

HBS SERIES

50-150 Watt DC/DC Converters - Single Output

The HBS series provides a broad selection of high efficiency, high density, isolated DC-DC converters in the 50W to 150W power range. Remote shutdown is provided, and the output voltage can be externally trimmed $\pm 10\%$ from its factory setting. Units are open frame design and are water washable. Threaded inserts are provided to ease mounting and to attach heatsinks in high temperature environments. These converters are highly suitable for use in systems employing distributed power architectures which require tightly regulated voltages close to the point of use. They offer great flexibility in expandable systems, such as Hubs and Routers, allowing OEM's to minimize entry level costs and grow power capability as a system expands.

S P E C I F I C A T I O N S

Output voltage setpoint accuracy	$\pm 1\%$
Output voltage trim range	$\pm 10\%$
Remote sense headroom	0.5 VDC
Line regulation V_{in} min. - V_{in} max., I_{out} rated	0.2% V_o
Load regulation I_{out} min. - I_{out} max., V_{in} nom.	0.2% V_o
Temperature co-efficient	$\pm 0.03\% / ^\circ C$
Dynamic regulation, 25% loadstep	
Pk Deviation	4%
Settling time to regulation band	500 μs
Overvoltage protection trip range, % V_{out} nom.	120 - 140%
Minimum output current, % I_{out} rated	10%
Current limit threshold range % I_{out} rated	110 - 130%
Switching frequency	500 kHz
Remote shutdown options ¹	
Negative logic	
Logic low	Module "On"
Logic high	Module "Off"
Positive logic	
Logic low	Module "Off"
Logic high	Module "On"
Remote shutdown reference	V_{in} negative
Turn on time, V_{in} nom., resistive load	10 mS
Input reverse voltage protection	Shunt diode
Reflected ripple current	
V_{in} nom., I_{out} rated, 0-20 MHz	25 mA Pk-Pk
Isolation	
Input - output	1500 VDC
Input - case	1500 VDC
Output - case	1500 VDC
Input - output resistance	>10 MOHM
Case temperature, operating range	-40 to +100° C
Case temperature, storage range	-40 to +125° C
Thermal shutdown range, $T_{BASEPLATE}$	105 - 115° C
Humidity max., non-condensing	95%
Vibration, 3 Axes, 5 minutes ea.	5g, 10 - 55 Hz
Safety	UL 1950, CSA 22.2-950, EN60950
MTBF ¹ (Bellcore TR-NWT-000332)	2.1 x 10 ⁶ hrs

¹ For negative logic add suffix "N" to model number—for positive logic add suffix "P".
¹ MTBF predictions may vary slightly from model to model.

Specifications typical at 25°C, nominal line, and full load - unless otherwise stated.
 Specifications subject to change without notice.

