

SMD Wire Wound Ceramic Chip Inductors - WCS Series



WCS-M Series For High Frequency Applications



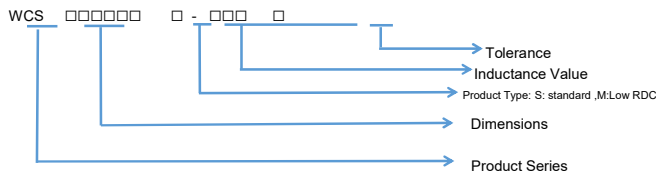
Features:

- RoHS Compliant
- Ceramic body and wire wound construction provide high SRFs
- Exceptional Q values even at high frequencies
- Ceramic construction delivers the highest possible SRFs as well as high Q value
- Low DC resistance design supports low loss, high output and low power consumption

Applications:

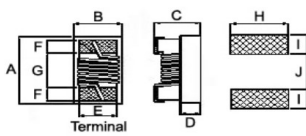
- RF products for cellular phone
- GPS receiver
- Base Station
- Repeater
- Wireless LAN/ mouse/ keyboard/ earphone
- Remote control
- Security system and other RF modules

Product Identification

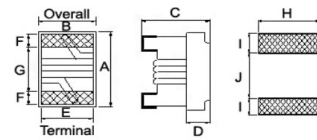


Dimensions-mm

WCS120707M



WCS161008M



Dimensions-mm

TYPE	A	B	C	D	E	F	G
WCS120707M	1.19Max.	0.70Max.	0.66Max.	0.25	0.51	0.23	0.66
WCS161008M	1.6+0.2/0.1	1.02±0.1	0.82+0.2/-0.1	0.35	0.70	0.30	0.95

Recommended Pad Layout

TYPE	H	I	J
WCS120707M	0.66	0.36	0.46
WCS161008M	1.02	0.64	0.64

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Electrical Characteristics

Part No.	Inductance (nH)	Tolerance (%)	L Test Freq. (MHz)	Q Min.	Q Test Freq. (MHz)	SRF (GHz)Min.	RDC (Ω)Max.	Irms (mA)Max.
WCS120707M-1N5□	1.5	±0.1nH/±0.2nH/±0.5 nH	100	10	250	18.0	0.03	1000
WCS120707M-2N4□	2.4	±0.1nH/±0.2nH/±0.5 nH	100	20	250	15.0	0.05	850
WCS120707M-2N5□	2.5	±0.1nH/±0.2nH/±0.5 nH	100	20	250	15.0	0.05	850
WCS120707M-2N7□	2.7	±0.1nH/±0.2nH/±0.5 nH	100	20	250	15.0	0.05	850
WCS120707M-2N9□	2.9	±0.1nH/±0.2nH/±0.5 nH	100	20	250	15.0	0.07	750
WCS120707M-3N9□	3.9	3/5	100	25	250	10.0	0.07	750
WCS120707M-4N1□	4.1	3/5	100	25	250	10.0	0.07	750
WCS120707M-4N3□	4.3	3/5	100	25	250	10.0	0.07	750
WCS120707M-4N7□	4.7	3/5	100	25	250	8.0	0.07	750
WCS120707M-5N1□	5.1	3/5	100	25 typ	250	8.0	0.12	600
WCS120707M-5N8□	5.8	3/5	100	25	250	8.0	0.12	700
WCS120707M-6N2□	6.2	3/5	100	25	250	8.0	0.09	700
WCS120707M-6N8□	6.8	3/5	100	25	250	6.0	0.09	700
WCS120707M-7N3□	7.3	3/5	100	25	250	6.0	0.13	570
WCS120707M-7N5□	7.5	3/5	100	25	250	6.0	0.13	570
WCS120707M-8N2□	8.2	3/5	100	25	250	5.5	0.14	540
WCS120707M-8N7□	8.7	3/5	100	25	250	5.5	0.14	540
WCS120707M-9N1□	9.1	3/5	100	25	250	5.5	0.14	540
WCS120707M-9N5□	9.5	3/5	100	25	250	5.5	0.14	540
WCS120707M-10N□	10	2/3/5	100	25	250	5.5	0.17	500
WCS120707M-11N□	11	2/3/5	100	30	250	5.5	0.14	500
WCS120707M-12N□	12	2/3/5	100	30	250	5.5	0.14	500
WCS120707M-13N□	13	2/3/5	100	25	250	5.0	0.21	430
WCS120707M-15N□	15	2/3/5	100	30	250	5.0	0.16	460
WCS120707M-16N□	16	2/3/5	100	25	250	4.5	0.24	370
WCS120707M-18N□	18	2/3/5	100	25	250	4.5	0.27	370
WCS120707M-19N□	19	2/3/5	100	25	250	4.5	0.27	370
WCS120707M-20N□	20	2/3/5	100	25	250	4.0	0.27	370
WCS120707M-22N□	22	2/3/5	100	25	250	4.0	0.3	310
WCS120707M-23N□	23	2/3/5	100	25	250	3.8	0.3	310
WCS120707M-24N□	24	2/3/5	100	25	250	3.5	0.52	280
WCS120707M-27N□	27	2/3/5	100	25	250	3.5	0.52	280
WCS120707M-30N□	30	2/3/5	100	25	250	3.3	0.58	270
WCS120707M-33N□	33	2/3/5	100	25	250	3.2	0.63	260
WCS120707M-36N□	36	2/3/5	100	25	250	3.1	0.63	260
WCS120707M-39N□	39	2/3/5	100	25	250	3.0	0.70	250
WCS120707M-40N□	40	2/3/5	100	25	250	3.0	0.70	250
WCS120707M-47N□	47	2/3/5	100	25	200	2.9	1.08	210
WCS120707M-51N□	51	2/3/5	100	25	200	2.85	1.08	210
WCS120707M-56N□	56	2/3/5	100	25	200	2.80	1.17	200
WCS120707M-62N□	62	2/3/5	100	20	200	2.60	1.82	145
WCS120707M-68N□	68	2/3/5	100	20	200	2.50	1.96	140
WCS120707M-72N□	72	2/3/5	100	20	150	2.50	2.10	135
WCS120707M-75N□	75	2/3/5	100	20	150	2.40	2.10	135
WCS120707M-82N□	82	2/3/5	100	20	150	2.30	2.24	130
WCS120707M-91N□	91	2/3/5	100	20	150	2.10	2.38	125
WCS120707M-R10□	100	2/3/5	100	20	150	1.50	2.52	120
WCS120707M-R12□	120	2/3/5	100	20	150	1.00	2.66	110

Note: 1. When ordering, please specify tolerance code. Tolerance: B=±0.1nH, C=±0.2nH, D=±0.5nH, G=±2%, H=±3%, J=±5%

2. Operating temperature range - 40°C ~ 125°C (Including self - temperature rise)

3. I_{rms} for a 15°C temperature rise from 25°C ambient with current

4. Measure Equipment :

L & Q : Agilent E4991A+Agilent HP16197A

SRF : Agilent HP8753D/Agilent HP8722ES

RDC : Chroma 16502

I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

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Part No.	Inductance (nH)	Tolerance (±%)	L Test Freq. (MHz)	Q Min.	Q Test Freq. (MHz)	SRF (GHz)Min.	RDC (Ω)Max.	Irms (mA)Max.
WCS161008M-2N2□	2.2	±0.1nH/±0.2nH/±0.5 nH	100	16	250	6.0	0.049	700
WCS161008M-3N6□	3.6	3/5	100	25	250	6.0	0.059	850
WCS161008M-3N9□	3.9	3/5	100	35	250	6.0	0.059	850
WCS161008M-4N3□	4.3	3/5	100	35	250	6.0	0.059	850
WCS161008M-4N7□	4.7	3/5	100	35	250	6.0	0.059	850
WCS161008M-5N6□	5.6	3/5	100	35	250	6.0	0.082	750
WCS161008M-6N2□	6.2	3/5	100	35	250	6.0	0.082	750
WCS161008M-6N8□	6.8	3/5	100	35	250	6.0	0.082	750
WCS161008M-7N5□	7.5	3/5	100	35	250	6.0	0.082	750
WCS161008M-8N2□	8.2	3/5	100	35	250	6.0	0.110	650
WCS161008M-8N7□	8.7	3/5	100	35	250	6.0	0.110	650
WCS161008M-9N1□	9.1	3/5	100	35	250	6.0	0.110	650
WCS161008M-9N5□	9.5	3/5	100	35	250	6.0	0.110	650
WCS161008M-10N□	10	2/3/5	100	35	250	6.0	0.110	650
WCS161008M-11N□	11	2/3/5	100	35	250	6.0	0.110	650
WCS161008M-12N□	12	2/3/5	100	35	250	6.0	0.130	600
WCS161008M-13N□	13	2/3/5	100	35	250	6.0	0.130	600
WCS161008M-15N□	15	2/3/5	100	40	250	6.0	0.130	600
WCS161008M-16N□	16	2/3/5	100	40	250	5.5	0.160	550
WCS161008M-18N□	18	2/3/5	100	40	250	5.5	0.160	550
WCS161008M-20N□	20	2/3/5	100	40	250	4.9	0.160	550
WCS161008M-22N□	22	2/3/5	100	40	250	4.6	0.170	500
WCS161008M-24N□	24	2/3/5	100	40	250	3.8	0.210	500
WCS161008M-27N□	27	2/3/5	100	40	250	3.7	0.210	440
WCS161008M-30N□	30	2/3/5	100	40	250	3.3	0.230	420
WCS161008M-33N□	33	2/3/5	100	40	250	3.2	0.230	420
WCS161008M-36N□	36	2/3/5	100	40	250	2.9	0.260	400
WCS161008M-39N□	39	2/3/5	100	40	250	2.8	0.260	400
WCS161008M-43N□	43	2/3/5	100	40	200	2.7	0.290	380
WCS161008M-47N□	47	2/3/5	100	38	200	2.6	0.290	380
WCS161008M-51N□	51	2/3/5	100	38	200	2.5	0.330	370
WCS161008M-56N□	56	2/3/5	100	38	200	2.4	0.350	360
WCS161008M-62N□	62	2/3/5	100	38	200	2.3	0.510	280
WCS161008M-68N□	68	2/3/5	100	38	200	2.2	0.380	340
WCS161008M-72N□	72	2/3/5	100	34	150	2.1	0.560	270
WCS161008M-75N□	75	2/3/5	100	34	150	2.05	0.560	270
WCS161008M-82N□	82	2/3/5	100	34	150	2.00	0.600	250
WCS161008M-91N□	91	2/3/5	100	34	150	1.90	0.640	230
WCS161008M-R10□	100	2/3/5	100	34	150	1.80	0.680	220
WCS161008M-R11□	110	2/3/5	100	32	150	1.70	1.200	200
WCS161008M-R12□	120	2/3/5	100	32	150	1.60	1.300	180
WCS161008M-R13□	130	2/3/5	100	32	150	1.45	1.400	170
WCS161008M-R15□	150	2/3/5	100	32	150	1.40	1.500	160
WCS161008M-R16□	160	2/3/5	100	32	150	1.35	2.100	150
WCS161008M-R18□	180	2/3/5	100	25	100	1.30	2.200	140
WCS161008M-R20□	200	2/3/5	100	25	100	1.25	2.400	120
WCS161008M-R22□	220	2/3/5	100	25	100	1.20	2.500	120
WCS161008M-R27□	270	2/3/5	100	30	100	0.96	3.400	110
WCS161008M-R33□	330	2/3/5	100	30	100	0.80	5.500	85
WCS161008M-R39□	390	2/3/5	100	30	100	0.80	6.200	80
WCS161008M-R47□	470	2/3/5	100	30	100	0.70	7.000	75

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