



# 1F1G~1F5G

## GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 600 Volts **CURRENT** 1.0 Amperes

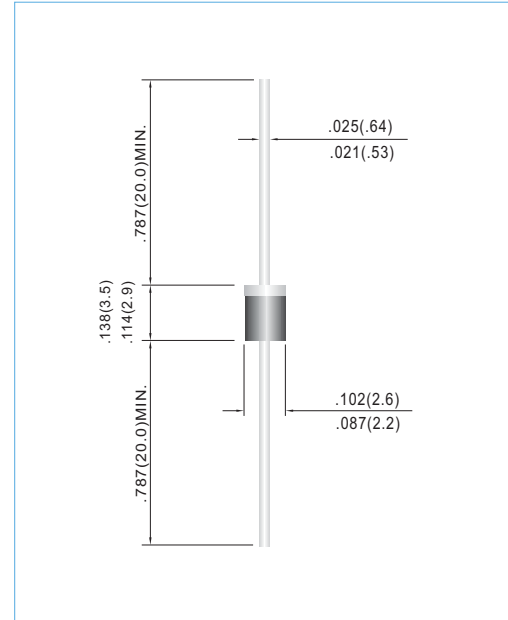
**R-1** Unit: inch(mm)

### FEATURES

- High current capability.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low leakage.
- Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: Molded plastic, R-1
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.0068 ounce, 0.1937 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

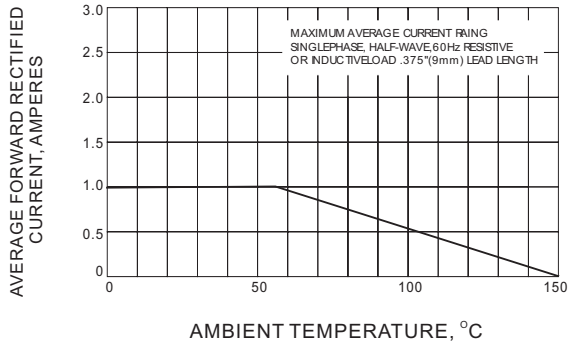
| PARAMETER  | SYMBOL          | 1F1G        | 1F2G | 1F3G | 1F4G | 1F5G | UNITS                       |
|--|-----------------|-------------|------|------|------|------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$       | 50          | 100  | 200  | 400  | 600  | V                           |
| Maximum RMS Voltage  | $V_{RMS}$       | 35          | 70   | 140  | 280  | 420  | V                           |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 50          | 100  | 200  | 400  | 600  | V                           |
| Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=55^\circ\text{C}$                    | $I_{F(AV)}$     | 1.0         |      |      |      |      | A                           |
| Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)    | $I_{FSM}$       | 30          |      |      |      |      | A                           |
| Maximum Forward Voltage at 1.0A  | $V_F$           | 1.3         |      |      |      |      | V                           |
| Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$ | $I_R$           | 1.0<br>150  |      |      |      |      | $\mu\text{A}$               |
| Typical Junction capacitance (Note 1)  | $C_J$           | 12          |      |      |      |      | pF                          |
| Maximum Reverse Recovery Time  | $t_{rr}$        | 150         |      |      |      | 250  | ns                          |
| Typical Thermal Resistance   | $R_{\theta JA}$ | 67          |      |      |      |      | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range   | $T_J, T_{STG}$  | -55 to +150 |      |      |      |      | $^\circ\text{C}$            |

NOTES: 1. Reverse Recovery Test Conditions:  $I_F=.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=.25\text{A}$   
 2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC  
 3. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. mounted with 0.22 x 0.22" ( 5.5 x 5.5mm ) copper pads.

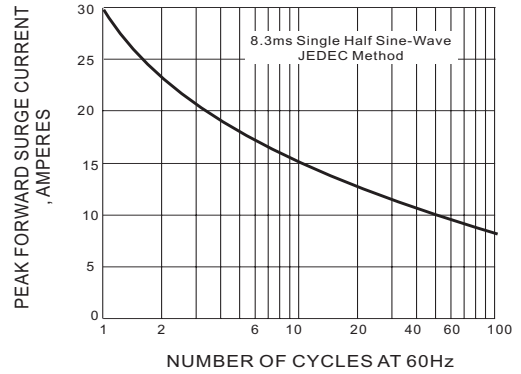


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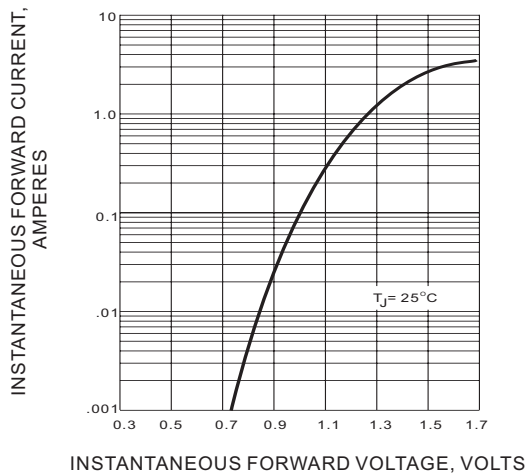
## RATING AND CHARACTERISTIC CURVES



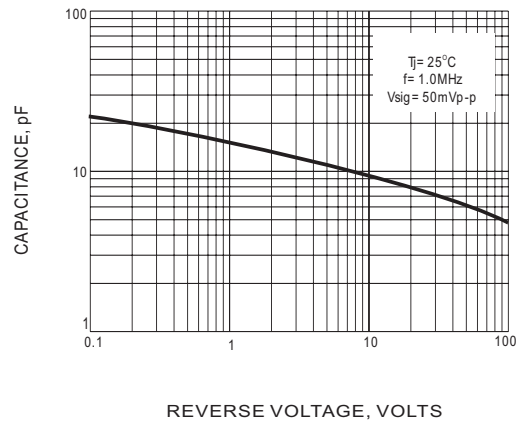
**Fig.1 FORWARD CURRENT DERATING CURVE**



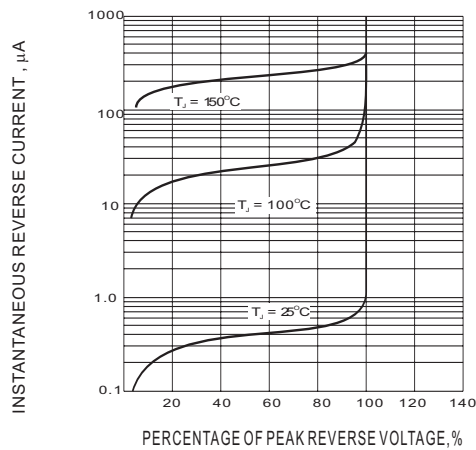
**Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL JUNCTION CAPACITANCE**



**Fig.5-TYPICAL REVERSE CHARACTERISTIC**