

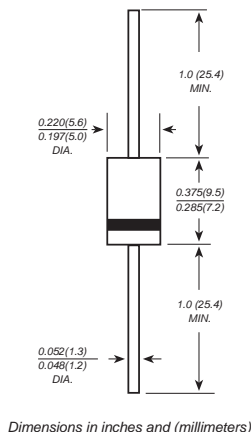


# UF5400 THRU UF5408

## ULTRA FAST RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

### DO-201AD



### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 ounce, 1.10 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

MDD Catalog Number	SYMBOLS	UF 5400	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	300	400	500	600	800	1000	VOLTS
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	210	280	350	420	560	700	VOLTS
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	300	400	500	600	800	1000	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length at TA=55°C	I <sub>(AV)</sub>	3.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150.0									Amps
Maximum instantaneous forward voltage at 3.0A	V <sub>F</sub>	1.0						1.70			Volts
Maximum DC reverse current      TA=25°C at rated DC blocking voltage      TA=100°C	I <sub>R</sub>	5.0 150.0									µA
Maximum reverse recovery time      (NOTE 1)	t <sub>rr</sub>	50						75			ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	45									pF
Typical thermal resistance (NOTE 3)	R <sub>θJA</sub>	20.0									°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150									°C

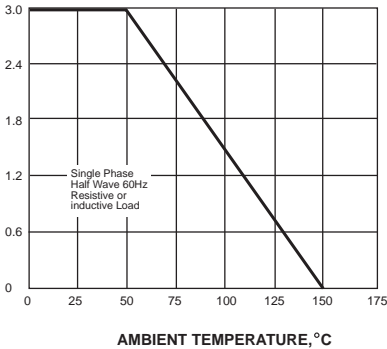
**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

# RATINGS AND CHARACTERISTIC CURVES UF5400 THRU UF5408

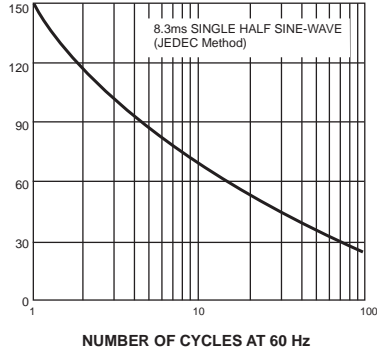
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



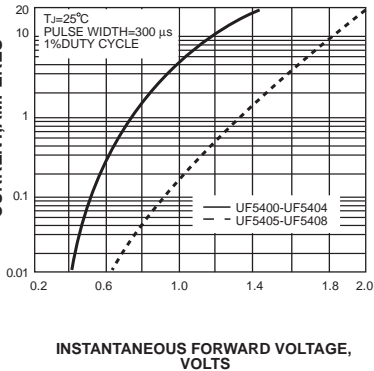
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



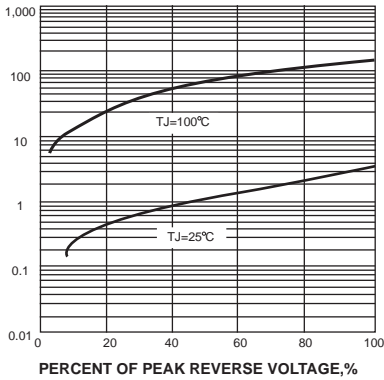
INSTANTANEOUS FORWARD  
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



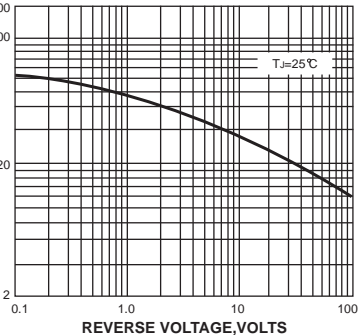
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

