

4.0 WATT UNREGULATED HIGH ISOLATION DC/DC CONVERTER

HB04U



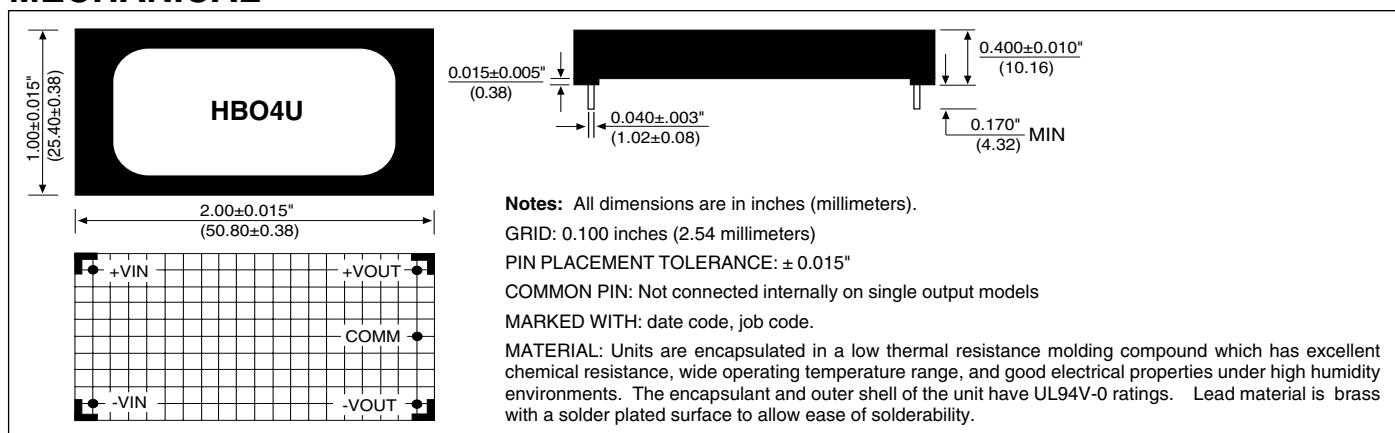
FEATURES

- HIGH ISOLATION - 3000V RATING
- 8000V ISOLATION TEST VOLTAGE
- BARRIER 100% PRODUCTION TESTED
- LOW BARRIER CAPACITANCE - 10PF
- LOW LEAKAGE CURRENT - 2 μ A MAX
- INTERNAL FILTERING

APPLICATIONS

- BIOMEDICAL DATA ACQUISITION
- INDUSTRIAL PROCESS CONTROL
- ANALYTICAL MEASUREMENTS
- GROUND LOOP ELIMINATION
- INTRINSIC SAFETY SYSTEMS

MECHANICAL



More product information and application notes are available
on our website at www.cdpowerelectronics.com

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ELECTRICAL SPECIFICATIONS

Specifications typical at $T_A = +25^\circ\text{C}$, nominal input voltage, rated output current unless otherwise noted.

MODEL	NOMINAL INPUT VOLTAGE (Vdc)	RATED OUTPUT VOLTAGE (Vdc)	RATED OUTPUT CURRENT (mA)	INPUT CURRENT		EFFICIENCY (%)
				NO LOAD (mA)	RATED LOAD (mA)	
HB04U05S05	5	5	800	60	1000	80
HB04U05S12	5	12	333	60	1000	80
HB04U05S15	5	15	267	60	1000	80
HB04U12S05	12	5	800	25	380	87
HB04U12S12	12	12	333	25	380	87
HB04U12S15	12	15	267	25	380	87
HB04U15S05	15	5	800	20	310	87
HB04U15S12	15	12	333	20	310	87
HB04U15S15	15	15	267	20	310	87
HB04U05D05	5	± 5	± 400	60	944	85
HB04U05D12	5	± 12	± 167	60	944	85
HB04U05D15	5	± 15	± 134	60	944	85
HB04U12D05	12	± 5	± 400	25	375	88
HB04U12D12	12	± 12	± 167	25	375	88
HB04U12D15	12	± 15	± 134	25	375	88
HB04U15D05	15	± 5	± 400	20	300	88
HB04U15D12	15	± 12	± 167	20	300	88
HB04U15D15	15	± 15	± 134	20	300	88

Note: Other input to output voltage options may be available. Please consult factory.

COMMON SPECIFICATIONS

Specifications typical at $T_A = +25^\circ\text{C}$, nominal input voltage, rated output current unless otherwise noted.

