

# BAS40 SERIES

## SURFACE MOUNT SCHOTTKY DIODES

**VOLTAGE** 40 Volt **CURRENT** 0.2 Ampere

### FEATURES

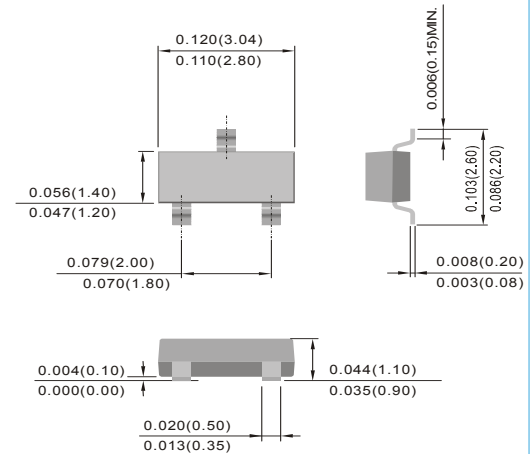
- Fast switching speed
- Surface mount package ideally suited for automatic insertion  
Electrical identical standard JEDEC
- High conductor
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

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

### SOT-23

Unit : inch(mm)

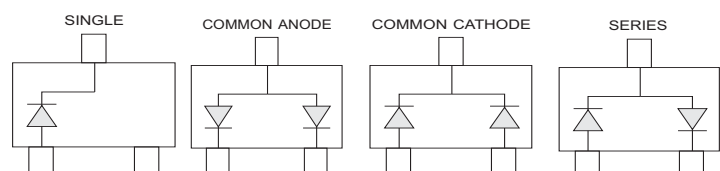


### ABSOLUTE RATINGS

| PARAMETER                                            | Symbol      | BAS40 | BAS40A | BAS40C | BAS40S | Units |
|------------------------------------------------------|-------------|-------|--------|--------|--------|-------|
| Marking Code                                         |             | S40   | S42    | S43    | S44    |       |
| Reverse Voltage                                      | $V_R$       | 40    |        |        |        | V     |
| Peak Reverse Voltage                                 | $V_{RRM}$   | 40    |        |        |        | V     |
| Average Rectified Current at Temp=25°C               | $I_{F(AV)}$ | 0.2   |        |        |        | A     |
| Non-repetitive Peak Forward Surge Current at t=1.0 s | $I_{FSM}$   | 0.6   |        |        |        | A     |

### THERMAL CHARACTERISTICS

| PARAMETER                                | Symbol          | BAS40      | BAS40A       | BAS40C         | BAS40S | Units |
|------------------------------------------|-----------------|------------|--------------|----------------|--------|-------|
| Power Dissipation                        | $P_{TOT}$       | 225        |              |                |        | mW    |
| Thermal Resistance , Junction to Ambient | $R_{\theta JA}$ | 556        |              |                |        | °C/W  |
| Junction Temperature                     | $T_J$           | -55 to 150 |              |                |        | °C    |
| Storage Temperature at Temp=25°C         | $T_{STG}$       | -55 to 150 |              |                |        | °C    |
| Circuit Figure                           |                 | SINGLE     | COMMON ANODE | COMMON CATHODE | SERIES |       |





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## ELECTRICAL CHARACTERISTICS

| PARAMETER                 | SYMBOL     | TEST CONDITION                                                  | MIN. | TYP. | MAX.                 | UNITS   |
|---------------------------|------------|-----------------------------------------------------------------|------|------|----------------------|---------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R \approx 10 \mu A$                                          | 40   | —    | —                    | V       |
| Reverse Current           | $I_R$      | $V_R \approx 25 V$                                              | —    | —    | 1.0                  | $\mu A$ |
| Forward Voltage           | $V_F$      | $I_F \approx 1.0mA$<br>$I_F \approx 10mA$<br>$I_F \approx 40mA$ | —    | —    | 0.38<br>0.50<br>1.00 | V       |
| Total Capacitance         | $C_T$      | $V_R = 0V, f \approx 1.0MHz$                                    | —    | —    | 5.0                  | pF      |

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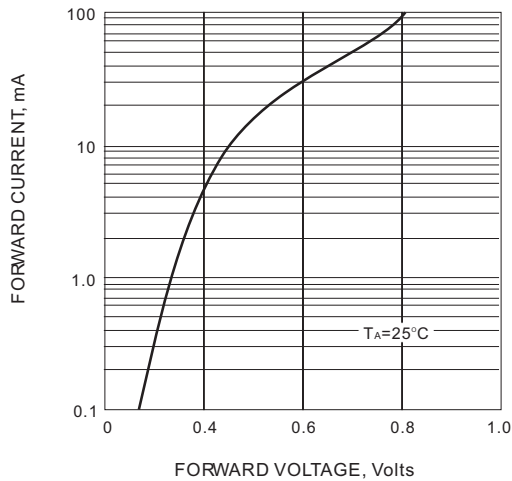


