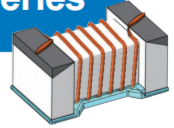


Wire Wound Chip Ceramic Inductor – MWSD – CP/CH Series



Operating Temp ◆ $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Features

- ◆ Small chip suitable for surface mounting
- ◆ High Q value and high self-resonant frequency with ceramic material
- ◆ Tight inductance tolerance and stable inductance at high frequency
- ◆ Lower DCR, higher Q and larger current than MWSD-C series
- ◆ Inductance of MWSD-CH series is larger than MWSD-CP series

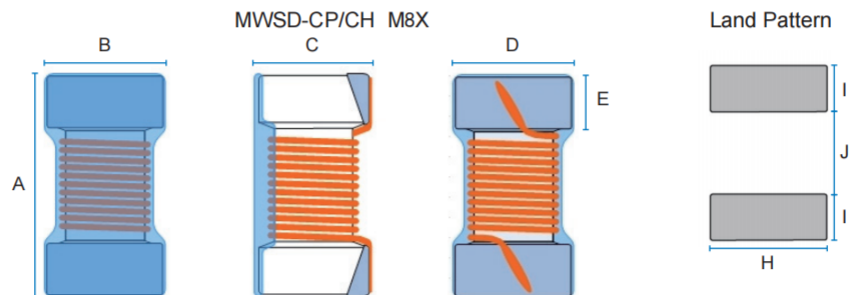
Applications

- ◆ High frequency line of communication equipment and wireless module
- ◆ Mobile phones, smart watches and other portable electronic devices
- ◆ Bluetooth, W-LAN, Broadband network

Product Identification

1	2	3	4	5	6	7
MWSD	1005	C	P	10N	□	T
1 Type MWSD Wire Wound Chip Inductor		2 External Dimensions 1005 [0402] 1.0×0.6 1608 [0603] 1.6×0.8		3 Material Code C Ceramic		
4 Feature Type P Large Current & High Q H Large Inductance & Large Current & High Q		5 Nominal Inductance Example Nominal Value 10N 10nH R10 100nH		6 Inductance Tolerance B $\pm 0.1\text{nH}$ C $\pm 0.2\text{nH}$ S $\pm 0.3\text{nH}$ D $\pm 0.5\text{nH}$ G $\pm 2\%$ H $\pm 3\%$ J $\pm 5\%$ K $\pm 10\%$		
		7 Packing T Tape & Reel				

Shape and Dimensions



Unit mm

Series	A	B	C	D	E	H Ref.	I Ref.	J Ref.
MWSD1005CP	1.10 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.5 ± 0.1	0.2 ± 0.1	0.65	0.35	0.50
MWSD1005CH	1.10 ± 0.1	0.6 ± 0.1	0.6 ± 0.1	0.5 ± 0.1	0.15 ± 0.1	0.65	0.35	0.50
MWSD1608CP	1.60 ± 0.2	1.0 ± 0.2	0.8 ± 0.2	0.8	0.3	1.02	0.64	0.64

