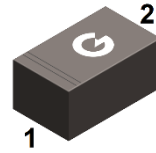


## Features

- High reliability
- Silicon epitaxial planar
- RoHS compliant with Halogen-free

HF



DFN1006-2

## Mechanical Data

- Case: DFN1006-2
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

## Ordering Information

| Part Number | Package   | Shipping Quantity       | Marking Code |
|-------------|-----------|-------------------------|--------------|
| RB521SL-30  | DFN1006-2 | 10000 pcs / Tape & Reel | SC           |

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

| Parameter                                                | Symbol             | Value | Unit |
|----------------------------------------------------------|--------------------|-------|------|
| Peak Repetitive Reverse Voltage                          | V <sub>RRM</sub>   | 30    | V    |
| Working Peak Reverse Voltage                             | V <sub>RWM</sub>   | 30    | V    |
| DC Reverse Voltage                                       | V <sub>R</sub>     | 30    | V    |
| RMS Reverse Voltage                                      | V <sub>RMS</sub>   | 21    | V    |
| Maximum Average Forward Output Current                   | I <sub>F(AV)</sub> | 100   | mA   |
| Peak Forward Surge Current (8.3ms single half sine-wave) | I <sub>FSM</sub>   | 0.5   | A    |

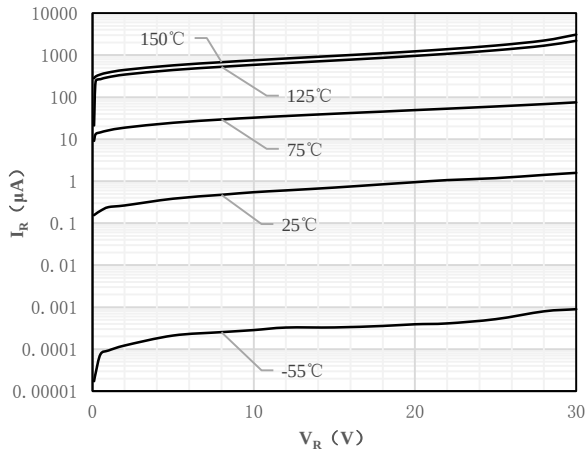
## Thermal Characteristics

| Parameter                      | Symbol           | Value      | Unit |
|--------------------------------|------------------|------------|------|
| Power Dissipation              | P <sub>D</sub>   | 100        | mW   |
| Operating Junction Temperature | T <sub>J</sub>   | -55 ~ +150 | °C   |
| Storage Temperature Range      | T <sub>STG</sub> | -55 ~ +150 | °C   |

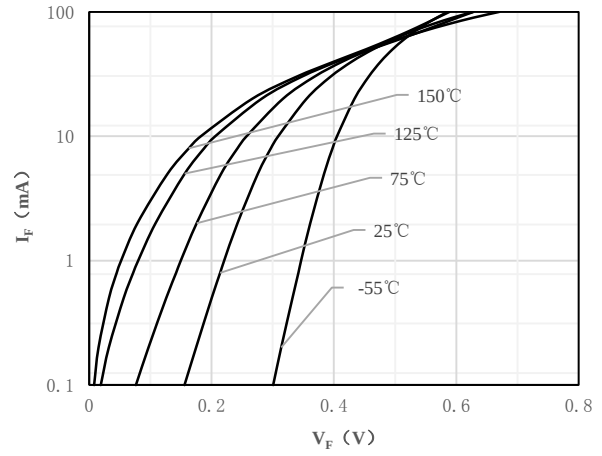
**Electrical Characteristics** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

| Parameter                    | Symbol     | Test Condition                     | Min. | Typ. | Max. | Unit          |
|------------------------------|------------|------------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage    | $V_{(BR)}$ | $I_R = 100\mu\text{A}$             | 30   | -    | -    | V             |
| Forward Voltage              | $V_F$      | $I_F = 10\text{mA}$                | -    | -    | 0.35 | V             |
| Maximum Peak Reverse Current | $I_R$      | $V_R = 10\text{V}$                 | -    | -    | 5    | $\mu\text{A}$ |
|                              |            | $V_R = 30\text{V}$                 | -    | -    | 10   | $\mu\text{A}$ |
| Junction Capacitance         | $C_J$      | $V_R = 1\text{V}, f = 1\text{MHz}$ | -    | -    | 8    | pF            |