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT Voltage Range		4.5 10.8 13.5	5 12 15 35	5.5 13.2 16.5	Vdc
Reflected Ripple Current					mA p-p
ISOLATION Rated Voltage Test Voltage Resistance Capacitance Leakage Current	60 Hz, 10 Seconds Viso= 240V Ac , 60Hz	3000 8000	10 10 1.2	2	Vdc Vpk G Ω pF μArms
OUTPUT Rated Power Voltage Setpoint Accuracy Temperature Coefficient Ripple & Noise BW = 10Hz to 2MHz Line Regulation Load Regulation	BW = DC to 10MHz High Line to Low Line See performance curves		4 ± 3 ± 0.02 100 20 ± 1.5	± 5	W % %/ $^\circ\text{C}$ mV p-p mV rms %/% Vin
GENERAL Switching Frequency Package Weight MTTF per MIL-HDBK-217, Rev. E Ground Benign	Circuit Stress Method $T_A = +25^\circ\text{C}$		100 22 200,000		kHz g Hr
TEMPERATURE Specification Operation Storage		-25 -40 -40		+70 +85 +110	$^\circ\text{C}$ $^\circ\text{C}$ $^\circ\text{C}$

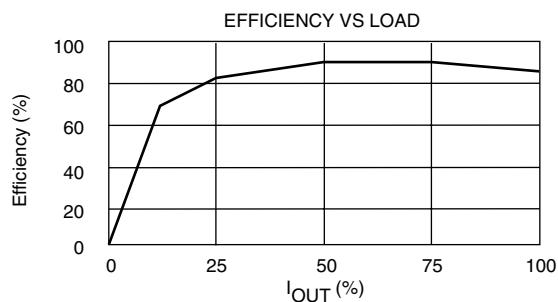
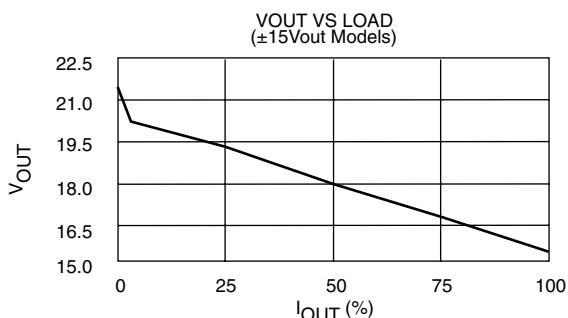
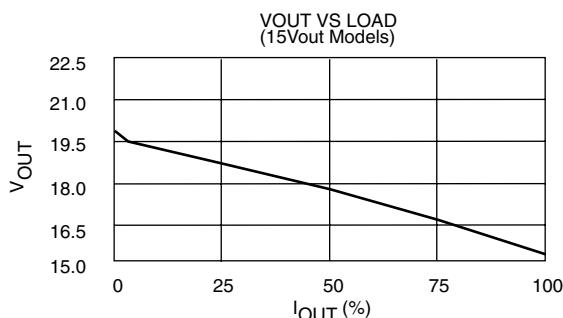
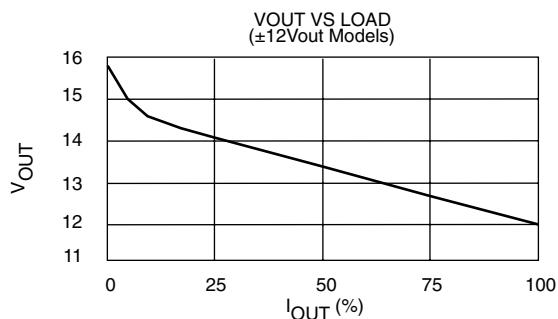
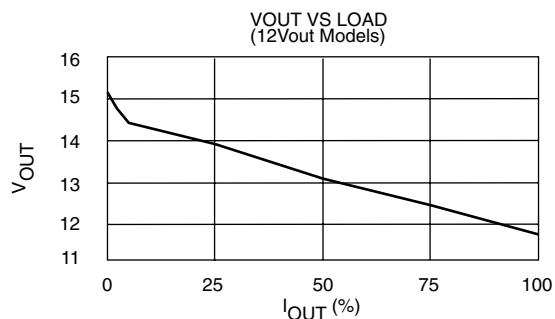
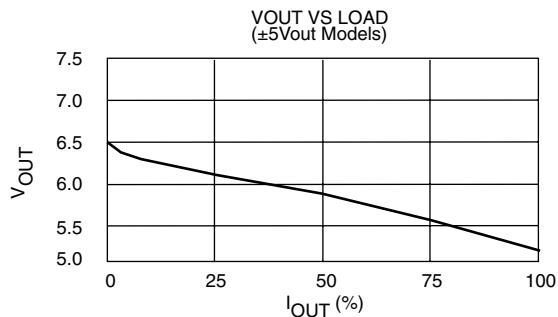
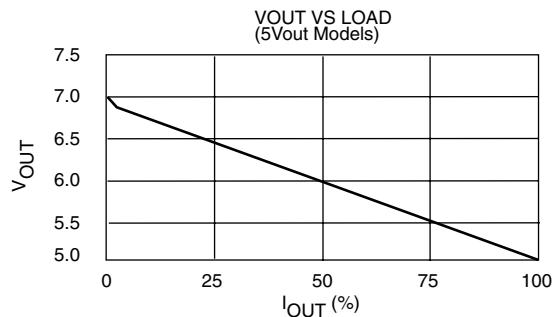
ABSOLUTE MAXIMUM RATINGS

Internal Power Dissipation.....	1W
Short Circuit Duration.....	Momentary
Lead Temperature (soldering, 10 seconds max).....	+300°C

ORDERING INFORMATION

HB04U	xx	yy	zz	Q
Device Family				
HB04U Indicates DC/DC Converter				
Model Number				
Where:				
xx = Input Voltage				
y = Number of Outputs (Single "S", Dual "D")				
zz = Output Voltage				
Package Option				

TYPICAL PERFORMANCE CURVES



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ENGINEERING NOTES