Wire Wound Chip Inductor

LCWC Series

FEATURES

- Ceramic base provides high SRF
- Ultra-compact inductors provide high Q factors
- 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 down to ±2%
- -40ºC to +125ºC

APPLICATIONS

RF Products:

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

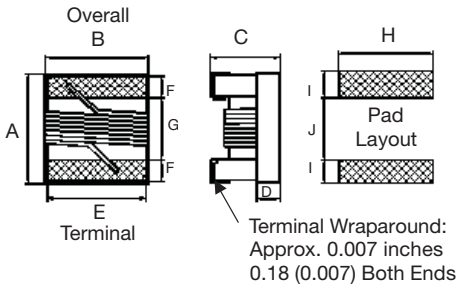
Broad Band Applications:

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

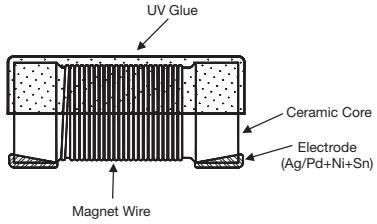
IT Applications:

- USB 2.0
- IEEE 1394

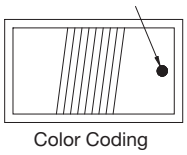
DIMENSIONS



CONSTRUCTION



COLOR CODING



STANDARD

mm (inches)

Type	Size (inch)	A Max.	B Max.	C Max.	D Ref.	E	F	G	H	I	J	Weight (g) (1000pcs)
0402	0402	1.27 (0.050)	0.76 (0.030)	0.61 (0.024)	0.15 (0.006)	0.51 (0.020)	0.23 (0.009)	0.56 (0.022)	0.66 (0.026)	0.50 (0.020)	0.46 (0.018)	0.8
0603	0603	1.80 (0.071)	1.12 (0.044)	1.02 (0.040)	0.38 (0.015)	0.76 (0.030)	0.33 (0.013)	0.86 (0.034)	1.02 (0.040)	0.64 (0.025)	0.64 (0.025)	3.46
0805	0805	2.29 (0.090)	1.73 (0.068)	1.52 (0.060)	0.51 (0.020)	1.27 (0.050)	0.44 (0.017)	1.02 (0.040)	1.78 (0.070)	1.02 (0.040)	0.76 (0.030)	12.13
1008	1008	2.92 (0.115)	2.79 (0.110)	2.13 (0.084)	0.65 (0.026)	2.03 (0.080)	0.51 (0.020)	1.52 (0.060)	2.54 (0.100)	1.02 (0.040)	1.27 (0.050)	30.73
1206	1206	3.45 (0.136)	1.90 (0.075)	1.40 (0.055)	0.50 (0.020)	1.60 (0.063)	0.50 (0.020)	2.20 (0.087)	1.93 (0.076)	1.02 (0.040)	1.78 (0.070)	40

LOW PROFILE

mm (inches)

Type	Size (inch)	A Max.	B Max.	C Max.	D Ref.	E	F	G	H	I	J
0805	0805	2.29 (0.090)	1.73 (0.068)	1.03 (0.041)	0.51 (0.020)	1.27 (0.050)	0.44 (0.017)	1.02 (0.040)	1.78 (0.070)	1.02 (0.040)	0.76 (0.030)
1008	1008	2.92 (0.115)	2.79 (0.110)	1.40 (0.055)	0.65 (0.026)	2.03 (0.080)	0.51 (0.020)	1.52 (0.060)	2.54 (0.100)	1.02 (0.040)	1.27 (0.050)

HIGH CURRENT/HIGH Q

mm (inches)

Type	Size (inch)	A Max.	B Max.	C Max.	D Ref.	E	F	G	H	I	J
0603	0603	1.80 (0.071)	1.12 (0.044)	1.02 (0.040)	0.38 (0.015)	0.76 (0.030)	0.33 (0.013)	0.86 (0.034)	1.02 (0.040)	0.64 (0.025)	0.64 (0.025)
0805	0805	2.29 (0.090)	1.73 (0.068)	1.52 (0.060)	0.51 (0.020)	1.27 (0.050)	0.44 (0.017)	1.02 (0.040)	1.78 (0.070)	1.02 (0.040)	0.76 (0.030)
1008	1008	2.92 (0.115)	2.79 (0.110)	2.03 (0.080)	0.65 (0.026)	2.03 (0.080)	0.51 (0.020)	1.52 (0.060)	2.54 (0.100)	1.02 (0.040)	1.27 (0.050)

Wire Wound Chip Inductor

LCWC Series

HOW TO ORDER

LC	WC	0402	K	101	G	T	A	R
Family	**Series**	**Size**	**Tolerance**	**Inductance**	**Style**	**Termination**	**Special**	**Packaging**
LC = Chip Inductor	WC = Wire Wound Ceramic	0402 0603 0805 1008 1206	G = 2% J = 5% K = 10%	3N9 = 3.9nH 39N = 39nH R39 = 390nH 3R9 = 3900nH 153 = 15000nH	G = Standard Q = High Q/ High Current R = Low Profile	T = Sn Plating	A = Standard	R = 7" Reel

STANDARD ELECTRICAL SPECIFICATIONS

0402

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor Min.	SRF (GHz)	DCR (Ω) max.	IDC (mA) max.	900MHz		1.7GHz	
							L	Q	L	Q
1.0	±10%	250	16	12.70	0.045	1360	1.02	77	1.02	69
1.9	±10%	250	16	11.30	0.070	1040	1.72	68	1.74	82
2.0	±10%	250	16	11.10	0.070	1040	1.93	54	1.93	75
2.2	±10%	250	19	10.80	0.070	960	2.19	59	2.23	100
2.4	±10%	250	15	10.50	0.070	790	2.24	51	2.27	68
2.7	±10%	250	16	10.40	0.120	640	2.23	42	2.25	61
3.3	±10%	250	19	7.00	0.066	840	3.10	65	3.12	87
3.6	±5, ±10%	250	19	6.80	0.066	840	3.56	45	3.62	71
3.9	±5, ±10%	250	19	5.80	0.066	840	3.89	50	4.00	75
4.3	±5, ±10%	250	18	6.00	0.091	700	4.19	47	4.30	71
4.7	±5, ±10%	250	18	4.70	0.130	640	4.55	48	4.68	68
5.1	±5, ±10%	250	20	4.80	0.083	800	5.15	56	5.25	82
5.6	±5, ±10%	250	20	4.80	0.083	760	5.16	54	5.28	81
6.2	±5, ±10%	250	20	4.80	0.083	760	6.16	52	6.37	76
6.8	±5, ±10%	250	20	4.80	0.083	680	6.56	63	6.93	78
7.5	±5, ±10%	250	22	4.80	0.104	680	7.91	60	8.22	88
8.2	±5, ±10%	250	22	4.40	0.104	680	8.50	57	8.85	84
8.7	±5, ±10%	250	18	4.10	0.200	480	8.78	54	9.21	73
9.0	±5, ±10%	250	22	4.16	0.104	680	9.07	62	9.53	78
9.5	±5, ±10%	250	18	4.00	0.200	480	9.42	54	9.98	69
10	±2, ±5, ±10%	250	21	3.90	0.195	480	9.80	50	10.10	67
11	±2, ±5, ±10%	250	24	3.68	0.120	640	10.70	52	11.20	78
12	±2, ±5, ±10%	250	24	3.60	0.120	640	11.90	53	12.70	71
13	±2, ±5, ±10%	250	24	3.45	0.210	440	13.40	51	14.60	57
15	±2, ±5, ±10%	250	24	3.28	0.172	560	14.60	55	15.50	77
16	±2, ±5, ±10%	250	24	3.10	0.220	560	16.60	46	18.80	47
18	±2, ±5, ±10%	250	25	3.10	0.230	420	18.30	57	20.30	62
19	±2, ±5, ±10%	250	24	3.04	0.202	480	19.10	50	21.10	67
20	±2, ±5, ±10%	250	25	3.00	0.250	420	20.70	52	23.70	53
22	±2, ±5, ±10%	250	25	2.80	0.300	400	23.20	53	26.80	53
23	±2, ±5, ±10%	250	24	2.72	0.300	400	23.80	49	26.90	64
24	±2, ±5, ±10%	250	25	2.70	0.300	400	25.10	51	29.50	50
27	±2, ±5, ±10%	250	24	2.48	0.300	400	28.70	49	33.50	63
30	±2, ±5, ±10%	250	25	2.35	0.350	400	31.10	46	38.50	39
33	±2, ±5, ±10%	250	24	2.35	0.350	400	34.90	31	41.70	32
36	±2, ±5, ±10%	250	24	2.32	0.440	320	39.50	44	48.40	53
39	±2, ±5, ±10%	250	25	2.10	0.550	200	41.70	47	50.20	45
40	±2, ±5, ±10%	250	24	2.24	0.500	320	39.00	44	47.40	33
43	±2, ±5, ±10%	250	25	2.03	0.810	100	45.80	46	61.60	34
47	±2, ±5, ±10%	250	25	2.10	0.830	150	50.00	38	55.80	37
51	±2, ±5, ±10%	250	25	1.75	0.820	100	50.40	47	59.40	37
56	±2, ±5, ±10%	250	25	1.76	0.970	100	57.40	49	72.40	40
68	±2, ±5, ±10%	250	22	1.62	1.120	100	69.60	45	83.40	38

