



SOFT RECOVERY FAST SWITCHING RECTIFIER

SFR501 THRU SFR507

VOLTAGE RANGE
CURRENT

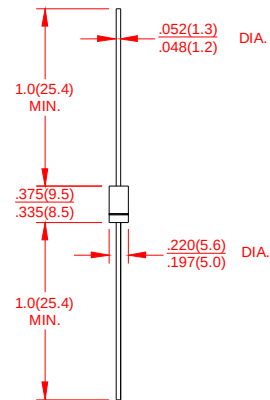
50 to 1000 Volts
5.0Ampere

FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 grams



DO-27

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings 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 501	SFR 502	SFR 503	SFR 504	SFR 505	SFR 506	SFR 507	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at T _A = 55℃	I _(AV)	5.0							Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I _{FSM}	200							Amps
Maximum Instantaneous Forward Voltage @ 5.0A	V _F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A = 25℃	25							μA
	T _A = 100℃	1.0							
Maximum Reverse Recovery Time (NOTE2) T _j =25℃	trr	100		150		200			ns
Typical Thermal Resistance (Note 1)	R _{θJA}	10							℃/W
Operating Junction Temperature Range	T _J	(-55 to +150)							℃
Storage Temperature Range	T _{STG}	(-55 to +150)							℃

Notes:

1. Thermal Resistance from junction to Ambient at .375”(9.5mm)lead length, P.C.board mounted,whith 1.1”× 1.1”(30×30mm)copper heatsink.
2. Reverse Recovery Test Conditions:If=0.5mA,Ir=1.0mA,Irr=0.25A



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RATING AND CHARACTERISTIC CURVES SFR501 THRU SFR507

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

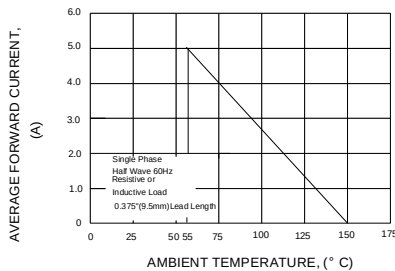


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

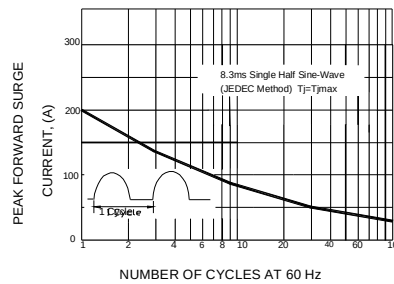


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

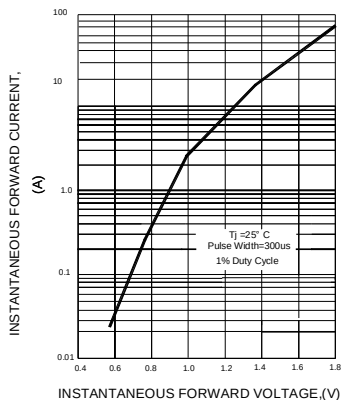


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

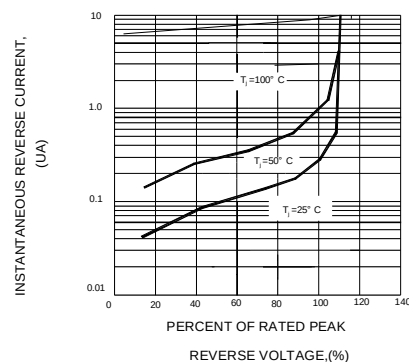


FIG.5-TYPICAL JUNCTION CAPACITANCE

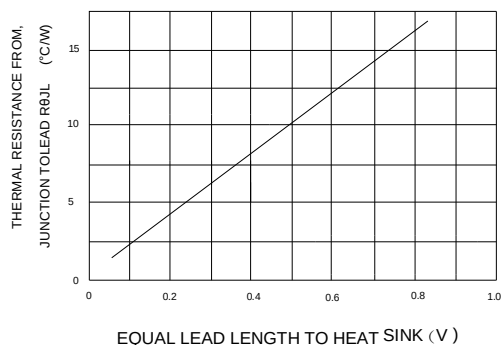
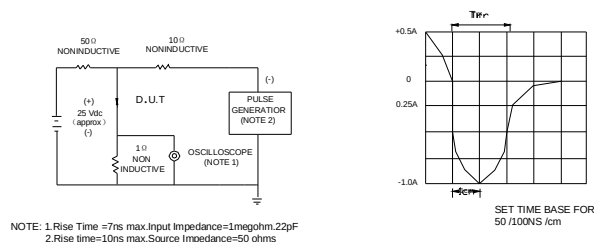


FIG.6-TEST CIRCUIT DIAGRAM AND
REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. Rise Time =7ns max. Input Impedance=1megohm. 22pF
2. Rise time=10ns max. Source Impedance=50 ohms