

POWER INDUCTORS, SEMI-SHIELDED (COATED) LPC SERIES



The Semi-shielded Power Inductor LPC Series are low profile and high current power inductors. Several dimensions are offered.

KEY FEATURES

- High Current Performance
- Small and Low Profile Inductors
- Magnetic shielding
- Available for automatic mounting in tape and reel package

APPLICATIONS

- DC/DC Converter
- Power Supplies
- Industrial
- Data Storage Devices
- Consumer Electronics

PRODUCT RANGE SUMMARY

SIZE CODE	INDUCTANCE RANGE	RATED CURRENT RANGE BASED ON INDUCTANCE CHANGE	RATED CURRENT RANGE BASED ON TEMPERATURE RISE	DC RESISTANCE RANGE	OPERATING TEMPERATURE RANGE ¹
2410	0.68 - 22.0 μ H	0.40 - 2.60 A	0.40 - 2.50 A	60 m Ω - 1470 m Ω	-25°C to +120°C
3010	1.00 - 100.0 μ H	0.15 - 2.30 A	0.18 - 2.30 A	50 m Ω - 5.00 Ω	-40°C to +125°C
3012	1.00 - 47.0 μ H	0.23 - 1.90 A	0.35 - 1.71 A	45 m Ω - 1250 m Ω	
3015	1.00 - 100.0 μ H	0.25 - 2.30 A	0.30 - 2.30 A	28 m Ω - 2100 m Ω	
4018	0.82 - 220.0 μ H	0.30 - 4.70 A	0.28 - 4.00 A	16 m Ω - 2960 m Ω	
4025	1.00 - 220.0 μ H	0.20 - 3.00 A	0.20 - 3.00 A	12 m Ω - 2300 m Ω	
5040	1.50 - 47.0 μ H	1.10 - 6.00 A	0.90 - 3.60 A	15 m Ω - 270 m Ω	
6045	1.00 - 220.0 μ H	0.55 - 8.60 A	0.50 - 6.50 A	10 m Ω - 920 m Ω	

Consult Factory for values not listed in the product range

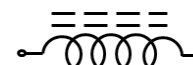
¹ Including self-generated heat

TEST FREQUENCY: 100KHz, 1V

STORAGE TEMPERATURE: -10°C to +40°C, humidity 30 to 70% R.H.

MOISTURE SENSITIVITY LEVEL: MSL - 1

Electrical Schematic: No Polarity



HOW TO ORDER

LPC	3015	2R2	M	E
INDUCTOR POWER SEMI-SHIELDED	SIZE CODE	INDUCTANCE	TOLERANCE	PACKING
LPC (Coated)	2410 3010 3012 3015 4018 4025 5040 6045	R68 = 0.68 μ H 2R2 = 2.2 μ H 220 = 22 μ H 221 = 220 μ H See chart	M = \pm 20% N = \pm 30%	E = Embossed Tape & Reel

Standard Termination Finish: Matte Tin(Sn)

Example P/N: LPC30152R2ME is semi-shielded power inductor 2.2 μ H, 3015 size, \pm 20%, embossed tape & reel



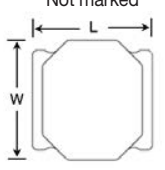
POWER INDUCTORS, SEMI-SHIELDED (COATED)

LPC SERIES

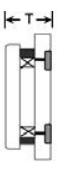
2410 SIZE

Units	Inches	mm
L	0.094 ±0.004	2.40 ±0.10
W	0.094 ±0.004	2.40 ±0.10
T max	0.039	1.00


Not marked



Top View



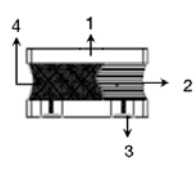
Side View



Bottom View

See page 68 for footprint

Part	Material
1	Ferrite Core Ni-Zn Ferrite
2	Copper Wire Cu / P180 Grd 1
3	Termination Ag / Ni / Sn
4	Adhesive Silicon Base Resin
	Magnetic Powder Ni-Zn Ferrite

