Compact Technology

# DI100 thru DI1010

**GLASS PASSIVATED BRIDGE RECTIFIERS**

REVERSE VOLTAGE **- 50** to **1000** Volts
FORWARD CURRENT **- 1.0** Amperes

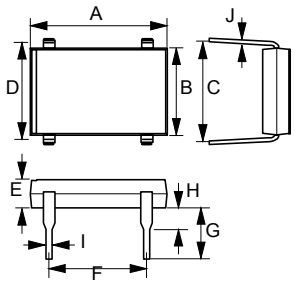
## FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- The plastic material has UL flammability classification 94V-0
- In compliance with EU RoHS 2002/95/EC directives

## MECHANICAL DATA

- Polarity : As marked on Body
- Weight : 0.02 ounces, 0.4 grams
- Mounting position : Any

**DIP**




| DIP | | |
|---|---|---|
| DIM. | MIN. | MAX. |
| A | 8.05 | 8.51 |
| B | 6.20 | 6.50 |
| C | 7.60 | 8.90 |
| D | 7.24 | 8.00 |
| E | 2.20 | 2.50 |
| F | 5.00 | 5.20 |
| G | 3.81 | 4.69 |
| H | 1.27 | 2.03 |
| I | .46 | .56 |
| J | 0.22 | 0.3 |
| All Dimensions in millimeter | | |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| PARAMETER | SYMBOL | DI 100 | DI 101 | DI 102 | DI 104 | DI 106 | DI 108 | DI 1010 | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| 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 rectified current @TA=40°C | $I_F$ | 1.0 | | | | | | | A |
| $I^2t$ Rating for fuisng (t< 8.3mS) | $I^2t$ | 3.735 | | | | | | | $A^2sec$ |
| Peak forward surge current, single sine-wave superim posed on rated load (JEDEC method) | $I_{FSM}$ | 30 | | | | | | | A |
| Maximum instantaneous Forward Voltage Drop per element at 1.0A DC | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current @TA=25°C<br>at Rated DC Blocking Voltage @TA=100°C | $I_R$ | 5.0<br>500 | | | | | | | uA |
| Typical junction capacitance per leg(note1 ) | $C_J$ | 25 | | | | | | | pF |
| Typical Thermal Resistance Per leg (note2) | $R_{\theta JA}$<br>$R_{\theta JC}$ | 40<br>15 | | | | | | | °C/W |
| Operating & StorageTemperature Range | $T_J$&$T_{STG}$ | -55 to +150 | | | | | | | °C |

note1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts
note2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B with 0.5x0.5" (13x13mm) copper pads.

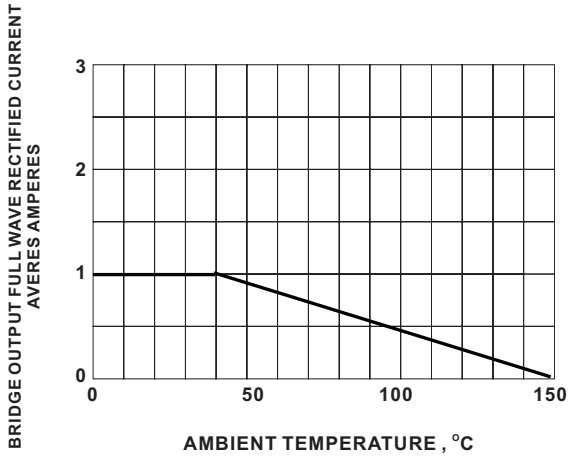



Fig.1 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

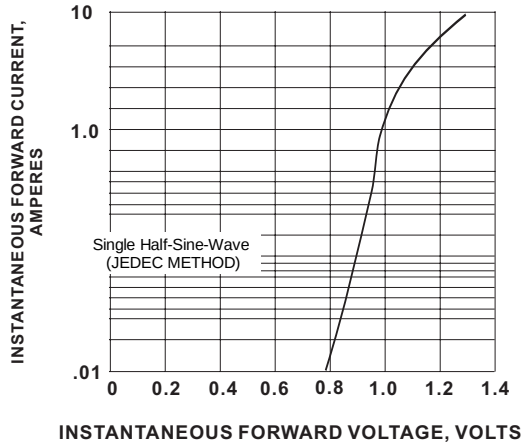



Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

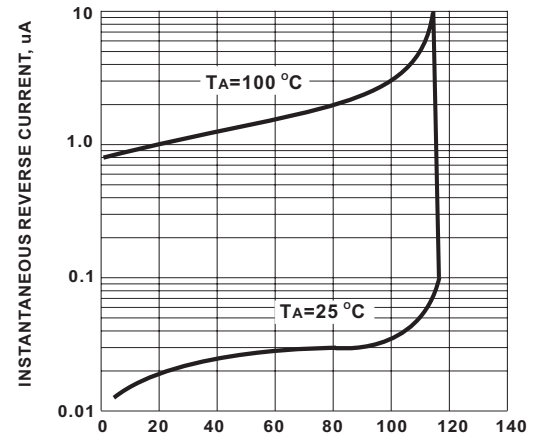



Fig.3 TYPICAL PEAK REVERSE CHARACTERISTICS

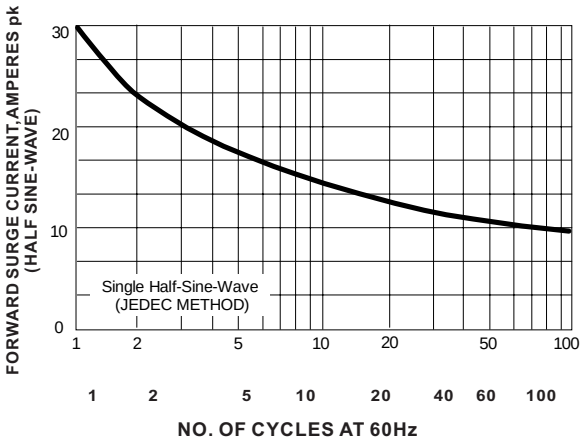



Fig.4 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT