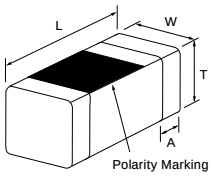
*The LL1608-FH Series is a miniature multilayer ceramic chip inductor. TOKO's proprietary laminated ceramic material provides high SRF, excellent Q, and superior reliability. The FH allows up to 3 times the current handling of standard multilayers. In addition, the Qs are 1.3-1.6 times higher. It has an industry standard 0603 footprint and comes on tape in 4,000 piece reels. It is an ideal solution for higher current needs in high frequency RF and wireless communications equipment.*



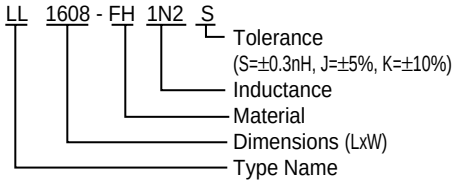

Unit: mm

| Type | L (mm) | W (mm) | T (mm) | A (mm) |
|---|---|---|---|---|
| LL1608FH | 1.6±0.15 | 0.8±0.15 | 0.8±0.15 | 0.3±0.2 |

## *Features*

- Inductance range: 1.2-100nH
- Miniature size: 0603 footprint (1.6mm x 0.8mm)
- Laminated ceramic allows high SRF
- Q: 35 typical (at 800MHz)
- High current handling, up to 1A
- Temperature coefficient of inductance: +250ppm/°C
- Temperature range: –40°C to +100°C
- S-parameter data available upon request
- Packaged on tape and reel in 4,000 piece quantity
- Reflow solderable

## *Part Numbering*




## STANDARD PARTS SELECTION GUIDE

### *TYPE LL1608-FH*

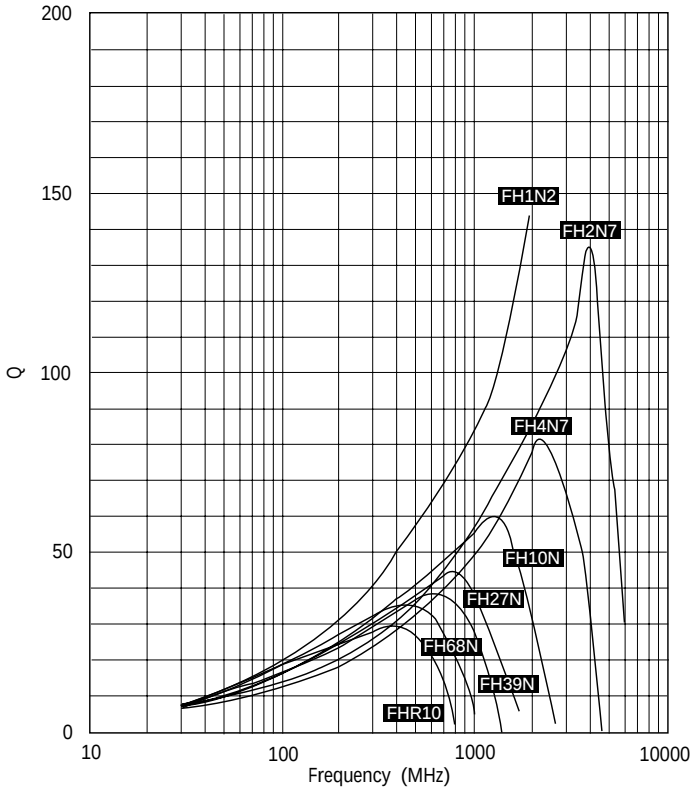
| TOKO Part Number | Lo (nH) | L Tol.* | Q 100MHz typ. | Q 800MHz typ. [500MHz] | SRF (MHz) typ. | RDC ( Ω ) max. | IDC (mA) max. |
|---|---|---|---|---|---|---|---|
| LL1608-FH1N2S | 1.2 | S | 13 | 60 | >6000 | 0.10 | 1000 |
| LL1608-FH1N5S | 1.5 | S | 13 | 47 | >6000 | 0.10 | 1000 |
| LL1608-FH1N8S | 1.8 | S | 12 | 51 | >6000 | 0.10 | 1000 |
| LL1608-FH2N2S | 2.2 | S | 12 | 38 | >6000 | 0.10 | 1000 |
| LL1608-FH2N7S | 2.7 | S | 12 | 38 | >6000 | 0.10 | 1000 |
| LL1608-FH3N3_* | 3.3 | S, K | 12 | 41 | 5900 | 0.12 | 1000 |
| LL1608-FH3N9_* | 3.9 | S, K | 13 | 50 | 5600 | 0.14 | 1000 |
| LL1608-FH4N7_* | 4.7 | S, K | 12 | 41 | 4800 | 0.16 | 1000 |
| LL1608-FH5N6_* | 5.6 | S, K | 12 | 42 | 4350 | 0.18 | 600 |
| LL1608-FH6N8_* | 6.8 | J, K | 12 | 40 | 3750 | 0.22 | 600 |
| LL1608-FH8N2_* | 8.2 | J, K | 13 | 34 | 3300 | 0.24 | 600 |
| LL1608-FH10N_* | 10.0 | J, K | 13 | 45 | 2850 | 0.26 | 600 |
| LL1608-FH12N_* | 12.0 | J, K | 15 | 46 | 2500 | 0.28 | 600 |
| LL1608-FH15N_* | 15.0 | J, K | 15 | 48 | 2150 | 0.32 | 600 |
| LL1608-FH18N_* | 18.0 | J, K | 16 | 48 | 2100 | 0.35 | 600 |
| LL1608-FH22N_* | 22.0 | J, K | 17 | 45 | 1850 | 0.40 | 600 |
| LL1608-FH27N_* | 27.0 | J, K | 17 | 43 | 1680 | 0.45 | 600 |
| LL1608-FH33N_* | 33.0 | J, K | 18 | 39 | 1580 | 0.55 | 600 |
| LL1608-FH39N_* | 39.0 | J, K | 17 | [37] | 1400 | 0.60 | 500 |
| LL1608-FH47N_* | 47.0 | J, K | 17 | [35] | 1200 | 0.70 | 500 |
| LL1608-FH56N_* | 56.0 | J, K | 17 | [32] | 1100 | 0.75 | 500 |
| LL1608-FH68N_* | 68.0 | J, K | 18 | [34] | 1050 | 0.85 | 400 |
| LL1608-FH82N_* | 82.0 | J, K | 18 | [32] | 900 | 1.50 | 300 |
| LL1608-FHR10_* | 100.0 | J, K | 15 | [16] | 850 | 2.10 | 300 |

