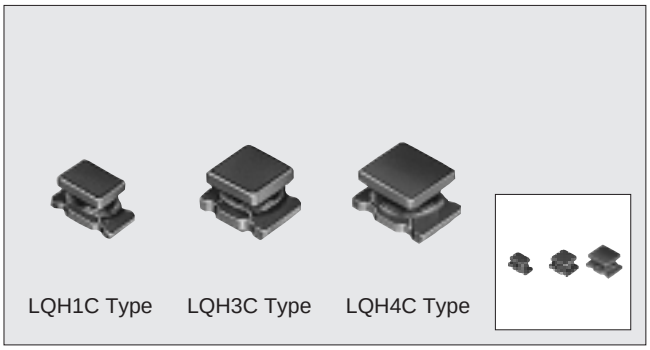
CHIP COIL

Miniature Chip Coil **LQH1C/LQH3C/LQH4C** Series for Power Line Choke

Miniature Chip Coil for Power Line Choke Has High Current Capacity, Low DC Resistance, Large Inductance

The LQH1C, LQH3C and LQH4C series consist of miniature chip coils with low DC resistance, high current capacity, and high impedance characteristics.
These features are made possible by the development of Murata's innovative automatic winding techniques. They are excellent for use as choke coils in DC power supply circuits.



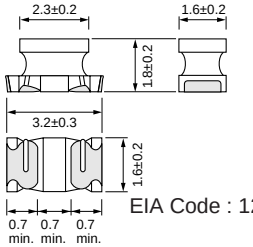
■FEATURES

1. The LQH1C, LQH3C and LQH4C series have an open magnetic structure. The series have a combined inductance range of 0.12µH to 560µH and are applicable in a wide variety of applications.
2. The series exhibit low voltage drops and small variations in inductance with respect to temperature rise and DC current level. This makes them excellent for use as power supply line choke coils.
3. The series has excellent solder heat resistance. Both flow and reflow soldering methods can be employed.

- LQH1C
  Miniature size (3.2×1.6×1.8mm) allows parallel mounting at 2.5mm pitch. Despite their small size, at 0.12µH these coils have a maximum current rating of 970mA.
- LQH3C
  The low DC resistance means high current and high inductance.
  For inductance ranging from 0.15µH to 10µH, LQH3C coils have very low DC resistance.
- LQH4C
  The LQH4C has miniature size 4.5mm×3.2mm and realized low height 2.8mm max.

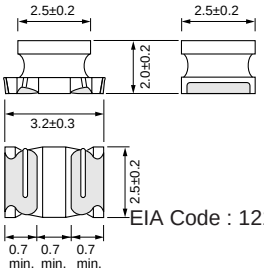
■DIMENSIONS

LQH1C Type



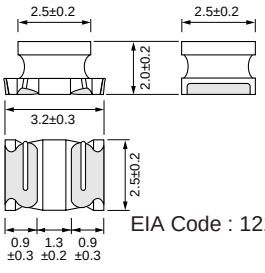
EIA Code : 1206

LQH3C
xx24 Series



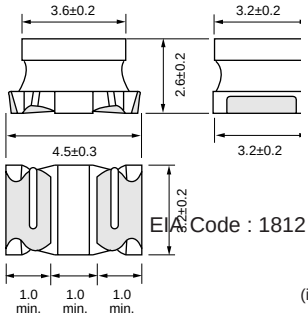
EIA Code : 1210

LQH3C
xx34 Series



EIA Code : 1210

LQH4C Type



EIA Code : 1812

(in mm)

■SPECIFICATIONS

LQH1C

Part Number	Inductance			DC Resistance (Ω)	Self-resonant Frequency (MHz)		Allowable Current (mA)	Operating Temp. Range
	Nominal Value (μH)	Tolerance (%)	Test Frequency		Typ.	Min.		
LQH1CR12M04	0.12	±20	1MHz	0.08±40%	900	250	970	−25 to +85℃
LQH1CR22M04	0.22			0.10±40%	570		850	
LQH1CR47M04	0.47			0.15±40%	310	180	700	
LQH1C1R0M04	1.0			0.28±30%	190	100	510	
LQH1C2R2M04	2.2			0.41±30%	110	50	430	
LQH1C4R7M04	4.7			0.65±30%	67	31	340	
LQH1C100K04	10	±10		1.3 ±30%	42	20	230	
LQH1C220K04	22			3.0 ±30%	26	14	160	
LQH1C470K04	47			8.0 ±30%	18	10	100	
LQH1C101K04	100			12.0 ±30%	12	7	80	

LQH3C

Part Number	Inductance			DC Resistance (Ω)	Self-resonant Frequency (MHz)		Allowable Current (mA)	Operating Temp. Range
	Nominal Value (μH)	Tolerance (%)	Test Frequency		Typ.	Min.		
LQH3CR15M24*	0.15	±20	1MHz	0.028±30%	680	400	1450	−25 to +85℃
LQH3CR27M24*	0.27			0.034±30%	490	250	1250	
LQH3CR47M24*	0.47			0.042±30%	370	150	1100	
LQH3C1R0M24*	1.0			0.060±30%	200	100	1000	
LQH3C2R2M24*	2.2			0.097±30%	120	64	790	
LQH3C4R7M24*	4.7			0.15 ±30%	77	43	650	
LQH3C100K24*	10	±10		0.30 ±30%	50	26	450	
LQH3C1R0M34	1.0	±20		0.09 ±30%	150	96	800	
LQH3C2R2M34	2.2			0.13 ±30%	100	64	600	
LQH3C4R7M34	4.7			0.20 ±30%	66	43	450	
LQH3C100K34	10	±10		0.44 ±30%	40	26	300	
LQH3C220K34	22			0.71 ±30%	27	19	250	
LQH3C470K34	47			1.3 ±30%	19	15	170	
LQH3C101K34	100			3.5 ±30%	13	10	100	
LQH3C221K34	220			8.4 ±30%	8.5	6.8	70	
LQH3C331K34	330			10.0 ±30%	7.0	5.6	60	
LQH3C391K34	390			17.0 ±30%	6.6	5.0		
LQH3C471K34	470		1kHz	19.0 ±30%	6.2			
LQH3C561K34	560			22.0 ±30%	5.7			

*Low DC Resistance type.

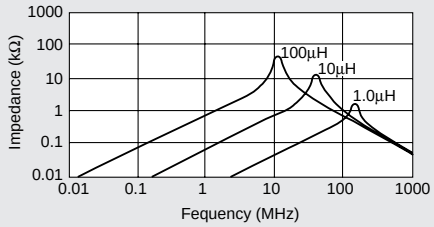
LQH4C

Part Number	Inductance			DC Resistance (Ω max.)	Self-resonant Frequency (MHz)	Allowable Current (mA)	Operating Temp. Range
	Nominal Value (μH)	Tolerance (%)	Test Frequency				
LQH4C1R0M04	1.0	±20	1MHz	0.08	100	1080	−25 to +85℃
LQH4C1R5M04	1.5			0.09	85	1000	
LQH4C2R2M04	2.2			0.11	60	900	
LQH4C3R3M04	3.3			0.13	47	800	
LQH4C4R7M04	4.7			0.15	35	750	
LQH4C6R8M04	6.8			0.20	30	720	
LQH4C100K04	10	±10		0.24	23	650	
LQH4C150K04	15			0.32	20	570	
LQH4C220K04	22			0.6	15	420	
LQH4C330K04	33			1.0	12	310	
LQH4C470K04	47			1.1	10	280	
LQH4C680K04	68			1.7	8.4	220	
LQH4C101K04	100			2.2	6.8	190	
LQH4C151K04	150			3.5	5.5	130	
LQH4C221K04	220			4.0	4.5	110	
LQH4C331K04	330			6.8	3.6	100	
LQH4C471K04	470		1kHz	8.5	3.0	90	

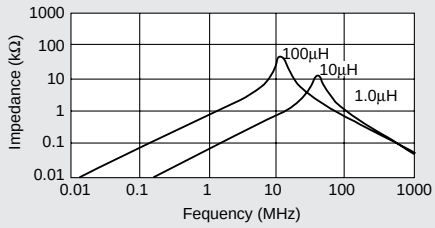
■TYPICAL ELECTRICAL CHARACTERISTICS

●Impedance - Frequency Characteristics

LQH1C



LQH3C



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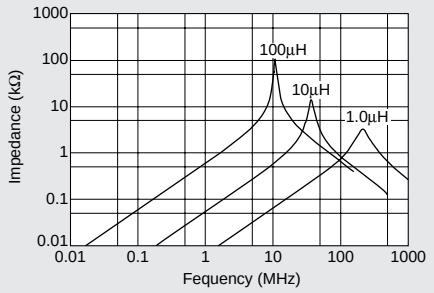
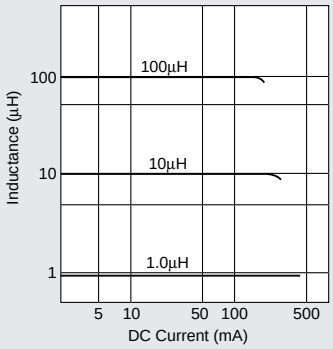
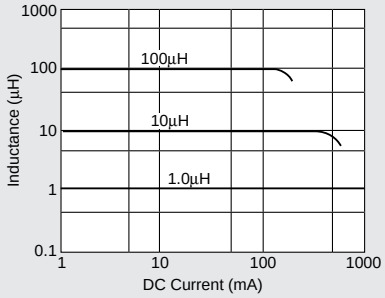


●Direct Current Characteristics

LQH1C



LQH3C



LQH4C