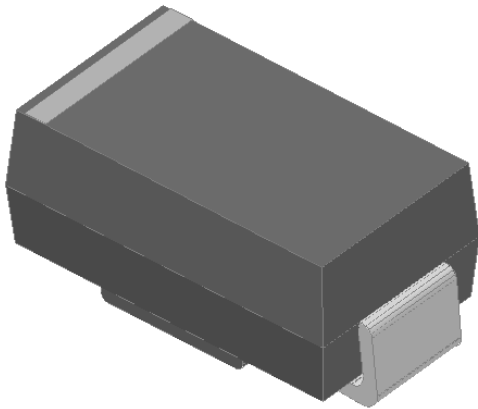


## Surface Mount Schottky Rectifier

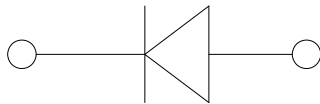


### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

### Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, automotive and polarity protection applications.



### Mechanical Data

- **Package:** DO-214AC (SMA)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                                                  | SYMBOL           | UNIT | SS18AQ   | SS110AQ |
|--------------------------------------------------------------------------------------------|------------------|------|----------|---------|
| Device marking code                                                                        |                  |      | SS18A    | SS110A  |
| Repetitive peak reverse voltage                                                            | V <sub>RRM</sub> | V    | 80       | 100     |
| Maximum RMS voltage                                                                        | V <sub>RMS</sub> | V    | 56       | 70      |
| Maximum DC blocking voltage                                                                | V <sub>DC</sub>  | V    | 80       | 100     |
| Maximum average forward rectified current at T <sub>L</sub> (Fig.1)                        | I <sub>O</sub>   | A    | 1.0      |         |
| Surge(non-repetitive)forward current<br>@60Hz half-sine wave,1 cycle, T <sub>J</sub> =25°C | I <sub>FSM</sub> | A    | 40       |         |
| Voltage rate of change (rated V <sub>R</sub> )                                             | dV/dt            | V/μs | 10000    |         |
| Storage temperature                                                                        | T <sub>stg</sub> | °C   | -55~+175 |         |
| Junction temperature                                                                       | T <sub>J</sub>   | °C   | -55~+175 |         |

### ■Electrical Characteristics(T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                     | SYMBOL         | TEST CONDITIONS           |                       | TYP  | MAX  | UNIT |
|-------------------------------|----------------|---------------------------|-----------------------|------|------|------|
| Instantaneous forward voltage | V <sub>F</sub> | I <sub>F</sub> =1A        | T <sub>J</sub> =25°C  | 0.73 | 0.77 | V    |
|                               |                |                           | T <sub>J</sub> =125°C | -    | 0.68 |      |
| Reverse current               | I <sub>R</sub> | Rated V <sub>R</sub>      | T <sub>J</sub> =25°C  | -    | 1    | μA   |
|                               |                |                           | T <sub>J</sub> =125°C | -    | 0.5  | mA   |
| Typical junction capacitance  | C <sub>J</sub> | V <sub>R</sub> =4V,f=1MHz |                       | 50   | -    | pF   |



## SS18AQ THRU SS110AQ

### ■ Thermal Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| PARAMETER          | SYMBOL           | UNIT                        | SS18AQ            | SS110AQ |
|--------------------|------------------|-----------------------------|-------------------|---------|
| Thermal resistance | $R_{\theta J-A}$ | $^{\circ}\text{C}/\text{W}$ | 65 <sup>(1)</sup> |         |
|                    | $R_{\theta J-L}$ |                             | 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)

Fig.1:Forward Current Derating Curve

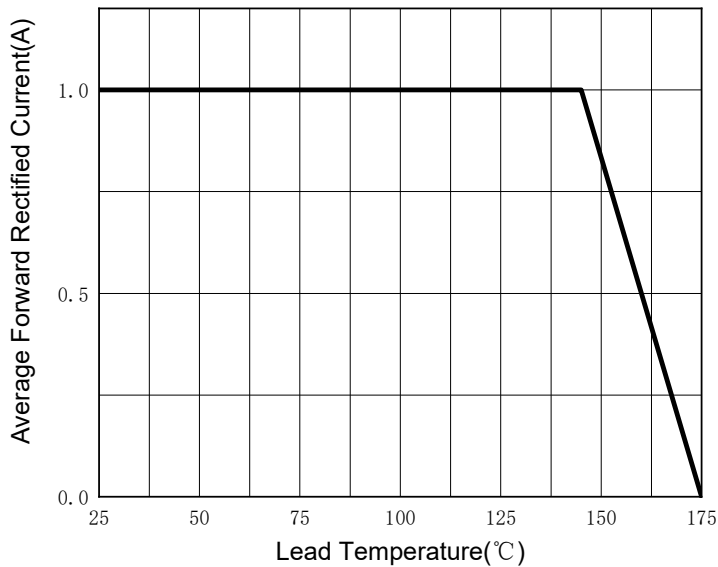


Fig.2:Maximum Non-Repetitive Peak Forward Surge Current

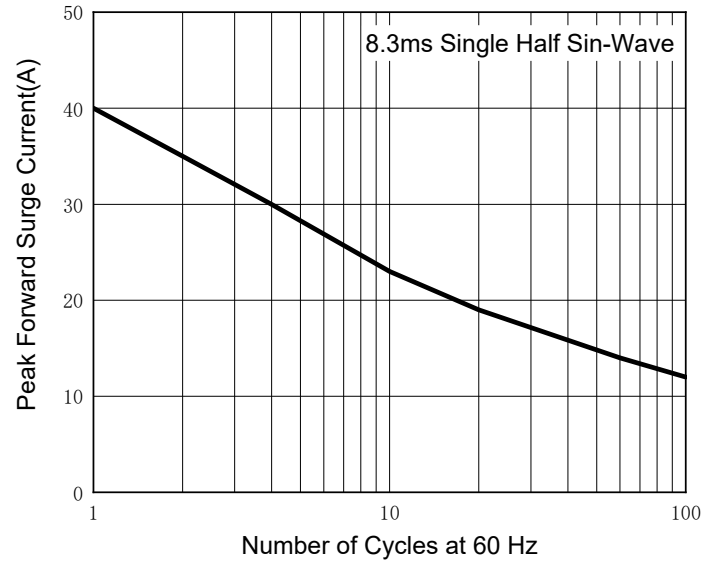


Fig.3:Typical Instantaneous Forward Characteristics

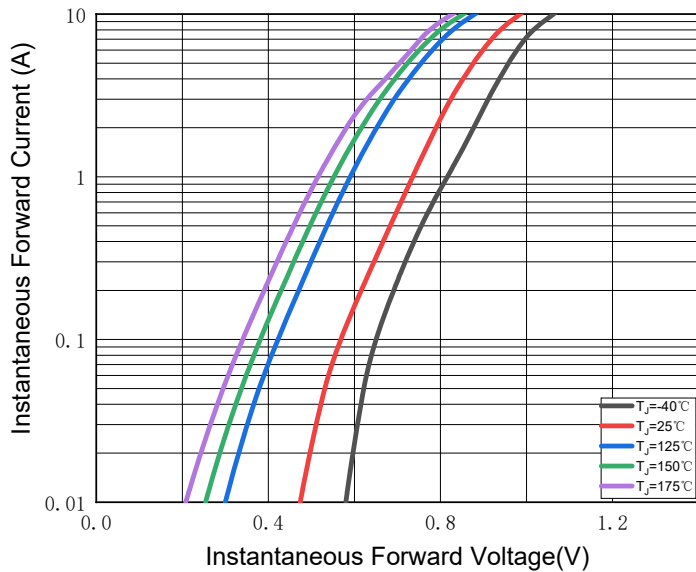
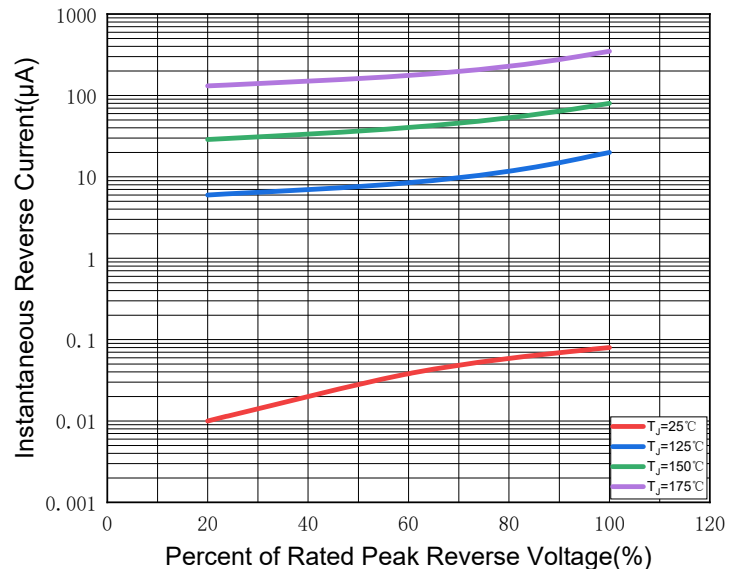


