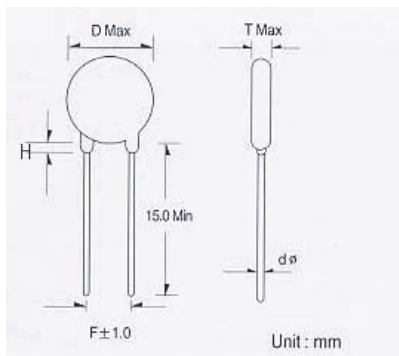
Capacitance	Q value
Less than 30pF	$\geq 400 + 20 \times C \#$
30pF and over	≥ 1000

C : Capacitance(pF)

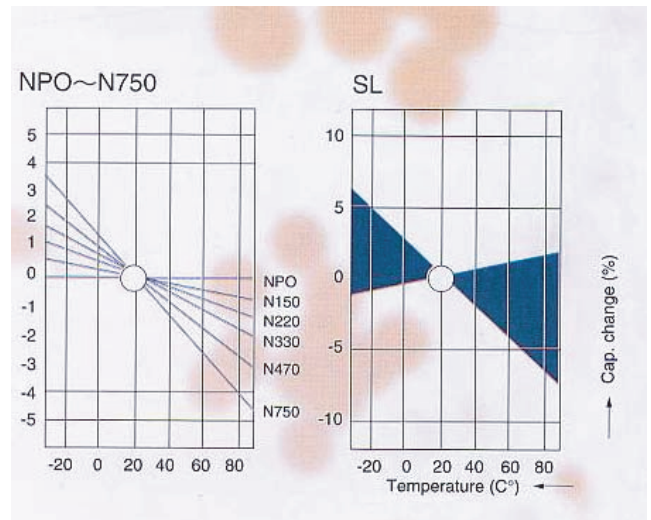
- Insulation Resistance : 10,000MΩ Minimum.
at rated voltage for 1 minute.
- Test Voltage : at 3 times of rated voltage
- Lead Variation (Bulk Type)

Rated Voltage	Unit : mm
50V, 500V DC	2.0Max #
above 1KV	3.0Max #

DIMENSIONS



TEMP. COEFFICIENT



CAPACITANCE VALUE ACCORDING TO TYPE (pF)

Rated Voltage	Part Number	Dimensions(mm)				Capacitance(pF)				Marking	
		D (Max)	T (Max)	F	dΦ	CH	RH	UJ	SL		
50V DC	CC1H△△□□□△□□	4.0	4.0	2.5	0.5	0.5~36	1~24	2~47	1~100	 D < 10	
	CC1H△△□□□△□□	5.0				39~47	27~39	56~82	120~150		
	CC1H△△□□□△□□	7.0	3.0	5.0		51~68	43~62	100~120	180~240	D < 10	
	CC1H△△□□□△□□	8.0				75~150	68~120	150~220	270~470		
	CC1H△△□□□△□□	10.0				180~220	150~180	—	560~820	D ≥ 10	
	CC1H△△□□□△□□	12.5				—	220	—	1000		
500V DC	CC2H△△□□□△□□	6.0	4.0	5.0	0.5	5~27	10~22	3~47	10~82	 D < 10	
	CC2H△△□□□△□□	8.0				30~56	27~39	51~100	100~180		
	CC2H△△□□□△□□	10.0				68~120	47~82	110~160	220~330	 D ≥ 10	
	CC2H△△□□□△□□	12.5				150	100~120	—	390~680		

CLASS II HIGH DIELECTRIC CERAMIC CAPACITORS

SPECIFICATION

- Temp. Range : $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Capacitance :
Measured at $1 \pm 0.1\text{KHz}$, 1Vms and $20 \pm 2^{\circ}\text{C}$
- Dissipation Factor : $\tan \delta (\%)$

T.C	B(Y5P)	E(Y5U)	F(Y5V)
$\tan \delta (\%)$	2.5%max	2.5%max	5.0%max

- Insulation Resistance :
 $10,000\text{M}\Omega$ or $200\text{M}\Omega \cdot \mu\text{F}$ whichever less
at rated voltage for 1 minute.

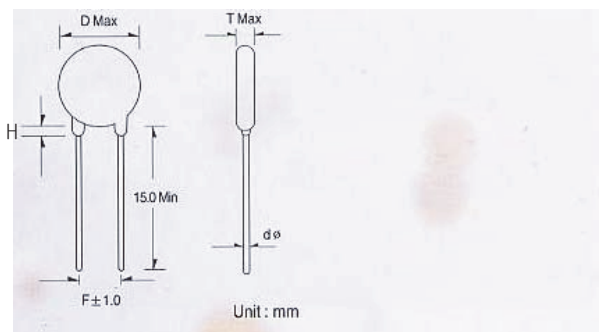
- Test Voltage

Rated Voltage	50~500V DC	1~15KV DC
Testing Voltage	$\text{R.V} \times 3$	$\text{R.V} \times 2$

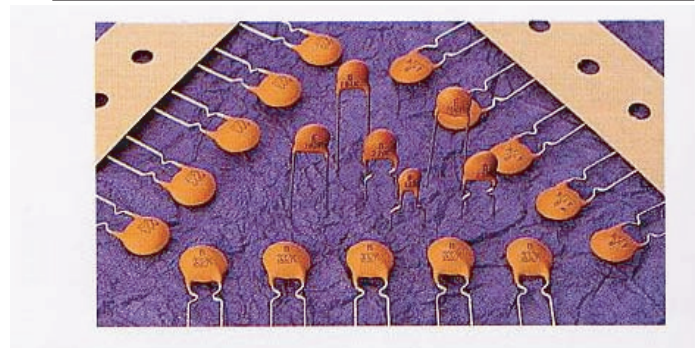
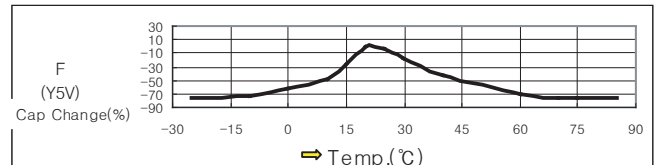
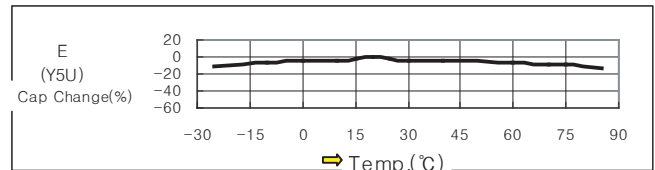
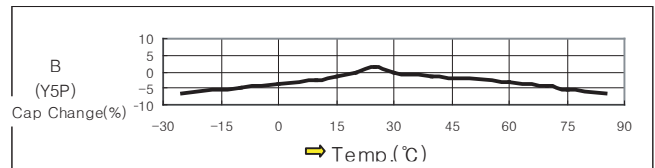
- Lead Variation(Bulk Type)

Rated Voltage	50~500V DC
50V, 500V DC	2.0 Max #
above 1KV	3.0Max #

DIMENSIONS



TEMP. COEFFICIENT



CAPACITANCE VALUE ACCORDING TO TYPE (pF)

Rated Voltage	Part Number	Dimensions(mm)				Capacitance(pF)			Marking
		D (Max)	T (Max)	F	dΦ	B(Y5P)	E(Y5U)	F(Y5V)	
50V	CK1H△△□□△□□	4.0	3.0	2.5	0.5	100～1000	—	1000～4700	B 222K
	CK1H△△□□△□□	5.0				1200～1500	—	5600	
	CK1H△△□□△□□	7.0		5.0		1800～2200	—	6800～10000	B 103K DIC
	CK1H△△□□△□□	8.0				2700～4700	—	15000～33000	
500V	CK2H△△□□△□□	6.0	4.0	5.0		100～820	1000	1000～3300	B 102K
	CK2H△△□□△□□	8.0				1000～2200	2200～3300	4700～6800	
	CK2H△△□□△□□	10.0				2700～3900	4700	10000	B 472K DIC
	CK2H△△□□△□□	12.5				4700～5600	6800	15000～22000	
	CK2H△△□□△□□	16.0		10.0		6800	10000	—	
	CK2H△△□□△□□	19.0				10000	—	—	

