DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-5000P-1B
ADBD-5000P-1B

50 AMP SILICON BRIDGE RECTIFIERS

FEATURES

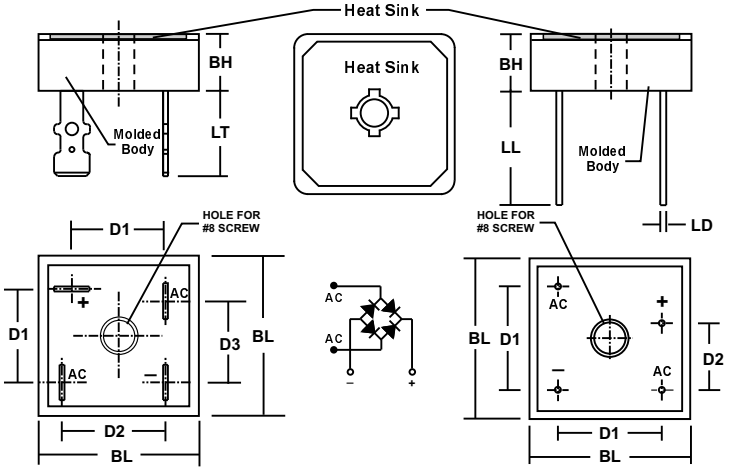
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE
- INTEGRALLY MOLDED HEAT SINK PROVIDES VERY LOW THERMAL RESISTANCE FOR MAXIMUM HEAT DISSIPATION
- **UL RECOGNIZED - FILE #E124962**
- **RoHS COMPLIANT**

MECHANICAL DATA

- Case: Case: Molded epoxy with integral heat sink
  Epoxy carries a U/L Flammability rating of 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounces (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES: DB5000P - DB5010P and ADB5004P - ADB5008P



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	10.2	0.38	0.40
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	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	10.2	0.38	0.40
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 "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 5004P	ADB 5006P	ADB 5008P	DB 5000P	DB 5001P	DB 5002P	DB 5004P	DB 5006P	DB 5008P	DB 5010P	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R(RMS)}$	280	420	560	35	70	140	280	420	560	700	
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	See Note 1			n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	See Note 1			n/a							
Forward Voltage Drop (Per Diode) at 25 Amps DC Max. / Typ.	V_{FM}	1.10 / 1.02										
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 125° C	I_{FSM}	600										AMPS
Average Forward Rectified Current @ T_C = 75°C	I_O	50										
Junction Temperature Range	T_J	-55 to +135										°C
Storage Temperature Range	T_{STG}	-55 to +135										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25° C / @ T_A = 125° C	I_{RM}	1 / 50										A
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\Theta JC}$	1.10										°C/W

3.01 50bdp

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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Data Sheet No. BRDB-5000P-2A
ABDB-5000P-2A

50 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB5000P - DB5010P and SERIES ADB5004P - ADB5008P

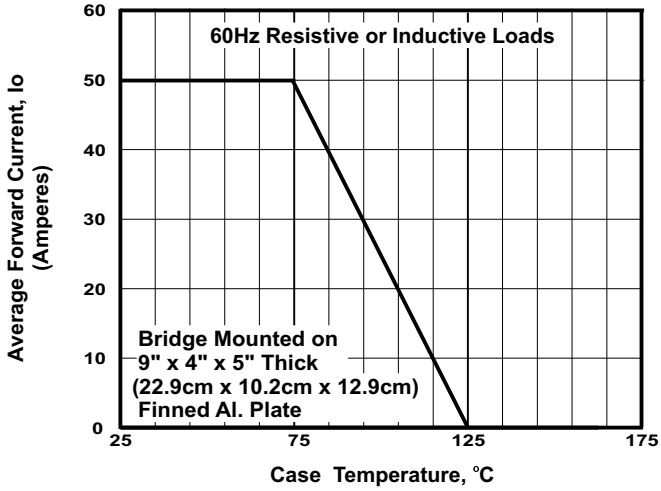

FIGURE 1. FORWARD CURRENT DERATING CURVE

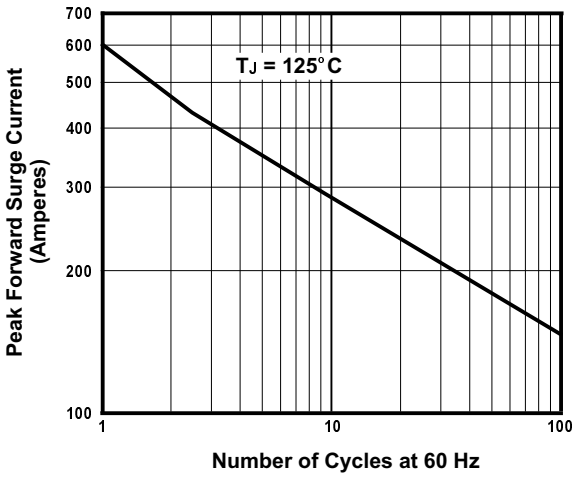

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

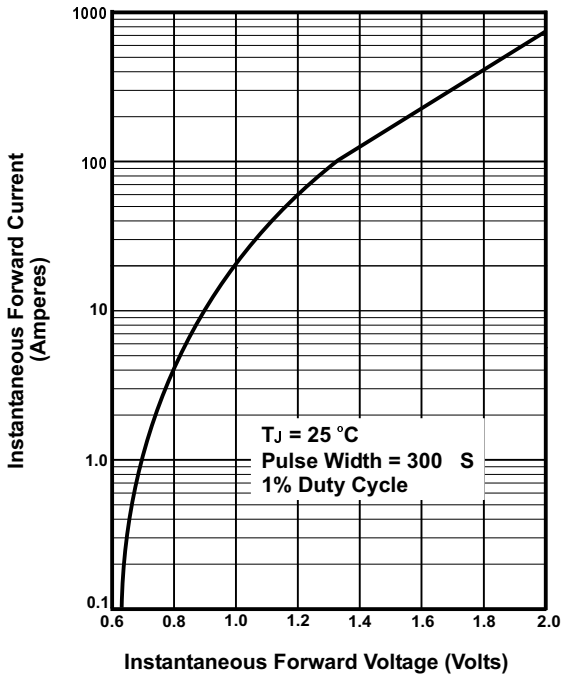

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

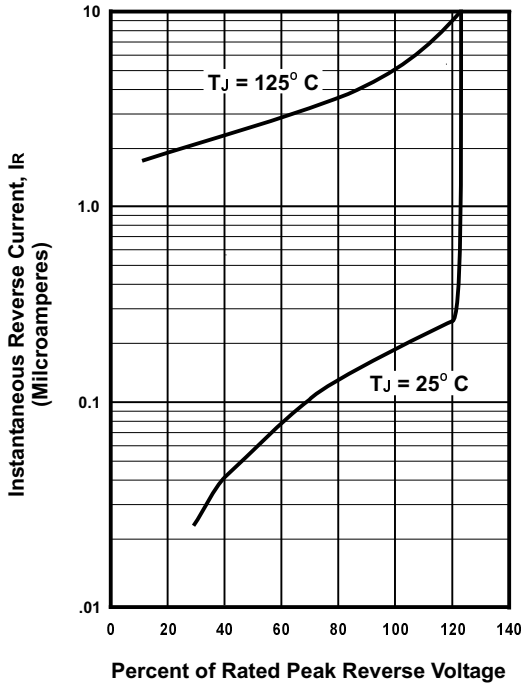

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS