

承認書

SPECIFICATION FOR APPROVAL

☒樣品承認 ☐新品承認 ☐規格/材質變更承認

客戶名稱(Customer):	正文科技股份有限公司		
客戶料號(Customer P/N):	180-100-1668R		
產品料號(Product No.):	A8-A003-00199		
產品品名(Product Name) :	外置黑色5G天線617-5900MHz with SMA 內螺紋針		
文件編號(Approved No) :			
日期(Issued Date) :	2026年 03 月 23 日		
客戶承認簽章 Customer Approval Signature	In Charge	Checked	Approval

 天凱科技股份有限公司 TSKY CO., LTD.

新竹縣竹北市自強南路8號21F-2 Tel:03-5502626 Fax:03-5503131

21F-2, No. 8, Ziqiang S. Rd., Jhubei City, Hsinchu County 30264, Taiwan (R.O.C.)



業務	核准	審核	主辦員

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Specification

1. Electrical Properties :

1.1 Frequency Range.....617-960MHz & 1400-2170MHz &
2300-5900MHz

1.2 Impedance50Ω

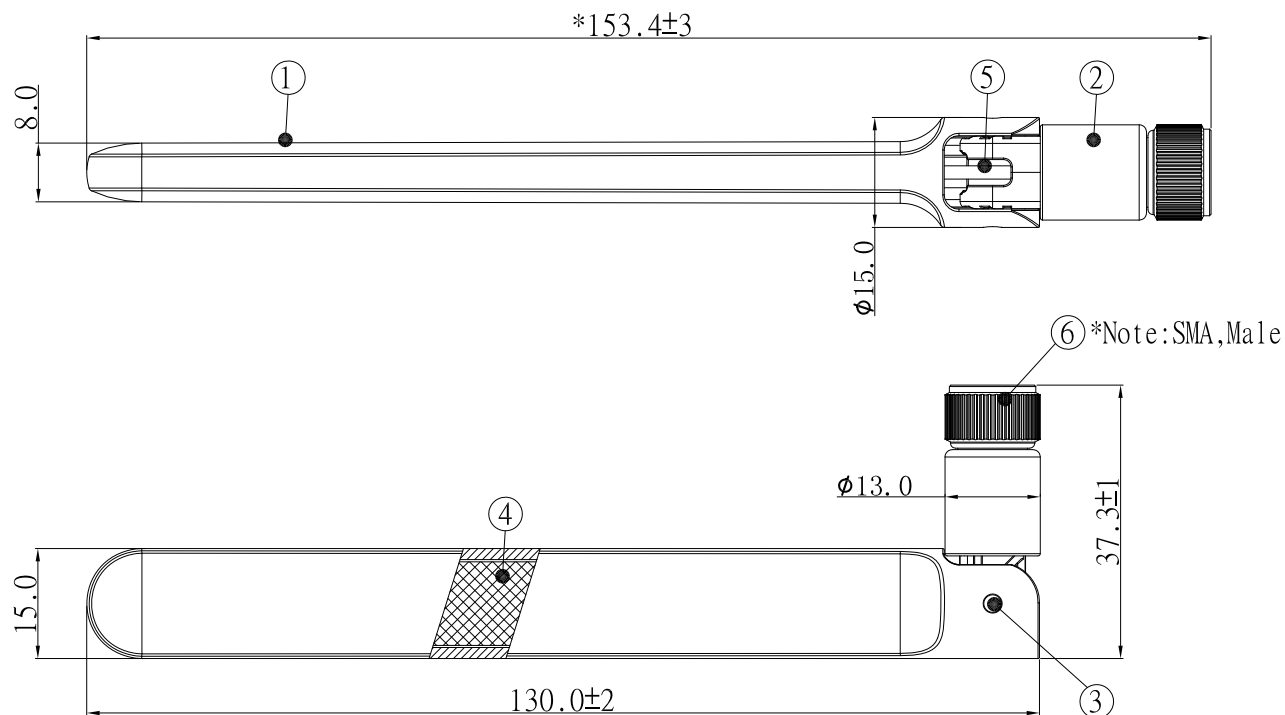
1.3 VSWR ≤ 4.0

2. Physical Properties :

2.1 Connector..... SMA Plug Standard

2.2 Operating Temp -20°C ~ +65°C

2.3 Storage Temp..... -30°C ~ +75°C

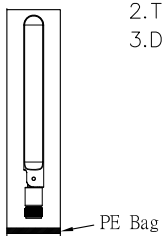


1.ELECTRICAL PROPERTIES:

- 1.1 Frequency Range.....617~960MHz&1400~2170MHz&2300~5900MHz
1.2 Impedance.....50 Ohm Nominal
1.3 VSWR..... ≤ 4.0 (tested in horizontal and bending state)

2. These Products are in conformity with ROHS 2.0;

3.Dimensions marked with "*" will be strictly controlled.



