



# UF1A THRU UF1M

## 1.0 AMP. Glass Passivated Ultrafast Plastic Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

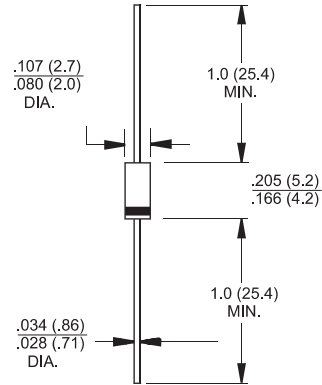
### Features

- ✧ Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- ✧ 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

### Mechanical Data

- ✧ Case: JEDEC DO-204AL molded plastic body over passivated chip
- ✧ Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode end
- ✧ Mounting Position: Any
- ✧ Weight: 0.012 ounce, 0.34 gram

### DO-204AL (DO-41)



Dimensions in inches and (millimeters)

### 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	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 55^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.0				1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	10.0				50.0			$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	50				75			nS
Typical Junction Capacitance ( Note 2 )	$C_j$	17.0							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	60.0				15.0			$^\circ\text{C/W}$
Operating/Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150							$^\circ\text{C}$

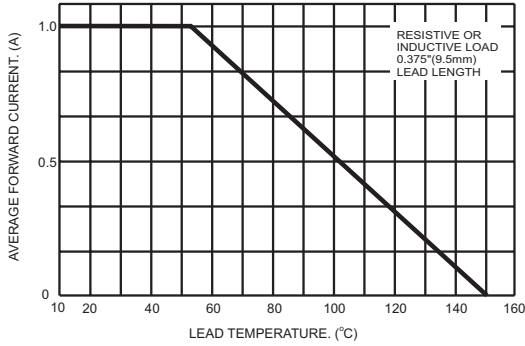
Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

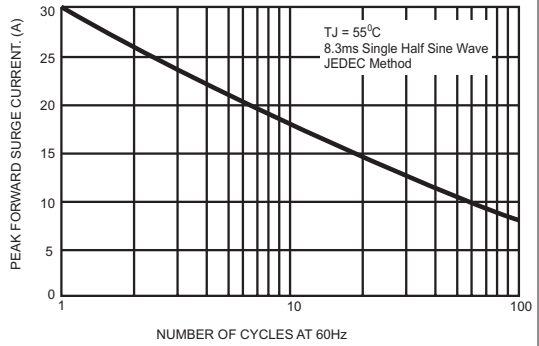
3. Thermal Resistance from junction to ambient and from Junction to Lead length .375"(9.5mm), Mounted on 0.2" x 0.2" (5mm x 5mm) Cu pads.

## RATINGS AND CHARACTERISTIC CURVES (UF1A THRU UF1M)

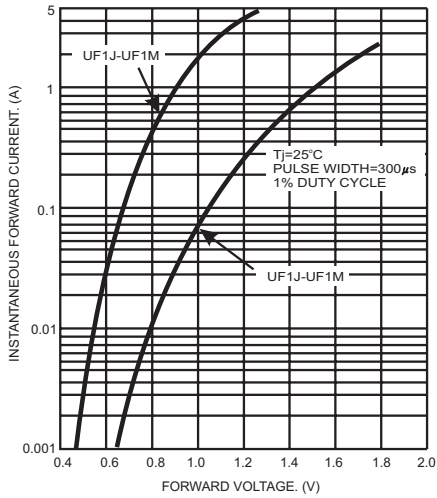
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



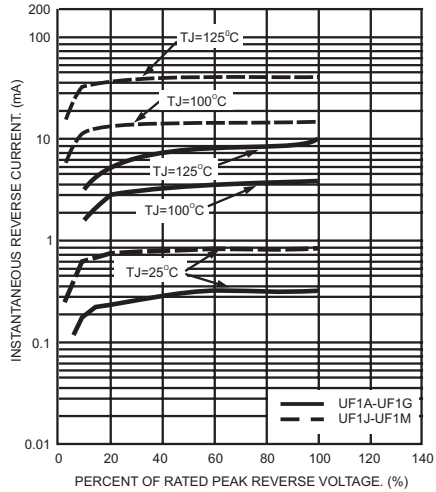
**FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**

