

UF4001 ~ UF4007

PRV : 50 ~ 1000 Volts

Io : 1.0 Ampere

FEATURES :

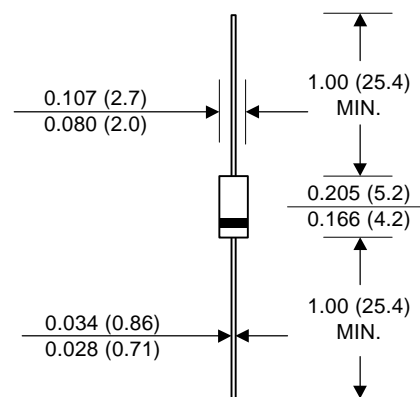
- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : DO-41 Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.34 gram

ULTRAFAST EFFICIENT RECTIFIER DIODES

DO - 41



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

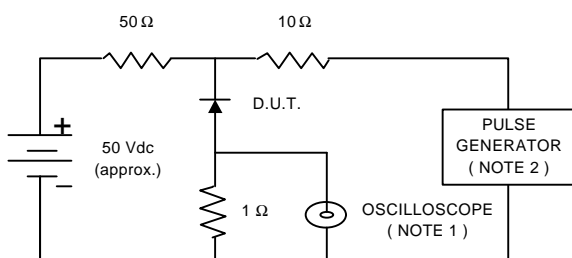
Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	UNIT
Maximum Recurrent 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 Current 0.375"(9.5mm) Lead Length Ta = 55 °C	IF(AV)	1.0							A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Maximum Forward Voltage at IF = 1.0 A	VF	1.0				1.7			V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	IR	10							μA
	IR(H)	50							μA
Maximum Reverse Recovery Time ⁽¹⁾	Trr	50				75			ns
Typical Junction Capacitance ⁽²⁾	CJ	17							pf
Typical Thermal Resistance ⁽³⁾	RθJA	60							°C/W
Junction Temperature Range	TJ	- 65 to + 150							°C
Storage Temperature Range	TSTG	- 65 to + 150							°C

- Notes :** (1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC
(3) Thermal Resistance from Junction to Ambient, 0.375" , 9.5 mm Lead Lengths.

RATING AND CHARACTERISTIC CURVES (UF4001 ~ UF4007)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

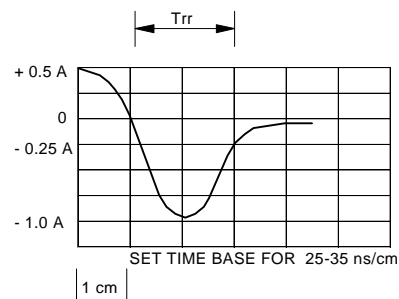


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

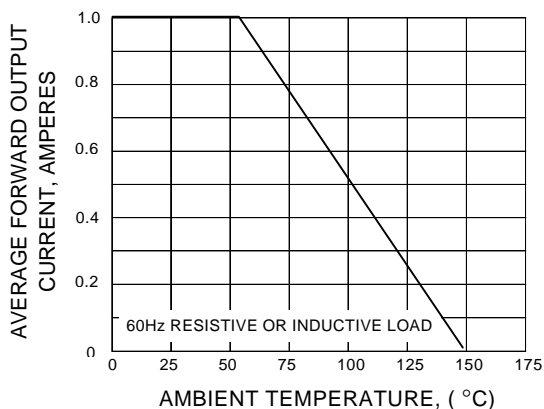


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

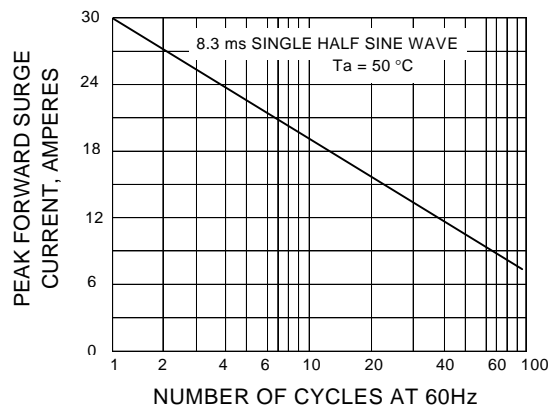


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

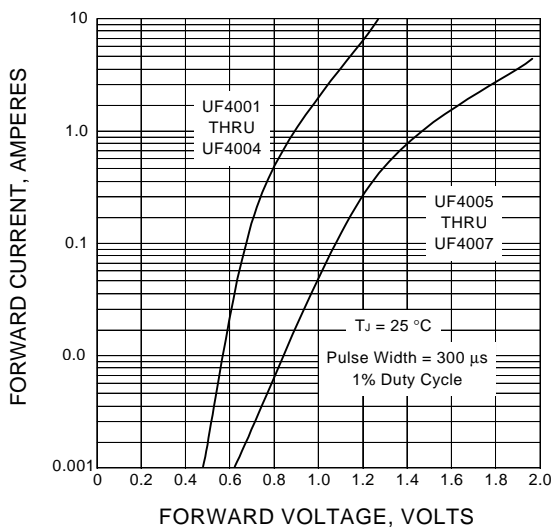


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

