

SOD-123 Plastic-Encapsulate Diodes

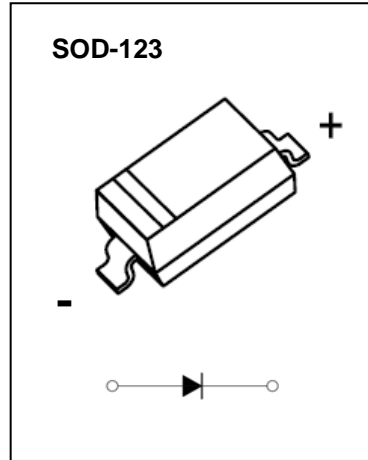
SD101AW

SCHOTTKY BARRIER DIODE

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time

MARKING: S1



The marking bar indicates the cathode

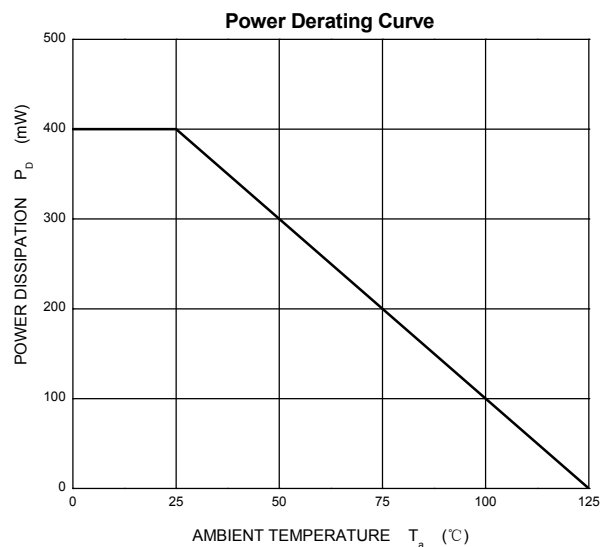
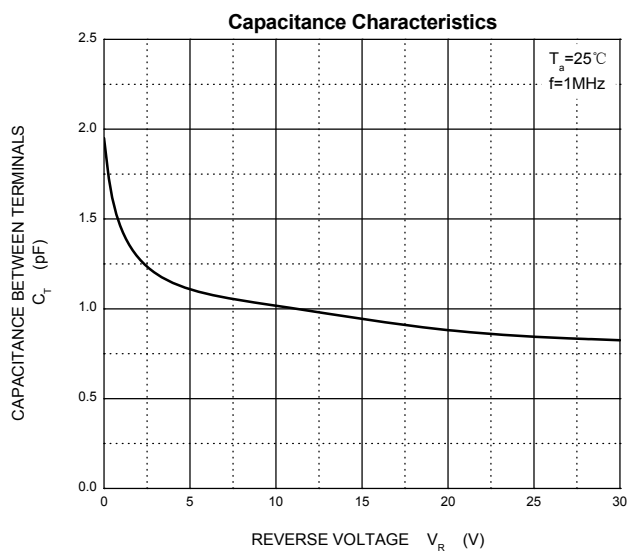
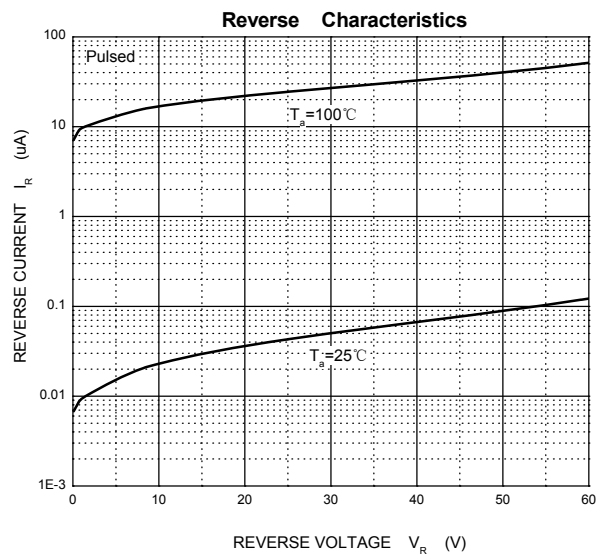
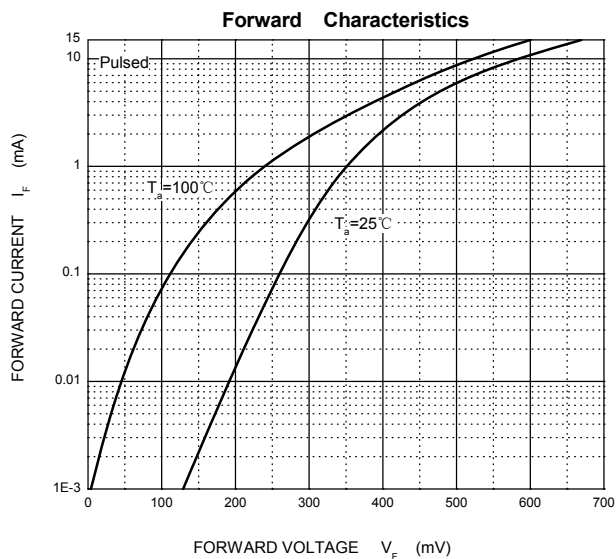
Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