CLASS III SEMI-CONDUCTOR CAPACITORS

SPECIFICATION

- Temp. Range : -25℃ ~ +85℃
- Capacitance : Measured at $1 \pm 0.1\text{KHz}$,
- Dissipation Factor : $\tan \delta$ (%)

VOL	50V
T.C	
F(Y5V)	5.0% Max

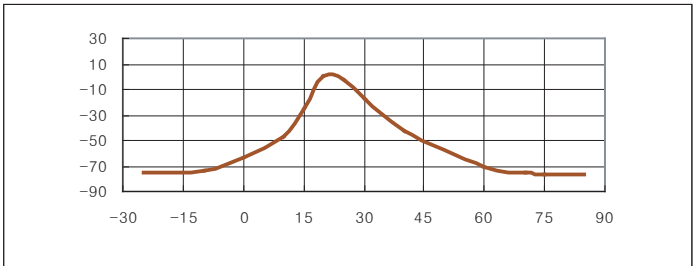
- Insulation Resistance : $M\Omega$

VOL	50V
T.C	
F(Y5V)	2,500 $M\Omega$ Min

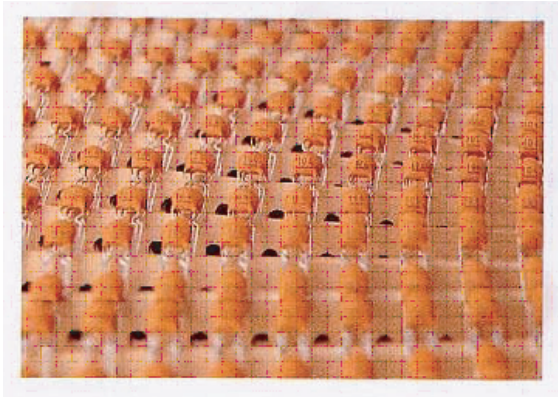
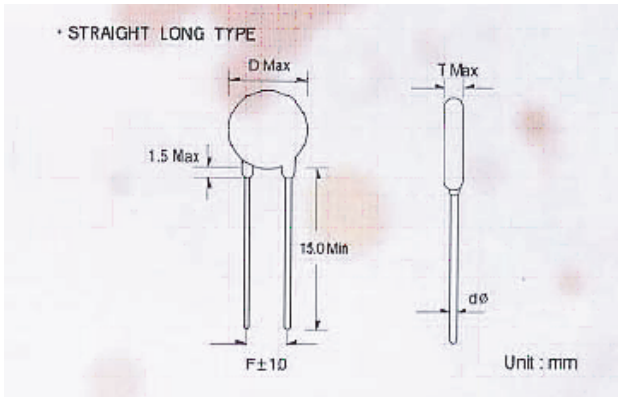
- Test Voltage :
at 1.5times of rated voltage
- Temp. Characteristics

T.C	F(Y5V)
Change Rate(%)	30%~-80%

TEMP. COEFFICIENT



DIMENSIONS



CAPACITANCE VALUE ACCORDING TO TYPE (pF)

Rated Voltage	Part Number	Dimensions(mm)				Capacitance(pF)	Marking
		D (Max)	T (Max)	F	dΦ	F(Y5V)	
50V DC	CG1H△△□□△□□	4.0	4.0	5	0.5	10000 ~ 22000	104 D≥10
	CG1H△△□□△□□	5.0				33000 ~ 47000	
	CG1H△△□□△□□	7.0				100000	

DC HIGH VOLTAGE CERAMIC CAPACITORS

CAPACITANCE VALUE ACCORDING TO TYPE (pF)

