

SERIES AV

Hi Voltage

Hi Reliability

Ultra-Miniature

Isolated

DC-DC

Converters

For Surface Mount
versions of this series
see page 60

.400 ht. up to 500 VDC output

T-57-11

OPTIONS AVAILABLE

- Expanded operating temp (-55°C to +85°C)
- Stabilization Bake (125°C ambient)
- Temperature Cycle (-55°C to +125°C)
- Hi Temp, burn in

- 1.25 watt output at 70° ambient
- Ultra-miniature size 0.400" height, 4.0 grams weight, 0.1 cubic inches volume
- 4 input voltage ranges 5, 12, 24 and 28 VDC
- 100 megohm @ 1000 VDC input/output isolation
- MIL-STD 883 options available
- No heat sink or electrical derating required

This series of unregulated high voltage DC-DC converters are produced in an ultra-miniature encapsulated package. 36 different models are available. These single output isolated units will operate over the temperature range of -25° to +70°C with no heat sink or electrical derating. For military applications an operating temperature range -55°C to +85°C is available. An optional environmental screening package per MIL-STD-883 is also available.

TYPICAL CHARACTERISTICS:

Test conditions: 25°C ambient and input voltage at nominal value unless otherwise specified.

LINE REGULATION: OUTPUT IS DIRECTLY PROPORTIONAL TO THE INPUT

Input voltage range: $\pm 10\%$ all models

Output voltage tolerance at full load-minimal input:

See chart for specific model.
Please keep loaded to minimum of 10% at all times.

Converter frequency: 20 - 40 KHz

Output temperature coefficient:
0.02%/°C for all models

Operating temperature: -25°C to +70°C ambient.
No heat sink.

Storage temperature: -55°C to +125°C

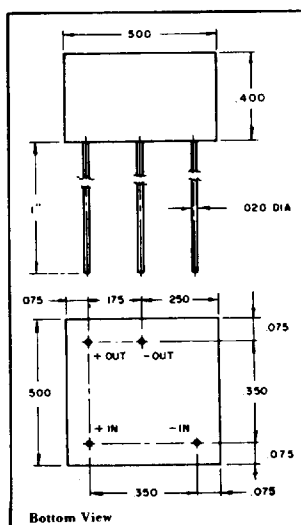
Isolation: 100 megohms min. @ 1000V DC

SERIES AV - SINGLE OUTPUT

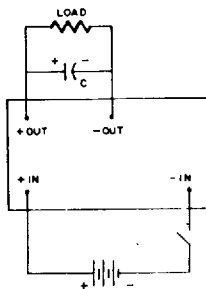
PICO PART NUMBER	INPUT VOLTAGE (V DC)	OUTPUT VOLTAGE (V DC)	MAX. LOAD CURRENT (mA)	MAX. OUTPUT POWER (watts)	EFF. @ FULL LOAD TYPICAL (%)	INPUT CURRENT FULL LOAD TYPICAL (mA)	OUTPUT VOLTAGE RIPPLE @ FULL LOAD (Vp-p max)	FULL LOAD OUTPUT VOLTAGE TOLERANCE (V DC)	PRICE 1-24
5AV100	5	100	12.50	1.25	78	321	0.90	± 3.0	80.12
5AV150	5	150	8.30	1.25	76	329	0.90	± 3.0	80.12
5AV200	5	200	6.25	1.25	75	333	0.90	± 3.0	80.12
5AV250	5	250	5.00	1.25	75	333	0.90	± 3.0	80.12
5AV300	5	300	4.16	1.25	70	357	1.20	± 5.0	99.00
5AV350	5	350	3.57	1.25	70	357	1.20	± 5.0	99.00
5AV400	5	400	3.12	1.25	70	357	1.20	± 5.0	99.00
5AV450	5	450	2.77	1.25	70	357	1.50	± 5.0	99.00
5AV500	5	500	2.50	1.25	70	357	1.50	± 5.0	99.00
12AV100	12	100	12.50	1.25	80	130	0.90	± 3.0	80.12
12AV150	12	150	8.30	1.25	79	132	0.90	± 3.0	80.12
12AV200	12	200	6.25	1.25	78	134	0.90	± 3.0	80.12
12AV250	12	250	5.00	1.25	75	139	0.90	± 3.0	80.12
12AV300	12	300	4.16	1.25	75	139	1.20	± 5.0	99.00
12AV350	12	350	3.57	1.25	75	139	1.20	± 5.0	99.00
12AV400	12	400	3.12	1.25	75	139	1.20	± 5.0	99.00
12AV450	12	450	2.77	1.25	75	139	1.50	± 5.0	99.00
12AV500	12	500	2.50	1.25	75	139	1.50	± 5.0	99.00
24AV100	24	100	12.50	1.25	76	69	0.90	± 3.0	80.12
24AV150	24	150	8.30	1.25	73	71	0.90	± 3.0	80.12
24AV200	24	200	6.25	1.25	73	71	0.90	± 3.0	80.12
24AV250	24	250	5.00	1.25	70	74	0.90	± 3.0	80.12
24AV300	24	300	4.16	1.25	73	71	1.20	± 5.0	99.00
24AV350	24	350	3.57	1.25	73	71	1.20	± 5.0	99.00
24AV400	24	400	3.12	1.25	73	71	1.20	± 5.0	99.00
24AV450	24	450	2.77	1.25	73	71	1.50	± 5.0	99.00
24AV500	24	500	2.50	1.25	73	71	1.50	± 5.0	99.00
28AV100	28	100	12.50	1.25	75	60	0.90	± 3.0	80.12
28AV150	28	150	8.30	1.25	76	59	0.90	± 3.0	80.12
28AV200	28	200	6.25	1.25	75	60	0.90	± 3.0	80.12
28AV250	28	250	5.00	1.25	70	64	0.90	± 3.0	80.12
28AV300	28	300	4.16	1.25	73	61	1.20	± 5.0	99.00
28AV350	28	350	3.57	1.25	73	61	1.20	± 5.0	99.00
28AV400	28	400	3.12	1.25	73	61	1.20	± 5.0	99.00
28AV450	28	450	2.77	1.25	73	61	1.50	± 5.0	99.00
28AV500	28	500	2.50	1.25	73	61	1.50	± 5.0	99.00

*Measured using 0.1 μ F, 1000 volt DC capacitor which is required across the output and maintain at least 10% of load at all times to prevent voltage surge.

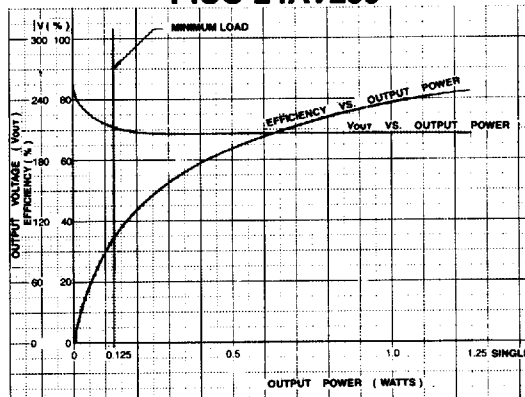
Ordering Instructions: No minimum. Net 30 days F.O.B. Mt. Vernon, New York.



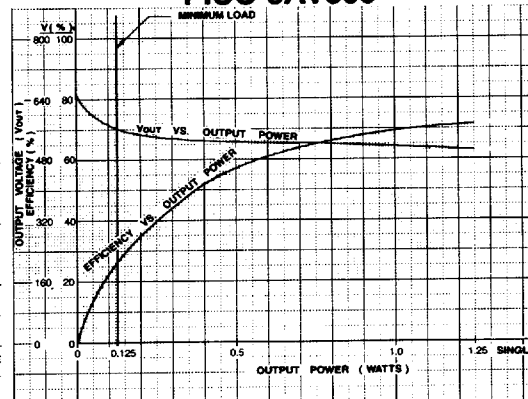
Typical Weight: 4 Grams



PICO 24AV200



PICO 5AV500



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

PICO Electronics, Inc.

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.500 ht. up to 1000 VDC output**OPTIONS AVAILABLE**

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

**For Surface Mount versions
of this series see page 61**

- 1.25 watt output at 70° ambient
- Ultra-miniature size 0.500" height, 5.0 grams weight, .125 cubic inches volume
- 4 input voltage ranges 5, 12, 24 and 28 VDC
- 100 megohm @ 1500 VDC input/output isolation
- MIL-STD 883 options available
- No heat sink or electrical derating required

This series of unregulated high voltage DC-DC converters are produced in an ultra-miniature encapsulated package. 20 different models are available. These single output isolated units will operate over the temperature range of -25° to +70°C with no heat sink or electrical derating. For military applications an operating temperature range -55°C to +85°C is available. An optional environmental screening package per MIL-STD-883 is also available.

TYPICAL CHARACTERISTICS:

Test conditions: 25°C ambient and input voltage at nominal value unless otherwise specified.

LINE REGULATION: OUTPUT IS DIRECTLY PROPORTIONAL TO THE INPUT

Input voltage range: ±10% all models

Output voltage tolerance at full load—nominal input:
See chart for specific model.
Please keep loaded to minimum of 10% at all times.

Converter frequency: 20 – 40 KHz

Output temperature coefficient:
0.02%/°C for all models

Operating temperature: -25°C to +70°C ambient.
No heat sink.

Storage temperature: -55°C to +125°C

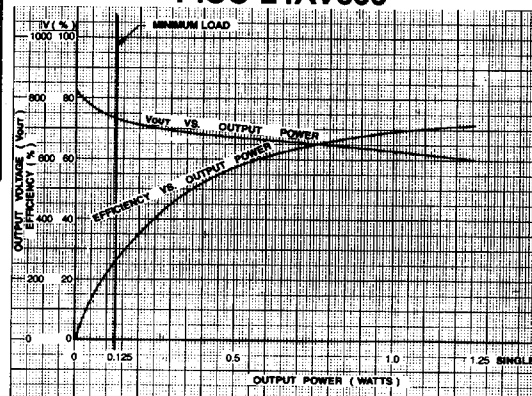
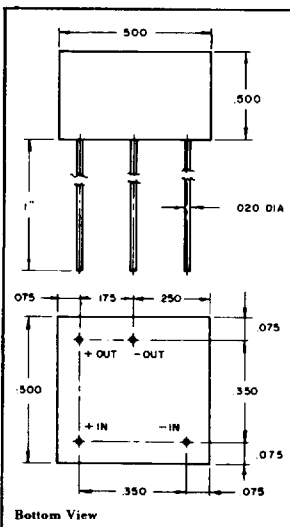
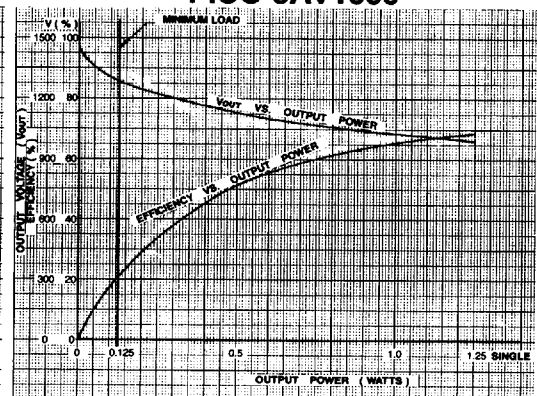
Isolation: 100 megohms min. @ 1500V DC

SERIES AV - SINGLE OUTPUT

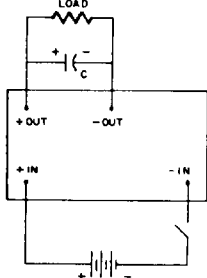
PICO PART NUMBER	INPUT VOLTAGE (V DC)	OUTPUT VOLTAGE (V DC)	MAX. LOAD CURRENT (mA)	MAX. OUTPUT POWER (watts)	EFF. @ FULL LOAD TYPICAL (%)	INPUT CURRENT FULL LOAD TYPICAL (mA)	OUTPUT VOLTAGE RIPPLE @ FULL LOAD (Vp-p max)	FULL LOAD OUTPUT VOLTAGE TOLERANCE (V DC)	PRICE 1-24
5AV600	5	600	2.08	1.25	70	357	3.0	±10V	120.00
5AV700	5	700	1.79	1.25	70	357	3.0	±15V	120.00
5AV800	5	800	1.56	1.25	70	357	3.0	±15V	120.00
5AV900	5	900	1.39	1.25	70	357	3.0	±20V	120.00
5AV1000	5	1000	1.25	1.25	70	357	3.0	±20V	120.00
12AV600	12	600	2.08	1.25	70	149	3.0	±10V	120.00
12AV700	12	700	1.79	1.25	70	149	3.0	±15V	120.00
12AV800	12	800	1.56	1.25	70	149	3.0	±15V	120.00
12AV900	12	900	1.39	1.25	70	149	3.0	±20V	120.00
12AV1000	12	1000	1.25	1.25	70	149	3.0	±20V	120.00
24AV600	24	600	2.08	1.25	70	74	3.0	±10V	120.00
24AV700	24	700	1.79	1.25	70	74	3.0	±15V	120.00
24AV800	24	800	1.56	1.25	70	74	3.0	±15V	120.00
24AV900	24	900	1.39	1.25	70	74	3.0	±20V	120.00
24AV1000	24	1000	1.25	1.25	70	74	3.0	±20V	120.00
28AV600	28	600	2.08	1.25	70	64	3.0	±10V	120.00
28AV700	28	700	1.79	1.25	70	64	3.0	±15V	120.00
28AV800	28	800	1.56	1.25	70	64	3.0	±15V	120.00
28AV900	28	900	1.39	1.25	70	64	3.0	±20V	120.00
28AV1000	28	1000	1.25	1.25	70	64	3.0	±20V	120.00

*Measured using 0.01μf, 3000 Volt DC capacitor which is required across the output and maintain at least 10% of load at all times to prevent voltage surge.

Ordering Instructions: No minimum. Net 30 days F.O.B. Mt. Vernon, New York.

PICO 24AV600**PICO 5AV1000**

Bottom View
Typical Weight: 5 Grams



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