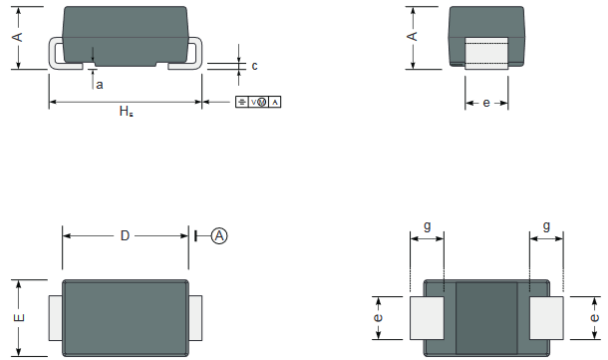


SMD Transient Voltage Suppressor Diodes

Primary characteristics		
Parameter	Value	Unit
V _Z range nom.	5 to 440	V
Power rating	400	W

Features


- **SMA (DO-214AC)** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Approx. weight: 0.07g / 0.002oz
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability
- Terminals: Solderable per MIL-STD-750, Method 2026

Case dimensions								
								
SMA (DO-214AC)								
Unit	A	D	E	H _E	c	e	g	a
mm	2.05 ±0.15	4.25 ±0.25	2.5 ±0.2	4.95 ±0.25	0.23 ±0.08	1.45 ±0.15	1.2 ±0.3	0.3


Part numbering system		
SMAJ	24	A
↓	↓	↓
Series code	Reverse standoff voltage marking (see: Characteristics table)	Unidirectional: A Bidirectional: CA

Absolute maximum ratings and general electrical characteristics (T _a = 25°C)			
Parameter	Symbol	Value	Unit
Peak pulse power dissipation ^{1) 2) 5)}	P _{PPM}	400	W
Peak forward surge current ^{3) 4)}	I _{FSM} (UNI)	40	A
Peak pulse current on 10/1000 μs waveform ¹⁾	I _{PPM}	Characteristics table	A
ESD voltage per IEC6100-4-2	Contact	V _{ESD1}	kV
	Air	V _{ESD2}	
Typical junction capacitance at V _R =4V, f=1MHz	C _j	390	pF
Typical thermal resistance junction to ambient ²⁾	R _{θJA}	70	°C/W
Operating junction temperature and storage temperature range	T _j , T _s	-55 ~ 150	°C
Notes:			
1) Non-repetitive current pulse			
2) Mounted on 5mm ² copper pads to each terminal			
3) Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)			
4) Peak pulse power waveform is 10/1000μs			

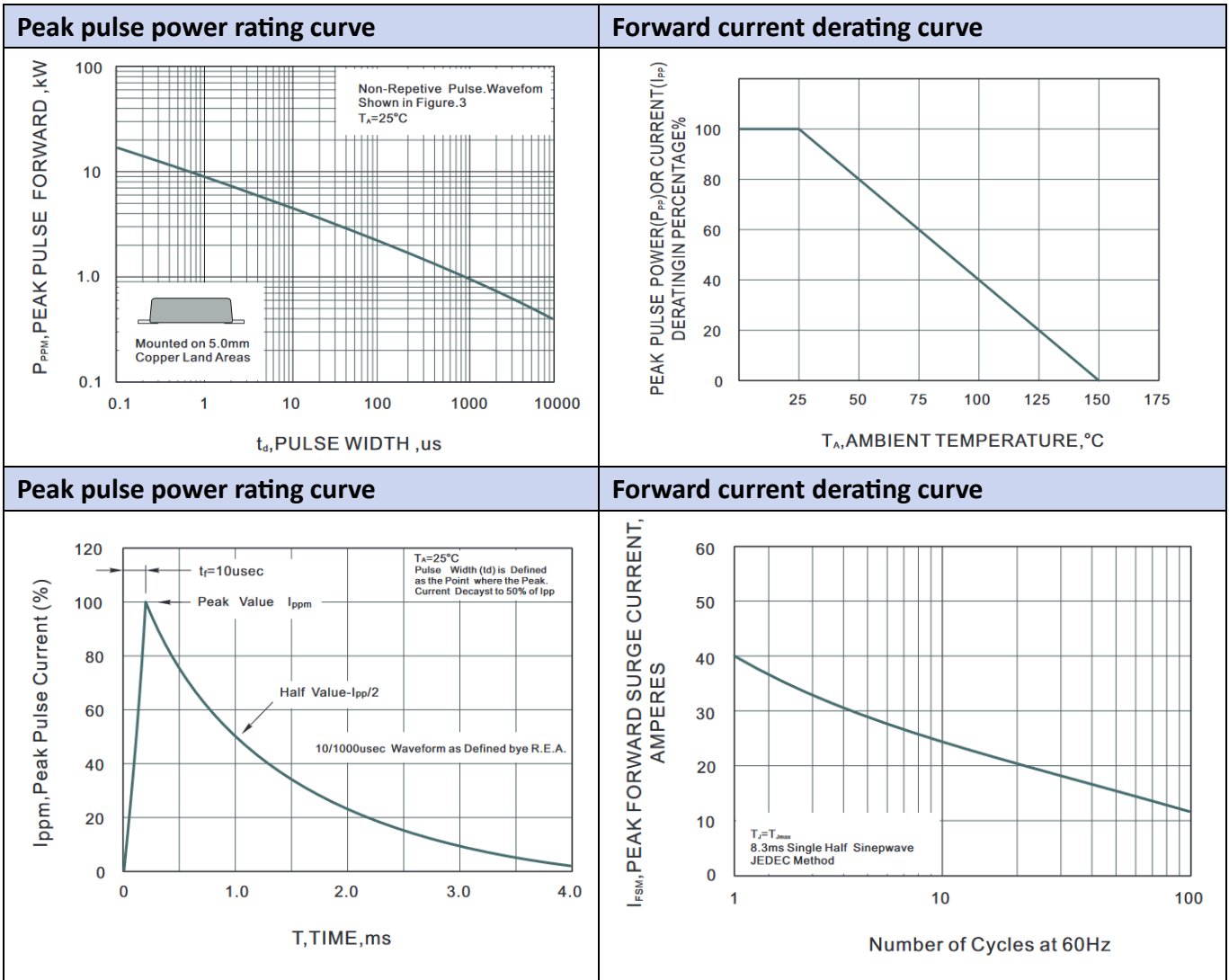
Characteristics table (T_a = 25°C)

