



# BAS16~BAS21

## SURFACE MOUNT SWITCHING DIODES

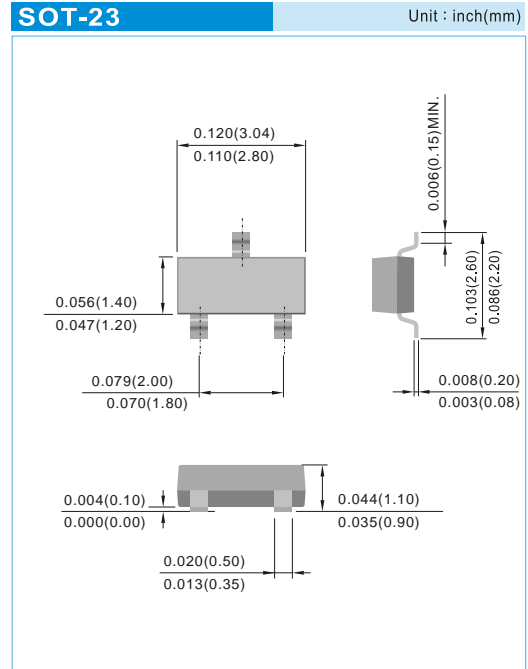
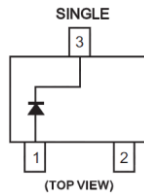
**Voltage** 100~250 V **POWER** 350 mW

### Features

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case: SOT-23, Plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams



### Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER  | SYMBOL          | BAS16       | BAS19     | BAS20     | BAS21     | UNIT               |
|--|-----------------|-------------|-----------|-----------|-----------|--------------------|
| Marking Code   |                 | A6          | A8        | A80       | A82       |                    |
| Reverse Voltage  | $V_R$           | 75          | 100       | 150       | 200       | V                  |
| Peak Reverse Voltage   | $V_{RM}$        | 100         | 120       | 200       | 250       | V                  |
| Rectified Current (Average), Half Wave Rectification<br>With Resistive Load And $f \geq 50\text{Hz}$ | $I_O$           | 250         | 200       | 200       | 200       | mA                 |
| Peak Forward Surge Current, $t_p=1\mu\text{s}$ Single Half<br>Sine-Wave Superimposed On Rated Load   | $I_{FSM}$       | 2           | 2.5       | 2.5       | 2.5       | A                  |
| Power Dissipation Derate Above $25^\circ\text{C}$  | $P_{TOT}$       | 350         | 350       | 350       | 350       | mW                 |
| Maximum Forward Voltage  | $V_F$           | 0.855@10mA  | 1.0@100mA | 1.0@100mA | 1.0@100mA | V                  |
| Maximum Dc Reverse Current At Rated Dc Blocking<br>Voltage $T_J=25^\circ\text{C}$                    | $I_R$           | 1           | 1         | 1         | 1         | $\mu\text{A}$      |
| Typical Junction Capacitance (Notes1)  | $C_J$           | 2           | 1.5       | 1.5       | 1.5       | pF                 |
| Maximum Reverse Recovery Time (Note 2)   | $T_{RR}$        | 6           | 50        | 50        | 50        | nS                 |
| Typical Thermal Resistance (Note 3)  | $R_{\theta JA}$ | 357         |           |           |           | $^\circ\text{C/W}$ |
| Operating Junction Temperature And Storage<br>Temperature Range                                      | $T_J, T_{STG}$  | -55 to +150 |           |           |           | $^\circ\text{C}$   |

#### NOTES :

1.  $C_J$  at  $V_R=0$ ,  $f=1\text{MHz}$
2. From  $I_F=10\text{mA}$  to  $I_R=1\text{mA}$ ,  $V_R=6\text{Volts}$ ,  $R_L=100\Omega$
3. Mounted on a FR-4 PCB, single-sided copper, with  $100\text{cm}^2$  copper pad area.



