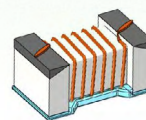


Wire Wound Chip Ceramic Inductor - MWSD-C Series

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

1005

②

C

③

10N

④

□

⑤

T

⑥

Type	
MWSD	Wire Wound Chip Inductor

External Dimensions	
0603[0201]	
0804[03015]	
1005[0402]	
1608[0603]	

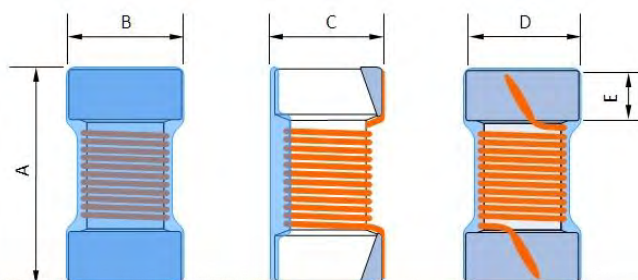
Material Code	
C	Ceramic

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

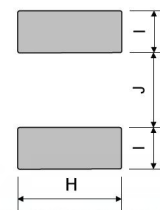
Packing	
B	Bulk Package
T	Tape & Reel

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

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
MWSD1608C	1.60±0.20	0.90±0.20	0.90±0.20	0.85	0.30	1.02	0.64	0.64

SPECIFICATIONS

MWSD0603C 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	I _r
MWSD0603C1N0 □ T	1.0	C,D	48	250/900	19.0	0.03	900
MWSD0603C1N1 □ T	1.1	C,D	41	250/900	19.0	0.06	660
MWSD0603C1N7 □ T	1.7	C,D	41	250/900	19.0	0.07	600
MWSD0603C1N8 □ T	1.8	C,D	37	250/900	19.0	0.10	520
MWSD0603C1N9 □ T	1.9	C,D	41	250/900	19.0	0.08	620
MWSD0603C2N0 □ T	2.0	C,D	42	250/900	19.0	0.10	490
MWSD0603C2N1 □ T	2.1	C,D	35	250/900	19.0	0.16	400
MWSD0603C2N2 □ T	2.2	C,D	33	250/900	19.0	0.16	400
MWSD0603C2N7 □ T	2.7	C,D	46	250/900	15.0	0.06	720
MWSD0603C2N8 □ T	2.8	C,D	44	250/900	14.0	0.08	600
MWSD0603C2N9 □ T	2.9	C,D	41	250/900	13.0	0.10	540
MWSD0603C3N0 □ T	3.0	C,D	34	250/900	14.0	0.22	350
MWSD0603C3N1 □ T	3.1	C,D	48	250/900	12.0	0.07	720
MWSD0603C3N2 □ T	3.2	C,D	48	250/900	10.0	0.08	580
MWSD0603C3N3 □ T	3.3	C,D	47	250/900	11.0	0.11	520
MWSD0603C3N4 □ T	3.4	C,D	43	250/900	11.0	0.15	440
MWSD0603C3N5 □ T	3.5	C,D	43	250/900	12.0	0.15	440
MWSD0603C3N6 □ T	3.6	C,D	36	250/900	11.0	0.23	340
MWSD0603C3N7 □ T	3.7	C,D	38	250/900	11.0	0.23	340
MWSD0603C3N9 □ T	3.9	C,D	38	250/900	11.0	0.25	500
MWSD0603C4N1 □ T	4.1	C,D	48	100/900	11.0	0.07	650
MWSD0603C4N3 □ T	4.3	D,J	45	100/900	11.0	0.12	480
MWSD0603C4N7 □ T	4.7	D,J	45	100/900	9.5	0.09	620
MWSD0603C5N1 □ T	5.1	D,J	45	100/900	9.5	0.14	480
MWSD0603C5N4 □ T	5.4	D,J	46	100/900	9.5	0.21	420
MWSD0603C5N6 □ T	5.6	D,J	37	100/900	8.3	0.33	330
MWSD0603C6N0 □ T	6.0	D,J	47	100/900	8.8	0.16	460
MWSD0603C6N2 □ T	6.2	D,J	39	100/900	9.9	0.22	360
MWSD0603C6N8 □ T	6.8	D,J	42	100/900	7.7	0.18	460
MWSD0603C7N5 □ T	7.5	D,J	41	100/900	7.5	0.24	400
MWSD0603C8N2 □ T	8.2	D,J	40	100/900	8.5	0.26	290
MWSD0603C8N7 □ T	8.7	D,J	39	100/900	7.5	0.42	290
MWSD0603C9N1 □ T	9.1	D,J	46	100/900	6.4	0.22	460
MWSD0603C10N □ T	10.0	J	37	100/900	7.2	0.46	250
MWSD0603C11N □ T	11.0	J	37	100/900	7.0	0.47	260
MWSD0603C12N □ T	12.0	J	39	100/900	6.0	0.54	280
MWSD0603C13N □ T	13.0	J	39	100/900	5.9	0.54	280
MWSD0603C14N □ T	14.0	J	37	100/900	6.0	0.53	240
MWSD0603C15N □ T	15.0	J	38	100/900	5.7	0.60	230

