

***FR15X SERIES***

***FAST RECOVERY RECTIFIER***

产

品

规

格

确

认

书

# 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

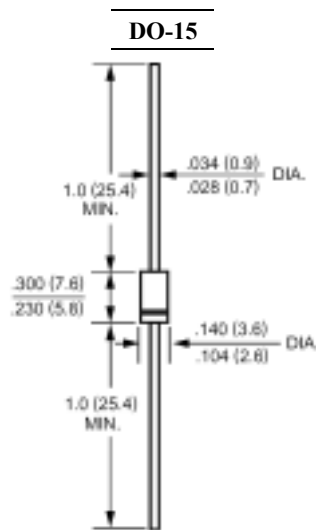
Epoxy: UL 94V-O rate flame retardant

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 <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T <sub>A</sub> =55	I <sub>(AV)</sub>	1.5							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	60							Amp
Maximum Forward Voltage at 1.5A DC and 25	V <sub>F</sub>	1.3							Volts
Maximum Reverse Current at T <sub>A</sub> =25 at Rated DC Blocking Voltage T <sub>A</sub> =100	I <sub>R</sub>	5.0 500							uAmp
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	30							pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	45							/W
Maximum Reverse Recovery Time (Note 3)	T <sub>RR</sub>	150				250	500		nS
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-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 :  $I_F=.5A$  ,  $I_R=1A$  ,  $I_{RR}=.25A$ .

FR151 THRU FR157  
FAST RECOVERY RECTIFIER

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

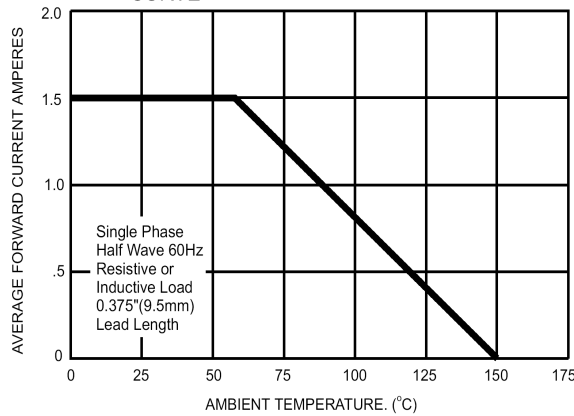


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

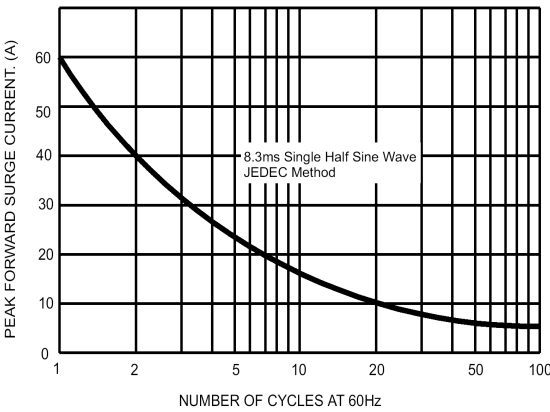


FIG.3- TYPICAL FORWARD CHARACTERISTICS

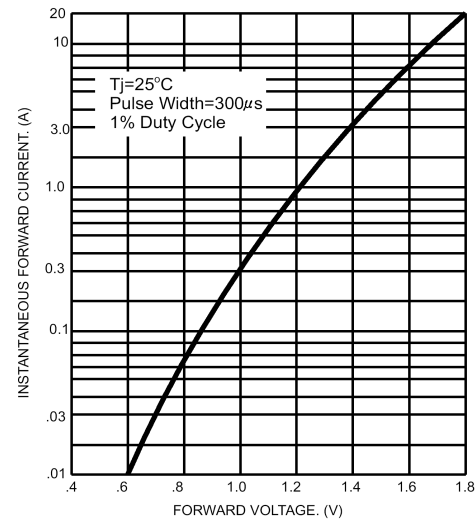


FIG.4- TYPICAL JUNCTION CAPACITANCE

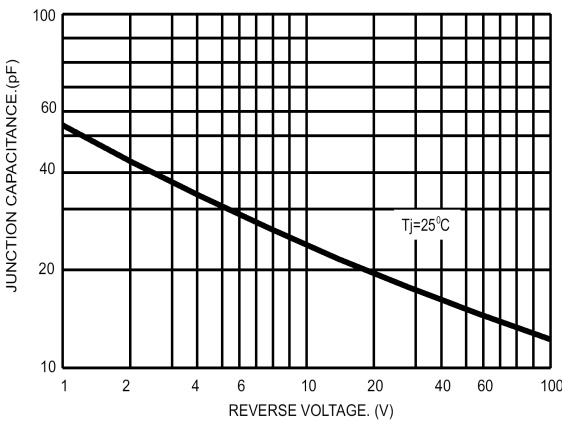


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

