



SERIES

VV VV-P VV-N

6,000 to 10,000 VDC OUTPUTS

Isolated, Single Output Modules

**6,000 to 10,000 Volts DC Output
Output VDC Proportional to Input VDC
Up to 6 Watts
High Efficiency**

VV: For Isolated applications, positive or negative outputs

VV-P: For positive output, with common grounds

VV-N: for negative output, with common grounds

Low Profile 0.500" Height

For Special Voltages or Military Upgrades Consult Factory 800-431-1064

This series of "High Voltage" DC-DC Converters are designed to allow you to vary the input voltage in order to vary the output voltage. The seven standard input voltage ranges will allow you to operate these units as fully isolated and the "P" or "N" designation as positive or negative DC outputs from 6,000 to 10,000 VDC from almost any DC source. These single output, isolated units will operate over the temperature range of -25° C to +70° C with no heat sink or electrical derating required.

FEATURES

TYPICAL CHARACTERISTICS:

- Up to 6 watts @ 70° C ambient
- Encapsulated semiconductors conservatively rated for maximum reliability
- Ultra-miniature size 0.500" height
- 7 input voltages standard
- 105 models standard
- High Efficiency: Up to 85

Test Conditions: 25° C

Operating Temperature Range: -25° C to +70° C

Storage Temperature: -55° C to +125° C

Operating Frequency: 15-25 KHz

Output Temperature Coefficient: 0.02%/°C

OPTIONS AVAILABLE

- Per Mil. Std. 883
- Expanded operating temp. (-40° C to +85° C)
- Stabilization Bake (125° C ambient)
- Temperature Cycle (-55° C to +125° C)
- Hi Temp, burn in

SERIES VV FOR ISOLATED OPERATION

Input and output grounds floating - Isolated from each other

Output voltage can be positive or negative

PICO Part Number	Input Voltage Range (VDC)		* Maximum Load Current (mA) Minimum Load Current 5%	Output Voltage Range (VDC)		Max. Output Power (Watts)	Typical Efficiency @ Full Load at Max VIN (%)	Typical Output Voltage Ripple @ Full Load (%)	Price
	Min	Max		Min VIN	Max VIN				
5VV6	2.0	5	0.833	625	6000	5	79	2	202.23
5VV7	2.0	5	0.714	1100	7000	5	77	2	245.03
5VV8	2.0	5	0.625	1750	8000	5	76	2	287.83
5VV9	2.0	5	0.556	1400	9000	5	75	2	330.63

5VV10	2.0	5	0.500	2150	10,000	5	75	2	373.43
9VV6	3.5	9	1.000	2000	6000	6	82	2	202.23
9VV7	3.5	9	0.857	2250	7000	6	80	2	245.03
9VV8	3.5	9	0.750	2500	8000	6	79	2	287.83
9VV9	3.5	9	0.667	2900	9000	6	77	2	330.63
9VV10	3.5	9	0.600	3100	10,000	6	76	2	373.43
12VV6	4.0	12	1.000	1700	6000	6	83	2	202.23
12VV7	4.0	12	0.857	1900	7000	6	81	2	245.03
12VV8	4.0	12	0.750	2100	8000	6	79	2	287.83
12VV9	4.0	12	0.667	2200	9000	6	77	2	330.63
12VV10	4.0	12	0.600	2100	10,000	6	76	2	373.43
15VV6	5.0	15	1.000	1700	6000	6	80	2	202.23
15VV7	5.0	15	0.857	1900	7000	6	80	2	245.03
15VV8	5.0	15	0.750	2150	8000	6	79	2	287.83
15VV9	5.0	15	0.667	2300	9000	6	77	2	330.63
15VV10	5.0	15	0.600	2200	10,000	6	76	2	373.43
24VV6	7.0	24	1.000	1400	6000	6	81	2	202.23
24VV7	7.0	24	0.857	1600	7000	6	81	2	245.03
24VV8	7.0	24	0.750	1750	8000	6	80	2	287.83
24VV9	7.0	24	0.667	1800	9000	6	78	2	330.63
24VV10	7.0	24	0.600	1500	10,000	6	77	2	373.43
28VV6	8.0	28	1.000	1350	6000	6	82	2	202.23
28VV7	8.0	28	0.857	1500	7000	6	80	2	245.03
28VV8	8.0	28	0.750	1600	8000	6	79	2	287.83
28VV9	8.0	28	0.667	1800	9000	6	78	2	330.63
28VV10	8.0	28	0.600	2200	10,000	6	77	2	373.43
48VV6	15.0	48	1.000	1600	6000	6	80	2	202.23
48VV7	15.0	48	0.857	1700	7000	6	79	2	245.03
48VV8	15.0	48	0.750	1850	8000	6	79	2	287.83
48VV9	15.0	48	0.667	2000	9000	6	78	2	330.63
48VV10	15.0	48	0.600	2200	10,000	6	77	2	373.43

* Maximum load current remains constant throughout input voltage range.

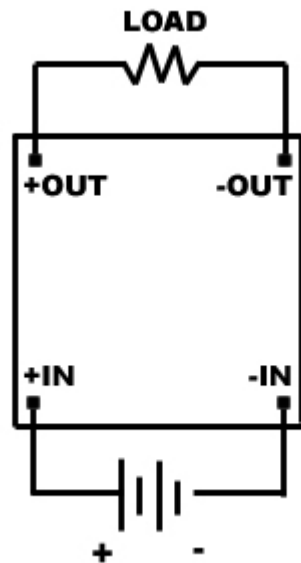
Safety Note: The high voltage power supplies described in this datasheet generate voltages which can be lethal. They should only be installed and used by personnel who have received the appropriate training and who are fully aware of the hazards that exist.

SERIES VV

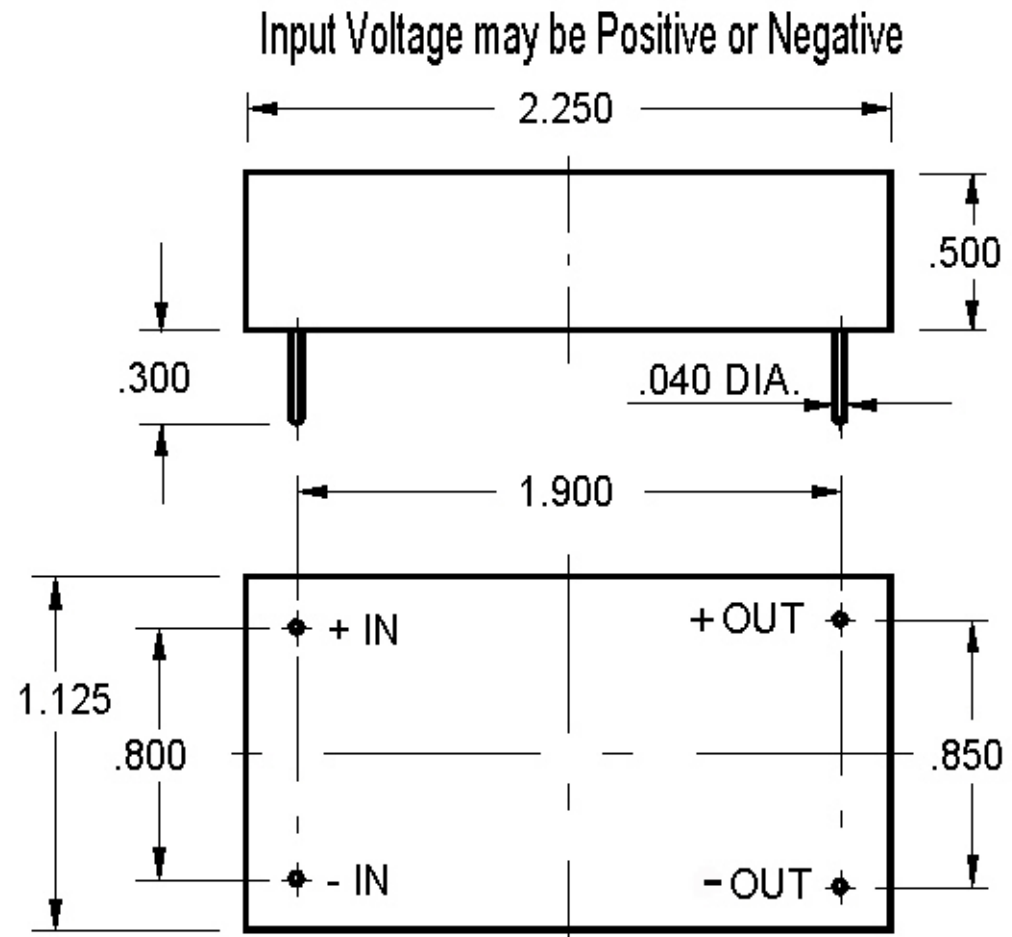
FOR ISOLATED OPERATION

Input and output grounds floating - Isolated from each other

Output voltage can be positive or negative



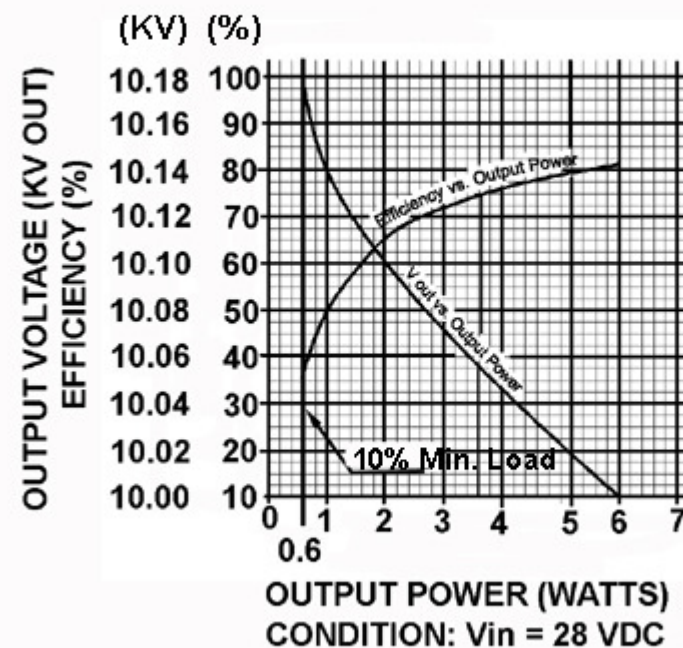
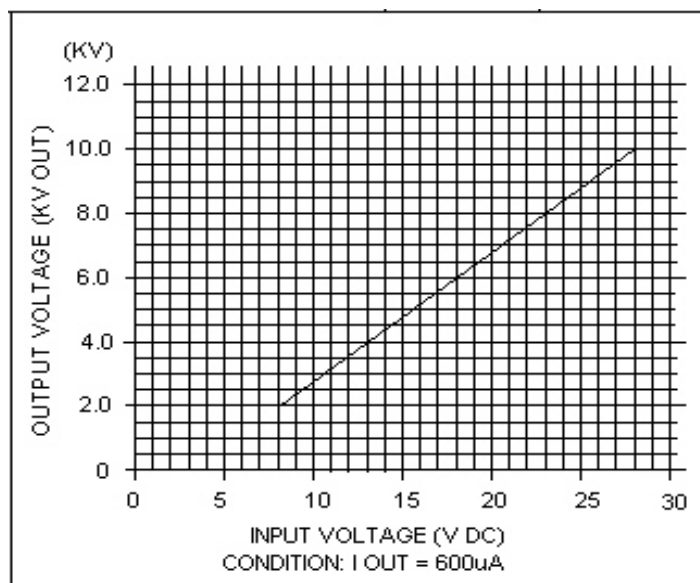
BOTTOM VIEW



BOTTOM VIEW

Measurements are in Inches
Typical Weight: 45 Grams

PICO 28VV10



SERIES VV-P

COMMON GROUND POSITIVE OUTPUT

For use when input and output grounds are connected and a positive output voltage is required

PICO Part Number	Input Voltage Range (VDC)		* Maximum Load Current (mA) Minimum Load Current 5%	Output Voltage Range (VDC)		Max. Output Power (Watts)	Typical Efficiency @ Full Load at Max VIN (%)	Typical Output Voltage Ripple @ Full Load (%)	Price
	Min	Max		Min VIN	Max VIN				
5VV6-P	2.0	5	0.833	625	6000	5	79	2	202.23
5VV7-P	2.0	5	0.714	1100	7000	5	77	2	245.03
5VV8-P	2.0	5	0.625	1750	8000	5	76	2	287.83
5VV9-P	2.0	5	0.556	1400	9000	5	75	2	330.63
5VV10-P	2.0	5	0.500	2150	10,000	5	75	2	373.43
9VV6-P	3.5	9	1.000	2000	6000	6	82	2	202.23
9VV7-P	3.5	9	0.857	2250	7000	6	80	2	245.03
9VV8-P	3.5	9	0.750	2500	8000	6	79	2	287.83
9VV9-P	3.5	9	0.667	2900	9000	6	77	2	330.63
9VV10-P	3.5	9	0.600	3100	10,000	6	76	2	373.43
12VV6-P	4.0	12	1.000	1700	6000	6	83	2	202.23
12VV7-P	4.0	12	0.857	1900	7000	6	81	2	245.03
12VV8-P	4.0	12	0.750	2100	8000	6	79	2	287.83
12VV9-P	4.0	12	0.667	2200	9000	6	77	2	330.63
12VV10-P	4.0	12	0.600	2100	10,000	6	76	2	373.43
15VV6-P	5.0	15	1.000	1700	6000	6	80	2	202.23
15VV7-P	5.0	15	0.857	1900	7000	6	80	2	245.03
15VV8-P	5.0	15	0.750	2150	8000	6	79	2	287.83
15VV9-P	5.0	15	0.667	2300	9000	6	77	2	330.63
15VV10-P	5.0	15	0.600	2200	10,000	6	76	2	373.43
24VV6-P	7.0	24	1.000	1400	6000	6	81	2	202.23
24VV7-P	7.0	24	0.857	1600	7000	6	81	2	245.03
24VV8-P	7.0	24	0.750	1750	8000	6	80	2	287.83
24VV9-P	7.0	24	0.667	1800	9000	6	78	2	330.63
24VV10-P	7.0	24	0.600	1500	10,000	6	77	2	373.43
28VV6-P	8.0	28	1.000	1350	6000	6	82	2	202.23
28VV7-P	8.0	28	0.857	1500	7000	6	80	2	245.03
28VV8-P	8.0	28	0.750	1600	8000	6	79	2	287.83
28VV9-P	8.0	28	0.667	1800	9000	6	78	2	330.63

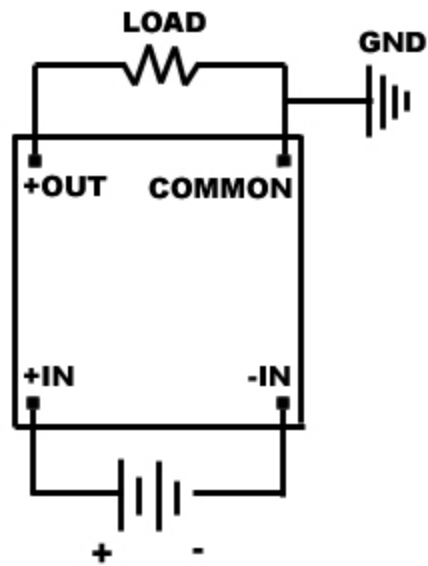
28VV10-P	8.0	28	0.600	2200	10,000	6	77	2	373.43
PICO Part Number	Input Voltage Range (VDC)		* Maximum Load Current (mA)	Output Voltage Range (VDC)		Max. Output Power (Watts)	Typical Efficiency @ Full Load at Max VIN (%)	Typical Output Voltage Ripple @ Full Load (%)	Price
	Min	Max	Minimum Load Current 5%	Min VIN	Max VIN				
48VV6-P	15.0	48	1.000	1600	6000	6	80	2	202.23
48VV7-P	15.0	48	0.857	1700	7000	6	79	2	245.03
48VV8-P	15.0	48	0.750	1850	8000	6	79	2	287.83
48VV9-P	15.0	48	0.667	2000	9000	6	78	2	330.63
48VV10-P	15.0	48	0.600	2200	10,000	6	77	2	373.43
* Maximum load current remains constant throughout input voltage range.									

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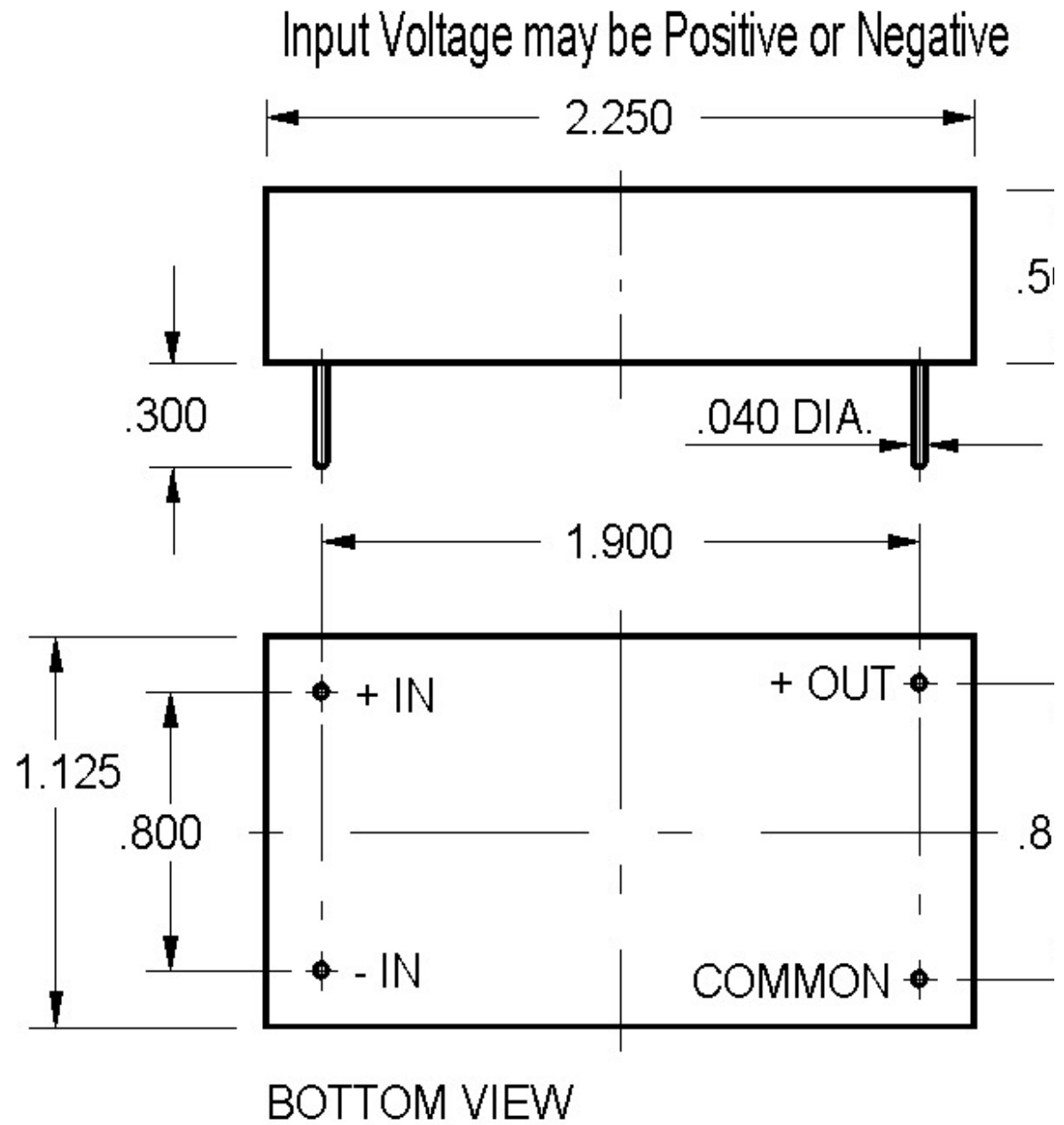
SERIES VV-P

For use when input and output grounds are connected and a positive output voltage is required

For Positive Output Voltage

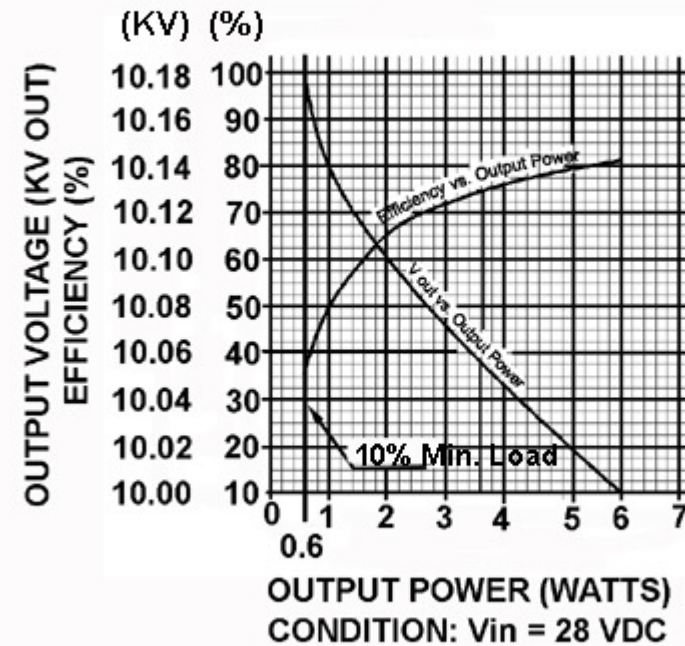
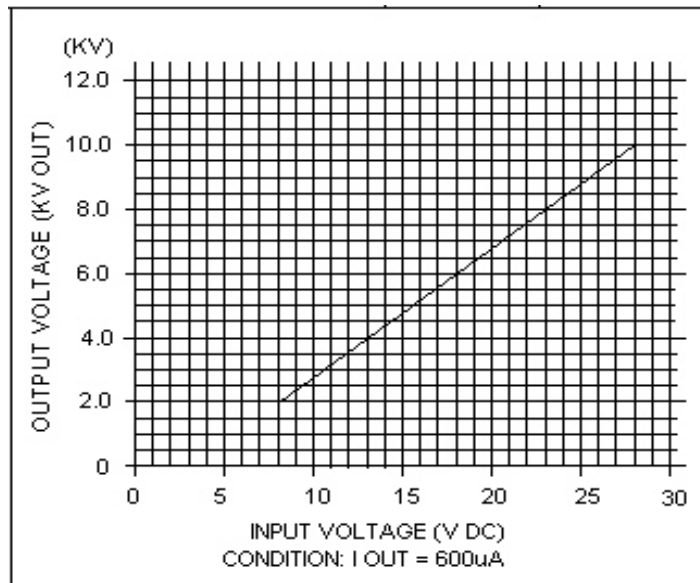


BOTTOM VIEW



Measurements are in Inches
Typical Weight: 45 Grams

PICO 28VV10-P



SERIES VV-N

COMMON GROUND NEGATIVE OUTPUT

For use when input and output grounds are connected and a negative output voltage is required

PICO Part Number	Input Voltage Range (VDC)		* Maximum Load Current (mA) Minimum Load Current 5%	Output Voltage Range (VDC)		Max. Output Power (Watts)	Typical Efficiency @ Full Load at Max VIN (%)	Typical Output Voltage Ripple @ Full Load (%)	Price
	Min	Max		Min VIN	Max VIN				
5VV6-N	2.0	5	0.833	-625	-6000	5	79	2	202.23
5VV7-N	2.0	5	0.714	-1100	-7000	5	77	2	245.03
5VV8-N	2.0	5	0.625	-1750	-8000	5	76	2	287.83
5VV9-N	2.0	5	0.556	-1400	-9000	5	75	2	330.63
5VV10-N	2.0	5	0.500	-2150	-10,000	5	75	2	373.43
9VV6-N	3.5	9	1.000	-2000	-6000	6	82	2	202.23
9VV7-N	3.5	9	0.857	-2250	-7000	6	80	2	245.03
9VV8-N	3.5	9	0.750	-2500	-8000	6	79	2	287.83
9VV9-N	3.5	9	0.667	-2900	-9000	6	77	2	330.63
9VV10-N	3.5	9	0.600	-3100	-10,000	6	76	2	373.43
12VV6-N	4.0	12	1.000	-1700	-6000	6	83	2	202.23
12VV7-N	4.0	12	0.857	-1900	-7000	6	81	2	245.03
12VV8-N	4.0	12	0.750	-2100	-8000	6	79	2	287.83
12VV9-N	4.0	12	0.667	-2200	-9000	6	77	2	330.63
12VV10-N	4.0	12	0.600	-2100	-10,000	6	76	2	373.43
PICO Part Number	Input Voltage Range (VDC)		* Maximum Load Current (mA) Minimum Load Current 5%	Output Voltage Range (VDC)		Max. Output Power (Watts)	Typical Efficiency @ Full Load at Max VIN (%)	Typical Output Voltage Ripple @ Full Load (%)	Price
	Min	Max		Min VIN	Max VIN				
15VV6-N	5.0	15	1.000	-1700	-6000	6	80	2	202.23
15VV7-N	5.0	15	0.857	-1900	-7000	6	80	2	245.03
15VV8-N	5.0	15	0.750	-2150	-8000	6	79	2	287.83
15VV9-N	5.0	15	0.667	-2300	-9000	6	77	2	330.63

15VV10-N	5.0	15	0.600	-2200	-10,000	6	76	2	373.43
24VV6-N	7.0	24	1.000	-1400	-6000	6	81	2	202.23
24VV7-N	7.0	24	0.857	-1600	-7000	6	81	2	245.03
24VV8-N	7.0	24	0.750	-1750	-8000	6	80	2	287.83
24VV9-N	7.0	24	0.667	-1800	-9000	6	78	2	330.63
24VV10-N	7.0	24	0.600	-1500	-10,000	6	77	2	373.43
28VV6-N	8.0	28	1.000	-1350	-6000	6	82	2	202.23
28VV7-N	8.0	28	0.857	-1500	-7000	6	80	2	245.03
28VV8-N	8.0	28	0.750	-1600	-8000	6	79	2	287.83
28VV9-N	8.0	28	0.667	-1800	-9000	6	78	2	330.63
28VV10-N	8.0	28	0.600	-2200	-10,000	6	77	2	373.43
48VV6-N	15.0	48	1.000	-1600	-6000	6	80	2	202.23
48VV7-N	15.0	48	0.857	-1700	-7000	6	79	2	245.03
48VV8-N	15.0	48	0.750	-1850	-8000	6	79	2	287.83
48VV9-N	15.0	48	0.667	-2000	-9000	6	78	2	330.63
48VV10-N	15.0	48	0.600	-2200	-10,000	6	77	2	373.43

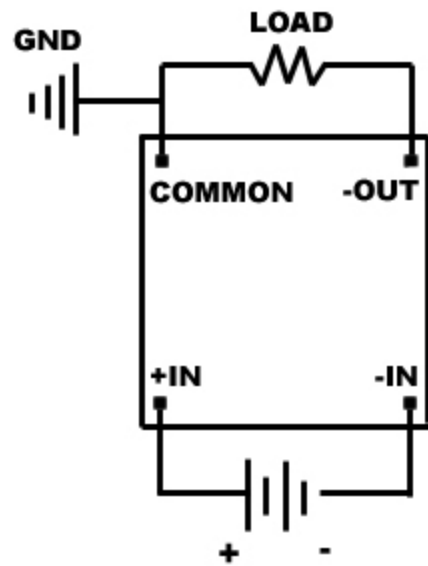
* Maximum load current remains constant throughout input voltage range.

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SERIES VV-N

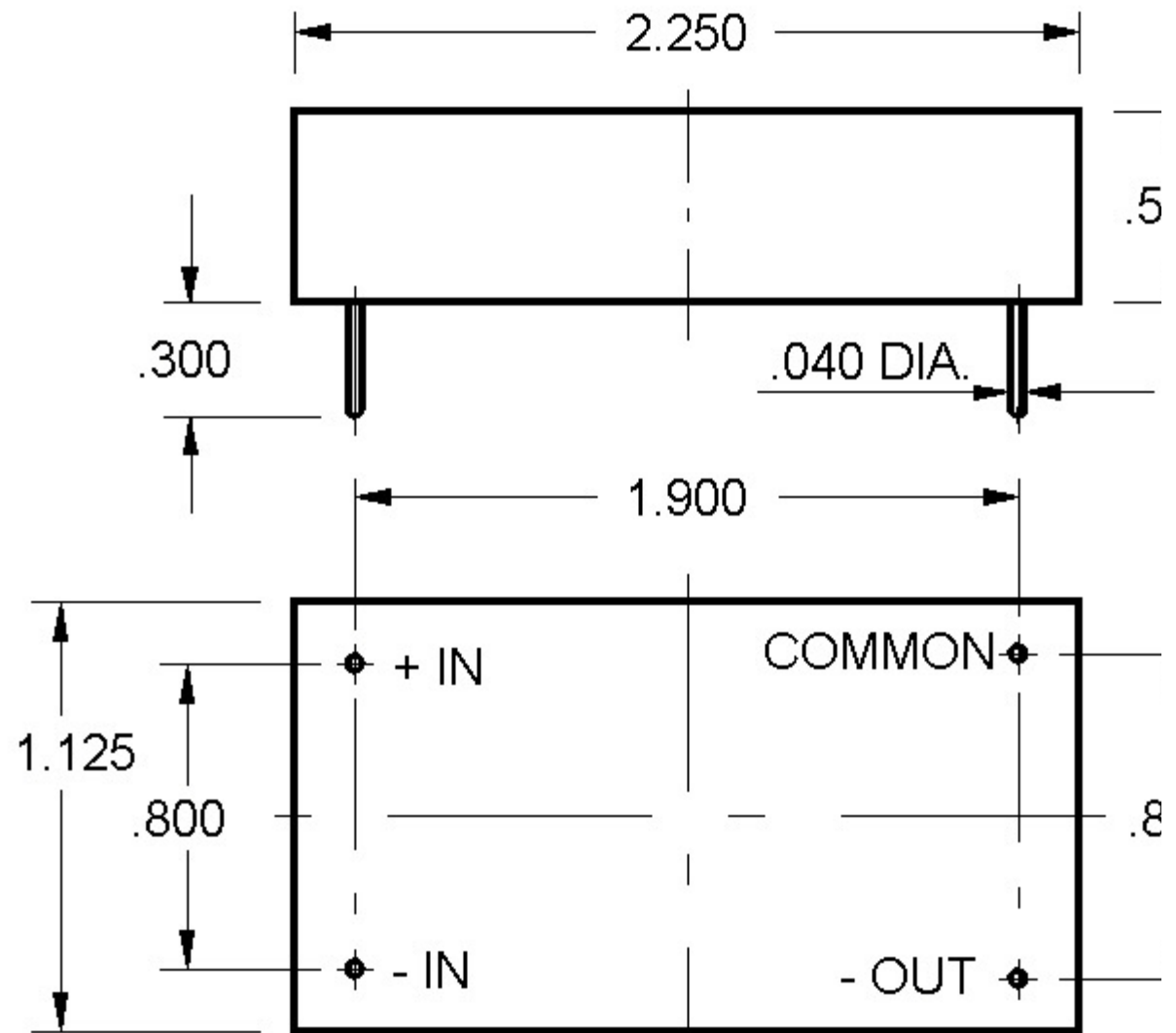
For use when input and output grounds are connected and a negative output voltage required

