

## 2.0 AMP GLASS PASSIVATED FAST RECOVERY RECTIFIERS

## FR201G THRU FR207G Vishaymas General Semiconductor

### FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Glass passivated junction

### MECHANICAL DATA

**Case:** Molded plastic

**Epoxy:** UL 94V-0 rate flame retardant

**Lead:** Axial leads, solderable per

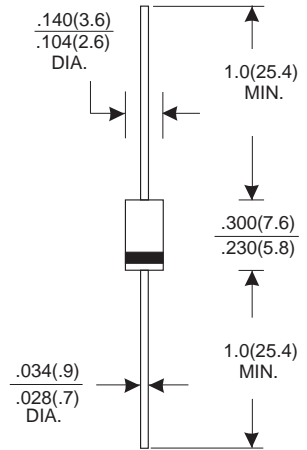
MIL-STD-202,method 208 guranteed

**Polarity:** Color band denotes cathode end

**Mounting position:** Any

**Weight:** 0.40 grams

### DO-15



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   | FR201G     | FR202G | FR203G | FR204G | FR205G | FR206G | FR207G | 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<br>.375"(9.5mm) Lead Length at Ta=55°C                      | 2.0        |        |        |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 70         |        |        |        |        |        |        | A     |
| Maximum Instantaneous Forward Voltage at 2.0A   | 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)   | 40         |        |        |        |        |        |        | 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.

FIG.1-TYPICAL FORWARD CHARACTERISTICS

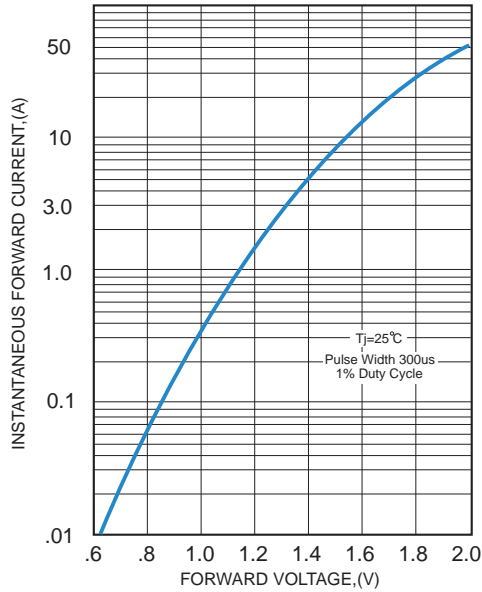


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

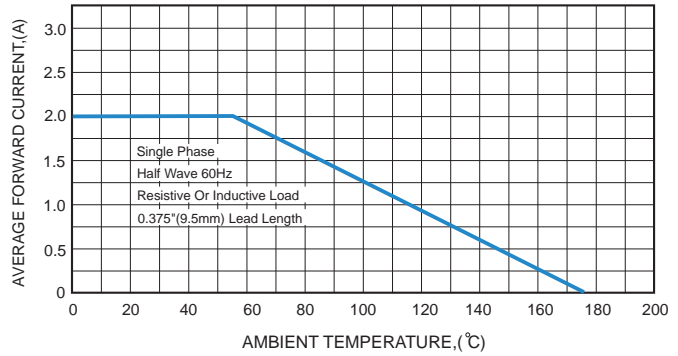


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

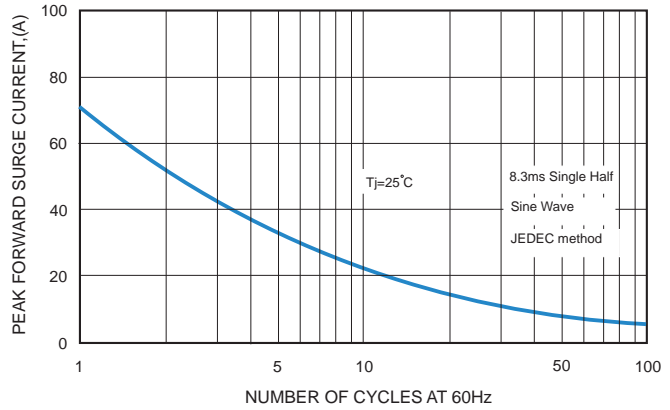
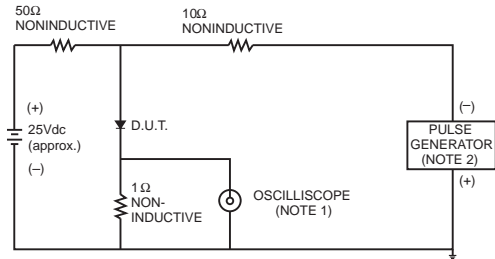


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

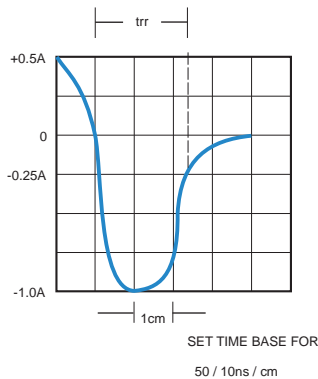


FIG.5-TYPICAL JUNCTION CAPACITANCE

