

SERIES HVP HI VOLTAGE PROGRAMMABLE PLUG-IN MODULES

0 - 100Vdc to 0 - 6000Vdc

5 Watt Positive and Negative Output Voltages

The HVP Series miniature precision 5 Watt High Voltage Converters are encased in a six side shielded case measuring only 2.55"x1.30"x0.50"(h). The low profile enables them as PCB mountable components in customer applications.

FEATURES:

- Accessible Calibration Trimmer
- 5 Watt Output
- Precision Regulated
- Low Ripple
- Low Temperature Coefficient
- 0 to 100% Output Programmable
- Wide Input Range: 11 to 16 Vdc
- Voltage Monitor and Reference Outputs
- Input Over Voltage Protection
- Output Arc, Over Current and Short Circuit Protection
- Remote Shutdown
- Operating Temperature Range: -25°C to +70°C
- Miniature 6 side shielded low profile case (0.500")
- PCB mountable

PHYSICAL CHARACTERISTICS:

- Size: 2.55"(w) x 1.3" (d) x 0.5"(h)
- Weight: 50 grams
- Case: 6 side Metal Shield
- Pins: 0.04" diameter, 0.40" length

TYPICAL CHARACTERISTICS:

- **Input Voltage:** 11 to 16Vdc.
- **Input Current:** 150mA max. no load -- 650mA max. full load
- **Input voltage Shutdown:** 18V, latching
- **Programming Voltage:** 0 to 5Vdc -- shdn @ Vprog
- **Internal Programming Voltage Limit:** 5.5 Vdc typical
- **Voltage Monitor:** 0 to 5V for 0 to 100%V out
- **Reference Voltage:** 5Vdc +/- 2%, 1mA max.
- **Linearity:**
- **Output Current Limit:** Iout, Max +30% typ.
- **Output Power:** 5W max.
- **Efficiency:** 70% typical
- **Internal Overtemperature Shutdown:** 95°C, latching
- **Line Regulation:**
- **Load Regulation:**
- **Output Ripple:**
- **Converter Frequency:** 55 to 110kHz
- **Calibration Adjustment Range:** >1%
- **Stability:**
- **Temperature Coefficient:**
- **Operating Temperature Range:** -25°C to +70°C
- **Storage Temperature Range:** -55°C to +125°C

SERIES HVP

| PICO PART NUMBER | OUTPUT | | REGULATION | | RIPPLE*** FULL LOAD PEAK - PEAK (%)typical | PRICE (US \$) |
|------------------|-------------|--------------|------------|----------|--|---------------|
| | VOLTAGE (V) | CURRENT (mA) | LINE (%) | LOAD (%) | | |
| HVP0.1P | 0 to +100 | 50 | | | | 266.43 |
| HVP0.1N | 0 to -100 | 50 | | | | 266.43 |
| HVP0.25P | 0 to +250 | 20 | | | | 266.43 |
| HVP0.25N | 0 to -250 | 20 | | | | 266.43 |
| HVP0.5P | 0 to +500 | 10 | | | | 319.93 |
| HVP0.5N | 0 to -500 | 10 | | | | 319.93 |
| HVP1P | 0 to +1kV | 5 | | | | 319.93 |
| HVP1N | 0 to -1kV | 5 | | | | 319.93 |
| HVP2P | 0 to +2kV | 2.5 | | | | 374.50 |
| HVP2N | 0 to -2kV | 2.5 | | | | 374.50 |
| HVP3P | 0 to +3kV | 1.67 | | | | 374.50 |

| | | | | | | |
|-------|-----------|------|--|--|--|--------|
| HVP3N | 0 to -3kV | 1.67 | | | | 374.50 |
| HVP4P | 0 to +4kV | 1.25 | | | | 374.50 |
| HVP4N | 0 to -4kV | 1.25 | | | | 374.50 |
| HVP5P | 0 to +5k | 1.00 | | | | 374.50 |
| HVP5N | 0 to -5k | 1.00 | | | | 374.50 |
| HVP6P | 0 to +6k | 0.84 | | | | 422.65 |
| HVP6N | 0 to -6k | 0.84 | | | | 422.65 |

NOTES:

All specifications are given under the following conditions: +25°C ambient, 12Vdc Input at Full Load

Measurements taken after 1 hour warm-up

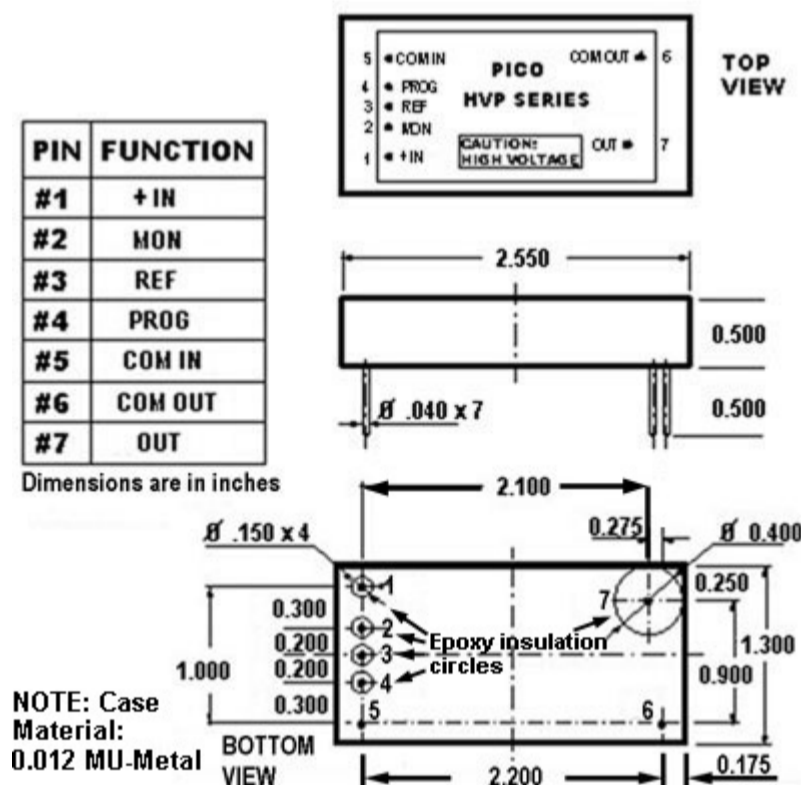
Load regulation given for 0 to 100% load change

For negative output units (suffix N), Vmonitor returns a buffered signal of the internal programming voltage

For expanded temperature range or non-standard features, please consult factory

*****FOR LOWER RIPPLE APPLICATIONS CONSULT FACTORY: 800-431-1064**

SERIES HVP



Typical Weight: 70 grams

PIN DESCRIPTION:

Pin #1 (+IN): Input Voltage to the unit, 11Vdc to 16Vdc. Input Voltage of 18Vdc and higher will cause the unit to shut-down. To restore operation, Input Over Voltage condition should be removed and input power recycled.

Pin #2 (MON): Returns a voltage proportional to the actual output voltage within 0 to 5Vdc range. Useful to identifying an overload condition by comparing with Vprog. For negative output units, Vmon returns a buffered signal of the internal programming voltage.

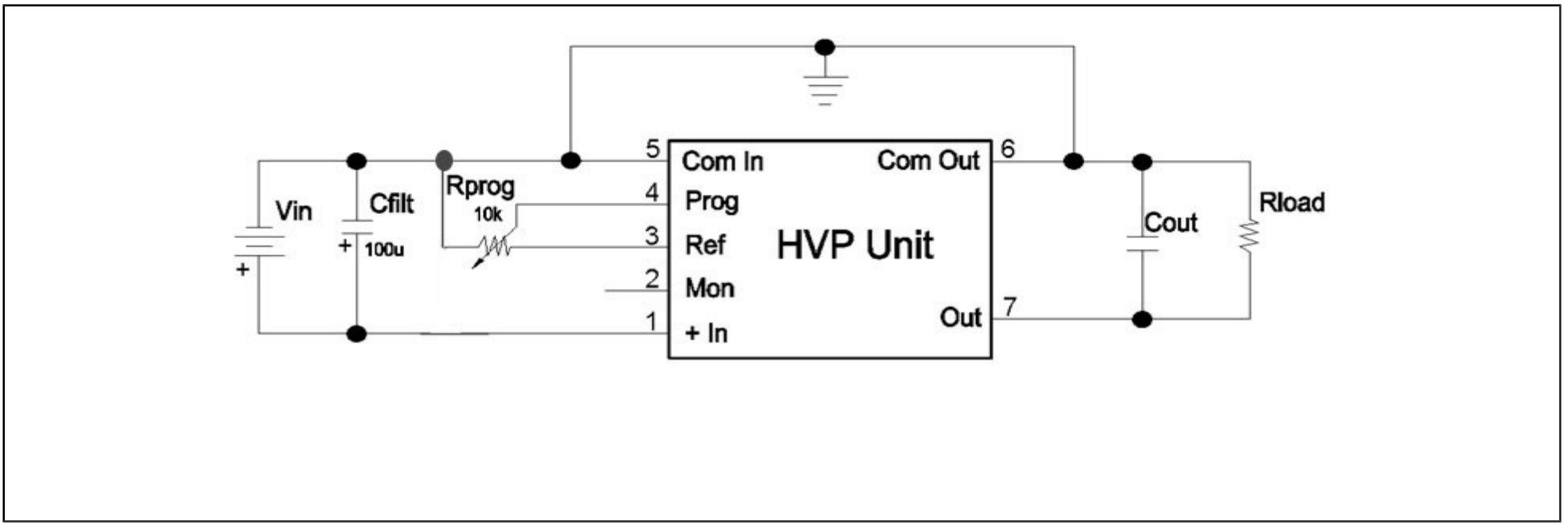
Pin #3 (REF): 5V ref generated on board. Range: 4.90Vdc to 5.10Vdc (±2%). Current sourcing capability:

Pin #4 (PROG): Programming Voltage 0 to 5Vdc controls the output within 0 to 100% Vout max. A programming voltage limiter is designed in to prevent internal programming voltage from exceeding 5.5Vdc. Input impedance at Pin #4 to Gnd is higher than 100 Kohm (if Vprog doesn't exceed 5Vdc). When pulled below 0.25Vdc, the unit will shut-down, non-latching.

Pin #5 (COM IN): Return of the Input Voltage to the unit. Internally connected with COM OUT.

Pin #6 (COM OUT): Return of HV Out. Connected with COM IN, represents the common point of input and output voltages

Pin #7 (Out): High Voltage Output



For immediate engineering assistance or to place an order:
Call Toll Free: 800-431-1064

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803-1810
Tel: 914-738-1400 or Fax: 914-738-8225

[Go to High Voltage DC-DC Converter menu^{\[1\]}](#)