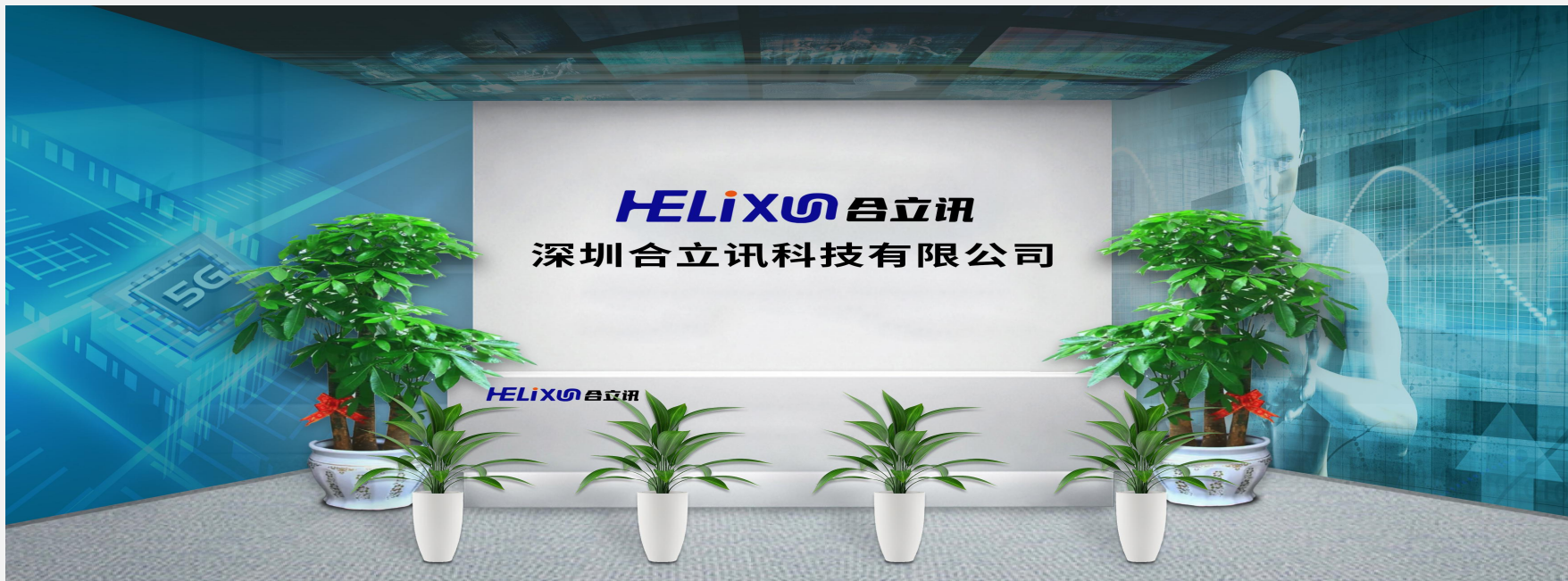




Project	T19
Antenna Revision	A0
Manufacturer	Shenzhen Helixun Technology Co., LTD
Address	1905, Building 2, Jiufang Square, Tiezai Road, Gongle Community, Xixiang Street, Baoan District, Shenzhen
Checked by	17279710721

Purpose

This report is to measure the performance of antenna for **T19** The antenna operating frequency at 2400-2500MHz, All test data are showed as below.

Content

1. Test system
- 2.Product Overview &Dimension
- 3.TestResult***
 - 3.1 OTA

1. Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5071B
OTA Test	TRP&TIS	Agilent 8960 & CMW500 STIMO
Gain & Efficiency	Gain & Efficiency	SATIMO Agilent 5071C

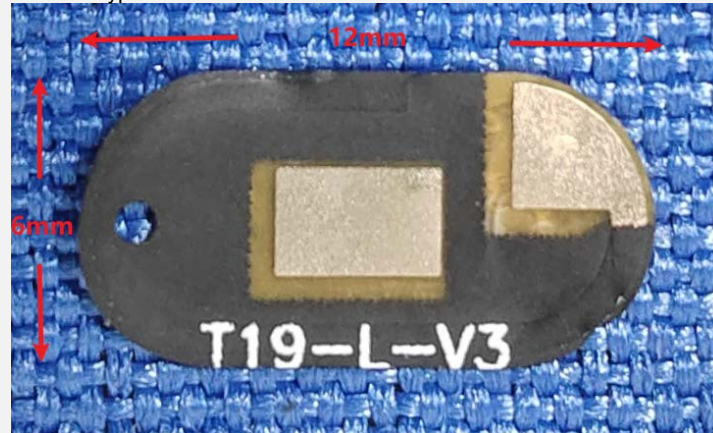


2. Product Overview & Dimension



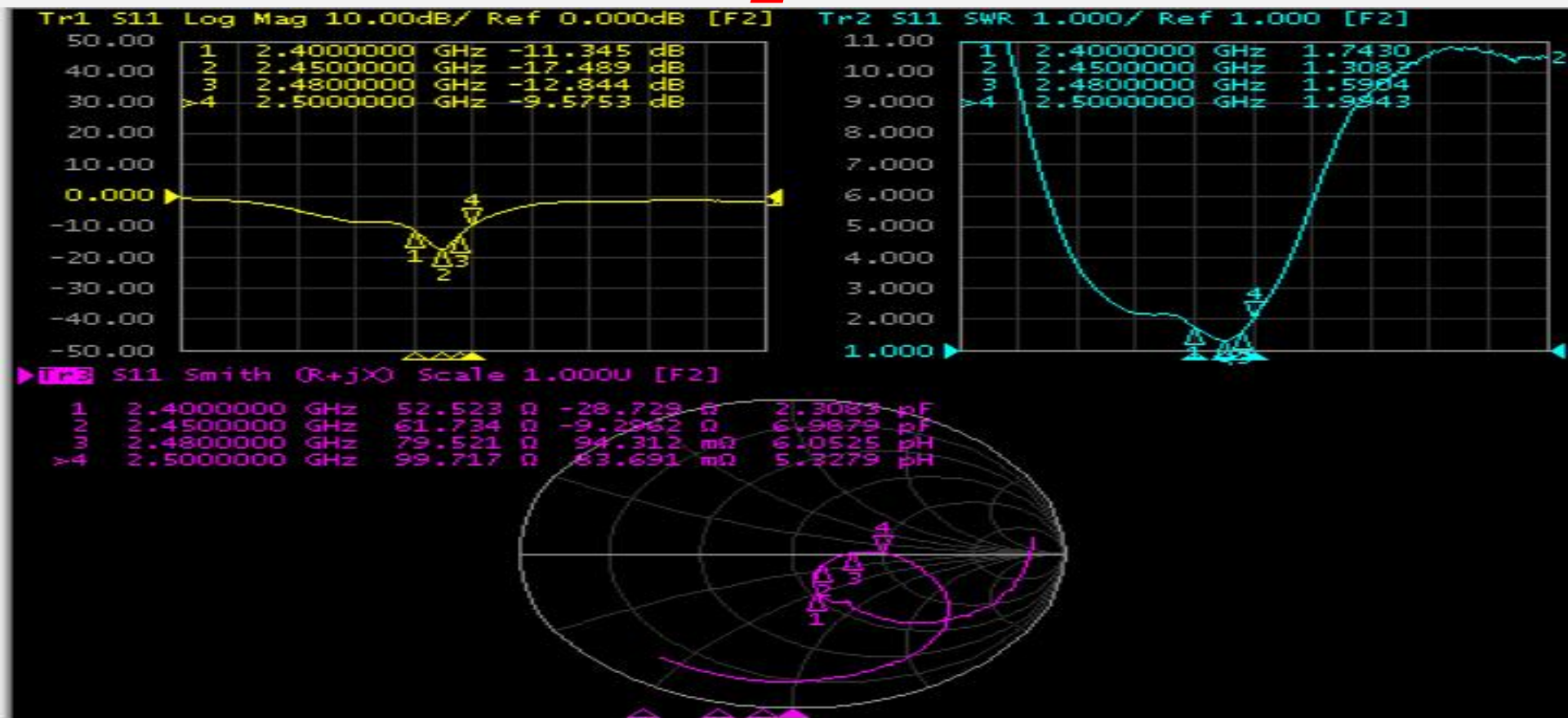
Antenna View (12mm*6mm)

Antenna Type: FPCB Antenna



3.Test Result

3.1 S11 Parameter-VSWR L