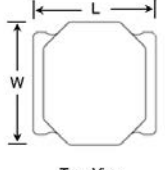


Part Number	Inductance @ 100KHz, 1V	Rated Current Based on Inductance Change ^{*1}	Rated Current Based on Temperature Rise ^{*2}	DC Resistance	DC Resistance Tolerance
LPC2410R68NE	0.68 μH, ±30%	2.60 A	2.50 A	60 mΩ	±30%
LPC24101R0NE	1.0 μH, ±30%	2.00 A	1.90 A	70 mΩ	±30%
LPC24101R5ME	1.5 μH, ±20%	1.50 A	1.50 A	110 mΩ	±20%
LPC24102R2ME	2.2 μH, ±20%	1.30 A	1.20 A	140 mΩ	±20%
LPC24103R3ME	3.3 μH, ±20%	1.05 A	1.00 A	220 mΩ	±20%
LPC24104R7ME	4.7 μH, ±20%	0.92 A	0.90 A	290 mΩ	±20%
LPC24106R8ME	6.8 μH, ±20%	0.75 A	0.65 A	410 mΩ	±20%
LPC2410100ME	10.0 μH, ±20%	0.60 A	0.55 A	690 mΩ	±20%
LPC2410150ME	15.0 μH, ±20%	0.50 A	0.45 A	1020 mΩ	±20%
LPC2410220ME	22.0 μH, ±20%	0.40 A	0.40 A	1470 mΩ	±20%


3010 SIZE

Units	Inches	mm
L	0.118 ±0.004	3.00 ±0.10
W	0.118 ±0.004	3.00 ±0.10
T max	0.039	1.00


Not marked



Top View



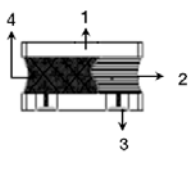
Side View



Bottom View

See page 68 for footprint

Part	Material
1	Ferrite Core Ni-Zn Ferrite
2	Copper Wire Cu / P180 Grd 1
3	Termination Ag / Ni / Sn
4	Adhesive Silicon Base Resin
	Magnetic Powder Ni-Zn Ferrite



Part Number	Inductance @ 100KHz, 1V	Rated Current Based on Inductance Change ^{*1}	Rated Current Based on Temperature Rise ^{*2}	DC Resistance	DC Resistance Tolerance
LPC30101R0NE	1.0 μH, ±30%	2.30 A	2.30 A	50 mΩ	±25%
LPC30101R2NE	1.2 μH, ±30%	1.90 A	2.10 A	62 mΩ	±30%
LPC30101R5NE	1.5 μH, ±30%	1.65 A	2.00 A	70 mΩ	±30%
LPC30102R2ME	2.2 μH, ±20%	1.30 A	1.90 A	80 mΩ	±20%
LPC30103R3ME	3.3 μH, ±20%	1.05 A	1.80 A	130 mΩ	±20%
LPC30104R7ME	4.7 μH, ±20%	0.85 A	1.70 A	175 mΩ	±20%
LPC30106R8ME	6.8 μH, ±20%	0.70 A	1.30 A	260 mΩ	±20%
LPC3010100ME	10.0 μH, ±20%	0.60 A	0.90 A	350 mΩ	±20%
LPC3010150ME	15.0 μH, ±20%	0.50 A	0.80 A	510 mΩ	±20%
LPC3010220ME	22.0 μH, ±20%	0.40 A	0.70 A	780 mΩ	±20%
LPC3010330ME	33.0 μH, ±20%	0.32 A	0.50 A	1.10 Ω	±20%
LPC3010470ME	47.0 μH, ±20%	0.28 A	0.35 A	1.60 Ω	±20%
LPC3010101ME	100.0 μH, ±20%	0.15 A	0.18 A	5.00 Ω	±20%

*1. Idc1: Based on inductance change ($\Delta L/L_0$: ≤ -30%)
 *2. Idc2: Based on temperature rise (ΔT : 40°C TYP.)

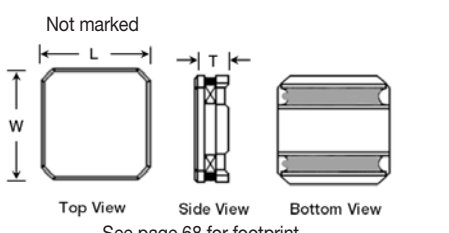
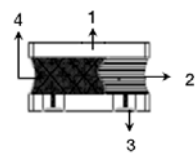
Notes: Inductance is measured in HP-4285A Precision LCR Meter.
 RDC measured in DU-5011 milli ohm meter (or equivalent).



POWER INDUCTORS, SEMI-SHIELDED (COATED)

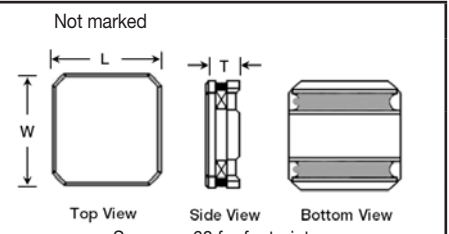
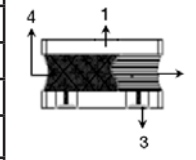
LPC SERIES

3012 SIZE

Units	Inches	mm		Part	Material	
L	0.118 ±0.004	3.00 ±0.10		1 Ferrite Core	Ni-Zn Ferrite	
W	0.118 ±0.004	3.00 ±0.10		2 Copper Wire	Cu / P180 Grd 1	
T	0.047	1.20	3 Terminals	Ag / Ni / Sn	4 Adhesive Silicon Base Resin	
T _{max}			4 Magnetic Powder	Ni-Zn Ferrite		

Part Number	Inductance @ 100KHz, 1V	Rated Current Based on Inductance Change ^{*1}	Rated Current Based on Temperature Rise ^{*2}	DC Resistance	DC Resistance Tolerance
LPC30121R0NE	1.0 µH, ±30%	1.90 A	1.71 A	45 mΩ	±20%
LPC30121R5NE	1.5 µH, ±30%	1.50 A	1.60 A	55 mΩ	±20%
LPC30122R2ME	2.2 µH, ±20%	1.25 A	1.37 A	60 mΩ	±20%
LPC30122R7ME	2.7 µH, ±20%	1.20 A	1.30 A	90 mΩ	±20%
LPC30123R3ME	3.3 µH, ±20%	1.05 A	1.21 A	90 mΩ	±20%
LPC30124R7ME	4.7 µH, ±20%	0.90 A	1.06 A	150 mΩ	±20%
LPC30126R8ME	6.8 µH, ±20%	0.70 A	0.89 A	190 mΩ	±20%
LPC3012100ME	10.0 µH, ±20%	0.60 A	0.72 A	270 mΩ	±20%
LPC3012150ME	15.0 µH, ±20%	0.50 A	0.57 A	450 mΩ	±20%
LPC3012220ME	22.0 µH, ±20%	0.40 A	0.50 A	550 mΩ	±20%
LPC3012330ME	33.0 µH, ±20%	0.30 A	0.41 A	900 mΩ	±20%
LPC3012470ME	47.0 µH, ±20%	0.23 A	0.35 A	1250 mΩ	±20%

3015 SIZE

Units	Inches	mm		Part	Material	
L	0.118 ±0.004	3.00 ±0.10		1 Ferrite Core	Ni-Zn Ferrite	
W	0.118 ±0.004	3.00 ±0.10		2 Copper Wire	Cu / P180 Grd 1	
T	0.059	1.50	3 Termination	Ag / Ni / Sn	4 Adhesive Silicon Base Resin	
T _{max}			4 Magnetic Powder	Ni-Zn Ferrite		

