

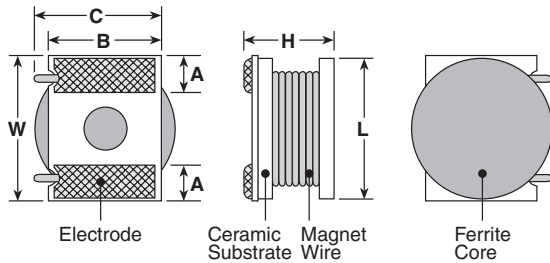


features

- Low DC resistance and high allowable current are realized by the original construction and wiring technology
- Automatic surface mounting is applicable
- Excellent solderability and endurance environment
- Suitable for reflow soldering
- Products meet EU RoHS requirements
- AEC-Q200 Tested

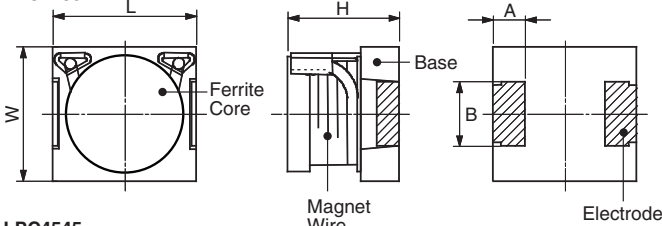
dimensions and construction

LPC4045

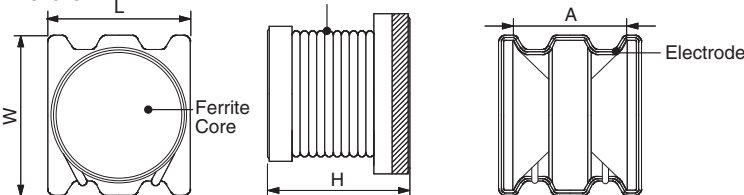


Size	Dimensions inches (mm)					
	L	W	H Max.	A	B	C
4045	ø.157±.008 (ø4.0±0.2)	.177±.008 (4.5±0.2)	.169±.009 (4.3±0.2)	.039±.112 (1.0±0.3)	.118±.008 (3.0±0.2)	.138 (3.5)
4235	.177±.008 (4.5±0.2)	.165±.008 (4.2±0.2)	.138 Max. (3.5 Max.)	.039±.008 (1.0±0.2)	.079±.008 (2.0±0.2)	—
4545	.161±.012 (4.1±0.3)	.181±.016 (4.6±0.4)	.181 Max. (4.6 Max.)	.126±.012 (3.2±0.3)	—	—

LPC4235



LPC4545



ordering information

LPC	4235	T	TM	221	K
Type	Size	Termination Material	Packaging	Nominal Inductance	Tolerance
	4045 4235 4545	A: SnAg (4045 only) T: Sn (4235 only) C: Sn/Cu (4545 only)	TM: taping (4235) TE: taping (4545) TED: taping (4045)	3 digits 221: 220µH	K: ±10% M: ±20%

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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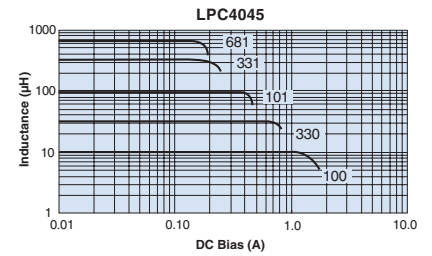
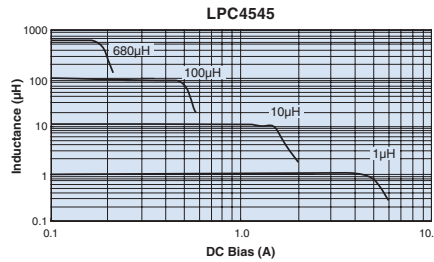
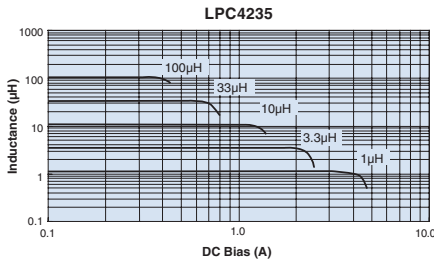
applications and ratings

Part Designation	Nominal Inductance (μH)	Inductance Tolerance	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (Amps)	
LPC4045ATED1R0M	1.0	M: ±20%	90.0	0.015	3.10	
LPC4045ATED1R5M	1.5		70.0	0.020	2.80	
LPC4045ATED2R2M	2.2		55.0	0.023	2.50	
LPC4045ATED3R3M	3.3		45.0	0.044	1.80	
LPC4045ATED4R7M	4.7		35.0	0.062	1.45	
LPC4045ATED6R8M	6.8		25.0	0.075	1.30	
LPC4045ATED100K	10	K: ±10%	23.5	0.10	1.02	
LPC4045ATED150K	15		18.5	0.15	0.84	
LPC4045ATED220K	22		14.0	0.21	0.70	
LPC4045ATED330K	33		12.0	0.41	0.52	
LPC4045ATED470K	47		10.5	0.52	0.46	
LPC4045ATED680K	68		8.0	0.67	0.40	
LPC4045ATED101K	100		6.3	0.92	0.28	
LPC4045ATED151K	150		5.2	1.80	0.25	
LPC4045ATED221K	220		3.9	2.25	0.18	
LPC4045ATED331K	330		3.0	4.27	0.15	
LPC4045ATED471K	470		2.7	5.23	0.14	
LPC4045ATED681K	680		2.2	6.67	0.12	
LPC4235TTM R82M	0.82		M: ±20%	146.6	0.017	3.34
LPC4235TTM 1R0M	1.0			125.1	0.020	3.27
LPC4235TTM 1R2M	1.2	114.7		0.023	3.10	
LPC4235TTM 1R5M	1.5	101.4		0.031	2.53	
LPC4235TTM 2R2M	2.2	78.8		0.039	2.28	
LPC4235TTM 3R3M	3.3	66.7		0.070	1.63	
LPC4235TTM 4R7M	4.7	52.0		0.090	1.44	
LPC4235TTM 6R8M	6.8	43.5		0.109	1.29	
LPC4235TTM 100K	10	K: ±10%	33.5	0.190	0.91	
LPC4235TTM 150K	15		29.1	0.230	0.87	
LPC4235TTM 220K	22		21.7	0.366	0.69	
LPC4235TTM 330K	33		13.9	0.542	0.52	
LPC4235TTM 470K	47		12.0	0.688	0.47	
LPC4235TTM 680K	68		12.7	1.30	0.34	
LPC4235TTM 101K	100		10.4	1.66	0.31	
LPC4235TTM 151K	150		7.5	2.96	0.22	
LPC4235TTM 221K	220		6.7	3.77	0.20	
LPC4545CTE 1R0M	1.0		M: ±20%	90.0	0.015	3.66
LPC4545CTE 1R5M	1.5	65.0		0.02	3.21	
LPC4545CTE 2R2M	2.2	50.0		0.023	2.96	
LPC4545CTE 3R3M	3.3	40.0		0.044	2.19	
LPC4545CTE 4R7M	4.7	35.0		0.062	1.81	
LPC4545CTE 6R8M	6.8	25.0		0.075	1.60	
LPC4545CTE 100K	10	K: ±10%	23.0	0.1	1.43	
LPC4545CTE 150K	15		15.0	0.15	1.04	
LPC4545CTE 220K	22		13.0	0.21	0.88	
LPC4545CTE 330K	33		10.0	0.41	0.60	
LPC4545CTE 470K	47		9.0	0.52	0.53	
LPC4545CTE 680K	68		7.5	0.67	0.49	
LPC4545CTE 101K	100		5.5	0.92	0.41	
LPC4545CTE 151K	150		5.0	1.8	0.29	
LPC4545CTE 221K	220		4.0	2.25	0.26	
LPC4545CTE 331K	330		2.5	4.27	0.19	
LPC4545CTE 471K	470		2.0	5.23	0.17	
LPC4545CTE 681K	680		1.8	6.67	0.15	
LPC4545CTE 152K	1500		1.3	17.04	0.10	
LPC4545CTE 222K	2200		0.9	35.0	0.07	

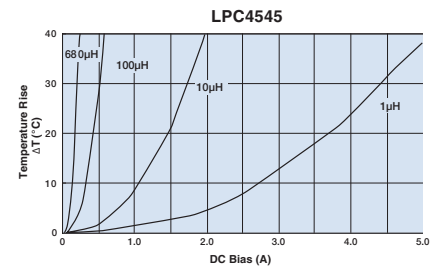
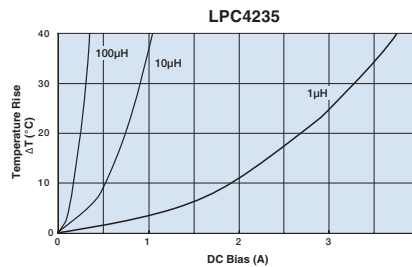
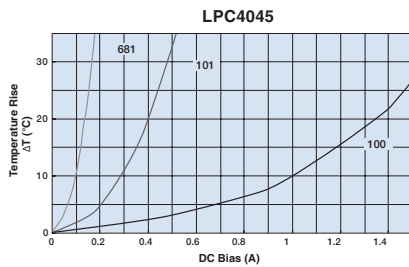
Allowable current is a DC Current which causes initial inductance to decrease by 10%. Or coil temperature to rise by 40°C, whichever is smaller
 Operating Temperature Range: -40°C ~ +125°C LPC4235: Test Report +155°C is available
 The operating temperature range of the coil (ambient temperature + self heating) must remain at +125°C or less

environmental applications

DC Bias Characteristics



Surface Temperature Rise



Performance Characteristics

Parameter	Performance Requirements $\Delta L/L$		Test Method		
	Limit	Typical	LPC4045	LPC4235	LPC4545
Rapid Change of Temperature	$\pm 5\%$	$\pm 1.3\%$	-40°C (30 minutes)/ +85°C (30 minutes), 100 cycles	-40°C (30 minutes)/ +125°C (30 minutes), 100 cycles	-40°C (30 minutes)/ +125°C (30 minutes), 100 cycles
Low Temperature Exposure	$\pm 5\%$	$\pm 1.3\%$	-40°C, 500 hours	-40°C $\pm 2^\circ\text{C}$, 500 hours	-40°C, 1000 hours
High Temperature Exposure	$\pm 5\%$	$\pm 1.3\%$	+85°C, 500 hours	+125°C $\pm 2^\circ\text{C}$, 500 hours	+125°C $\pm 2^\circ\text{C}$, 1000 hours
Moisture Exposure	$\pm 5\%$	$\pm 1.6\%$	+40°C $\pm 2^\circ\text{C}$, 90 - 95% RH, 500 hours	+40°C $\pm 2^\circ\text{C}$, 90 - 95% RH, 500 hours	+85°C, 8 5% RH, 1000 hours

Surface Temperature Rise graphs and additional environmental applications can be found at www.koaspeer.com

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