

## 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.

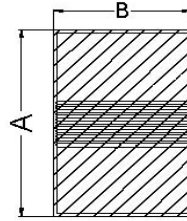
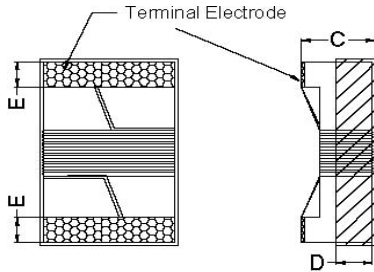
### SCI S-Series

## SCI1608S type

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SCI1608S [0603 inch]

## ◆ SHAPE & DIMENSIONS



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

## ◆ PART NUMBER CONSTRUCTION

SCI	1608	S
Series name	L*W*T Dimensions (mm)	S type Signal Line
SMD Ceramic Inductor	1.8*1.2*1.0	

1N6				K	T
Inductance (uH) at 25/50/100/150/200MHz				Inductance Tolerance	Taping
1N6	7N5	30N	36N	B = ±0.2nH	
				S = ±0.3nH	
				G = ±2%	
				J = ±5%	
				K = ±10%	
				M = ±20%	
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				

## ◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

Type	Temperature range		Reel Dimensions (mm)	Package quantity (pieces/reel)
	Operating Temperature °C	Storage Temperature °C		
SCI1608S-Series	-25 to +85	-25 to +85	ø180	3,000

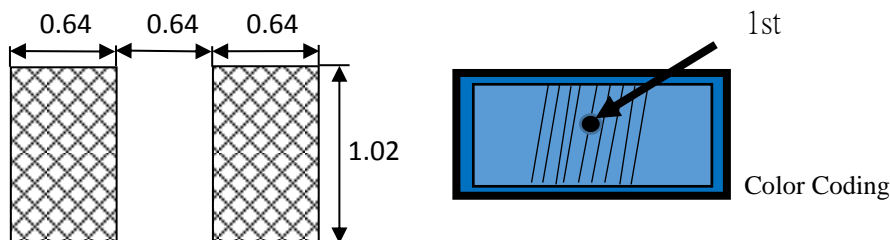
# SCI1608S-Series (SMD Wire-Wound Ceramic Chip Inductor For Signal Line)



## ◆ 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( $\Omega$ ) 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	0.045	700	> 6000	SCI1608S-2N2□
3.3	B,S	20	250	3.31	75	3.38	88	0.063	700	> 6000	SCI1608S-3N3□
3.6	J,B,S	22	250	3.72	53	3.71	65	0.070	700	> 6000	SCI1608S-3N6□
3.9	J,B,S	22	250	3.95	49	3.96	67	0.063	700	> 6000	SCI1608S-3N9□
4.3	B,J,S	22	250	4.32	50	4.33	70	0.120	700	5900	SCI1608S-4N3□
4.7	B,J,S	20	250	4.72	47	4.75	57	0.140	700	5800	SCI1608S-4N7□
5.1	B,J,S	20	250	4.93	47	4.95	56	0.120	700	5700	SCI1608S-5N1□
5.6	B,J,S	20	250	5.77	63	6.05	80	0.110	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)



# SCI1608S-Series (SMD Wire-Wound Ceramic Chip Inductor For Signal Line)



## ◆ ELECTRICAL CHARACTERISTICS

Inductance 200MHz (nH)	Inductance Tolerance	Q min	900MHz MHz	900MHz		1.7GHz		L	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
				L typ	Q typ	typ	Qtyp					
47	G,J,K	38	250	52.2	62	77.2	35	0.28	600	2000	SCI1608S-47N□	
51	G,J,K	35	250	52.5	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	900MHz MHz	900MHz		1.7GHz		L	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
				L typ	Q typ	typ	Qtyp					
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			0.61	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	900MHz MHz	900MHz		1.7GHz		L	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
				L typ	Q typ	typ	Qtyp					
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□	

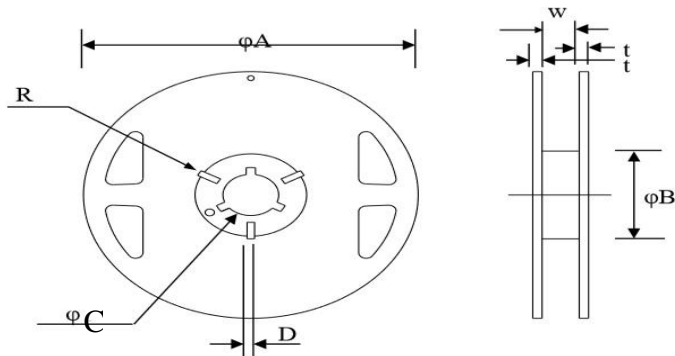
Inductance 50MHz (nH)	Inductance Tolerance	Q min	900MHz MHz	900MHz		1.7GHz		L	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
				L typ	Q typ	typ	Qtyp					
470	G,J,K	20	100					3.6	90	300	SCI1608S-R47□	

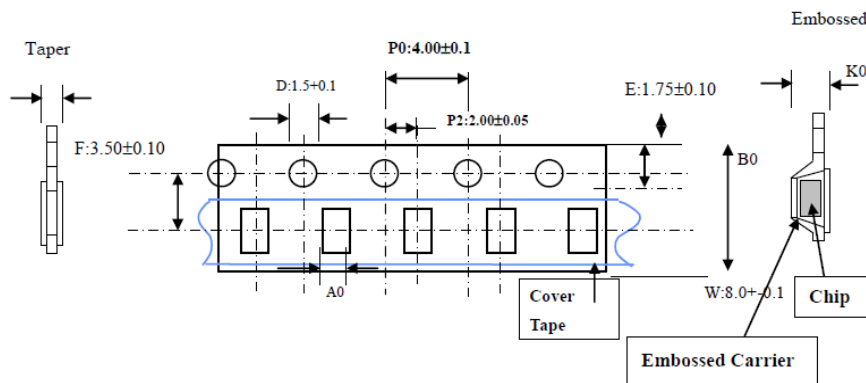
Inductance 25MHz (nH)	Inductance Tolerance	Q min	900MHz MHz	900MHz		1.7GHz		L	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
				L typ	Q typ	typ	Qtyp					
560	G,J,K	12	50					3.6	80	150	SCI1608S-R56□	

Solder Heat Resistance	Appearance: NO significant abnormality. Inductance change: Within $\pm$ 20%.	Preheat: 150°C, 60sec. Solder temperature: 260 $\pm$ 5°C Flux for lead :rosin Dip time: 10 $\pm$ 0.5sec															
Solder ability Test	More than 90% of the terminal electrode Should be covered with solder.	Preheat: 150°C, 60sec. Solder temperature: 230 $\pm$ 5°C Flux for lead :rosin Dip time: 4 $\pm$ 1sec															
Reliability Test																	
High Temperature Life Test	Appearance: no damage. Inductance: within $\pm$ 20% of initial value. No disconnection or short circuit.	Temperature: 85 $\pm$ 5°C. Duration: 500 $\pm$ 12hrs Measured at room temperature after placing for 2 to 3hrs.															
Low Temperature Life Test	Appearance: no damage Inductance: within $\pm$ 20% of initial value. No disconnection or short circuit.	Temperature: -40 $\pm$ 5°C. Duration: 500 $\pm$ 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	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">階段</th> <th style="width: 30%;">溫度°C</th> <th style="width: 25%;">時間 (分)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">-40<math>\pm</math>3°C</td> <td style="text-align: center;">30<math>\pm</math>3</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">常溫</td> <td style="text-align: center;">Within3</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">+85<math>\pm</math>3°C</td> <td style="text-align: center;">30<math>\pm</math>3</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">常溫</td> <td style="text-align: center;">Within3</td> </tr> </tbody> </table> 測試性能同上	階段	溫度°C	時間 (分)	1	-40 $\pm$ 3°C	30 $\pm$ 3	2	常溫	Within3	3	+85 $\pm$ 3°C	30 $\pm$ 3	4	常溫	Within3	Condition for 1 cycle Step1: -40 $\pm$ 3°C 30 $\pm$ 3 min. Step2: Room Temperature within 3min. Step3: +85 $\pm$ 3°C 30 $\pm$ 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.
階段	溫度°C	時間 (分)															
1	-40 $\pm$ 3°C	30 $\pm$ 3															
2	常溫	Within3															
3	+85 $\pm$ 3°C	30 $\pm$ 3															
4	常溫	Within3															
Humidity Resistance	Appearance: no damage Inductance: within $\pm$ 20% of initial value. No disconnection or short circuit.	Humidity: 90-95%RH    Temperature: 60 $\pm$ 5°C Applied current: Rated current. Duration: 500 $\pm$ 12hrs.    放置時間：500 $\pm$ 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



Size	B0(mm)	A0(mm)	K0(mm)
1608	1.80±0.10	1.30±0.10	1.25±0.10
2012	2.50±0.10	1.60±0.10	1.25±0.10
2520	2.93±0.05	2.61±0.05	2.25±0.05

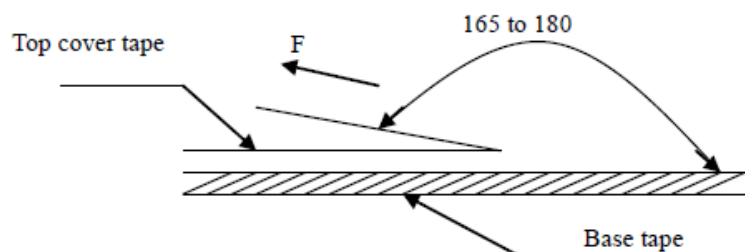
The force for tearing off cover tape is 15 to 60 grams in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa

Tearing Speed: 300Mm/min



## ◆ Packaging Quantity

Chip Size	1608	2012	2520
8mm / Reel	2000/3000	2000/3000	2000