

25 AMP SILICON BRIDGE RECTIFIERS

FEATURES

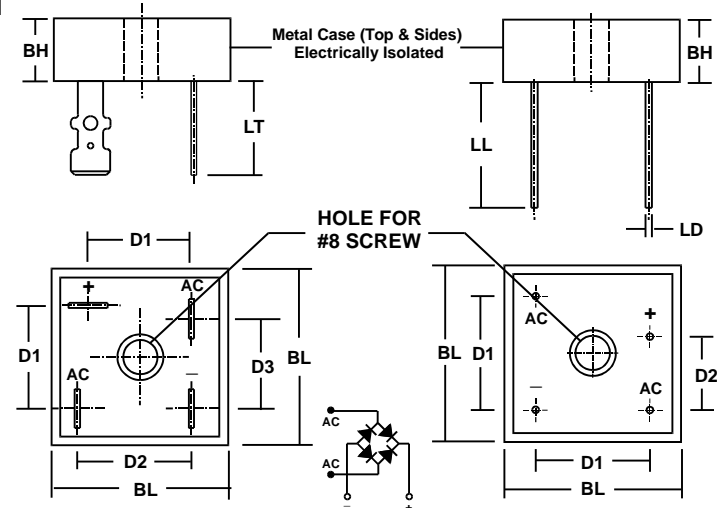
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE
- ELECTRICALLY ISOLATED METAL CASE FOR MAXIMUM HEAT DISSIPATION
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

- Case: Metal (Potting epoxy carries U/L flammability Rating 94V-0)
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed (Note 1)
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 1.1 Ounces (31.6 Grams)
Wire Leads - 0.95 Ounce (28.5 Grams)

MECHANICAL SPECIFICATION

SERIES: DB2500 - DB2510 and ADB2504 - ADB2508



| SYM | MILLIMETERS | | INCHES | |
|-----|-------------|------|--------|------|
| | MIN | MAX | MIN | MAX |
| BL | 28.4 | 28.7 | 1.12 | 1.13 |
| BH | 11.0 | 11.2 | 0.43 | 0.44 |
| D1 | 15.7 | 16.7 | 0.62 | 0.66 |
| D2 | 17.5 | 18.5 | 0.69 | 0.73 |
| D3 | 13.5 | 14.5 | 0.53 | 0.57 |
| LT | n/a | 14.2 | n/a | 0.56 |

| SYM | MILLIMETERS | | INCHES | |
|-----|-------------|------|--------|-------|
| | MIN | MAX | MIN | MAX |
| BL | 28.4 | 28.7 | 1.12 | 1.13 |
| BH | 11.0 | 11.2 | 0.43 | 0.44 |
| D1 | 17.5 | 18.5 | 0.69 | 0.73 |
| D2 | 10.9 | 11.9 | 0.43 | 0.47 |
| LL | 20.6 | n/a | 0.81 | n/a |
| LD | 1.0 | 1.1 | 0.039 | 0.042 |

Suffix "T" indicates FAST-ON TERMINALS

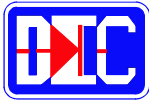
Suffix "W" indicates WIRE LEADS

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 | | | | | | | |
| Series Number | | ADB 2504 | ADB 2506 | ADB 2508 | DB 2500 | DB 2501 | DB 2502 | DB 2504 | DB 2506 | DB 2508 | DB 2510 | |
| 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 | |
| Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS) | I ² t | 375 | | | | | | | | | | AMPS ² SEC |
| Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T _J = 150° C | I _{FSM} | 300 | | | | | | | | | | AMPS |
| Average Forward Rectified Current @ T _c = 50° C | I _o | 25 | | | | | | | | | | |
| Junction Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | | | | | | | | | °C |
| Mimimum Avalanche Voltage | V(BR) Min | See Note 1 | | | n/a | | | | | | | VOLTS |
| Maximum Avalanche Voltage | V(BR) Max | See Note 1 | | | n/a | | | | | | | |
| Maximum Forward Voltage (Per Diode) at 12.5 Amps DC | V _{FM} | 1.05 | | | | | | | | | | |
| Maximum Reverse Current at Rated V _{RM} @ T _A = 25° C @ T _A = 125° C | I _{RM} | 1 50 | | | | | | | | | | μA |
| Minimum Insulation Breakdown Voltage (Circuit to Case) | V _{ISO} | 2000 | | | | | | | | | | VOLTS |
| Typical Thermal Resistance, Junction to Case | R _{θJC} | 1.6 | | | | | | | | | | °C/W |

NOTES: (1) These bridges exhibit the avalanche characteristic at breakdown. If your application requires a specific breakdown voltage range, please contact us.



