PSA

華科事業群 PASSIVE SYSTEM ALLIANCE

信昌電子陶瓷

2013
COIL DEVICES

www.pdc.com.tw

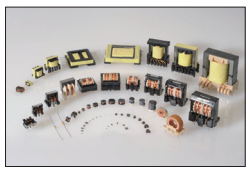
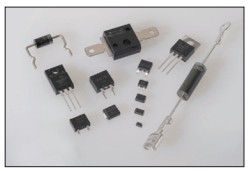
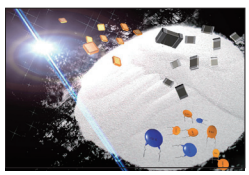
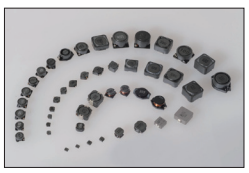
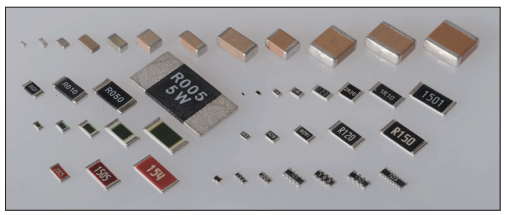
ABOUT PDC

■ Introduction

Prosperity Dielectrics Co., Ltd. (PDC) was founded in 1990 as the 1st local manufacturer and exporter in Taiwan for ceramic dielectric powders and multiple-layer ceramic chip capacitors (MLCCs). PDC joined to Walsin Technology Corporation (WTC) as an allied company in September 2005, and incorporated Frontier to create solid synergy in 2008. Our product lines expand to SMD magnetic chips, power chokes, coils, diode and transformers.

信昌電子陶瓷成立於 1990 年，為國內少數能自行供給瓷粉原料並同時銷售積層陶瓷電容的被動元件廠商，更是唯一有能力由上游初發原料，向下垂直整合至被動晶片元件的廠商。2005 年信昌電陶與華新集團進行策略聯盟、2008 年正式合併弘電電子，將銷售範圍從介電瓷粉、半導性陶瓷電容器瓷片、積層陶瓷電容、晶片電阻延伸到二極體與線圈，成為國內唯一可全數提供特殊電容、電感、電阻之被動元件供應商。

歷史沿革	1990 台泥集團購買美大美電子公司，信昌電子陶瓷正式成立。
	1995 信昌電子陶瓷併購台灣精密材料公司。
	2002 信昌電子陶瓷正式上櫃。
	2005 與華新科技 (股) 公司策略聯盟。
	2007 與弘電電子工業 (股) 公司策略聯盟，生產二極體與磁性材料元件。
	2008 集團推動 PSA 被動系統聯盟企業識別，信昌電子陶瓷定位為特殊品及材料事業群。
關鍵技術	1988 生產製造圓板電容粉末、開發。
	1990 生產製造積層陶瓷晶片電容。
	1995 生產陶瓷晶片電阻、陶瓷晶片電感。
	2001 臺灣第一家自行供給晶片電容器介電瓷粉之被動元件廠商。 自製半導性介電瓷粉，掌握由材料至製程的完整關鍵性技術。
	2007 生產二極體與磁性材料元件。
品牌價值	2001 亞洲第一家獲得 SEMKO 安全規格認證之供應商。
	2003 獲 ISO 9001 驗證通過。
	2004 榮獲經濟部工業局工業精銳獎。
	2004 獲 TS16949、ISO 14000 及 OHSAS 18000 驗證。
	2008 獲 IECQ QC080000 HSF 驗證。
	2007 天下雜誌 1000 大製造業排名第 705 名
	2008 天下雜誌 1000 大製造業排名第 682 名
	2009 天下雜誌 1000 大製造業排名第 677 名
市場表現	介電陶瓷粉末產品產能全球第二、市占率全球第三。
	國內唯一可全數提供特殊電容、電感、電阻之被動元件供應商。
	國內唯一打入日本供應鏈之廠商。

■ Branding Performance

成為高階電子陶瓷產品的世界級廠商

Business Operation 經營模式分析	▪ Vertical integration to improve competitiveness. ▪ Building strategic alliances to strengthen competitiveness. ▪ Expanding Western and Japanese markets, cultivation high-end products. ▪ Moving into Chinese market to expand market share. ▪ 垂直整合發展，擺脫同業競爭 ▪ 運用策略聯盟，產品水平延伸 ▪ 拓展歐美日市場，深耕高階產品 ▪ 跨足中國市場，擴大市佔率
Branding Strategy 品牌經營策略	▪ Developing specialized products market. ▪ Enhancing brand value with continuing innovation and R&D ability. ▪ Improving competitiveness through vertical integration. ▪ Satisfying customer's need through extending product lines. ▪ 深耕被動元件特殊品市場及其上游材料產業高階產品 ▪ 持續創新研發能力，提升品牌含金量 ▪ 產品垂直整合，強化競爭優勢 ▪ 產品水平延伸，滿足客戶一次購足
Keys to the Success 關鍵成功因素	▪ The only local manufacturer with vertical production capability from ceramic dielectric powder material to multiple-layer ceramic chip capacitors. ▪ Differentiating marketing strategy with niche product. ▪ Diversifying product lines to expand customer base. ▪ Continuing innovation and R&D ability. ▪ Focusing core competence with PSA group support. ▪ 國內唯一有能力由上游初發原料，向下垂直整合至被動晶片元件的廠商，掌握材料與製程的完整關鍵性技術 ▪ 利基產品差異化與行銷差異化策略 ▪ 產品線多元發展，擴大客戶群 ▪ 持續創新與研發，開發新產品與導入新製程 ▪ 共享集團資源，聚焦核心競爭力
Characteristics 企業特色	▪ PDC is the domestic manufacturer devoting to ceramic dielectric materials. ▪ 為國內廠商對介電瓷粉材料研發投注最深者

Supporting You Forward

由於掌握關鍵性材料的技術利基，信昌電陶可配合市場需求，由材料研發著手，向下整合開發客戶所需要的電子元件，縮短量產時效，並積極規劃各項產品朝高附加價值的零件功能領域邁進，如：中高壓、高精度、大尺寸之晶片電容器及高功率、高精度與低阻值之晶片電阻器等高附加價值產品。未來更將結合材料核心技術，進軍高頻及高容領域。

目前信昌電陶貴金屬製程及卑金屬製程（BME）使用的晶片電容器介電瓷粉已陸續開發完成，量產自用與對外銷售並行展開，提升國內高階積層電容瓷粉原料自主供應比率。藉由原料往下游整合至晶片電容器成品的延伸策略，發揮上下垂直整合的高度營運績效。

近年來，為了擴展磁性元件及半導體系列產品的產能，信昌電陶陸續在中國昆山廠增置半導體相關製造設備，在東莞廠、湖南廠、重慶廠增置電感、變壓器相關製造設備，藉由產能提升，大幅拉升業績。

上下游垂直整合 ・ 掌握完整關鍵性技術：
原料 (介電瓷粉)
半成品 (半導性陶瓷電容瓷片)
成品 (晶片電容、晶片電阻、線圈、二極體)

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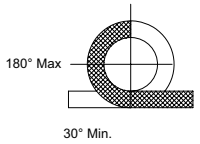
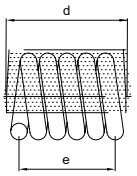
SMD AIR WOUND COIL

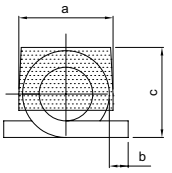
291A and 291B Series

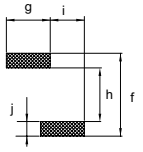
■ Mechanical Dimensions (Unit: mm)

291A 291B









Recommended Patterns

Series	a	b	c	d	e
291A	3.05 (Max)	0.58±0.38	3.18 (Max)	3.68 (Max)	2.92±0.25
291B	3.05 (Max)	0.58±0.38	3.18 (Max)	6.86 (Max)	5.84±0.25

■ Land Pattern: (Unit: mm)

Series	f	g	h	i	j
291A	4.19	3.30	1.65	2.79	1.27
291B	7.24	3.30	4.70	2.79	1.27

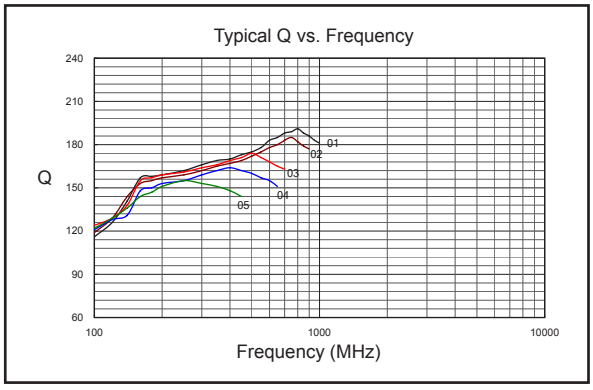
■ Electrical Specification

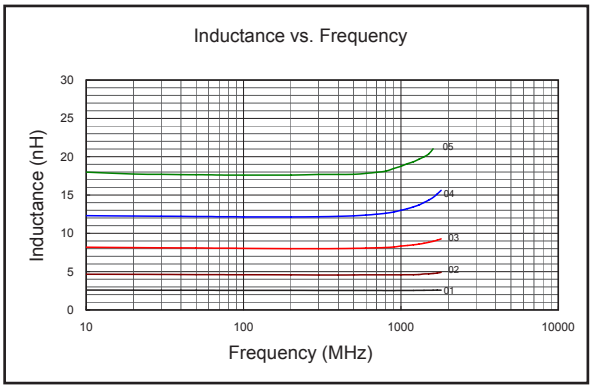
Part Number	Turns	Tolerance	Inductance (nH)	Q (Min)	Test Freq (MHz)	DCR (mΩ) Max	SRF (GHz) Min	Rated Current (A) Max
291A-01□-LRH	1	K	2.5	145	150	1.1	12.5	4.0
291A-02□-LRH	2	K,J	5.0	140	150	1.8	6.5	4.0
291A-03□-LRH	3	G,J	8.0	140	150	2.6	5.0	4.0
291A-04□-LRH	4	G,J	12.5	137	150	3.4	3.3	4.0
291A-05□-LRH	5	G,J	18.5	132	150	3.9	2.5	4.0
291B-06□-LRH	6	G,J	17.5	100	150	4.5	2.2	4.0
291B-07□-LRH	7	G,J	22.0	102	150	5.2	2.1	4.0
291B-08□-LRH	8	G,J	28.0	105	150	6.0	1.8	4.0
291B-09□-LRH	9	G,J	35.5	112	150	6.8	1.5	4.0
291B-10□-LRH	10	G,J	43.0	106	150	7.9	1.2	4.0

a. Tolerance : G=± 2%,J :± 5%, K : ± 10%
b. Test Equipment:
L/Q : HP-4291B With HP16193A test fixture or equivalent.
SRF : HP8753E or equivalent.
RDC : Chroma 16502 or equivalent..
c. Operating temperature range : -40°C to +125°C.
d. For Temperature Rise : 15°C
e. Storage Temp. : -40°C to +85°C.
f. MSL : Level 1

■ Characteristic Curve

・291A





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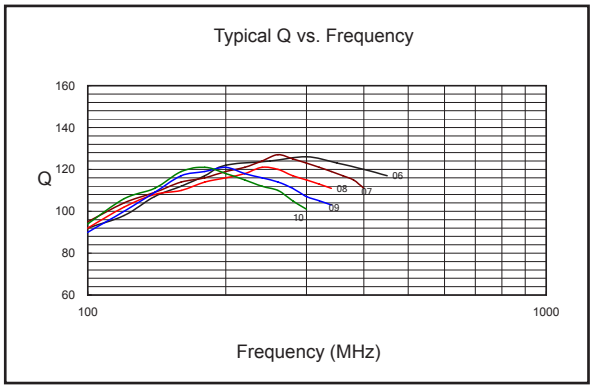
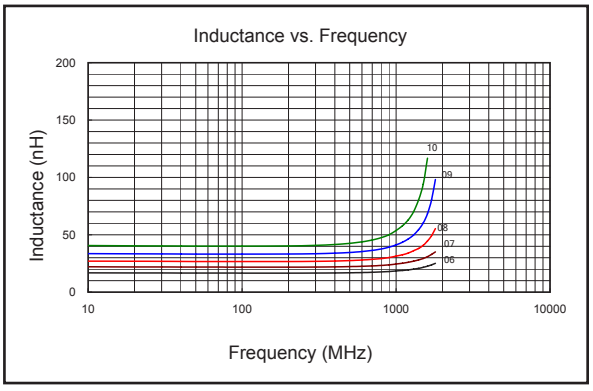
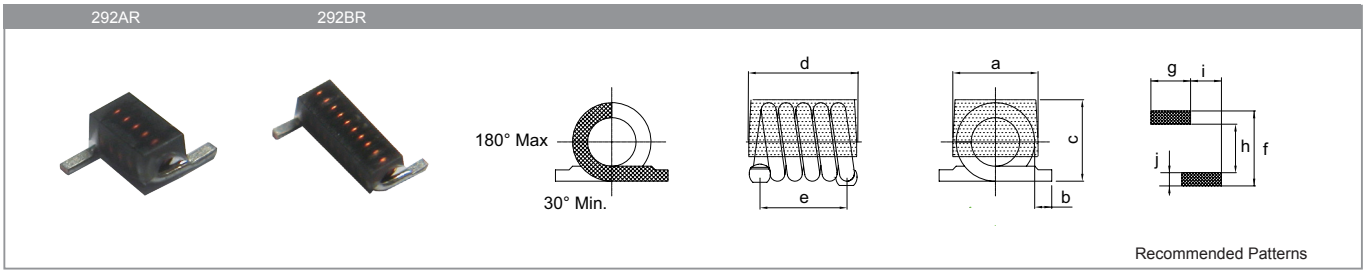




SMD AIR WOUND COIL

292AR and 292BR Series

■ Mechanical Dimensions (Unit: mm)



Series	a	b	c	d	e
292AR	1.42±0.13	0.89±0.25	1.37±0.15	2.21±0.25	1.83±0.25
292BR	1.42±0.13	0.89±0.25	1.37±0.15	4.04±0.30	3.66±0.25

■ Land Pattern: (Unit: mm)

Series	f	g	h	i	j
292AR	2.62	2.46	1.04	1.02	0.79
292BR	4.45	2.46	2.87	1.02	0.79

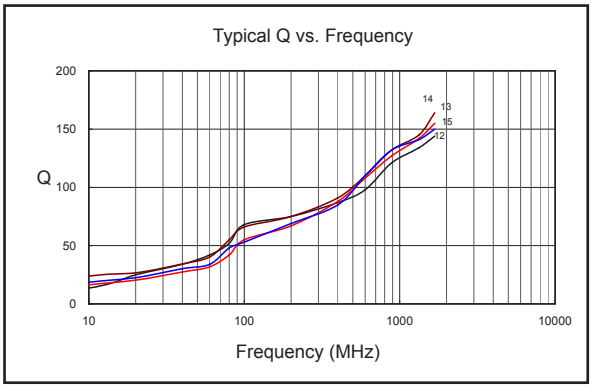
■ Electrical Specification

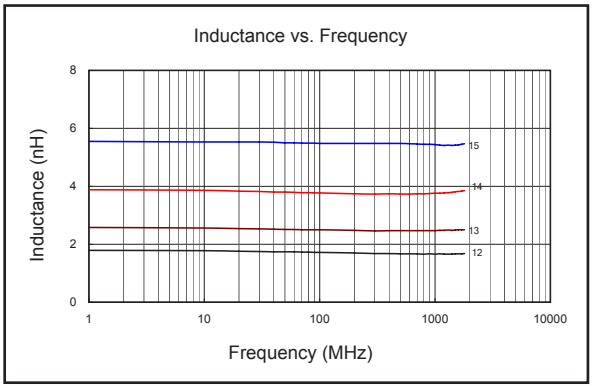
Part Number	Turns	Tolerance	Inductance @100MHz (nH)	Q (Min)	Test Freq (MHz)	DCR (mΩ) Max	SRF (GHz) Min	Rated Current (A) Max
292AR12□-LRH	2	K	1.65	100	800	4.0	10.0	1.6
292AR13□-LRH	3	J,K	2.55	100	800	5.0	8.2	1.6
292AR14□-LRH	4	G,J,K	3.85	100	800	6.0	7.5	1.6
292AR15□-LRH	5	G,J	5.45	100	800	8.0	7.0	1.6
292BR16□-LRH	6	G,J	5.60	100	800	9.0	6.5	1.6
292BR17□-LRH	7	G,J	7.15	100	800	10.0	6.0	1.6
292BR18□-LRH	8	G,J	8.80	100	800	12.0	6.0	1.6
292BR19□-LRH	9	G,J	9.85	100	800	13.0	5.2	1.6
292BR20□-LRH	10	G,J	12.55	100	800	14.0	4.6	1.6

a. Tolerance: G=± 2%,J:± 5%, K: ± 10%
b. Test Equipment:
L/Q : HP-4291B With HP16193A test fixture or equivalent.
RDC: Chroma 16502 or equivalent.
SRF : HP8753E/HP8720D or equivalent.
c. Operating temperature range: -40°C to +125°C.
d. For Temperature Rise: 15°C
e. Storage Temp.: -40°C to +85°C.
f. MSL: Level 1

■ Characteristic Curve

・292AR





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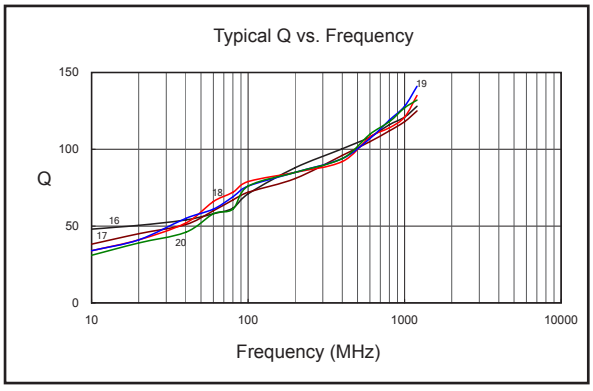
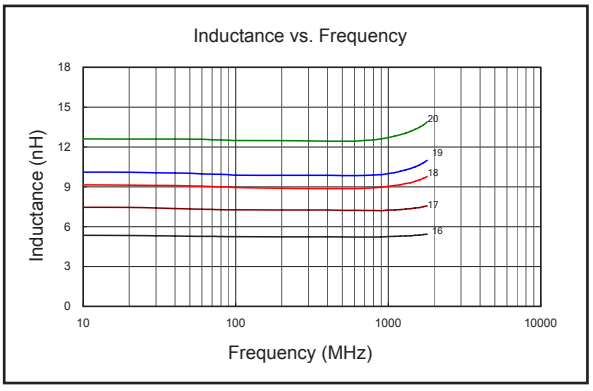


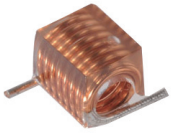


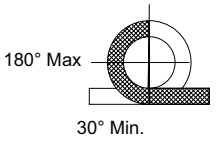
SMD AIR WOUND COIL

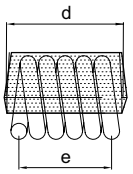
293A Series

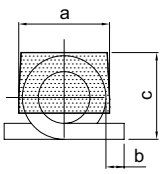
■ Mechanical Dimensions (Unit: mm)

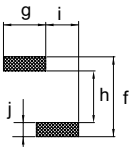
293A











Recommended Patterns

Series	a	b	c	d	e	f	g	h	i	j
293A	3.81 (Max.)	1.53±0.39	4.2 (Max.)	4.83 (Max.)	4.32±0.39	5.80	5.16	2.85	2.62	1.48

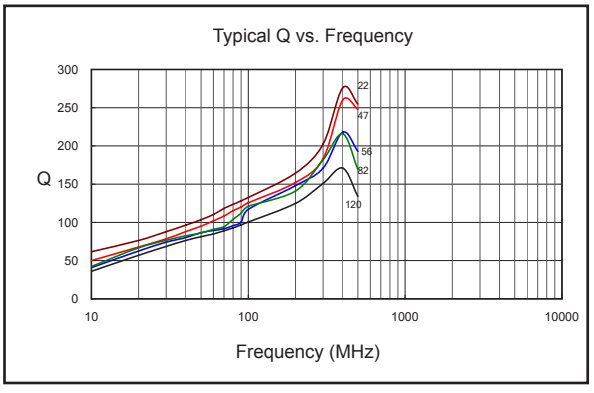
■ Electrical Specification

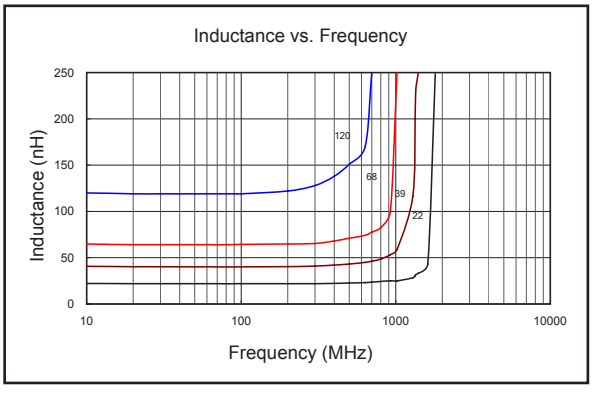
Part Number	Inductance (nH)	Q (Min)	Q (Typ.)	Test Freq (MHz)	DCR (mΩ) Max	SRF (GHz) Min	Rated Current (A) Max
293A-22□-LRH	22	100	135	150	4.2	3.2	3.0
293A-27□-LRH	27	100	135	150	4.0	2.7	3.5
293A-33□-LRH	33	100	130	150	4.8	2.5	3.0
293A-39□-LRH	39	100	135	150	4.4	2.1	3.0
293A-47□-LRH	47	100	135	150	5.6	2.1	3.0
293A-56□-LRH	56	100	125	150	6.2	1.5	3.0
293A-68□-LRH	68	100	120	150	8.2	1.5	2.5
293A-82□-LRH	82	100	120	150	9.4	1.3	2.5
293A-100□-LRH	100	100	115	150	12.3	1.2	1.7
293A-120□-LRH	120	100	125	150	17.3	1.1	1.5

a. Tolerance : G=± 2%,J : ± 5%, K : ± 10%
b. Test Frequency : 150MHz.
c. Test Equipment :
L/Q : HP-4291B With HP16193A test fixture or equivalent.
SRF : HP8753E or equivalent.
RDC : Chroma 16502 or equivalent.
d. Operating temperature range : -40°C to +125°C.
e. For Temperature Rise : 15°C.
f. Storage Temp. : -40°C to +85°C.
g. MSL : Level 1

■ Characteristic Curve

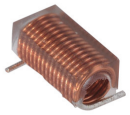
・293A

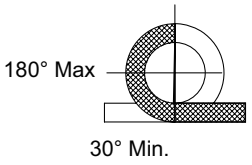


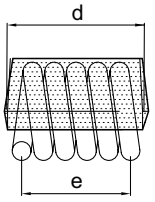


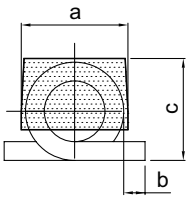
■ Mechanical Dimensions (Unit: mm)

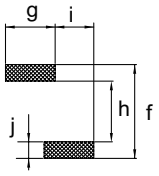
294A











Recommended Patterns

Series	a	b	c	d	e	f	g	h	i	j
294A	6.35 (Max.)	1.02±0.39	5.9 (Max.)	10.55 (Max.)	7.98±0.51	10.00	4.70	5.95	2.42	2.04

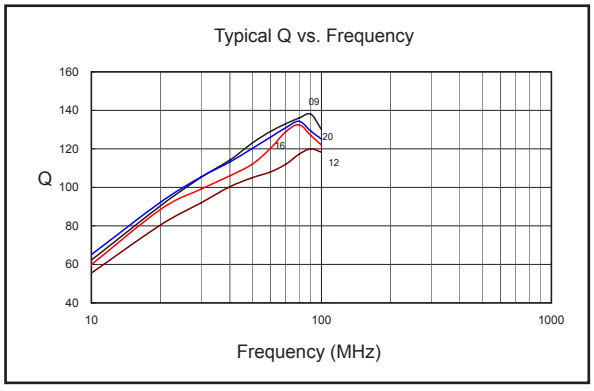
■ Electrical Specification

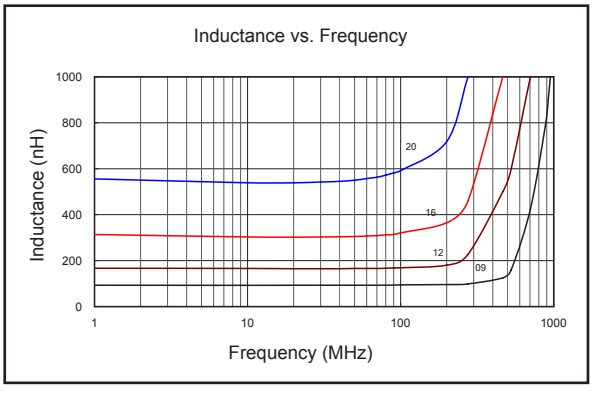
Part Number	Turns	Inductance (nH)	Q (Min)	Q (Typ.)	Test Freq (MHz)	DCR (mΩ) Max	SRF (MHz) Min	Rated Current (A) Max
294A-09□-LRH	9	90	95	114	50	15	1140	3.5
294A-10□-LRH	10	111	87	104	50	15	1020	3.5
294A-11□-LRH	11	130	87	104	50	20	900	3.0
294A-12□-LRH	12	169	95	114	50	25	875	3.0
294A-13□-LRH	13	206	95	114	50	30	800	3.0
294A-14□-LRH	14	222	92	110	50	35	730	3.0
294A-15□-LRH	15	246	95	114	50	35	685	3.0
294A-16□-LRH	16	307	95	114	50	35	660	3.0
294A-17□-LRH	17	380	95	114	50	50	590	2.5
294A-18□-LRH	18	422	95	114	50	60	540	2.5
294A-19□-LRH	19	491	95	114	50	65	535	2.0
294A-20□-LRH	20	538	87	104	50	90	490	2.0

a. Tolerance: G=± 2%,J:± 5%, K: ± 10%
b. Test Equipment:
L/Q : HP-4291B With HP16193A test fixture or equivalent.
SRF: HP8753E or equivalent.
RDC: CHROMA 16502 or equivalent.
c. Operating temperature range: -40°C to +125°C.
d. For Temperature Rise: 15°C.
e. Storage Temp.: -40°C to +85°C.
f. MSL: Level 1

■ Characteristic Curve

・294A



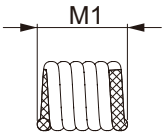


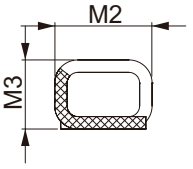
SMD SQUARE AIR WOUND COIL

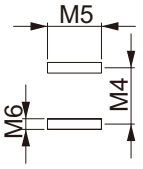
LSQ0806A Series

■ Mechanical Dimensions (Unit: mm)

LSQ0806A







Recommended Patterns

Part Number	M1	M2	M3	M4	M5	M6
LSQ0806A-5N5J	1.346±0.102	1.829±0.254	1.397±0.102	0.962	2.6	0.51
LSQ0806A-6N0J	1.295±0.102	1.829±0.254	1.397±0.102	1.020	2.6	0.51
LSQ0806A-8N9J	1.626±0.152	1.829±0.254	1.397±0.102	1.320	2.6	0.51
LSQ0806A-12NJ	1.930±0.152	1.829±0.254	1.397±0.102	1.630	2.6	0.51
LSQ0806A-16NJ	2.286±0.152	1.829±0.254	1.397±0.102	1.960	2.6	0.51
LSQ0806A-19NJ	2.591±0.152	1.829±0.254	1.397±0.102	2.290	2.6	0.51

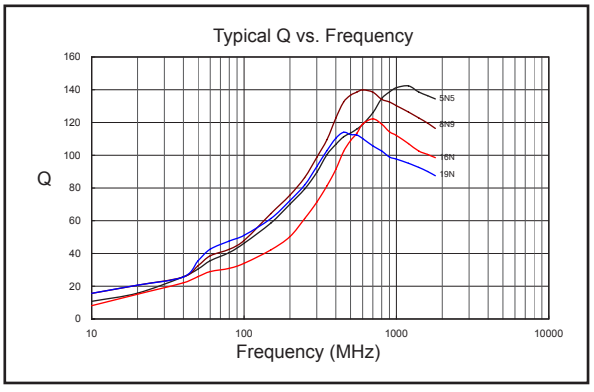
■ Electrical Specification

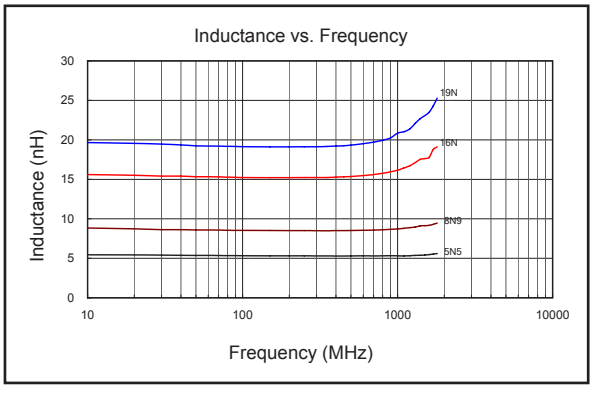
Part Number	Turns	Tolerance	Inductance (nH)	Q (Min)	Test Freq (MHz)	DCR (mΩ) Max	SRF (GHz) Typ.	Rated Current (A) Max
LSQ0806A-5N5J	3	J,K	5.5	60	400	3.4	4.9	2.9
LSQ0806A-6N0J	3	J,K	6.0	64	400	6.0	5.2	2.9
LSQ0806A-8N9J	4	J,K	8.9	90	400	7.0	4.3	2.9
LSQ0806A-12NJ	5	J,K	12.3	90	400	8.0	4.8	2.9
LSQ0806A-16NJ	6	J,K	15.7	90	400	9.0	4.4	2.9
LSQ0806A-19NJ	7	J,K	19.4	90	400	10.0	4.0	2.9

a. Tolerance : J : ± 5%, K : ± 10%
b. Test Frequency : 400MHz,0.1Vrms.
c. Test Equipment :
L/Q : HP-4291B With HP16193A test fixture or equivalent.
SRF : HP8753E or equivalent.
RDC : Chroma 16502 or equivalent.
d. Operating temperature range : -40°C to +125°C.
e. Electrical specifications at 25°C.
f. Storage Temp. : -40°C to +85°C.
g. MSL : Level 1

■ Characteristic Curve

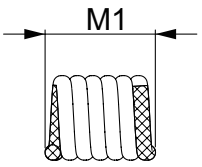
・LSQ0806

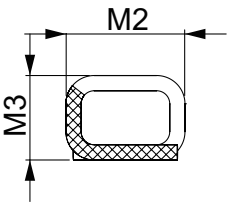


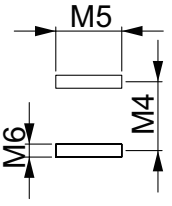


■ Mechanical Dimensions (Unit: mm)

LSQ0807A







Recommended Patterns

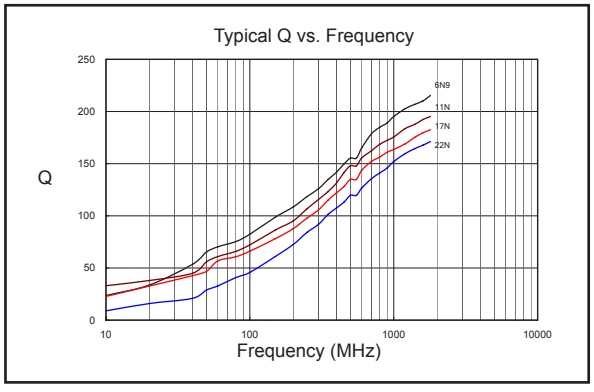
Part Number	M1	M2	M3	M4	M5	M6
LSQ0807A-6N9J	1.295±0.102	1.829±0.254	1.524±0.254	1.02	2.6	0.51
LSQ0807A-10NJ	1.626±0.152	1.829±0.254	1.524±0.254	1.32	2.6	0.51
LSQ0807A-11NJ	1.549±0.152	1.829±0.254	1.524±0.254	1.24	2.6	0.51
LSQ0807A-14NJ	1.930±0.152	1.829±0.254	1.524±0.254	1.63	2.6	0.51
LSQ0807A-17NJ	2.286±0.152	1.829±0.254	1.524±0.254	1.96	2.6	0.51
LSQ0807A-22NJ	2.591±0.152	1.829±0.254	1.524±0.254	2.29	2.6	0.51

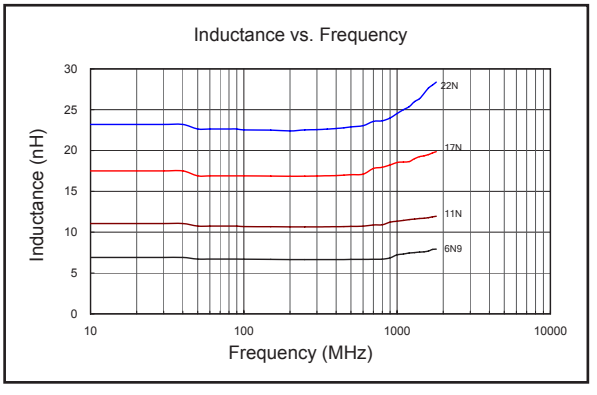
■ Electrical Specification

Part Number	Turns	Tolerance	Inductance (nH)	Q (Min)	Test Freq (MHz)	DCR (mΩ) Max	SRF (GHz) Typ.	Rated Current (A) Max
LSQ0807A-6N9J	3	J,K	6.9	100	400	6.0	4.6	2.7
LSQ0807A-10NJ	4	J,K	10.2	100	400	7.0	4.0	2.7
LSQ0807A-11NJ	4	J,K	11.2	90	400	6.3	3.6	2.7
LSQ0807A-14NJ	5	J,K	13.7	100	400	8.0	4.3	2.7
LSQ0807A-17NJ	6	J,K	17.0	100	400	9.0	4.0	2.7
LSQ0807A-22NJ	7	J,K	22.0	100	400	10.0	3.5	2.7

a. Tolerance : J : ± 5%, K : ± 10%
b. Test Frequency : 400MHz,0.1Vrms.
c. Test Equipment :
L/Q : HP-4291B With HP16193A test fixture or equivalent.
SRF : HP8753E or equivalent.
RDC : Chroma 16502 or equivalent.
d. Operating temperature range : -40°C to +125°C.
e. Electrical specifications at 25°C.
f. Storage Temp. : -40°C to +85°C.
g. MSL : Level 1

・LSQ0807



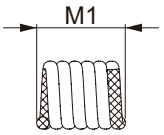


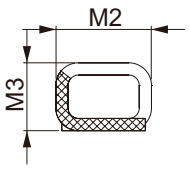
SMD SQUARE AIR WOUND COIL

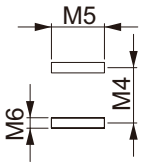
LSQ0908A Series

■ Mechanical Dimensions (Unit: mm)

LSQ0908







Recommended Patterns

Part Number	M1	M2	M3	M4	M5	M6
LSQ0908A-8N1J	1.473±0.152	2.134±0.152	1.829±0.152	1.12	2.8	0.64
LSQ0908A-12NJ	1.854±0.152	2.134±0.152	1.829±0.152	1.45	2.8	0.64
LSQ0908A-15NJ	1.549±0.152	2.134±0.152	1.829±0.152	1.24	2.8	0.64
LSQ0908A-17NJ	2.210±0.152	2.134±0.152	1.829±0.152	1.83	2.8	0.64
LSQ0908A-22NJ	2.565±0.152	2.134±0.152	1.829±0.152	2.18	2.8	0.64
LSQ0908A-23NJ	2.235±0.152	2.134±0.152	1.829±0.152	1.90	2.8	0.64
LSQ0908A-25NJ	2.972±0.152	2.134±0.152	1.829±0.152	2.57	2.8	0.64
LSQ0908A-27NJ	2.972±0.152	2.134±0.152	1.829±0.152	2.57	2.8	0.64

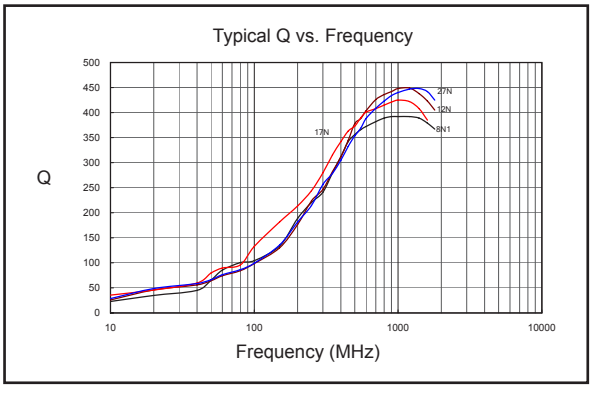
■ Electrical Specification

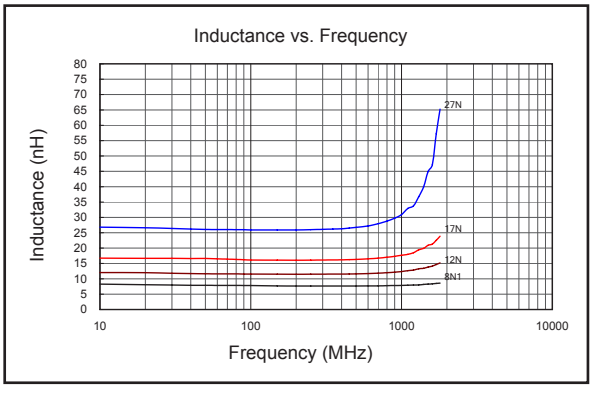
Part Number	Turns	Tolerance	Inductance (nH)	Q (Min)	Test Freq (MHz)	DCR (mΩ) Max	SRF (GHz) Typ.	Rated Current (A) Max
LSQ0908A-8N1J	3	J,K	8.1	130	400	6.0	5.2	4.4
LSQ0908A-12NJ	4	J,K	12.1	130	400	7.0	4.3	4.4
LSQ0908A-15NJ	4	J,K	14.7	90	400	7.2	3.0	4.4
LSQ0908A-17NJ	5	J,K	16.6	130	400	8.0	3.4	4.4
LSQ0908A-22NJ	6	J,K	21.5	130	400	9.0	3.7	4.4
LSQ0908A-23NJ	6	J,K	23.0	130	400	10.0	2.6	4.4
LSQ0908A-25NJ	7	J,K	25.0	130	400	10.0	2.5	4.4
LSQ0908A-27NJ	7	J,K	27.3	130	400	10.0	3.2	4.4

a. Tolerance : J :± 5%, K : ± 10%
b. Test Frequency : 400MHz,0.1Vrms.
c. Test Equipment :
L/Q : HP-4291B With HP16193A test fixture or equivalent.
SRF : HP8753E or equivalent.
RDC: Chroma 16502 or equivalent.
d. Operating temperature range : -40°C to +125°C.
e. Electrical specifications at 25°C.
f. Storage Temp. : -40°C to +85°C.
g. MSL : Level 1

■ Characteristic Curve

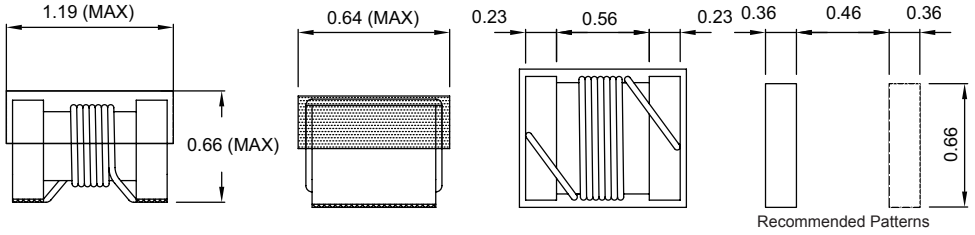
・LSQ0908





■ Mechanical Dimensions (Unit: mm)

0402CP



■ Electrical Specification

Part Number	Inductance (nH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Rated Current (mA)
0402CP-1N0□-LRH	1.0	J、K	16	250	12.70	0.045	1360
0402CP-1N2□-LRH	1.2	J、K	16	250	12.90	0.090	740
0402CP-1N8□-LRH	1.8	J、K	16	250	12.00	0.070	1040
0402CP-1N9□-LRH	1.9	J、K	16	250	11.30	0.070	1040
0402CP-2N0□-LRH	2.0	G、J、K	16	250	11.10	0.070	1040
0402CP-2N2□-LRH	2.2	G、J、K	19	250	10.80	0.070	960
0402CP-2N4□-LRH	2.4	G、J、K	15	250	10.50	0.068	790
0402CP-2N7□-LRH	2.7	G、J、K	16	250	10.40	0.120	640
0402CP-3N3□-LRH	3.3	G、J、K	19	250	7.00	0.066	840
0402CP-3N6□-LRH	3.6	G、J、K	19	250	6.80	0.066	840
0402CP-3N9□-LRH	3.9	G、J、K	19	250	6.00	0.066	840
0402CP-4N3□-LRH	4.3	G、J、K	18	250	6.00	0.091	700
0402CP-4N7□-LRH	4.7	G、J、K	15	250	4.70	0.130	640
0402CP-5N1□-LRH	5.1	G、J、K	20	250	4.80	0.083	800
0402CP-5N6□-LRH	5.6	G、J、K	20	250	4.80	0.083	760
0402CP-6N2□-LRH	6.2	G、J、K	20	250	4.80	0.083	760
0402CP-6N8□-LRH	6.8	G、J、K	20	250	4.80	0.083	680
0402CP-7N3□-LRH	7.3	G、J、K	20	250	4.80	0.260	680
0402CP-7N5□-LRH	7.5	G、J、K	22	250	4.80	0.100	680
0402CP-8N2□-LRH	8.2	G、J、K	22	250	4.40	0.100	680
0402CP-8N7□-LRH	8.7	G、J、K	18	250	4.10	0.200	480
0402CP-9N1□-LRH	9.1	G、J、K	22	250	4.16	0.100	680
0402CP-9N5□-LRH	9.5	G、J、K	18	250	4.00	0.200	480
0402CP-10N□-LRH	10	G、J、K	21	250	3.90	0.200	480
0402CP-11N□-LRH	11	G、J、K	24	250	3.68	0.120	640
0402CP-12N□-LRH	12	G、J、K	24	250	3.60	0.120	640
0402CP-13N□-LRH	13	G、J、K	24	250	3.45	0.210	440
0402CP-15N□-LRH	15	G、J、K	24	250	3.28	0.170	560
0402CP-16N□-LRH	16	G、J、K	24	250	3.10	0.220	560
0402CP-18N□-LRH	18	G、J、K	25	250	3.10	0.230	420
0402CP-19N□-LRH	19	G、J、K	24	250	3.04	0.200	480
0402CP-20N□-LRH	20	G、J、K	25	250	3.00	0.250	420
0402CP-22N□-LRH	22	G、J、K	25	250	2.80	0.300	400
0402CP-23N□-LRH	23	G、J、K	22	250	2.72	0.300	400
0402CP-24N□-LRH	24	G、J、K	25	250	2.70	0.300	400
0402CP-27N□-LRH	27	G、J、K	24	250	2.48	0.300	400
0402CP-30N□-LRH	30	G、J、K	25	250	2.35	0.300	400
0402CP-33N□-LRH	33	G、J、K	24	250	2.35	0.300	400
0402CP-36N□-LRH	36	G、J、K	24	250	2.32	0.440	320
0402CP-39N□-LRH	39	G、J、K	25	250	2.10	0.550	200
0402CP-40N□-LRH	40	G、J、K	24	250	2.24	0.440	320
0402CP-43N□-LRH	43	G、J、K	25	250	2.03	0.810	100
0402CP-47N□-LRH	47	G、J、K	20	250	2.10	0.830	150
0402CP-51N□-LRH	51	G、J、K	25	250	1.75	0.820	100
0402CP-56N□-LRH	56	G、J、K	22	250	1.76	0.970	100

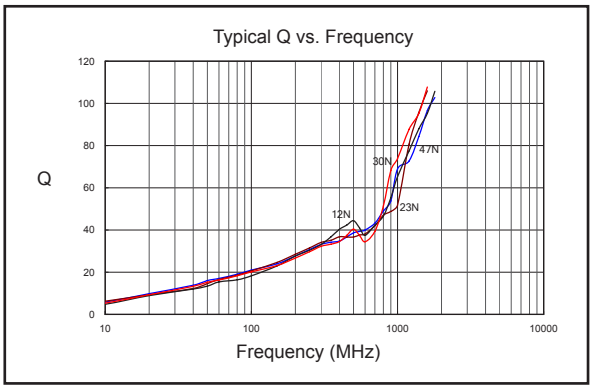
0402CP Series

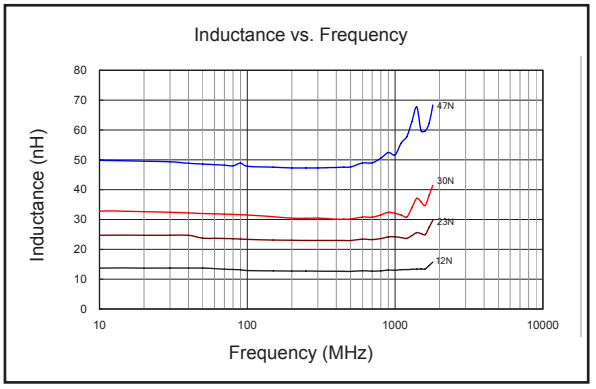
Part Number	Inductance (nH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Rated Current (mA)
0402CP-68N□-LRH	68	G、J、K	22	250	1.62	1.120	100
0402CP-82N□-LRH	82	G、J、K	20	250	1.26	1.550	50
0402CP-R10□-LRH	100	G、J、K	20	250	1.16	2.000	30
0402CP-R12□-LRH	120	G、J、K	-	250	1.90	2.200	50

a. Tolerance:K=±10% ; J=±5% ; G=±2%
b. Operating Temp:-40°C to +125°C
c. For 15: Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request

■ Characteristic Curve

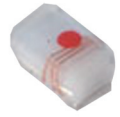
・0402CP

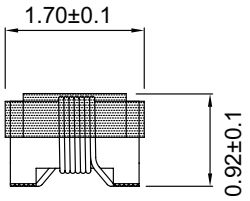


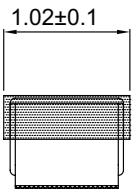


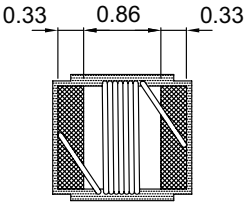
■ Mechanical Dimensions (Unit: mm)

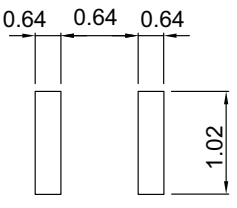
FEC0603CP











Recommended Patterns

■ Electrical Specification

Part Number.	Inductance (nH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	900 (MHz)		1.7 (GHz)		SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE
					L typ.	Q typ.	L typ.	Q typ.				
FEC0603CP-1N6□-LRH	1.6	J、K	24	250	1.67	49	1.65	63	12.50	0.030	700	BLACK
FEC0603CP-1N8□-LRH	1.8	J、K	16	250	1.83	35	1.86	50	12.50	0.045	700	BROWN
FEC0603CP-2N1□- LRH	2.1	J、K	20	250	2.11	31	2.09	45	5.80	0.005	700	RED
FEC0603CP-2N2□- LRH	2.2	J、K	20	250	2.22	31	2.24	44	5.80	0.005	700	ORANGE
FEC0603CP-3N3□- LRH	3.3	J、K	20	250	3.31	75	3.38	88	5.50	0.070	700	VIOLET
FEC0603CP-3N6□- LRH	3.6	J、K	22	250	3.72	53	3.71	65	5.90	0.063	700	RED
FEC0603CP-3N9□- LRH	3.9	J、K	22	250	3.95	49	3.96	67	5.90	0.080	700	ORANGE
FEC0603CP-4N3□- LRH	4.3	J、K	22	250	4.32	50	4.33	70	5.90	0.063	700	YELLOW
FEC0603CP-4N7□- LRH	4.7	J、K	20	250	4.72	47	4.75	57	5.80	0.116	700	GREEN
FEC0603CP-5N1□- LRH	5.1	J、K	20	250	4.93	47	4.95	56	5.70	0.140	700	BLUE
FEC0603CP-5N6□- LRH	5.6	J、K	20	250	5.77	63	6.05	80	5.80	0.150	700	GRAY
FEC0603CP-6N1□- LRH	6.1	J、K	25	250	5.90	59	7.08	79	5.80	0.110	700	WHITE
FEC0603CP-6N8□- LRH	6.8	G、J、K	27	250	6.75	60	7.10	81	5.80	0.110	700	VIOLET
FEC0603CP-7N5□- LRH	7.5	G、J、K	28	250	7.70	60	7.82	85	4.80	0.106	700	GRAY
FEC0603CP-8N2□- LRH	8.2	G、J、K	25	250	8.25	82	8.37	87	5.80	0.120	700	BLACK
FEC0603CP-8N4□- LRH	8.4	G、J、K	28	250	8.39	79	8.51	85	4.60	0.109	700	RED
FEC0603CP-8N5□- LRH	8.5	G、J、K	28	250	8.47	81	8.62	86	4.60	0.109	700	RED
FEC0603CP-8N7□- LRH	8.7	G、J	28	250	8.86	62	9.32	58	4.60	0.109	700	WHITE
FEC0603CP-9N5□- LRH	9.5	G、J	28	250	9.70	59	9.92	61	5.40	0.135	700	BLACK
FEC0603CP-10N□- LRH	10	G、J	31	250	10.00	66	10.6	83	4.80	0.130	700	BROWN
FEC0603CP-11N□- LRH	11	G、J	33	250	11.00	53	11.5	56	4.00	0.086	700	RED
FEC0603CP-12N□- LRH	12	G、J	35	250	12.30	72	13.5	83	4.00	0.130	700	ORANGE
FEC0603CP-14N□- LRH	14	G、J	35	250	14.20	69	15.6	85	4.00	0.170	700	BROWN
FEC0603CP-15N□- LRH	15	G、J	35	250	15.40	64	16.8	89	4.00	0.170	700	YELLOW
FEC0603CP-16N□- LRH	16	G、J	34	250	16.20	55	17.3	52	3.30	0.104	700	GREEN
FEC0603CP-18N□- LRH	18	G、J	35	250	18.70	70	21.4	69	3.10	0.170	700	BLUE
FEC0603CP-22N□- LRH	22	G、J	38	250	22.80	73	26.1	71	3.00	0.190	700	VIOLET
FEC0603CP-23N□- LRH	23	G、J	38	250	24.10	71	28.0	67	2.85	0.190	700	BLACK
FEC0603CP-24N□- LRH	24	G、J	37	250	24.50	45	28.7	39	2.65	0.135	700	GRAY
FEC0603CP-27N□- LRH	27	G、J	40	250	29.20	74	34.6	65	2.80	0.220	600	WHITE
FEC0603CP-30N□- LRH	30	G、J	37	250	31.40	47	39.9	28	2.25	0.144	600	BLACK
FEC0603CP-33N□- LRH	33	G、J	40	250	36.00	67	49.5	42	2.30	0.220	600	BROWN
FEC0603CP-36N□- LRH	36	G、J	38	250	39.40	47	52.7	24	2.08	0.250	600	RED
FEC0603CP-39N□- LRH	39	G、J	40	250	42.70	60	60.2	40	2.20	0.250	600	ORANGE
FEC0603CP-43N□- LRH	43	G、J	39	250	47.00	44	64.9	21	2.00	0.280	600	YELLOW
FEC0603CP-47N□- LRH	47	G、J	38	200	52.20	62	77.2	35	2.00	0.280	600	GREEN
FEC0603CP-51N□- LRH	51	G、J	35	200	55.50	69	82.2	34	1.90	0.270	600	BROWN
FEC0603CP-56N□- LRH	56	G、J	38	200	62.50	56	97.0	26	1.90	0.310	600	BLUE
FEC0603CP-68N□- LRH	68	G、J	37	200	80.50	54	168	21	1.70	0.340	600	VIOLET
FEC0603CP-72N□- LRH	72	G、J	34	150	82.00	53	135	20	1.70	0.490	400	GRAY
FEC0603CP-82N□- LRH	82	G、J	34	150	96.20	54	177	21	1.70	0.540	400	WHITE
FEC0603CP-R10□- LRH	100	G、J	34	150	124	49	-	-	1.40	0.580	400	BLACK
FEC0603CP-R11□- LRH	110	G、J	32	150	138	43	-	-	1.35	0.610	300	BROWN
FEC0603CP-R12□- LRH	120	G、J	32	150	166	39	-	-	1.30	0.650	300	RED
FEC0603CP-R15□- LRH	150	G、J	28	150	250	25	-	-	0.990	0.920	280	ORANGE

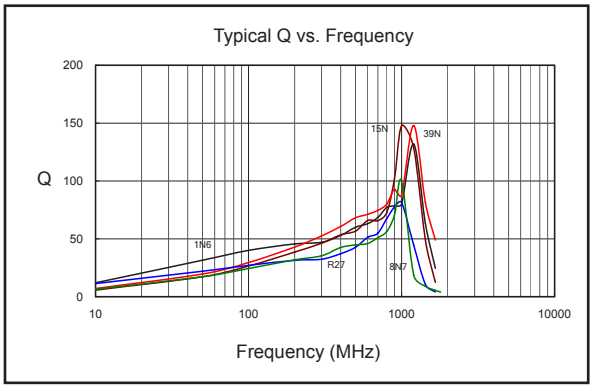
FEC0603CP Series

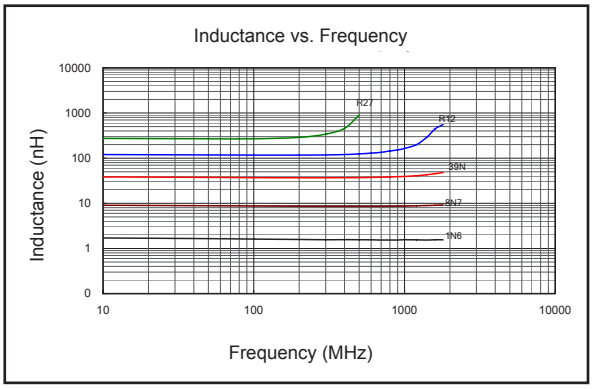
Part Number.	Inductance (nH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	900 (MHz)		1.7 (GHz)		SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE
					L typ.	Q typ.	L typ.	Q typ.				
FEC0603CP-R18□- LRH	180	G、J	25	100	305	22	-	-	0.990	1.250	240	YELLOW
FEC0603CP-R20□- LRH	200	G、J	25	100	-	-	-	-	0.990	1.980	200	RED
FEC0603CP-R21□- LRH	210	G、J	27	100	-	-	-	-	0.895	2.060	200	ORANGE
FEC0603CP-R22□- LRH	220	G、J	25	100	-	-	-	-	0.900	1.900	200	GREEN
FEC0603CP-R25□- LRH	250	G、J	25	100	-	-	-	-	0.822	3.550	120	YELLOW
FEC0603CP-R27□- LRH	270	G、J	24	100	-	-	-	-	0.900	2.300	170	BLUE
FEC0603CP-R33□- LRH	330	G、J	24	100	-	-	-	-	0.900	2.300	100	VIOLET
FEC0603CP-R39□- LRH	390	G、J	25	100	-	-	-	-	0.900	4.350	100	GRAY

a. Tolerance :K=±10% ; J=±5% ; G=±2%
b. Operating Temp :-40°C to +125°C
c. For 15 : Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request

■ Characteristic Curve

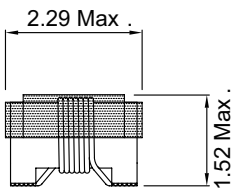
・FEC0603CP

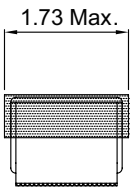


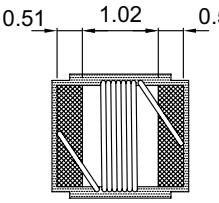


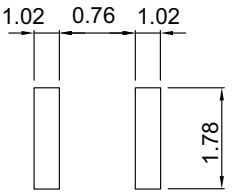
■ Mechanical Dimensions (Unit: mm)

FEC0805CP









Recommended Patterns

■ Electrical Specification

Part Number.	Inductance (nH)	Inductance Tolerance	Test Freq. (MHz)	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE
FEC0805CP-2N2□-LRH	2.20	K,J	250	35	1500	3.00	0.08	600	WHITE
FEC0805CP-2N7□-LRH	2.70	K,J	250	35	1000	6.00	0.03	600	BROWN
FEC0805CP-2N8□-LRH	2.80	K,J	250	80	1000	7.90	0.06	800	GRAY
FEC0805CP-2N9□-LRH	2.90	K,J	250	50	1000	4.70	0.05	600	BLUE
FEC0805CP-3N0□-LRH	3.00	K,J	250	65	1500	7.90	0.06	800	WHITE
FEC0805CP-3N3□-LRH	3.30	K,J	250	50	1500	7.90	0.08	600	BLACK
FEC0805CP-5N6□-LRH	5.60	K,J	250	65	1000	5.50	0.08	600	VIOLET
FEC0805CP-6N8□-LRH	6.80	K,J	250	50	1000	5.50	0.11	600	BROWN
FEC0805CP-7N5□-LRH	7.50	K,J	250	50	1000	4.50	0.14	600	GREEN
FEC0805CP-8N2□-LRH	8.20	K,J,G	250	50	1000	4.70	0.12	600	RED
FEC0805CP-10N□-LRH	10.0	K,J,G	250	60	500	4.20	0.10	600	RED
FEC0805CP-11N□-LRH	11.0	K,J,G	700	45	500	3.00	0.15	600	ORANGE
FEC0805CP-12N□-LRH	12.0	K,J,G	250	50	500	4.00	0.15	600	ORANGE
FEC0805CP-15N□-LRH	15.0	K,J,G	250	50	500	3.40	0.17	600	YELLOW
FEC0805CP-18N□-LRH	18.0	K,J,G	250	50	500	3.30	0.20	600	GREEN
FEC0805CP-22N□-LRH	22.0	K,J,G	250	55	500	2.60	0.22	500	BLUE
FEC0805CP-24N□-LRH	24.0	K,J,G	250	50	500	2.00	0.22	500	GRAY
FEC0805CP-27N□-LRH	27.0	K,J,G	250	55	500	2.50	0.25	500	VIOLET
FEC0805CP-33N□-LRH	33.0	K,J,G	250	60	500	2.05	0.27	500	GRAY
FEC0805CP-36N□-LRH	36.0	K,J,G	250	55	500	1.70	0.27	500	YELLOW
FEC0805CP-37N□-LRH	37.0	K,J,G	350	40	500	1.80	0.27	500	GREEN
FEC0805CP-38N□-LRH	38.0	K,J,G	350	40	500	1.80	0.27	500	BLUE
FEC0805CP-39N□-LRH	39.0	K,J,G	250	60	500	2.00	0.29	500	WHITE
FEC0805CP-43N□-LRH	43.0	K,J,G	200	60	500	1.65	0.34	500	YELLOW
FEC0805CP-47N□-LRH	47.0	K,J,G	200	60	500	1.65	0.31	500	BLACK
FEC0805CP-56N□-LRH	56.0	K,J,G	200	60	500	1.55	0.34	500	BROWN
FEC0805CP-68N□-LRH	68.0	K,J,G	200	60	500	1.45	0.38	500	RED
FEC0805CP-82N□-LRH	82.0	K,J,G	150	65	500	1.30	0.42	400	ORANGE
FEC0805CP-91N□-LRH	91.0	K,J,G	150	65	500	1.20	0.48	400	BLACK
FEC0805CP-R10□-LRH	100	K,J,G	150	65	500	1.20	0.46	400	YELLOW
FEC0805CP-R11□-LRH	110	K,J,G	150	50	500	1.00	0.48	400	BROWN
FEC0805CP-R12□-LRH	120	K,J,G	150	50	250	1.10	0.51	400	GREEN
FEC0805CP-R15□-LRH	150	K,J,G	100	50	250	0.920	0.56	400	BLUE
FEC0805CP-R18□-LRH	180	K,J,G	100	50	250	0.870	0.64	400	VIOLET
FEC0805CP-R20□-LRH	200	K,J,G	100	50	250	0.860	0.68	400	RED
FEC0805CP-R22□-LRH	220	K,J,G	100	50	250	0.850	0.70	400	GRAY
FEC0805CP-R24□-LRH	240	K,J,G	100	44	250	0.690	1.00	350	RED
FEC0805CP-R25□-LRH	250	K,J,G	100	45	250	0.660	1.20	350	YELLOW
FEC0805CP-R27□-LRH	270	K,J,G	100	48	250	0.650	1.00	350	WHITE
FEC0805CP-R30□-LRH	300	K,J,G	100	25	250	0.450	1.40	300	GRAY
FEC0805CP-R33□-LRH	330	K,J,G	100	48	250	0.600	1.40	310	BLACK
FEC0805CP-R36□-LRH	360	K,J,G	100	35	250	0.400	0.90	300	ORANGE
FEC0805CP-R39□-LRH	390	K,J,G	150	48	250	0.560	1.50	290	BROWN
FEC0805CP-R43□-LRH	430	K,J,G	100	25	100	0.400	1.70	190	WHITE
FEC0805CP-R47□-LRH	470	K.J	50	33	100	0.375	1.76	250	VIOLET

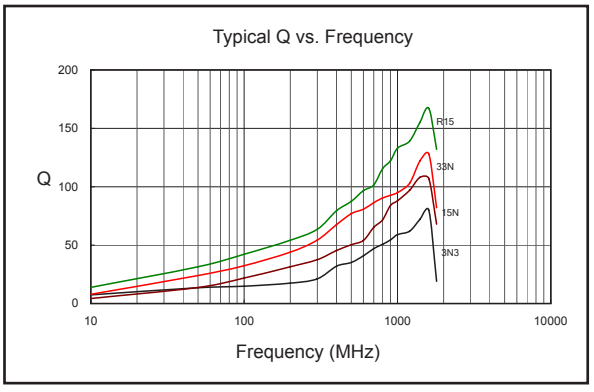
FEC0805CP Series

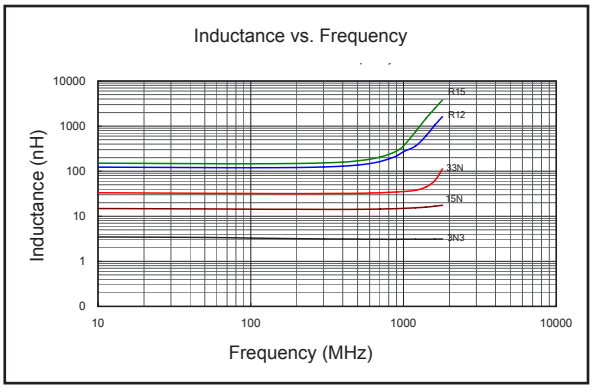
Part Number.	Inductance (nH)	Inductance Tolerance	Test Freq. (MHz)	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE
FEC0805CP-R56□-LRH	560	K,J	25	23	50	0.340	1.90	230	ORANGE
FEC0805CP-R62□-LRH	620	K,J	25	23	50	0.220	2.20	210	YELLOW
FEC0805CP-R68□-LRH	680	K,J	25	23	50	0.188	2.20	190	GREEN
FEC0805CP-R82□-LRH	820	K,J	25	23	50	0.215	2.35	180	BROWN

a. Tolerance:K=±10% ; J=±5% ; G=±2%
b. Operating Temp:-40°C to +125°C
c. For 15: Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request

■ Characteristic Curve

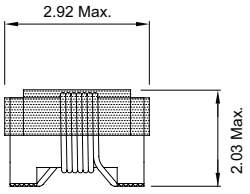
・FEC0805CP

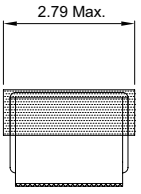


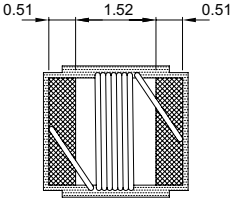


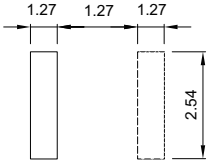
■ Mechanical Dimensions (Unit: mm)

FEC1008CP









Recommended Patterns

■ Electrical Specification

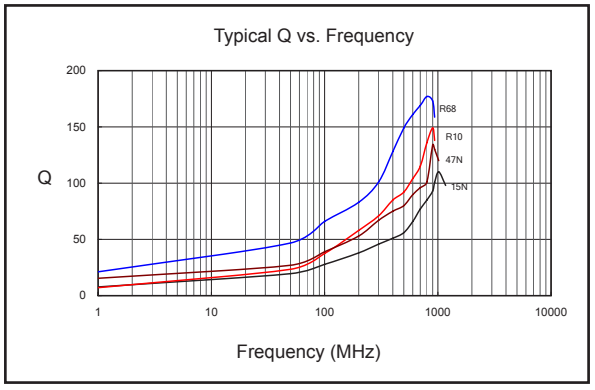
Part Number.	Inductance (nH)	Inductance Tolerance	Test Freq. (MHz)	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE		
									1st	2nd	multiplier
FEC1008CP-10N□-LRH	10	K,J	50	50	500	4.10	0.08	1000	BROWN	BLACK	BLACK
FEC1008CP-12N□-LRH	12	K,J	50	50	500	3.30	0.09	1000	BROWN	RED	BLACK
FEC1008CP-15N□-LRH	15	K,J	50	50	500	2.50	0.10	1000	BROWN	GREEN	BLACK
FEC1008CP-18N□-LRH	18	K,J,G	50	50	350	2.50	0.11	1000	BROWN	GRAY	BLACK
FEC1008CP-22N□-LRH	22	K,J,G	50	55	350	2.40	0.12	1000	RED	RED	BLACK
FEC1008CP-24N□-LRH	24	K,J,G	50	50	350	1.50	0.13	1000	RED	YELLOW	BLACK
FEC1008CP-27N□-LRH	27	K,J,G	50	55	350	1.60	0.13	1000	RED	VIOLET	BLACK
FEC1008CP-33N□-LRH	33	K,J,G	50	60	350	1.60	0.14	1000	ORANGE	ORANGE	BLACK
FEC1008CP-39N□-LRH	39	K,J,G	50	60	350	1.50	0.15	1000	ORANGE	WHITE	BLACK
FEC1008CP-47N□-LRH	47	K,J,G	50	65	350	1.50	0.16	1000	YELLOW	VIOLET	BLACK
FEC1008CP-56N□-LRH	56	K,J,G	50	65	350	1.30	0.18	1000	GREEN	BLUE	BLACK
FEC1008CP-68N□-LRH	68	K,J,G	50	65	350	1.30	0.20	1000	BLUE	GRAY	BLACK
FEC1008CP-82N□-LRH	82	K,J,G	50	60	350	1.00	0.22	1000	GRAY	RED	BLACK
FEC1008CP-R10□-LRH	100	K,J,G	25	60	350	1.00	0.56	650	BROWN	BLACK	BROWN
FEC1008CP-R12□-LRH	120	K,J,G	25	60	350	0.950	0.63	650	BROWN	RED	BROWN
FEC1008CP-R15□-LRH	150	K,J,G	25	45	100	0.850	0.70	580	BROWN	GREEN	BROWN
FEC1008CP-R18□-LRH	180	K,J,G	25	45	100	0.750	0.77	620	BROWN	GRAY	BROWN
FEC1008CP-R20□-LRH	200	K,J,G	25	50	100	0.750	0.81	500	RED	BLACK	BROWN
FEC1008CP-R22□-LRH	220	K,J,G	25	45	100	0.700	0.84	500	RED	RED	BROWN
FEC1008CP-R24□-LRH	240	K,J,G	25	50	100	0.600	0.84	500	RED	YELLOW	BROWN
FEC1008CP-R27□-LRH	270	K,J,G	25	45	100	0.600	0.91	500	RED	VIOLET	BROWN
FEC1008CP-R30□-LRH	300	K,J,G	25	40	100	0.500	1.05	660	ORANGE	BLACK	BROWN
FEC1008CP-R33□-LRH	330	K,J,G	25	45	100	0.570	1.05	450	ORANGE	ORANGE	BROWN
FEC1008CP-R36□-LRH	360	K,J,G	25	40	100	0.500	1.05	660	ORANGE	BLUE	BROWN
FEC1008CP-R39□-LRH	390	K,J,G	25	45	100	0.500	1.12	470	ORANGE	WHITE	BROWN
FEC1008CP-R43□-LRH	430	K,J,G	25	45	100	0.425	1.19	600	YELLOW	ORANGE	BROWN
FEC1008CP-R47□-LRH	470	K,J,G	25	45	100	0.450	1.19	470	YELLOW	VIOLET	BROWN
FEC1008CP-R56□-LRH	560	K,J,G	25	45	100	0.415	1.33	400	GREEN	BLUE	BROWN
FEC1008CP-R62□-LRH	620	K,J,G	25	45	100	0.375	1.40	300	BLUE	RED	BROWN
FEC1008CP-R68□-LRH	680	K,J,G	25	45	100	0.375	1.47	400	BLUE	GRAY	BROWN
FEC1008CP-R75□-LRH	750	K,J,G	25	45	100	0.360	1.54	360	VIOLET	GREEN	BROWN
FEC1008CP-R82□-LRH	820	K,J,G	25	45	100	0.350	1.61	400	GRAY	RED	BROWN
FEC1008CP-R91□-LRH	910	K,J,G	25	35	50	0.320	1.68	380	WHITE	BROWN	BROWN
FEC1008CP-1R0□-LRH	1000	K,J,G	25	35	50	0.290	1.75	370	BROWN	BLACK	RED
FEC1008CP-1R2□-LRH	1200	K,J,G	7.9	35	50	0.250	2.00	310	BROWN	RED	RED
FEC1008CP-1R5□-LRH	1500	K,J,G	7.9	28	50	0.200	2.30	330	BROWN	GREEN	RED
FEC1008CP-1R8□-LRH	1800	K,J,G	7.9	28	50	0.160	2.60	300	BROWN	GRAY	RED
FEC1008CP-2R0□-LRH	2000	K,J,G	7.9	25	50	0.160	2.80	280	RED	BLACK	RED
FEC1008CP-2R2□-LRH	2200	K,J,G	7.9	28	50	0.160	2.80	280	RED	RED	RED
FEC1008CP-2R7□-LRH	2700	K,J,G	7.9	22	25	0.140	3.20	290	RED	VIOLET	RED
FEC1008CP-3R3□-LRH	3300	K,J,G	7.9	22	25	0.110	3.40	290	ORANGE	ORANGE	RED
FEC1008CP-3R9□-LRH	3900	K,J,G	7.9	20	25	0.100	3.60	260	ORANGE	WHITE	RED
FEC1008CP-4R7□-LRH	4700	K,J,G	7.9	20	25	0.090	4.00	260	YELLOW	VIOLET	RED

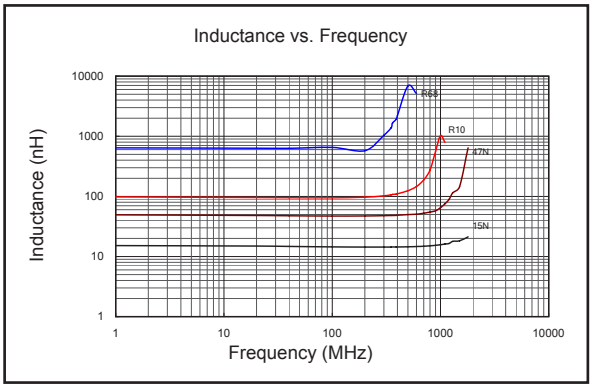
FEC1008CP Series

a. Tolerance:K=±10% ; J=±5% ; G=±2%
b. Operating Temp:-40°C to +125°C
c. For 15: Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request

■ Characteristic Curve

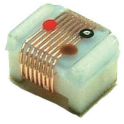
・FEC1008CP

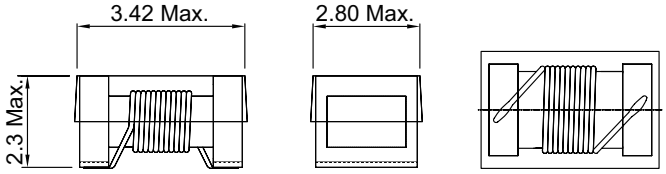




■ Mechanical Dimensions (Unit: mm)

1210C





Recommended Patterns

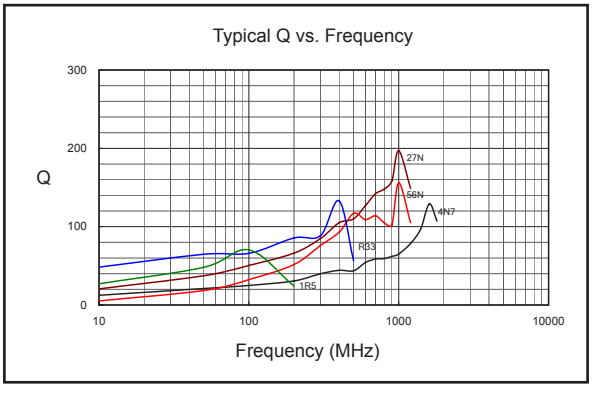
■ Electrical Specification

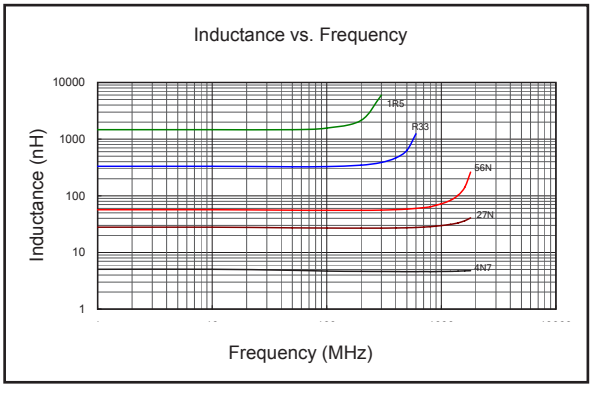
Part Number.	Inductance (nH)	Test Freq. (MHz)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	SRF (MHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE		
									1st	2nd	multiplier
1210C-4N7□-LRH	4.7	100	K , J	50	1000	6000	0.06	600	YELLOW	VIOLET	BLACK
1210C-5N6□-LRH	5.6	100	K , J	50	1000	5500	0.08	600	GREEN	BLUE	BLACK
1210C-10N□-LRH	10	100	K , J , G	60	500	4000	0.06	600	BROWN	BLACK	BROWN
1210C-12N□-LRH	12	100	K , J , G	60	500	3400	0.06	600	BROWN	RED	BROWN
1210C-15N□-LRH	15	100	K , J , G	60	500	3200	0.06	600	BROWN	GREEN	BROWN
1210C-18N□-LRH	18	100	K , J , G	60	300	2800	0.06	600	BROWN	GRAY	BROWN
1210C-22N□-LRH	22	100	K , J , G	60	300	2300	0.08	600	RED	RED	BROWN
1210C-27N□-LRH	27	100	K , J , G	60	300	2000	0.08	600	RED	VIOLET	BROWN
1210C-33N□-LRH	33	100	K , J , G	60	300	1800	0.08	600	ORANGE	ORANGE	BROWN
1210C-39N□-LRH	39	100	K , J , G	60	300	1800	0.08	600	ORANGE	WHITE	BROWN
1210C-47N□-LRH	47	100	K , J , G	60	300	1600	0.08	600	YELLOW	VIOLET	BROWN
1210C-56N□-LRH	56	100	K , J , G	60	300	1500	0.10	600	GREEN	BLUE	BROWN
1210C-68N□-LRH	68	100	K , J , G	60	300	1300	0.10	600	BLUE	GRAY	BROWN
1210C-82N□-LRH	82	100	K , J , G	60	300	1200	0.10	600	GRAY	RED	BROWN
1210C-91N□-LRH	91	100	K , J , G	60	300	1100	0.10	1000	WHITE	BROWN	BROWN
1210C-R10□-LRH	100	100	K , J , G	60	300	1100	0.10	500	BROWN	BLACK	RED
1210C-R12□-LRH	120	50	K , J , G	60	300	900	0.12	500	BROWN	RED	RED
1210C-R15□-LRH	150	50	K , J , G	60	300	800	0.18	500	BROWN	GREEN	RED
1210C-R18□-LRH	180	50	K , J , G	60	300	760	0.21	500	BROWN	GRAY	RED
1210C-R22□-LRH	220	50	K , J , G	60	300	760	0.27	500	RED	RED	RED
1210C-R27□-LRH	270	50	K , J , G	50	300	660	0.33	500	RED	VIOLET	RED
1210C-R33□-LRH	330	50	K , J , G	50	100	650	0.37	500	ORANGE	ORANGE	RED
1210C-R36□-LRH	360	50	K , J , G	50	100	500	0.63	600	ORANGE	BLUE	RED
1210C-R39□-LRH	390	50	K , J , G	50	100	600	0.63	500	ORANGE	WHITE	RED
1210C-R47□-LRH	470	50	K , J , G	50	100	550	0.69	400	YELLOW	VIOLET	RED
1210C-R56□-LRH	560	50	K , J , G	50	100	470	0.90	400	GREEN	BLUE	RED
1210C-R68□-LRH	680	25	K , J , G	50	100	450	1.05	400	BLUE	GRAY	RED
1210C-R82□-LRH	820	25	K , J , G	50	100	400	1.45	350	GRAY	RED	RED
1210C-1R0□-LRH	1000	25	K , J , G	45	100	340	2.10	280	BROWN	BLACK	ORANGE
1210C-1R2□-LRH	1200	7.96	K , J , G	45	50	320	2.40	250	BROWN	RED	ORANGE
1210C-1R5□-LRH	1500	7.96	K , J , G	45	50	300	2.70	220	BROWN	GREEN	ORANGE
1210C-1R8□-LRH	1800	7.96	K , J , G	45	50	280	3.50	180	BROWN	GRAY	ORANGE
1210C-2R2□-LRH	2200	7.96	K , J , G	45	50	260	3.80	150	RED	RED	ORANGE
1210C-3R3□-LRH	3300	7.96	K , J , G	25	25	140	10	50	ORANGE	ORANGE	ORANGE

a. Tolerance:K=±10% ; J=±5% ; G=±2%
b. Operating Temp:-40°C to +125°C
c. For 15: Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request

■ Characteristic Curve

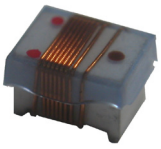
・1210C

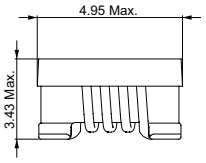


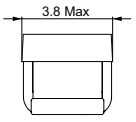


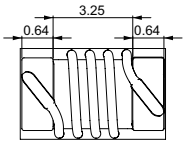
■ Mechanical Dimensions (Unit: mm)

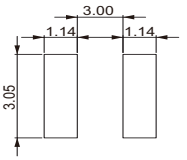
1812CP











Recommended Patterns

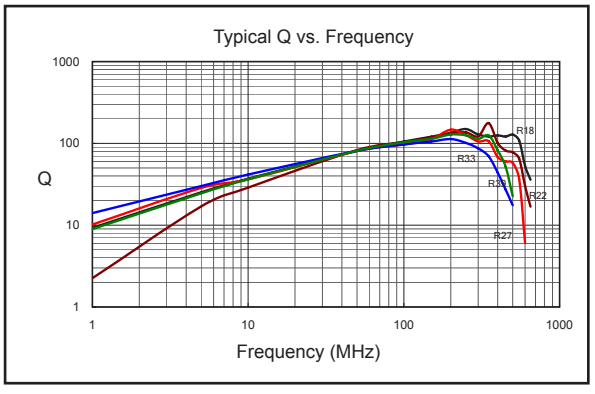
■ Electrical Specification

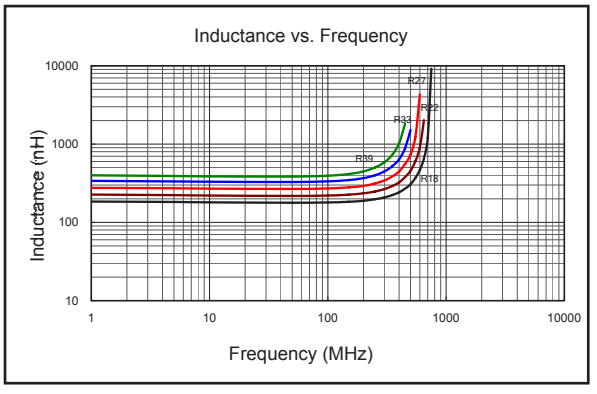
Part Number.	Inductance (nH)	Test Freq. (MHz)	Inductance Tolerance	Q Typ.	Test Freq. (MHz)	SRF (MHz) Min	DCR (mΩ) Max	Irms (mA)	COLOR CODE		
									1st	2nd	multiplier
1812CP-82N□-LRH	82	50	K , J , G	70	50	800	60	1500	GRAY	RED	BLACK
1812CP-R15□-LRH	150	50	K , J , G	75	50	860	110	1150	BROWN	GREEN	BROWN
1812CP-R18□-LRH	180	50	K , J , G	80	50	850	110	1150	BROWN	GRAY	BROWN
1812CP-R22□-LRH	220	50	K , J , G	80	50	700	105	940	RED	RED	BROWN
1812CP-R27□-LRH	270	50	K , J , G	85	50	730	120	940	RED	VIOLET	BROWN
1812CP-R33□-LRH	330	50	K , J , G	80	50	600	135	850	ORANGE	ORANGE	BROWN
1812CP-R39□-LRH	390	50	K , J , G	80	50	600	140	850	ORANGE	WHITE	BROWN
1812CP-1R2□-LRH	1200	50	K , J , G	62	50	230	1200	480	BROWN	RED	RED

a. Tolerance : K=±10% ; J=±5% ; G=±2%
b. Operating Temp:-40°C to +125°C
c. For 15: Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request

■ Characteristic Curve

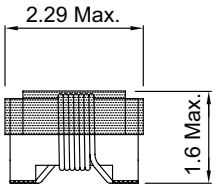
・1812CP

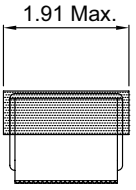


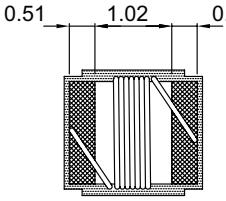


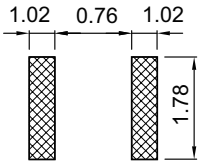
■ Mechanical Dimensions (Unit: mm)

0805F









Recommended Patterns

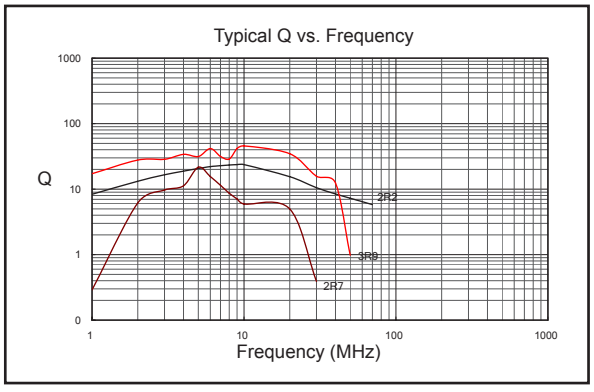
■ Electrical Specification

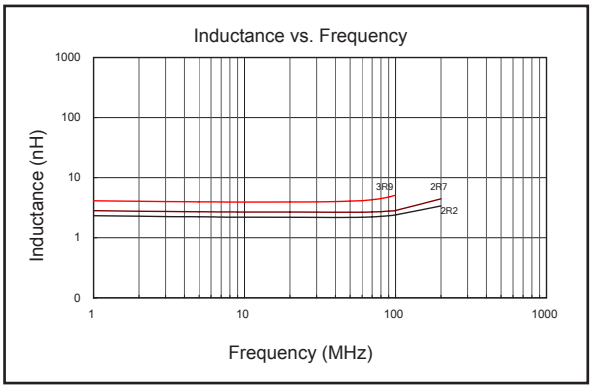
Part Number.	Inductance (μH)	Inductance Tolerance	Test Freq. (MHz)	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE
0805F-78N□-LRH	0.078	K,J	7.9	19	7.9	1.44	0.042	2000	BLACK
0805F-R11□-LRH	0.110	K,J	7.9	19	7.9	1.40	0.050	2000	BROWN
0805F-R18□-LRH	0.180	K,J	7.9	15	7.9	1.00	0.15	500	GRAY
0805F-R22□-LRH	0.220	K,J	7.9	15	7.9	1.00	0.15	500	VIOLET
0805F-R33□-LRH	0.330	K,J	7.9	15	7.9	0.862	0.25	300	WHITE
0805F-R39□-LRH	0.390	K,J	7.9	15	7.9	0.800	0.30	500	BLACK
0805F-R47□-LRH	0.470	K,J	7.9	19	7.9	0.500	0.31	720	RED
0805F-R56□-LRH	0.560	K,J	7.9	12	7.9	0.800	1.20	300	RED
0805F-R68□-LRH	0.680	K,J	7.9	20	7.9	0.400	0.46	590	ORANGE
0805F-R82□-LRH	0.820	K,J	7.9	12	7.9	0.600	1.00	300	YELLOW
0805F-1R0□-LRH	1.00	K,J	7.9	20	7.9	0.340	0.69	500	YELLOW
0805F-1R2□-LRH	1.20	K,J	7.9	15	7.9	0.400	0.75	800	BLACK
0805F-1R5□-LRH	1.50	K,J	7.9	20	7.9	0.275	0.83	490	GREEN
0805F-1R8□-LRH	1.80	K,J	7.9	20	7.9	0.246	1.15	410	BLUE
0805F-2R2□-LRH	2.20	K,J	7.9	20	7.9	0.106	1.28	365	VIOLET
0805F-2R7□-LRH	2.70	K,J	7.9	20	7.9	0.105	1.48	350	GRAY
0805F-3R3□-LRH	3.30	K,J	7.9	20	7.9	0.083	1.57	330	WHITE
0805F-3R9□-LRH	3.90	K,J	7.9	20	7.9	0.052	1.70	300	BLACK
0805F-4R7□-LRH	4.70	K,J	7.9	20	7.9	0.050	1.87	280	BROWN
0805F-5R6□-LRH	5.60	K,J	7.9	20	7.9	0.090	2.00	340	BLUE
0805F-6R8□-LRH	6.80	K,J	7.9	20	7.9	0.035	2.25	260	RED
0805F-8R2□-LRH	8.20	K,J	2.5	18	2.5	0.027	2.55	250	ORANGE
0805F-100□-LRH	10.0	K,J	2.5	18	2.5	0.021	3.45	200	YELLOW
0805F-120□-LRH	12.0	K,J	2.5	18	2.5	0.037	3.80	220	BROWN
0805F-150□-LRH	15.0	K,J	2.5	18	2.5	0.017	5.03	180	GREEN
0805F-180□-LRH	18.0	K,J	2.5	18	2.5	0.023	4.48	180	ORANGE
0805F-220□-LRH	22.0	K,J	2.5	18	2.5	0.013	6.18	150	BLUE
0805F-270□-LRH	27.0	K,J	2.5	15	2.5	0.011	11.04	120	VIOLET

a. Tolerance : K=±10% ; J=±5%
b. Operating Temp : -40°C to +85°C
c. For 15°CTemperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request.

■ Characteristic Curve

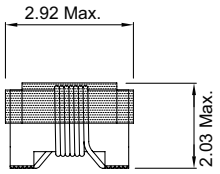
・0805F

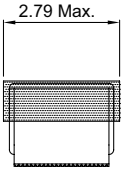


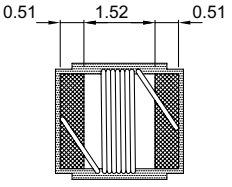


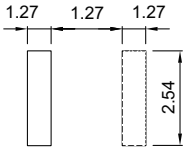
■ Mechanical Dimensions (Unit: mm)

1008F









Recommended Patterns

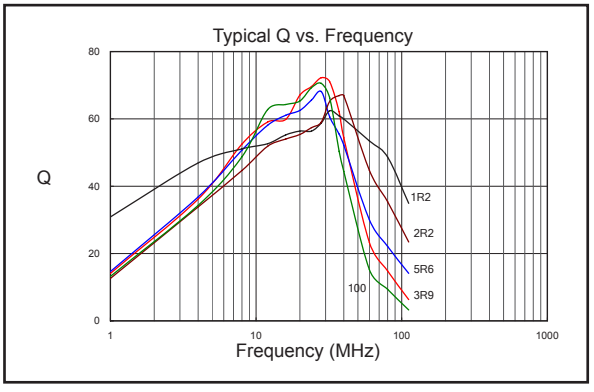
■ Electrical Specification

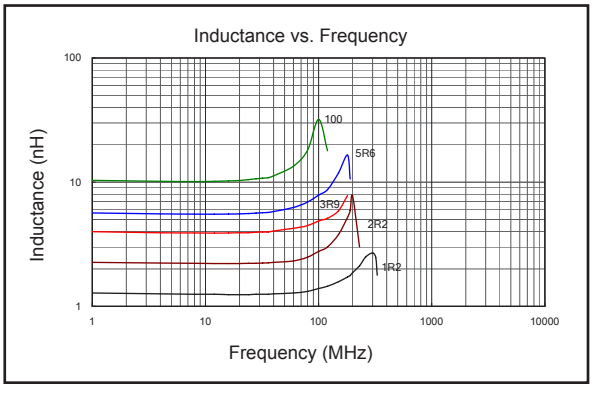
Part Number.	Inductance (μH)	Inductance Tolerance	Test Freq. (MHz)	Q (Min)	Test Freq. (MHz)	SRF (GHz) Min	DCR (Ω) Max	Irms (mA)	COLOR CODE		
									1st	2nd	multiplier
1008F-47N□-LRH	0.047	K,J	50	50	50	1.80	0.045	650	YELLOW	VIOLET	BLACK
1008F-68N□-LRH	0.068	K,J	50	40	50	1.80	0.045	650	BLUE	GRAY	BLACK
1008F-R10□-LRH	0.100	K,J	50	50	50	1.80	0.196	700	BROWN	BLACK	BROWN
1008F-R18□-LRH	0.180	K,J	50	50	50	1.00	0.290	700	BROWN	GRAY	BROWN
1008F-R20□-LRH	0.200	K,J	50	50	50	0.900	0.285	700	RED	BLACK	BROWN
1008F-R24□-LRH	0.240	K,J	50	50	50	0.900	0.135	700	RED	YELLOW	BROWN
1008F-R56□-LRH	0.560	K,J	7.9	40	50	0.460	0.300	700	GREEN	BLUE	BROWN
1008F-R68□-LRH	0.680	K,J	7.9	27	50	0.400	0.320	700	BLUE	GRAY	BROWN
1008F-1R0□-LRH	1.00	K,J	50	50	50	0.380	0.260	650	BROWN	BLACK	RED
1008F-1R2□-LRH	1.20	K,J	7.9	48	50	0.210	0.680	650	BROWN	RED	RED
1008F-1R5□-LRH	1.50	K,J	7.9	41	50	0.190	0.760	630	BROWN	GREEN	RED
1008F-1R8□-LRH	1.80	K,J	7.9	39	50	0.170	0.840	600	BROWN	GRAY	RED
1008F-2R2□-LRH	2.20	K,J	7.9	34	50	0.150	1.10	520	RED	RED	RED
1008F-2R7□-LRH	2.70	K,J	7.9	34	50	0.135	1.28	490	RED	VIOLET	RED
1008F-3R3□-LRH	3.30	K,J	7.9	32	50	0.120	1.46	450	ORANGE	ORANGE	RED
1008F-3R9□-LRH	3.90	K,J	7.9	32	7.9	0.105	1.56	420	ORANGE	WHITE	RED
1008F-4R3□-LRH	4.30	K,J	7.9	30	7.9	0.085	1.70	400	YELLOW	ORANGE	RED
1008F-4R7□-LRH	4.70	K,J	7.9	31	7.9	0.090	1.68	400	YELLOW	VIOLET	RED
1008F-5R6□-LRH	5.60	K,J	7.9	31	7.9	0.080	1.82	380	GREEN	BLUE	RED
1008F-6R8□-LRH	6.80	K,J	7.9	31	7.9	0.070	2.00	360	BLUE	GRAY	RED
1008F-8R2□-LRH	8.20	K,J	7.9	23	7.9	0.065	2.65	330	GRAY	RED	RED
1008F-100□-LRH	10.0	K,J	7.9	31	7.9	0.060	2.95	300	BROWN	BLACK	ORANGE
1008F-120□-LRH	12.0	K,J	7.9	30	7.9	0.050	3.35	270	BROWN	RED	ORANGE
1008F-150□-LRH	15.0	K,J	7.9	38	7.9	0.050	3.04	250	BROWN	GREEN	ORANGE
1008F-220□-LRH	22.0	K,J	2.52	10	2.52	0.010	2.80	120	RED	RED	ORANGE

a. Tolerance : K=±10% ; J=±5%
b. Operating Temp :-40°C to +85°C
c. For 15°C Temperature Rise.
d. Inductance & Q measured using the HP4291B.
e. SRF measured using the HP8753E,or HP8720D .
f. DCR measured using the 16502 milli-ohm meter.
g. Unspeified values available on request.

■ Characteristic Curve

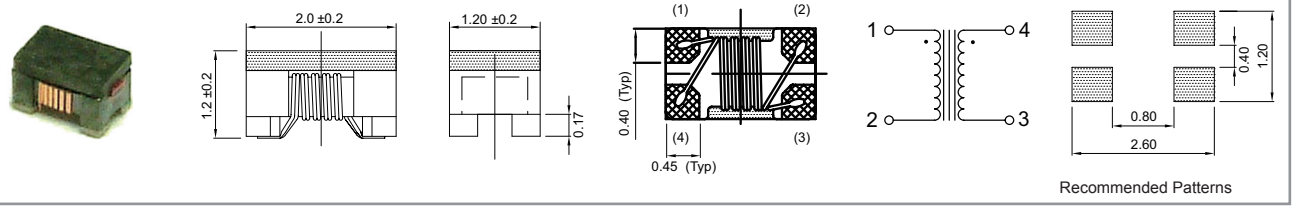
・1008F





■ Mechanical Dimensions (Unit: mm)

SCM2012F-I



Recommended Patterns

■ Electrical Specification

Part Number	Impedance @100MHz (Ω)	Rated Current (mA)	DCR (Ω) Max.	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance @125VDC (MΩ) Min.
SCM2012F-670M-I-LRH	67	400	0.25	50	125	10
SCM2012F-900M-I-LRH	90	330	0.35			
SCM2012F-121M-I-LRH	120	370	0.30			
SCM2012F-181M-I-LRH	180	330	0.35			
SCM2012F-261M-I-LRH	260	300	0.40			
SCM2012F-371M-I-LRH	370	280	0.45			
SCM2012F-601M-I-LRH	600	240	0.60			

a. Tolerance : M=±20%
b. Small size, low profile.
c. Various common mode impedance from 67Ω to 600Ω.
d. Operating Temp. : -40°C to +125°C
e. Storage temperature : -40°C to +125°C
f. Temperature rise : 15°C
g. Impedance measured using the HP4291B RF RF Impedance Analyzer.
h. DCR measured using the 16502 milli-ohm meter.

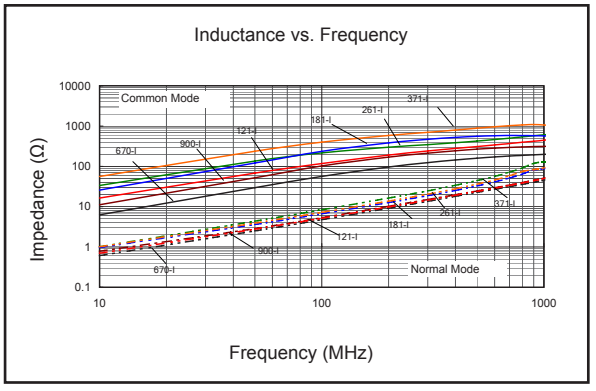
■ Applications

» Common mode noise suppression of signal lines in high speed and high-density digital equipment such as personal computers and peripherals.

» Suitable for differential signal line such as USB2.0, IEEE1394 and LVDS, Capable of high speed signal transmission without distortion due to its high coupling.

■ Characteristic Curve

・SCM2012F-I

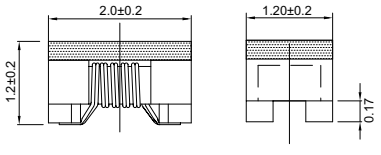


SMD COMMON MODE CHOKE COILS

SCM2012FH Series (SHIELDED)

■ Mechanical Dimensions (Unit: mm)

SCM2012FH



Recommended Patterns

■ Electrical Specification

Part Number	Impedance @100MHz (Ω)	Rated Current (mA)	DCR (Ω) Max.	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance @125VDC (MΩ) Min.
SCM2012FH-670M-I-LRH	67	400	0.30	50	125	10
SCM2012FH-900M-I-LRH	90	300	0.40			
SCM2012FH-121M-I-LRH	120	250	0.45			

a. Tolerance : M=±20%
b. Small size, low profile.
c. Various common mode impedance from 67Ω to 120Ω.
d. Operating Temp. : -40°C to +125°C
e. Storage temperature : -40°C to +125°C
f. Temperature rise : 15°C
g. Impedance measured using the HP4291B RF Impedance Analyzer.
h. DCR measured using the 16502 milli-ohm meter.

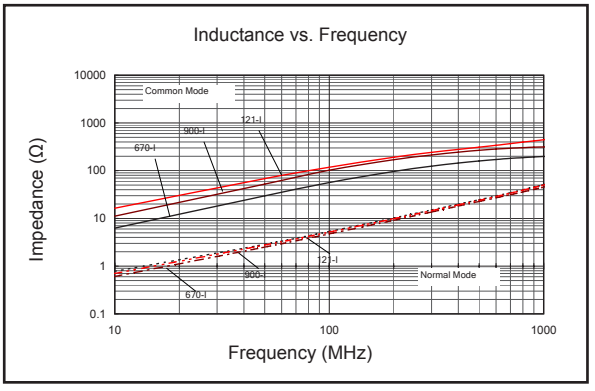
■ Applications

» Common mode noise suppression of signal lines in high speed and high-density digital equipment such as personal computers and peripherals.

» The cut-off frequency of HDMI for differential mode are 3.5GHz and 6GHz repectively, so they don't interfere with higher-speed differential signals such as DVI,HDMI. The product is suited for use on the transmission side of digital Tvs, DVD recorders and liquid crystal projectors.

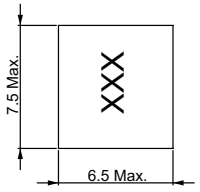
■ Characteristic Curve

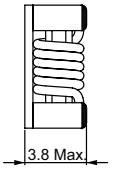
・SCM2012FH

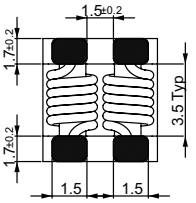


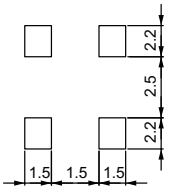
■ Mechanical Dimensions (Unit: mm)

SCM7038F









Recommended Patterns

■ Electrical Specification

Part Number.	Impedance @100MHz (Ω)		Rated Current (A)	DCR (mΩ) Max.	Rated Voltage (Vdc)	Insulation Resistance @125VDC (MΩ) Min.
	Min.	Typ.				
SCM7038F-301M-LRH	225	300	5	10	80	10
SCM7038F-501M-LRH	300	500	4	13		
SCM7038F-701M-LRH	500	700	4	15		
SCM7038F-102M-LRH	800	1020	3	17		

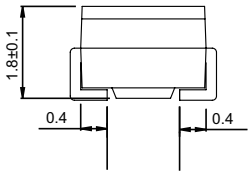
a. Tolerance : M=±20%
b. Small size, low profile.
c. Various common mode impedance from 300Ω to 1020Ω.
d. Operating Temp. : -40°C to +105°C (Including self temp. rise)
e. Storage temperature : -40°C to +105°C
f. Impedance measured using the HP4291B RF Impedance Analyzer.
g. DCR measured using the 16502 milli-ohm meter.

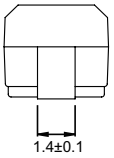
■ Applications

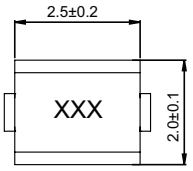
a. Use for power line noise suppression for any electronic devices.
b. Use to counter adapter/battery line noise for relatively large electronic devices such as Notebook PCs, Stand-alone Word Processors, etc.

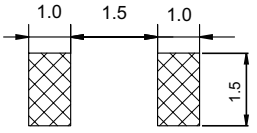
■ Mechanical Dimensions (Unit: mm)

CF252018









Recommended Patterns

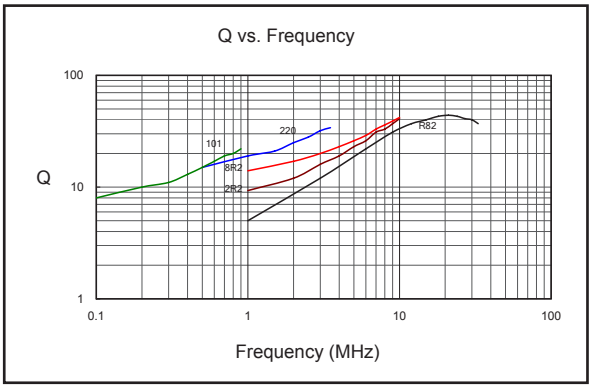
■ Electrical Specification

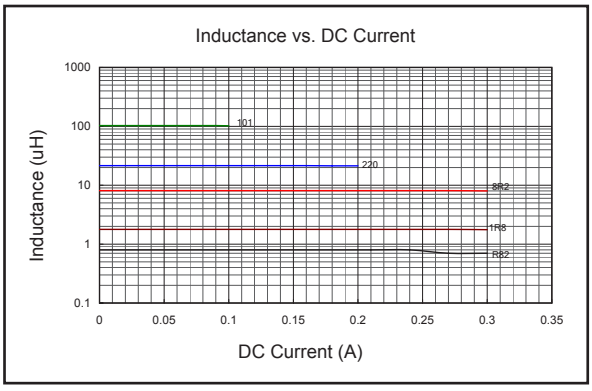
Part Number.	Inductance (uH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	DCR (Ω) Max	SRF (MHz) Min	Rated Current (mA) Max
CF252018-10N□-LRH	0.010	M,K,J	15	100	0.26	2150	530
CF252018-12N□-LRH	0.012	M,K,J	15	100	0.27	2050	500
CF252018-15N□-LRH	0.015	M,K,J	15	100	0.29	2000	480
CF252018-18N□-LRH	0.018	M,K,J	15	100	0.31	1850	450
CF252018-22N□-LRH	0.022	M,K,J	15	100	0.37	1650	420
CF252018-27N□-LRH	0.027	M,K,J	15	100	0.40	1550	410
CF252018-33N□-LRH	0.033	M,K,J	20	100	0.42	1450	400
CF252018-39N□-LRH	0.039	M,K,J	20	100	0.45	1350	380
CF252018-47N□-LRH	0.047	M,K,J	20	100	0.50	1200	360
CF252018-56N□-LRH	0.056	M,K,J	20	100	0.60	1100	340
CF252018-68N□-LRH	0.068	M,K,J	20	100	0.65	1050	320
CF252018-82N□-LRH	0.082	M,K,J	20	100	0.75	900	300
CF252018-R10□-LRH	0.10	M,K,J	20	100	0.80	800	280
CF252018-R12□-LRH	0.12	M,K,J	30	25.2	0.30	700	550
CF252018-R15□-LRH	0.15	M,K,J	30	25.2	0.35	550	500
CF252018-R18□-LRH	0.18	M,K,J	30	25.2	0.40	500	460
CF252018-R22□-LRH	0.22	M,K,J	30	25.2	0.50	450	430
CF252018-R27□-LRH	0.27	M,K,J	30	25.2	0.55	425	420
CF252018-R33□-LRH	0.33	M,K,J	30	25.2	0.60	400	400
CF252018-R39□-LRH	0.39	M,K,J	30	25.2	0.65	375	375
CF252018-R47□-LRH	0.47	M,K,J	30	25.2	0.68	350	350
CF252018-R56□-LRH	0.56	M,K,J	30	25.2	0.75	325	325
CF252018-R68□-LRH	0.68	M,K,J	30	25.2	0.85	300	300
CF252018-R82□-LRH	0.82	M,K,J	30	25.2	1.00	260	260
CF252018-1R0□-LRH	1.0	K,J	30	7.96	1.10	245	245
CF252018-1R2□-LRH	1.2	K,J	30	7.96	1.20	230	230
CF252018-1R5□-LRH	1.5	K,J	30	7.96	1.30	182	220
CF252018-1R8□-LRH	1.8	K,J	30	7.96	1.45	135	210
CF252018-2R2□-LRH	2.2	K,J	30	7.96	1.55	105	200
CF252018-2R7□-LRH	2.7	K,J	30	7.96	1.70	70	195
CF252018-3R3□-LRH	3.3	K,J	30	7.96	1.90	55	185
CF252018-3R9□-LRH	3.9	K,J	30	7.96	2.10	48	180
CF252018-4R7□-LRH	4.7	K,J	30	7.96	2.30	43	175
CF252018-5R6□-LRH	5.6	K,J	25	7.96	2.50	42	170
CF252018-6R8□-LRH	6.8	K,J	25	7.96	2.70	39	165
CF252018-8R2□-LRH	8.2	K,J	25	7.96	3.05	36	160
CF252018-100□-LRH	10.0	K,J	25	2.52	3.50	33	155
CF252018-120□-LRH	12.0	K,J	25	2.52	3.80	30	150
CF252018-150□-LRH	15.0	K,J	25	2.52	4.40	26	140
CF252018-180□-LRH	18.0	K,J	25	2.52	4.80	24	130
CF252018-220□-LRH	22.0	K,J	25	2.52	5.50	22	125
CF252018-270□-LRH	27.0	K,J	25	2.52	6.30	21	115
CF252018-330□-LRH	33.0	K,J	25	2.52	7.10	20	110
CF252018-390□-LRH	39.0	K,J	20	2.52	9.50	18	90
CF252018-470□-LRH	47.0	K,J	20	2.52	11.10	17	80
CF252018-560□-LRH	56.0	K,J	20	2.52	12.10	16	75
CF252018-680□-LRH	68.0	K,J	20	2.52	16.60	15	70
CF252018-820□-LRH	82.0	K,J	20	2.52	19.00	13	66
CF252018-101□-LRH	100.0	K,J	15	0.796	21.00	12	60

a. Tolerance : M=±20% ; K=±10% ; J=±5%.
b. Operating Temperature Range : -40°C to +85°C
c. Storage Temperature Range : -40°C to +85°C
d. For 20°C Temperature Rise.
e. Inductance & Q measured using the HP4285A.
f. SRF measured using the HP8753Eor HP4291B
g. DCR measured using the 16502 milli-ohm meter.
h. Resistance to solder heat: 260°C for 10 seconds.

■ Characteristic Curve

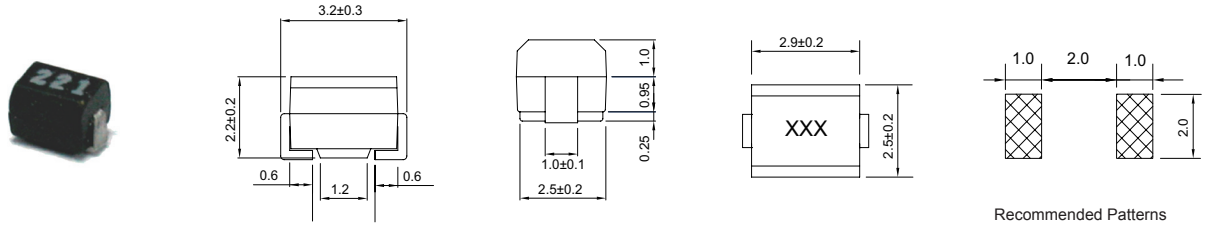
・CF252018





■ Mechanical Dimensions (Unit: mm)

CF322522



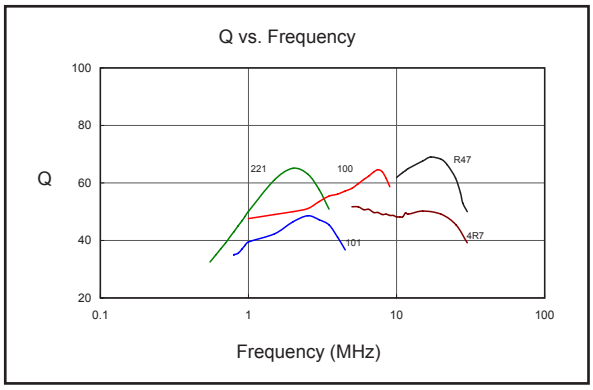
■ Electrical Specification

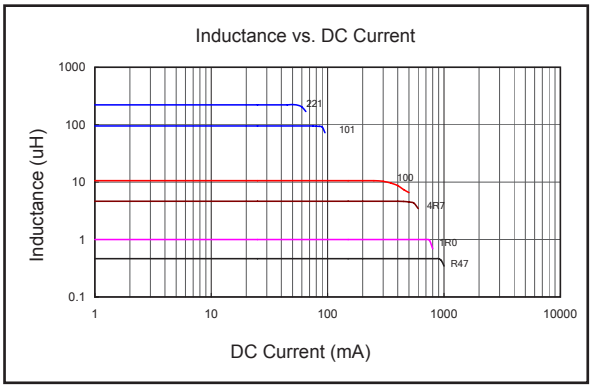
Part Number.	Inductance (uH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	DCR (Ω) Max	SRF (MHz) Min	Rated Current (mA) Max
CF322522-R12□-LRH	0.12	M,K	30	25.2/0.1V	0.22	500	450
CF322522-R15□-LRH	0.15	M,K	30	25.2/0.1V	0.25	450	450
CF322522-R18□-LRH	0.18	M,K	30	25.2/0.1V	0.28	400	450
CF322522-R22□-LRH	0.22	M,K	30	25.2/0.1V	0.32	350	450
CF322522-R27□-LRH	0.27	M,K	30	25.2/0.1V	0.36	320	450
CF322522-R33□-LRH	0.33	M,K	30	25.2/0.1V	0.40	300	450
CF322522-R39□-LRH	0.39	M,K	30	25.2/0.1V	0.45	250	450
CF322522-R47□-LRH	0.47	M,K	30	25.2/0.1V	0.50	220	450
CF322522-R56□-LRH	0.56	M,K	30	25.2/0.1V	0.55	180	450
CF322522-R68□-LRH	0.68	M,K	30	25.2/0.1V	0.60	160	450
CF322522-R82□-LRH	0.82	M,K	30	25.2/0.1V	0.65	140	450
CF322522-1R0□-LRH	1.0	M,K	30	7.96/0.1V	0.70	120	400
CF322522-1R2□-LRH	1.2	M,K	30	7.96/0.1V	0.75	100	390
CF322522-1R5□-LRH	1.5	M,K	30	7.96/0.1V	0.85	85	370
CF322522-1R8□-LRH	1.8	M,K	30	7.96/0.1V	0.90	80	350
CF322522-2R2□-LRH	2.2	M,K	30	7.96/0.1V	1.00	75	320
CF322522-2R7□-LRH	2.7	M,K	30	7.96/0.1V	1.10	70	290
CF322522-3R3□-LRH	3.3	K,J	30	7.96/0.1V	1.20	60	260
CF322522-3R9□-LRH	3.9	K,J	30	7.96/0.1V	1.30	55	250
CF322522-4R7□-LRH	4.7	K,J	30	7.96/0.1V	1.50	50	220
CF322522-5R6□-LRH	5.6	K,J	30	7.96/0.1V	1.60	47	200
CF322522-6R8□-LRH	6.8	K,J	30	7.96/0.1V	1.80	43	180
CF322522-8R2□-LRH	8.2	K,J	30	7.96/0.1V	2.00	40	170
CF322522-100□-LRH	10.0	K,J	30	2.52/0.1V	2.10	36	150
CF322522-120□-LRH	12.0	K,J	30	2.52/0.1V	2.50	33	140
CF322522-150□-LRH	15.0	K,J	30	2.52/0.1V	2.80	28	130
CF322522-180□-LRH	18.0	K,J	30	2.52/0.1V	3.30	25	120
CF322522-220□-LRH	22.0	K,J	30	2.52/0.1V	3.70	23	110
CF322522-270□-LRH	27.0	K,J	30	2.52/0.1V	5.00	18	80
CF322522-330□-LRH	33.0	K,J	30	2.52/0.1V	5.60	17	70
CF322522-390□-LRH	39.0	K,J	30	2.52/0.1V	6.40	16	65
CF322522-470□-LRH	47.0	K,J	30	2.52/0.1V	7.00	15	60
CF322522-560□-LRH	56.0	K,J	30	2.52/0.1V	8.00	13	55
CF322522-680□-LRH	68.0	K,J	30	2.52/0.1V	9.00	12	50
CF322522-820□-LRH	82.0	K,J	30	2.52/0.1V	10.0	11	45
CF322522-101□-LRH	100	K,J	20	0.796/0.1V	11.0	10	40
CF322522-121□-LRH	120	K,J	20	0.796/0.1V	12.0	10	70
CF322522-151□-LRH	150	K,J	20	0.796/0.1V	15.0	8	65
CF322522-181□-LRH	180	K,J	20	0.796/0.1V	17.0	7	60
CF322522-221□-LRH	220	K,J	20	0.796/0.1V	21.0	7	50
CF322522-271□-LRH	270	K,J	20	0.796/0.1V	28.0	6	45
CF322522-331□-LRH	330	K,J	20	0.796/0.1V	34.0	5	40

a. Tolerance : M=±20% ; L=±15%; K=±10% ; J=±5%
b. Operating Temperature Range: -25°C to +100°C
c. Storage Temperature Range: -40°C to +100°C
d. For 20°C Temperature Rise.
e. Ambient temperature : 80°C Max.
f. Rated Current: Current cause inductance drop within 10% from 0°C to 50°C.
g. Resistance to solder heat : 260°C for 10 seconds.
h. Inductance & Q measured using the HP4285A.
i. SRF measured using the HP8753E or HP4291B.
j. DCR measured using the 16502 milli-ohm meter.

■ Characteristic Curve

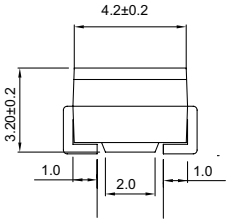
・CF322522

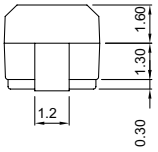


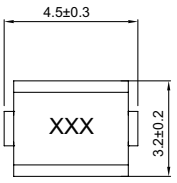


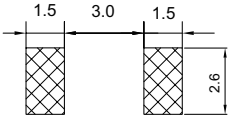
■ Mechanical Dimensions (Unit: mm)

CF453232









Recommended Patterns

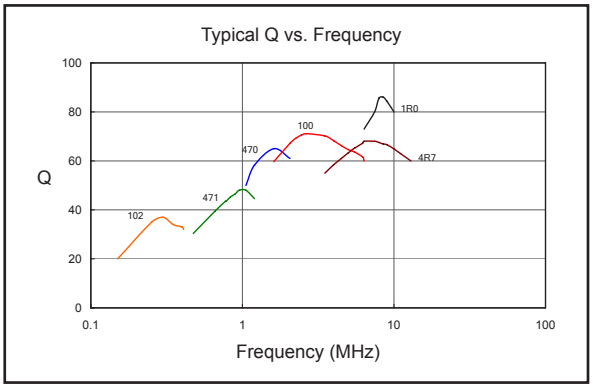
■ Electrical Specification

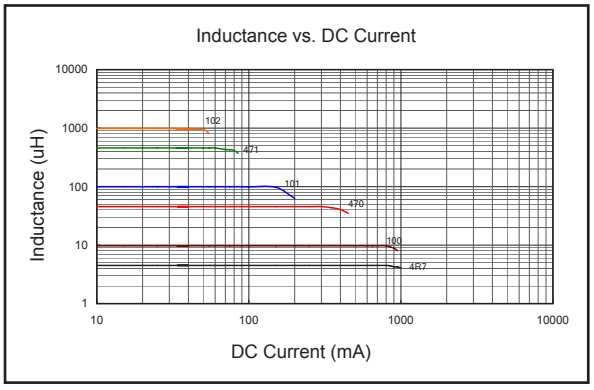
Part Number.	Inductance (uH)	Inductance Tolerance	Q (Min)	Test Freq. (MHz)	DCR (Ω) Max	SRF (MHz) Min	Rated Current (mA) Max
CF453232-R10□-LRH	0.10	M,K	35	25.2	0.18	300	800
CF453232-R12□-LRH	0.12	M,K	35	25.2	0.20	280	770
CF453232-R15□-LRH	0.15	M,K	35	25.2	0.22	250	730
CF453232-R18□-LRH	0.18	M,K	35	25.2	0.24	220	700
CF453232-R22□-LRH	0.22	M,K	40	25.2	0.25	200	665
CF453232-R27□-LRH	0.27	M,K	40	25.2	0.26	180	635
CF453232-R33□-LRH	0.33	M,K	40	25.2	0.28	165	605
CF453232-R39□-LRH	0.39	M,K	40	25.2	0.30	150	575
CF453232-R47□-LRH	0.47	M,K	40	25.2	0.32	145	545
CF453232-R56□-LRH	0.56	M,K	40	25.2	0.36	140	520
CF453232-R68□-LRH	0.68	M,K	40	25.2	0.40	135	500
CF453232-R82□-LRH	0.82	M,K	40	25.2	0.45	130	475
CF453232-1R0□-LRH	1.0	K,J	50	7.96	0.50	100	450
CF453232-1R2□-LRH	1.2	K,J	50	7.96	0.55	80	430
CF453232-1R5□-LRH	1.5	K,J	50	7.96	0.60	70	410
CF453232-1R8□-LRH	1.8	K,J	50	7.96	0.65	60	390
CF453232-2R2□-LRH	2.2	K,J	50	7.96	0.70	55	380
CF453232-2R7□-LRH	2.7	K,J	50	7.96	0.75	50	370
CF453232-3R3□-LRH	3.3	K,J	50	7.96	0.80	45	355
CF453232-3R9□-LRH	3.9	K,J	50	7.96	0.90	40	330
CF453232-4R7□-LRH	4.7	K,J	50	7.96	1.00	35	315
CF453232-5R6□-LRH	5.6	K,J	50	7.96	1.10	33	300
CF453232-6R8□-LRH	6.8	K,J	50	7.96	1.20	27	285
CF453232-8R2□-LRH	8.2	K,J	50	7.96	1.40	25	270
CF453232-100□-LRH	10	K,J	50	2.52	1.60	20	250
CF453232-120□-LRH	12	K,J	50	2.52	2.00	18	225
CF453232-150□-LRH	15	K,J	50	2.52	2.50	17	200
CF453232-180□-LRH	18	K,J	50	2.52	2.80	15	190
CF453232-220□-LRH	22	K,J	50	2.52	3.20	13	180
CF453232-270□-LRH	27	K,J	50	2.52	3.60	12	170
CF453232-330□-LRH	33	K,J	50	2.52	4.00	11	160
CF453232-390□-LRH	39	K,J	50	2.52	4.50	10	150
CF453232-470□-LRH	47	K,J	50	2.52	5.00	10	140
CF453232-560□-LRH	56	K,J	50	2.52	5.50	9.0	135
CF453232-680□-LRH	68	K,J	50	2.52	6.00	9.0	130
CF453232-820□-LRH	82	K,J	50	2.52	7.00	8.0	120
CF453232-101□-LRH	100	K,J	40	0.796	8.00	8.0	110
CF453232-121□-LRH	120	K,J	40	0.796	8.00	6.0	110
CF453232-151□-LRH	150	K,J	40	0.796	9.00	5.0	105
CF453232-181□-LRH	180	K,J	40	0.796	9.50	5.0	102
CF453232-221□-LRH	220	K,J	40	0.796	10.00	4.0	100
CF453232-271□-LRH	270	K,J	40	0.796	12.00	4.0	92
CF453232-331□-LRH	330	K,J	40	0.796	14.00	3.5	85
CF453232-391□-LRH	390	K,J	40	0.796	18.00	3.0	80
CF453232-471□-LRH	470	K,J	40	0.796	26.00	3.0	62
CF453232-561□-LRH	560	K,J	30	0.796	30.00	3.0	50
CF453232-681□-LRH	680	K,J	30	0.796	30.00	3.0	50
CF453232-821□-LRH	820	K,J	30	0.796	35.00	2.5	30
CF453232-102□-LRH	1000	K,J	20	0.252	40.00	2.5	30

a. Tolerance : M=±20% ; K=±10% ; J=±5%.
b. Operating Temperature Range: -25°C to +100°C
c. Storage Temperature Range: -40°C to +100°C
d. For 20°C Temperature Rise.
e. Ambient temperature : 80°C Max.
f. Rated Current: Current cause inductance drop within 10% from 0°C to 50°C.
g. Resistance to solder heat : 260°C for 10 seconds.
h. Inductance & Q measured using the HP4285A.
i. SRF measured using the HP8753E°C or HP4291B.
j. DCR measured using the 16502 milli-ohm meter.

■ Characteristic Curve

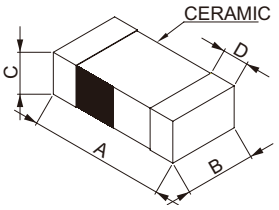
・CF453232

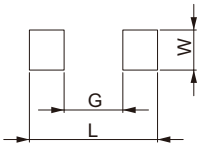




■ Mechanical Dimensions (Unit: mm)

TF





Recommended Patterns

TYPE	A	B	C	D	L	W	G
100505 (0402)	1.0±0.1 (0.040±0.004)	0.5±0.1 (0.020±0.004)	0.5±0.1 (0.020±0.004)	0.1 (MIN.) (0.004)	1.4 (0.055)	0.5 (0.020)	0.5 (0.020)
160808 (0603)	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.3±0.2 (0.012±0.008)	2.1 (0.083)	0.7 (0.028)	0.7 (0.028)

■ Part Number Key

TF	□□□□□□	-	□□□	□	-	□□□
(1)	(A) (B) (C)		(3)	(4)		(5)
	(2)					

(1) Product Symbol : Multilayer Chip Inductors
(2) Dimensions : Length (A) x Width (B) x Thickness (C)
(3) Inductance
(4) Tolerance
(5) Internal code

■ Features

» Tolerance: J : ±5%, K : ±10%, S : ±0.3nH

» The product's material: Ceramic.

» No cross coupling between inductors due to magnetic shield. Ideal for high-density installation.

» The completely monolithic structure gives high reliability and allows high SRF.

» Operating temperature range: -40°C to +125°C.

» Monolithic structure for highly reliable surface mount applications.

» Excellent solderability and high heat resistance for either flow or reflow soldering.

» Superior Q characteristics guaranteed over the wide frequency allow high frequency application.

■ Electrical Specification: 1005 TYPE

Part Number	Inductance at 100MHz (nH)	Inductance Tolerance	Q (Min.)	SRF (MHz) Min.	DC Resistance (Ω) Max.	Rated Current (mA) Max.
TF100505-1N0S-LRH	1.0	S	8	10000	0.12	300
TF100505-1N2S-LRH	1.2	S	8	10000	0.12	300
TF100505-1N5S-LRH	1.5	S	8	6000	0.13	300
TF100505-1N8S-LRH	1.8	S	8	6000	0.14	300
TF100505-2N2S-LRH	2.2	S	8	6000	0.16	300
TF100505-2N7S-LRH	2.7	S	8	6000	0.17	300
TF100505-3N3□-LRH	3.3	S, K	8	6000	0.19	300
TF100505-3N9□-LRH	3.9	S, K	8	4000	0.22	300
TF100505-4N7□-LRH	4.7	S, K	8	4000	0.24	300
TF100505-5N6□-LRH	5.6	S, K	8	4000	0.27	300
TF100505-6N8□-LRH	6.8	J, K	8	3900	0.32	250
TF100505-8N2□-LRH	8.2	J, K	8	3600	0.40	250
TF100505-10N□-LRH	10.0	J, K	8	3200	0.45	250
TF100505-12N□-LRH	12.0	J, K	8	2700	0.50	250
TF100505-15N□-LRH	15.0	J, K	8	2300	0.60	250
TF100505-18N□-LRH	18.0	J,K	8	2100	0.65	200
TF100505-22N□-LRH	22.0	J,K	8	1900	0.80	200
TF100505-27N□-LRH	27.0	J,K	8	1600	0.90	200
TF100505-33N□-LRH	33.0	J,K	8	1300	1.00	200
TF100505-39N□-LRH	39.0	J, K	8	1200	1.20	150
TF100505-47N□-LRH	47.0	J, K	8	1000	1.30	150
TF100505-56N□-LRH	56.0	J,K	8	1300	2.00	150
TF100505-68N□-LRH	68.0	J,K	8	1300	2.20	100
TF100505-82N□-LRH	82.0	J,K	8	1300	2.50	100
TF100505-R10□-LRH	100.0	J, K	8	1300	2.50	100
TF100505-R12□-LRH	120.0	J, K	8	1300	2.50	100

□ : Inductance tolerance (J : ±5%, K : ±10%, S : ±0.3nH)

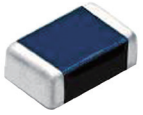
■ Electrical Specification: 1608 TYPE

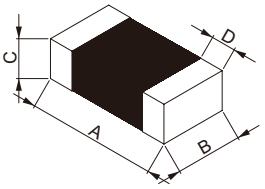
Part Number	Inductance at 100MHz (nH)	Inductance Tolerance	Q (Min.)	SRF (MHz) Min.	DC Resistance (Ω) Max.	Rated Current (mA) Max.
TF160808-1N0S-LRH	1.0	S	8	10000	0.10	300
TF160808-1N2S-LRH	1.2	S	8	10000	0.10	300
TF160808-1N5S-LRH	1.5	S	8	6000	0.10	300
TF160808-1N8S-LRH	1.8	S	8	6000	0.15	300
TF160808-2N2S-LRH	2.2	S	8	6000	0.15	300
TF160808-2N7S-LRH	2.7	S	8	6000	0.20	300
TF160808-3N3□-LRH	3.3	S, K	8	4000	0.25	300
TF160808-3N9□-LRH	3.9	S, K	8	3500	0.25	300
TF160808-4N7□-LRH	4.7	S, K	8	3500	0.30	300
TF160808-5N6□-LRH	5.6	S, K	8	3500	0.30	300
TF160808-6N8□-LRH	6.8	J, K	8	3000	0.35	300
TF160808-8N2□-LRH	8.2	J, K	8	3000	0.40	300
TF160808-10N□-LRH	10.0	J, K	8	2800	0.45	300
TF160808-12N□-LRH	12.0	J, K	8	2000	0.50	300
TF160808-15N□-LRH	15.0	J, K	8	2000	0.55	300
TF160808-18N□-LRH	18.0	J, K	10	1800	0.60	300
TF160808-22N□-LRH	22.0	J, K	10	1800	0.65	300
TF160808-27N□-LRH	27.0	J, K	10	1500	0.70	300
TF160808-33N□-LRH	33.0	J, K	10	1200	0.80	300
TF160808-39N□-LRH	39.0	J, K	10	1100	0.85	300
TF160808-47N□-LRH	47.0	J, K	12	900	1.00	300
TF160808-56N□-LRH	56.0	J, K	12	900	1.10	300
TF160808-68N□-LRH	68.0	J, K	12	700	1.20	300
TF160808-82N□-LRH	82.0	J, K	12	600	1.80	300
TF160808-R10□-LRH	100.0	J, K	12	600	2.00	300

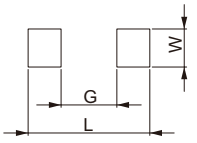
□ : Inductance tolerance (J : ±5%, K : ±10%, S : ±0.3nH)

■ Mechanical Dimensions (Unit: mm)

FL







Recommended Patterns

TYPE	A	B	C	D	L	W	G
160808	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.3±0.2 (0.012±0.008)	2.1 (0.083)	0.7 (0.028)	0.7 (0.028)
201209	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)	2.6 (0.102)	1.0 (0.039)	1.0 (0.039)
201212	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	1.2±0.2 (0.047±0.008)	0.5±0.3 (0.020±0.012)	2.6 (0.102)	1.0 (0.039)	1.0 (0.039)

■ Part Number Key

FL	□□□□□□	-	□□□	□	-	□□□
(1)	(A) (B) (C)		(3)	(4)		(5)
	(2)					

(1) Product Symbol : Multilayer Chip Inductors
(2) Dimensions : Length (A) x Width (B) x Thickness (C)
(3) Inductance
(4) Tolerance
(5) Internal code

■ Features

» Tolerance: J : ±5%, K : ±10%, M : ±20%

» The product's material: Ferrite.

» No cross coupling between inductors due to magnetic shield. Ideal for high-density installation.

» The completely monolithic structure gives high reliability and allows high SRF.

» Operating temperature range: -40°C to +125°C .

» Monolithic structure for highly reliable surface mount applications.

» Excellent solderability and high heat resistance for either flow or reflow soldering.

» Superior Q characteristics guaranteed over the wide frequency allow high frequency application.

■ Electrical Specification: 1608 TYPE

Part Number	Inductance (μH)	Q (Min.)	Test Frequency (MHz)	SRF (MHz) Min.	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FL160808-47NM-LRH	0.047±20%	10	50	260	0.30	50
FL160808-68NM-LRH	0.068±20%	10	50	250	0.30	50
FL160808-R10K-LRH	0.10±10%	15	25	240	0.50	50
FL160808-R12K-LRH	0.12±10%	15	25	205	0.50	50
FL160808-R15K-LRH	0.15±10%	15	25	180	0.60	50
FL160808-R18K-LRH	0.18±10%	15	25	165	0.60	50
FL160808-R22K-LRH	0.22±10%	15	25	150	0.80	50
FL160808-R27K-LRH	0.27±10%	15	25	136	0.80	50
FL160808-R33K-LRH	0.33±10%	15	25	125	0.85	35
FL160808-R39K-LRH	0.39±10%	15	25	110	1.00	35

Part Number	Inductance (μH)	Q (Min.)	Test Frequency (MHz)	SRF (MHz) Min.	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FL160808-R47K-LRH	0.47±10%	15	25	105	1.35	35
FL160808-R56K-LRH	0.56±10%	15	25	95	1.55	35
FL160808-R68K-LRH	0.68±10%	15	25	90	1.70	35
FL160808-R82K-LRH	0.82±10%	15	25	85	2.10	35
FL160808-1R0K-LRH	1.0±10%	35	10	75	0.60	25
FL160808-1R2K-LRH	1.2±10%	35	10	65	0.80	25
FL160808-1R5K-LRH	1.5±10%	35	10	60	0.80	25
FL160808-1R8K-LRH	1.8±10%	35	10	55	0.95	25
FL160808-2R2K-LRH	2.2±10%	35	10	50	1.15	15
FL160808-2R7K-LRH	2.7±10%	35	10	45	1.35	15
FL160808-3R3K-LRH	3.3±10%	35	10	40	1.55	15
FL160808-3R9K-LRH	3.9±10%	35	10	35	1.70	15
FL160808-4R7K-LRH	4.7±10%	35	10	33	2.10	15
FL160808-5R6K-LRH	5.6±10%	35	4	22	1.55	5
FL160808-6R8K-LRH	6.8±10%	35	4	20	1.70	5
FL160808-8R2K-LRH	8.2±10%	35	4	18	2.10	5
FL160808-100K-LRH	10±10%	30	2	17	1.85	3
FL160808-120K-LRH	12±10%	30	2	15	2.10	3

□ : Inductance tolerance (J : ±5%, K : ±10%, S : ±0.3nH)

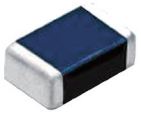
■ Electrical Specification: 2012 TYPE

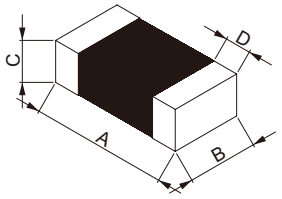
Part Number	Inductance (μH)	Q (Min.)	Test Frequency (MHz)	SRF (MHz) Min.	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FL201209-47NM-LRH	0.047±20%	15	50	320	0.20	300
FL201209-68NM-LRH	0.068±20%	15	50	280	0.20	300
FL201209-R10K-LRH	0.10±10%	20	25	235	0.30	250
FL201209-R12K-LRH	0.12±10%	20	25	220	0.30	250
FL201209-R15K-LRH	0.15±10%	20	25	200	0.40	250
FL201209-R18K-LRH	0.18±10%	20	25	185	0.40	250
FL201209-R22K-LRH	0.22±10%	20	25	170	0.50	250
FL201209-R27K-LRH	0.27±10%	20	25	150	0.50	250
FL201209-R33K-LRH	0.33±10%	20	25	145	0.55	250
FL201209-R39K-LRH	0.39±10%	25	25	135	0.65	200
FL201209-R47K-LRH	0.47±10%	25	25	125	0.65	200
FL201209-R56K-LRH	0.56±10%	25	25	115	0.75	150
FL201209-R68K-LRH	0.68±10%	25	25	105	0.80	150
FL201209-R82K-LRH	0.82±10%	25	25	100	1.00	150
FL201209-1R0K-LRH	1.0±10%	45	10	75	0.40	50
FL201209-1R2K-LRH	1.2±10%	45	10	65	0.50	50
FL201209-1R5K-LRH	1.5±10%	45	10	60	0.50	50
FL201209-1R8K-LRH	1.8±10%	45	10	55	0.60	50
FL201209-2R2K-LRH	2.2±10%	45	10	50	0.65	30
FL201212-2R7K-LRH	2.7±10%	45	10	45	0.75	30
FL201212-3R3K-LRH	3.3±10%	45	10	41	0.80	30
FL201212-3R9K-LRH	3.9±10%	45	10	38	0.90	30
FL201212-4R7K-LRH	4.7±10%	45	10	35	1.00	30
FL201212-5R6K-LRH	5.6±10%	50	4	32	0.90	15
FL201212-6R8K-LRH	6.8±10%	50	4	29	1.00	15
FL201212-8R2K-LRH	8.2±10%	50	4	26	1.10	15
FL201212-100K-LRH	10±10%	50	2	24	1.15	15
FL201212-120K-LRH	12±10%	50	2	22	1.25	15
FL201212-150K-LRH	15±10%	35	1	19	0.80	5
FL201212-180K-LRH	18±10%	35	1	18	0.90	5
FL201212-220K-LRH	22±10%	35	1	16	1.10	5
FL201212-270K-LRH	27±10%	35	1	14	1.15	5
FL201212-330K-LRH	33±10%	35	1	13	1.25	5

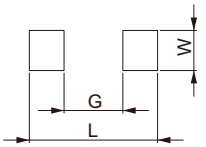
□ : Inductance tolerance (J : ±5%, K : ±10%, S : ±0.3nH)

■ Mechanical Dimensions (Unit: mm)

TI







Recommended Patterns

TYPE	A	B	C	D	L	W	G
160808	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.3±0.2 (0.012±0.008)	2.1 (0.083)	0.7 (0.028)	0.7 (0.028)
201209	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)	2.6 (0.102)	1.0 (0.039)	1.0 (0.039)
321611	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.1±0.2 (0.043±0.008)	0.5±0.3 (0.020±0.012)	4.4 (0.173)	1.4 (0.055)	2.2 (0.087)
322513	3.2±0.2 (0.126±0.008)	2.5±0.2 (0.098±0.008)	1.3±0.2 (0.051±0.008)	0.5±0.3 (0.020±0.012)	4.4 (0.173)	2.3 (0.091)	2.2 (0.087)
451616	4.5±0.2 (0.177±0.008)	1.6±0.2 (0.063±0.008)	1.6±0.2 (0.063±0.008)	0.5±0.3 (0.020±0.012)	6.0 (0.236)	1.5 (0.059)	1.5 (0.059)
453215	4.5±0.2 (0.177±0.008)	3.2±0.2 (0.126±0.008)	1.5±0.2 (0.059±0.008)	0.5±0.3 (0.020±0.012)	6.0 (0.236)	3.0 (0.118)	3.0 (0.118)

■ Part Number Key

TI	□□□□□□	□	□□□	□□□
(1)	(A) (B) (C)	(3)	(4)	(5)
	(2)			

(1) Product Symbol : Multilayer Chip Beads
(2) Dimensions: Length (A) x Width (B) x Thickness (C)
(3) Material Code : Z, U, G, B, L
(4) Impedance: a b c = a b x 10^c Ω
(5) Internal code

■ Features

» High density packaging with a pitch of 2.54 mm (0.1 inch) max. is possible. This series requires less space and has greater EMI suppression effects.
» Different types with the same shape are available.
» Excellent in physical properties, such as terminal strength, flexure strength, soldering resistance and solderability.
» Applicable to both flow and reflow soldering.
» High impedance cover wide frequency ranges.
» TI series can be used in high current circuits due to its low DC resistance.
» Operating temperature range: -40°C to +125°C.
» The products have five types of material: Material L,B,G,U,Z

■ Materials

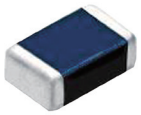
ITEM		UNIT	STANDARD VALUE				
Material Code		—	L	B	G	U	Z
Initial permeability	μiac	—	25	45	110	200	500
Maximum Permeability	μM	—	125	125	250	450	900
Saturation Flux Density at 10 Oe	Bs	Gauss	2000	2000	1700	1400	1500
Curie Temperature	Tc	°C	>200	>200	>130	>130	>100
Volume Resistivity	ρ	Ω-m	10^5	10^5	10^5	10^5	10^5
Temperature Coefficient (Inductance)		10^{-4}/°C	10	10	12	13	5
Density		g/cm^3	4.8	4.8	4.8	4.8	4.8

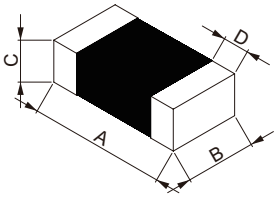
■ Electrical Specification

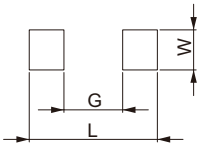
Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (A) Max.
TI160808U300	30	0.050	3.0
TI160808U600	60	0.050	3.0
TI160808U121	120	0.100	2.0
TI160808U301	300	0.150	1.5
TI160808U601	600	0.300	1.0
TI201209U110	11	0.010	6.0
TI201209U170	17	0.010	6.0
TI201209U220	22	0.010	6.0
TI201209U300	30	0.030	4.0
TI201209U600	60	0.050	3.0
TI201209U121	120	0.080	2.5
TI201209U221	220	0.100	2.0
TI201209U301	300	0.100	2.0
TI201209U601	600	0.300	1.0
TI201209B070	7	0.050	3.0
TI321611Z260	26	0.010	6.0
TI321611U310	31	0.010	6.0
TI321611U500	50	0.025	3.0
TI321611U121	120	0.080	2.5
TI321611U301	300	0.080	2.5
TI321611U601	600	0.15	1.5
TI321611G800	80	0.050	3.0
TI321611G101	100	0.050	3.0
TI321611B190	19	0.040	3.0
TI322513U300	30	0.050	3.0
TI322513U520	52	0.050	3.0
TI322513U650	65	0.030	3.0
TI451616U600	60	0.010	6.0
TI451616U750	75	0.025	3.0
TI451616U800	80	0.050	3.0
TI453215Z121	120	0.050	3.0
TI453215U700	70	0.030	6.0
TI453215U121	120	0.050	3.0

■ Mechanical Dimensions (Unit: mm)

FB







Recommended Patterns

TYPE	A	B	C	D	L	W	G
100505	1.0±0.1 (0.040±0.004)	0.5±0.1 (0.020±0.004)	0.5±0.1 (0.020±0.004)	0.1 (MIN.) (0.004)	1.4 (0.055)	0.5 (0.020)	0.5 (0.020)
160808	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.3±0.2 (0.012±0.008)	2.1 (0.083)	0.7 (0.028)	0.7 (0.028)
201209	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)	2.6 (0.102)	1.0 (0.039)	1.0 (0.039)
321611	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.1±0.2 (0.043±0.008)	0.5±0.3 (0.020±0.012)	4.4 (0.173)	1.4 (0.055)	2.2 (0.087)
322513	3.2±0.2 (0.126±0.008)	2.5±0.2 (0.098±0.008)	1.3±0.2 (0.051±0.008)	0.5±0.3 (0.020±0.012)	4.4 (0.173)	2.3 (0.091)	2.2 (0.087)
451616	4.5±0.2 (0.177±0.008)	1.6±0.2 (0.063±0.008)	1.6±0.2 (0.063±0.008)	0.5±0.3 (0.020±0.012)	6.0 (0.236)	1.5 (0.059)	1.5 (0.059)
453215	4.5±0.2 (0.177±0.008)	3.2±0.2 (0.126±0.008)	1.5±0.2 (0.059±0.008)	0.5±0.3 (0.020±0.012)	6.0 (0.236)	3.0 (0.118)	3.0 (0.118)

■ Part Number Key

FB	□□□□□□	□	□□□	-	□□□
(1)	(A) (B) (C)	(3)	(4)		(5)
	(2)				

(1) Product Symbol : Multilayer Chip Beads
(2) Dimensions: Length (A) x Width (B) x Thickness (C)
(3) Material Code : Z, U, G, B, L
(4) Impedance: a b c = a b x 10^c Ω
(5) Internal code

■ Features

» High density packaging with a pitch of 2.54 mm (0.1 inch) max. is possible. This series requires less space and has greater EMI suppression effects.
» Different types with the same shape are available.
» Excellent in physical properties, such as terminal strength, flexure strength, soldering resistance and solderability.
» Applicable to both flow and reflow soldering.
» High impedance cover wide frequency ranges.
» L material type can minimize attenuation of the signal waveform due to its sharp impedance characteristics.
» Dimensions are suitable for automatic mounting.
» Operating temperature range: -40ºC to +125ºC.
» The products have five types of material: Material L,B,G,U,Z

■ Materials

ITEM		UNIT	STANDARD VALUE				
Material Code	—	—	L	B	G	U	Z
Initial permeability	μiac	—	25	45	110	200	500
Maximum Permeability	μM	—	125	125	250	450	900
Saturation Flux Density at 10 Oe	Bs	Gauss	2000	2000	1700	1400	1500
Curie Temperature	Tc	°C	>200	>200	>130	>130	>100
Volume Resistivity	ρ	Ω-m	10^5	10^5	10^5	10^5	10^5
Temperature Coefficient (Inductance)		10^{-4}/°C	10	10	12	13	5
Density		g/cm^3	4.8	4.8	4.8	4.8	4.8

* Z Material is for applications whose blocking region is near 100 MHz.
* L material, an improvement of B material, has sharp impedance characteristics at high frequency.
* G material is for application whose signal frequency is far from the cut off region.
* Suitable for application requires low insertion loss at high frequency.
* Different materials are available for different application range.

■ Electrical Specification: 100505 TYPE

Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FB100505U300-LRH	30	0.30	500
FB100505U600-LRH	60	0.40	200
FB100505U121-LRH	120	0.50	200
FB100505U221-LRH	220	0.70	100
FB100505U301-LRH	300	0.80	100
FB100505U451-LRH	450	0.90	100
FB100505U601-LRH	600	1.00	100
FB100505U102-LRH	1000	1.50	50
FB100505Z300-LRH	30	0.30	500
FB100505Z600-LRH	60	0.40	200
FB100505Z121-LRH	120	0.50	200
FB100505Z221-LRH	220	0.70	100
FB100505Z301-LRH	300	0.80	100
FB100505Z451-LRH	450	0.90	100
FB100505Z601-LRH	600	1.00	100
FB100505G300-LRH	30	0.30	500
FB100505G600-LRH	60	0.40	200
FB100505G121-LRH	120	0.50	200
FB100505G221-LRH	220	0.70	100
FB100505G301-LRH	300	0.80	100
FB100505G451-LRH	450	0.90	100
FB100505G601-LRH	600	1.00	100
FB100505G102-LRH	1000	1.30	100
FB100505B300-LRH	30	0.40	200
FB100505B600-LRH	60	0.50	200
FB100505B121-LRH	120	0.70	100
FB100505B221-LRH	220	0.90	100
FB100505B301-LRH	300	1.00	100

FB Series

■ Electrical Specification: 160808 TYPE

Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FB160808Z600-LRH	60	0.20	300
FB160808Z800-LRH	80	0.20	300
FB160808Z121-LRH	120	0.20	200
FB160808Z221-LRH	220	0.20	200
FB160808Z301-LRH	300	0.35	200
FB160808Z451-LRH	450	0.40	250
FB160808Z601-LRH	600	0.45	200
FB160808Z102-LRH	1000	0.60	100
FB160808U090-LRH	9	0.20	500
FB160808U300-LRH	30	0.20	400
FB160808U600-LRH	60	0.20	300
FB160808U800-LRH	80	0.20	300
FB160808U121-LRH	120	0.20	200
FB160808U221-LRH	220	0.20	200
FB160808U301-LRH	300	0.35	200
FB160808U451-LRH	450	0.40	200
FB160808U601-LRH	600	0.45	200
FB160808U102-LRH	1000	0.60	100
FB160808G600-LRH	60	0.20	300
FB160808G800-LRH	80	0.20	300
FB160808G121-LRH	120	0.20	200
FB160808G221-LRH	220	0.20	200
FB160808G301-LRH	300	0.35	200
FB160808G451-LRH	450	0.40	200
FB160808G601-LRH	600	0.45	200
FB160808G102-LRH	1000	0.60	100
FB160808G152-LRH	1500	0.70	50
FB160808G202-LRH	2000	0.80	50
FB160808G252-LRH	2500	1.00	50
FB160808B050-LRH	5	0.20	600
FB160808B400-LRH	40	0.30	300
FB160808B600-LRH	60	0.30	300
FB160808B800-LRH	80	0.30	200
FB160808B121-LRH	120	0.30	200
FB160808B181-LRH	180	0.35	200
FB160808B221-LRH	220	0.40	200
FB160808B301-LRH	300	0.45	200
FB160808B601-LRH	600	0.65	200
FB160808B102-LRH	1000	0.80	50
FB160808L150-LRH	15	0.30	200
FB160808L300-LRH	30	0.30	200
FB160808L600-LRH	60	0.30	200
FB160808L800-LRH	80	0.40	150
FB160808L121-LRH	120	0.40	150
FB160808L221-LRH	220	0.45	150
FB160808L301-LRH	300	0.60	100

■ Electrical Specification: 201209 TYPE

Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FB201209Z100-LRH	10	0.15	600
FB201209Z800-LRH	80	0.15	300
FB201209Z121-LRH	120	0.25	300
FB201209Z151-LRH	150	0.25	300
FB201209Z221-LRH	220	0.30	200
FB201209Z100-LRH	10	0.15	600
FB201209Z800-LRH	80	0.15	300
FB201209Z121-LRH	120	0.25	300

Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FB201209Z151-LRH	150	0.25	300
FB201209Z221-LRH	220	0.30	200
FB201209Z301-LRH	300	0.30	200
FB201209Z501-LRH	500	0.30	200
FB201209Z601-LRH	600	0.35	200
FB201209Z102-LRH	1000	0.45	200
FB201209U110-LRH	11	0.15	600
FB201209U320-LRH	32	0.15	400
FB201209U800-LRH	80	0.15	300
FB201209U121-LRH	120	0.25	300
FB201209U151-LRH	150	0.25	300
FB201209U221-LRH	220	0.30	200
FB201209U301-LRH	300	0.30	200
FB201209U501-LRH	500	0.30	200
FB201209U601-LRH	600	0.35	200
FB201209U102-LRH	1000	0.45	200
FB201209G800-LRH	80	0.15	300
FB201209G121-LRH	120	0.25	300
FB201209G151-LRH	150	0.25	300
FB201209G221-LRH	220	0.30	200
FB201209G301-LRH	300	0.30	200
FB201209G501-LRH	500	0.30	200
FB201209G601-LRH	600	0.35	200
FB201209G102-LRH	1000	0.45	200
FB201209G152-LRH	1500	0.55	200
FB201209G202-LRH	2000	0.60	200
FB201209G222-LRH	2200	0.80	200
FB201209G272-LRH	2700	0.80	200
FB201209B070-LRH	7	0.15	600
FB201209B400-LRH	40	0.20	300
FB201209B800-LRH	80	0.20	300
FB201209B121-LRH	120	0.25	200
FB201209B221-LRH	220	0.35	200
FB201209B301-LRH	300	0.40	200
FB201209B601-LRH	600	0.50	200
FB201209B102-LRH	1000	0.60	200

■ Electrical Specification: 321611 TYPE

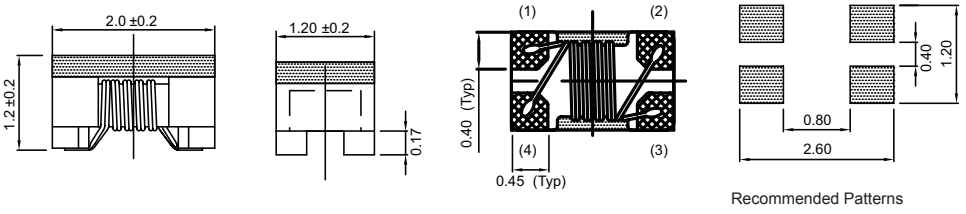
Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FB321611Z260-LRH	26	0.20	500
FB321611Z151-LRH	150	0.30	300
FB321611Z301-LRH	300	0.30	300
FB321611Z601-LRH	600	0.30	200
FB321611Z122-LRH	1200 (at 50 MHz)	0.50	100
FB321611Z202-LRH	2000 (at 30 MHz)	0.60	100
FB321611U310-LRH	31	0.20	500
FB321611U600-LRH	60	0.30	400
FB321611U900-LRH	90	0.30	300
FB321611U151-LRH	150	0.30	300
FB321611U301-LRH	300	0.30	300
FB321611U601-LRH	600	0.30	200
FB321611U122-LRH	1200 (at 50 MHz)	0.50	100
FB321611U152-LRH	1500 (at 50 MHz)	0.50	100
FB321611U202-LRH	2000 (at 30 MHz)	0.60	100
FB321611G151-LRH	150	0.30	300
FB321611G301-LRH	300	0.30	300
FB321611G601-LRH	600	0.30	200
FB321611B190-LRH	19	0.20	500

■ Electrical Specification: 322513, 451616, 453225 TYPE

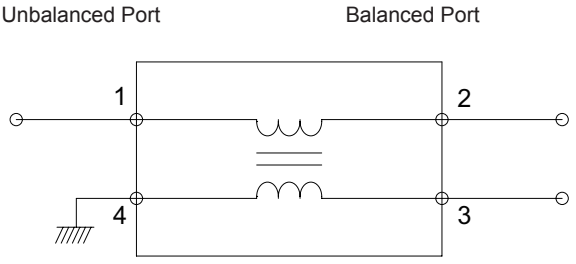
Part Number	Impedance At 100MHz (Ω) ±25%	DC Resistance (Ω) Max.	Rated Current (mA) Max.
FB322513Z520-LRH	52	0.30	400
FB322513U600-LRH	60	0.30	400
FB322513U900-LRH	90	0.30	300
FB322513B310-LRH	31	0.30	400
FB451616Z800-LRH	80	0.10	500
FB451616Z151-LRH	150	0.30	300
FB451616U600-LRH	60	0.10	500
FB451616U151-LRH	150	0.30	300
FB453215Z121-LRH	120	0.30	300
FB453215U131-LRH	130	0.30	300
FB453215B700-LRH	70	0.30	300

■ Mechanical Dimensions (Unit: mm)

BIH2012OB



■ Test Circuit



■ Features

» Input impedance is 75Ω.
» Impedance ration is 1:1
» Frequency band width is 50MHz to 1.0GHz (IL= 1.0dB typ.)
» RoHs compliant and Halogen Free.

■ Applications

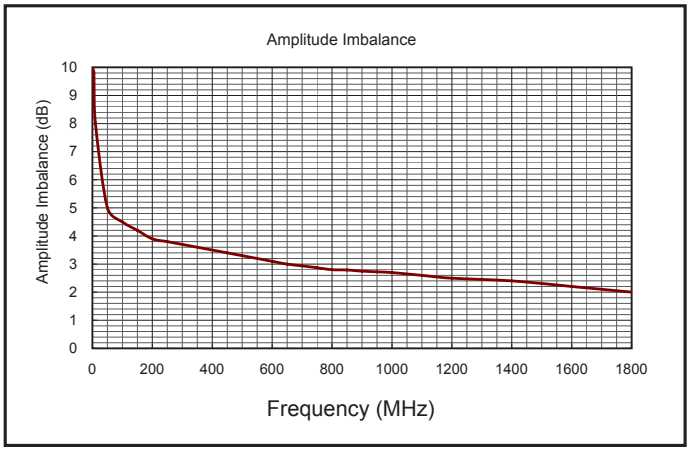
» Tuner for TV.
» Mobile devices.
» Power divider for STB and Tuner.

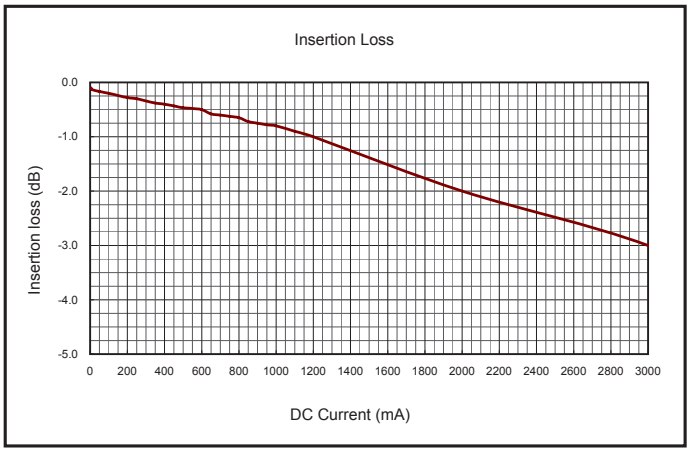
■ Electrical Specification

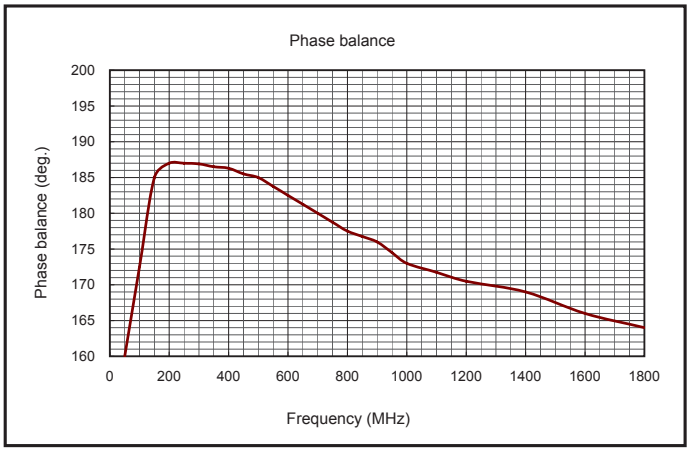
Part Number	UB/B Impedance (Ω)	Withstand Voltage (DCV)	Rated Voltage (DCV)	DCR (Ω) Max.	Rated Current (mA)	Frequency Range (MHz)	Insertion Loss at Freq.Range (Max.)
BIH2012OB-001H	75/75	125	50	0.35	330	50MHz to 1000MHz	1.0dB

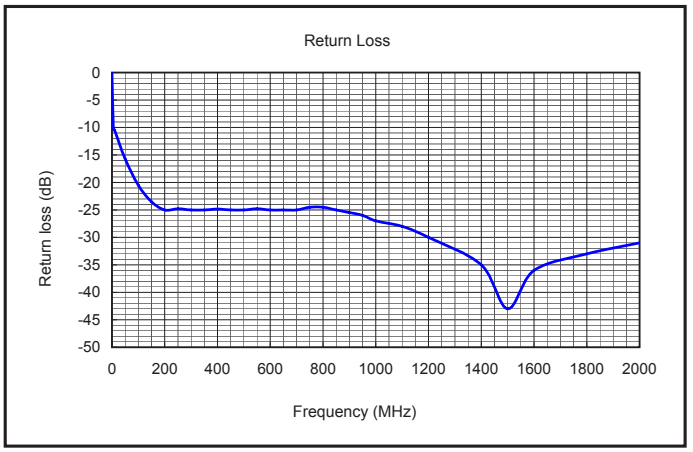
■ Characteristic Curve

・BIH2012OB



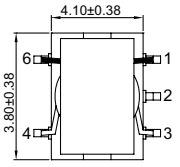


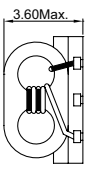


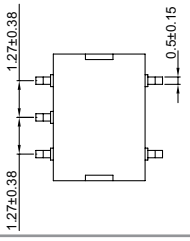


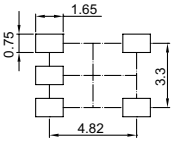
■ Mechanical Dimensions (Unit: mm)

BIY3520AB



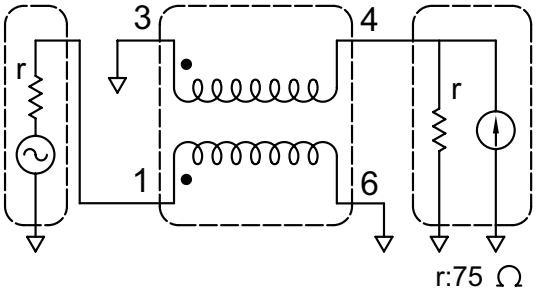






Recommended Patterns

■ Test Circuit



Test Equipment : WILTRON 5411A

■ Features

» Base pin terminal treated, allowing mounting ‘as is’ on a PCB.
» This item can be custom designed to meet customer requirements.

■ Applications

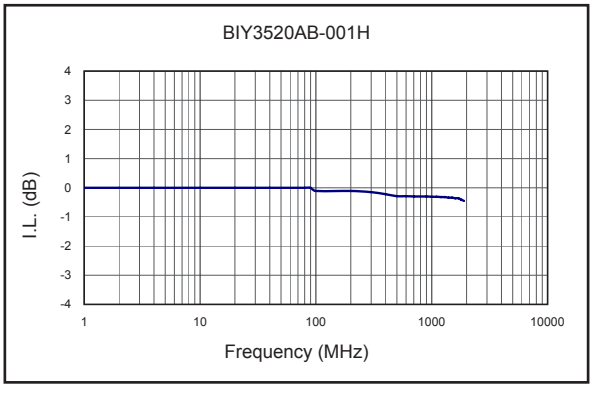
» Double balance mixers, broad-band transformers, Impedance Transformers, etc.

■ Electrical Specification

Part Number	Winding Turns	Insertion Loss 1 dB Max.
BIY3520AB-001H	4.5 Ts	@500~1800 MHz

■ Characteristic Curve: Insertion Loss

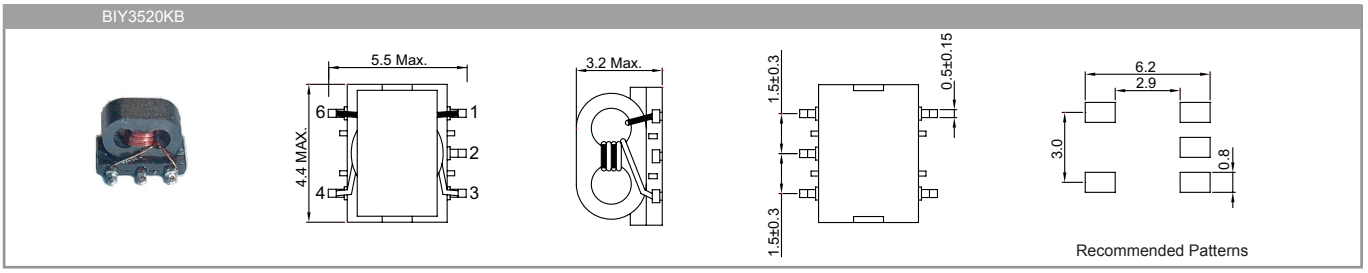
・BIY3520AB



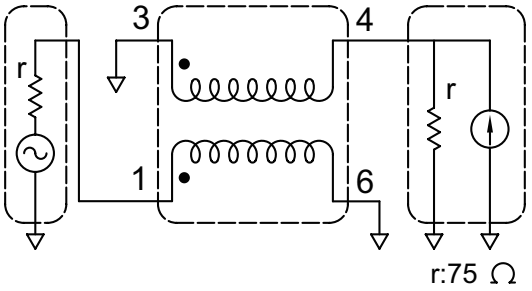
SMD BALUN TRANSFORMER

BIY3520KB Series

■ Mechanical Dimensions (Unit: mm)



■ Test Circuit



Test Equipment : WILTRON 5411A

■ Features

» Base pin terminal treated, allowing mounting ‘as is’ on a PCB.

» This item can be custom designed to meet customer requirements.

■ Applications

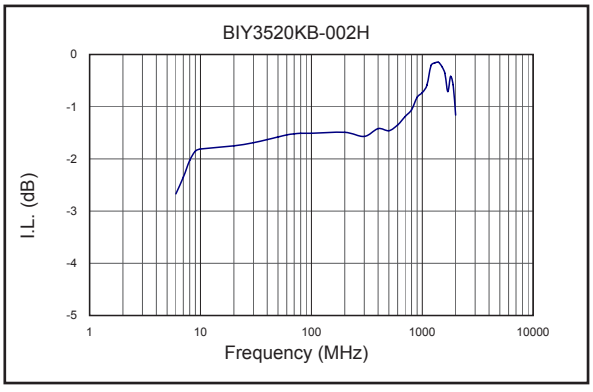
» Double balance mixers, broad-band transformers, Impedance Transformers,etc.

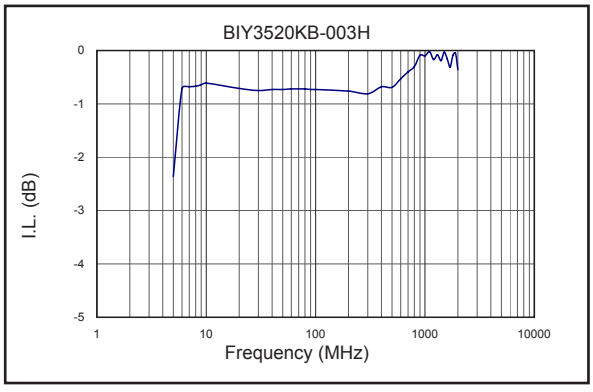
■ Electrical Specification

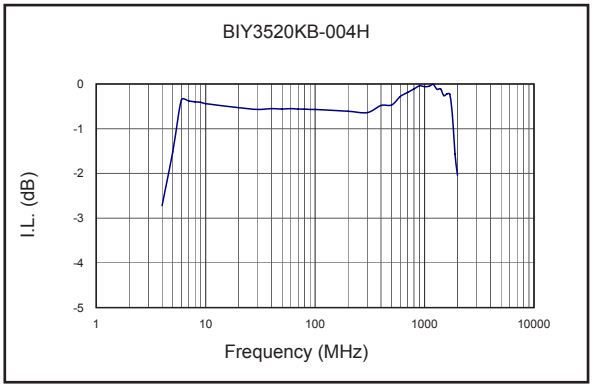
Part Number	Winding Turns	Insertion Loss 2.5 dB Max.
BIY3520KB-002H	2.5Ts	@8~2000MHz
BIY3520KB-003H	3.5Ts	@6~2000MHz
BIY3520KB-004H	4.5Ts	@5~1900MHz
BIY3520KB-005H	5.5Ts	@3~1700MHz

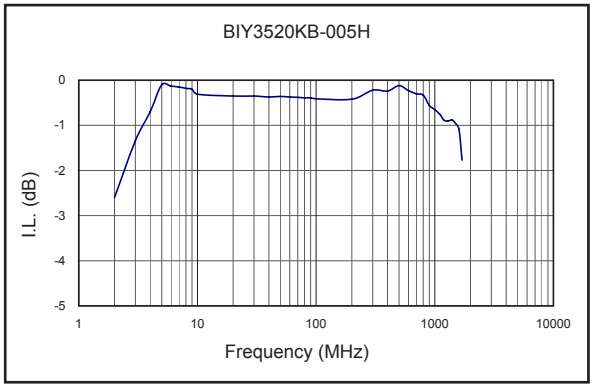
■ Characteristic Curve: Insertion Loss

・BIY3520KB







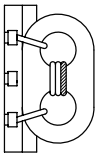


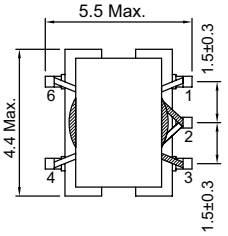
SMD BALUN TRANSFORMER

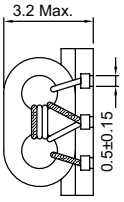
BIY3520KM Series

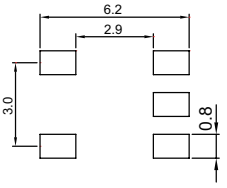
■ Mechanical Dimensions (Unit: mm)

BIY3520KM



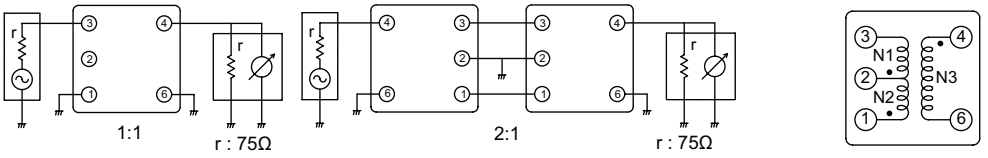






Recommended Patterns

■ Test Circuit



Test Equipment : WILTRON 5411A

■ Features

» Base pin terminal treated, allowing mounting 'as is' on a PCB.

» This item can be custom designed to meet customer requirements.

■ Applications

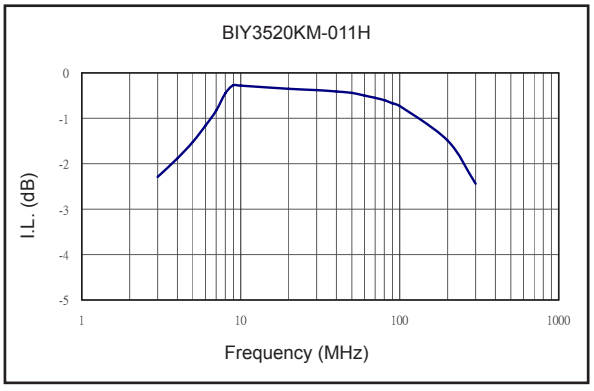
» Double balance mixers, broad-band transformers, Impedance Transformers, etc.

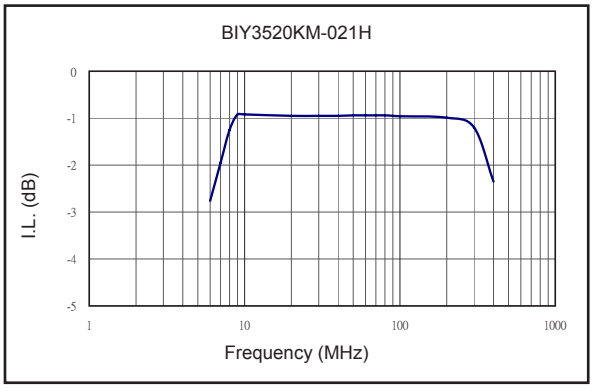
■ Electrical Specification

Part Number	Winding Ratio	Insertion Loss 3 dB Max.
BIY3520KM-011H	1 : 1	@3~300MHz
BIY3520KM-021H	2 : 1	@6~400MHz

■ Characteristic Curve: Insertion Loss vs. Frequency

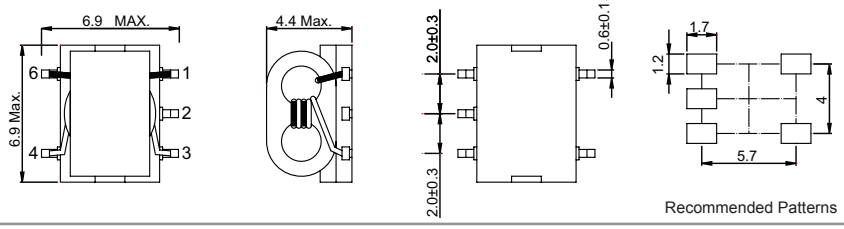
・BIY3520KM



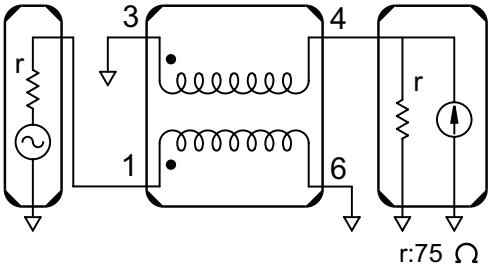


■ Mechanical Dimensions (Unit: mm)

BIY5030KB



■ Test Circuit



Test Equipment : WILTRON 5411A

■ Features

» Base pin terminal treated, allowing mounting 'as is' on a PCB.
» This item can be custom designed to meet customer requirements.

■ Applications

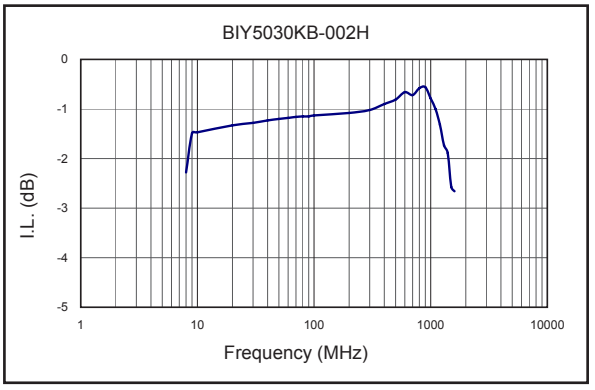
» Double balance mixers, broad-band transformers, Impedance Transformers, etc.
» Common Mode Choke Coils.

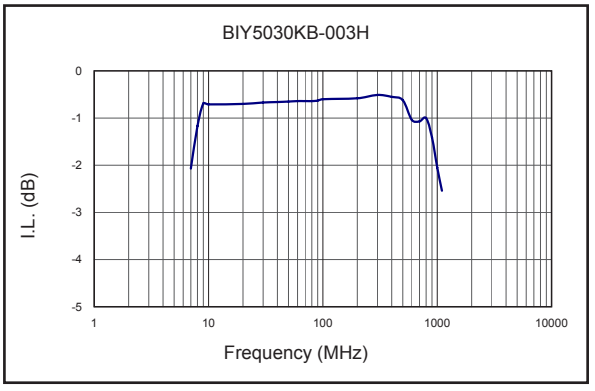
■ Electrical Specification

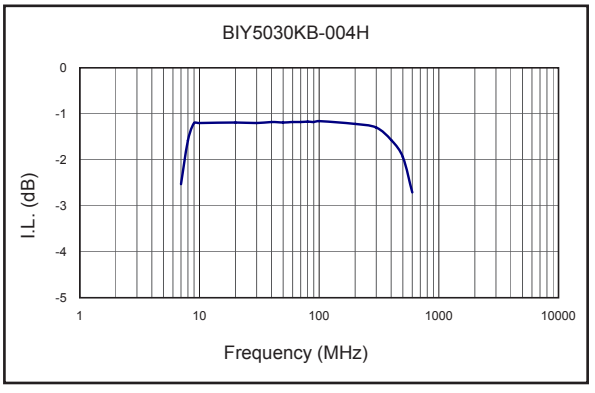
Part Number	Turn Turns	Insertion Loss 3 dB Max.
BIY5030KB-002H	2.5Ts	@8~1600MHz
BIY5030KB-003H	3.5Ts	@7~1100MHz
BIY5030KB-004H	4.5Ts	@8~600MHz

■ Characteristic Curve: Insertion Loss vs. Frequency

・BIY5030KB

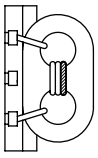


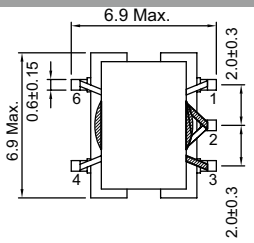


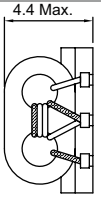


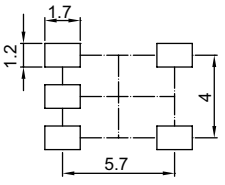
■ Mechanical Dimensions (Unit: mm)

BIY5030FM



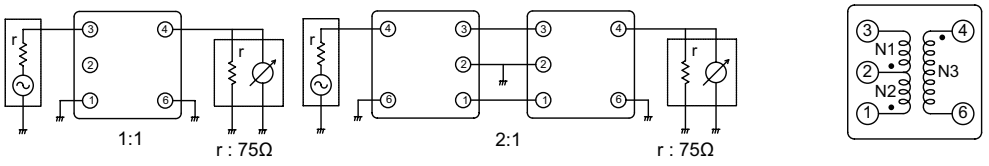






Recommended Patterns

■ Test Circuit



Test Equipment : WILTRON 5411A

■ Features

» Base pin terminal treated, allowing mounting 'as is' on a PCB.
» This item can be custom designed to meet customer requirements.

■ Applications

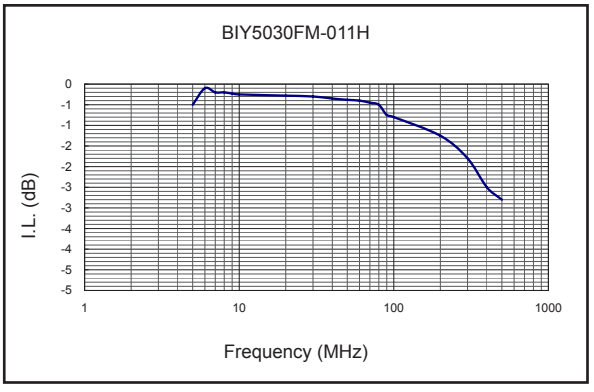
» Double balance mixers, broad-band transformers, Impedance Transformers, etc.
» Common Mode Choke Coils.

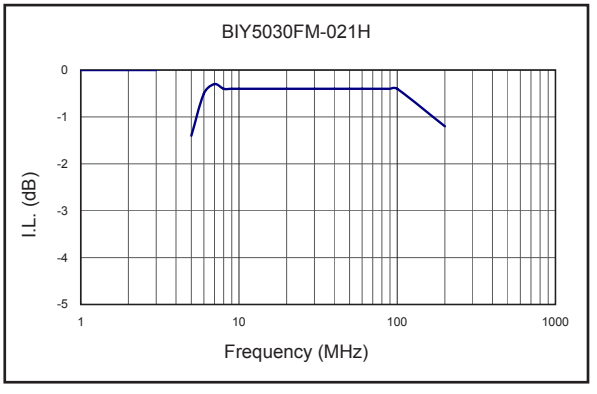
■ Electrical Specification

Part Number	Turn Ratio	Insertion Loss 3dB Max.
BIY5030FM-011H	1 : 1	@5~400MHz
BIY5030FM-021H	2 : 1	@5~250MHz

■ Characteristic Curve: Insertion Loss

・BIY5030FM



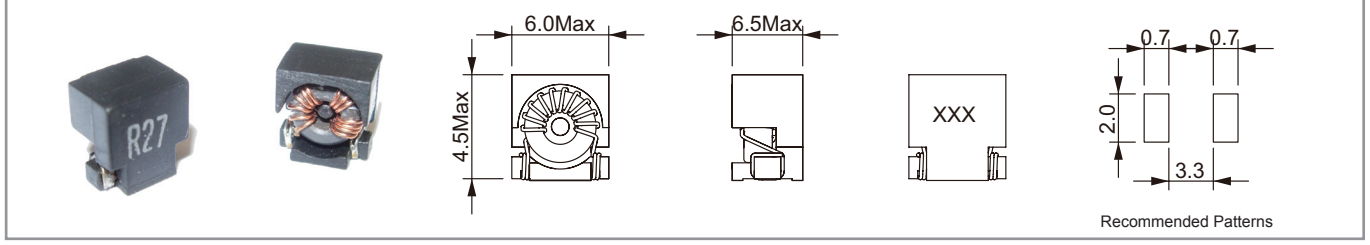


RF SIGNAL CHOKE

OI0604DV Series / OI0707BI Series

■ Mechanical Dimensions (Unit: mm)

O10604DV



Part Number	Marking	Inductance (nH)	Q (Min.)	Test Freq.
OI0604DV-R15□ H	R15	150	80	40MHz
OI0604DV-R18□H	R18	180	80	40MHz
OI0604DV-R27□H	R27	270	80	40MHz
OI0604DV-R33□H	R33	330	80	40MHz

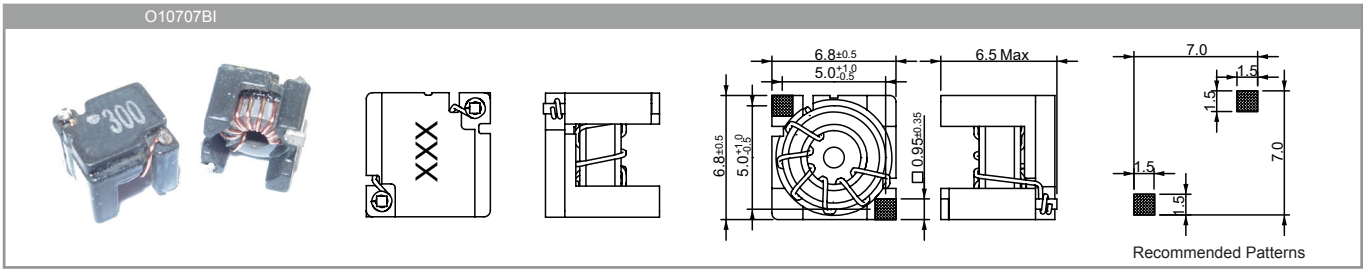
a. Tolerance: H=±3%、J=±5%、K=±10%
b. Operating Temp. : -25°C to +85°C
c. Inductance measured using the HP4291B or HP4287A .
d. Q measured using the HP4291B or HP4287A.
e. Test Fixture: HP16193A.

■ Applications

LC filter，for CATV diplex filter.

■ Mechanical Dimensions (Unit: mm)

O10707BI



Part Number	Marking	Inductance (nH)	Inductance Tolerance	Q (Min.)	Test Freq.
OI0707BI-R22□H	220	220	G,J,K	100	40 MHz
OI0707BI-R33□H	330	330	G,J,K	100	40 MHz
OI0707BI-R24□H	240	240	G,J,K	100	40 MHz
OI0707BI-R20□H	200	200	G,J,K	100	40 MHz
OI0707BI-R30□H	300	300	G,J,K	100	40 MHz
OI0707BI-R43□H	430	430	G,J,K	100	40 MHz

a. Tolerance : G=±2%、J=±5%、K=±10%
b. Operating Temp. : -40°C to +125°C
c. Inductance measured using the HP4291B or HP4287A .
d. Q measured using the HP4291B or HP4287A.
e. Test Fixture: HP16193A.

■ Applications

LC filter，for CATV diplex filter.