



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 $\pm 12V$ auxiliary outputs. Remote shutdown is provided, and the main channel output voltage can be externally trimmed $\pm 10\%$ 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.

SPECIFICATIONS

Output voltage setpoint accuracy, main output	$\pm 1\%$
Output voltage trim range	$\pm 10\%$
Static regulation, main output ¹	
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.	0.5% V_o
Temperature co-efficient	$\pm 0.03\% / ^\circ C$
Dynamic regulation, main output, 25% loadstep	
Pk Deviation	4%
Settling time to regulation band	500 μs
Overvoltage protection trip range, % V_{out} nom. (main output)	120 - 140%
Minimum output current, % rated I_{out}	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	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 - 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 ³ (Bellcore TR-NWT-000332)	1.0 x 10 ⁶ hrs

¹ $\pm 12V$ outputs within $\pm 15\%$ 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".

³ 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.

