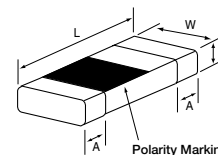


The LLP2012-F is a photolithographically etched single layer ceramic chip inductor in a standard 0805 package. TOKO's proprietary design provides high SRF, excellent Q, and superior temperature stability. This inductor family is specifically designed for critical tolerance inductor needs. More economical than thin film or screened wirewounds, the LLP2012-F is an ideal solution for tight tolerance requirements, such as VCO circuits and GaAs matching.



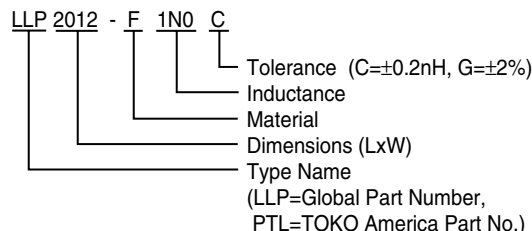
Unit: mm

| Type | L (mm) | W (mm) | T (mm) | A (mm) |
|----------|---------|----------|----------|---------|
| LLP2012F | 2.0±0.2 | 1.25±0.2 | 0.5±0.15 | 0.3±0.2 |

Features

- ±0.2nH and ±2% inductance tolerances
- Inductance range: 1.0-82nH
- Miniature size: 0805 footprint (2.0mm x 1.2mm)
- Inductance and Q specified at 100MHz and 800MHz
- Self-resonant frequency specified at ±10%
- Q: 23 ~ 68 typical (at 1800MHz)
- Temperature coefficient: +100ppm/°C
- Temperature range: -55°C to +125°C
- S-parameter data available upon request
- Packaged on tape and reel in 6,000 piece quantity
- Reflow solderable

