

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

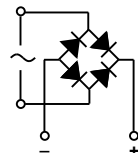
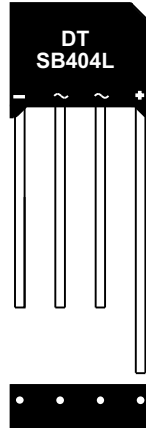
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE
- SURGE OVERLOAD RATING TO 200 AMPS PEAK
- **UL RECOGNIZED - FILE #E124962**
- **RoHS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

MECHANICAL DATA

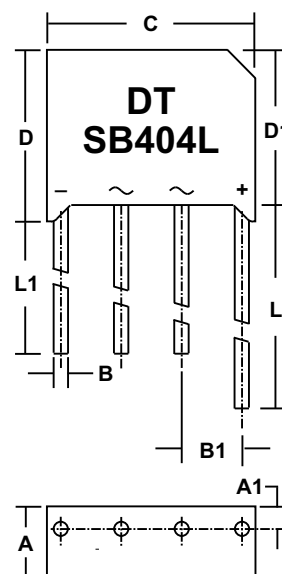
- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed)
- Polarity: Marked on case
- Mounting Position: Any.
- Weight: 0.2 Ounces (5.6 Grams)

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"

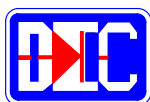
MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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}											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	
Thermal Energy (Rating for Fusing)	I ² t	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 _{θJA} R _{θJL}	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).

3.01 04501



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ABSB-400-2C

4 AMP SILICON BRIDGE RECTIFIERS

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

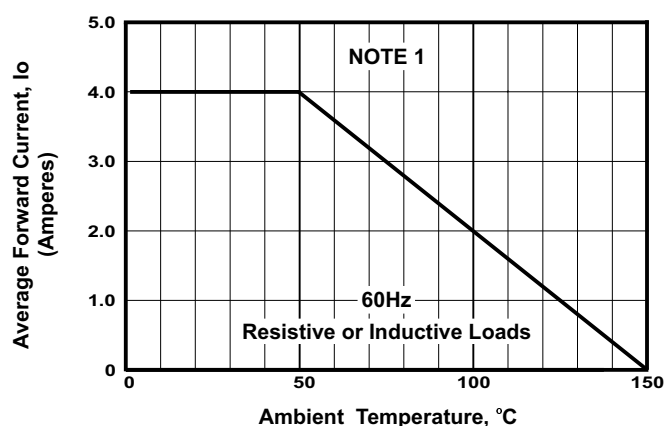


FIGURE 1. FORWARD CURRENT DERATING CURVE

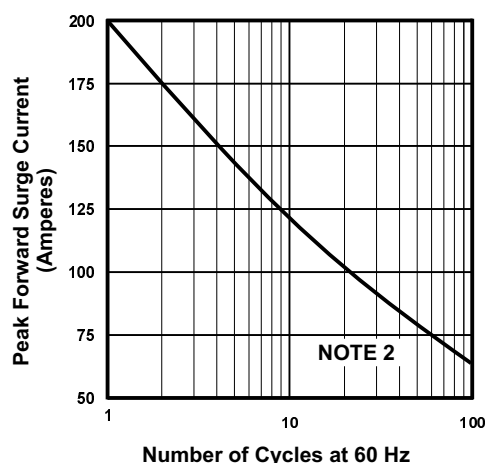


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

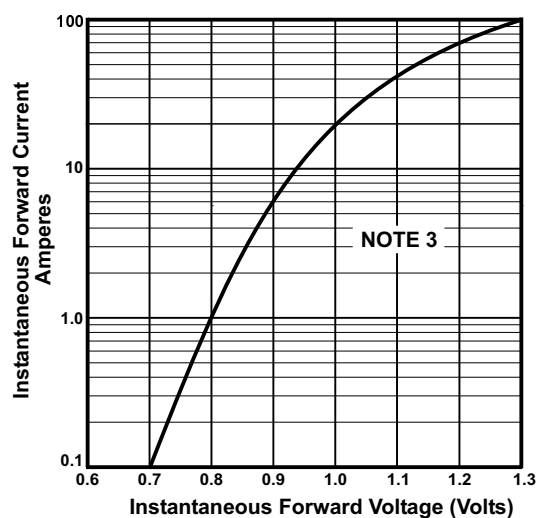


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

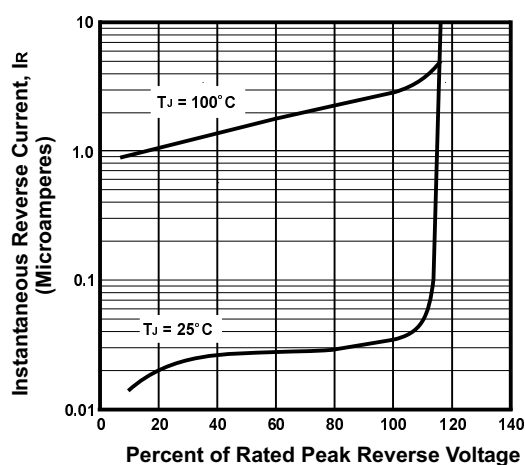


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

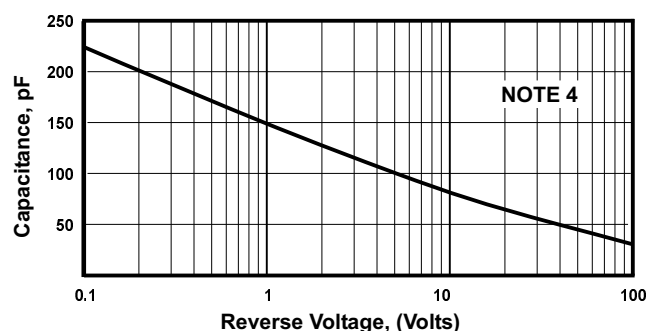


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

- (1) Bridge Mounted on 3.0" Sq. x 0.11" Thick (7.5cm Sq. x 0.15cm) Aluminum Plate
- (2) $T_J = 150^\circ\text{C}$
- (3) $T_J = 25^\circ\text{C}$; Pulse Width = 300 Sec; 1% Duty Cycle
- (4) $T_J = 25^\circ\text{C}$; $f = 1\text{ MHz}$; $V_{sig} = 50\text{mVp-p}$