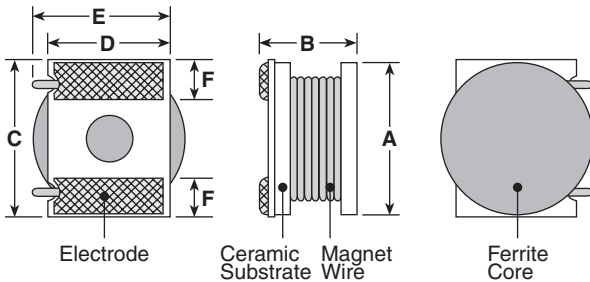


features

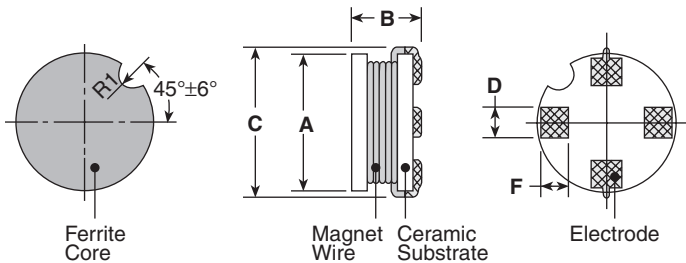
- Small size allows for high mounting density
- Operating temperature: LPC9040E: -40°C ~ +125°C, all others: -40°C ~ +85°C
- Large DC current capacity with low DC resistance
- Polarity identification available
- E-6 series of values (customs available)
- Marking: Black body color with no marking
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified (LPC4045 only)

dimensions and construction



4045, 10065, 12065

Size	Dimensions inches (mm)					
	A	B	C	D	E	F
4045	ø.157±.008 (ø4.0±0.2)	.169±.009 (4.3±0.2)	.177±.008 (4.5±0.2)	.118±.008 (3.0±0.2)	.138 (3.5)	.039±.112 (1.0±0.3)
9040N	ø.354±.004 (ø9.0±0.1)	.193 Max. (4.9 Max.)	.402 Max. (10.2 Max.)	.079±.008 (2.0±0.2)	—	.079±.008 (2.0±0.2)
9040E	ø.354±.004 (ø9.0±0.1)	.193 Max. (4.9 Max.)	.402 Max. (10.2 Max.)	.071±.008 (1.8±0.2)	—	.079±.008 (2.0±0.2)
10065	ø.394±.008 (ø10.0±0.2)	.295 Max. (7.5 Max.)	.409±.008 (10.4±0.2)	.315±.008 (8.0±0.2)	.354 (9.0)	.098±.008 (2.5±0.2)
12065	ø.472±.008 (ø12.0±0.2)	.295 Max. (7.5 Max.)	.488±.008 (12.4±0.2)	.472±.008 (10.0±0.2)	.433 (11.0)	.146±.112 (3.7±0.3)



9040N, 9040E

Coil Temperature

	LPC4045/LPC9040N/ LPC10065/LPC12065	LPC9040E
Coil Temperature Rise ΔT	+20°C	+40°C
Inductance Change Ratio ΔL/L	-10%	-10%

ordering information

New Part #	LPC	4045	A	TED	101	K
Type		Size	Termination Material	Packaging	Nominal Inductance	Tolerance
		4045 9040N 9040E 10065 12065	A: SnAg	TED: 10" embossed plastic (4045 - 1,000 pieces/reel) (9040N - 500 pieces/reel) (9040E - 500 pieces/reel) (10065 - 300 pieces/reel) (12065 - 300 pieces/reel)	101: 100μH 221: 220μH 152: 1500μH	K: ±10% M: ±20% N: ±30%

