muRata
Innovator in Electronics

LQH1N/3N/4N Series

The chip coil LQH/LQN Series comprises subminiature chip inductors wound on a special ferrite core made possible by an automatic winding technique developed by Murata Electronics. These inductors have a high Q at high frequencies and low DC resistance, making them suited for enhancing the performance of electronic circuits in video, communications and audio equipment.

LQH1N
The sub-miniature dimensions (3.2 x 1.6 x 1.8mm) allow parallel mounting on 2.5mm centers. This series is suitable for portable audio-visual equipment.

LQH3N
High Q value makes the series suitable for circuits up to 100MHz in frequency. This series is excellent for video equipment.

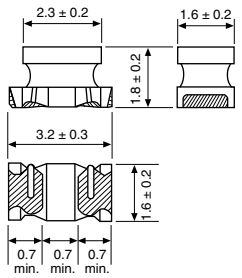
LQH(N)4N
This series is available with high inductance values and high current capacity. At 10μH, up to 450mA designs are possible, resulting in excellent performance when the series is used as a choke coil.

PART NUMBERING SYSTEM

LQH	3	N	101	K	34	M00
TYPE LQH: Epoxy coating on winding	**SIZE** 1: 3.2 x 1.6mm (1206) 3: 3.2 x 2.5mm (1210) 4: 4.5 x 3.2mm (1812)	**APPLICATION** N: General Use	**INDUCTANCE CODE** R22: 0.22μH 2R2: 2.2μH 220: 22μH 221: 220μH 102: 1000μH	**TOLERANCE** J: ±5% K: ±10% M: ±20%	**ELECTRODE MATERIAL** 04/34: Nickel & Solder	**UNMARKED**

SPECIFICATIONS

Dimensions: mm	Part Number	Inductance			Q		DC Resistance (Ohms)	Self-resonant Frequency (MHz min.)	Allowable Current (mA)	Operating Temp. Range
		Nominal Value (μH)	Tolerance (%)	Measurement Frequency (MHz)	Nominal Value (min.)	Measurement Frequency (MHz)				
1206	★LQH1NR15M(K)04	0.15	★±20 (±10)	1	20	25	0.39 ± 40%	250	250	–25°C ~ +85°C
	★LQH1NR22M(K)04	0.22					0.43 ± 40%	250	240	
	★LQH1NR33M(K)04	0.33			30		0.45 ± 40%	250	230	
	★LQH1NR47M(K)04	0.47					0.83 ± 40%	200	215	
	★LQH1NR56M(K)04	0.56					0.61 ± 40%	180	200	
	★LQH1NR68M(K)04	0.68					0.67 ± 40%	160	190	
	★LQH1NR82M(K)04	0.82					0.73 ± 40%	120	185	
	★LQH1N1R0M(K)04	1.0			35	10	0.49 ± 30%	100	175	
	★LQH1N1R2M(K)04	1.2					0.9 ± 30%	90	165	
	★LQH1N1R5(K.J)04	1.5	★±10 (±5)				1.0 ± 30%	75	155	
	★LQH1N1R8(K.J)04	1.8					1.6 ± 30%	60	150	
	★LQH1N2R2(K.J)04	2.2					0.7 ± 30%	50	140	
	★LQH1N2R7(K.J)04	2.7					0.55 ± 30%	43	135	
	★LQH1N3R3(K.J)04	3.3	★±10 (±5)			8	1.4 ± 30%	38	130	
	★LQH1N3R9(K.J)04	3.9					1.5 ± 30%	35	125	
	★LQH1N4R7(K.J)04	4.7					1.7 ± 30%	31	120	
	★LQH1N5R6(K.J)04	5.6					1.8 ± 30%	28	115	
	★LQH1N6R8(K.J)04	6.8					2.0 ± 30%	25	110	
	★LQH1N8R2(K.J)04	8.2					2.2 ± 30%	23	105	
	★LQH1N100K(J)04	10	★±10 (±5)			5	2.5 ± 30%	20	100	
	★LQH1N120K(J)04	12					2.7 ± 30%	18	95	
	★LQH1N150K(J)04	15					3.0 ± 30%	16	90	
	★LQH1N180K(J)04	18					3.4 ± 30%	15	85	
	★LQH1N220K(J)04	22			40	2.5	3.1 ± 30%	14	85	
	★LQH1N270K(J)04	27					3.4 ± 30%	13	85	
	★LQH1N330K(J)04	33					3.8 ± 30%	12	80	
	★LQH1N390K(J)04	39					7.2 ± 30%	11	55	
	★LQH1N470K(J)04	47					8.0 ± 30%	10	55	
	★LQH1N560K(J)04	56					8.9 ± 30%	9.0	50	
	★LQH1N680K(J)04	68					9.9 ± 30%	8.5	50	
	★LQH1N820K(J)04	82					11 ± 30%	7.5	45	
	★LQH1N101K(J)04	100					12 ± 30%	7.0	45	



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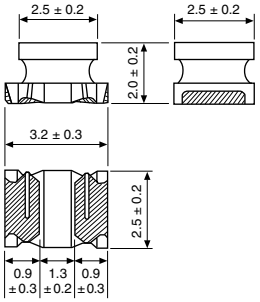
SPECIFICATIONS

Dimensions: mm	Part Number	Inductance			Q		DC Resistance (Ohms) max.	Self-resonant Frequency (MHz min.)	Allowable Current (mA)	Operating Temp. Range
		Nominal Value (μH)	Tolerance (%)	Measurement Frequency (MHz)	Nominal Value (min.)	Measurement Frequency				
1210	★LQH3NR10M34	0.10	★±20	1	20	25.2MHz	0.25	200	700	–25°C ~ +85°C
	★LQH3NR18M34	0.18					0.25	200	650	
	★LQH3NR27M34	0.27			25		0.25	200	600	
	★LQH3NR39M34	0.39					0.25	200	530	
	★LQH3NR56M34	0.56			30		0.25	160	530	
	★LQH3NR68M34	0.68					0.25	160	470	
	★LQH3NR82M34	0.82					0.25	120	450	
	★LQH3N1R0M34	1.0			20	1MHz	0.5	100	445	
	★LQH3N1R2M34	1.2					0.6	100	425	
	★LQH3N1R5K(M)34	1.5	(±20) ★±10				0.6	75	400	
	★LQH3N1R8K(M)34	1.8					0.7	60	390	
	★LQH3N2R2K(M)34	2.2					0.8	50	370	
	★LQH3N2R7K(M)34	2.7					0.9	43	320	
	★LQH3N3R3K(M)34	3.3					1.0	38	300	
	★LQH3N3R9K(M)34	3.9					1.1	35	290	
	★LQH3N4R7K(M)34	4.7					1.2	31	270	
	★LQH3N5R6K(M)34	5.6					1.3	28	250	
	★LQH3N6R8K(M)34	6.8					1.5	25	240	
	★LQH3N8R2K(M)34	8.2					1.6	23	225	
	★LQH3N100J(K)34	10	(±10) ★±5		35		1.8	20	190	
	★LQH3N120J(K)34	12					2.0	18	180	
	★LQH3N150J(K)34	15					2.2	16	170	
	★LQH3N180J(K)34	18					2.5	15	165	
	★LQH3N220J(K)34	22					2.8	14	150	
	★LQH3N270J(K)34	27					3.1	13	125	
	★LQH3N330J(K)34	33			40		3.5	12	115	
	★LQH3N390J(K)34	39					3.9	11	110	
	★LQH3N470J(K)34	47					4.3	11	100	
	★LQH3N560J(K)34	56					4.9	10	85	
	★LQH3N680J(K)34	68					5.5	9.0	80	
	★LQH3N820J(K)34	82					6.2	8.5	70	
	★LQH3N101J(K)34	100				796kHz	7.0	8.0	80	
	★LQH3N121J(K)34	120					8.0	7.5	75	
	★LQH3N151J(K)34	150					9.3	7.0	70	
	★LQH3N181J(K)34	180					10.2	6.0	65	
	★LQH3N221J(K)34	220					11.8	5.5	65	
	★LQH3N271J(K)34	270					12.5	5.0	65	
	★LQH3N331J(K)34	330					13.0	5.0	65	
	★LQH3N391J(K)34	390			50		22.0	5.0	50	
	★LQH3N471J(K)34	470		1kHz			25.0	5.0	45	
	★LQH3N561J(K)34	560					28.0	5.0	40	



