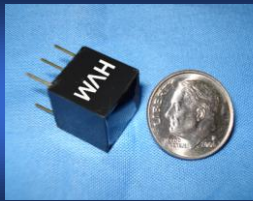


# UMHV-BP Series

Ultra-Miniature Bi-Polar HV Power Supply



## Features

- ❖ Ultra-Miniature Case Size (0.5" x 0.5" x 0.5")
- ❖ High Impedance Programming Input (10kΩ)
- ❖ Extremely Low Quiescent Current (5mA typical)
- ❖ No External Components Required
- ❖ PCB Mountable
- ❖ Low Ripple and EMI/RFI
- ❖ High Input/Output Isolation
- ❖ Wide Operating Temp Range (-55°C to +70°C)
- ❖ Bi-Polar Outputs

## Description

The UMHV-BP Series is a family of ultra-miniature bipolar-output DC to DC converters in 0.125 cubic inches (0.5" x 0.5" x 0.5"). These ultra-compact converters are ideal for applications requiring small size and ease of use.

A high impedance programming input makes it very easy to use, eliminating the need for a low impedance adjustable power source voltage.

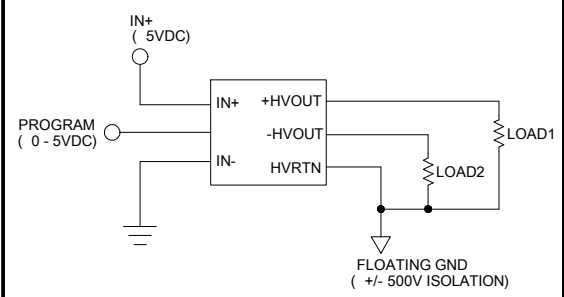
HVM's proprietary resonant converter design minimizes quiescent current and operating noise while delivering maximum performance and reliability. A special feature of this power supply is its extremely low input current, typically 1/10<sup>th</sup> of that of similar devices on the market, making it ideal for battery powered applications.

The devices operate directly from 5VDC ± 0.5VDC input. Output voltage is independent of input power voltage and is proportional to the programming voltage (0 to IN+ produces 0 to full scale output) and features excellent linearity.

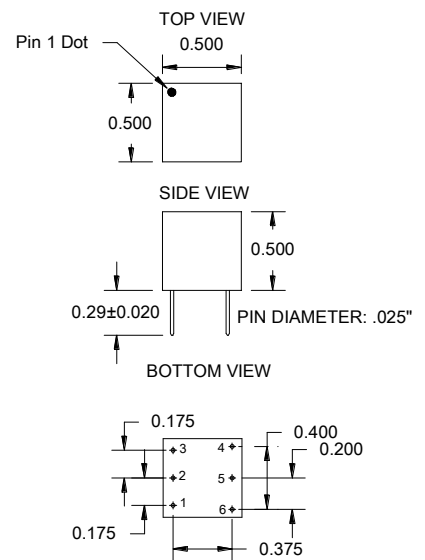
The output power rating is 0.5W and the input/output isolation is +/-500V.

The UMHV Series is very stable over a wide operating temperature range.

## Application Schematic



## Mechanical Dimensions



PIN #	FUNCTION
1	PROGRAM
2	IN -
3	IN+
4	-HV OUT
5	HVRTN
6	+HV OUT

Note: Also available with wires

Website: [www.hvmtech.com](http://www.hvmtech.com)  
 Email: [sales@hvmtech.com](mailto:sales@hvmtech.com)  
 (877) 626-5552 Ext. 211

# UMHV-BP Series

Ultra-Miniature HV Power Supply

## Mechanical Characteristics

**Size:** 0.5" x 0.5" x 0.5"

**Weight:** 4.1 grams typical

**Packaging:** Encapsulated in high performance epoxy

**Case Material:** Thermoset plastic (Diallyl Phthalate)

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## Electrical Characteristics (at +23°C)

**Input Power Voltage (V+):** 5V  $\pm$  10%

**Programming Voltage:** 0 to IN+ results in 0 to rated output

**Programming Input Impedance:** 10k $\Omega$

**Output Tolerance at No Load:**  $\pm$  5%

**Input-Output Isolation:** +/- 500V

**Load Regulation:** 20% (drop from no load to full load)

**Output Ripple:** <2% typical at full load

**Oscillator Frequency:** 45 kHz – 80 kHz

**Efficiency:** 55% typical at full load

## Environmental Characteristics

**Operating Temp Range:** -55°C to +70°C

**Storage Temp Range:** -55°C to +85°C

Model	Input Voltage	+HV OUT Voltage	-HV OUT Voltage	MAX Output Current (each output)	Input Current	
					No Load	Max Load
UMHV05025BP	5V	+250V	-250V	1 mA	<10mA	<175mA

Please consult factory for additional models.

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