

## 8 AMP SILICON BRIDGE RECTIFIERS

### FEATURES

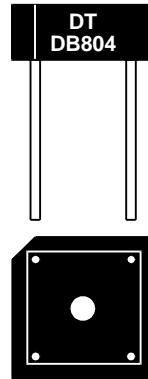
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)**
- **BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **SURGE OVERLOAD RATING TO 300 AMPS PEAK**
- **UL RECOGNIZED - FILE #E124962**

### MECHANICAL DATA

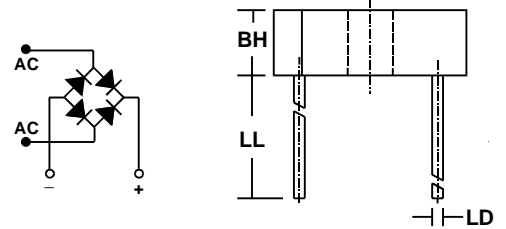
- **Case:** Molded plastic, U/L Flammability Rating 94V-0
- **Terminals:** Round silver plated copper pins
- **Soldering:** Per MIL-STD 202 Method 208 guaranteed
- **Polarity:** Marked on side of case; positive lead at beveled corner
- **Mounting Position:** Any. Through hole provided for #6 screw
-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

### MECHANICAL SPECIFICATION

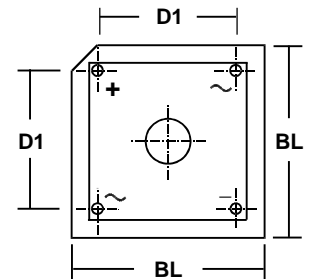
ACTUAL SIZE



SERIES DB800-DB810 and ADB804-ADB808



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



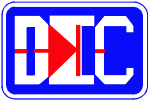
### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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 804	ADB 806	ADB 808	DB 800	DB 801	DB 802	DB 804	DB 806	DB 808	DB 810		
<b>Series Number</b>													
Maximum DC Blocking Voltage	V <sub>RM</sub>											VOLTS	
Working Peak Reverse Voltage	V <sub>RWM</sub>	400	600	800	50	100	200	400	600	800	1000		
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>												
RMS Reverse Voltage	V <sub>R</sub> (RMS)	280	420	560	35	70	140	280	420	560	700		
Power Dissipation in V <sub>(BR)</sub> Region for 100 μS Square Wave	P <sub>RM</sub>	400			n/a							WATTS	
Continuous Power Dissipation in V <sub>(BR)</sub> Region @ T <sub>HS</sub> =80° C (Heat Sink Temp)	P <sub>R</sub>	2			n/a								
Thermal Energy (Rating for Fusing)	I <sup>2</sup> t	64										AMPS <sup>2</sup> SEC	
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T <sub>J</sub> = 150° C	I <sub>FSM</sub>	300										AMPS	
Average Forward Rectified Current @ T <sub>C</sub> = 50° C (Note 1) @ T <sub>A</sub> = 50° C (Note 2)	I <sub>O</sub>	10 8											
Junction Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150										°C	
Minimum Avalanche Voltage	V <sub>(BR) Min</sub>	See Note 4			n/a							VOLTS	
Maximum Avalanche Voltage	V <sub>(BR) Max</sub>	See Note 4			n/a								
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V <sub>FM</sub>	0.95 (Typ. 0.90)											
Maximum Reverse Current at Rated V <sub>RM</sub> @ T <sub>A</sub> = 25° C @ T <sub>A</sub> = 125° C	I <sub>RM</sub>	1 50										μA	
Minimum Insulation Breakdown Voltage (Circuit to Case)	V <sub>ISO</sub>	2000										VOLTS	
Typical Thermal Resistance	Junction to Ambient (Note 2)	R <sub>θJA</sub>	12										°C/W
	Junction to Case (Note 1)	R <sub>θJC</sub>	5										

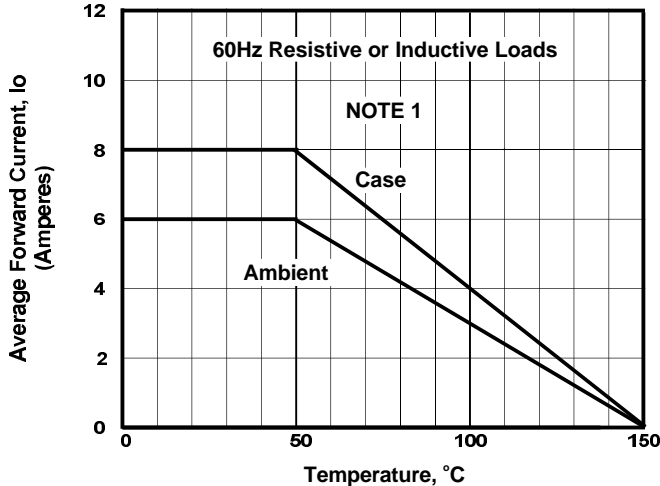
NOTES: (1) Bridge mounted on 4.9" x 4.3" x 0.11" thick (12.4cm x 10.8cm x 0.3cm) aluminum plate  
 (2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)  
 (3) Bolt bridge on heat sink, using silicon thermal compound between bridge and mounting surface, for maximum heat transfer  
 (4) These bridges exhibit the avalanche characteristic at breakdown. If your application requires a specific breakdown voltage range, please contact us.