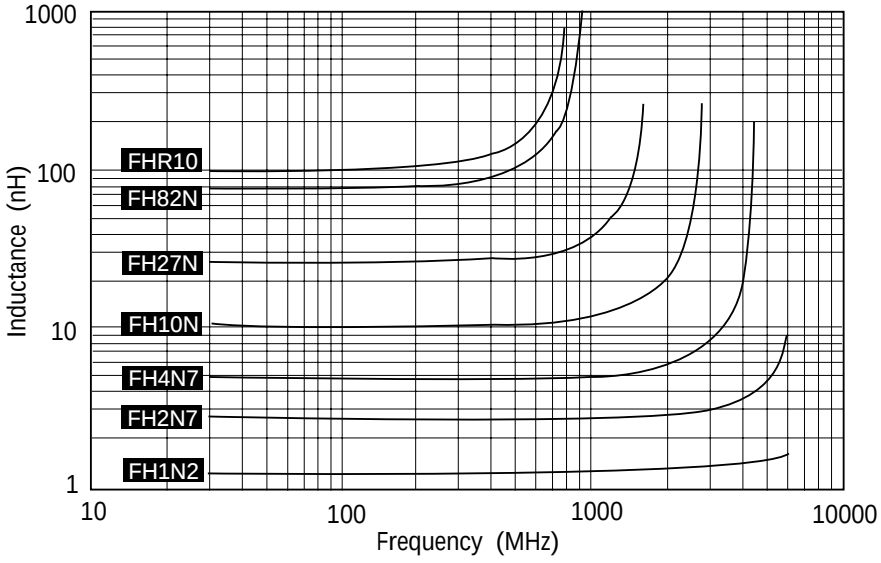
* Add tolerance to part number: S=±0.3nH, J = ±5%, K = ±10%

Testing Conditions: (1) L,Q: Agilent 4191A at 100MHz (Test fixture 16092A) (2) SRF: Agilent 8753C (Test fixture 16091A) (3) RDC: Agilent 4338B

## ELECTRICAL CHARACTERISTICS

**Q vs. Frequency**




**Inductance vs. Frequency**