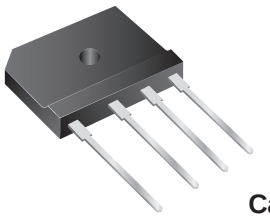
GSIB6A20 thru GSIB6A80

New Product

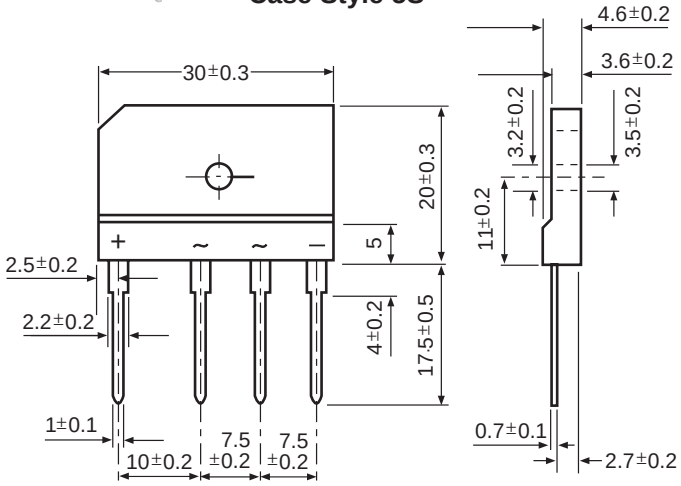
Vishay Semiconductors
formerly General Semiconductor



Glass Passivated Single-Phase Bridge Rectifier

Rectifier Reverse Voltage 200 and 800V
Rectifier Forward Current 6.0A

Case Style 5S



Dimensions in millimeters

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 V_{RMS}
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability

Mechanical Data

Case: 5S Molded plastic body

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

High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

Mounting Position: Any (3)

Mounting Torque: 5 in. - lb. max.

Weight: 0.26 oz., 7.0 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GSIB6A20	GSIB6A40	GSIB6A60	GSIB6A80	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	V
Maximum average forward rectified output current at T_C = 100°C / T_A = 25°C	$I_{F(AV)}$	6.0(1) / 2.8(2)				A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150				A
Rating for fusing (t < 8.3ms)	I^2t	93				A^2sec
Maximum thermal resistance per leg	$R_{\theta JA}$ / $R_{\theta JC}$	22(2) / 3.4 (1)				°C/W
Operating junction and storage temperature range	T_J, T_{STG}	–55 to +150				°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GSIB6A20	GSIB6A40	GSIB6A60	GSIB6A80	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	V_F	1.00				V
Maximum DC reverse current at rated DC blocking voltage per leg T_A = 25°C / T_A = 125°C	I_R	10 / 250				µA

Notes:
(1) Unit case mounted on Al plate heatsink
(2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length
(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 (T_A = 25°C unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

