



# RS1A THRU RS1M

1.0 AMP. Fast Recovery Surface Mount Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

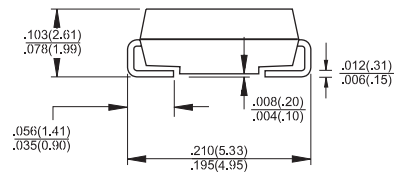
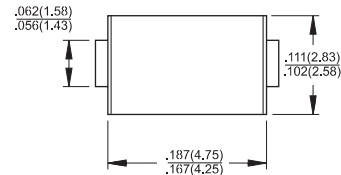
## Features

- ✧ For surface mounted application
- ✧ Glass passivated junction chip
- ✧ Built-in strain relief, ideal for automated placement
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ✧ Fast switching for high efficiency
- ✧ High temperature soldering:  
260°C / 10 seconds at terminals

## Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per E1A STD RS-481
- ✧ Weight: 0.064 gram

### SMA/DO-214AC



Dimensions in inches and (millimeters)

## 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%

Type Number	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current See Fig. 1 @T <sub>L</sub> =90°C	I <sub>(AV)</sub>	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =125°C	I <sub>R</sub>	5 50							uA uA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	150				250	500		nS
Typical Junction Capacitance ( Note 2 )	C <sub>j</sub>	10							pF
Typical Thermal Resistance (Note 3)	R θ JA R θ JL	105.0 32.0							°C/W °C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $IRR=0.25A$

2. Measured at 1 MHz and Applied  $V_R=4.0$  Volts

3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.2"x0.2" ( 5.0 x 5.0 mm ) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES (RS1A THRU RS1M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

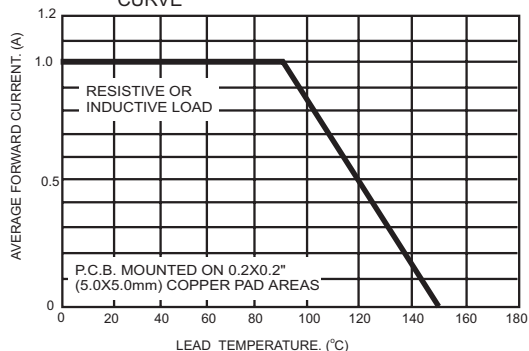


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

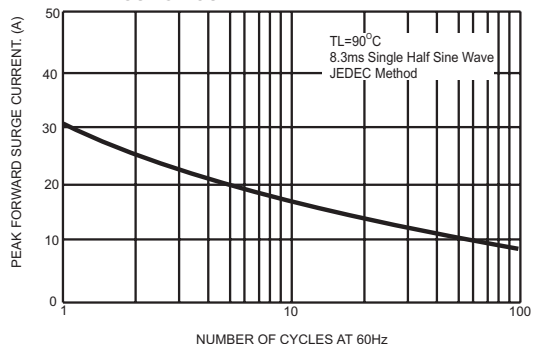


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

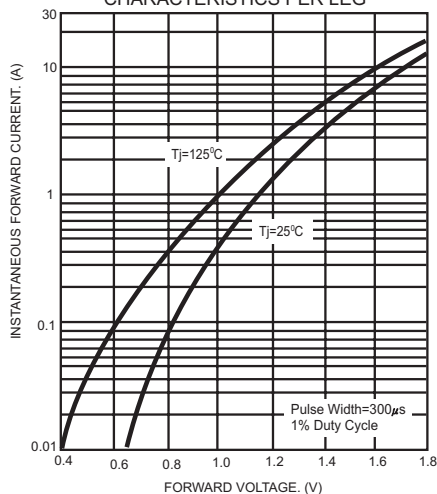


FIG.4- TYPICAL REVERSE CHARACTERISTICS

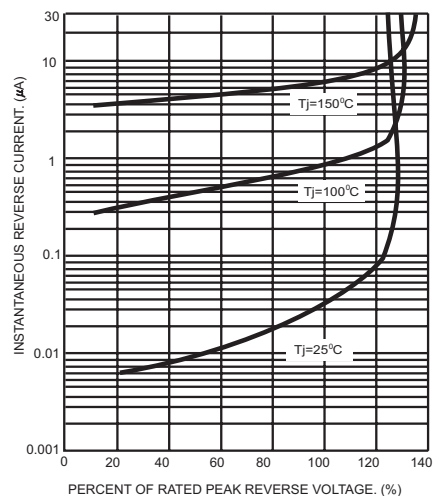


FIG.5- TYPICAL JUNCTION CAPACITANCE

