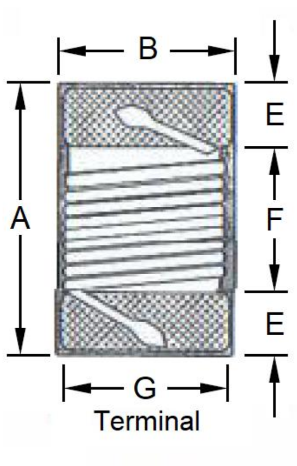
1. Part No. Expression

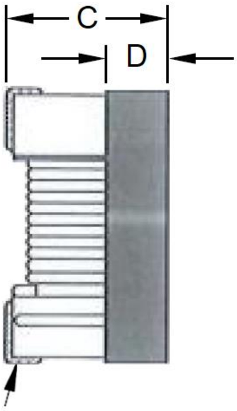
SCI 1008 C 10N G

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

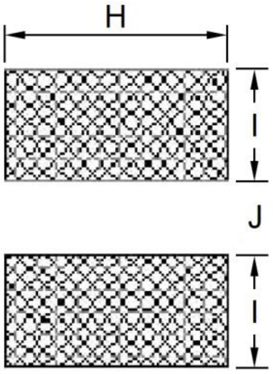
(a) Series Code
(b) Dimension Code
(c) Material Code
(d) Inductance Code
(e) Tolerance Code

2. Configuration & Dimensions (Unit: mm)





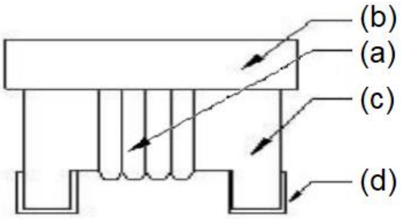
Terminal Wrap:
Approx. 0.38mm at both ends



Recommended PCB Layout

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

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%

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

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%

Part Number	Inductance		Q		Tolerance	Irms (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%

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

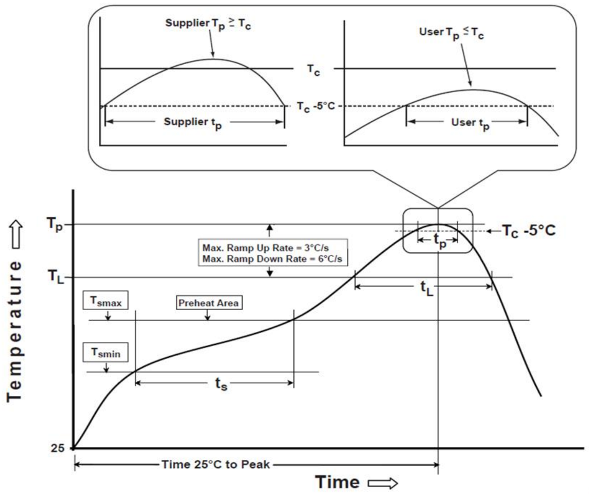
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020F).

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).

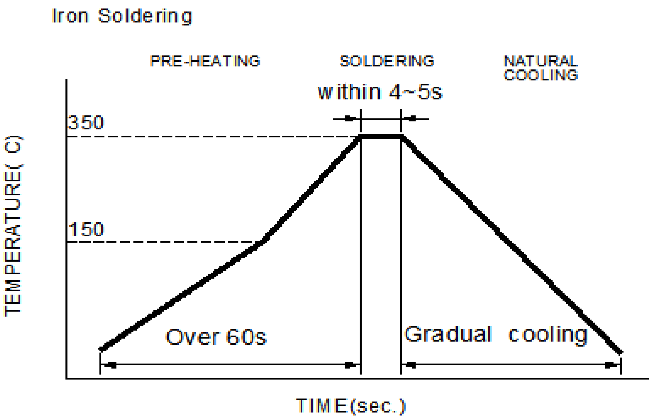
Note:

(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.



Reflow times: 3 times Max

Figure 1: IR Soldering Reflow



Iron Soldering times：1 times max

Figure 2: Iron soldering temperature profiles

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

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 Tc- 5°C (Tp should be equal to or less than Tc.)	< 30 seconds
Ramp-down rate (T_p to T_L)	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

Tp: maximum peak package body temperature, **Tc**: the classification temperature.

For user (customer) **Tp** should be equal to or less than **Tc.**

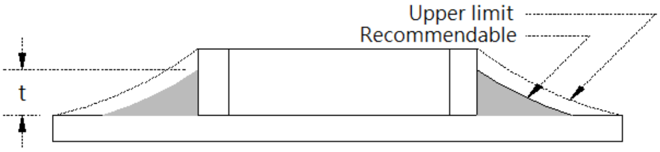
Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

	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-020F.

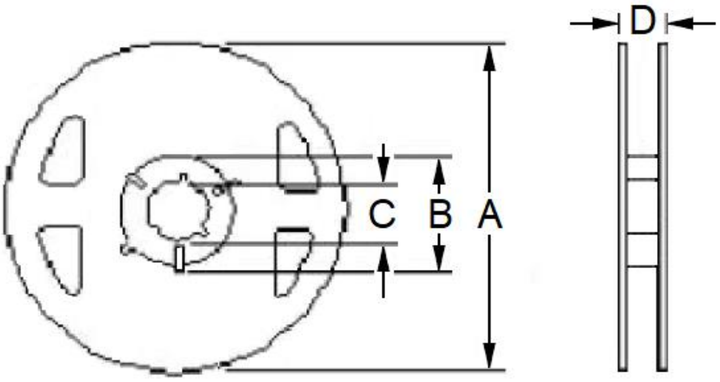
6-3. Soldering Volume

Accordingly increasing the solder volume, the mechanical stress to product is also increased. Exceeding solder volume may cause the failure of mechanical or electrical performance. Solder shall be used not to be exceeded as shown in the Figure below. Minimum fillet height = soldering thickness + 25% product height.



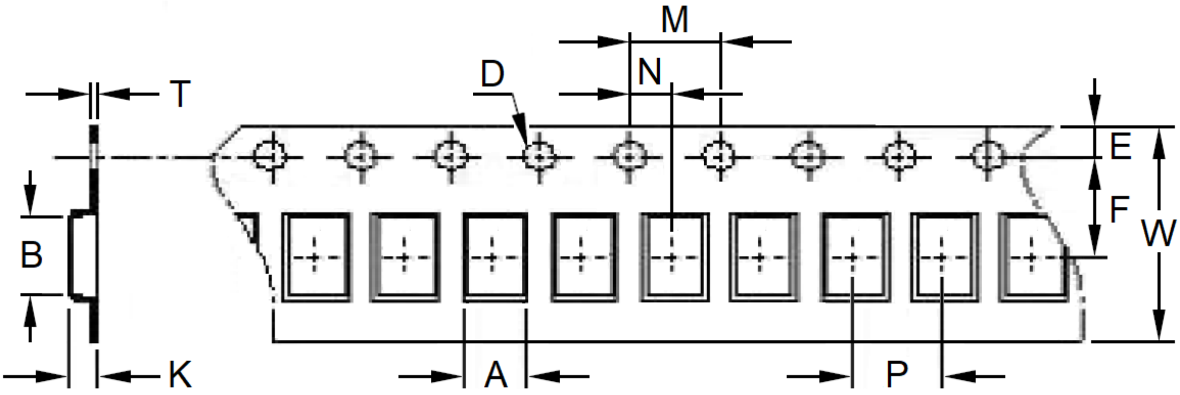
7. Packaging Information

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)



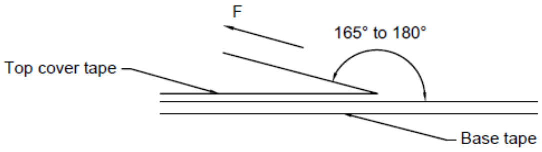
A	B	T	W	P	F
2.73 Ref	2.90 Ref	0.25 Ref	8.00 Ref	4.00 Ref	3.50 Ref
K	D	M	N	E	-
2.34 Ref	1.50+0.10/-0.00	4.00±0.10	2.00±0.05	1.75±0.10	-

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

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) Products meet IPC/JEDEC J-STD-020F standard-MSL, level 1.

   (b) Recommended products should be used within 12 months from the time of delivery.

   (c) 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.