

S1A ~ S1M

PRV : 50 - 1000 Volts
Io : 1.0 Ampere

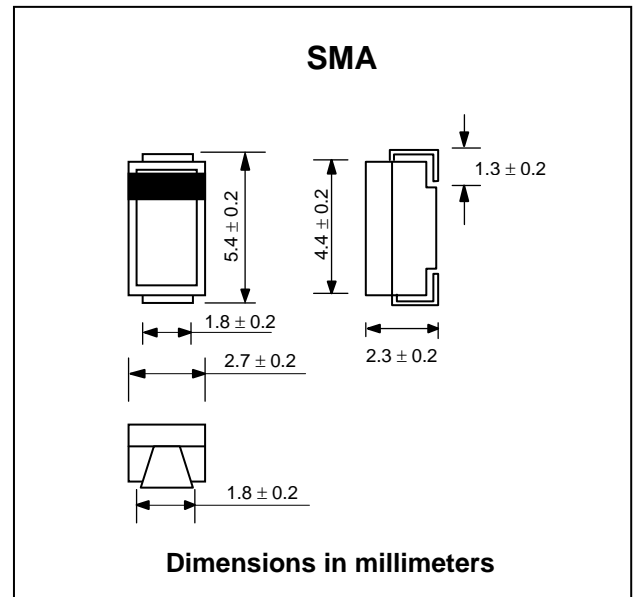
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMA Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.060 gram (Approximately)

SURFACE MOUNT RECTIFIERS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

RATING	SYMBOL	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNIT
Maximum Repetitive 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 Current (See fig. 1)	I_F	1.0							A
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) $T_L = 110\text{ }^\circ\text{C}$	I_{FSM}	40					30		A
Maximum Instantaneous Forward Voltage at $I_F = 1.0\text{ A}$.	V_F	1.1							V
Maximum DC Reverse Current at rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$ $T_a = 125\text{ }^\circ\text{C}$	I_R	1.0					5.0		μA
	$I_{R(H)}$	50							μA
Typical Reverse Recovery Time (Note 1)	T_{rr}	1.8							μs
Typical thermal resistance (Note 2)	$R_{\theta JA}$	75					85		$^\circ\text{C/W}$
	$R_{\theta JL}$	27					30		$^\circ\text{C/W}$
Typical Junction Capacitance at 4.0V, 1 MHz	C_J	12							pF
Junction Temperature Range	T_J	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150							$^\circ\text{C}$

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- (2) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with $0.2 \times 0.2''$ ($5.0 \times 5.0\text{mm}$) copper pad areas

RATING AND CHARACTERISTIC CURVES (S1A - S1M)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

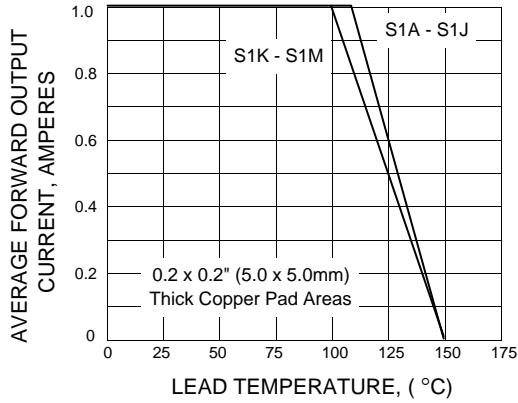


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

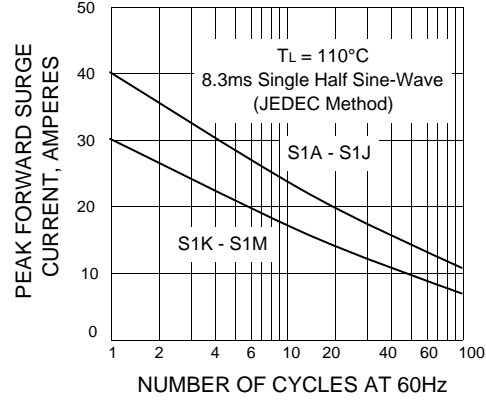


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

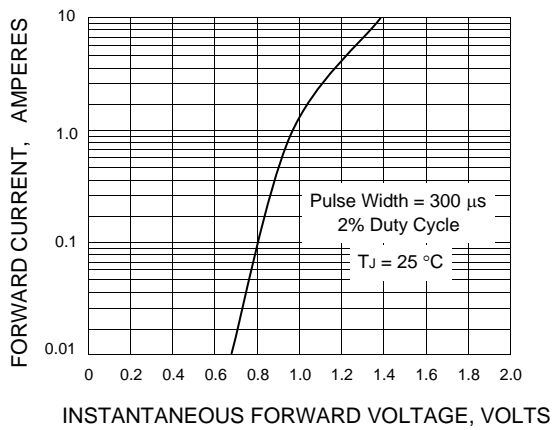


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

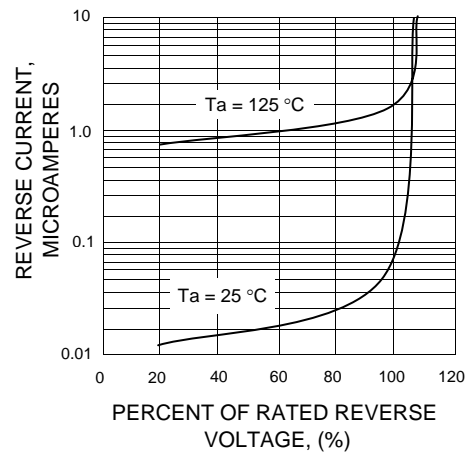


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

