GBU20A THRU GBU20M

SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

VOLTAGE:50 TO 1000V CURRENT:20A

GULF SEMI

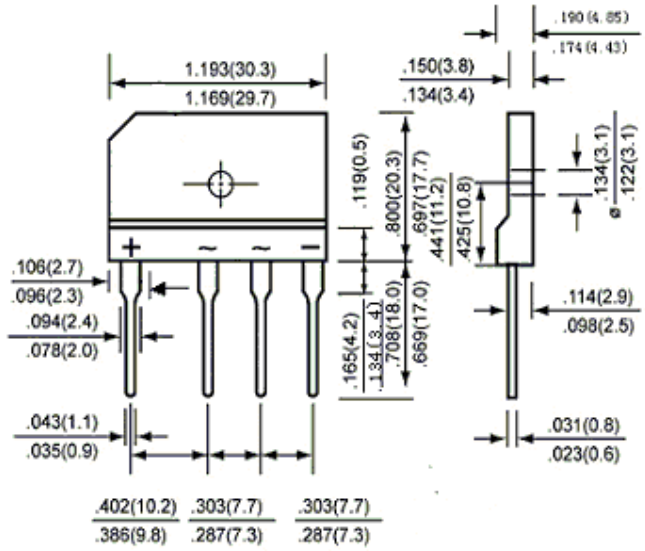
Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under Recognized Component Index, file number E54214.
- High case dielectric strength of 2500 VRMS
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

Mechanical Data

Case: GBU Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Mounting Position: Any(3)
Mounting Torque: 8 in-lbs max.
Weight: 0.26 oz., 7.0 g *Dimensions in millimeters*

GBU



Dimensions in millimeters

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%)

	SYMBOL	GBU 20A	GBU 20B	GBU 20D	GBU 20G	GBU 20J	GBU 20K	GBU 20M	units
Maximum repetitive peak reverse voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS voltage	Vrms	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	Vdc	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at : TC = 87°C / Ta=25 °C	$If_{(av)}$	20(1) / 3.5(2)							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{fsm}	240							A
Maximum instantaneous forward voltage drop per leg at 10A	Vf	1.1							V
Rating for fusing (t < 8.3ms)	I^2t	240							A^2Sec
Typical Junction Capacitance (f=1Mhz, VR=DC4V)	Cj	180							Pf
Maximum DC reverse current at TA = 25°C / rated DC blocking voltage per leg TA = 125°C	Ir	10.0 / 250							μA
Maximum thermal resistance per leg	$R\theta_{Ja}$ / $R\theta_{JC}$	22(2) / 1.5(1)							°C/w
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Note:
(1) Unit case mounted on Al plate heatsink.
(2) Units mounted on P.C.B. without heatsink
(3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

