

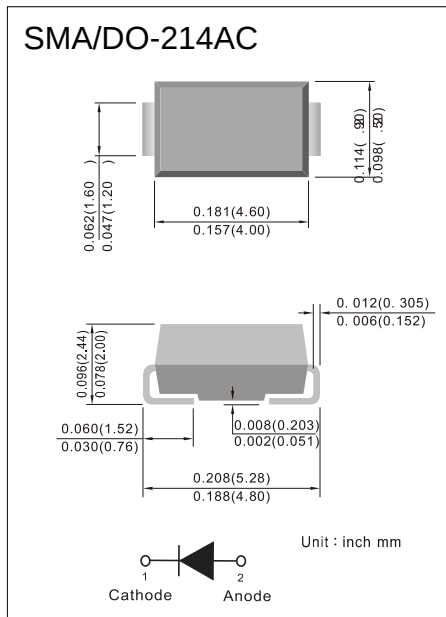
## Surface Mount Schottky Barrier Diode

### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Compliant with RoHS standards, halogen-free

### Mechanical Data

- **Package:** SMA/DO-214AC
- **Terminal:** Tin plated leads, solderable per
- **Polarity:** Cathode line denotes the cathode end



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

| Parameter                                                                                       | Symbol    | Unit               | SS12A     | SS13A | SS14A | SS15A | SS16A | SS18A     | SS110A | SS115A | SS120A |
|-------------------------------------------------------------------------------------------------|-----------|--------------------|-----------|-------|-------|-------|-------|-----------|--------|--------|--------|
| Repetitive peak reverse voltage                                                                 | $V_{RRM}$ | V                  | 20        | 30    | 40    | 50    | 60    | 80        | 100    | 150    | 200    |
| Average rectified output current<br>@60Hz sine wave, resistance load, TL (FIG.1)                | $I_O$     | A                  | 1.0       |       |       |       |       |           |        |        |        |
| Surge(non-repetitive)forward current<br>@60Hz half-sine wave, 1 cycle, $T_A=25^{\circ}\text{C}$ | $I_{FSM}$ | A                  | 30        |       |       |       |       |           |        |        |        |
| 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 noted )

| Parameter                                                                                            | Symbol           | Unit | Test Conditions       | SS   |     |     |      |     |      |      |      |      |
|------------------------------------------------------------------------------------------------------|------------------|------|-----------------------|------|-----|-----|------|-----|------|------|------|------|
|                                                                                                      |                  |      |                       | 12A  | 13A | 14A | 15A  | 16A | 18A  | 110A | 115A | 120A |
| Maximum instantaneous forward voltage drop per diode                                                 | V <sub>F</sub>   | V    | I <sub>FM</sub> =1.0A | 0.55 |     |     | 0.70 |     | 0.85 |      | 0.95 |      |
| Maximum DC reverse current at rated DC blocking voltage per diode@ V <sub>RM</sub> =V <sub>RRM</sub> | I <sub>RRM</sub> | mA   | Ta=25℃                | 0.50 |     |     |      |     | 0.10 |      |      |      |
|                                                                                                      |                  |      | Ta=100℃               | 10   |     |     |      |     | 5.0  |      |      |      |

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

| Parameter          | Symbol            | Unit | SS               |     |     |     |     |     |      |      |
|--------------------|-------------------|------|------------------|-----|-----|-----|-----|-----|------|------|
|                    |                   |      | 12A              | 13A | 14A | 15A | 16A | 18A | 110A | 115A |
| Thermal resistance | R <sub>θJ-A</sub> | °C/W | 65 <sup>1)</sup> |     |     |     |     |     |      |      |
|                    | R <sub>θJ-L</sub> |      | 20 <sup>1)</sup> |     |     |     |     |     |      |      |

