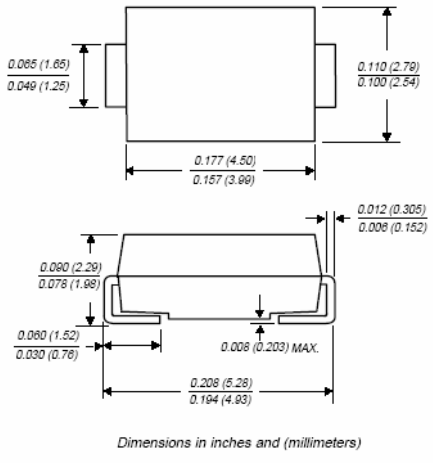
SURFACE MOUNT GLASS PASSIVATED RECTIFIER

S1A THRU S1M

VOLTAGE RANGE **50 to 1000 Volts**
CURRENT **1.0 Ampere**

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- High Temperature Soldering: 260 ^{O}C / 10 seconds, 265 ^{O}C / 5 seconds at terminals



DO-214AC (SMA)

MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic over glass passivated chip
- Terminals: Solder plated, solderable per
- MIL-STD 750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, At T_C = 105^{O}C	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	40					30		Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.1							Volts
Maximum DC Reverse Current at Rated T_A = 25 ^{O}C	I_R	1.0					5.0		µA
DC Blocking Voltage per element T_A = 125 ^{O}C		50							
Maximum Reverse Recovery Time Test conditions I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A	t_{rr}	1.8							µS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	12							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75					85		^{O}C/W
	$R_{\theta JL}$	27					30		
Operating Junction Temperature	T_J	(-55 to +150)							^{O}C
Storage Temperature Rang	T_{STG}	(-55 to +150)							^{O}C

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.2" x 0.2" (5.0 x 5.0nn) copper pad areas.

Fig. 1 – Forward Current Derating Curve

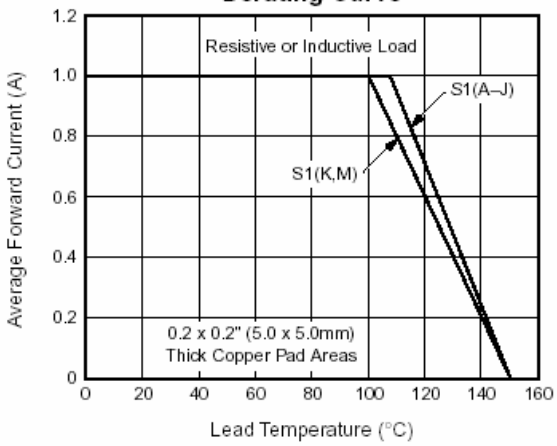


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

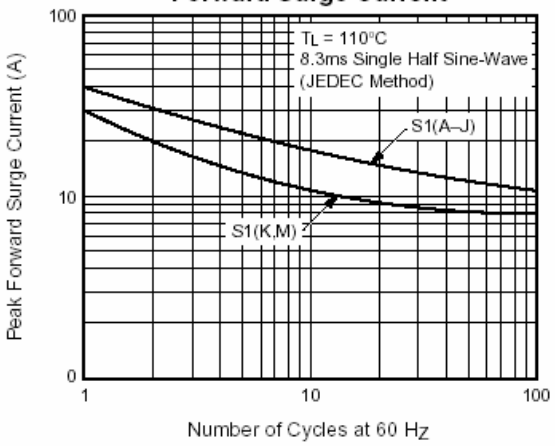


Fig. 3 – Typical Instantaneous Forward Characteristics

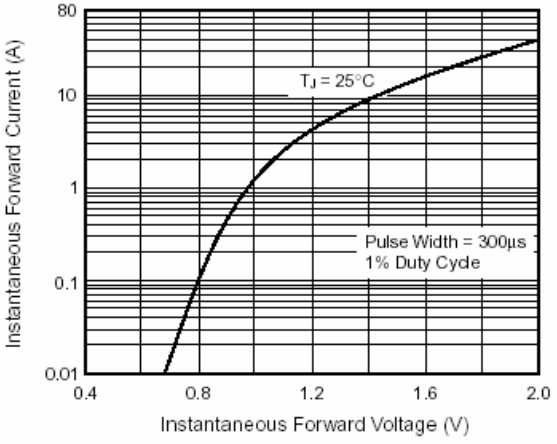


Fig. 4 – Typical Reverse Leakage Characteristics

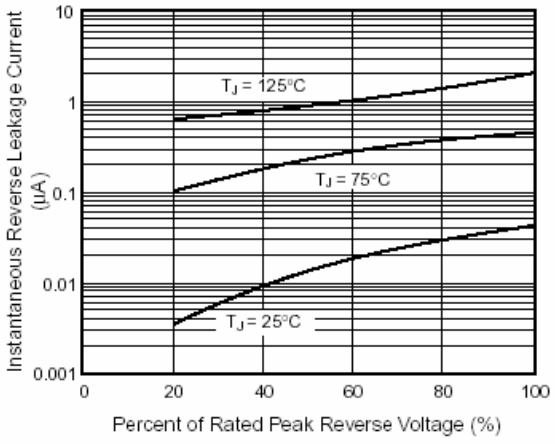


Fig. 5 – Typical Junction Capacitance

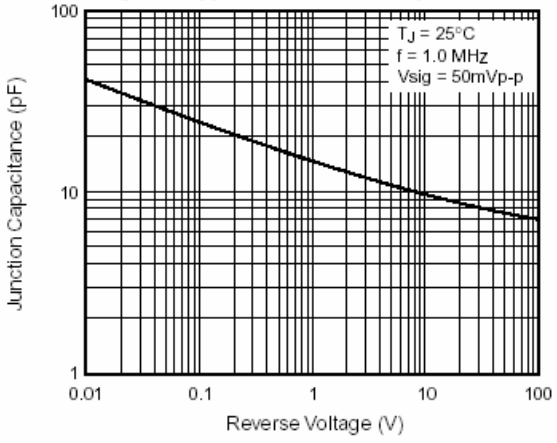


Fig. 6 – Transient Thermal Impedance