文件履歷表

申請單編號	版本	修訂內容簡述	修訂頁次	生效日期	修訂者
WTEC201709142746	F	更新圖片跟 layout	P1.P7	2017.09.14	Mike
WTEC201904115209	G	新增 13.Soldering Conditions	P8	2019.04.11	Mina

發行份數：電子檔發行

FM Chip Antenna (AA047) Engineering Specification

1. Explanation of Product Number

H	2	U	5	6	6	K	K	J	A	0	1	0	0



2. Features

*Stable and reliable in performances
*Low temperature coefficient of frequency
*Miniature size
*RoHS compliance

3. Applications

*FM earphone systems
*Hand-held devices when FM radio is needed, e.g., Smart phone, MP3

4. Description

This AA047 antenna is specially designed for FM applications and can be easily built-in portable devices with SMT processes. It has excellent stability and sensitivity to consistently provide high signal reception efficiency.

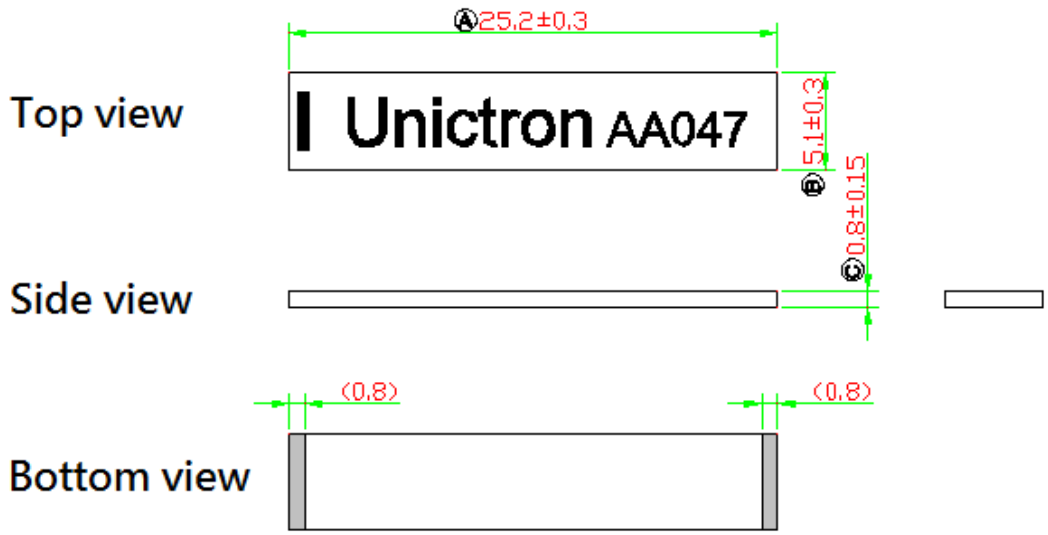
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5. Electrical Specifications

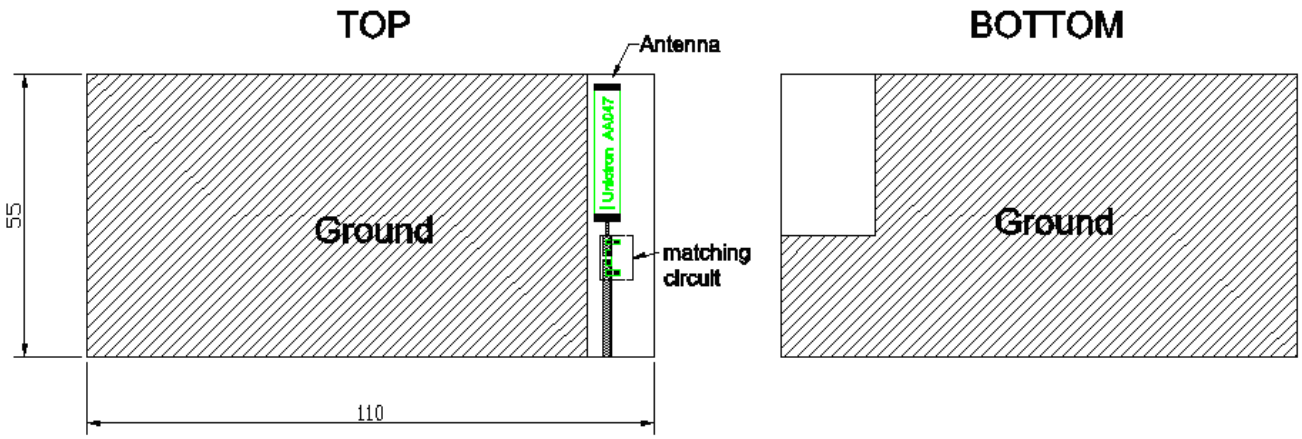
Characteristics	Specifications	Unit
Outline Dimensions	25.2 x 5.1	mm
Frequency	87.5 ~ 108	MHz
Impedance	50	Ω
Polarization	Linear Polarization	

6. Antenna Dimensions & Test Board (unit: mm)

6-1. Antenna Dimensions

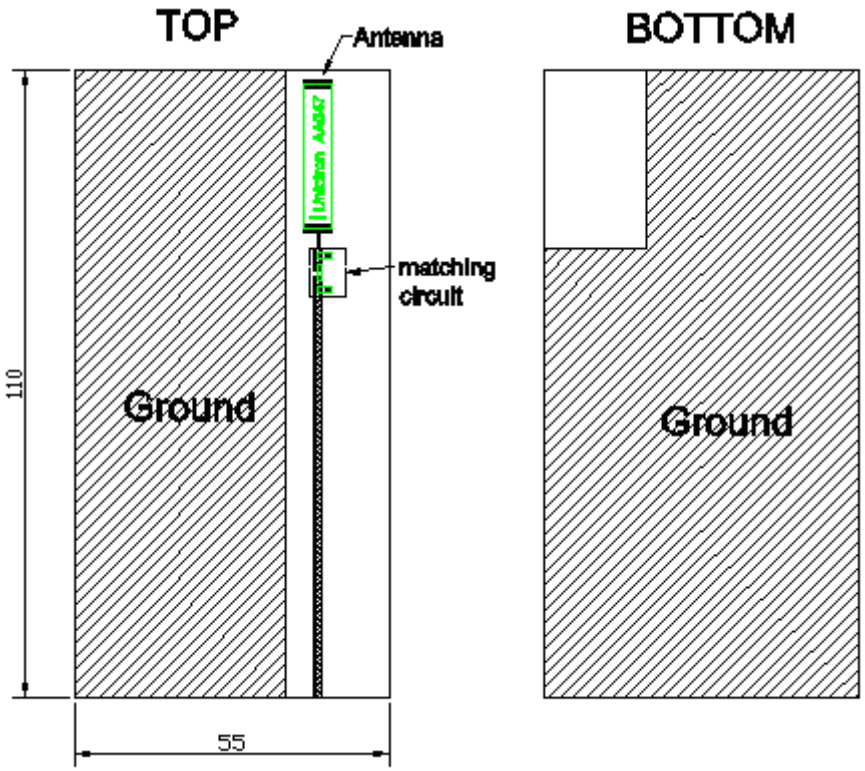


6-2. Type A Test Board with Antenna



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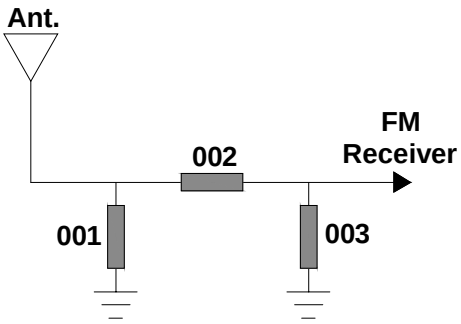
6-3. Type B Test Board with Antenna



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7. Measurement on Type A Test board