Fig.4:Typical Reverse Leakage Characteristics



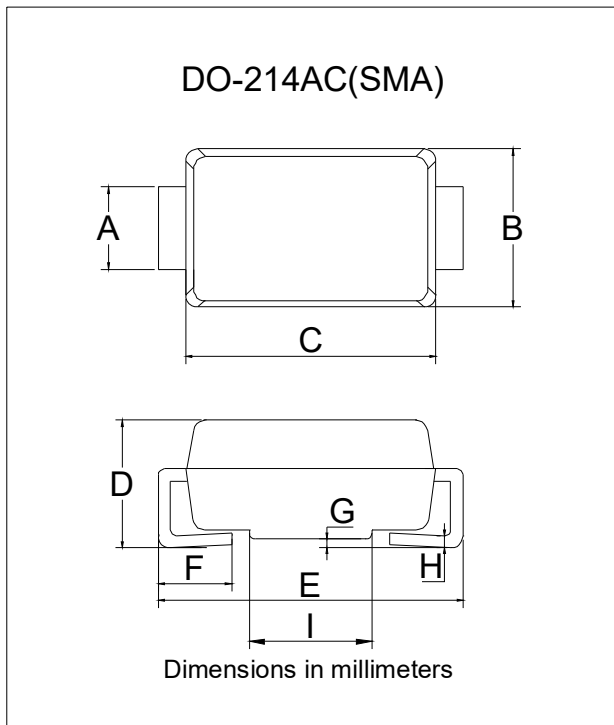
### ■ Ordering Information (Example)

| PREFERRED P/N  | PACKAGE CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|----------------|--------------|-------------------|----------------------|----------------------------|---------------|
| SS18AQ-SS110AQ | F2           | Approximate 0.067 | 7500                 | 120000                     | 13" reel      |



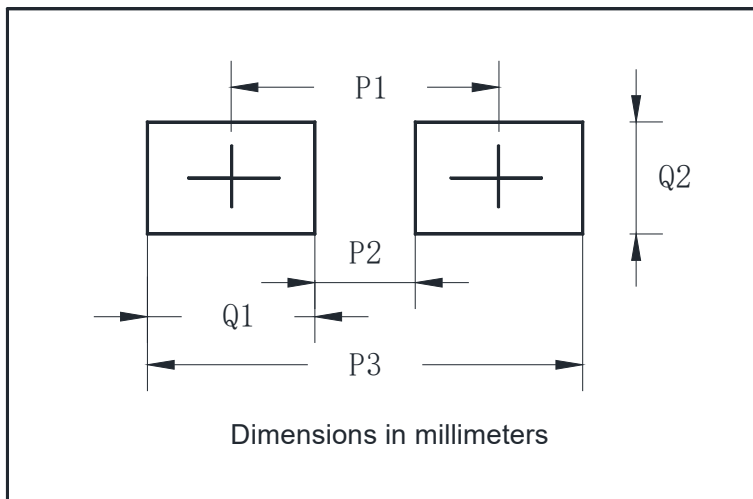
## SS18AQ THRU SS110AQ

### ■ Outline Dimensions



| DO-214AC(SMA) |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 1.25 | 1.58 |
| B             | 2.40 | 2.83 |
| C             | 4.00 | 4.75 |
| D             | 1.90 | 2.30 |
| E             | 4.93 | 5.28 |
| F             | 0.76 | 1.41 |
| G             | 0.05 | 0.20 |
| H             | 0.15 | 0.31 |
| I             | 1.7  | 2.1  |

### ■ Suggested Pad Layout



| DO-214AC(SMA) |             |
|---------------|-------------|
| Dim           | Millimeters |
| P1            | 4.00        |
| P2            | 1.50        |
| P3            | 6.50        |
| Q1            | 2.50        |
| Q2            | 1.70        |



## SS18AQ THRU SS110AQ

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