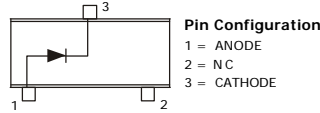
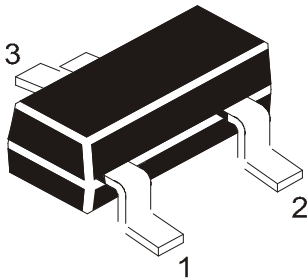


**SILICON PLANAR SWITCHING DIODE**

**BAS16**



**SOT-23**  
**Formed SMD Package**

**Marking**

**BAS16 = A6**

**High-Speed Switching Diodes**

**ABSOLUTE MAXIMUM RATINGS**

| DESCRIPTION                                       | SYMBOL    | VALUE        | UNIT       |
|---|-----------|--------------|------------|
| Continuous Reverse Voltage                        | $V_R$     | 75           | V          |
| Repetitive Peak Reverse Voltage                   | $V_{RRM}$ | 85           | V          |
| Forward Current (DC)                              | $I_F$     | 215          | mA         |
| Repetitive Peak Forward Current                   | $I_{FRM}$ | 500          | mA         |
| Non Repetitive Peak Forward Current (Per Crystal) |           |              |            |
| $t=1\mu s$  | $I_{FSM}$ | 4.0          | A          |
| $t=1ms$   | $I_{FSM}$ | 1.0          | A          |
| $t=1s$  | $I_{FSM}$ | 0.5          | A          |
| Power Dissipation @ $T_a=25^\circ C$              | $P_D$     | 0.25         | W          |
| Storage Temperature Range                         | $T_{stg}$ | - 55 to +150 | $^\circ C$ |
| Junction Temperature                              | $T_j$     | 150          | $^\circ C$ |

**Thermal Resistance**

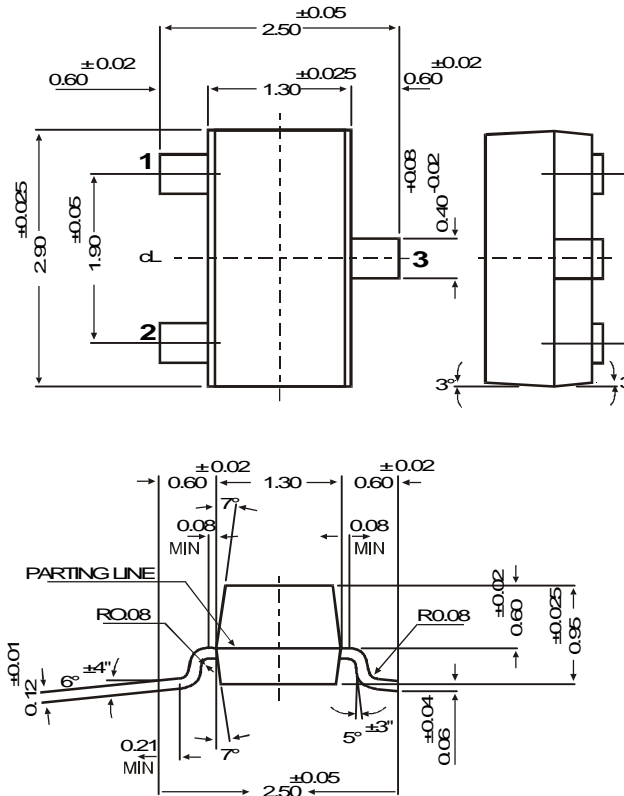
|                                  |               |     |     |
|----------------------------------|---------------|-----|-----|
| Junction to Ambient in free fair | $R_{th(j-a)}$ | 500 | K/W |
|----------------------------------|---------------|-----|-----|

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$  unless specified otherwise)**

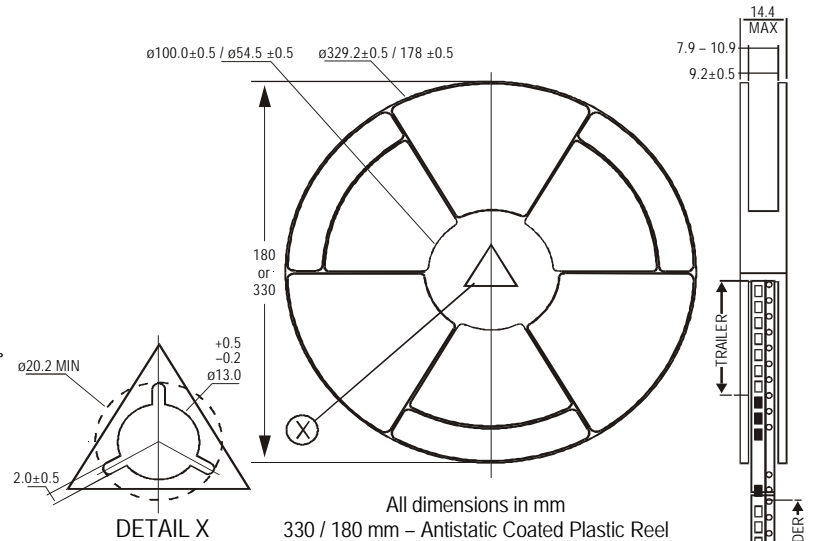
| DESCRIPTION                               | SYMBOL   | TEST CONDITION  | MIN | TYP | MAX   | UNIT    |
|---|----------|---|-----|-----|-------|---------|
| Forward Voltage                           | $V_F$    | $I_F = 1\text{ mA}$   |     |     | 0.715 | V       |
|   |          | $I_F = 10\text{ mA}$  |     |     | 0.855 | V       |
|   |          | $I_F = 50\text{ mA}$  |     |     | 1.0   | V       |
|   |          | $I_F = 150\text{ mA}$   |     |     | 1.25  | V       |
| Reverse Voltage Leakage Current           | $I_R$    | $V_R=25V, T_j=150^\circ C$  |     |     | 30    | $\mu A$ |
|   |          | $V_R=75V$   |     |     | 1.0   | $\mu A$ |
|   |          | $V_R=75V, T_j=150^\circ C$  |     |     | 50    | $\mu A$ |
| Diode Capacitance                         | $C_d$    | $V_R=0V, f=1MHz$  |     |     | 2.0   | pF      |
| Forward Recovery Voltage When Switched to | $V_{fr}$ | $I_F=10mA, t_p=20ns$  |     |     | 1.75  | V       |
| Reverse Recovery Time When Switched from  | $t_{rr}$ | $I_F=10mA$ to $I_R=60mA, R_L=100\ \Omega$ , measured at $I_R=1mA$ |     |     | 4.0   | ns      |
| Recovery Charge When Switched from        | $Q_S$    | $I_F=10mA$ to $V_R=5V, R_L=100\ \Omega$ ,                         |     |     | 45    | pC      |

**BAS16**  
**SOT-23**  
**Formed SMD Package**

**SOT-23 Formed SMD Package**



**SOT-23 Package Reel Information**  
**Reel Specifications for W Packing (13") and 7"**

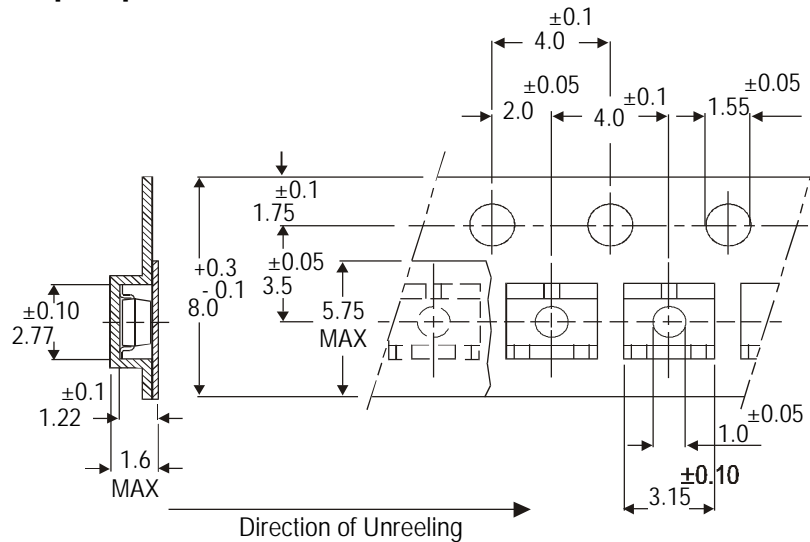


All dimensions in mm  
 330 / 180 mm – Antistatic Coated Plastic Reel

**NOTES:**

- | No. of Devices | 8mm Tape Size of Reel | 8mm Tape Size of Reel |
|----------------|-----------------------|-----------------------|
| 10,000 Pcs     | 330 mm (13")          | 180 mm (7")           |
| 3,000 Pcs      |                       |                       |
- The bandolier of 330 mm reel contains at least 10,000 devices.
  - The bandolier of 180 mm reel contains at least 3,000 devices.
  - No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.
  - Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
  - The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there.

**Tape Specification for SOT-23 Surface Mount Device**



All dimensions in mm

**Packing Detail**

| PACKAGE    | STANDARD PACK |                | INNER CARTON BOX |      | OUTER CARTON BOX  |       |        |
|------------|---------------|----------------|------------------|------|-------------------|-------|--------|
|            | Details       | Net Weight/Qty | Size             | Qty  | Size              | Qty   | Gr Wt  |
| SOT-23 T&R | 3K/feel       | 136 gm/3K pcs  | 3" x 7.5" x 7.5" | 12 K | 17" x 15" x 13.5" | 192 K | 12 kgs |
|            | 10K/feel      | 415 gm/10K pcs | 9" x 9" x 9"     | 51 K | 19" x 19" x 19"   | 408 K | 28 kgs |
|            |               |                | 13" x 13" x 0.5" | 10 K | 17" x 15" x 13.5" | 300 K | 16 kgs |