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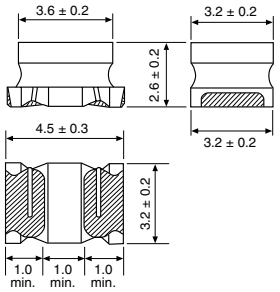
SPECIFICATIONS

Dimensions: mm	Part Number	Inductance			Q		DC Resistance (Ohms) max.	Self-resonant Frequency (MHz min.)	Allowable Current (mA)	Operating Temp. Range
		Nominal Value (μH)	Tolerance (%)	Measurement Frequency	Nominal Value (min.)	Measurement Frequency				
1812	LQH4N1R0M04	1.0	★±20	1MHz	20	1MHz	0.20	120	500	–25°C ~ +85°C
	LQH4N1R2M04	1.2						100		
	LQH4N1R5M04	1.5					0.30	85		
	LQH4N1R8M04	1.8						75		
	LQH4N2R2M04	2.2						62		
	LQH4N2R7M04	2.7					0.32	53		
	LQH4N3R3M04	3.3					0.35	47		
	LQH4N3R9M04	3.9					0.38	41		
	LQH4N4R7M(K)04	4.7	★±20 ★(±10)		30		0.40	38		
	LQH4N5R6M(K)04	5.6					0.47	33		
	LQH4N6R8M(K)04	6.8					0.50	31	450	
	LQH4N8R2M(K)04	8.2					0.56	27		
	★LQH4N100K(J)04	10	★±10 ★(±5)		35		0.56	23	400	
	★LQH4N120K(J)04	12					0.62	21	380	
	★LQH4N150K(J)04	15					0.73	19	360	
	★LQH4N180K(J)04	18					0.82	17	340	
	★LQH4N220K(J)04	22					0.94	15	320	
	★LQH4N270K(J)04	27					1.1	14	300	
	★LQH4N330K(J)04	33					1.2	12	270	
	★LQH4N390K(J)04	39					1.4	11	240	
	★LQH4N470K(J)04	47					1.5	10	220	
	★LQH4N560K(J)04	56					1.7	9.3	200	
	★LQH4N680K(J)04	68					1.9	8.4	180	
	★LQH4N820K(J)04	82					2.2	7.5	170	
	★LQH4N101K(J)04	100			40	796kHz	2.5	6.8	160	
	★LQH4N121K(J)04	120					3.0	6.2	150	
	★LQH4N151K(J)04	150					3.7	5.5	130	
	★LQH4N181K(J)04	180					4.5	5.0	120	
	★LQH4N221K(J)04	220					5.4	4.5	110	
	★LQH4N271K(J)04	270					6.8	4.0	100	
	★LQH4N331K(J)04	330					8.2	3.6	95	
	★LQH4N391K(J)04	390					9.7	3.3	90	
	★LQH4N471K(J)04	470		1kHz			11.8	3.0	80	
	★LQH4N561K(J)04	560					14.5	2.7	70	
	★LQH4N681K(J)04	680					17.0	2.5	65	
	★LQH4N821K(J)04	820					20.5	2.2	60	
	★LQH4N102K(J)04	1000				252kHz	25.0	2.0	50	
	★LQH4N122K(J)04	1200					30.0	1.8	45	
	★LQH4N152K(J)04	1500					37.0	1.6	40	
	★LQN4N182K(J)04	1800					45.0	1.5	35	
	★LQN4N222K(J)04	2200					50.0	1.3	30	



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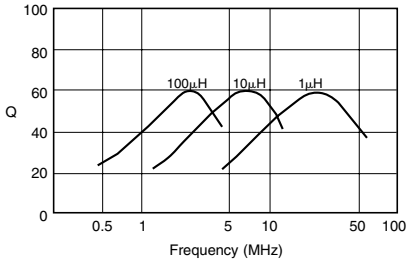
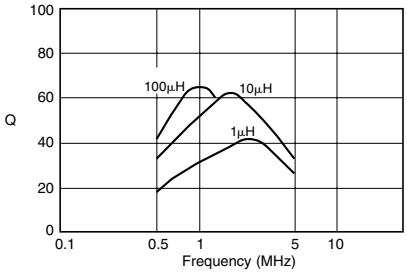
TYPICAL ELECTRICAL CHARACTERISTICS

Q-FREQUENCY CHARACTERISTICS

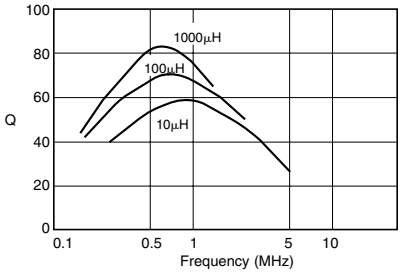
LQH1N Series



LQH3N Series

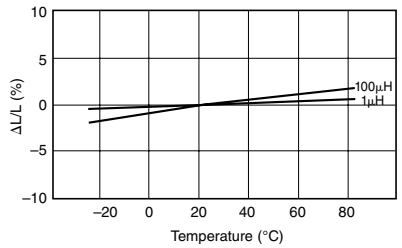


LQH4N/LQN4N Series

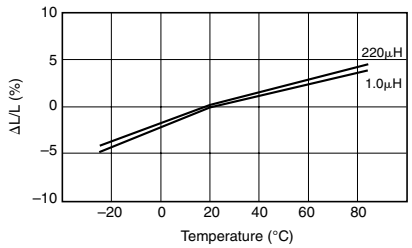


INDUCTANCE-TEMPERATURE CHARACTERISTICS

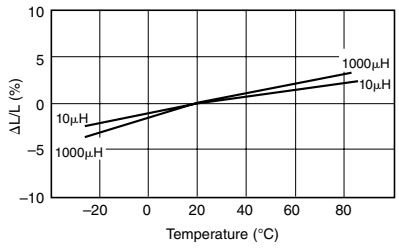
LQH1N Series



LQH3N Series

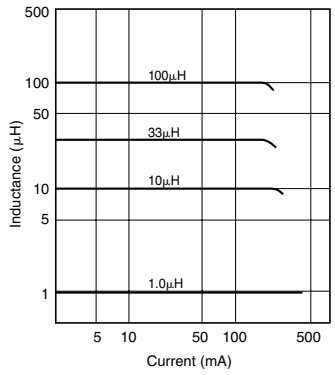


LQH4N/LQN4N Series

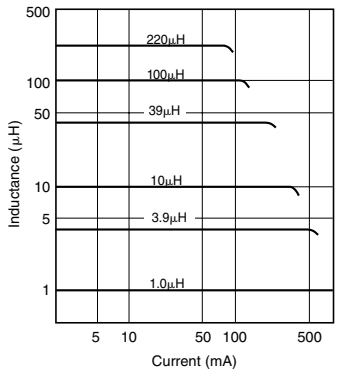


INDUCTANCE-CURRENT CHARACTERISTICS

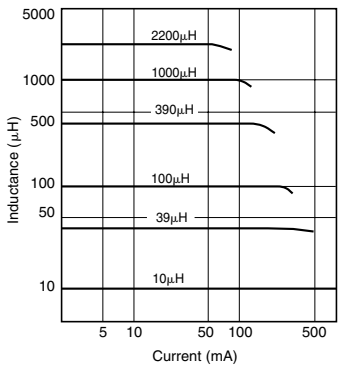
LQH1N Series



LQH3N Series



LQH4N/LQN4N Series



COUPLING FACTOR

LQH1N Series