

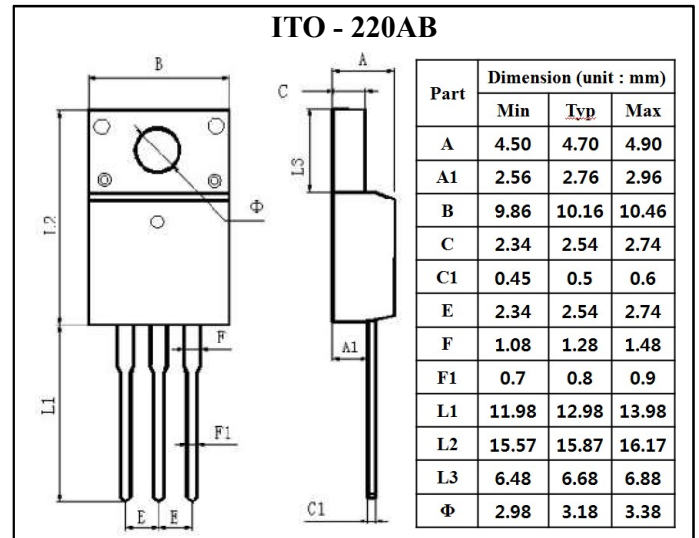
**Glass Passivated High Efficient Rectifiers**  
**Reverse Voltage 50 to 1000 Volts Forward Current 10.0 Amperes**

**Features**

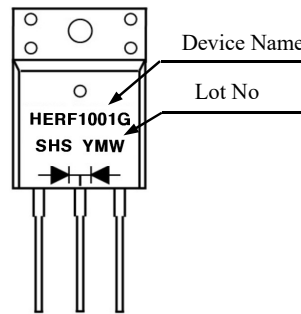
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- For use in low voltage, high frequency inverter, free wheeling, and polarity protection application

**Mechanical Data**

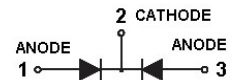
- Case : ITO-220AB Molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Terminals : Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : As marked
- High temperature soldering guaranteed : 260°C/10 seconds /0.25",(6.35mm) from case
- Mounting torque : 5 in-lbs. max
- Weight : 2.24 grams



**Marking**



**Equivalent Circuit**



**Maximum Ratings & Electrical Characteristics**

Ratings 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%

Parameter	Symbol	HERF 1001G	HERF 1002G	HERF 1003G	HERF 1004G	HERF 1005G	HERF 1006G	HERF 1007G	HERF 1008G	Unit	Remark
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	$I_{(AV)}$	10.0								A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	125								A	
Maximum Instantaneous Forward Voltage at 5.0A	$V_F$	1.0			1.3		1.7			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	10.0								uA	Ta=25°C
		400									Ta=125°C
Maximum Reverse Recovery Time	$t_{rr}$	50				80				ns	Note 1
Typical Junction Capacitance	$C_J$	60				40				pF	Note 2
Typical Thermal Resistance	$R_{th(j-c)}$	3.0								°C/W	Note 3
Operation Junction Temperature Range	$T_J$	-55 to +150								°C	
Storage Temperature Range	$T_{STG}$	-55 to +150								°C	

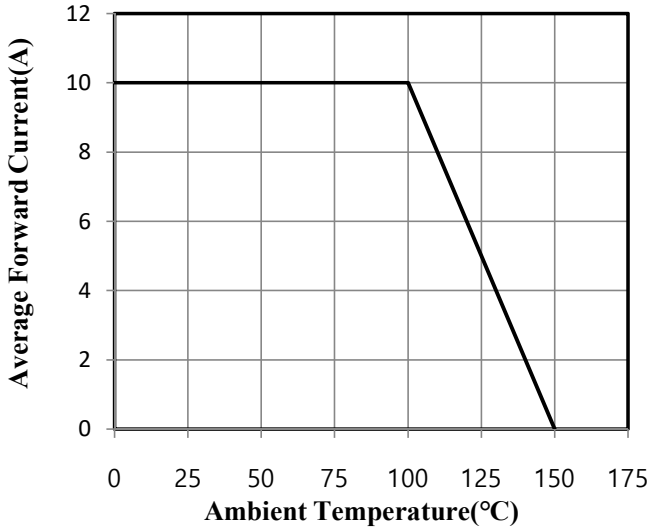
Note 1. Reverse Recovery Time Test Conditions :  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note 2. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.

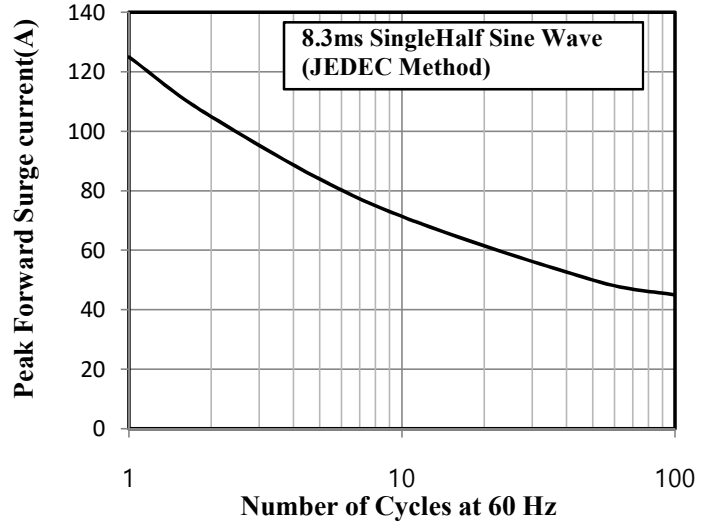
Note 3. Mounted on Heatsink Size of 2 in × 3 in × 0.25 in Al-Plate

Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

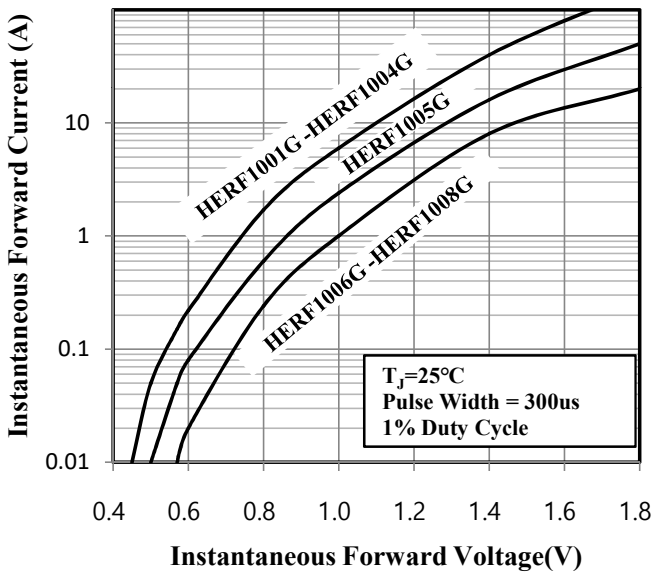
**Fig.1 Forward Current Derating Curve**



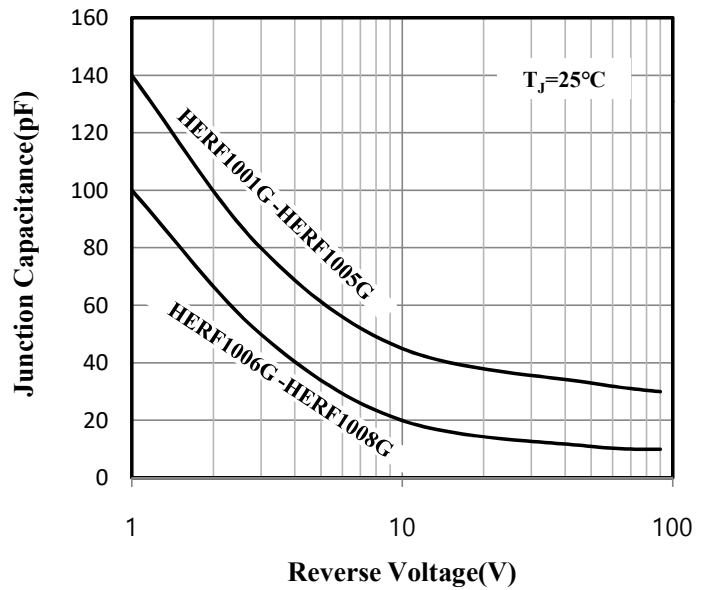
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



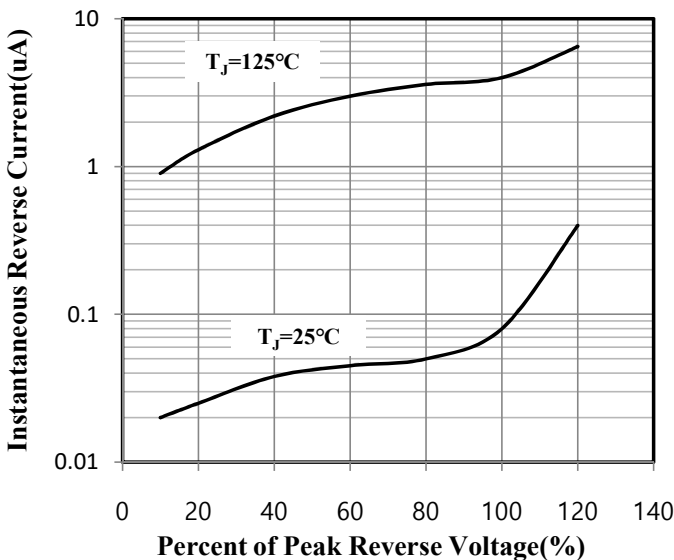
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Typical Reverse Characteristics**



**Fig. 6 Reverse Recovery Time Characteristic and Test Circuit Diagram**

