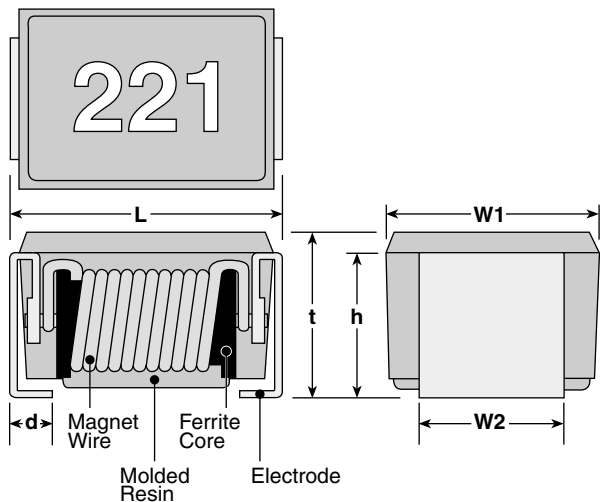




features

- UL94V-0 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

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

| | | | | | | |
|------------|------|-----------|----------------------|---|------------------------------------|------------------------------|
| Old Part # | KL | 32 | | TE | 101 | J |
| New Part # | KL | 32 | L | TE | 101 | J |
| | Type | Size | Termination Material | Packaging | Nominal Inductance | Tolerance |
| | | 1210 size | L: SnPb C: SnCu | 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.

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

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) |
|------------------|-----------------|------------------------------|------------------------|---------------------------------------|---------------------------|-----------------------------------|--------------------------|
| KL32*TE005** | 0.005 | M: ±20% | 11 | 2700 | 0.12 | 450 | 100 |
| KL32*TE010** | 0.010 | K: ±10% M: ±20% | 15 | 2500 | 0.13 | | |
| KL32*TE012** | 0.012 | | 17 | 2300 | 0.14 | | |
| KL32*TE015** | 0.015 | | 19 | 2100 | 0.16 | | |
| KL32*TE018** | 0.018 | | 21 | 1900 | 0.18 | | |
| KL32*TE022** | 0.022 | | 23 | 1700 | 0.20 | | |
| KL32*TE027** | 0.027 | | 25 | 1500 | 0.22 | | |
| KL32*TE033** | 0.033 | J: ±5% K: ±10% M: ±20% | 25 | 1400 | 0.24 | | |
| KL32*TE039** | 0.039 | | | 1300 | 0.27 | | |
| KL32*TE047** | 0.047 | | 26 | 1200 | 0.30 | | |
| KL32*TE056** | 0.056 | | | 1100 | 0.33 | | |
| KL32*TE068** | 0.068 | | 27 | 1000 | 0.36 | | |
| KL32*TE082** | 0.082 | | | 900 | 0.40 | | |
| KL32*TER10** | 0.10 | | 28 | 700 | 0.44 | | |
| KL32*TER12** | 0.12 | | | 500 | 0.22 | | |
| KL32*TER15** | 0.15 | | | 450 | 0.25 | | |
| KL32*TER18** | 0.18 | | | 400 | 0.28 | | |
| KL32*TER22** | 0.22 | 350 | | 0.32 | | | |
| KL32*TER27** | 0.27 | 320 | | 0.36 | | | |
| KL32*TER33** | 0.33 | 300 | | 0.40 | | | |
| KL32*TER39** | 0.39 | 250 | | 0.45 | | | |
| KL32*TER47** | 0.47 | 220 | | 0.50 | | | |
| KL32*TER56** | 0.56 | 180 | | 0.55 | | | |
| KL32*TER68** | 0.68 | 160 | 0.60 | | | | |
| KL32*TER82** | 0.82 | 140 | 0.65 | | | | |
| KL32*TE1R0** | 1.0 | 30 | 120 | 0.70 | 400 | 7.96 | |
| KL32*TE1R2** | 1.2 | | 100 | 0.75 | 390 | | |
| KL32*TE1R5** | 1.5 | | 85 | 0.85 | 370 | | |
| KL32*TE1R8** | 1.8 | | 80 | 0.90 | 350 | | |
| KL32*TE2R2** | 2.2 | | 75 | 1.0 | 320 | | |
| KL32*TE2R7** | 2.7 | | 70 | 1.1 | 290 | | |
| KL32*TE3R3** | 3.3 | | 60 | 1.2 | 260 | | |
| KL32*TE3R9** | 3.9 | | 55 | 1.3 | 250 | | |
| KL32*TE4R7** | 4.7 | | 50 | 1.5 | 220 | | |
| KL32*TE5R6** | 5.6 | | 47 | 1.6 | 200 | | |
| KL32*TE6R8** | 6.8 | 43 | 1.8 | 180 | | | |
| KL32*TE8R2** | 8.2 | 40 | 2.0 | 170 | | | |
| KL32*TE100** | 10 | 36 | 2.1 | 150 | 2.52 | | |
| KL32*TE120** | 12 | 33 | 2.5 | 140 | | | |
| KL32*TE150** | 15 | 30 | 2.8 | 130 | | | |
| KL32*TE180** | 18 | 27 | 3.3 | 120 | | | |
| KL32*TE220** | 22 | 25 | 3.7 | 110 | | | |
| KL32*TE270** | 27 | 20 | 5.0 | 80 | | | |
| KL32*TE330** | 33 | 17 | 5.6 | 70 | | | |
| KL32*TE390** | 39 | 16 | 6.4 | 65 | | | |
| KL32*TE470** | 47 | 15 | 7.0 | 60 | | | |
| KL32*TE560** | 56 | 13 | 8.0 | 55 | | | |
| KL32*TE680** | 68 | 12 | 9.0 | 50 | | | |
| KL32*TE820** | 82 | 11 | 10 | 45 | 0.796 | | |
| KL32*TE101** | 100 | 10 | 10 | 40 | | | |
| KL32*TE121** | 120 | | 11 | 70 | | | |
| KL32*TE151** | 150 | 8 | 15 | 65 | | | |
| KL32*TE181** | 180 | | 17 | 60 | | | |
| KL32*TE221** | 220 | 7 | 21 | 50 | | | |
| KL32*TE271** | 270 | | 6 | | | 28 | |
| KL32*TE331** | 330 | 5 | 34 | | | | |

