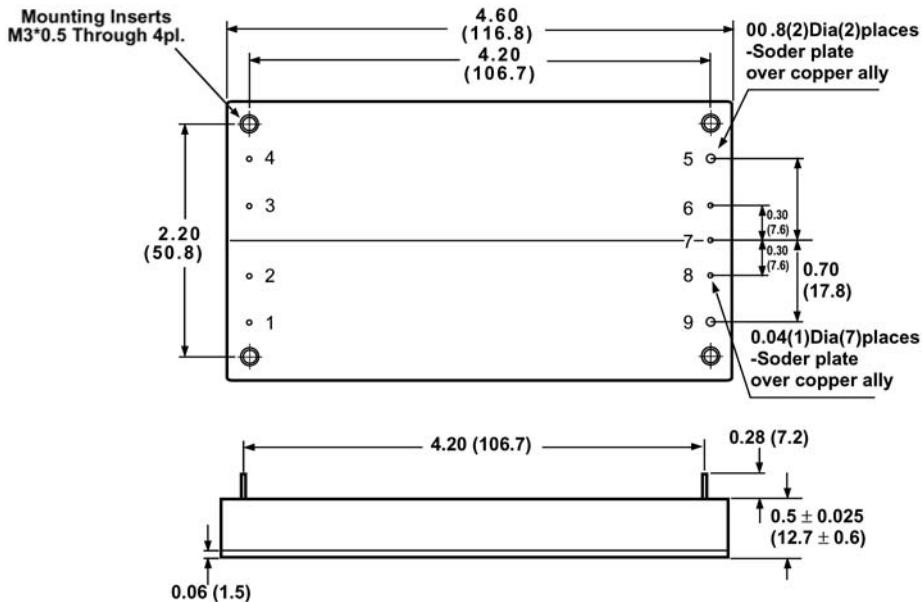


Features

- 100-200W isolated output
- Efficiency to 85%
- 300KHz switching frequency
- 2:1 input range
- Regulated outputs
- Continuous short circuit protection
- Industry standard half-brick package



Model Number	Input Voltage	Output Voltage	Output Current	Input Current		Efficiency
				No Load	Full Load	
VFB200-D48-S2R5	36-75VDC	2.5VDC	40A	25mA	2.8A	74%
VFB200-D48-S3R3	36-75VDC	3.3VDC	40A	25mA	3.5A	79%
VFB200-D48-S5	36-75VDC	5VDC	40A	25mA	5A	83%
VFB200-D48-S12	36-75VDC	12VDC	17A	25mA	5A	85%
VFB200-D48-S15	36-75VDC	15VDC	13.3A	25mA	5A	85%
VFB200-D48-S24	36-75VDC	24VDC	8.4A	25mA	5A	85%
VFB200-D48-S28	36-75VDC	28VDC	7.14A	25mA	5A	85%
VFB200-D48-S48	36-75VDC	48VDC	4.2A	25mA	5A	85%


Pin Connection

Pin	Function
1.	+Vin
2.	ON/OFF
3.	Case
4.	-Vin
5.	-Vout
6.	-Sense
7.	Trim
8.	+Sense
9.	+Vout

**Input**

Input Voltage Range	48V 36-75V
Under Voltage Lockout	48 Vin power up 48Vin power down 32.5V
Positive Logic Remote ON/OFF ^{3,4}	
Input Filter	PI Type

Output

Voltage Accuracy	±1% max.
Transient Response: 25% Step Load Change	<500µ sec.
External Trim Adj. Range	±10%
Ripple & Noise	20MHz BW, 2.5V, 3.3V, 5V
	12V & 15V
	24V & 48V
	40mV RMS., max 100mV pk-pk, max
	60mV RMS., max 150mV pk-pk, max
	100mV/200mV RMS., max 240mV/480mV pk-pk., max
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Line Regulation ¹	±0.2% max
Load Regulation ²	±0.2% max
Over Voltage Protection trip Range, % Vo nom.	115-140%
Current Limit	115-140% Nominal Output

General Specifications

Efficiency	see table
Isolation Voltage	Input/Output Input/Case Output/Case
	1500VDC min. 1500VDC min. 1500VDC min.
Isolation Resistance	Ohm min.
Switching Frequency	300KHz, Typ.
Operating Case Temperature	40°C to 100°C
Storage Temperature	40°C to 105°C
Thermal Shutdown, Case Temp.	100°C Typ.
Dimensions	4.60x2.40x0.50 inches (116.8x61.0x12.7mm)
Case Material	aluminum base with plastic case

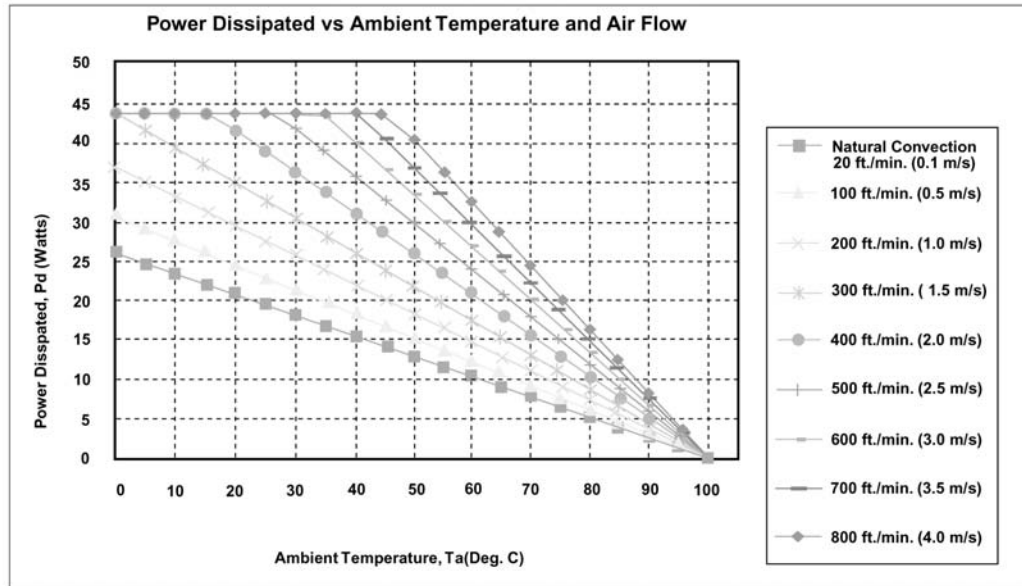
NOTES:

