



10 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 150 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications

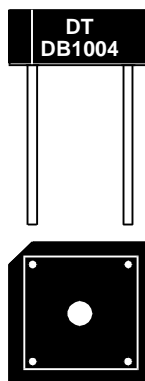
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

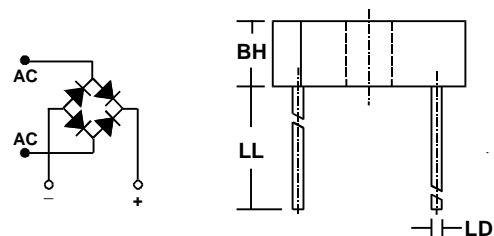
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case; positive lead at beveled corner
- Mounting Position: Any. Through hole provided for #6 screw
- Weight: 0.18 Ounces (5.4 Grams)

MECHANICAL SPECIFICATION

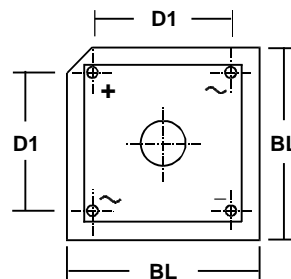
ACTUAL SIZE



SERIES DB1000-DB1010 and ADB1004-ADB1008



| SYM | MILLIMETERS | | INCHES | |
|-----|-------------|------|--------|-------|
| | MIN | MAX | MIN | MAX |
| BL | 18.5 | 19.6 | 0.73 | 0.77 |
| BH | 6.4 | 7.6 | 0.25 | 0.3 |
| D1 | 12.2 | 13.2 | 0.48 | 0.52 |
| LL | 22.2 | n/a | 0.875 | n/a |
| LD | 1.2 | 1.3 | 0.048 | 0.052 |



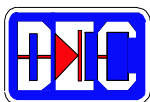
MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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 |
|---|--------------------------------------|----------------------|----------|----------|--------------------------|---------|---------|---------|---------|---------|---------|-----------------------|
| | | CONTROLLED AVALANCHE | | | NON-CONTROLLED AVALANCHE | | | | | | | |
| | | ADB 1004 | ADB 1006 | ADB 1008 | DB 1000 | DB 1001 | DB 1002 | DB 1004 | DB 1006 | DB 1008 | DB 1010 | |
| Series Number | | | | | | | | | | | | |
| Maximum DC Blocking Voltage | V _{RM} | | | | | | | | | | | VOLTS |
| Working Peak Reverse Voltage | V _{RWM} | 400 | 600 | 800 | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| Maximum Peak Recurrent Reverse Voltage | V _{RRM} | | | | | | | | | | | |
| RMS Reverse Voltage | V _R (RMS) | 280 | 420 | 560 | 35 | 70 | 140 | 280 | 420 | 560 | 700 | |
| Power Dissipation in V _(BR) Region for 100 μS Square Wave | P _{RM} | 500 | | | n/a | | | | | | | WATTS |
| Continuous Power Dissipation in V _(BR) Region @ T _{HS} =80 °C (Heat Sink Temp) | P _R | 2 | | | n/a | | | | | | | |
| Thermal Energy (Rating for Fusing) | I ² t | 64 | | | | | | | | | | AMPS ² SEC |
| Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load) | I _{FSM} | 150 | | | | | | | | | | AMPS |
| Average Forward Rectified Current @ T _c = 50 °C (Note 1) | I _o | 10 | | | | | | | | | | |
| Rectified Current @ T _c = 100 °C (Note 1); T _A = 50 °C (Note 2) | | 8 | | | | | | | | | | |
| Junction Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | | | | | | | | | °C |
| Minimum Avalanche Voltage | V _(BR) Min | 450 | 650 | 850 | n/a | | | | | | | VOLTS |
| Maximum Avalanche Voltage | V _(BR) Max | 900 | 1100 | 1300 | n/a | | | | | | | |
| Maximum Forward Voltage (Per Diode) at 5 Amps DC | V _{FM} | 1.1 | | | | | | | | | | |
| Maximum Reverse Current at Rated V _{RM} @ T _A = 25 °C @ T _A = 100 °C | I _{RM} | 5 1 | | | | | | | | | | |
| Minimum Insulation Breakdown Voltage (Circuit to Case) | V _{ISO} | 2000 | | | | | | | | | | VOLTS |
| Typical Thermal Resistance (on Heat Sink) Junction to Ambient Junction to Case | R _{θJA} R _{θJC} | 2.5 5.0 | | | | | | | | | | °C/W |

NOTES: (1) Unit Mounted on Metal Chassis
(2) Unit Mounted on PC Board

4.971brdb010



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RATING & CHARACTERISTIC CURVES FOR SERIES DB1000 - DB1010 and SERIES ADB1004 - ADB1008

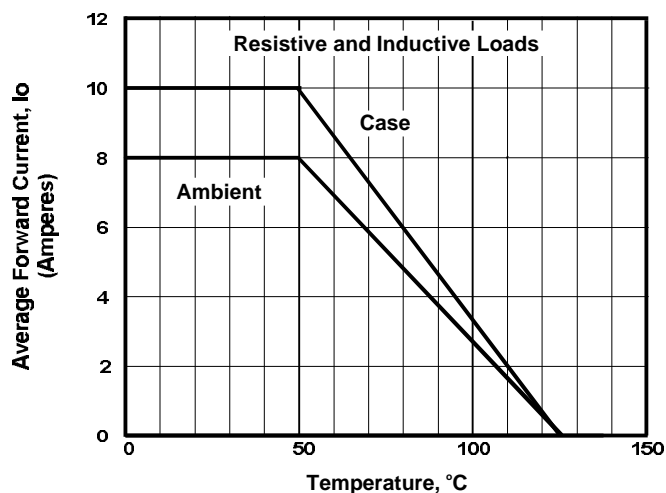


FIGURE 1. FORWARD CURRENT DERATING CURVE

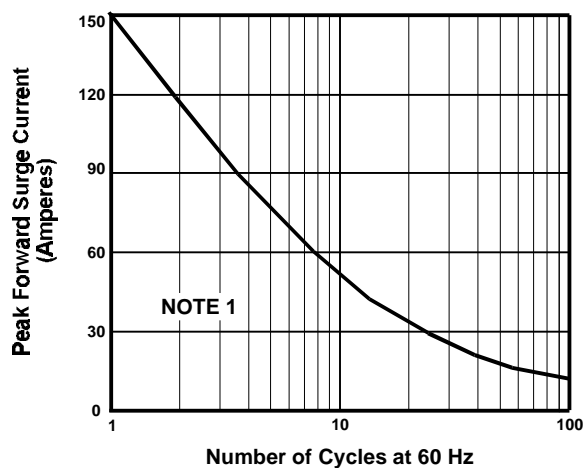


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

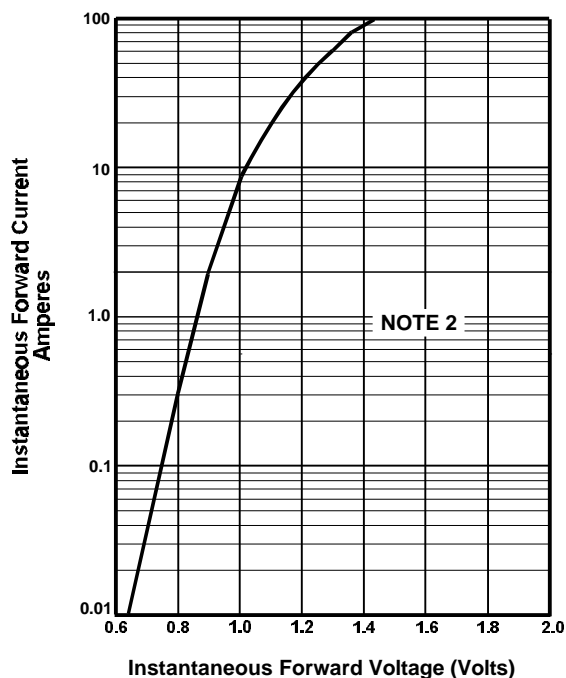


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

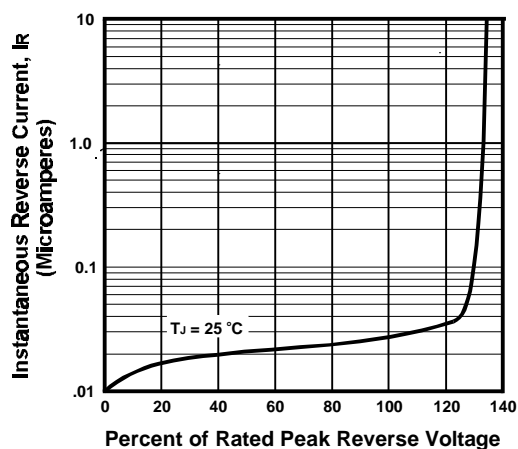


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

NOTES

- (1) JEDEC Method, 8.3 mSec. Single Half Sine Wave; $T_J = 125^\circ\text{C}$
- (2) $T_J = 25^\circ\text{C}$; Pulse Width = 300 μSec