* Add termination material character (L, C)

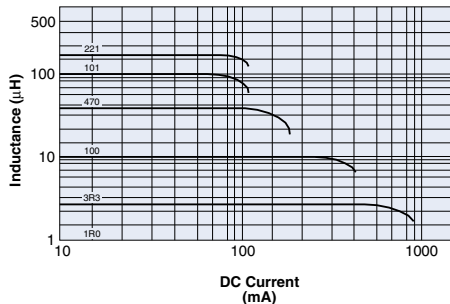
** Add tolerance character (J, K, M)

For complete environmental specifications, please refer to page 112.

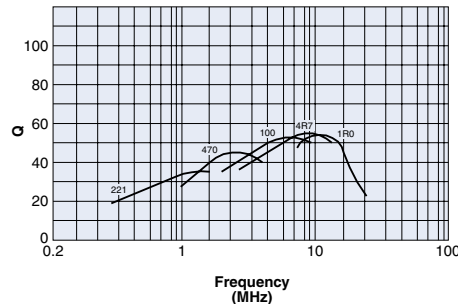
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environmental applications

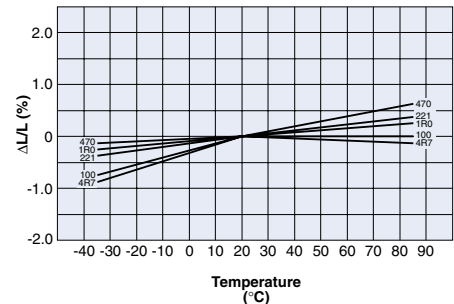
DC Current Characteristics



Q-Frequency Characteristics



Temperature Characteristics



Performance Characteristics

| Parameter | Maximum Δ L | Test Method |
|---------------------------------|--|---|
| Low Temperature Characteristics | No evidence of damage Δ L/L within ±5% Δ Q/Q within ±20% | Store @ -40°C ± 2°C for 1000 hours |
| Resistance to Heat | No evidence of damage Δ L/L within ±5% Δ Q/Q within ±30% | Store @ +100°C ± 2°C for 1000 hours |
| Thermal Shock | No evidence of damage Δ L/L within ±5% | 100 cycles between -25°C/hour and +100°C/hour |
| Temperature Characteristics | Δ L/L within ±10% | Δ L/L to be measured at the temperatures between -25°C and +85°C, reference to the inductance @ 25°C |
| Moisture Endurance | No evidence of damage Δ L/L within ±5% Δ Q/Q within ±30% | 40°C ± 2°C, 90 - 95% RH, 1000 hours |
| Resistance to Solvents | No damage and markings must remain legible | MIL-STD-202, Method 215 |
| 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 3mm deflection |
| Vibration | Δ L/L within ±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 Δ L/L within ±3% | Immerse in solder @ 260° ± 5°C for 10 seconds ± 1 second |
| Solderability | 95% of the terminal should be covered with new solder | Immerse in solder @ 230° ± 5°C for 3 seconds ± 0.5 second |
| DC Superimposition | Δ L/L within ±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 | 1000MΩ and over | 1 minute @ DC 500V measured between both terminals and case |
| Storage Temperature Range | -40°C to +100°C | — |
| Operating Temperature Range | -40°C to +100°C | — |

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