

TRANSIENT VOLTAGE SUPPRESSOR

FEATURE

- ✧ Plastic package.
- ✧ Glass passivated chip junction in SMA Package
- ✧ Excellent clamping capability.
- ✧ Low zener impedance.
- ✧ 400W peak pulse power capability on 10/1000µs waveform.
- ✧ Typical IR less than 1µA above 13V.
- ✧ Fast response time: typically less than 1.0ps from 0 Volts to BV min.
- ✧ High temperature soldering guaranteed: 265°C/10 seconds

MECHANICAL DATE

- ✧ Case: JEDEC SMA Molded Plastic.
- ✧ Terminals: Axial leads, solderable per MIL-STD-750, Method 2026.
- ✧ Polarity: Color band denoted cathode except bidirectional.
- ✧ Mounting Position: Any.

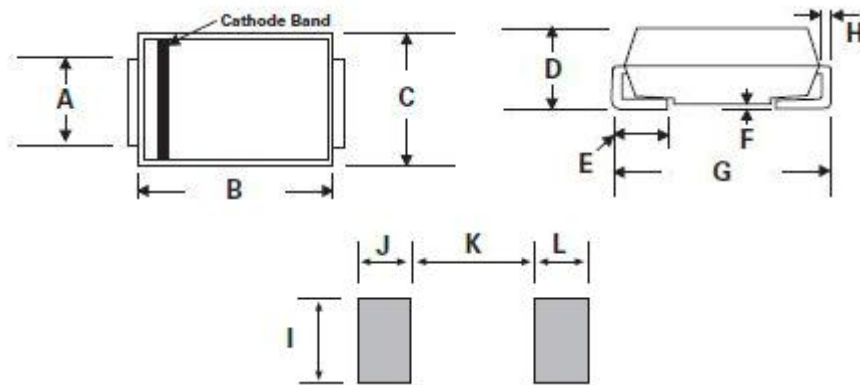
MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Peak Pulse Power Dissipation on 10/1000us waveform (Notel, Fig.1).	P _{PPM}	Minimum 400	Watts
Peak Pulse Current of on 10/1000us waveform. (Notel, Fig.3)	I _{PPM}	See Table	Amps
Steady State Power Dissipation at TL =75°C, Lead lengths. 375", (9.5mm) (Fig.5).	P _{M(AV)}	3.3	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 2, Fig.6).	I _{FPM}	40	Amps
Operating junction and Storage Temperature Range.	T _J , T _{STG}	-55 to +150	°C

Notes:

1. Non-repetitive current pulse, per Fig. 3 and derated above TA = 25°C per Fig. 2.
2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.



A	1.25	1.65	0.049	0.065
B	3.99	4.5	0.157	0.177
C	2.54	2.79	0.1	0.11
D	1.98	2.29	0.078	0.09
E	0.78	1.52	0.03	0.06
F	-	0.203	-	0.008
G	4.93	5.28	0.194	0.208
H	0.152	0.305	0.006	0.012
I	1.8	-	0.07	-
J	2.1	-	0.082	-
K	-	2.3	-	0.09
L	2.1	-	0.082	-

ELECTRICAL CHARACTERISTICS

Part Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage NIN.@IT	Breakdown Voltage MAX.@IT	Reverse Leakage @VRWM	Test Current	Peak Pulse Current	Maximum Clamping Voltage @IPP
UNT	BI	UNT	BI	VR(V)	VBL(V)	VBH(V)	IR(uA)	IT(mA)	IPP(A)	VCH(V)
SMAJ85A	SMAJ85CA	RV	ZV	85	94.4	104.0	1	1	2.9	137

RATINGS AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 - Peak Pulse Power Rating Curve

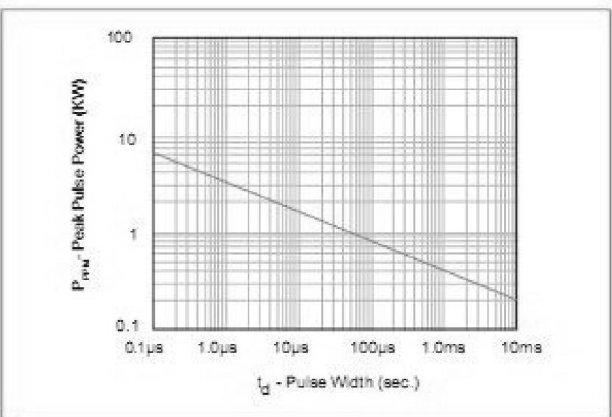


Figure 2 - Pulse Derating Curve

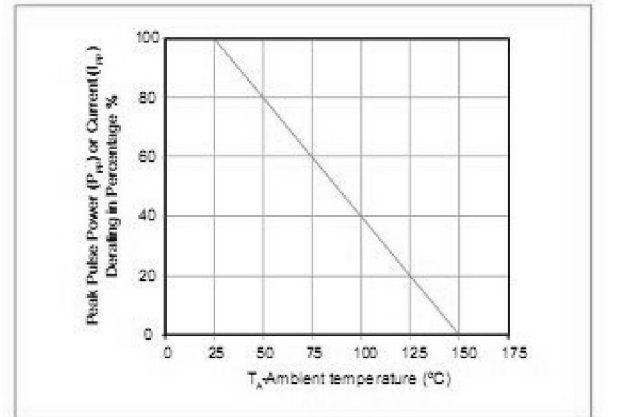


Figure 3 - Pulse Waveform

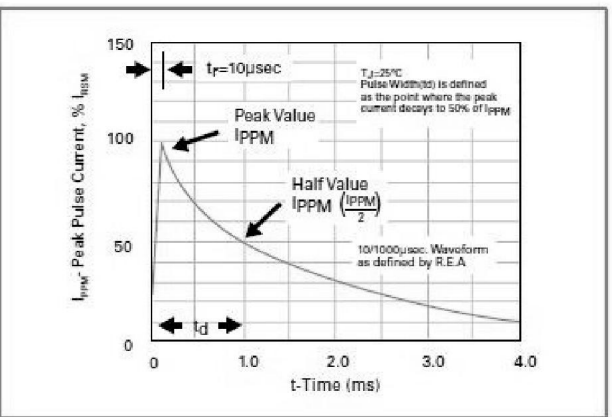


Figure 4 - Typical Junction Capacitance Uni-Directional

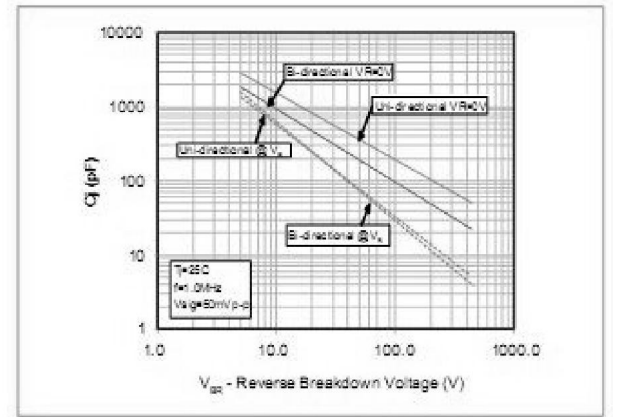


Figure 5 - Steady State Power Dissipation Derating Curve

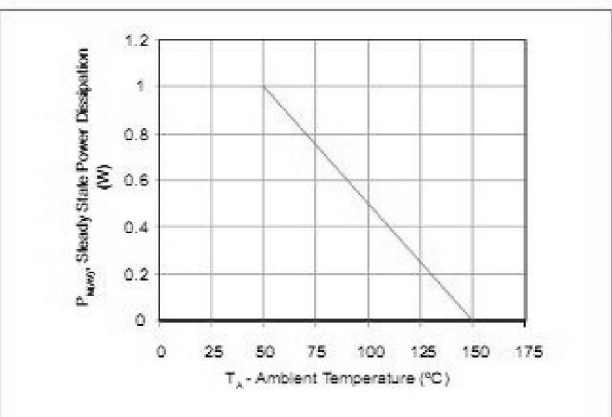
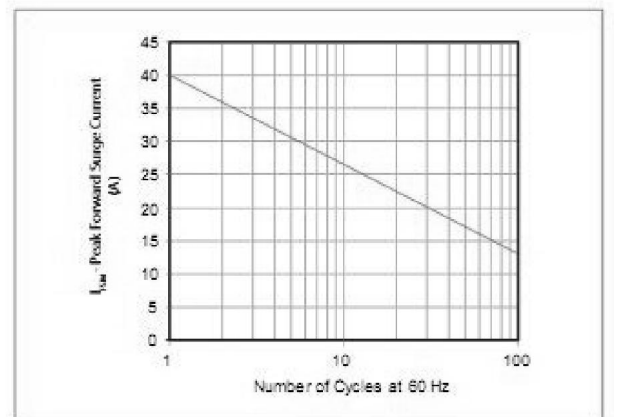


Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



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