



## Features

- ◊ Plastic package has Underwriters Laboratory Flammability Classification 94V0
- ◊ Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- ◊ Glass passivated chip junction
- ◊ Excellent high temperature switching
- ◊ Ultrafast recovery time for high efficiency
- ◊ Soft recovery characteristics
- ◊ High temperature soldering guaranteed: 260°C/10 seconds/.375",(9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◊ Green compound with suffix "G" on packing code & prefix "G" on datecode.

## Mechanical Data

- ◊ Case: JEDEC DO-204AL molded plastic body over passivated chip
- ◊ Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
- ◊ Polarity: Color band denotes cathode
- ◊ Mounting Position: Any
- ◊ Weight: 0.012 ounce, 0.34 gram

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

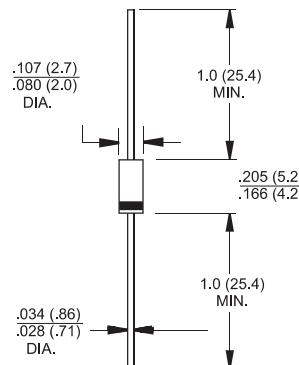
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	UF1M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @T <sub>A</sub> = 55 °C	I <sub>(AV)</sub>				1.0				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>				30				A
Maximum Instantaneous Forward Voltage @ 1.0A	V <sub>F</sub>		1.0			1.7			V
Maximum DC Reverse Current @ T <sub>A</sub> =25 °C at Rated DC Blocking Voltage @ T <sub>A</sub> =125 °C	I <sub>R</sub>			5.0	150				uA uA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>		50			75			nS
Typical Junction Capacitance ( Note 2 )	C <sub>j</sub>			17					pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub> R <sub>θJL</sub>			60	15				°C/W
Operating/Storage Temperature Range	T <sub>J</sub> , T <sub>TSTG</sub>			-55 to + 150					°C

Notes:

1. Reverse Recovery Test Conditions: I<sub>f</sub>=0.5A, I<sub>r</sub>=1.0A, I<sub>RR</sub>=0.25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
3. Thermal Resistance from junction to ambient and from Junction to Lead length .375" (9.5mm), Mounted on 0.2" x 0.2" (5mm x 5mm) Cu pads.



Dimensions in inches and (millimeters)

### Marking Diagram



UF1X = Specific Device Code  
G = Green Compound  
Y = Year  
WW = Work Week

## RATINGS AND CHARACTERISTIC CURVES (UF1A THRU UF1M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

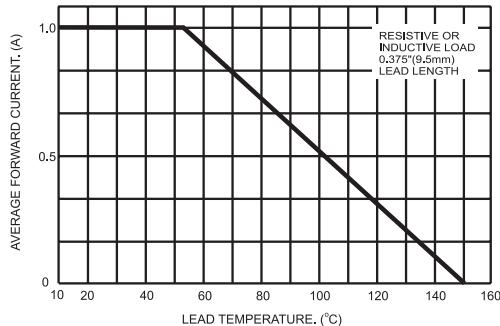


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

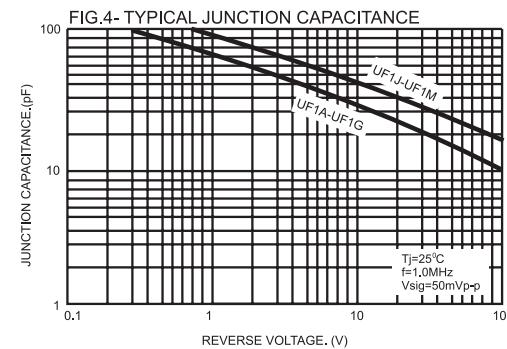
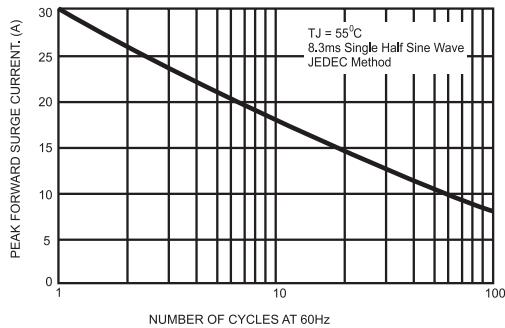


FIG.2- TYPICAL FORWARD CHARACTERISTICS

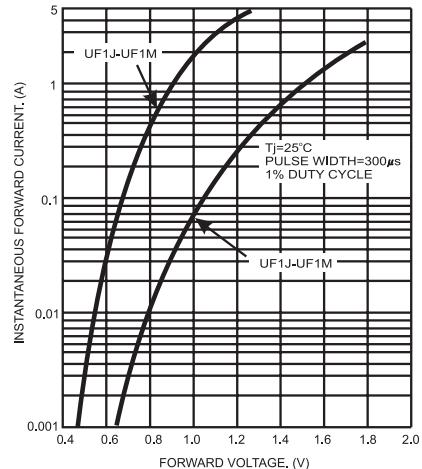


FIG.5- TYPICAL REVERSE CHARACTERISTICS

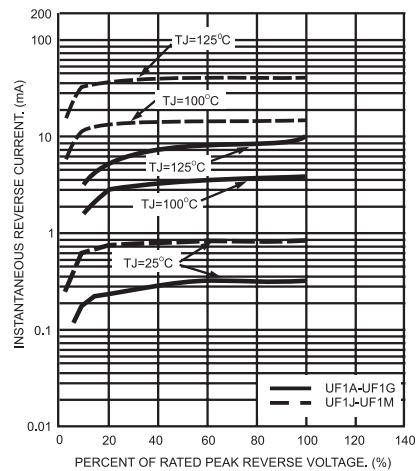
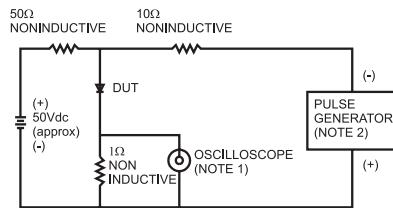


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max, Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max, Source Impedance= 50 ohms

