



# B1S SERIES

## MINI SURFACE MOUNT GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 100 to 1000Volt **CURRENT** 0.8 Ampere

**MDI** Unit : inch(mm)

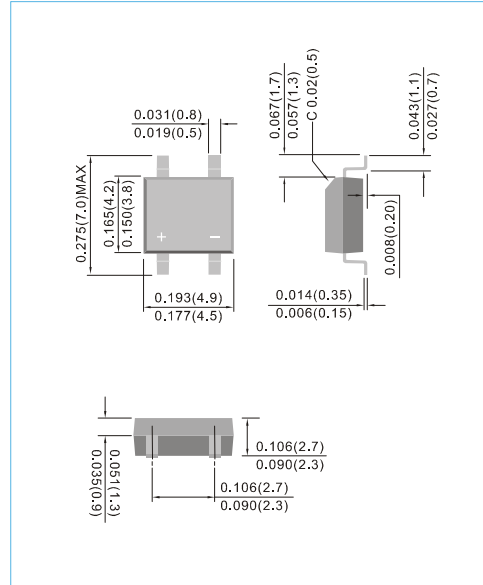
**Recongnized File # E111753**

### FEATURES

- Plastic material used carries Underwriters Laboratory recognition 94V-O
- Low leakage
- Ideal for printed circuit board
- Exceeds environmental standards of MIL-S-19500
- Lead free in compliance with EU RoHS 2.0

### MECHANICAL DATA

- Case: Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbols molded or marking on body
- Weight: 0.0044 ounce, 0.1268 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, Resistive or inductive load.  
For capacitive load, derate current by 20%

| PARAMETER  | SYMBOL                             | B1S         | B2S | B4S | B6S | B8S | B10S | UNITS |                             |
|--|------------------------------------|-------------|-----|-----|-----|-----|------|-------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$                          | 100         | 200 | 400 | 600 | 800 | 1000 | V     |                             |
| Maximum RMS Bridge Input Voltage   | $V_{RMS}$                          | 70          | 140 | 280 | 420 | 560 | 700  | V     |                             |
| Maximum DC Blocking Voltage  | $V_R$                              | 100         | 200 | 400 | 600 | 800 | 1000 | V     |                             |
| Maximum Average Forward Current $T_A=55^\circ\text{C}$<br>$T_A=25^\circ\text{C}$                             | $I_{F(AV)}$                        | 0.5<br>0.8  |     |     |     |     |      |       | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load                          | $I_{FSM}$                          | 35          |     |     |     |     |      |       | A                           |
| Power Dissipation at $T_A=25^\circ\text{C}$  | $P_D$                              | 1.4         |     |     |     |     |      |       | W                           |
| $I^2t$ Rating For Fusing ( $t < 8.35\text{ms}$ )   | $I^2t$                             | 5.083       |     |     |     |     |      |       | A <sup>2</sup> S            |
| Maximum Forward Voltage Drop per Bridge Element at 0.5A  | $V_F$                              | 1.0         |     |     |     |     |      |       | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>$T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ | $I_R$                              | 5<br>500    |     |     |     |     |      |       | $\mu\text{A}$               |
| Typical Junction Capacitance (Note 1)  | $C_J$                              | 25          |     |     |     |     |      |       | pF                          |
| Typical Thermal Resistance<br>(Note 2)   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 85<br>20    |     |     |     |     |      |       | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range   | $T_J, T_{STG}$                     | -55 to +150 |     |     |     |     |      |       | $^\circ\text{C}$            |

**NOTES :**

1. Measured at 1MHz and applied reverse voltage of 4 Volts.
2. Thermal resistance from junction to ambient mounted on 5cmX6cm P.C.B. with minimum copper pads.



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## RATING AND CHARACTERISTIC CURVES

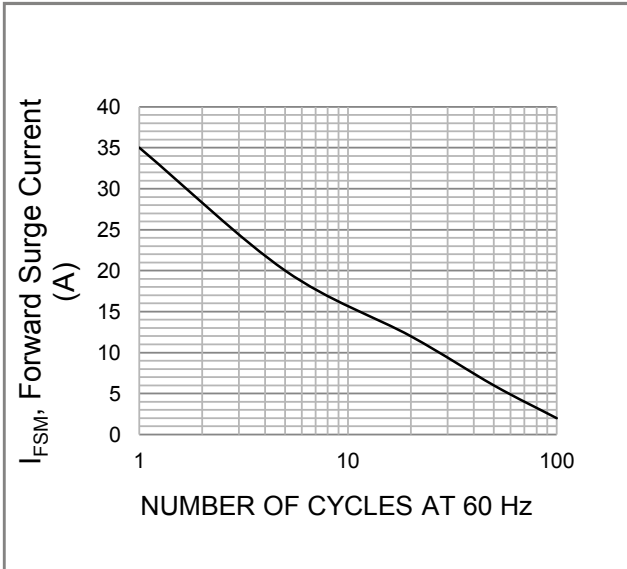


Fig.1 MAXIMUM NON-REPETITIVE SURGE CURRENT

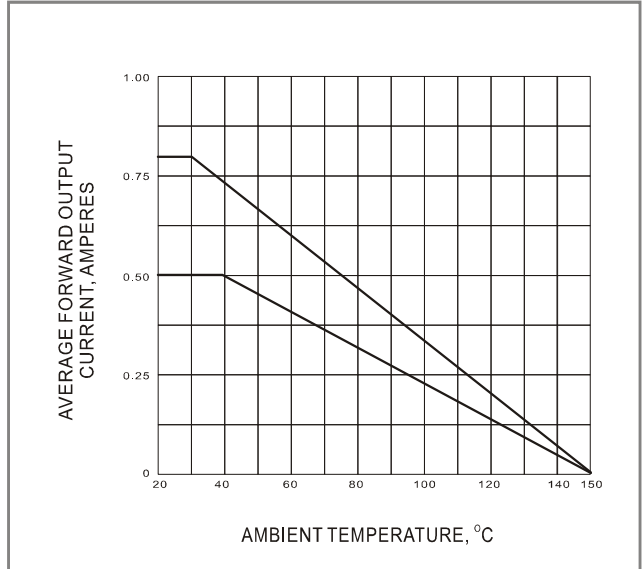


Fig.2 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

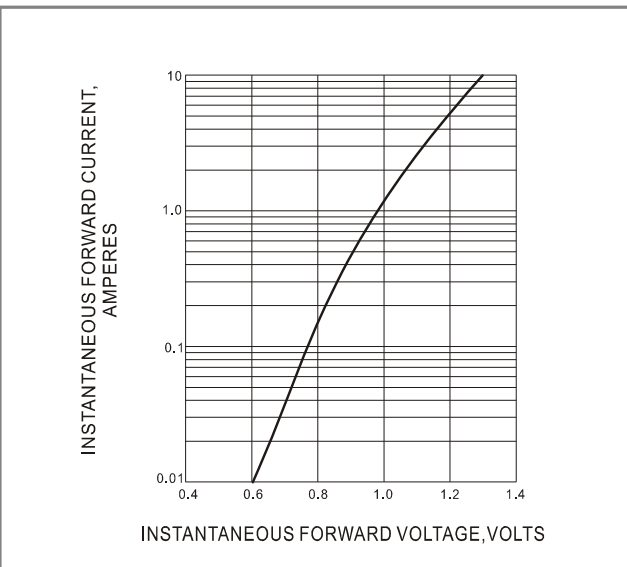


Fig.3 TYPICAL FORWARD CHARACTERISTICS

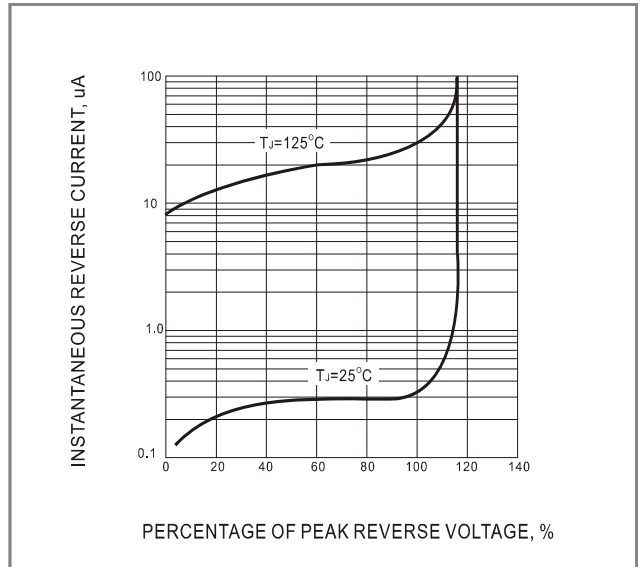


Fig.4 TYPICAL REVERSE CHARACTERISTICS

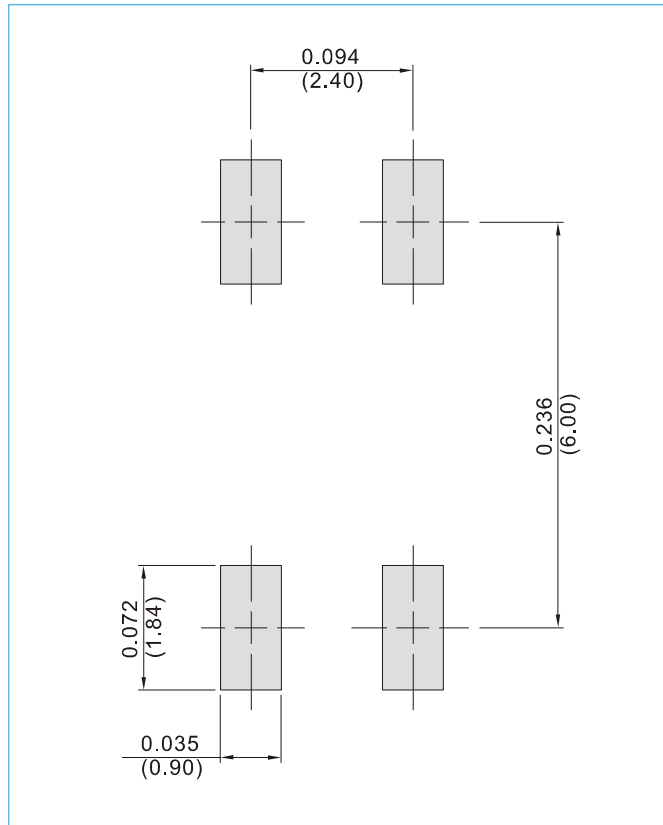


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### MOUNTING PAD LAYOUT

MDI

Unit : inch(mm)



### ORDER INFORMATION

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



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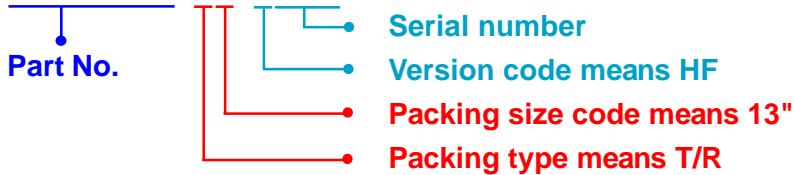
**Part No\_packing code\_Version**

B1S\_R2\_00001

B1S\_R2\_10001

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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