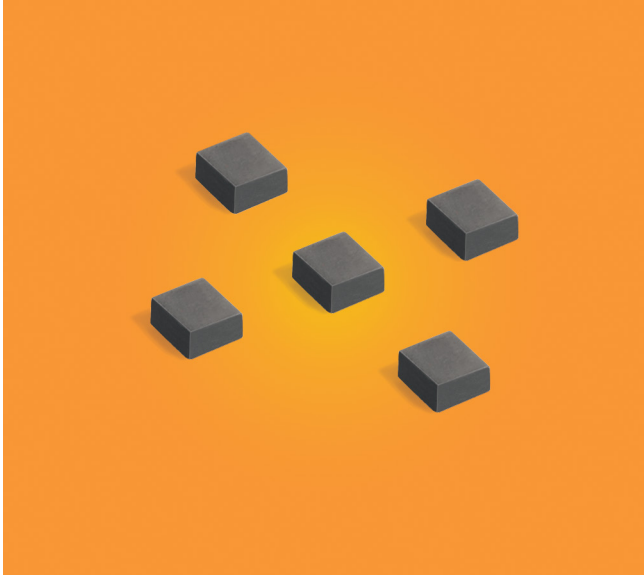


# High Reliability Power Inductors MS410PZA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Low profile, ultra-miniature, shielded power inductor
- Soft saturation makes them ideal for VRM/VRD applications.

**Terminations** Tin-lead (63/37) over tin over nickel over silver.

**Core material** Composite

**Weight** 44 – 69 mg

**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)

**Enhanced crush-resistant packaging** 2000/7" reel; 7500/13" reel  
Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.25 mm pocket depth

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR (mOhms) <sup>3</sup>		SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS410PZA221MSZ	0.22	14	19	272	340	2.5	3.5	4.1	2.6	3.5
MS410PZA331MSZ	0.33	23	27	234	293	2.3	3.0	3.4	2.6	3.5
MS410PZA361MSZ	0.36	19	23	168	210	2.3	3.1	3.5	2.2	3.0
MS410PZA561MSZ	0.56	28	32	162	203	1.8	2.5	2.9	2.2	3.0
MS410PZA601MSZ	0.61	23	29	134	167	1.9	2.6	3.0	2.1	2.8
MS410PZA681MSZ	0.69	34	40	131	164	1.6	2.2	2.7	2.1	2.8
MS410PZA102MSZ	1.0	35	42	92	115	1.6	2.2	2.5	1.9	2.6
MS410PZA152MSZ	1.5	60	72	75.5	94.4	1.3	1.8	2.2	1.6	2.2
MS410PZA222MSZ	2.2	81	97	58.6	73.2	1.0	1.3	1.6	1.4	1.9
MS410PZA332MSZ	3.3	106	127	49.3	61.6	0.87	1.2	1.4	1.2	1.6
MS410PZA472MSZ	4.7	143	171	42.1	52.6	0.72	1.0	1.2	1.0	1.4
MS410PZA682MSZ	6.8	166	200	31.9	39.9	0.61	0.84	1.0	0.94	1.3
MS410PZA103MSZ	10	255	306	27.7	34.6	0.50	0.65	0.74	0.90	1.2
MS410PZA153MSZ	15	394	483	20.6	25.8	0.43	0.58	0.65	0.74	1.0
MS410PZA223MSZ	22	608	630	17.8	22.2	0.32	0.45	0.52	0.58	0.80
MS410PZA333MSZ	33	855	896	13.3	16.6	0.23	0.32	0.38	0.42	0.57
MS410PZA393MSZ	39	919	985	12.7	15.9	0.23	0.32	0.37	0.39	0.54
MS410PZA473MSZ	47	1220	1320	11.0	13.7	0.21	0.28	0.32	0.33	0.46
MS410PZA563MSZ	56	1430	1520	9.68	12.1	0.19	0.26	0.30	0.37	0.51
MS410PZA683MSZ	68	2160	2370	8.72	10.9	0.16	0.21	0.25	0.31	0.42
MS410PZA823MSZ	82	2300	2440	8.64	10.8	0.15	0.21	0.24	0.26	0.34
MS410PZA104MSZ	100	2630	3000	7.52	9.40	0.17	0.24	0.28	0.29	0.39
MS410PZA224MSZ	220	6830	8000	4.88	6.10	0.10	0.10	0.20	0.17	0.23

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

**MS410PZA224MSZ**

**Testing:**

**Z** = Unscreened

**H** = Group A screening per Coilcraft CP-SA-10001

All screening performed to the document's latest revision

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A or equivalent.

5. DC current at 25°C that causes the specified inductance drop from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

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

**Coilcraft CPS**  
CRITICAL PRODUCTS & SERVICES

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

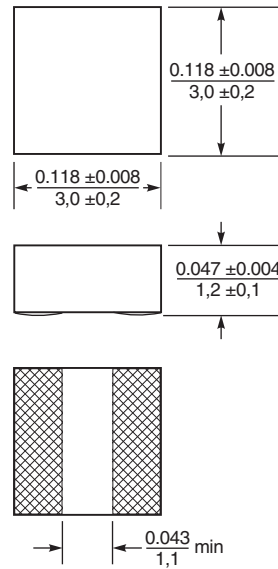
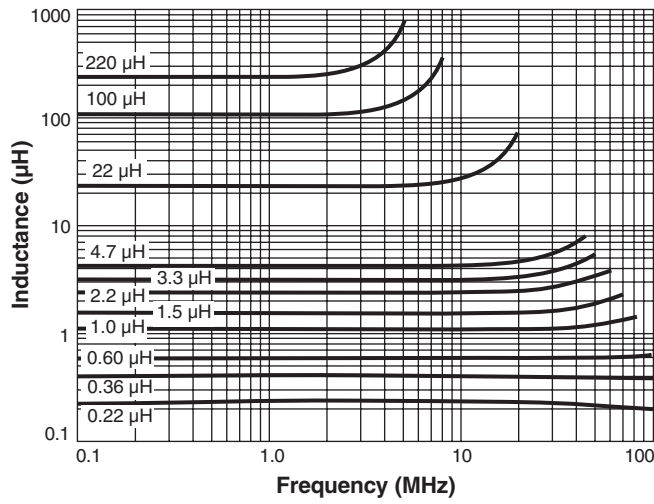
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Document MS747-1 Revised 01/09/18

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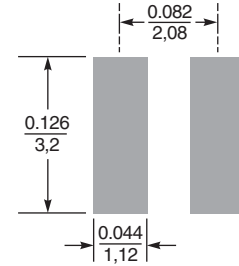
# MS410PZA Series

## Typical L vs Frequency



\* Dimensions are for the mounted part. Dimensions before mounting can be an additional 0.006 inch / 0.15 mm.

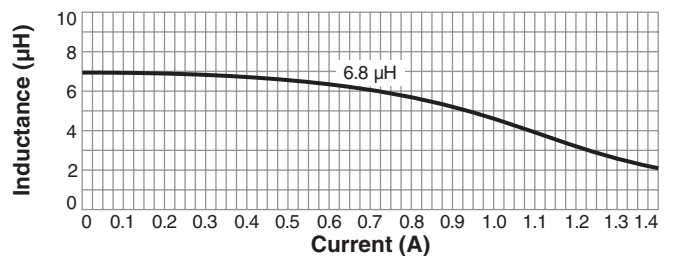
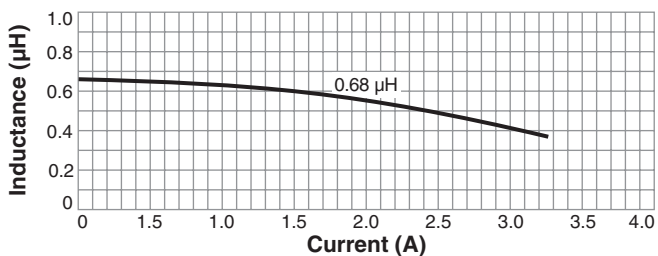
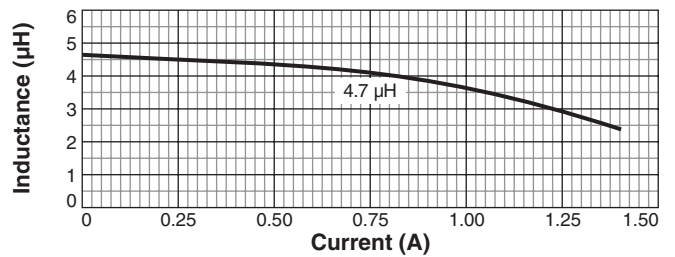
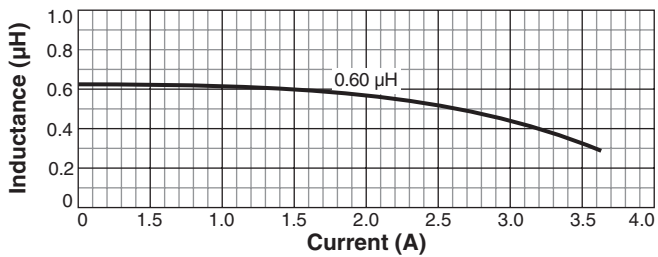
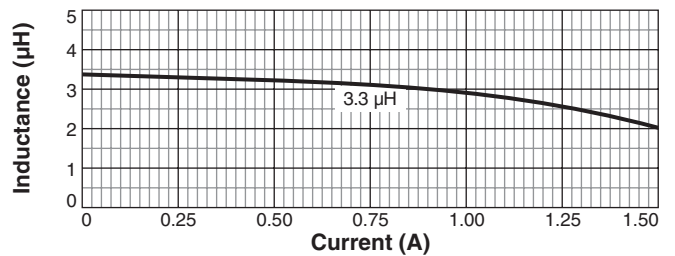
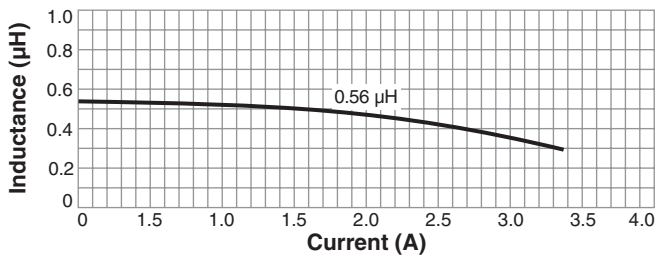
