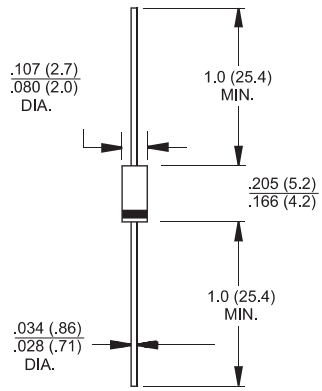
UF1A THRU UF1M

1.0 AMP. Glass Passivated Ultrafast Plastic Rectifiers

Voltage Range
50 to 1000 Volts
Current
1.0 Ampere

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

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

Maximum Ratings and Electrical Characteristics

Rating at 25℃ 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℃	$I_{(AV)}$	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℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	10.0 50.0							uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	50				75			nS
Typical Junction Capacitance (Note 2)	Cj	17.0							pF
Typical Thermal Resistance (Note 3)	$R\theta_{JA}$ $R\theta_{JL}$	60.0 15.0							℃/W
Operating/Storage Temperature Range	T_J, TSTG	-55 to + 150							℃

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

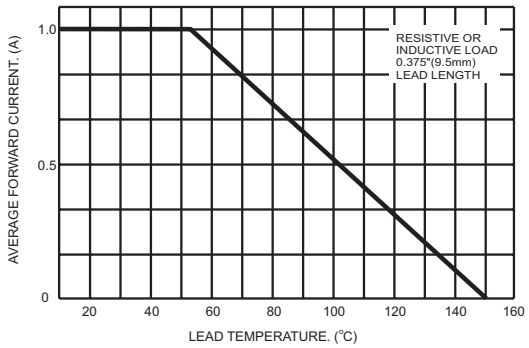


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

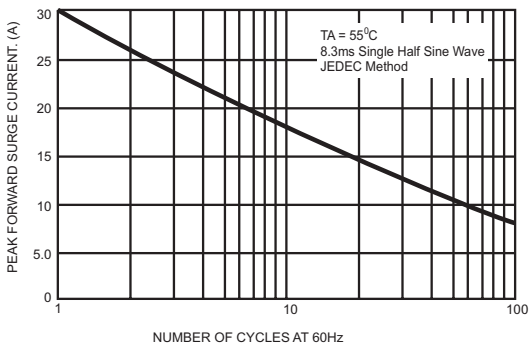


FIG.3- TYPICAL FORWARD CHARACTERISTICS

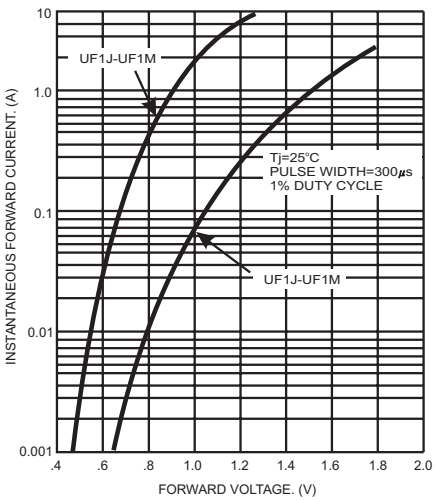


FIG.4- TYPICAL REVERSE CHARACTERISTICS

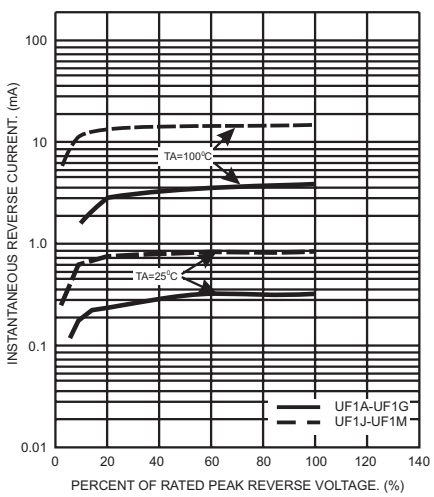


FIG.5- TYPICAL JUNCTION CAPACITANCE