

## WIRE WOUND CHIP CERAMIC INDUCTOR CKCW-C Series

### 高频绕线陶瓷电感 CKCW-C 系列

#### ● FEATURES 特性

1. High Q value and high self-resonant frequency with ceramic material.

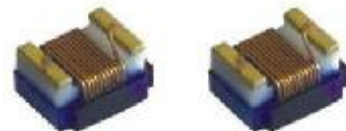
高Q值高SRF的陶瓷材料.

2. Small chip suitable for surface mounting.

小尺寸, 表面贴装.

3. Tight inductance tolerance and high reliability.

高精度, 高可靠性.



陶瓷 (Ceramic)

#### ● APPLICATIONS 用途

1. Mobile phone TD-LTE/5G communication. 移动电话, TD-LTE, 5G通讯.
2. High frequency circuit in communication equipments. 高频线路的通讯设备.
3. Bluetooth, W-LAN, Broadband network. 蓝牙, 无线网络.

#### ● PART NUMBERING SYSTEM 品名系统

CKCW 0402 - 22nH / J (C)

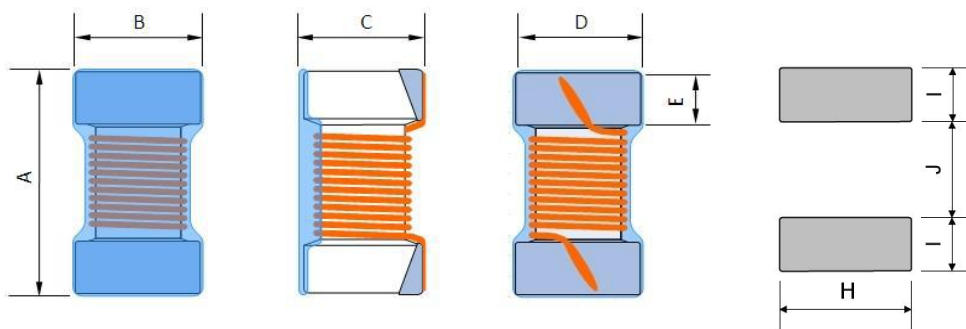
(1) (2) (3) (4) (5)

(1) Type 型号 (2) External Dimensions 外形尺寸 (3) Inductance 电感值

(4) Inductance Tolerance 电感值公差 (B:±0.1nH C:±0.2nH S:±0.3nH G:±2% H:±3% J:±5% K:±10%)

(5) Material code (Ceramic) 材料代号 (陶瓷)

#### ● SHAPES AND DIMENSIONS 外形尺寸 (Unit:mm)

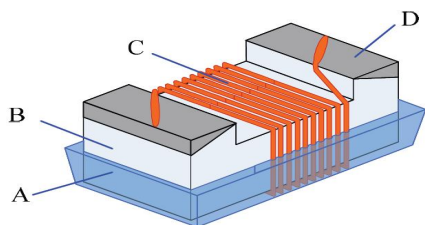


Land Pattern

TYPE(型号)	A	B	C	D	E	H	I	J
CKCW0402 (C)	1.1±0.1	0.6±0.1	0.55±0.1	0.5±0.1	0.2±0.1	0.65 ref	0.35 ref	0.50 ref
CKCW0603 (C)	1.8 Max	1.12 Max	1.02 Max	0.76 Typ	0.33 Typ	1.02 ref	0.64 ref	0.64 ref
CKCW0805 (C)	2.29 Max	1.73 Max	1.55 Max	1.27 Typ	0.5 Typ	1.78 ref	1.02 ref	0.76 ref

\* Electrode Coplanarity:0.1mm Max.

● **STRUCTURE AND MATERIAL 结构与材料**



Part	Components(组件)	Material(材料)
A	Coating	Ultraviolet epoxy resin
B	Core	Ceramic
C	Wire	Polyurethane enameled copper wire
D	Electrodes	Ag/Ag-Pd with Ni and Sn plating

● **TEMPERATURE RATING 额定温度**

1. Operating temperature range (individual chip without packing): -40°C to +125°C  
工作温度范围: -40°C ~ +125°C
2. Storage temperature range (packaging conditions): -10°C~+40°C and RH 70% (Max.)  
储存温度范围(包装条件): -10°C~+40°C, 相对湿度70%(最大值)

● **TEST AND MEASUREMENT PROCEDURES 测试项目与测试条件**

1. Inductance 电感值(L)

Test equipment: Keysight E4991B / Agilent 16197A or equivalent

测试设备: Keysight E4991B / Agilent 16197A仪表或同等仪表

Test signal: -13dBm or 10mA

测试信号: -13dBm或10mA

2. DC Resistance (DCR) 直流电阻

Test equipment: Agilent34420A / Agilent 4338B or equivalent

测试设备: Agilent34420A / Agilent 4338B或同等产品

3. Q Factor Q值(Q)

Test equipment: Keysight E4991B / Agilent 16197A or equivalent

测试设备: Keysight E4991B / Agilent 16197A或同等产品

4. Self-Resonant Frequency 自谐振频率(SRF)

Test equipment: Keysight E4991B / Agilent 16197A / HP 8753E or equivalent

测试设备: Keysight E4991B/Agilent 16197A/HP 8753E或同等产品

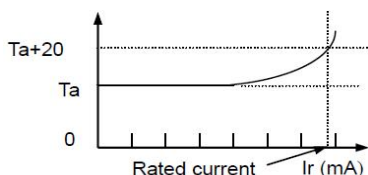
Test signal: -20dBm or 50 mV

测试信号: -20dBm或50mV

5. Rated Current 额定电流(Irms)

Irms is direct electric current as chip surface temperature rose just 20 against chip initial surface temperature (Ta)

电感加载直流电, 电感表面温度相比于电感初始表面温度升高20度



● **Reflow Soldering 回流焊**

Re-flowing Profile

Preheat condition: 150~200 /60~120sec.

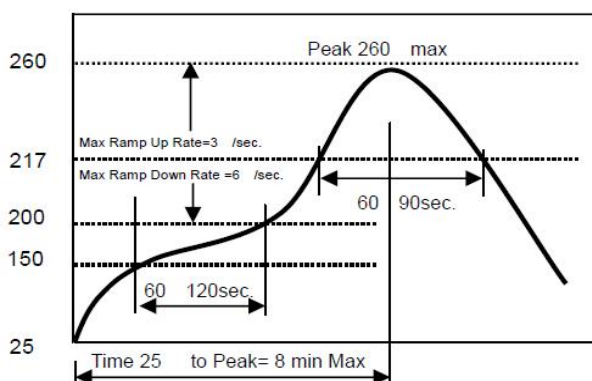
Allowed time above 217C: 60~90sec.

Max temp: 260

Max time at max temp: 10sec

Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2 times max





## ● SPECIFICATION TABLE 规格特性表

### CKCW0402 (C) Series

PART NUMBER 品名	Inductance 电感值	Tolerance 公差	Quality Factor 品质因数	L/Q Test Freq. L/Q测试频率	Max. DC Resistance 最大直流电阻	Max. Rated Current 最大额定电流	Self-resonant Frequency 自谐振频率
Symbol	L		Q	Freq.	DCR	I <sub>rms</sub>	SRF (Min)
Units				MHz	Ω	mA	MHz
CKCW0402-1nH/□(C)	1nH	C,S,D,K	10	250	0.085	650	>6000
CKCW0402-2.2nH/□(C)	2.2nH	C,S,D,J,K	22	250	0.058	820	>6000
CKCW0402-3.3nH/□(C)	3.3nH	C,S,D,J,K	24	250	0.063	790	>6000
CKCW0402-3.9nH/□(C)	3.9nH	C,S,D,J,K	24	250	0.063	790	>6000
CKCW0402-4.1nH/□(C)	4.1nH	C,S,D,J,K	22	250	0.070	700	>6000
CKCW0402-4.3nH/□(C)	4.3nH	C,S,D,J,K	22	250	0.070	750	>6000
CKCW0402-4.7nH/□(C)	4.7nH	C,S,D,J,K	20	250	0.075	570	>6000
CKCW0402-6.8nH/□(C)	6.8nH	J,K	24	250	0.105	610	6000
CKCW0402-8.7nH/□(C)	8.7nH	J,K	25	250	0.110	590	5500
CKCW0402-10nH/□(C)	10nH	J,K	24	250	0.150	510	5500
CKCW0402-11nH/□(C)	11nH	J,K	26	250	0.120	500	5500
CKCW0402-12nH/□(C)	12nH	J,K	26	250	0.120	570	5500
CKCW0402-15nH/□(C)	15nH	J,K	26	250	0.210	430	5000
CKCW0402-22nH/□(C)	22nH	J,K	25	250	0.360	330	4000
CKCW0402-33nH/□(C)	33nH	J,K	24	250	0.550	260	3200
CKCW0402-47nH/□(C)	47nH	J,K	25	250	0.950	200	2900
CKCW0402-68nH/□(C)	68nH	J,K	25	250	1.350	170	2500

※□(C): Please specify the inductance tolerance code

(B=±0.1nH, C=±0.2nH, S=±0.3nH, D=±0.5nH, G=±2%, H=±3%, J=±5%, K=±10%).

**CKCW0603 (C) Series**

PART NUMBER 品名	Inductance 电感值	Tolerance 公差	Quality Factor 品质因数	L/Q Test Freq. L/Q测试频率	Max. DC Resistance 最大直流电阻	Max. Rated Current 最大额定电流	Self-resonant Frequency 自谐振频率
Symbol	L		Q	Freq.	DCR	I <sub>rms</sub>	SRF (Min)
Units				MHz	Ω	mA	MHz
CKCW0603-3.3nH/□(C)	3.3nH	C,S,D,J,K	25	250	0.059	850	>6000
CKCW0603-3.9nH/□(C)	3.9nH	C,S,D,J,K	25	250	0.059	850	>6000
CKCW0603-5.6nH/□(C)	5.6nH	C,S,D,J,K	21	100/250	0.082	750	>6000
CKCW0603-6.8nH/□(C)	6.8nH	H,J,K	29	250	0.095	700	>6000
CKCW0603-10nH/□(C)	10nH	H,J,K	30	250	0.130	600	6000
CKCW0603-15nH/□(C)	15nH	H,J,K	37	250	0.150	550	6000
CKCW0603-22nH/□(C)	22nH	H,J,K	38	250	0.190	490	4600
CKCW0603-27nH/□(C)	27nH	H,J,K	38	250	0.190	490	3700
CKCW0603-33nH/□(C)	33nH	H,J,K	40	250	0.210	470	3200
CKCW0603-39nH/□(C)	39nH	H,J,K	40	250	0.220	460	2800
CKCW0603-47nH/□(C)	47nH	H,J,K	36	200	0.270	400	2600
CKCW0603-56nH/□(C)	56nH	H,J,K	38	200	0.350	360	2400
CKCW0603-68nH/□(C)	68nH	H,J,K	36	200	0.380	350	2200
CKCW0603-100nH/□(C)	100nH	H,J,K	31	150	0.660	260	1800
CKCW0603-150nH/□(C)	150nH	H,J,K	32	150	0.091	280	1400
CKCW0603-180nH/□(C)	180nH	H,J,K	25	100	1.380	180	1300
CKCW0603-220nH/□(C)	220nH	H,J,K	25	100	2.100	140	1200
CKCW0603-270nH/□(C)	270nH	H,J,K	26	100	3.000	120	960
CKCW0603-470nH/□(C)	470nH	H,J,K	27	100	5.700	90	700

※□(C): Please specify the inductance tolerance code

(B=±0.1nH, C=±0.2nH, S=±0.3nH, D=±0.5nH, G=±2%, H=±3%, J=±5%, K=±10%).

**CKCW0805 (C) Series**

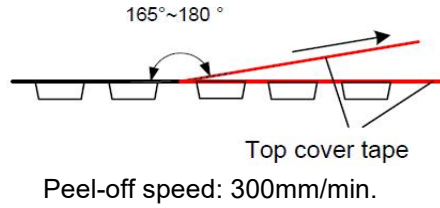
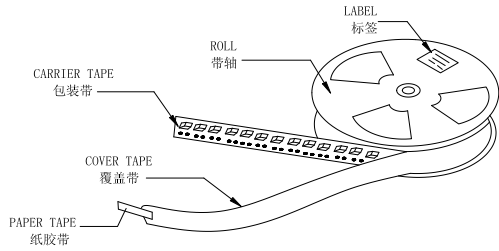
PART NUMBER 品名	Inductance 电感值	Tolerance 公差	Quality Factor 品质因数	L/Q Test Freq. L/Q测试频率	Max. DC Resistance 最大直流电阻	Max. Rated Current 最大额定电流	Self-resonant Frequency 自谐振频率
Symbol	L		Q	Freq.	DCR	I <sub>rms</sub>	SRF (Min)
Units				MHz	Ω	mA	MHz
CKCW0805-2.2nH/□(C)	2.2nH	J,K	40	250/1500	0.10	600	>6000
CKCW0805-3.3nH/□(C)	3.3nH	J,K	25	250/1500	0.20	600	>6000
CKCW0805-6.8nH/□(C)	6.8nH	J,K	40	250/1000	0.11	600	5000
CKCW0805-8.2nH/□(C)	8.2nH	J,K	40	250/1000	0.19	600	4600
CKCW0805-12nH/□(C)	12nH	J,K	40	250/500	0.15	600	4000
CKCW0805-15nH/□(C)	15nH	G,J,K	40	250/500	0.17	600	2900
CKCW0805-18nH/□(C)	18nH	G,J,K	50	250/500	0.20	600	3300
CKCW0805-22nH/□(C)	22nH	G,J,K	55	250/500	0.22	500	2000
CKCW0805-27nH/□(C)	27nH	G,J,K	55	250/500	0.25	500	2500
CKCW0805-33nH/□(C)	33nH	G,J,K	60	250/500	0.27	500	2000
CKCW0805-39nH/□(C)	39nH	G,J,K	60	250/500	0.29	500	2000
CKCW0805-47nH/□(C)	47nH	G,J,K	50	200/500	0.31	500	1600
CKCW0805-56nH/□(C)	56nH	G,J,K	55	200/500	0.32	500	1550
CKCW0805-68nH/□(C)	68nH	G,J,K	55	200/500	0.38	500	1450
CKCW0805-82nH/□(C)	82nH	G,J,K	50	150/500	0.42	400	1300
CKCW0805-100nH/□(C)	100nH	G,J,K	50	150/500	0.46	400	1200
CKCW0805-120nH/□(C)	120nH	G,J,K	50	150/250	0.51	400	1100
CKCW0805-150nH/□(C)	150nH	G,J,K	50	100/250	0.56	400	920
CKCW0805-180nH/□(C)	180nH	G,J,K	50	100/250	0.64	400	870
CKCW0805-220nH/□(C)	220nH	G,J,K	45	100/250	1.10	400	850
CKCW0805-270nH/□(C)	270nH	G,J,K	48	100/250	1.00	350	730
CKCW0805-330nH/□(C)	330nH	G,J,K	40	100/250	1.40	310	600
CKCW0805-390nH/□(C)	390nH	G,J,K	35	100/250	1.50	290	560
CKCW0805-470nH/□(C)	470nH	G,J,K	33	50/100	1.72	250	375
CKCW0805-560nH/□(C)	560nH	G,J,K	23	25/50	1.90	230	375
CKCW0805-680nH/□(C)	680nH	G,J,K	23	25/50	2.05	190	270
CKCW0805-2.2uH/□(C)	2.2uH	G,J,K	15	7.9/25	4.60	100	70
CKCW0805-3.3uH/□(C)	3.3uH	G,J,K	10	7.9/7.9	5.40	50	70
CKCW0805-4.7uH/□(C)	4.7uH	G,J,K	10	7.9/7.9	8.20	30	70

※□(C): Please specify the inductance tolerance code  
 (B=±0.1nH, C=±0.2nH, S=±0.3nH, D=±0.5nH, G=±2%, H=±3%, J=±5%, K=±10%).

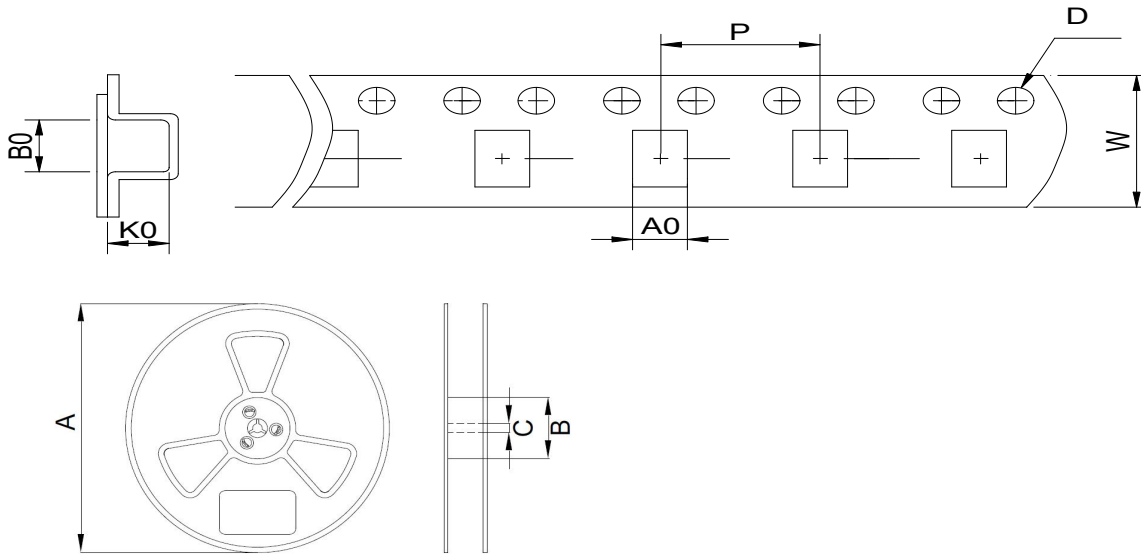
● **PACKAGING SPECIFICATION 包装规格**

1. Packaging - Cover Tape

The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



2. Packaging - Tape & Reel



TYPE(型号)	Tape Dimension 载带尺寸(mm)						Reel Dimension 卷盘尺寸 (mm)			Quantity (Pcs/Reel) 数量 (个/卷)
	W	A0	B0	K0	D	P	A	B	C	
CKCW0402 (C)	8	0.66	1.2	0.67	1.5	4	178	58	13	10Kpcs
CKCW0603 (C)	8	1.1	1.75	1.1	1.5	4	178	58	13	4Kpcs
CKCW0805 (C)	8	1.55	2.45	1.5	1.5	4	178	58	13	2Kpcs