

Chip Coils for High Frequency Film Type



LQP03T_00 Series (0201 Size)

LQP03T_00 series using MURATA's original film technology contributes further to miniaturizing high performance equipment because the size is small and the Q-value is high.

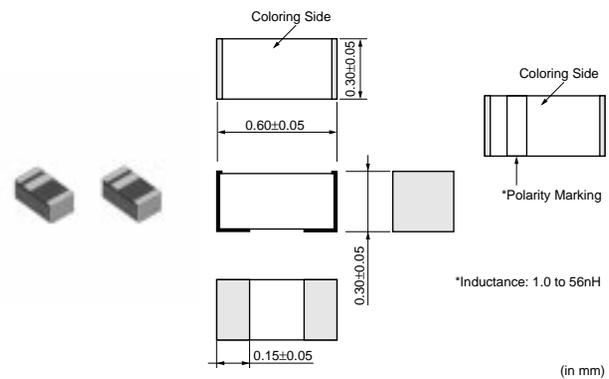
■ Features

1. Ultra small and thin size 0.6x0.3x0.3mm
2. High Q value in high frequency range
3. E24 step
 - 0.6 to 3.9nH ± 0.1 nH
 - 4.3 to 10nH $\pm 3\%$
4. E12 step
 - 0.6 to 3.9nH ± 0.2 nH
 - 4.7 to 27nH $\pm 3\%, \pm 5\%$
 - 33 to 56nH $\pm 5\%$
5. Sn Electrode

■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general

■ Dimension



■ Rated Value (□: packaging code)

Part Number	Inductance	Test Frequency	Rated Current	Max. of DC resistance	Q (min.)	Test Frequency	Self Resonance Frequency (min.)
LQP03TN0N6B00□	0.6nH ± 0.1 nH	500MHz	420mA	0.08ohm	13	500MHz	6000MHz
LQP03TN0N6C00□	0.6nH ± 0.2 nH	500MHz	420mA	0.08ohm	13	500MHz	6000MHz
LQP03TN0N7B00□	0.7nH ± 0.1 nH	500MHz	410mA	0.09ohm	13	500MHz	6000MHz
LQP03TN0N8B00□	0.8nH ± 0.1 nH	500MHz	410mA	0.09ohm	13	500MHz	6000MHz
LQP03TN0N8C00□	0.8nH ± 0.2 nH	500MHz	410mA	0.09ohm	13	500MHz	6000MHz
LQP03TN0N9B00□	0.9nH ± 0.1 nH	500MHz	400mA	0.10ohm	13	500MHz	6000MHz
LQP03TN1N0B00□	1.0nH ± 0.1 nH	500MHz	400mA	0.10ohm	13	500MHz	6000MHz
LQP03TN1N0C00□	1.0nH ± 0.2 nH	500MHz	400mA	0.10ohm	13	500MHz	6000MHz
LQP03TN1N1B00□	1.1nH ± 0.1 nH	500MHz	280mA	0.13ohm	13	500MHz	6000MHz
LQP03TN1N2B00□	1.2nH ± 0.1 nH	500MHz	280mA	0.13ohm	13	500MHz	6000MHz
LQP03TN1N2C00□	1.2nH ± 0.2 nH	500MHz	280mA	0.13ohm	13	500MHz	6000MHz
LQP03TN1N3B00□	1.3nH ± 0.1 nH	500MHz	280mA	0.16ohm	13	500MHz	6000MHz
LQP03TN1N5B00□	1.5nH ± 0.1 nH	500MHz	280mA	0.16ohm	13	500MHz	6000MHz
LQP03TN1N5C00□	1.5nH ± 0.2 nH	500MHz	280mA	0.16ohm	13	500MHz	6000MHz
LQP03TN1N6B00□	1.6nH ± 0.1 nH	500MHz	280mA	0.16ohm	13	500MHz	6000MHz
LQP03TN1N8B00□	1.8nH ± 0.1 nH	500MHz	280mA	0.16ohm	13	500MHz	6000MHz
LQP03TN1N8C00□	1.8nH ± 0.2 nH	500MHz	280mA	0.16ohm	13	500MHz	6000MHz
LQP03TN2N0B00□	2.0nH ± 0.1 nH	500MHz	220mA	0.18ohm	13	500MHz	6000MHz
LQP03TN2N2B00□	2.2nH ± 0.1 nH	500MHz	220mA	0.18ohm	13	500MHz	6000MHz
LQP03TN2N2C00□	2.2nH ± 0.2 nH	500MHz	220mA	0.18ohm	13	500MHz	6000MHz

Operating Temperature Range: -40°C to +85°C Only for reflow soldering.

Continued on the following page.

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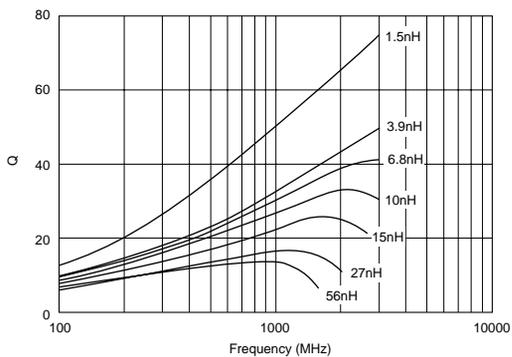
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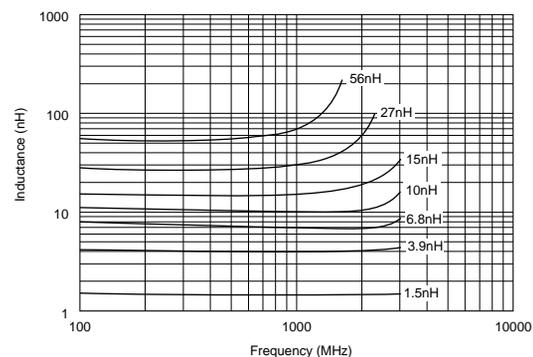
Part Number	Inductance	Test Frequency	Rated Current	Max. of DC resistance	Q (min.)	Test Frequency	Self Resonance Frequency (min.)
LQP03TN2N4B00□	2.4nH±0.1nH	500MHz	220mA	0.21ohm	13	500MHz	6000MHz
LQP03TN2N7B00□	2.7nH±0.1nH	500MHz	220mA	0.21ohm	13	500MHz	6000MHz
LQP03TN2N7C00□	2.7nH±0.2nH	500MHz	220mA	0.21ohm	13	500MHz	6000MHz
LQP03TN3N0B00□	3.0nH±0.1nH	500MHz	190mA	0.30ohm	13	500MHz	6000MHz
LQP03TN3N3B00□	3.3nH±0.1nH	500MHz	190mA	0.30ohm	13	500MHz	6000MHz
LQP03TN3N3C00□	3.3nH±0.2nH	500MHz	190mA	0.30ohm	13	500MHz	6000MHz
LQP03TN3N6B00□	3.6nH±0.1nH	500MHz	170mA	0.45ohm	13	500MHz	6000MHz
LQP03TN3N9B00□	3.9nH±0.1nH	500MHz	170mA	0.45ohm	13	500MHz	6000MHz
LQP03TN3N9C00□	3.9nH±0.2nH	500MHz	170mA	0.45ohm	13	500MHz	6000MHz
LQP03TN4N3H00□	4.3nH±3%	500MHz	160mA	0.55ohm	13	500MHz	6000MHz
LQP03TN4N7H00□	4.7nH±3%	500MHz	160mA	0.55ohm	13	500MHz	6000MHz
LQP03TN4N7J00□	4.7nH±5%	500MHz	160mA	0.55ohm	13	500MHz	6000MHz
LQP03TN5N1H00□	5.1nH±3%	500MHz	140mA	0.68ohm	13	500MHz	6000MHz
LQP03TN5N6H00□	5.6nH±3%	500MHz	140mA	0.68ohm	13	500MHz	6000MHz
LQP03TN5N6J00□	5.6nH±5%	500MHz	140mA	0.68ohm	13	500MHz	6000MHz
LQP03TN6N2H00□	6.2nH±3%	500MHz	130mA	0.75ohm	13	500MHz	6000MHz
LQP03TN6N8H00□	6.8nH±3%	500MHz	130mA	0.75ohm	13	500MHz	6000MHz
LQP03TN6N8J00□	6.8nH±5%	500MHz	130mA	0.75ohm	13	500MHz	6000MHz
LQP03TN7N5H00□	7.5nH±3%	500MHz	110mA	0.86ohm	13	500MHz	5500MHz
LQP03TN8N2H00□	8.2nH±3%	500MHz	110mA	0.86ohm	13	500MHz	5500MHz
LQP03TN8N2J00□	8.2nH±5%	500MHz	110mA	0.86ohm	13	500MHz	5500MHz
LQP03TN9N1H00□	9.1nH±3%	500MHz	100mA	1.10ohm	13	500MHz	4500MHz
LQP03TN10NH00□	10nH±3%	500MHz	100mA	1.10ohm	13	500MHz	4500MHz
LQP03TN10NJ00□	10nH±5%	500MHz	100mA	1.10ohm	13	500MHz	4500MHz
LQP03TN12NH00□	12nH±3%	500MHz	90mA	1.25ohm	11	500MHz	3700MHz
LQP03TN12NJ00□	12nH±5%	500MHz	90mA	1.25ohm	11	500MHz	3700MHz
LQP03TN15NH00□	15nH±3%	500MHz	90mA	1.40ohm	11	500MHz	3300MHz
LQP03TN15NJ00□	15nH±5%	500MHz	90mA	1.40ohm	11	500MHz	3300MHz
LQP03TN18NH00□	18nH±3%	500MHz	80mA	1.60ohm	11	500MHz	3100MHz
LQP03TN18NJ00□	18nH±5%	500MHz	80mA	1.60ohm	11	500MHz	3100MHz
LQP03TN22NH00□	22nH±3%	500MHz	70mA	2.55ohm	11	500MHz	2800MHz
LQP03TN22NJ00□	22nH±5%	500MHz	70mA	2.55ohm	11	500MHz	2800MHz
LQP03TN27NH00□	27nH±3%	500MHz	70mA	2.90ohm	11	500MHz	2500MHz
LQP03TN27NJ00□	27nH±5%	500MHz	70mA	2.90ohm	11	500MHz	2500MHz
LQP03TN33NJ00□	33nH±5%	300MHz	60mA	2.95ohm	8	300MHz	2000MHz
LQP03TN39NJ00□	39nH±5%	300MHz	60mA	3.35ohm	8	300MHz	1800MHz
LQP03TN47NJ00□	47nH±5%	300MHz	50mA	3.60ohm	8	300MHz	1600MHz
LQP03TN56NJ00□	56nH±5%	300MHz	50mA	4.30ohm	8	300MHz	1400MHz

