

5.0Amp Surface Mounted Schottky Barrier Rectifiers

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Built-in strain relief,ideal for automated placement
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed
250°C/10 seconds at terminals

Mechanical Data

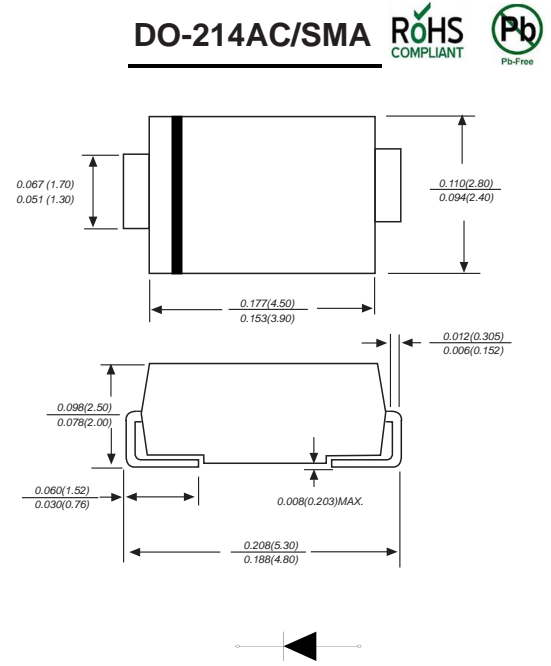
Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0023 ounce, 0.07 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter | SYMBOLS | SS52 | SS54 | SS56 | SS58 | SS510 | SS515 | SS520 | UNITS |
|--|-------------------|-------------|------|------------|------|-------|-------|-------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V _{RMS} | 14 | 28 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V _{DC} | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum average forward rectified current at T _L =100°C | I _(AV) | 5.0 | | | | | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I _{FSM} | 120.0 | | | | | | | A |
| Maximum instantaneous forward voltage at 5.0A | V _F | 0.55 | 0.70 | 0.85 | 0.95 | | | | V |
| Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =125°C | I _R | 0.5 50 | | 0.05 10 | | | | | mA |
| Typical thermal resistance | R _{qJA} | 80.0 | | | | | | | °C/W |
| Operating junction temperature range | T _J | -55 to +150 | | | | | | | °C |
| Storage temperature range | T _{STG} | -55 to +150 | | | | | | | °C |

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

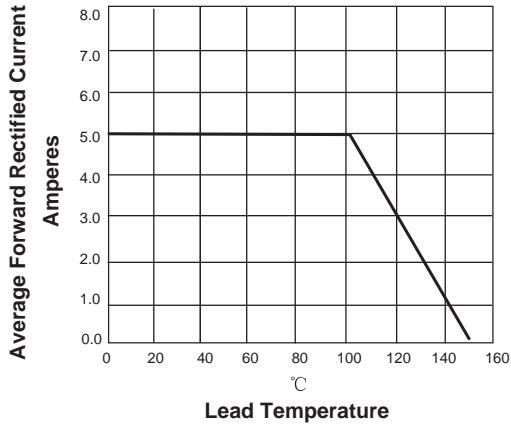


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

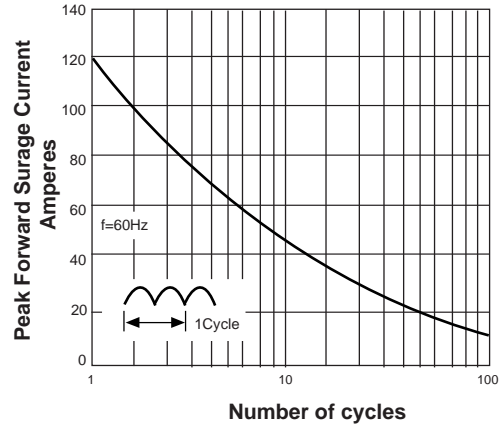


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

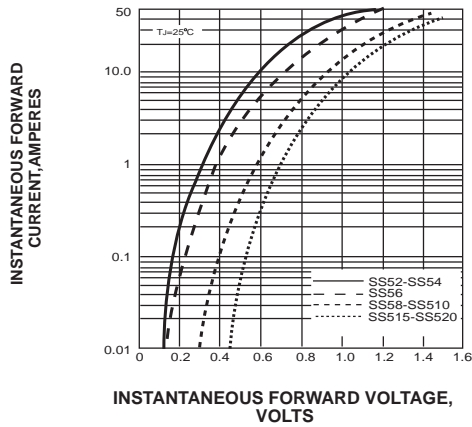
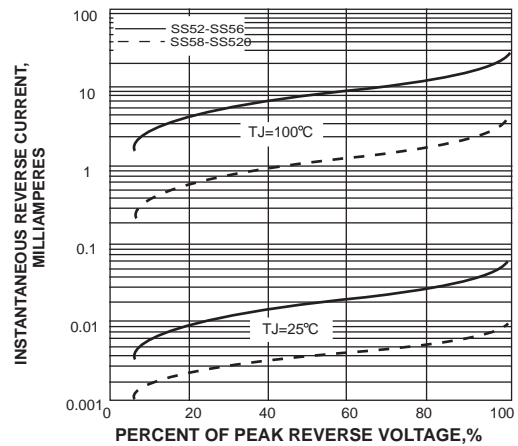
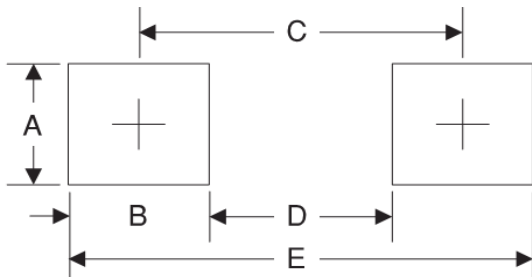


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 1.68 | 0.066 |
| B | 1.52 | 0.060 |
| C | 3.90 | 0.154 |
| D | 2.41 | 0.095 |
| E | 5.45 | 0.215 |

Suggested Soldering Temperature Profile

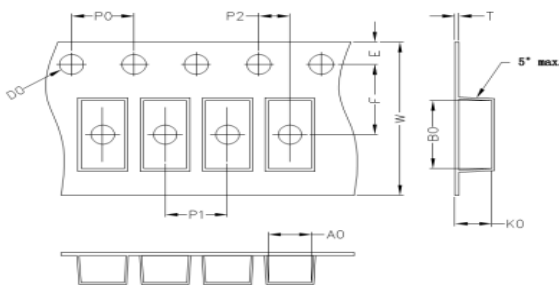


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



| | | | | | |
|-----------|-----------|-----------|-----------|----------|------------------|
| A0 | B0 | K0 | D0 | E | F |
| 2.80 | 5.30 | 2.36 | 1.55 | 1.75 | 5.50 |
| P0 | P1 | P2 | T | W | Tolerance |
| 4.0 | 4.0 | 2.0 | 0.25 | 12 | 0.1 |

Package Specifications

| Package | Reel Size | Reel DIA. (mm) | Q'TY/Reel (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|-----------|----------------|------------------|---------------|----------------|------------------|--------------------|
| SMA | 11' | 278 | 5 | 285 | 10 | 355*310*310 | 80 |
| | 13' | 330 | 7.5 | 340 | 15 | 360*360*360 | 120 |

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