

SERIES M PICO

**Hi Reliability
Ultra-Miniature
Isolated DC-DC
Converters**
-55°C + 85°C

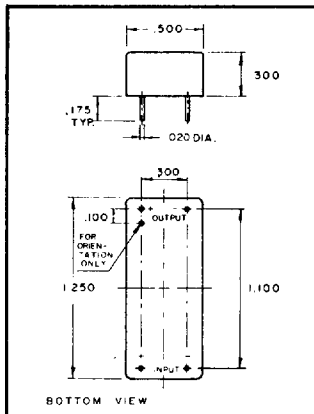
**OPTIONS AVAILABLE
PER MIL-STD-883**

- Stabilization Bake
- Temperature Cycle
- Hi Temperature Burn In
160 Hours at Full Power

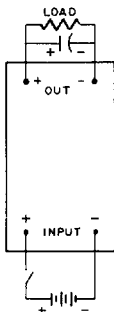
FEATURES

- Up to 1.25 watt output at 85°C ambient
- Ultra-miniature size (0.3" Height)
- 4 input voltage ranges 5, 12, 24 and 28 V DC
- 100 megohm @ 500V DC isolation
- Input/output isolation
- Single and dual output
- No heat sink required
- Shielded
- 24 Pin Dip compatible

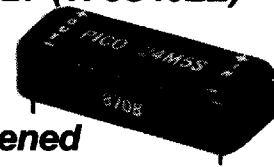
This series of unregulated DC-DC converters are encapsulated in an ultra-miniature 5 sided shielding package. 54 different models are available. The units feature single and dual outputs. They will operate over the temperature range of -55°C to +85°C. No heat sink is required.



Typical Weight: 9.0 Grams

**MILITARY DC-DC CONVERTERS**

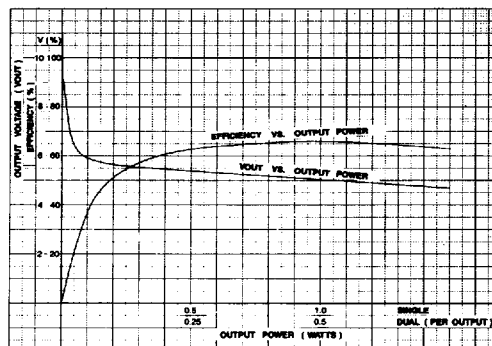
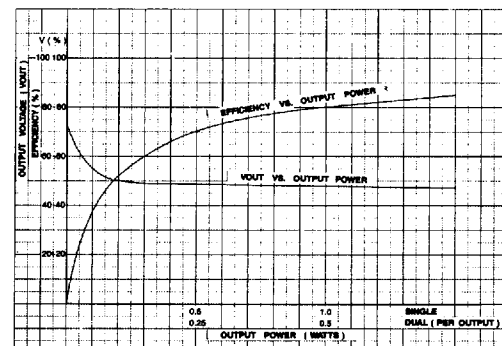
- Diodes JAN TX
- Transformers manufactured to MIL-T-27 (TF5S40ZZ)
- Capacitors MIL-C-39003, S Level
MIL-C-55681, S Level
- Resistors MIL-R-39008, S Level
- Transistors Hermetically Sealed, Screened
per MIL-S-19500, Table II, JAN TXV

**SERIES M - 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
5M5S	5	5	200	1.00	65	308	0.20	65	±0.25	315.65
5M9S	5	9	139	1.25	71	352	0.15	80	±0.3	315.65
5M12S	5	12	104	1.25	74	338	0.15	80	±0.4	315.65
5M15S	5	15	83	1.25	74	338	0.12	90	±0.4	315.65
5M24S	5	24	52	1.25	77	325	0.10	90	±0.5	315.65
5M28S	5	28	45	1.25	76	329	0.10	90	±0.5	315.65
12M5S	12	5	200	1.00	67	124	0.15	40	±0.25	315.65
12M9S	12	9	139	1.25	74	141	0.15	40	±0.3	315.65
12M12S	12	12	104	1.25	76	137	0.12	40	±0.4	315.65
12M15S	12	15	83	1.25	76	137	0.12	40	±0.4	315.65
12M24S	12	24	52	1.25	78	134	0.08	40	±0.5	315.65
12M28S	12	28	45	1.25	80	130	0.08	40	±0.5	315.65
12M48S	12	48	26	1.25	80	130	0.08	40	±0.7	315.65
24M5S	24	5	200	1.00	67	62	0.15	13	±0.25	315.65
24M9S	24	9	139	1.25	74	70	0.15	15	±0.3	315.65
24M12S	24	12	104	1.25	75	69	0.10	15	±0.4	315.65
24M15S	24	15	83	1.25	78	67	0.10	15	±0.4	315.65
24M24S	24	24	52	1.25	82	64	0.10	15	±0.5	315.65
24M28S	24	28	45	1.25	79	66	0.10	15	±0.5	315.65
24M48S	24	48	26	1.25	80	65	0.07	16	±0.7	315.65
28M5S	28	5	200	1.00	68	53	0.15	12	±0.25	315.65
28M9S	28	9	139	1.25	76	59	0.15	14	±0.3	315.65
28M12S	28	12	104	1.25	78	57	0.12	14	±0.4	315.65
28M15S	28	15	83	1.25	79	57	0.10	14	±0.4	315.65
28M24S	28	24	52	1.25	81	55	0.09	14	±0.5	315.65
28M28S	28	28	45	1.25	81	55	0.09	14	±0.5	315.65
28M48S	28	48	26	1.25	80	56	0.09	15	±0.7	315.65

*Ripple is measured with 10μF, 75 volt high quality tantalum capacitor which is required across the output.

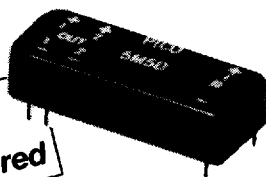
Ordering Instructions: No minimum. Net 30 days F.O.B. Mt. Vernon, New York.

SERIES M SINGLE & DUAL 5V-5V**SERIES M SINGLE & DUAL 12V-48V**

PICO's MILITARY DC-DC CONVERTERS

Low Profile 1.250" x .5" x .3" ht. up to 1.25 Watts

No Heat Sink
or Electrical
Derating Required



OPTIONS AVAILABLE
PER MIL-STD-883

- Stabilization Bake
- Temperature Cycle
- Hi Temperature Burn In
160 Hours at Full Power

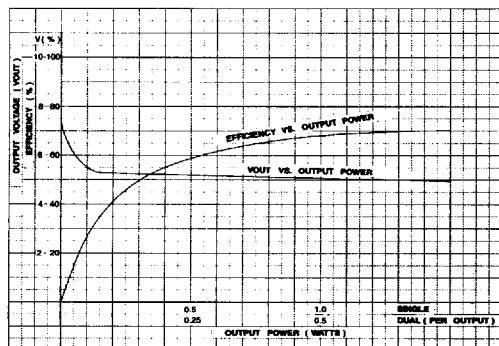
SERIES M - DUAL OUTPUT

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
5M5D	5	5	100	0.5	65	308	0.20	65	±0.25	373.43
5M9D	5	9	69	0.625	71	352	0.15	80	±0.3	373.43
5M12D	5	12	52	0.625	74	338	0.15	80	±0.4	373.43
5M15D	5	15	42	0.625	74	338	0.12	90	±0.4	373.43
5M24D	5	24	26	0.625	77	325	0.10	90	±0.5	373.43
5M28D	5	28	22	0.625	76	329	0.10	90	±0.5	373.43
12M5D	12	5	100	0.5	67	124	0.15	40	±0.25	373.43
12M9D	12	9	69	0.625	74	141	0.15	40	±0.3	373.43
12M12D	12	12	52	0.625	76	137	0.12	40	±0.4	373.43
12M15D	12	15	42	0.625	76	137	0.12	40	±0.4	373.43
12M24D	12	24	26	0.625	78	134	0.08	40	±0.5	373.43
12M28D	12	28	22	0.625	80	130	0.08	40	±0.5	373.43
12M48D	12	48	13	0.625	80	130	0.05	40	±0.7	373.43
24M5D	24	5	100	0.5	67	62	0.15	13	±0.25	373.43
24M9D	24	9	69	0.625	74	70	0.15	15	±0.3	373.43
24M12D	24	12	52	0.625	75	69	0.10	15	±0.4	373.43
24M15D	24	15	42	0.625	78	67	0.10	15	±0.4	373.43
24M24D	24	24	26	0.625	82	64	0.10	15	±0.5	373.43
24M28D	24	28	22	0.625	79	66	0.10	15	±0.5	373.43
24M48D	24	48	13	0.625	80	65	0.07	16	±0.7	373.43
28M5D	28	5	100	0.5	68	53	0.15	12	±0.25	373.43
28M9D	28	9	69	0.625	76	59	0.15	14	±0.3	373.43
28M12D	28	12	52	0.625	78	57	0.12	14	±0.4	373.43
28M15D	28	15	42	0.625	79	57	0.10	14	±0.4	373.43
28M24D	28	24	26	0.625	81	55	0.09	14	±0.5	373.43
28M28D	28	28	22	0.625	81	55	0.09	14	±0.5	373.43
28M48D	28	48	13	0.625	80	56	0.09	15	±0.7	373.43

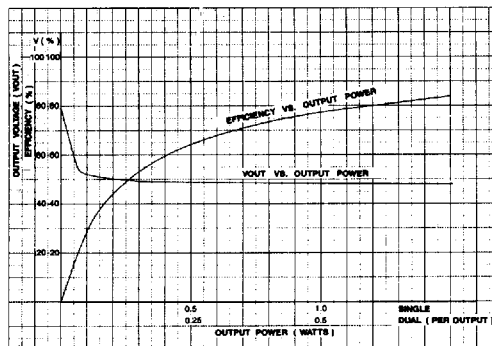
*The ripple is measured with 10 μ F, 75 volt high quality tantalum capacitor which is required across each output.

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

SERIES M SINGLE & DUAL 24V-5V



SERIES M SINGLE & DUAL 28V-48V



TYPICAL CHARACTERISTIC:

T-57-11

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

Output voltage tolerance at full load:
5V models ± 0.25 V
9V models ± 0.3 V
12V & 15V models ± 0.4 V
24V & 28V models ± 0.5 V
48V models ± 0.7 V

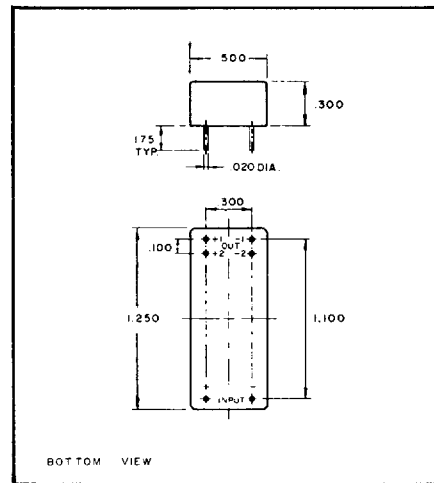
Converter frequency: 20 - 40 KHz

Output temperature coefficient:
0.05%/°C for 5V and 9V outputs.
0.02%/°C for 12, 15, 24, 28, 48V outputs.

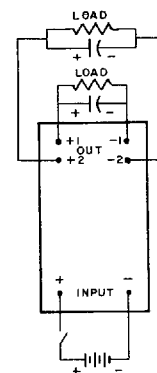
Operating temperature: -55°C to +85°C ambient.
No heat sink is required.
No electrical derating required.

Storage temperature: -55°C to +125°C

Isolation: 100 megohms min. @ 500V DC



Typical Weight: 9.0 Grams



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Delivery—
stock to one week

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