COILTRONICS
INCORPORATED

UNI-PAC

UNI-PAC™

GENERAL

UNI-PACs are surface mount inductors designed for use in applications requiring low inductance and high current in a miniature package. They can be used in DC/DC converters and as signal conditioning or filter inductors. Available standard inductance values range from 0.47 to 100 µH. RMS current values range from 19.2 to 0.47 Amperes.

Because of their miniature size and rugged construction, UNI-PACs are ideally suited for products requiring higher power per millimeter of PCB space. Such applications include notebook computers, pagers, and a variety of battery powered equipment. Their versatility extends to use in DC/DC converters on all board level products from personal computers to industrial-level VME products.

UNI-PACs are engineered for high volume production using automated surface mount technology. Their tape-and-reel packaging accommodates reliable pick-and-place manufacturing, and their construction permits normal exposure to infrared reflow soldering to +240°C.

In addition to the standard inductance values shown, modified UNI-PAC inductors are available to meet your exact high volume requirements.

FEATURE - BENEFITS

- Miniature Surface Mount Design
- Inductance Range from 0.47 µH to 100 µH
- Current Range from 19.2 Amps to .47 Amps
- Maximum Power Density
- Supplied in Tape-and-Reel Packaging for Pick-and-Place Utilization
- Modified Standard Products are Available

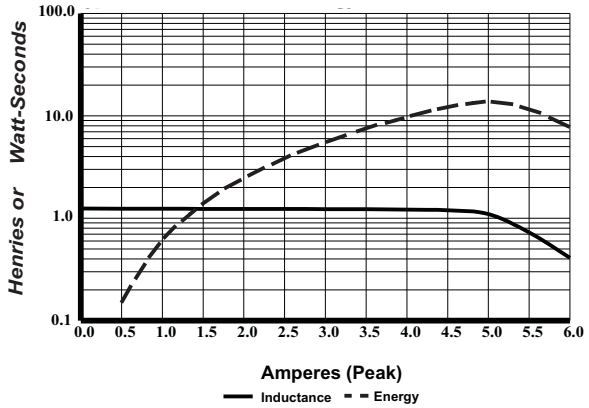
UNI-PAC 1B FAMILY TABLE

Part Number	Inductance µH (rated)	OCL(1) µH±20%	I RMS(2) Amperes	I SAT(3) Amperes	DCR(4) Ohms max.
UP1B-R47	0.47	0.569	6.0	7.7	0.0097
***UP1B-1R0**	1.0	1.20	4.4	5.3	0.0177
UP1B-1R5	1.5	1.61	4.2	4.5	0.0200
***UP1B-2R2**	2.2	2.62	3.1	3.5	0.0363
UP1B-3R3	3.3	3.79	2.9	3.0	0.0428
***UP1B-4R7**	4.7	5.15	2.2	2.6	0.0544
UP1B-6R8	6.8	6.87	1.7	2.2	0.0897
***UP1B-100**	10.0	11.00	1.5	1.9	0.1107
***UP1B-150**	15.0	16.00	1.2	1.5	0.1747
***UP1B-220**	22.0	23.50	1.0	1.2	0.2541
***UP1B-330**	33.0	36.00	0.82	0.99	0.3670
***UP1B-470**	47.0	48.50	0.72	0.87	0.4740
UP1B-680	68.0	73.52	0.58	0.67	0.7320
UP1B-101	100.0	112.67	0.47	0.53	1.109

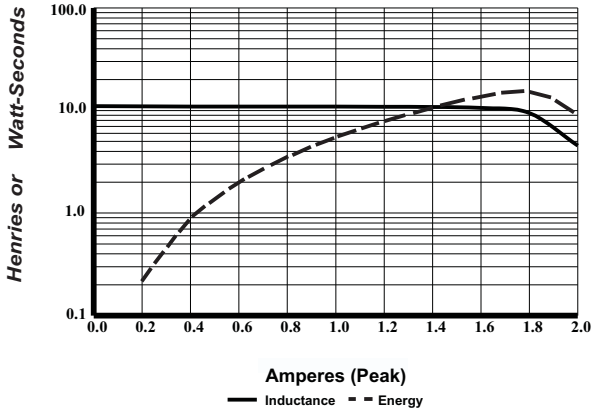
Notes: (1) Open Circuit Inductance Test Parameters: 100KHz, .250Vrms, 0.0Adc.
(2) RMS current for an approximate ΔT of 40°C. at an ambient temperature of 85°C.
(3) Peak current for approximately 30% rolloff.
(4) DCR limits 20°C.

*__BOLD__ are available from stock.

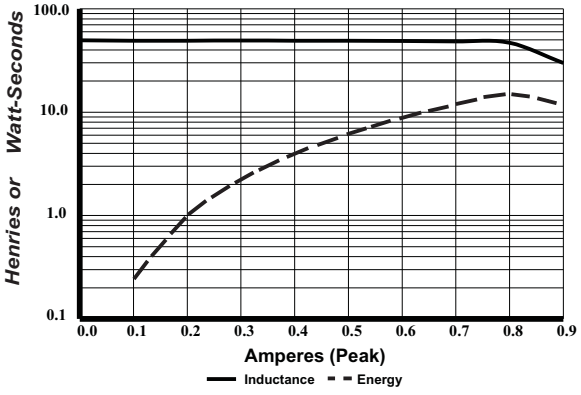
UP1B-1R0
Typical Inductance & Energy vs Saturation Current



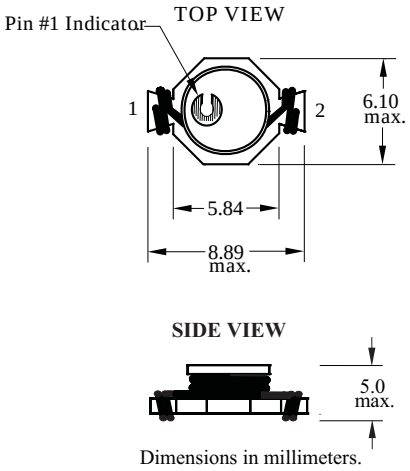
UP1B-100
Typical Inductance & Energy vs Saturation Current



UP1B-470
Typical Inductance & Energy vs Saturation Current

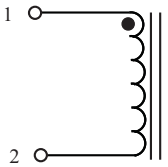


MECHANICAL DIAGRAM

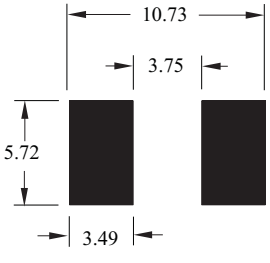


Dimensions in millimeters.

CONNECTION DIAGRAM



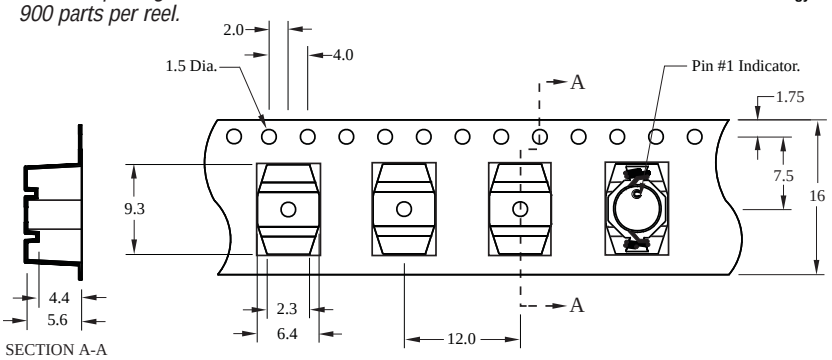
PCB PAD LAYOUT



Component View

PACKAGING INFORMATION

Parts are packaged on 13" reels.
900 parts per reel.



SECTION A-A

Direction of feed

Dimensions in millimeters.

ACTUAL SIZE
UNI-PAC 1B

UNI-PAC™

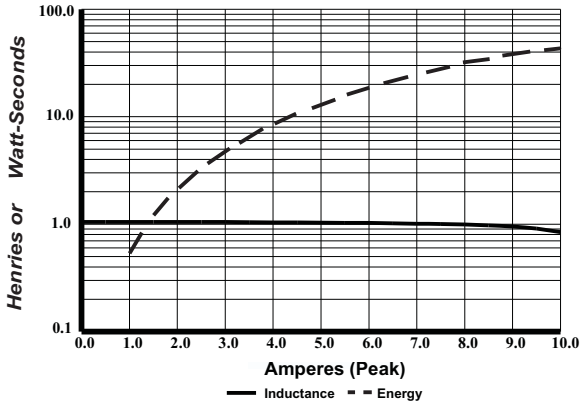
UNI-PAC 2B FAMILY TABLE

Part Number	Inductance µH (rated)	OCL(1) µH±20%	I RMS(2) Amperes	I SAT(3) Amperes	DCR(4) Ohms max.
UP2B-R47	0.47	0.595	10.6	11.4	0.0049
***UP2B-1R0**	1.0	1.00	9.3	9.9	0.0065
UP2B-1R5	1.5	1.46	8.3	7.9	0.0081
***UP2B-2R2**	2.2	2.39	7.2	6.1	0.0107
UP2B-3R3	3.3	3.23	6.5	5.1	0.0128
***UP2B-4R7**	4.7	4.77	5.5	4.2	0.0165
UP2B-6R8	6.8	6.63	5.0	3.6	0.0202
***UP2B-100**	10.0	9.73	4.3	3.3	0.0267
***UP2B-150**	15.0	15.43	3.5	2.4	0.0410
***UP2B-220**	22.0	22.50	2.8	2.0	0.0617
***UP2B-330**	33.0	33.13	2.1	1.7	0.0917
***UP2B-470**	47.0	48.65	1.7	1.4	0.1388
UP2B-680	68.0	68.17	1.5	1.2	0.1787
UP2B-101	100.0	102.60	1.2	0.95	0.2707

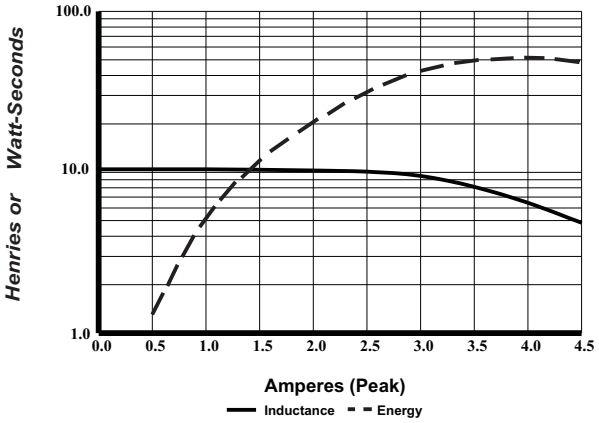
Notes: (1) Open Circuit Inductance Test Parameters: 100KHz, .250Vrms, 0.0Adc.
(2) RMS current for an approximate ΔT of 40°C. at an ambient temperature of 85°C.
(3) Peak current for approximately 10% rolloff.
(4) DCR limits 20°C.

*__BOLD__ are available from stock.

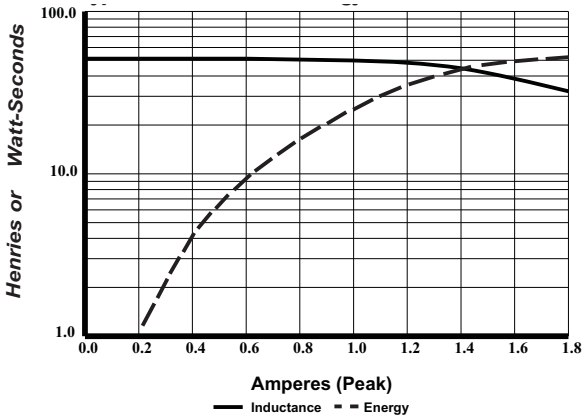
UP2B-1R0
Typical Inductance & Energy vs Saturation Current



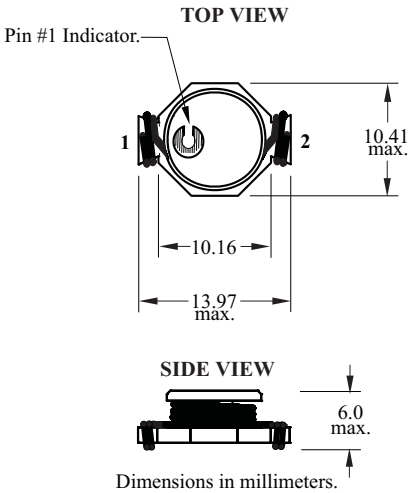
UP2B-100
Typical Inductance & Energy vs Saturation Current



UP2B-470
Typical Inductance & Energy vs Saturation Current

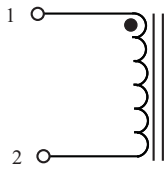


MECHANICAL DIAGRAM



Dimensions in millimeters.

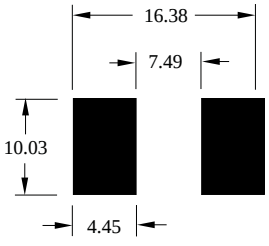
CONNECTION DIAGRAM



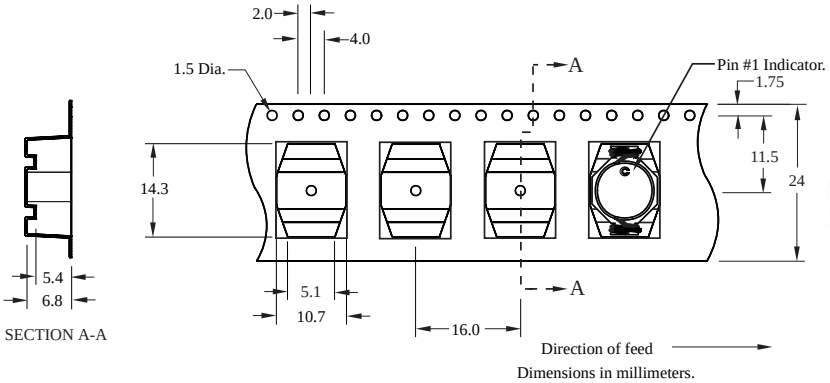
PACKAGING INFORMATION

Parts are packaged on 13" reels.
550 parts per reel.

PCB PAD LAYOUT



Component View
Dimensions in millimeters.



Dimensions in millimeters.

ACTUAL SIZE
UNI-PAC 2B

COILTRONICS INCORPORATED 6000 PARK OF COMMERCE BOULEVARD • BOCA RATON, FL 33487 • Phone 561-241-7876 • Fax 561-241-9339

UNI-PAC 3B FAMILY TABLE

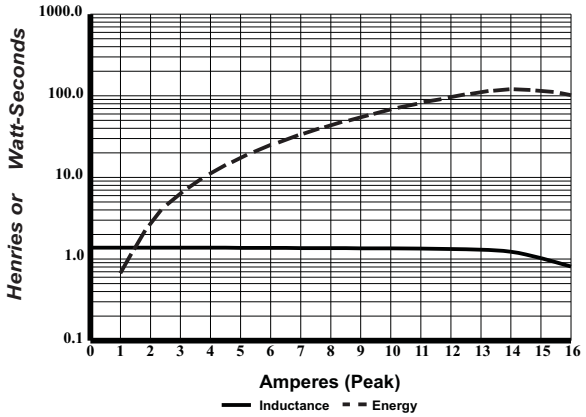
Part Number	Inductance µH (rated)	OCL(1) µH±20%	I RMS(2) Amperes	I SAT(3) Amperes	DCR(4) Ohms max.
UP3B-R47	0.47	0.452	16.0	25.1	0.0021
***UP3B-1R0**	1.0	1.34	12.5	15.3	0.0034
UP3B-1R5	1.5	2.08	10.0	12.0	0.0053
***UP3B-2R2**	2.2	3.01	9.2	10.2	0.0074
UP3B-3R3	3.3	3.96	8.0	9.3	0.0083
***UP3B-4R7**	4.7	5.00	6.5	7.7	0.0114
UP3B-6R8	6.8	7.70	5.8	6.2	0.0183
***UP3B-100**	10.0	11.00	4.3	5.2	0.0261
***UP3B-150**	15.0	16.38	3.9	4.3	0.0317
***UP3B-220**	22.0	23.93	3.1	3.7	0.0491
***UP3B-330**	33.0	33.85	2.4	3.0	0.0688
***UP3B-470**	47.0	51.00	1.9	2.4	0.1082
UP3B-680	68.0	69.50	1.6	2.0	0.1558
UP3B-101	100.0	101.40	1.4	1.8	0.2053

