

DATA SHEET

GBU8A~GBU810

SINGLE-PHASE BRIDGE RECTIFIER

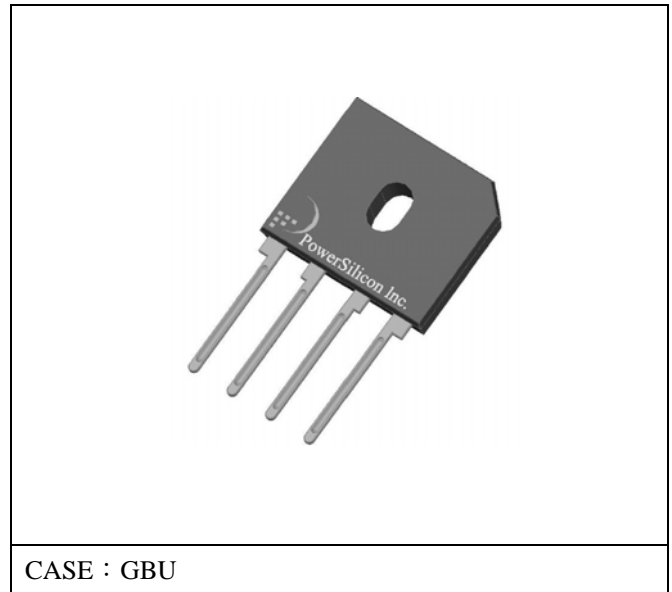
VOLTAGE 50~1000 Volts **CURRENT** 8.0 Ampere

FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94 V-0
- HIGH TEMPERATURE SOLDERING GUARANTEED : 260°C /10S .375" (9.5MM)LEAD LENGTH AT 5 LBS (2.3KG)TENSION.
- GLASS PASSIVATED CHIP JUNCTIONS
- IDEAL FOR PRINTED CIRCUIT BOARDS
- LEAD FREE AND HALOGEN-FREE

MECHANICAL DATA

- CASE : MOLDED PLASTIC
- MOUNTING POSITION: ANY
- MOUNTING TORQUE: 5 IN-LB MAX.
- TERMINALS : LEADS SOLDERABLE PER MIL-STD-202, METHOD 208
- WEIGHT : 4.0 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.										
PARAMETER	SYMBOL	GBU8A	GBU801	GBU802	GBU804	GBU806	GBU808	GBU810	UNITS	
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	400	600	800	1000	V	
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	280	420	600	700	V	
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	400	600	800	1000	V	
MAXIMUM AVERAGE FORWARD OUTPUT RECTIFIED CURRENT ($T_c=107^\circ\text{C}$ WITH HEAT SINK)	I_F	8.0							A	
RATING FOR FUSING ($t<8.3\text{ms}$)	I^2t	120							A^2s	
PEAK FORWARD SURGE CURRENT SINGLE SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	175							A	
TYPICAL THERMAL RESISTANCE (NOTE 3)	$R_{\theta JA}$	21							$^\circ\text{C}/\text{W}$	
TYPICAL THERMAL RESISTANCE (NOTE 1)	$R_{\theta JC}$	2.2							$^\circ\text{C}/\text{W}$	
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150							$^\circ\text{C}$	
OPERATING TEMPERATURE RANGE	T_J	-55 TO + 150							$^\circ\text{C}$	
ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)										
PARAMETER	SYMBOL	GBU8A	GBU801	GBU802	GBU804	GBU806	GBU808	GBU810	UNITS	
MAXIMUM FORWARD VOLTAGE AT 8A	V_F	1.0							V	
MAXIMUM REVERSE DC CURRENT AT RATE DC BLOCKING VOLTAGE PER ELEMENT	25°C	5.0							μA	
	125°C	250								
JUNCTION CAPACITANCE (NOTE 2)	C_J	211				94				pF

- NOTE: 1. UNITS CASE MOUNTED ON AL PLATE HEATSINK.
 2. MEASURED AT 1.0MHz AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS.
 3. UNITS MOUNTED ON P.C.B. WITH 0.5 x 0.5" (12 x 12mm) COPPER PADS ,0.375" (9.5mm) LEAD LENGTH.

