LITE-ON SEMICONDUCTORS

GBU10V06 thru GBU10V08

GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE – 600 to 800Volts
FORWARD CURRENT – 10 Amperes

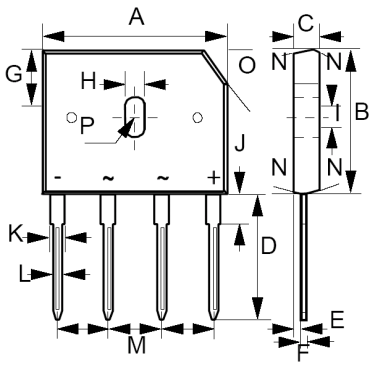
FEATURES

- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability

MECHANICAL DATA

- Case: GBU
- Case Material: Plastic material, UL flammability classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead free plating (Tin finish), Solderable per MIL-STD-202, Method 208
- Polarity indicator: As marked on the body
- Weight: 0.15 ounces, 4.0 grams
- Component in accordance to RoHs 2002/95/EC

GBU



GBU		
DIM.	MIN.	MAX.
A	21.80	22.30
B	18.30	18.80
C	3.30	3.56
D	17.50	18.00
E	0.76	1.00
F	0.46	0.56
G	7.40	7.90
H	3.50	4.10
I	1.65	2.16
J	2.25	2.75
K	1.95	2.35
L	1.02	1.27
M	4.83	5.33
N	7.0° TYPICAL	
O	3.2 x 45°	
P	1.90 RADIUS	
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER		SYMBOL	GBU10V06	GBU10V08	UNIT
Device marking code		Note	GBU10V06	GBU10V08	---
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	600	800	V
Average Rectified Output Current	With heatsink, @T_C=85°C Without heatsink, @T_C=100°C	$I_{F(av)}$	10 2.9		A
Peak Forward Surge Current 8.3ms single half sine-wave	Tj=25°C Tj=125°C	I_{FSM}	250 220		A
Peak Forward Surge Current 1.0 ms single half sine-wave	Tj=25°C Tj=125°C	I_{FSM}	500 450		A
I^2t Rating for Fusing (t = 8.3ms)		I^2t	260		A^2s
Mounting Torque (Recommended torque: 0.5 N.m)		TOR	0.8		N.m
Storage temperature range		T_{STG}	-55 to +150		°C
Operating junction temperature range		T_J	-40 to +150		°C

PARAMETER		TEST CONDITIONS		SYMBOL	Min.	Typ.	Max.	UNIT
Breakdown voltage	GBU10V06 GBU10V08	IR=5uA	Tj=25°C	V_B	600 800	---	---	V
Forward Voltage (1)		IF=5A	Tj=25°C Tj=125°C	V_F	--- ---	--- ---	0.92 0.85	V
Leakage Current		Rated VR	Tj=25°C Tj=125°C	I_R	--- ---	--- ---	5 500	uA

THERMAL CHARACTERISTIC	SYMBOL	Typical	UNIT
Typical Thermal Resistance (Unit mounted on 150 mm x 150 mm x 2 mm Cu Plate Heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta Ja}$	2 4 10	°C/W
Typical Thermal Resistance (Without heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta Ja}$	3 18 35	°C/W

Note: (1) 300us Pulse Width, 2% Duty Cycle.

RATING AND CHARACTERISTIC CURVES
GBU10V06 thru GBU10V08

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FIG.1- FORWARD CURRENT DERATING CURVE

