



## 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.

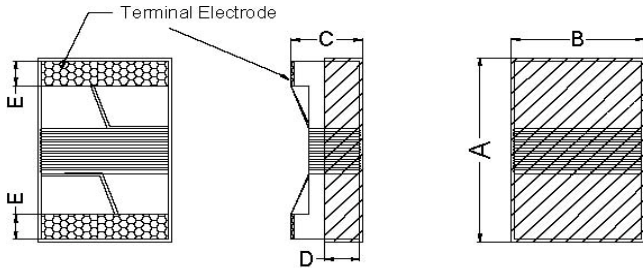
### SCI S-Series

## SCI2012S type

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SCI2012S [0805 inch]

## ◆ SHAPE & DIMENSIONS



SCI2012S	Dimensions
<b>A (mm)</b>	2.29 max
<b>B (mm)</b>	1.73 max
<b>C (mm)</b>	1.52 max
<b>D (mm)</b>	0.51(ref)
<b>E (mm)</b>	0.45±0.10

## ◆ PART NUMBER CONSTRUCTION

SCI	2012	S	—	2N0	K	T
Series name	L*W*T Dimensions (mm)	S type Signal Line		Inductance (nH) at 7.96/25/50/100/150/200/250MHz	Inductance Tolerance	Taping
SMD Ceramic Inductor	2.29*1.73*1.52			2N0 10N 36N R22	B = ±0.2nH S = ±0.3nH G = ±2% J = ±5% K = ±10% M = ±20%	
				2N2 39N R24		
				2N5 43N R27		
				2N8 47N R29		
				3N0 56N R33		
				3N3 12N 68N R39		
				3N9 15N 82N R47		
				4N7 16N 91N R56		
				5N6 18N R10 R62		
				6N8 22N R11 R68		
				7N5 24N R12 R75		
				8N2 27N R15 R82		
				9N1 33N R18 R91		
				1R0 1R2 1R5 1R8 2R0 2R2 2R4		

## ◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

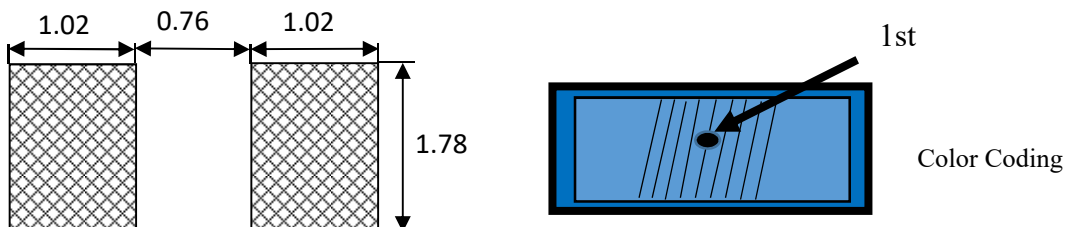
Type	Temperature range		Reel Dimensions (mm)	Package quantity (pieces/reel)
	Operating Temperatur e °C	Storage Temperatur e °C		
SCI2012S-Series	-25 to +85	-25 to +85	ø180	2K/3K

## ◆ ELECTRICAL CHARACTERISTICS

2019/6/6

Inductance 250MHz (nH)	Inductance Tolerance	Q min	Q MHz	RDC( $\Omega$ ) Max	IDC (mA) max.	SRF (MHz) Min.	Part No.
2.0	B,S	45	1500	0.03	800	> 6000	SCI2012S-2N0□
2.2	B,S	45	1500	0.07	750	> 6000	SCI2012S-2N2□
2.5	B,S	45	1500	0.03	700	> 6000	SCI2012S-2N5□
2.8	B,S	45	1500	0.06	700	> 6000	SCI2012S-2N8□
3.0	B,S	30	1500	0.06	800	> 6000	SCI2012S-3N0□
3.3	B,S	30	1500	0.12	600	> 6000	SCI2012S-3N3□
3.9	B,S	70	1500	0.04	800	5750	SCI2012S-3N9□
4.7	B,J,K	70	1500	0.04	800	5500	SCI2012S-4N7□
5.6	B,J,K	55	1000	0.08	600	5500	SCI2012S-5N6□
6.8	B,J,K	50	1000	0.11	600	5500	SCI2012S-6N8□
7.5	B,J,K	50	1000	0.14	600	4800	SCI2012S-7N5□
8.2	B,J,K	50	1000	0.12	600	4400	SCI2012S-8N2□
9.1	B,J,K	65	1000	0.08	600	4400	SCI2012S-9N1□
10	G,J,K	50	500	0.10	600	4300	SCI2012S-10N□
12	G,J,K	50	500	0.15	600	4000	SCI2012S-12N□
15	G,J,K	50	500	0.17	600	3400	SCI2012S-15N□
16	G,J,K	50	500	0.17	600	3300	SCI2012S-16N□
18	G,J,K	50	500	0.20	600	3300	SCI2012S-18N□
22	G,J,K	55	500	0.22	500	2600	SCI2012S-22N□
24	G,J,K	50	500	0.22	500	2000	SCI2012S-24N□
27	G,J,K	55	500	0.25	500	2500	SCI2012S-27N□
33	G,J,K	60	500	0.27	500	2100	SCI2012S-33N□
36	G,J,K	55	500	0.27	500	1900	SCI2012S-36N□
39	G,J,K	60	500	0.29	500	2000	SCI2012S-39N□
Inductance 200MHz (nH)	Inductance Tolerance	Q min	Q MHz	RDC( $\Omega$ ) Max	IDC (mA) max.	SRF (MHz) Min.	Part No.
43	G,J,K	60	500	0.34	500	1650	SCI2012S-43N□
47	G,J,K	60	500	0.31	500	1650	SCI2012S-47N□
56	G,J,K	60	500	0.34	500	1550	SCI2012S-56N□
68	G,J,K	60	500	0.38	500	1500	SCI2012S-68N□
Inductance 150MHz (nH)	Inductance Tolerance	Q min	Q MHz	RDC( $\Omega$ ) Max	IDC (mA) max.	SRF (MHz) Min.	Part No.
82	G,J,K	65	500	0.42	400	1330	SCI2012S-82N□
91	G,J,K	55	500	0.48	400	1250	SCI2012S-91N□
100	G,J,K	65	500	0.46	400	1200	SCI2012S-R10□

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



# SCI2012S-Series (SMD Wire-Wound Ceramic Chip Inductor For Signal Line)



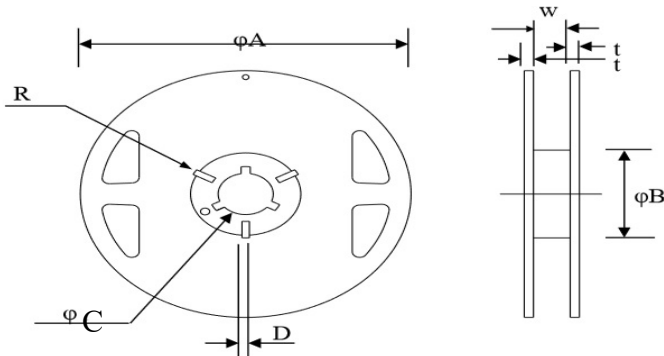
## ◆ ELECTRICAL CHARACTERISTICS

2019/6/6

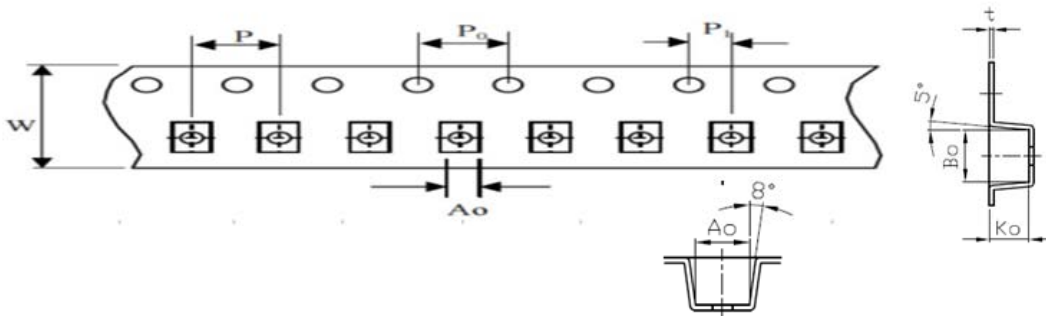
Inductance 150MHz (nH)	Inductance Tolerance	Q		RDC ( $\Omega$ ) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
		min	MHz				
110	G,J,K	50	250	0.48	400	1100	SCI2012S-R11□
120	G,J,K	50	250	0.51	400	1100	SCI2012S-R12□
Inductance 100MHz (nH)	Inductance Tolerance	Q		RDC ( $\Omega$ ) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
		min	MHz				
150	G,J,K	50	250	0.56	400	920	SCI2012S-R15□
180	G,J,K	50	250	0.64	400	920	SCI2012S-R18□
220	G,J,K	50	250	1.10	400	850	SCI2012S-R22□
240	G,J,K	44	250	1.00	350	710	SCI2012S-R24□
270	G,J,K	48	250	1.30	350	680	SCI2012S-R27□
290	G,J,K	48	250	1.30	330	660	SCI2012S-R29□
330	G,J,K	48	250	1.40	310	650	SCI2012S-R33□
390	G,J,K	48	250	1.50	290	560	SCI2012S-R39□
Inductance 50MHz (nH)	Inductance Tolerance	Q		RDC ( $\Omega$ ) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
		min	MHz				
470	G,J,K	33	100	1.76	250	375	SCI2012S-R47□
Inductance 25MHz (nH)	Inductance Tolerance	Q		RDC ( $\Omega$ ) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
		min	MHz				
560	G,J,K	23	50	2.50	230	350	SCI2012S-R56□
620	G,J,K	23	50	2.20	210	330	SCI2012S-R62□
680	G,J,K	23	50	2.05	190	300	SCI2012S-R68□
750	G,J,K	23	50	2.25	180	280	SCI2012S-R75□
820	G,J,K	23	50	2.35	180	250	SCI2012S-R82□
910	G,J,K	23	50	2.45	170	230	SCI2012S-R91□
1000	G,J,K	23	50	2.50	170	200	SCI2012S-1R0□
Inductance 7.96MHz (nH)	Inductance Tolerance	Q		RDC ( $\Omega$ ) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
		min	MHz				
1200	G,J,K	25	50	3.00	160	195	SCI2012S-1R2□
1500	G,J,K	25	50	3.80	150	180	SCI2012S-1R5□
1800	G,J,K	22	50	5.00	140	165	SCI2012S-1R8□
2000	G,J,K	22	50	6.00	130	145	SCI2012S-2R0□
2200	G,J,K	24	50	6.50	130	140	SCI2012S-2R2□
2400	G,J,K	23	50	6.60	120	130	SCI2012S-2R4□

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															
<b>Reliability Test</b>																	
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	<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+-3°C</td> <td style="text-align: center;">30+-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+-33°C</td> <td style="text-align: center;">30+-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+-3°C	30+-3	2	常溫	Within3	3	+85+-33°C	30+-3	4	常溫	Within3	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.
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															
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)
SF11608P	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
SF12012P	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
SF12012S	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
SF12520P	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
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

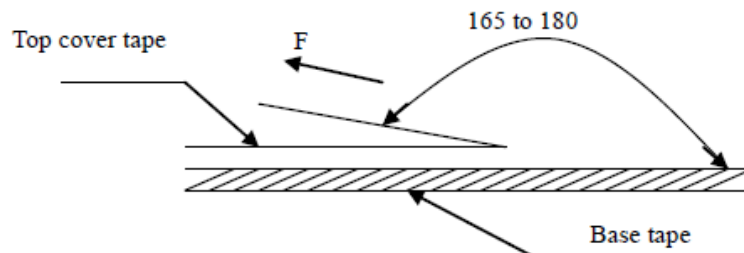
The force for tearing off cover tape is 15 to 60 grams in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpz

Tearing Speed: 300Mm/min



## ◆ Packaging Quantity

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