

BAS16~BAS21

SURFACE MOUNT SWITCHING DIODES

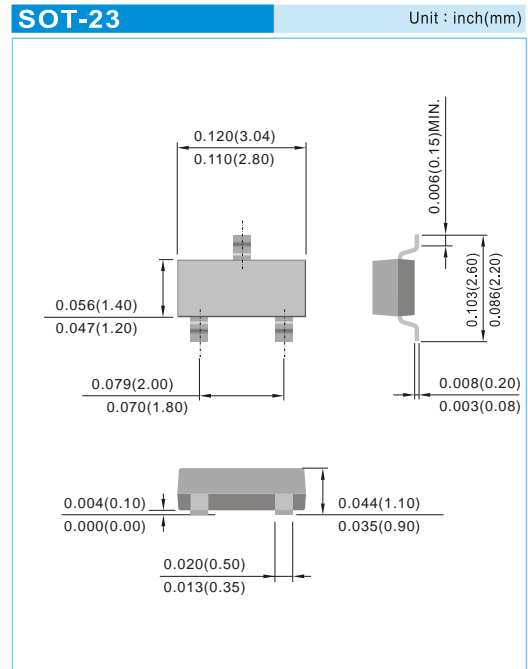
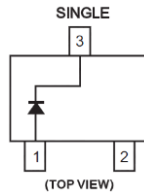
Voltage 100~250 V **POWER** 350 mW

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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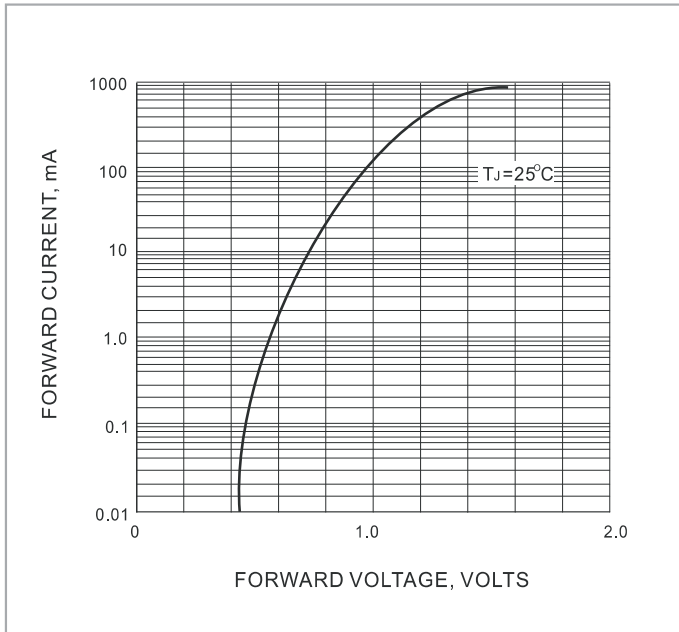


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

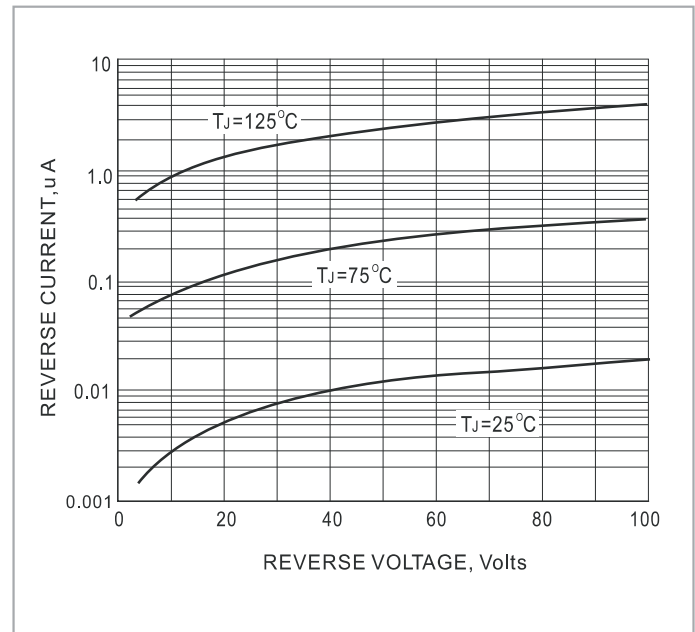


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

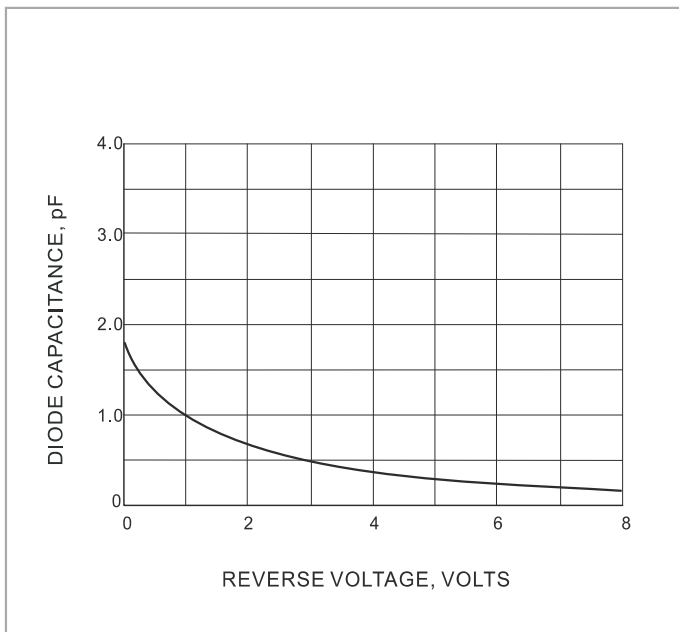


FIG. 3 TYPICAL JUNCTION CAPACITANCE

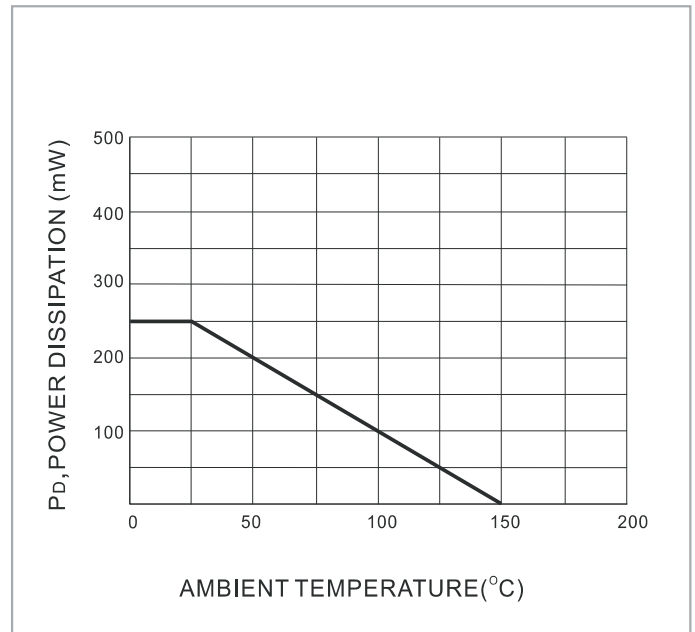
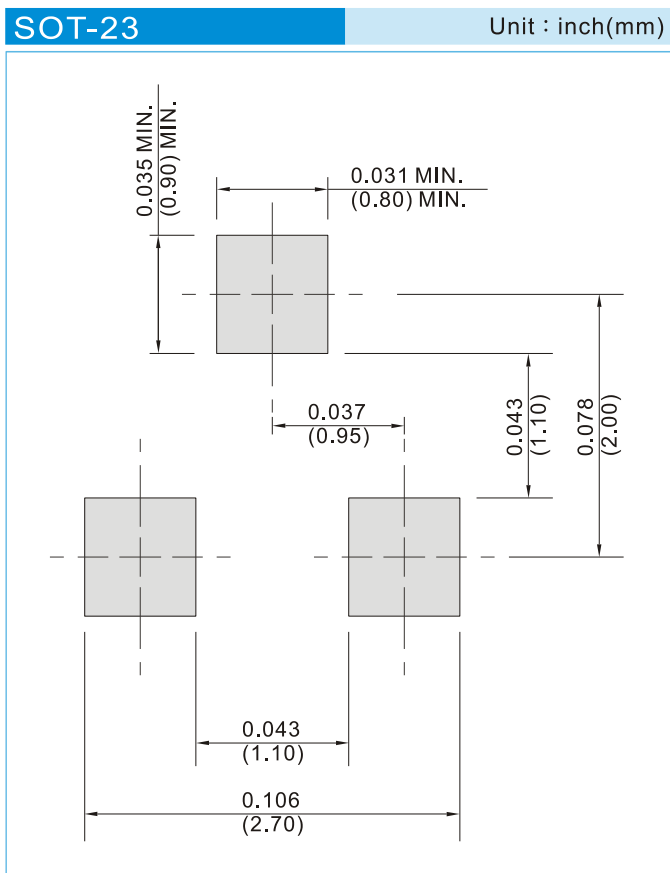


FIG. 4 POWER DERATING CURVE

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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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