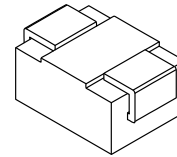


FEATURES

- ◆ Glass passivated chip
- ◆ Low leakage
- ◆ Uni and Bidirectional unit
- ◆ Excellent clamping capability
- ◆ The plastic material has U/L recognition 94V-0
- ◆ Fast response time
- ◆ AEC-Q101 qualified



ABSOLUTE MAXIMUM RATING

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

Parameter	Symbol	Value	Units
Peak Pulse Power dissipation on 10/1000μs waveform (NOTE 1)	P _{PP}	600	Watts
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55~150	°C
Power Dissipation on Infinite Heat Sink at TA=50°C (NOTE 2)	P _{M(AV)}	5.0	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (NOTE 3)	I _F	100	A
Maximum Instantaneous forward voltage at 25A for unidirectional devices only (NOTE 4)	V _F	3.5/5.0	V

NOTE :

1. Non-repetitive current pulse@10/1000μs and derated above TA=25°C
2. Mounted on 5.0x5.0mm copper pad to each terminal.
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only.
4. V_F < 3.5V for V_{BR} ≤ 200V and V_F < 6.5V for V_{BR} ≥ 201V.

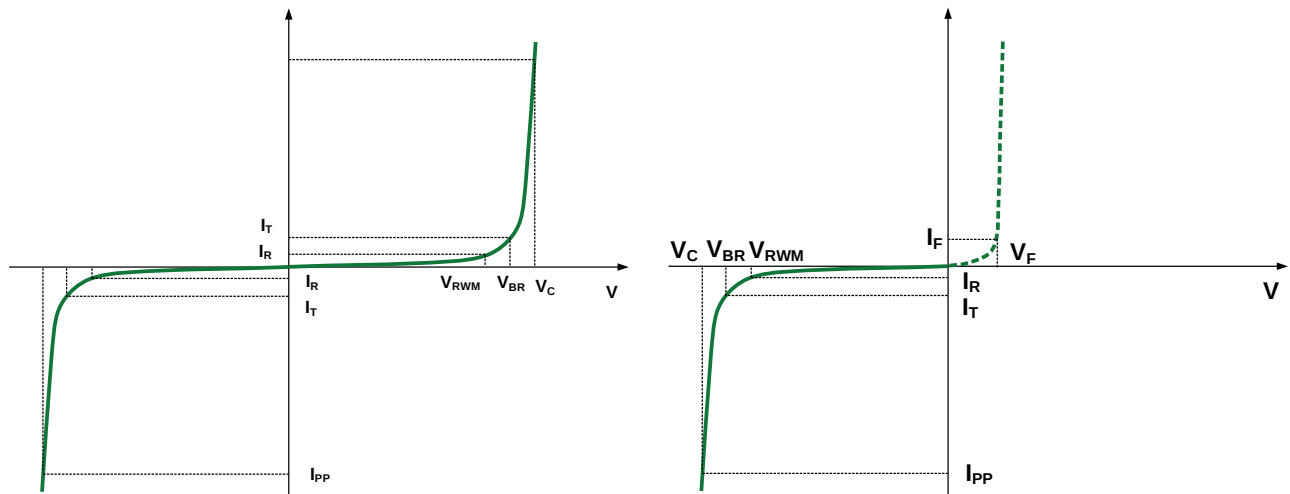
ELECTRICAL CHARACTERISTICS

Part Number		Marking Code		Breakdown Voltage		Test Current	Reverse Stand-off Voltage	Maximum Reverse Leakage Current	Maximum Clamping Voltage	Maximum Peak Pules Current
				V _{BR} @I _T		I _T	V _{RM}	I _R @V _{RM}	V _C @I _{PP}	I _{PP}
Uni	Bi	Uni	Bi	MIN (V)	MAX (V)	mA	V	μA	V	A
SMAJ5.0A	SMAJ5.0CA	HE	TE	6.40	7.00	10	5.0	800	9.2	43.5
SMAJ6.0A	SMAJ6.0CA	HG	TG	6.67	7.37	10	6.0	800	10.3	38.8
SMAJ6.5A	SMAJ6.5CA	HK	TK	7.22	7.98	10	6.5	500	11.2	35.7
SMAJ7.0A	SMAJ7.0CA	HM	TM	7.78	8.6	10	7.0	200	12.0	33.3
SMAJ7.5A	SMAJ7.5CA	HP	TP	8.33	9.21	1	7.5	100	12.9	31.0
SMAJ8.0A	SMAJ8.0CA	HR	TR	8.89	9.83	1	8.0	50	13.6	29.4
SMAJ8.5A	SMAJ8.5CA	HT	TT	9.44	10.4	1	8.5	20	14.4	27.8
SMAJ9.0A	SMAJ9.0CA	HV	TV	10.0	11.1	1	9.0	10	15.4	26.0
SMAJ10A	SMAJ10CA	HX	TX	11.1	12.3	1	10	5	17.0	23.5

