

UF5400 THRU UF5408

ULTRAFast EFFICIENT PLASTIC RECTIFIER

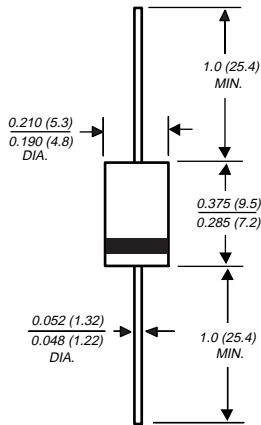
Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low cost
- ◆ Ultrafast recovery time for high efficiency
- ◆ Low forward voltage, high current capability
- ◆ Low leakage
- ◆ High surge capability
- ◆ High temperature soldering guaranteed: 250°C, 0.375" (9.5mm) lead length for 10 seconds, 5 lbs. (2.3 kg) tension



DO-201AD



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC DO-201AD, molded plastic body over passivated chip

Terminals: Plated axial leads solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UF5400	UF5401	UF5402	UF5403	UF5404	UF5405	UF5406	UF5407	UF5408	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	Volts	
Maximum average forward rectified current, 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	3.0									Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=55^\circ\text{C}$	I_{FSM}	150.0									Amps	
Maximum instantaneous forward voltage at 3.0A	V_F	1.0			1.7						Volts	
Maximum DC reverse current at rated DC blocking voltage	I_R			10.0			75.0		200.0		μA	
Maximum reverse recovery time (NOTE 1)	t_{rr}			50.0			75.0				ns	
Typical junction capacitance (NOTE 2)	C_J	45.0			36.0						pF	
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$					20.0			8.5			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150									$^\circ\text{C}$	

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measure at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to lead and from junction to ambient with 0.375" (9.5mm) lead length, both leads attached to heatsink

RATINGS AND CHARACTERISTIC CURVES UF5400 THRU UF5408

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

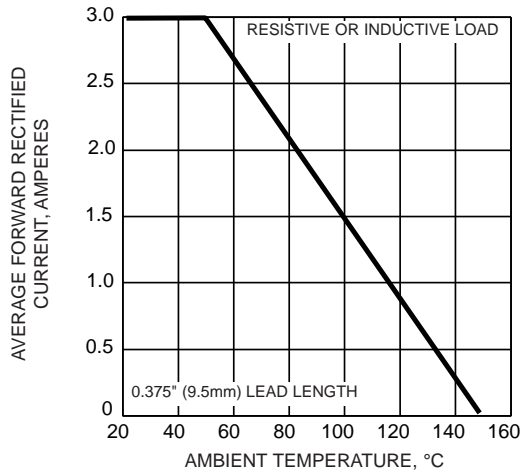


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

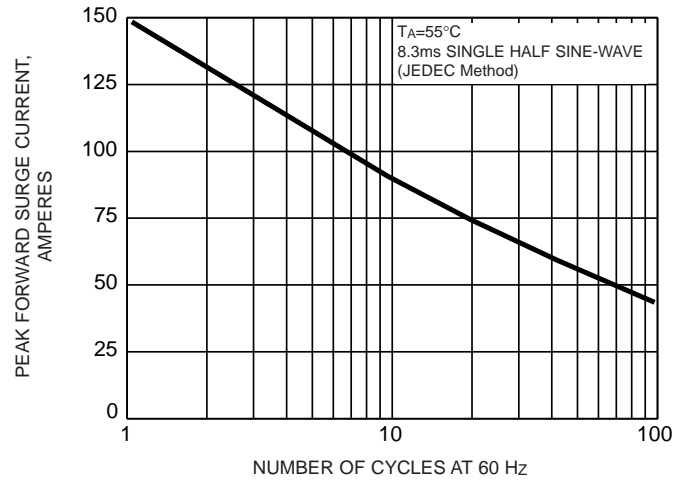


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

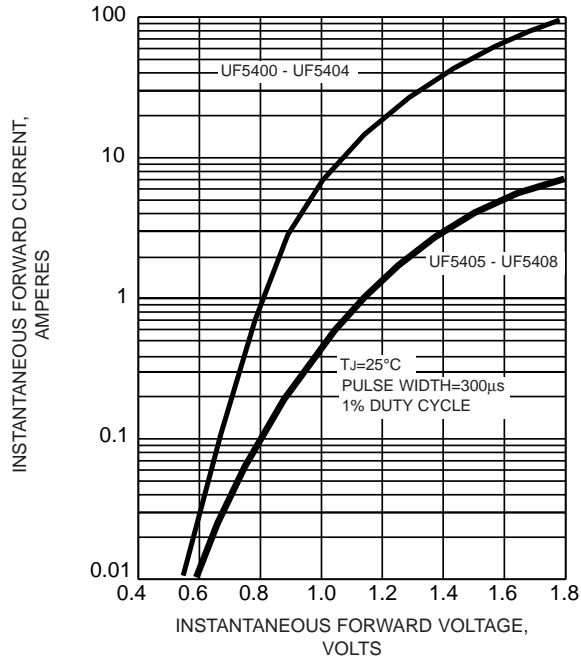


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

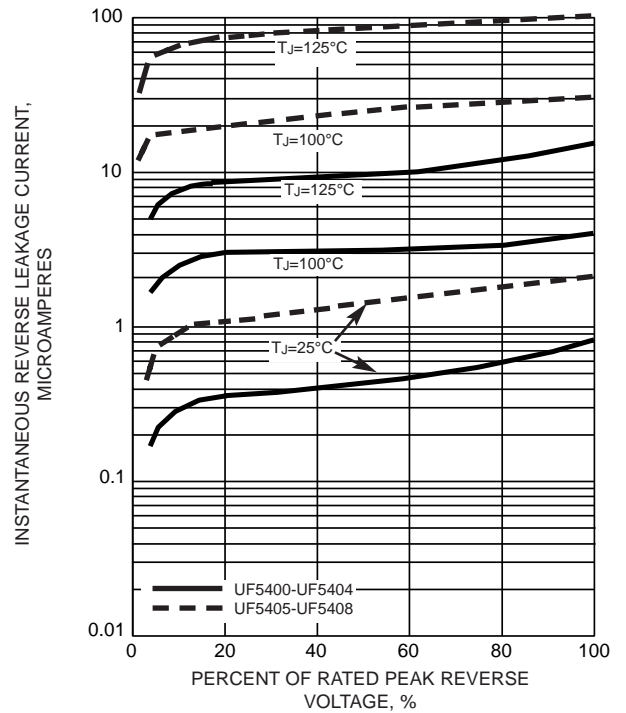


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

