



Ultra Fast Glass Passivated Rectifier

Features

- Fast switching speed for high efficiency
- Glass passivated chip junction
- Low reverse leakage
- High forward surge current capability
- 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 denotes cathode end.
Epoxy:	UL94V-0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E Method 208C
Mounting Position:	Any
Weight:	0.042 ounce, 1.19 gram

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

Symbol	Description	UF3001G	UF3002G	UF3003G	UF3004G	UF3005G	UF3006G	UF3007G	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 0.375" (9mm) lead length	3.0							A	TA=55°C
IFSM	Peak Forward Surge Current, 8.3ms single half sine – wave superimposed on rated load	150							A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150							°C	

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

Symbol	Description	UF3001G	UF3002G	UF3003G	UF3004G	UF3005G	UF3006G	UF3007G	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.0			1.7				V	3.0A
Rθ-JA	Typical Thermal Resistance	20							°C/W	Note 2
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10							µA	TA=25°C
		100								TA=125°C
TRR	Maximum reverse recovery time	50			75				nS	Note 1
CJ	Typical Junction capacitance	45							pF	Measured at 1.0MHz/4.0V

Note:

1. 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, P.C.B mounted.

UF3001G ~ UF3007G

RATINGS AND CHARACTERISTIC CURVES UF3001G THRU UF3007G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

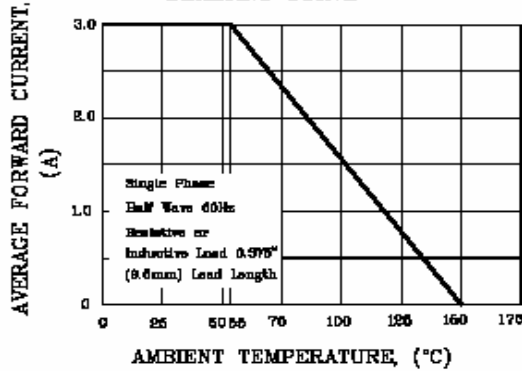


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

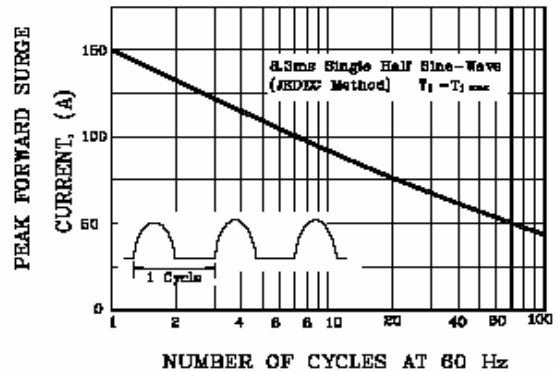


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

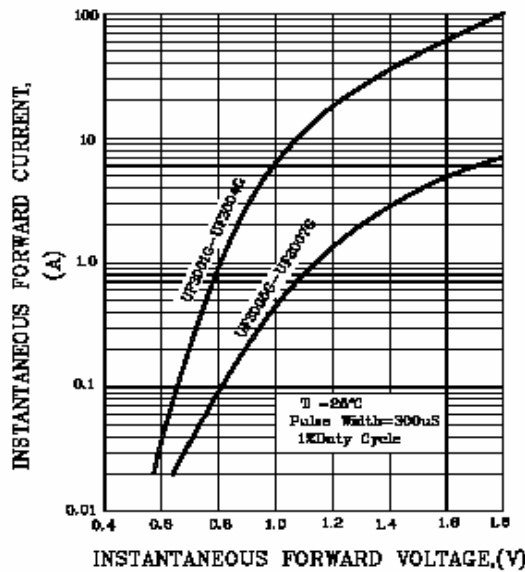


FIG.4-TYPICAL REVERSE CHARACTERISTICS

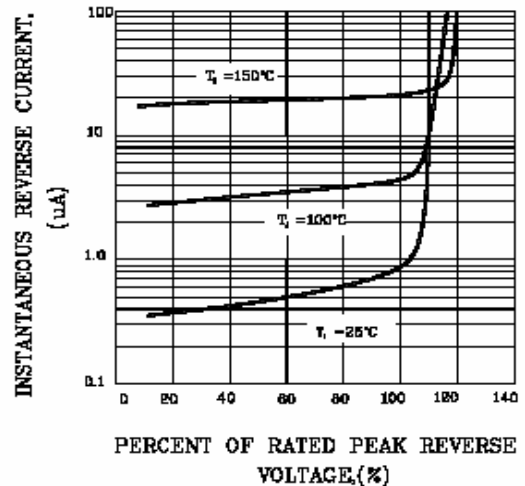


FIG.5-TYPICAL JUNCTION CAPACITANCE

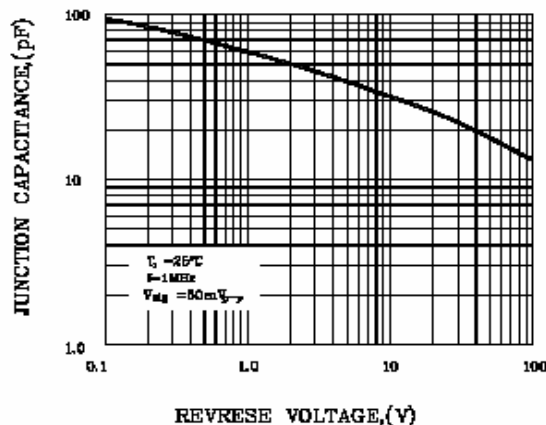
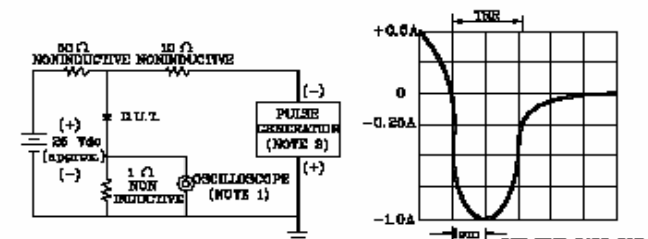
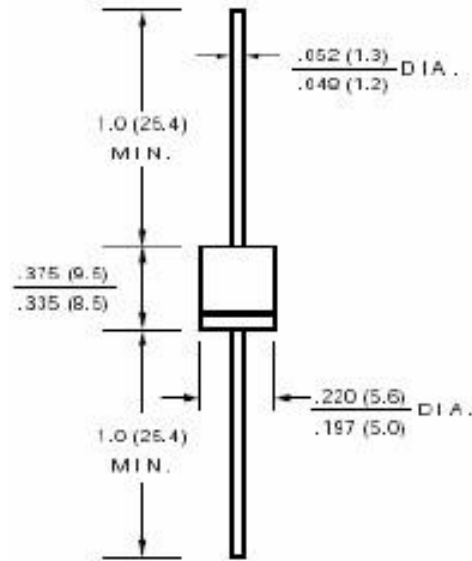


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22pF
2. Rise time = 10ns max. Source Impedance = 60 ohms

Dimensions in inches (mm)



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