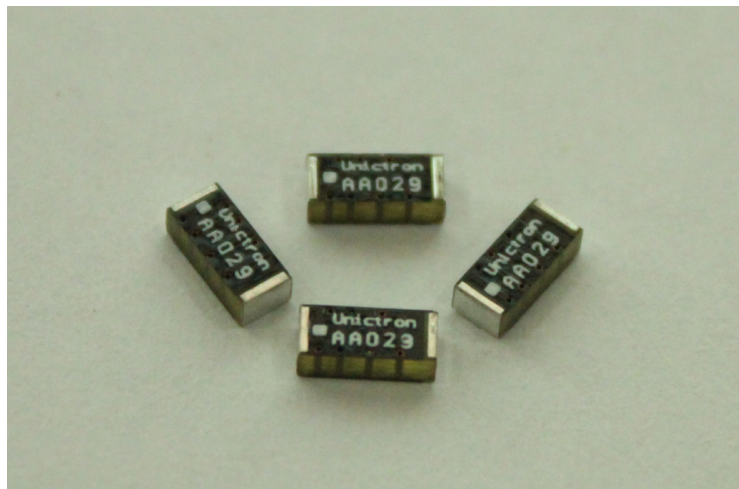


5.0 x 2.2 x 1.6 (mm) WiFi / Bluetooth Chip Antenna (Standard)

Engineering Specification

1. Explanation of Product Number

H	2	U	2	6	2	G	K	B	A	0	1	0	0
(1) (2) (3) (4) (5) (6)													



Product Code:

- (1) Product categories:
6: polymer substrate
- (2) Dimensions and polarization:
2G: 5x2.2x1.6(mm) / linear polarization
- (3) Material:
K: FR4
- (4) Working frequency:
B: 2400~2500MHz
- (5) Ground plane dimensions:
A: special
- (6) Antenna series:
01: serial number



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Prepared by : **Nacy** Designed by : **Chinling** Checked by : **Mike** Approved by : **Herbert** UNIT : mm

TITLE : 5.0 x 2.2 x 1.6 (mm) Bluetooth/Wi-Fi Chip Antenna (Standard) Engineering Specification	DOCUMENT NO.	H2U262GKBA0100	REV.
			D

2. Features

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

3. Applications

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

4. Description

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

5. Electrical Specifications (100x50 (mm) ground plane)

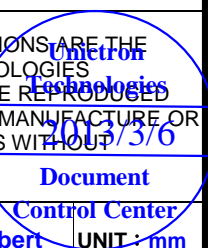
5-1. Electrical Table:

Characteristics		Specifications	Unit
Outline Dimensions		5.0 x 2.2 x 1.6	mm
Ground Plane		100 x 50	mm
Working Frequency*		2400 ~ 2500	MHz
Bandwidth (under -10dB return loss)		140 typical	MHz
VSWR		2 max.	
Impedance		50	Ω
Polarization		Linear Polarization	
Gain	Peak	3.4 (typical)	dBi
	Efficiency	65 (typical)	%



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UNIT : mm

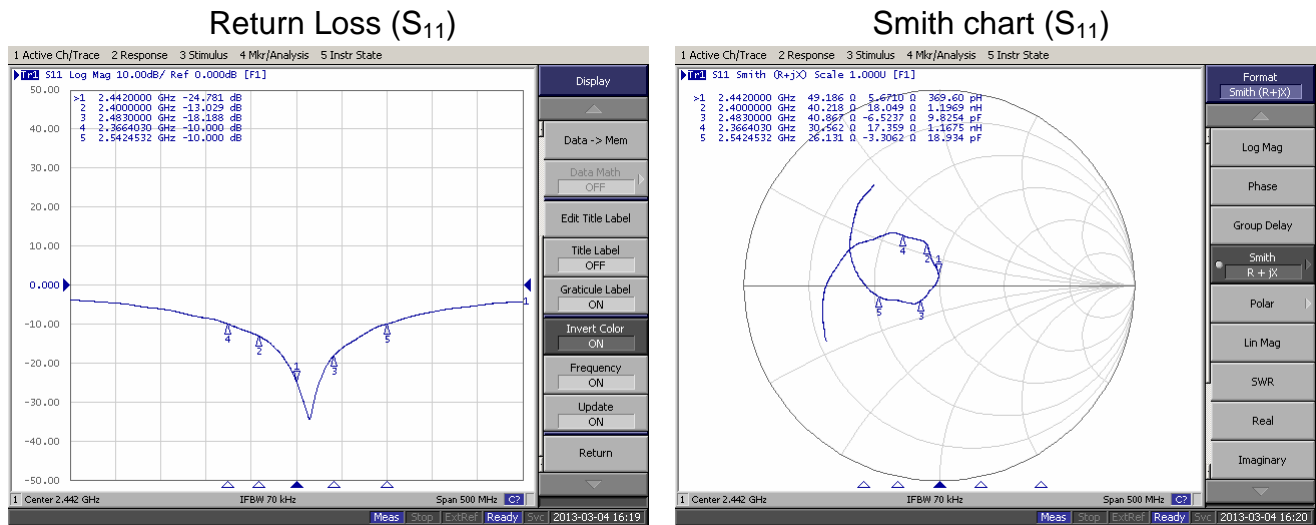
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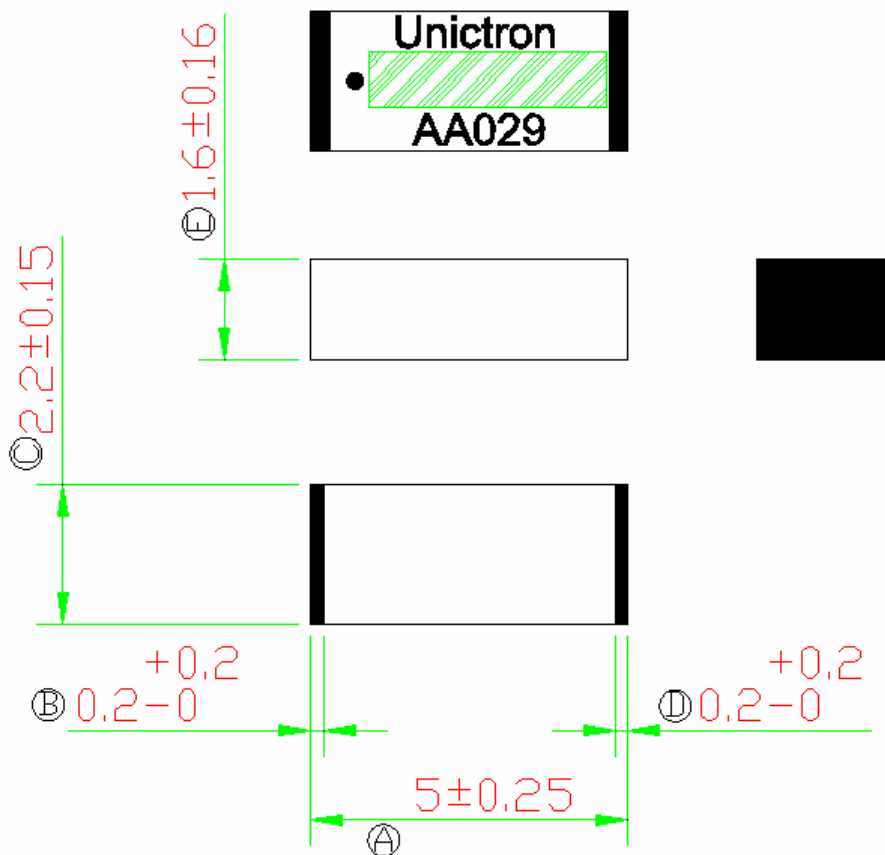
REV.
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5-2. Return Loss & Smith Chart



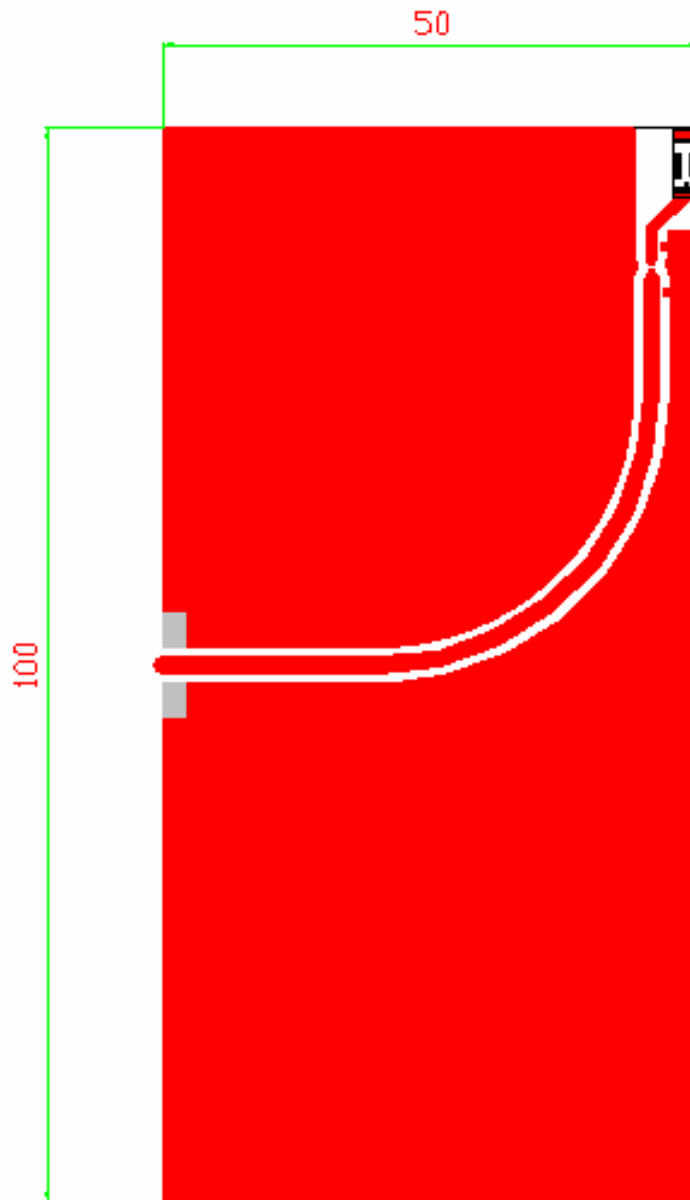
6. Antenna Dimensions & Test Board (unit: mm)

a. Antenna Dimensions



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	<p>Prepared by : Nacy</p>	<p>Designed by : Chinling</p>	<p>Checked by : Mike</p>
<p>TITLE : 5.0 x 2.2 x 1.6 (mm) Bluetooth/Wi-Fi Chip Antenna (Standard) Engineering Specification</p>		<p>DOCUMENT NO. H2U262GKBA0100</p>	<p>REV. D</p>

b. Test Board with Antenna

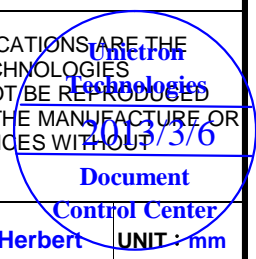


Unit: mm



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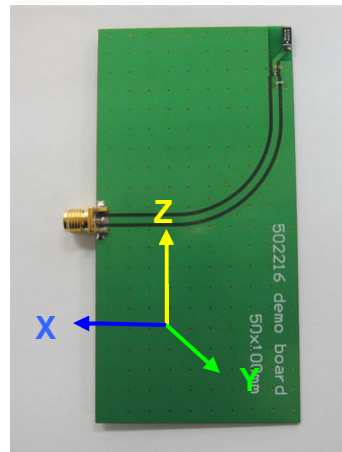
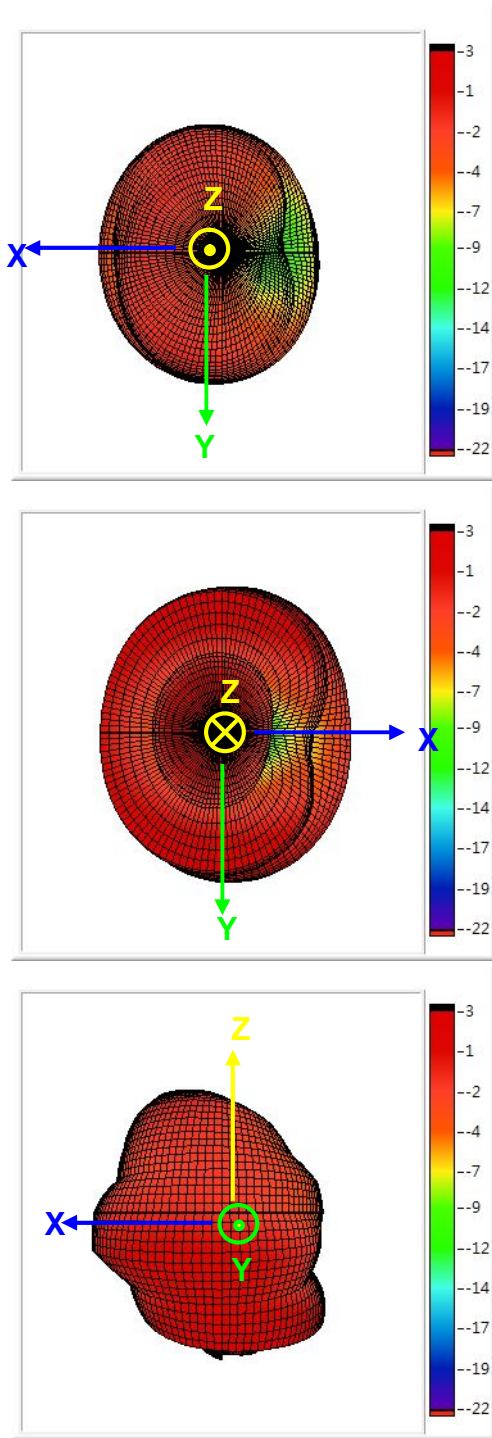
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7. Radiation Pattern (100x50(mm) ground plane)

7-1 . 3D Gain Pattern @ 2442 MHz



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 UNIT : mm

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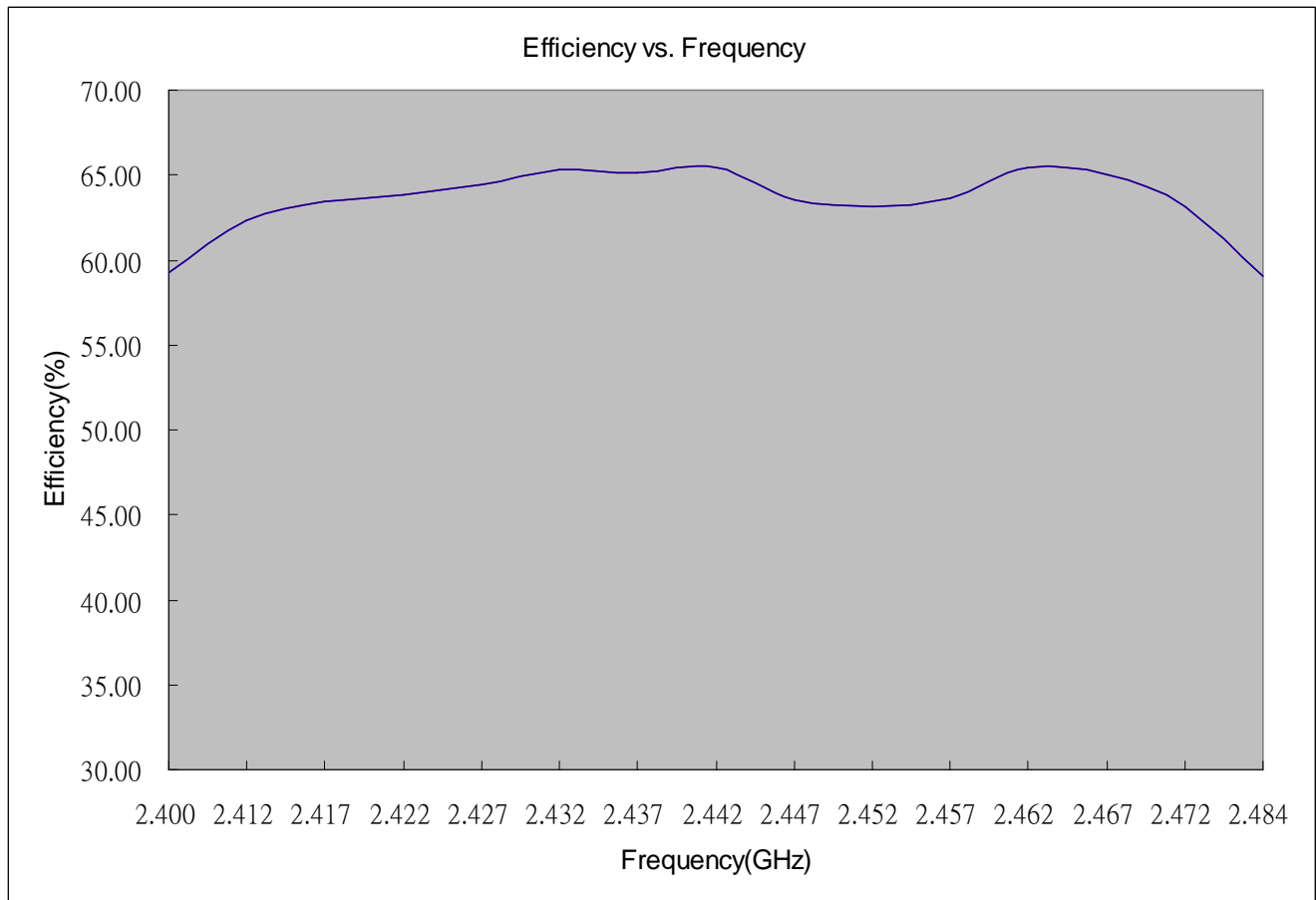
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7-2. 3D Efficiency Table

