

【Version change history】

versions	Effective Date	Changed Contents	Change Reasons	Approved By
A01	May.11.2024	New release	/	
			/	

Power Inductor LMSC、LMTC、LMSE series type

1. Features

- Extremely low DCR and ultra low AC losses for high switching frequencies (up to 5MHz)
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI)
- Excellent saturation characteristics
- Ultra wide temperature range of application(-55℃~155℃)
- No thermal aging issues
- High reliability

2. Applications

- High-end phones, tablets, 5G modules
- Server, base station, etc
- Various DC-DC conversion power modules

3. Outline Dimensions

1) Dimensions See Fig.4-1 and recommended PCB pattern See Fig.4-2 and Table 4-1.

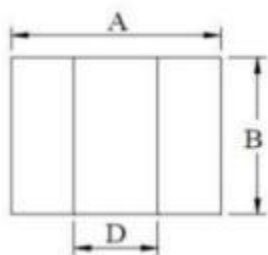


Fig 4-1

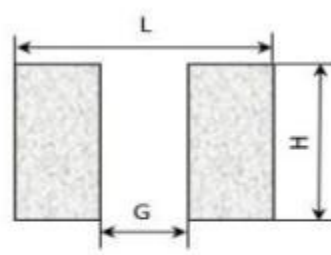


Fig 4-2

Table 4-1

Unit: mm

Type	A	B	C	D	L	G	H
LMTC252012MTA Series	2.5±0.2	2.0±0.2	1.2Max	1.3Type	2.8	1.2	2.0
LMSC252012MTA Series	2.5±0.2	2.0±0.2	1.2Max	0.9Type	2.5	0.9	2.0
LMSC322509MTA Series	3.2±0.2	2.5±0.2	0.9Max	2.2Type	2.3	1.3	2.5
LMSC322510MFA Series	3.2±0.15	2.5±0.15	1.0Max	0.9Type	3.3	0.8	2.6
LMTW322512MFA Series	3.2±0.15	2.5±0.15	1.2Max	0.9Type	3.2	0.8	2.5
LMSC322512MFA Series	3.2±0.15	2.5±0.15	1.2Max	0.9Type	3.2	0.8	2.5
LMTC322512MTA Series	3.2±0.2	2.5±0.2	1.2Max	1.0Type	3.25	0.9	2.55
LMSC322512MTA Series	3.2±0.2	2.5±0.2	1.2Max	0.9Type	3.2	0.8	2.5
LMSE0420MTA Series	4.0±0.2	4.0±0.2	2.0Max	1.7Type	4.1	1.6	4.0
LMSC0430MYA Series	4.0±0.3	4.0±0.3	3.1Max	1.6Type	4.1	1.5	4.1
LMSC0614G/ETA Series	6.5±0.2	6.5±0.2	1.4Max	2.9Type	6.8	2.6	6.4
LMSC0615MTA Series	6.4±0.2	6.6±0.2	1.5Max	2.2Type	6.8	1.8	6.8
LMSC0624MYTA Series	7.25±0.3	6.6±0.2	2.4Max	3.25Type	8.4	3.7	3.5
LMSC0630MYTA Series	7.1±0.3	6.6±0.2	3.0Max	3.9Type	8.4	3.7	3.5
LMSC0717MTA Series	7.8±0.2	7.8±0.2	1.7Max	2.6Type	8.05	2.35	8.00

4. Specifications

LMTC252012MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMTC2520121R5MTA	1.5±20%	1	33	40	4.2	3.8	4.4	4.0

LMSC252012MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC252012R22MTA	0.22±20%	1	6.0	8.0	11.50	10.00	6.50	5.50
LMSC2520121R0MTA	1.0±20%	1	26	29	3.70	3.40	5.50	5.00
LMSC2520121R5MTA	1.5±20%	1	40	44	3.50	3.20	5.00	4.50

LMSC322509MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC32250980NMTA	0.08±20%	1	3.3	4.2	16.50	14.50	8.60	7.60

LMSC322510MFA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC322510150MFA	15±20%	1	400	450	1.30	1.10	0.85	1.27

LMTW322512MFA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMTW322512R10MFA	0.1±20%	1	3.3	4.2	15.50	13.00	8.60	7.60
LMTW322512R47MFA	0.47±20%	1	11.5	14	9.90	9.00	8.80	8.00
LMTW3225121R0MFA	1.0±20%	1	23	27.5	7.10	6.40	5.50	5.00

LMSC322512MFA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC322512R47MFA	0.47±20%	1	20	24	9.90	9.00	6.80	6.10
LMSC3225121R0MFA	1.0±20%	1	30	36	7.10	6.40	4.40	4.00

LMTC322512MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMTC322512R68MTA	0.68±20%	1	12	15	8.0	7.5	7.0	6.5

LMSC322512MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC322512R47MTA	0.47±20%	1	11.8	13.0	7.20	6.50	8.30	7.50
LMSC322512R68MTA	0.68±20%	1	15.0	16.5	6.50	5.50	7.30	6.60

LMSE0420MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSE0420R47MTA	0.47±20%	1	3.2	3.6	15	12	20	18
LMSE04201R0MTA	1.0±20%	1	7.4	8.4	8.0	6.5	14	12

LMSC0430MYA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC0430R33MYA	0.33±20%	1	2.0	2.2	21.40	18.80	22.40	19.40
LMSC0430R47MYA	0.47±20%	1	2.6	3.1	17.70	15.60	19.60	17.00
LMSC0430R68MYA	0.68±20%	1	3.5	3.9	16.30	14.30	16.20	14.10
LMSC04301R5MYA	1.5±20%	1	7.8	8.6	11.00	9.60	11.30	9.80
LMSC04302R2MYA	2.2±20%	1	10.7	11.8	8.10	7.10	10.30	9.00
LMSC04303R3MYA	3.3±20%	1	16.1	17.7	5.80	5.30	8.30	8.00
LMSC04304R7MYA	4.7±20%	1	21.3	23.4	5.50	4.80	7.00	6.10
LMSC04306R8MYA	6.8±20%	1	34.0	37.4	4.80	4.10	5.30	4.60

LMSC0614G/ETA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	KHz	mΩ	mΩ	A	A	A	A
LMSC06142R2GTA	2.2±15%	100	30	34	6.60	6.00	4.60	4.20
LMSC06143R3ETA	3.3±10%	100	50	55	5.50	5.00	3.80	3.50

LMSC0615MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC0615R28MTA	0.28±20%	1.5	3.7	4.5	26.50	23.00	20.00	18.00
LMSC06151R0MTA	1.0±20%	1.5	9.5	11.5	13.00	11.00	12.80	11.50

LMSC0624MYTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	KHz	mΩ	mΩ	A	A	A	A
LMSC0624R56MYTA	0.56±20%	100	5.5	6.5	25.00	22.00	13.00	11.70

LMSC0630MYTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	KHz	mΩ	mΩ	A	A	A	A
LMSC0630R10MYTA	0.1±20%	100	0.72	0.8	73.00	64.00	40.00	27.00

LMSC0717MTA Series

Electrical CharacteristicsPart Number	L	L Test Freq.	DC Resistance		Saturation Current(Isat)		Temperature Rise Current(Irms)	
			Typ	Max	Typ.	Max.	Typ.	Max.
Unit	μH	MHz	mΩ	mΩ	A	A	A	A
LMSC07171R4MTA	1.4±20%	1.5	9.0	10.8	14.00	12.00	13.00	11.70

* : If you require another part number please contact with us.

** : Inductance Tolerance ± 20% or other value is also available.

- 1) All test data is referenced to 25°C ambient
- 2) Idc : DC current (A) that will cause an approximate ΔT of 40°C (Single-Layer PCB)
- 3) Isat : DC current (A) that will cause L0 to drop approximately 30%