

RS1A - RS1M

SURFACE MOUNT FAST SWITCHING RECTIFIERS

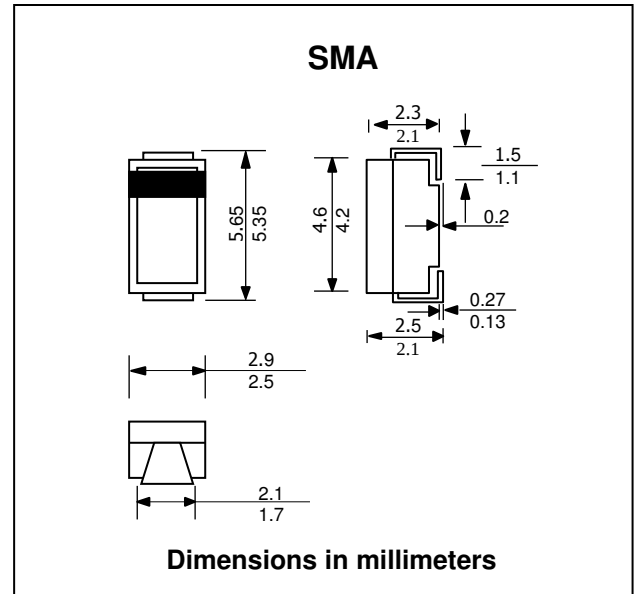
PRV : 50 - 1000 Volts
Io : 1.0 Ampere

FEATURES :

- * Glass passivated chip
- * Low profile package
- * High forward surge capability
- * High reliability
- * Low reverse current
- * Fast switching for high efficiency
- * **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)



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	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNIT
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 Current at T _L = 90 °C	I _{F(AV)}	1.0							A
Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I _{FSM}	30							A
Maximum Peak Forward Voltage at I _F = 1.0 A	V _F	1.3							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 125 °C	I _R	5							μA
	I _{R(H)}	50							μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C _J	10							pF
Thermal Resistance (Junction to Ambient)	R _{ΘJA}	105							°C/W
Thermal Resistance (Junction to Lead)	R _{ΘJL}	32							°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	- 55 to + 150							°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) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

RATING AND CHARACTERISTIC CURVES (RS1A - RS1M)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

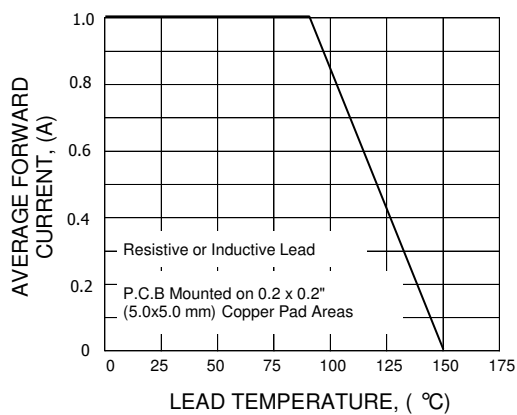


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

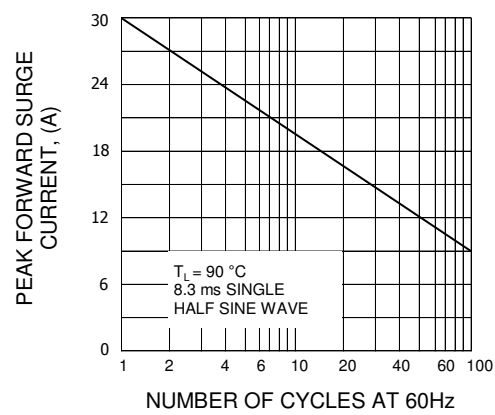


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

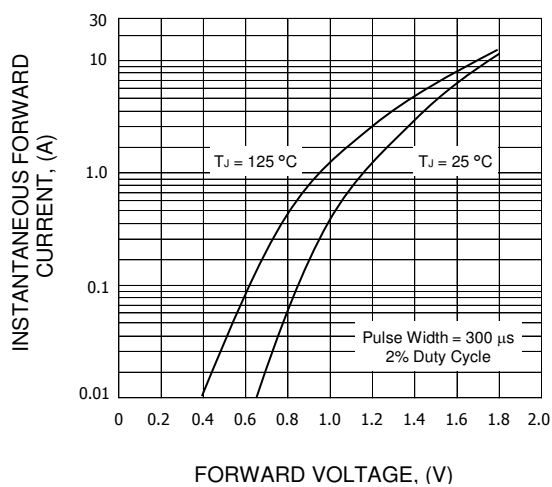


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

