



ULTRA FAST RECTIFIER

UF4001
THRU
UF4007

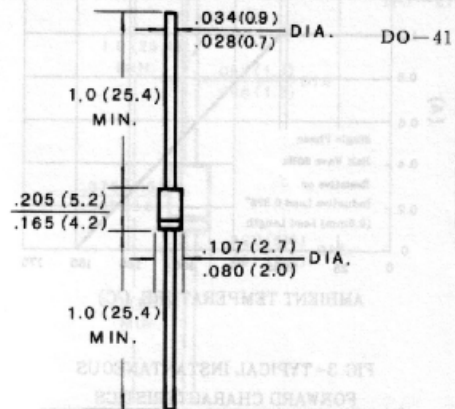
FEATURES

- Low cost construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed;
260°C/10 seconds/.375" (9.5mm) lead length
at 5 lbs(2,3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E
method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.33 gram

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere



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	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 °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							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V _F	1.0				1.7			Volts
Maximum DC Reverse Current at rated DC blocking voltage	T _A = 25 °C T _A = 125 °C	I _R	10						μAmps
			50						
Maximum Reverse Recovery Time (Note 3) T _J = 25 °C	t _{rr}	50				75			nS
Typical Junction Capacitance (Note 1)	C _J	15							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	60							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	- 65 to + 150							°C

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at .375" (9.5mm) lead length, P. C. board mounted.
3. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{tr} = 0.25\text{A}$.

RATINGS AND CHARACTERISTIC CURVES UF4001 THRU UF4007

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

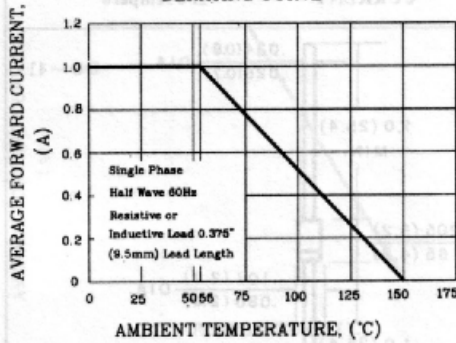


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

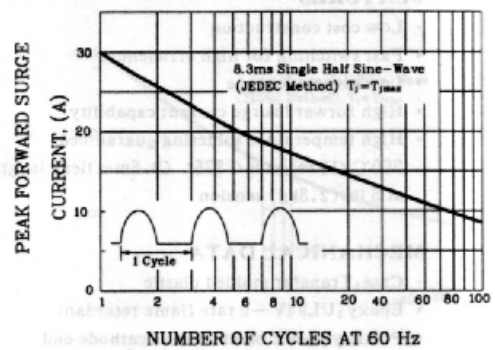


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

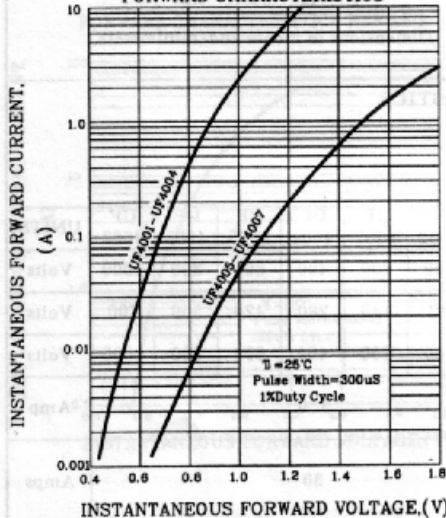


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

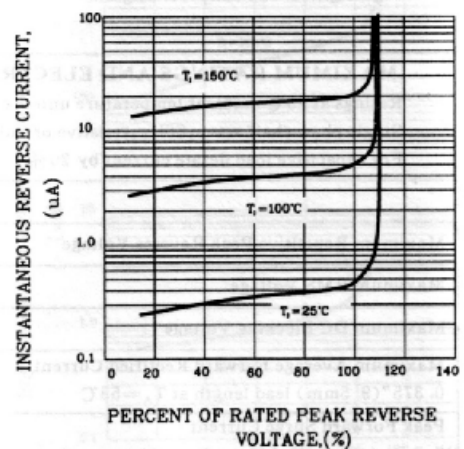


FIG. 5-TYPICAL JUNCTION CAPACITANCE

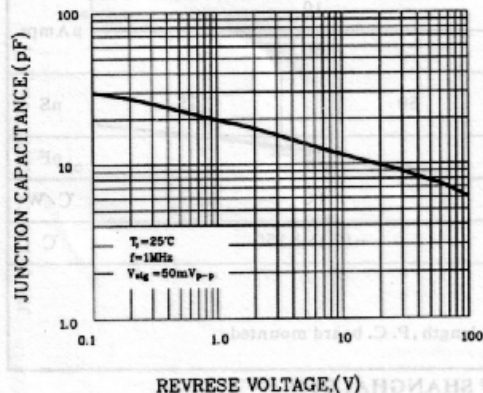


FIG. 6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