Part Numbering



STANDARD PARTS SELECTION GUIDE

TYPE LLP2012-F

| Global Part Number | TOKO America Part Number | Inductance & Tolerance | | | | Q min. | | Q (Typ.) | | | | | | SRF (MHz) | RDC (Ω) max. | IDC (mA) max. |
|--------------------|--------------------------|------------------------|---------|------------|---------|--------|----|----------|---------|---------|---------|----------|----------|-------------|--------------|---------------|
| | | at 100MHz | | at 800 MHz | | | | 100 MHz | 300 MHz | 500 MHz | 800 MHz | 1000 MHz | 1800 MHz | | | |
| | | Lo (nH) | L Tol.* | Lo (nH) | L Tol.* | | | | | | | | | | | |
| LLP2012-F1N0_* | PTL2012-F1N0_* | 1.0 | C | 1.0 | ± 0.3nH | 7 | 22 | 10.4 | 20.0 | 25.4 | 31.3 | 32.1 | 52.5 | 10000 ± 10% | 0.10 | 1300 |
| LLP2012-F1N2_* | PTL2012-F1N2_* | 1.2 | C | 1.2 | ± 0.3nH | 7 | 22 | 9.4 | 19.1 | 24.9 | 31.7 | 32.7 | 62.6 | 9000 ± 10% | 0.10 | 1100 |
| LLP2012-F1N5_* | PTL2012-F1N5_* | 1.5 | C | 1.5 | ± 0.3nH | 6 | 22 | 9.2 | 17.4 | 22.4 | 30.6 | 32.9 | 43.2 | 8500 ± 10% | 0.12 | 800 |
| LLP2012-F1N8_* | PTL2012-F1N8_* | 1.8 | C | 1.7 | ± 0.3nH | 6 | 22 | 9.5 | 20.0 | 26.5 | 34.9 | 35.2 | 60.7 | 8000 ± 10% | 0.15 | 800 |
| LLP2012-F2N2_* | PTL2012-F2N2_* | 2.2 | C | 2.1 | ± 0.3nH | 7 | 23 | 10.0 | 21.1 | 28.5 | 37.3 | 38.2 | 63.9 | 7000 ± 10% | 0.15 | 750 |
| LLP2012-F2N7_* | PTL2012-F2N7_* | 2.7 | C | 2.6 | ± 0.3nH | 8 | 25 | 10.5 | 21.9 | 29.5 | 38.1 | 38.8 | 63.8 | 6000 ± 10% | 0.20 | 750 |
| LLP2012-F3N3C | PTL2012-F3N3C | 3.3 | C | 3.2 | ± 0.3nH | 8 | 25 | 10.6 | 22.6 | 31.2 | 40.5 | 41.1 | 67.5 | 5300 ± 10% | 0.20 | 650 |
| LLP2012-F3N9C | PTL2012-F3N9C | 3.9 | C | 3.8 | ± 0.3nH | 8 | 25 | 10.6 | 22.3 | 30.6 | 39.5 | 39.2 | 62.5 | 4800 ± 10% | 0.30 | 600 |
| LLP2012-F4N7C | PTL2012-F4N7C | 4.7 | C | 4.6 | ± 0.3nH | 8 | 28 | 10.4 | 21.8 | 30.1 | 39.2 | 39.4 | 60.8 | 4350 ± 10% | 0.35 | 550 |
| LLP2012-F5N6C | PTL2012-F5N6C | 5.6 | C | 5.5 | ± 0.3nH | 8 | 28 | 10.1 | 21.8 | 30.3 | 39.5 | 38.8 | 61.5 | 4000 ± 10% | 0.50 | 500 |
| LLP2012-F6N8C | PTL2012-F6N8C | 6.8 | C | 6.7 | ± 0.3nH | 8 | 30 | 10.5 | 22.6 | 31.6 | 41.3 | 39.4 | 57.9 | 3600 ± 10% | 0.50 | 450 |
| LLP2012-F8N2C | PTL2012-F8N2C | 8.2 | C | 8.1 | ± 0.3nH | 8 | 30 | 11.0 | 23.8 | 33.1 | 43.0 | 40.1 | 55.1 | 3250 ± 10% | 0.60 | 400 |
| LLP2012-F10NG | PTL2012-F10NG | 10 | G | 10.0 | ± 4% | 9 | 32 | 10.2 | 21.9 | 30.8 | 39.8 | 37.1 | 51.0 | 2850 ± 10% | 0.70 | 350 |
| LLP2012-F12NG | PTL2012-F12NG | 12 | G | 12.2 | ± 4% | 9 | 32 | 10.9 | 23.2 | 32.1 | 40.6 | 37.0 | 46.7 | 2500 ± 10% | 0.80 | 350 |
| LLP2012-F15NG | PTL2012-F15NG | 15 | G | 15.5 | ± 4% | 9 | 32 | 10.8 | 22.8 | 31.6 | 39.3 | 34.5 | 39.7 | 2250 ± 10% | 1.00 | 300 |
| LLP2012-F18NG | PTL2012-F18NG | 18 | G | 19.1 | ± 4% | 9 | 30 | 12.0 | 24.7 | 33.6 | 40.5 | 34.1 | 31.6 | 2000 ± 10% | 1.20 | 300 |
| LLP2012-F22NG | PTL2012-F22NG | 22 | G | 23.8 | ± 4% | 9 | 30 | 12.7 | 25.2 | 33.6 | 38.8 | 31.6 | 23.4 | 1800 ± 10% | 1.50 | 250 |
| LLP2012-F27NG | PTL2012-F27NG | 27 | G | 30.2 | ± 5% | 9 | 30 | 10.9 | 23.2 | 32.1 | 36.9 | 28.8 | - | 1650 ± 10% | 1.80 | 200 |
| LLP2012-F33NG | PTL2012-F33NG | 33 | G | 39.0 | ± 5% | 8 | 30 | 11.0 | 22.9 | 30.8 | 33.7 | 24.1 | - | 1450 ± 10% | 2.50 | 200 |
| LLP2012-F39NG | PTL2012-F39NG | 39 | G | 49.4 | ± 5% | 8 | 28 | 11.2 | 23.5 | 31.5 | 32.9 | 21.7 | - | 1350 ± 10% | 3.00 | 180 |
| LLP2012-F47NG | PTL2012-F47NG | 47 | G | 62.8 | ± 5% | 7 | 24 | 11.1 | 23.1 | 30.6 | 29.7 | 17.5 | - | 1180 ± 10% | 4.00 | 130 |
| LLP2012-F56NG | PTL2012-F56NG | 56 | G | 83.4 | ± 5% | 7 | 20 | 12.1 | 24.7 | 31.2 | 26.3 | - | - | 1070 ± 10% | 4.50 | 120 |
| LLP2012-F68NG | PTL2012-F68NG | 68 | G | **80.2 | ** ± 5% | 7 | 22 | 10.6 | 23.2 | 29.0 | 22.6 | - | - | 950 ± 10% | 5.00 | 100 |
| LLP2012-F82NG | PTL2012-F82NG | 82 | G | **99.8 | ** ± 5% | 8 | 20 | 9.7 | 22.0 | 27.3 | 19.0 | - | - | 900 ± 10% | 6.00 | 90 |

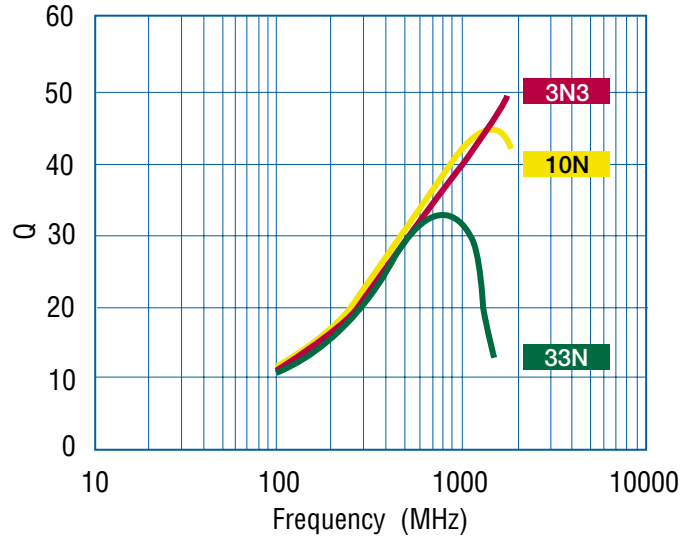
** (at 500MHz)

* Add tolerance to part number: C = ±0.2nH, G = ±2%

Testing Conditions: (1) L,Q: Agilent 4291A (Test fixture Agilent 16193A) (2) SRF: Agilent 8719D (3) RDC: Agilent 4338B

ELECTRICAL CHARACTERISTICS

Q vs. Frequency



Inductance vs. Frequency

