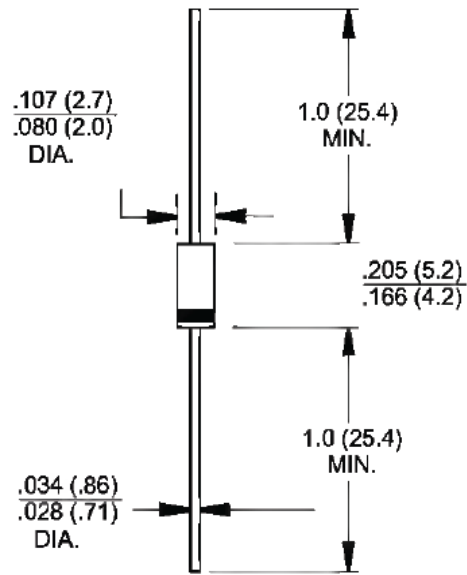


**Features**

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

**Mechanical Data**

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10s / .375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ✧ Weight: 0.34 grams



**Dimensions in inches and (millimeters)**

**Marking Diagram**



- FR10X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

**Maximum Ratings and Electrical Characteristics**

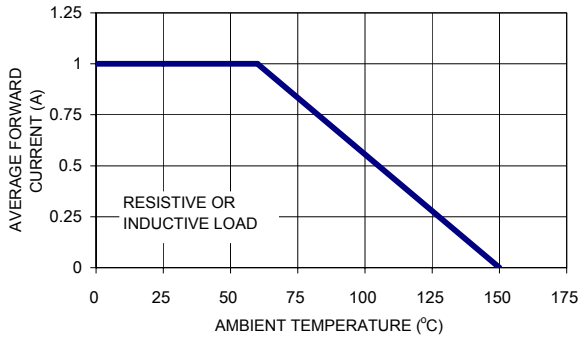
Rating at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number	Symbol	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	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 .375 (9.5mm) Lead Length @ $T_A=55^\circ C$	$I_{F(AV)}$	1							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	$V_F$	1.2							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	5 150							$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	150			250		500		nS
Typical Junction Capacitance (Note 3)	$C_j$	10							pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$ $R_{\theta JC}$	65 8							$^\circ C/W$
Operating Temperature Range $T_J$	$T_J$	- 65 to + 150							$^\circ C$
Storage Temperature Range $T_{STG}$	$T_{STG}$	- 65 to + 150							$^\circ C$

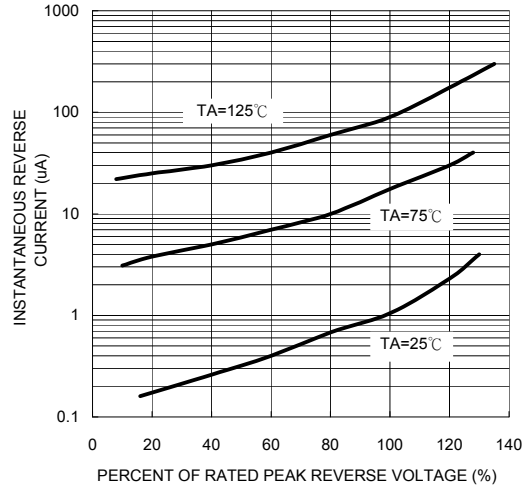
Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle  
 Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$   
 Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0Volts D.C.  
 Note 4: Mount on Cu-Pad Size 5mm x 5mm on PCB

**RATINGS AND CHARACTERISTIC CURVES (FR101 THRU FR107)**

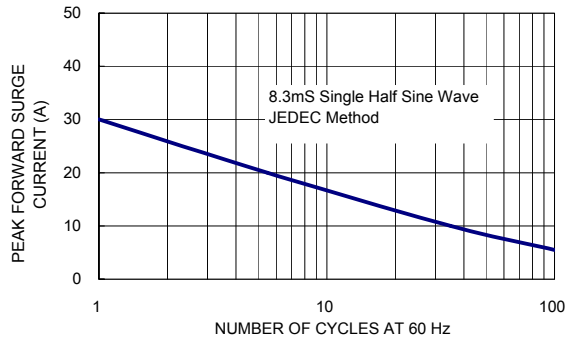
**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**



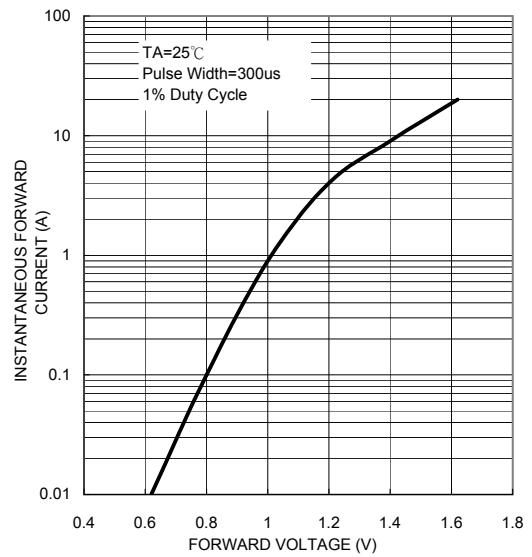
**FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG**



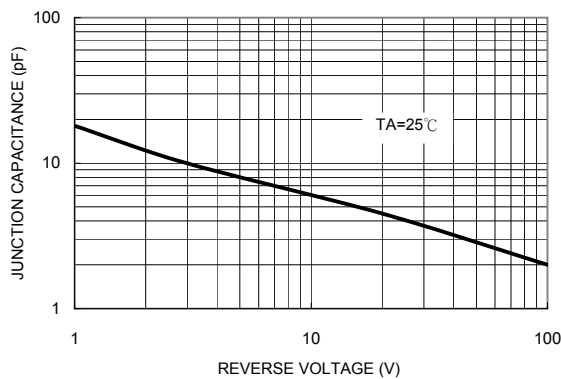
**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 5- TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



**FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**

