

# 35 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 #E141956**

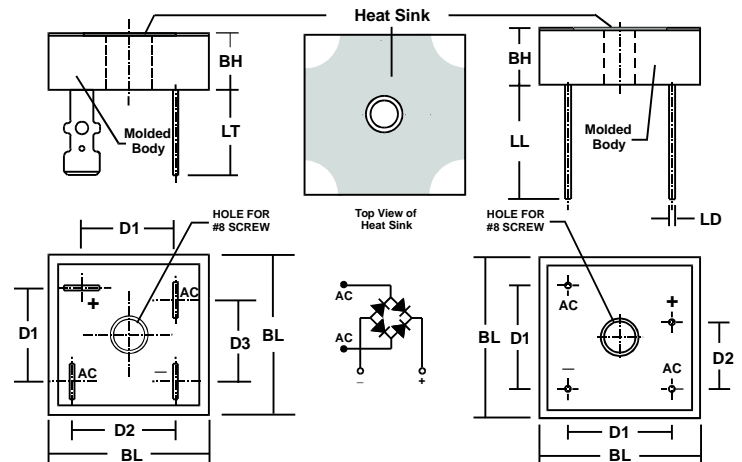
## MECHANICAL DATA

- Case: Molded plastic, 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 - 0.7 Ounces (20.0 Grams)  
Wire Leads - 0.55 Ounces (16.0 Grams)

## MECHANICAL SPECIFICATION

### SERIES: DB3500P - DB3510P and ADB3504P - ADB3508P

Suffix "P" indicates molded PLASTIC with integrally mounted Heat Sink



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%.

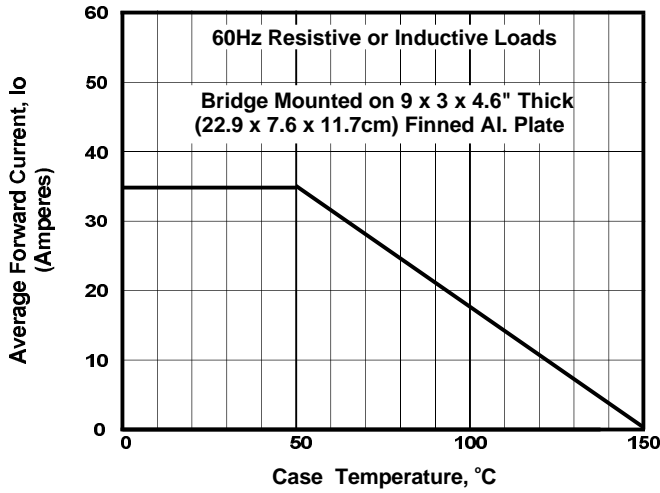
PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS									UNITS	
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
		ADB 3504P	ADB 3506P	ADB 3508P	DB 3500P	DB 3501P	DB 3502P	DB 3504P	DB 3506P	DB 3508P		DB 3510P
Series Number												
Maximum DC Blocking Voltage	V <sub>RM</sub>											
Working Peak 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</sub> (RMS)	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I <sup>2</sup> t	664									AMPS <sup>2</sup> SEC	
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									AMPS	
Average Forward Rectified Current @ T <sub>c</sub> = 50° C	I <sub>o</sub>	35										
Junction Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150									°C	
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 17.5 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.

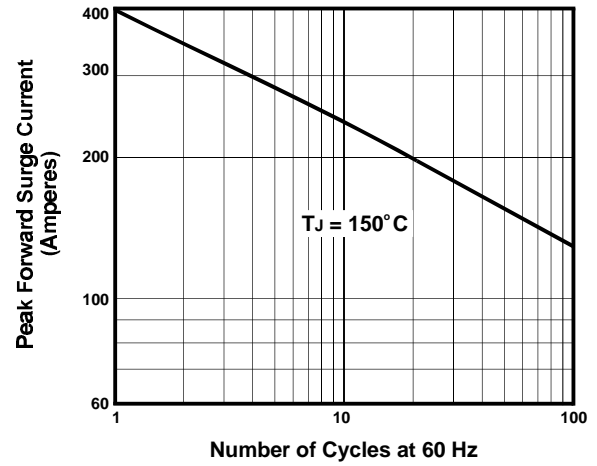
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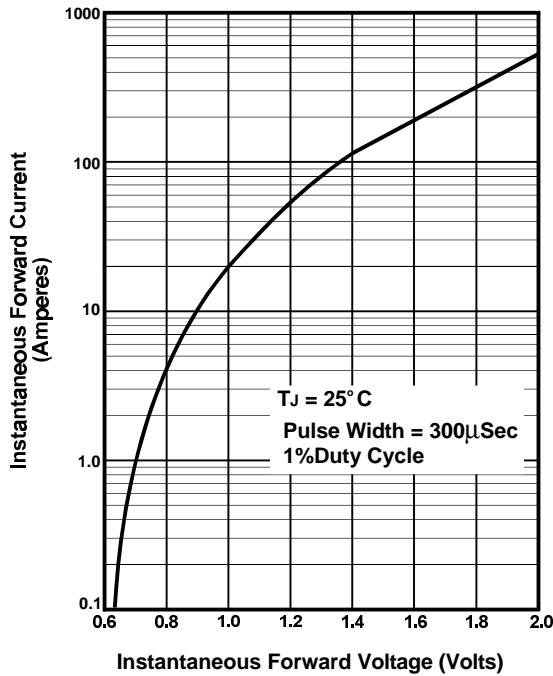
**RATING & CHARACTERISTIC CURVES FOR SERIES DB3500P - DB3510P and SERIES ADB3504P - ADB3508P**



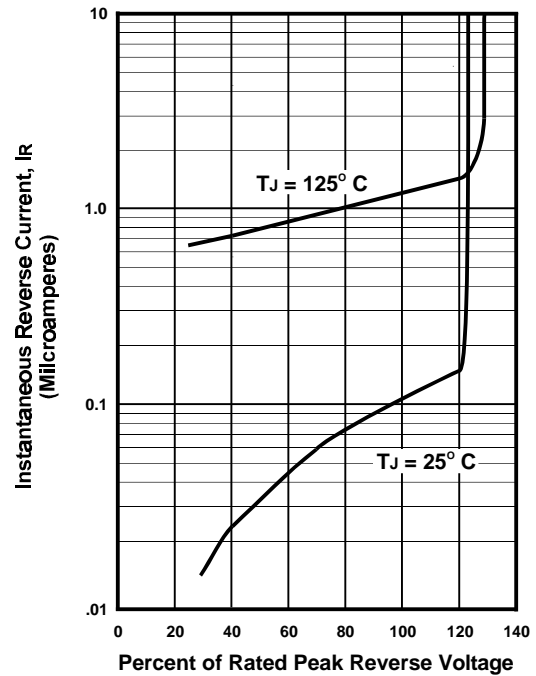
**FIGURE 1. FORWARD CURRENT DERATING CURVE**



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



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



**FIGURE 4. TYPICAL REVERSE CHARACTERISTICS**