Quectel Antenna Specification

Product No.: Y0HRY00A0AA
Version: 1.0
Date: 2024-04-12

Product Name: 4G External Antenna
Main Specification:
Frequency Range: 700-960MHz, 1710-2690MHz
Size: 209.23 × 42.0 × 13.0 mm
Efficiency: Max. 81%
Comply with RoHS Environmental Standards
IP65

1 Specifications

Test status: Free space - single antenna

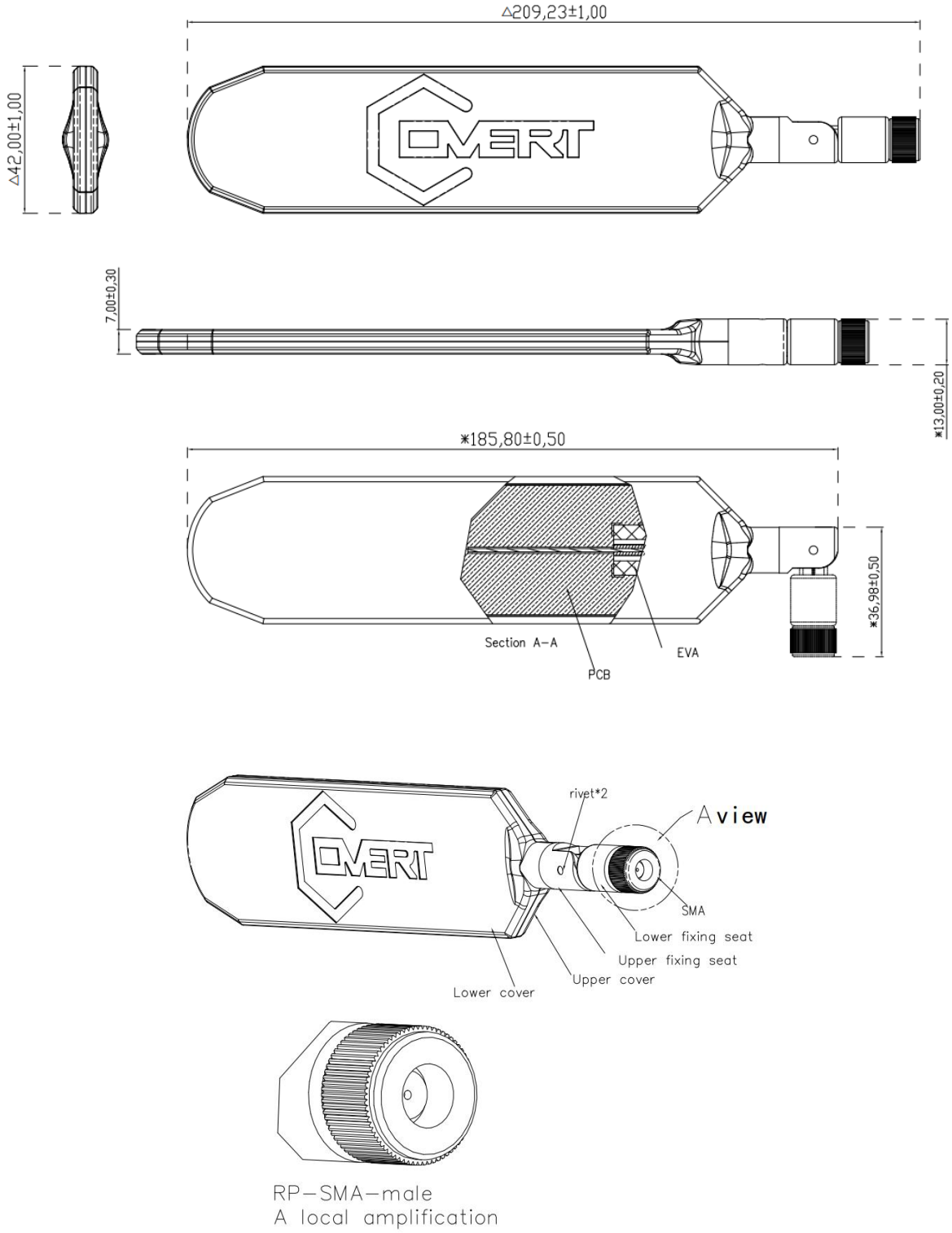
1.1. Electrical properties

Electrical Specifications	
Frequency Range	700-960MHz, 1710-2690MHz
Impedance	50 Ω
Polarization mode	Linear polarization
Radiation pattern	Omnidirectional
VSWR	≤ 5.1
Peak Gain	≤ 3.5 dBi

1.2. Mechanical and Environmental Characteristics

Mechanical	
Antenna Size	209.23 × 42.0 × 13.0 mm
Housing Material & Color	PC/ABS & Black
Connector Type	RP-SMA-Male
Weight	about 40.17 g
Installation Type	Nut locking
Environment	
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Waterproof Level	IP65
Comply with Environmental Standards	RoHS

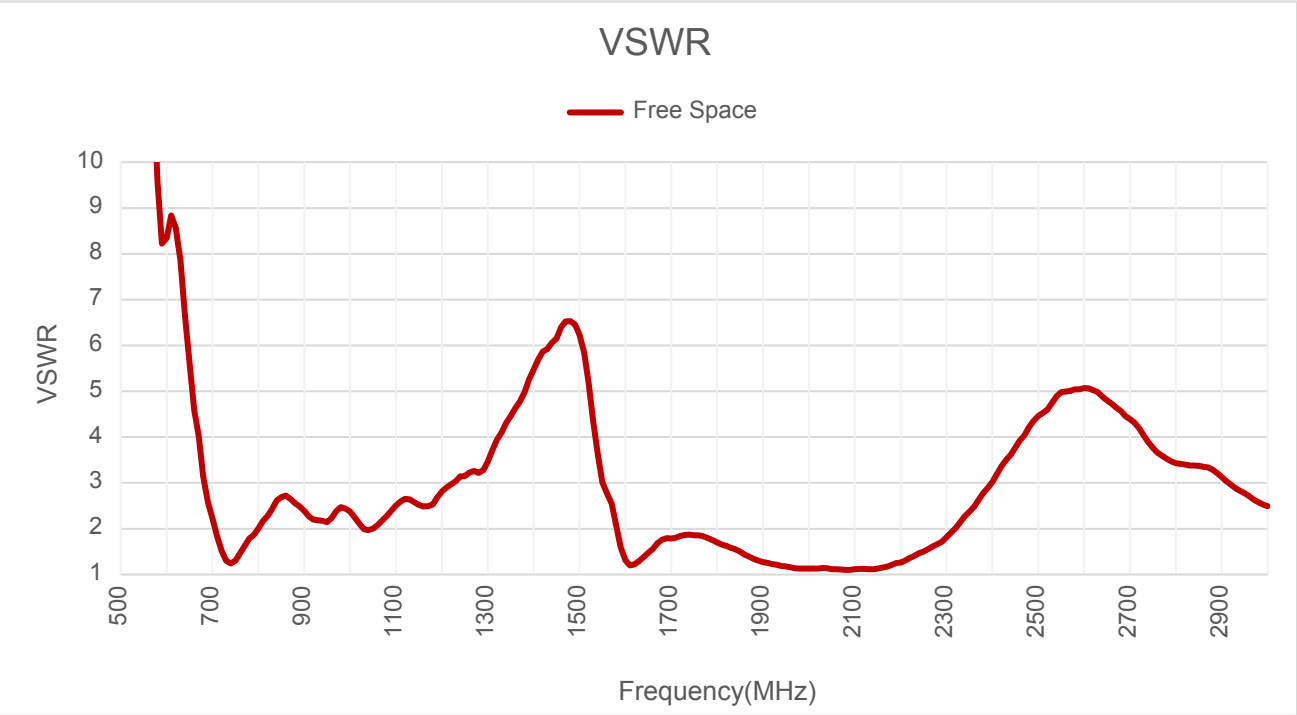
2 Drawing


△209,23±1,00
△42,00±1,00
7,00±0,30
*13,00±0,20
*185,80±0,50
*36,98±0,50
Section A-A
PCB
EVA
rivet*2
A view
SMA
Lower fixing seat
Upper fixing seat
Upper cover
Lower cover
RP-SMA-male
A local amplification

3 Detailed Performance Parameters

3.1. S Parameter Test

3.1.1. VSWR

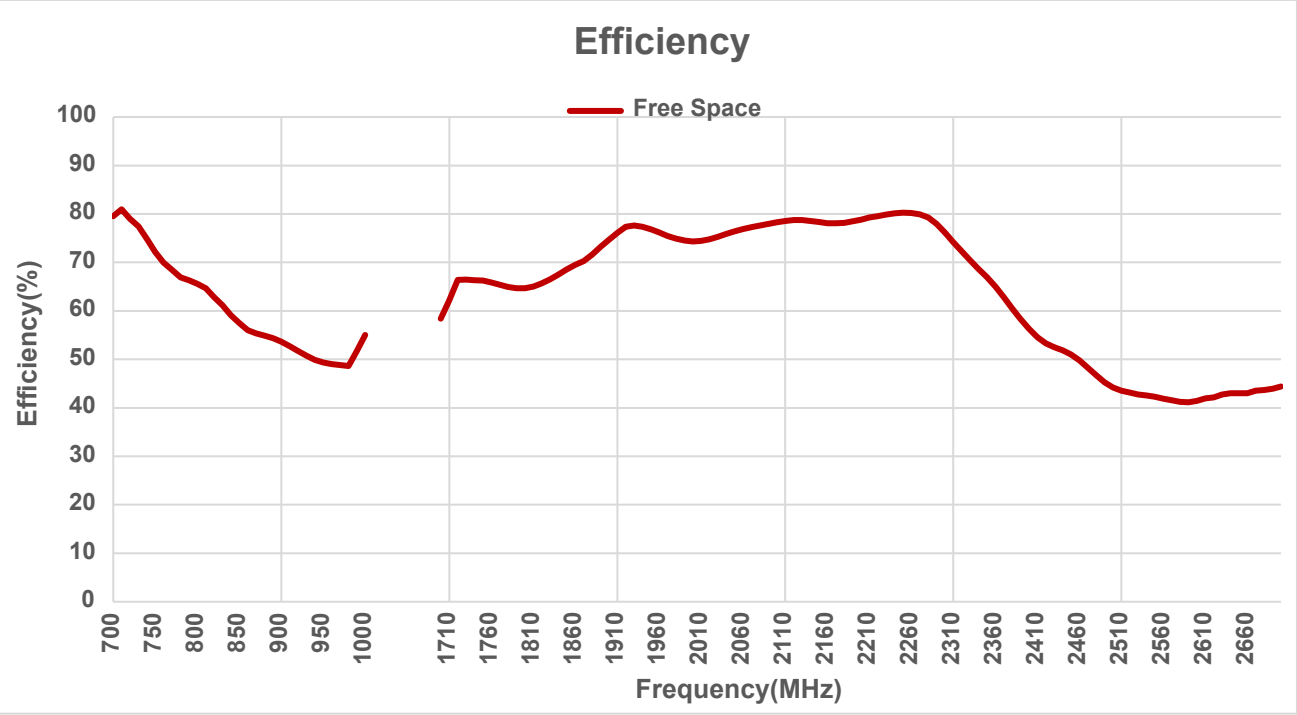


VSWR

F (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
VSWR	-	-	1.8	2.4	2.4	2.2	-	1.8	1.9	1.3
F (MHz)	**1950**	**2140**	**2350**	**2450**	**2600**	**2690**	**4700**	**5000**	**5500**	**6000**
VSWR	1.2	1.1	2.4	3.8	5.1	4.5	-	-	-	-

3.2. Radiation Performance Test

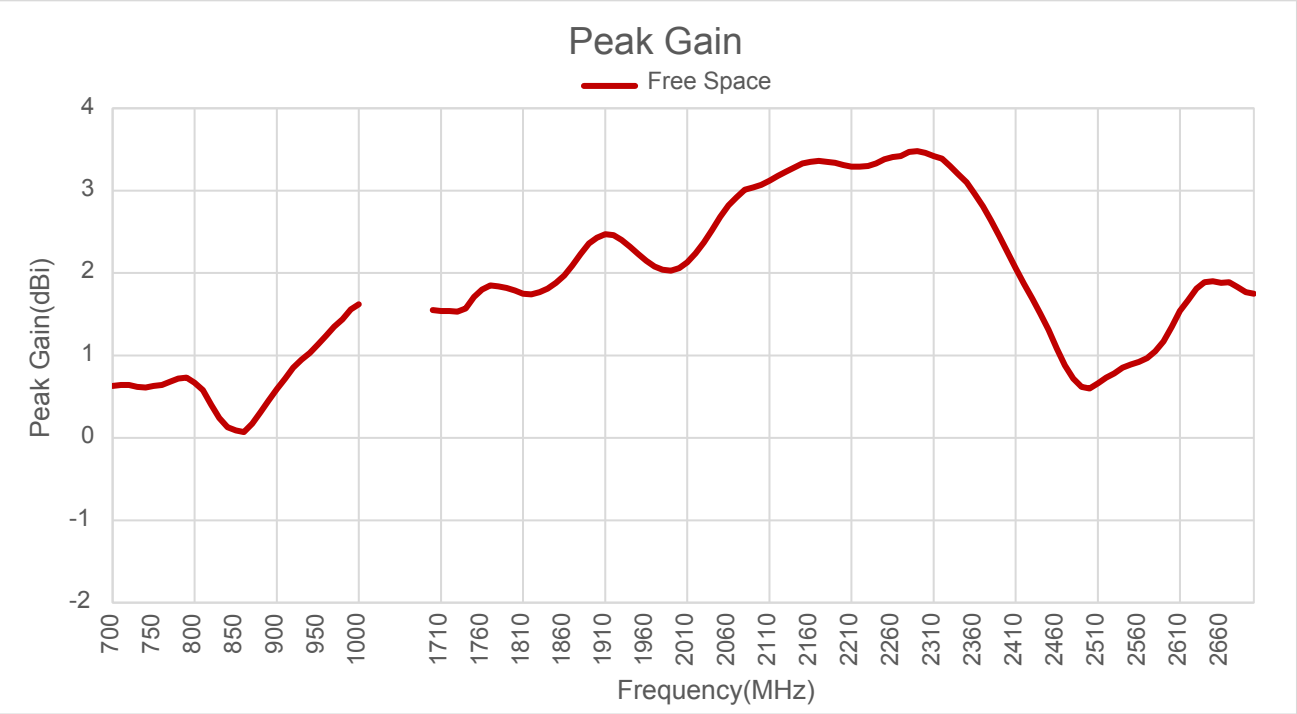
3.2.1. Efficiency



Efficiency (%)

F (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Efficiency(%)	-	-	81.0	61.2	53.6	49.0	-	62.2	66.4	71.6
F (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Efficiency(%)	76.9	78.5	67.0	51.0	41.4	43.9	-	-	-	-

