



HERF1601G - HERF1608G

16.0AMPS. Isolated Glass Passivated High Efficient Rectifiers

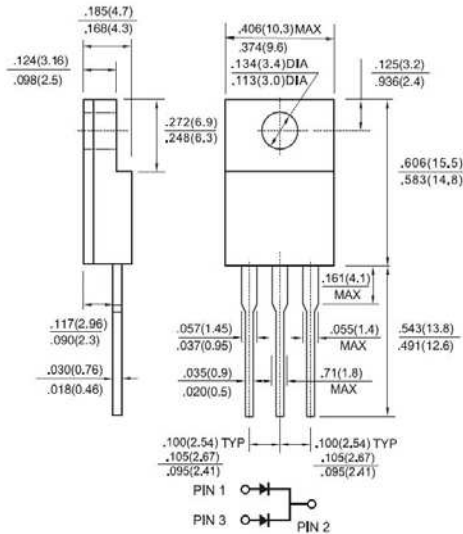
ITO-220AB

Features

- ◇ UL Recognized File # E-326243
- ◇ 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
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode

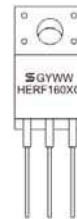
Mechanical Data

- ◇ Case: ITO-220AB Molded plastic
- ◇ Epoxy: UL 94V-0 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/10s /0.25", (6.35mm) from case
- ◇ Mounting torque: 5 in-lbs. max
- ◇ Weight: 2.24 grams



Dimensions in inches and (millimeters)

Marking Diagram



- HERF160XG = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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	HERF 1601G	HERF 1602G	HERF 1603G	HERF 1604G	HERF 1605G	HERF 1606G	HERF 1607G	HERF 1608G	Unit	
Maximum Repetitive 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 .375 (9.5mm) Lead Length @ $T_C=100^\circ C$	$I_{F(AV)}$	16.0								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 (Note 1) @ 8.0A	V_F	1.0			1.3		1.7			V	
Maximum Reverse Current @ Rated VR $T_A=25^\circ C$ $T_A=125^\circ C$	I_R	10 400								uA	
Maximum Reverse Recovery Time (Note 2)	T_{rr}	50					80				nS
Typical Junction Capacitance (Note 3)	C_j	80					50				pF
Typical Thermal Resistance	$R_{\theta JC}$	1.5								$^\circ C/W$	
Operating Temperature Range	T_J	- 65 to + 150								$^\circ C$	
Storage Temperature Range	T_{STG}	- 65 to + 150								$^\circ C$	

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (HERF1601G THRU HERF1608G)

FIG.1 FORWARD CURRENT DERATING CURVE

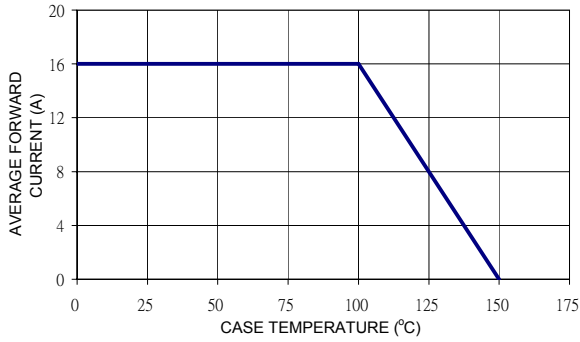


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

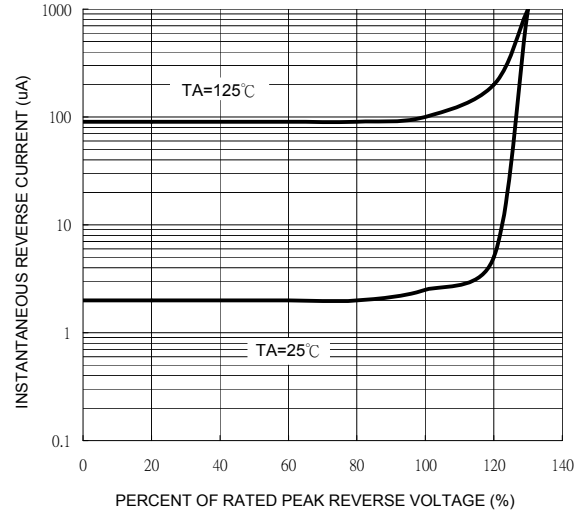


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

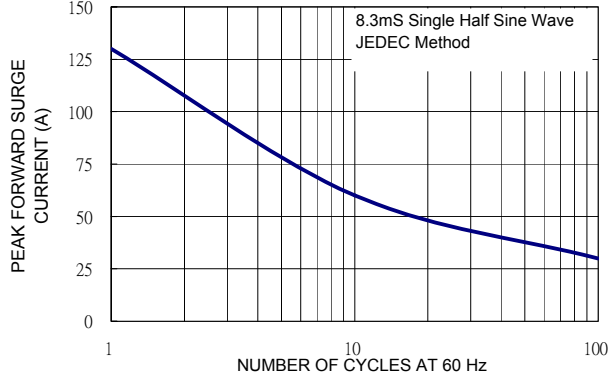


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

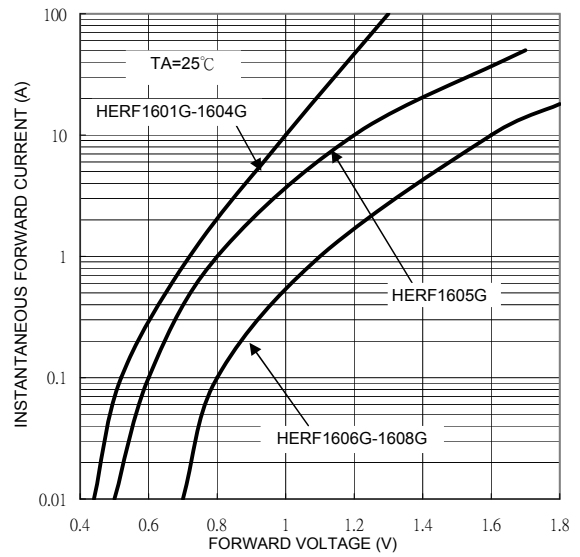


FIG. 4 TYPICAL JUNCTION CAPACITANCE

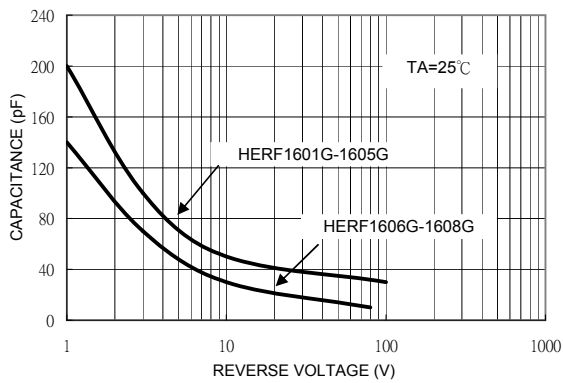


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

