

1. Part No. Expression

SCI0603C1N6S

(a) (b) (c) (d) (e)

a) Series Code

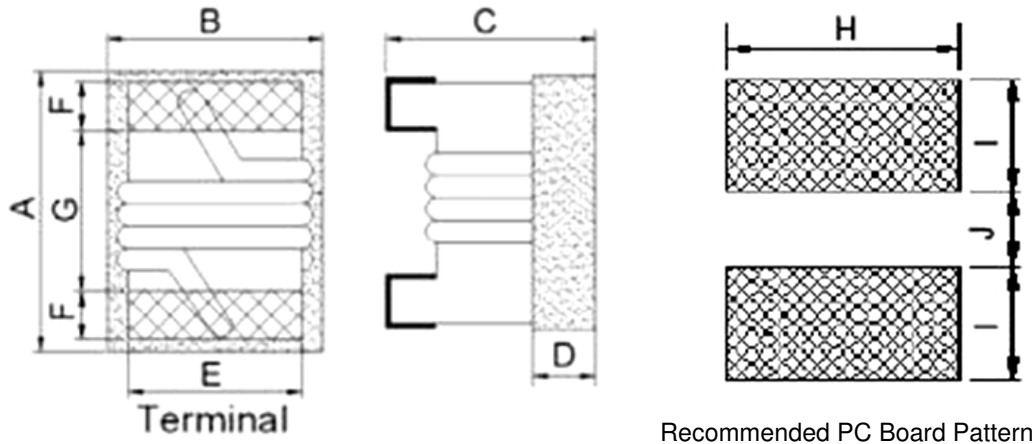
b) Dimension Code

c) Material Code

d) Inductance Code

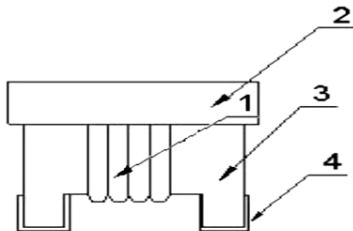
e) Tolerance Code

2. Configuration & Dimensions: (Unit:- mm)



| A | B | C | D | E | F | G | H | I | J |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1.80 Max | 1.12 Max | 1.02 Max | 0.50 Ref | 0.76 Ref | 0.33 Ref | 0.86 Ref | 1.02 Ref | 0.64 Ref | 0.64 Ref |

3. Material List



- (1) Wire
- (2) Epoxy
- (3) Core
- (4) Terminal

NOTE: Specifications subject to change without notice. Please check our website for latest information.



4. General Specifications

- (a) Operating Temp.: -40°C to +125°C (Including self - temperature rise).
- (b) Storage Temp.: -40°C to +125°C (on board).
- (c) Rated Current: 15°C rise above 25°C ambient.
- (d) Storage Condition (Component in its packaging)
 - i) Temperature: -10°C to +40°C.
 - ii) Humidity: 70% RH.

5. Electrical Characteristics

| Part No | Inductance (nH) | Test Frequency For L (Hz) | Tolerance | Q Typ | Test Frequency For Q (Hz) | I _{rms} (mA) Min | DCR (Ω) Max | SRF (MHz) Typ |
|--------------|-----------------|---------------------------|-----------|-------|---------------------------|---------------------------|-------------|---------------|
| SCI0603C1N6□ | 1.6 | 0.2V/250M | S, J, K | 24 | 0.2V/250M | 700 | 0.03 | 12500 |
| SCI0603C1N8□ | 1.8 | 0.2V/250M | S, J, K | 16 | 0.2V/250M | 700 | 0.045 | 12500 |
| SCI0603C1N9□ | 1.9 | 0.2V/250M | S, J, K | 13 | 0.2V/250M | 700 | 0.06 | 12500 |
| SCI0603C2N0□ | 2.0 | 0.2V/250M | S, J, K | 13 | 0.2V/250M | 700 | 0.07 | 12500 |
| SCI0603C2N2□ | 2.2 | 0.2V/250M | G, J, K | 13 | 0.2V/250M | 700 | 0.15 | 12500 |
| SCI0603C3N3□ | 3.3 | 0.2V/250M | G, J, K | 35 | 0.2V/250M | 700 | 0.045 | 5900 |
| SCI0603C3N6□ | 3.6 | 0.2V/250M | G, J, K | 22 | 0.2V/250M | 700 | 0.063 | 5900 |
| SCI0603C3N9□ | 3.9 | 0.2V/250M | G, J, K | 22 | 0.2V/250M | 700 | 0.07 | 6900 |
| SCI0603C4N1□ | 4.1 | 0.2V/250M | G, J, K | 22 | 0.2V/250M | 700 | 0.063 | 6900 |
| SCI0603C4N3□ | 4.3 | 0.2V/250M | G, J, K | 22 | 0.2V/250M | 700 | 0.063 | 5900 |
| SCI0603C4N7□ | 4.7 | 0.2V/250M | G, J, K | 20 | 0.2V/250M | 700 | 0.116 | 5800 |
| SCI0603C5N1□ | 5.1 | 0.2V/250M | G, J, K | 20 | 0.2V/250M | 700 | 0.14 | 5700 |
| SCI0603C5N6□ | 5.6 | 0.2V/250M | G, J, K | 20 | 0.2V/250M | 700 | 0.16 | 5800 |
| SCI0603C6N0□ | 6.0 | 0.2V/250M | G, J, K | 20 | 0.2V/250M | 700 | 0.115 | 5700 |
| SCI0603C6N2□ | 6.2 | 0.2V/250M | G, J, K | 26 | 0.2V/250M | 700 | 0.115 | 5700 |
| SCI0603C6N3□ | 6.3 | 0.2V/250M | G, J, K | 26 | 0.2V/250M | 700 | 0.14 | 5700 |
| SCI0603C6N8□ | 6.8 | 0.2V/250M | G, J, K | 27 | 0.2V/250M | 700 | 0.08 | 5800 |
| SCI0603C7N5□ | 7.5 | 0.2V/250M | G, J, K | 28 | 0.2V/250M | 700 | 0.106 | 4800 |
| SCI0603C8N2□ | 8.2 | 0.2V/250M | G, J, K | 30 | 0.2V/250M | 700 | 0.109 | 4700 |
| SCI0603C8N7□ | 8.7 | 0.2V/250M | G, J, K | 28 | 0.2V/250M | 700 | 0.109 | 4600 |

Tolerance: S= ±0.3nH, G= ±2%, J= ±5%, K= ±10%.

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| Part No | Inductance (nH) | Test Frequency For L (Hz) | Tolerance | Q Typ | Test Frequency For Q (Hz) | I _{rms} (mA) Min | DCR (Ω) Max | SRF (MHz) Typ |
|--------------|-----------------|---------------------------|-----------|-------|---------------------------|---------------------------|-------------|---------------|
| SCI0603C9N1□ | 9.1 | 0.2V/250M | G, J, K | 28 | 0.2V/250M | 700 | 0.12 | 4800 |
| SCI0603C9N5□ | 9.5 | 0.2V/250M | G, J, K | 28 | 0.2V/250M | 700 | 0.135 | 5400 |
| SCI0603C10N□ | 10 | 0.2V/250M | G, J, K | 31 | 0.2V/250M | 700 | 0.13 | 4800 |
| SCI0603C11N□ | 11 | 0.2V/250M | G, J, K | 33 | 0.2V/250M | 700 | 0.086 | 4000 |
| SCI0603C12N□ | 12 | 0.2V/250M | G, J, K | 35 | 0.2V/250M | 700 | 0.13 | 4000 |
| SCI0603C13N□ | 13 | 0.2V/250M | G, J, K | 30 | 0.2V/250M | 700 | 0.13 | 4000 |
| SCI0603C15N□ | 15 | 0.2V/250M | G, J, K | 35 | 0.2V/250M | 700 | 0.13 | 4000 |
| SCI0603C16N□ | 16 | 0.2V/250M | G, J, K | 34 | 0.2V/250M | 700 | 0.104 | 3300 |
| SCI0603C18N□ | 18 | 0.2V/250M | G, J, K | 35 | 0.2V/250M | 700 | 0.16 | 3100 |
| SCI0603C19N□ | 19 | 0.2V/250M | G, J, K | 35 | 0.2V/250M | 700 | 0.19 | 3000 |
| SCI0603C20N□ | 20 | 0.2V/250M | G, J, K | 38 | 0.2V/250M | 700 | 0.18 | 3000 |
| SCI0603C22N□ | 22 | 0.2V/250M | G, J, K | 38 | 0.2V/250M | 700 | 0.19 | 3000 |
| SCI0603C23N□ | 23 | 0.2V/250M | G, J, K | 38 | 0.2V/250M | 700 | 0.19 | 2850 |
| SCI0603C24N□ | 24 | 0.2V/250M | G, J, K | 36 | 0.2V/250M | 700 | 0.13 | 2650 |
| SCI0603C25N□ | 25 | 0.2V/250M | G, J, K | 38 | 0.2V/250M | 600 | 0.21 | 2650 |
| SCI0603C27N□ | 27 | 0.2V/250M | G, J, K | 40 | 0.2V/250M | 600 | 0.22 | 2800 |
| SCI0603C30N□ | 30 | 0.2V/250M | G, J, K | 37 | 0.2V/250M | 600 | 0.144 | 2250 |
| SCI0603C33N□ | 33 | 0.2V/250M | G, J, K | 40 | 0.2V/250M | 600 | 0.22 | 2300 |
| SCI0603C36N□ | 36 | 0.2V/250M | G, J, K | 38 | 0.2V/250M | 600 | 0.25 | 2300 |
| SCI0603C39N□ | 39 | 0.2V/250M | G, J, K | 40 | 0.2V/250M | 600 | 0.25 | 2200 |
| SCI0603C43N□ | 43 | 0.2V/250M | G, J, K | 39 | 0.2V/250M | 600 | 0.28 | 2000 |
| SCI0603C47N□ | 47 | 0.2V/200M | G, J, K | 38 | 0.2V/200M | 600 | 0.28 | 2000 |
| SCI0603C51N□ | 51 | 0.2V/200M | G, J, K | 38 | 0.2V/200M | 600 | 0.3 | 2130 |
| SCI0603C56N□ | 56 | 0.2V/200M | G, J, K | 38 | 0.2V/200M | 600 | 0.31 | 1900 |
| SCI0603C62N□ | 62 | 0.2V/200M | G, J, K | 37 | 0.2V/200M | 600 | 0.33 | 1800 |
| SCI0603C68N□ | 68 | 0.2V/200M | G, J, K | 37 | 0.2V/200M | 600 | 0.34 | 1700 |
| SCI0603C72N□ | 72 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.42 | 1700 |
| SCI0603C75N□ | 75 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.43 | 1700 |
| SCI0603C79N□ | 79 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.5 | 1700 |
| SCI0603C82N□ | 82 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.54 | 1700 |
| SCI0603C85N□ | 85 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.55 | 1600 |
| SCI0603C91N□ | 91 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.56 | 1500 |

Tolerance: S= $\pm 0.3nH$, G= $\pm 2\%$, J= $\pm 5\%$, K= $\pm 10\%$.

NOTE: Specifications subject to change without notice. Please check our website for latest information.



| Part No | Inductance (nH) | Test Frequency For L (Hz) | Tolerance | Q Typ | Test Frequency For Q (Hz) | Irms (mA) Min | DCR (Ω) Max | SRF (MHz) Typ |
|--------------|-----------------|---------------------------|-----------|-------|---------------------------|---------------|-------------|---------------|
| SCI0603CR10□ | 100 | 0.2V/150M | G, J, K | 34 | 0.2V/150M | 400 | 0.58 | 1400 |
| SCI0603CR11□ | 110 | 0.2V/150M | G, J, K | 32 | 0.2V/150M | 300 | 0.61 | 1350 |
| SCI0603CR12□ | 120 | 0.2V/150M | G, J, K | 32 | 0.2V/150M | 300 | 0.84 | 1300 |
| SCI0603CR13□ | 130 | 0.2V/150M | G, J, K | 32 | 0.2V/150M | 280 | 0.75 | 1200 |
| SCI0603CR14□ | 140 | 0.2V/150M | G, J, K | 30 | 0.2V/150M | 280 | 0.9 | 1000 |
| SCI0603CR15□ | 150 | 0.2V/150M | G, J, K | 28 | 0.2V/150M | 280 | 0.92 | 990 |
| SCI0603CR16□ | 160 | 0.2V/100M | G, J, K | 28 | 0.2V/100M | 260 | 1.05 | 990 |
| SCI0603CR17□ | 170 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 240 | 1.15 | 990 |
| SCI0603CR18□ | 180 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 240 | 1.25 | 990 |
| SCI0603CR19□ | 190 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 200 | 1.35 | 990 |
| SCI0603CR20□ | 200 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 200 | 1.5 | 990 |
| SCI0603CR21□ | 210 | 0.2V/100M | G, J, K | 27 | 0.2V/100M | 200 | 2.06 | 895 |
| SCI0603CR22□ | 220 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 250 | 2.02 | 900 |
| SCI0603CR24□ | 240 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 200 | 1.9 | 900 |
| SCI0603CR25□ | 250 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 250 | 2.34 | 900 |
| SCI0603CR27□ | 270 | 0.2V/100M | G, J, K | 24 | 0.2V/100M | 170 | 2.36 | 900 |
| SCI0603CR30□ | 300 | 0.2V/100M | G, J, K | 26 | 0.2V/100M | 150 | 2.7 | 900 |
| SCI0603CR33□ | 330 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 100 | 3.4 | 900 |
| SCI0603CR34□ | 340 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 100 | 2.9 | 900 |
| SCI0603CR36□ | 360 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 100 | 3.07 | 900 |
| SCI0603CR37□ | 370 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 100 | 3.1 | 900 |
| SCI0603CR39□ | 390 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 100 | 3.6 | 900 |
| SCI0603CR47□ | 470 | 0.2V/100M | G, J, K | 25 | 0.2V/100M | 100 | 4.0 | 750 |
| SCI0603CR56□ | 560 | 0.2V/100M | G, J, K | 23 | 0.2V/100M | 90 | 4.7 | 460 |

Tolerance: S= $\pm 0.3\text{nH}$, G= $\pm 2\%$, J= $\pm 5\%$, K= $\pm 10\%$.

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6. Soldering and Mounting

Mildly activated rosin fluxes are preferred. Our terminations are suitable for all re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

6-1 Solder Re-flow

Recommended temperature profiles for re-flow soldering in Figure 1.

6-2 Soldering Iron (Figure 2)

Products attachment with soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

Note:

- a) Preheat circuit and products to 150°C.
- b) 350°C tip temperature (Max.)
- c) Never contact the ceramic with the iron tip
- d) 1.0mm tip diameter (Max.)
- e) Use a 20 Watt soldering iron with tip diameter of 1.0mm.
- f) Limit soldering time to 4~5 sec.

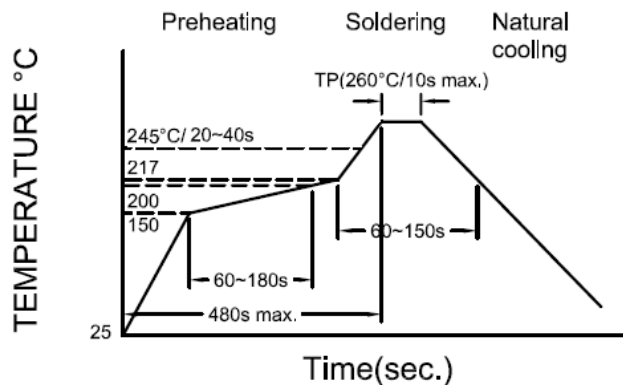


Figure 1: Re-flow Soldering Time 3 times Max.

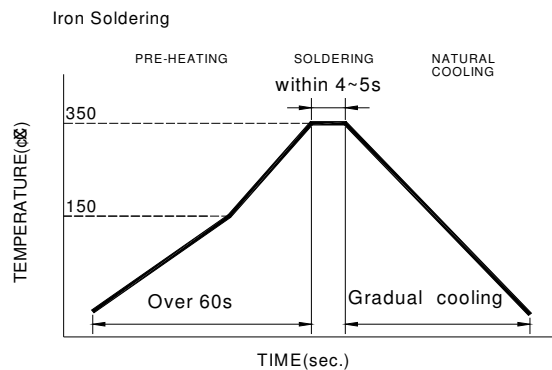
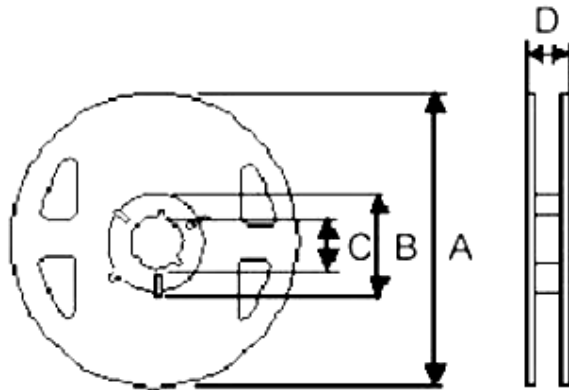


