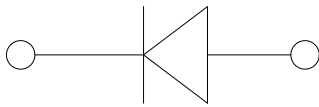
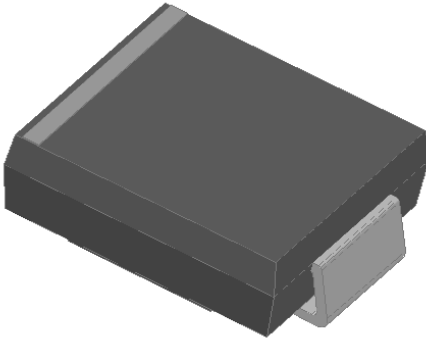


## Surface Mount Schottky Rectifier



### 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<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT | SSL54        | SSL56        | SSL510        |
|---|------------------|------|--------------|--------------|---------------|
| Device marking code   |                  |      | <b>SSL54</b> | <b>SSL56</b> | <b>SSL510</b> |
| Repetitive Peak Reverse Voltage   | VRRM             | V    | 40           | 60           | 100           |
| Average Rectified Output Current<br>@60Hz sine wave, Resistance load, T <sub>a</sub> (FIG.1)  | I <sub>O</sub>   | A    | 5.0          |              |               |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A    | 100          |              |               |
| Storage Temperature   | T <sub>stg</sub> | °C   | -55 ~+150    |              |               |
| Junction Temperature  | T <sub>j</sub>   | °C   | -55 ~+125    | -55 ~+150    |               |

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS  | SSL54       | SSL56      | SSL510     |
|---|----------------|------|--|-------------|------------|------------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =5.0A                                      | <b>0.45</b> | <b>0.5</b> | <b>0.7</b> |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>r</sub> | mA   | T <sub>a</sub> =25°C                                       | 0.5         |            |            |
|   |                |      | T <sub>a</sub> =100°C                                      | 50          |            |            |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C. | 330         | 220        | 680        |



# SSL54 THRU SSL510

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER          |                     | SYMBOL            | UNIT | SSL54             | SSL56 | SSL510 |
|--------------------|---------------------|-------------------|------|-------------------|-------|--------|
| Thermal Resistance | Junction to ambient | R <sub>θJ-A</sub> | °C/W | 47 <sup>(1)</sup> |       |        |
|                    | Junction to lead    | R <sub>θJ-L</sub> | °C/W | 13 <sup>(1)</sup> |       |        |

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

## ■ Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| SSL54~SSL510  | F1           | Approximate 0.252 | 3000                 | 6000                    | 42000                      | 13" reel      |

## ■ Characteristics(Typical)

FIG.1: I<sub>o</sub>-T<sub>L</sub> Curve

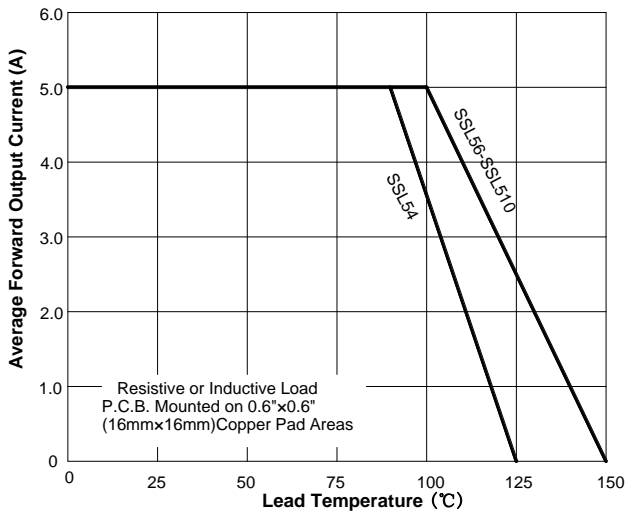


FIG.2: Forward Surge Current Capability

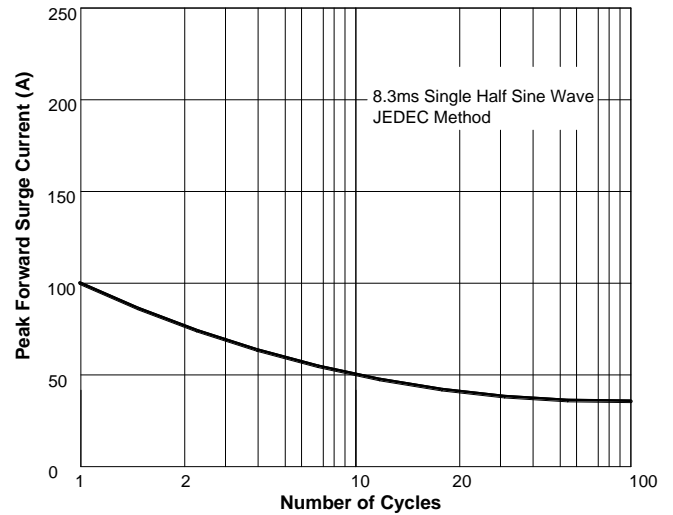


FIG.3: Forward Voltage

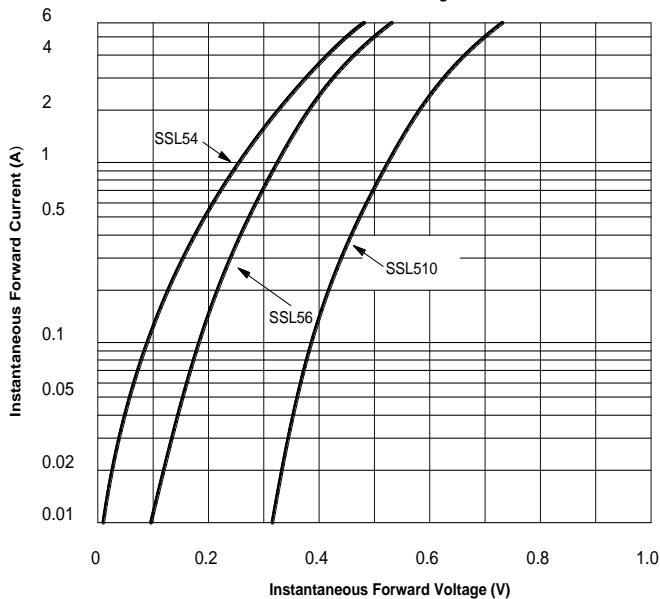
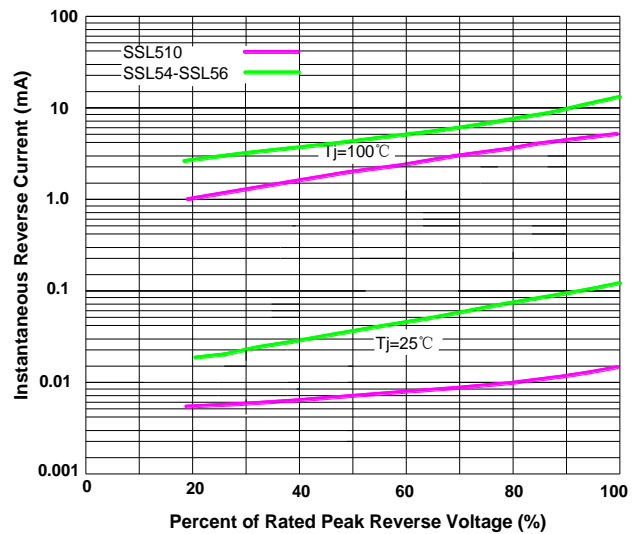


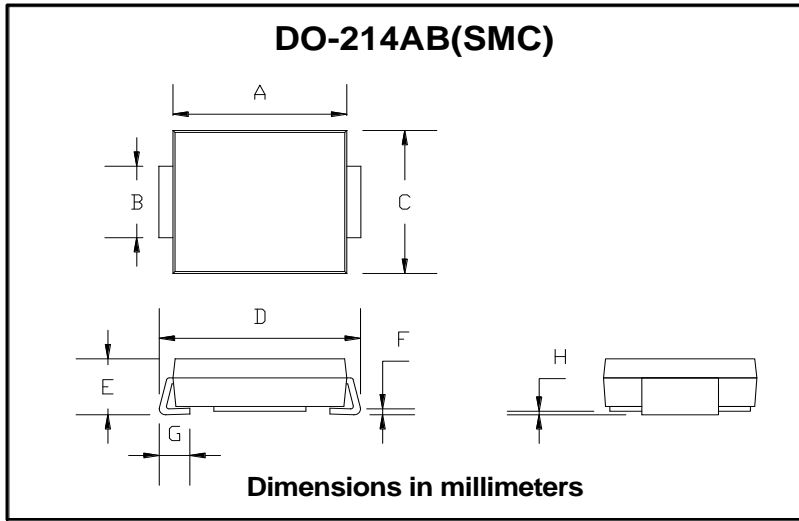
FIG.4: Typical Reverse Characteristics





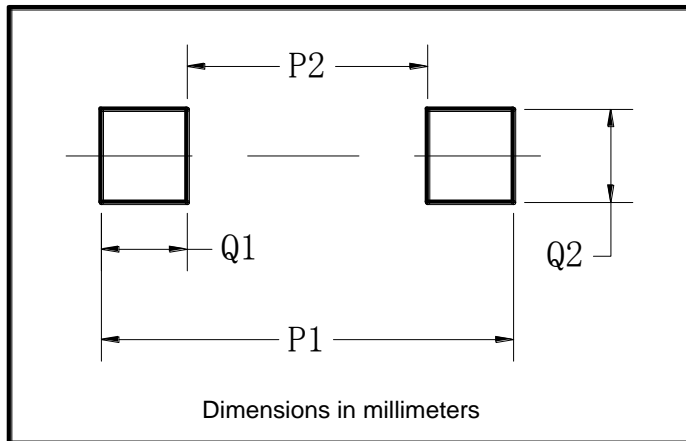
# SSL54 THRU SSL510

## ■ 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 |



## SSL54 THRU SSL510

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