



#### BAS21A-AU~BAS21S-AU SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES SOT-23 Unit : inch(mm) 250 mW 250 V Voltage Power Features 0.120(3.04) • High reverse bearkdown voltage. 0.110(2.80) Fast switching speed. Low reverse leakage current. Surface mount package ideally suited for automatic insertion. • 0.103(2.60) Galvanically isolated dual configurations to save board space. • 0.056(1.40) AEC-Q101 qualified . 0.047(1.20) Lead free in compliance with EU RoHS 2.0 . Green molding compound as per IEC 61249 standard • 0.079(2.00) 0.008(0.20) 0.070(1.80) 0.003(0.08) Mechanical Data 0.044(1.10) 0.004(0.10) • Case: SOT-23 plastic case 0.000(0.00) 0.035(0.90) • Terminals: Solderable per MIL-STD-750, Method 2026 0.020(0.50) Approx. Weight: 0.0003 ounces, 0.008 grams • 0.013(0.35) Marking: BAS21A-AU:21A, BAS21C-AU:21C, BAS21S-AU:21S •

#### ABSOLUTE RATINGS

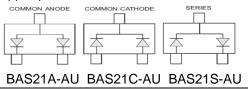
PARAMETER	SYMBOL	VALUE	UNIT
Maximum reverse voltage	VR	250	V
Peak reverse voltage	Vrrm	250	V
Average rectified current at temp=25 °C	lo	0.2	А
Non-repetitive peak forward surge current at t=1 $\mu$ s	IFSM	4	А

#### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT	
Power dissipation	Ртот	250	mW	
Typical thermal resistance (Note 1)	Reja	357	°C/W	
Typical thermal resistance (Note 2)	Rejc	250	°C/W	
	Rej∟	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.

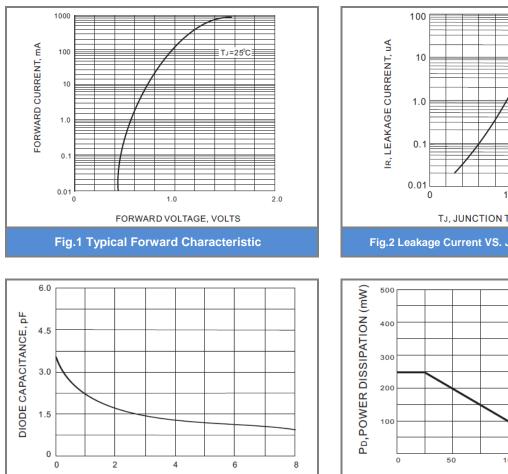




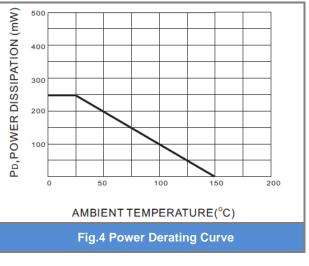


### ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25 °C, unless otherwise noted)

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



# 100 200 TJ, JUNCTION TEMPERATURE,°C Fig.2 Leakage Current VS. Junction Temperature

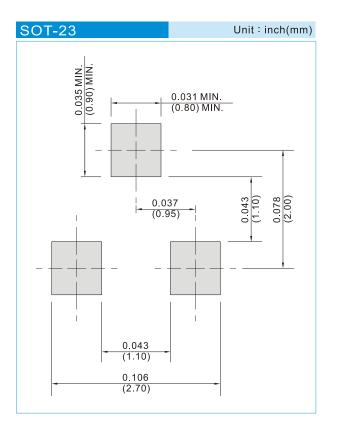


**REVERSE VOLTAGE, VOLTS Fig.3 Typical Junction Capacitance** 





#### MOUNTING PAD LAYOUT



#### ORDER INFORMATION

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



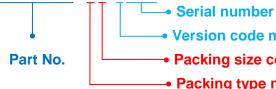


#### Part No\_packing code\_Version

BAS21A-AU\_R1\_000A1 BAS21A-AU\_R2\_000A1

#### For example :

#### RB500V-40\_R2\_00001



 Version code means HF Packing size code means 13"

- Packing type means T/R

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	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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