| Parameter | Symbol | Value | Unit |
|--|-----------------|------------|------|
| Peak Repetitive Peak Reverse Voltage | V_{RRM} | 60 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 42 | V |
| Forward Continuous Current | I_{FM} | 15 | mA |
| Non-repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.0 | A |
| Power Dissipation | P_d | 400 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 250 | °C/W |
| Operating Junction Temperature Range | T_j | -40 ~ +125 | °C |
| Storage Temperature Range | T_{STG} | -55 ~ +150 | °C |

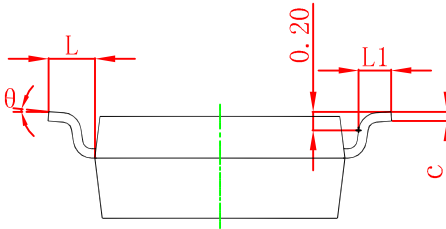
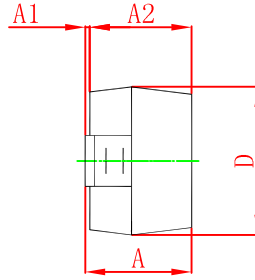
Electrical Ratings @Ta=25°C

| Parameter | Symbol | Min | Typ | Max | Unit | Conditions |
|-------------------------------|----------|-----|-----|--------------|---------|---|
| Reverse breakdown voltage | V_R | 60 | | | V | $I_R=10\mu A$ |
| Forward voltage | V_F | | | 0.41 1.00 | V | $I_F=1.0mA$ $I_F=15mA$ |
| Reverse current | I_{RM} | | | 0.2 | μA | $V_R=50V$ |
| Capacitance between terminals | C_T | | | 2.0 | pF | $V_R=0V, f=1.0MHz$ |
| Reverse recovery time | t_{rr} | | | 1.0 | ns | $I_F=I_R=5mA$ $I_{rr}=0.1X I_R, R_L=100\Omega$ |

Typical Characteristics



SOD-123 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.600 | 2.800 | 0.102 | 0.110 |
| E1 | 3.550 | 3.850 | 0.140 | 0.152 |
| L | 0.500 REF | | 0.020 REF | |
| L1 | 0.250 | 0.450 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

SOD-123 Suggested Pad Layout



Note:

