

# High Efficiency Rectifier



## Features:

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

## Mechanical Data:

Case	: JEDEC DO-27 molded plastic
Polarity	: Colour band denotes cathode
Weight	: 0.04ounces, 1.1grams
Mounting Position	: Any
Reverse Voltage	: 400 Volts
Forward Current	: 3 Amperes

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	Values	Unit
Max. Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	400	V
Max. RMS Voltage	V <sub>RMS</sub>	280	
Max. DC Blocking Voltage	V <sub>DC</sub>	400	
Max. Average Forward Rectified Current @ T <sub>A</sub> = 25°C	I <sub>(AV)</sub>	3	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	150	
Peak Forward Voltage at 3A DC	V <sub>F</sub>	1.3	V
Max. DC Reverse Current at T <sub>J</sub> = 25°C Rated DC Blocking Voltage at T <sub>J</sub> = 100°C	I <sub>R</sub>	5 100	µA
Max. Reverse Recovery Time (Note 1)	T <sub>RR</sub>	50	nS
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	50	pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	20	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>		

## Notes:

1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A, I<sub>RR</sub> = 0.25A.
2. Measured at 1MHz and applied reverse voltage of 4.0V DC
3. Thermal resistance junction to ambient
4. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

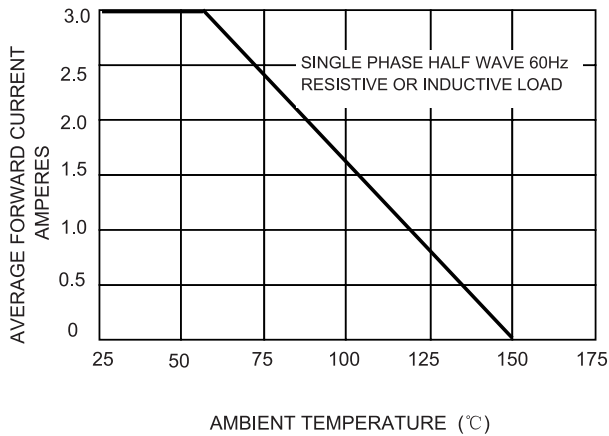


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

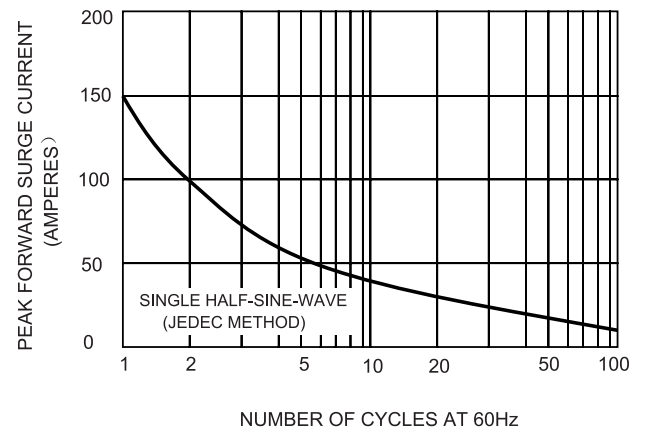


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

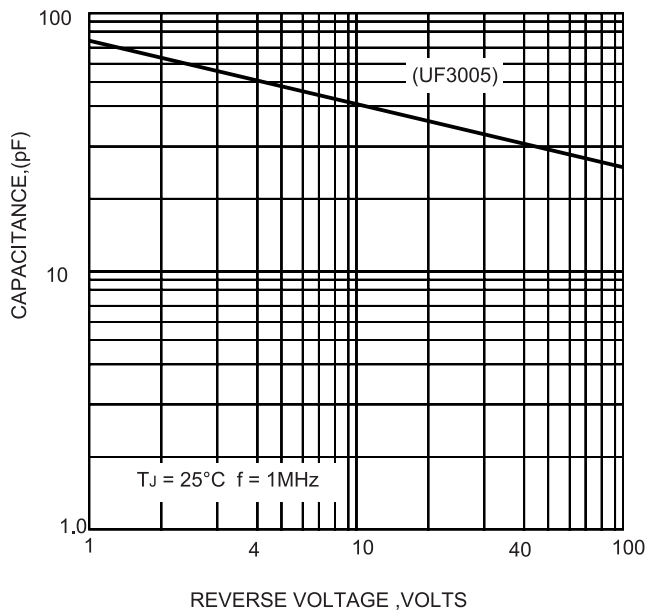
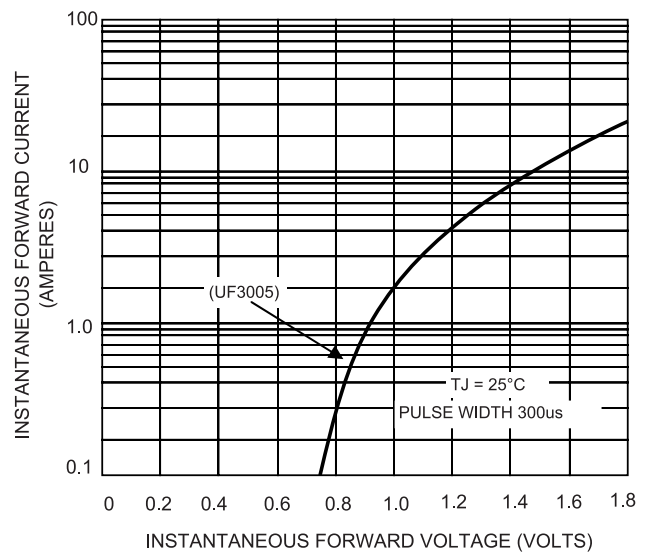


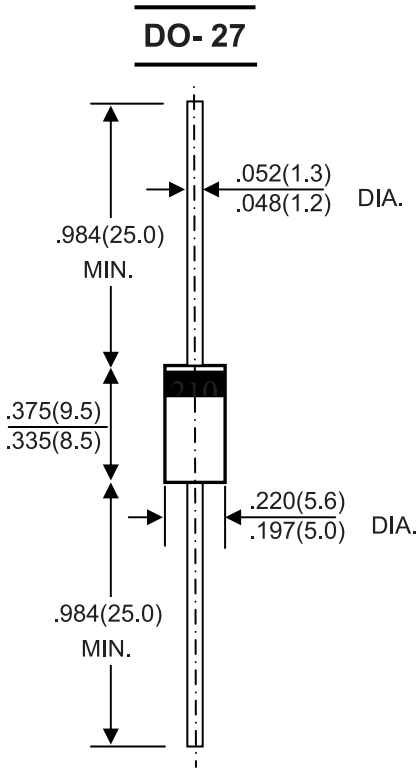
FIG.4-TYPICAL FORWARD CHARACTERISTICS



# High Efficiency Rectifier



## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
High Efficiency (Ultra Fast) Rectifier, 3A 400V, DO-27	UF3005

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