

## 25 AMP SILICON BRIDGE RECTIFIERS

### FEATURES

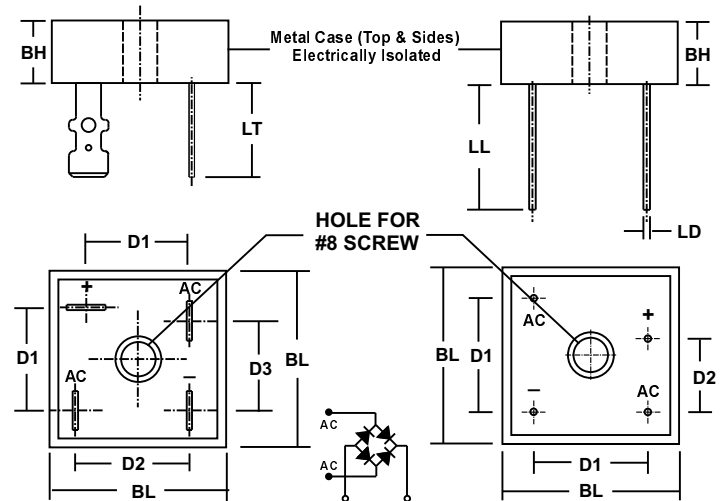
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)**
- **BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **ELECTRICALLY ISOLATED METAL CASE FOR MAXIMUM HEAT DISSIPATION**
- **UL RECOGNIZED - FILE #E124962**
- **RoHS COMPLIANT**

### MECHANICAL DATA

- **Case: Metal (Potting epoxy carries U/L flammability Rating 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: Fast-on Terminals - 1.1 Ounces (31.6 Grams)  
 Wire Leads - 0.95 Ounce (28.5 Grams)**

### MECHANICAL SPECIFICATION

**SERIES: DB2500 - DB2510 and ADB2504 - ADB2508**



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	14.2	n/a	0.56

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "T" indicates FAST-ON TERMINALS

Suffix "W" indicates WIRE LEADS

### 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
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
		ADB 2504	ADB 2506	ADB 2508	DB 2500	DB 2501	DB 2502	DB 2504	DB 2506	DB 2508	DB 2510	
Series Number												
Maximum DC Blocking Voltage	V <sub>RM</sub>											
Working Peak Reverse Voltage	V <sub>RWM</sub>	400	600	800	50	100	200	400	600	800	1000	VOLTS
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>											
RMS Reverse Voltage	V <sub>R (RMS)</sub>	280	420	560	35	70	140	280	420	560	700	
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T <sub>J</sub> = 125 °C	I <sub>FSM</sub>	500										AMPS
Average Forward Rectified Current @ T <sub>c</sub> = 75 °C	I <sub>O</sub>	25										
Junction Temperature Range	T <sub>J</sub>	-55 to +135										°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +135										
Minimum Avalanche Voltage	V <sub>(BR) Min</sub>	See Note 1			n/a							VOLTS
Maximum Avalanche Voltage	V <sub>(BR) Max</sub>	See Note 1			n/a							
Maximum Forward Voltage (Per Diode) at 12.5 Amps DC	V <sub>FM</sub>	1.05										
Maximum Reverse Current at Rated V <sub>RM</sub> @ T <sub>A</sub> = 25 °C @ T <sub>A</sub> = 125 °C	I <sub>RM</sub>						1 50					μA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V <sub>ISO</sub>	2000										VDC
Typical Thermal Resistance, Junction to Case	R <sub>θJC</sub>	1.6										°C/W

NOTES: (1) These bridges exhibit the avalanche characteristic at breakdown. If your application requires a specific breakdown voltage range, please contact us.



