

# Wire Wound Chip Ceramic Inductor - MWSD-C Series

Operating Temp. : -40°C~+125°C



## FEATURES

- Small chip suitable for surface mounting
- High Q value and high self-resonant frequency with ceramic material
- Tight inductance tolerance and high reliability
- Single-sided package, thinner than SDWL-C series

## APPLICATIONS

- High frequency circuit in telecommunication and other equipments
- Mobile phones and other electronic devices
- Bluetooth, W-LAN, Broadband network

## PRODUCT IDENTIFICATION

**MWSD**

①

Type	
MWSD	Wire Wound Chip Inductor

**1005**

②

External Dimensions	
0603[0201]	
0804[03015]	
1005[0402]	

**C**

③

**10N**

④

④

Nominal Inductance	
Example	Nominal Value
4N7	4.7nH
10N	10nH
R10	100nH

**S**

⑤

**I**

⑥

③

Material Code	
C	Ceramic

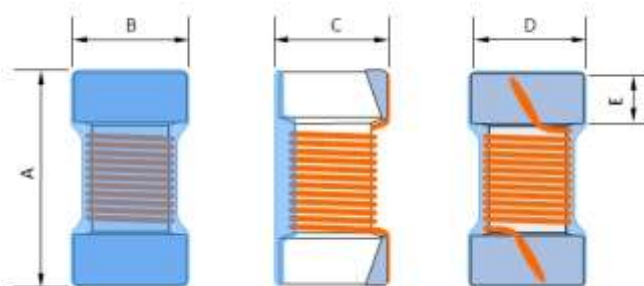
⑤

Inductance Tolerance	
B	±0.1nH
C	±0.2nH
S	±0.3nH
D	±0.5nH
G	±2%
H	±3%
J	±5%
K	±10%

⑥

Packing	
B	Bulk Package
T	Tape & Reel

## SHAPE AND DIMENSIONS



## Land Pattern



## SHAPE AND DIMENSIONS

Unit: mm

Series	A	B	C	D	E	H REF.	I REF.	J REF.
MWSD0603C	0.53±0.05	0.40±0.05	0.40±0.05	0.40±0.05	0.10±0.05	0.50	0.20	0.23
MWSD0804C	0.80±0.05	0.40±0.05	0.40±0.05	0.40±0.05	0.15±0.05	0.50	0.25	0.43
MWSD1005C	1.1±0.1	0.6±0.1	0.55±0.1	0.5±0.1	0.2±0.1	0.65	0.35	0.50

## SPECIFICATIONS

### MWSD0603C TYPE

Part Number	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Max. Rated Current	Min. Self-resonant Frequency	Max. DC Resistance
Units	nH	-	-	MHz	mA	GHz	Ω
Symbol	L	-	Q	Freq.	I <sub>r</sub>	S.R.F	DCR
MWSD0603C1N0□T	1.0	C、D	48	250	900	19.0	0.03
MWSD0603C1N1□T	1.1	C、D	41	250	660	19.0	0.06
MWSD0603C1N7□T	1.7	C、D	41	250	600	19.0	0.07
MWSD0603C1N8□T	1.8	C、D	37	250	520	19.0	0.10
MWSD0603C1N9□T	1.9	C、D	41	250	620	19.0	0.08
MWSD0603C2N0□T	2.0	C、D	42	250	490	19.0	0.10
MWSD0603C2N1□T	2.1	C、D	35	250	400	19.0	0.16
MWSD0603C2N2□T	2.2	C、D	33	250	400	19.0	0.16
MWSD0603C2N7□T	2.7	C、D	46	250	720	15.0	0.06
MWSD0603C2N8□T	2.8	C、D	44	250	600	14.0	0.08
MWSD0603C2N9□T	2.9	C、D	41	250	540	13.0	0.10
MWSD0603C3N0□T	3.0	C、D	34	250	350	14.0	0.22
MWSD0603C3N1□T	3.1	C、D	48	250	720	12.0	0.07
MWSD0603C3N2□T	3.2	C、D	48	250	580	10.0	0.08
MWSD0603C3N3□T	3.3	C、D	47	250	520	11.0	0.11
MWSD0603C3N4□T	3.4	C、D	43	250	440	11.0	0.15
MWSD0603C3N5□T	3.5	C、D	43	250	440	12.0	0.15
MWSD0603C3N6□T	3.6	C、D	36	250	340	11.0	0.23
MWSD0603C3N7□T	3.7	C、D	38	250	340	11.0	0.23
MWSD0603C3N9□T	3.9	C、D	38	250	500	11.0	0.25
MWSD0603C4N1□T	4.1	C、D	48	100	650	11.0	0.07
MWSD0603C4N3□T	4.3	D、J	45	100	480	11.0	0.12
MWSD0603C4N7□T	4.7	D、J	45	100	620	9.5	0.09
MWSD0603C5N1□T	5.1	D、J	45	100	480	9.5	0.14
MWSD0603C5N4□T	5.4	D、J	46	100	420	9.5	0.21
MWSD0603C5N6□T	5.6	D、J	37	100	330	8.3	0.33
MWSD0603C6N0□T	6.0	D、J	47	100	460	8.8	0.16
MWSD0603C6N2□T	6.2	D、J	39	100	360	9.9	0.22
MWSD0603C6N8□T	6.8	D、J	42	100	460	7.7	0.18
MWSD0603C7N5□T	7.5	D、J	41	100	400	7.5	0.24
MWSD0603C8N2□T	8.2	D、J	40	100	290	8.5	0.26
MWSD0603C8N7□T	8.7	D、J	39	100	290	7.5	0.42
MWSD0603C9N1□T	9.1	D、J	46	100	460	6.4	0.22
MWSD0603C10N□T	10.0	J	37	100	250	7.2	0.46
MWSD0603C11N□T	11.0	J	37	100	260	7.0	0.47
MWSD0603C12N□T	12.0	J	39	100	280	6.0	0.54
MWSD0603C13N□T	13.0	J	39	100	280	5.9	0.54
MWSD0603C14N□T	14.0	J	37	100	240	6.0	0.53
MWSD0603C15N□T	15.0	J	38	100	230	5.7	0.60

# SPECIFICATIONS

## MWSD0804C 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	GHz	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	Ir
MWSD0804C0N8□T	0.8	C、D	23	100	20	0.02	1800
MWSD0804C1N1□T	1.1	C、D	15	100	20	0.03	990
MWSD0804C1N3□T	1.3	C、D	15	100	20	0.03	1500
MWSD0804C1N6□T	1.6	C、D	15	100	17	0.06	700
MWSD0804C1N7□T	1.7	C、D	15	100	17	0.06	700
MWSD0804C1N8□T	1.8	C、D	15	100	17	0.06	700
MWSD0804C1N9□T	1.9	C、D	10	100	15	0.12	490
MWSD0804C2N3□T	2.3	C、D	18	100	20	0.07	780
MWSD0804C2N4□T	2.4	C、D	15	100	15	0.07	570
MWSD0804C2N5□T	2.5	C、D	10	100	10	0.12	490
MWSD0804C2N6□T	2.6	C、D	15	100	15	0.07	620
MWSD0804C2N7□T	2.7	C、D	15	100	15	0.07	570
MWSD0804C2N8□T	2.8	C、D	15	100	15	0.07	620
MWSD0804C3N0□T	3.0	C、D	15	100	13	0.07	620
MWSD0804C3N3□T	3.3	C、D	10	100	10.0	0.14	440
MWSD0804C3N4□T	3.4	C、D	10	100	8.0	0.27	310
MWSD0804C3N6□T	3.6	C、D	15	100	13.0	0.10	530
MWSD0804C3N7□T	3.7	C、D	20	100	10.0	0.14	440
MWSD0804C3N8□T	3.8	C、D	15	100	11.0	0.10	530
MWSD0804C3N9□T	3.9	C、D	15	100	12.0	0.10	530
MWSD0804C4N3□T	4.3	C、D	15	100	11.0	0.10	530
MWSD0804C4N5□T	4.5	C、D	20	100	10.0	0.14	440
MWSD0804C5N0□T	5.0	C、D	15	100	9.0	0.23	350
MWSD0804C5N1□T	5.1	C、D	20	100	10.0	0.12	470
MWSD0804C5N6□T	5.6	C、D	20	100	9.0	0.12	470
MWSD0804C6N2□T	6.2	C、D	20	100	9.0	0.19	390
MWSD0804C6N5□T	6.5	C、D	20	100	9.0	0.19	390
MWSD0804C6N8□T	6.8	C、D	20	100	9.0	0.14	440
MWSD0804C7N5□T	7.5	C、D	20	100	8.0	0.14	440
MWSD0804C8N2□T	8.2	C、D	20	100	8.0	0.23	350
MWSD0804C9N0□T	9.0	C、D	20	100	7.0	0.26	330
MWSD0804C9N5□T	9.5	C、D	20	100	7.0	0.26	330
MWSD0804C9N9□T	9.9	C、D	20	100	7.0	0.26	330
MWSD0804C10N□T	10	H、J	20	100	7.0	0.26	330
MWSD0804C12N□T	12	H、J	15	100	6.0	0.28	310
MWSD0804C18N□T	18	H、J	15	100	5.0	0.54	220
MWSD0804C24N□T	24	H、J	15	100	4.0	0.95	160
MWSD0804C33N□T	33	H、J	15	100	4.0	1.11	140
MWSD0804C43N□T	43	J	15	100	1.6	1.20	180
MWSD0804C56N□T	56	J	13	100	1.2	1.60	130

## MWSD1005C 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	Ir
MWSD1005C0N8□T	0.8	B,C,S,D,K	14	250	>6000	0.035	1000
MWSD1005C1N0□T	1.0	B,C,S,D,K	10	250	>6000	0.085	650
MWSD1005C1N8□T	1.8	B,C,S,D,J,K	20	250	>6000	0.043	950
MWSD1005C1N9□T	1.9	B,C,S,D,J,K	20	250		0.043	950

