

Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

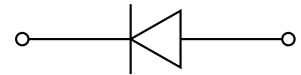
Applications

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

Mechanical Data

- Case: DO-214AA(SMB)
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

DO-214AA(SMB)



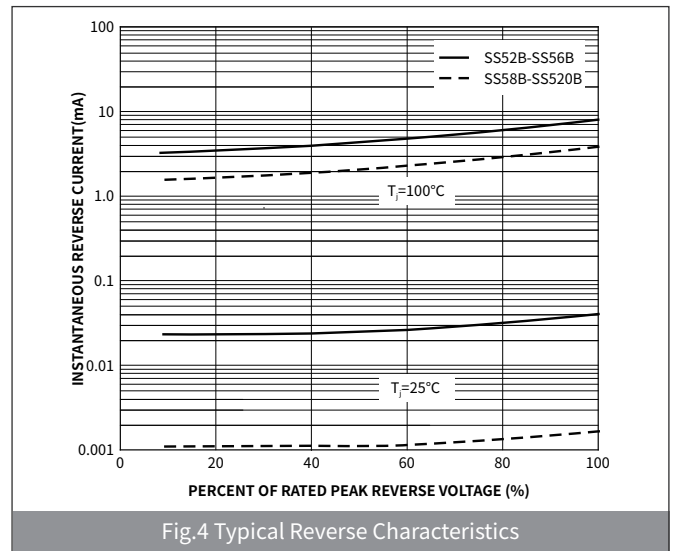
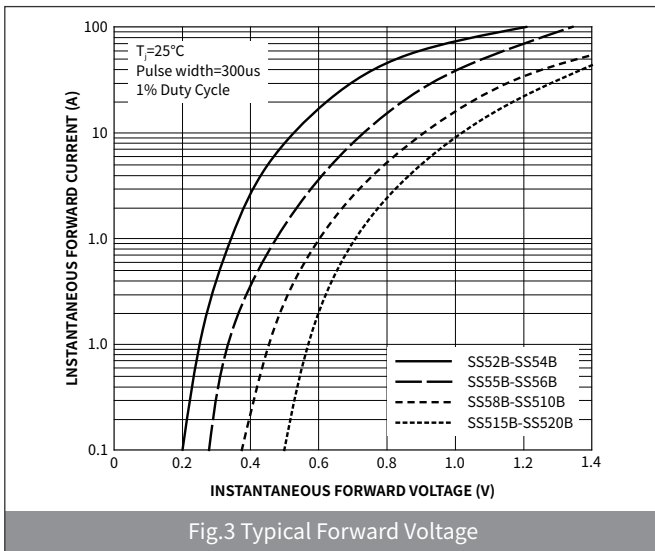
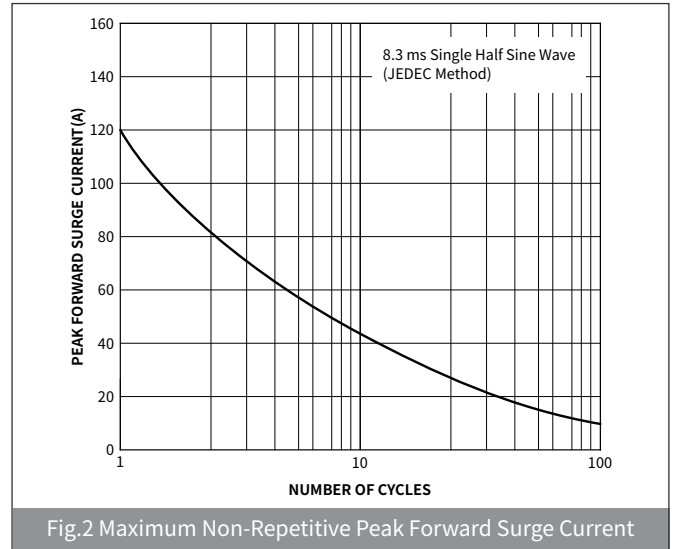
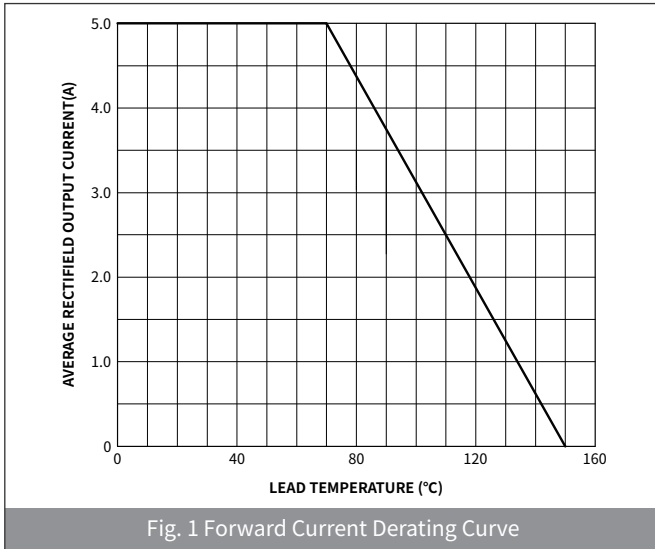
Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SS52B | SS53B | SS54B | SS55B | SS56B | SS58B | SS510B | SS515B | SS520B | |
|--|--------------------|-------|------------|-------|-------|-------|-------|------------|--------|--------|--------|--|
| Device marking code | | | SS52B | SS53B | SS54B | SS55B | SS56B | SS58B | SS510B | SS515B | SS520B | |
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | V | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | |
| Maximum RMS Voltage | V _{RMS} | V | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | |
| Maximum DC blocking Voltage | V _{DC} | V | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | |
| Average rectified output current @60Hz sinewave, Resistance load, TL (Fig.1) | I _{F(AV)} | A | 5 | | | | | | | | | |
| Forward Surge Current (Nonrepetitive) @60Hz Half-sine wave, 1 cycle, T=25°C | I _{FSM} | A | 120 | | | | | | | | | |
| Storage temperature | T _{stg} | °C | -55 ~ +150 | | | | | | | | | |
| Junction temperature | T _j | °C | -55 ~ +125 | | | | | -55 ~ +150 | | | | |
| Typical Thermal Resistance | R _{θJ-A} | °C /W | 60 | | | | | | | | | |
| | R _{θJ-L} | °C /W | 22 | | | | | | | | | |

Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | TEST CONDITIONS | SYMBOL | UNIT | SS52B | SS53B | SS54B | SS55B | SS56B | SS58B | SS510B | SS515B | SS520B |
|---|--|----------------|------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| Maximum instantaneous forward voltage | I _F =5.0A | V _F | V | 0.55 | | | 0.70 | | 0.85 | | 0.95 | |
| Maximum DC reverse current at rated DC blocking voltage | V _{RM} =V _{RRM} VA=25°C | I _R | mA | 0.2 | | | | | 0.05 | | | |
| | VA=100°C | | | 10 | | | | | 5 | | | |
| Typical junction capacitance | 4.0V DC, 1MHz | C _J | pF | 300 | | | | | | | | |

► **Ratings And Characteristics Curves** ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)



▶ Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---------|--------------|----------------|-----------|----------|-------------|---------------|
| SMB | R3 | 0.098 | 3000 | / | 48000 | 13" |

▶ Package Outline Dimensions (SMB/DO-214AA)

| Symbol | Dimensions | | | |
|--------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 1.85 | 2.21 | 0.073 | 0.087 |
| B | 4.25 | 4.85 | 0.167 | 0.191 |
| C | 3.30 | 3.94 | 0.130 | 0.155 |
| D | 2.15 | 2.65 | 0.085 | 0.104 |
| E | 0.75 | 1.52 | 0.030 | 0.060 |
| F | - | 0.203 | - | 0.008 |
| G | 5.08 | 5.59 | 0.200 | 0.220 |
| H | 0.15 | 0.31 | 0.006 | 0.012 |

▶ Suggested Pad Layout

| Symbol | Dimensions | | | |
|--------|-------------|------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| M | 2.26 | - | 0.089 | - |
| J | 2.10 | - | 0.085 | - |
| K | - | 2.74 | - | 0.107 |