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	I _r
MWSD0804C0N8 □ T	0.8	C,D	23	100/250	20	0.02	1800
MWSD0804C1N1 □ T	1.1	C,D	15	100/250	20	0.03	990
MWSD0804C1N3 □ T	1.3	C,D	15	100/250	20	0.03	1500
MWSD0804C1N6 □ T	1.6	C,D	15	100/250	17	0.06	700
MWSD0804C1N7 □ T	1.7	C,D	15	100/250	17	0.06	700
MWSD0804C1N8 □ T	1.8	C,D	15	100/250	17	0.06	700
MWSD0804C1N9 □ T	1.9	C,D	10	100/250	15	0.12	490
MWSD0804C2N3 □ T	2.3	C,D	18	100/250	20	0.07	780
MWSD0804C2N4 □ T	2.4	C,D	15	100/250	15	0.07	570
MWSD0804C2N5 □ T	2.5	C,D	10	100/250	10	0.12	490
MWSD0804C2N6 □ T	2.6	C,D	15	100/250	15	0.07	620
MWSD0804C2N7 □ T	2.7	C,D	15	100/250	15	0.07	570
MWSD0804C2N8 □ T	2.8	C,D	15	100/250	15	0.07	620
MWSD0804C3N0 □ T	3.0	C,D	15	100/250	13	0.07	620
MWSD0804C3N3 □ T	3.3	C,D	10	100/250	10.0	0.14	440
MWSD0804C3N4 □ T	3.4	C,D	10	100/250	8.0	0.27	310
MWSD0804C3N6 □ T	3.6	C,D	15	100/250	13.0	0.10	530
MWSD0804C3N7 □ T	3.7	C,D	20	100/250	10.0	0.14	440
MWSD0804C3N8 □ T	3.8	C,D	15	100/250	11.0	0.10	530
MWSD0804C3N9 □ T	3.9	C,D	15	100/250	12.0	0.10	530
MWSD0804C4N3 □ T	4.3	C,D	15	100/250	11.0	0.10	530
MWSD0804C4N5 □ T	4.5	C,D	20	100/250	10.0	0.14	440
MWSD0804C5N0 □ T	5.0	C,D	15	100/250	9.0	0.23	350
MWSD0804C5N1 □ T	5.1	C,D	20	100/250	10.0	0.12	470
MWSD0804C5N6 □ T	5.6	C,D	20	100/250	9.0	0.12	470
MWSD0804C6N2 □ T	6.2	C,D	20	100/250	9.0	0.19	390
MWSD0804C6N5 □ T	6.5	C,D	20	100/250	9.0	0.19	390
MWSD0804C6N8 □ T	6.8	C,D	20	100/250	9.0	0.14	440
MWSD0804C7N5 □ T	7.5	C,D	20	100/250	8.0	0.14	440
MWSD0804C8N2 □ T	8.2	C,D	20	100/250	8.0	0.23	350
MWSD0804C9N0 □ T	9.0	C,D	20	100/250	7.0	0.26	330
MWSD0804C9N5 □ T	9.5	C,D	20	100/250	7.0	0.26	330
MWSD0804C9N9 □ T	9.9	C,D	20	100/250	7.0	0.26	330
MWSD0804C10N □ T	10	H,J	20	100/250	7.0	0.26	330
MWSD0804C12N □ T	12	H,J	15	100/250	6.0	0.28	310
MWSD0804C18N □ T	18	H,J	15	100/250	5.0	0.54	220
MWSD0804C24N □ T	24	H,J	15	100/250	4.0	0.95	160
MWSD0804C33N □ T	33	H,J	15	100/250	4.0	1.11	140
MWSD0804C43N □ T	43	J	15	100/250	1.6	1.20	180
MWSD0804C56N □ T	56	J	13	100/250	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	I _r
MWSD1005C0N8 □ T	0.8	B,C,S,D,K	14	250/250	>6000	0.035	1000
MWSD1005C1N0 □ T	1.0	B,C,S,D,K	10	250/250	>6000	0.085	650
MWSD1005C1N8 □ T	1.8	B,C,S,D,J,K	20	250/250	>6000	0.043	950
MWSD1005C1N9 □ T	1.9	B,C,S,D,J,K	20	250/250	>6000	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 _r
MWSD1005C2N0 □ T	2.0	B,C,S,D,J,K	23	250/250	>6000	0.043	950
MWSD1005C2N2 □ T	2.2	B,C,S,D,J,K	22	250/250	>6000	0.058	820
MWSD1005C2N4 □ T	2.4	B,C,S,D,J,K	18	250/250	>6000	0.091	650
MWSD1005C2N7 □ T	2.7	B,C,S,D,J,K	24	250/250	>6000	0.050	900
MWSD1005C3N0 □ T	3.0	S,D,K	24	250/250	>6000	0.063	790
MWSD1005C3N3 □ T	3.3	B,C,S,D,J,K	24	250/250	>6000	0.063	790
MWSD1005C3N6 □ T	3.6	B,C,S,D,J,K	24	250/250	>6000	0.063	790
MWSD1005C3N9 □ T	3.9	B,C,S,D,J,K	24	250/250	>6000	0.063	790
MWSD1005C4N1 □ T	4.1	B,C,S,D,J,K	22	250/250	>6000	0.070	700
MWSD1005C4N3 □ T	4.3	B,C,S,D,J,K	22	250/250	>6000	0.070	750
MWSD1005C4N7 □ T	4.7	B,C,S,D,J,K	20	250/250	>6000	0.120	570
MWSD1005C5N1 □ T	5.1	B,C,S,D,J,K	23	250/250	>6000	0.100	620
MWSD1005C5N6 □ T	5.6	B,C,S,D,J,K	25	250/250	>6000	0.078	710
MWSD1005C5N8 □ T	5.8	B,C,S,D,J,K	25	250/250	>6000	0.078	710
MWSD1005C6N2 □ T	6.2	B,C,S,D,J,K	25	250/250	>6000	0.078	710
MWSD1005C6N8 □ T	6.8	G,H,J,K	24	250/250	6000	0.105	610
MWSD1005C7N5 □ T	7.5	G,H,J,K	25	250/250	6000	0.12	570
MWSD1005C8N2 □ T	8.2	G,H,J,K	25	250/250	5500	0.11	590
MWSD1005C8N7 □ T	8.7	G,H,J,K	25	250/250	5500	0.11	590
MWSD1005C9N0 □ T	9.0	G,H,J,K	25	250/250	5500	0.11	590
MWSD1005C9N1 □ T	9.1	G,H,J,K	25	250/250	5500	0.11	590
MWSD1005C10N □ T	10	G,H,J,K	24	250/250	5500	0.15	510
MWSD1005C11N □ T	11	G,H,J,K	26	250/250	5500	0.12	570
MWSD1005C12N □ T	12	G,H,J,K	26	250/250	5500	0.12	570
MWSD1005C13N □ T	13	G,H,J,K	24	250/250	5000	0.18	460
MWSD1005C14N □ T	14	G,H,J,K	26	250/250	5000	0.21	430
MWSD1005C15N □ T	15	G,H,J,K	26	250/250	5000	0.21	430
MWSD1005C16N □ T	16	G,H,J,K	25	250/250	4500	0.28	370
MWSD1005C18N □ T	18	G,H,J,K	25	250/250	4500	0.28	370
MWSD1005C19N □ T	19	G,H,J,K	26	250/250	4000	0.24	400
MWSD1005C20N □ T	20	G,H,J,K	26	250/250	4000	0.24	400
MWSD1005C22N □ T	22	G,H,J,K	25	250/250	4000	0.36	330
MWSD1005C23N □ T	23	G,H,J,K	25	250/250	3800	0.36	330
MWSD1005C24N □ T	24	G,H,J,K	25	250/250	3500	0.36	330
MWSD1005C27N □ T	27	G,H,J,K	25	250/250	3500	0.38	320
MWSD1005C30N □ T	30	G,H,J,K	25	250/250	3300	0.38	320
MWSD1005C33N □ T	33	G,H,J,K	24	250/250	3200	0.55	260
MWSD1005C36N □ T	36	G,H,J,K	25	250/250	3100	0.60	250
MWSD1005C38N □ T	38	G,H,J,K	25	250/250	3000	0.60	250
MWSD1005C39N □ T	39	G,H,J,K	25	250/250	3000	0.60	250
MWSD1005C43N □ T	43	G,H,J,K	25	250/250	3000	0.68	240
MWSD1005C47N □ T	47	G,H,J,K	25	250/250	2900	0.95	200
MWSD1005C51N □ T	51	G,H,J,K	25	250/250	2850	0.95	200
MWSD1005C56N □ T	56	G,H,J,K	25	250/250	2800	1.05	190
MWSD1005C62N □ T	62	G,H,J,K	25	250/250	2600	1.05	190
MWSD1005C68N □ T	68	G,H,J,K	25	250/250	2500	1.35	170
MWSD1005C75N □ T	75	G,H,J,K	24	250/250	2400	1.75	140
MWSD1005C82N □ T	82	G,H,J,K	25	250/250	2300	1.90	140
MWSD1005C91N □ T	91	G,H,J,K	25	250/250	2100	1.95	140
MWSD1005C96N □ T	96	G,H,J,K	24	250/250	1500	2.06	130
MWSD1005CR10 □ T	100	G,H,J,K	24	250/250	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	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I _r
MWSD1005CR11 □ T	110	G,H,J,K	25	250/250	1200	2.38	120
MWSD1005CR12 □ T	120	J,K	25	250/250	1000	2.66	110
MWSD1005CR27 □ T	270	JK	10	100/100	400	3.30	100

