

SERIES E

Hi Reliability

Miniature

Isolated

DC-DC

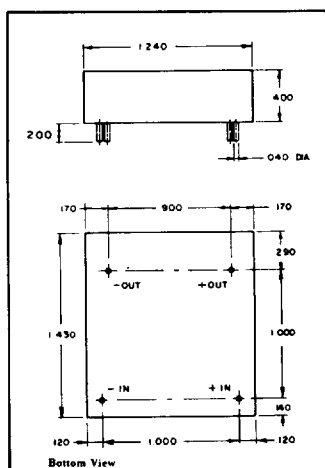
Converters

Up to 7 Watts

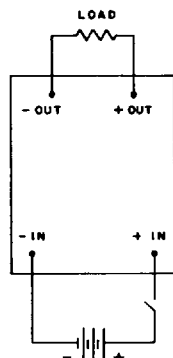


OPTIONS AVAILABLE

- 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 Weight: 25 Grams



Delivery—
stock to one week

FEATURES

- Up to 7 watt output at 70°C ambient
- Encapsulated semiconductors, conservatively rated for maximum reliability
- 5 input voltage ranges 5, 12, 24, 28 and 48V DC
- 100 megohm @ 500V DC isolation
- Single and dual isolated outputs
- No heat sink required
- Output filter included (No external capacitors required)

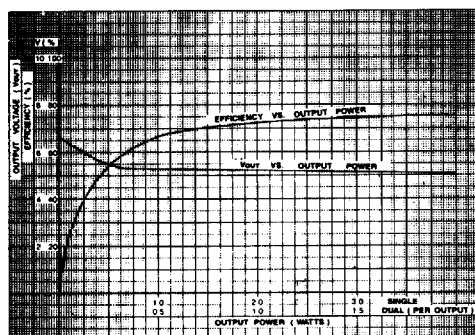
This series of unregulated DC-DC converters are produced in an ultra-miniature encapsulated package. 68 different models are available. The units feature single and isolated dual outputs. They will operate over the temperature range of -25°C to +70°C. No heat sink is required.

SERIES E - SINGLE OUTPUT

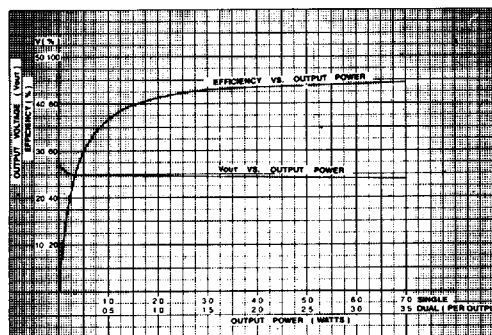
PICO PART NUMBER	INPUT VOLTAGE (V DC)	OUTPUT VOLTAGE (V DC)	MAX. LOAD CURRENT (mA)	MAX. OUTPUT POWER (watts)	EFF. @ FULL LOAD TYPICAL (%)	INPUT CURRENT FULL LOAD TYPICAL (mA)	OUTPUT VOLTAGE RIPPLE @ FULL LOAD (Vp-p max)	NO LOAD CURRENT TYPICAL (mA)	FULL LOAD OUTPUT VOLTAGE TOLERANCE (V DC)	PRICE 1-24
5E5S	5	5	800	4	68	1176	0.3	140	±0.25	89.62
5E9S	5	9	500	4.5	73	1233	0.3	200	±0.3	89.62
5E12S	5	12	375	4.5	75	1200	0.25	200	±0.4	89.62
5E15S	5	15	300	4.5	78	1154	0.25	190	±0.4	89.62
5E24S	5	24	187	4.5	80	1125	0.25	190	±0.5	89.62
5E28S	5	28	161	4.5	79	1139	0.25	190	±0.5	89.62
5E48S	5	48	93	4.5	80	1125	0.25	190	±0.7	89.62
12E5S	12	5	800	4.0	73	456	0.3	40	±0.25	89.62
12E9S	12	9	666	6.0	80	625	0.3	45	±0.3	89.62
12E12S	12	12	541	6.5	82	660	0.25	45	±0.4	89.62
12E15S	12	15	433	6.5	83	652	0.25	40	±0.4	89.62
12E24S	12	24	281	6.75	86	654	0.25	40	±0.5	89.62
12E28S	12	28	241	6.75	86	654	0.25	40	±0.5	89.62
12E48S	12	48	141	6.75	86	654	0.25	40	±0.7	89.62
24E5S	24	5	800	4.0	69	241	0.3	22	±0.25	89.62
24E9S	24	9	666	6.0	79	316	0.3	22	±0.3	89.62
24E12S	24	12	541	6.5	81	334	0.25	22	±0.4	89.62
24E15S	24	15	433	6.5	82	330	0.25	22	±0.4	89.62
24E24S	24	24	291	7.0	88	331	0.25	17	±0.5	89.62
24E28S	24	28	250	7.0	88	331	0.25	17	±0.5	89.62
24E48S	24	48	146	7.0	88	331	0.25	17	±0.7	89.62
28E5S	28	5	800	4.0	69	207	0.3	22	±0.25	89.62
28E9S	28	9	666	6.0	80	268	0.3	22	±0.3	89.62
28E12S	28	12	540	6.5	80	290	0.25	22	±0.4	89.62
28E15S	28	15	433	6.5	82	283	0.25	22	±0.4	89.62
28E24S	28	24	291	7.0	88	284	0.25	22	±0.5	89.62
28E28S	28	28	250	7.0	88	284	0.25	20	±0.5	89.62
28E48S	28	48	146	7.0	88	284	0.25	20	±0.7	89.62
48E5S	48	5	800	4.0	75	111	0.3	6	±0.25	96.45
48E9S	48	9	666	6.0	80	156	0.3	6	±0.3	96.45
48E12S	48	12	541	6.5	84	161	0.3	6	±0.4	96.45
48E15S	48	15	433	6.5	84	161	0.3	6	±0.4	96.45
48E24S	48	24	291	7.0	89	164	0.3	6	±0.5	96.45
48E28S	48	28	250	7.0	89	164	0.3	6	±0.5	96.45

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

SERIES E SINGLE & DUAL 48V-5V



SERIES E SINGLE & DUAL 48V-24V



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

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: 5V models 4 to 6.5V DC
12V models 9 to 15V DC
24V models 17 to 28V DC
28V models 21 to 32V DC
48V models 25 to 50V DC

Output voltage tolerance at full load:

5V models $\pm 0.25V$
9V models $\pm 0.3V$
12V & 15V models $\pm 0.4V$
24V & 28V models $\pm 0.5V$
48V models $\pm 0.7V$

Converter frequency: 20 to 40 KHz

Output temperature coefficient: 0.02%/°C

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

Storage temperature: -55°C to +125°C

Isolation: 100 megohms min. @ 500V DC

Short circuit protection: Temporary

SERIES E - DUAL OUTPUT

PICO PART NUMBER	INPUT VOLTAGE (V DC)	DUAL OUTPUT VOLTAGE (V DC)	MAX. LOAD CURRENT PER OUTPUT (mA)	MAX. OUTPUT POWER PER OUTPUT (watts)	EFF. @ FULL LOAD TYPICAL (%)	INPUT CURRENT FULL LOAD TYPICAL (mA)	OUTPUT VOLTAGE RIPPLE @ FULL LOAD (Vp-p max)	NO LOAD CURRENT TYPICAL (mA)	FULL LOAD OUTPUT VOLTAGE TOLERANCE (V DC)	PRICE 1-24
5E5D	5	5	400	2.0	68	1176	0.3	200	± 0.25	97.91
5E9D	5	9	250	2.25	74	1216	0.3	200	± 0.3	97.91
5E12D	5	12	187	2.25	77	1168	0.25	220	± 0.4	97.91
5E15D	5	15	150	2.25	79	1139	0.25	200	± 0.4	97.91
5E24D	5	24	93	2.25	80	1125	0.25	200	± 0.5	97.91
5E28D	5	28	80	2.25	80	1139	0.25	200	± 0.5	97.91
5E48D	5	48	46	2.25	80	1125	0.25	200	± 0.7	97.91
12E5D	12	5	400	2.0	75	444	0.3	40	± 0.25	97.91
12E9D	12	9	333	3.0	80	625	0.3	40	± 0.3	97.91
12E12D	12	12	270	3.25	83	652	0.25	40	± 0.4	97.91
12E15D	12	15	217	3.25	85	637	0.25	40	± 0.4	97.91
