

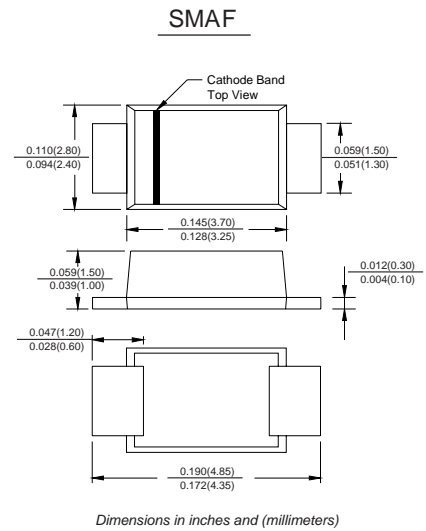


### FEATURES

- ✧ Low profile package
- ✧ For surface mounted applications
- ✧ Built-in strain relief, ideal for automated placement
- ✧ Plastic package has Underwriters Laboratory Flammability Classification
- ✧ High temperature soldering: 260°C/10 seconds at terminals

### MECHANICAL DATA

- ✧ Case: JEDEC SMAFL, molded plastic over passivated chip
- ✧ Terminals: Solder Plated, solderable per MIL-STD- 750, Method 2026
- ✧ Polarity: Color band denotes cathode end



### Maximum Ratings(@TA = 25°C unless otherwise specified)

Characteristic	Symbol	S1AAF	S1BAF	S1DAF	S1GAF	S1JAF	S1KAF	S1MAF	UNITS
Marking code		S1A	S1B	S1D	S1G	S1J	S1K	S1M	
Maximum repetitive 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 at $T_c=110^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current @ $T_c=110^\circ\text{C}$ 8.3ms single half-sine-wave superimposed on rated load(JEDEC Method)	$I_{FSM}$	30.0							A

### Thermal Characteristics

Characteristic	Symbol	S1AAF	S1BAF	S1DAF	S1GAF	S1JAF	S1KAF	S1MAF	UNITS
Typical junction capacitance (NOTE 1)	$C_j$	12.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_{JSTG}$	-55-----+175							$^\circ\text{C}$

### Electrical Characteristics (@TA = 25°C unless otherwise specified)

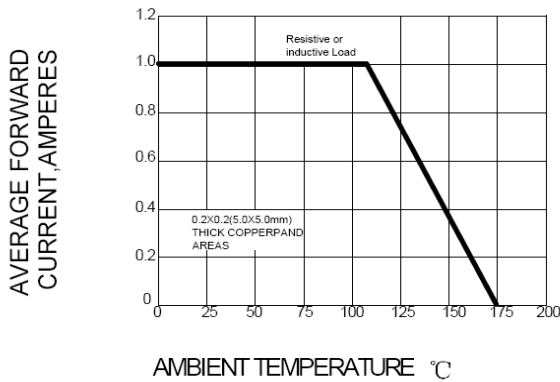
Characteristic	Symbol	S1AAF	S1BAF	S1DAF	S1GAF	S1JAF	S1KAF	S1MAF	UNITS
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.1							V
Maximum DC reverse current $T_a=25^\circ\text{C}$ at rated DC blocking voltage $T_a=125^\circ\text{C}$	$I_R$	1.0							$\mu\text{A}$
		50							

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts

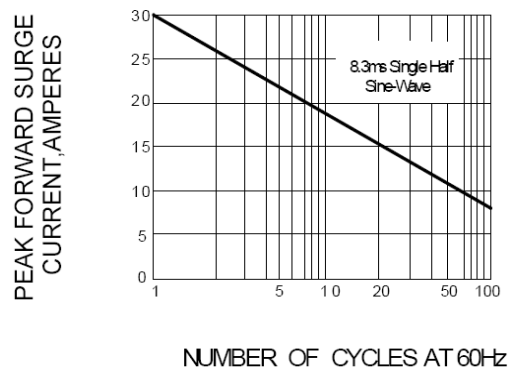
2. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.27"X0.27"(7.0X7.0mm2) copper pad areas