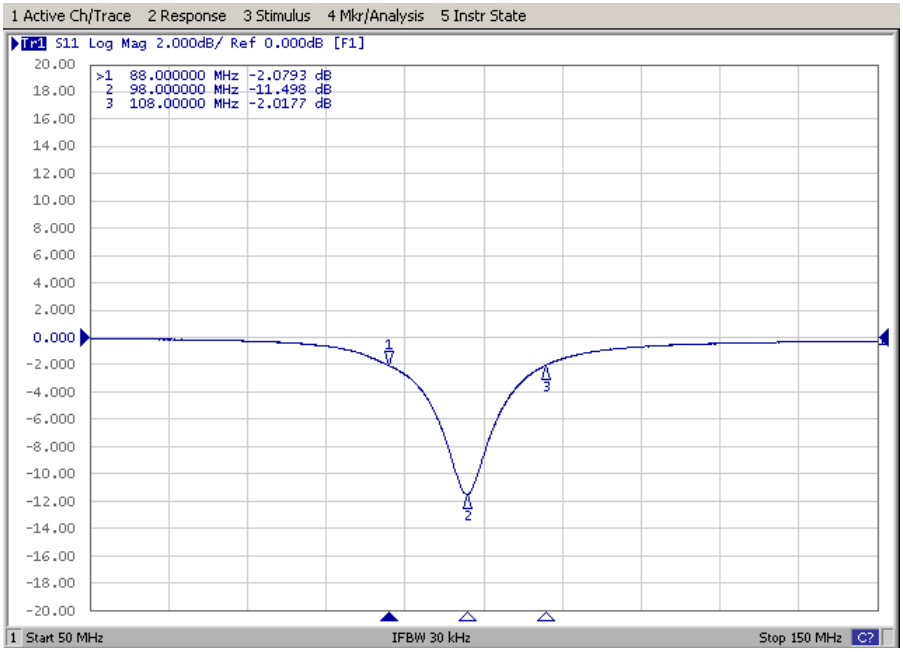
7-1. Recommend Matching Circuit



System Matching Circuit Component			
Location	Description	Vendor	Tolerance
001	1.8pF*, 0402	DARFON	±0.25pF
002	680nH*, 0603	DARFON	±5%
003	N/A*	-	-

*Typical reference values which may need to be changed when circuit boards or part vendors are different.

7-2.Return loss



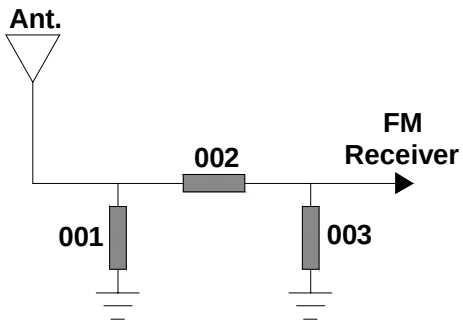
7-3. Measurement frequency points and S11 value

Frequency	88MHz	98MHz	108MHz
Return loss(dB)	<-2.08	<-11.49	<-2.02

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8. Measurement on Type B Test board

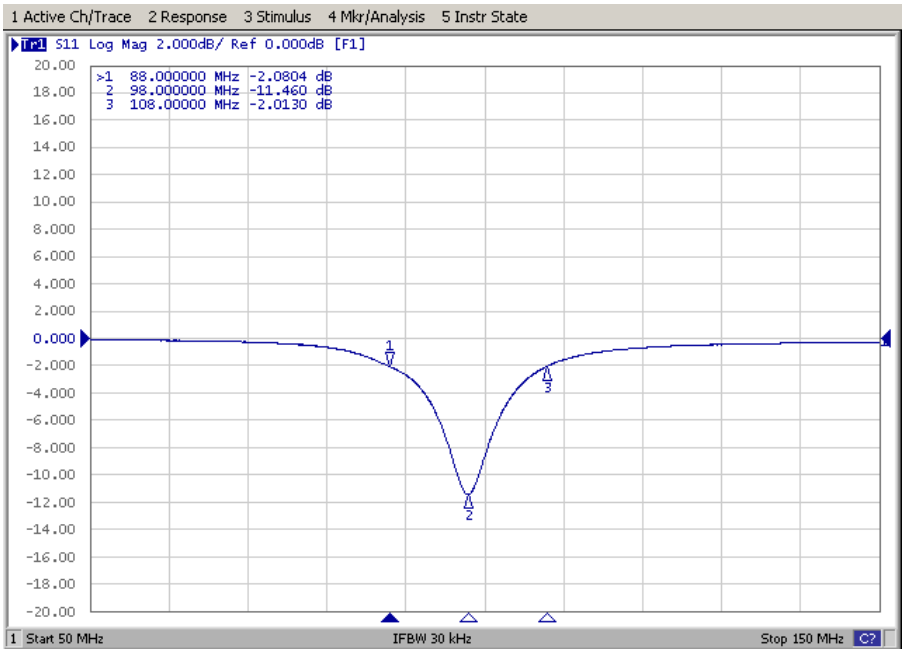
8-1. Recommend Matching Circuit



System Matching Circuit Component			
Location	Description	Vendor	Tolerance
001	1.8pF*, 0402	DARFON	±0.25pF
002	680nH*, 0603	DARFON	±5%
003	N/A*	-	-

*Typical reference values which may need to be changed when circuit boards or part vendors are different.

8-2. Return loss



8-3. Measurement frequency points and S11 value

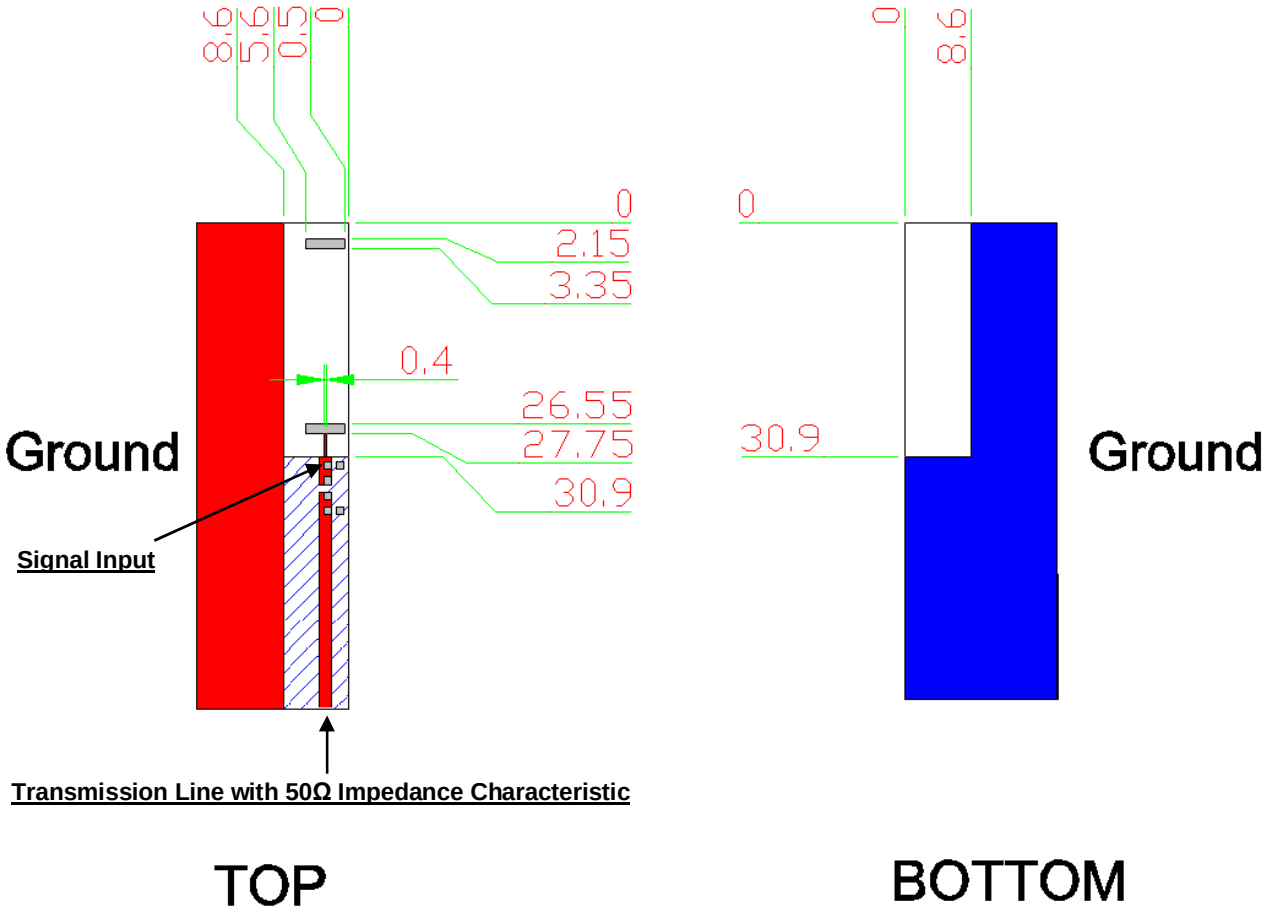
Frequency	88MHz	98MHz	108MHz
Return loss(dB)	<-2.08	<-11.46	<-2.01

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9. Layout Guide

Solder Land Pattern:

Soldering pads are as shown below. Depending on Customer's requirement, matching circuit as shown below is also recommended.



Unit: mm

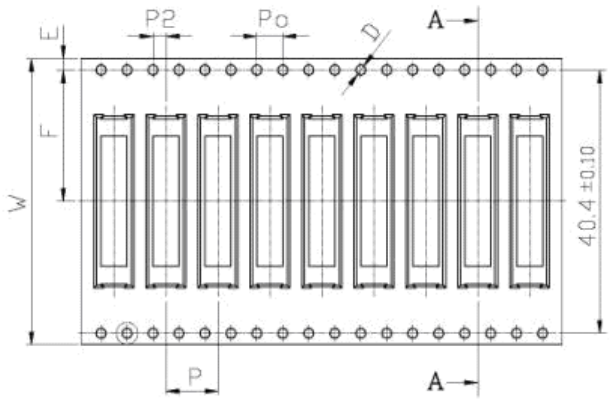
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10. Packing

(1) Quantity/Reel: 4000 pcs/Reel

(2) Plastic tape:

a. Tape Drawing



b. Tape Dimensions (unit: mm)

Feature	Specifications	Tolerances
W	44.00	±0.30
P	8.00	±0.10
E	1.75	±0.10
F	20.20	±0.10
P2	2.00	±0.10
D	1.50	+0.10 -0.00
D1	2.00	±0.10
Po	4.00	±0.10
10Po	40.00	±0.20

11. Operating & Storage Conditions

11-1. Operating

(1) Maximum Input Power**:** 2 W

(2) Operating Temperature**:** -40℃ to 85℃

11-2. Storage

(1) Storage Temperature**:** -5℃ to 40℃

(2) Relative Humidity**:** 20% to 70%

(3) Shelf Life**:** 1 year

12. Notice

(1) Installation Guide:

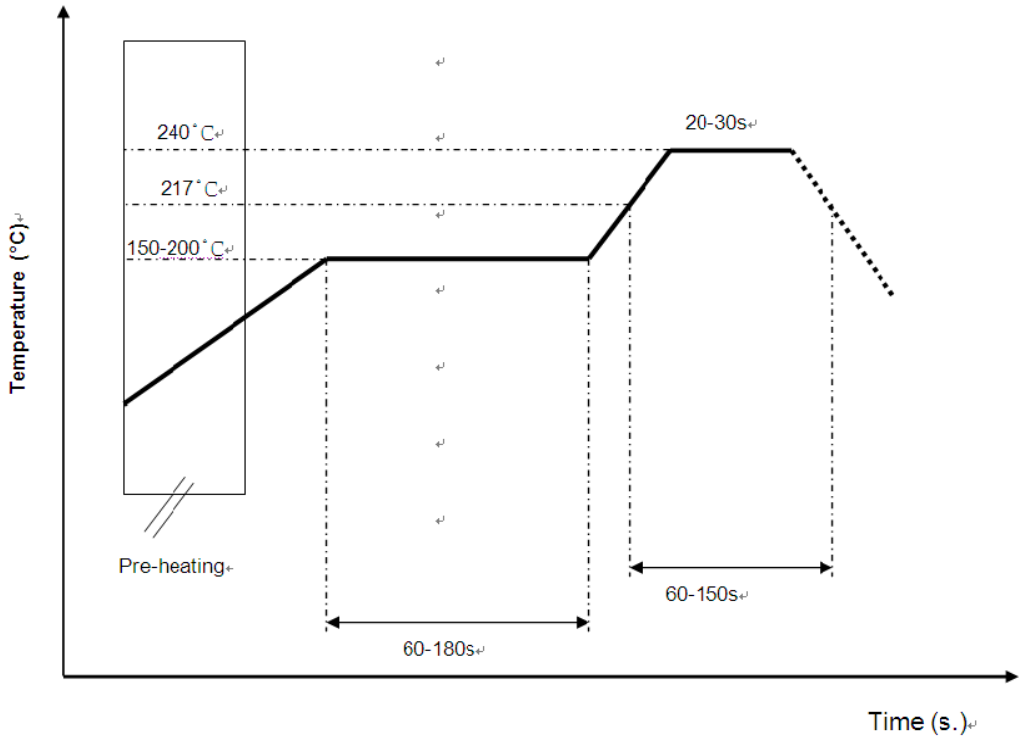
Please refer to “General guidelines for the installation of Unictron’s chip antennas” document.

(2) All specifications are subject to change without notice.

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13. Soldering Conditions

Typical Soldering Profile for Lead-free Process



*Recommended solder paste alloy: SAC305 (Sn96.5 /Ag3 /Cu0.5) Lead Free solder paste

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