

Pb Free Plating Product

FR151 thru FR157



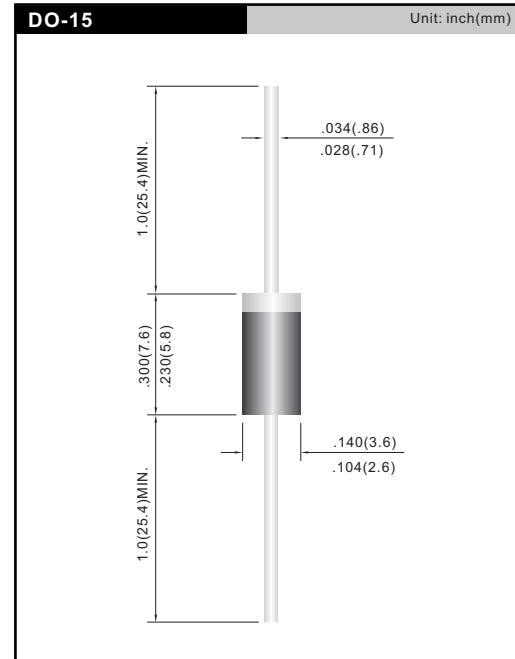
FAST SWITCHING PLASTIC RECTIFIER DIODES

Features

- High current capability.
- 1.5 ampere operation at $T_A=50^\circ\text{C}$ with no thermal runaway.
- Low leakage.

Mechanical Data

- **Case:** Molded plastic, DO-15
- **Terminals:** Plated axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any

**Absolute Maximum Ratings and Characteristics**

Ratings 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%.

| | Symbols | FR151 | FR152 | FR153 | FR154 | FR155 | FR156 | FR157 | Units |
|---|-----------------|-------------|-------|-------|-------|-------|-------|-------|--------------------|
| Maximum repetitive 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 at $T_A = 55^\circ\text{C}$ | $I_{(AV)}$ | 1.5 | | | | | | | A |
| Peak forward surge current I_{FM} (surge) 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 50 | | | | | | | A |
| Maximum forward voltage at 1.5A DC | V_F | 1.3 | | | | | | | V |
| Maximum reverse current $T_J = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$ | I_R | 5 500 | | | | | | | μA |
| Typical junction capacitance (Note 1) | C_J | 25 | | | | | | | pF |
| Typical thermal resistance (Note 3) | $R_{\theta JL}$ | 45 | | | | | | | $^\circ\text{C/W}$ |
| Maximum reverse recovery time(Note 2) | T_{rr} | 150 | 150 | 150 | 150 | 250 | 500 | 500 | ns |
| Operating and storage temperature range | T_J, T_S | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes:

- (1) Measured at 1MHz and applied reverse voltage of 4 VDC.
- (2) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$.
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B mounted.

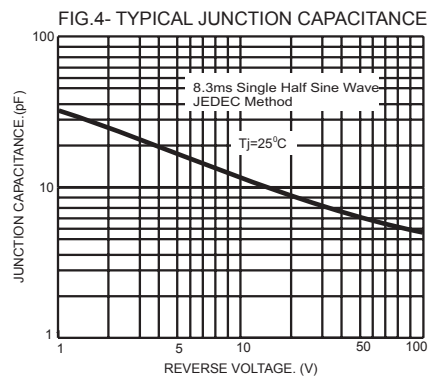
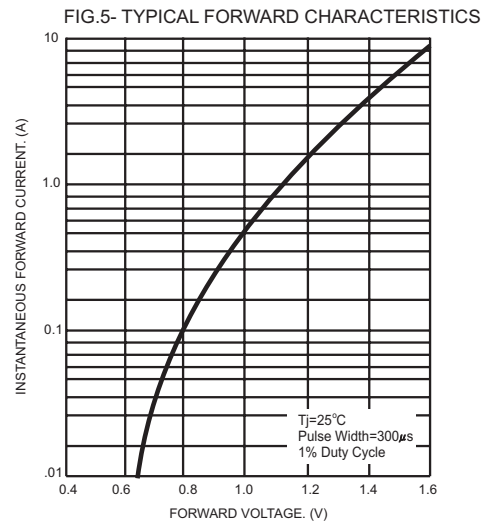
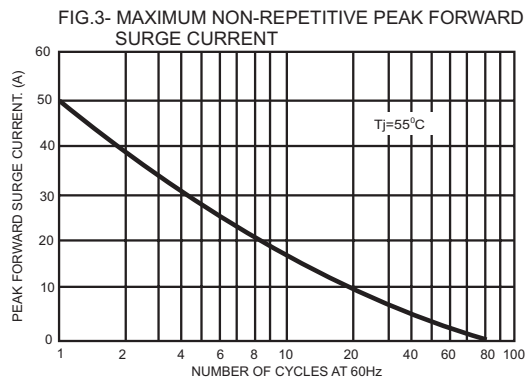
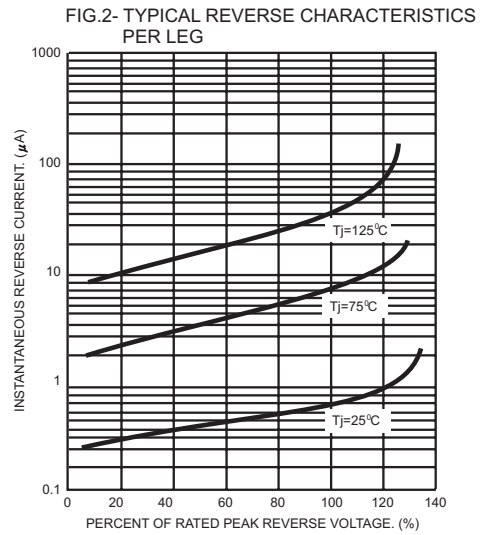
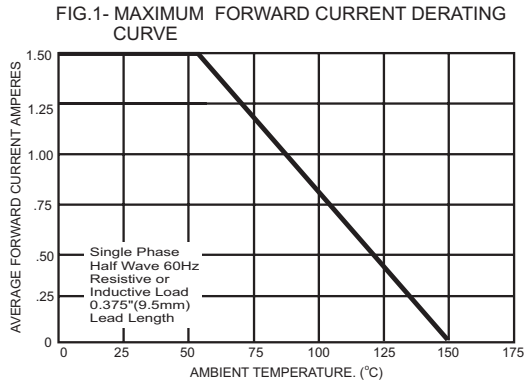


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

