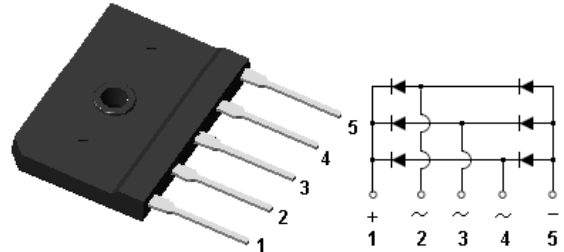


# 3SRB5008 ~ 3SRB5016

## Glass Passivated Three Phase Bridge Rectifier

### Features

- Ideal for printed circuit board
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- 2500V Isolation ratings
- High temperature soldering:  
260°C/10 seconds at terminals
- Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC



SIP2-5  
(RS:RS-C3)

### Mechanical Date

- **Case:** SIP2-5 (RS-C3) Molded plastic over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002 and JESD22-B102D
- **Polarity:** Polarity symbols marked on body

### Major Ratings and Characteristics

|              |               |
|--------------|---------------|
| $I_{F(AV)}$  | 50A           |
| $V_{RRM}$    | 800V to 1600V |
| $I_{FSM}$    | 500 A         |
| $I_R$        | 10 $\mu$ A    |
| $V_F$        | 1.3V          |
| $T_{j\max.}$ | 150°C         |

### Maximum Ratings & Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| Items                                                                                             | Symbol          | 3SRB5008    | 3SRB5010 | 3SRB5012 | 3SRB5016 | UNIT             |
|---------------------------------------------------------------------------------------------------|-----------------|-------------|----------|----------|----------|------------------|
| Maximum repetitive peak reverse voltage                                                           | $V_{RRM}$       | 800         | 1000     | 1200     | 1600     | V                |
| Maximum RMS voltage                                                                               | $V_{RMS}$       | 560         | 700      | 840      | 1120     | V                |
| Maximum DC blocking voltage                                                                       | $V_{DC}$        | 800         | 1000     | 1200     | 1600     | V                |
| Maximum average forward rectified current at $T_c=80^\circ\text{C}$ (With heatsink)               | $I_{F(AV)}$     | 50          |          |          |          | A                |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 500         |          |          |          | A                |
| $I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )                                                   | $I^2t$          | 1000        |          |          |          | A <sup>2</sup> s |
| Isolation Breakdown Voltage(R.M.S)<br>@a.c.50HZ;r.m.s.;1min                                       | $V_{isol}$      | 2500        |          |          |          | V                |
| Thermal resistance junction to case per leg <sup>(1)</sup>                                        | $R_{\theta JC}$ | 0.96        |          |          |          | °C/W             |
| Operating junction and storage temperature range                                                  | $T_J, T_{STG}$  | -55 to +150 |          |          |          | °C               |

Note 1: With heatsink, Thermal resistance test is according to JESD 282b.

### Electrical Characteristics for Rectifier ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| Items                                 | Test conditions |                                                   | Symbol | Min | Type | Max       | UNIT    |
|---------------------------------------|-----------------|---------------------------------------------------|--------|-----|------|-----------|---------|
| Instantaneous forward voltage per leg | $I_F=25A^{(2)}$ |                                                   | $V_F$  | -   | 1.00 | 1.30      | V       |
| Reverse current per leg               | $V_R=V_{DC}$    | $T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ | $I_R$  | -   | -    | 10<br>500 | $\mu$ A |

Note2: Pulse test:300 $\mu$ s pulse width,1% duty circle.

### Characteristic Curves

Fig.1 Forward Current Derating Curve

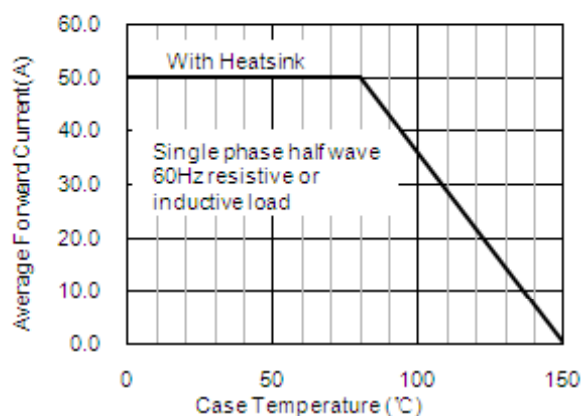


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

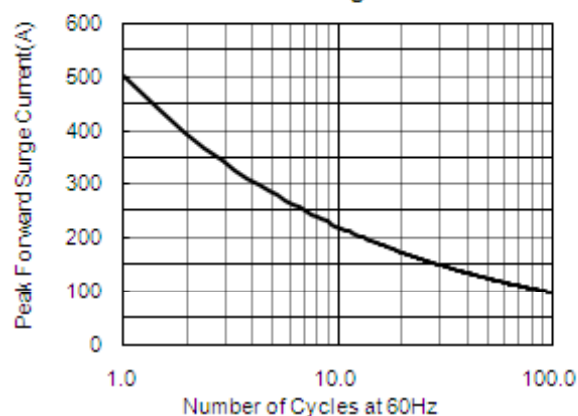


Fig.3 Typical Instantaneous Forward Characteristics

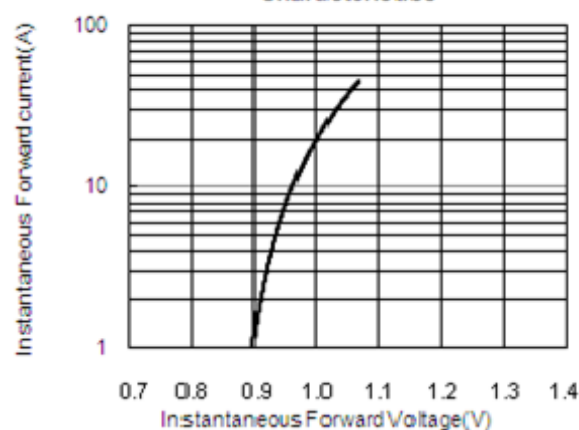
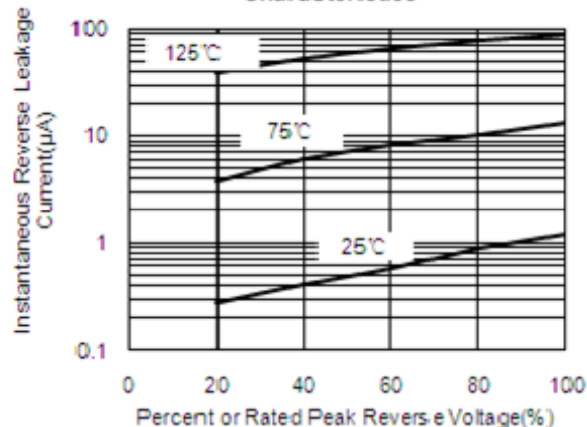


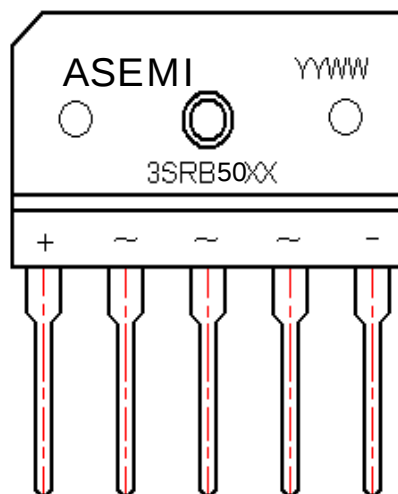
Fig.4 Typical Reverse Leakage Characteristics



# 3SRB5008 ~ 3SRB5016

## Glass Passivated Three Phase Bridge Rectifier

### Marking



ASEMI = Trademark  
 YYWW = Year And Week When  
 does it product  
 3SRB50XX = Marking Code  
 XX = 08, 10, 12, 16

### Package Outline

