

Plastic-Encapsulate Diodes

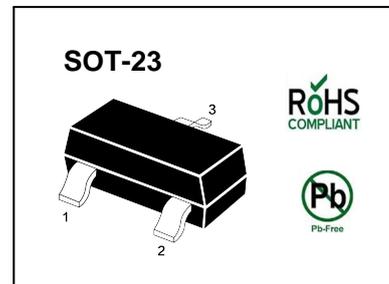
SCHOTTKY BARRIER DIODE

FEATURES

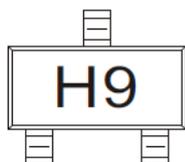
- Low Forward Voltage
- Fast Reverse Recovery Time
- High Forward Current

APPLICATIONS

- High Speed Switching



MARKING: H9



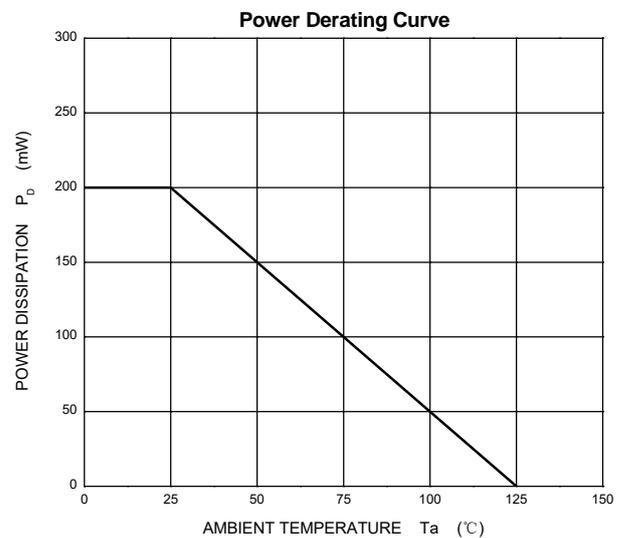
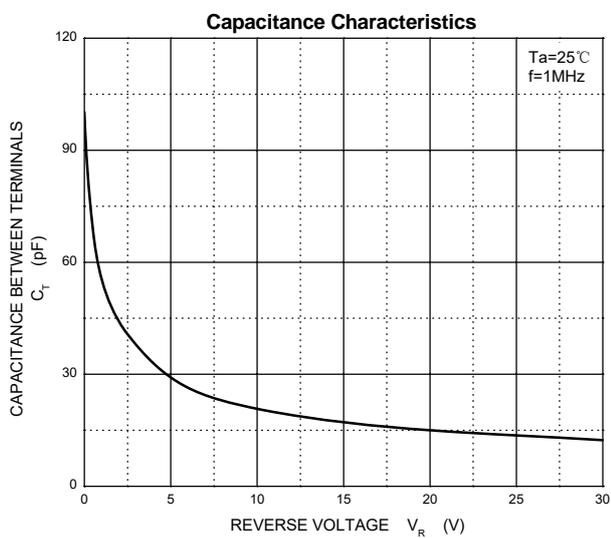
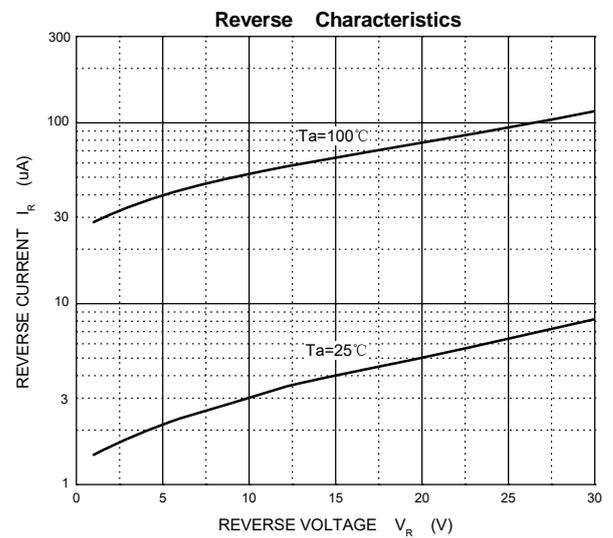
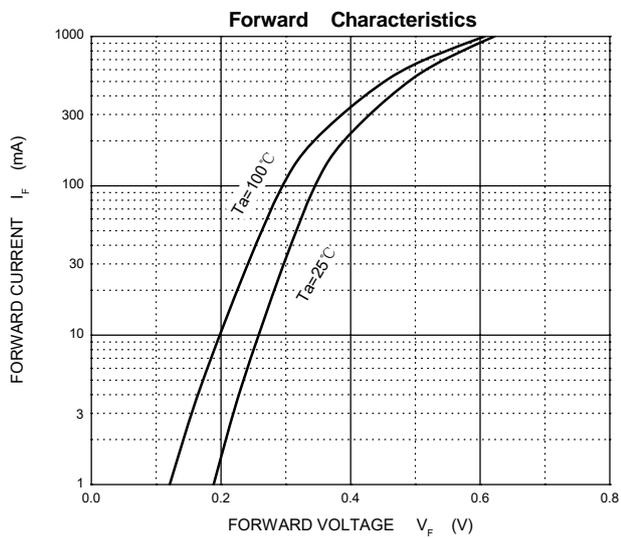
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------|---|------------|----------------------|
| V_R | DC Blocking Voltage | 20 | V |
| I_O | Forward Continuous Current | 500 | mA |
| I_{FM} | Peak Forward Current | 1.5 | A |
| I_{FSM} | Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$ | 5 | A |
| P_D | Power Dissipation | 200 | mW |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 500 | $^{\circ}\text{C/W}$ |
| T_j | Operating Junction Temperature Range | -40 ~ +125 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature Range | -55 ~ +150 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

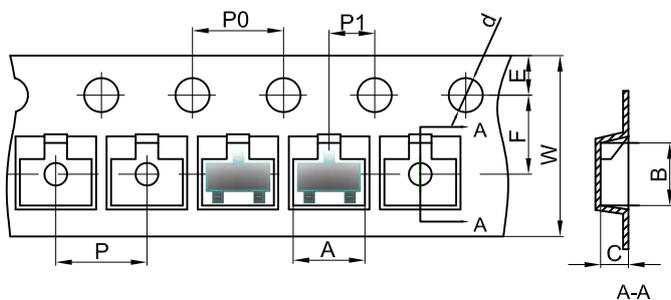
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-----------------------|------------|---|-----|-----|------|---------------|
| Reverse voltage | $V_{(BR)}$ | $I_R=100\mu\text{A}$ | 20 | | | V |
| Reverse current | I_R | $V_R=10\text{V}$ | | | 20 | μA |
| | | $V_R=20\text{V}$ | | | 100 | |
| Forward voltage | V_F | $I_F=10\text{mA}$ | | | 0.35 | V |
| | | $I_F=100\text{mA}$ | | | 0.43 | |
| | | $I_F=500\text{mA}$ | | | 0.55 | |
| Total capacitance | C_{tot} | $V_R=0\text{V}$, $f=1\text{MHz}$ | | 120 | | pF |
| Reverse recovery time | t_{rr} | $I_F=I_R=50\text{mA}$, $V_R=6\text{V}$ | | 20 | | ns |

Typical Characteristics



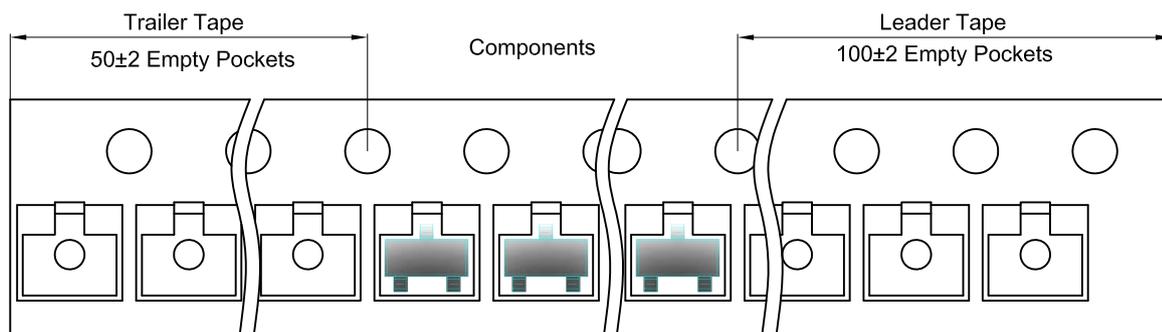
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

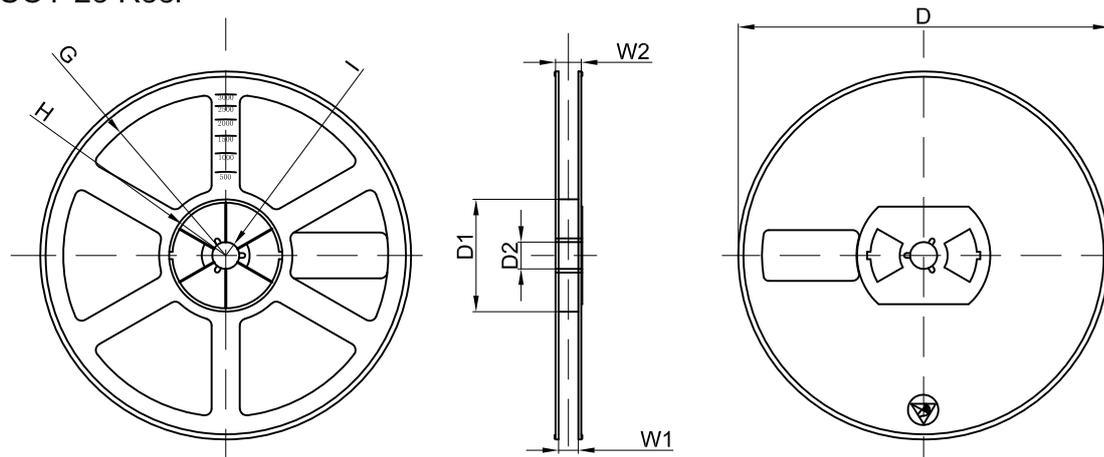


| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-23 | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-23 Tape Leader and Trailer



SOT-23 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 | |



| SYMBOL | MILLIMETER | |
|--------|------------|-------|
| | MIN | MAX |
| A | 0.900 | 1.150 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.150 |
| D | 2.800 | 3.000 |
| E | 1.200 | 1.400 |
| E1 | 2.250 | 2.550 |
| e | 0.950 TYP | |
| e1 | 1.800 | 2.000 |
| L | 0.550 REF | |
| L1 | 0.300 | 0.500 |
| θ | 0° | 8° |

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