SMD Wire-Wound Ceramic Chip Inductor For Signal Line

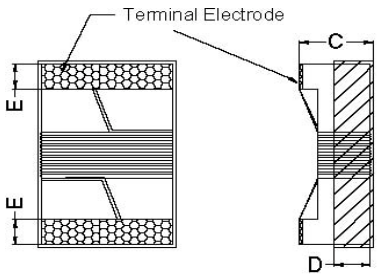
Wire wound ceramic chip inductor offers the overall combination of low cost, close tolerance, better Q factor and high self-resonant multiplayer chip inductor.

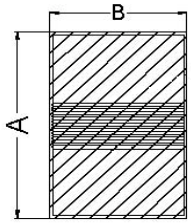
SCI S-Series

SCI1608S type

SCI1608S	[0603 inch]

◆ SHAPE & DIMENSIONS





SCI1608S	Dimensions
A (mm)	1.80 max
B (mm)	1.20 max
C (mm)	1.02 max
D (mm)	0.38(ref)
E (mm)	0.35±0.10

◆ PART NUMBER CONSTRUCTION

SCI	1608	S	–	1N6	K	T
Series name	L*W*T Dimensions (mm)	S type Signal Line		Inductance (uH) at 25/50/100/150/200/250MHz	Inductance Tolerance	Taping
SMD Ceramic Inductor	1.8*1.2*1.02			1N6 7N5 30N 36N 1N8 8N2 39N 43N 2N0 8N7 47N 51N 2N2 9N5 56N 68N 3N3 10N 72N 82N 3N6 11N R10 R11 3N9 12N R12 R15 4N3 15N R18 R20 4N7 16N R22 R25 5N1 18N R27 R33 5N6 22N R39 R47 6N2 24N R56 6N8 27N 33N	B = ±0.2nH S = ±0.3nH G = ±2% J = ±5% K = ±10% M = ±20%	

◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

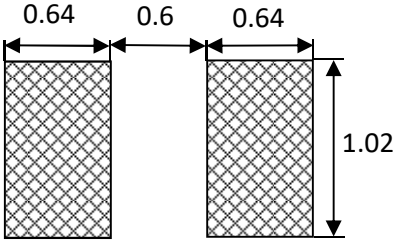
Type	Temperature range		Reel Dimensions (mm)	Package quantity (pieces/reel)
	Operating Temperature ℃	Storage Temperature ℃		
SCI1608S-Series	–25 to +85	–25 to +85	ø180	2K/3K/4K

