

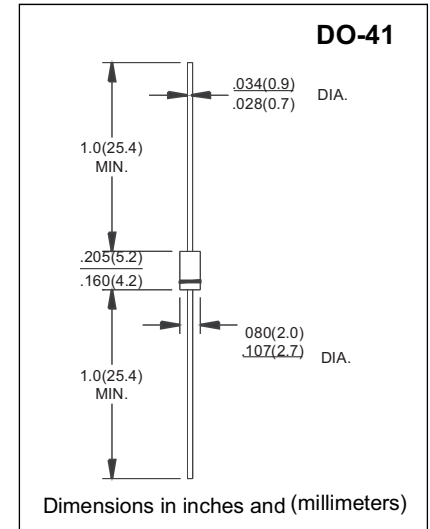
ULTRA FAST RECTIFIER

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-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012ounce, 0.33 grams



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%

PARAMETER	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							Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.0				1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	10							μA
	$T_A = 125^\circ\text{C}$	50							
Maximum Reverse Recovery Time $T_J = 25^\circ\text{C}$ (NOTE 1)	t_{rr}	50				75			ns
Typical Thermal Resistance (NOTE 2)	C_J	15							PF
Typical Thermal Resistance(NOTE 3)	$R_{\theta JA}$	60							$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J, T_{STG}	(-55 to +150)							$^\circ\text{C}$

Notes:

- 1 Test Condition: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse of 4.0 volts.
- 3 Thermal resistance from junction to ambient with .375"(9.5mm)lead length, P.C.B. mounted. .

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RATING AND CHARACTERISTIC CURVES UF4001 - UF4007

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

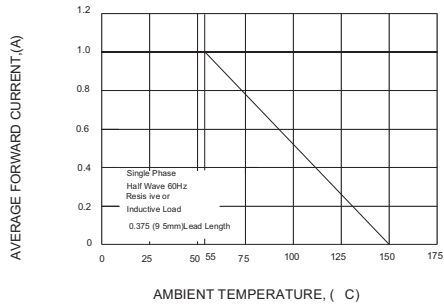


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

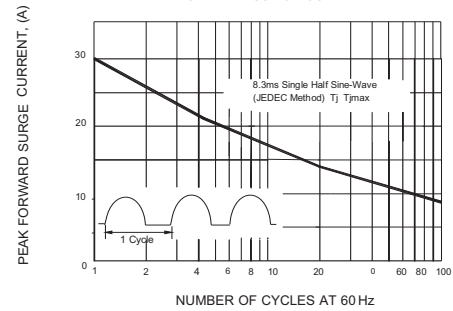


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

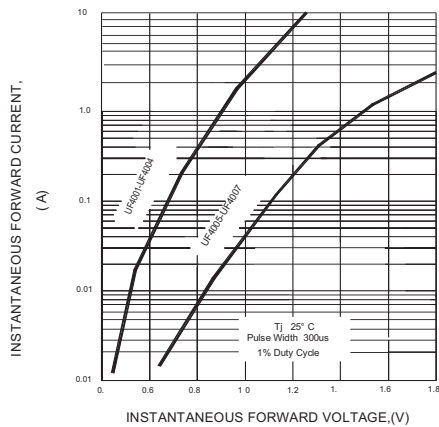


FIG.4-TYPICAL REVERSE CHARACTERISTICS

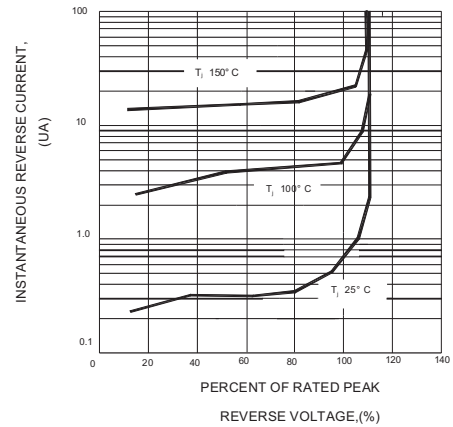


FIG.5-TYPICAL JUNCTION CAPACITANCE

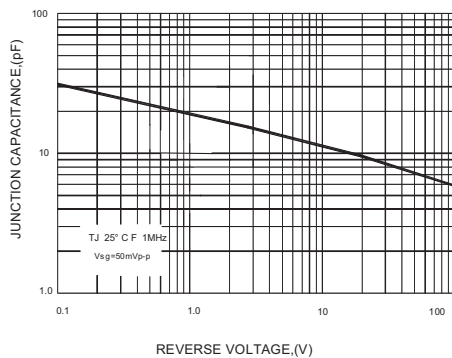
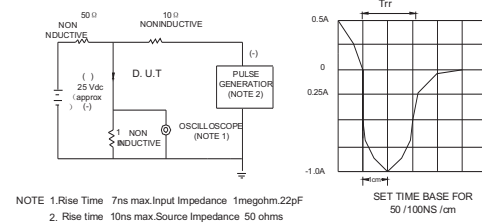


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



Disclaimer

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