# **G2SB460-E THRU G2SB480-E**

# SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

Voltage: 600V to 800V Current:4.0A



## **Features**

Plastic package has Underwriters Laboratory

Flammability Classification 94V-0

Glass passivated chip junction

High case dielectric strength

Typical IR less than 0.1µA

High surge current capability

Ideal for printed circuit boards

High temperature soldering guaranteed:

260°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kg)

tension

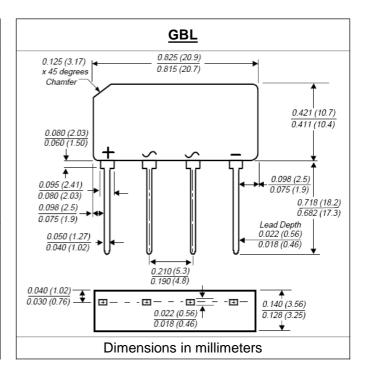
Halogen Free

# **Mechanical Data**

Case: Molded plastic body over passivated junctions Terminals: Plated leads solderable per MIL-STD-750,

Method 2026

Mounting Position: Any Weight: 0.071 oz., 2.0 g



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

Maximum Recurrent Peak Reverse Voltage       Vrrm       600         Maximum RMS Voltage       Vrms       420         Maximum DC blocking Voltage       Vdc       600         Maximum average forward rectified output current at       Tc=50℃(Note1) Ta=40℃(Note2)       If(av)       4.0 Ta=40℃(Note2)         Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load       Ifsm       150         Maximum Instantaneous Forward Voltage at forward current 2.0A       Vf       1.0         Rating for fusing (t<8.3ms)       I²t       93         Maximum DC Reverse Current at rated DC blocking voltage       Ta =125°C       Ir       5.0 Ta =125°C         Typical thermal resistance per leg       Rth(ja) Rth(ji)       47 Ta =100			
Maximum RMS Voltage     Vrms     420       Maximum DC blocking Voltage     Vdc     600       Maximum average forward rectified output current at     Tc=50°C(Note1) Ta=40°C(Note2)     If(av)     4.0 Ta=40°C(Note2)       Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load     Ifsm     150       Maximum Instantaneous Forward Voltage at forward current 2.0A     Vf     1.0       Rating for fusing (t<8.3ms)     I²t     93       Maximum DC Reverse Current at rated DC blocking voltage     Ta =25°C Ta =125°C     Ir     5.0 Ta =125°C       Typical thermal resistance per leg     Rth(ja)     Rth(ja)		Symbol G2SB460-E G2SB480	D-E units
Maximum DC blocking Voltage       Vdc       600         Maximum average forward rectified output current at       Tc=50℃(Note1) Ta=40℃(Note2)       If(av)       4.0 3.0         Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load       Ifsm       150         Maximum Instantaneous Forward Voltage at forward current 2.0A       Vf       1.0         Rating for fusing (t<8.3ms)	um Recurrent Peak Reverse Voltage	Vrrm 600 800	V
Maximum average forward Tc=50°C(Note1) rectified output current at Ta=40°C(Note2) If(av) 3.0  Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load Maximum Instantaneous Forward Voltage at forward current 2.0A  Rating for fusing (t<8.3ms) I <sup>2</sup> t 93  Maximum DC Reverse Current Ta=25°C Ir 5.0  at rated DC blocking voltage Ta=125°C Rth(ja)  Rth(ja) 47	um RMS Voltage	Vrms 420 560	V
Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load  Maximum Instantaneous Forward Voltage at forward current 2.0A  Rating for fusing (t<8.3ms)  Maximum DC Reverse Current at Ta = 25°C at rated DC blocking voltage  Typical thermal resistance per leg  Traction (Note2)  If(av)  3.0  If(av)  3.0  If(av)  3.0  If(av)  3.0  If a = 25°C  Ir  5.0  Rth(ja)	um DC blocking Voltage	Vdc 600 800	V
wave superimposed on rated load  Maximum Instantaneous Forward Voltage at forward current 2.0A  Rating for fusing (t<8.3ms)  Maximum DC Reverse Current Ta = 25°C at rated DC blocking voltage  Typical thermal resistance per leg		If(av)	А
current 2.0A         VI         1.0           Rating for fusing (t<8.3ms)		Ifsm 150	А
Maximum DC Reverse Current at rated DC blocking voltage  Typical thermal resistance per leg  Rth(ja)		Vf 1.0	V
at rated DC blocking voltage  Trail 125°C  Ir  500  Typical thermal resistance per leg  Rth(ja)	for fusing (t<8.3ms)	l²t 93	A <sup>2</sup> S
Typical thermal resistance per leg		Ir	μА
3,	I thermal resistance per leg	Kinga)	°C/
Storage and Operation Junction Temperature Tj, Tstg -55 to +150	e and Operation Junction Temperature	Tj, Tstg -55 to +150	0

# Note:

- 1. Unit mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3 cm) Aluminum plate
- 2. Unit mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5"(12 x 12mm) copper pads

Rev.A1 www.gulfsemi.com

## RATINGS AND CHARACTERISTIC CURVES G2SB460-E THRU G2SB480-E

150

Rectified Current 5.0 Average Forward Output Current (A) 60 Hz Resistive or Inductive Load Heat-Sink Mounting 4.0 3.0 x 3.0 x 0.11" Thick (7.5 x 7.5 x 0.3cm) Àluminum Plate 3.0 2.0 P.C.B. Mounting 0.47 x 0.47" (12 x 12mm) 1.0 Copper pads with 0.375" (9.5mm) lead length

Fig. 1 -- Derating Curves Output

50 100 Ambient Temperature (°C)

0

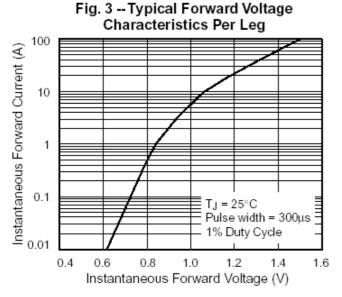


Fig. 5 -- Typical Junction Capacitance Per Leg

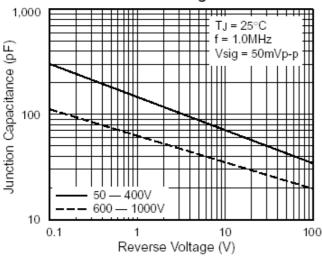


Fig. 2 -- Maximum Non-Repetitive Peak Forward Surge Current Per Leg

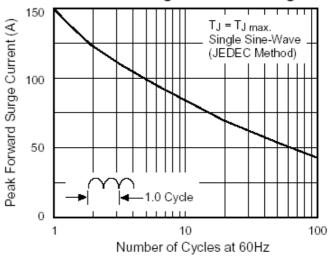


Fig. 4 – Typical Reverse Leakage Characteristics Per Leg

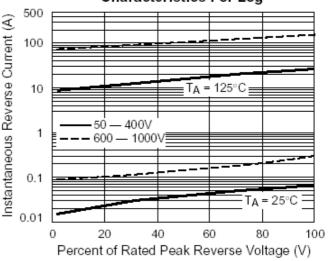
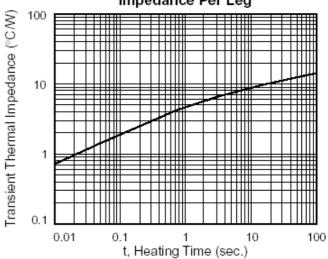


Fig. 6 -- Typical Transient Thermal Impedance Per Leg



Rev.A1 www.gulfsemi.com