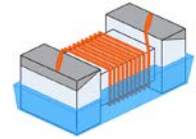


# Wire Wound Chip Ceramic Inductor -SDWL-CP/CH Series

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 stable inductance at high frequency
- Lower DCR, higher Q and larger current than SDWL-C series
- Inductance of SDWL-CH series is larger than SDWL-CP series

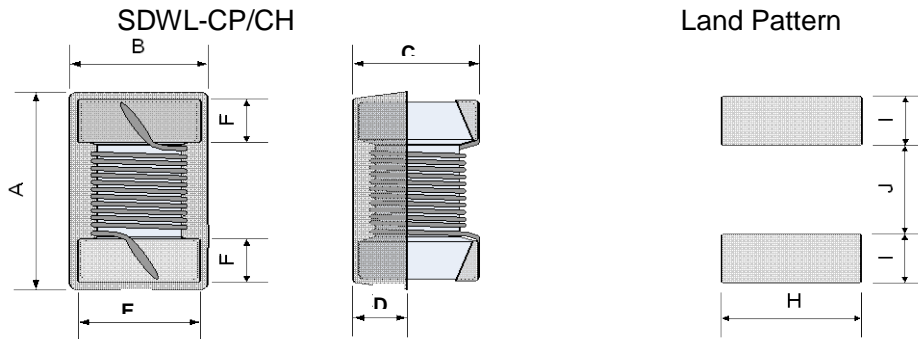
## APPLICATIONS

- High frequency circuit in telecommunication and other equipments
- Mobile phones such as GSM, CDMA, PDC, etc.
- Bluetooth, W-LAN, Broadband network

## PRODUCT IDENTIFICATION

<u>SDWL</u> ①	<u>1005</u> ②	<u>C</u> ③	<u>P</u> ④	<u>10N</u> ⑤	<u>J</u> ⑥	<u>S</u> ⑦	<u>T</u> ⑧	<u>F</u> ⑨																																																														
① <table border="1"> <tr><th colspan="2">Type</th></tr> <tr><td>SDWL</td><td>Wire Wound Chip Inductor</td></tr> </table>	Type		SDWL	Wire Wound Chip Inductor	② <table border="1"> <tr><th colspan="2">External Dimensions</th></tr> <tr><td colspan="2">1005 [0402]</td></tr> <tr><td colspan="2">1608 [0603]</td></tr> <tr><td colspan="2">2012[0805]</td></tr> </table>	External Dimensions		1005 [0402]		1608 [0603]		2012[0805]		③ <table border="1"> <tr><th colspan="2">Material Code</th></tr> <tr><td>C</td><td>Ceramic</td></tr> </table>	Material Code		C	Ceramic	④ <table border="1"> <tr><th colspan="2">Feature Type</th></tr> <tr><td>P</td><td>&amp;Q Large Current &amp; High Q</td></tr> <tr><td>H</td><td>&amp;&amp;Q Large Inductance &amp;Large Current &amp; High Q</td></tr> </table>	Feature Type		P	&Q Large Current & High Q	H	&&Q Large Inductance &Large Current & High Q	⑤ <table border="1"> <tr><th colspan="2">Nominal Inductance</th></tr> <tr><th>Example</th><th>Nominal Value</th></tr> <tr><td>10N</td><td>10nH</td></tr> <tr><td>R10</td><td>100nH</td></tr> <tr><td>1R0</td><td>1.0μH</td></tr> </table>	Nominal Inductance		Example	Nominal Value	10N	10nH	R10	100nH	1R0	1.0μH	⑥ <table border="1"> <tr><th colspan="2">Inductance Tolerance</th></tr> <tr><td>B</td><td>±0.1nH</td></tr> <tr><td>C</td><td>±0.2nH</td></tr> <tr><td>S</td><td>±0.3nH</td></tr> <tr><td>D</td><td>±0.5nH</td></tr> <tr><td>G</td><td>±2%</td></tr> <tr><td>H</td><td>±3%</td></tr> <tr><td>J</td><td>±5%</td></tr> <tr><td>K</td><td>±10%</td></tr> </table>	Inductance Tolerance		B	±0.1nH	C	±0.2nH	S	±0.3nH	D	±0.5nH	G	±2%	H	±3%	J	±5%	K	±10%	⑦ <table border="1"> <tr><th colspan="2">Feature Type</th></tr> <tr><td>S</td><td>Sn Plating Five-faces Coating</td></tr> </table>	Feature Type		S	Sn Plating Five-faces Coating	⑧ <table border="1"> <tr><th colspan="2">Packing</th></tr> <tr><td>T</td><td>Tape &amp; Reel</td></tr> </table>	Packing		T	Tape & Reel	⑨ <table border="1"> <tr><th colspan="2">Hazardous Substance Free Products</th></tr> <tr><td colspan="2">F</td></tr> </table>	Hazardous Substance Free Products		F	
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## SHAPE AND DIMENSIONS



