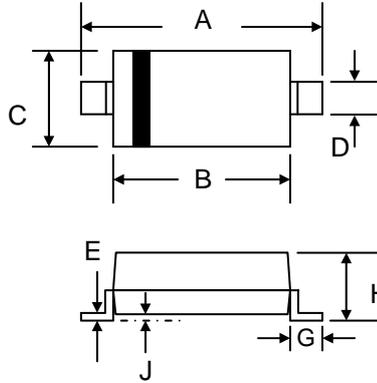


SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Very Low Forward Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



| SOD-123 | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 3.6 | 3.9 |
| B | 2.5 | 2.8 |
| C | 1.4 | 1.8 |
| D | 0.5 | 0.7 |
| E | — | 0.2 |
| G | 0.4 | — |
| H | 0.95 | 1.35 |
| J | — | 0.12 |
| All Dimensions in mm | | |

Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | SS0520 | SS0530 | SS0540 | Unit |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|--------|--------|---------------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 20 | 30 | 40 | V |
| Forward Continuous Current (Note 1) | I_F | 500 | | | mA |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 5.5 | | | A |
| Thermal Resistance, Junction to Ambient (Note 1) | R_{JA} | 206 | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +125 | | | $^\circ\text{C}$ |

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | SS0520 | SS0530 | SS0540 | Unit |
|-------------------------------------------------------------------------|----------|-------------|--------------|----------|---------------|
| Forward Voltage Drop @ $I_F = 0.1\text{A} / 0.5\text{A}$ | V_{FM} | 0.3 / 0.385 | 0.375 / 0.43 | — / 0.51 | V |
| Peak Reverse Leakage Current @ $V_R = 50\% / 100\%$ DC Blocking Voltage | I_{RM} | 75 / 250 | 20 / 130 | 10 / 20 | μA |
| Typical Junction Capacitance ($V_R = 0\text{V DC}, f = 1\text{MHz}$) | C_j | 170 | | | pF |

Note: 1. Mounted on FR-4 PCB with 645mm² pad size.