Frequency(GHz)	2.400	2.412	2.417	2.422	2.427	2.432	2.437	2.442	2.447	2.452	2.457	2.462	2.467	2.472	2.484
Efficiency(dB)	-2.27	-2.05	-1.98	-1.95	-1.91	-1.85	-1.86	-1.84	-1.97	-2.00	-1.96	-1.84	-1.87	-2.00	-2.29
Efficiency (%)	59.29	62.37	63.39	63.83	64.42	65.31	65.16	65.46	63.53	63.10	63.68	65.46	65.01	63.10	59.02
Gain (dBi)	2.79	3.12	3.25	3.38	3.48	3.49	3.48	3.48	3.35	3.33	3.49	3.77	3.78	3.73	3.51

7-3. 3D Efficiency vs. Frequency



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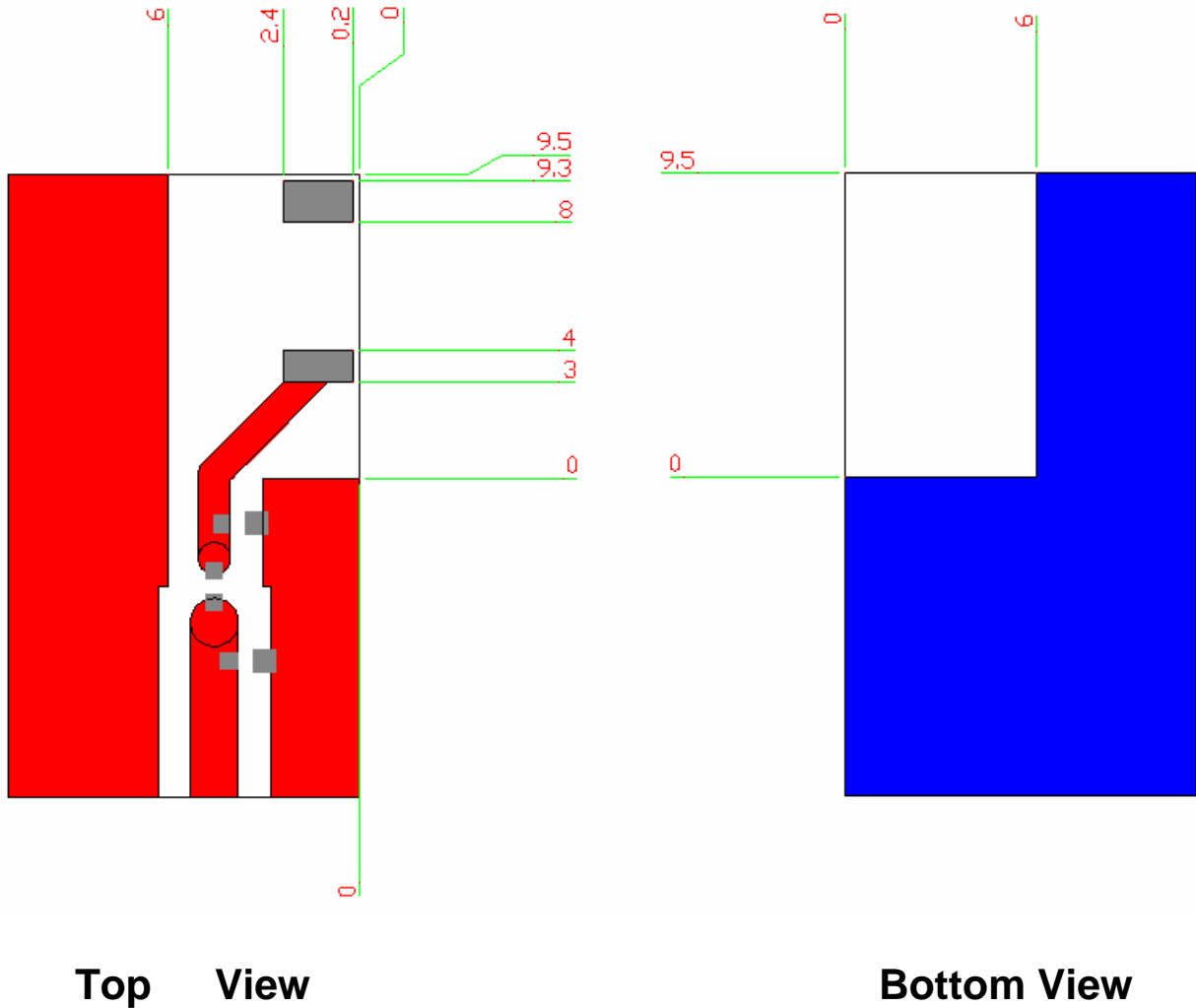
