



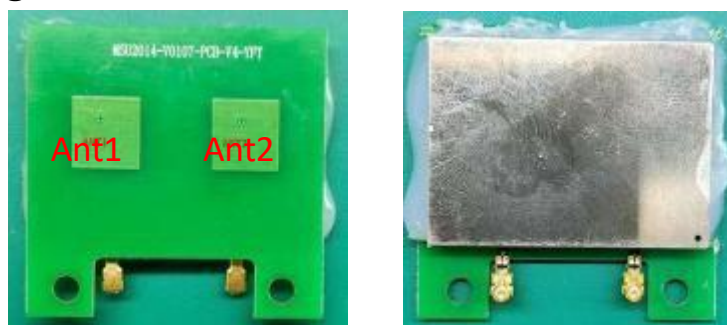
MSU2014 Main Antenna Specification Document

Project name :	MSU2014 Main Ant	Frequency range :	6.24GHz-6.74Ghz		
Internal Part Number:	/	Version number :	A.2		
Date :	2026/2/25				
Futen Technology (Shanghai) Co., Ltd. Room 503, Building 6, Phase II, Juke Bio-Park, No. 333, Guiping Road, Xuhui District, Shanghai					
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Date :	2026/2/25				
Affirm	RF				
	ME				
Remarks					

Table of Contents

- 1. Project Image**
- 2. Test Fixture**
- 3. Matching Circuit**
- 4. S11 Test**
 - 4.0 S11 Testing Method
 - 4.1 S11 Parameters
 - 4.2 Parameter Image
 - 4.2.1 Return loss
 - 4.2.2 V.S.W.R
- 5.Darkroom Test Data**
 - 5.0 testing facility
 - 5.1 Active Data
 - 5.2 Passive Data
- 6. Grounding Treatment for the Prototype**
- 7. Antenna Diagram**

1. Project Image



Antenna Diagram

2. Antenna Specifications

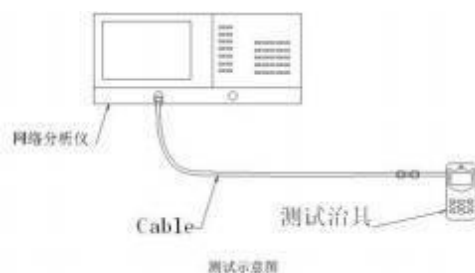
UWB antenna	Specification
Working Frequency Range	Working Frequency
	CH5:6.24Ghz-6.74Ghz
Bandwidth	>500MHz
Impedance	50Ω
Standing Wave Ratio (VSWR)	<2.5
Working Temperature	-40C~+85C
Power Capacity	5W

3. Matching Circuit

NO Matching

4. S11 Test

4.0 S11 Testing Method



4.1 S11 Parameters

	Frequency (MHZ)	6240	6540	6740
Ant1	VSWR	1.89	1.40	1.93
	RL	-10.23	-15.51	-9.94
Ant2	VSWR	2.2	1.74	2.49
	RL	-8.29	-11.34	-7.40

4.2 Parameter Image

4.2.1 Return loss

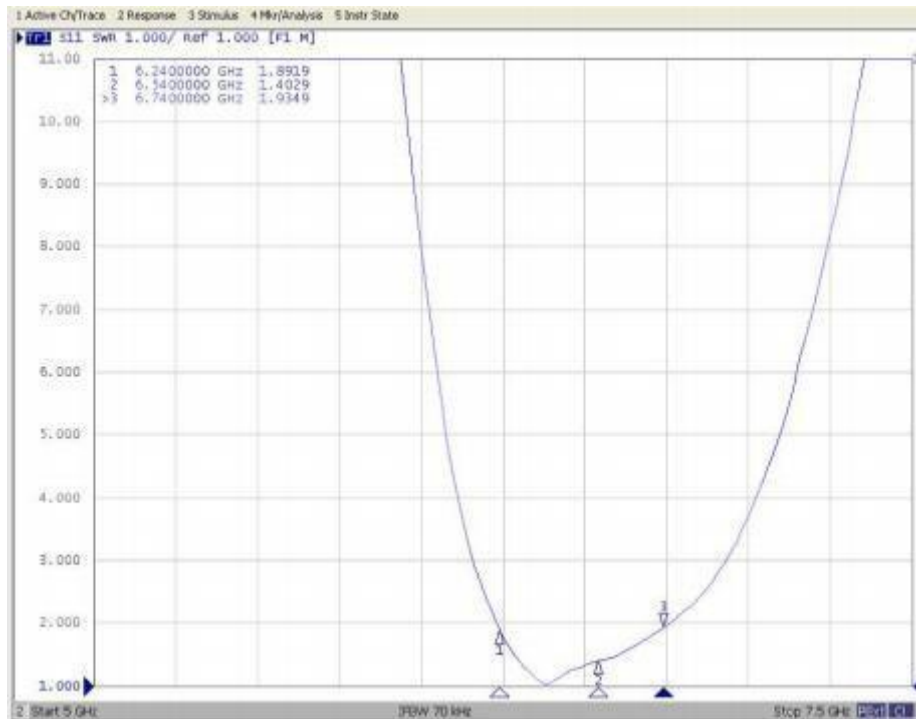


Ant1

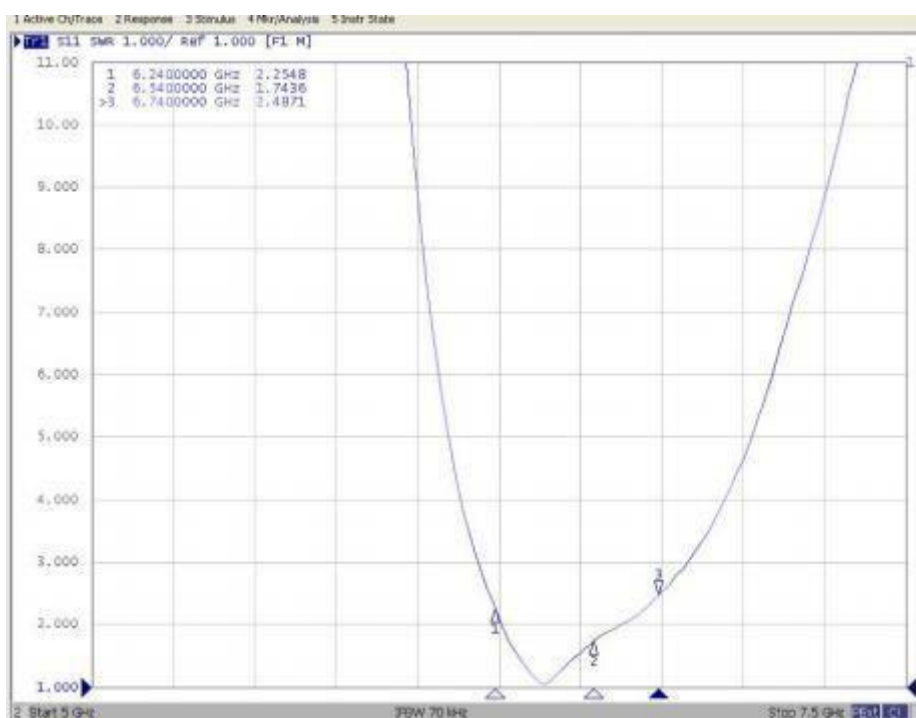


Ant2

4.2.2 V.S.W.R



Ant1



Ant2

5. Darkroom Test Data

5.0 Testing equipment

Testing System: Shielded Chamber

Test Environment: Temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, Humidity $50\% \pm 15\%$

Testing equipment: For testing passive data, use the Agilent E5071C network analyzer.

5.1 Active Data

NG

5.2 Passive Data

Passive Test For UWB(ANT1)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
6240	22.42	-6.49	-0.76
6290	21.92	-6.59	-1
6340	24.4	-6.13	-0.63
6390	24.8	-6.05	-0.61
6440	31.13	-5.07	0.35
6490	28.38	-5.47	-0.01
6540	40.62	-3.91	1.37
6590	37.6	-4.25	0.93
6640	38.76	-4.12	1.25
6690	38.88	-4.1	1.08
6740	41.02	-3.87	1.19

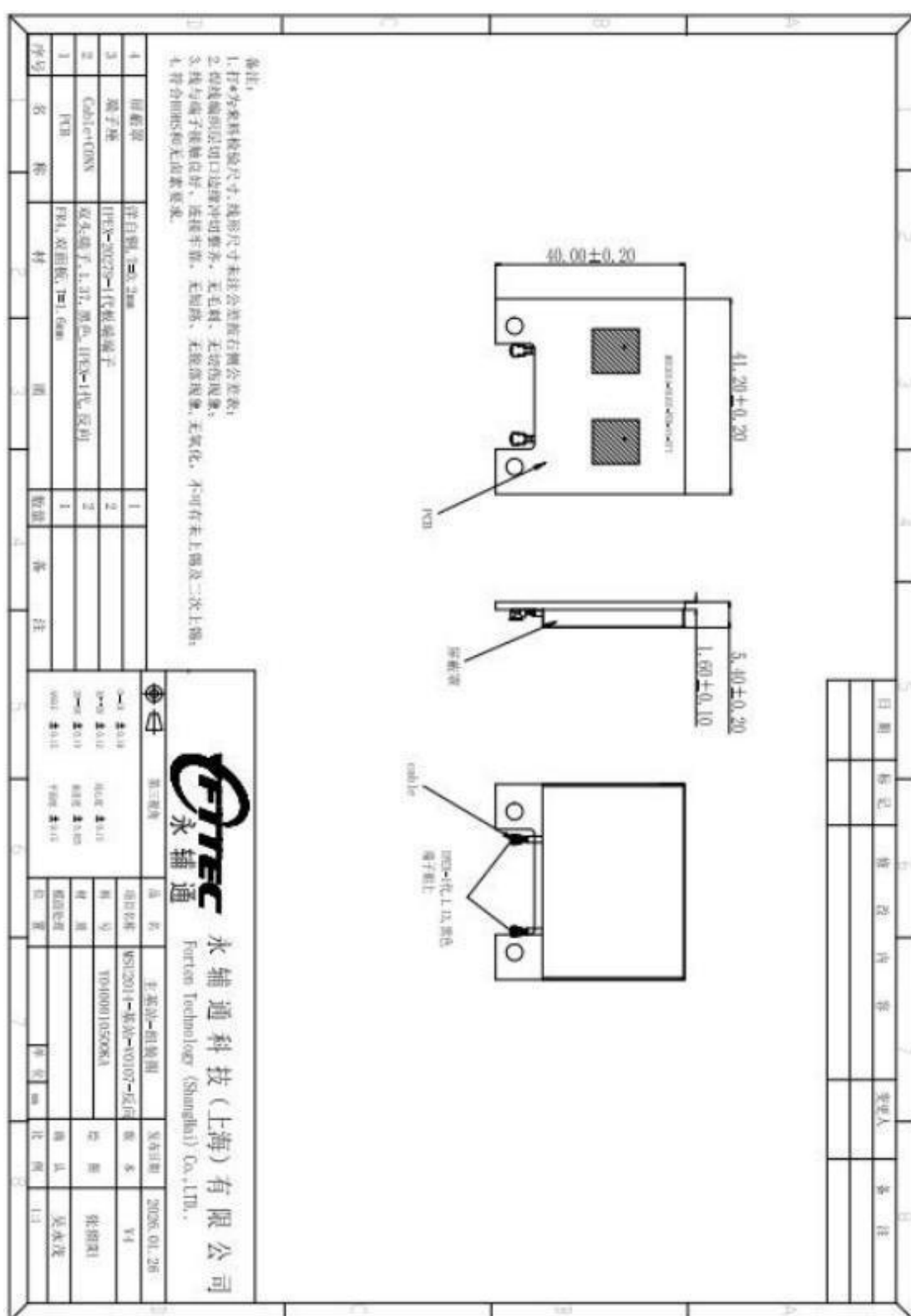
Passive Test For UWB(ANT2)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
6240	25.65	-5.91	-0.49
6290	24.59	-6.09	-0.57
6340	26.79	-5.72	-0.3
6390	26.63	-5.75	-0.26
6440	32.87	-4.83	0.44
6490	29.15	-5.35	-0.13
6540	41.42	-3.83	1.45
6590	37.53	-4.26	0.8
6640	39.33	-4.05	0.95
6690	40.33	-3.94	1.09
6740	42.12	-3.76	1.21

