

# Schottky Barrier Rectifiers

## SL52CF--SL545CF

### 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: SMCF 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             | SL52CF | SL53CF | SL54CF | SL545CF | Units |
|------------------------------------------------------------|--------------------|--------|--------|--------|---------|-------|
| Peak repetitive reverse voltage                            | V <sub>RRM</sub>   | 20     | 30     | 40     | 45      | V     |
| RMS reverse voltage                                        | V <sub>RMS</sub>   | 14     | 21     | 28     | 31.5    | V     |
| DC blocking voltage                                        | V <sub>DC</sub>    | 20     | 30     | 40     | 45      | V     |
| Maximum average forward output current                     | I <sub>F(AV)</sub> | 5.0    |        |        |         | A     |
| Peak forward surge current,<br>8.3ms single half-sine-wave | I <sub>FSM</sub>   | 150    |        |        |         | A     |

### Thermal Characteristics

| Parameter                              | Symbol           | SL52CF          | SL53CF | SL54CF | SL545CF | Units |
|----------------------------------------|------------------|-----------------|--------|--------|---------|-------|
| Typical thermal resistance<br>(Note 1) | R <sub>θJA</sub> | 27              |        |        |         | °C /W |
|                                        | R <sub>θJC</sub> | 10              |        |        |         |       |
|                                        | R <sub>θJL</sub> | 4               |        |        |         |       |
| Operating junction temperature range   | T <sub>J</sub>   | - 55 ---- + 125 |        |        |         | °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****SL52CF--SL545CF****Electrical Characteristics** (@ $T_A = 25^{\circ}\text{C}$  unless otherwise specified)

| Parameter                                     | Symbol | Test conditions   |                             | Typ. | Max. | Units         |
|-----------------------------------------------|--------|-------------------|-----------------------------|------|------|---------------|
| Maximum instantaneous forward voltage(Note 1) | $V_F$  | $I_F=5.0\text{A}$ | @ $T_A=25^{\circ}\text{C}$  | --   | 0.45 | V             |
| Maximum Reverse current (Note 2)              | $I_R$  | Rated $V_R$ ,     | @ $T_J=25^{\circ}\text{C}$  | --   | 500  | $\mu\text{A}$ |
|                                               |        |                   | @ $T_J=100^{\circ}\text{C}$ | --   | 40   | m A           |

Note:

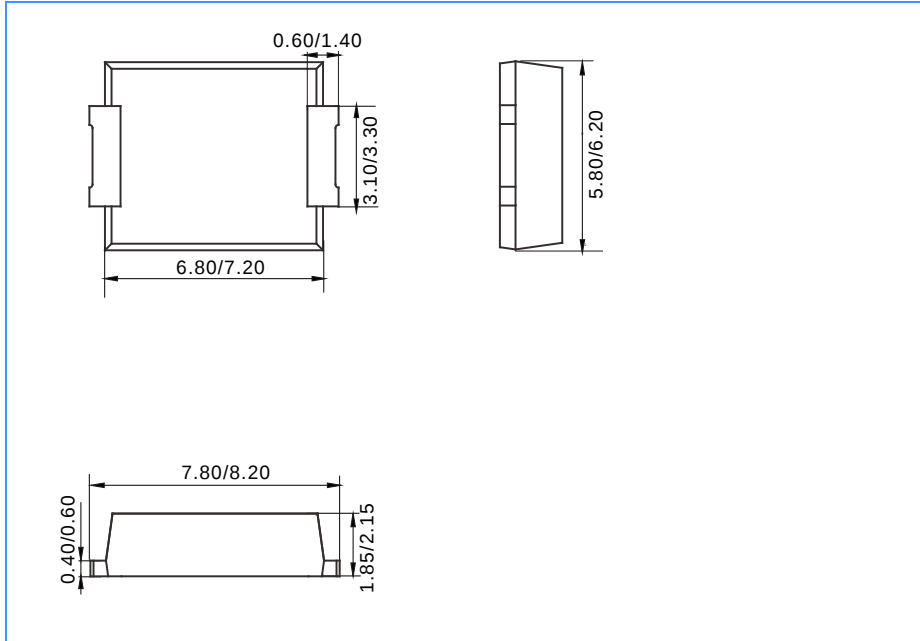
1.Pulse test: 300us pulse width, 1 % duty cycle

2.Pulse test: Pulse width 40ms

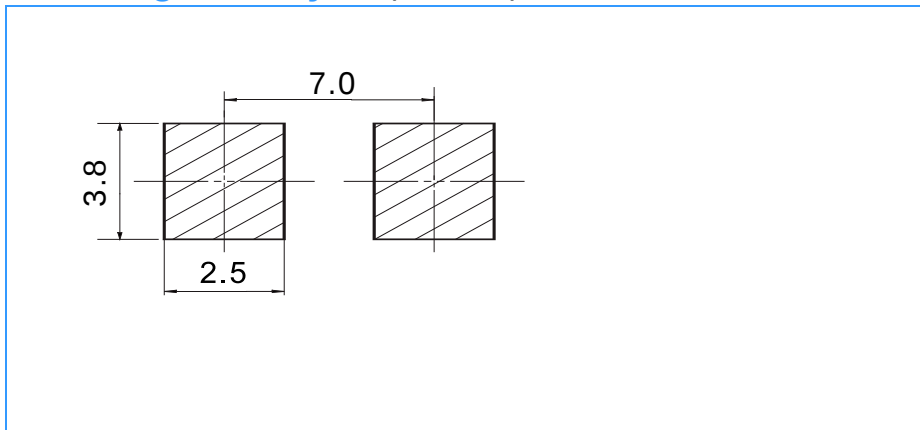
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### Package Outline Dimensions(unit:mm)



### Mounting Pad Layout(unit:mm)



### Ordering Information

| Part No. | Marking | Package | Shipping         |
|----------|---------|---------|------------------|
| SL52CF   | SL52CF  | SMCF    | 3000 / Tape&Reel |
| SL53CF   | SL53CF  | SMCF    | 3000 / Tape&Reel |
| SL54CF   | SL54CF  | SMCF    | 3000 / Tape&Reel |
| SL545CF  | SL545CF | SMCF    | 3000 / Tape&Reel |