Rated Voltage	Part Number	Dimensions(mm)				Capacitance(pF)				Marking
		D (Max)	T (Max)	F	dΦ	SL	B(Y5P)	E(Y5U)	F(Y5V)	
1KV DC	CK3A△△□□□△□□	7.0	4.5	5.0	0.5	10~100	100~1200	1000	1000~4700	B 471K 2KV D < 10 B222K 2KV DIC D ≥ 10 B102K 10KV DIC D ≥ 10
	CK3A△△□□□△□□	9.0				120~180	1500~2200	2200~3300	6800~10000	
	CK3A△△□□□△□□	11.0				220~390	2700~3300	4700~6800	—	
	CK3A△△□□□△□□	13.0		470~680		4700	10000	22000		
	CK3A△△□□□△□□	16.0		820		5600~6800	—	—		
	CK3A△△□□□△□□	19.0		1000		10000	—	—		
2KV DC	CK3D△△□□□△□□	7.0	5.0	5.0	0.6	10~82	100~1000	1000	1000~2200	
	CK3D△△□□□△□□	9.0				100~150	1200~1500	2200	3300~4700	
	CK3D△△□□□△□□	11.0				180~220	1800~2200	3300~4700	6800	
	CK3D△△□□□△□□	13.0		270~330		2700	—	10000		
	CK3D△△□□□△□□	16.0		390~470		3300~4700	10000	15000		
	CK3D△△□□□△□□	19.0		560		5600~6800	—	22000		
	CK3D△△□□□△□□	21.0		680		8200~10000	—	—		
3KV DC	CK3F△△□□□△□□	7.0	5.5	5.0	0.6	5~47	100~680	1000	1000	
	CK3F△△□□□△□□	9.0				56~150	820~1200	2200	1500~3300	
	CK3F△△□□□△□□	11.0		10.0		180~220	1500	—	4700	
	CK3F△△□□□△□□	13.0				270	1800	4700	6800~10000	
	CK3F△△□□□△□□	16.0				330~390	2200~2700	—	—	
	CK3F△△□□□△□□	19.0				—	3300	10000	—	
	CK3F△△□□□△□□	23.0				—	3900~5600	—	—	
6KV DC	CK3J△△□□□△□□	9.0	7.0	10.0	0.6	10~47	100~560	1000	1000~2200	
	CK3J△△□□□△□□	11.0				56~68	680~820	2200	3300	
	CK3J△△□□□△□□	13.0				82	1000~1500	—	4700	
	CK3J△△□□□△□□	15.0				100~150	—	—	6800	
	CK3J△△□□□△□□	17.0				—	—	—	—	
	CK3J△△□□□△□□	19.0				—	—	4700	10000	
10KV DC	CK4A△△□□□△□□	9.0	7.5	10.0	0.8	—	100~270	—	1000	
	CK4A△△□□□△□□	11.0				—	330~390	1000	2200	
	CK4A△△□□□△□□	13.0				—	470~680	2200	3300	
	CK4A△△□□□△□□	16.0				—	820~1000	—	4700	
	CK4A△△□□□△□□	19.0				—	1200~1500	4700	6800	
	CK4A△△□□□△□□	23.0				—	—	—	10000	
12KV DC	CK4B△△□□□△□□	9.0	8.0	10.0	0.8	—	100~390	—	1000	
	CK4B△△□□□△□□	11.0				—	470	1000	2200	
	CK4B△△□□□△□□	13.0				—	560~680	—	3300	
	CK4B△△□□□△□□	16.0				—	820~1000	2200	4700	
	CK4B△△□□□△□□	19.0				—	1200~1500	—	6800	
	CK4B△△□□□△□□	23.0				—	2000	4700	—	
15KV DC	CK4C△△□□□△□□	9.0	8.0	10.0	0.8	—	100~220	—	1000	
	CK4C△△□□□△□□	13.0				—	330~470	—	2200	
	CK4C△△□□□△□□	16.0				—	680	—	4700	
	CK4C△△□□□△□□	19.0				—	1000	—	—	

C.R MULTIPLE (Safety Standard Recognized)

