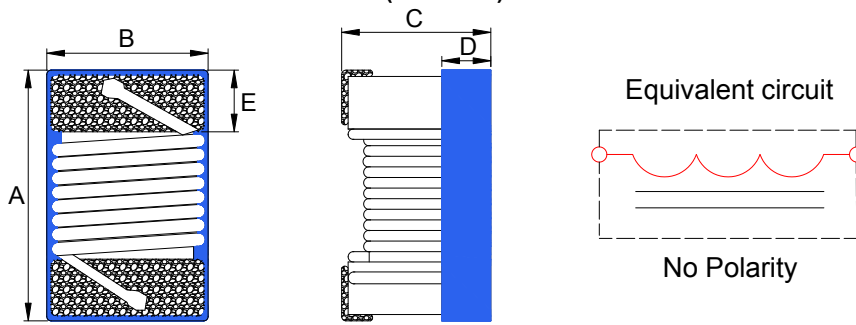


### 1. External Dimensions (Unit:m/m)



TYPE	METRIC	A	B	C	D	E	Q'Ty / Reel
ALSF201212	0805	2.4Max	1.75Max	1.52Max	0.65Ref	0.44Ref	2000

### 2. Part Number Code

ALSF    201212    K    1R0  
 A            B            C            D

A: Series Name                      Wire Wound Inductors  
 B: Dimensions(mm)                201212: 0805  
 C: Tolerance                         K: ±10%  
 D: Inductance                        1R0=1.0uH

### 3. Electrical Characteristics

Part Number	Inductance (uH)/MHz	Inductance Tolerance	Q/MHz Min.	SRF(Min.) (MHz)	RDC (Ω)Max.	I <sub>rms</sub> (mA)
ALSF201212K1R0	1.0/7.9	±10%	12/7.9	360.0	1.0	430.0

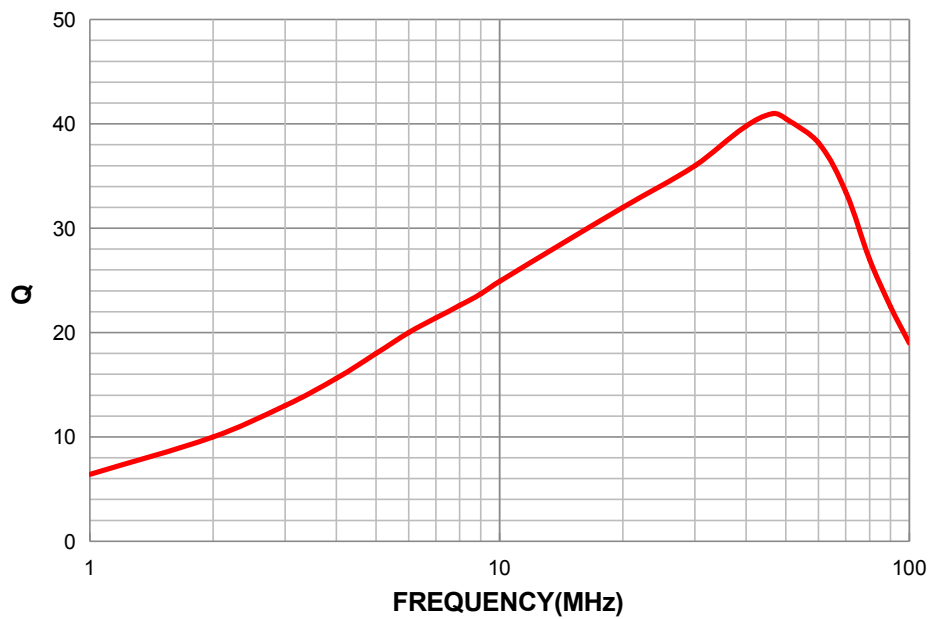
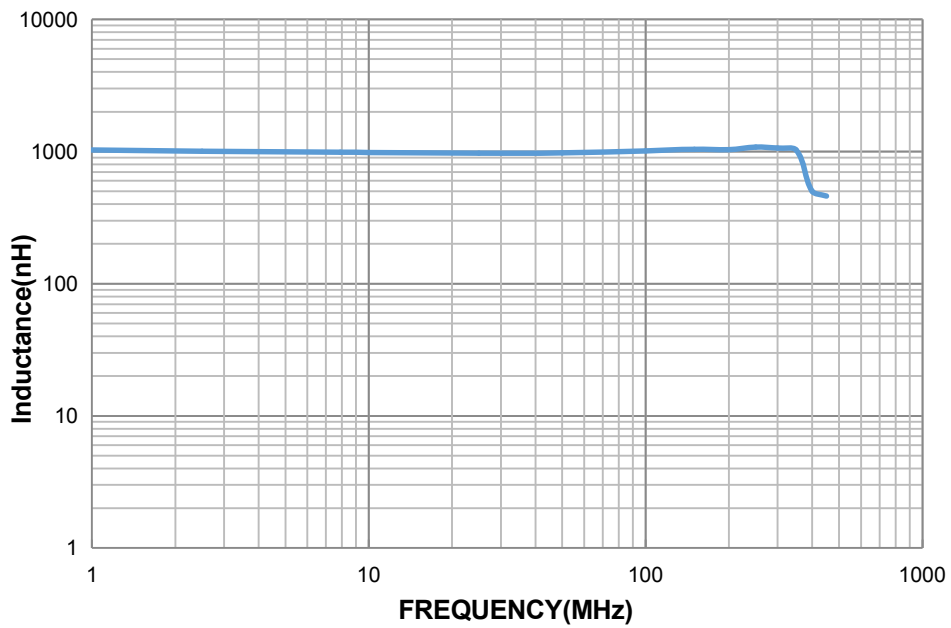
Notes:

