

## 25 AMP FAST RECOVERY BRIDGE RECTIFIERS

### FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 500 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency

**UL RECOGNIZED - FILE #E124962**

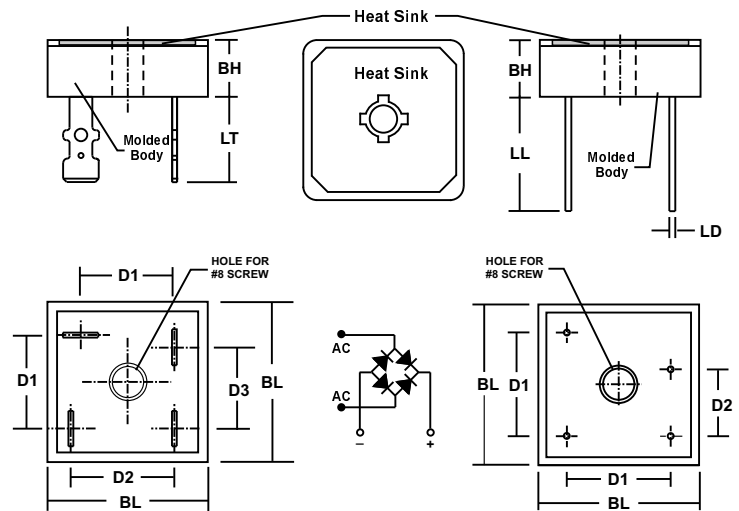
**RoHS COMPLIANT**

### MECHANICAL DATA

- 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 FDB2500P - FDB2510P



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
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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BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
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

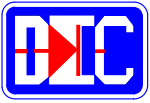
### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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
		FDB 2500P	FDB 2501P	FDB 2502P	FDB 2504P	FDB 2506P	FDB 2508P	FDB 2510P		
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> = 75 °C	I <sub>O</sub>	25								AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load) T <sub>J</sub> = 125° C	I <sub>FSM</sub>	500								
Maximum Forward Voltage (Per Bridge Element) at 12.5 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								A mA
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	200			300		500		nS	
Typical Thermal Resistance, Junction to Case (Note 2)	R <sub>θJC</sub>	1.2								°C/W
Junction Temperature Range	T <sub>J</sub>	-55 to +135								°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +135								

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) Bridge mounted on an 5" x 6" x 4.9" thick (12.7cm x 15.2cm x 12.4cm) finned aluminum plate

3312500P



## 25 AMP FAST RECOVERY BRIDGE RECTIFIERS

### RATING & CHARACTERISTIC CURVES FOR SERIES FDB2500P - FDB2510P

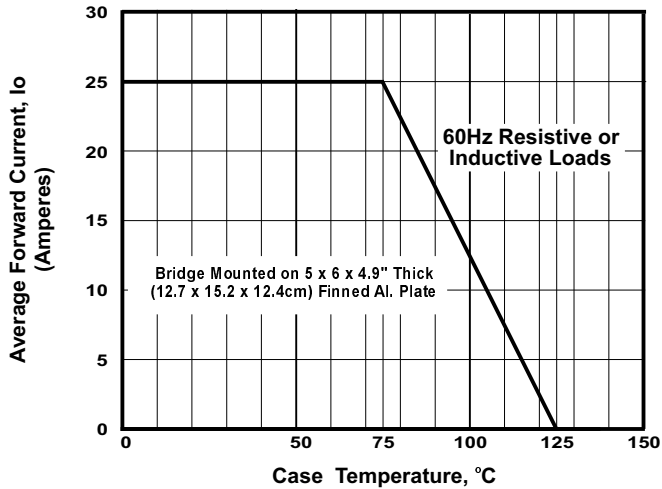


FIGURE 1. FORWARD CURRENT DERATING CURVE

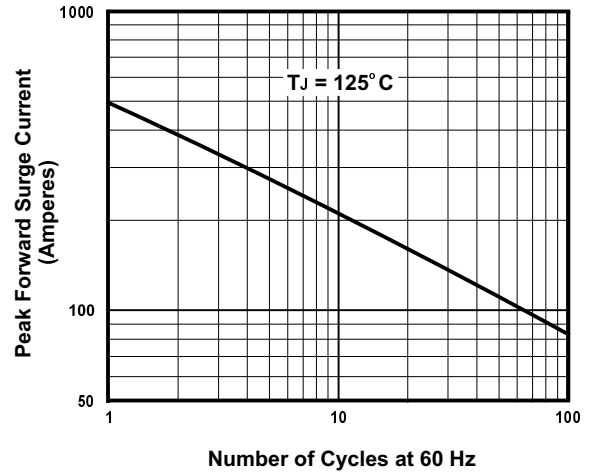


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

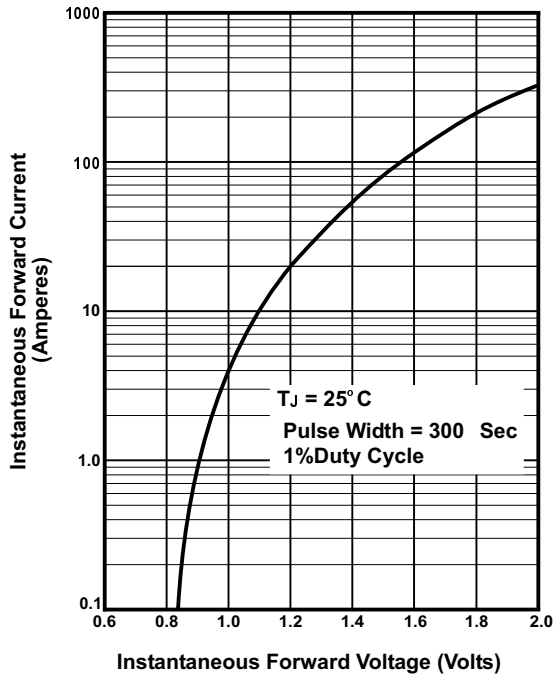


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

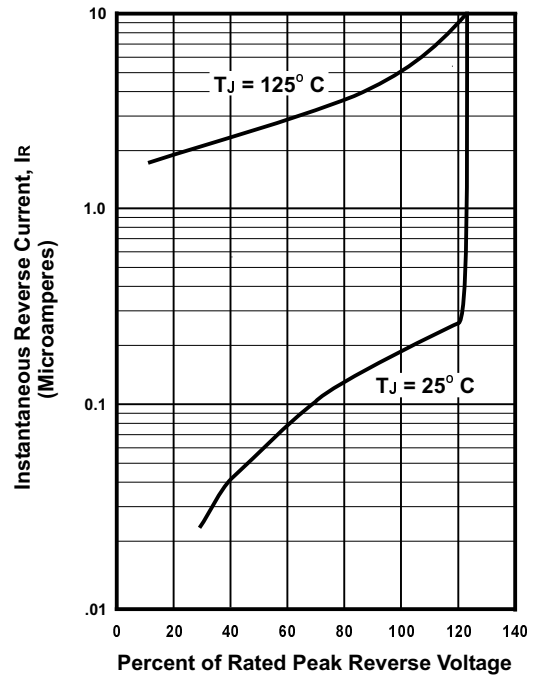


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS