PRELIMINARY

High-Reliability Power Inductors ML416PJB

- 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 54 – 64 mg

Ambient temperature –55°C to +85°C with Irms current, +85°C to +155°C with derated current

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, 0.25 mm thick, 8 mm pocket spacing, 1.32 mm pocket depth

Recommended pick and place nozzle OD: 4 mm; ID: ≤ 2 mm

Part number[1]	Inductance[2] (µH)	DCR max[3] (Ohms)	SRF (MHz)[4] min	SRF (MHz)[4] typ	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
ML416PJB331MLZ	0.33 ±20%	0.023	262	375	5.2	5.4	5.6	2.2	3.0
ML416PJB681MLZ	0.68 ±20%	0.055	154	220	3.5	3.6	3.7	1.4	1.9
ML416PJB102NLZ	1.0 ±30%	0.060	126	180	2.8	2.9	3.0	1.4	1.9
ML416PJB152MLZ	1.5 ±20%	0.070	98	140	2.6	2.7	2.8	1.3	1.8
ML416PJB222MLZ	2.2 ±20%	0.100	80	115	2.3	2.4	2.5	1.0	1.4
ML416PJB332MLZ	3.3 ±20%	0.100	70	100	1.3	1.4	1.4	1.2	1.6
ML416PJB472MLZ	4.7 ±20%	0.175	49	70	1.6	1.7	1.8	0.88	1.2
ML416PJB562MLZ	5.6 ±20%	0.260	42	60	1.5	1.6	1.6	0.68	0.88
ML416PJB682MLZ	6.8 ±20%	0.340	38	55	1.3	1.3	1.4	0.64	0.78
ML416PJB103MLZ	10 ±20%	0.350	28	40	0.98	1.0	1.1	0.44	0.60
ML416PJB153MLZ	15 ±20%	0.550	21	30	0.79	0.82	0.84	0.42	0.58
ML416PJB223MLZ	22 ±20%	0.600	17	25	0.74	0.78	0.79	0.42	0.56
ML416PJB333MLZ	33 ±20%	0.825	15	22	0.45	0.47	0.48	0.37	0.49
ML416PJB473MLZ	47 ±20%	1.40	13	19	0.35	0.37	0.38	0.32	0.42
ML416PJB683MLZ	68 ±20%	1.70	10	15	0.30	0.32	0.33	0.28	0.37
ML416PJB104MLZ	100 ±20%	2.40	8.0	12	0.24	0.26	0.27	0.24	0.32
ML416PJB124MLZ	120 ±20%	3.30	8.0	11.5	0.23	0.24	0.25	0.22	0.29
ML416PJB154MLZ	150 ±20%	3.50	7.0	10.0	0.21	0.22	0.23	0.20	0.26
ML416PJB184MLZ	180 ±20%	5.00	5.6	8.0	0.18	0.19	0.20	0.18	0.23
ML416PJB224MLZ	220 ±20%	5.20	4.9	7.0	0.15	0.16	0.17	0.17	0.22
ML416PJB334MLZ	330 ±20%	7.20	4.9	7.0	0.14	0.14	0.15	0.14	0.18
ML416PJB474MLZ	470 ±20%	10.0	2.8	4.0	0.10	0.11	0.12	0.10	0.14
ML416PJB564MLZ	560 ±20%	12.5	2.5	3.5	0.10	0.105	0.115	0.090	0.11
ML416PJB684MLZ	680 ±20%	13.5	2.0	3.0	0.10	0.105	0.110	0.090	0.11
ML416PJB824MLZ	820 ±20%	20.0	2.0	3.0	0.090	0.095	0.095	0.080	0.10
ML416PJB105MLZ	1000 ±20%	21.5	2.0	3.0	0.080	0.090	0.095	0.080	0.10
ML416PJB155MLZ	1500 ±20%	35.0	1.7	2.5	0.090	0.090	0.090	0.070	0.090
ML416PJB185MLZ	1800 ±20%	36.0	1.4	2.0	0.079	0.085	0.087	0.060	0.080
ML416PJB225MLZ	2200 ±20%	40.0	0.70	1.0	0.079	0.083	0.085	0.060	0.070
ML416PJB335MLZ	3300 ±20%	76.0	0.66	0.95	0.074	0.078	0.080	0.040	0.050

1. When ordering, please specify **testing** code:
   ML416PJB105MLZ
   Testing: Z = COTS
   H = Screening per Coilcraft CP-SA-10001
   N = Screening per Coilcraft CP-SA-10004
   C = Custom screening (please specify when ordering)
2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A. Inductance at 1 MHz is the same for parts with SRF ≥10 MHz.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 8753ES or equivalent.
5. DC current that causes the specified inductance drop from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

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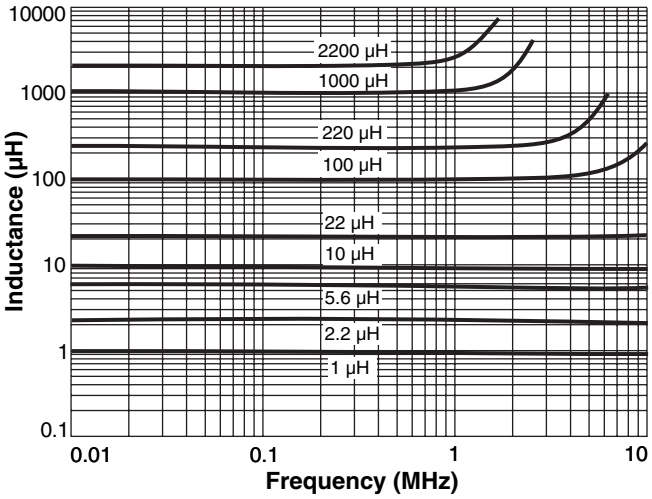
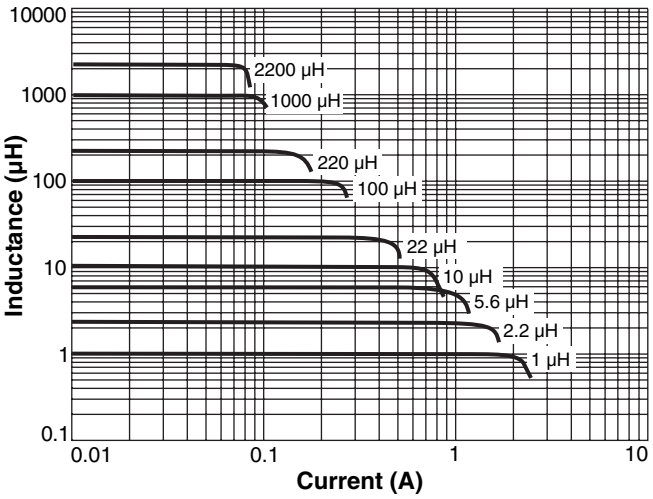
PRELIMINARY

ML416PJB Series (4012)

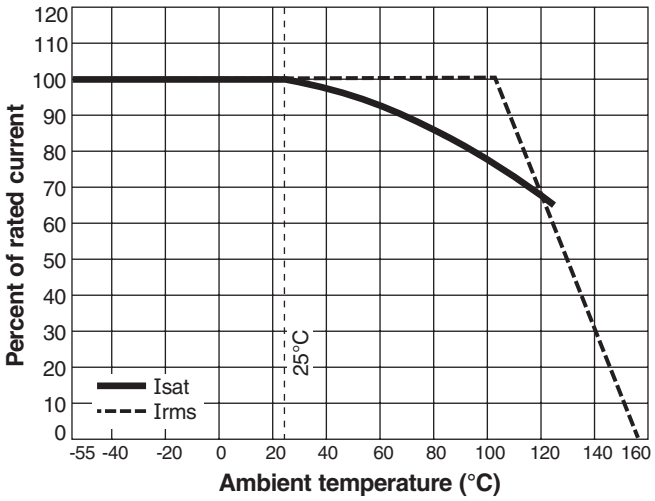
Typical L vs Frequency

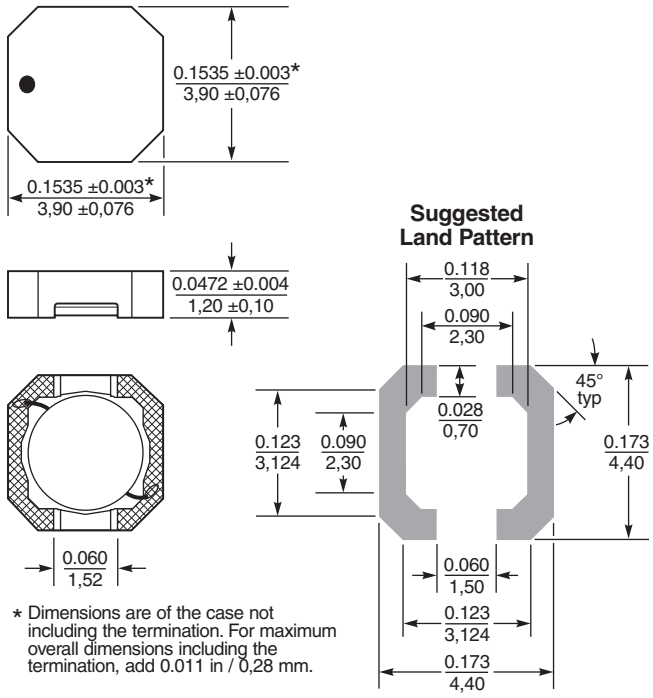


Typical L vs Current



Current Derating





* Dimensions of the case not including the termination. For maximum overall dimensions including the termination, add 0.011 in / 0,28 mm.

Dimensions are in inches / mm

These parts are preproduction products for electrical evaluation only.
Specification subject to change without notice.

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