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8. Layout Guide:

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 .



Unit: mm



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2013/3/6
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Control Center
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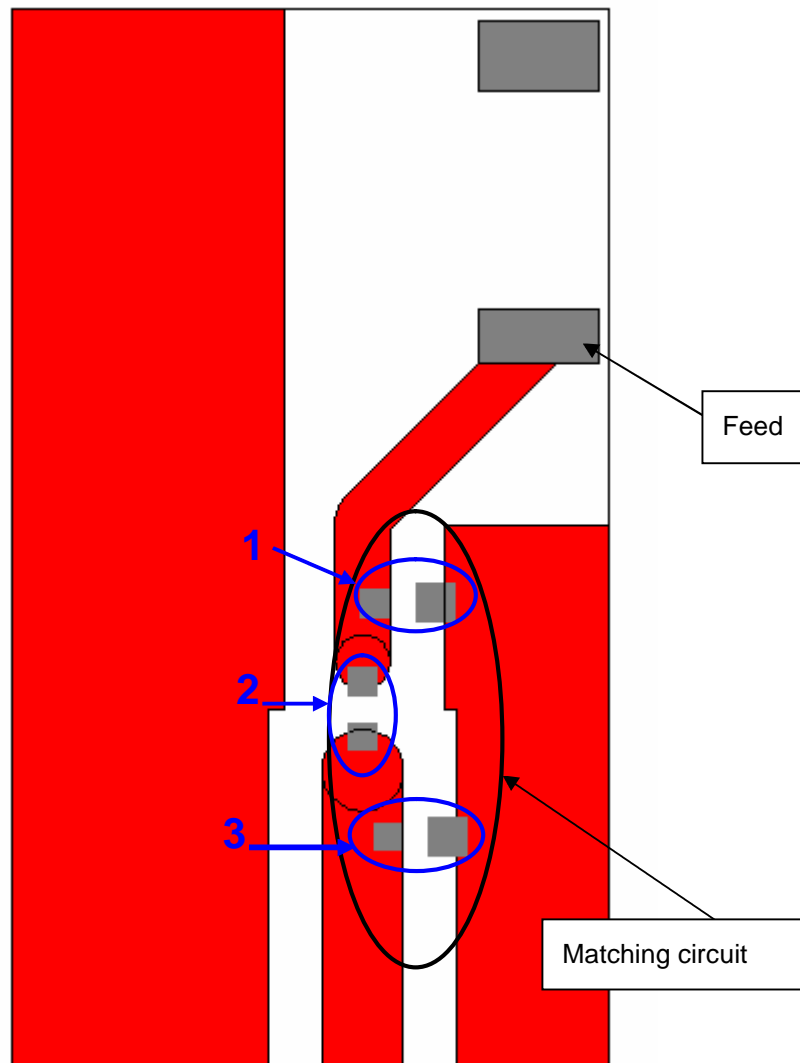
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9. Matching Circuit:



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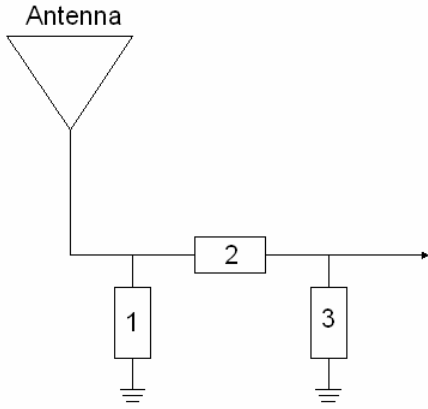
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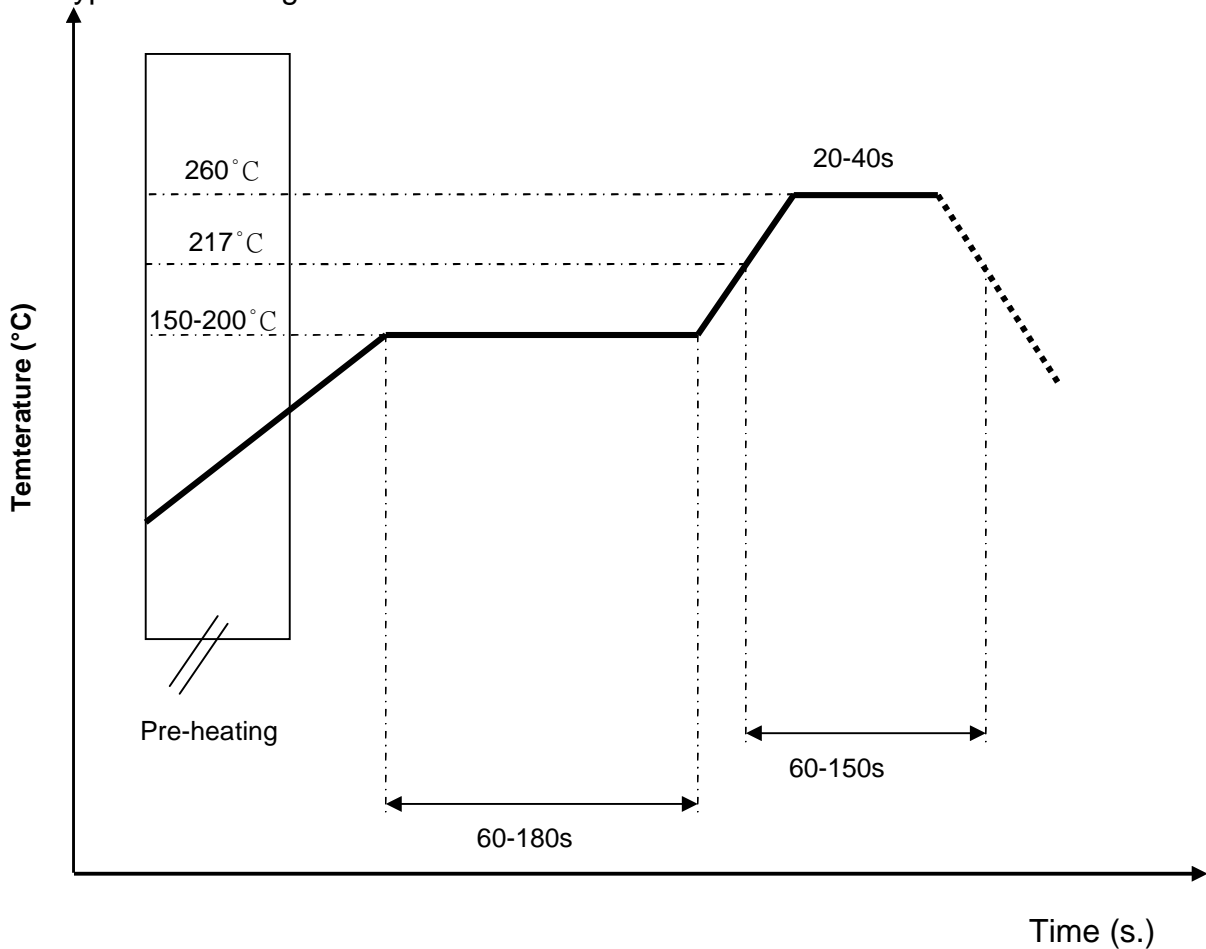
b. Matching circuit : (Center frequency is about 2442MHz @ (100 x 50 mm) ground plane)



