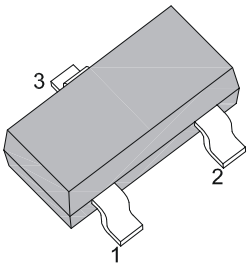
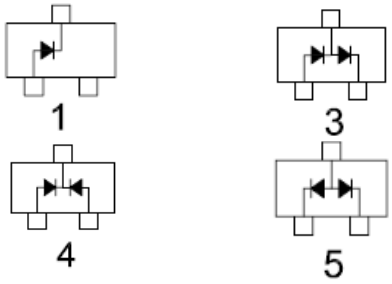
# Multiple Terminals SMD Schottky Diodes

## Features

- Low Turn-on Voltage
- Fast Switching
- High Conductance
- Electrically Identical to Standard JEDEC
- RoHS Compliant




SOT-23




## Mechanical Data

| | |
|---|---|
| **Case:** | SOT-23, Plastic Package |
| **Terminals:** | Solderable per MIL-STD-202G, Method 208 |
| **Weight:** | Approx. 0.008 gram |

## Maximum Ratings *(T Ambient=25ºC unless noted otherwise)*

| Symbol | Description | BAT54 | BAT54A | BAT54C | BAT54S | Unit | Conditions |
|---|---|---|---|---|---|---|---|
| | Pinout Figure | 1 | 5 | 4 | 3 | | |
| | Marking Code | L4/JV3 | L42/B6 | L43/KL3 | L44/LD3 | | |
| $V_{RRM}$ | Repetitive Peak Reverse Voltage | 30 | | | | V | |
| $I_{F(AV)}$ | Maximum Average Forward Current | 200 | | | | mA | $T_A$=75° C |
| $I_{FRM}$ | Repetitive Peak Forward Current | 300 | | | | mA | |
| $I_{FSM}$ | Peak Forward Surge Current, Pulse Width=1.0s (JEDEC Method) | 600 | | | | mA | |
| $P_D$ | Power Dissipation | 200 | | | | mW | $T_A$=25° C |
| | | 2.0 | | | | mW/° C | Derate above 25° C |
| $R_{thJA}$ | Thermal Resistance, Junction to Ambient | 500 | | | | ° C /W | |
| $T_J$ | Operating Junction Temperature Range | 125 | | | | ° C | |
| $T_{STG}$ | Operating Junction and Storage Temperature Range | -55 to +150 | | | | ° C | |

## Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

| Symbol | Description | Min. | Max. | Unit | Conditions |
|---|---|---|---|---|---|
| $V_{(BR)R}$ | Reverse Breakdown Voltage | 30 | - | V | $I_R$=10μA |
| $V_F$ | Forward Voltage | - | 0.24 | V | $I_F$=0.1mA |
| | | - | 0.32 | | $I_F$=1.0mA |
| | | - | 0.4 | | $I_F$=10mA |
| | | - | 0.5 | | $I_F$=30mA |
| | | - | 1.0 | | $I_F$=100mA |
| $I_R$ | Maximum Reverse Current | - | 2.0 | μA | $V_R$=25V |
| $C_J$ | Junction Capacitance | - | 10 | pF | $V_R$=1V, f=1MHz |
| $T_{rr}$ | Reverse Recovery Time | - | 5.0 | nS | $I_F$=$I_R$=10mA, $I_{R(REC)}$=1mA, |

## Typical Characteristics Curves

**Fig.1- Forward Current Derating**

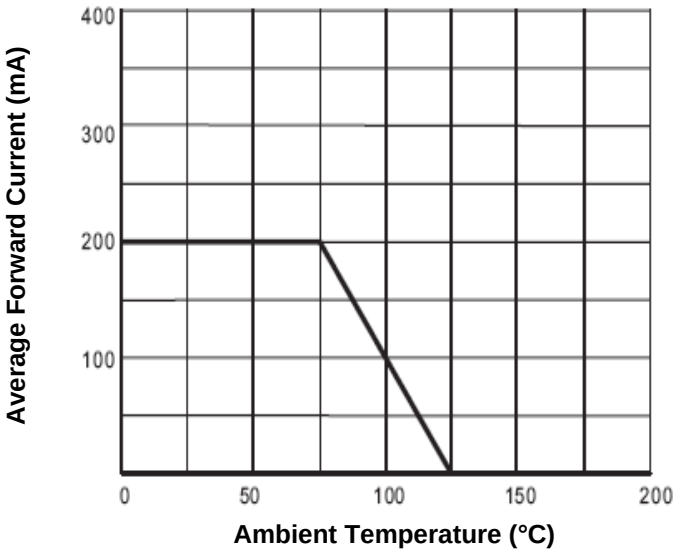



**Fig.2- Typical Forward Characteristics**

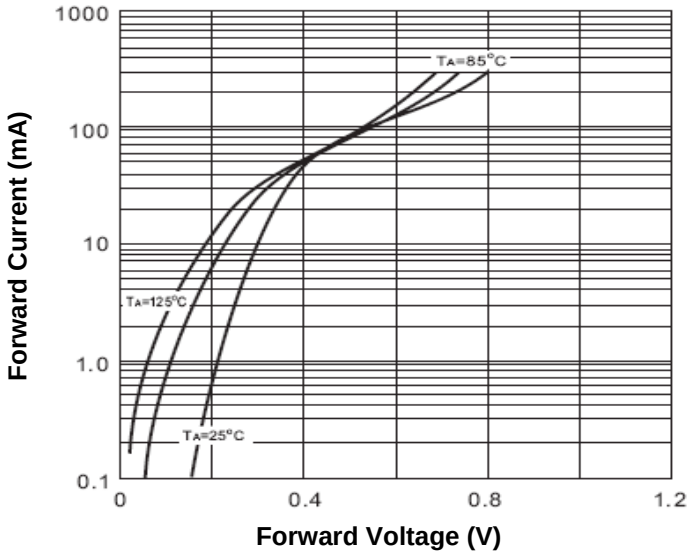


Fig.3-Typical Reverse Characteristics

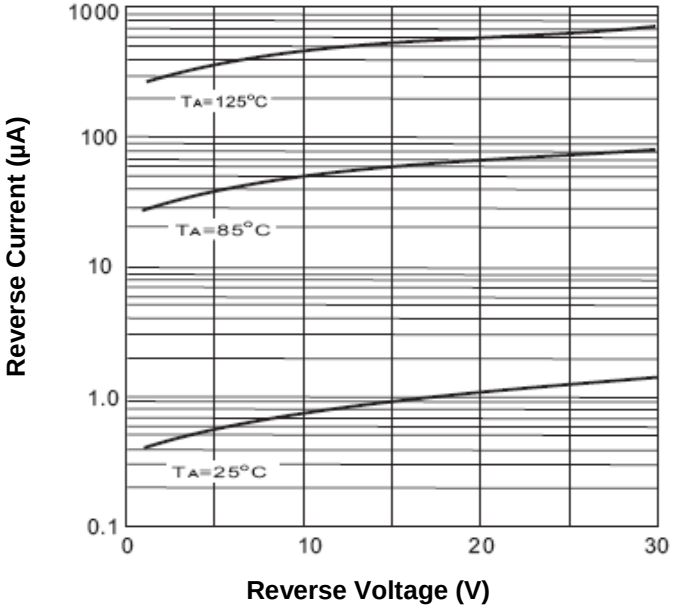
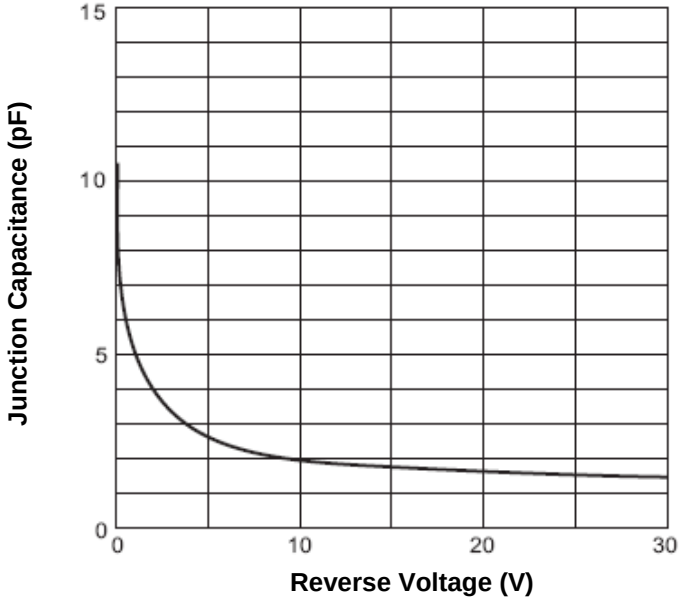
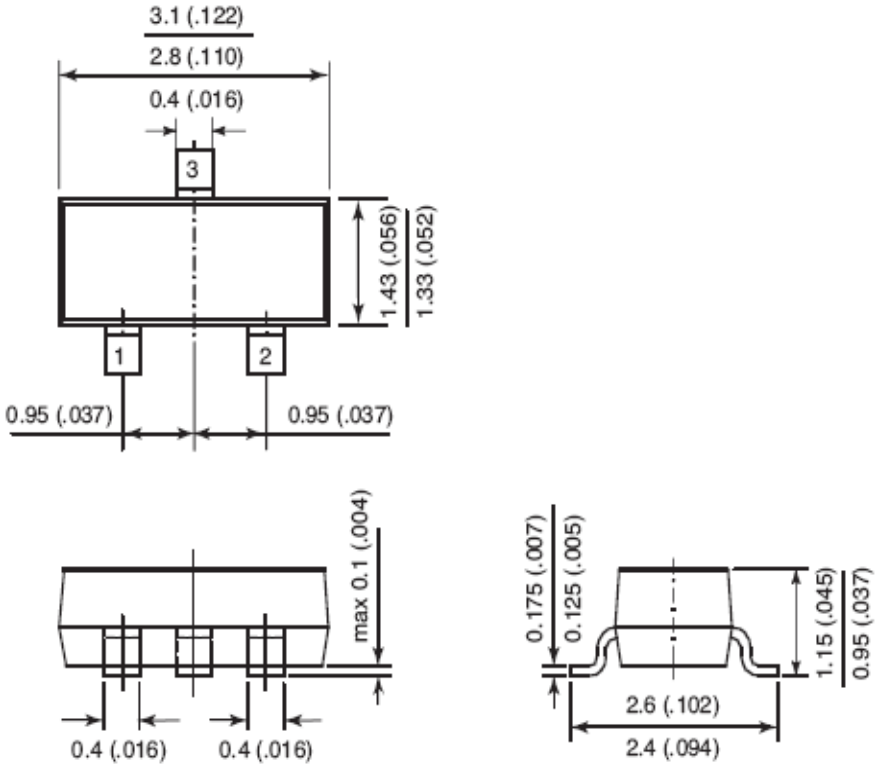



Fig.4- Typical Junction Capacitance

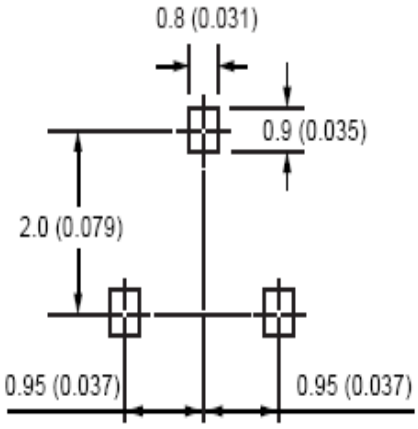


## Dimensions in mm (inch)

**SOT-23**

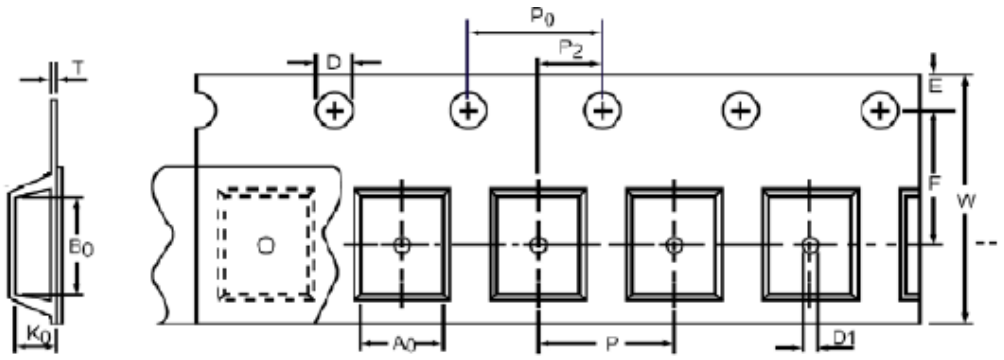



## Mounting Pad Layout in mm (inch)



## Packing Information:

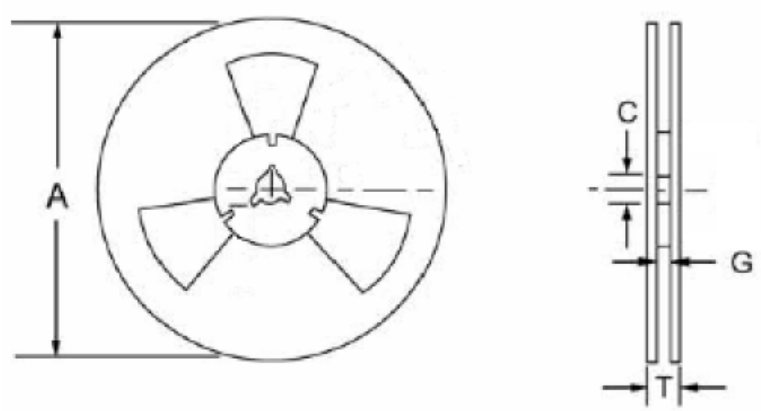
### Carrier Tape Dimensions (in mm)




| Product Type | A0 | B0 | K0 | D | P0 | P |
|---|---|---|---|---|---|---|
| | See Note | | | 1.55±0.5 | 4.0±0.1 | 4.0±0.1 |
| SOT-23 | **W** | **E** | **T** | **D1** | **F** | **P2** |
| | 8.0+0.3/-0.1 | 1.75±0.1 | 0.38±0.1 | 1.0±0.05 | 3.5±0.5 | 2.0±0.05 |

**Note:** Symbol A0, B0, K0 are determined by the maximum dimensions of the component size. The clearance between the component and the cavity must be within 0.05 mm (0.002'') min. to 0.50 mm (0.02'') max. for 8 mm tape.

## Reel Dimensions (in mm)




| A | C | G | T |
|---|---|---|---|
| 178.0±2.0 | 13.0±0.5 | 8.4±2.0 | 14.4 max. |

## Packing Quantity Information:

| Quantity | PCS per Inner Box | PCS per Inner Carton |
|---|---|---|
| TR70 Tape & Reel | 3000/Reel | 15000 |

## Inner Carton Size Information:

| Carton Size |
|---|
| 390X270X400 (in mm) |

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