繞線貼片電感

SWCI05 (0805) Series
Wire Wound Chip Inductor (Standard)

Feature

Wire wound Ceramic Construction Provide High SRFs
Ultra-compact Inductors Provide Exceptional Q Values
Low profile , High Current are Available
Miniature SMD Chip Inductor for Fully Automated Assembly
Outstanding Endurance from Pull-up Force, Mechanical Shock and Pressure
Tighter Tolerance of ±2%
Smaller Size of 0402 (1005)

Figure:

Application

RF Products:
Cellular Phone (CDMA/GSM/PHS)
Cordless Phone (DECT/CT1CT2)
Remote Control, Security System
Wireless PDA
WLL, Wireless LAN / Mouse / Keyboard / Earphone
VCO, RF Module & Other Wireless Products
Base Station, Repeater
GPS Receiver

IT Applications:

USB 2.0
IEEE 1394

Broad Band Applications:

CATV Filter, Tuner
Cable Modem/ XDSL Tuner
Set Top Box

ORDERING INFORMATION

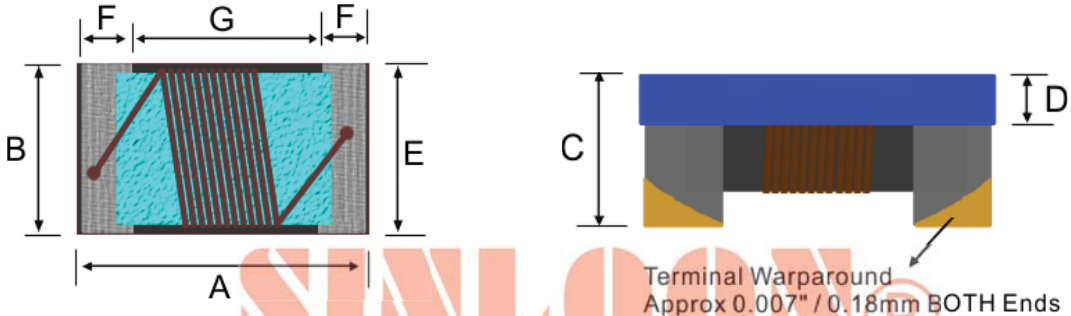
Example: SWCI05G10NT

Size	Design	Type	Tolerance	Inductance	Packing	Quantity
0402	S	WCI02	G= ±2%	1N0=1 nH	T=Taping	4K/Reel
0603	L	WCI03	H= ±3%	10N= 10 nH	B=Bulk	4K/Reel
0805	H	WCI05	J= ±5%	101=100nH		2K/Reel
1008		WCI08	K= ±10%	102=1000nH		2K/Reel
1206		WCI06	M= ±20%	103=10000nH		2K/Reel

DIMENSION

Unit: mm

Type	A (Max)	B (Max.)	C (Max.)	D (Ref.)	E	F	G
SWCI02	1.27	0.76	0.61	0.15	0.15	0.23	0.56
SWCI03	1.80	1.12	1.02	0.38	0.76	0.33	0.86
SWCI05	2.29	1.73	1.52	0.51	1.27	0.44	1.02
SWCI08	2.92	2.79	2.03	0.65	2.03	0.51	1.52
SWCI06	3.56	2.16	1.52	0.50	1.20	0.50	2.20
LWCI05	2.29	1.73	1.03	0.51	1.27	0.44	1.02
LWCI08	2.92	2.79	2.03	0.65	2.03	0.51	1.52
HWCI03	1.80	1.12	1.02	0.38	0.76	0.33	0.86
HWCI05	2.29	1.73	1.52	0.51	1.27	0.44	1.02
HWCI08	2.92	2.79	2.03	0.65	2.03	0.51	1.52



B: OVERALL
E: TERMINAL

Remark Design:

S = Standard.
L = Low Profile Inductor.
H = High Current and High Q

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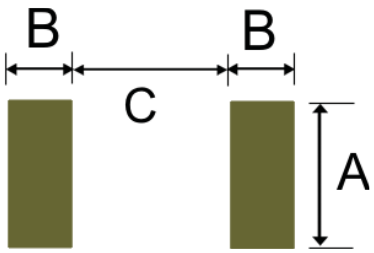
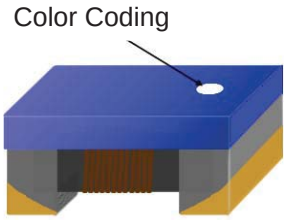
PAD LAYOUT

Type	A	B	C
SWCI02	0.66	0.50	0.46
SWCI03	1.02	0.64	0.64
SWCI05	1.78	1.02	0.76
SWCI08	2.54	1.02	1.27
SWCI06	1.93	1.02	1.78
LWCI05	1.78	1.02	0.76
LWCI08	2.54	1.02	1.27
HWCI03	1.02	0.64	0.64
HWCI05	1.78	1.02	0.76
HWCI08	2.54	1.02	1.27



Color Coding

0603 / 0805/1206/1008 Series (0402 Series is No Color Coding)
Because of small sizes, these parts are marked with a single color dot.
The inductance value represented by the dot is shown on the data page for each series.



Environmental Characteristics

Mechanical Performance

Item	Specification	Test Method
1Vibration Test	Appearance: No damage L change: within ±5% Q change: within ±10%	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y &Z), total 6hrs
2 Resistance to		Solder Temperature: 260±5℃ Immersion Time: 10±2sec
3 Component Adhesion	1 lbs. For 0402 2 lbs. For 0603 3 lbs. For the rest	The device should be soldered (260±5℃ for 10 seconds) to a tinned copper subs rate. A dynamiter force gauge should be applied to the side of the component. The device must with stand a minimum force of 2 or 4
4 Drop Test	No damage	pounds without a failure of adhesion on termination Dropping chip by each side and each corner. Drop 10 times in total Drop height :100cm Drop weight:125g
5 Solderability Test	90% covered with solder.	Inductor shall be dipped in a melted solder bath at 235±5℃ for 5 second
6 Resistance to Solvent Test	No damage on appearance and marking.	MIL-STD202F,Method 215D

Electrical Performance Test

Item	Specification	Test Method
1. Inductance	Refer to standard electrical characteristic spec.	HP4291B
2. Q		HP4291B
3. SRF		HP8753D
4. DC Resistance RDC		Micro-Ohm meter (Gom-801G)
5. Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initia l value
6. Over Load Test	Inductors shall have no evidence of electrical and mechanical damage	Applied 2 times of rated allowed DC current to inductor for a period of 5 minute
7 Withstanding Voltage Test	Inductors shall be no evidence of electrical and mechanical damage.	AC voltage of 500 VAC applied between inductors terminal and case for 1 minute.
8 Insulation Resistance Test	1000M ohm min	100 VDC applied between inductor terminal and case

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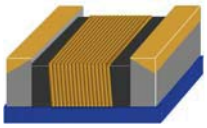
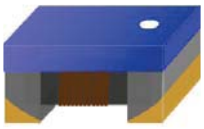
Environmental Characteristics

Climatic Test

Item	Specification	Test Method
1 Temperature Characteristic	Appearance: No damage L change: within ±10% Q change: within ±20%	-40℃~+125℃
2 Humidity Resistance		Temperature: 40±2℃ Relative Humidity: 90~95% Time: 96hrs±2hrs Measured after exposure in the room condition for 2hrs
3 Low Temperature Storage Test		Temperature: -40±2℃ Time: 96±2hrs Inductors are tested after 1 hour at room temperature
4 Thermal Shock Test		One cycle: Total: 5 cycles Step / mperature（℃ / Time（min） 1 / -25±3 / 30 2 / 25±2 / 15 3 / 125±3 / 30 4 / 25±2 / 15
5 High Temperature Storage Test		Temperature:125±2℃ Time: 96±2hrs Measured after exposure in the room condition for 1hr
6 High Temperature Load Life Test	There should be no evidence of short of open circuit.	Temperature:85±2℃ Time:1000±12hrs Load: Allowed DC current
7 Humidity Load Life		Temperature: 40±2℃ Relative Humidity: 90~95% Time: 1000±12hrs Load: Allowed DC current

※Storage Temperature :25±3℃; Humidity:<80%RH





Standard Electrical Specification

SWCI05 Wire Wound Chip Inductors (Standard)

Part Number	Inductance nH	Tolerance (%)	Quality Factor /min.	Self Resonant Frequency /min. (GHz)	Resistance DC/Max (Ohm)	Current DC/Max (mA)	Color Code
WCI05□2N7T	2.7 @ 250MHz	10,5	80 @ 1500MHz	7.900	0.06	800	Brown
WCI05□2N8T	2.8 @ 250MHz	10,5	80 @ 1500MHz	7.900	0.06	800	Gray
WCI05□3N0T	3.0 @ 250MHz	10,5	65 @ 1500MHz	7.900	0.06	800	White
WCI05□3N3T	3.3 @ 250MHz	10,5	50 @ 1500MHz	6.000	0.08	600	Black
WCI05□5N6T	5.6 @ 250MHz	10,5	65 @ 1000MHz	5.500	0.08	600	Orange
WCI05□6N2T	6.2 @ 250MHz	10,5	50 @ 1000MHz	5.500	0.11	600	Green
WCI05□6N8T	6.8 @ 250MHz	10,5	50 @ 1000MHz	5.500	0.11	600	Brown
WCI05□7N5T	7.5 @ 250MHz	10,5	50 @ 1000MHz	4.500	0.14	600	Green
WCI05□8N2T	8.2 @ 250MHz	10,5	50 @ 1000MHz	4.700	0.12	600	Red
WCI05□8N7T	8.7 @ 250MHz	10,5	50 @ 1000MHz	3.900	0.21	400	White
WCI05□10NT	10.0 @ 250MHz	10,5,2	60 @ 500MHz	4.200	0.10	600	Blue
WCI05□12NT	12.0 @ 250MHz	10,5,2	50 @ 500MHz	4.000	0.15	600	Orange
WCI05□T15N	15.0 @ 250MHz	10,5,2	50 @ 500MHz	3.400	0.17	600	Yellow
WCI05□18NT	18.0 @ 250MHz	10,5,2	50 @ 500MHz	3.300	0.20	600	Green
WCI05□22NT	22.0 @ 250MHz	10,5,2	55 @ 500MHz	2.600	0.22	500	Blue
WCI05□24NT	24.0 @ 250MHz	10,5,2	50 @ 500MHz	2.000	0.22	500	Gray
WCI05□27NT	27.0 @ 250MHz	10,5,2	55 @ 500MHz	2.500	0.25	500	Violet
WCI05□33NT	33.0 @ 250MHz	10,5,2	60 @ 500MHz	2.050	0.27	500	Gray
WCI05□36NT	36.0 @ 250MHz	10,5,2	55 @ 500MHz	1.700	0.27	500	Orange
WCI05□39NT	39.0 @ 250MHz	10,5,2	60 @ 500MHz	2.000	0.29	500	White
WCI05□43NT	43.0 @ 200MHz	10,5,2	60 @ 500MHz	1.650	0.34	500	Yellow
WCI05□47NT	47.0 @ 200MHz	10,5,2	60 @ 500MHz	1.650	0.31	500	Black
WCI05□56NT	56.0 @ 200MHz	10,5,2	60 @ 500MHz	1.550	0.34	500	Brown
WCI05□68NT	68.0 @ 200MHz	10,5,2	60 @ 500MHz	1.450	0.38	500	Red
WCI05□72NT	72.0 @ 150MHz	10,5,2	65 @ 500MHz	1.400	0.40	500	Green
WCI05□82NT	82.0 @ 150MHz	10,5,2	65 @ 500MHz	1.300	0.42	400	Orange
WCI05□91NT	91.0 @ 150MHz	10,5,2	65 @ 500MHz	1.200	0.48	400	Black
WCI05□101NT	100 @ 150MHz	10,5,2	65 @ 500MHz	1.200	0.46	400	Yellow
WCI05□111NT	110 @ 150MHz	10,5,2	50 @ 250MHz	1.000	0.48	400	Brown
WCI05□121NT	120 @ 150MHz	10,5,2	50 @ 250MHz	1.100	0.51	400	Green
WCI05□151NT	150 @ 100MHz	10,5,2	50 @ 250MHz	0.920	0.56	400	Blue
WCI05□181NT	180 @ 100MHz	10,5,2	50 @ 250MHz	0.870	0.64	400	Violet
WCI05□201NT	200 @ 100MHz	10,5,2	50 @ 250MHz	0.860	0.66	400	Orange
WCI05□221NT	220 @ 100MHz	10,5,2	50 @ 250MHz	0.850	0.70	400	Gray
WCI05□241NT	240 @ 100MHz	10,5,2	44 @ 250MHz	0.690	1.00	350	Red
WCI05□251NT	250 @ 100MHz	10,5,2	45 @ 250MHz	0.680	1.00	350	Green
WCI05□271NT	270 @ 100MHz	10,5,2	48 @ 250MHz	0.650	1.00	350	White
WCI05□301NT	300 @ 100MHz	10,5,2	48 @ 250MHz	0.620	1.20	330	Yellow
WCI05□331NT	330 @ 100MHz	10,5,2	48 @ 250MHz	0.600	1.40	310	Black
WCI05□361NT	360 @ 100MHz	10,5,2	48 @ 250MHz	0.580	1.45	300	Green
WCI05□391NT	390 @ 100MHz	10,5,2	48 @ 250MHz	0.560	1.50	290	Brown
WCI05□431NT	430 @ 50MHz	10,5,2	33 @ 100MHz	0.430	1.70	230	Blue
WCI05□471NT	470 @ 50MHz	10,5,2	33 @ 100MHz	0.375	1.70	220	Red
WCI05□561NT	560 @ 25MHz	10,5,2	23 @ 50MHz	0.340	1.90	210	Orange
WCI05□601NT	600 @ 25MHz	10,5,2	23 @ 50MHz	0.260	1.60	450	White
WCI05□621NT	620 @ 25MHz	10,5,2	23 @ 50MHz	0.220	2.20	210	Yellow
WCI05□681NT	680 @ 25MHz	10,5,2	23 @ 50MHz	0.200	2.20	190	Green
WCI05□751NT	750 @ 25MHz	10,5,2	23 @ 50MHz	0.200	2.30	180	Blue
WCI05□821NT	820 @ 25MHz	10,5,2	23 @ 50MHz	0.200	2.35	180	Violet
WCI05□102NT	1000 @ 25MHz	10,5,2	20 @ 50MHz	0.100	2.50	170	Gray
WCI05□122NT	1200 @ 7.9MHz	10,5,2	18 @ 25MHz	0.100	2.50	170	White
WCI05□152NT	1500 @ 7.9MHz	10,5,2	16 @ 25MHz	0.100	2.50	170	Black
WCI05□182NT	1800 @ 7.9MHz	10,5,2	16 @ 7.9MHz	0.080	2.50	170	Brown
WCI05□222NT	2200 @ 7.9MHz	10,5,2	16 @ 7.9MHz	0.060	2.70	160	Red
WCI05□272NT	2700 @ 7.9MHz	10,5,2	16 @ 7.9MHz	0.050	2.95	150	Orange