For Negative Output Voltage



BOTTOM VIEW

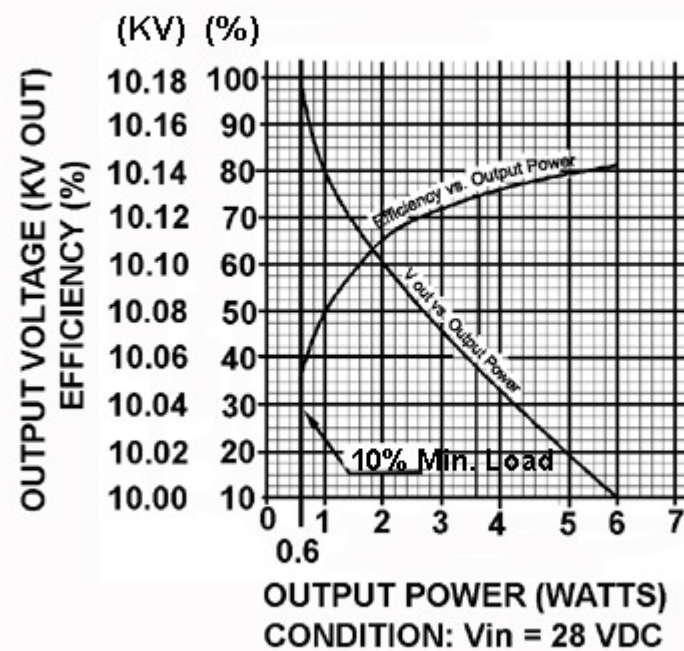
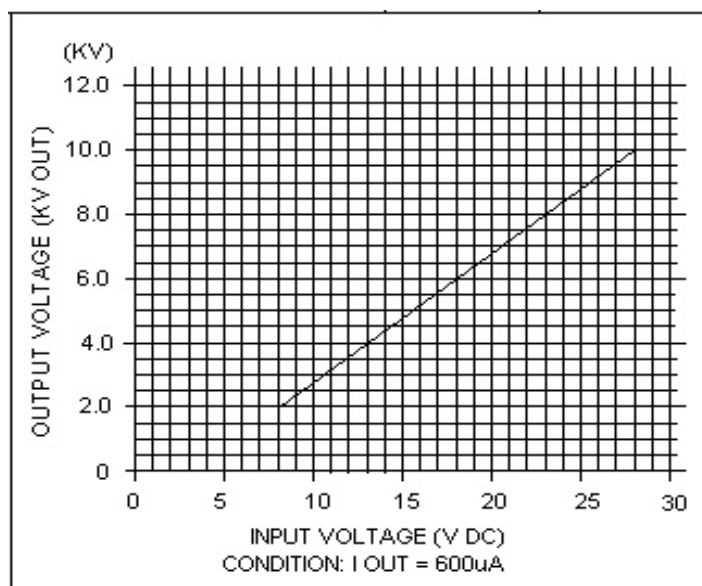
Input Voltage may be Positive or Negative



BOTTOM VIEW

Measurements are in Inches
Typical Weight: 45 Grams

PICO 28VV10-N



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

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803-1837

Tel: 914-738-1400 or Fax: 914-738-8225

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