

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

(YF1608B1) Engineering Specification

1. Product Number

YF 1608 D1 P 2G45

1 2 3 4 5



(1)Product Type	Chip Antenna
(2)Size Code	1.6x0.8x0.8mm
(3)Type Code	D1
(4)Packing	Plastic Packaging
(5)Frequency	2.45GHz

2. Features

- *Stable and reliable in performances
- *Low temperature coefficient of frequency



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Prepared by : JIEXI

Designed by : Jason

Checked by : Jason

Approved by: MR.FANG

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- *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 mm² 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)	%



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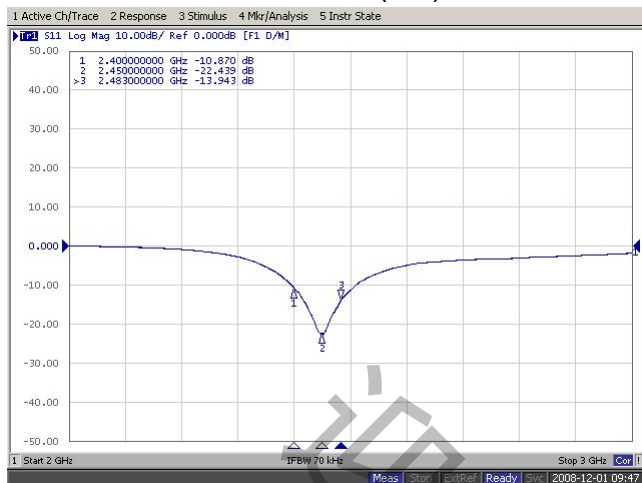
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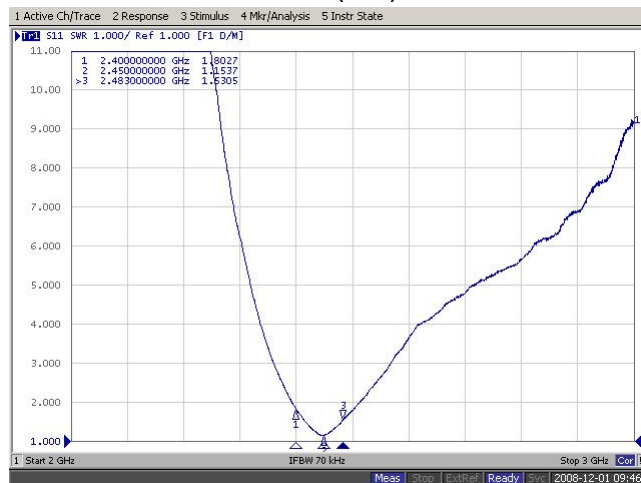
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5-2. Return Loss & VSWR

Return Loss (S_{11})



VSWR(S_{11})



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

a. Antenna Dimensions



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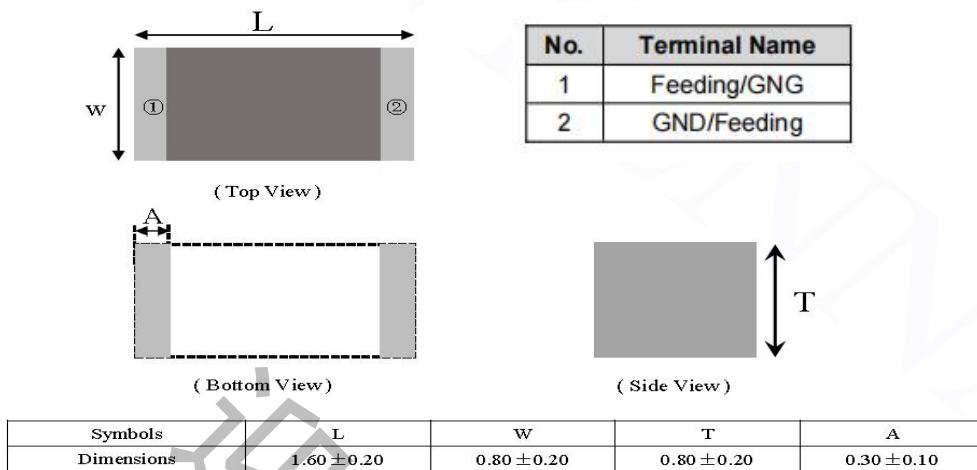
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Applications

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

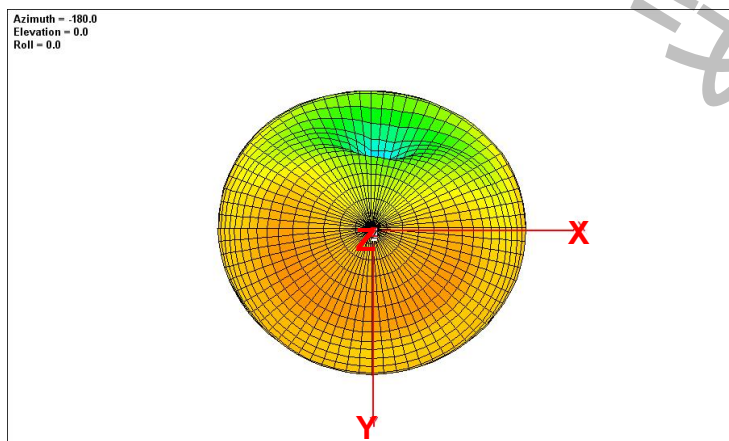
Dimensions (Unit: mm)



Unit: mm

7. Radiation Pattern (50 x 40 mm² ground plane)

7-1. 3D Gain Pattern @ 2442 MHz



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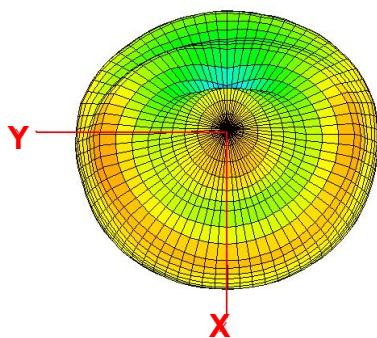
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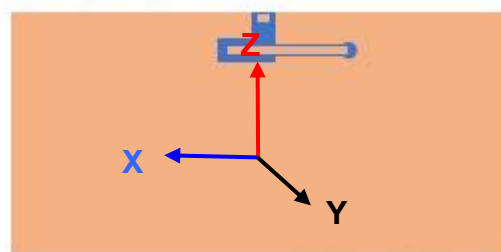
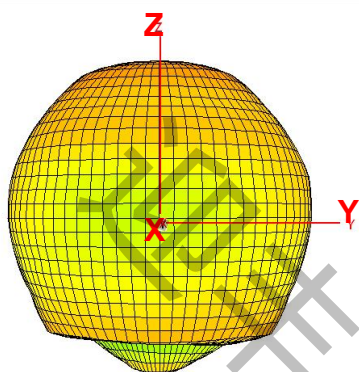
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Azimuth = -180.0
 Elevation = -5.1
 Roll = 180.0



Azimuth = 0.0
 Elevation = -90.0
 Roll = 180.0



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



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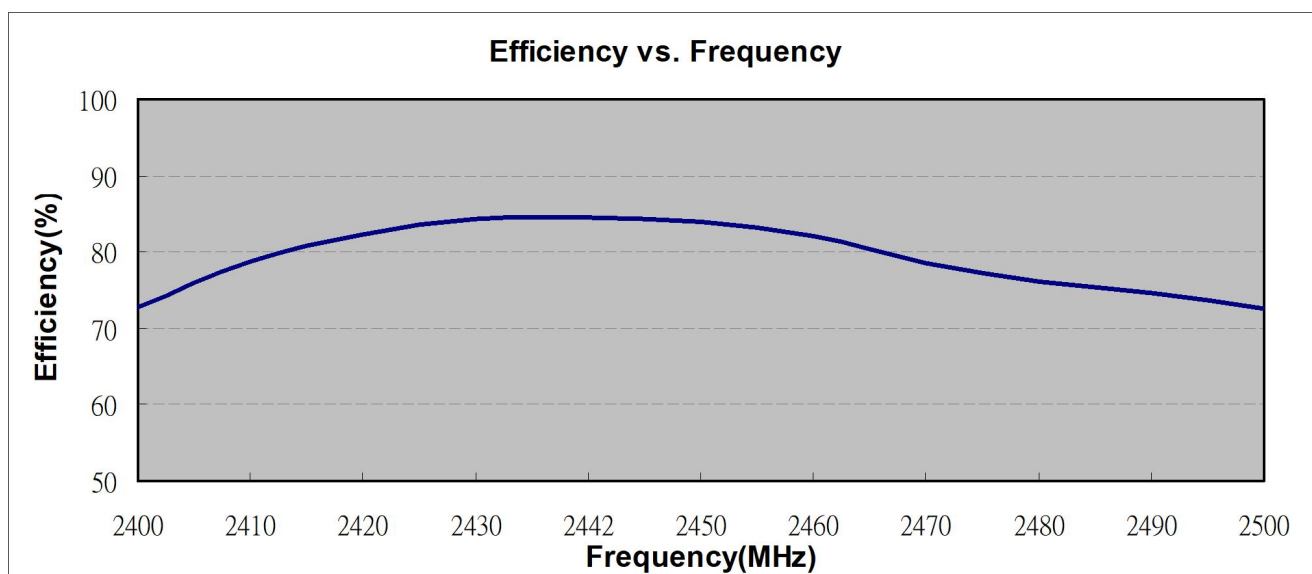
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8. Layout Guide

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.



