

VHB75-Q Series Half Brick DC-DC Converter

Features -37.5W-75W isolated output -Efficiency to 84% -300KHz switching frequency -4:1 input range -Regulated outputs -Continuous short circuit protection -Industry standard half-brick package -Five-sided metal case



Model	Input	Output	Output	l nput C	Current		
Number	Voltage	Voltage	Current	No Load	Full Load	Effic.	Case
VHB75-Q48-S3R3	18-75 VDC	3.3VDC	15A	50mA	1320mA	78%	HB
VHB75-Q48-S5	18-75 VDC	5VDC	15A	50mA	1905mA	82%	HB
VHB75-Q48-S12	18-75 VDC	12VDC	6.25A	50mA	1860mA	84%	HB
VHB75-Q48-S15	18-75 VDC	15VDC	5A	50mA	1860mA	84%	HB
VHB75-Q48-S24	18-75 VDC	24VDC	3.12A	50mA	1860mA	84%	HB

Input

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Input Voltage Range	48V:	18-75V
Under Voltage Lockout	48Vin:	power up 17V
		power down 16V
ON/OFF Control		see notes 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 3.3V, 5V	40mV RMS., max		
20MHz BW	100mV pk-pk., max		
12V & 15V	60mV RMS., max		
	150mV 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	110%-160% Nominal Output		

General Specifications

Efficiency		see table	
Isolation Voltage	Input/Output	1500VDC min.	
	Input/Case	1500VDC min.	
	Output/Case	1500VDC min.	
Isolation Resistanc	e	10 ⁷ Ohm min.	
Switching Frequent	су	300KHz, Typ	
Operating Case Ter	mperature	-40°C to +100°C	
Storage Temperatu	re	-55°C to +105°C	
Thermal Shutdown	Case Temp.	100°C Typ.	
Dimensions		2.28x2.40x0.50 inches	
		(57.9x61.0x12.7mm)	
Case Material		aluminum	



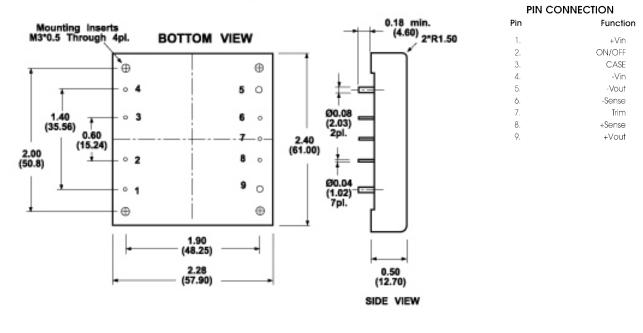
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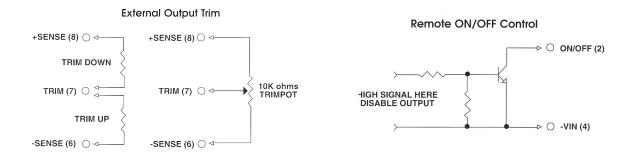
- 1. Measured from high line to low line
- 2. Measured from full load to zero load
- 3. On/Off Control: Positive logic default. Referenced to -Vin. Open collector. Module ON...open circuit
 - Module OFF...<0.8Vdc
- 4. For negative logic On/Off control, add suffix "N" to the model number

Case HB

All Dimensions In Inches(mm)

				Pin
Tolerances	Inches	.XX±.02	.XXX±.010	±0.02
	Millimeters	.X=.5	XX±.25	±0.5





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