Soft Fast Recovery Rectifier

Features

- Fast switching speed for high efficiency
- Low reverse leakage
- High forward surge current capacity
- High temperature soldering guaranteed:
  260℃/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance

Mechanical Data

Case:	Transfer molded plastic
Polarity:	Color band denots cathode end
Epoxy:	UL94V-0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E method 208C
Mounting position:	Any
Weight:	0.07 ounce, 2.0 gram

Maximum Ratings *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	SFR501	SFR502	SFR503	SFR504	SFR505	SFR506	SFR507	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	**V**	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	**V**	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	**V**	
I(AV)	Max Average Forward Rectified Current	5.0							**A**	TC=55℃
IFSM	Peak Forward Surge Current	300							**A**	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +125, -55 to +150							℃	
RθJA	Typical Thermal Resistance	10							℃/W	Note 2

Electrical Characteristics *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	SFR501	SFR502	SFR503	SFR504	SFR505	SFR506	SFR507	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.3							**V**	3.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	25							**μA**	TA=25℃
		1.0							**mA**	TA=100℃
TRR	Maximum reverse recovery time	100		150		200			**nS**	Note 1

Note:

1. Reverse recovery test conditions: I_F= 0.5A, I_R=1.0A, I_{RR} = 0.25A
2. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

SFR501 ~ SFR507

RATINGS AND CHARACTERISTIC CURVES SFR501 THRU SFR507

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

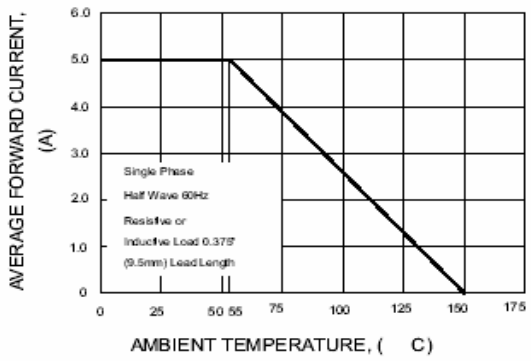


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

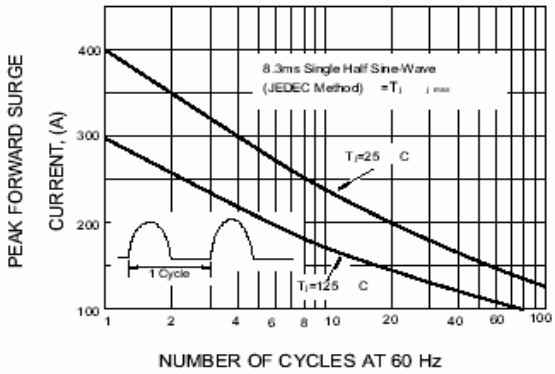


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

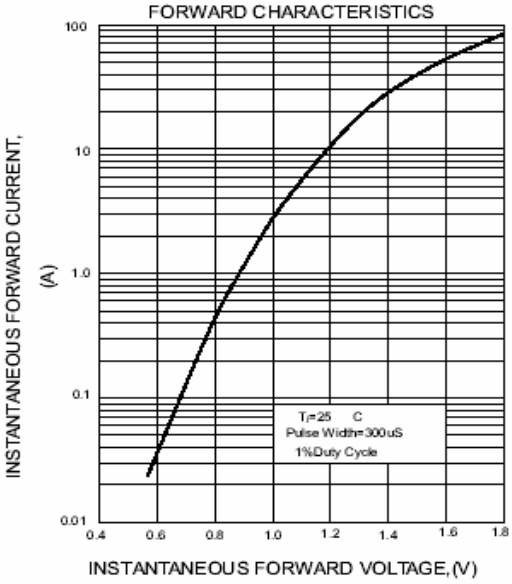


FIG.4-TYPICAL REVERSE CHARACTERISTICS

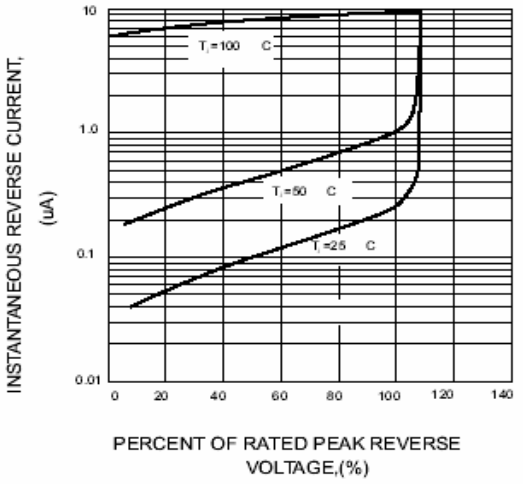


FIG.5-TYPICAL THERMAL RESISTANCE

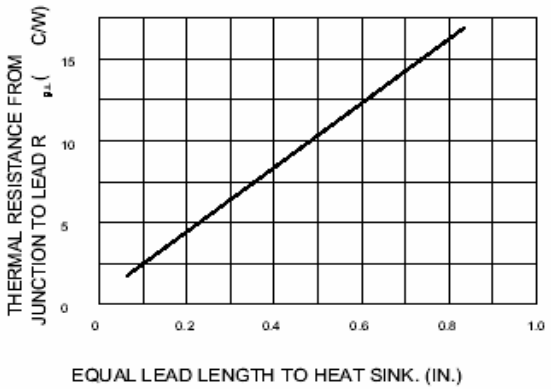
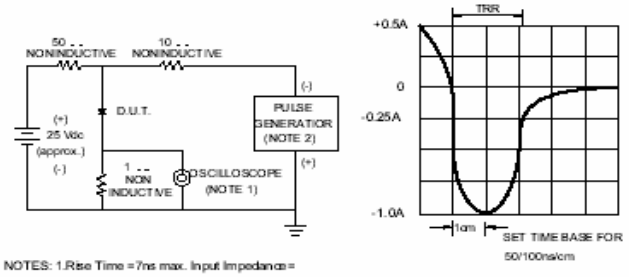


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm. 22pF

2.Rise time=10ns max. Source Impedance= 50 ohms

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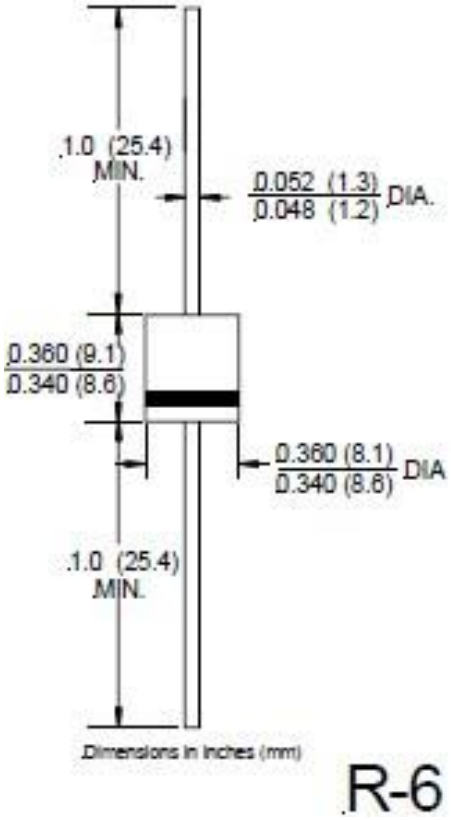
Dimensions in inches (mm)



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