



Shenzhen Yimingyuan Technology Co., Ltd

One stop communication RF antenna solution manufacturer

Antenna test report

Shenzhen Yimingyuan Technology Co., Ltd

Address: 2nd Floor, Building 5, Yifenghua Innovation
Industrial Park, Dalang Street, Longhua District, Shenzhen

Operator: Song Bingwei

tester: Huang He

TEL: 134 2435 5302

Report edition: 2025.03.18

One stop communication RF antenna solution manufacturer

Information of Antenna

Customer Information:

Customer: Dongguan Thermal Electronic Technology Co., Ltd

Customer Address: No. 28 Jinyuling Road, Dongcheng Street,
Dongguan City, Guangdong Province, China

Project Name: BenQ Dongle

Antenna manufacturing information:

Antenna manufacturing: Wei Ken Technology (Huizhou)

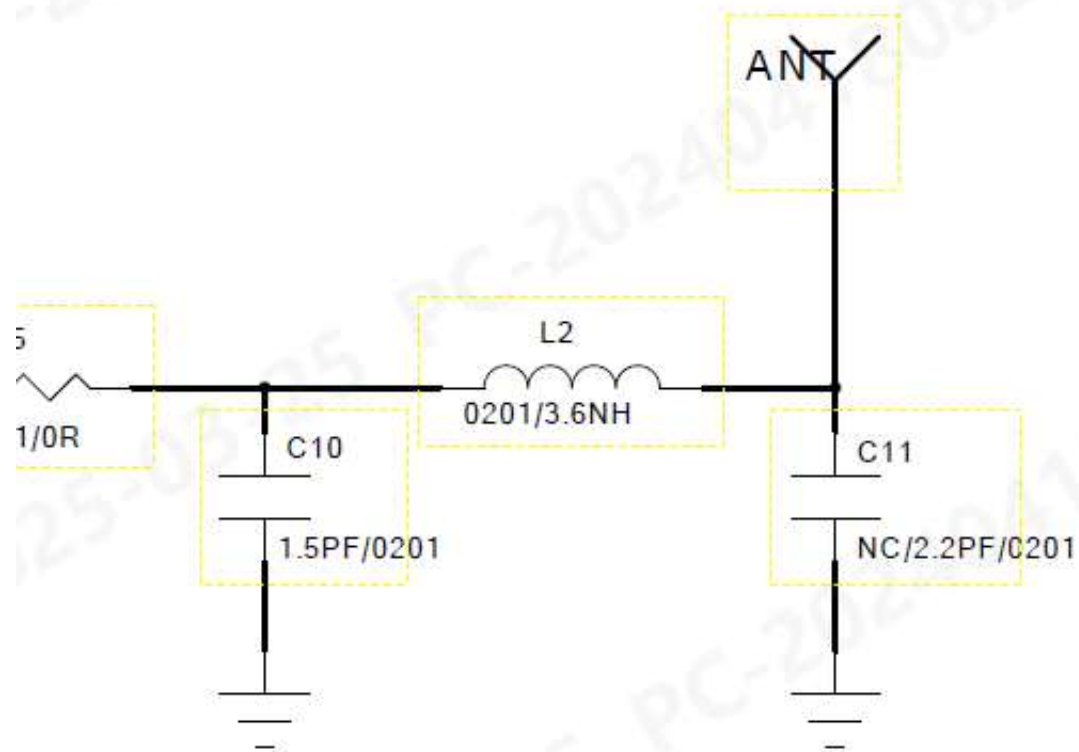
Antenna model:U2-DW-DONGLE

Antenna type: Onboard antenna

Antenna gain: 5.47dBi

Antenna manufacturing address: No. 18, West Petrochemical Avenue,
Xiangshuihe Industrial Park, Dayawan District, Huizhou City

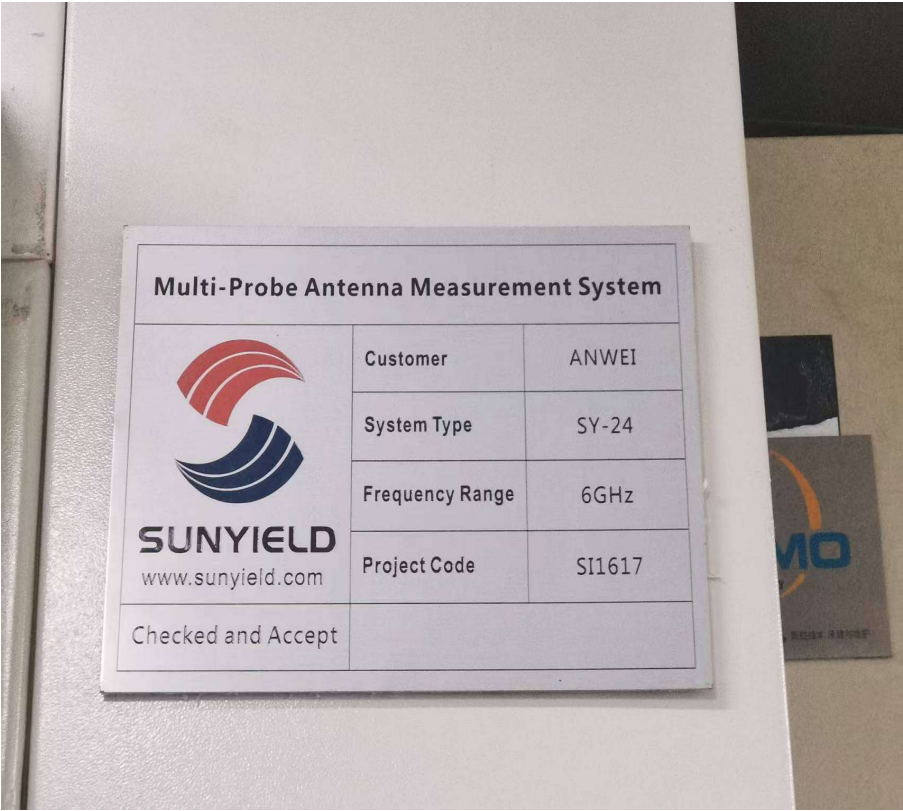
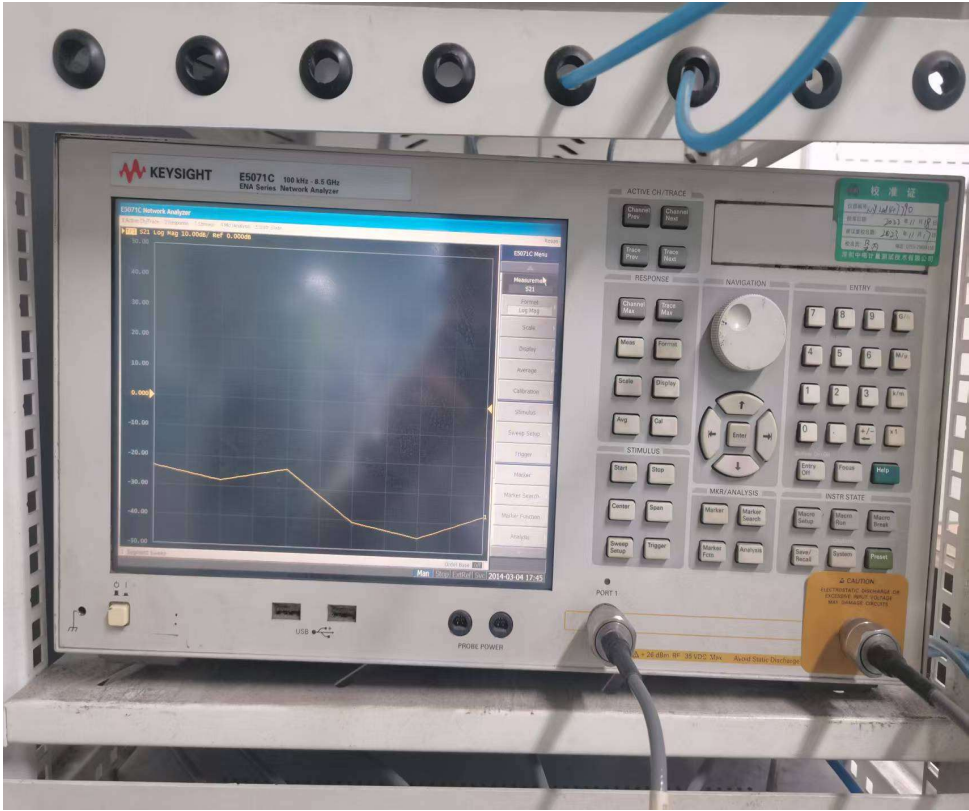
Main antenna matching circuit



Antenna smith circle chart and S11 parameters

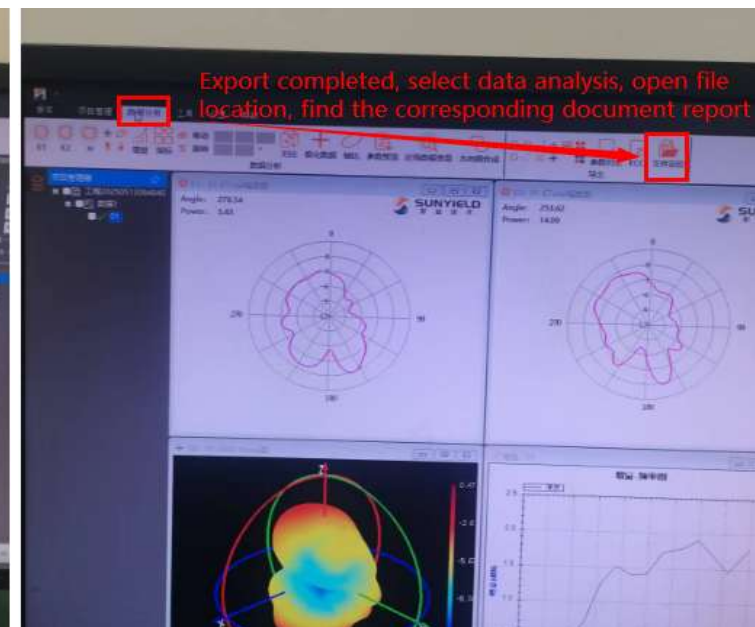
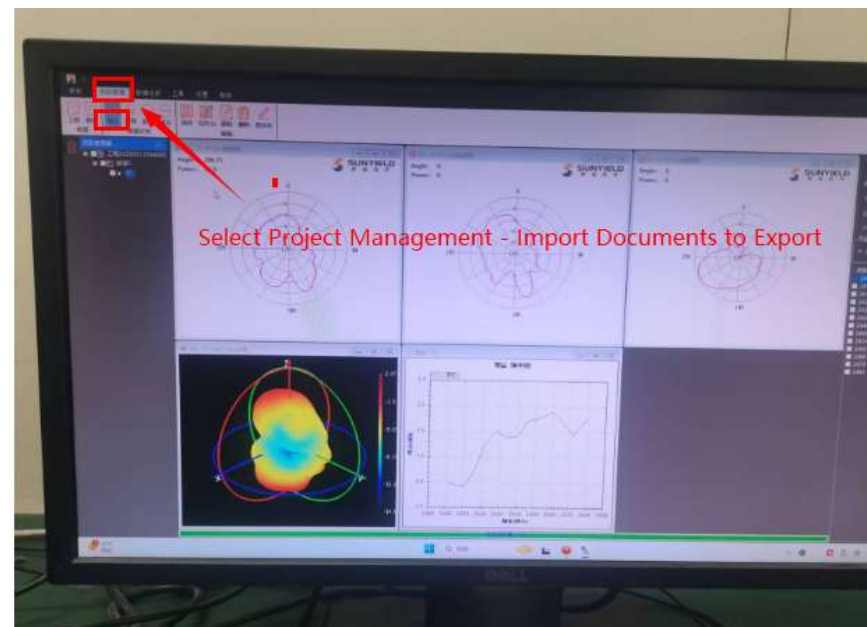
