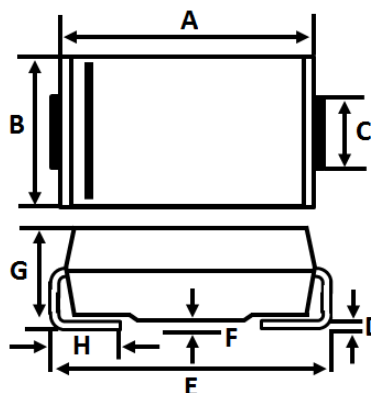


**GLASS PASSIVATED  
UNIDIRECTIONAL AND BIDIRECTIONAL  
TRANSIENT VOLTAGE SUPPRESSORS**
**REVERSE VOLTAGE - 12 to 100 Volts  
POWER DISSIPATION - 5000 Watts**
**FEATURES**

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

**MECHANICAL DATA**

- Case : Molded plastic, "Halogen-free"
- Polarity : by cathode band denotes uni-directional device  
none cathode band denotes bi-directional device

**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°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation @ $T_A = 25^\circ\text{C}$ , $T_P = 1\text{ms}$ (Note1)	$P_{PP}$	5000	W
Peak forward surge current 8.3ms single half sine-wave @ $T_J = 25^\circ\text{C}$ (Note2)	$I_{FSM}$	300	A
Steady state power dissipation @ $T_L = 75^\circ\text{C}$	$P_{M(AV)}$	6.5	W
Maximum instantaneous forward voltage at 100A for unidirectional devices only (Note3)	$V_F$	3.5	V
Operating temperature range	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

REV.2, JUN.-2020, KSIC09

**Notes:**

1. Non-repetitive current pulse, per fig. 6 and derated above  $T_A = 25^\circ\text{C}$  per fig.1.
2. Unidirectional units only.
3.  $V_F \text{ max} = 3.5\text{V}$  at  $I_F = 100\text{A}$ ,  $T_P = 300\mu\text{s}$  square wave pulse.

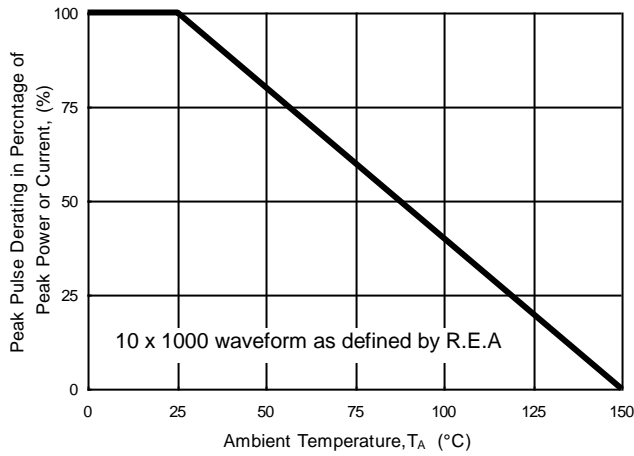
Please be aware that an **Important Notice and Disclaimer** concerning availability, disclaimers, and use in Critical applications of LSC products thereto appears at the end of this Data Sheet.

