

Pb Free Plating Product

HERF1601GA thru HERF1608GA



16Ampere Insulated Dual Common Anode High Efficiency Rectifiers

**Features**

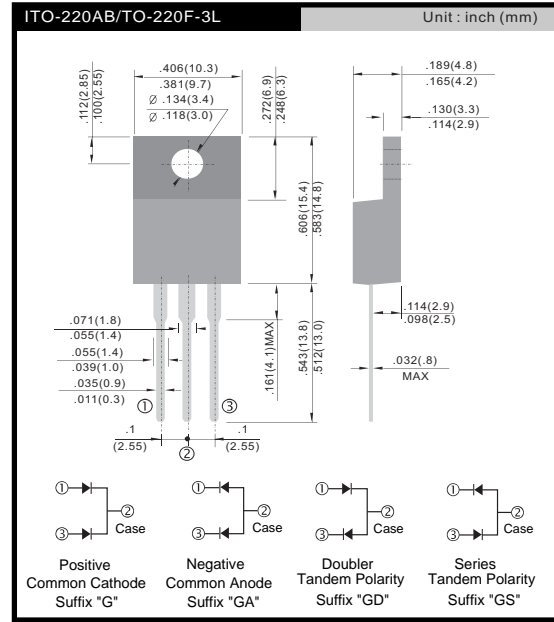
- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**Application**

- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- ★ Case: TO-220F fully plastic isolated encapsulation
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 1.9 gram approximately



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	HERF 1601GA	HERF 1602GA	HERF 1603GA	HERF 1604GA	HERF 1605GA	HERF 1606GA	HERF 1607GA	HERF 1608GA	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	16								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	125								A
Maximum instantaneous forward voltage @ 8 A (Note 1)	V <sub>F</sub>	1.0			1.3		1.7			V
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	10								μA
		400								
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	50					80			ns
Typical junction capacitance (Note 3)	C <sub>J</sub>	80					50			pF
Typical thermal resistance	R <sub>θJC</sub>	1.5								°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150								°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150								°C

Note 1: Pulse test with PW=300μs, 1% duty cycle  
 Note 2: Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A  
 Note 3: Measured at 1 MHz and applied reverse voltage of 4.0V DC.

RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

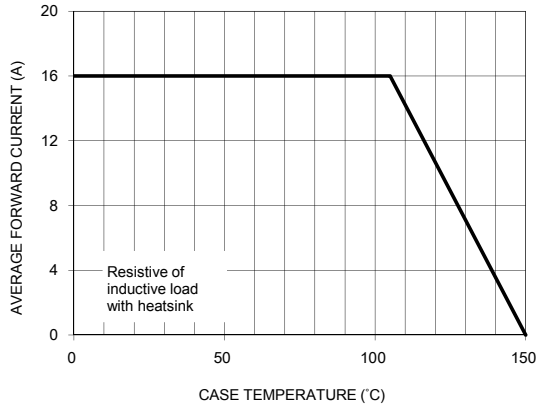


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

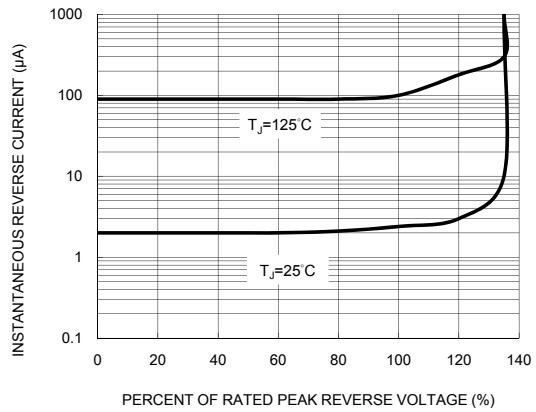


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

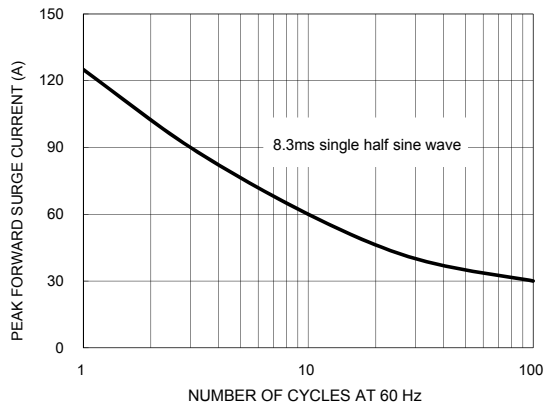


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

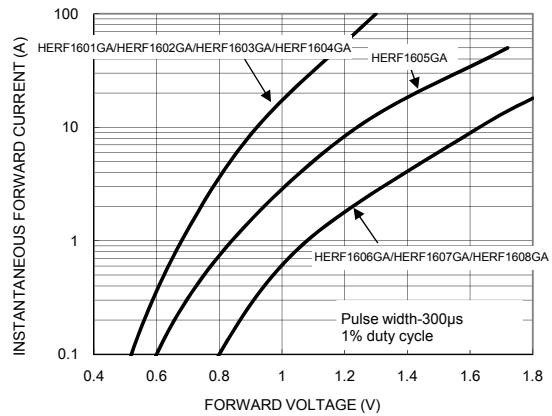


FIG. 5 TYPICAL JUNCTION CAPACITANCE

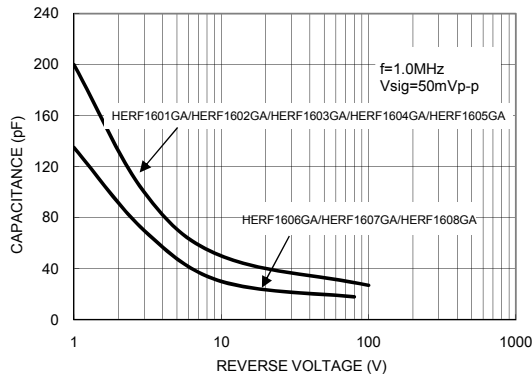


FIG. 6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