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

applications and ratings

Part Designation	Inductance (μH)	Inductance Tolerance	Quality Factor Minimum (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (Amps)	Measured Frequency (Hz)	
LPC4045ATE1R0M	1.0	M: ±20%	20	90.0	0.015	3.10	1000	
LPC4045ATE1R5M	1.5			70.0	0.020	2.80		
LPC4045ATE2R2M	2.2			55.0	0.023	2.50		
LPC4045ATE3R3M	3.3			45.0	0.044	1.80		
LPC4045ATE4R7M	4.7			35.0	0.062	1.45		
LPC4045ATE6R8M	6.8			25.0	0.075	1.30		
LPC4045ATE100K	10	K: ±10%	20	23.5	0.10	1.02		
LPC4045ATE150K	15			18.5	0.15	0.84		
LPC4045ATE220K	22			14.0	0.21	0.70		
LPC4045ATE330K	33			12.0	0.41	0.52		
LPC4045ATE470K	47			10.5	0.52	0.46		
LPC4045ATE680K	68			8.0	0.67	0.40		
LPC4045ATE101K	100		40	6.3	0.92	0.28		
LPC4045ATE151K	150			5.2	1.80	0.25		
LPC4045ATE221K	220			3.9	2.25	0.18		
LPC4045ATE331K	330			3.0	4.27	0.15		
LPC4045ATE471K	470			2.7	5.23	0.14		
LPC4045ATE681K	680			2.2	6.67	0.12		
LPC9040NATE100M	10	M: ±20%	40	25.0	0.07	1.55	10 kHz	
LPC9040NATE150K	15	K: ±10%	30	21.0	0.09	1.40		
LPC9040NATE220K	22			15.0	0.11	1.25		
LPC9040NATE330K	33			13.5	0.14	1.10		
LPC9040NATE470K	47		20	11.5	0.20	0.99		
LPC9040NATE680K	68			10.0	0.27	0.91		
LPC9040NATE101K	100			8.0	0.41	0.70		
LPC9040NATE151K	150	10	7.0	0.55	0.60			
LPC9040NATE221K	220		5.0	0.81	0.50			
LPC9040NATE331K	330		3.3	1.86	0.29			
LPC9040NATE471K	470		2.8	2.07	0.22			
LPC9040NATE681K	680	1.2	2.65	0.14				
LPC9040EATE100M	10	M: ±20%	40	25.0	0.07	2.40		10 kHz
LPC9040EATE150K	15	K: ±10%	30	21.0	0.09	2.20		
LPC9040EATE220K	22			15.0	0.11	2.00		
LPC9040EATE330K	33			13.5	0.14	1.80		
LPC9040EATE470K	47		20	11.5	0.20	1.40		
LPC9040EATE680K	68			10.0	0.27	1.20		
LPC9040EATE101K	100			8.0	0.41	1.00		
LPC9040EATE151K	150	10	7.0	0.55	0.80			
LPC9040EATE221K	220		5.0	0.81	0.60			
LPC9040EATE331K	330		3.3	1.86	0.45			
LPC9040EATE471K	470		2.8	2.07	0.40			
LPC9040EATE681K	680	1.2	2.65	0.35				
LPC10065ATE6R8M	0.68	M: ±20%	40	75.0	6.0 m	9.50	L Meas. Freq. 1 MHz Q Meas. Freq. 2.52 MHz	
LPC10065ATE1R0M	1.0			65.0	7.0 m	9.00		
LPC10065ATE1R5M	1.5			50.0	8.0 m	8.50		
LPC10065ATE2R2M	2.2			40.0	9.0 m	7.50		
LPC10065ATE3R3M	3.3			30.0	0.012	6.80		
LPC10065ATE4R7M	4.7			25.0	0.017	5.70		
LPC10065ATE6R8M	6.8	20.0	0.024	4.70				
LPC10065ATE100K	10	K: ±10%	20	15.0	0.036	3.90		
LPC10065ATE150K	15			12.0	0.054	3.15		
LPC10065ATE220K	22			9.0	0.080	2.60		
LPC10065ATE330K	33		15	8.0	0.120	2.30		
LPC10065ATE470K	47			6.0	0.175	1.79		

applications and ratings (continued)

Part Designation	Inductance (μH)	Inductance Tolerance	Quality Factor Minimum (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (Amps)	Measured Frequency (Hz)		
LPC10065ATE680K	68	K: ±10%	30	5.0	0.255	1.48	100 MHz		
LPC10065ATE101K	100			4.0	0.380	1.22			
LPC10065ATE151K	150			3.0	0.580	1.00			
LPC10065ATE221K	220			2.5	0.850	0.82			
LPC10065ATE331K	330			2.0	1.30	0.67			
LPC10065ATE471K	470			1.5	1.85	0.57			
LPC10065ATE681K	680			1.0	2.70	0.47			
LPC10065ATE102K	1.0 mH			0.95	4.00	0.38			
LPC10065ATE152K	1.5 mH			0.85	6.10	0.31			
LPC10065ATE222K	2.2 mH			0.70	9.00	0.26			
LPC10065ATE332K	3.3 mH			0.55	13.5	0.21			
LPC12065ATE68N	0.68			N: ±30%	40	77.0		5.0 m	10.0
LPC12065ATE1R0N	1.0	60.0	7.0 m			9.50			
LPC12065ATE1R5N	1.5	47.0	8.0 m			9.00			
LPC12065ATE2R2N	2.2	38.0	10.0 m			8.00			
LPC12065ATE3R3M	3.3	M: ±20%	30	30.0	0.012	7.00			
LPC12065ATE4R7M	4.7			24.0	0.016	6.50			
LPC12065ATE6R8M	6.8			19.0	0.022	5.40			
LPC12065ATE100K	10			15.0	0.031	4.50			
LPC12065ATE150K	15	K: ±10%	15	12.0	0.046	3.63	100 KHz		
LPC12065ATE220K	22			20	9.5	0.065		3.00	
LPC12065ATE330K	33				7.5	0.093		2.40	
LPC12065ATE470K	47				6.2	0.130		2.05	
LPC12065ATE680K	68				4.9	0.182		1.70	
LPC12065ATE101K	100			4.0	0.260	1.38			
LPC12065ATE151K	150			3.2	0.380	1.14			
LPC12065ATE221K	220			2.5	0.540	0.94			
LPC12065ATE331K	330	2.0	0.790	0.77					
LPC12065ATE471K	470	30	1.6	1.08	0.65				
LPC12065ATE681K	680		1.3	1.55	0.53				
LPC12065ATE102K	1.0 mH		1.0	2.21	0.44				
LPC12065ATE152K	1.5 mH		0.83	3.20	0.35				
LPC12065ATE222K	2.2 mH		0.67	4.60	0.29				
LPC12065ATE332K	3.3 mH		0.53	6.60	0.23				
LPC12065ATE472K	4.7 mH	0.43	9.30	0.19					
LPC12065ATE682K	6.8 mH	0.34	13.2	0.16					

Inductors

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 (Self-heating is included). That the operating temperature upper limit temperature of the coil winding portions (ambient temperature + self-heating) is (+125°C) or less.

environmental applications

Performance Characteristics

Parameter	Performance Requirements ΔL/L		Test Method
	Limit	Typical	
High Temperature Exposure	±5%	±1.3%	LPC4045, LPC9040N, LPC10065, LPC12065: +85°C ± 2°C, 500 hours LPC9040E: +125°C ± 2°C, 500 hours
Low Temperature Exposure	±5%	±1.3%	-40°C±2°C, 500 hours
Moisture Exposure	±5%	±1.6%	+40°C, 90 - 95% RH, 500 hours
Temperature Cycling	±5%	±1.3%	LPC4045, LPC9040N, LPC10065, LPC12065: -40°C (30 minutes)/ +85°C (30 minutes), 100 cycles LPC9040E: -40°C (30 minutes)/+125°C (30 minutes), 100 cycles

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

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

1/03/14

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