

Multilayer Chip Ceramic Inductor – SDCL0603Q – S02 Series



Operating Temp ◆ $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Features

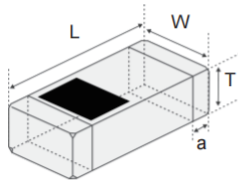
- ◆ Monolithic structure for high reliability
- ◆ High self-resonant frequency
- ◆ Excellent solderability and high heat resistance
- ◆ High Q factor

Applications ◆ RF circuit in telecommunication and other equipments

Product Identification

1	2	3	4	5	6	7	8	9
SDCL	0603	Q	10N	J	T	02	B03	S02
1Type			2External Dimensions (L×W) (mm)			3Characteristics Code		
SDCL		Chip Ceramic Inductor		0603 [0201]0.6×0.3		Q		
4Nominal Inductance			5Inductance Tolerance			6Packing		
Example		Nominal Value		B±0.1nH		T		Tape & Reel
3N9		3.9nH		C±0.2nH				
10N		10nH		S±0.3nH				
※R =decimal point, N=nH			H±3%					
			J±5%					
7Serial Code			8Internal Code			9Customer Code		
02			B03			S02		

Shape and Dimensions



Unit: mm [inch]

Type	L	W	T	a
SDCL0603Q-S02 [0201]	0.6 ± 0.03 [.024 ± .0012]	0.3 ± 0.03 [.012 ± .0012]	0.3 ± 0.03 [.012 ± .0012]	0.12 ± 0.05 [.005 ± .002]

Specifications SDCL0603Q-S02 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.	Typical Q @ Freq. (GHz)					Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.5	0.8	1.8	2	2.4			
Units	nH	-	MHz	-					MHz	Ω	mA
Symbol	L	Q	Freq.	Q					S.R.F	DCR	I _r
SDCL0603Q0N6 □ T02B03S02	0.6	13	500	>24	>32	>54	>57	>65	20000	0.06	850
SDCL0603Q0N7 □ T02B03S02	0.7	13	500	>24	>32	>54	>57	>65	20000	0.06	800
SDCL0603Q0N8 □ T02B03S02	0.8	13	500	>24	>32	>54	>57	>65	18000	0.07	800
SDCL0603Q0N9 □ T02B03S02	0.9	13	500	>24	>32	>54	>57	>65	18000	0.07	750
SDCL0603Q1N0 □ T02B03S02	1	13	500	24	32	54	57	65	17000	0.08	750
SDCL0603Q1N1 □ T02B03S02	1.1	13	500	19	26	45	47	55	17000	0.1	750
SDCL0603Q1N2 □ T02B03S02	1.2	13	500	19	25	43	44	52	17000	0.1	750
SDCL0603Q1N3 □ T02B03S02	1.3	13	500	19	25	40	42	47	17000	0.12	600
SDCL0603Q1N4 □ T02B03S02	1.4	13	500	19	24	39	41	47	16000	0.12	600
SDCL0603Q1N5 □ T02B03S02	1.5	13	500	19	24	39	41	46	15000	0.12	600
SDCL0603Q1N6 □ T02B03S02	1.6	13	500	19	24	39	41	46	15000	0.13	600
SDCL0603Q1N7 □ T02B03S02	1.7	13	500	19	24	39	41	46	15000	0.15	600
SDCL0603Q1N8 □ T02B03S02	1.8	13	500	19	24	39	41	46	15000	0.15	600
SDCL0603Q1N9 □ T02B03S02	1.9	13	500	18	24	38	40	45	12500	0.15	600
SDCL0603Q2N0 □ T02B03S02	2	13	500	17	24	38	39	44	12500	0.15	600
SDCL0603Q2N1 □ T02B03S02	2.1	13	500	17	24	37	39	44	11000	0.15	600
SDCL0603Q2N2 □ T02B03S02	2.2	13	500	17	24	38	40	43	11000	0.15	600
SDCL0603Q2N3 □ T02B03S02	2.3	13	500	17	24	37	39	43	10000	0.2	500
SDCL0603Q2N4 □ T02B03S02	2.4	13	500	17	23	36	38	42	10000	0.2	500
SDCL0603Q2N5 □ T02B03S02	2.5	13	500	17	23	35	36	40	10000	0.2	500
SDCL0603Q2N6 □ T02B03S02	2.6	13	500	17	22	34	35	39	10000	0.2	500
SDCL0603Q2N7 □ T02B03S02	2.7	13	500	17	22	34	35	39	10000	0.2	500
SDCL0603Q2N8 □ T02B03S02	2.8	13	500	17	22	34	35	39	9500	0.2	500
SDCL0603Q2N9 □ T02B03S02	2.9	13	500	17	22	34	35	39	9500	0.2	500
SDCL0603Q3N0 □ T02B03S02	3	13	500	17	22	34	35	39	9500	0.25	450
SDCL0603Q3N1 □ T02B03S02	3.1	13	500	17	22	34	35	39	8500	0.25	450
SDCL0603Q3N2 □ T02B03S02	3.2	13	500	17	22	33	35	39	8200	0.25	450
SDCL0603Q3N3 □ T02B03S02	3.3	13	500	18	23	34	36	40	8100	0.25	450
SDCL0603Q3N4 □ T02B03S02	3.4	13	500	17	23	33	35	39	8000	0.25	450
SDCL0603Q3N5 □ T02B03S02	3.5	13	500	17	23	33	35	39	7900	0.25	450
SDCL0603Q3N6 □ T02B03S02	3.6	13	500	16	23	33	35	39	7700	0.3	400
SDCL0603Q3N7 □ T02B03S02	3.7	13	500	16	23	33	35	38	7600	0.3	400
SDCL0603Q3N8 □ T02B03S02	3.8	13	500	16	22	33	35	38	7500	0.3	400
SDCL0603Q3N9 □ T02B03S02	3.9	13	500	16	22	33	35	38	7400	0.3	400
SDCL0603Q4N0 □ T02B03S02	4.0	14	500	16	21	32	34	37	7000	0.40	350
SDCL0603Q4N1 □ T02B03S02	4.1	14	500	16	21	32	34	37	7000	0.40	350
SDCL0603Q4N2 □ T02B03S02	4.2	14	500	16	21	32	34	37	6800	0.4	350
SDCL0603Q4N3 □ T02B03S02	4.3	14	500	16	21	32	34	37	6800	0.4	350
SDCL0603Q4N7 □ T02B03S02	4.7	14	500	16	22	33	35	38	6200	0.4	350
SDCL0603Q5N1 □ T02B03S02	5.1	14	500	17	22	34	36	38	5900	0.4	350
SDCL0603Q5N6 □ T02B03S02	5.6	14	500	16	21	33	34	37	5500	0.4	350
SDCL0603Q6N2 □ T02B03S02	6.2	14	500	18	23	34	35	37	5100	0.48	300
SDCL0603Q6N8 □ T02B03S02	6.8	14	500	17	22	32	33	35	5500	0.5	300
SDCL0603Q7N5 □ T02B03S02	7.5	14	500	16	21	31	33	34	4700	0.5	300
SDCL0603Q8N2 □ T02B03S02	8.2	14	500	16	21	31	32	34	4300	0.56	250
SDCL0603Q9N1 □ T02B03S02	9.1	14	500	16	20	30	31	32	4100	0.7	250
SDCL0603Q10N □ T02B03S02	10	13	500	16	20	28	29	31	3800	0.7	250
SDCL0603Q11N □ T02B03S02	11	14	500	16	20	27	28	28	3400	0.7	250
SDCL0603Q12N □ T02B03S02	12	13	500	16	20	27	28	28	3400	0.7	250
SDCL0603Q13N □ T02B03S02	13	13	500	15	19	24	24	23	3000	0.7	250
SDCL0603Q15N □ T02B03S02	15	13	500	15	19	23	21	14	2600	0.7	250
SDCL0603Q16N □ T02B03S02	16	13	500	15	19	23	20	12	2300	0.8	200
SDCL0603Q18N □ T02B03S02	18	13	500	15	19	23	20	12	2300	0.8	200

Specifications SDCL0603Q-S02 Series

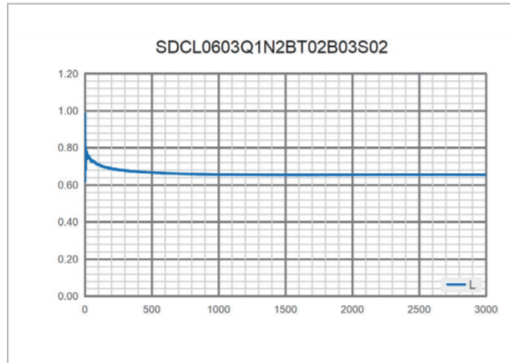
Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.	Typical Q @ Freq. (GHz)					Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.5	0.8	1.8	2	2.4			
Units	nH	-	MHz	-					MHz	Ω	mA
Symbol	L	Q	Freq.	Q					S.R.F	DCR	Ir
SDCL0603Q20N □ T02B03S02	20	13	500	15	19	22	19	10	2200	1.2	150
SDCL0603Q22N □ T02B03S02	22	13	500	15	19	22	19	10	2200	1.2	150
SDCL0603Q24N □ T02B03S02	24	13	500	15	19	15	13	8	2000	1.6	140
SDCL0603Q27N □ T02B03S02	27	13	500	15	19	15	13	8	2000	1.6	140
SDCL0603Q30N □ T02B03S02	30	11	500	14	15	8	5	-	2000	2.2	120
SDCL0603Q33N □ T02B03S02	33	11	300	14	15	8	5	-	2000	2.2	120
SDCL0603Q36N □ T02B03S02	36	11	300	14	15	6	-	-	1600	2.3	120
SDCL0603Q39N □ T02B03S02	39	11	300	14	15	6	-	-	1600	2.3	120
SDCL0603Q47N □ T02B03S02	47	11	300	14	15	-	-	-	1500	2.6	100
SDCL0603Q51N □ T02B03S02	51	11	300	13	13	-	-	-	1400	2.8	100
SDCL0603Q56N □ T02B03S02	56	11	300	13	13	-	-	-	1400	2.8	100
SDCL0603Q62N □ T02B03S02	62	11	300	13	11	-	-	-	1200	3.2	100
SDCL0603Q68N □ T02B03S02	68	11	300	13	11	-	-	-	1200	3.2	100
SDCL0603Q75N □ T02B03S02	75	10	300	12	10	-	-	-	1100	3.8	100
SDCL0603Q82N □ T02B03S02	82	10	300	12	10	-	-	-	1100	3.8	100
SDCL0603Q91N □ T02B03S02	91	10	300	12	10	-	-	-	1000	4	80
SDCL0603QR10 □ T02B03S02	100	10	300	12	10	-	-	-	1000	4	80
SDCL0603QR11 □ T02B03S02	110	9	300	12	8	-	-	-	1000	5	80
SDCL0603QR12 □ T02B03S02	120	9	300	12	8	-	-	-	1000	5	80

※□: Please specify the inductance tolerance. For $L \leq 4.2\text{nH}$, choose $B = \pm 0.1\text{nH}$, $C = \pm 0.2\text{nH}$ or $S = \pm 0.3\text{nH}$; For $4.2\text{nH} < L < 5.6\text{nH}$, choose, $H = \pm 3\%$, $J = \pm 5\%$ or $S = \pm 0.3\text{nH}$; For $L \geq 5.6\text{nH}$, choose, $H = \pm 3\%$, $J = \pm 5\%$.

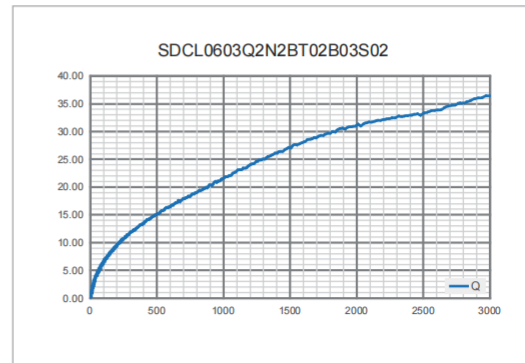
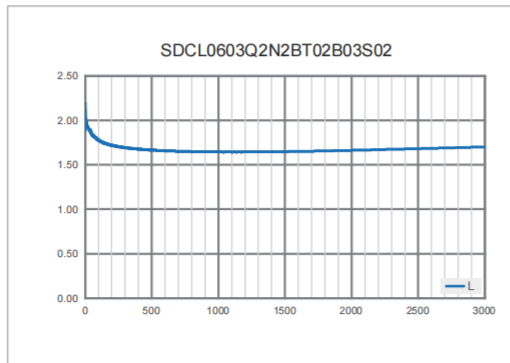
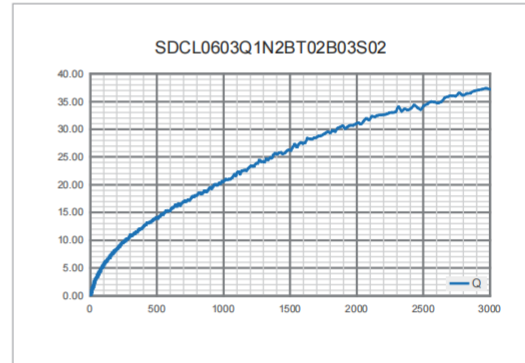
※: Please refer to "Measurement Notice For RF Inductors".

Typical Electrical Characteristics

SDCL0603Q-S02 Series Inductance vs. Frequency Characteristics

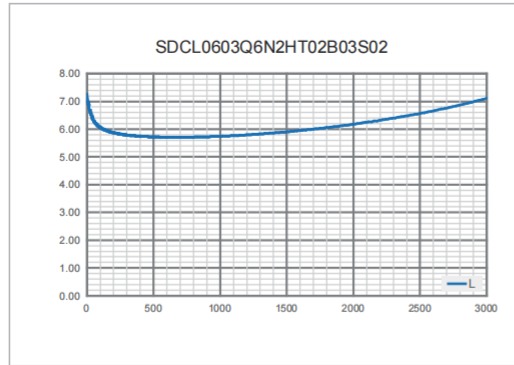


Q vs. Frequency Characteristics



Typical
Electrical
Characteristics

SDCL0603Q-S02 Series
Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics

