



### 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)

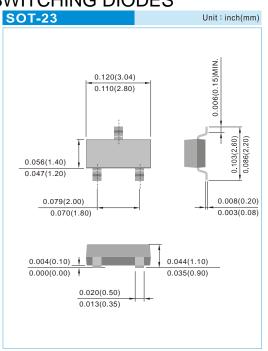


• Case: SOT-23 plastic case

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**

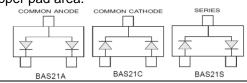
| PARAMETER  | SYMBOL | VALUE | UNIT |
|--|--------|-------|------|
| Maximum reverse voltage                            | VR     | 250   | V    |
| Peak reverse voltage                               | Vrrm   | 250   | V    |
| Average rectified current at temp=25 °C            | lo     | 0.2   | A    |
| 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 100cm<sup>2</sup> copper pad area.

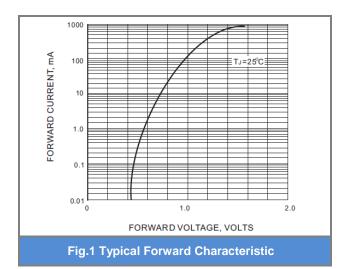






## ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25 °C, unless otherwise noted)

| PARAMETER                    | SYMBOL | TEST CONDITION                 | MIN. | TYP | MAX. | UNIT |
|------------------------------|--------|--------------------------------|------|-----|------|------|
| Reverse breakdown voltage    | V(BR)  | IR=100μA                       | 250  | -   | -    | V    |
| Reverse current              | lr     | VR =200V                       | -    | -   | 0.1  | μА   |
|                              |        | VR =200V T <sub>J</sub> =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 <sub>L</sub> =100Ω           |      |     |      |      |



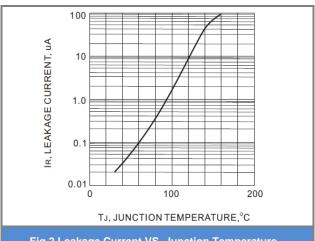
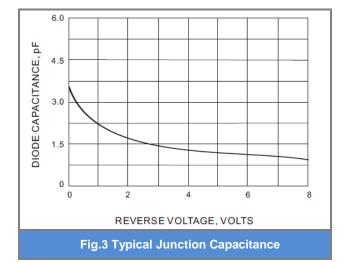
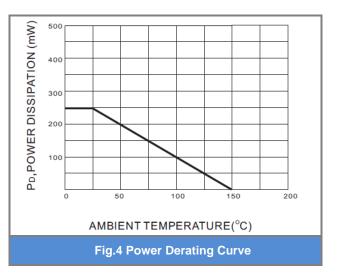


Fig.2 Leakage Current VS. Junction Temperature



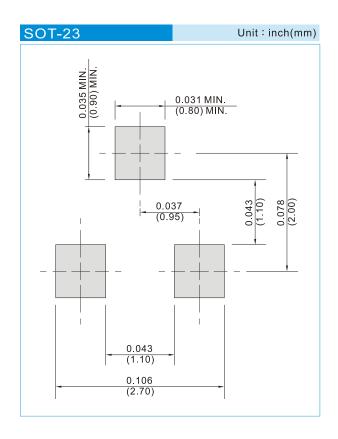


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#### **MOUNTING PAD LAYOUT**



#### ORDER INFORMATION

• Packing information

T/R - 12K per 13" plastic Reel

T/R – 3K per 7" plastic Reel

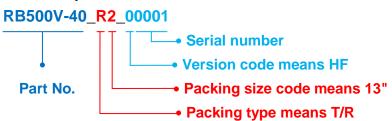




### Part No\_packing code\_Version

BAS21A\_R1\_00001 BAS21A\_R2\_00001

### For example:



| Packing Code XX                        |                         |                                     | Version Code XXXXX      |               |                         |  |
|--|-------------------------|-------------------------------------|-------------------------|---------------|-------------------------|--|
| Packing type                           | 1 <sup>st</sup><br>Code | Packing size code                   | 2 <sup>nd</sup><br>Code | HF or<br>RoHS | 1 <sup>st</sup><br>Code | 2 <sup>nd</sup> ~5 <sup>th</sup><br>Code |
| Tape and Ammunition<br>Box (T/B)       | Α                       | N/A                                 | 0                       | HF            | 0                       | serial<br>number                         |
| Tape and Reel (T/R)                    | R                       | 7"                                  | 1                       | RoHS          | 1                       | serial<br>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)<br>(TRL) | L                       | PANASERT T/B<br>CATHODE UP (PBCU)   | U                       |               |                         |  |
| FORMING                                | F                       | PANASERT T/B<br>CATHODE DOWN (PBCD) | D                       |               |                         |  |





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BAW75-TAP MM230L-CAA IDW40E65D1 LL4151-GS18 053684A SMMSD4148T3G 707803H SP000010217 ACDSW4448-HF

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