

**Surface Mount Schottky Barrier Rectifier**

**Reverse Voltage - 45 to 100 V**

**Forward Current - 10 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



**Pinning**

| 1.Cathode           | 2.Anode |
|---------------------|---------|
| <p>DO-214AB/SMC</p> |         |

**Marking Code**

|                |               |
|----------------|---------------|
| <b>SS1045</b>  | <b>S1045</b>  |
| <b>SS1060</b>  | <b>S1060</b>  |
| <b>SS10100</b> | <b>S10100</b> |

**MECHANICAL DATA**

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

**Absolute Maximum Ratings and Electrical characteristics**

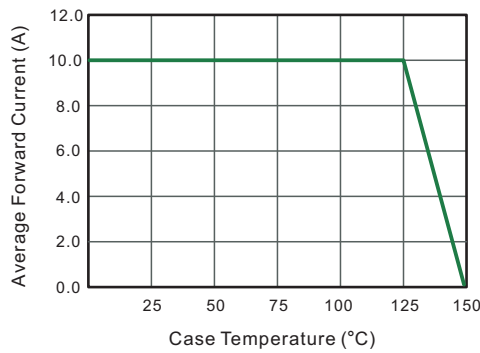
Ratings at 25 ° ambient temperature unless otherwise specified.Single phase, half wave, 60Hz resistive or inductive load,for capacitive load, derate by 20 %

| Parameter                                                                                                           | Symbols         | SS1045     | SS1060 | SS10100 | Units |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------|--------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                             | $V_{RRM}$       | 45         | 60     | 100     | V     |
| Maximum RMS voltage                                                                                                 | $V_{RMS}$       | 32         | 42     | 70      | V     |
| Maximum DC Blocking Voltage                                                                                         | $V_{DC}$        | 45         | 60     | 100     | V     |
| Maximum Average Forward Rectified Current                                                                           | $I_{F(AV)}$     | 10.0       |        |         | 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 8 A                                                                        | $V_F$           | 0.55       | 0.75   | 0.90    | 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 Thermal Resistance <sup>(2)</sup>                                                                           | $R_{\theta JA}$ | 20         |        |         | °C/W  |
| Operating Junction Temperature Range                                                                                | $T_j$           | -55 ~ +150 |        |         | °C    |
| Storage Temperature Range                                                                                           | $T_{stg}$       | -55 ~ +150 |        |         | °C    |

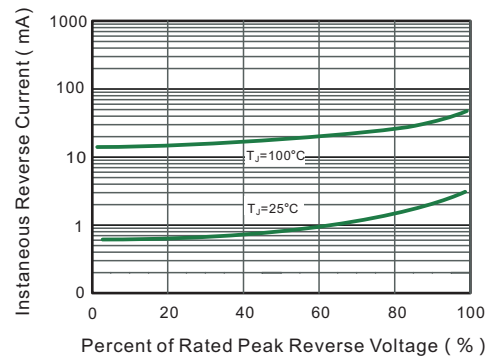
① Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

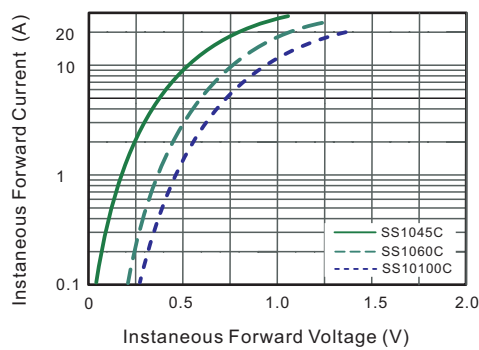
**Fig.1 Forward Current Derating Curve**



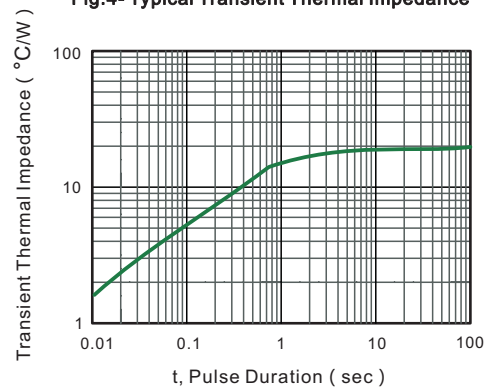
**Fig.2 Typical Reverse Characteristics**



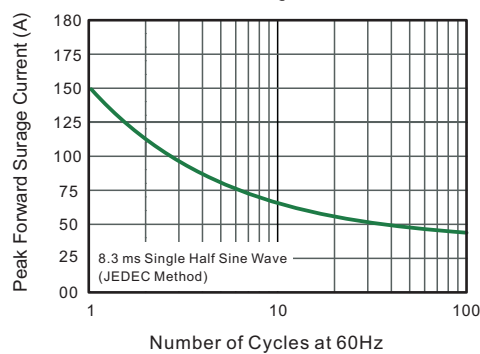
**Fig.3 Typical Forward Characteristic**



**Fig.4- Typical Transient Thermal Impedance**



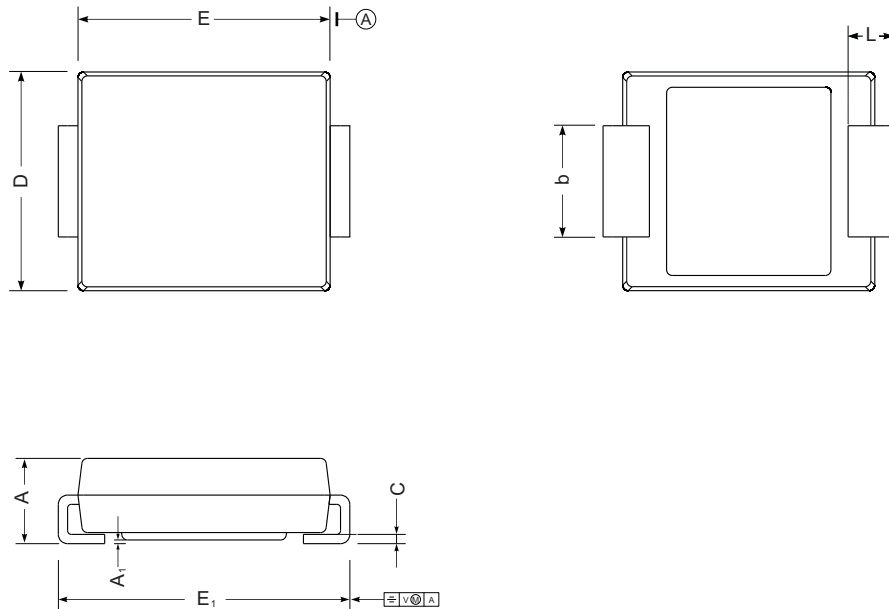
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Package Outline**

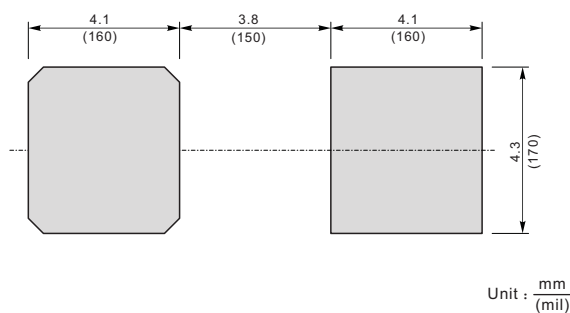
**DO-214AB SMC**

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         |