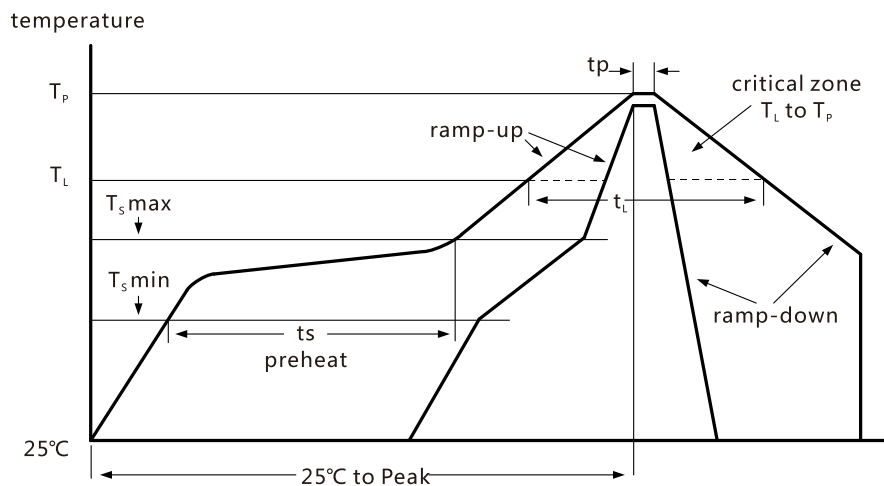
LEADEMC ELECTRONICS CO., LTD.

Part Number		Marking Code		Breakdown Voltage		Test Current	Reverse Stand-off Voltage	Maximum Reverse Leakage Current	Maximum Clamping Voltage	Peak Pules Current
				V _{BR} @I _T		I _T	V _{RM}	I _R @V _{RM}	V _C @I _{PP}	I _{PP}
Uni	Bi	Uni	Bi	MIN (V)	MAX (V)	mA	V	μA	V	A
SMAJ11A	SMAJ11CA	HZ	TZ	12.2	13.5	1	11	1	18.2	22.0
SMAJ12A	SMAJ12CA	IE	UE	13.3	14.7	1	12	1	19.9	20.1
SMAJ13A	SMAJ13CA	IG	UG	14.4	15.9	1	13	1	21.5	18.6
SMAJ14A	SMAJ14CA	IK	UK	15.6	17.2	1	14	1	23.2	17.2
SMAJ15A	SMAJ15CA	IM	UM	16.7	18.5	1	15	1	24.4	16.4
SMAJ16A	SMAJ16CA	IP	UP	17.8	19.7	1	16	1	26.0	15.4
SMAJ17A	SMAJ17CA	IR	UR	18.9	20.9	1	17	1	27.6	14.5
SMAJ18A	SMAJ18CA	IT	UT	20	22.1	1	18	1	29.2	13.7
SMAJ20A	SMAJ20CA	IV	UV	22.2	24.5	1	20	1	32.4	12.3
SMAJ22A	SMAJ22CA	IX	UX	24.4	26.9	1	22	1	35.5	11.3
SMAJ24A	SMAJ24CA	IZ	UZ	26.7	29.5	1	24	1	38.9	10.3
SMAJ26A	SMAJ26CA	JE	VE	28.9	31.9	1	26	1	42.1	9.5
SMAJ28A	SMAJ28CA	JG	VG	31.1	34.4	1	28	1	45.4	8.8
SMAJ30A	SMAJ30CA	JK	VK	33.3	36.8	1	30	1	48.4	8.3
SMAJ33A	SMAJ33CA	JM	VM	36.7	40.6	1	33	1	53.3	7.5
SMAJ36A	SMAJ36CA	JP	VP	40.0	44.2	1	36	1	58.1	6.9
SMAJ40A	SMAJ40CA	JR	VR	44.4	49.1	1	40	1	64.5	6.2
SMAJ43A	SMAJ43CA	JT	VT	47.8	52.8	1	43	1	69.4	5.8
SMAJ45A	SMAJ45CA	JV	VV	50.0	55.3	1	45	1	72.7	5.5
SMAJ48A	SMAJ48CA	JX	VX	53.3	58.9	1	48	1	77.4	5.2
SMAJ51A	SMAJ51CA	JZ	VZ	56.7	62.7	1	51	1	82.4	4.9
SMAJ54A	SMAJ54CA	RE	WE	60.0	66.3	1	54	1	87.1	4.6
SMAJ58A	SMAJ58CA	RG	WG	64.4	71.2	1	58	1	93.6	4.3
SMAJ60A	SMAJ60CA	RK	WK	66.7	73.7	1	60	1	96.8	4.1
SMAJ64A	SMAJ64CA	RM	WM	71.1	78.6	1	64	1	103	3.9
SMAJ70A	SMAJ70CA	RP	WP	77.8	86	1	70	1	113	3.5
SMAJ75A	SMAJ75CA	RR	WR	83.3	92.1	1	75	1	121	3.3
SMAJ78A	SMAJ78CA	RT	WT	86.7	95.8	1	78	1	126	3.2
SMAJ85A	SMAJ85CA	RV	WV	94.4	104	1	85	1	137	2.9
SMAJ90A	SMAJ90CA	RX	WX	100	111	1	90	1	146	2.7
SMAJ100A	SMAJ100CA	RZ	WZ	111	123	1	100	1	162	2.5
SMAJ110A	SMAJ110CA	SE	XE	122	135	1	110	1	177	2.3
SMAJ120A	SMAJ120CA	SG	XG	133	147	1	120	1	193	2.1

