# FR151 THRU FR157

## *FAST RECOVERY RECTIFIER*

***REVERSE VOLTAGE:*** **50 to 1000 VOLTS**

***FORWARD CURRENT:*** **1.5 AMPERE**

http://www.njzrg.com

### *FEATURES*

· High current capability

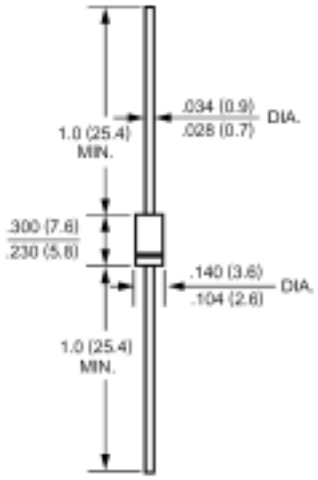
· 1.5 ampere operation at $T_A$=55℃ with no thermal runaway.

· Fast switching for high efficiency

· Exceeds environmental standards of MIL-S-19500/228

· Low leakage.

**DO-15**




**Dimensions in inches and (millimeters)**

### *MECHANICAL DATA*

Case: Molded plastic, DO-15

Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.015ounce, 0.4gram

## *Maximum Ratings and Electrical Characteristics*

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60$H_Z$, resistive or inductive load.

For capacitive load, derate current by 20%.

| | Symbols | *FR151* | *FR152* | *FR153* | *FR154* | *FR155* | *FR156* | *FR157* | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Maximum Recurrent Peak Reverse Voltage** | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | **Volts** |
| **Maximum RMS Voltage** | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | **Volts** |
| **Maximum DC Blocking Voltage** | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | **Volts** |
| **Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A$=55℃** | $I_{(AV)}$ | 1.5 | | | | | | | **Amp** |
| **Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)** | $I_{FSM}$ | 60 | | | | | | | **Amp** |
| **Maximum Forward Voltage at 1.5A DC and 25℃** | $V_F$ | 1.3 | | | | | | | **Volts** |
| **Maximum Reverse Current at $T_A$=25℃** | $I_R$ | 5.0 | | | | | | | **uAmp** |
| **at Rated DC Blocking Voltage $T_A$=100℃** | | 500 | | | | | | | |
| **Typical Junction Capacitance (Note 1)** | $C_J$ | 30 | | | | | | | **pF** |
| **Typical Thermal Resistance (Note 2)** | $R_{\theta JA}$ | 45 | | | | | | | **℃/W** |
| **Maximum Reverse Recovery Time (Note 3)** | $T_{RR}$ | 150 | | | | 250 | 500 | | **nS** |
| **Operating and Storage Temperature Range** | $T_J$，Tstg | -55 to +150 | | | | | | | **℃** |

**NOTES:**

1- Measured at 1 $MH_Z$ and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions：$I_F$=.5A，$I_R$=1A，$I_{RR}$=.25A.

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## *FAST RECOVERY RECTIFIER*

GROWCHILD ELECTRONICS™

http://www.njzrg.com

### *RATINGS AND CHARACTERISTIC CURVES*

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

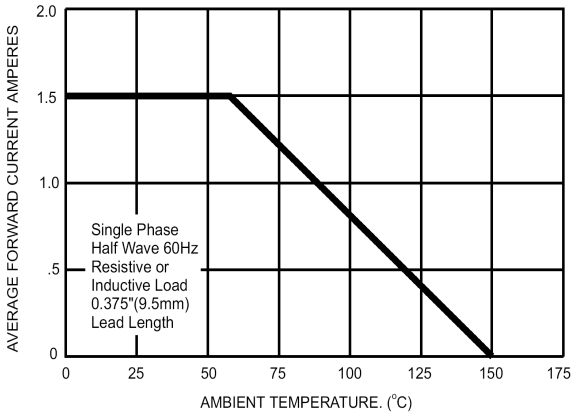


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

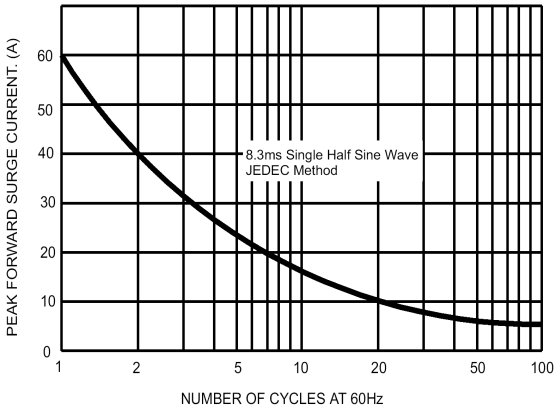


FIG.3- TYPICAL FORWARD CHARACTERISTICS

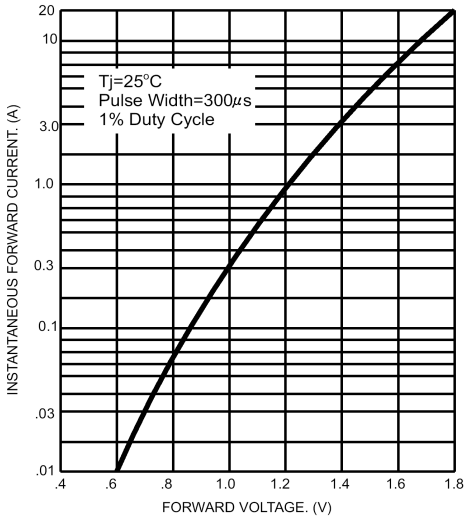


FIG.4- TYPICAL JUNCTION CAPACITANCE

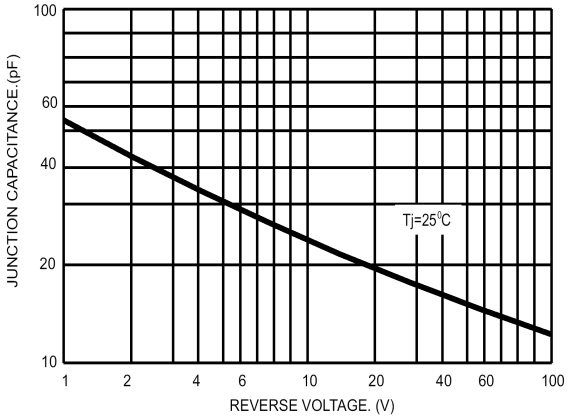


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM