LITE-ON SEMICONDUCTOR

5.0SMCJ SERIES

SURFACE MOUNT
UNIDIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS

STAND-OFF VOLTAGE - **18** to **36** Volts
POWER DISSIPATION - **5000** WATTS

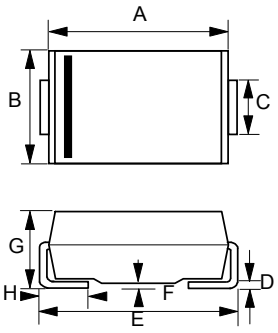
FEATURES

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Fast response time: typically less than 1.0ns

MECHANICAL DATA

- Case : Molded plastic
- Polarity : by cathode band denotes uni-directional device none cathode band denotes bi-directional device
- Weight : 0.007 ounces, 0.21 gram

SMC



SMC		
DIM.	MIN.	MAX.
A	6.60	7.11
B	5.59	6.22
C	2.92	3.18
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT T_J = 25℃ , T_P = 1ms (Note 1)	P_{PK}	5000	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave @T_J=25 ℃ (Note 2)	I_{FSM}	300	AMPS.
Steady State Power Dissipation at TL =120℃ , see fig. 6	$P_{M(AV)}$	2.0	WATTS
Operating Temperature Range	T_J	-55 to +175	℃
Storage Temperature Range	T_{STG}	-55 to +175	℃

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above T_J= 25℃ per Fig.1.
2. Only for unidirectional units.

