

### GLASS PASSIVATED RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 2.0 A

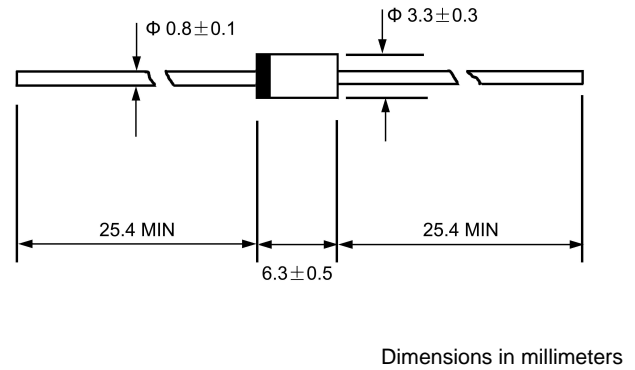
#### FEATURES

- ◇ Low cost
- ◇ Glass passivated junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC DO-15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

#### DO - 15



#### 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 by 20%.

|  |                 | FR201G          | FR202G | FR203G | FR204G | FR205G | FR206G | FR207G | UNITS        |
|--|-----------------|-----------------|--------|--------|--------|--------|--------|--------|--------------|
| Maximum recurrent 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<br>9.5mm lead length, @ $T_A=75^\circ C$             | $I_{F(AV)}$     | 2.0             |        |        |        |        |        |        | A            |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load        | $I_{FSM}$       | 60.0            |        |        |        |        |        |        | A            |
| Maximum instantaneous forward voltage at 2.0A  | $V_F$           | 1.3             |        |        |        |        |        |        | V            |
| Maximum reverse current @ $T_J=25^\circ C$<br>at rated DC blocking voltage @ $T_J=125^\circ C$ | $I_R$           | 5.0<br>100.0    |        |        |        |        |        |        | $\mu A$      |
| Maximum reverse recovery time (Note1)  | $t_{rr}$        | 150             |        |        | 250    |        | 500    |        | ns           |
| Typical junction capacitance (Note2)   | $C_J$           | 18.0            |        |        |        |        |        |        | pF           |
| Typical thermal resistance (Note3)   | $R_{\theta JA}$ | 45.0            |        |        |        |        |        |        | $^\circ C/W$ |
| Operating junction temperature range   | $T_J$           | - 55 ---- + 150 |        |        |        |        |        |        | $^\circ C$   |
| Storage temperature range  | $T_{STG}$       | - 55 ---- + 150 |        |        |        |        |        |        | $^\circ C$   |

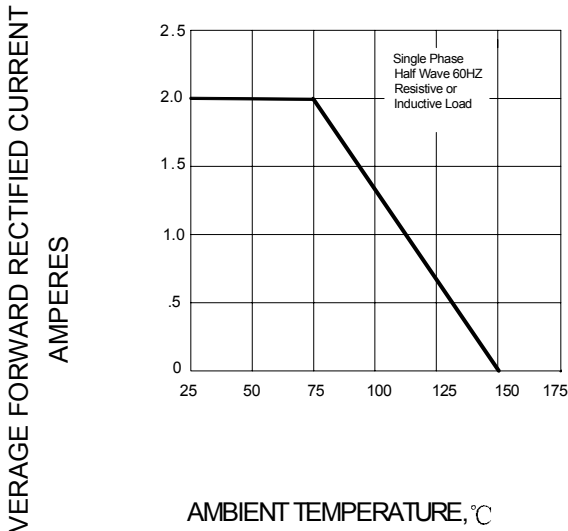
NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_n=0.25A$ .

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

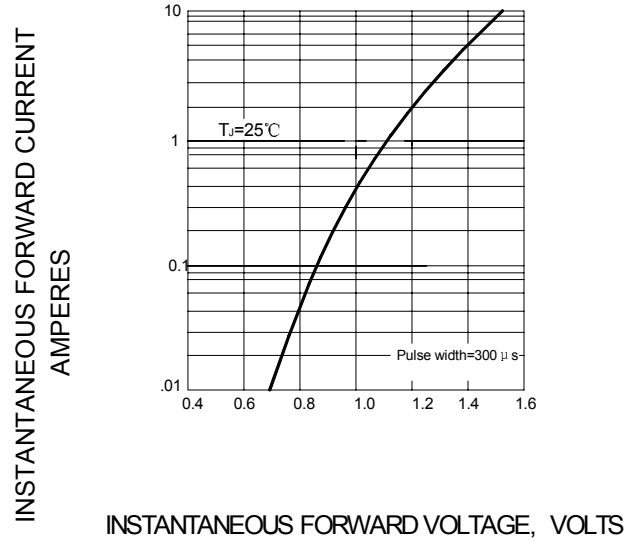
3. Thermal resistance junction to ambient

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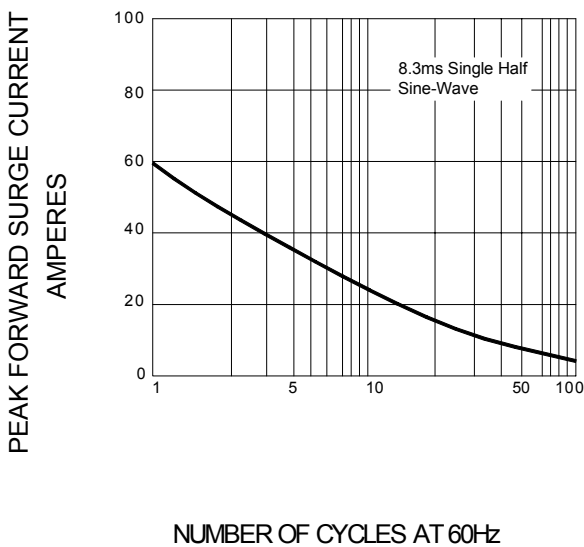
**FIG.1 – FORWARD DERATING CURVE**



**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.3 – REAK FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

