PRELIMINARY

Military Grade Power Inductors ML414PJB

- High temperature material allows 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 44.1 – 46.5 mg

Ambient temperature –55°C to +105°C with Irms current, +105°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; 3500/13″ reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.52 mm pocket depth

Recommended pick and place nozzle OD: 3.3 mm; ID: ≤ 1.65 mm

Part number[1]	Inductance ±20%[2] (µH)	DCR max[3] (Ohms)	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	20% drop	30% drop	Irms (A)[6] 20°C rise	40°C rise
ML414PJB102MLZ	1.0	0.055	215	2.3	2.5	2.55	1.6	2.10
ML414PJB222MLZ	2.2	0.100	140	1.1	1.4	1.5	1.2	1.60
ML414PJB332MLZ	3.3	0.145	115	0.98	1.2	1.3	1.0	1.35
ML414PJB472MLZ	4.7	0.175	86	1.1	1.2	1.3	0.90	1.25
ML414PJB562MLZ	5.6	0.220	74	0.98	1.1	1.2	0.82	1.10
ML414PJB682MLZ	6.8	0.240	72	0.82	0.83	0.86	0.82	1.10
ML414PJB822MLZ	8.2	0.270	60	0.58	0.75	0.78	0.70	1.00
ML414PJB103MLZ	10	0.330	55	0.56	0.66	0.70	0.65	0.87
ML414PJB153MLZ	15	0.440	45	0.46	0.56	0.59	0.62	0.82
ML414PJB183MLZ	18	0.575	37	0.44	0.51	0.54	0.52	0.68
ML414PJB223MLZ	22	0.720	34	0.44	0.48	0.49	0.45	0.60
ML414PJB333MLZ	33	0.920	27	0.30	0.38	0.40	0.43	0.58
ML414PJB473MLZ	47	1.40	22	0.28	0.33	0.34	0.35	0.47
ML414PJB563MLZ	56	1.55	19	0.26	0.30	0.31	0.32	0.42
ML414PJB683MLZ	68	1.80	17	0.22	0.26	0.29	0.30	0.40
ML414PJB823MLZ	82	2.00	14	0.20	0.24	0.26	0.29	0.39
ML414PJB104MLZ	100	2.75	13	0.19	0.23	0.24	0.26	0.37
ML414PJB124MLZ	120	3.45	11	0.19	0.21	0.22	0.22	0.30
ML414PJB154MLZ	150	4.10	10	0.16	0.19	0.20	0.20	0.27
ML414PJB184MLZ	180	4.80	9.0	0.14	0.17	0.18	0.19	0.25
ML414PJB224MLZ	220	6.00	7.0	0.14	0.16	0.17	0.16	0.22
ML414PJB334MLZ	330	9.30	6.0	0.11	0.12	0.13	0.13	0.18
ML414PJB474MLZ	470	12.0	4.5	0.080	0.11	0.11	0.12	0.16
ML414PJB564MLZ	560	14.0	4.5	0.095	0.105	0.11	0.11	0.145
ML414PJB684MLZ	680	18.5	4.0	0.092	0.100	0.105	0.095	0.125
ML414PJB824MLZ	820	24.0	3.7	0.086	0.099	0.100	0.085	0.110
ML414PJB105MLZ	1000	31.0	3.0	0.090	0.099	0.100	0.082	0.100
ML414PJB155MLZ	1500	44.0	2.7	0.080	0.086	0.090	0.060	0.080

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

ML414PJB105MLZ

Testing: **Z** = Coilcraft Critical Products Environmental Stress Conditions Testing.
H = Coilcraft Qual + Coilcraft Hi-Rel Burn-in
P = Coilcraft Qual + MIL-STD-981 Class S Group A screening
N = Coilcraft Qual + MIL-STD-981 Class B Group A screening
C = Coilcraft Qual + MIL-STD-981 Class S Group A screening + MIL-STD-981 Class S Group B qualification
W = Coilcraft Qual + MIL-STD-981 Class B Group A screening + MIL-STD-981 Class S Group B qualification

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.

