Single Phase Glass Passivated Silicon Bridge Rectifier

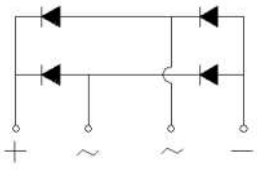
V_{RRM} = 50 V - 400 V

I_O = 8 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500 V_{RMS}
- Glass passivated chip junction
- Ideal for printed circuit boards
- High surge overload rating
- High temperature soldering guaranteed: 260ºC/ 10 seconds, 0.375 (9.5mm) lead length
- Not ESD Sensitive

GBU Package





Mechanical Data

Case: Molded plastic body over passivated junctions

Terminals: Plated leads, solderable per MIL-STD-750 Method 2026.

Mounting position: Any

Maximum ratings at Tc = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	GBU8A	GBU8B	GBU8D	GBU8G	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	400	V
RMS reverse voltage	V_{RMS}		35	70	140	280	V
DC blocking voltage	V_{DC}		50	100	200	400	V
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C

Electrical characteristics at Tc = 25 °C, unless otherwise specified

Single phase, half sine wave, 60 Hz, resistive or inductive load

For capacitive load derate current by 20%

Parameter	Symbol	Conditions	GBU8A	GBU8B	GBU8D	GBU8G	Unit
Maximum average forward rectified current [1,2]	I_O	T_c = 100 °C	8.0	8.0	8.0	8.0	A
Peak forward surge current	I_{FSM}	t_p = 8.3 ms, half sine	200	200	200	200	A
Maximum instantaneous forward voltage drop per leg	V_F	I_F = 8 A	1.1	1.1	1.1	1.1	V
Maximum DC reverse current at rated DC blocking voltage per leg	I_R	T_a = 25 °C T_a = 125 °C	5 500	5 500	5 500	5 500	µA
Rating for fusing	I^2t	t < 8.3 ms	166	166	166	166	A^2sec
Typical junction capacitance per leg [3]	C_j		211	211	211	211	pF
Typical thermal resistance per leg [1,2]	$R_{\Theta JA}$ $R_{\Theta JL}$		21 2.2	21 2.2	21 2.2	21 2.2	°C/W

[1] - Device mounted on 82 mm x 82 mm x 3 mm Al plate heatsink

[2] - Recommended mounted position is to bolt down device on a heatsink with silicon thermal compond for maximum heat transfer using #6 screw.

