

### Features

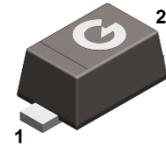
- Low reverse current
- Low forward voltage
- RoHS compliant with Halogen-free

HF



### Mechanical Data

- Case: SOD-523
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



SOD-523

### Ordering Information

| Part Number | Package | Shipping Quantity      | Marking Code |
|-------------|---------|------------------------|--------------|
| 1SS388      | SOD-523 | 3000 pcs / Tape & Reel | S3           |

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

| Parameter                                     | Symbol              | Value | Unit |
|---|---------------------|-------|------|
| Peak Repetitive Reverse Voltage               | V <sub>RRM</sub>    | 45    | V    |
| DC Reverse Voltage                            | V <sub>R</sub>      | 40    | V    |
| RMS Reverse Voltage                           | V <sub>R(RMS)</sub> | 28    | V    |
| Maximum Average Forward Output Current        | I <sub>F(AV)</sub>  | 100   | mA   |
| Maximum Peak Forward Current                  | I <sub>FM</sub>     | 300   | mA   |
| Forward Surge Current @ t <sub>p</sub> = 10ms | I <sub>FSM</sub>    | 1     | A    |

### Thermal Characteristics

| Parameter                                   | Symbol           | Value      | Unit |
|---|------------------|------------|------|
| Power Dissipation                           | P <sub>D</sub>   | 150        | mW   |
| Thermal Resistance (Junction-to-Ambient) *1 | R <sub>θJA</sub> | 250        | °C/W |
| Thermal Resistance (Junction-to-Case) *1    | R <sub>θJC</sub> | 180        | °C/W |
| Thermal Resistance (Junction-to-Lead) *1    | R <sub>θJL</sub> | 190        | °C/W |
| Operating junction Temperature              | T <sub>J</sub>   | -40 ~ +125 | °C   |
| Storage Temperature Range                   | T <sub>STG</sub> | -40 ~ +150 | °C   |

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

| Parameter                       | Symbol     | Test Condition                     | Min. | Typ. | Max. | Unit          |
|---------------------------------|------------|------------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage       | $V_{(BR)}$ | $I_R = 100\mu\text{A}$             | 40   | -    | -    | V             |
| Forward Voltage *2              | $V_F$      | $I_F = 1\text{mA}$                 | -    | 0.28 | -    | V             |
|                                 |            | $I_F = 10\text{mA}$                | -    | 0.36 | -    | V             |
|                                 |            | $I_F = 50\text{mA}$                | -    | 0.40 | 0.60 | V             |
| Maximum Peak Reverse Current *3 | $I_R$      | $V_R = 10\text{V}$                 | -    | -    | 5    | $\mu\text{A}$ |
| Capacitance Between Terminals   | $C_T$      | $V_R = 0\text{V}, f = 1\text{MHz}$ | -    | 22   | 25   | pF            |

Notes:

1. The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper
2. Pulse width  $\leq 380\mu\text{s}$ , Duty cycle < 2%
3. pulse test,  $t_p \leq 5\text{ms}$