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas



## Characteristics (Typical)

FIG1: Io-TL Curve

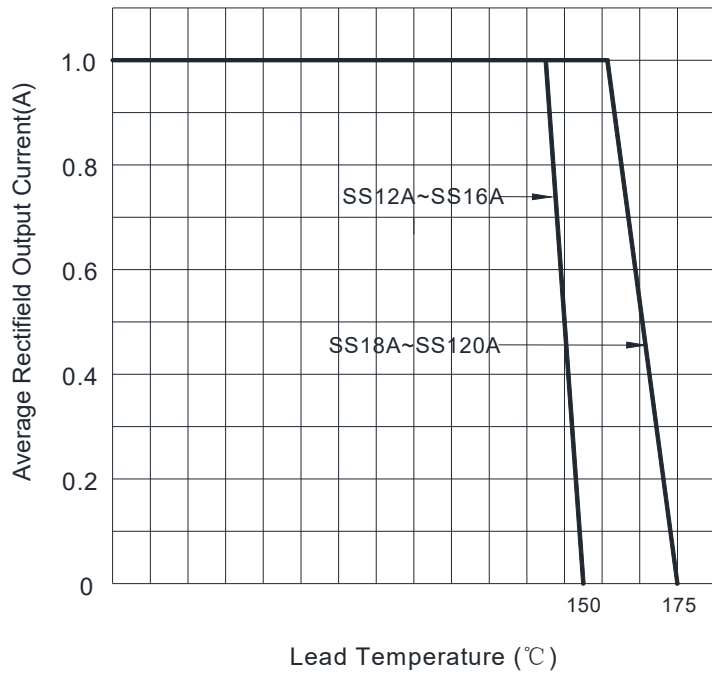


FIG2: Surge Forward Current Capability

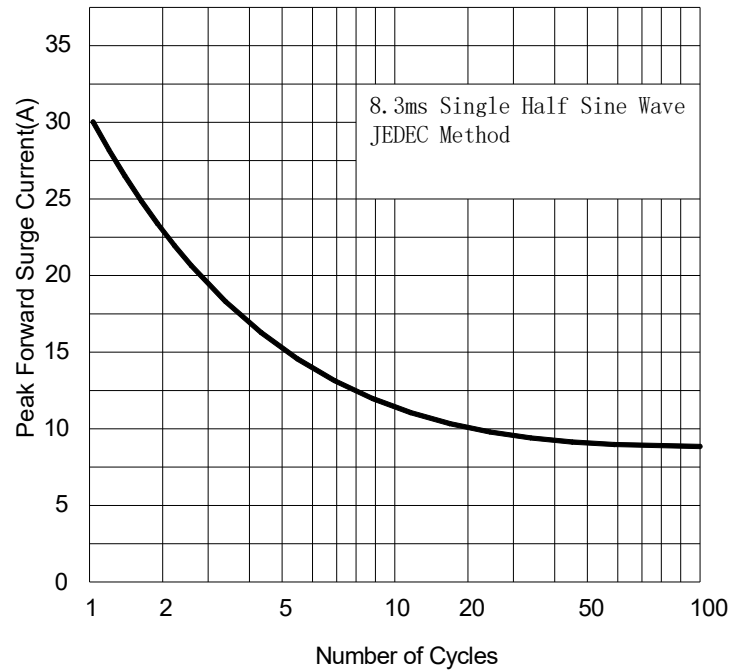


FIG3: TYPICAL FORWARD CHARACTERISTICS

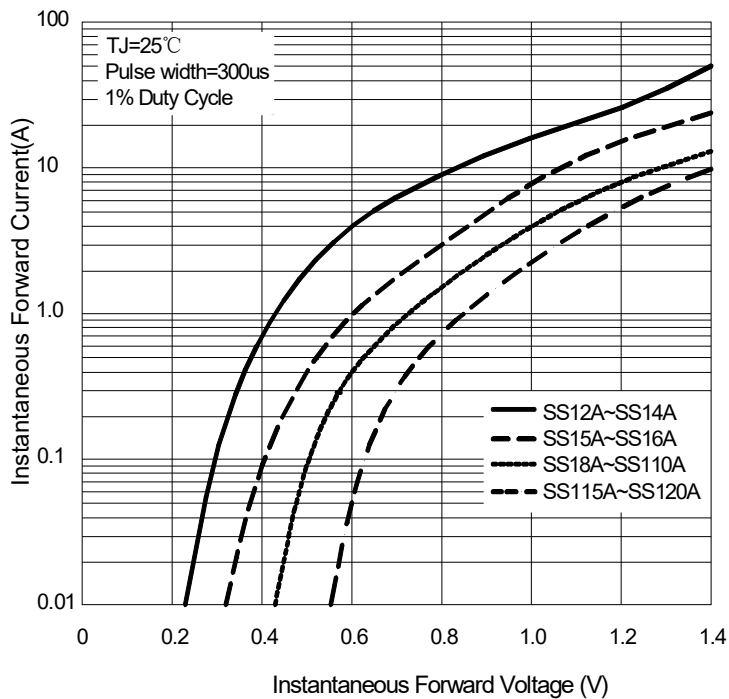


FIG4: Typical Reverse Characteristics

