

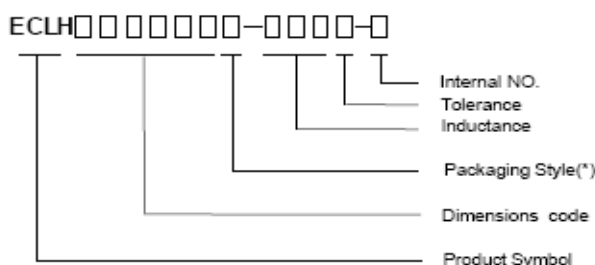
SMD Ceramic Multilayer Chip Inductors - ECLH Series

ECLH Series

Features

- RoHS compliant
- Excellent Q factor and SRF characteristics
- Small size of 1005/1608 is suitable for small portable equipment.
- Supports operating frequency up to 6GHz with no
- minimal inductance values from 1.0nH to 470nH.

Product Identification



Applications

- RF Resonance and Impedance Matching Circuit
- RF and wireless communication
- Information technology equipment, computers, telecommunications, radar detectors, automotive electronics, cellular phones, pagers, PDAs, keyless remote systems.
- Use in L-C filter configurations

- Packing Type: T : Taping B : Bulk

- Product series identification:

ECLH0603-S: Top side full mark

ECLH1005-S: White

ECLH1608-S: White.

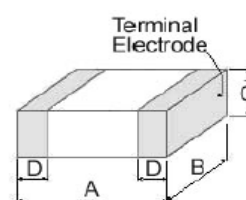
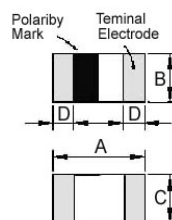
ECLH2012-S: White

Shapes and Dimensions

ECLH0603/ ECLH1005

ECLH0603-S Series

ECLH1005-S Series



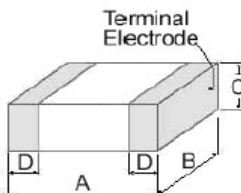
Dimensions in mm

TYPE	A	B	C	D
0603	0.6±0.03	0.3±0.03	0.3±0.03	0.15±0.05
1005	1.0±0.10	0.5±0.10	0.5±0.10	0.25±0.10

ECLH1608/ ECLH2012

ECLH1608-S

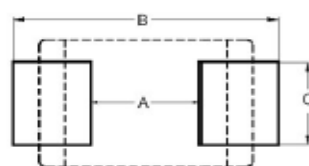
ECLH2012-S



Dimensions in mm

TYPE	A	B	C	D
1608	1.6±0.15	0.8±0.15	0.8±0.15	0.3±0.2
2012	2.0±0.2	1.25±0.2	0.9±0.2	0.5±0.3

Recommended Pattern



Dimensions in mm

TYPE	A	B	C
ECLH0603	0.3	0.75 ~ 1.05	0.3
ECLH1005	0.4	1.2 ~ 1.4	0.5
ECLH1608	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
ECLH2012	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2



SUZHOU LYE ELECTRONICSCO.,LTD 60

Electrical Characteristics

Part Number	Inductance (nH) at 100MHz	Tolerance	Q Min at 100MHz	SRF (MHz) Typ	DC Resistance (Ω) Max	IDC (mA) Max
ECLH0603T-1N0□-S	1.0	S	4	>10000	0.10	300
ECLH0603T-1N2□-S	1.2	S	4	>10000	0.11	300
ECLH0603T-1N5□-S	1.5	S	4	>10000	0.12	300
ECLH0603T-1N8□-S	1.8	S	4	>10000	0.15	300
ECLH0603T-2N0□-S	2.0	S	4	>10000	0.16	200
ECLH0603T-2N2□-S	2.2	S	4	>10000	0.18	200
ECLH0603T-2N4□-S	2.4	S	4	>10000	0.19	200
ECLH0603T-2N7□-S	2.7	S	4	>10000	0.19	200
ECLH0603T-3N0□-S	3.0	S	4	9300	0.21	200
ECLH0603T-3N3□-S	3.3	S	4	9200	0.22	200
ECLH0603T-3N6□-S	3.6	S	4	8900	0.24	150
ECLH0603T-3N9□-S	3.9	S	4	8800	0.26	150
ECLH0603T-4N3□-S	4.3	S	4	8500	0.29	150
ECLH0603T-4N7□-S	4.7	S	4	8500	0.29	150
ECLH0603T-5N1□-S	5.1	S	4	7200	0.32	150
ECLH0603T-5N6□-S	5.6	S	4	7200	0.35	150
ECLH0603T-6N2□-S	6.2	S	4	6100	0.37	100
ECLH0603T-6N8□-S	6.8	J	4	6100	0.38	100
ECLH0603T-7N5□-S	7.5	J	4	5800	0.40	100
ECLH0603T-8N2□-S	8.2	J	4	5800	0.44	100
ECLH0603T-9N1□-S	9.1	J	4	4600	0.47	100
ECLH0603T-10N□-S	10	J	4	4600	0.50	100
ECLH0603T-12N□-S	12	J	4	3800	0.67	100
ECLH0603T-15N□-S	15	J	3.5	3800	0.80	90
ECLH0603T-18N□-S	18	J	3.5	3300	1.21	80
ECLH0603T-22N□-S	22	J	3.5	3000	1.32	70
ECLH0603T-27N□-S	27	J	3.5	2800	1.34	50
ECLH0603T-33N□-S	33	J	3.5	2500	1.45	50
ECLH0603T-39N□-S	39	J	3.5	1900	1.71	50
ECLH0603T-47N□-S	47	J	3.5	1600	1.89	50
ECLH0603T-56N□-S	56	J	3.5	1400	2.26	50
ECLH0603T-68N□-S	68	J	3.5	1200	2.65	50