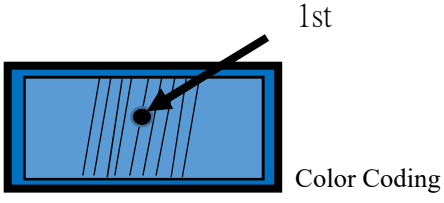
◆ ELECTRICAL CHARACTERISTICS

2019/6/6

Inductance 250MHz (nH)	Inductance Tolerance	Q min	Q MHz	900MHz L typ	900MHz Q typ	1.7GHz L typ	1.7GHz Qtyp	RDC(Ω) Max	IDC (mA) max.	SRF (MHz) Min.	Part No.
1.6	B,S	24	250	1.67	49	1.65	63	0.030	700	＞6000	SCI1608S-1N6□
1.8	B,S	16	250	1.83	35	1.86	50	0.045	700	＞6000	SCI1608S-1N8□
2.0	B,S	13	250	2.02	35	2.04	50	0.070	700	＞6000	SCI1608S-2N0□
2.2	B,S	13	250	2.22	31	2.24	44	0.070	700	＞6000	SCI1608S-2N2□
3.3	B,S	20	250	3.31	75	3.38	88	0.045	700	＞6000	SCI1608S-3N3□
3.6	J,B,S	22	250	3.72	53	3.71	65	0.063	700	＞6000	SCI1608S-3N6□
3.9	J,B,S	22	250	3.95	49	3.96	67	0.070	700	＞6000	SCI1608S-3N9□
4.3	B,J,S	22	250	4.32	50	4.33	70	0.063	700	5900	SCI1608S-4N3□
4.7	B,J,S	20	250	4.72	47	4.75	57	0.120	700	5800	SCI1608S-4N7□
5.1	B,J,S	20	250	4.93	47	4.95	56	0.140	700	5700	SCI1608S-5N1□
5.6	B,J,S	20	250	5.77	63	6.05	80	0.120	700	5800	SCI1608S-5N6□
6.2	B,J,K	27	250	6.45	60	6.78	80	0.110	700	5800	SCI1608S-6N2□
6.8	B,J,K	27	250	6.75	60	7.10	81	0.110	700	5800	SCI1608S-6N8□
7.5	B,J,K	28	250	7.70	60	7.82	65	0.120	700	4800	SCI1608S-7N5□
8.2	B,J,K	30	250	8.25	82	8.37	87	0.120	700	4700	SCI1608S-8N2□
8.7	B,J,K	28	250	8.86	62	9.32	58	0.109	700	4600	SCI1608S-8N7□
9.5	B,J,K	28	250	9.70	59	9.92	61	0.135	700	5400	SCI1608S-9N5□
10	G,J,K	31	250	10.0	66	10.6	83	0.130	700	4800	SCI1608S-10N□
11	G,J,K	30	250	11.0	53	11.5	56	0.130	700	4000	SCI1608S-11N□
12	G,J,K	35	250	12.3	72	13.5	83	0.130	700	4000	SCI1608S-12N□
15	G,J,K	35	250	15.4	64	16.8	89	0.130	700	4000	SCI1608S-15N□
16	G,J,K	34	250	16.2	55	17.3	52	0.130	700	3300	SCI1608S-16N□
18	G,J,K	35	250	18.7	70	21.4	69	0.170	700	3100	SCI1608S-18N□
22	G,J,K	38	250	22.8	73	26.1	71	0.190	700	3000	SCI1608S-22N□
24	G,J,K	38	250	25.3	73	28.5	71	0.190	700	3000	SCI1608S-24N□
27	G,J,K	40	250	29.2	74	34.6	65	0.220	600	2800	SCI1608S-27N□
30	G,J,K	37	250	31.4	47	39.9	28	0.220	600	2250	SCI1608S-30N□
33	G,J,K	40	250	36.0	67	49.5	42	0.220	600	2300	SCI1608S-33N□
36	G,J,K	37	250	39.4	47	52.7	24	0.250	600	2080	SCI1608S-36N□
39	G,J,K	40	250	42.7	60	60.2	40	0.250	600	2200	SCI1608S-39N□
43	G,J,K	38	250	47.0	44	64.9	21	0.280	600	2000	SCI1608S-43N□

◆ Recommended Soldering Conditions (Please use this product by reflow soldering)





◆ ELECTRICAL CHARACTERISTICS

Inductance 200MHz (nH)	Inductance Tolerance	Q min	Q MHz	900MHz L typ	900MHz Q typ	1.7GHz L typ	1.7GHz Qtyp	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
47	G,J,K	38	250	52.2	62	77.2	35	0.28	600	2000	SCI1608S-47N□
51	G,J,K	35	250	55.5	69	82.2	34	0.31	600	1900	SCI1608S-51N□
56	G,J,K	38	250	62.5	56	97.0	26	0.31	600	1900	SCI1608S-56N□
68	G,J,K	37	250	80.5	54	168	21	0.34	600	1700	SCI1608S-68N□

Inductance 150MHz (nH)	Inductance Tolerance	Q min	Q MHz	900MHz L typ	900MHz Q typ	1.7GHz L typ	1.7GHz Qtyp	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
72	G,J,K	34	250	82.0	53	135	20	0.49	400	1700	SCI1608S-72N□
82	G,J,K	34	250	96.2	54	177	21	0.54	400	1700	SCI1608S-82N□
100	G,J,K	34	250	124	49			0.68	400	1400	SCI1608S-R10□
110	G,J,K	32	250	138	43			0.65	300	1350	SCI1608S-R11□
120	G,J,K	32	250	166	39			0.75	300	1300	SCI1608S-R12□
150	G,J,K	28	250	250	25			1.2	280	990	SCI1608S-R15□

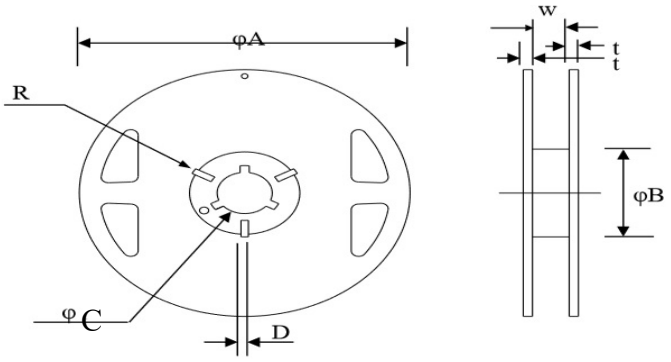
Inductance 100MHz (nH)	Inductance Tolerance	Q min	Q MHz	900MHz L typ	900MHz Q typ	1.7GHz L typ	1.7GHz Qtyp	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
180	G,J,K	25	250	305	22			1.52	240	990	SCI1608S-R18□
200	G,J,K	25	250					1.98	200	900	SCI1608S-R20□
220	G,J,K	25	250					2.02	200	900	SCI1608S-R22□
250	G,J,K	25	250					2.2	120	880	SCI1608S-R25□
270	G,J,K	24	250					2.36	170	900	SCI1608S-R27□
330	G,J,K	25	250					3.2	100	900	SCI1608S-R33□
390	G,J,K	25	250					3.6	100	700	SCI1608S-R39□

Inductance 50MHz (nH)	Inductance Tolerance	Q min	Q MHz	900MHz L typ	900MHz Q typ	1.7GHz L typ	1.7GHz Qtyp	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
470	G,J,K	20	100					3.6	90	300	SCI1608S-R47□

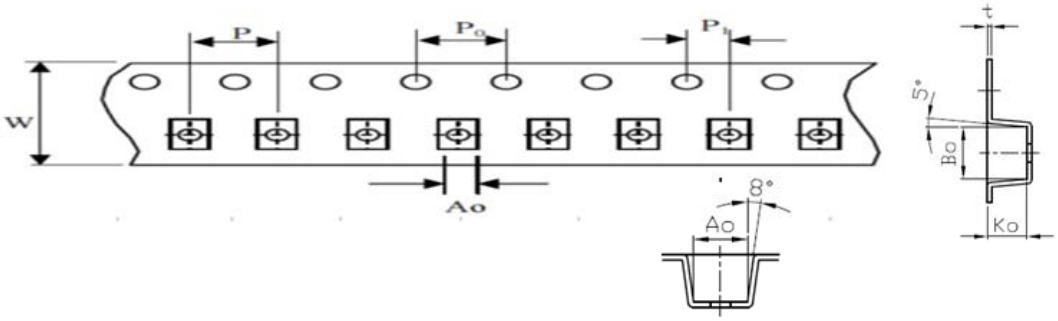
Inductance 25MHz (nH)	Inductance Tolerance	Q min	Q MHz	900MHz L typ	900MHz Q typ	1.7GHz L typ	1.7GHz Qtyp	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
560	G,J,K	12	50					4	80	150	SCI1608S-R56□

Solder Heat Resistance	Appearance: NO significant abnormality. Inductance change: Within+-20%.	Preheat:150°C,60sec. Solder tamperature:260+-5°C Flux for lead :rosin Dip time:10+-0.5sec
Solder ability Test	More than 90% of the terminal electrode Should be covered with solder.	Preheat: 150°C,60sec. Solder tamperature:230+-5°C Flux for lead :rosin Dip time: 4+-1sec
Reliability Test		
High Temperature Life Test	Appearance: no damage. Inductance: within+-20%of initial value. No disconnection or short circuit.	Temperature: 85+-5°C. Duration:500+-12hrs Measured at room temperature after placing for 2 to 3hrs.
Low Temperature Life Test	Appearance: no damage Inductance: within+-20%of initial value. No disconnection or short circuit.	Temperature: -40+-5°C. Duration:500+-12hrs Measured at room temperature after placing for 2 to 3hrs. 測試後室溫放置2-3小時，才可以測試電氣特性.
Thermal shock	階段 / 溫度°C / 時間（分） 1 / -40+-3°C / 30+-3 2 / 常溫 / Within3 3 / +85+-33°C / 30+-3 4 / 常溫 / Within3 測試性能同上	Condition for 1 cycle Step1:-40+-3°C 30+-3 min. Step2: Room Temperature within 3min. Step3:+85+-3°C 30+-3min Step4: Room Temperature within 3min. Number of cycles:10 測試後室溫放置2-3小時，才可以測試電氣特性.
Humidity Resistance	Appearance: no damage Inductance: within+-20%of initial value. No disconnection or short circuit.	Humidity:90-95%RH Temperature:60+-5°C Applied current: Rated current. Duration: 500+-12hrs. 放置時間：500+-12hrs Measured at room temperature after placing for 2 to 3hrs. 測試後室溫放置2-3小時，才可以測試電氣特性.

◆ Reel Dimension & Tape Dimension

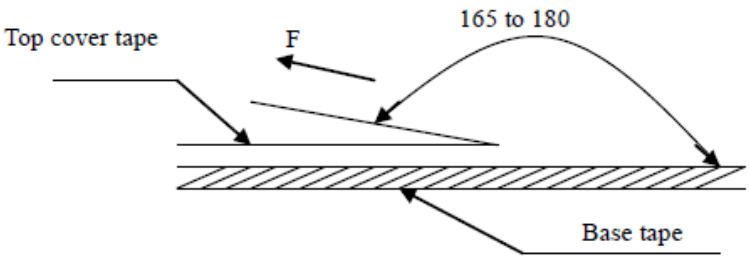


Type	A(mm)	B(mm)	C(mm)	W(mm)
7”x8mm	178±1.0	60±0.5	13.5±0.5	9.5±0.5



PN	Size	W(mm)	P(mm)	Po(mm)	P1(mm)	A0(mm)	B0(mm)	K0(mm)	t(mm)
SFI1608P	1608	8±0.1	4±0.1	4±0.1	2±0.05	1.3±0.1	1.8±0.1	1.1±0.1	0.2±0.05
SCI2012S	2012	8±0.1	4±0.1	4±0.1	2±0.05	1.85±0.1	2.5±0.1	1.7±0.1	0.23±0.05
SFI2012P SFI2012S	2012	8±0.1	4±0.1	4±0.1	2±0.05	1.6±0.1	2.5±0.1	1.25±0.1	0.22±0.05
SFI2520P SCI2520S	2520	8±0.1	4±0.1	4±0.1	2±0.05	2.61±0.1	2.93±0.1	2.25±0.1	0.26±0.05
SCI1608S	1608	8±0.1	4±0.1	4±0.1	2±0.05	1.15±0.1	1.83±0.1	0.95±0.1	0.22±0.05

The force for tearing off cover tape is 15 to 60 grams in the arrow direction at the following conditions:
Temperature : 5 ~ 35℃
Humidity : 45 ~ 85%
Atmospheric pressure : 860 ~ 1060 hpa
Tearing Speed: 300Mm/min



◆ Packaging Quantity

Chip Size	1608	2012	2520
8mm / Reel	2K/3K/4K	2K/3K	2K