



### SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES

Voltage

250 V

Power

250 mW

#### **Features**

- High reverse bearkdown 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)

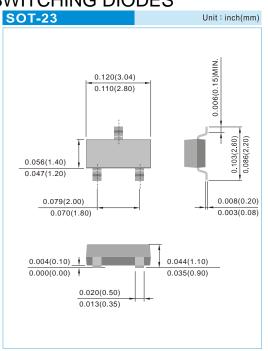


• Case: SOT-23 plastic case

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**

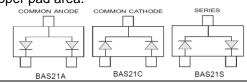
PARAMETER	SYMBOL	VALUE	UNIT
Maximum reverse voltage	VR	250	V
Peak reverse voltage	Vrrm	250	V
Average rectified current at temp=25 °C	lo	0.2	A
Non-repetitive peak forward surge current at t=1μs	IFSM	4	A

#### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT	
Power dissipation	Ртот	250	mW	
Typical thermal resistance (Note 1)	RөJA	357	°C/W	
Typical theory all registers as (Nets O)	Rejc	250	°C/W	
Typical thermal resistance (Note 2)	Rejl	285		
Junction temperature range	TJ	150	°C	
Storage temperature range	Тѕтс	-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.

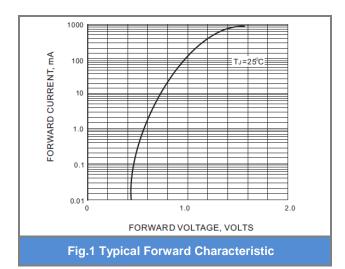






## ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25 °C, unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP	MAX.	UNIT
Reverse breakdown voltage	V(BR)	IR=100μA	250	-	-	V
Reverse current	lr	VR =200V	-	-	0.1	μА
		VR =200V T <sub>J</sub> =150°C	-	-	100	
Forward voltage	VF	I=1mA	-	-	0.7	V
		I=100mA	-	-	1	
Maximum junction capacitance	Сл	VR=0V,f=1MHz	-	-	5	pF
Reverse recovery time	Trr	If = IR=30mA	-	-	50	ns
		R <sub>L</sub> =100Ω				



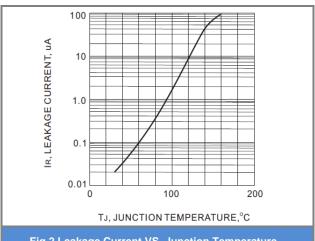
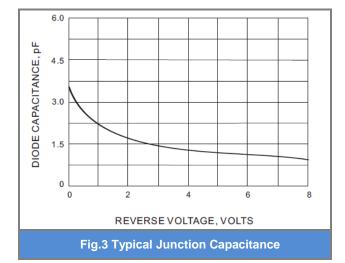
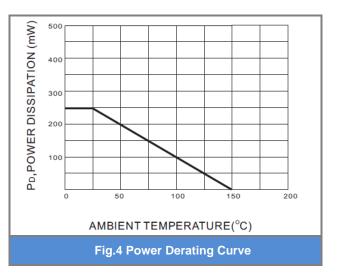


Fig.2 Leakage Current VS. Junction Temperature



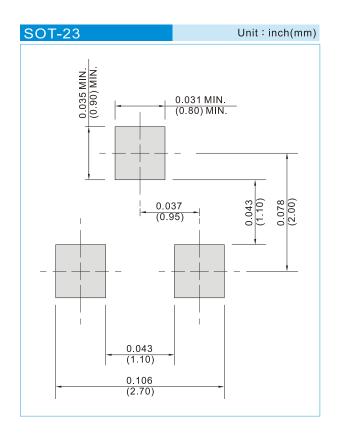


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#### **MOUNTING PAD LAYOUT**



#### ORDER INFORMATION

• Packing information

T/R - 12K per 13" plastic Reel

T/R – 3K per 7" plastic Reel

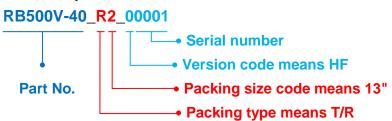




### Part No\_packing code\_Version

BAS21A\_R1\_00001 BAS21A\_R2\_00001

### For example:



Packing Code XX			Version Code XXXXX			
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)	Α	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	В	13"	2			
Tube Packing (T/P)	Т	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Υ			
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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