

# SS5817 THRU SS5819

## Surface Mount Schottky Barrier Rectifiers

Reverse Voltage - 20 to 40 V

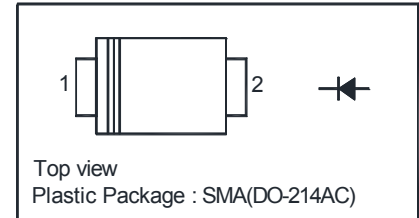
Forward Current - 1 A

### Features

- Plastic package has Underwriters Laboratory Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic case
- **Terminals:** Solder plate, solderable per MIL-STD -750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

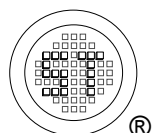
### Maximum Ratings and Electrical Characteristics

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

| Parameter                                                                                                            | Symbols         | SS5817        | SS5818 | SS5819 | Units |
|----------------------------------------------------------------------------------------------------------------------|-----------------|---------------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                              | $V_{RRM}$       | 20            | 30     | 40     | V     |
| Maximum RMS Voltage                                                                                                  | $V_{RMS}$       | 14            | 21     | 28     | V     |
| Maximum DC Blocking Voltage                                                                                          | $V_{DC}$        | 20            | 30     | 40     | V     |
| Maximum Average Forward Rectified Current                                                                            | $I_{(AV)}$      | 1             |        |        | A     |
| Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)                     | $I_{FSM}$       | 25            |        |        | A     |
| Maximum Instantaneous Forward Voltage at 1 A                                                                         | $V_F$           | 0.45          | 0.55   | 0.6    | V     |
| Maximum Instantaneous Reverse Current at $T_A = 25^{\circ}C$<br>at Rated DC Blocking Voltage at $T_A = 100^{\circ}C$ | $I_R$           | 0.5           |        |        | mA    |
|                                                                                                                      |                 | 10            |        |        | mA    |
| Typical Junction Capacitance <sup>1)</sup>                                                                           | $C_J$           | 110           |        |        | pF    |
| Typical Thermal Resistance <sup>2)</sup>                                                                             | $R_{\theta JA}$ | 75            |        |        | °C/W  |
| Operating Temperature                                                                                                | $T_J$           | 125           |        |        | °C    |
| Storage Temperature Range                                                                                            | $T_{Stg}$       | - 55 to + 150 |        |        | °C    |

<sup>1)</sup> Measured at 1 MHz and reverse voltage of 4 V.D.C.

<sup>2)</sup> P.C.B. mounted with 2" X 2" (5 X 5 cm) copper pad areas.



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## Electrical characteristic curves

Fig.1 Forward Current Derating Curve

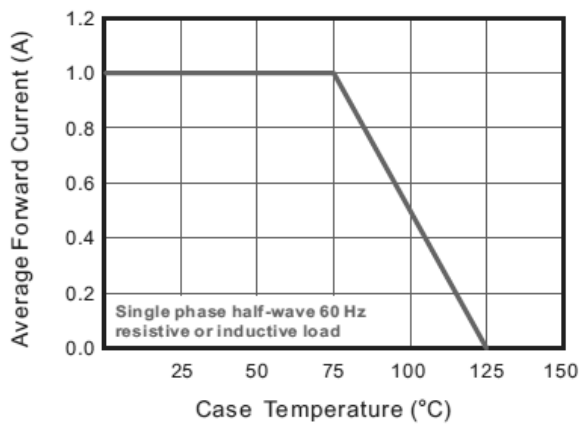


Fig.2 Typical Reverse Characteristics

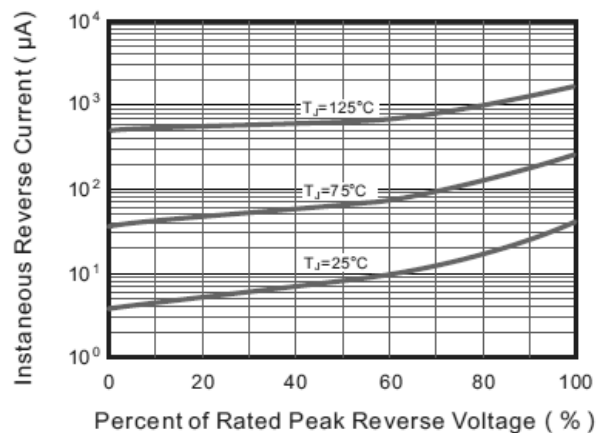


Fig.3 Typical Forward Characteristic

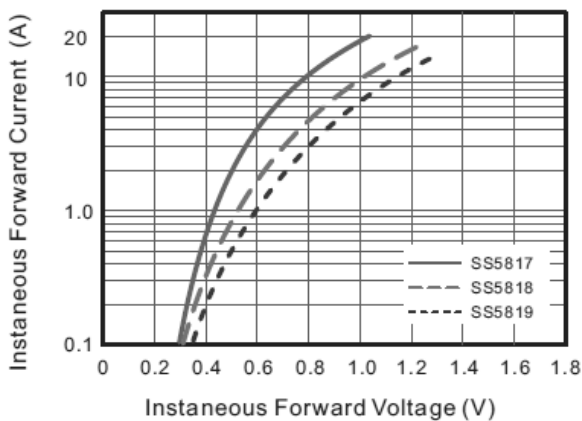


Fig.4 Typical Junction Capacitance

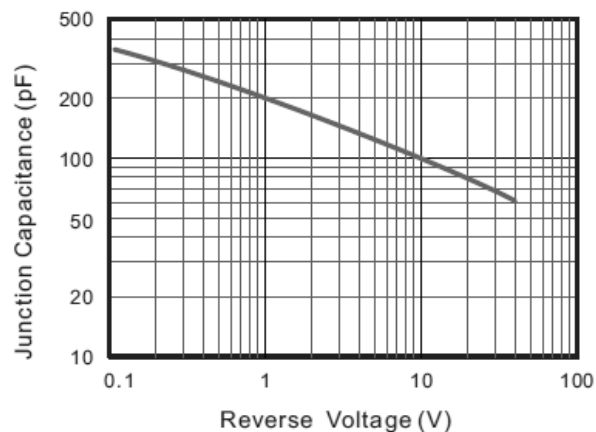


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

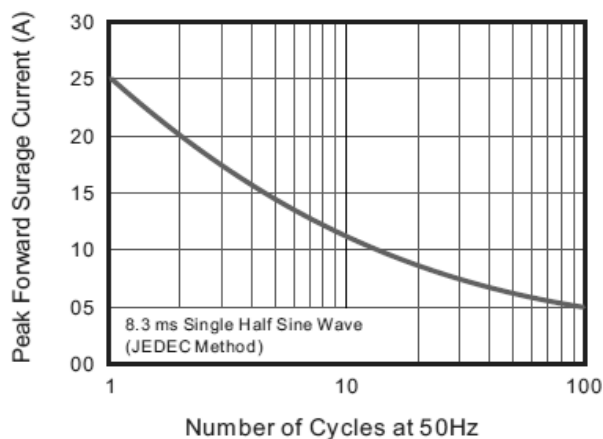
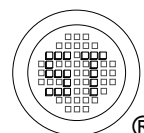
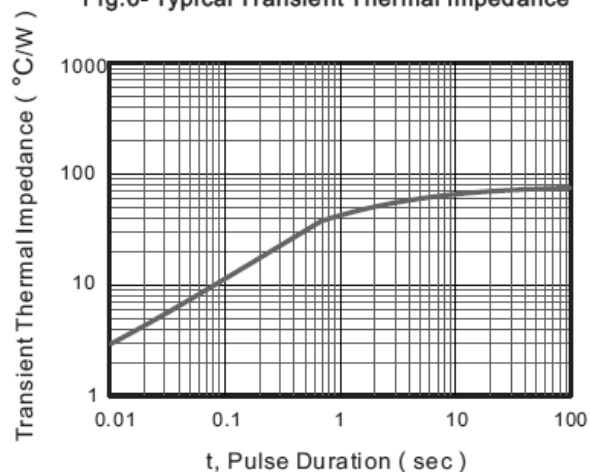


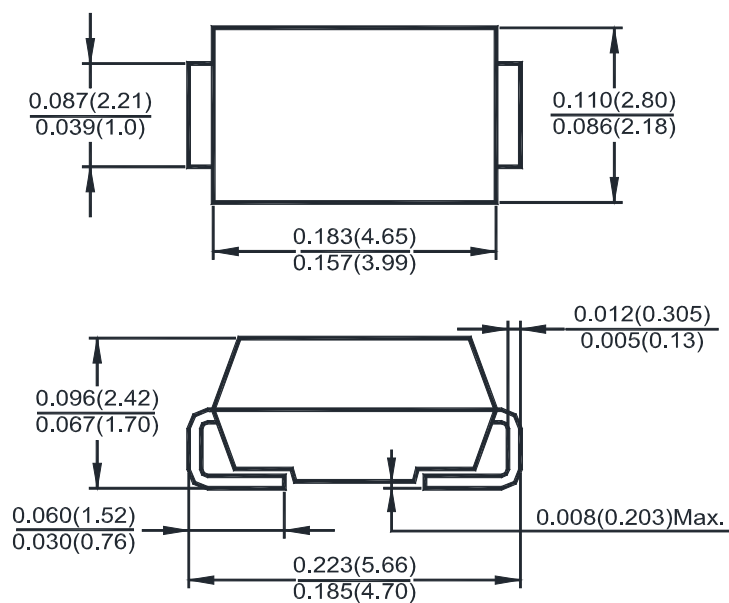
Fig.6- Typical Transient Thermal Impedance



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Package Outline Dimensions in inches (millimeters)

SMA(DO-214AC)



## Marking information

" \*\*\*\*\* " = Part No.

" III " = Cathode line

Font type: Arial

