

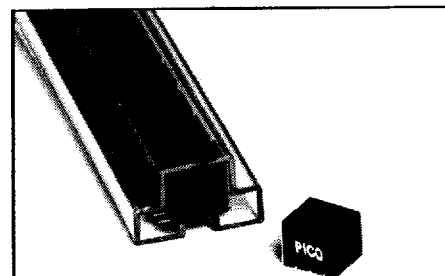
SERIES SMV**NEW SURFACE MOUNT DESIGN**

Hi Voltage
Hi Reliability
Ultra-Miniature
Isolated
DC-DC Converters

**.440" ht. up to
500V DC 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, full power burn in (100% power, 125°C case temp)

**SURFACE MOUNT**

PICO surface mount units utilize materials and methods to withstand extreme temperature (220°C) of vapor phase, I.R., and other reflow procedures without degradation of electrical or mechanical characteristics.

**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-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

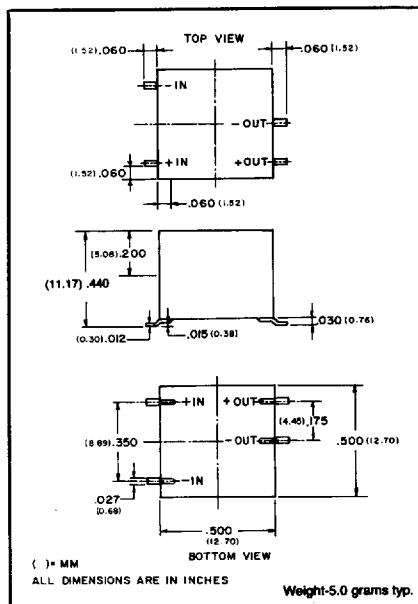
Isolation: 100 megohms min. @ 1000V DC

SERIES SMV—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
5SMV100	5	100	12.50	1.25	78	321	0.90	± 3.0	80.12
5SMV150	5	150	8.30	1.25	75	329	0.90	± 3.0	80.12
5SMV200	5	200	6.25	1.25	75	333	0.90	± 3.0	80.12
5SMV250	5	250	5.00	1.25	75	333	0.90	± 3.0	80.12
5SMV300	5	300	4.16	1.25	70	357	1.20	± 5.0	99.00
5SMV350	5	350	3.57	1.25	70	357	1.20	± 5.0	99.00
5SMV400	5	400	3.12	1.25	70	357	1.20	± 5.0	99.00
5SMV450	5	450	2.77	1.25	70	357	1.50	± 5.0	99.00
5SMV500	5	500	2.50	1.25	70	357	1.50	± 5.0	99.00
12SMV100	12	100	12.50	1.25	80	130	0.90	± 3.0	80.12
12SMV150	12	150	8.30	1.25	78	132	0.90	± 3.0	80.12
12SMV200	12	200	6.25	1.25	75	134	0.90	± 3.0	80.12
12SMV250	12	250	5.00	1.25	75	139	0.90	± 3.0	80.12
12SMV300	12	300	4.16	1.25	75	139	1.20	± 5.0	99.00
12SMV350	12	350	3.57	1.25	75	139	1.20	± 5.0	99.00
12SMV400	12	400	3.12	1.25	75	139	1.20	± 5.0	99.00
12SMV450	12	450	2.77	1.25	75	139	1.50	± 5.0	99.00
12SMV500	12	500	2.50	1.25	75	139	1.50	± 5.0	99.00
24SMV100	24	100	12.50	1.25	76	69	0.90	± 3.0	80.12
24SMV150	24	150	8.30	1.25	73	71	0.90	± 3.0	80.12
24SMV200	24	200	6.25	1.25	73	71	0.90	± 3.0	80.12
24SMV250	24	250	5.00	1.25	70	74	0.90	± 3.0	80.12
24SMV300	24	300	4.16	1.25	73	71	1.20	± 5.0	99.00
24SMV350	24	350	3.57	1.25	73	71	1.20	± 5.0	99.00
24SMV400	24	400	3.12	1.25	73	71	1.20	± 5.0	99.00
24SMV450	24	450	2.77	1.25	73	71	1.50	± 5.0	99.00
24SMV500	24	500	2.50	1.25	73	71	1.50	± 5.0	99.00
28SMV100	28	100	12.50	1.25	75	60	0.90	± 3.0	80.12
28SMV150	28	150	8.30	1.25	76	59	0.90	± 3.0	80.12
28SMV200	28	200	6.25	1.25	75	60	0.90	± 3.0	80.12
28SMV250	28	250	5.00	1.25	70	64	0.90	± 3.0	80.12
28SMV300	28	300	4.16	1.25	73	61	1.20	± 5.0	99.00
28SMV350	28	350	3.57	1.25	73	61	1.20	± 5.0	99.00
28SMV400	28	400	3.12	1.25	73	61	1.20	± 5.0	99.00
28SMV450	28	450	2.77	1.25	73	61	1.50	± 5.0	99.00
28SMV500	28	500	2.50	1.25	73	61	1.50	± 5.0	99.00

