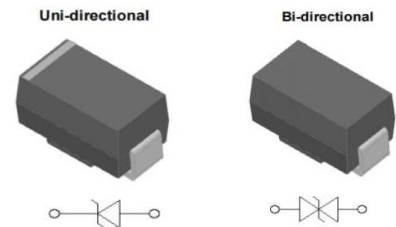


Transient Voltage Suppressors

FEATURES :

- For surface mounted applications
- 400W peak pulse power capability on 10/1000 μ s waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 260 $^{\circ}$ C/10 seconds
- RoHS compliant.



DO-214AC

MECHANICAL DATA :

- Case : Molded plastic body
- Polarity : Polarity symbol marking on body



MAXIMUM RATINGS (Ratings at 25 $^{\circ}$ C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A=25^{\circ}\text{C}$ by 10x1000 μ s waveform	P_{PPM}	400	W
Power Dissipation on infinite heat sink at $T_A=50^{\circ}\text{C}$	$P_{M(AV)}$	3.3	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave	I_{FSM}	40	A
Maximum Instantaneous Forward Voltage at 0.2A for Unidirectional	V_F	1.2	V
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Lead	R_{Uj}	30	$^{\circ}\text{C/W}$
Typical Thermal Resistance Junction to Ambient	R_{UJA}	120	$^{\circ}\text{C/W}$

Electrical Characteristics

P/N		Marking		VR (V)	VBR @ IT (V)		IT (mA)	IR@ VR (μA)		Ipp (A)	VC@ Ipp (V)
Uni	Bi	Uni	Bi		MIN	MAX		Uni	Bi		
SMAJ5.0A	SMAJ5.0CA	AE	WE	5	6.4	7	10	100	200	43.5	9.2
SMAJ6.0A	SMAJ6.0CA	AG	WG	6	6.67	7.37	10	100	200	38.8	10.3
SMAJ6.5A	SMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	50	100	35.7	11.2
SMAJ7.0A	SMAJ7.0CA	AM	WM	7	7.78	8.6	10	50	80	33.3	12
SMAJ7.5A	SMAJ7.5CA	AP	WP	7.5	8.33	9.21	1	3	30	31	12.9
SMAJ8.0A	SMAJ8.0CA	AR	WR	8	8.89	9.83	1	3	4	29.4	13.6
SMAJ8.5A	SMAJ8.5CA	AT	WT	8.5	9.44	10.4	1	2	8	27.8	14.4
SMAJ9.0A	SMAJ9.0CA	AV	WV	9	10	11.1	1	1	2	26	15.4
SMAJ10A	SMAJ10CA	AX	WX	10	11.1	12.3	1	1	1	23.5	17
SMAJ11A	SMAJ11CA	AZ	WZ	11	12.2	13.5	1	1	1	22	18.2
SMAJ12A	SMAJ12CA	BE	XE	12	13.3	14.7	1	1	1	20.1	19.9
SMAJ13A	SMAJ13CA	BG	XG	13	14.4	15.9	1	1	1	18.6	21.5
SMAJ14A	SMAJ14CA	BK	XK	14	15.6	17.2	1	1	1	17.2	23.2
SMAJ15A	SMAJ15CA	BM	XM	15	16.7	18.5	1	1	1	16.4	24.4
SMAJ16A	SMAJ16CA	BP	XP	16	17.8	19.7	1	1	1	15.4	26
SMAJ17A	SMAJ17CA	BR	XR	17	18.9	20.9	1	1	1	14.5	27.6
SMAJ18A	SMAJ18CA	BT	XT	18	20	22.1	1	1	1	13.7	29.2
SMAJ20A	SMAJ20CA	BV	XV	20	22.2	24.5	1	1	1	12.3	32.4
SMAJ22A	SMAJ22CA	BX	XX	22	24.4	26.9	1	1	1	11.3	35.5
SMAJ24A	SMAJ24CA	BZ	XZ	24	26.7	29.5	1	1	1	10.3	38.9
SMAJ26A	SMAJ26CA	CE	YE	26	28.9	31.9	1	1	1	9.5	42.1
SMAJ28A	SMAJ28CA	CG	YG	28	31.1	34.4	1	1	1	8.8	45.4
SMAJ30A	SMAJ30CA	CK	YK	30	33.3	36.8	1	1	1	8.3	48.4
SMAJ33A	SMAJ33CA	CM	YM	33	36.7	40.6	1	1	1	7.5	53.3
SMAJ36A	SMAJ36CA	CP	YP	36	40	44.2	1	1	1	6.9	58.1
SMAJ40A	SMAJ40CA	CR	YR	40	44.4	49.1	1	1	1	6.2	64.5
SMAJ43A	SMAJ43CA	CT	YT	43	47.8	52.8	1	1	1	5.8	69.4
SMAJ45A	SMAJ45CA	CV	YV	45	50	55.3	1	1	1	5.5	72.7
SMAJ48A	SMAJ48CA	CX	YX	48	53.3	58.9	1	1	1	5.2	77.4
SMAJ51A	SMAJ51CA	CZ	YZ	51	56.7	62.7	1	1	1	4.9	82.4
SMAJ54A	SMAJ54CA	RE	ZE	54	60	66.3	1	1	1	4.6	87.1
SMAJ58A	SMAJ58CA	RG	ZG	58	64.4	71.2	1	1	1	4.3	93.6
SMAJ60A	SMAJ60CA	RK	ZK	60	66.7	73.7	1	1	1	4.1	96.8
SMAJ64A	SMAJ64CA	RM	ZM	64	71.1	78.6	1	1	1	3.9	103
SMAJ70A	SMAJ70CA	RP	ZP	70	77.8	86	1	1	1	3.5	113
SMAJ75A	SMAJ75CA	RR	ZR	75	83.3	92.1	1	1	1	3.3	121
SMAJ78A	SMAJ78CA	RT	ZT	78	86.7	95.8	1	1	1	3.2	126
SMAJ85A	SMAJ85CA	RV	ZV	85	94.4	104	1	1	1	2.9	137
SMAJ90A	SMAJ90CA	RX	ZX	90	100	111	1	1	1	2.7	146
SMAJ100A	SMAJ100CA	RZ	ZZ	100	111	123	1	1	1	2.5	162
SMAJ110A	SMAJ110CA	SE	VE	110	122	135	1	1	1	2.3	177
SMAJ120A	SMAJ120CA	SG	VG	120	133	147	1	1	1	2.1	193
SMAJ130A	SMAJ130CA	SK	VK	130	144	159	1	1	1	1.9	209
SMAJ150A	SMAJ150CA	SM	VM	150	167	185	1	1	1	1.6	243
SMAJ160A	SMAJ160CA	SP	VP	160	178	197	1	1	1	1.5	259
SMAJ170A	SMAJ170CA	SR	VR	170	189	209	1	1	1	1.5	275
SMAJ180A	SMAJ180CA	ST	VT	180	201	222	1	1	1	1.4	292
SMAJ200A	SMAJ200CA	SV	VV	200	224	247	1	1	1	1.2	324
SMAJ220A	SMAJ220CA	SX	VX	220	246	272	1	1	1	1.1	356
SMAJ250A	SMAJ250CA	SZ	VZ	250	279	309	1	1	1	1	405

SMAJ300A*	SMAJ300CA*	TE	UE	300	335	371	1	1	1	0.8	486
SMAJ350A*	SMAJ350CA*	TG	UG	350	391	432	1	1	1	0.7	567
SMAJ400A*	SMAJ400CA*	TK	UK	400	447	494	1	1	1	0.6	648
SMAJ440A*	SMAJ440CA*	TM	UM	440	492	543	1	1	1	0.6	713

Notes : For stack-die parts, use * to label the part number.

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

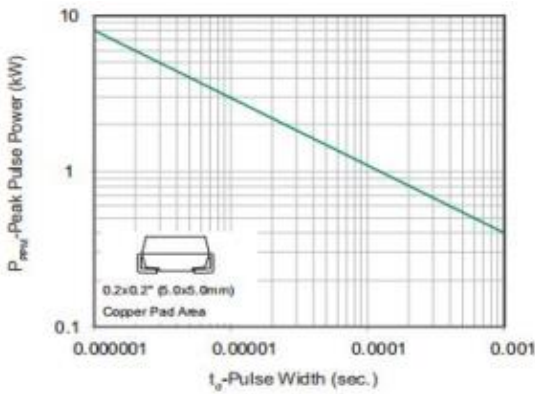


Figure 1. Peak Pulse Power Rating Curve

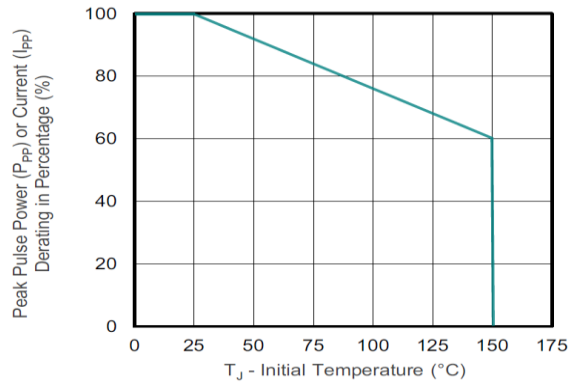


Figure 2. Pulse Derating Curve

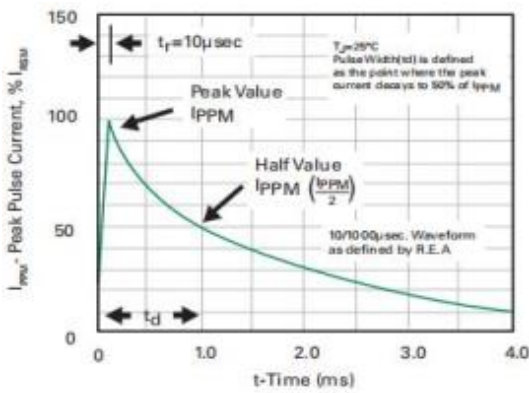


Figure 3. Pulse Waveform

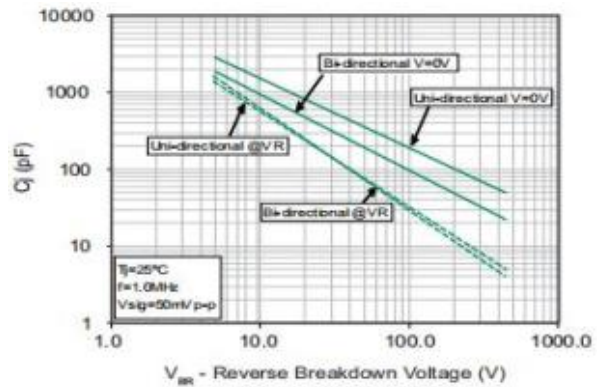


Figure 4. Typical Junction Capacitance

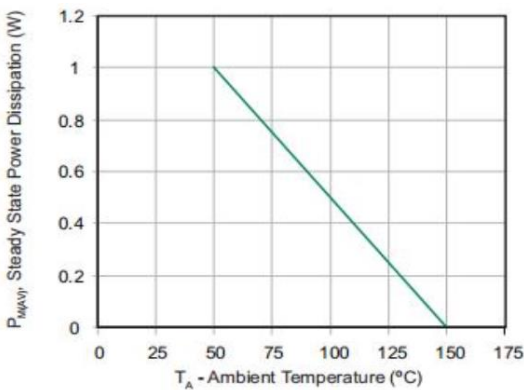


Figure 5. Steady State Power Dissipation Derating Curve

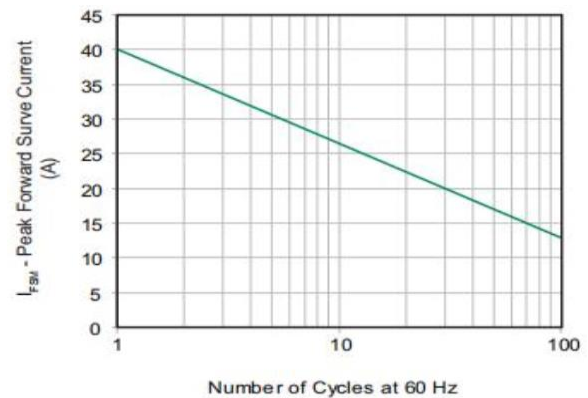
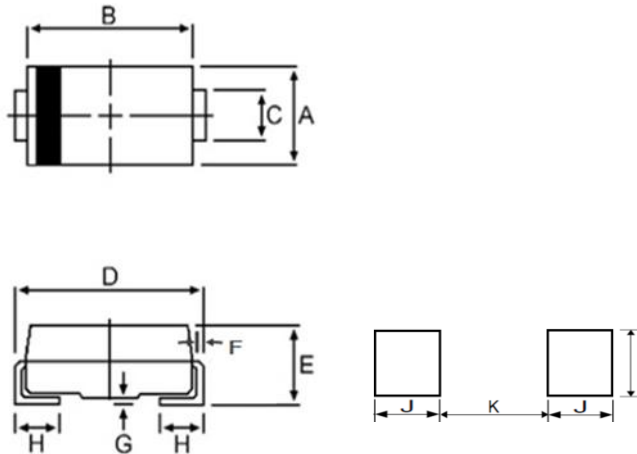


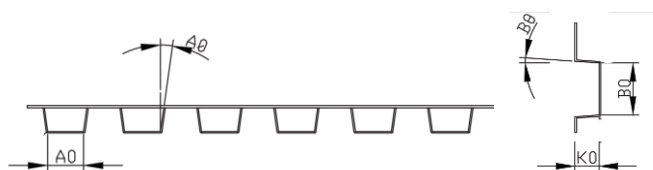
