

# SURFACE MOUNT INDUCTORS

## LQH1N/3N/4N

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

<b>LQH</b>		<b>3</b>	<b>N</b>	<b>101</b>	<b>K</b>	<b>04</b>	<b>M00</b>
<b>TYPE</b> LQH : Epoxy coating on winding	<b>SIZE</b> 1 : 3.2 x 1.6mm (1206) 3 : 3.2 x 2.5mm (1210) 4 : 4.5 x 3.2mm (1812)	<b>APPLICATION</b> N : General Use		<b>INDUCTANCE CODE</b> R22 : 0.22μH 2R2 : 2.2μH 220 : 22μH 221 : 220μH 102 : 1000μH	<b>TOLERANCE</b> J : ± 5% K : ± 10% M : ± 20%	<b>ELECTRODE MATERIAL</b> 04 : Nickel Alloy Metallization	<b>MARKING</b> M00 : Unmarked (Marking not available on LQH4N)

## SPECIFICATIONS

Dimensions: mm	Part Number	Inductance			Q		DC Resistance (Ω)	Self-resonant Frequency (MHz min.)	Allowable Current (mA)	Operating Temp. Range
		Nominal Value (μH)	Tolerance (%)	Measurement Frequency	Nominal Value (min.)	Measurement Frequency				
	*LQH1NR15M(K)04	0.15	± 20 (± 10)	1MHz	20	25MHz	0.39±40%	250	250	-25°C ~ +85°C
	*LQH1NR22M(K)04	0.22					0.43±40%	250	240	
	*LQH1NR33M(K)04	0.33					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	
	*LQH1NR10M(K)04	1.0					0.49±30%	100	175	
	*LQH1NR12M(K)04	1.2					0.9±30%	90	165	
	*LQH1NR15M(K.J)04	1.5					1.0±30%	75	155	
	*LQH1NR18M(K.J)04	1.8	1.6±30%	30	150					
	*LQH1N2R2M(K.J)04	2.2	0.7±30%	50	140					
	*LQH1N2R7M(K.J)04	2.7	0.55±30%	43	135					
	*LQH1N3R3M(K.J)04	3.3	1.4±30%	38	130					
	*LQH1N3R9M(K.J)04	3.9	1.5±30%	35	125					
	*LQH1N4R7M(K.J)04	4.7	1.7±30%	31	120					
	*LQH1N5R6M(K.J)04	5.6	1.8±30%	28	115					
	*LQH1N6R8M(K.J)04	6.8	2.0±30%	25	110					
	*LQH1N8R2M(K.J)04	8.2	2.2±30%	23	105					
	*LQH1N100K(J)04	10	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	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						

\*Available as standard through authorized Murata Electronics Distributors.

SPECIFICATIONS

Dimensions: mm	Part Number	Inductance			Q		DC Resistance (Ω) max.	Self-resonant Frequency (MHz min.)	Allowable Current (mA)	Operating Temp. Range
		Nominal Value (μH)	Tolerance (%)	Measurement Frequency	Nominal Value (min.)	Measurement Frequency				
	*LQH3NR10M04	0.10	± 20	1MHz	20	25 2MHz	0.25	200	700	-25°C ~ +85°C
	*LQH3NR18M04	0.18					0.25	200	650	
	*LQH3NR27M04	0.27					0.25	200	600	
	*LQH3NR39M04	0.39					0.25	200	530	
	*LQH3NR56M04	0.56					0.25	160	530	
	*LQH3NR68M04	0.68					0.25	160	470	
	*LQH3NR82M04	0.82					0.25	120	450	
	*LQH3N1R0M04	1.0					0.5	100	445	
	*LQH3N1R2M04	1.2					0.6	100	425	
	*LQH3N1R5M(K)04	1.5					0.6	75	400	
	*LQH3N1R8M(K)04	1.8	0.7	60	390					
	*LQH3N2R2M(K)04	2.2	0.8	50	370					
	*LQH3N2R7M(K)04	2.7	0.9	43	320					
	*LQH3N3R3M(K)04	3.3	1.0	38	300					
	*LQH3N3R9M(K)04	3.9	1.1	35	290					
	*LQH3N4R7M(K)04	4.7	1.2	31	270					
	*LQH3N5R6M(K)04	5.6	1.3	28	250					
	*LQH3N6R8M(K)04	6.8	1.5	25	240					
	*LQH3N8R2M(K)04	8.2	1.6	23	225					
	*LQH3N100K(J)04	10	1.8	20	190					
	*LQH3N120K(J)04	12	2.0	18	180					
	*LQH3N150K(J)04	15	2.2	16	170					
	*LQH3N180K(J)04	18	2.5	15	165					
	*LQH3N220K(J)04	22	2.8	14	150					
	*LQH3N270K(J)04	27	3.1	13	125					
	*LQH3N330K(J)04	33	3.5	12	115					
	*LQH3N390K(J)04	39	3.9	11	110					
	*LQH3N470K(J)04	47	4.3	11	100					
	*LQH3N560K(J)04	56	4.9	10	85					
	*LQH3N680K(J)04	68	5.5	9.0	80					
	*LQH3N820K(J)04	82	6.2	8.5	70					
	*LQH3N101K(J)04	100	7.0	8.0	80					
	*LQH3N121K(J)04	120	8.0	7.5	75					
	*LQH3N151K(J)04	150	9.3	7.0	70					
	*LQH3N181K(J)04	180	10.2	6.0	65					
	*LQH3N221K(J)04	220	11.8	5.5	65					
	*LQH3N271K(J)04	270	12.5	5.0	65					
	*LQH3N331K(J)04	330	13.0	5.0	65					
	*LQH3N391K(J)04	390	22.0	5.0	50					
	*LQH3N471K(J)04	470	25.0	5.0	45					
*LQH3N561K(J)04	560	28.0	5.0	40						
			★ 20 ( 10)		20	1MHz				
			★ 10 ( 5)		35	1MHz				
					40	796kHz				
					50	1kHz				

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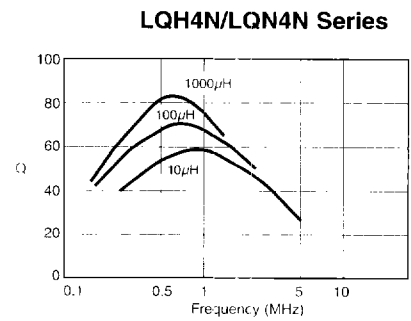
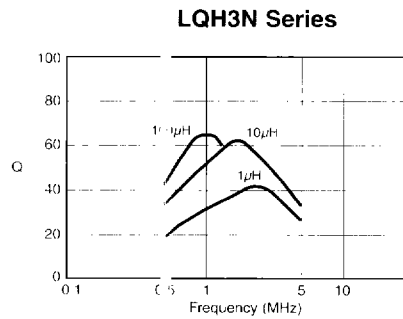
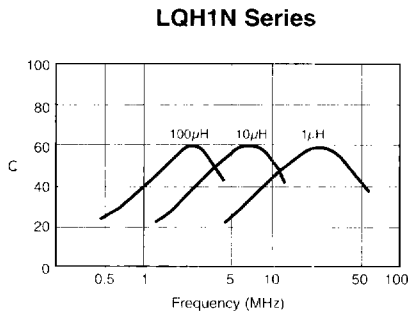
SPECIFICATIONS

Dimensions: mm	Part Number	Inductance			Q		DC Resistance (Ω) max.	Self-resonant Frequency (MHz min.)	Allowable Current (mA)	Operating Temp. Range
		Nominal Value (μH)	Tolerance (%)	Measurement Frequency	Nominal Value (min.)	Measurement Frequency				
	LQH4N1R0M04	1.0	± 20	1MHz	20	1MHz	0.20	120	500	-25°C ~ +85°C
	LQH4N1R2M04	1.2					100			
	LQH4N1R5M04	1.5					85			
	LQH4N1R8M04	1.8					75			
	LQH4N2R2M04	2.2					62			
	LQH4N2R7M04	2.7					53			
	LQH4N3R3M04	3.3					47			
	LQH4N3R9M04	3.9					41			
	LQH4N4R7M(K)04	4.7					38			
	LQH4N5R6M(K)04	5.6					33			
	LQH4N6R8M(K)04	6.8	31		450					
	LQH4N8R2M(K)04	8.2	27							
	*LQH4N100K(J)04	10	23							
	*LQH4N120K(J)04	12	21							
	*LQH4N150K(J)04	15	19							
	*LQH4N180K(J)04	18	17							
	*LQH4N220K(J)04	22	15							
	*LQH4N270K(J)04	27	14							
	*LQH4N330K(J)04	33	12							
	*LQH4N390K(J)04	39	11							
	*LQH4N470K(J)04	47	10	200						
	*LQH4N560K(J)04	56	9.3							
	*LQH4N680K(J)04	68	8.4							
	*LQH4N820K(J)04	82	7.5							
	*LQH4N101K(J)04	100	6.8							
	*LQH4N121K(J)04	120	6.2							
	*LQH4N151K(J)04	150	5.5							
	*LQH4N181K(J)04	180	5.0							
	*LQH4N221K(J)04	220	4.5							
	*LQH4N271K(J)04	270	4.5							
	*LQH4N331K(J)04	330	4.0	100						
	*LQH4N391K(J)04	390	3.6							
	*LQH4N471K(J)04	470	3.3							
	*LQH4N561K(J)04	560	3.0							
	*LQH4N681K(J)04	680	2.7							
	*LQH4N821K(J)04	820	2.5							
	*LQH4N102K(J)04	1000	2.2							
	*LQH4N122K(J)04	1200	2.0							
	*LQH4N152K(J)04	1500	1.8							
	*LQH4N182K(J)04	1800	1.6							
*LQN4N182K(J)04	1800	1.5	35							
*LQN4N222K(J)04	2200	1.3								

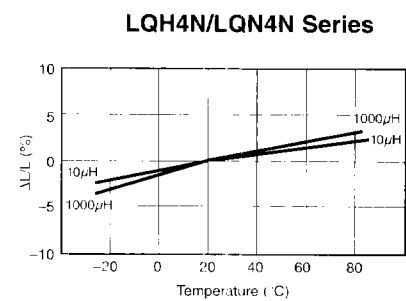
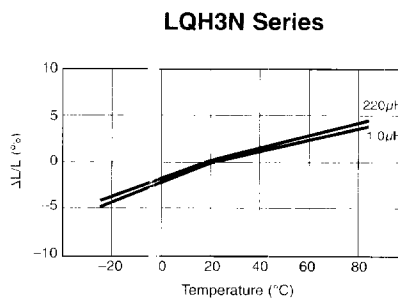
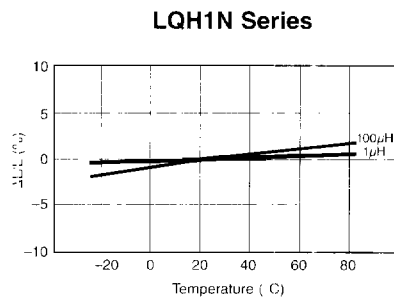
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### TYPICAL ELECTRICAL CHARACTERISTICS

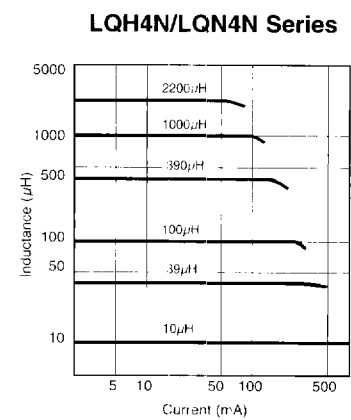
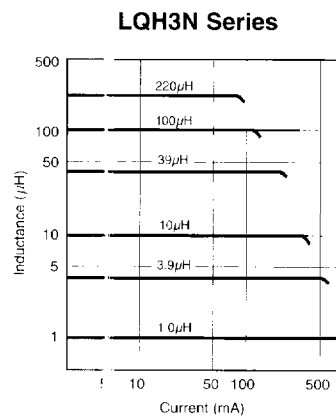
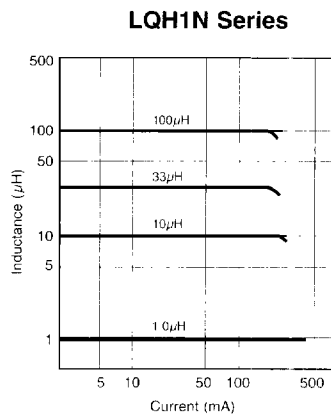
#### Q-FREQUENCY CHARACTERISTICS



#### INDUCTANCE-TEMPERATURE CHARACTERISTICS



#### INDUCTANCE-CURRENT CHARACTERISTICS



#### COUPLING FACTOR

##### LQH1N Series