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RATING & CHARACTERISTIC CURVES FOR SERIES DB2500 - DB2510 and SERIES ADB2504 - ADB2508

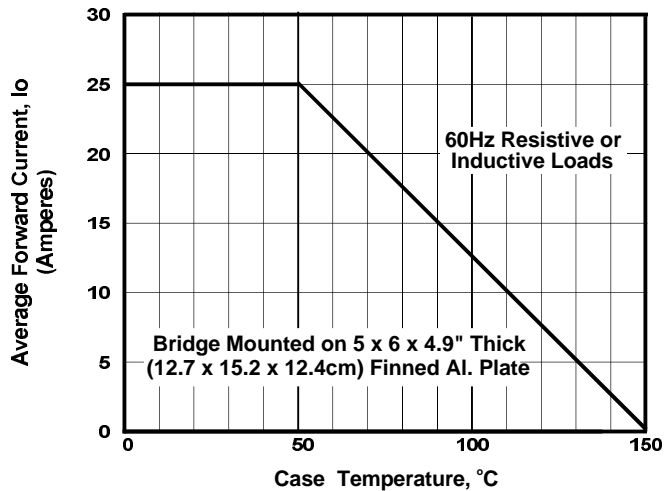


FIGURE 1. FORWARD CURRENT DERATING CURVE

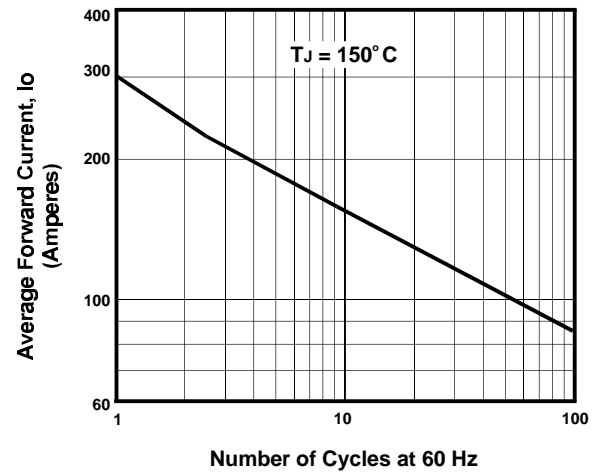


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

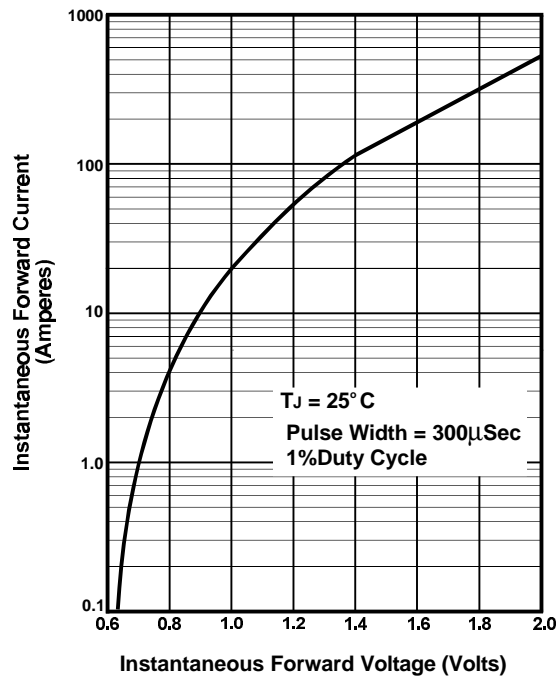


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

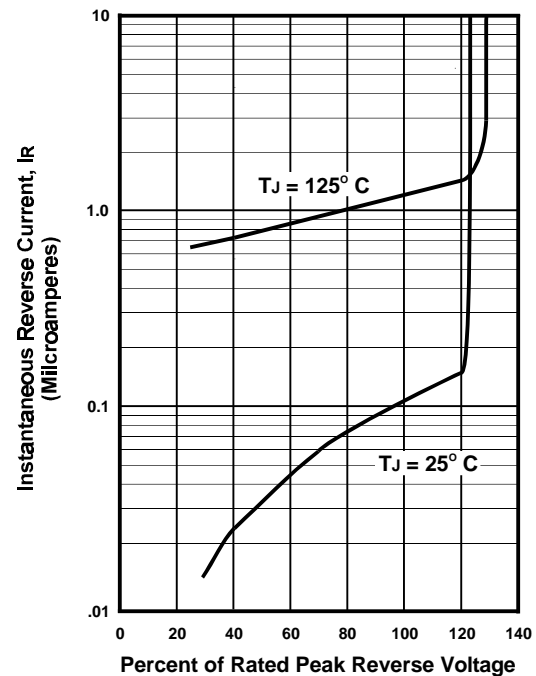


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS