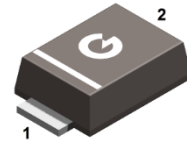


## Features

- 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**



**SMAFL**

## Mechanical Data

- Case: SMAFL
- 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 |
|-------------|---------|-------------------------|--------------|
| SS25FA      | SMAFL   | 10000 pcs / Tape & Reel | S25          |
| SS26FA      | SMAFL   | 10000 pcs / Tape & Reel | S26          |

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

| Parameter                                                  | Symbol             | SS25FA | SS26FA | Unit |
|------------------------------------------------------------|--------------------|--------|--------|------|
| Peak Repetitive Reverse Voltage                            | V <sub>RRM</sub>   | 50     | 60     | V    |
| RMS Reverse Voltage                                        | V <sub>RMS</sub>   | 35     | 42     | V    |
| DC Blocking Voltage                                        | V <sub>DC</sub>    | 50     | 60     | V    |
| Average Forward Output Current                             | I <sub>F(AV)</sub> | 2.0    |        | A    |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine wave | I <sub>FSM</sub>   | 50     |        | A    |

## Thermal Characteristics

| Parameter                              | Symbol           | SS25FA     | SS26FA | Unit |
|----------------------------------------|------------------|------------|--------|------|
| Thermal Resistance Junction-to-Air *1  | R <sub>θJA</sub> | 64         |        | °C/W |
| Thermal Resistance Junction-to-Case *1 | R <sub>θJC</sub> | 27         |        | °C/W |
| Thermal Resistance Junction-to-Lead *1 | R <sub>θJL</sub> | 21         |        | °C/W |
| Operating Junction Temperature Range   | T <sub>J</sub>   | -55 ~ +150 |        | °C   |
| Storage Temperature Range              | T <sub>STG</sub> | -55 ~ +150 |        | °C   |

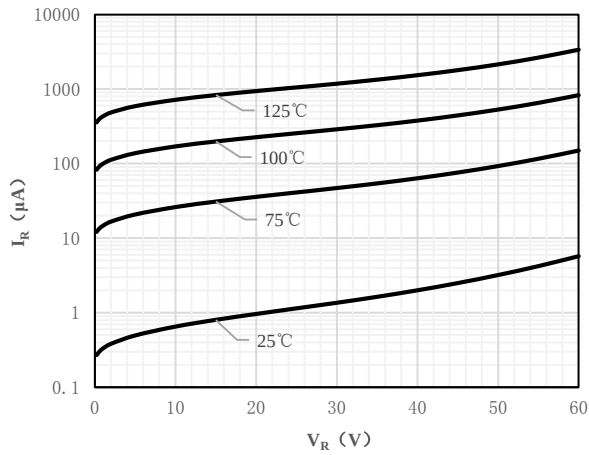
### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                       | Symbol     | Test Condition                          | Min. | Typ. | Max. | Unit          |
|---------------------------------|------------|-----------------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage       | $V_{(BR)}$ | $I_R = 100\mu\text{A}$ , SS25FA         | 50   | -    | -    | V             |
|                                 |            | $I_R = 100\mu\text{A}$ , SS26FA         | 60   | -    | -    | V             |
| Forward Voltage *2              | $V_F$      | $I_F = 2\text{A}$                       | -    | -    | 0.65 | V             |
| Maximum Peak Reverse Current *3 | $I_R$      | Rated $V_R$ , $T_J = 25^\circ\text{C}$  | -    | -    | 50   | $\mu\text{A}$ |
|                                 |            | Rated $V_R$ , $T_J = 100^\circ\text{C}$ | -    | -    | 5    | mA            |
| Diode capacitance               | $C_J$      | $V_R = 4\text{V}$ , $f = 1\text{MHz}$   | -    | 94   | -    | pF            |

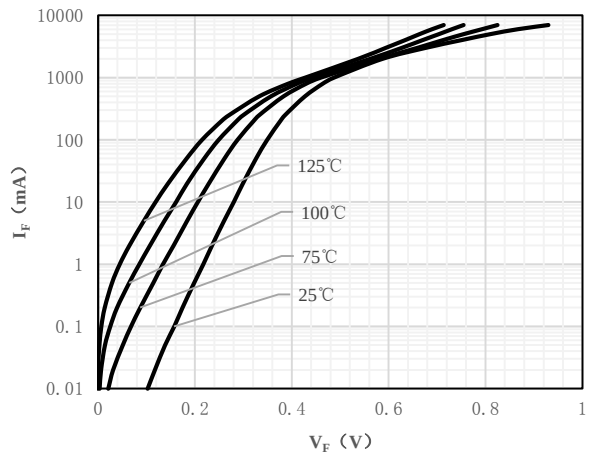
Notes:

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  $\leq 40\text{ms}$

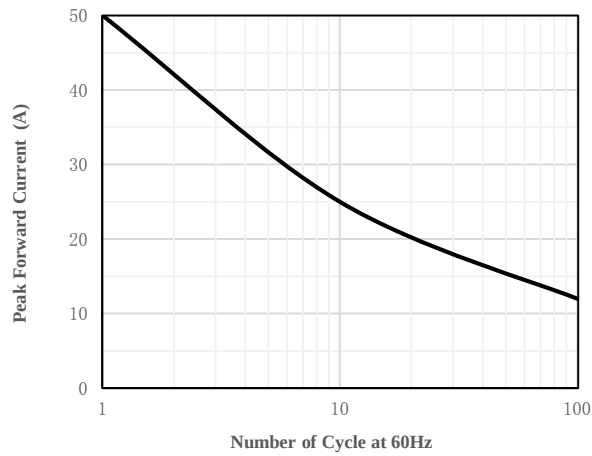
**Ratings and Characteristic Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



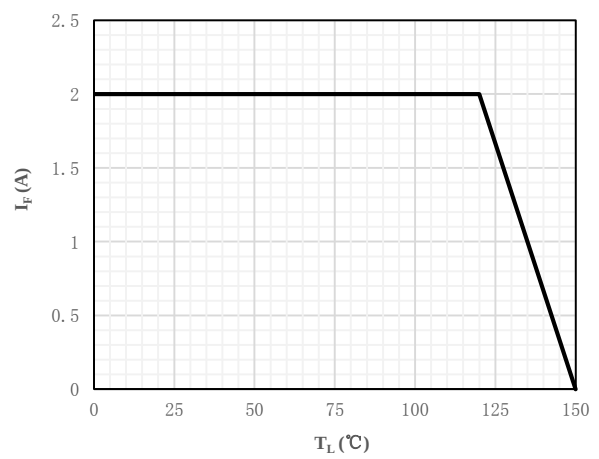
**Fig 1 Typical Reverse Characteristic**



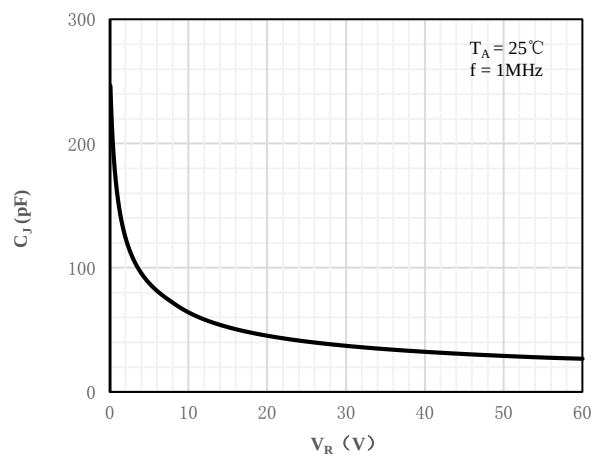
**Fig 2 Typical Forward Characteristics**



**Fig 3 Surge Current Derating Curve**

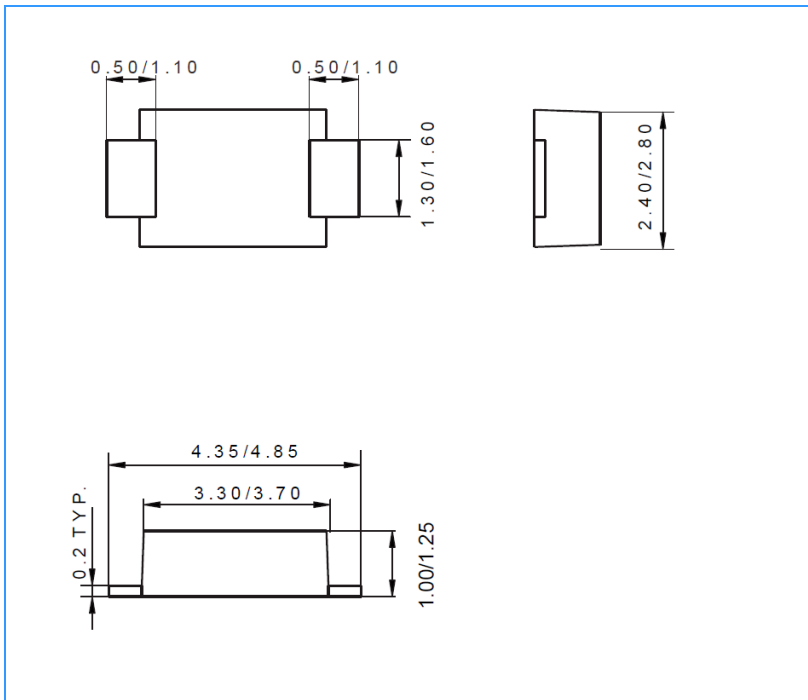


**Fig 4 Forward Current Derating Curve**



**Fig 5 Capacitance vs. Reverse Voltage**

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



**Mounting Pad Layout** (Unit: mm)