Part Number	Inductance @ 100KHz, 1V	Rated Current Based on Inductance Change ^{*1}	Rated Current Based on Temperature Rise ^{*2}	DC Resistance	DC Resistance Tolerance
LPC30151R0NE	1.0 µH, ±30%	2.30 A	2.30 A	28 mΩ	±30%
LPC30151R5NE	1.5 µH, ±30%	2.10 A	2.10 A	37 mΩ	±30%
LPC30152R2ME	2.2 µH, ±20%	1.62 A	2.00 A	58 mΩ	±20%
LPC30152R7ME	2.7 µH, ±20%	1.50 A	1.95 A	60 mΩ	±20%
LPC30153R3ME	3.3 µH, ±20%	1.35 A	1.80 A	75 mΩ	±20%
LPC30154R7ME	4.7 µH, ±20%	1.20 A	1.60 A	100 mΩ	±20%
LPC30155R6ME	5.6 µH, ±20%	1.00 A	1.40 A	120 mΩ	±20%
LPC30156R8ME	6.8 µH, ±20%	0.97 A	1.30 A	150 mΩ	±20%
LPC3015100ME	10.0 µH, ±20%	0.80 A	1.10 A	220 mΩ	±20%
LPC3015150ME	15.0 µH, ±20%	0.65 A	1.00 A	300 mΩ	±20%

*1. I_{dc1}: Based on inductance change ($\Delta L/L_0$: $\leq -30\%$)
 *2. I_{dc2}: Based on temperature rise (ΔT : 40°C TYP.)

Notes: Inductance is measured in HP-4285A Precision LCR Meter.
 RDC measured in DU-5011 milli ohm meter (or equivalent).

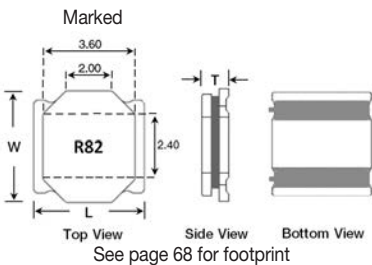
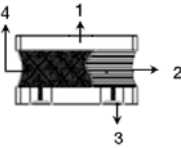
POWER INDUCTORS, SEMI-SHIELDED (COATED)

LPC SERIES

3015 SIZE (CONTINUED)

Part Number	Inductance @ 100KHz, 1V	Rated Current Based ^{*1} on Inductance Change	Rated Current Based ^{*2} on Temperature Rise	DC Resistance	DC Resistance Tolerance
LPC3015180ME	18.0 µH, ±20%	0.57 A	0.90 A	410 mΩ	±20%
LPC3015220ME	22.0 µH, ±20%	0.55 A	0.80 A	475 mΩ	±20%
LPC3015330ME	33.0 µH, ±20%	0.45 A	0.70 A	650 mΩ	±20%
LPC3015390ME	39.0 µH, ±20%	0.40 A	0.50 A	850 mΩ	±20%
LPC3015470ME	47.0 µH, ±20%	0.35 A	0.45 A	1100 mΩ	±20%
LPC3015680ME	68.0 µH, ±20%	0.30 A	0.35 A	1700 mΩ	±20%
LPC3015820ME	82.0 µH, ±20%	0.27 A	0.32 A	1900 mΩ	±20%
LPC3015101ME	100.0 µH, ±20%	0.25 A	0.30 A	2100 mΩ	±20%

4018 SIZE

Units	Inches	mm				Part	Material	
L	0.157 ±0.008	4.00 ±0.20	(R82-2R7) 0.074 1.88 (3R3-221) 0.071 1.80	1	Ferrite Core	Ni-Zn Ferrite		
W	0.157 ±0.008	4.00 ±0.20		2	Copper Wire	Cu / P180 Grd 1		
T max				3	Termination	Ag / Ni / Sn		
				4	Adhesive Magnetic Powder	Silicon Base Resin Ni-Zn Ferrite		

