

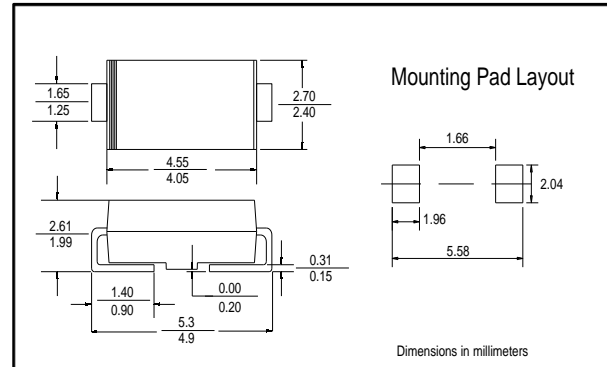
## 5A SCHOTTKY BARRIER RECTIFIER

Reverse Voltage 20 to 200 Volts Forward Current 5.0 Amperes

### Features

- Metal silicon junction, majority carrier conduction
- Guardring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- High temperature soldering guaranteed: 250°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

### DO-214AC (SMA)



### Mechanical Data

- Case: SMA molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.058 grams (approximate)

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER   | SYMBOL    | SS 52A      | SS 53A | SS 54A | SS 55A      | SS 56A | SS 58A | SS 510A | SS 515A  | SS 520A | UNITS |    |
|---|-----------|-------------|--------|--------|-------------|--------|--------|---------|----------|---------|-------|----|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$ | 20          | 30     | 40     | 50          | 60     | 80     | 100     | 150      | 200     | V     |    |
| Maximum RMS voltage   | $V_{RMS}$ | 14          | 21     | 28     | 35          | 42     | 56     | 70      | 105      | 140     | V     |    |
| Maximum DC blocking voltage   | $V_{DC}$  | 20          | 30     | 40     | 50          | 60     | 80     | 100     | 150      | 200     | V     |    |
| Average Rectified Output Current<br>0.375" (9.5mm) lead length                      | $I_o$     | 5.0         |        |        |             |        |        |         |          |         | A     |    |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | $I_{FSM}$ | 150.0       |        |        |             |        |        |         |          |         | A     |    |
| Maximum instantaneous forward voltage at $I_o$                                      | $V_F$     | 0.45        | 0.55   | 0.70   | 0.85        | 0.95   |        |         |          |         | V     |    |
| Maximum DC reverse current<br>at rated DC blocking voltage                          | $I_R$     | 0.5<br>10.0 |        |        |             |        |        |         | 0.1<br>2 |         |       | mA |
| Typical junction capacitance (Note 1)   | $C_J$     | 800         |        |        |             |        |        |         |          |         | pF    |    |
| Typical thermal resistance (Note 2)   | $R_{JA}$  | 55.0        |        |        |             |        |        |         |          |         | °C/W  |    |
| Operating junction temperature range  | $T_J$     | -55 to +125 |        |        | -55 to +150 |        |        |         |          |         | °C    |    |
| Storage temperature range   | $T_{STG}$ | -55 to +150 |        |        |             |        |        |         |          |         | °C    |    |

- Notes:
1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
  2. P.C.B. mounted with 0.2×0.2"(5.0×5.0 mm) copper pad areas.



# SS52A ~ SS520A

## Ratings and Characteristic Curves

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

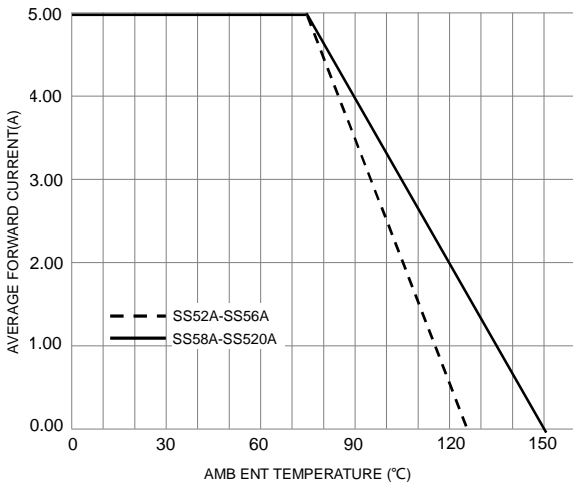


FIG. 2 – TYPICAL FORWARD CHARACTERISTICS

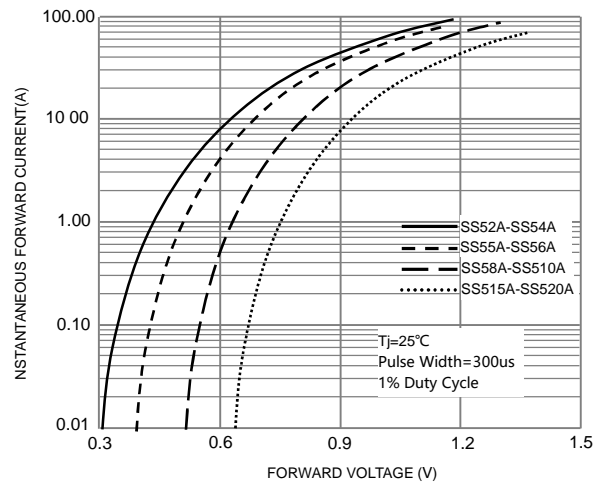


FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

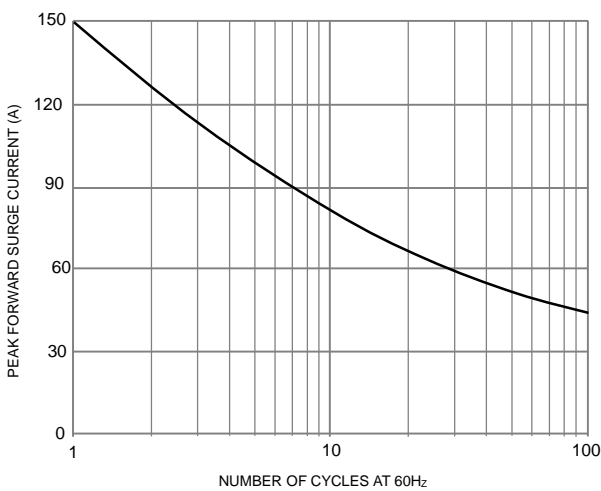


FIG. 4 – TYPICAL REVERSE CHARACTERISTICS

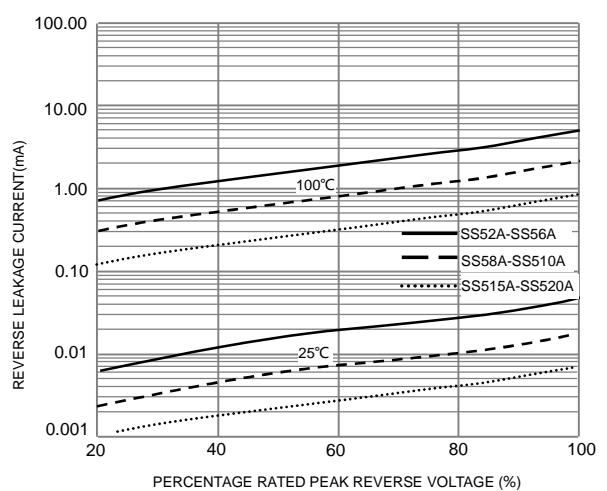


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