12E24D	12	24	140	3.375	86	654	0.25	40	± 0.5	97.91
12E28D	12	28	121	3.375	86	654	0.25	40	± 0.5	97.91
12E48D	12	48	70	3.5	88	654	0.25	40	± 0.7	97.91
24E5D	24	5	400	2.0	72	231	0.3	22	± 0.25	97.91
24E9D	24	9	333	3.0	79	316	0.3	22	± 0.3	97.91
24E12D	24	12	270	3.25	82	330	0.25	22	± 0.4	97.91
24E15D	24	15	217	3.25	85	318	0.25	22	± 0.4	97.91
24E24D	24	24	145	3.5	88	331	0.25	18	± 0.5	97.91
24E28D	24	28	125	3.5	88	331	0.25	18	± 0.5	97.91
24E48D	24	48	73	3.5	88	331	0.25	18	± 0.7	97.91
28E5D	28	5	400	2.0	69	207	0.3	25	± 0.25	97.91
28E9D	28	9	333	3.0	80	268	0.3	25	± 0.3	97.91
28E12D	28	12	270	3.25	80	290	0.25	22	± 0.4	97.91
28E15D	28	15	217	3.25	82	283	0.25	22	± 0.4	97.91
28E24D	28	24	145	3.5	88	284	0.25	20	± 0.5	97.91
28E28D	28	28	125	3.5	88	284	0.25	20	± 0.5	97.91
28E48D	28	48	73	3.5	88	284	0.25	20	± 0.7	97.91
48E5D	48	5	400	2.0	74	113	0.3	6	± 0.25	104.72
48E9D	48	9	333	3.0	80	156	0.3	6	± 0.3	104.72
48E12D	48	12	270	3.25	85	160	0.3	6	± 0.4	104.72
48E15D	48	15	217	3.25	85	160	0.3	6	± 0.4	104.72
48E24D	48	24	145	3.5	88	166	0.3	6	± 0.5	104.72
48E28D	48	28	125	3.5	89	164	0.3	6	± 0.5	104.72

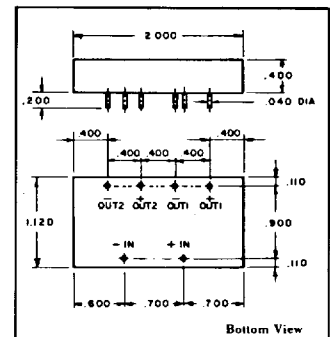
Ordering Instructions: No minimum. Net 30 days F.O.B. Mt. Vernon, New York.

**Low Profile
0.4" Height!
Up to 7 Watts**

**NO EXTERNAL
CAPACITORS
REQUIRED**

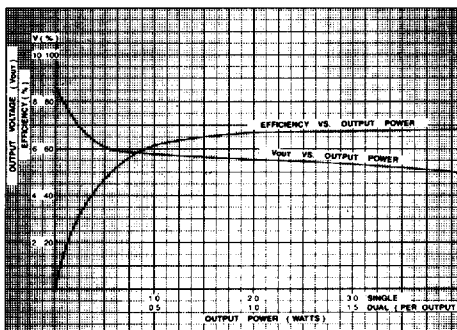


**No Heat Sink
or Electrical
Derating Required**

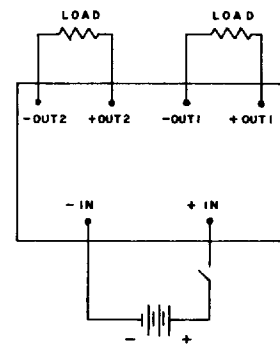
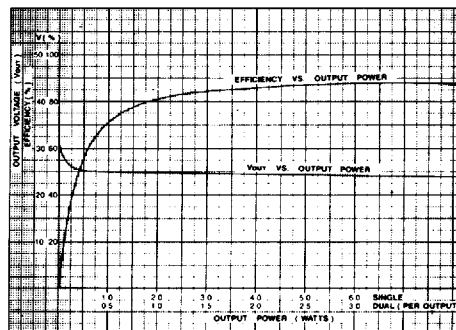


Typical Weight: 33 Grams

SERIES E SINGLE & DUAL 5V-5V



SERIES E SINGLE & DUAL 24V-24V



PICO Electronics, Inc.

453 N. MacQuesten Pkwy., Mt. Vernon, N.Y. 10552 • 914-699-5514 • FAX 914-699-5565