

### FEATURES

- 100% Burn In
- Synchronizable
- Output Trim  $\pm 10\%$
- 1500VDC Isolation
- Operation to No Load
- Very Low Output Ripple
- Fast Transient Response
- Output Current up to 60A
- Fixed Switching Frequency
- 250-300 Watts Output Power
- Remote Sense Compensation
- Remote ON/OFF (Active High/Low)
- Optional Chassis Mount Version Available
- Short Circuit and Over Temperature Protection
- 90% Efficient at Half Load, 88% Efficient at Full Load



### DESCRIPTION

The FB series is a high-density full brick converter that incorporates the desired features required in today's demanding low voltage bus applications. Its unique dual interleaved phase-shifted topology minimizes both input and output noise. When performance, reliability, and low cost are needed, the FB series delivers.

### SPECIFICATIONS: FB Series

(All specifications apply @ 25°C ambient unless otherwise noted)

#### INPUT SPECIFICATIONS

Input Voltage Range .....	18 - 75VDC
Input Filter .....	1,000 $\mu$ F low ESR capacitor recommended
Reflected Ripple Current (nominal Vin and full load) .....	20mA
Remote ON/OFF .....	active high or active low
Input Current under Remote Off .....	1mA

#### OUTPUT SPECIFICATIONS

Output Voltage .....	see table
Voltage Accuracy .....	$\pm 1\%$
Output Adjustability .....	$\pm 10\%$
Output Current .....	see table
Output Power .....	see table
Line Regulation (LL to HL at FL) .....	$\pm 0.2\%$
Load Regulation (NL to FL) .....	$\pm 0.2\%$
Ripple/Noise (20 MHz BW) .....	1% Vout max
Temperature Coefficient .....	$\pm 0.02\%$ / °C max.
Transient Response (50% load step) .....	5% total deviation

#### PROTECTION SPECIFICATIONS

Current Limit .....	130%
Short Circuit Protection .....	Continuous, self re-setting
Over Temperature Protection .....	110°C, self re-setting

#### GENERAL SPECIFICATIONS

Efficiency .....	90% typical
Switching Frequency .....	700KHz typ.
Isolation Voltage (Input to Output) .....	1500VDC min.
Isolation Resistance .....	1G $\Omega$ min.
Isolation Capacitance .....	0.01 $\mu$ F

#### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature (ambient) .....	-40°C ~ +100°C (case)
Storage Temperature .....	-55°C ~ +125°C
Humidity .....	fully potted construction
Cooling .....	heatsink optional (see Note 4)

#### PHYSICAL SPECIFICATIONS

Weight .....	9.88oz (218g)
Dimensions (L x W x H) .....	4.6 x 2.4 x 0.50 in (117.0 x 61.0 x 12.7 mm)
Case Material .....	Aluminum alloy
Shielding .....	six-sided

Due to advances in technology, specifications subject to change without notice

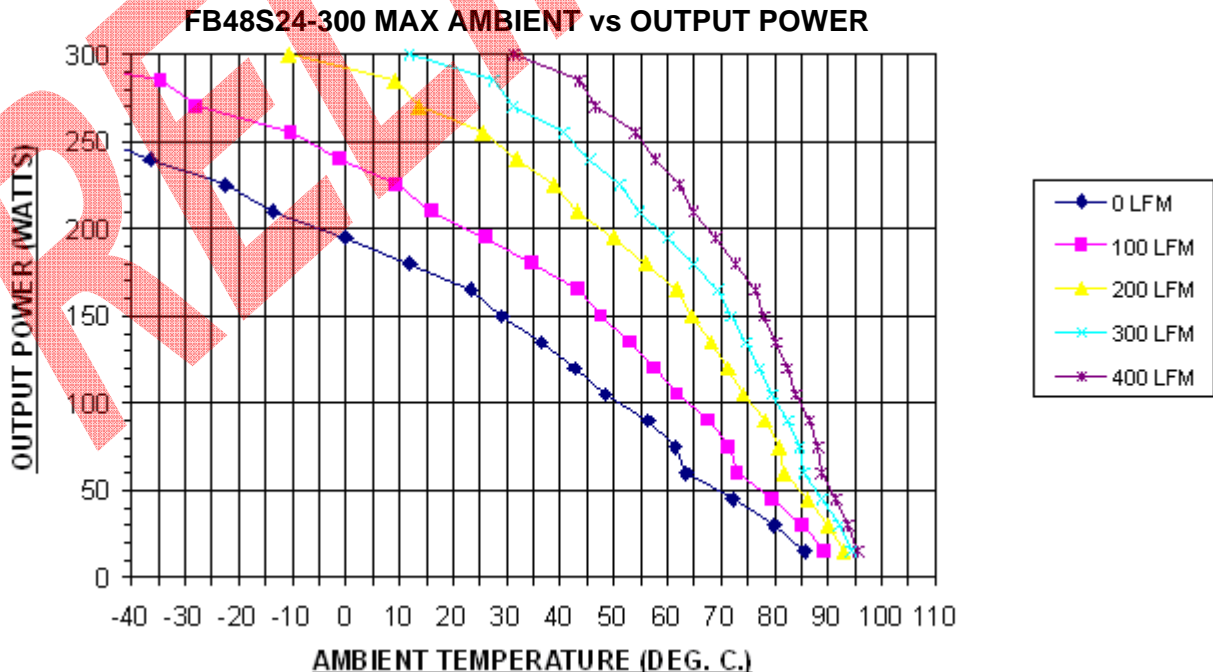
### MODEL SELECTION TABLE

Model Number for Threaded Inserts	Model Number for Thru-Hole Inserts	Input Voltage Range	Output Voltage	Output Current	Output Power
FB48S5-300	FB48S5-300TH	48 VDC (18 - 75 VDC)	5 VDC	60A	300W
FB48S12-300	FB48S12-300TH		12 VDC	25A	300W
FB48S15-300	FB48S15-300TH		15 VDC	20A	300W
FB48S20-300	FB48S20-300TH		20 VDC	15A	300W
FB48S24-300	FB48S24-300TH		24 VDC	12.5A	300W
FB48S26-300	FB48S26-300TH		26 VDC	11.538A	300W
FB48S28-300	FB48S28-300TH		28 VDC	10.714A	300W
FB48S43-250	FB48S43-250TH		43 VDC	5.814A	250W
FB48S48-300	FB48S48-300TH		48VDC	6.25A	300W

### NOTES

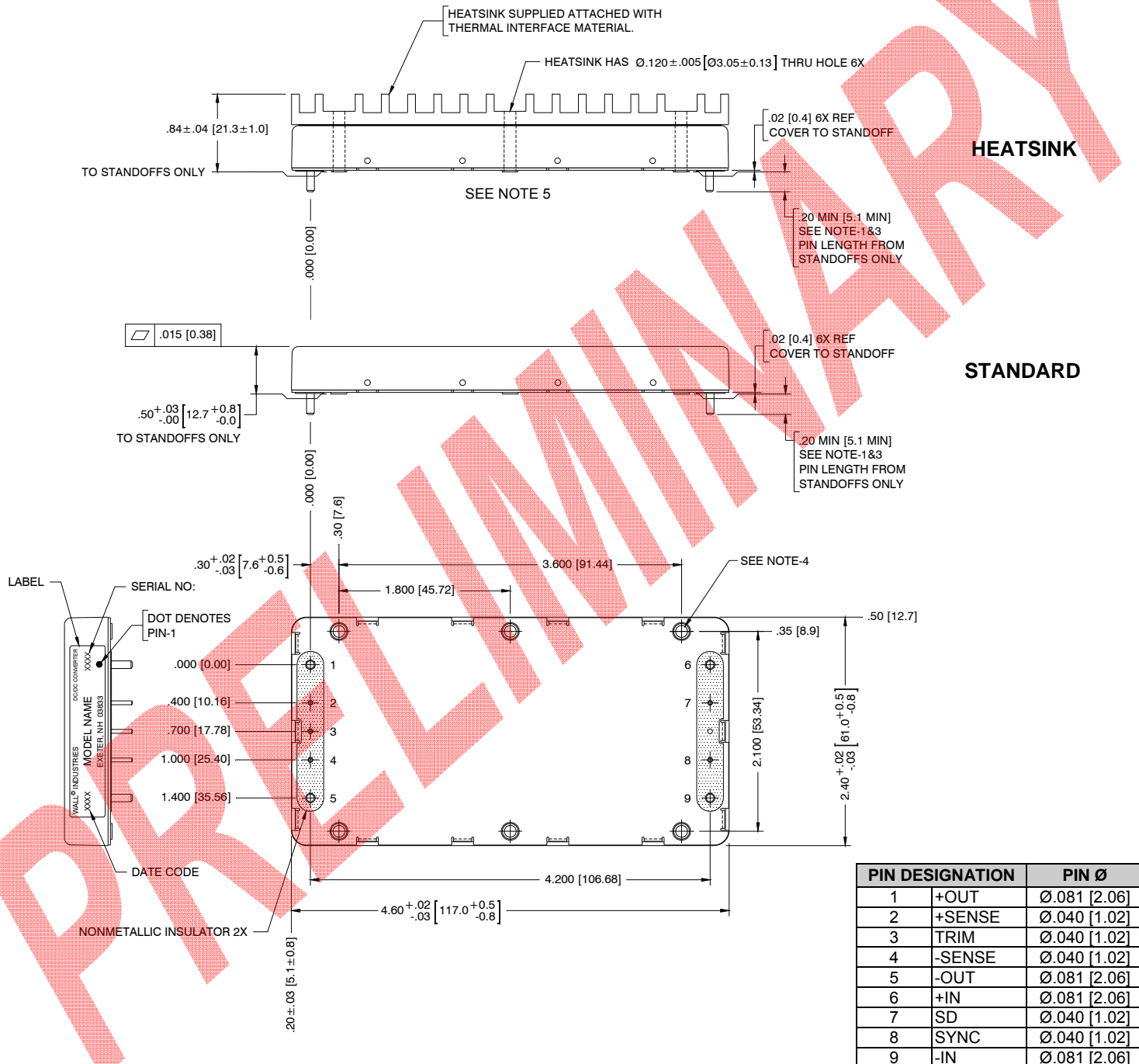
1. Pin to pin tolerance  $\pm 0.01"$  [ $\pm 0.3\text{mm}$ ]. Pin diameter tolerance  $\pm 0.005"$  [ $\pm 0.13\text{mm}$ ].
2. Case material: 0.040" [1.02mm] thick, aluminum alloy 3003-0, Per: QQA 250/2.
3. Unit comes with either 3M x 0.5 threaded thru inserts or for 0.125 thru-hole add "TH" suffix to the model part number. Ex: FB48S48-300TH.
4. For Heat sink add "HS" suffix to the model part number. Ex: FB48S48-300HS.
5. Active High Enable is standard; for Active Low Enable add "R" suffix to the model number. Ex: FB48S48-300R.
6. Chassis mount version also available. Please call factory for ordering details.

### DERATING CURVE



**MECHANICAL DRAWING**

Unit: inches [mm]



**NOTES:**

1. PIN TO PIN TOLERANCE  $\pm .01$  [ $\pm 0.3$ ],  
 PIN DIAMETER TOLERANCE:  $\pm .005$  [ $\pm 0.13$ ].
2. CASE MATERIAL: .040 [1.02] THICK, ALUMINUM ALLOY 3003-0,  
 PER: QQA 250/2.
3. UNLESS OTHERWISE SPECIFIED.

**TO ORDER:**

4. UNIT COMES WITH EITHER 3M x 0.5 THREADED  
 THRU INSERTS OR FOR Ø.125 THRU-HOLE ADD:  
 "TH" SUFFIX TO MODEL PART NUMBER.  
 EXAMPLE: FB48S48-300TH
5. FOR HEAT SINK ADD: "HS" SUFFIX TO MODEL  
 PART NUMBER. EXAMPLE: FB48S48-300HS.
6. OPTIONAL CHASSIS MOUNT VERSION AVAILABLE.

PIN DESIGNATION	PIN Ø
1 +OUT	Ø.081 [2.06]
2 +SENSE	Ø.040 [1.02]
3 TRIM	Ø.040 [1.02]
4 -SENSE	Ø.040 [1.02]
5 -OUT	Ø.081 [2.06]
6 +IN	Ø.081 [2.06]
7 SD	Ø.040 [1.02]
8 SYNC	Ø.040 [1.02]
9 -IN	Ø.081 [2.06]

### OPTIONAL CHASSIS MOUNT VERSION *(Call factory for ordering details)*

Unit: inches [mm]