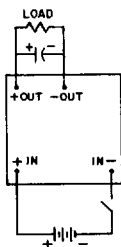
*Measured using 0.1 μ F, 1000 volt DC capacitor which is required across the output and maintain at least 10% of load at all times to prevent voltage surge.

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

**FEATURES:**

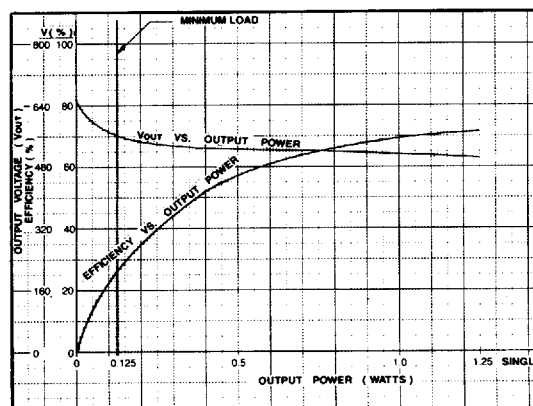
- New surface mount construction
- 1.25 watt output at 70° ambient
- Ultra-miniature size .440" height, 5.0 grams weight, 0.1 cubic inches volume
- 4 input voltage ranges 5, 12, 24 and 28 VDC
- 100 megohm @ 1000 VDC input/output isolation
- MIL-STD 883 options available
- No heat sink or electrical derating required

This series of unregulated high voltage DC-DC converters are produced in an ultra-miniature encapsulated package, now compatible with your surface mount assembly. 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.



PICO
Electronics, Inc.

453 North Mac Questen Pkwy.
 Mt. Vernon, New York 10552

PICO 5SMV500

SERIES SMV
Hi Voltage
Hi Reliability
Ultra-Miniature
Isolated
DC-DC Converters
NEW SURFACE MOUNT DESIGN
**.540" ht. up to
1000V DC 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, full power burn in
 (100% power, 125°C case temp)
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:

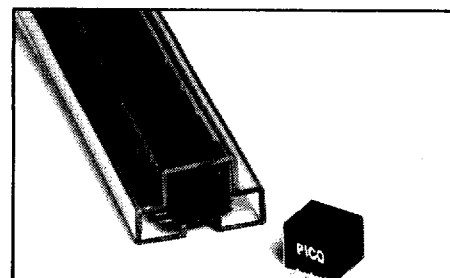
 See chart for specific model.
 Please keep loaded to minimum
of 10% at all times.

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
**SURFACE MOUNT**

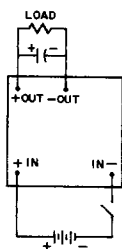
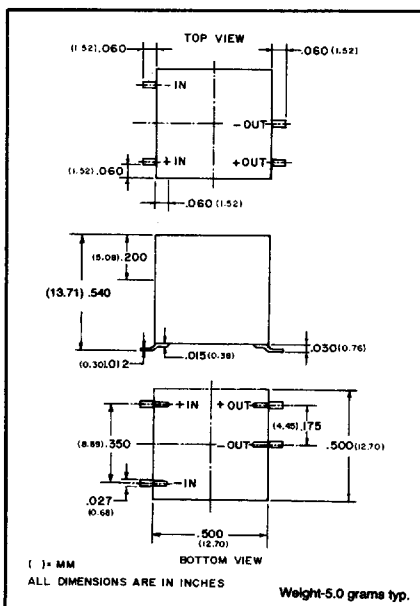
PICO surface mount units utilize materials and methods to withstand extreme temperature (220°C) of vapor phase, I.R., and other reflow procedures without degradation of electrical or mechanical characteristics.

SERIES SMV—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
5SMV600	5	600	2.08	1.25	70	357	3.0	±10V	120.00
5SMV700	5	700	1.79	1.25	70	357	3.0	±15V	120.00
5SMV800	5	800	1.56	1.25	70	357	3.0	±15V	120.00
5SMV900	5	900	1.39	1.25	70	357	3.0	±20V	120.00
5SMV1000	5	1000	1.25	1.25	70	357	3.0	±20V	120.00
12SMV600	12	600	2.08	1.25	70	149	3.0	±10V	120.00
12SMV700	12	700	1.79	1.25	70	149	3.0	±15V	120.00
12SMV800	12	800	1.56	1.25	70	149	3.0	±15V	120.00
12SMV900	12	900	1.39	1.25	70	149	3.0	±20V	120.00
12SMV1000	12	1000	1.25	1.25	70	149	3.0	±20V	120.00
24SMV600	24	600	2.08	1.25	70	74	3.0	±10V	120.00
24SMV700	24	700	1.79	1.25	70	74	3.0	±15V	120.00
24SMV800	24	800	1.56	1.25	70	74	3.0	±15V	120.00
24SMV900	24	900	1.39	1.25	70	74	3.0	±20V	120.00
24SMV1000	24	1000	1.25	1.25	70	74	3.0	±20V	120.00
28SMV600	28	600	2.08	1.25	70	64	3.0	±10V	120.00
28SMV700	28	700	1.79	1.25	70	64	3.0	±15V	120.00
28SMV800	28	800	1.56	1.25	70	64	3.0	±15V	120.00
28SMV900	28	900	1.39	1.25	70	64	3.0	±20V	120.00
28SMV1000	28	1000	1.25	1.25	70	64	3.0	±20V	120.00

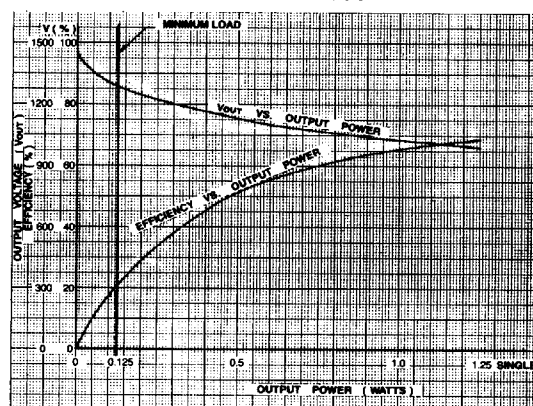
*Measured using 0.01μf, 3000 Volt DC capacitor which is required across the output and maintain at least 10% of load at all times to prevent voltage surge.

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

**FEATURES:**

- New surface mount construction
- 1.25 watt output at 70° ambient
- Ultra-miniature size .540" 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, now compatible with your surface mount assembly. 20 different models are available. These single output isolated units will operate over the temperature range of -25° to +70° 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.

PICO 5SMV1000
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 Mt. Vernon, New York 10552

For immediate engineering assistance or to place an order—Call Toll Free 800-431-1064 • 914-699-5514 • FAX 914-699-5565