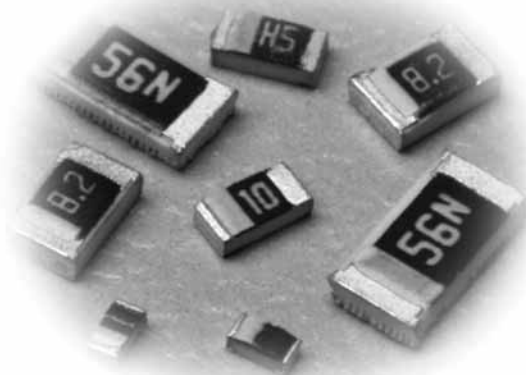
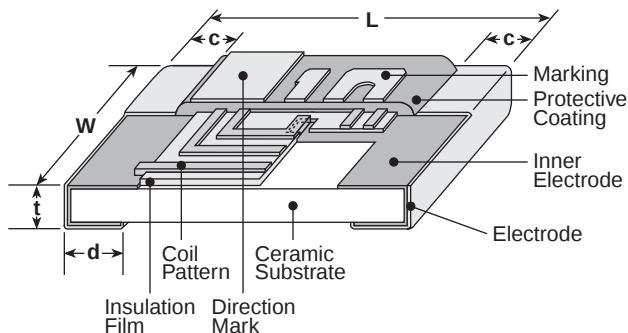




features

- 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 termination meet 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 $\pm$.004 (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: $\pm 0.1\text{nH}$ C: $\pm 0.2\text{nH}$ 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			0.30	300	
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			0.50		
KL731HTTB1N5*	1.5	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB1N6*	1.6	B: ± 0.1 nH			0.60	200	
KL731HTTB1N8*	1.8	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB2N0*	2.0	B: ± 0.1 nH		8000	0.70	130	
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		6000	1.00	120	
KL731HTTB3N3*	3.3	B: ± 0.1 nH, C: ± 0.2 nH					
KL731HTTB3N6*	3.6	B: ± 0.1 nH					
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		4000	2.00	110	
KL731HTTB5N1*	5.1	G: $\pm 2\%$					
KL731HTTB5N6*	5.6	G: $\pm 2\%$, J: $\pm 5\%$					
KL731HTTB6N2*	6.2	G: $\pm 2\%$			2.50		
KL731HTTB6N8*	6.8	G: $\pm 2\%$, J: $\pm 5\%$					
KL731HTTB7N5*	7.5	G: $\pm 2\%$					
KL731HTTB8N2*	8.2	G: $\pm 2\%$, J: $\pm 5\%$		2000	5.00	70	
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						
KL731HTTB20N*	20						
KL731HTTB22N*	22						
KL731HTTB24N*	24						
KL731HTTB27N*	27	1500	1000	6.00	50		
KL731HTTB33N*	33						
KL731HTTB39N*	39						
				800	7.00	40	200

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

For complete environmental specifications, please refer to pages 218-219.

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	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	650		
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			4000				1.00
KL731ETTP3N3*	3.3				3000			
KL731ETTP3N9*	3.9			2500				2.00
KL731ETTP4N7*	4.7				2000			
KL731ETTP5N6*	5.6			1500				5.00
KL731ETTP6N8*	6.8	1000			200			
KL731ETTP8N2*	8.2					150		
KL731ETTP10N*	10					150		
KL731ETTP12N*	12					150		
KL731ETTP15N*	15					150		
KL731ETTP18N*	18					150		
KL731ETTP22N*	22					150		
KL731ETTP27N*	27					150		
KL731ETTP33N*	33					150		
KL731JTTE1N0*	1.0			C: ± 0.2 nH	10	13000	0.10	650
KL731JTTE1N2*	1.2	15						
KL731JTTE1N5*	1.5	20	10000					
KL731JTTE1N8*	1.8		8000		0.15	450		
KL731JTTE2N2*	2.2		6000		0.25			
KL731JTTE2N7*	2.7	5000	0.50		350			
KL731JTTE3N3*	3.3	4000						
KL731JTTE3N9*	3.9	3000						
KL731JTTE4N7*	4.7	25	2500		1.0	250		
KL731JTTE5N6*	5.6		2000					
KL731JTTE6N8*	6.8		10	1500			1.50	200
KL731JTTE8N2*	8.2			1000	2.50	150		
KL731JTTE10N*	10							
KL731JTTE12N*	12		600				4.50	100
KL731JTTE15N*	15	600		5.00	100			
KL731JTTE18N*	18					600		
KL731JTTE22N*	22		600				5.00	100
KL731JTTE27N*	27	600		5.00	100			
KL731JTTE33N*	33					600		
KL731JTTE39N*	39		600				5.00	100
KL731JTTE47N*	47	600		5.00	100			
KL731JTTE56N*	56					600		
KL731JTTE68N*	68		600				5.00	100
KL731JTTE82N*	82	600		5.00	100			

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

For complete environmental specifications, please refer to pages 218-219.

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: ±0.2nH	20	13000	0.25	900	500	
KL732ATTE1N2*	1.2			10000				
KL732ATTE1N5*	1.5		9000			800		
KL732ATTE1N8*	1.8			8000				
KL732ATTE2N2*	2.2				6000			
KL732ATTE2N7*	2.7			5000		700		
KL732ATTE3N3*	3.3		4500					
KL732ATTE3N9*	3.9				4000	500		
KL732ATTE4N7*	4.7		3000					
KL732ATTE5N6*	5.6			25	2500	400		
KL732ATTE6N8*	6.8	2000						
KL732ATTE8N2*	8.2		1500		300			
KL732ATTE10N*	10	20				1000	250	
KL732ATTE12N*	12		800					
KL732ATTE15N*	15			15	700	150		
KL732ATTE18N*	18		600					
KL732ATTE22N*	22	10			4.00			
KL732ATTE27N*	27		5.00					
KL732ATTE33N*	33			200				
KL732ATTE39N*	39		20		1.50			
KL732ATTE47N*	47	1.00						
KL732ATTE56N*	56			500				
KL732ATTE68N*	68	200						
KL732ATTE82N*	82		10	2.00				
		2.00						
KL732BTTE2N2*	2.2			C: ±0.2nH	25	9000	0.25	1000
KL732BTTE2N7*	2.7	7000						
KL732BTTE3N3*	3.3		6000		900			
KL732BTTE3N9*	3.9	5000						
KL732BTTE4N7*	4.7		4500	900				
KL732BTTE5N6*	5.6					4000		
KL732BTTE6N8*	6.8			3500	800			
KL732BTTE8N2*	8.2	3000						
KL732BTTE10N*	10		2500		800			
KL732BTTE12N*	12					2000		
KL732BTTE15N*	15			1.00	500			
KL732BTTE18N*	18	1500						
KL732BTTE22N*	22		25		1000		400	
KL732BTTE27N*	27	500						
KL732BTTE33N*	33			15	2.00			
KL732BTTE39N*	39	200						
KL732BTTE47N*	47		400					
KL732BTTE56N*	56	200						
KL732BTTE68N*	68			200				
KL732BTTE82N*	82	200						
KL732BTTE100*	100		200					
		200						

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

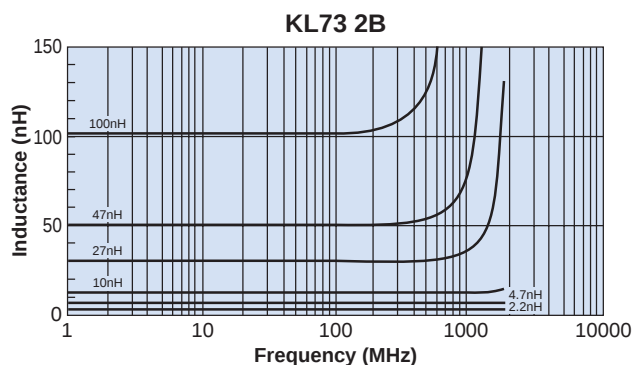
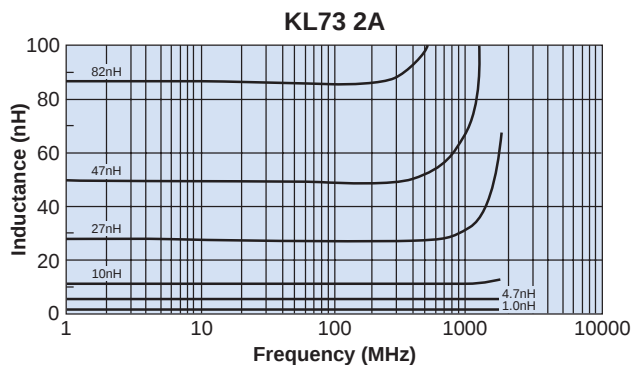
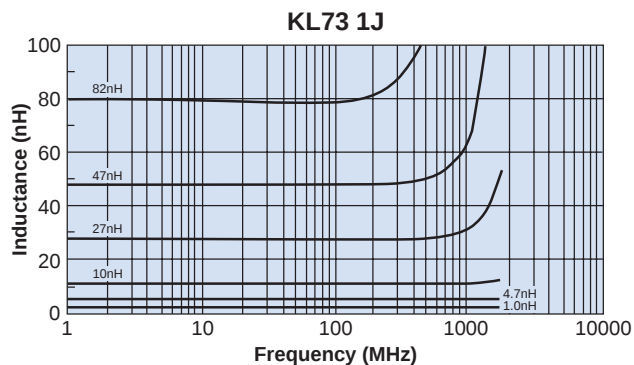
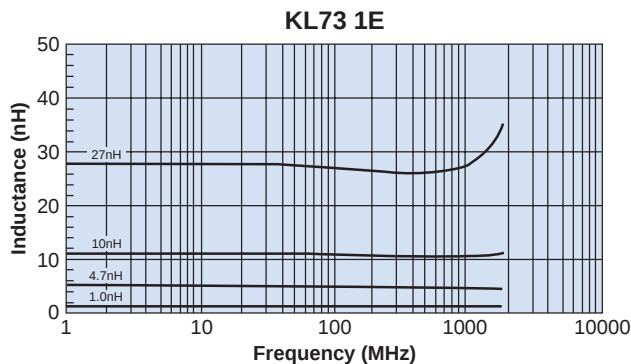
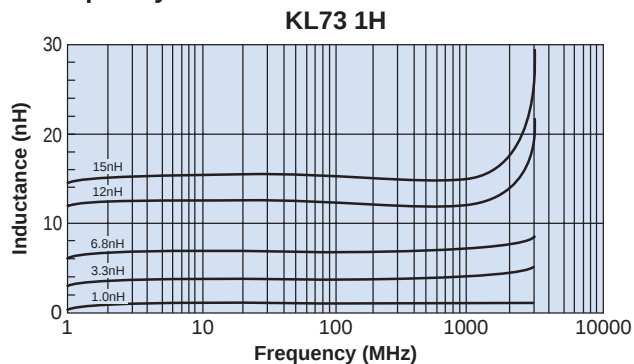
For complete environmental specifications, please refer to pages 218-219.

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

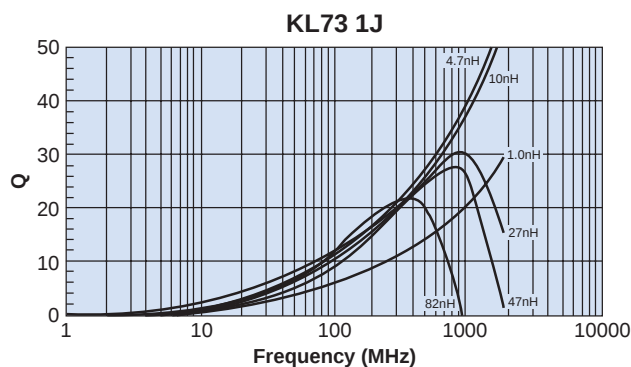
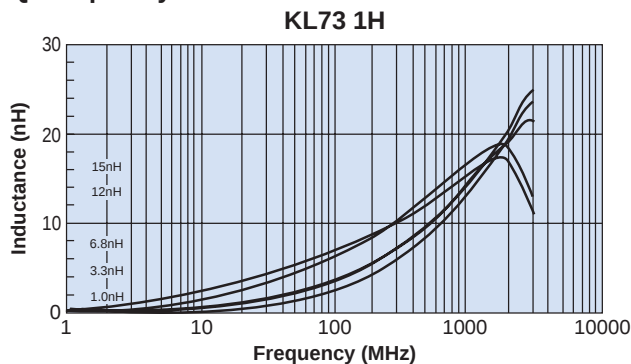
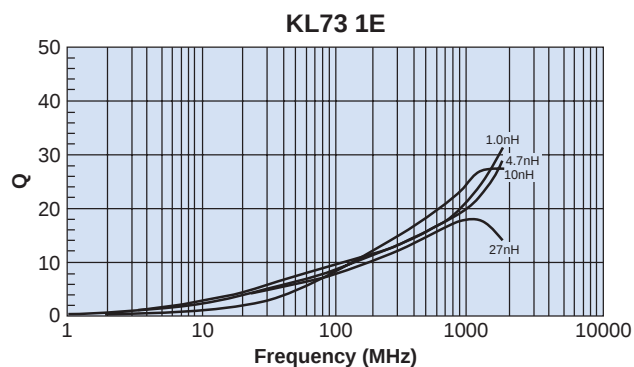
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environmental applications

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: Agilent E4991A impedance analyzer (1H)

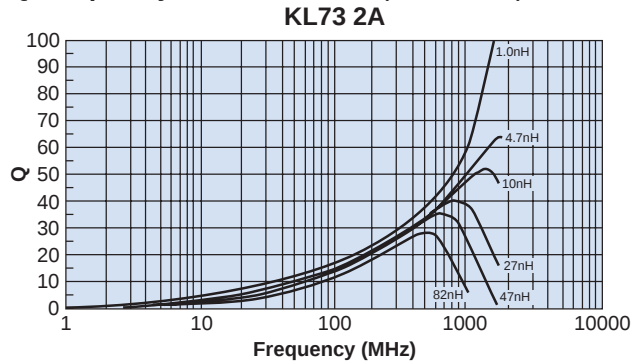
Test equipment: HP4291B impedance analyzer (1E, 1J, 2A, 2B)

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

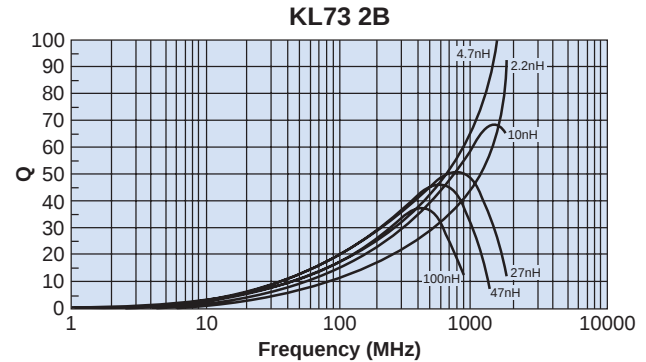
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environmental applications (continued)

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