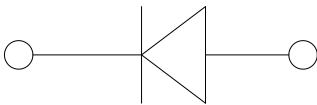
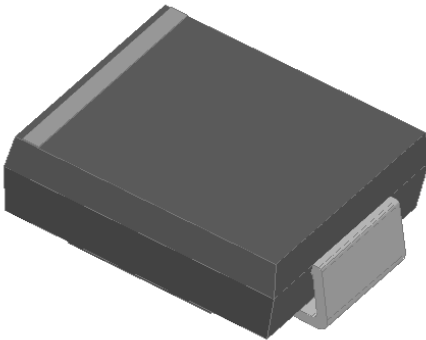


Surface Mount Schottky Rectifier



Features

- Guardring for overvoltage protection
- Low forward voltage drop, Low power losses
- High forward surge capability
- High frequency operation
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

Mechanical Data

- **Package:** DO-214AB (SMC)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SS54L | SS56L | SS510L |
|---|------------------|------|-----------|-----------|--------|
| Device marking code | | | SS54L | SS56L | SS510L |
| Repetitive Peak Reverse Voltage | VRRM | V | 40 | 60 | 100 |
| Average Rectified Output Current @60Hz sine wave, Resistance load, T _a (FIG.1) | I _O | A | 5.0 | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _a =25°C | I _{FSM} | A | 100 | | |
| Storage Temperature | T _{stg} | °C | -55 ~+150 | | |
| Junction Temperature | T _j | °C | -55 ~+125 | -55 ~+150 | |

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | SS54L | SS56L | SS510L |
|---|----------------|------|--|-------|-------|--------|
| Maximum instantaneous forward voltage drop per diode | V _F | V | I _{FM} =5.0A | 0.45 | 0.5 | 0.7 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _R | mA | T _a =25°C | 0.5 | | |
| | | | T _a =100°C | 50 | | |
| Typical junction capacitance | C _j | pF | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C. | 330 | 220 | 680 |

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | SS54L | SS56L | SS510L |
|--------------------|---------------------|-------------------|------|-------------------|-------|--------|
| Thermal Resistance | Junction to ambient | R _{θJ-A} | °C/W | 47 ⁽¹⁾ | | |
| | Junction to lead | R _{θJ-L} | °C/W | 13 ⁽¹⁾ | | |

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■ Characteristics(Typical)

FIG.1: I_o-T_L Curve

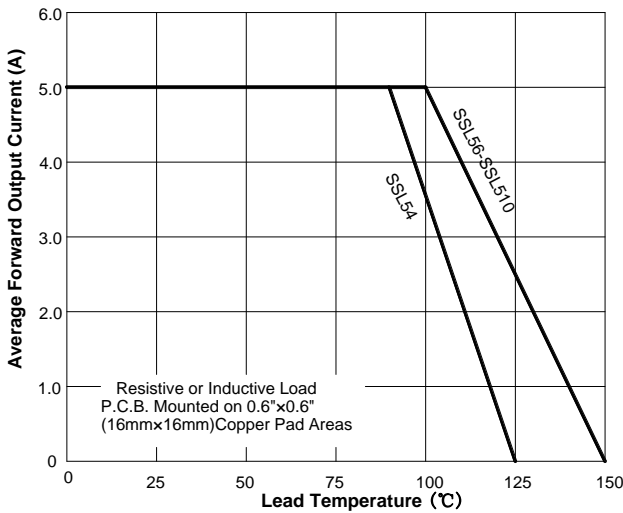


FIG.2: Forward Surge Current Capability

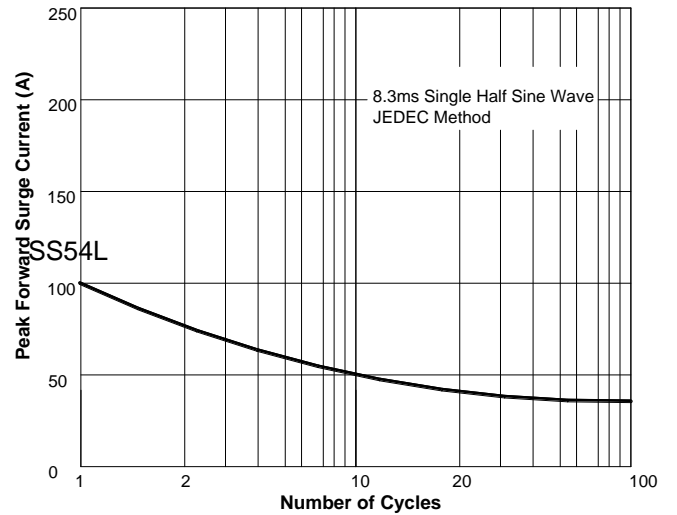


FIG.3: Forward Voltage

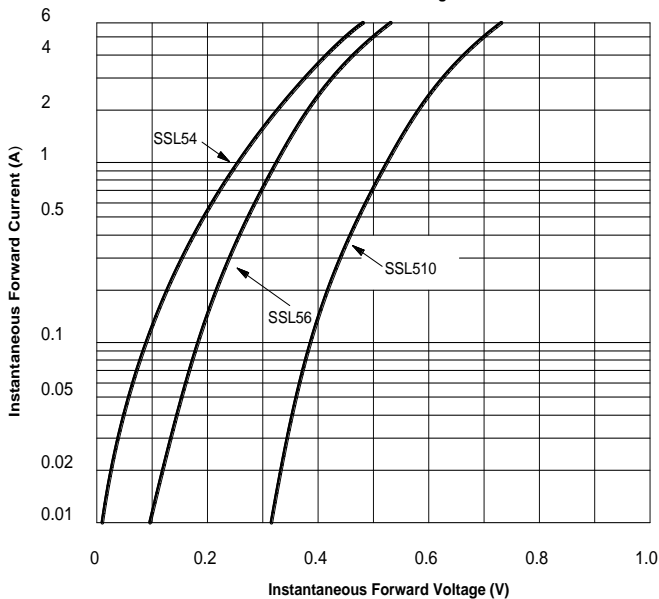
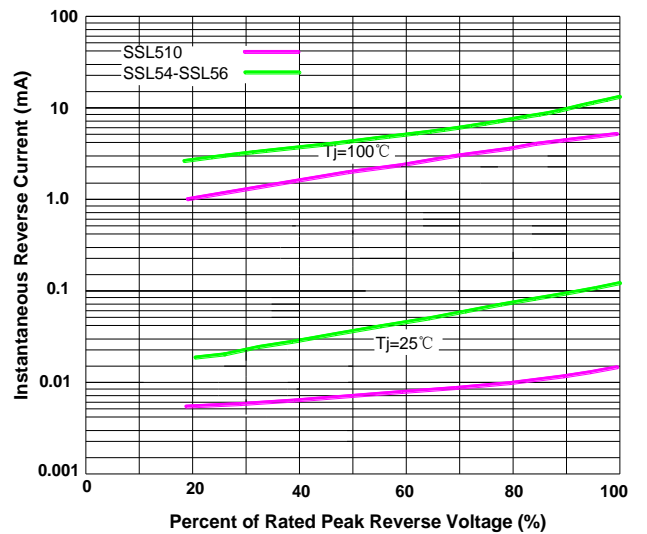
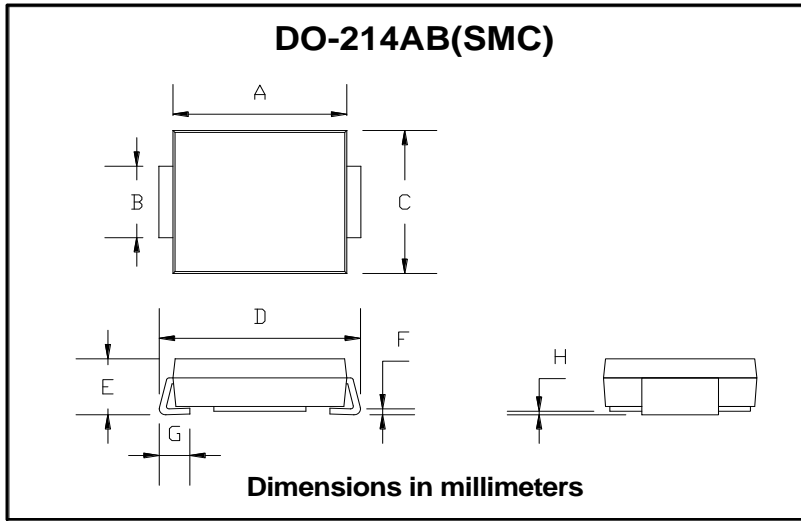


FIG.4: Typical Reverse Characteristics

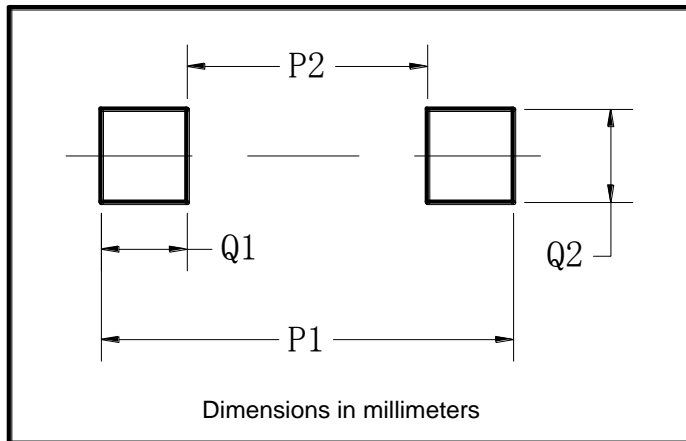


■ Outline Dimensions



| DO-214AB (SMC) | | |
|----------------|------|------|
| Dim | Min | Max |
| A | 6.60 | 7.11 |
| B | 2.85 | 3.27 |
| C | 5.59 | 6.22 |
| D | 7.75 | 8.13 |
| E | 1.99 | 2.61 |
| F | 0.15 | 0.31 |
| G | 0.76 | 1.52 |
| H | 0.10 | 0.20 |

■ Suggested pad layout



| Dim | Typ |
|-----|------|
| P1 | 9.9 |
| P2 | 3.84 |
| Q1 | 3.03 |
| Q2 | 3.82 |