

SURFACE MOUNT RECTIFIERS

VOLTAGE RANGE: 50 ---- 1000V

CURRENT: 1.0 A

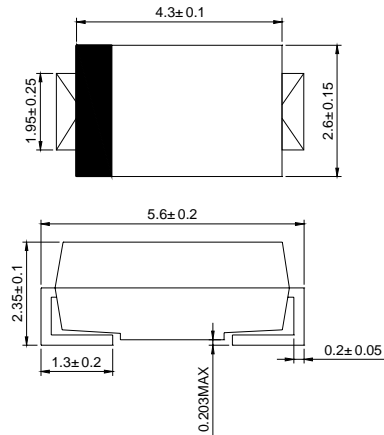
FEATURES

- ◇ For surface mounted applications
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Alcohol, Isopropnol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC SMAJ, molded plastic
- ◇ Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.003 ounces, 0.084 grams
- ◇ Mounting position: Any

SMAJ



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		M1J	M2J	M3J	M4J	M5J	M6J	M7J	UNITS
Device marking		M1	M2	M3	M4	M5	M6	M7	
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 @ $T_L=110^\circ C$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_J=125^\circ C$	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1.0 A	V_F	1.1							V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	5.0 50							μA
Typical junction capacitance (Note1)	C_J	15							pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	75							$^\circ C/W$
Operating temperature range	T_J	- 55 --- + 150							$^\circ C$
Storage temperature range	T_{STG}	- 55 --- + 150							$^\circ C$

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

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2. Thermal resistance from junction to ambient

FIG.1 – FORWARD DERATING CURVE

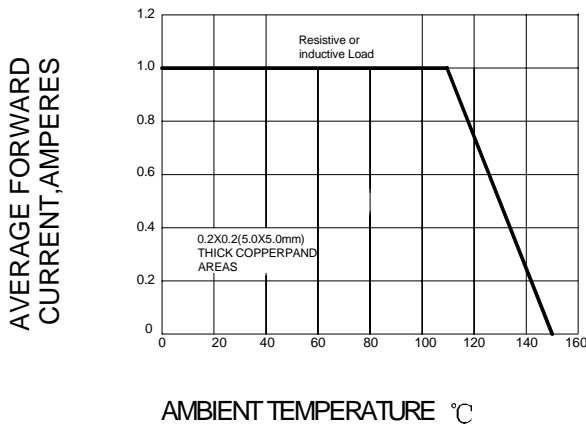


FIG.2 PEAK FORWARD SURGE CURRENT

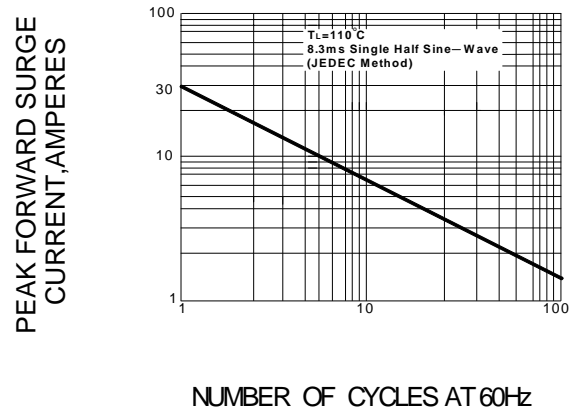


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

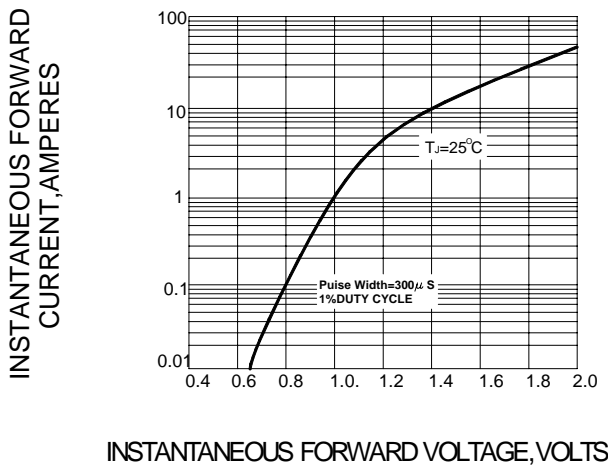


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

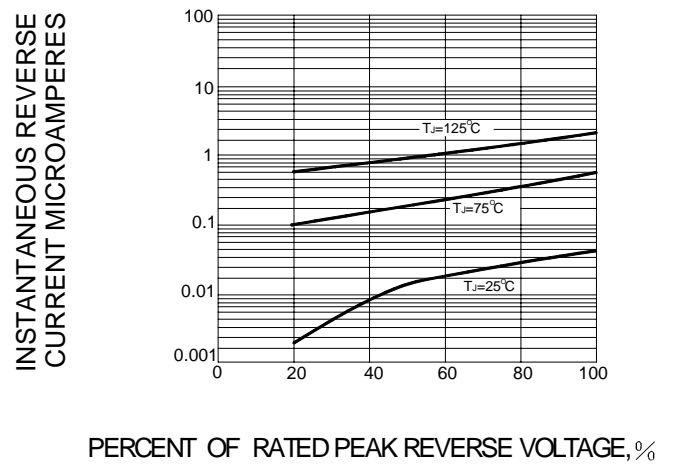


FIG.5-TYPICAL JUNCTION CAPACITANCE

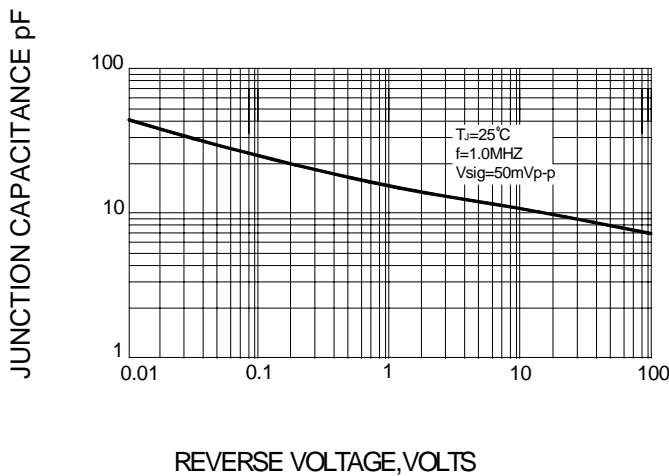


FIG.6-TRANSIENT THERMAL IMPEDANCE

