

Pb Free Plating Product

HERF1001GA thru HERF1008GA



10.0 Ampere Insulated Dual Common Anode High Efficiency Rectifiers

Features

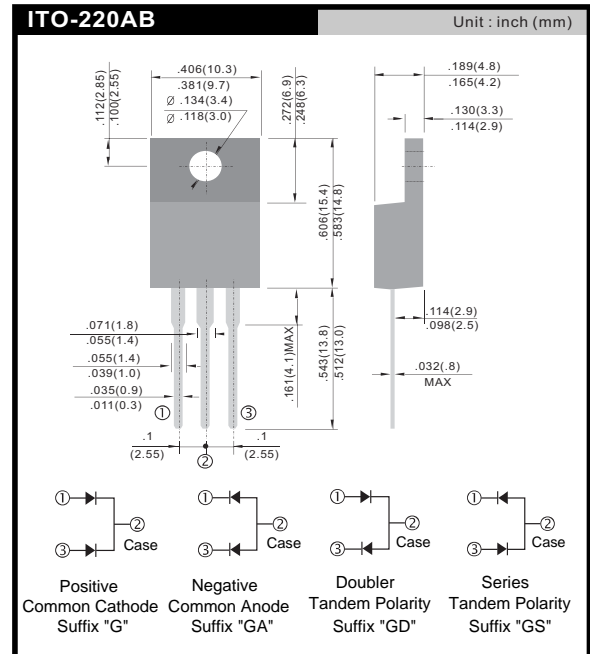
- * Fast switching for high efficiency
- * Low forward voltage drop
- * High current capability
- * Low reverse leakage current
- * High surge current capability

Application

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

Mechanical Data

- * Case: Fully Molded Isolated Package TO-220F
- * 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: 2.1 gram approxiamtely



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 1001GA	HERF 1002GA	HERF 1003GA	HERF 1004GA	HERF 1005GA	HERF 1006GA	HERF 1007GA	HERF 1008GA	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	$I_{F(AV)}$	10								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) @ 5 A	V_F	1.0			1.3		1.7			V	
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	I_R	10				400					uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	50				80					nS
Typical Junction Capacitance (Note 3)	C_j	60				40					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: IF=0.5A, IR=1.0A, IRR=0.25A
 Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (HERF1001GA thru HERF1008GA)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

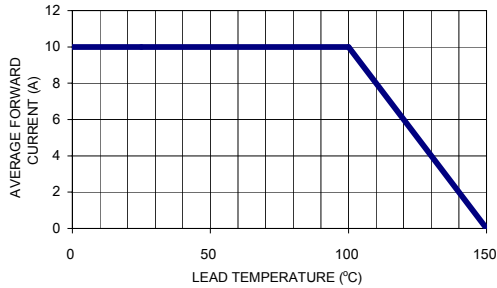


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

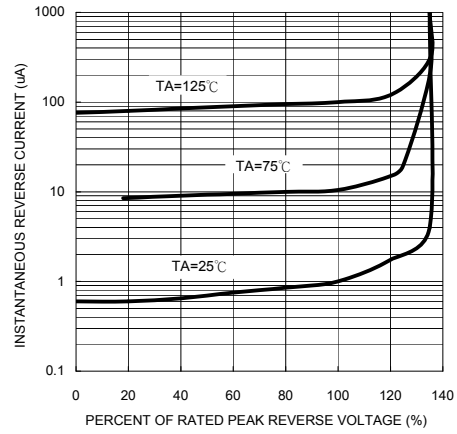


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

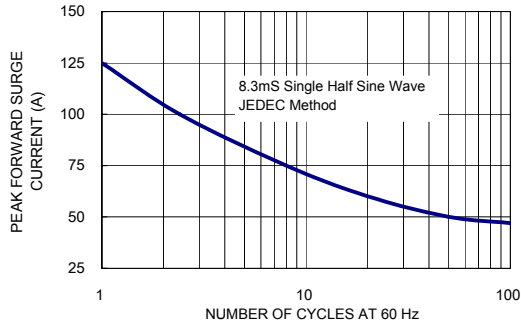


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

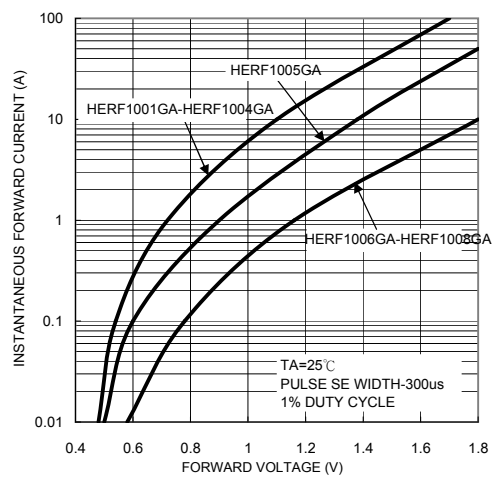


FIG. 4- TYPICAL JUNCTION CAPACITANCE

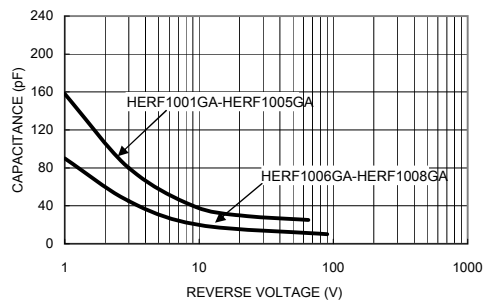


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

