DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

UF4001 THRU UF4007

TECHNICAL SPECIFICATIONS OF ULTRA FAST RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 1.0 Ampere*

FEATURES

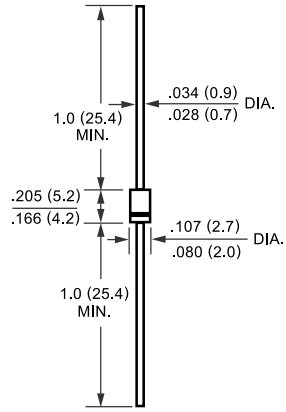
* Low power loss, high efficiency
* Low leakage
* Low forward voltage
* High current capability
* High speed switching
* High surge capability
* High reliability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.35 gram



DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

	SYMBOL	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	800	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A= 50°C	I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V_F	1.0				1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 25°C	I_R	5.0							uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at T_L = 55°C		100							uAmps
Maximum Reverse Recovery Time (Note 1)	trr	50				75			nSec
Typical Junction Capacitance (Note 2)	C_J	15				12			pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 150							°C

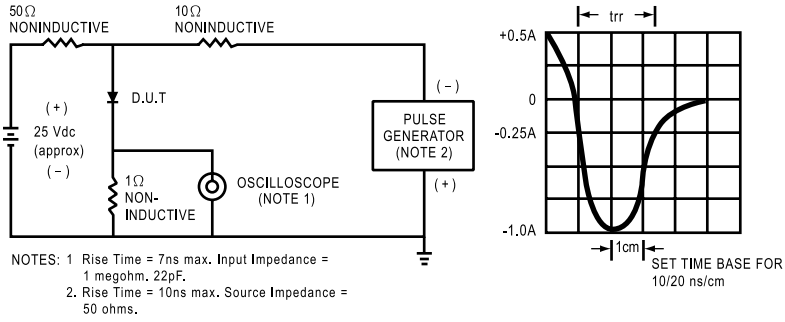
NOTES : 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

NEXT EXIT

RATING AND CHARACTERISTIC CURVES (UF4001 THRU UF4007)

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



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

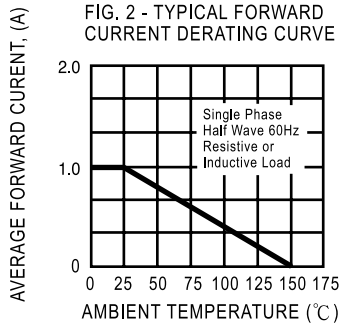


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

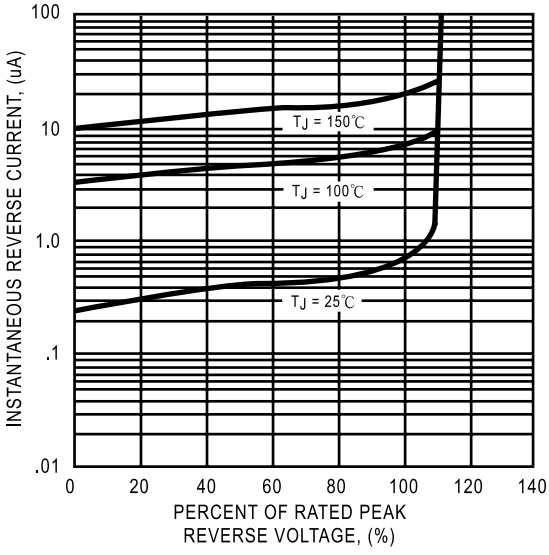


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

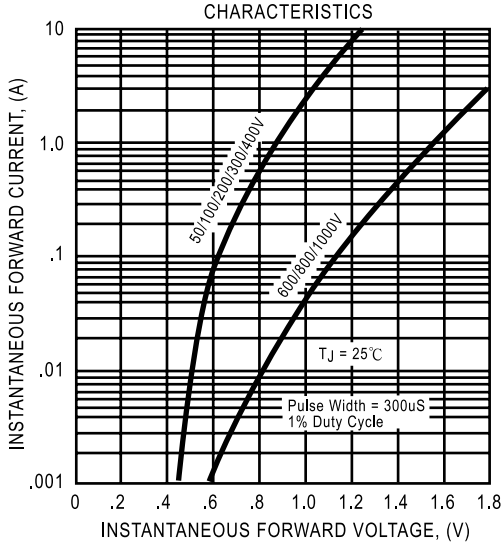


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

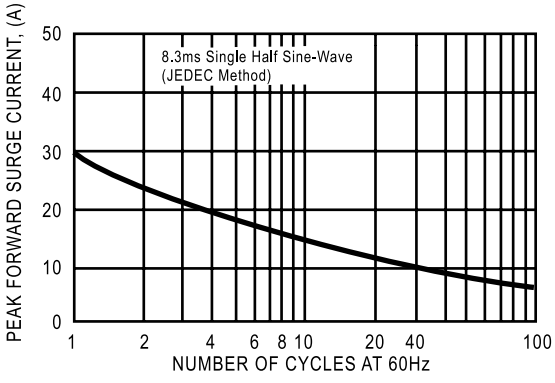


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