requeency (MHz)	2400	2450	2480	2500
VSWR	1.74	1.30	1.59	1.99

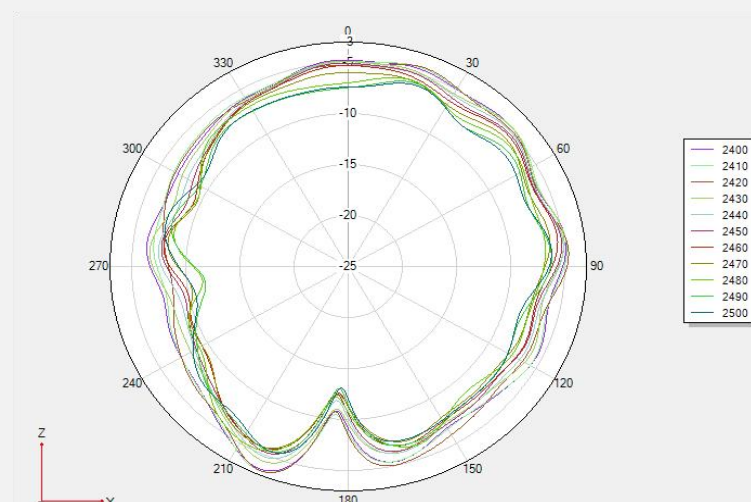
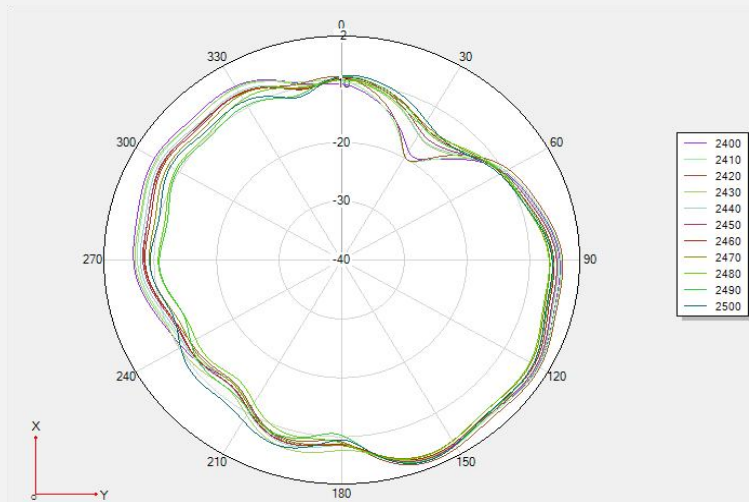
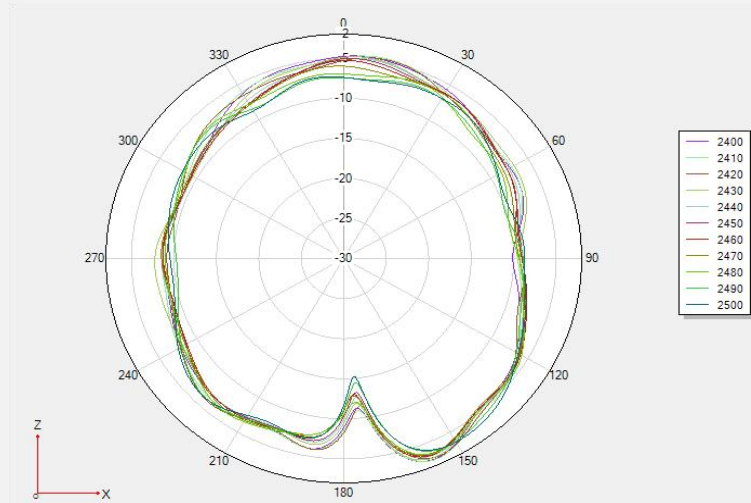
3. Test Result-L