RATINGS AND CHARACTERISTIC CURVES GBU20A THRU GBU20M

Fig. 1 – Derating Curve Output Rectified Current

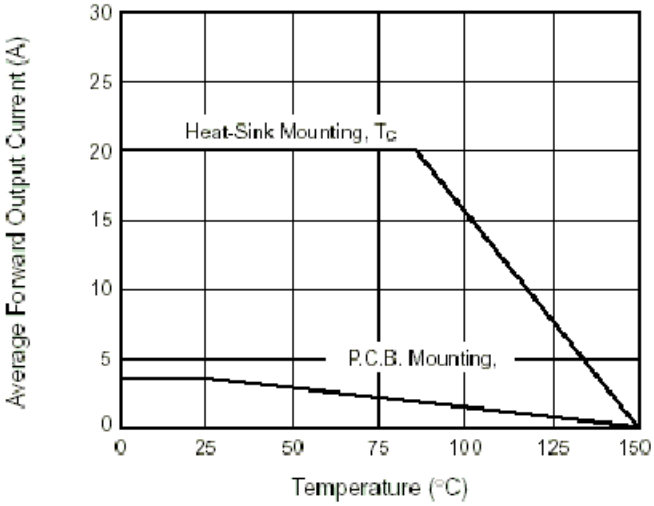


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

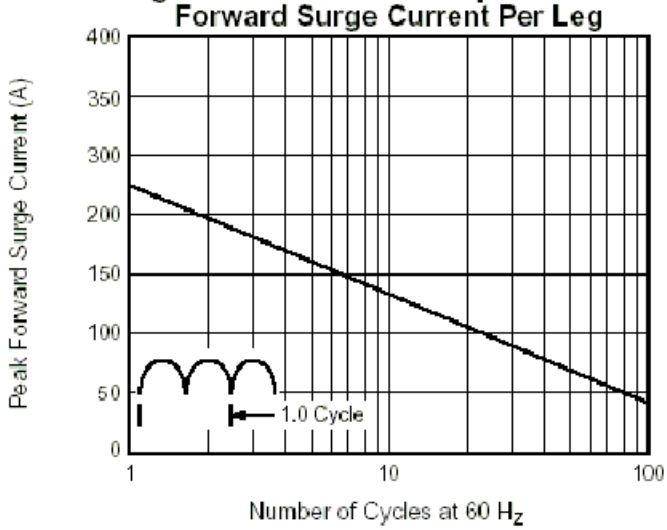


Fig. 3 – Typical Forward Characteristics Per Leg

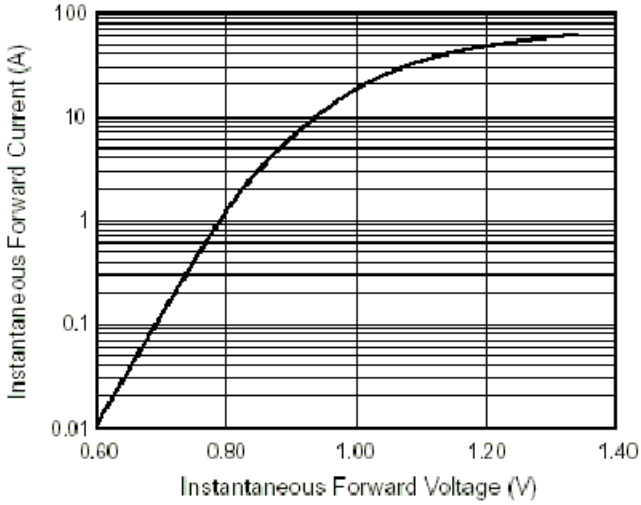


Fig. 4 – Typical Reverse Characteristics Per Leg

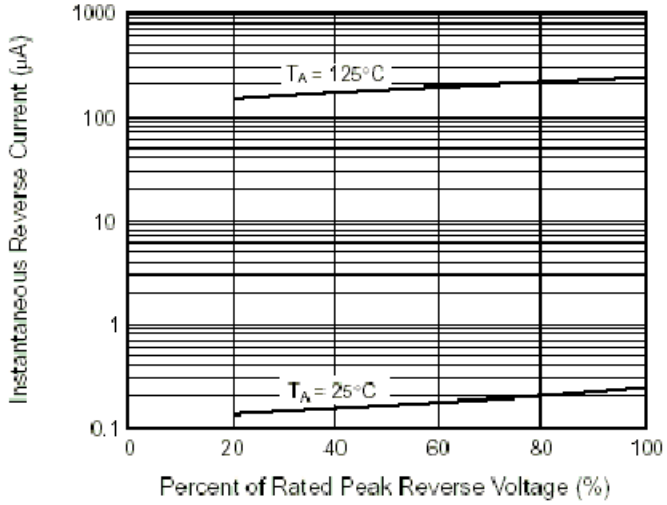


Fig. 5 – Typical Junction Capacitance Per Leg

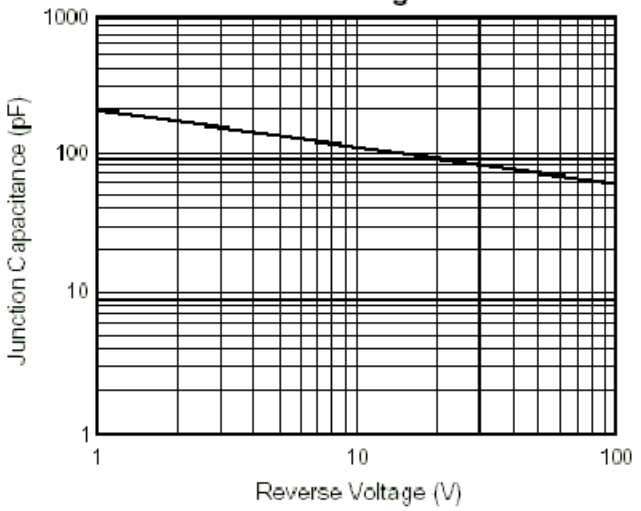


Fig. 6 – Typical Transient Thermal Impedance