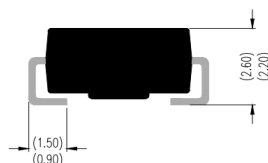
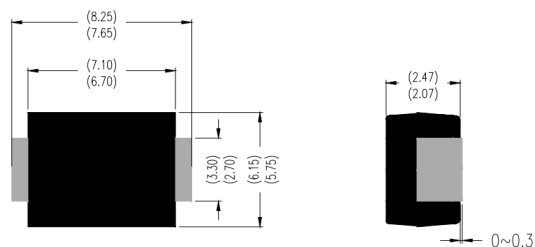


## Surface Mount Schottky Barrier Diode

### Features

- Guardring for overvoltage protection
- Low power loss
- Extremely fast switching
- High forward surge current capability
- High frequency operation
- AEC-Q101 qualified
- Solder dip 260 °C max. 10 s, per JESD 22-B106

### DO-214AB (SMC)



Unit : inch(mm)



### Mechanical Data

- Package: DO-214AB (SMC)
- Polarity : Polarity symbol marking on body
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any

### Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise noted )

| Parameter                                                                                     | Symbol    | Unit             | SS82CQ    | SS84CQ | SS86CQ | SS810CQ   | SS815CQ | SS820CQ |
|-----------------------------------------------------------------------------------------------|-----------|------------------|-----------|--------|--------|-----------|---------|---------|
| Repetitive Peak Reverse Voltage                                                               | $V_{RRM}$ | V                | 20        | 40     | 60     | 100       | 150     | 200     |
| Average Rectified Output Current<br>@60Hz sine wave, Resistance load, $T_A$ (FIG.1)           | $I_O$     | A                | 8.0       |        |        |           |         |         |
| Surge(Non-repetitive)Forward Current<br>@60Hz Half-sine wave, 1 cycle, $T_A=25^\circ\text{C}$ | $I_{FSM}$ | A                | 120       |        |        |           |         |         |
| Storage Temperature                                                                           | $T_{stg}$ | $^\circ\text{C}$ | -55 ~+150 |        |        |           |         |         |
| Junction Temperature                                                                          | $T_j$     | $^\circ\text{C}$ | -55 ~+150 |        |        | -55 ~+175 |         |         |

### Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter                                                         | Symbol         | Unit | Test Conditions                                            | SS82CQ | SS84CQ | SS86CQ | SS810CQ | SS815CQ | SS820CQ |
|-------------------------------------------------------------------|----------------|------|------------------------------------------------------------|--------|--------|--------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =8.0A                                      | 0.55   |        | 0.70   | 0.85    | 0.95    |         |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | mA   | Ta=25℃                                                     | 0.2    |        |        | 0.1     |         |         |
|                                                                   |                |      | Ta=100℃                                                    | 20     |        |        | 5.0     |         |         |
| Typical junction capacitance                                      | Cj             | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C. | 450    |        | 350    | 270     | 180     |         |

## Thermal Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter          |                              | Symbol           | Unit               | SS82CQ            | SS84CQ | SS86CQ | SS810CQ | SS815CQ | SS820CQ |
|--------------------|------------------------------|------------------|--------------------|-------------------|--------|--------|---------|---------|---------|
| Thermal Resistance | Between junction and ambient | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | 45 <sup>(1)</sup> |        |        |         |         |         |
|                    | Between junction and lead    | $R_{\theta J-L}$ |                    | 12 <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

## Characteristics (Typical)

FIG.1: Io-TL Curve

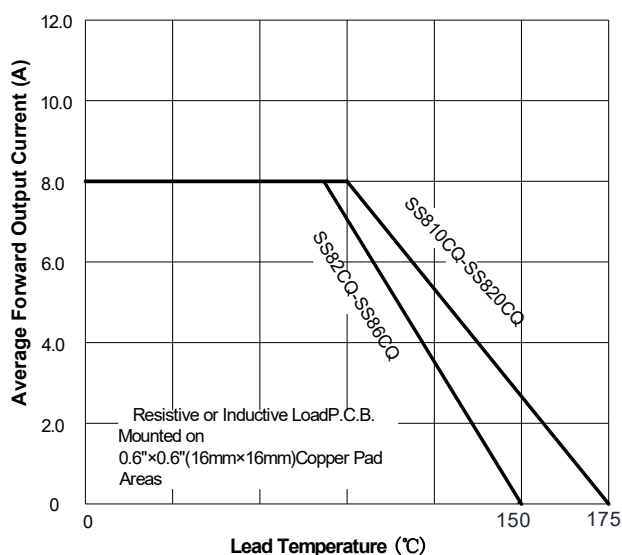


FIG.2: Forward Surge Current Capability

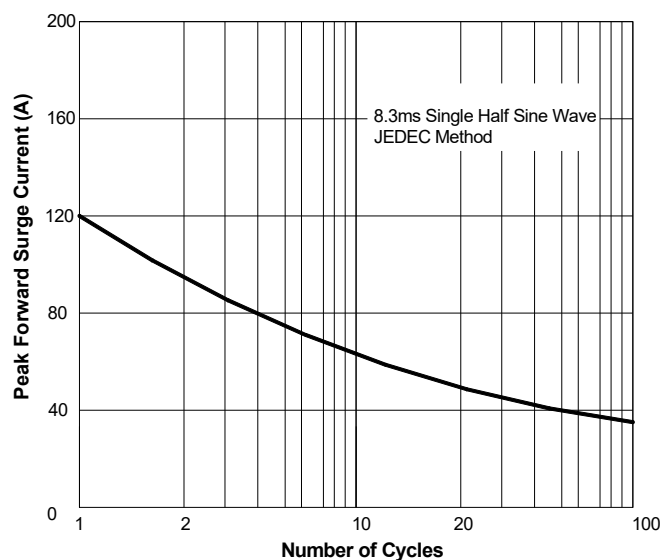


FIG.3: Forward Voltage

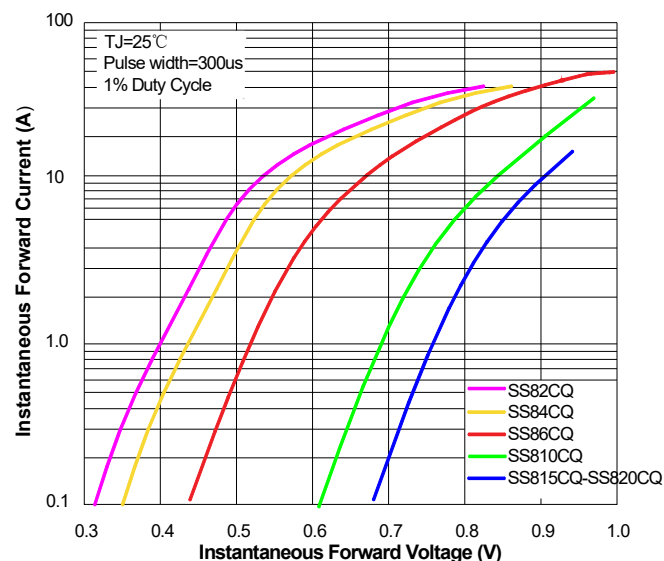


FIG.4: Typical Reverse Characteristics

