



# UF5400 THRU UF5408

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

## ULTRA FAST RECTIFIERS

### 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

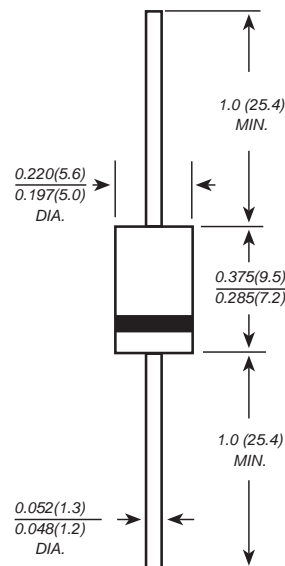
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.04 ounce, 1.10 grams

DO-201AD



Dimensions in inches and (millimeters)

### 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%.

parameter	SYMBOLS	UF 5400	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	UNITS
Marking code		MDD UF 5400	MDD UF 5401	MDD UF 5402	MDD UF 5403	MDD UF 5404	MDD UF 5405	MDD UF 5406	MDD UF 5407	MDD UF 5408	
Maximum repetitive peak reverse voltage		V <sub>RRM</sub>	50	100	200	300	400	500	600	800	
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current 0.375"(9.5mm) lead length at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	3.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150.0									A
Maximum instantaneous forward voltage at 3.0A	V <sub>F</sub>	1.0					1.7				V
Maximum DC reverse current      T <sub>A</sub> =25°C at rated DC blocking voltage      T <sub>A</sub> =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>	45.0									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  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $t_{rr}=0.25\text{A}$

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



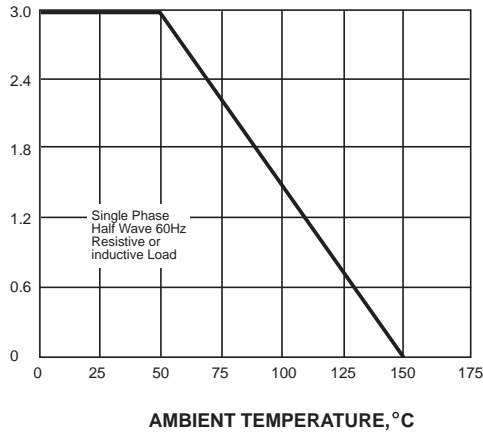
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## Ratings And Characteristic Curves

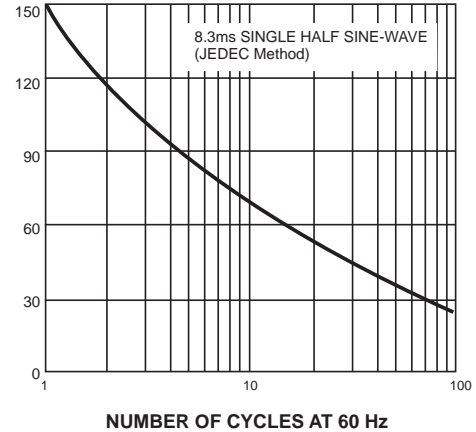
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



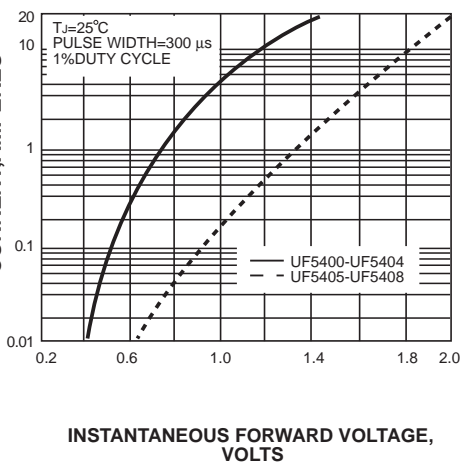
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



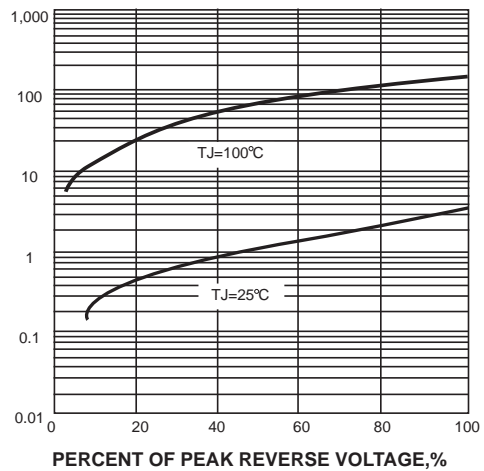
INSTANTANEOUS FORWARD  
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



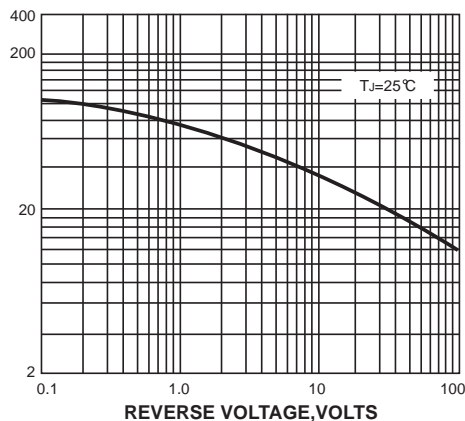
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



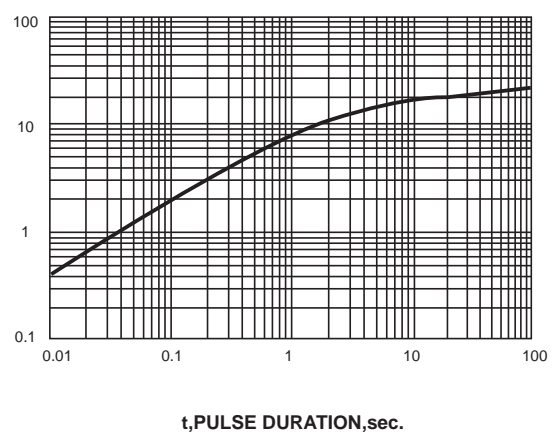
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.