



# FR151 – FR157

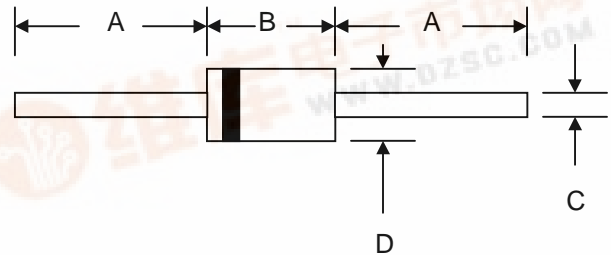
## 1.5A FAST RECOVERY RECTIFIER

### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.40 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



DO-15		
Dim	Min	Max
A	25.4	—
B	5.50	7.62
C	0.71	0.864
D	2.60	3.60
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	FR151	FR152	FR153	FR154	FR155	FR156	FR157	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T <sub>A</sub> = 55°C	I <sub>O</sub>	1.5							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	60							A
Forward Voltage @I <sub>F</sub> = 1.5A	V <sub>FM</sub>	1.2							V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	5.0 100							μA
Reverse Recovery Time (Note 2)	t <sub>rr</sub>	150				250	500		nS
Typical Junction Capacitance (Note 3)	C <sub>j</sub>	30							pF
Operating Temperature Range	T <sub>j</sub>	-65 to +125							°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150							°C

\*Glass passivated forms are available upon request

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case

2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A. See figure 5.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

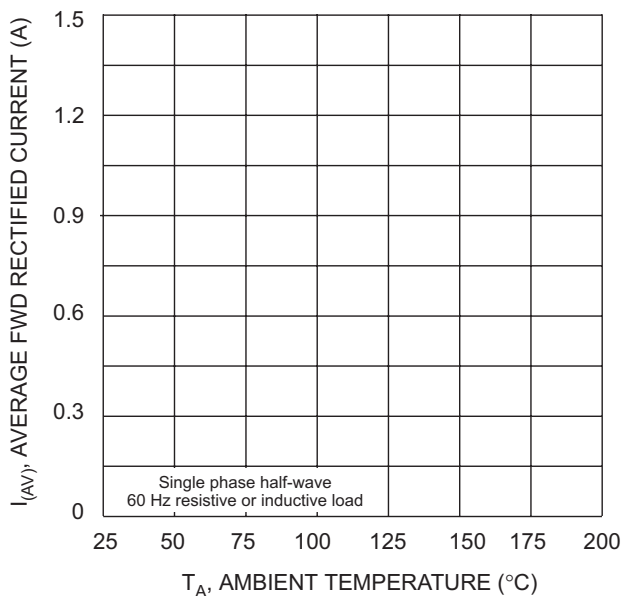


Fig. 1 Forward Derating Curve

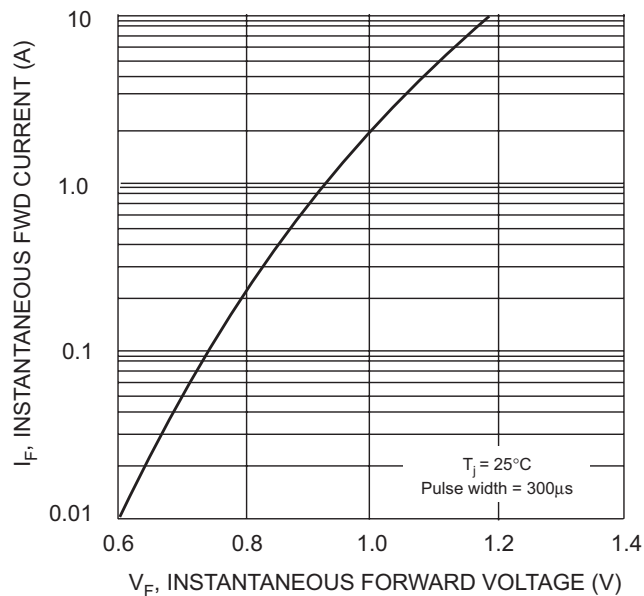


Fig. 2 Typical Forward Characteristics

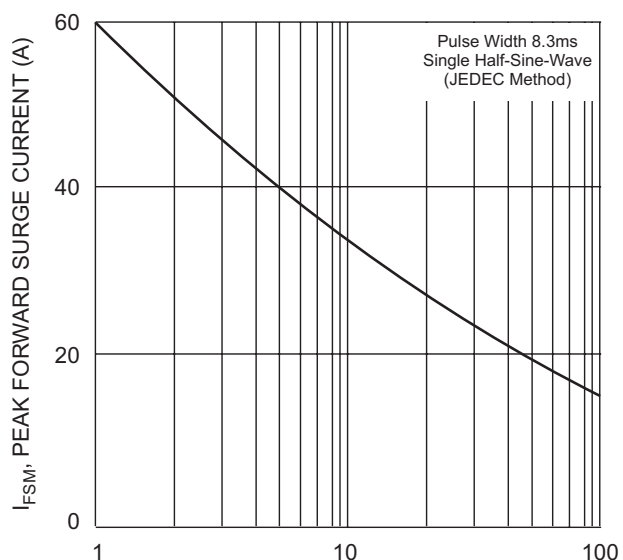


Fig. 3 Peak Forward Surge Current

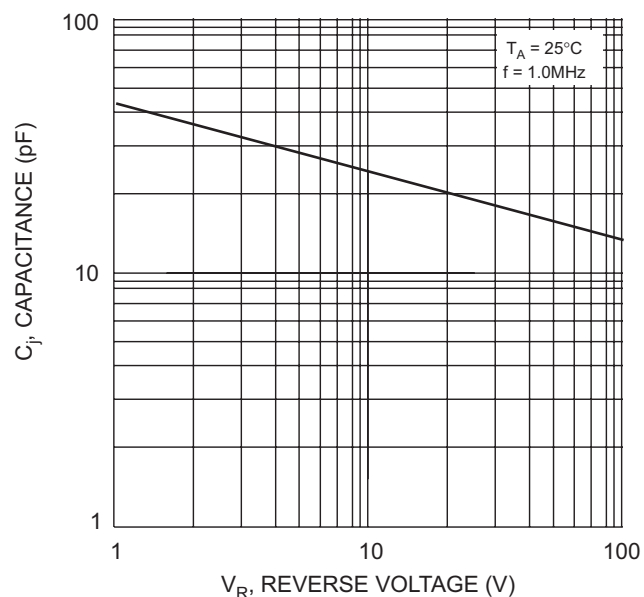
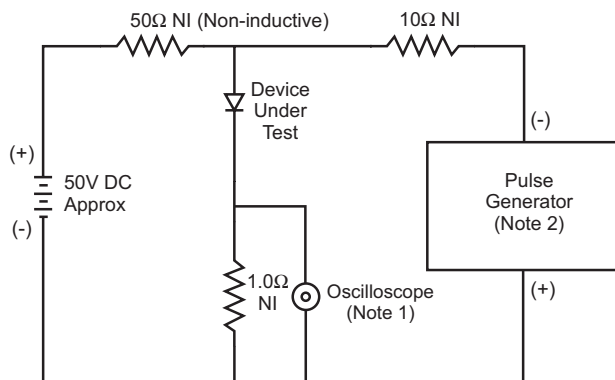
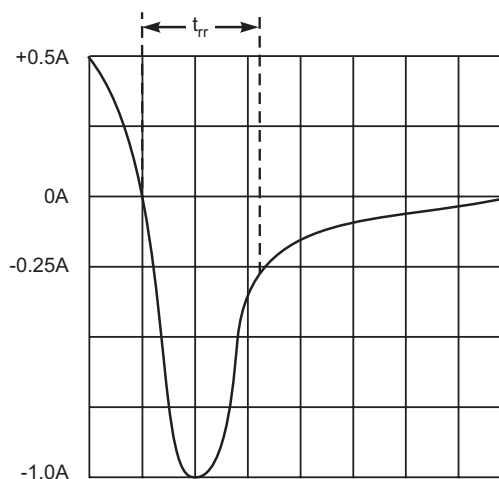


Fig. 4 Typical Junction Capacitance



Notes:

1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## ORDERING INFORMATION

Product No.♦	Package Type	Shipping Quantity
FR151-T3	DO-15	4000/Tape & Reel
<b>FR151-TB</b>	DO-15	3000/Tape & Box
FR151	DO-15	1000 Units/Box
FR152-T3	DO-15	4000/Tape & Reel
<b>FR152-TB</b>	DO-15	3000/Tape & Box
FR152	DO-15	1000 Units/Box
FR153-T3	DO-15	4000/Tape & Reel
<b>FR153-TB</b>	DO-15	3000/Tape & Box
FR153	DO-15	1000 Units/Box
FR154-T3	DO-15	4000/Tape & Reel
<b>FR154-TB</b>	DO-15	3000/Tape & Box
FR154	DO-15	1000 Units/Box
FR155-T3	DO-15	4000/Tape & Reel
<b>FR155-TB</b>	DO-15	3000/Tape & Box
FR155	DO-15	1000 Units/Box
FR156-T3	DO-15	4000/Tape & Reel
<b>FR156-TB</b>	DO-15	3000/Tape & Box
FR156	DO-15	1000 Units/Box
FR157-T3	DO-15	4000/Tape & Reel
<b>FR157-TB</b>	DO-15	3000/Tape & Box
FR157	DO-15	1000 Units/Box

Products listed in **bold** are WTE **Preferred** devices.

♦T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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