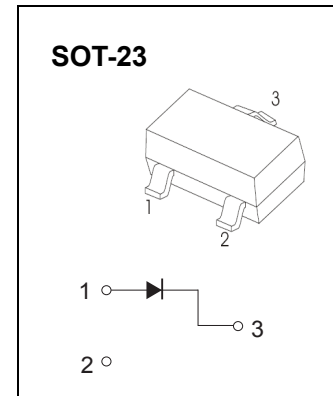


BAS16 SWITCHING DIODE

FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance



Marking: A6



Solid dot = Green molding compound device,
if none, the normal device.

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

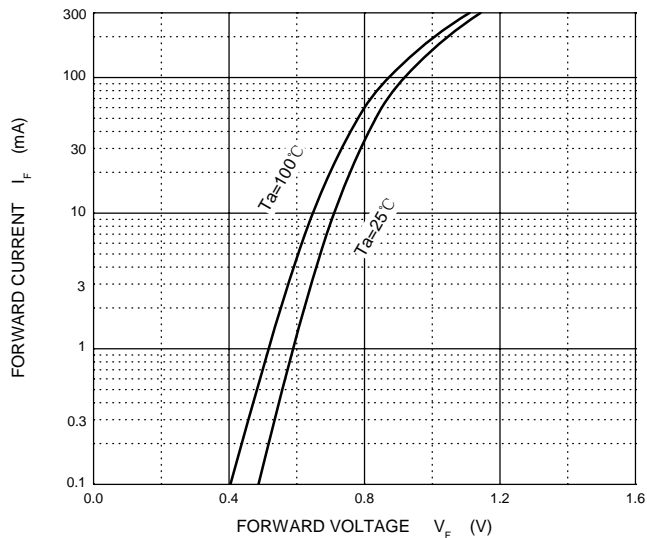
| Parameter | Symbol | Limit | Unit |
|--|-----------------|----------|------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Peak Reverse Voltage | V_{RRM} | 75 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Forward Continuous Current | I_{FM} | 300 | mA |
| Average Rectified Output Current | I_O | 150 | mA |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.0 | A |
| Power Dissipation | P_d | 225 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 556 | °C/W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{STG} | -55~+150 | °C |

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

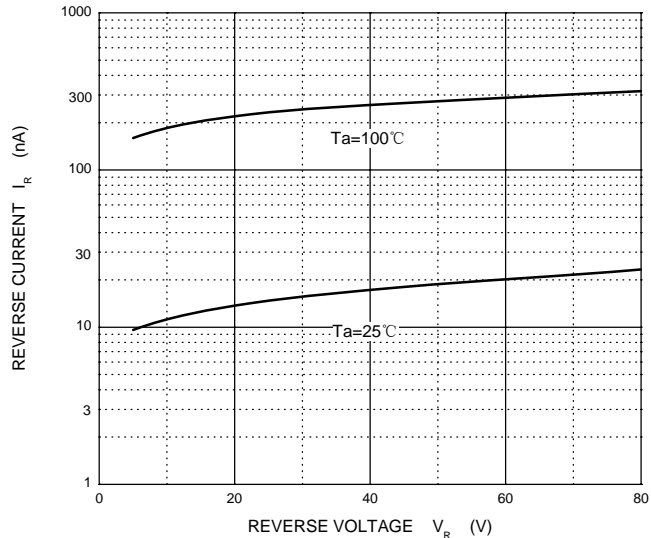
| Parameter | Symbol | Test conditions | Min | Max | Unit |
|---------------------------------|------------|---|-----|-----------------------------|---------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R = 100\mu A$ | 75 | | V |
| Reverse voltage leakage current | I_R | $V_R = 75V$ | | 1 | μA |
| Forward voltage | V_F | $I_F = 1mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$ | | 0.715 0.855 1 1.25 | V |
| Diode capacitance | C_D | $V_R = 0, f = 1MHz$ | | 2 | pF |
| Revers recovery time | t_{rr} | $I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R,$ $R_L = 100\Omega$ | | 6 | ns |

