

15-A Bridge Rectifier Features 1000-V Rating In GBU Package

[Taiwan Semiconductor](#)'s GBU150x family of standard bridge rectifiers offers GBU-packaged, 15-A-rated rectifiers with peak repetitive reverse voltage ratings (V_{RRM}) from 600 V to 1000 V and 1.0-ms peak forward surge current (I_{FSM}) of 600 A. The highest rated (1-kV) device, which is offered at the same price in production quantities as the others in the family, provides added design margin that can facilitate meeting regulatory standards, such as IEC61000-4-x and IEEE C62.XX ringing waveform requirements, in a wide range of mains-connected power conversion products.

"Since higher-voltage bridge rectifiers typically are more expensive, engineers trained to optimize price and performance will select 600-V or 800-V PIV devices to achieve cost targets," said vice president, TSC Products, Sam Wang. "The GBU1507, with an industry-leading 1000-V PIV rating, is offered at the same price as the lower-voltage-rated parts in the series. This gives engineers a cost-effective opportunity to add safety margin for new designs as well as upgrading existing GBU sockets.

The devices in the GBU150x series provide a number of beneficial features, including:

- UL-recognized file #E-326243. UL-recognized components simplify agency approvals on the customers' end products, saving time and money.
- Standard GBU package. This device meets or exceeds operational specs of competitive devices and offers a drop-in upgrade for existing GBU sockets for requirements from 50 V to 1000 V. One part can replace many others, simplifying the number of stocked SKUs and reducing BOM costs (see the figure).
- 1000-V rating provides added design margin for universal input supplies at no added cost.
- Global materials compliance. The parts are RoHS compliant and halogen-free (per IEC-61249-2-21).

Applications for the GBU150x series include switch-mode power supplies, battery chargers, lighting power supplies, TVs and adapters. Design resources include a [comprehensive datasheet](#) and 3D CAD and Spice models. In OEM quantities, unit pricing is \$0.450. Samples are in-stock at Digi-Key and Mouser.

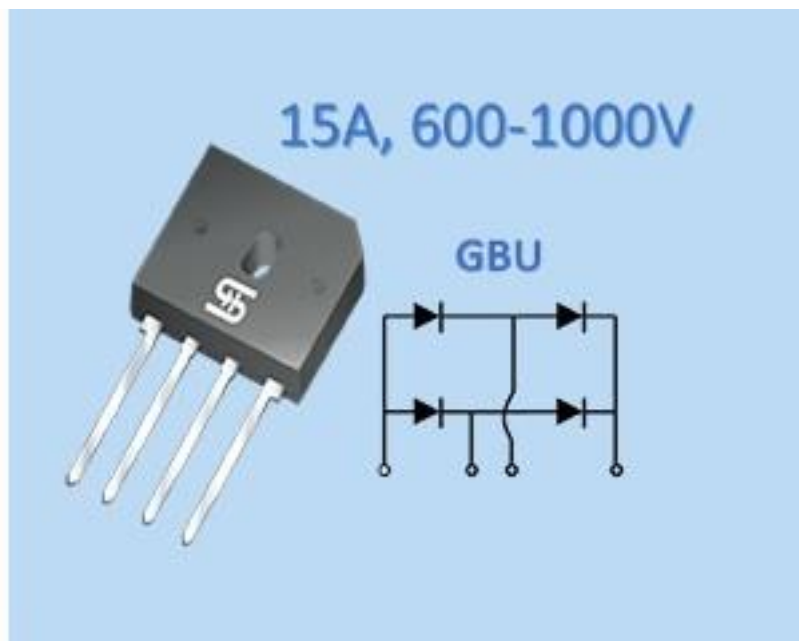


Figure. The higher peak reverse voltage and surge current ratings of the GBU150x bridge rectifiers provide increased design margins for universal input power supply designs without added cost versus lower-rated parts.