

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**

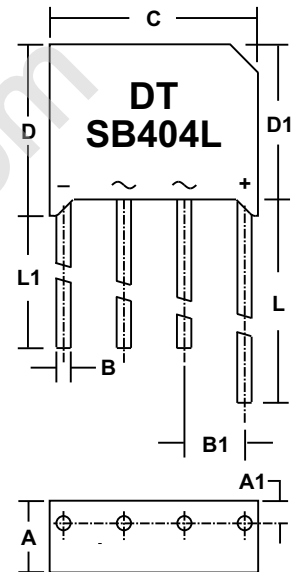
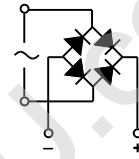
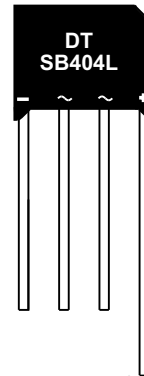
MECHANICAL DATA

- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed (NOTE 1)
- 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

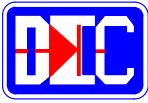
* This measurement is "Typical"

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								
		ASB 404L	ASB 406L	ASB 408L	SB 400L	SB 401L	SB 402L	SB 404L	SB 406L	SB 408L	SB 410L		
Series Number													
Maximum DC Blocking Voltage	VRM											VOLTS	
Working Peak Reverse Voltage	VRWM	400	600	800	50	100	200	400	600	800	1000		
Maximum Peak Recurrent Reverse Voltage	VRRM												
RMS Reverse Voltage	VR (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}	19.0										°C/W
		R _{θJL}	2.4										

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).



4 AMP SILICON BRIDGE RECTIFIERS

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

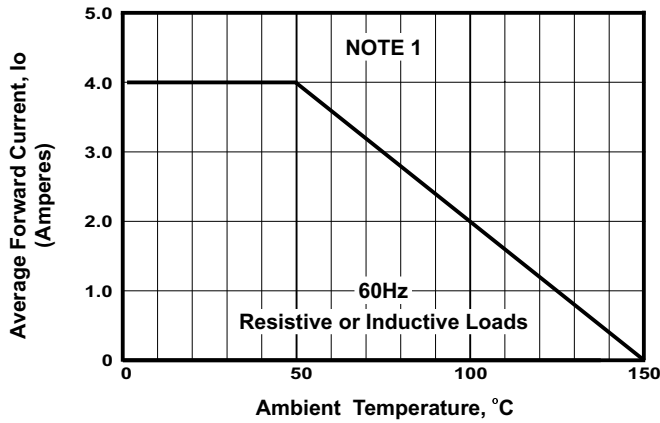


FIGURE 1. FORWARD CURRENT DERATING CURVE

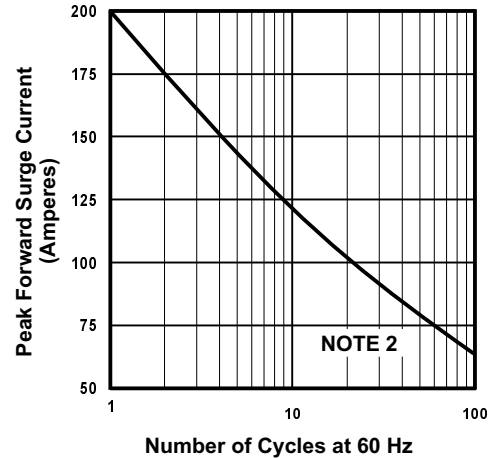


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

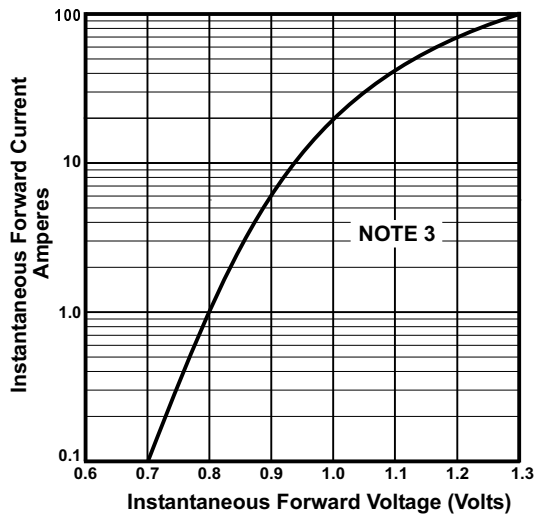


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

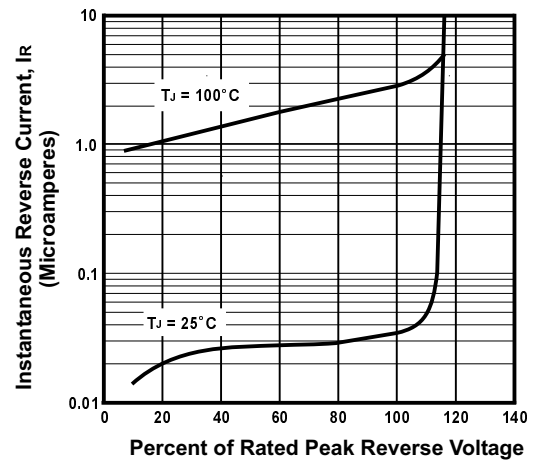


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

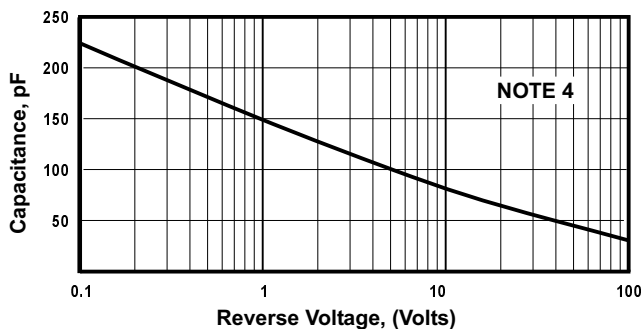


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

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