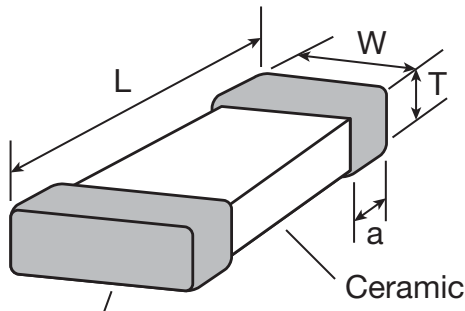


# Low Value Multilayer Chip Inductors

## Features

- Low inductance — down to 1.0 nH
- Suitable for high frequency applications
- Monolithic structure
- Excellent solderability for either flow or reflow soldering

## Dimensions



Termination finish is 100% matte Tin (Sn) over Nickel (Ni)

Unit: mm (inch)

SERIES	L	W	T	a
LMCI 0201 (0201)	0.60 ± 0.03 (0.024 ± .0012)	0.30 ± 0.03 (0.012 ± .0012)	0.3 ± 0.03 (0.012 ± .0012)	0.15 ± 0.05 (0.006 ± .002)
LMCI 1005 (0402)	1.0 ± 0.05 (0.040 ± .002)	0.5 ± 0.05 (0.020 ± .001)	0.5 ± 0.05 (0.014 ± .002)	0.25 ± 0.1 (0.007 ± .004)
LMCI 1608 (0603)	1.6 ± 0.15 (0.064 ± .006)	0.8 ± 0.15 (0.032 ± .006)	0.8 ± 0.15 (0.032 ± .006)	0.3 ± 0.2 (0.012 ± .008)
LMCI 2012 (0805)	2.0 ± 0.2 (0.080 ± .008)	1.25 ± 0.2 (0.050 ± .008)	0.85 ± 0.2 (0.034 ± .008) 1.00 +0.2 -0.3 (0.040 ± .008)	0.5 ± 0.3 (0.020 ± .012)

<b>Operating Temperature Range</b>	-40 to +85° C -55~ +125° C (1005 only)
<b>Temperature Coefficient of Inductance (TCL)</b>	±250 PPM
<b>Storage Temperature Range</b>	-10 to +40° C

## How To Order

**LMCI 1608**

Series

**3N9**

Inductance Value  
3N9: 3.9nH  
10N: 10nH  
R10: 100nH

**K**

Tolerance  
J: ± 5%  
K: ± 10%  
M: ± 20%  
S: ± 0.3nH

**T**

Packaging  
T: Tape

NOTE: All LMCI series have Ceramic core.

Standard termination finish for this product is 100% matte Tin (Sn)

**Please Note: Venkel offers Engineering Kits for this product. See page 120 for details.**

All components in this section are RoHS compliant per the EU directives and definitions.

## LMCI 0201 SERIES (0.6 x 0.3mm) - Electrical Characteristics

Part Number	Inductance (at 100MHz)		Q min. (MHz)		S.R.F. (MHz) min.	R <sub>DC</sub> (Ω) max.	I <sub>DC</sub> (mA) max.	Q'ty/Reel (pcs)
	L (nH)	Tolerance	100	800				
LMCI0201-1N0S T	1.0	S	4	15	20,000	0.12	300	15,000
LMCI0201-1N2S T	1.2	S	4	15	20,000	0.12	300	15,000
LMCI0201-1N5S T	1.5	S	4	15	20,000	0.13	300	15,000
LMCI0201-1N8S T	1.8	S	4	15	20,000	0.14	300	15,000
LMCI0201-2N2S T	2.2	S	4	15	20,000	0.18	300	15,000
LMCI0201-2N7S T	2.7	S	4	14	20,000	0.19	300	15,000
LMCI0201-3N3 □T	3.3	S, K	4	14	20,000	0.24	200	15,000
LMCI0201-3N9 □T	3.9	S, K	4	14	18,000	0.28	190	15,000
LMCI0201-4N7 □T	4.7	S, K	4	14	9,600	0.35	180	15,000
LMCI0201-5N6 □T	5.6	S, K	4	14	9,000	0.40	170	15,000
LMCI0201-6N8 □T	6.8	J, K	4	14	8,000	0.45	160	15,000
LMCI0201-8N2 □T	8.2	J, K	4	14	7,000	0.55	150	15,000
LMCI0201-10N □T	10.0	J, K	4	14	6,700	0.65	150	15,000
LMCI0201-12N □T	12.0	J, K	4	14	6,400	0.75	120	15,000
LMCI0201-15N □T	15.0	J, K	4	14	6,000	0.95	110	15,000
LMCI0201-18N □T	18.0	J, K	4	13	5,300	1.20	100	15,000
LMCI0201-22N □T	22.0	J, K	4	13	5,000	1.80	100	15,000
LMCI0201-27N □T	27.0	J, K	4	12	3,600	2.00	90	15,000
LMCI0201-33N □T	33.0	J, K	4	12	3,000	2.30	85	15,000

- NOTE**
- L, Q; HP4291A at 100MHz (Test fixture: HP16193A)
  - S.R.F: Self-resonance Frequency; HP8753C (Test fixture: HP16193A)
  - R<sub>DC</sub>: DC Resistance; VP-2811A
  - I<sub>DC</sub>: Allowable Current
  - □ Inductance Tolerance (S = ±0.3nH, J = ±5%, K = ± 10%, M = ± 20%)

## LMCI 1005 SERIES (0402) - Electrical Characteristics

Part Number	Inductance (at 100MHz)		Q min. (MHz)		S.R.F. (MHz) min.	R <sub>dc</sub> (Ω) max.	I <sub>dc</sub> (mA) max.	Q'ty/Reel (pcs)
	L (nH)	Tolerance	100	800 *500				
LMCI1005-1N0S T	1.0	S	8	20	8,000	0.12	300	10,000
LMCI1005-1N2S T	1.2	S	8	20	8,000	0.12	300	10,000
LMCI1005-1N5S T	1.5	S	8	22	6,000	0.13	300	10,000
LMCI1005-1N8S T	1.8	S	8	22	6,000	0.14	300	10,000
LMCI1005-2N2S T	2.2	S	8	22	6,000	0.16	300	10,000
LMCI1005-2N7S T	2.7	S	8	22	5,800	0.17	300	10,000
LMCI1005-3N3K T	3.3	K	8	22	5,800	0.19	300	10,000
LMCI1005-3N9K T	3.9	K	8	22	4,000	0.22	300	10,000
LMCI1005-4N7K T	4.7	K	8	22	4,000	0.24	300	10,000
LMCI1005-5N6K T	5.6	K	8	22	3,900	0.28	300	10,000
LMCI1005-6N8 □T	6.8	J, K	8	21	3,900	0.34	250	10,000
LMCI1005-8N2 □T	8.2	J, K	8	21	3,500	0.38	250	10,000
LMCI1005-10N □T	10.0	J, K	8	21	3,200	0.45	250	10,000
LMCI1005-12N □T	12.0	J, K	8	20	2,700	0.55	250	10,000
LMCI1005-15N □T	15.0	J, K	8	20	2,300	0.60	250	10,000
LMCI1005-18N □T	18.0	J, K	8	20	2,000	0.70	200	10,000
LMCI1005-22N □T	22.0	J, K	8	20	1,800	0.80	200	10,000
LMCI1005-27N □T	27.0	J, K	8	17	1,500	0.90	200	10,000
LMCI1005-33N □T	33.0	J, K	8	17	1,200	1.0	200	10,000
LMCI1005-39N □T	39.0	J, K	8	16	1,100	1.20	150	10,000
LMCI1005-47N □T	47.0	J, K	8	15	1,000	1.30	150	10,000
LMCI1005-56N □T	56.0	J, K	8	—	700	1.40	150	10,000
LMCI1005-68N □T	68.0	J, K	8	—	700	1.40	150	10,000
LMCI1005-82N □T	82.0	J, K	8	—	600	1.60	100	10,000
LMCI1005-R10 □T	100.0	J, K	8	—	600	1.60	100	10,000

- NOTE**
- L, Q; HP4291A at 100MHz (Test fixture: HP16193A)
  - S.R.F: Self-resonance Frequency; HP8753C (Test fixture: HP16193A)
  - R<sub>dc</sub>: DC Resistance; VP-2811A
  - I<sub>dc</sub>: Allowable Current
  - □ Inductance Tolerance (S = ±0.3nH, J = ±5%, K = ± 10%, M = ± 20%)

# Low Value Multilayer Chip Inductors

## LMCI 1608 SERIES (0603) - Electrical Characteristics

Part Number	Inductance (at 100MHz)		Q min. (MHz)		S.R.F. (MHz) min.	R <sub>dc</sub> (Ω) max.	I <sub>dc</sub> (mA) max.	Q'ty/Reel (pcs)
	L (nH)	Tolerance	100	800 *500/**50				
LMCI1608-1N2S T	1.2	S	8	40	8,000	0.10	300	4,000
LMCI1608-1N5S T	1.5	S	8	36	6,000	0.10	300	4,000
LMCI1608-1N8S T	1.8	S	8	38	6,000	0.10	300	4,000
LMCI1608-2N2S T	2.2	S	8	28	6,000	0.12	300	4,000
LMCI1608-2N7S T	2.7	S	10	28	6,000	0.12	300	4,000
LMCI1608-3N3 □T	3.3	S, K	10	26	5,900	0.14	300	4,000
LMCI1608-3N9 □T	3.9	S, K	10	28	5,600	0.16	300	4,000
LMCI1608-4N7 □T	4.7	S, K	10	28	4,200	0.18	300	4,000
LMCI1608-5N6 □T	5.6	S, K	10	28	4,000	0.20	300	4,000
LMCI1608-6N8 □T	6.8	J, K	10	26	3,800	0.24	300	4,000
LMCI1608-8N2 □T	8.2	J, K	10	26	3,500	0.26	300	4,000
LMCI1608-10N □T	10.0	J, K	12	32	2,800	0.28	300	4,000
LMCI1608-12N □T	12.0	J, K	12	32	2,500	0.32	300	4,000
LMCI1608-15N □T	15.0	J, K	12	32	2,200	0.34	300	4,000
LMCI1608-18N □T	18.0	J, K	12	32	2,000	0.36	300	4,000
LMCI1608-22N □T	22.0	J, K	12	34	1,600	0.42	300	4,000
LMCI1608-27N □T	27.0	J, K	12	34	1,400	0.46	300	4,000
LMCI1608-33N □T	33.0	J, K	12	28	1,200	0.58	300	4,000
LMCI1608-39N □T	39.0	J, K	12	24	1,100	0.64	300	4,000
LMCI1608-47N □T	47.0	J, K	12	24	900	0.80	300	4,000
LMCI1608-56N □T	56.0	J, K	12	24	900	0.86	300	4,000
LMCI1608-68N □T	68.0	J, K	12	*24	700	0.86	300	4,000
LMCI1608-82N □T	82.0	J, K	12	*22	600	0.95	300	4,000
LMCI1608-R10 □T	100.0	J, K	12	*20	600	1.00	300	4,000
LMCI1608-R12 □T	120.0	J, K	8	-	500	1.20	300	4,000
LMCI1608-R15 □T	150.0	J, K	8	-	500	1.20	300	4,000
LMCI1608-R18 □T	180.0	J, K	8	-	400	1.30	300	4,000
LMCI1608-R22 □T	220.0	J, K	8	-	400	1.50	300	4,000
LMCI1608-R27 □T	270.0	J, K	8	-	400	1.50	300	4,000

- \*NOTE**
- L, Q; HP4191A at 100MHz (Test fixture: HP16092A)
  - S.R.F: Self-resonance Frequency; HP8753C (Test fixture: HP16091A)
  - R<sub>dc</sub>: DC Resistance; VP-2811A
  - I<sub>dc</sub>: Allowable Current
  - □ Inductance Tolerance (S = ±0.3nH, J = ±5%, K = ± 10%, M = ± 20%)

5900 Shepherd Mountain Cove • Austin, TX 78730  
 Phone: 512 / 794-0081 • Fax: 512 / 794-0087 • Toll Free: 800 / 950-8365  
 e-mail: sales@venkel.com • www.venkel.com

## LMCI 2012 SERIES (0805) - Electrical Characteristics

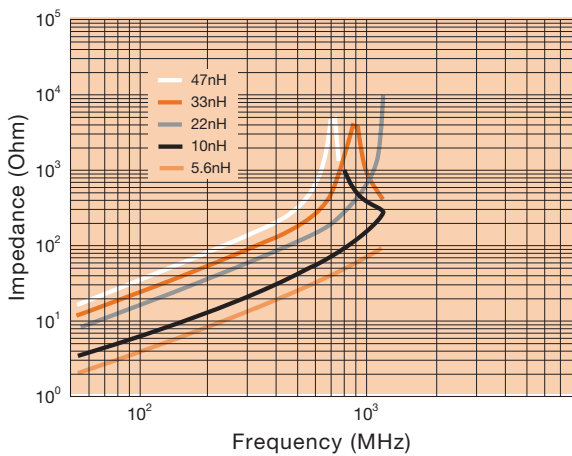
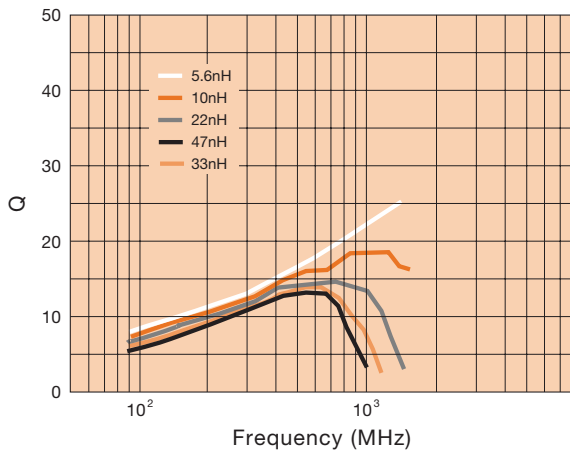
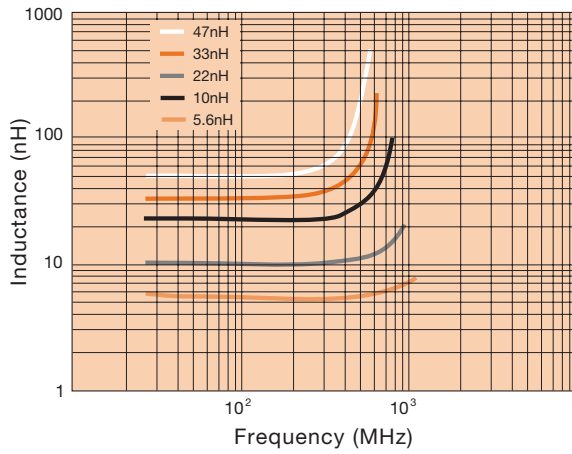
Part Number	Inductance			Q min. (MHz)				S.R.F. (MHz) min.	R <sub>dc</sub> (Ω) max.	I <sub>dc</sub> (mA) max.	Q'ty/Reel (pcs)
	L (nH)	(MHz)	Tolerance	25	50	100	800				
LMCI2012-F1N5ST	1.5	100	S	—	—	13	40	4,000	0.10	300	4,000
LMCI2012-F1N8ST	1.8	100	S	—	—	13	45	4,000	0.10	300	4,000
LMCI2012-F2N2ST	2.2	100	S	—	—	13	48	4,000	0.10	300	4,000
LMCI2012-F2N7ST	2.7	100	S	—	—	12	36	4,000	0.10	300	4,000
LMCI2012-F3N3□T	3.3	100	J, S, K, M	—	—	13	56	4,000	0.13	300	4,000
LMCI2012-F3N9□T	3.9	100	J, S, K, M	—	—	15	54	4,000	0.15	300	4,000
LMCI2012-F4N7□T	4.7	100	J, S, K, M	—	—	15	50	3,500	0.20	300	4,000
LMCI2012-F5N6□T	5.6	100	J, S, K, M	—	—	15	53	3,200	0.23	300	4,000
LMCI2012-F6N8□T	6.8	100	J, K, M	—	—	15	51	2,800	0.25	300	4,000
LMCI2012-F8N2□T	8.2	100	J, K, M	—	—	15	53	2,400	0.28	300	4,000
LMCI2012-F10N□T	10.0	100	J, K, M	—	—	16	45	2,100	0.30	300	4,000
LMCI2012-F12N□T	12.0	100	J, K, M	—	—	16	48	1,900	0.35	300	4,000
LMCI2012-F15N□T	15.0	100	J, K, M	—	—	17	48	1,600	0.40	300	4,000
LMCI2012-F18N□T	18.0	100	J, K, M	—	—	17	43	1,500	0.45	300	4,000
LMCI2012-F22N□T	22.0	100	J, K, M	—	—	17	47	1,400	0.50	300	4,000
LMCI2012-F27N□T	27.0	100	J, K, M	—	—	18	38	1,300	0.55	300	4,000
LMCI2012-F33N□T	33.0	100	J, K, M	—	—	18	35	1,200	0.60	300	4,000
LMCI2012-F39N□T	39.0	100	J, K, M	—	—	18	40	1,000	0.65	300	4,000
LMCI2012-F47N□T	47.0	100	J, K, M	—	—	18	33	900	0.70	300	3,000
LMCI2012-F56N□T	56.0	100	J, K, M	—	—	19	31	800	0.75	300	3,000
LMCI2012-F68N□T	68.0	100	J, K, M	—	—	19	28	700	0.80	300	3,000
LMCI2012-F82N□T	82.0	100	J, K, M	—	—	20	9	600	0.90	300	3,000
LMCI2012-FR10□T	100	100	J, K, M	—	13	18	—	600	1.00	300	3,000
LMCI2012-FR12□T	120	50	J, K, M	—	15	19	—	500	1.30	250	3,000
LMCI2012-FR15□T	150	50	J, K, M	—	16	20	—	500	1.50	250	3,000
LMCI2012-FR18□T	180	50	J, K, M	—	17	20	—	400	1.80	250	3,000
LMCI2012-FR22□T	220	50	J, K, M	—	17	20	—	400	2.00	200	3,000
LMCI2012-FR27□T	270	25	J, K, M	13	18	—	—	380	2.50	200	3,000
LMCI2012-FR33□T	330	25	J, K, M	15	18	—	—	380	3.00	150	3,000
LMCI2012-FR39□T	390	25	J, K, M	15	18	—	—	330	3.50	150	3,000
LMCI2012-FR47□T	470	25	J, K, M	13	16	—	—	300	4.00	100	3,000