# SPECIFICATIONS

## MWSD1005C 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 <sub>r</sub>
MWSD1005C2N0□T	2.0	B,C,S,D,J,K	23	250	>6000	0.043	950
MWSD1005C2N2□T	2.2	B,C,S,D,J,K	22	250	>6000	0.058	820
MWSD1005C2N4□T	2.4	B,C,S,D,J,K	18	250	>6000	0.091	650
MWSD1005C2N7□T	2.7	B,C,S,D,J,K	24	250	>6000	0.050	900
MWSD1005C3N0□T	3.0	S,D,K	24	250	>6000	0.063	790
MWSD1005C3N3□T	3.3	B,C,S,D,J,K	24	250	>6000	0.063	790
MWSD1005C3N6□T	3.6	B,C,S,D,J,K	24	250	>6000	0.063	790
MWSD1005C3N9□T	3.9	B,C,S,D,J,K	24	250	>6000	0.063	790
MWSD1005C4N1□T	4.1	B,C,S,D,J,K	22	250	>6000	0.070	700
MWSD1005C4N3□T	4.3	B,C,S,D,J,K	22	250	>6000	0.070	750
MWSD1005C4N7□T	4.7	B,C,S,D,J,K	20	250	>6000	0.120	570
MWSD1005C5N1□T	5.1	B,C,S,D,J,K	23	250	>6000	0.100	620
MWSD1005C5N6□T	5.6	B,C,S,D,J,K	25	250	>6000	0.078	710
MWSD1005C5N8□T	5.8	B,C,S,D,J,K	25	250	>6000	0.078	710
MWSD1005C6N2□T	6.2	B,C,S,D,J,K	25	250	>6000	0.078	710
MWSD1005C6N8□T	6.8	G,H,J,K	24	250	6000	0.105	610
MWSD1005C7N5□T	7.5	G,H,J,K	25	250	6000	0.12	570
MWSD1005C8N2□T	8.2	G,H,J,K	25	250	5500	0.11	590
MWSD1005C8N7□T	8.7	G,H,J,K	25	250	5500	0.11	590
MWSD1005C9N0□T	9.0	G,H,J,K	25	250	5500	0.11	590
MWSD1005C9N1□T	9.1	G,H,J,K	25	250	5500	0.11	590
MWSD1005C10N□T	10	G,H,J,K	24	250	5500	0.15	510
MWSD1005C11N□T	11	G,H,J,K	26	250	5500	0.12	570
MWSD1005C12N□T	12	G,H,J,K	26	250	5500	0.12	570
MWSD1005C13N□T	13	G,H,J,K	24	250	5000	0.18	460
MWSD1005C14N□T	14	G,H,J,K	26	250	5000	0.21	430
MWSD1005C15N□T	15	G,H,J,K	26	250	5000	0.21	430
MWSD1005C16N□T	16	G,H,J,K	25	250	4500	0.28	370
MWSD1005C18N□T	18	G,H,J,K	25	250	4500	0.28	370
MWSD1005C19N□T	19	G,H,J,K	26	250	4000	0.24	400
MWSD1005C20N□T	20	G,H,J,K	26	250	4000	0.24	400
MWSD1005C22N□T	22	G,H,J,K	25	250	4000	0.36	330
MWSD1005C23N□T	23	G,H,J,K	25	250	3800	0.36	330
MWSD1005C24N□T	24	G,H,J,K	25	250	3500	0.36	330
MWSD1005C27N□T	27	G,H,J,K	25	250	3500	0.38	320
MWSD1005C30N□T	30	G,H,J,K	25	250	3300	0.38	320
MWSD1005C33N□T	33	G,H,J,K	24	250	3200	0.55	260
MWSD1005C36N□T	36	G,H,J,K	25	250	3100	0.60	250
MWSD1005C38N□T	38	G,H,J,K	25	250	3000	0.60	250
MWSD1005C39N□T	39	G,H,J,K	25	250	3000	0.60	250
MWSD1005C43N□T	43	G,H,J,K	25	250	3000	0.68	240
MWSD1005C47N□T	47	G,H,J,K	25	250	2900	0.95	200
MWSD1005C51N□T	51	G,H,J,K	25	250	2850	0.95	200
MWSD1005C56N□T	56	G,H,J,K	25	250	2800	1.05	190
MWSD1005C62N□T	62	G,H,J,K	25	250	2600	1.05	190
MWSD1005C68N□T	68	G,H,J,K	25	250	2500	1.35	170
MWSD1005C75N□T	75	G,H,J,K	24	250	2400	1.75	140
MWSD1005C82N□T	82	G,H,J,K	25	250	2300	1.90	140
MWSD1005C91N□T	91	G,H,J,K	25	250	2100	1.95	140
MWSD1005C96N□T	96	G,H,J,K	24	250	1500	2.06	130
MWSD1005CR10□T	100	G,H,J,K	24	250	1500	2.06	130

# SPECIFICATIONS

## MWSD1005C 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	$\Omega$	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I <sub>r</sub>
MWSD1005CR11□T	110	G,H,J,K	25	250	1200	2.38	120
MWSD1005CR12□T	120	J,K	25	250	1000	2.66	110
MWSD1005CR27□T	270	JK	10	100	400	3.30	100

