

S2A ~ S2M

PRV : 50 - 1000 Volts

Io : 1.5 Ampere

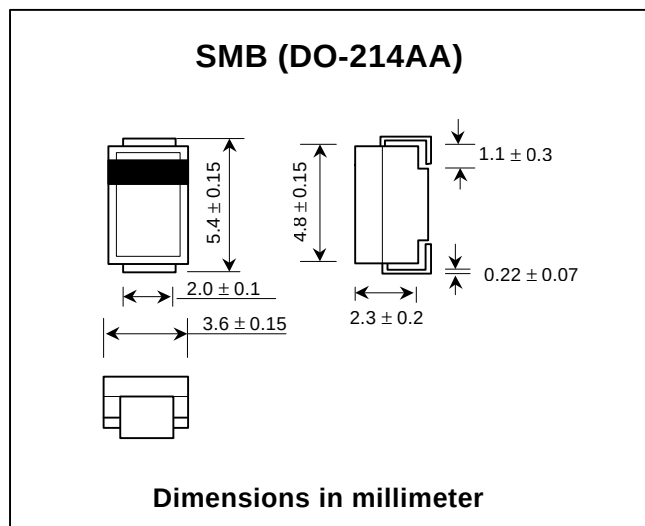
FEATURES :

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

MECHANICAL DATA :

- * Case : SMB Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Indicated by cathode band
- * Mounting position : Any
- * Weight : 0.093 gram

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	S2A	S2B	S2D	S2G	S2J	S2K	S2M	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	1.5							A
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) $T_L = 100\text{ }^{\circ}\text{C}$	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage at $I_F = 1.5\text{ A}$.	V_F	1.15							V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$	I_R	1.0							μA
	$I_{R(H)}$	125							μA
Typical Reverse Recovery Time (Note 1)	T_{rr}	2.0							μs
Typical thermal resistance (Note 2)	$R_{\theta JA}$	100							$^{\circ}\text{C/W}$
	$R_{\theta JL}$	20							$^{\circ}\text{C/W}$
Typical Junction Capacitance at 4.0V, 1 MHz (Note 3)	C_j	30							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 x 0.2" (5.0 x 5.0mm) copper pad areas

(3) Measured at 1.0 Mhz and applied $V_r = 4.0\text{ volts}$

RATING AND CHARACTERISTIC CURVES (S2A - S2M)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

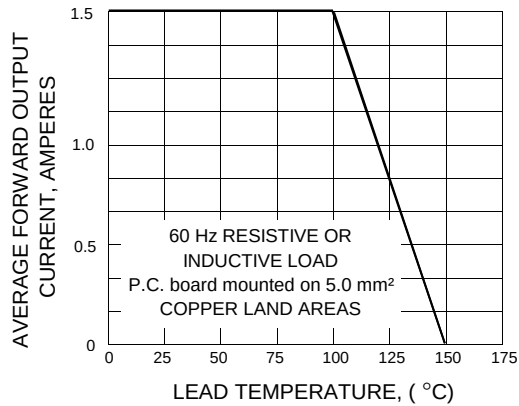


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

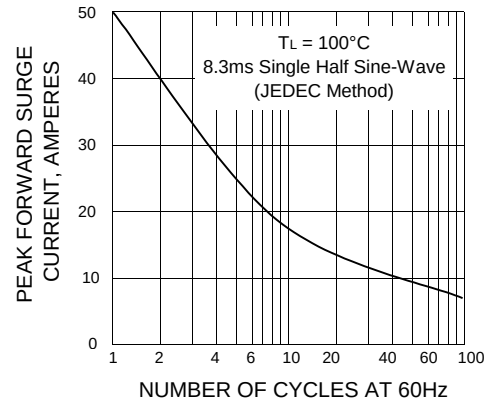


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

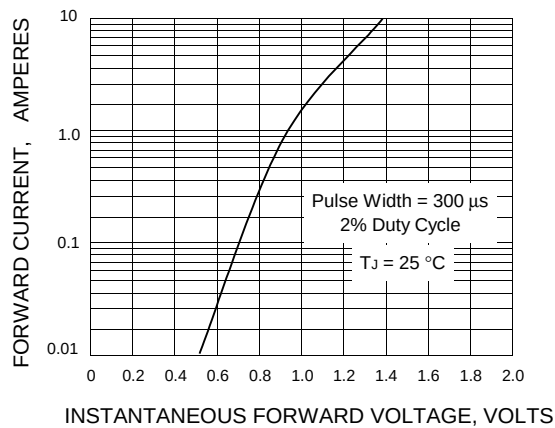


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

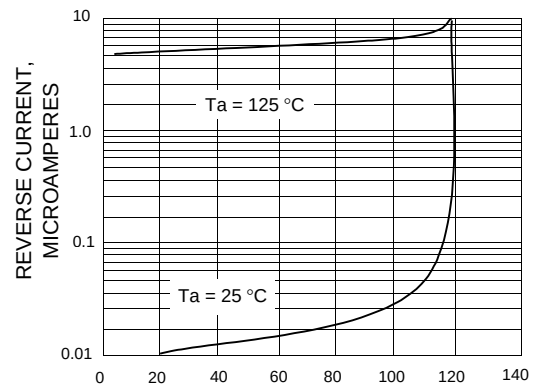


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

