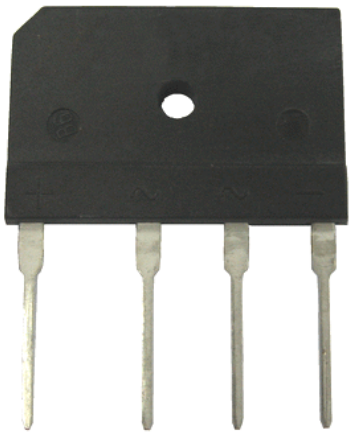
Microsemi Shanghai

# SGBJ15D thru SGBJ15M



## Glass Passivated Single Phase Bridge Rectifiers

**Reverse Voltage** 200 to 1000V
**Forward Current** 15.Amp

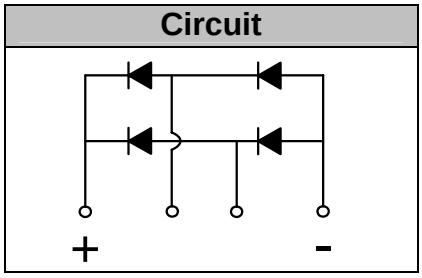
### Features

- Glass passivated die construction
- Ideal for printed circuit boards
- Plastic material used carries UL flammability recognition 94V-0
- High surge current capability
- High temperature soldering guaranteed: 265℃ /10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kg) tension

### Mechanical Data

**Case:** Molded plastic case
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026
**Polarity:** Marked on Body
**Mounting Position:** Any

**Circuit**




### Module Type

| TYPE | $V_{RRM}$ | $V_{RSM}$ |
|---|---|---|
| SGBJ15D | 200V | 300V |
| SGBJ15G | 400V | 500V |
| SGBJ15J | 600V | 700V |
| SGBJ15K | 800V | 900V |
| SGBJ15M | 1000V | 1100V |

### Maximum Ratings and Thermal Characteristics (TA = 25℃ unless otherwise noted)

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{F(AV)}$ | Maximum average forward output rectified current Tc =100℃ | 15 | A |
| $I_{FSM}$ | Peak forward surge current single half sine-wave superimposed on rated load (JEDEC Method) | 200 | A |
| $i^2t$ | Rating for fusing (t<8.3ms) | 166 | $A^2s$ |
| Visol | a.c.50HZ;r.m.s.;1min | 2500 | V |
| $R_{\theta JA}$<br>$R_{\theta JC}$ | Maximum thermal resistance per leg | 22 (1)<br>1.5 (2) | ℃/W |
| TOR | Mounting Torque (Recommended torque:0.5 N.m) | 0.8 | N.m |
| $T_j$, $T_{STG}$ | Operating Junction and storage temperature range | -55 to +150 | ℃ |
| Weight | Approximate Weight | 7.0 | g |

### Electrical Characteristics (TA = 25℃ unless otherwise noted)

| Symbol | Conditions | | Values | Units |
|---|---|---|---|---|
| $V_F$ | Maximum Instantaneous Forward Voltage per leg | $I_{FM}$ =7.5A | 1.0 | V |
| $I_R$ | Maximum DC reverse current at rated<br>DC blocking voltage per leg | $T_A$ = 25℃<br>$T_A$ = 125℃ | 5.0<br>500 | μA |

Notes: (1) Junction to ambient without heatsink
(2) Junction to case with heatsink
(3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

## Performance Curves

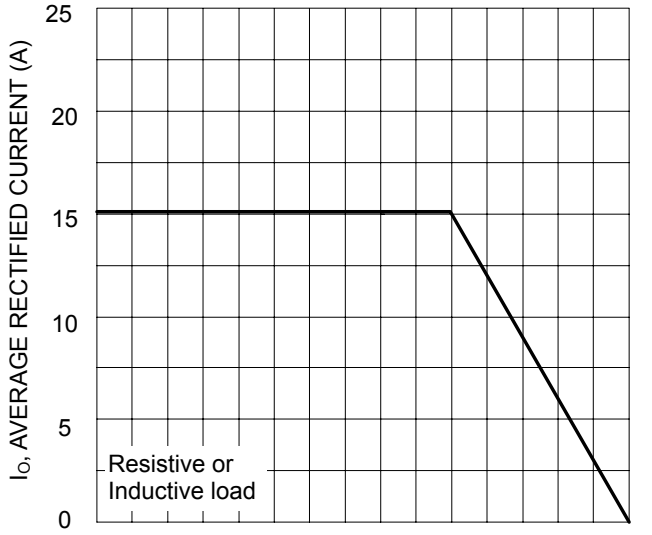



Fig.1 Forward Current Derating Curve

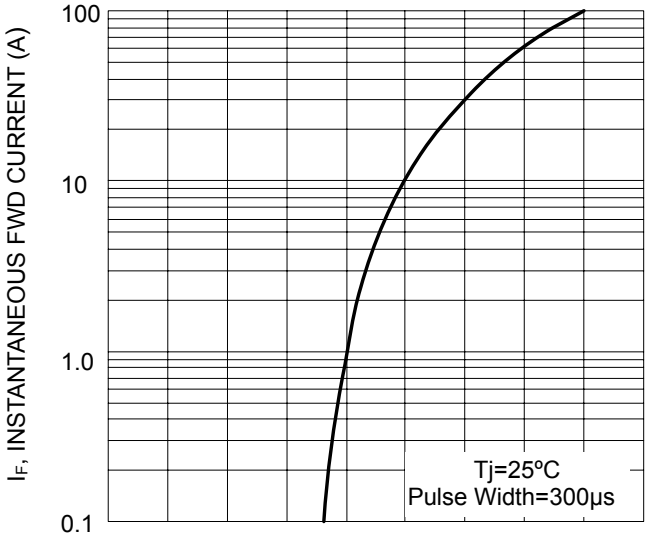



Fig.2 Typical Forward Characteristics, per element

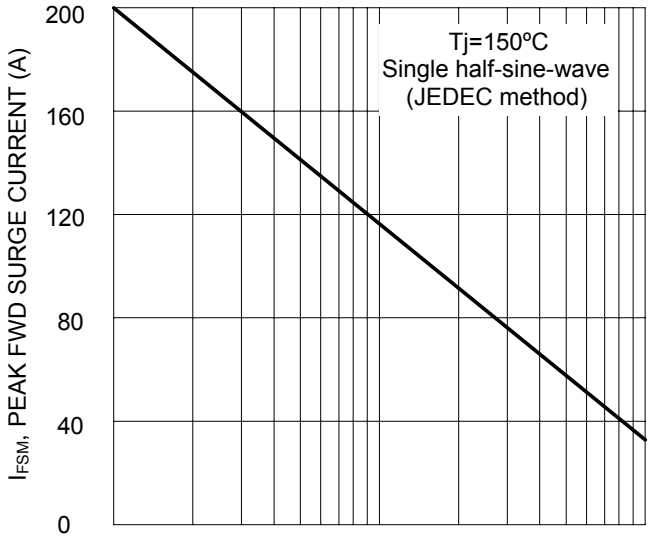



Fig.3 Max Non-Repetitive Peak Fwd Surge Current