Single Package

7	Foam	Soft foam(單面背膠);size:20*10*2mm(reference)	1
6	Connector	SMA,Male;Plastic cover color:Black(Pantone Black C)	1
5	Coaxial cable	RG178 Cable,Brown	1
4	Antenna board	PCB,FR4	1
3	Antenna dowels	POM , Color:Black(Pantone Black C)	2
2	Antenna base	PC+PBT , Color:Black(Pantone Black C)	1
1	Antenna cover	ABS , Color:Black(Pantone Black C)	1
NO		DESCRIPTION	Q'TY

TOLERANCE UNLESS OTHERWISE SPECIFIED				DESCRIPTION				INITIAL MODEL:													
DIMENSION				CONFIDENTIAL		FINISH:				PART NAME											
.X±		0.3		X. ±		0.5				SIZE: A4		UNIT: mm		SCALE: 1:1		外置黑色5G天線617-5900MHz with SMA內螺紋針					
.XX±		0.2						DRAWING		DESIGNED		CONCURRED		APPROVED							
.XXX±		0.1						Nydia						Gray		PART NO. A8-A003-00199		REV. A		SHT. 1/1	

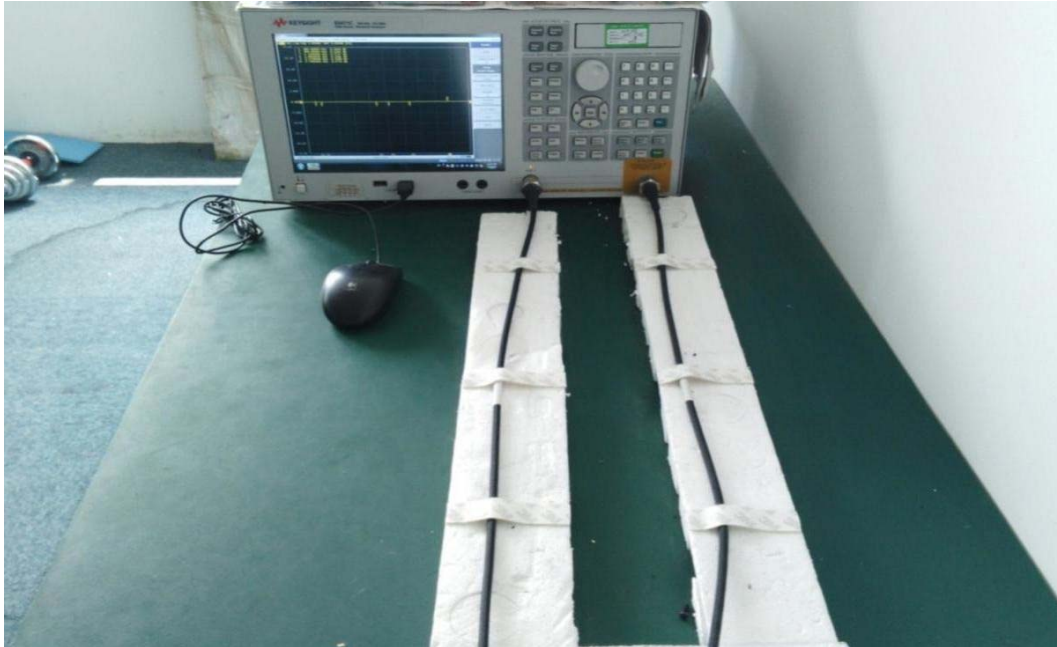
Antenna Test Report
617-5900MHz External antenna

1. RF Fixture Experiment

1.1 Test Setup

1.1.1 VNA Test Setup

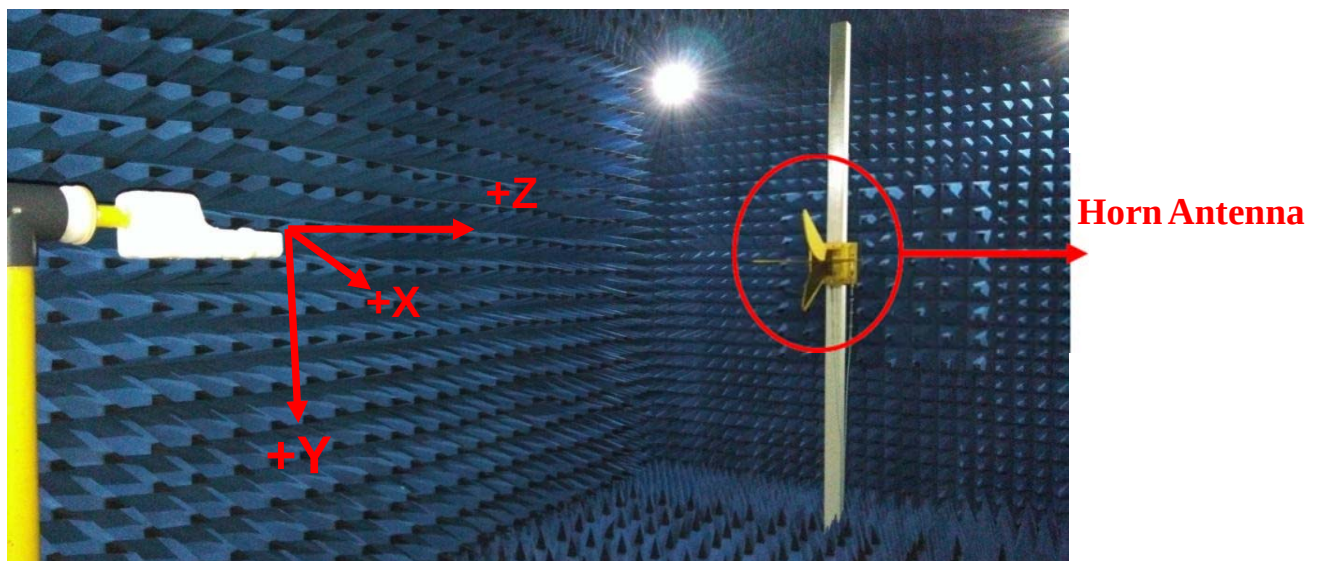
VSWR and Return Loss measurements (S11) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.



1.1.2 Anechoic Chamber Test Setup

The gain of the antenna was measured in the anechoic chamber.

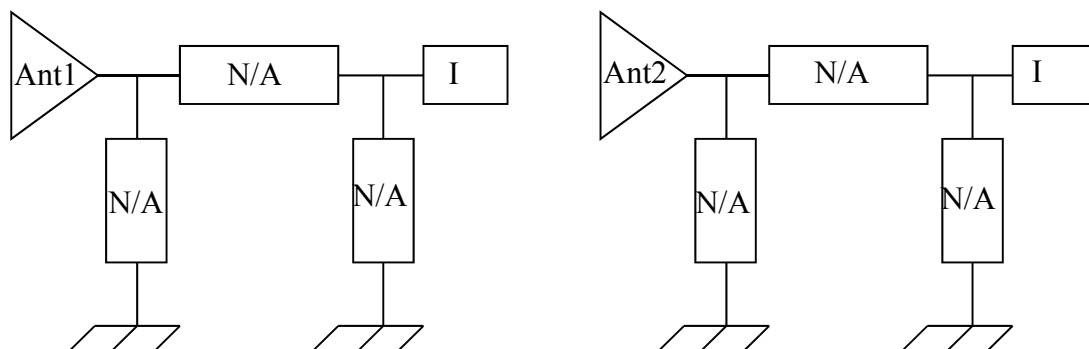
The chamber provides less than -30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.