Series	A	B	C	D Ref.	E	F	H Ref.	I Ref.	J Ref.
SDWL1005CP/CH	1.10±0.1	0.6±0.1	0.6±0.1	0.20	0.5±0.1	0.2±0.1	0.65	0.35	0.50
SDWL1608CP	1.70±0.2	1.1±0.2	0.9±0.2	0.38	0.76±0.1	0.3±0.1	1.02	0.64	0.64
SDWL2012CP	2.4 Max.	1.8 Max.	1.5 Max.	0.51	1.55±0.1	0.3±0.1	1.98	1.02	1.12

## SPECIFICATIONS

### SDWL1005CP TYPE

Part Number	Inductance	Tolerance	Quality Factor Typ.	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	GHz
Symbol	L	-	Q	Freq.	DCR	I <sub>r</sub>	S.R.F
SDWL1005CP1N0□STF	1.0	C,S,D	20	250	0.030	2300	16.0
SDWL1005CP2N0□STF	2.0	B,C,S,D,J,K	24	250	0.038	2100	15.2
SDWL1005CP2N2□STF	2.2	C,S,D,J,K	25	250	0.038	2100	15.1
SDWL1005CP2N4□STF	2.4	S,D	23	250	0.042	2000	14.0
SDWL1005CP2N7□STF	2.7	C,S,D,J,K	24	250	0.056	1500	13.0
SDWL1005CP3N3□STF	3.3	C,S,D,J,K	28	250	0.045	1700	12.8
SDWL1005CP3N6□STF	3.6	C,S,D,J,K	28	250	0.045	1700	11.7
SDWL1005CP3N9□STF	3.9	C,S,D,J,K	28	250	0.045	1700	9.50
SDWL1005CP4N3□STF	4.3	S,D,J,K	27	250	0.050	1600	7.15
SDWL1005CP4N7□STF	4.7	S,D,J,K	23	250	0.075	1500	6.85
SDWL1005CP5N1□STF	5.1	S,D,J,K	20	250	0.100	1200	6.80
SDWL1005CP5N6□STF	5.6	S,D,J,K	29	250	0.048	1600	6.50
SDWL1005CP6N2□STF	6.2	S,D,J,K	29	250	0.050	1600	5.80
SDWL1005CP6N8□STF	6.8	G,H,J,K	28	250	0.070	1500	5.80
SDWL1005CP7N5□STF	7.5	G,H,J,K	26	250	0.080	1400	5.40
SDWL1005CP8N2□STF	8.2	G,H,J,K	28	250	0.065	1500	5.40
SDWL1005CP8N7□STF	8.7	G,H,J,K	29	250	0.070	1500	5.00
SDWL1005CP9N0□STF	9.0	G,H,J,K	27	250	0.080	1400	5.00
SDWL1005CP9N5□STF	9.5	G,H,J,K	28	250	0.075	1400	4.70
SDWL1005CP10N□STF	10	G,H,J,K	26	250	0.085	1300	4.70
SDWL1005CP11N□STF	11	G,H,J,K	29	250	0.070	1400	4.70
SDWL1005CP12N□STF	12	G,H,J,K	28	250	0.100	1200	4.40
SDWL1005CP13N□STF	13	G,H,J,K	27	250	0.140	870	4.20
SDWL1005CP15N□STF	15	G,H,J,K	28	250	0.115	1100	3.90
SDWL1005CP16N□STF	16	G,H,J,K	27	250	0.130	850	3.70
SDWL1005CP17N□STF	17	G,H,J,K	26	250	0.230	650	3.70
SDWL1005CP18N□STF	18	G,H,J,K	26	250	0.120	900	3.55
SDWL1005CP19N□STF	19	G,H,J,K	26	250	0.145	850	3.50
SDWL1005CP20N□STF	20	J,K	27	250	0.155	780	3.50
SDWL1005CP21N□STF	21	G,H,J,K	25	250	0.460	450	1.70
SDWL1005CP22N□STF	22	G,H,J,K	28	250	0.190	800	3.30

## SPECIFICATIONS

### SDWL1005CP TYPE

Part Number	Inductance	Tolerance	Quality Factor Typ.	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	GHz
Symbol	L	-	Q	Freq.	DCR	I <sub>r</sub>	S.R.F
SDWL1005CP23N□STF	23	G,H,J,K	28	250	0.160	800	3.30
SDWL1005CP24N□STF	24	G,H,J,K	27	250	0.275	700	3.15
SDWL1005CP25N□STF	25	G,H,J,K	26	250	0.260	700	3.15
SDWL1005CP26N□STF	26	G,H,J,K	27	250	0.275	700	3.15
SDWL1005CP27N□STF	27	G,H,J,K	27	250	0.330	450	3.20
SDWL1005CP30N□STF	30	G,H,J,K	25	250	0.350	450	2.90
SDWL1005CP33N□STF	33	G,H,J,K	28	250	0.330	490	2.80
SDWL1005CP36N□STF	36	G,H,J,K	26	250	0.360	480	2.80
SDWL1005CP37N□STF	37	G,H,J,K	26	250	0.480	470	2.70
SDWL1005CP39N□STF	39	G,H,J,K	28	250	0.430	450	2.60
SDWL1005CP40N□STF	40	G,H,J,K	28	250	0.520	450	2.60
SDWL1005CP43N□STF	43	G,H,J,K	26	250	0.520	450	2.50
SDWL1005CP47N□STF	47	G,H,J,K	28	250	0.580	420	2.40
SDWL1005CP51N□STF	51	G,H,J,K	26	250	0.700	360	2.30

### SDWL1005CH TYPE

Part Number	Inductance	Tolerance	Quality Factor Typ.	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	GHz
Symbol	L	-	Q	Freq.	DCR	I <sub>r</sub>	S.R.F
SDWL1005CH56N□STF	56	G,H,J,K	31	250	0.900	330	2.07
SDWL1005CH68N□STF	68	G,H,J,K	31	250	1.000	320	1.84
SDWL1005CH82N□STF	82	G,H,J,K	31	250	1.100	315	1.75
SDWL1005CHR10□STF	100	G,H,J,K	30	250	1.200	310	1.58
SDWL1005CHR12□STF	120	G,H,J,K	29	250	1.200	310	1.25
SDWL1005CHR15□STF	150	G,H,J,K	29	100/250	2.000	240	1.14
SDWL1005CHR16□STF	160	G,H,J,K	29	100/250	2.400	240	1.65
SDWL1005CHR18□STF	180	G,H,J,K	32	100/250	2.500	240	1.08
SDWL1005CHR22□STF	220	G,H,J,K	32	100/250	3.500	160	0.96

### SDWL1608CP TYPE

Part Number	Inductance	Tolerance	Quality Factor Typ.	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	GHz
Symbol	L	-	Q	Freq.	DCR	I <sub>r</sub>	S.R.F
SDWL1608CP1N8□STF	1.8	S,D,K	23	250/250	0.033	2100	16.0
SDWL1608CP2N2□STF	2.2	C,S,D,J,K	13	250/250	0.230	900	15.0
SDWL1608CP3N3□STF	3.3	C,S,D,J,K	32	250/250	0.030	1900	9.60
SDWL1608CP3N6□STF	3.6	C,S,D,J,K	40	250/250	0.031	1900	9.70
SDWL1608CP3N9□STF	3.9	C,S,D,J,K	35	250/250	0.039	1600	7.50
SDWL1608CP4N3□STF	4.3	C,S,D,J,K	30	250/250	0.080	1300	7.50
SDWL1608CP4N7□STF	4.7	D,K	26	250/250	0.100	1100	7.90
SDWL1608CP5N1□STF	5.1	C,S,D,J,K	40	250/250	0.036	1700	8.90
SDWL1608CP5N6□STF	5.6	C,S,D,J,K	48	250/250	0.040	1700	6.60

# SPECIFICATIONS

## SDWL1608CP TYPE

Part Number	Inductance	Tolerance	Quality Factor Typ.	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	GHz
Symbol	L	-	Q	Freq.	DCR	I <sub>r</sub>	S.R.F
SDWL1608CP6N0□STF	6.0	C,S,D,J,K	49	250/250	0.040	1700	6.00
SDWL1608CP6N8□STF	6.8	G,H,J,K	42	250/250	0.042	1400	5.80
SDWL1608CP7N2□STF	7.2	G,H,J,K	43	250/250	0.070	1400	5.40
SDWL1608CP7N5□STF	7.5	G,H,J,K	41	250/250	0.080	1300	5.30
SDWL1608CP8N2□STF	8.2	G,H,J,K	46	250/250	0.054	1400	5.90
SDWL1608CP8N7□STF	8.7	G,H,J,K	46	250/250	0.054	1400	5.50
SDWL1608CP9N1□STF	9.1	G,H,J,K	40	250/250	0.058	1400	5.10
SDWL1608CP9N5□STF	9.5	G,H,J,K	49	250/250	0.053	1400	4.90
SDWL1608CP10N□STF	10	G,H,J,K	49	250/250	0.048	1400	4.30
SDWL1608CP11N□STF	11	G,H,J,K	41	250/250	0.065	1400	4.10
SDWL1608CP12N□STF	12	G,H,J,K	37	250/250	0.115	1100	4.10
SDWL1608CP15N□STF	15	G,H,J,K	48	250/250	0.078	1200	3.60
SDWL1608CP16N□STF	16	G,H,J,K	48	250/250	0.085	1100	3.50
SDWL1608CP18N□STF	18	G,H,J,K	41	250/250	0.070	1200	3.30
SDWL1608CP22N□STF	22	G,H,J,K	44	250/250	0.140	850	3.15
SDWL1608CP23N□STF	23	G,H,J,K	40	250/250	0.183	850	3.00
SDWL1608CP24N□STF	24	G,H,J,K	42	250/250	0.085	1100	2.95
SDWL1608CP27N□STF	27	G,H,J,K	44	250/250	0.200	780	2.80
SDWL1608CP30N□STF	30	G,H,J,K	49	250/250	0.160	920	2.80
SDWL1608CP33N□STF	33	G,H,J,K	45	250/250	0.220	680	2.70
SDWL1608CP36N□STF	36	G,H,J,K	44	250/250	0.225	720	2.50
SDWL1608CP39N□STF	39	G,H,J,K	44	250/250	0.250	680	2.45
SDWL1608CP43N□STF	43	G,H,J,K	45	250/250	0.225	810	2.45
SDWL1608CP47N□STF	47	G,H,J,K	47	200/250	0.240	680	2.30
SDWL1608CP51N□STF	51	G,H,J,K	45	200/250	0.280	660	2.30
SDWL1608CP56N□STF	56	G,H,J,K	45	200/250	0.300	610	2.20
SDWL1608CP68N□STF	68	G,H,J,K	46	200/250	0.350	600	2.00
SDWL1608CP72N□STF	72	G,H,J,K	46	150/250	0.420	550	1.90
SDWL1608CP75N□STF	75	G,H,J,K	46	150/250	0.520	500	1.90
SDWL1608CP82N□STF	82	G,H,J,K	45	150/250	0.460	510	1.80
SDWL1608CP91N□STF	91	G,H,J,K	45	150/250	0.580	440	1.65
SDWL1608CPR10□STF	100	G,H,J,K	49	150/250	0.540	470	1.70
SDWL1608CPR11□STF	110	G,H,J,K	47	150/250	0.580	440	1.60
SDWL1608CPR12□STF	120	G,H,J,K	47	150/250	0.720	420	1.55
SDWL1608CPR15□STF	150	J,K	47	150/250	0.820	390	1.35
SDWL1608CPR18□STF	180	G,H,J,K	48	100/250	1.500	310	1.30
SDWL1608CPR20□STF	200	G,H,J,K	47	100/250	2.000	280	1.25
SDWL1608CPR21□STF	210	G,H,J,K	48	100/250	2.000	280	1.20
SDWL1608CPR22□STF	220	G,H,J,K	47	100/250	2.000	280	1.10
SDWL1608CPR25□STF	250	G,H,J,K	45	100/250	3.000	240	1.05
SDWL1608CPR27□STF	270	G,H,J,K	46	100/250	2.250	260	1.05
SDWL1608CPR30□STF	300	G,H,J,K	47	100/250	2.800	220	0.99
SDWL1608CPR33□STF	330	G,H,J,K	46	100/250	3.600	180	0.93
SDWL1608CPR36□STF	360	G,H,J,K	47	100/250	4.600	170	0.93
SDWL1608CPR39□STF	390	G,H,J,K	47	100/250	4.770	170	0.88