● Tolerance : S = ± 0.3 nH ; J = ± 5%

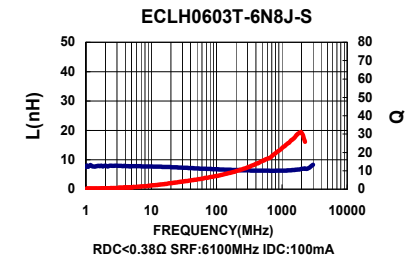
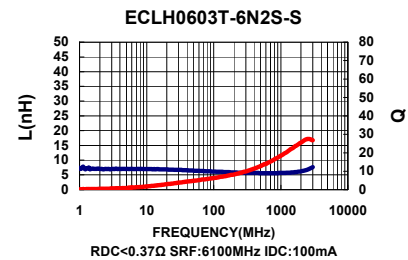
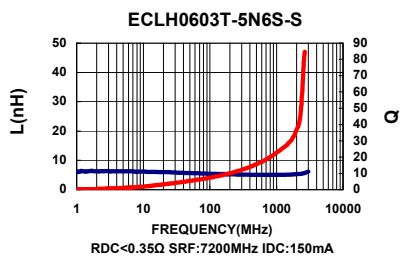
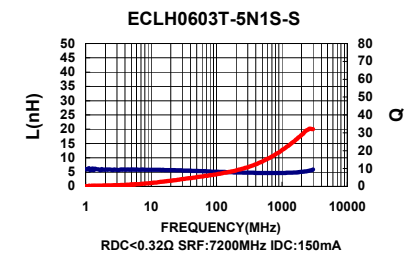
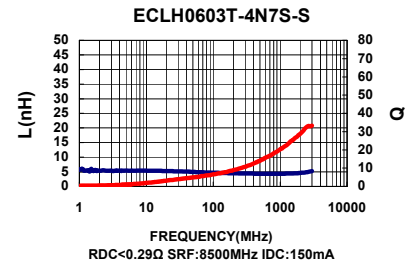
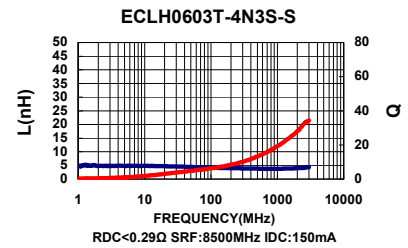
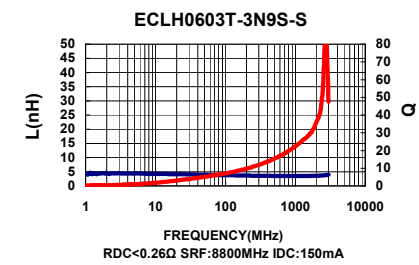
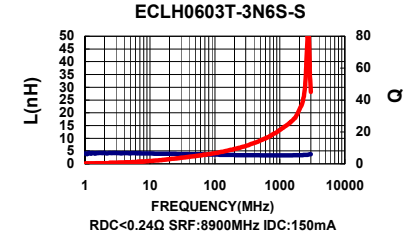
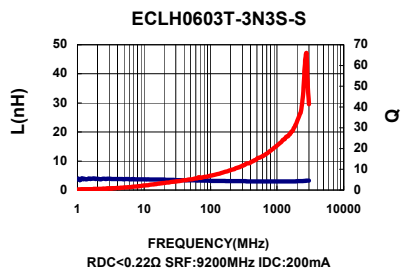
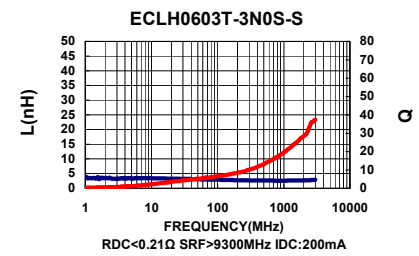
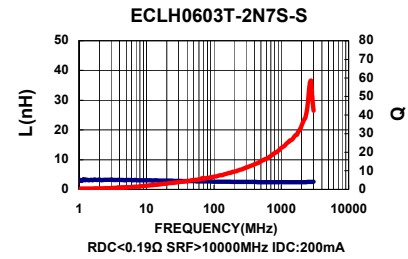
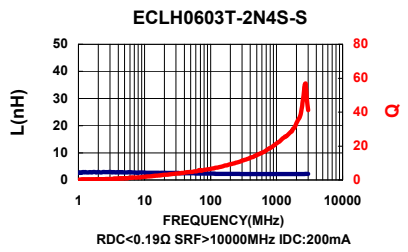
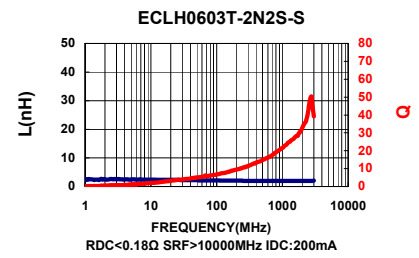
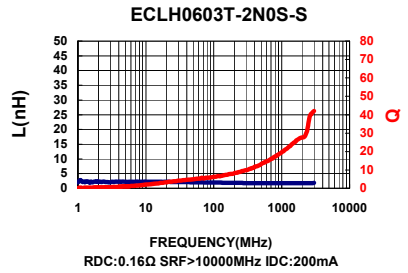
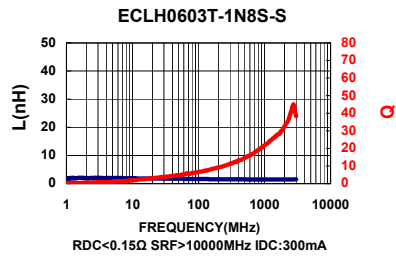
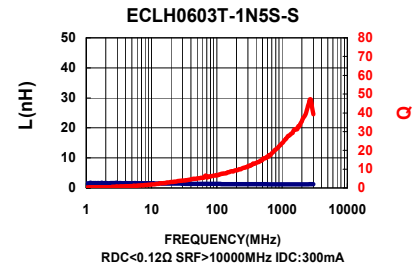
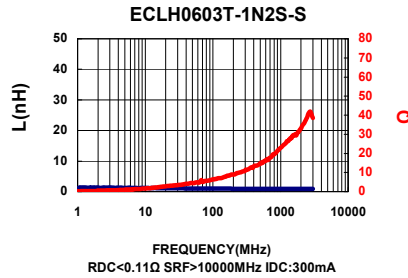
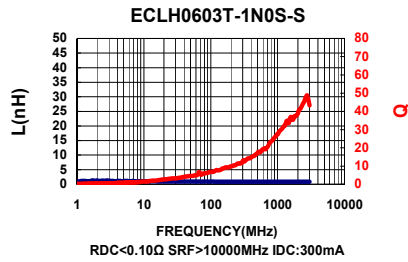
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SRF : HPE4991A/ HP19196C

RDC : HP4338B/ CH502BC

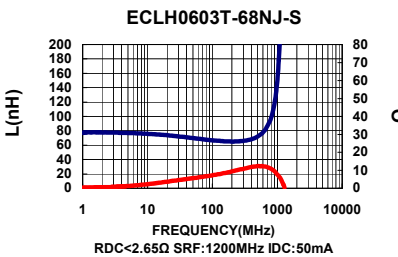
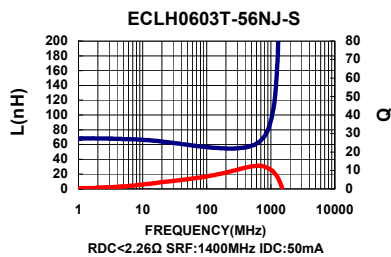
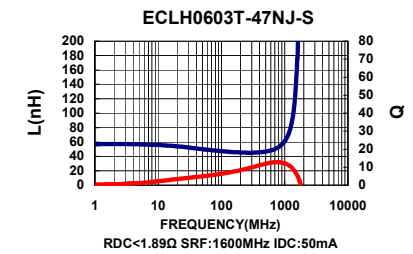
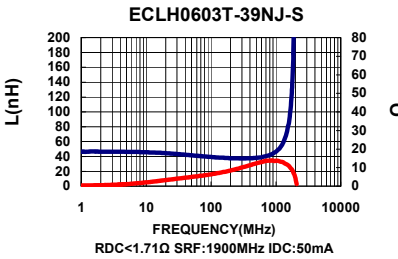
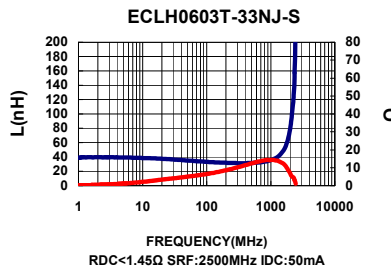
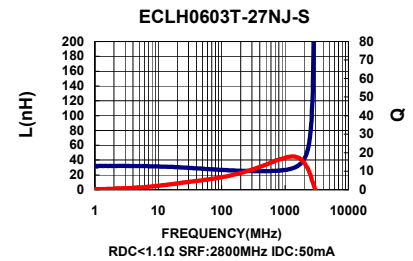
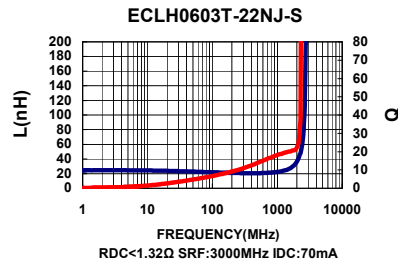
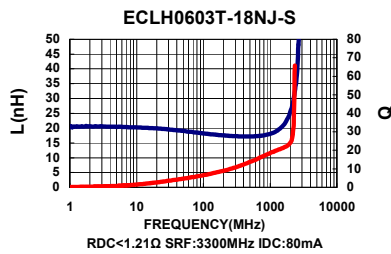
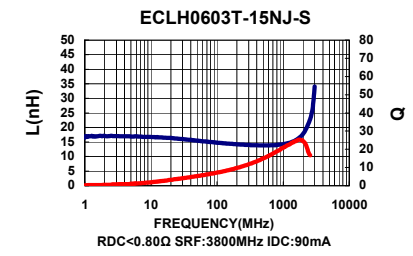
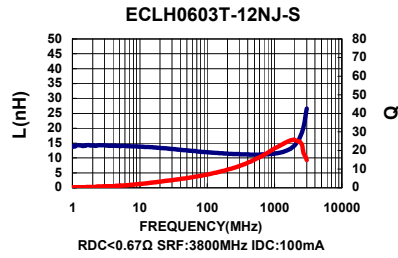
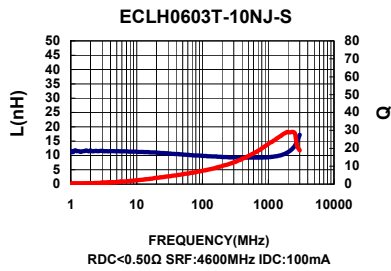
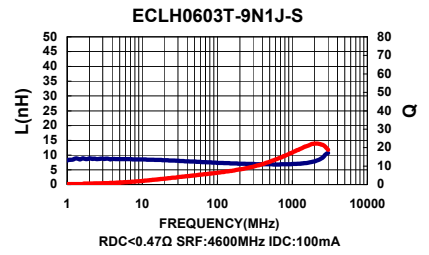
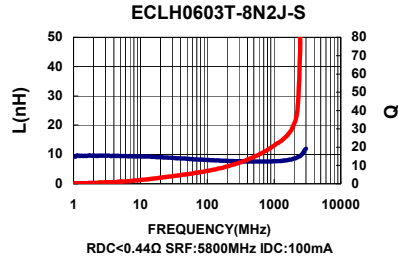
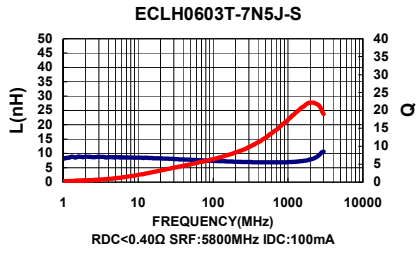
SMD Ceramic Multilayer Chip Inductors – ECLH Series

Test Instruments : HP4291A Material/Impedance Analyzer



SMD Ceramic Multilayer Chip Inductors – ECLH Series

Test Instruments : HP4291A Material/Impedance Analyzer



SMD Multilayer Ceramic Chip Inductors – ECLH Series

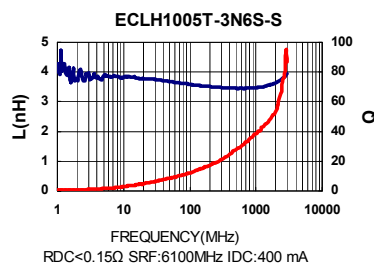
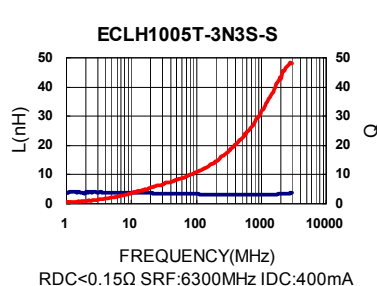
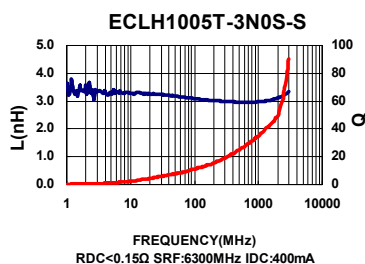
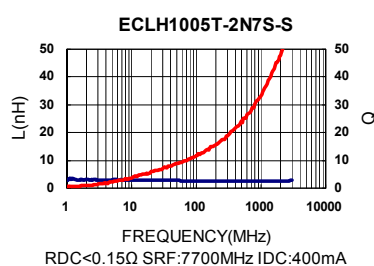
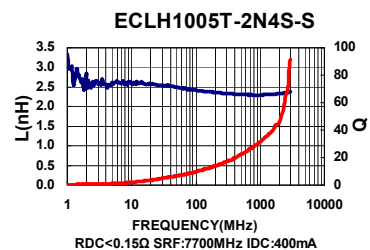
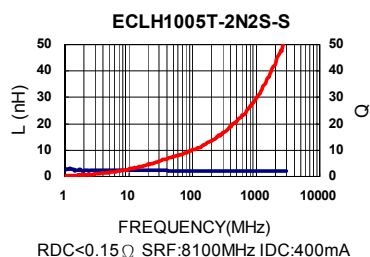
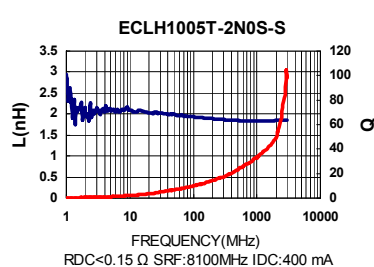
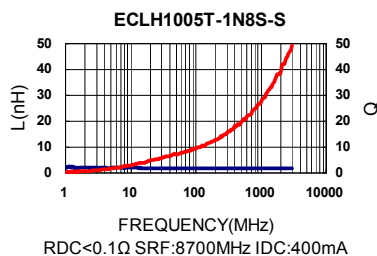
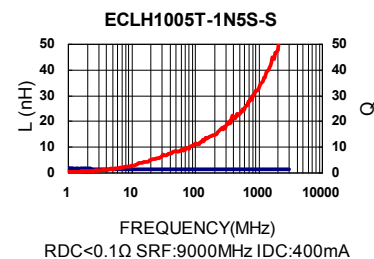
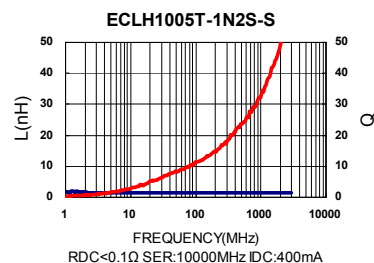
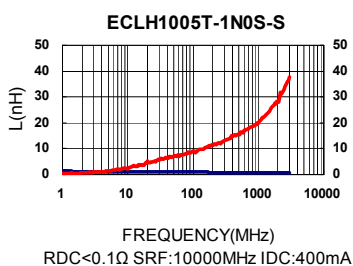
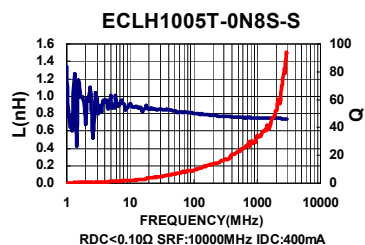
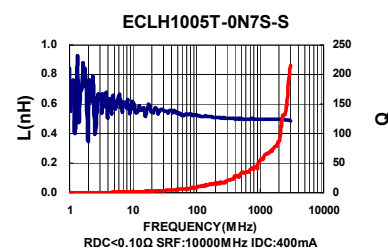
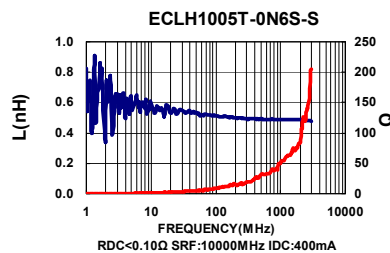
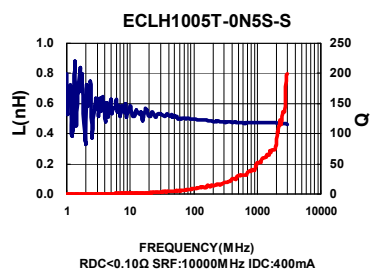
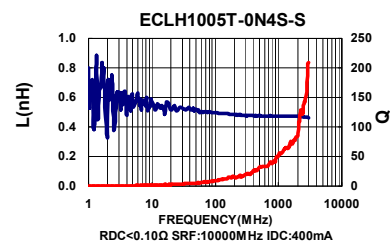
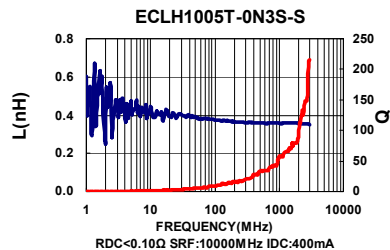
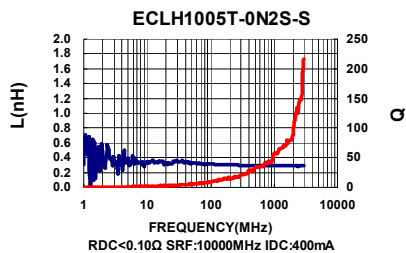
Electrical Characteristics

