

## SURFACE MOUNT GLASS PASSIVATED JUNCTION RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 1 Ampere

### FEATURES

- \* For surface mounted applications in order optimize board space
- \* Low profile package
- \* Built-in strain relief, ideal for automated placement
- \* Fast switching speed
- \* Low forward voltage drop
- \* Glass passivated chip junction
- \* High Temperature soldering guaranteed: 250°C/10 seconds.

### MECHANICAL DATA

- \* Case : JEDED SMA(DO-214AC) molded plastic body
- \* Epoxy: UL94V-O rate flame retardant
- \* Terminals : Plated axial lead, Solderable Per MIL-STD-750 Method 2026
- \* Polarity : Color band denotes cathode end
- \* Mounting position: Any
- \* Weight : 0.002 ounce, 0.064 grams (approx)

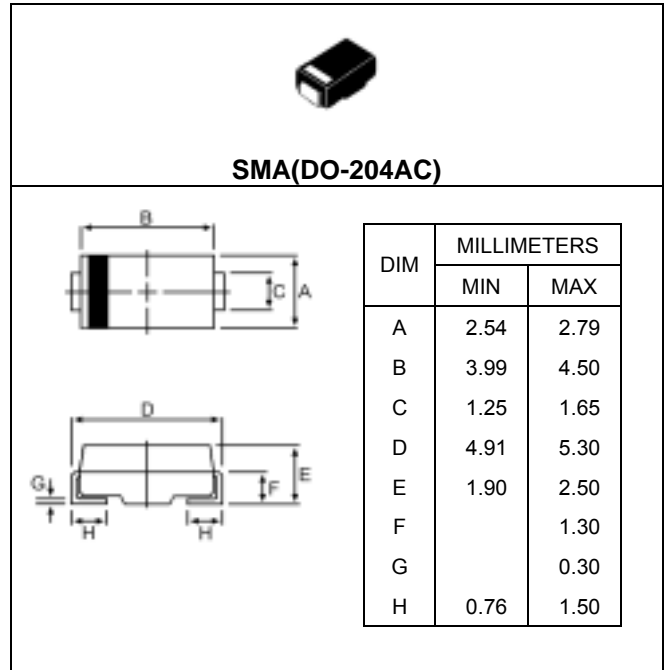
### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Characteristic	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectifier Forward Current Per Leg $T_C=75$	$I_{F(AV)}$	1.0							A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage ( $I_F=1.0$ Amp $T_C=25$ )	$V_F$	1.3							V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$ ) (Rated DC Voltage, $T_C=125$ )	$I_R$	5.0 100							uA
Reverse Recovery Time (Note 1)	$T_{rr}$	150				250	500		ns
Typical Junction Capacitance (Note 2)	$C_j$	10					7.0		pF
Typical Thermal Resistance(Note 3)	$R_{\theta JA}$ $R_{\theta JC}$	32 105							°C/W
Operating and Storage Temperature Range	$T_{stg}$	-55 to +150							

### NOTES:

1. Test conditions:  $I_F=0.5$  A,  $I_R=1.0$ ,  $I_{RR}=0.25$  A
2. Measured at 1.0MHz and applied reverse voltage of 4.0 volts
3. Thermal Resistance from Junction to Ambient and from junction to lead mounted on 0.2×0.2"(5.0×5.0 mm)copper pad area.



# RS1A thru RS1M

FIG-1 FORWARD CURRENT DERATING CURVE

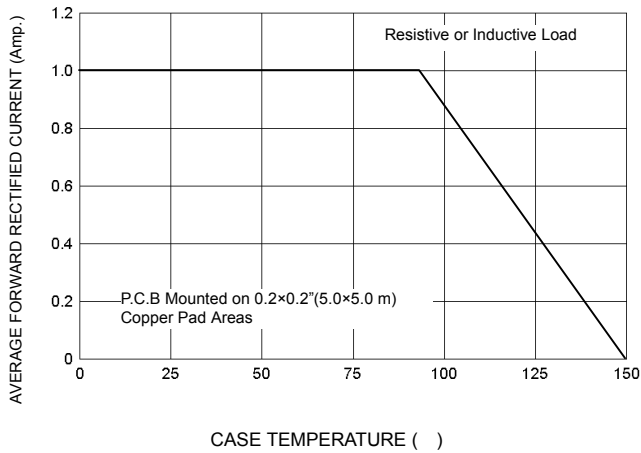


FIG-2 PEAK FORWARD SURGE CURRENT

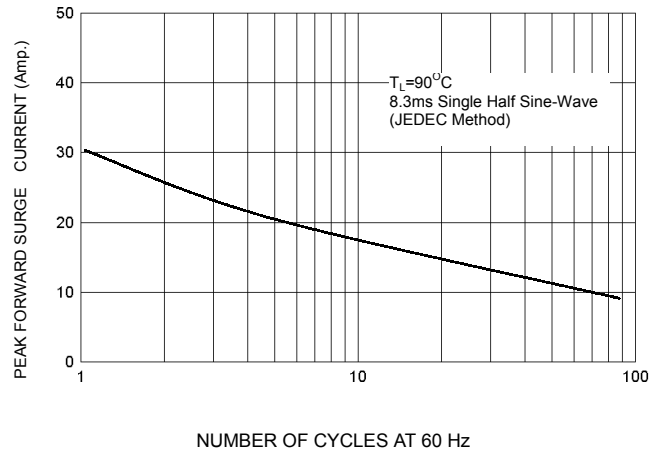


FIG-3 TYPICAL FORWARD CHARACTERISTICS

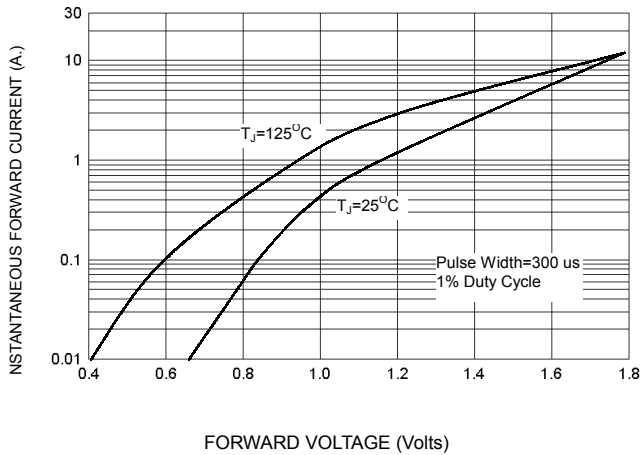


FIG-3 TYPICAL REVERSE CHARACTERISTICS

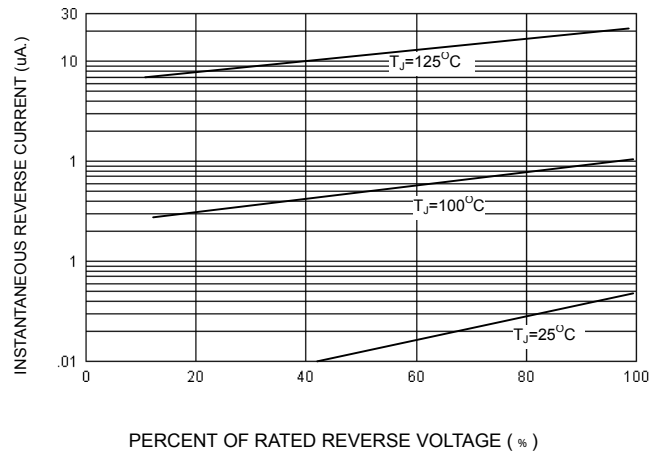


FIG-5 TYPICAL JUNCTION CAPACITANCE

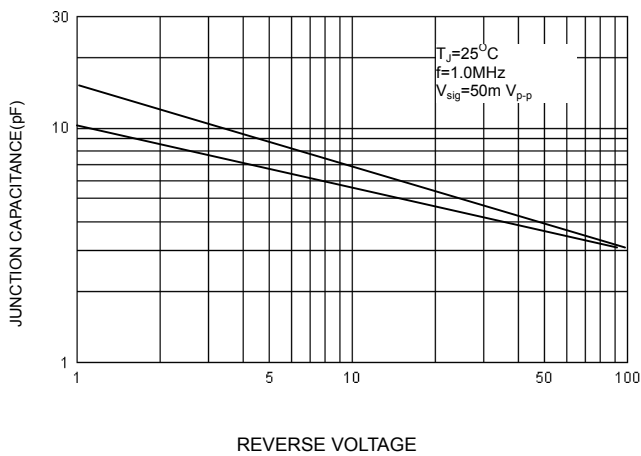


FIG-6 TYPICAL TRANSIENT THERMAL IMPEDANCE