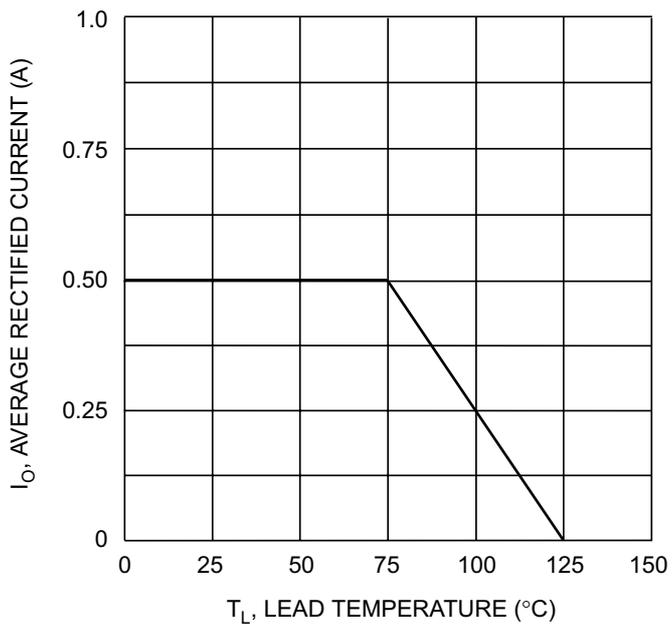


Fig. 1 Forward Current Derating Curve

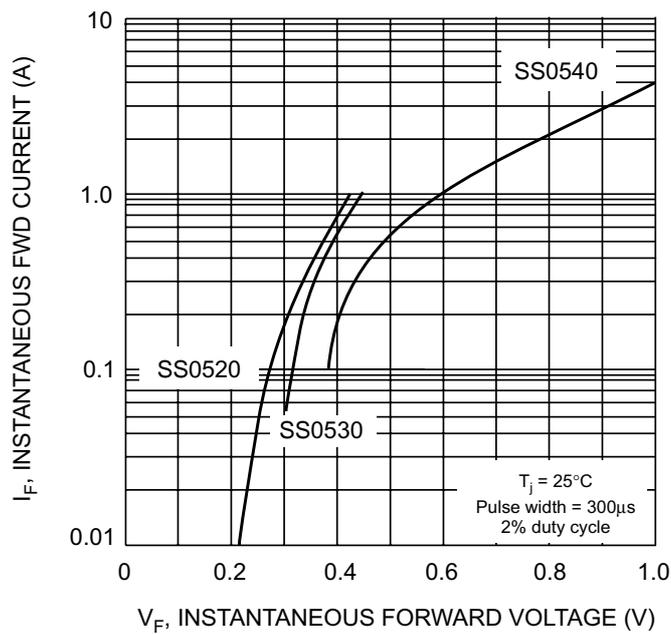


Fig. 2 Typical Forward Characteristics

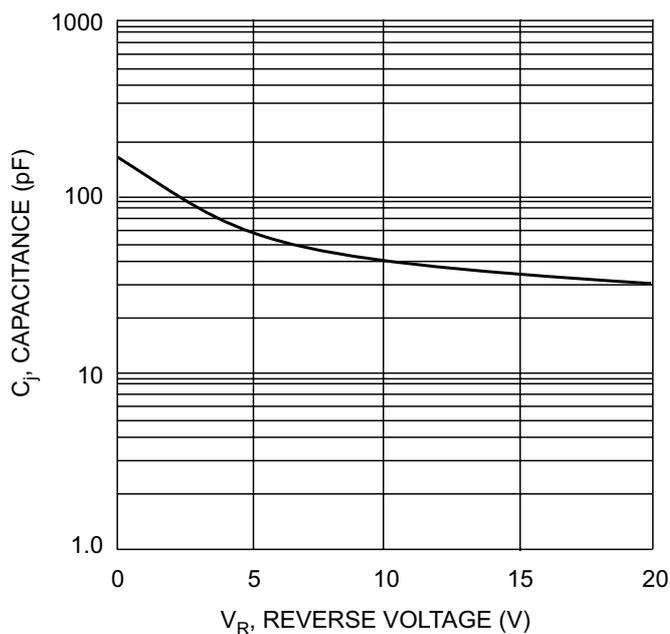


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

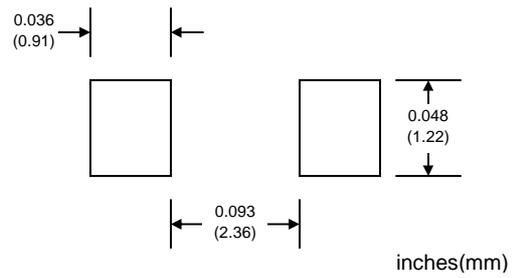
MARKING INFORMATION



xx = Device Code, See Table Below

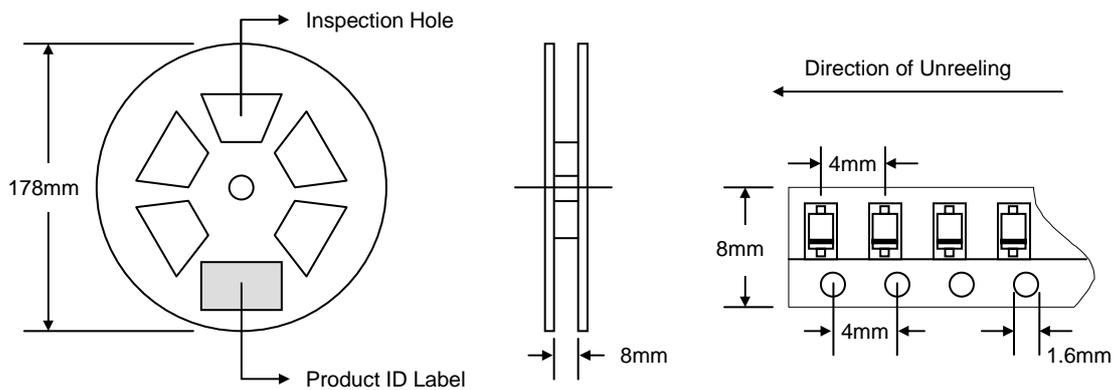
| Mfg Site | SS0520 | SS0530 | SS0540 |
|----------|--------|--------|--------|
| TW Plant | B2 | B3 | B4 |
| CN Plant | SD | SE | SF |

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 178 | 3,000 | 187 x 187 x 65 | 15,000 | 390 x 240 x 420 | 150,000 | 10.0 |

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| SS0520-T1 | SOD-123 | 3000/Tape & Reel |
| SS0530-T1 | SOD-123 | 3000/Tape & Reel |
| SS0540-T1 | SOD-123 | 3000/Tape & Reel |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SS0520-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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