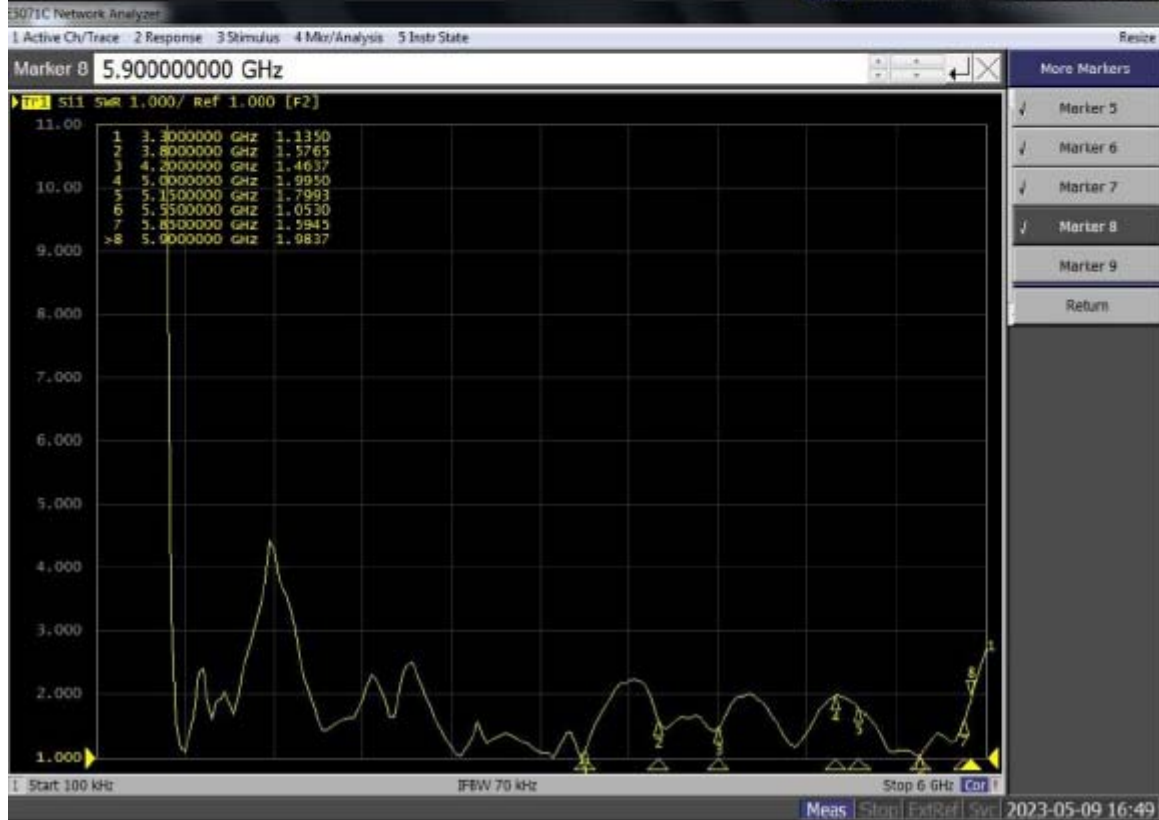
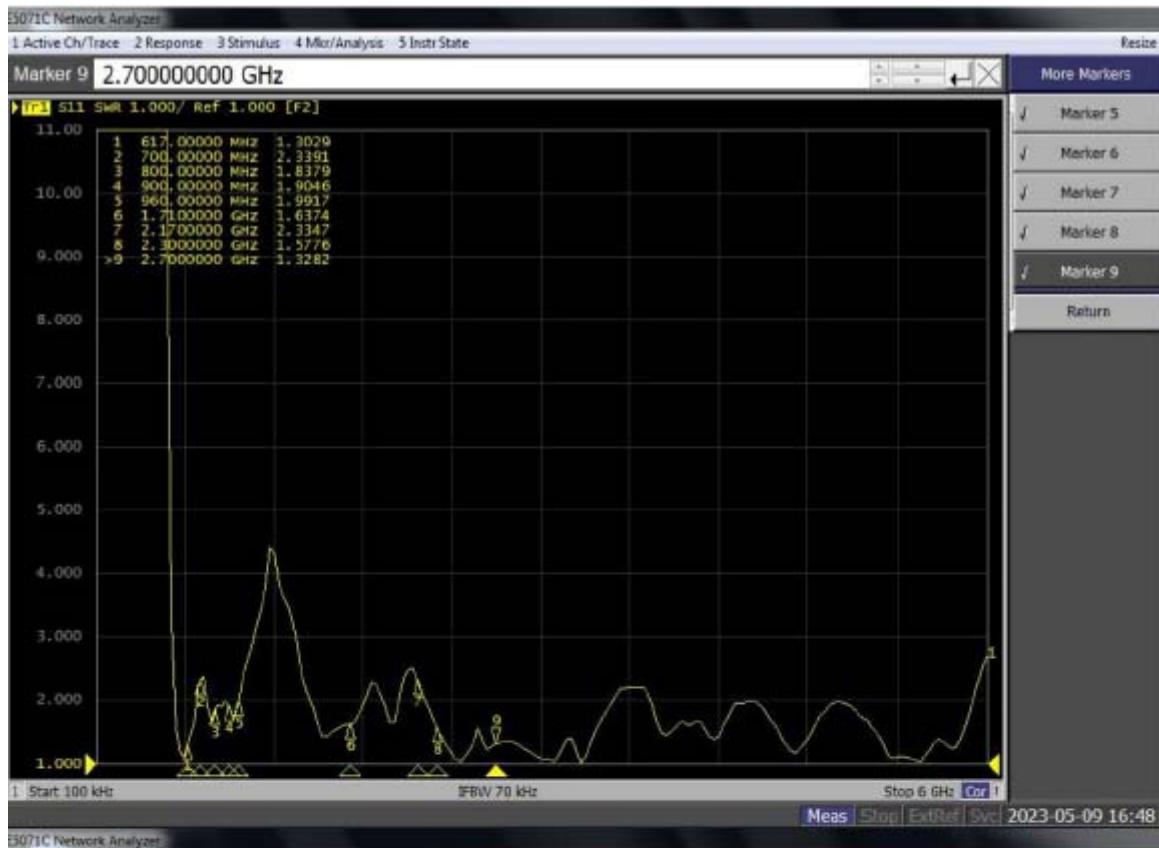


2. Antenna Solution



3. RF matching circuit for different antennas



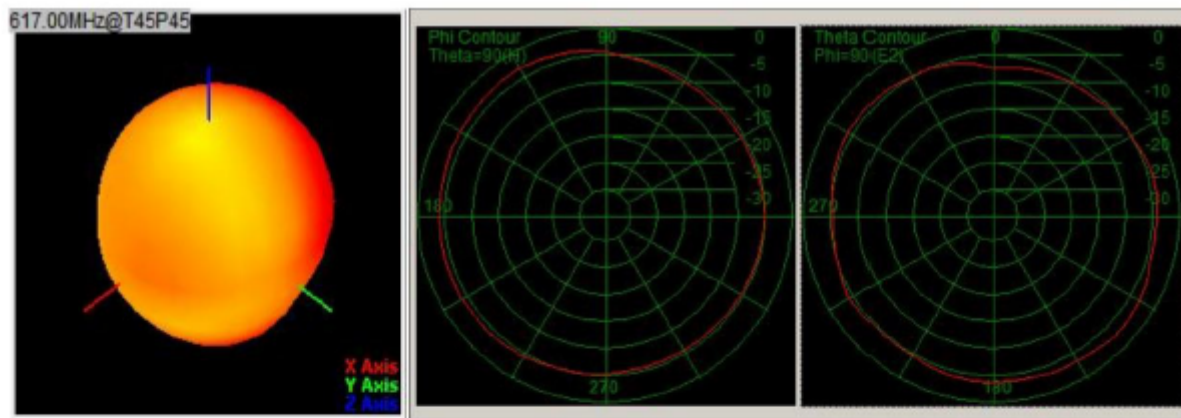


Data Preview

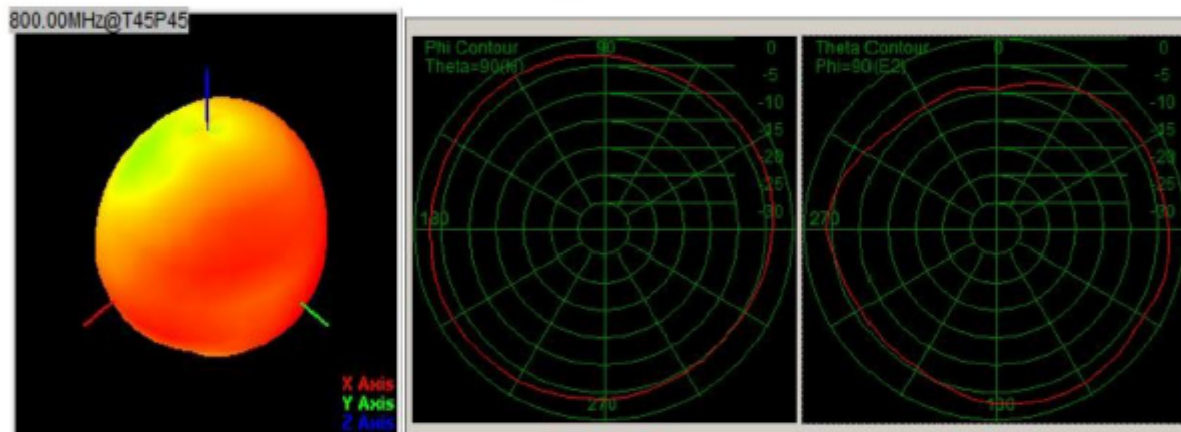
Freq.(MHz)	617	700	800	900	960	1710	2170	2300	2700
VSWR	1.3	2.34	1.84	1.9	1.99	1.64	2.33	1.58	1.33
Gain(dBi)	-0.47	-0.71	-1.18	-0.15	0.57	2.51	4.22	4.17	4.20
Eff. (%)	35.40	37.80	36.30	42.60	40.80	51.90	61.30	64.10	71.20

Freq.(MHz)	3300	3800	4200	5000	5150	5550	5850	5900
VSWR	1.14	1.58	1.46	2.00	1.80	1.05	1.59	1.98
Gain(dBi)	3.06	2.46	3.26	2.48	2.78	3.12	2.99	2.56
Eff. (%)	78.50	67.90	54.50	58.20	67.70	62.80	57.20	58.30

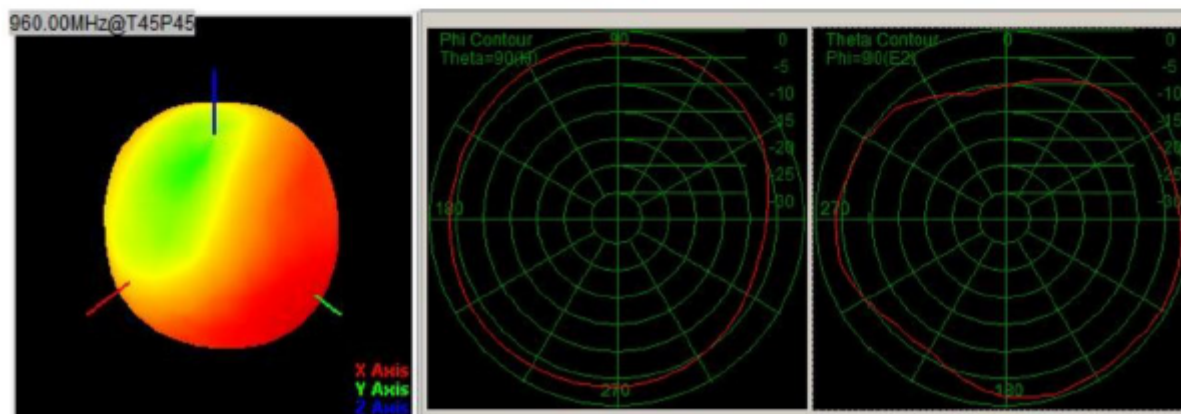
Radiation patterns:3D &2D(617MHz)



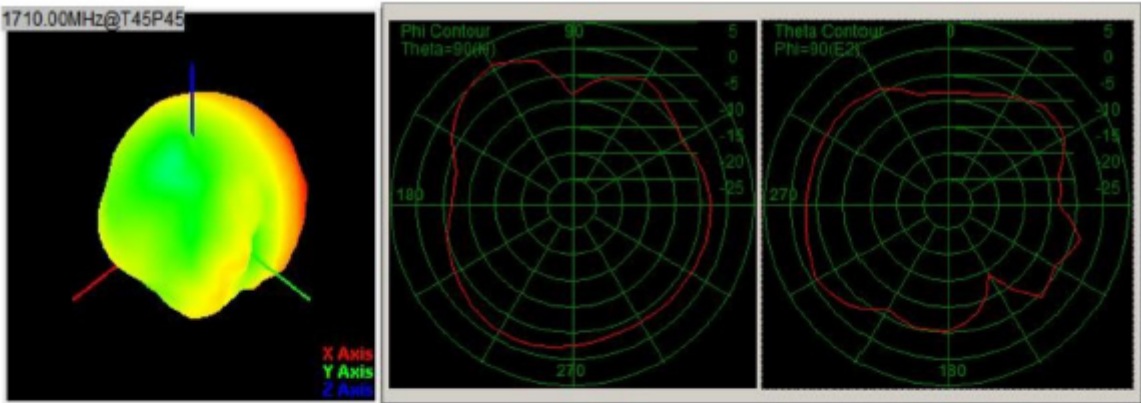
Radiation patterns:3D &2D(800MHz)



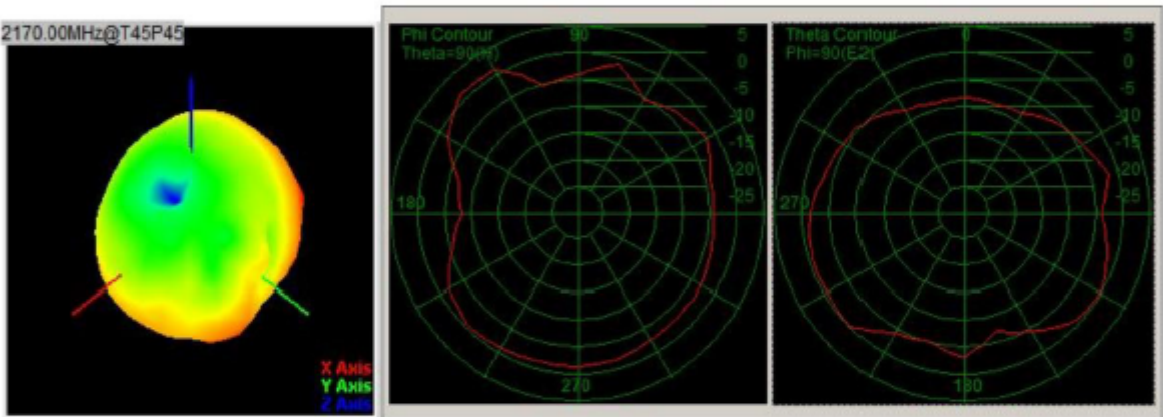
Radiation patterns:3D &2D(960MHz)



