

### SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 50 --- 1000 V  
CURRENT: 1.0 A

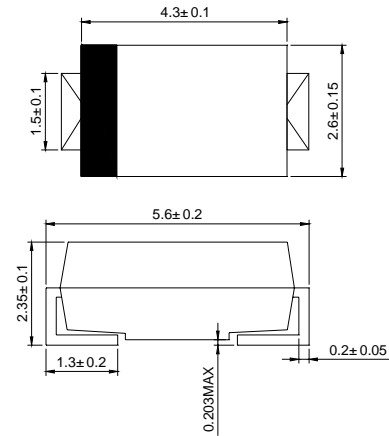
#### FEATURES

- ◇ Plastic package has underwriters laborator flammability classification 94V-0
- ◇ For surface mounted applications
- ◇ Low profile package
- ◇ Built-in strain relief, ideal for automated placement
- ◇ High temperature soldering: 250 °C/10 seconds at terminals

#### MECHANICAL DATA

- ◇ Case: JEDEC SMAJ, molded plastic
- ◇ Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: color band denotes cathode end
- ◇ Weight: 0.003 ounces, 0.084 grams

#### SMAJ



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		RS1AJ	RS1BJ	RS1DJ	RS1GJ	RS1JJ	RS1KJ	RS1MJ	UNITS
		RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RWS}$	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 @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	30.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.30							V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	150				250	500		ns
Typical junction capacitance (NOTE 2)	$C_J$	10					7.0		pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	105 32							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J T_{STG}$	- 55 ----- + 150							$^\circ\text{C}$

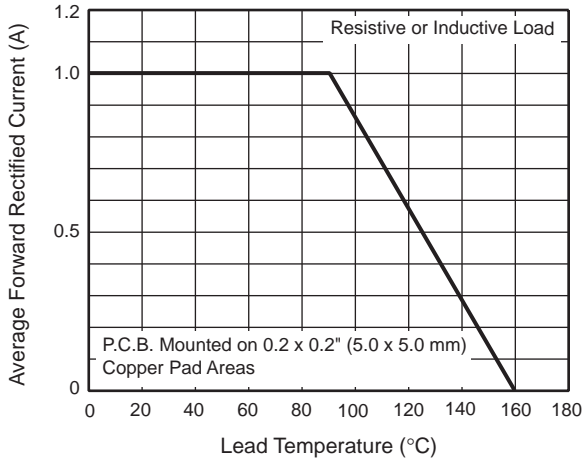
NOTE: 1. Reverse recovery time test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts

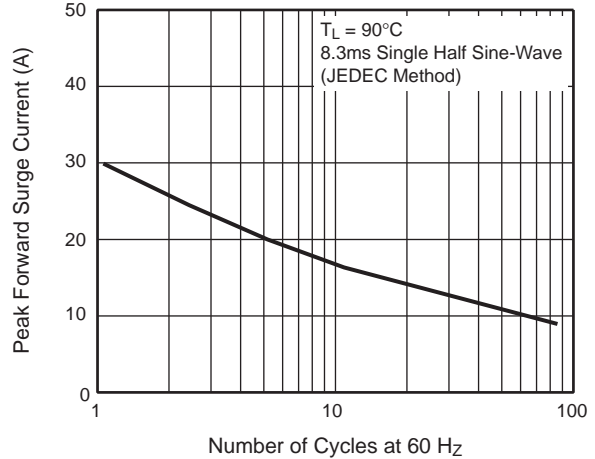
3. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.2"X0.2" (5.0X5.0mm<sup>2</sup>) copper pad areas

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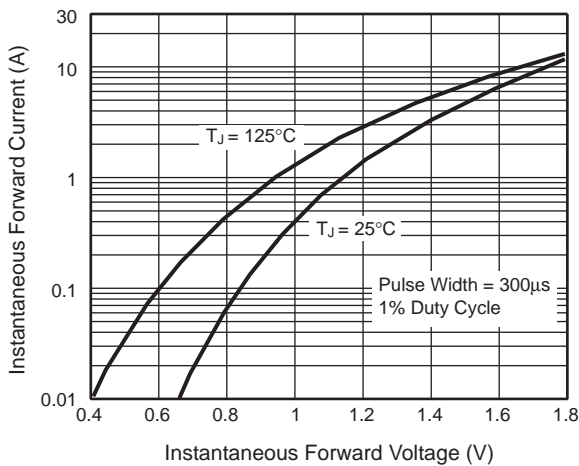
**Fig. 1 — Forward Current Derating Curve**



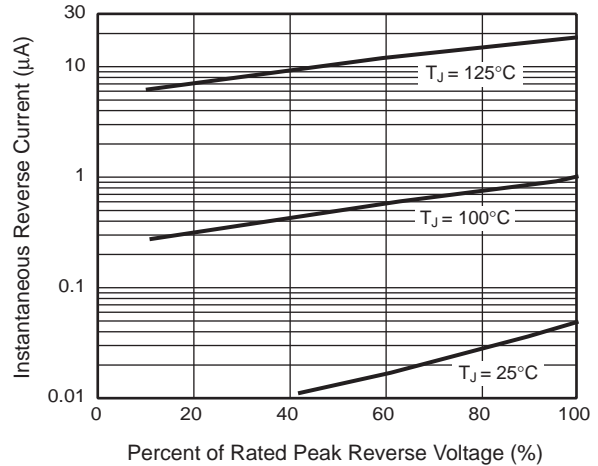
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



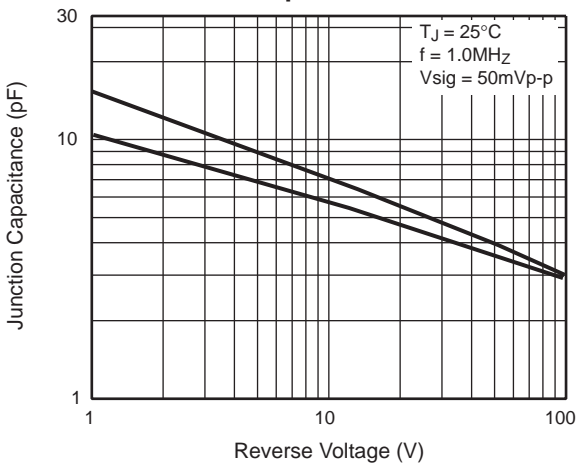
**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Reverse Characteristics**



**Fig. 5 — Typical Junction Capacitance**



**Fig. 6 — Typical Transient Thermal Impedance**