Wire Wound Chip Inductor

LCWC Series

0603

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor Min.	SRF (GHz)	DCR (Ω) max.	IDC (mA) max.	900MHz		1.7GHz		Color Code
							L	Q	L	Q	
1.6	±5, ±10%	250	24	12.5	0.030	700	1.53	35	1.58	55	Blue
1.8	±5, ±10%	250	16	12.5	0.045	700	1.63	35	1.66	50	Black
2.2	±5, ±10%	250	15	6.00	0.100	700	2.18	41	2.20	64	White
2.3	±5, ±10%	250	16	>4.00	0.140	700	2.32	32	2.35	40	Yellow
3.3	±2, ±5, ±10%	250	22	>6.00	0.080	700	3.35	47	3.40	65	Red
3.6	±2, ±5, ±10%	250	22	5.80	0.063	700	3.53	49	3.58	65	Violet
3.9	±2, ±5, ±10%	250	22	>6.00	0.080	700	3.95	49	3.96	67	Brown
4.3	±2, ±5, ±10%	250	22	5.80	0.063	700	4.32	49	4.43	67	Orange
4.5	±2, ±5, ±10%	250	20	5.80	0.120	700	4.74	55	4.87	92	Gray
4.7	±2, ±5, ±10%	250	25	5.80	0.120	700	4.65	53	4.80	67	Violet
5.1	±2, ±5, ±10%	250	20	5.80	0.160	700	5.13	47	5.36	56	Green
5.6	±2, ±5, ±10%	250	20	5.80	0.170	700	5.53	56	5.86	77	Yellow
6.2	±2, ±5, ±10%	250	25	5.80	0.110	700	6.28	60	6.40	85	Black
6.3	±2, ±5, ±10%	250	25	5.80	0.110	700	6.67	41	6.86	61	Black
6.8	±2, ±5, ±10%	250	27	5.80	0.110	700	6.75	60	7.10	81	Red
7.5	±2, ±5, ±10%	250	28	4.80	0.106	700	7.70	60	7.82	65	Brown
8.2	±2, ±5, ±10%	250	27	4.80	0.110	700	8.25	64	8.40	81	Green
8.7	±2, ±5, ±10%	250	28	4.80	0.109	700	8.86	62	9.32	58	Yellow
9.1	±2, ±5, ±10%	250	35	4.80	0.130	700	9.20	70	9.70	80	Black
9.5	±2, ±5, ±10%	250	28	5.40	0.135	700	9.70	59	9.92	61	Blue
10	±2, ±5, ±10%	250	31	4.80	0.130	700	10.0	66	10.6	83	Orange
11	±2, ±5, ±10%	250	31	4.00	0.086	700	11.3	53	12.1	56	Gray
12	±2, ±5, ±10%	250	35	4.00	0.130	700	12.3	72	13.5	83	Yellow
15	±2, ±5, ±10%	250	35	4.00	0.170	700	15.4	64	16.8	89	Green
16	±2, ±5, ±10%	250	35	3.30	0.110	700	16.5	55	18.0	52	White
17	±2, ±5, ±10%	250	35	3.20	0.170	700	17.6	56	19.4	44	Red
18	±2, ±5, ±10%	250	35	3.10	0.170	700	18.7	70	21.4	69	Blue
20	±2, ±5, ±10%	250	40	3.00	0.190	700	20.7	80	23.5	30	Green
22	±2, ±5, ±10%	250	38	3.00	0.190	700	22.8	73	26.1	71	Violet
23	±2, ±5, ±10%	250	38	2.85	0.190	700	24.1	71	28.0	71	Orange
24	±2, ±5, ±10%	250	38	2.80	0.130	700	25.7	45	30.9	40	Black
27	±2, ±5, ±10%	250	40	2.80	0.220	600	29.2	74	34.6	65	Gray
30	±2, ±5, ±10%	250	40	2.80	0.150	600	31.4	47	39.8	28	Brown
33	±2, ±5, ±10%	250	40	2.30	0.220	600	36.0	67	49.5	42	White
36	±2, ±5, ±10%	250	37	2.30	0.250	600	39.1	47	48.9	24	Red
39	±2, ±5, ±10%	250	40	2.20	0.250	600	42.7	60	60.2	40	Black
43	±2, ±5, ±10%	200	38	2.00	0.280	600	46.9	44	60.3	21	Orange
47	±2, ±5, ±10%	200	38	2.00	0.280	600	52.2	62	77.2	35	Brown
51	±2, ±5, ±10%	200	38	1.90	0.280	600	55.5	69	82.2	34	Blue
56	±2, ±5, ±10%	200	38	1.90	0.310	600	62.5	56	97.0	26	Red
62	±2, ±5, ±10%	200	37	1.80	0.340	600	68.0	40	110	10	Gray
68	±2, ±5, ±10%	200	37	1.70	0.340	600	80.5	54	168	21	Orange
72	±2, ±5, ±10%	150	34	1.70	0.490	600	82.0	53	135	20	Yellow
82	±2, ±5, ±10%	150	34	1.70	0.540	400	96.2	54	177	21	Green
91	±2, ±5, ±10%	150	30	1.70	0.500	400	110.0	50	416.4	6	Brown
100	±2, ±5, ±10%	150	34	1.40	0.580	400	124.0	49	319.5	13	Blue
110	±2, ±5, ±10%	150	32	1.35	0.610	300	138.0	43	342.7	15	Violet
120	±2, ±5, ±10%	150	32	1.30	0.650	300	166.0	39	529.3	8	Gray
130	±2, ±5, ±10%	150	30	1.40	0.720	300	185.0	60	-	-	White
140	±2, ±5, ±10%	100	28	1.30	0.870	280	190.0	80	-	-	Blue
150	±2, ±5, ±10%	100	28	1.30	0.950	280	230.0	25	-	-	White
160	±2, ±5, ±10%	100	25	1.30	1.400	280	215.0	20	-	-	Yellow
180	±2, ±5, ±10%	100	25	1.25	1.400	250	305.0	22	-	-	Black
220	±2, ±5, ±10%	100	25	1.20	1.600	250	377.0	21	-	-	Brown
260	±2, ±5, ±10%	100	25	1.00	2.000	200	469.0	21	-	-	Violet
270	±2, ±5, ±10%	100	25	0.90	2.100	200	523.0	19	-	-	Red
280	±2, ±5, ±10%	100	25	1.00	2.400	100	524.0	18	-	-	Green
300	±2, ±5, ±10%	100	25	0.75	2.500	150	539.7	21	-	-	Orange
330	±2, ±5, ±10%	100	25	0.90	3.800	100	680.4	20	-	-	Blue
390	±2, ±5, ±10%	100	25	0.90	4.350	100	734.5	29	-	-	Yellow
470	±2, ±5, ±10%	100	23	0.60	3.600	80	-	-	-	-	White

Wire Wound Chip Inductor

LCWC Series

0805

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
2.7	±5, ±10%	250	80 @ 1500MHz	7.900	0.06	800	Brown
2.8	±5, ±10%	250	80 @ 1500MHz	7.900	0.06	800	Gray
3.0	±5, ±10%	250	65 @ 1500MHz	7.900	0.06	800	White
3.3	±5, ±10%	250	50 @ 1500MHz	6.000	0.08	600	Black
5.6	±5, ±10%	250	65 @ 1000MHz	5.500	0.08	600	Orange
6.2	±5, ±10%	250	50 @ 1000MHz	5.500	0.11	600	Green
6.8	±5, ±10%	250	50 @ 1000MHz	5.500	0.11	600	Brown
7.5	±5, ±10%	250	50 @ 1000MHz	4.500	0.14	600	Green
8.2	±5, ±10%	250	50 @ 1000MHz	4.700	0.12	600	Red
8.7	±5, ±10%	250	50 @ 1000MHz	4.000	0.21	400	White
10	±2, ±5, ±10%	250	60 @ 500MHz	4.200	0.10	600	Blue
12	±2, ±5, ±10%	250	50 @ 500MHz	4.000	0.15	600	Orange
15	±2, ±5, ±10%	250	50 @ 500MHz	3.400	0.17	600	Yellow
18	±2, ±5, ±10%	250	50 @ 500MHz	3.300	0.20	600	Green
22	±2, ±5, ±10%	250	55 @ 500MHz	2.600	0.22	500	Blue
24	±2, ±5, ±10%	250	50 @ 500MHz	2.000	0.22	500	Gray
27	±2, ±5, ±10%	250	55 @ 500MHz	2.500	0.25	500	Violet
33	±2, ±5, ±10%	250	60 @ 500MHz	2.050	0.27	500	Gray
36	±2, ±5, ±10%	250	55 @ 500MHz	1.700	0.27	500	Orange
39	±2, ±5, ±10%	250	60 @ 500MHz	2.000	0.29	500	White
43	±2, ±5, ±10%	200	60 @ 500MHz	1.650	0.34	500	Yellow
47	±2, ±5, ±10%	200	60 @ 500MHz	1.650	0.31	500	Black
56	±2, ±5, ±10%	200	60 @ 500MHz	1.550	0.34	500	Brown
68	±2, ±5, ±10%	200	60 @ 500MHz	1.450	0.38	500	Red
72	±2, ±5, ±10%	150	65 @ 500MHz	1.400	0.40	500	Green
82	±2, ±5, ±10%	150	65 @ 500MHz	1.300	0.42	400	Orange
91	±2, ±5, ±10%	150	65 @ 500MHz	1.200	0.48	400	Black
100	±2, ±5, ±10%	150	65 @ 500MHz	1.200	0.46	400	Yellow
110	±2, ±5, ±10%	150	50 @ 250MHz	1.000	0.48	400	Brown
120	±2, ±5, ±10%	150	50 @ 250MHz	1.100	0.51	400	Green
150	±2, ±5, ±10%	100	50 @ 250MHz	0.920	0.56	400	Blue
180	±2, ±5, ±10%	100	50 @ 250MHz	0.870	0.64	400	Violet
200	±2, ±5, ±10%	100	50 @ 250MHz	0.860	0.66	400	Orange
220	±2, ±5, ±10%	100	50 @ 250MHz	0.850	0.70	400	Gray
240	±2, ±5, ±10%	100	44 @ 250MHz	0.690	1.00	350	Red
250	±2, ±5, ±10%	100	50 @ 250MHz	0.680	1.00	350	Green
270	±2, ±5, ±10%	100	48 @ 250MHz	0.650	1.00	350	White
300	±2, ±5, ±10%	100	48 @ 250MHz	0.620	1.20	330	Yellow
330	±2, ±5, ±10%	100	48 @ 250MHz	0.600	1.40	310	Black
360	±2, ±5, ±10%	100	48 @ 250MHz	0.580	1.45	300	Green
390	±2, ±5, ±10%	100	48 @ 250MHz	0.560	1.50	290	Brown
430	±2, ±5, ±10%	50	33 @ 100MHz	0.430	1.70	230	Blue
470	±2, ±5, ±10%	50	33 @ 100MHz	0.375	1.70	250	Red
560	±2, ±5, ±10%	25	23 @ 50MHz	0.340	1.90	230	Orange
600	±2, ±5, ±10%	25	23 @ 50MHz	0.260	1.60	450	White
620	±2, ±5, ±10%	25	23 @ 50MHz	0.220	2.20	210	Yellow
680	±2, ±5, ±10%	25	23 @ 50MHz	0.200	2.20	190	Green
750	±2, ±5, ±10%	25	23 @ 50MHz	0.200	2.30	180	Blue
820	±2, ±5, ±10%	25	23 @ 50MHz	0.200	2.35	180	Violet
1000	±2, ±5, ±10%	25	20 @ 50MHz	0.100	2.50	170	Gray
1200	±2, ±5, ±10%	7.9	18 @ 25MHz	0.100	2.50	170	White
1500	±2, ±5, ±10%	7.9	16 @ 25MHz	0.100	2.50	170	Black
1800	±2, ±5, ±10%	7.9	16 @ 7.9MHz	0.080	2.50	170	Brown
2200	±2, ±5, ±10%	7.9	16 @ 7.9MHz	0.060	2.70	160	Red
2700	±2, ±5, ±10%	7.9	16 @ 7.9MHz	0.050	3.10	150	Orange
3300	±2, ±5, ±10%	7.9	15 @ 7.9MHz	0.040	4.40	90	Blue
4700	±2, ±5, ±10%	7.9	15 @ 7.9MHz	0.040	6.40	90	Green

Wire Wound Chip Inductor

LCWC Series

1008

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
*5.6	±5, ±10%	50	50 @ 1500MHz	4.000	0.15	1000	Black
*10	±2, ±5, ±10%	50	50 @ 500MHz	4.100	0.08	1000	Brown
*12	±2, ±5, ±10%	50	50 @ 500MHz	3.300	0.09	1000	Red
*15	±2, ±5, ±10%	50	50 @ 500MHz	2.500	0.11	1000	Orange
*18	±2, ±5, ±10%	50	50 @ 350MHz	2.400	0.12	1000	Yellow
*22	±2, ±5, ±10%	50	55 @ 350MHz	2.400	0.12	1000	Green
24	±2, ±5, ±10%	50	55 @ 350MHz	1.900	0.13	1000	Blue
*27	±2, ±5, ±10%	50	55 @ 350MHz	1.600	0.13	1000	Violet
*33	±2, ±5, ±10%	50	60 @ 350MHz	1.600	0.14	1000	Gray
36	±2, ±5, ±10%	50	60 @ 350MHz	1.600	0.15	1000	Orange
*39	±2, ±5, ±10%	50	60 @ 350MHz	1.500	0.15	1000	White
*47	±2, ±5, ±10%	50	65 @ 350MHz	1.500	0.16	1000	Black
*56	±2, ±5, ±10%	50	65 @ 350MHz	1.300	0.18	1000	Brown
*62	±2, ±5, ±10%	50	65 @ 350MHz	1.250	0.20	1000	Blue
*68	±2, ±5, ±10%	50	65 @ 350MHz	1.300	0.20	1000	Red
75	±2, ±5, ±10%	50	60 @ 350MHz	1.100	0.21	1000	White
*82	±2, ±5, ±10%	50	60 @ 350MHz	1.000	0.22	1000	Orange
91	±2, ±5, ±10%	50	50 @ 350MHz	1.000	0.45	1000	White
*100	±2, ±5, ±10%	25	60 @ 350MHz	1.000	0.56	650	Yellow
*120	±2, ±5, ±10%	25	60 @ 350MHz	0.950	0.63	650	Green
*150	±2, ±5, ±10%	25	45 @ 100MHz	0.850	0.70	800	Blue
*180	±2, ±5, ±10%	25	45 @ 100MHz	0.750	0.77	620	Violet
*220	±2, ±5, ±10%	25	45 @ 100MHz	0.700	0.84	500	Gray
*240	±2, ±5, ±10%	25	45 @ 100MHz	0.650	0.88	500	White
*270	±2, ±5, ±10%	25	45 @ 100MHz	0.600	0.91	690	Black
*300	±2, ±5, ±10%	25	45 @ 100MHz	0.585	1.00	450	Brown
*330	±2, ±5, ±10%	25	45 @ 100MHz	0.570	1.05	450	Red
*360	±2, ±5, ±10%	25	45 @ 100MHz	0.530	1.10	470	Orange
*390	±2, ±5, ±10%	25	45 @ 100MHz	0.500	1.12	630	Yellow
*430	±2, ±5, ±10%	25	45 @ 100MHz	0.480	1.15	470	Green
*470	±2, ±5, ±10%	25	45 @ 100MHz	0.450	1.19	470	Blue
*560	±2, ±5, ±10%	25	45 @ 100MHz	0.415	1.33	580	Violet
*620	±2, ±5, ±10%	25	45 @ 100MHz	0.375	1.40	300	Gray
*680	±2, ±5, ±10%	25	45 @ 100MHz	0.375	1.47	540	White
*750	±2, ±5, ±10%	25	45 @ 100MHz	0.360	1.54	360	Black
*820	±2, ±5, ±10%	25	45 @ 100MHz	0.350	1.61	400	Brown
*910	±2, ±5, ±10%	25	35 @ 50MHz	0.320	1.68	380	Red
*1000	±2, ±5, ±10%	25	35 @ 50MHz	0.290	1.75	370	Orange
*1200	±2, ±5, ±10%	7.9	35 @ 50MHz	0.250	2.00	310	Yellow
*1500	±2, ±5, ±10%	7.9	28 @ 50MHz	0.200	2.30	330	Green
*1800	±2, ±5, ±10%	7.9	28 @ 50MHz	0.160	2.60	300	Blue
*2200	±2, ±5, ±10%	7.9	28 @ 50MHz	0.160	2.80	280	Violet
*2700	±2, ±5, ±10%	7.9	22 @ 25MHz	0.140	3.20	290	Gray
*3300	±2, ±5, ±10%	7.9	22 @ 25MHz	0.110	3.40	290	White
*3900	±2, ±5, ±10%	7.9	18 @ 25MHz	0.100	3.60	260	Black
*4700	±2, ±5, ±10%	7.9	18 @ 25MHz	0.090	4.00	260	Brown
5600	±2, ±5, ±10%	7.9	16 @ 7.96MHz	0.020	4.00	240	Red
6800	±2, ±5, ±10%	7.9	15 @ 7.96MHz	0.040	4.90	200	Orange
8200	±2, ±5, ±10%	7.9	15 @ 7.96MHz	0.025	6.00	170	Yellow
10000	±2, ±5, ±10%	2.52	15 @ 7.96MHz	0.020	9.00	150	Green
12000	±2, ±5, ±10%	2.52	15 @ 7.96MHz	0.018	10.5	130	Blue
15000	±2, ±5, ±10%	2.52	15 @ 7.96MHz	0.015	11.5	120	Violet

* Test Method/Instrument: Network/Spectrum Analyzer

Wire Wound Chip Inductor

LCWC Series

1206							
Inductance (nH)	**Tolerance**	**L Freq. (MHz)**	**Quality Factor min.**	**SRF (GHz) min.**	**DCR (Ω) max.**	**IDC (mA) max.**	**Color Code**
6.8	±5, ±10%	100	30 @ 300MHz	5.50	0.07	1000	Brown
10	±5, ±10%	100	40 @ 300MHz	4.00	0.08	1000	Red
12	±5, ±10%	100	40 @ 300MHz	3.20	0.08	1000	Orange
15	±5, ±10%	100	40 @ 300MHz	3.20	0.10	1000	Yellow
18	±5, ±10%	100	50 @ 300MHz	2.80	0.10	1000	Green
22	±5, ±10%	100	50 @ 300MHz	2.20	0.10	1000	Blue
24	±5, ±10%	100	50 @ 300MHz	2.00	0.10	1000	Red
27	±2, ±5, ±10%	100	50 @ 300MHz	1.80	0.11	1000	Violet
33	±2, ±5, ±10%	100	55 @ 300MHz	1.80	0.11	1000	Gray
39	±2, ±5, ±10%	100	55 @ 300MHz	1.80	0.12	1000	White
47	±2, ±5, ±10%	100	55 @ 300MHz	1.50	0.13	1000	Black
56	±2, ±5, ±10%	100	55 @ 300MHz	1.45	0.14	1000	Brown
62	±2, ±5, ±10%	100	55 @ 300MHz	1.20	0.20	1000	Violet
68	±2, ±5, ±10%	100	55 @ 300MHz	1.20	0.26	950	Red
82	±2, ±5, ±10%	100	55 @ 300MHz	1.20	0.21	920	Orange
91	±2, ±5, ±10%	100	55 @ 300MHz	1.10	0.24	900	White
100	±2, ±5, ±10%	100	55 @ 300MHz	1.10	0.26	850	Yellow
120	±2, ±5, ±10%	100	55 @ 300MHz	0.75	0.26	800	Green
150	±2, ±5, ±10%	100	60 @ 300MHz	0.95	0.31	750	Blue
180	±2, ±5, ±10%	50	55 @ 300MHz	0.90	0.43	700	Violet
220	±2, ±5, ±10%	50	55 @ 300MHz	0.76	0.50	670	Gray
270	±2, ±5, ±10%	50	55 @ 300MHz	0.74	0.56	630	White
300	±2, ±5, ±10%	50	50 @ 150MHz	0.68	0.60	600	Green
330	±2, ±5, ±10%	50	45 @ 150MHz	0.65	0.62	590	Black
360	±2, ±5, ±10%	50	45 @ 150MHz	0.60	0.65	550	Blue
390	±2, ±5, ±10%	50	45 @ 150MHz	0.60	0.75	530	Brown
470	±2, ±5, ±10%	50	45 @ 150MHz	0.55	1.30	490	Red
560	±2, ±5, ±10%	35	45 @ 150MHz	0.47	1.34	460	Orange
620	±2, ±5, ±10%	35	45 @ 150MHz	0.47	1.58	460	Gray
680	±2, ±5, ±10%	35	45 @ 150MHz	0.45	1.58	430	Yellow
750	±2, ±5, ±10%	35	45 @ 150MHz	0.44	2.25	320	White
820	±2, ±5, ±10%	35	45 @ 150MHz	0.42	1.82	400	Green
910	±2, ±5, ±10%	35	45 @ 150MHz	0.41	2.95	310	Green
1000	±2, ±5, ±10%	35	45 @ 150MHz	0.40	2.80	320	Blue
1200	±2, ±5, ±10%	35	45 @ 150MHz	0.38	3.20	300	Violet

Wire Wound Chip Inductor

LCWC Series

LOW PROFILE ELECTRICAL SPECIFICATIONS

0805

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
1.8	±5%	250	55 @ 1500MHz	9.40	0.03	800	Black
3.9	±5, ±10%	250	60 @ 1000MHz	6.10	0.06	800	Brown
4.7	±5, ±10%	250	50 @ 1000MHz	5.50	0.06	800	Red
6.8	±5, ±10%	250	50 @ 1000MHz	5.50	0.08	800	Orange
8.2	±5, ±10%	250	50 @ 1000MHz	4.80	0.08	800	Yellow
10	±2, ±5, ±10%	250	55 @ 750MHz	3.30	0.08	800	Green
12	±2, ±5, ±10%	250	55 @ 750MHz	3.80	0.10	800	Blue
15	±2, ±5, ±10%	250	50 @ 500MHz	2.95	0.10	800	Violet
18	±2, ±5, ±10%	250	50 @ 500MHz	3.10	0.13	800	Gray
22	±2, ±5, ±10%	250	50 @ 500MHz	2.90	0.15	800	Whit
27	±2, ±5, ±10%	250	50 @ 500MHz	2.45	0.23	600	Black
33	±2, ±5, ±10%	250	50 @ 500MHz	2.35	0.28	600	Brown
39	±2, ±5, ±10%	250	50 @ 500MHz	2.20	0.33	600	Red
47	±2, ±5, ±10%	200	50 @ 500MHz	2.00	0.39	600	Orange
56	±2, ±5, ±10%	200	50 @ 500MHz	1.85	0.39	500	Yellow
68	±2, ±5, ±10%	200	50 @ 500MHz	1.50	0.40	500	Green
82	±2, ±5, ±10%	150	50 @ 500MHz	1.50	0.44	500	Blue
100	±2, ±5, ±10%	150	50 @ 500MHz	1.20	0.64	400	Violet
120	±2, ±5, ±10%	150	40 @ 250MHz	1.15	0.68	300	Gray
150	±2, ±5, ±10%	150	40 @ 250MHz	1.05	0.80	300	Whit
1000	±2, ±5, ±10%	25	16 @ 50MHz	0.08	3.50	170	Black

1008

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
3.3	±5, ±10%	50	42 @ 1500MHz	6.00	0.03	1000	White
4.2	±5, ±10%	50	42 @ 1500MHz	6.00	0.15	1000	Black
6.8	±5, ±10%	50	50 @ 1500MHz	5.40	0.17	1000	Brown
8.2	±5, ±10%	50	50 @ 1500MHz	5.00	0.22	1000	Red
15	±5, ±10%	50	57 @ 500MHz	3.00	0.22	1000	Orange
18	±5, ±10%	50	50 @ 350MHz	2.40	0.12	1000	Gray
20	±5, ±10%	50	72 @ 500MHz	2.40	0.33	1000	Yellow
27	±5, ±10%	50	50 @ 350MHz	1.60	0.13	850	Green
30	±5, ±10%	50	69 @ 500MHz	2.40	0.38	600	Blue
40	±5, ±10%	50	67 @ 500MHz	2.00	0.43	600	Violet
50	±2, ±5, ±10%	50	72 @ 500MHz	1.90	0.48	600	Gray
60	±2, ±5, ±10%	50	75 @ 500MHz	1.80	0.52	600	White
70	±2, ±5, ±10%	50	68 @ 500MHz	1.70	0.55	510	Black
80	±2, ±5, ±10%	50	75 @ 500MHz	1.40	0.56	510	Brown
180	±2, ±5, ±10%	50	50 @ 350MHz	0.90	0.40	450	Blue
560	±2, ±5, ±10%	25	40 @ 100MHz	0.415	1.33	400	Red

Wire Wound Chip Inductor

LCWC Series

HIGH CURRENT ELECTRICAL SPECIFICATIONS

0603

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
1.6	±5, ±10%	250	24	12.50	0.030	2400	Black
3.6	±5, ±10%	250	24	5.90	0.048	2300	Brown
3.9	±5, ±10%	250	25	5.90	0.054	2200	Red
6.8	±5, ±10%	250	35	5.80	0.054	2100	Orange
7.5	±5, ±10%	250	38	3.70	0.059	2100	Yellow
8.2	±5, ±10%	250	38	3.70	0.060	2000	White
10	±2, ±5, ±10%	250	38	3.70	0.071	2000	Green
12	±2, ±5, ±10%	250	38	3.00	0.075	2000	Blue
15	±2, ±5, ±10%	250	38	2.80	0.080	1900	Violet
18	±2, ±5, ±10%	250	40	2.80	0.099	1900	Gray
22	±2, ±5, ±10%	250	42	2.40	0.099	1800	White
24	±2, ±5, ±10%	250	42	2.40	0.105	1800	Black

HIGH Q ELECTRICAL SPECIFICATIONS

0805

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
2.5	±5, ±10%	250	80 @ 1500MHz	6.00	0.020	1600	Black
5.6	±5, ±10%	250	98 @ 1500MHz	6.00	0.035	1600	Brown
6.2	±5, ±10%	250	88 @ 1000MHz	4.75	0.035	1600	Red
6.8	±5, ±10%	250	80 @ 1000MHz	4.40	0.035	1600	White
8.2	±5, ±10%	250	75 @ 1000MHz	3.00	0.075	1000	Gray
10	±5, ±10%	250	80 @ 1000MHz	3.00	0.060	1600	Black
12	±5, ±10%	250	80 @ 1000MHz	3.00	0.045	1600	Orange
15	±2, ±5, ±10%	250	80 @ 1000MHz	2.80	0.100	1200	Black
16	±2, ±5, ±10%	250	72 @ 500MHz	2.95	0.060	1500	Yellow
18	±2, ±5, ±10%	250	75 @ 500MHz	2.55	0.060	1400	Green
20	±2, ±5, ±10%	250	70 @ 500MHz	2.05	0.055	1400	Blue
22	±2, ±5, ±10%	250	80 @ 500MHz	2.00	0.100	1200	Black
27	±2, ±5, ±10%	250	75 @ 500MHz	2.00	0.070	1300	Violet
30	±2, ±5, ±10%	250	65 @ 500MHz	1.95	0.095	1200	Gray
39	±2, ±5, ±10%	250	65 @ 500MHz	1.60	0.110	1100	White
48	±2, ±5, ±10%	200	65 @ 500MHz	1.40	0.095	1200	Black
51	±2, ±5, ±10%	200	65 @ 500MHz	1.40	0.120	1000	Brown

1008

Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
3.0	±5, ±10%	50	70 @ 1500MHz	6.00	0.04	1600	Black
3.9	±5, ±10%	50	75 @ 1500MHz	6.00	0.05	1600	White
4.1	±5, ±10%	50	75 @ 1500MHz	6.00	0.05	1600	Brown
7.8	±5, ±10%	50	75 @ 500MHz	3.80	0.05	1600	Red
10	±2, ±5, ±10%	50	60 @ 500MHz	3.60	0.06	1600	Orange
12	±2, ±5, ±10%	50	70 @ 500MHz	2.80	0.06	1500	Yellow
18	±2, ±5, ±10%	50	62 @ 350MHz	2.70	0.07	1400	Green
22	±2, ±5, ±10%	50	62 @ 350MHz	2.05	0.07	1400	Blue
33	±2, ±5, ±10%	50	75 @ 350MHz	1.70	0.09	1300	Violet
39	±2, ±5, ±10%	50	75 @ 350MHz	1.30	0.09	1300	Gray
47	±2, ±5, ±10%	50	75 @ 350MHz	1.45	0.12	1200	White
56	±2, ±5, ±10%	50	75 @ 350MHz	1.23	0.12	1200	Black
68	±2, ±5, ±10%	50	80 @ 350MHz	1.15	0.13	1100	Brown
82	±2, ±5, ±10%	50	80 @ 350MHz	1.06	0.16	1100	Red
100	±2, ±5, ±10%	50	50 @ 350MHz	0.82	0.16	1000	Orange

ENVIRONMENTAL CHARACTERISTICS

MECHANICAL PERFORMANCE TEST

Items	Requirement	Test Methods
Inductance	Refer to standard electrical characteristic spec.	HP4286
Q		HP4286
SRF		HP4287
DC Resistance RDC		Micro-Ohm meter (Gom-801G)
Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initial value
Over Load	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 minutes
Withstanding Voltage	Inductors shall be no evidence of electrical and mechanical damage.	AC voltage of 500 VAC applied between inductors terminal and case for 1 min.
Insulation Resistance	1000M ohm min.	100 VDC applied between inductor terminal and case and case

MECHANICAL PERFORMANCE TEST

Items	Requirement	Test Methods
Vibration	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 1 min. Amplitude: 1.5 mm Time: 2 hrs for each axis (X, Y &Z), total 6 hrs
Resistance to Soldering Heat		Solder Temperature: 260±50ºC Immersion Time: 10±2 seconds
Component Adhesion (Push Test)	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 pounds without a failure of adhesion on termination
Drop	No damage	Dropping chip by each side and each corner. Drop 10 times in total Drop height: 100 cm Drop weight: 125 g
Solderability	90% covered with solder	Inductor shall be dipped in a melted solder bath at 245±5 for 3 seconds
Resistance to Solvent	No damage on appearance and marking	MIL-STD202F, Method 215D

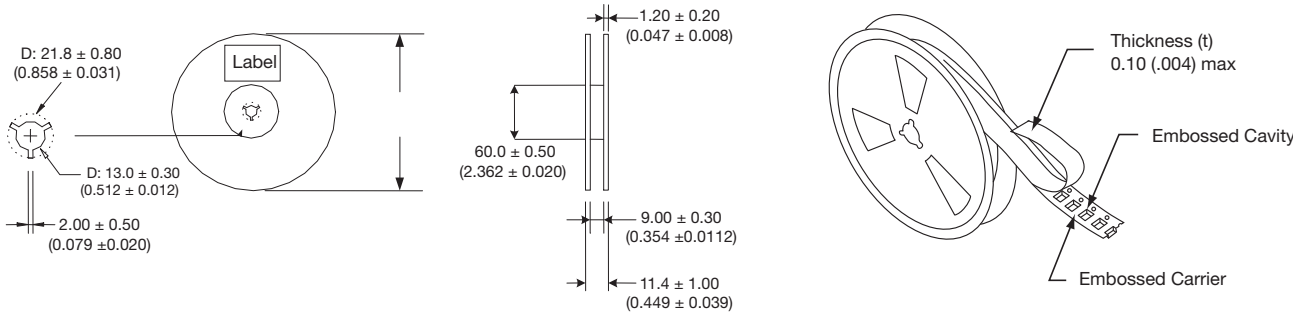
CLIMATIC TEST

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

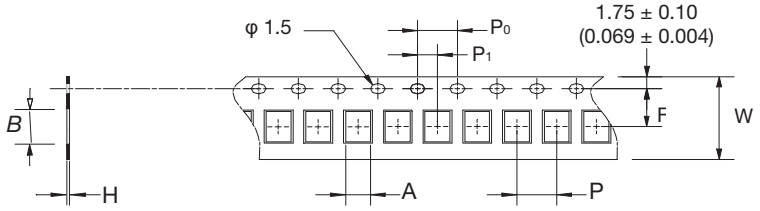
Wire Wound Chip Inductor

LCWC Series

REEL DIMENSIONS AND PACKAGING QUANTITY



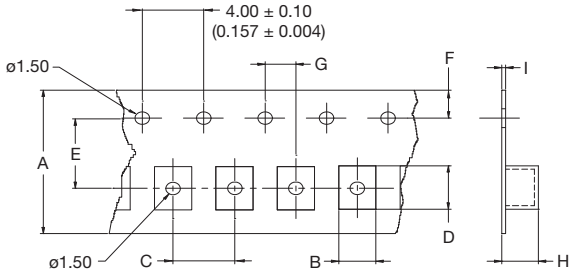
PAPER TAPE SPECIFICATION AND PACKAGING QUANTITY



mm (inches)

Type	A	B	H	F	P	P0	P1	W	Reel (EA)
LCWC0402	0.72 (0.028)	1.19 (0.047)	0.60 (0.024)	3.50 (0.138)	4.00 (0.157)	4.00 (0.147)	2.00 (0.079)	8.00 (0.315)	4,000
LCWC0603	1.35 (0.053)	1.95 (0.077)	0.95 (0.037)	3.50 (0.138)	4.00 (0.157)	4.00 (0.147)	2.00 (0.079)	8.00 (0.315)	4,000

EMBOSSED PLASTIC PAPER TAPE SPECIFICATION AND PACKAGING QUANTITY



mm (inches)

Type	A	B	C	D	E	F	G	H	I	Reel (EA)
LCWC0805	8.00 ± 0.20 (0.315 ± 0.008)	1.85 ± 0.10 (0.073 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	2.30 ± 0.10 (0.091 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	1.45 ± 0.05 (0.057 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000
LCWC0805 (R)	8.00 ± 0.20 (0.315 ± 0.008)	1.80 ± 0.10 (0.071 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	2.30 ± 0.10 (0.091 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	0.90 ± 0.05 (0.035 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000
LCWC0805 (Q)	8.00 ± 0.20 (0.315 ± 0.008)	1.85 ± 0.10 (0.073 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	2.30 ± 0.10 (0.091 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	1.45 ± 0.05 (0.057 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000
LCWC1206	8.00 ± 0.20 (0.315 ± 0.008)	1.95 ± 0.10 (0.077 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	3.50 ± 0.10 (0.138 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	1.50 ± 0.05 (0.059 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000
LCWC1008	8.00 ± 0.20 (0.315 ± 0.008)	2.70 ± 0.10 (0.106 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	2.80 ± 0.10 (0.110 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	2.00 ± 0.05 (0.079 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000
LCWC1008 (R)	8.00 ± 0.20 (0.315 ± 0.008)	2.70 ± 0.10 (0.106 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	2.80 ± 0.10 0.110 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	1.50 ± 0.05 (0.059 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000
LCWC1008 (Q)	8.00 ± 0.20 (0.315 ± 0.008)	2.70 ± 0.10 (0.106 ± 0.073)	4.00 ± 0.10 (0.157 ± 0.073)	2.80 ± 0.10 0.110 ± 0.073)	3.50 ± 0.05 (0.138 ± 0.002)	1.75 ± 0.10 (0.069 ± 0.073)	2.00 ± 0.05 (0.079 ± 0.002)	2.00 ± 0.05 (0.079 ± 0.002)	0.23 ± 0.05 (0.009 ± 0.002)	2,000

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