

High-Reliability 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 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 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 (MHz) ⁴		Isat (A) ⁵			Irms (A) ⁶	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
ML612PNB102NLZ	1.0 ±30%	6.3	7.0	80	115	31.84	35.04	36.84	7.1	10.1
ML612PNB142NLZ	1.4 ±30%	8.8	9.8	60	85	25.04	27.76	29.52	6.8	9.8
ML612PNB222NLZ	2.2 ±30%	9.4	10.5	42	60	22.56	24.80	25.96	6.3	9.2
ML612PNB272NLZ	2.7 ±30%	10.1	11.3	28	40	18.76	20.72	22.04	6.1	8.6
ML612PNB392NLZ	3.9 ±30%	11.7	13.0	25	35	16.52	18.24	19.20	5.7	7.7
ML612PNB472MLZ	4.7 ±20%	13.9	15.5	23	33	15.30	16.90	17.76	4.3	6.2
ML612PNB562MLZ	5.6 ±20%	15.7	17.5	21	30	13.38	14.86	15.74	4.3	6.2
ML612PNB682MLZ	6.8 ±20%	19.1	21.3	16	23	12.10	13.56	14.20	4.2	6.0
ML612PNB822MLZ	8.2 ±20%	20.3	22.6	14	20	11.38	12.60	13.28	4.1	5.9
ML612PNB103MLZ	10 ±20%	21.8	24.3	12	17	10.62	11.82	12.48	4.0	5.7
ML612PNB123MLZ	12 ±20%	23.2	25.8	11	15	8.90	9.88	10.44	3.7	5.2
ML612PNB153MLZ	15 ±20%	27.9	31.0	9.0	13	8.36	9.32	9.94	3.5	4.9
ML612PNB183MLZ	18 ±20%	30.8	34.3	8.4	12	8.00	8.88	9.36	3.0	4.5
ML612PNB223MLZ	22 ±20%	35.5	39.5	7.7	11	7.08	7.88	8.34	2.9	4.0
ML612PNB273MLZ	27 ±20%	45.0	50.0	7.0	10	6.32	7.08	7.54	2.6	3.6
ML612PNB333MLZ	33 ±20%	61.9	68.8	6.6	9.5	5.96	6.56	6.98	2.3	3.1
ML612PNB393MLZ	39 ±20%	69.1	76.8	6.0	8.5	5.38	5.94	6.28	2.1	3.0
ML612PNB473MLZ	47 ±20%	72.3	80.4	5.3	7.5	4.76	5.40	5.66	2.0	2.9
ML612PNB563MLZ	56 ±20%	80.2	89.2	4.9	7.0	4.40	4.98	5.30	1.9	2.7
ML612PNB683MLZ	68 ±20%	91.3	101.5	4.6	6.5	3.92	4.46	4.74	1.8	2.6
ML612PNB823MLZ	82 ±20%	125.9	139.9	3.5	5.0	3.66	4.08	4.38	1.6	2.3
ML612PNB104MLZ	100 ±20%	135.1	150.2	3.1	4.5	3.12	3.56	3.78	1.5	2.2
ML612PNB124KLZ	120 ±10%	182.3	202.6	3.0	4.3	3.02	3.36	3.58	1.4	1.9
ML612PNB154KLZ	150 ±10%	216.5	240.6	2.9	4.1	2.60	2.94	3.10	1.3	1.8
ML612PNB184KLZ	180 ±10%	229.0	254.5	2.8	4.0	2.36	2.68	2.84	1.2	1.7
ML612PNB224KLZ	220 ±10%	323.6	359.6	2.4	3.4	2.24	2.50	2.62	1.0	1.6
ML612PNB274KLZ	270 ±10%	415.6	461.8	2.2	3.1	1.94	2.18	2.34	0.90	1.2
ML612PNB334KLZ	330 ±10%	487.3	541.5	2.0	2.9	1.72	1.92	2.06	0.80	1.0
ML612PNB394KLZ	390 ±10%	533.6	592.9	1.9	2.7	1.62	1.82	1.92	0.75	1.0
ML612PNB474KLZ	470 ±10%	707.5	786.2	1.6	2.2	1.44	1.64	1.74	0.66	0.90
ML612PNB564KLZ	560 ±10%	777.4	863.8	1.4	2.0	1.40	1.54	1.66	0.60	0.80
ML612PNB684KLZ	680 ±10%	1045	1162	1.2	1.7	1.24	1.32	1.46	0.55	0.75
ML612PNB824KLZ	820 ±10%	1166	1296	1.0	1.4	1.14	1.28	1.42	0.50	0.70
ML612PNB105KLZ	1000 ±10%	1334	1482	0.90	1.3	0.982	1.08	1.18	0.48	0.68

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

ML612PNB105KLZ

Screening: Z = Unscreened

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

G = Coilcraft CP-SA-10001
Group A (SLDC Option A)

D = Coilcraft CP-SA-10001
Group A (SLDC Option B)

- Screening performed to the document's latest revision.
- Custom testing also available.
- Country of origin restrictions available; prefix option G.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc 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.

5. Typical DC current at which the inductance drops the specified amount from its value without current.

6. Typical 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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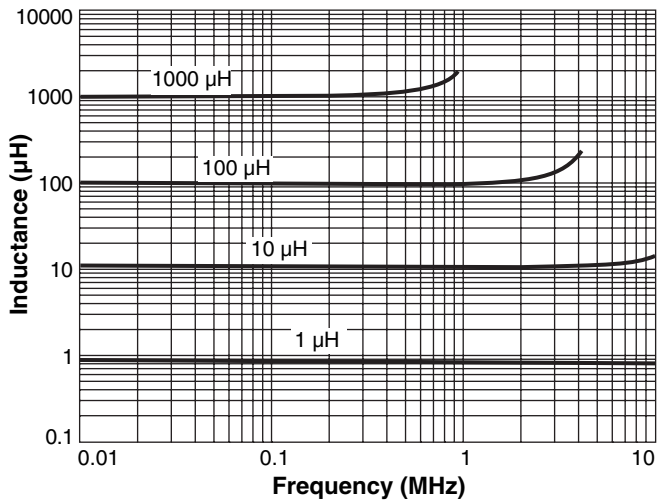
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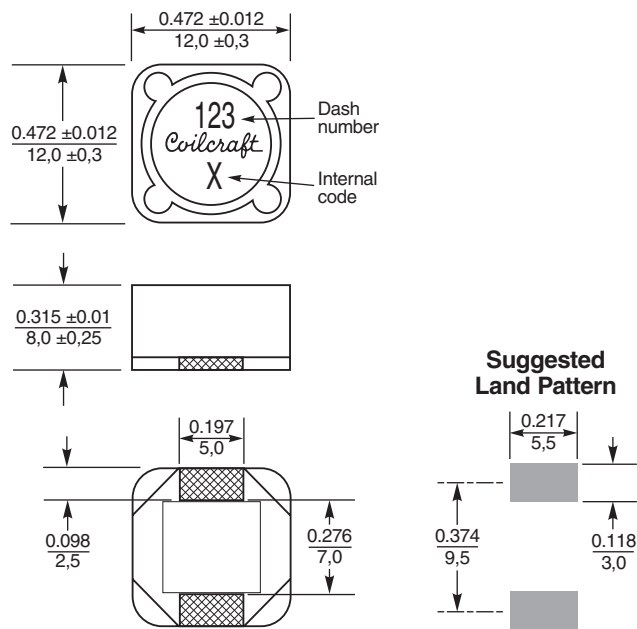
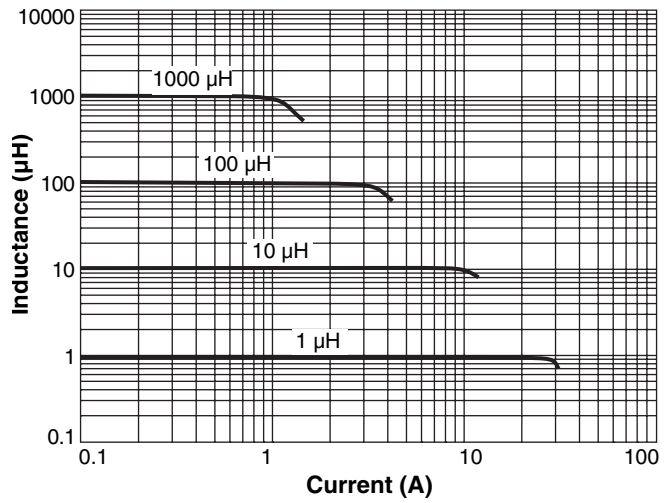
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ML612PNB Series

Typical L vs Frequency



Typical L vs Current



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



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