

UF5400 THRU UF5408

ULTRAFAST RECOVERY RECTIFIER



REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 3.0 AMPERES

FEATURES

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Low cost
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Low leakage
- High surge capability

MECHANICAL DATA

Case: Molded plastic, DO-201AD

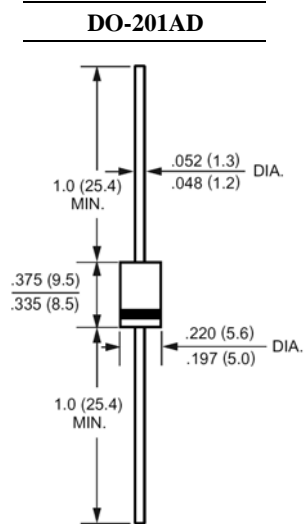
Terminals: Plated axial leads, solderable per

MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.04ounce, 1.1gram



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, derate current by 20%.

	Symbols	UF5400	UF5401	UF5402	UF5403	UF5404	UF5405	UF5406	UF5407	UF5408	Units
Maximum Recurrent 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 .375"(9.5mm) Lead Length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	3.0									Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150									Amp
Maximum Forward Voltage at 3.0A DC and 25°C	V_F	1.0			1.7						Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	I_R	10.0				100					uAmp
Typical Junction Capacitance (Note 1)	C_J	45			36						pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20									°C/W
Maximum Reverse Recovery Time (Note 3)	T_{RR}	50			75						nS
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150									°C

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted with 0.8x0.8" (20x20mm) copper pads.

3- Reverse Recovery Test Conditions: $I_F=5A$, $I_R=1A$, $I_{RR}=25A$.

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 – Maximum Forward Current Derating Curve

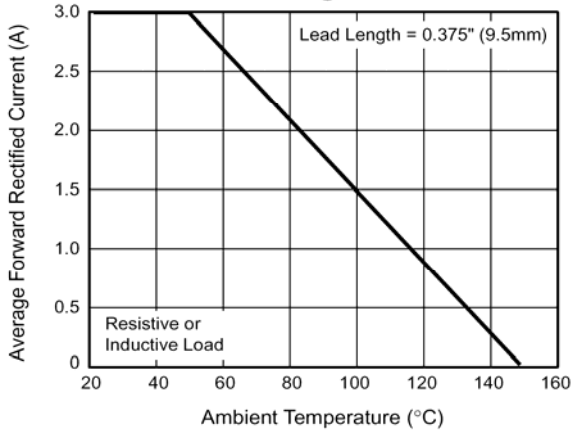


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

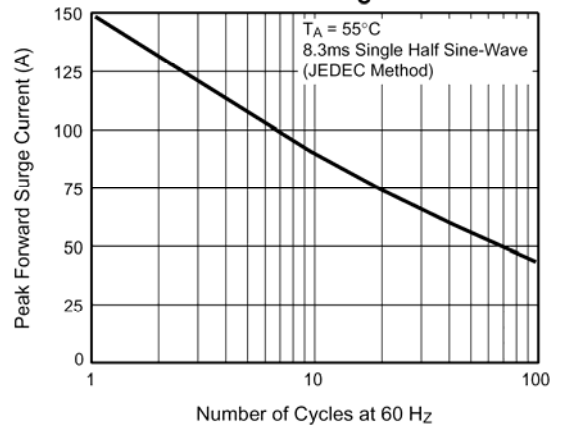


Fig. 3 – Typical Instantaneous Forward Characteristics

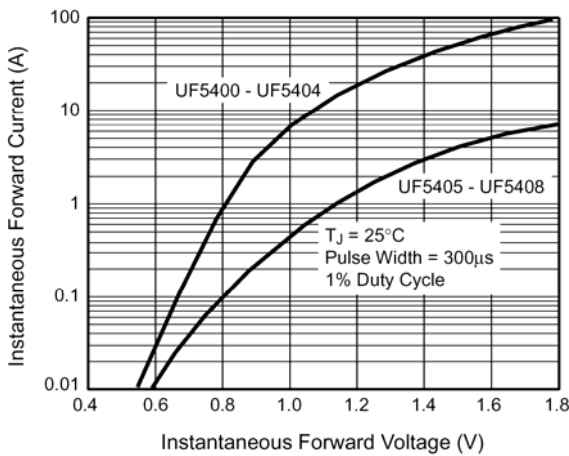


Fig. 4 – Typical Reverse Leakage Characteristics

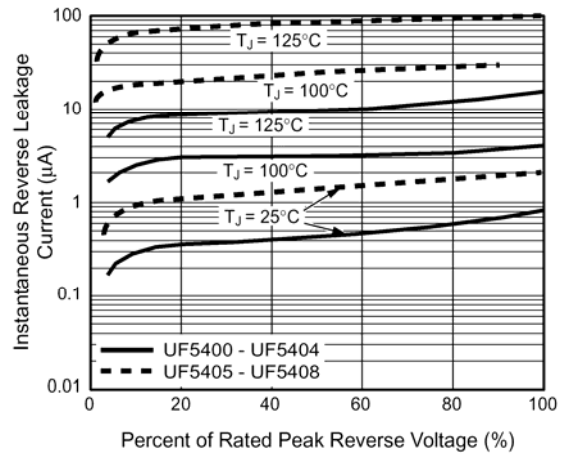


Fig. 5 – Typical Junction Capacitance