# BAS16~BAS21

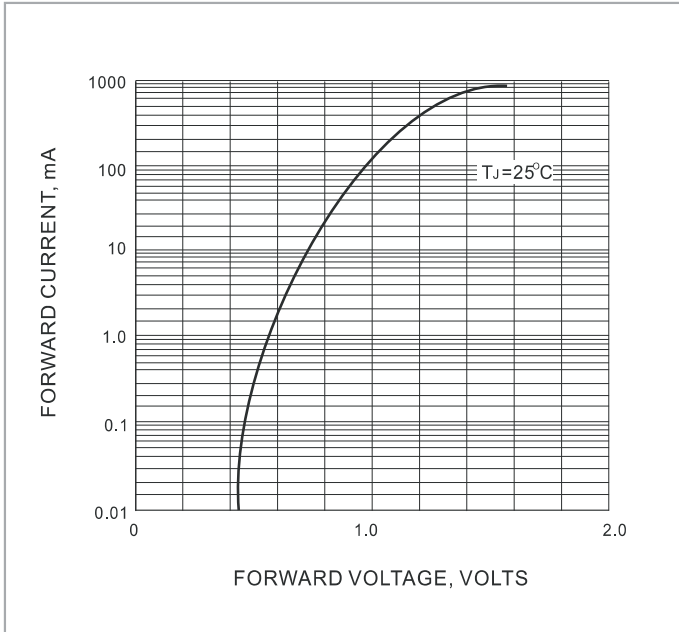


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

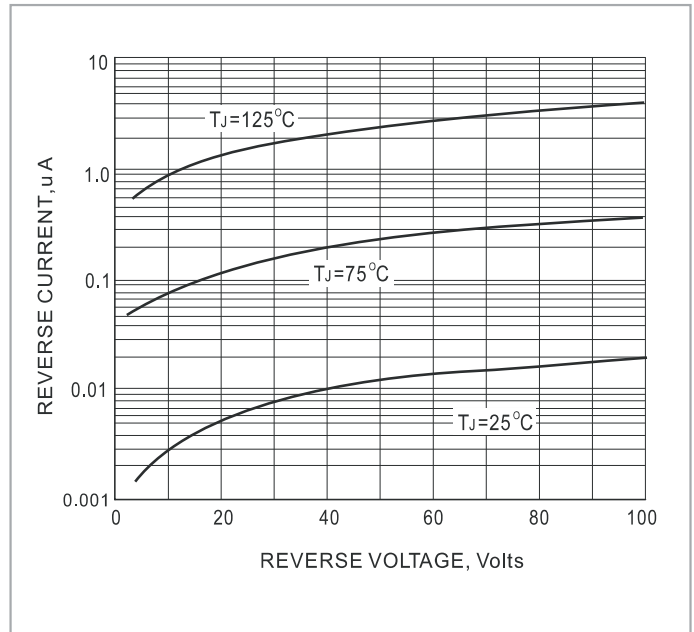


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

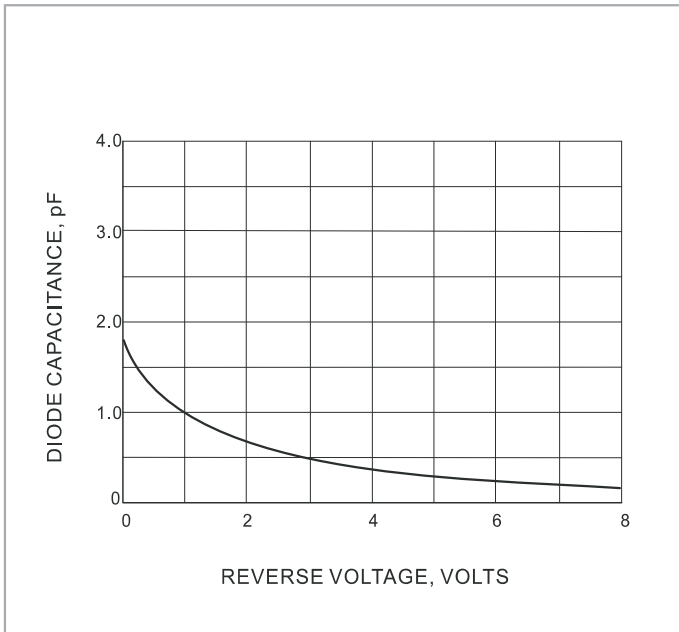


FIG. 3 TYPICAL JUNCTION CAPACITANCE

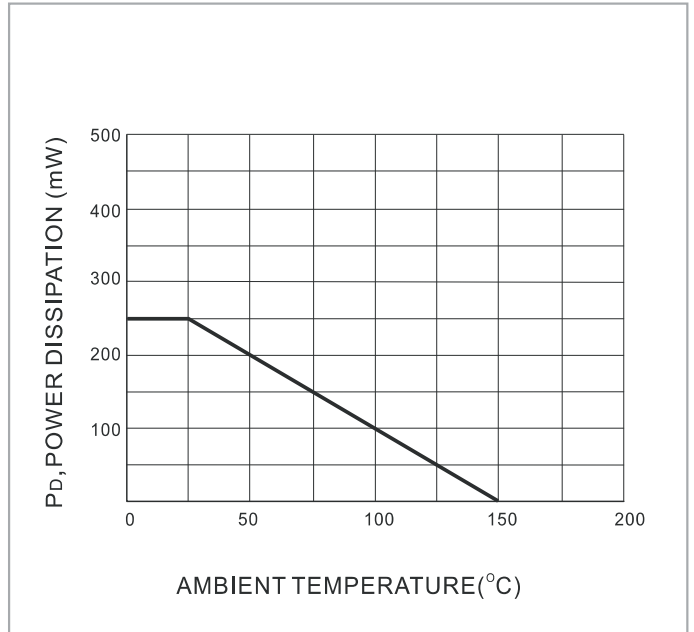
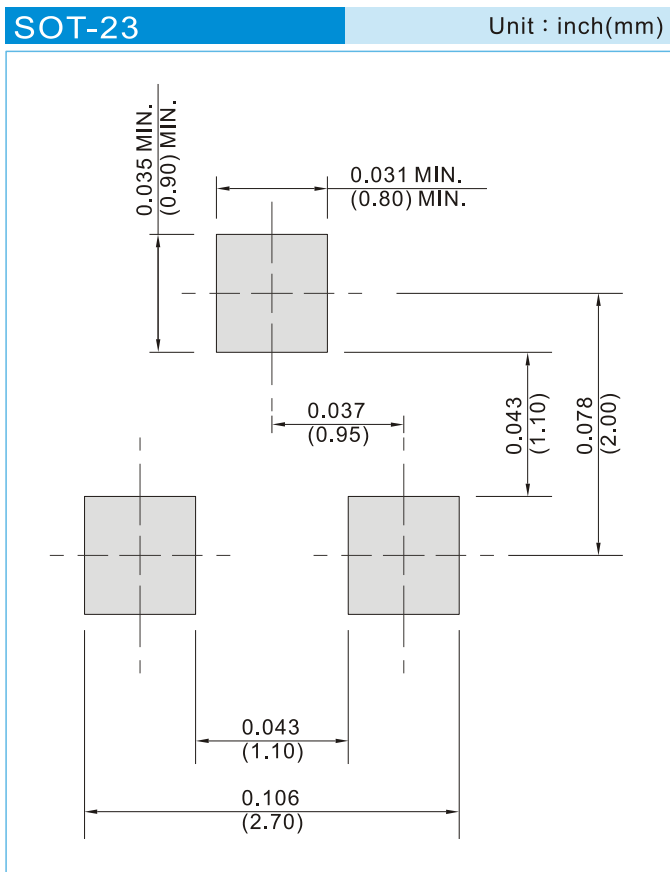


FIG. 4 POWER DERATING CURVE

# BAS16~BAS21

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



## BAS16~BAS21

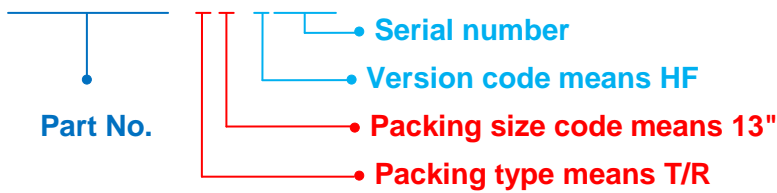
Part No\_packing code\_Version

BAS16\_R1\_00001

BAS16\_R2\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                        | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS                      | 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                    |                           |                      |                                       |



## **BAS16~BAS21**

### **Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Panjit:](#)

[BAS21\\_R2\\_10001](#) [BAS21\\_R1\\_00001](#) [BAS21\\_R2\\_00001](#) [BAS21\\_R1\\_10001](#)