3.2 Gain & Efficiency—ANT

Frequency (MHz)	Efficiency (%)	Max GAIN (dBi)
2400	26.48	-0.83
2410	26.83	-0.71
2420	26.43	-0.43
2430	25.81	-1.11
2440	25.18	-0.93
2450	24.82	-0.85
2460	23.92	-0.94
2470	23.51	-1.21
2480	24.18	-1.11
2490	23.83	-0.61
2500	24.06	-0.55

3. Test Result-L

3.3 2D Pattern—BT ANT



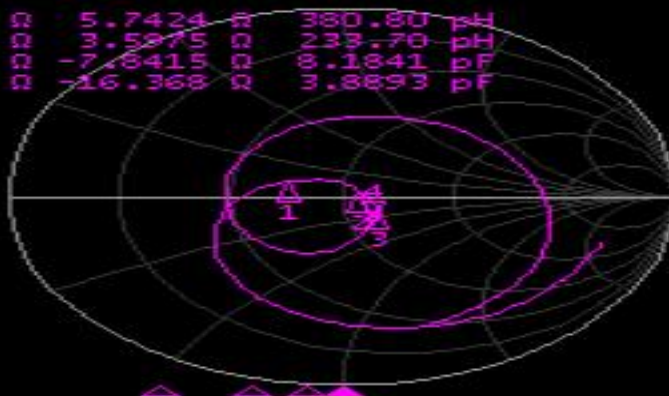
3.Test Result

3.1 S11 Parameter-VSWR R



Tr3 S11 Smith (R+jX) Scale 1.000U [F2]

1	2.4000000 GHz	35.808 Ω	5.7424 Ω	380.80 pF
2	2.4500000 GHz	55.518 Ω	3.5875 Ω	233.70 pF
3	2.4800000 GHz	61.138 Ω	-7.6415 Ω	8.1841 pF
4	2.5000000 GHz	58.075 Ω	-16.368 Ω	3.8893 pF



frequency (MHz)	2400	2450	2480	2500
VSWR	1.43	1.13	1.27	1.40

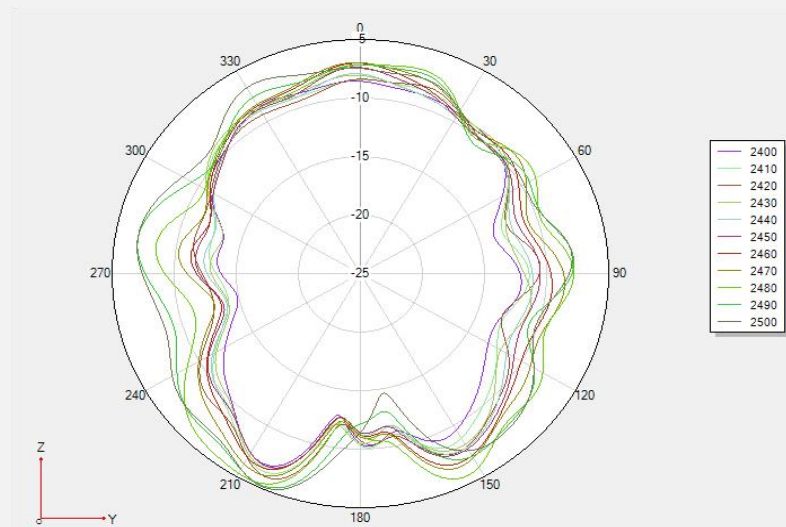
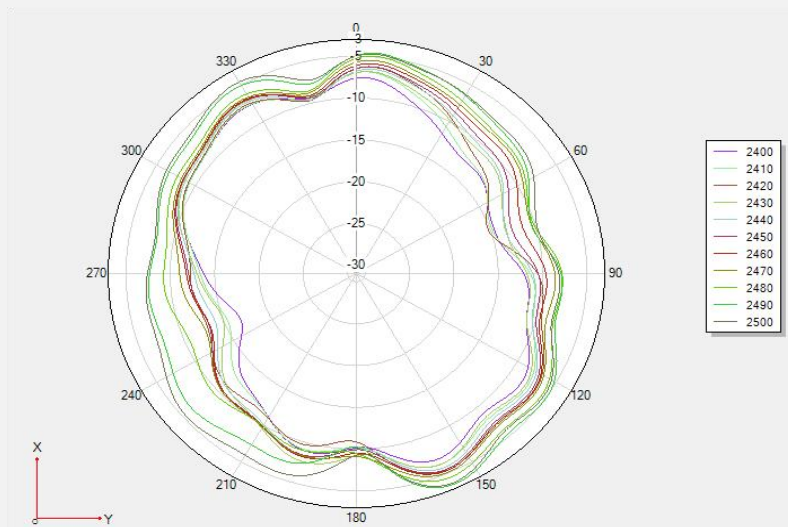
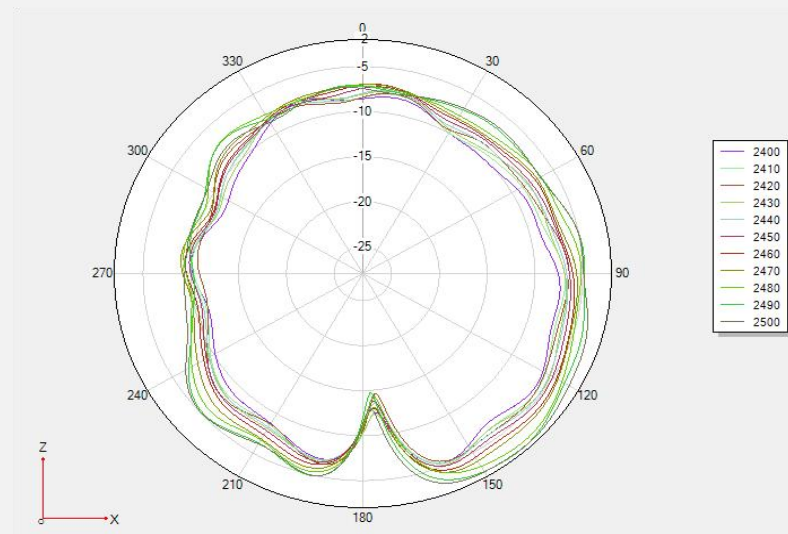
3. Test Result-**R**