**NOTE** — The "F" in the LMCI 2012 series is an internal material code and is the exact same material as all other sizes.

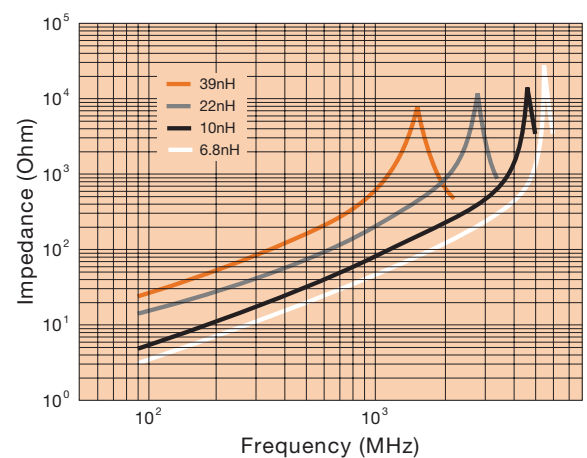
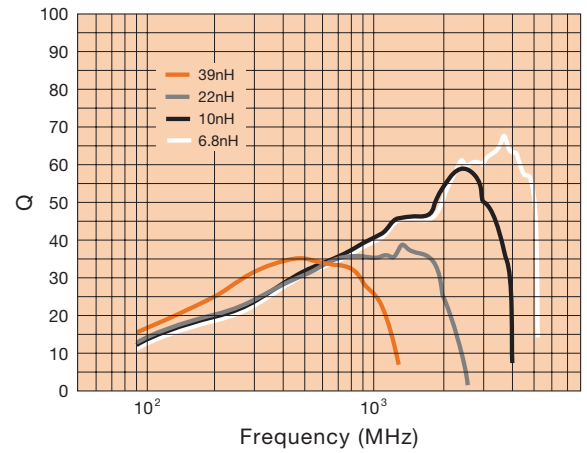
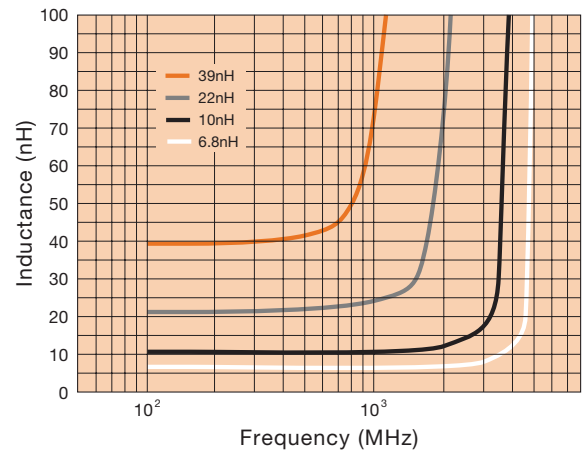
- NOTE**
- L, Q; HP4191A at 100MHz (Test fixture: HP16092A)
  - S.R.F: Self-resonance Frequency; HP8753C (Test fixture: HP16091A)
  - R<sub>dc</sub>: DC Resistance; VP-2811A
  - I<sub>dc</sub>: Allowable Current
  - □ Inductance Tolerance (S = ±0.3nH, J = ±5%, K = ± 10%, M = ± 20%)

# Low Value Multilayer Chip Inductors

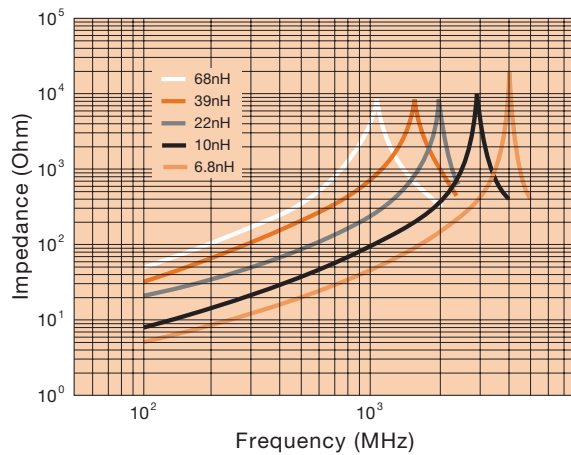
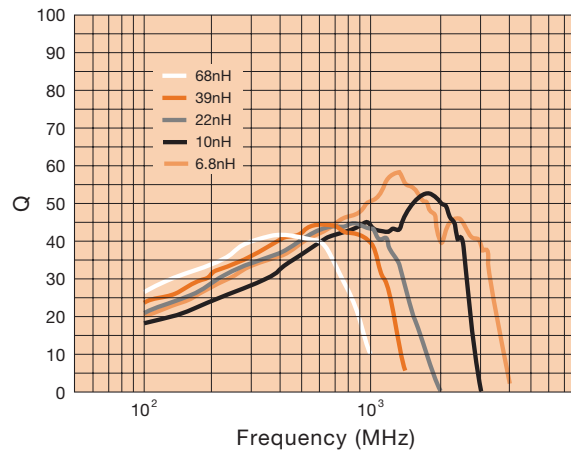
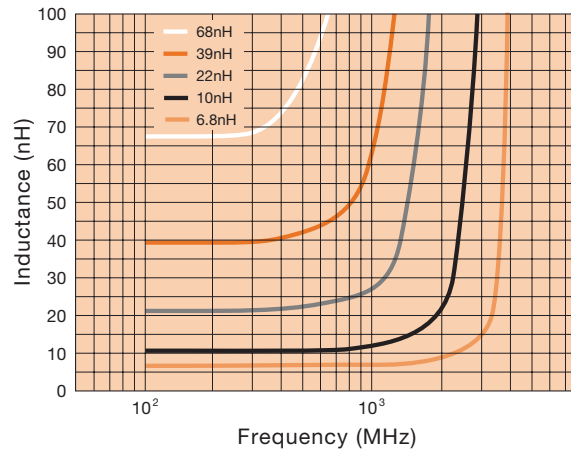
## 1005



## 1608



# 2012



All components in this section are RoHS compliant per the EU directives and definitions.