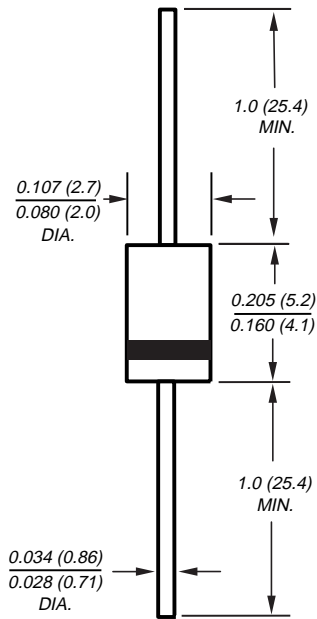


## Ultrafast Plastic Rectifier

Reverse Voltage 50 to 1000V  
Forward Current 1.0A

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Soft recovery characteristics
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

**Case:** JEDEC DO-204AL molded plastic body over passivated chip

**Terminals:** Axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.34 gram

## Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	Units
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at TA=55°C	IF(AV)	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Typical thermal resistance <sup>(1)</sup>	RθJA RθJL	60 15							°C/W
Operating junction and storage temperature range	TJ, TSTG	-55 to +150°C							°C

## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	Units
Maximum instantaneous forward voltage at 1.0A <sup>(2)</sup>	VF	1.0				1.7			V
Maximum DC reverse current at rated DC blocking voltage TA= 25°C TA=100°C	IR	10 50							µA
Maximum reverse recovery time IF=0.5A, IR=1.0A, Irr= 0.25A	trr	50				75			ns
Typical junction capacitance at 4.0V, 1MHz	CJ	17							pF

**Notes:**

(1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length

(2) Pulse test: 300µs pulse width, 1% duty cycle

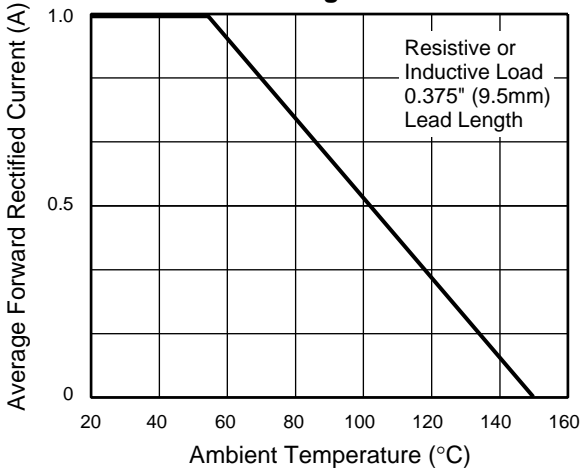
# UF4001 thru UF4007

Vishay Semiconductors  
formerly General Semiconductor

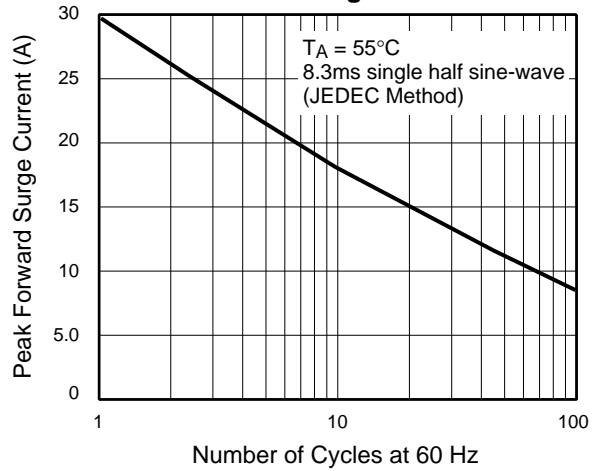


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

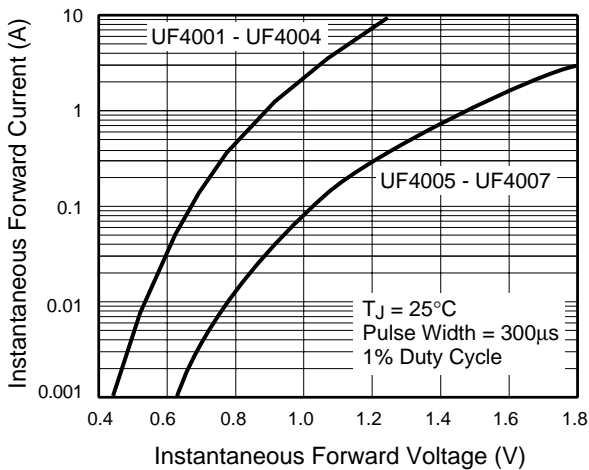
**Fig. 8 - Maximum Forward Current Derating Curve**



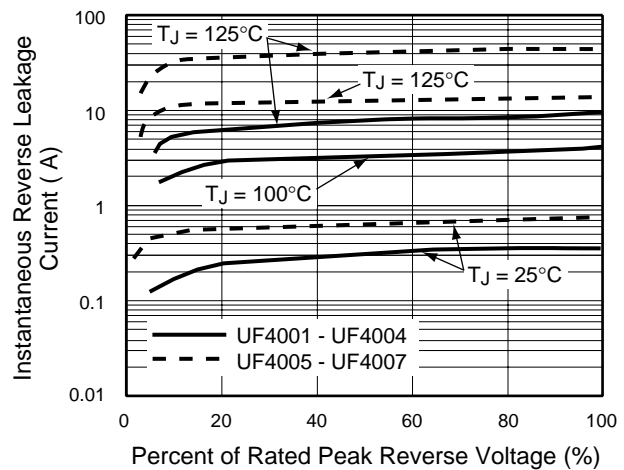
**Fig. 9 - Maximum Non-Repetitive Peak Forward Surge Current**



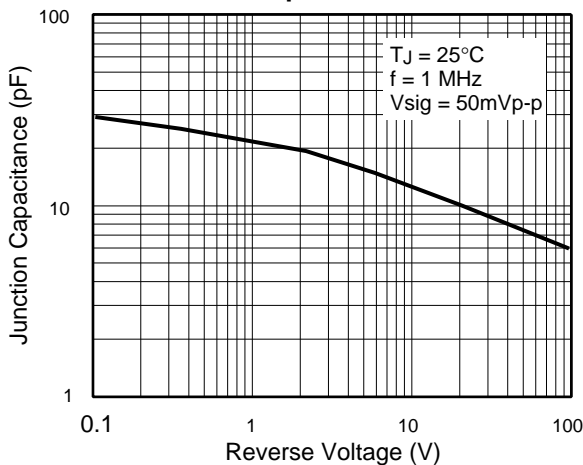
**Fig. 10 - Typical Instantaneous Forward Characteristics**



**Fig. 11 - Typical Reverse Leakage Characteristics**



**Fig. 12 - Typical Junction Capacitance**



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