

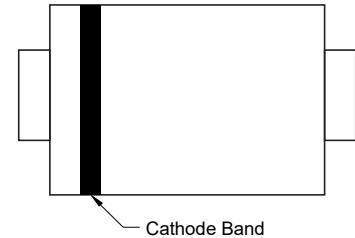
SURFACE MOUNT GENERAL PURPOSE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Ampere

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

DO-214AB/SMC



Mechanical Data

Case : DO-214AB/SMC molded plastic body

Terminals :Solderable per MIL-STD-750,Method2026

Approx. Weight : 0.22grams / 0.0077oz

Equivalent circuit



Absolute Maximum Ratings and Electrical characteristics

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

| Parameter | Symbols | S3AC | S3BC | S3DC | S3GC | S3JC | S3KC | S3MC | Units |
|--|-----------------|------------|------|------|------|------|------|------|----------------------|
| | | S3A | S3B | S3D | S3G | S3J | S3K | S3M | |
| Marking Code | | S3A | S3B | S3D | S3G | S3J | S3K | S3M | |
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I_{FSM} | 90 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 3.0 A | V_F | 1.0 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ }^{\circ}\text{C}$ $T_a = 125\text{ }^{\circ}\text{C}$ | I_R | 5 100 | | | | | | | μA |
| Typical Junction Capacitance ^(note1) | C_j | 40 | | | | | | | pF |
| Typical Thermal Resistance ^(note2) | $R_{\theta JA}$ | 40 | | | | | | | $^{\circ}\text{C/W}$ |
| | $R_{\theta JC}$ | 16 | | | | | | | |
| Operating Junction and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | | | | | | | $^{\circ}\text{C}$ |

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

2.P.C.B. mounted with 1.5 X 1.5" (3.81 X 3.81 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

