



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)

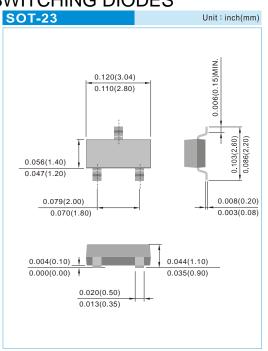


• Case: SOT-23 plastic case

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

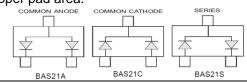
| PARAMETER | SYMBOL | VALUE | UNIT |
|----------------------------------------------------|--------|-------|------|
| Maximum reverse voltage | VR | 250 | V |
| Peak reverse voltage | Vrrm | 250 | V |
| Average rectified current at temp=25 °C | lo | 0.2 | A |
| Non-repetitive peak forward surge current 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 100cm² copper pad area.

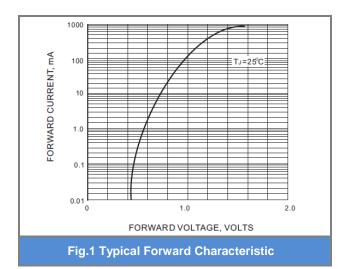






ELECTRICAL CHARACTERISTICS (T_J=25 °C, unless otherwise noted)

| 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 _J =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 _L =100Ω | | | | |



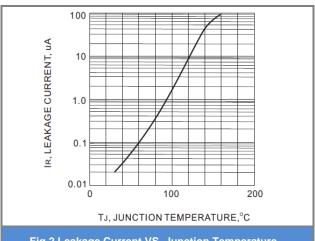
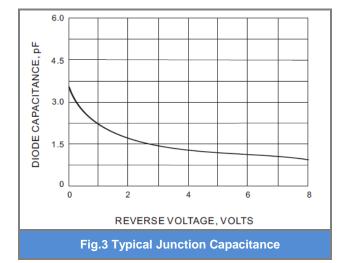
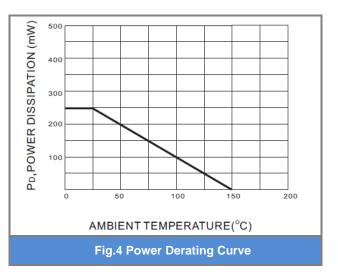


Fig.2 Leakage Current VS. Junction Temperature



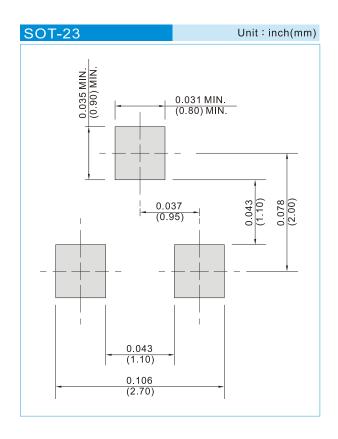


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MOUNTING PAD LAYOUT



ORDER INFORMATION

• Packing information

T/R - 12K per 13" plastic Reel

T/R – 3K per 7" plastic Reel

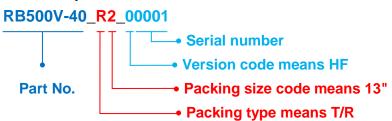




Part No_packing code_Version

BAS21A_R1_00001 BAS21A_R2_00001

For example:



| Packing Code XX | | | Version Code XXXXX | | | |
|----------------------------------------|-------------------------|-------------------------------------|-------------------------|---------------|-------------------------|------------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th 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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