

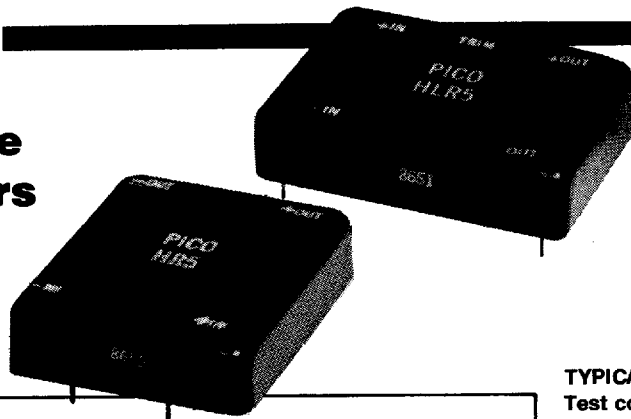
SERIES HR/HRL

Hi Reliability

Wide Input Range

DC-DC Converters

up to 12 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)

FEATURES:

- Excellent voltage regulation.
- Encapsulated semiconductors, conservatively rated for maximum reliability
- Excellent load regulation
- Up to 12 watts output power at 70°C ambient.
- No heat sink required
- 6 sided shielding
- High efficiency (up to 90%)
- Low no load currents

This series of non-isolated encapsulated converters come in 6 different models. The units are single output and will operate over a temperature range of -25°C to +70°C. No heat sink is required. These units are excellent for applications where the input voltages varies over a wide range, yet they maintain a high efficiency and offer low no load currents.

TYPICAL CHARACTERISTICS:

Test conditions: = 25°C ambient

Output voltage tolerance: $\pm 1\%$ on all units

Line regulation: (see table below)

Operating temperature: -25°C to +70°C

Output voltage temperature coefficient:

0.01% HRL 9 volt unit

0.005% all other models

Storage temperature: -55°C to +125°C

Short circuit protection: Temporary

Typical operating frequency: 30-50 Khtz

PICO PART NUMBER	HR 5	HR 12	HR 15	HRL 9	HRL 12	HRL 15
OUTPUT VOLTAGE (VOLTS)	5	12	15	9	12	15
INPUT VOLTAGE RANGE (VOLTS)	17 to 35	17 to 35	17 to 35	5 to 9	5 to 12	5 to 15
TYPICAL INPUT CURRENT AT FULL LOAD (mA)	475	560	785	2600	2600	2600
LOW LINE	245	285	408	1250	930	740
HIGH LINE						
TYPICAL INPUT CURRENT AT NO LOAD (mA)	8.5	8.5	8.5	10	10	10
OUTPUT POWER (WATTS)	6	8	12	10	10	10
TYPICAL LINE REGULATION LOW LINE TO HIGH LINE (%)	0.5	0.2	0.2	.7	.7	.5
TYPICAL LOAD REGULATION NO LOAD TO FULL LOAD (%)	1.0	0.5	0.5	2	3	1.5
TYPICAL EFFICIENCY AT FULL LOAD (%)	75	84	90	77	77	77
LOW LINE	70	80	84	88	89	90
HIGH LINE						
OUTPUT RIPPLE PEAK TO PEAK MAXIMUM (mV)	200	200	200	100*	100*	100*
PRICE (1-24)	117.70	117.70	117.70	117.70	117.70	117.70

*The ripple is measured with a 10 μ f, 35 volt tantalum capacitor which is required across the output.
Ordering Instructions: No minimum. Net 30 days F.O.B. Mt. Vernon, New York.

Delivery—
stock to one week

PICO
Electronics,
Inc.

453 N. MacQuesten Pkwy.
Mt. Vernon, N.Y. 10552

914-699-5514

FAX 914-699-5565

