

## 25 AMP SILICON BRIDGE RECTIFIERS

### FEATURES

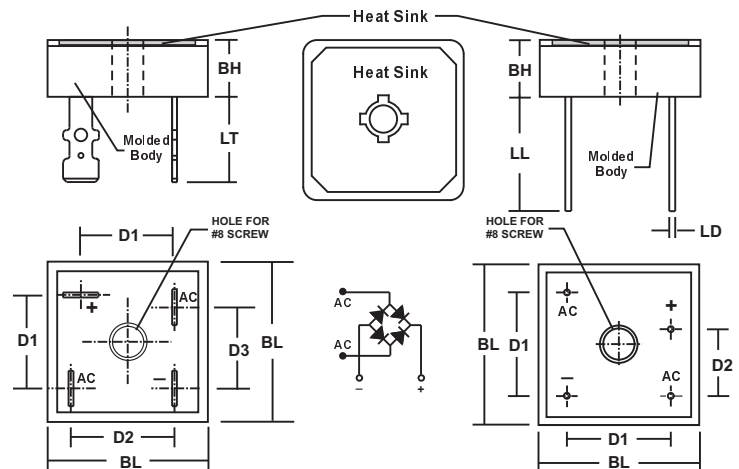
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)**
- **BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **INTEGRALLY MOLDED HEAT SINK PROVIDES VERY LOW THERMAL RESISTANCE FOR MAXIMUM HEAT DISSIPATION**
- **UL RECOGNIZED - FILE #E124962**
- **RoHS COMPLIANT**

### MECHANICAL DATA

- **Case:** Case: Molded epoxy with integral heat sink  
Epoxy carries a U/L Flammability rating of 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 - 0.7 Ounces (20.0 Grams)  
Wire Leads - 0.55 Ounces (16.0 Grams)

### MECHANICAL SPECIFICATION

**SERIES: DB2500P - DB2510P and ADB2504P - ADB2508P**



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	10.2	0.38	0.40
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	15.2	n/a	0.6

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	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	10.2	0.38	0.40
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

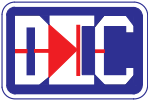
Suffix "W" indicates WIRE LEADS

### 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 2504P	ADB 2506P	ADB 2508P	DB 2500P	DB 2501P	DB 2502P	DB 2504P	DB 2506P	DB 2508P	DB 2510P	
Series Number												
Maximum DC Blocking Voltage	V <sub>RM</sub>											VOLTS
Working Peak Reverse Voltage	V <sub>RWM</sub>	400	600	800	50	100	200	400	600	800	1000	
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 +150										°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150										
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>	2500										VOLTS
Typical Thermal Resistance, Junction to Case	R <sub>θJC</sub>	1.2										°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 DB2500P - DB2510P and SERIES ADB2504P - ADB2508P

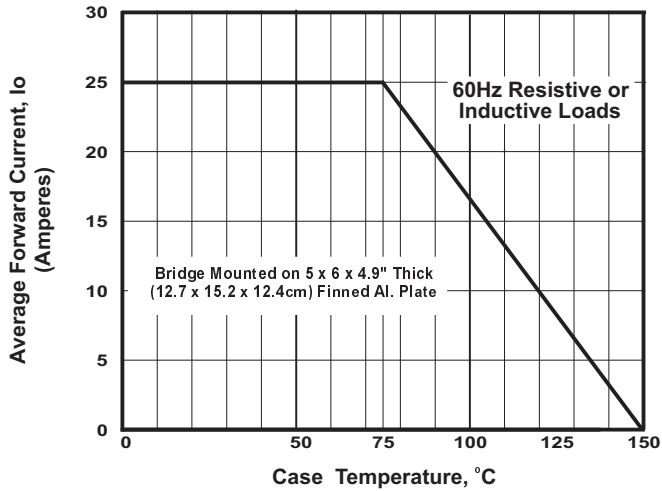


FIGURE 1. FORWARD CURRENT DERATING CURVE

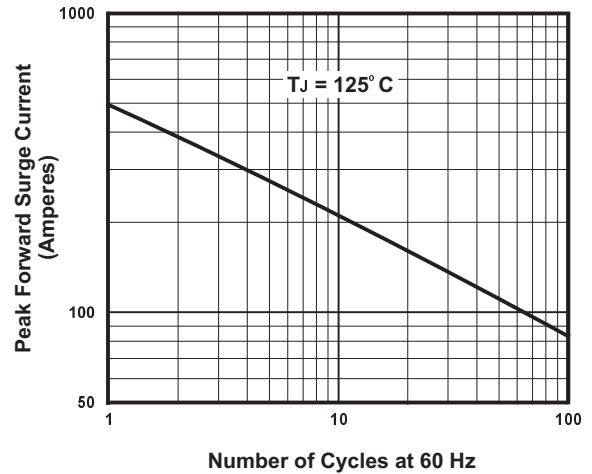


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

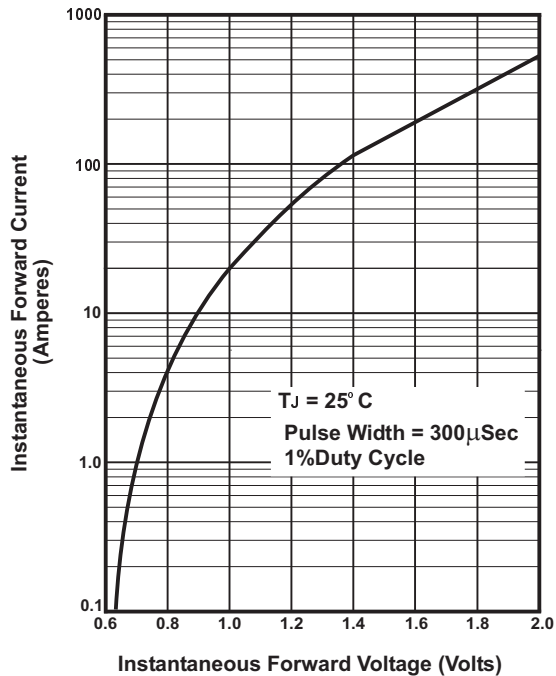


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

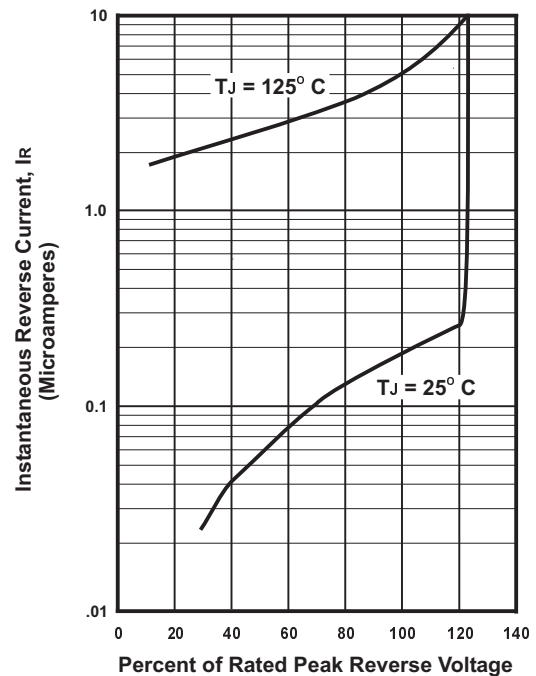


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS