



Project Name : RX7000-WIFI-BT

Antenna model : ZTX-RX7000-WIFI-ANT-V1.0

Item number : E.03.00677

MPN : B0680314D

Date : 2022-7-14

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version	date	status
A1	2021-12-24	First issue.
A2	2022-5-17	Performance optimization, drawing update.
A3	2022-7-14	FPC shape update.





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## 1 Explanation of Nouns

dBi	Decibel relative isotropic antenna
Tx	Transmit frequency
Rx	Receive frequency
TRP	Total Radiated Power
TIS	Total Isotropic Sensitivity
VSWR	Voltage Standing Wave Ratio
GSM	Global Service for Mobile communication
DCS	Digital Communication System
CDMA	Code Division Multiple Access
WCDMA	Wideband Code Division Multiple Access

## 2 Test equipment

Vector network analyzer	Agilent 8753E
Frequency analyzer	
General-purpose tester	8960 E5515C
High performance no-reflection shielding darkroom	ETS 8m*4m*4m

## 3 Applied frequency band

Frequency Band	Frequency
BT WIFI	2400-2500MHz, 5150-5850MHz.





## 4. Test project

### 4.1 VSWR

N/A

### 4.2 Antenna passive test

#### 2.4G

chNo	Freq	Gain	Efficiency_Pcent
1	2400	2. 637569	45. 38436
2	2410	3. 138997	47. 97622
3	2420	3. 680823	50. 35684
4	2430	3. 792371	49. 3469
5	2440	3. 861776	47. 5174
6	2450	4. 047704	50. 28952
7	2460	3. 966928	48. 07173
8	2470	4. 140885	49. 14722
9	2480	4. 052156	47. 44742
10	2490	4. 020229	47. 08136
11	2500	4. 113462	48. 22341

#### 5.8G

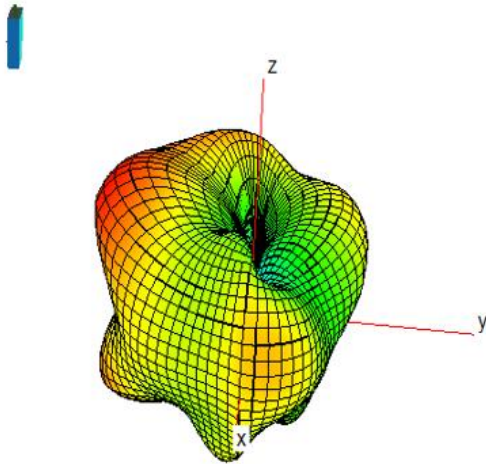
chNo	Freq	Gain	Efficiency_Pcent
1	5150	1. 556557	37. 56914
2	5200	1. 209135	39. 58976
3	5250	1. 273027	40. 26461
4	5300	1. 591882	41. 87554
5	5350	1. 626063	43. 25834
6	5400	2. 097859	43. 50105
7	5450	1. 083947	40. 44902
8	5500	1. 072023	33. 73299
9	5550	2. 355893	35. 51408
10	5600	1. 836634	35. 21584
11	5650	1. 796	38. 99077
12	5700	1. 998267	36. 69407
13	5750	1. 773072	35. 3368
14	5800	1. 643059	34. 59367
15	5850	1. 48082	39. 85698



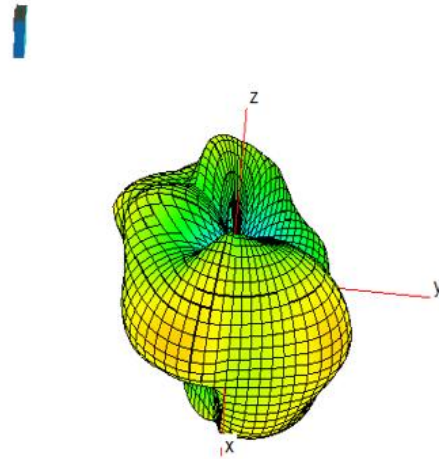


### 4.3 3D radiation drawing

2450MHz

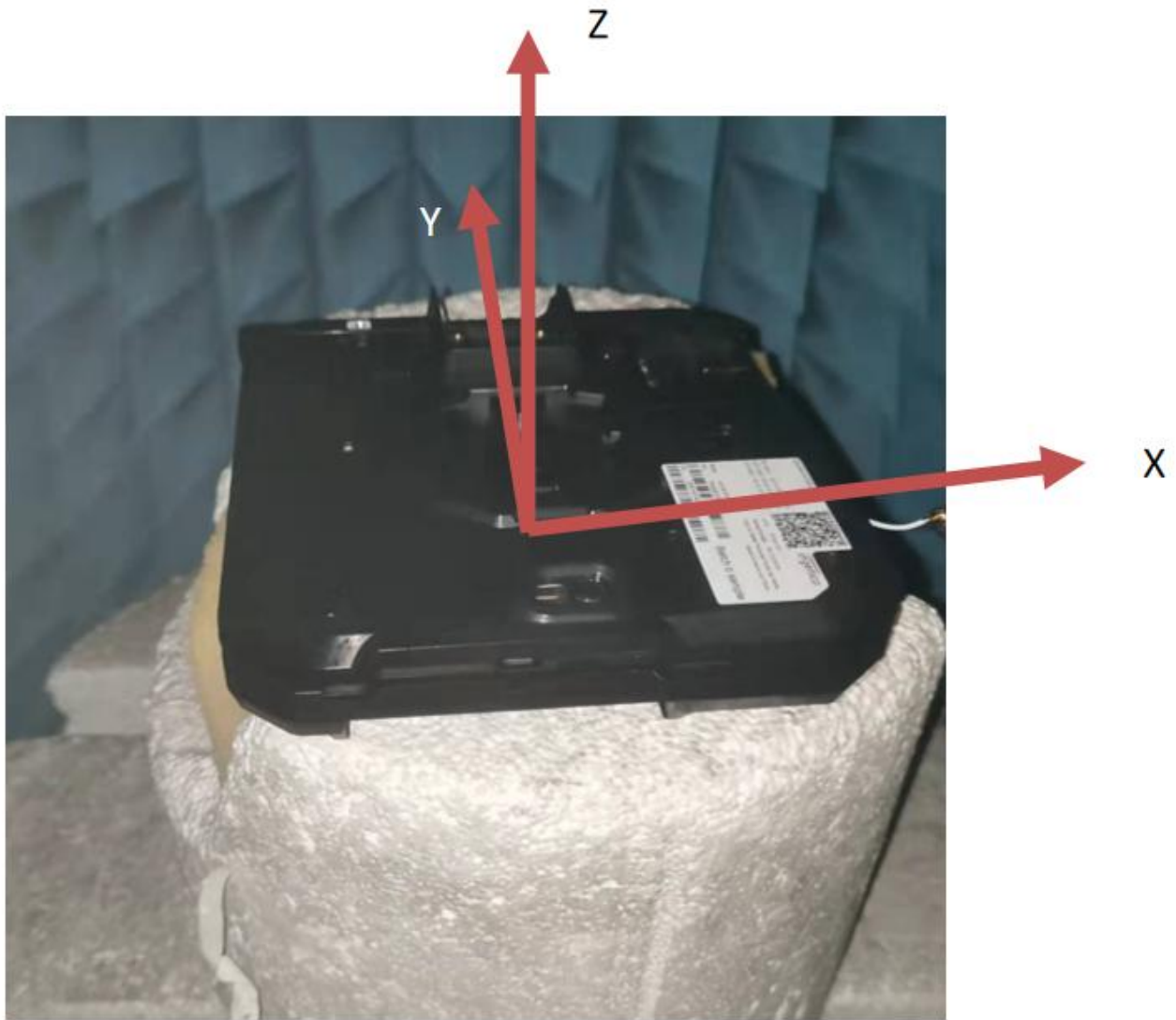


5500MHz





#### 4.4 Test schematic





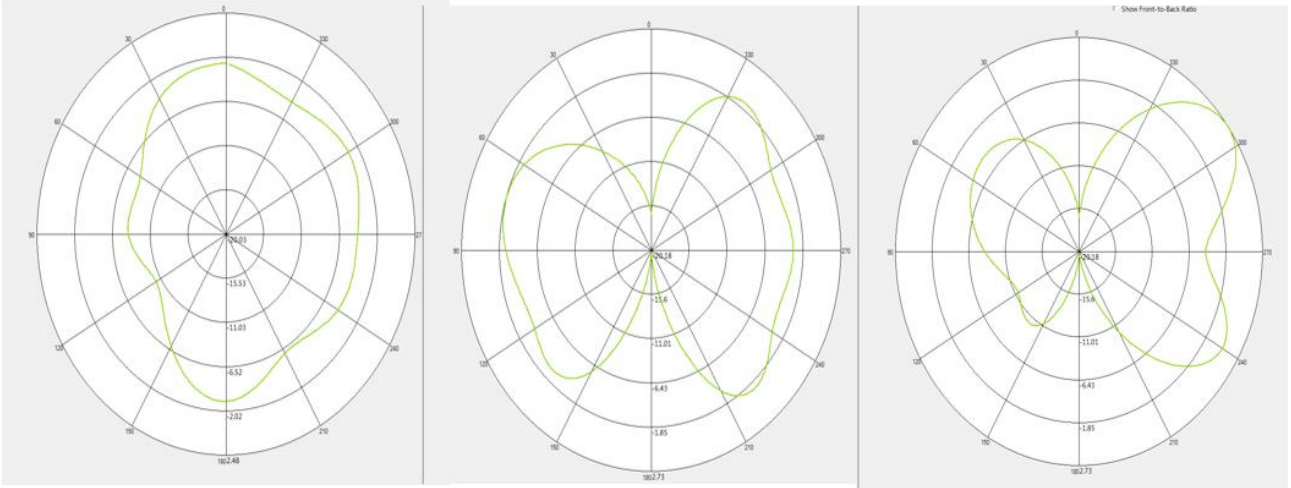
### 4.5 2D pattern

2450MHz

XOY

XOZ

YOZ

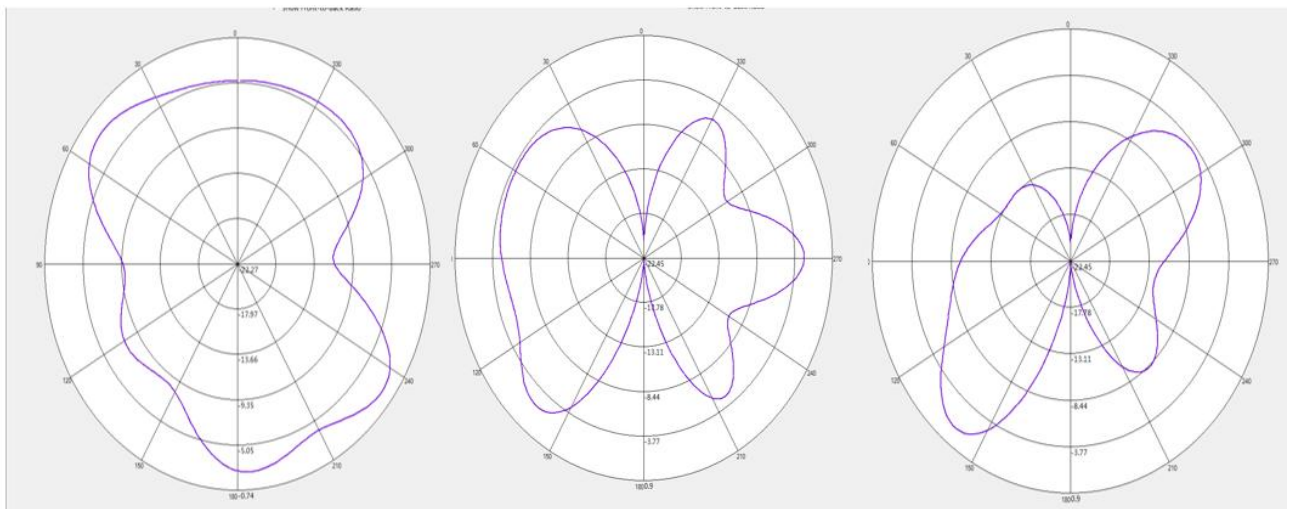


5500MHz

XOY

XOZ

YOZ







## 4.6 Active test data

0		TEST BAND	TEST CHANNEL	TEST CONDITIONS	TEST RESULT	
WIFI	TRP	11b	1	11Mbps	17.15	
			7		15.95	
			13		16.12	
		11g	1	6Mbps	15.69	
			7		15.42	
			13		15.3	
		11g/n	1	MCS0	15.67	
			7		15.67	
			13		15.36	
		11a	36	6Mbps	8.07	
			64		8.09	
			157		7.7	
		TRP	11b	1	11Mbps	-78.95
				7		-79.27
				13		-80.88
	11g		1	54Mbps	-65.31	
			7		-67.71	
			13		-67.9	
	11g/n		1	MCS7	-61.56	
			7		-62.39	
			13		-63.06	
	11a		36	54Mbps	-63.05	
			64		-65.26	
			157		-64.98	



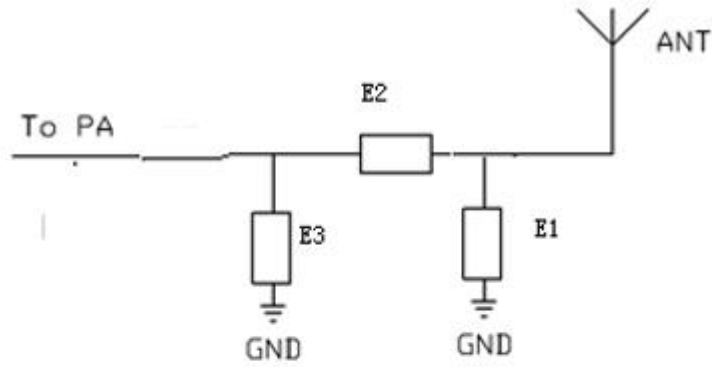


#### 4.7 Environment treatment





## 5. Matching circuit

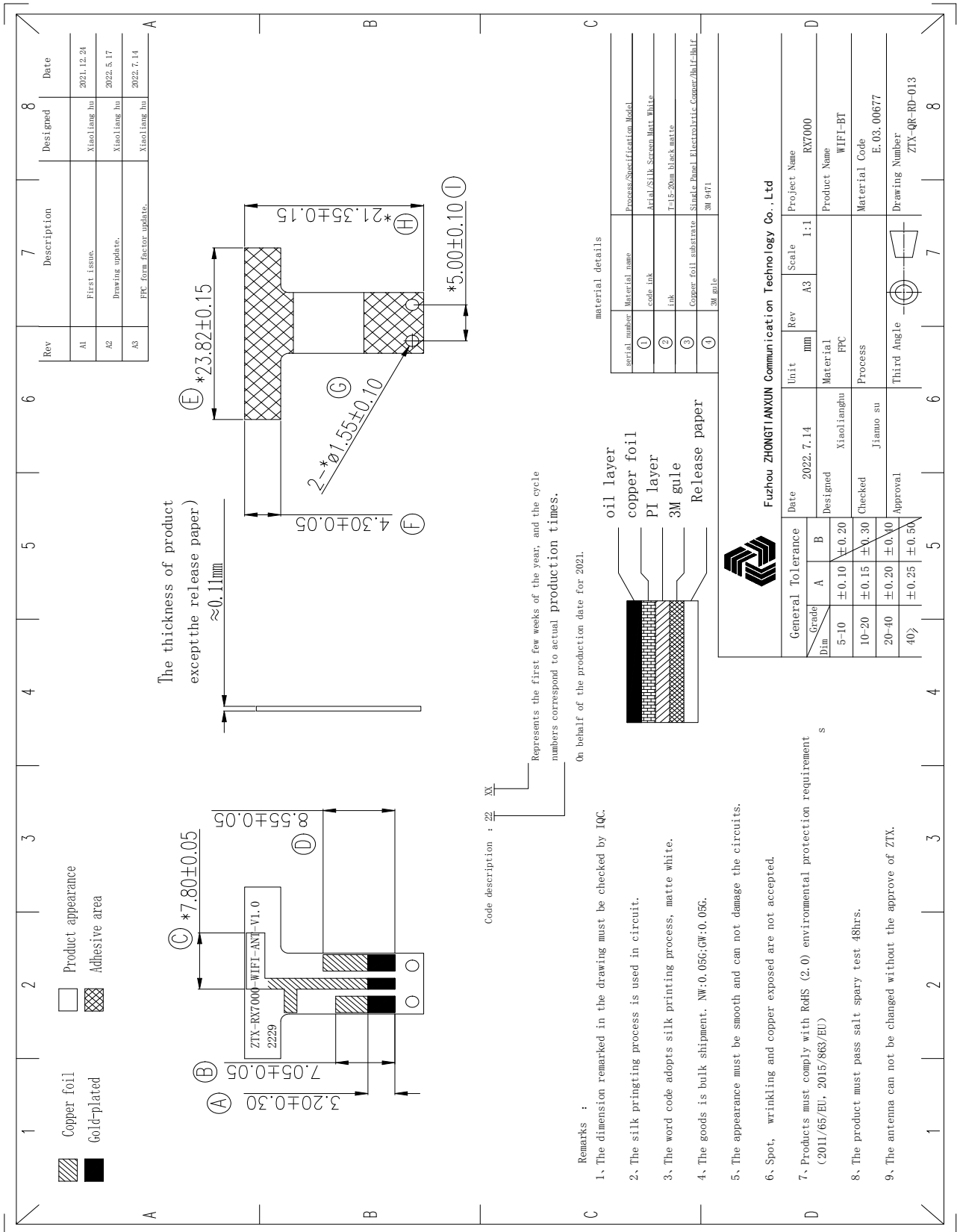


	WIFI
E1	NC
E2	0Ω
E3	NC



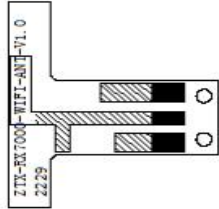





## 6. Mechanical Specification





## SOP

product name	product model	File Number	version	Process number/name	process man-hou	Daily output
WIFI-BT	RX7000	ZTX-QD-WI-024	A1	package	/	/
<b>Packaging process</b>						
 <p>Figure 1: Confirmed quantity</p>		<p>1. The products are shipped in a single PCS, and each (100pcs) product is packed in a 90*130mm PE sealing plastic bag:</p>				
 <p>Picture 2: Every 10 sachets are packed in large PE bags</p>		<p>2. Each 160*240mm PE open plastic bag is packed in 10 sachets (100PCS), except the mantissa:</p>				
 <p>Picture 3: Small label and traceability code</p>		<p>3. Except for the label, the outer box cannot be shipped with any silk screen (ie blank carton):</p>				
 <p>Picture 4: Attach the outer box label and seal the box</p>		<p>4. Put the packaged products into cartons, and confirm the quantity of each box according to the order quantity requirements to ensure that the quantity of each box is correct.</p>				
		<p>5. Put the outer box label and material traceability code, RoHS on the upper right corner of the outer box on the box with the product, and the printed label content includes (manufacturer, model, product name, customer code, quantity, order number, date, QA inspection,)</p>				
Item number	Material name and specification	Dosage	Work/Clamping Fixture			
	Carton (45*32.5*21) cm	1	Electronic scale			
	PE sealed bag (90*130)mm	200	Sealer			
	PE open pocket (160*240)mm	20				
version	modify the content				Revision date	Revised by
Formulate	Xiaoliang hu	Review	Ailing yi	Quality confirmation	Chumei hu	Approve
						Wumin zhang