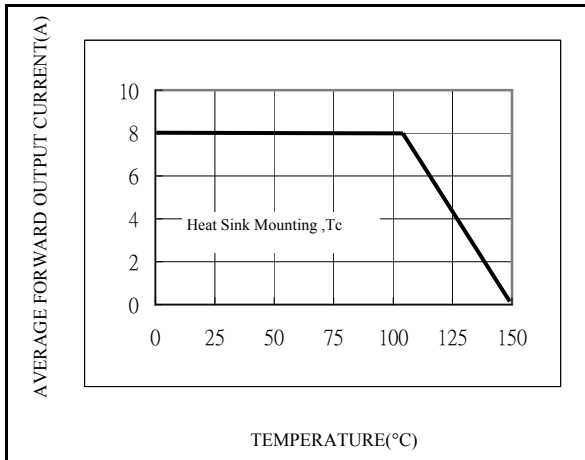


Fig. 1-DERATING CURVE OUTPUT RECTIFIED CURRENT

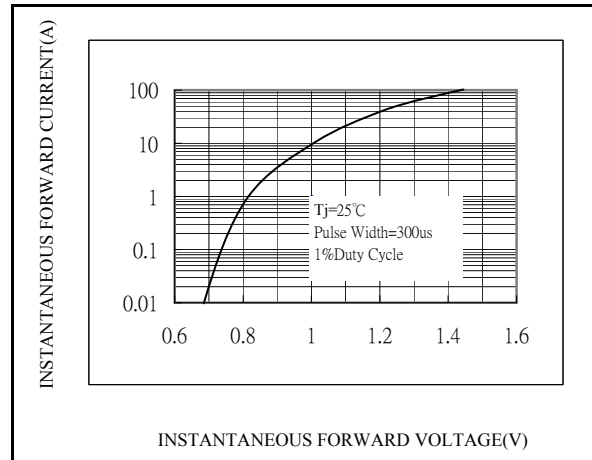


Fig. 2-TYPICAL FORWARD CHARACTERISTICS PER LEG

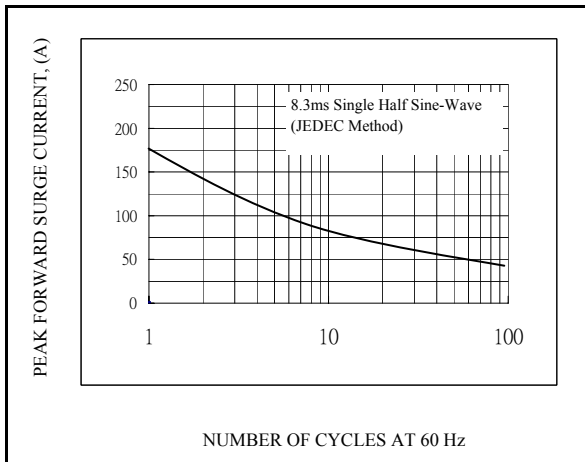


Fig. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

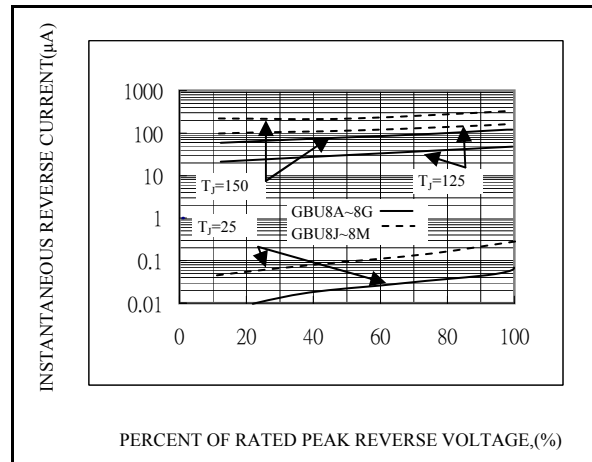


Fig. 4-TYPICAL REVERSE CHARACTERISTIC PER LEG

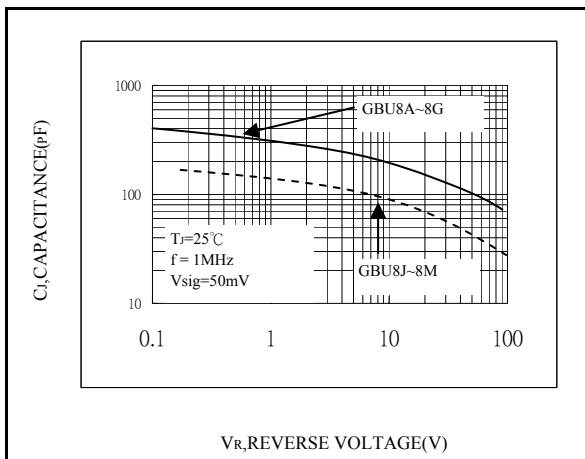


Fig. 5-TYPICAL JUNCTION CAPACITANCE PER LEG

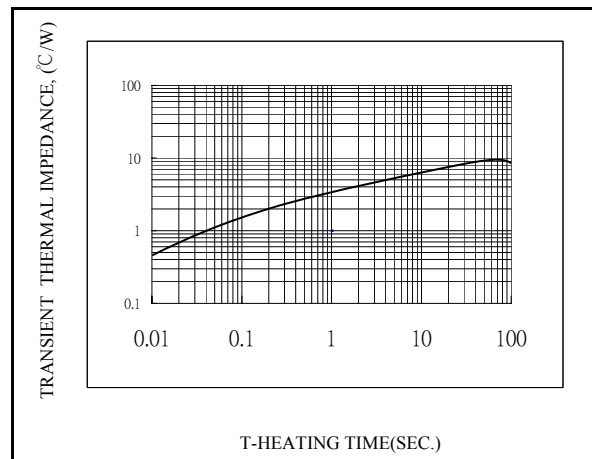
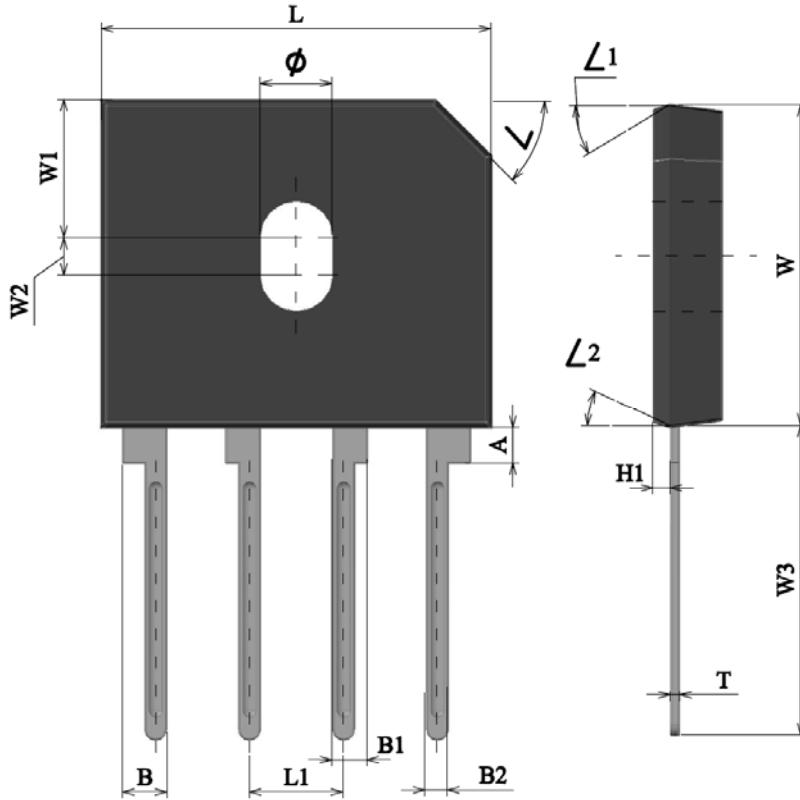


Fig. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

GBU DIMENSION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
L	21.80	22.30	0.858	0.878
L1	4.83	5.35	0.190	0.211
W	18.30	18.80	0.720	0.740
W1	7.40	7.90	0.291	0.311
W2	1.65	2.16	0.065	0.085
W3	17.50	18.00	0.689	0.709
A	1.52	2.03	0.060	0.080
B	2.16	2.54	0.085	0.100
B1	1.65	2.03	0.065	0.080
B2	1.02	1.27	0.040	0.050
H1	1.90	2.16	0.075	0.085
T	0.46	0.56	0.018	0.022
Φ	3.5	4.10	0.138	0.161
\angle	3.2*45° CHAMFER		0.125*45° CHAMFER	
$\angle 1$	9° TYP		9° TYP	
$\angle 2$	5° TYP		5° TYP	