

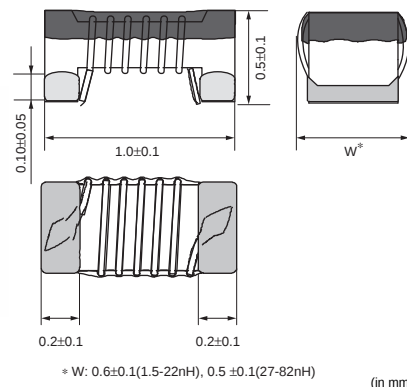
CHIP COILS

muRata

High-frequency Winding Type LQW15A/LQW18A Series

LQW15A Series

The LQW15A series consists of air core chip coil using a miniature alumina core.
The tight inductance tolerance ($\pm 0.2\text{nH}$, $\pm 3\%$) is available due to Murata's original winding technology.
The LQW15A series has high Q value in high frequency range and high self resonant frequency. It is suitable for high frequency circuits which are used in telecommunication equipment.



■ Features

1. Horizontal winding structure enables tight inductance tolerance ($\pm 0.2\text{nH}$, $\pm 3\%$)
2. The subminiature dimensions (1.0x0.5mm) allow high density mounting.
3. The high self resonant frequency realizes high-Q value and stable inductance at high frequency.
4. Low DC resistance design is ideal for low loss, high output and low power consumption.
5. Resin-coated surface enables excellent mounting.

■ Applications

High frequency circuits in telecommunication equipment, such as DECT, PHS, PCS, PCN, GSM and CDMA.

Impedance Matching -- Power-AMP Module (PA)

SAW filter

Resonance circuits -- VCO

Part Number	Inductance (nH)	Test Frequency (MHz)	Rated Current (mA)	DC Resistance (ohm)	Q (min.)	Test Frequency (MHz)	Self Resonance Frequency (GHz)	EIA
LQW15AN1N5C00	$1.5 \pm 0.2\text{nH}$	100	1000	0.03 max.	10	250	18.0 min.	0402
LQW15AN1N5D00	$1.5 \pm 0.5\text{nH}$	100	1000	0.03 max.	10	250	18.0 min.	0402
LQW15AN2N7C00	$2.7 \pm 0.2\text{nH}$	100	850	0.05 max.	20	250	15.0 min.	0402
LQW15AN2N7D00	$2.7 \pm 0.5\text{nH}$	100	850	0.05 max.	20	250	15.0 min.	0402
LQW15AN3N9C00	$3.9 \pm 0.2\text{nH}$	100	750	0.07 max.	25	250	10.0 min.	0402
LQW15AN3N9D00	$3.9 \pm 0.5\text{nH}$	100	750	0.07 max.	25	250	10.0 min.	0402
LQW15AN4N3C00	$4.3 \pm 0.2\text{nH}$	100	750	0.07 max.	25	250	10.0 min.	0402
LQW15AN4N3D00	$4.3 \pm 0.5\text{nH}$	100	750	0.07 max.	25	250	10.0 min.	0402
LQW15AN4N7C00	$4.7 \pm 0.2\text{nH}$	100	750	0.07 max.	25	250	8.0 min.	0402
LQW15AN4N7D00	$4.7 \pm 0.5\text{nH}$	100	750	0.07 max.	25	250	8.0 min.	0402
LQW15AN5N1C00	$5.1 \pm 0.2\text{nH}$	100	600	0.12 max.	25	250	8.0 min.	0402
LQW15AN5N1D00	$5.1 \pm 0.5\text{nH}$	100	600	0.12 max.	25	250	8.0 min.	0402
LQW15AN6N2C00	$6.2 \pm 0.2\text{nH}$	100	700	0.09 max.	25	250	8.0 min.	0402
LQW15AN6N2D00	$6.2 \pm 0.5\text{nH}$	100	700	0.09 max.	25	250	8.0 min.	0402
LQW15AN6N8H00	$6.8 \pm 3\%$	100	700	0.09 max.	25	250	6.0 min.	0402
LQW15AN6N8J00	$6.8 \pm 5\%$	100	700	0.09 max.	25	250	6.0 min.	0402
LQW15AN7N5H00	$7.5 \pm 3\%$	100	570	0.13 max.	25	250	6.0 min.	0402
LQW15AN7N5J00	$7.5 \pm 5\%$	100	570	0.13 max.	25	250	6.0 min.	0402
LQW15AN8N2H00	$8.2 \pm 3\%$	100	540	0.14 max.	25	250	5.5 min.	0402
LQW15AN8N2J00	$8.2 \pm 5\%$	100	540	0.14 max.	25	250	5.5 min.	0402
LQW15AN9N1H00	$9.1 \pm 3\%$	100	540	0.14 max.	25	250	5.5 min.	0402

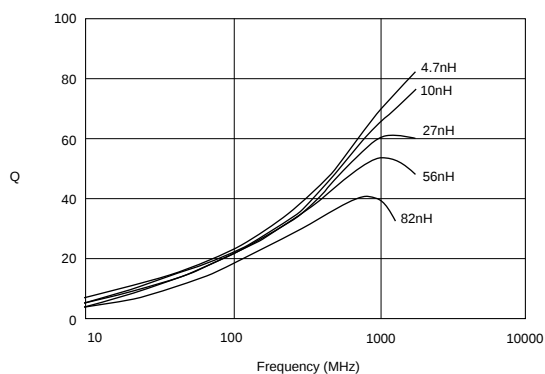
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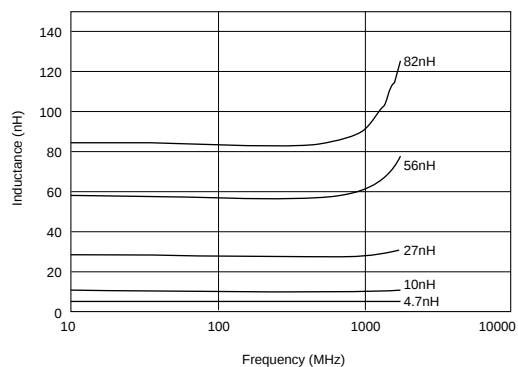
Part Number	Inductance (nH)	Test Frequency (MHz)	Rated Current (mA)	DC Resistance (ohm)	Q (min.)	Test Frequency (MHz)	Self Resonance Frequency (GHz)	EIA
LQW15AN9N1J00	9.1 ±5%	100	540	0.14 max.	25	250	5.5 min.	0402
LQW15AN10NH00	10 ±3%	100	500	0.17 max.	25	250	5.5 min.	0402
LQW15AN10NJ00	10 ±5%	100	500	0.17 max.	25	250	5.5 min.	0402
LQW15AN12NH00	12 ±3%	100	500	0.14 max.	30	250	5.5 min.	0402
LQW15AN12NJ00	12 ±5%	100	500	0.14 max.	30	250	5.5 min.	0402
LQW15AN15NH00	15 ±3%	100	460	0.16 max.	30	250	5.0 min.	0402
LQW15AN15NJ00	15 ±5%	100	460	0.16 max.	30	250	5.0 min.	0402
LQW15AN18NH00	18 ±3%	100	370	0.27 max.	25	250	4.5 min.	0402
LQW15AN18NJ00	18 ±5%	100	370	0.27 max.	25	250	4.5 min.	0402
LQW15AN22NH00	22 ±3%	100	310	0.30 max.	25	250	4.0 min.	0402
LQW15AN22NJ00	22 ±5%	100	310	0.30 max.	25	250	4.0 min.	0402
LQW15AN27NH00	27 ±3%	100	280	0.52 max.	25	250	3.5 min.	0402
LQW15AN27NJ00	27 ±5%	100	280	0.52 max.	25	250	3.5 min.	0402
LQW15AN33NH00	33 ±3%	100	260	0.63 max.	25	250	3.2 min.	0402
LQW15AN33NJ00	33 ±5%	100	260	0.63 max.	25	250	3.2 min.	0402
LQW15AN39NH00	39 ±3%	100	250	0.70 max.	25	250	3.0 min.	0402
LQW15AN39NJ00	39 ±5%	100	250	0.70 max.	25	250	3.0 min.	0402
LQW15AN47NH00	47 ±3%	100	210	1.08 max.	25	200	2.9 min.	0402
LQW15AN47NJ00	47 ±5%	100	210	1.08 max.	25	200	2.9 min.	0402
LQW15AN56NH00	56 ±3%	100	200	1.17 max.	25	200	2.8 min.	0402
LQW15AN56NJ00	56 ±5%	100	200	1.17 max.	25	200	2.8 min.	0402
LQW15AN68NJ00	68 ±5%	100	140	1.96 max.	20	200	2.5 min.	0402
LQW15AN82NJ00	82 ±5%	100	130	2.24 max.	20	150	2.3 min.	0402

Operating Temp. Range : -55°C to 125°C

Q-Frequency Characteristics

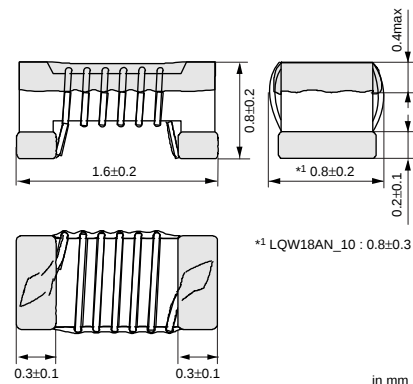
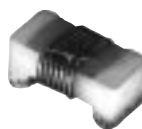


Inductance-Frequency Characteristics



■ Features LQW18A_00 (Standard type)

1. Broad range of inductance (2.2nH to 470nH) with E24 step line up.
2. Horizontal winding structure enables tight inductance tolerance (+0.2nH, +-2%). Stable circuit operation is possible.
3. The subminiature dimensions (1.6x0.8mm) allow high density mounting.
4. The high self resonant frequency realizes high-Q value and stable inductance at high frequency.
5. Low DC resistance design is ideal for low loss, high output and low power consumption.
6. Resin-coated surface enables excellent mounting.



■ Applications

High frequency circuit in telecommunication equipment, such as DECT, PHS, PCS, GSM and CDMA.

Impedance Matching -- Power-AMP Module (PA)

SAW filter

Resonance circuits -- VCO

■ Features LQW18A_10 (High-Q/Low DC Resistance type)

Lower DC Resistance approximately by 50% than current type. Higher Q by 10%, Higher rated current by 20%.

■ Applications

Cellular phone and Base station.

W-CDMA, GSM, N-CDMA, PDC.

Higher Q -- Matching circuit for antenna, SAWFIL.

Lower Rdc -- Choke coil for IF, RF circuit like PA.

Equipment with high frequency circuits (Wireless LAN etc.)

LQW18A_00 Series

Part Number	Inductance (nH)	Test Frequency (MHz)	Rated Current (mA)	DC Resistance (ohm)	Q (min.)	Test Frequency (MHz)	Self Resonance Frequency (MHz)	EIA
LQW18AN2N2D00	2.2 ±0.5nH	100	700	0.049 max.	16	250	6000 min.	0603
LQW18AN3N6C00	3.6 ±0.2nH	100	850	0.059 max.	25	250	6000 min.	0603
LQW18AN3N6D00	3.6 ±0.5nH	100	850	0.059 max.	25	250	6000 min.	0603
LQW18AN3N9C00	3.9 ±0.2nH	100	850	0.059 max.	35	250	6000 min.	0603
LQW18AN3N9D00	3.9 ±0.5nH	100	850	0.059 max.	35	250	6000 min.	0603
LQW18AN4N3C00	4.3 ±0.2nH	100	850	0.059 max.	35	250	6000 min.	0603
LQW18AN4N3D00	4.3 ±0.5nH	100	850	0.059 max.	35	250	6000 min.	0603
LQW18AN4N7D00	4.7 ±0.5nH	100	850	0.059 max.	35	250	6000 min.	0603
LQW18AN5N6C00	5.6 ±0.2nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN5N6D00	5.6 ±0.5nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN6N2C00	6.2 ±0.2nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN6N2D00	6.2 ±0.5nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN6N8C00	6.8 ±0.2nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN6N8D00	6.8 ±0.5nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN7N5D00	7.5 ±0.5nH	100	750	0.082 max.	35	250	6000 min.	0603
LQW18AN8N2D00	8.2 ±0.5nH	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN8N7D00	8.7 ±0.5nH	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN9N1D00	9.1 ±0.5nH	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN9N5D00	9.5 ±0.5nH	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN10NG00	10 ±2%	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN10NJ00	10 ±5%	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN11NG00	11 ±2%	100	650	0.11 max.	35	250	6000 min.	0603

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Part Number	Inductance (nH)	Test Frequency (MHz)	Rated Current (mA)	DC Resistance (ohm)	Q (min.)	Test Frequency (MHz)	Self Resonance Frequency (MHz)	EIA
LQW18AN11NJ00	11 ±5%	100	650	0.11 max.	35	250	6000 min.	0603
LQW18AN12NG00	12 ±2%	100	600	0.13 max.	35	250	6000 min.	0603
LQW18AN12NJ00	12 ±5%	100	600	0.13 max.	35	250	6000 min.	0603
LQW18AN13NG00	13 ±2%	100	600	0.13 max.	35	250	6000 min.	0603
LQW18AN13NJ00	13 ±5%	100	600	0.13 max.	35	250	6000 min.	0603
LQW18AN15NG00	15 ±2%	100	600	0.13 max.	40	250	6000 min.	0603
LQW18AN15NJ00	15 ±5%	100	600	0.13 max.	40	250	6000 min.	0603
LQW18AN16NG00	16 ±2%	100	550	0.16 max.	40	250	5500 min.	0603
LQW18AN16NJ00	16 ±5%	100	550	0.16 max.	40	250	5500 min.	0603
LQW18AN18NG00	18 ±2%	100	550	0.16 max.	40	250	5500 min.	0603
LQW18AN18NJ00	18 ±5%	100	550	0.16 max.	40	250	5500 min.	0603
LQW18AN20NG00	20 ±2%	100	550	0.16 max.	40	250	4900 min.	0603
LQW18AN20NJ00	20 ±5%	100	550	0.16 max.	40	250	4900 min.	0603
LQW18AN22NG00	22 ±2%	100	500	0.17 max.	40	250	4600 min.	0603
LQW18AN22NJ00	22 ±5%	100	500	0.17 max.	40	250	4600 min.	0603
LQW18AN24NG00	24 ±2%	100	500	0.21 max.	40	250	3800 min.	0603
LQW18AN24NJ00	24 ±5%	100	500	0.21 max.	40	250	3800 min.	0603
LQW18AN27NG00	27 ±2%	100	440	0.21 max.	40	250	3700 min.	0603
LQW18AN27NJ00	27 ±5%	100	440	0.21 max.	40	250	3700 min.	0603
LQW18AN30NG00	30 ±2%	100	420	0.23 max.	40	250	3300 min.	0603
LQW18AN30NJ00	30 ±5%	100	420	0.23 max.	40	250	3300 min.	0603
LQW18AN33NG00	33 ±2%	100	420	0.23 max.	40	250	3200 min.	0603
LQW18AN33NJ00	33 ±5%	100	420	0.23 max.	40	250	3200 min.	0603
LQW18AN36NG00	36 ±2%	100	400	0.26 max.	40	250	2900 min.	0603
LQW18AN36NJ00	36 ±5%	100	400	0.26 max.	40	250	2900 min.	0603
LQW18AN39NG00	39 ±2%	100	400	0.26 max.	40	250	2800 min.	0603
LQW18AN39NJ00	39 ±5%	100	400	0.26 max.	40	250	2800 min.	0603
LQW18AN43NG00	43 ±2%	100	380	0.29 max.	40	200	2700 min.	0603
LQW18AN43NJ00	43 ±5%	100	380	0.29 max.	40	200	2700 min.	0603
LQW18AN47NG00	47 ±2%	100	380	0.29 max.	38	200	2600 min.	0603
LQW18AN47NJ00	47 ±5%	100	380	0.29 max.	38	200	2600 min.	0603
LQW18AN51NG00	51 ±2%	100	370	0.33 max.	38	200	2500 min.	0603
LQW18AN51NJ00	51 ±5%	100	370	0.33 max.	38	200	2500 min.	0603
LQW18AN56NG00	56 ±2%	100	360	0.35 max.	38	200	2400 min.	0603
LQW18AN56NJ00	56 ±5%	100	360	0.35 max.	38	200	2400 min.	0603
LQW18AN62NG00	62 ±2%	100	280	0.51 max.	38	200	2300 min.	0603
LQW18AN62NJ00	62 ±5%	100	280	0.51 max.	38	200	2300 min.	0603
LQW18AN68NG00	68 ±2%	100	340	0.38 max.	38	200	2200 min.	0603
LQW18AN68NJ00	68 ±5%	100	340	0.38 max.	38	200	2200 min.	0603
LQW18AN72NG00	72 ±2%	100	270	0.56 max.	34	150	2100 min.	0603
LQW18AN72NJ00	72 ±5%	100	270	0.56 max.	34	150	2100 min.	0603
LQW18AN75NG00	75 ±2%	100	270	0.56 max.	34	150	2050 min.	0603
LQW18AN75NJ00	75 ±5%	100	270	0.56 max.	34	150	2050 min.	0603
LQW18AN82NG00	82 ±2%	100	250	0.60 max.	34	150	2000 min.	0603
LQW18AN82NJ00	82 ±5%	100	250	0.60 max.	34	150	2000 min.	0603
LQW18AN91NG00	91 ±2%	100	230	0.64 max.	34	150	1900 min.	0603
LQW18AN91NJ00	91 ±5%	100	230	0.64 max.	34	150	1900 min.	0603
LQW18ANR10G00	100 ±2%	100	220	0.68 max.	34	150	1800 min.	0603
LQW18ANR10J00	100 ±5%	100	220	0.68 max.	34	150	1800 min.	0603
LQW18ANR11G00	110 ±2%	100	200	1.2 max.	32	150	1350 min.	0603
LQW18ANR11J00	110 ±5%	100	200	1.2 max.	32	150	1350 min.	0603
LQW18ANR12G00	120 ±2%	100	180	1.3 max.	32	150	1600 min.	0603
LQW18ANR12J00	120 ±5%	100	180	1.3 max.	32	150	1600 min.	0603
LQW18ANR13G00	130 ±2%	100	170	1.4 max.	32	150	1450 min.	0603
LQW18ANR13J00	130 ±5%	100	170	1.4 max.	32	150	1450 min.	0603
LQW18ANR15G00	150 ±2%	100	160	1.5 max.	32	150	1400 min.	0603
LQW18ANR15J00	150 ±5%	100	160	1.5 max.	32	150	1400 min.	0603

