

Ceramic RF Chip Inductors

PE-0402CL Series



- Ⓢ Monolithic inorganic material construction
- Ⓢ Low DC resistance, high Q Values at high frequency
- Ⓢ High Self Resonant Frequency
- Ⓢ Industry Standard 0402 (1005) Surface Mount Land Pattern
- Ⓢ Operational temperature -55°C to +125°C

Electrical Specifications @ 25°C - Operating Temperature -40°C to +85°C

| Part Number | Inductance ¹ (uH) | Standard Tolerance | Q ² (Min.) | Test Frequency (MHz) | SRF ³ (MHz MIN) | Rdc ⁴ (Ω MAX) | Ibc ⁵ (mA MAX) |
|-----------------|---------------------------------|-----------------------|--------------------------|----------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-0402CL1N0STT | 1.0 | ±0.3nH (S) | 8 | 100 | 10000 | 0.1 | 400 |
| PE-0402CL1N2STT | 1.2 | ±0.3nH (S) | 8 | 100 | 10000 | 0.1 | 400 |
| PE-0402CL1N5STT | 1.5 | ±0.3nH (S) | 8 | 100 | 6000 | 0.1 | 300 |
| PE-0402CL1N8STT | 1.8 | ±0.3nH (S) | 8 | 100 | 6000 | 0.1 | 300 |
| PE-0402CL2N0STT | 2.0 | ±0.3nH (S) | 8 | 100 | 6000 | 0.2 | 300 |
| PE-0402CL2N2STT | 2.2 | ±0.3nH (S) | 8 | 100 | 6000 | 0.2 | 300 |
| PE-0402CL2N7STT | 2.7 | ±0.3nH (S) | 8 | 100 | 6000 | 0.2 | 300 |
| PE-0402CL3N3STT | 3.3 | ±0.3nH (S) | 8 | 100 | 6000 | 0.2 | 300 |
| PE-0402CL3N6STT | 3.6 | ±0.3nH (S) | 8 | 100 | 4000 | 0.2 | 300 |
| PE-0402CL3N9STT | 3.9 | ±0.3nH (S) | 8 | 100 | 4000 | 0.2 | 300 |
| PE-0402CL4N7STT | 4.7 | ±0.3nH (S) | 8 | 100 | 4000 | 0.2 | 300 |
| PE-0402CL5N6STT | 5.6 | ±0.3nH (S) | 8 | 100 | 4000 | 0.3 | 300 |
| PE-0402CL6N2STT | 6.2 | ±0.3nH (S) | 8 | 100 | 3900 | 0.3 | 300 |
| PE-0402CL6N8JTT | 6.8 | ±5% (J) | 8 | 100 | 3900 | 0.3 | 300 |
| PE-0402CL7N5JTT | 7.5 | ±5% (J) | 8 | 100 | 3700 | 0.4 | 300 |
| PE-0402CL8N2JTT | 8.2 | ±5% (J) | 8 | 100 | 3600 | 0.4 | 300 |
| PE-0402CL100JTT | 10 | ±5% (J) | 8 | 100 | 3200 | 0.4 | 300 |
| PE-0402CL120JTT | 12 | ±5% (J) | 8 | 100 | 2700 | 0.5 | 300 |
| PE-0402CL150JTT | 15 | ±5% (J) | 8 | 100 | 2300 | 0.5 | 300 |
| PE-0402CL180JTT | 18 | ±5% (J) | 8 | 100 | 2100 | 0.5 | 300 |
| PE-0402CL220JTT | 22 | ±5% (J) | 8 | 100 | 1900 | 0.6 | 300 |
| PE-0402CL270JTT | 27 | ±5% (J) | 8 | 100 | 1600 | 0.7 | 300 |
| PE-0402CL330JTT | 33 | ±5% (J) | 8 | 100 | 1300 | 0.8 | 200 |

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| Mechanical Specification - Dimension in mm | | | | | | | |
|--|------------------------------|--------------------|-----------------------|----------------------|----------------------------|--------------------------|---------------------------|
| Part Number | Inductance ¹ (nH) | Standard Tolerance | Q ² (Min.) | Test Frequency (MHz) | SRF ³ (MHz MIN) | Rdc ⁴ (Ω MAX) | Ibc ⁵ (mA MAX) |
| PE-0402CL470JTT | 47 | ±5% (J) | 8 | 100 | 1000 | 1.1 | 200 |
| PE-0402CL560JTT | 56 | ±5% (J) | 8 | 100 | 750 | 1.2 | 200 |
| PE-0402CL680JTT | 68 | ±5% (J) | 8 | 100 | 750 | 1.4 | 180 |
| PE-0402CL820JTT | 82 | ±5% (J) | 8 | 100 | 750 | 2.4 | 150 |
| PE-0402CL101JTT | 100 | ±5% (J) | 8 | 100 | 700 | 2.6 | 150 |
| PE-0402CL121JTT | 120 | ±5% (J) | 8 | 100 | 600 | 2.8 | 150 |

