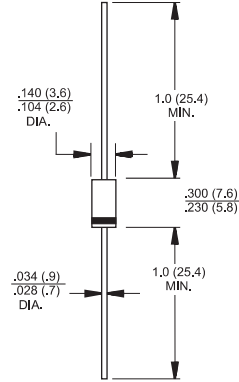




DO-15



Dimensions in inches and (millimeters)

Features

- ✧ Glass passivated chip junction.
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed:
260 °C /10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.40 gram

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 151G | FR 152G | FR 153G | FR 154G | FR 155G | FR 156G | FR 157G | 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 @ $T_A = 55^\circ C$ | $I_{(AV)}$ | 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 @ 1.5A | V_F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$ | I_R | 5.0 100 | | | | | | | μA μA |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 150 | | | 250 | 500 | | nS | |
| Typical Junction Capacitance (Note 2) | C_j | 20 | | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 60 | | | | | | | $^\circ C/W$ |
| Operating Temperature Range | T_J | -55 to +150 | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
 3. Mount on Cu-Pad Size 10mm x 10mm on P.C.B.



RATINGS AND CHARACTERISTIC CURVES (FR151G THRU FR157G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

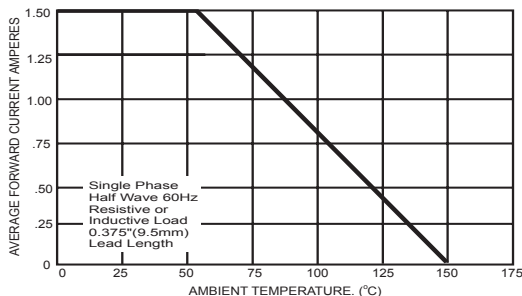


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

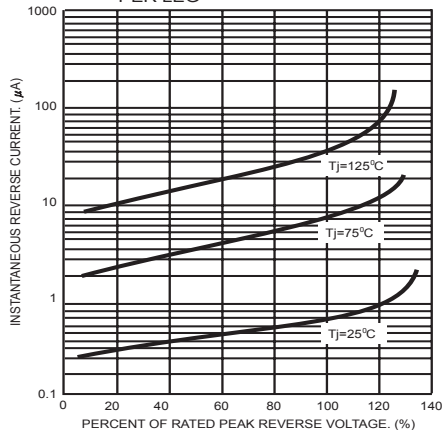


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

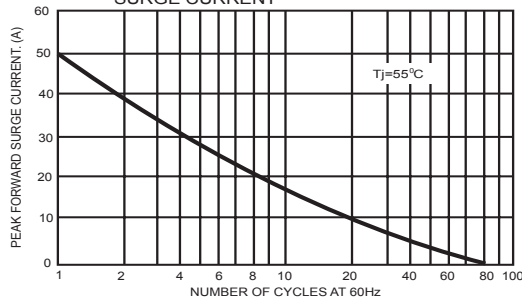


FIG.5- TYPICAL FORWARD CHARACTERISTICS

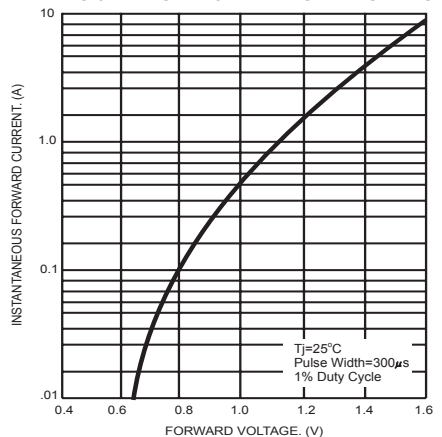


FIG.4- TYPICAL JUNCTION CAPACITANCE

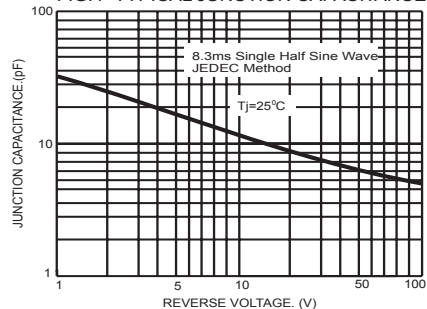
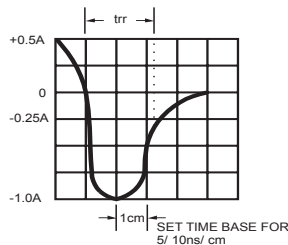
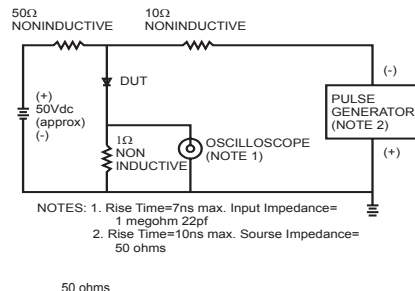


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



| PACKAGE | SPQ/PCS | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| DO-15 | 3000/AMMO | 30000 | 42X28X31 | 12.00 | 10.00 |