SFR151 THRU SFR157

SOFT FAST RECOVERY RECTIFIERS Reverse Voltage – 50 to 1000 Volts

Forward Current – 1.5 Amperes

Features

- Low forward voltage drop.
- High current capability.
- · High reliability.
- · High surge current capability.
- · Fast switching for high efficiency.

Mechanical Data

- Cases: Molded plastic
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed.
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed:

250°C/10 seconds/ 0.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension

DO-15

Dimensions in mm

Absolute Maximum Ratings and Characteristics

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

	Symbols	SFR 151	SFR 152	SFR 153	SFR 154	SFR 155	SFR 156	SFR 157	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375 "(9.5mm) lead length at $T_A = 55$ $^{\circ}$ C	I _(AV)	1.5						Α	
Peak forward surge current , 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	50						А	
Maximum instantaneous forward voltage @ 1.5A	V _F	1.2							V
Maximum DC reverse current @ $T_A = 25$ °C at rated DC blocking voltage @ $T_A = 75$ °C	I _R	5 100						μ Α μ Α	
Maximum reverse recovery time (Note 1)	Trr	120 200			350		nS		
Typical junction capacitance (Note 2)	CJ	30						pF	
Operating temperature range	TJ	-65 to +150						°С	
Storage temperature range	T _S	-65 to +150						°С	

Note: (1) Reverse recovery test conditions: I_F = 0.5A, I_R = 1A , I_{RR} = 0.25A.

(2) Measured at 1 MHz and applied reverse voltage of 4 Volts D.C.



SEMTECH ELECTRONICS LTD.

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Dated: 20/06/2003

RATINGS AND CHARACTERISTIC CURVES (SFR151 THRU SFR157)

Fig. 1-MAXIMUM FORWARD CURRENT DERATING CURVE

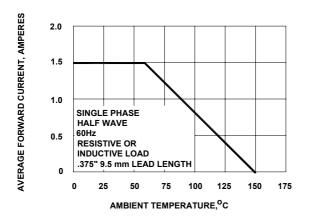


Fig. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

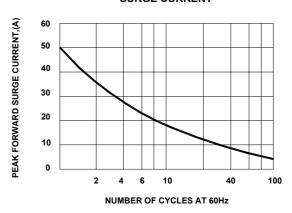


Fig. 3-TYPICAL FORWARD CHARACTERISTICS

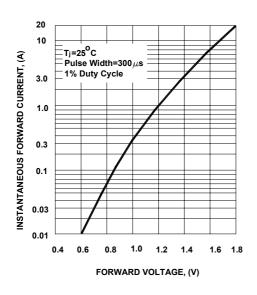


Fig. 4-TYPICAL JUNCTION CAPACITANCE

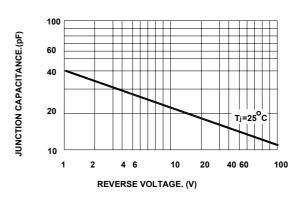
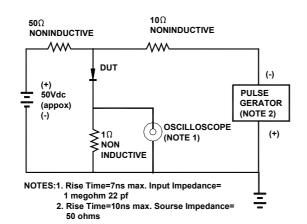
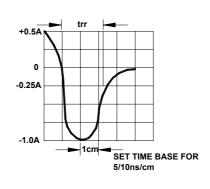


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM







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