1.6X0.8X0.8 (mm) WiFi/Bluetooth Ceramic Chip Antenna

(YF1608-1) Engineering Specification

1. Product Number

YF	1608	F2	P	2G45	02
1	2	3	4	5	6

2. Features

(1)Product Type	Chip Antenna
(2)Size Code	1.6x0.8x0.8mm
(3)Type Code	F2
(4)Packing	Plastic Packaging
(5)Frequency	2.45GHz

*Stable and reliable in performances
*Low temperature coefficient of frequency
*Low profile, compact size
*RoHS compliance
*SMT processes compatible

3. Applications

*Bluetooth earphone systems
*Hand-held devices when WiFi /Bluetooth functions are needed, e.g., Smart phone.
*IEEE802.11 b/g/n
*ZigBee
*Wireless PCMCIA cards or USB dongle

4. Description

Yingfeng chip antenna series are specially designed for WiFi/Bluetooth applications. Based on yingfeng proprietary design and processes, this chip antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

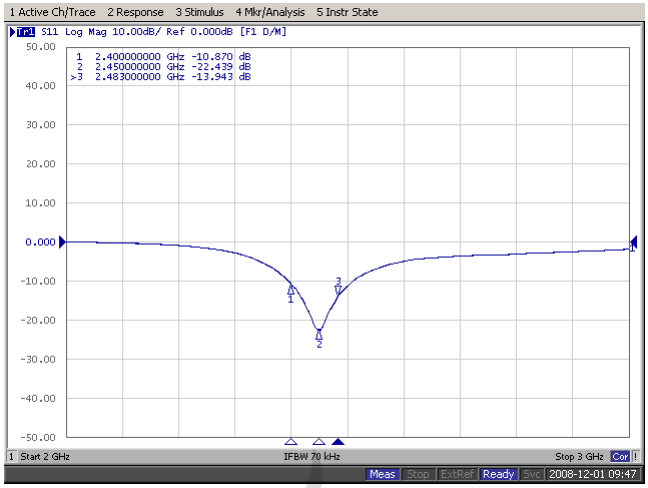
5. Electrical Specifications (50 x 40 mm^2 ground plane)

5-1. Electrical Table

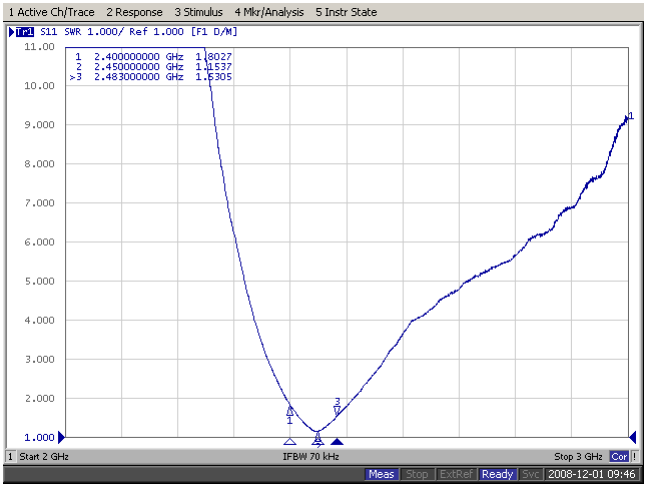
Characteristics		Specifications	Unit
Outline Dimensions		1.6x0.8x0.8	mm
Working Frequency		2400~2500	MHz
VSWR		2 Max.	
Impedance		50	Ω
Polarization		Linear Polarization	
Gain	Peak	2.5 (typical)	dBi
	Efficiency	75 (typical)	%

5-2. Return Loss & VSWR

Return Loss (S_{11})



VSWR(S_{11})