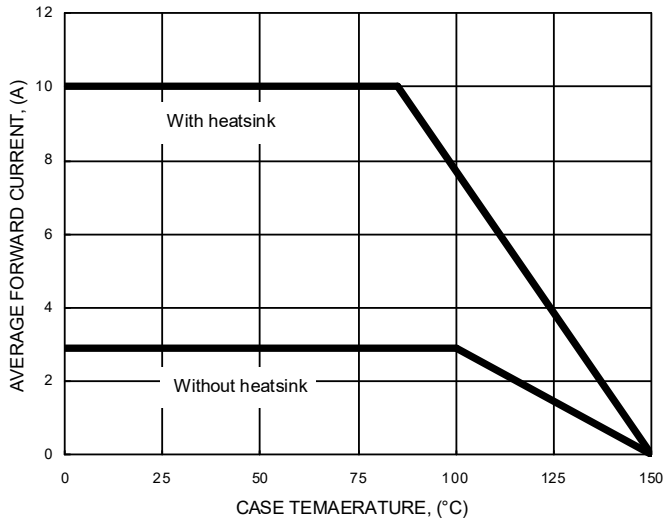


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

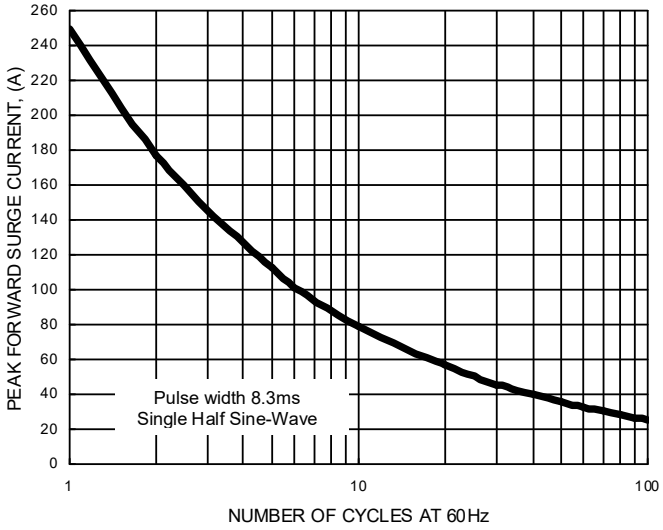


FIG.3- TYPICAL REVERSE CHARACTERISTICS

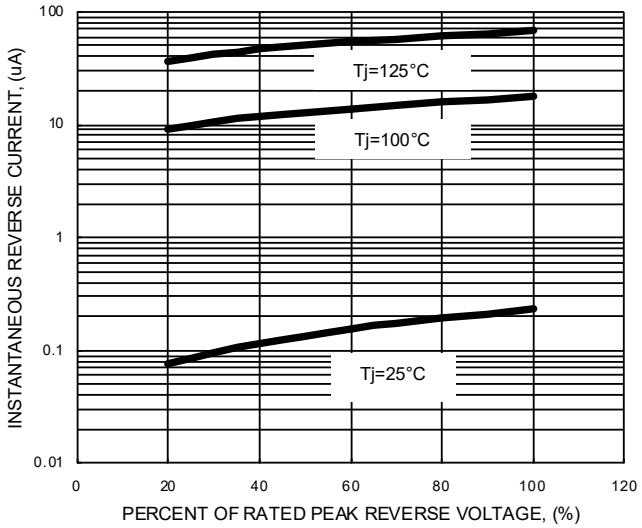


FIG.4- TYPICAL JUNCTION CAPACITANCE

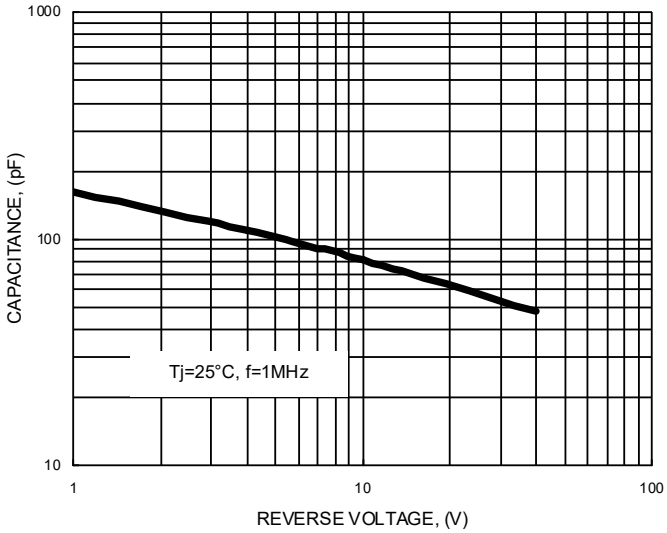


FIG.5- TYPICAL FORWORD CHARACTERISTICS

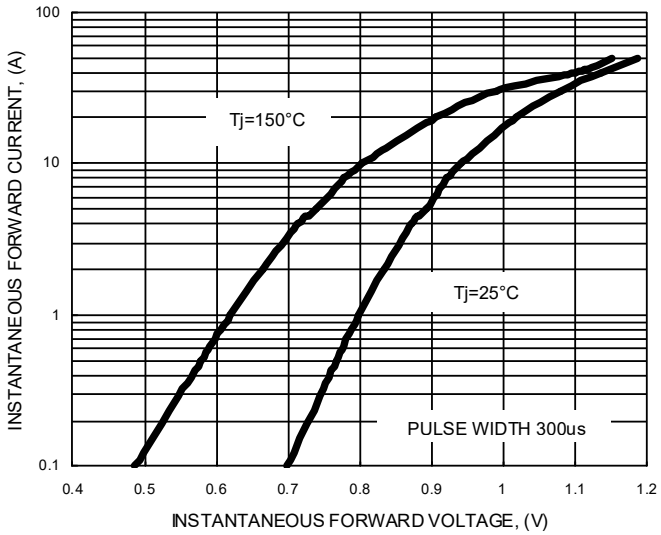
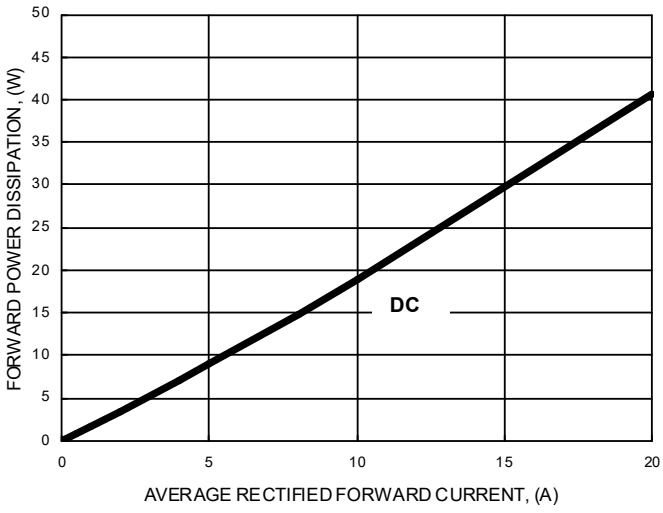


FIG.6- FORWARD POWER DISSIPATION



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