

SOD-323 Plastic-Encapsulate Diodes

SCHOTTKY BARRIER DIODE

Features:

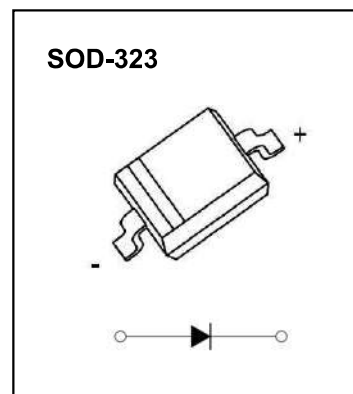
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance

MARKING:

KWSD103AWS:S4 KWSD103BWS:S5 KWSD103CWS:S6



The marking bar indicates the cathode



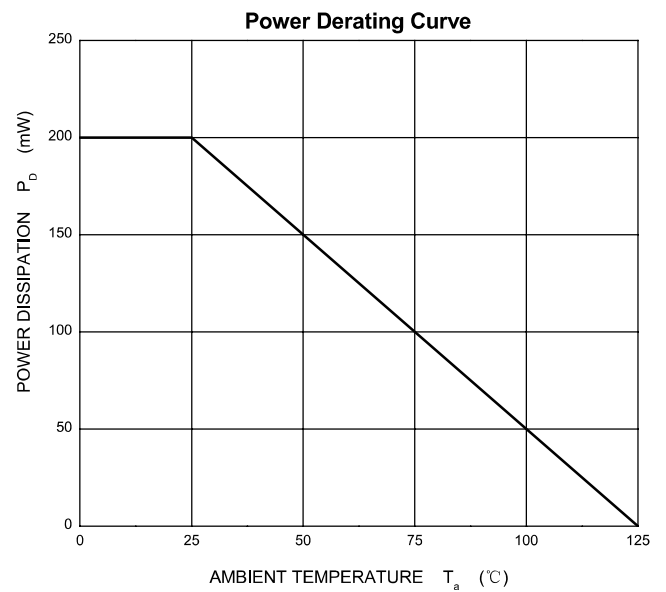
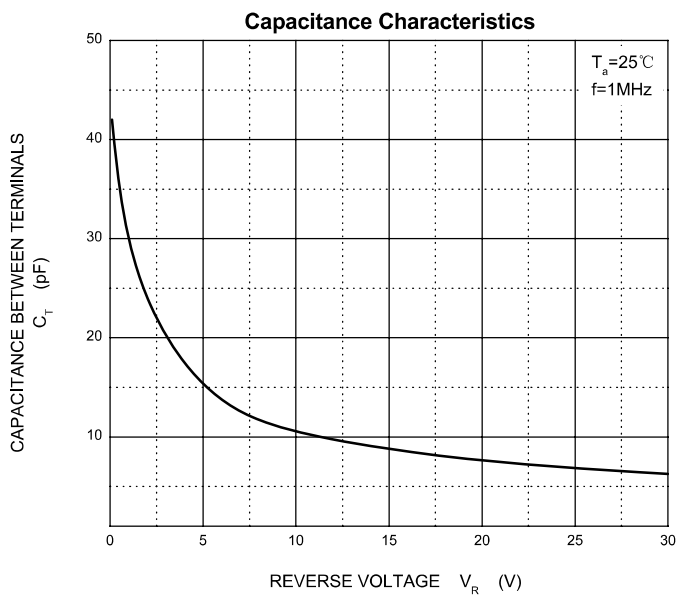
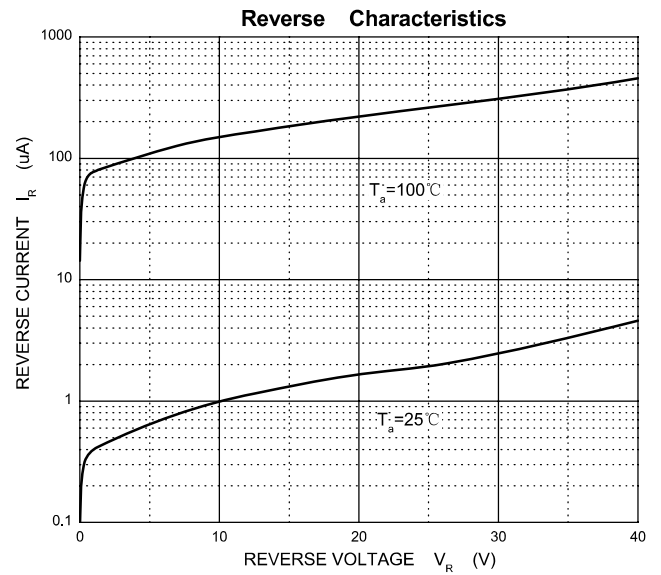
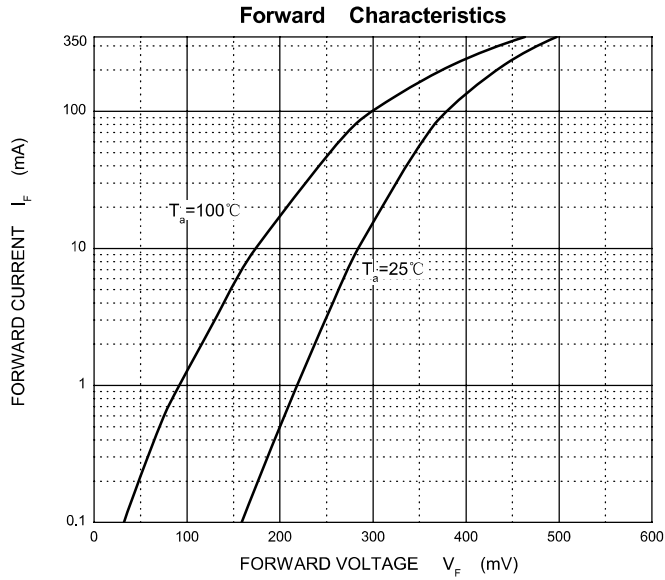
Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

| Parameter | Symbol | KWSD103AWS | KWSD103BWS | KWSD103CWS | Unit |
|--|-----------------|------------|------------|------------|------|
| Peak Repetitive Peak Reverse Voltage | V_{RRM} | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 40 | 30 | 20 | V |
| DC Blocking Voltage | V_R | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 28 | 21 | 14 | V |
| Forward Continuous Current | I_{FM} | 350 | | | mA |
| Non-repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.0 | | | A |
| Power Dissipation | P_d | 200 | | | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 500 | | | °C/W |
| Junction Temperature | T_j | -40~+125 | | | °C |
| Storage Temperature | T_{STG} | -55~+150 | | | °C |

Electrical Ratings @Ta=25°C

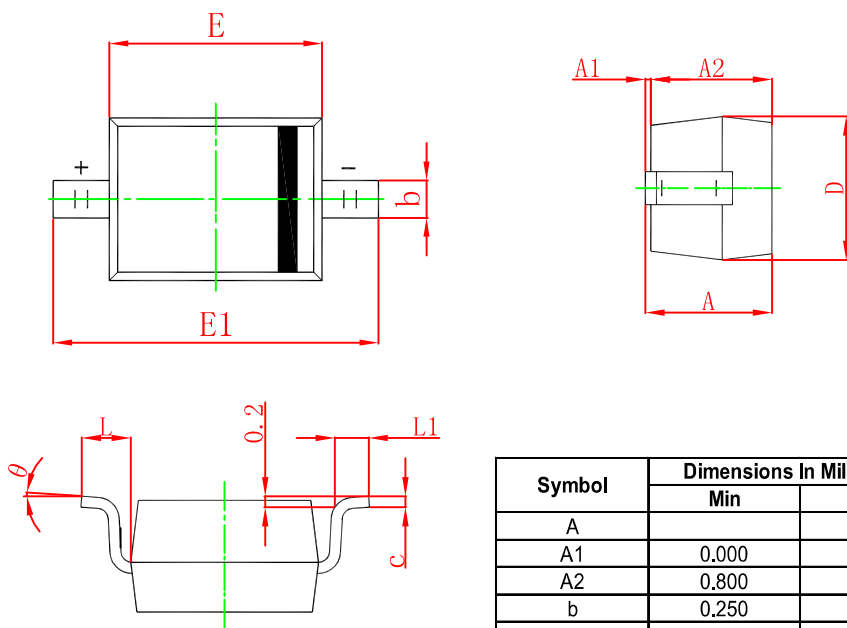
| Parameter | Symbol | Min | Typ | Max | Unit | Conditions |
|-------------------------------|------------|-----|-----|--------------|------|---|
| Reverse breakdown voltage | $V_{(BR)}$ | 40 | | | V | $I_R=100\mu A$ |
| KWSD103AWS | | 30 | | | | $I_R=100\mu A$ |
| KWSD103BWS KWSD103CWS | | 20 | | | | $I_R=100\mu A$ |
| Forward voltage | V_F | | | 0.37 0.60 | V | $I_F=20mA$ $I_F=200mA$ |
| Reverse current | I_{RM} | | | 5.0 | | μA |
| KWSD103AWS | | | | | | |
| KWSD103BWS KWSD103CWS | | | | | | |
| Capacitance between terminals | C_T | | | 50 | pF | $V_R=0V, f=1.0MHz$ |
| Reverse recovery time | t_{rr} | | 10 | | ns | $I_F=I_R=200mA$ $I_{rr}=0.1I_R, R_L=100\Omega$ |

