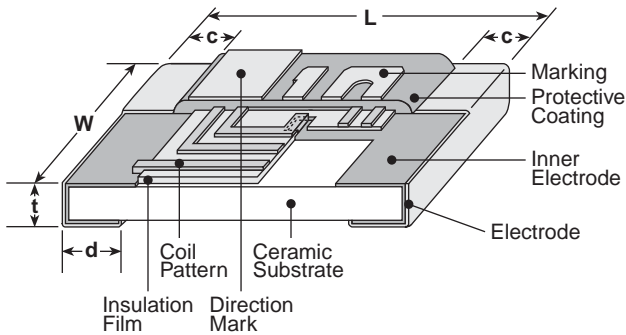


features

- Excellent for high frequency applications
- Low DC resistance and high Q
- Suitable for reflow and wave soldering
- Low tolerance $\pm 2\%$ available
- Small size allows for high density mounting (1H, 1E, 1J, 2A, 2B)
- Marking: Yellow marking on blue protective coating (1E, 1J, 2A, 2B)
White marking on green protective coating (1H)
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
1H (0201)	.024 \pm .001 (0.6 \pm 0.03)	.01 \pm .001 (0.3 \pm 0.03)	.003 \pm .002 (0.08 \pm 0.05)	.006 \pm .002 (0.15 \pm 0.05)	.009 \pm .001 (0.24 \pm 0.03)
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 - 47
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
		1H: 0201 1E: 0402 1J: 0603 2A: 0805 2B: 1206	T: Sn	TP: 7" embossed paper 2mm pitch (1E only - 10,000 pieces/reel) TE: 7" embossed plastic 4mm pitch (1J, 2A, 2B - 4,000 pieces/reel) TB: 7" paper tape 2mm pitch (1H only - 10,000 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	Inductance (nH)	Inductance Tolerance	Quality Factor Minimum	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Measured Frequency (MHz)
KL731HTTB0N6*	0.6	B: ± 0.1 nH, C: ± 0.2 nH	5	9000	0.20	350	500
KL731HTTB0N7*	0.7	B: ± 0.1 nH					
KL731HTTB0N8*	0.8	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB0N9*	0.9	B: ± 0.1 nH					
KL731HTTB1N0*	1.0	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB1N1*	1.1	B: ± 0.1 nH					
KL731HTTB1N2*	1.2	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB1N3*	1.3	B: ± 0.1 nH					
KL731HTTB1N5*	1.5	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB1N6*	1.6	B: ± 0.1 nH					
KL731HTTB1N8*	1.8	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB2N0*	2.0	B: ± 0.1 nH			8000	0.70	
KL731HTTB2N2*	2.2	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB2N4*	2.4	B: ± 0.1 nH					
KL731HTTB2N7*	2.7	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB3N0*	3.0	B: ± 0.1 nH					
KL731HTTB3N3*	3.3	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB3N6*	3.6	B: ± 0.1 nH		6000	1.30	120	
KL731HTTB3N9*	3.9	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB4N3*	4.3	B: ± 0.1 nH					
KL731HTTB4N7*	4.7	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB5N1*	5.1	G: $\pm 2\%$					
KL731HTTB5N6*	5.6	G: $\pm 2\%$, J: $\pm 5\%$					
KL731HTTB6N2*	6.2	G: $\pm 2\%$		4000	2.50	110	
KL731HTTB6N8*	6.8	G: $\pm 2\%$, J: $\pm 5\%$					
KL731HTTB7N5*	7.5	G: $\pm 2\%$					
KL731HTTB8N2*	8.2	G: $\pm 2\%$, J: $\pm 5\%$					
KL731HTTB9N1*	9.1	G: $\pm 2\%$					
KL731HTTB10N*	10	G: $\pm 2\%$ J: $\pm 5\%$					
KL731HTTB11N*	11						
KL731HTTB12N*	12						
KL731HTTB13N*	13						
KL731HTTB15N*	15						
KL731HTTB16N*	16						
KL731HTTB18N*	18			1500	6.00	50	
KL731HTTB20N*	20						
KL731HTTB22N*	22						
KL731HTTB24N*	24						
KL731HTTB27N*	27						
KL731HTTB33N*	33						
KL731HTTB39N*	39	800	7.00	40	200		

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

For complete environmental specifications, please refer to pages 225-226.

applications and ratings (continued)

Part Designation	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	200					
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				600						
KL731ETTP3N3*	3.3			4000	1.00			550			
KL731ETTP3N9*	3.9						500				
KL731ETTP4N7*	4.7			3000	1.50		450				
KL731ETTP5N6*	5.6						350				
KL731ETTP6N8*	6.8	2500	2.00	300							
KL731ETTP8N2*	8.2			250							
KL731ETTP10N*	10	7	7	2000	3.00	150					
KL731ETTP12N*	12			1500	5.00						
KL731ETTP15N*	15	G: $\pm 2\%$ J: $\pm 5\%$	7	1000	200	200					
KL731ETTP18N*	18										
KL731ETTP22N*	22										
KL731ETTP27N*	27										
KL731ETTP33N*	33										
KL731JTTE1N0*	1.0			C: ± 0.2 nH			10	0.10	650	500	
KL731JTTE1N2*	1.2						15				
KL731JTTE1N5*	1.5						20				10000
KL731JTTE1N8*	1.8										8000
KL731JTTE2N2*	2.2						6000				0.25
KL731JTTE2N7*	2.7										
KL731JTTE3N3*	3.3	5000	0.50		350						
KL731JTTE3N9*	3.9										
KL731JTTE4N7*	4.7	3000	1.0		250						
KL731JTTE5N6*	5.6										
KL731JTTE6N8*	6.8	2500	1.50	200							
KL731JTTE8N2*	8.2										
KL731JTTE10N*	10	10	10	2.50	150						
KL731JTTE12N*	12										
KL731JTTE15N*	15	600	600	4.00	100						
KL731JTTE18N*	18										
KL731JTTE22N*	22	4.50	4.50	100							
KL731JTTE27N*	27										
KL731JTTE33N*	33	5.00	5.00	100							
KL731JTTE39N*	39										
KL731JTTE47N*	47	600	600	4.00	100						
KL731JTTE56N*	56										
KL731JTTE68N*	68	5.00	5.00	100							
KL731JTTE82N*	82										

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

For complete environmental specifications, please refer to pages 225-226.

applications and ratings (continued)

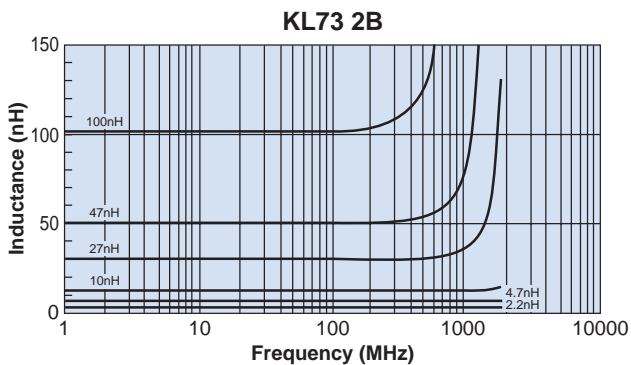
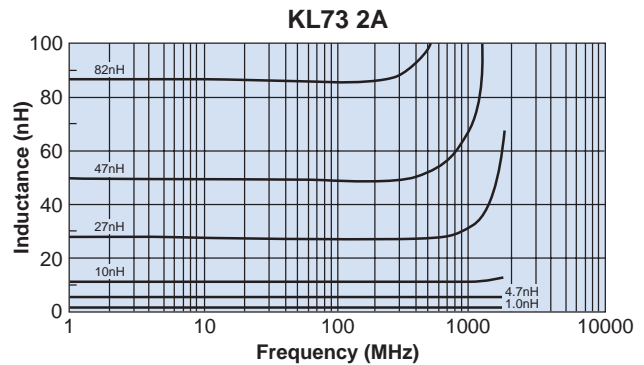
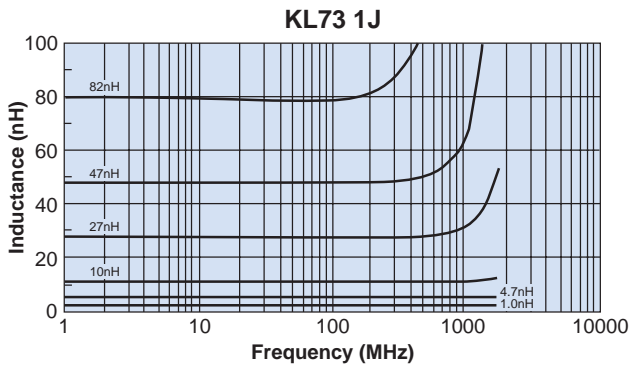
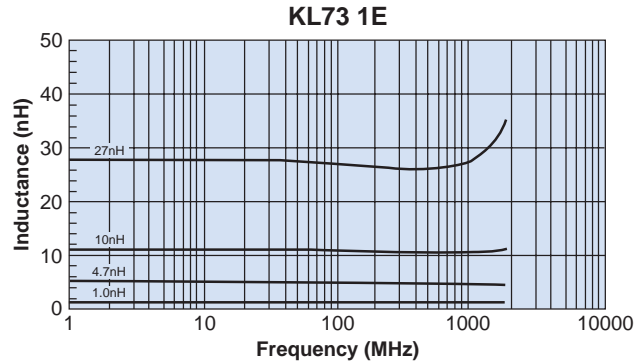
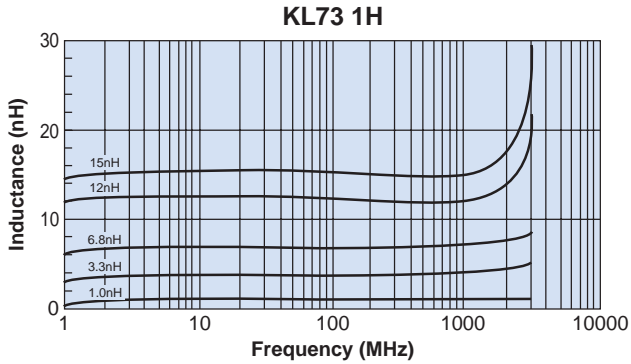
Part Designation	Inductance (nH)	Inductance Tolerance	Quality Factor Minimum	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Measured Frequency (MHz)		
KL732ATTE1N0*	1.0	C: $\pm 0.2\text{nH}$	20	13000	0.25	900	500		
KL732ATTE1N2*	1.2			10000					
KL732ATTE1N5*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

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

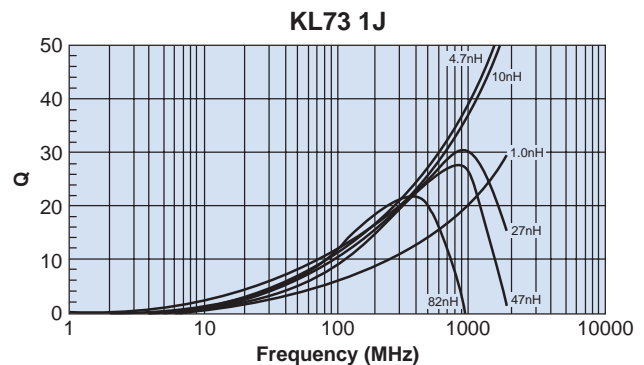
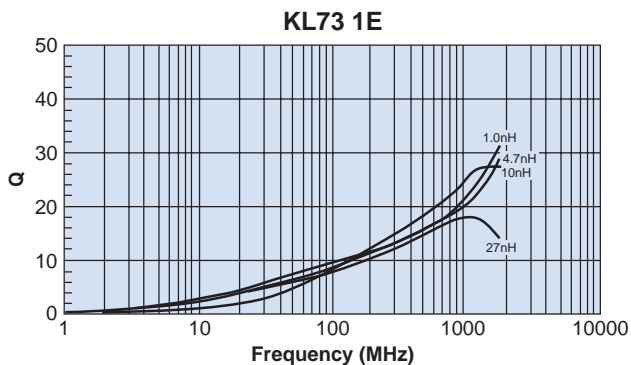
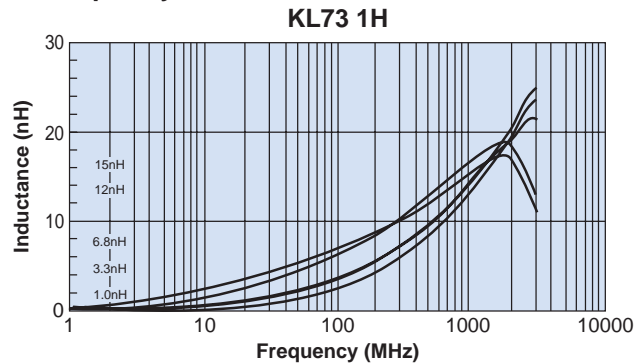
For complete environmental specifications, please refer to pages 225-226.

