

# Multilayer Chip Ceramic Inductor – SDCL-D Series

Operating Temp. : SDCL1005 series: -55°C~+125°C

SDCL1608 series: -40°C~+85°C



## FEATURES

- Monolithic structure for high reliability
- High self-resonant frequency
- Excellent solderability and high heat resistance

## APPLICATIONS

- RF circuit in telecommunication and other equipments

## PRODUCT IDENTIFICATION

<u>SDCL</u> ①	<u>1608</u> ②	<u>C</u> ③	<u>10N</u> ④	<u>J</u> ⑤	<u>T</u> ⑥	<u>D</u> ⑦	<u>F</u> ⑧	
①	②	③	④	⑤	⑥	⑦	⑧	
①	②		③		④			
Type		External Dimensions (L×W) (mm)		Material Code				
SDCL	Chip Ceramic Inductor		1005 [0402]	1.0×0.5	C			
			1608 [0603]	1.6×0.8	⑤			
④		⑥		⑤				
Nominal Inductance		Packing		Inductance Tolerance				
Example	Nominal Value		T	Tape & Reel		S	±0.3nH	
3N9	3.9nH		⑦		K			
10N	10nH		Internal Code		±5%			
R10	100nH		D		±10%			
※R= Decimal Point, N=nH				⑧				
				Hazardous Substance Free Products				
				F				

## SHAPE AND DIMENSIONS

Unit: mm [inch]

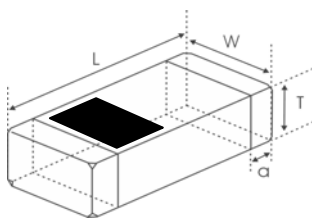


Fig.1

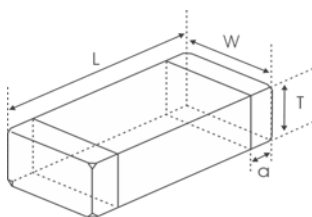


Fig.2

Type	L	W	T	a	
SDCL1005 [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.1 [.010±.004]	Fig.1
SDCL1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]	Fig.2
	1.65±0.15 [.065±.006]				

