



## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.19 grams

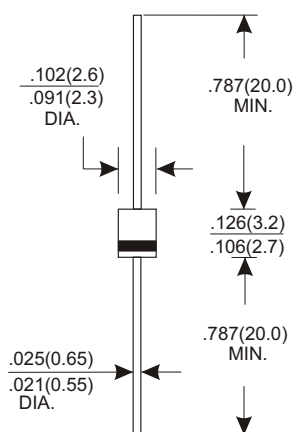
## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

1.0 Ampere

R-1



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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                                                                                        | 1F1        | 1F2 | 1F3 | 1F4 | 1F5 | 1F6 | 1F7  | UNITS |
|----------------------------------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                             | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum RMS Voltage                                                                                | 35         | 70  | 140 | 280 | 420 | 560 | 700  | V     |
| Maximum DC Blocking Voltage                                                                        | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum Average Forward Rectified Current                                                          |            |     |     |     |     |     |      |       |
| .375"(9.5mm) Lead Length at Ta=25°C                                                                | 1.0        |     |     |     |     |     |      | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 25         |     |     |     |     |     |      | A     |
| Maximum Instantaneous Forward Voltage at 1.0A                                                      | 1.3        |     |     |     |     |     |      | V     |
| Maximum DC Reverse Current Ta=25°C                                                                 | 5.0        |     |     |     |     |     |      | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                              | 100        |     |     |     |     |     |      | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                             | 150        |     |     |     | 250 | 500 |      | nS    |
| Typical Junction Capacitance (Note 2)                                                              | 15         |     |     |     |     |     |      | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                   | -65 — +150 |     |     |     |     |     |      | °C    |

### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (1F1 THRU 1F7)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

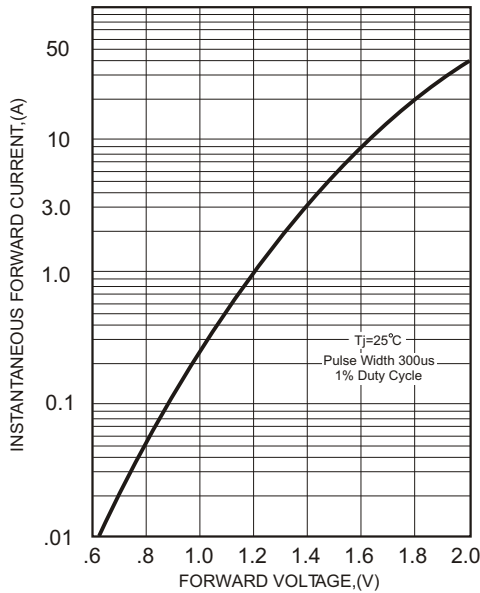


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

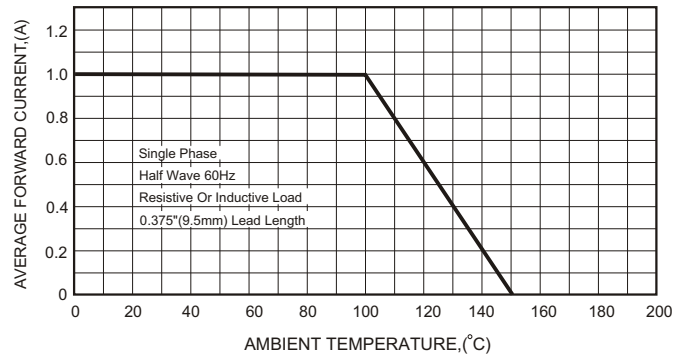


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

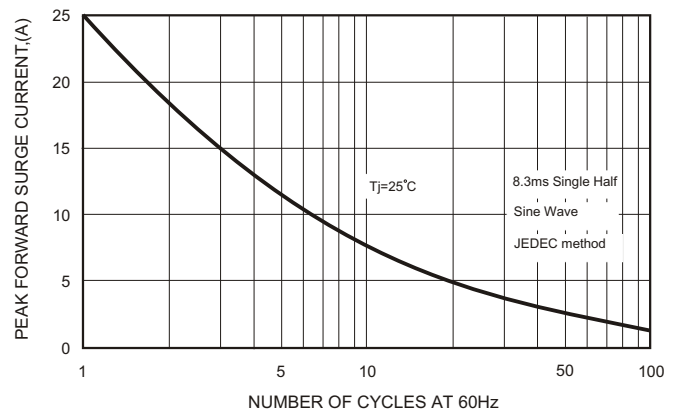
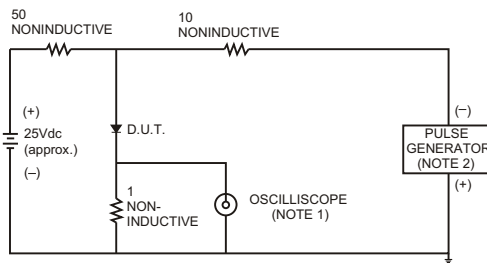


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

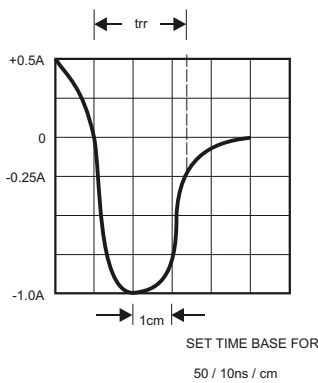


FIG.5-TYPICAL JUNCTION CAPACITANCE