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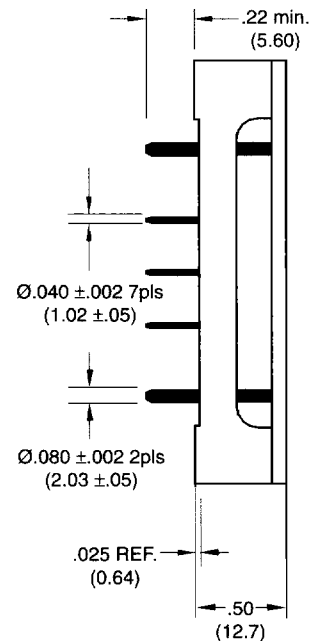
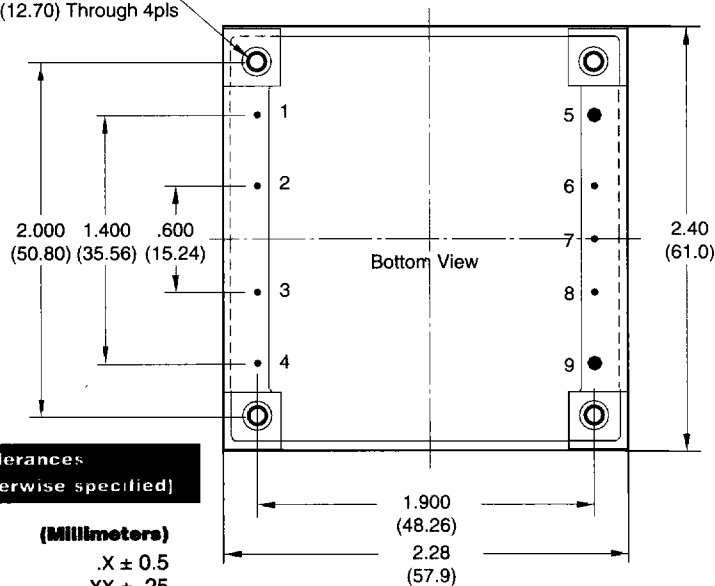
VIN (VDC)	Range (Volts)	IIN max [*] (Amps)	VOUT	IOUT Rated (Amps)	Ripple & Noise		Efficiency Typ.**	Model
					Pk-Pk (mV)	RMS (mV)		
24	18-36	2.30	3.30	10.00	100	40	80%	HBS033YE
24	18-36	3.60	5.00	10.00	100	40	83%	HBS050YG
24	18-36	3.50	12.00	4.20	150	60	85%	HBS050YH
24	18-36	3.50	15.00	3.30	150	60	86%	HBS050YJ
24	18-36	3.50	3.30	15.00	100	40	80%	HBS050YE
24	18-36	5.40	5.00	15.00	100	40	83%	HBS075YG
24	18-36	5.40	12.00	6.25	150	60	85%	HBS075YH
24	18-36	5.40	15.00	5.00	150	60	86%	HBS075YJ
24	18-36	4.60	3.30	20.00	100	40	80%	HBS066YE
24	18-36	7.20	5.00	20.00	100	40	83%	HBS100YG
24	18-36	7.00	12.00	8.30	150	60	85%	HBS100YH
24	18-36	7.00	15.00	6.70	150	60	86%	HBS100YJ
24	18-36	7.00	3.30	30.00	100	40	80%	HBS100YE
24	18-36	11.70	5.00	30.00	100	40	83%	HBS150YG
24	18-36	10.50	12.00	12.50	150	60	85%	HBS150YH
24	18-36	10.50	15.00	10.00	150	60	86%	HBS150YJ
48	34-75	1.22	3.30	10.00	100	40	80%	HBS033ZE
48	34-75	1.80	5.00	10.00	100	40	84%	HBS050ZG
48	34-75	1.75	12.00	4.20	150	60	86%	HBS050ZH
48	34-75	1.75	15.00	3.30	150	60	87%	HBS050ZJ
48	34-75	1.32	3.30	15.00	100	40	80%	HBS050ZE
48	34-75	2.70	5.00	15.00	100	40	84%	HBS075ZG
48	34-75	2.70	12.00	6.25	150	60	86%	HBS075ZH
48	34-75	2.70	15.00	5.00	150	60	87%	HBS075ZJ
48	34-75	2.50	3.30	20.00	100	40	80%	HBS066ZE
48	34-75	3.60	5.00	20.00	100	40	84%	HBS100ZG
48	34-75	3.50	12.00	8.30	150	60	86%	HBS100ZH
48	34-75	3.50	15.00	6.70	150	60	87%	HBS100ZJ
48	34-75	3.65	3.30	30.00	100	40	80%	HBS100ZE
48	34-75	5.84	5.00	30.00	100	40	83%	HBS150ZG
48	34-75	5.20	12.00	12.50	150	60	86%	HBS150ZH
48	34-75	5.20	15.00	10.00	150	60	87%	HBS150ZJ

*IIN max. at VIN min., IOUT rated. Case connected to VIN negative.

**At nominal VIN, rated output.

For negative logic add suffix "N" to model number—for positive logic add suffix "P".

Mounting Inserts
M3x.5 (12.70) Through 4pls



Pin	Function	Tolerances (unless otherwise specified)	
		Inches	(Millimeters)
1	-VIN		
2	Case	.XX ± .020	.X ± 0.5
3	On/Off	.XXX ± .010	.XX ± .25
4	+VIN		
5	-VOUT		
6	-Sense		
7	Trim		
8	+Sense		
9	+VOUT		

In North America, call **1-888-IPD-CONVERTERS** for more information.

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