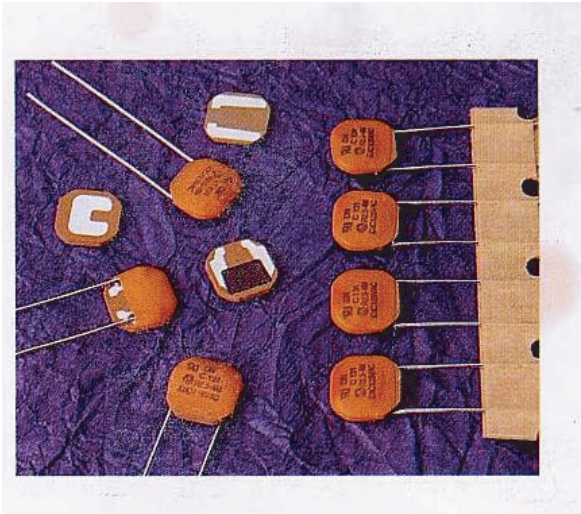
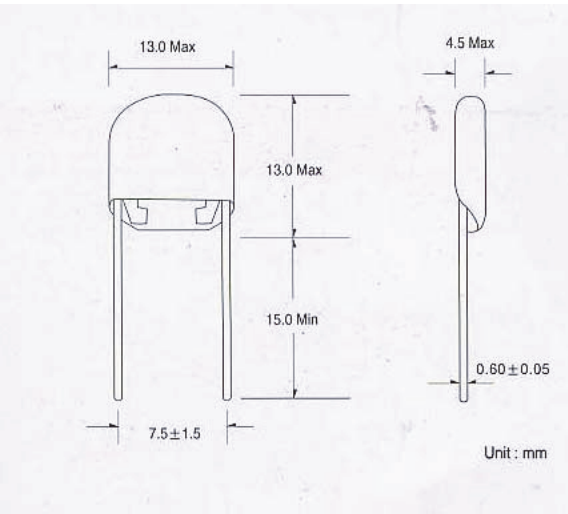
Across - The - Line, Antenna - Coupling and Line - By - Pass Component.

Type	Rated Voltage	Testing Voltage	Rated Wattage	Standard	File Number
DN	125V AC	1250V AC	1/2 W	UL 1414 C22.2 No.1~98	UL : E128646 CSA : LR 79291
FNR	125V AC	1300VAC	1/2 W	UL 1676 C22.2 No.1~98	UL : E206159 CNR

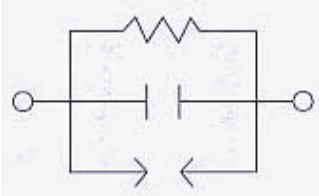
SPECIFIATIONS

- Temp. Range : -25℃ ~ +85℃
- Capacitance : Measured at $1 \pm 0.1\text{MHz}$: C131P, C271P, $1 \pm 0.1\text{KHz}$: C471P
1Vrms and $20 \pm 2^\circ\text{C}$
- Resistance : Measured at $20 \pm 2^\circ\text{C}$

DIMENSIONS



CAPACITANCE VALUE ACCORDING TO TYPE (pF)

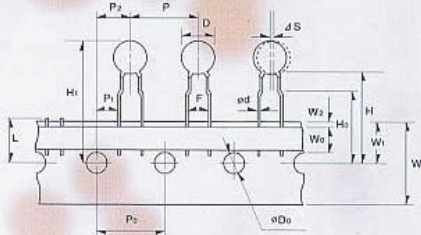
Rated voltage	Part Number	Capacitance	Resistance (MΩ)	Circuit
125VAC	DN C131, R1 – 2M	130pF	1 – 2	
	DN C131, R1 – 2M		2.5 – 4	
	DN C131, R1 – 2M	270pF	1 – 2	
	DN C131, R1 – 2M		2.5 – 4	
	DN C131, R1 – 2M	470pF	1 – 2	
	DN C131, R1 – 2M		2.5 – 4	
125VAC	FNR G31D	–	2.5 – 4	

TAPING TYPE CAPACITORS

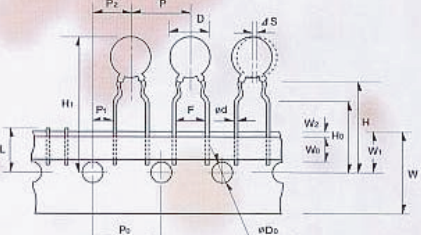
TAPING DIMENSIONS

Item	Code	Dimensions(mm)			
		1	2:3	4	5
Body Diameter	D	5.0 Max	5.0<D≤11.0	13.0 Max	20.0 Max
Body Thickness	T	4.0 Max		5.0 Max	7.0 Max
Lead Diameter	Φ d	0.5±0.05(0.6±0.05)		0.6±0.05	
Pitch of Sprocket Hole	P ₀	12.7±0.3		15.0±0.3	
Pitch of Component	P	12.7±1.0		15.0±1.0	30±1.0
Lead length from Hole	P ₁	3.85±0.7		3.75±1.0	
Center to Lead					
Lead length from Hole	P ₂	6.35±1.3		7.5±1.5	
Center to component Center					
Lead Spacing	F	5.0 $\frac{+0.8}{-0.2}$		7.5±1.0	10.0±1.0
Deviation along Tape, Left, or Right	△S	0±1.0			
Deviation across Tape	△h	0±2.0			
Carrier tape width	W	18.0 $\frac{+0.8}{-0.2}$			
Hold down tape Width	W ₀	5.0 Min		9.0 Min	
Position of Sproket hole	W ₁	9.0±0.5			
Hold Down Tape Position	W ₂	3.0 Max			
Height of Component From Hole Center	H	20.0±1.0			
Lead-Wire Clinch Height	H ₀	16.0±0.5			
Cpmponent Height	H ₁	32.25 Max			
Portion to Cut in case of Defect	L	11.0 Max			
Lead Protrusion	Lx	1.0 Max			
Diameter of Sprocket Hole	D ₀	4.0±0.2			
Total Tape Thickness	t ₁	0.7±0.2			
Total Thickness, Tape and Lead Wire	t ₂	1.5 Max			

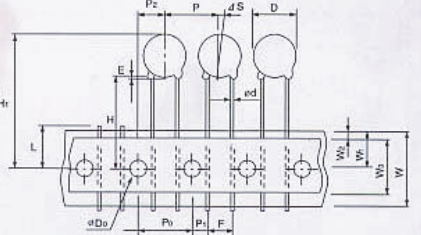
1. 12.7 pitch Type



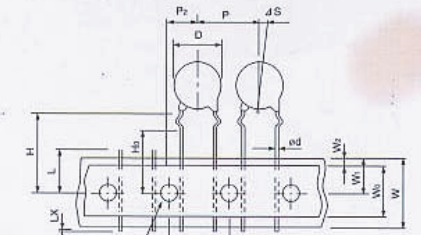
2. 12.7 pitch Type



3. 12.7 pitch Type



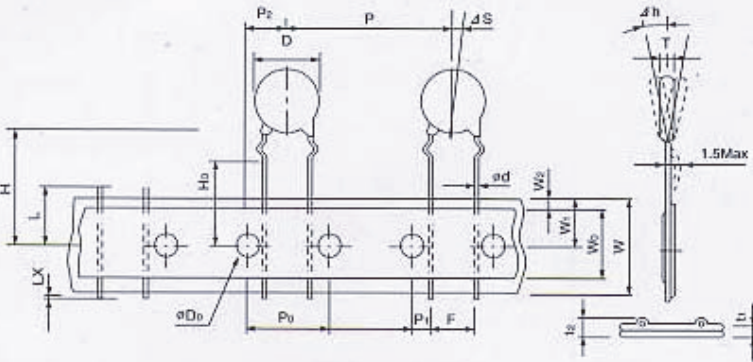
4. 15.0 pitch Type



STANDARD PACKING

Coated Material	Quantity(pcs)	Pitch Rated Voltage
Phenol Resin	2,000	12.7mm DC 50V, DC 500V
Epoxy Powder	2,000	12.7mm
	1,500	DC 3KV 이상
	1,000, 1,500	15.0mm
	500, 1,000	30.0mm

5. 30.0 pitch Type



FLAT PACK

