

40 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
- INTEGRALLY MOLDED HEAT SINK PROVIDES VERY LOW THERMAL RESISTANCE FOR MAXIMUM HEAT TRANSFER
- SPACE SAVING IN-LINE DESIGN FOR PRINTED CIRCUIT BOARD APPLICATIONS

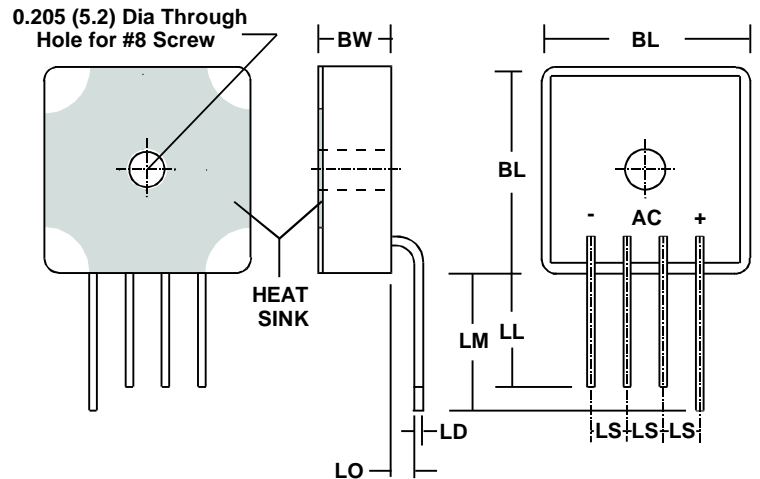
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MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any. Bolt down on heatsink
Maximum mounting torque = 20 in. lb.
- Weight: 0.6 Ounces (17 Grams)

MECHANICAL SPECIFICATION

SDB PACKAGE SHOWN ACTUAL SIZE



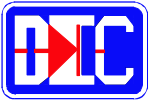
SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BW	n/a	10.3	n/a	0.405
LD	1.27 Typ		0.050 Typ	
LL	15.9	n/a	0.625	n/a
LM	19.0	n/a	0.750	n/a
LO	3.175 Nom		0.125 Nom	
LS	5.08 Typ		0.200 Typ	

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
		SDB 4000	SDB 4001	SDB 4002	SDB 4004	SDB 4006	SDB 4008	SDB 4010	
Series Number									
Maximum DC Blocking Voltage	V _{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V _{RM} S	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T _c = 55 °C	I _o	40							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T _J = 175° C	I _{FSM}	500							
Forward Voltage (Per Diode) at 20 Amps DC	V _{FM}	0.96 0.93			1.00 0.97			VOLTS	
Maximum Average DC Reverse Current At Rated DC Blocking Voltage	I _{RM}	2 20							μA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V _{ISO}	2500							VOLTS
Typical Thermal Resistance, Junction to Case	R _{θJC}	1.1							°C/W
Junction Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +175							°C

301 4000b



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RATING & CHARACTERISTIC CURVES FOR SDB4000-4010 SERIES

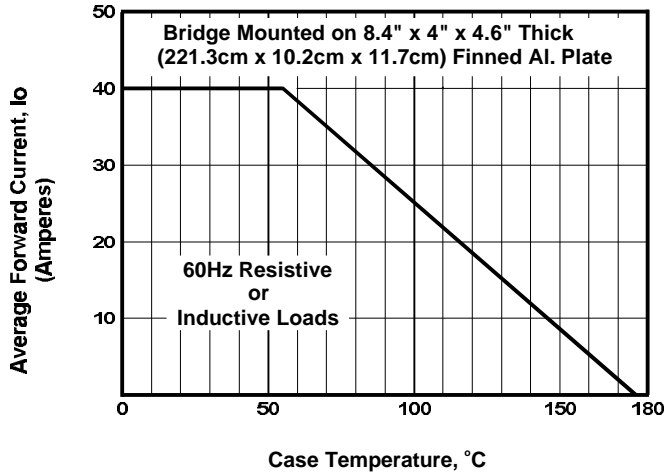


FIGURE 1. FORWARD CURRENT DERATING CURVE

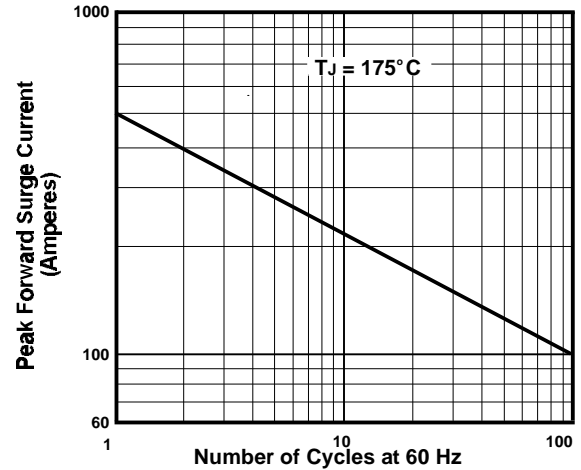


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

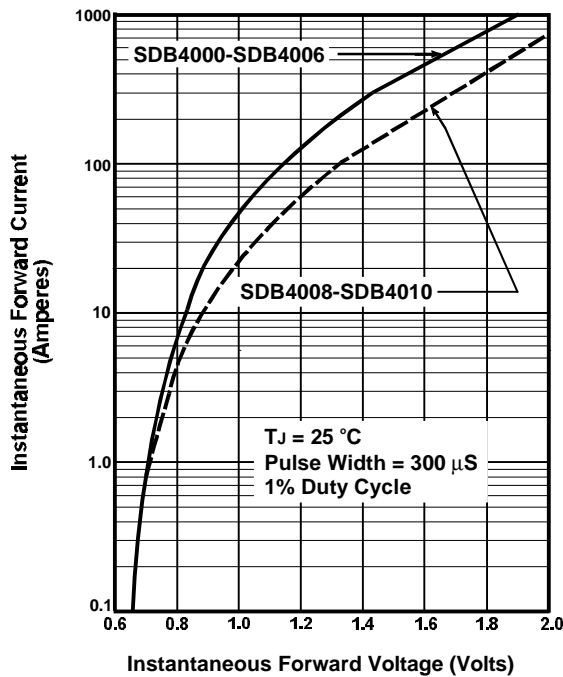


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

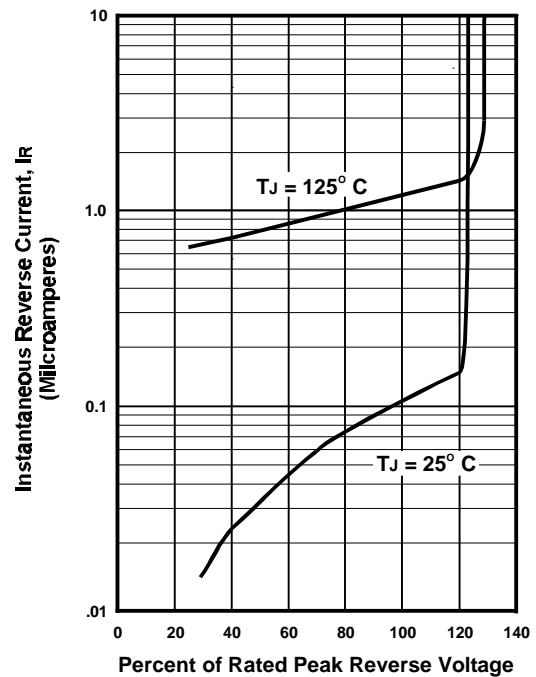


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS