

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

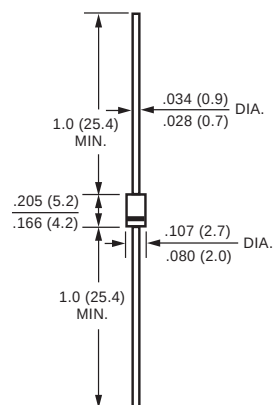
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.35 gram

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%.



DO-41



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	HER101	HER102	HER103	HER104	HER105	HER106	HER107	HER108	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 = 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
Typical Junction Capacitance (Note 2)	C _J	15					12			pF
Typical Thermal Resistance	R _{θJA}	60								°C/W
Typical Thermal Resistance	R _{θJC}	18								°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150								°C

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

CHARACTERISTICS	SYMBOL	HER101	HER102	HER103	HER104	HER105	HER106	HER107	HER108	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
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTIC CURVES (HER101 THRU HER108)

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

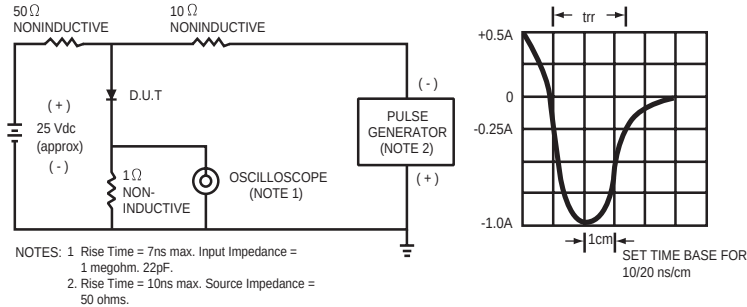


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

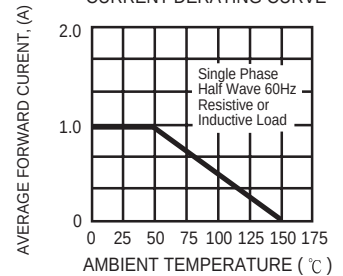


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

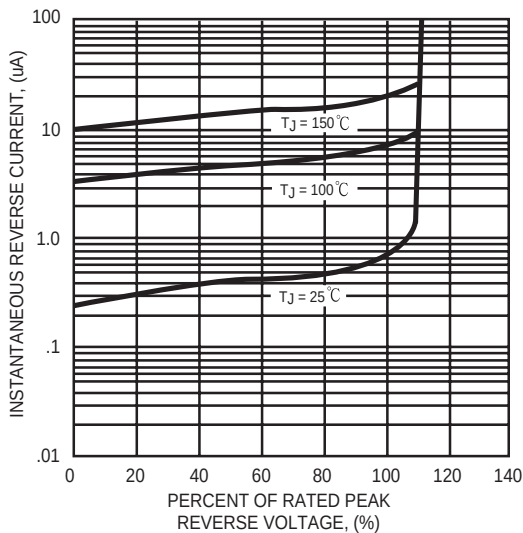


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

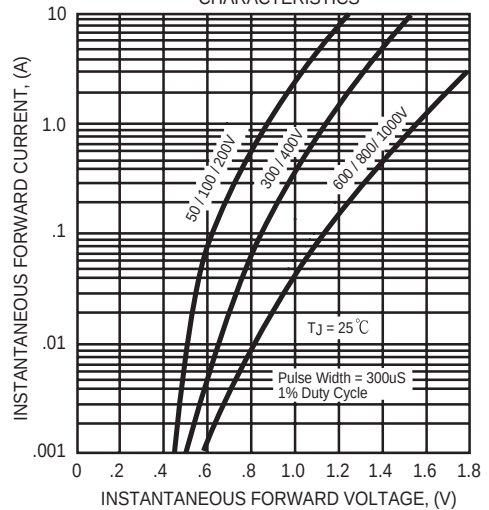


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

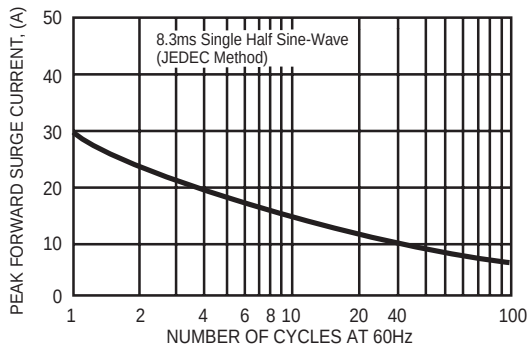


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

