

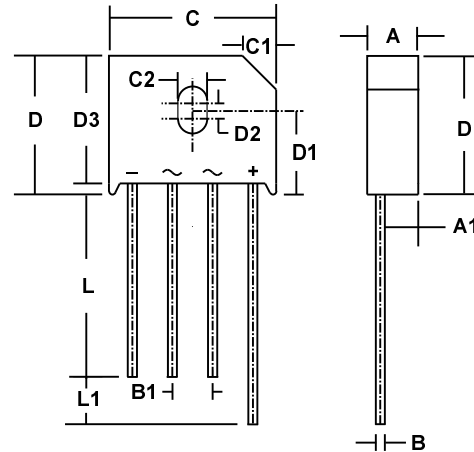


4 AMP SILICON BRIDGE RECTIFIERS

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**

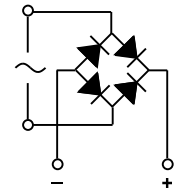
MECHANICAL SPECIFICATION



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)

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	22.70	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



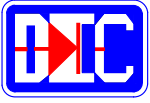
SERIES SBU4A - SBU4M

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 4A	SBU 4B	SBU 4D	SBU 4G	SBU 4J	SBU 4K	SBU 4M	
Series Number									
Maximum DC Blocking Voltage	V _{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V _{RMS}	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 = 100° C (Note 1) T _A = 30° C (Note 2)	I _o	4 4							AMPS
Peak Forward Surge Current, Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method), T _J = 150° C	I _{FSM}	200							
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V _{FM}	0.95 (Typical < 0.90)							VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ T _A = 25° C @ T _A = 100° C	I _{RM}	1 50							μA
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Lead (Note 1)	R _{θJA} R _{θJL}	19.0 2.4							°C/W
Minimum Insulation Breakdown Voltage (Circuit to Case)	V _{ISO}	2500							VOLTS
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on 2.0" x 1.6" x 0.3" thick (5cm x 4cm x 0.8cm) 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.



4 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SBU4A - SBU4M

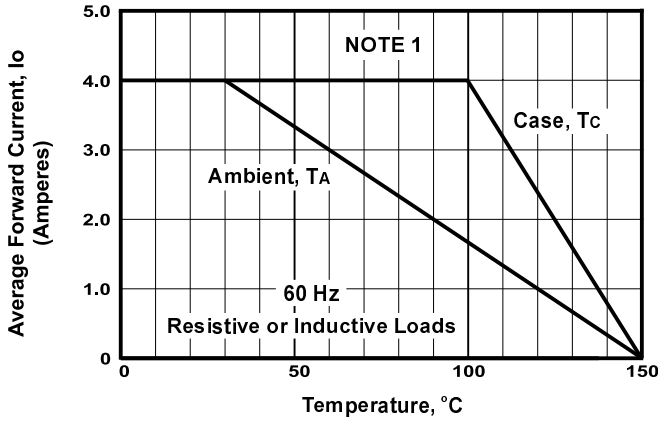


FIGURE 1. FORWARD CURRENT DERATING CURVE

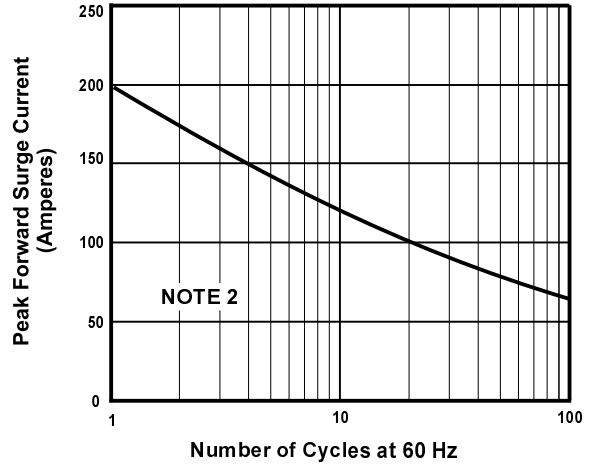


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

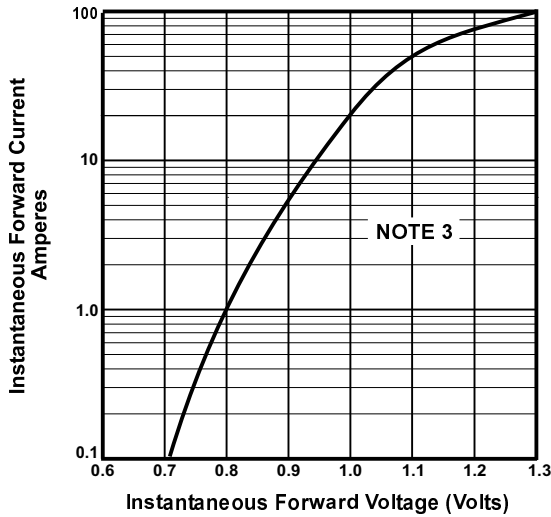


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

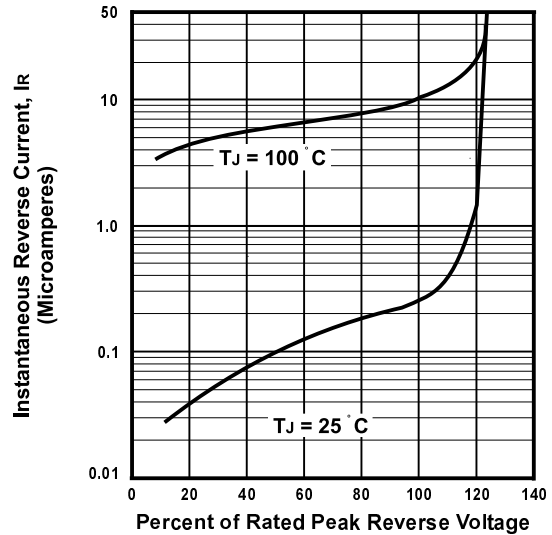


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

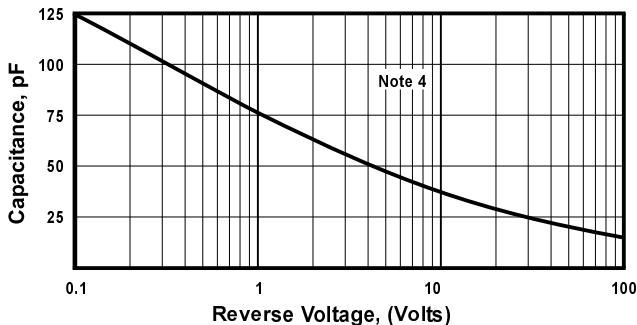


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

- (1) Case Temperature, T_c . With Bridge Mounted on 2.0" x 1.6" x 0.3" Thick (5cm x 4cm x 0.8cm) Aluminum Plate
 Ambient Temperature, T_A . With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Pads and Bridge Lead Length of 0.375" (9.5mm)
- (2) $T_J = 150^\circ\text{C}$
- (3) $T_J = 25^\circ\text{C}$; Pulse Width = 300 μs ; 1% Duty Cycle
- (4) $T_J = 25^\circ\text{C}$; $f = 1\text{ MHz}$; $V_{sig} = 50\text{mVp-p}$