

RS1A THRU RS1M

1.0 AMP. FAST RECOVERY SURFACE MOUNT RECTIFIERS

Voltage Range
50 to 1000 Volts
Current
1.0 Amperes

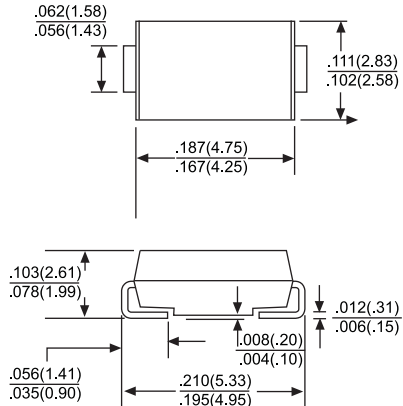
Features

- For surface mounted application
- Class passivated junction chip.
- Built-in strain relief, ideal for automated placement
- Plastic material used carriers Underwriters Laboratory Classification 94V-O
- Fast switching for high efficiency
- High temperature soldering:
250°C/ 10 seconds at terminals

Mechanical Data

- Case: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Packaging: 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, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| Type Number | | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M | UNITS |
|---|--------------------------------------|---------------|------|------|------|------|------|------|--------------|
| 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 Rectified Current See Fig.1 @ T _L =90°C | I _{F(AV)} | 1.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 1.0A | V _F | 1.3 | | | | | | | v |
| Maximum DC Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 125°C | I _R | 5 50 | | | | | | | uA uA |
| Maximum Reverse Recovery Time (Note 1) | T _{RR} | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance (Note 2) | C _J | 10 | | | | | | | pF |
| Typical Thermal Resistance | R _{θJA} R _{θJL} | 105.0 32.0 | | | | | | | °C/W °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | °C |

NOTES: 1.Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

2.Measured at 1MHz 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.

RATING AND CHARACTERISTIC CURVES RS1A THRU RS1M

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

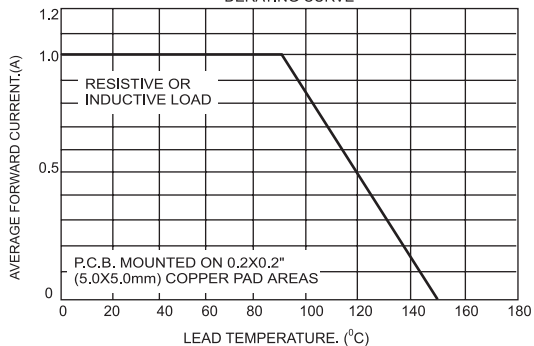


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

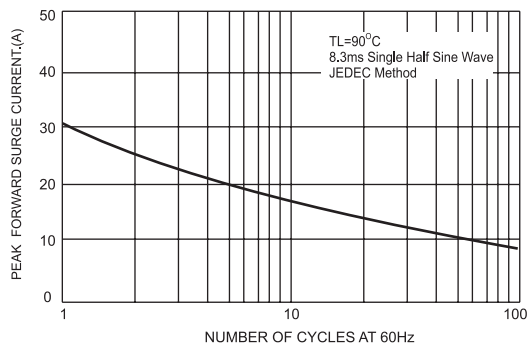


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

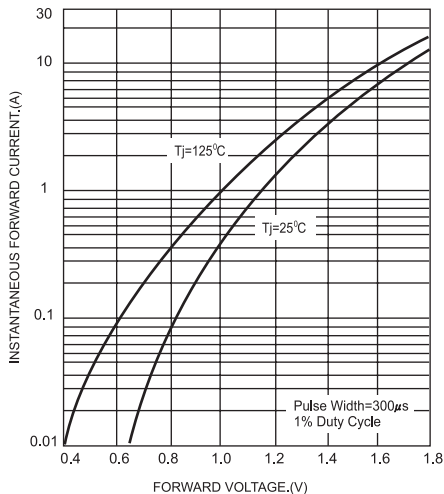


FIG.4- TYPICAL REVERSE CHARACTERISTICS

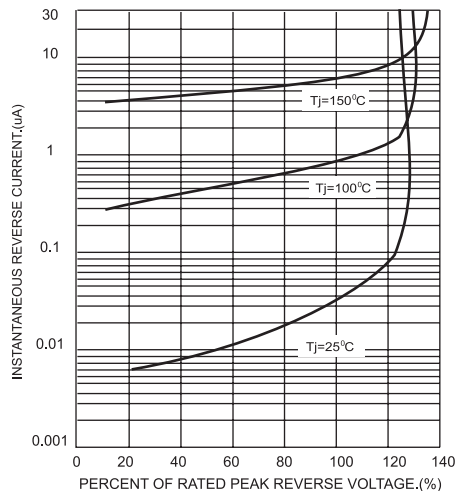


FIG.5- TYPICAL JUNCTION CAPACITANCE

