

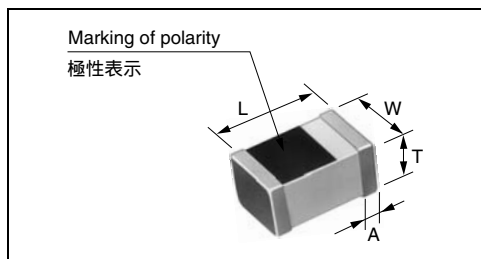
# LL1608-FSL Series

**Inductance Range:** 1.2~270nH (E-12 Series)  
**Temperature Coefficient of L:** + 250ppm/°C (for reference only)

## FEATURES / 特長

- Guaranteed S.R.F range (SRF tolerance: ±15%)
- Dual frequency standard for inductance value
- Supports high temperature reflow soldering (260°C, 3 times)
- Surface mounting applicability (Supports both reflow and flow soldering)
- High reliability (ceramic integrated structure, and terminals plated)
- RoHS compliant
- S.R.Fの範囲保証化 (SRF公差 : ±15%)
- インダクタンス値の2周波規格化
- 高温リフロー対応可 (260 ×3回)
- 面実装適用性 (リフロー、フロー対応)
- 高信頼性 (セラミック一体構造、およびめっき端子電極)
- RoHS指定対応

## DIMENSIONS / 外形寸法図



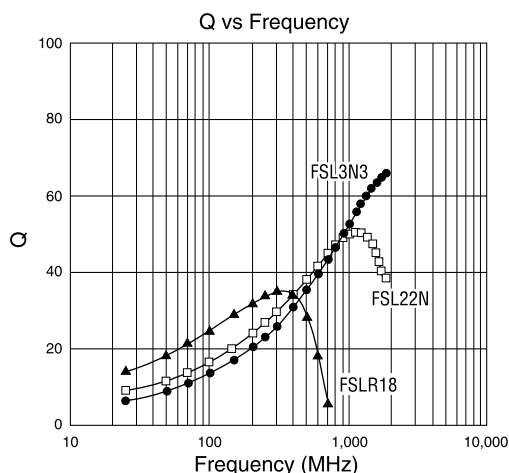
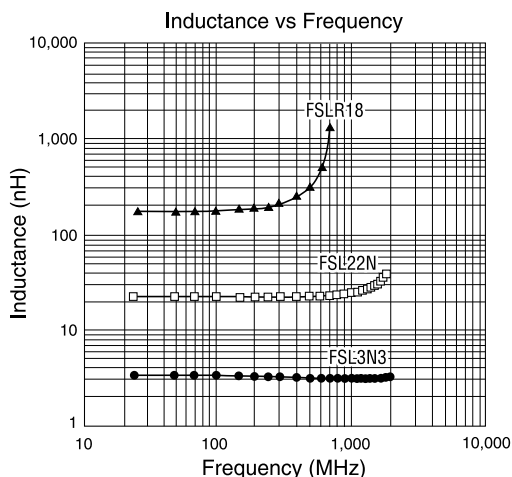
| Length<br>L (mm) | Width<br>W (mm) | Thickness<br>T (mm) | Electrode width<br>A (mm) |
|------------------|-----------------|---------------------|---------------------------|
| 1.6 ± 0.15       | 0.8 ± 0.15      | 0.8 ± 0.15          | 0.3 ± 0.2                 |

- **Marking of polarity:** Marking is on the upper Surface of the unit.
- **極性表示:** 磁束方向を示します。この表示が、常に上を向くようにテーピングされています。

## ELECTRICAL CHARACTERISTICS / 電気的特性

- |  |   |                    |  |
|--|---|--------------------|--|
| • Inductance Range   | 1.2~270nH (E-12 Series)                         | • インダクタンス範囲        | 1.2 ~ 270nH (E-12 Series)                            |
| • Inductance Tolerance                                       | S ; ± 0.3nH (1.2~5.6nH)<br>J ; ± 5% (6.8~270nH) | • インダクタンス許容差       | S級 ; ±0.3nH (1.2 ~ 5.6nH)<br>J級 ; ± 5% (6.8 ~ 270nH) |
| • Q (Typical)  | 20~54 (at 800MHz)                               | • Q (Typical)      | 20~54 (at 800MHz)                                    |
| • Rated Current  | 150~1,000mA                                     | • 許容電流値            | 150 ~ 1,000mA  |
| • Inductance Temperature Coefficient<br>(for reference only) | + 250ppm/°C                                     | • インダクタンス温度係数(参考値) | + 250ppm/°C  |
| • Operating Temperature Range                                | -55°C~+ 125°C                                   | • 使用温度範囲           | - 55 ~ + 125   |
| • Storage Temperature Range                                  | -55°C~+ 125°C                                   | • 保存温度範囲           | - 55 ~ + 125   |

## EXAMPLES OF CHARACTERISTICS / 代表特性例



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**TOKO STANDARD PART NUMBERS / 東光 標準品一覧**
**TYPE LL1608-FSL Series (Quantity/reel; 4,000 PCS)**

| TOKO Part number | Inductance & Tolerance |        |           | Q Min. 100 MHz | Q Typical       |         |         |         |         |          | S.R.F. (MHz) Min. | R <sub>DC</sub> (Ω) Max. | R <sub>DC</sub> (Ω) Typ. | I <sub>DC</sub> (mA) Max. |          |
|------------------|------------------------|--------|-----------|----------------|-----------------|---------|---------|---------|---------|----------|-------------------|--------------------------|--------------------------|---------------------------|----------|
|                  | at 100MHz              | L (nH) | Tolerance |                | Frequency (MHz) | 100 MHz | 300 MHz | 500 MHz | 800 MHz | 1000 MHz |                   |                          |                          |                           | 1800 MHz |
| LL1608-FSL1N2S   | 1.2±0.3nH              | 1.1    | ±0.5nH    | 800            | 10              | 14.0    | 18.8    | 24.3    | 30.5    | 35.6     | 48.0              | 8000min                  | 0.10                     | 0.04                      | 1,000    |
| LL1608-FSL1N5S   | 1.5±0.3nH              | 1.4    | ±0.5nH    | 800            | 10              | 14.1    | 27.9    | 38.8    | 49.1    | 56.8     | 80.0              | 7000min                  | 0.10                     | 0.04                      | 1,000    |
| LL1608-FSL1N8S   | 1.8±0.3nH              | 1.7    | ±0.5nH    | 800            | 10              | 11.6    | 20.7    | 27.9    | 36.4    | 40.2     | 52.0              | 12000±15%                | 0.10                     | 0.05                      | 1,000    |
| LL1608-FSL2N2S   | 2.2±0.3nH              | 2.1    | ±0.5nH    | 800            | 10              | 13.0    | 26.5    | 35.4    | 44.2    | 51.9     | 63.9              | 9100±15%                 | 0.10                     | 0.06                      | 1,000    |
| LL1608-FSL2N7S   | 2.7±0.3nH              | 2.6    | ±0.5nH    | 800            | 11              | 13.1    | 28.4    | 37.6    | 48.2    | 54.7     | 72.0              | 7300±15%                 | 0.11                     | 0.07                      | 1,000    |
| LL1608-FSL3N3S   | 3.3±0.3nH              | 3.2    | ±0.5nH    | 800            | 12              | 13.8    | 27.8    | 36.0    | 46.4    | 52.9     | 68.0              | 5800±15%                 | 0.13                     | 0.07                      | 1,000    |
| LL1608-FSL3N9S   | 3.9±0.3nH              | 3.8    | ±0.5nH    | 800            | 12              | 14.4    | 30.4    | 39.6    | 50.2    | 56.8     | 70.0              | 6500±15%                 | 0.15                     | 0.09                      | 1,000    |
| LL1608-FSL4N7S   | 4.7±0.3nH              | 4.6    | ±0.5nH    | 800            | 12              | 14.9    | 29.7    | 39.0    | 49.2    | 55.6     | 70.0              | 5600±15%                 | 0.17                     | 0.09                      | 1,000    |
| LL1608-FSL5N6S   | 5.6±0.3nH              | 5.5    | ±0.5nH    | 800            | 12              | 15.7    | 28.8    | 38.2    | 47.7    | 53.3     | 61.9              | 4800±15%                 | 0.20                     | 0.09                      | 600      |
| LL1608-FSL6N8J   | 6.8nH±5%               | 6.7    | ±10%      | 800            | 12              | 15.8    | 29.4    | 39.0    | 49.3    | 55.8     | 67.5              | 4700±15%                 | 0.22                     | 0.10                      | 600      |
| LL1608-FSL8N2J   | 8.2nH±5%               | 8.1    | ±10%      | 800            | 12              | 16.8    | 30.4    | 40.3    | 51.1    | 56.8     | 63.8              | 4200±15%                 | 0.26                     | 0.12                      | 600      |
| LL1608-FSL10NJ   | 10nH±5%                | 9.9    | ±10%      | 800            | 13              | 17.3    | 29.3    | 38.6    | 48.1    | 53.8     | 56.7              | 4000±15%                 | 0.30                     | 0.12                      | 600      |
| LL1608-FSL12NJ   | 12nH±5%                | 12     | ±10%      | 800            | 13              | 18.2    | 31.8    | 42.2    | 53.0    | 58.4     | 53.3              | 3400±15%                 | 0.35                     | 0.13                      | 600      |
| LL1608-FSL15NJ   | 15nH±5%                | 15     | ±10%      | 800            | 13              | 18.0    | 31.8    | 41.4    | 51.2    | 55.8     | 49.7              | 3200±15%                 | 0.40                     | 0.14                      | 600      |
| LL1608-FSL18NJ   | 18nH±5%                | 18     | ±10%      | 800            | 13              | 18.7    | 33.5    | 43.8    | 53.7    | 58.5     | 46.1              | 2900±15%                 | 0.47                     | 0.18                      | 600      |
| LL1608-FSL22NJ   | 22nH±5%                | 23     | ±10%      | 800            | 13              | 19.9    | 32.2    | 42.0    | 50.4    | 52.7     | 34.5              | 2500±15%                 | 0.54                     | 0.19                      | 600      |
| LL1608-FSL27NJ   | 27nH±5%                | 29     | ±10%      | 800            | 13              | 19.6    | 27.3    | 43.3    | 50.4    | 51.8     | 24.3              | 2300±15%                 | 0.62                     | 0.22                      | 600      |
| LL1608-FSL33NJ   | 33nH±5%                | 37     | ±10%      | 800            | 15              | 19.6    | 33.2    | 42.2    | 48.0    | 47.9     | 15.9              | 2000±15%                 | 0.70                     | 0.27                      | 600      |
| LL1608-FSL39NJ   | 39nH±5%                | 45     | ±10%      | 800            | 15              | 20.6    | 32.2    | 41.3    | 46.1    | 44.8     | 11.4              | 1900±15%                 | 0.80                     | 0.26                      | 600      |
| LL1608-FSL47NJ   | 47nH±5%                | 58     | ±10%      | 800            | 15              | 21.0    | 32.6    | 40.4    | 40.8    | 37.1     | 9.7               | 1600±15%                 | 0.90                     | 0.30                      | 500      |
| LL1608-FSL56NJ   | 56nH±5%                | 60     | ±10%      | 500            | 15              | 21.5    | 31.7    | 38.6    | 38.6    | 33.5     | -                 | 1500±15%                 | 1.00                     | 0.34                      | 500      |
| LL1608-FSL68NJ   | 68nH±5%                | 77     | ±10%      | 500            | 15              | 21.7    | 29.5    | 34.5    | 29.1    | 19.1     | -                 | 1300±15%                 | 1.20                     | 0.39                      | 400      |
| LL1608-FSL82NJ   | 82nH±5%                | 104    | ±10%      | 500            | 15              | 21.1    | 34.7    | 40.2    | 32.5    | 19.5     | -                 | 1000±15%                 | 1.40                     | 0.46                      | 300      |
| LL1608-FSLR10J   | 100nH±5%               | 136    | ±10%      | 500            | 15              | 20.5    | 35.5    | 39.1    | 20.4    | -        | -                 | 900±15%                  | 1.60                     | 0.83                      | 300      |
| LL1608-FSLR12J   | 120nH±5%               | 133    | ±10%      | 300            | 12*             | 23.1    | 31.3    | 30.8    | -       | -        | -                 | 800±15%                  | 2.00                     | 0.59                      | 200      |
| LL1608-FSLR15J   | 150nH±5%               | 174    | ±10%      | 300            | 11*             | 20.0    | 27.5    | 21.6    | -       | -        | -                 | 740±15%                  | 2.40                     | 2.02                      | 200      |
| LL1608-FSLR18J   | 180nH±5%               | 222    | ±10%      | 300            | 11*             | 18.8    | 27.1    | 12.1    | -       | -        | -                 | 650±15%                  | 2.70                     | 2.29                      | 150      |
| LL1608-FSLR22J   | 220nH±5%               | 293    | ±10%      | 300            | 11*             | 22.3    | 25.1    | -       | -       | -        | -                 | 580±15%                  | 3.00                     | 2.37                      | 150      |
| LL1608-FSLR27J   | 270nH±5%               | 319    | ±10%      | 200            | 8**             | 21.9    | 21.1    | -       | -       | -        | -                 | 470±15%                  | 3.50                     | 2.90                      | 150      |

\* at 50MHz, \*\* at 25MHz

**Test Equipment & note**

(測定器 / 注意事項)

- L, Q : RF Impedance Analyzer 4291A/B (Agilent Technologies), Test Fixture 16192A (Agilent Technologies)
- S.R.F. / 自己共振周波数 : Network Analyzer 8719D (Agilent Technologies), 8720D (Agilent Technologies)
- R<sub>DC</sub> / 直流抵抗 : Milliohmmeter 4338A/B (Agilent Technologies)
- Inductance tolerance / インダクタンス許容差 : S=±0.3nH, J=±5%
- Operating temperature range / 使用温度範囲 : -55°C ~ + 125°C
- Storage temperature range / 保存温度範囲 : -55°C ~ + 125°C