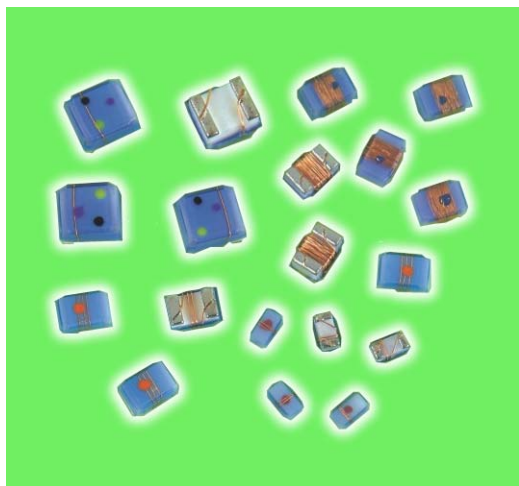


# WIRE WOUND CHIP INDUCTOR – WL



Ceramic body and wire wound construction provide highest SRFs available in 0603 size.

These ultra-compact inductors provided exceptional Q values, even at high frequencies.

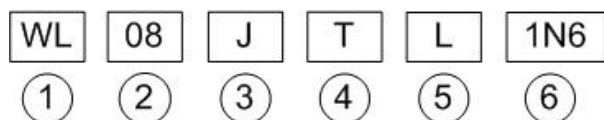
## Feature

- High Q
- Large current

## Application

- IF Impedance matching
- RF Oscillation circuit
- IF choke
- Circuits where large currents flow (PA, LNA)
- Circuits where high Q characteristics (DAC, LNA)

## Part Numbering



### ① Product Type

Product Type	
WL	Wire Wound Chip Inductor

### ② Dimensions (LxW)

Codes	Dimensions (LxW)	EIA
08	2.85x2.50mm	1008
05	2.25x1.50mm	0805
03	1.60x0.80mm	0603
02	1.00x0.50mm	0402

### ③ Inductance Tolerance

Code	Type
G	±2%
J	5%
K	10%
M	20%

### ④ Packaging

Code	Type
T	Taping Reel

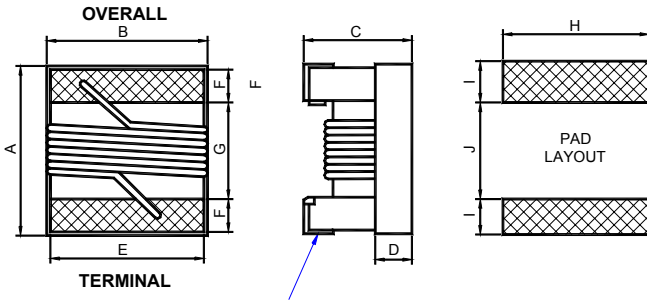
### ⑤ Design code

Code	
	Standard Inductors
L	Low Profile Inductors
H	High Current and High Q

### ⑥ Inductance

Codes	Inductance
1N6	1.6nH
82N	82nH
R27	270nH

**D**imensions



Approx. 0.007" / 0.18mm BOTH ENDS

**Standard**

Unit: mm

SIZE	STYLE	A Max.	B Max.	C Max.	D Ref.	E	F	G	H	I	J
1008	WL08	2.92	2.79	2.03	0.65	2.03	0.51	1.52	2.54	1.02	1.27
0805	WL05	2.29	1.73	1.52	0.51	1.27	0.44	1.02	1.78	1.02	0.76
0603	WL03	1.80	1.12	1.02	0.38	0.76	0.33	0.86	1.02	0.64	0.64
0402	WL02	1.27	0.76	0.61	0.15	0.51	0.23	0.56	0.66	0.50	0.46

**Low Profile**

SIZE	STYLE	A Max.	B Max.	C Max.	D Ref.	E	F	G	H	I	J
1008	WL08	2.92	2.79	1.04	0.65	2.03	0.51	1.52	2.54	1.02	1.27
0805	WL05	2.29	1.73	1.03	0.51	1.27	0.44	1.02	1.78	1.02	0.76

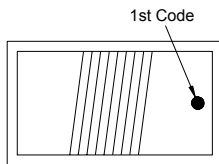
**High Current / High Q**

SIZE	STYLE	A Max.	B Max.	C Max.	D Ref.	E	F	G	H	I	J
1008	WL08	2.92	2.79	2.03	0.65	2.03	0.51	1.52	2.54	1.02	1.27
0805	WL05	2.29	1.73	1.52	0.51	1.27	0.44	1.02	1.78	1.02	0.76
0603	WL03	1.80	1.12	1.02	0.38	0.76	0.33	0.86	1.02	0.64	0.64

**C**olor Coding

0603 / 0805 Series (0402 Series is No Color Coding)

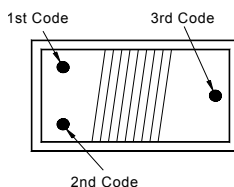
Because of their small size, these parts are marked with a single color dot. The inductance value represented by the dot is shown on the data page for each series.



**COLOR CODING**

**1008 Series**

These parts are marked with 3 color dots. The table at right side shows the significance of each color.



**COLOR CODING**

- 0=Black
- 1=Brown
- 2=Red
- 3=Orange
- 4=Yellow
- 5=Green
- 6=Blue
- 7=Violet
- 8=Gray
- 9=White

Examples:  
 Gray, Red, Black =82nH  
 Brown, Red, Black =120nH

**S** Standard Electrical Specifications  
**1008** Wire Wound Chip Inductors / **Standard**

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)
5.6	10,5	50	50	1500	4000	0.15	1000
10	10,5	50	50	500	4100	0.08	1000
12	10,5	50	50	500	3300	0.09	1000
15	10,5	50	50	500	2500	0.11	1000
18	10,5	50	50	350	2400	0.12	1000
22	10,5	50	55	350	2400	0.12	1000
24	10,5	50	55	350	1900	0.12	1000
27	10,5	50	55	350	1600	0.13	1000
33	10,5,2	50	60	350	1600	0.14	1000
39	10,5,2	50	60	350	1500	0.15	1000
47	10,5,2	50	65	350	1500	0.16	1000
56	10,5,2	50	65	350	1300	0.18	1000
68	10,5,2	50	65	350	1300	0.20	1000
82	10,5,2	50	60	350	1000	0.22	1000
100	10,5,2	25	60	350	1000	0.56	650
120	10,5,2	25	60	350	950	0.63	650
150	10,5,2	25	45	100	850	0.70	580
180	10,5,2	25	45	100	750	0.77	620
220	10,5,2	25	45	100	700	0.84	500
240	10,5,2	25	45	100	650	0.88	500
270	10,5,2	25	45	100	600	0.91	500
300	10,5,2	25	45	100	585	1.00	450
330	10,5,2	25	45	100	570	1.05	450
390	10,5,2	25	45	100	500	1.12	470
430	10,5,2	25	45	100	480	1.15	470
470	10,5,2	25	45	100	450	1.19	470
560	10,5,2	25	45	100	415	1.33	400
620	10,5,2	25	45	100	375	1.40	300
680	10,5,2	25	45	100	375	1.47	400
750	10,5,2	25	45	100	360	1.54	360
820	10,5,2	25	45	100	350	1.61	400
910	10,5,2	25	35	50	320	1.68	380
1000	10,5,2	25	35	50	290	1.75	370
1200	10,5,2	7.9	35	50	250	2.00	310
1500	10,5,2	7.9	28	50	200	2.30	330
1800	10,5,2	7.9	28	50	160	2.60	300
2200	10,5,2	7.9	28	50	160	2.80	280
2700	10,5,2	7.9	22	25	140	3.20	290
3300	10,5,2	7.9	22	25	110	3.40	290
3900	10,5,2	7.9	20	25	100	3.60	260
4700	10,5,2	7.9	20	25	90	4.00	260
5600	10,5,2	7.9	16	7.96	20	4.00	240
6800	10,5,2	7.9	18	7.96	40	4.90	200
8200	10,5,2	7.9	18	7.96	25	6.00	170
10000	10,5,2	2.52	18	7.96	20	9.00	150
12000	10,5,2	2.52	18	7.96	18	10.5	130
15000	10,5,2	2.52	18	7.96	15	11.5	120

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DataShee

0805 Wire Wound Chip Inductors / Standard

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)	Color Code
2.8	10,5	250	80	1500	7900	0.06	800	Gray
3.0	10,5	250	65	1500	7900	0.06	800	White
3.3	10,5	250	50	1500	6000	0.08	600	Black
5.6	10,5	250	65	1000	5500	0.08	600	Orange
6.8	10,5	250	50	1000	5500	0.11	600	Brown
7.5	10,5	250	50	1000	4500	0.14	600	Green
8.2	10,5	250	50	1000	4700	0.12	600	Red
10.0	10,5,2	250	60	500	4200	0.10	600	Blue
12.0	10,5,2	250	50	500	4000	0.15	600	Orange
15.0	10,5,2	250	50	500	3400	0.17	600	Yellow
18.0	10,5,2	250	50	500	3300	0.20	600	Green
22.0	10,5,2	250	55	500	2600	0.22	600	Blue
24.0	10,5,2	250	50	500	2000	0.22	500	Gray
27.0	10,5,2	250	55	500	2500	0.25	500	Violet
33.0	10,5,2	250	60	500	2050	0.27	500	Gray
36.0	10,5,2	250	55	500	1700	0.27	500	Orange
39.0	10,5,2	250	60	500	2000	0.29	500	White
43.0	10,5,2	200	60	500	1650	0.34	500	Yellow
47.0	10,5,2	200	60	500	1650	0.31	500	Black
56.0	10,5,2	200	60	500	1550	0.34	500	Brown
68.0	10,5,2	200	60	500	1450	0.38	500	Red
82.0	10,5,2	150	65	500	1300	0.42	400	Orange
91.0	10,5,2	150	65	500	1200	0.48	400	Black
100	10,5,2	150	65	500	1200	0.46	400	Yellow
110	10,5,2	150	50	250	1000	0.48	400	Brown
120	10,5,2	150	50	250	1100	0.51	400	Green
150	10,5,2	100	50	250	920	0.56	400	Blue
180	10,5,2	100	50	250	870	0.64	400	Violet
220	10,5,2	100	50	250	850	0.70	400	Gray
240	10,5,2	100	44	250	690	1.00	350	Red
270	10,5,2	100	48	250	650	1.00	350	White
330	10,5,2	100	48	250	600	1.40	310	Black
390	10,5,2	100	48	250	560	1.50	290	Brown
470	10,5,2	50	33	100	375	1.70	220	Red
560	10,5,2	25	23	50	340	1.90	210	Orange
620	10,5,2	25	23	50	220	2.20	210	Yellow
680	10,5,2	25	23	50	200	2.20	190	Green
750	10,5,2	25	23	50	200	2.30	180	Blue
820	10,5,2	25	23	50	200	2.35	180	Violet
1000	10,5,2	25	20	50	100	2.50	170	Gray
1200	10,5,2	7.9	18	25	100	2.50	170	White
1500	10,5,2	7.9	16	25	100	2.50	170	Black
1800	10,5,2	7.9	16	7.9	80	2.50	170	Brown
2200	10,5,2	7.9	16	7.9	60	2.70	160	Red
2700	10,5,2	7.9	16	7.9	50	2.95	150	Orange

0603 Wire Wound Chip Inductors / Standard

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	SRF Min (MHz)	RDC Max (Ω)	IDC Max (mA)	900MHz		1.7GHz		Color Code
							L TYP	Q TYP	L TYP	Q TYP	
1.6	10,5	250	16	12500	0.040	700	1.53	35	1.58	55	Blue
1.8	10,5	250	16	12500	0.045	700	1.63	35	1.66	50	Black
3.3	10,5	250	22	>6000	0.080	700	3.35	47	3.40	65	Red
3.6	10,5	250	22	5800	0.063	700	3.53	49	3.58	65	Violet
3.9	10,5	250	22	>6000	0.080	700	3.95	49	3.96	67	Brown
4.3	10,5	250	22	5800	0.063	700	4.32	49	4.43	67	Orange
4.7	10,5	250	20	5800	0.120	700	4.65	53	4.80	67	Violet
5.1	10,5	250	20	5800	0.160	700	5.13	47	5.36	56	Green
5.6	10,5	250	20	5800	0.170	700	5.53	56	5.86	77	Yellow
6.8	10,5,2	250	27	5800	0.110	700	6.75	60	7.10	81	Red
7.5	10,5,2	250	27	4800	0.110	700	7.39	62	7.71	81	Brown
8.2	10,5,2	250	27	4800	0.110	700	8.25	64	8.40	81	Green
8.7	10,5,2	250	27	4800	0.110	700	8.84	62	9.38	58	Yellow
9.5	10,5,2	250	27	4800	0.130	700	9.64	59	10.5	61	Blue
10.0	10,5,2	250	31	4800	0.130	700	10.0	66	10.6	83	Orange
11.0	10,5,2	250	31	4000	0.086	700	11.3	53	12.1	56	Gray
12.0	10,5,2	250	35	4000	0.130	700	12.3	72	13.5	83	Yellow
15.0	10,5,2	250	35	4000	0.170	700	15.4	64	16.8	89	Green
16.0	10,5,2	250	35	3300	0.110	700	16.5	55	18.0	52	White
18.0	10,5,2	250	35	3100	0.170	700	18.7	70	21.4	69	Blue
22.0	10,5,2	250	38	3000	0.190	700	22.8	73	26.1	71	Violet
23.0	10,5,2	250	38	2850	0.190	700	24.1	71	28.0	71	Orange
24.0	10,5,2	250	38	2800	0.130	700	25.7	45	30.9	40	Black
27.0	10,5,2	250	40	2800	0.220	600	29.2	74	34.6	65	Gray
30.0	10,5,2	250	40	2800	0.150	600	31.4	47	39.8	28	Brown
33.0	10,5,2	250	40	2300	0.220	600	36.0	67	49.5	42	White
36.0	10,5,2	250	40	2300	0.250	600	39.1	47	48.9	24	Red
39.0	10,5,2	250	40	2200	0.250	600	42.7	60	60.2	40	Black
43.0	10,5,2	200	38	2000	0.280	600	46.9	44	60.3	21	Orange
47.0	10,5,2	200	38	2000	0.280	600	52.2	62	77.2	35	Brown
51.0	10,5,2	200	35	1900	0.280	600	55.5	69	82.2	34	Blue
56.0	10,5,2	200	37	1900	0.310	600	62.5	56	97.0	26	Red
68.0	10,5,2	200	34	1700	0.340	600	80.5	54	168.0	21	Orange
72.0	10,5,2	150	34	1700	0.490	400	82.0	53	135.0	20	Yellow
82.0	10,5,2	150	34	1700	0.540	400	96.2	54	177.0	21	Green
100	10,5,2	150	32	1400	0.580	400	124	49			Blue
110	10,5,2	150	28	1350	0.610	300	138	43			Violet
120	10,5,2	150	28	1300	0.650	300	166	39			Gray
150	10,5,2	100	25	1300	0.950	280	230	25			White
180	10,5,2	100	25	1250	1.400	250	300	20			Black
220	10,5,2	100	25	1200	1.600	250	440	15			Brown
270	10,5,2	100	25	900	2.100	200	580	12			Red
330	10,5,2	100	25	900	3.800	100					Blue
390	10,5,2	100	25	900	4.350	100					Yellow

0402 Wire Wound Chip Inductors / Standard

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	SRF Min (MHz)	RDC Max (Ω)	IDC Max (mA)	900MHz		1.7GHz	
							L TYP	Q TYP	L TYP	Q TYP
1.0	10	250	16	12700	0.045	1360	1.02	77	1.02	69
1.9	10	250	16	11300	0.070	1040	1.72	68	1.74	82
2.0	10,5	250	16	11100	0.070	1040	1.93	54	1.93	75
2.2	10,5	250	19	10800	0.070	960	2.19	59	2.23	100
2.4	10,5	250	15	10500	0.070	790	2.24	51	2.27	68
2.7	10,5	250	16	10400	0.120	640	2.23	42	2.25	61
3.3	10,5	250	19	7000	0.066	840	3.10	65	3.12	87
3.6	10,5,2	250	19	6800	0.066	840	3.56	45	3.62	71
3.9	10,5,2	250	19	5800	0.066	840	3.89	50	4.00	75
4.3	10,5,2	250	18	6000	0.091	700	4.19	47	4.30	71
4.7	10,5,2	250	15	4700	0.130	640	4.55	48	4.68	68
5.1	10,5,2	250	20	4800	0.083	800	5.15	56	5.25	82
5.6	10,5,2	250	20	4800	0.083	760	5.16	54	5.28	81
6.2	10,5,2	250	20	4800	0.083	760	6.16	52	6.37	76
6.8	10,5,2	250	20	4800	0.083	680	6.56	63	6.93	78
7.5	10,5,2	250	22	4800	0.104	680	7.91	60	8.22	88
8.2	10,5,2	250	22	4400	0.104	680	8.50	57	8.85	84
8.7	10,5,2	250	18	4100	0.200	480	8.78	54	9.21	73
9.0	10,5,2	250	22	4160	0.104	680	9.07	62	9.53	78
9.5	10,5,2	250	18	4000	0.200	480	9.42	54	9.98	69
10.0	10,5,2	250	21	3900	0.195	480	9.80	50	10.1	67
11.0	10,5,2	250	24	3680	0.120	640	10.7	52	11.2	78
12.0	10,5,2	250	24	3600	0.120	640	11.9	53	12.7	71
13.0	10,5,2	250	24	3450	0.210	440	13.4	51	14.6	57
15.0	10,5,2	250	24	3280	0.172	560	14.6	55	15.5	77
16.0	10,5,2	250	24	3100	0.220	560	16.6	46	18.8	47
18.0	10,5,2	250	24	3100	0.230	420	18.3	57	20.28	62
19.0	10,5,2	250	24	3040	0.202	480	19.1	50	21.1	67
20.0	10,5,2	250	25	3000	0.250	420	20.7	52	23.66	53
22.0	10,5,2	250	25	2800	0.300	400	23.2	53	26.75	53
23.0	10,5,2	250	22	2720	0.300	400	23.8	49	26.9	64
24.0	10,5,2	250	25	2700	0.300	400	25.1	51	29.5	50
27.0	10,5,2	250	24	2480	0.300	400	28.7	49	33.5	63
30.0	10,5,2	250	25	2350	0.350	400	31.1	46	38.5	39
33.0	10,5,2	250	24	2350	0.350	400	34.9	31	41.74	32
36.0	10,5,2	250	24	2320	0.440	320	39.5	44	48.4	53
39.0	10,5,2	250	25	2100	0.550	200	41.7	47	50.23	45
40.0	10,5,2	250	24	2240	0.440	320	39.0	44	47.4	33
43.0	10,5,2	250	25	2030	0.810	100	45.8	46	61.55	34
47.0	10,5,2	250	20	2100	0.830	150	50.0	38		
51.0	10,5,2	250	25	1750	0.820	100				
56.0	10,5,2	250	22	1760	0.970	100				
68.0	10,5,2	250	22	1620	1.120	100				

**1008** Wire Wound Chip Inductors / Low Profile

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)
4.7	10,5	50	42	500	6000	0.15	600
8.2	10,5	50	50	500	5000	0.22	600
15.0	10,5	50	57	500	3000	0.22	600
20.0	10,5	50	72	500	2400	0.33	600
30.0	10,5	50	69	500	2400	0.38	600
40.0	10,5	50	67	500	2000	0.43	600
50.0	10,5,2	50	72	500	1900	0.48	600
60.0	10,5,2	50	75	500	1800	0.52	600
70.0	10,5,2	50	68	500	1700	0.55	510
80.0	10,5,2	50	75	500	1400	0.56	510
90.0	10,5,2	50	85	500	1400	0.61	500
560.0	10,5,2	25	40	100	400	1.33	400

**0805** Wire Wound Chip Inductors / Low Profile

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)	Color Code
1.8	10	250	55	1500	9400	0.03	800	Black
3.9	10	250	50	1000	6100	0.06	800	Brown
4.7	10,5	250	50	1000	5500	0.06	800	Red
6.8	10,5	250	50	1000	5500	0.08	800	Orange
8.2	10,5,2	250	50	1000	4800	0.08	800	Yellow
10.0	10,5,2	250	55	750	3300	0.08	800	Green
12.0	10,5,2	250	55	750	3800	0.10	800	Blue
15.0	10,5,2	250	50	500	2950	0.10	800	Violet
18.0	10,5,2	250	50	500	3100	0.13	800	Gray
22.0	10,5,2	250	50	500	2900	0.15	800	White
27.0	10,5,2	250	50	500	2450	0.23	600	Black
33.0	10,5,2	250	50	500	2350	0.28	600	Brown
39.0	10,5,2	250	50	500	2200	0.33	600	Red
47.0	10,5,2	200	50	500	2000	0.39	600	Orange
56.0	10,5,2	200	50	500	1850	0.39	500	Yellow
68.0	10,5,2	200	50	500	1500	0.40	500	Green
82.0	10,5,2	150	50	500	1500	0.44	500	Blue
100.0	10,5,2	150	50	500	1200	0.64	400	Violet
120.0	10,5,2	150	40	250	1150	0.68	300	Gray
150.0	10,5,2	150	40	250	1050	0.80	300	White

**1008** Wire Wound Chip Inductors / High Q

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)
3.0	10,5	50	70	1500	6000	0.04	1600
4.1	10,5	50	75	1500	6000	0.05	1600
7.8	10,5	50	75	500	3800	0.05	1600
10.0	10,5,2	50	60	500	3600	0.06	1600
12.0	10,5,2	50	70	500	2800	0.06	1500
18.0	10,5,2	50	62	350	2700	0.07	1400
22.0	10,5,2	50	62	350	2050	0.07	1400
33.0	10,5,2	50	75	350	1700	0.09	1300
39.0	10,5,2	50	75	350	1300	0.09	1300
47.0	10,5,2	50	75	350	1450	0.12	1200
56.0	10,5,2	50	75	350	1230	0.12	1200
68.0	10,5,2	50	80	350	1150	0.13	1100
82.0	10,5,2	50	80	350	1060	0.16	1100
100.0	10,5,2	50	62	350	820	0.16	1000

**0805** Wire Wound Chip Inductors / High Q

Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)	Color Code
2.5	10,5	250	80	1500	6000	0.020	1600	Black
5.6	10,5	250	98	1500	6000	0.035	1600	Brown
6.2	10,5	250	88	1000	4750	0.035	1600	Red
12.0	10,5	250	80	1000	3000	0.045	1600	Orange
16.0	10,5,2	250	72	500	2950	0.060	1500	Yellow
18.0	10,5,2	250	75	500	2550	0.060	1400	Green
20.0	10,5,2	250	70	500	2050	0.055	1400	Blue
27.0	10,5,2	250	75	500	2000	0.070	1300	Violet
30.0	10,5,2	250	65	500	1950	0.095	1200	Gray
39.0	10,5,2	250	65	500	1600	0.110	1100	White
48.0	10,5,2	200	65	500	1400	0.095	1200	Black
51.0	10,5,2	200	65	500	1400	0.120	1000	Brown

**0603** Wire Wound Chip Inductors / High Q

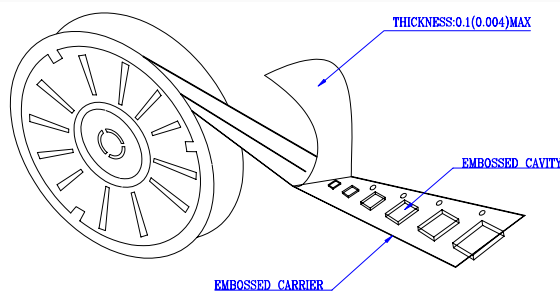
Inductance (nH)	Percent Tolerance	Test Frequency (MHz)	Q Min	SRF Min (MHz)	RDC Max ( $\Omega$ )	IDC Max (mA)	Color Code
1.6	10,5	250	24	12500	0.030	2400	Black
3.6	10,5	250	24	5900	0.048	2300	Brown
3.9	10,5	250	25	5900	0.054	2200	Red
6.8	10,5	250	35	5800	0.054	2100	Orange
7.5	10,5	250	38	3700	0.059	2100	Yellow
10.0	10,5,2	250	38	3700	0.071	2000	Green
12.0	10,5,2	250	38	3000	0.075	2000	Blue
15.0	10,5,2	250	38	2800	0.080	1900	Violet
18.0	10,5,2	250	40	2800	0.099	1900	Gray
22.0	10,5,2	250	42	2400	0.099	1800	White
24.0	10,5,2	250	42	2400	0.105	1800	Black



## Packing Packaging Quantity

Unit: pcs

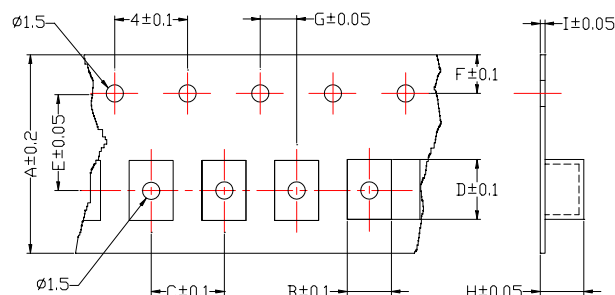
Packaging Series	pcs/wheel
WL08	2,000
WL05	2,000
WL03	4,000
WL02	4,000



## Reel Dimensions

Unit: pcs

Series	A	B	C	D	E	F	G	H	I
WL08	8	2.73	4	2.88	3.5	1.75	2	2.33	0.2
WL05	8	1.88	4	2.38	3.5	1.75	2	1.48	0.2
WL03	8	1.1	4	1.75	3.5	1.75	2	1.15	0.25
WL02	8								



## Environmental Characteristics

### Electrical Performance Test

Item	Specification	Test Method
1 Inductance	REF.ER to Standard Electrical Characteristic List	HP4291B
2 Q		HP4291B
3 SRF		HP8753D
4 DC Resistance $R_{dc}$		Micro-Ohmmeter (Gom-801G)
5 Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initial value
6 Over Load Test	After 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	After 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

### Mechanical Performance

Item	Specification	Test Method
1 Vibration Test	Appearance: No damage L change: within $\pm 5\%$ Q change: within $\pm 10\%$	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 Soldering-teat		Pre-heating: 150°C, 1min Solder Composition: Sn/Pb= 63/67 Solder Temperature: 230 $\pm$ 5°C Immersion Time: 20 $\pm$ 2sec Solder Temperature: 260 $\pm$ 5°C Immersion Time: 5 $\pm$ 2sec
3 Component Adhesion (Push Test)	1 lbs. For 0402 2 lbs. For 0603 3 lbs. For the rest	The device should be REF.LOW soldered (230 $\pm$ 5°C 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 pounds without a failure of the termination attached to component.
3 Component Adhesion (Push Test)	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Pb= 63/67 Solder Temperature: 230 $\pm$ 5°C Immersion Time: 4 $\pm$ 1sec

Item	Specification	Test Method
4 Drop Test	After test, The chip inductor don't fell of broke on the P.C board	Drop 1time for each face and 1time for each corner. Total drop 10 Times. Drop height :100cm Drop weight:125g
5 Solderability test	The terminal should at least be 90% covered with solder.	After fluxing (alpha 100 or equiv), inductor shall ve dipped in a melted solder bath at 232±5°C for 5 seconds.
6 Resistance to solvent test	There shall be no case of deformation change in appearance of obliteration of marking	MIL-STD202F,METHOD 215D

**Climatic Test**

Item	Specification	Test Method														
1 Temperature Characteristic	Appearance: No damage L change: within ±10% Q change: within ±20%	-40°C~+125°C														
2 Humidity Resistance		Temperature: 40±2°C Relative Humidity: 90~95% Time: 96hrs±2hrs Measured after exposure in the room condition for 2hrs														
3 Low Temperature Storage Test		Temperature: -40±2°C Time: 48±2hrs Inductors are to be tested after 1 hour at room temperature														
4 Thermal Shock Test		One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>15</td> </tr> <tr> <td>3</td> <td>85±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>15</td> </tr> </tbody> </table> Total: 5 cycles	Step	Temperature (°C)	Time (min)	1	-25±3	30	2	25±2	15	3	85±3	30	4	25±2
Step	Temperature (°C)	Time (min)														
1	-25±3	30														
2	25±2	15														
3	85±3	30														
4	25±2	15														
5 High Temperature Storage Test		Temperature:125±2°C Time: 48±2hrs Measured after exposure in the room condition for 1hrs														
6 High Temperature Load Life Test	There should be no evidence of short of open circuit.	Temperature:85±2°C Time:1000±12hrs Load: Allowed dc current														
7 Humidity Load Life		Temperature: 40±2°C Relative Humidity: 90~95% Time: 1000±12hrs Load: Allowed dc current														