

PRELIMINARY

Military Grade Power Inductors ML612PNB



- High current, low DCR shielded power inductors
- High temperature materials allow operation in ambient temperatures up to 155°C

Core material Ferrite**Terminations** Matte tin over nickel over phos bronze.**Weight:** 3.8 g – 4.6 g**Ambient temperature** –55°C to +105°C with I_{rms} 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** 500/13" reel;
Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 8.1 mm pocket depth

Part number ¹	Inductance ² (µH)	DCR ³ (mOhms)		SRF typ ⁴ (MHz)	Isat (A) ⁵			I _{rms} (A) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
ML612PNB102NLZ	1.0±30%	6.3	7.0	115	31.84	35.04	36.84	7.1	10.1
ML612PNB142NLZ	1.4±30%	8.8	9.8	85	25.04	27.76	29.52	6.8	9.8
ML612PNB222NLZ	2.2±30%	9.4	10.5	60	22.56	24.80	25.96	6.3	9.2
ML612PNB272NLZ	2.7±30%	10.1	11.3	40	18.76	20.72	22.04	6.1	8.6
ML612PNB392NLZ	3.9±30%	11.7	13.0	35	16.52	18.24	19.20	5.7	7.7
ML612PNB472MLZ	4.7±20%	13.9	15.5	33	15.30	16.90	17.76	4.3	6.2
ML612PNB562MLZ	5.6±20%	15.7	17.5	30	13.38	14.86	15.74	4.3	6.2
ML612PNB682MLZ	6.8±20%	19.1	21.3	23	12.10	13.56	14.20	4.2	6.0
ML612PNB822MLZ	8.2±20%	20.3	22.6	20	11.38	12.60	13.28	4.1	5.9
ML612PNB103MLZ	10±20%	21.8	24.3	17	10.62	11.82	12.48	4.0	5.7
ML612PNB123MLZ	12±20%	23.2	25.8	15	8.90	9.88	10.44	3.7	5.2
ML612PNB153MLZ	15±20%	27.9	31.0	13	8.36	9.32	9.94	3.5	4.9
ML612PNB183MLZ	18±20%	30.8	34.3	12	8.00	8.88	9.36	3.0	4.5
ML612PNB223MLZ	22±20%	35.5	39.5	11	7.08	7.88	8.34	2.9	4.0
ML612PNB273MLZ	27±20%	45.0	50.0	10	6.32	7.08	7.54	2.6	3.6
ML612PNB333MLZ	33±20%	61.9	68.8	9.5	5.96	6.56	6.98	2.3	3.1
ML612PNB393MLZ	39±20%	69.1	76.8	8.5	5.38	5.94	6.28	2.1	3.0
ML612PNB473MLZ	47±20%	72.3	80.4	7.5	4.76	5.40	5.66	2.0	2.9
ML612PNB563MLZ	56±20%	80.2	89.2	7.0	4.40	4.98	5.30	1.9	2.7
ML612PNB683MLZ	68±20%	91.3	101.5	6.5	3.92	4.46	4.74	1.8	2.6
ML612PNB823MLZ	82±20%	125.9	139.9	5.0	3.66	4.08	4.38	1.6	2.3
ML612PNB104MLZ	100±20%	135.1	150.2	4.5	3.12	3.56	3.78	1.5	2.2
ML612PNB124KLZ	120±10%	182.3	202.6	4.3	3.02	3.36	3.58	1.4	1.9
ML612PNB154KLZ	150±10%	216.5	240.6	4.1	2.60	2.94	3.10	1.3	1.8
ML612PNB184KLZ	180±10%	229.0	254.5	4.0	2.36	2.68	2.84	1.2	1.7
ML612PNB224KLZ	220±10%	323.6	359.6	3.4	2.24	2.50	2.62	1.0	1.6
ML612PNB274KLZ	270±10%	415.6	461.8	3.1	1.94	2.18	2.34	0.90	1.2
ML612PNB334KLZ	330±10%	487.3	541.5	2.9	1.72	1.92	2.06	0.80	1.0
ML612PNB394KLZ	390±10%	533.6	592.9	2.7	1.62	1.82	1.92	0.75	1.0
ML612PNB474KLZ	470±10%	707.5	786.2	2.2	1.44	1.64	1.74	0.66	0.90
ML612PNB564KLZ	560±10%	777.4	863.8	2.0	1.40	1.54	1.66	0.60	0.80
ML612PNB684KLZ	680±10%	1045	1162	1.7	1.24	1.32	1.46	0.55	0.75
ML612PNB824KLZ	820±10%	1166	1296	1.4	1.14	1.28	1.42	0.50	0.70
ML612PNB105KLZ	1000±10%	1334	1482	1.3	0.982	1.08	1.18	0.48	0.68

1. When ordering, please specify **testing** code:**ML612PNB105KLZ**
1**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
qualification2. Inductance tested at 100 kHz, 0.1 V_{rms}, 0 A_{dc}
using an Agilent/HP 4263B LCR meter or
equivalent.3. DCR measured on a micro-ohmmeter and a
Coilcraft CCF858 test fixture.4. SRF measured using an Agilent/HP 8753D
network analyzer and a Coilcraft SMD-D test
fixture.5. DC current at which the inductance drops the
specified amount 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 & SERVICESThese parts are preproduction products for electrical evaluation only.
Specification subject to change without notice.

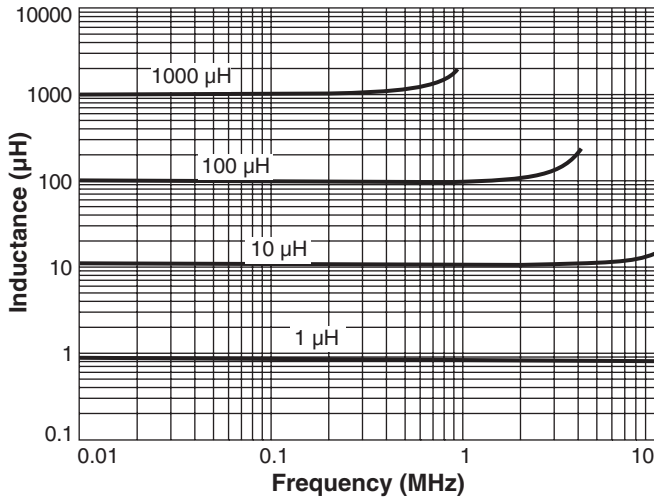
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1102 Silver Lake Road
Cary IL 60013**Phone** 800-981-0363
Fax 847-639-1508**E-mail** cp@coilcraft.com
Web www.coilcraft-cps.com

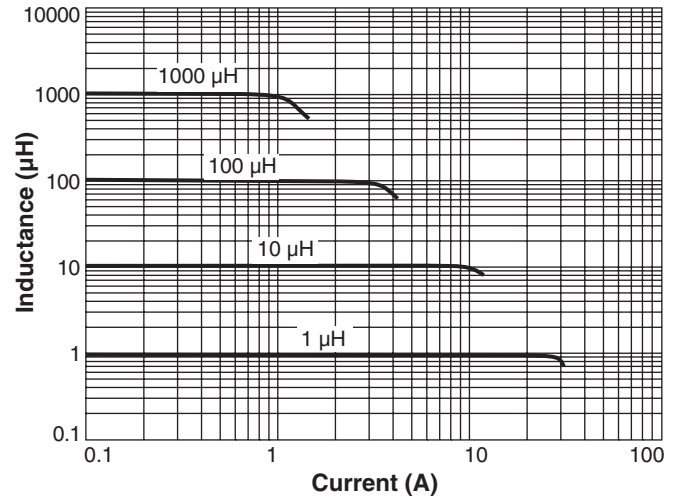
PRELIMINARY

ML612PNB Series

Typical L vs Frequency



Typical L vs Current



Current Derating

