

# 承认书

## Specification

客户名称:

Customer Name: \_\_\_\_\_  
(请填写贵司全名)

规格书编号:

Spification NO : \_\_\_\_\_ Spec-CWLC Series Rev.01

客户品名:

Product P/N : \_\_\_\_\_  
(请填写贵司物料品名)

华拓品名:

Manufacturer's P/N : \_\_\_\_\_  
(请填写欲承认的华拓品名)

变更履历:

Revised record:

Rev.	Date	Changed Contents	Change reasons	Approved by
01	2013-12-10	New released		Buck

客户承认栏 (请签名并写明日期后回传)

广州华拓电子科技有限公司

Customer's Approval

Confirmed	Checked	Prepared
Buck	Dana	Amy

Type: CWLC1005, 1608, 2012, 2520

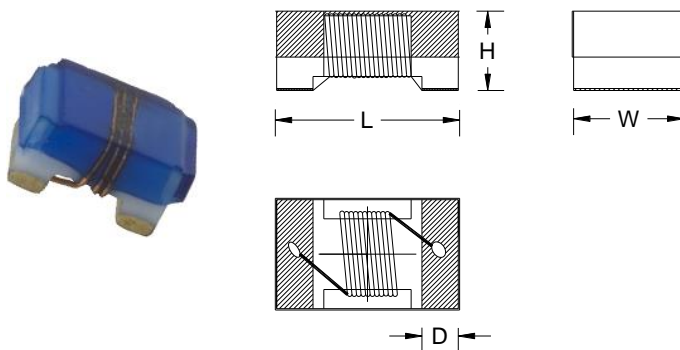
Feature/特长

- Ceramic core wire wound type.
- Excellent solderability and heat resistance.
- High Q characteristics, high self-resonant frequency and high reliability.
- RoHS compliant.
- 绕线片式陶瓷电感
- 良好的可焊性、耐热性。
- 高可靠性。
- RoHS指定对应。

Application/用途

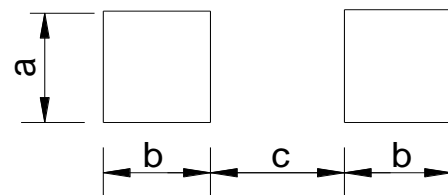
For high frequency applications such as mobile phones, high frequency modules (PA, VCO, FEM etc.), Bluetooth, W-LAN, UWB and tuners. 携帶電話、高周波数制品(PA, VCO, FEM etc.), Bluetooth, W-LAN, UWB 及无线电收音机適用。

Dimensions/外形图



Recommended Land Pattern

推荐贴装尺寸



Unit: mm

Type	L	W	H	D	a	b	c	Packaging (pcs/reel)
CWLC1005	1.27 max.	0.76 max.	0.61 max.	0.23	0.66	0.50	0.46	3000
CWLC1608	1.80 max.	1.20 max.	1.20 max.	0.35	1.02	0.64	0.64	3000
CWLC2012	2.40 max.	1.60 max.	1.40 max.	0.44	1.78	1.02	0.76	2000
CWLC2520	2.92 max.	2.79 max.	2.03 max.	0.55	2.54	1.02	1.27	2000

Dimensions without tolerance are typical./无公差尺寸为参考值。

Product Identification/品名注释

C W L C 1608 - 22N J C  
(1) (2) (3) (4) (5) (6) (7) (8)

(1) SMD/表面安装制品

(2) Wire Wound Chip/绕线片式

(3) Inductors/电感

(4) Ceramic/陶瓷

(5) Dimension symbol/尺寸表示:

1608= 1.6 X 0.8 mm (L X W)

(6) Inductance value/电感值:

2N2= 2.2nH, 22N=22nH

(7) Tolerance/公差:

B=±0.2nH, S=±0.3nH, G =±2%, J=±5%, K=±10%

(8) Packing Style/包装形态:C=Carrier taping/载带包装

### CWLC1005 Electrical Characteristics

Part Number	Inductance (nH)	Inductance tolerance	Test frequency L(MHz)	Q @250MHz min.	DCR max. (mΩ)	Rated current (mA)	SRF(MHz) min.
CWLC1005-1N0□C	1.0	B,S	0.1V/250M	16	54	1360	7000
CWLC1005-2N0□C	2.0	B,S	0.1V/250M	16	84	1040	7000
CWLC1005-2N2□C	2.2	B,S	0.1V/250M	19	84	960	7000
CWLC1005-2N7□C	2.7	B,S	0.1V/250M	19	95	840	7000
CWLC1005-3N3□C	3.3	B,S	0.1V/250M	19	79	840	7000
CWLC1005-3N9□C	3.9	B,S	0.1V/250M	19	79	840	6000
CWLC1005-5N2□C	5.2	B,J,K	0.1V/250M	20	120	640	4800
CWLC1005-5N6□C	5.6	B,J,K	0.1V/250M	20	99	760	4700
CWLC1005-6N8□C	6.8	B,J,K	0.1V/250M	20	99	680	4800
CWLC1005-8N2□C	8.2	B,J,K	0.1V/250M	21	136	680	4400
CWLC1005-8N5□C	8.5	B,J,K	0.1V/250M	24	150	680	4400
CWLC1005-9N0□C	9.0	B,J,K	0.1V/250M	24	170	680	3900
CWLC1005-10N□C	10	G,J,K	0.1V/250M	21	240	480	3900
CWLC1005-12N□C	12	G,J,K	0.1V/250M	24	168	640	3600
CWLC1005-15N□C	15	G,J,K	0.1V/250M	24	204	560	3300
CWLC1005-18N□C	18	G,J,K	0.1V/250M	24	276	420	3100
CWLC1005-22N□C	22	G,J,K	0.1V/250M	24	360	400	2800
CWLC1005-27N□C	27	G,J,K	0.1V/250M	24	360	400	2500
CWLC1005-33N□C	33	G,J,K	0.1V/250M	24	450	400	2400
CWLC1005-39N□C	39	G,J,K	0.1V/250M	25	660	200	2100
CWLC1005-43N□C	43	G,J,K	0.1V/250M	25	744	175	2000
CWLC1005-47N□C	47	G,J,K	0.1V/250M	20	792	175	2100
CWLC1005-56N□C	56	G,J,K	0.1V/250M	22	780	175	1800
CWLC1005-68N□C	68	G,J,K	0.1V/250M	22	912	150	1600

• □ Tolerance: B=±0.2nH, S=±0.3nH, G =±2%, J=±5%, K=±10%

• Test equipments:

Inductance Q : HP4291A+16193A, or equivalent; SRF: HP8720C, or equivalent; DCR: YOKOGAWA TYPE7561, or equivalent

• Rated current : is the current at which the temperature rise is 20°C.

### CWLC1608 Electrical Characteristics

Part Number	Inductance (nH)	Inductance tolerance	Test frequency L(MHz)	Q min.	DCR max. (mΩ)	Rated current (mA)	SRF(MHz) min.
CWLC1608-2N0□C	2.0	B,S	0.1V/250M	13	70	700	8000
CWLC1608-3N9□C	3.9	B,S	0.1V/250M	22	70	700	6900
CWLC1608-4N7□C	4.7	B,S	0.1V/250M	20	120	700	5800
CWLC1608-6N8□C	6.8	B,J,K	0.1V/250M	27	80	700	5800
CWLC1608-8N2□C	8.2	B,J,K	0.1V/250M	30	130	700	4200
CWLC1608-10N□C	10	G,J,K	0.1V/250M	31	130	700	4800
CWLC1608-12N□C	12	G,J,K	0.1V/250M	35	130	700	4000
CWLC1608-15N□C	15	G,J,K	0.1V/250M	35	130	700	4000
CWLC1608-18N□C	18	G,J,K	0.1V/250M	35	160	700	3100
CWLC1608-22N□C	22	G,J,K	0.1V/250M	38	230	700	3000
CWLC1608-24N□C	24	G,J,K	0.1V/250M	38	130	700	2800
CWLC1608-27N□C	27	G,J,K	0.1V/250M	40	140	600	2800
CWLC1608-33N□C	33	G,J,K	0.1V/250M	40	220	600	2300
CWLC1608-39N□C	39	G,J,K	0.1V/250M	40	300	600	2200
CWLC1608-47N□C	47	G,J,K	0.1V/200M	38	350	600	2000
CWLC1608-56N□C	56	G,J,K	0.1V/200M	38	370	600	1900
CWLC1608-68N□C	68	G,J,K	0.1V/200M	37	430	600	1700
CWLC1608-72N□C	72	G,J,K	0.1V/150M	34	420	400	1700
CWLC1608-82N□C	82	G,J,K	0.1V/150M	34	710	400	1700
CWLC1608-R10□C	100	G,J,K	0.1V/150M	34	780	400	1400
CWLC1608-R12□C	120	G,J,K	0.1V/150M	32	840	300	1300
CWLC1608-R15□C	150	G,J,K	0.1V/150M	28	960	280	990
CWLC1608-R18□C	180	G,J,K	0.1V/100M	25	1520	240	990
CWLC1608-R22□C	220	G,J,K	0.1V/100M	25	2020	200	900
CWLC1608-R27□C	270	G,J,K	0.1V/100M	24	2360	170	900
CWLC1608-R33□C	330	G,J,K	0.1V/100M	24	2200	185	700
CWLC1608-R39□C	390	G,J,K	0.1V/100M	24	3600	100	900

□ Tolerance: B=±0.2nH, S=±0.3nH, G =±2%, J=±5%, K=±10%

• Test equipments:

Inductance Q : HP4291A+16193A, or equivalent; SRF: HP8720C, or equivalent; DCR: YOKOGAWA TYPE7561, or equivalent

• Rated current : is the current at which the temperature rise is 20°C.

### CWLC2012 Electrical Characteristics

Part Number	Inductance (nH)	Inductance tolerance	Test frequency L(MHz)	Q @Test Freq. MHz(min.)	DCR max. (mΩ)	Rated current (mA)	SRF(MHz) min.
CWLC2012-2N0□C	2.0	B,S	0.1V/250M	70/1500	30	800	8000
CWLC2012-3N9□C	3.9	B,S	0.1V/250M	70/1500	40	800	5750
CWLC2012-4N7□C	4.7	B,S	0.1V/250M	70/1500	40	800	5750
CWLC2012-6N8□C	6.8	B,J,K	0.1V/250M	70/1500	60	800	5500
CWLC2012-7N5□C	7.5	B,J,K	0.1V/250M	70/1000	60	800	4500
CWLC2012-8N2□C	8.2	B,J,K	0.1V/250M	70/1000	60	800	4700
CWLC2012-10N□C	10	G,J,K	0.1V/250M	70/1000	80	600	4200
CWLC2012-12N□C	12	G,J,K	0.1V/250M	80/1000	80	600	4000
CWLC2012-15N□C	15	G,J,K	0.1V/250M	80/1000	100	600	3400
CWLC2012-18N□C	18	G,J,K	0.1V/250M	80/1000	100	600	3300
CWLC2012-22N□C	22	G,J,K	0.1V/250M	60/500	120	600	2600
CWLC2012-24N□C	24	G,J,K	0.1V/250M	60/500	120	600	2000
CWLC2012-27N□C	27	G,J,K	0.1V/250M	60/500	120	600	2500
CWLC2012-33N□C	33	G,J,K	0.1V/250M	60/500	130	600	2050
CWLC2012-36N□C	36	G,J,K	0.1V/250M	65/500	130	600	1700
CWLC2012-39N□C	39	G,J,K	0.1V/250M	65/500	150	600	2000
CWLC2012-43N□C	43	G,J,K	0.1V/200M	65/500	150	600	1650
CWLC2012-47N□C	47	G,J,K	0.1V/200M	65/500	170	600	1650
CWLC2012-56N□C	56	G,J,K	0.1V/200M	65/500	190	600	1550
CWLC2012-68N□C	68	G,J,K	0.1V/200M	60/500	220	500	1450
CWLC2012-82N□C	82	G,J,K	0.1V/150M	55/500	400	400	1300
CWLC2012-R10□C	100	G,J,K	0.1V/150M	55/500	520	400	1200
CWLC2012-R11□C	110	G,J,K	0.1V/150M	55/500	520	400	1200
CWLC2012-R12□C	120	G,J,K	0.1V/150M	50/250	550	400	1100
CWLC2012-R15□C	150	G,J,K	0.1V/150M	50/250	730	400	920
CWLC2012-R18□C	180	G,J,K	0.1V/100M	50/500	880	400	870
CWLC2012-R22□C	220	G,J,K	0.1V/100M	50/500	1180	340	850
CWLC2012-R24□C	240	G,J,K	0.1V/100M	48/250	1200	330	690
CWLC2012-R27□C	270	G,J,K	0.1V/100M	48/250	1360	310	650
CWLC2012-R33□C	330	G,J,K	0.1V/100M	40/250	1400	300	600
CWLC2012-R39□C	390	G,J,K	0.1V/100M	25/250	1500	290	560
CWLC2012-R47□C	470	G,J,K	0.1V/50M	25/100	1760	250	375
CWLC2012-R56□C	560	G,J,K	0.1V/25M	23/100	1900	210	340
CWLC2012-R62□C	620	G,J,K	0.1V/25M	23/100	2000	205	220
CWLC2012-R68□C	680	G,J,K	0.1V/25M	23/100	2150	200	200
CWLC2012-R75□C	750	G,J,K	0.1V/25M	20/100	2250	185	200
CWLC2012-R82□C	820	G,J,K	0.1V/25M	20/100	2500	170	200
CWLC2012-1R0□C	1000	G,J,K	0.1V/25M	15/50	2600	170	100

• □ Tolerance: B=±0.2nH, S=±0.3nH, G =±2%, J=±5%, K=±10%

• Test equipments:

Inductance Q : HP4291A+16193A, or equivalent; SRF: HP8720C, or equivalent; DCR: YOKOGAWA TYPE7561, or equivalent

• Rated current : is the current at which the temperature rise is 20°C.

### CWLC2520 Electrical Characteristics

Part Number	Inductance (nH)	Inductance tolerance	Test frequency L(MHz)	Q @Test Freq. MHz(min.)	DCR max. (mΩ)	Rated current (mA)	SRF(MHz) min.
CWLC2520-3N9□C	3.9	B,S	0.1V/50M	60/1500	80	1000	5000
CWLC2520-10N□C	10	G,J,K	0.1V/50M	50/500	80	1000	4100
CWLC2520-10N□C	12	G,J,K	0.1V/50M	50/500	90	1000	3300
CWLC2520-15N□C	15	G,J,K	0.1V/50M	50/500	100	1000	2500
CWLC2520-18N□C	18	G,J,K	0.1V/50M	50/350	100	1000	2400
CWLC2520-22N□C	22	G,J,K	0.1V/50M	55/350	130	1000	2400
CWLC2520-24N□C	24	G,J,K	0.1V/50M	55/350	130	1000	1900
CWLC2520-27N□C	27	G,J,K	0.1V/50M	55/350	130	1000	1600
CWLC2520-33N□C	33	G,J,K	0.1V/50M	60/350	150	1000	1600
CWLC2520-39N□C	39	G,J,K	0.1V/50M	60/350	150	1000	1500
CWLC2520-47N□C	47	G,J,K	0.1V/50M	65/350	180	1000	1500
CWLC2520-56N□C	56	G,J,K	0.1V/50M	65/350	210	1000	1300
CWLC2520-68N□C	68	G,J,K	0.1V/50M	65/350	210	1000	1300
CWLC2520-75N□C	75	G,J,K	0.1V/50M	60/350	240	1000	1100
CWLC2520-82N□C	82	G,J,K	0.1V/50M	60/350	240	1000	1000
CWLC2520-R10□C	100	G,J,K	0.1V/25M	60/350	370	650	1000
CWLC2520-R12□C	120	G,J,K	0.1V/25M	60/350	420	600	950
CWLC2520-R15□C	150	G,J,K	0.1V/25M	45/100	460	580	850
CWLC2520-R18□C	180	G,J,K	0.1V/25M	45/100	550	620	750
CWLC2520-R22□C	220	G,J,K	0.1V/25M	45/100	580	500	700
CWLC2520-R24□C	240	G,J,K	0.1V/25M	45/100	680	500	650
CWLC2520-R27□C	270	G,J,K	0.1V/25M	45/100	730	500	600
CWLC2520-R30□C	300	G,J,K	0.1V/25M	45/100	780	450	585
CWLC2520-R33□C	330	G,J,K	0.1V/25M	45/100	820	450	570
CWLC2520-R36□C	360	G,J,K	0.1V/25M	45/100	880	470	530
CWLC2520-R39□C	390	G,J,K	0.1V/25M	45/100	920	470	500
CWLC2520-R47□C	470	G,J,K	0.1V/25M	45/100	1000	470	450
CWLC2520-R56□C	560	G,J,K	0.1V/25M	45/100	1140	400	415
CWLC2520-R62□C	620	G,J,K	0.1V/25M	45/100	1200	300	375
CWLC2520-R68□C	680	G,J,K	0.1V/25M	45/100	1240	400	375
CWLC2520-R75□C	750	G,J,K	0.1V/25M	45/100	1540	360	360
CWLC2520-R82□C	820	G,J,K	0.1V/25M	45/100	1610	400	350
CWLC2520-R91□C	910	G,J,K	0.1V/25M	35/100	1680	380	320
CWLC2520-1R0□C	1000	G,J,K	0.1V/25M	35/100	1750	370	290
CWLC2520-1R2□C	1200	G,J,K	0.1V/7.9M	30/100	2000	340	250
CWLC2520-1R5□C	1500	G,J,K	0.1V/7.9M	28/100	2230	330	200
CWLC2520-4R7□C	4700	G,J,K	0.1V/7.9M	20/25	6300	260	90

□ Tolerance: B=±0.2nH, S=±0.3nH, G=±2%, J=±5%, K=±10%

• Test equipments:

Inductance Q : HP4291A+16193A, or equivalent; SRF: HP8720C, or equivalent; DCR: YOKOGAWA TYPE7561, or equivalent

• Rated current : is the current at which the temperature rise is 20°C.