

### Description

- Miniature surface mount design
- Inductance range from 0.470uH to 1000uH
- Current range from 19.2 to .47 Amps
- Maximum power density
- Ideal for applications requiring low inductance and high current in a miniature package
- Modified standard products are available
- Protective case eliminates core breakage
- Meets UL 94V-0 flammability standard

### Applications

- DC-DC converters on board level and industrial products

### Environmental Data

- Storage temperature range: -40C to +125C
- Operating ambient temperature range: -40C to +85C (range is application specific)
- Infrared reflow temperature: +240C for 30 seconds maximum



### Packaging

- Supplied in tape and reel packaging, 900 (UP1B), 550 (UP2B), 450 (UP3B), and 275 (UP4B) per reel

Part Number	Inductance $\mu\text{H}$ (rated)	OCL <sup>(1)</sup> $\mu\text{H}\pm 20\%$	I RMS <sup>(2)</sup> Amperes	I SAT <sup>(3)</sup> Amperes	DCR <sup>(4)</sup> 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	1.11
UP1B-151	150.0	152.40	0.40	0.46	1.61
UP1B-221	220.0	223.10	0.36	0.38	1.96
UP1B-331	330.0	331.90	0.28	0.31	3.10
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	2.56	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-820	82.0	84.1	1.34	1.03	0.2235
UP2B-101	100.0	102.60	1.2	0.95	0.2707
UP2B-151	150.0	150	1.0	0.77	0.4100
UP2B-221	220.0	223	0.773	0.637	0.6717
UP2B-331	330.0	338	0.676	0.510	0.8783
UP2B-471	470.0	471	0.553	0.427	1.31

Notes: (1) Open Circuit Inductance Test Parameters: 100KHz, .250Vrms, 0.0Adc.

(2) RMS current for an approximate  $\Delta T$  of 40°C. at an ambient temperature of 85°C.

(3) Peak current for approximately 10% rolloff.

(4) DCR limits 20°C.

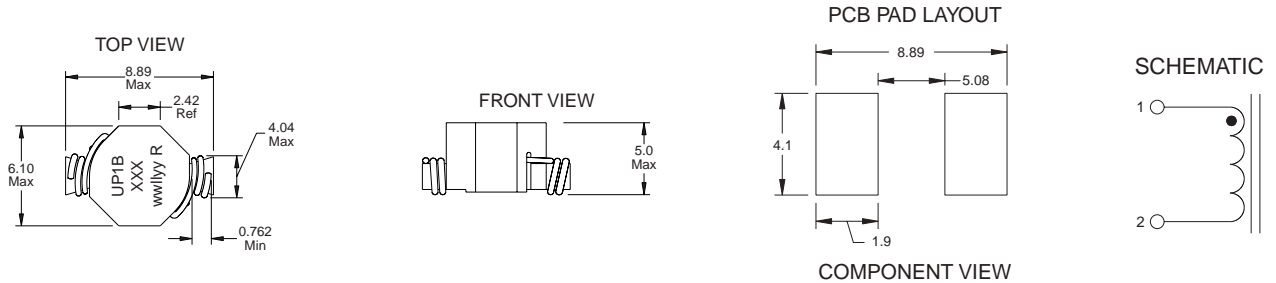
Part Number	Inductance $\mu\text{H}$ (rated)	OCL <sup>(1)</sup> $\mu\text{H}\pm 20\%$	I <sub>RMS</sub> <sup>(2)</sup> Amperes	I <sub>SAT</sub> <sup>(3)</sup> Amperes	DCR <sup>(4)</sup> Ohms max.
UP2B-681	680.0	700	0.452	0.355	1.97
UP2B-821	820.0	823	0.423	0.334	2.24
UP2B-102	1000.0	1005	0.369	0.300	2.96
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	0.0260
UP3B-150	15.0	16.38	3.9	4.3	0.0317
UP3B-220	22.0	23.93	3.1	3.7	0.0490
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
UP3B-331	330.0	332.80	0.75	0.98	0.7330
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
UP4B-151	150.0	146.90	1.7	3.0	0.2392
UP4B-221	220.0	221.40	1.4	2.4	0.3571
UP4B-331	330.0	330.00	1.1	2.0	0.5800
UP4B-471	470.0	470.10	0.91	1.7	0.8330

Notes: (1) Open Circuit Inductance Test Parameters: 100KHz, .250Vrms, 0.0Adc.  
(2) RMS current for an approximate  $\Delta T$  of 40°C. at an ambient temperature of 85°C.

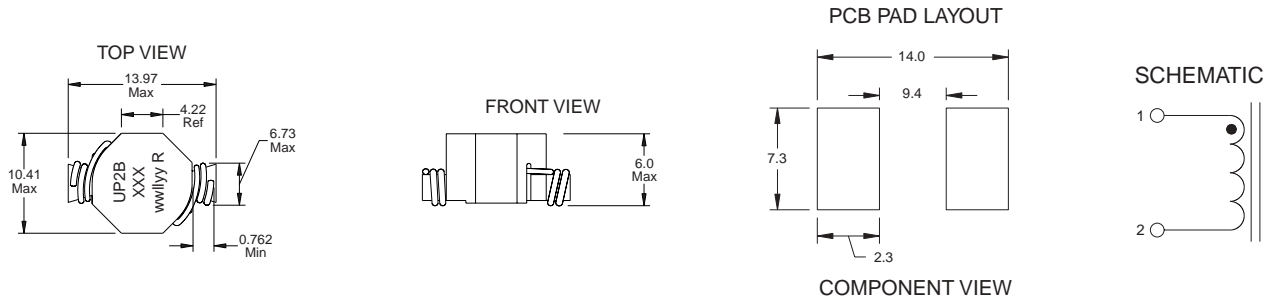
(3) Peak current for approximately 30% rolloff @ 20°C.  
(4) DCR limits 20°C.

**Mechanical Diagrams**

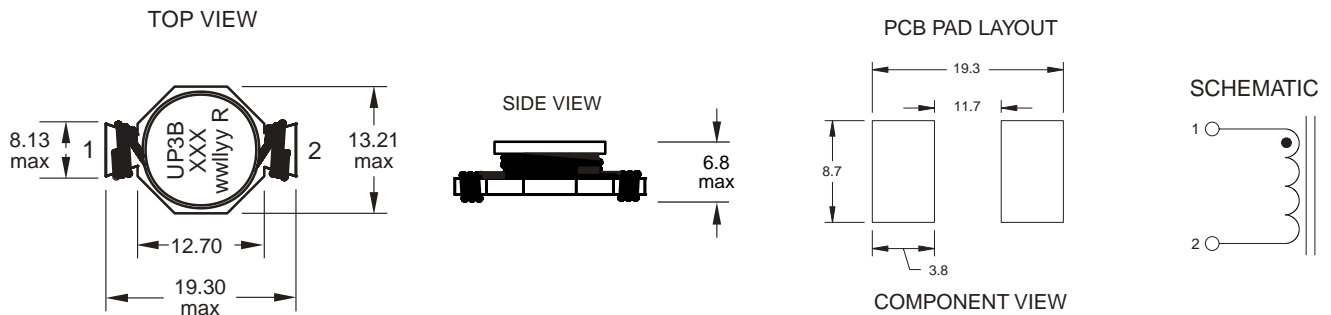
UP1B Series



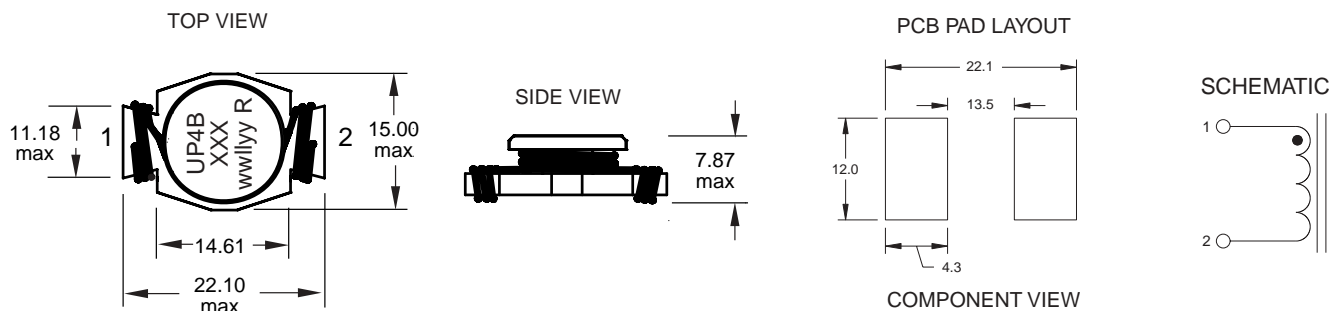
UP2B Series



UP3B Series



UP4B Series

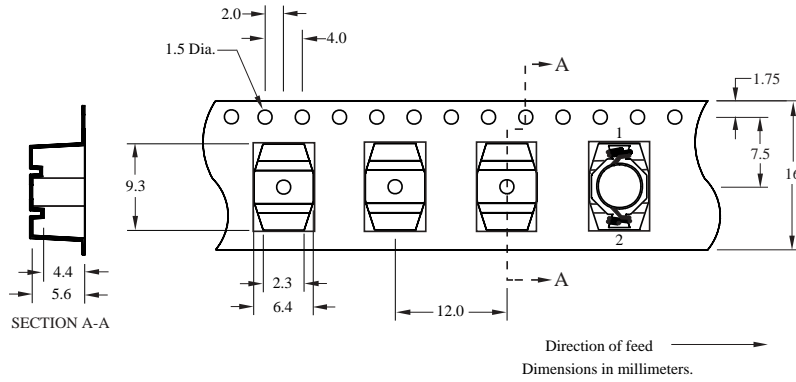


Dimensions in Millimeters.

wwlly = (date code) R = revision level  
 xxx = Inductance value per family chart

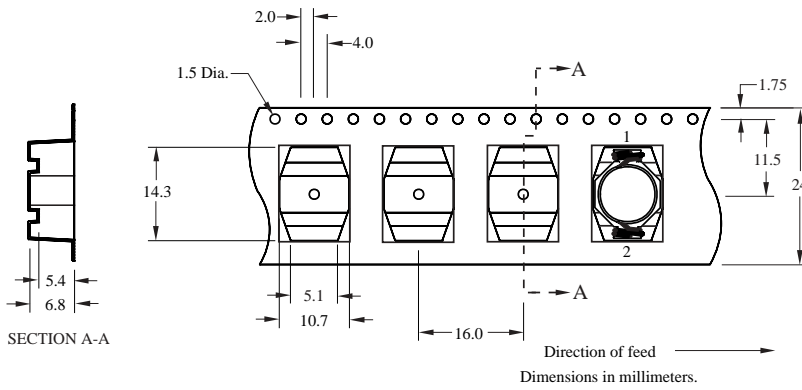
**Packaging Information**

UP1B Series



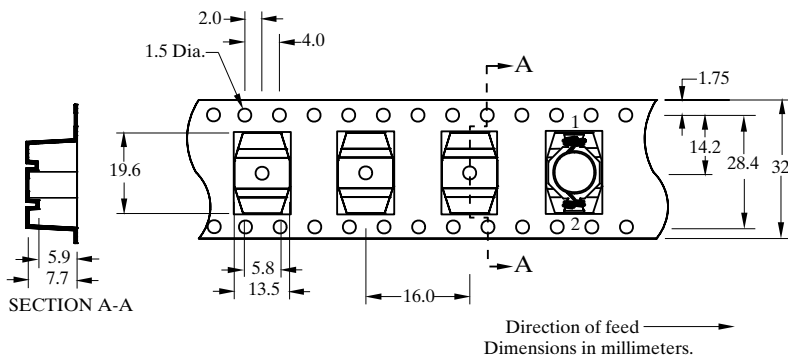
Parts packaged on 13" Diameter reel,  
900 parts per reel.

UP2B Series



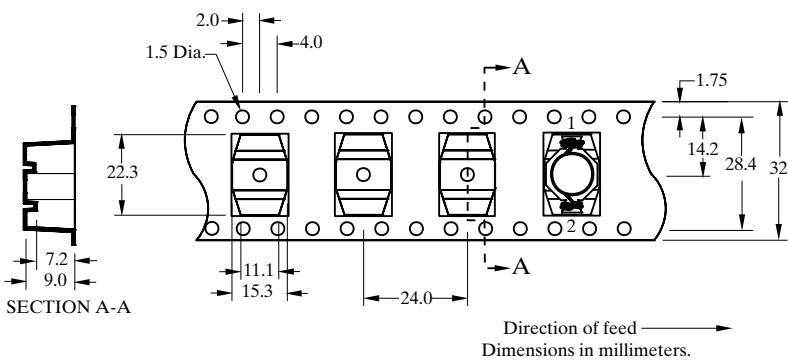
Parts packaged on 13" Diameter reel,  
550 parts per reel.

UP3B Series



Parts packaged on 13" Diameter reel,  
450 parts per reel.

UP4B Series

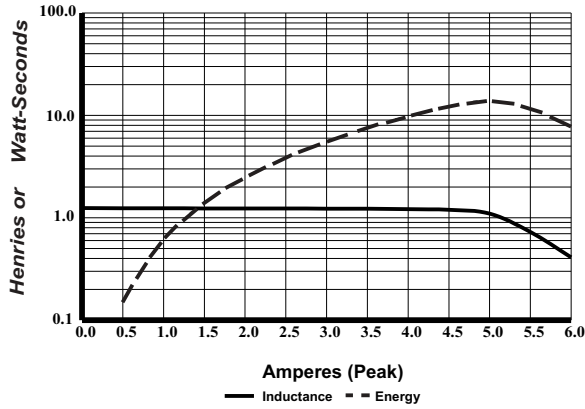


Parts packaged on 13" Diameter reel,  
275 parts per reel.

Mechanical Diagrams

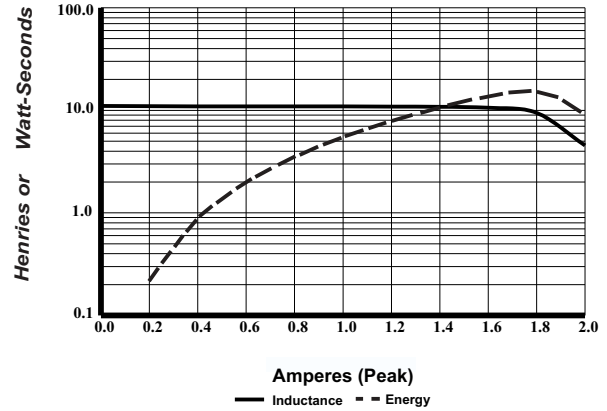
**UP1B-1R0**

Typical Inductance & Energy vs Saturation Current



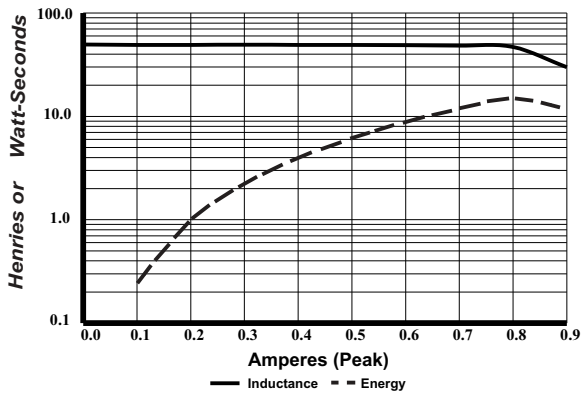
**UP1B-100**

Typical Inductance & Energy vs Saturation Current



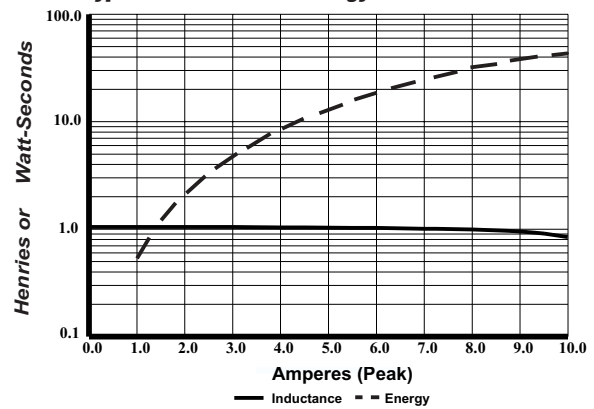
**UP1B-470**

Typical Inductance & Energy vs Saturation Current



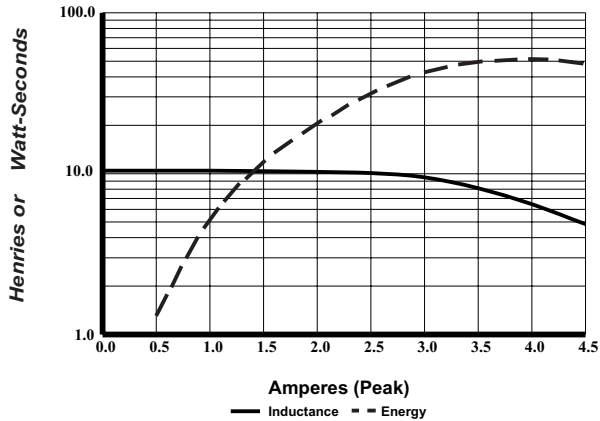
**UP2B-1R0**

Typical Inductance & Energy vs Saturation Current



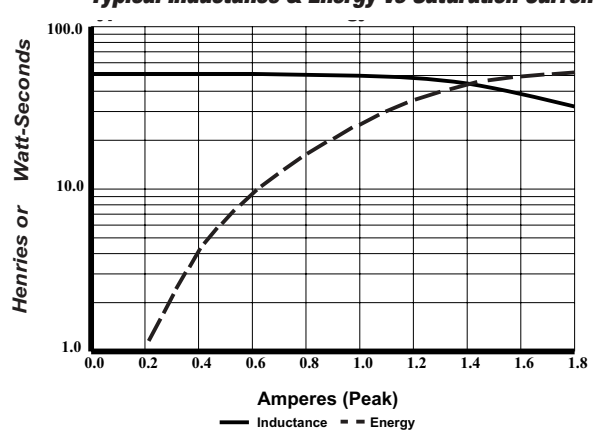
**UP2B-100**

Typical Inductance & Energy vs Saturation Current



**UP2B-470**

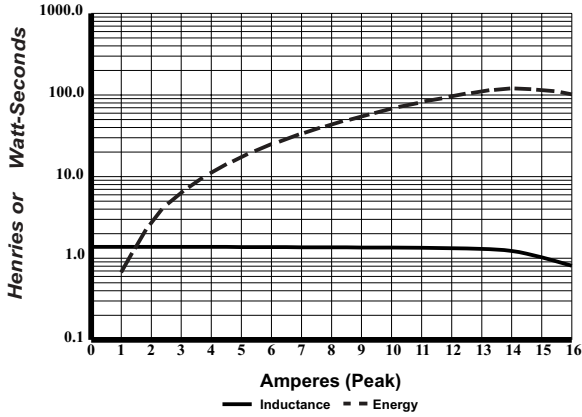
Typical Inductance & Energy vs Saturation Current



Mechanical Diagrams

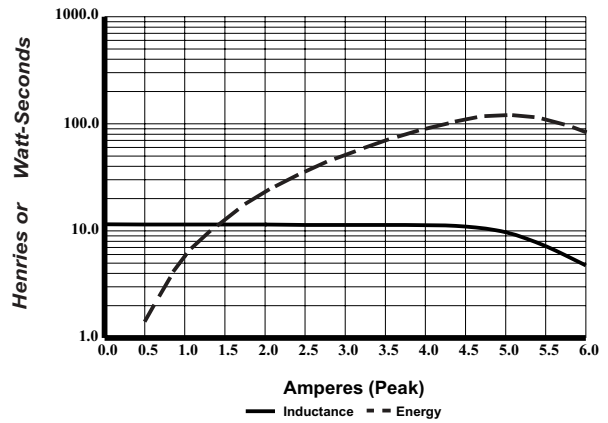
**UP3B-1R0**

Typical Inductance & Energy vs Saturation Current



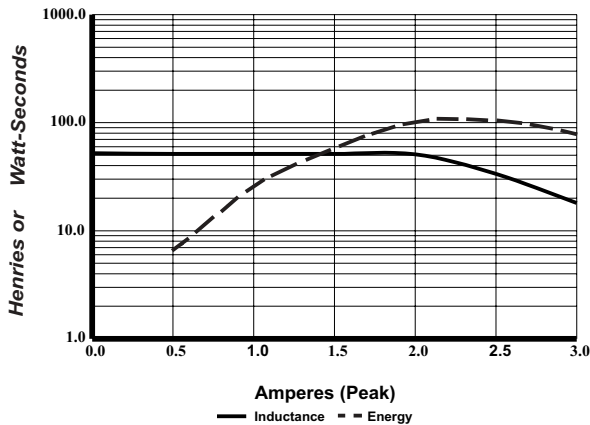
**UP3B-100**

Typical Inductance & Energy vs Saturation Current



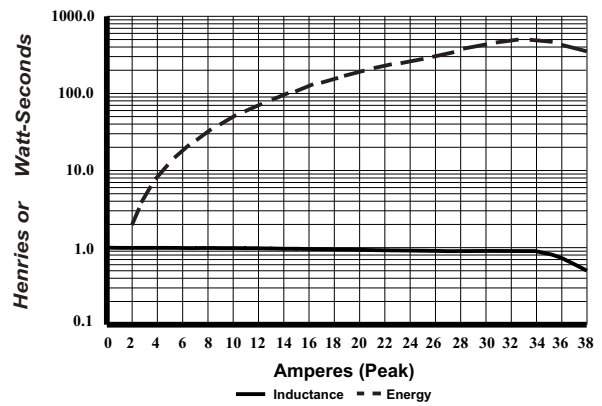
**UP3B-470**

Typical Inductance & Energy vs Saturation Current



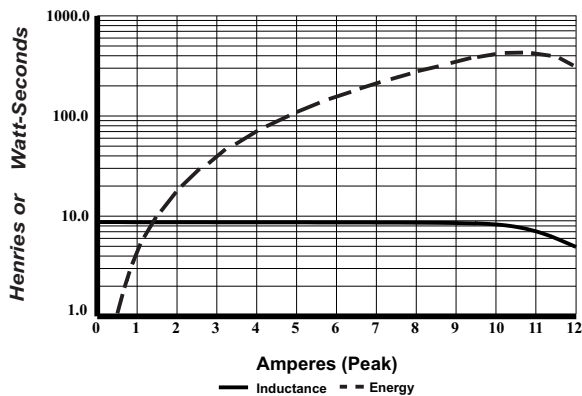
**UP4B-1R0**

Typical Inductance & Energy vs Saturation Current



**UP4B-100**

Typical Inductance & Energy vs Saturation Current



**UP4B-470**

Typical Inductance & Energy vs Saturation Current