System Matching Circuit Component			
Location	Description	Vendor	Tolerance
1	N/A	-	-
2	2.2nH	DARFON (0402)	±0.1nH
3	1pF	DARFON (0402)	±0.1pF

10. Soldering Conditions:

a. Typical Soldering Profile for Lead-free Process



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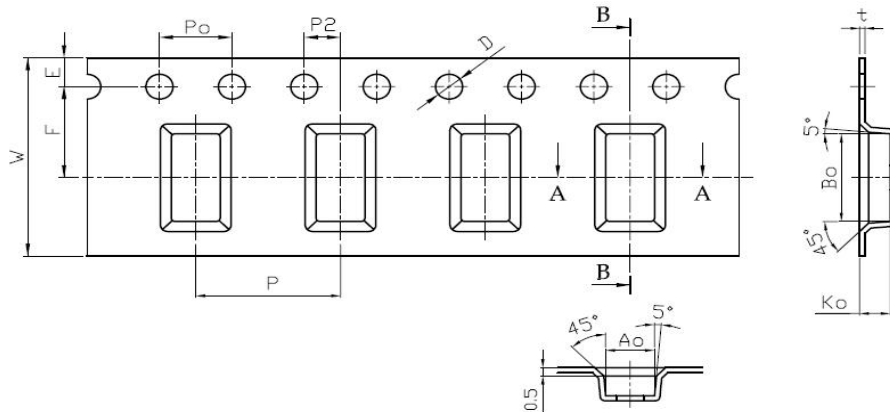
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11. Packing:

- (1) Quantity/Reel: 3000pcs/Reel
- (2) Plastic tape:



1. Cumulative tolerance of 10 sprocket hole pitch: $\pm 0.20\text{mm}$
2. Carrier camber not to exceed 1mm in 250mm
3. Ao and Bo measured on a plane 0.3mm above the bottom of the pocket.
4. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
5. All dimensions meet EIA-481-B requirements.
6. Material:
 - Clear Non Anti-Static Polystyrene.
 - Black Conductive Polystyrene.

2.1 Tape Dimensions(unit: mm)

Feature	Specifications	Tolerances
W	12.00	± 0.30
P	8.00	± 0.10
E	1.75	± 0.10
F	5.50	± 0.10
P2	2.00	± 0.10
D	1.50	+0.10 -0.00
Po	4.00	± 0.10
10Po	40.00	± 0.20

2.2 Pocket Dimensions(unit: mm)

Feature	Specifications	Tolerances
Ao	2.70	± 0.10
Bo	5.30	± 0.10
Ko	1.70	± 0.10
t	0.30	± 0.05

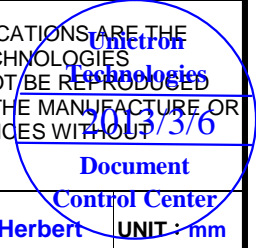
12. Storage Conditions:

- (1) Temperature: -25°C to 85°C
- (2) Relative Humidity: 20% to 70%
- (3) Shelf Life :1 year



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