MWSD1608C TYPE

Part Number	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Min. Selfresonant Frequency	Max. DC Resistance	Max. Rated Current
Units	nH	-	-	MHz	MHz	Ω	mA
Symbol	L	-	Q	Freq.	S.R.F	DCR	I _r
MWSD1608C1N6 □ T	1.6	C,D,K	22	250/250	6000	0.035	1150
MWSD1608C2N7 □ T	2.7	C,D, J,K	25	250/250	6000	0.043	1000
MWSD1608C3N3 □ T	3.3	C,D,J,K	25	250/250	6000	0.059	850
MWSD1608C3N6 □ T	3.6	C,D,J,K	25	250/250	6000	0.059	850
MWSD1608C4N7 □ T	4.7	C,D,J,K	25	250/250	6000	0.065	800
MWSD1608C5N1 □ T	5.1	C,D,J,K	21	250/250	6000	0.13	600
MWSD1608C6N2 □ T	6.2	C,D,J,K	29	250/250	6000	0.095	700
MWSD1608C6N8 □ T	6.8	C,D,J,K	29	250/250	6000	0.095	700
MWSD1608C7N5 □ T	7.5	C,D,J,K	33	250/250	6000	0.095	700
MWSD1608C8N2 □ T	8.2	C,D,J,K	31	250/250	6000	0.095	700
MWSD1608C8N7 □ T	8.7	C,D,J,K	31	250/250	6000	0.095	700
MWSD1608C9N1 □ T	9.1	C,D,J,K	30	250/250	6000	0.12	620
MWSD1608C9N5 □ T	9.5	C,D,J,K	26	250/250	6000	0.16	540
MWSD1608C10N □ T	10	G,H,J,K	30	250/250	5700	0.13	600
MWSD1608C11N □ T	11	G,H,J,K	35	250/250	6000	0.13	600
MWSD1608C12N □ T	12	G,H,J,K	35	250/250	6000	0.13	600
MWSD1608C13N □ T	13	G,H,J,K	35	250/250	5300	0.13	600
MWSD1608C15N □ T	15	G,H,J,K	37	250/250	5700	0.15	550
MWSD1608C16N □ T	16	G,H,J,K	37	250/250	4700	0.15	550
MWSD1608C17N □ T	17	G,H,J,K	37	250/250	4700	0.15	550
MWSD1608C18N □ T	18	G,H,J,K	37	250/250	4550	0.15	550
MWSD1608C20N □ T	20	G,H,J,K	37	250/250	4550	0.15	550
MWSD1608C22N □ T	22	G,H,J,K	38	250/250	4000	0.19	490
MWSD1608C23N □ T	23	G,H,J,K	40	250/250	3800	0.19	490
MWSD1608C24N □ T	24	G,H,J,K	40	250/250	3800	0.19	490
MWSD1608C25N □ T	25	G,H,J,K	40	250/250	3700	0.19	490
MWSD1608C27N □ T	27	G,H,J,K	38	250/250	3700	0.19	490
MWSD1608C30N □ T	30	G,H,J,K	38	250/250	3300	0.21	470
MWSD1608C33N □ T	33	G,H,J,K	40	250/250	3200	0.21	470
MWSD1608C36N □ T	36	G,H,J,K	40	250/250	2900	0.22	460
MWSD1608C39N □ T	39	G,H,J,K	40	250/250	2800	0.22	460
MWSD1608C43N □ T	43	G,H,J,K	40	250/250	2700	0.27	400
MWSD1608C47N □ T	47	G,H,J,K	36	200/200	2600	0.27	400
MWSD1608C51N □ T	51	G,H,J,K	35	200/200	2400	0.3	390

MWSD1608C 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
MWSD1608C56N □ T	56	G,H,J,K	38	200/200	2400	0.35	360
MWSD1608C62N □ T	62	G,H,J,K	36	200/200	2300	0.38	350
MWSD1608C68N □ T	68	G,H,J,K	36	200/200	2200	0.38	350
MWSD1608C72N □ T	72	G,H,J,K	34	150/150	2100	0.43	320
MWSD1608C82N □ T	82	G,H,J,K	34	150/150	2000	0.5	300
MWSD1608C90N □ T	90	G,H,J,K	34	150/150	1900	0.52	300
MWSD1608C91N □ T	91	G,H,J,K	34	150/150	1900	0.52	300
MWSD1608CR10 □ T	100	G,H,J,K	31	150/150	1800	0.66	260
MWSD1608CR11 □ T	110	G,H,J,K	32	150/150	1700	0.73	250
MWSD1608CR12 □ T	120	G,H,J,K	32	150/150	1600	0.75	240
MWSD1608CR13 □ T	130	G,H,J,K	32	150/150	1500	0.75	240
MWSD1608CR14 □ T	140	G,H,J,K	32	150/150	1400	1.1	200
MWSD1608CR15 □ T	150	G,H,J,K	32	150/150	1400	1.12	200
MWSD1608CR16 □ T	160	G,H,J,K	32	150/150	1400	1.12	200
MWSD1608CR18 □ T	180	G,H,J,K	25	100/100	1300	1.38	180
MWSD1608CR20 □ T	200	G,H,J,K	25	100/100	1250	1.9	150
MWSD1608CR21 □ T	210	G,H,J,K	25	100/100	1250	1.9	150
MWSD1608CR22 □ T	220	G,H,J,K	25	100/100	1200	2.1	140
MWSD1608CR24 □ T	240	G,H,J,K	25	100/100	1100	2.75	120
MWSD1608CR25 □ T	250	G,H,J,K	25	100/100	1100	2.8	120
MWSD1608CR27 □ T	270	G,H,J,K	26	100/100	960	3	120
MWSD1608CR30 □ T	300	G,H,J,K	26	100/100	900	4.05	110
MWSD1608CR33 □ T	330	G,H,J,K	26	100/100	800	4.2	100
MWSD1608CR36 □ T	360	G,H,J,K	27	100/100	800	4.3	100
MWSD1608CR39 □ T	390	G,H,J,K	27	100/100	800	4.5	100
MWSD1608CR42 □ T	420	G,H,J,K	27	100/100	800	5.4	90
MWSD1608CR47 □ T	470	G,H,J,K	27	100/100	700	5.7	90
MWSD1608CR56 □ T	560	G,H,J,K	27	100/100	650	8.1	70

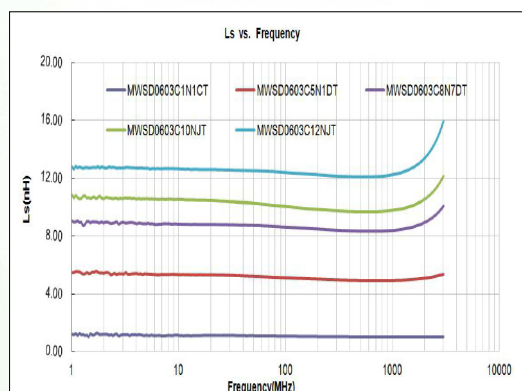
※ □ : Please specify the inductance tolerance code (B=±0.1nH, C=±0.2nH, S=±0.3nH, D=±0.5nH, G=±2%, H=±3%, J=±5%, K=±10%).

