



# DI200~DI2010

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

**VOLTAGE** 50~1000 Volts **CURRENT** 2.0 Amperes

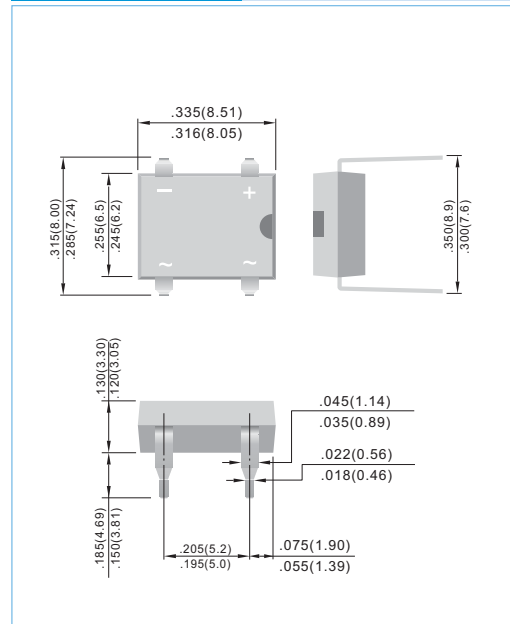
**DIP** Unit : inch (mm)

### FEATURES

- Plastic material used carries Underwriters Laboratory recognition 94V-0
- Low leakage
- Surge overload rating-- 50 amperes peak
- Ideal for printed circuit board
- Exceeds environmental standards of MIL-S-19500/228
- In compliance with EU RoHS 2002/95/EC directives

### 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
- Mounting Position: Any
- Weight: 0.0115 ounce, 0.3268 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                             | DI200        | DI201 | DI202 | DI204 | DI206 | DI208 | DI2010 | 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 $T_A=40^\circ\text{C}$  | $I_{F(AV)}$                        | 2.0          |       |       |       |       |       |        | A                           |
| Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load (JEDEC method)         | $I_{FSM}$                          | 50           |       |       |       |       |       |        | A                           |
| $I^2t$ Rating for fusing ( $t < 8.35\text{ms}$ )  | $I^2t$                             | 10.0         |       |       |       |       |       |        | $\text{A}^2\text{S}$        |
| Maximum Forward Voltage Drop per Bridge Element at 2.0A   | $V_F$                              | 1.1          |       |       |       |       |       |        | V                           |
| Maximum DC Reverse Current $T_J=25^\circ\text{C}$<br>at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$ | $I_R$                              | 5.0<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>$R_{\theta JL}$ | 40<br>15     |       |       |       |       |       |        | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$                     | -55 to + 150 |       |       |       |       |       |        | $^\circ\text{C}$            |

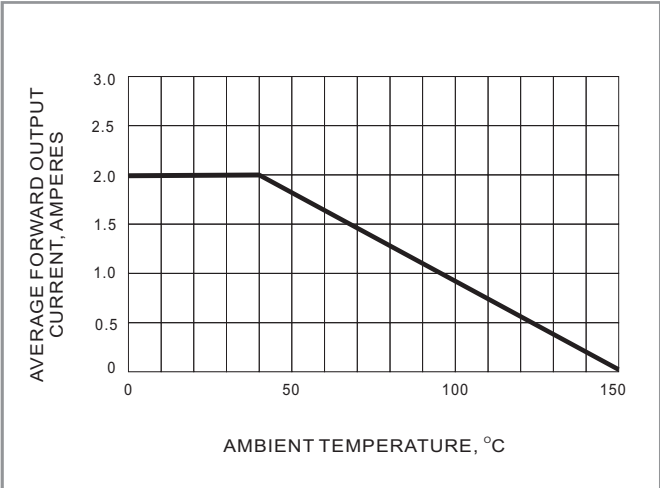
**NOTES:**

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. 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

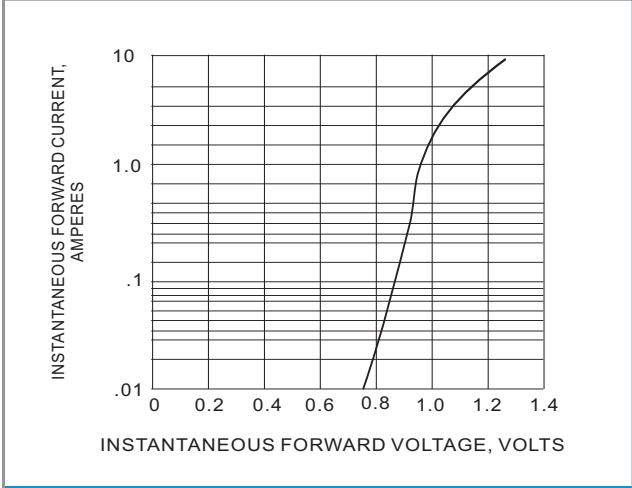


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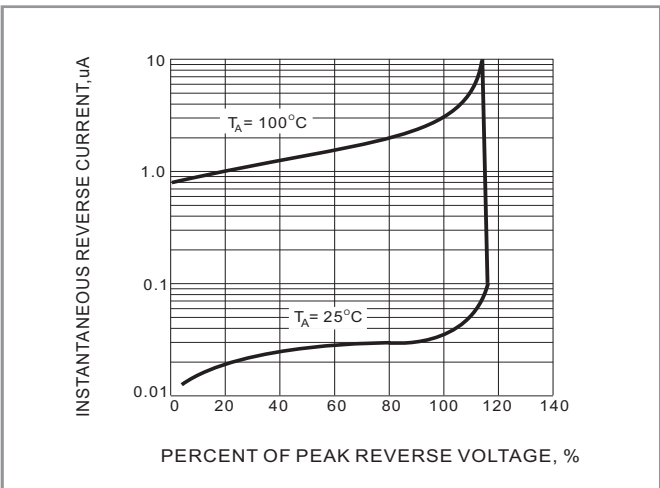
## RATING AND CHARACTERISTIC CURVES



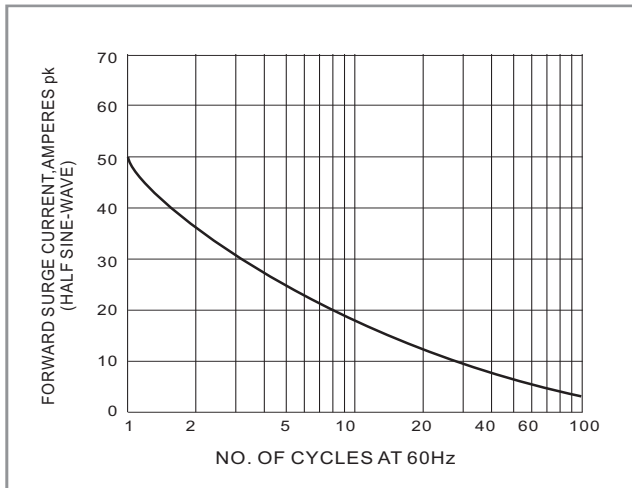
**FIG. 1 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3 TYPICAL REVERSE CHARACTERISTICS**



**Fig.4 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**