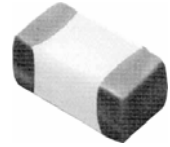


Multilayer Chip Ceramic Inductor – SDCL-D Series

Operating Temp. : SDCL0603&1005 series: -55°C ~ +125°C

SDCL1608&2012 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

SDCL

①

Type	
SDCL	Chip Ceramic Inductor

1608

②

C

③

External Dimensions (L×W) (mm)	
0603 [0201]	0.6×0.3
1005 [0402]	1.0×0.5
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.25

10N

④

①

Nominal Inductance	
Example	Nominal Value
3N9	3.9nH
10N	10nH
R10	100nH
※R=Decimal Point, N=nH	

④

⑤

Inductance Tolerance	
S	±0.3nH
J	±5%
K	±10%

J

⑤

T

⑥

Material Code	
C	

⑥

Packing	
T	Tape & Reel

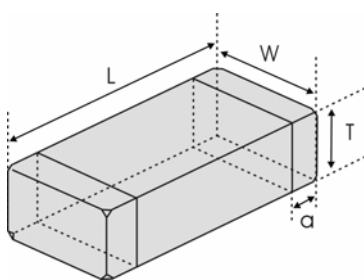
⑦

Internal Code	
D	

⑧

Hazardous Substance Free Products	
F	

SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
SDCL0603 [0201]	0.6±0.05 [.024±.002]	0.3±0.05 [.012±.002]	0.3±0.05 [.012±.002]	0.15±0.05 [.006±.002]
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]
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]
	1.65±0.15 [.065±.006]			
SDCL2012 [0805]	2.0±0.2 [.079±.008]	1.25±0.2 [.049±.008]	0.85±0.2 [.033±.008]	0.5±0.2 [.020±.008]

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SPECIFICATIONS

SDCL0603-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	300	500	800	1000	1800				
Units	nH	-	MHz	-						MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q						SRF	DCR	Ir	T
SDCL0603C1N0STDF	1.0±0.3	4	100	5	8	12	16	18	23	>6000	0.15	550	0.3±0.05 [.012±.002]
SDCL0603C1N1STDF	1.1±0.3	4	100	5	8	11	15	17	22	>6000	0.15	550	
SDCL0603C1N2STDF	1.2±0.3	4	100	5	8	11	14	16	21	>6000	0.16	550	
SDCL0603C1N3STDF	1.3±0.3	4	100	5	8	11	14	16	21	>6000	0.16	550	
SDCL0603C1N5STDF	1.5±0.3	4.5	100	5	8	11	14	16	21	>6000	0.20	500	
SDCL0603C1N6STDF	1.6±0.3	4.5	100	5	8	11	14	16	20	>6000	0.22	440	
SDCL0603C1N8STDF	1.8±0.3	4.5	100	5	8	11	15	17	21	>6000	0.25	420	
SDCL0603C2N0STDF	2.0±0.3	4.5	100	5	9	11	15	17	21	>6000	0.25	400	
SDCL0603C2N2STDF	2.2±0.3	4.5	100	5	9	12	16	18	22	>6000	0.26	400	
SDCL0603C2N4STDF	2.4±0.3	4.5	100	5	9	12	16	18	22	>6000	0.26	380	
SDCL0603C2N7STDF	2.7±0.3	4.5	100	5	9	12	16	18	22	>6000	0.28	350	
SDCL0603C3N0STDF	3.0±0.3	4.5	100	5	9	12	16	18	22	6000	0.32	300	
SDCL0603C3N3STDF	3.3±0.3	4.5	100	5	10	13	17	19	23	5800	0.35	300	
SDCL0603C3N6STDF	3.6±0.3	4.5	100	5	10	13	17	19	23	5500	0.35	300	
SDCL0603C3N9STDF	3.9±0.3	4.5	100	5	9	12	16	18	22	5200	0.40	280	
SDCL0603C4N3STDF	4.3±0.3	4.5	100	5	9	12	16	18	22	4800	0.40	280	
SDCL0603C4N7STDF	4.7±0.3	4.5	100	5	9	12	15	17	21	4600	0.45	250	
SDCL0603C5N1STDF	5.1±0.3	5	100	6	10	13	17	19	22	4500	0.45	250	
SDCL0603C5N6STDF	5.6±0.3	5	100	6	10	13	17	19	21	4200	0.48	250	
SDCL0603C6N2STDF	6.2±0.3	5	100	6	10	12	16	18	20	4000	0.50	250	
SDCL0603C6N8□TDF	6.8	5	100	6	10	12	16	18	20	3800	0.55	240	
SDCL0603C7N5□TDF	7.5	5	100	6	10	12	16	18	20	3500	0.65	220	
SDCL0603C8N2□TDF	8.2	5	100	6	10	12	16	18	20	3300	0.70	200	
SDCL0603C9N1□TDF	9.1	5	100	6	10	12	16	18	20	3200	0.80	180	
SDCL0603C10N□TDF	10	5	100	6	10	13	16	18	19	3000	0.85	180	
SDCL0603C12N□TDF	12	5	100	6	10	13	16	18	18	2500	1.00	180	
SDCL0603C15N□TDF	15	5	100	6	12	15	19	21	18	2200	1.30	160	
SDCL0603C18N□TDF	18	6	100	7	12	15	19	20	17	2000	1.40	150	
SDCL0603C22N□TDF	22	6	100	7	13	15	19	20	15	1800	1.50	140	
SDCL0603C27N□TDF	27	6	100	7	13	15	19	20	13	1700	1.60	120	
SDCL0603C33N□TDF	33	6	100	7	10	12	14	15	9	1600	2.20	80	
SDCL0603C39N□TDF	39	6	100	7	10	12	14	14	8	1500	2.30	80	
SDCL0603C47N□TDF	47	6	100	7	10	12	13	13	5	1400	2.60	80	
SDCL0603C56N□TDF	56	6	100	7	10	12	12	11	-	1200	3.00	50	
SDCL0603C68N□TDF	68	6	100	7	10	12	11	10	-	1200	3.20	50	
SDCL0603C82N□TDF	82	6	100	7	10	12	11	9	-	1000	3.50	50	
SDCL0603CR10□TDF	100	6	100	7	10	11	9	5	-	1000	4.30	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

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	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q			S.R.F	DCR	I _r	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	

※□: 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	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q			S.R.F	DCR	Ir	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	

※□: 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.

SDCL2012-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	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q			S.R.F	DCR	Ir	T
SDCL2012C1N5STDF	1.5±0.3	10	100	21	61	85	6000	0.10	500	0.85±0.2 [.033±.008]
SDCL2012C1N8STDF	1.8±0.3	10	100	20	55	80	6000	0.10	500	
SDCL2012C2N2STDF	2.2±0.3	10	100	20	53	75	6000	0.10	500	
SDCL2012C2N7STDF	2.7±0.3	12	100	18	56	70	5500	0.10	500	



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SPECIFICATIONS

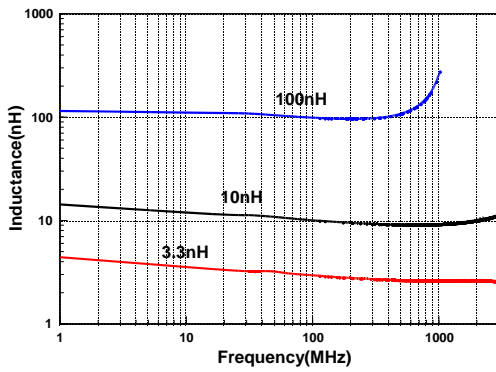
SDCL2012-D TYPE

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	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q			S.R.F	DCR	Ir	T
SDCL2012C3N3STDF	3.3±0.3	12	100	18	54	65	5000	0.13	500	0.85±0.2 [.033±.008]
SDCL2012C3N9STDF	3.9±0.3	12	100	18	54	60	4500	0.15	500	
SDCL2012C4N7STDF	4.7±0.3	12	100	18	55	65	4000	0.20	500	
SDCL2012C5N6STDF	5.6±0.3	15	100	18	60	66	3500	0.23	500	
SDCL2012C6N8□TDF	6.8	15	100	18	63	68	3000	0.25	500	
SDCL2012C8N2□TDF	8.2	15	100	20	63	70	2500	0.28	500	
SDCL2012C10N□TDF	10	15	100	21	60	70	2200	0.30	500	
SDCL2012C12N□TDF	12	15	100	20	60	70	2000	0.35	500	
