

SERIES AV/SMV SURFACE MOUNT and PLUG-IN

Hi Voltage 600 to 1000 VDC
Hi Reliability
Ultra-Miniature - Low Profile
Isolated DC-DC Converters

This series of unregulated high voltage DC-DC converters are produced in an ultra-miniature encapsulated package. 40 different models are available. These single output isolated units will operate over the temperature range of -25° C 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.

FEATURES

- 1.25 watt output at 70° ambient
- Ultra-miniature size 0.500" height, 5.0 grams weight, 0.125 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

OPTIONS AVAILABLE

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

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-nom. Input:** ±3%
Please keep loaded to minimum of 10% at all times.
Note: For tighter output voltage tolerances, please consult factory.
- **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 is required.
- **Storage temperature:** -55° C to +125° C
- **Isolation:** 100 Megohms @ 1500 VDC

SERIES AV/SMV - SINGLE OUTPUT

PICO Plug-in Part Number	PICO Surface Mount Part Number	Input Volt. (V DC)	Output Volt. (V DC)	Max. Load Current (mA)	Max. Output Power (watts)	Eff. @ Full Load Typical (%)	Input Current Full Load Typical (mA)	Output Volt. Ripple @ Full Load (Vp-p max)	Full** Load Output Volt. Tolerance (%)	Price (US \$)
5AV600	5SMV600	5	600	2.08	1.25	70	357	3.0	±3	137.39
5AV700	5SMV700	5	700	1.79	1.25	70	357	3.0	±3	137.39
5AV800	5SMV800	5	800	1.56	1.25	70	357	3.0	±3	137.39
5AV900	5SMV900	5	900	1.39	1.25	70	357	3.0	±3	137.39
5AV1000	5SMV1000	5	1000	1.25	1.25	70	357	3.0	±3	137.39
12AV600	12SMV600	12	600	2.08	1.25	70	149	3.0	±3	137.39
12AV700	12SMV700	12	700	1.79	1.25	70	149	3.0	±3	137.39
12AV800	12SMV800	12	800	1.56	1.25	70	149	3.0	±3	137.39
12AV900	12SMV900	12	900	1.39	1.25	70	149	3.0	±3	137.39
12AV1000	12SMV1000	12	1000	1.25	1.25	70	149	3.0	±3	137.39
15AV600	15SMV600	15	600	2.08	1.25	70	120	3.0	±3	137.39
15AV700	15SMV700	15	700	1.79	1.25	70	120	3.0	±3	137.39
15AV800	15SMV800	15	800	1.56	1.25	70	120	3.0	±3	137.39
15AV900	15SMV900	15	900	1.39	1.25	70	120	3.0	±3	137.39
15AV1000	15SMV1000	15	1000	1.25	1.25	70	120	3.0	±3	137.39

24AV600	5SMV600	24	600	2.08	1.25	70	74	3.0	±3	137.39
24AV700	24SMV700	24	700	1.79	1.25	70	74	3.0	±3	137.39
24AV800	24SMV800	24	800	1.56	1.25	70	74	3.0	±3	137.39
24AV900	24SMV900	24	900	1.39	1.25	70	74	3.0	±3	137.39
24AV1000	24SMV1000	24	1000	1.25	1.25	70	74	3.0	±3	137.39
28AV600	28SMV600	28	600	2.08	1.25	70	64	3.0	±3	137.39
28AV700	28SMV700	28	700	1.79	1.25	70	64	3.0	±3	137.39
28AV800	28SMV800	28	800	1.56	1.25	70	64	3.0	±3	137.39
28AV900	28SMV900	28	900	1.39	1.25	70	64	3.0	±3	137.39
28AV1000	28SMV1000	28	1000	1.25	1.25	70	64	3.0	±3	137.39

* 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.

**For tighter tolerances consult factory.

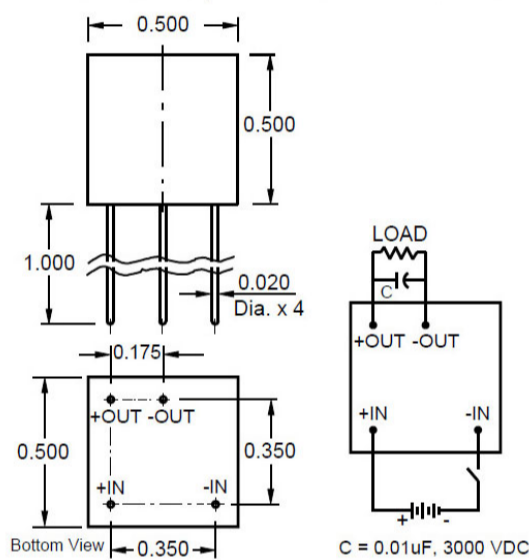
Ordering Instructions: No minimum. Net 30 days F.O.B. Pelham, New York

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 AV/SMV Single Output

AV Single

SERIES AV: 600 TO 1,000 VDC SINGLE OUTPUT PLUG-IN



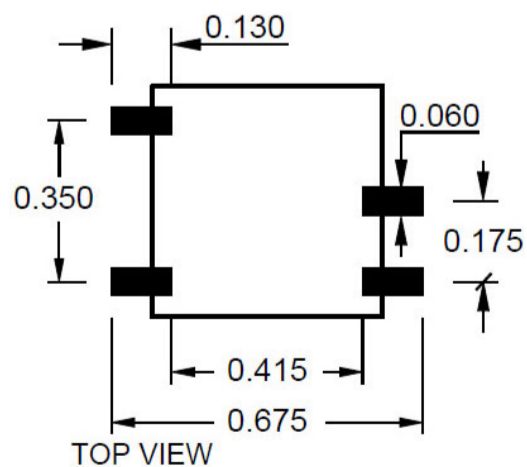
Notes: All dimensions are in inches
White Dot on top of the unit indicates +Input
Typical Weight: 5 Grams

[Larger Size Drawing \[1\]](#)

SMV Single

RECOMMENDED LAND PATTERN

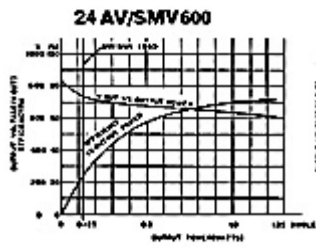
SERIES SMV: 600 TO 1,000 VDC SINGLE OUTPUT



[Larger Size Drawing \[2\]](#)

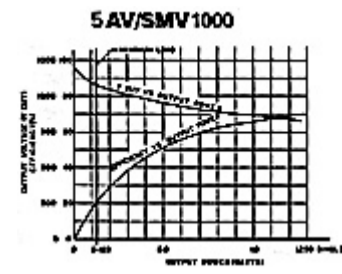
White dot on top indicates + input

24 AV/SMV 600



[Larger Size Graph](#) [3]

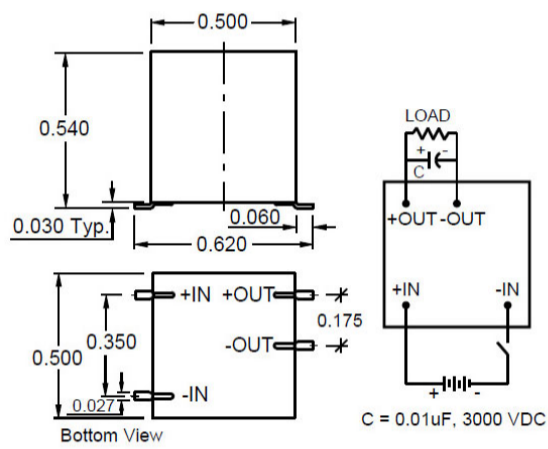
5 AV/SMV 1000



[Larger Size Graph](#) [4]

RECOMMENDED LAND PATTERN DIMENSIONS SERIES SMV

SERIES SMV: 600 TO 1,000 VDC SINGLE OUTPUT SURFACE MOUNT



Notes: White dot on top of unit indicates +Input
All dimensions are in inches
Typical Weight: 5 Grams

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