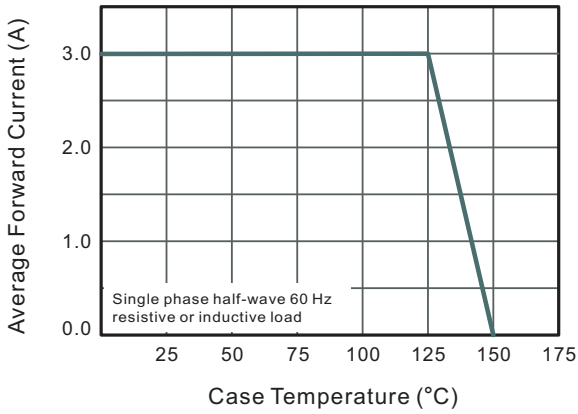


Fig.2 Typical Reverse Characteristics

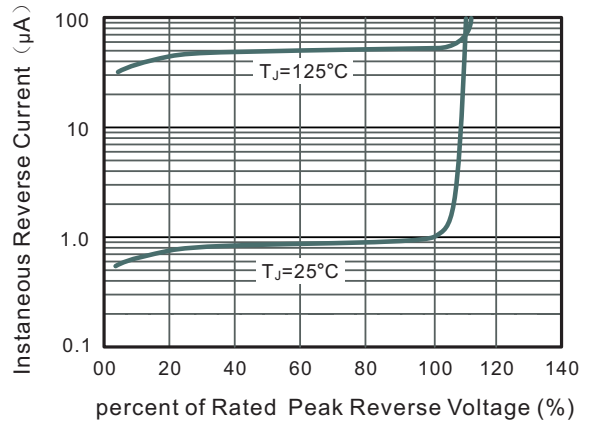


Fig.3 Typical Forward Characteristic

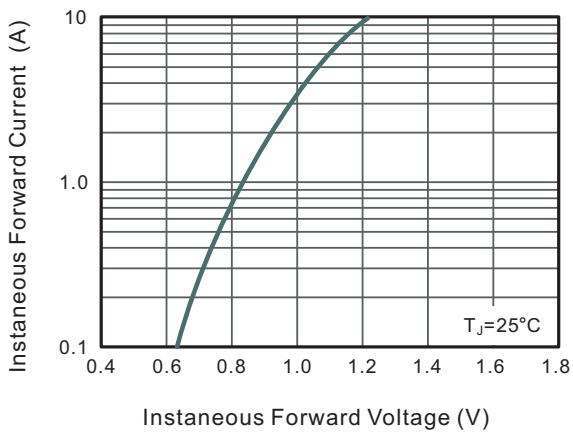


Fig.4 Typical Junction Capacitance

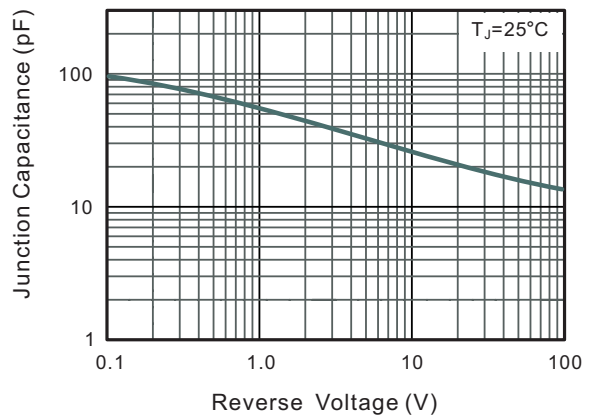
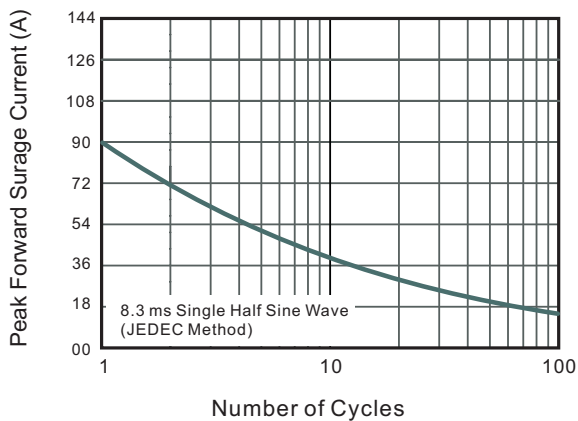
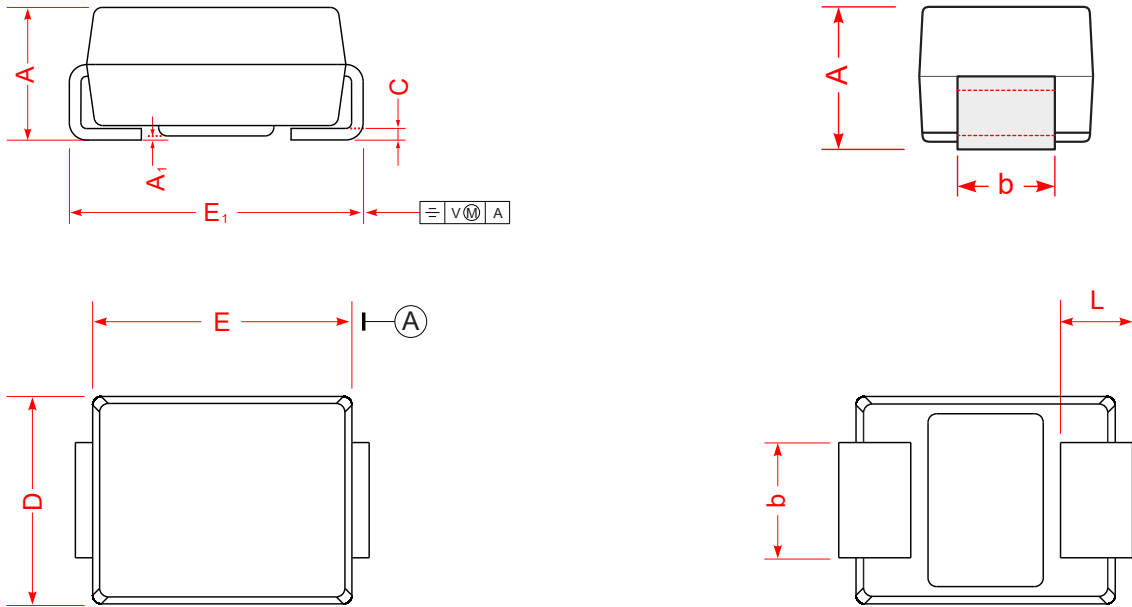


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

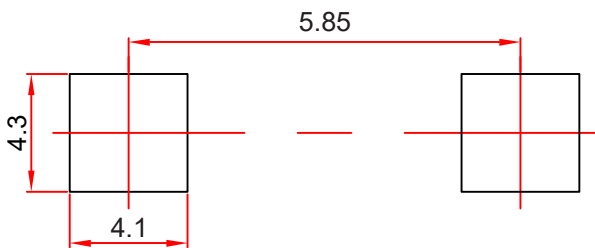


DO-214AB/SMC Package Outline Dimensions



| Symbol | imensions In Millimeters | | imensions In Inches | |
|----------------|--------------------------|------|---------------------|-------|
| | Min | Max | Min | Max |
| A | 2.00 | 2.62 | 0.078 | 0.103 |
| C | 0.15 | 0.31 | 0.006 | 0.012 |
| D | 5.60 | 6.20 | 0.220 | 0.244 |
| E | 6.50 | 7.00 | 0.256 | 0.276 |
| E ₁ | 7.60 | 8.00 | 0.229 | 0.315 |
| b | 2.75 | 3.25 | 0.108 | 0.128 |
| L | 0.90 | 1.60 | 0.035 | 0.063 |
| A ₁ | 0.2 REF | | 0.008 REF | |

DO-214AB/SMC Suggested Pad Layout



- Note:
1. Controlling dimension: in/millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.