

## 400W SURFACE MOUNT TVS

### Features

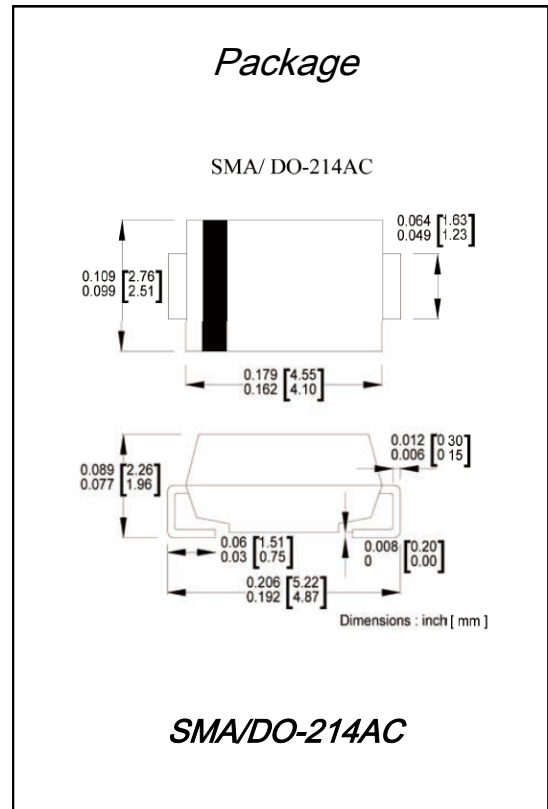
- ◆ Glass Passivated Chip
- ◆ Low Leakage
- ◆ Uni and Bidirectional Unit
- ◆ Excellent Clamping Capability
- ◆ Very Fast Response Time
- ◆ RoHS Compliant
- ◆ 400 W peak pulse power capability with 10/1000us waveform, repetitive rate (duty cycle): 0.01 %

### Application

- ◆ IPC
- ◆ Car Electronics
- ◆ Power Supply
- ◆ Smart Meters

### Mechanical Characteristics

- ◆ Case: Molded Plastic
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end except Bi-directional parts
- ◆ Mounting position: Any



<b>Packing Info</b>	
<b>Reel Size</b>	<b>13"</b>
<b>Qty / Reel</b>	<b>5000</b>
<b>Reel / Box</b>	<b>2</b>
<b>Box / Carton</b>	<b>8</b>

## DEVICE CHARACTERISTICS

Maximum Rating			
Parameter	Symbol	Value	Units
Peak Power Dissipation With 10/1000us Waveform	P <sub>PP</sub>	400	Watt
Peak Pulse Current With 10/1000us Waveform	I <sub>PP</sub>	-	A
Power Dissipation On Infinite Heatsink @ T <sub>L</sub> = 75°C	P <sub>D</sub>	1.0	Watt
Peak Forward Surge Current	I <sub>FSM</sub>	40	A
Maximum Instantaneous Forward Voltage @ 50 A	V <sub>F</sub>	3.5/5	V
Operating Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

ELECTRICAL CHARACTERISTICS @ 25°C										
Part Number	Part Number	Marking Code		Breakdown Voltage VBR @IT			IR @ V <sub>RWM</sub>	V <sub>RWM</sub>	I <sub>PP</sub>	V <sub>C</sub> @ I <sub>PP</sub>
		Uni	Bi	Min (V)	Max (V)	IT (mA)	(uA)	(V)	(A)	(V)
SMAJ5.0A	SMAJ5.0CA	AE	WE	6.4	7	10	800	5	43.4	9.2
SMAJ6.0A	SMAJ6.0CA	AG	WG	6.67	7.37	10	800	6	38.8	10.3
SMAJ6.5A	SMAJ6.5CA	AK	WK	7.22	7.98	10	500	6.6	35.7	11.2
SMAJ7.0A	SMAJ7.0CA	AM	WM	7.78	8.6	10	200	7	33.3	12
SMAJ7.5A	SMAJ7.5CA	AP	WP	8.33	9.21	1	100	7.5	31.0	12.9
SMAJ8.0A	SMAJ8.0CA	AR	WR	8.89	9.83	1	50	8	29.4	13.6
SMAJ8.5A	SMAJ8.5CA	AT	WT	9.44	10.4	1	10	8.5	27.7	14.4
SMAJ9.0A	SMAJ9.0CA	AV	WV	10	11.1	1	5	9	25.9	15.4
SMAJ10A	SMAJ10CA	AX	WX	11.1	12.3	1	5	10	23.5	17
SMAJ11A	SMAJ11CA	AZ	WZ	12.2	13.5	1	5	11	21.9	18.2
SMAJ12A	SMAJ12CA	BE	XE	13.3	14.7	1	5	12	20.1	19.9
SMAJ13A	SMAJ13CA	BG	XG	14.4	15.9	1	5	13	18.6	21.5
SMAJ14A	SMAJ14CA	BK	XK	15.6	17.2	1	5	14	17.2	23.2
SMAJ15A	SMAJ15CA	BM	XM	16.7	18.5	1	5	15	16.3	24.4
SMAJ16A	SMAJ16CA	BP	XP	17.8	19.7	1	5	16	15.3	26
SMAJ17A	SMAJ17CA	BR	XR	18.9	20.9	1	5	17	14.4	27.6
SMAJ18A	SMAJ18CA	BT	XT	20	21.1	1	5	18	13.7	29.2
SMAJ20A	SMAJ20CA	BV	XV	22.2	24.5	1	5	20	12.3	32.4

## DEVICE CHARACTERISTICS

ELECTRICAL CHARACTERISTICS @ 25°C										
Part Number	Part Number	Marking Code		Breakdown Voltage VBR @IT			IR @ V <sub>RWM</sub> ( $\mu$ A)	V <sub>RWM</sub> (V)	I <sub>PP</sub> (A)	V <sub>C</sub> @ I <sub>PP</sub> (V)
		Uni	Bi	Min (V)	Max (V)	IT (mA)				
SMAJ22A	SMAJ22CA	BX	XX	24.4	26.9	1	5	22	11.2	35.5
SMAJ24A	SMAJ24CA	BZ	XZ	26.7	29.5	1	5	24	10.2	38.9
SMAJ26A	SMAJ26CA	CE	YE	28.9	31.9	1	5	26	9.5	42.1
SMAJ28A	SMAJ28CA	CG	YG	31.1	34.4	1	5	28	8.8	45.4
SMAJ30A	SMAJ30CA	CK	YK	33.3	36.8	1	5	30	8.2	48.4
SMAJ33A	SMAJ33CA	CM	YM	36.7	40.6	1	5	33	7.5	53.3
SMAJ36A	SMAJ36CA	CP	YP	40	44.2	1	5	36	6.8	58.1
SMAJ40A	SMAJ40CA	CR	YR	44.4	49.1	1	5	40	6.2	64.5
SMAJ43A	SMAJ43CA	CT	YT	47.8	52.8	1	5	43	5.7	69.4
SMAJ45A	SMAJ45CA	CV	YV	50	55.3	1	5	45	5.5	72.7
SMAJ48A	SMAJ48CA	CX	YX	53.3	58.9	1	5	48	5.1	77.4
SMAJ51A	SMAJ51CA	CZ	YZ	56.7	62.7	1	5	51	4.8	82.4
SMAJ54A	SMAJ54CA	RE	ZE	60	66.3	1	5	54	4.5	87.1
SMAJ58A	SMAJ58CA	RG	ZG	64.4	71.2	1	5	58	4.2	93.6
SMAJ60A	SMAJ60CA	RK	ZK	66.7	73.7	1	5	60	4.1	96.8
SMAJ64A	SMAJ64CA	RM	ZM	71.1	78.6	1	5	64	3.8	103
SMAJ70A	SMAJ70CA	RP	ZP	77.8	86	1	5	70	3.5	113
SMAJ75A	SMAJ75CA	RR	ZR	83.3	92.1	1	5	75	3.3	121
SMAJ78A	SMAJ78CA	RT	ZT	86.7	95.8	1	5	78	3.1	126
SMAJ85A	SMAJ85CA	RV	ZV	94.4	104	1	5	85	2.9	137
SMAJ90A	SMAJ90CA	RX	ZX	100	111	1	5	90	2.7	146
SMAJ100A	SMAJ100CA	RZ	ZZ	111	123	1	5	100	2.4	162
SMAJ110A	SMAJ110CA	SE	VE	122	135	1	5	110	2.2	177
SMAJ120A	SMAJ120CA	SG	VG	133	147	1	5	120	2.0	193
SMAJ130A	SMAJ130CA	SK	VK	144	159	1	5	130	1.9	209
SMAJ150A	SMAJ150CA	SM	VM	167	185	1	5	150	1.6	243
SMAJ160A	SMAJ160CA	SP	VP	178	197	1	5	160	1.5	259
SMAJ170A	SMAJ170CA	SR	VR	189	209	1	5	170	1.4	275
SMAJ180A	SMAJ180CA	ST	VT	201	222	1	5	180	1.3	292
SMAJ200A	SMAJ200CA	SV	VV	224	247	1	5	200	1.2	324
SMAJ220A	SMAJ220CA	SX	VX	246	272	1	5	220	1.1	356
SMAJ250A	SMAJ250CA	SZ	VZ	279	309	1	5	250	0.9	405
SMAJ300A	SMAJ300CA	DE	HE	335	371	1	5	300	0.8	486
SMAJ350A	SMAJ350CA	DG	HG	391	432	1	5	350	0.7	567
SMAJ400A	SMAJ400CA	DK	HK	447	494	1	5	400	0.6	648
SMAJ440A	SMAJ440CA	DM	HM	492	543	1	5	440	0.5	713

