



Antenna Test Report

Project No	P25154G4P	PCB Version	GM012E1_V1.1
Tester	XuNing	Date	2026.4.3
Auditing		Date	
Approval		Date	

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1. Project Information

1.1. Antenna Coding: ANT-BFNCNC26012

1.2. Antenna Type: FPC Antenna

1.3. Model of the DUT: MG11

1.4. Test Data : 2026.4.3

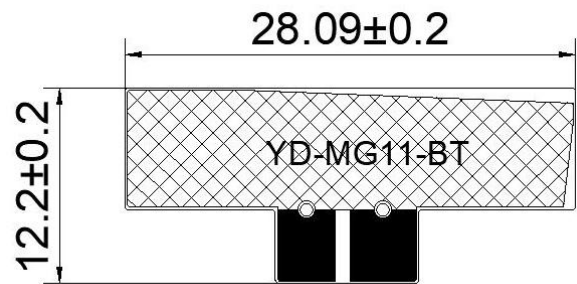
1.5. Product picture:

Product appearance	
PCB board and antenna	

2. Technical Specification

Electrical Specifications	
Frequency Range	2400-2480 MHz
Peak Gain	1.83 dBi
Efficiency	66%
Return Loss	$\leq -10\text{dB}$
VSWR	≤ 2.0
Bandwidth (S11 $\leq -10\text{dB}$)	80 MHz
Input Impedance	50 Ω
Radiation direction	Omni
Polarization Type	Linear
Lightning Protection	DC grounding
Power Capacity	1000mW (30dBm)
Mechanical Specifications	
Antenna Size	28.09 x 12.2 mm
Core Radiator	Copper
Substrate material	FPC
Substrate thickness	0.13mm $\pm$ 0.02mm
Coaxial wire	Not Required
Connect Type	Not Required
Operating Temperature	-20 to +60 $^{\circ}\text{C}$
Storage Temperature	-10 to +60 $^{\circ}\text{C}$

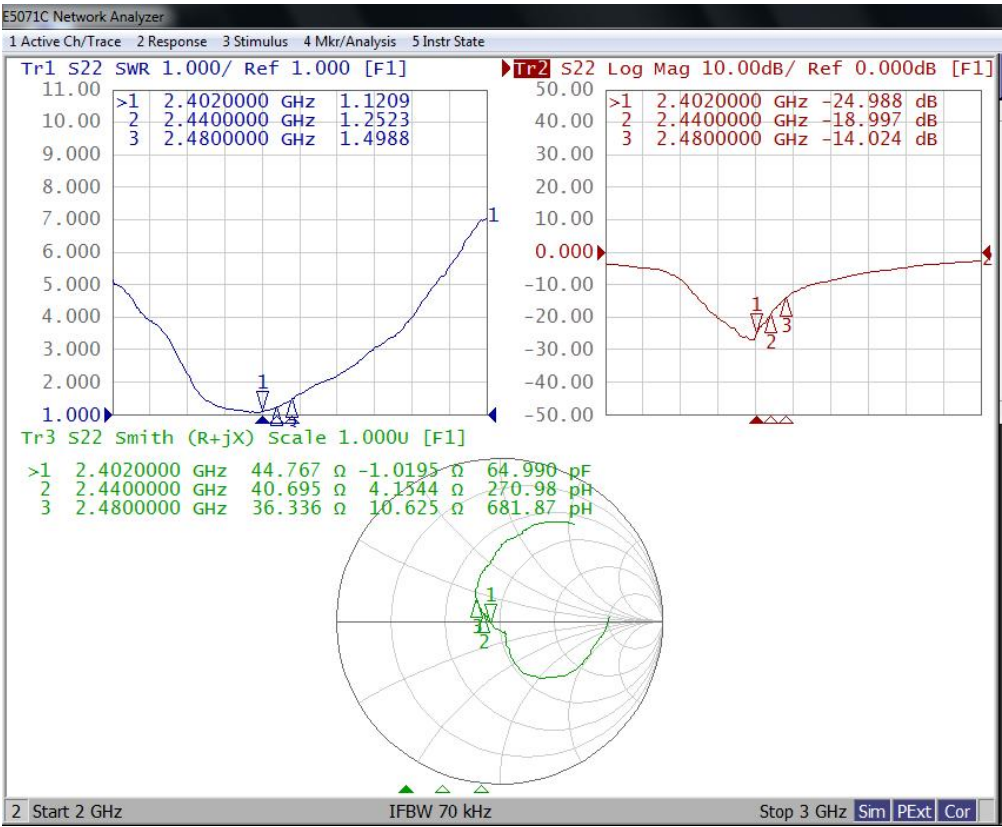
3. The shape and size of the antenna



Unit: mm

4. The result of the test

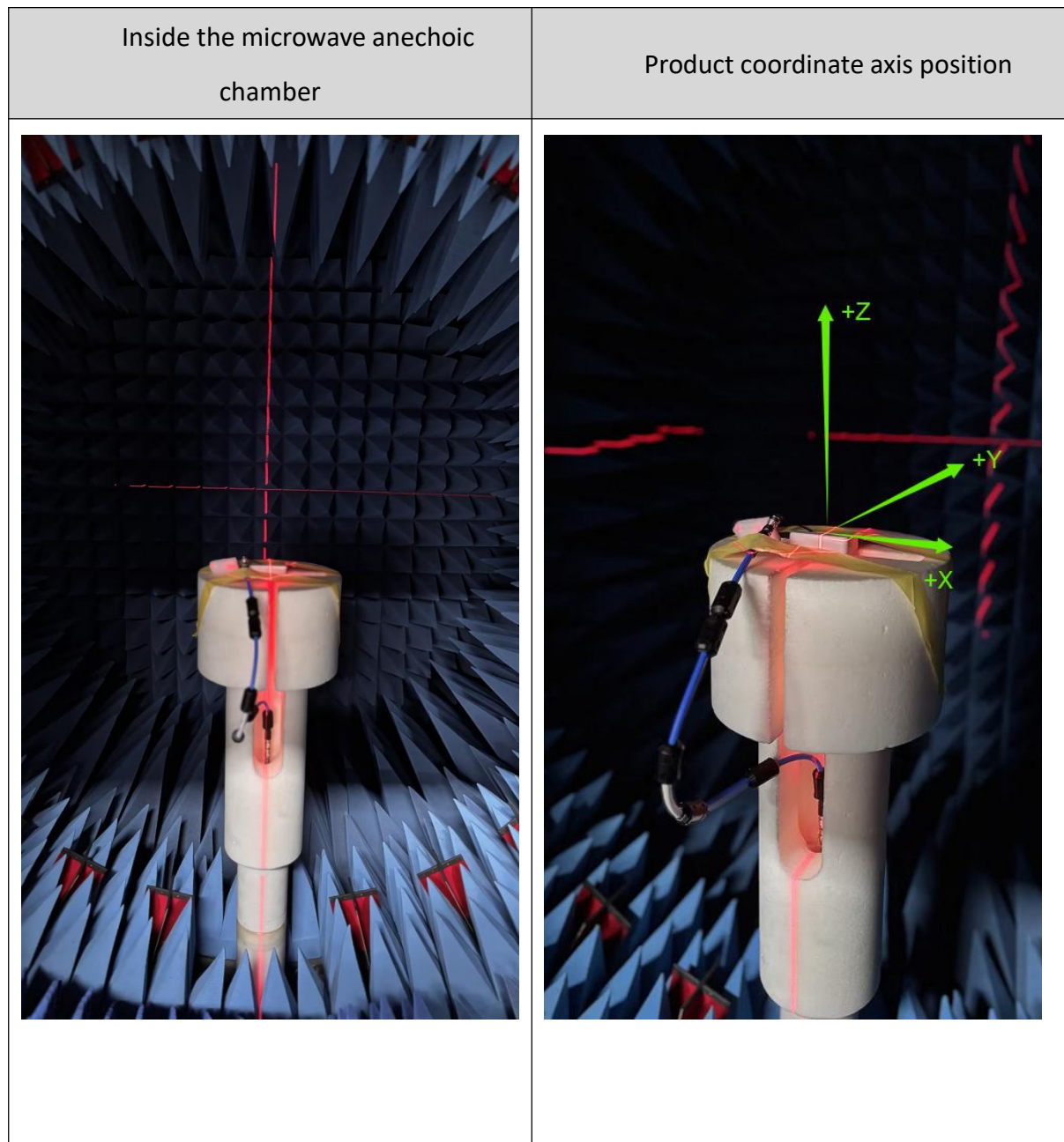
4.1. VSWR & Return loss & Smith



Frequency (MHz)	Return Loss (dB)	VSWR
2402	-24.9	1.12
2440	-18.9	1.25
2480	-14.0	1.49
Bandwidth (S11≤-10dB)	200	

4.2. Antenna Gain and Efficiency

4.2.1. Product coordinate axis position

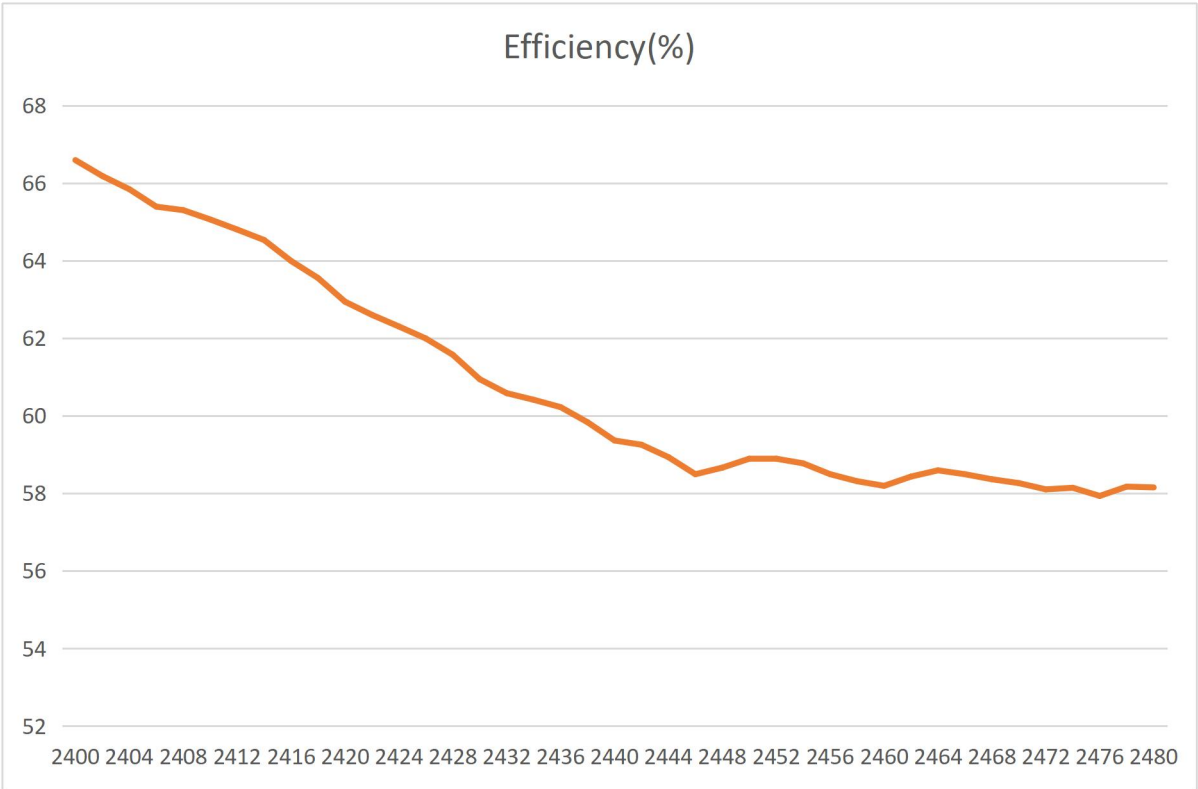
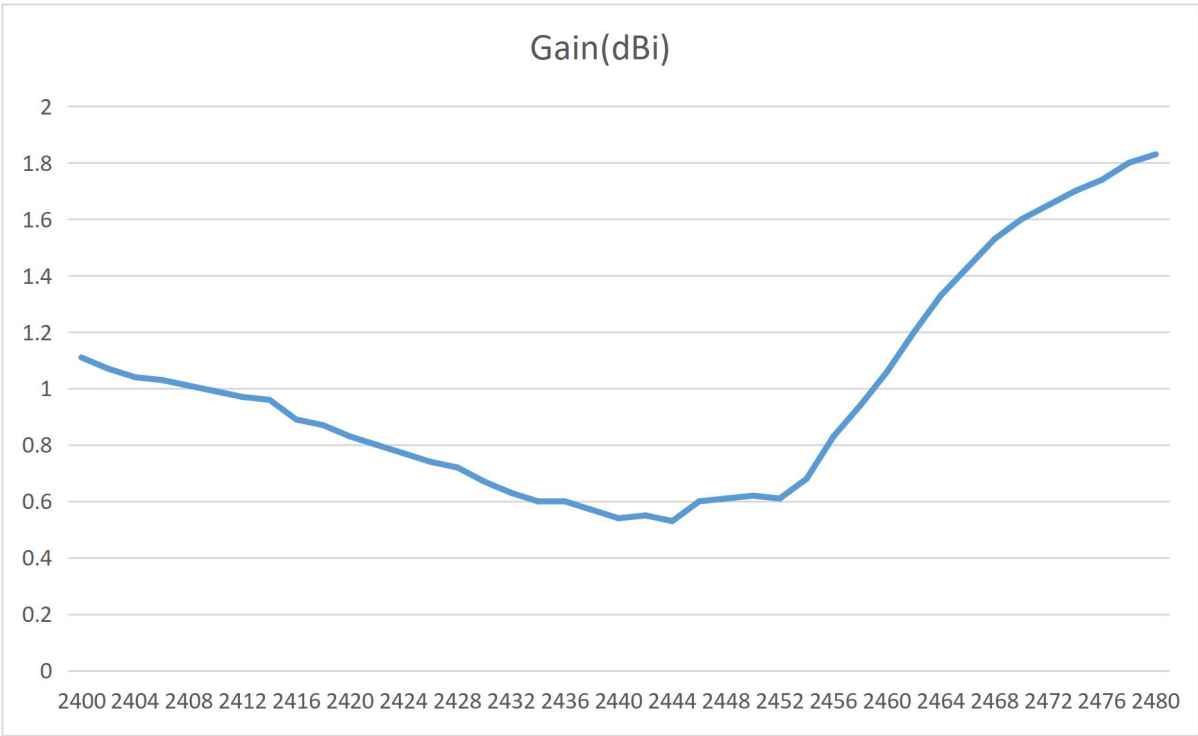


Note: The antenna towards to +Y.

4.2.2. Gain and Efficiency data sheet

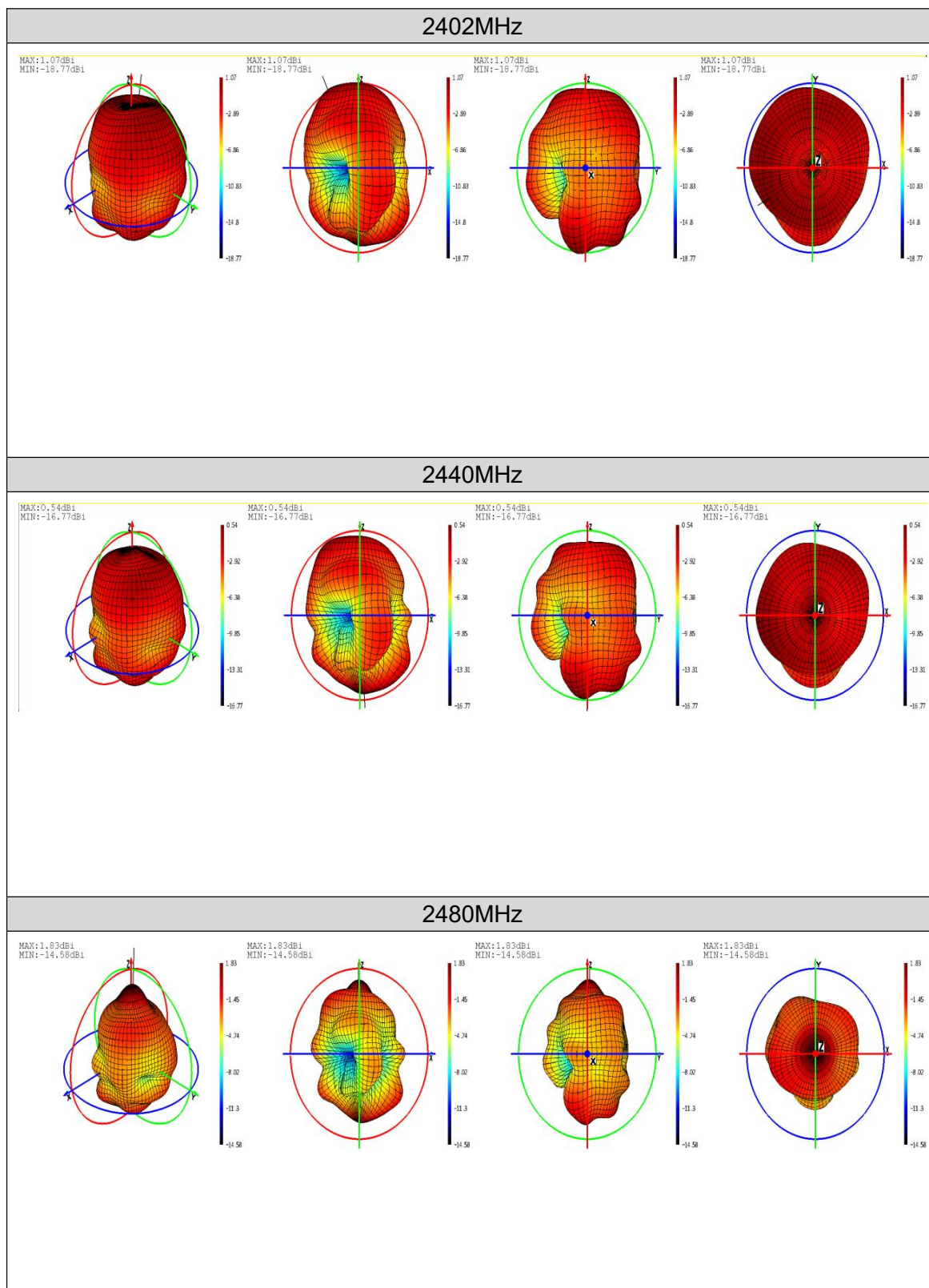
Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)	PeakGain (dBi)
2400	1.11	-1.77	66.59	1.83
2402	1.07	-1.79	66.18	
2404	1.04	-1.81	65.84	
2406	1.03	-1.84	65.39	
2408	1.01	-1.85	65.3	
2410	0.99	-1.87	65.06	
2412	0.97	-1.88	64.8	
2414	0.96	-1.9	64.53	
2416	0.89	-1.94	63.99	
2418	0.87	-1.97	63.55	
2420	0.83	-2.01	62.94	
2422	0.8	-2.03	62.6	
2424	0.77	-2.06	62.3	
2426	0.74	-2.08	61.99	
2428	0.72	-2.11	61.57	
2430	0.67	-2.15	60.94	
2432	0.63	-2.18	60.58	
2434	0.6	-2.19	60.41	
2436	0.6	-2.2	60.22	
2438	0.57	-2.23	59.83	
2440	0.54	-2.26	59.36	
2442	0.55	-2.27	59.25	
2444	0.53	-2.3	58.93	
2446	0.6	-2.33	58.49	
2448	0.61	-2.32	58.66	
2450	0.62	-2.3	58.89	
2452	0.61	-2.3	58.89	
2454	0.68	-2.31	58.77	
2456	0.83	-2.33	58.49	
2458	0.94	-2.34	58.31	
2460	1.06	-2.35	58.19	
2462	1.2	-2.33	58.43	
2464	1.33	-2.32	58.59	
2466	1.43	-2.33	58.49	
2468	1.53	-2.34	58.36	
2470	1.6	-2.35	58.26	
2472	1.65	-2.36	58.1	
2474	1.7	-2.36	58.14	
2476	1.74	-2.37	57.93	
2478	1.8	-2.35	58.17	
2480	1.83	-2.35	58.15	

4.2.3. Graphs of Gain and Efficiency

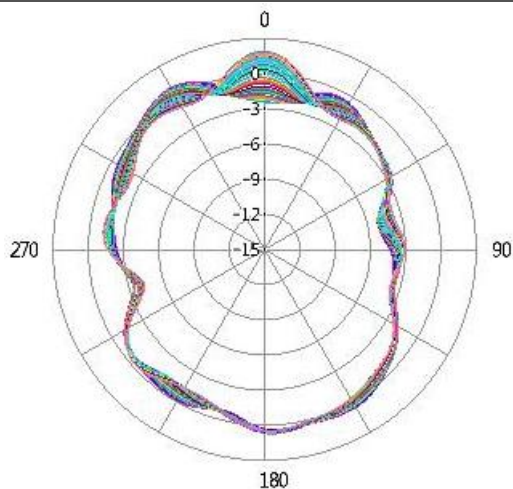
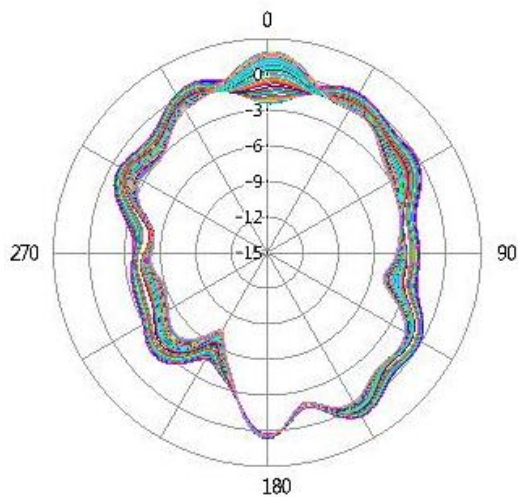


4.3.Radiation Pattern

4.3.1. 3D Radiation Pattern



4.3.2. 2D Radiation Pattern

E1, XZ-Face, $\phi=0^\circ$; (E1, $\theta=0^\circ\sim 360^\circ$, $\phi=0^\circ$)E2, YZ-Face, $\phi=90^\circ$; (E2, $\theta=0^\circ\sim 360^\circ$, $\phi=90^\circ$)H, XY-Face, $\theta=90^\circ$; (H, $\phi=0^\circ\sim 360^\circ$, $\theta=90^\circ$)