

5-2. Electrical Specifications (Evaluation Board Dimensions: 80 x 40 mm<sup>2</sup>) 5-2-1. Electrical Table (2400~2500 MHz Band)

	N N	,	
Charac	teristics	Specifications	Unit
Outline Dimension	ons	3.2 x 1.6 x 0.5	mm
Ground Plane Di	mensions	80 x 40	mm
Working Frequer	псу	2400~2500	MHz
VSWR(@ center	frequency)*	2 Max.	
Characteristic Im	ipedance	50	Ω
Polarization		Linear Polarization	
Peak Gain		1.4 (typical)	dBi
Efficiency	(@2442 MHz)	76 (typical)	%

\*Center frequency means the frequency with the lowest value in return loss of the chip antenna on the evaluation board.

### 5-2-2. Electrical Table (5150~5850 MHz Band)

Charac	teristics	Specifications	Unit
Working Frequen	су	5150~5850	MHz
VSWR(@ center	frequency)*	2 Max.	
Characteristic Im	pedance	50	Ω
Polarization		Linear Polarization	
Peak Gain		2.3 (typical)	dBi
Efficiency	(@5550 MHz)	67 (typical)	%

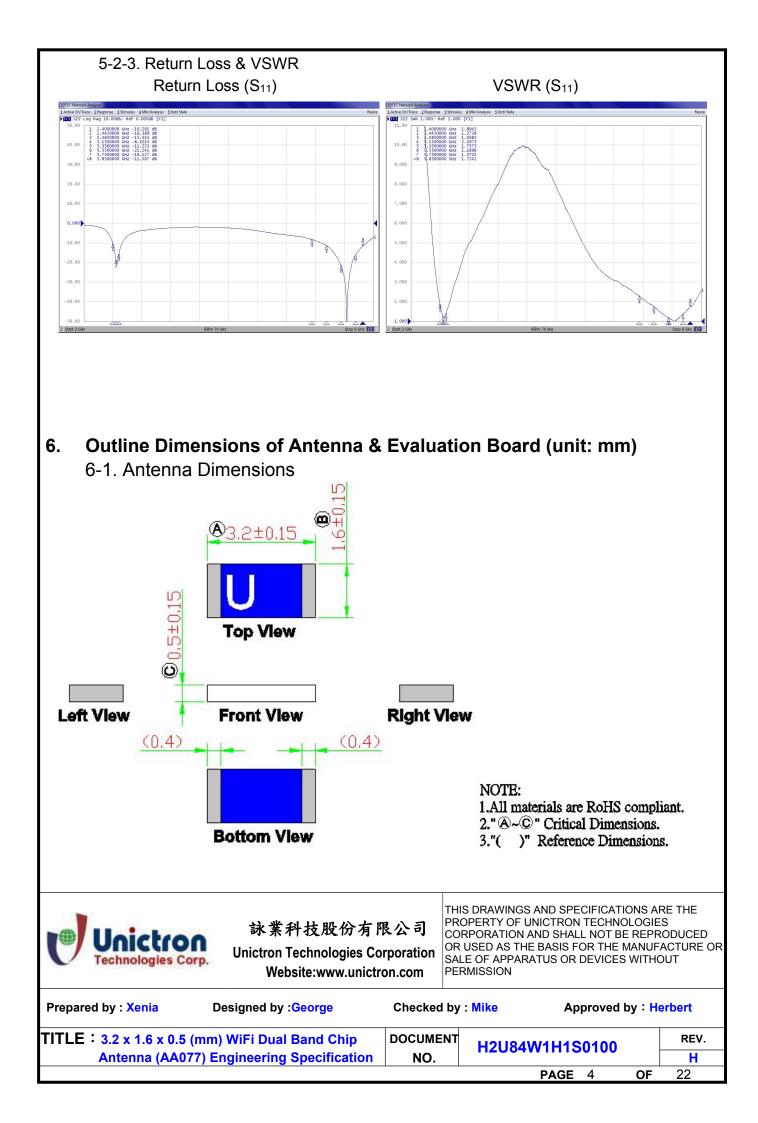
\*Center frequency means the frequency with the lowest value in return loss of the chip antenna on the evaluation board.



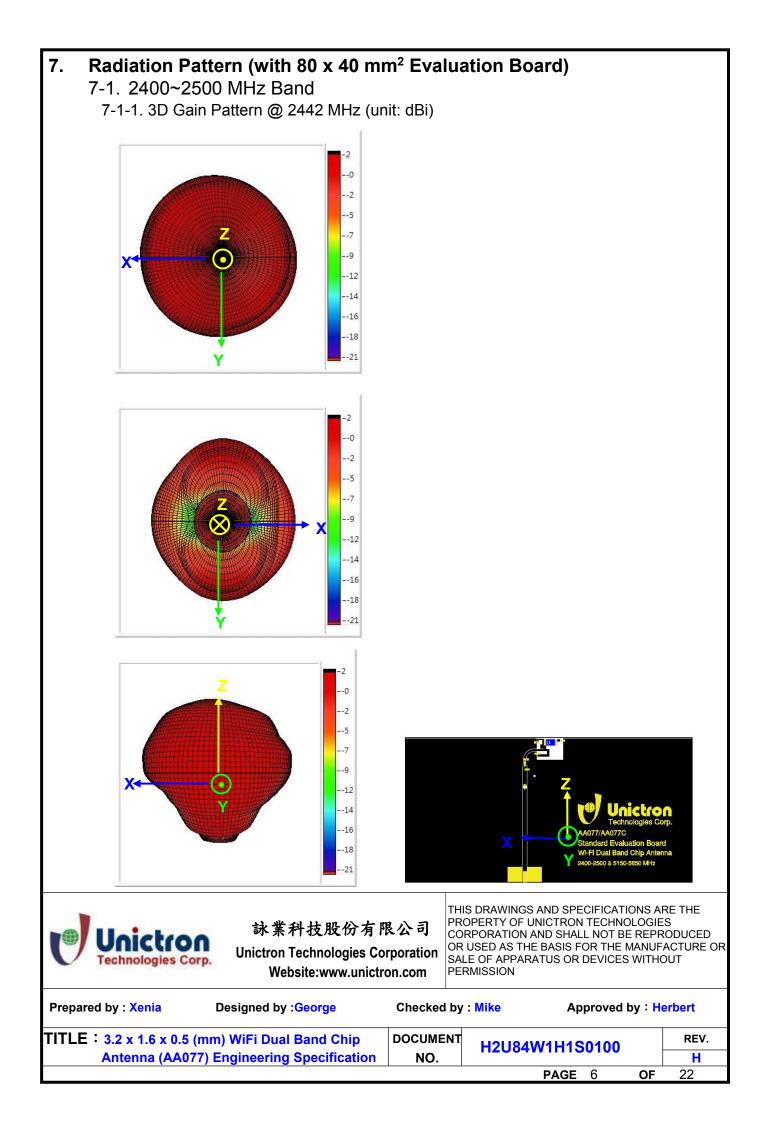
詠業科技股份有限公司

Unictron Technologies Corporation Website:www.unictron.com THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF UNICTRON TECHNOLOGIES CORPORATION AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

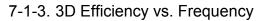
Prepared by : Xenia	Designed by :George	Checked by	: Mike	Approved by : Herbert					
TITLE:3.2 x 1.6 x 0.5	(mm) WiFi Dual Band Chip	DOCUMENT	H2U84W1H1S0100					REV.	
Antenna (AA0	77) Engineering Specification	NO.	112004011100100					н	
			PA	GE	3		OF	22	

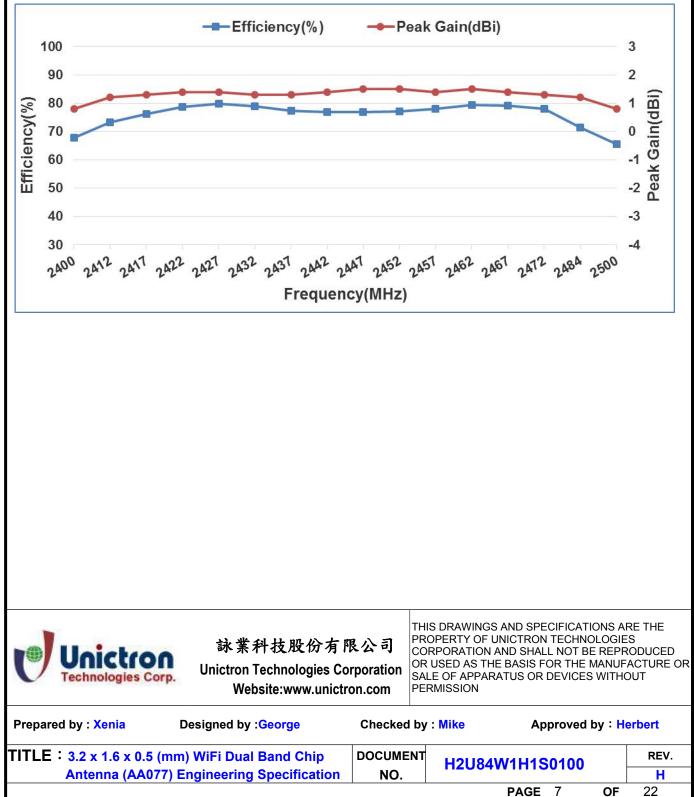


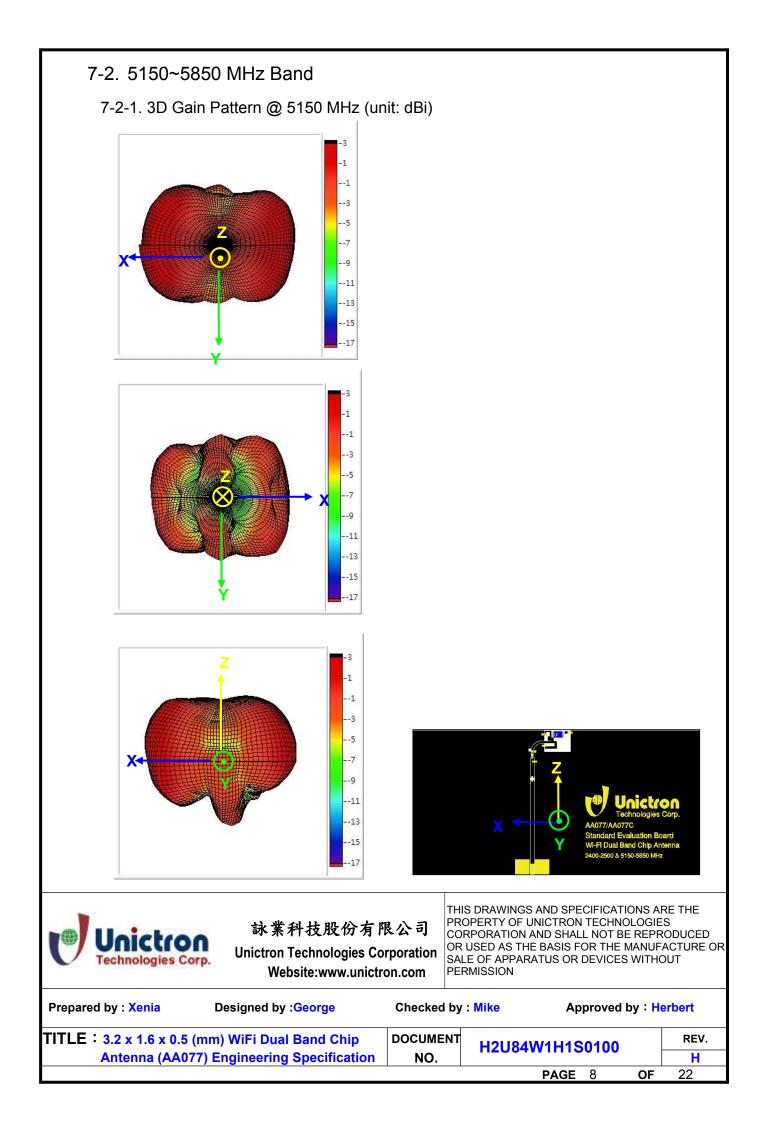
	PIN Defi	nitions			
PIN1	PIN2				
Тор	View		Bottom	View	
PIN Soldering PAD	1 Signal		2 Tuning / Gr	round	
6-2. Evaluation	Board with Antenna	<u>_</u>			
40		Stand WI-FI	Unictron Technologies Corp 7/AA077C ard Evaluation Board Dual Band Chlp Antenna 500 & 5150-5850 MHz		
				uni	t : mm
Unictron Technologies Corp.	詠業科技股份有M Unictron Technologies Con Website:www.unictro	え公司 PR CC rporation OF SA	IS DRAWINGS AND SPE OPERTY OF UNICTRON ORPORATION AND SHAL USED AS THE BASIS F LE OF APPARATUS OR RMISSION	I TECHNOLOGIE L NOT BE REPF OR THE MANUF	S RODUCED ACTURE OR
Prepared by : Xenia	Designed by :George	Checked by	-	proved by:H	erbert
TITLE : 3.2 x 1.6 x 0.5 (mn Antenna (AA077) I	n) WiFi Dual Band Chip Engineering Specification	DOCUMENT NO.	H2U84W1H1S		REV. H 22

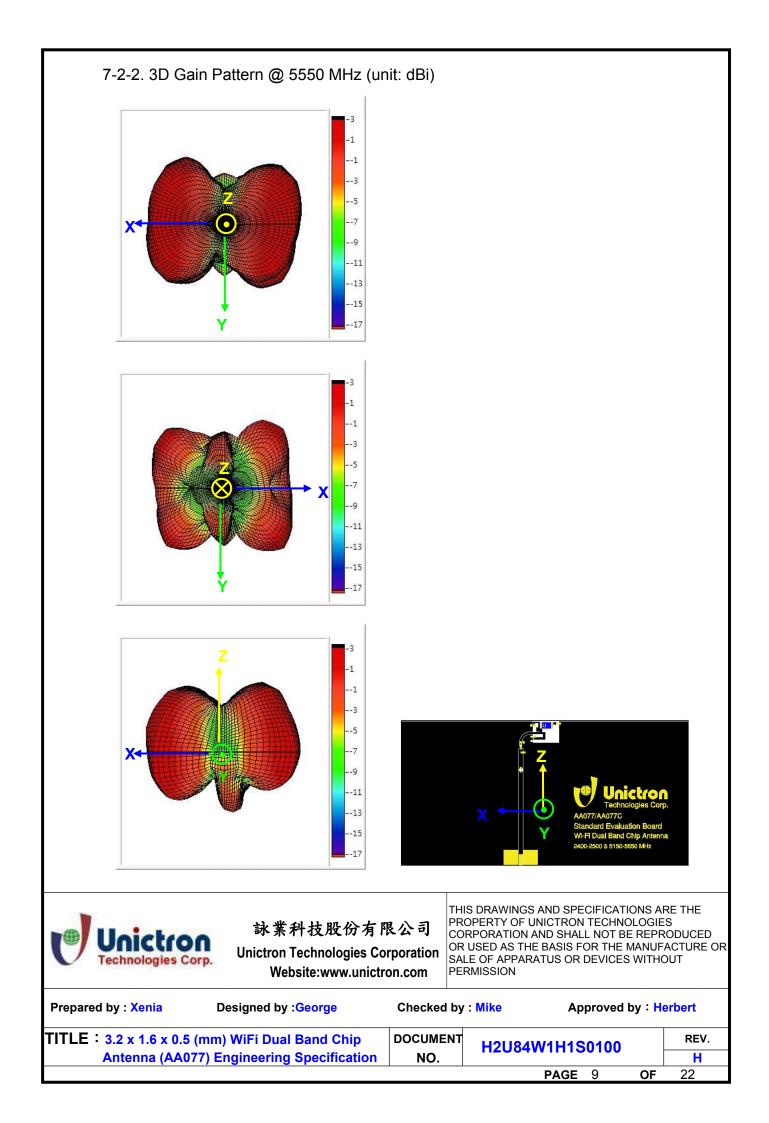


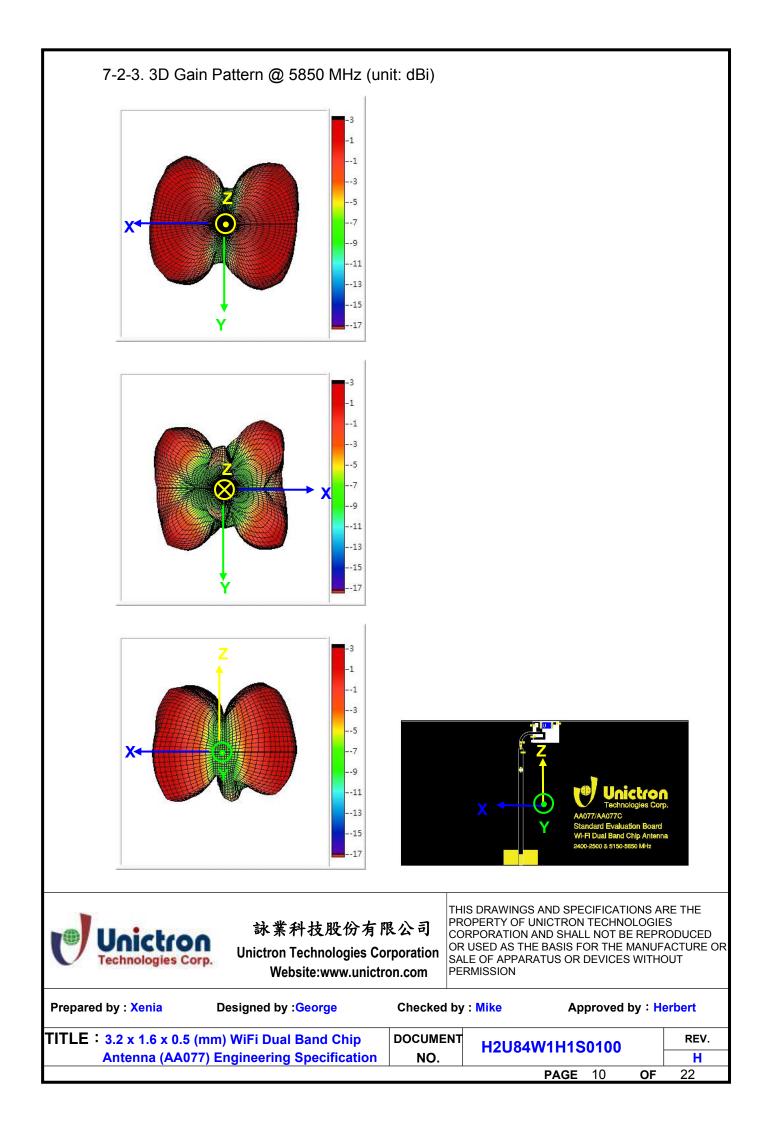
7-1-2. 3D Efficiency Table																
Frequency(MHz)	2400	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462	2467	2472	2484	2500
Efficiency(dB)	-1.7	-1.4	-1.2	-1.0	-1.0	-1.0	-1.1	-1.1	-1.2	-1.1	-1.1	-1.0	-1.0	-1.1	-1.5	-1.8
Efficiency(%)	67.9	73.2	76.1	78.7	79.9	78.8	77.4	76.8	76.8	77.2	78.1	79.3	79.2	78.1	71.5	65.5
Peak Gain(dBi)	0.8	1.2	1.3	1.4	1.4	1.3	1.3	1.4	1.5	1.5	1.4	1.5	1.4	1.3	1.2	0.8
-			-	-								-				







