



# BAS121/A/C/S

## SURFACE MOUNT HIGH VOLTAGE, LOW LEAKAGE SWITCHING DIODE

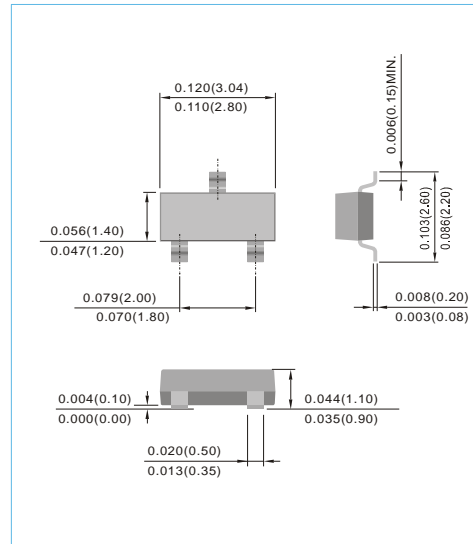
**VOLTAGE** 250 Volt **POWER** 250 mW **SOT-23** Unit : inch(mm)

### FEATURES

- High Reverse Blocking Voltage
- Extremely Low Reverse Leakage Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- Lead free in compliance with EU RoHS 2011/65/EU directive
- 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  
 Marking : BAS121 : P8  
           BAS121A : P5  
           BAS121C : P6  
           BAS121S : P7



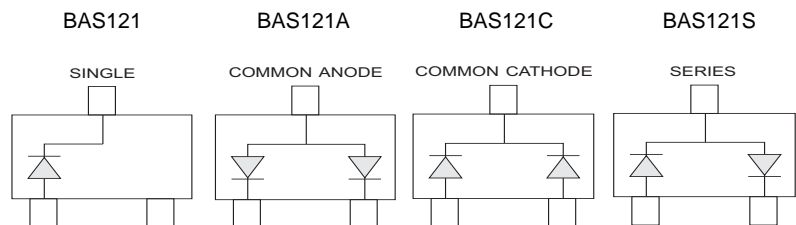
### ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNITS
Reverse Voltage	$V_R$	250	V
Peak Reverse Voltage	$V_{RRM}$	250	V
Continuous Forward Current	$I_F$	0.2	A
Non-repetitive Peak Forward Surge Current at $t=1.0 \mu s$	$I_{FSM}$	4.0	A
Power Dissipation <sup>(1)</sup>	$P_{TOT}$	250	mW
Junction and Storage Temperature	$T_J, T_{STG}$	-55 to 150	°C

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Thermal Resistance , Junction to Ambient <sup>(1)</sup>	$R_{\theta JA}$	500	°C/W

Note 1. FR-5 Board = 1 x 0.75 x 0.062 in





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## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	250	-	-	V
Forward Voltage	$V_F$	$I_F=1\text{mA}$ $I_F=100\text{mA}$ $I_F=50\text{mA}$ $I_F=150\text{mA}$	-	-	0.90 1.00 1.10 1.25	V
Reverse Current at Rated $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$ $T_J=150^{\circ}\text{C}$	-	-	0.005 10	$\mu\text{A}$
Total Capacitance	$C_T$	$f=1.0\text{MHz}$ ; $V_R=0\text{V}$	-	-	5.0	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=30\text{mA}$ , $I_{rr}=3\text{mA}$ , $R_L=100\Omega$	-	-	3000	ns

## ELECTRICAL CHARACTERISTICS CURVE

### ELECTRICAL CHARACTERISTICS CURVES

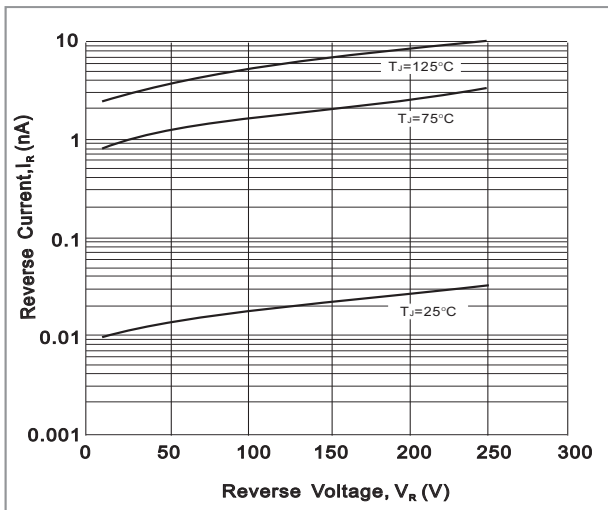


FIG. 1-REVERSE CHARACTERISTICS

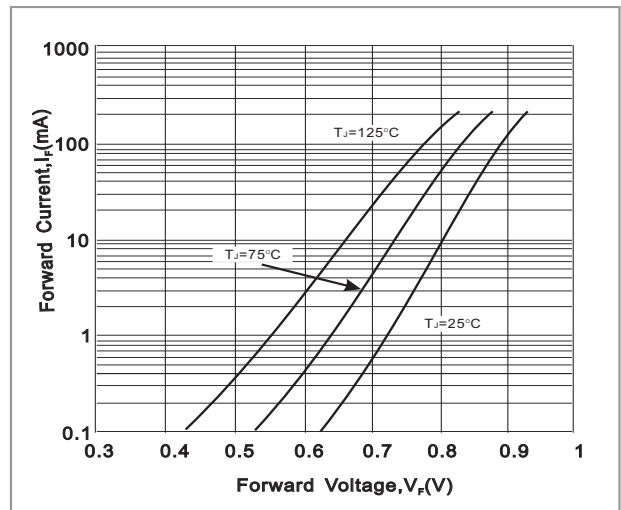


FIG. 2-FORWARD CHARACTERISTICS

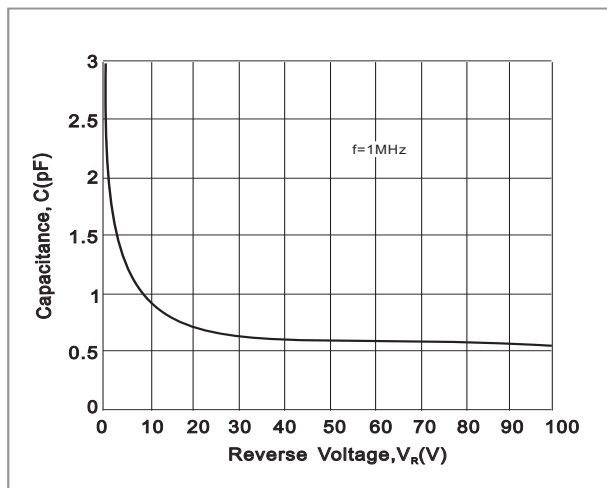


FIG. 3-CAPACITANCE

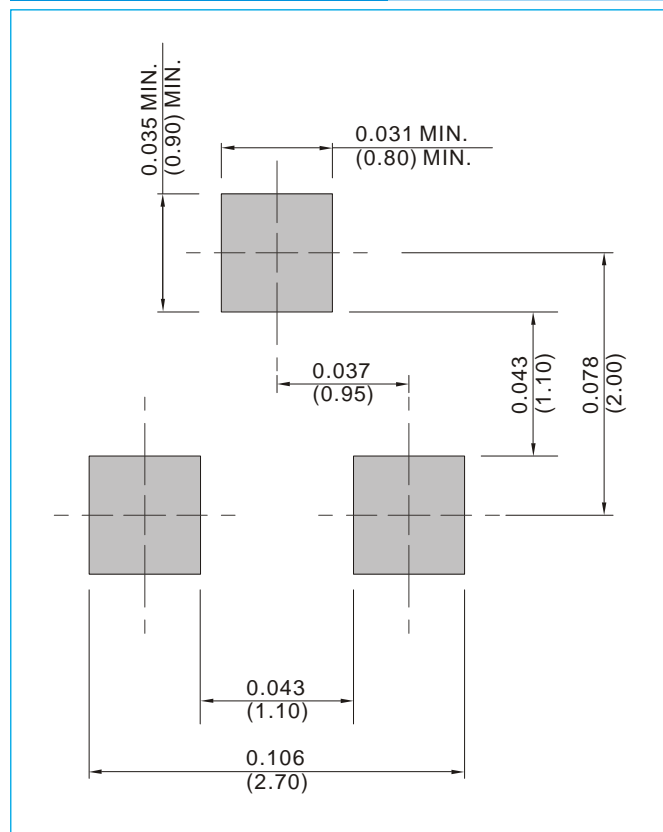


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### MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



### ORDER INFORMATION

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



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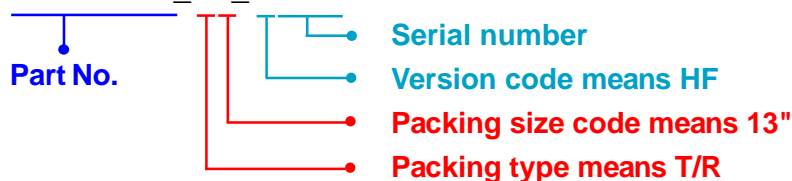
## Part No\_packing code\_Version

BAS121\_R1\_00001

BAS121\_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)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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