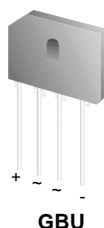


GBU8A - GBU8M

Bridge Rectifiers

Features

- Glass passivated junction
- Surge overload rating: 200 amperes peak
- Reliable low cost construction utilizing molded plastic technique.
- Ideal for printed circuit board.



Absolute Maximum Ratings * T_a = 25°C unless otherwise noted

| Symbol | Parameter | Value | | | | | | | Units |
|--------------------|--|-------------|-----|-----|-----|-----|-----|------|-------|
| | | 8A | 8B | 8D | 8G | 8J | 8K | 8M | |
| V _{RRM} | Maximum Repetitive Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| V _{RMS} | Maximum RMS Bridge Input Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| V _R | DC Reverse Voltage (Rated V _R) | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| I _{F(AV)} | Average Rectified Forward Current, @ T _A = 100°C @ T _A = 45°C | 8.0 | | | | | | | A |
| | | 6.0 | | | | | | | A |
| I _{FSM} | Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave | 200 | | | | | | | A |
| T _{STG} | Storage Temperature Range | -55 to +150 | | | | | | | °C |
| T _J | Operating Junction Temperature | -55 to +150 | | | | | | | °C |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

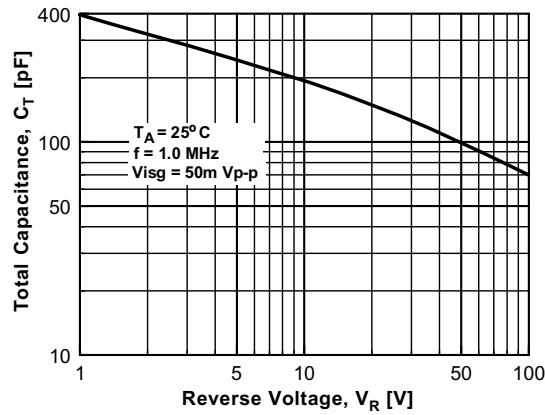
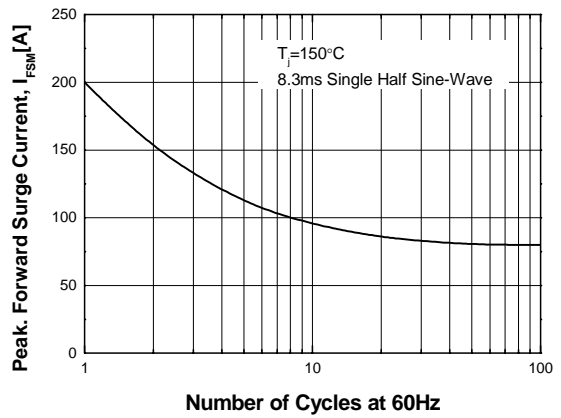
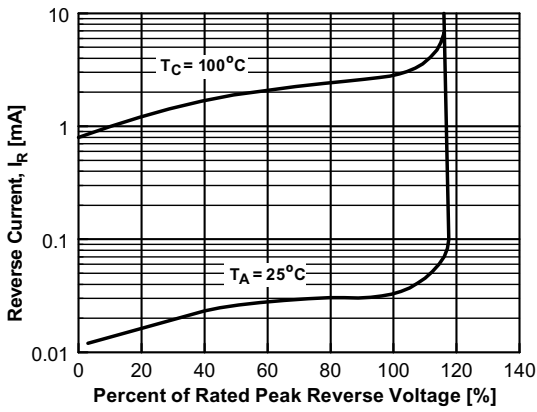
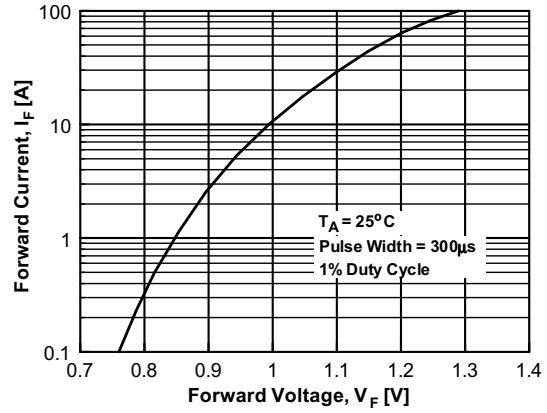
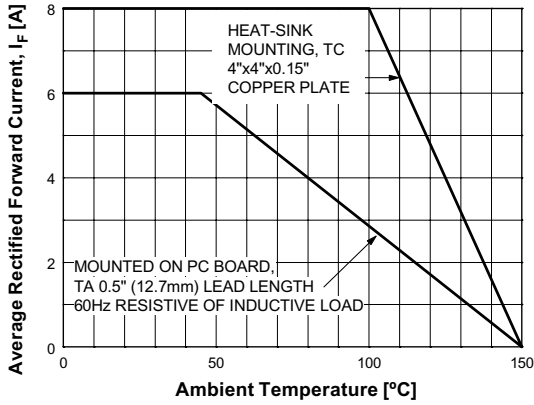
| Symbol | Parameter | Value | Units |
|------------------|--|-------|-------|
| P _D | Power Dissipation | 16 | W |
| R _{θJA} | Thermal Resistance, Junction to Ambient, * per leg | 18 | °C/W |
| R _{θJC} | Thermal Resistance, Junction to Case, * per leg | 3 | °C/W |

* Device mounted on PCB with 0.5 × 0.5" (12 × 12mm).

Electrical Characteristics T_C = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|--|-------|------------------|
| V _F | Forward Voltage, per element @ 8.0A | 1.0 | V |
| I _R | Reverse Current, per element @ Rated V _R T _A = 25°C T _A = 100°C | 50 | μA |
| | | 500 | μA |
| | I ² t Rating for Fusing t < 8.35ms | 166 | A ² s |

Typical Performance Characteristics



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| | | | | |
|--------------------------------------|---------------------|------------------------|------------------------------|------------------------|
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| ActiveArray™ | FASTr™ | LittleFET™ | PowerEdge™ | SuperFET™ |
| Bottomless™ | FPS™ | MICROCOUPLER™ | PowerSaver™ | SuperSOT™-3 |
| CoolFET™ | FRFET™ | MicroFET™ | PowerTrench [®] | SuperSOT™-6 |
| CROSSVOLT™ | GlobalOptoisolator™ | MicroPak™ | QFET [®] | SuperSOT™-8 |
| DOME™ | GTO™ | MICROWIRE™ | QS™ | SyncFET™ |
| EcoSPARK™ | HiSeC™ | MSX™ | QT Optoelectronics™ | TinyLogic [®] |
| E ² CMOST™ | I ² C™ | MSXPro™ | Quiet Series™ | TINYOPTO™ |
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| FACT™ | ImpliedDisconnect™ | OCXPro™ | RapidConnect™ | UHC™ |
| FACT Quiet Series™ | | OPTOLOGIC [®] | μSerDes™ | UltraFET [®] |
| Across the board. Around the world.™ | | OPTOPLANAR™ | SILENT SWITCHER [®] | UniFET™ |
| The Power Franchise [®] | | PACMAN™ | SMART START™ | VCX™ |
| Programmable Active Droop™ | | POP™ | SPM™ | |

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

| Datasheet Identification | Product Status | Definition |
|--------------------------|------------------------|---|
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| No Identification Needed | Full Production | This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design. |
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