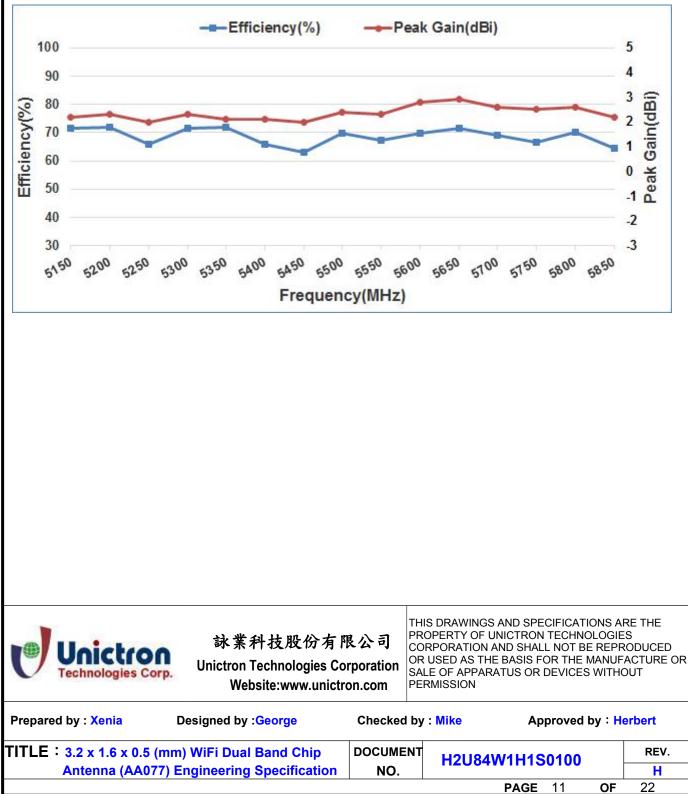




7-2-4.	3D	Efficiency	Table
--------	----	------------	-------

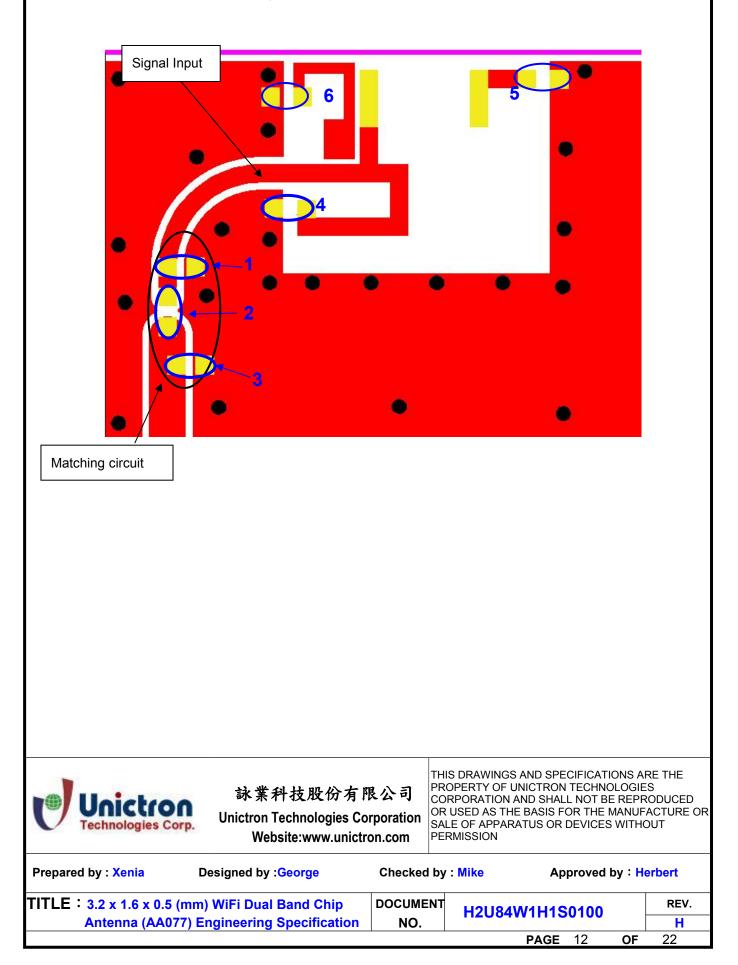
Frequency(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Efficiency(dB)	-1.5	-1.4	-1.8	-1.5	-1.4	-1.8	-2.0	-1.6	-1.7	-1.6	-1.4	-1.6	-1.8	-1.5	-1.9
Efficiency(%)	71.5	71.9	65.7	71.6	71.9	65.8	63.2	69.9	67.3	69.6	71.7	68.9	66.6	70.1	64.6
Peak Gain(dBi)	2.2	2.3	2.0	2.3	2.1	2.1	2.0	2.4	2.3	2.8	2.9	2.6	2.5	2.6	2.2

#### 7-2-5. 3D Efficiency vs. Frequency



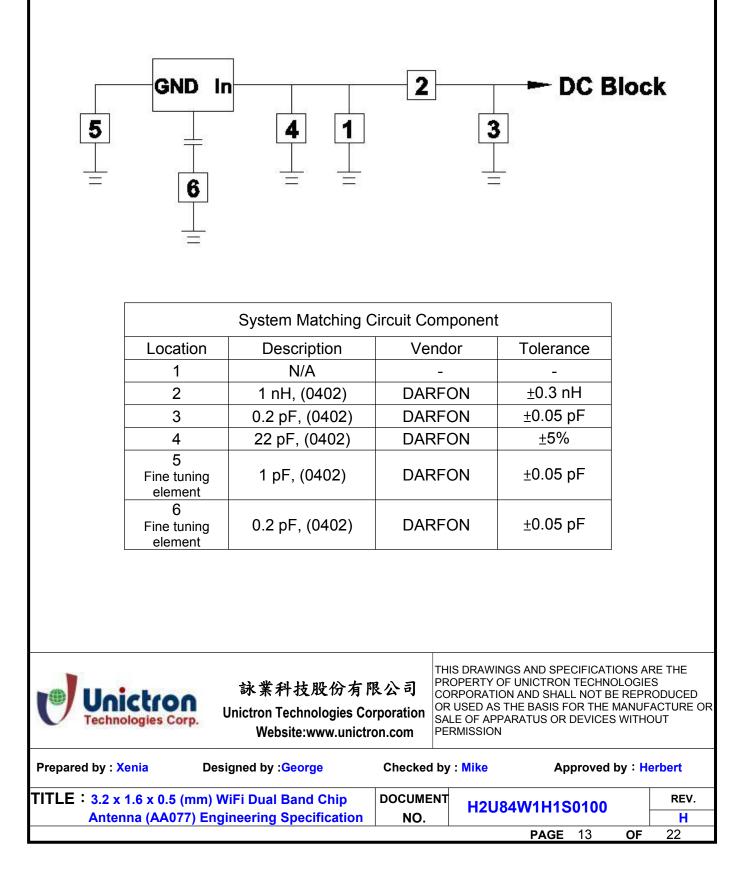
# 8. Frequency tuning and Matching circuit

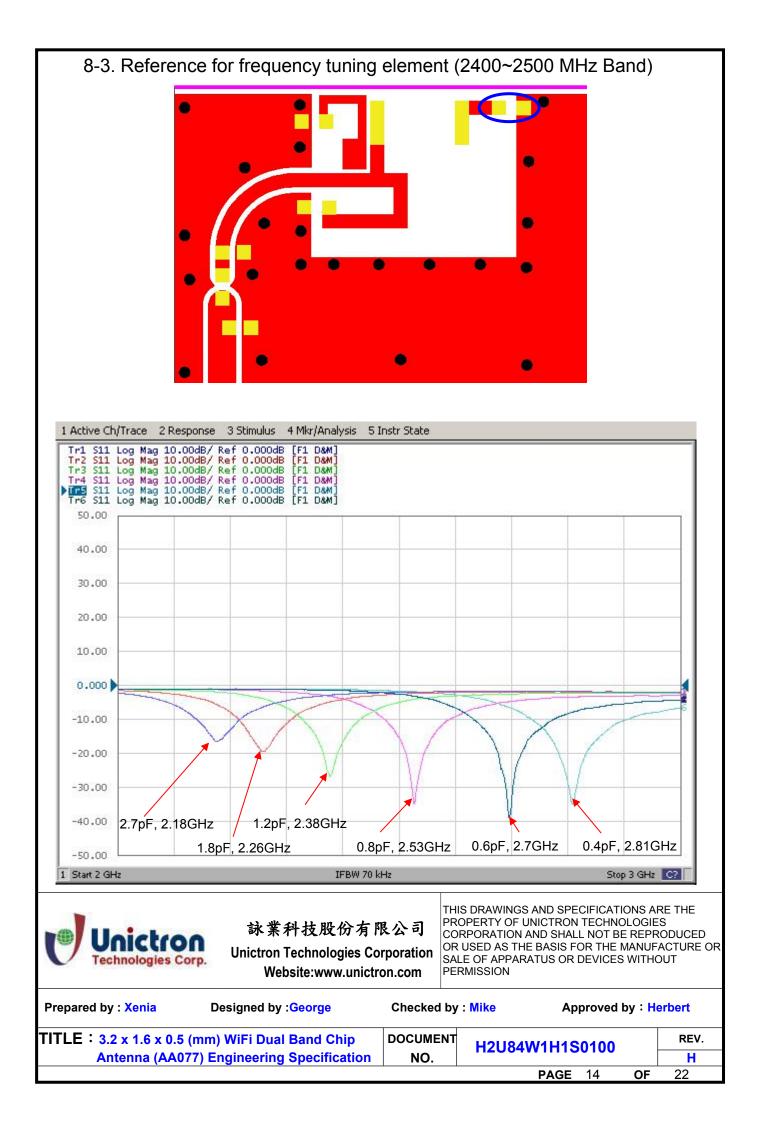
8-1. Chip antenna tuning scenario :

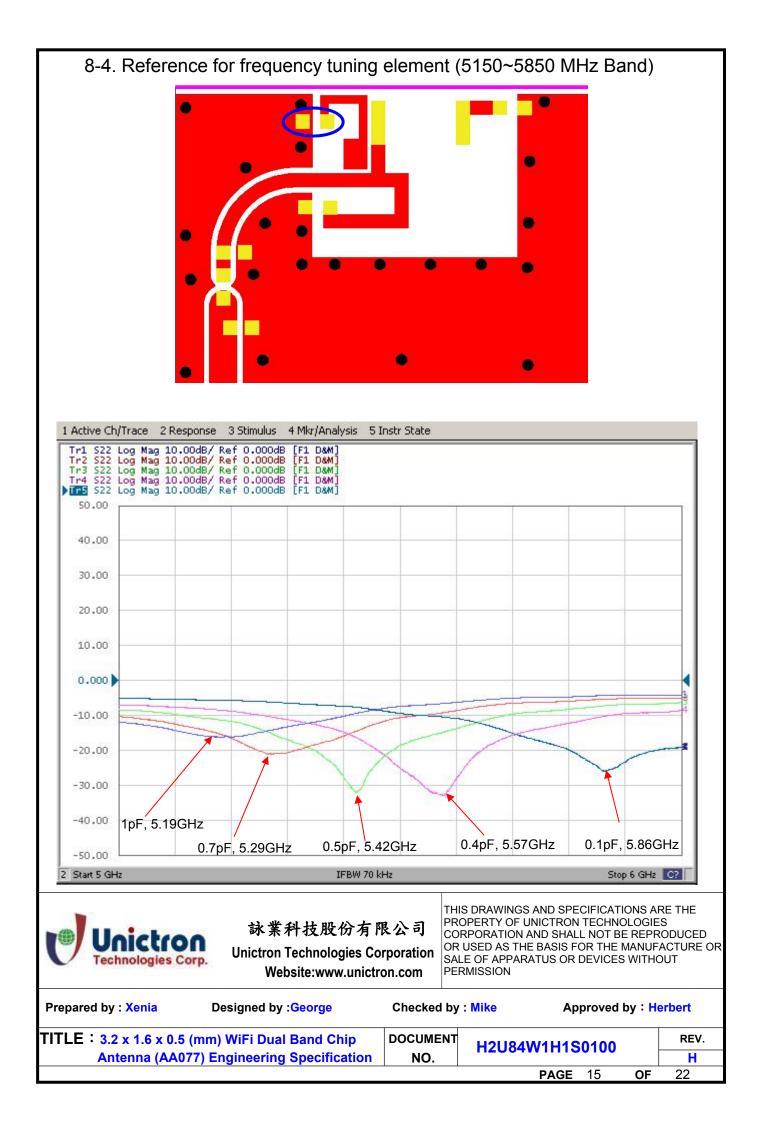


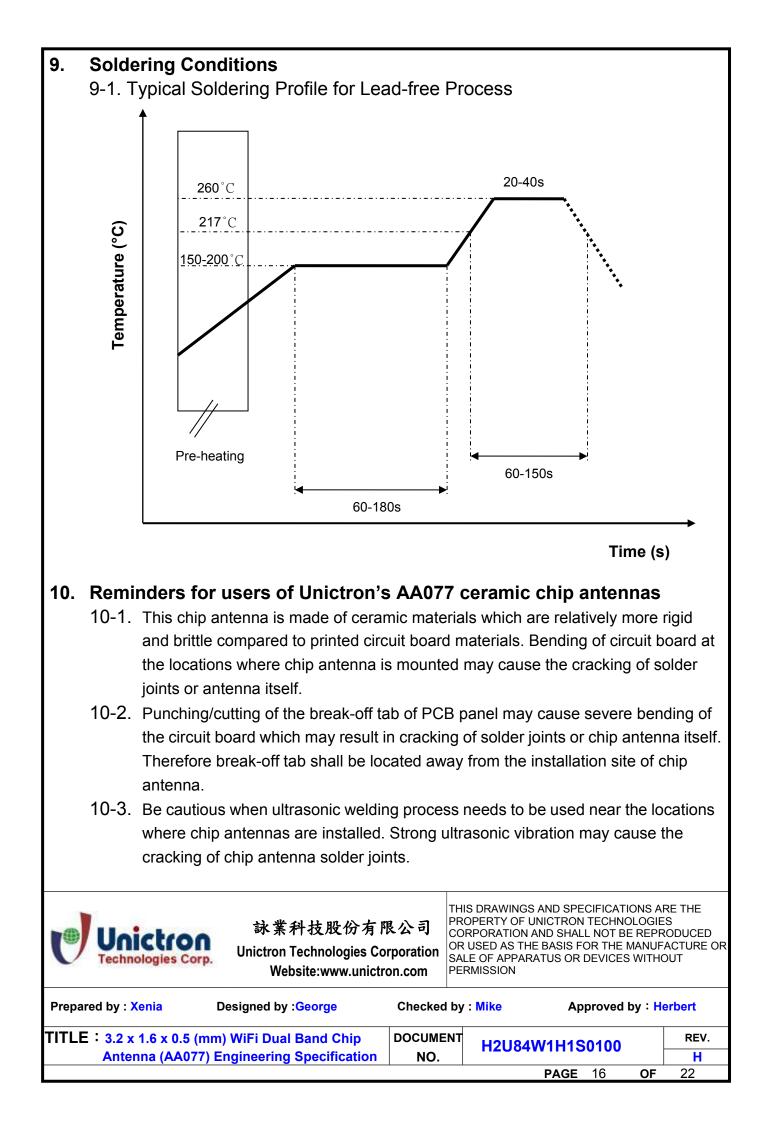
### 8-2. Matching circuit :

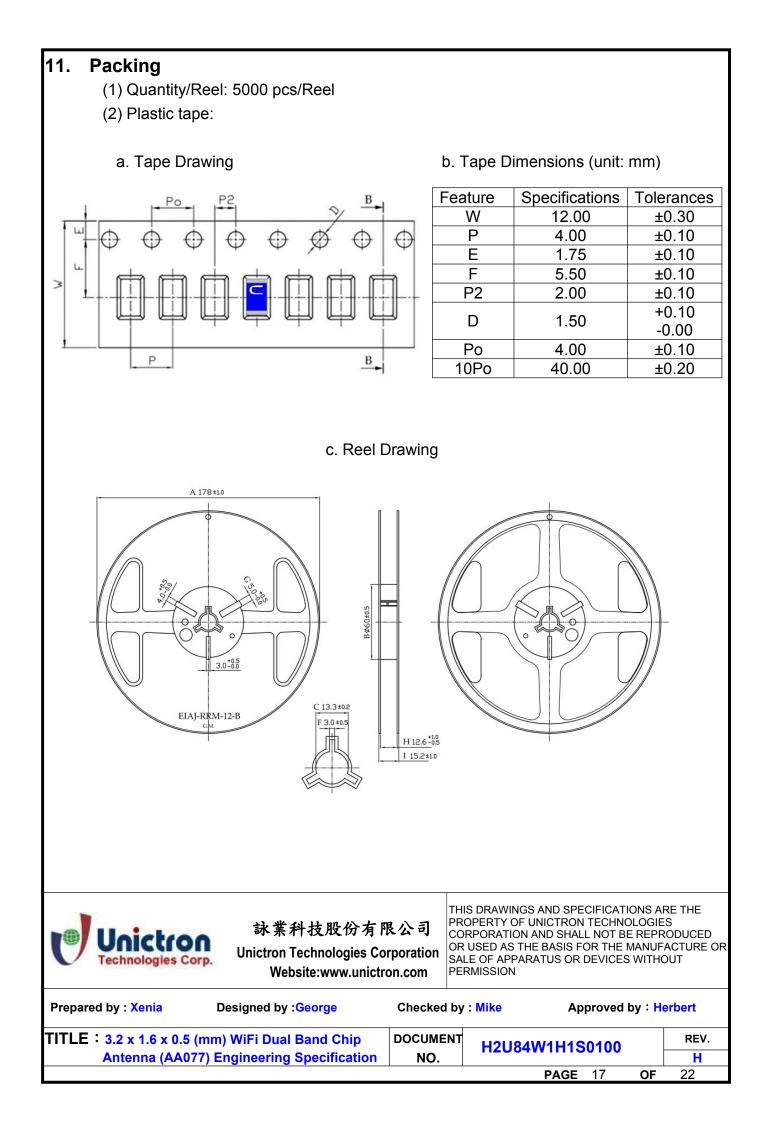
With the following recommended values of matching and tuning components, the center frequencies will be about 2442 MHz for lower band & 5500 MHz for higher band at our standard 80x40 mm<sup>2</sup> evaluation board. However, these are typical reference values which may need to be changed when circuit boards or part vendors are different.

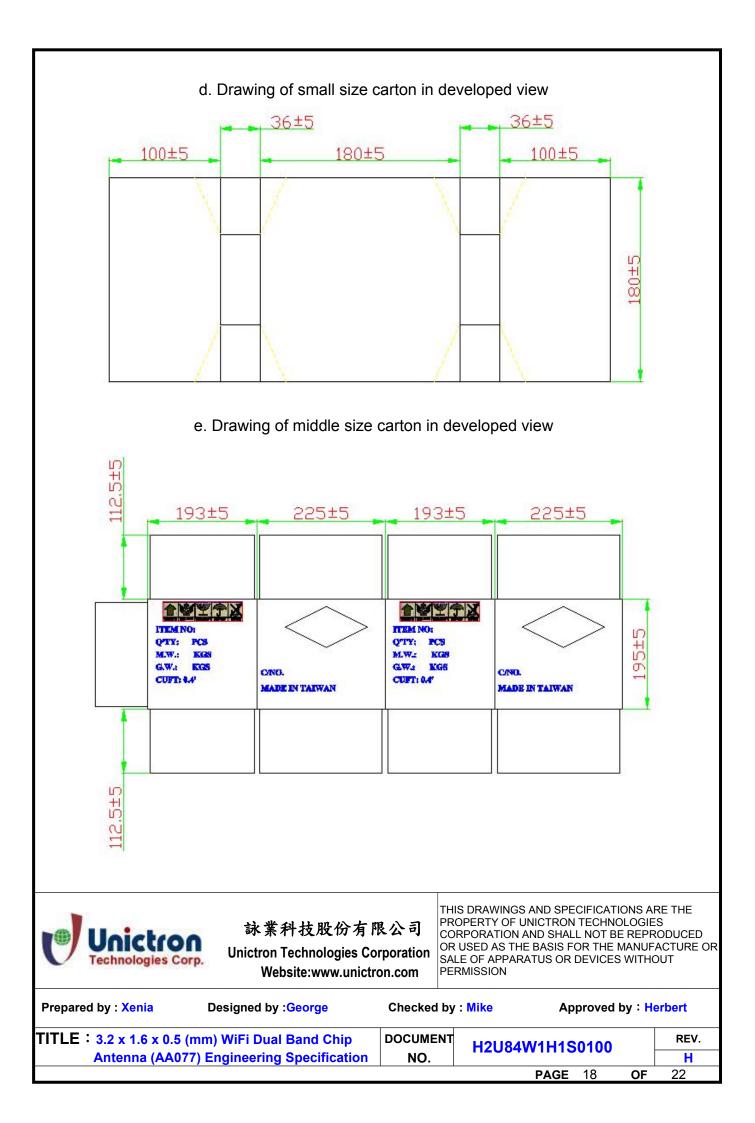


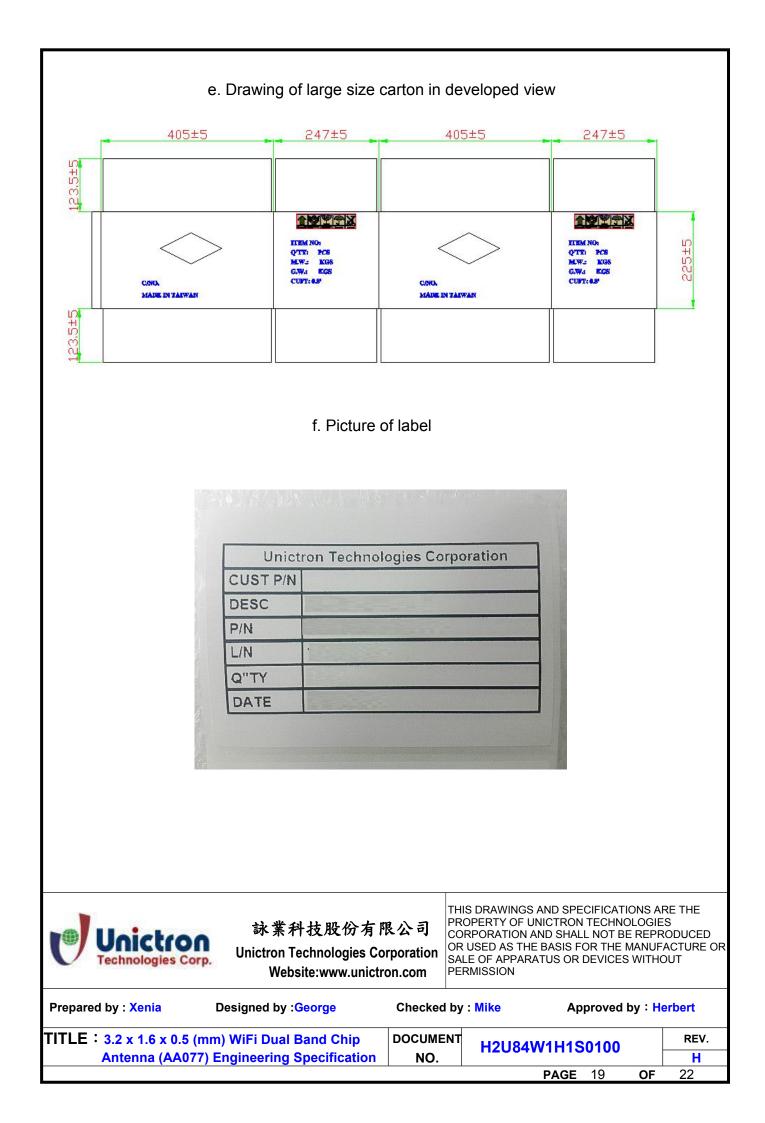


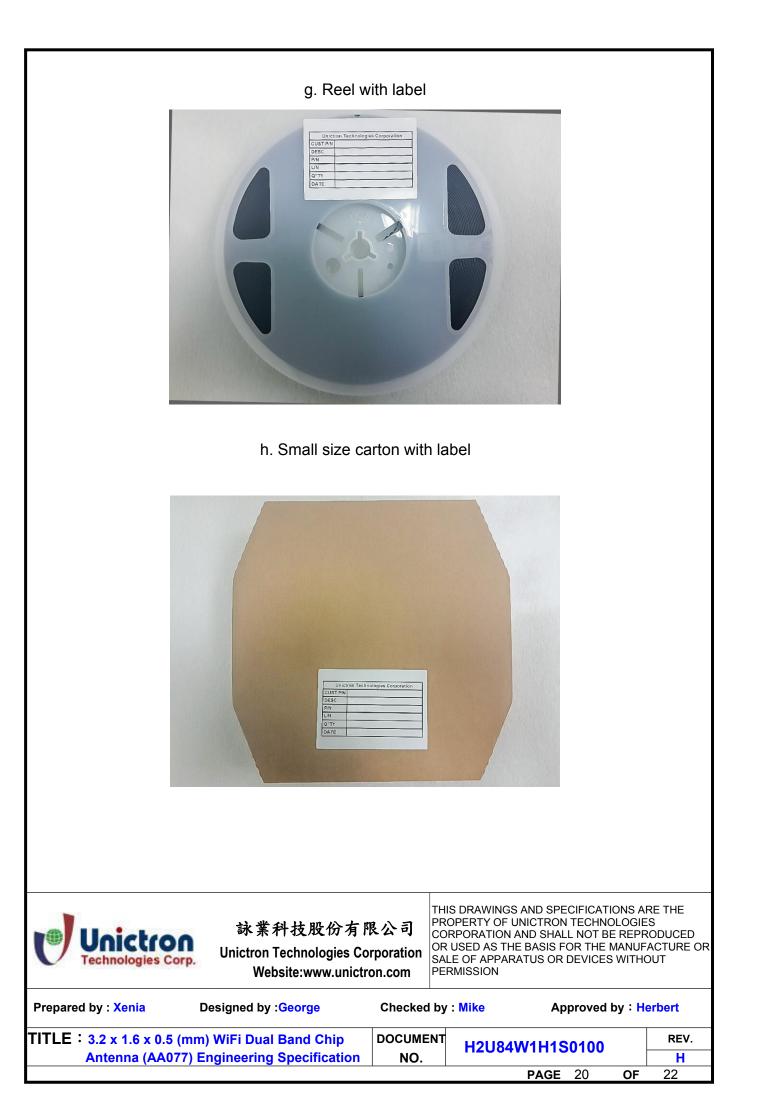








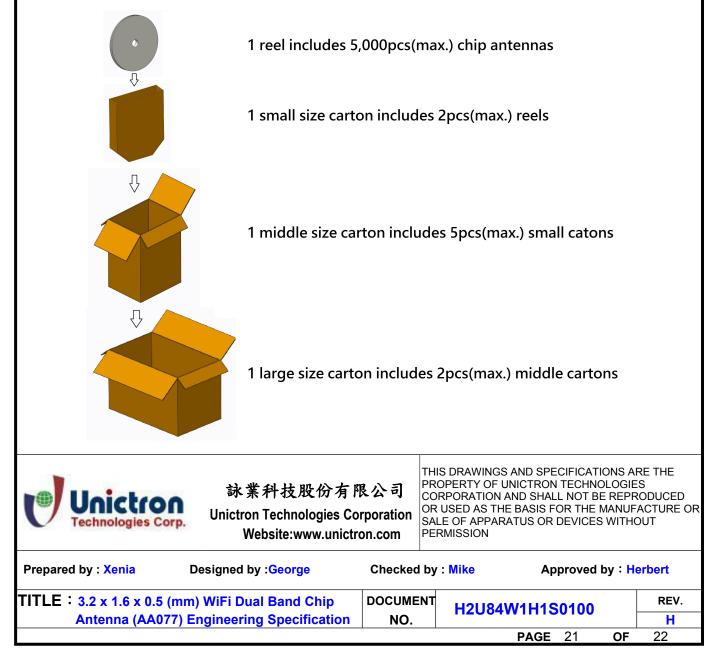




i. Middle size carton with label



## 11-2. Process of packing



# 12. Operating & Storage Conditions

12-1. Operating

- (1) Maximum Input Power: 2 W
- (2) Operating Temperature: -40  $^\circ\!\mathrm{C}$  to 85  $^\circ\!\mathrm{C}$
- 12-2. Storage
  - (1) Storage Temperature: -5 $^\circ\!\mathrm{C}$  to 40 $^\circ\!\mathrm{C}$
  - (2) Relative Humidity: 20% to 70%
  - (3) Shelf Life: 1 year

## 13. Notice

(1) Installation Guide:

Please refer to Unictron's application note "General guidelines for the installation of Unictron's chip antennas" for further information.

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



詠業科技股份有限公司

Unictron Technologies Corporation Website:www.unictron.com

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF UNICTRON TECHNOLOGIES CORPORATION AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

Prepared by : Xenia	Designed by :George	Checked by	: Mike	Approved by : Herbert					
TITLE:3.2 x 1.6 x 0.5	(mm) WiFi Dual Band Chip	DOCUMENT	H2U84W1H1S0100					REV.	
Antenna (AA0	77) Engineering Specification	NO.						н	
			PA	GE	22	OF		22	