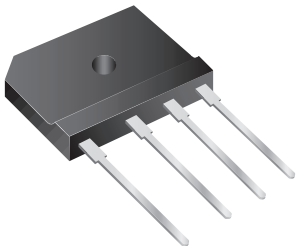
GSIB1520 thru GSIB1580

New Product

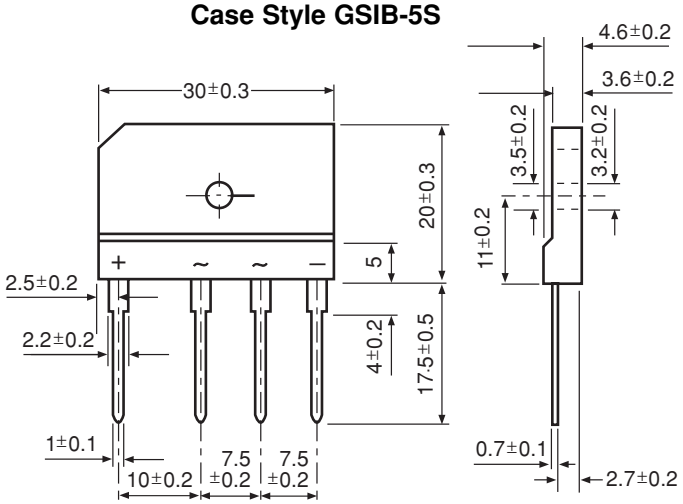
Vishay Semiconductors
formerly General Semiconductor



Single-Phase Single In-Line Bridge Rectifiers

Reverse Voltage 200 to 800V
Forward Current 15A

Case Style GSIB-5S



Dimensions in millimeters

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 V_{RMS}
- 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: GSIB-5S 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

Maximum Ratings & Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	GSIB1520	GSIB1540	GSIB1560	GSIB1580	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 = 107°C T_A = 25°C	$I_{F(AV)}$	15(1) 3.5(2)				A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300				A
Rating for fusing (t < 8.3ms)	I^2t	240				A^2sec
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

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	GSIB1520	GSIB1540	GSIB1560	GSIB1580	Unit
Maximum instantaneous forward voltage drop per leg at 7.5A	V_F	0.95				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. 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 (T_A = 25°C unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

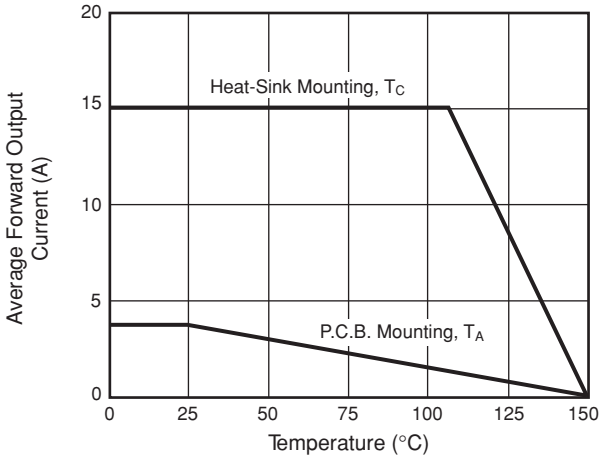


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

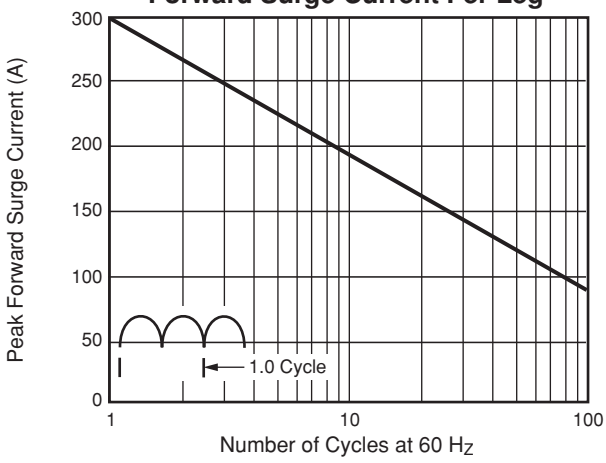


Fig. 3 - Typical Forward Characteristics Per Leg

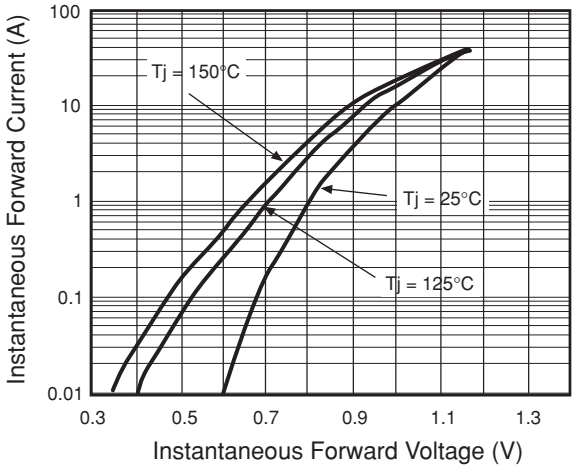


Fig. 4 - Typical Reverse Characteristics Per Leg

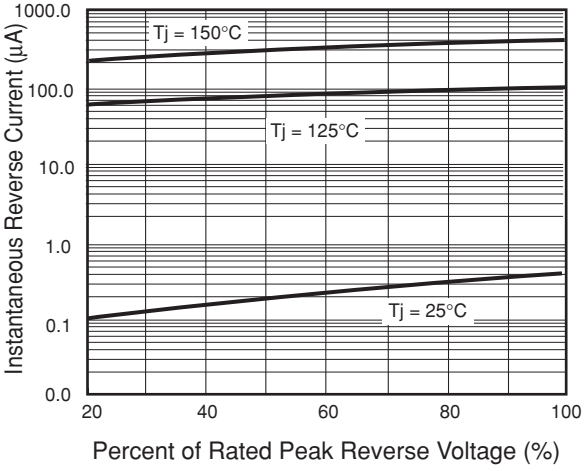


Fig. 5 - Typical Junction Capacitance Per Leg

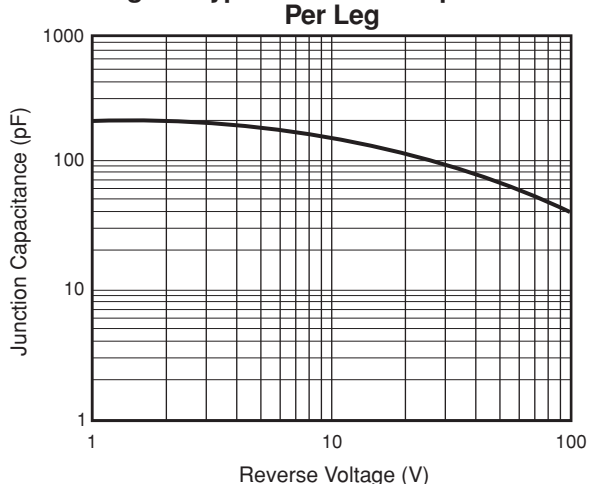


Fig. 6 - Typical Transient Thermal Impedance