



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

1U1
THRU
1U8

TECHNICAL SPECIFICATIONS OF ULTRA FAST RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

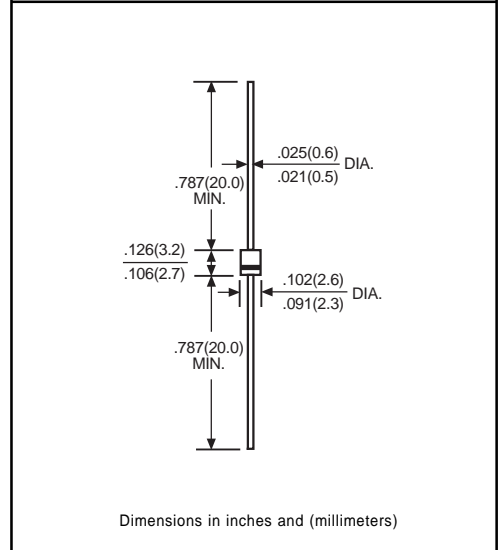
CURRENT - 1.0 Ampere

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 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.19 gram approx.



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	1U1	1U2	1U3	1U4	1U5	1U6	1U7	1U8	UNITS	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	700	Volts	
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current at TA = 55°C	Io	1.0								Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	25								Amps	
Maximum Instantaneous Forward Voltage at 1.0A DC	VF	1.0		1.3		1.7				Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	@ TA = 25°C								μAmps	
		@ TA = 100°C									
Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at TL = 55°C		150									
Maximum Reverse Recovery Time (Note 1)	trr	50					75				nSec
Typical Junction Capacitance (Note 2)	CJ	17								pF	
Typical Thermal Resistance (Note 3)	RθJA	65								°C/W	
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150								°C	

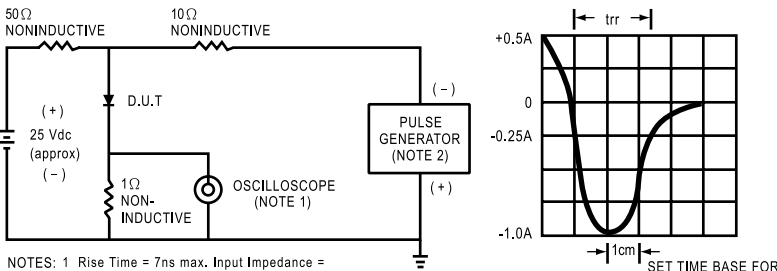
Note: 1. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

2. Measured at 1 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

RATING AND CHARACTERISTIC CURVES (1U1 THRU 1U8)

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

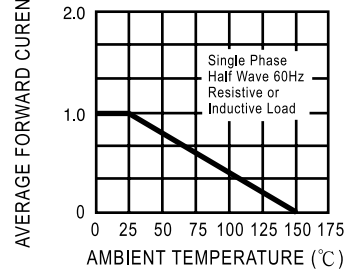


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

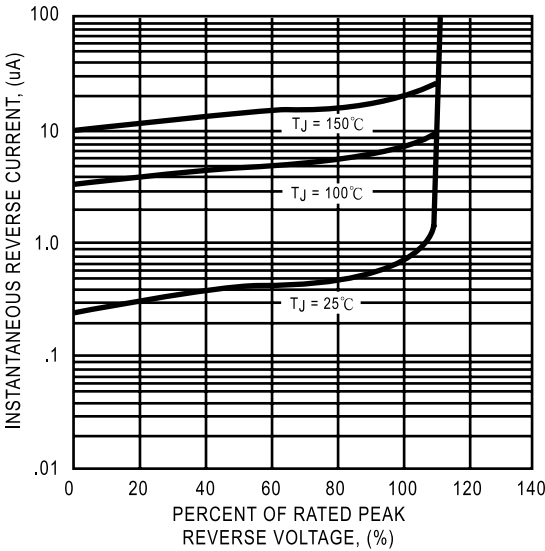


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

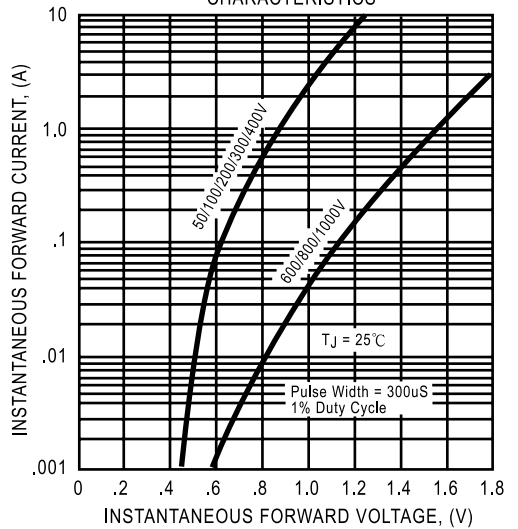


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

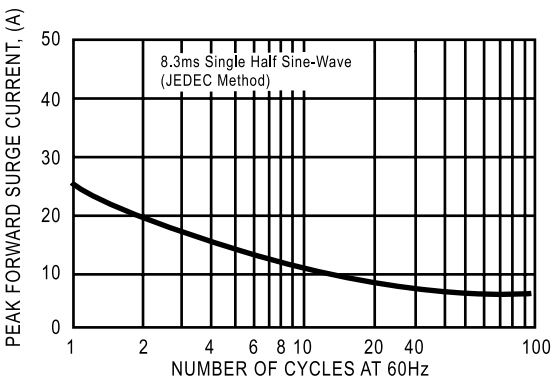


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

