



Shielded Power Inductors – MLC



- Soft saturation makes them ideal for VRD/VRM applications
- Special materials eliminate all thermal aging issues.

Designer's Kit C387 contains samples of all values

Core material Iron

Core and winding loss See www.coilcraft.com/coreloss

Terminations RoHS tin-silver over copper. Other terminations available at additional cost.

Weight MLC12XX 1.91 – 3.03 g; MLC15XX 2.73 – 4.72 g

Ambient temperature –40°C to +85°C with I_{rms} current

Maximum part temperature: The part may be operated without damage as long its temperature (ambient + self-heating) does not exceed +125°C.

Storage temperature Component: –40°C to +125°C.

Packaging: –40°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

PCB washing Only pure water or alcohol recommended

Part number ¹	L ² ±20% (µH)	DCR (mOhm)		SRF ³ (MHz)	Isat (A) ⁴		I _{rms} (A) ⁵		Height max (mm)
		typ	max		10% drop	20% drop	20°C rise	40°C rise	
10.5 mm × 11.4 mm body size									
MLC1265-361ML_	0.36	0.93	1.03	234	26.9	42.6	16.5	22.7	6.5
MLC1260-401ML_	0.40	0.93	1.03	228	21.0	35.2	16.3	21.9	6.1
MLC1255-421ML_	0.42	0.93	1.03	219	21.1	34.5	16.8	24.1	5.6
MLC1240-451ML_	0.45	1.73	1.91	198	16.5	24.9	12.8	19.8	4.1
MLC1265-701ML_	0.70	1.24	1.37	134	16.4	27.5	15.2	21.0	6.5
MLC1250-801ML_	0.80	2.35	2.59	151	13.3	21.7	12.4	17.3	5.1
MLC1240-901ML_	0.90	2.57	2.83	108	13.9	22.8	11.9	16.3	4.1
MLC1260-122ML_	1.20	2.38	2.62	93	14.0	23.3	12.3	17.6	6.1
MLC1255-122ML_	1.20	2.38	2.62	85	14.1	22.4	12.4	17.5	5.6
MLC1250-132ML_	1.30	2.38	2.62	76	10.8	17.7	11.7	16.5	5.3
MLC1245-152ML_	1.50	4.08	4.49	79	10.7	17.3	10.3	14.2	4.6
MLC1260-172ML_	1.75	2.84	3.13	72	12.1	19.2	10.9	15.3	6.1
MLC1245-402ML_	4.00	8.18	9.00	46	7.42	11.8	6.9	9.8	4.8
13.2 mm × 14.0 mm body size									
MLC1565-451ML_	0.45	0.864	0.951	158	32.8	54.0	18.0	25.6	6.5
MLC1565-501ML_	0.50	0.864	0.951	132	21.3	38.1	18.6	26.9	6.5
MLC1555-551ML_	0.55	1.34	1.48	165	20.8	35.7	16.1	22.3	5.6
MLC1565-801ML_	0.80	1.20	1.32	93	27.4	47.4	17.4	24.6	6.5
MLC1560-901ML_	0.90	1.72	1.90	101	17.8	28.7	14.6	20.6	6.0
MLC1538-102ML_	1.00	3.46	3.81	81	13.6	21.2	11.5	16.7	3.9
MLC1550-102ML_	1.00	1.72	1.90	76	16.1	27.3	13.9	19.7	5.2
MLC1565-142ML_	1.40	2.20	2.42	77	18.9	30.1	13.7	19.9	6.5
MLC1538-152ML_	1.50	4.36	4.80	50	13.4	21.0	10.6	14.6	3.9
MLC1565-202ML_	2.00	3.56	3.82	64	15.2	24.2	11.6	16.3	6.5
MLC1550-252ML_	2.50	3.43	3.74	45	10.9	17.7	11.5	15.8	5.2
MLC1565-282ML_	2.80	4.10	4.51	44	13.7	22.3	10.7	15.2	6.5
MLC1555-302ML_	3.00	4.06	4.47	42	11.1	18.1	10.9	15.6	5.6
MLC1550-452ML_	4.50	7.13	7.85	36	7.12	11.8	8.43	11.7	5.2

1. Please specify **termination** and **packaging** codes:

MLC1550-452ML C

Termination: L = RoHS compliant tin-silver over copper.
Special order:
T = RoHS tin-silver-copper (95.5/4/0.5)
or S = non-RoHS tin-lead (63/37).

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape.

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked.

2. Inductance measured at 100 kHz, 0.1 V_{rms}, 0.1 A_{dc} using a Coilcraft SMD-A fixture in an Agilent/HP 4284A LCR meter.

3. SRF measured using an Agilent/HP4291A impedance analyzer and a Coilcraft 16193 fixture.

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

5. Current that causes the specified temperature rise from 25°C ambient.

6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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Specifications subject to change without notice.
Please check our website for latest information.

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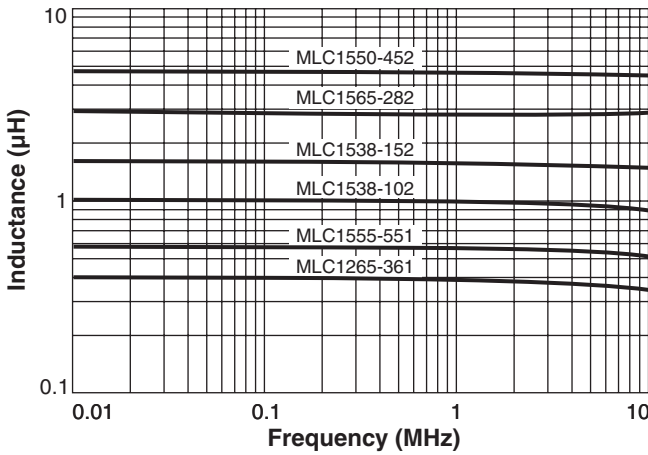
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail info@coilcraft.com Web <http://www.coilcraft.com>

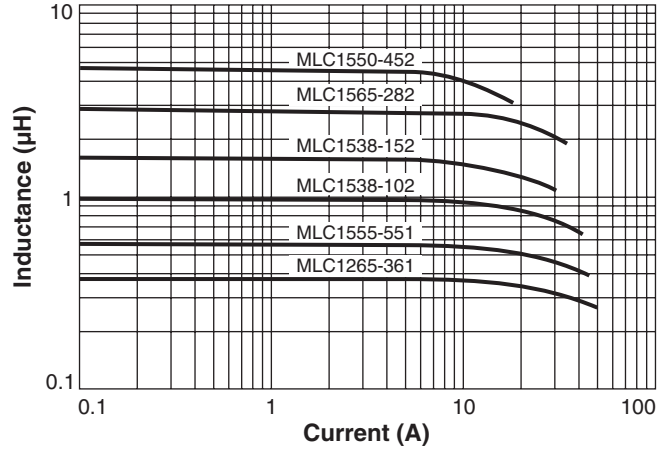


Shielded Power Inductors - MLC Series

Typical L vs Frequency

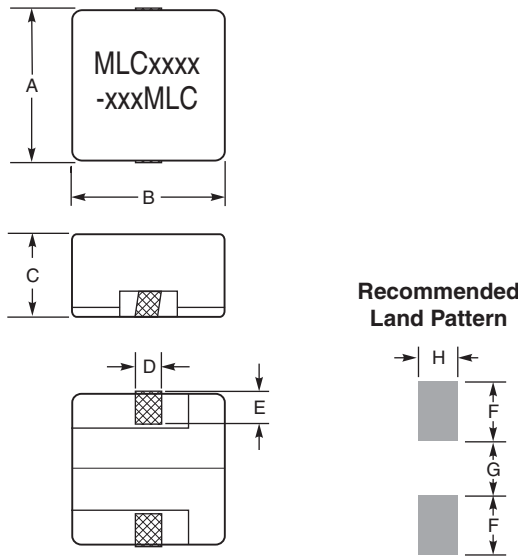


Typical L vs Current



Inductance vs current is unaffected by part temperature up to 135°C.

Dimensions

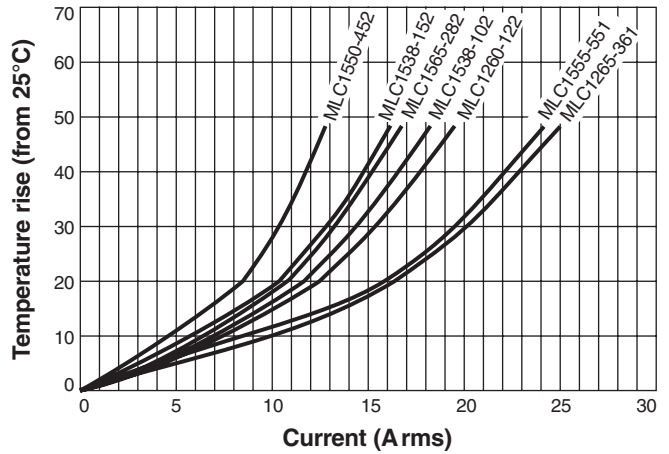


Weight: MLC12XX 1.91 – 3.03 g; MLC15XX 2.73 – 4.72 g

Body Size	A max	B max	C max	D	E	F	G	H
1240	11.2	10.5	4.1	1.8	2.3	4.0	4.0	2.7
1245	11.2	10.5	4.6	1.8	2.3	4.0	4.0	2.7
1250	11.2	10.5	5.1	1.8	2.3	4.0	4.0	2.7
1255	11.4	10.5	5.6	1.8	2.3	4.0	4.0	2.7
1260	11.4	10.5	6.1	1.8	2.3	4.0	4.0	2.7
1265	11.4	10.5	6.5	1.8	2.3	4.0	4.0	2.7
1538	13.8	13.2	3.9	2.4	3.0	5.0	5.4	3.4
1550	13.8	13.2	5.2	2.4	3.0	5.0	5.4	3.4
1555	13.8	13.2	5.6	2.4	3.0	5.0	5.4	3.4
1560	13.8	13.2	6.0	2.4	3.0	5.0	5.4	3.4
1565	14.0	13.2	6.5	2.4	3.0	5.0	5.4	3.4

All dimensions are in mm.

Temperature Rise vs Current



Tape and Reel

MLC1240	250/7" reel;	900/13" reel	24 mm tape width
MLC1245	200/7" reel;	800/13" reel	24 mm tape width
MLC1250	200/7" reel;	700/13" reel	24 mm tape width
MLC1255	200/7" reel;	700/13" reel	24 mm tape width
MLC1260	175/7" reel;	600/13" reel	24 mm tape width
MLC1265	150/7" reel;	600/13" reel	24 mm tape width
MLC1538	200/7" reel;	800/13" reel	24 mm tape width
MLC1550	150/7" reel;	600/13" reel	24 mm tape width
MLC1555	125/7" reel;	500/13" reel	24 mm tape width
MLC1560	125/7" reel;	500/13" reel	24 mm tape width
MLC1565	125/7" reel;	500/13" reel	24 mm tape width

7" reels are stocked; 13" reels are factory orders only.



Specifications subject to change without notice.
Please check our website for latest information.

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