

KHBLS Multilayer Chip Inductors

Multilayer chip ferrite inductors, 0201 to 0805 — selection table

Features

- Monolithic structure for high reliability
- Compact size
- Shape suited to mounting with no directionality
- Excellent solderability and heat resistance for reflow or wave soldering

SIZES 0201 / 0402 / 0603 / 0805	INDUCTANCE 0201 0.6 – 120 nH · 0402 1 – 330 nH · 0603 1 – 680 nH · 0805 1 – 220 nH	OPERATING TEMPERATURE –40 °C to +85 °C	PART NUMBERS 168
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Applications

Communications, video and audio equipment, computers, remote controls.

Part numbering

KHBLS Type Chip ferrite inductor	1005 Size (L×W, mm) 1005 = 1.0×0.5	10N Nominal inductance 1N0 = 1.0 nH, 47N = 47 nH, R10 = 100 nH	J Tolerance B ±0.1 nH, C ±0.2 nH, S ±0.3 nH, G ±2%, H ±3%, J ±5%, K ±10%
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Example: KHBLS1005-10N J

Dimensions (mm [inch])

Type	L	W	T	a
KHBLS0603 [0201]	0.6±0.05 [.024±.002]	0.3±0.05 [.012±.002]	0.3±0.05 [.012±.002]	0.12±0.05 [.005±.002]
KHBLS1005 [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.1 [.010±.004]
KHBLS1608 [0603]	1.6±0.15 [.063±.006] / 1.65±0.15 [.065±.006] ④	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
KHBLS2012 [0805]	2.0(+0.3,–0.1) [.079(+.012,–.004)]	1.25±0.2 [.049±.008]	0.85±0.2 [.033±.008]	0.5±0.3 [.020±.012]

Operating temperature range: –40 °C to +85 °C. Storage: –10 °C to +40 °C, 70% RH.

KHBLS0603 [0201] — electrical characteristics

Part number	L (nH)	Q min	L, Q test freq. (MHz/V)	SRF min (MHz)	DCR max (Ω)	Rated current max (mA)
KHBLS0603-0N6□	0.6	13	500/0.05	10000	0.06	600
KHBLS0603-0N7□	0.7	13	500/0.05	10000	0.06	550
KHBLS0603-0N8□	0.8	13	500/0.05	10000	0.07	550
KHBLS0603-0N9□	0.9	13	500/0.05	10000	0.07	550
KHBLS0603-1N0□	1	13	500/0.05	10000	0.08	520
KHBLS0603-1N1□	1.1	13	500/0.05	10000	0.11	440
KHBLS0603-1N2□	1.2	13	500/0.05	10000	0.12	420
KHBLS0603-1N3□	1.3	13	500/0.05	10000	0.12	420
KHBLS0603-1N4□	1.4	13	500/0.05	10000	0.11	440
KHBLS0603-1N5□	1.5	13	500/0.05	10000	0.12	420
KHBLS0603-1N6□	1.6	13	500/0.05	10000	0.13	410
KHBLS0603-1N7□	1.7	13	500/0.05	10000	0.15	380
KHBLS0603-1N8□	1.8	13	500/0.05	10000	0.15	380
KHBLS0603-1N9□	1.9	13	500/0.05	10000	0.18	350
KHBLS0603-2N0□	2	13	500/0.05	10000	0.23	300
KHBLS0603-2N1□	2.1	13	500/0.05	10000	0.24	300
KHBLS0603-2N2□	2.2	13	500/0.05	10000	0.25	290
KHBLS0603-2N3□	2.3	13	500/0.05	10000	0.2	330
KHBLS0603-2N4□	2.4	13	500/0.05	10000	0.22	310
KHBLS0603-2N5□	2.5	13	500/0.05	9600	0.2	330
KHBLS0603-2N6□	2.6	13	500/0.05	9400	0.2	330
KHBLS0603-2N7□	2.7	13	500/0.05	9200	0.22	310
KHBLS0603-2N8□	2.8	13	500/0.05	8900	0.24	300
KHBLS0603-2N9□	2.9	13	500/0.05	8800	0.26	280
KHBLS0603-3N0□	3	13	500/0.05	8600	0.26	280
KHBLS0603-3N1□	3.1	13	500/0.05	8500	0.28	270
KHBLS0603-3N2□	3.2	13	500/0.05	8200	0.28	270
KHBLS0603-3N3□	3.3	13	500/0.05	8100	0.3	270
KHBLS0603-3N4□	3.4	13	500/0.05	8000	0.3	270
KHBLS0603-3N5□	3.5	13	500/0.05	7900	0.34	250
KHBLS0603-3N6□	3.6	13	500/0.05	7700	0.38	240
KHBLS0603-3N7□	3.7	13	500/0.05	7600	0.4	230
KHBLS0603-3N8□	3.8	13	500/0.05	7500	0.42	230
KHBLS0603-3N9□	3.9	13	500/0.05	7400	0.42	230
KHBLS0603-4N3□	4.3	13	500/0.05	6800	0.44	220
KHBLS0603-4N7□	4.7	13	500/0.05	6200	0.45	220
KHBLS0603-5N1□	5.1	13	500/0.05	5900	0.46	210
KHBLS0603-5N6□	5.6	13	500/0.05	5500	0.46	210
KHBLS0603-6N2□	6.2	13	500/0.05	5100	0.48	210
KHBLS0603-6N8□	6.8	13	500/0.05	4900	0.5	200

Thickness: 0.3±0.05 [0.012±0.002] mm [inch]. □ = tolerance code.

KHBLS0603 [0201] — electrical characteristics (continued)

Part number	L (nH)	Q min	L, Q test freq. (MHz/V)	SRF min (MHz)	DCR max (Ω)	Rated current max (mA)
KHBLS0603-7N5□	7.5	13	500/0.05	4700	0.5	200
KHBLS0603-8N2□	8.2	13	500/0.05	4300	0.56	190
KHBLS0603-9N1□	9.1	13	500/0.05	4100	0.72	170
KHBLS0603-10N□	10	13	500/0.05	3800	0.8	160
KHBLS0603-12N□	12	13	500/0.05	3400	0.8	160
KHBLS0603-15N□	15	13	500/0.05	2600	0.85	160
KHBLS0603-18N□	18	13	500/0.05	2300	1	140
KHBLS0603-22N□	22	13	500/0.05	1900	1.2	130
KHBLS0603-27N□	27	13	500/0.05	1800	1.6	120
KHBLS0603-33N□	33	11	300/0.05	1800	2.2	110
KHBLS0603-39N□	39	11	300/0.05	1600	2.3	100
KHBLS0603-47N□	47	11	300/0.05	1500	2.6	100
KHBLS0603-56N□	56	11	300/0.05	1400	2.8	80
KHBLS0603-68N□	68	11	300/0.05	1200	3.2	80
KHBLS0603-82N□	82	10	300/0.05	1100	3.8	70
KHBLS0603-R10□	100	10	300/0.05	1000	4	60
KHBLS0603-R12□	120	9	300/0.05	1000	5	50

Thickness: 0.3±0.05 [.012±.002] mm [inch]. □ = tolerance code.

KHBLS1005 [0402] — electrical characteristics

Part number	L (nH)	Q min	L, Q test freq. (MHz/V)	SRF min (MHz)	DCR max (Ω)	Rated current max (mA)
KHBLS1005-1N0□	1.0	8	100/0.05	10000	0.1	400
KHBLS1005-1N1□	1.1	8	100/0.05	10000	0.1	400
KHBLS1005-1N2□	1.2	8	100/0.05	10000	0.1	400
KHBLS1005-1N3□	1.3	8	100/0.05	10000	0.1	400
KHBLS1005-1N5□	1.5	8	100/0.05	6000	0.1	300
KHBLS1005-1N6□	1.6	8	100/0.05	6000	0.1	300
KHBLS1005-1N8□	1.8	8	100/0.05	6000	0.1	300
KHBLS1005-2N0□	2.0	8	100/0.05	6000	0.2	300
KHBLS1005-2N2□	2.2	8	100/0.05	6000	0.2	300
KHBLS1005-2N4□	2.4	8	100/0.05	6000	0.2	300
KHBLS1005-2N7□	2.7	8	100/0.05	6000	0.2	300
KHBLS1005-3N0□	3.0	8	100/0.05	6000	0.2	300
KHBLS1005-3N3□	3.3	8	100/0.05	6000	0.2	300
KHBLS1005-3N6□	3.6	8	100/0.05	4000	0.2	300
KHBLS1005-3N9□	3.9	8	100/0.05	4000	0.2	300
KHBLS1005-4N3□	4.3	8	100/0.05	4000	0.2	300
KHBLS1005-4N7□	4.7	8	100/0.05	4000	0.2	300
KHBLS1005-5N1□	5.1	8	100/0.05	4000	0.3	300
KHBLS1005-5N6□	5.6	8	100/0.05	4000	0.3	300
KHBLS1005-6N2□	6.2	8	100/0.05	3900	0.3	300
KHBLS1005-6N8□	6.8	8	100/0.05	3900	0.3	300
KHBLS1005-7N5□	7.5	8	100/0.05	3700	0.4	300
KHBLS1005-8N2□	8.2	8	100/0.05	3600	0.4	300
KHBLS1005-9N1□	9.1	8	100/0.05	3400	0.4	300
KHBLS1005-10N□	10	8	100/0.05	3200	0.4	300
KHBLS1005-12N□	12	8	100/0.05	2700	0.5	300
KHBLS1005-15N□	15	8	100/0.05	2300	0.5	300
KHBLS1005-18N□	18	8	100/0.05	2100	0.6	300
KHBLS1005-20N□	20	8	100/0.05	2000	0.6	300
KHBLS1005-22N□	22	8	100/0.05	1900	0.6	300
KHBLS1005-27N□	27	8	100/0.05	1600	0.7	300
KHBLS1005-33N□	33	8	100/0.05	1300	0.8	200
KHBLS1005-39N□	39	8	100/0.05	1200	1	200
KHBLS1005-43N□	43	8	100/0.05	1100	1.1	200
KHBLS1005-47N□	47	8	100/0.05	1000	1.1	200
KHBLS1005-56N□	56	8	100/0.05	750	1.2	200
KHBLS1005-68N□	68	8	100/0.05	750	1.4	180
KHBLS1005-75N□	75	8	100/0.05	750	2.0	160
KHBLS1005-82N□	82	8	100/0.05	750	2.4	150
KHBLS1005-R10□	100	8	100/0.05	700	2.6	150

Thickness: 0.5±0.15 [0.020±0.006] mm [inch]. □ = tolerance code.

KHBLS1005 [0402] — electrical characteristics (continued)

Part number	L (nH)	Q min	L, Q test freq. (MHz/V)	SRF min (MHz)	DCR max (Ω)	Rated current max (mA)
KHBLS1005-R12□	120	8	100/0.05	600	2.8	150
KHBLS1005-R15□	150	8	100/0.05	550	3.2	100
KHBLS1005-R18□	180	8	100/0.05	500	3.7	100
KHBLS1005-R22□	220	8	100/0.05	450	4	100
KHBLS1005-R27□	270	8	100/0.05	400	4.5	100
KHBLS1005-R33□	330	6	50/0.05	350	7	50

Thickness: 0.5±0.15 [.020±.006] mm [inch]. □ = tolerance code.

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KHBLS1608 [0603] — electrical characteristics

Part number	L (nH)	Q min	L, Q test freq. (MHz/V)	SRF min (MHz)	DCR max (Ω)	Rated current max (mA)
KHBLS1608-1N0□	1.0	8	100/0.05	10000	0.05	500
KHBLS1608-1N2□	1.2	8	100/0.05	10000	0.05	500
KHBLS1608-1N5□	1.5	8	100/0.05	6000	0.1	500
KHBLS1608-1N8□	1.8	8	100/0.05	6000	0.1	500
KHBLS1608-2N2□	2.2	8	100/0.05	6000	0.1	500
KHBLS1608-2N7□	2.7	10	100/0.05	6000	0.12	500
KHBLS1608-3N3□	3.3	10	100/0.05	6000	0.15	500
KHBLS1608-3N9□	3.9	10	100/0.05	6000	0.16	500
KHBLS1608-4N7□	4.7	10	100/0.05	6000	0.2	500
KHBLS1608-5N6□	5.6	10	100/0.05	5000	0.25	500
KHBLS1608-6N8□	6.8	10	100/0.05	5000	0.3	500
KHBLS1608-8N2□	8.2	10	100/0.05	4500	0.35	500
KHBLS1608-10N□	10	12	100/0.05	3500	0.4	300
KHBLS1608-12N□	12	12	100/0.05	3000	0.45	300
KHBLS1608-15N□	15	12	100/0.05	2300	0.5	300
KHBLS1608-18N□	18	12	100/0.05	2200	0.55	300
KHBLS1608-22N□	22	12	100/0.05	2000	0.6	300
KHBLS1608-24N□	24	12	100/0.05	1800	0.65	300
KHBLS1608-27N□	27	12	100/0.05	1700	0.65	300
KHBLS1608-33N□	33	12	100/0.05	1500	0.7	300
KHBLS1608-39N□	39	12	100/0.05	1400	0.7	300
KHBLS1608-47N□	47	12	100/0.05	1200	0.7	300
KHBLS1608-56N□	56	12	100/0.05	1100	0.75	300
KHBLS1608-68N□	68	12	100/0.05	900	0.85	300
KHBLS1608-82N□	82	8	100/0.05	800	1	300
KHBLS1608-R10□	100	8	100/0.05	700	1.2	300
KHBLS1608-R12□	120	8	50/0.05	600	1.4	200
KHBLS1608-R15□	150	8	50/0.05	500	1.6	200
KHBLS1608-R18□	180	8	50/0.05	400	1.9	200
KHBLS1608-R22□	220	8	50/0.05	350	2.4	200
KHBLS1608-R27□	270	8	50/0.05	350	2.6	150
KHBLS1608-R33□	330	8	50/0.05	350	2.8	150
KHBLS1608-R39□	390	8	50/0.05	300	3.2	150
KHBLS1608-R43□	430	8	50/0.05	280	3.4	150
KHBLS1608-R47□	470	8	50/0.05	250	3.6	150
KHBLS1608-R56□	560	8	50/0.05	250	4	100
KHBLS1608-R68□	680	8	50/0.05	250	4.5	100

Thickness: 0.8±0.15 [0.031±0.006] mm [inch]. □ = tolerance code.

KHBSL2012 [0805] — electrical characteristics

Part number	L (nH)	Q min	L, Q test freq. (MHz/V)	SRF min (MHz)	DCR max (Ω)	Rated current max (mA)
KHBSL2012-1N0□	1	10	100/0.05	>3000	0.1	600
KHBSL2012-1N5□	1.5	10	100/0.05	>3000	0.1	600
KHBSL2012-1N8□	1.8	10	100/0.05	>3000	0.1	600
KHBSL2012-2N2□	2.2	10	100/0.05	>3000	0.1	600
KHBSL2012-2N7□	2.7	10	100/0.05	>3000	0.1	600
KHBSL2012-3N3□	3.3	10	100/0.05	>3000	0.13	600
KHBSL2012-3N9□	3.9	10	100/0.05	>3000	0.15	600
KHBSL2012-4N7□	4.7	10	100/0.05	>3000	0.2	400
KHBSL2012-5N6□	5.6	10	100/0.05	>3000	0.23	400
KHBSL2012-6N8□	6.8	10	100/0.05	>3000	0.25	400
KHBSL2012-8N2□	8.2	10	100/0.05	>3000	0.28	400
KHBSL2012-10N□	10	10	100/0.05	2500	0.3	300
KHBSL2012-12N□	12	10	100/0.05	2450	0.3	300
KHBSL2012-15N□	15	10	100/0.05	2000	0.4	300
KHBSL2012-18N□	18	10	100/0.05	1750	0.45	300
KHBSL2012-22N□	22	10	100/0.05	1700	0.5	300
KHBSL2012-24N□	24	10	100/0.05	1650	0.55	300
KHBSL2012-27N□	27	10	100/0.05	1550	0.55	300
KHBSL2012-33N□	33	10	100/0.05	1350	0.6	300
KHBSL2012-39N□	39	13	100/0.05	1300	0.65	300
KHBSL2012-47N□	47	15	100/0.05	1200	0.7	300
KHBSL2012-56N□	56	15	100/0.05	1150	0.75	300
KHBSL2012-68N□	68	15	100/0.05	1000	0.8	300
KHBSL2012-82N□	82	15	100/0.05	850	0.9	300
KHBSL2012-R10□	100	15	100/0.05	600	1	300
KHBSL2012-R12□	120	15	50/0.05	500	1.5	300
KHBSL2012-R15□	150	15	50/0.05	500	1.5	300
KHBSL2012-R22□	220	13	50/0.05	350	2.1	200

Thickness: 0.85 ± 0.20 [.033 $\pm$.008] mm [inch]. □ = tolerance code.

Full product specifications are available on request; please contact us.

- ① All values as printed in the original appendix; test conditions follow the original specification (test equipment and reliability tests not reproduced) — subject to manufacturer confirmation.
- ② The KHBSL2012 appendix table prints thickness 0.85 ± 0.20 in mm only; the inch value [.033 $\pm$.008] is taken from the p.3 dimension table.
- ③ SRF cells printed as '>value' (11 rows) are kept as printed.
- ④ The p.3 dimension table prints two L values for KHBSL1608, 1.6 ± 0.15 [.063 $\pm$.006] and 1.65 ± 0.15 [.065 $\pm$.006], without stating which applies; both are kept as printed — subject to manufacturer confirmation.