

# FR151 THRU FR157



1.5 AMP FAST RECOVERY RECTIFIERS



## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.40 grams
- \* Both normal and Pb free product are available:  
 Normal: 30~95% Sn, 5~20% Pb  
 \* Pb free: 99 Sn above can meet Rohs enviroment substance directive request

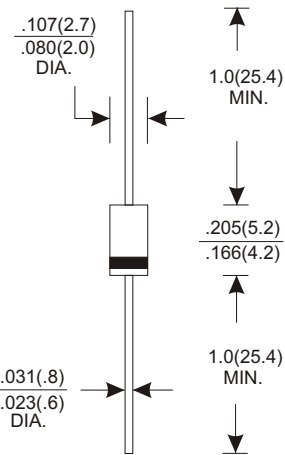
## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

1.5 Amperes

DO-41



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess otherwies specified.  
 Single phase half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

TYPE NUMBER	FR151	FR152	FR153	FR154	FR155	FR156	FR157	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current									
.375"(9.5mm) Lead Length at Ta=75°C								1.5	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								50	A
Maximum Instantaneous Forward Voltage at 1.5A								1.3	V
Maximum DC Reverse Current Ta=25°C								5.0	µA
at Rated DC Blocking Voltage Ta=100°C								100	µA
Maximum Reverse Recovery Time (Note 1)					150	250	500	nS	
Typical Junction Capacitance (Note 2)								30	pF
Operating and Storage Temperature Range Tj, Tstg								-65 — +150	°C

### NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATING AND CHARACTERISTIC CURVES (FR151 THRU FR157)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

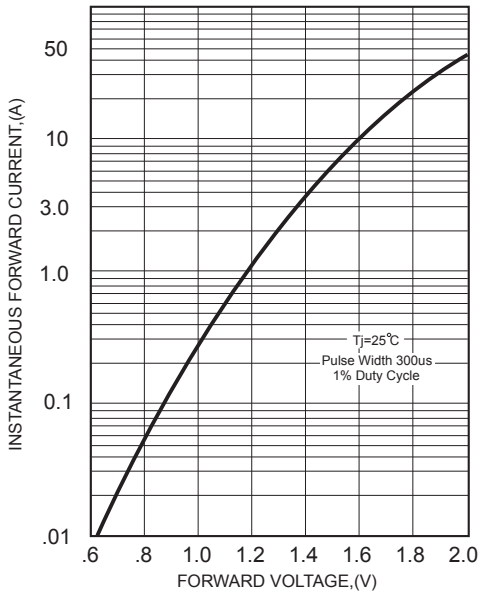


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

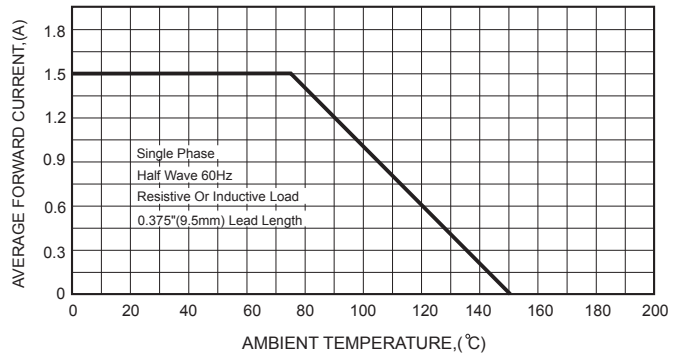


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

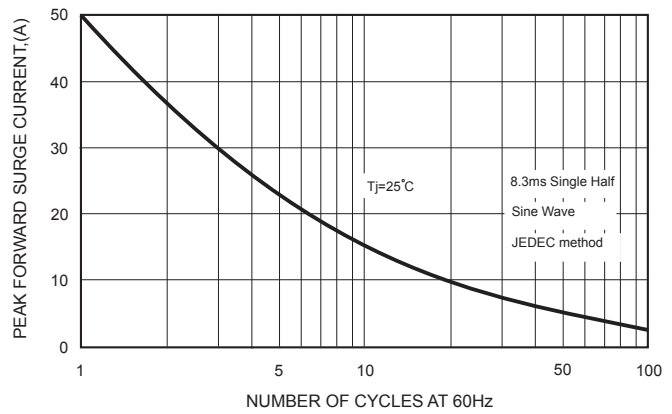
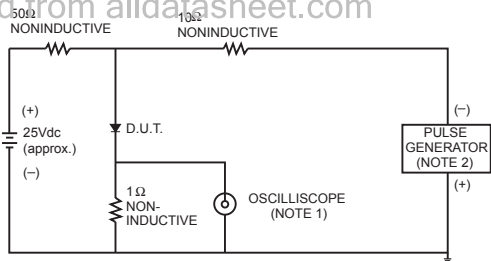


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
 2. Rise Time= 10ns max., Source Impedance= 50 ohms.

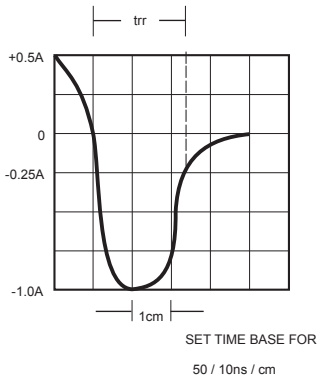


FIG.5-TYPICAL JUNCTION CAPACITANCE