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



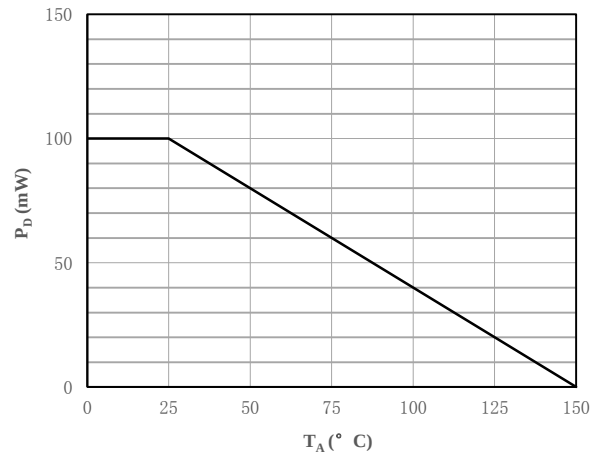
**Fig 1 Typical Reverse Characteristic**



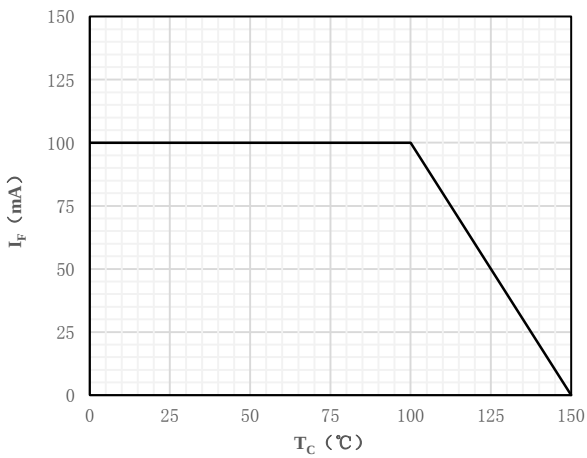
**Fig 2 Typical Forward Characteristics**



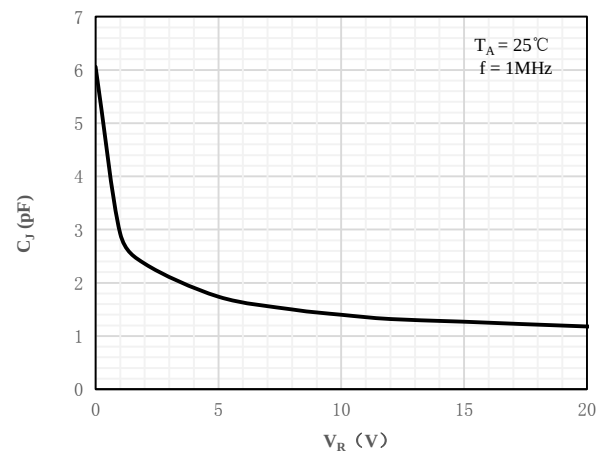
**Fig 3 Surge Current Derating Curve**



**Fig 4 Power Derating Curve**

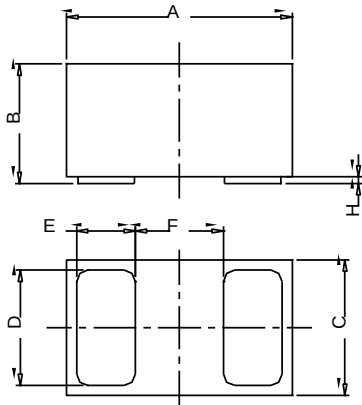


**Fig 5 Current Derating Curve**



**Fig 6 Capacitance vs. Reverse Voltage**

**Package Outline Dimensions** (Unit: mm)



| DFN1006-2 |      |      |       |
|-----------|------|------|-------|
| Dimension | Min. | Typ. | Max.  |
| A         | 0.95 | 1.00 | 1.075 |
| B         | 0.45 | 0.50 | 0.55  |
| C         | 0.55 | 0.60 | 0.675 |
| D         | 0.45 | 0.50 | 0.55  |
| E         | 0.20 | 0.25 | 0.30  |
| F         | -    | 0.40 | -     |
| H         | 0    | 0.03 | 0.05  |

**Package Outline Dimensions** (Unit: mm)

**DFN1006-2**