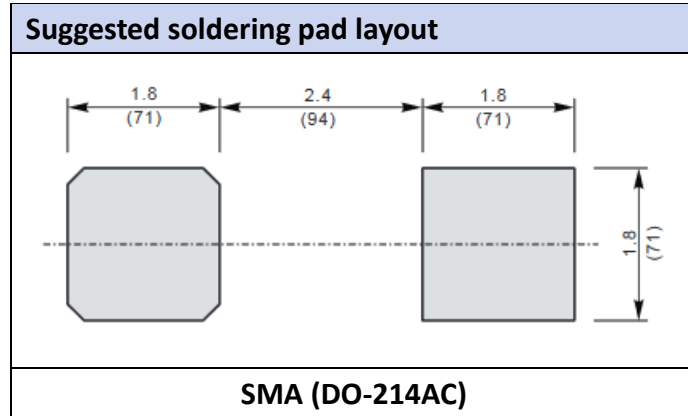
Part number (UNI)	Part number (BI)	Marking		Reverse stand off voltage	Breakdown voltage @I _T		Test current	Maximum clamping voltage @I _{PP}	Maximum peak pulse current	Maximum reverse leakage @V _R	Agency approval 
					V _{BR}						
		UNI	BI	V _R	MIN	MAX	I _T	V _C	I _{PP}	I _R	
		V	V	V	mA	V	A	μA			
SMAJ5.0A	SMAJ5.0CA	AE	WE	5.0	6.40	7.00	10	9.2	43.5	800	X
SMAJ6.0A	SMAJ6.0CA	AG	WG	6.0	6.67	7.37	10	10.3	38.8	800	X
SMAJ6.5A	SMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	35.7	500	X
SMAJ7.0A	SMAJ7.0CA	AM	WM	7.0	7.78	8.60	10	12.0	33.3	200	X
SMAJ7.5A	SMAJ7.5CA	AP	WP	7.5	8.33	9.21	1	12.9	31.0	100	X
SMAJ8.0A	SMAJ8.0CA	AR	WR	8.0	8.89	9.83	1	13.6	29.4	50	X
SMAJ8.5A	SMAJ8.5CA	AT	WT	8.5	9.44	10.4	1	14.4	27.8	20	X
SMAJ9.0A	SMAJ9.0CA	AV	WV	9.0	10.0	11.1	1	15.4	26.0	10	X
SMAJ10A	SMAJ10CA	AX	WX	10	11.1	12.3	1	17.0	23.5	5	X
SMAJ11A	SMAJ11CA	AZ	WZ	11	12.2	13.5	1	18.2	22.0	1	X
SMAJ12A	SMAJ12CA	BE	XE	12	13.3	14.7	1	19.9	20.1	1	X
SMAJ13A	SMAJ13CA	BG	XG	13	14.4	15.9	1	21.5	18.6	1	X
SMAJ14A	SMAJ14CA	BK	XK	14	15.6	17.2	1	23.2	17.2	1	X
SMAJ15A	SMAJ15CA	BM	XM	15	16.7	18.5	1	24.4	16.4	1	X
SMAJ16A	SMAJ16CA	BP	XP	16	17.8	19.7	1	26.0	15.4	1	X
SMAJ17A	SMAJ17CA	BR	XR	17	18.9	20.9	1	27.6	14.5	1	X
SMAJ18A	SMAJ18CA	BT	XT	18	20.0	22.1	1	29.2	13.7	1	X
SMAJ20A	SMAJ20CA	BV	XV	20	22.2	24.5	1	32.4	12.3	1	X
SMAJ22A	SMAJ22CA	BX	XX	22	24.4	26.9	1	35.5	11.3	1	X
SMAJ24A	SMAJ24CA	BZ	XZ	24	26.7	29.5	1	38.9	10.3	1	X
SMAJ26A	SMAJ26CA	CE	YE	26	28.9	31.9	1	42.1	9.5	1	X
SMAJ28A	SMAJ28CA	CG	YG	28	31.1	34.4	1	45.4	8.8	1	X
SMAJ30A	SMAJ30CA	CK	YK	30	33.3	36.8	1	48.4	8.3	1	X
SMAJ33A	SMAJ33CA	CM	YM	33	36.7	40.6	1	53.3	7.5	1	X
SMAJ36A	SMAJ36CA	CP	YP	36	40.0	44.2	1	58.1	6.9	1	X
SMAJ40A	SMAJ40CA	CR	YR	40	44.4	49.1	1	64.5	6.2	1	X
SMAJ43A	SMAJ43CA	CT	YT	43	47.8	52.8	1	69.4	5.8	1	X
SMAJ45A	SMAJ45CA	CV	YV	45	50.0	55.3	1	72.7	5.5	1	X
SMAJ48A	SMAJ48CA	CX	YX	48	53.3	58.9	1	77.4	5.2	1	X
SMAJ51A	SMAJ51CA	CZ	YZ	51	56.7	62.7	1	82.4	4.9	1	X
SMAJ54A	SMAJ54CA	RE	ZE	54	60.0	66.3	1	87.1	4.6	1	X
SMAJ58A	SMAJ58CA	RG	ZG	58	64.4	71.2	1	93.6	4.3	1	X
SMAJ60A	SMAJ60CA	RK	ZK	60	66.7	73.7	1	96.8	4.1	1	X
SMAJ64A	SMAJ64CA	RM	ZM	64	71.1	78.6	1	103	3.9	1	X
SMAJ70A	SMAJ70CA	RP	ZP	70	77.8	86.0	1	113	3.5	1	X
SMAJ75A	SMAJ75CA	RR	ZR	75	83.3	92.1	1	121	3.3	1	X
SMAJ78A	SMAJ78CA	RT	ZT	78	86.7	95.8	1	126	3.2	1	X
SMAJ85A	SMAJ85CA	RV	ZV	85	94.4	104	1	137	2.9	1	X

Characteristics table (T_a = 25°C)

Part number (UNI)	Part number (BI)	Marking		Reverse stand off voltage	Breakdown voltage @I _T		Test current	Maximum clamping voltage @I _{PP}	Maximum peak pulse current	Maximum reverse leakage @V _R	Agency approval 
					V _{BR}						
		UNI	BI	V _R	MIN	MAX	I _T	V _C	I _{PP}	I _R	
		V	V	V	mA	V	A	μA			
SMAJ90A	SMAJ90CA	RX	ZX	90	100	111	1	146	2.7	1	X
SMAJ100A	SMAJ100CA	RZ	ZZ	100	111	123	1	162	2.5	1	X
SMAJ110A	SMAJ110CA	SE	VE	110	122	135	1	177	2.3	1	X
SMAJ120A	SMAJ120CA	SG	VG	120	133	147	1	193	2.1	1	X
SMAJ130A	SMAJ130CA	SK	VK	130	144	159	1	209	1.9	1	X
SMAJ150A	SMAJ150CA	SM	VM	150	167	185	1	243	1.6	1	X
SMAJ160A	SMAJ160CA	SP	VP	160	178	197	1	259	1.5	1	X
SMAJ170A	SMAJ170CA	SR	VR	170	189	209	1	275	1.5	1	X
SMAJ180A	SMAJ180CA	ST	VT	180	201	222	1	292	1.4	1	
SMAJ200A	SMAJ200CA	SV	VV	200	224	247	1	324	1.2	1	
SMAJ220A	SMAJ220CA	SX	VX	220	246	272	1	356	1.1	1	
SMAJ250A	SMAJ250CA	SZ	VZ	250	279	309	1	405	1.0	1	
SMAJ300A	SMAJ300CA	TE	UE	300	335	371	1	486	0.8	1	
SMAJ350A	SMAJ350CA	TG	UG	350	391	432	1	567	0.7	1	
SMAJ400A	SMAJ400CA	TK	UK	400	447	494	1	648	0.6	1	
SMAJ440A	SMAJ440CA	TM	UM	440	492	543	1	713	0.6	1	

For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.
 For parts without A (V_{BR} is ± 10% and V_C is 5% higher than with A parts).





Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
SMAJ5.0A(CA) ~ SMAJ440A(CA)	SMA (DO-214AC)	5000 pcs / 11" reel 2000 pcs / 7" reel	---

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