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

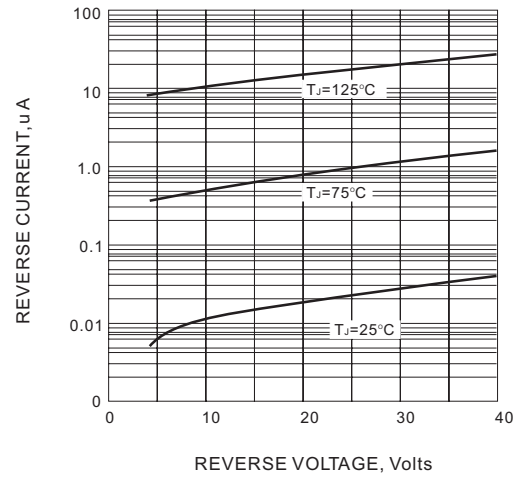


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

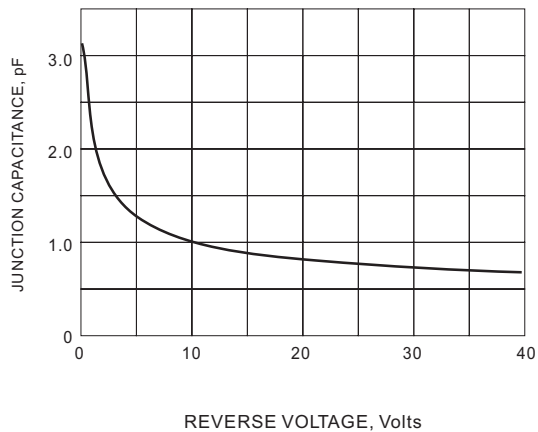


FIG. 3 TYPICAL JUNCTION CAPACITANCE

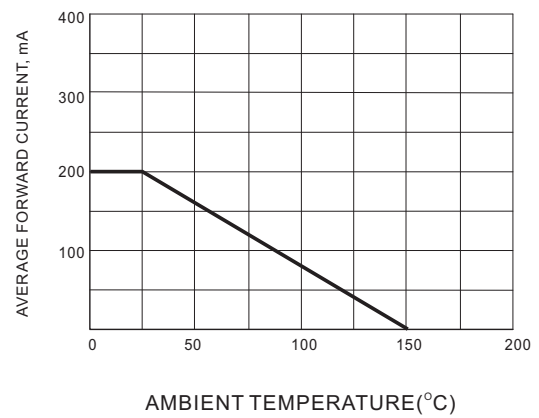


FIG. 4 FORWARD CURRENT DERATING

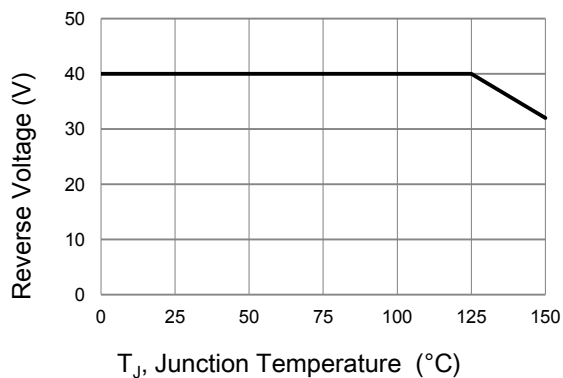


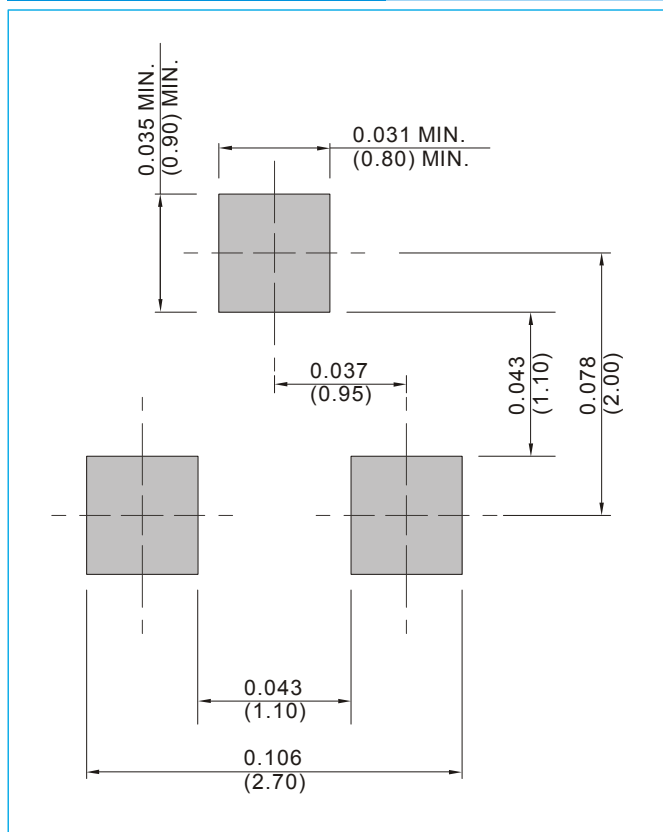
Fig.5 Operating Temperature Derating Curve

# BAS40 SERIES

## MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



## ORDER INFORMATION

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



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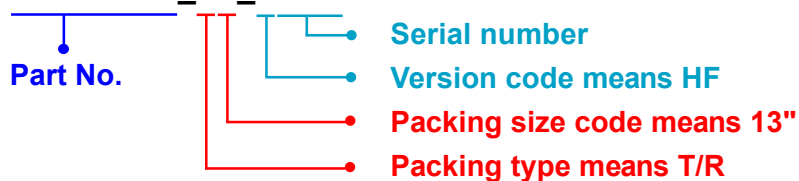
### Part No.\_packing code\_Version

BAS40\_R1\_00001

BAS40\_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)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                 | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>               | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                           |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                           |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                           |                      |                                       |



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