

BAS16~BAS21

SURFACE MOUNT SWITCHING DIODES

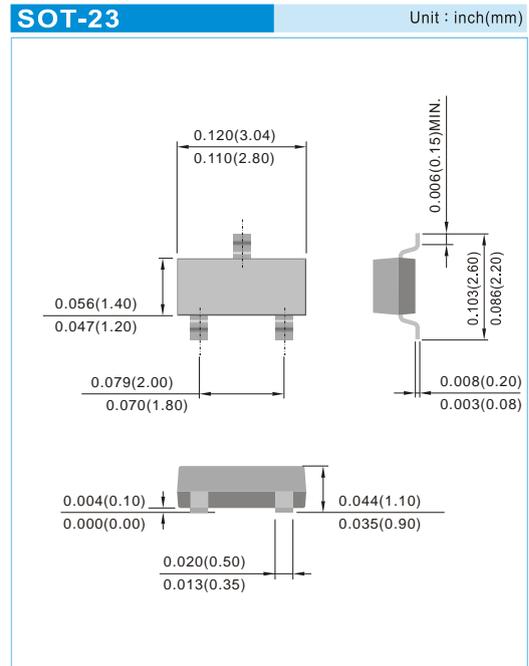
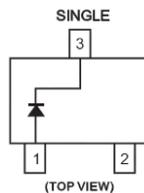
Voltage 100~250 V **POWER** 350 mW

Features

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: SOT-23, Plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | BAS16 | BAS19 | BAS20 | BAS21 | UNIT |
|------------------------------------------------------------------------------------------------------|-----------------|-------------|-----------|-----------|-----------|--------------------|
| Marking Code | | A6 | A8 | A80 | A82 | |
| Reverse Voltage | V_R | 75 | 100 | 150 | 200 | V |
| Peak Reverse Voltage | V_{RM} | 100 | 120 | 200 | 250 | V |
| Rectified Current (Average), Half Wave Rectification With Resistive Load And $f \geq 50\text{Hz}$ | I_O | 250 | 200 | 200 | 200 | mA |
| Peak Forward Surge Current, $t_p=1\mu\text{s}$ Single Half Sine-Wave Superimposed On Rated Load | I_{FSM} | 2 | 2.5 | 2.5 | 2.5 | A |
| Power Dissipation Derate Above 25°C | P_{TOT} | 350 | 350 | 350 | 350 | mW |
| Maximum Forward Voltage | V_F | 0.855@10mA | 1.0@100mA | 1.0@100mA | 1.0@100mA | V |
| Maximum Dc Reverse Current At Rated Dc Blocking Voltage $T_J=25^\circ\text{C}$ | I_R | 1 | 1 | 1 | 1 | μA |
| Typical Junction Capacitance (Notes1) | C_J | 2 | 1.5 | 1.5 | 1.5 | pF |
| Maximum Reverse Recovery Time (Note 2) | T_{RR} | 6 | 50 | 50 | 50 | nS |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 357 | | | | $^\circ\text{C/W}$ |
| Operating Junction Temperature And Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | $^\circ\text{C}$ |

NOTES :

1. C_J at $V_R=0$, $f=1\text{MHz}$
2. From $I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{Volts}$, $R_L=100\Omega$
3. Mounted on a FR-4 PCB, single-sided copper, with 100cm^2 copper pad area.

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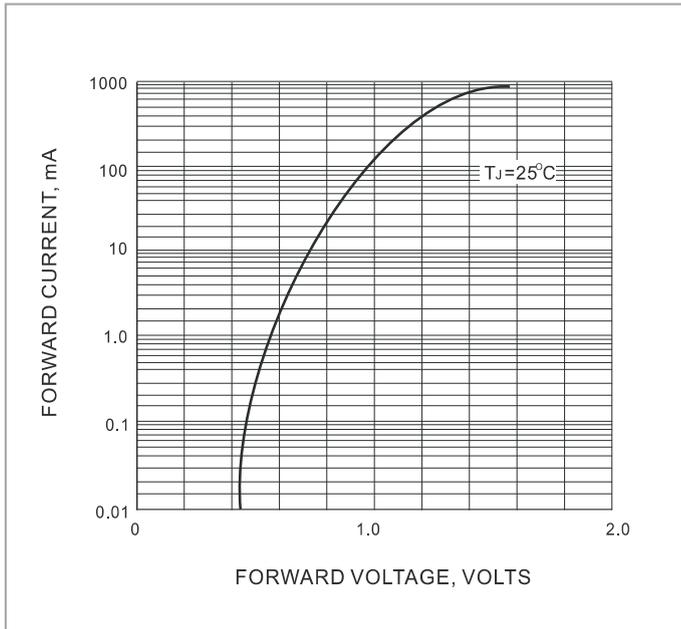


