

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: ±10% all models

Output voltage tolerance at full load-nominal input:

See chart for specific model.
Please load 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

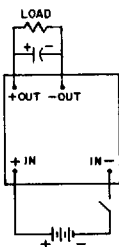
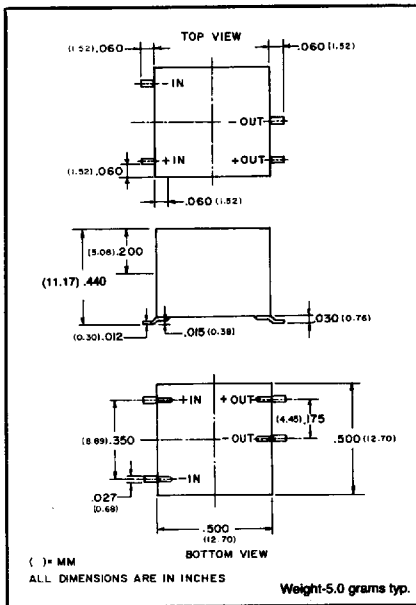
Isolation: 100 megohms min. @ 1000V DC



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	76	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	75	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	79	132	0.90	±3.0	80.12
12SMV200	12	200	6.25	1.25	78	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 0.1µf, 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.

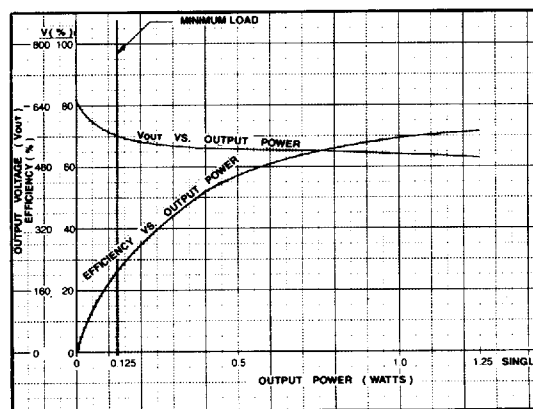


FEATURES:

- 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 5SMV500



**PICO
Electronics, Inc.**

453 North Mac Questen Pkwy.
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

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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

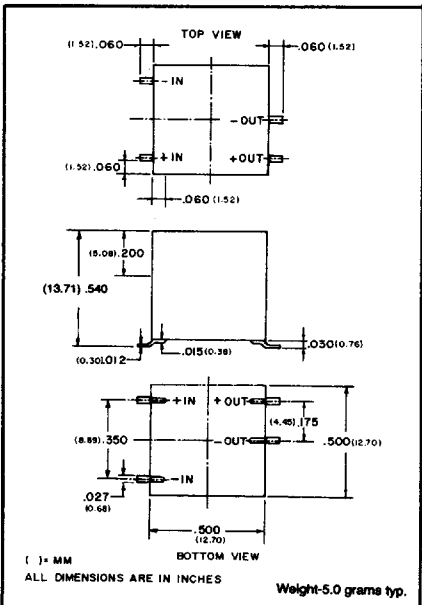
Operating temperature: -25°C to +70°C ambient No heat sink.

Storage temperature: -55°C to +125°C

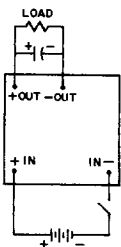
Isolation: 100 megohms min. @ 1500V DC

SERIES SMV—SINGLE OUTPUT

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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.

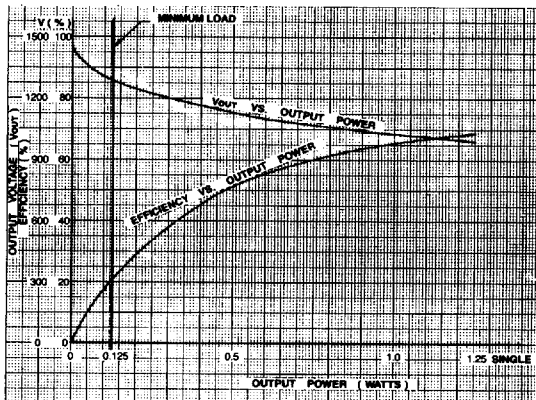


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PICO 5SMV1000



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