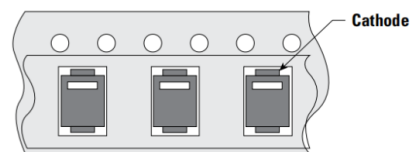
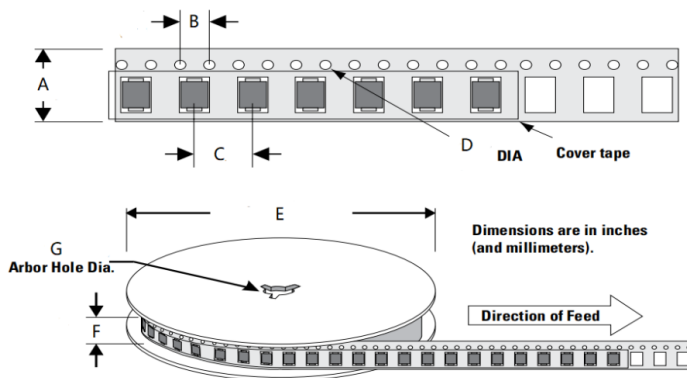
Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

• DO-214AC Package outlines : Dimensions in millimeters



Dimensions	Millimeters	
	Min	Max
A	2.20	2.80
B	3.90	4.75
C	1.25	1.70
D	4.70	5.30
E	1.90	2.50
F	0.152	0.305
G	0.00	0.203
H	0.75	1.55
I	1.68	
J	1.52	
K		2.08

• Tape & Reel Information



Dimensions	Millimeters	
	Min	Max
A	12.00	12.10
B	3.90	4.10
C	3.90	4.10
D	1.50	1.60
E	329.0	331.0
F	13.00	14.50
G	13.00	14.50
A0	2.69	2.89
B0	5.23	5.43
K0	2.26	2.46
Aθ	--	5°
Bθ	--	5°

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