



# BAS16~BAS21

## SURFACE MOUNT SWITCHING DIODES

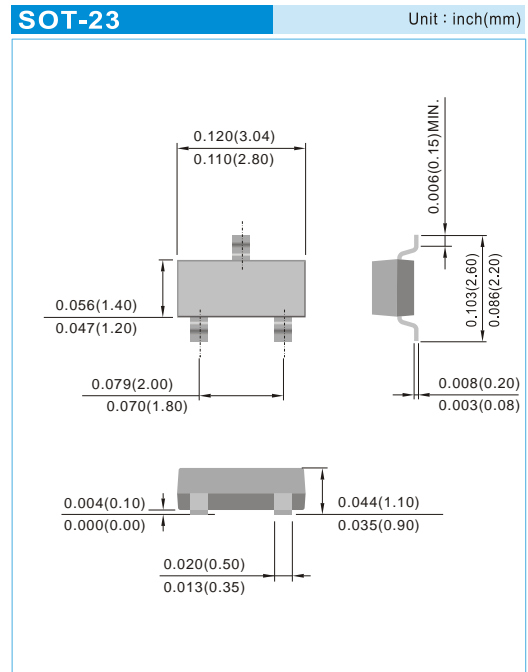
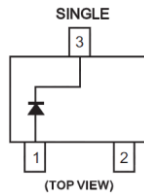
**Voltage** 100~250 V **POWER** 350 mW

### 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)

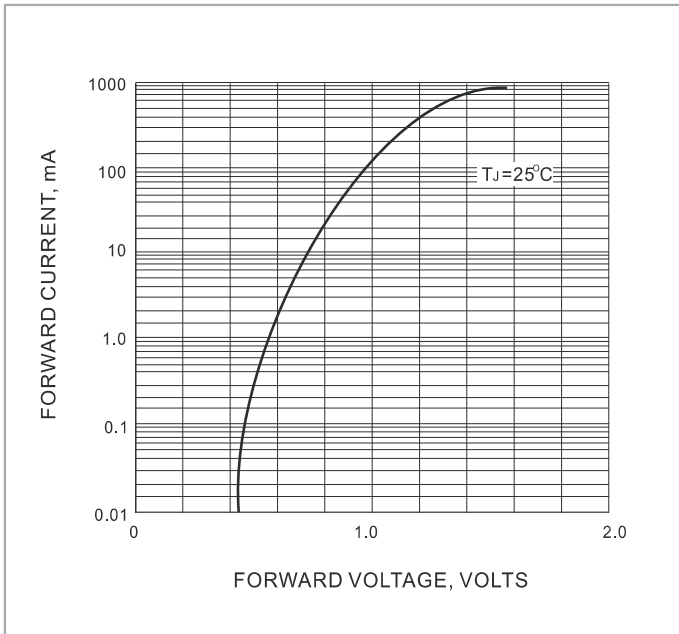
PARAMETER	SYMBOL	BAS16	BAS19	BAS20	BAS21	UNIT
Marking Code		A6	A8	A80	A82	
Reverse Voltage	$V_R$	75	100	150	200	V
Peak Reverse Voltage	$V_{RM}$	100	120	200	250	V
Rectified Current (Average), Half Wave Rectification With Resistive Load And $f \geq 50\text{Hz}$	$I_O$	250	200	200	200	mA
Peak Forward Surge 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 $25^\circ\text{C}$	$P_{TOT}$	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	$\mu\text{A}$
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 :

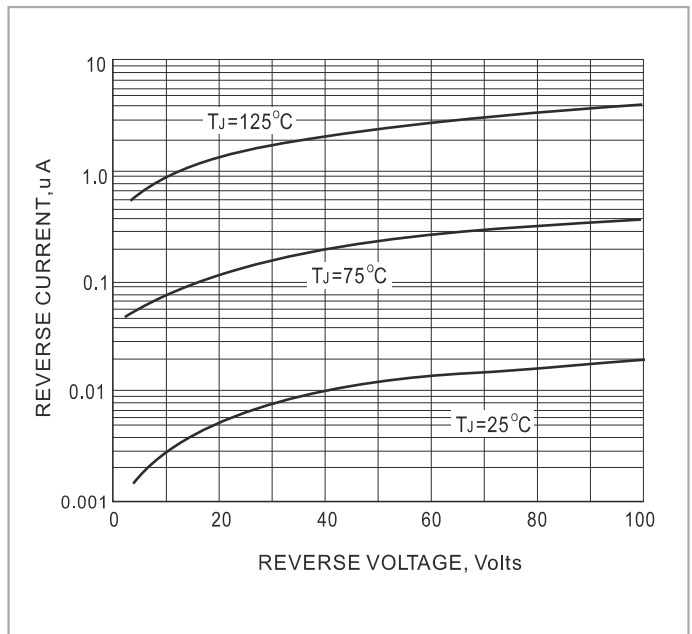
1.  $C_J$  at  $V_R=0$ ,  $f=1\text{MHz}$
2. From  $I_F=10\text{mA}$  to  $I_R=1\text{mA}$ ,  $V_R=6\text{Volts}$ ,  $R_L=100\Omega$
3. Mounted on a FR-4 PCB, single-sided copper, with  $100\text{cm}^2$  copper pad area.