## SPECIFICATIONS

### SDWL2012CP TYPE

Part Number	Inductance	Tolerance	Quality Factor Typ.	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	$\Omega$	mA	GHz
Symbol	L	-	Q	Freq.	DCR	I <sub>r</sub>	S.R.F
SDWL2012CP2N6□STF	2.6	J	100	250/1500	0.015	2000	9500
SDWL2012CP6N2□STF	6.2	J	104	250/1000	0.027	1500	7200
SDWL2012CP6N8□STF	6.8	J	90	250/1000	0.066	1300	6000
SDWL2012CP11N□STF	11	G,J	93	250/500	0.039	1600	4750
SDWL2012CP12N□STF	12	G,J	91	250/500	0.039	1400	4425
SDWL2012CP13N□STF	13	G,J	91	250/500	0.039	1400	4100
SDWL2012CP18N□STF	18	G,J	95	250/500	0.050	1200	3650
SDWL2012CP33N□STF	33	G,J	100	250/500	0.087	1100	2410
SDWL2012CP47N□STF	47	G,J	105	200/500	0.093	1000	2170
SDWL2012CP56N□STF	56	G,J	100	200/500	0.122	950	1815
SDWL2012CP82N□STF	82	G,J	103	150/500	0.168	820	1525
SDWL2012CPR10□STF	100	G,J	100	150/500	0.220	720	1400
SDWL2012CPR12□STF	120	G,J	80	150/250	0.293	620	1265
SDWL2012CPR15□STF	150	G,J	80	100/250	0.288	600	1150
SDWL2012CPR18□STF	180	G,J	77	100/250	0.374	540	1025
SDWL2012CPR22□STF	220	G,J	75	100/250	0.426	500	930
SDWL2012CPR27□STF	270	G,J	75	100/250	0.754	420	830
SDWL2012CPR33□STF	330	G,J	54	100/100	1.004	360	770
SDWL2012CPR39□STF	390	G,J	52	100/100	1.110	330	700
SDWL2012CPR47□STF	470	G,J	52	50/100	1.559	280	640
SDWL2012CPR56□STF	560	G,J	46	25/100	2.067	240	550
SDWL2012CPR68□STF	680	G,J	46	25/100	2.355	210	535
SDWL2012CPR82□STF	820	G,J	50	25/100	3.945	180	485

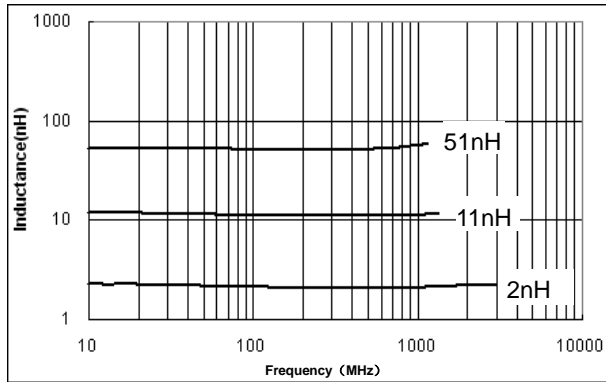
※□: Please specify the inductance tolerance code (B=±0.1nH, C=±0.2nH, S=±0.3nH, D=±0.5nH, G=±2%, H=±3%, J=±5%, K=±10%).

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

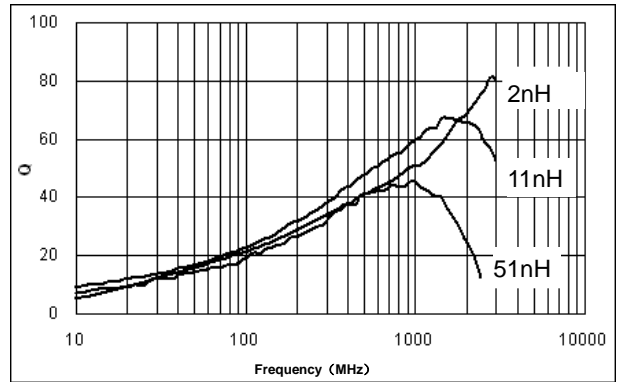
# TYPICAL ELECTRICAL CHARACTERISTICS

## SDWL1005CP TYPE

Inductance vs. Frequency Characteristics

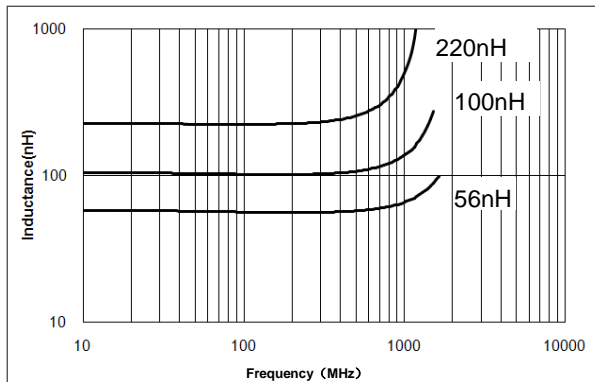


Q vs. Frequency Characteristics

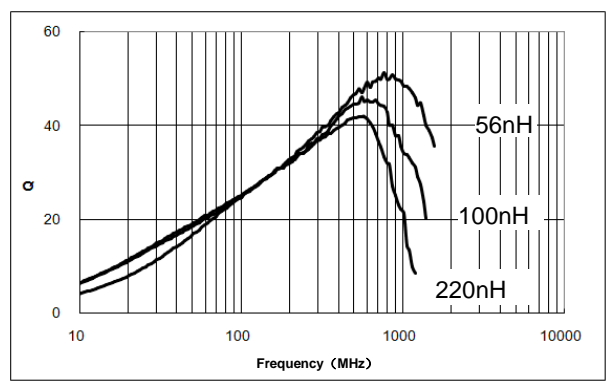


## SDWL1005CH TYPE

Inductance vs. Frequency Characteristics

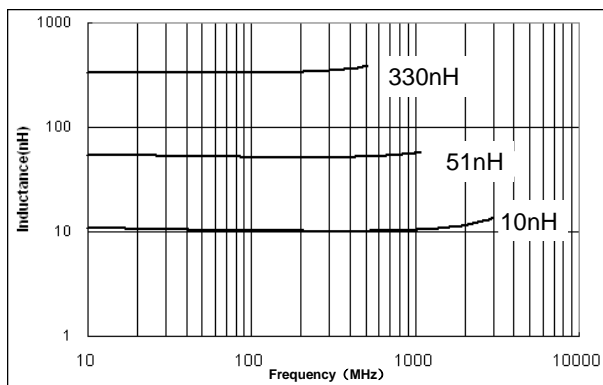


Q vs. Frequency Characteristics

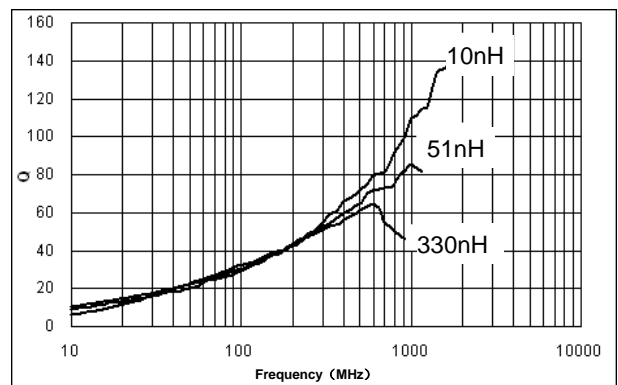


## SDWL1608CP TYPE

Inductance vs. Frequency Characteristics



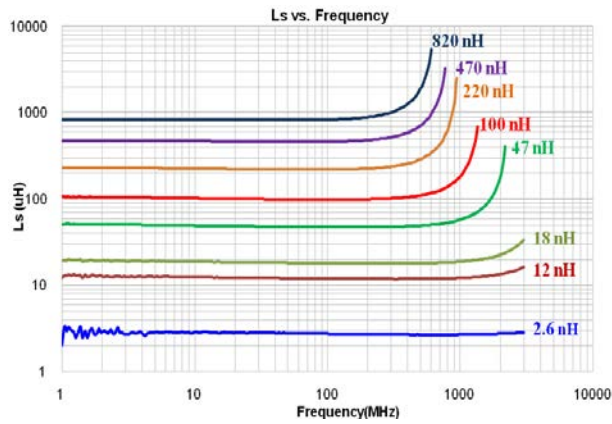
Q vs. Frequency Characteristics



# TYPICAL ELECTRICAL CHARACTERISTICS

SDWL2012CP TYPE

### Inductance vs. Frequency Characteristics



### Q vs. Frequency Characteristics