1. Measured from High Line to Low Line
2. Measured from Full Load to Zero Load
3. Logic Compatibility: Open Collector ref to -Input
Module ON: Open Circuit
Module OFF: < 0.8VDC
4. Suffix "N" to the model number with Negative Logic Remote ON/OFF

Application Notes

Derating:

The operating case temperature range of the VFB200 series is -40°C to +100°C. When operating the VFB200, proper derating or cooling is needed. Following is the derating curve of VFB200 without heat sink.



Forced Convection Power Derating with No Heat Sink; Airflow Along Width (Transverse)

Where:

The power dissipation (Pd) is

$$P_d = P_i - P_o = P_o (1 - \eta) / \eta$$

The thermal resistances are listed below.

Chart of Thermal Resistance vs Air Flow:

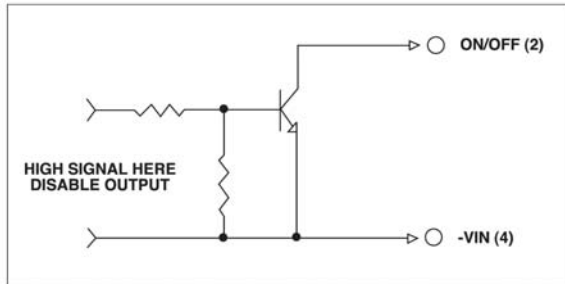
AIR FLOW RATE	TYPICAL Rca
Natural Convection 20ft./min. (0.1m/s)	3.82 °C/W
100 ft./min. (0.5m/s)	3.23 °C/W
200 ft./min. (1.0m/s)	2.71 °C/W
300 ft./min. (1.5m/s)	2.28 °C/W
400 ft./min. (2.0m/s)	1.92 °C/W
500 ft./min. (2.5m/s)	1.68 °C/W
600 ft./min. (3.0m/s)	1.50 °C/W
700 ft./min. (3.5m/s)	1.35 °C/W
800 ft./min. (4.0m/s)	1.23 °C/W

The temperature rise (DT):

$$\Delta T = P_d * R_{ca}$$

Remote ON/OFF Control

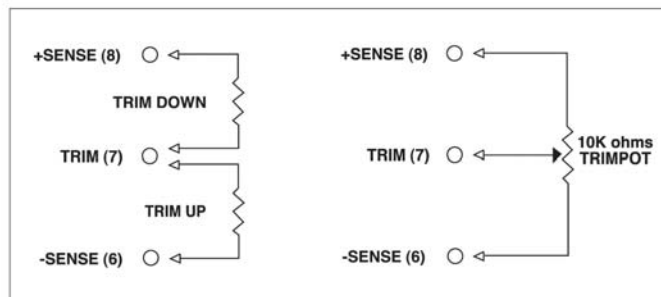
The VFB200 series allows the user to switch the module on and off electronically with the remote on/off feature. The VFB200 series is available with "positive logic" or "negative logic" options.


Logic Table

Logic State (Pin 2)	Negative Logic	Positive Logic
Logic Low - Switch Closed	Module on	Module off
Logic High - Switch Open	Module off	Module on

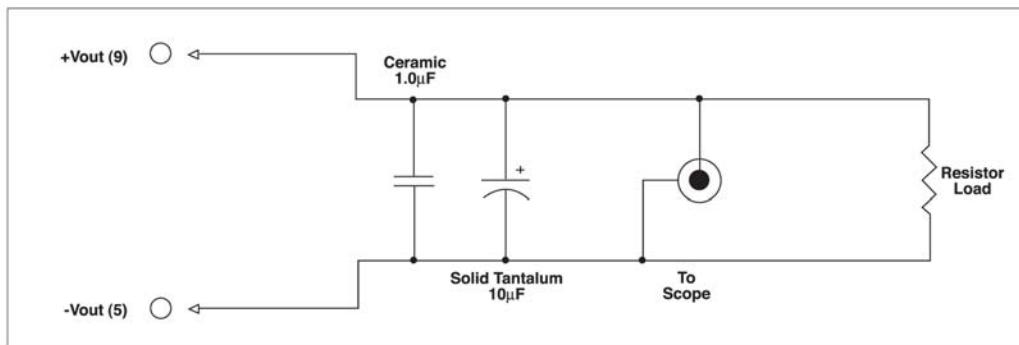
External Output Trimming

Output may optionally be externally trimmed ($\pm 10\%$) with a fixed resistor or an external trimpot as shown.



Output Noise

The output noise is measured with a $10\mu\text{F}$ tantalum capacitor and a $1.0\mu\text{F}$ ceramic capacitor across the output.



Output Noise Test Circuit schematic

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