

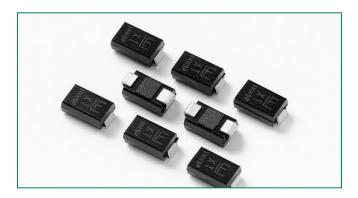
SMAJ Series











Agency Approvals

AGENCY	AGENCY FILE NUMBER
<i>I</i> R ®	E230531

Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A =25°C by 10x1000 μ s waveform (Fig.1)(Note 1), (Note 2)	P _{PPM}	400	W
Power Dissipation on infinite heat sink at $T_A = 50^{\circ}C$	P _{M(AV)}	3.3	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)	I _{FSM}	40	А
Maximum Instantaneous Forward Voltage at 25A for Unidirectional only (Note 4)	V _F	3.5V/6.5	V
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-65 to 150	°C
Typical Thermal Resistance Junction to Lead	R _{wL}	30	°C/W
Typical Thermal Resistance Junction to Ambient	R _{uJA}	120	°C/W

Notes:

- 1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig. 2.
- 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
- 4. $V_F < 3.5 V$ for $V_{BR} \le 200 V$ and $V_F < 6.5 V$ for $V_{BR} \ge 201 V$.

Description

The SMAJ series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- Halogen-Free
- RoHS compliant
- For surface mounted applications to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- 400W Peak Pulsepower capability at 10 x 1000µs waveform, repetition rate (duty cycle): 0.01%

- Fast response time: typically less than 1.0ps from 0 Volts to V_{BR} min
- Typical I_p less than 1µA above 12V
- High temperature soldering: 260°C/40 seconds at terminals
- Typical maximum temperature coefficient $\Delta V_{BR} = 0.1\% \times V_{BR}@25^{\circ}C \times \Delta T$
- Plastic package has Underwriters Laboratory Flammability 94V-O
- Matte Tin Lead-free Plated

Applications

TVS devices are ideal for the protection of I/O Interfaces, V_{cc} bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications.