

## Single Phase Glass Passivated Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 400\text{ V}$

$I_O = 6\text{ A}$

### Features

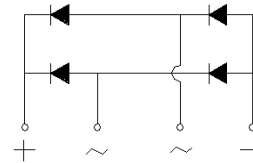
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500  $V_{RMS}$
- Glass passivated chip junction
- Ideal for printed circuit boards
- High surge overload rating
- High temperature soldering guaranteed: 260°C/ 10 seconds, 0.375 (9.5mm)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

### Mechanical Data

Case: Molded plastic body over passivated junctions

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

Mounting position: Any



GBU Package



### Maximum ratings at $T_c = 25\text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	GBU6A	GBU6B	GBU6D	GBU6G	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	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$

### Electrical characteristics at $T_c = 25\text{ }^\circ\text{C}$ , unless otherwise specified

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

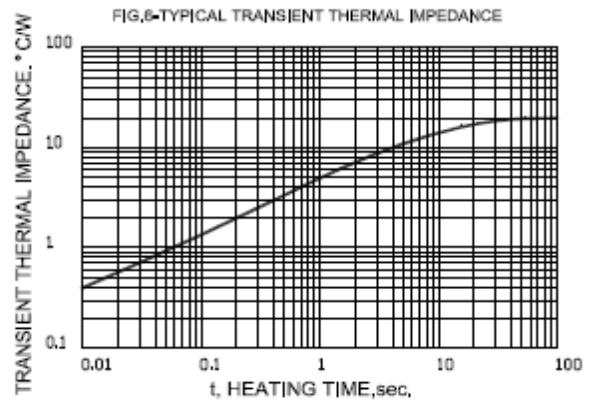
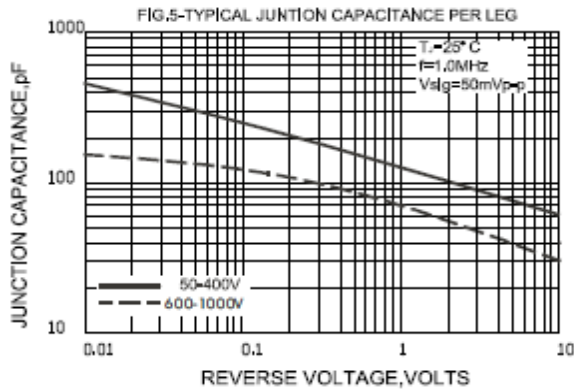
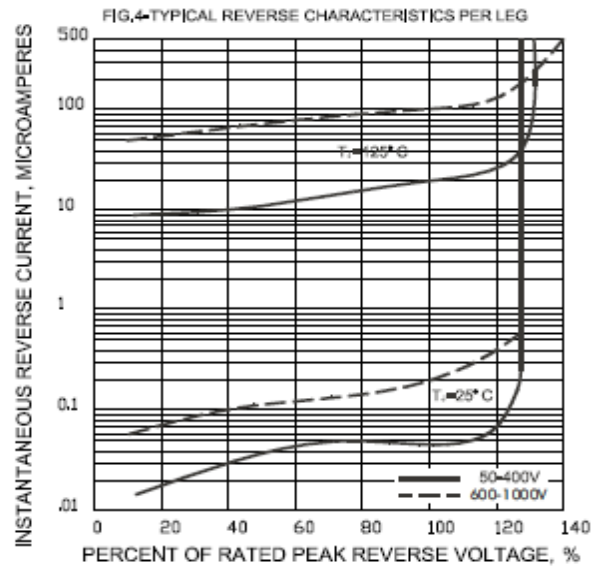
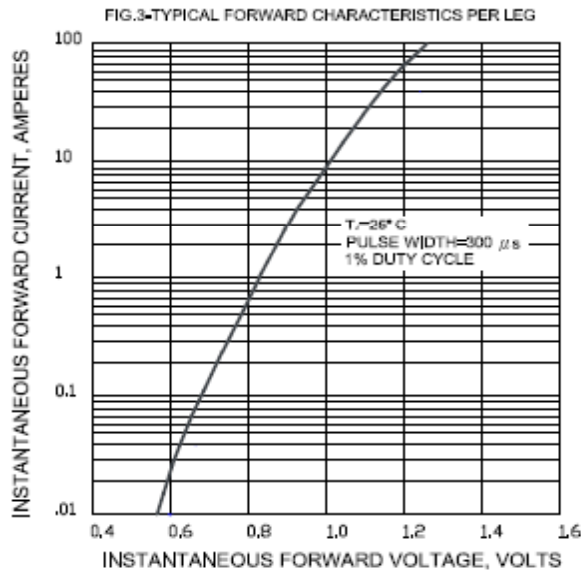
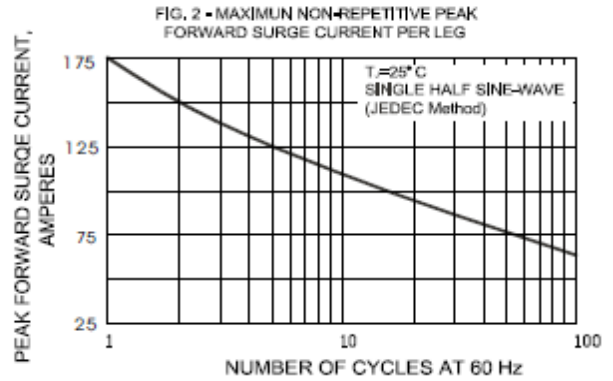
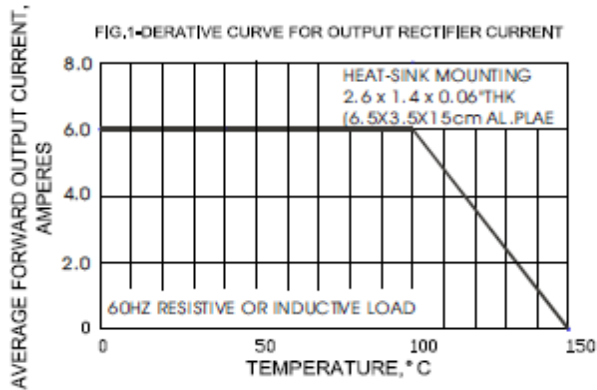
For capacitive load derate current by 20%

Parameter	Symbol	Conditions	GBU6A	GBU6B	GBU6D	GBU6G	Unit
Maximum average forward rectified current <sup>1,2</sup>	$I_O$	$T_c = 100\text{ }^\circ\text{C}$	6.0	6.0	6.0	6.0	A
Peak forward surge current	$I_{FSM}$	$t_p = 8.3\text{ ms}$ , half sine	175	175	175	175	A
Maximum instantaneous forward voltage drop per leg	$V_F$	$I_F = 6\text{ A}$	1.1	1.1	1.1	1.1	V
Maximum DC reverse current at rated DC blocking voltage per leg	$I_R$	$T_a = 25\text{ }^\circ\text{C}$	5	5	5	5	$\mu\text{A}$
		$T_a = 125\text{ }^\circ\text{C}$	500	500	500	500	
Rating for fusing	$I^2t$	$t < 8.3\text{ ms}$	127	127	127	127	$\text{A}^2\text{sec}$
Typical junction capacitance per leg <sup>3</sup>	$C_j$		211	211	211	211	pF
Typical thermal resistance per leg <sup>1,2</sup>	$R_{\theta JA}$		7.4	7.4	7.4	7.4	
	$R_{\theta JL}$		2.2	2.2	2.2	2.2	$^\circ\text{C/W}$

<sup>1</sup> - Device mounted on 65 mm x 35 mm x 1.5 mm Al plate heatsink

<sup>2</sup> - Recommended mounted position is to bolt down device on a heatsink with silicon thermal compound for maximum heat transfer using #6 screw.

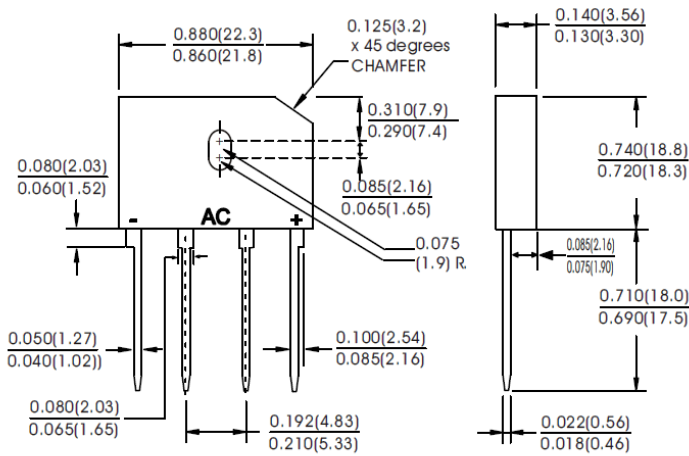
<sup>3</sup> - Measured at 1.0 MHz and applied reverse bias of 4.0 V



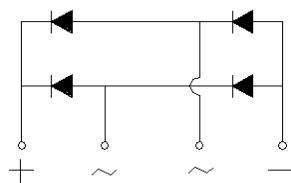
**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.

GBU



Dimensions in inches and (millimeters)



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[GeneSiC Semiconductor:](#)

[GBU6A](#) [GBU6B](#) [GBU6D](#) [GBU6G](#)