

ELS Series



ELS Series is the newest combo in open type ferrite wire wound chip inductors. The wire wound ferrite construction provides higher SRF, lower DCR and superior Q values than other ferrite chip inductors.

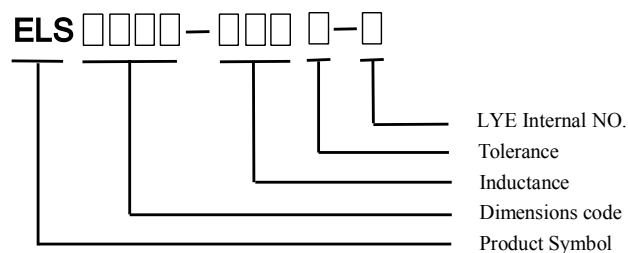
Features

- Ro HS compliant
- Very strong solderability by reflow soldering and soldering iron
- Highly accurate dimensions can be mounted automatically.
- Terminals are highly resistant to pull forces.
- Highly resistant to mechanical shocks and pressure.
- Highly reliable in environments of sudden temperature change and humidity.
- Low DCR & better Q value in ferrite series.

Applications

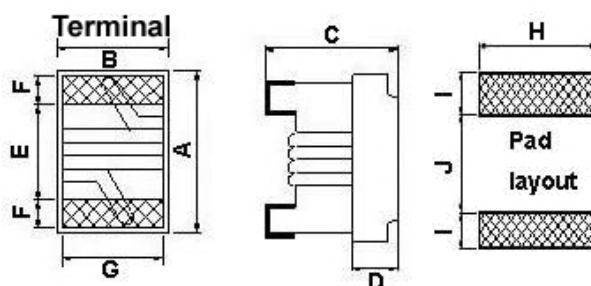
- Telecom and datacom applications such as xDSL, Cable Modem, Set-top Box, CATV filter/tuner, wireless LAN and so on.

Product Identification



Shapes and Dimensions / Recommended Pattern

ELS0603/0805/1008



Dimensions in mm

TYPE	A Max	B Max	C Max	D	E	F	G	H	I	J
ELS0603	1.8	1.25	1.02	0.38	0.86	0.33	0.76	1.02	0.64	0.64
ELS0805	2.4	1.72	1.52	0.70	1.02	0.50	1.27	1.78	1.02	0.76
ELS1008	2.99	2.50	2.20	0.70	1.52	0.51	2.03	2.54	1.02	1.27

SMD Wire Wound Ferrite Chip Inductors - ELS Series

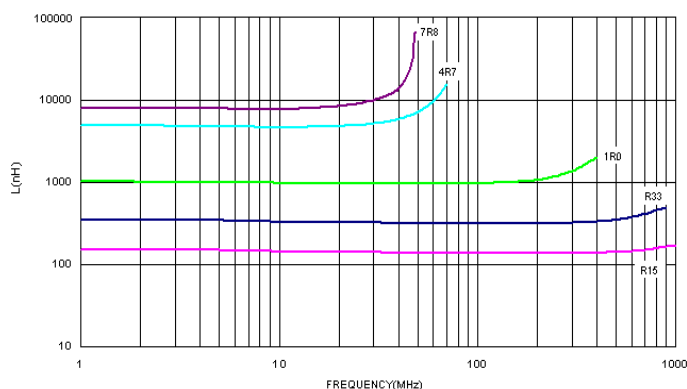
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Typ.	SRF (MHz) Min	Rdc (Ω) Max	Idc (mA)
ELS0603-47N□-N	0.047	7.9	10 / 5	17	1700	0.075	1500
ELS0603-72N□-N	0.072	7.9	10 / 5	17	1700	0.12	1500
ELS0603-R10□-N	0.10	7.9	10 / 5	17	1650	0.13	1500
ELS0603-R12□-N	0.12	7.9	10 / 5	17	1350	0.15	1500
ELS0603-R15□-N	0.15	7.9	10 / 5	17	1350	0.15	1450
ELS0603-R18□-N	0.18	7.9	10 / 5	17	1150	0.15	1400
ELS0603-R22□-N	0.22	7.9	10 / 5	17	1050	0.16	1350
ELS0603-R24□-N	0.24	7.9	10 / 5	17	1050	0.19	1300
ELS0603-R27□-N	0.27	7.9	10 / 5	17	1050	0.30	1050
ELS0603-R33□-N	0.33	7.9	10 / 5	17	850	0.46	1200
ELS0603-R39□-N	0.39	7.9	10 / 5	17	810	0.51	1200
ELS0603-R47□-N	0.47	7.9	10 / 5	17	720	0.62	1050
ELS0603-R56□-N	0.56	7.9	10 / 5	17	600	0.44	850
ELS0603-R68□-N	0.68	7.9	10 / 5	17	600	0.52	850
ELS0603-R78□-N	0.78	7.9	10 / 5	17	460	0.83	850
ELS0603-R82□-N	0.82	7.9	10 / 5	17	480	0.69	750
ELS0603-1R0□-N	1.0	7.9	10 / 5	18	310	0.81	600
ELS0603-1R2□-N	1.2	7.9	10 / 5	17	270	0.87	550
ELS0603-1R5□-N	1.5	7.9	10 / 5	17	270	1.06	540
ELS0603-1R8□-N	1.8	7.9	10 / 5	17	230	1.10	520
ELS0603-2R2□-N	2.2	7.9	10 / 5	17	140	1.20	500
ELS0603-2R7□-N	2.7	7.9	10 / 5	17	105	1.50	480
ELS0603-3R3□-N	3.3	7.9	10 / 5	17	84	1.50	440
ELS0603-3R9□-N	3.9	7.9	10 / 5	17	80	1.60	430
ELS0603-4R7□-N	4.7	7.9	10 / 5	18	69	2.10	420
ELS0603-5R6□-N	5.6	7.9	10 / 5	18	65	2.60	400
ELS0603-6R8□-N	6.8	7.9	10 / 5	19	55	3.10	400
ELS0603-7R8□-N	7.8	7.9	10 / 5	17	47	3.50	400
ELS0603-8R2□-N	8.2	7.9	10 / 5	17	42	3.80	400
ELS0603-100□-N	10	7.9	10 / 5	19	40	4.80	300

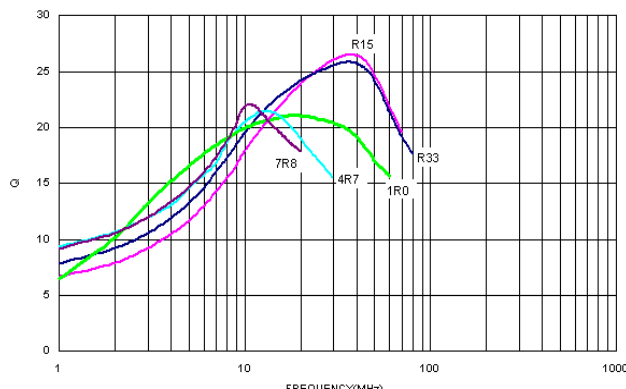
- When ordering, please specify tolerance and packaging codes.
- Tolerance : J = ±5% , K = ±10%
- L , Q : Agilent E4991A+ Agilent HP16197A
- SRF : Agilent E4991A
- Rdc : CH502BC/ HP4338B
- Idc for Inductance drop 10% from its value without current.
- Operating temperature range from -25°C to 105°C. (Including self - temperature rise)

Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical **L** vs. **Frequency**



Typical **Q** vs. **Frequency**



SMD Wire Wound Ferrite Chip Inductors - ELS Series

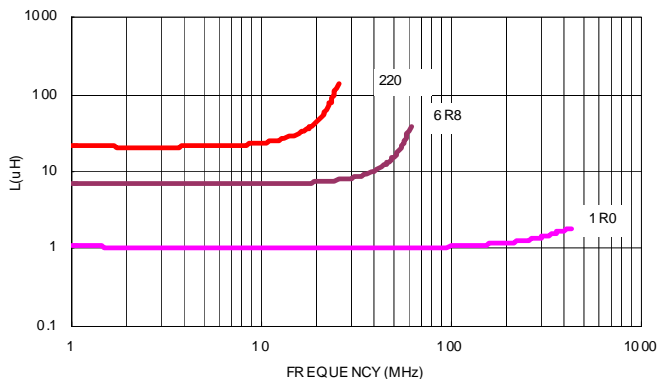
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Typ.	SRF (MHz) Min	Rdc (Ω) Max	Idc (mA)
ELS0805-78N□-N	0.078	7.9	10 / 5	19	1440	0.06	2000
ELS0805-R11□-N	0.11	7.9	10 / 5	19	1200	0.07	2000
ELS0805-R47□-N	0.47	7.9	10 / 5	19	480	0.40	800
ELS0805-R56□-N	0.56	7.9	10 / 5	19	480	0.40	800
ELS0805-R68□-N	0.68	7.9	10 / 5	20	480	0.40	800
ELS0805-1R0□-N	1.0	7.9	10 / 5	20	400	0.69	700
ELS0805-1R5□-N	1.5	7.9	10 / 5	20	330	0.83	700
ELS0805-1R8□-N	1.8	7.9	10 / 5	20	300	1.00	650
ELS0805-2R2□-N	2.2	7.9	10 / 5	20	250	1.10	650
ELS0805-2R7□-N	2.7	7.9	10 / 5	23	200	1.25	650
ELS0805-3R3□-N	3.3	7.9	10 / 5	23	160	1.45	650
ELS0805-3R9□-N	3.9	7.9	10 / 5	23	90	1.50	600
ELS0805-4R7□-N	4.7	7.9	10 / 5	20	70	1.60	530
ELS0805-5R6□-N	5.6	7.9	10 / 5	20	65	1.70	500
ELS0805-6R8□-N	6.8	7.9	10 / 5	20	45	1.95	470
ELS0805-8R2□-N	8.2	2.5	10 / 5	16	45	2.10	450
ELS0805-100□-N	10	2.5	10 / 5	16	40	2.40	400
ELS0805-120□-N	12	2.5	10 / 5	16	38	3.20	360
ELS0805-150□-N	15	2.5	10 / 5	16	35	3.55	350
ELS0805-180□-N	18	2.5	10 / 5	16	25	4.90	300
ELS0805-220□-N	22	2.5	10 / 5	16	20	5.45	270
ELS0805-270□-N	27	2.5	10 / 5	16	19	7.80	240
ELS0805-470□-N	47	2.5	10 / 5	16	15	14.50	180

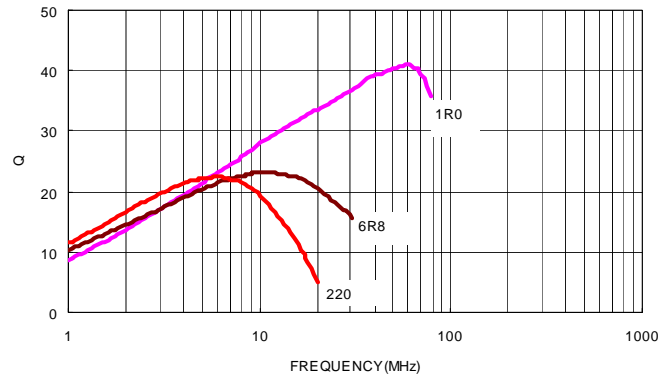
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Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



SMD Wire Wound Ferrite Chip Inductors – ELS Series

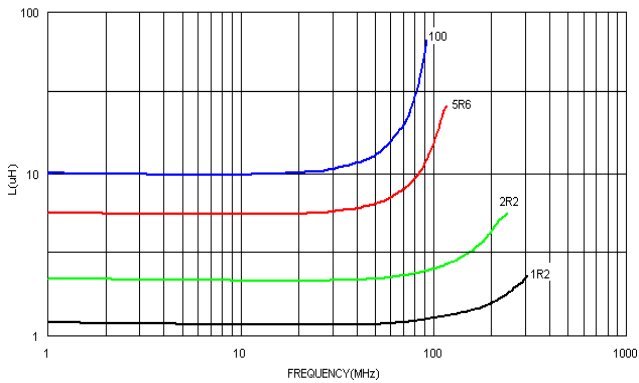
Electrical Characteristics

Part Number	Inductance (μ H)	Test Frequency (MHz)	Tolerance (\pm %)	Q Typ	SRF (MHz) Min	Rdc (Ω) Max	Idc (mA)
				25MHz			
ELS1008-1R2□-N	1.2	7.9	10 / 5	12	350	0.50	1200
ELS1008-1R5□-N	1.5	7.9	10 / 5	12	300	0.65	1200
ELS1008-1R8□-N	1.8	7.9	10 / 5	12	280	0.75	1050
ELS1008-2R2□-N	2.2	7.9	10 / 5	12	250	0.90	950
ELS1008-2R7□-N	2.7	7.9	10 / 5	12	200	1.00	950
ELS1008-3R3□-N	3.3	7.9	10 / 5	12	200	1.15	900
ELS1008-3R9□-N	3.9	7.9	10 / 5	12	170	1.25	850
ELS1008-4R7□-N	4.7	7.9	10 / 5	12	130	1.35	700
ELS1008-5R6□-N	5.6	7.9	10 / 5	12	110	1.45	700
ELS1008-6R8□-N	6.8	7.9	10 / 5	12	105	1.60	600
ELS1008-8R2□-N	8.2	7.9	10 / 5	12	90	1.80	550
ELS1008-100□-N	10.0	7.9	10 / 5	12	85	2.40	500

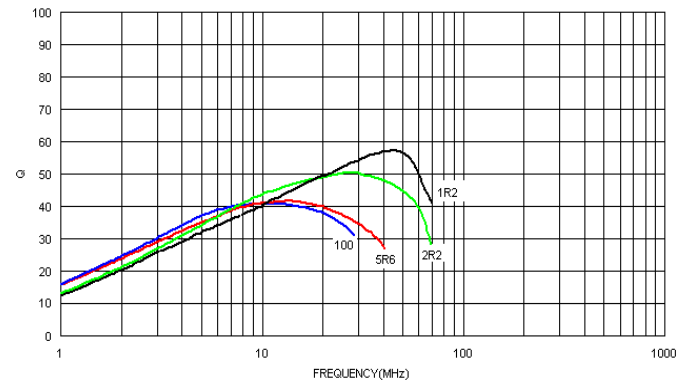
- When ordering, please specify tolerance and packaging codes.
- Tolerance : J = $\pm 5\%$, K = $\pm 10\%$
- L /Q: Agilent/HP4291A+ Agilent/HP16197A
- SRF: Agilent/HP4291A
- Rdc: CH502BC/HP4338B
- Idc for Inductance drop 10% from its value without current
- Operating temperature range from -25°C to 105°C . (Including self - temperature rise)

Test Instruments : HP4291A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency

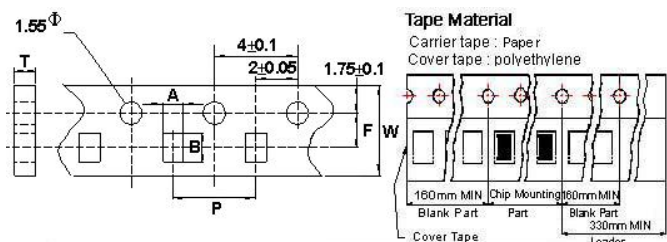


SMD Wire Wound Ferrite Chip Inductors - ELS Series

Packaging Specifications

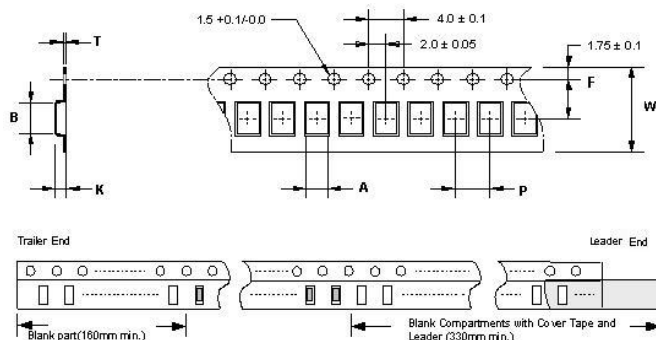
Tape Dimensions

Figure 1

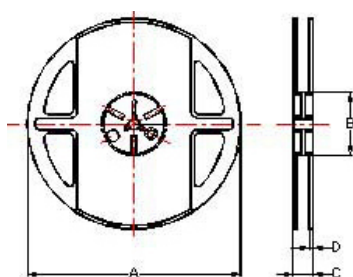


Reel Dimensions

Figure 2



Reel Dimensions



Dimensions in mm

TYPE	Fig.	Tape Dimensions							Reel Dimensions				Quantity PCS / REEL
		A	B	T	W	P	F	K	A	B	C	D	
ELS0603	1	1.30	2.00	0.97	8	4	3.5	-	178	60	12	1.5	4000
ELS0805	2	1.60	2.42	0.22	8	4	3.5	1.45	178	60	12	1.5	2000
ELS1008	2	2.61	2.93	0.26	8	4	3.5	2.25	178	60	12	1.5	2000