CL

A Series

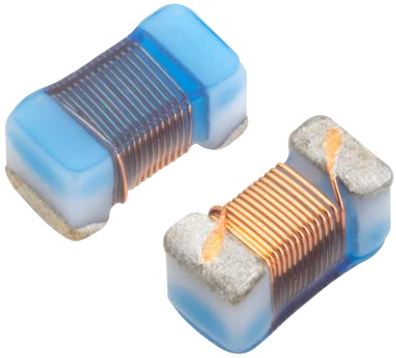
0402 Case Size

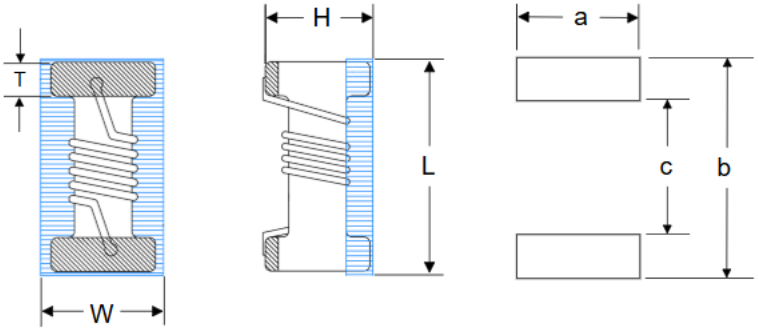
A Series Ceramic Core Inductors

These inductors provide reliable performance and consistent inductance across a broad frequency range, making them well suited for cost-sensitive and high-volume applications. Knowles designs focus on delivering competitive Q performance that meets industry standards while maintaining strong value and manufacturability.

Electrical Details	
Inductance Range	1.0nH to 100nH
Core Material	Ceramic
Termination: (J)	matte tin over nickel over silver
Termination: (2)*	matte tin over copper over silver
Operating Temp. Range	-55°c to +125°c
Environmental	RoHS Compliant, halogen Free

* Not currently available, contact sales for release schedule timeline.

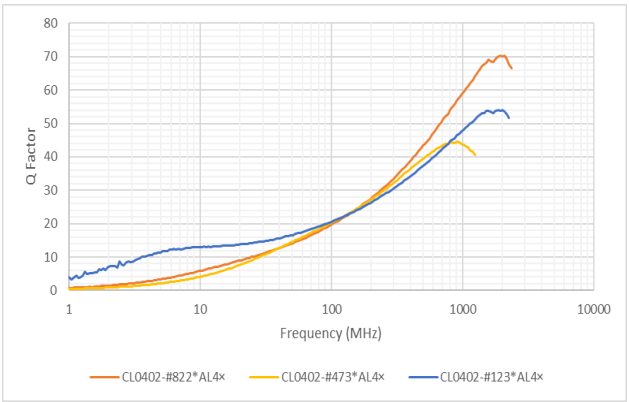




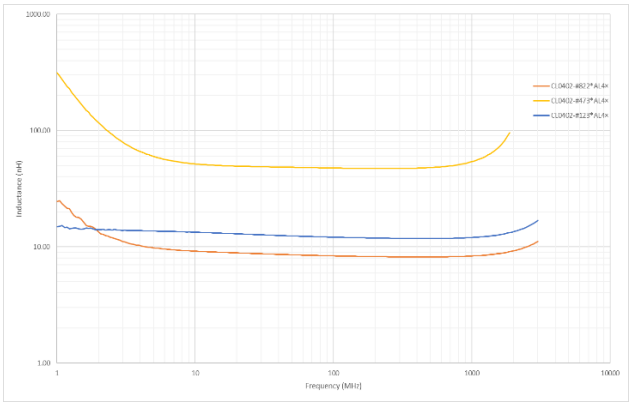
	Reel Dia.	QTY
T	178mm 7"	10000

Dimension	L	H	W	T	a	b	c
mm	1.0	0.5	0.55	0.2	0.65	1.2	0.45
Inch	0.039	0.020	0.022	0.008	0.026	0.047	0.018
Tolerance	±0.1 ±0.004	±0.1 ±0.004	±0.1 ±0.004	±0.1 ±0.004	Recommended		

Q vs Frequency



L vs Frequency



Specifications

Part Number	Inductance (nH)	Tolerance	Q min	SRF Min (MHz)	DCR (Ohm) Max	Current rating (mA)
CL0402-#102*AL4×	1.0 nH	±0.2nH,±0.3nH	13 (250MHz)	6000	0.045	1360
CL0402-#152*AL4×	1.5 nH	±0.2nH,±0.3nH	14 (250MHz)	6000	0.060	1100
CL0402-#222*AL4×	2.2 nH	±0.2nH,±0.3nH	18 (250MHz)	10800	0.070	960
CL0402-#392*AL4×	3.9 nH	±0.2nH,±0.3nH	20 (250MHz)	5800	0.066	840
CL0402-#472*AL4×	4.7 nH	±0.2nH,±0.3nH	15 (250MHz)	4775	0.130	640
CL0402-#562*AL4×	5.6 nH	±0.2nH,±0.3nH	23 (250MHz)	5800	0.083	760
CL0402-#682*AL4×	6.8 nH	±0.2nH,±5%	20 (250MHz)	4800	0.083	680
CL0402-#822*AL4×	8.2 nH	±0.2nH,±5%	25 (250MHz)	4400	0.104	680
CL0402-#103*AL4×	10 nH	±2%,±5%	23 (250MHz)	3900	0.195	480
CL0402-#153*AL4×	15 nH	±2%,±5%	26 (250MHz)	3280	0.172	560
CL0402-#183*AL4×	18 nH	±2%,±5%	25 (250MHz)	3100	0.23	520
CL0402-#223*AL4×	22 nH	±2%,±5%	25(250MHz)	2800	0.3	400
CL0402-#273*AL4×	27 nH	±2%,±5%	26 (250MHz)	2480	0.298	400
CL0402-#303*AL4×	30 nH	±2%,±5%	25 (250MHz)	2350	0.3	400
CL0402-#393*AL4×	39 nH	±2%,±5%	25 (250MHz)	2100	0.55	320
CL0402-#473*AL4×	47 nH	±2%,±5%	26 (200MHz)	2100	0.83	210
CL0402-#563*AL4×	56 nH	±5%	22 (200MHz)	1760	0.97	200
CL0402-#683*AL4×	68 nH	±5%	22 (200MHz)	1620	1.12	180
CL0402-#823*AL4×	82 nH	±5%	20 (150MHz)	1500	1.25	150
CL0402-#104*AL4×	100 nH	±5%	20 (150MHz)	1300	2.52	120

Selected values from range, please contact sales for full list of inductance values.

Ordering information - *For Example: CL0402-222JAL4T*

CL0402	#	103	*	AL	4	x
Case Size	Termination	Inductance	Tolerance	Series	Version	Packaging
CL0402	-J Nickel barrier	See Chart	B: ±0.2nH S: ±0.3nH G: ± 2% J: ± 5%	AL - A Series	See Chart	T 178mm / 7"

Performance

Key Test	Test Condition (per AEC-Q200)	Min Specification
Temperature Cycling	-55°c to +125°c	1000 cycles
High Temperature Operating Life	+125°c, (powered)	1000 hr
Humidity Bias	85°c & 85%RH, (unpowered)	1000 hr, (<5% change in inductance)
High Temperature Storage	+125°c	1000 hr
Push Test	Termination Stress Test	1kg for 60 sec, no damage
Substrate Bend Test	2mm deflection of pcb	No damage

CL

A Series

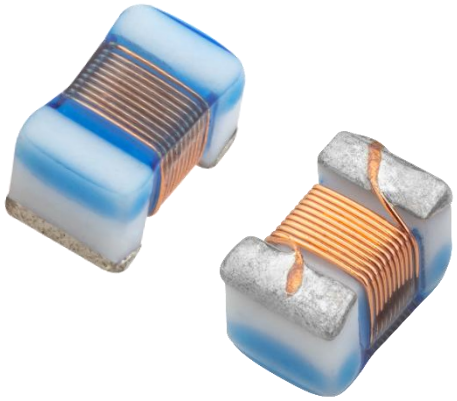
0603 Case Size

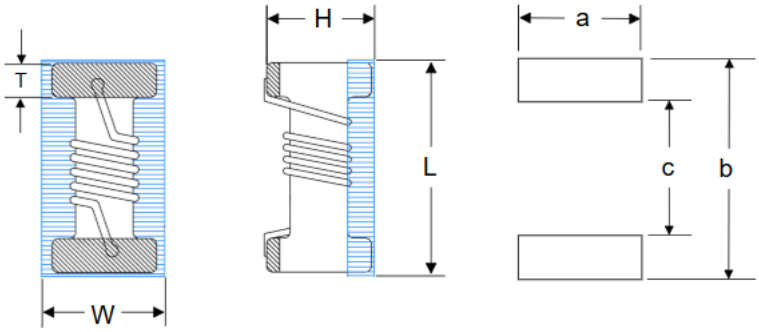
A Series Ceramic Core Inductors

These inductors provide reliable performance and consistent inductance across a broad frequency range, making them well suited for cost-sensitive and high-volume applications. Knowles designs focus on delivering competitive Q performance that meets industry standards while maintaining strong value and manufacturability.

Electrical Details	
Inductance Range	1.6nH to 390nH
Core Material	Ceramic
Termination: (J)	matte tin over nickel over silver
Termination: (2)*	matte tin over copper over silver
Operating Temp. Range	-55°c to +125°c
Environmental	RoHS Compliant, halogen Free

* Not currently available, contact sales for release schedule timeline.

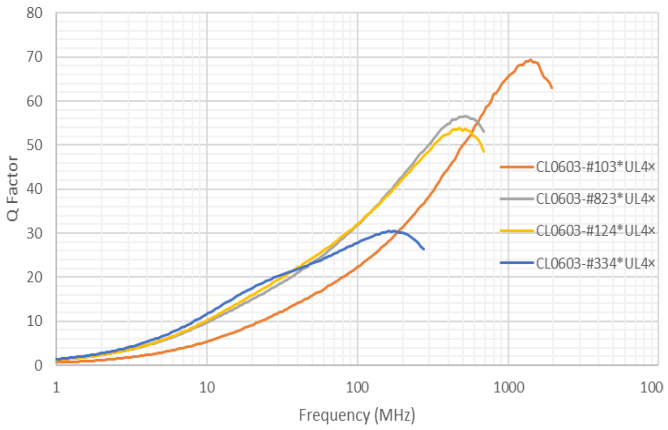




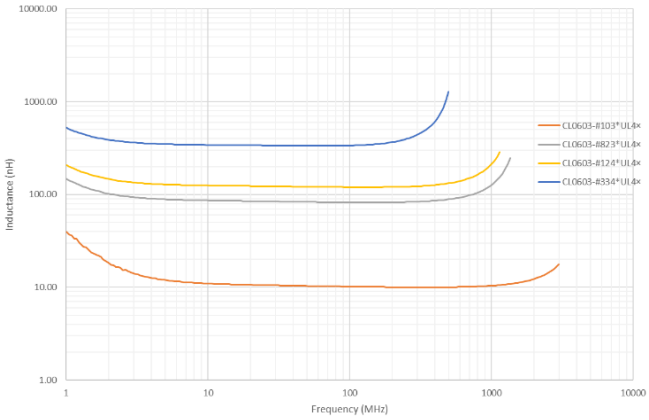
Reel Dia.		QTY
T	178mm 7"	3000
R	330mm 13"	10000

Dimension	L	H	W	T	a	b	c
mm	1.6	1.05	1.05	0.35	1	1.9	0.65
Inch	0.063	0.041	0.041	0.014	0.039	0.075	0.026
Tolerance	±0.2 ±0.008	±0.2 ±0.008	±0.2 ±0.008	±0.1 ±0.004	Recommended		

Q vs Frequency



L vs Frequency



Specifications

Part Number	Inductance (nH)	Tolerance	Q min	SRF Min (MHz)	DCR (Ohm) Max	Current rating (mA)
CL0603-#162*AL4×	1.6 nH	±0.2nH,±0.3nH	24 (250MHz)	12500	0.03	700
CL0603-#682*AL4×	6.8 nH	±0.2nH,±0.3nH	30 (250MHz)	5800	0.11	700
CL0603-#103*AL4×	10 nH	* J (±5%), G (±2%)	30 (250MHz)	4800	0.13	700
CL0603-#123*AL4×	12 nH	* J (±5%), G (±2%)	35 (250MHz)	4000	0.13	700
CL0603-#153*AL4×	15 nH	* J (±5%), G (±2%)	35 (250MHz)	4000	0.17	700
CL0603-#183*AL4×	18 nH	* J (±5%), G (±2%)	38 (250MHz)	3100	0.17	700
CL0603-#223*AL4×	22 nH	* J (±5%), G (±2%)	38 (250MHz)	3000	0.22	700
CL0603-#273*AL4×	27 nH	* J (±5%), G (±2%)	40 (250MHz)	2800	0.22	600
CL0603-#393*AL4×	39 nH	* J (±5%), G (±2%)	40 (250MHz)	2800	0.26	400
CL0603-#473*AL4×	47 nH	* J (±5%), G (±2%)	40 (200MHz)	2000	0.28	600
CL0603-#683*AL4×	68 nH	* J (±5%), G (±2%)	40 (200MHz)	1700	0.34	600
CL0603-#823*AL4×	82 nH	* J (±5%), G (±2%)	35 (150MHz)	1700	0.54	400
CL0603-#104*AL4×	100 nH	* J (±5%), G (±2%)	35 (150MHz)	1400	0.63	400
CL0603-#124*AL4×	120 nH	* J (±5%), G (±2%)	32 (150MHz)	1600	1.3	180
CL0603-#154*AL4×	150 nH	* J (±5%), G (±2%)	35 (150MHz)	1000	0.92	280

Selected values from range, please contact sales for full list of inductance values.

Ordering information - *For Example: CL0603-103JAL4T*

CL0603	#	103	*	AL	4	x
Case Size	Termination	Inductance	Tolerance	Series	Version	Packaging
CL0603	-J Nickel barrier	See Chart	B: ±0.2nH S: ±0.3nH G: ± 2% J: ± 5%	AL - A Series	See Chart	T 178mm / 7" R 330mm / 13"

Performance

Key Test	Test Condition (per AEC-Q200)	Min Specification
Temperature Cycling	-55°c to +125°c	1000 cycles
High Temperature Operating Life	+125°c, (powered)	1000 hr
Humidity Bias	85°c & 85%RH, (unpowered)	1000 hr, (<5% change in inductance)
High Temperature Storage	+125°c	1000 hr
Push Test	Termination Stress Test	1kg for 60 sec, no damage
Substrate Bend Test	2mm deflection of pcb	No damage

