

SFR151 THRU SFR157

SOFT FAST RECOVERY RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 1.5 Amperes

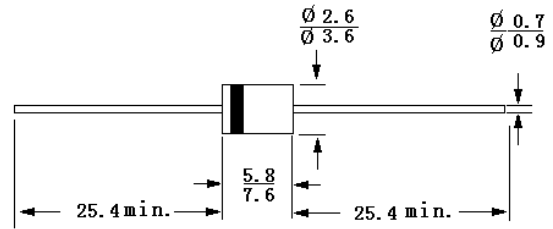
Features

- 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

D0-15



Dimensions in mm

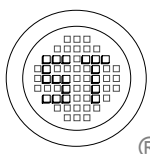
Absolute Maximum Ratings and Characteristics

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							A
Peak forward surge current , 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							A
Maximum instantaneous forward voltage @ 1.5A	V_F	1.2							V
Maximum DC reverse current @ $T_A = 25^\circ C$	I_R	5							μA
at rated DC blocking voltage @ $T_A = 75^\circ C$	I_R	100							μA
Maximum reverse recovery time (Note 1)	T_{rr}	120			200		350		nS
Typical junction capacitance (Note 2)	C_J	30							pF
Operating temperature range	T_J	-65 to +150							$^\circ C$
Storage temperature range	T_S	-65 to +150							$^\circ C$

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.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 550-1550-04-002-04

Dated : 20/06/2003

SFR151 THRU SFR157

RATINGS AND CHARACTERISTIC CURVES (SFR151 THRU SFR157)

Fig. 1-MAXIMUM FORWARD CURRENT DERATING CURVE

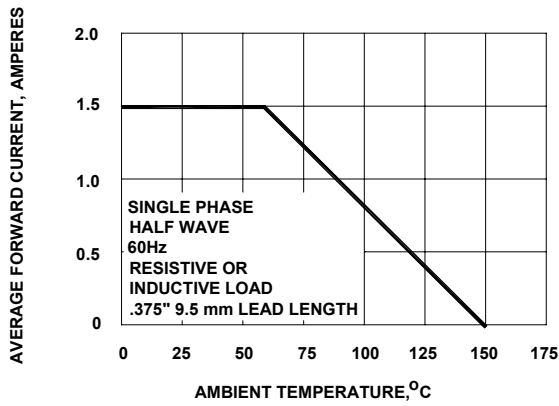


Fig. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

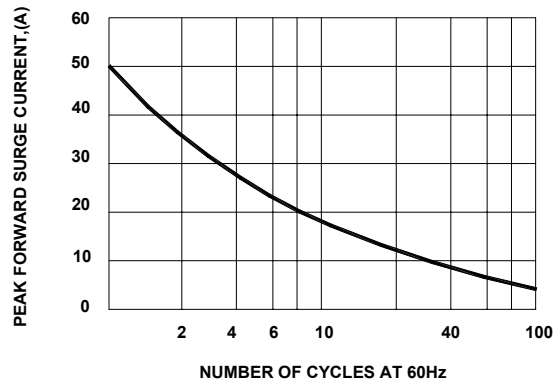


Fig. 3-TYPICAL FORWARD CHARACTERISTICS

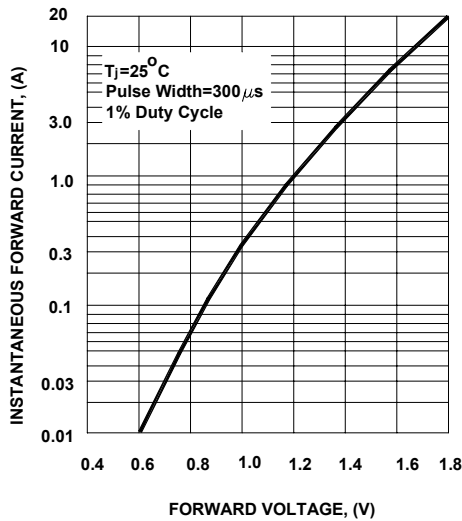


Fig. 4-TYPICAL JUNCTION CAPACITANCE

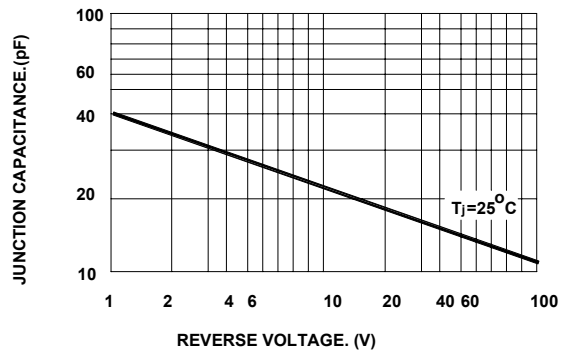
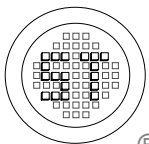
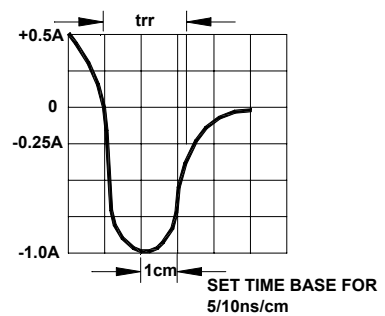
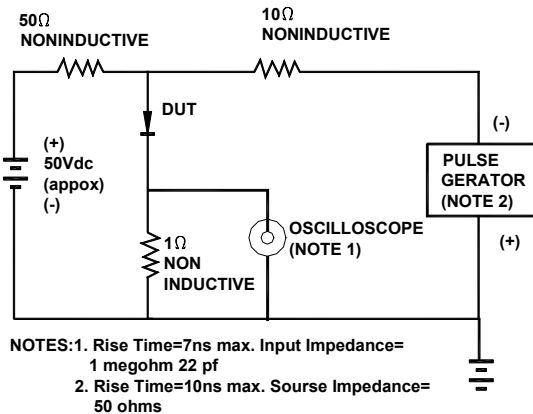


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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