



# BAS21A~BAS21S

## SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES

**Voltage**

**250 V**

**Power**

**250 mW**

**SOT-23**

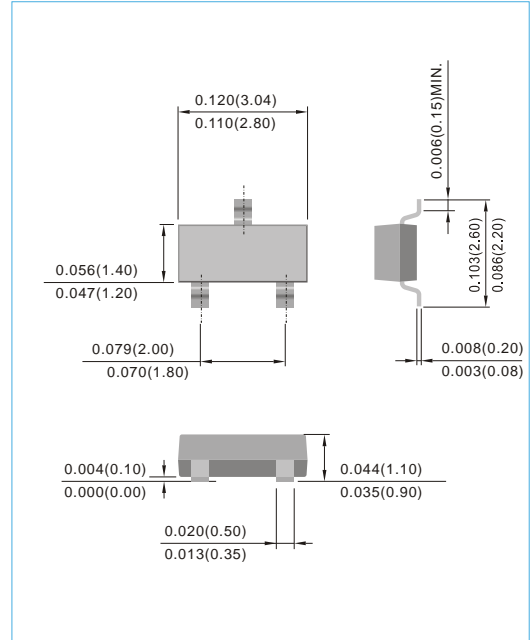
Unit : inch(mm)

### Features

- High reverse breakdown voltage.
- Fast switching speed.
- Low reverse leakage current.
- Surface mount package ideally suited for automatic insertion.
- Galvanically isolated dual configurations to save board space.
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive).
- Green molding compound as per IEC61249 Std..(Halogen Free)

### Mechanical Data

- Case: SOT-23 plastic case
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.008 grams
- Marking: BAS21A:21A, BAS21C:21C, BAS21S:21S



### ABSOLUTE RATINGS

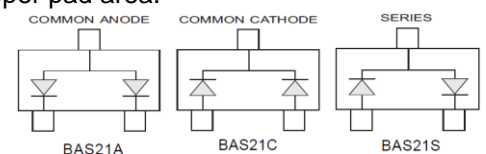
PARAMETER	SYMBOL	VALUE	UNIT
Maximum reverse voltage	V <sub>R</sub>	250	V
Peak reverse voltage	V <sub>RRM</sub>	250	V
Average rectified current at temp=25 °C	I <sub>o</sub>	0.2	A
Non-repetitive peak forward surge current at t=1μs	I <sub>FSM</sub>	4	A

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P <sub>TOT</sub>	250	mW
Typical thermal resistance (Note 1)	R <sub>θJA</sub>	357	°C/W
Typical thermal resistance (Note 2)	R <sub>θJC</sub>	250	°C/W
	R <sub>θJL</sub>	285	
Junction temperature range	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

Note : 1.Mounted on a FR-4 PCB, single-sided copper, mini pad.

2. Mounted on a FR-4 PCB, single-sided copper,with 100cm<sup>2</sup> copper pad area.

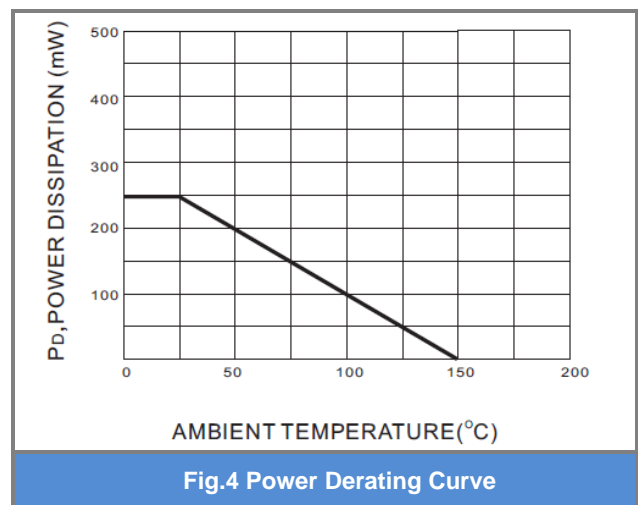
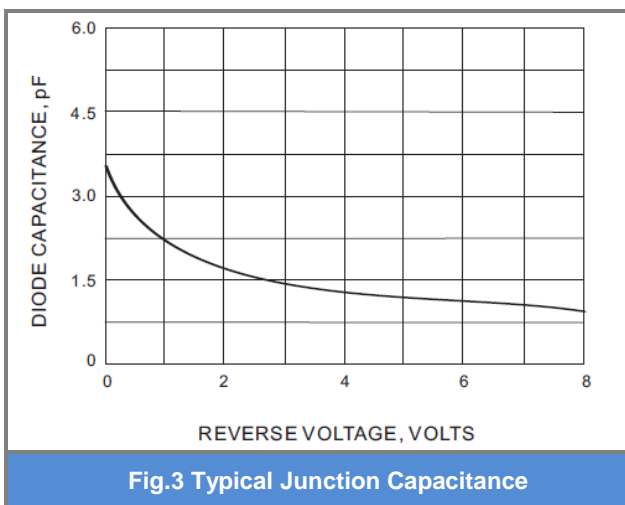
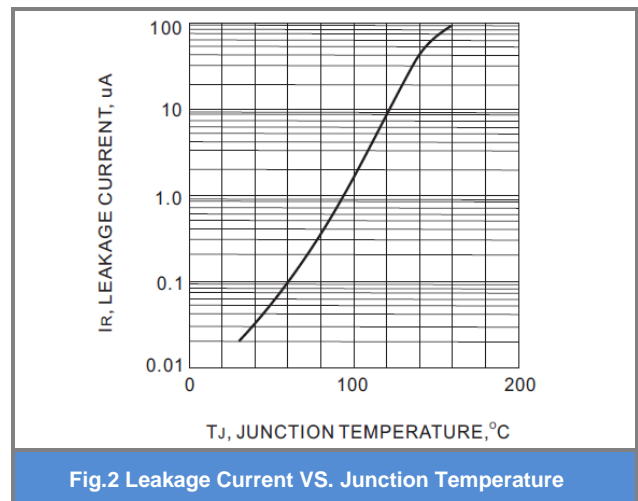
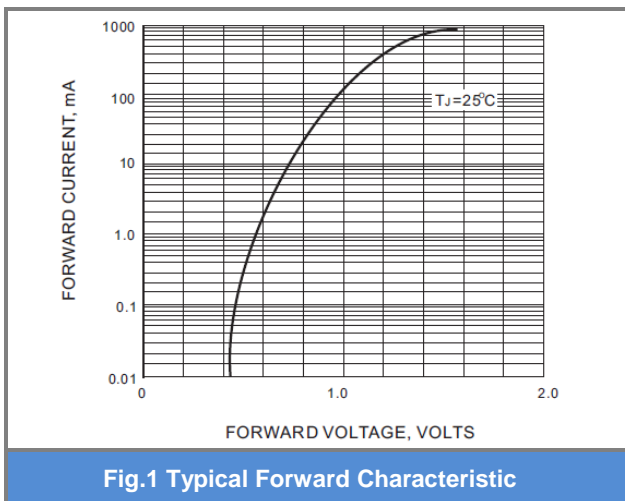




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ELECTRICAL CHARACTERISTICS ( $T_J=25^\circ\text{C}$ , unless otherwise noted)

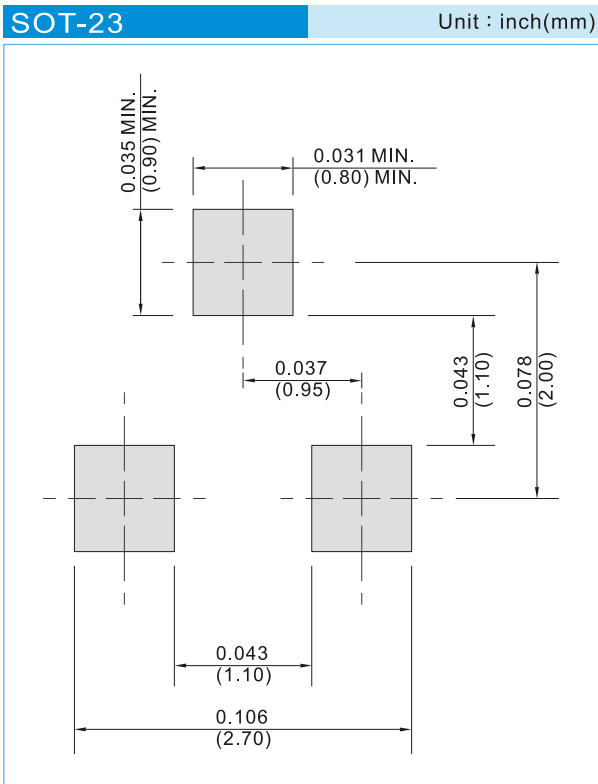
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP	MAX.	UNIT
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	250	-	-	V
Reverse current	$I_R$	$V_R=200\text{V}$ $V_R=200\text{V } T_J=150^\circ\text{C}$	-	-	0.1 100	$\mu\text{A}$
Forward voltage	$V_F$	$I_F=1\text{mA}$ $I_F=100\text{mA}$	-	-	0.7 1	V
Maximum junction capacitance	$C_J$	$V_R=0\text{V}, f=1\text{MHz}$	-	-	5	pF
Reverse recovery time	$T_{RR}$	$I_F = I_R=30\text{mA}$ $R_L=100\Omega$	-	-	50	ns





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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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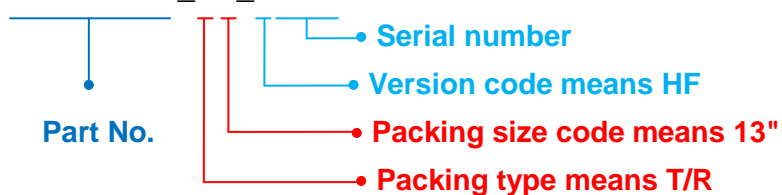
Part No\_packing code\_Version

BAS21A\_R1\_00001

BAS21A\_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			



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