Notes: (1) Open Circuit Inductance Test Parameters: 100KHz, .250Vrms, 0.0Adc.
(2) RMS current for an approximate ΔT of 40°C. at an ambient temperature of 85°C.
(3) Peak current for approximately 30% rolloff.
(4) DCR limits 20°C.

*__BOLD__ are available from stock.

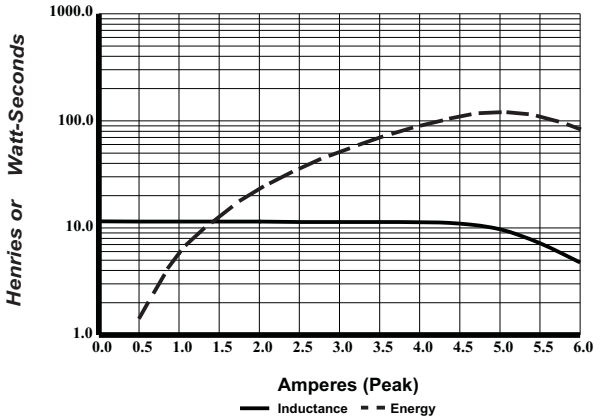
UP3B-1R0

Typical Inductance & Energy vs Saturation Current



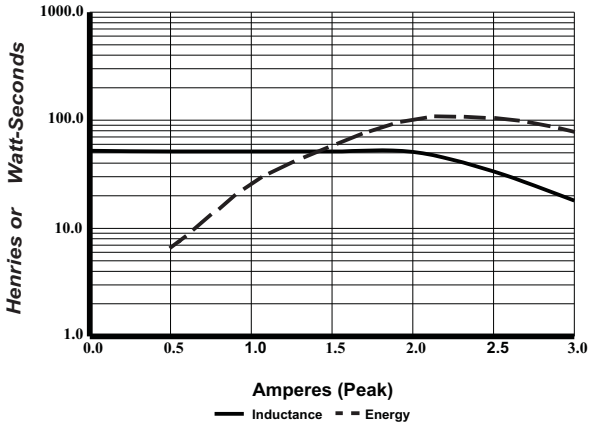
UP3B-100

Typical Inductance & Energy vs Saturation Current



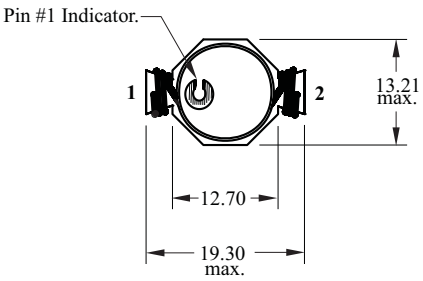
UP3B-470

Typical Inductance & Energy vs Saturation Current

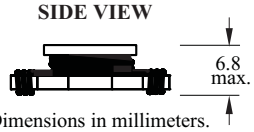


MECHANICAL DIAGRAM

TOP VIEW

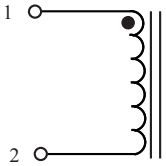


SIDE VIEW



Dimensions in millimeters.

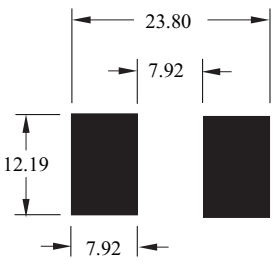
CONNECTION DIAGRAM



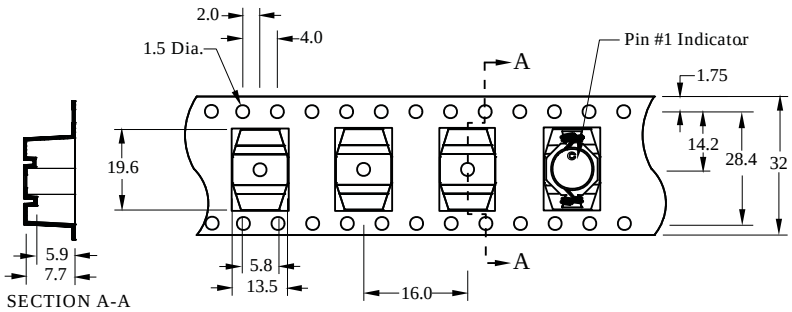
PACKAGING INFORMATION

Parts are packaged on 13" reels.
450 parts per reel.

PCB PAD LAYOUT



Component View
Dimensions in millimeters.



Direction of feed
Dimensions in millimeters.

ACTUAL SIZE
UNI-PAC 3B

UNI-PAC™

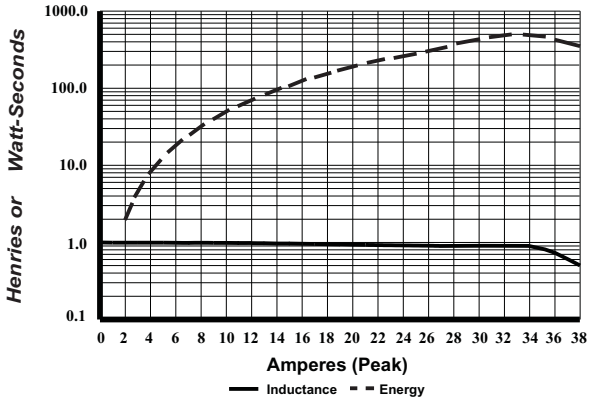
UNI-PAC 4B FAMILY TABLE

Part Number	Inductance µH (rated)	OCL(1) µH±20%	I RMS(2) Amperes	I SAT(3) Amperes	DCR(4) Ohms max.
UP4B-R47	0.47	0.473	19.2	51.7	0.0019
***UP4B-1R0**	1.0	0.916	17.3	37.3	0.0023
UP4B-1R5	1.5	1.52	13.4	28.9	0.0039
***UP4B-2R2**	2.2	2.27	12.0	23.7	0.0048
UP4B-3R3	3.3	3.14	11.0	20.2	0.0057
***UP4B-4R7**	4.7	5.34	8.6	15.6	0.0093
UP4B-6R8	6.8	6.66	8.3	14.1	0.0100
***UP4B-100**	10.0	9.77	6.8	11.5	0.0150
***UP4B-150**	15.0	15.61	5.5	9.1	0.0230
***UP4B-220**	22.0	22.61	4.5	7.6	0.0340
***UP4B-330**	33.0	34.30	3.7	6.1	0.0520
***UP4B-470**	47.0	48.10	3.1	5.2	0.0740
UP4B-680	68.0	69.14	2.4	4.3	0.1200
UP4B-101	100.0	99.42	2.0	3.6	0.1700

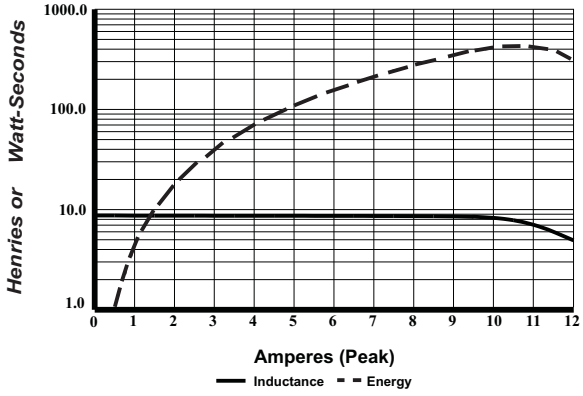
Notes: (1) Open Circuit Inductance Test Parameters: 100KHz, .250Vrms, 0.0Adc.
(2) RMS current for an approximate ΔT of 40°C. at an ambient temperature of 85°C.
(3) Peak current for approximately 30% rolloff.
(4) DCR limits 20°C.

*__BOLD__ are available from stock.

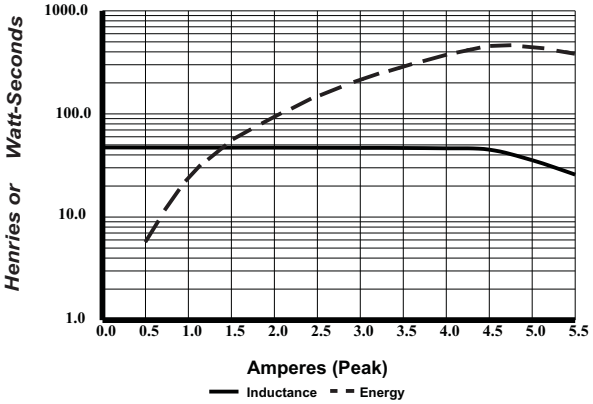
UP4B-1R0
Typical Inductance & Energy vs Saturation Current



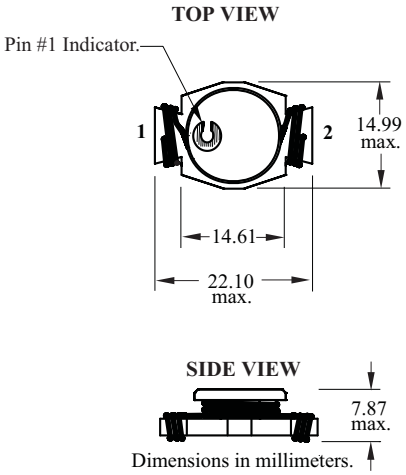
UP4B-100
Typical Inductance & Energy vs Saturation Current



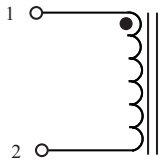
UP4B-470
Typical Inductance & Energy vs Saturation Current



MECHANICAL DIAGRAM



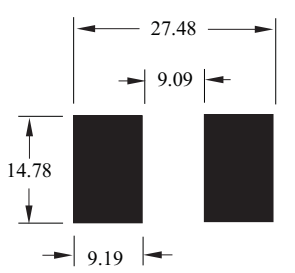
CONNECTION DIAGRAM

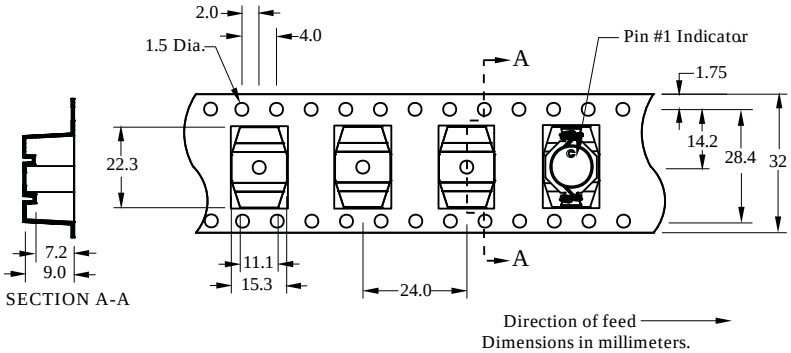


PACKAGING INFORMATION

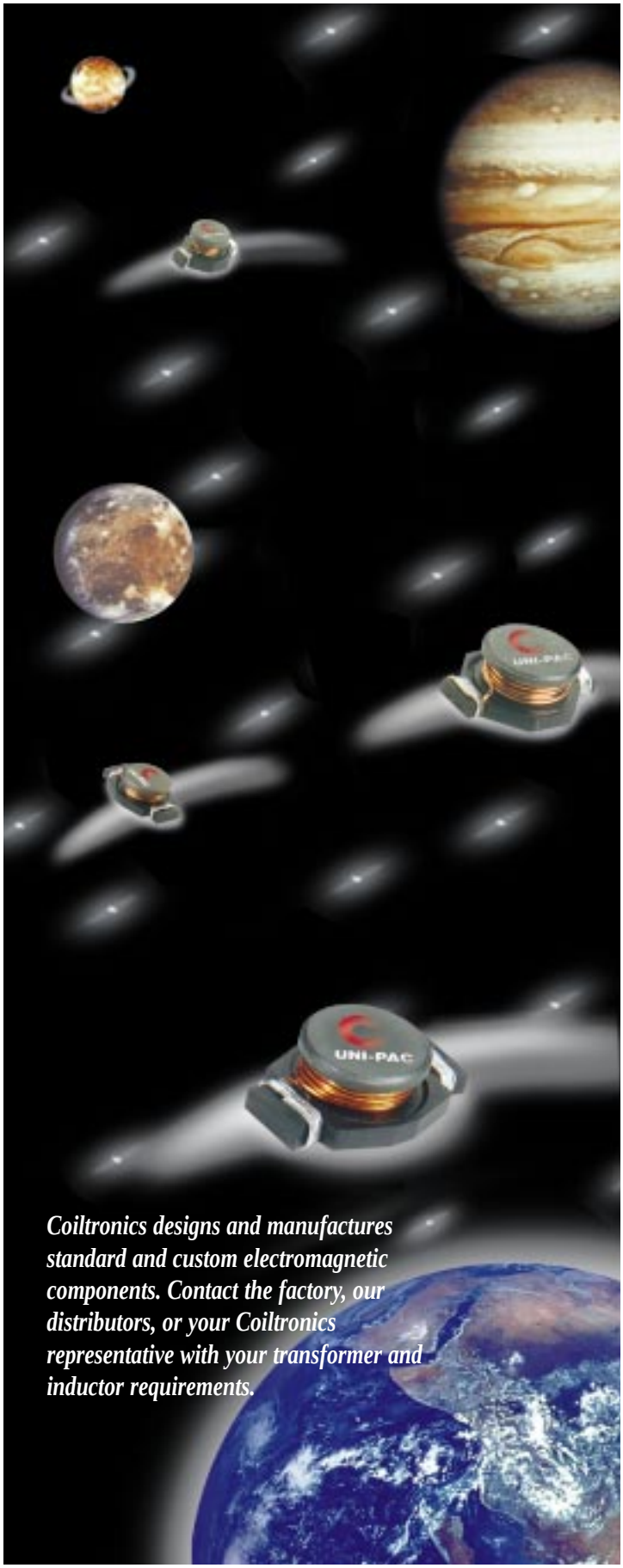
Parts are packaged on 13" reels.
275 parts per reel.

PCB PAD LAYOUT





ACTUAL SIZE
UNI-PAC 4B



Coiltronics designs and manufactures standard and custom electromagnetic components. Contact the factory, our distributors, or your Coiltronics representative with your transformer and inductor requirements.

DESIGN KITS AVAILABLE

To assist in prototyping, Coiltronics offers a low-cost Design Kit for all four UNI-PAC product families. Each Kit contains 2 pieces of each stocked part number *(BOLD part numbers in each Data Table).* Coiltronics Design Kits can save hours to days of searching for parts and waiting on samples.

- Order Part Number UPK1-13704

ENVIRONMENTAL SPECIFICATIONS

- Storage Temperature Range:
  -40°C to +125°C.
- Operating Ambient Temperature Range:
  -40°C to +85°C
  Range is application specific
- Infrared Reflow Temperature:
  +240°C for 30 seconds maximum
- Meets UL 94V-O Flammability Standard