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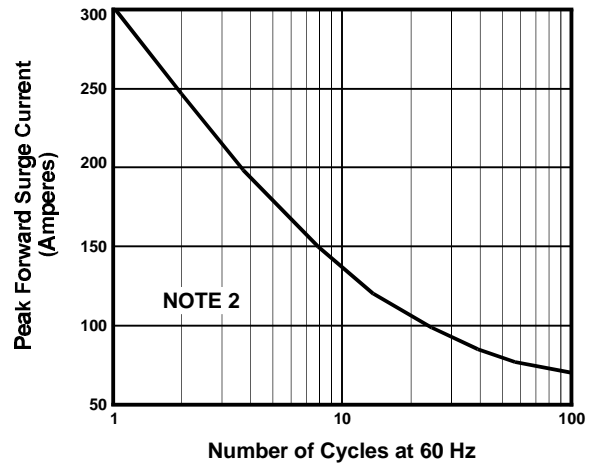


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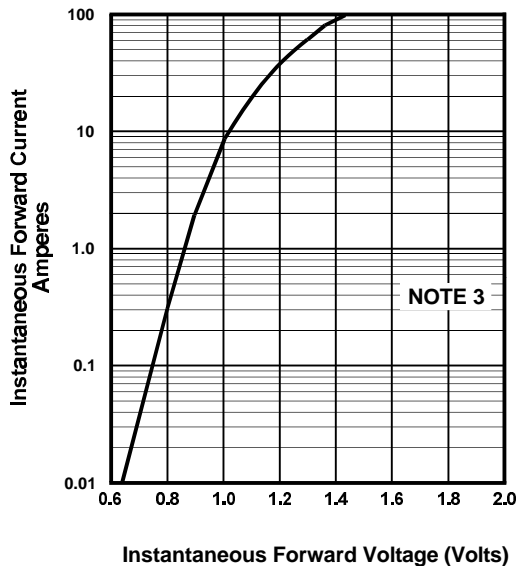
### RATING & CHARACTERISTIC CURVES FOR SERIES DB800 - DB810 and SERIES ADB804 - ADB808



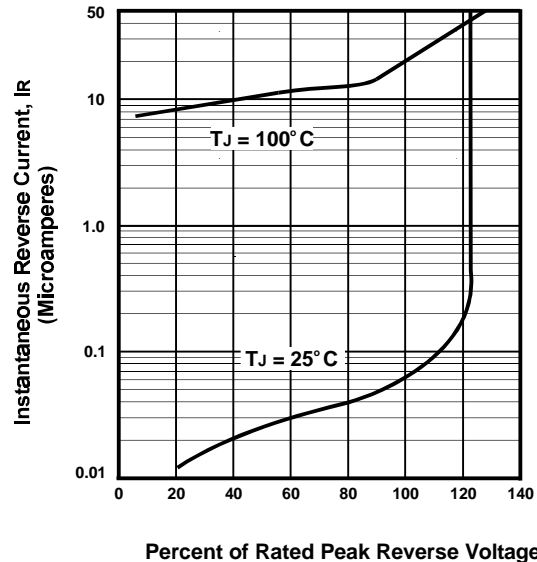
**FIGURE 1. FORWARD CURRENT DERATING CURVE**



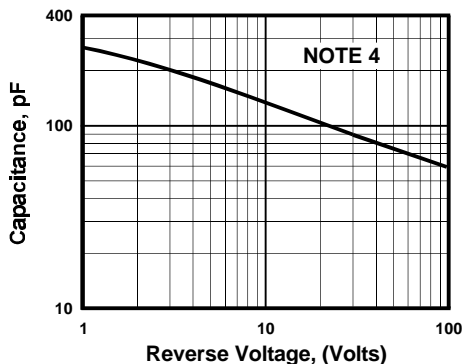
**FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE**



**FIGURE 4. TYPICAL REVERSE CHARACTERISTICS**



**FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE**

#### NOTES

(1) Case Temperature,  $T_c$ , With Bridge Mounted on 4.9" x 4.3" x 0.11" Thick (12.4cm x 10.8cm x 0.3cm) Aluminum Plate

Ambient Temperature,  $T_A$ , With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Copper Pads And Bridge Lead Length of 0.375" (9.5mm)

(2)  $T_J = 150^\circ\text{C}$

(3)  $T_J = 25^\circ\text{C}$ ; Pulse Width = 300 $\mu\text{Sec}$ ; 1% Duty Cycle

(4)  $T_J = 25^\circ\text{C}$ ;  $f = 1\text{ MHz}$ ;  $V_{sig} = 50\text{mVp-p}$