

DIOTEC ELECTRONICS CORP.
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Data Sheet No. FRDI-100-1B

1 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency

- **UL RECOGNIZED - FILE #E124962**

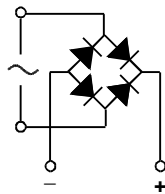
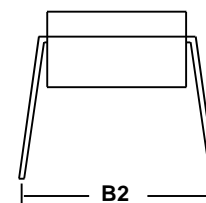
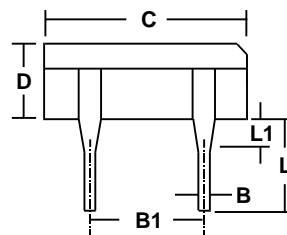
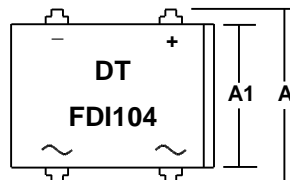
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Rectangular pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
THE FDI PACKAGE

SERIES FDI100 - FDI110



| Sym | Minimum | | Maximum | |
|-----|---------|------|---------|------|
| | in | mm | in | mm |
| A | 0.290 | 7.4 | 0.310 | 8.9 |
| A1 | 0.245 | 6.2 | 0.255 | 6.5 |
| B | 0.016 | 0.41 | 0.020 | 0.51 |
| B1 | 0.195 | 5.0 | 0.205 | 5.2 |
| B2 | 0.300 | 7.6 | 0.350 | 8.9 |
| C | 0.355 | 9.3 | 0.365 | 9.3 |
| D | 0.125 | 3.2 | 0.135 | 3.4 |
| L | 0.155 | 3.9 | 0.165 | 4.3 |
| L1 | 0.060* | 1.5* | | |

* This dimension is "Typical".

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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

| PARAMETER (TEST CONDITIONS) | SYMBOL | RATINGS | | | | | | | UNITS |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|----------|
| Series Number | | FDI 100 | FDI 101 | FDI 102 | FDI 104 | FDI 106 | FDI 108 | FDI 110 | |
| Maximum DC Blocking Voltage | V _{RM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | |
| Maximum Peak Recurrent Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| Average Forward Rectified Current @ T _A = 40 °C | I _O | 1 | | | | | | | AMPS |
| Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load) | I _{FSM} | 50 | | | | | | | |
| Maximum Forward Voltage at 1 Amp DC | V _{FM} | 1.3 | | | | | | | VOLTS |
| Maximum Average DC Reverse Current @ T _A = 25 °C At Rated DC Blocking Voltage @ T _A = 100 °C | I _{RM} | 10 1 | | | | | | | μA mA |
| Maximum Reverse Recovery Time (Note 1) @ T _J = 25 °C | T _{RR} | 200 | | | 300 | | 500 | | nS |
| Maximum Thermal Resistance, Junction to Ambient (Note 2) | R _{θJA} | 40 | | | | | | | °C/W |
| Junction Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | | | | | | °C |

NOTES: (1) T_J=25°C, I_F=0.5A, I_{RR}=0.25A

(2) Thermal resistance from junction to ambient with bridge mounted on PC Board with 0.5" sq. (13mm sq.) copper pads

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