



# 3 AMP ULTRA-FAST SILICON RECTIFIERS UF5400 THRU UF5408

## TECHNICAL SPECIFICATION

### FEATURES

- Ultra-fast recovery times for high efficiency
- Low cost construction utilizing void - free moulded plastic technique
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Low leakage
- High temperature soldering capability : 250°C/10 seconds/9.5mm (.375in.) lead length at 2.3kg (5lb) tension
- Easily cleaned with Freon, Alcohol, Chlorothene and other similar solvents

### MECHANICAL DATA

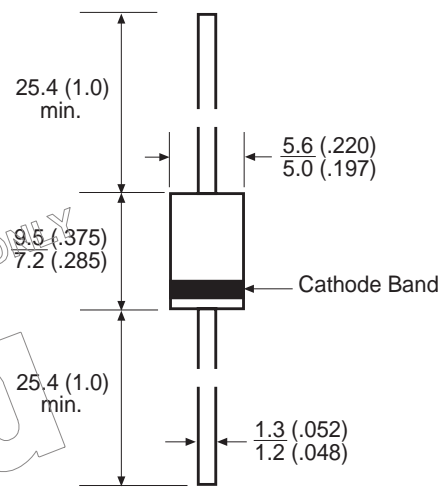
Case : JEDEC DO-27, moulded plastic.  
 Terminals : Plated axial leads, solderable per MIL-STD-202, Method 208.  
 Polarity : Colour band denotes cathode end.  
 Mounting Position : Any  
 Weight : 1.1 grams (0.04 ounce)

**VOLTAGE**  
50 to 1000 Volts

**CURRENT**  
3.0 Amps

### DIMENSIONS - millimeters (inches)

DO-27



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	UF5400	UF5401	UF5402	UF5404	UF5406	UF5407	UF5408	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 at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150							A
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.0				1.7			V
Maximum Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	10							$\mu\text{A}$
	$T_A = 125^\circ\text{C}$	50							$\mu\text{A}$
Maximum Reverse Recovery Time (see Note 1)	$t_{rr}$	50				75			ns
Typical Junction Capacitance (see Note 2)	$C_J$	40				50			pF
Operating Temperature Range	$T_J$	- 65 to + 150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 175							$^\circ\text{C}$

- Notes :
1. Test conditions :  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$  recovery to 0.25A
  2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts



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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

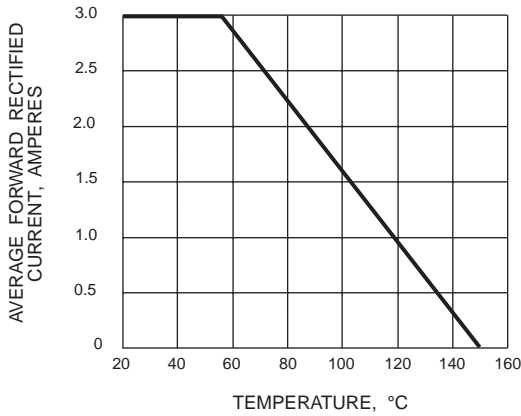


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

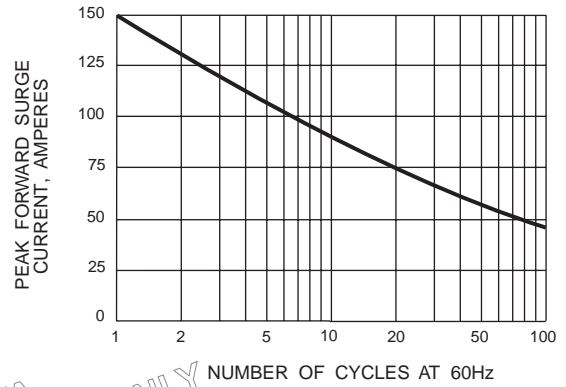


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

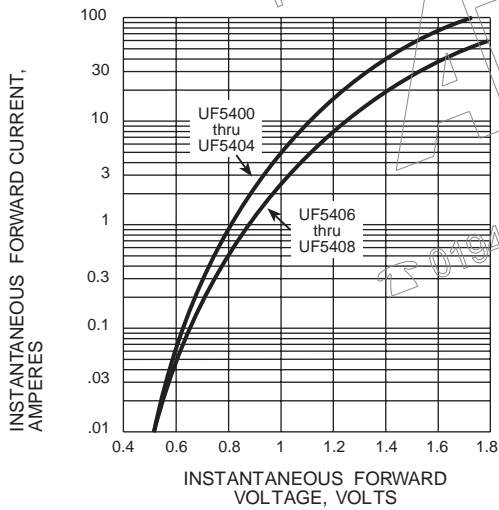


FIG. 4 - REVERSE RECOVERY TIME CHARACTERISTICS

