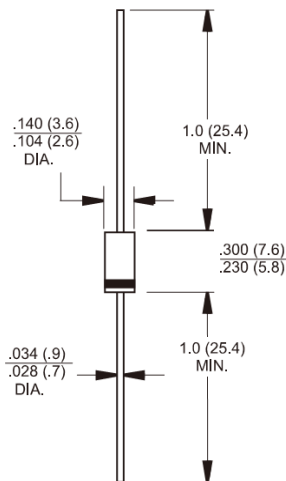


### DO-15



### Dimensions in inches and (millimeters)

### Marking Diagram



FR15X	=	Specific Device Code
G	=	Green Compound
Y	=	Year
WW	=	Work Week

### 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: 0.40 grams

### 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 151	FR 152	FR 153	FR 154	FR 155	FR 156	FR 157	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 @ $T_A=55^\circ C$	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50							A
Maximum Instantaneous Forward Voltage (Note 1) @ 1.5A	$V_F$	1.2							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	5 150							uA uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	150			250		500		nS
Typical Junction Capacitance (Note 3)	$C_j$	20							pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	60							°C/W
Operating Temperature Range	$T_J$	- 65 to + 150							°C
Storage Temperature Range	$T_{STG}$	- 65 to + 150							°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

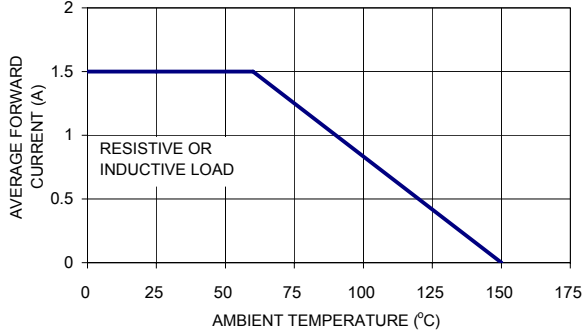
Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

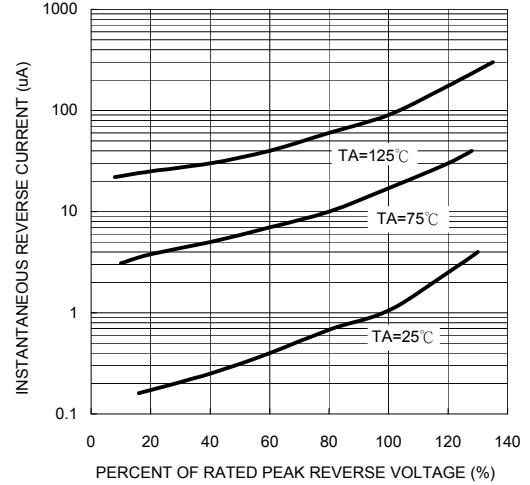
Note 4: Mount on Cu-Pad Size 10mm x 10mm on PCB

**RATINGS AND CHARACTERISTIC CURVES (FR151 THRU FR157)**

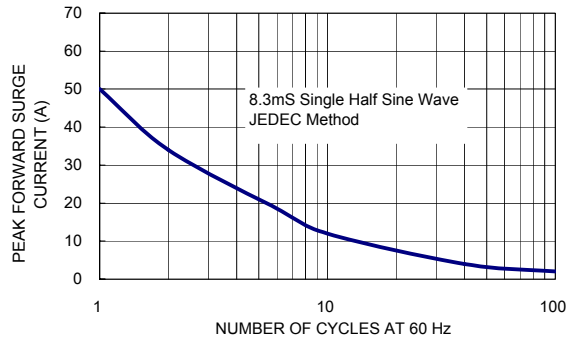
**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**



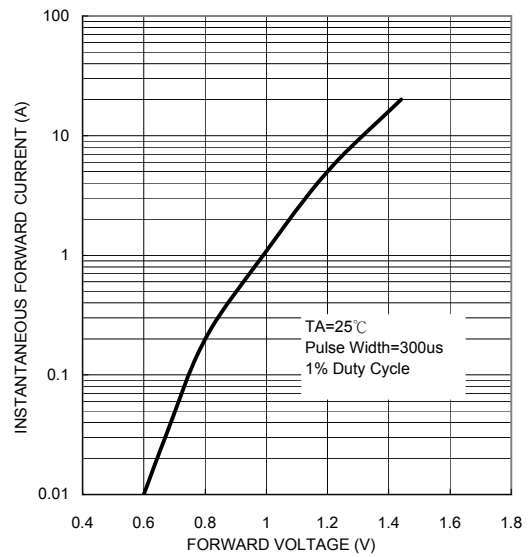
**FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG**



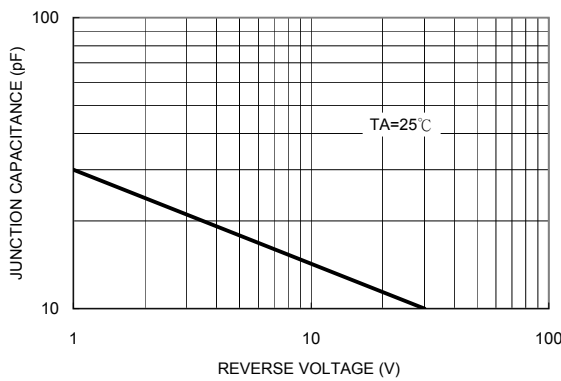
**FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 5- TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



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

