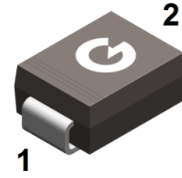


## Features

- Metal silicon junction, majority carrier conduction
- High forward surge current capability
- Low forward voltage drop
- High temperature soldering guaranteed: 260°C @ 10s
- Robust guarding for over voltage protection
- RoHS compliant with Halogen-free

HF



SMB

## Mechanical Data

- Case: SMB
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

## Ordering Information

| Part Number | Package | Shipping Quantity      | Marking Code |
|-------------|---------|------------------------|--------------|
| SS10100B-XQ | SMB     | 3000 pcs / Tape & Reel | SS10AB       |

## Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

| Parameter                                                  | Symbol             | Value | Unit |
|------------------------------------------------------------|--------------------|-------|------|
| Peak Repetitive Reverse Voltage                            | V <sub>RRM</sub>   | 100   | V    |
| RMS Reverse Voltage                                        | V <sub>RMS</sub>   | 70    | V    |
| DC Blocking Voltage                                        | V <sub>DC</sub>    | 100   | V    |
| Average Forward Output Current                             | I <sub>F(AV)</sub> | 10    | A    |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine wave | I <sub>FSM</sub>   | 200   | A    |

## Thermal Characteristics

| Parameter                              | Symbol           | Value      | Unit |
|----------------------------------------|------------------|------------|------|
| Thermal Resistance Junction-to-Air *1  | R <sub>θJA</sub> | 60         | °C/W |
| Thermal Resistance Junction-to-Case *1 | R <sub>θJC</sub> | 25         | °C/W |
| Thermal Resistance Junction-to-Lead *1 | R <sub>θJL</sub> | 23         | °C/W |
| Operating Junction Temperature Range   | T <sub>J</sub>   | -55 ~ +150 | °C   |
| Storage Temperature Range              | T <sub>STG</sub> | -55 ~ +150 | °C   |

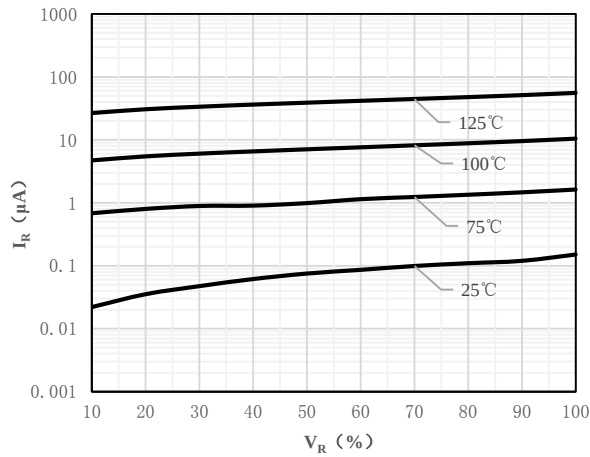
### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                                  | Symbol     | Test Condition                          | Min. | Typ. | Max. | Unit          |
|--------------------------------------------|------------|-----------------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage                  | $V_{(BR)}$ | $I_R = 100\mu\text{A}$                  | 100  | -    | -    | V             |
| Forward Voltage <sup>*2</sup>              | $V_F$      | $I_F = 10\text{A}$                      | -    | -    | 0.85 | V             |
| Maximum Peak Reverse Current <sup>*3</sup> | $I_R$      | Rated $V_R$ , $T_J = 25^\circ\text{C}$  | -    | -    | 30   | $\mu\text{A}$ |
|                                            |            | Rated $V_R$ , $T_J = 100^\circ\text{C}$ | -    | -    | 5    | mA            |

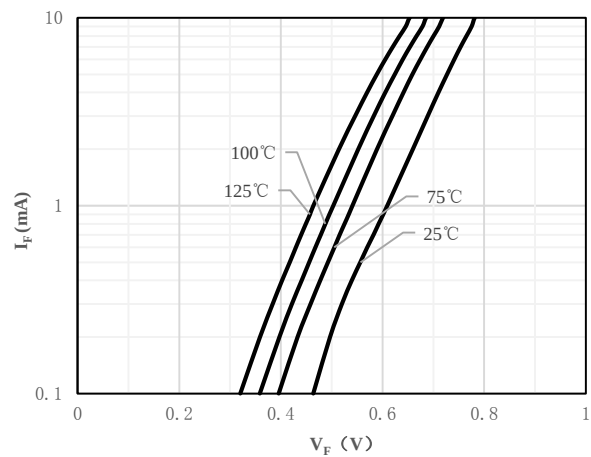
Notes:

1. The data tested by surface mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area
2. The data tested by pulsed, pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 1\%$
3. The data tested by pulsed, pulse width  $\leq 40\text{ms}$

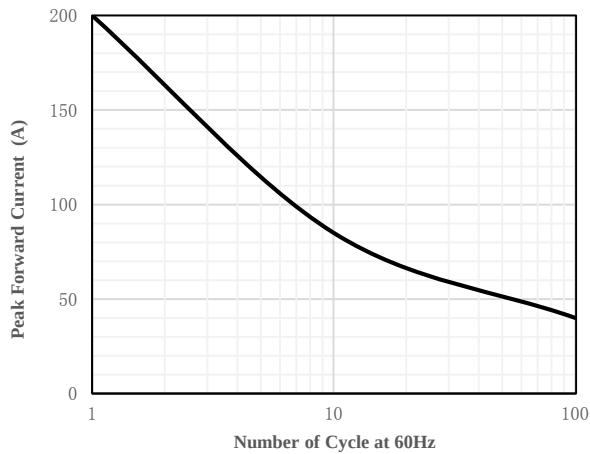
**Ratings and Characteristic Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



**Fig 1 Typical Reverse Characteristic**

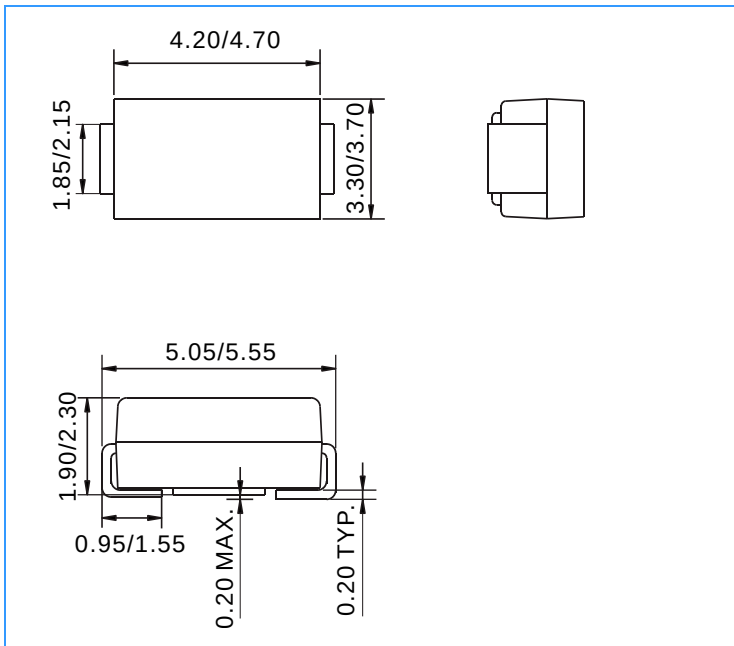


**Fig 2 Typical Forward Characteristics**



**Fig 3 Surge Current Derating Curve**

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)