Part Number	Inductance @ 100KHz, 1V	Rated Current Based ^{*1} on Inductance Change	Rated Current Based ^{*2} on Temperature Rise	DC Resistance	DC Resistance Tolerance	Marking
LPC4018R82NE	0.82 µH, ±30%	4.20 A	4.00 A	16 mΩ	±30%	R82
LPC40181R0NE	1.0 µH, ±30%	4.70 A	3.70 A	19 mΩ	±30%	1R0
LPC40181R2NE	1.2 µH, ±30%	4.00 A	3.50 A	21 mΩ	±30%	1R2
LPC40181R5NE	1.5 µH, ±30%	3.50 A	3.10 A	27 mΩ	±30%	1R5
LPC40182R2ME	2.2 µH, ±20%	3.00 A	2.90 A	37 mΩ	±20%	2R2
LPC40182R7ME	2.7 µH, ±20%	2.40 A	2.30 A	43 mΩ	±20%	2R7
LPC40183R3ME	3.3 µH, ±20%	2.30 A	2.20 A	55 mΩ	±20%	3R3
LPC40184R7ME	4.7 µH, ±20%	2.00 A	1.90 A	70 mΩ	±20%	4R7
LPC40186R8ME	6.8 µH, ±20%	1.60 A	1.50 A	98 mΩ	±20%	6R8
LPC4018100ME	10.0 µH, ±20%	1.40 A	1.30 A	150 mΩ	±20%	100
LPC4018150ME	15.0 µH, ±20%	1.10 A	1.00 A	220 mΩ	±20%	150
LPC4018220ME	22.0 µH, ±20%	0.95 A	0.90 A	290 mΩ	±20%	220
LPC4018330ME	33.0 µH, ±20%	0.75 A	0.70 A	460 mΩ	±20%	330
LPC4018470ME	47.0 µH, ±20%	0.62 A	0.60 A	650 mΩ	±20%	470
LPC4018680ME	68.0 µH, ±20%	0.50 A	0.50 A	940 mΩ	±20%	680
LPC4018101ME	100.0 µH, ±20%	0.45 A	0.42 A	1330 mΩ	±20%	101
LPC4018151ME	150.0 µH, ±20%	0.35 A	0.32 A	2000 mΩ	±20%	151
LPC4018221ME	220.0 µH, ±20%	0.30 A	0.28 A	2960 mΩ	±20%	221

*1. Idc1: Based on inductance change ($\Delta L/L_0$: $\leq -30\%$)
 *2. Idc2: Based on temperature rise (ΔT : 40°C TYP.)

Notes: Inductance is measured in HP-4285A Precision LCR Meter.
 RDC measured in DU-5011 milli ohm meter (or equivalent).

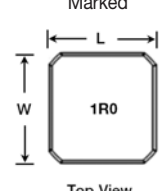


POWER INDUCTORS, SEMI-SHIELDED (COATED)

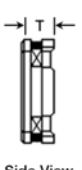
LPC SERIES

4025 SIZE

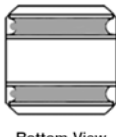
Units	Inches	mm
L	0.157 ±0.008	4.00 ±0.20
W	0.157 ±0.008	4.00 ±0.20
T max	0.098	2.50



Marked
Top View



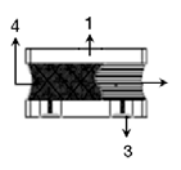
Side View



Bottom View

See page 68 for footprint

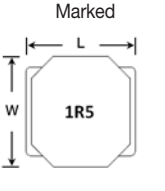
Part	Material
1	Ferrite Core Ni-Zn Ferrite
2	Copper Wire Cu / P180 Grd 1
3	Terminals Ag / Ni / Sn
4	Adhesive Silicon Base Resin
	Magnetic Powder Ni-Zn Ferrite



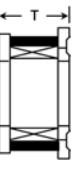
Part Number	Inductance @ 100KHz, 1V	Rated Current Based on Inductance Change ^{*1}	Rated Current Based on Temperature Rise ^{*2}	DC Resistance	DC Resistance Tolerance	Marking
LPC40251R0NE	1.0 μH, ±30%	3.00 A	3.00 A	12 mΩ	±30%	1R0
LPC40251R2NE	1.2 μH, ±30%	2.75 A	2.75 A	18 mΩ	±30%	1R2
LPC40252R2NE	2.2 μH, ±30%	2.10 A	2.10 A	22 mΩ	±30%	2R2
LPC40253R3ME	3.3 μH, ±20%	1.60 A	1.60 A	30 mΩ	±20%	3R3
LPC40254R7ME	4.7 μH, ±20%	1.40 A	1.40 A	40 mΩ	±20%	4R7
LPC40256R8ME	6.8 μH, ±20%	1.20 A	1.20 A	70 mΩ	±20%	6R8
LPC4025100ME	10.0 μH, ±20%	0.97 A	0.97 A	85 mΩ	±20%	100
LPC4025150ME	15.0 μH, ±20%	0.77 A	0.77 A	120 mΩ	±20%	150
LPC4025220ME	22.0 μH, ±20%	0.67 A	0.67 A	195 mΩ	±20%	220
LPC4025330ME	33.0 μH, ±20%	0.50 A	0.50 A	305 mΩ	±20%	330
LPC4025470ME	47.0 μH, ±20%	0.40 A	0.40 A	495 mΩ	±20%	470
LPC4025680ME	68.0 μH, ±20%	0.35 A	0.35 A	710 mΩ	±20%	680
LPC4025101ME	100.0 μH, ±20%	0.30 A	0.30 A	1000 mΩ	±20%	101
LPC4025151ME	150.0 μH, ±20%	0.22 A	0.22 A	1600 mΩ	±20%	151
LPC4025221ME	220.0 μH, ±20%	0.20 A	0.20 A	2300 mΩ	±20%	121

5040 SERIES


Units	Inches	mm
L	0.197 ±0.008	5.00 ±0.20
W	0.197 ±0.008	5.00 ±0.20
T max	.157	4.00



Marked
Top View



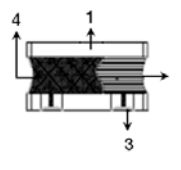
Side View



Bottom View

See page 68 for footprint

Part	Material
1	Ferrite Core Ni-Zn Ferrite
2	Copper Wire Cu / P180 Grd 1
3	Termination Ag / Ni / Sn
4	Adhesive Silicon Base Resin
	Magnetic Powder Ni-Zn Ferrite



Part Number	Inductance @ 100KHz, 1V	Rated Current Based on Inductance Change ^{*1}	Rated Current Based on Temperature Rise ^{*2}	DC Resistance	DC Resistance Tolerance	Marking
LPC50401R5NE	1.5 μH, ±30%	6.00 A	3.60 A	15 mΩ	±20%	1R5
LPC50402R2NE	2.2 μH, ±30%	4.60 A	3.50 A	17 mΩ	±20%	2R2
LPC50403R3ME	3.3 μH, ±20%	3.80 A	3.30 A	22 mΩ	±20%	3R3
LPC50404R7ME	4.7 μH, ±20%	3.30 A	3.10 A	29 mΩ	±20%	4R7
LPC50406R8ME	6.8 μH, ±20%	2.60 A	2.30 A	49 mΩ	±20%	6R8
LPC50408R2ME	8.2 μH, ±20%	2.40 A	2.20 A	54 mΩ	±20%	8R2
LPC5040100ME	10.0 μH, ±20%	2.30 A	2.10 A	56 mΩ	±20%	100

*1. Idc1: Based on inductance change ($\Delta L/L_0$: $\leq -30\%$)
 *2. Idc2: Based on temperature rise (ΔT : 40°C TYP.)

Notes: Inductance is measured in HP-4285A Precision LCR Meter.
 RDC measured in DU-5011 milli ohm meter (or equivalent).

POWER INDUCTORS, SEMI-SHIELDED (COATED)

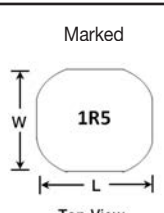
LPC SERIES

5040 SIZE (CONTINUED)

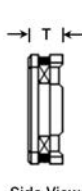
Part Number	Inductance @ 100KHz, 1V	Rated Current Based ^{*1} on Inductance Change	Rated Current Based ^{*2} on Temperature Rise	DC Resistance	DC Resistance Tolerance	Marking
LPC5040150ME	15.0 μ H, \pm 20%	2.00 A	1.80 A	80 m Ω	\pm 20%	150
LPC5040220ME	22.0 μ H, \pm 20%	1.60 A	1.40 A	126 m Ω	\pm 20%	220
LPC5040270ME	27.0 μ H, \pm 20%	1.40 A	1.30 A	165 m Ω	\pm 20%	270
LPC5040330ME	33.0 μ H, \pm 20%	1.30 A	1.20 A	180 m Ω	\pm 20%	330
LPC5040470ME	47.0 μ H, \pm 20%	1.10 A	0.90 A	270 m Ω	\pm 20%	470

6045 SIZE


Units	Inches	mm
L	0.236 \pm 0.008	6.00 \pm 0.20
W	0.236 \pm 0.008	6.00 \pm 0.20
T max	0.177	4.50



Top View



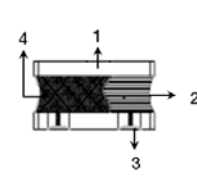
Side View



Bottom View

See page 68 for footprint

Part	Material
1	Ferrite Core Ni-Zn Ferrite
2	Copper Wire Cu / P180 Grd 1
3	Terminals Ag / Ni / Sn
4	Adhesive Silicon Base Resin
	Magnetic Powder Ni-Zn Ferrite



Part Number	Inductance @ 100KHz, 1V	Rated Current Based ^{*1} on Inductance Change	Rated Current Based ^{*2} on Temperature Rise	DC Resistance	DC Resistance Tolerance	Marking
LPC60451R0NE	1.0 μ H, \pm 30%	8.60 A	6.50 A	10 m Ω	\pm 30%	1R0
LPC60451R3NE	1.3 μ H, \pm 30%	8.00 A	6.00 A	11m Ω	\pm 30%	1R3
LPC60451R8NE	1.8 μ H, \pm 30%	7.00 A	5.30 A	12 m Ω	\pm 30%	1R8
LPC60452R2NE	2.2 μ H, \pm 30%	6.10 A	5.00 A	13 m Ω	\pm 30%	2R2
LPC60453R0NE	3.0 μ H, \pm 30%	5.00 A	4.80 A	17 m Ω	\pm 30%	3R0
LPC60453R3NE	3.3 μ H, \pm 30%	4.50 A	4.50 A	17 m Ω	\pm 30%	3R3
LPC60454R5NE	4.5 μ H, \pm 30%	4.30 A	3.80 A	23 m Ω	\pm 30%	4R5
LPC60454R7NE	4.7 μ H, \pm 30%	4.00 A	3.70 A	23 m Ω	\pm 30%	4R7
LPC60455R6NE	5.6 μ H, \pm 30%	3.80 A	3.60 A	26 m Ω	\pm 30%	5R6
LPC60456R3NE	6.3 μ H, \pm 30%	3.80 A	3.60 A	26 m Ω	\pm 30%	6R3
LPC60456R8NE	6.8 μ H, \pm 30%	3.60 A	3.50 A	34 m Ω	\pm 30%	6R8
LPC60458R2NE	8.2 μ H, \pm 30%	3.20 A	3.10 A	41 m Ω	\pm 30%	8R2
LPC6045100ME	10.0 μ H, \pm 20%	3.10 A	3.00 A	45 m Ω	\pm 20%	100
LPC6045150ME	15.0 μ H, \pm 20%	2.30 A	2.30 A	80 m Ω	\pm 20%	150
LPC6045220ME	22.0 μ H, \pm 20%	1.90 A	1.90 A	112 m Ω	\pm 20%	220
LPC6045330ME	33.0 μ H, \pm 20%	1.50 A	1.50 A	170 m Ω	\pm 20%	330
LPC6045470ME	47.0 μ H, \pm 20%	1.30 A	1.30 A	210 m Ω	\pm 20%	470
LPC6045560ME	56.0 μ H, \pm 20%	1.20 A	1.20 A	270 m Ω	\pm 20%	560
LPC6045680ME	68.0 μ H, \pm 20%	1.00 A	1.00 A	325 m Ω	\pm 20%	680
LPC6045101ME	100.0 μ H, \pm 20%	0.90 A	0.90 A	460 m Ω	\pm 20%	101
LPC6045221ME	220.0 μ H, \pm 20%	0.55 A	0.50 A	920 m Ω	\pm 20%	221

