

# BAS40WS

## SURFACE MOUNT SCHOTTKY DIODES

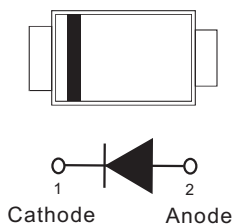
**VOLTAGE** 40 Volt **CURRENT** 0.2 Ampere

### 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 2011/65/EU directive
- Green molding compound as per IEC61249 Std. .  
(Halogen Free)

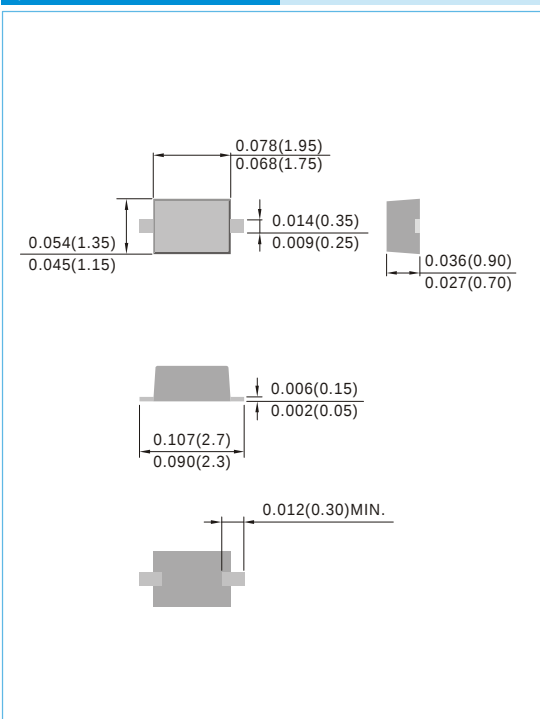
### MECHANICAL DATA

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams
- Polarity: Color band denotes cathode end
- Marking: S40



### SOD-323

Unit : inch(mm)



### ABSOLUTE RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER                                          | SYMBOL           | LIMITS | UNITS |
|----------------------------------------------------|------------------|--------|-------|
| Reverse Voltage                                    | V <sub>R</sub>   | 40     | V     |
| Peak Reverse Voltage                               | V <sub>RRM</sub> | 40     | V     |
| Average Rectified Current at Temp=25°C             | I <sub>F</sub>   | 0.2    | A     |
| Non-repetitive Peak Forward Surge Current at t=1ms | I <sub>FSM</sub> | 4      | A     |

### THERMAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER                                              | SYMBOL                            | VALUE      | UNITS |
|--------------------------------------------------------|-----------------------------------|------------|-------|
| Power Dissipation                                      | P <sub>TOT</sub>                  | 225        | mW    |
| Thermal Resistance , Junction to Ambient               | R <sub>θJA</sub>                  | 556        | °C/W  |
| Operating Junction Temperature and Storage Temperature | T <sub>J</sub> , T <sub>STG</sub> | -55 to 150 | °C    |



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

| PARAMETER                 | SYMBOL          | TEST CONDITION                                                        | MIN. | TYP. | MAX.                 | UNITS |
|---------------------------|-----------------|-----------------------------------------------------------------------|------|------|----------------------|-------|
| Reverse Breakdown Voltage | V <sub>BR</sub> | I <sub>R</sub> =10μA                                                  | 40   | --   | --                   | V     |
| Reverse Current           | I <sub>R</sub>  | V <sub>R</sub> =25 V<br>V <sub>R</sub> =40 V                          | --   | --   | 1.0<br>10            | μA    |
| Forward Voltage           | V <sub>F</sub>  | I <sub>F</sub> =1.0mA<br>I <sub>F</sub> =10mA<br>I <sub>F</sub> =40mA | --   | --   | 0.38<br>0.50<br>1.00 | V     |
| Total Capacitance         | C <sub>T</sub>  | V <sub>R</sub> =0V, f=1.0MHz                                          | --   | --   | 5.0                  | pF    |

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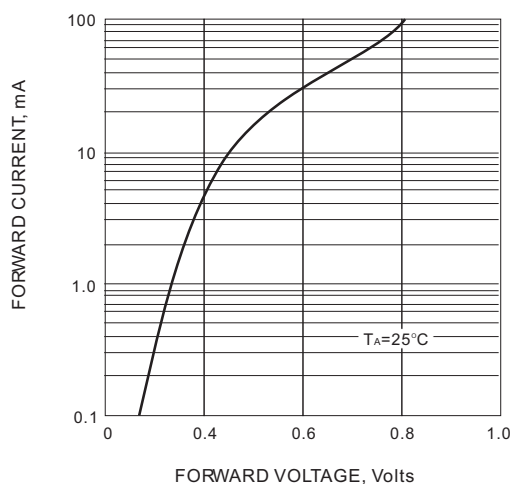


