TAIWAN SEMICONDUCTOR

HER0801G – HER0808G

8.0 AMPS. Glass Passivated High Efficient Rectifiers

TO-220AB

RoHS COMPLIANCE



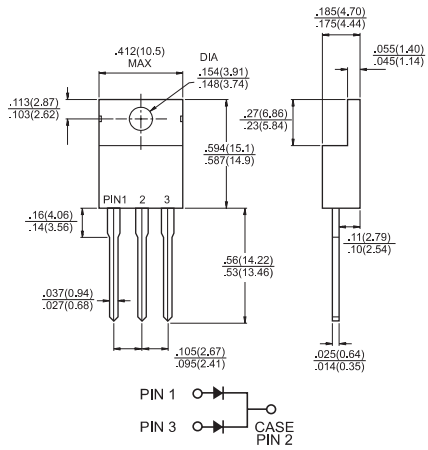
Features

- ✧ Glass passivated chip junction.
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

For use in low voltage, high frequency inventor, free wheeling, and polarity protection application.

Mechanical Data

- ✧ Case: TO-220AB molded plastic
- ✧ Epoxy: UL 94V0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds .16",(4.06mm) from case
- ✧ Weight: 2.24 grams



Dimensions in inches and (millimeters)

Maximum Ratings 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 0801G	HER 0802G	HER 0803G	HER 0804G	HER 0805G	HER 0806G	HER 0807G	HER 0808G	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 @T_C = 100 °C	$I_{(AV)}$	8.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125								A
Maximum Instantaneous Forward Voltage @ 4.0A	V_F	1.0				1.3	1.7			V
Maximum DC Reverse Current @ $_A$=25 °C at Rated DC Blocking Voltage @ T_A=125 °C	I_R	10 400								uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	50					80			nS
Typical Junction Capacitance (Note 2)	Cj	80					50			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	3.0								°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=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
3. Mounted on Heatsink Size of 2 in x 3 in x 0.25 in Al-Plate..

RATINGS AND CHARACTERISTIC CURVES (HER0801G THRU HER0808G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

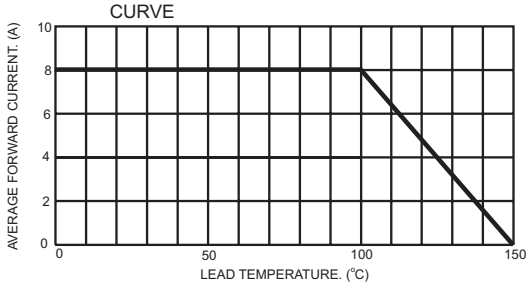


FIG.2- TYPICAL REVERSE CHARACTERISTICS

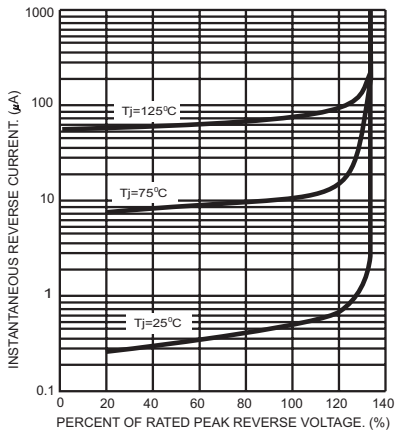


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

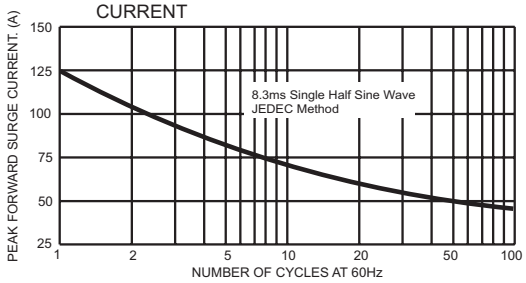


FIG.4- TYPICAL JUNCTION CAPACITANCE

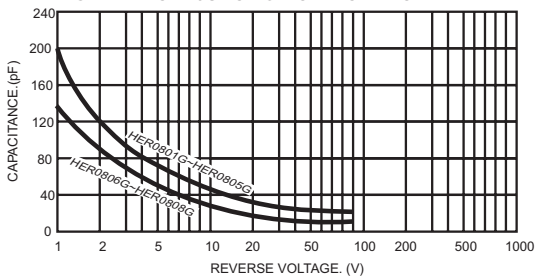


FIG.5- TYPICAL FORWARD CHARACTERISTICS

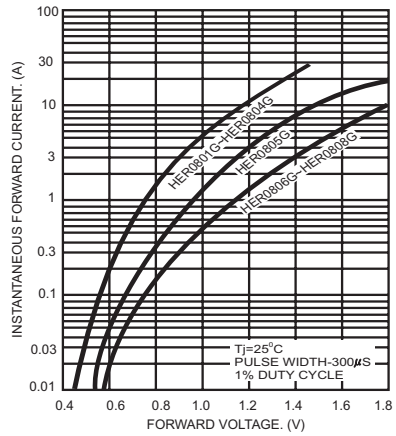


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