CL

A Series

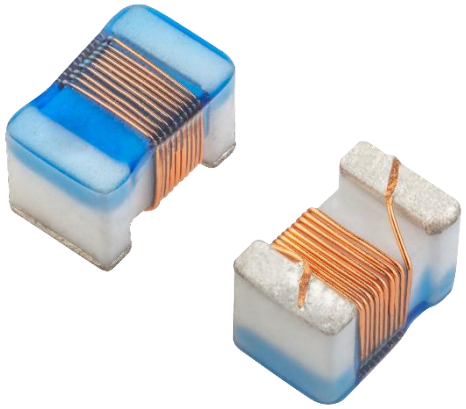
0805 Case Size

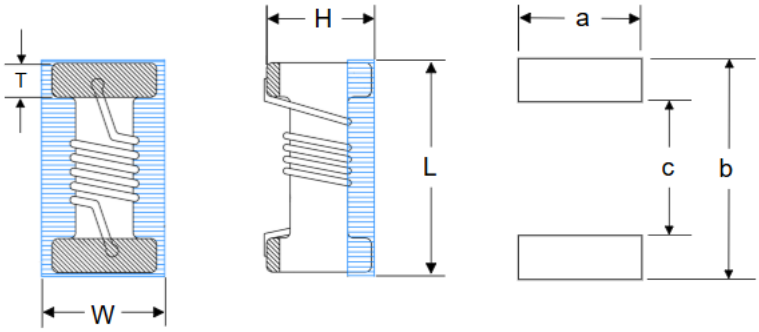
A Series Ceramic Core Inductors

These inductors provide reliable performance and consistent inductance across a broad frequency range, making them well suited for cost-sensitive and high-volume applications. Knowles designs focus on delivering competitive Q performance that meets industry standards while maintaining strong value and manufacturability.

Electrical Details	
Inductance Range	10nH to 4.7uH
Core Material	Ceramic
Termination: (J)	matte tin over nickel over silver
Termination: (2)*	matte tin over copper over silver
Operating Temp. Range	-55°c to +125°c
Environmental	RoHS Compliant, halogen Free

* Not currently available, contact sales for release schedule timeline.

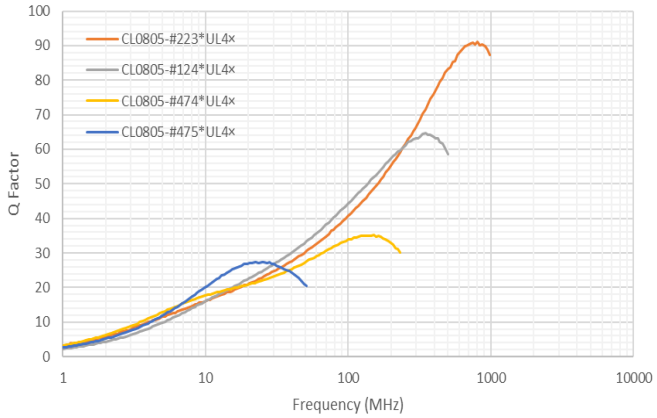




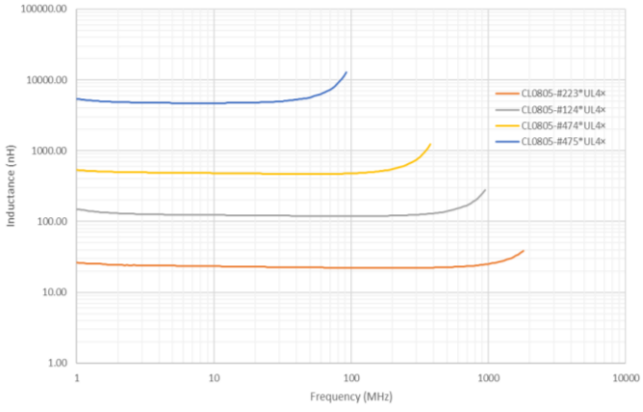
Reel Dia.		QTY
T	178mm 7"	2000
R	330mm 13"	10000

Dimension	L	H	W	T	a	b	c
mm	2.0	1.20	1.25	0.4	1.30	2.6	0.75
Inch	0.08	0.047	0.05	0.016	0.051	0.102	0.030
Tolerance	±0.2 ±0.008	±0.20 ±0.008	±0.25 ±0.01	±0.1 ±0.004	Recommended		

Q vs Frequency



L vs Frequency



Specifications

Part Number	Inductance	Tolerance	Q min	SRF Min (MHz)	DCR (Ohm) Max	Current rating 15°C (mA)
CL0805-#103*AL4×	10nH	* J (±5%), G (±2%)	60 (500MHz)	4800	0.080	600
CL0805-#123*AL4×	12nH	* J (±5%), G (±2%)	60 (500MHz)	4100	0.080	600
CL0805-#153*AL4×	15nH	* J (±5%), G (±2%)	60 (500MHz)	3600	0.080	600
CL0805-#183*AL4×	18nH	* J (±5%), G (±2%)	60 (500MHz)	3400	0.080	600
CL0805-#223*AL4×	22nH	* J (±5%), G (±2%)	60 (500MHz)	2800	0.100	600
CL0805-#273*AL4×	27nH	* J (±5%), G (±2%)	60 (500MHz)	2600	0.120	600
CL0805-#333*AL4×	33nH	* J (±5%), G (±2%)	60 (500MHz)	2400	0.150	500
CL0805-#393*AL4×	39nH	* J (±5%), G (±2%)	60 (500MHz)	2100	0.180	500
CL0805-#473*AL4×	47nH	* J (±5%), G (±2%)	60 (500MHz)	1700	0.150	500
CL0805-#563*AL4×	56nH	* J (±5%), G (±2%)	60 (500MHz)	1600	0.250	500
CL0805-#683*AL4×	68nH	* J (±5%), G (±2%)	60 (500MHz)	1450	0.270	500
CL0805-#823*AL4×	82nH	* J (±5%), G (±2%)	60 (500MHz)	1350	0.320	500
CL0805-#104*AL4×	100nH	* J (±5%), G (±2%)	60 (500MHz)	1200	0.430	500
CL0805-#124*AL4×	120nH	* J (±5%), G (±2%)	50 (250MHz)	1100	0.480	500
CL0805-#154*AL4×	150nH	* J (±5%), G (±2%)	50 (250MHz)	950	0.560	400
CL0805-#184*AL4×	180nH	* J (±5%), G (±2%)	50 (250MHz)	900	0.78	400
CL0805-#224*AL4×	220nH	* J (±5%), G (±2%)	50 (250MHz)	860	1	400
CL0805-#274*AL4×	270nH	* J (±5%), G (±2%)	45 (250MHz)	850	1.46	350
CL0805-#334*AL4×	330nH	* J (±5%), G (±2%)	45 (250MHz)	800	1.65	300
CL0805-#335*AL4×	3300nH	* J (±5%), G (±2%)	23 (25MHz)	130	9	100

Selected values from range, please contact sales for full list of inductance values.

Ordering information - *For Example: CL0805-103JAL4T*

CL0805	#	103	*	AL	4	x
Case Size	Termination	Inductance	Tolerance	Series	Version	Packaging
CL0805	-J Nickel barrier	See Chart	G: ± 2% J: ± 5%	AL - A Series		T 178mm / 7" R 330mm / 13"

Performance

Key Test	Test Condition (per AEC-Q200)	Min Specification
Temperature Cycling	-55°c to +125°c	1000 cycles
High Temperature Operating Life	+125°c, (powered)	1000 hr
Humidity Bias	85°c & 85%RH, (unpowered)	1000 hr, (<5% change in inductance)
High Temperature Storage	+125°c	1000 hr
Push Test	Termination Stress Test	1kg for 60 sec, no damage
Substrate Bend Test	2mm deflection of pcb	No damage