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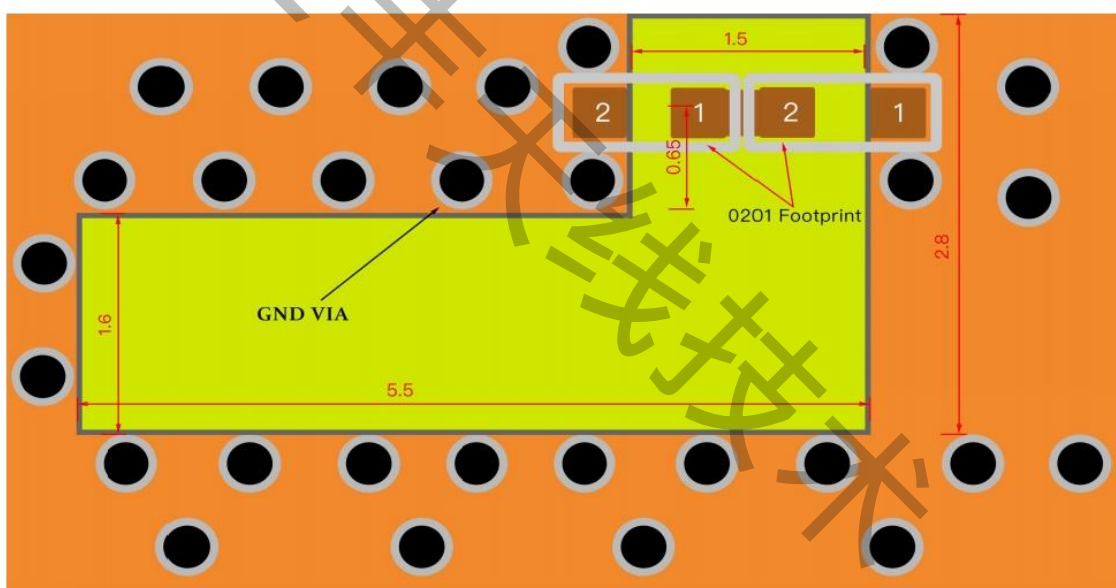
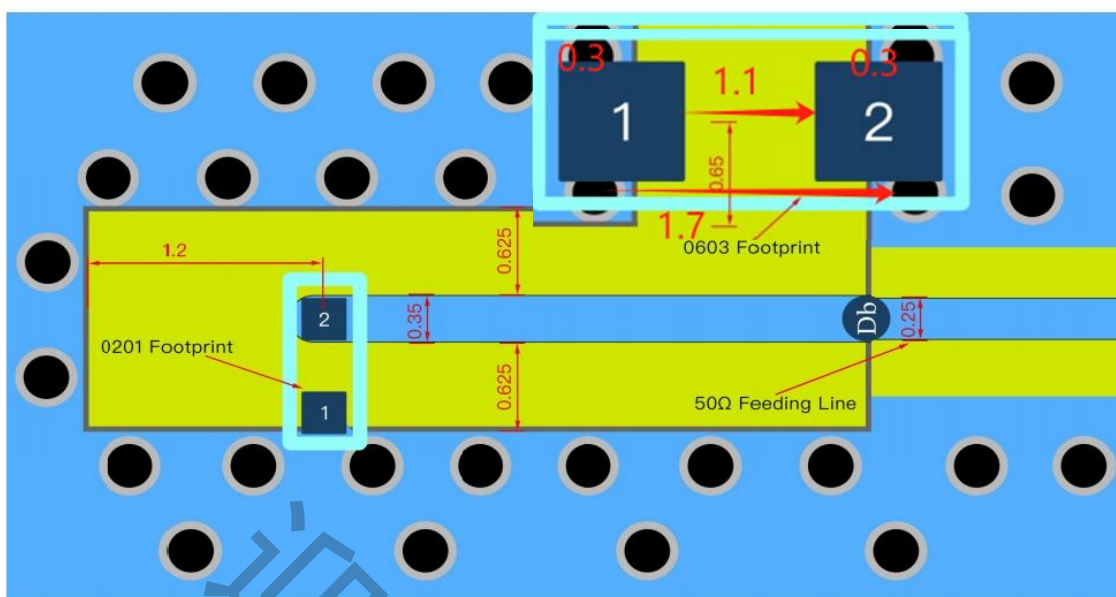
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Evaluation Board and Matching Circuits