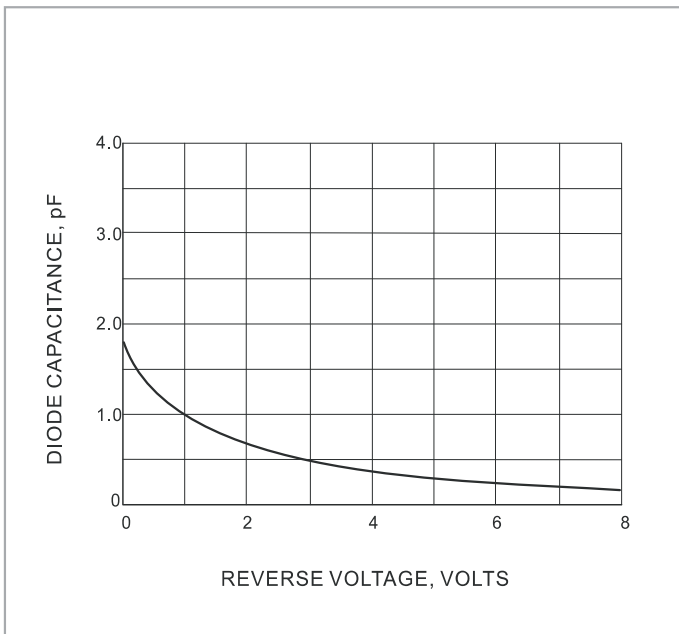
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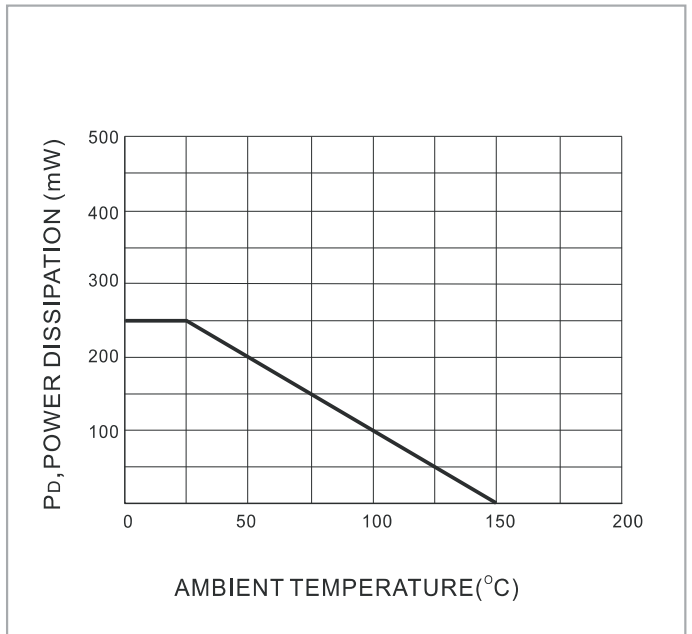
**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**FIG. 2-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 3 TYPICAL JUNCTION CAPACITANCE**

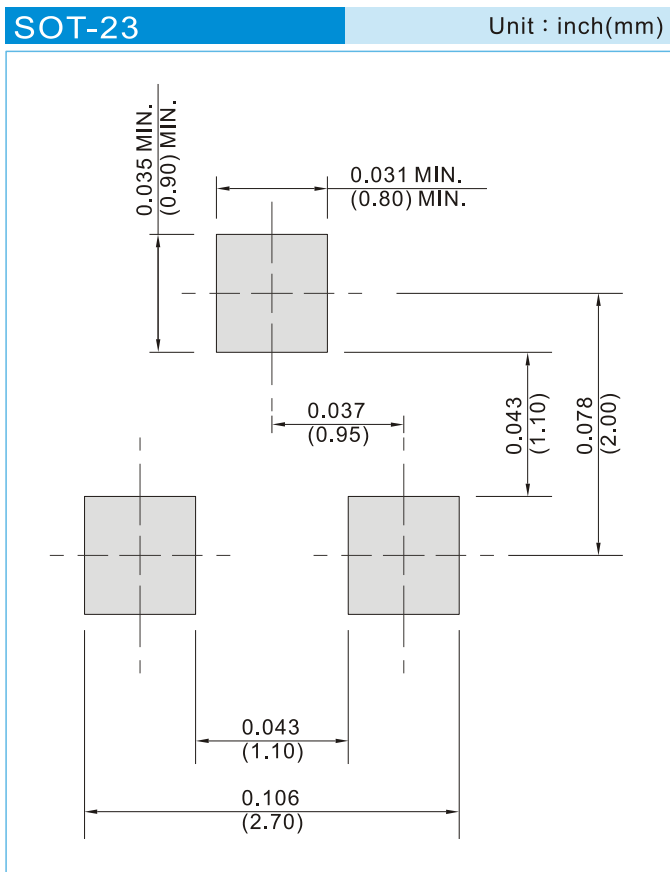


**FIG. 4 POWER DERATING CURVE**



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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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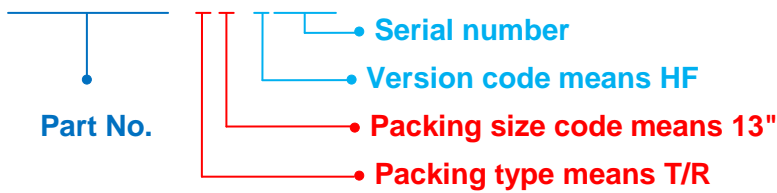
Part No\_packing code\_Version

BAS16\_R1\_00001

BAS16\_R2\_00001

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
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			