



### Multilayer Chip Ceramic Inductor (SDCL-D Series)

#### • Dimension

Unit: mm

Type	L	W	T	A
SDCL1005-D [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.10 [.010±.004]
SDCL1608-D [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-D [0805]	2.0±0.2 [.079±.008]	1.25±0.20 [.049±.008]	0.85±0.20 [.033±.008]	0.5±0.2 [.020±.008]

Unit: mm [inch]

#### • Features

- Monolithic structure for high reliability
- High self-resonant frequency
- Excellent solderability and heat resistance for reflow and wave soldering processes
- Operating temperature:  
SDCL1005-D Series: -55°C to +125°C  
SDCL1608-D and SDCL2012-D Series: -40°C to +85°C

#### • Applications

- RF circuit in telecommunication equipment, and audiovisual equipment.

#### • Part Number Identification

**SDCL**    **1608**    **C**    **10N**    **J**    **T**    **D**    **F**  
 (1)            (2)            (3)            (4)            (5)            (6)            (7)            (8)

(1)

Product ID	
SDCL	Chip ceramic inductor

(2)

Dimensions (L x W, mm)	
1005 [0402]	1.0 x 0.50
1608 [0603]	1.6 x 0.80
2012 [0805]	2.0 x 1.25

(3)

Material
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(4)

Nominal Inductance	
Example	Nominal Value
3N9	3.9nH
10N	10nH
R10	100nH

(5)

Tolerance of Inductance	
S	±0.3nH
J	±5%
M	±10%

(6)

Packing Type	
B	Bulk packing
T	Tape & reel packing

(7)

Internal Code
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(8)

Hazardous Substance Free Products
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### ● SDCL1005-D Series

Part Number *	Inductance	Quality Factor (min.)	Test Frequency	Typical Q at Frequency (MHz)			Self Resonance Frequency (min.)	DC Resistance (max.)	Rated Current (max.)	Thickness
				100	800	1000				
Unit	nH	-	MHz	-			MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	Q			S.R.F	DCR	Ir	T
SDCL1005C1N0STDF	1.0±0.3	8	100	11	34	36	10000	0.10	400	0.5±0.15 [.020±.006]
SDCL1005C1N2STDF	1.2±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	
SDCL1005C1N8STDF	1.8±0.3	8	100	11	30	34	6000	0.10	300	
SDCL1005C2N2STDF	2.2±0.3	8	100	10	29	33	6000	0.20	300	
SDCL1005C2N7STDF	2.7±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	
SDCL1005C3N9STDF	3.9±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	
SDCL1005C5N6STDF	5.6±0.3	8	100	10	28	30	4000	0.30	300	
SDCL1005C6N8□TDF	6.8	8	100	10	27	30	3900	0.30	300	
SDCL1005C8N2□TDF	8.2	8	100	10	27	30	3600	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	
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	
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	

\* □: Tolerance levels other than ±5% or ±10% are also available.

### ● SDCL1608-D Series

Part Number *	Inductance	Quality Factor (min.)	Test Frequency	Typical Q at Frequency (MHz)			Self Resonance Frequency (min.)	DC Resistance (max.)	Rated Current (max.)	Thickness
				100	800	1000				
Unit	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	14	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	

\* □: Tolerance levels other than ±5% or ±10% are also available.



### ● SDCL1608-D Series (continued from the preceding page)

Part Number *	Inductance	Quality Factor (min.)	Test Frequency	Typical Q at Frequency (MHz)			Self Resonance Frequency (min.)	DC Resistance (max.)	Rated Current (max.)	Thickness
				100	800	1000				
Unit	nH	-	MHz	-			MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	Q			S.R.F	DCR	I <sub>r</sub>	T
SDCL1608C8N2□TDF	8.2	10	100	14	43	48	4500	0.35	500	0.8±0.15 [.031±.006]
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	8	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 <sup>†</sup> TDF	120	8	50	15	-	-	600	1.40	200	
SDCL1608CR15 <sup>†</sup> TDF	150	8	50	15	-	-	500	1.60	200	
SDCL1608CR18 <sup>†</sup> TDF	180	8	50	15	-	-	400	1.90	200	
SDCL1608CR22 <sup>†</sup> TDF	220	8	50	15	-	-	350	2.40	200	
SDCL1608CR27 <sup>†</sup> TDF	270	8	50	16	-	-	350	2.60	150	
SDCL1608CR33 <sup>†</sup> TDF	330	8	50	16	-	-	350	2.80	150	
SDCL1608CR39 <sup>†</sup> TDF	390	8	50	16	-	-	300	3.20	150	
SDCL1608CR43 <sup>†</sup> TDF	430	8	50	16	-	-	280	3.40	150	
SDCL1608CR47 <sup>†</sup> TDF	470	8	50	15	-	-	250	3.60	150	

\* □: Tolerance levels other than ±5% or ±10% are also available.

<sup>†</sup> Length: 1.65±0.15 [.065±.006]

### ● SDCL2012-D Series

Part Number *	Inductance	Quality Factor (min.)	Test Frequency	Typical Q at Frequency (MHz)			Self Resonance Frequency (min.)	DC Resistance (max.)	Rated Current (max.)	Thickness
				100	800	1000				
Unit	nH	-	MHz	-			MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	Q			S.R.F	DCR	I <sub>r</sub>	T
SDCL2012C1N5STDF	1.5±0.3	10	100	21	61	85	6000	0.10	500	0.85±0.2 [.033±.008]
SDCL2012C1N8STDF	11.8±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	
SDCL2012C3N3STDF	3.3±0.3	12	100	18	54	65	5000	0.13	500	
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	

\* □: Tolerance levels other than ±5% or ±10% are also available.



● **SDCL2012-D Series** (continued from the preceding page)

Part Number *	Inductance	Quality Factor (min.)	Test Frequency	Typical Q at Frequency (MHz)			Self Resonance Frequency (min.)	DC Resistance (max.)	Rated Current (max.)	Thickness
				100	800	1000				
Unit	nH	-	MHz	-			MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	Q			S.R.F	DCR	I <sub>r</sub>	T
SDCL2012C47N□TDF	47	18	100	23	43	20	1000	0.70	300	0.85±0.2 [.033±.008]
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	2.00500	300	

\*□: Tolerance levels other than ±5% or ±10% are also available.