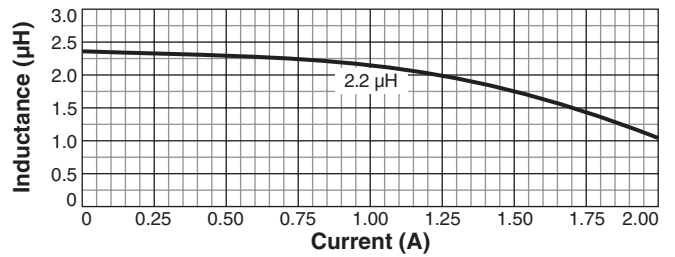
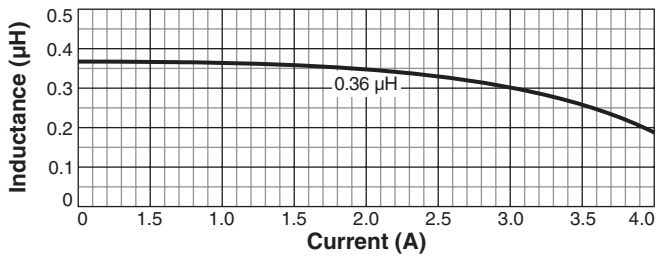
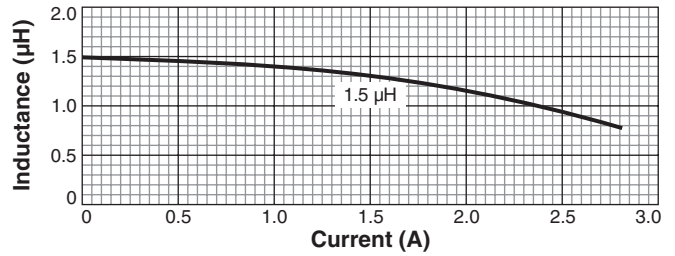
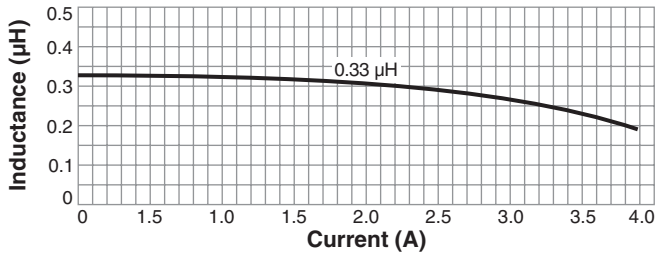
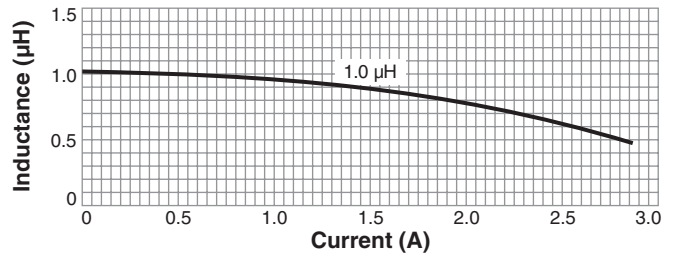
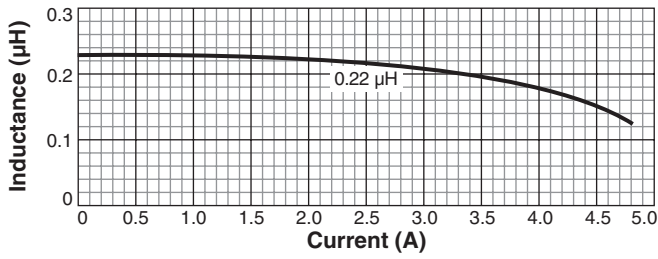
### Suggested Land Pattern



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

# MS410PZA Series

## L vs Current



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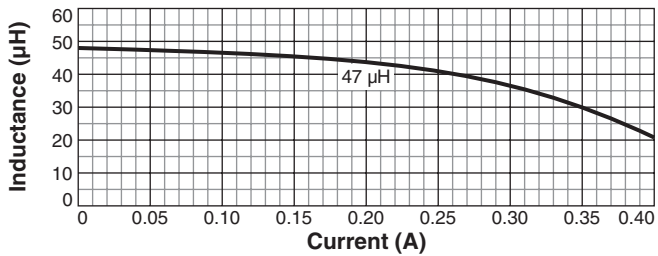
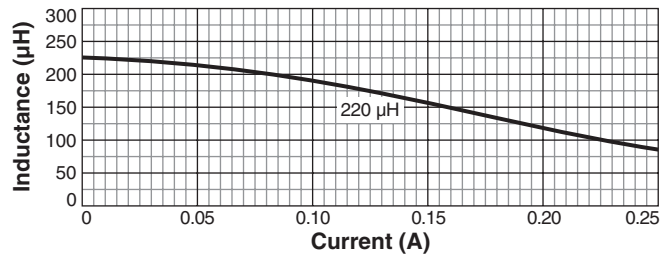
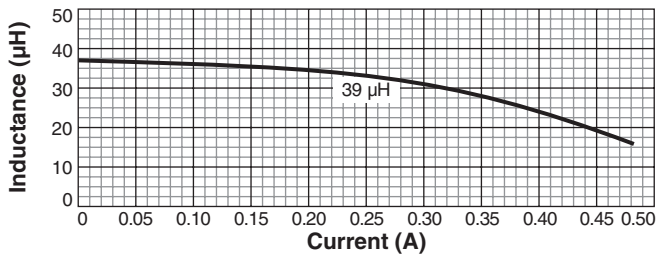
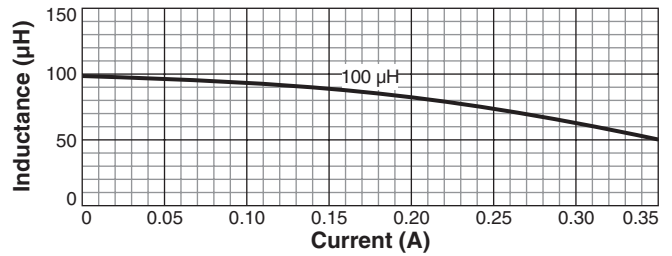
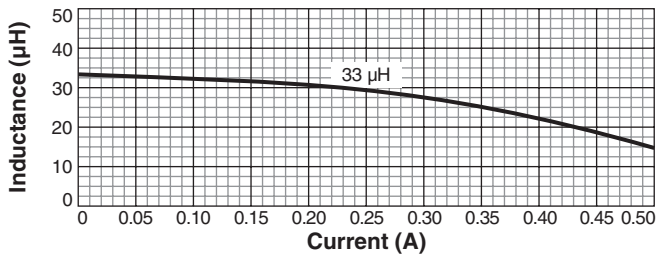
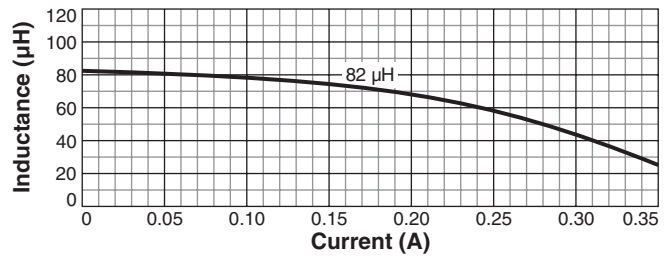
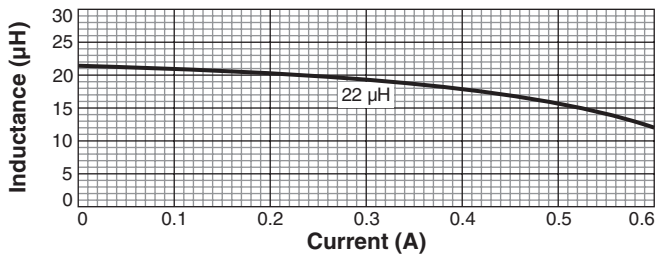
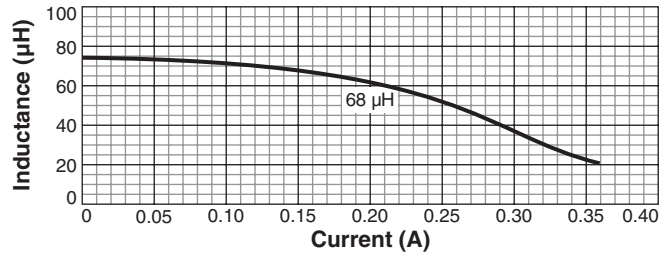
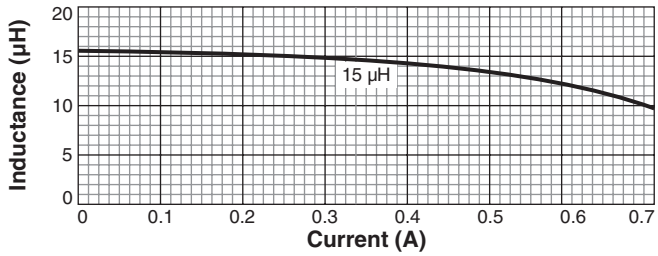
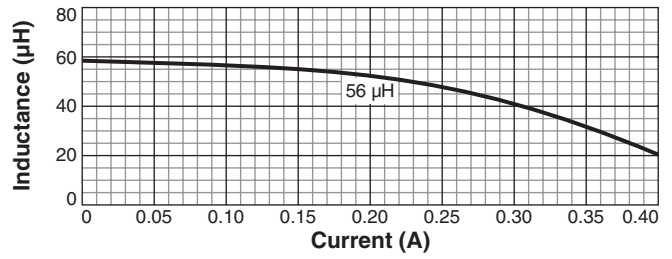
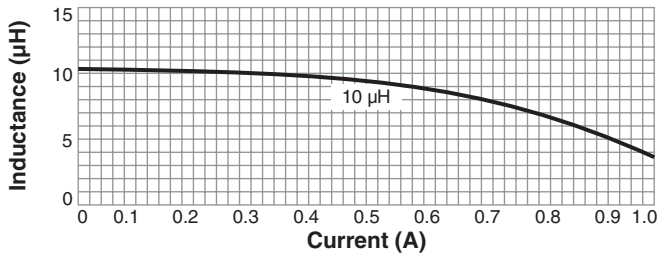
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Document MS747-3 Revised 01/09/18

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# MS410PZA Series

## L vs Current



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