Part Number	Inductance (nH) at 100MHz	Tolerance	Q Min At 100MHz	SRF (MHz) Typ	DC Resistance (Ω) Max	IDC (mA) Max
ECLH1005T-0N2□-S	0.2	S	8	10000	0.10	400
ECLH1005T-0N3□-S	0.3	S	8	10000	0.10	400
ECLH1005T-0N4□-S	0.4	S	8	10000	0.10	400
ECLH1005T-0N5□-S	0.5	S	8	10000	0.10	400
ECLH1005T-0N6□-S	0.6	S	8	10000	0.10	400
ECLH1005T-0N7□-S	0.7	S	8	10000	0.10	400
ECLH1005T-0N8□-S	0.8	S	8	10000	0.10	400
ECLH1005T-1N0□-S	1.0	S	8	10000	0.10	400
ECLH1005T-1N2□-S	1.2	S	8	10000	0.10	400
ECLH1005T-1N5□-S	1.5	S	8	9000	0.10	400
ECLH1005T-1N8□-S	1.8	S	8	8700	0.10	400
ECLH1005T-2N0□-S	2.0	S	8	8100	0.15	400
ECLH1005T-2N2□-S	2.2	S	8	8100	0.15	400
ECLH1005T-2N4□-S	2.4	S	8	7700	0.15	400
ECLH1005T-2N7□-S	2.7	S	8	7700	0.15	400
ECLH1005T-3N0□-S	3.0	S	8	6300	0.15	400
ECLH1005T-3N3□-S	3.3	S / K	8	6300	0.15	400
ECLH1005T-3N6□-S	3.6	S / K	8	6100	0.15	400
ECLH1005T-3N9□-S	3.9	S / K	8	6100	0.20	400
ECLH1005T-4N3□-S	4.3	S / K	8	5400	0.20	400
ECLH1005T-4N7□-S	4.7	S / K	8	5400	0.20	400
ECLH1005T-5N6□-S	5.6	S / K	8	5100	0.20	400
ECLH1005T-6N8□-S	6.8	J / K	8	4550	0.25	400
ECLH1005T-8N2□-S	8.2	J / K	8	4100	0.30	300
ECLH1005T-9N1□-S	9.1	J / K	8	4000	0.32	300
ECLH1005T-10N□-S	10	J / K	8	3900	0.35	300
ECLH1005T-12N□-S	12	J / K	8	3000	0.40	300
ECLH1005T-15N□-S	15	J / K	8	2800	0.50	300
ECLH1005T-18N□-S	18	J / K	8	2500	0.55	300
ECLH1005T-22N□-S	22	J / K	8	2200	0.70	300
ECLH1005T-27N□-S	27	J / K	8	2000	0.80	300
ECLH1005T-33N□-S	33	J / K	8	1800	0.9	200
ECLH1005T-39N□-S	39	J / K	8	1600	1.0	150
ECLH1005T-47N□-S	47	J / K	8	1400	1.2	150
ECLH1005T-56N□-S	56	J / K	8	1300	1.3	150
ECLH1005T-68N□-S	68	J / K	8	1100	1.5	100
ECLH1005T-82N□-S	82	J / K	8	1000	1.6	100
ECLH1005T-R10□-S	100	J / K	8	900	2.0	100
ECLH1005T-R12□-S	120	J / K	8	800	2.2	100

● Tolerance : S = $\pm 0.3\text{nH}$, J = $\pm 5\%$, K = $\pm 10\%$

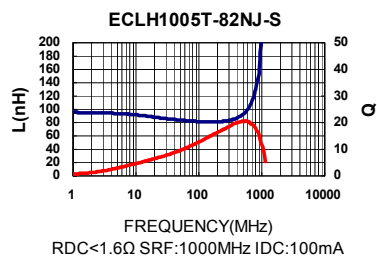
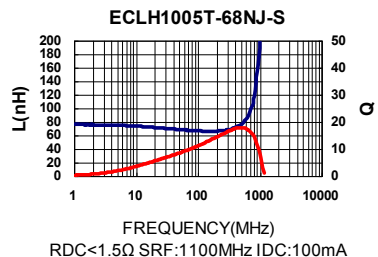
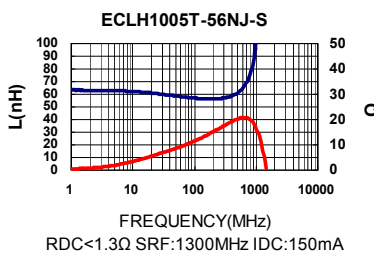
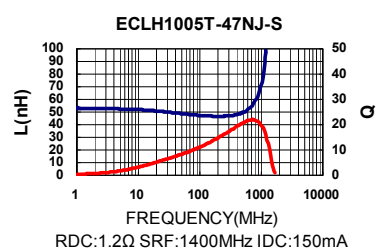
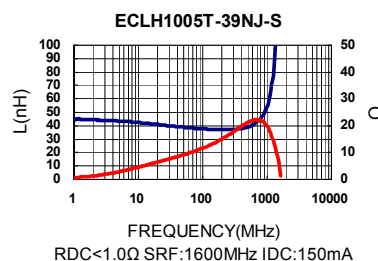
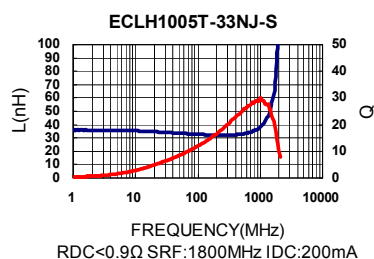
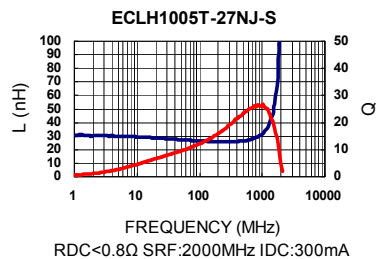
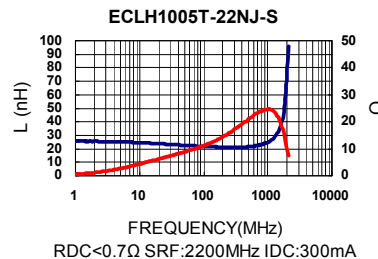
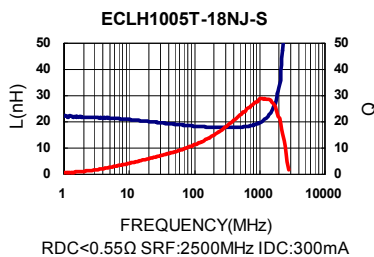
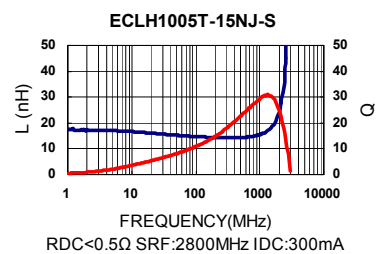
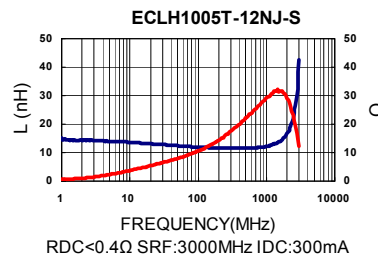
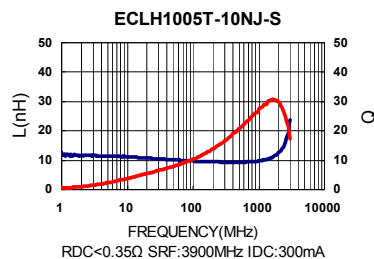
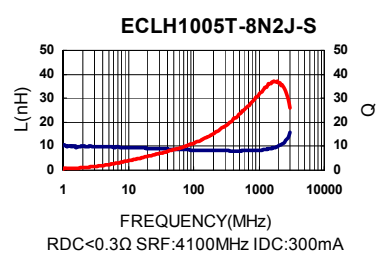
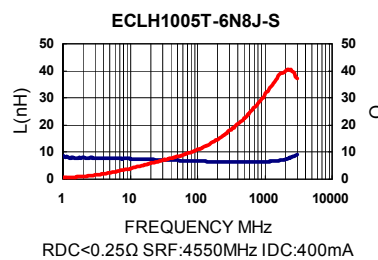
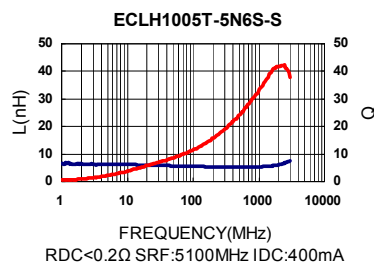
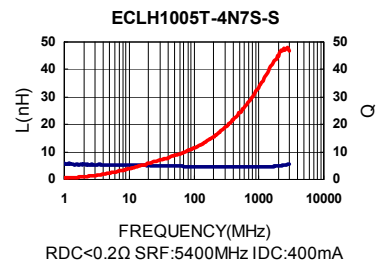
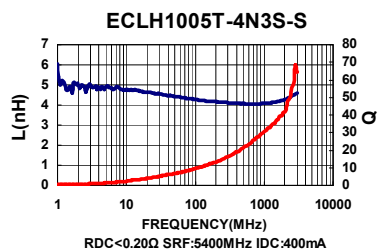
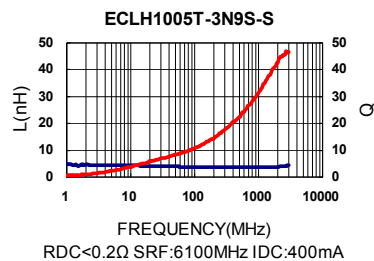
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 SRF : HP8753D
 RDC : HP4338B/ CH502BC

