

**GLASS PASSIVATED
UNIDIRECTIONAL AND BIDIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS**

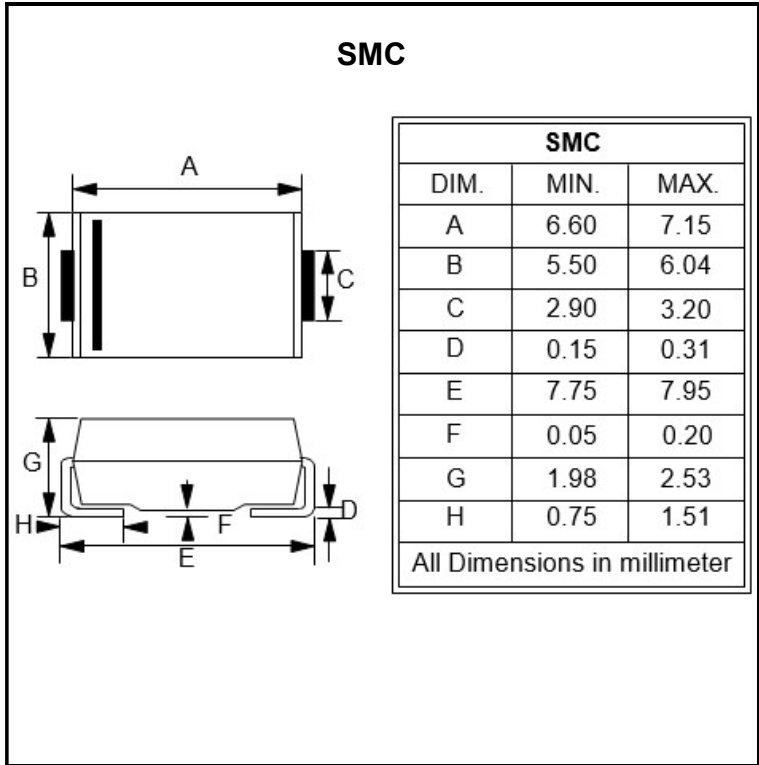
REVERSE VOLTAGE - 12 to 100 V
POWER DISSIPATION - 5000 W

FEATURES

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-0
- Fast response time: typically less than 1.0ns
- RoHS compliant
- Qualified to AEC-Q101 Rev_C

MECHANICAL DATA

- Case : Molded plastic
- Polarity : by cathode band denotes uni-directional device none cathode band denotes bi-directional device



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Peak Power Dissipation at TA = 25 °C , TP = 1ms (Note 1)	P _{PP}	5000	W
Peak Forward Surge Current 8.3ms single half sine-wave @ TJ = 25 °C (Note 2)	I _{FSM}	300	A
Steady State Power Dissipation at TL =75°C (on infinite heatsink)	P _{M(AV)}	6.5	W
Maximum Instantaneous forward voltage at 100A for unidirectional devices only (Note 3)	V _F	3.5	V
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

REV.1, NOV.-2017, KSID01

NOTES : 1. Non-repetitive current pulse, per fig. 5 and derated above TA= 25 °C per fig.1.
2. unidirectional units only.
3. V_F max=3.5V at I_F=100 A 300us square wave pulse.