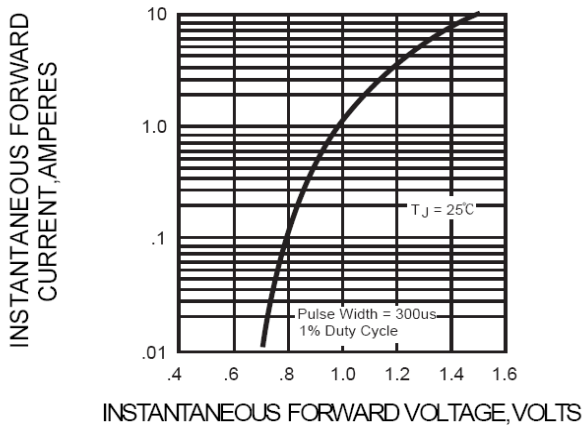
**FIG.1 – FORWARD DERATING CURVE**



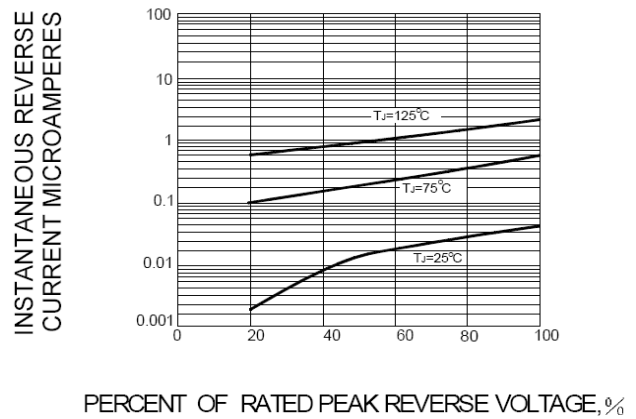
**FIG.2 PEAK FORWARD SURGE CURRENT**



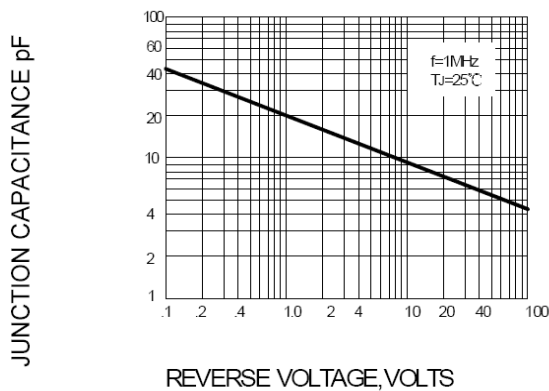
**FIG.3 -- TYPICAL FORWARD CHARACTERISTICS**



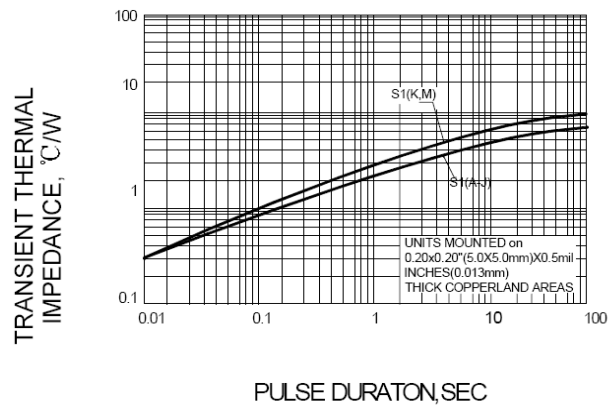
**FIG.4 -- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



**FIG.6-TRANSIENT THERMAL IMPEDANCE**



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	3000/REEL	120000	30.5X30.5X42.5	12.00	11.00
PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	5000/REEL	100000	30.5X30.5X42.5	10.00	9.00