Typical Characteristics



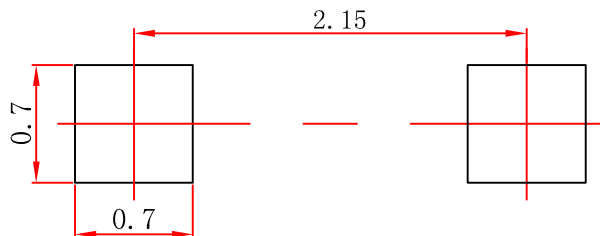
PACKAGE OUTLINE AND PAD LAYOUT INFORMATION

SOD-323 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | | 1.100 | | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.800 | 1.000 | 0.031 | 0.039 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.200 | 1.400 | 0.047 | 0.055 |
| E | 1.600 | 1.800 | 0.063 | 0.071 |
| E1 | 2.500 | 2.750 | 0.098 | 0.108 |
| L | 0.475 REF | | 0.019 REF | |
| L1 | 0.250 | 0.400 | 0.010 | 0.016 |
| θ | 0° | 8° | 0° | 8° |

SOD-323 Suggested Pad Layout

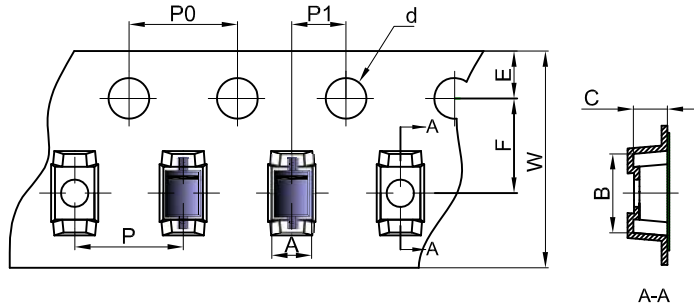


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.

SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape



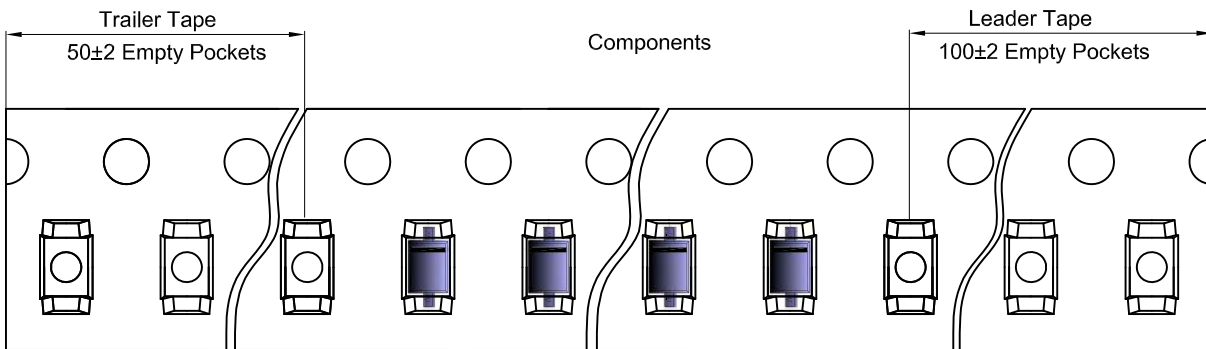
Packaging Description:

SOD-323 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).

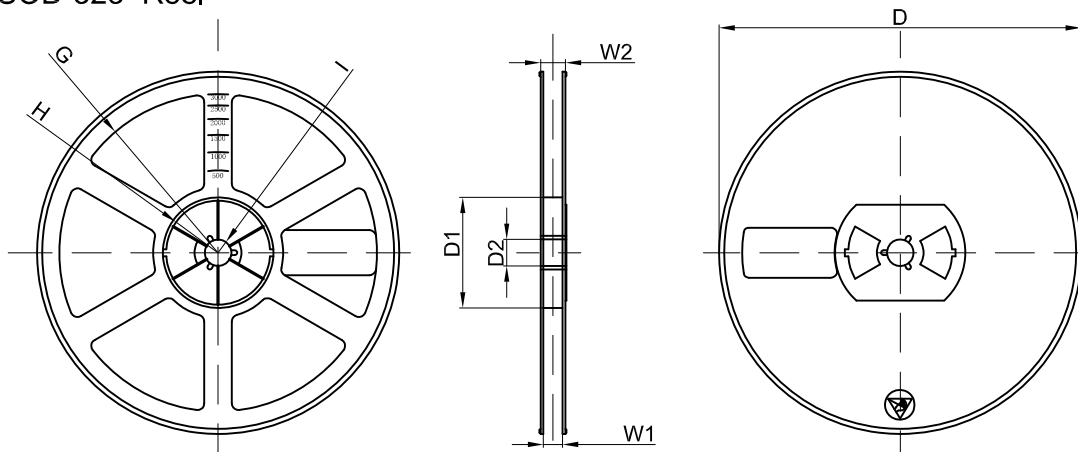
Dimensions are in millimeter

| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
|----------|------|-----|------|-------|------|------|------|------|------|------|
| SOD-323 | 1.48 | 3.3 | 1.25 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOD-323 Tape Leader and Trailer



SOD-323 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 | |