

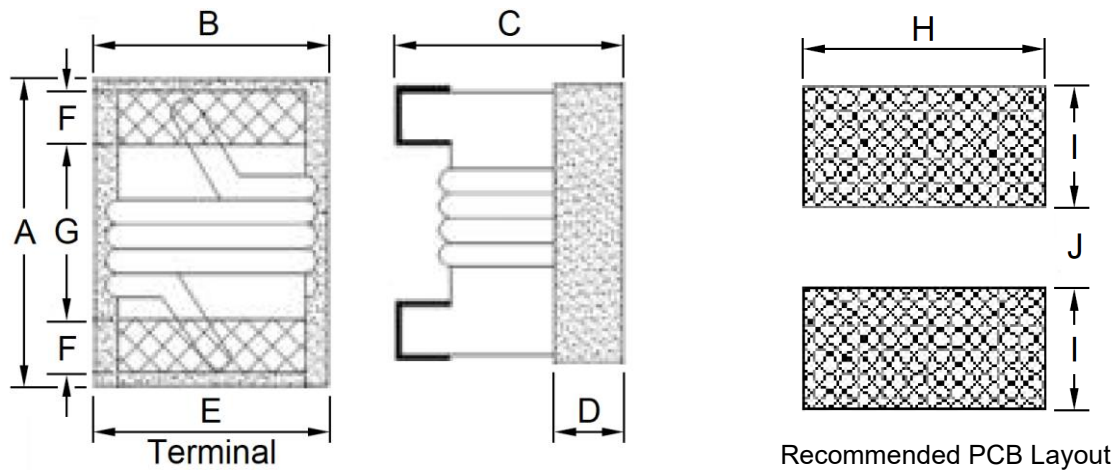
1. Part No. Expression

SC10805C 2N2K

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

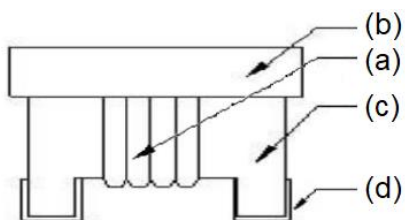
- (a) Series Code (d) Inductance Code
(b) Dimension Code (e) Tolerance Code
(c) Material Code

2. Configuration & Dimensions (Unit: mm)



A	B	C	D	E
2.35 Max	1.73 Max	1.52 Max	0.70 Ref	1.27 Ref
F	G	H	I	J
0.51 Ref	1.02 Ref	1.78 Ref	1.02 Ref	0.76 Ref

3. Material List



- (a) Wire
(b) Epoxy
(c) Core
(d) 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: Less than 70% RH

5. Electrical Characteristics

Part Number	Inductance		Q		Tolerance	I _{rms} (mA) Typ	DCR (Ω) Max	SRF (MHz) Typ
	(nH)	Test Frequency	Typ	Test Frequency				
SCI0805C2N2□	2.2	0.2V/250MHz	50	0.2V/1500MHz	K	800	0.05	7900
SCI0805C2N7□	2.7	0.2V/250MHz	50	0.2V/1500MHz	B, C, J, K	800	0.058	7900
SCI0805C2N8□	2.8	0.2V/250MHz	80	0.2V/1500MHz	B, C, J, K	800	0.06	7900
SCI0805C3N0□	3.0	0.2V/250MHz	65	0.2V/1500MHz	B, C, J, K	800	0.06	7900
SCI0805C3N3□	3.3	0.2V/250MHz	50	0.2V/1500MHz	B, C, J, K	600	0.08	7900
SCI0805C4N1□	4.1	0.2V/250MHz	60	0.2V/1000MHz	B, C, J, K	600	0.06	5800
SCI0805C5N1□	5.1	0.2V/250MHz	60	0.2V/1000MHz	G, J, K	600	0.06	5800
SCI0805C5N6□	5.6	0.2V/250MHz	65	0.2V/1000MHz	G, J, K	600	0.06	5500
SCI0805C6N2□	6.2	0.2V/250MHz	50	0.2V/1000MHz	G, J, K	600	0.11	5500
SCI0805C6N8□	6.8	0.2V/250MHz	50	0.2V/1000MHz	G, J, K	600	0.06	5500
SCI0805C7N5□	7.5	0.2V/250MHz	50	0.2V/1000MHz	G, J, K	600	0.06	4500
SCI0805C8N2□	8.2	0.2V/250MHz	50	0.2V/1000MHz	G, J, K	600	0.06	4700
SCI0805C8N7□	8.7	0.2V/250MHz	50	0.2V/1000MHz	G, J, K	600	0.23	4700

□Tolerance: B= ±0.1nH, C=±0.2nH, G= ±2%, J= ±5%, K= ±10%

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Part Number	Inductance		Q		Tolerance	I _{rms} (mA) Typ	DCR (Ω) Max	SRF (MHz) Typ
	(nH)	Test Frequency	Typ	Test Frequency				
SCI0805C10N□	10	0.2V/250MHz	60	0.2V/500MHz	G, J, K	600	0.08	4200
SCI0805C12N□	12	0.2V/250MHz	50	0.2V/500MHz	G, J, K	600	0.08	4000
SCI0805C14N□	14	0.2V/250MHz	50	0.2V/500MHz	G, J, K	600	0.17	3400
SCI0805C15N□	15	0.2V/250MHz	50	0.2V/500MHz	G, J, K	700	0.1	3400
SCI0805C16N□	16	0.2V/250MHz	50	0.2V/500MHz	G, J, K	600	0.19	3300
SCI0805C18N□	18	0.2V/250MHz	50	0.2V/500MHz	G, J, K	600	0.1	3300
SCI0805C22N□	22	0.2V/250MHz	55	0.2V/500MHz	G, J, K	500	0.12	2600
SCI0805C24N□	24	0.2V/250MHz	50	0.2V/500MHz	G, J, K	500	0.12	2000
SCI0805C27N□	27	0.2V/250MHz	55	0.2V/500MHz	G, J, K	500	0.12	2500
SCI0805C33N□	33	0.2V/250MHz	60	0.2V/500MHz	G, J, K	500	0.13	2050
SCI0805C36N□	36	0.2V/250MHz	55	0.2V/500MHz	G, J, K	500	0.13	1700
SCI0805C39N□	39	0.2V/250MHz	60	0.2V/500MHz	G, J, K	500	0.15	2000
SCI0805C43N□	43	0.2V/200MHz	60	0.2V/500MHz	G, J, K	500	0.15	1650
SCI0805C47N□	47	0.2V/200MHz	60	0.2V/500MHz	G, J, K	500	0.17	1650
SCI0805C50N□	50	0.2V/200MHz	60	0.2V/500MHz	G, J, K	500	0.34	1650
SCI0805C56N□	56	0.2V/200MHz	60	0.2V/500MHz	G, J, K	500	0.19	1550
SCI0805C68N□	68	0.2V/200MHz	60	0.2V/500MHz	G, J, K	500	0.22	1450
SCI0805C75N□	75	0.2V/150MHz	60	0.2V/500MHz	G, J, K	400	0.4	1400
SCI0805C82N□	82	0.2V/150MHz	65	0.2V/500MHz	G, J, K	400	0.4	1300
SCI0805C84N□	84	0.2V/150MHz	65	0.2V/500MHz	G, J, K	400	0.48	1300
SCI0805C91N□	91	0.2V/150MHz	65	0.2V/500MHz	G, J, K	400	0.48	1200

□Tolerance: B= ±0.1nH, C=±0.2nH, G= ±2%, J= ±5%, K= ±10%

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Part Number	Inductance		Q		Tolerance	I _{rms} (mA) Typ	DCR (Ω) Max	SRF (MHz) Typ
	(nH)	Test Frequency	Typ	Test Frequency				
SCI0805CR10□	100	0.2V/150MHz	65	0.2V/500MHz	G, J, K	400	0.46	1200
SCI0805CR11□	110	0.2V/150MHz	50	0.2V/250MHz	G, J, K	400	0.48	1000
SCI0805CR12□	120	0.2V/150MHz	50	0.2V/250MHz	G, J, K	400	0.51	1100
SCI0805CR13□	130	0.2V/150MHz	50	0.2V/250MHz	G, J, K	400	0.55	1100
SCI0805CR15□	150	0.2V/100MHz	50	0.2V/250MHz	G, J, K	400	0.56	920
SCI0805CR16□	160	0.2V/100MHz	50	0.2V/250MHz	G, J, K	400	0.6	900
SCI0805CR18□	180	0.2V/100MHz	50	0.2V/250MHz	G, J, K	400	0.64	870
SCI0805CR20□	200	0.2V/100MHz	50	0.2V/250MHz	G, J, K	400	0.68	865
SCI0805CR22□	220	0.2V/100MHz	50	0.2V/250MHz	G, J, K	400	0.7	850
SCI0805CR24□	240	0.2V/100MHz	44	0.2V/250MHz	G, J, K	350	1	690
SCI0805CR25□	250	0.2V/100MHz	48	0.2V/250MHz	G, J, K	350	1	680
SCI0805CR27□	270	0.2V/100MHz	48	0.2V/250MHz	G, J, K	350	1	650
SCI0805CR30□	300	0.2V/100MHz	48	0.2V/250MHz	G, J, K	330	1.4	790
SCI0805CR33□	330	0.2V/100MHz	48	0.2V/250MHz	G, J, K	310	1.4	750
SCI0805CR36□	360	0.2V/100MHz	48	0.2V/250MHz	G, J, K	300	1.45	650
SCI0805CR39□	390	0.2V/100MHz	48	0.2V/250MHz	G, J, K	290	1.5	560
SCI0805CR43□	430	0.2V/50MHz	33	0.2V/100MHz	G, J, K	270	1.70	430
SCI0805CR47□	470	0.2V/50MHz	33	0.2V/100MHz	G, J, K	250	1.76	450
SCI0805CR51□	510	0.2V/25MHz	23	0.2V/50MHz	G, J, K	230	1.90	340
SCI0805CR56□	560	0.2V/25MHz	23	0.2V/50MHz	G, J, K	230	1.90	340
SCI0805CR62□	620	0.2V/25MHz	23	0.2V/50MHz	G, J, K	210	2.00	220

□Tolerance: B= ±0.1nH, C=±0.2nH, G= ±2%, J= ±5%, K= ±10%

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Part Number	Inductance		Q		Tolerance	I _{rms} (mA) Typ	DCR (Ω) Max	SRF (MHz) Typ
	(nH)	Test Frequency	Typ	Test Frequency				
SCI0805CR68□	680	0.2V/25MHz	23	0.2V/50MHz	G, J, K	190	2.15	188
SCI0805CR75□	750	0.2V/25MHz	23	0.2V/50MHz	G, J, K	180	2.25	200
SCI0805CR82□	820	0.2V/25MHz	23	0.2V/50MHz	G, J, K	180	2.35	215
SCI0805CR88□	880	0.2V/25MHz	22	0.2V/50MHz	G, J, K	180	2.38	212
SCI0805CR91□	910	0.2V/25MHz	22	0.2V/50MHz	G, J, K	180	2.40	210
SCI0805CR93□	930	0.2V/25MHz	22	0.2V/50MHz	G, J, K	180	2.45	200
SCI0805C1R0□	1000	0.2V/25MHz	20	0.2V/50MHz	G, J, K	180	2.50	200
SCI0805C1R2□	1200	0.2V/7.9MHz	18	0.2V/7.9MHz	G, J, K	170	2.45	160
SCI0805C1R5□	1500	0.2V/7.9MHz	16	0.2V/7.9MHz	G, J, K	170	2.50	120
SCI0805C1R8□	1800	0.2V/7.9MHz	16	0.2V/7.9MHz	G, J, K	170	2.50	80
SCI0805C2R2□	2200	0.2V/7.9MHz	16	0.2V/7.9MHz	G, J, K	160	3.90	65
SCI0805C2R7□	2700	0.2V/7.9MHz	16	0.2V/7.9MHz	G, J, K	160	4.00	50
SCI0805C3R3□	3300	0.2V/7.9MHz	15	0.2V/7.9MHz	G, J, K	90	4.40	20
SCI0805C4R7□	4700	0.2V/7.9MHz	15	0.2V/7.9MHz	G, J, K	130	6.40	40

□Tolerance: B= $\pm 0.1\text{nH}$, C= $\pm 0.2\text{nH}$, G= $\pm 2\%$, J= $\pm 5\%$, K= $\pm 10\%$

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6. Soldering Specification

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

6-1. IR Soldering Reflow

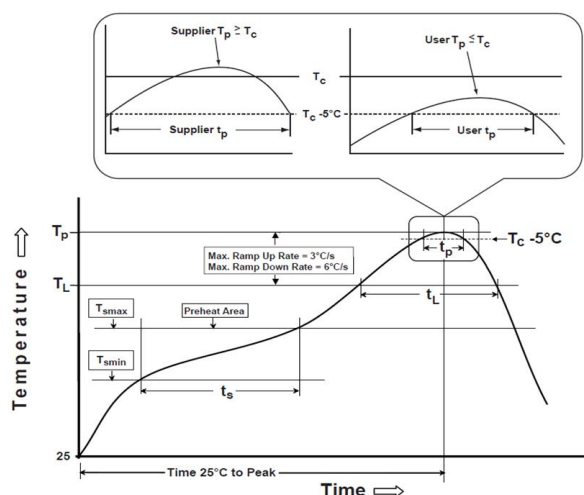
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

6-2. Iron Reflow

Products attachment with a 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 (Figure 2).

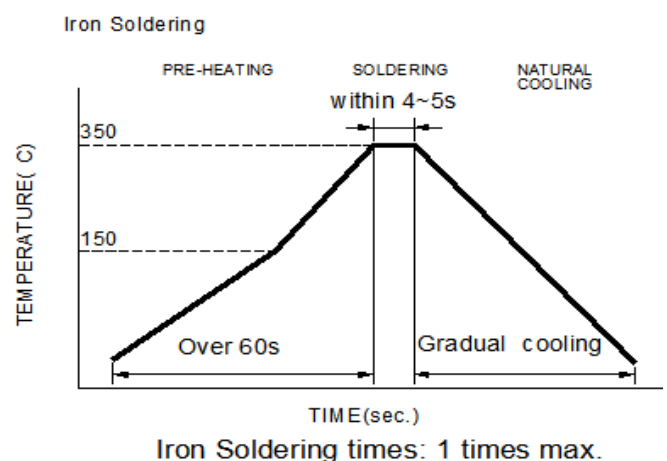
Note:

- Preheat circuit and products to 150°C.
- 355°C tip temperature (Max.)
- Never contact the ceramic with the iron tip
- 1.0mm tip diameter (Max.)
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 4~5 sec.



Reflow times: 3 times Max

Figure 1: IR Soldering Reflow



Soldering iron method: 350±5°C Max

Figure 2: Iron soldering temperature profiles

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Table (1.1) Reflow Profiles

Profile Type:	Pb-Free Assembly
Preheat	
-Temperature Min (T_{smin})	150°C
-Temperature Max (T_{smax})	200°C
-Time (t_s) from (T_{smin} to T_{smax})	60-120seconds
Ramp-up rate (T_L to T_p)	3°C /second max.
Liquids temperature (T_L)	217°C
Time (t_L) maintained above T_L	60-150 seconds
Classification temperature (T_c)	See Table (1.2)
Time (t_p) at $T_c - 5^\circ\text{C}$ (T_p should be equal to or less than T_c .)	* < 30 seconds
Ramp-down rate (T_p to T_L)	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

T_p: maximum peak package body temperature, **T_c**: the classification temperature.

For user (customer) **T_p** should be equal to or less than **T_c**.

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

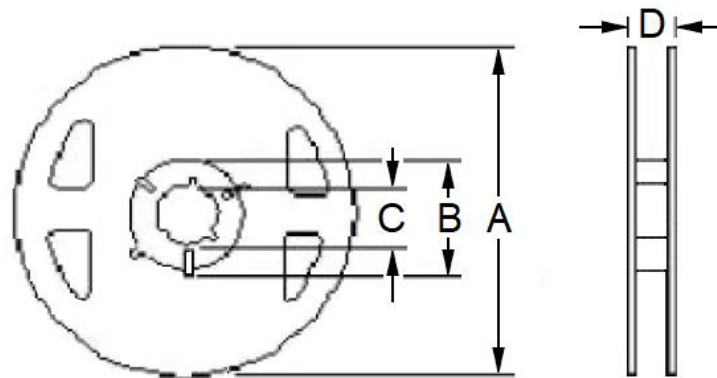
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E.

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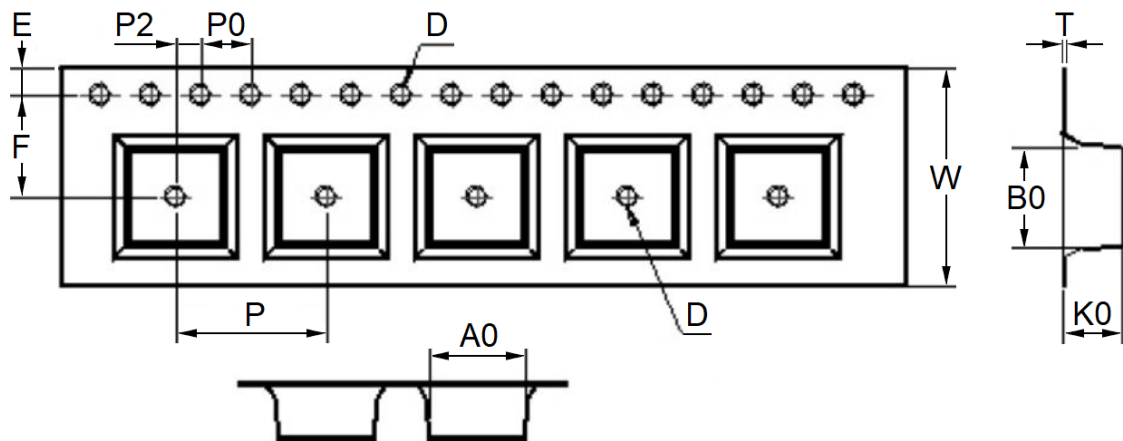
7. Packaging Information

7-1. Reel Dimension (Unit: mm)



Type	A	B	C	D
7"x8mm	180.0 Ref	60.0 Ref	13.0 Ref	14.4 Ref

7-2. Tape Dimension (Unit: mm)



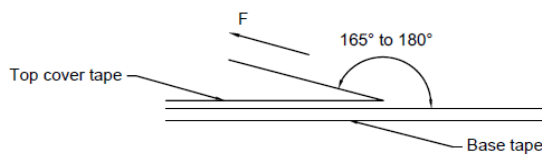
A0	B0	T	W	P	P0
1.85 Ref	2.45 Ref	0.23 Ref	8.00 Ref	4.00 Ref	4.00 Ref
P2	F	E	D	K0	-
2.00 Ref	3.50 Ref	1.75 Ref	1.50 Ref	1.55 Ref	-

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7-3. Packaging Quantity (Unit: Pcs)

Chip/ Reel	2,000
Inner Carton	10,000
Outer Carton	100,000

7-4. Tearing Off Force



The force for tearing off cover tape is according to the follow table, in the arrow direction under the following conditions.

(Referenced ANSI/EIA-481-D-2008 of 4.11 standard)

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed (mm/min)
5~35	45~85	860~1060	300±10

Tape Size	8 mm	12 to 56 mm	72 mm or Wider
Tearing Off Force (grams)	10~100	10~130	10~150

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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