



BAS21A-AU~BAS21S-AU

SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES

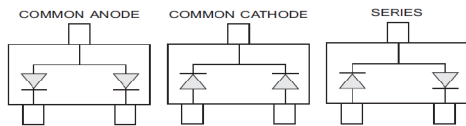
Voltage	250 V	Power	250 mW
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Features

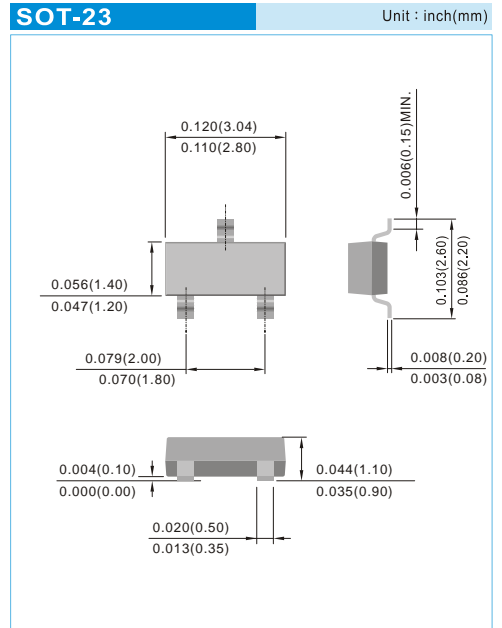
- High reverse breakdown voltage.
- Fast switching speed.
- Low reverse leakage current.
- Surface mount package ideally suited for automatic insertion.
- Galvanically isolated dual configurations to save board space.
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

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-AU:21A, BAS21C-AU:21C, BAS21S-AU:21S



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ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum reverse voltage	V _R	250	V
Peak reverse voltage	V _{RRM}	250	V
Average rectified current at temp=25 °C	I _o	0.2	A
Non-repetitive peak forward surge current at t=1μs	I _{FSM}	4	A



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THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_{TOT}	250	mW
Power dissipation (Note 3)	P_{TOT}	500	mW
Typical thermal resistance (Note 1)	$R_{\theta JA}$	357	°C/W
Typical thermal resistance (Note 3)	$R_{\theta JA}$	250	°C/W
Typical thermal resistance (Note 2)	$R_{\theta JC}$	250	°C/W
	$R_{\theta JL}$	285	
Junction temperature range	T_J	150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

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

2. Mounted on a FR-4 PCB, single-sided copper, with 100cm² copper pad area.

3. $R_{\theta JA}$ is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins mounted on a 1 inch FR-4 with 2oz. square pad of copper.

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	$V_R=200\text{V}$	-	-	0.1	μA
		$V_R=200\text{V } T_J=150^\circ\text{C}$	-	-	100	
Forward voltage	V_F	$I_F=1\text{mA}$	-	-	0.7	V
		$I_F=100\text{mA}$	-	-	1	
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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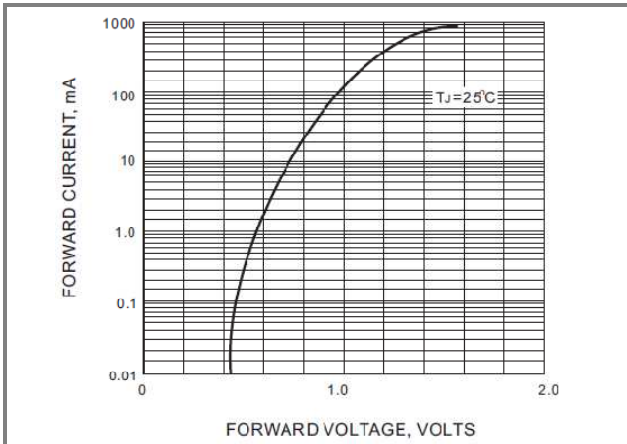


Fig.1 Typical Forward Characteristic

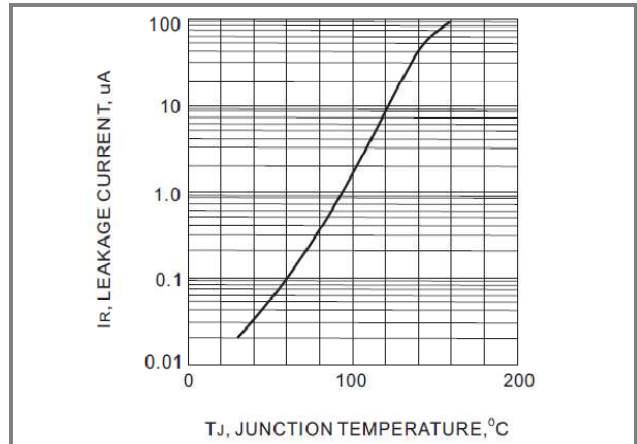


Fig.2 Leakage Current VS. Junction Temperature

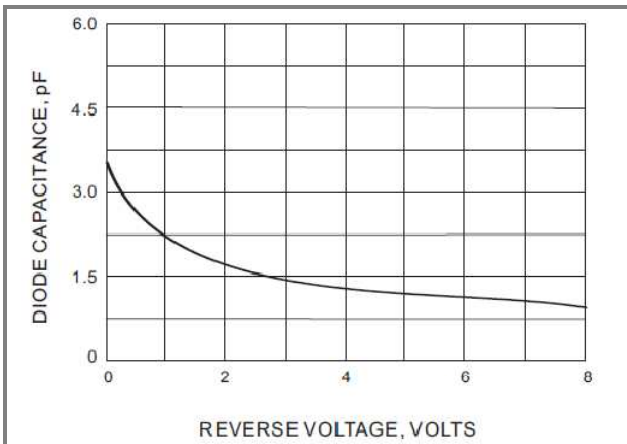


Fig.3 Typical Junction Capacitance

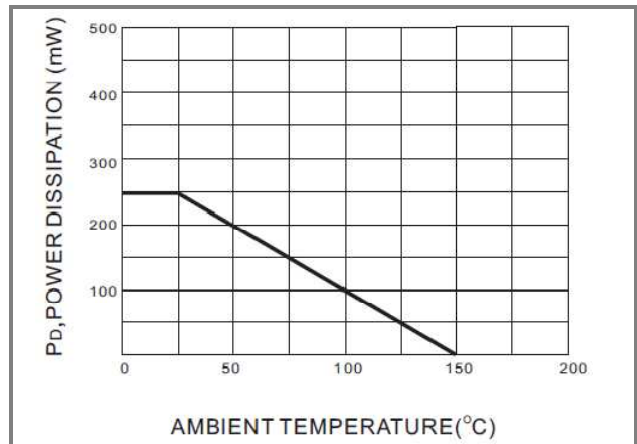
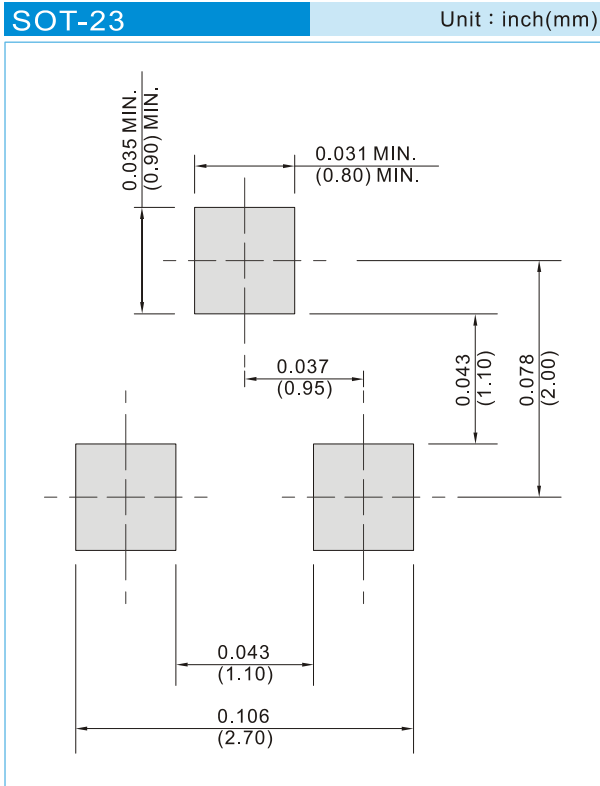


Fig.4 Power Derating Curve



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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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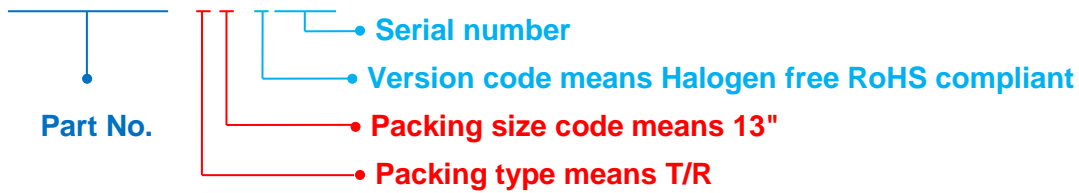
Part No._packing code_Version

BAS21A-AU_R1_000A1

BAS21A-AU_R2_000A1

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code X		Serial number XXXX
Packing type	1 st Code	Packing size code	2 nd Code	HSF Level	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	Halogen free RoHS compliant	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS compliant	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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