

## Surface Mount General Purpose Rectifier

## S3AB—S3MB

### Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability



### Mechanical Data

**Case:** SMB Molded plastic body

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**High temperature soldering guaranteed:** 260°C/10 seconds

**Polarity:** Cathode line denotes the cathode end

**Mounting Position:** Any

### Maximum Ratings & Electrical Characteristics

Ratings at TA = 25°C unless otherwise specified

| Characteristic  | Symbol | S3AB | S3BB | S3DB | S3GB | S3JB | S3KB | S3MB | Units |
|---|--------|------|------|------|------|------|------|------|-------|
| Peak repetitive reverse voltage                                     | VRRM   | 50   | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| RMS reverse voltage   | VRMS   | 35   | 70   | 140  | 280  | 420  | 560  | 700  | V     |
| DC blocking voltage   | VDC    | 50   | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| Maximum average forward output current                              | IF(AV) | 3    |      |      |      |      |      |      | A     |
| Peak forward surge current, 8.3ms single half-sine-wave, @TJ = 25°C | IFSM   | 100  |      |      |      |      |      |      | A     |
| Rating for fusing (t<8.3ms)   | I2t    | 41.7 |      |      |      |      |      |      | A2sec |
| Maximum instantaneous forward voltage @ 3A                          | VF     | 1.1  |      |      |      |      |      |      | V     |
| Maximum Reverse current<br>Rated VR                                 | IR     | 10   |      |      |      |      |      |      | μA    |
|   |        | 200  |      |      |      |      |      |      |       |

### Thermal Characteristics

| Characteristic                       | Symbol | S3AB            | S3BB | S3DB | S3GB | S3JB | S3KB | S3MB | Units |
|--------------------------------------|--------|-----------------|------|------|------|------|------|------|-------|
| Typical thermal resistance (Note 1)  | R θJA  | 60              |      |      |      |      |      |      | °C/W  |
|                                      | R θJC  | 23              |      |      |      |      |      |      |       |
|                                      | R θJL  | 25              |      |      |      |      |      |      |       |
| Operating junction temperature range | TJ     | - 55 ---- + 150 |      |      |      |      |      |      | °C    |
| Storage temperature range            | TSTG   | - 55 ---- + 150 |      |      |      |      |      |      | °C    |

**Note**

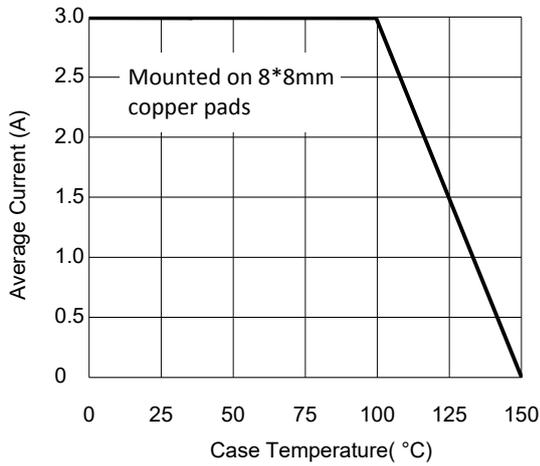
(1) Units mounted on PCB with 10 mm x 20mmx0.1mm Copper Pads

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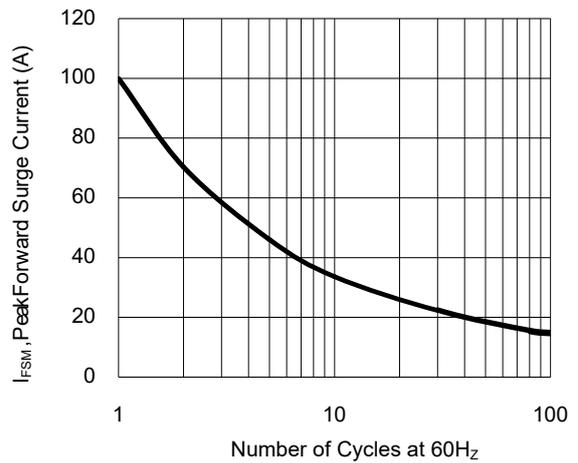
# S3AB- S3MB

## Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

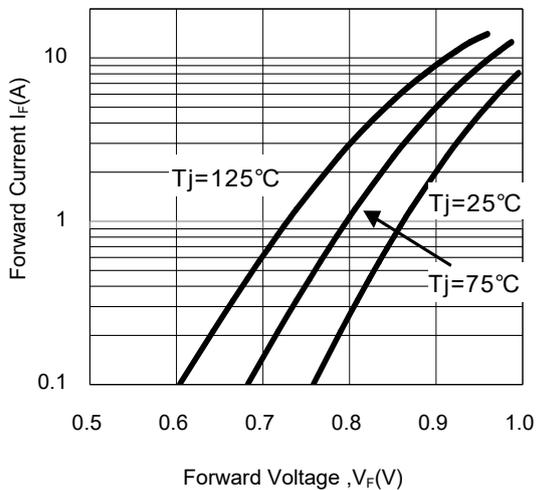
**Fig.1-Forward Current Derating Curve**



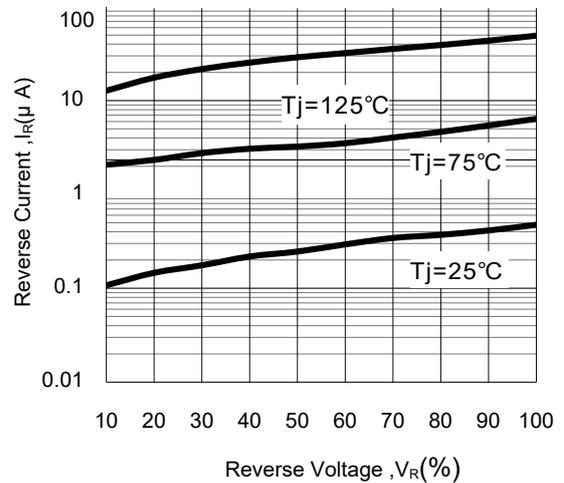
**Fig.2- Surge Current Derating Curve**



**Fig.3- Typical Forward Voltage Characteristic**



**Fig.4- Typical Reverse Characteristic**

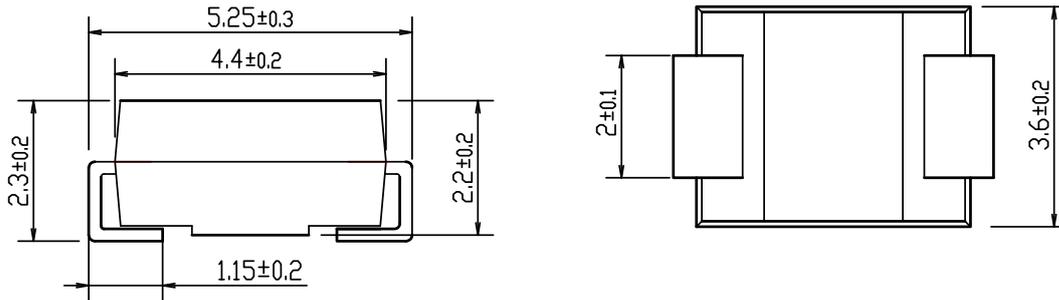


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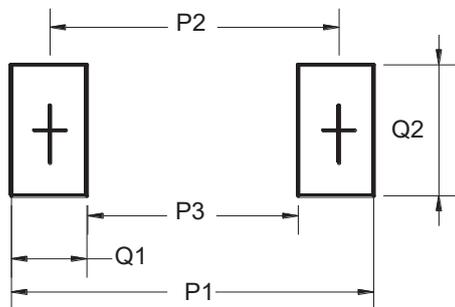
**S3AB- S3MB**

### Package Outline Dimensions(unit:mm)

#### DO-214AA (SMB)



### Mounting Pad Layout(unit:mm)



| Dim | Millimeters |
|-----|-------------|
| P1  | 6.80        |
| P2  | 4.30        |
| P3  | 1.80        |
| Q1  | 2.50        |
| Q2  | 2.30        |

### Ordering Information

| Part No. | Marking | Package | Shipping           |
|----------|---------|---------|--------------------|
| S3AB     | S3AB    | SMB     | 3000PCS /Tape&Reel |
| S3BB     | S3BB    | SMB     | 3000PCS /Tape&Reel |
| S3DB     | S3DB    | SMB     | 3000PCS /Tape&Reel |
| S3GB     | S3GB    | SMB     | 3000PCS /Tape&Reel |
| S3JB     | S3JB    | SMB     | 3000PCS /Tape&Reel |
| S3KB     | S3KB    | SMB     | 3000PCS /Tape&Reel |
| S3MB     | S3MB    | SMB     | 3000PCS /Tape&Reel |

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