# SPECIFICATIONS

## SDCL1005-D TYPE

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq. L/Q	Typical Q @ Freq. (MHz)			Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
				100	800	1000				
Units	nH	-	MHz	-			MHz	$\Omega$	mA	mm [inch]
Symbol	L	Q	Freq	Q			S.R.F	DCR	I <sub>r</sub>	T
SDCL1005C1N0STDF	1.0±0.3	8	100	11	34	36	10000	0.10	400	0.5±0.15 [.020±.006]
SDCL1005C1N1STDF	1.1±0.3	8	100	11	34	36	10000	0.10	400	
SDCL1005C1N2STDF	1.2±0.3	8	100	11	34	36	10000	0.10	400	
SDCL1005C1N3STDF	1.3±0.3	8	100	11	34	36	10000	0.10	400	
SDCL1005C1N5STDF	1.5±0.3	8	100	11	34	36	6000	0.10	300	
SDCL1005C1N6STDF	1.6±0.3	8	100	11	32	35	6000	0.10	300	
SDCL1005C1N8STDF	1.8±0.3	8	100	11	30	34	6000	0.10	300	
SDCL1005C2N0STDF	2.0±0.3	8	100	10	29	33	6000	0.20	300	
SDCL1005C2N2STDF	2.2±0.3	8	100	10	29	33	6000	0.20	300	
SDCL1005C2N4STDF	2.4±0.3	8	100	10	29	32	6000	0.20	300	
SDCL1005C2N7STDF	2.7±0.3	8	100	10	29	32	6000	0.20	300	
SDCL1005C3N0STDF	3.0±0.3	8	100	10	29	32	6000	0.20	300	
SDCL1005C3N3STDF	3.3±0.3	8	100	10	29	32	6000	0.20	300	
SDCL1005C3N6STDF	3.6±0.3	8	100	10	28	31	4000	0.20	300	
SDCL1005C3N9STDF	3.9±0.3	8	100	10	28	31	4000	0.20	300	
SDCL1005C4N3STDF	4.3±0.3	8	100	10	28	31	4000	0.20	300	
SDCL1005C4N7STDF	4.7±0.3	8	100	10	28	31	4000	0.20	300	
SDCL1005C5N1STDF	5.1±0.3	8	100	10	28	30	4000	0.30	300	
SDCL1005C5N6STDF	5.6±0.3	8	100	10	28	30	4000	0.30	300	
SDCL1005C6N2STDF	6.2±0.3	8	100	10	27	30	3900	0.30	300	
SDCL1005C6N8□TDF	6.8	8	100	10	27	30	3900	0.30	300	
SDCL1005C7N5□TDF	7.5	8	100	10	27	30	3700	0.40	300	
SDCL1005C8N2□TDF	8.2	8	100	10	27	30	3600	0.40	300	
SDCL1005C9N1□TDF	9.1	8	100	10	27	30	3400	0.40	300	
SDCL1005C10N□TDF	10	8	100	10	27	30	3200	0.40	300	
SDCL1005C12N□TDF	12	8	100	10	26	29	2700	0.50	300	
SDCL1005C15N□TDF	15	8	100	10	26	28	2300	0.50	300	
SDCL1005C18N□TDF	18	8	100	10	25	27	2100	0.60	300	
SDCL1005C20N□TDF	20	8	100	10	25	26	2000	0.60	300	
SDCL1005C22N□TDF	22	8	100	10	25	25	1900	0.60	300	
SDCL1005C27N□TDF	27	8	100	10	25	23	1600	0.70	300	
SDCL1005C33N□TDF	33	8	100	10	22	22	1300	0.80	200	
SDCL1005C39N□TDF	39	8	100	10	22	19	1200	1.00	200	
SDCL1005C43N□TDF	43	8	100	10	21	16	1100	1.10	200	
SDCL1005C47N□TDF	47	8	100	10	21	16	1000	1.10	200	
SDCL1005C56N□TDF	56	8	100	10	18	13	750	1.20	200	
SDCL1005C68N□TDF	68	8	100	10	18	9	750	1.40	180	
SDCL1005C82N□TDF	82	8	100	10	13	-	750	2.40	150	
SDCL1005CR10□TDF	100	8	100	10	12	-	700	2.60	150	
SDCL1005CR12□TDF	120	8	100	10	-	-	600	2.80	150	
SDCL1005CR15□TDF	150	8	100	10	-	-	550	3.20	100	
SDCL1005CR18□TDF	180	8	100	10	-	-	500	3.70	100	
SDCL1005CR22□TDF	220	8	100	12	-	-	450	4.00	100	
SDCL1005CR27□TDF	270	8	100	12	-	-	400	4.50	100	
SDCL1005CR33□TDF	330	6	50	-	-	-	350	7.00	50	

※□: Please specify the inductance tolerance code (J=±5%, K=±10%). The product with tolerance less than ±5%, ±10% is also available. Please contact your local sales.

