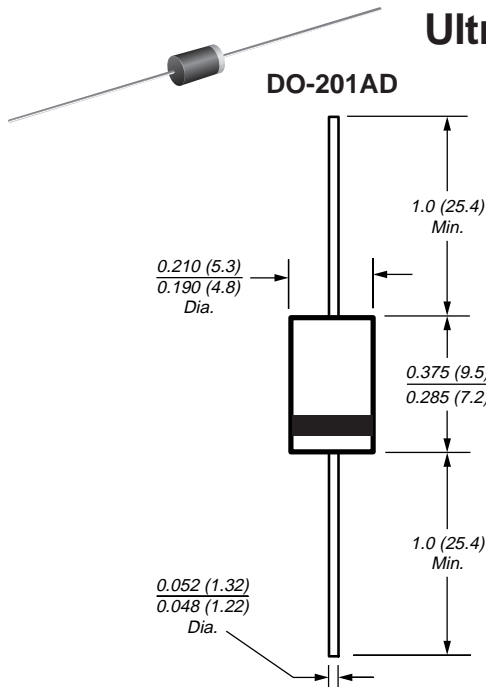


## Ultrafast Plastic Rectifier

**Reverse Voltage** 50 to 1000V  
**Forward Current** 3.0A


Dimensions in inches and (millimeters)

### Features

- Plastic package has Underwriters Laboratories 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. (2.3kg) tension

### 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 oz., 1.1 g

## Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	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	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current, 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3.0									A
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									A
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	20 8.5									°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150									°C

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	UF 5400	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	Units
Maximum instantaneous forward voltage at 3.0A <sup>(2)</sup>	$V_F$	1.0				1.7				V	
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	$I_R$	10				200				$\mu\text{A}$	
Maximum reverse recovery time at $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{rr} = 0.25\text{A}$ $T_J = 25^\circ\text{C}$	$t_{rr}$	50				75				ns	
Typical junction capacitance at 4.0V, 1MHz	$C_J$	45				36				pF	

### Notes:

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

 (2) Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle

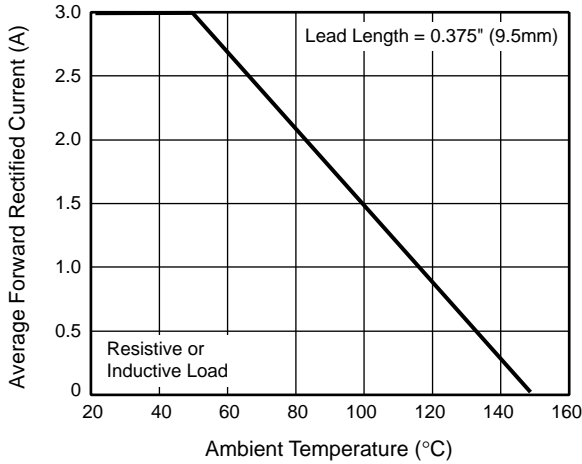
# UF5400 thru UF5408

Vishay Semiconductors  
formerly General Semiconductor

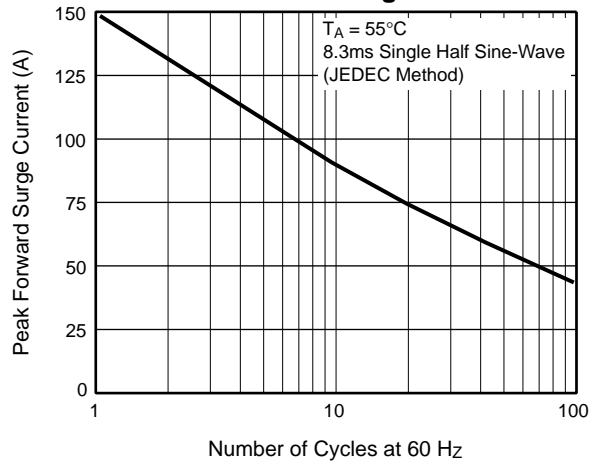


## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

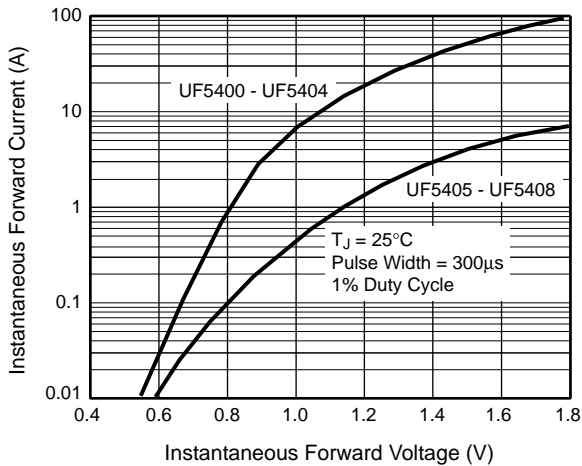
**Fig. 1 – Maximum Forward Current Derating Curve**



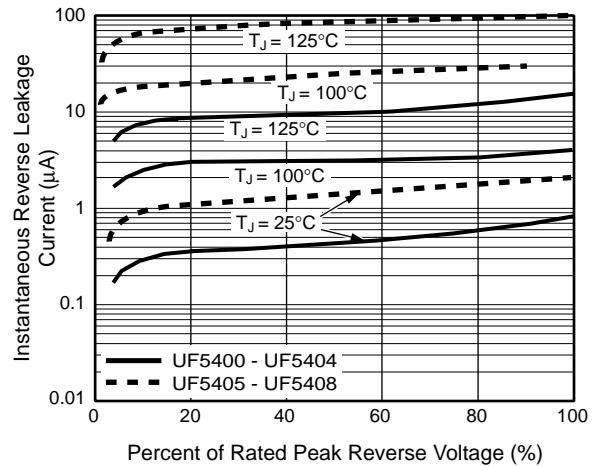
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Leakage Characteristics**



**Fig. 5 – Typical Junction Capacitance**