I-V CURVE CHARACTERISTICS



REFLOW SOLDERING PROFILE



Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate (T_S max to T_P)	3°C/s maximum	3°C/s maximum
Preheat		
Temperature minimum (T_S min)	100°C	150°C
Temperature maximum (T_S max)	150°C	200°C
Time (T_S min to T_S max)	60 s to 120 s	60 s to 180 s
Time maintained above		
Temperature (T_L)	183°C	217°C
Time (t_L)	60 s to 150 s	60 s to 150 s
Peak/classification temperature (T_P)	235°C	260°C
Number of allowed reflow cycles	3	3
Time within 5 °C of actual peak temperature (t_p)	10 s to 30 s	20 s to 40 s
Ramp-down rate	6°C/s maximum	6°C/s maximum
Time 25 °C to peak temperature	6 minutes maximum	8 minutes maximum

Figure 1. Pulse Waveform

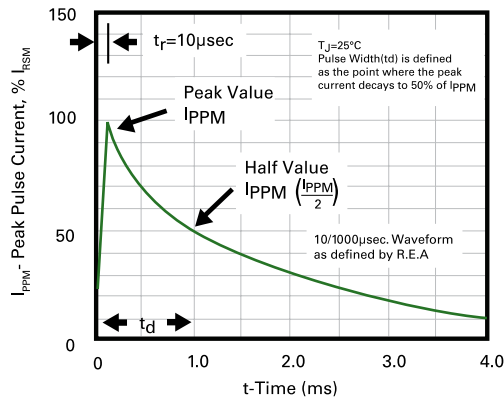


Figure 2. Pulse Derating Curve

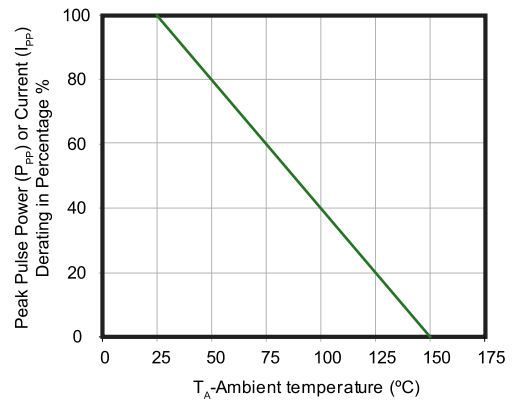


Figure 3. Steady Power Dissipation Derating Curve

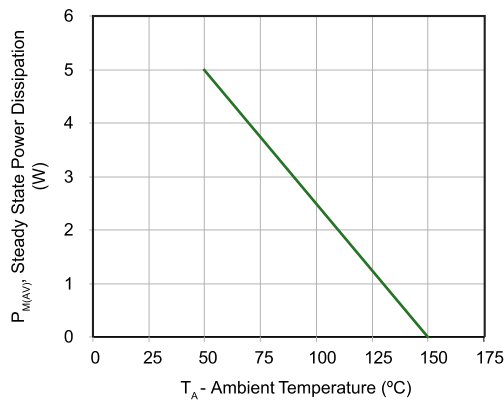


Figure 4. Peak Pulse Power Rating Curve

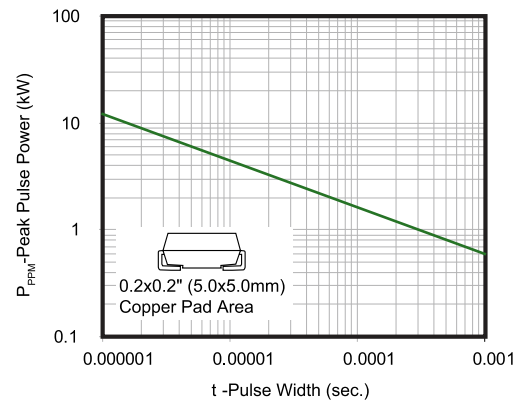
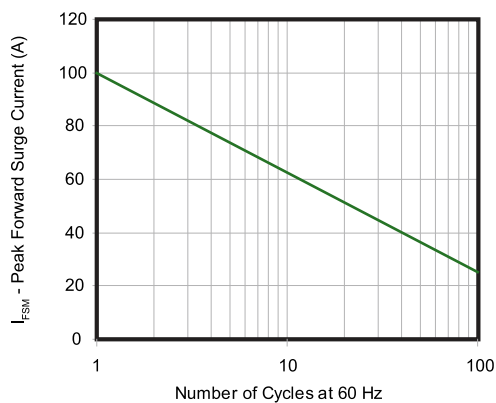
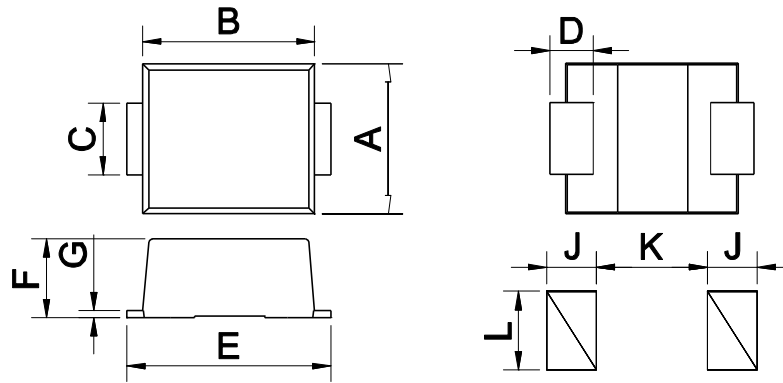


Figure 5. Maximum Non-Repetitive Surge Current



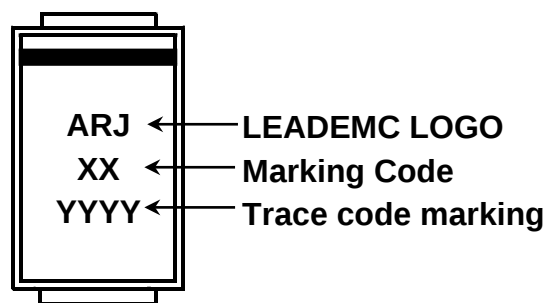
DIMENSIONS



SMBJ

DIM	Millimeters		Inch	
	Min	Max	Min	Max
A	3.900	4.500	0.154	0.177
B	4.650	5.150	0.183	0.203
C	1.850	2.150	0.073	0.085
D	0.600	-	0.024	-
E	5.600	6.000	0.220	0.236
F	2.050	2.350	0.081	0.093
G	0.120	0.280	0.005	0.011
J	2.000	-	0.079	-
K	-	3.200	-	0.126
L	2.300	-	0.091	-

PACKAGING



Part Number	Marking Code	Package	Quantity	Packaging
SMBJ6.5(C)A	KK/AK	SMBJ	500pcs	7" Reel
SMBJ6.5(C)A	KK/AK	SMBJ	3,000pcs	13" Reel