RATING AND CHARACTERISTIC CURVES 5.0SMDJ SERIES



FIG.1- Pulse Derating Curve

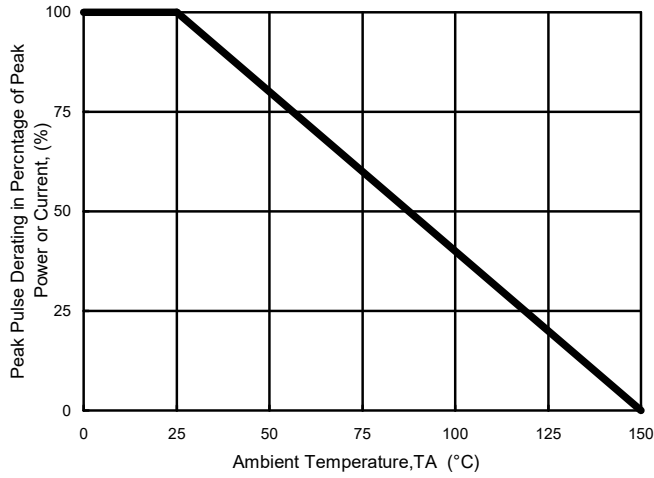


FIG.2- Maximum Non-Repetitive Surge Current

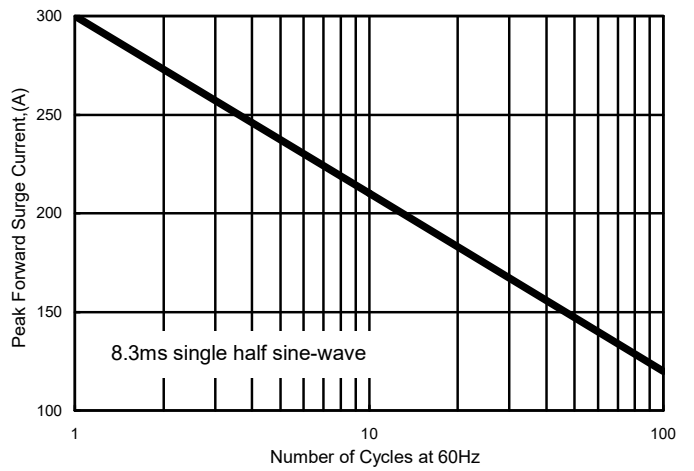


FIG.3- Steady State Power Derating Curve

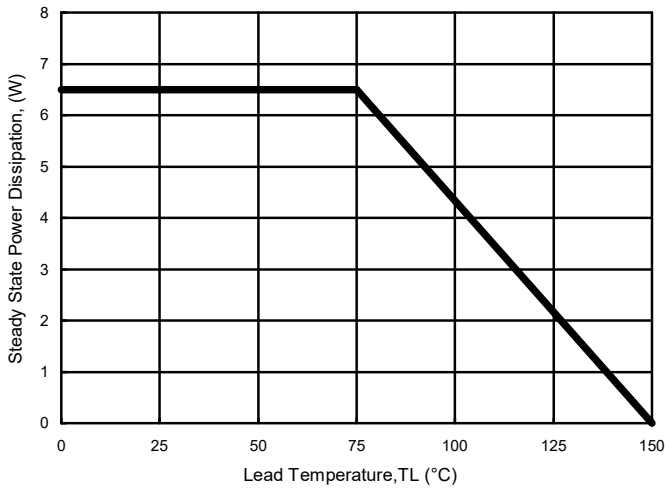


FIG.4- Peak Pulse Power Rating Curve

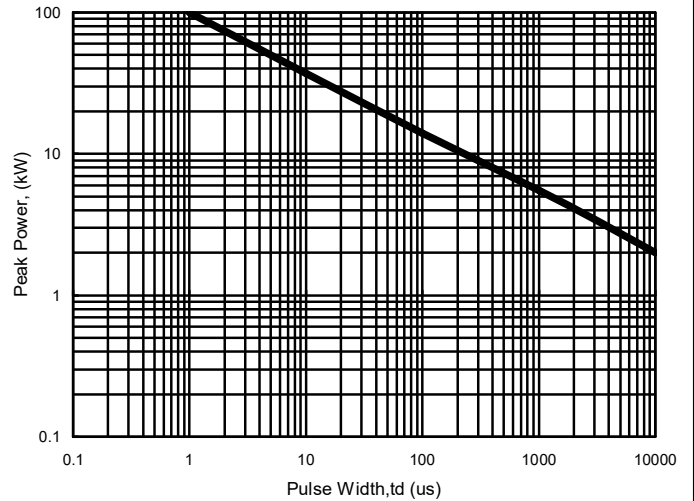


FIG.5- Typical Junction Capacitance

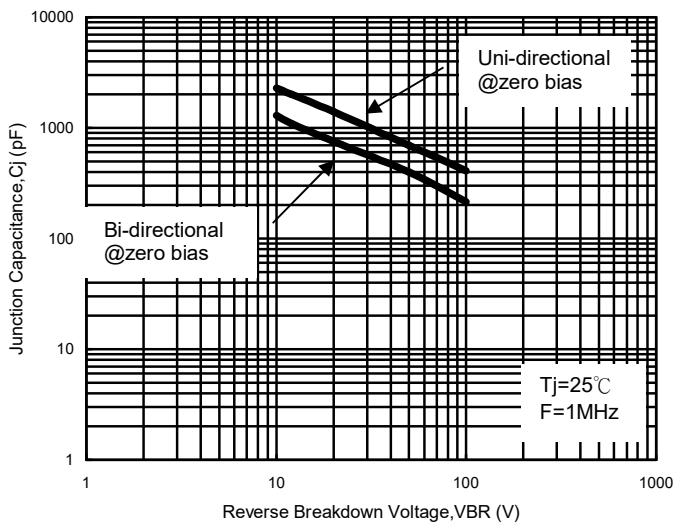
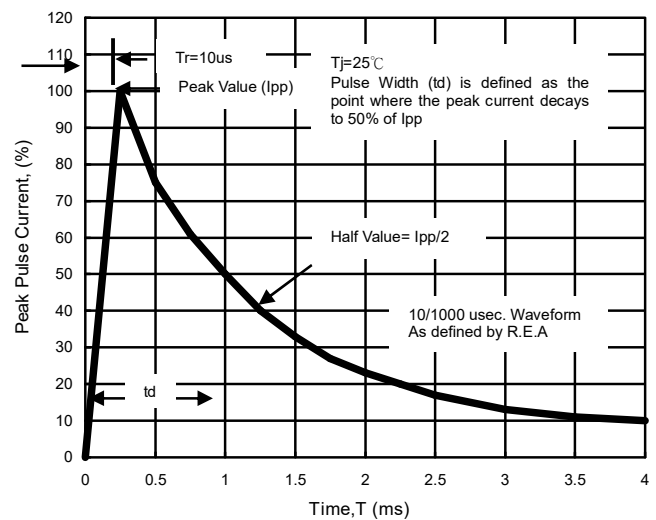