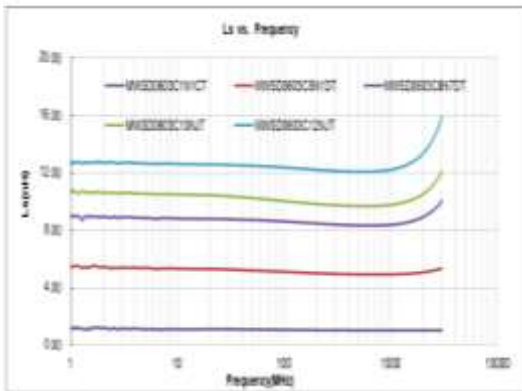
※□: Please specify the inductance tolerance code (B=±0.1nH, C=±0.2nH, S=±0.3nH, D=±0.5nH, G=±2%, H=±3%, J=±5%, K=±10%).

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

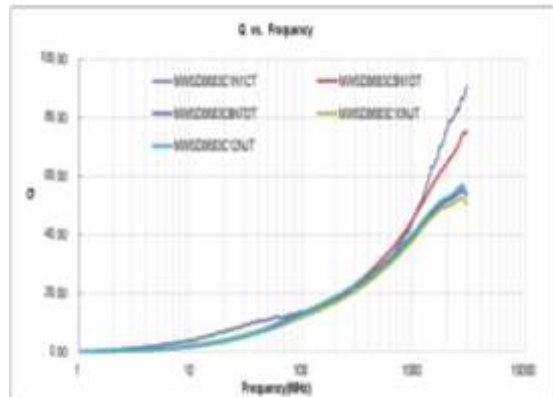
# TYPICAL ELECTRICAL CHARACTERISTICS

## MWSD0603C TYPE

Inductance vs. Frequency Characteristics

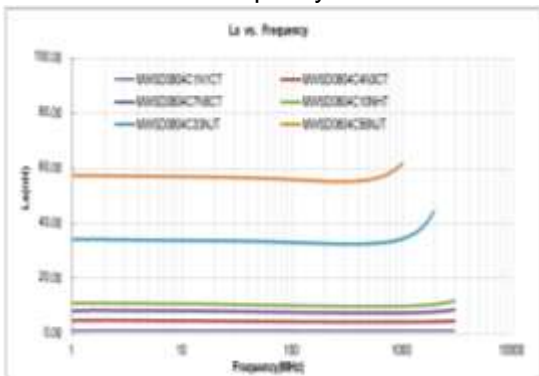


Q vs. Frequency Characteristics

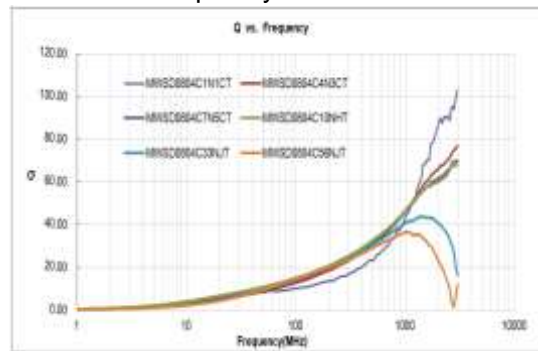


## MWSD00804C TYPE

Inductance vs. Frequency Characteristics

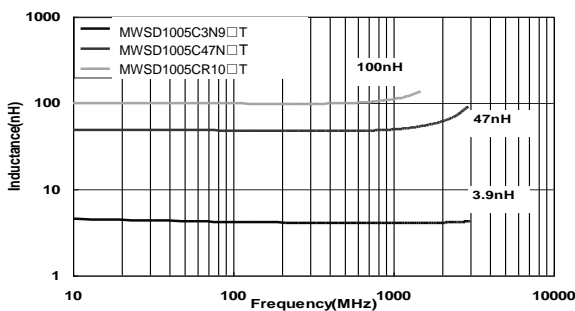


Q vs. Frequency Characteristics



## MWSD1005C TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics

