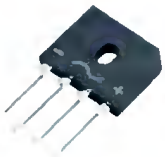
TAIWAN SEMICONDUCTOR

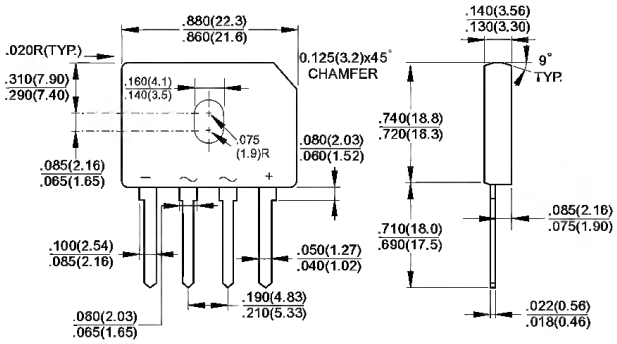
GBU401 - GBU407

Single Phase 4.0 AMPS. Glass Passivated Bridge Rectifiers

RoHS COMPLIANCE



GBU



Dimensions in inches and (millimeters)

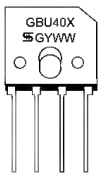
Features

- UL Recognized File # E-96005
- Ideal for printed circuit board
- Reliable low cost construction
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500VRMS
- Surge overload rating to 150 amperes peak
- High temperature soldering guaranteed: 260°C / 10 seconds / .375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- Case: Molded plastic body
- Terminals: Leads solderable per MIL-STD-750, Method 2026
- Weight: 4.0 grams
- Mounting torque: 5 in. lbs. Max.

Marking Diagram



GBU40X = Specific Device Code
G = Green Compound
Y = Year
WW = Work Week

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	GBU 401	GBU 402	GBU 403	GBU 404	GBU 405	GBU 406	GBU 407	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	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_C = 100 °C	$I_{(AV)}$	4.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sne-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage @ 2.0A @ 4.0A	V_F	1.0 1.1							V
Maximum DC Reverse Current @ T_A=25 °C at Rated DC Blocking Voltage @ T_A=125 °C	I_R	5.0 500							uA uA
Typical Junction Capacitance (Note 3)	Cj	100				45			pF
Typical Thermal Resistance (Note 1) (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	20 4.0							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to + 150							°C

Notes: 1. Mounted on P.C.B. with 0.5" x 0.5" (12mm x 12mm) Copper Pads and 0.375" 9.5mm) Lead Length. 2. Mounted on Al. Plate of 2" x 3" x 0.25" Al-Plate Heatsink.
3. Measured at 1.0MHZ and Applied Reverse Voltage of 4.0 Volts.

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RATINGS AND CHARACTERISTIC CURVES (GBU401 THRU GBU407)

FIG.1-MAXIMUM FORWARD CURRENT DERATING CURVE

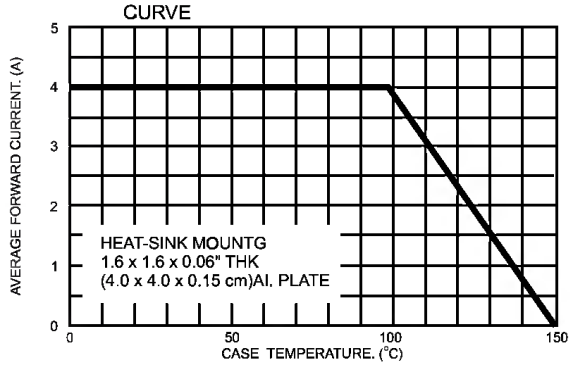


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

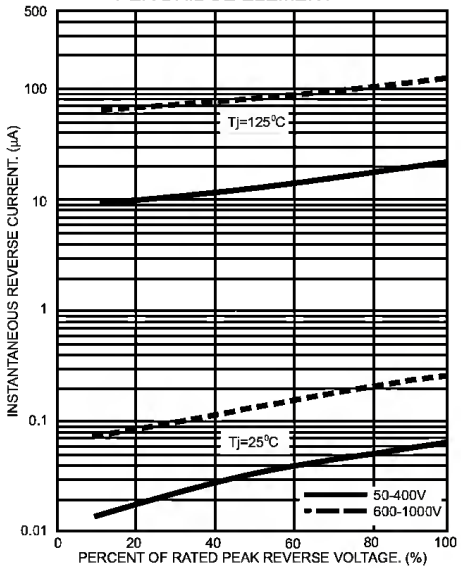


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

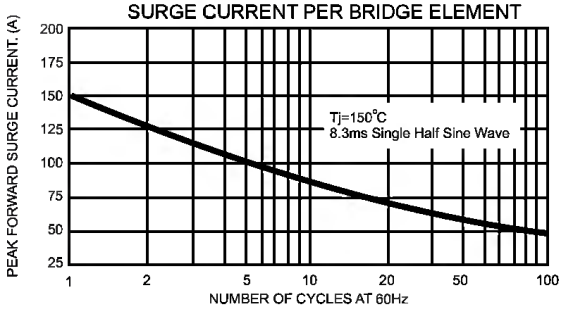


FIG.4- TYPICAL JUNCTION CAPACITANCE

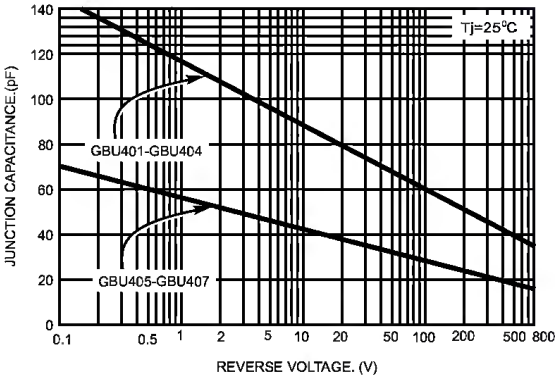
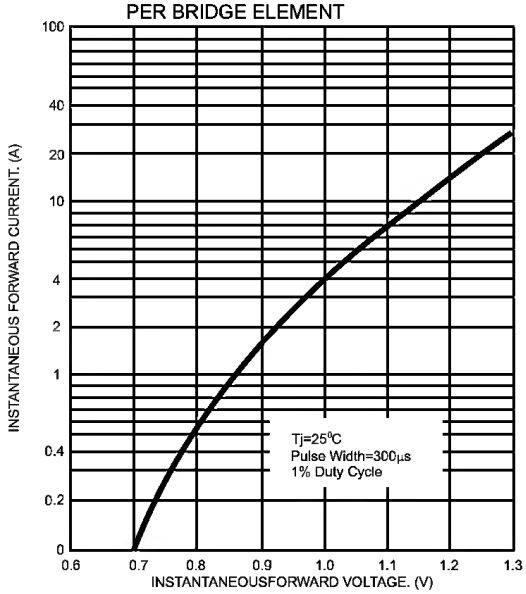


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT



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