Test Instruments : HP4291A Material/Impedance Analyzer



SMD Multilayer Ceramic Chip Inductors – ECLH Series

Test Instruments : HP4291A Material/Impedance Analyzer



SMD Multilayer Ceramic Chip Inductors – ECLH Series

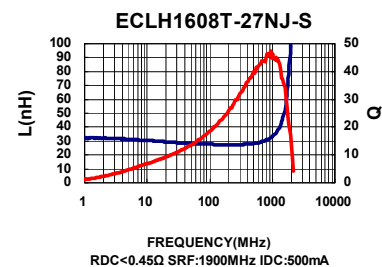
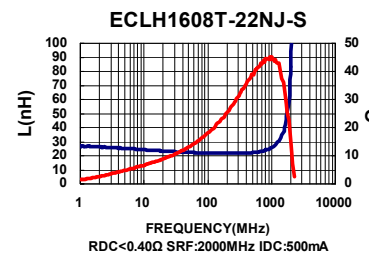
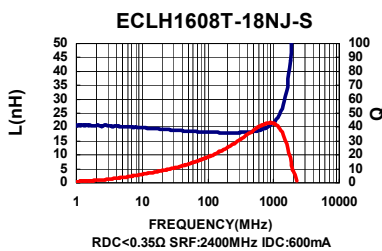
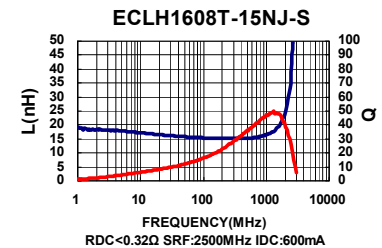
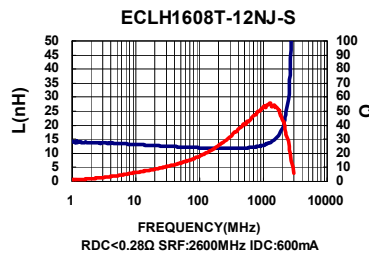
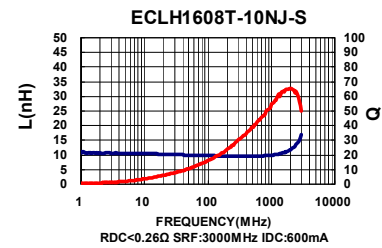
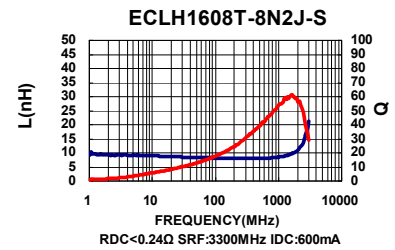
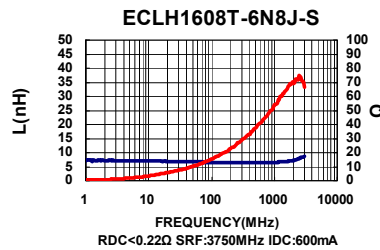
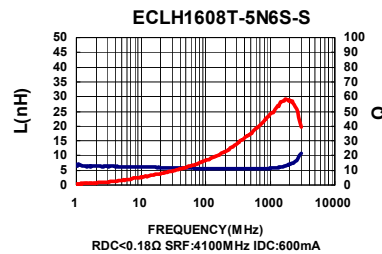
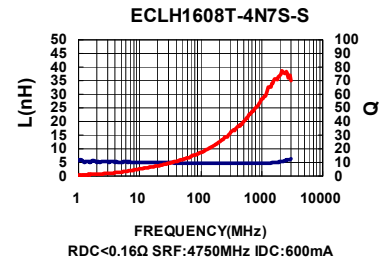
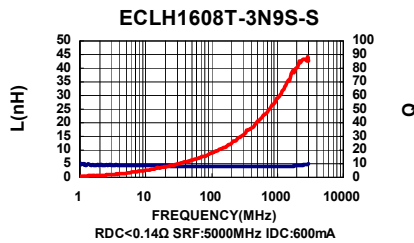
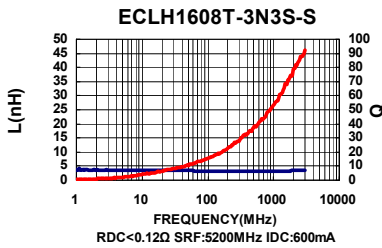
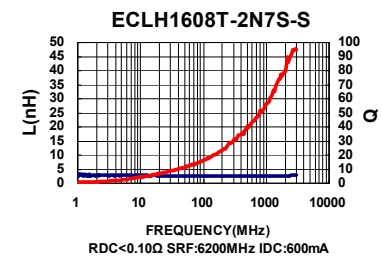
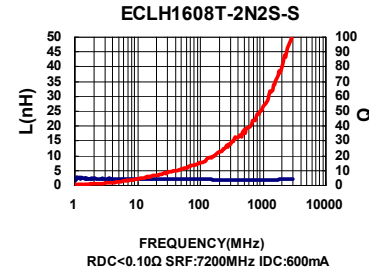
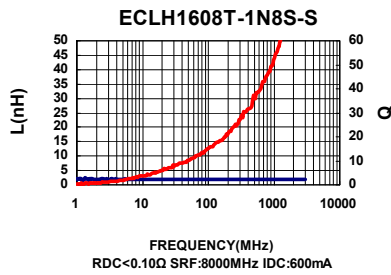
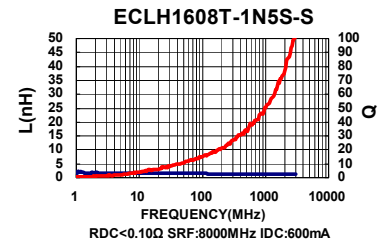
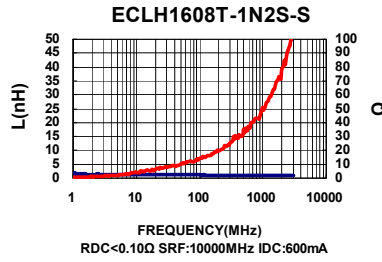
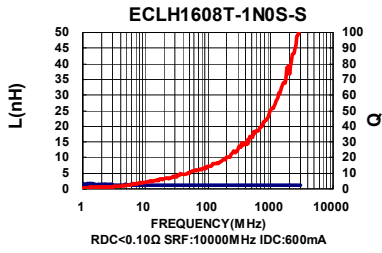
Electrical Characteristics

