DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
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Data Sheet No. BRDB-300-1C
ABDB-300-1C

3 AMP SILICON BRIDGE RECTIFIERS

FEATURES

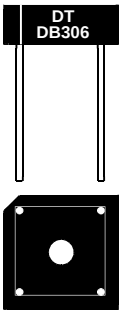
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 60 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

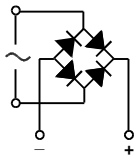
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed (NOTE 1)
- Polarity: Marked on top of case; positive lead at beveled corner
- Mounting Position: Any. Thru hole provided for #6 screw (NOTE 2)
- Weight: 0.13 Ounces (3.6 Grams)

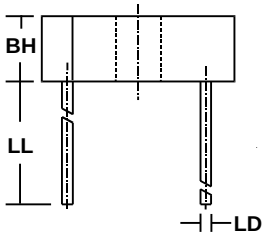
MECHANICAL SPECIFICATION

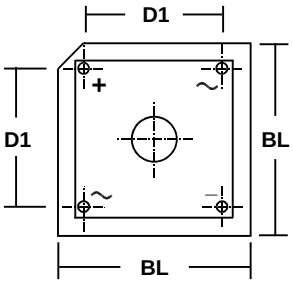
ACTUAL SIZE



SERIES DB300-DB310 and ADB304-ADB308







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	14.7	15.7	0.58	0.62
BH	4.8	5.3	0.19	0.21
D1	10.3	11.3	0.405	0.445
LL	19.0	n/a	0.75	n/a
LD	0.7	0.9	0.028	0.035

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 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 304	ADB 306	ADB 308	DB 300	DB 301	DB 302	DB 304	DB 306	DB 308	DB 310	
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	
Power Dissipation in $V_{(BR)}$ Region for 100 µS Square Wave	P_{RM}	300			n/a							WATTS
Continuous Power Dissipation in $V_{(BR)}$ Region @ T_{HS}=80 °C (Heat Sink Temp)	P_R	1			n/a							
Thermal Energy (Rating for Fusing) t < 8.3mSec	I^2t	15										AMPS² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). Tc = 60° C	I_{FSM}	60										AMPS
Average Forward Rectified Current @ T_C = 60° C (Note 2) @ T_A = 25° C (Note 3)	I_O	3 2										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ Min}$	See Note 5			n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	See Note 5			n/a							
Maximum Forward Voltage (Per Diode) at 1.5 Amps DC	V_{FM}	0.95 (Typical < 0.9)										
Typical Junction Capacitance (Note 4)	C_J	21										pF
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}	2500										VOLTS
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	12.0										°C/W
Typical Thermal Resistance Junction to Case (Note 2)	$R_{\theta JC}$	8.0										

3.01 03db

NOTES: (1) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.
(2) Bridge mounted on 4.0" sq. x 0.11" thick (10.5cm sq. x 0.3cm) aluminum plate
(3) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(4) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(5) These bridges exhibit the avalanche characteristic at breakdown. If your application requires a specific breakdown voltage range, please contact us.

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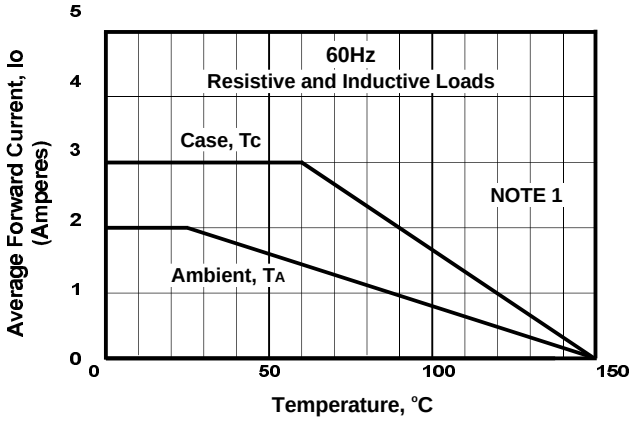
Data Sheet No. BRDB-300-2C
ABDB-300-2C

3 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB300 - DB310 and SERIES ADB304 - ADB308



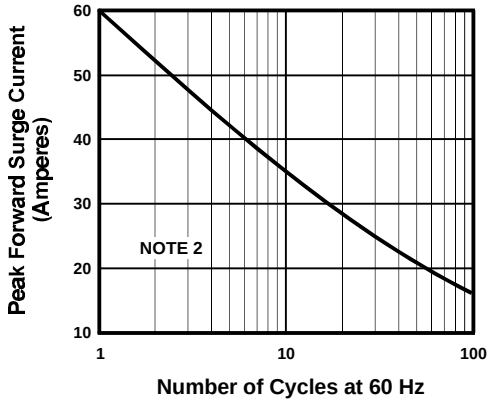


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

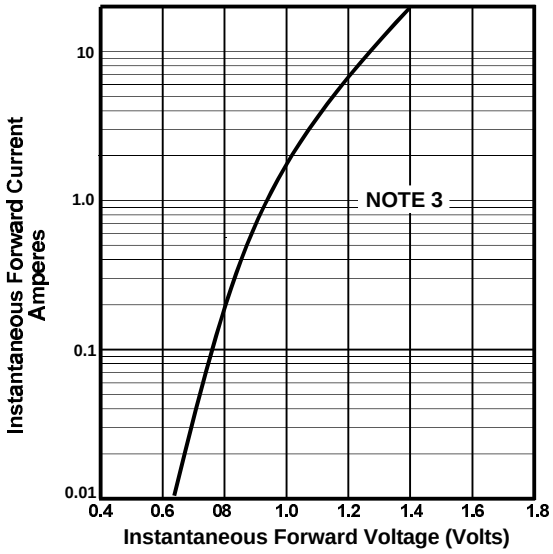


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

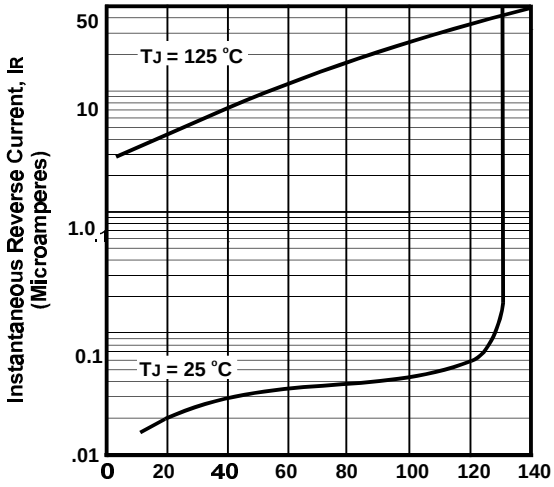


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

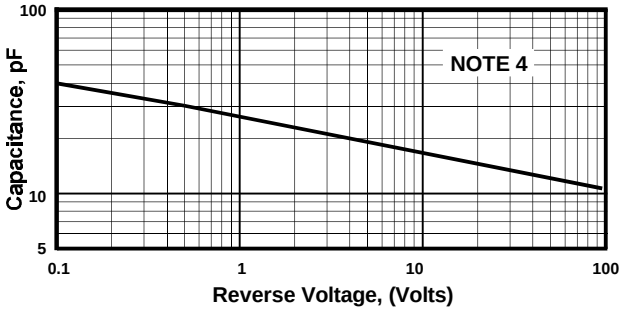


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, TC, With Bridge Mounted on 4" Sq. x 0.11" Thick (10.5cm Sq. x 0.3cm) Aluminum Plate

Ambient Temperature, TA, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Pads and Lead Length of 0.375" (9.5mm)

(2) TC = 60° C

(3) TJ = 25° C; Pulse Width = 300μSec; 1% Duty Cycle

(4) TJ = 25° C; f = 1 MHz; Vsig = 50mVp-p