SUNG HO SEMICONDUCTOR

HERF1601G THRU HERF1608G

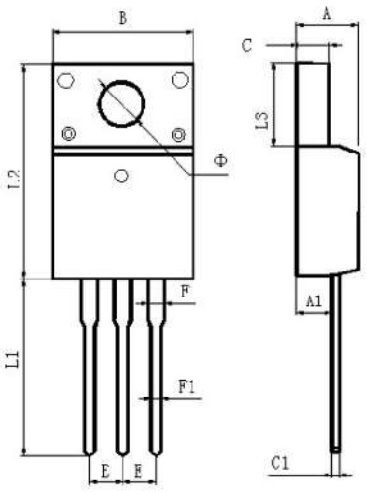
16.0 AMPS. Isolated High Efficient Rectifiers

Glass Passivated High Efficient Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 16.0 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

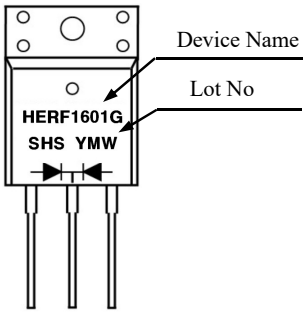
Mechanical Data
- Case : ITO-220AB Molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Terminals : Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : As marked
- High temperature soldering guaranteed : 260°C/10 seconds /0.25",(6.35mm) from case
- Mounting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

ITO - 220AB

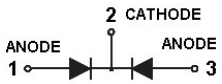


Part	Dimension (unit : mm)		
	Min	Typ	Max
A	4.50	4.70	4.90
A1	2.56	2.76	2.96
B	9.86	10.16	10.46
C	2.34	2.54	2.74
C1	0.45	0.5	0.6
E	2.34	2.54	2.74
F	1.08	1.28	1.48
F1	0.7	0.8	0.9
L1	11.98	12.98	13.98
L2	15.57	15.87	16.17
L3	6.48	6.68	6.88
Φ	2.98	3.18	3.38

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 1601G	HERF 1602G	HERF 1603G	HERF 1604G	HERF 1605G	HERF 1606G	HERF 1607G	HERF 1608G	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	$I_{(AV)}$	16.0								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 8.0A	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℃
Maximum Reverse Recovery Time	trr	50					80			ns	Note 1
Typical Junction Capacitance	C_J	80					50			pF	Note 2
Typical Thermal Resistance	Rth(j-c)	1.5								℃/W	Note 3
Operation Junction Temperature Range	T_J	-55 to +150								℃	
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℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

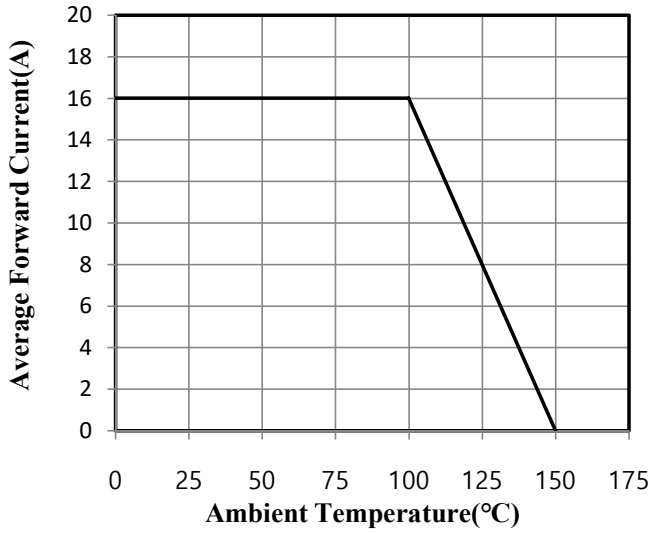


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

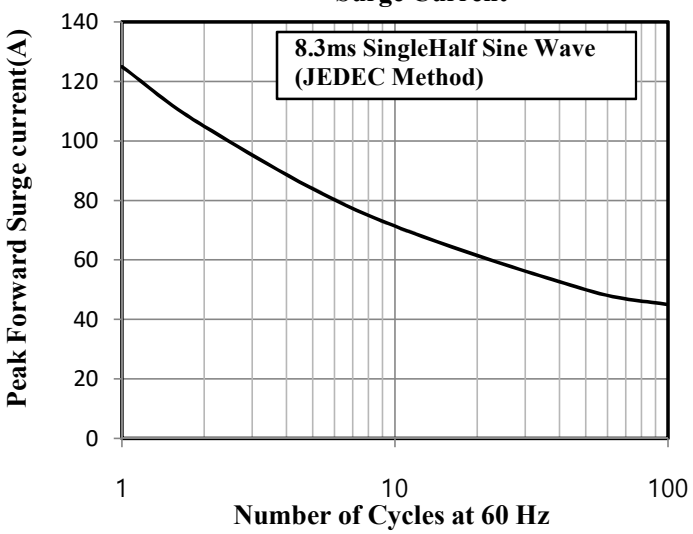


Fig.3 Typical Instantaneous Forward Characteristics

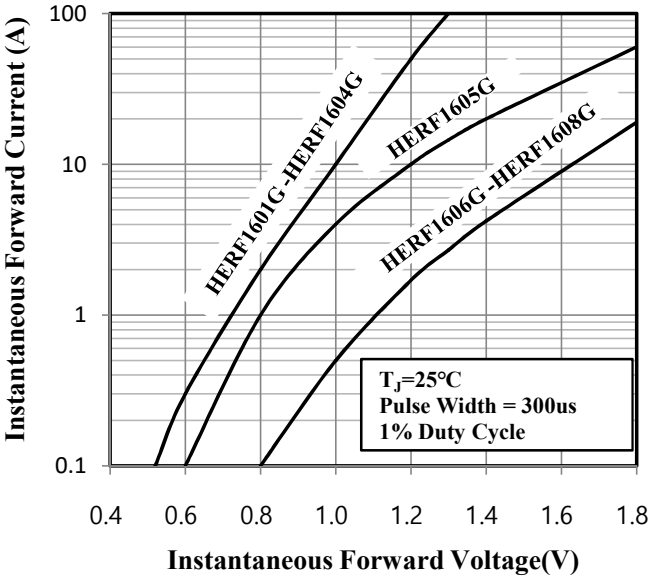


Fig.4 Typical Junction Capacitance

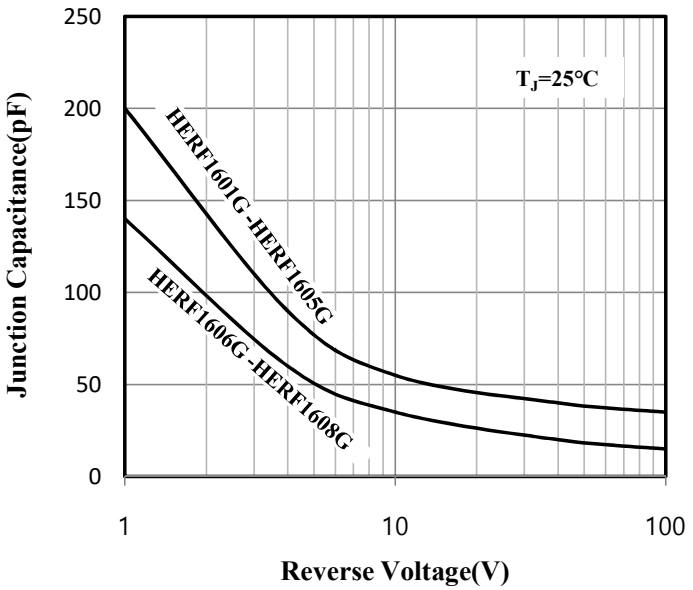


Fig.5 Typical Reverse Charateristics

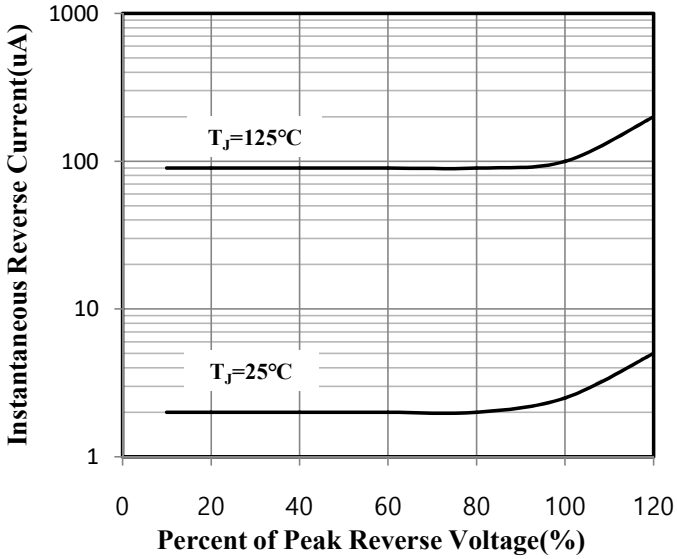


Fig. 6 Reverse Recovery Time Charateristic and Test Circuit Diagram