SDCL2012C15N□TDF	15	15	100	20	63	65	1800	0.40	500	
SDCL2012C18N□TDF	18	15	100	22	63	60	1600	0.45	300	
SDCL2012C22N□TDF	22	15	100	19	60	45	1500	0.50	300	
SDCL2012C27N□TDF	27	15	100	19	58	38	1400	0.55	300	
SDCL2012C33N□TDF	33	15	100	19	55	30	1300	0.60	300	
SDCL2012C39N□TDF	39	15	100	19	47	26	1100	0.65	300	
SDCL2012C47N□TDF	47	18	100	23	43	20	1000	0.70	300	
SDCL2012C56N□TDF	56	18	100	22	39	10	900	0.75	300	
SDCL2012C68N□TDF	68	18	100	22	30	-	850	0.80	300	
SDCL2012C82N□TDF	82	18	100	22	-	-	800	0.90	300	
SDCL2012CR10□TDF	100	18	100	22	-	-	700	0.90	300	
SDCL2012CR12□TDF	120	13	50	19	-	-	600	0.95	300	
SDCL2012CR15□TDF	150	13	50	19	-	-	550	1.20	300	
SDCL2012CR18□TDF	180	13	50	19	-	-	500	1.30	300	
SDCL2012CR22□TDF	220	12	50	20	-	-	400	1.50	300	
SDCL2012CR27□TDF	270	12	50	20	-	-	350	1.80	300	
SDCL2012CR33□TDF	330	12	50	18	-	-	300	2.00	300	
SDCL2012CR39□TDF	390	10	50	17	-	-	250	2.00	300	
SDCL2012CR47□TDF	470	10	50	17	-	-	200	2.00	300	

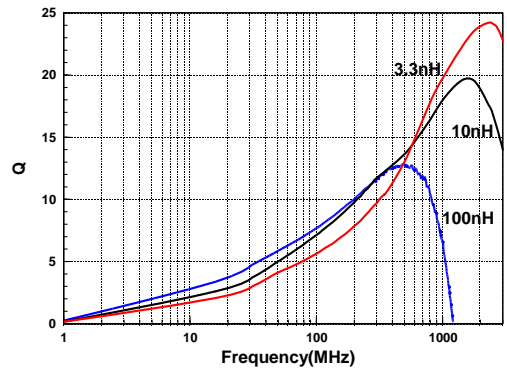
※□: Please specify the inductance tolerance code (J=±5%, K=±10%). The product with tolerance less than ±5%, ±10% is also available. Please contact your local sales.

TYPICAL ELECTRICAL CHARACTERISTICS

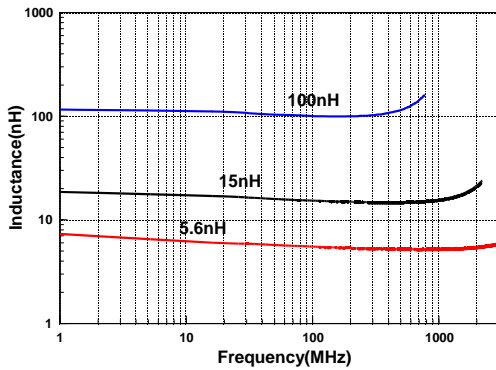
Inductance vs. Frequency Characteristics
SDCL0603-D TYPE



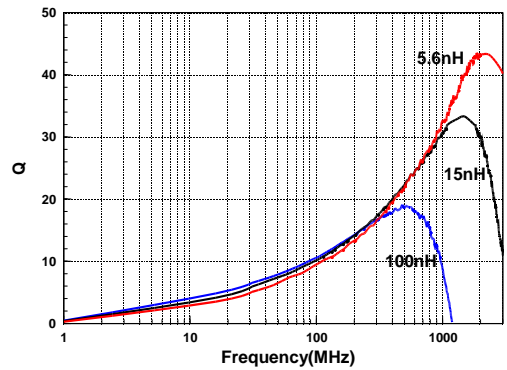
Q vs. Frequency Characteristics
SDCL0603-D TYPE



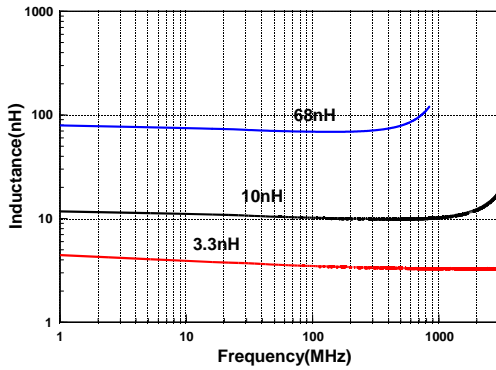
SDCL1005-D TYPE



SDCL1005-D TYPE



SDCL1608-D TYPE



SDCL1608-D TYPE

