

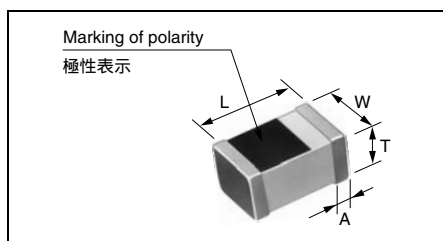
# LL1608-FSL Series

**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:  $\pm 15\%$ )
- 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:  $\pm 15\%$ )
- 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



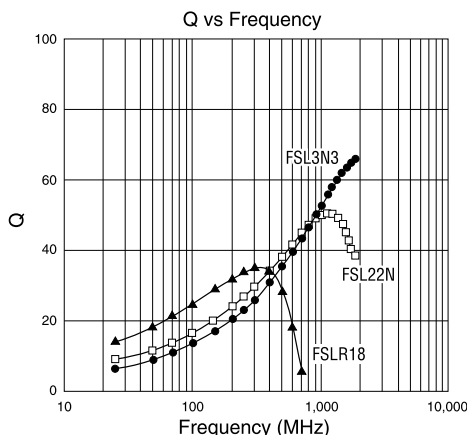
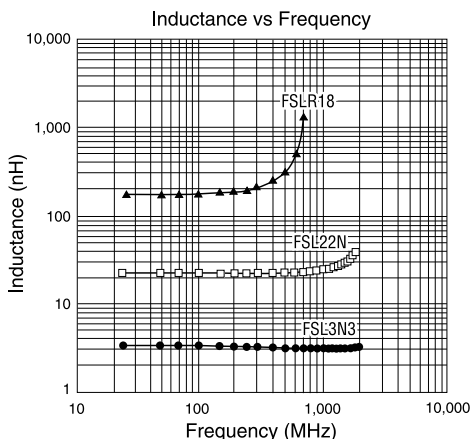
Length L (mm)	Width W (mm)	Thickness T (mm)	Electrode width A (mm)
1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.2

- **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 ; $\pm 0.3\text{nH}$ (1.2~5.6nH)<br>J ; $\pm 5\%$ (6.8~270nH) | • インダクタンス許容差       | S級; $\pm 0.3\text{nH}$ (1.2 ~ 5.6nH)<br>J級; $\pm 5\%$ (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 (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)	Toler- ance 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 : Milliohmmer 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