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. BRSB-400-1C
ABSB-400-1C

4 AMP SILICON BRIDGE RECTIFIERS

FEATURES

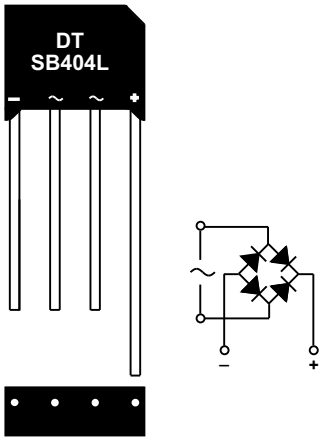
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)**
- **BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **SURGE OVERLOAD RATING TO 200 AMPS PEAK**
- **UL RECOGNIZED - FILE #E124962**
- **RoHS COMPLIANT**

MECHANICAL DATA

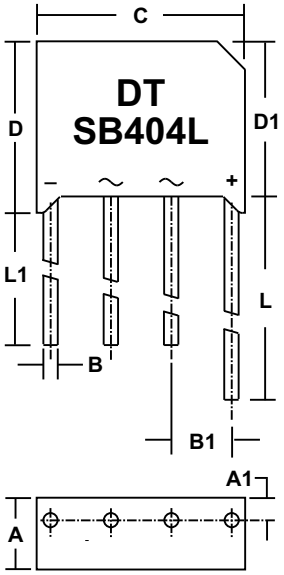
- **Case: Molded Epoxy (UL Flammability Rating 94V-0)**
- **Terminals: Round silver plated copper pins**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed)**
- **Polarity: Marked on case**
- **Mounting Position: Any.**
- **Weight: 0.2 Ounces (5.6 Grams)**

MECHANICAL SPECIFICATION

ACTUAL SIZE OF SB4 PACKAGE



SERIES: SB400L - SB410L
ASB404L - ASB408L



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.4	6.65	0.252	0.262
A1	2.06	2.18	0.061	0.065
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	19.1	19.3	0.750	0.760
D	15.62	15.88	0.615	0.625
D1	14.38*	n/a	0.566*	n/a
L	27.94	n/a	1.2	n/a
L1	25.4	n/a	1.0	n/a

* This measurement is "Typical"

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		ASB 404L	ASB 406L	ASB 408L	SB 400L	SB 401L	SB 402L	SB 404L	SB 406L	SB 408L	SB 410L	
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	
Thermal Energy (Rating for Fusing)	I^2t	93										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method) T_J = 150° C	I_{FSM}	200										AMPS
Average Forward Rectified Current @ T_A = 50° C	I_O	4										
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 4 Amps DC	V_{FM}	0.95 (Typical < 0.90)										
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 1) Junction to Lead (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	19.0 2.4										°C/W

NOTES: (1) Bridge mounted on 3.0" sq. x 0.11" thick (7.5cm sq. x 0.3cm) aluminum plate.
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and a lead length of 0.375" (9.5mm).

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Data Sheet No. BRSB-400-2C
ABSB-400-2C

4 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SB400L - SB410L and SERIES ASB404L - ASB408L

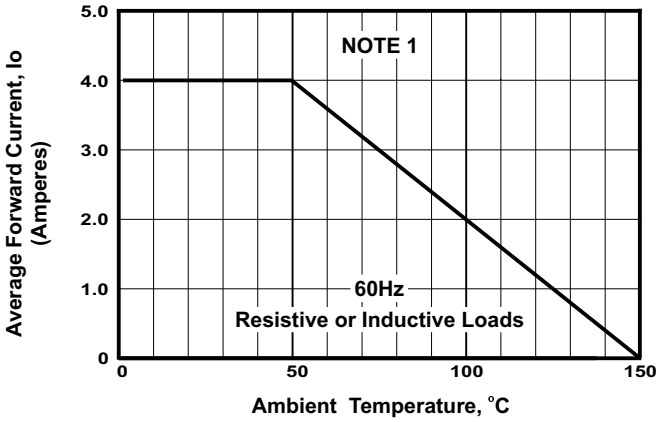

FIGURE 1. FORWARD CURRENT DERATING CURVE

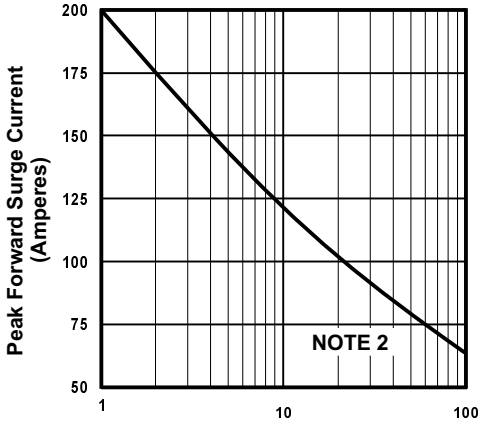

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

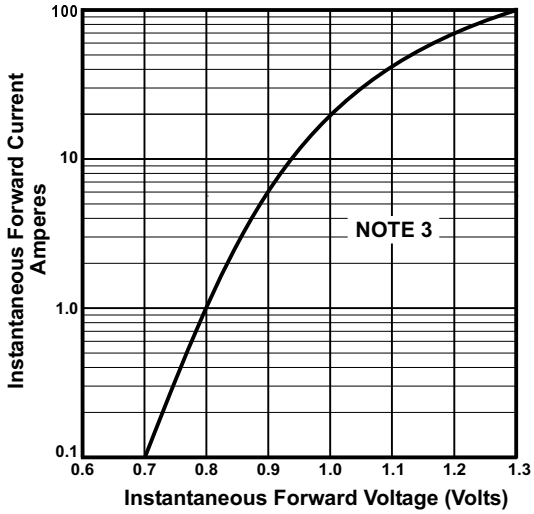

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

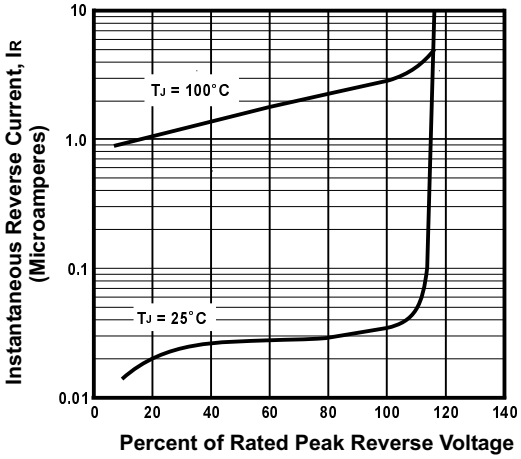

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

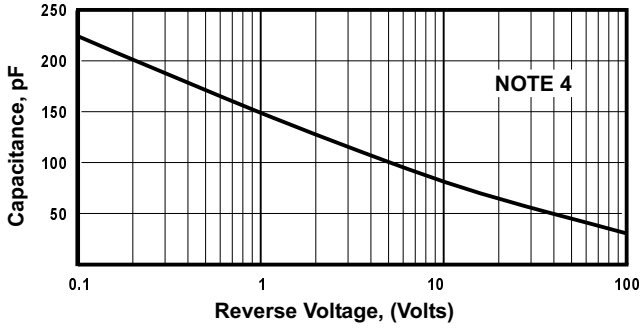

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on 3.0" Sq. x 0.11" Thick (7.5cm Sq. x 015cm) Aluminum Plate

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300 Sec; 1%Duty Cycle

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

3.1 04sb1