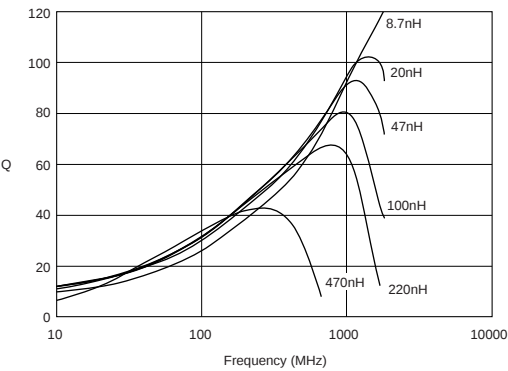
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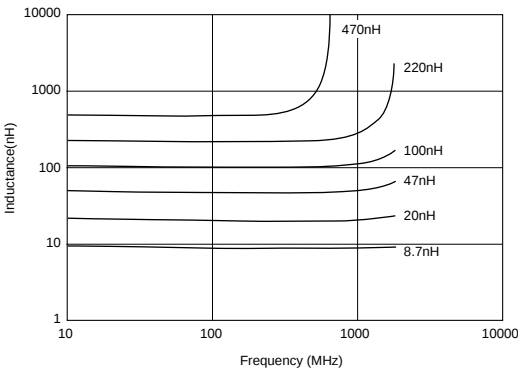
Part Number	Inductance (nH)	Test Frequency (MHz)	Rated Current (mA)	DC Resistance (ohm)	Q (min.)	Test Frequency (MHz)	Self Resonance Frequency (MHz)	EIA
LQW18ANR16G00	160 ±2%	100	150	2.1 max.	32	150	1350 min.	0603
LQW18ANR16J00	160 ±5%	100	150	2.1 max.	32	150	1350 min.	0603
LQW18ANR18G00	180 ±2%	100	140	2.2 max.	25	100	1300 min.	0603
LQW18ANR18J00	180 ±5%	100	140	2.2 max.	25	100	1300 min.	0603
LQW18ANR20G00	200 ±2%	100	120	2.4 max.	25	100	1250 min.	0603
LQW18ANR20J00	200 ±5%	100	120	2.4 max.	25	100	1250 min.	0603
LQW18ANR22G00	220 ±2%	100	120	2.5 max.	25	100	1200 min.	0603
LQW18ANR22J00	220 ±5%	100	120	2.5 max.	25	100	1200 min.	0603
LQW18ANR27G00	270 ±2%	100	110	3.4 max.	30	100	960 min.	0603
LQW18ANR27J00	270 ±5%	100	110	3.4 max.	30	100	960 min.	0603
LQW18ANR33G00	330 ±2%	100	85	5.5 max.	30	100	800 min.	0603
LQW18ANR33J00	330 ±5%	100	85	5.5 max.	30	100	800 min.	0603
LQW18ANR39G00	390 ±2%	100	80	6.2 max.	30	100	800 min.	0603
LQW18ANR39J00	390 ±5%	100	80	6.2 max.	30	100	800 min.	0603
LQW18ANR47G00	470 ±2%	100	75	7.0 max.	30	100	700 min.	0603
LQW18ANR47J00	470 ±5%	100	75	7.0 max.	30	100	700 min.	0603

