	Series	Structure	Size Code in inch (in mm)	Inductance Range (H) 0.1n 1n 10n 100n 1µ 10µ 100µ 1m 10m	Rated Current (A) 10m 100m 1 10 100
RF Inductors	LQG15HN_02 p201	Multilayer Type	0402 (1005)	1nH 120nH	150mA 1A
	LQG15HS_02 p204		0402 (1005)	1nH 270nH	110mA 1A
	LQG18HN_00 p208		0603 (1608)	1.2nH 100nH	350mA 1.1A
	LQW21HN_00 p289	Wire Wound Ferrite Core Type	0805 (2012)	470nH 2.2µH	75mA 160mA
	LQP02HQ_02 p210	Film Type	01005 (0402)	0.2nH 56nH	100mA 1A
	LQP02TN_02 p214		01005 (0402)	0.2nH 39nH	90mA 320mA
	LQP02TQ_02 p218		01005 (0402)	0.2nH 22nH	120mA 990mA
	LQP03HQ_02 p221		0201 (0603)	0.6nH 150nH	80mA 1.1A
	LQP03PN_02 p225		0201 (0603)	2.2nH 4.7nH	900mA 1.4A
	LQP03TG_02 p227		0201 (0603)	0.1nH 120nH	80mA 850mA
	LQP03TN_02 p231		0201 (0603)	0.6nH 270nH	60mA 850mA
	LQP03TQ_02 p235		0201 (0603)	0.6nH 13nH	250mA 1A
	LQP15MN_02 p238		0402 (1005)	1nH 33nH	60mA 400mA
	LQP18MN_02 p240		0603 (1608)	1.3nH 100nH	50mA 300mA
	LQW03AW_00 p242	Wire Wound Non-Magnetic Core Type	0201 (0603)	1nH 15.5nH	230mA 900mA
	LQW04AN_00 p244		03015 (0804)	0.8nH 33nH	140mA 1.8A
	LQW04AN_10 p249		03015 (0804)	36nH 56nH	180mA 200mA
	LQW15AN_00 p250		0402 (1005)	1.5nH 120nH	110mA 1A
	LQW15AN_10 p256		0402 (1005)	1.3nH 8.4nH	640mA 1.2A
	LQW15AN_80 p258		0402 (1005)	1.3nH 75nH	320mA 3.15A
	LQW18AN_00 p265		0603 (1608)	2.2nH 470nH	75mA 850mA
	LQW18AN_10 p268		0603 (1608)	2.2nH 33nH	550mA 1.4A
	LQW18AN_80 p270		0603 (1608)	2.2nH 390nH	190mA 3.2A
	LQW18AS_00 p275		0603 (1608)	1.6nH 390nH	100mA 700mA
	LQW2BAN_00 p278		0805 (2015)	3.2nH 200nH	750mA 3.8A
	LQW2BAS_00 p281		0805 (2015)	2.8nH 820nH	180mA 800mA
	LQW2BHN_03 p283		0805 (2015)	3.3nH 470nH	160mA 1.32A
	LQW2BHN_13 p285		0805 (2015)	2.7nH 27nH	900mA 1.9A
	LQW2UAS_00 p286		1008 (2520)	12nH 4.7µH	260mA 1A
	LQW31HN_03 p290		1206 (3216)	8.8nH 100nH	230mA 750mA

Part Numbering

RF Inductors

(Part Number) LQ G 15 H N 1N0 S 0 2 D
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
LQ	Chip Inductors (Chip Coils)

❷Structure

Code	Structure
G	Multilayer Type (Air-core Inductors (Coils))
H	Wire Wound Type (Ferrite Core)
P	Film Type
W	Wire Wound Type (Air-core Inductors (Coils))
	Wire Wound Type (Ferrite Core)

❸Dimensions (LxW)

Code	Nominal Dimensions (LxW)	Size Code (in inch)
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
2U	2.5×2.0mm	1008
31	3.2×1.6mm	1206

❹Applications and Characteristics

Code	Series	Applications and Characteristics
H	LQG	Multilayer Air-core Inductors (Coils)
	LQP	Film Type (High Q Type)
M	LQP	Film Type
P		Film Type (For Large Current)
T		Film Type (Low DC Resistance Type)
A	LQW	High Q Type (UHF-SHF)
H		High Q Type (VHF-UHF)
H	LQH	for High-frequency Resonant Circuit

❺Category

Code	Category	
G/N	General	Standard Type
S		
Q		High Q Type
W		Specialty Dimensions

❻Inductance

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 that 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. For those products whose inductance values are specified using three designated digits, these values may be indicated using the closest two digits instead.

❼Inductance Tolerance

Code	Inductance Tolerance
B	±0.1nH
C	±0.2nH
D	±0.5nH
F	±1%
G	±2%
H	±3%
J	±5%
K	±10%
S	±0.3nH
W	±0.05nH

❽Features

Code	Features	Series
0	Standard Type	LQG/LQP/LQW/LQH*1
1	High-Q/Low DC Resistance	LQW15A/18A/2BH
8	Low DC Resistance, Large Rated Current	LQW15A/LQW18A

*1 Except for LQH32 Series

❾Electrode

▪Lead (Pb) Free

Code	Electrode	Series
0	Sn	LQG18H/LQW□□A/LQW□□C
2		LQG15H/LQP02T/LQP03T/ LQP15T/LQP□□M
3	LF Solder	LQW□□H/LQH

❿Packaging

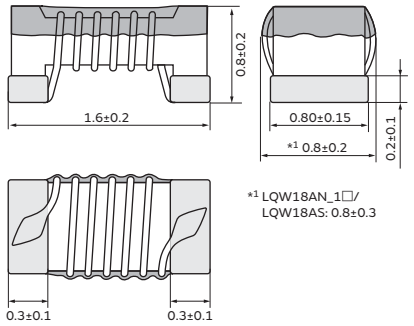
Code	Packaging	Series
K	Embossed Taping (ø330mm Reel)	LQH/LQW□□H*2
L/E	Embossed Taping (ø180mm Reel)	LQH/LQW2BA/LQW2UA/LQW□□H/LQP
B	Bulk	LQW/LQG/LQP
J	Paper Taping (ø330mm Reel)	LQW18A/LQG/LQP*1
D	Paper Taping (ø180mm Reel)	LQW□□A*3 /LQG/LQP

*1 Except for LQP02T *2 Except for LQW21H *3 Except for LQW2BA/LQW2UA

RF Inductors

LQW18AN_00 Series 0603 (1608) inch (mm)

Appearance/Dimensions



(in mm)

Packaging

Code	Packaging	Minimum Quantity
D	ø180mm Paper Taping	4000
J	ø330mm Paper Taping	10000
B	Packing in Bulk	500

Rated Value (□: packaging code)

Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18AN2N2D00□	2.2nH ±0.5nH	100MHz	16	250MHz	700mA	0.042Ω	6000MHz
LQW18AN3N6C00□	3.6nH ±0.2nH	100MHz	25	250MHz	850mA	0.059Ω	6000MHz
LQW18AN3N6D00□	3.6nH ±0.5nH	100MHz	25	250MHz	850mA	0.059Ω	6000MHz
LQW18AN3N9C00□	3.9nH ±0.2nH	100MHz	35	250MHz	850mA	0.059Ω	6000MHz
LQW18AN3N9D00□	3.9nH ±0.5nH	100MHz	35	250MHz	850mA	0.059Ω	6000MHz
LQW18AN4N3C00□	4.3nH ±0.2nH	100MHz	35	250MHz	850mA	0.059Ω	6000MHz
LQW18AN4N3D00□	4.3nH ±0.5nH	100MHz	35	250MHz	850mA	0.059Ω	6000MHz
LQW18AN4N7D00□	4.7nH ±0.5nH	100MHz	35	250MHz	850mA	0.059Ω	6000MHz
LQW18AN5N6C00□	5.6nH ±0.2nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN5N6D00□	5.6nH ±0.5nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN6N2C00□	6.2nH ±0.2nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN6N2D00□	6.2nH ±0.5nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN6N8C00□	6.8nH ±0.2nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN6N8D00□	6.8nH ±0.5nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN7N5C00□	7.5nH ±0.2nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN7N5D00□	7.5nH ±0.5nH	100MHz	35	250MHz	750mA	0.082Ω	6000MHz
LQW18AN8N2C00□	8.2nH ±0.2nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN8N2D00□	8.2nH ±0.5nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN8N7C00□	8.7nH ±0.2nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN8N7D00□	8.7nH ±0.5nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN9N1C00□	9.1nH ±0.2nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN9N1D00□	9.1nH ±0.5nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN9N5D00□	9.5nH ±0.5nH	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN10NG00□	10nH ±2%	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN10NJ00□	10nH ±5%	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN11NG00□	11nH ±2%	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN11NJ00□	11nH ±5%	100MHz	35	250MHz	650mA	0.11Ω	6000MHz
LQW18AN12NG00□	12nH ±2%	100MHz	35	250MHz	600mA	0.13Ω	6000MHz
LQW18AN12NJ00□	12nH ±5%	100MHz	35	250MHz	600mA	0.13Ω	6000MHz
LQW18AN13NG00□	13nH ±2%	100MHz	35	250MHz	600mA	0.13Ω	6000MHz
LQW18AN13NJ00□	13nH ±5%	100MHz	35	250MHz	600mA	0.13Ω	6000MHz
LQW18AN15NG00□	15nH ±2%	100MHz	40	250MHz	600mA	0.13Ω	6000MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency

Continued on the following page.↗

Continued from the preceding page. ↘

Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18AN15NJ00□	15nH ±5%	100MHz	40	250MHz	600mA	0.13Ω	6000MHz
LQW18AN16NG00□	16nH ±2%	100MHz	40	250MHz	550mA	0.16Ω	5500MHz
LQW18AN16NJ00□	16nH ±5%	100MHz	40	250MHz	550mA	0.16Ω	5500MHz
LQW18AN18NG00□	18nH ±2%	100MHz	40	250MHz	550mA	0.16Ω	5500MHz
LQW18AN18NJ00□	18nH ±5%	100MHz	40	250MHz	550mA	0.16Ω	5500MHz
LQW18AN20NG00□	20nH ±2%	100MHz	40	250MHz	550mA	0.16Ω	4900MHz
LQW18AN20NJ00□	20nH ±5%	100MHz	40	250MHz	550mA	0.16Ω	4900MHz
LQW18AN22NG00□	22nH ±2%	100MHz	40	250MHz	500mA	0.17Ω	4600MHz
LQW18AN22NJ00□	22nH ±5%	100MHz	40	250MHz	500mA	0.17Ω	4600MHz
LQW18AN24NG00□	24nH ±2%	100MHz	40	250MHz	500mA	0.21Ω	3800MHz
LQW18AN24NJ00□	24nH ±5%	100MHz	40	250MHz	500mA	0.21Ω	3800MHz
LQW18AN27NG00□	27nH ±2%	100MHz	40	250MHz	440mA	0.21Ω	3700MHz
LQW18AN27NJ00□	27nH ±5%	100MHz	40	250MHz	440mA	0.21Ω	3700MHz
LQW18AN30NG00□	30nH ±2%	100MHz	40	250MHz	420mA	0.23Ω	3300MHz
LQW18AN30NJ00□	30nH ±5%	100MHz	40	250MHz	420mA	0.23Ω	3300MHz
LQW18AN33NG00□	33nH ±2%	100MHz	40	250MHz	420mA	0.23Ω	3200MHz
LQW18AN33NJ00□	33nH ±5%	100MHz	40	250MHz	420mA	0.23Ω	3200MHz
LQW18AN36NG00□	36nH ±2%	100MHz	40	250MHz	400mA	0.26Ω	2900MHz
LQW18AN36NJ00□	36nH ±5%	100MHz	40	250MHz	400mA	0.26Ω	2900MHz
LQW18AN39NG00□	39nH ±2%	100MHz	40	250MHz	400mA	0.26Ω	2800MHz
LQW18AN39NJ00□	39nH ±5%	100MHz	40	250MHz	400mA	0.26Ω	2800MHz
LQW18AN43NG00□	43nH ±2%	100MHz	40	200MHz	380mA	0.29Ω	2700MHz
LQW18AN43NJ00□	43nH ±5%	100MHz	40	200MHz	380mA	0.29Ω	2700MHz
LQW18AN47NG00□	47nH ±2%	100MHz	38	200MHz	380mA	0.29Ω	2600MHz
LQW18AN47NJ00□	47nH ±5%	100MHz	38	200MHz	380mA	0.29Ω	2600MHz
LQW18AN51NG00□	51nH ±2%	100MHz	38	200MHz	370mA	0.33Ω	2500MHz
LQW18AN51NJ00□	51nH ±5%	100MHz	38	200MHz	370mA	0.33Ω	2500MHz
LQW18AN56NG00□	56nH ±2%	100MHz	38	200MHz	360mA	0.35Ω	2400MHz
LQW18AN56NJ00□	56nH ±5%	100MHz	38	200MHz	360mA	0.35Ω	2400MHz
LQW18AN62NG00□	62nH ±2%	100MHz	38	200MHz	280mA	0.51Ω	2300MHz
LQW18AN62NJ00□	62nH ±5%	100MHz	38	200MHz	280mA	0.51Ω	2300MHz
LQW18AN68NG00□	68nH ±2%	100MHz	38	200MHz	340mA	0.38Ω	2200MHz
LQW18AN68NJ00□	68nH ±5%	100MHz	38	200MHz	340mA	0.38Ω	2200MHz
LQW18AN72NG00□	72nH ±2%	100MHz	34	150MHz	270mA	0.56Ω	2100MHz
LQW18AN72NJ00□	72nH ±5%	100MHz	34	150MHz	270mA	0.56Ω	2100MHz
LQW18AN75NG00□	75nH ±2%	100MHz	34	150MHz	270mA	0.56Ω	2050MHz
LQW18AN75NJ00□	75nH ±5%	100MHz	34	150MHz	270mA	0.56Ω	2050MHz
LQW18AN82NG00□	82nH ±2%	100MHz	34	150MHz	250mA	0.60Ω	2000MHz
LQW18AN82NJ00□	82nH ±5%	100MHz	34	150MHz	250mA	0.60Ω	2000MHz
LQW18AN91NG00□	91nH ±2%	100MHz	34	150MHz	230mA	0.64Ω	1900MHz
LQW18AN91NJ00□	91nH ±5%	100MHz	34	150MHz	230mA	0.64Ω	1900MHz
LQW18ANR10G00□	100nH ±2%	100MHz	34	150MHz	220mA	0.68Ω	1800MHz
LQW18ANR10J00□	100nH ±5%	100MHz	34	150MHz	220mA	0.68Ω	1800MHz
LQW18ANR11G00□	110nH ±2%	100MHz	32	150MHz	200mA	1.2Ω	1700MHz
LQW18ANR11J00□	110nH ±5%	100MHz	32	150MHz	200mA	1.2Ω	1700MHz
LQW18ANR12G00□	120nH ±2%	100MHz	32	150MHz	180mA	1.3Ω	1600MHz
LQW18ANR12J00□	120nH ±5%	100MHz	32	150MHz	180mA	1.3Ω	1600MHz
LQW18ANR13G00□	130nH ±2%	100MHz	32	150MHz	170mA	1.4Ω	1450MHz
LQW18ANR13J00□	130nH ±5%	100MHz	32	150MHz	170mA	1.4Ω	1450MHz
LQW18ANR15G00□	150nH ±2%	100MHz	32	150MHz	160mA	1.5Ω	1400MHz
LQW18ANR15J00□	150nH ±5%	100MHz	32	150MHz	160mA	1.5Ω	1400MHz
LQW18ANR16G00□	160nH ±2%	100MHz	32	150MHz	150mA	2.1Ω	1350MHz
LQW18ANR16J00□	160nH ±5%	100MHz	32	150MHz	150mA	2.1Ω	1350MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency

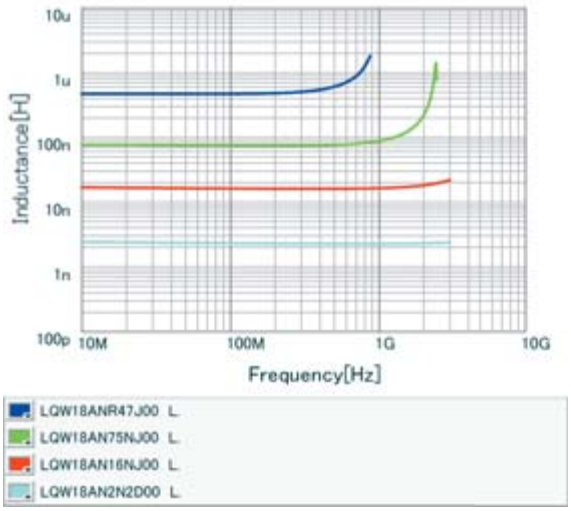
Continued on the following page. ↗

Continued from the preceding page. ↘

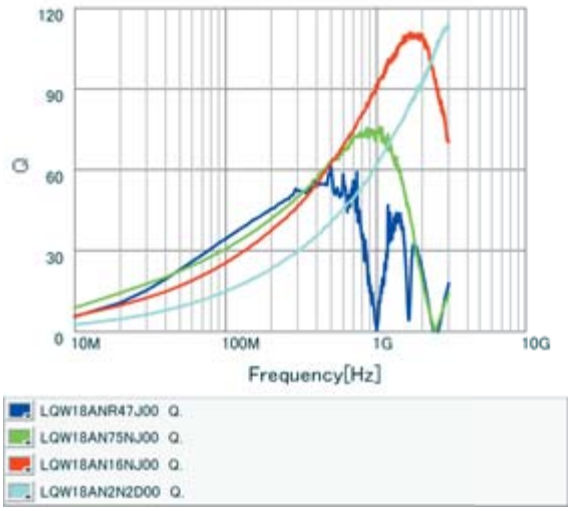
Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18ANR18G00□	180nH ±2%	100MHz	25	100MHz	140mA	2.2Ω	1300MHz
LQW18ANR18J00□	180nH ±5%	100MHz	25	100MHz	140mA	2.2Ω	1300MHz
LQW18ANR20G00□	200nH ±2%	100MHz	25	100MHz	120mA	2.4Ω	1250MHz
LQW18ANR20J00□	200nH ±5%	100MHz	25	100MHz	120mA	2.4Ω	1250MHz
LQW18ANR22G00□	220nH ±2%	100MHz	25	100MHz	120mA	2.5Ω	1200MHz
LQW18ANR22J00□	220nH ±5%	100MHz	25	100MHz	120mA	2.5Ω	1200MHz
LQW18ANR27G00□	270nH ±2%	100MHz	30	100MHz	110mA	3.4Ω	960MHz
LQW18ANR27J00□	270nH ±5%	100MHz	30	100MHz	110mA	3.4Ω	960MHz
LQW18ANR33G00□	330nH ±2%	100MHz	30	100MHz	85mA	5.5Ω	800MHz
LQW18ANR33J00□	330nH ±5%	100MHz	30	100MHz	85mA	5.5Ω	800MHz
LQW18ANR39G00□	390nH ±2%	100MHz	30	100MHz	80mA	6.2Ω	800MHz
LQW18ANR39J00□	390nH ±5%	100MHz	30	100MHz	80mA	6.2Ω	800MHz
LQW18ANR47G00□	470nH ±2%	100MHz	30	100MHz	75mA	7.0Ω	700MHz
LQW18ANR47J00□	470nH ±5%	100MHz	30	100MHz	75mA	7.0Ω	700MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency

Inductance-Frequency Characteristics (Typ.)



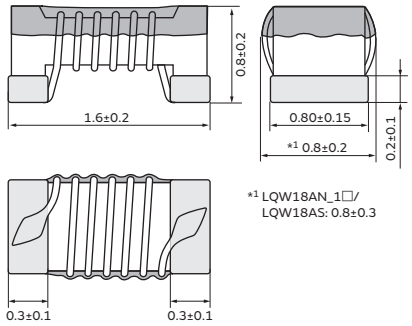
Q-Frequency Characteristics (Typ.)



RF Inductors

LQW18AN_10 Series 0603 (1608) inch (mm)

Appearance/Dimensions



*1 LQW18AN_1□/
LQW18AS: 0.8±0.3

(in mm)

Packaging

Code	Packaging	Minimum Quantity
D	ø180mm Paper Taping	4000
J	ø330mm Paper Taping	10000
B	Packing in Bulk	500

Rated Value (□: packaging code)

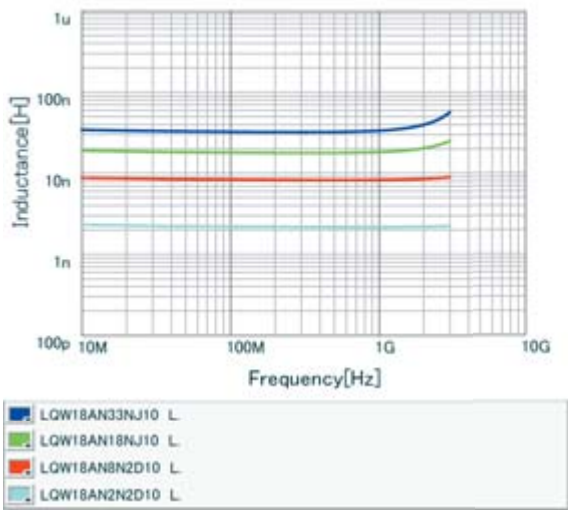
Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18AN2N2D10□	2.2nH ±0.5nH	100MHz	25	250MHz	1400mA	0.018Ω	18000MHz
LQW18AN3N9C10□	3.9nH ±0.2nH	100MHz	38	250MHz	1000mA	0.032Ω	11000MHz
LQW18AN3N9D10□	3.9nH ±0.5nH	100MHz	38	250MHz	1000mA	0.032Ω	11000MHz
LQW18AN5N6D10□	5.6nH ±0.5nH	100MHz	38	250MHz	900mA	0.045Ω	10000MHz
LQW18AN6N8C10□	6.8nH ±0.2nH	100MHz	38	250MHz	900mA	0.045Ω	7000MHz
LQW18AN6N8D10□	6.8nH ±0.5nH	100MHz	38	250MHz	900mA	0.045Ω	7000MHz
LQW18AN8N2D10□	8.2nH ±0.5nH	100MHz	38	250MHz	800mA	0.058Ω	7000MHz
LQW18AN10NG10□	10nH ±2%	100MHz	38	250MHz	800mA	0.058Ω	5000MHz
LQW18AN10NJ10□	10nH ±5%	100MHz	38	250MHz	800mA	0.058Ω	5000MHz
LQW18AN12NG10□	12nH ±2%	100MHz	38	250MHz	750mA	0.071Ω	5000MHz
LQW18AN12NJ10□	12nH ±5%	100MHz	38	250MHz	750mA	0.071Ω	5000MHz
LQW18AN15NJ10□	15nH ±5%	100MHz	42	250MHz	700mA	0.085Ω	4500MHz
LQW18AN18NG10□	18nH ±2%	100MHz	42	250MHz	700mA	0.085Ω	3500MHz
LQW18AN18NJ10□	18nH ±5%	100MHz	42	250MHz	700mA	0.085Ω	3500MHz
LQW18AN22NG10□	22nH ±2%	100MHz	42	250MHz	640mA	0.099Ω	3200MHz
LQW18AN22NJ10□	22nH ±5%	100MHz	42	250MHz	640mA	0.099Ω	3200MHz
LQW18AN27NG10□	27nH ±2%	100MHz	42	250MHz	590mA	0.116Ω	2800MHz
LQW18AN27NJ10□	27nH ±5%	100MHz	42	250MHz	590mA	0.116Ω	2800MHz
LQW18AN33NJ10□	33nH ±5%	100MHz	42	250MHz	550mA	0.132Ω	2500MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency

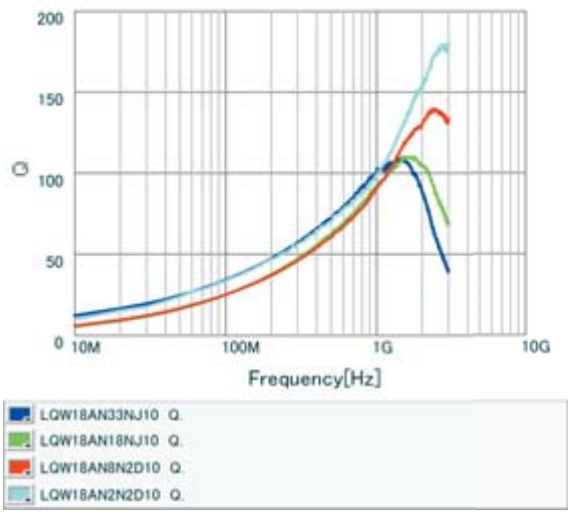
Continued on the following page.↗

Continued from the preceding page. ↘

Inductance-Frequency Characteristics (Typ.)



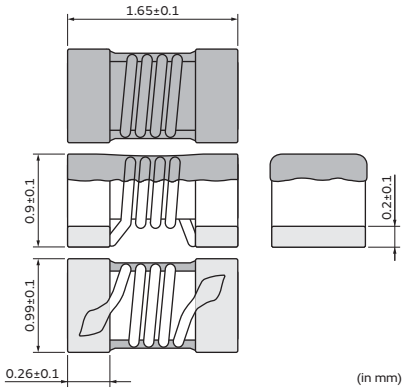
Q-Frequency Characteristics (Typ.)



RF Inductors

LQW18AN_80 Series 0603 (1608) inch (mm)

Appearance/Dimensions



Packaging

Code	Packaging	Minimum Quantity
D	ø180mm Paper Taping	4000
J	ø330mm Paper Taping	10000
B	Packing in Bulk	500

Rated Value (☐: packaging code)

Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18AN2N2C80☐	2.2nH ±0.2nH	100MHz	24	250MHz	3200mA	0.018Ω	15000MHz
LQW18AN2N4C80☐	2.4nH ±0.2nH	100MHz	18	250MHz	2400mA	0.026Ω	15000MHz
LQW18AN3N0C80☐	3.0nH ±0.2nH	100MHz	13	250MHz	670mA	0.17Ω	15000MHz
LQW18AN3N9B80☐	3.9nH ±0.1nH	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN3N9C80☐	3.9nH ±0.2nH	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN3N9G80☐	3.9nH ±2%	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N1B80☐	4.1nH ±0.1nH	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N1C80☐	4.1nH ±0.2nH	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N1G80☐	4.1nH ±2%	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N2B80☐	4.2nH ±0.1nH	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N2C80☐	4.2nH ±0.2nH	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N2G80☐	4.2nH ±2%	100MHz	30	250MHz	2200mA	0.028Ω	10000MHz
LQW18AN4N3B80☐	4.3nH ±0.1nH	100MHz	35	250MHz	2100mA	0.036Ω	11600MHz
LQW18AN4N3C80☐	4.3nH ±0.2nH	100MHz	35	250MHz	2100mA	0.036Ω	11600MHz
LQW18AN4N3G80☐	4.3nH ±2%	100MHz	35	250MHz	2100mA	0.036Ω	11600MHz
LQW18AN4N7B80☐	4.7nH ±0.1nH	100MHz	25	250MHz	1500mA	0.054Ω	10400MHz
LQW18AN4N7C80☐	4.7nH ±0.2nH	100MHz	25	250MHz	1500mA	0.054Ω	10400MHz
LQW18AN4N7G80☐	4.7nH ±2%	100MHz	25	250MHz	1500mA	0.054Ω	10400MHz
LQW18AN4N9B80☐	4.9nH ±0.1nH	100MHz	23	250MHz	1200mA	0.081Ω	7300MHz
LQW18AN4N9C80☐	4.9nH ±0.2nH	100MHz	23	250MHz	1200mA	0.081Ω	7300MHz
LQW18AN4N9G80☐	4.9nH ±2%	100MHz	23	250MHz	1200mA	0.081Ω	7300MHz
LQW18AN5N6C80☐	5.6nH ±0.2nH	100MHz	38	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN5N6G80☐	5.6nH ±2%	100MHz	38	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN6N0C80☐	6.0nH ±0.2nH	100MHz	40	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN6N0G80☐	6.0nH ±2%	100MHz	40	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN6N5C80☐	6.5nH ±0.2nH	100MHz	40	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN6N5G80☐	6.5nH ±2%	100MHz	40	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN6N8C80☐	6.8nH ±0.2nH	100MHz	40	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN6N8G80☐	6.8nH ±2%	100MHz	40	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN7N2C80☐	7.2nH ±0.2nH	100MHz	38	250MHz	1900mA	0.040Ω	6650MHz
LQW18AN7N2G80☐	7.2nH ±2%	100MHz	38	250MHz	1900mA	0.040Ω	6650MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency
In operating temperatures exceeding +85°C, derating of current is necessary for the LQW18AN_80 series. Please apply the derating curve shown in the chart according to the operating temperature. Please consider the "Notice (Rating)."

Continued on the following page.↗

Continued from the preceding page.↘

Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18AN7N5C80□	7.5nH ±0.2nH	100MHz	35	250MHz	1500mA	0.048Ω	7000MHz
LQW18AN7N5G80□	7.5nH ±2%	100MHz	35	250MHz	1500mA	0.048Ω	7000MHz
LQW18AN8N2C80□	8.2nH ±0.2nH	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN8N2G80□	8.2nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN8N4C80□	8.4nH ±0.2nH	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN8N4G80□	8.4nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN8N7C80□	8.7nH ±0.2nH	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN8N7G80□	8.7nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN9N1C80□	9.1nH ±0.2nH	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN9N1G80□	9.1nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN9N5C80□	9.5nH ±0.2nH	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN9N5G80□	9.5nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN9N9C80□	9.9nH ±0.2nH	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN9N9G80□	9.9nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN10NG80□	10nH ±2%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN10NJ80□	10nH ±5%	100MHz	38	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN11NG80□	11nH ±2%	100MHz	40	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN11NJ80□	11nH ±5%	100MHz	40	250MHz	1600mA	0.052Ω	4750MHz
LQW18AN12NG80□	12nH ±2%	100MHz	37	250MHz	1500mA	0.064Ω	5000MHz
LQW18AN12NJ80□	12nH ±5%	100MHz	37	250MHz	1500mA	0.064Ω	5000MHz
LQW18AN13NG80□	13nH ±2%	100MHz	37	250MHz	1500mA	0.064Ω	5000MHz
LQW18AN13NJ80□	13nH ±5%	100MHz	37	250MHz	1500mA	0.064Ω	5000MHz
LQW18AN15NG80□	15nH ±2%	100MHz	38	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN15NJ80□	15nH ±5%	100MHz	38	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN16NG80□	16nH ±2%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN16NJ80□	16nH ±5%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN17NG80□	17nH ±2%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN17NJ80□	17nH ±5%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN18NG80□	18nH ±2%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN18NJ80□	18nH ±5%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN19NG80□	19nH ±2%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN19NJ80□	19nH ±5%	100MHz	40	250MHz	1400mA	0.075Ω	4600MHz
LQW18AN22NG80□	22nH ±2%	100MHz	40	250MHz	1300mA	0.086Ω	3450MHz
LQW18AN22NJ80□	22nH ±5%	100MHz	40	250MHz	1300mA	0.086Ω	3450MHz
LQW18AN23NG80□	23nH ±2%	100MHz	40	250MHz	1300mA	0.086Ω	3450MHz
LQW18AN23NJ80□	23nH ±5%	100MHz	40	250MHz	1300mA	0.086Ω	3450MHz
LQW18AN24NG80□	24nH ±2%	100MHz	40	250MHz	1300mA	0.086Ω	3450MHz
LQW18AN24NJ80□	24nH ±5%	100MHz	40	250MHz	1300mA	0.086Ω	3450MHz
LQW18AN25NG80□	25nH ±2%	100MHz	40	250MHz	1200mA	0.098Ω	3600MHz
LQW18AN25NJ80□	25nH ±5%	100MHz	40	250MHz	1200mA	0.098Ω	3600MHz
LQW18AN27NG80□	27nH ±2%	100MHz	40	250MHz	1200mA	0.098Ω	3600MHz
LQW18AN27NJ80□	27nH ±5%	100MHz	40	250MHz	1200mA	0.098Ω	3600MHz
LQW18AN28NG80□	28nH ±2%	100MHz	40	250MHz	1200mA	0.098Ω	3600MHz
LQW18AN28NJ80□	28nH ±5%	100MHz	40	250MHz	1200mA	0.098Ω	3600MHz
LQW18AN30NG80□	30nH ±2%	100MHz	40	250MHz	1100mA	0.12Ω	2880MHz
LQW18AN30NJ80□	30nH ±5%	100MHz	40	250MHz	1100mA	0.12Ω	2880MHz
LQW18AN31NG80□	31nH ±2%	100MHz	40	250MHz	1100mA	0.11Ω	3150MHz
LQW18AN31NJ80□	31nH ±5%	100MHz	40	250MHz	1100mA	0.11Ω	3150MHz
LQW18AN33NG80□	33nH ±2%	100MHz	40	250MHz	1100mA	0.11Ω	3150MHz
LQW18AN33NJ80□	33nH ±5%	100MHz	40	250MHz	1100mA	0.11Ω	3150MHz
LQW18AN34NG80□	34nH ±2%	100MHz	40	250MHz	1050mA	0.15Ω	3000MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency
In operating temperatures exceeding +85°C, derating of current is necessary for the LQW18AN_80 series. Please apply the derating curve shown in the chart according to the operating temperature. Please consider the "Notice (Rating)."

Continued on the following page.↗

Continued from the preceding page.↘

Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18AN34NJ80□	34nH ±5%	100MHz	40	250MHz	1050mA	0.15Ω	3000MHz
LQW18AN36NG80□	36nH ±2%	100MHz	37	250MHz	910mA	0.20Ω	3000MHz
LQW18AN36NJ80□	36nH ±5%	100MHz	37	250MHz	910mA	0.20Ω	3000MHz
LQW18AN37NG80□	37nH ±2%	100MHz	37	250MHz	910mA	0.20Ω	3000MHz
LQW18AN37NJ80□	37nH ±5%	100MHz	37	250MHz	910mA	0.20Ω	3000MHz
LQW18AN39NG80□	39nH ±2%	100MHz	40	250MHz	1000mA	0.16Ω	3280MHz
LQW18AN39NJ80□	39nH ±5%	100MHz	40	250MHz	1000mA	0.16Ω	3280MHz
LQW18AN41NG80□	41nH ±2%	100MHz	40	250MHz	1000mA	0.16Ω	3280MHz
LQW18AN41NJ80□	41nH ±5%	100MHz	40	250MHz	1000mA	0.16Ω	3280MHz
LQW18AN43NG80□	43nH ±2%	100MHz	40	250MHz	840mA	0.21Ω	2780MHz
LQW18AN43NJ80□	43nH ±5%	100MHz	40	250MHz	840mA	0.21Ω	2780MHz
LQW18AN44NG80□	44nH ±2%	100MHz	40	250MHz	840mA	0.21Ω	2780MHz
LQW18AN44NJ80□	44nH ±5%	100MHz	40	250MHz	840mA	0.21Ω	2780MHz
LQW18AN47NG80□	47nH ±2%	100MHz	32	200MHz	830mA	0.23Ω	2700MHz
LQW18AN47NJ80□	47nH ±5%	100MHz	32	200MHz	830mA	0.23Ω	2700MHz
LQW18AN48NG80□	48nH ±2%	100MHz	32	200MHz	830mA	0.23Ω	2700MHz
LQW18AN48NJ80□	48nH ±5%	100MHz	32	200MHz	830mA	0.23Ω	2700MHz
LQW18AN51NG80□	51nH ±2%	100MHz	32	200MHz	830mA	0.23Ω	2700MHz
LQW18AN51NJ80□	51nH ±5%	100MHz	32	200MHz	830mA	0.23Ω	2700MHz
LQW18AN52NG80□	52nH ±2%	100MHz	35	200MHz	750mA	0.27Ω	2750MHz
LQW18AN52NJ80□	52nH ±5%	100MHz	35	200MHz	750mA	0.27Ω	2750MHz
LQW18AN56NG80□	56nH ±2%	100MHz	38	200MHz	770mA	0.26Ω	2600MHz
LQW18AN56NJ80□	56nH ±5%	100MHz	38	200MHz	770mA	0.26Ω	2600MHz
LQW18AN58NG80□	58nH ±2%	100MHz	35	200MHz	700mA	0.30Ω	2400MHz
LQW18AN58NJ80□	58nH ±5%	100MHz	35	200MHz	700mA	0.30Ω	2400MHz
LQW18AN68NG80□	68nH ±2%	100MHz	37	200MHz	630mA	0.38Ω	2380MHz
LQW18AN68NJ80□	68nH ±5%	100MHz	37	200MHz	630mA	0.38Ω	2380MHz
LQW18AN69NG80□	69nH ±2%	100MHz	37	200MHz	630mA	0.38Ω	2380MHz
LQW18AN69NJ80□	69nH ±5%	100MHz	37	200MHz	630mA	0.38Ω	2380MHz
LQW18AN72NG80□	72nH ±2%	100MHz	34	150MHz	560mA	0.47Ω	2330MHz
LQW18AN72NJ80□	72nH ±5%	100MHz	34	150MHz	560mA	0.47Ω	2330MHz
LQW18AN73NG80□	73nH ±2%	100MHz	28	150MHz	590mA	0.41Ω	2280MHz
LQW18AN73NJ80□	73nH ±5%	100MHz	28	150MHz	590mA	0.41Ω	2280MHz
LQW18AN75NG80□	75nH ±2%	100MHz	28	150MHz	590mA	0.41Ω	2280MHz
LQW18AN75NJ80□	75nH ±5%	100MHz	28	150MHz	590mA	0.41Ω	2280MHz
LQW18AN78NG80□	78nH ±2%	100MHz	28	150MHz	590mA	0.41Ω	2280MHz
LQW18AN78NJ80□	78nH ±5%	100MHz	28	150MHz	590mA	0.41Ω	2280MHz
LQW18AN82NG80□	82nH ±2%	100MHz	34	150MHz	550mA	0.5Ω	2230MHz
LQW18AN82NJ80□	82nH ±5%	100MHz	34	150MHz	550mA	0.5Ω	2230MHz
LQW18AN83NG80□	83nH ±2%	100MHz	34	150MHz	550mA	0.5Ω	2230MHz
LQW18AN83NJ80□	83nH ±5%	100MHz	34	150MHz	550mA	0.5Ω	2230MHz
LQW18AN91NG80□	91nH ±2%	100MHz	33	150MHz	520mA	0.54Ω	1900MHz
LQW18AN91NJ80□	91nH ±5%	100MHz	33	150MHz	520mA	0.54Ω	1900MHz
LQW18AN94NG80□	94nH ±2%	100MHz	34	150MHz	490mA	0.63Ω	1750MHz
LQW18AN94NJ80□	94nH ±5%	100MHz	34	150MHz	490mA	0.63Ω	1750MHz
LQW18ANR10G80□	100nH ±2%	100MHz	34	150MHz	490mA	0.63Ω	1750MHz
LQW18ANR10J80□	100nH ±5%	100MHz	34	150MHz	490mA	0.63Ω	1750MHz
LQW18ANR11G80□	110nH ±2%	100MHz	32	150MHz	450mA	0.7Ω	1730MHz
LQW18ANR11J80□	110nH ±5%	100MHz	32	150MHz	450mA	0.7Ω	1730MHz
LQW18ANR12G80□	120nH ±2%	100MHz	32	150MHz	450mA	0.72Ω	1650MHz
LQW18ANR12J80□	120nH ±5%	100MHz	32	150MHz	450mA	0.72Ω	1650MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency
In operating temperatures exceeding +85°C, derating of current is necessary for the LQW18AN_80 series. Please apply the derating curve shown in the chart according to the operating temperature. Please consider the "Notice (Rating)."

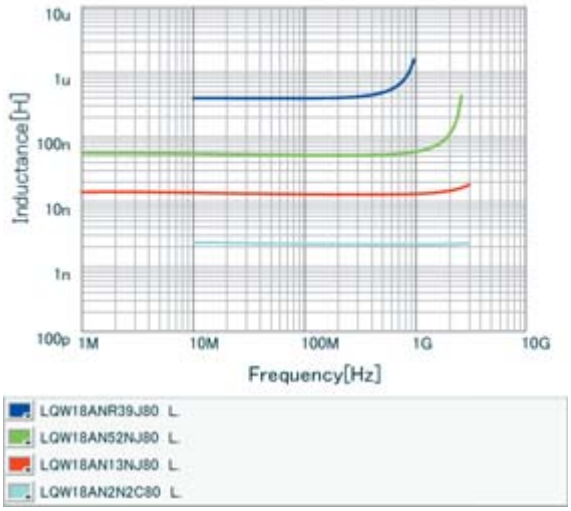
Continued on the following page.↗

Continued from the preceding page.↘

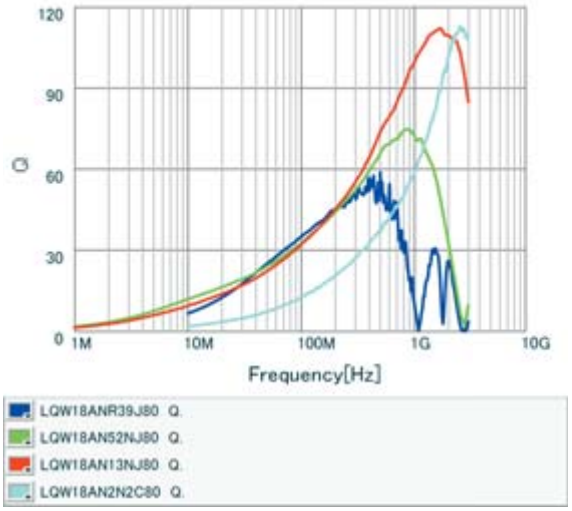
Part Number	Inductance	Inductance Test Frequency	Q (min.)	Q Test Frequency	Rated Current	Max. of DC Resistance	S.R.F.* (min.)
LQW18ANR15G80□	150nH ±2%	100MHz	28	150MHz	420mA	0.87Ω	1580MHz
LQW18ANR15J80□	150nH ±5%	100MHz	28	150MHz	420mA	0.87Ω	1580MHz
LQW18ANR18G80□	180nH ±2%	100MHz	25	100MHz	310mA	1.65Ω	1380MHz
LQW18ANR18J80□	180nH ±5%	100MHz	25	100MHz	310mA	1.65Ω	1380MHz
LQW18ANR20G80□	200nH ±2%	100MHz	25	100MHz	290mA	1.74Ω	1350MHz
LQW18ANR20J80□	200nH ±5%	100MHz	25	100MHz	290mA	1.74Ω	1350MHz
LQW18ANR21G80□	210nH ±2%	100MHz	27	100MHz	280mA	1.98Ω	1330MHz
LQW18ANR21J80□	210nH ±5%	100MHz	27	100MHz	280mA	1.98Ω	1330MHz
LQW18ANR22G80□	220nH ±2%	100MHz	25	100MHz	280mA	2.08Ω	1330MHz
LQW18ANR22J80□	220nH ±5%	100MHz	25	100MHz	280mA	2.08Ω	1330MHz
LQW18ANR25G80□	250nH ±2%	100MHz	24	100MHz	250mA	2.28Ω	1330MHz
LQW18ANR25J80□	250nH ±5%	100MHz	24	100MHz	250mA	2.28Ω	1330MHz
LQW18ANR27G80□	270nH ±2%	100MHz	24	100MHz	260mA	2.42Ω	1250MHz
LQW18ANR27J80□	270nH ±5%	100MHz	24	100MHz	260mA	2.42Ω	1250MHz
LQW18ANR30G80□	300nH ±2%	100MHz	25	100MHz	220mA	3.12Ω	1200MHz
LQW18ANR30J80□	300nH ±5%	100MHz	25	100MHz	220mA	3.12Ω	1200MHz
LQW18ANR33G80□	330nH ±2%	100MHz	25	100MHz	190mA	3.84Ω	1100MHz
LQW18ANR33J80□	330nH ±5%	100MHz	25	100MHz	190mA	3.84Ω	1100MHz
LQW18ANR36G80□	360nH ±2%	100MHz	25	100MHz	190mA	3.98Ω	1050MHz
LQW18ANR36J80□	360nH ±5%	100MHz	25	100MHz	190mA	3.98Ω	1050MHz
LQW18ANR39G80□	390nH ±2%	100MHz	25	100MHz	190mA	4.23Ω	1100MHz
LQW18ANR39J80□	390nH ±5%	100MHz	25	100MHz	190mA	4.23Ω	1100MHz

Operating temp. range (Self-temp. rise not included): -55 to 125°C
For reflow soldering only
*S.R.F.: Self-Resonant Frequency
In operating temperatures exceeding +85°C, derating of current is necessary for the LQW18AN_80 series. Please apply the derating curve shown in the chart according to the operating temperature. Please consider the "Notice (Rating)."

Inductance-Frequency Characteristics (Typ.)



Q-Frequency Characteristics (Typ.)



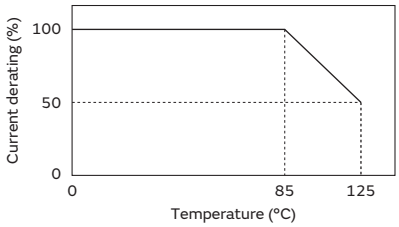
Continued on the following page.↗

Continued from the preceding page. ↘

Notice (Rating)

In operating temperatures exceeding +85°C, derating of current is necessary for the LQW18AN_80 series. Please apply the derating curve shown in the chart according to the operating temperature.

Derating of Rated Current



RF Inductors ⚠Caution/Notice

⚠Caution

Rating

1. About the Rated Current
Do not use products beyond the rated current as this may create excessive heat and deteriorate the insulation resistance.

2. About Excessive Surge Current
Surge current (pulse current or rush current) greater than the specified rated current applied to the product may cause a critical failure, such as an open circuit or burnout caused by excessive temperature rise.
Please contact us in advance if applying a surge current.

Notice

Storage and Operating Condition

<Operating Environment>
Do not use products in a chemical atmosphere such as chlorine gas, acid or sulfide gas.
<Storage Requirements>
1. Storage Period
The LQG series should be used within 6 months; the other products should be used within 12 months.
Check solderability if this period is exceeded.
2. Storage Conditions
(1) Store products in a warehouse in compliance with the following conditions:
Temperature: -10 to +40 degrees C.
Humidity: 15 to 85% (relative humidity)
Do not subject products to rapid changes in temperature and humidity.
Do not store them in a chemical atmosphere such as one containing sulfurous acid gas or alkaline gas.
This will prevent electrode oxidation, which causes poor solderability and possible corrosion of inductors.
(2) Do not store products in bulk packaging to prevent collision among inductors, which causes core chipping and wire breakage.
(3) Store products on pallets to protect from humidity, dust, etc.
(4) Avoid heat shock, vibration, direct sunlight, etc.

Handling

This item is designed to have sufficient strength, but handle with care to avoid chipping or breaking its ceramic structure.
LQW_A/LQW_H series
- To prevent breaking the wire, avoid touching with sharp materials, such as tweezers or the bristles of a cleaning brush, to the wire wound portion.
- To prevent breaking the core, avoid applying excessive mechanical shock to products mounted on the board.
- In some mounting machines, when picking up components, a support pin pushes the components up from the bottom of the base tape. In this case, please remove the support pin. The support pin may damage the components and break the wire.
- In rare cases, the laser recognition cannot recognize this component. Please contact us when you use laser recognizion. (There is no problem with the permeation and reflection type.)

LQH_H series
- To prevent breaking the wire, avoid touching with sharp materials, such as tweezers or the bristles of a cleaning brush, to the wire wound portion of this product.
- To prevent breaking the core, avoid applying excessive mechanical shock to products mounted on the board.

LQG,LQP series (except LQP02_02/LQP03_02)
- The pattern of the chip Inductors is covered with protective film. Take care to avoid damaging the chip Inductors when handling it with pick-up nozzles, sharp instruments, etc.

<Transportation>
Do not apply excessive vibration or mechanical shock to products.

Continued on the following page.↗

RF Inductors Soldering and Mounting

Continued from the preceding page.↘

<Resin Coating>

When coating products with resin, the relatively high resin curing stress may change inductance values.

For exterior coating, select resin carefully so that electrical and mechanical performance of the product is not affected. Prior to use, please evaluate reliability with the product mounted in your application set.

(LQW, LQH series)

An open circuit issue may occur by mechanical stress caused by the resin, amount/cured shape of resin, or operating conditions, etc. Some resins containing impurities or chloride may possibly generate chlorine by hydrolysis under some operating conditions, causing corrosion of the inductor wire and leading to an open circuit.

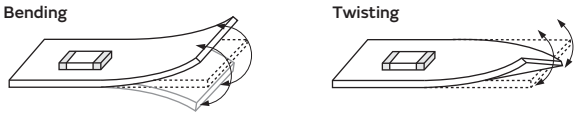
(LQP02_02/LQP03_02)

When products are coated with resin, please contact us in advance.

<Handling of a Substrate>

After mounting products on a substrate, do not apply any stress to the product caused by bending or twisting the substrate when cropping the substrate, inserting and removing a connector from the substrate, or tightening a screw to the substrate.

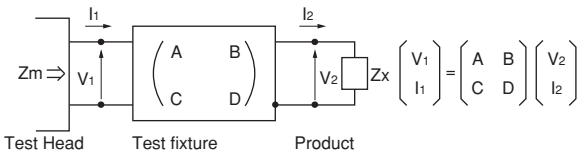
Excessive mechanical stress may cause cracking in the Product.



Measuring Method

Measuring Method of Inductance/Q

1. Residual elements and stray elements of test fixtures can be described by F-parameter as shown in the following:



2. The impedance of chip Inductors (chip coils) Zx and measured value Zm can be described by input/output current/voltage.

$$Zm = \frac{V_1}{I_1} \quad , \quad Zx = \frac{V_2}{I_2}$$

3. Thus, the relation between Zx and Zm is shown in the following:

$$Zx = \alpha \frac{Zm - \beta}{1 - Zm\Gamma}$$

where, $\alpha = D / A = 1$
$\beta = B / D = Zsm - (1 - Yom\ Zsm)\ Zss$
$\Gamma = C / A = Yom$

Zsm: measured impedance of short chip
Zss: residual impedance of short chip*
Yom: measured admittance when opening the fixture

*Residual impedance of short chip

Residual Impedance	Series
0nH	**LQG15H/LQP03TG**
0.110nH	**LQP02HQ/LQP02TN/LQP02TQ**
0.464nH	**LQW04AN**
0.480nH	**LQP03HQ/LQP03TN_02/LQW03AW**
0.556nH	**LQG15HN, LQW15A, LQP15M**
0.771nH	**LQG18H, LQP18M, LQW18A,LQW21H/LQW2BAN**

4. Lx and Qx should be calculated with the following equation.

$$Lx = \frac{Im\ (Zx)}{2\pi f} \quad , \quad Qx = \frac{Im\ (Zx)}{Re\ (Zx)}$$

Lx: Inductance of chip Inductors (chip coils)
Qx: Q of chip Inductors (chip coils)
f: Measuring frequency

Please contact us for LQW18AS, LQW2BAS, LQW2UAS, because they are different from other inductors regarding the inductance calculation method.

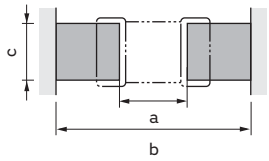
RF Inductors Soldering and Mounting

1. Standard Land Pattern Dimensions

A high Q value is achieved when the PCB electrode land pattern is designed so that it does not project beyond the chip Inductor's (chip coil's) electrode.

Land Pattern + Solder Resist Land Pattern Solder Resist

(in mm)

Series	Standard Land Dimensions
LQG15H **LQG18H** **LQP02TN** **LQP02TQ** **LQP03T** **LQP15M** **LQP18M** **LQW03A** **LQW04A** **LQW15A** **LQW18A** **LQW21H** **LQW2BH** **LQW2BA** **LQW2UA** **LQW31H** **LQH31H**	

Part Number	a	b	c
LQG15H	0.4	1.4 to 1.5	0.5 to 0.6
LQG18H	0.6 to 0.8	1.8 to 2.2	0.6 to 0.8
LQP02TN	0.16 to 0.2	0.4 to 0.56	0.2 to 0.23
LQP02HQ/TQ	0.2	0.56	0.16
LQP03HQ	0.3	0.9	0.25 to 0.3
LQP03TN/TG/PN	0.2 to 0.3	0.8 to 0.9	0.2 to 0.3
LQP03TQ	0.3	0.9	0.25
LQP15M	0.4	1.4 to 1.5	0.5 to 0.6
LQP18M	0.7 to 0.9	1.8 to 2.2	0.6 to 0.8
LQW03A	0.23	0.65	0.4
LQW04A	0.4	1.0	0.4
LQW15A_00/10	0.5	1.2	0.65
LQW15A_80	0.6	1.42	0.66
LQW18AN_00/10/AS_00	0.6 to 0.8	1.9 to 2.0	0.7 to 1.0
LQW18A_80	0.86	2.0	1.15
LQW21H	1.0	2.6	1.2
LQW2BH	0.8	3.0	1.2
LQW2BA	0.76	2.8	1.78
LQW2UA	1.27	3.3	2.54
LQH31H **LQW31H**	1.0	4.5	1.5

Attention should be paid to potential magnetic coupling effects when using the Inductor (coil) as a resonator.

2. Standard Soldering Conditions

(1) Soldering method

Chip Inductors (Chip coils) can be flow or reflow soldered.

Please contact Murata regarding other soldering methods.

For LQG, LQP, LQW03A/04A/15A/18A/21H/2BA/2UA series, please use reflow soldering.

Solder: Use Sn-3.0Ag-0.5Cu solder.

Flux: Use rosin-based flux, but not strongly acidic flux (with chlorine content exceeding 0.2wt%).
Do not use water-soluble flux.
The flux used for the LQW03/04/15/18/21/2BA/2UA series should be a rosin-based flux that includes a middle activator equivalent to 0.06wt% to 0.1wt% chlorine.

For additional mounting methods, please contact Murata.

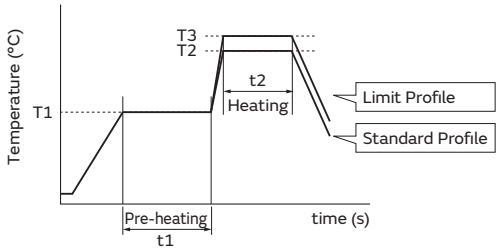
Continued on the following page.↗

RF Inductors Soldering and Mounting

Continued from the preceding page.↘

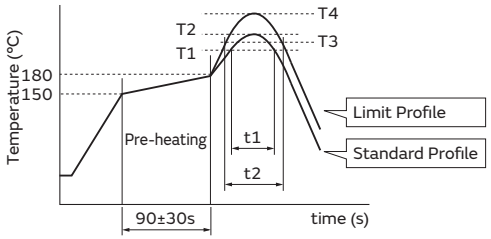
(2) Soldering profile

●Flow Soldering profile
(Sn-3.0Ag-0.5Cu solder)



Series	Pre-heating		Standard Profile			Limit Profile		
			Heating		Cycle of flow	Heating		Cycle of flow
	Temp. (T1)	Time. (t1)	Temp. (T2)	Time. (t2)		Temp. (T3)	Time. (t2)	
LQW2BH/31H LQH31H	150°C	60s min.	250°C	4 to 6s	2 times max.	265±3°C	5s max.	2 times max.

●Reflow Soldering profile
(Sn-3.0Ag-0.5Cu solder)



Series	Standard Profile				Limit Profile			
	Heating		Peak temperature (T2)	Cycle of reflow	Heating		Peak temperature (T4)	Cycle of reflow
	Temp. (T1)	Time. (t1)			Temp. (T3)	Time. (t2)		
LQG15H/18H LQW03A/04A/15A/18A/21H LQW2BA/2UA LQP02T/03T/15M/18M LQW2BH/31H LQH31H	220°C	30 to 60s	245±3°C	2 times max.	230°C	60s max.	260°C/10s	2 times max.

(3) Reworking with a Soldering Iron

*Except for LQP02T/LQW04AN/03AW/15AN_80 Series

Preheating at 150°C for 1 minute is required. Do not directly touch the ceramic element with the tip of the soldering iron. The reworking soldering conditions are as follows:

Soldering iron power output: 80W max.
Temperature of soldering iron tip: 350°C
Diameter of soldering iron end: 3.0mm max.
Soldering time: within 3 s

Please keep the fix time with the soldering iron within 2 times.

Continued on the following page.↗

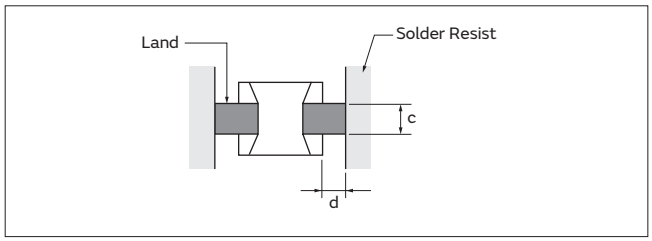
RF Inductors Soldering and Mounting

Continued from the preceding page.↘

3. Mounting Instructions

(1) Land Pattern Dimensions

Large lands reduce the Q of the mounted chip. Also, large protruding land areas (bordered by lines having the dimensions "c" and "d" shown) cause floating and electrode leaching.

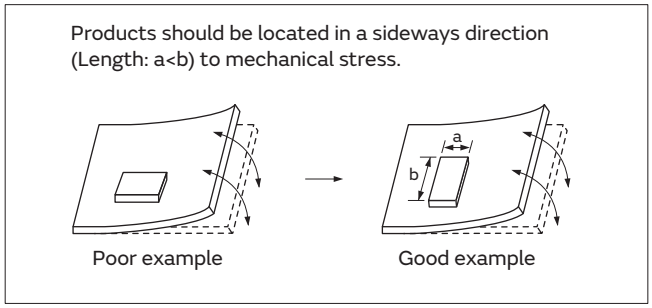


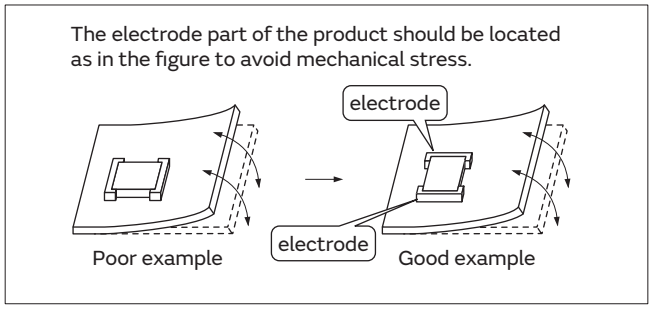
(2) Land Pattern Designing (LQW series)

Please follow the recommended patterns. Otherwise, their performance, which includes electrical performance or solderability, may be affected, or result in “position shift” in the soldering process.

(3) PCB Warping

The PCB should be designed so that products are not subjected to mechanical stress caused by warping the board.





Continued on the following page.↗

RF Inductors Soldering and Mounting

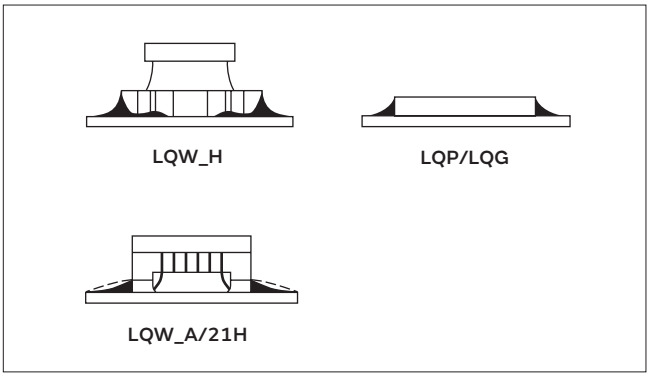
Continued from the preceding page. ↘

(4) Amount of Solder Paste

Excessive solder causes electrode corrosion, while insufficient solder causes low electrode bonding strength. Adjust the amount of solder paste as shown on the right so that the correct amount is applied.

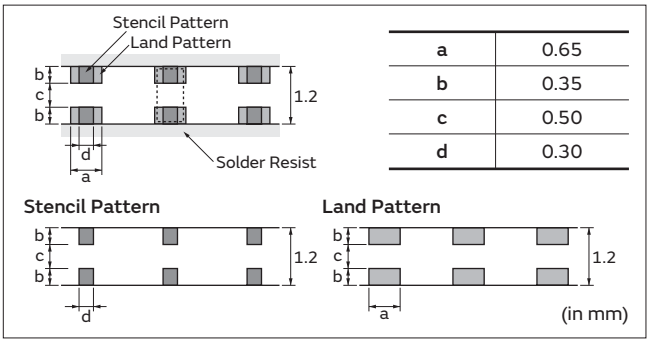
Guideline of solder paste thickness

- LQP (*Except for LQP02TN/LQP02TQ/HQ/ LQP03TQ/HQ),LQG,LQW15AN_00/ LQW15AN_10/LQW18AN/LQW21H/LQW2BA/ LQW2UA: 100 to 150μm
- LQP02TN: 50 to 80μm
- LQP02TQ/HQ: 50 to 65μm
- LQP03TQ/HQ: 100μm
- LQW03A/LQW04A: 80 to 100μm
- LQW15AN_80: 50 to 100μm
- LQW_H: 200 to 300μm



LQW15A Series:

Too much solder may cause slant or rotation of the chip at the time of solder melting. Please reduce the amount of solder by using a smaller solder area than the land pattern, as shown in the figure at right.



a	0.65
b	0.35
c	0.50
d	0.30

4. Cleaning

The following conditions should be observed when cleaning chip inductors (chip coils):

(1) Cleaning Temperature: 60°C max. (40°C max. for alcohol cleaning agents)

(2) Ultrasonic

Output: 20W/l max.

Duration: 5 minutes max.

Frequency: 28 to 40kHz

Care should be taken not to cause resonance of the PCB and mounted products.

(3) Cleaning agent

The following cleaning agents have been tested on individual components. Evaluation in complete assembly should be done prior to production.

(a) Alcohol cleaning agents

Isopropyl alcohol (IPA)

(b) Aqueous cleaning agents

Pine Alpha ST-100S

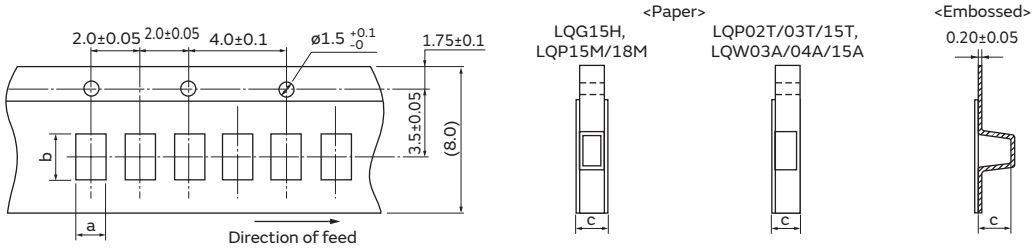
(4) Ensure that flux residue is completely removed.

Component should be thoroughly dried after aqueous agents have been removed with deionized water.

For additional cleaning methods, please contact Murata.

RF Inductors Packaging

Minimum Quantity and 8mm Width Taping Dimensions



Paper Tape

Part Number	Dimensions		Total Thickness of Tape	Packaging Code (Minimum Qty. (pcs.))		
	a	b	c	ø180mm reel	ø330mm reel	Bulk
LQG15H	0.62	1.12	0.8 max.	**D** (10000)	**J** (50000)	**B** (1000)
LQP02TN	0.24	0.47	0.39 max.	**D** (20000)	—	**B** (500)
LQP02TQ	0.23	0.45	0.39 max.	**D** (20000)	—	**B** (500)
LQP03HQ	0.36	0.68	0.55 max.	**D** (15000)	**J** (50000)	**B** (500)
LQP03TN/TG/TQ *1	0.35	0.65/0.67	0.55 max.	**D** (15000)	**J** (50000)	**B** (500)
LQP15M	0.70	1.20	0.8 max.	**D** (10000)	**J** (50000)	**B** (500)
LQP18M	1.19	2.0	0.8 max.	**D** (4000)	**J** (10000)	**B** (500)
LQW03A	0.52	0.65	0.75 max.	**D** (10000)	—	—
LQW04A	0.49	0.91	0.75 max.	**D** (10000)	—	**B** (500)
LQW15A_00 *2	0.64/0.66/0.69	1.18	0.8 max.	**D** (10000)	—	**B** (500)
LQW15A_10 *3	0.66/0.69	1.18	0.8 max.	**D** (10000)	—	**B** (500)
LQW15A_80	0.75	1.18	0.8 max.	**D** (10000)	—	**B** (500)

*1 0.67 (LQP03TG · LQP03TN_02; 0.6 to 62nH, 130 to 270nH · LQP03PN, LQP03TQ)
0.65 (LQP03TN_02; 68 to 120nH)
*2 0.69 (1.5nH, 2.4 to 2.8nH, 3.9 to 4.8nH, 5.8 to 6.8nH, 8.2 to 9.9nH, 11nH, 12nH, 15nH)
0.66 (1.6 to 1.8nH, 2.9nH, 3.0nH, 3.1nH, 3.2nH, 4.9 to 5.1nH, 6.9 to 7.5nH, 10nH, 13nH, 16 to 23nH, 100nH, 120nH)
0.64 (24 to 91nH)
*3 0.69 (1.3nH, 1.4nH)
0.66 (2.2 to 8.4nH)

Embossed Tape

Part Number	Dimensions		Total Thickness of Tape	Packaging Code (Minimum Qty. (pcs.))		
	a	b	c	ø180mm reel	ø330mm reel	Bulk
LQP02HQ	0.24	0.46	0.34 max.	**E** (15000)	—	**B** (500)

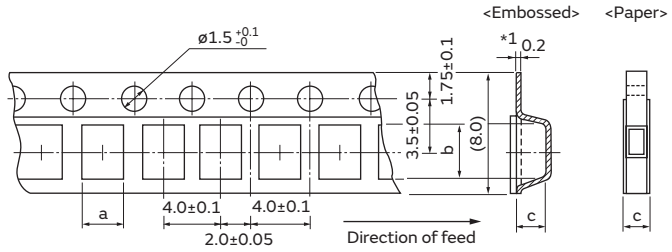
(in mm)

Continued on the following page.↗

RF Inductors Packaging

Continued from the preceding page. ↘

Minimum Quantity and 8mm Width Taping Dimensions



The dimension of the cavity of embossed tape is measured at the bottom side.

Paper Tape

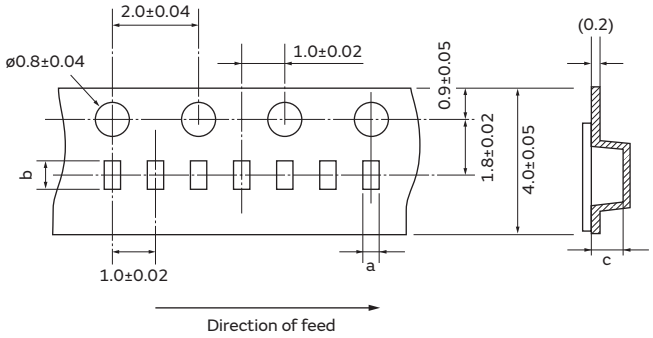
Part Number	Dimensions		Total Thickness of Tape	Packaging Code (Minimum Qty. (pcs.))		
	a	b	c	ø180mm reel	ø330mm reel	Bulk
LQG18H	1.05	1.85	1.1 max.	**D** (4000)	**J** (10000)	**B** (1000)
LQW18AN_00	1.0	1.8	1.1 max.	**D** (4000)	**J** (10000)	**B** (500)
LQW18AN_10	1.1	1.9	1.1 max.	**D** (4000)	**J** (10000)	**B** (500)
LQW18AN_80	1.15	1.9	1.1 max.	**D** (4000)	**J** (10000)	**B** (500)
LQW18AS_00	1.06	1.86	1.1 max.	**D** (4000)	**J** (10000)	**B** (500)

Embossed Tape

Part Number	Dimensions		Depth of Cavity	Packaging Code (Minimum Qty. (pcs.))		
	a	b	c	ø180mm reel	ø330mm reel	Bulk
LQP02HQ	0.24	0.46	0.34 max.	**L** (30000)	—	**B** (500)
LQH31H, LQW31H	1.9	3.6	2.0	**L** (2000)	**K** (7500)	—
LQW21H	1.55	2.3	1.1	**L** (3000)	—	**B** (500)
LQW2BH	1.75	2.3	2.0	**L** (2000)	**K** (7500)	—
LQW2BA	1.8	2.3	1.65	**L** (2000)	—	—
LQW2UA	2.7	2.8	2.15	**L** (2000)	—	—

(in mm)

Minimum Quantity and 4mm Width Taping Dimensions



Embossed Tape

Part Number	Dimensions		Total Thickness of Tape	Packaging Code (Minimum Qty. (pcs.))		
	a	b	c	ø180mm reel	ø330mm reel	Bulk
LQP02HQ	0.24	0.46	0.34 max.	**L** (30000)	—	**B** (500)
LQP02TN	0.21	0.43	0.23 max.	**L** (40000)	—	**B** (500)
LQP02TQ	0.22	0.47	0.23 max.	**L** (40000)	—	**B** (500)

(in mm)