[3] - Measured at 1.0 MHz and applied reverse bias of 4.0 V

FIG.1-DERATIVE CURVE FOR OUTPUT RECTIFIER CURRENT

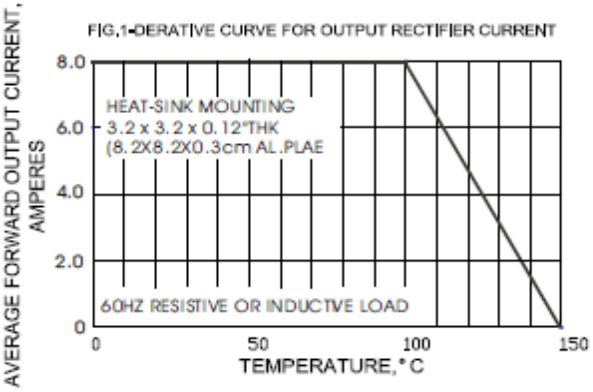


FIG. 2 - MAXIMUN NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

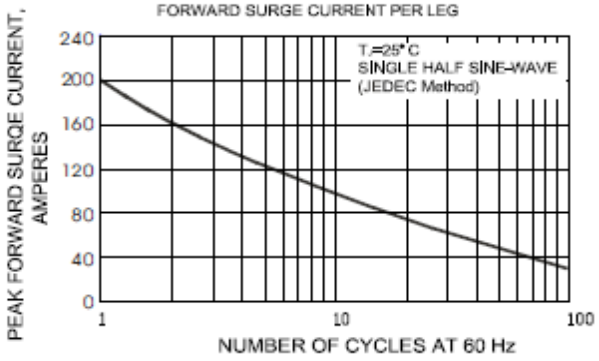


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER LEG

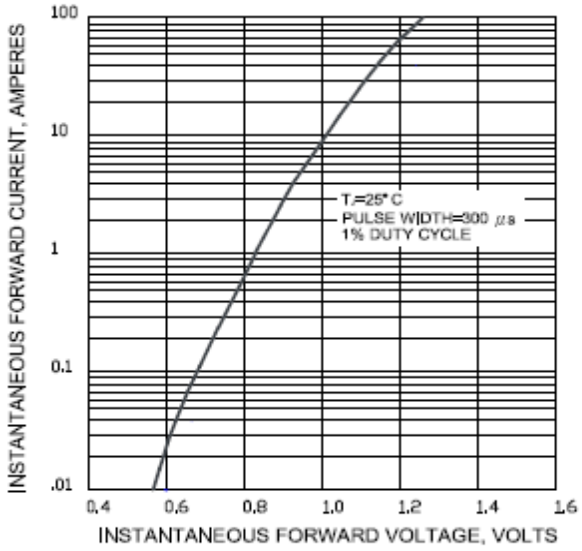


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER LEG

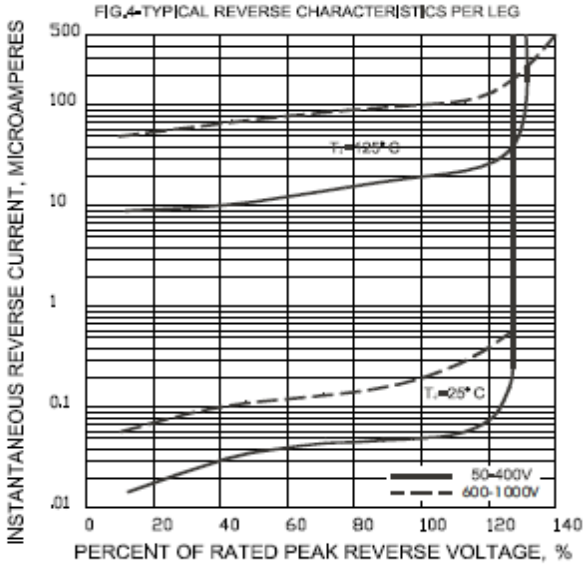


FIG.5-TYPICAL JUNTION CAPACITANCE PER LEG

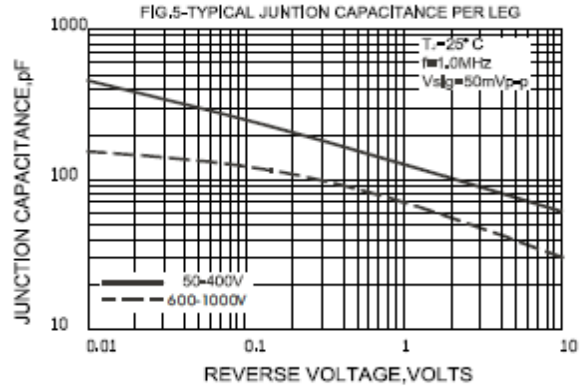
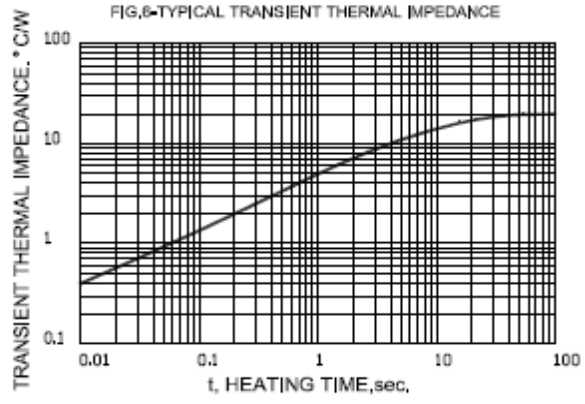


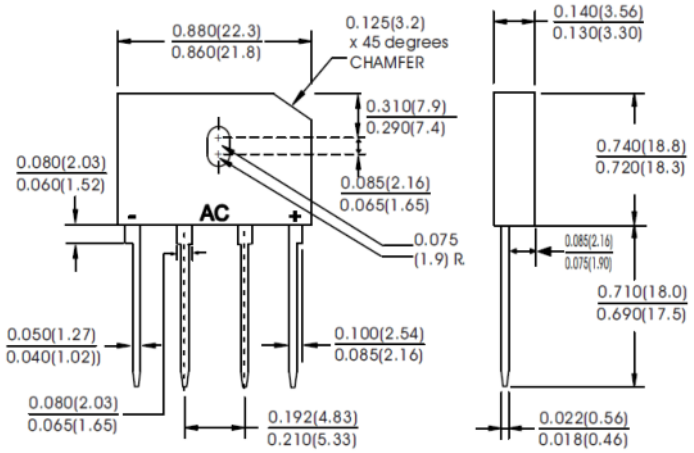
FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

GBU



Dimensions in inches and (millimeters)