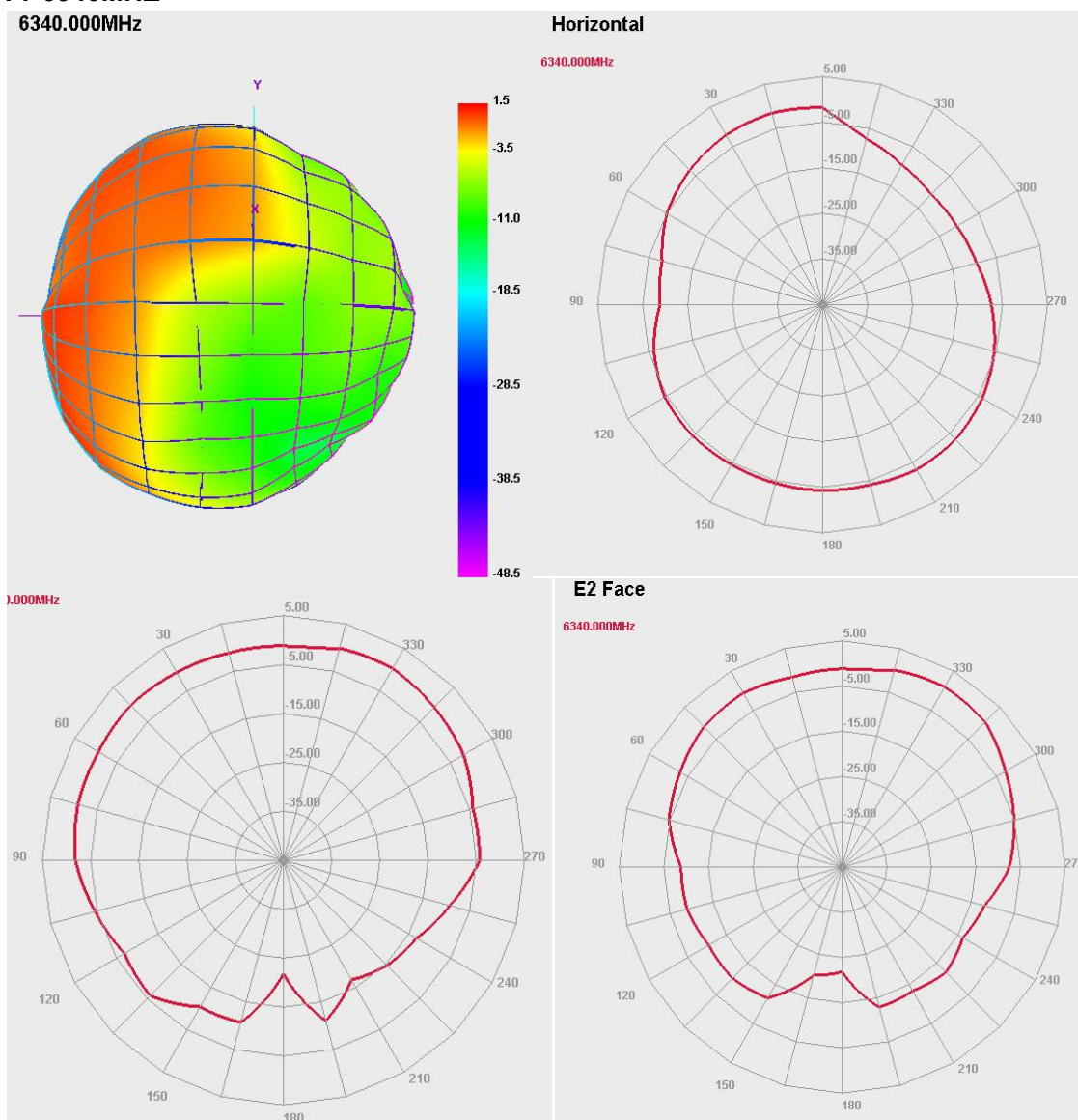
6. Grounding Treatment for the Prototype

