



# BAS16~BAS21

## SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100-250 Volts    **POWER** 350mWatts

**SOT-23**    Unit : inch(mm)

### FEATURES

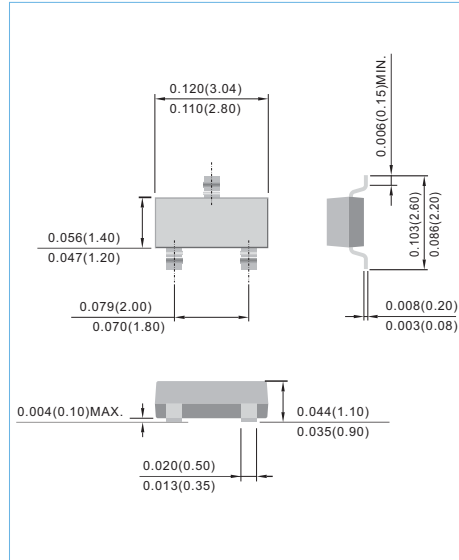
- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.0003 ounces, 0.0084 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

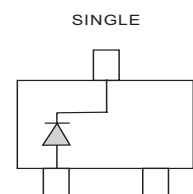
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	BAS16	BAS19	BAS20	BAS21	UNITS
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 $f \geq 50$ Hz	$I_o$	250	200	200	200	mA
Peak Forward Surge Current, $t_p=1.0\mu s$ single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	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			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ C$	$I_R$	1	1	1	1	$\mu A$
Typical Junction Capacitance( Notes1)	$C_J$	2	1.5	1.5	1.5	pF
Maximum Reverse Recovery (Notes2)	$T_{RR}$	6	50	50	50	ns
Typical Thermal Resistance	$R_{\theta JA}$	357				$^\circ C / W$
Storage Temperature Range	$T_J$	-55 TO +125				$^\circ C$

NOTE:

1.  $C_J$  at  $V_R=0$ ,  $f=1MHz$
2. From  $I_F=10mA$  to  $I_R=1mA$ ,  $V_R=6Volts$ ,  $R_L=100\Omega$





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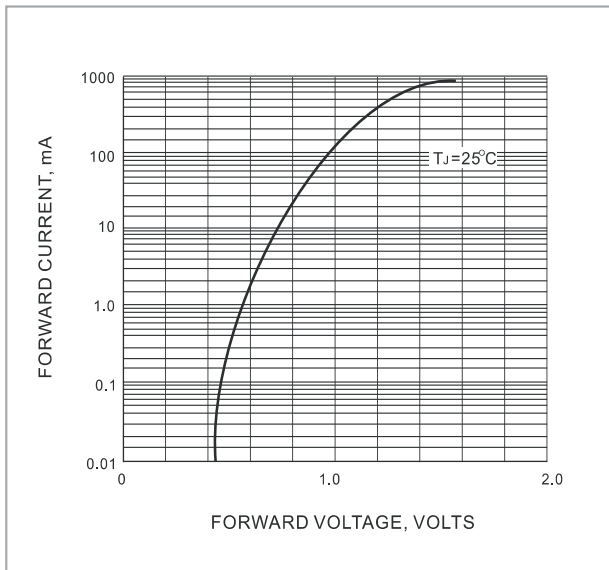


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

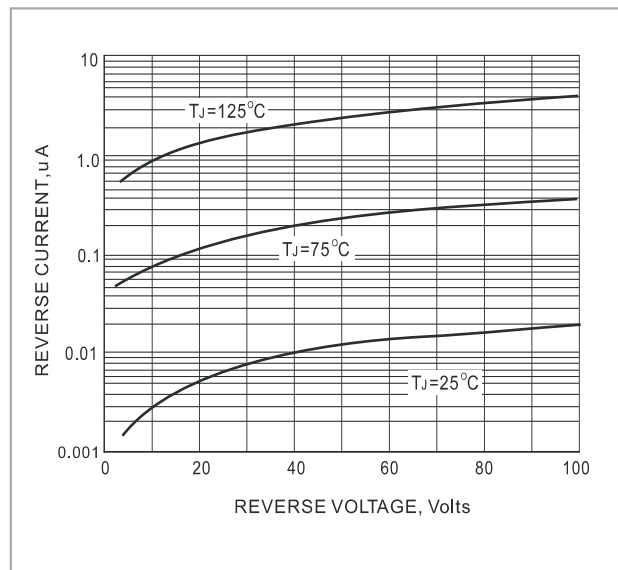


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

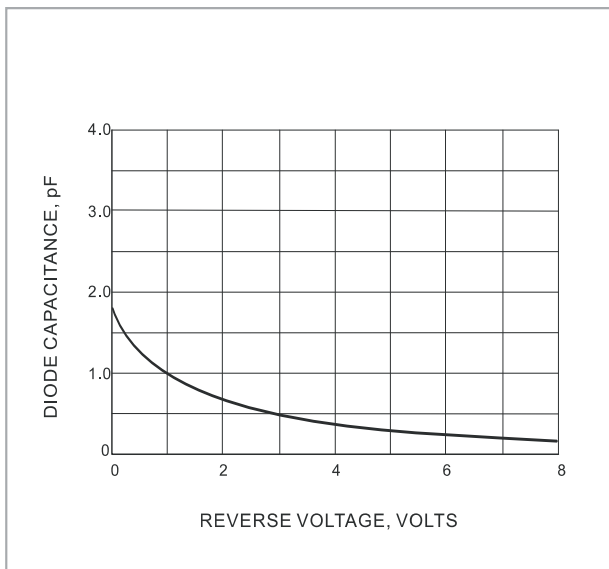


FIG. 3 TYPICAL JUNCTION CAPACITANCE

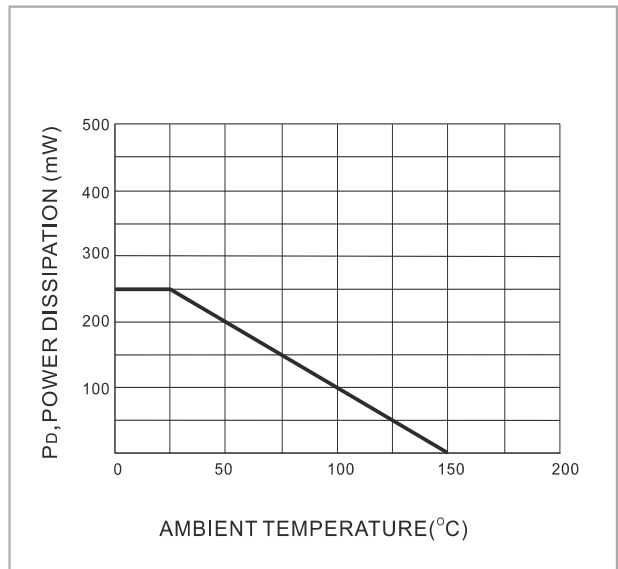
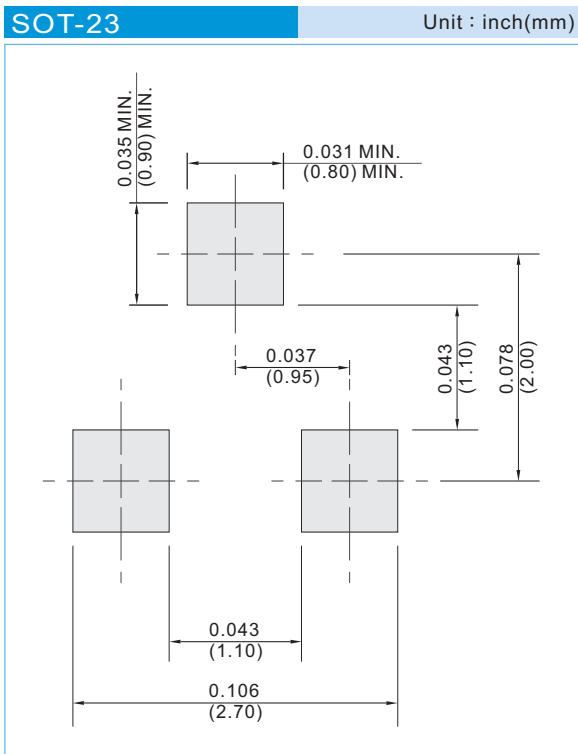


FIG. 4 POWER DERATING CURVE



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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

## LEGAL STATEMENT

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For example :

RB500V-40\_R2\_00001



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
T/B	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
T/R	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
B/P	<b>B</b>	13"	<b>2</b>			
T/P	<b>T</b>	26mm	<b>X</b>			
TRR	<b>S</b>	52mm	<b>Y</b>			
TRL	<b>L</b>	PBCU	<b>U</b>			
FORMING	<b>F</b>	PBCD	<b>D</b>			

Part No\_packing code\_Version

BAS16\_R1\_00001

BAS16\_R2\_00001