

SPECIFICATION FOR APPROVAL

CUSTOMER :	
Antenna :	FPCB Antenna
PART NO. :	
DZZ NO. :	N12-7701-R0A
REV. :	1.0

	MANUFACTURERR SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY:	Huiping Feng	Jiehui Liu
DATE:	13/09/2023	13/09/2023

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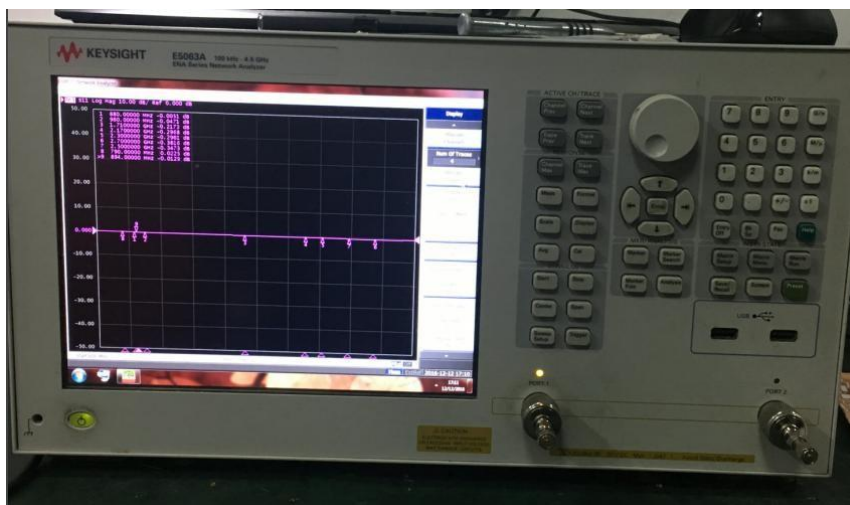
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1.RF Fixture Experiment

1.1 Test Setup

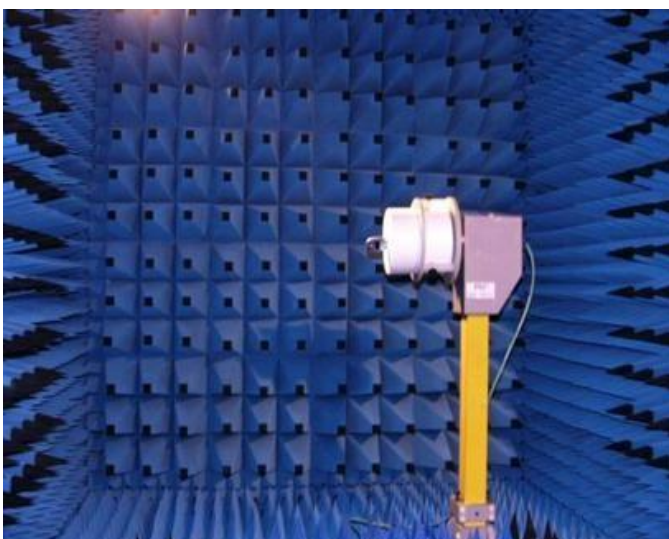
1.1.1 VNA Test Setup

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



1.1.2 Anechoic Chamber Test Setup

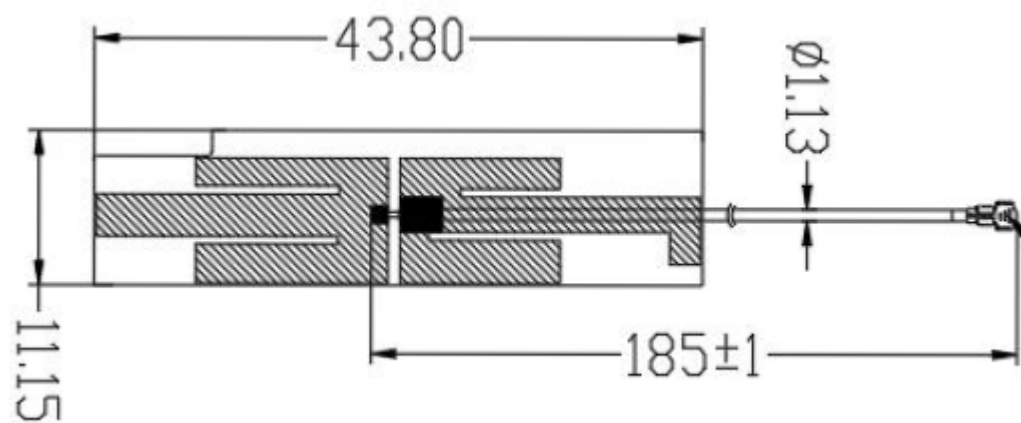
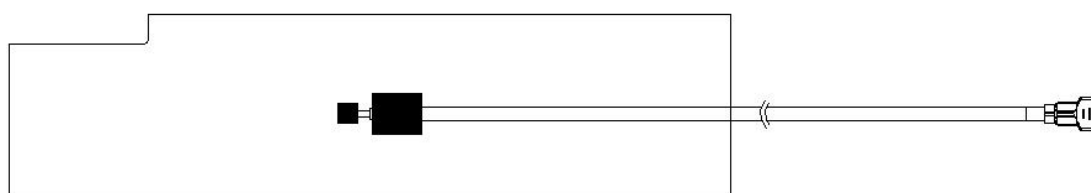
When we test Gain and Efficiency of the antenna, we will use the ETS 3D chamber. The chamber provides test frequency from 400MHz to 6GHz. The real test environment is showing as following picture





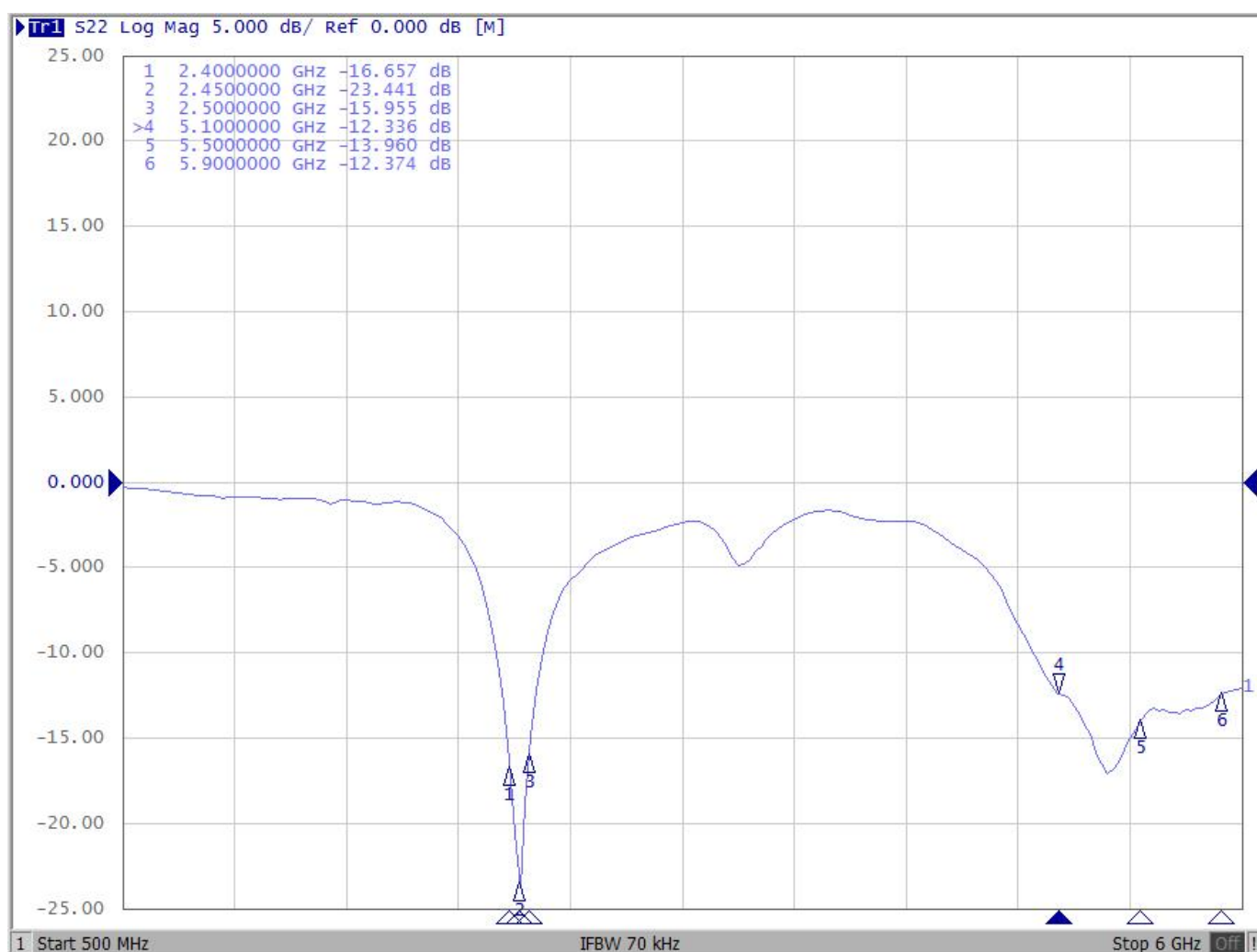
1.2 UE configuration

1.2.1 Antenna pictures and size information



Unit (mm)

2. S11



3. Peak Gain & Efficiency

2.4 Efficiency / Gain

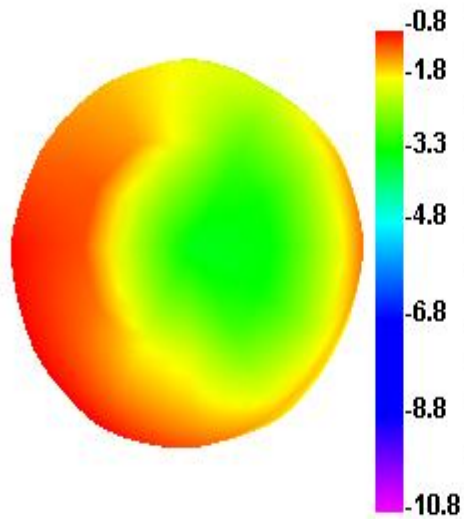
Freq (MHz)	Effi (%)	Gain (dBi)
2400	47.18	1.25
2410	44.72	1.57
2420	45.22	1.69
2430	46.65	1.54
2440	47.53	1.34
2450	50.22	1.22
2460	51.2	1.6
2470	53.22	1.55
2480	55.57	1.88
2490	56.15	1.86
2500	57.55	1.98

5.8 Efficiency / Gain

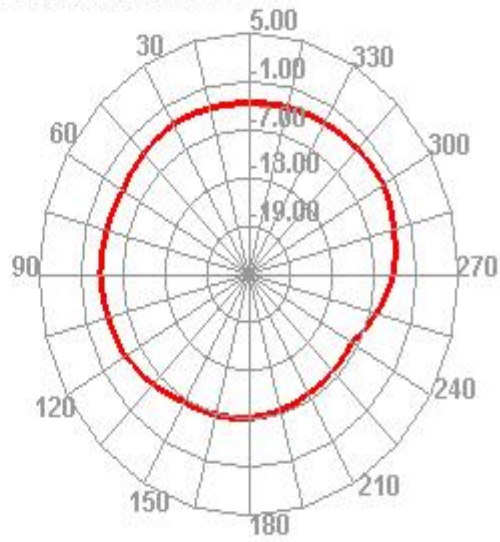
Freq (MHz)	Effi (%)	Gain (dBi)
5150	48.52	3.35
5200	45.23	2.45
5250	44.44	2.7
5300	45.11	2.22
5350	48.06	2.68
5400	52.36	3.22
5450	50.21	3.56
5500	49.29	3.29
5550	49.55	3.36
5600	50.18	3.55
5650	49.71	3.18
5700	46.26	2.52
5750	48.36	2.68
5800	46.91	2.42
5850	42.39	1.96

2.4G

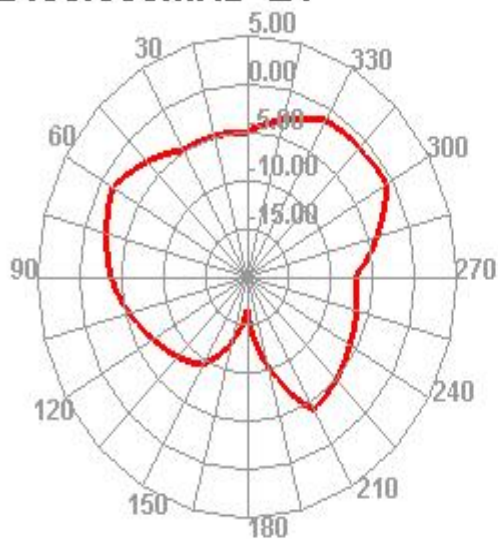
2400.000MHz



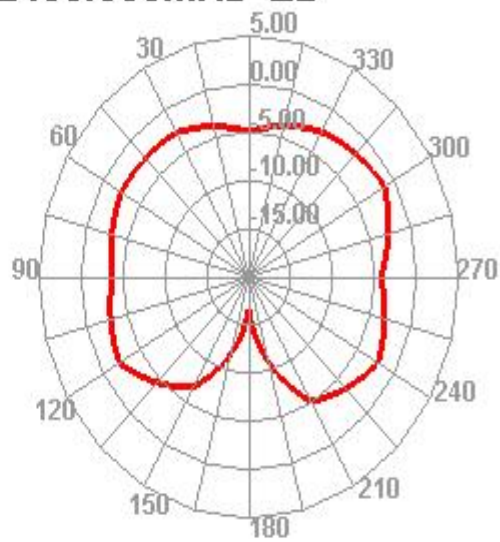
2400.000MHz H



2400.000MHz E1

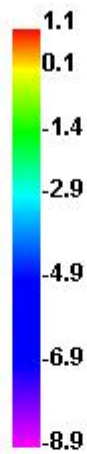
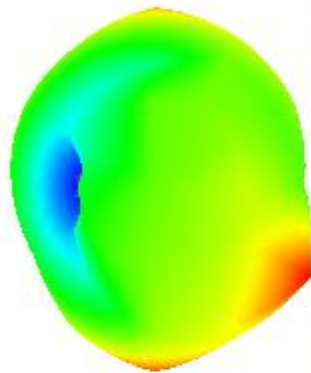


2400.000MHz E2

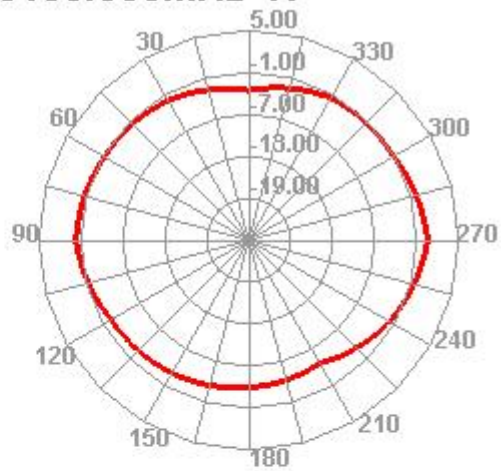


5G

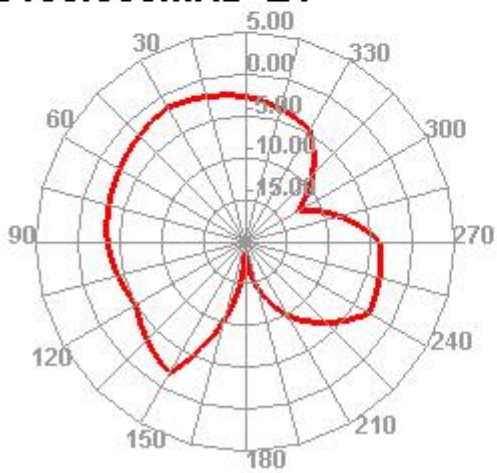
5150.000MHz



5150.000MHz H



5150.000MHz E1



5150.000MHz E2

