

# UF1001 THRU UF1007

**ULTRAFAST EFFICIENT  
PLASTIC SILICON RECTIFIER**  
VOLTAGE: 50 TO 1000V      CURRENT: 1.0A



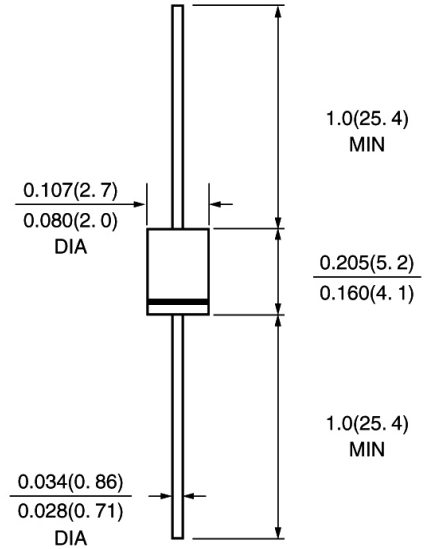
## FEATURE

Low power loss  
High surge capability  
Glass passivated chip junction  
Ultra-fast recovery time for high efficiency  
High temperature soldering guaranteed  
250°C/10sec/0.375" lead length at 5 lbs tension

## MECHANICAL DATA

Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C  
Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy  
Polarity: color band denotes cathode  
Mounting position: any

## DO-41\DO-204AL



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	UF 1001	UF 1002	UF 1003	UF 1004	UF 1005	UF 1006	UF 1007	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>d</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8" lead length at T <sub>a</sub> =55°C	I <sub>f(av)</sub>	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	30.0							A
Maximum Forward Voltage at Forward current 1A Peak	V <sub>f</sub>	1.0		1.3		1.7		V	
Maximum DC Reverse Current T <sub>a</sub> =25°C at rated DC blocking voltage T <sub>a</sub> =120°C	I <sub>r</sub>	5.0 100.0							μ A μ A
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	50				75			nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	20				10			pF
Typical Thermal Resistance (Note 3)	R(ja)	25.0							°C/W
Storage and Operating Junction Temperature	T <sub>stg</sub> , T <sub>j</sub>	-55 to +150							°C

### Note:

- Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0V<sub>d</sub>
- Thermal Resistance from Junction to Ambient at 3/8" lead length, P.C. Board Mounted

FIG.1 - FORWARD CURRENT DERATING CURVE

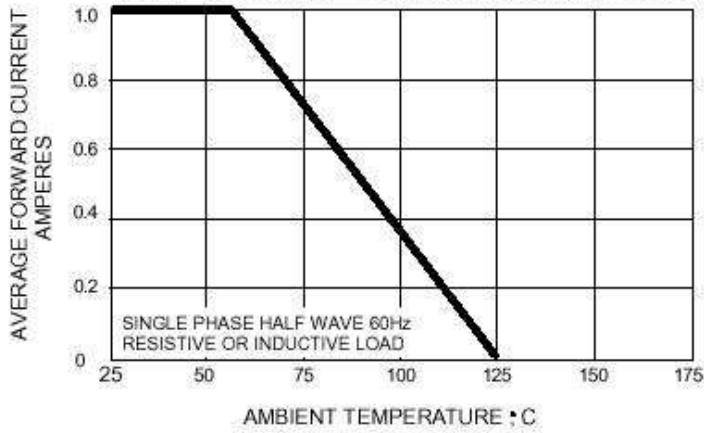


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

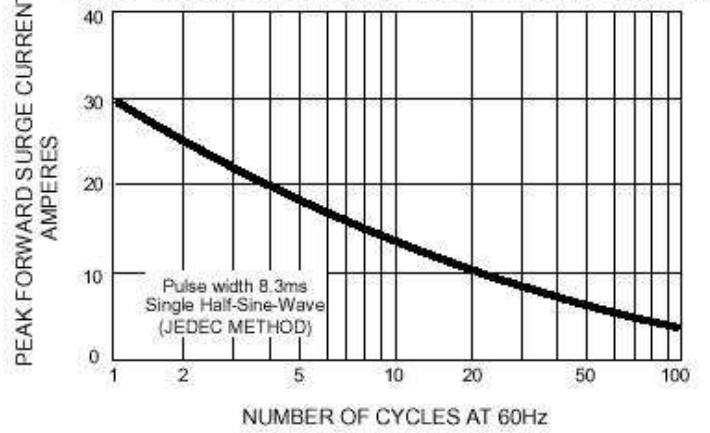


FIG.3 - TYPICAL JUNCTION CAPACITANCE

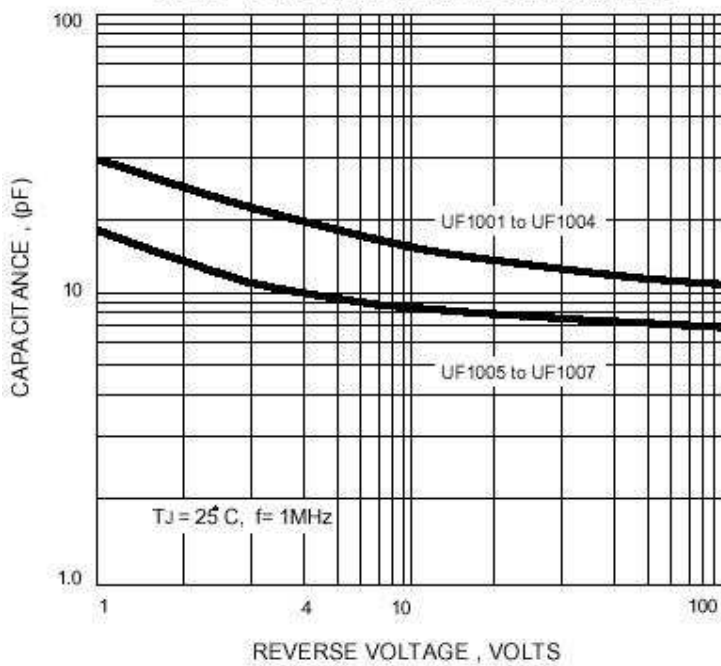


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

