Mini Molded Chip Power Inductors – LMS/T Series

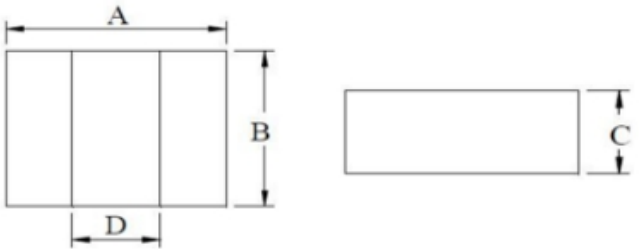
Key Features

- Metal material for large current and low loss Closed
- agnetic circuit design reduces leakage flux
- Super low resistance, ultra high current rating
- Halogen free，RoHS compliant

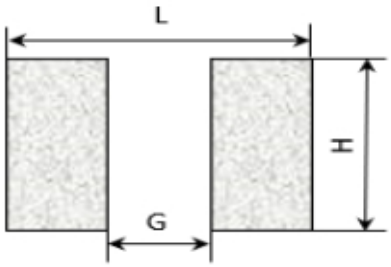
Typical Application

- PDA, notebook, Smart phone, and server applications
- Closed magnetic circuit design reduces leakage flux
- Battery powered devices
- DC/DC converters in distributed power systems

Outline Dimensions



DIMENSIONS



PAD LAYOUT

Unit: mm

Series	A	B	C	D	L	G	H
1005055	1.0±0.2	0.5±0.2	0.55Max	0.35 Typ	1.1	0.3	0.6
100608	1.0±0.2	0.6±0.2	0.80Max	0.35 Typ	1.1	0.3	0.7
1008055	1.0±0.2	0.8±0.2	0.55Max	0.48 Typ	1.1	0.3	0.9
121006	1.2±0.2	1.0±0.2	0.60Max	0.48 Typ	1.3	0.38	1.1
121008	1.2±0.2	1.0±0.2	0.80Max	0.48 Typ	1.3	0.38	1.1
1412065	1.4 ±0.2	1.2±0.2	0.65Max	0.53 Typ	1.5	0.43	1.3
141208	1.4±0.2	1.2±0.2	0.8Max	0.53 Typ	1.5	0.43	1.3
160808	1.6 ±0.2	0.8±0.2	0.8Max	0.5 Typ	1.7	0.4	0.9
2012065	2.0 ±0.2	1.2±0.2	0.65Max	0.6 Typ	2.1	0.5	1.3
201208	2.0 ±0.2	1.2±0.2	0.8Max	0.6 Typ	2.1	0.5	1.3
201210	2.0 ±0.2	1.6±0.2	1.0Max	0.6 Typ	2.1	0.5	1.3
201608	2.0 ±0.2	1.6±0.2	0.8Max	0.6 Typ	2.1	0.5	1.7
201610	2.0 ±0.2	1.6±0.2	1.0Max	0.6 Typ	2.1	0.5	1.7
252010	2.5 ±0.2	2.0±0.2	1.0Max	0.7 Typ	2.6	0.6	2.1
252012	2.5 ±0.2	2.0±0.2	1.2Max	0.7 Typ	2.6	0.6	2.1
322512	3.2 ±0.2	2.5±0.2	1.2Max	1.0 Typ	3.25	0.9	2.55
041010	4.0±0.2	4.0±0.2	1.0Max	1.7 Typ	4.1	1.6	4.0

SPECIFICATIONS

LMSC100608 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC1006082R2MTA	2.2	20%	1	560	620	1.1	1.0	0.8	0.7

LMSC121006 /08 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC121006R47MTA	0.47	20%	1	60	72	2.5	2.3	2.3	2.1
LMSC1210084R7MTA	4.7	20%	1	640	660	0.9	0.8	0.8	0.7
LMSE1210084R7MTA	4.7	20%	1	590	680	0.9	0.8	0.7	0.6

LMSC1412065 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC1412065R24MTA	0.24	20%	1	22	24	6.7	6.5	4.4	4.2
LMSC1412065R33MTA	0.33	20%	1	28	32	5.6	5.0	3.6	3.2
LMSH1412065R33MTA	0.33	20%	1	28	32	6.0	5.6	3.7	3.3
LMSE1412065R33MTA	0.33	20%	1	28.5	31.5	5.5	5.0	3.5	3.2
LMSC1412065R47MTA	0.47	20%	1	33	39	3.7	3.3	3.0	2.7
LMSH1412065R47MTA	0.47	20%	1	31	38	4.0	3.6	3.8	3.5
LMSE1412065R47MTA	0.47	20%	1	33	38	3.5	3.3	3.4	3.2

LMSW141208 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC141208R24MTA	0.24	20%	1	17	19	7.0	6.6	5.4	5.0
LMSW141208R33MTA	0.33	20%	1	23	25	5.3	5.0	4.2	4.0
LMSC141208R47MTA	0.47	20%	1	28	32	4.5	4.2	3.6	3.4
LMSW141208R47MTA	0.47	20%	1	27	29	4.8	4.5	3.6	3.4
LMSC1412081R0MTA	1	20%	1	70	77	2.8	2.5	2.3	2.0

LMSC1608065 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC1608065R47MTA	0.47	20%	1	52	58	3.8	3.5	2.5	2.3
LMSC16080651R0MTA	1	20%	1	165	173	1.9	1.7	1.6	1.4

LMSC160808 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC160808R47MTA	0.47	20%	1	36	43	3.4	3.1	3.3	3.0
LMSC160808R56MTA	0.56	20%	1	50	60	3.0	2.7	2.4	2.2
LMSH160808R56MTA	0.56	20%	1	53	58	3.3	3.0	3.0	2.7
LMSC1608081R0MTA	1	20%	1	105	120	2.5	2.3	2.0	1.8
LMSH1608081R0MTA	1	20%	1	105	120	3.1	2.8	2.2	2.0
LMSC1608082R2MTA	2.2	20%	1	350	400	0.9	0.8	0.82	0.78
LMSW1608082R2MTA	2.2	20%	1	237	290	1.8	1.5	1.3	1.2
LMSC1608084R7MTA	4.7	20%	1	530	590	0.8	0.7	0.75	0.68

LMSC2012065 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC2012065R22MTA	0.22	20%	1	15.5	19	6.1	5.5	5.1	4.6
LMSW2012065R47MTA	0.47	20%	1	34	40	3.8	3.5	3.5	3.2
LMSC2012065R47MTA	0.47	20%	1	55	60	2.4	2.2	2.2	1.9
LMSC20120651R0MTA	1	20%	1	85	100	2.6	2.4	2.3	2.2
LMSC20120652R2MTA	2.2	20%	1	175	210	1.4	1.3	1.2	1.1

LMSC201208 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC201208R22MTA	0.24	20%	1	11	13.5	6.1	5.5	6.0	5.4
LMSH201208R24MTA	0.24	20%	1	16	20	6.8	6.6	5.5	5.3
LMTC201208R24MTA	0.24	20%	1	16	18	7.2	7.0	5.7	5.5
LMSC201208R33MTA	0.33	20%	1	25	28	5.2	4.7	4.2	3.8
LMSH201208R33MTA	0.33	20%	1	21	23	5.6	5.4	4.8	4.6
LMSC201208R47MTA	0.47	20%	1	34	40	5.0	4.5	3.7	3.3
LMSH201208R47MTA	0.47	20%	1	27	29	5.0	4.8	4.3	4.1
LMSC2012081R0MTA	1	20%	1	75	85	3.8	3.3	2.5	2.2
LMSH2012081R0MTA	1	20%	1	46	50	3.5	3.3	3.5	3.3
LMSC2012082R2MTA	2.2	20%	1	155	170	2.2	2.0	1.7	1.5
LMSW2012082R2MTA	2.2	20%	1	120	130	2.1	1.9	2.0	1.8

LMSC201210 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC201210R11MTA	0.11	20%	1	11	13	7.5	6.8	6.1	5.5
LMSW201210R11MTA	0.11	20%	1	6	7.2	12.0	11.0	8.5	7.5
LMSC201210R24MTA	0.24	20%	1	17	20	6.2	5.6	6.0	5.4
LMTC201210R24MTA	0.24	20%	1	12	15	7.5	7.0	7.0	6.5
LMSC201210R33MTA	0.33	20%	1	15	18	6.5	6.0	5.5	5.0
LMSW201210R33MTA	0.33	20%	1	13	16	6.5	6.0	5.5	5.0
LMSC201210R47MTA	0.47	20%	1	25	29	5.2	4.7	4.3	4.0
LMSW201210R47MTA	0.47	20%	1	21	24	6.0	5.5	5.5	5.0
LMSC201210R68MTA	0.68	20%	1	38	42	3.8	3.6	3.6	3.4
LMSC2012101R0MTA	1	20%	1	45	55	3.8	3.3	3.5	3.2
LMSH2012101R0MTA	1	20%	1	50	55	4.0	3.5	3.5	3.2
LMSW2012101R0MTA	1	20%	1	45	50	4.2	3.6	3.6	3.2
LMSC2012102R2MTA	2.2	20%	1	132	145	2.2	2.0	1.8	1.6
LMSW2012102R2MTA	2.2	20%	1	120	130	2.1	2.9	2.0	1.8

