

WLS Series



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

Features

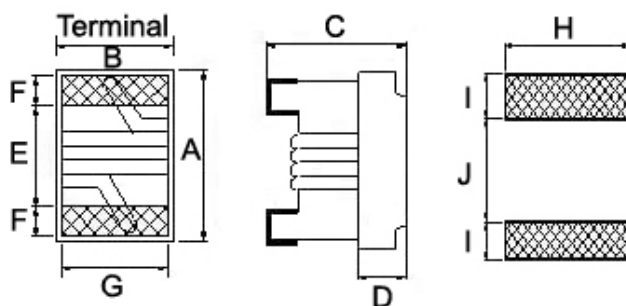
- RoHS compliant
- Very strong solderability by reflow soldering and soldering iron
- Highly accurate dimensions
- Can be mounted automatically
- Terminals are highly resistant to external forces
- Highly resistant to mechanical shocks and pressure
- Highly reliable in environments of sudden temperature 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, etc

Product Identification

Shape and Dimensions / Recommended Pattern



Dimensions in mm

TYPE	A Max	B Max	C Max	D	E	F	G	H	I	J
WLS0603	1.8	1.25	1.02	0.38	0.86	0.33	0.76	1.02	0.64	0.64
WLS0805	2.4	1.72	1.52	0.70	1.02	0.50	1.27	1.78	1.02	0.76
WLS1008	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 - WLS

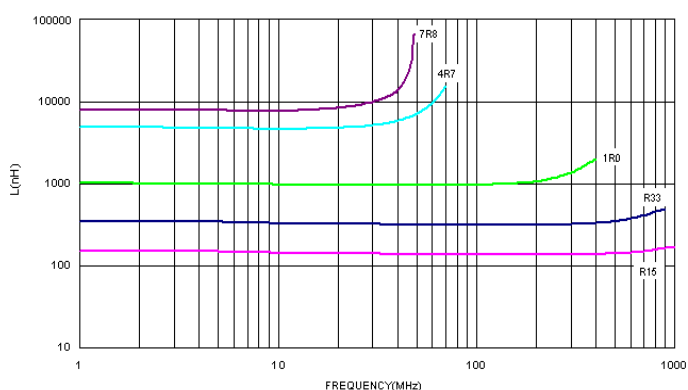
Series Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Typ.	SRF (MHz) Min	Rdc (Ω) Max	Idc (mA)	Color
WLS0603-47N□	0.047	7.9	10 / 5	17	1700	0.075	1500	Black
WLS0603-72N□	0.072	7.9	10 / 5	17	1700	0.12	1500	Brown
WLS0603-R10□	0.10	7.9	10 / 5	17	1650	0.13	1500	Red
WLS0603-R12□	0.12	7.9	10 / 5	17	1350	0.15	1500	Orange
WLS0603-R15□	0.15	7.9	10 / 5	17	1350	0.15	1450	Yellow
WLS0603-R18□	0.18	7.9	10 / 5	17	1150	0.15	1400	Green
WLS0603-R22□	0.22	7.9	10 / 5	17	1050	0.16	1350	Blue
WLS0603-R24□	0.24	7.9	10 / 5	17	1050	0.19	1300	Violet
WLS0603-R27□	0.27	7.9	10 / 5	17	1050	0.30	1050	Gray
WLS0603-R33□	0.33	7.9	10 / 5	17	850	0.46	1200	White
WLS0603-R39□	0.39	7.9	10 / 5	17	810	0.51	1200	Black
WLS0603-R47□	0.47	7.9	10 / 5	17	720	0.62	1050	Brown
WLS0603-R56□	0.56	7.9	10 / 5	17	600	0.44	850	Red
WLS0603-R68□	0.68	7.9	10 / 5	17	600	0.52	850	Orange
WLS0603-R78□	0.78	7.9	10 / 5	17	460	0.83	850	Yellow
WLS0603-R82□	0.82	7.9	10 / 5	17	480	0.69	750	Green
WLS0603-1R0□	1.0	7.9	10 / 5	18	310	0.81	600	Blue
WLS0603-1R2□	1.2	7.9	10 / 5	17	270	0.87	550	Violet
WLS0603-1R5□	1.5	7.9	10 / 5	17	270	1.06	540	Gray
WLS0603-1R8□	1.8	7.9	10 / 5	17	230	1.10	520	White
WLS0603-2R2□	2.2	7.9	10 / 5	17	140	1.20	500	Black
WLS0603-2R7□	2.7	7.9	10 / 5	17	105	1.50	480	Brown
WLS0603-3R3□	3.3	7.9	10 / 5	17	84	1.50	440	Red
WLS0603-3R9□	3.9	7.9	10 / 5	17	80	1.60	430	Orange
WLS0603-4R7□	4.7	7.9	10 / 5	18	69	2.10	420	Yellow
WLS0603-5R6□	5.6	7.9	10 / 5	18	65	2.60	400	Green
WLS0603-6R8□	6.8	7.9	10 / 5	19	55	3.10	400	Blue
WLS0603-7R8□	7.8	7.9	10 / 5	17	47	3.50	400	Violet
WLS0603-8R2□	8.2	7.9	10 / 5	17	42	3.80	400	Gray
WLS0603-100□	10	7.9	10 / 5	19	40	4.80	300	White

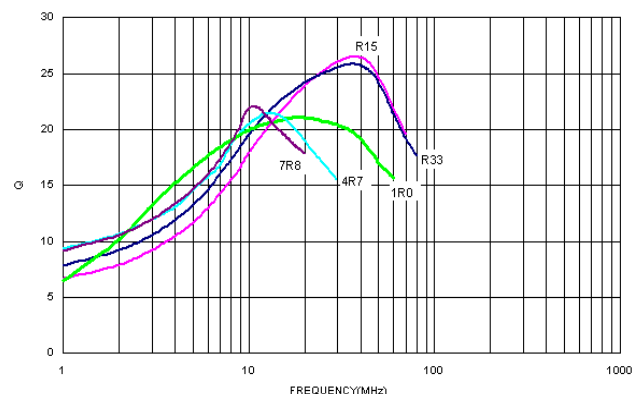
- When ordering, please specify tolerance and packaging codes.
- Tolerance : J = ±5% , K = ±10%
- L , Q : Agilent E4991A+ Agilent HP16197A
- SRF : Agilent E4991A
- Rdc : CH502BC/ HP4338B
- Idc for Inductance drop 10% from its value without current.
- Operating temperature range from -25°C to 105°C. (Including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

Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



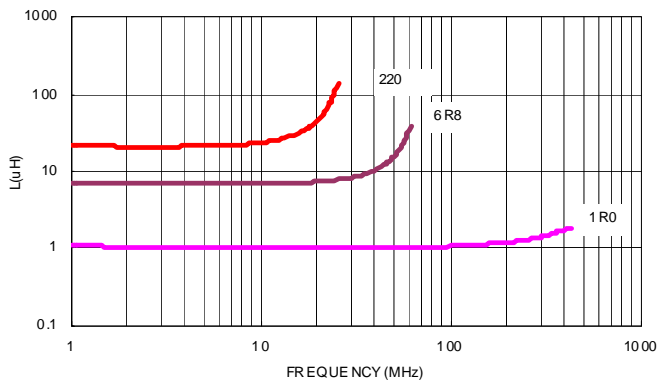
Series Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Typ.	SRF (MHz) Min	Rdc (Ω) Max	Idc (mA)	Color
WLS0805-78N□	0.078	7.9	10 / 5	19	1440	0.06	2000	Black
WLS0805-R11□	0.11	7.9	10 / 5	19	1200	0.07	2000	Brown
WLS0805-R47□	0.47	7.9	10 / 5	19	480	0.40	800	Red
WLS0805-R56□	0.56	7.9	10 / 5	19	480	0.40	800	Yellow
WLS0805-R68□	0.68	7.9	10 / 5	20	480	0.40	800	Orange
WLS0805-1R0□	1.0	7.9	10 / 5	20	400	0.69	700	Yellow
WLS0805-1R5□	1.5	7.9	10 / 5	20	330	0.83	700	Green
WLS0805-1R8□	1.8	7.9	10 / 5	20	300	1.00	650	Blue
WLS0805-2R2□	2.2	7.9	10 / 5	20	250	1.10	650	Violet
WLS0805-2R7□	2.7	7.9	10 / 5	23	200	1.25	650	Gray
WLS0805-3R3□	3.3	7.9	10 / 5	23	160	1.45	650	White
WLS0805-3R9□	3.9	7.9	10 / 5	23	90	1.50	600	Black
WLS0805-4R7□	4.7	7.9	10 / 5	20	70	1.60	530	Brown
WLS0805-5R6□	5.6	7.9	10 / 5	20	65	1.70	500	Red
WLS0805-6R8□	6.8	7.9	10 / 5	20	45	1.95	470	Orange
WLS0805-8R2□	8.2	2.5	10 / 5	16	45	2.10	450	Yellow
WLS0805-100□	10	2.5	10 / 5	16	40	2.40	400	Green
WLS0805-120□	12	2.5	10 / 5	16	38	3.20	360	Red
WLS0805-150□	15	2.5	10 / 5	16	30	3.55	350	Blue
WLS0805-180□	18	2.5	10 / 5	16	25	4.90	300	Orange
WLS0805-220□	22	2.5	10 / 5	16	20	5.45	270	Violet
WLS0805-270□	27	2.5	10 / 5	16	19	7.80	240	Gray
WLS0805-470□	47	2.5	10 / 5	16	15	14.50	180	Brown

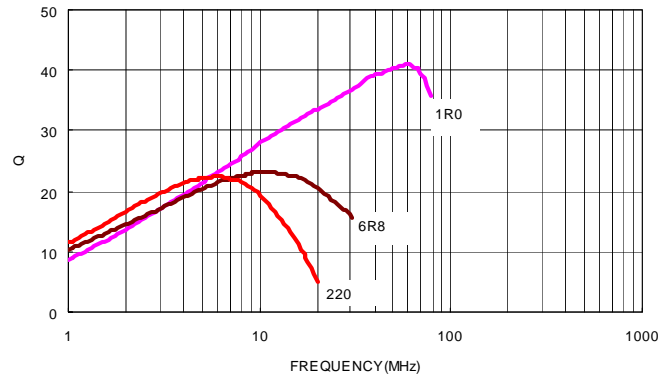
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Typical Q vs. Frequency



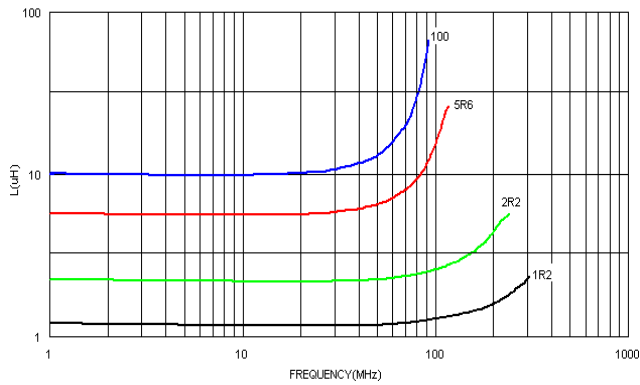
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Typ.			SRF (MHz) Min	Rdc (Ω) Max	Idc (mA)	Color Coding		
				7.9MHz	25MHz	50MHz				1 ST	2 ND	3 RD
WLS1008-1R2□	1.2	7.9	10 / 5	35	47	55	350	0.50	1200	Brown	Red	Red
WLS1008-1R5□	1.5	7.9	10 / 5	38	53	58	300	0.65	1200	Brown	Green	Red
WLS1008-1R8□	1.8	7.9	10 / 5	34	47	54	280	0.75	1050	Brown	Gray	Red
WLS1008-2R2□	2.2	7.9	10 / 5	34	43	48	250	0.90	950	Red	Red	Red
WLS1008-2R7□	2.7	7.9	10 / 5	38	49	51	200	1.00	950	Red	Violet	Red
WLS1008-3R3□	3.3	7.9	10 / 5	42	57	58	200	1.15	900	Orange	Orange	Red
WLS1008-3R9□	3.9	7.9	10 / 5	37	46	47	170	1.25	850	Orange	White	Red
WLS1008-4R7□	4.7	7.9	10 / 5	37	43	38	130	1.35	700	Yellow	Violet	Red
WLS1008-5R6□	5.6	7.9	10 / 5	36	40	29	110	1.45	700	Green	Blue	Red
WLS1008-6R8□	6.8	7.9	10 / 5	33	39	33	105	1.60	600	Blue	Gray	Red
WLS1008-8R2□	8.2	7.9	10 / 5	40	43	28	90	1.80	550	Gray	Red	Red
WLS1008-100□	10.0	7.9	10 / 5	40	41	25	85	2.40	500	Brown	Black	Orange

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