

FR151 THRU FR157

FAST RECOVERY RECTIFIER



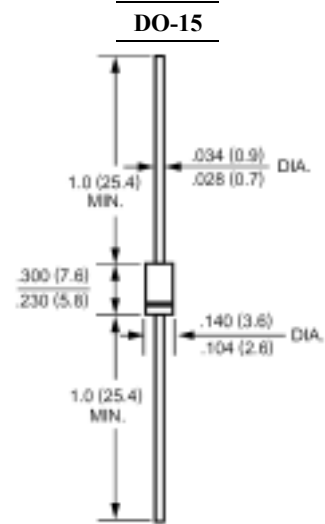
REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 1.5 AMPERE

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.

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



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, 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 $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	I_R					5.0			uAmp
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, T_{stg}	-55 to +150							

NOTES:

- 1- Measured at 1 MHz 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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RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

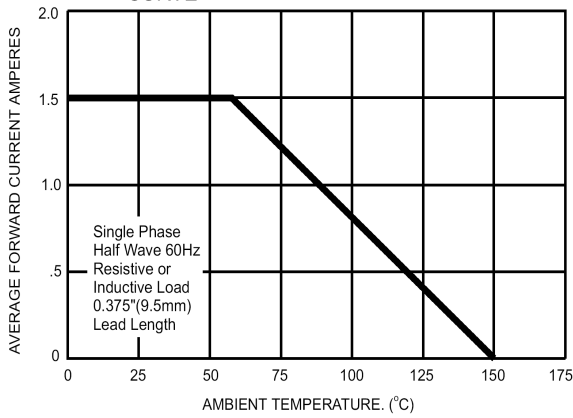


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

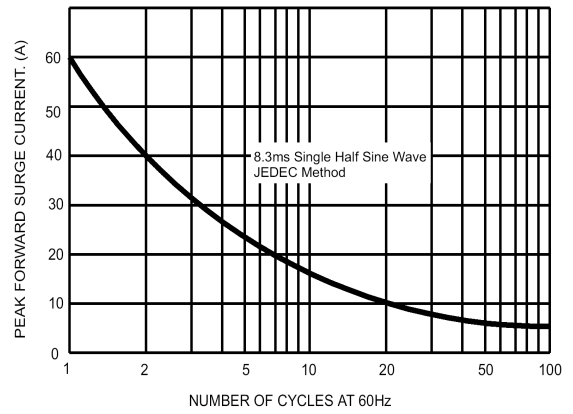


FIG.3- TYPICAL FORWARD CHARACTERISTICS

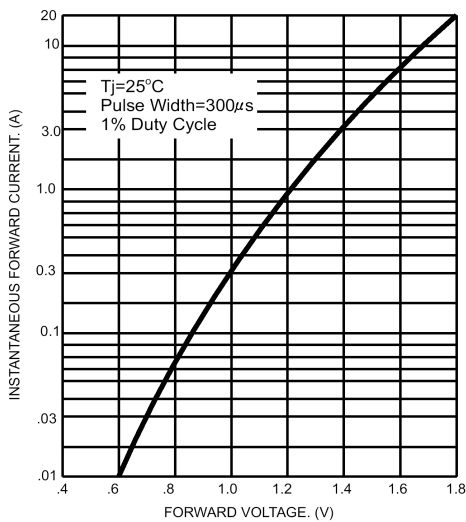


FIG.4- TYPICAL JUNCTION CAPACITANCE

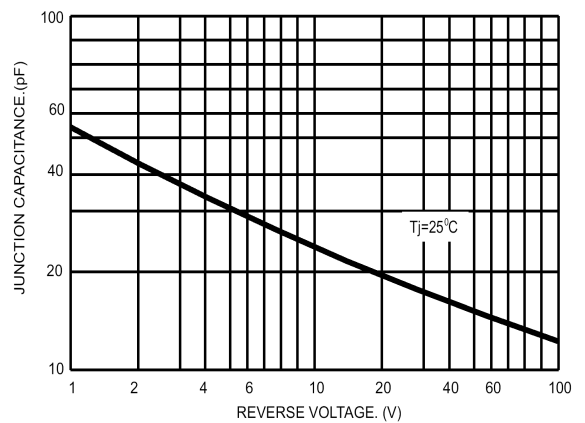


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

