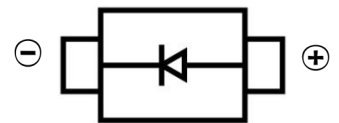


SCHOTTKY BARRIER DIODE
FEATURES

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


SOD-523

MECHANICAL DATA

- Case: SOD-523
- Case Material: Molded Plastic. UL Iammability
- Classification Rating: 94V-0
- Weight: 0.0015 grams (approximate)
- Marking:S4

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

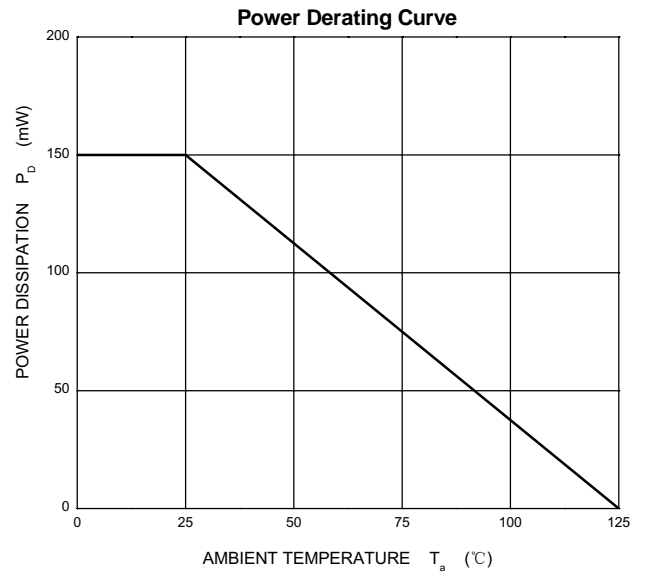
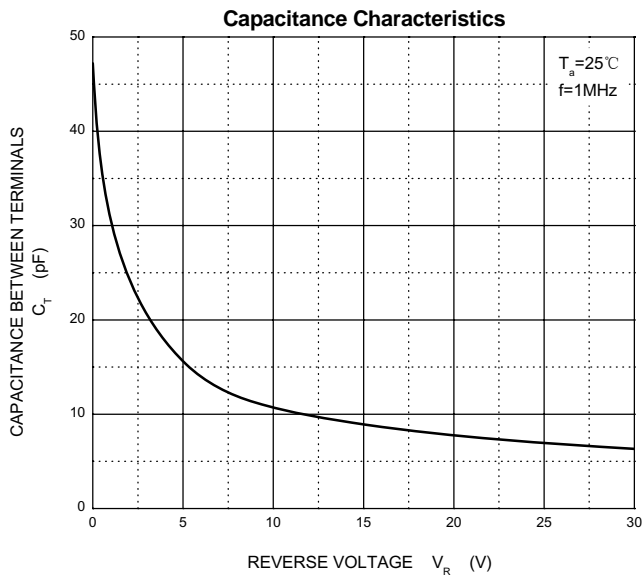
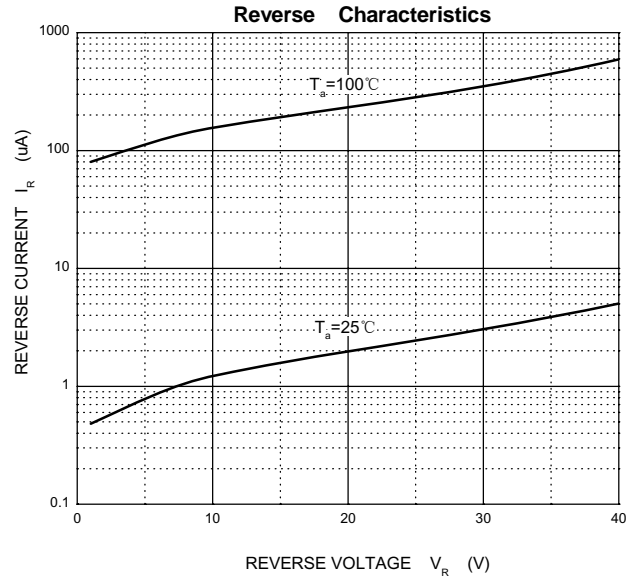
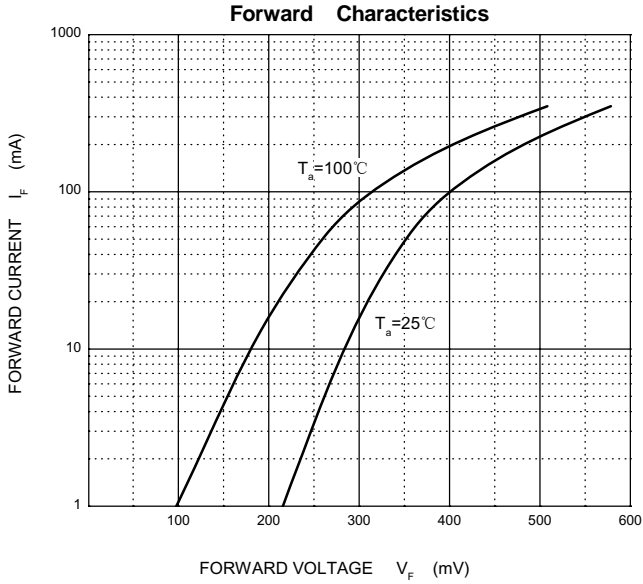
| Parameter | Symbol | Value | Unit |
|--|---------------------|-----------|------|
| Reverse Voltage | V _R | 40 | V |
| Peak Repetitive Reverse Voltage | V _{RRM} | | |
| Working Peak Reverse Voltage | V _{RWM} | | |
| RMS Reverse Voltage | V _{R(RMS)} | 28 | V |
| Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms | I _{FSM} | 2 | A |
| Forward Continuous Current | I _{FM} | 200 | mA |
| Power Dissipation | P _D | 150 | mW |
| Thermal Resistance From Junction To Ambient | R _{θJA} | 667 | °C/W |
| Junction Temperature | T _J | 125 | °C |
| Storage Temperature | T _{STG} | -50 ~+125 | °C |

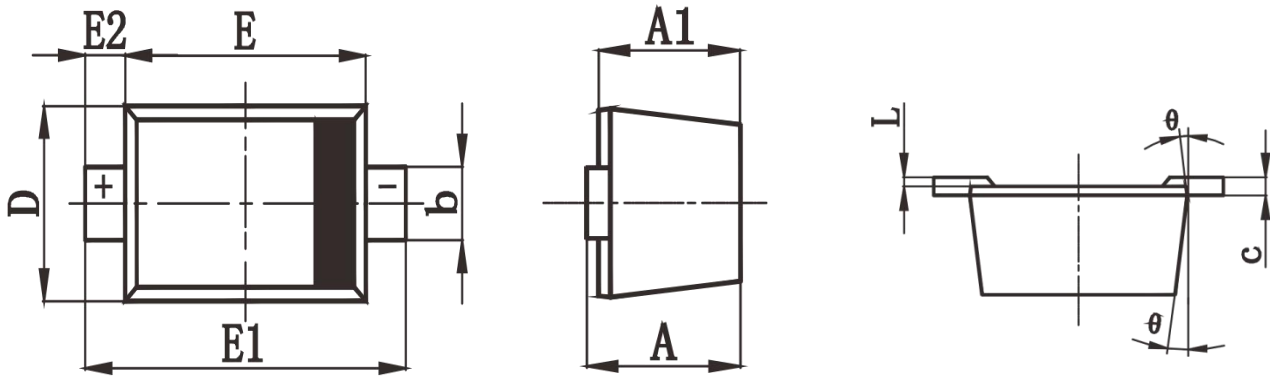
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | Min | Type | Max | Unit | Conditions |
|-----------------------|-------------------|------|------|------|------|---|
| Reverse voltage | V _(BR) | 40 | | | V | I _R =100uA |
| Forward voltage | V _F | | | 0.60 | V | I _F =200mA |
| | | | | 0.37 | | I _F =20mA |
| | | 0.32 | | | | I _F =5mA |
| | | 0.27 | | | | I _F =1mA |
| Reverse voltage | I _R | | | 1 | uA | V _R =10V |
| | | | | 2 | uA | V _R =20V |
| | | | | 5 | uA | V _R =30V |
| Total capacitance | C _{tot} | | 50 | | pF | V _R =0V,f=1MHz |
| Reverse recovery time | t _{RR} | | 10 | | ns | I _F =I _R =200mA, I _{rr} =0.1×I _R , R _L =100Ω |

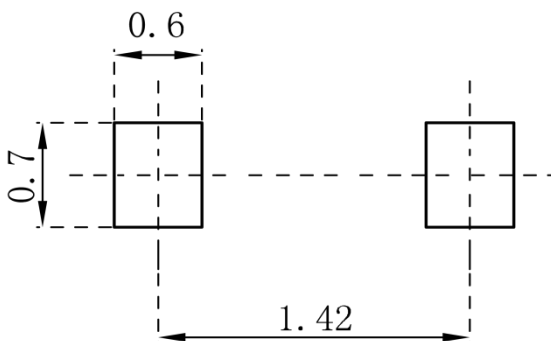
SCHOTTKY BARRIER DIODE

Typical Characteristics

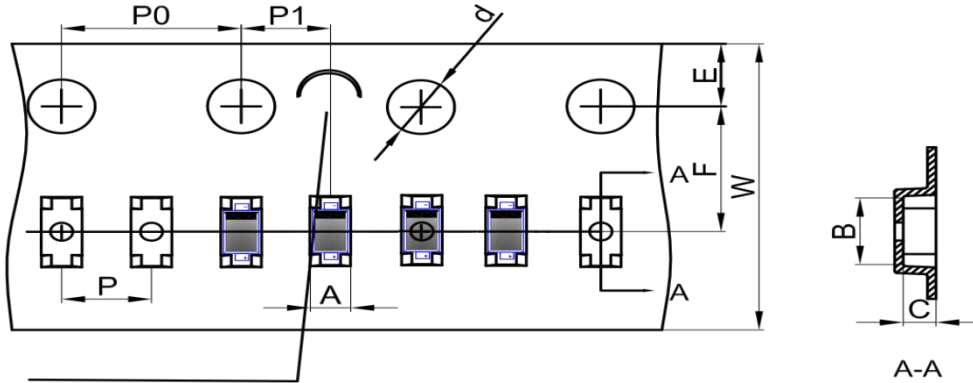


SCHOTTKY BARRIER DIODE
SOD-523 Package Outline Dimensions


| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.510 | 0.770 | 0.020 | 0.031 |
| A1 | 0.010 | 0.070 | 0.001 | 0.003 |
| A2 | 0.500 | 0.700 | 0.020 | 0.028 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 0.750 | 0.850 | 0.030 | 0.033 |
| E | 1.100 | 1.300 | 0.043 | 0.051 |
| E1 | 1.500 | 1.700 | 0.059 | 0.067 |
| L | 0.200 REF | | 0.008 REF | |
| L1 | 0.250 | 0.400 | 0.010 | 0.016 |
| θ | 0° | 8° | 0° | 8° |

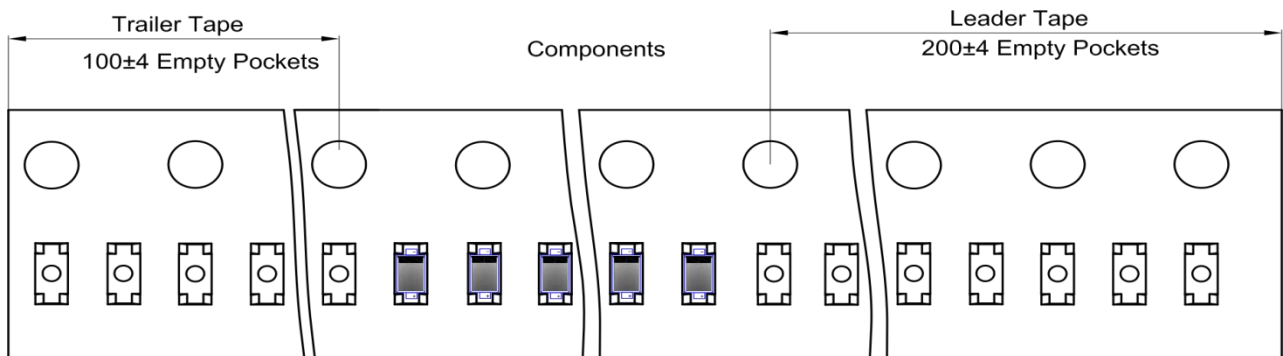
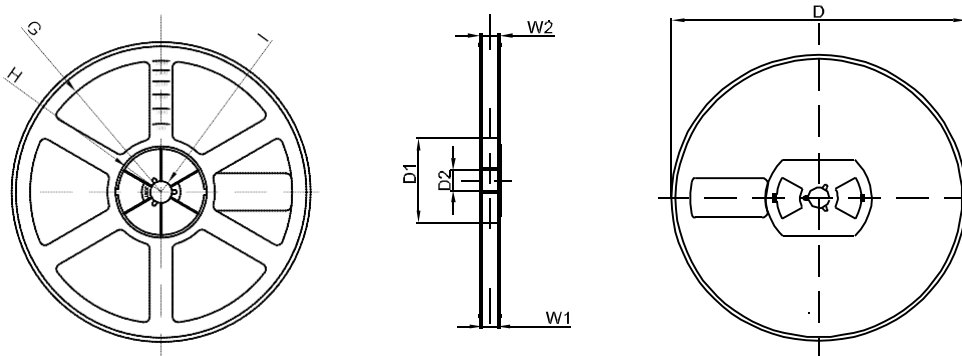
SOD-523 Suggested Pad Layout

Note:

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

SCHOTTKY BARRIER DIODE
SOD-523 Tape and Reel
SOD-523 Embossed Carrier Tape


NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

| DIMENSIONS ARE IN MILLIMETER | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| TYPE | A | B | C | d | E | F | P0 | P | P1 | W |
| SOD-523 | 0.90 | 1.94 | 0.73 | Ø1.50 | 1.75 | 3.50 | 4.00 | 2.00 | 2.00 | 8.00 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

SOD-523 Tape Leader and Trailer

SOD-523 Reel


| DIMENSIONS ARE IN MILLIMETER | | | | | | | | |
|------------------------------|------|-------|-------|-----|--------|-------|------|-------|
| REEL OPTION | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" DIA | Ø178 | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 9.50 | 12.30 |
| TOLERANCE | ±2 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |