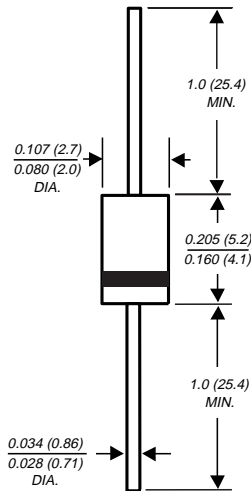


UF4001 THRU UF4007

ULTRAFast EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

DO-204AL



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ 1.0 ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- ◆ Glass passivated chip junction
- ◆ Low cost
- ◆ Ultrafast recovery time for high efficiency
- ◆ Low forward voltage
- ◆ Low leakage current
- ◆ High 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-204AL 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: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND 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 repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	I _(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.0				1.7			Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	$T_A=25^\circ\text{C}$ 10.0				$T_A=100^\circ\text{C}$ 50.0			μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	50.0				75.0			ns
Typical junction capacitance (NOTE 2)	C _J	17.0							pF
Typical thermal resistance (NOTE 3)	R _{θJA} R _{θJL}	60.0				15.0			°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

NOTES:

- (1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm), P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES UF4001 THRU UF4007

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

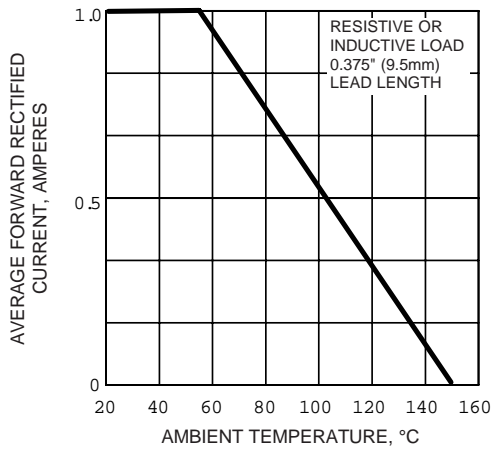


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

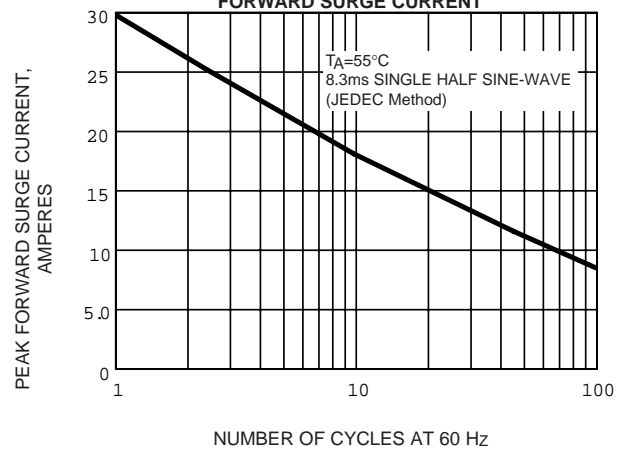


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

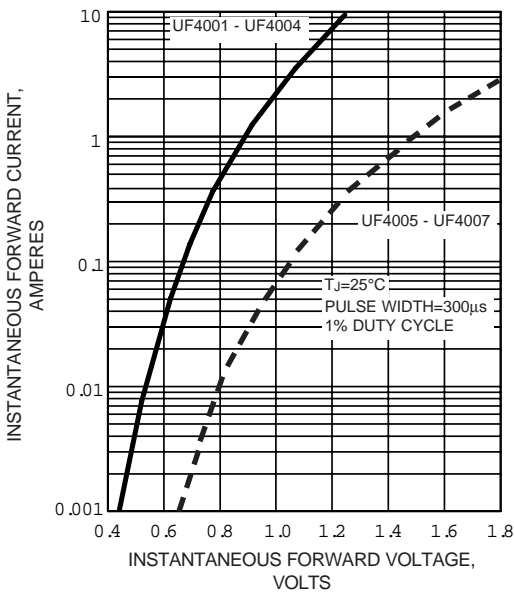


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

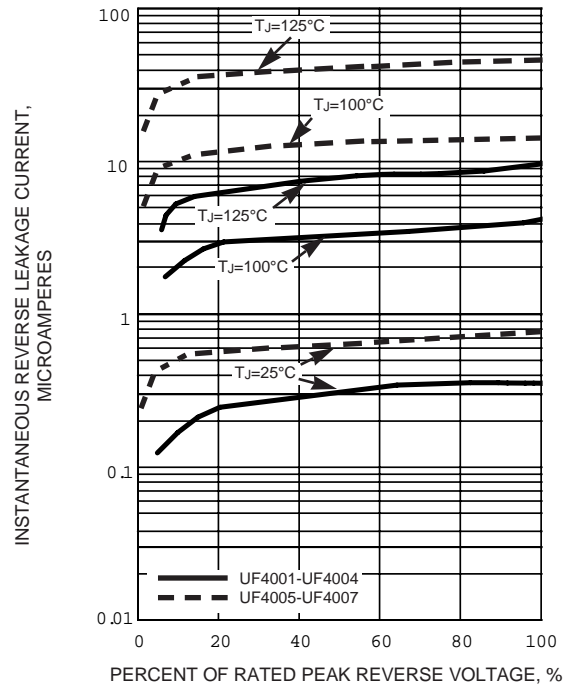


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

