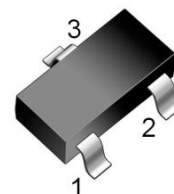
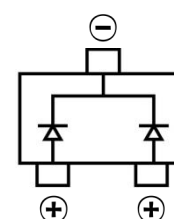


SWITCHING DIODE
FEATURES

- Fast Switching
- High Conductance
- Surface Mount device
- For General Purpose Switching Applications


SOT-23


BAS21C:JS3

MECHANICAL DATA

- Case: SOT-23
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.008 grams (approximate)

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

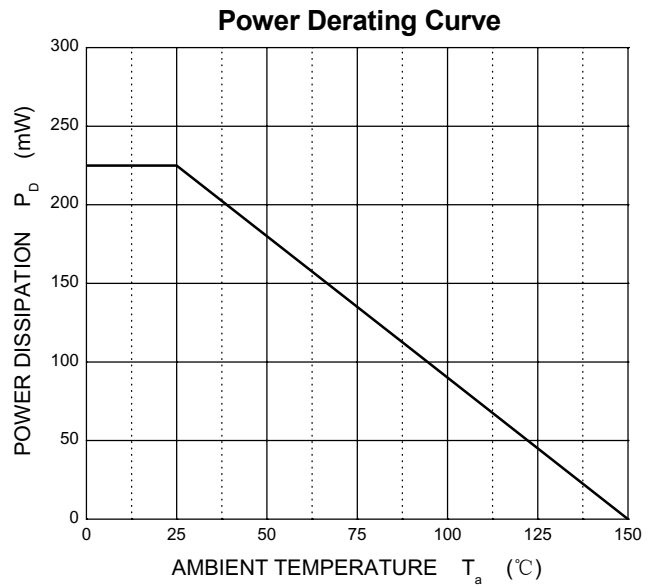
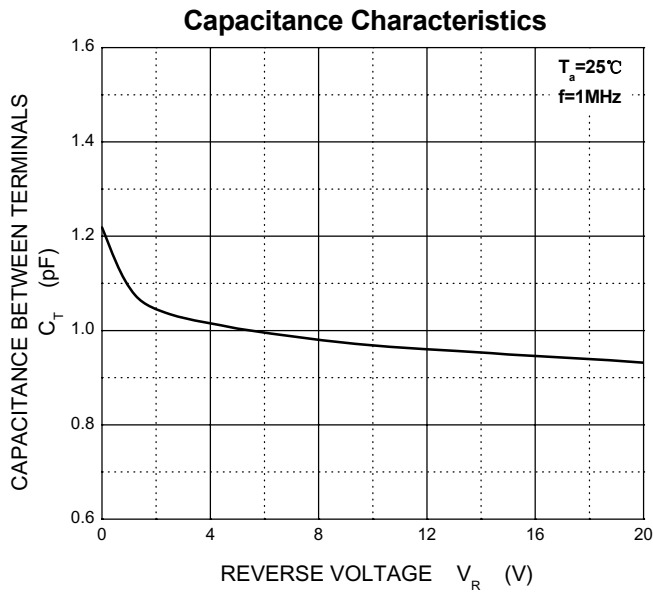
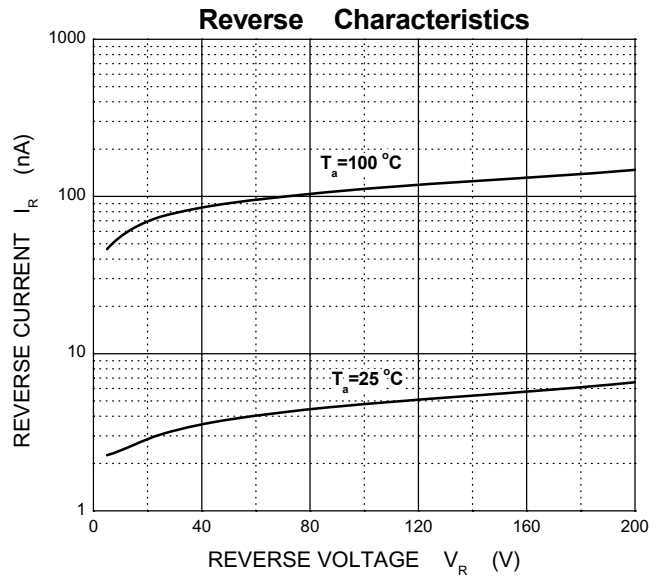
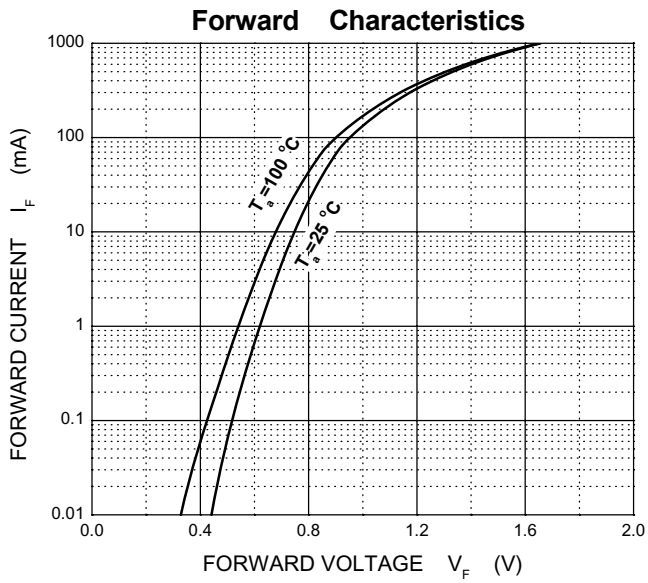
| Parameter | Symbol | Value | Unit |
|---|------------------|-----------|------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 250 | V |
| DC Blocking Reverse Voltage | V _R | 250 | V |
| Forward Current | I _F | 400 | mA |
| Average Rectified Output Current | I _O | 200 | mA |
| Non-Repetitive Peak Forward Surge Current @t@=8.3ms | I _{FSM} | 2.5 | A |
| Repetitive Peak Forward Surge Current | I _{FRM} | 625 | mA |
| Power Dissipation | P _D | 225 | mW |
| Thermal Resistance From Junction To Ambient | R _{θJA} | 555 | °C/W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature | T _{STG} | -55 ~+150 | °C |

