



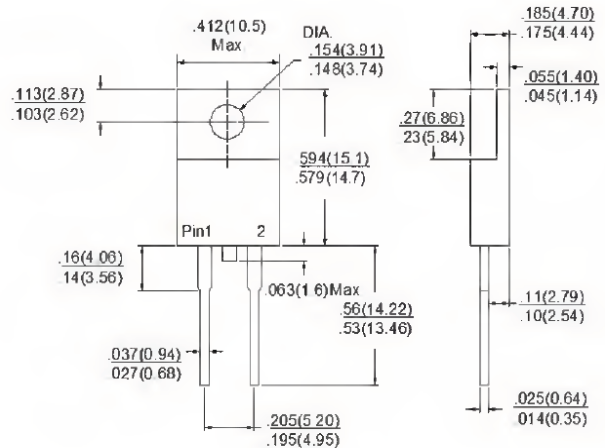
HERA1601G - HERA1608G

16.0AMPS. Glass Passivated High Efficient Rectifiers

TO-220AC

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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Mechanical Data

- ✧ Cases: TO-220AC 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/10 seconds .16", (4.06mm) from case
- ✧ Weight: 2.24 grams

Dimensions in inches and (millimeters)

Marking Diagram



- HERA160XG = 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	HERA 1601G	HERA 1602G	HERA 1603G	HERA 1604G	HERA 1605G	HERA 1606G	HERA 1607G	HERA 1608G	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	$I_{F(AV)}$	16								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	250								A
Maximum Instantaneous Forward Voltage (Note 1) @ 16 A	V_F	1.0			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ C$	I_R	10								uA
at Rated DC Blocking Voltage @ $T_A=125^\circ C$		400								uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	50				80				nS
Typical Junction Capacitance (Note 3)	C_j	120				80				pF
Typical Thermal Resistance	$R_{\theta JC}$	2.0								$^\circ C/W$
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 (HERA1601G THRU HERA1608G)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

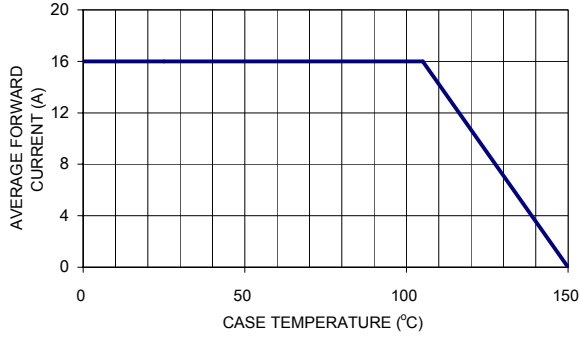


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

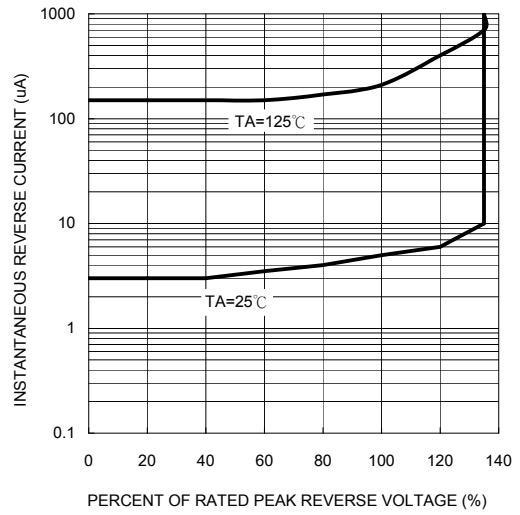


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

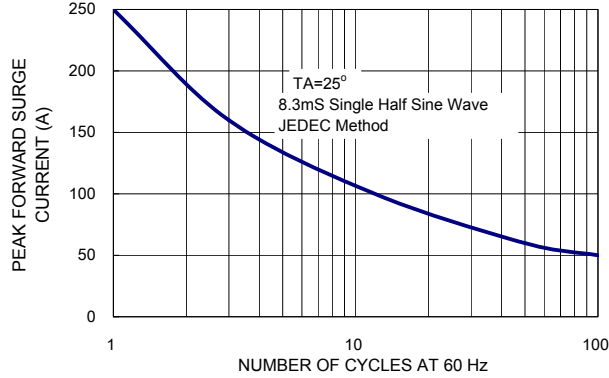


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

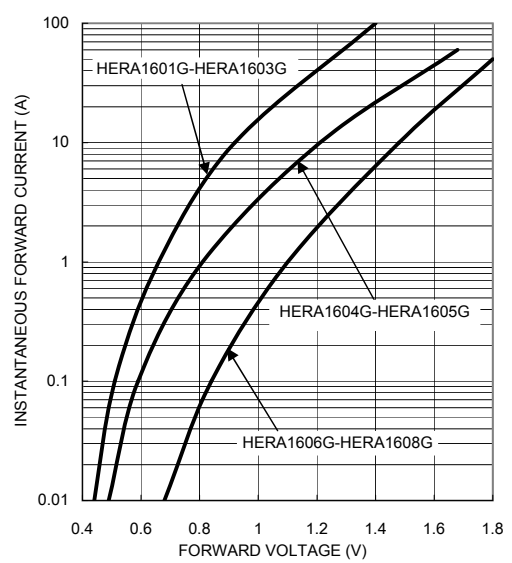


FIG. 4- TYPICAL JUNCTION CAPACITANCE

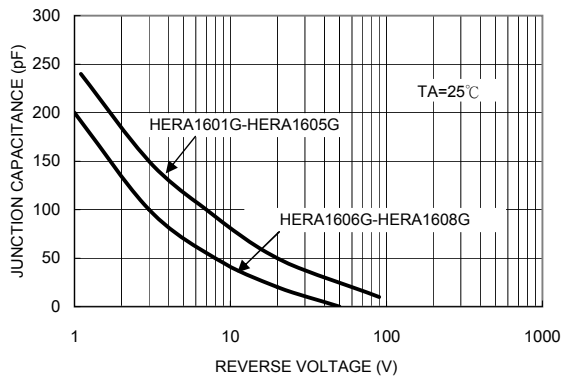


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

