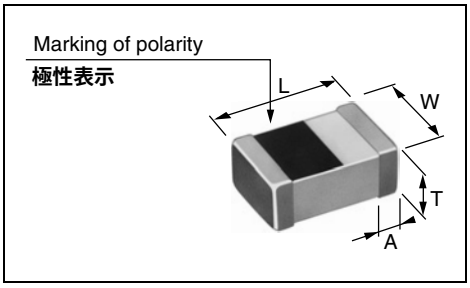
LL2012-FHL Series 系列

Inductance Range/电感值范围:1.5~680nH (E-12 Series/ 系列)
Temperature Coefficient of L/ L温度系数:+ 250ppm/°C (for reference only/ 仅供参考)



Length/长度 L (mm)	Width/宽度 W (mm)	Thickness/厚度 T (mm)	Electrode width/ 电极宽度A (mm)
2.0 ± 0.2	1.25 ± 0.2	0.6 ± 0.2 (1.5~8.2nH) 0.85 ± 0.3 (10.0~39.0nH) 1.0 ± 0.3 (47.0~100nH) 1.2 ± 0.3 (120.0~680nH)	0.5±0.3

- **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
- 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

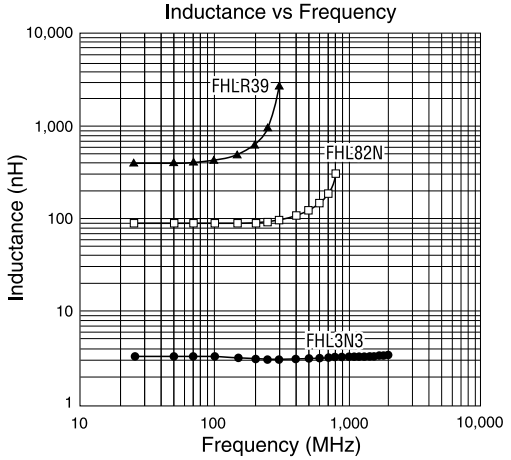
- 电感值的双频率标准
- 支持高温回流焊接（260°C × 3 次）
- 表面贴装设备适用性（支持回流焊接和流动焊接）
- 高可靠性（陶瓷制品混合结构、以及电镀电极）
- 符合RoHS指令

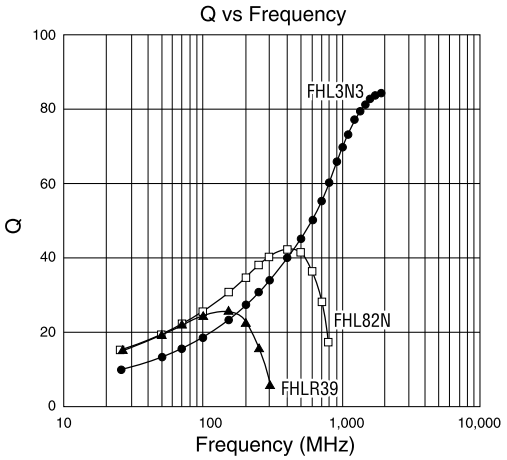
ELECTRICAL CHARACTERISTICS 电气特性

• Inductance Range	1.5~680nH (E-12 Series)
• Inductance Tolerance	S ; ± 0.3nH (1.5~5.6nH) J ; ± 5% (6.8~680nH)
• Q (Typical)	22 ~ 65 (at 800MHz)
• Rated Current	50~300mA
• Inductance Temperature Coefficient (for reference only)	+ 250ppm/°C
• Operating Temperature Range	-40°C~+ 100°C
• Storage Temperature Range	-40°C~+ 100°C

• 电感值范围	1.5～680nH (E-12 Series）
• 电感值公差	S; ±0.3nH (1.5～5.6nH) J; ± 5 % (6.8～680nH)
• Q (典型)	22～65 (at 800MHz)
• 额定电流	50～300mA
• 电感值温度系数(参考值)	＋250ppm/°C
• 工作温度范围	－40°C～＋100°C
• 储存温度范围	－40°C～＋100°C

EXAMPLES OF CHARACTERISTICS 特性范例





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TOKO STANDARD PART NUMBERS 东光标准零件号码

TYPE LL2012-FHL Series (Quantity/reel; ~39nH [4,000 PCS], 47nH~ [3,000 PCS])

