

## 35 AMP FAST RECOVERY BRIDGE RECTIFIERS

### FEATURES

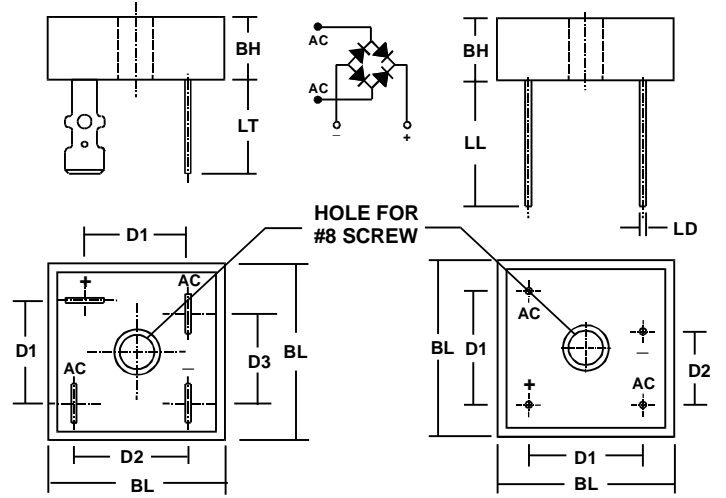
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 400 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E124962**

### 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 Ounces (28.5 Grams)

### MECHANICAL SPECIFICATION

#### SERIES FDB3500 - FDB3510



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
D3	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
		FDB 3500	FDB 3501	FDB 3502	FDB 3504	FDB 3506	FDB 3508	FDB 3510		
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>c</sub> = 55 °C	I <sub>o</sub>	35								AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I <sub>FSM</sub>	400								
Maximum Forward Voltage (Per Bridge Element) at 17.5 Amps DC	V <sub>FM</sub>	1.3								VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage (Per Bridge Element-Note 2)	I <sub>RM</sub>	10 1								μA mA
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	200		300		500			nS	
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I <sup>2</sup> t	664								AMPS <sup>2</sup> SEC
Typical Thermal Resistance, Junction to Ambient (Note 2)	R <sub>θJA</sub>	2.5								°C/W
Junction Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150								°C

NOTES: (1) T<sub>J</sub>=25°C, I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A  
 (2) Mounted on an 11.8 in.<sup>2</sup> x 0.06 in thick (300mm<sup>2</sup> x 1.5mm thick) copper plate

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