Typical Characteristics

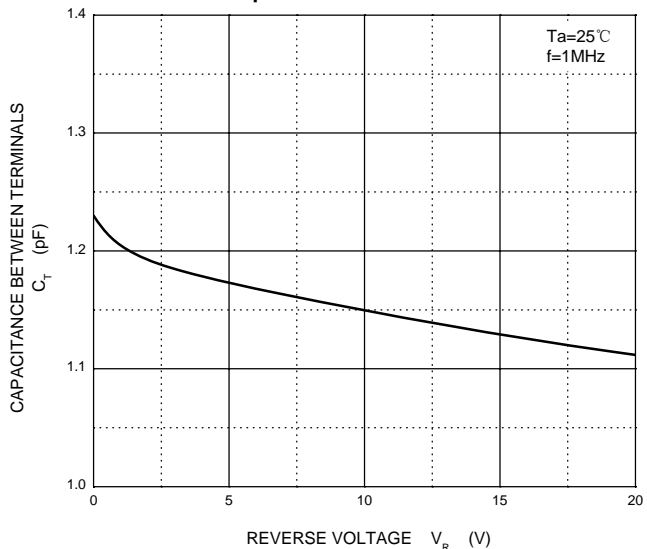
Forward Characteristics



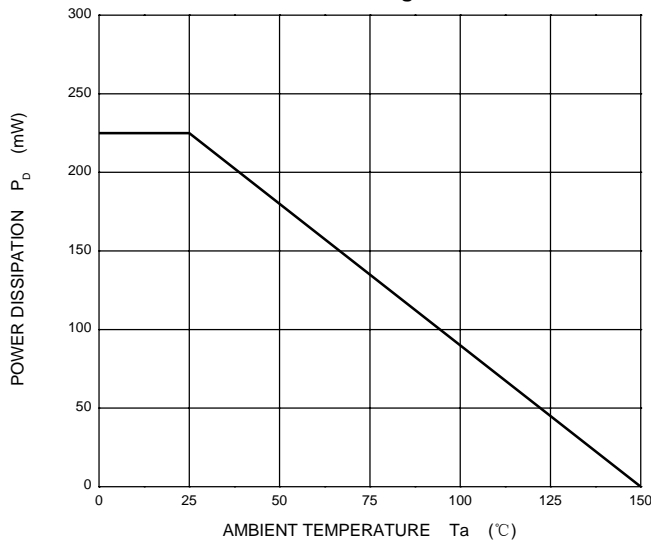
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

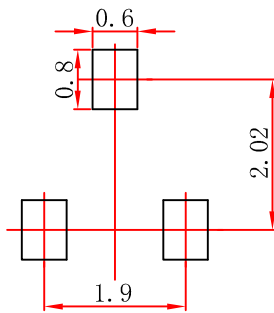


SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

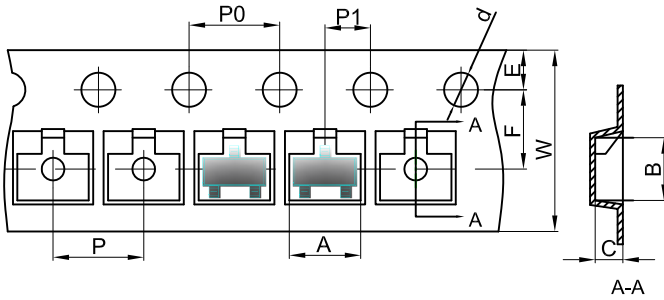
SOT-23 Suggested Pad Layout



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

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape



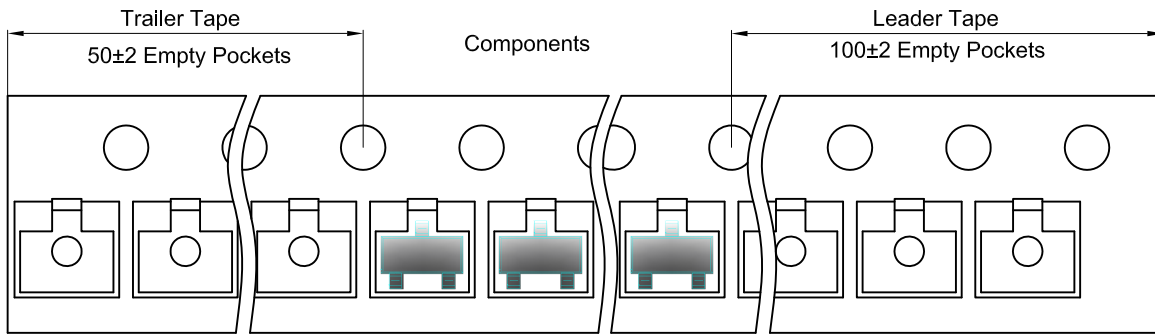
Packaging Description:

SOT-23 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).

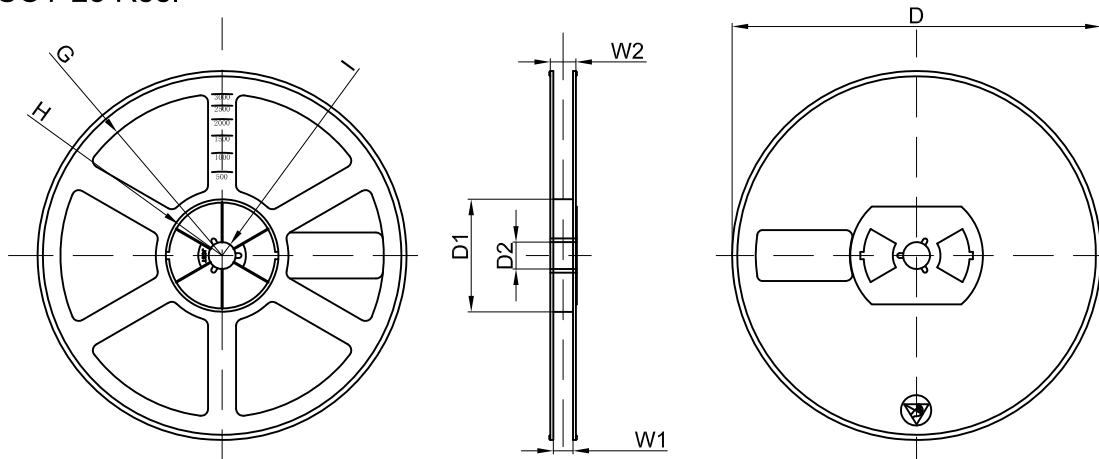
Dimensions are in millimeter

| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
|----------|------|------|------|-------|------|------|------|------|------|------|
| 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 | |