

SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 50 - 1000 V
CURRENT: 1.0 A

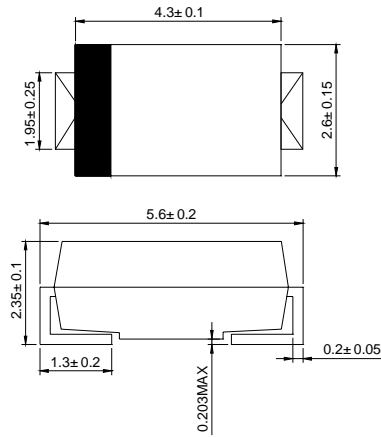
FEATURES

- ◇ Plastic package has underwriters laboratory flammability classifications
- ◇ 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 over passivated chip
- ◇ Terminals: Solder Plated, solderable per ML-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

		S1AJ	S1BJ	S1DJ	S1GJ	S1JJ	S1KJ	S1MJ	UNITS
Device marking code		S1A	S1B	S1D	S1G	S1J	S1K	S1M	
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 @ $T_L=110^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current @ $T_L = 110^\circ\text{C}$ 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40.0					30.0		A
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	5.0 50.0							μA
Typical junction capacitance(NOTE 1)	C_J	15							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_{JTSTG}	-55-----+175							$^\circ\text{C}$

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

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.

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FIG.1 – FORWARD DERATING CURVE

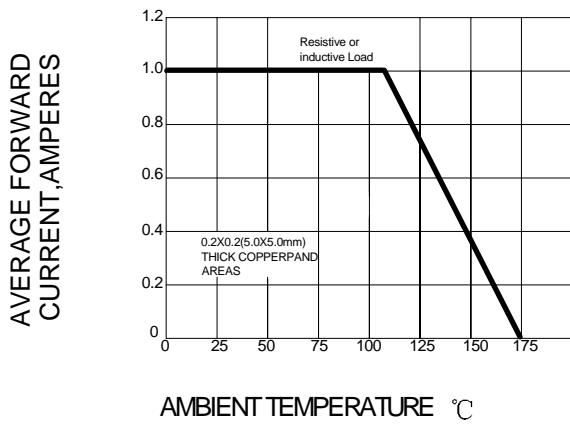


FIG.2 PEAK FORWARD SURGE CURRENT

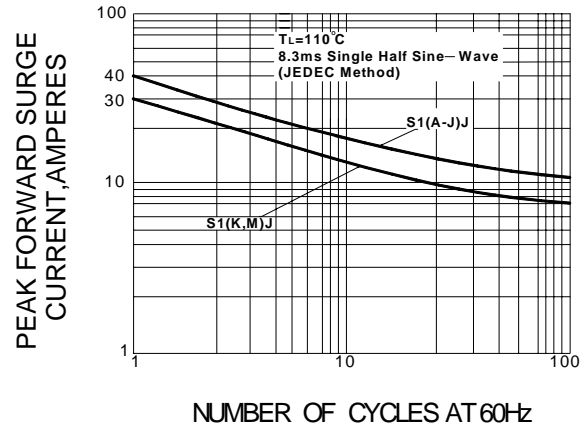


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

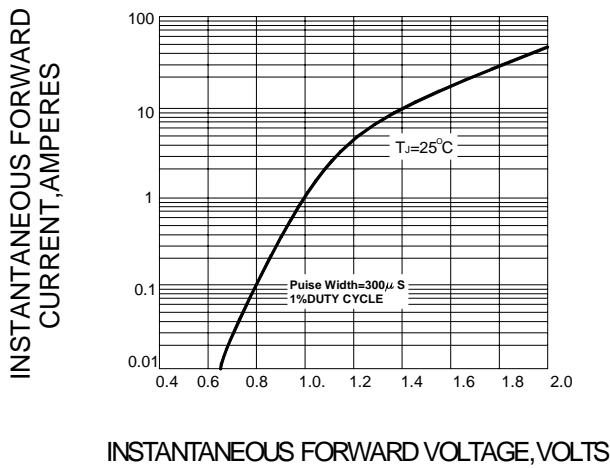


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

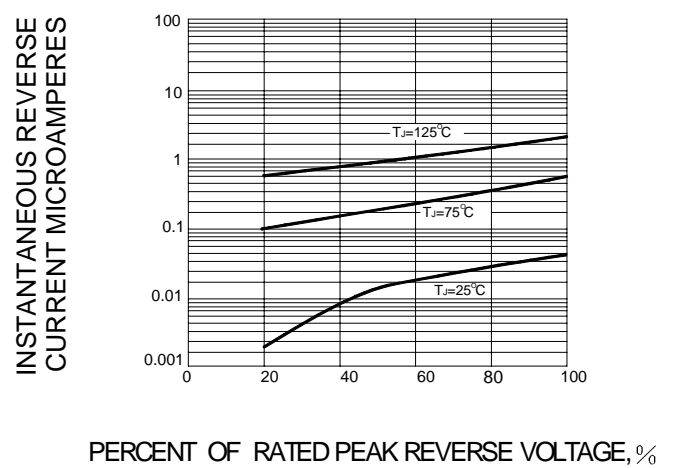


FIG.5-TYPICAL JUNCTION CAPACITANCE

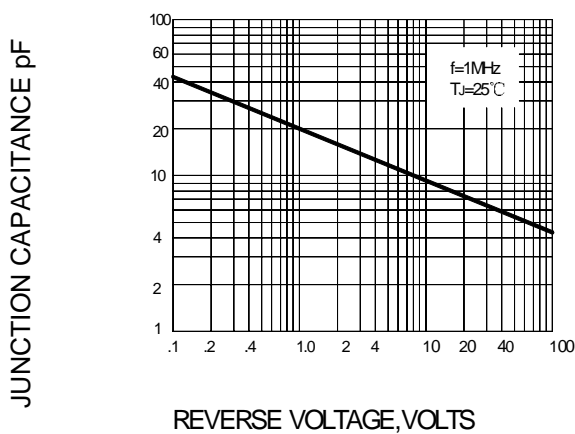


FIG.6-TRANSIENT THERMAL IMPEDANCE

