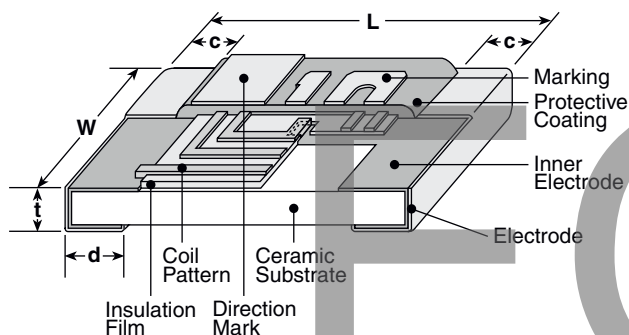


features

- Excellent for high frequency applications
- Low DC resistance and high Q
- Operating temperature: -40°C ~ +125°C
- Low tolerance $\pm 2\%$ available
- Small size allows for high density mounting (1E, 1J, 2A, 2B)
- Marking: Yellow marking on blue protective coating (1E, 1J, 2A, 2B)
- Products with lead-free terminations meet EU RoHS and China RoHS requirements
- AEC-Q200 Qualified

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
1E (0402)	.039 $\pm$.004 (1.0 $\pm$ 0.1)	.02 $\pm$.002 (0.5 $\pm$ 0.05)	.006 $\pm$.004 (0.15 $\pm$ 0.1)	.01 $\pm$.004 (0.25 $\pm$ 0.1)	.014 $\pm$.002 (0.35 $\pm$ 0.05)
1J (0603)	.063 $\pm$.008 (1.6 $\pm$ 0.2)	.031 $\pm$.004 (0.8 $\pm$ 0.1)	.012 $\pm$.004 (0.3 $\pm$ 0.1)	.012 $\pm$.004 (0.3 $\pm$ 0.1)	.02 $\pm$.004 (0.5 $\pm$ 0.1)
2A (0805)	.079 $\pm$.008 (2.0 $\pm$ 0.2)	.049 $\pm$.008 (1.25 $\pm$ 0.2)	.016 $\pm$.008 (0.4 $\pm$ 0.2)	.012 $\pm$.004 (0.3 $\pm$ 0.2)	.02 $\pm$.004 (0.5 $\pm$ 0.1)
2B (1206)	.126 $\pm$.008 (3.2 $\pm$ 0.2)	.063 $\pm$.008 (1.6 $\pm$ 0.2)	.02 $\pm$.008 (0.5 $\pm$ 0.2)	.016 $\pm$.008 (0.4 $\pm$ 0.2)	.024 $\pm$.004 (0.6 $\pm$ 0.1)

Inductance Marking

Part 1J (nH)	Marking
1.0	L1
1.2	L2
1.5	L3
1.8	L4
2.2	22
2.7	27
3.3	33
3.9	39
4.7	47
5.6	56
6.8	68
8.2	82

Part 1J (nH)	Marking
10	10
12	12
15	15
18	H1
22	H2
27	H3
33	H4
39	H5
47	H6
56	H7
68	H8
82	H9

Part Marking	Value (nH) 2.2 - 8.2	Value (nH) 10 and higher
2A	Ex. = 2.2 = 2.2nH	Ex. = 15 = 15nH
2B	Ex. = 2N2 = 2.2nH	Ex. = 15N = 15nH

No marking on 1E (0402)

ordering information

New Part #	KL73	2A	T	TE	4N7	G
	Type	Size Code	Termination Material	Packaging	Nominal Inductance	Tolerance
		1E: 0402 1J: 0603 2A: 0805 2B: 1206	T: Sn	TP: 7" paper 2mm pitch (1E only - 10,000 pieces/reel) TE: 7" embossed plastic 4mm pitch (1J, 2A, 2B - 4,000 pieces/reel)	4N7: 4.7nH 47N: 47nH	B: ± 0.1 nH C: ± 0.2 nH G: $\pm 2\%$ J: $\pm 5\%$

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

applications and ratings

Part Designation	Nominal Inductance (nH)	Inductance Tolerance	Quality Factor Minimum	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Measured Frequency (MHz)**	
KL731ETTPN56B	0.56	B: ± 0.1 nH	7	14000	0.10	700	500	
KL731ETTPN68B	0.68							
KL731ETTPN82B	0.82							
KL731ETTP1N0*	1.0	B: ± 0.1 nH C: ± 0.2 nH	10	12000	0.15	700		500
KL731ETTP1N2*	1.2			10000	0.20			
KL731ETTP1N5*	1.5				8000	0.25		
KL731ETTP1N8*	1.8			6000		0.30		
KL731ETTP2N2*	2.2				5000	0.50		
KL731ETTP2N7*	2.7			500				
KL731ETTP3N3*	3.3			4000	1.00	450		
KL731ETTP3N9*	3.9					350		
KL731ETTP4N7*	4.7			3000	1.50	300		
KL731ETTP5N6*	5.6					250		
KL731ETTP6N8*	6.8	G: $\pm 2\%$ J: $\pm 5\%$	7	2500	2.00	200	200	
KL731ETTP8N2*	8.2			2000	3.00	150		
KL731ETTP10N*	10			1500	5.00	300		
KL731ETTP12N*	12					250		
KL731ETTP15N*	15					1000		
KL731ETTP18N*	18	C: ± 0.2 nH	20	13000	0.10	650	500	
KL731ETTP22N*	22			10000				0.15
KL731ETTP27N*	27				8000	0.25		
KL731ETTP33N*	33			6000				0.50
KL731JTTE1N0*	1.0				5000	1.0		
KL731JTTE1N2*	1.2			4000				2.50
KL731JTTE1N5*	1.5				3000	4.00		
KL731JTTE1N8*	1.8			2500				6.00
KL731JTTE2N2*	2.2				2000	10.00		
KL731JTTE2N7*	2.7			1500				15.00
KL731JTTE3N3*	3.3	1000	20.00		10			
KL731JTTE3N9*	3.9			800		25.00	5	
KL731JTTE4N7*	4.7	600	30.00		2.5			
KL731JTTE5N6*	5.6			400		40.00	1.5	
KL731JTTE6N8*	6.8	300	50.00		1			
KL731JTTE8N2*	8.2			200		60.00	0.75	
KL731JTTE10N*	10	150	70.00		0.5			
KL731JTTE12N*	12			100		80.00	0.4	
KL731JTTE15N*	15	75	90.00		0.3			
KL731JTTE18N*	18			50		100.00	0.25	
KL731JTTE22N*	22	35	110.00		0.2			
KL731JTTE27N*	27			25		120.00	0.18	
KL731JTTE33N*	33	18	130.00		0.16			
KL731JTTE39N*	39			14		140.00	0.15	
KL731JTTE47N*	47	11	150.00		0.14			
KL731JTTE56N*	56			9		160.00	0.13	
KL731JTTE68N*	68	7	170.00		0.12			

* Add tolerance character (B, C, G, J)

** The operating temperature range of the coil (ambient temperature + self heating) must remain at +125°C or less

For complete environmental specifications, please refer to 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.

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applications and ratings (continued)

Part Designation	Nominal Inductance (nH)	Inductance Tolerance	Quality Factor Minimum	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Measured Frequency (MHz)**												
KL732ATTE1N0*	1.0	C: ±0.2nH	20	13000	0.25	900	500												
KL732ATTE1N2*	1.2																		
KL732ATTE1N5*	1.5			10000															
KL732ATTE1N8*	1.8		25	9000	0.50	700													
KL732ATTE2N2*	2.2			8000															
KL732ATTE2N7*	2.7			6000															
KL732ATTE3N3*	3.3			5000															
KL732ATTE3N9*	3.9			4500															
KL732ATTE4N7*	4.7			4000															
KL732ATTE5N6*	5.6			G: ±2% J: ±5%				20	3000	1.00	400								
KL732ATTE6N8*	6.8	2500	1.50		500														
KL732ATTE8N2*	8.2	2000				2.00			300										
KL732ATTE10N*	10	1500										2.50	250						
KL732ATTE12N*	12	1000					3.00							200					
KL732ATTE15N*	15	800													4.00	150			
KL732ATTE18N*	18	700															5.00	100	
KL732ATTE22N*	22	600																	6.00
KL732ATTE27N*	27	500						7.00		20									
KL732ATTE33N*	33	400	8.00		10														
KL732ATTE39N*	39	300		9.00		5													
KL732ATTE47N*	47	200							10.00		2								
KL732ATTE56N*	56	150					11.00					1							
KL732ATTE68N*	68	100											12.00	0.5					
KL732ATTE82N*	82	50													13.00	0.2			
KL732BTTE2N2*	2.2	C: ±0.2nH															25	9000	0.25
KL732BTTE2N7*	2.7							7000											
KL732BTTE3N3*	3.3		6000																
KL732BTTE3N9*	3.9		35	5000	0.50	900													
KL732BTTE4N7*	4.7			4500															
KL732BTTE5N6*	5.6			4000															
KL732BTTE6N8*	6.8			3500															
KL732BTTE8N2*	8.2			3000															
KL732BTTE10N*	10			2500															
KL732BTTE12N*	12			40			2000	1.00	500										
KL732BTTE15N*	15	1500																	
KL732BTTE18N*	18	1000	2.00		400														
KL732BTTE22N*	22	500				2.50	200												
KL732BTTE27N*	27	400								3.00	100								
KL732BTTE33N*	33	300										4.00	50						
KL732BTTE39N*	39	200												5.00	20				
KL732BTTE47N*	47	100		6.00				10											
KL732BTTE56N*	56	50							7.00							5			
KL732BTTE68N*	68	20	8.00		2														
KL732BTTE82N*	82	10				9.00	1												
KL732BTTE100*	100	5								10.00	0.5								

* Add tolerance character (B, C, G, J)

** The operating temperature range of the coil (ambient temperature + self heating) must remain at $+125^{\circ}\text{C}$ or less

For L-Frequency and Q-Frequency Characteristics, see Environmental Applications at www.koaspeer.com

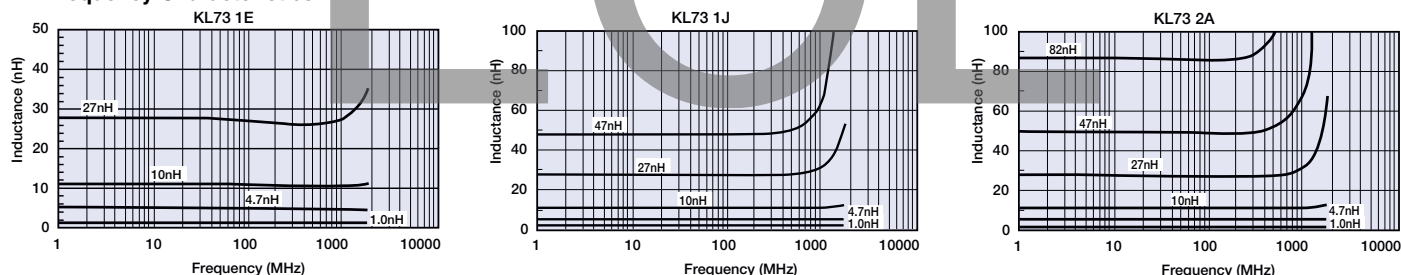
environmental applications

Performance Characteristics

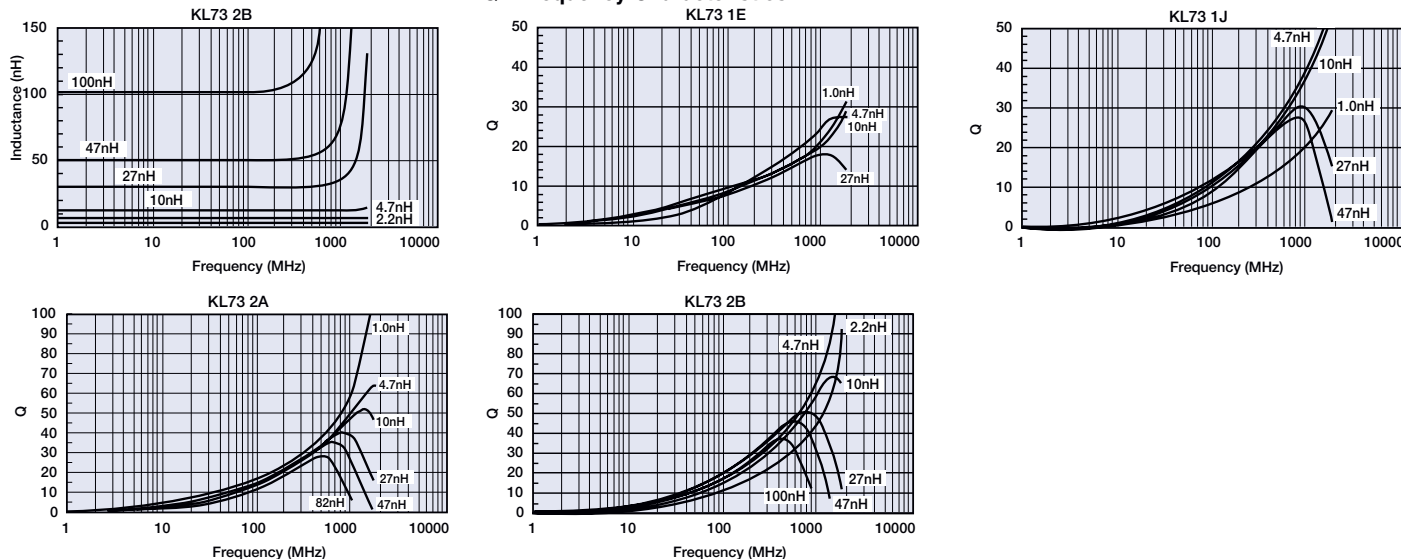
Parameter	Requirements Maximum Limit	$\Delta L/L$ $\Delta Q/Q$ Typical	Test Method
Resistance to Soldering Heat	Without distinct damage in appearance and construction $\Delta L/L: \pm 2\%$, $\Delta Q/Q: \pm 20\%$	$\Delta L/L: \pm 0.5\%$ $\Delta Q/Q: \pm 1.5\%$	260°C $\pm$ 5°C, 10s $\pm$ 1s
Rapid Change of Temperature	Without distinct damage in appearance and construction $\Delta L/L: \pm 2\%$, $\Delta Q/Q: \pm 20\%$	$\Delta L/L: \pm 0.5\%$ $\Delta Q/Q: \pm 1.6\%$	-40°C (30min.)/ +125°C (30min.) 100 cycles
Low Temperature Exposure	Without distinct damage in appearance and construction $\Delta L/L: \pm 2\%$, $\Delta Q/Q: \pm 20\%$	$\Delta L/L: \pm 0.7\%$ $\Delta Q/Q: \pm 1.2\%$	-40°C $\pm$ 3°C, 1000h
High Temperature Exposure	Without distinct damage in appearance and construction $\Delta L/L: \pm 2\%$, $\Delta Q/Q: \pm 20\%$	$\Delta L/L: \pm 0.4\%$ $\Delta Q/Q: \pm 1.3\%$	125°C $\pm$ 2°C, 1000h
Moisture Exposure	Without distinct damage in appearance and construction Insulation resistance: 50M Ω or more $\Delta L/L: \pm 2\%$, $\Delta Q/Q: \pm 20\%$	$\Delta L/L: \pm 0.4\%$ $\Delta Q/Q: \pm 1.4\%$	40°C $\pm$ 2°C, 90%~95%RH, 1000h
Resistance to Solvent	Without distinct damage in appearance, construction and marking $\Delta L/L: \pm 2\%$, $\Delta Q/Q: \pm 20\%$	$\Delta L/L: \pm 0.6\%$ $\Delta Q/Q: \pm 1.2\%$	Immerse the inductors for 30s $\pm$ 5s in the reagent (20°C ~ 25°C) of JIS K8839 (1995)

Frequency Characteristics Test equipment: HP4291B impedance analyzer (1E, 1J, 2A, 2B)

L - Frequency Characteristics



Q - Frequency Characteristics



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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[KL731ETK001KIT](#) [KL731JTTE22NG](#) [KL731JTTE47NG](#)