

HER501G - HER508G

5.0 AMP. Glass Passivated High Efficient Rectifiers

DO-201AD

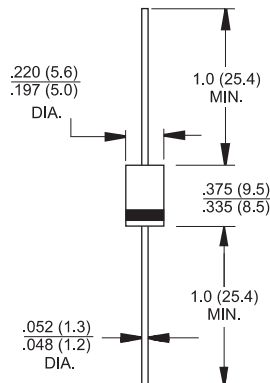


Features

- ✧ Glass passivated chip junction.
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application.

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.65grams



Dimensions in inches and (millimeters)

Maximum Rating and Electrical Characteristics

Rating 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%

Type Number	Symbol	HER 501G	HER 502G	HER 503G	HER 504G	HER 505G	HER 506G	HER 507G	HER 508G	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMD}	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 .375 (9.5mm) lead length @ T _A = 55 °C	I _(AV)	5.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200								A
Maximum Instantaneous Forward Voltage @5.0A	V _F	1.0				1.3		1.7		V
Maximum DC Reverse Current @ Ta=25 °C at Rated DC Blocking Voltage @ Ta=125 °C	I _R	10 200								uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	50					75			nS
Typical Junction Capacitance (Note 2)	C _j	100					65			pF
Typical Thermal Resistance	R _{θJA}	40								°C/W
Operating Temperature Range	T _J	-65 to +150								°C
Storage Temperature Range	T _{STG}	-65 to +150								°C

- Notes:
1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
 2. Measured at 1 MHz and applied reverse voltage of 4.0 V D.C.
 3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (HER501G THRU HER508G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

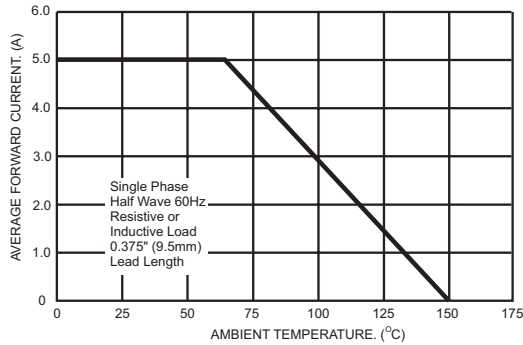


FIG.2- TYPICAL REVERSE CHARACTERISTICS

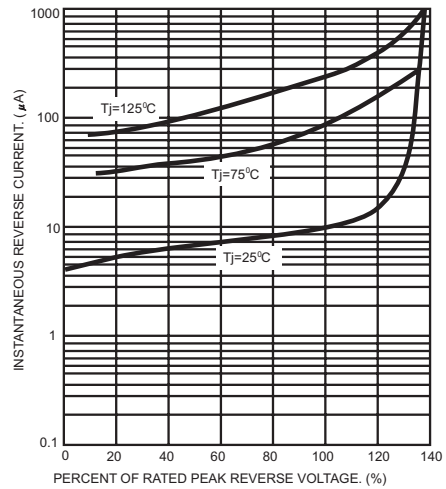


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

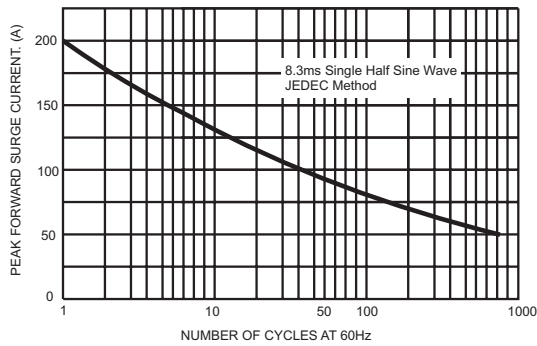


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

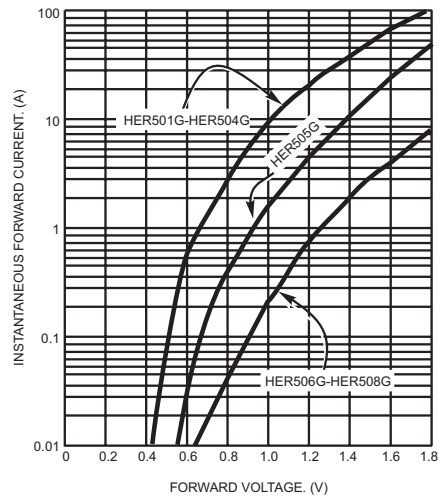


FIG.4- TYPICAL JUNCTION CAPACITANCE

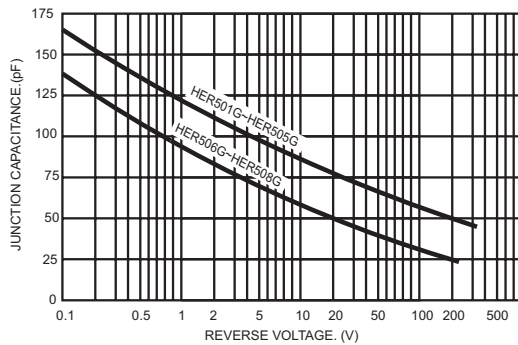


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

