

HIGH EFFICIENCY 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

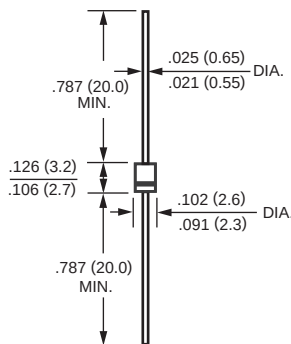
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.12 gram

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%.



R-1



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	1H1	1H2	1H3	1H4	1H5	1H6	1H7	1H8	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _A = 25°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}	25								Amps
Typical Junction Capacitance (Note 2)	C _J	15					12			pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150								°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	1H1	1H2	1H3	1H4	1H5	1H6	1H7	1H8	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.0			1.3		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

NOTES : 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

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RATING AND CHARACTERISTIC CURVES (1H1 THRU 1H8)

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

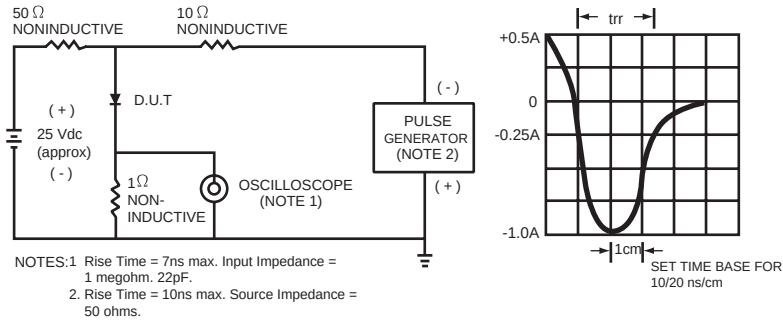


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

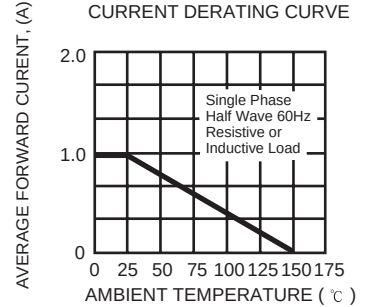


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

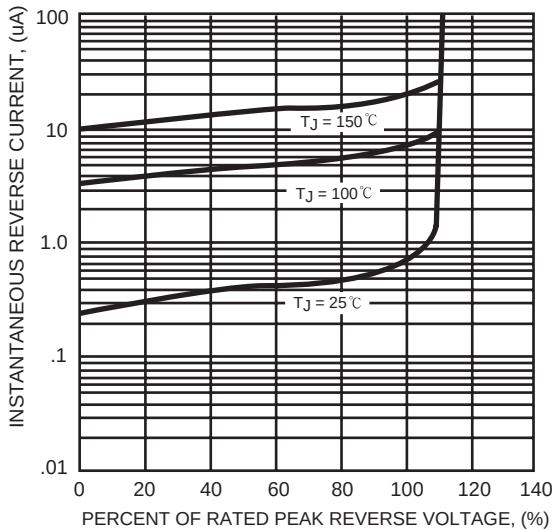


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

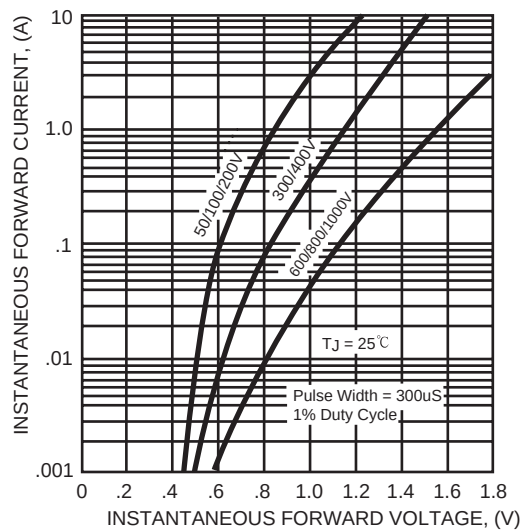


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

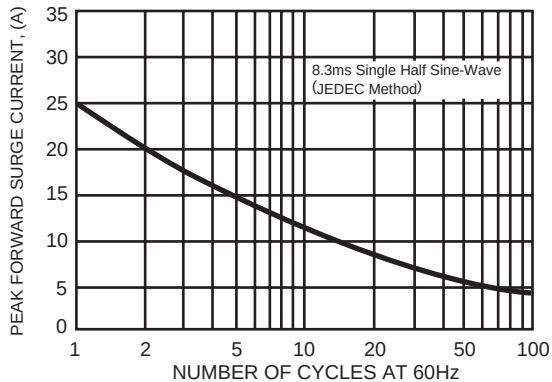
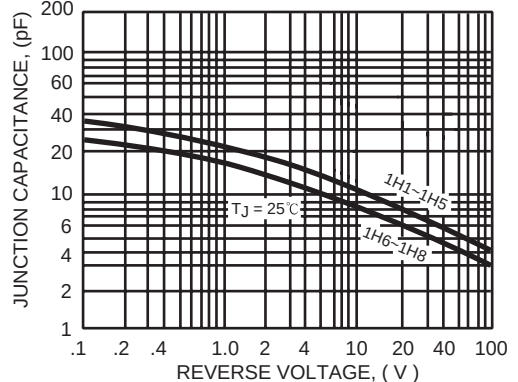


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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[1H3-B](#) [1H3-T](#) [1H7-B](#) [1H7-T](#) [1H5-T](#) [1H5-B](#) [1H1-B](#) [1H1-T](#) [1H6-B](#) [1H6-T](#) [1H2-T](#) [1H2-B](#) [1H8-T](#) [1H8-B](#) [1H4-T](#)
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