3.2 Gain & Efficiency—**ANT**

Frequency (MHz)	Efficiency (%)	Max GAIN (dBi)
2400	25.86	-0.62
2410	26.86	-0.93
2420	27.79	-1.21
2430	27.06	-1.11
2440	27.37	-1.22
2450	27.52	-1.21
2460	26.78	-1.07
2470	26.83	-1.38
2480	25.71	-1.37
2490	25.42	-1.16
2500	24.13	-0.81

3. Test Result-*R*

3.3 2D Pattern—*BT ANT*

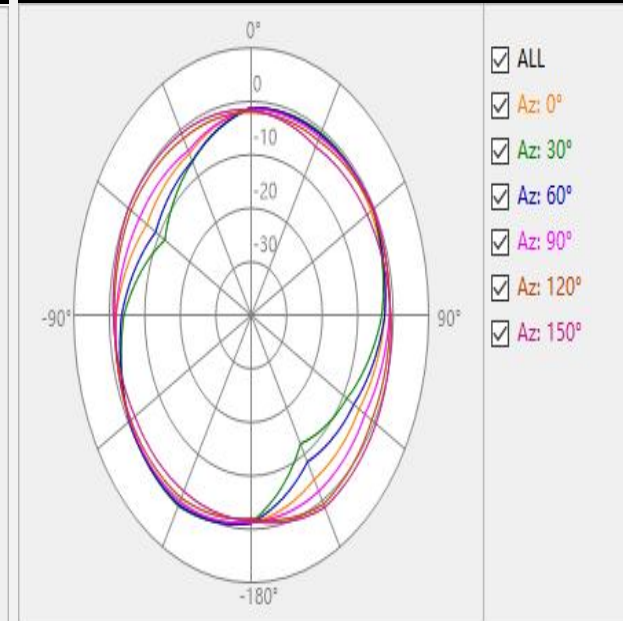
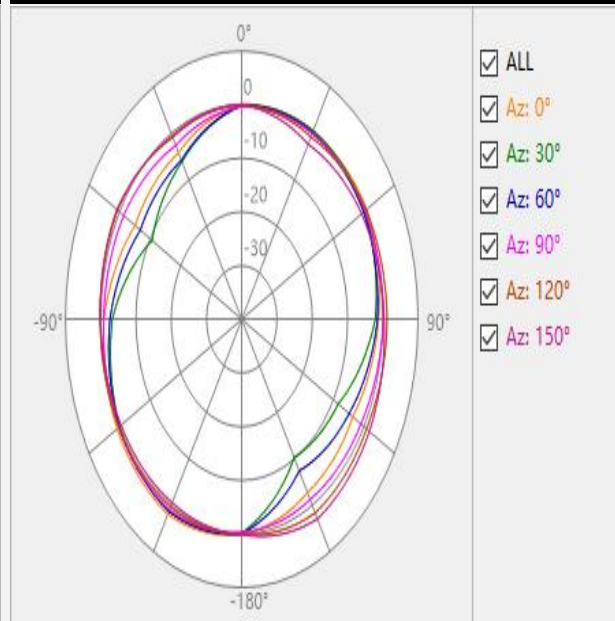
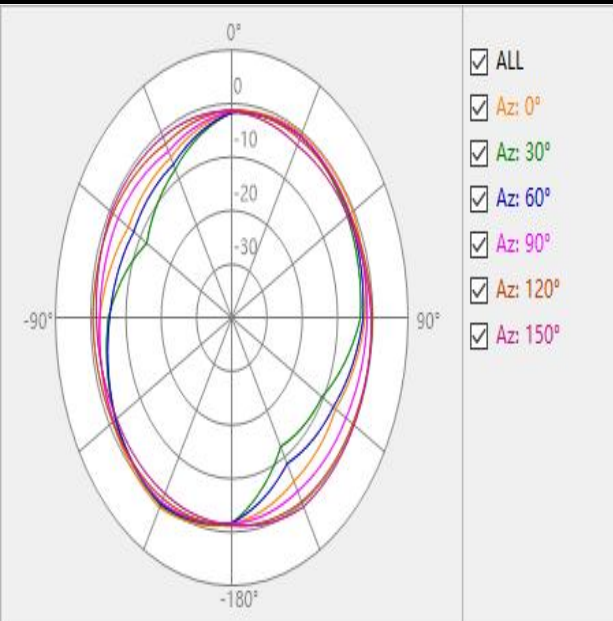
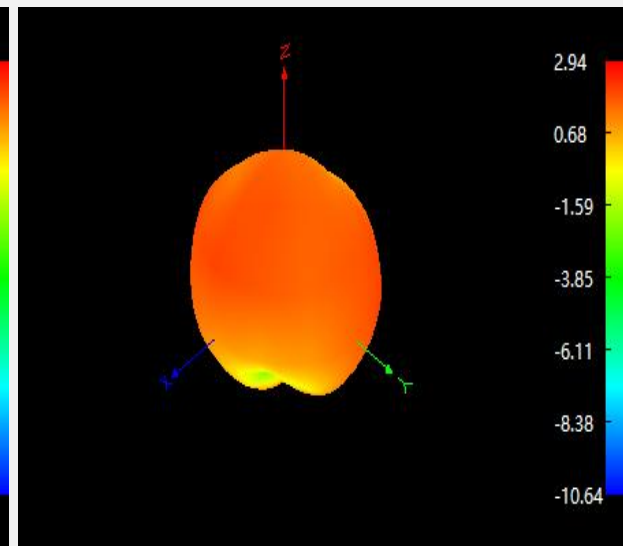
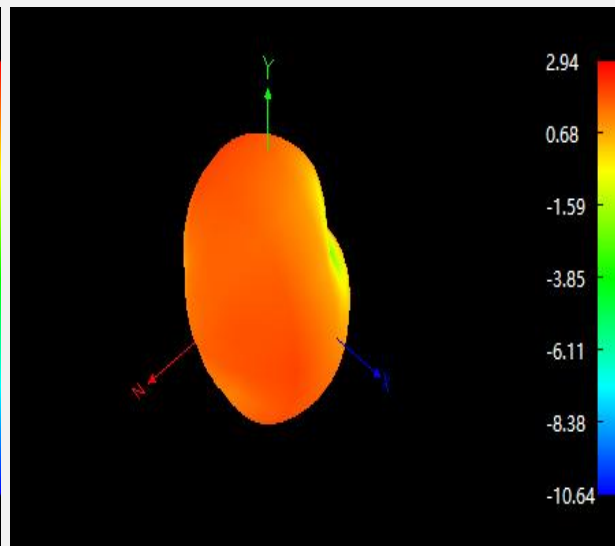
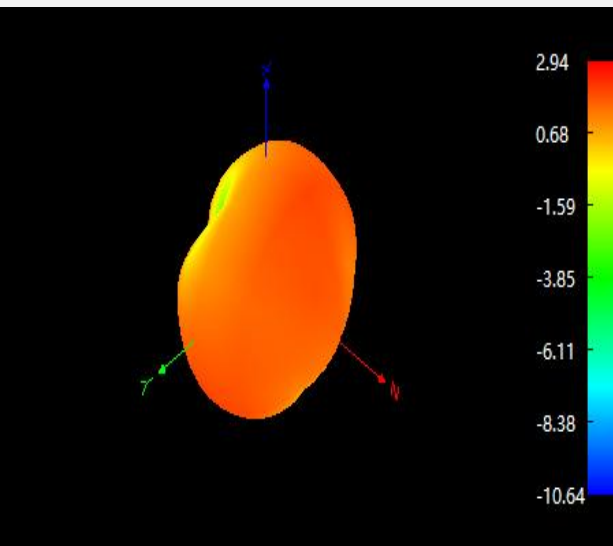


3.1 OTA Data

Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band		Channel	TRP(dBm)	TIS(dBm)
BT	L	0	-1.41	-73.51
		39	0.09	-75.41
		78	-1.05	-76.43
BT	R	0	-2.67	-76.47
		39	-1.41	-75.85
		78	-1.71	-74.23

3.Test

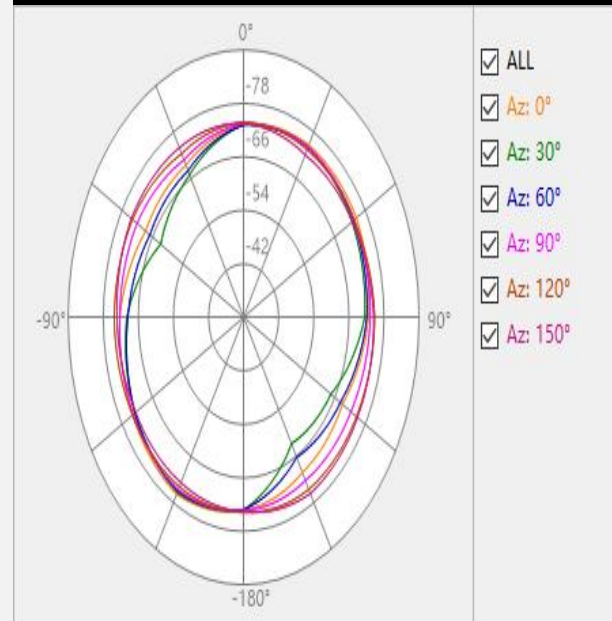
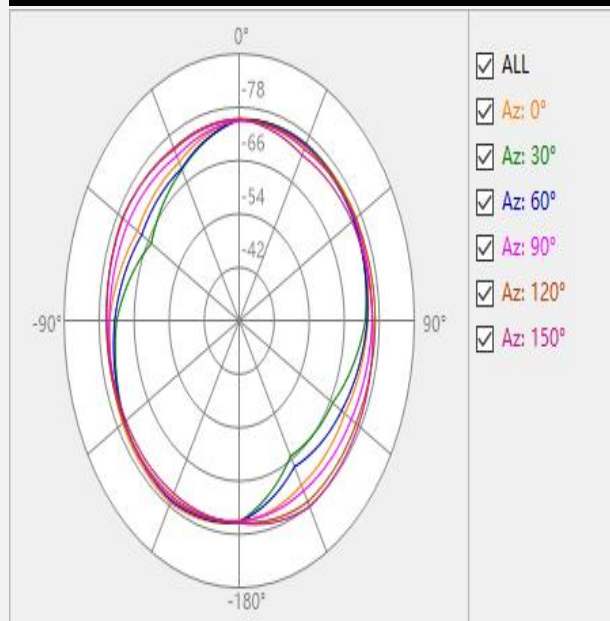
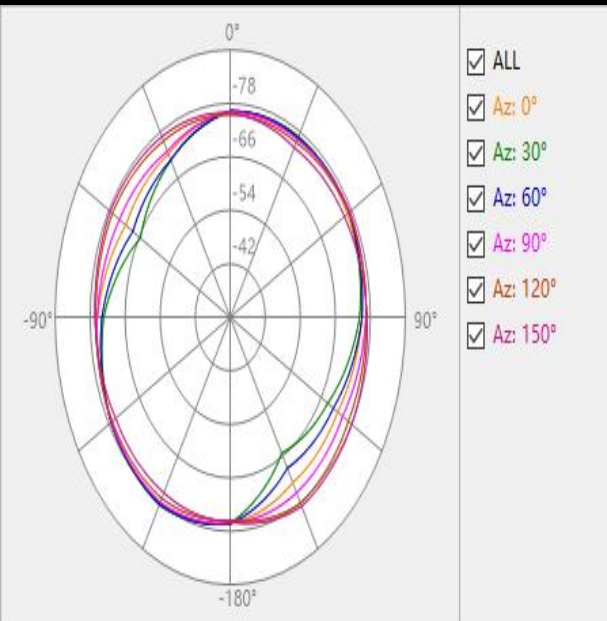
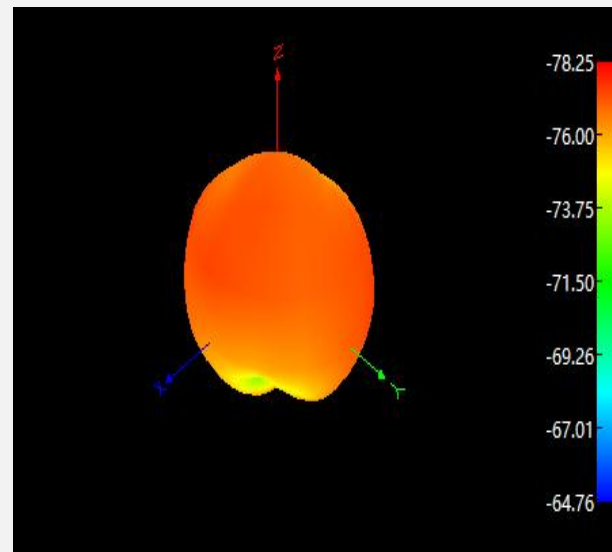
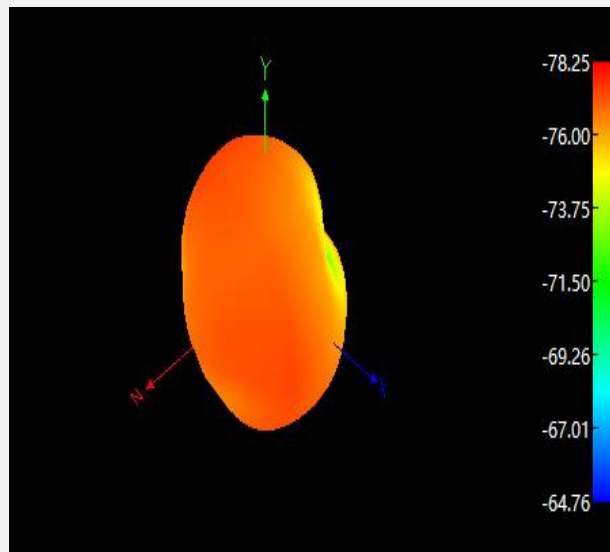
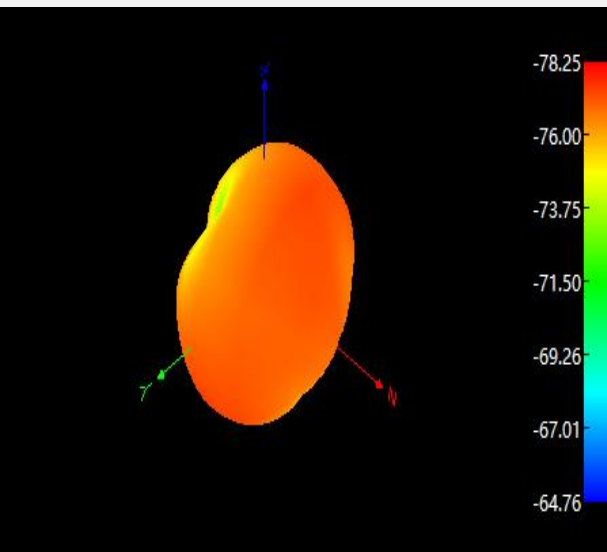
Result L-TRP



3.Test

Result

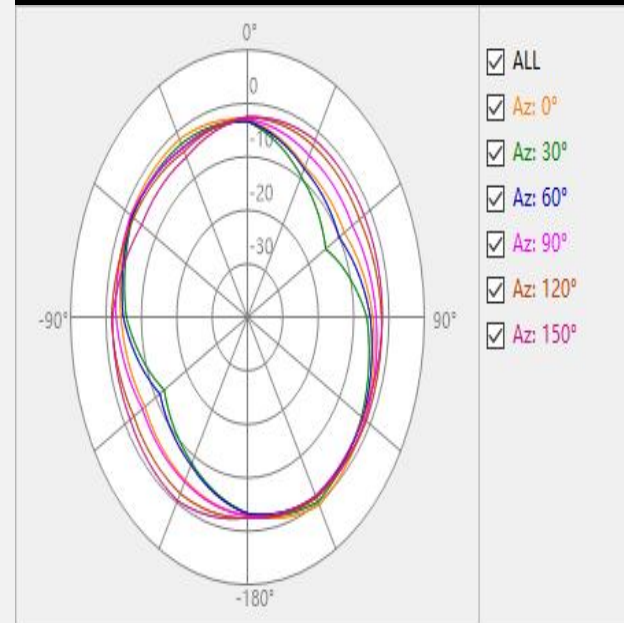
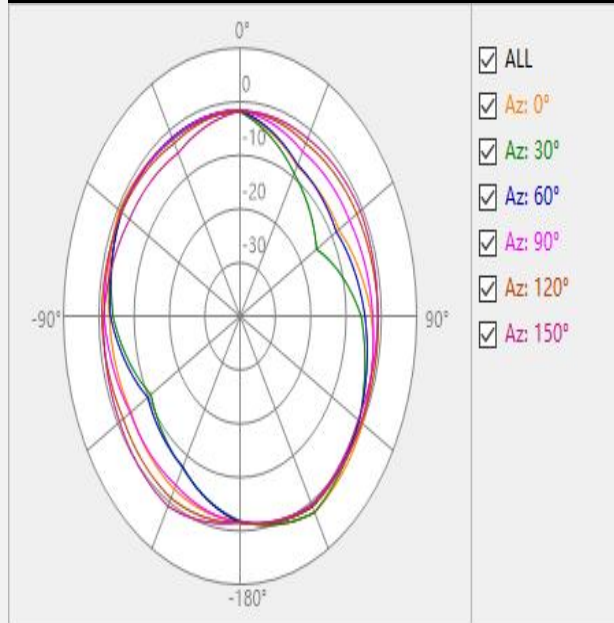
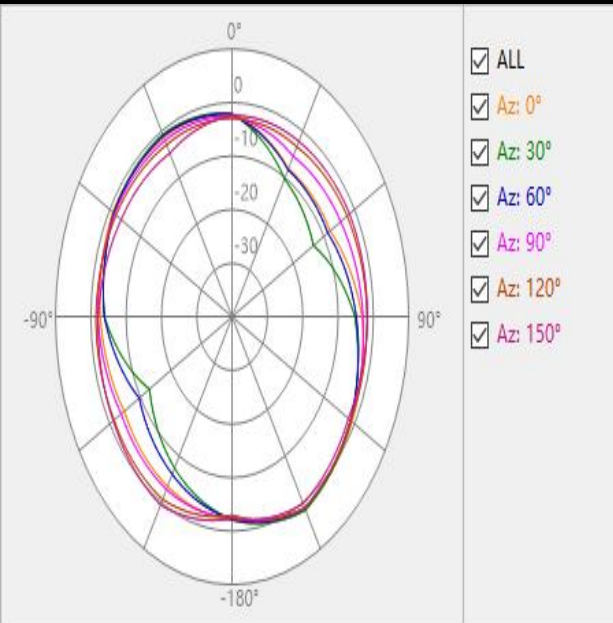
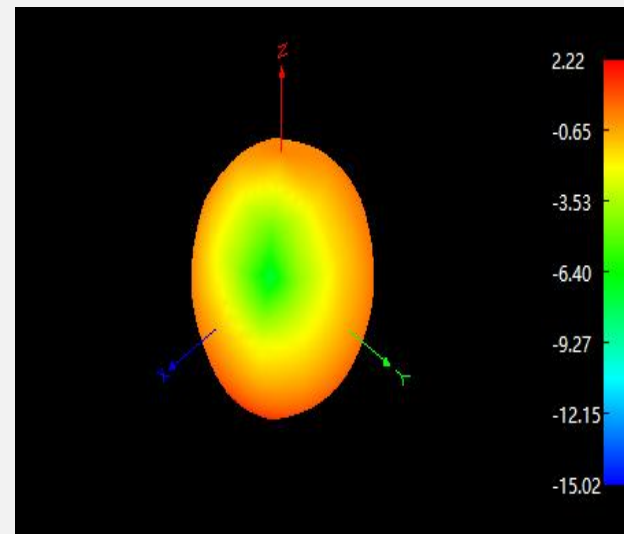
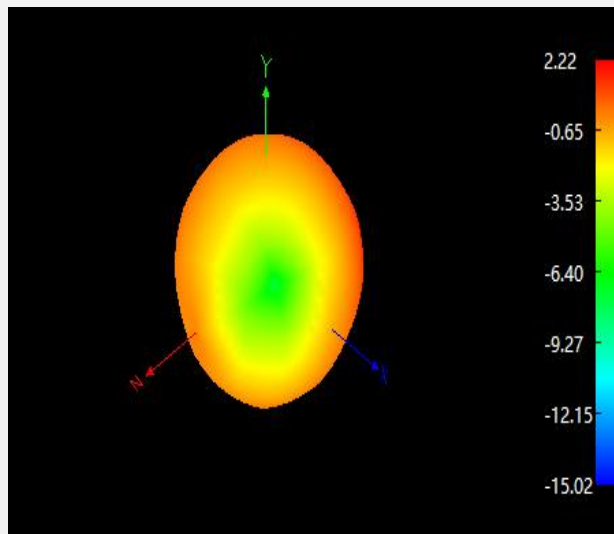
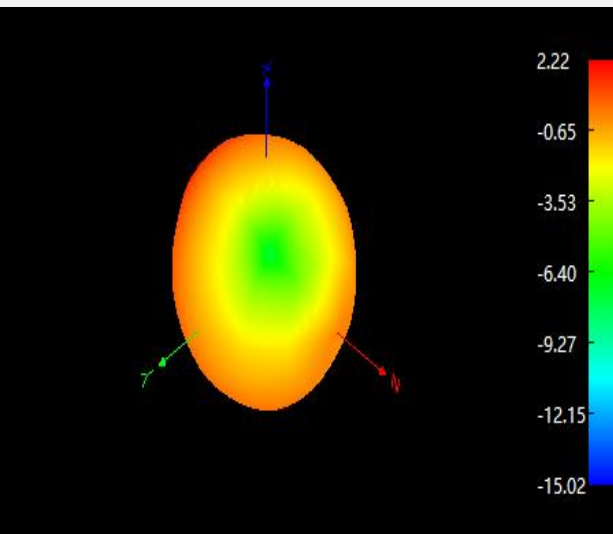
L-TIS



3.Test

Result

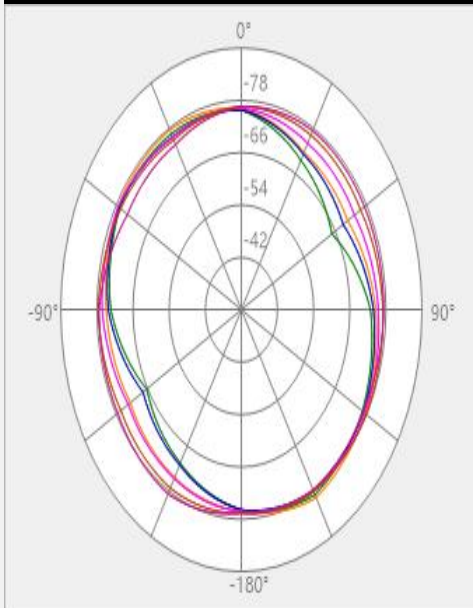
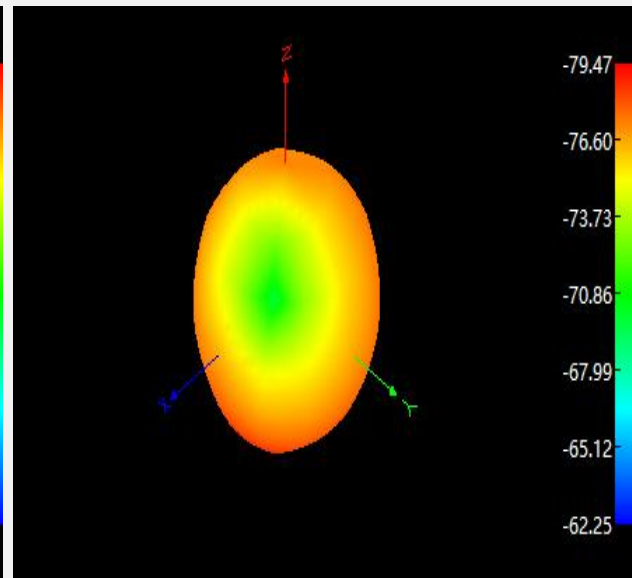
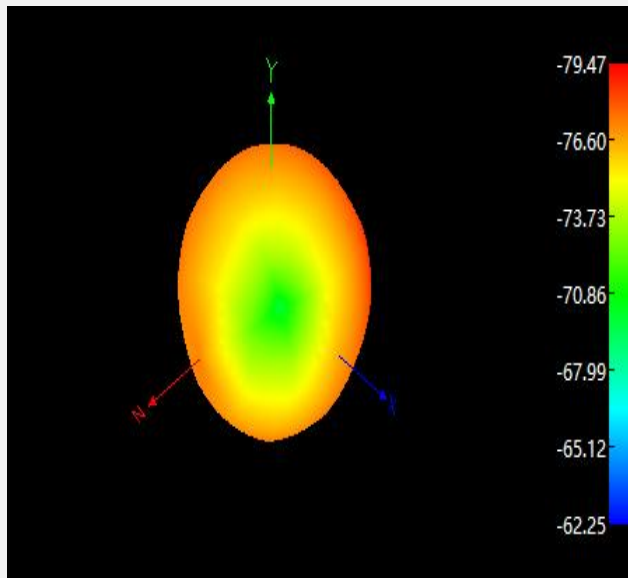
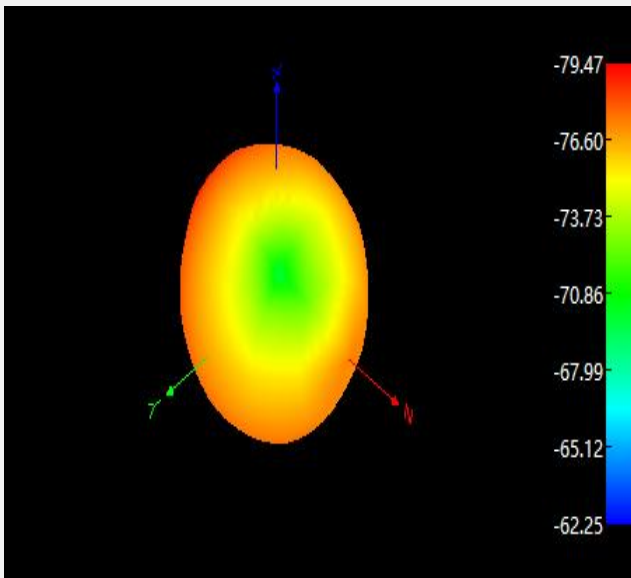
R-TRP



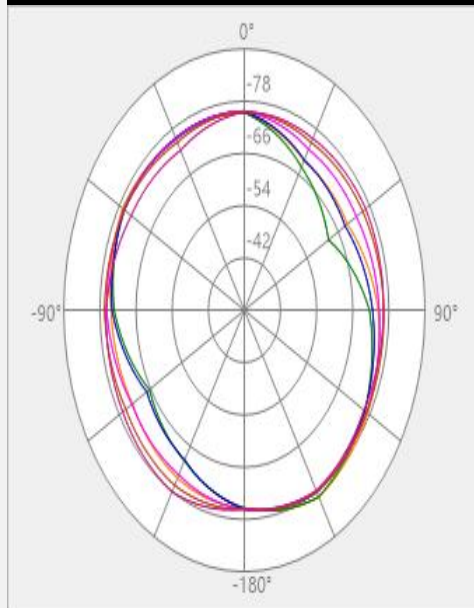
3.Test

Result

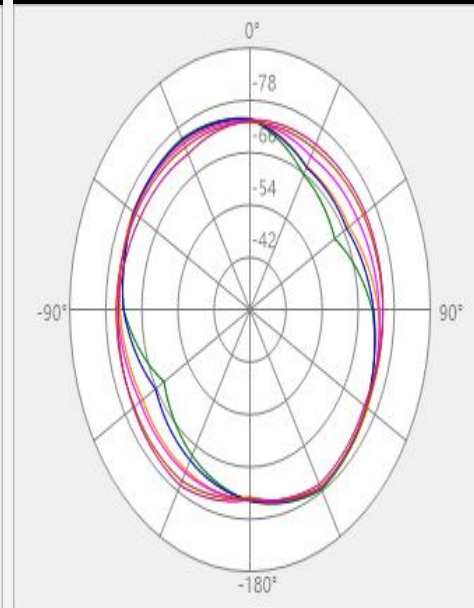
R-TIS



- ☒ ALL
- ☒ Az: 0°
- ☒ Az: 30°
- ☒ Az: 60°
- ☒ Az: 90°
- ☒ Az: 120°
- ☒ Az: 150°



- ☒ ALL
- ☒ Az: 0°
- ☒ Az: 30°
- ☒ Az: 60°
- ☒ Az: 90°
- ☒ Az: 120°
- ☒ Az: 150°



- ☒ ALL
- ☒ Az: 0°
- ☒ Az: 30°
- ☒ Az: 60°
- ☒ Az: 90°
- ☒ Az: 120°
- ☒ Az: 150°

Thank you!