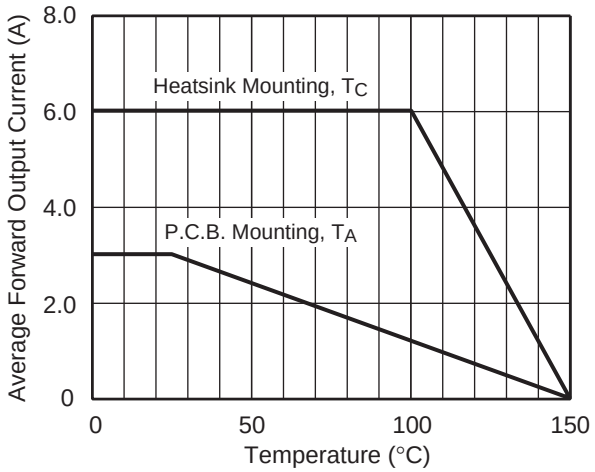


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

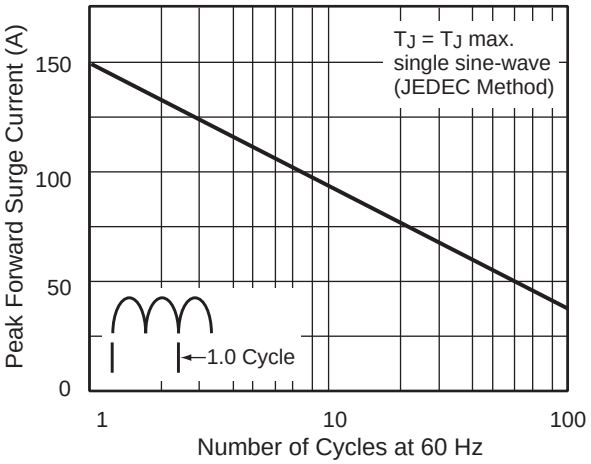


Fig. 3 - Typical Forward Characteristics Per Leg

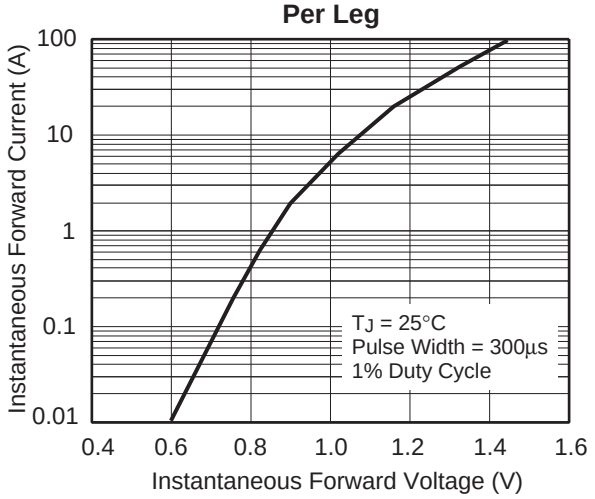


Fig. 4 - Typical Reverse Characteristics Per Leg

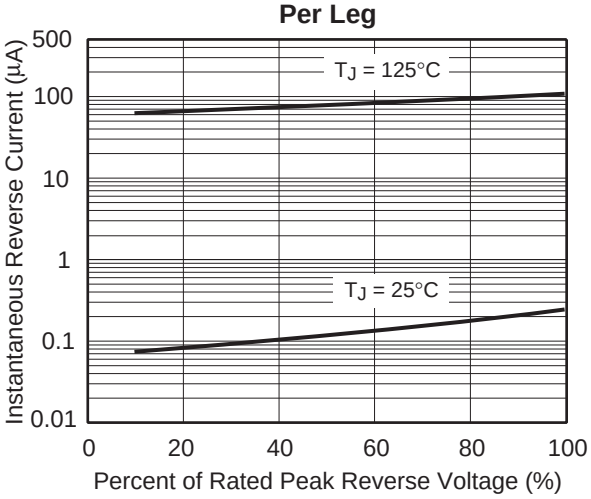


Fig. 5 - Typical Junction Capacitance Per Leg

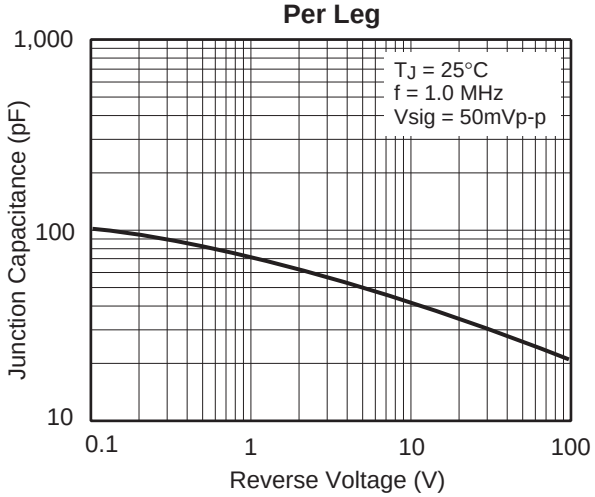


Fig. 6 - Typical Transient Thermal Impedance