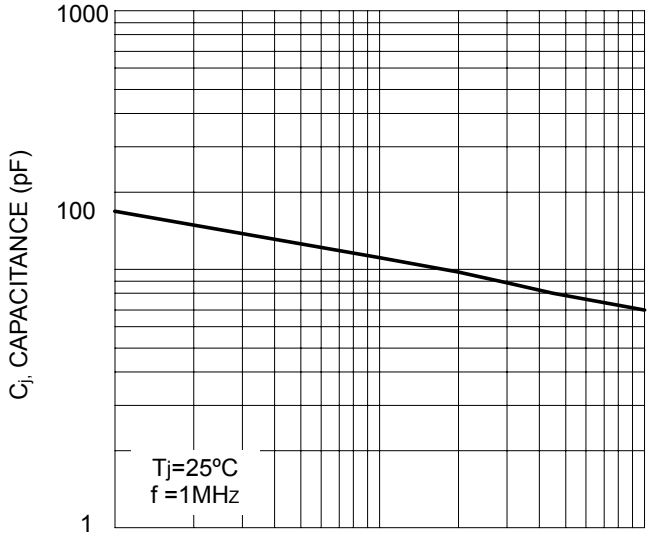



Fig.4 Typical Junction Capacitance

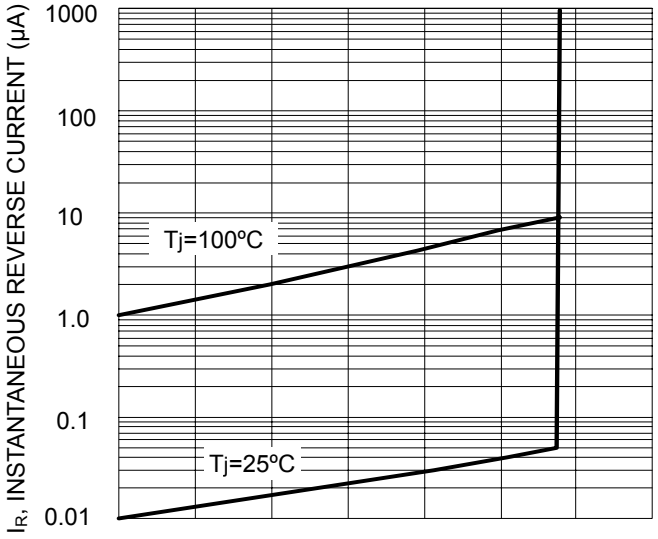
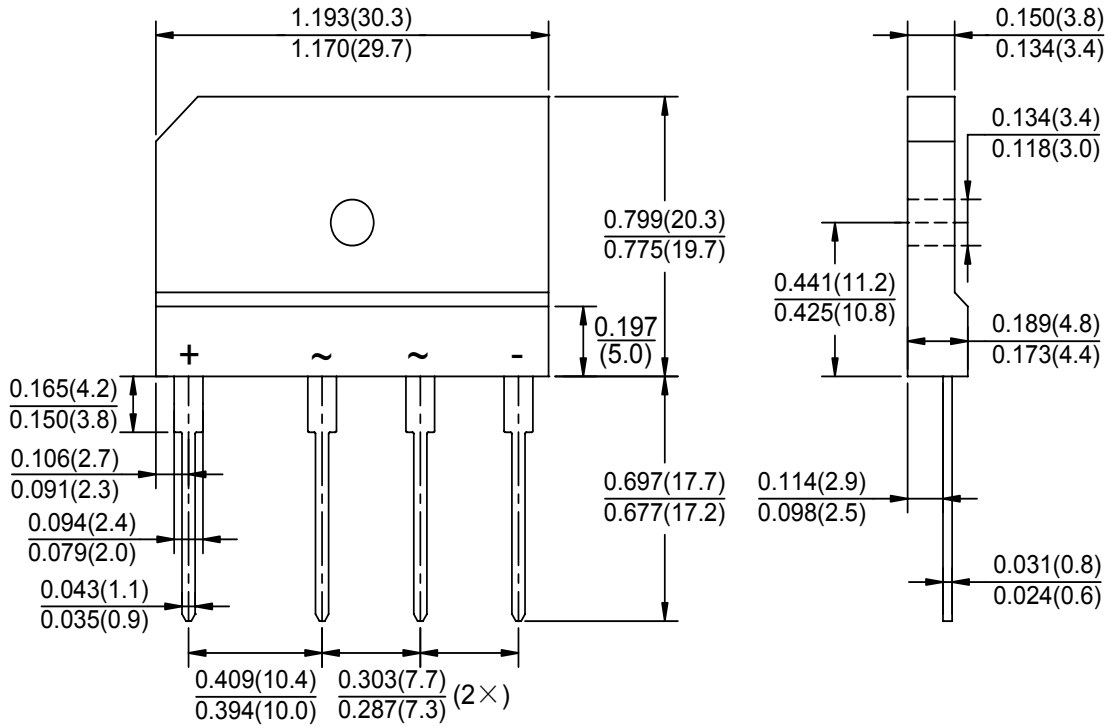



Fig.5 Typical Reverse Characteristics

## Package Outline Information

**CASE: GBJ**




**Dimensions in inches (mm)**