SEMICONDUCTOR

DATA SHEET

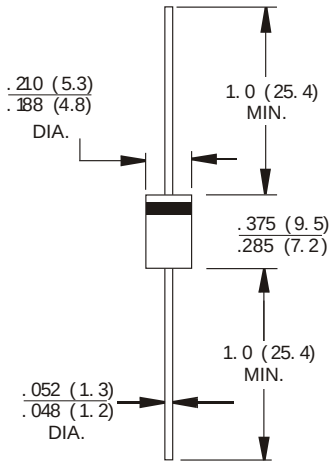
HER501 THRU HER508

5.0AMP HIGH EFFICIENT RECTIFIERS
VOLTAGE RANGE: 50 TO 1000 VOLTS

FEATURES

- Low cost
- Diffused junction
- Low Leakage
- Low forward voltage
- High current capability
- Easily cleaned with Freon. Alcohol. Lsopropanol and similar solvents
- The plastic material carries U/L recognition 94 V-O

DO-201AD Unit:inch(mm)



MECHANICAL DATA

- Case: Molded plastic , DO-201AD
- Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode
- Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ℃ ambient temperature unless otherwise specified.
Single phase. half wave. 60HZ. resistive or inductive load. For capacitive load. derate current by 20%

	SYMBOL	HER501	HER502	HER503	HER504	HER505	HER506	HER507	HER508	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current 9.5mm Lead Length. T_A =55 °C	$I_{(AV)}$	5.0								A
Peak Forward Surge Current 8.3ms Single Single half-sine-wave superimposed on rated Tj=125 °C	I_{FSM}	200								A
Maximum Forward Voltage at 5.0A DC	V_F	1.0			1.3		1.7			V
Maximum Reverse Current TA = 25 °C at Rated DC Blocking Voltage TA = 100 °C	I_R	10.0 200.0								μA
Typical Junction Capacitance (Note 1)	C_j	80					50			pF
Maximum reverse recovery time (Note 2)	Trr	50					75			ns
Operating Junction Temperature Range	T_j	- 55 to 150								°C
Storage Temperature Range	T_{STG}	- 55 to 150								°C

NOTE: 1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.
2. Thermal resistance junction to ambient.

FIG. 1 -- TYPICAL FORWARD CHARACTERISTIC

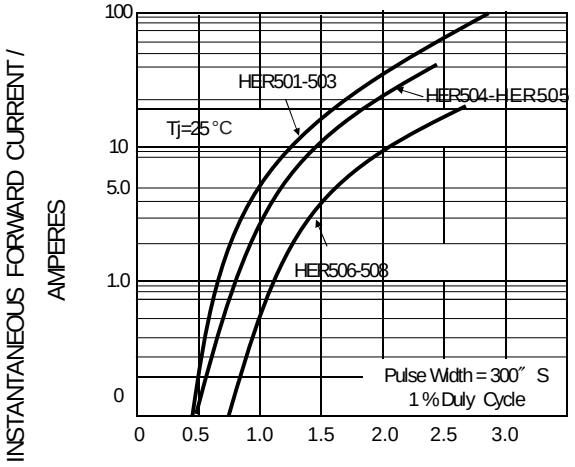


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

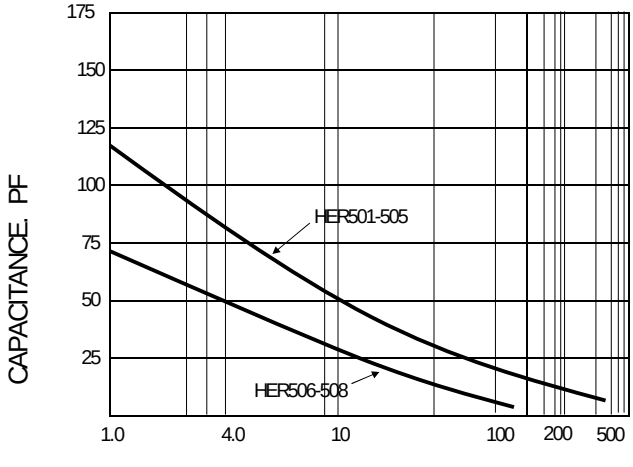


FIG. 3 -- FORWARD CURRENT DERATING CURVE

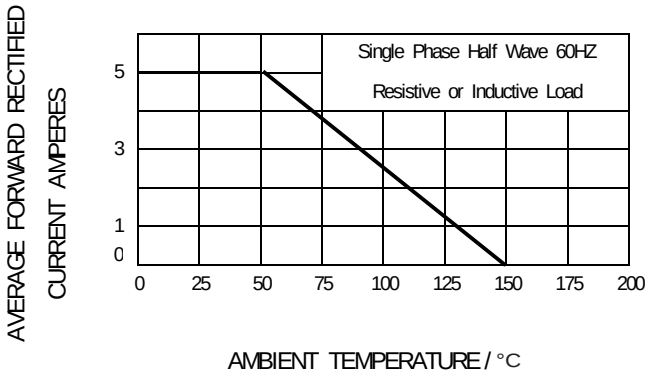


FIG. 4 -- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

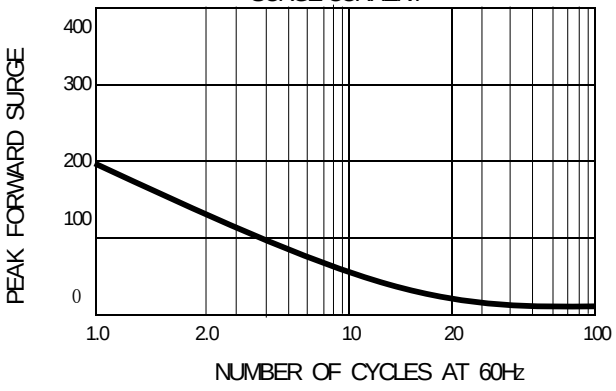
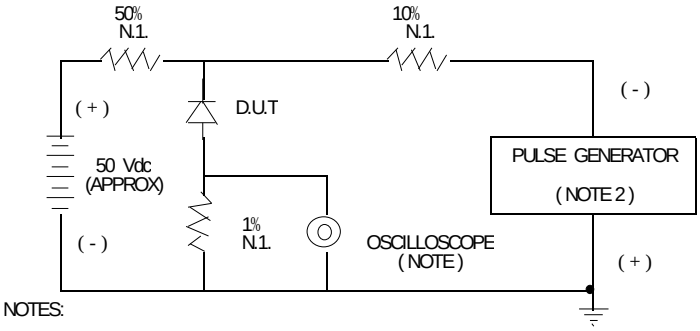
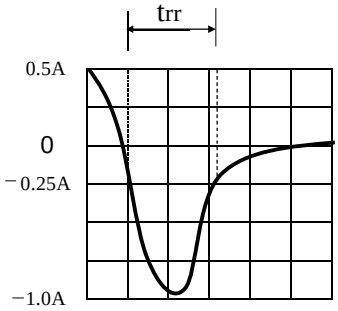


FIG. 5 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:

1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM. 22PF
2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM.



SET TIME BASE FOR 15 ns / cm