Specifications

MWSD1005CP TYPE

Part Number	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
Units	nH	-	-	MHz	MHz	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I _r
MWSD1005CP1N0 □ T	1.0	C,S	20	250	16000	0.030	2300
MWSD1005CP2N0 □ T	2.0	B,C,S,D,J,K	24	250	15200	0.038	2100
MWSD1005CP2N2 □ T	2.2	B,C,S,D,J,K	25	250	15100	0.038	2100
MWSD1005CP2N4 □ T	2.4	S,D	23	250	14000	0.042	2000
MWSD1005CP2N7 □ T	2.7	C,S,D,J,K	24	250	13000	0.056	1500
MWSD1005CP3N3 □ T	3.3	B,C,S,D,J,K	28	250	12800	0.045	1700
MWSD1005CP3N6 □ T	3.6	C,S,D,J,K	28	250	11700	0.045	1700
MWSD1005CP3N9 □ T	3.9	C,S,D,J,K	28	250	9500	0.045	1700
MWSD1005CP4N3 □ T	4.3	B,C,S,D,H,J,K	27	250	7150	0.050	1600
MWSD1005CP4N7 □ T	4.7	C,S,D,H,J,K	23	250	6850	0.075	1500
MWSD1005CP5N1 □ T	5.1	B,C,S,D,H,J,K	20	250	6800	0.100	1200
MWSD1005CP5N6 □ T	5.6	B,C,S,D,H,J,K	29	250	6500	0.048	1600
MWSD1005CP6N2 □ T	6.2	B,C,S,D,H,J,K	29	250	5800	0.050	1600
MWSD1005CP6N8 □ T	6.8	G,H,J,K	28	250	5800	0.070	1500
MWSD1005CP7N5 □ T	7.5	G,H,J,K	26	250	5400	0.080	1400
MWSD1005CP8N2 □ T	8.2	G,H,J,K	28	250	5400	0.065	1500
MWSD1005CP8N7 □ T	8.7	G,H,J,K	29	250	5000	0.070	1500
MWSD1005CP9N0 □ T	9.0	G,H,J,K	27	250	5000	0.080	1400
MWSD1005CP9N1 □ T	9.1	G,H,J,K	27	250	5000	0.080	1400
MWSD1005CP9N5 □ T	9.5	G,H,J,K	28	250	4700	0.075	1400
MWSD1005CP10N □ T	10	G,H,J,K	26	250	4700	0.085	1300
MWSD1005CP11N □ T	11	G,H,J,K	29	250	4700	0.070	1400
MWSD1005CP12N □ T	12	G,H,J,K	28	250	4400	0.100	1200
MWSD1005CP13N □ T	13	G,H,J,K	27	250	4200	0.140	870
MWSD1005CP15N □ T	15	G,H,J,K	28	250	3900	0.115	1100
MWSD1005CP16N □ T	16	G,H,J,K	27	250	3700	0.130	850
MWSD1005CP17N □ T	17	G,H,J,K	26	250	3700	0.230	650
MWSD1005CP18N □ T	18	G,H,J,K	26	250	3550	0.120	900
MWSD1005CP19N □ T	19	G,H,J,K	26	250	3500	0.145	850
MWSD1005CP20N □ T	20	J,K	27	250	3500	0.155	780
MWSD1005CP21N □ T	21	G,H,J,K	25	250	1700	0.460	450
MWSD1005CP22N □ T	22	G,H,J,K	28	250	3300	0.190	800
MWSD1005CP23N □ T	23	G,H,J,K	28	250	3300	0.160	800
MWSD1005CP24N □ T	24	G,H,J,K	27	250	3150	0.275	700
MWSD1005CP25N □ T	25	G,H,J,K	26	250	3150	0.260	700
MWSD1005CP26N □ T	26	G,H,J,K	27	250	3150	0.275	700
MWSD1005CP27N □ T	27	G,H,J,K	27	250	3200	0.330	450
MWSD1005CP30N □ T	30	G,H,J,K	25	250	2900	0.350	450
MWSD1005CP33N □ T	33	G,H,J,K	28	250	2800	0.330	490
MWSD1005CP36N □ T	36	G,H,J,K	26	250	2800	0.360	480
MWSD1005CP37N □ T	37	G,H,J,K	26	250	2700	0.480	470
MWSD1005CP39N □ T	39	G,H,J,K	28	250	2600	0.430	450
MWSD1005CP40N □ T	40	G,H,J,K	28	250	2600	0.520	450
MWSD1005CP43N □ T	43	G,H,J,K	26	250	2500	0.520	450
MWSD1005CP47N □ T	47	G,H,J,K	28	250	2400	0.580	420
MWSD1005CP51N □ T	51	G,H,J,K	26	250	2300	0.700	360
MWSD1005CP56N □ T	56	G,H,J,K	32	250	2070	0.900	330
MWSD1005CP82N □ T	82	G,H,J,K	31	250	1750	1.100	315

Specifications

MWSD1005CH TYPE

Part Number	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Min.Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
Units	nH	-	-	MHz	MHz	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I _r
MWSD1005CH56N □ T	56	G,H,J,K	31	250/250	2070	0.900	330
MWSD1005CH68N □ T	68	G,H,J,K	31	250/250	1840	1.000	320
MWSD1005CH82N □ T	82	G,H,J,K	31	250/250	1750	1.100	315
MWSD1005CHR10 □ T	100	G,H,J,K	30	250/250	1580	1.200	310
MWSD1005CHR12 □ T	120	G,H,J,K	29	250/250	1250	1.200	310
MWSD1005CHR15 □ T	150	G,H,J,K	29	100/250	1140	2.000	240
MWSD1005CHR16 □ T	160	G,H,J,K	29	100/250	1650	2.400	240
MWSD1005CHR18 □ T	180	G,H,J,K	32	100/250	1080	2.500	240
MWSD1005CHR22 □ T	220	G,H,J,K	32	100/250	960	3.500	160

MWSD1608CP TYPE

Part Number	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Min.Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
Units	nH	-	-	MHz	MHz	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I _r
MWSD1608CP1N8 □ T	1.8	S,D,K	23	250/250	16000	0.033	2100
MWSD1608CP2N2 □ T	2.2	C,S,D,J,K	13	250/250	15000	0.230	900
MWSD1608CP3N3 □ T	3.3	C,S,D,J,K	32	250/250	9600	0.030	1900
MWSD1608CP3N6 □ T	3.6	C,S,D,J,K	40	250/250	9700	0.031	1900
MWSD1608CP3N9 □ T	3.9	C,S,D,J,K	35	250/250	7500	0.039	1600
MWSD1608CP4N3 □ T	4.3	C,S,D,J,K	30	250/250	7500	0.080	1300
MWSD1608CP4N7 □ T	4.7	D,K	26	250/250	7900	0.100	1100
MWSD1608CP5N1 □ T	5.1	C,S,D,J,K	40	250/250	8900	0.036	1700
MWSD1608CP5N6 □ T	5.6	B,C,S,D,J,K	48	250/250	6600	0.040	1700
MWSD1608CP6N0 □ T	6.0	C,S,D,J,K	49	250/250	6000	0.040	1700
MWSD1608CP6N8 □ T	6.8	G,H,J,K	42	250/250	5800	0.042	1400
MWSD1608CP7N2 □ T	7.2	G,H,J,K	43	250/250	5400	0.070	1400
MWSD1608CP7N5 □ T	7.5	G,H,J,K	41	250/250	5300	0.080	1300
MWSD1608CP8N2 □ T	8.2	G,H,J,K	46	250/250	5900	0.054	1400
MWSD1608CP8N7 □ T	8.7	G,H,J,K	46	250/250	5500	0.054	1400
MWSD1608CP9N1 □ T	9.1	G,H,J,K	40	250/250	5100	0.058	1400
MWSD1608CP9N5 □ T	9.5	G,H,J,K	49	250/250	4900	0.053	1400
MWSD1608CP10N □ T	10	G,H,J,K	49	250/250	4300	0.048	1400
MWSD1608CP11N □ T	11	G,H,J,K	41	250/250	4100	0.065	1400
MWSD1608CP12N □ T	12	G,H,J,K	37	250/250	4100	0.115	1100
MWSD1608CP15N □ T	15	G,H,J,K	48	250/250	3600	0.078	1200
MWSD1608CP16N □ T	16	G,H,J,K	48	250/250	3500	0.085	1100
MWSD1608CP18N □ T	18	G,H,J,K	41	250/250	3300	0.070	1200
MWSD1608CP19N □ T	19	G,H,J,K	32	250/250	3200	0.110	1000
MWSD1608CP22N □ T	22	G,H,J,K	44	250/250	3150	0.140	850
MWSD1608CP23N □ T	23	G,H,J,K	40	250/250	3000	0.183	850
MWSD1608CP24N □ T	24	G,H,J,K	42	250/250	2950	0.085	1100
MWSD1608CP27N □ T	27	G,H,J,K	44	250/250	2800	0.200	780
MWSD1608CP30N □ T	30	G,H,J,K	49	250/250	2800	0.160	920
MWSD1608CP33N □ T	33	G,H,J,K	45	250/250	2700	0.220	680
MWSD1608CP36N □ T	36	G,H,J,K	44	250/250	2500	0.225	720
MWSD1608CP39N □ T	39	G,H,J,K	44	250/250	2450	0.250	680
MWSD1608CP43N □ T	43	G,H,J,K	45	250/250	2450	0.225	810
MWSD1608CP47N □ T	47	G,H,J,K	47	200/250	2300	0.240	680
MWSD1608CP51N □ T	51	G,H,J,K	45	200/250	2300	0.280	660

Specifications

MWSD1608CP TYPE

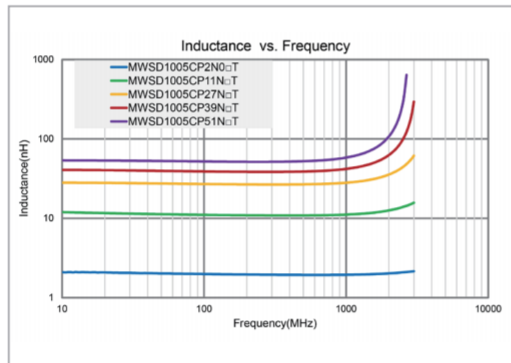
Part Number	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
Units	nH	-	-	MHz	MHz	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I _r
MWSD1608CP56N □ T	56	G,H,J,K	45	200/250	2200	0.300	610
MWSD1608CP68N □ T	68	G,H,J,K	46	200/250	2000	0.350	600
MWSD1608CP72N □ T	72	G,H,J,K	46	150/250	1900	0.420	550
MWSD1608CP75N □ T	75	G,H,J,K	46	150/250	1900	0.520	500
MWSD1608CP82N □ T	82	G,H,J,K	45	150/250	1800	0.460	510
MWSD1608CP91N □ T	91	G,H,J,K	45	150/250	1650	0.580	440
MWSD1608CPR10 □ T	100	G,H,J,K	49	150/250	1700	0.540	470
MWSD1608CPR11 □ T	110	G,H,J,K	47	150/250	1600	0.580	440
MWSD1608CPR12 □ T	120	G,H,J,K	47	150/250	1550	0.720	420
MWSD1608CPR15 □ T	150	J,K	47	150/250	1350	0.820	390
MWSD1608CPR18 □ T	180	G,H,J,K	48	100/250	1300	1.500	310
MWSD1608CPR20 □ T	200	G,H,J,K	47	100/250	1250	2.000	280
MWSD1608CPR21 □ T	210	G,H,J,K	48	100/250	1200	2.000	280
MWSD1608CPR22 □ T	220	G,H,J,K	47	100/250	1100	2.000	280
MWSD1608CPR25 □ T	250	G,H,J,K	45	100/250	1050	3.000	240
MWSD1608CPR27 □ T	270	G,H,J,K	46	100/250	1050	2.250	260
MWSD1608CPR30 □ T	300	G,H,J,K	47	100/250	990	2.800	220
MWSD1608CPR33 □ T	330	G,H,J,K	46	100/250	930	3.600	180
MWSD1608CPR36 □ T	360	G,H,J,K	47	100/250	930	4.600	170
MWSD1608CPR39 □ T	390	G,H,J,K	47	100/250	880	4.770	170

※: Please refer to "Measurement Notice For RF Inductors".

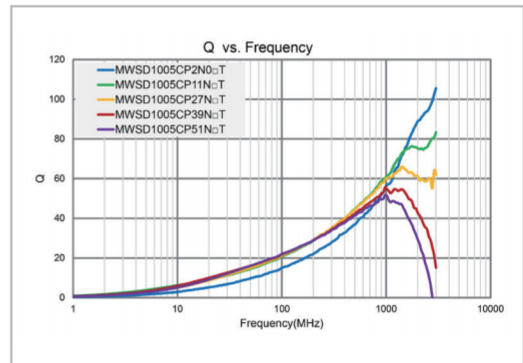
Typical
Electrical
Characteristics

MWSD1005CP TYPE

Inductance vs. Frequency Characteristics

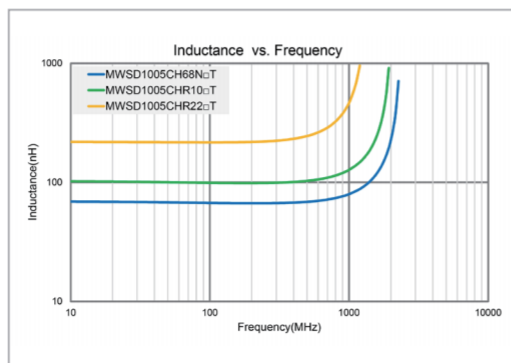


Q vs. Frequency Characteristics

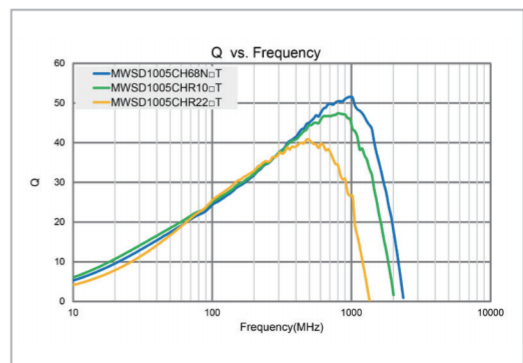


MWSD1005CH TYPE

Inductance vs. Frequency Characteristics

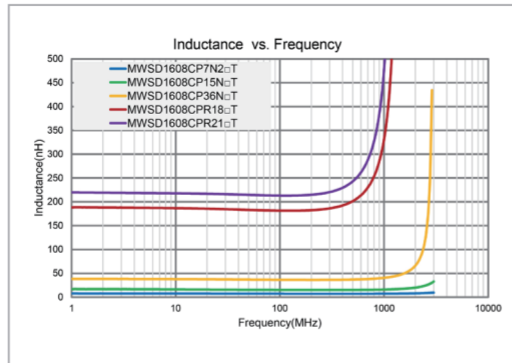


Q vs. Frequency Characteristics



Typical
Electrical
Characteristics

MWSD1608CP TYPE
Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics

