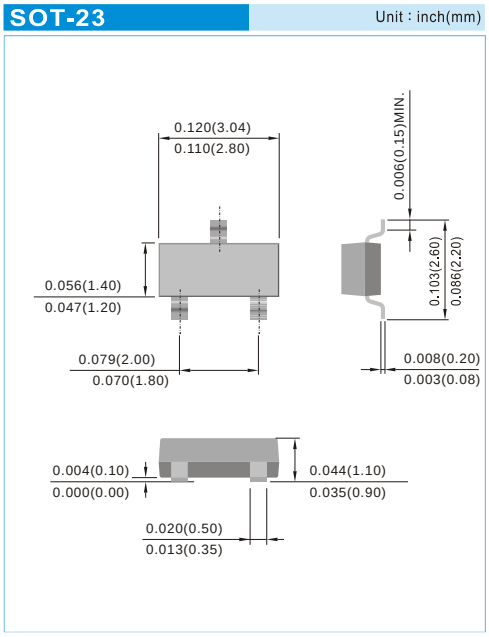
BAS21A-AU~BAS21S-AU

SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES

Voltage	250 V	Power	250 mW

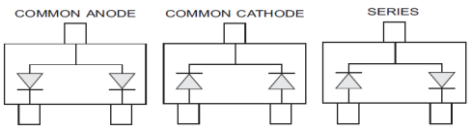


Features

- 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.
- 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)	$R_{\theta JC}$ $R_{\theta JL}$	250 285	°C/W
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 100cm^2 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 °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 V_R =200V T_J=150°C	- -	- -	0.1 100	μA
Forward voltage	V_F	I_F=1mA I_F=100mA	- -	- -	0.7 1	V
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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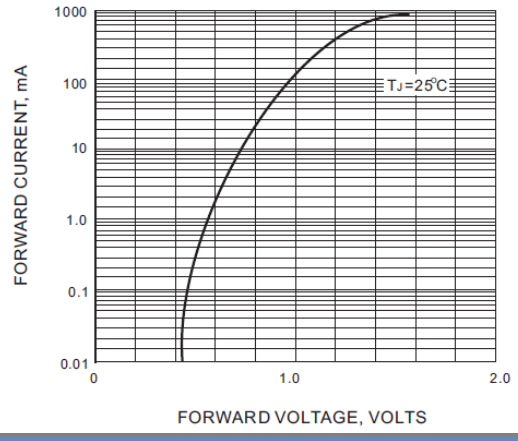

Fig.1 Typical Forward Characteristic

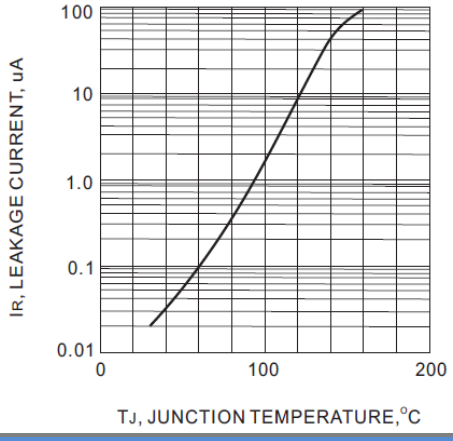

Fig.2 Leakage Current VS. Junction Temperature

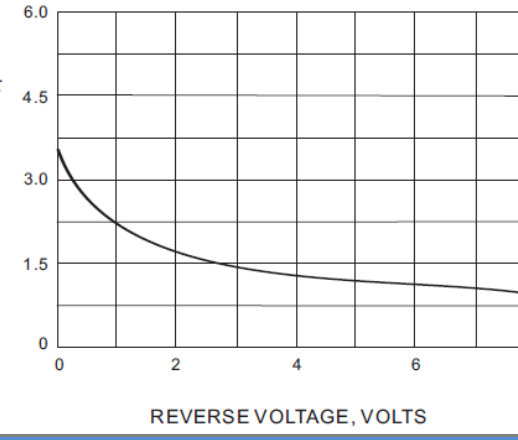

Fig.3 Typical Junction Capacitance

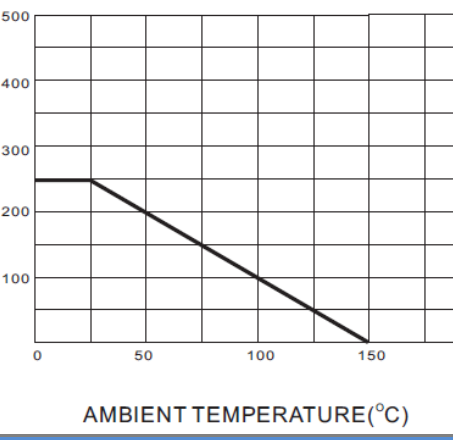

Fig.4 Power Derating Curve

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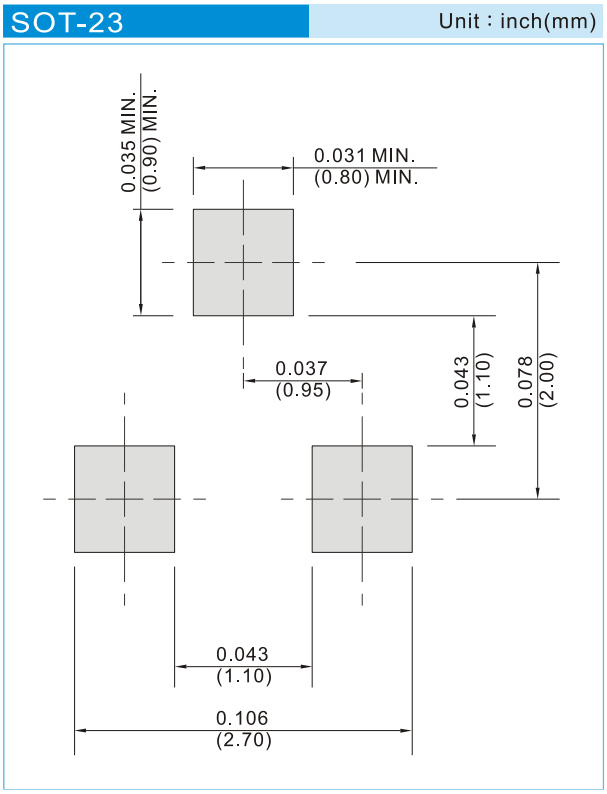
MOUNTING PAD LAYOUT



ORDER INFORMATION

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

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