S1A THRU S1M

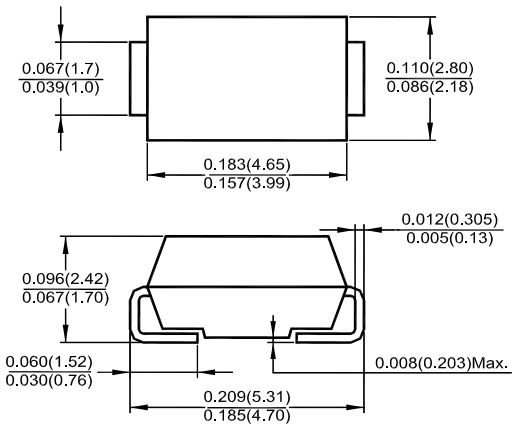
SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage – 50 to 1000 V
Forward Current – 1 A

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Glass passivated chip junction
- For surface mount application
- Low profile package
- Built-in strain relief, ideal for automated placement

SMA (DO-214AC)



Dimensions in inches and (millimeters)

Mechanical Data

- **Case:** SMA (DO-214AC), molded plastic
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end

Absolute Maximum Ratings and Characteristics

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

Parameter	Symbols	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current , 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current at T_A = 25 °C at Rated DC Blocking Voltage at T_A = 125 °C	I_R	5 50							μA
Typical Junction Capacitance at V_R = 4 V, f = 1 MHz	C_J	12							pF
Typical Thermal Resistance [1]	$R_{\theta JA}$ $R_{\theta JL}$	75 27							°C/W
Operating and Storage Temperature Range	T_J, T_S	- 55 to +1 50							°C

[1] Thermal resistance from junction to ambient from junction to lead mounted on P.C.B. with 0.2 X 0.2" (5 X 5 mm) copper pad areas

FIG.1-FORWARD DERATING CURVE

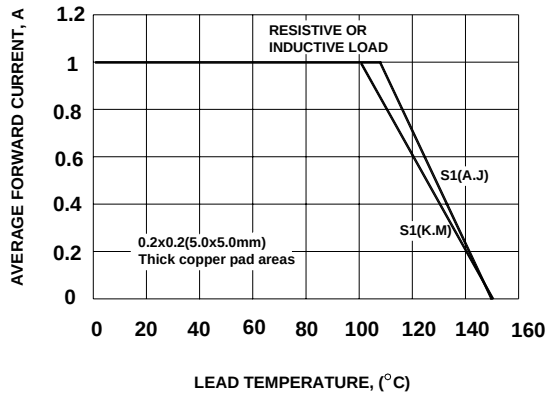


FIG.2- PEAK FORWARD SURGE CURRENT

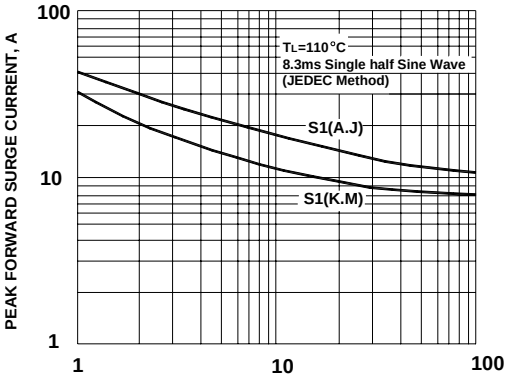


FIG.3-TYPICAL FORWARD CHARACTERISTICS

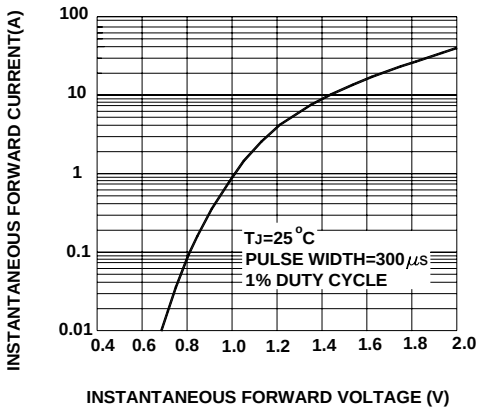


FIG.4-TYPICAL REVERSE CHARACTERISTICS

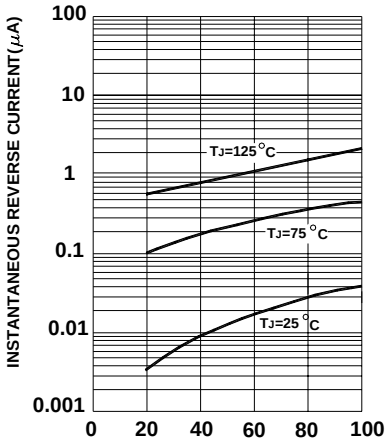


FIG.5- TYPICAL JUNCTION CAPACITANCE

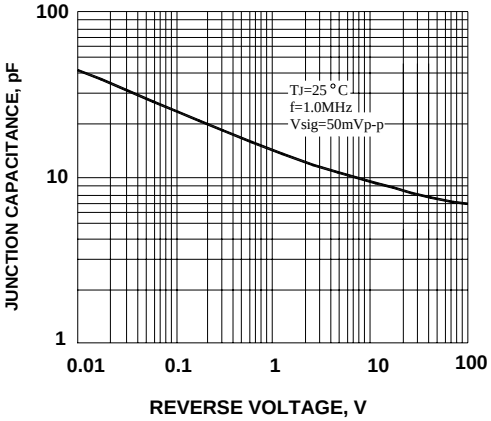


FIG.6- TRANSIENT THERMAL IMPEDANCE