environmental applications

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: Agilent E4991A impedance analyzer (1H)

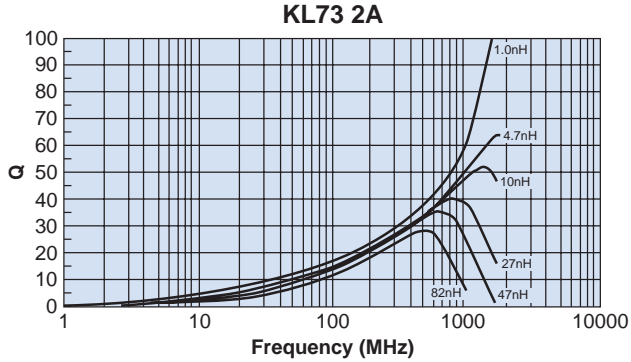
Test equipment: HP4291B impedance analyzer (1E, 1J, 2A, 2B)

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

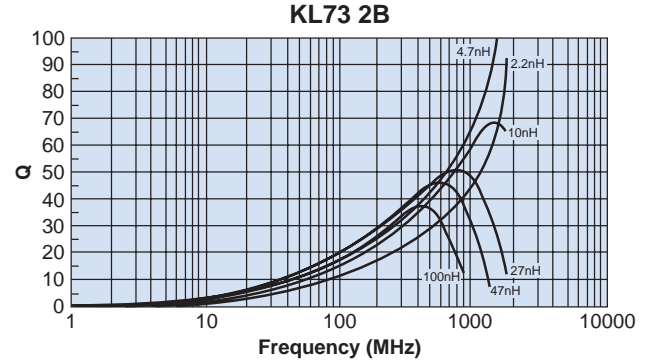
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environmental applications (continued)

Q-Frequency Characteristics (continued)



Test equipment: Agilent E4991A impedance analyzer (1H)



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

Performance Characteristics

Parameter	Maximum ΔL	Test Method
Terminal Pull Strength	No evidence of breakdown	Terminals shall withstand a pull of 0.5Kg in a horizontal direction
Terminal Bending Strength	No evidence of breakdown $\Delta R/R \pm 1\%$, $\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	3mm deflection in either direction
Resistance to Solder Heat	No evidence of outer damage $\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	Immerse in solder (H63A) @ $260^\circ \pm 5^\circ\text{C}$ for 10 seconds ± 1 second
Solderability	95% of the terminal should be covered with new solder	Immerse in solder (H63A) @ $230^\circ \pm 5^\circ\text{C}$ for 3 seconds ± 0.5 second
Low Temperature Characteristics	$\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	Store @ $-40^\circ\text{C} \pm 3^\circ\text{C}$ for 1000 hours
Resistance to Heat	$\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	Store @ $125^\circ\text{C} \pm 2^\circ\text{C}$ for 1000 hours
Thermal Shock	$\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	-40°C for 30 minutes and $+125^\circ\text{C}$ for 30 minutes, 100 cycles
Moisture Endurance	No evidence of damage $\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	$40^\circ\text{C} \pm 2^\circ\text{C}$, 90 - 95% RH, 1000 hours
Vibration	No evidence of breakdown $\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	2 hours in each direction of X, Y, Z on PCB at a frequency range of 10 - 55 - 10Hz with 1.5mm amplitude
Dropping	No evidence of damage $\Delta L/L \pm 2\%$ $\Delta Q/Q \pm 20\%$	MIL-STD-202, Method 213, Item 4.1 condition C
Resistance to Solvents	No outer damage and markings must remain legible	MIL-STD-202, Method 215