



# FAST RECOVERY GLASS PASSIVATED RECTIFIER FR101SG ~ FR107SG

## Fast Recovery Glass Passivated Rectifier

### Features

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

### Mechanical Data

<b>Case:</b>	Transfer molded plastic
<b>Polarity:</b>	Color band denots cathode end
<b>Epoxy:</b>	UL94V-0 rate flame retardant
<b>Lead:</b>	Plated axial lead, solderable per MIL-STD-202E method 208C
<b>Mounting position:</b>	Any
<b>Weight:</b>	0.0081 ounce, 0.23 gram

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

Symbol	Description	FR101 SG	FR102 SG	FR103 SG	FR104 SG	FR105 SG	FR106 SG	FR107 SG	Unit	Conditions
<b>VRRM</b>	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
<b>VRMS</b>	Max RMS Voltage	35	70	140	280	420	560	700	V	
<b>VDC</b>	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
<b>I(AV)</b>	Max Average Forward Rectified Current	1.0							A	TC=55°C (Note 2)
<b>IFSM</b>	Peak Forward Surge Current	30							A	JEDEC method
<b>TJ,TSTG</b>	Operating and Storage Temperature Range	-65 to +175, -65 to +175							°C	
<b>Rθ-JA</b>	Typical Thermal Resistance	50							°C/W	Note 2

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

Symbol	Description	FR101SG	FR102SG	FR103SG	FR104SG	FR105SG	FR106SG	FR107SG	Unit	Conditions
<b>VF</b>	Max Instantaneous Forward Voltage	1.3							V	Drop per Bridge element 1.0A
<b>IR</b>	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	TA=25°C
		100							mA	TA=100°C
<b>TRR</b>	Maximum reverse recovery time	150		250			500	nS	Note 1	
<b>CJ</b>	Typical Junction Capacitance	15							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

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## RATINGS AND CHARACTERISTIC CURVES FR101SG THRU FR107SG

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

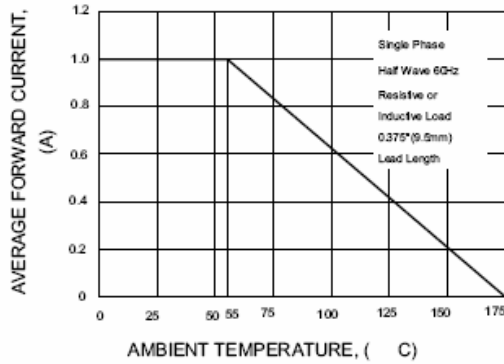


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

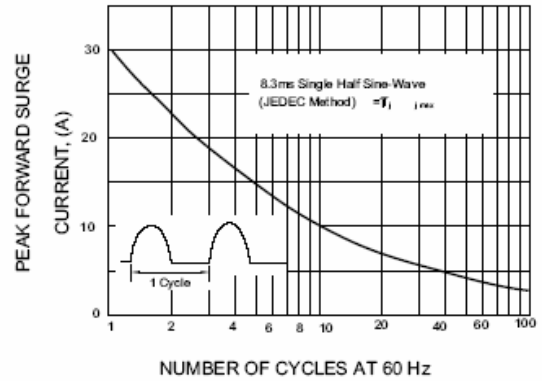


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

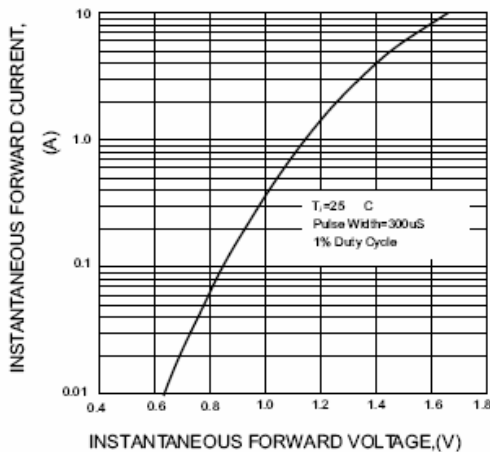


FIG.4-TYPICAL REVERSE CHARACTERISTICS

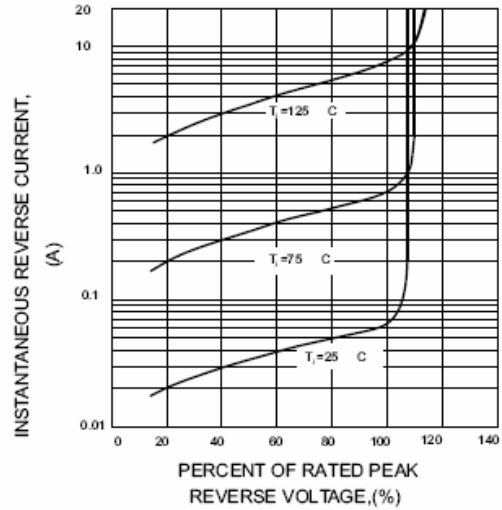


FIG.5-TYPICAL JUNCTION CAPACITANCE

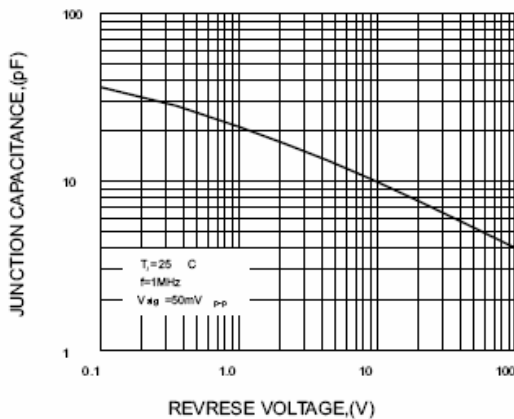
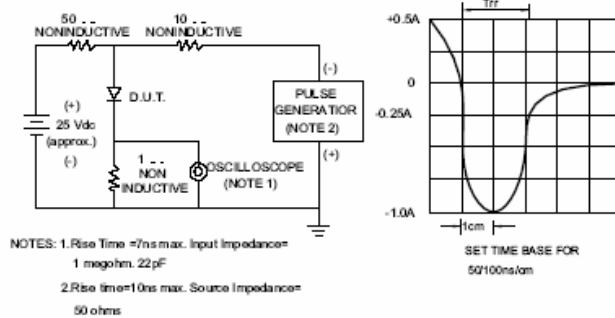
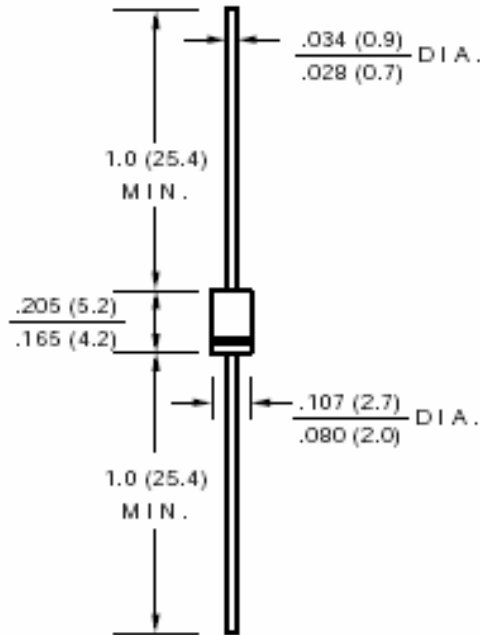


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



**FR101SG ~ FR107SG**

Dimensions in inches (mm)



Contact us:

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