- 1) All test data is referenced to 25°C ambient.
- 2) Operating temperature range -40°C to +85°C,(Including self - temperature rise).
- 3) L.Q.SRF:agilent/HP E4991A+agilent/HP16197A.  
(the electrical specification test by the smallest gap position)or HP16193A.
- 4) Rdc: chroma milliohmmeter 16502, or equivalent.
- 5) I<sub>rms</sub> :DC current(A) that will cause an approximate ΔT of 40°C.

### 4. Material list

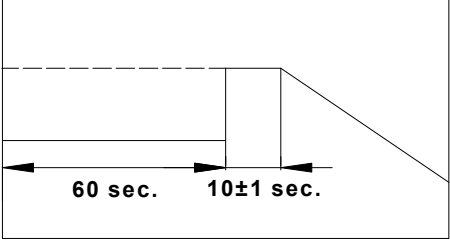
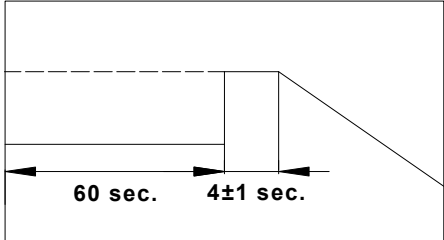
Item	Material
Core	Ferrite core
Wire	Copper wire
Epoxy	UV Epoxy

Curve:



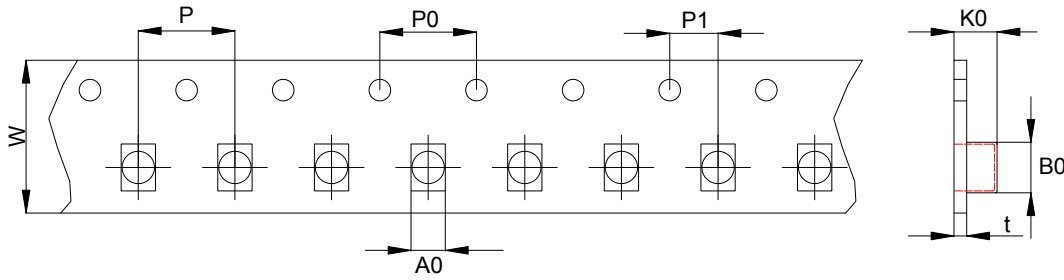
### 5. Reliability Test

Item	Specifications	Test conditions
5.1 High temperature storage test	No visible mechanical damage. Inductance change: Within $\pm 10\%$ .	<p>Temperature: <math>85 \pm 2^\circ\text{C}</math>. Duration: 500hrs. Measured at room temperature after placing for <math>24 \pm 4</math> hrs.</p>
5.2 Temperature cycling test	No visible mechanical damage. Inductance change: Within $\pm 10\%$ .	<p>Condition for 1 cycle. Step1: <math>-40 \pm 2^\circ\text{C}</math> 30min Min. Step2: <math>85 \pm 2^\circ\text{C}</math>, transition time 2min Max. Step3: <math>85 \pm 2^\circ\text{C}</math> 30min Min. Step4: Low temp, transition time 2min Max. Number of cycles: 100. Measured at room temperature after placing for <math>24 \pm 4</math> hrs.</p>
5.3 Biased humidity test	No visible mechanical damage. Inductance change: Within $\pm 10\%$ .	<p>Humidity : <math>85\% \pm 3</math> RH. Temperature: <math>60^\circ\text{C} \pm 2^\circ\text{C}</math>. Duration : 500hrs. Measured at room temperature after placing for <math>24 \pm 4</math> hrs.</p>
5.4 Operational life test	No visible mechanical damage. Inductance change: Within $\pm 10\%$ .	<p>Temperature: <math>85^\circ\text{C} \pm 2^\circ\text{C}</math>. Duration : 500hrs. Measured at room temperature after placing for <math>24 \pm 4</math> hrs.</p>
5.5 Resistance to solvent test	No visible mechanical damage. Inductance change: Within $\pm 10\%$ .	Add aqueous wash chemical - OKEM clean or equivalent.
5.6 Vibration test	No visible mechanical damage. Inductance change: Within $\pm 10\%$ .	The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.52mm and a frequency of from 10 to 55Hz/1 minute repeated should be applied to the 3 directions (X,Y,Z) for 2 hours each.(A total of 6 hours)

Item	Specifications	Test conditions
<p>5.7 Resistance to soldering heat test</p>	<p>No visible mechanical damage. Inductance change: Within <math>\pm 10\%</math>.</p>	<p>Temperature (<math>^{\circ}\text{C}</math>): <math>260 \pm 5</math> (solder temp). Time (s): <math>10 \pm 1</math>. ramp/immersion and emersion rate: <math>25\text{mm/s} \pm 6 \text{ mm/s}</math>. Number of heat cycles:1.</p> 
<p>5.8 Solderability test</p>	<p>More than 95% of the terminal electrode should be covered with solder.</p>	<p>Steam Aging: 8 hours <math>\pm</math> 15 min. Preheat: <math>150^{\circ}\text{C}</math>, 60sec. Solder: Sn99.5%-Cu0. 5%. Temperature: <math>245 \pm 5^{\circ}\text{C}</math>. Flux for lead free: Rosin. 9.5%. Dip time: <math>4 \pm 1</math>sec. Depth: completely cover the termination.</p> 
<p>5.9 Terminal strength (SMD) test</p>	<p>No visible mechanical damage.</p>	<p>Preconditioning: Run through IR reflow for 2 times. (IPC/JEDECJ-STD-020D Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(<math>&gt;0805:1\text{kg}</math> , <math>\leq 0805:0.5\text{kg}</math>) to the side of a device being tested. This force shall be applied for <math>10 \pm 1</math> seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested.</p>

### 6. Packing

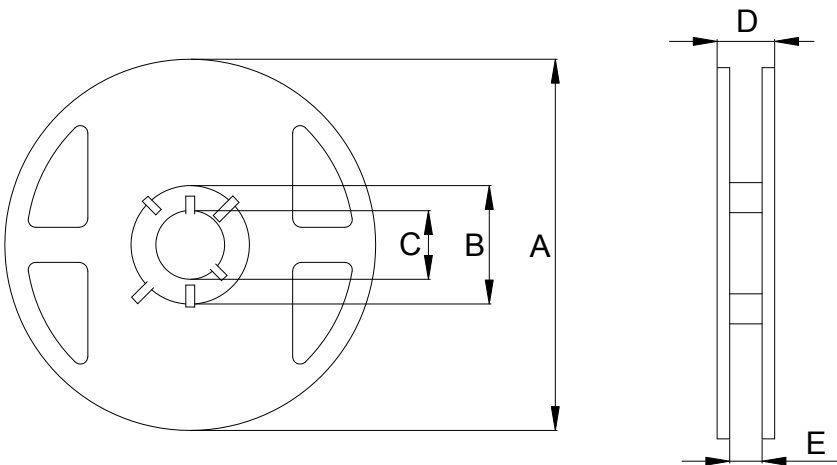
#### 6.1 Tape Dimensions(Unit: mm)



(Tolerance:  $\pm 0.1$ )

TYPE	W	P	Po	P1	Ao	Bo	K0	t
ALSF201212	8.0	4.0	4.0	2.0	2.0	2.5	1.5	0.23

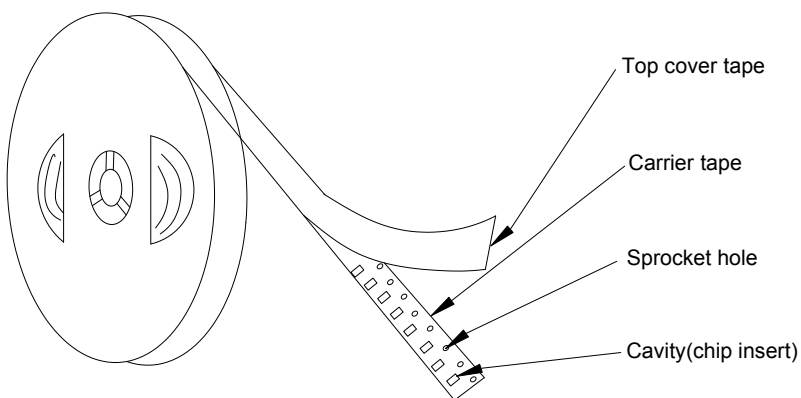
#### 6.2 Reel Dimensions(Unit: mm)



( Dimensions in mm )

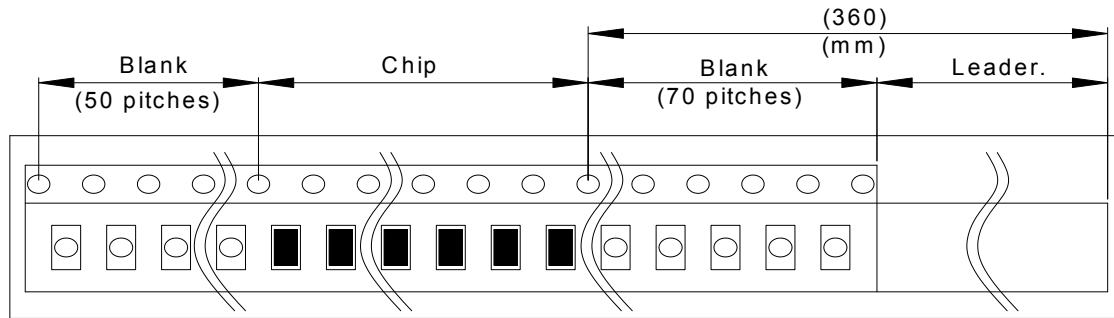
Symbol	A	B	C	D	E
T	180.0	60.0	13.0	14.4	8.4

#### 6.3 Tapping figure



### 6.4 Packaging Form

There shall not continuation more than two vacancies of the product.



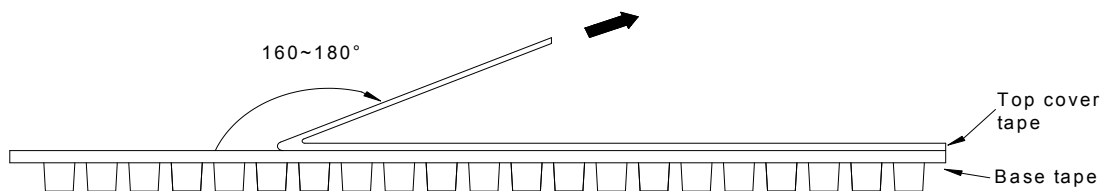
### 6.5 Cover Tape Peel Strength

The force for tearing off cover tape is 0.1~0.6(N) in the arrow direction at the following conditions:

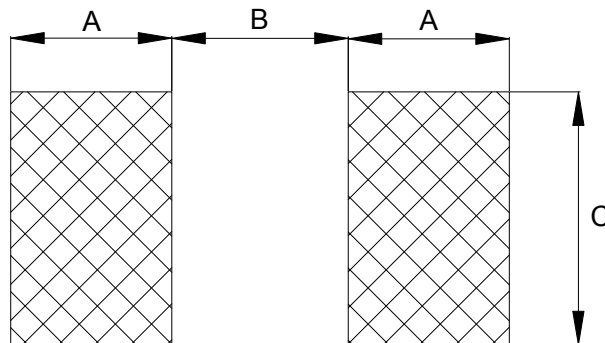
Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa



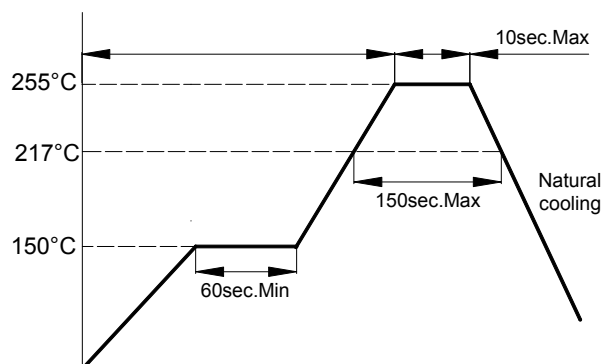
### 6.6 Recommended Footprint



Unit:mm

TYPE	METRIC	A	B	C
ALSF201212	0805	1.02	0.76	1.78

### 6.7 Recommended Reflow Pattern



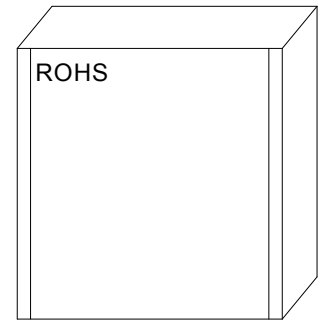
### 6.8 Packaging

6.8.1 The inner box specification: 195\*192\*65MM

Packing quantity: 10000PCS/ box

Sealing bag : 37\*45CM

Job description: putting the air sealing bag products placed inside the box.

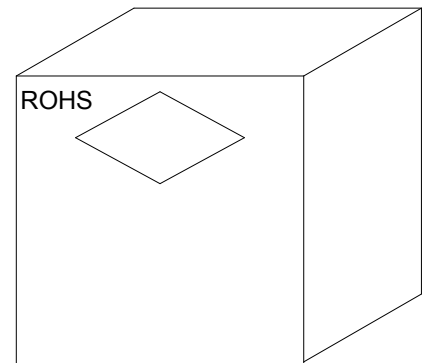


6.8.2 The outside box specification: 410\*405\*165MM

Packing quantity: 80000PCS/ box.

Job description: will be outside the box bottom sealed, inner box into the box.

- a. With transparent tape sealed box at the top.
- b. The specified location with a box labels in the outer box.
- c. If the mantissa box under a FCL with inner box for filling full.



### 6.9 Storage

- a. To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled.
- b. Recommended conditions: -10°C~40°C, 70%RH (Max).
- c. Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. For this reason, product should be used with one year from the time of delivery.
- d. In case of storage over one year, solderability shall be checked before actual usage.

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