

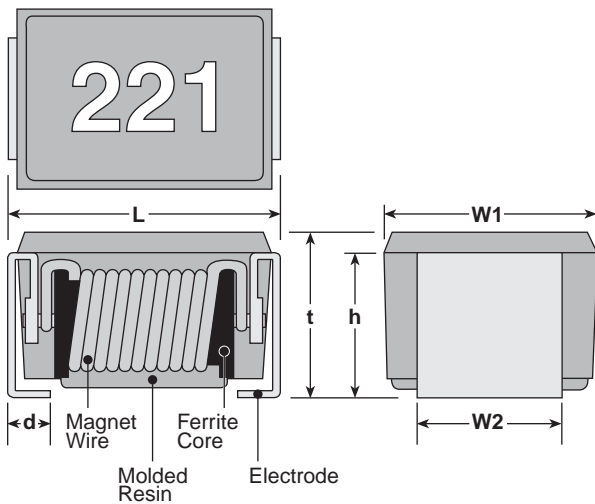


**features**

- UL94V0 molded epoxy case
- Suitable for reflow and wave soldering
- 1210 size - surface mount style
- High Q value achieved by wirewound structure
- Marking: Black body color with white marking
- Products with lead-free terminations meet EU RoHS requirements

Inductors

**dimensions and construction**



Type	Dimensions inches (mm)					
	L	W1	W2	t	h	d
KL32	.126±.008 (3.2±0.2)	.098±.008 (2.5±0.2)	.067±.004 (1.7±0.1)	.087±.008 (2.2±0.2)	.075±.004 (1.9±0.1)	.02 nominal (.5 nominal)

**Inductance Marking**

Value	Code
0.005μH - 0.082μH	005 - 082
0.10μH - 8.2μH	R10 - 8R2 R indicates decimal point.
10μH - 330μH	100 - 331 1st two figures are significant, the last figure indicates the number of zeros to follow.

**ordering information**

New Part #	KL	32	T	TE	101	J
Type		Size	Termination Material	Packaging	Nominal Inductance	Tolerance
		1210 size	T: Sn	TE: 7" embossed plastic TED: 10" embossed plastic (TE: 2,000 pieces/reel) (TED: 4,000 pieces/reel)	Reference inductance marking chart	J: ±5% K: ±10% M: ±20%

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

applications and ratings

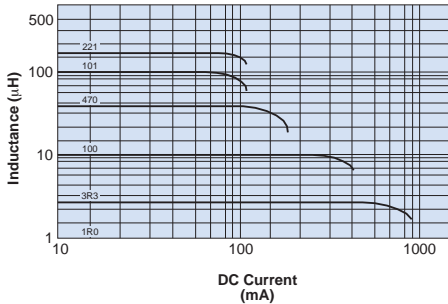
Part Designation	Inductance (μH)	Inductance Tolerance	Quality Factor Minimum	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Measured Frequency (MHz)	
KL32TTE005*	0.005	M: ±20%	11	2700	0.12	450	100	
KL32TTE010*	0.010	K: ±10% M: ±20%	15	2500	0.13			
KL32TTE012*	0.012		17	2300	0.14			
KL32TTE015*	0.015		19	2100	0.16			
KL32TTE018*	0.018		21	1900	0.18			
KL32TTE022*	0.022		23	1700	0.20			
KL32TTE027*	0.027		25	1500	0.22			
KL32TTE033*	0.033	J: ±5% K: ±10% M: ±20%	25	1400	0.24			
KL32TTE039*	0.039			1300	0.27			
KL32TTE047*	0.047		26	1200	0.30			
KL32TTE056*	0.056			1100	0.33			
KL32TTE068*	0.068		27	1000	0.36			
KL32TTE082*	0.082			900	0.40			
KL32TTER10*	0.10		J: ±5% K: ±10% M: ±20%	28	700			0.44
KL32TTER12*	0.12				500	0.22		
KL32TTER15*	0.15			450	0.25			
KL32TTER18*	0.18			400	0.28			
KL32TTER22*	0.22			350	0.32			
KL32TTER27*	0.27			320	0.36			
KL32TTER33*	0.33			300	0.40			
KL32TTER39*	0.39			250	0.45			
KL32TTER47*	0.47	220		0.50				
KL32TTER56*	0.56	180		0.55				
KL32TTER68*	0.68	160		0.60				
KL32TTER82*	0.82	140		0.65				
KL32TTE1R0*	1.0	J: ±5% K: ±10% M: ±20%		30	120	0.70	400	7.96
KL32TTE1R2*	1.2				100	0.75		
KL32TTE1R5*	1.5		85		0.85	370		
KL32TTE1R8*	1.8		80		0.90	350		
KL32TTE2R2*	2.2		75		1.0	320		
KL32TTE2R7*	2.7		70		1.1	290		
KL32TTE3R3*	3.3		60		1.2	260		
KL32TTE3R9*	3.9		55		1.3	250		
KL32TTE4R7*	4.7		50		1.5	220		
KL32TTE5R6*	5.6		47		1.6	200		
KL32TTE6R8*	6.8		43		1.8	180		
KL32TTE8R2*	8.2		40		2.0	170		
KL32TTE100*	10		36		2.1	150		
KL32TTE120*	12		33		2.5	140		
KL32TTE150*	15	30	2.8	130				
KL32TTE180*	18	27	3.3	120				
KL32TTE220*	22	25	3.7	110				
KL32TTE270*	27	20	5.0	80				
KL32TTE330*	33	17	5.6	70				
KL32TTE390*	39	16	6.4	65				
KL32TTE470*	47	15	7.0	60				
KL32TTE560*	56	13	8.0	55				
KL32TTE680*	68	12	9.0	50				
KL32TTE820*	82	11	10	45				
KL32TTE101*	100	20	10	40	50	40	0.796	
KL32TTE121*	120			11				70
KL32TTE151*	150			15				65
KL32TTE181*	180			17				60
KL32TTE221*	220			21				60
KL32TTE271*	270			28				60
KL32TTE331*	330			34				60

\* Add tolerance character (J, K, M)

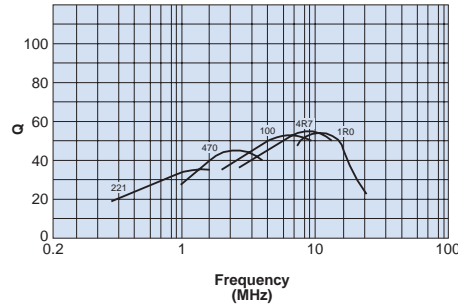
For complete environmental specifications, please refer to page 220.

## environmental applications

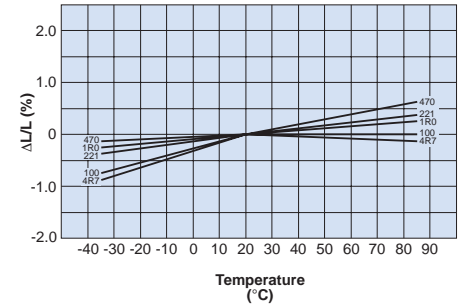
### DC Current Characteristics



### Q-Frequency Characteristics



### Temperature Characteristics



## Performance Characteristics

Parameter	Maximum $\Delta L$	Test Method
Low Temperature Characteristics	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 20\%$	Store @ $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1000 hours
Resistance to Heat	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 30\%$	Store @ $+100^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1000 hours
Thermal Shock	No evidence of damage $\Delta L/L$ within $\pm 5\%$	100 cycles between $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ / 1 hour and $+100^{\circ}\text{C} \pm 2^{\circ}\text{C}$ / 1 hour
Temperature Characteristics	$\Delta L/L$ within $\pm 10\%$	$\Delta L/L$ to be measured at the temperatures between $-55^{\circ}\text{C}$ and $+100^{\circ}\text{C}$ , reference to the inductance @ $20^{\circ}\text{C}$
Moisture Endurance	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 30\%$	$40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 90 - 95% RH, 1000 hours
Resistance to Solvents	No damage and markings must remain legible	MIL-STD-202, Method 215 (1990)
Terminal Pull Strength	No evidence of damage	Terminals shall withstand a pull of 4.9N in a horizontal direction
Terminal Bending Strength	No evidence of breakdown	Specimen shall be soldered and force applied to the opposite side to cause a 10mm deflection
Vibration	$\Delta L/L$ within $\pm 3\%$	2 hours in each direction of X, Y, Z on PCB at a frequency range of 10 - 55 - 10Hz with 1.5mm amplitude
Resistance to Solder Heat	No evidence of outer damage $\Delta L/L$ within $\pm 3\%$	Immerse in solder @ $260^{\circ} \pm 5^{\circ}\text{C}$ for 10 seconds $\pm 1$ second
Solderability	95% of the terminal should be covered with new solder	Immerse in solder @ $230^{\circ} \pm 5^{\circ}\text{C}$ for 3 seconds $\pm 0.5$ second
DC Superimposition	$\Delta L/L$ within $\pm 10\%$	When the allowable current is applied, inductance to be measured by LCR - meter
Dielectric Withstanding Voltage	No evidence of flaming, fuming or breakdown	5 seconds @ DC 1000V applied between both terminals and case
Insulation Resistance	1000M $\Omega$ and over	1 minute @ DC 500V measured between both terminals and case
Storage Temperature Range	$-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$	—
Operating Temperature Range	$-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$	—