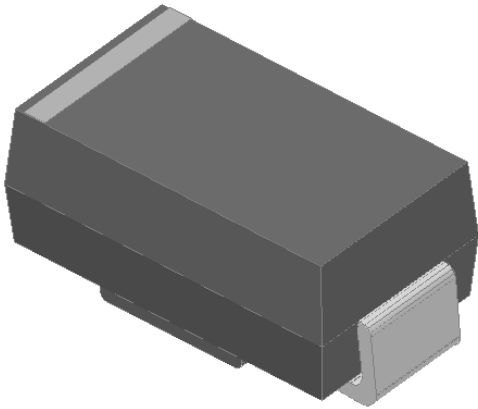




Surface Mount Schottky Rectifier

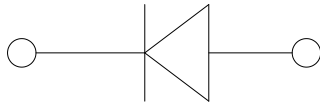


Features

- 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

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, 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_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SS12A | SS13A | SS14A | SS15A | SS16A | SS18A | SS110A | SS115A | SS120A |
|---|------------------|------|-----------|-------|-------|-------|-----------|-------|--------|--------|--------|
| Device marking code | | | SS12A | SS13A | SS14A | SS15A | SS16A | SS18A | SS110A | SS115A | SS120A |
| Repetitive peak reverse voltage | VRRM | V | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 |
| Average rectified output current @60Hz sine wave, resistance load, T _a (FIG.1) | I _O | A | 1.0 | | | | | | | | |
| Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, T _a =25°C | I _{FSM} | A | 30 | | | | | | | | |
| Storage temperature | T _{stg} | °C | -55 ~+150 | | | | | | | | |
| Junction temperature | T _j | °C | -55~+125 | | | | -55 ~+150 | | | | |

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | SS12A | SS13A | SS14A | SS15A | SS16A | SS18A | SS110A | SS115A | SS120A |
|---|------------------|------|-----------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode | V _F | V | IFM=1.0A | 0.50 | | | 0.70 | | 0.85 | | 0.90 | |
| Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =VRRM | I _{RRM} | mA | T _a =25°C | 0.50 | | | | 0.10 | | | | |
| | | | T _a =100°C | 10 | | | 5.0 | | | | | |

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SS12A | SS13A | SS14A | SS15A | SS16A | SS18A | SS110A | SS115A | SS120A |
|--------------------|-------------------|------|------------------|-------|-------|-------|-------|-------|--------|--------|--------|
| Thermal resistance | R _{θJ-A} | °C/W | 65 ¹⁾ | | | | | | | | |
| | R _{θJ-L} | | 20 ¹⁾ | | | | | | | | |

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



SS12A THRU SS120A

■ Characteristics (Typical)

FIG1: I_o-T_L Curve

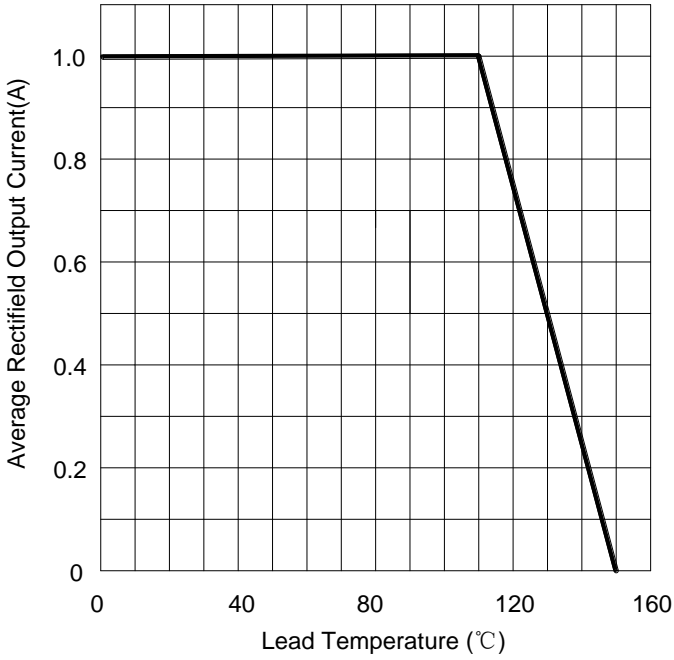


FIG2: Surge Forward Current Capability

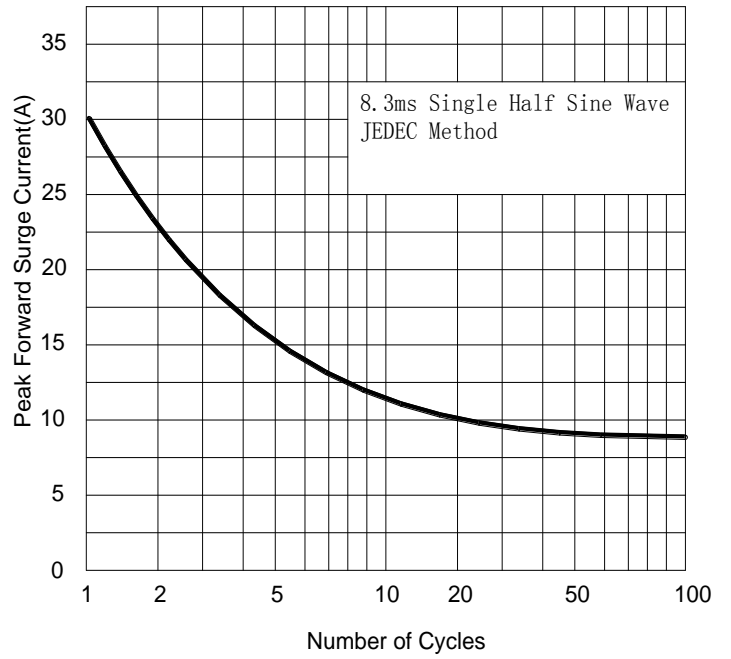


FIG.3: TYPICAL FORWARD CHARACTERISTICS

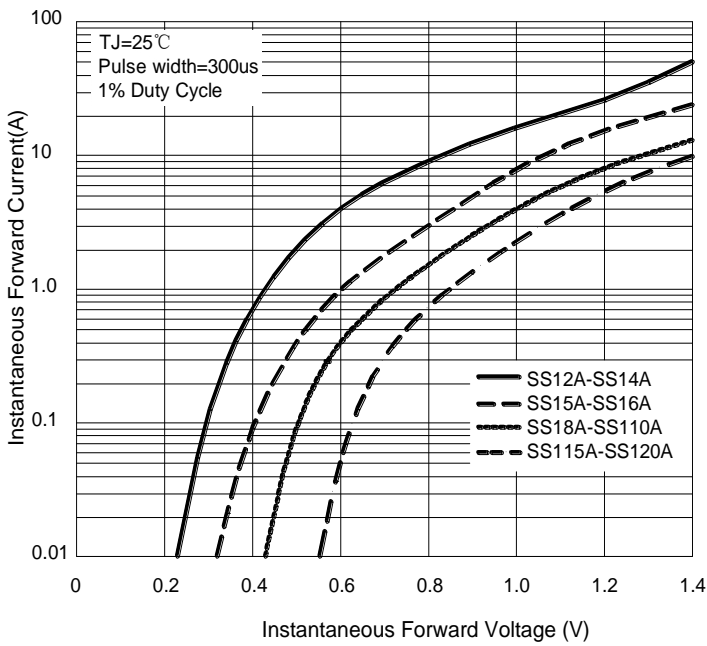
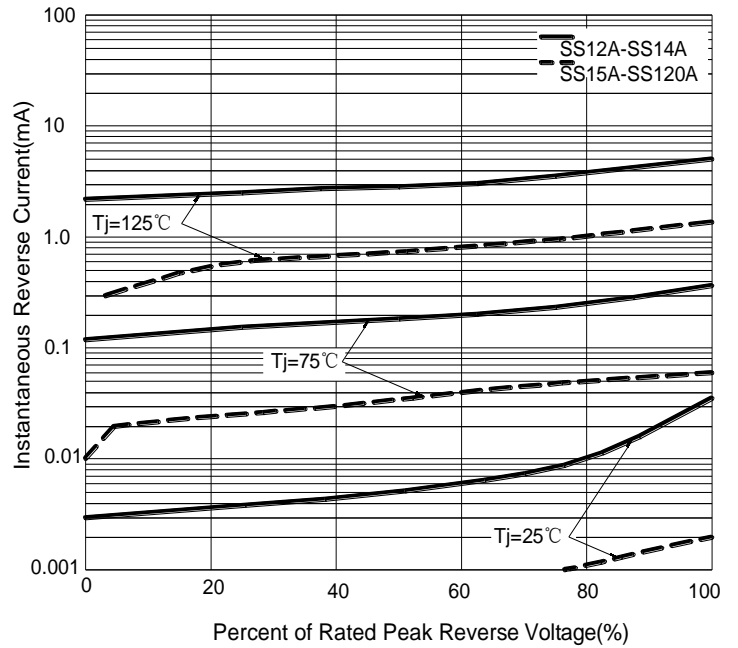


FIG.4: TYPICAL REVERSE CHARACTERISTICS



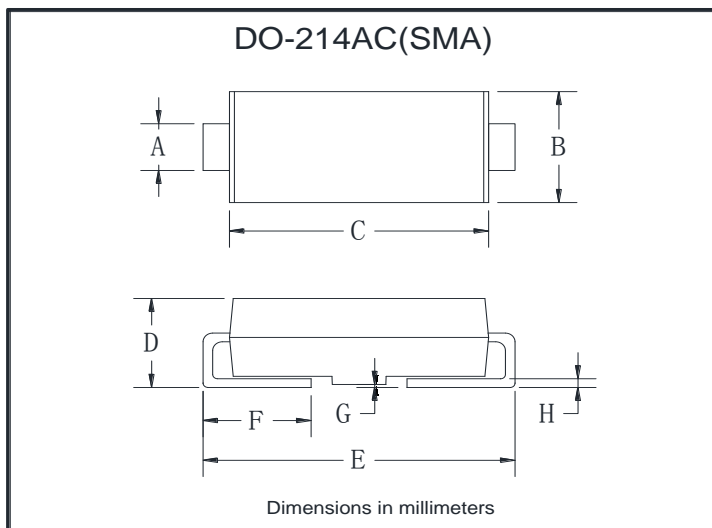


SS12A THRU SS120A

Ordering Information (Example)

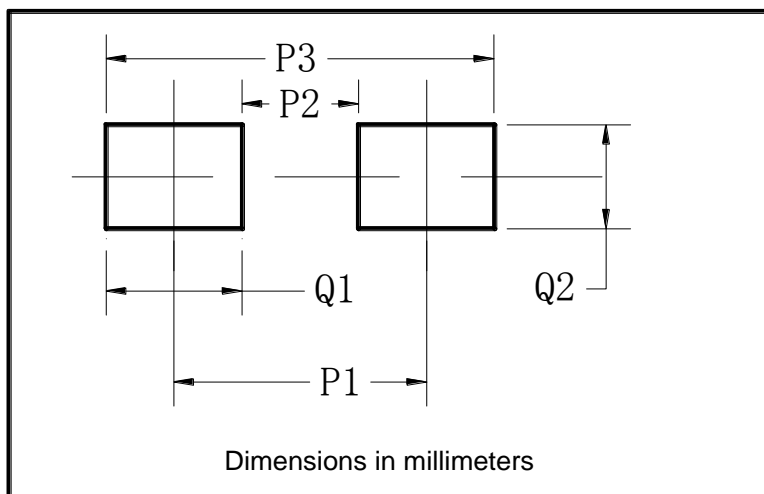
| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| SS12A-SS120A | F1 | Approximate 0.059 | 5000 | 10000 | 80000 | 13" reel |
| SS12A-SS120A | F2 | Approximate 0.059 | 7500 | 15000 | 120000 | 13" reel |
| SS12A-SS120A | F3 | Approximate 0.059 | 7500 | 15000 | 60000 | 13" reel |
| SS12A-SS120A | F4 | Approximate 0.059 | 1800 | 7200 | 57600 | 7" reel |
| SS12A-SS120A | F5 | Approximate 0.059 | 2000 | 8000 | 64000 | 7" reel |
| SS12A-SS120A | F6 | Approximate 0.059 | 5000 | 10000 | 100000 | 13" reel |

Outline Dimensions



| DO-214AC(SMA) | | |
|---------------|------|------|
| Dim | Min | Max |
| A | 1.25 | 1.58 |
| B | 2.40 | 2.83 |
| C | 4.25 | 4.75 |
| D | 1.90 | 2.30 |
| E | 4.93 | 5.28 |
| F | 0.76 | 1.41 |
| G | 0.08 | 0.20 |
| H | 0.15 | 0.31 |

Suggested Pad Layout



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



SS12A THRU SS120A

Disclaimer

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