



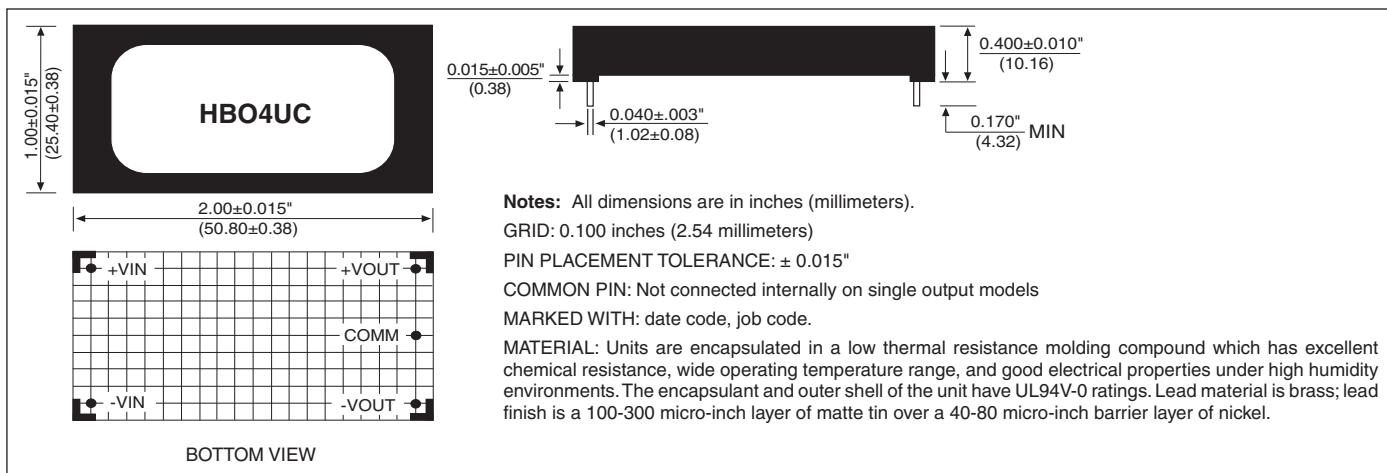
FEATURES

- RoHS compliant
- High Isolation - 3000v Rating
- 8000v Isolation Test Voltage
- Barrier 100% Production Tested
- Low Barrier Capacitance - 10pf
- Low Leakage Current - 2ma Max
- Internal Filtering

Applications

- Biomedical Data Acquisition
- Industrial Process Control
- Analytical Measurements
- Ground Loop Elimination
- Intrinsic Safety Systems

MECHANICAL



For full details go to
www.murata-ps.com/rohs



More product information and application notes are available
 on our website at www.murata-ps.com

ELECTRICAL SPECIFICATIONS

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

Model	Nominal Input Voltage (V _{DC})	Rated Output Voltage (V _{DC})	Rated Output Current (mA)	Input Current		Efficiency(%)	
				No Load (mA)	Rated Load (mA)		
Discontinued	HB04U05S05QC	5	5	800	60	1000	80
Discontinued	HB04U05S12QC	5	12	333	60	1000	80
Discontinued	HB04U05S15QC	5	15	267	60	1000	80
Discontinued	HB04U12S05QC	12	5	800	25	380	87
Available	HB04U12S12QC*	12	12	333	25	380	87
Discontinued	HB04U12S15QC	12	15	267	25	380	87
Discontinued	HB04U15S05QC	15	5	800	20	310	87
Discontinued	HB04U15S12QC	15	12	333	20	310	87
Discontinued	HB04U15S15QC	15	15	267	20	310	87
Discontinued	HB04U05D05QC	5	± 5	± 400	60	944	85
Discontinued	HB04U05D12QC	5	± 12	± 167	60	944	85
Discontinued	HB04U05D15QC	5	± 15	± 134	60	944	85
Discontinued	HB04U12D05QC	12	± 5	± 400	25	375	88
Discontinued	HB04U12D12QC	12	± 12	± 167	25	375	88
Discontinued	HB04U12D15QC	12	± 15	± 134	25	375	88
Discontinued	HB04U15D05QC	15	± 5	± 400	20	300	88
Discontinued	HB04U15D12QC	15	± 12	± 167	20	300	88
Discontinued	HB04U15D15QC	15	± 15	± 134	20	300	88

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

* $\pm 6.25\%$ Max for Voltage Setpoint Accuracy.

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	5	5.5	V _{DC}
		10.8	12	13.2	
		13.5	15	16.5	
Reflected Ripple Current			35 ¹		mA _{p-p}
ISOLATION					
Rated Voltage		3000			V _{DC}
Test Voltage	60 Hz, 10 Seconds	8000			V _{pk}
Resistance			10		G Ω
Capacitance			10		pF
Leakage Current	V _{iso} = 240V _{AC} , 60Hz		1.2	2	μA_{rms}
OUTPUT					
Rated Power			4		W
Voltage Setpoint Accuracy			± 3		%
Temperature Coefficient			± 0.02		%/ $^\circ\text{C}$
Ripple & Noise	BW = DC to 10MHz		100		mV _{p-p}
	BW = 10Hz to 2MHz		20		mV _{rms}
Line Regulation	High Line to Low Line				%/ $\%$ Vin
Load Regulation	See performance curves		± 1.5		
GENERAL					
Switching Frequency			100		kHz
Package Weight			22		g
MTTF per MIL-HDBK-217, Rev. E	Circuit Stress Method				
Ground Benign	$T_A = +25^\circ\text{C}$		200,000		Hr
TEMPERATURE					
Specification		-25		+70	$^\circ\text{C}$
Operation		-40		+85	$^\circ\text{C}$
Storage		-40		+110	$^\circ\text{C}$

1. Reflected ripple current is measured at 50% load with a 33 μF capacitor across the input of the UUT.

THROUGH-HOLE SOLDERING INFORMATION

These devices are intended for wave soldering or manual soldering.
They are not intended to be subject to surface mount processes under any circumstances.

The normal wave soldering process can be used with these devices where the device is subjected to a maximum wave temperature of 260 $^\circ\text{C}$ for a period of no more than 10 seconds. Within this time and temperature range, the integrity of the device's plastic body will not be compromised and internal temperatures within the converter will not exceed 175 $^\circ\text{C}$. Care should be taken to control manual soldering limits identical to that of wave soldering.

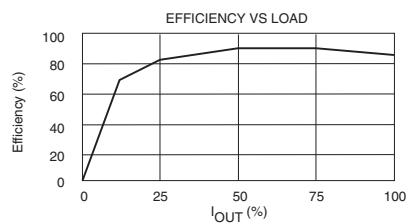
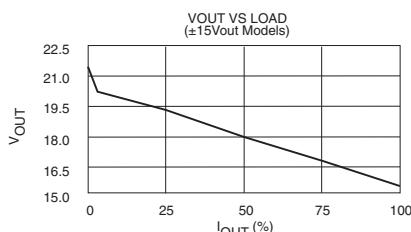
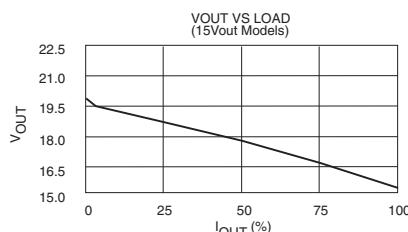
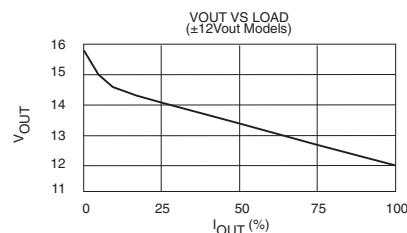
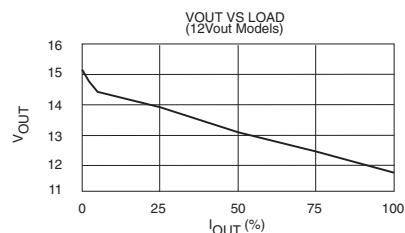
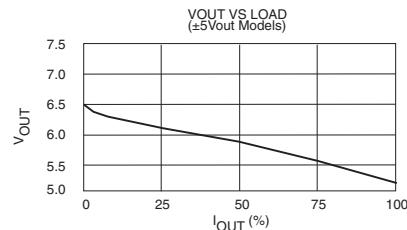
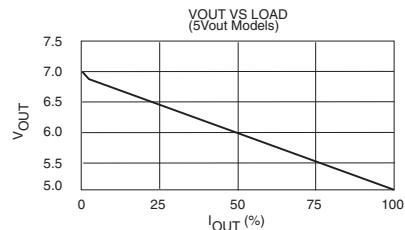
ABSOLUTE MAXIMUM RATINGS

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

ORDERING INFORMATION

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

TYPICAL PERFORMANCE CURVES



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ISO 9001 and 14001 REGISTERED

www.murata-ps.com/support

This product is subject to the following [operating requirements](#) and the [Life and Safety Critical Application Sales Policy](#): Refer to: <http://www.murata-ps.com/requirements/>



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