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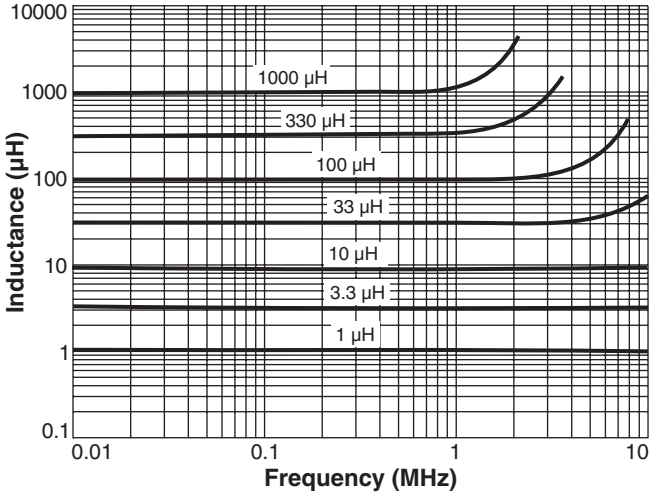
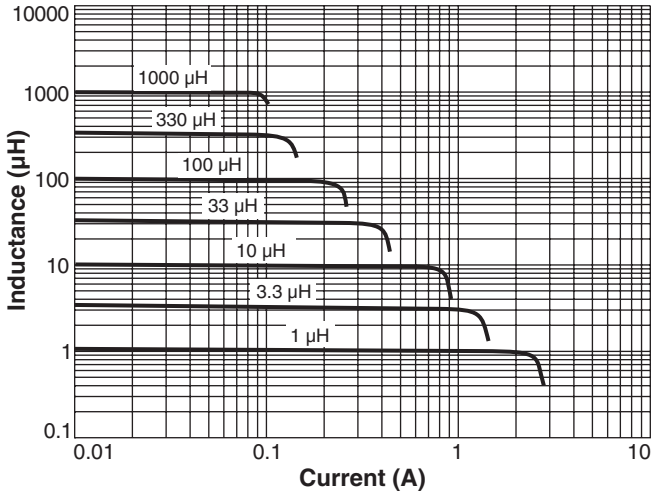
PRELIMINARY

ML414PJB Series (3315)

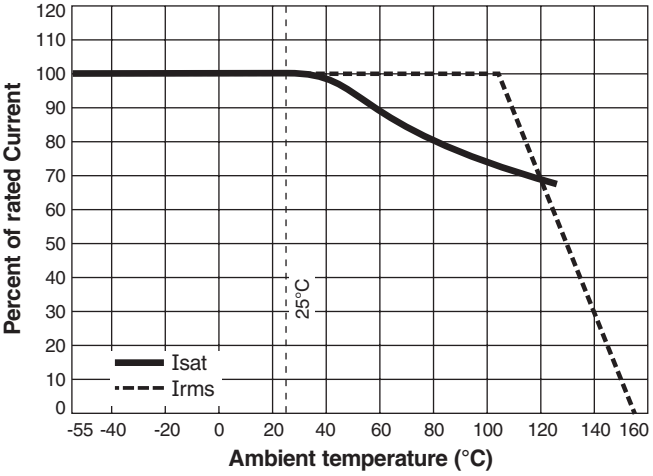
Typical L vs Frequency

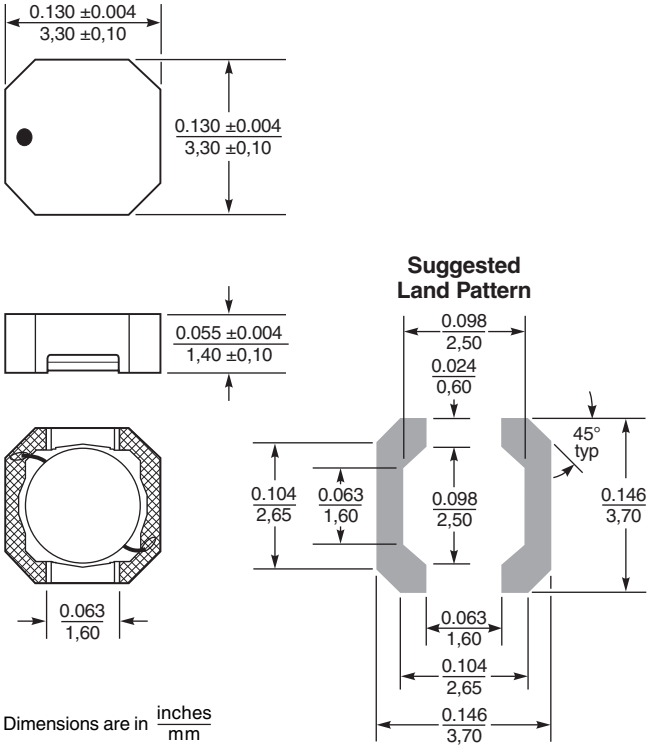


Typical L vs Current



Current Derating





Dimensions are in inches / mm

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