Operating Temp. Range : -25°C to 85°C

■ Q-Frequency Characteristics



■ Inductance-Frequency Characteristics

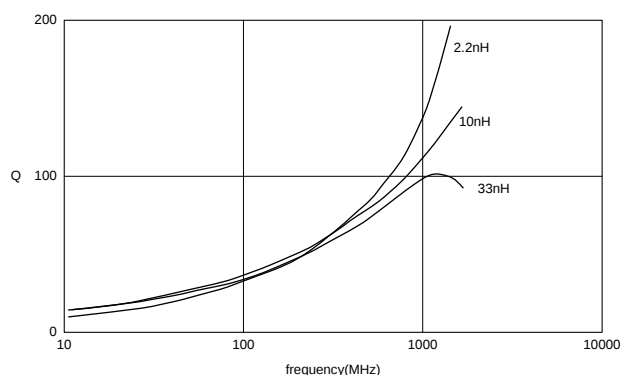


LQW18A_10 Series (High-Q/Low DC Resistance Type)

Part Number	Inductance (nH)	Test Frequency (MHz)	Rated Current (mA)	DC Resistance (ohm)	Q (min.)	Test Frequency (MHz)	Self Resonance Frequency (MHz)	EIA
LQW18AN2N2D10	2.2 ±0.5nH	100	1400	0.018 max.	25	250	18000 min.	0603
LQW18AN3N9C10	3.9 ±0.2nH	100	1000	0.032 max.	38	250	11000 min.	0603
LQW18AN3N9D10	3.9 ±0.5nH	100	1000	0.032 max.	38	250	11000 min.	0603
LQW18AN5N6D10	5.6 ±0.5nH	100	900	0.045 max.	38	250	10000 min.	0603
LQW18AN6N8C10	6.8 ±0.2nH	100	900	0.045 max.	38	250	7000 min.	0603
LQW18AN6N8D10	6.8 ±0.5nH	100	900	0.045 max.	38	250	7000 min.	0603
LQW18AN8N2D10	8.2 ±0.5nH	100	800	0.058 max.	38	250	7000 min.	0603
LQW18AN10NG10	10 ±2%	100	800	0.058 max.	38	250	5000 min.	0603
LQW18AN10NJ10	10 ±5%	100	800	0.058 max.	38	250	5000 min.	0603
LQW18AN12NG10	12 ±2%	100	750	0.071 max.	38	250	5000 min.	0603
LQW18AN12NJ10	12 ±5%	100	750	0.071 max.	38	250	5000 min.	0603
LQW18AN15NJ10	15 ±5%	100	700	0.085 max.	42	250	4500 min.	0603
LQW18AN18NG10	18 ±2%	100	700	0.085 max.	42	250	3500 min.	0603
LQW18AN18NJ10	18 ±5%	100	700	0.085 max.	42	250	3500 min.	0603
LQW18AN22NG10	22 ±2%	100	640	0.099 max.	42	250	3200 min.	0603
LQW18AN22NJ10	22 ±5%	100	640	0.099 max.	42	250	3200 min.	0603
LQW18AN27NG10	27 ±2%	100	590	0.116 max.	42	250	2800 min.	0603
LQW18AN27NJ10	27 ±5%	100	590	0.116 max.	42	250	2800 min.	0603
LQW18AN33NJ10	33 ±5%	100	550	0.132 max.	42	250	2500 min.	0603

Operating Temp. Range : -25°C to 85°C

■ Q-Frequency Characteristics



■ Inductance-Frequency Characteristics

