Ultra Fast Rectifier

Features

- Fast switching speed for high efficiency
- Low reverse leakage
- Low forward voltage
- High forward surge current capability
- 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 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=25ºC unless noted otherwise)*

Symbol	Description	UF5400	UF5401	UF5402	UF5404	UF5406	UF5407	UF5408	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℃
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	-65 to +150							℃	

Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	UF5400	UF5401	UF5402	UF5403	UF5404	UF5406	UF5408	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.0			1.7				**V**	3.0A
RθJA	Typical Thermal Resistance	20							℃/W	Note 2
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10							**μA**	TA=25℃
		50								TA=125℃
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.

UF5400 ~ UF5408

RATINGS AND CHARACTERISTIC CURVES UF5400 THRU UF5408

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

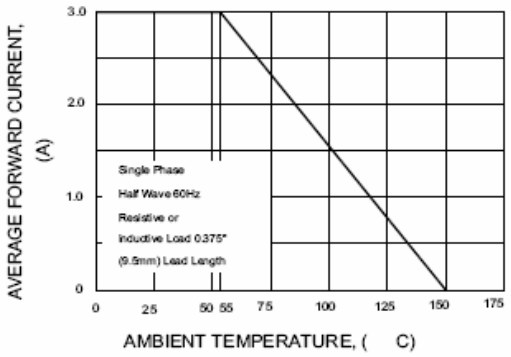


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

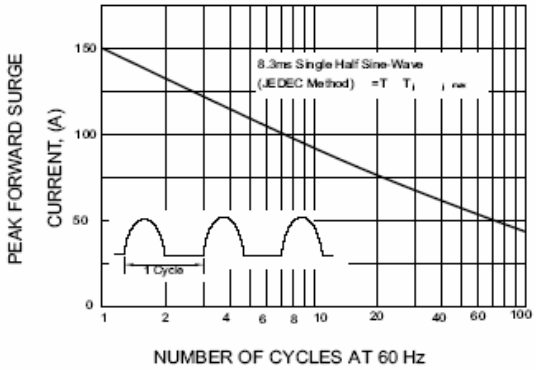


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

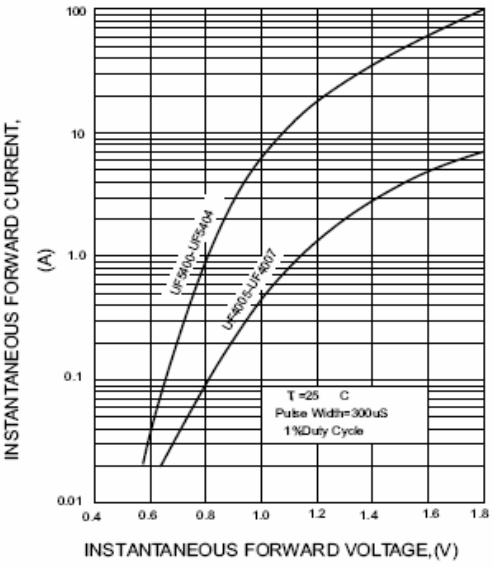


FIG.4-TYPICAL REVERSE CHARACTERISTICS

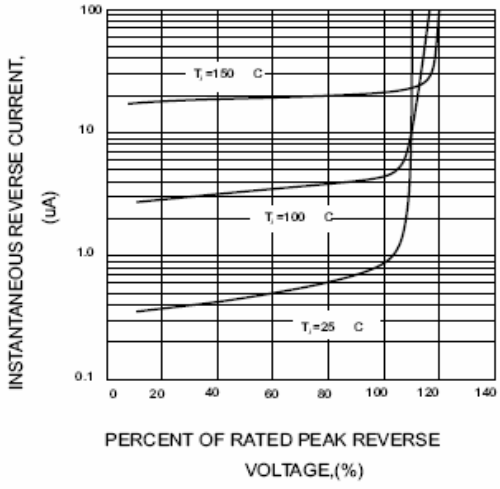


FIG.5-TYPICAL JUNCTION CAPACITANCE

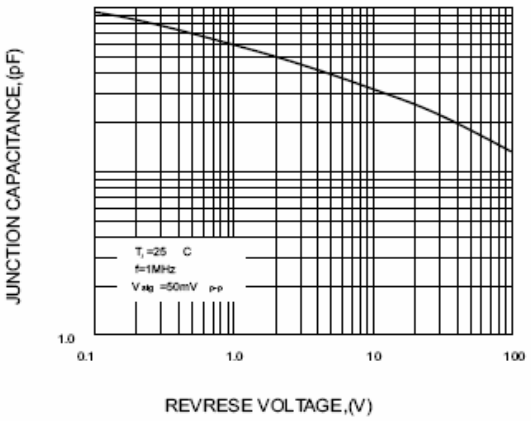
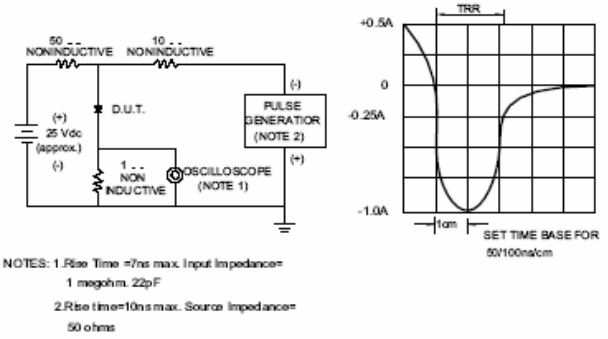


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

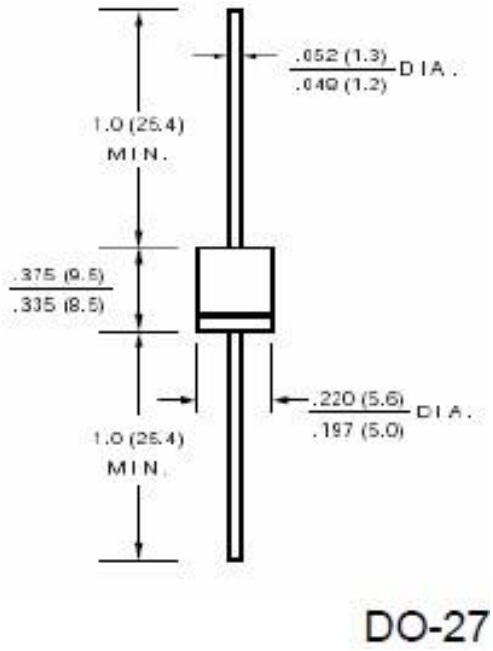


NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm. 22pF

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

UF5400 ~ UF5408

Dimensions in inches (mm)



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