



# DI100S~DI1010S

## SURFACE MOUNT GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 50 to 1000 Volt **CURRENT** 1 Ampere



Recognized File #E111753

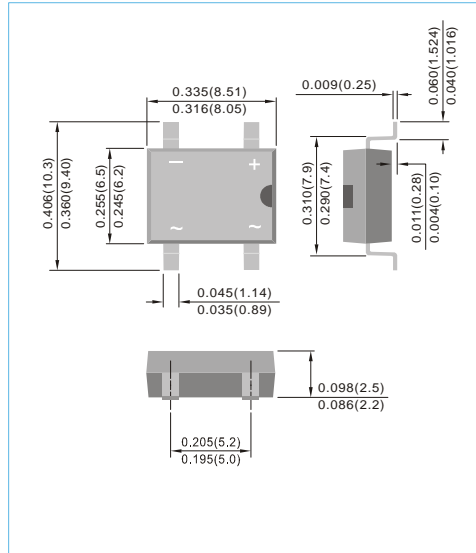
### FEATURES

- Plastic material used carries Underwriters Laboratory recognition 94V-O
- Low leakage
- Surge overload rating--30 amperes peak
- Ideal for printed circuit board
- Exceeds environmental standards of MIL-S-19500/228
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### 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: 0.01058 ounce, 0.3 gram

**SDIP** Unit : inch(mm)



### 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                             | DI100S      | DI101S | DI102S | DI104S | DI106S | DI108S | DI1010S | UNITS                       |
|---|------------------------------------|-------------|--------|--------|--------|--------|--------|---------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                          | 50          | 100    | 200    | 400    | 600    | 800    | 1000    | V                           |
| Maximum RMS Bridge Input Voltage  | $V_{RMS}$                          | 35          | 70     | 140    | 280    | 420    | 560    | 700     | V                           |
| Maximum DC Blocking Voltage   | $V_{DC}$                           | 50          | 100    | 200    | 400    | 600    | 800    | 1000    | V                           |
| Maximum Average Forward Current $T_A=40^\circ\text{C}$  | $I_{F(AV)}$                        | 1           |        |        |        |        |        |         | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load                       | $I_{FSM}$                          | 30          |        |        |        |        |        |         | A                           |
| $I^2t$ Rating For Fusing ( $t < 8.35\text{ms}$ )  | $I^2t$                             | 3.735       |        |        |        |        |        |         | $\text{A}^2\text{S}$        |
| Maximum Forward Voltage Drop per Bridge Element at 1A   | $V_F$                              | 1.1         |        |        |        |        |        |         | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$<br>$T_A=125^\circ\text{C}$ | $I_R$                              | 5<br>500    |        |        |        |        |        |         | $\mu\text{A}$               |
| Typical Junction Capacitance (Note 1)   | $C_J$                              | 25          |        |        |        |        |        |         | pF                          |
| Typical Thermal Resistance Per Leg (Note 2)   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 55<br>30    |        |        |        |        |        |         | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$                     | -55 to +150 |        |        |        |        |        |         | $^\circ\text{C}$            |

#### NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area



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## RATING AND CHARACTERISTIC CURVES

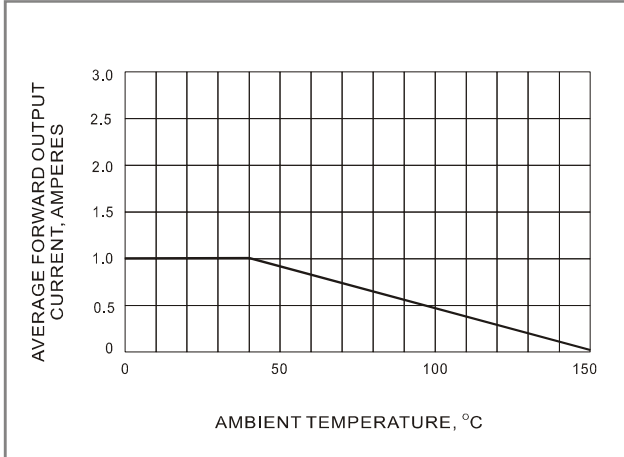


FIG.1 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

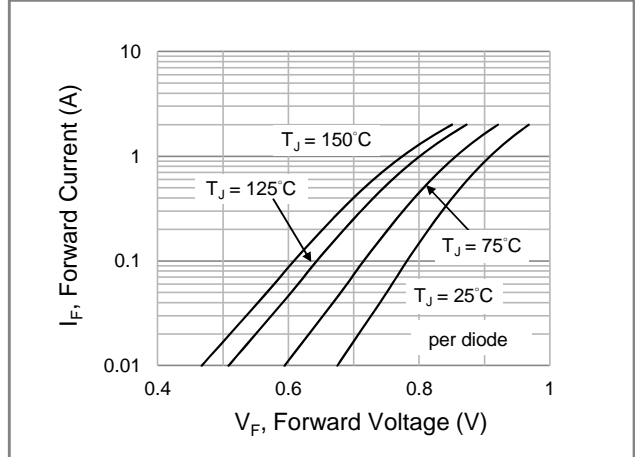


FIG.2 TYPICAL FORWARD CHARACTERISTICS

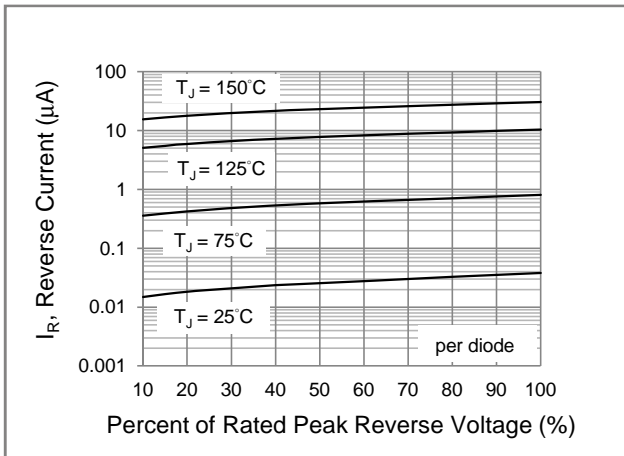


FIG.3 TYPICAL REVERSE CHARACTERISTICS

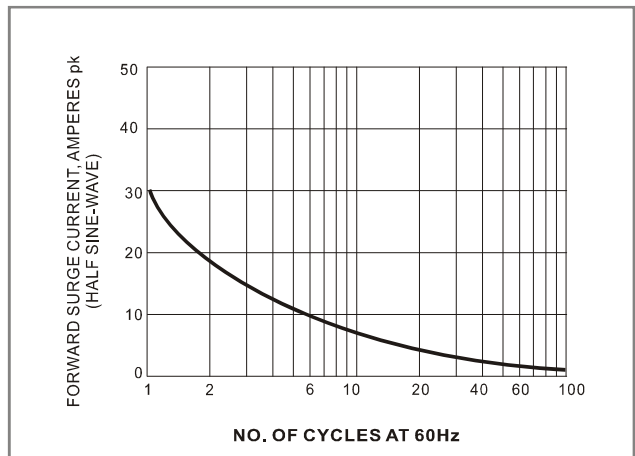
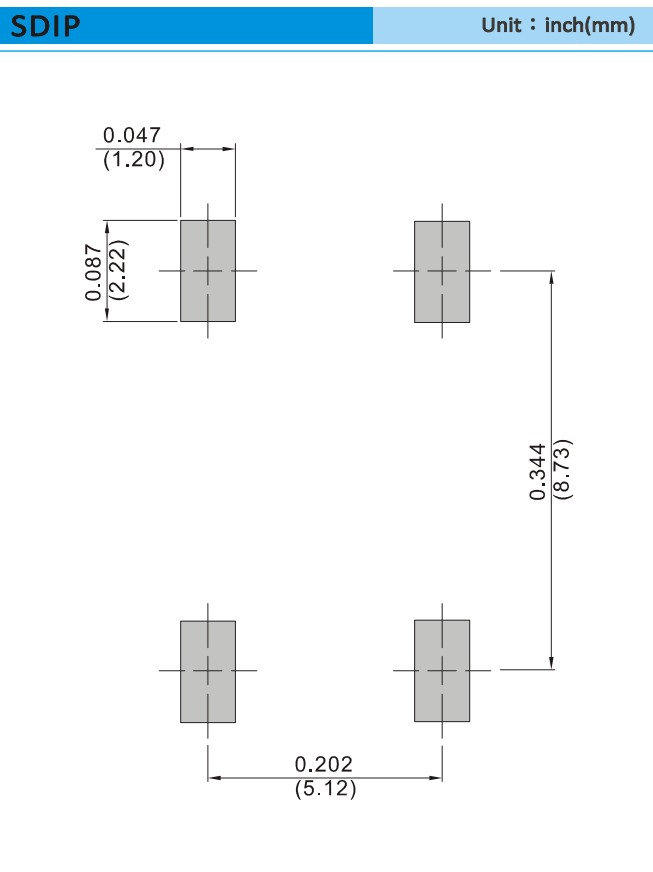


FIG.4 MAX NON-REPETITIVE SURGE CURRENT



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 1.5K per 13" plastic Reel



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### Part No\_packing code\_Version

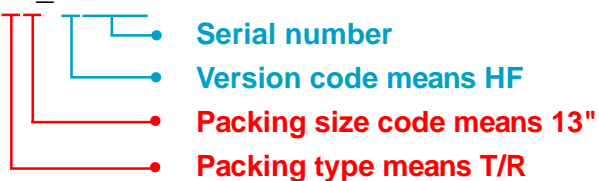
DI100S\_R2\_00001

DI100S\_T0\_00001

For example :

**RB500V-40\_R2\_00001**

Part No.



| 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                    |                           |                      |                                       |



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