LL2012-FHL系列 （每卷数量：~39nH [4,000 PCS], 47nH~ [3,000 PCS]）

东光零件号码	电感值和公差				最小 Q	Q 典型						最小自谐振频率	最大直流电阻	典型直流电阻	最大额定电流
TOKO Part number	Inductance & Tolerance				Q	Q Typical						S.R.F. (MHz) Min.	R_{DC} (Ω) Max.	R_{DC} (Ω) Typ.	I_{DC} (mA) Max.
	at 100MHz	L (nH)	Tolerance	Frequency (MHz)	Min. 100 MHz	100 MHz	300 MHz	500 MHz	800 MHz	1000 MHz	1800 MHz				
LL2012-FHL1N5S	1.5±0.3nH	1.5	±0.5nH	800	11	15.3	27.5	37.5	52.0	61.5	79.3	4000	0.10	0.02	300
LL2012-FHL1N8S	1.8±0.3nH	1.7	±0.5nH	800	12	14.0	25.0	33.9	46.6	54.0	78.4	4000	0.10	0.02	300
LL2012-FHL2N2S	2.2±0.3nH	2.1	±0.5nH	800	12	16.7	29.5	39.9	55.0	62.6	96.4	3800	0.10	0.03	300
LL2012-FHL2N7S	2.7±0.3nH	2.42	±0.5nH	800	12	15.5	27.5	36.8	50.8	57.8	89.0	3600	0.10	0.03	300
LL2012-FHL3N3S	3.3±0.3nH	3.0	±0.5nH	800	12	15.4	29.0	39.2	52.6	59.2	96.4	3400	0.10	0.04	300
LL2012-FHL3N9S	3.9±0.3nH	3.7	±0.5nH	800	12	16.0	29.7	39.7	53.4	59.7	76.8	3200	0.10	0.04	300
LL2012-FHL4N7S	4.7±0.3nH	4.6	±0.5nH	800	12	16.5	30.4	40.9	54.3	61.0	81.0	2800	0.12	0.03	300
LL2012-FHL5N6S	5.6±0.3nH	5.7	±0.5nH	800	12	17.0	31.3	42.1	55.2	61.0	76.9	2800	0.15	0.05	300
LL2012-FHL6N8J	6.8nH±5%	6.7	±10%	800	12	18.7	33.3	44.6	58.1	63.9	89.7	2100	0.15	0.06	300
LL2012-FHL8N2J	8.2nH±5%	8.2	±10%	800	15	18.5	32.2	42.4	54.8	59.5	73.2	2000	0.18	0.05	300
LL2012-FHL10NJ	10nH±5%	10.2	±10%	800	15	18.9	33.7	44.4	56.9	61.5	75.7	1600	0.20	0.06	300
LL2012-FHL12NJ	12nH±5%	12.7	±10%	800	16	20.5	36.5	47.5	60.8	65.9	79.8	1350	0.22	0.07	300
LL2012-FHL15NJ	15nH±5%	15.8	±10%	800	16	22.1	39.5	51.5	64.2	68.2	67.9	1350	0.24	0.11	300
LL2012-FHL18NJ	18nH±5%	19.5	±10%	800	16	22.9	40.7	52.9	64.9	68.4	49.3	1200	0.26	0.10	300
LL2012-FHL22NJ	22nH±5%	24.5	±10%	800	16	21.6	38.0	48.6	56.8	57.4	−	1100	0.28	0.09	300
LL2012-FHL27NJ	27nH±5%	31.2	±10%	800	16	22.8	39.6	49.4	57.4	57.3	−	1100	0.30	0.12	300
LL2012-FHL33NJ	33nH±5%	38.5	±10%	800	16	23.0	39.9	49.9	55.6	54.4	−	1000	0.40	0.13	300
LL2012-FHL39NJ	39nH±5%	50.7	±10%	800	16	24.6	41.4	50.0	50.9	45.5	−	900	0.50	0.13	300
LL2012-FHL47NJ	47nH±5%	63.9	±10%	800	17	24.8	41.8	49.5	47.4	39.4	−	800	0.55	0.21	300
LL2012-FHL56NJ	56nH±5%	62.7	±10%	500	17	26.1	43.3	50.0	44.5	34.5	−	750	0.60	0.23	300
LL2012-FHL68NJ	68nH±5%	80.3	±10%	500	17	25.7	41.8	46.2	33.6	18.1	−	700	0.65	0.24	300
LL2012-FHL82NJ	82nH±5%	103	±10%	500	20	26.5	41.4	43.1	21.5	−	−	600	0.70	0.28	300
LL2012-FHLR10J	100nH±5%	142	±10%	500	20	27.7	43.3	41.4	−	−	−	550	0.80	0.33	300
LL2012-FHLR12J	120nH*±5%	139	±10%	300	16*	26.4	38.2	31.0	−	−	−	500	0.85	0.32	250
LL2012-FHLR15J	150nH*±5%	173	±10%	300	16*	29.2	40.3	29.6	−	−	−	450	0.90	0.44	250
LL2012-FHLR18J	180nH*±5%	194	±10%	200	10**	28.2	33.2	−	−	−	−	400	1.00	0.51	250
LL2012-FHLR22J	220nH*±5%	234	±10%	200	10**	25.1	32.8	−	−	−	−	360	3.00	2.15	200
LL2012-FHLR27J	270nH**±5%	303	±10%	200	11**	23.6	28.8	−	−	−	−	330	3.50	3.22	200
LL2012-FHLR33J	330nH**±5%	382	±10%	200	11**	26.0	28.6	−	−	−	−	300	4.00	2.86	150
LL2012-FHLR39J	390nH**±5%	500	±10%	200	11**	25.0	21.1	−	−	−	−	270	4.50	3.82	150
LL2012-FHLR47J	470nH**±5%	−	−	−	11**	25.5	−	−	−	−	−	240	5.00	2.58	50
LL2012-FHLR56J	560nH**±5%	−	−	−	11**	24.5	−	−	−	−	−	210	5.50	2.69	50
LL2012-FHLR68J	680nH**±5%	−	−	−	11**	26.5	−	−	−	−	−	180	6.00	3.14	50

* at 50MHz, ** at 25MHz

●**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)
  RF 阻抗分析器 4291A/B (Agilent 技术), 测试固定设备16192A (Agilent技术)。
- S.R.F.自谐振频率 : Network Analyzer网络分析器 8719D (Agilent Technologies技术), 8720D (Agilent Technologies技术)
- R_{DC}直流电阻 : Milliohmmeter毫欧计 4338A/B (Agilent Technologies技术)
- Inductance tolerance电感值公差 : S=±0.3nH, J=±5%
- Operating temperature range工作温度范围 : -40°C ~ + 100°C
- Storage temperature range储存温度范围 : -40°C ~ + 100°C