# RATING AND CHARACTERISTIC CURVES

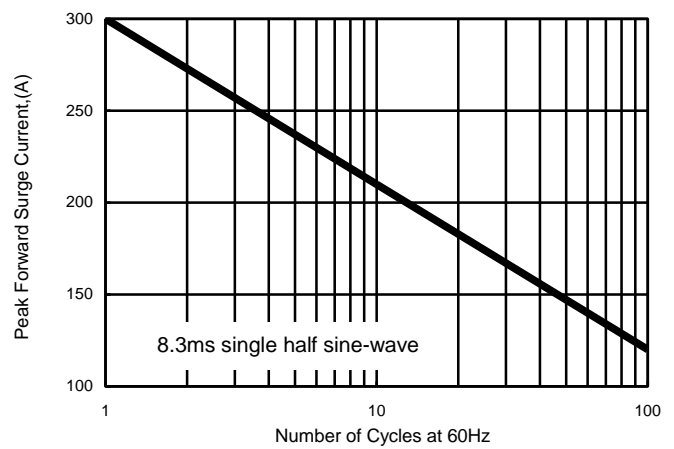
## 5.0SMDJ SERIES

**LITEON**

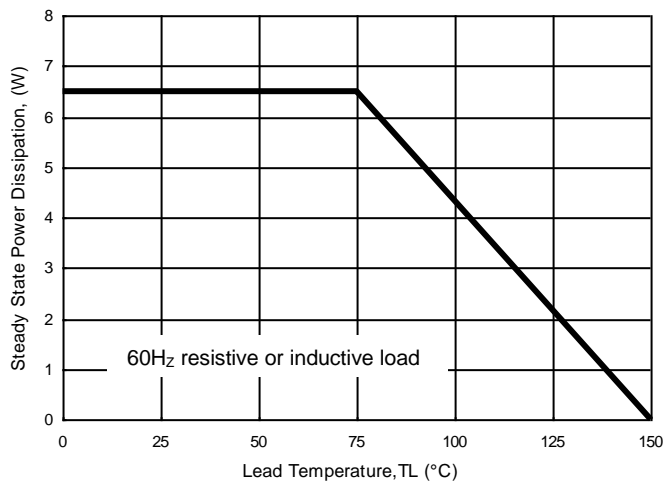
**FIG.1- Pulse Derating Curve**



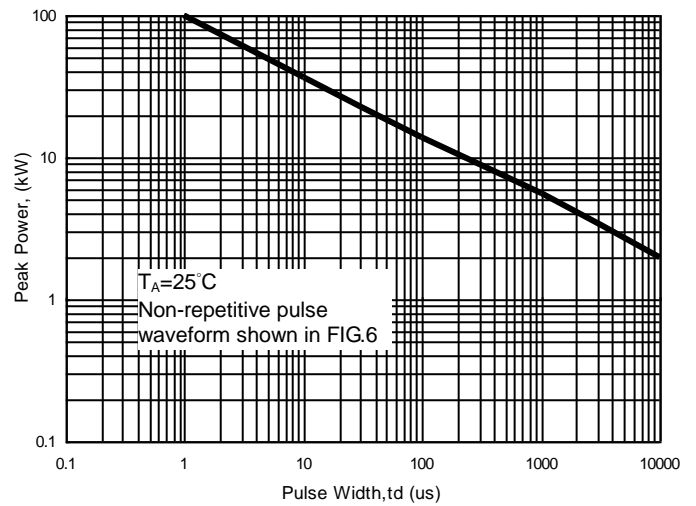
**FIG.2- Maximum Non-Repetitive Surge Current**



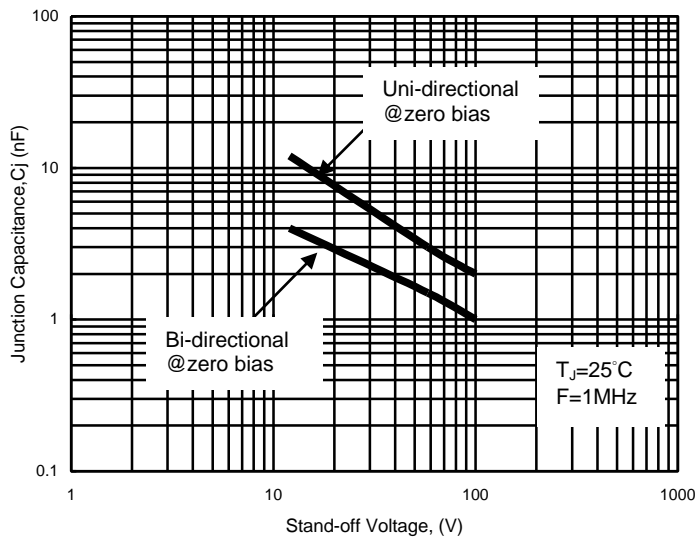
**FIG.3- Steady State Power Derating Curve**



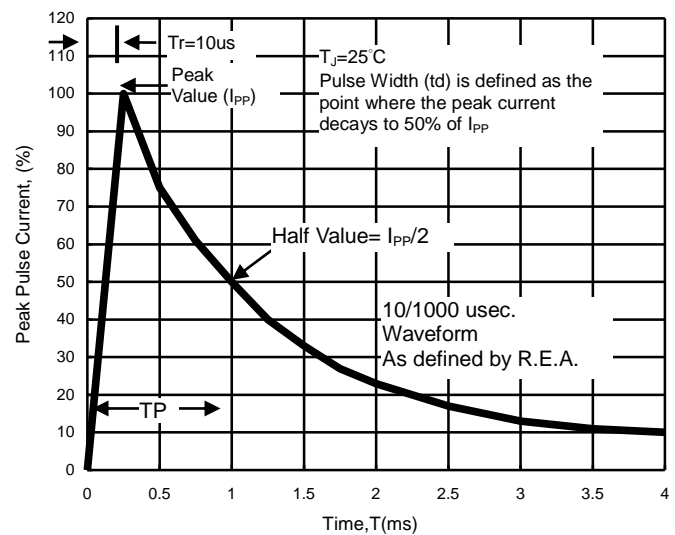
**FIG.4- Peak Pulse Power Rating Curve**



**FIG.5- Typical Junction Capacitance**



**FIG.6- Pulse Waveform**



## 5.0SMDJ SERIES



Device		Marking code		Reverse stand-off voltage	Breakdown voltage $V_{BR}$ Volts			Maximum Reverse voltage at $I_{RSM}$ (clamping voltage)	Maximum reverse surge current	Maximum reverse leakage at $V_{RWM}$
Uni	Bi	Uni	Bi	$V_{RWM}$ (Volts)	Min.	Max	@IT(mA)	$V_{RSM}$ (Volts)	$I_{RSM}$ (Amps)	$I_R$ (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

### Notes:

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

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