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

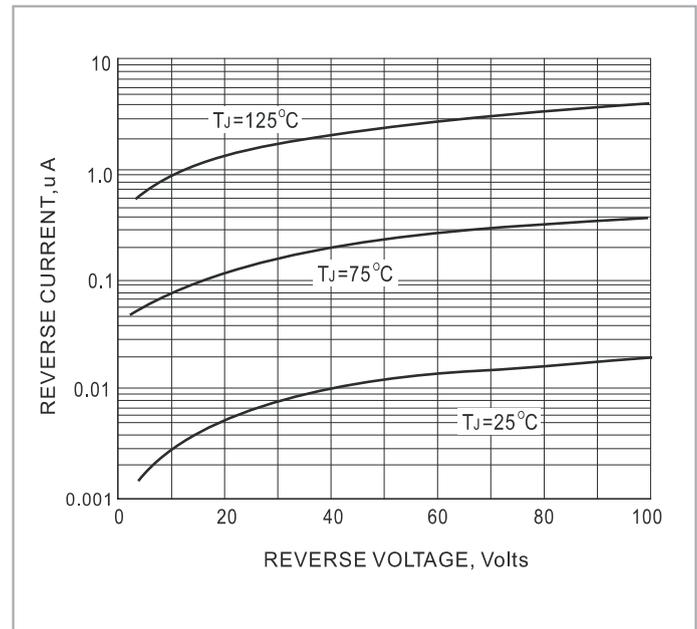


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

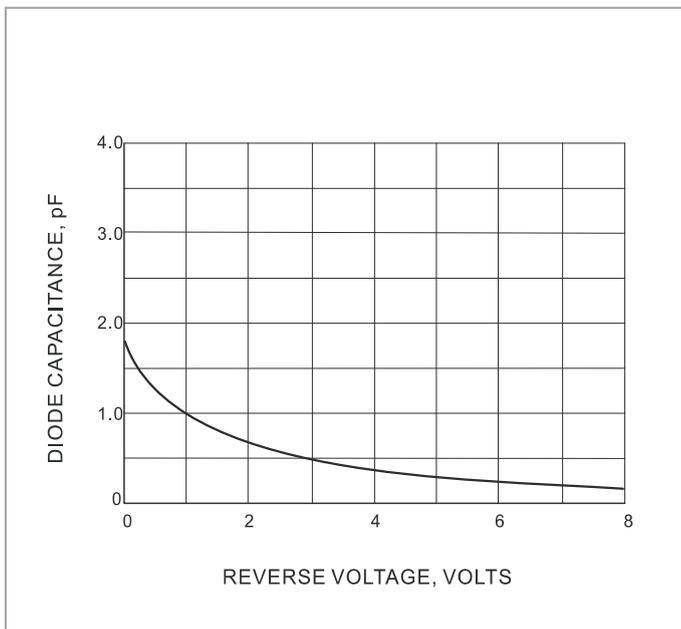


FIG. 3 TYPICAL JUNCTION CAPACITANCE

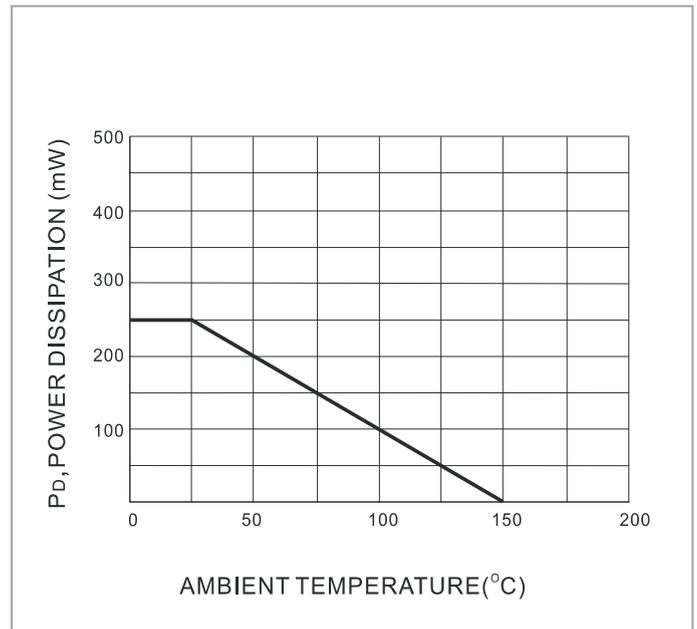
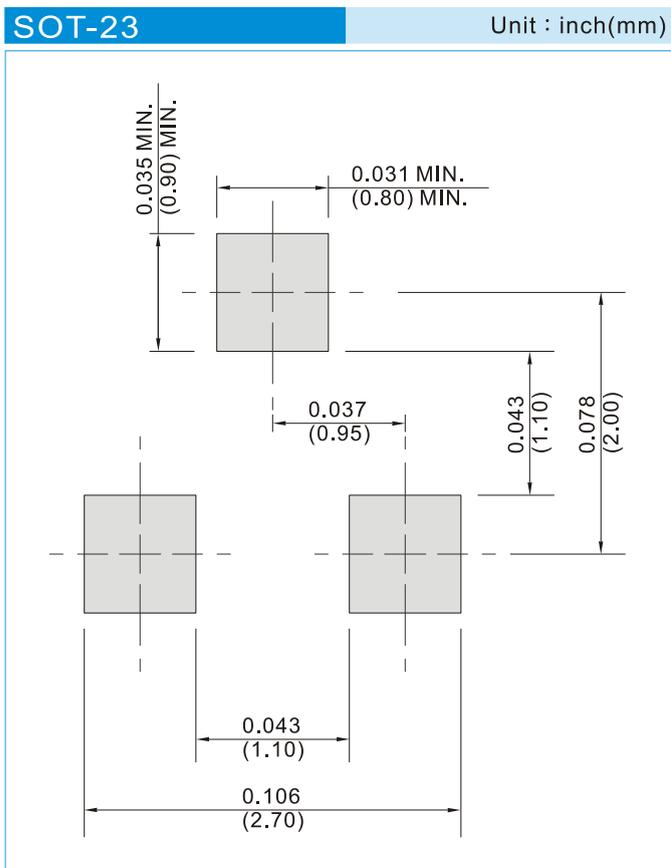


FIG. 4 POWER DERATING CURVE

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R – 12K per 13" plastic Reel
T/R – 3K per 7" plastic Reel

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