Part Number	Inductance (nH) at 100MHz	Tolerance	Q Min		SRF (MHz) Typ	DC Resistance (Ω) Max	IDC (mA) Max
			at 50MHz	at 100MHz			
ECLH1608T-1N0S-S	1.0	S		8	10000	0.10	600
ECLH1608T-1N2S-S	1.2	S		8	10000	0.10	600
ECLH1608T-1N5S-S	1.5	S		8	8000	0.10	600
ECLH1608T-1N8S-S	1.8	S		8	8000	0.10	600
ECLH1608T-2N2S-S	2.2	S		8	7200	0.10	600
ECLH1608T-2N7S-S	2.7	S		10	6200	0.10	600
ECLH1608T-3N3□-S	3.3	S/ K		10	5200	0.12	600
ECLH1608T-3N9□-S	3.9	S/ K		10	5000	0.14	600
ECLH1608T-4N7□-S	4.7	S/ K		10	4750	0.16	600
ECLH1608T-5N6□-S	5.6	S/ K		10	4100	0.18	600
ECLH1608T-6N8□-S	6.8	J/ K		10	3750	0.22	600
ECLH1608T-8N2□-S	8.2	J/ K		10	3300	0.24	600
ECLH1608T-10N□-S	10	J/ K		12	3000	0.24	600
ECLH1608T-12N□-S	12	J/ K		12	2600	0.28	600
ECLH1608T-15N□-S	15	J/ K		12	2500	0.32	600
ECLH1608T-18N□-S	18	J/ K		12	2400	0.35	600
ECLH1608T-22N□-S	22	J/ K		12	2000	0.40	500
ECLH1608T-27N□-S	27	J/ K		12	1900	0.45	500
ECLH1608T-33N□-S	33	J/ K		12	1600	0.55	400
ECLH1608T-39N□-S	39	J/ K		12	1400	0.60	400
ECLH1608T-47N□-S	47	J/ K		12	1300	0.70	400
ECLH1608T-56N□-S	56	J/ K		12	1100	0.75	400
ECLH1608T-62N□-S	62	J/ K		12	1050	0.85	400
ECLH1608T-68N□-S	68	J/ K		12	1050	0.85	400
ECLH1608T-82N□-S	82	J/ K		12	900	1.00	300
ECLH1608T-R10□-S	100	J/ K		12	770	1.20	300
ECLH1608T-R12□-S	*120	J/ K	8		650	1.30	300
ECLH1608T-R15□-S	*150	J/ K	8		550	1.70	250
ECLH1608T-R18□-S	*180	J/ K	8		520	1.90	250
ECLH1608T-R22□-S	*220	J/ K	8		500	2.00	250
ECLH1608T-R27□-S	*270	J/ K	8		470	2.20	150
ECLH1608T-R33□-S	*330	J/ K	8		320	2.80	100
ECLH1608T-R39□-S	*390	J/ K	8		300	3.00	100

- * at 50MHz
- Tolerance : S = ± 0.3 nH ; J = $\pm 5\%$; K = $\pm 10\%$
- Test Instruments : L/Q : L/Q : Agilent E4991A Fixture : Agilent 16197A
SRF : HP8753D RDC : HP4338B/ CH502BC

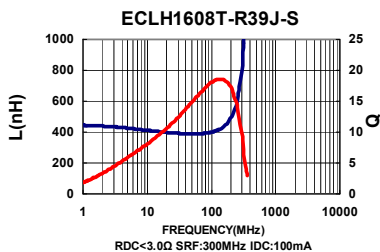
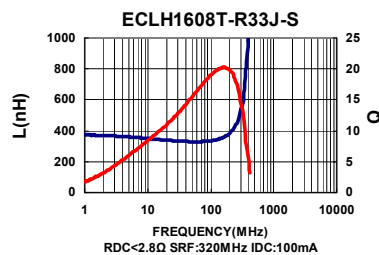
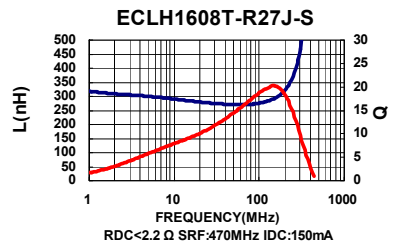
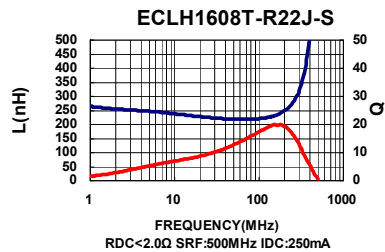
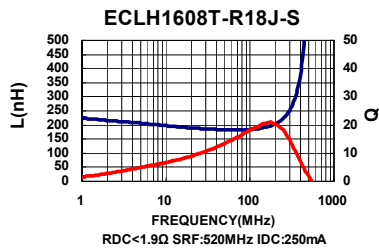
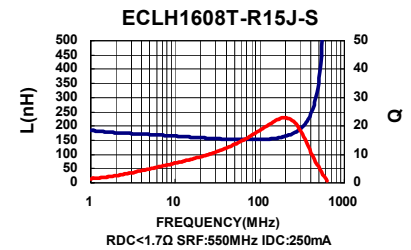
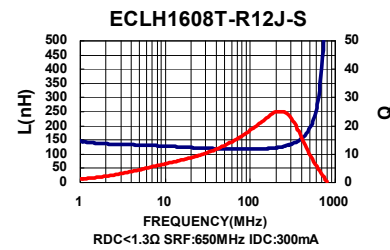
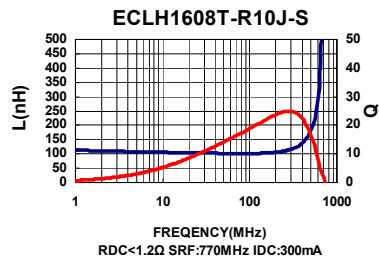
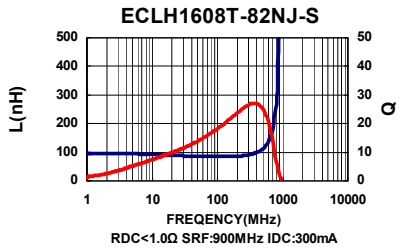
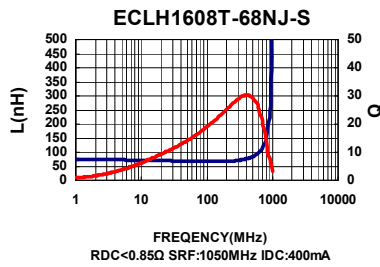
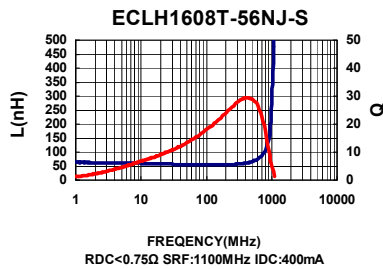
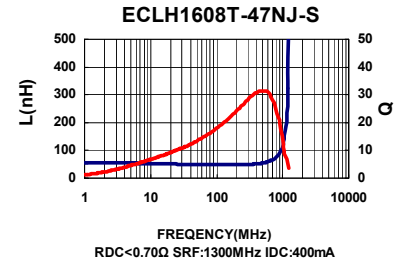
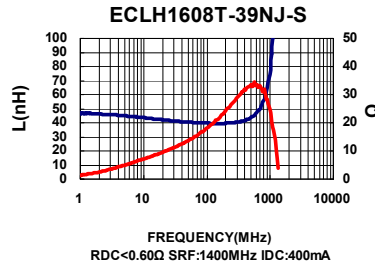
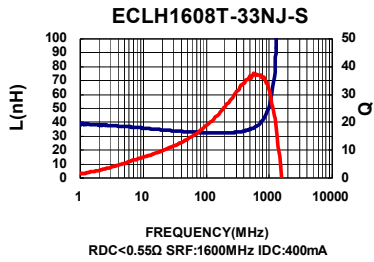
SMD Multilayer Ceramic Chip Inductors – ECLH Series