Operating Temperature Range: -40°C to +85°C Only for reflow soldering.

■ Q - Frequency Characteristics (Typ.)



■ Inductance - Frequency Characteristics (Typ.)



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■ Reference Data

E4991A & 16197A

Part Number	Inductance (nH) (typ.)					Q (Typ.)				
	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz
LQP03TN0N6	0.6	0.6	0.6	0.6	0.6	50 min.	54 min.	70 min.	73 min.	77 min.
LQP03TN0N7	0.7	0.7	0.7	0.7	0.7	50 min.	54 min.	70 min.	73 min.	77 min.
LQP03TN0N8	0.8	0.8	0.8	0.8	0.8	50 min.	54 min.	70 min.	73 min.	77 min.
LQP03TN0N9	0.9	0.9	0.9	0.9	0.9	50 min.	54 min.	70 min.	73 min.	77 min.
LQP03TN1N0	1.0	1.0	1.0	1.0	1.0	50 min.	54 min.	70 min.	73 min.	77 min.
LQP03TN1N1	1.1	1.1	1.1	1.1	1.1	50 min.	54 min.	70 min.	73 min.	77 min.
LQP03TN1N2	1.2	1.2	1.2	1.2	1.2	50	54	70	73	77
LQP03TN1N3	1.3	1.3	1.3	1.3	1.3	48	52	67	72	74
LQP03TN1N5	1.5	1.5	1.5	1.5	1.5	45	48	63	66	69
LQP03TN1N6	1.6	1.6	1.6	1.6	1.6	43	47	57	64	67
LQP03TN1N8	1.8	1.8	1.8	1.8	1.8	36	38	50	53	55
LQP03TN2N0	2.0	2.0	2.0	2.0	2.0	38	40	52	54	57
LQP03TN2N2	2.2	2.2	2.2	2.2	2.2	28	35	49	52	54
LQP03TN2N4	2.4	2.4	2.4	2.4	2.4	36	38	50	53	56
LQP03TN2N7	2.7	2.7	2.7	2.7	2.7	28	30	40	42	44
LQP03TN3N0	3.0	3.0	3.0	3.0	3.0	28	29	39	41	43
LQP03TN3N3	3.3	3.3	3.3	3.3	3.4	29	31	42	43	45
LQP03TN3N6	3.6	3.6	3.6	3.7	3.7	31	33	43	45	47
LQP03TN3N9	3.9	3.9	3.9	4.0	4.1	29	31	41	43	45
LQP03TN4N3	4.3	4.3	4.3	4.4	4.5	28	30	40	42	44
LQP03TN4N7	4.7	4.7	4.8	4.9	5.1	28	30	40	42	43
LQP03TN5N1	5.1	5.1	5.2	5.3	5.5	26	28	37	39	40
LQP03TN5N6	5.6	5.6	5.8	5.9	6.1	22	24	32	33	33
LQP03TN6N2	6.2	6.2	6.5	6.6	6.9	20	21	27	28	28
LQP03TN6N8	6.8	6.8	7.1	7.4	7.7	21	22	29	30	30
LQP03TN7N5	7.5	7.5	7.9	8.2	8.7	21	22	28	30	29
LQP03TN8N2	8.2	8.2	8.6	9.1	9.6	18	19	25	25	24
LQP03TN9N1	9.1	9.1	9.9	10	11	20	21	26	26	25
LQP03TN10N	10	10	11	12	13	21	22	28	28	27
LQP03TN12N	12	12	13	14	16	21	22	27	27	25
LQP03TN15N	15	15	18	19	23	21	21	25	24	22
LQP03TN18N	18	18	24	-	-	18	19	20	-	-
LQP03TN22N	22	23	32	-	-	16	17	16	-	-
LQP03TN27N	28	29	47	-	-	15	15	13	-	-
LQP03TN33N	35	36	-	-	-	18	19	-	-	-
LQP03TN39N	42	44	-	-	-	15	15	-	-	-
LQP03TN47N	55	58	-	-	-	14	14	-	-	-
LQP03TN56N	63	67	-	-	-	13	13	-	-	-

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● Part Numbering

Chip Coils (SMD)

(Part Number)

LQ	H	32	M	N	331	K	2	3	L
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

① Product ID

Product ID	
LQ	Chip Coils

② Structure

Code	Structure
G	Monolithic Type (Air-core Coil)
H	Wire Wound Type (Ferrite Core)
M	Monolithic Type (Ferrite Core)
P	Film Type
W	Wire Wound Type (Air-core Coil)

③ Dimensions (L×W)

Code	Dimensions (L×W)	EIA
02	0.4×0.2mm	01005
03	0.6×0.3mm	0201
04	0.8×0.4mm	03015
15	1.0×0.5mm	0402
18	1.6×0.8mm	0603
21	2.0×1.25mm	0805
2B	2.0×1.5mm	0805
2M	2.0×1.6mm	0806
3N	3.0×3.0mm	1212
31	3.2×1.6mm	1206
32	3.2×2.5mm	1210
43	4.5×3.2mm	1812
55	5.7×5.0mm	2220
66	6.3×6.3mm	2525

④ Applications and Characteristics

Code	Series	Applications and Characteristics
H	LQG	Monolithic Air-core
N	LQM	for Resonant Circuit
D		for Choke (Low-current DC Power Supplies)
F	LQP	for Choke (DC Power Supplies)
M		Film Type
T	LQW	Film Type (Low DC Resistance Type)
A		High Q Type (UHF-SHF)
H	LQH	High Q Type (VHF-UHF)
N		for Resonant Circuit
M		for Resonant Circuit (Coating Type)
D		for Choke
C		for Choke (Coating Type)
S		for Choke (Magnetically Shielded Type)
H		for High-frequency Resonant Circuit
P	LQM/LQH	for Power Line

⑤ Category

Code	Category
N	Standard Type
S	

⑥ Inductance

Expressed by three-digit alphanumerics. The unit is micro-henry (μH). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "R". In this case, all figures are significant digits. If inductance is less than 0.1μH, the inductance code is expressed by a combination of two figures and the capital letter "N", and the unit of inductance is nano-henry (nH). The capital letter "N" indicates the unit of "nH", and also expresses a decimal point. In this case, all figures are significant digits.

⑦ Inductance Tolerance

Code	Inductance Tolerance
B	±0.1nH
C	±0.2nH
D	±0.5nH
G	±2%
H	±3%
J	±5%
K	±10%
M	±20%
N	±30%
S	±0.3nH
W	±0.05nH

⑧ Features (Except LQH3NP/LQM21P/LQM31P_C0)

Code	Features	Series
0	Standard Type	LQG/LQP/LQW/LQM*/LQH* ²
1	High-Q/ Low DC Resistance	LQW15A/18A/2BH
	Standard Type	LQM21N
2	Standard Type	LQH32C/32M
3	Low DC Resistance	LQH32C
5	Low Profile Type	LQH2MC/32C
7	Large Current Type	LQM21F

*1 : Except LQM21N Series

*2 : Except LQH32 Series

⑨ Features (LQH3NP/LQM21P/LQM31P_C0 Only)

Code	Dimensions (T)
C	0.5mm
G	0.9mm

⑩ Electrode

•Lead (Pb) Free

Code	Electrode	Series
0	Sn	LQG18H/LQP03T/LQW□□A/LQM/LQH3NP
		LQG15H/LQP02T/LQP15T/LQP□□M/LQH2MC
3	LF Solder	LQW□□H/LQH (Except LQH2MC)
4	Au	LQP03T

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(Part Number)

LQ	H	32	M	N	331	K	2	3	L
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

⑩Packaging

Code	Packaging	Series
K	Embossed Taping (ø330mm Reel)	LQH*1 /LQW□□H/LQM31F/LQM21*2
L	Embossed Taping (ø180mm Reel)	LQH/LQW□□H/LQM31F/LQM21*2 /LQM31P
B	Bulk	LQH2MC/LQW/LQG/LQM/LQP
J	Paper Taping (ø330mm Reel)	LQW15A/LQW18A/LQG/LQM18/LQM21*3 /LQP*5
D	Paper Taping (ø180mm Reel)	LQW□□A/LQG/LQM18/LQM21*4 /LQP

*1 Except LQH2MC/LQH3NP/LQH43C

*2 LQM21D(22 - 47μH)/LQM21F(4.7 - 47μH)/LQM21N(2.7 - 4.7μH) only.

*3 LQM21D(1.0 - 10μH)/LQM21F(1.0 - 2.2μH)/LQM21N(0.1 - 2.2μH) only.

*4 LQM21D(1.0 - 10μH)/LQM21F(1.0 - 2.2μH)/LQM21N(0.1 - 2.2μH)/LQM21P only.

*5 Except LQP15T