FIG.1 - PULSE DERATING CURVE

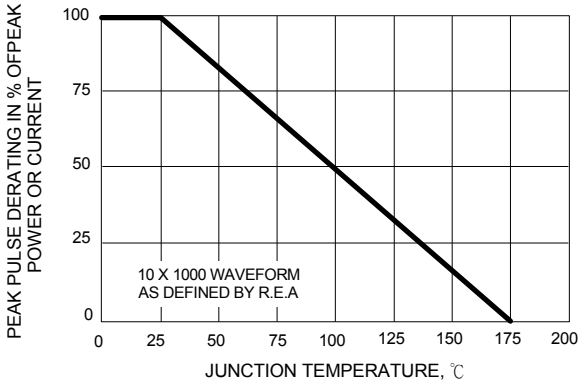


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

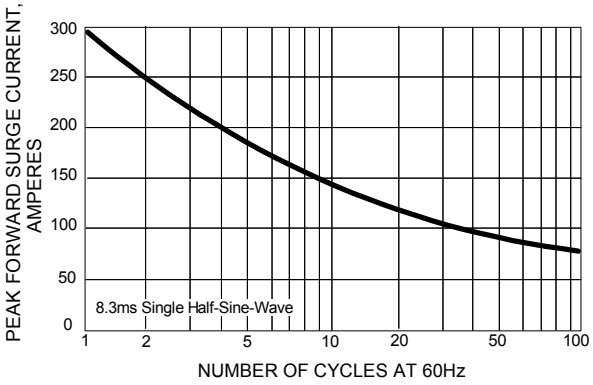


FIG.3 - PULSE WAVEFORM

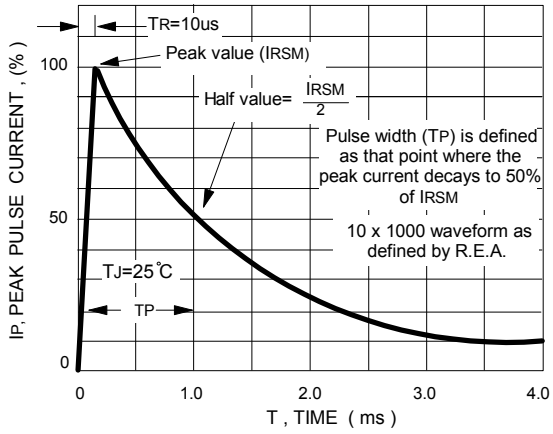


FIG.4 - TYPICAL JUNCTION CAPACITANCE

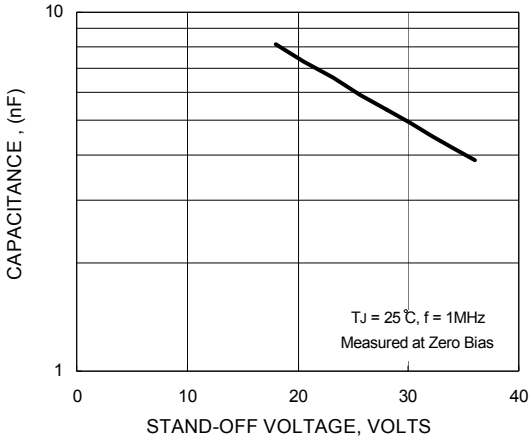


FIG.5 - PULSE RATING CURVE

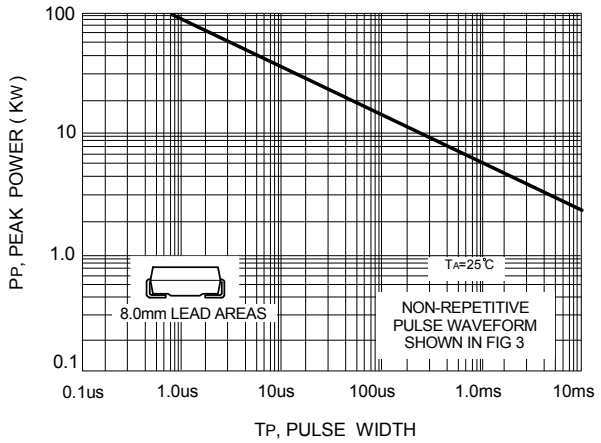
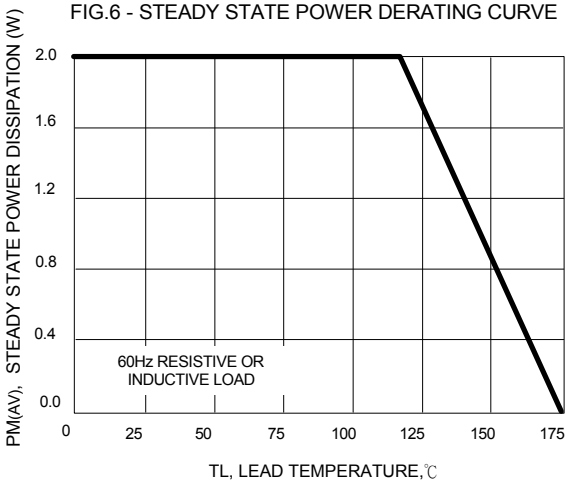


FIG.6 - STEADY STATE POWER DERATING CURVE



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SEMICONDUCTOR

Type Number	Type Number	Device Marking code		Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
(UNI)	(BI)	(UNI)	(BI)	VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Vc (V)	Ipp (A)
5.0SMCJ18	---	OES	--	18.0	20.0	24.4	1	5.0	32.2	155.3
5.0SMCJ18A	---	OET	--	18.0	20.0	22.1	1	5.0	29.2	171.2
5.0SMCJ20	---	OEU	--	20.0	22.2	27.1	1	5.0	35.8	139.7
5.0SMCJ20A	---	OEV	--	20.0	22.2	24.5	1	5.0	32.4	154.3
5.0SMCJ22	---	OEW	--	22.0	24.4	29.8	1	5.0	39.4	126.9
5.0SMCJ22A	---	OEX	--	22.0	24.4	27.0	1	5.0	35.5	140.8
5.0SMCJ24	---	OEY	--	24.0	26.7	32.6	1	5.0	43.0	116.3
5.0SMCJ24A	---	OEZ	--	24.0	26.7	29.5	1	5.0	38.9	128.5
5.0SMCJ26	---	OFD	--	26.0	28.9	35.3	1	5	46.6	107.3
5.0SMCJ26A	---	OFE	--	26.0	28.9	31.9	1	5	42.1	118.8
5.0SMCJ28	---	OFF	--	28.0	31.1	38.0	1	5	50.0	100.0
5.0SMCJ28A	---	OFG	--	28.0	31.1	34.4	1	5	45.4	110.1
5.0SMCJ30	---	OFH	--	30.0	33.3	40.7	1	5	53.5	93.5
5.0SMCJ30A	---	OFK	--	30.0	33.3	36.8	1	5	48.4	103.3
5.0SMCJ33	---	OFL	--	33.0	36.7	44.8	1	5	59.0	84.7
5.0SMCJ33A	---	OFM	--	33.0	36.7	40.6	1	5	53.3	93.8
5.0SMCJ36	---	OFN	--	36.0	40.0	48.9	1	5	64.3	77.8
5.0SMCJ36A	---	OFP	--	36.0	40.0	44.2	1	5	58.1	86.1

NOTES:

Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

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