Test Instruments : HP4291A Material/Impedance Analyzer



SMD Multilayer Ceramic Chip Inductors – ECLH Series

Test Instruments : HP4291A Material/Impedance Analyzer



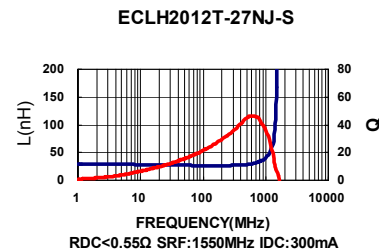
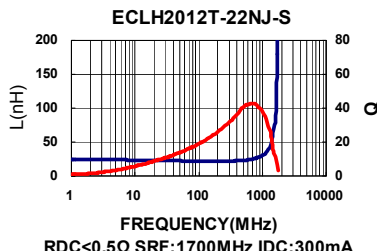
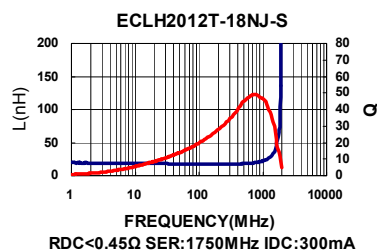
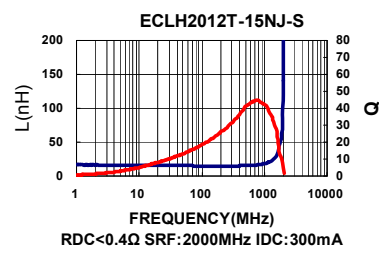
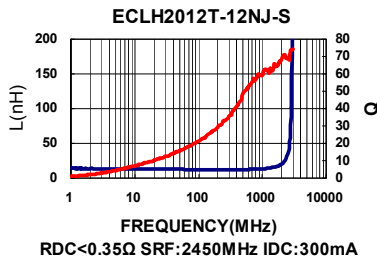
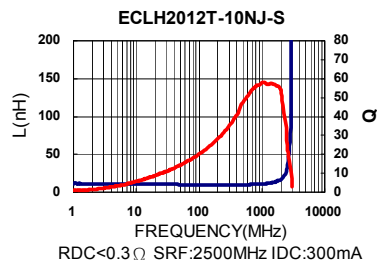
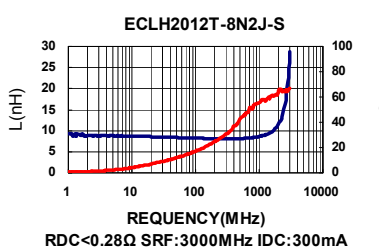
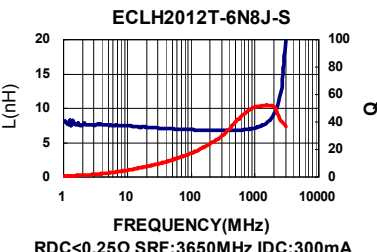
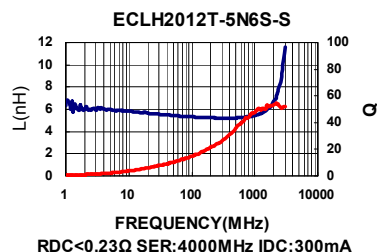
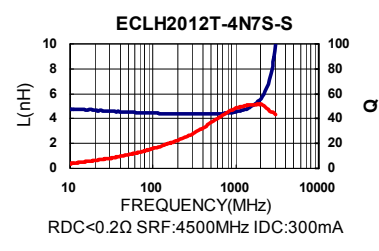
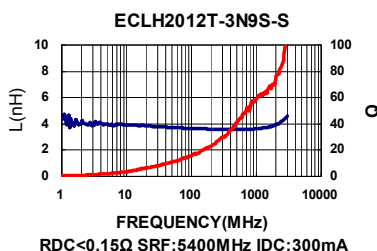
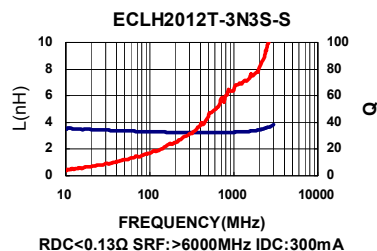
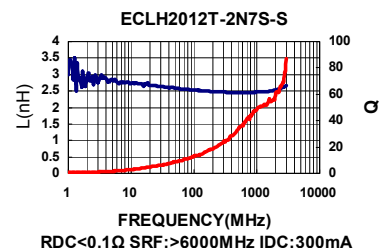
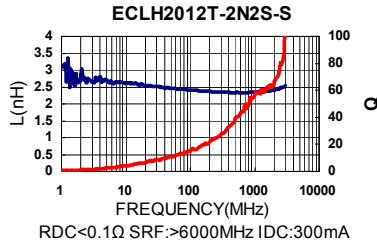
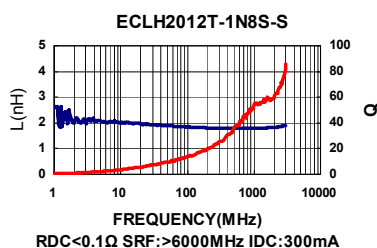
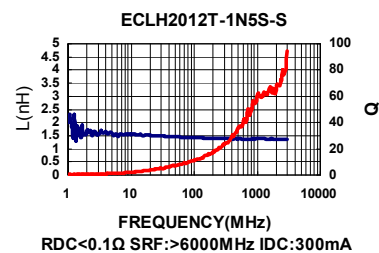
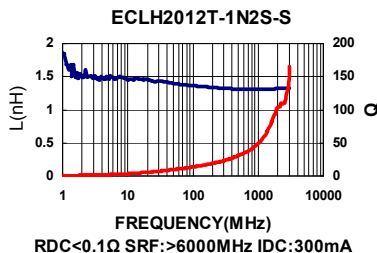
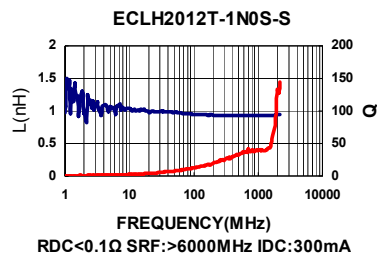
Electrical Characteristics

Part Number	Inductance (nH)	Tolerance	Q Min at		SRF (MHz) Typ	DC Resistance (Ω) Max	IDC (mA) Max
	at 100MHz		50MHz	100MHz			
ECLH2012T-1N0□-S	1.0	S		10	> 6000	0.10	300
ECLH2012T-1N2□-S	1.2	S		10	> 6000	0.10	300
ECLH2012T-1N5□-S	1.5	S		10	> 6000	0.10	300
ECLH2012T-1N8□-S	1.8	S		10	> 6000	0.10	300
ECLH2012T-2N2□-S	2.2	S		10	> 6000	0.10	300
ECLH2012T-2N7□-S	2.7	S		12	> 6000	0.10	300
ECLH2012T-3N3□-S	3.3	S / K		12	> 6000	0.13	300
ECLH2012T-3N9□-S	3.9	S / K		12	5400	0.15	300
ECLH2012T-4N7□-S	4.7	S / K		12	4500	0.20	300
ECLH2012T-5N6□-S	5.6	S / K		12	4000	0.23	300
ECLH2012T-6N8□-S	6.8	J / K		15	3650	0.25	300
ECLH2012T-8N2□-S	8.2	J / K		15	3000	0.28	300
ECLH2012T-10N□-S	10	J / K		15	2500	0.30	300
ECLH2012T-12N□-S	12	J / K		15	2450	0.35	300
ECLH2012T-15N□-S	15	J / K		15	2000	0.40	300
ECLH2012T-18N□-S	18	J / K		15	1750	0.45	300
ECLH2012T-22N□-S	22	J / K		15	1700	0.50	300
ECLH2012T-27N□-S	27	J / K		15	1550	0.55	300
ECLH2012T-33N□-S	33	J / K		15	1350	0.60	300
ECLH2012T-39N□-S	39	J / K		18	1300	0.65	300
ECLH2012T-47N□-S	47	J / K		18	1200	0.70	300
ECLH2012T-56N□-S	56	J / K		18	1150	0.75	300
ECLH2012T-68N□-S	68	J / K		18	1000	0.80	300
ECLH2012T-82N□-S	82	J / K		18	850	0.90	300
ECLH2012T-R10□-S	100	J / K		18	730	1.00	300
ECLH2012T-R12□-S	* 120	J / K	13		650	1.20	300
ECLH2012T-R15□-S	* 150	J / K	13		550	1.40	300
ECLH2012T-R18□-S	* 180	J / K	13		500	1.80	300
ECLH2012T-R22□-S	* 220	J / K	12		450	2.00	300
ECLH2012T-R27□-S	* 270	J / K	12		400	2.50	200
ECLH2012T-R33□-S	* 330	J / K	12		380	3.00	200
ECLH2012T-R39□-S	* 390	J / K	10		330	3.50	200
ECLH2012T-R47□-S	* 470	J / K	10		300	4.00	200

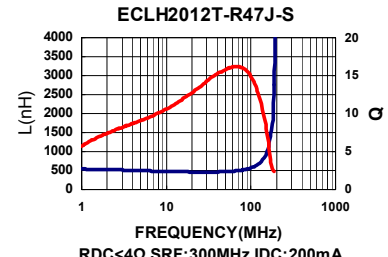
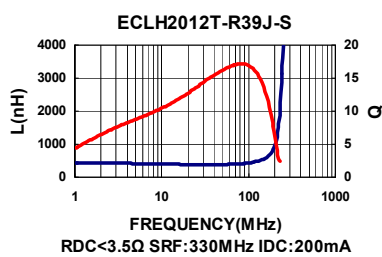
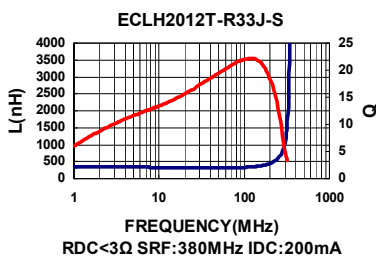
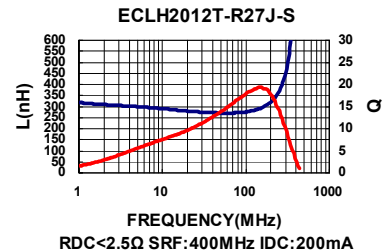
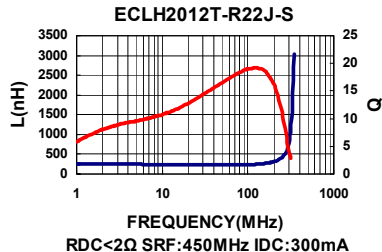
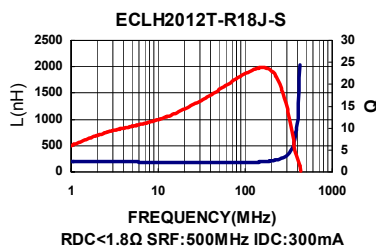
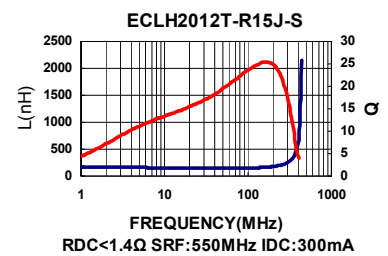
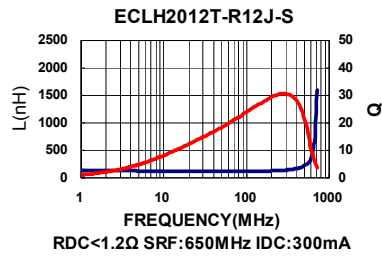
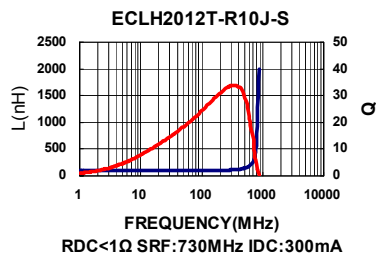
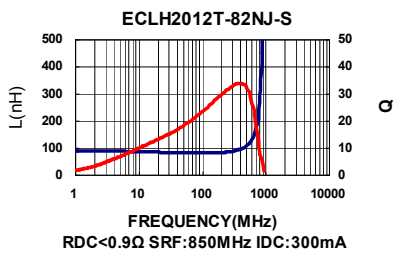
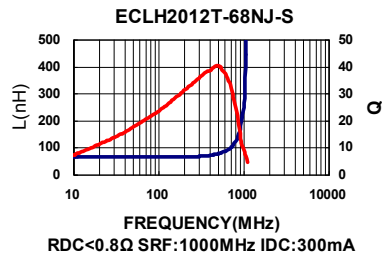
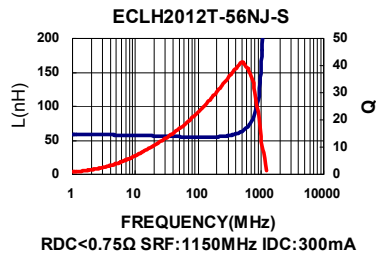
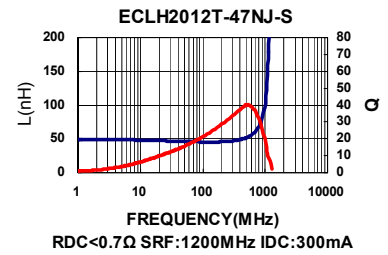
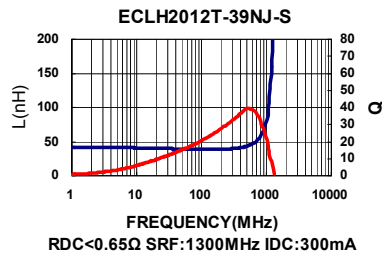
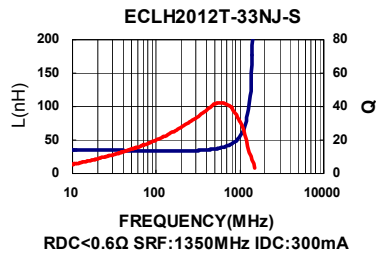
- * at 50MHz
- Tolerance : S = $\pm 0.3\text{nH}$, J = $\pm 5\%$, K = $\pm 10\%$
- Test Instruments : Agilent E4991A : Agilent 16197A
SRF : HP8753D
RDC : HP4338B/ CH502BC

SMD Multilayer Ceramic Chip Inductors – ECLH Series

Test Instruments : HP4291A Material/Impedance Analyzer



Test Instruments : HP4291A Material/Impedance Analyzer



Packaging Specifications

Tape Dimensions

Tape Material

Figure A

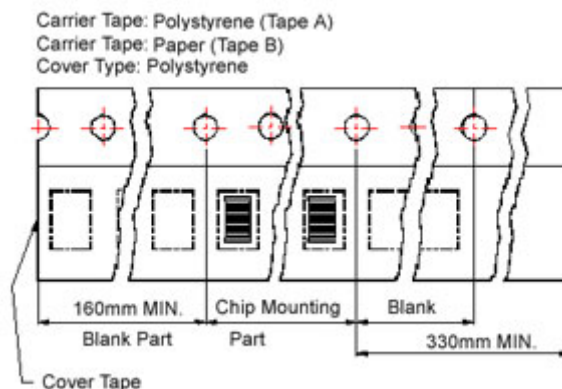
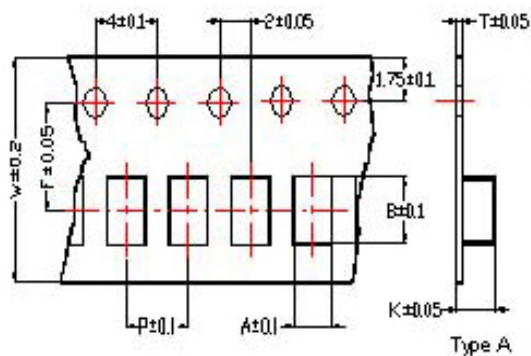
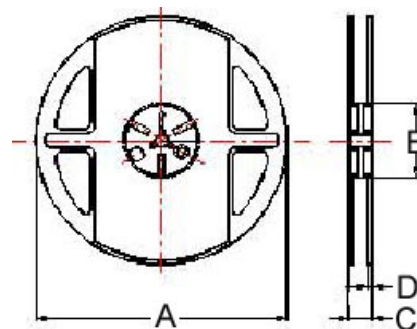
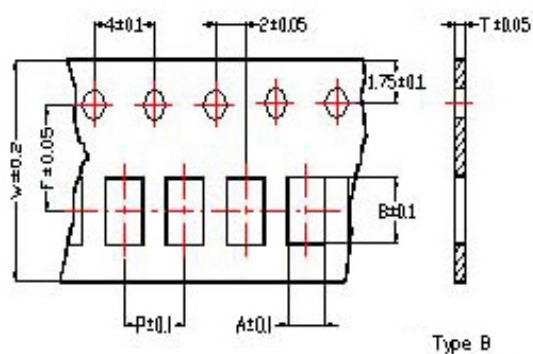


Figure B

Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Recommended Pattern			Quantity PCS / Reel
	A	B	T	W	P	F	K	Tape	A	B	C	D	A	B	C	
ECLH0603	0.37	0.67	0.50	8	2	3.5		B	180	60	13	1.5	0.3	0.75~1.05	0.3	15000
ECLH1005	0.65	1.15	0.60	8	2	3.5		B	178	60	12	1.5	0.4	1.2 ~ 1.4	0.4	10000
ECLH1608	1.00	1.80	0.95	8	4	3.5		B	178	60	12	1.5	0.8	2.4 ~ 3.4	0.6	4000
ECLH2012	1.42	2.25	0.22	8	4	3.5	1.04	A,B	178	60	12	1.5	1.2	3.0 ~ 4.0	1.0	4000