



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

RS1A
THRU
RS1M

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction

MECHANICAL DATA

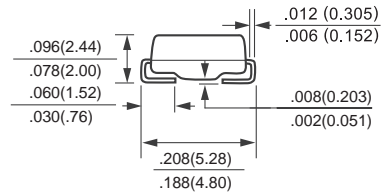
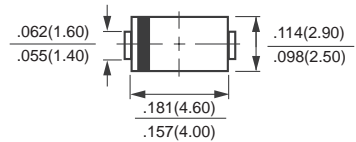
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



SMA (DO-214AC)



Dimensions in inches and (millimeters)

| | SYMBOL | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M | UNITS |
|---|----------|--------------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at TA = 55°C | Io | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 30 | | | | | | | Amps |
| Maximum Forward Voltage at 1.0A DC | VF | 1.3 | | | | | | | Volts |
| Maximum DC Reverse Current at @TA = 25°C | IR | 5.0 | | | | | | | uAmps |
| Rated DC Blocking Voltage @TA = 125°C | | 150 | | | | | | | |
| Maximum Reverse Recovery Time (Note 3) | trr | 150 | | | 250 | | 500 | | nSec |
| Maximum Thermal Resistance (Note 2) | RθJL | 30 | | | | | | | °C/W |
| Typical Junction Capacitance (Note 1) | Cj | 15 | | | | | | | pF |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to + 175 | | | | | | | °C |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
 2. Thermal Resistance (Junction to Ambient), .24in² (6.0mm²) copper pads to each terminal.
 3. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

RATING AND CHARACTERISTIC CURVES (RS1A THRU RS1M)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

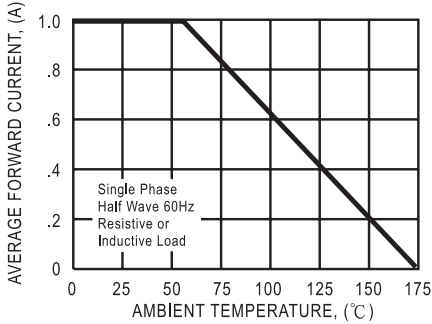


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

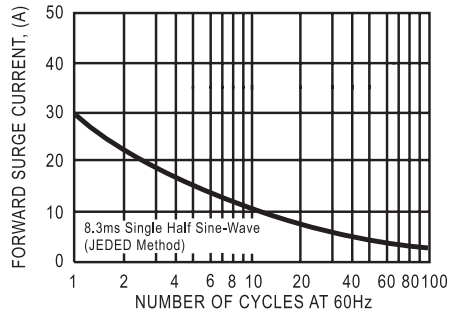


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

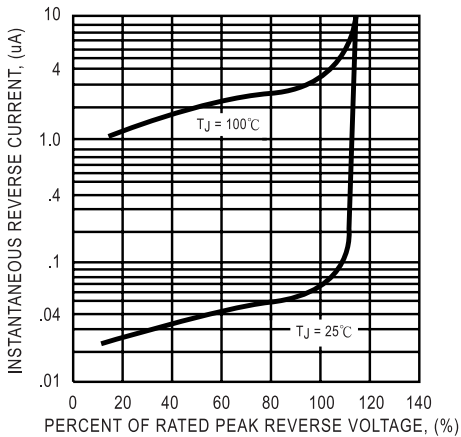


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

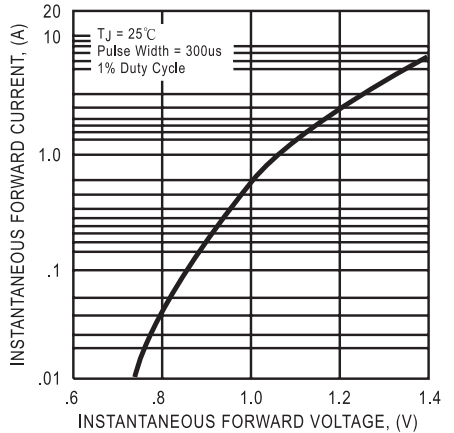


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

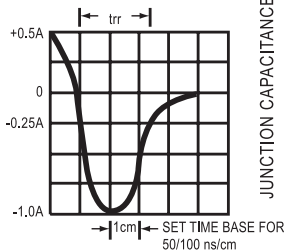
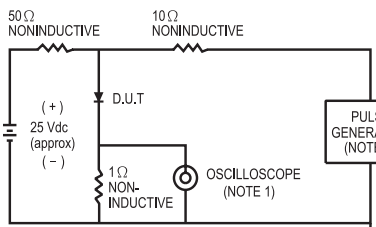
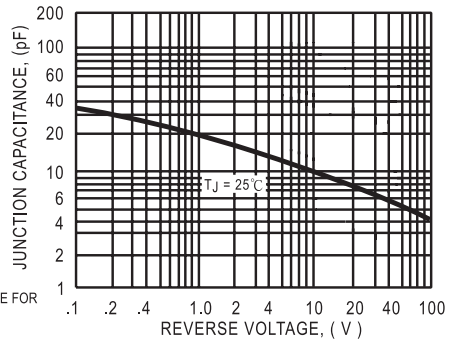


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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