

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 5.0 Ampere

FEATURES

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

MECHANICAL DATA

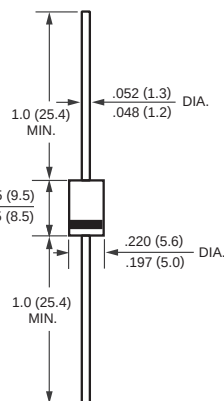
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 1.20 grams

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%.



DO-201AD



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

RATINGS	SYMBOL	HER501	HER502	HER503	HER504	HER505	HER506	HER507	HER508	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= 50°C	Io	5.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	200						150		Amps
Typical Junction Capacitance (Note 2)	CJ	70						50		pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150								°C

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

CHARACTERISTICS	SYMBOL	HER501	HER502	HER503	HER504	HER505	HER506	HER507	HER508	UNITS
Maximum Instantaneous Forward Voltage at 5.0A 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	10								uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T _L = 55°C		150								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

RATING AND CHARACTERISTIC CURVES (HER501 THRU HER508)

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

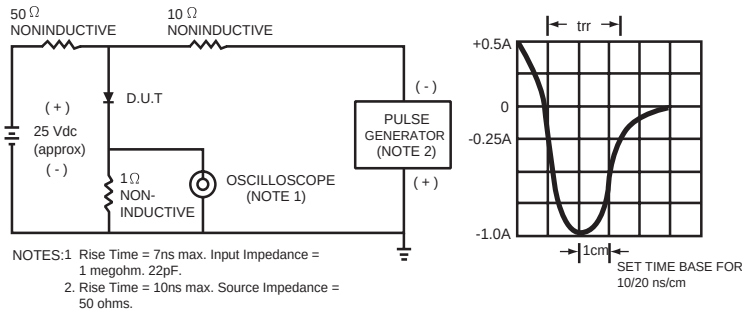


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

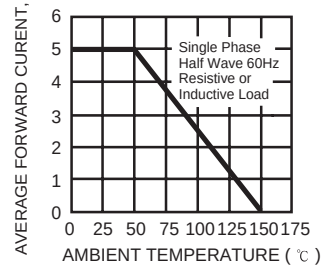


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

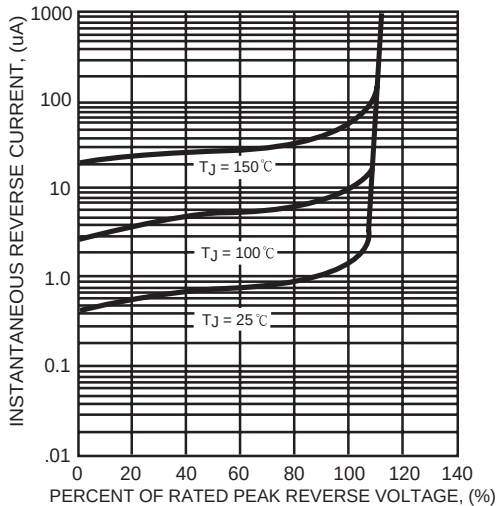


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

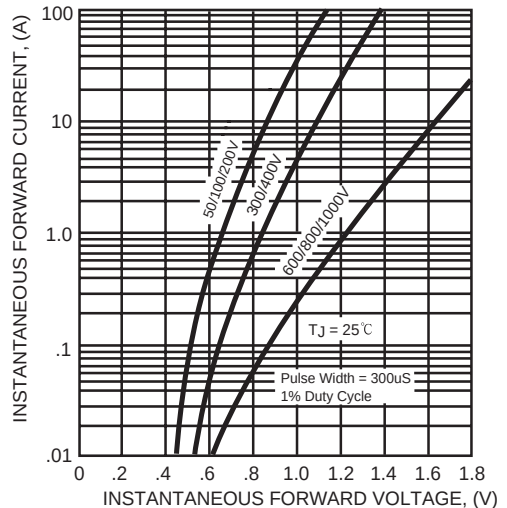


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

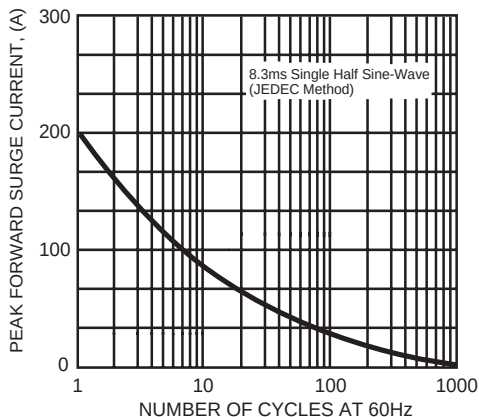
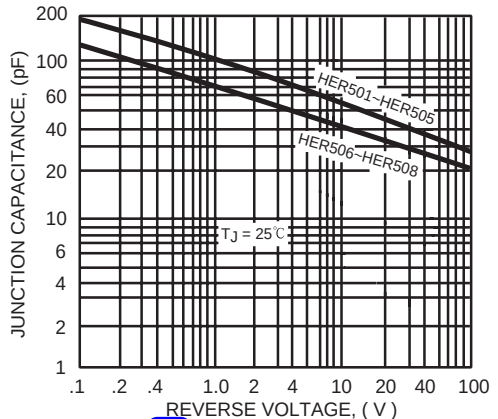


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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