

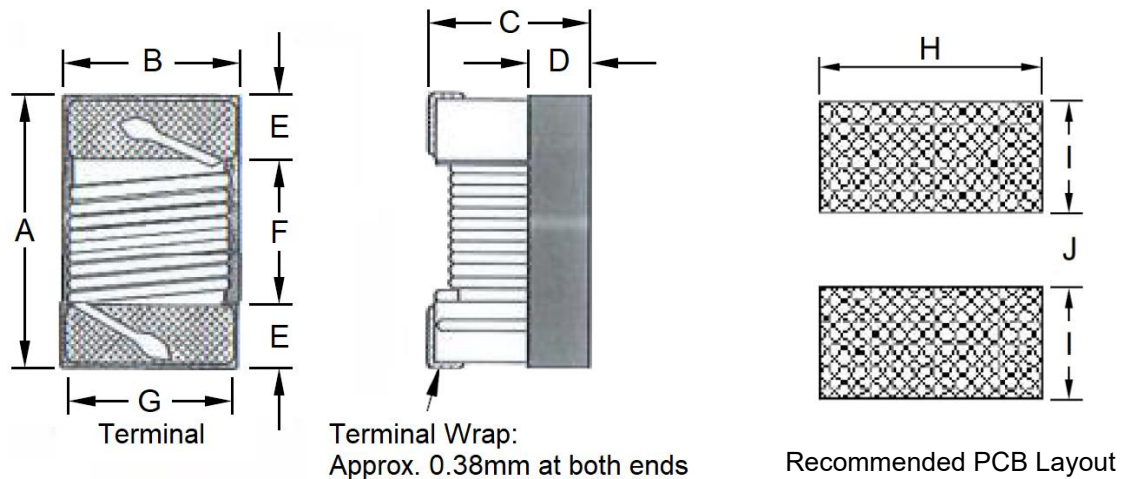
1. Part No. Expression

SCI1008C10NG

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

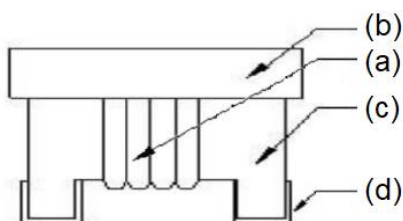
- (a) Series Code
- (b) Dimension Code
- (c) Material Code
- (d) Inductance Code
- (e) Tolerance Code

2. Configuration & Dimensions (Unit: mm)



A	B	C	D	E
2.92 Max	2.70 Max	2.23 Max	1.30 Ref	0.51 Ref
F	G	H	I	J
1.52 Ref	2.00 Ref	2.54 Ref	1.02 Ref	1.27 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	Irms (mA) Max	DCR (Ω) Max	SRF (MHz) Min
	(nH)	Test Frequency	Min	Test Frequency				
SCI1008C10N□	10	0.2V/50MHz	50	0.2V/500MHz	G, J, K	1000	0.08	4100
SCI1008C12N□	12	0.2V/50MHz	50	0.2V/500MHz	G, J, K	1000	0.09	3300
SCI1008C15N□	15	0.2V/50MHz	50	0.2V/500MHz	G, J, K	1000	0.18	2500
SCI1008C18N□	18	0.2V/50MHz	50	0.2V/350MHz	G, J, K	1000	0.11	2500
SCI1008C22N□	22	0.2V/50MHz	55	0.2V/350MHz	G, J, K	1000	0.12	2400
SCI1008C27N□	27	0.2V/50MHz	55	0.2V/350MHz	G, J, K	1000	0.13	1600
SCI1008C33N□	33	0.2V/50MHz	60	0.2V/350MHz	G, J, K	1000	0.14	1600
SCI1008C39N□	39	0.2V/50MHz	60	0.2V/350MHz	G, J, K	1000	0.15	1500
SCI1008C47N□	47	0.2V/50MHz	65	0.2V/350MHz	G, J, K	1000	0.16	1500
SCI1008C56N□	56	0.2V/50MHz	65	0.2V/350MHz	G, J, K	1000	0.18	1300
SCI1008C68N□	68	0.2V/50MHz	65	0.2V/350MHz	G, J, K	1000	0.2	1300
SCI1008C82N□	82	0.2V/50MHz	60	0.2V/350MHz	G, J, K	1000	0.22	1000
SCI1008CR10□	100	0.2V/25MHz	60	0.2V/350MHz	G, J, K	650	0.56	1000

□Tolerance: G= ±2%, J= ±5%, K= ±10%

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Part Number	Inductance		Q		Tolerance	Irms (mA) Max	DCR (Ω) Max	SRF (MHz) Min
	(nH)	Test Frequency	Min	Test Frequency				
SCI1008CR12□	390	0.2V/50MHz	60	0.2V/350MHz	G, J, K	650	0.63	950
SCI1008CR15□	470	0.2V/50MHz	45	0.2V/100MHz	G, J, K	580	0.7	850
SCI1008CR18□	560	0.2V/50MHz	45	0.2V/100MHz	G, J, K	620	0.77	750
SCI1008CR22□	620	0.2V/50MHz	45	0.2V/100MHz	G, J, K	500	0.84	700
SCI1008CR27□	680	0.2V/50MHz	45	0.2V/100MHz	G, J, K	500	0.91	600
SCI1008CR33□	750	0.2V/50MHz	45	0.2V/100MHz	G, J, K	450	1.05	570
SCI1008CR39□	33	0.2V/25MHz	45	0.2V/100MHz	G, J, K	470	1.12	500
SCI1008CR47□	39	0.2V/25MHz	45	0.2V/100MHz	G, J, K	470	1.19	450
SCI1008CR56□	47	0.2V/25MHz	45	0.2V/100MHz	G, J, K	400	1.33	415
SCI1008CR62□	56	0.2V/25MHz	45	0.2V/100MHz	G, J, K	300	1.4	375
SCI1008CR68□	68	0.2V/25MHz	45	0.2V/100MHz	G, J, K	400	1.47	375
SCI1008CR75□	82	0.2V/25MHz	45	0.2V/100MHz	G, J, K	360	1.54	360
SCI1008CR82□	100	0.2V/25MHz	45	0.2V/100MHz	G, J, K	400	1.61	350
SCI1008CR91□	910	0.2V/25MHz	35	0.2V/50MHz	G, J, K	380	1.68	320
SCI1008C1R0□	1000	0.2V/25MHz	35	0.2V/50MHz	G, J, K	370	1.75	290
SCI1008C1R2□	1200	0.2V/7.9MHz	35	0.2V/50MHz	G, J, K	310	2	250
SCI1008C1R5□	1500	0.2V/7.9MHz	28	0.2V/50MHz	G, J, K	330	2.23	200
SCI1008C1R8□	1800	0.2V/7.9MHz	28	0.2V/50MHz	G, J, K	300	2.6	160
SCI1008C2R2□	2200	0.2V/7.9MHz	28	0.2V/50MHz	G, J, K	280	2.8	160
SCI1008C2R7□	2700	0.2V/7.9MHz	22	0.2V/25MHz	G, J, K	290	3.2	140
SCI1008C3R3□	3300	0.2V/7.9MHz	22	0.2V/25MHz	G, J, K	290	3.4	110

□Tolerance: G= ±2%, J= ±5%, K= ±10%

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Part Number	Inductance		Q		Tolerance	I _{rms} (mA) Max	DCR (Ω) Max	SRF (MHz) Min
	(nH)	Test Frequency	Min	Test Frequency				
SCI1008C3R9□	3900	0.2V/7.9MHz	20	0.2V/25MHz	G, J, K	260	3.6	100
SCI1008C4R7□	4700	0.2V/7.9MHz	18	0.2V/7.9MHz	G, J, K	200	4	32
SCI1008C5R6□	5600	0.2V/7.9MHz	16	0.2V/7.9MHz	G, J, K	240	5.7	20
SCI1008C6R8□	6800	0.2V/7.9MHz	18	0.2V/7.9MHz	G, J, K	200	7.7	40
SCI1008C8R2□	8200	0.2V/7.9MHz	18	0.2V/7.9MHz	G, J, K	170	10.7	25
SCI1008C100□	10000	0.2V/7.9MHz	18	0.2V/7.9MHz	G, J, K	100	12.7	25

□Tolerance: G= ±2%, J= ±5%, K= ±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

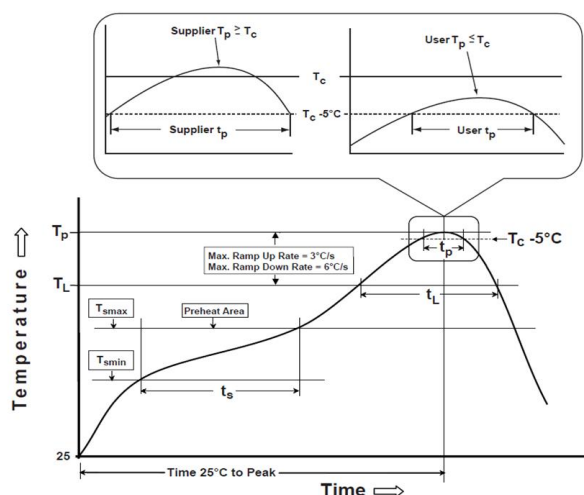
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

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).

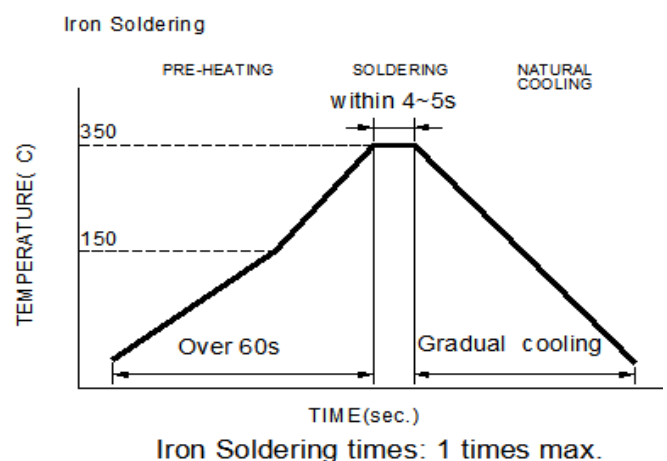
Note:

- 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)

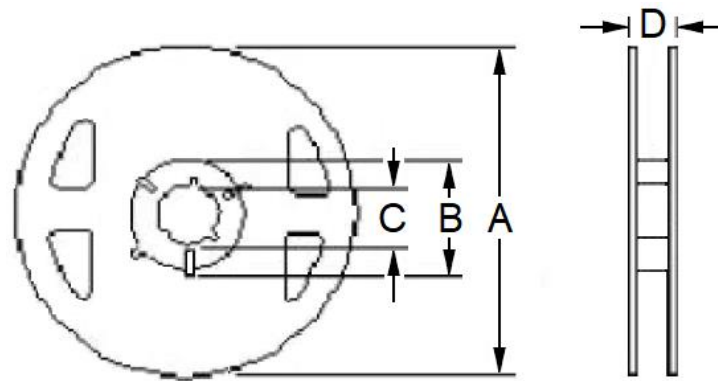
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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

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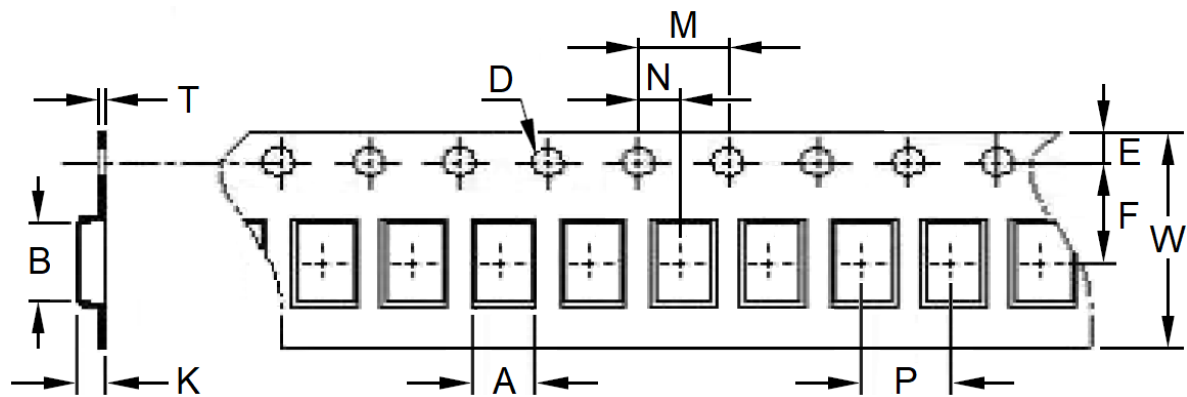
7. Packaging Information

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)



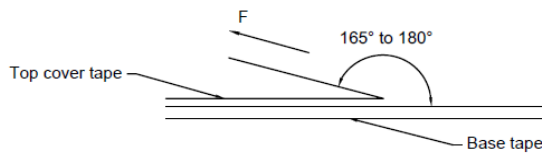
A	B	T	W	P	F
2.73 Ref	2.90 Ref	0.25 Ref	8.00 Ref	4.00 Ref	3.50 Ref
K	D	M	N	E	-
2.34 Ref	1.50+0.10/-0.00	4.00±0.10	2.00±0.05	1.75±0.10	-

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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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