# SPECIFICATIONS

## SDCL1608-D TYPE

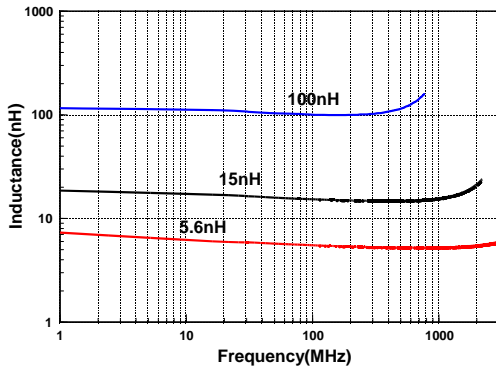
Part Number	Inductance	Min. Quality Factor	L, Q Test Freq. L/Q	Typical Q @ Freq. (MHz)			Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
				100	800	1000				
Units	nH	-	MHz	-			MHz	$\Omega$	mA	mm [inch]
Symbol	L	Q	Freq	Q			S.R.F	DCR	I <sub>r</sub>	T
SDCL1608C1N0STDF	1.0±0.3	8	100	13	70	80	10000	0.05	500	0.8±0.15 [.031±.006]
SDCL1608C1N2STDF	1.2±0.3	8	100	13	60	70	10000	0.05	500	
SDCL1608C1N5STDF	1.5±0.3	8	100	13	47	68	6000	0.10	500	
SDCL1608C1N8STDF	1.8±0.3	8	100	13	45	61	6000	0.10	500	
SDCL1608C2N2STDF	2.2±0.3	8	100	13	45	60	6000	0.10	500	
SDCL1608C2N7STDF	2.7±0.3	10	100	13	44	55	6000	0.12	500	
SDCL1608C3N3STDF	3.3±0.3	10	100	13	43	50	6000	0.15	500	
SDCL1608C3N9STDF	3.9±0.3	10	100	13	43	50	6000	0.16	500	
SDCL1608C4N7STDF	4.7±0.3	10	100	13	43	50	6000	0.20	500	
SDCL1608C5N6STDF	5.6±0.3	10	100	14	42	48	5000	0.25	500	
SDCL1608C6N8□TDF	6.8	10	100	14	43	50	5000	0.30	500	
SDCL1608C8N2□TDF	8.2	10	100	14	43	48	4500	0.35	500	
SDCL1608C10N□TDF	10	12	100	15	45	50	3500	0.40	300	
SDCL1608C12N□TDF	12	12	100	18	48	50	3000	0.45	300	
SDCL1608C15N□TDF	15	12	100	18	48	50	2300	0.50	300	
SDCL1608C18N□TDF	18	12	100	16	48	51	2200	0.55	300	
SDCL1608C22N□TDF	22	12	100	16	45	48	2000	0.60	300	
SDCL1608C27N□TDF	27	12	100	16	45	45	1700	0.65	300	
SDCL1608C33N□TDF	33	12	100	16	45	41	1500	0.70	300	
SDCL1608C39N□TDF	39	12	100	17	40	48	1400	0.70	300	
SDCL1608C47N□TDF	47	12	100	17	35	35	1200	0.70	300	
SDCL1608C56N□TDF	56	12	100	17	35	30	1100	0.75	300	
SDCL1608C68N□TDF	68	12	100	17	30	20	900	0.85	300	
SDCL1608C82N□TDF	82	8	100	15	22	-	800	1.00	300	
SDCL1608CR10□TDF	100	8	100	15	16	-	700	1.20	300	
SDCL1608CR12□TDF*	120	8	50	15	-	-	600	1.40	200	
SDCL1608CR15□TDF*	150	8	50	15	-	-	500	1.60	200	
SDCL1608CR18□TDF*	180	8	50	15	-	-	400	1.90	200	
SDCL1608CR22□TDF*	220	8	50	15	-	-	350	2.40	200	
SDCL1608CR27□TDF*	270	8	50	16	-	-	350	2.60	150	
SDCL1608CR33□TDF*	330	8	50	16	-	-	350	2.80	150	
SDCL1608CR39□TDF*	390	8	50	16	-	-	300	3.20	150	
SDCL1608CR43□TDF*	430	8	50	16	-	-	280	3.40	150	
SDCL1608CR47□TDF*	470	8	50	15	-	-	250	3.60	150	
SDCL1608CR56□TDF*	560	8	50	15	-	-	250	4.00	100	
SDCL1608CR68□TDF*	680	8	50	15	-	-	250	4.50	100	

※□: Please specify the inductance tolerance code (J=±5%, K=±10%). The product with tolerance less than ±5%, ±10% is also available. Please contact your local sales.

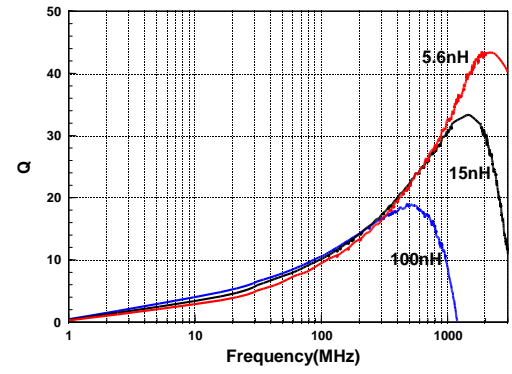
※\*: The length: 1.65±0.15mm, for others: 1.60±0.15mm.

# TYPICAL ELECTRICAL CHARACTERISTICS

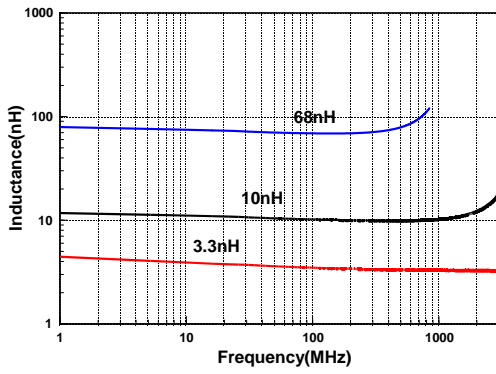
SDCL1005-D TYPE



SDCL1005-D TYPE



SDCL1608-D TYPE



SDCL1608-D TYPE

