

SFR151 THRU SFR157

SOFT FAST RECOVERY RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 1.5 Amperes

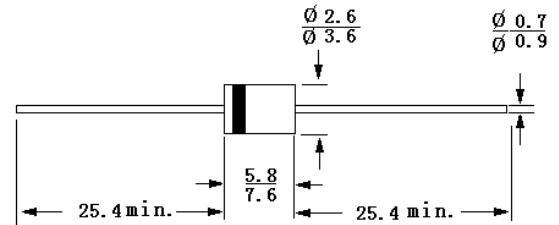
Features

- 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

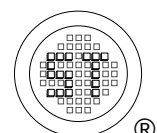
Absolute Maximum Ratings and Characteristics

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 °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 °C at rated DC blocking voltage @ T _A = 75 °C	I _R I _R	5 100							μA 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							°C
Storage temperature range	T _{Stg}	-65 to +150							°C

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

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



Dated : 20/06/2003

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RATINGS AND CHARACTERISTIC CURVES (SFR151 THRU SFR157)

Fig. 1-MAXIMUM FORWARD CURRENT DERATING CURVE

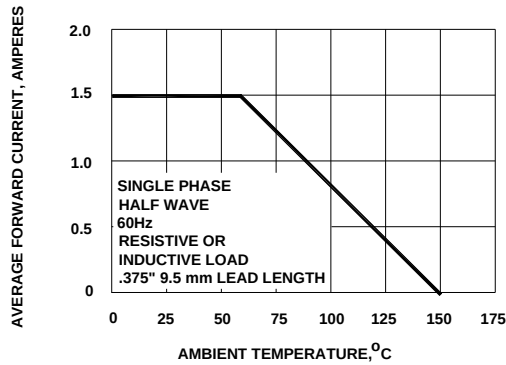


Fig. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

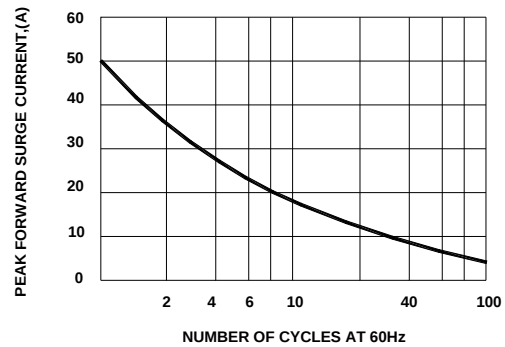


Fig. 3-TYPICAL FORWARD CHARACTERISTICS

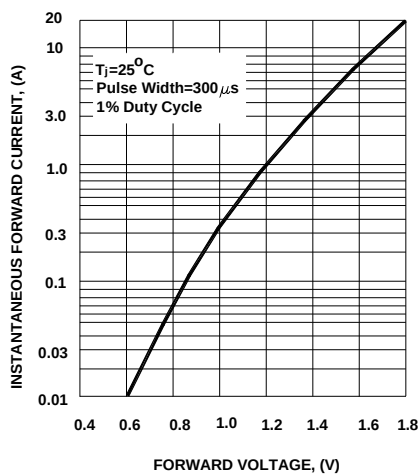


Fig. 4-TYPICAL JUNCTION CAPACITANCE

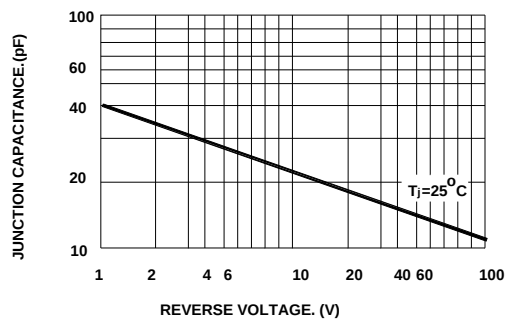


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