FIG. 1 TYPICAL FORWARD CHARACTERISTIC

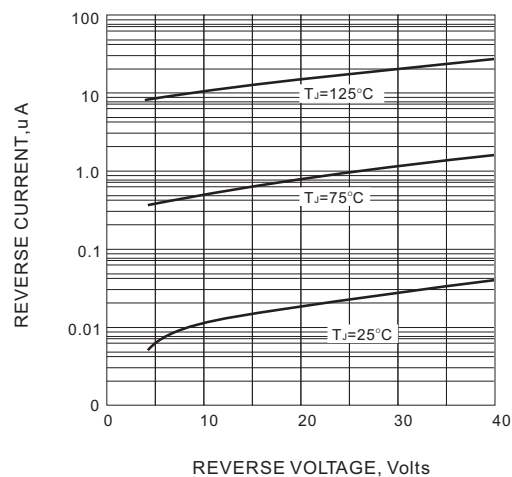


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

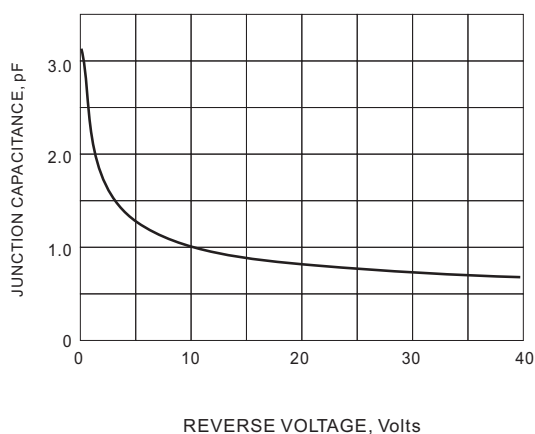


FIG. 3 TYPICAL JUNCTION CAPACITANCE

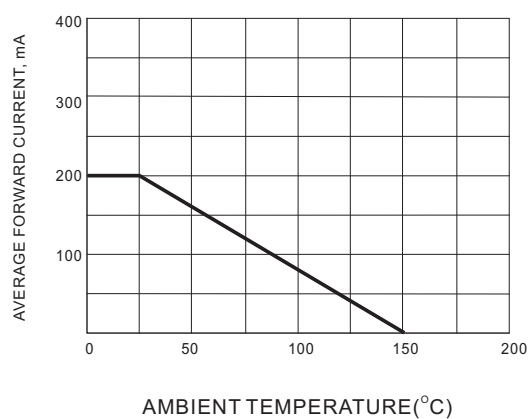


FIG. 4 FORWARD CURRENT DERATING

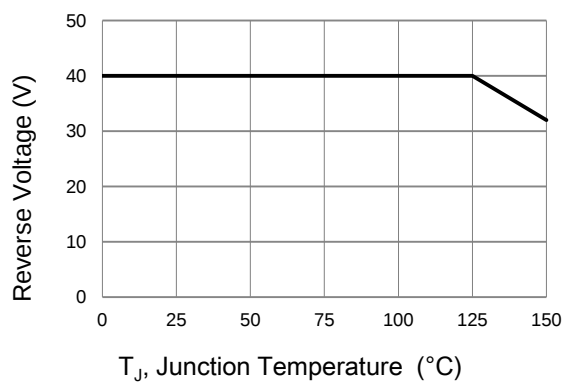


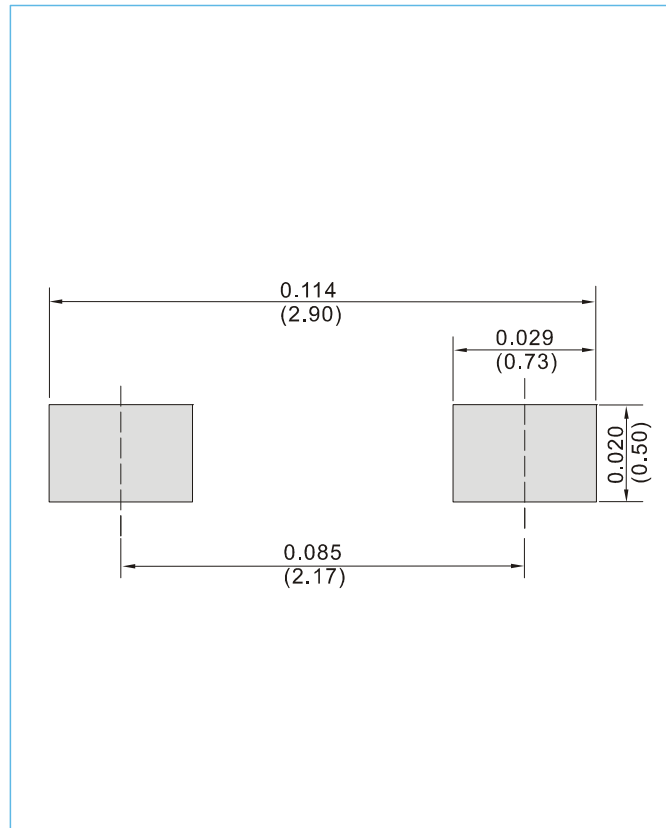
Fig.5 Operating Temperature Derating Curve

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## MOUNTING PAD LAYOUT

**SOD-323**

Unit : inch(mm)



## ORDER INFORMATION

- Packing information  
T/R - 12K per 13" plastic Reel  
T/R - 5K per 7" plastic Reel

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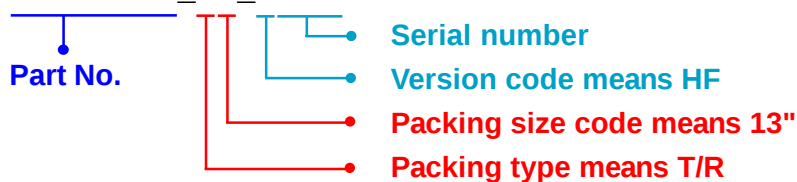
## Part No\_packing code\_Version

BAS40WS\_R1\_00001

BAS40WS\_R2\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code XX                      |                      |                                  |                      | Version Code XXXXX |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|--------------------|----------------------|---------------------------------------|
| 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                    |                    |                      |                                       |



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