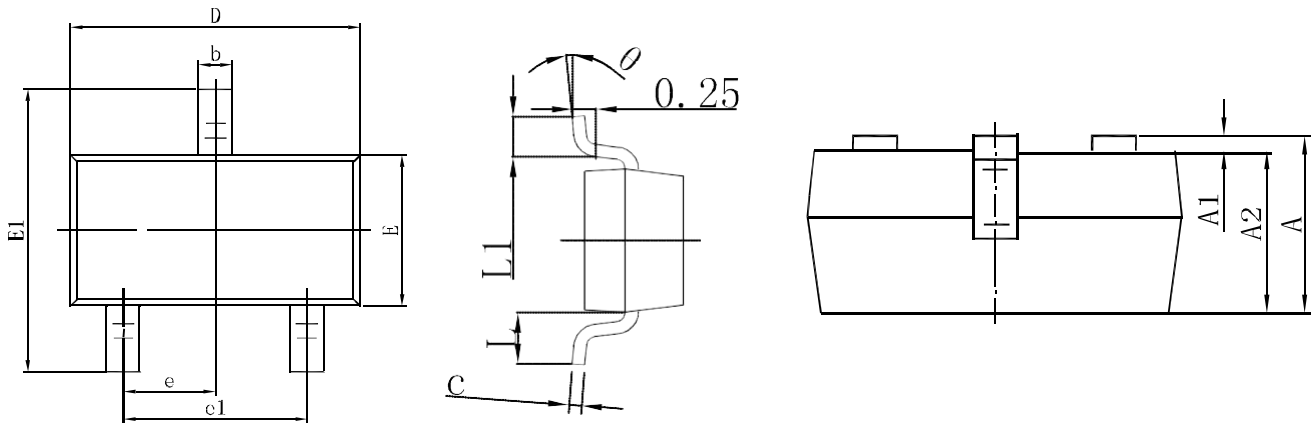
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | Min | Max | Unit | Conditions |
|---------------------------------|-------------------|-----|-----|------|---|
| Reverse breakdown voltage | V _(BR) | 250 | | V | I _R =100uA |
| Reverse voltage leakage current | I _R | | 0.1 | uA | V _R =200V |
| Forward voltage | V _F | | 1 | V | I _F =100mA |
| Diode capacitance | C _D | | 5 | pF | V _R =0V, f=1MHz |
| Reverse recovery time | T _{rr} | | 50 | nS | I _F =I _R =30mA I _{rr} =0.1×I _R R _L =100Ω |

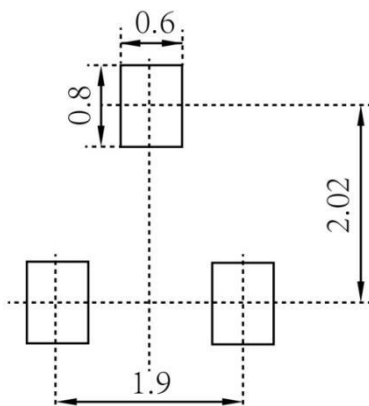
SWITCHING DIODE

Typical Characteristics



SWITCHING DIODE
SOT-23 Package Outline Dimensions


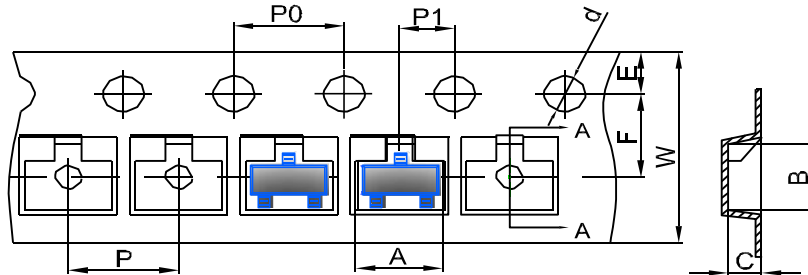
| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 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

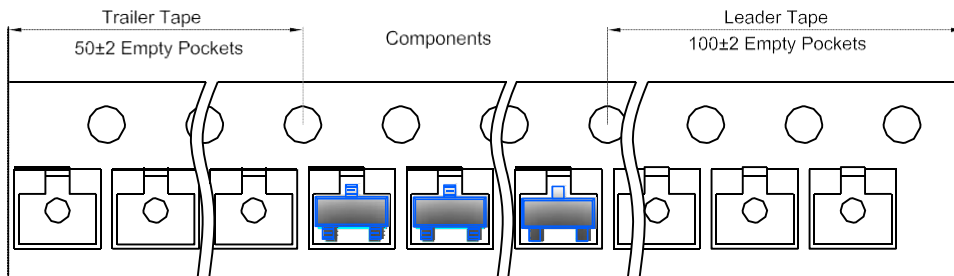
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

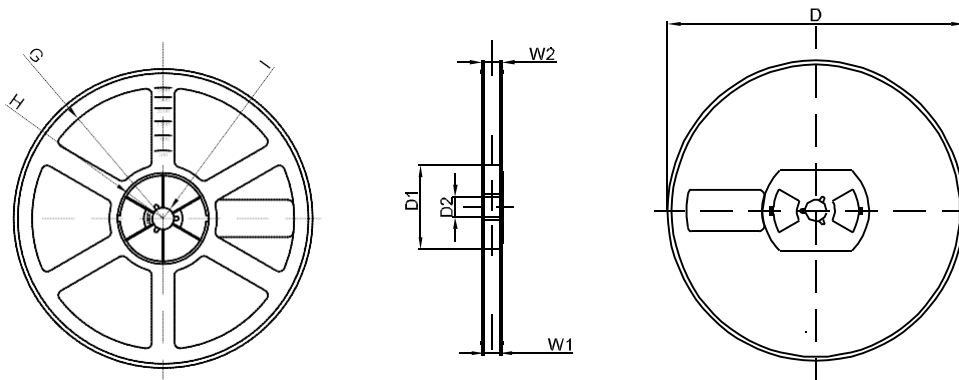


| DIMENSIONS ARE IN MILLIMETER | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| TYPE | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-23 | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

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 | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 9.50 | 12.30 |
| TOLERANCE | ±2 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |