



# BAT42W~BAT43W

## SURFACE MOUNT SCHOTTKY BARRIER

**VOLTAGE** 30 Volt      **CURRENT** 0.2 Ampere

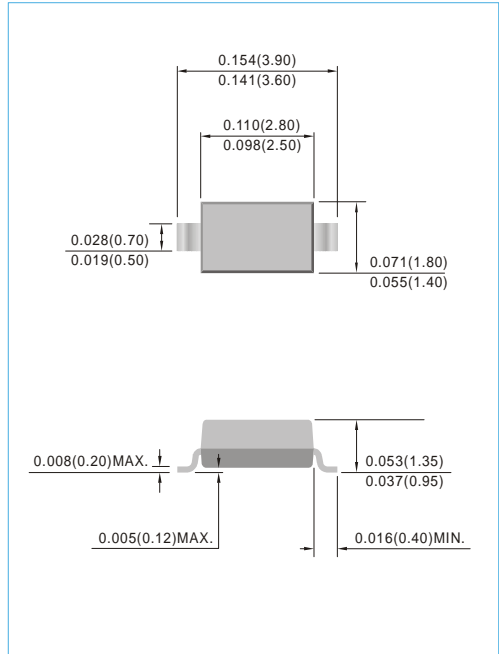
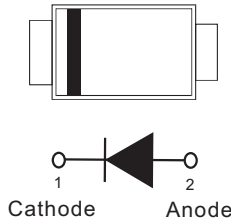
**SOD-123**      Unit : inch(mm)

### FEATURES

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOD-123, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity : Color band cathode
- Approx. Weight: 0.0004 ounces, 0.01 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

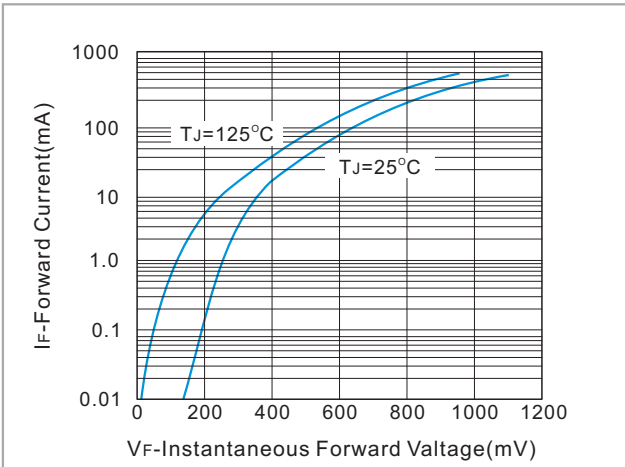
| PARAMETER  | SYMBOL          | BAT42W                    | BAT43W                      | UNITS                       |
|--|-----------------|---------------------------|-----------------------------|-----------------------------|
| Marking Code   | -               | L2                        | L3                          | -                           |
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$       | 30                        |                             | V                           |
| Maximum RMS Voltage  | $V_{RMS}$       | 21                        |                             | V                           |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 30                        |                             | V                           |
| Maximum Average Forward Current at $T_A=25^\circ\text{C}$                          | $I_{F(AV)}$     | 0.2                       |                             | A                           |
| Peak Forward Surge Current, 1.0ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 4.0                       |                             | A                           |
| Maximum Instantaneous Forward Voltage  | $V_F$           | 0.4 / 10mA<br>1.0 / 200mA | 0.33 / 2.0mA<br>1.0 / 200mA | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                            | $I_R$           | 0.5                       |                             | $\mu\text{A}$               |
| Maximum Thermal Resistance   | $R_{\theta JA}$ | 635                       |                             | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range                                   | $T_J, T_{STG}$  | -55 to +125               |                             | $^\circ\text{C}$            |

Note : 1.  $C_J$  at  $V_R=1$ ,  $f=1\text{MHz}$

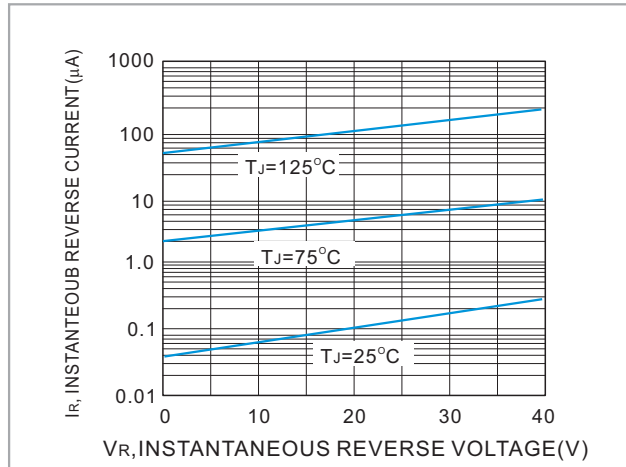
2. Mounted on FR-4 board with recommended pad layout



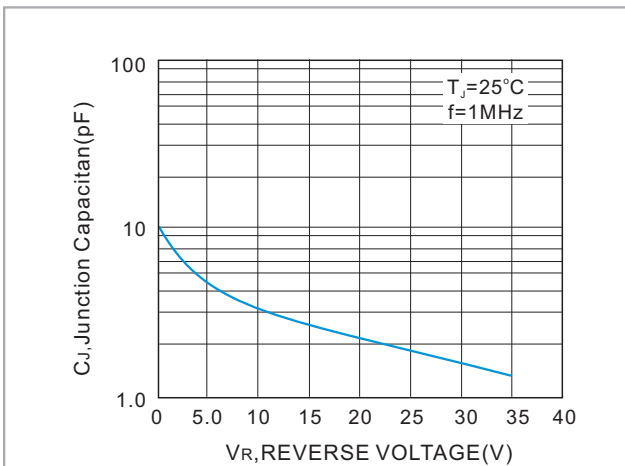
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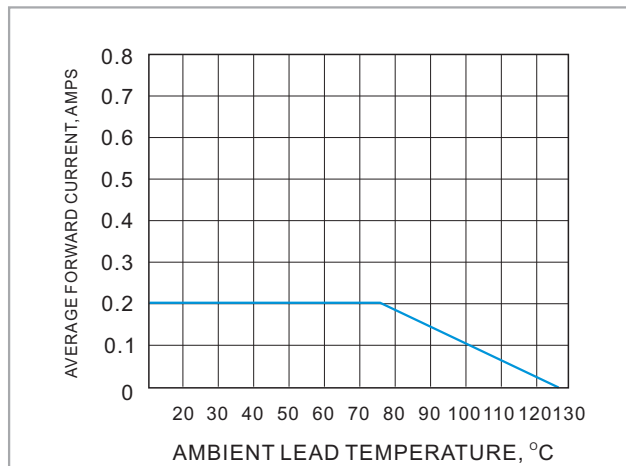
**Fig. 1-TYPICAL FORWARD CHARACTERISTIC**



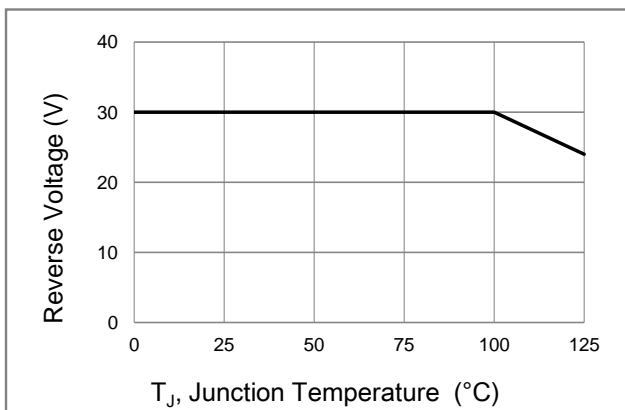
**Fig. 2-TYPICAL REVERSE CHARACTERISTICS**



**Fig. 3-TYPICAL JUNCTION CAPACITANCE**



**Fig. 4-FORWARD DERATING CURVE**

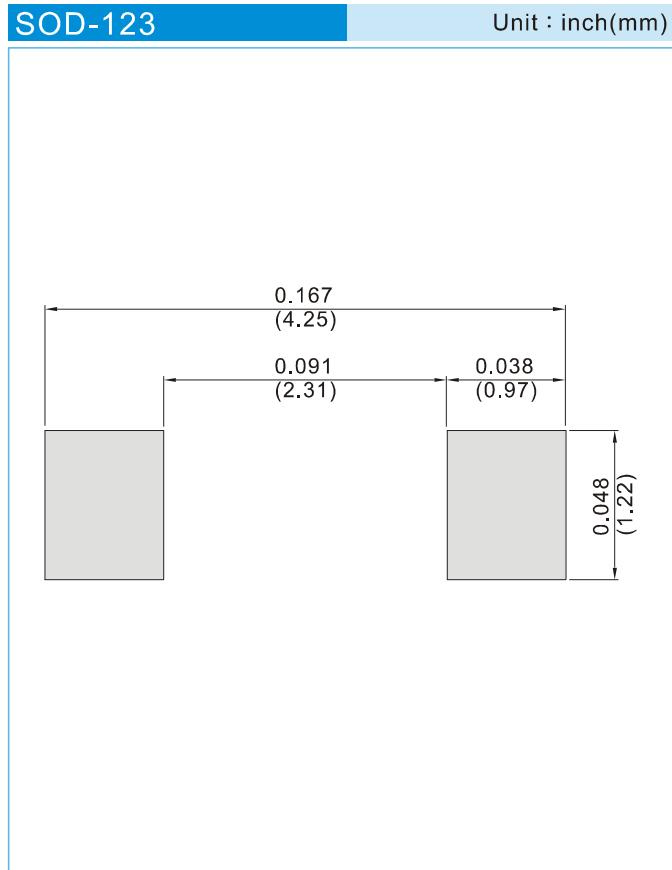


**Fig.5 Operating Temperature Derating Curve**



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



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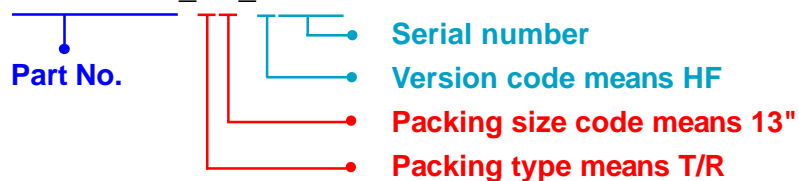
### Part No\_packing code\_Version

BAT42W\_R1\_00001

BAT42W\_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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