Figure 2: Iron Soldering Time 1 times Max.

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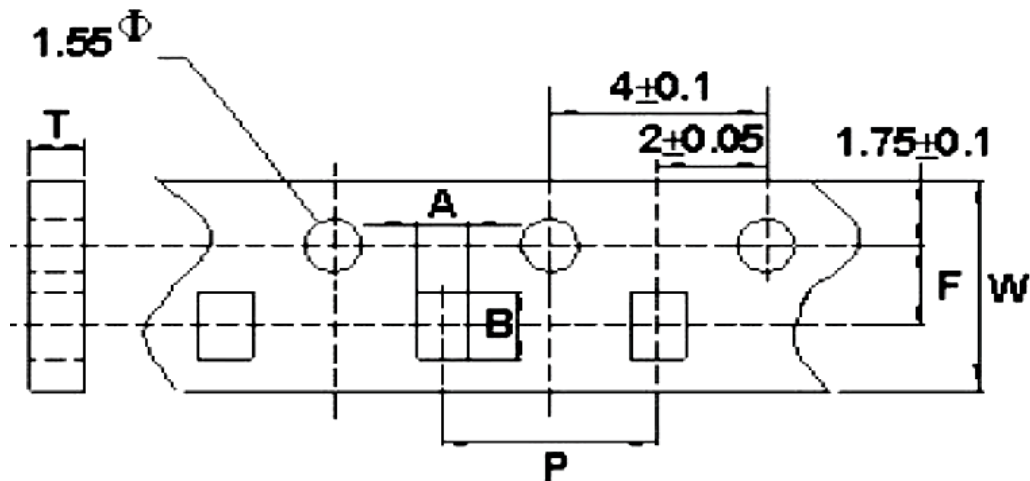
7. Packaging Information

7-1 Reel Dimension



| Type | A(mm) | B(mm) | C(mm) | D(mm) |
|--------|---------|----------|----------|----------|
| 7"x8mm | 180 Ref | 60.0 Ref | 13.0 Ref | 14.4 Ref |

7-2 Tape Dimension



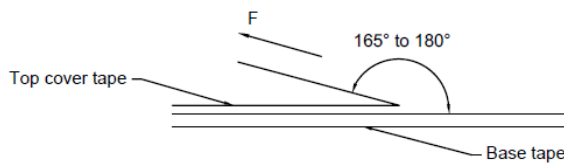
| Size | A(mm) | B(mm) | T(mm) | W(mm) | P(mm) | F(mm) |
|----------|----------|----------|----------|----------|----------|----------|
| SCI0603C | 1.25 Ref | 1.85 Ref | 1.10 Ref | 8.00 Ref | 4.00 Ref | 3.50 Ref |

NOTE: Specifications subject to change without notice. Please check our website for latest information.

7-3 Packaging Quantity

| | |
|--------------|----------|
| Chip Size | SCI0603C |
| Chip/Reel | 4000 |
| Inner Carton | 20000 |
| Outer Carton | 200000 |

7-4 Tearing Off Force



The force for tearing off cover tape is 10 to 100 grams in the arrow direction under the following conditions.

| Room Temp. (°C) | Room Humidity (%) | Room atm (hPa) | Tearing Speed mm/min |
|-----------------|-------------------|----------------|----------------------|
| 5~35 | 45~85 | 860~1060 | 300 |

Application Notice:

1. Storage Conditions:

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery.
- b) The packaging material should be kept where no chlorine or sulfur exists in the air.

2. Transportation:

- a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- b) Vacuum pick up is strongly recommended for individual components.
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

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