

**NEW!**

# SMT Power Inductors - MLC Series



- 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](http://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: –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)

**Mean Time Between Failures (MTBF)** 26,315,789 hours

**PCB washing** Only pure water or alcohol recommended

Part number <sup>1</sup>	$L^2$ ±20% (µH)	DCR typ (mOhm)	DCR max (mOhm)	SRF <sup>3</sup> (MHz)	Isat <sup>4</sup> (A)	$I_{rms}^5$ (A)	Height max (mm)
<b>10.5 mm × 11.2 mm body size</b>							
MLC1265-361ML_	0.36	0.93	1.03	234	37.0	19.0	6.5
MLC1260-401ML_	0.40	0.93	1.03	228	35.5	19.8	6.1
MLC1255-421ML_	0.42	0.93	1.03	219	33.0	19.8	5.6
MLC1240-451ML_	0.45	1.73	1.91	198	25.0	15.7	4.1
MLC1265-701ML_	0.70	1.24	1.37	134	26.0	17.3	6.5
MLC1250-801ML_	0.80	2.35	2.59	151	24.5	14.8	5.1
MLC1240-901ML_	0.90	2.57	2.83	108	21.0	13.4	4.1
MLC1260-122ML_	1.20	2.38	2.62	93	21.0	14.7	6.1
MLC1255-122ML_	1.20	2.38	2.62	85	20.0	14.3	5.6
MLC1250-132ML_	1.30	2.38	2.62	76	20.0	10.9	5.3
MLC1245-152ML_	1.50	4.08	4.49	79	15.0	11.5	4.6
MLC1260-172ML_	1.75	2.84	3.13	72	17.0	13.6	6.1
MLC1245-402ML_	4.00	8.18	9.00	46	13.0	8.8	4.8
<b>13.2 mm × 13.8 mm body size</b>							
MLC1565-501ML_	0.50	0.864	0.951	132	36.5	19.7	6.5
MLC1555-551ML_	0.55	1.34	1.48	165	32.0	18.2	5.6
MLC1560-901ML_	0.90	1.72	1.90	101	27.0	13.0	6.0
MLC1538-102ML_	1.00	3.46	3.81	81	24.5	12.4	3.9
MLC1550-102ML_	1.00	1.72	1.90	76	23.0	13.7	5.2
MLC1538-152ML_	1.50	4.36	4.80	50	21.0	10.6	3.9
MLC1550-252ML_	2.50	3.43	3.74	45	16.5	11.4	5.2
MLC1555-302ML_	3.00	4.06	4.47	42	14.0	12.2	5.6
MLC1550-452ML_	4.50	7.13	7.85	36	11.5	9.5	5.2

1. When ordering, please specify **termination** and **packaging** codes:

MLC1550-452ML  $\begin{matrix} \downarrow \\ \text{L} \\ \downarrow \\ \text{C} \end{matrix}$

**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<sub>rms</sub>, 0 A<sub>dc</sub> 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 20% (typ) from its value without current.  
5. Current that causes a 40°C (max) temperature rise above 25°C ambient.  
6. Electrical specifications at 25°C.  
See Qualification Standards section for environmental and test data.  
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

## Coilcraft®

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

Document 327-1 Revised 01/10/08

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 [www.DataSheet4U.com](http://www.DataSheet4U.com)

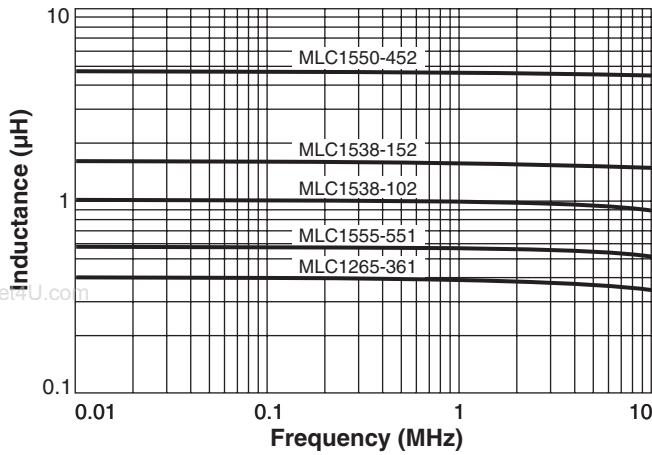
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



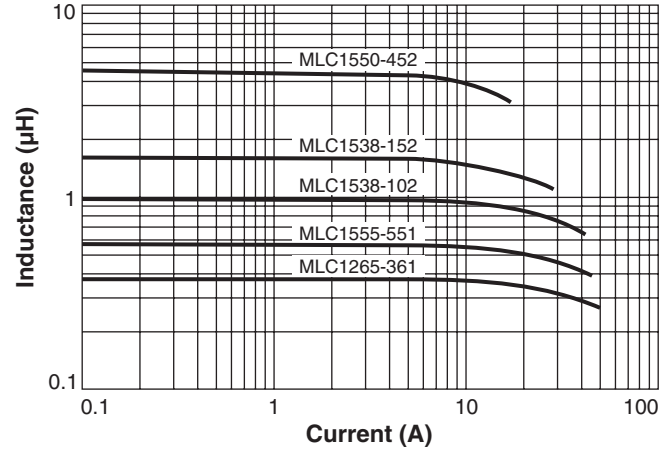
**NEW!**

# SMT Power Inductors - MLC Series

## Typical L vs Frequency

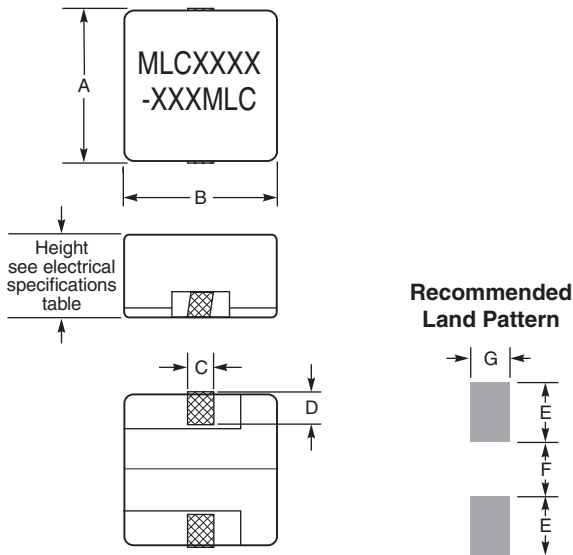
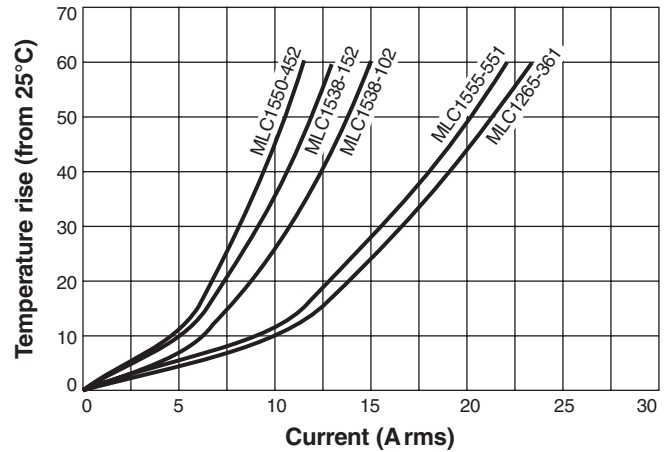


## Typical L vs Current



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

## Temperature Rise vs Current



Body Size	A max	B max	C	D	E	F	G
1240	11.2	10.5	1.8	2.3	4.0	4.0	2.7
1245	11.2	10.5	1.8	2.3	4.0	4.0	2.7
1250	11.2	10.5	1.8	2.3	4.0	4.0	2.7
1255	11.2	10.5	1.8	2.3	4.0	4.0	2.7
1260	11.2	10.5	1.8	2.3	4.0	4.0	2.7
1265	11.2	10.5	1.8	2.3	4.0	4.0	2.7
1538	13.8	13.2	2.4	3.0	5.0	5.4	3.4
1550	13.8	13.2	2.4	3.0	5.0	5.4	3.4
1555	13.8	13.2	2.4	3.0	5.0	5.4	3.4
1560	13.8	13.2	2.4	3.0	5.0	5.4	3.4
1565	13.8	13.2	2.4	3.0	5.0	5.4	3.4

All dimensions are in mm.

## Tape and Reel

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

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

For packaging data see Tape and Reel Specifications section.



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

Document 327-2 Revised 01/10/08

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 [www.DataSheet4U.com](http://www.DataSheet4U.com)

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>