

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.
- Shielded construction

Core material Ferrite

Terminations Silver-palladium-platinum-glass frit.

Weight 60 – 81 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, 0.25 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		Isat (A) ⁵			Irms (A) ⁶	
			min	typ	10% drop	20% drop	30% drop	20°C rise	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. Please specify **termination** and **testing** codes:

ML416PJB105MLZ

Termination: L = Silver-palladium-platinum-glass frit
R = Matte tin over nickel over silver

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

Custom screening also available

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 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

© Coilcraft, Inc. 2017

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

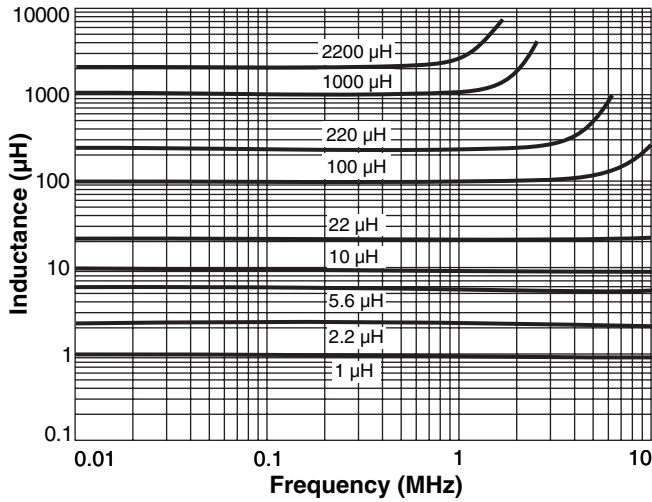
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document ML433-1 Revised 05/22/17

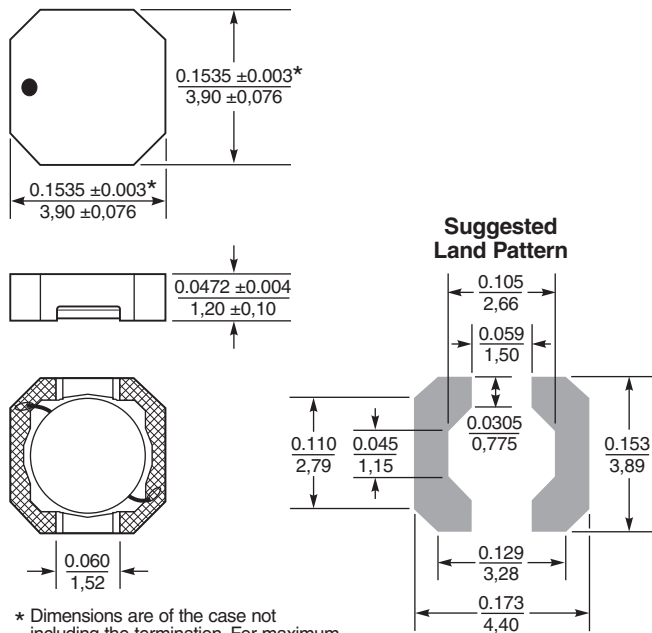
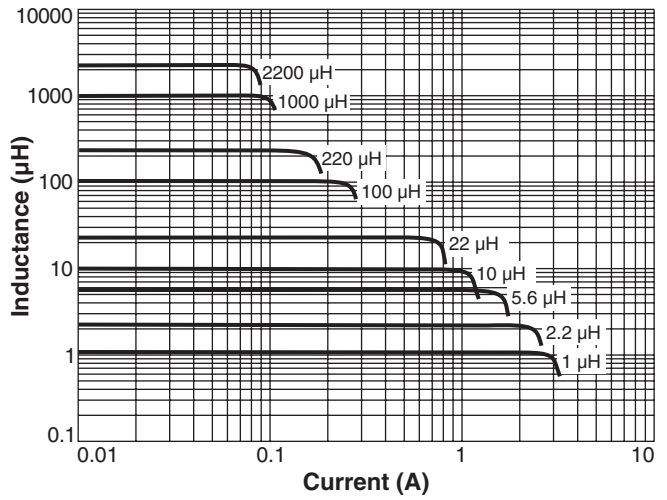
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

ML416PJB Series (4012)

Typical L vs Frequency



Typical L vs Current



* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0,13 mm.

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



CRITICAL PRODUCTS & SERVICES

© Coilcraft, Inc. 2017

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

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

Document ML433-2 Revised 05/22/17

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.