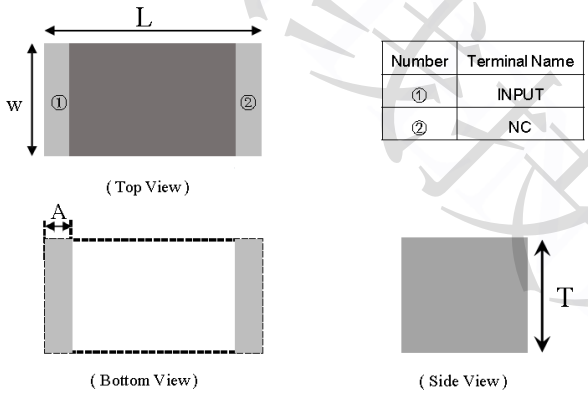
6. Antenna Dimensions & Test Board (unit: mm)

a. Antenna Dimensions

Applications

1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

Dimensions (Unit: mm)



Number	Terminal Name
①	INPUT
②	NC

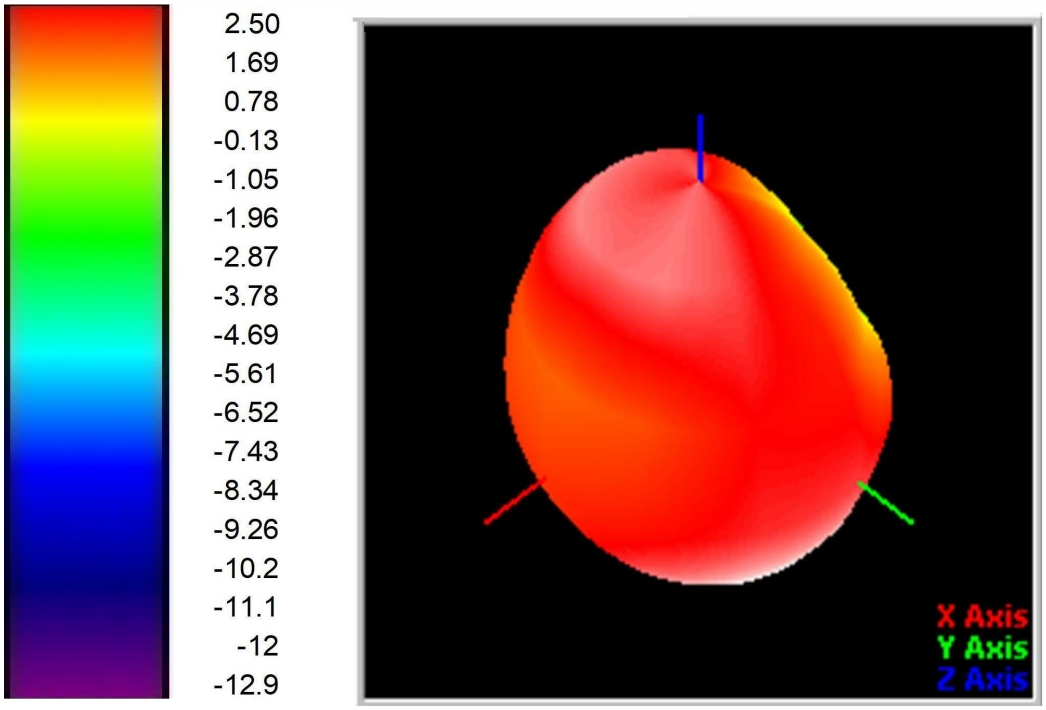
Symbols	L	W	T	A
Dimensions	1.60 ±0.20	0.80 ±0.20	0.80 ±0.20	0.30 ±0.10

Unit: mm

7. Radiation Pattern (50 x 40 mm^2 ground plane)

7-1. 3D Gain Pattern @ 2442 MHz

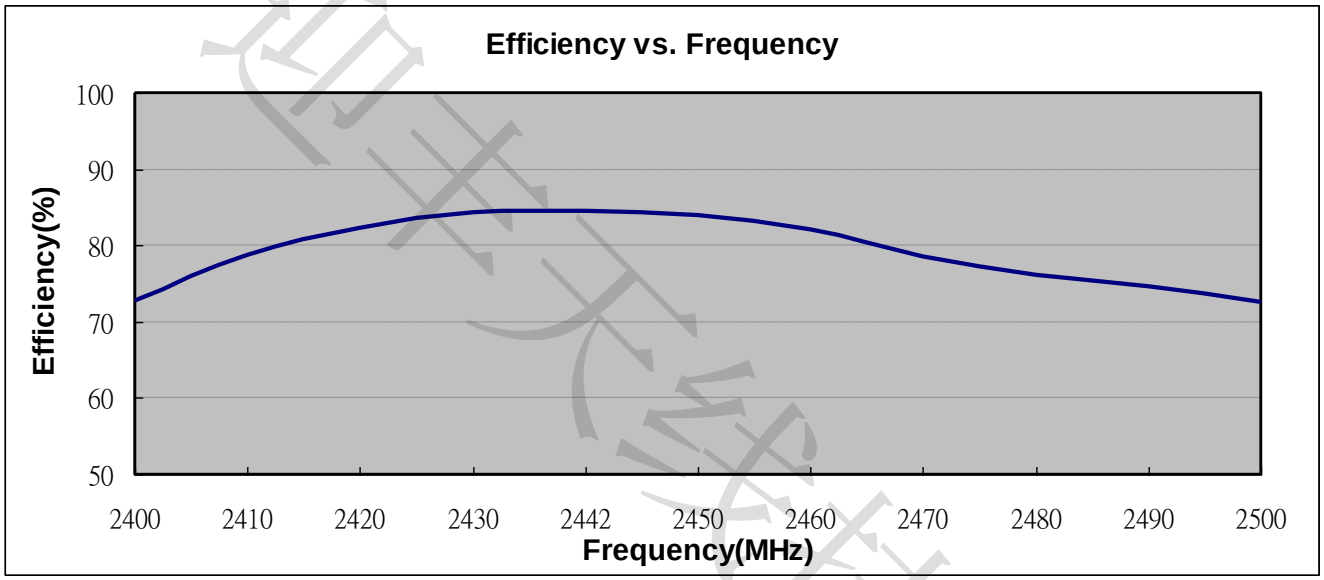
unit: dBi



7-2. 3D Efficiency Table

Frequency(MHz)	2400	2410	2420	2430	2442	2450	2460	2470	2480	2490	2500
Efficiency (dB)	-1.4	-1.0	-0.9	-0.7	-0.7	-0.8	-0.9	-1.1	-1.2	-1.3	-1.4
Efficiency (%)	72.8	73.7	74.3	74.4	75.5	75.0	74.0	73.6	73.1	72.6	71.5
Gain (dBi)	2.1	2.2	2.3	2.4	2.5	2.5	2.4	1.8	1.7	1.6	1.4

7-3. 3D Efficiency vs. Frequency

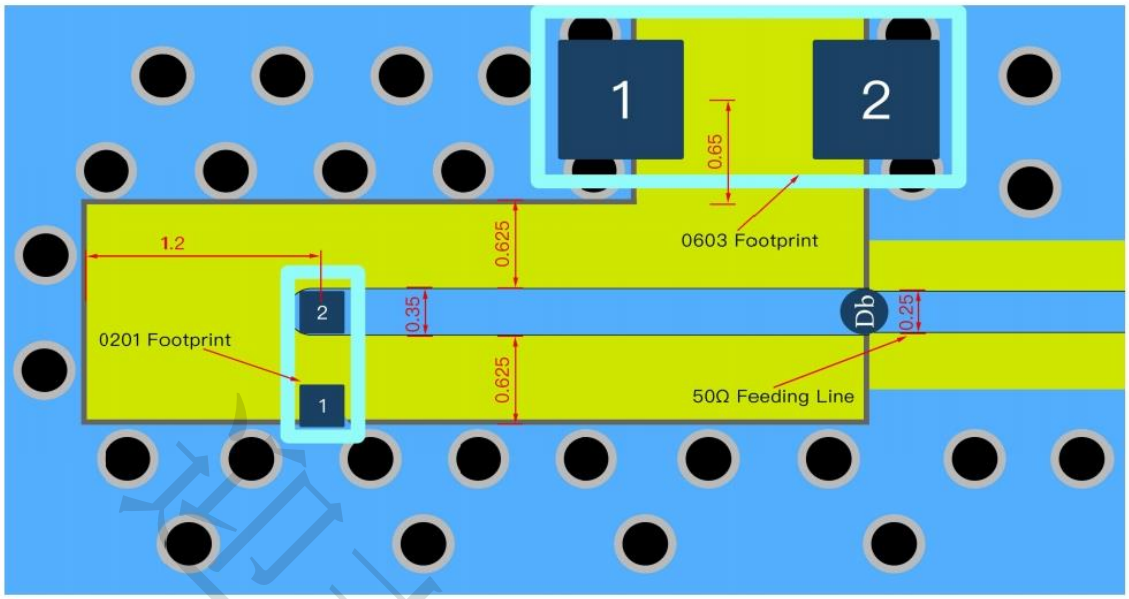


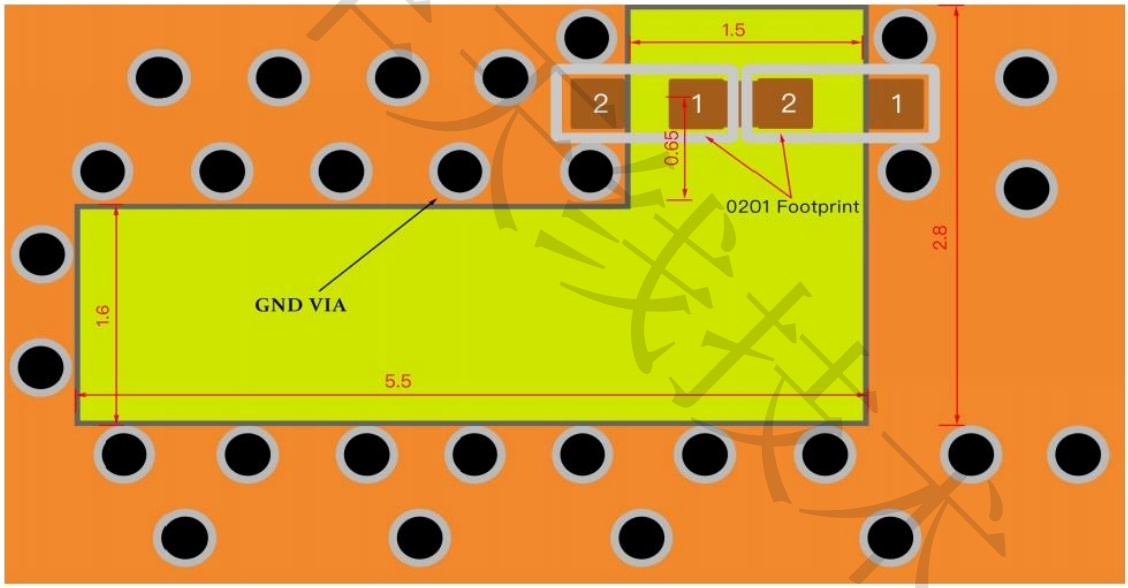
8. Layout Guide

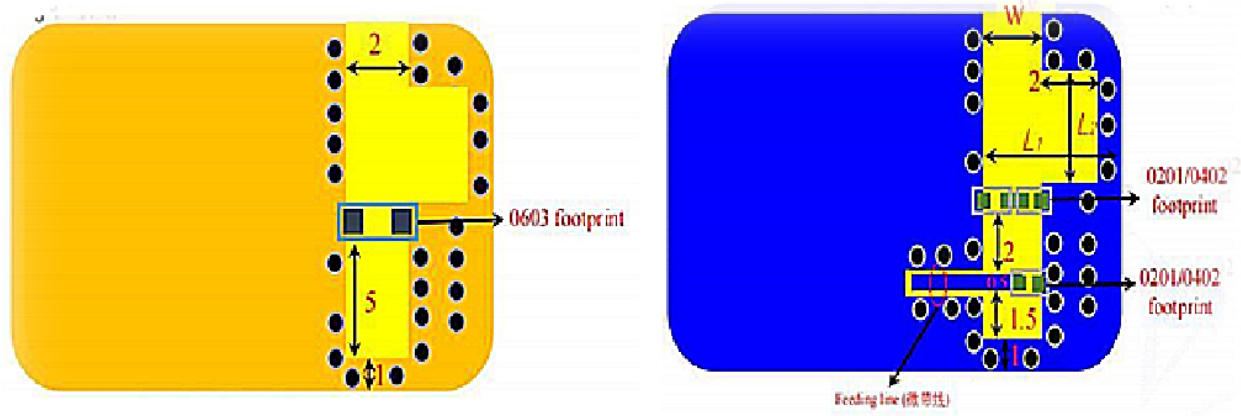
a. Solder Land Pattern:

Land pattern for soldering (gray marking areas) is as shown below. Depending on Customer's requirement, matching circuit as shown below is also recommended.

Evaluation Board and Matching Circuits



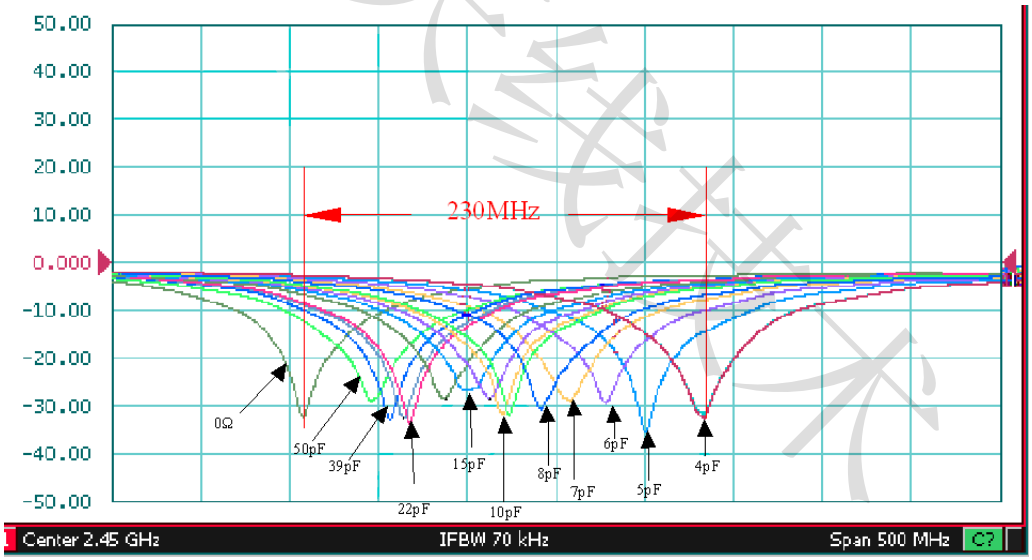




Bottom View

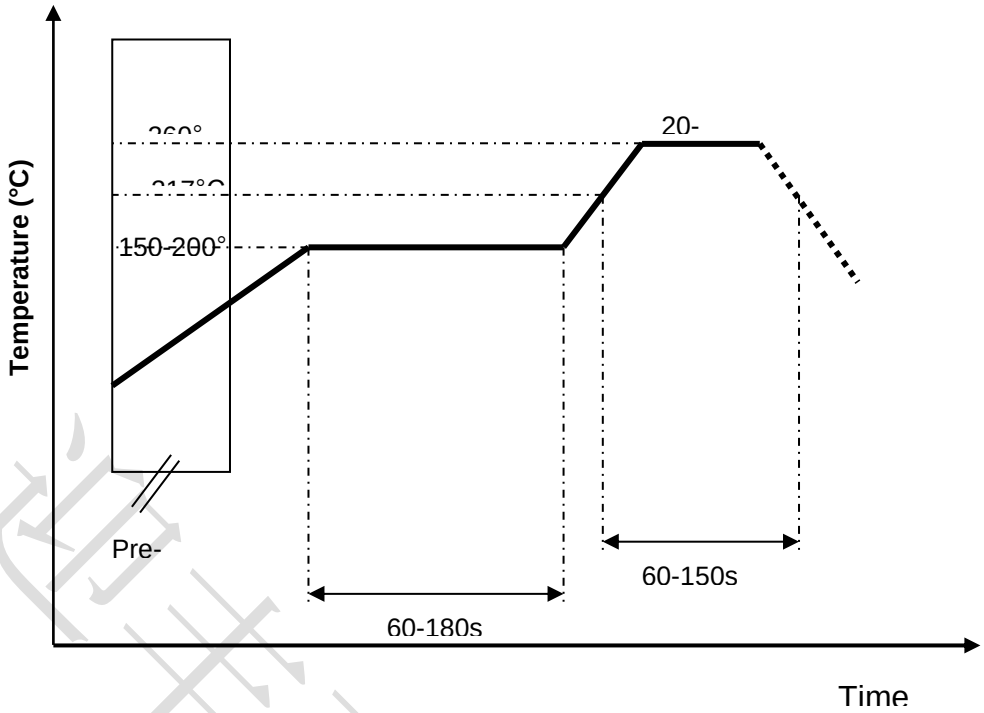
Unit： mm

c. Fine tuning element vs. Center frequency



9. Soldering Conditions

a. Typical Soldering Profile for Lead-free Process



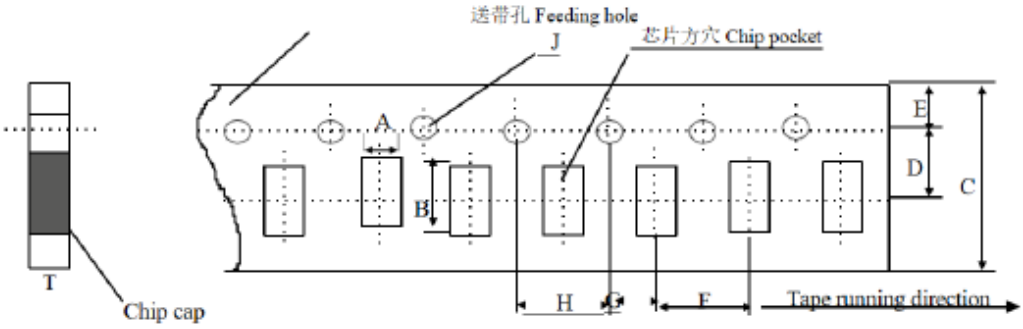
Packing

(1) Quantity/Reel: 4000 pcs/Reel

(2) Plastic tape:

迎丰天线技术

Dimensions of paper taping

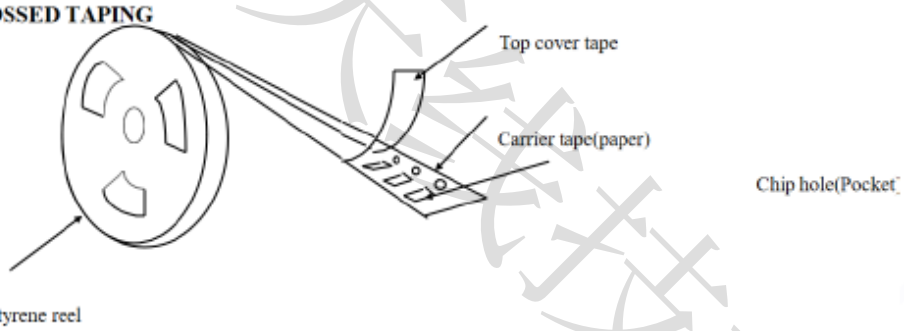


Unit: mm

代号 Code / 纸带规格 papersize	A	B	C	D*	E	F	G*	H	J	T
尺寸	1.10 ±0.10	1.90 ±0.10	8.00 ±0.10	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.10	4.00 ±0.10	1.50 -0/+0.10	1.10 Max

Reel（4000 pcs/Reel）

EMBOSSED TAPING



Storage Period

The guaranteed period for solderability is 6 months (Under deliver package condition).
Temperature: 5~40°C /Relative Humidity: 20~70%