

S1A THRU S1M

SURFACE MOUNT RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

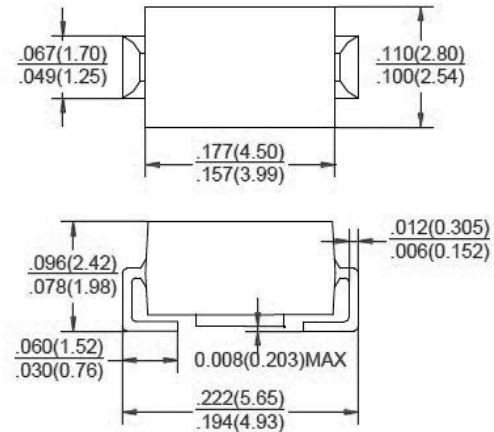
FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Plastic package has underwrites laboratory flammability
- ◆ Classification 94V-0
- ◆ High temperature soldering guaranteed:
250°C/10 second at terminals

Mechanical Data

- ◆ Case: JEDED SMA-J molded plastic
- ◆ Terminals: Plated axial lead solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting position: Any

SMA-J



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°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	UNITS
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 (see Fig.1)	$I_{F(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) $T_L=90^\circ C$	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.1							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	I_R	$T_A=25^\circ C$							μA
		$T_A=125^\circ C$							
Typical Junction Capacitance (NOTE 1)	$R_{\theta JA}$	50							$^\circ C/W$
	$R_{\theta JL}$	90							
Typical Thermal Resistance (NOTE 2)	t_{tr}	1.8							μs
Operating and Storage Temperature Range	T_I, T_{STG}	-55 to +150							$^\circ C$

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on 0.2×0.2"(5.0 × 5.0mm) copper pad areas.

2. Reverse recovery test condition: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

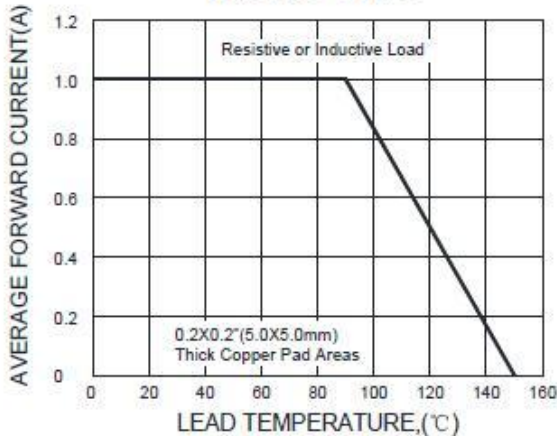
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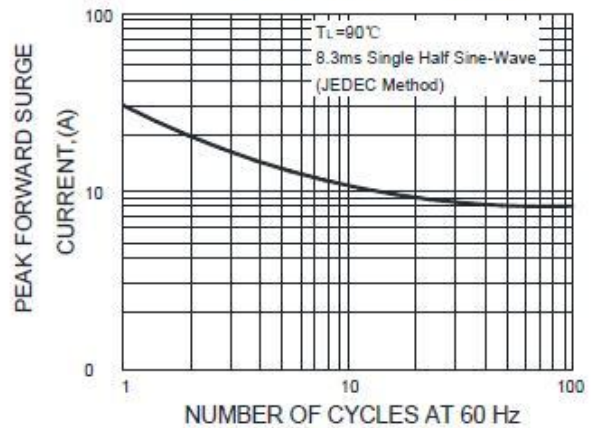
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RATING AND CHARACTERISTIC CURVES

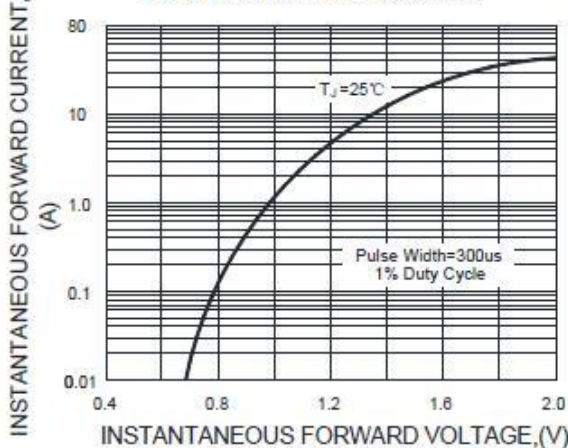
F1G.1-FORWARD CURRENT DERATING CURVE



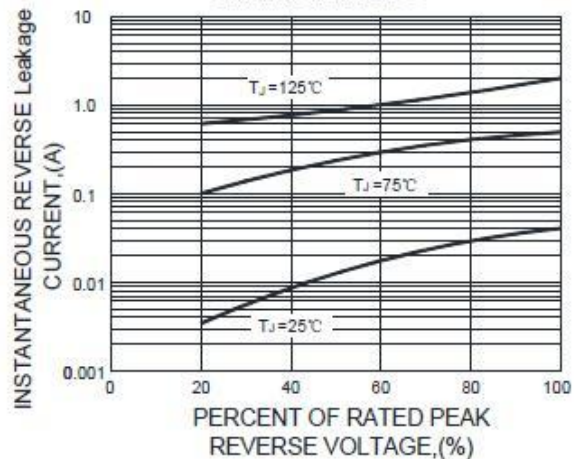
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



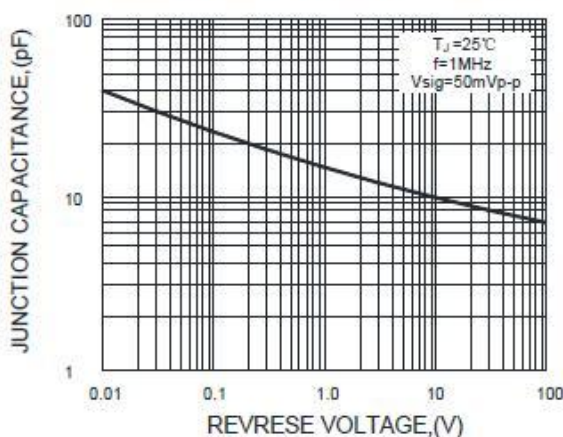
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



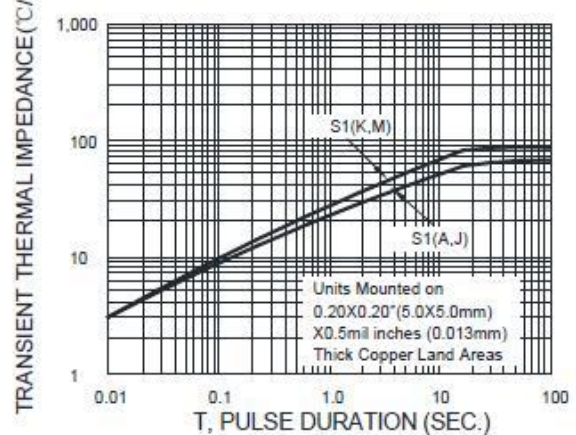
F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TRANSIENT THERMAL IMPEDANCE



Note: Specification are subject to change without notice. For more detail and update, please visit our website.