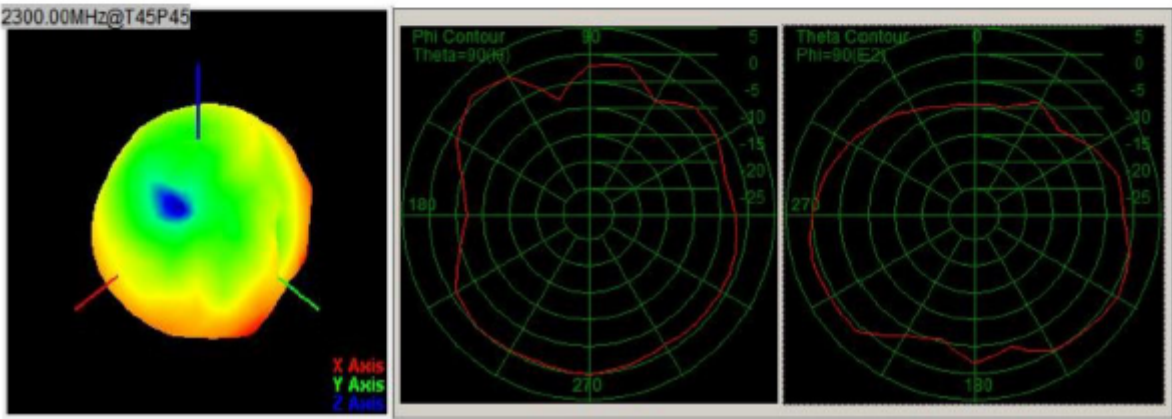
Radiation patterns:3D &2D(1710MHz)



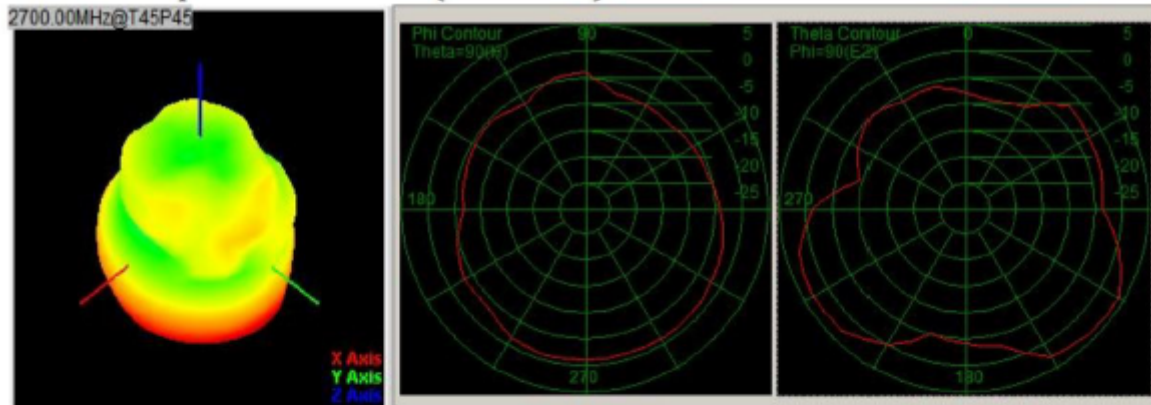
Radiation patterns:3D &2D(2170MHz)



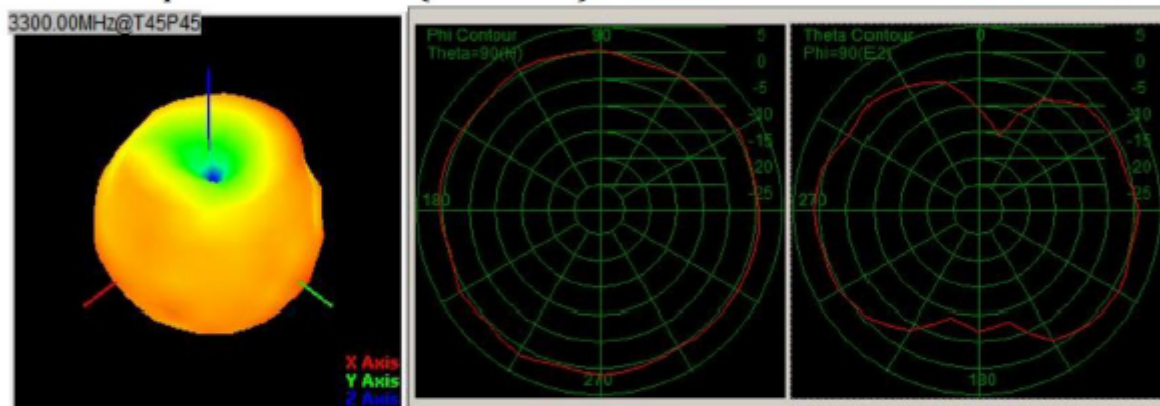
Radiation patterns:3D &2D(2300MHz)



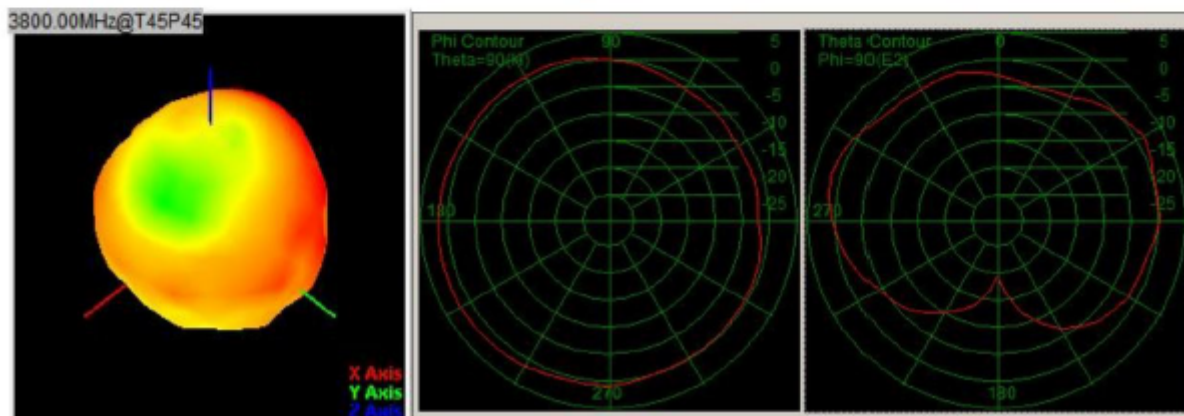
Radiation patterns:3D & 2D(2700MHz)



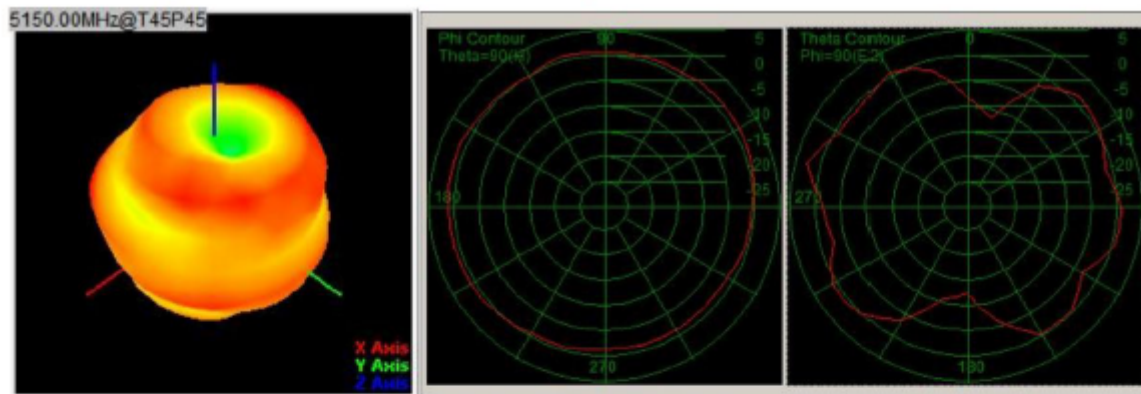
Radiation patterns:3D & 2D(3300MHz)



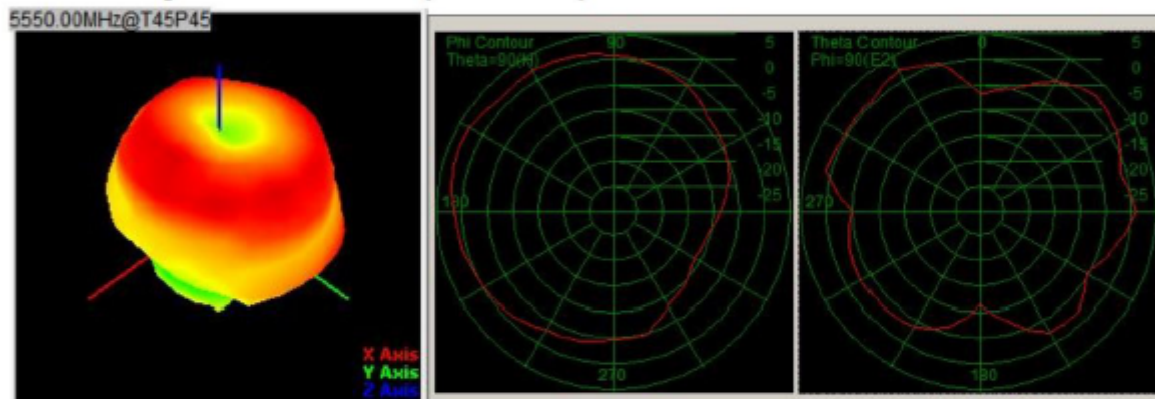
Radiation patterns:3D & 2D(3800MHz)



Radiation patterns:3D & 2D(5150MHz)



Radiation patterns:3D & 2D(5550MHz)



Radiation patterns:3D & 2D(5850MHz)

