



FAST RECOVERY GLASS PASSIVATED RECTIFIER FR601SG ~ FR607SG

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

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:	0.06 ounce, 1.70 gram

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

Symbol	Description	FR601 SG	FR602 SG	FR603 SG	FR604 SG	FR605 SG	FR606 SG	FR607 SG	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	6.0							A	TC=55°C
IFSM	Peak Forward Surge Current	250							A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-65 to +175, -65 to +175							°C	
Rθ-JA	Typical Thermal Resistance	10							°C/W	Note 2

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

Symbol	Description	FR601SG	FR602SG	FR603SG	FR604SG	FR605SG	FR606SG	FR607SG	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.3							V	6.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10.0							μA	TA=25°C
		500							mA	TA=125°C
TRR	Maximum reverse recovery time	150		250			500	nS	Note 1	
CJ	Typical Junction Capacitance	90							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

FR601SG ~ FR607SG

RATINGS AND CHARACTERISTIC CURVES FR601SG THRU FR607SG

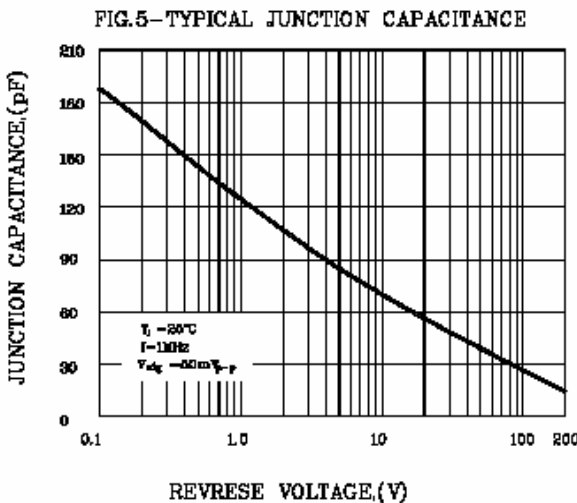
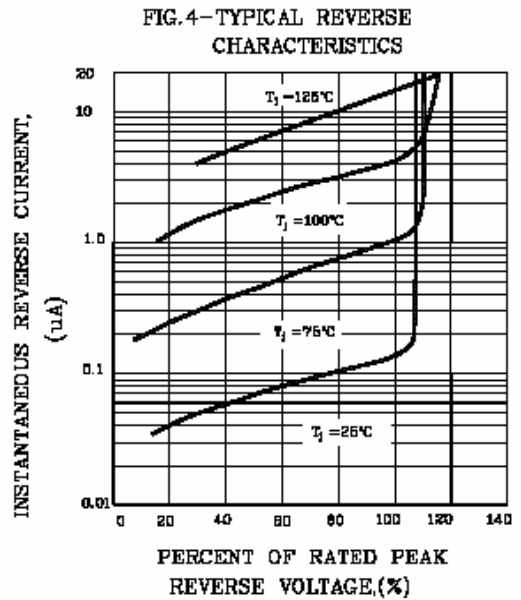
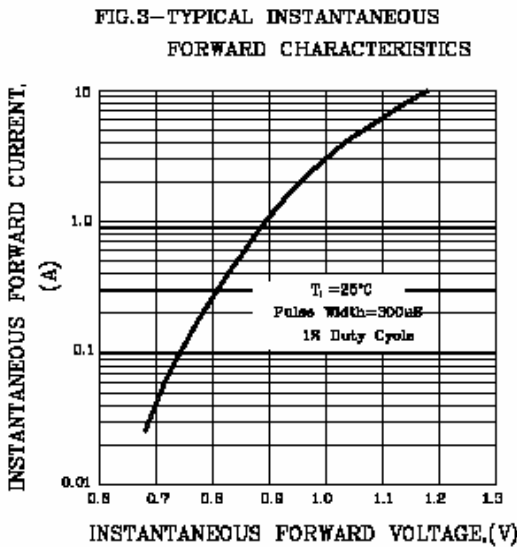
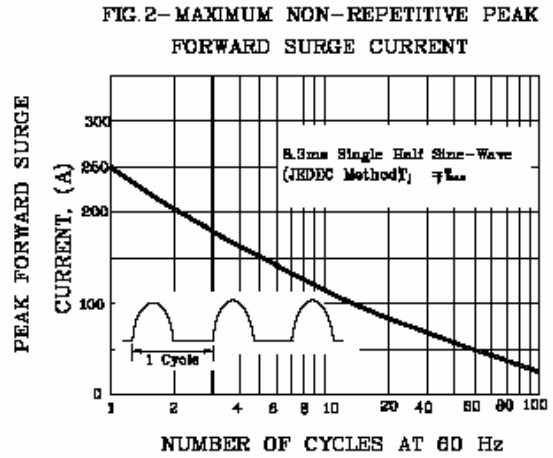
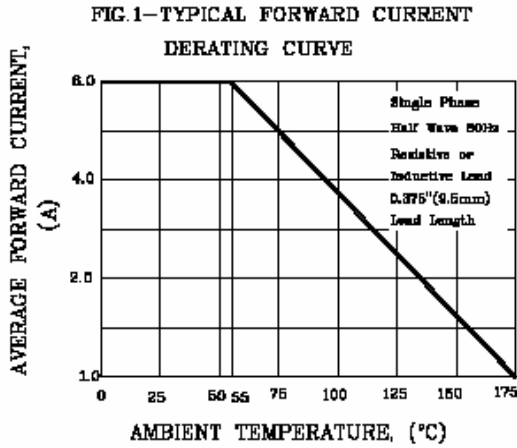
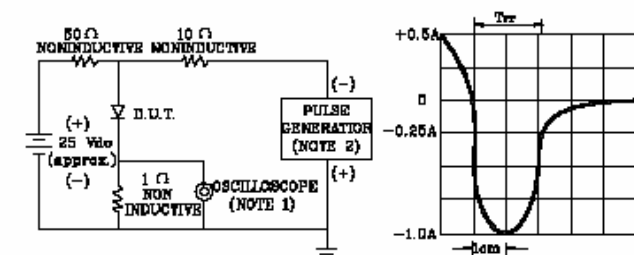


FIG.6—TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

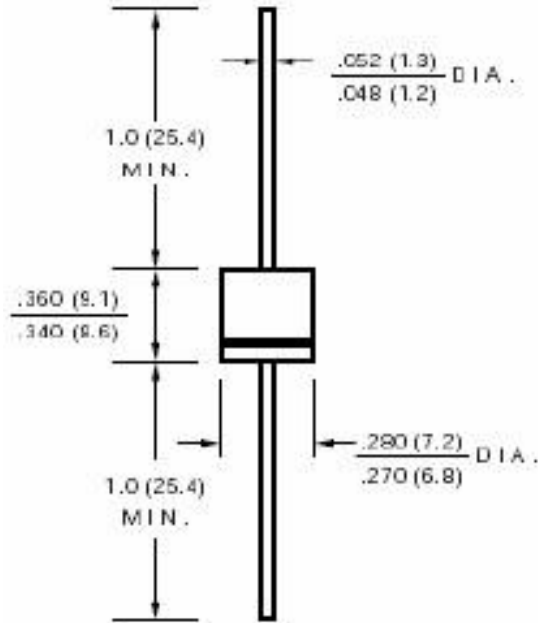


NOTES: 1. Rise Time = T_{rise} max. Input Impedance = 1 megohm, 20pF
2. Rise time = 10ns max. Source Impedance = 50 ohms

SET TIME BASE FOR 50/100ns/cm

FR601SG ~ FR607SG

Dimensions in inches (mm)



R-6S

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