

### DIOTEC ELECTRONICS CORP.

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# **8 AMP SOFT RECOVERY FAST SWITCHING BRIDGE RECTIFIERS**

#### **FEATURES**

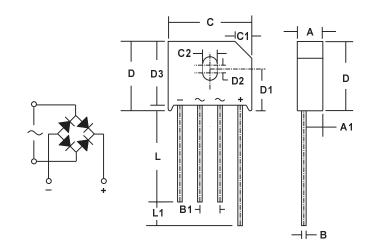
- TRUE SOFT RECOVERY CHARACTERISTIC WITH NO RINGING, SPIKES, or OVERSHOOT
- HIGH FREQUENCY: 250 kHz FAST RECOVERY: 100nS - 150nS
- UNMATCHED PERFORMANCE Minimal RFI/EMI, Reduced Power Losses, Extremely Cool Operation Increased Power Supply Efficiency
- VOID FREE Vacuum Die Soldering For Maximum Mechanical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

## • UL RECOGNIZED - FILE #E124962

### **MECHANICAL DATA**

- Case: Molded epoxy, 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. Max. mounting torque = 5 in lb
- Weight: 0.28 Ounces (8 Grams)

### MECHANICAL SPECIFICATION





SYM	MILLIM	ETERS	INCHES			
	MIN	MAX	MIN	MAX		
Α	6.6	7.1	0.260	0.280		
A1	4.7	5.2	0.185	0.205		
В	1.22	1.32	0.048	0.052		
В1	4.57	5.59	0.180	0.220		
С	22.70	23.24	0.895	0.915		
C1	4.2	4.7	0.165	0.185		
C2	3.6	4.1	0.140	0.160		
D	n/a	19.3	n/a	0.760		
D1	10.3	11.3	0.405	0.455		
D2	1.7	2.2	0.065	0.085		
D3	16.5	17.8	0.660	0.700		
L	25.4	n/a	1.0	n/a		
L1	4.57	6.8	0.180	0.260		

### **MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)		RATINGS				UNITS		
Series Number		SBU 8A-S	SBU 8B-S	SBU 8D-S	SBU 8G-S	SBU 8J-S		
Maximum DC Blocking Voltage	Vrm	50	100	200	400	600		
Maximum RMS Voltage	VRMS	35	70	140	280	420	VOLTS	
Maximum Peak Recurrent Reverse Voltage	VRRM	50	100	200	400	600		
Average Forward Rectified Current, Tc = 100 °C (Note 2)	lo	8				AMPS		
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	IFSM	300						
Maximum Forward Voltage (Per Diode) at 4 Amps DC	VFM	1.25				VOLTS		
Maximum Average DC Reverse Current At Rated @ TA = 25 °C DC Blocking Voltage @ TA = 125 °C	lrm	1.0 50				μ <b>Α</b>		
Maximum Reverse Recovery Time	Trr	150 (Typ. 100)				nS		
Typical Thermal Resistance, Junction to Case (Note 2)		3				°C/W		
Junction Operating and Storage Temperature Range		-55 to +150				°C		

NOTES: (1) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

(2) Bridge mounted on 4.0" sq. x 0.11" thick (10.5cm sq. x 0.3cm) aluminum plate

1.03 06 fd b-S