



**DIOTEC ELECTRONICS CORP.**  
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Looking for: KBU8A, KBU8B, KBU8D, KBU8G  
 KBU8J, KBU8K, KBU8M?  
 or  
 GBU8A, GBU8B, GBU8D, GB8G, GBU8J, GBU8K,  
 GBU8M?

## 8 AMP SILICON BRIDGE RECTIFIERS

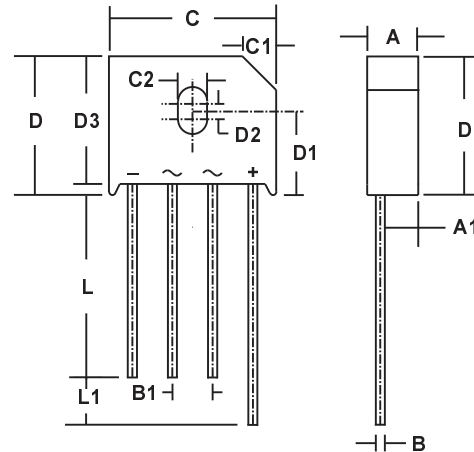
### FEATURES

- 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 400 AMPS PEAK
- THRU-HOLE FOR EASY HEAT SINK MOUNTING
- **UL RECOGNIZED - FILE #E124962**
- **RoHS COMPLIANT**

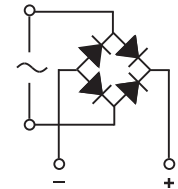
### MECHANICAL DATA

- Case: Molded Epoxy (UL 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: 0.3 Ounces (8 Grams)

### MECHANICAL SPECIFICATION



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.6	7.1	0.260	0.280
A1	4.7	5.2	0.185	0.205
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	22.7	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



### SERIES SBU8A - SBU8M

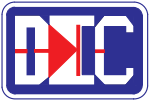
### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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)	SYMBOL	RATINGS								UNITS
		SBU 8A	SBU 8B	SBU 8D	SBU 8G	SBU 8J	SBU 8K	SBU 8M		
Series Number										
Maximum DC Blocking Voltage	V <sub>RM</sub>	50	100	200	400	600	800	1000		VOLTS
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700		
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000		
Average Forward Rectified Current T <sub>c</sub> = 100° C (Notes 1, 3)	I <sub>O</sub>	8								AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T <sub>J</sub> = 150° C	I <sub>FSM</sub>	400								
Maximum Forward Voltage (Per Diode) at 8 Amps DC	V <sub>FM</sub>	0.95 (Typ. 0.90)								VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ T <sub>A</sub> = 25° C @ T <sub>A</sub> = 125° C	I <sub>RM</sub>	1 50								μA
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Case (Note 1)	R <sub>θJA</sub> R <sub>θJC</sub>	16 3								°C/W
Minimum Insulation Breakdown Voltage (Circuit to Case)	V <sub>ISO</sub>	2500								VOLTS
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150								°C

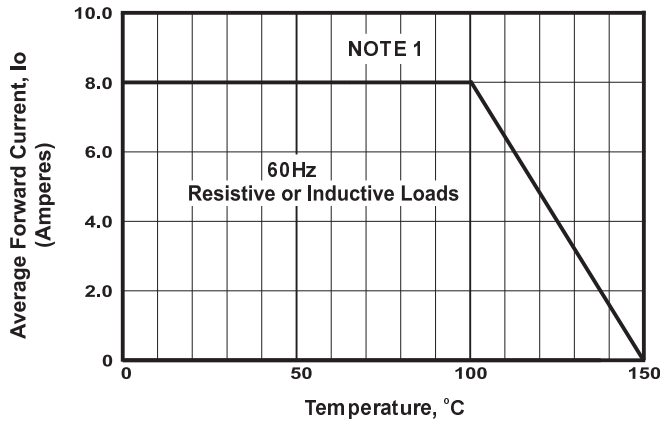
NOTES: (1) Bridge mounted on 3.2" sq. x 0.12" thick (8.2cm sq. x 0.3cm) aluminum plate  
 (2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)  
 (3) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

Data Sheet No. BSBU-800-1D

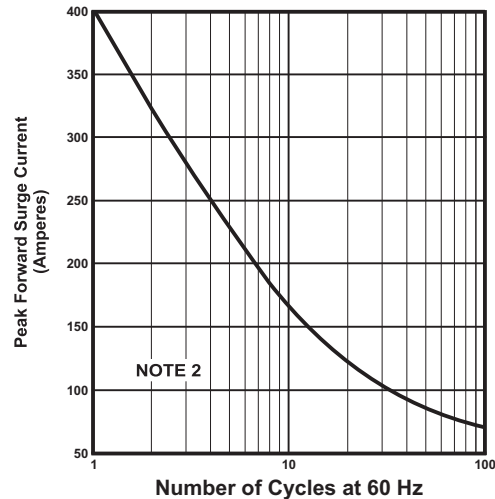


## 8 AMP SILICON BRIDGE RECTIFIERS

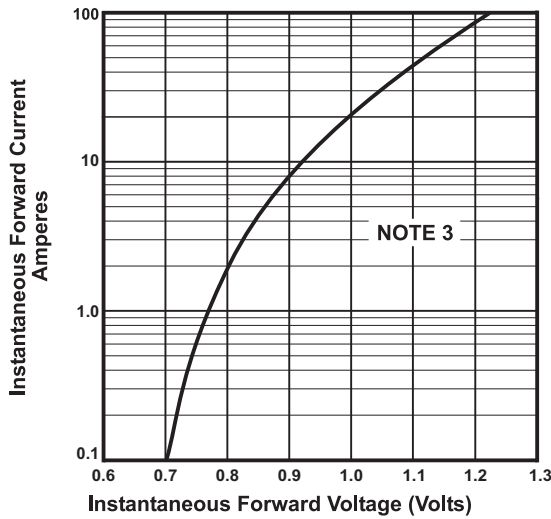
### RATING & CHARACTERISTIC CURVES FOR SERIES SBU8A - SBU8M



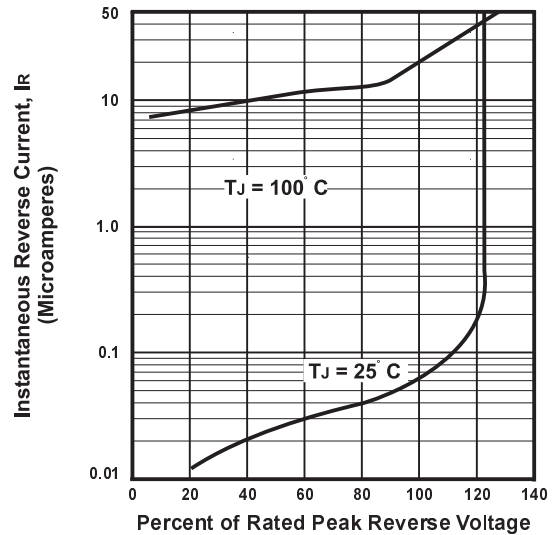
**FIGURE 1. FORWARD CURRENT DERATING CURVE**



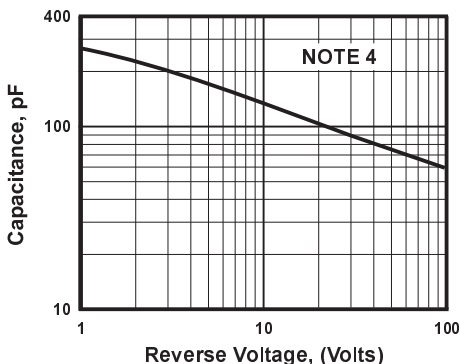
**FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE**



**FIGURE 4. TYPICAL REVERSE CHARACTERISTICS**



**FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE**

#### NOTES

- (1) Case Temperature,  $T_c$ , With Bridge Mounted on 3.2" Sq. x 0.12" Thick (8.2cm Sq. x 0.3cm) Aluminum Plate
- (2)  $T_J = 150^\circ C$
- (3)  $T_J = 25^\circ C$ ; Pulse Width = 300 $\mu$ Sec; 1% Duty Cycle
- (4)  $T_J = 25^\circ C$ ;  $f = 1$  MHz;  $V_{sig} = 50mV_{p-p}$