

# UF3001 THRU UF3007

## 3.0 AMP HIGH EFFICIENCY RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* High speed switching

### MECHANICAL DATA

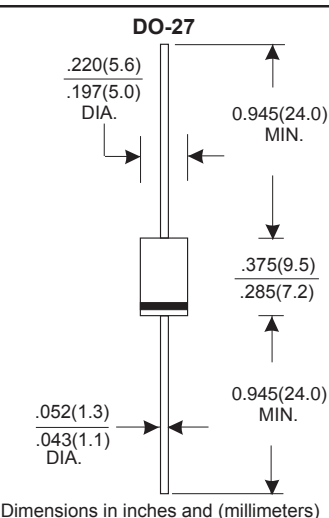
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.10 grams
- \* Both normal and Pb free product are available:
- \* Normal: 80~95%Sn, 5~20%Pb
- \* Pb free: 99 Sn above can meet Rohs environment substance directive request

### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

3.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

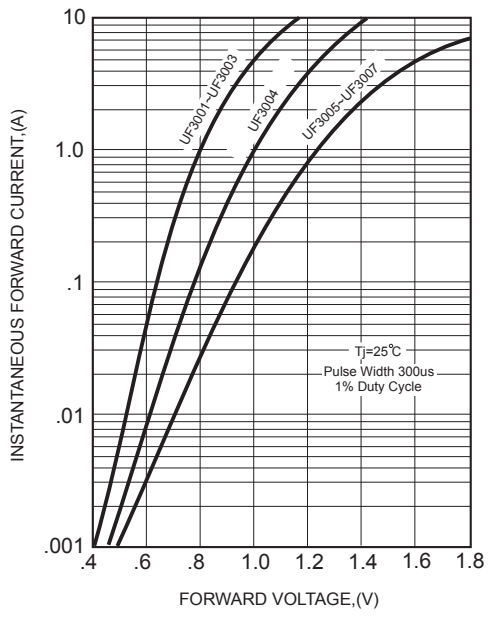
TYPE NUMBER	UF3001	UF3002	UF3003	UF3004	UF3005	UF3006	UF3007	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=50°C	3.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	150							A
Maximum Instantaneous Forward Voltage at 3.0A	1.0		1.3		1.85			V
Maximum DC Reverse Current Ta=25°C	10							μA
at Rated DC Blocking Voltage Ta=100°C	200							μA
Maximum Reverse Recovery Time (Note 1)	50				75			nS
Typical Junction Capacitance (Note 2)	75							pF
Operating and Storage Temperature Range Tj, Tstg	-65 — +150							°C

#### NOTES:

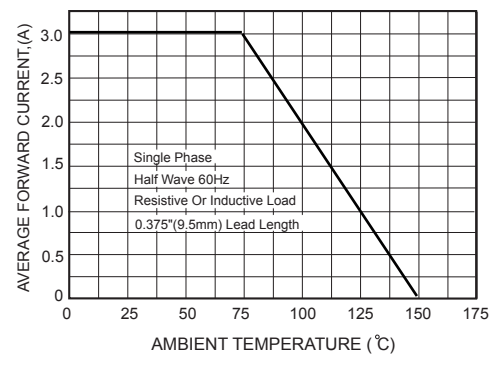
- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (UF3001 THRU UF3007)

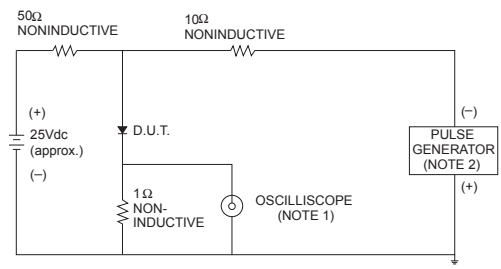
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



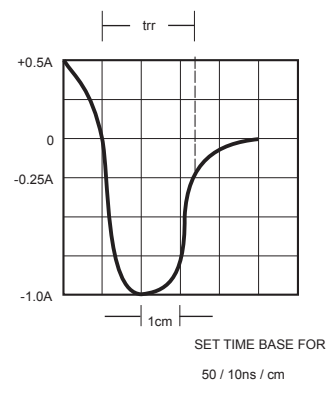
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



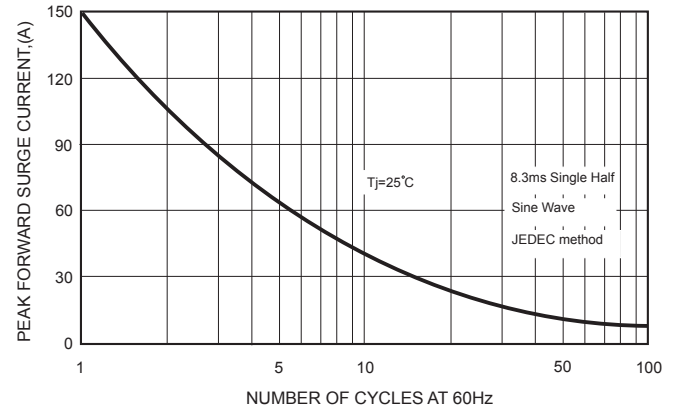
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

