



SUPER FAST GLASS PASSIVATED RECTIFIER SF81G ~ SF88G

Super Fast Glass Passivated Rectifier

Features

- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- Glass passivated chip junction
- Super fast switching speed
- High temperature soldering guaranteed:
250°C/10 seconds, 0.373" (9.5mm) lead length
- Also available with reversed polarity, add an "R" suffix, i.e. SF81GR
- RoHS and REACH Compliance



Mechanical Data

Case:	Transfer molded plastic
Polarity:	Color band denotes cathode end
Epoxy:	UL94V-0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E Method 208C
Mounting Position:	Any
Weight:	0.064 ounce, 1.81 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	SF81G	SF82G	SF83G	SF84G	SF85G	SF86G	SF87G	SF88G	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	150	200	300	400	500	600	V	
VRMS	Max RMS Voltage	35	70	105	140	210	280	350	420	V	
VDC	Max DC Blocking Voltage	50	100	150	200	300	400	500	600	V	
I(AV)	Max Average Forward Rectified Current	8.0								A	$T_c=125^{\circ}C$ Note 2
IFSM	Peak Forward Surge Current	150								A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150, -55 to +150								$^{\circ}C$	
Rθ-JA	Typical Thermal Resistance	3								$^{\circ}C/W$	Note 2

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	SF81G	SF82G	SF83G	SF84G	SF85G	SF86G	SF87G	SF88G	Unit	Conditions
VF	Max Instantaneous Forward Voltage	0.975		1.30			1.70			V	8.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10.0								μA	$T_A=25^{\circ}C$
		500									$T_A=125^{\circ}C$
TRR	Maximum reverse recovery time	35								nS	Note 1
CJ	Typical Junction capacitance	50				30				pF	Measured at 1.0MHz / 4.0V

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

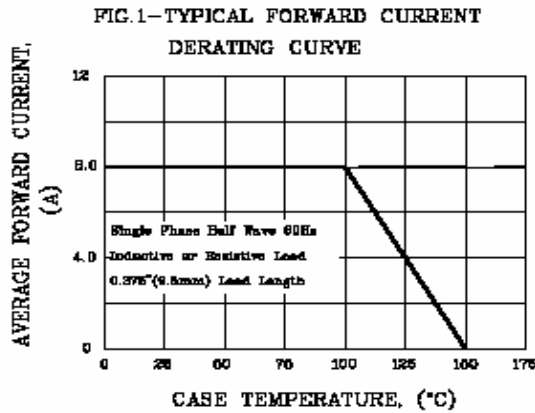
SF81G ~ SF88G
RATINGS AND CHARACTERISTIC CURVES SF81G THRU SF88G


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

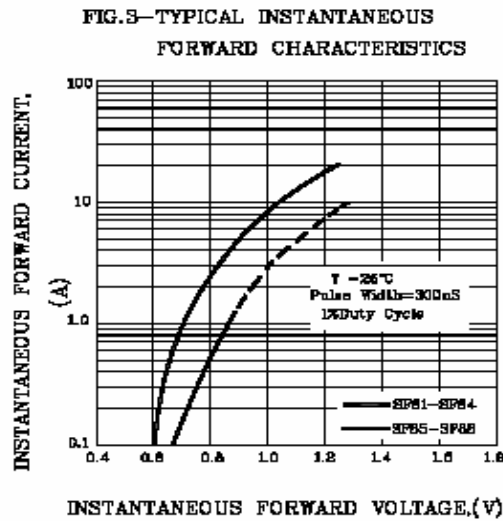
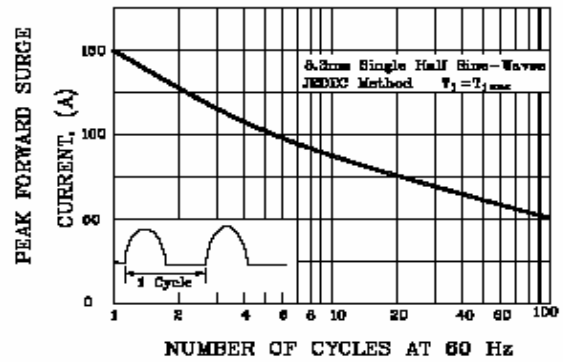


FIG.4-TYPICAL REVERSE CHARACTERISTICS

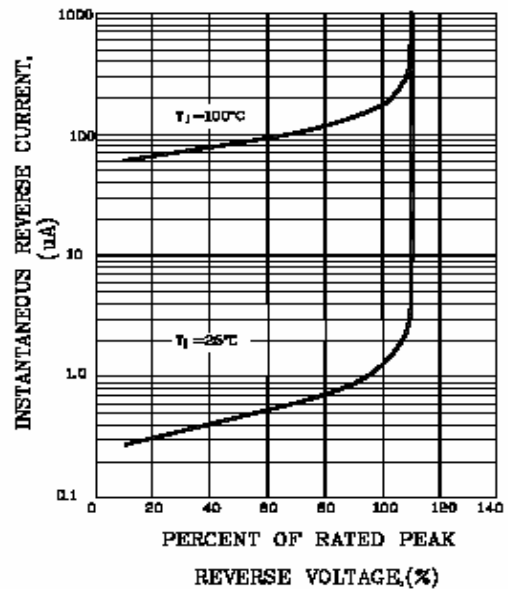


FIG.5-TYPICAL JUNCTION CAPACITANCE

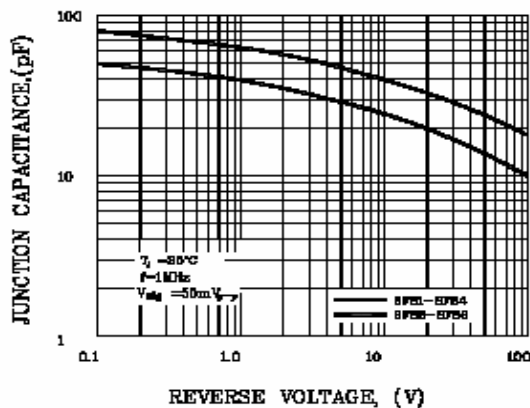
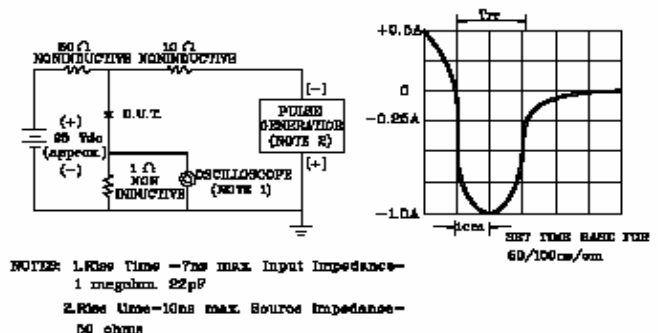
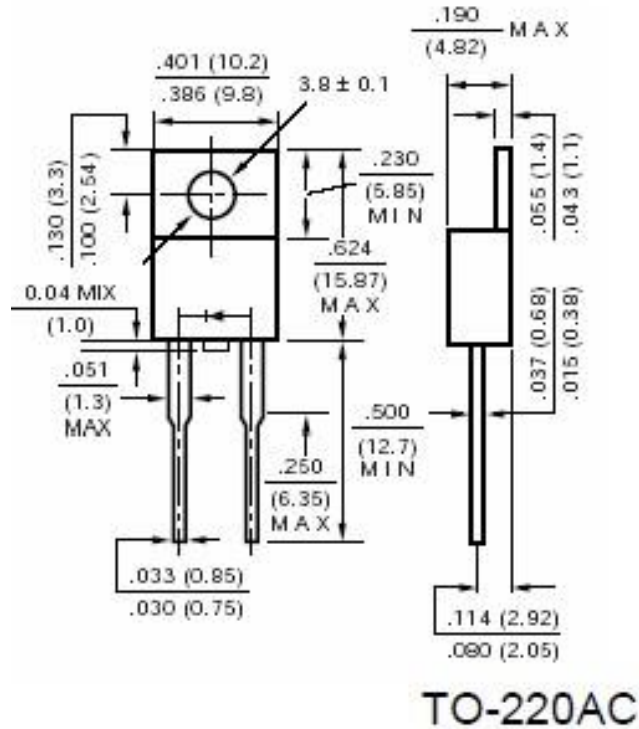


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



Dimensions in inches (mm)

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