

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

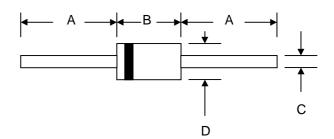
Terminals: Plated Leads Solderable per

MIL-STD-202, Method 208
Polarity: Cathode Band

• Weight: 0.40 grams (approx.)

Mounting Position: Any

Marking: Type Number



DO-15							
Dim	Min	Max					
Α	25.4						
В	5.50	7.62					
С	0.71	0.864					
D	2.60	3.60					
All Dimensions in mm							

Maximum Ratings and Electrical Characteristics @TA=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	Vrrm Vrwm Vr	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	VR(RMS)	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T _A = 55°C	lo	1.5					Α		
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	İFSM	60					Α		
Forward Voltage $@I_F = 1.5A$	VFM	1.2						V	
	lгм	5.0 100						μΑ	
Reverse Recovery Time (Note 2)	trr	150 250 500				nS			
Typical Junction Capacitance (Note 3)	Cj	30					pF		
Operating Temperature Range	Tj	-65 to +125					°C		
Storage Temperature Range	Тѕтс	-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 IF = 0.5A, IR = 1.0A, IRR = 0.25A. See figure 5.
 - 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

10 I_F, INSTANTANEOUS FWD CURRENT (A) 1.0 0.1 T_j = 25°C Single phase half-wave 60 Hz resistive or inductive load Pulse width = 300μs 0.01 100 125 150 175 200 75 0.6 8.0 1.2 1.4 T_A , AMBIENT TEMPERATURE (°C) V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 1 Forward Derating Curve Fig. 2 Typical Forward Characteristics 100 Pulse Width 8.3ms T_A = 25°C Single Half-Sine-Wave (JEDEC Method) f = 1.0MHzC_j, CAPACITANCE (pF) 10 100 100 1 10 10 V_R, REVERSE VOLTAGE (V) NUMBER OF CYCLES AT 60Hz Fig. 3 Peak Forward Surge Current Fig. 4 Typical Junction Capacitance +0.5A 50Ω NI (Non-inductive) $10\Omega\,NI$ Device Under (-) 0A Pulse 50V DC -0.25A Generator Approx (Note 2) 1.0Ω Oscilloscope (+)

1.5

1.2

0.9

0.6

0.3

0

60

40

20

1

(-)

I_{FSM}, PEAK FORWARD SURGE CURRENT (A)

25

(A), AVERAGE FWD RECTIFIED CURRENT (A)



-1.0A

0 NI

1. Rise Time = 7.0ns max. Input Impedance = $1.0M\Omega$, 22pF.

2. Rise Time = 10ns max. Input Impedance = 50Ω .

(Note 1)

Set time base for 5/10ns/cm