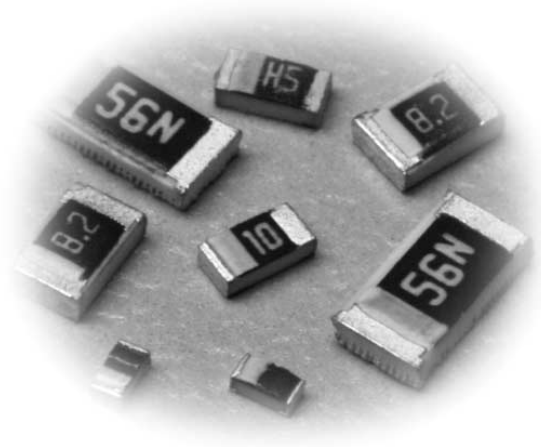
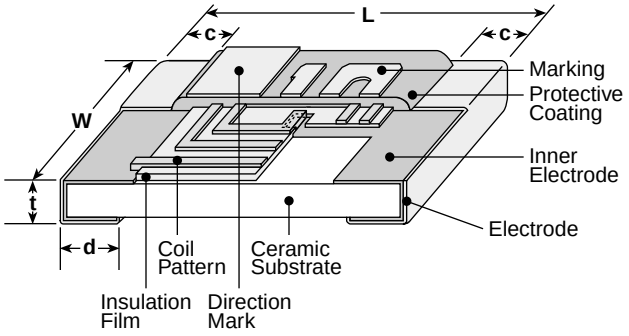
RoHS COMPLIANT



features

- Excellent for high frequency applications
- Low DC resistance and high Q
- Suitable for reflow and wave soldering
- Low tolerance ±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 RoHS requirements

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm) L	W	c	d	t
1H (0201)	.024±.001 (0.6±0.03)	.01±.001 (0.3±0.03)	.003±.002 (0.08±0.05)	.006±.002 (0.15±0.05)	.009±.001 (0.24±0.03)
1E (0402)	.039±.004 (1.0±0.1)	.02±.002 (0.5±0.05)	.006±.004 (0.15±0.1)	.01±.004 (0.25±0.1)	.014±.002 (0.35±0.05)
1J (0603)	.063±.008 (1.6±0.2)	.031±.004 (0.8±0.1)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.02±.004 (0.5±0.1)
2A (0805)	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.016±.008 (0.4±0.2)	.012±.004 (0.3±0.2)	.02±.004 (0.5±0.1)
2B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.008 (0.5±0.2)	.016 $^{+.008}_{-.004}$ (0.4 $^{+0.2}_{-0.1}$)	.024±.004 (0.6±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 (Other termination styles available, contact factory for options)	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: ±0.1nH C: ±0.2nH G: ±2% J: ±5%