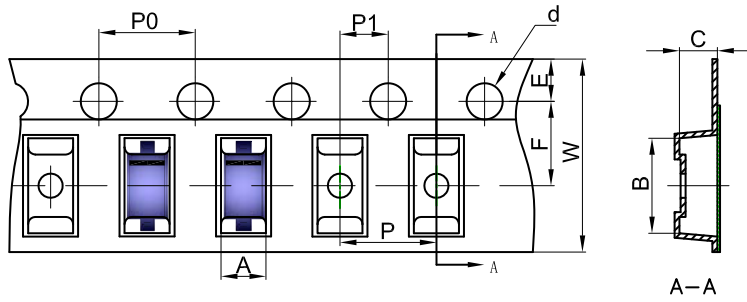
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape



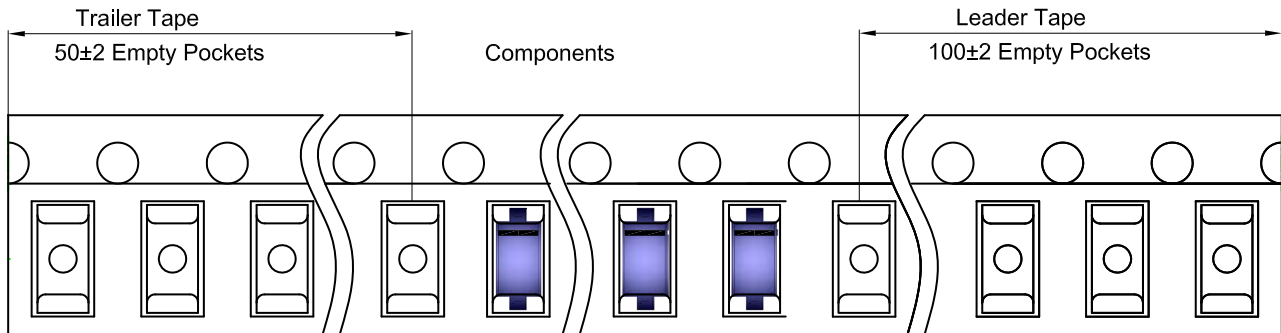
Packaging Description:

SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

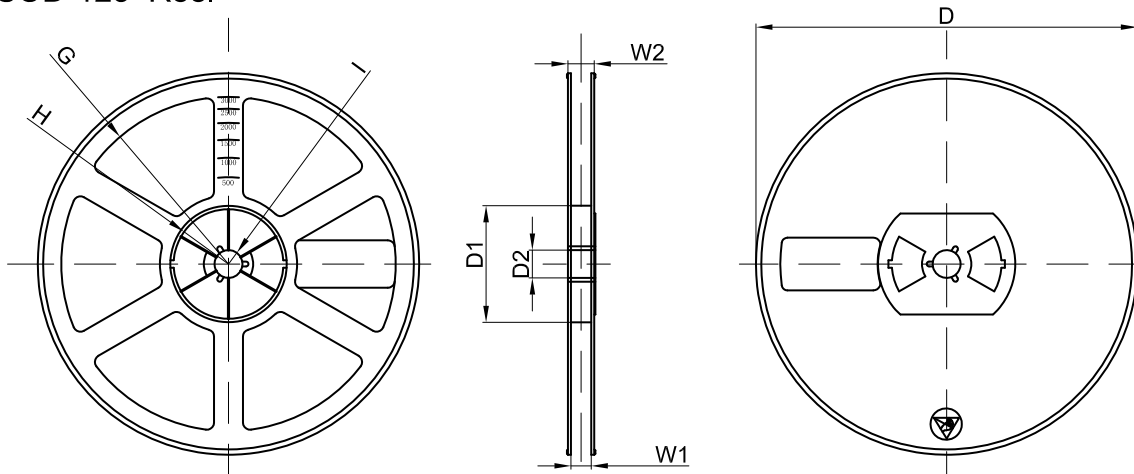
Dimensions are in millimeter

| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
|----------|------|------|------|-------|------|------|------|------|------|------|
| SOD-123 | 1.85 | 3.95 | 1.57 | Ø1.55 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter

| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
|-------------|---------|-------|-------|--------|--------|-------|------|-------|
| 7" Dia | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch | 45,000 pcs | 203×203×195 | 180,000 pcs | 438×438×220 | |