No processing

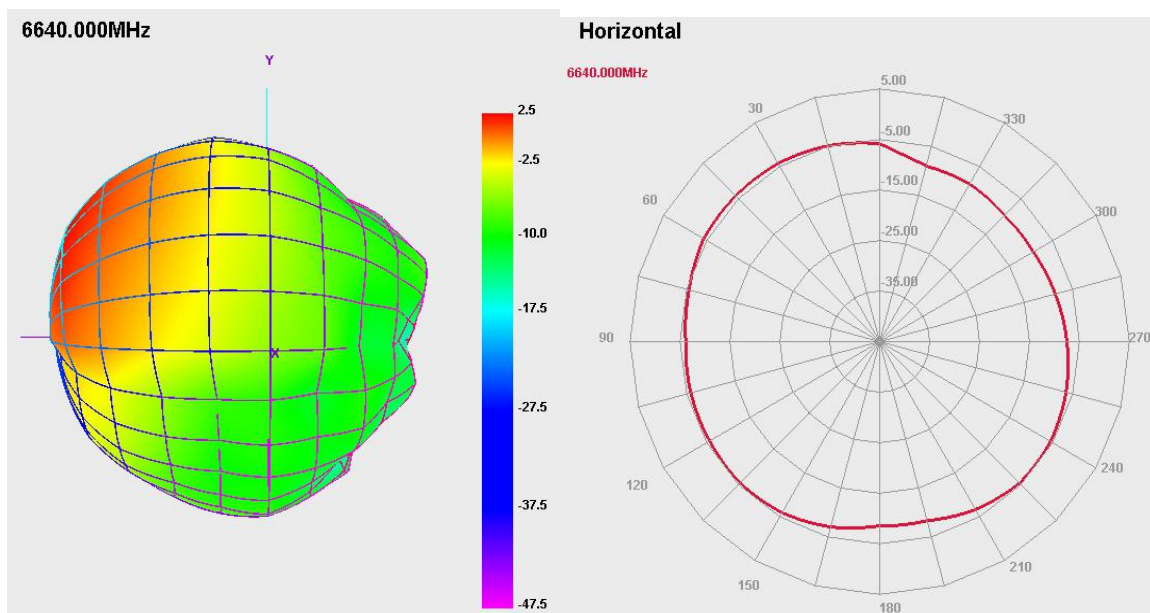
7. Antenna Diagram



MAIN ANT1-6340MHZ

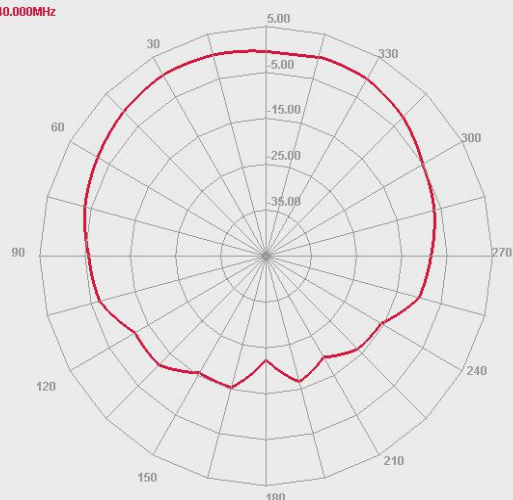


MAIN ANT1-6640MHZ



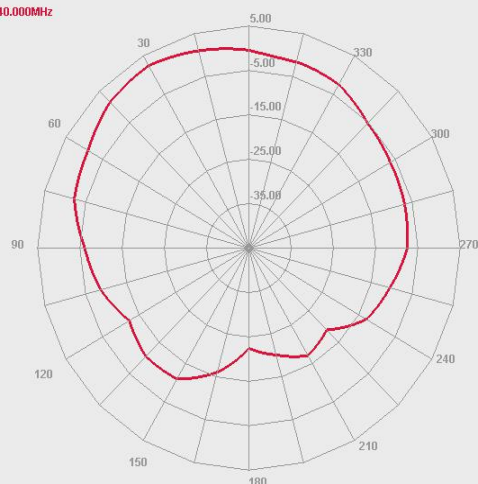
E1 Face

6640.000MHz



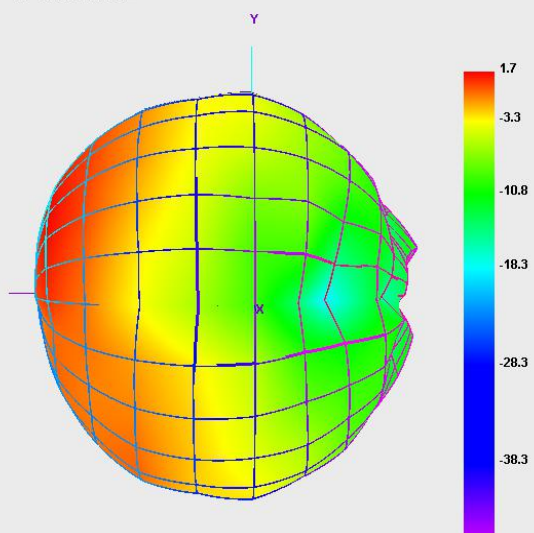
E2 Face

6640.000MHz



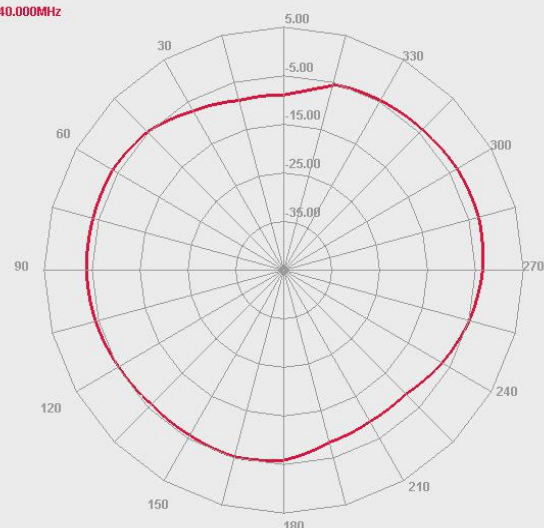
MAIN ANT2-6340MHZ

6340.000MHz



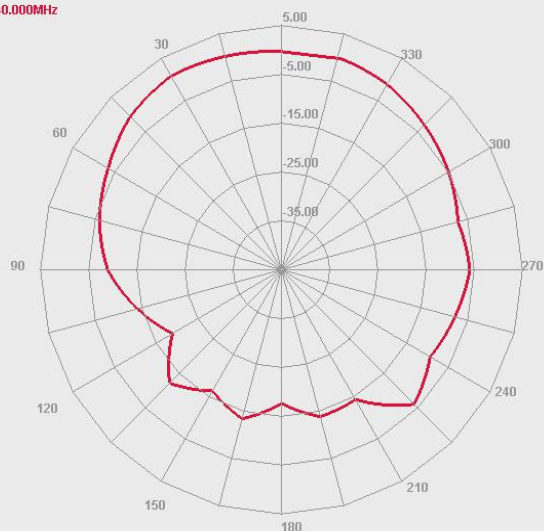
Horizontal

6340.000MHz



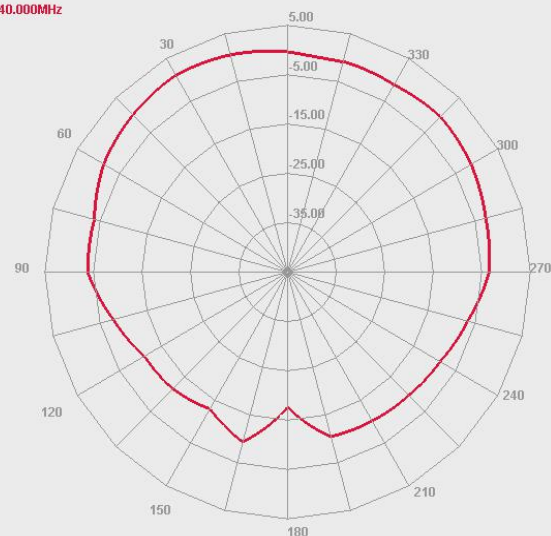
E1 Face

6340.000MHz



E2 Face

6340.000MHz



MAIN ANT2-6640MHZ

