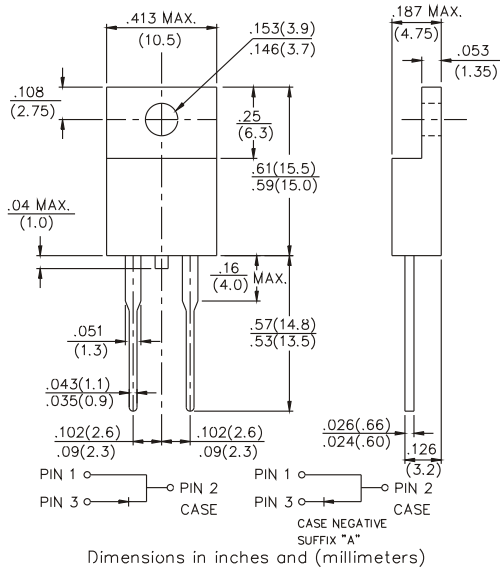
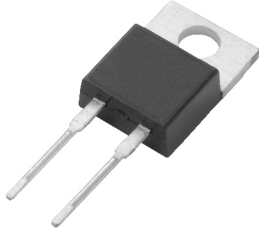


# UF1000 thru UF1008

**SURFACE MOUNT REVERSE VOLTAGE 50 TO 800 VOLTS**

**ULTRA FAST RECTIFIERS FORWARD CURRENT -10 AMPERES**

**TO-220AC**



## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency
- Low forward voltage, high current capability
- High surge capacity
- Ultra Fast recovery times, high voltage
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

## MECHANICAL DATA

- Case: TO-220AC molded plastic
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 0. ounce, 2.24 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS @ T<sub>A</sub>=25°C unless otherwise specified

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOL	UF1000	UF1001	UF1002	UF1003	UF1004	UF1006	UF1008	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length @ T <sub>c</sub> =100°C	I <sub>F</sub>	10							A
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	150							A
Maximum Instantaneous Forward Voltage at 10.0A	V <sub>F</sub>	1.0		1.3		1.7		V	
Maximum DC Reverse Current @ T <sub>A</sub> =25°C	I <sub>R</sub>	10.0							µA
at Rated DC Blocking Voltage @ T <sub>A</sub> =125°C		500							µA
Maximum Reverse Recovery Time(Note 1)		50					75		ns
Typical Junction capacitance (Note 2)		80					50		pF
Typical Junction Resistance (Note 2) R <sub>θJA</sub>		15							°C/W
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>	TSTG	-55 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

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## SURFACE MOUNT REVERSE VOLTAGE 50 TO 800 VOLTS

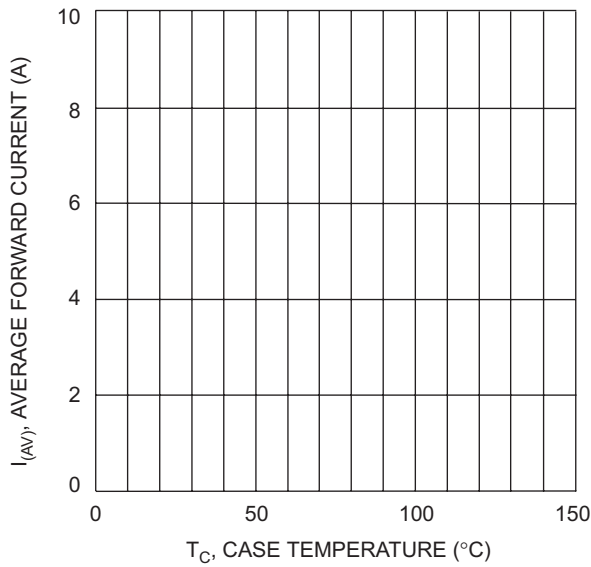


Fig. 1 Forward Current Derating Curve

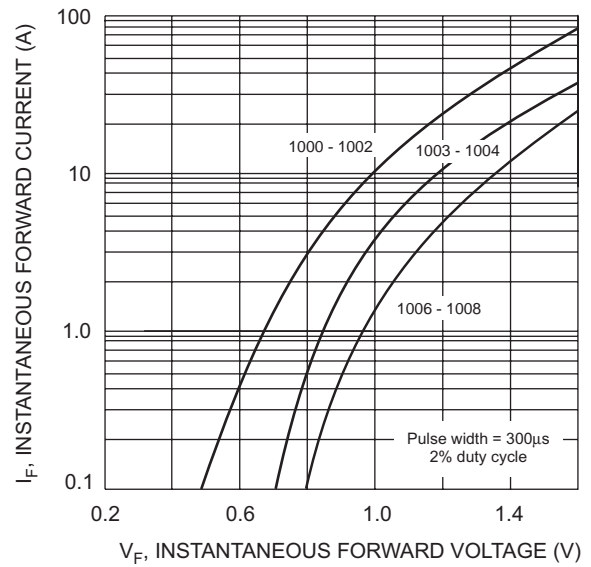


Fig. 2 Typical Forward Characteristics

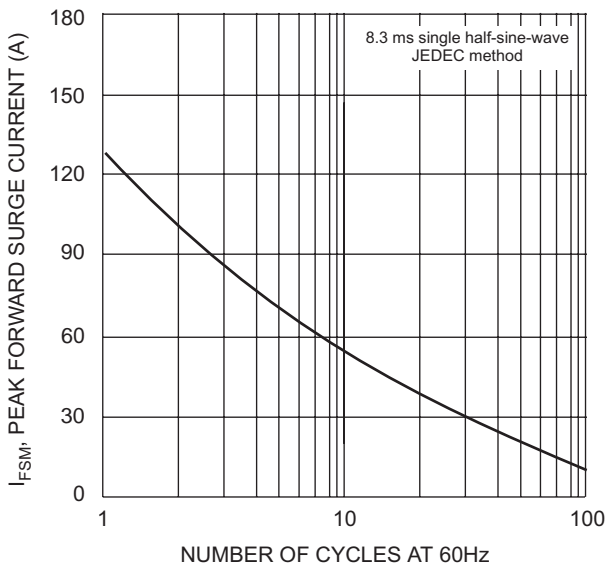


Fig. 3 Max Non-Repetitive Surge Current

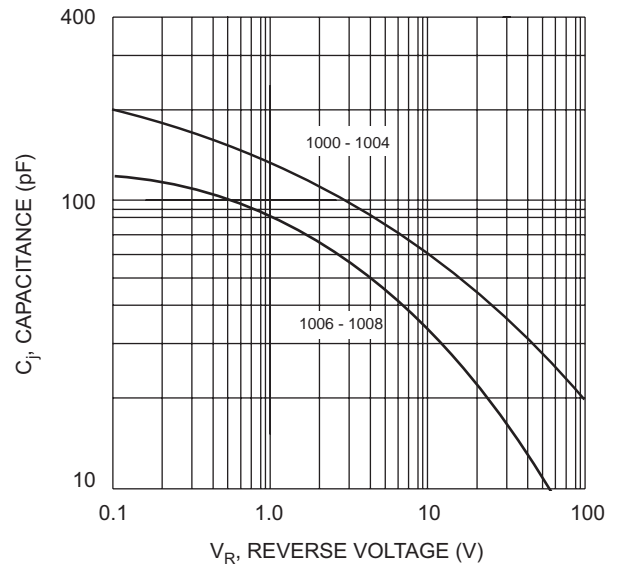


Fig. 4 Typical Junction Capacitance