

## Schottky Barrier Rectifiers

## GVS38A--GVS310A

### Features

- Metal silicon junction, majority carrier conduction
- High surge capability
- High temperature soldering guaranteed:  
260°C/10 seconds
- High current capability, low forward voltage drop
- Guarding for over voltage protection
- RoHS Compliant



### Mechanical Data

- Case: SMA molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes cathode end

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

| Characteristic                                             | Symbol             | GVS38A | GVS39A | GVS310A | Units |
|------------------------------------------------------------|--------------------|--------|--------|---------|-------|
| Peak repetitive reverse voltage                            | V <sub>RRM</sub>   | 80     | 90     | 100     | V     |
| RMS reverse voltage                                        | V <sub>RMS</sub>   | 56     | 63     | 70      | V     |
| DC blocking voltage                                        | V <sub>DC</sub>    | 80     | 90     | 100     | V     |
| Maximum average forward output current                     | I <sub>F(AV)</sub> | 3.0    |        |         | A     |
| Peak forward surge current,<br>8.3ms single half-sine-wave | I <sub>FSM</sub>   | 80     |        |         | A     |

### Thermal Characteristics

| Parameter                              | Symbol           | GVS38A          | GVS39A | GVS310A | Units |
|----------------------------------------|------------------|-----------------|--------|---------|-------|
| Typical thermal resistance<br>(Note 1) | R <sub>ΘJA</sub> | 70              |        |         | °C /W |
|                                        | R <sub>ΘJC</sub> | 25              |        |         |       |
|                                        | R <sub>ΘJL</sub> | 30              |        |         |       |
| Operating junction temperature range   | T <sub>J</sub>   | - 55 ---- + 150 |        |         | °C    |
| Storage temperature range              | T <sub>STG</sub> | - 55 ---- + 150 |        |         | °C    |

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

**Schottky Barrier Rectifiers****GVS38A--GVS310A****Electrical Characteristics** (@ $T_A = 25^{\circ}\text{C}$  unless otherwise specified)

| Parameter                                     | Symbol | Test conditions   |                             | Typ. | Max. | Units         |
|-----------------------------------------------|--------|-------------------|-----------------------------|------|------|---------------|
| Maximum instantaneous forward voltage(Note 1) | $V_F$  | $I_F=3.0\text{A}$ | @ $T_A=25^{\circ}\text{C}$  | --   | 0.7  | V             |
| Maximum Reverse current (Note 2)              | $I_R$  | Rated $V_R$       | @ $T_J=25^{\circ}\text{C}$  | --   | 250  | $\mu\text{A}$ |
|                                               |        |                   | @ $T_J=100^{\circ}\text{C}$ | --   | 20   | m A           |

Note:

1.Pulse test: 300us pulse width, 1 % duty cycle

2.Pulse test: Pulse width 40ms

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## GVS38A--GVS310A

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

Fig.1-Forward Current Derating Curve

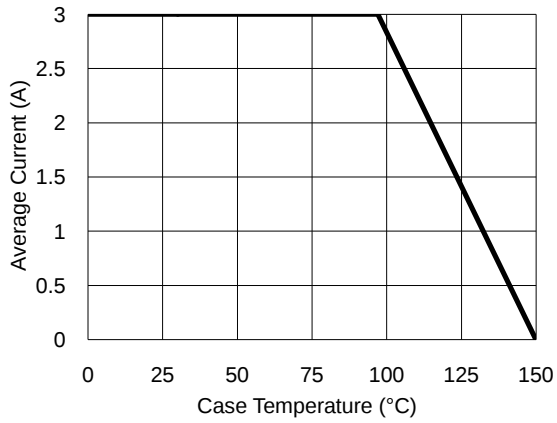


Fig.2- Surge Current Derating Curve

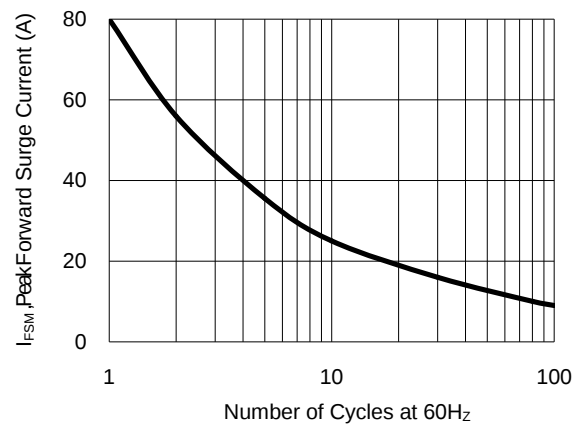


Fig.3- Typical Forward Voltage Characteristic

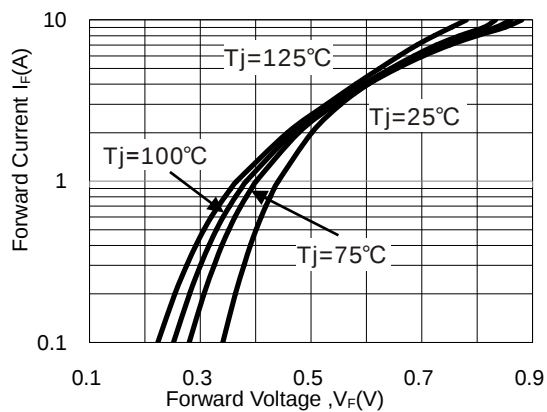
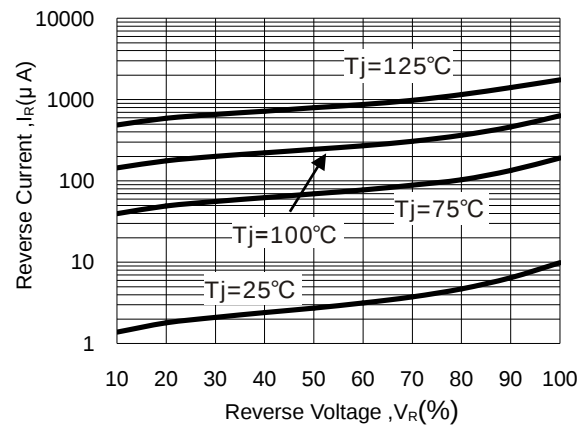


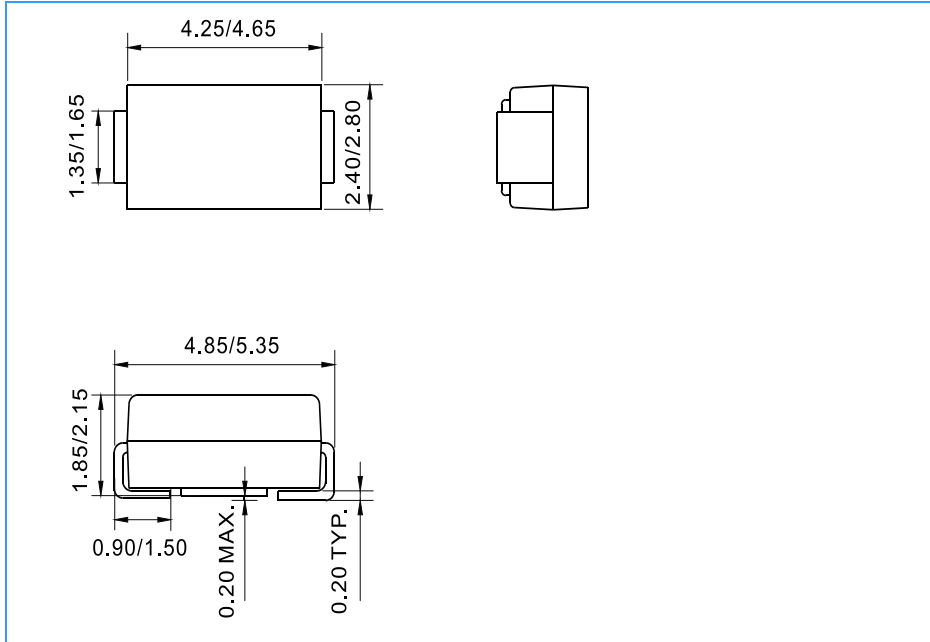
Fig.4- Typical Reverse Characteristic



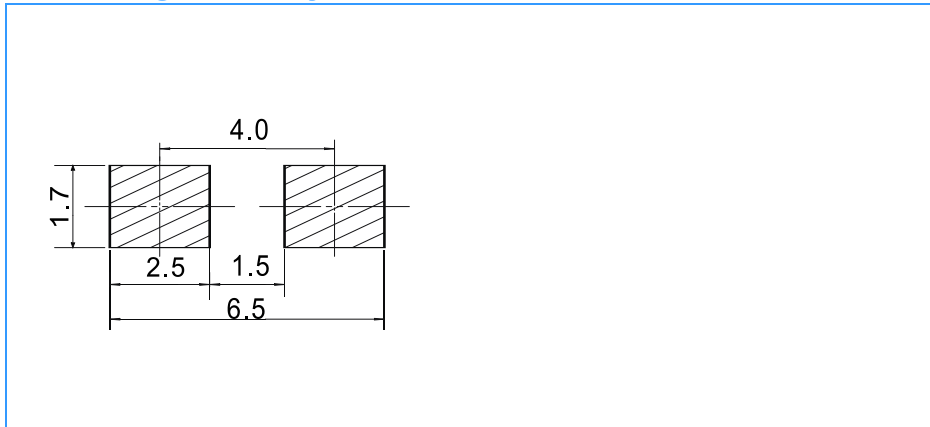
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### Package Outline Dimensions(unit:mm)



### Mounting Pad Layout(unit:mm)



### Ordering Information

| Part No. | Marking | Package | Shipping       |
|----------|---------|---------|----------------|
| GVS38A   | VS38A   | SMA     | 5000/Tape&Reel |
| GVS39A   | VS39A   | SMA     | 5000/Tape&Reel |
| GVS310A  | VS310A  | SMA     | 5000/Tape&Reel |