LMSC2016065 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC20160651R0MTA	1	20%	1	85	95	3.4	3.2	2.5	2.3
LMSC20160652R2MTA	2.2	20%	1	170	200	2.2	2	1.5	1.3

LMSC201608 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC201608R24MTA	0.24	20%	1	16	19	6.7	6.1	5.2	4.7
LMSC201608R47MTA	0.47	20%	1	23	27	4.9	4.5	4.2	3.8
LMSC2016081R0MTA	1	20%	1	50	56	3.7	3.3	2.8	2.4
LMSC2016082R2MTA	2.2	20%	1	84	100	2.7	2.5	2.3	2.1
LMSC2016084R7MTA	2.2	20%	1	255	285	1.7	1.5	1.6	1.4

LMSC201610 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC201610R10MTA	0.1	20%	1	10	12	8.0	7.4	5.8	5.5
LMSC201610R24MTA	0.24	20%	1	12	15	7.8	7.0	5.6	5.0
LMSH201610R24MTA	0.24	20%	1	11	14	8.0	7.2	5.8	5.2
LMSC201610R33MTA	0.33	20%	1	13	16	7.6	6.8	5.3	4.8
LMSC201610R47MTA	0.47	20%	1	17	20	6.0	5.5	4.8	4.2
LMSH201610R47MTA	0.47	20%	1	17	20	6.1	5.6	5.0	4.8
LMSC2016101R0MTA	1	20%	1	42	46	4.8	4.2	3.3	2.8
LMSH2016101R0MTA	1	20%	1	40	43	4.6	4.4	4.2	4.0
LMSW2016101R0MTA	1	20%	1	30	32	4.5	4.2	4.5	4.2
LMSC2016101R2MTA	1.2	20%	1	54	60	4.4	4.0	3.0	2.6
LMSC2016101R5MTA	1.5	20%	1	80	85	3.9	3.6	2.7	2.4
LMSC2016102R2MTA	2.2	20%	1	86	92	3.2	3.0	2.8	2.5
LMSW2016102R2MTA	2.2	20%	1	58	75	3.3	2.8	3.0	2.7
LMSC2016104R7MTA	4.7	20%	1	200	220	2.1	1.8	1.6	1.4
LMSC2016106R8MTA	6.8	20%	1	230	250	1.3	1.1	1.3	1.1
LMSC201610100MTA	10	20%	1	600	690	0.9	0.8	0.7	0.6

LMS_252010 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC252010R33MTA	0.33	20%	1	13	16	7.5	7.2	5.7	5.2
LMSC252010R47MTA	0.47	20%	1	19	22	6.1	5.6	4.3	4.0
LMSC2520101R0MTA	1	20%	1	27	31	5.2	5.0	3.7	3.5
LMSW2520101R0MTA	1	20%	1	24	27	5.6	5.3	5.2	4.6
LMSC2520101R5MTA	1.5	20%	1	60	65	4.3	4.0	3.2	3.0
LMSC2520102R2MTA	2.2	20%	1	62	70	3.6	3.2	2.4	2.2
LMSC2520104R7MTA	4.7	20%	1	143	158	2.6	2.2	2.0	1.7
LMSC2520106R8MTA	6.8	20%	1	190	220	1.9	1.7	1.8	1.6
LMSC252010100MTA	10	20%	1	470	490	1.6	1.5	1.2	1.1

LMS_252012 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC252012R47MTA	0.47	20%	1	15	18	7.4	6.7	6.7	6.0
LMSC2520121R5MTA	1.5	20%	1	42	51	4.8	4.2	4.2	3.6
LMSC2520122R2MTA	2.2	20%	1	55	62	3.7	3.4	3.2	2.9
LMSC2520124R7MTA	4.7	20%	1	130	148	2.6	2.2	2.5	2.0

LMS_0410 Series

P/N	L	Tolerance	Test Freq.	DCR/mΩ		Saturation Isat/A		Temperature Irms/A	
	uh	%	MHz	Typ.	Max.	Typ.	Max.	Typ.	Max.
LMSC0410100MTA	10	20%	1	220	265	3.0	2.6	2.2	2.0

1) All test data is referenced to 25℃ ambient
2) Test Condition:1MHz, 1.0Vrms
3) Idc : DC current (A) that will cause an approximate ΔT of 40℃
4) Isat : DC current (A) that will cause L0 to drop approximately 30%
5) Operating Temperature Range -40℃ to + 125℃
6) The part temperature (ambient + temp rise) should not exceed 125℃ under the worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.
7) The rated current as listed is either the saturation current or the heating current depending on which value i
8) Rated Voltage Max. 20V