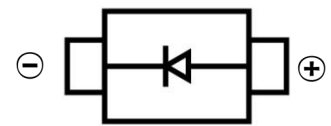


SCHOTTKY BARRIER DIODE
FEATURES

- Low Forward Voltage
- Fast Switching
- Small Surface Mount device
- PN Junction Guard Ring for Transient and ESD Protection
- Low Capacitance


MECHANICAL DATA

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.005 grams (approximate)
- Marking:S4

SOD-123

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

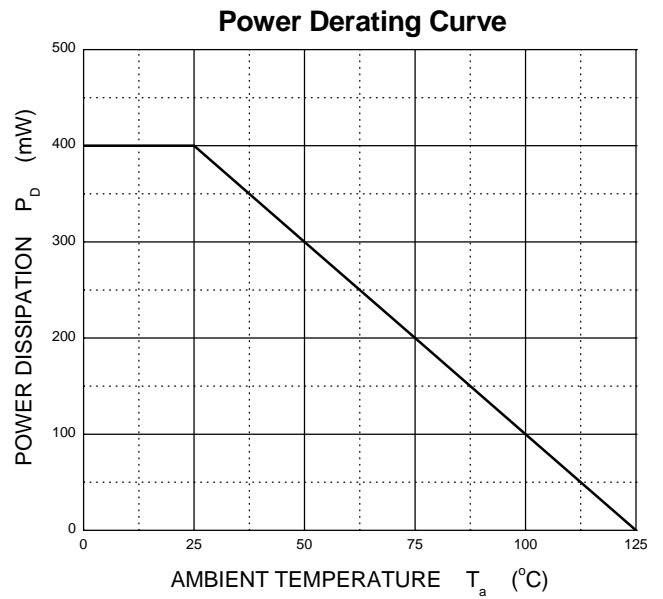
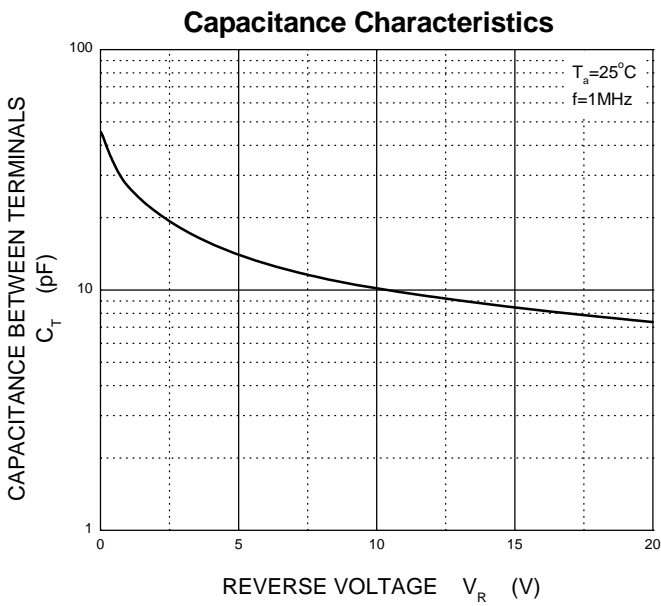
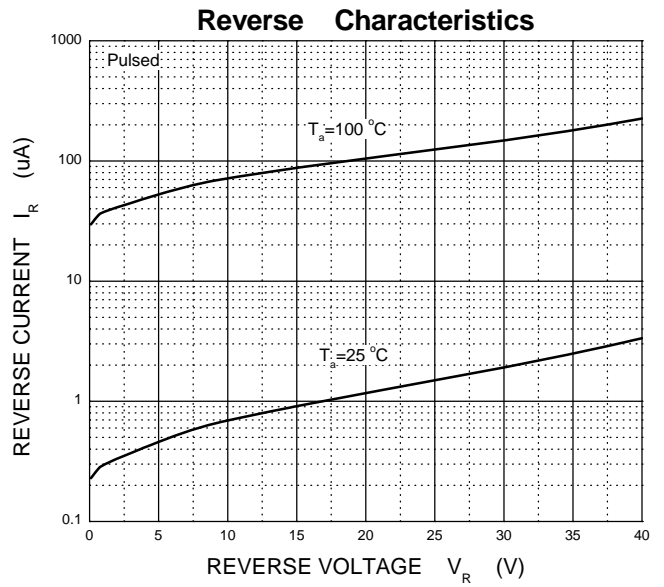
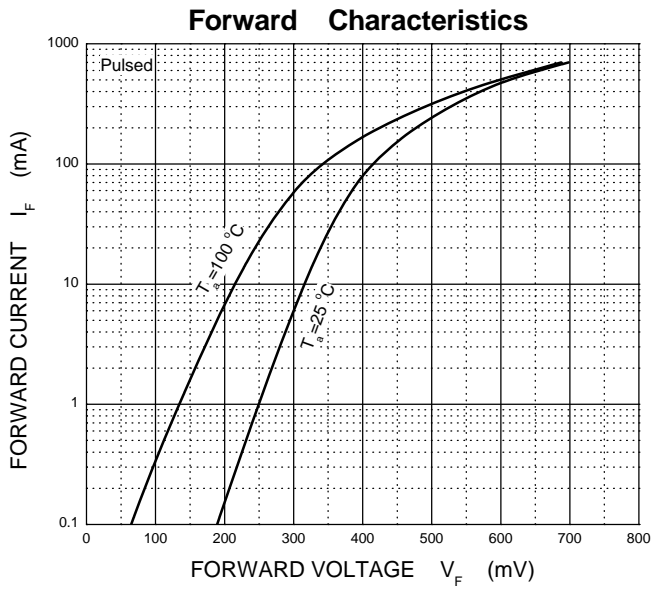
| Parameter | Symbol | Value | Unit |
|--|---------------------|-----------|------|
| Peak Reverse Voltage | V _R | 40 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 28 | V |
| Forward Current | I _F | 350 | mA |
| Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms | I _{FSM} | 2 | A |
| Power Dissipation | P _D | 400 | mW |
| Thermal Resistance From Junction To Ambient | R _{θJA} | 250 | °C/W |
| Junction Temperature | T _J | 125 | °C |
| Storage Temperature | T _{STG} | -55 ~+150 | °C |

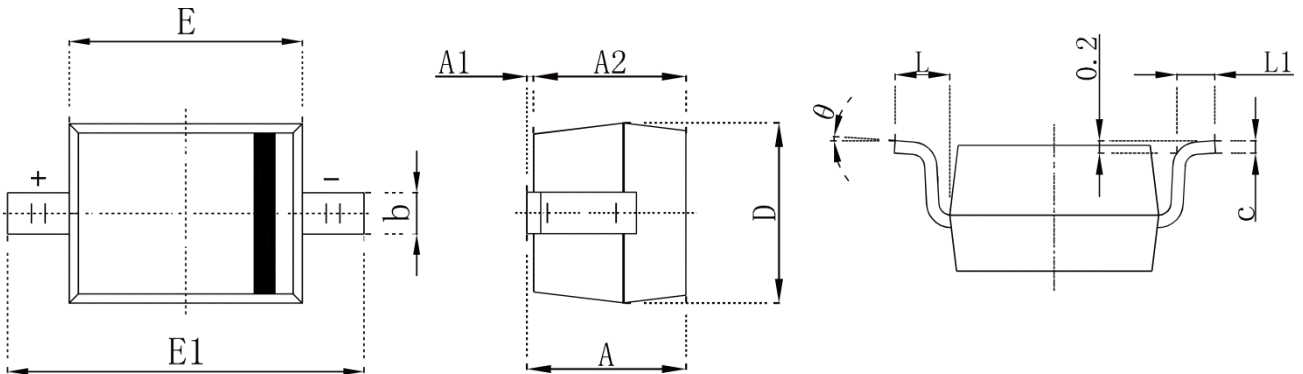
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Conditions |
|-------------------------|-----------------|-----|-----|------|------|--|
| Forward voltage | V _F | | | 0.37 | V | I _F =20mA |
| | | | | 0.60 | | I _F =200mA |
| Reverse voltage | V _R | 40 | | | V | I _R =100uA |
| Reverse voltage leakage | I _R | | | 5 | uA | V _R =30V |
| Diode capacitance | C _D | | 50 | | pF | V _R =0V,f=1MHz |
| Reverse recovery time | T _{RR} | | 10 | | nS | I _F =I _R =200mA,I _{rr} =0.1X I _R ,R _L =100Ω |

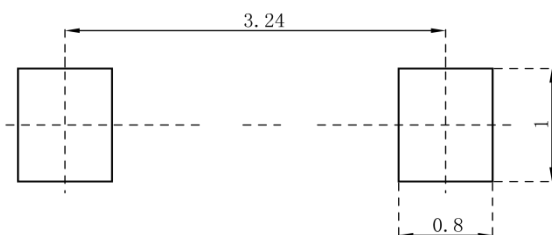
SCHOTTKY BARRIER DIODE

Typical Characteristics



SCHOTTKY BARRIER DIODE
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 | 0.500REF | | 0.020 REF | |
| L1 | 0.250 | 0.450 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

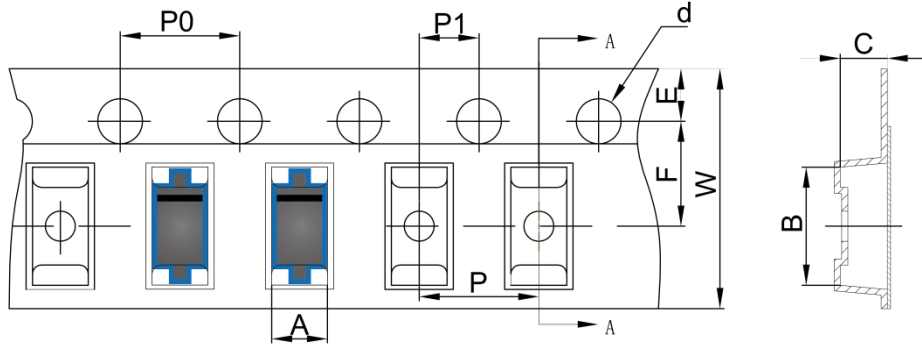
SOD-123 Suggested Pad Layout

Note:

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

SCHOTTKY BARRIER DIODE

SOD-123 Tape and Reel

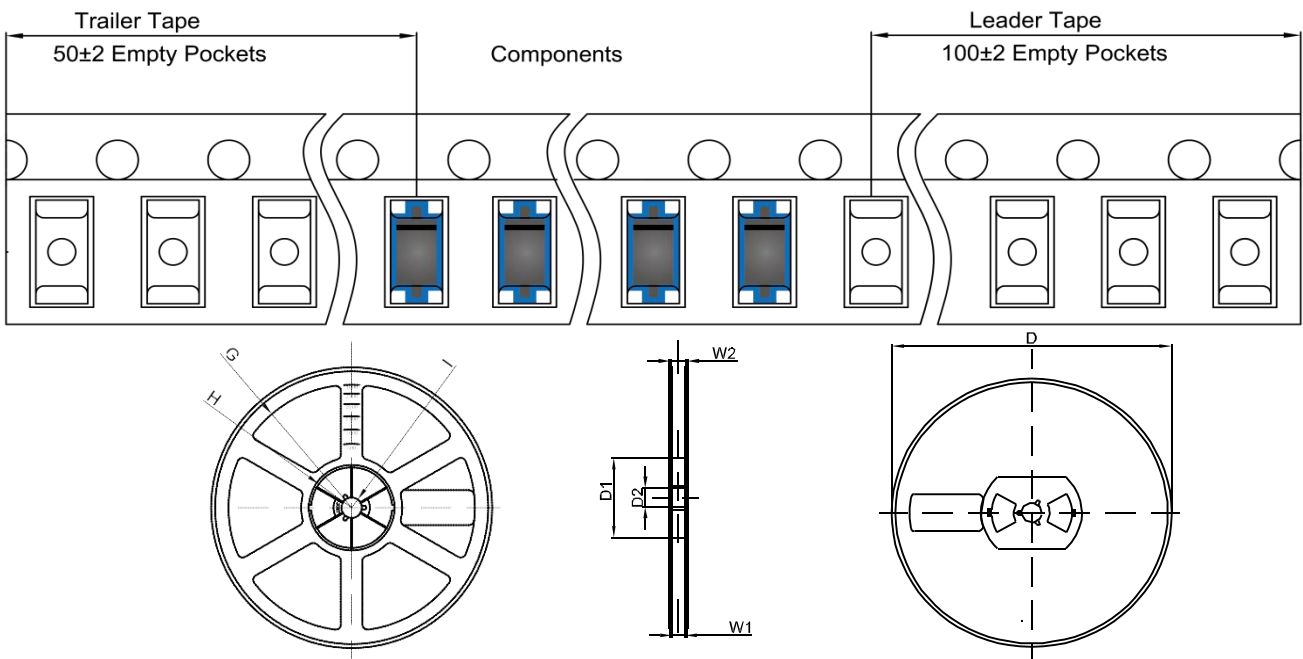
SOD-123 Embossed Carrier Tape



SOD-123 Tape Leader and Trailer

| DIMENSIONS ARE IN MILLIMETER | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| 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 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

SOD-123 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 |