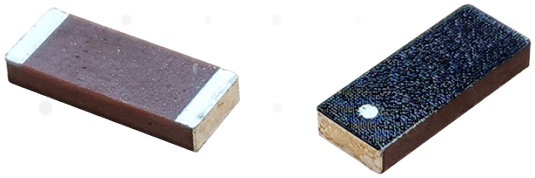
RF Antenna Technology
享 元 科 技

SPECIFICATION

NB-IoT－750~960 MHz
Chip Antenna



Model No.：CCCLW-7901

1. General Description

1.1 Electrical Properties

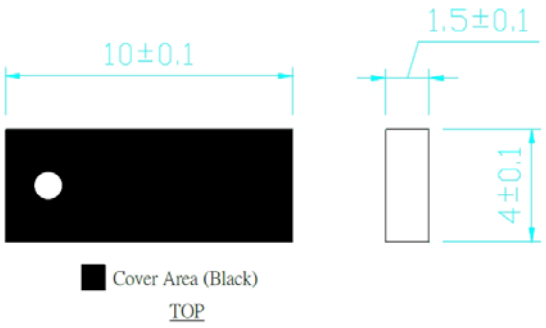
Parameter	Description					
Frequency Band	750~960 MHz					
Nominal Impedance	50 Ω					
Polarization	Linear					
V.S.W.R	<3:1					
	791 MHz	824 MHz	862 MHz	880 MHz	894 MHz	960 MHz
Efficiency	40.7 %	54.5 %	62.4 %	62.2 %	61.3 %	53.9 %
Average Gain	-3.9 dBi	-2.6 dBi	-2.1 dBi	-2.1 dBi	-2.1 dBi	-2.7 dBi
Peak Gain	-1.2 dBi	0.1 dBi	1.2 dBi	1.4 dBi	1.4 dBi	0.7 dBi
※With 35 x 115 mm Evaluation Board & 35 x 12.5 mm Clearance Area						

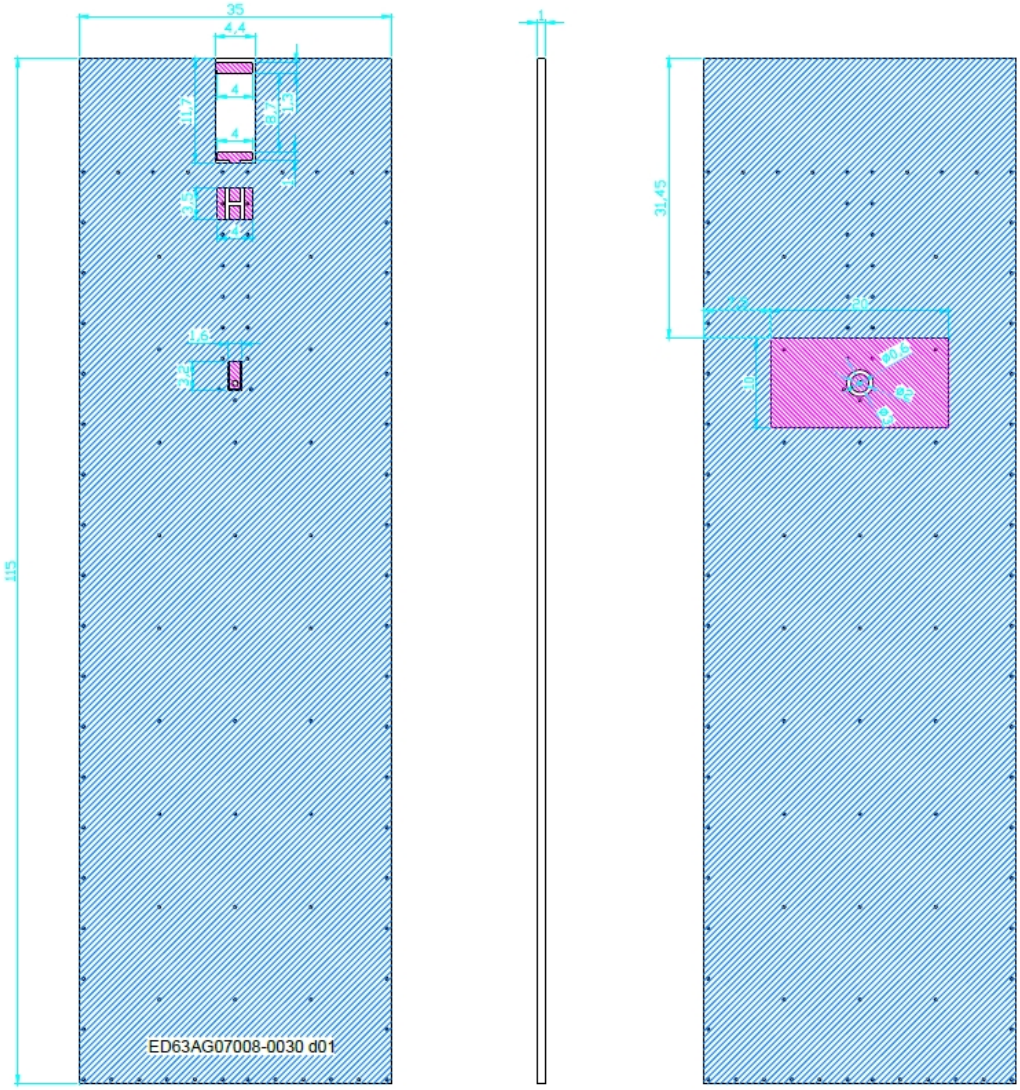
1.2 Mechanical Properties

Parameter	Description
Dimension	10×4×1.5 mm
Operating Temperature	-30˚C~85˚C
Storage Temperature (With Packing Sealed)	-30˚C~85˚C

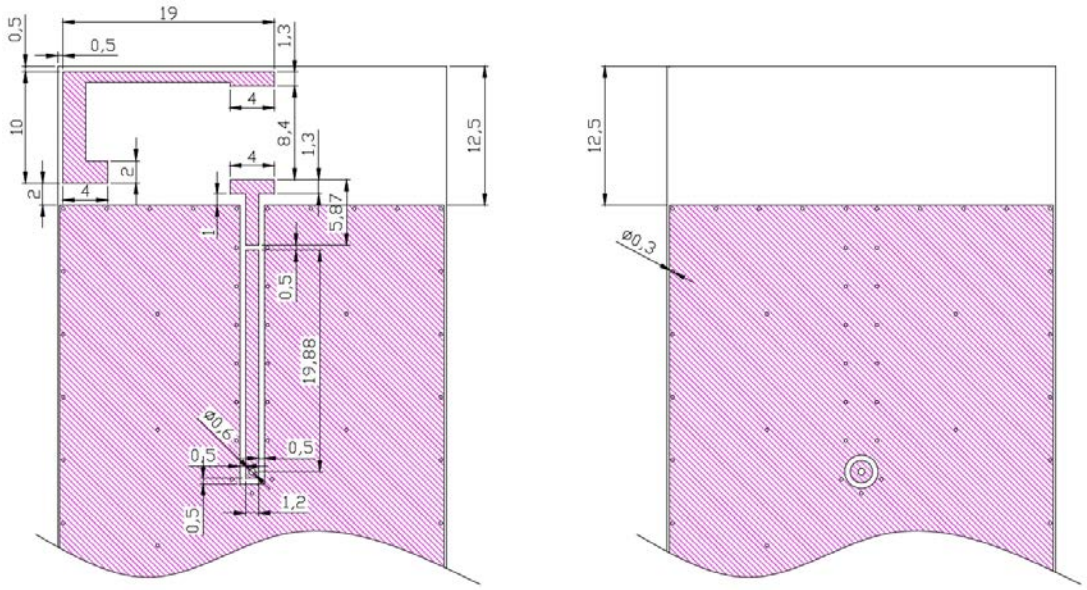
2. Appearance

Dimensions Of Antenna And Evaluation Board (Unit：mm)

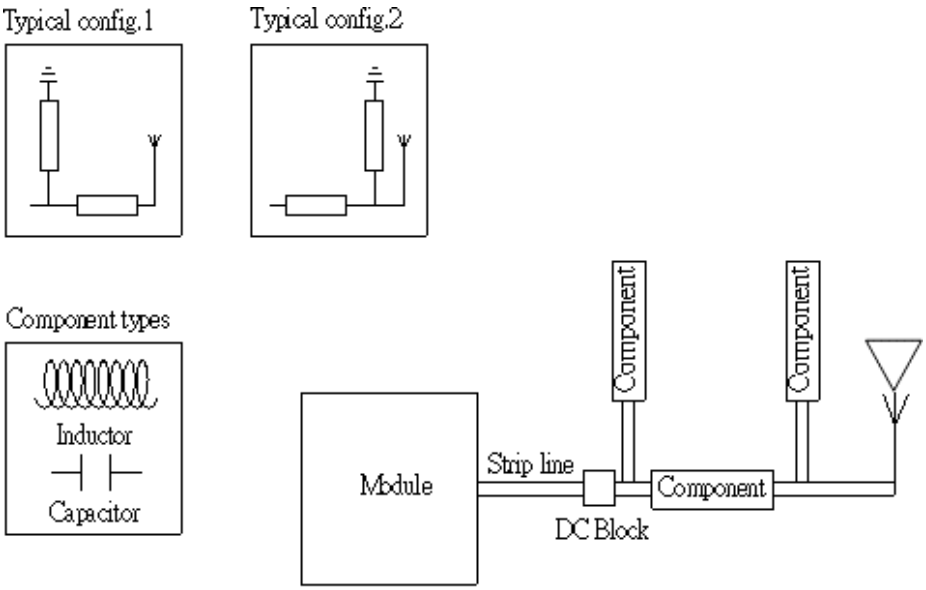




3. Layout Guide (Unit：mm)



4. Transmission And Matching Circuit



The matching network has to be individually designed using one,two or three components.

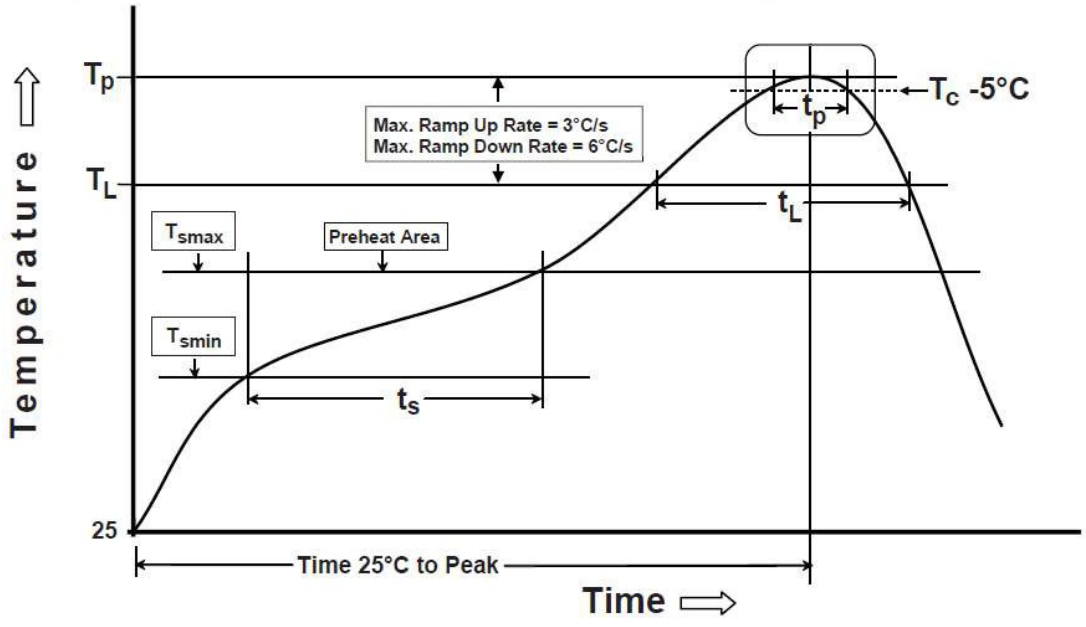
5. Soldering Conditions

The product can be assembled following Pb-free assembly. According to the Standard **IPC/JEDEC J-STD-020C**, the temperature profile suggested is as follow：

Phase	Profile features	Pb-Free Assembly (SnAgCu)
PREHEAT	-Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(ts) form (Tsmin to Tsmax)	150℃ 200℃ 60~120 seconds
RAMP-UP	Avg. Ramp-up Rate (Tsmax to TP)	3℃/second max.
REFLOW	-Temperature(TL) -Total Time above TL (t L)	217℃ 30~100 seconds
PEAK	-Temperature(TP) -Time(tp)	260℃ 10 seconds
RAMP-DOWN	Rate	6℃/second max.
Time from 25℃ to Peak Temperature		8 minutes max.
Composition of solder paste		Sn 96.5/ Ag 3/Cu 0.5
Solder Paste Model		SHENMAO PF606-P26

Note：All the temperature measure point is on top surface of the component, if temperature over recommend, it will make component surface peeling or damage.

The graphic shows temperature profile for component assembly process in reflow ovens



Soldering With Iron:

Temperature 270±10 ℃.

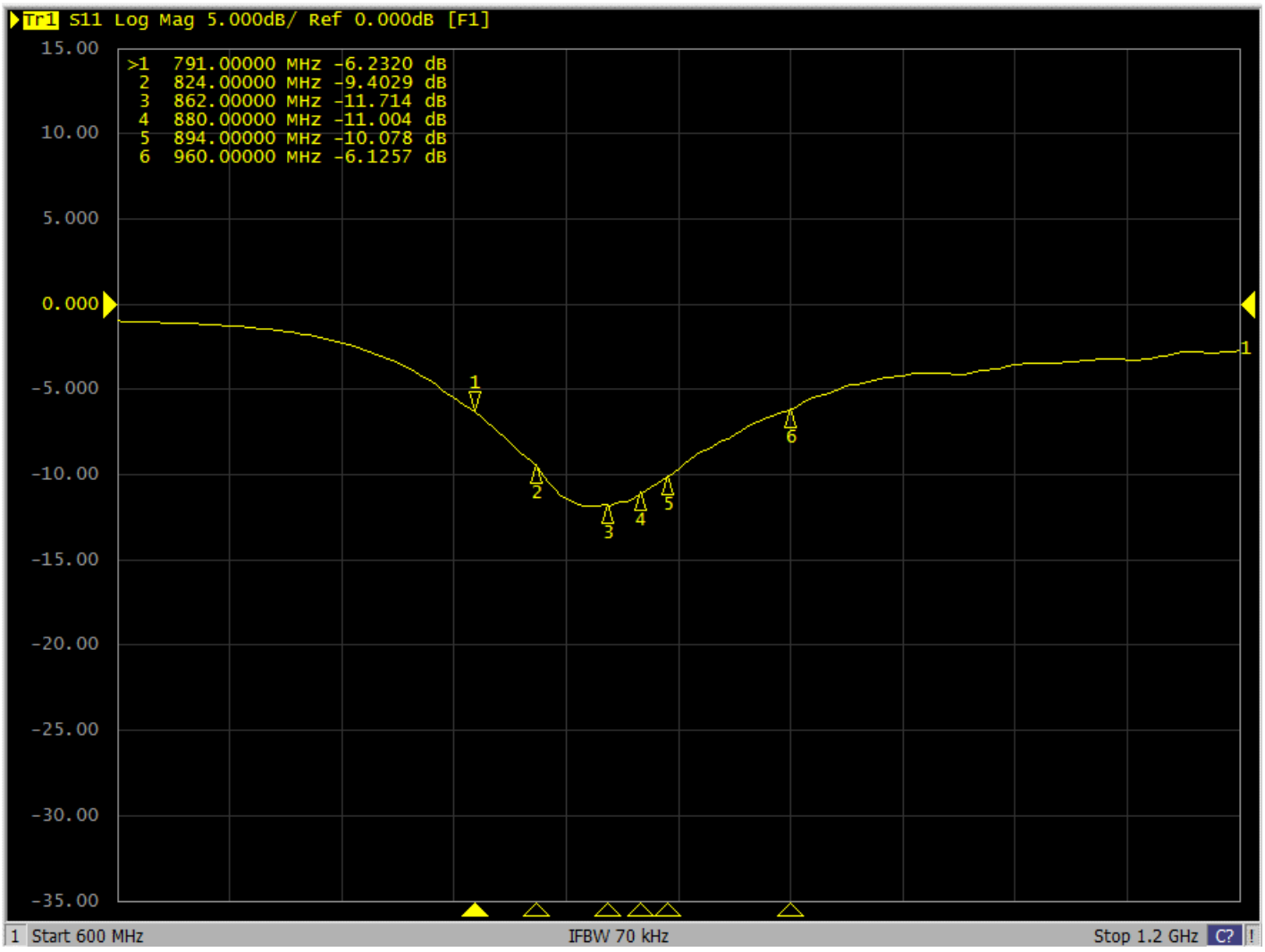
Apply preheating at 120℃ for 2-3 minutes.

Finish soldering for each terminal within 3 seconds, if soldering iron over temperature 270±10 ℃ or 3 seconds, it will make component surface peeling or damage.

Soldering iron can not leakage of electricity.

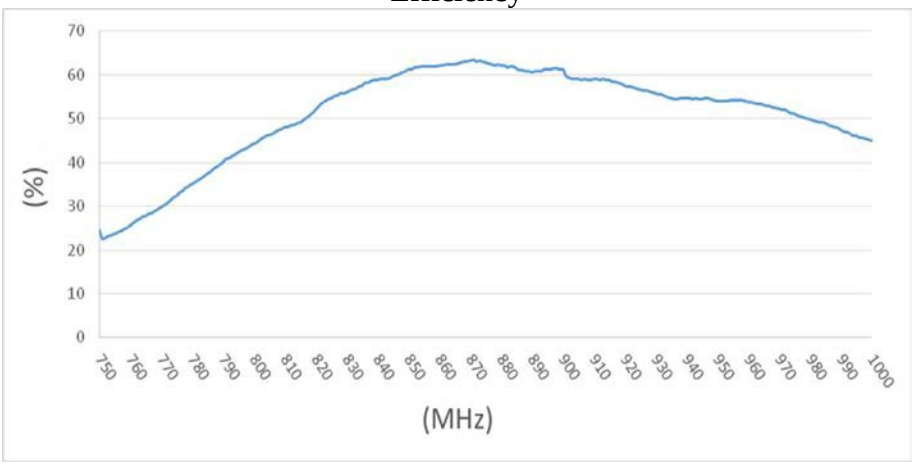
6. Performance

6.1 Return Loss

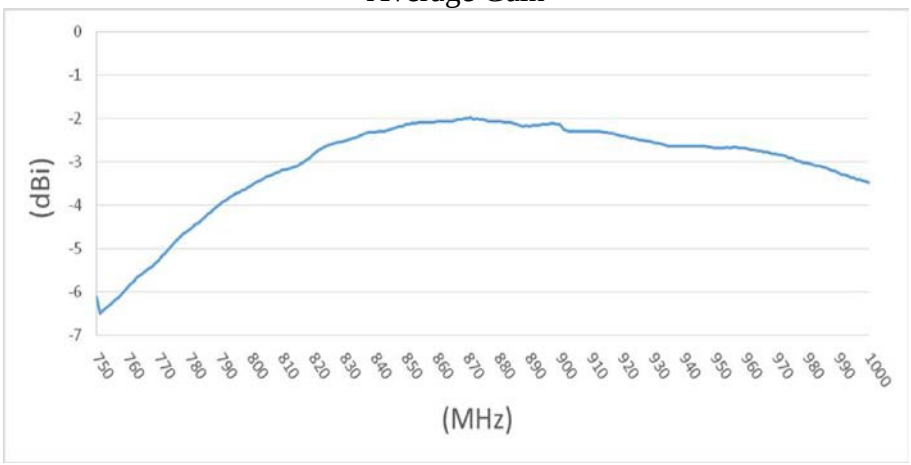


6.2 Efficiency , Average Gain , Peak Gain

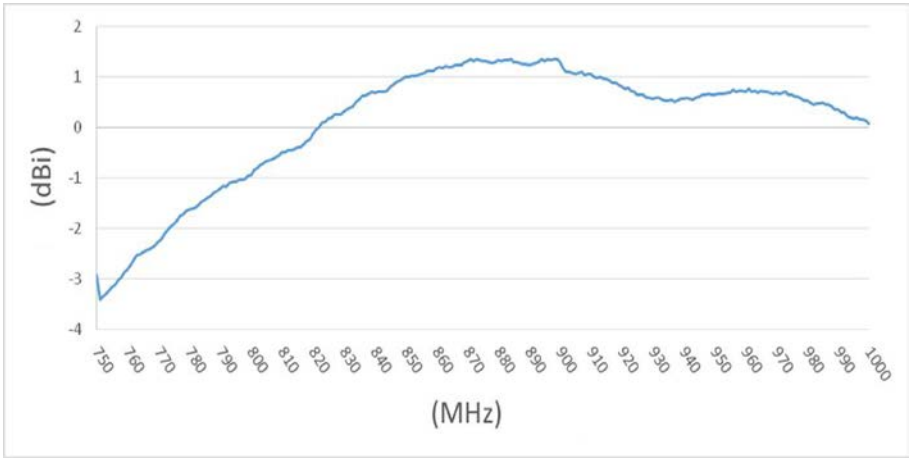
Efficiency



Average Gain

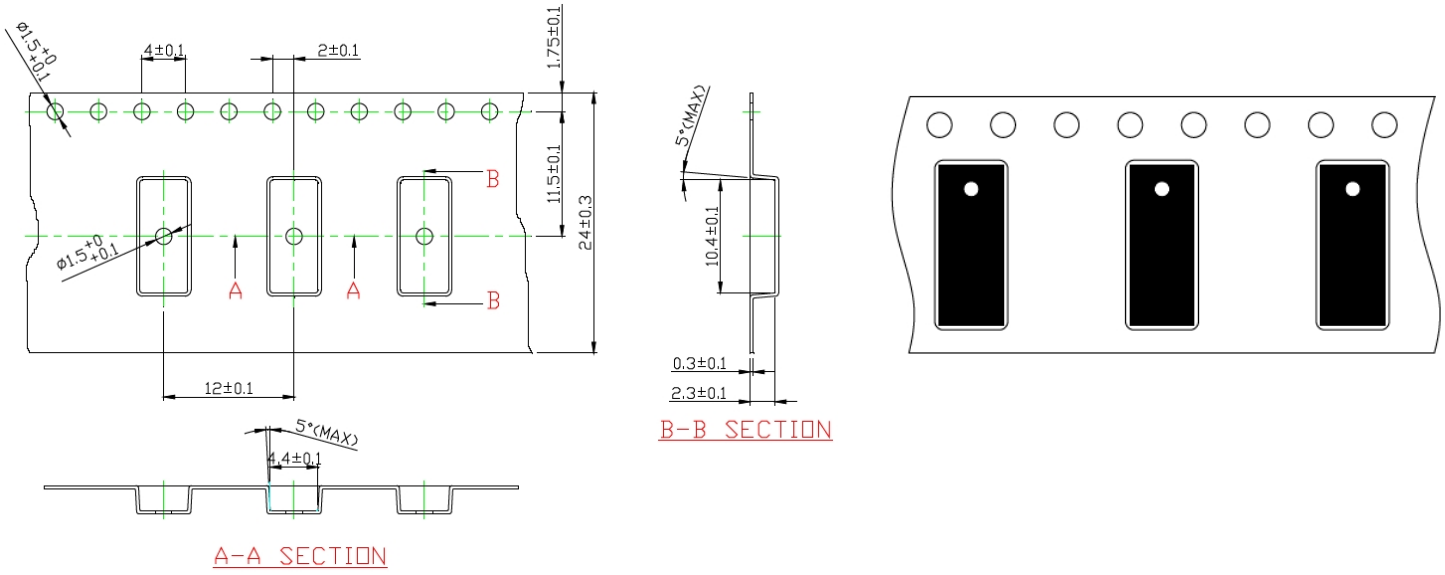


Peak Gain



7. Packing

- Tape：



- Reel：2,000 pcs