

## 4 AMP SILICON BRIDGE RECTIFIERS

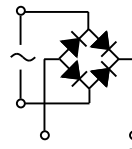
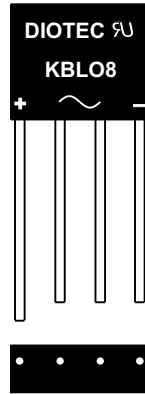
### FEATURES

- 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
- IDEAL FOR PRINTED CIRCUIT BOARD APPLICATIONS
- **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
- Weight: 0.2 Ounces (5.6 Grams)

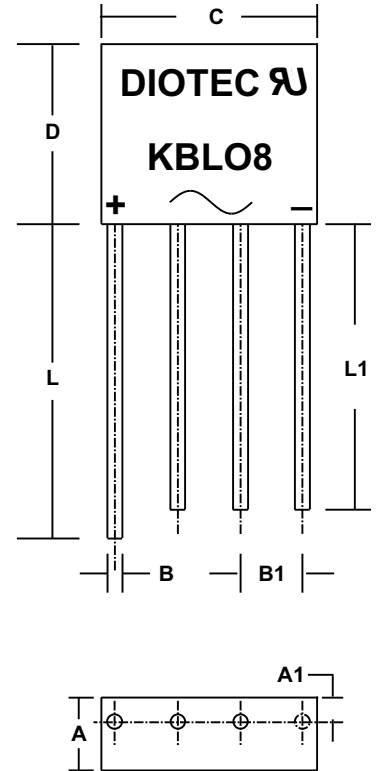
ACTUAL SIZE OF KBL PACKAGE



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.22	6.48	0.245	0.255
A1	2.05	2.18	0.081	0.085
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	18.92	19.80	0.745	0.755
D	15.75	16.00	0.620	0.630
L	27.94	n/a	1.10	n/a
L1	25.4	n/a	1.00	n/a

### MECHANICAL SPECIFICATION

SERIES KBL00 - KBL10



### 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
		KBL 00	KBL 01	KBL 02	KBL 04	KBL 06	KBL 08	KBL 10		
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>A</sub> = 65 °C	I <sub>O</sub>	4								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>	200								
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V <sub>FM</sub>	0.95 (Typical < 0.90)								VOLTS
Maximum Average DC Reverse Current @ T <sub>A</sub> = 25 °C At Rated DC Blocking Voltage @ T <sub>A</sub> = 125 °C	I <sub>RM</sub>	1 50								μA
Typical Thermal Resistance Junction to Lead (Note 1)	R <sub>θJA</sub> R <sub>θJL</sub>	19.0 2.4								°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 PC Board with 0.5" sq. (12mm sq.) copper pads and a lead length of 0.375" (9.5mm).

3.01 04/01



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### RATING & CHARACTERISTIC CURVES FOR SERIES KBL00 - KBL10

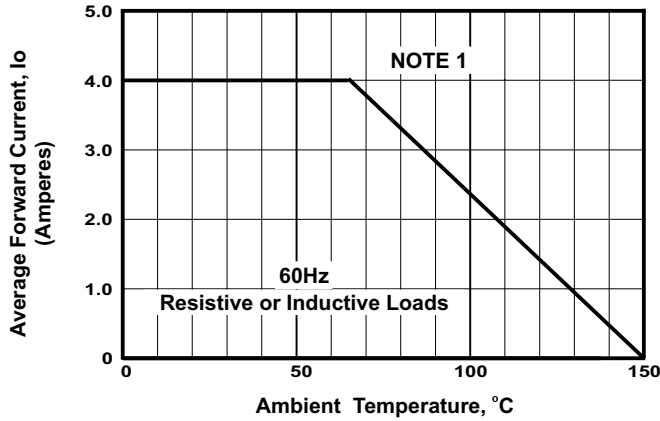


FIGURE 1. FORWARD CURRENT DERATING CURVE

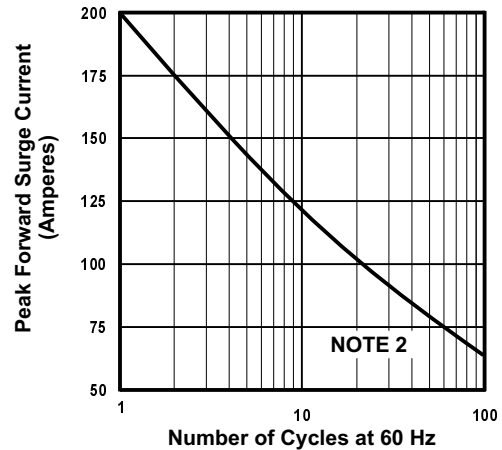


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

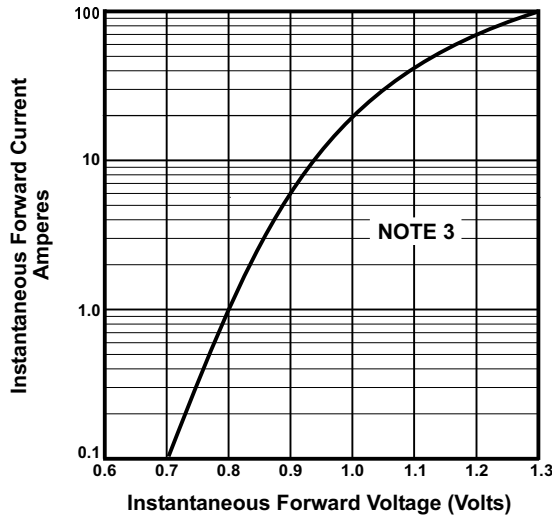


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

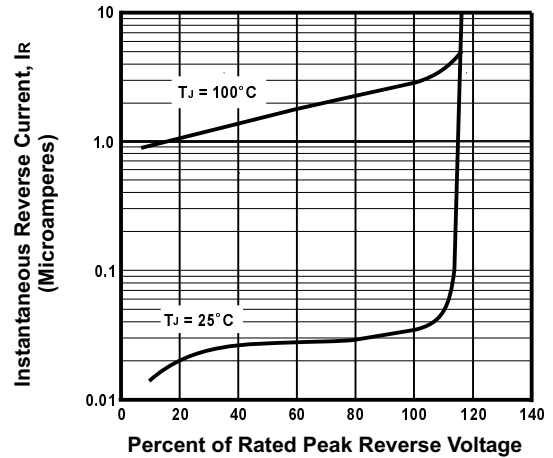


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

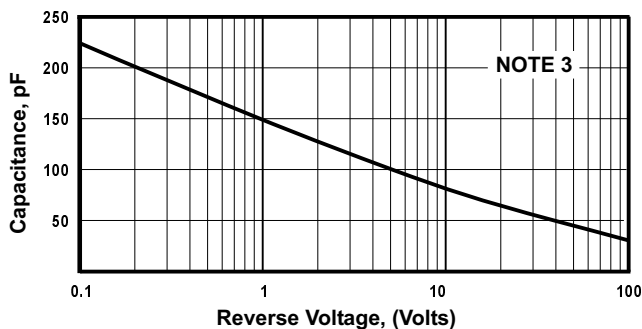


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

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