

# DATA SHEET

## DI100~DI1010

### DUAL-IN-LINE GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 50 to 400 Volts **CURRENT** 1.0 Amperes

**DIP** Unit : inch (mm)

**Recongnized 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
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICALDATA

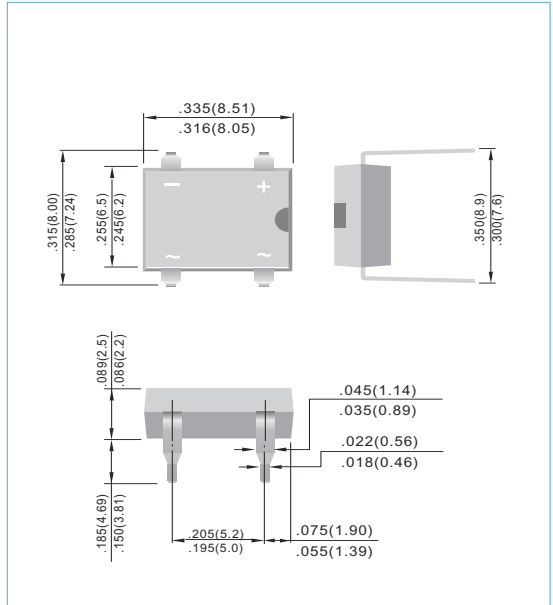
Case: Reliable low cost construction utilizing molded plastic technique results in inexpensive product

Terminals: Lead solderable per MIL-STD-202G, Method 208

Polarity: Polarity symbols molded or marking on body

Mounting Position: Any

Weight: 0.02 ounce, 0.4 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                             | DI100        | DI101 | DI102 | DI104 | DI106 | DI108 | DI1010 | 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 $T_A=40^{\circ}C$                                                 | $I_{AV}$                           | 1.0          |       |       |       |       |       |        | A                |
| Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$                          | 30           |       |       |       |       |       |        | A                |
| $I^2t$ Rating for fusing ( $t < 8.35ms$ )                                                         | $I^2t$                             | 3.735        |       |       |       |       |       |        | A <sup>2</sup> t |
| Maximum Forward Voltage Drop per Bridge Element at 1.0A                                           | $V_F$                              | 1.1          |       |       |       |       |       |        | V                |
| Maximum DC Reverse Current $T_J=25^{\circ}C$ at Rated DC Blocking Voltage $T_J=125^{\circ}C$      | $I_R$                              | 5.0<br>500   |       |       |       |       |       |        | $\mu A$          |
| Typical Junction capacitance (Note 1)                                                             | $C_J$                              | 25           |       |       |       |       |       |        | pF               |
| Typical thermal resistance per leg ((Note 2)                                                      | $R_{\theta JA}$<br>$R_{\theta JL}$ | 40<br>15     |       |       |       |       |       |        | $^{\circ}C / W$  |
| Operating Junction and Storage Temperature Range                                                  | $T_J, T_{STG}$                     | -55 to + 150 |       |       |       |       |       |        | $^{\circ}C$      |

#### NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.5 X 0.5"(13 X 13mm) copper pads

## RATING AND CHARACTERISTIC CURVES

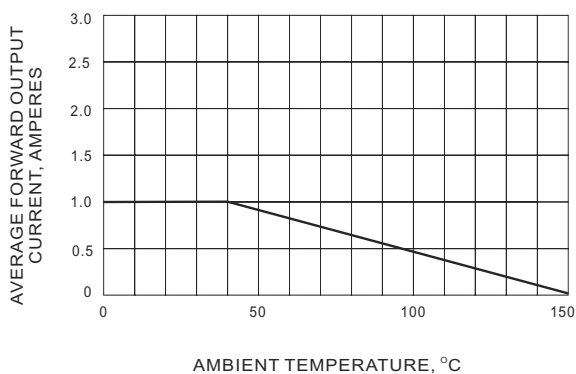


FIG.1 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

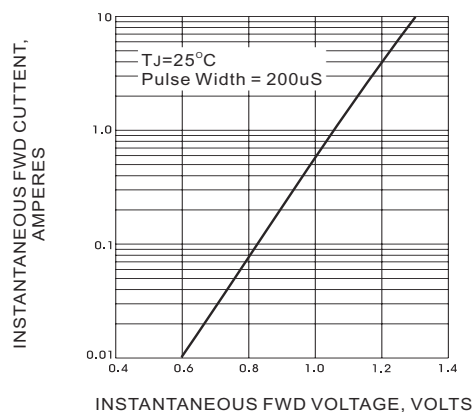


FIG.2 TYPICAL FORWARD CHARACTERISTICS

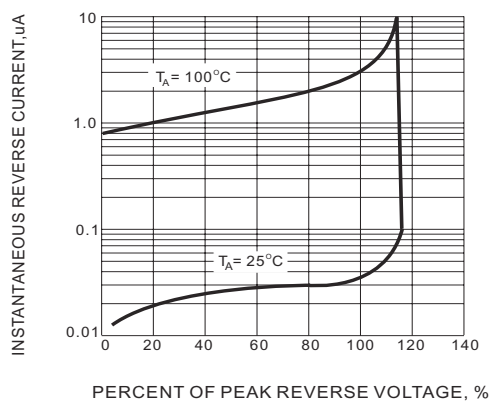


FIG.3 TYPICAL REVERSE CHARACTERISTICS

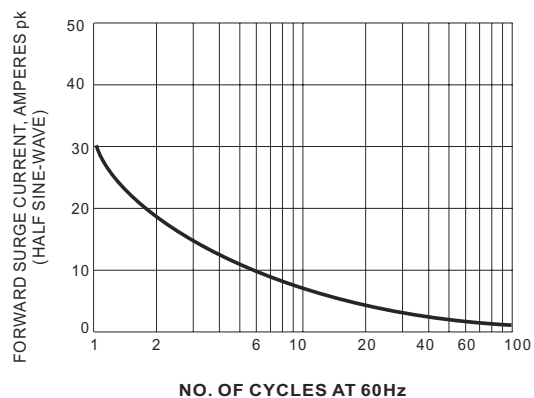


FIG.4 MAX NON-REPETITIVE SURGE CURRENT