FIG.6- Pulse Waveform



5.0SMDJ SERIES



Type Number		Device Marking code		Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Voltage at IRSM (Clamping Voltage)	Maximum Reverse Surge Current	Maximum Reverse Leakage at VRWM
Uni	Bi	Uni	Bi	VRWM(Volts)	Min.	Max.	@IT(mA)	Vrsm(Volts)	Irsm(Amps)	IR (uA)
5.0SMDJ12A	5.0SMDJ12CA	5PDZ	5BDZ	12	13.3	14.7	10	19.9	251.3	800
5.0SMDJ13A	5.0SMDJ13CA	5PEE	5BEE	13	14.4	15.9	10	21.5	232.6	500
5.0SMDJ14A	5.0SMDJ14CA	5PEG	5BEG	14	15.6	17.2	10	23.2	215.5	200
5.0SMDJ15A	5.0SMDJ15CA	5PEK	5BEK	15	16.7	18.5	1.0	24.4	204.9	100
5.0SMDJ16A	5.0SMDJ16CA	5PEM	5BEM	16	17.8	19.7	1.0	26.0	192.3	50
5.0SMDJ17A	5.0SMDJ17CA	5PEP	5BEP	17	18.9	20.9	1.0	27.6	181.2	20
5.0SMDJ18A	5.0SMDJ18CA	5PER	5BER	18	20.0	22.1	1.0	29.2	171.2	10
5.0SMDJ19A	5.0SMDJ19CA	5PET	5BET	19	21.1	23.3	1.0	30.8	162.4	10
5.0SMDJ20A	5.0SMDJ20CA	5PEV	5BEV	20	22.2	24.5	1.0	32.4	154.3	5.0
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22	24.4	26.9	1.0	35.5	140.8	5.0
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24	26.7	29.5	1.0	38.9	128.5	5.0
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26	28.9	31.9	1.0	42.1	118.8	5.0
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28	31.1	34.4	1.0	45.4	110.1	5.0
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30	33.3	36.8	1.0	48.4	103.3	5.0
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33	36.7	40.6	1.0	53.3	93.8	5.0
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36	40.0	44.2	1.0	58.1	86.1	5.0
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40	44.4	49.1	1.0	64.5	77.5	5.0
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43	47.8	52.8	1.0	69.4	72.0	5.0
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45	50.0	55.3	1.0	72.7	68.8	5.0
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48	53.3	58.9	1.0	77.4	64.6	5.0
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51	56.7	62.7	1.0	82.4	60.7	5.0
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54	60.0	66.3	1.0	87.1	57.4	5.0
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58	64.4	71.2	1.0	93.6	53.4	5.0
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60	66.7	73.7	1.0	96.8	51.7	5.0
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64	71.1	78.6	1.0	103.0	48.5	5.0
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70	77.8	86.0	1.0	113.0	44.2	5.0
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75	83.3	92.1	1.0	121.0	41.3	5.0
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78	86.7	95.8	1.0	126.0	39.7	5.0
5.0SMDJ80A	5.0SMDJ80CA	5PGB	5BGB	80	88.8	97.6	1.0	129.6	38.6	5.0
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85	94.4	104.0	1.0	137.0	36.5	5.0
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90	100.0	111.0	1.0	146.0	34.2	5.0
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100	111.0	123.0	1.0	162.0	30.9	5.0

NOTE :

1. Suffix 'A ' denotes 5% tolerance device.
2. Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.
3. The IR limit is double for Bi-Directional devices.

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