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

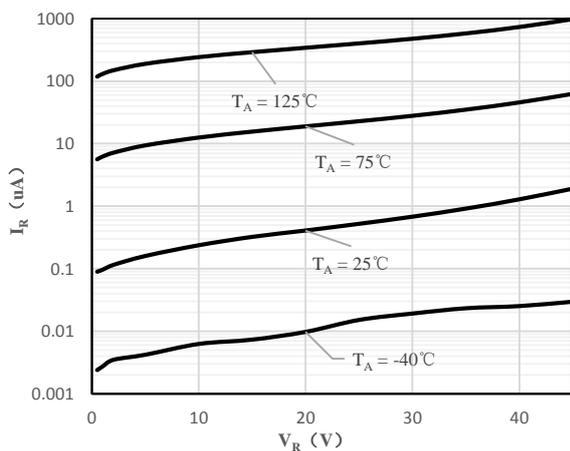


Fig 1 Typical Reverse Characteristic

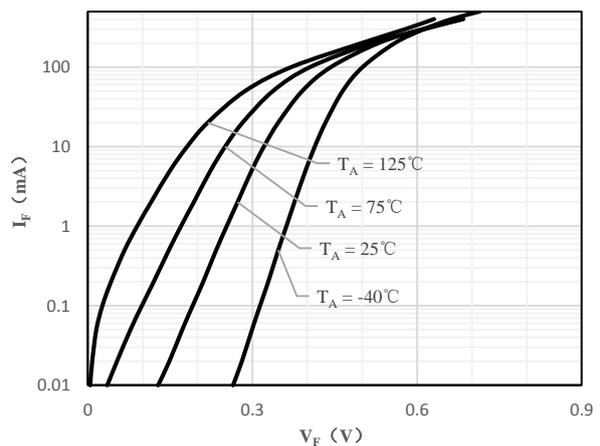


Fig 2 Typical Forward Characteristics

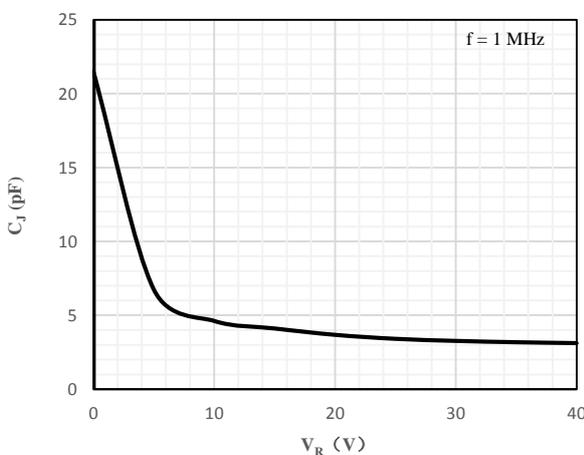


Fig 3 Capacitance vs. Reverse Voltage

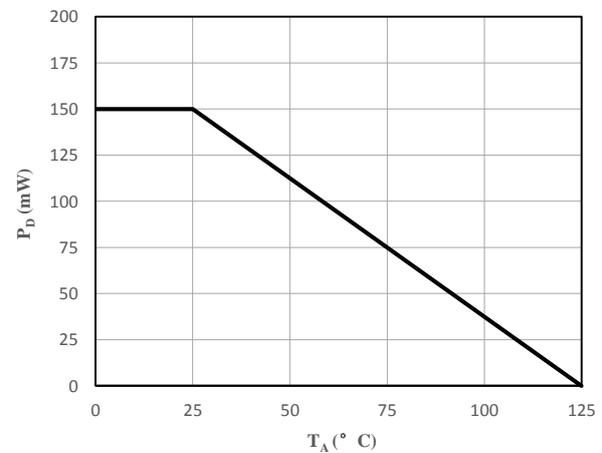
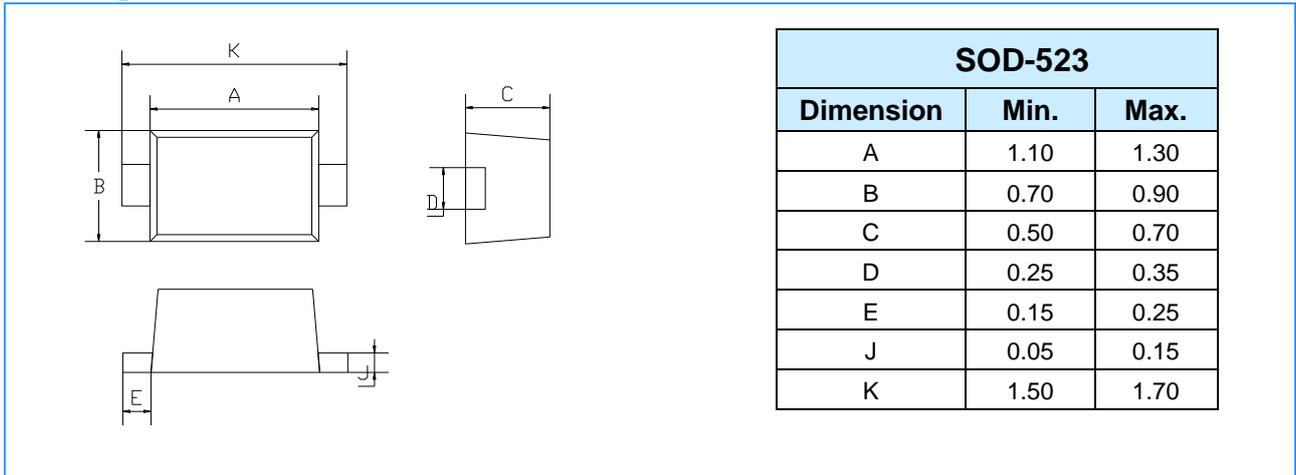


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



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