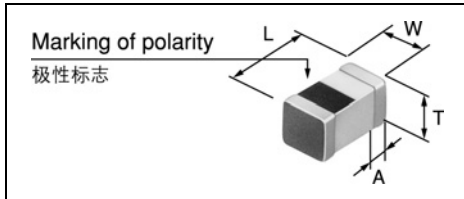


## LL1005-FHL

**Inductance Range:** 1.0~100nH (E-24 Series)、特殊对应品 order production available (1.1nH, 1.3nH, 1.6nH, 2.0nH, 2.4nH, 3.0nH, 3.6nH, 4.3nH, 5.1nH, 6.2nH, 7.5nH, 9.1nH)

**Temperature Coefficient of L:** +250ppm/°C (for reference only)



Inductance	Length L (mm)	Width W (mm)	Thickness T (mm)	Electrode width A (mm)
1.0 ~ 68nH	1.0 ± 0.05	0.5 ± 0.05	0.5 ± 0.05	0.25 ± 0.1
82 ~ 100nH	1.0 ± 0.05	0.5 ± 0.05	0.5 ± 0.1	0.25 ± 0.1

- **Marking of polarity:** Marking is on the upper Surface of the unit.
- **极性标志:** 标志在单元上部表面。

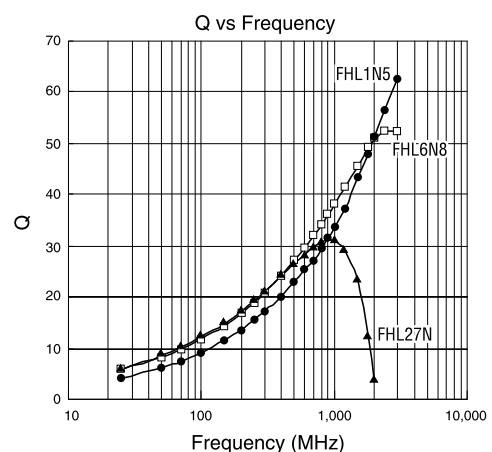
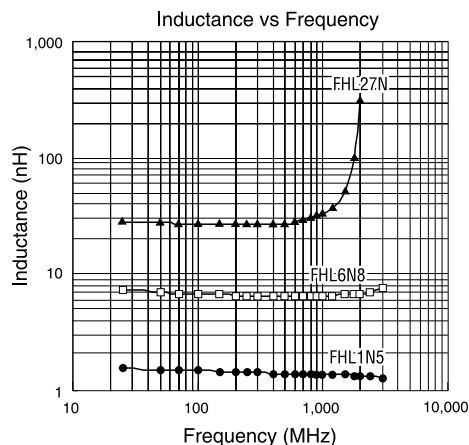
### FEATURES 特点

- Dual frequency standard for inductance value
- Tight tolerance physical dimensions (±0.05mm)
- Supports high temperature reflow soldering (260°C, 3 times)
- Expanding operating temperature range (-55°C~+125°C)
- Extended applicable frequency range (~10GHz)
- Surface mounting applicability (Supports reflow soldering)
- High reliability (ceramic integrated structure, and terminals plated)
- RoHS compliant
- 针对电感值的双频率标准
- 缩小物理尺寸公差 (±0.05毫米)
- 支持高温回流焊接 (260°C, 3次)
- 扩展工作温度范围 (-55°C ~ +125°C)
- 扩展适用的频率范围 (~10GHz)
- 表面贴装设备适用性 (支持回流焊接)
- 可靠性高 (陶瓷制品混合结构, 以及电镀电极)
- 符合RoHS指令

### ELECTRICAL CHARACTERISTICS 电气特性

- |   |   |                   |   |
|---|---|-------------------|---|
| • Inductance Range  | 1.0~100nH (E-24 Series)                         | • 电感值范围           | 1.0~100nH (E-24系列)                              |
| • Inductance Tolerance                                    | S ; ± 0.3nH (1.0~6.2nH)<br>J ; ± 5% (6.8~100nH) | • 电感值公差           | S级 ; ±0.3nH (1.0~6.2nH)<br>J级 ; ±5% (6.8~100nH) |
| • Q (Typical)   | 15~35 (at 800MHz)                               | • Q (典型)          | 15~35 (在800MHz情况下)                              |
| • Rated Current   | 200~500mA                                       | • 额定电流值           | 200~500mA                                       |
| • Inductance Temperature Coefficient (for reference only) | +250ppm/°C                                      | • 电感的感应温度系数(仅供参考) | +250ppm/°C                                      |
| • Operating Temperature Range                             | -55°C~+125°C                                    | • 使用温度范围          | -55°C~+125°C                                    |
| • Storage Temperature Range                               | -55°C~+125°C                                    | • 储存温度范围          | -55°C~+125°C                                    |

### EXAMPLES OF CHARACTERISTICS 特性范例



continued on next page 接下页

## TOKO STANDARD PART NUMBERS 东光标准零件号码

### LL1005-FHL Series (Quantity/reel; 10,000 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.
	100MHz	800MHz (**500MHz)		100 MHz	300 MHz	500 MHz	800 MHz	1000 MHz	1800 MHz	2400 MHz				
LL1005-FHL1N0S	1.0±0.3nH	0.93±0.5nH	8.0	8.8	17.0	22.0	29.0	33.0	47.0	57.0	20000	0.10	0.07	500
* LL1005-FHL1N1S	1.1±0.3nH	1.0±0.5nH	8.0	9.0	16.0	21.0	27.0	30.0	43.0	53.0	16000	0.10	0.07	500
LL1005-FHL1N2S	1.2±0.3nH	1.1±0.5nH	8.0	9.0	17.0	22.0	28.0	32.0	46.0	55.0	16000	0.10	0.07	500
* LL1005-FHL1N3S	1.3±0.3nH	1.2±0.5nH	8.0	9.0	17.0	22.0	28.0	32.0	45.0	54.0	12000	0.11	0.07	500
LL1005-FHL1N5S	1.5±0.3nH	1.4±0.5nH	8.0	9.2	17.0	23.0	29.0	33.0	47.0	57.0	12000	0.13	0.08	500
* LL1005-FHL1N6S	1.6±0.3nH	1.5±0.5nH	8.0	10.0	17.0	23.0	29.0	33.0	46.0	55.0	12000	0.13	0.08	500
LL1005-FHL1N8S	1.8±0.3nH	1.7±0.5nH	8.0	9.1	16.0	22.0	28.0	32.0	44.0	53.0	12000	0.14	0.08	500
* LL1005-FHL2N0S	2.0±0.3nH	1.9±0.5nH	8.0	10.0	18.0	23.0	30.0	34.0	46.0	53.0	11000	0.14	0.08	500
LL1005-FHL2N2S	2.2±0.3nH	2.0±0.5nH	8.0	10.0	18.0	24.0	31.0	34.0	48.0	55.0	11000	0.15	0.09	500
* LL1005-FHL2N4S	2.4±0.3nH	2.2±0.5nH	8.0	11.0	18.0	24.0	31.0	35.0	49.0	54.0	8100	0.15	0.09	500
LL1005-FHL2N7S	2.7±0.3nH	2.5±0.5nH	8.0	10.0	18.0	24.0	31.0	35.0	50.0	58.0	8100	0.15	0.10	500
* LL1005-FHL3N0S	3.0±0.3nH	2.9±0.5nH	8.0	10.0	18.0	24.0	31.0	35.0	49.0	54.0	7700	0.15	0.10	500
LL1005-FHL3N3S	3.3±0.3nH	3.1±0.5nH	8.0	10.0	18.0	24.0	30.0	34.0	47.0	54.0	7700	0.16	0.10	500
* LL1005-FHL3N6S	3.6±0.3nH	3.4±0.5nH	8.0	10.0	18.0	24.0	30.0	34.0	46.0	52.0	6200	0.16	0.11	500
LL1005-FHL3N9S	3.9±0.3nH	3.7±0.5nH	8.0	10.0	18.0	24.0	31.0	36.0	48.0	55.0	6200	0.18	0.12	500
* LL1005-FHL4N3S	4.3±0.3nH	4.1±0.5nH	8.0	10.0	18.0	24.0	30.0	34.0	46.0	50.0	6000	0.18	0.12	400
LL1005-FHL4N7S	4.7±0.3nH	4.4±0.5nH	9.0	11.0	19.0	24.0	31.0	35.0	47.0	52.0	6000	0.20	0.13	400
* LL1005-FHL5N1S	5.1±0.3nH	4.8±0.5nH	9.0	11.0	19.0	25.0	31.0	35.0	45.0	49.0	5300	0.20	0.14	400
LL1005-FHL5N6S	5.6±0.3nH	5.3±0.5nH	9.0	12.0	21.0	27.0	35.0	39.0	50.0	53.0	5100	0.22	0.15	400
* LL1005-FHL6N2S	6.2±0.3nH	6.0±0.5nH	9.0	12.0	21.0	27.0	34.0	38.0	50.0	54.0	4700	0.22	0.15	400
LL1005-FHL6N8J	6.8nH±5%	6.5nH±10%	9.0	12.0	21.0	27.0	34.0	38.0	49.0	52.0	4700	0.23	0.16	400
* LL1005-FHL7N5J	7.5nH±5%	7.3nH±10%	9.0	12.0	21.0	27.0	34.0	38.0	46.0	46.0	4200	0.23	0.16	400
LL1005-FHL8N2J	8.2nH±5%	7.9nH±10%	9.0	12.0	21.0	27.0	33.0	37.0	46.0	46.0	4000	0.25	0.17	400
* LL1005-FHL9N1J	9.1nH±5%	8.9nH±10%	9.0	11.0	19.0	25.0	31.0	34.0	40.0	36.0	3600	0.26	0.18	400
LL1005-FHL10NJ	10nH±5%	9.7nH±10%	9.0	12.0	20.0	26.0	33.0	36.0	43.0	39.0	3600	0.30	0.19	400
LL1005-FHL12NJ	12nH±5%	12nH±10%	9.0	12.0	20.0	25.0	31.0	33.0	33.0	23.0	2800	0.40	0.21	300
LL1005-FHL15NJ	15nH±5%	15nH±10%	9.0	12.0	20.0	25.0	30.0	32.0	27.0	-	2500	0.50	0.26	300
LL1005-FHL18NJ	18nH±5%	18nH±10%	10.0	12.0	21.0	26.0	31.0	33.0	27.0	-	2300	0.60	0.44	300
LL1005-FHL22NJ	22nH±5%	23nH±10%	10.0	12.0	20.0	25.0	30.0	31.0	18.0	-	2100	0.70	0.50	300
LL1005-FHL27NJ	27nH±5%	30nH±10%	10.0	12.0	21.0	26.0	31.0	31.0	12.0	-	1700	0.85	0.52	300
LL1005-FHL33NJ	33nH±5%	36nH±10%	10.0	12.0	19.0	24.0	27.0	27.0	-	-	1700	1.00	0.70	200
LL1005-FHL39NJ	39nH±5%	44nH±10%	10.0	12.0	20.0	24.0	26.0	26.0	-	-	1600	1.10	0.80	200
LL1005-FHL47NJ	47nH±5%	**50nH±10%	10.0	11.0	18.0	21.0	21.0	18.0	-	-	1200	1.30	0.93	200
LL1005-FHL56NJ	56nH±5%	**60nH±10%	10.0	12.0	19.0	22.0	20.0	16.0	-	-	1100	1.50	1.20	200
LL1005-FHL68NJ	68nH±5%	**77nH±10%	10.0	11.0	18.0	20.0	18.0	13.0	-	-	1100	1.70	1.25	200
LL1005-FHL82NJ	82nH±5%	**95nH±10%	10.0	13.0	20.0	21.0	15.0	-	-	-	970	1.90	1.26	200
LL1005-FHLR10J	100nH±5%	**122nH±10%	10.0	13.0	19.0	19.0	-	-	-	-	870	2.20	1.45	200

Note : (1) Add tolerance to part number; B=±0.1nH, C=±0.2nH, G=±2%, T=±3%  
 (2) \* Sign shows the order production product number. Please demand each product number because it is not a regular product number of the sample kit.  
 (3) Please be sure that carefully discuss your planned purchase with our sales division if you intend to use the automotive products for LL1005-FHL82NJ and LL1005-FHLR10J.

注 : (1) 添加公差至品号; B = ±0.1nH, C = ±0.2nH, G ± 2%, T ± 3%  
 (2) \*标记表示订购生产的产品编号。请查询每种产品编号, 因为原有产品编号并非样品组的恒用产品编号。  
 (3) 如果您准备使用LL1005-FHL82NJ和LL1005-FHLR10J在车载产品上时, 请务必事前与我们的销售人员咨询联系。

#### ● Test Equipment & note

(测试设备和注意事项)

- L, Q : RF Impedance Analyzer 4291A/B (Agilent Technologies), Test Fixture 16192A (Agilent Technologies)
- Q at 2400MHz : RF Impedance Analyzer E4991A (Agilent Technologies), Test Fixture 16192A (Agilent Technologies)
- S.R.F./自谐振频率 : Network Analyzer 8719D (Agilent Technologies), 8720D (Agilent Technologies)
- R<sub>DC</sub>/直流电阻 : Milliohmmeter 4338A/B (Agilent Technologies)
- Inductance tolerance/电感值公差 : S=±0.3nH, J=±5%
- Operating temperature range/工作温度范围 : -55°C ~ + 125°C
- Storage temperature range/储存温度范围 : -55°C ~ + 125°C