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

1/10/06

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: ±0.1nH, C: ±0.2nH	5	9000	0.20	350	500
KL731HTTB0N7*	0.7	B: ±0.1nH					
KL731HTTB0N8*	0.8	B: ±0.1nH, C: ±0.2nH					
KL731HTTB0N9*	0.9	B: ±0.1nH					
KL731HTTB1N0*	1.0	B: ±0.1nH, C: ±0.2nH			0.30	300	
KL731HTTB1N1*	1.1	B: ±0.1nH			0.35		
KL731HTTB1N2*	1.2	B: ±0.1nH, C: ±0.2nH					
KL731HTTB1N3*	1.3	B: ±0.1nH			0.50		
KL731HTTB1N5*	1.5	B: ±0.1nH, C: ±0.2nH					
KL731HTTB1N6*	1.6	B: ±0.1nH			0.60	200	
KL731HTTB1N8*	1.8	B: ±0.1nH, C: ±0.2nH					
KL731HTTB2N0*	2.0	B: ±0.1nH		8000	0.70		
KL731HTTB2N2*	2.2	B: ±0.1nH, C: ±0.2nH				130	
KL731HTTB2N4*	2.4	B: ±0.1nH					
KL731HTTB2N7*	2.7	B: ±0.1nH, C: ±0.2nH					
KL731HTTB3N0*	3.0	B: ±0.1nH		6000	1.00		
KL731HTTB3N3*	3.3	B: ±0.1nH, C: ±0.2nH					
KL731HTTB3N6*	3.6	B: ±0.1nH			1.30	120	
KL731HTTB3N9*	3.9	B: ±0.1nH, C: ±0.2nH					
KL731HTTB4N3*	4.3	B: ±0.1nH			1.50		
KL731HTTB4N7*	4.7	B: ±0.1nH, C: ±0.2nH					
KL731HTTB5N1*	5.1	G: ±2%		4000	2.00	110	
KL731HTTB5N6*	5.6	G: ±2%, J: ±5%					
KL731HTTB6N2*	6.2	G: ±2%			2.50		
KL731HTTB6N8*	6.8	G: ±2%, J: ±5%					
KL731HTTB7N5*	7.5	G: ±2%			5.00		
KL731HTTB8N2*	8.2	G: ±2%, J: ±5%					
KL731HTTB9N1*	9.1	G: ±2%		2000		70	
KL731HTTB10N*	10	G: ±2% J: ±5%					
KL731HTTB11N*	11						
KL731HTTB12N*	12						
KL731HTTB13N*	13						
KL731HTTB15N*	15						
KL731HTTB16N*	16			1500			
KL731HTTB18N*	18						
KL731HTTB20N*	20			1000	6.00	50	
KL731HTTB22N*	22						
KL731HTTB24N*	24						
KL731HTTB27N*	27						
KL731HTTB33N*	33			800	7.00	40	200
KL731HTTB39N*	39						

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

For complete environmental specifications, please refer to pages 211-212.

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: ±0.1nH	7	14000	0.10	700	500
KL731ETTPN68B	0.68						
KL731ETTPN82B	0.82						
KL731ETTP1N0*	1.0	B: ±0.1nH C: ±0.2nH	10	12000	0.15		
KL731ETTP1N2*	1.2						
KL731ETTP1N5*	1.5			10000	0.20		
KL731ETTP1N8*	1.8						
KL731ETTP2N2*	2.2			8000	0.25	650	
KL731ETTP2N7*	2.7						
KL731ETTP3N3*	3.3			6000	0.30	600	
KL731ETTP3N9*	3.9				0.50	550	
KL731ETTP4N7*	4.7			5000		500	
KL731ETTP5N6*	5.6	G: ±2% J: ±5%			1.00	450	
KL731ETTP6N8*	6.8			4000		350	
KL731ETTP8N2*	8.2			3000			
KL731ETTP10N*	10			2500	1.50	300	
KL731ETTP12N*	12					250	
KL731ETTP15N*	15			2000	2.00	200	
KL731ETTP18N*	18		7	1500	3.00		200
KL731ETTP22N*	22				5.00	150	
KL731ETTP27N*	27						
KL731ETTP33N*	33			1000			
KL731JTTE1N0*	1.0	C: ±0.2nH	10	13000	0.10	650	500
KL731JTTE1N2*	1.2		15				
KL731JTTE1N5*	1.5		20	10000			
KL731JTTE1N8*	1.8						
KL731JTTE2N2*	2.2			8000	0.15	450	
KL731JTTE2N7*	2.7						
KL731JTTE3N3*	3.3			6000	0.25		
KL731JTTE3N9*	3.9					350	
KL731JTTE4N7*	4.7			5000	0.50		
KL731JTTE5N6*	5.6	G: ±2% J: ±5%	25				
KL731JTTE6N8*	6.8			4000			
KL731JTTE8N2*	8.2			3000			
KL731JTTE10N*	10			2500	1.0	250	
KL731JTTE12N*	12						
KL731JTTE15N*	15			2000			
KL731JTTE18N*	18		10	1500	1.50	200	200
KL731JTTE22N*	22						
KL731JTTE27N*	27			1000	2.50	150	
KL731JTTE33N*	33						
KL731JTTE39N*	39			600			
KL731JTTE47N*	47					120	
KL731JTTE56N*	56				4.00	100	
KL731JTTE68N*	68				4.50		
KL731JTTE82N*	82				5.00		

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

For complete environmental specifications, please refer to pages 211-212.

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						
KL732ATTE1N5*	1.5			10000			
KL732ATTE1N8*	1.8		25	9000			
KL732ATTE2N2*	2.2			8000		800	
KL732ATTE2N7*	2.7						
KL732ATTE3N3*	3.3			6000			
KL732ATTE3N9*	3.9						
KL732ATTE4N7*	4.7			5000	0.50	700	
KL732ATTE5N6*	5.6	G: ±2% J: ±5%		4500			
KL732ATTE6N8*	6.8			4000		500	
KL732ATTE8N2*	8.2			3000			
KL732ATTE10N*	10			2500	1.00	400	
KL732ATTE12N*	12						
KL732ATTE15N*	15			2000		300	
KL732ATTE18N*	18		20	1500			
KL732ATTE22N*	22			1000	1.50	250	
KL732ATTE27N*	27		15				200
KL732ATTE33N*	33					200	
KL732ATTE39N*	39			800			
KL732ATTE47N*	47						
KL732ATTE56N*	56		10	700	4.00	150	
KL732ATTE68N*	68				5.00		
KL732ATTE82N*	82			600			
KL732BTTE2N2*	2.2	C: ±0.2nH	25	9000	0.25	1000	500
KL732BTTE2N7*	2.7			7000			
KL732BTTE3N3*	3.3			6000			
KL732BTTE3N9*	3.9		35	5000		900	
KL732BTTE4N7*	4.7			4500	0.50		
KL732BTTE5N6*	5.6	G: ±2% J: ±5%		4000		900	
KL732BTTE6N8*	6.8			3500		800	
KL732BTTE8N2*	8.2			3000			
KL732BTTE10N*	10		40	2500			
KL732BTTE12N*	12						
KL732BTTE15N*	15			2000	1.00	500	
KL732BTTE18N*	18						
KL732BTTE22N*	22			1500			
KL732BTTE27N*	27		25				200
KL732BTTE33N*	33			1000	2.00	400	
KL732BTTE39N*	39						
KL732BTTE47N*	47						
KL732BTTE56N*	56		15	500		200	
KL732BTTE68N*	68						
KL732BTTE82N*	82			400			
KL732BTTE100*	100						

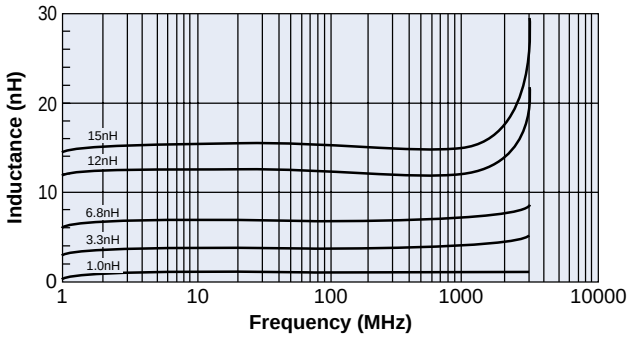
* Add tolerance character (B, C, G, J)

For complete environmental specifications, please refer to pages 211-212.

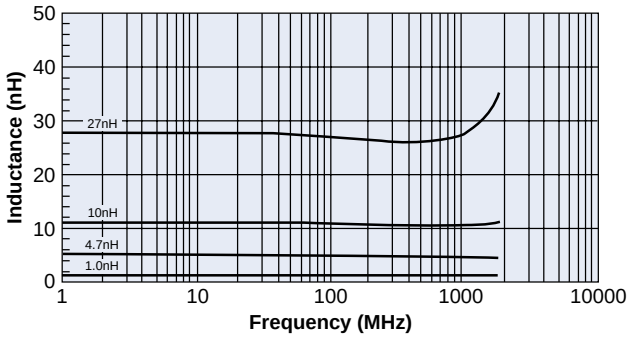
environmental applications

L-Frequency Characteristics

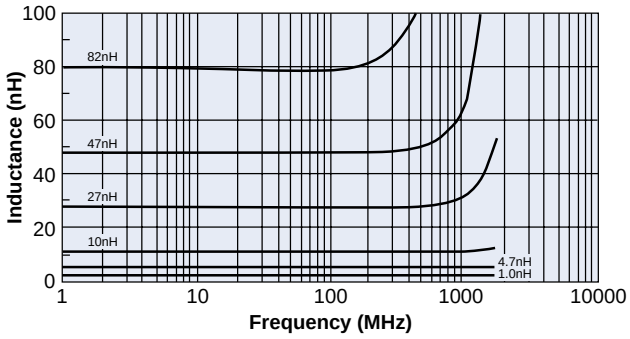
KL73 1H



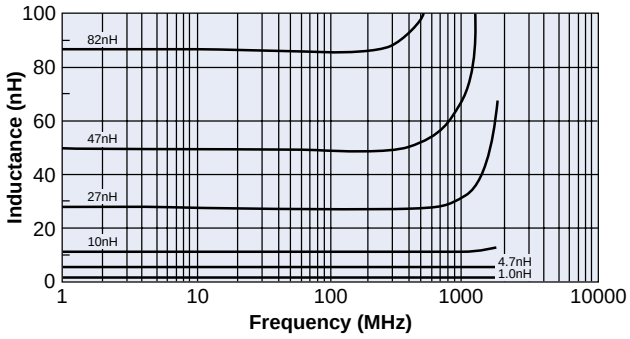
KL73 1E



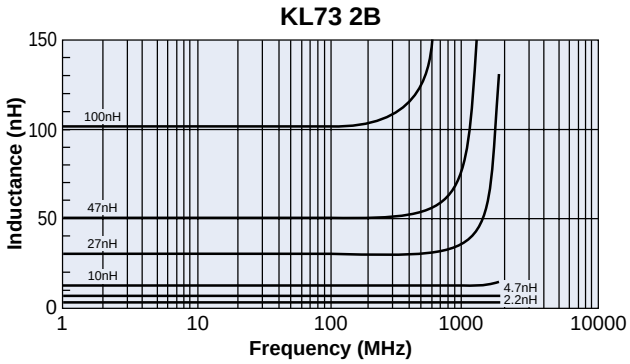
KL73 1J



KL73 2A

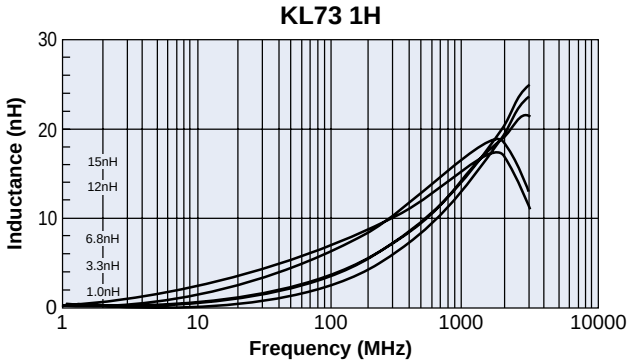


KL73 2B

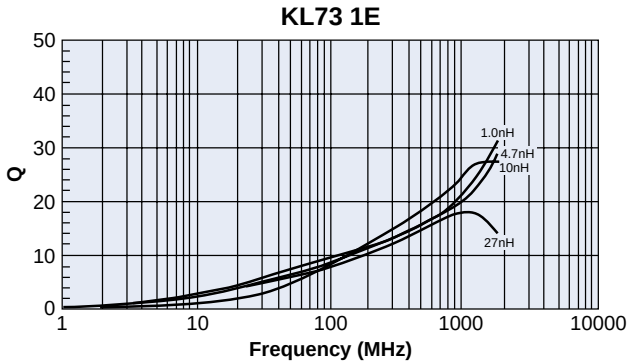


Q-Frequency Characteristics

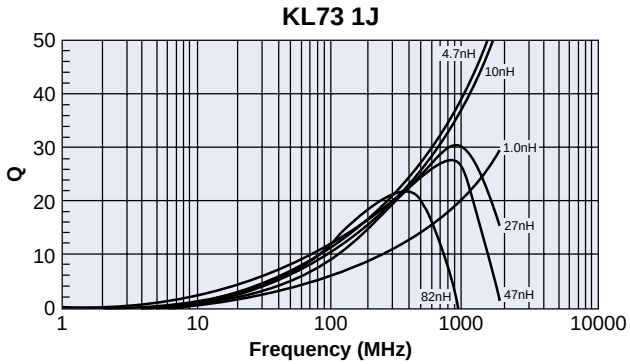
KL73 1H



KL73 1E



KL73 1J



Test equipment: Agilent E4991A impedance analyzer (1H)

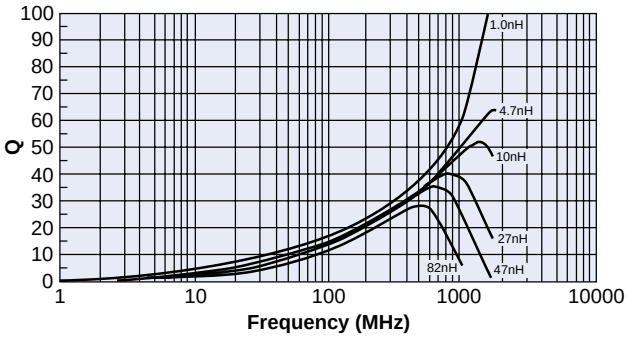
Test equipment: HP4291B impedance analyzer (1E, 1J, 2A, 2B)

12/27/04

environmental applications (continued)

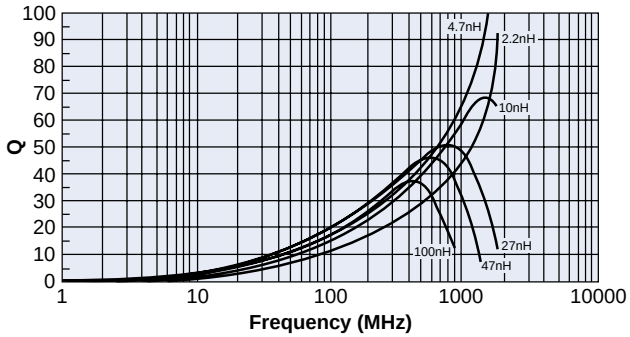
Q-Frequency Characteristics (continued)

KL73 2A



Test equipment: Agilent E4991A impedance analyzer (1H)

KL73 2B



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

Performance Characteristics

Parameter	Maximum Δ L	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 Δ R/R ±1%, Δ L/L ±2% Δ Q/Q ±20%	3mm deflection in either direction
Resistance to Solder Heat	No evidence of outer damage Δ L/L ±2% Δ Q/Q ±20%	Immerse in solder (H63A) @ 260° ± 5°C for 10 seconds ± 1 second
Solderability	95% of the terminal should be covered with new solder	Immerse in solder (H63A) @ 230° ± 5°C for 3 seconds ± 0.5 second
Low Temperature Characteristics	Δ L/L ±2% Δ Q/Q ±20%	Store @ -40°C ± 3°C for 1000 hours
Resistance to Heat	Δ L/L ±2% Δ Q/Q ±20%	Store @ 125°C ± 2°C for 1000 hours
Thermal Shock	Δ L/L ±2% Δ Q/Q ±20%	-40°C for 30 minutes and +125°C for 30 minutes, 100 cycles
Moisture Endurance	No evidence of damage Δ L/L ±2% Δ Q/Q ±20%	40°C ± 2°C, 90 - 95% RH, 1000 hours
Vibration	No evidence of breakdown Δ L/L ±2% Δ Q/Q ±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 Δ L/L ±2% Δ Q/Q ±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