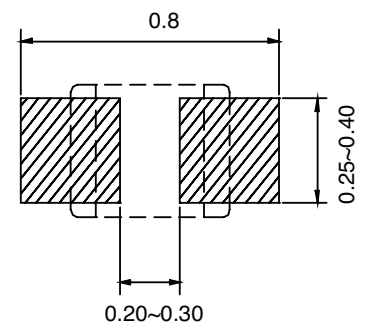
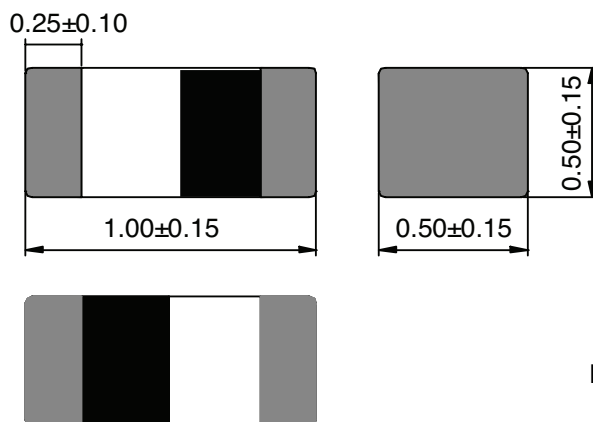
Notes:

- Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
- Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
- SRF measured using a HP8753C Network Analyzer.
- RDC measured using a Valhalla Scientific model 4100 ATC Digital Ohm meter.
- Based on a 15°C maximum temperature rise.

Mechanical

Schematic

0402CL Series



Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{0.10}{0.25}$

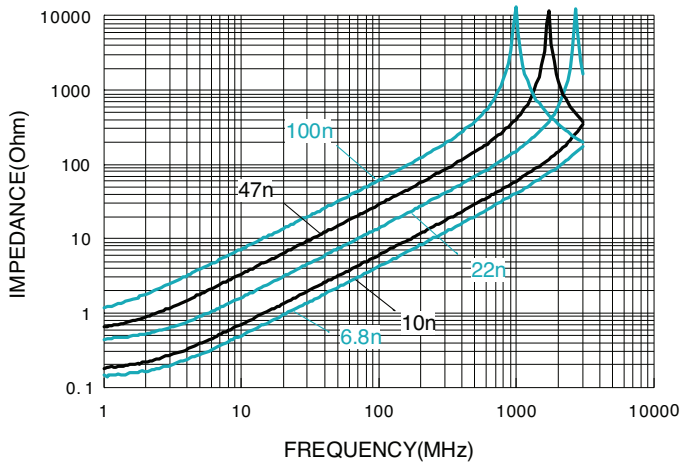
Ceramic RF Chip Inductors

PE-0402CL Series

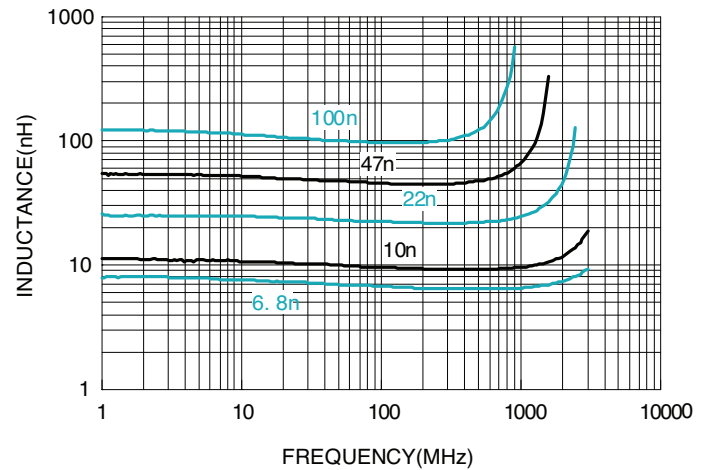
Characteristic Graphs

0402CL Series

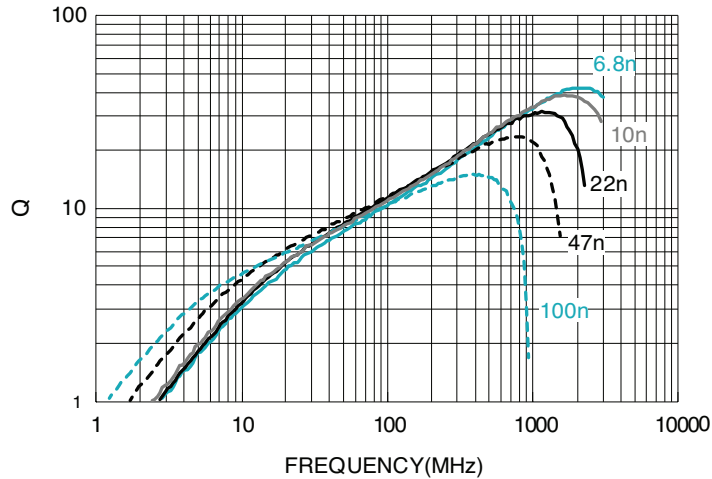
Impedance v.s. Frequency Characteristics



Inductance v.s. Frequency Characteristics



Q v.s. Frequency Characteristics



For More Information:

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