

# High-Reliability Power Inductors ML420PJB



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Special construction allows it to pass vibration testing to 80 G and shock testing to 1000 G.

**Core material** Ferrite

**Terminations** Silver-palladium-platinum-glass frit

**Weight** 66 – 76 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.

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** 1000/7" reel

Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.02 mm pocket depth

**Recommended pick and place nozzle** OD: 5 mm; ID: ≤ 2.5 mm

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max <sup>3</sup> (Ohms)	SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
			min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
ML420PJB471MLZ	0.47	0.038	203	290	3.1	3.3	3.4	1.6	2.2
ML420PJB821MLZ	0.82	0.058	136.5	195	2.3	2.5	2.6	1.0	1.2
ML420PJB152MLZ	1.5	0.072	117.6	168	1.7	1.8	1.9	0.72	1.1
ML420PJB222MLZ	2.2	0.100	100.8	144	1.4	1.5	1.6	0.70	1.0
ML420PJB332MLZ	3.3	0.125	73.5	105	1.1	1.2	1.3	0.69	0.88
ML420PJB472MLZ	4.7	0.175	53.2	76	0.95	1.1	1.1	0.68	0.78
ML420PJB562MLZ	5.6	0.240	52.5	75	0.90	0.97	1.00	0.60	0.74
ML420PJB682MLZ	6.8	0.255	49.7	71	0.82	0.90	0.93	0.59	0.68
ML420PJB103MLZ	10	0.350	35.7	51	0.66	0.72	0.74	0.58	0.64
ML420PJB153MLZ	15	0.500	27.3	39	0.55	0.59	0.62	0.54	0.60
ML420PJB223MLZ	22	0.670	22.4	32	0.47	0.51	0.53	0.37	0.50
ML420PJB333MLZ	33	1.05	18.2	26	0.38	0.42	0.43	0.32	0.44
ML420PJB473MLZ	47	1.45	14.0	20	0.31	0.34	0.36	0.26	0.35
ML420PJB683MLZ	68	2.00	10.5	15	0.26	0.29	0.30	0.20	0.28
ML420PJB104MLZ	100	3.10	8.40	12	0.21	0.23	0.24	0.17	0.22
ML420PJB124MLZ	120	3.50	7.70	11	0.20	0.22	0.23	0.15	0.20
ML420PJB154MLZ	150	4.25	6.30	9.0	0.18	0.20	0.21	0.14	0.18
ML420PJB224MLZ	220	6.25	4.90	7.0	0.15	0.16	0.17	0.12	0.16
ML420PJB334MLZ	330	8.60	3.85	5.5	0.12	0.13	0.14	0.10	0.15
ML420PJB474MLZ	470	12.7	3.15	4.5	0.090	0.11	0.11	0.090	0.12
ML420PJB564MLZ	560	15.7	2.80	4.0	0.090	0.10	0.10	0.080	0.11
ML420PJB684MLZ	680	20.0	2.59	3.7	0.090	0.097	0.10	0.070	0.10
ML420PJB105MLZ	1000	28.0	2.10	3.0	0.087	0.096	0.10	0.060	0.090

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

**ML427PJB335MLZ**

**Testing:**

**Z** = Unscreened

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

**T** = Screening per MIL-STD-981

**U** = Screening per EEE-INST-002

**F** = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753ES 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**  
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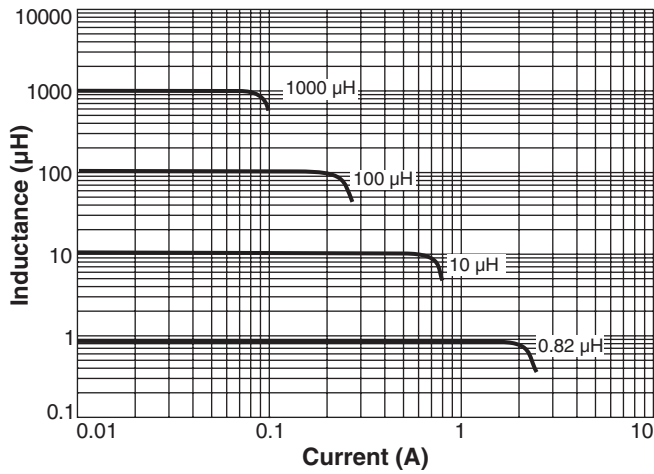
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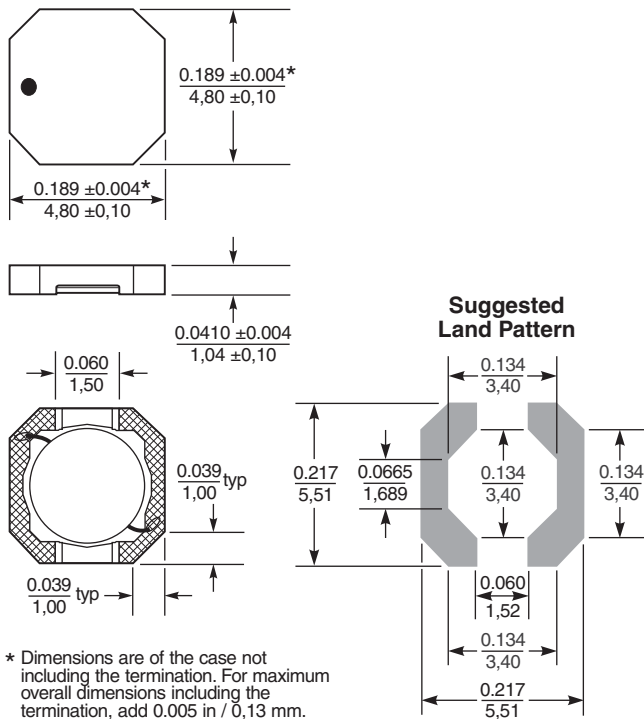
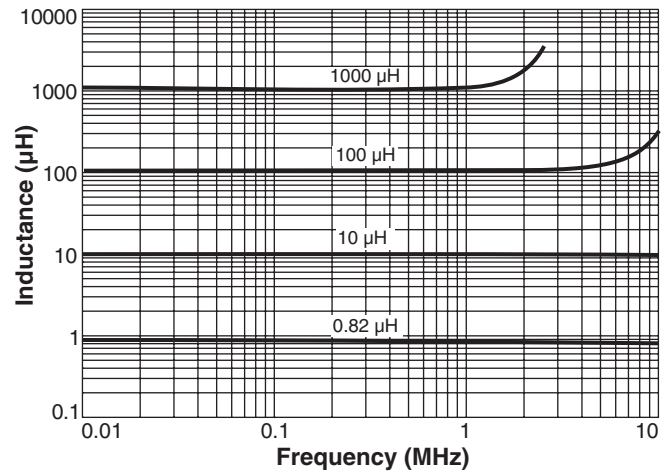
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# ML420PJB Series (5010)

## Typical L vs Current



## Typical L vs Frequency



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



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