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

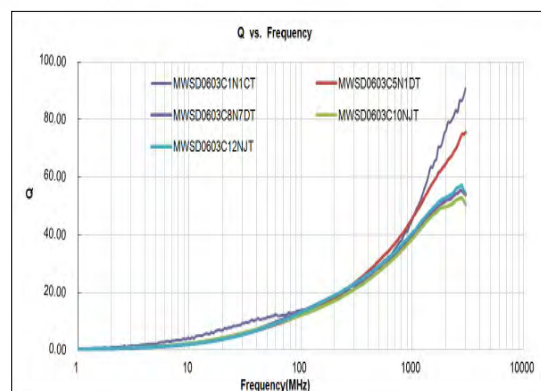
TYPICAL ELECTRICAL CHARACTERISTICS

MWSD0603C TYPE

Inductance vs. Frequency Characteristics

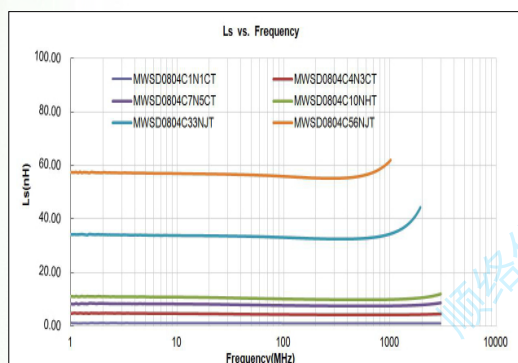


Q vs. Frequency Characteristics

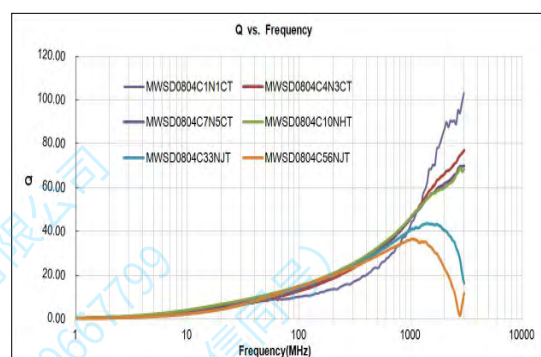


MWSD0804C TYPE

Inductance vs. Frequency Characteristics

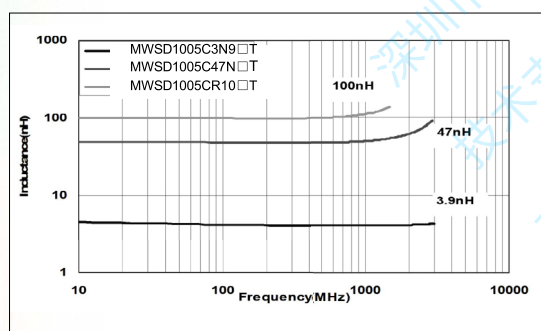


Q vs. Frequency Characteristics

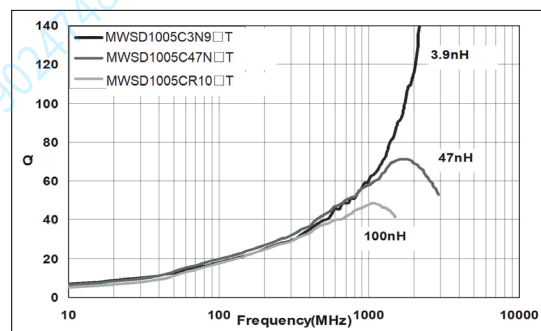


MWSD1005C TYPE

Inductance vs. Frequency Characteristics

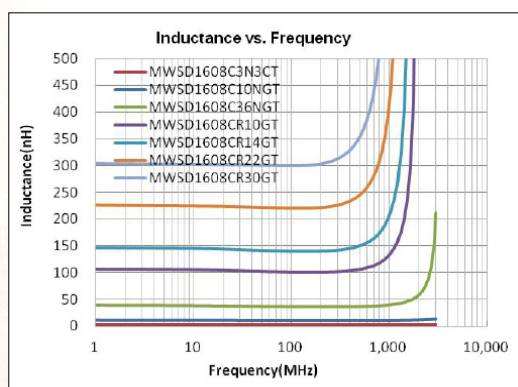


Q vs. Frequency Characteristics



MWSD1608C TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics