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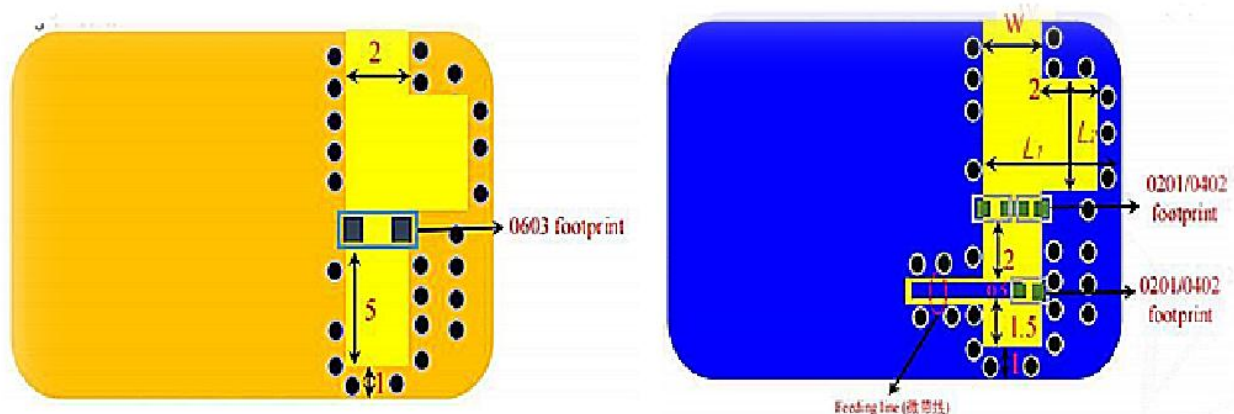
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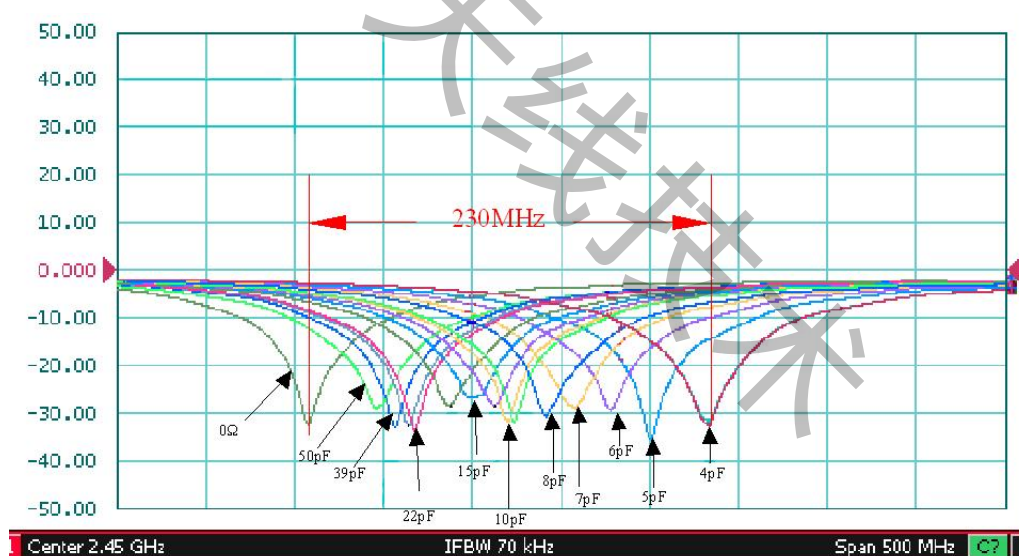
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Bottom View

Unit : mm

c. Fine tuning element vs. Center frequency



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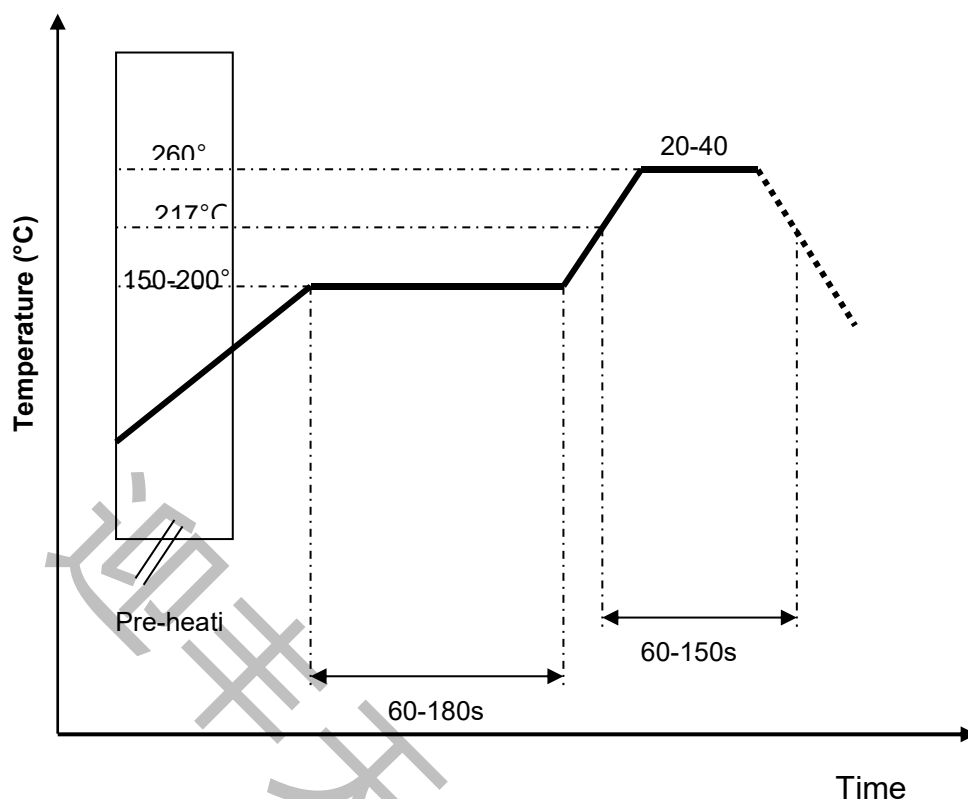
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9. Soldering Conditions

a. Typical Soldering Profile for Lead-free Process



Packing

- (1) Quantity/Reel: 4000 pcs/Reel
- (2) Plastic tape:



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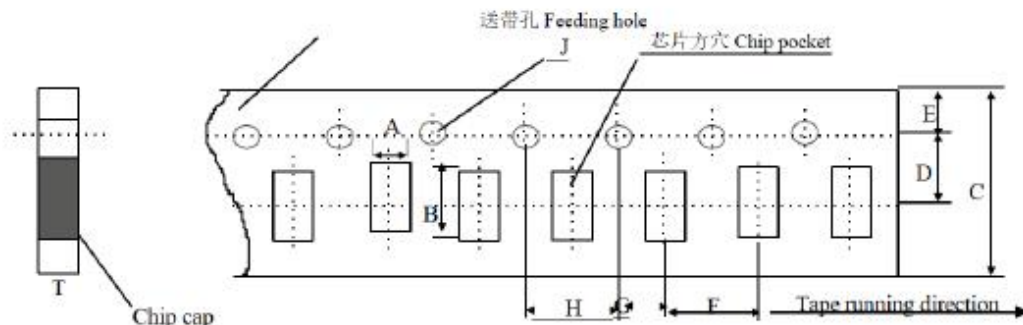
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Dimensions of paper taping

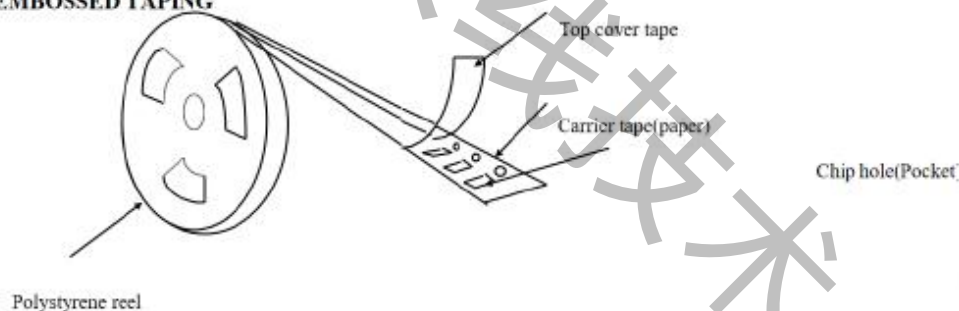


Unit: mm

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 ±0.10	1.10 Max

Reel (4000 pcs/Reel)

EMBOSED TAPING



Storage Period

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



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