CL

A Series

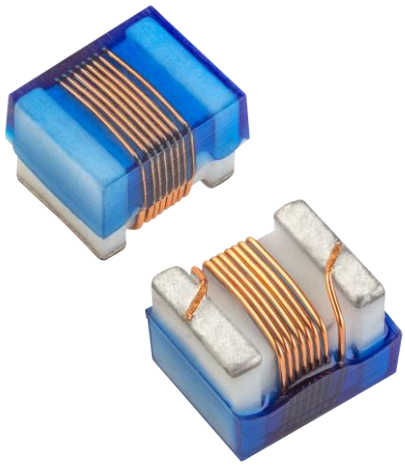
1008 Case Size

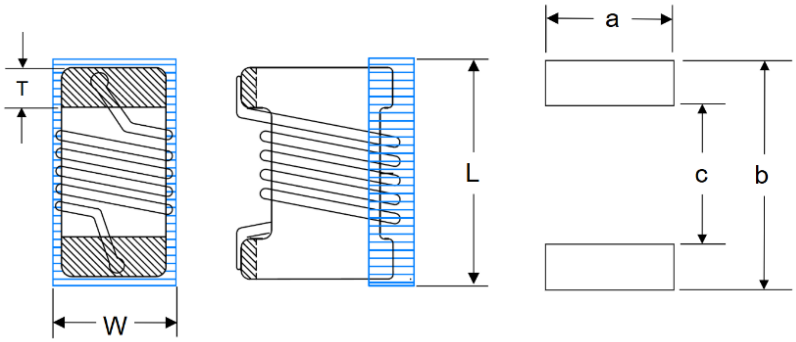
A Series Ceramic Core Inductors

These inductors provide reliable performance and consistent inductance across a broad frequency range, making them well suited for cost-sensitive and high-volume applications. Knowles designs focus on delivering competitive Q performance that meets industry standards while maintaining strong value and manufacturability.

Electrical Details	
Inductance Range	10nH to 10uH
Core Material	Ceramic
Termination: (J)	matte tin over nickel over silver
Termination: (2)*	matte tin over copper over silver
Operating Temp. Range	-55°c to +125°c
Environmental	RoHS Compliant, halogen Free

* Not currently available, contact sales for release schedule timeline.

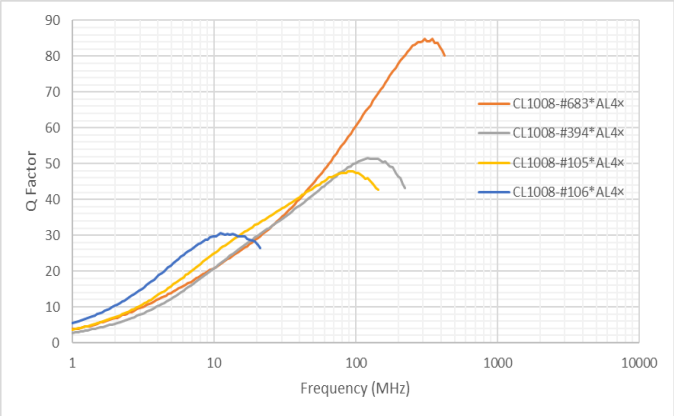




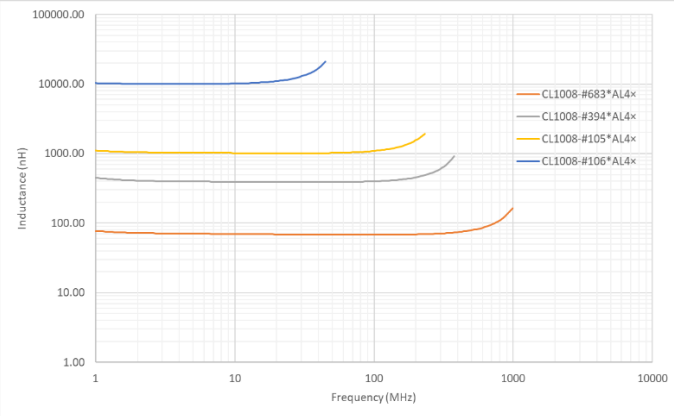
Reel Dia.		QTY
T	178mm 7"	2000
R	330mm 13"	7000

Dimension	L	H	W	T	a	b	c
mm	2.6	1.80	2.15	0.5	2.20	3.0	1.20
Inch	0.102	0.071	0.085	0.020	0.087	0.118	0.047
Tolerance	±0.2 ±0.008	±0.20 ±0.008	±0.2 ±0.008	±0.1 ±0.004	Recommended		

Q vs Frequency



L vs Frequency



Specifications

Part Number	Inductance	Tolerance	Q min	SRF Min (MHz)	DCR (Ohm) Max	Current rating 15°C (mA)
CL1008-#103*AL4×	10nH	* J (±5%), G (±2%)	50 (1000MHz)	4300	0.080	1000
CL1008-#223*AL4×	22nH	* J (±5%), G (±2%)	60 (350MHz)	2500	0.100	1000
CL1008-#393*AL4×	39nH	* J (±5%), G (±2%)	60 (350MHz)	1500	0.100	1000
CL1008-#473*AL4×	47nH	* J (±5%), G (±2%)	60 (350MHz)	1500	0.100	1000
CL1008-#563*AL4×	56nH	* J (±5%), G (±2%)	60 (350MHz)	1350	0.120	1000
CL1008-#683*AL4×	68nH	* J (±5%), G (±2%)	60 (350MHz)	1300	0.150	1000
CL1008-#823*AL4×	82nH	* J (±5%), G (±2%)	60 (350MHz)	1100	0.180	1000
CL1008-#104*AL4×	100nH	* J (±5%), G (±2%)	60 (350MHz)	1100	0.180	1000
CL1008-#124*AL4×	120nH	* J (±5%), G (±2%)	45 (100MHz)	950	0.200	800
CL1008-#184*AL4×	180nH	* J (±5%), G (±2%)	45 (100MHz)	800	0.330	800
CL1008-#274*AL4×	270nH	* J (±5%), G (±2%)	45 (100MHz)	650	0.750	600
CL1008-#334*AL4×	330nH	* J (±5%), G (±2%)	45 (100MHz)	570	0.900	500
CL1008-#394*AL4×	390nH	* J (±5%), G (±2%)	45 (100MHz)	530	1.060	470
CL1008-#474*AL4×	470nH	* J (±5%), G (±2%)	45 (100MHz)	480	1.17	420
CL1008-#564*AL4×	560nH	* J (±5%), G (±2%)	45 (100MHz)	430	1.5	310
CL1008-#624*AL4×	620nH	* J (±5%), G (±2%)	40 (100MHz)	375	1.1	280
CL1008-#684*AL4×	680nH	* J (±5%), G (±2%)	45 (100MHz)	380	2.06	230
CL1008-#824*AL4×	820nH	* J (±5%), G (±2%)	45 (100MHz)	350	2.3	180
CL1008-#914*AL4×	910nH	* J (±5%), G (±2%)	45 (100MHz)	330	3.18	150
CL1008-#105*AL4×	1000nH	* J (±5%), G (±2%)	35 (50MHz)	310	3.3	120

Selected values from range, please contact sales for full list of inductance values.

Ordering information - *For Example: CL1008-103JAL4T*

CL1008	#	103	*	AL	4	x
Case Size	Termination	Inductance	Tolerance	Series	Version	Packaging
CL1008	-J Nickel barrier	See Chart	G: ± 2% J: ± 5%	AL - A Series		T 178mm / 7" R 330mm / 13"

Performance

Key Test	Test Condition (per AEC-Q200)	Min Specification
Temperature Cycling	-55°c to +125°c	1000 cycles
High Temperature Operating Life	+125°c, (powered)	1000 hr
Humidity Bias	85°c & 85%RH, (unpowered)	1000 hr, (<5% change in inductance)
High Temperature Storage	+125°c	1000 hr
Push Test	Termination Stress Test	1kg for 60 sec, no damage
Substrate Bend Test	2mm deflection of pcb	No damage