

## 50 AMP HIGH FREQUENCY SOFT RECOVERY BRIDGE RECTIFIERS

### FEATURES

- TRUE SOFT RECOVERY CHARACTERISTIC WITH NO RINGING, SPIKES, or OVERSHOOT
- HIGH FREQUENCY: 250 kHz  
FAST RECOVERY: 100nS - 150nS
- UNMATCHED PERFORMANCE - Minimal RFI/EMI, Reduced Power Losses, Extremely Cool Operation Increased Power Supply Efficiency
- VOID FREE Vacuum Die Soldering For Maximum Mechanical Strength And Heat Dissipation (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Proprietary *SOFT GLASS* Junction Passivation For Superior Reliability and Performance
- Wide Range of Applications - Inverters, Converters Choppers, Power Supplies, etc.

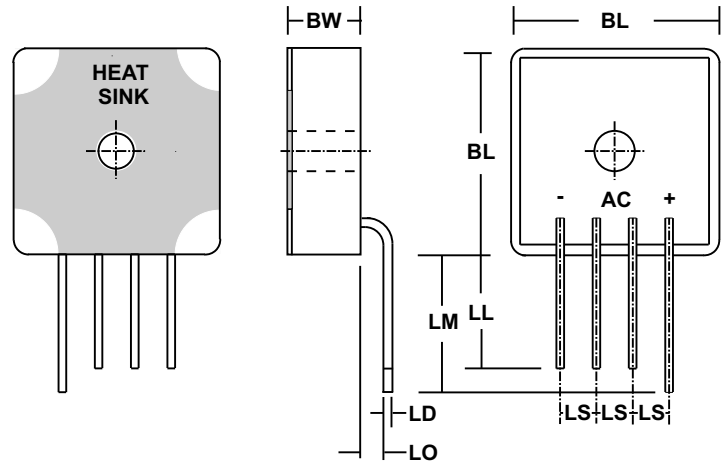
**UL RECOGNIZED - FILE #E124962**

**RoHS COMPLIANT**

### MECHANICAL DATA

- Case: Case: Molded epoxy with integral heat sink  
Epoxy carries a U/L Flammability rating of 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.  
Max. mounting torque = 20 in-lb.
- Weight: 0.55 Ounces (16.0 Grams)

### MECHANICAL SPECIFICATION



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.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
		SDB 5000-S	SDB 5001-S	SDB 5002-S	SDB 5004-S	SDB 5006-S	
Series Number							
Maximum DC Blocking Voltage	V <sub>RM</sub>	50	100	200	400	600	VOLTS
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	
Average Forward Rectified Current @ T <sub>c</sub> = 55 °C	I <sub>o</sub>	50					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I <sub>FSM</sub>	600					
Maximum Forward Voltage, Per Diode, at 25 Amps DC	V <sub>FM</sub>	1.2					VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage Per Diode	I <sub>RM</sub>	1.0					μA
		50					
Maximum Reverse Recovery Time	T <sub>RR</sub>	150 (Typ. 100)					nS
Typical Thermal Resistance, Junction to Case	R <sub>θJC</sub>	1.1					°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150					°C

NOTES: (1) Bolt bridge on heat sink with #8 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.