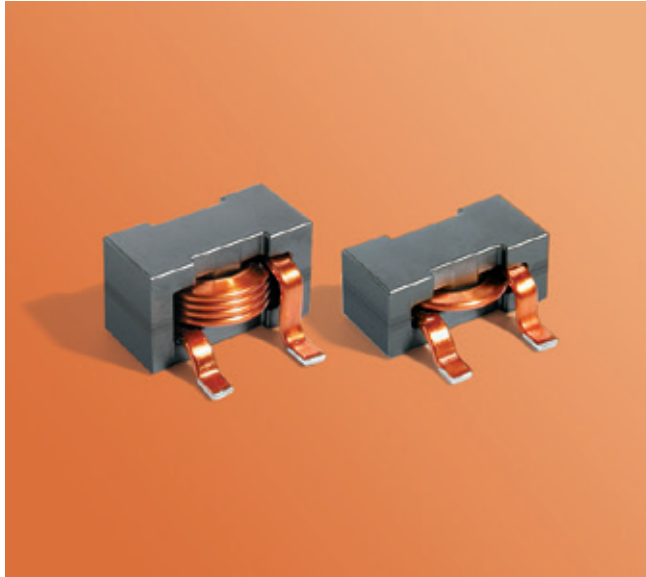


Outgassing Compliant Power Inductors AE63xPTA AE64xPTA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Passes NASA low outgassing specifications
- Tin-lead (Sn-Pb) terminations for the best possible board adhesion
- Designed for high current power supply applications
- Flat wire windings provide exceptionally low DCR
- Isat ratings as high as 100 A

Core material Ferrite

Terminations Tin-lead over copper.

Ambient temperature -55°C to +105°C with Irms current

Maximum part temperature +155°C (ambient + temp rise)

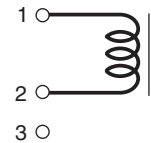
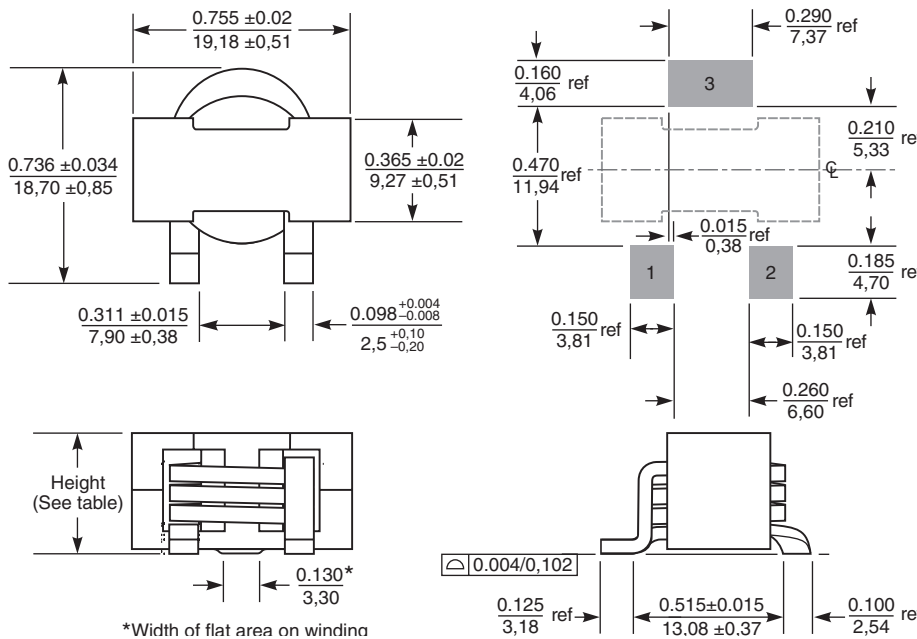
Storage temperature Component: -55°C to +155°C.

Tape and reel packaging: -55°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Suggested Land Pattern



Caution:

Terminal 3 is provided for mounting stability only. This terminal is connected to the winding of the inductor and must not be connected to ground or any circuitry.

	Maximum height	Weight
630PTA	0.34 / 8,64	6.65 – 6.89 g
632PTA	0.37 / 9,40	7.46 – 7.90 g
637PTA	0.42 / 10,67	8.63 – 9.08 g
641PTA	0.47 / 11,94	9.92 – 10.3 g
645PTA	0.51 / 12,95	10.8 – 11.4 g
648PTA	0.55 / 13,97	11.7 – 12.4 g

Dimensions are in $\frac{\text{inches}}{\text{mm}}$

Enhanced crush-resistant packaging

- AE630PTA 200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 9.25 pocket depth
- AE632PTA 200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 10.5 pocket depth
- AE637PTA 170 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 11.6 pocket depth
- AE641PTA 150 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 13.0 pocket depth
- AE645PTA 150 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 4 mm pocket spacing, 14.0 pocket depth
- AE648PTA 125 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 4 mm pocket spacing, 15.0 pocket depth



1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document AE349-1 Revised 06/17/20

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

AE63xPTA, AE64xPTA Series

Part number ¹	L ±20% ² (µH)	DCR (mΩ) ³		SRF (MHz) ⁴		Isat ⁵ (A)	Irms (A) ⁶		Height (mm)
		max	typ	min	typ		20°C rise	40°C rise	
AE630PTA301MSZ	0.30	0.740	0.630	385	550	100	41	54	8,64
AE632PTA301MSZ	0.30	1.00	0.900	127	182	100	36	45	9,40
AE630PTA501MSZ	0.50	0.740	0.630	380	544	60	41	54	8,64
AE632PTA501MSZ	0.50	1.00	0.900	104	148	81	36	45	9,40
AE637PTA501MSZ	0.50	1.34	1.20	113	161	100	30	40	10,67
AE630PTA601MSZ	0.60	0.740	0.630	454	648	49	41	54	8,64
AE632PTA601MSZ	0.60	1.00	0.900	80	115	70	36	45	9,40
AE637PTA601MSZ	0.60	1.34	1.20	87	124	90	30	40	10,67
AE641PTA601MSZ	0.60	1.60	1.44	80	115	97	25	35	11,94
AE630PTA681MSZ	0.68	0.740	0.630	318	454	45	41	54	8,64
AE632PTA681MSZ	0.68	1.00	0.900	95	136	62	36	45	9,40
AE637PTA681MSZ	0.68	1.34	1.20	95	135	78	30	40	10,67
AE641PTA681MSZ	0.68	1.60	1.44	72	103	85	25	35	11,94
AE645PTA681MSZ	0.68	1.82	1.70	73	104	98	23	30	12,95
AE630PTA801MSZ	0.80	0.740	0.630	397	567	38	41	54	8,64
AE632PTA801MSZ	0.80	1.00	0.900	64	92	53	36	45	9,40
AE637PTA801MSZ	0.80	1.34	1.20	79	113	70	30	40	10,67
AE641PTA801MSZ	0.80	1.60	1.44	64	91	75	25	35	11,94
AE645PTA801MSZ	0.80	1.82	1.70	65	93	85	23	30	12,95
AE648PTA801MSZ	0.80	2.15	1.94	73	104	98	21	27	13,97
AE630PTA901MSZ	0.90	0.740	0.630	390	557	33	41	54	8,64
AE632PTA901MSZ	0.90	1.00	0.900	67	96	48	36	45	9,40
AE637PTA901MSZ	0.90	1.34	1.20	73	104	62	30	40	10,67
AE641PTA901MSZ	0.90	1.60	1.44	60	85	69	25	35	11,94
AE645PTA901MSZ	0.90	1.82	1.70	69	98	73	23	30	12,95
AE648PTA901MSZ	0.90	2.15	1.94	71	102	87	21	27	13,97
AE630PTA102MSZ	1.0	0.740	0.630	342	488	29	41	54	8,64
AE632PTA102MSZ	1.0	1.00	0.900	57	81	42	36	45	9,40
AE637PTA102MSZ	1.0	1.34	1.20	68	97	56	30	40	10,67
AE641PTA102MSZ	1.0	1.60	1.44	53	75	64	25	35	11,94
AE645PTA102MSZ	1.0	1.82	1.70	69	98	68	23	30	12,95
AE648PTA102MSZ	1.0	2.15	1.94	62	88	70	21	27	13,97
AE630PTA122MSZ	1.2	0.740	0.630	57	81	28	41	54	8,64
AE632PTA122MSZ	1.2	1.00	0.900	48	69	37	36	45	9,40
AE637PTA122MSZ	1.2	1.34	1.20	57	81	49	30	40	10,67
AE641PTA122MSZ	1.2	1.60	1.44	51	73	54	25	35	11,94
AE645PTA122MSZ	1.2	1.82	1.70	57	82	58	23	30	12,95
AE648PTA122MSZ	1.2	2.15	1.94	55	78	63	21	27	13,97
AE630PTA202MSZ	2.0	0.740	0.630	28	40	16	41	54	8,64
AE632PTA202MSZ	2.0	1.00	0.900	34	48	27	36	45	9,40
AE637PTA202MSZ	2.0	1.34	1.20	39	56	37	30	40	10,67
AE641PTA202MSZ	2.0	1.60	1.44	36	51	35	25	35	11,94
AE645PTA202MSZ	2.0	1.82	1.70	43	61	40	23	30	12,95
AE648PTA202MSZ	2.0	2.15	1.94	43	62	45	21	27	13,97
AE645PTA362MSZ	3.6	1.82	1.70	27	38	25	23	30	12,95
AE645PTA402MSZ	4.0	1.82	1.70	25	35	20	23	30	12,95
AE648PTA402MSZ	4.0	2.15	1.94	25	36	25	21	27	13,97
AE645PTA472MSZ	4.7	1.82	1.70	21	30	18	23	30	12,95

1. When ordering, please specify **screening** code:

AE648PTA472MSZ

Screening: Z = Unscreened

H = Coilcraft CP-SA-10001 Group A

1 = EEE-INST-002 (Family 1) Level 1

2 = EEE-INST-002 (Family 1) Level 2

3 = EEE-INST-002 (Family 1) Level 3

4 = MIL-STD-981 (Family 04) Class B

5 = MIL-STD-981 (Family 04) Class S

F = ESCC3201 (F4 operational life performed at 105°C)

- Screening performed to the document's latest revision.
- Lot qualification (Group B) available.
- Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.
- Country of origin restrictions available; prefix option G.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.

3. DCR measured on a Keithley 580 micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753D network analyzer.

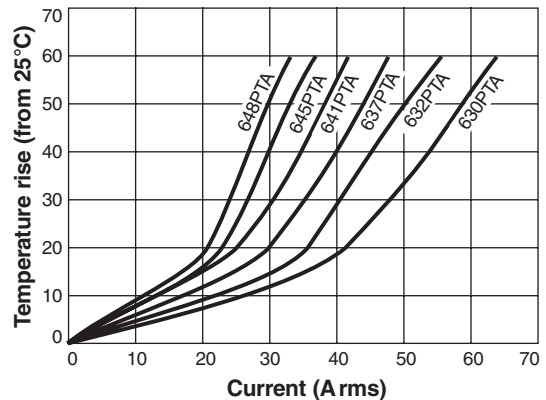
5. DC current at which the inductance drops 10% (typ) from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient. When Irms is greater than Isat, Isat is the more critical specification, and Irms is shown in gray type. See Temperature Rise vs Current curve below.

7. Electrical specifications at 25°C.

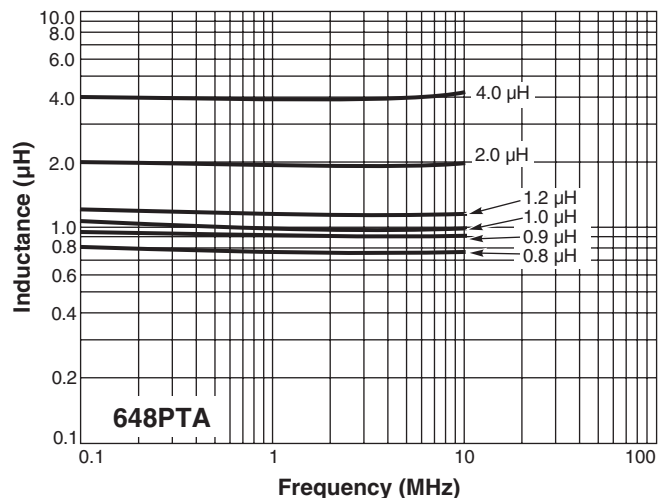
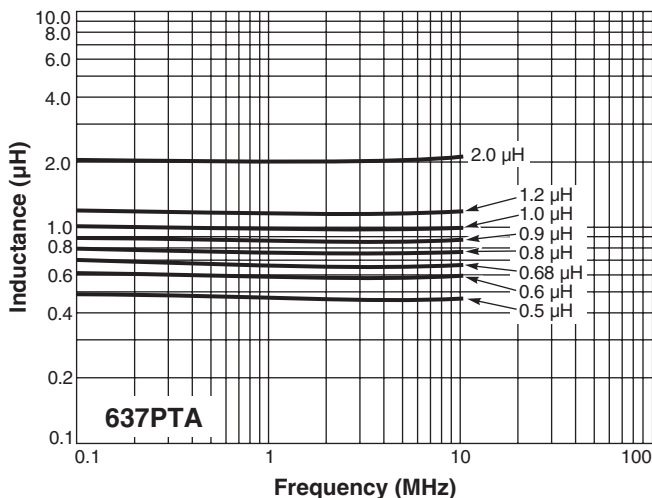
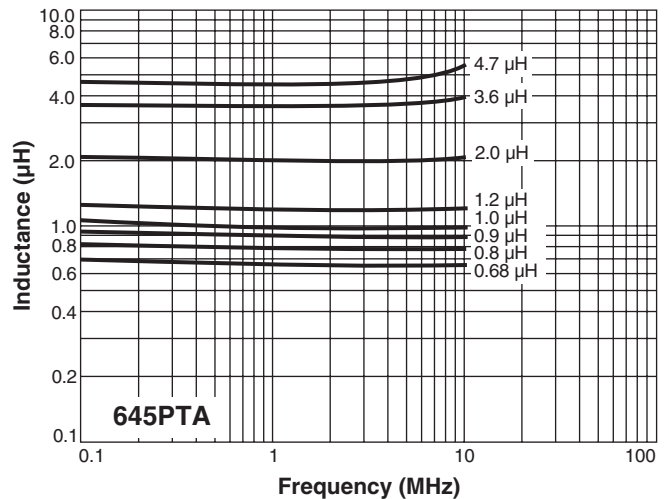
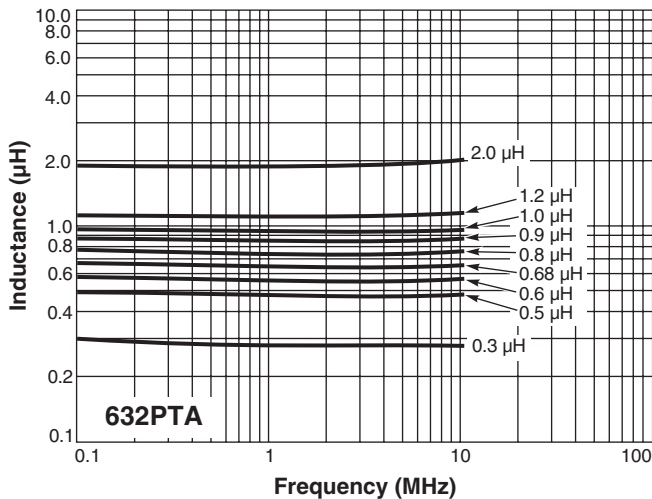
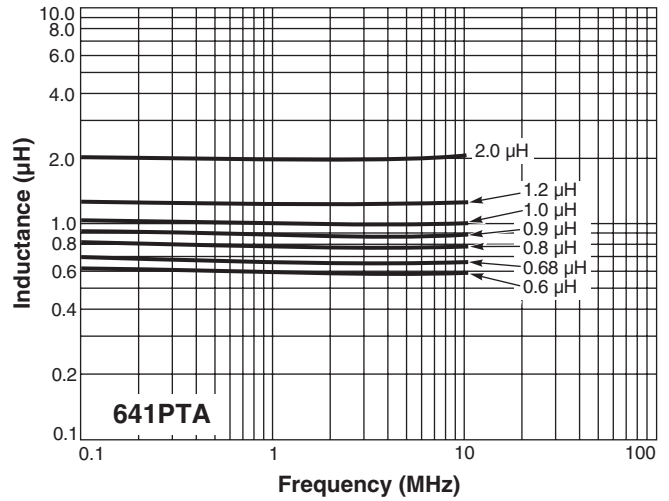
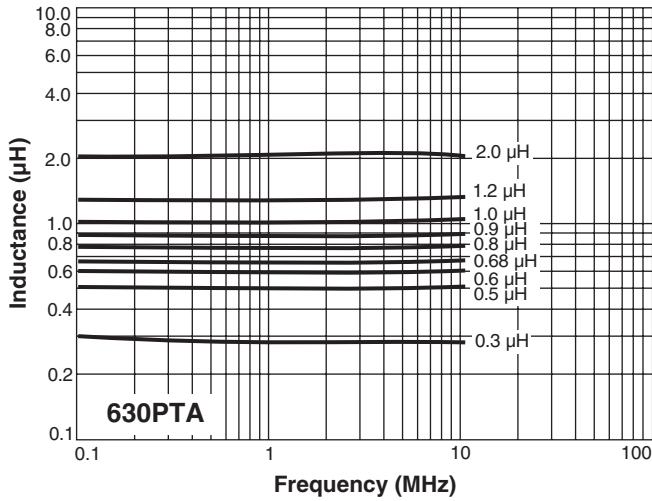
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Temperature Rise vs Current



AE63xPTA, AE64xPTA Series

L vs Frequency



1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

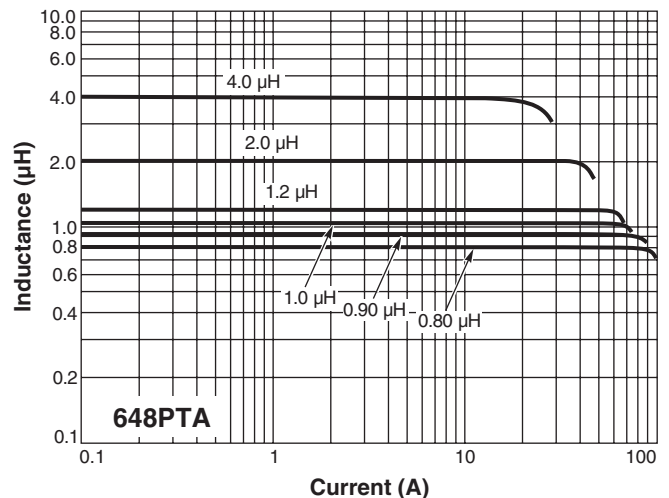
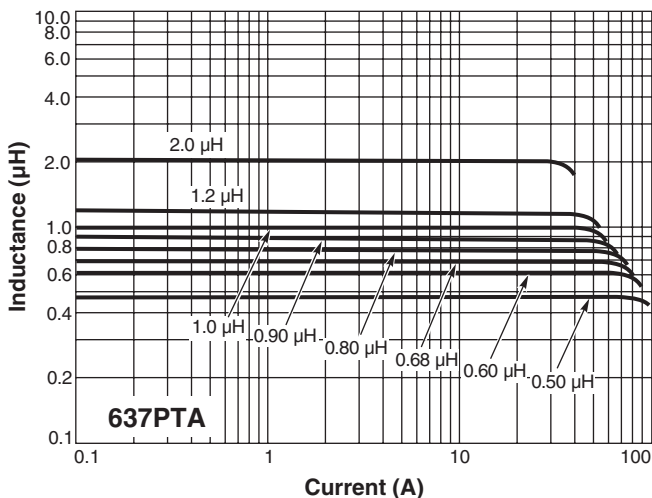
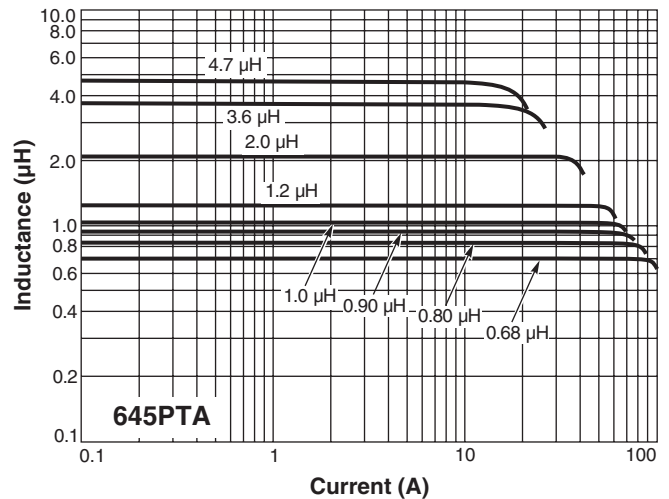
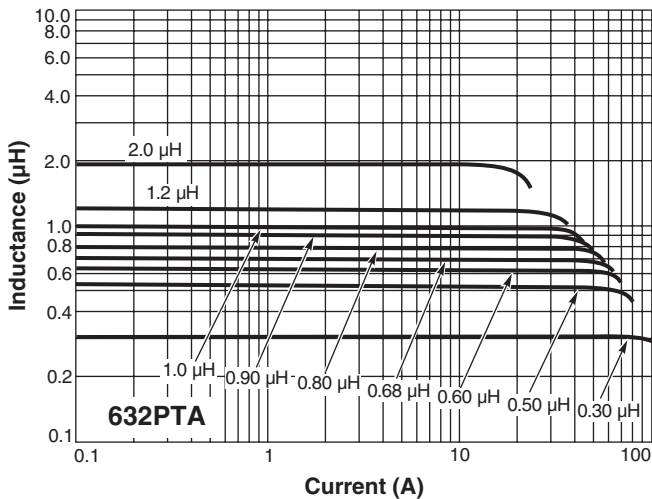
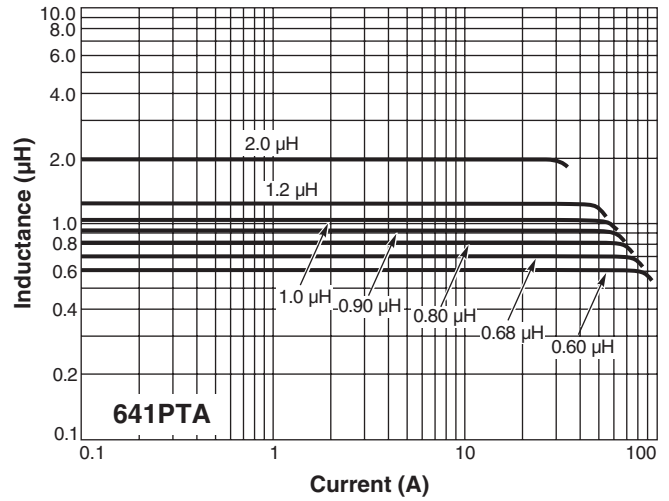
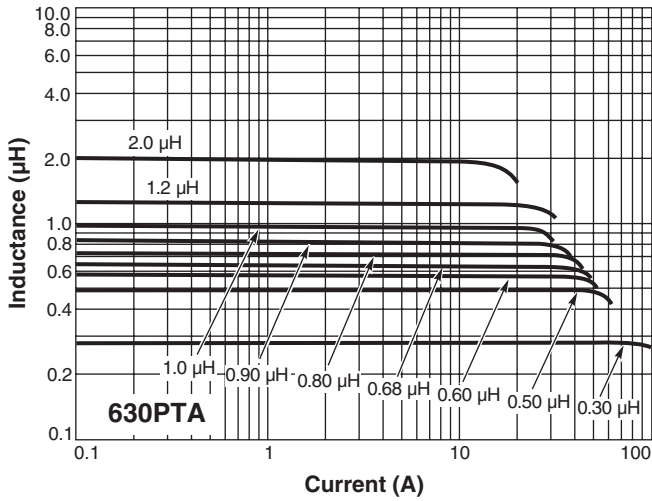
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document AE349-3 Revised 06/17/20

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

AE63xPTA, AE64xPTA Series

L vs Current



CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

© Coilcraft, Inc. 2020

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document AE349-4 Revised 06/17/20

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.