

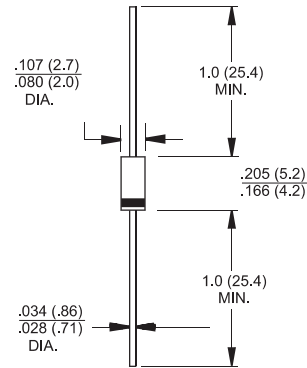


## Features

- 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



Dimensions in inches and (millimeters)

Marking Diagram



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

## 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
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>STG</sub>	-55 to + 150							°C

Notes:

1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

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.

## RATINGS AND CHARACTERISTIC CURVES (UF1A THRU UF1M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

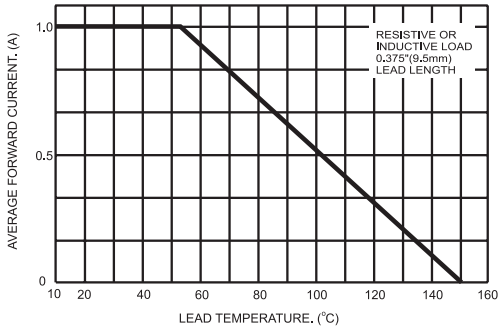


FIG.2- TYPICAL FORWARD CHARACTERISTICS

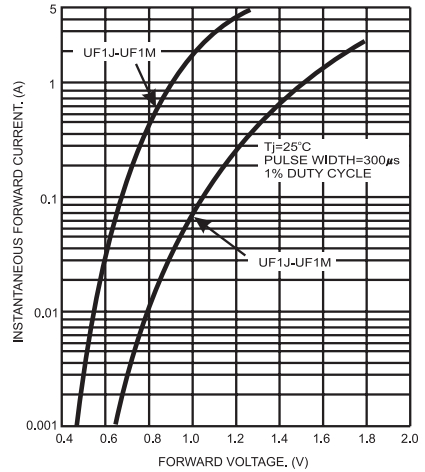


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

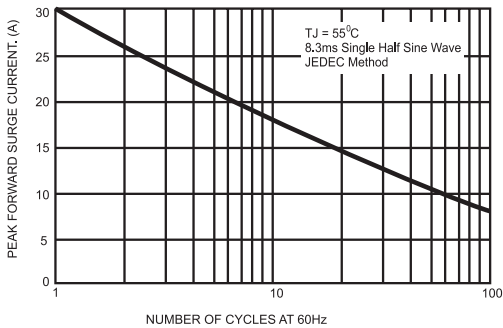


FIG.5- TYPICAL REVERSE CHARACTERISTICS

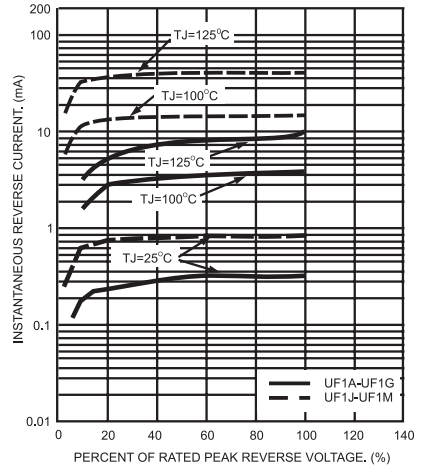


FIG.4- TYPICAL JUNCTION CAPACITANCE

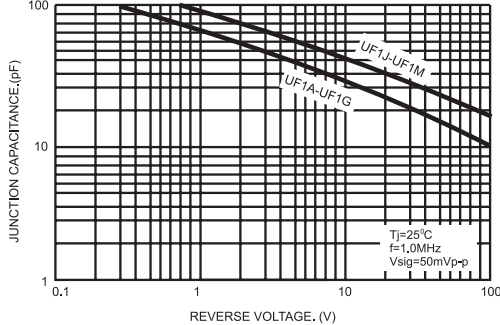


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