**RATING CURVES**

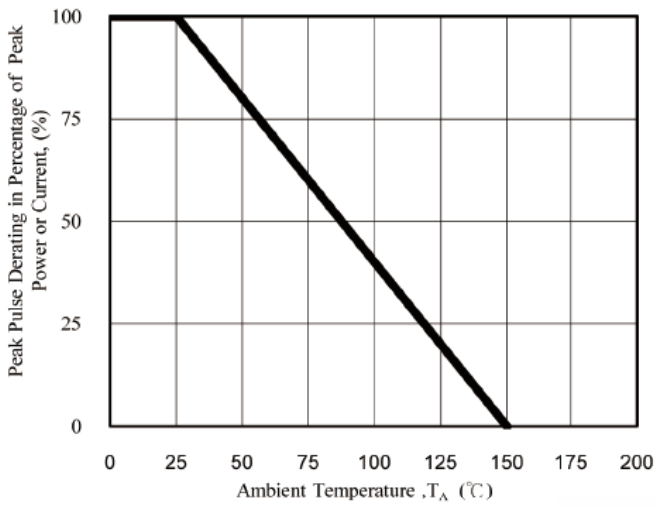


Fig. 1 - Pulse Derating Curve

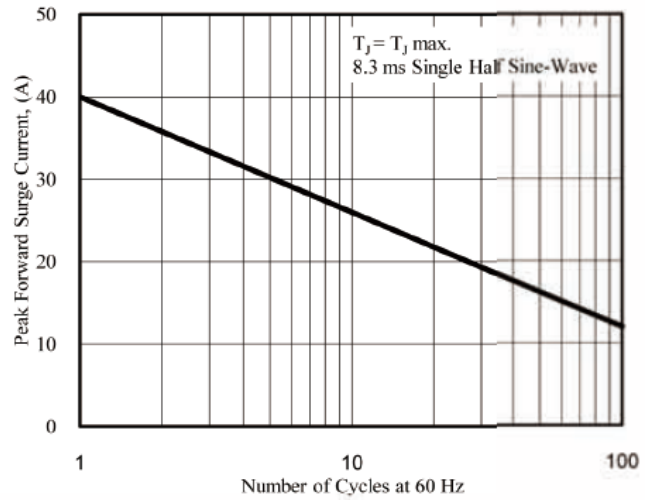


Fig. 2 - Maximum Non-Repetitive Surge Current

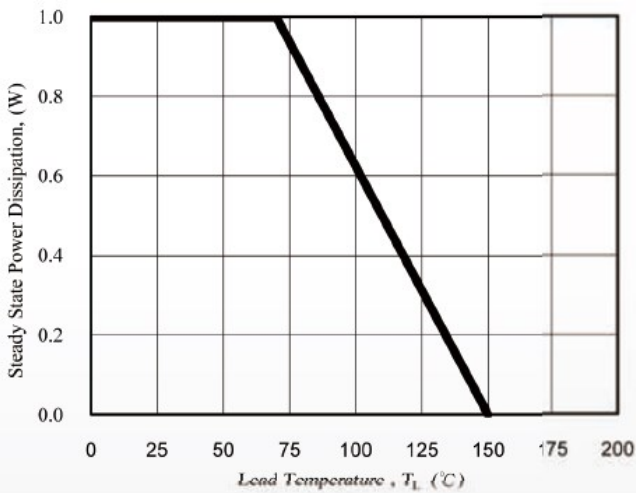


Fig. 3 - Steady State Power Derating Curve

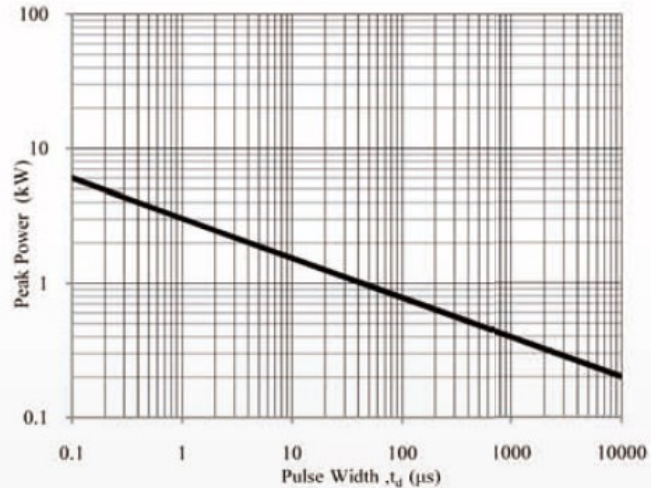


Fig. 4 - Peak Pulse Power Rating Curve

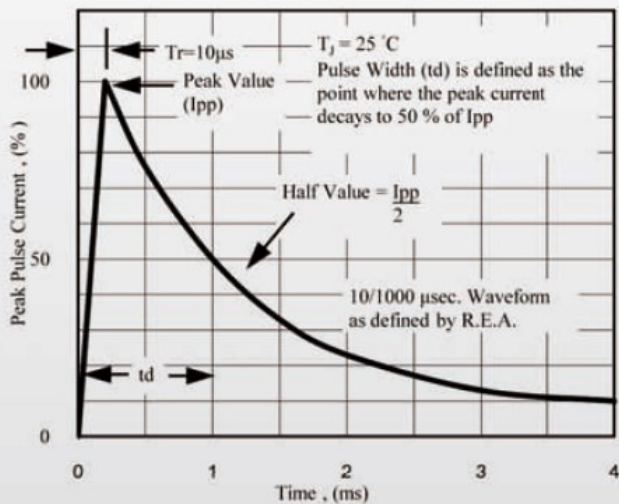


Fig. 5 - Pulse Waveform

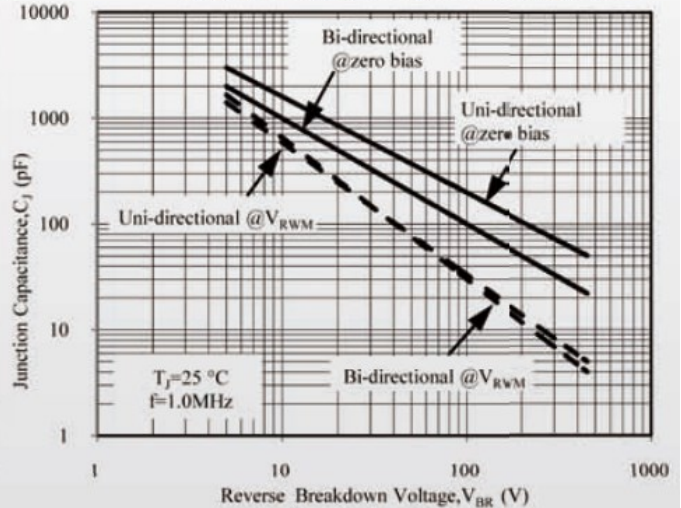


Fig. 6 - Typical Junction Capacitance

**REFERENCE**

<b>Revision History</b>	<b>Modification Description</b>
<b>Rev.1.0</b>	<b>Initial Release</b>
<b>Rev.1.01</b>	<b>Edit Document Layout</b>