*1. I_{dc1}: Based on inductance change ($\Delta L/L_0$: \leq -30%)
 *2. I_{dc2}: Based on temperature rise (ΔT : 40°C TYP.)

Notes: Inductance is measured in HP-4285A Precision LCR Meter.
 RDC measured in DU-5011 milli ohm meter (or equivalent).



POWER INDUCTORS, SEMI-SHIELDED (COATED)



LPC SERIES

ENVIRONMENTAL PERFORMANCE

	SPECIFICATION	TEST PARAMETERS
VIBRATION	$\Delta L/L_0 : \leq \pm 10\%$ There shall be no mechanical damage	Solder specimen inductor on the test printed circuit board. Apply vibrations in each of the x, y and z directions for 2 hours for a total of 6 hours. Frequency : 10 to 50 Hz Amplitude : 1.5mm
SOLDERABILITY	The metalized area must have 90% minimum solder coverage.	Dip pads in flux and dip in solder pot (NP303) at $240^\circ\text{C} \pm 5^\circ\text{C}$
HIGH TEMPERATURE RESISTANCE	$\Delta L/L_0 : \leq \pm 10\%$ There shall be no mechanical damage or electrical damage.	The sample shall be left for 96 hours in an atmosphere with a temperature of $85 \pm 2^\circ\text{C}$ and a normal humidity. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.
LOW TEMPERATURE	$\Delta L/L_0 : \leq \pm 10\%$ There shall be no mechanical damage or electrical damage.	The sample shall be left for 96 hours in an atmosphere with a temperature of $-30 \pm 2^\circ\text{C}$. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.
MOISTURE STORAGE	$\Delta L/L_0 : \leq \pm 10\%$ There shall be no mechanical damage	The sample shall be left for 96 hours in a temperature of $40 \pm 2^\circ\text{C}$ and a humidity(RH) of 90~95%. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity more than 1 hour.
SUBSTRATE BENDING	$\Delta L/L_0 : \leq \pm 10\%$ There shall be no mechanical damage or electrical damage	The sample shall be soldered onto the printed circuit board and a load applied until the figure in the arrow direction is made approximately 3mm (keep time 5 ± 1 seconds).
THERMAL SHOCK	$\Delta L/L_0 : \leq \pm 10\%$ There shall be no damage or problems.	The sample shall be subject to 5 continuous cycles, such as shown in the following temperature cycle. Measure the test items after leaving the inductors at room temperature and humidity for 1 hour.
COMPONENT ADHESION (PUSH TEST)	10N Min (LPC 2410, 3010) 12N Min (LPC 3012, 3015, 4018, 4025, 5040, 6045)	The device should be reflow soldered ($245 \pm 5^\circ\text{C}$ for 10 seconds) to a copper substrate a dynamometer force gauge should be applied to the side of the component the device must withstand a minimum force of 10N or 12N without failure of the termination attached to the component.