

HBT SERIES

60 Watt DC/DC Converters - Triple Output

The HBT series provides a selection of high efficiency, high density multiple output isolated DC-DC converters with up to 60W of output power. HBT units offer either +3.3V, or +5V as a main output, and ±12V auxiliary outputs. Remote shutdown is provided, and the main channel output voltage can be externally trimmed ± 10% from its factory setting. Input pi filters are standard. Through hole inserts are provided to ease mounting and to attach heatsinks in high temperature environments. All units feature advanced open frame technology and are water washable.

S P E C I F I C A T I O N S	
Output voltage setpoint accuracy, main output	± 1%
Output voltage trim range	± 10%
Static regulation, main output ¹	
Line regulation Vin min. - Vin max., Iout rated	0.2% Vo
Load regulation Iout min. - Iout max., Vin nom.	0.5% Vo
Temperature co-efficient	± 0.03% / °C
Dynamic regulation, main output, 25% loadstep	
Pk Deviation	4%
Settling time to regulation band	500 µs
Overshoot protection trip range, % Vout nom. (main output)	120 - 140%
Minimum output current, % rated Iout	10%
Power limit threshold range	110 - 130%
Switching frequency	450 kHz
Remote shutdown options ²	
Negative logic	
Logic low	Module "On"
Logic high	Module "Off"
Positive logic	
Logic low	Module "Off"
Logic high	Module "On"
Remote shutdown reference	VIN negative
Turn on time, VIN nom., resistive load	10 mS
Input reverse voltage protection	Shunt diode
Reflected ripple current	
VIN nom., Iout rated, 0-20 MHz	25 mA Pk-Pk
Isolation	
Input - outputs	1500 VDC
Input - case	1500 VDC
Outputs - case	500 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, TBASEPLATE	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 [†] (Bellcore TR-NWT-000332)	1.0 x 10 ⁶ hrs

¹ ±12V outputs within ±15% for all conditions of line, load, and cross regulation.

² For negative logic add suffix "N" to model number—for positive logic add suffix "P".

[†]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.

H B T S E R | E S

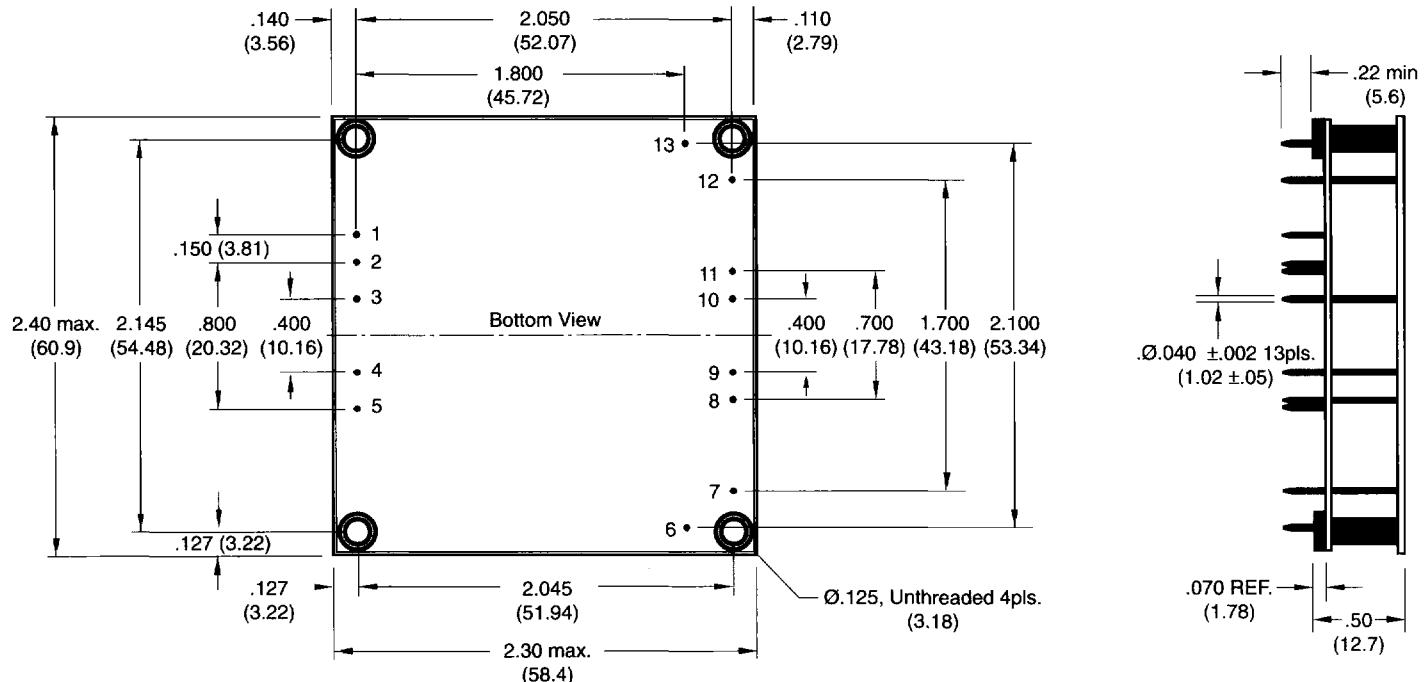
60 Watt DC/DC Converters - Triple Output

VIN (VDC)	Range (Volts)	IIN max. Amps	Vout	IOUT Rated (Amps)	Ripple & Noise		Efficiency Typ.*	Model
					Pk-Pk (mV)	RMS (mV)		
24	18 - 36	4.6	3.3±12	9/1.25/1.25	100/120/120	60/60/60	83%	HBT060YEHH
24	18 - 36	4.6	5.0±12	6/1.25/1.25	100/120/120	60/60/60	83%	HBT060YGHH
48	34 - 75	2.3	3.3±12	9/1.25/1.25	100/120/120	60/60/60	83%	HBT060ZEHH
48	34 - 75	2.3	5.0±12	6/1.25/1.25	100/120/120	60/60/60	83%	HBT060ZGHH

*IIN max. at VIN min., IOUT rated.

**At nominal VIN, rated output.

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



Pin	Function	Tolerances (unless otherwise specified)	
1	Case	Inches	(Millimeters)
2	On/Off	.XX ± .020	.X ± 0.5
3	-VIN	.XXX ± .010	.XX ± .25
4	+VIN		
5	No Connect		
6	-V2		
7	+V2		
8	Trim		
9	+V1		
10	-V1		
11	No Connect		
12	+V3		
13	-V3		

1 Case	2 On/Off	3 -VIN	4 +VIN	5 No Connect	6 -V2	7 +V2	8 Trim	9 +V1	10 -V1	11 No Connect	12 +V3	13 -V3

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

4 7 3 - 2 6 6 8