



BAS21A-AU~BAS21S-AU

SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES

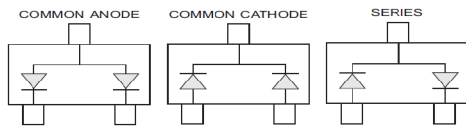
Voltage	250 V	Power	250 mW
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Features

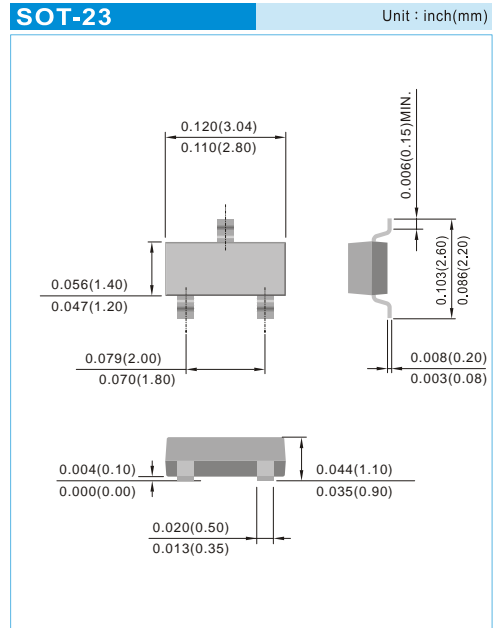
- High reverse breakdown voltage.
- Fast switching speed.
- Low reverse leakage current.
- Surface mount package ideally suited for automatic insertion.
- Galvanically isolated dual configurations to save board space.
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound 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 _{θJA}	357	°C/W
Typical thermal resistance (Note 3)	R _{θJA}	250	°C/W
Typical thermal resistance (Note 2)	R _{θJC}	250	°C/W
	R _{θJL}	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_{θJA} 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 °C, unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP	MAX.	UNIT
Reverse breakdown voltage	V _(BR)	I _R =100μA	250	-	-	V
Reverse current	I _R	V _R =200V	-	-	0.1	μA
		V _R =200V T _J =150°C	-	-	100	
Forward voltage	V _F	I _F =1mA	-	-	0.7	V
		I _F =100mA	-	-	1	
Maximum junction capacitance	C _J	V _R =0V, f=1MHz	-	-	5	pF
Reverse recovery time	T _{RR}	I _F = I _R =30mA R _L =100Ω	-	-	50	ns



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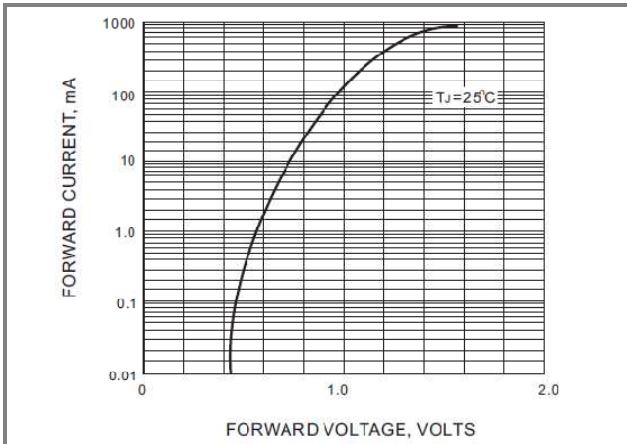


Fig.1 Typical Forward Characteristic

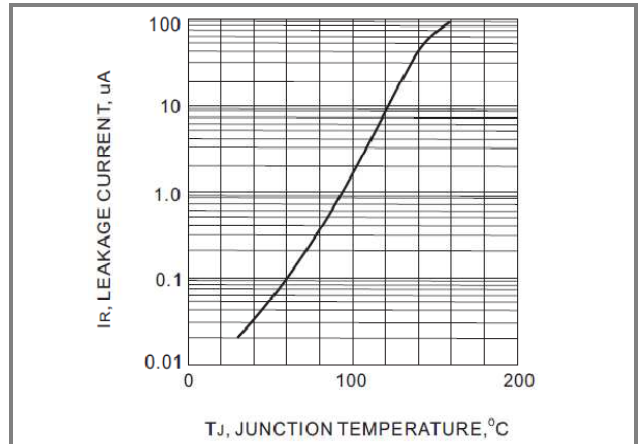


Fig.2 Leakage Current VS. Junction Temperature

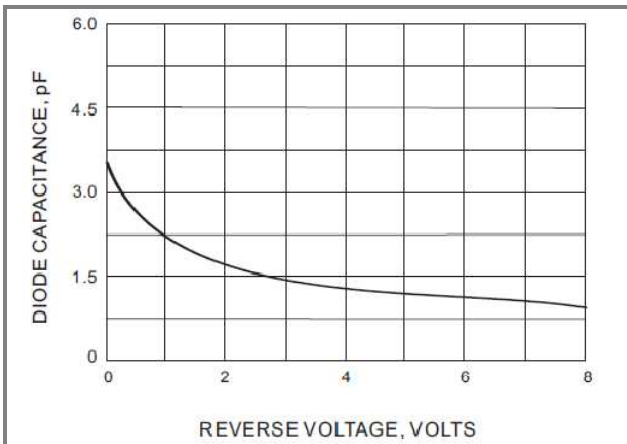


Fig.3 Typical Junction Capacitance

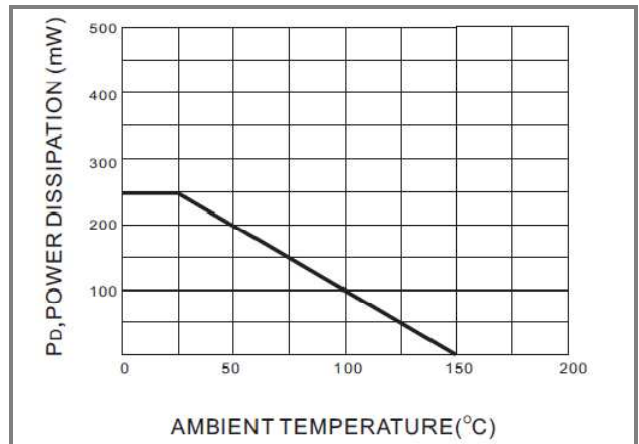
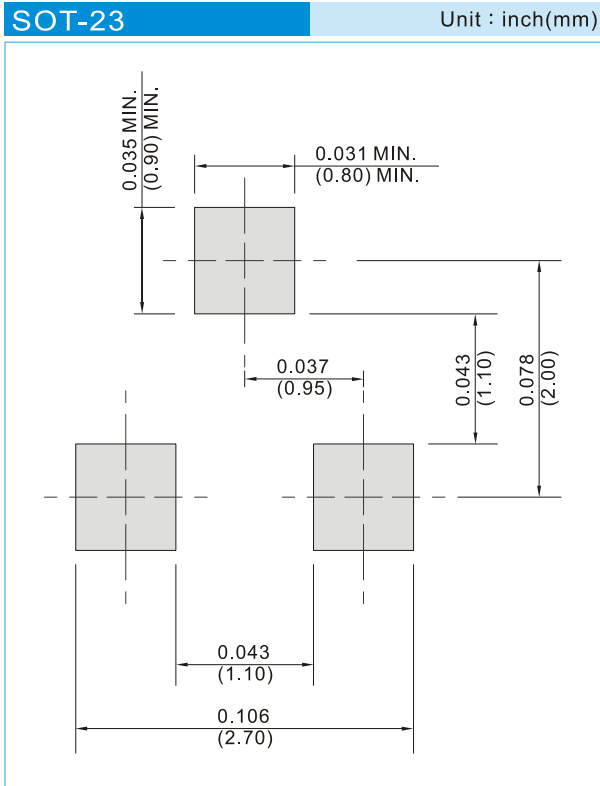


Fig.4 Power Derating Curve



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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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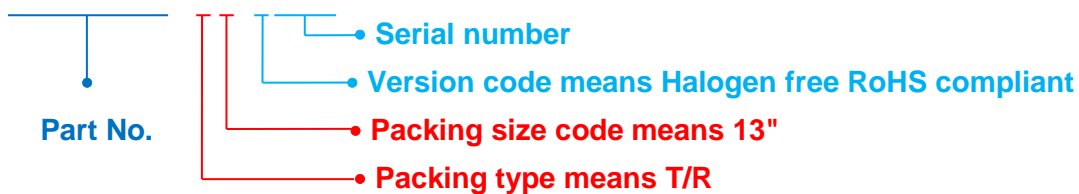
Part No._packing code_Version

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			