

**Surface Mount Schottky Barrier Rectifier**

**Reverse Voltage – 40~100V**

**Forward Current - 5 A**

**FEATURES**

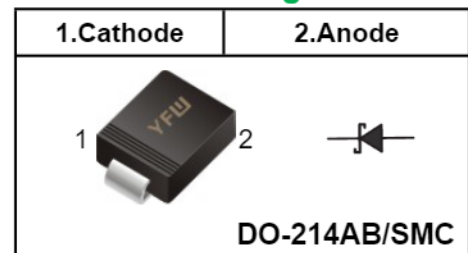
- ◆Metal silicon junction, majority carrier conduction
- ◆For surface mounted applications
- ◆Low power loss, high efficiency
- ◆High forward surge current capability
- ◆For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



**MECHANICAL DATA**

- ◆Case: DO-214AB/SMC
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.22g / 0.0077oz

**Pinning**



**Marking Code**

|        |        |
|--------|--------|
| SSL54  | SSL54  |
| SSL545 | SSL545 |
| SSL55  | SSL55  |
| SSL56  | SSL56  |
| SSL510 | SSL510 |

**Absolute Maximum Ratings and Electrical characteristics**

Ratings at 25 ° ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

| Parameter                                                                                                           | Symbols         | SSL54      | SSL545 | SSL55 | SSL56 | SSL510 | Units |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------|--------|-------|-------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                             | $V_{RRM}$       | 40         | 45     | 50    | 60    | 100    | V     |
| Maximum RMS voltage                                                                                                 | $V_{RMS}$       | 28         | 32     | 35    | 42    | 70     | V     |
| Maximum DC Blocking Voltage                                                                                         | $V_{DC}$        | 40         | 45     | 50    | 60    | 100    | V     |
| Maximum Average Forward Rectified Current                                                                           | $I_{F(AV)}$     | 5.0        |        |       |       |        | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)                   | $I_{FSM}$       | 150        |        |       |       |        | A     |
| Maximum Instantaneous Forward Voltage at 3 A                                                                        | $V_F$           | 0.45       |        |       | 0.50  | 0.60   | V     |
| Maximum Instantaneous Reverse Current<br>at Rated DC Reverse Voltage<br>$T_A = 25^{\circ}C$<br>$T_A = 100^{\circ}C$ | $I_R$           | 0.5<br>50  |        |       |       |        | mA    |
| Typical Junction Capacitance <sup>(1)</sup>                                                                         | $C_j$           | 500        | 300    |       |       |        | pF    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                           | $R_{\theta JA}$ | 60         |        |       |       |        | °C/W  |
| Operating Junction Temperature Range                                                                                | $T_j$           | -55 ~ +150 |        |       |       |        | °C    |
| Storage Temperature Range                                                                                           | $T_{stg}$       | -55 ~ +150 |        |       |       |        | °C    |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

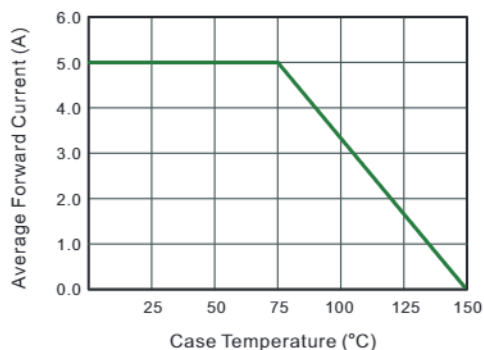


Fig.2 Typical Reverse Characteristics

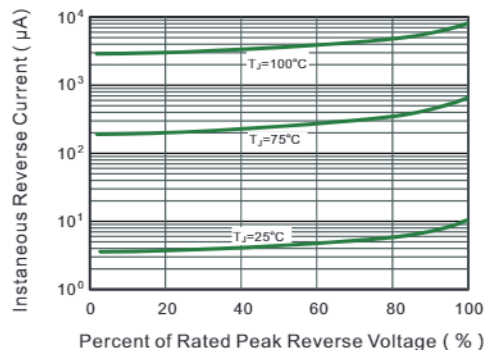


Fig.3 Typical Forward Characteristic

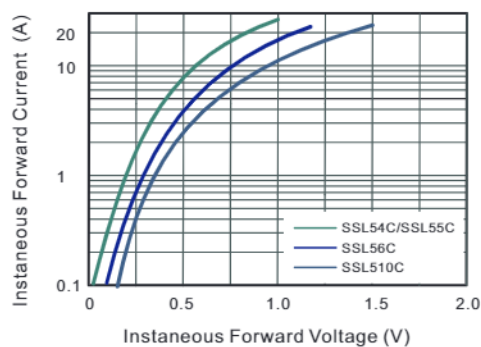


Fig.4 Typical Junction Capacitance

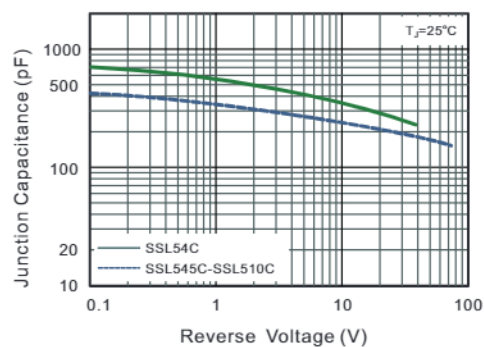


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

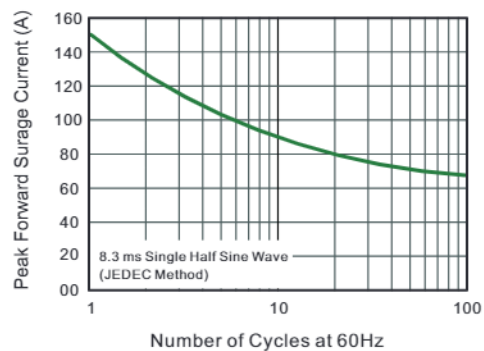
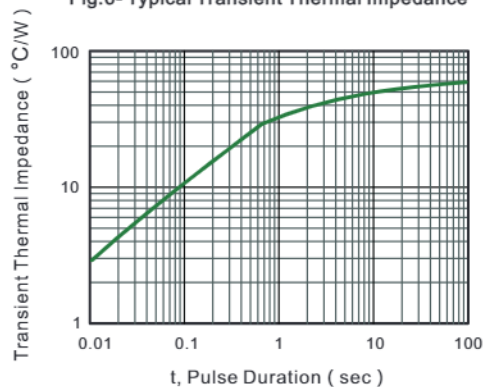


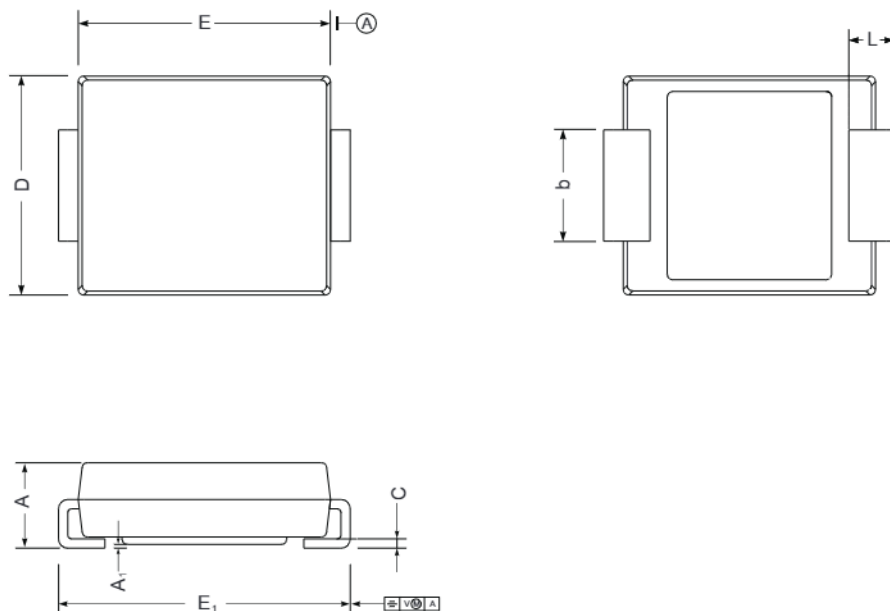
Fig.6- Typical Transient Thermal Impedance



## Package Outline

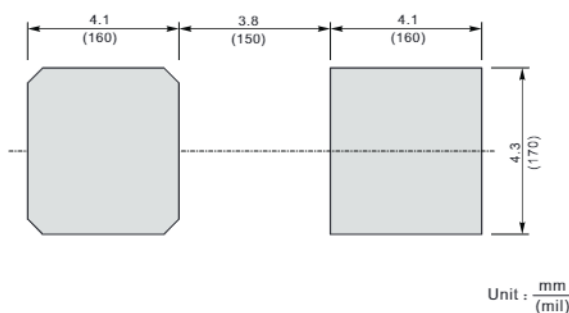
## DO-214AB SMC

Plastic surface mounted package; 2 leads



| UNIT |     | A    | E   | D   | E <sub>1</sub> | A <sub>1</sub> | C    | L   | b    |
|------|-----|------|-----|-----|----------------|----------------|------|-----|------|
| mm   | max | 2.62 | 7.0 | 6.2 | 8.0            | 0.21           | 0.31 | 1.6 | 3.25 |
|      | min | 2.00 | 6.5 | 5.6 | 7.6            | 0.05           | 0.15 | 0.9 | 2.75 |
| mil  | max | 103  | 276 | 244 | 315            | 8.3            | 12   | 63  | 128  |
|      | min | 79   | 256 | 220 | 299            | 2.0            | 5.9  | 35  | 108  |

## The recommended mounting pad size



Unit :  $\frac{\text{mm}}{(\text{mil})}$

## Summary of Packing Options

| Package      | Packing Description | Packing Quantity | Industry Standard |
|--------------|---------------------|------------------|-------------------|
| DO-214AB SMC | Tape/Reel, 13" reel | 3000             | EIA-481-1         |