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### RATING & CHARACTERISTIC CURVES FOR SERIES DB2500 - DB2510 and SERIES ADB2504 - ADB2508

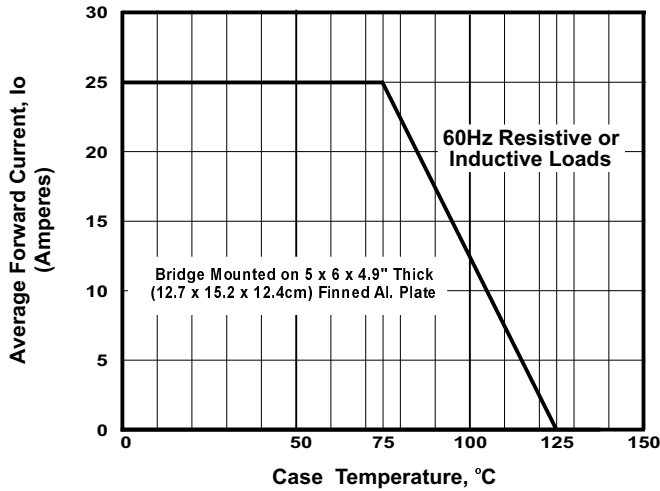


FIGURE 1. FORWARD CURRENT DERATING CURVE

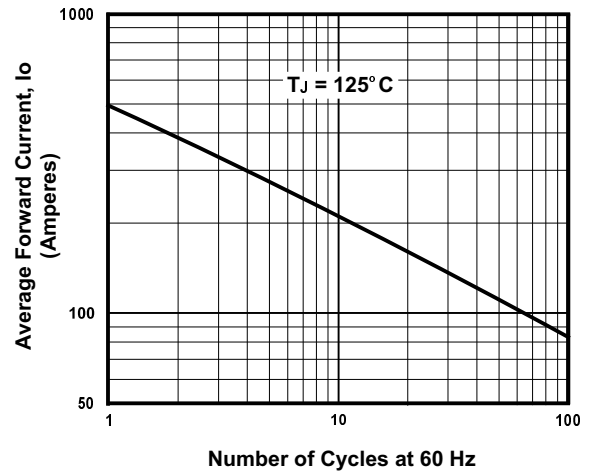


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

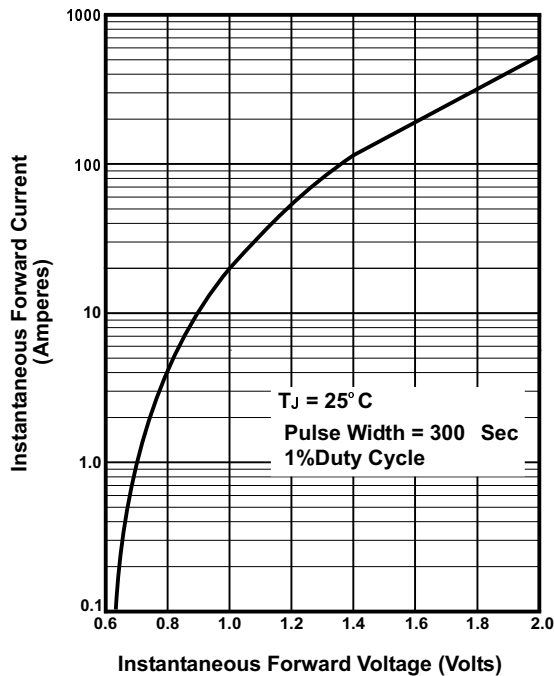


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

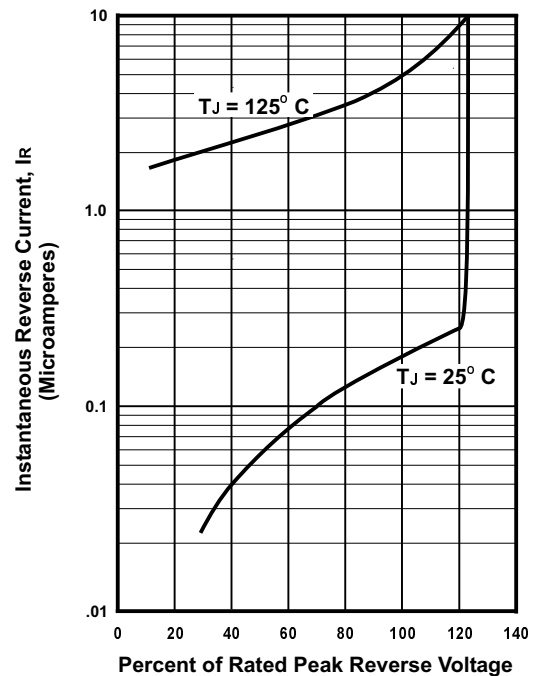


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS