



# DATA SHEET

SEMICONDUCTOR

R1A THRU R1M

**RECTIFIER SPECIALISTS**  
**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT FAST RECOVERY**  
**RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 1.0 Ampere**



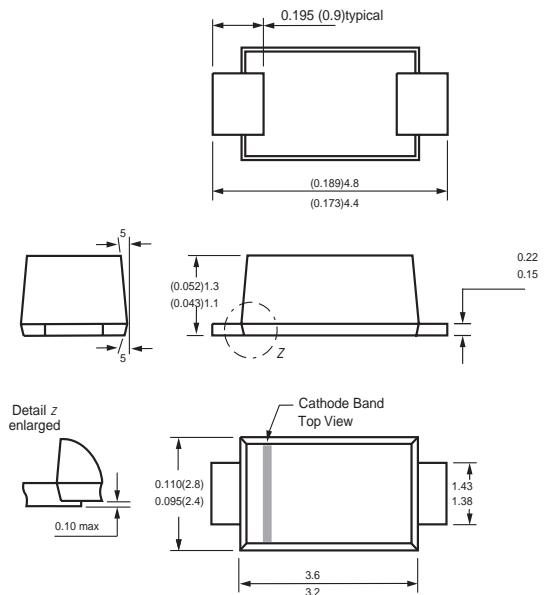
**FEATURES**

- Ideal for surface mounted applications
- Low leakage current
- Glass passivated junction
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request.

SMF Unit: inch ( mm )

**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



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

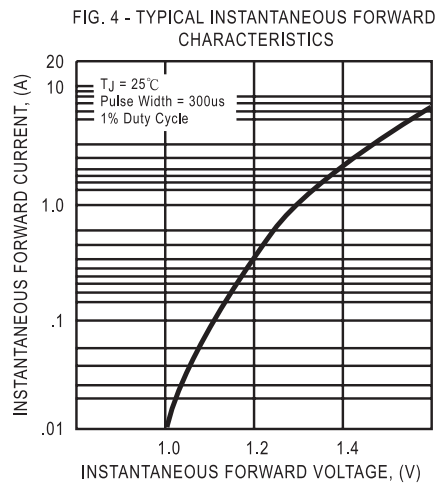
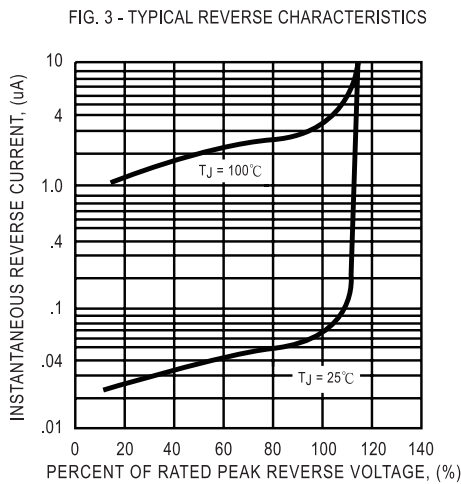
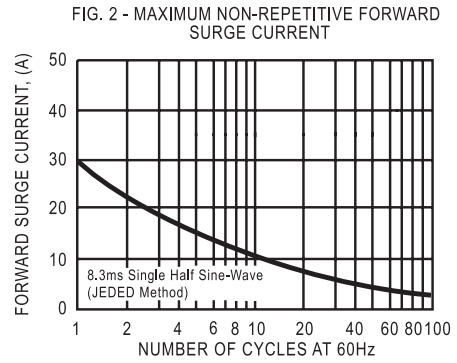
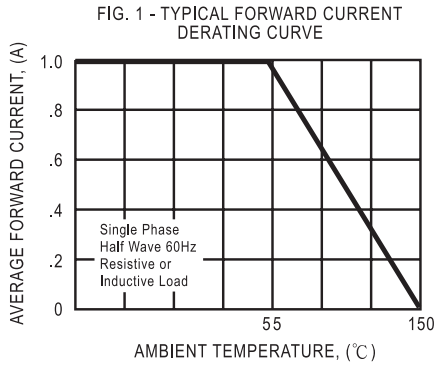
For capacitive load, derate current by 20%.

	SYMBOL	R1A	R1B	R1D	R1G	R1J	R1K	R1M	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)	RθJA	30							°C / W
Typical Junction Capacitance (Note 1)	CJ	15							pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to +150 °C							°C

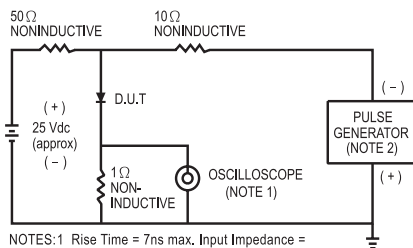
- NOTES :**
1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
  2. Thermal Resistance (Junction to Ambient), .24in (6.0mm ) 2 copper pads to each terminal.
  3. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

# RATING AND CHARACTERISTIC CURVES

## R1A THRU R1M



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



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22 pF.  
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