3.2.2. Peak Gain

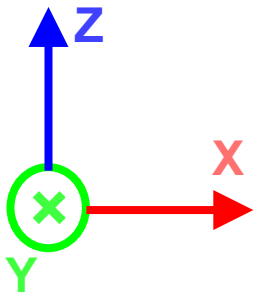


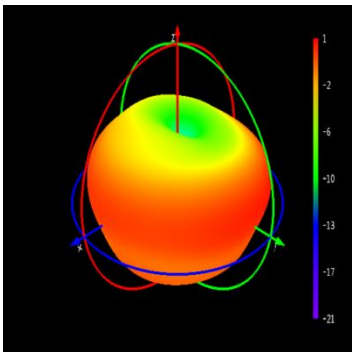
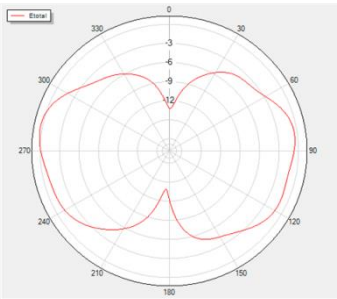
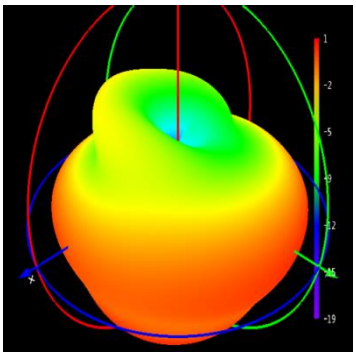
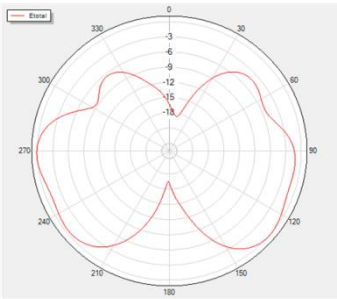
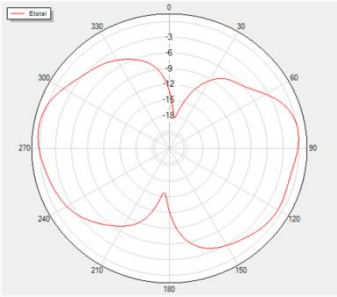
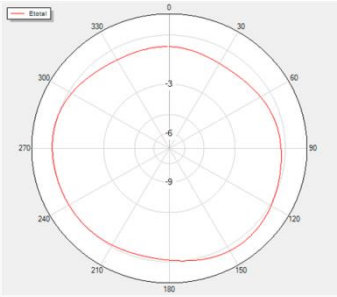
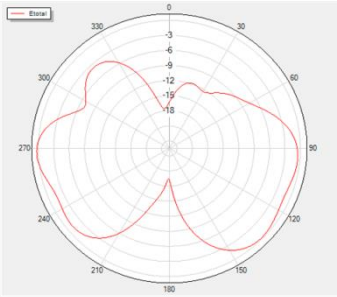
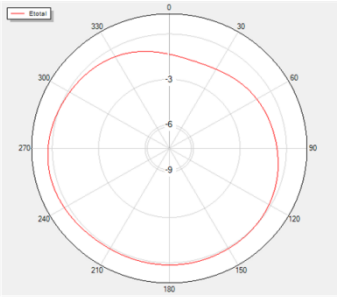
Peak Gain (dBi)

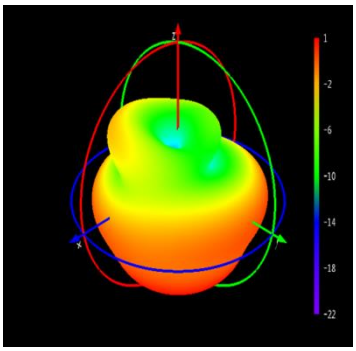
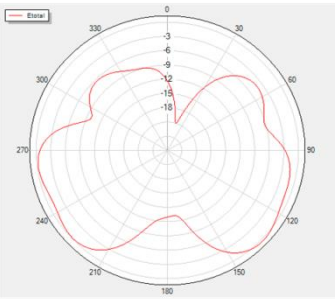
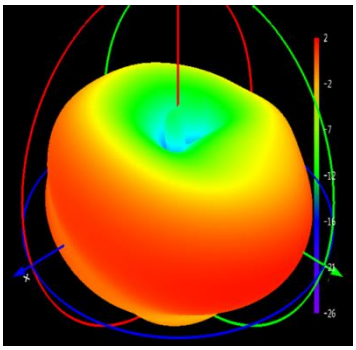
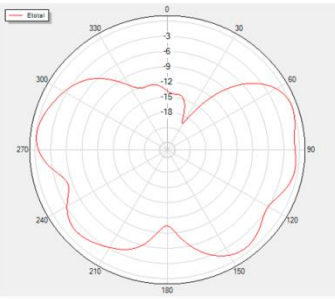
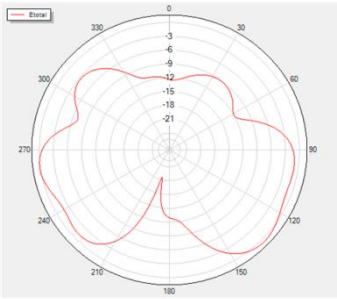
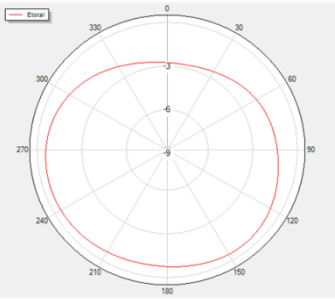
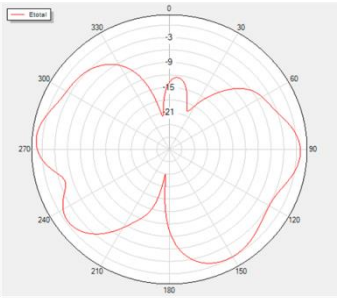
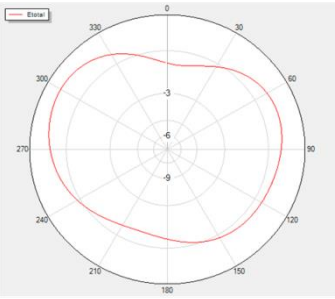
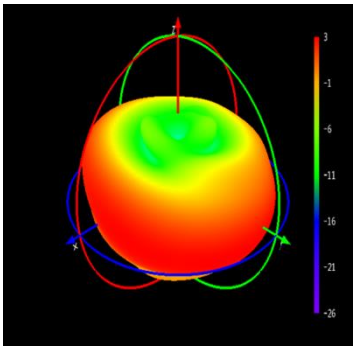
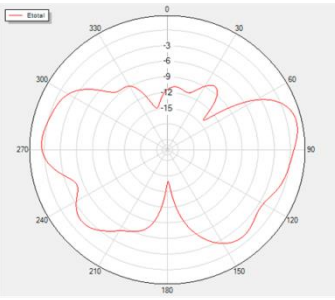
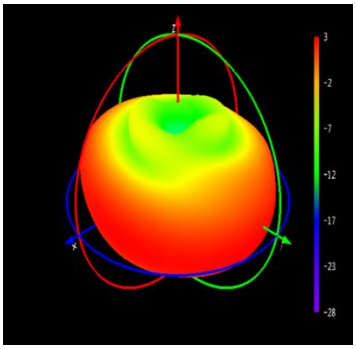
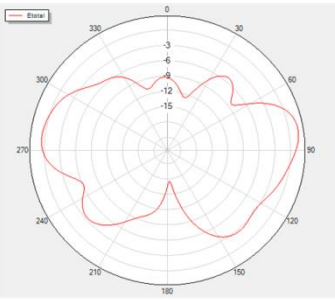
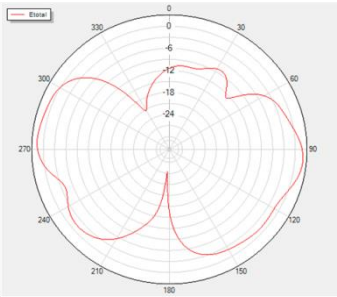
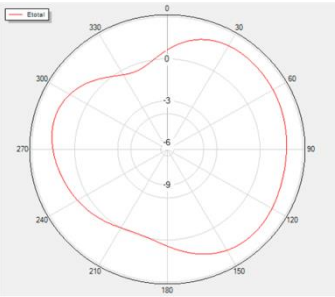
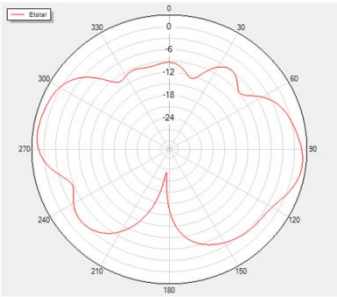
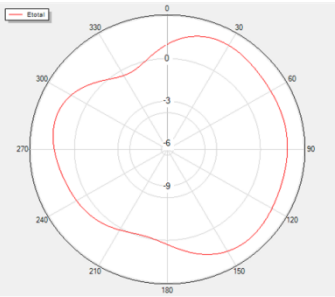
F (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Peak Gain (dBi)	-	-	0.6	0.2	0.6	1.2	-	1.5	1.6	2.2
F (MHz)	**1950**	**2140**	**2350**	**2450**	**2600**	**2690**	**4700**	**5000**	**5500**	**6000**
Peak Gain (dBi)	2.2	3.3	3.1	1.3	1.4	1.8	-	-	-	-

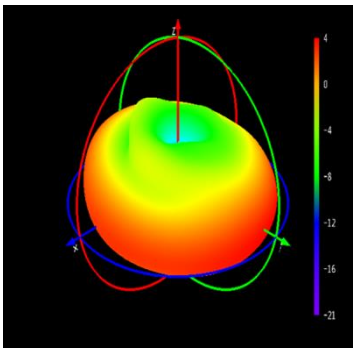
3.2.3. 2D Radiation Pattern

- Test status: Free space - single antenna
- Test Lab: SZ-S-1



710 MHz		830 MHz	
	Phi=0 Freq=710MHz 		Phi=0 Freq=830MHz 
Phi=90 Freq=710MHz 	Theta=90 Freq=710MHz 	Phi=90 Freq=830MHz 	Theta=90 Freq=830MHz 

900 MHz		1740 MHz	
	Phi=0 Freq=900MHz 		Phi=0 Freq=1740MHz 
Phi=90 Freq=900MHz 	Theta=90 Freq=900MHz 	Phi=90 Freq=1740MHz 	Theta=90 Freq=1740MHz 
1880 MHz		1950 MHz	
	Phi=0 Freq=1880MHz 		Phi=0 Freq=1950MHz 
Phi=90 Freq=1880MHz 	Theta=90 Freq=1880MHz 	Phi=90 Freq=1950MHz 	Theta=90 Freq=1950MHz 
2140 MHz		2350 MHz	



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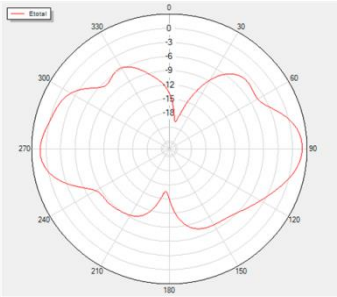

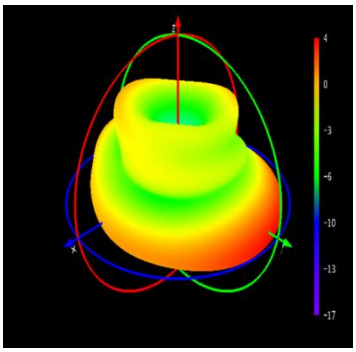

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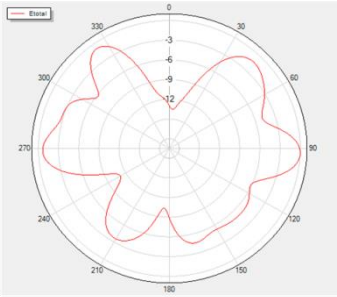

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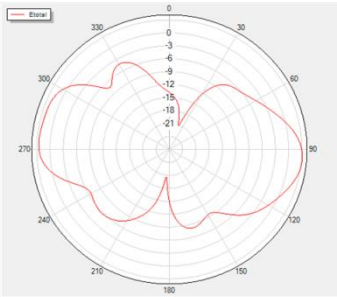

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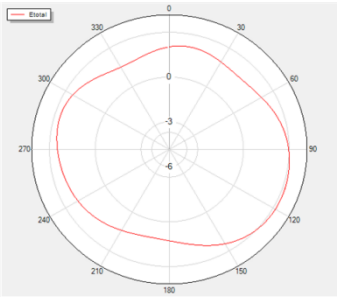

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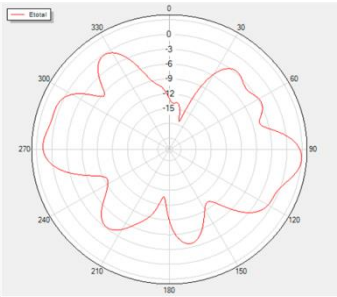

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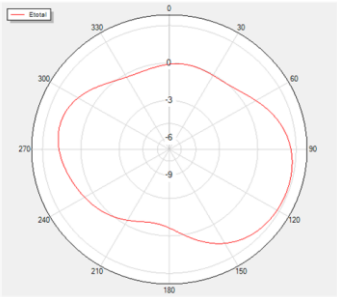
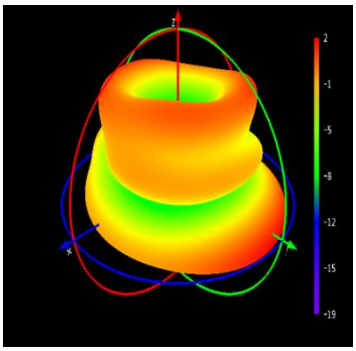
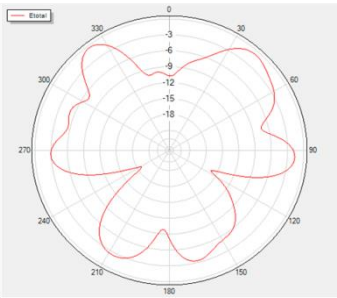


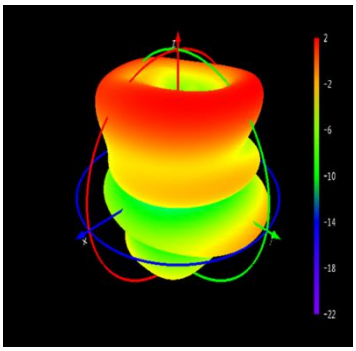
2450 MHz

2600 MHz

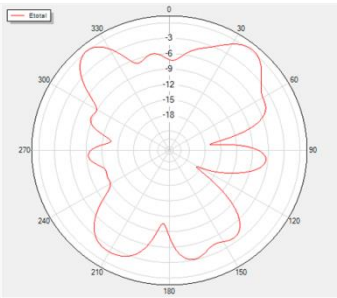


Phi=0 Freq=2450MHz

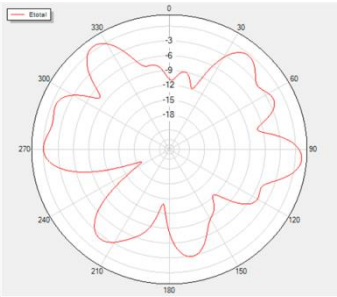




Phi=0 Freq=2600MHz



Phi=90 Freq=2450MHz



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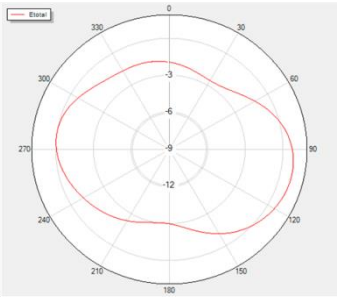
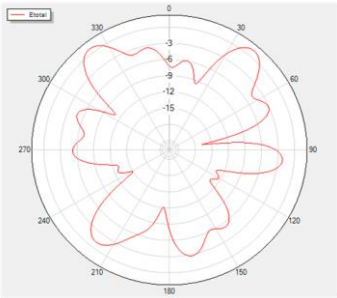
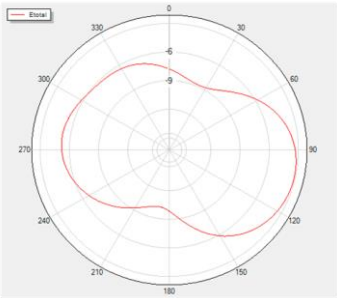


Phi=90 Freq=2600MHz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