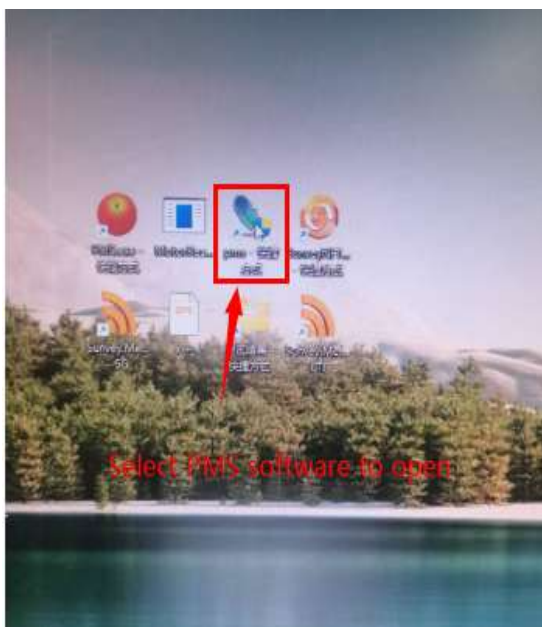
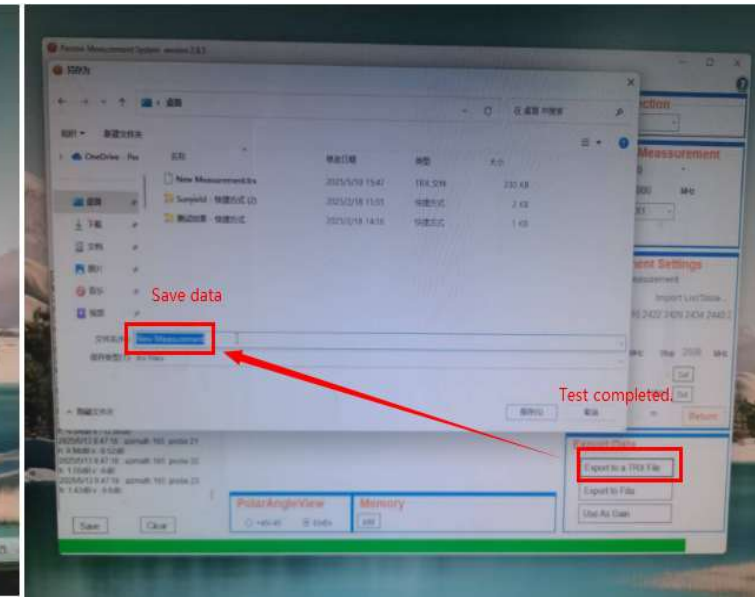
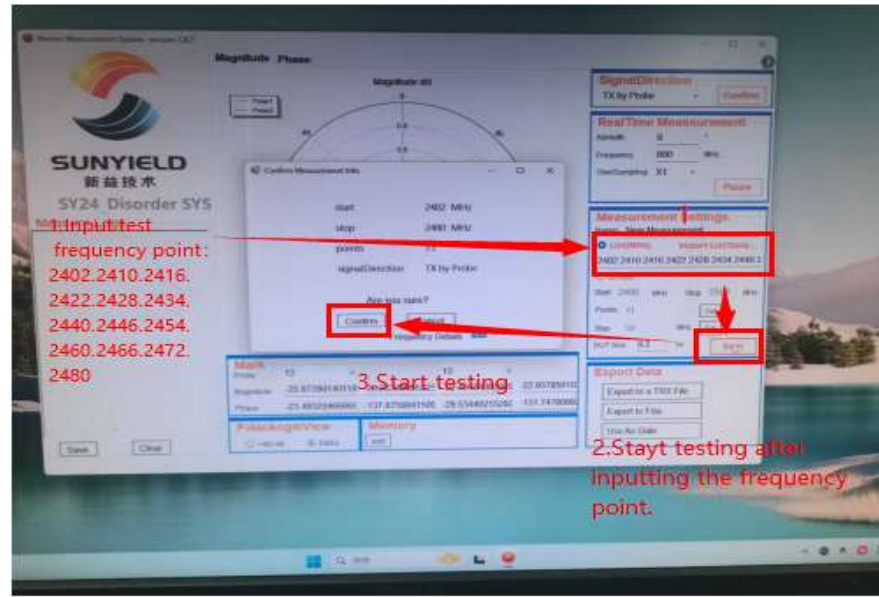


Testing instruments and software



name	network analyzer
brand	Agilent Technologies
model	E5071C
serial number	MY46104453
calibration time	2024/8/25
Next calibration time	2025/8/24

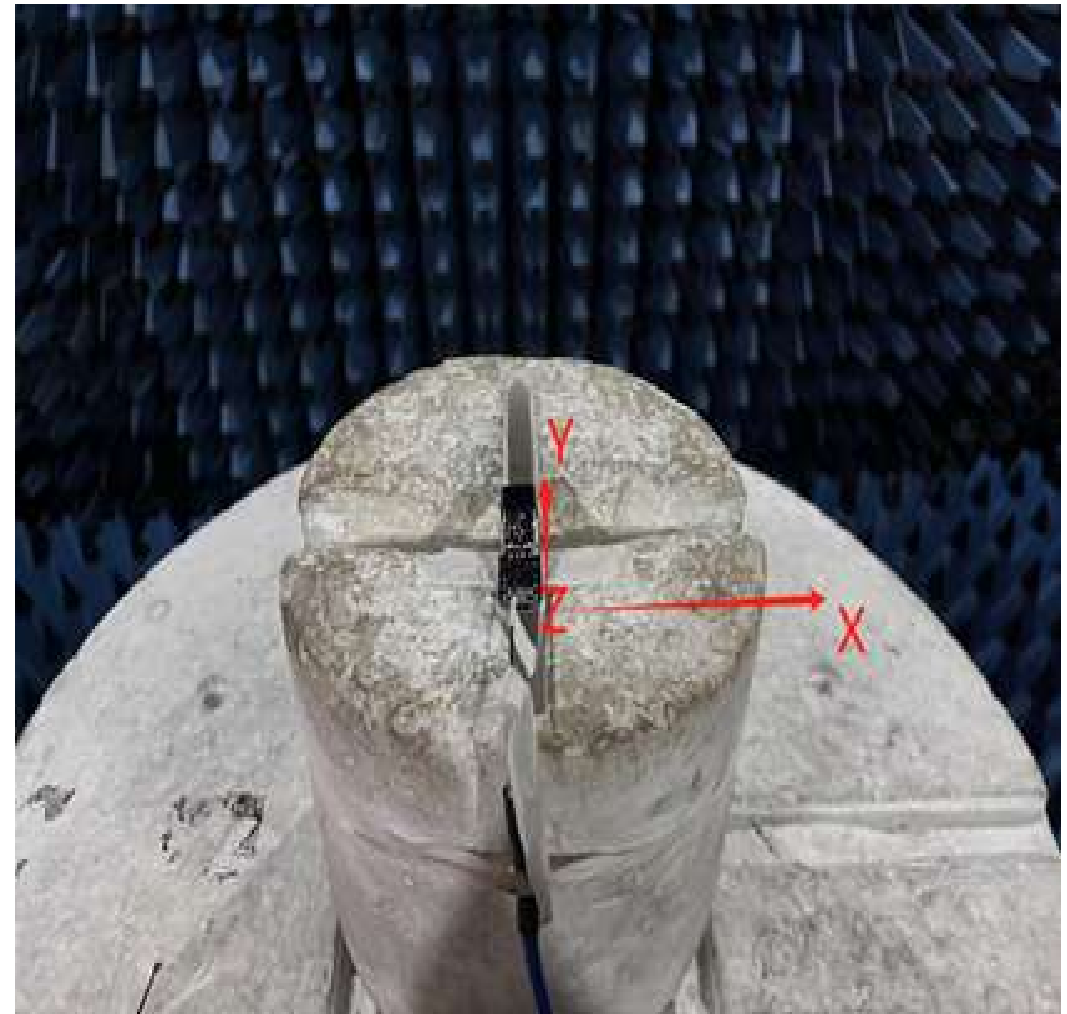
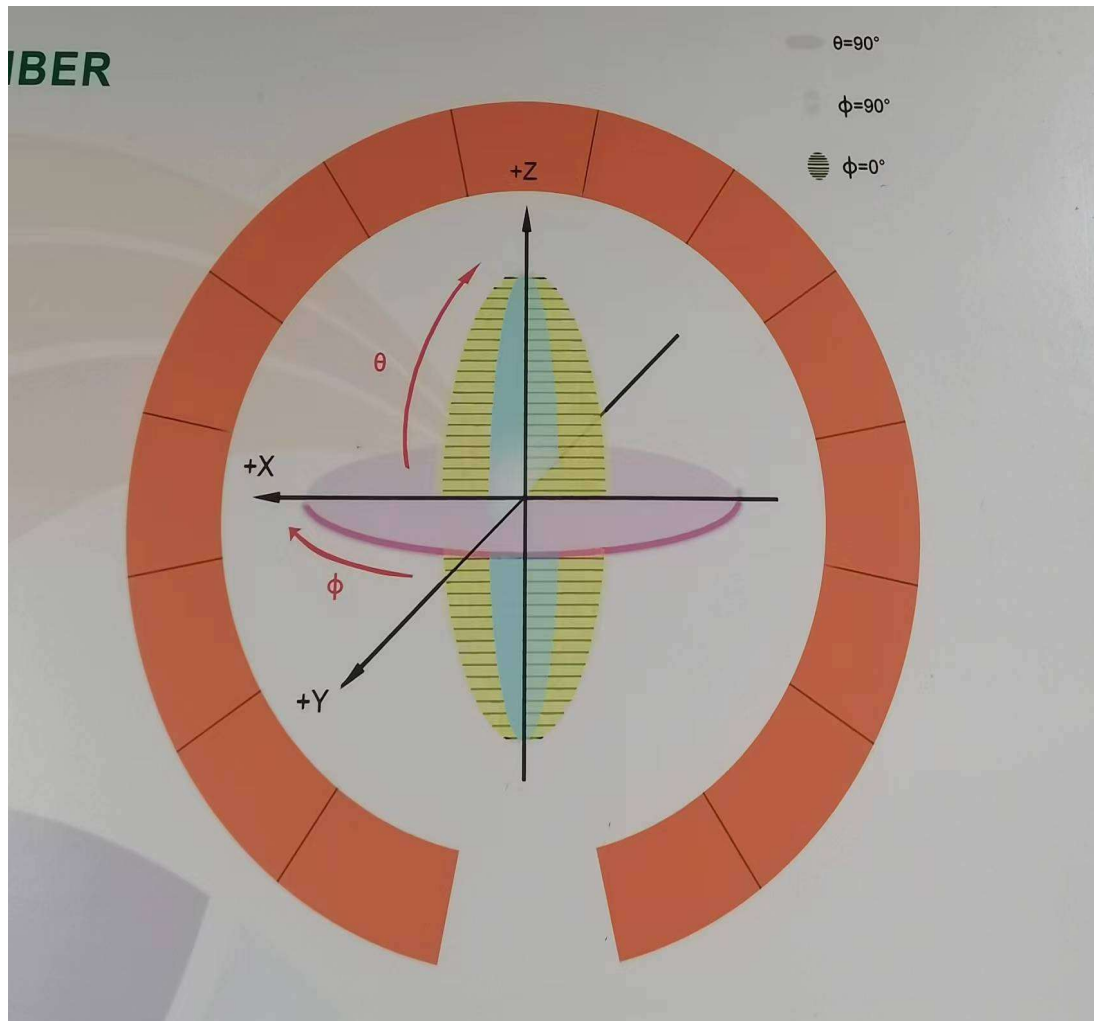
Test steps and data export



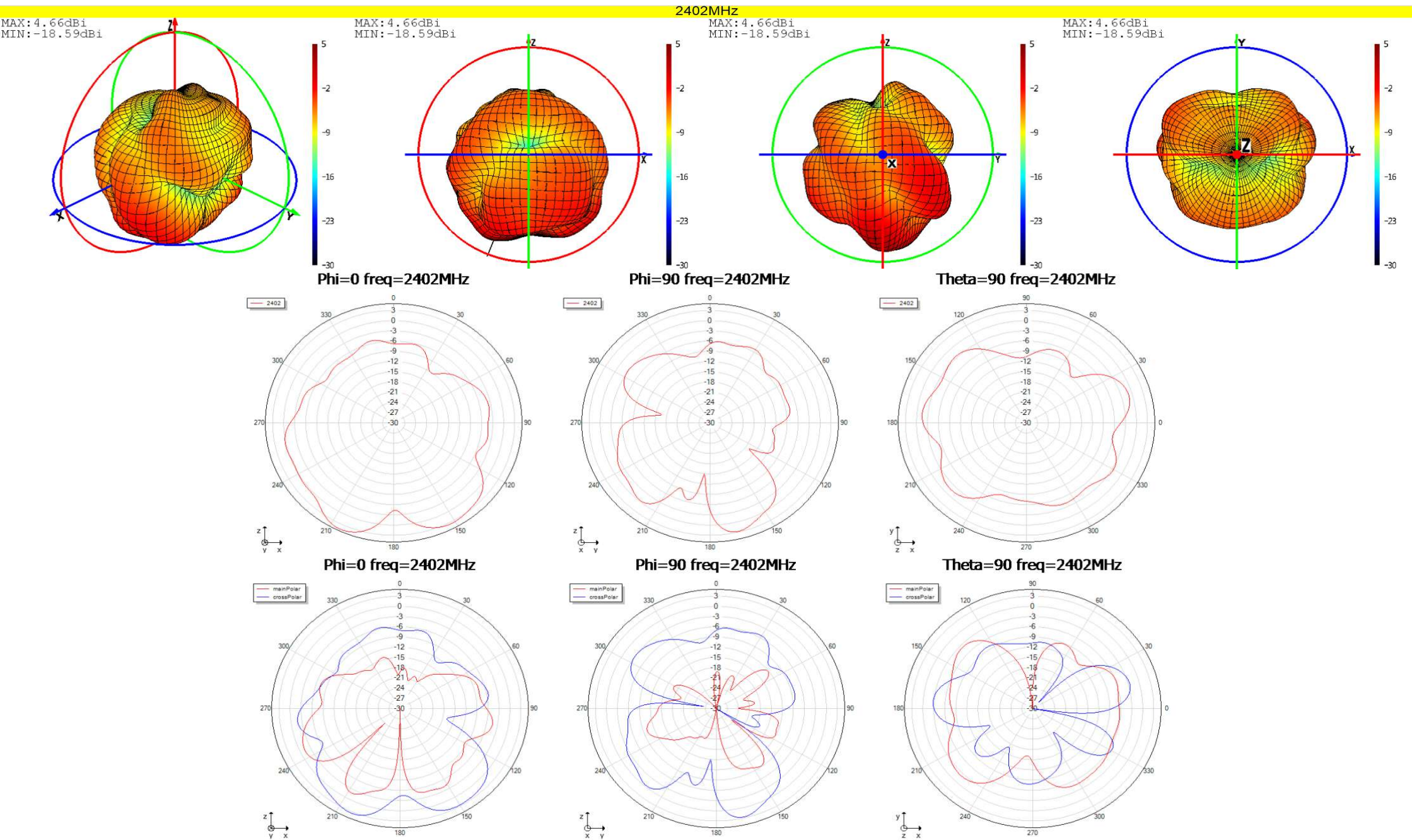
Antenna efficiency

Shenzhen Yimingyuan Technology Co., Ltd									make:Wei Ken Technology (Huizhou) Model:U2-DW-DONGLE AntennaType: Onboard antenna Antenna Gain: 5.47 dBi address: No. 18, West Petrochemical Avenue, Xiangshuihe Industrial Park, Dayawan District, Huizhou City					
Test data report		Address: 2nd Floor, Building 5, Yifenghua Innovation Industrial Park, Dalang Street, Longhua District, Shenzhen												
Software Version: SNF V2.4.3 Export time: 2025/3/18 14:35:44														
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	PEAK
Frequency (MHz)	2402	2410	2416	2422	2428	2434	2440	2446	2454	2460	2466	2472	2480	
Gain (dBi)	4.66	4.54	4.34	4.24	4.52	4.44	4.47	4.93	5.30	5.24	4.90	5.00	5.47	5.47
Efficiency (dB)	-2.97	-2.78	-3.13	-3.19	-3.06	-3.03	-3.01	-2.79	-2.76	-2.90	-3.10	-2.93	-2.58	-2.58
Efficiency (%)	50.44	52.77	48.65	47.94	49.41	49.82	49.95	52.64	52.97	51.27	48.97	50.99	55.19	55.19
Plane: Phi=0	2402	2410	2416	2422	2428	2434	2440	2446	2454	2460	2466	2472	2480	
Plane: Phi=90	2402	2410	2416	2422	2428	2434	2440	2446	2454	2460	2466	2472	2480	
Plane: Theta=90	2402	2410	2416	2422	2428	2434	2440	2446	2454	2460	2466	2472	2480	

Z、X、Y Physical drawing

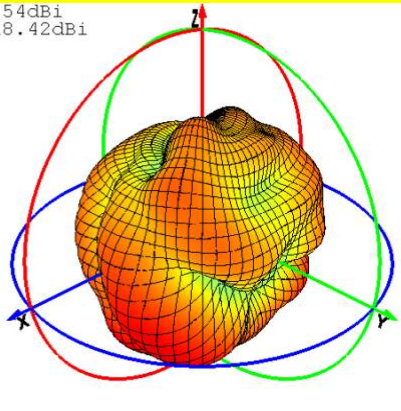


Antenna apple diagram and pattern

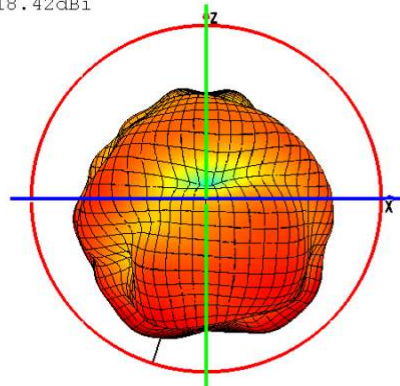


Antenna apple diagram and pattern

MAX: 4.54dBi
MIN: -18.42dBi

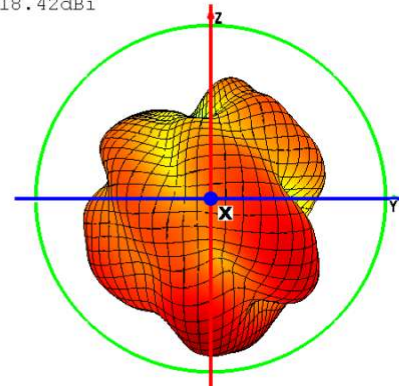


MAX: 4.54dBi
MIN: -18.42dBi

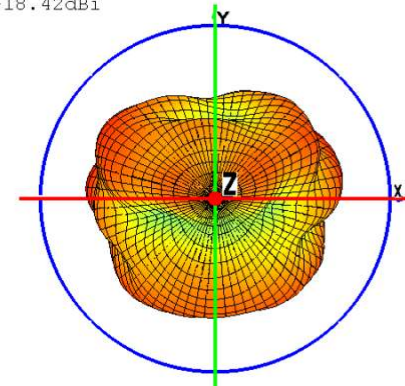


2410MHz

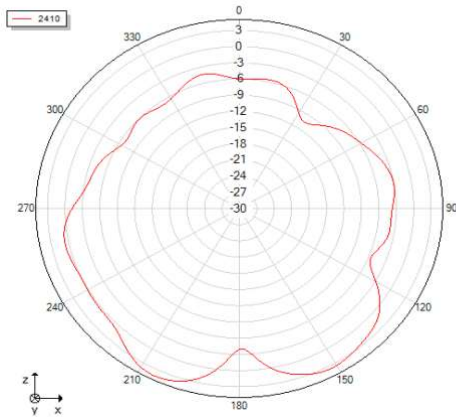
MAX: 4.54dBi
MIN: -18.42dBi



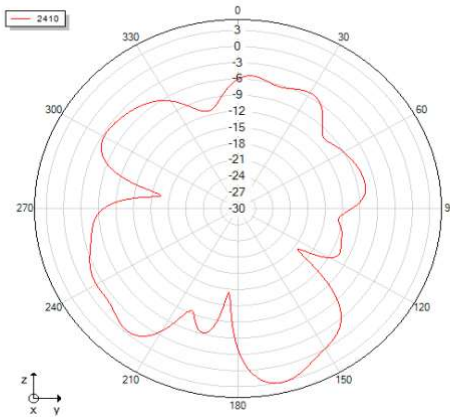
MAX: 4.54dBi
MIN: -18.42dBi



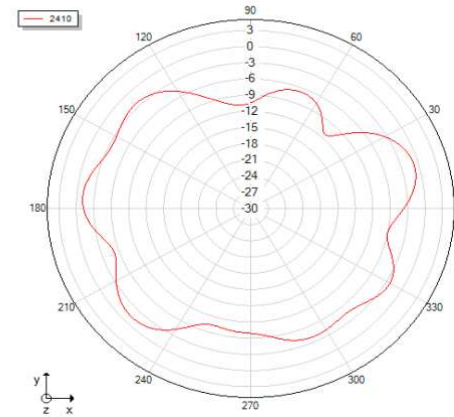
Phi=0 freq=2410MHz



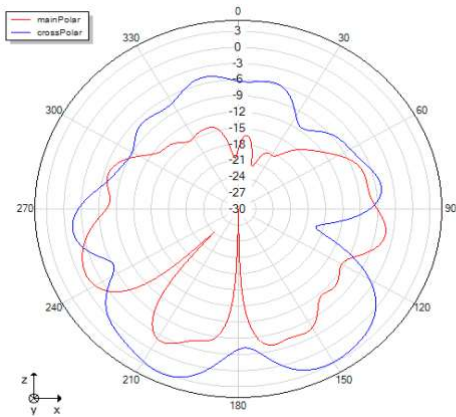
Phi=90 freq=2410MHz



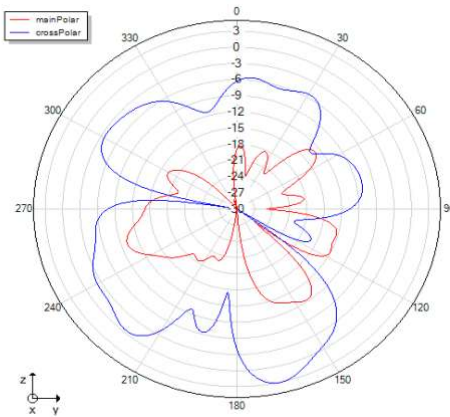
Theta=90 freq=2410MHz



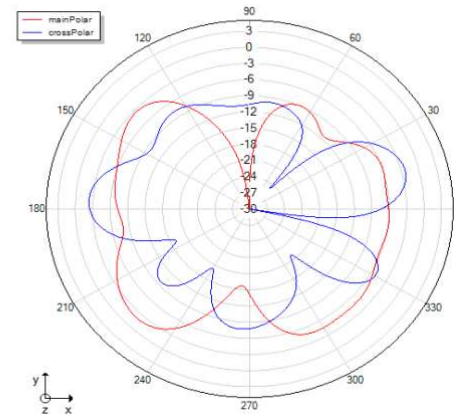
Phi=0 freq=2410MHz



Phi=90 freq=2410MHz

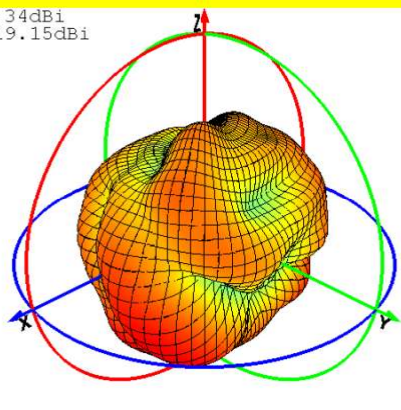


Theta=90 freq=2410MHz

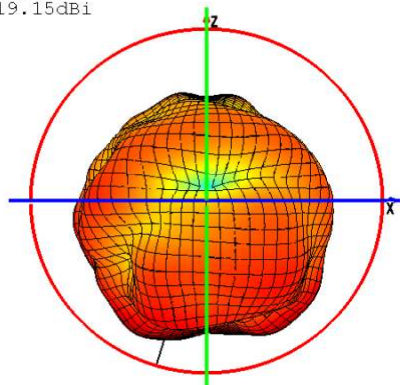


Antenna apple diagram and pattern

MAX: 4.34dBi
MIN: -19.15dBi

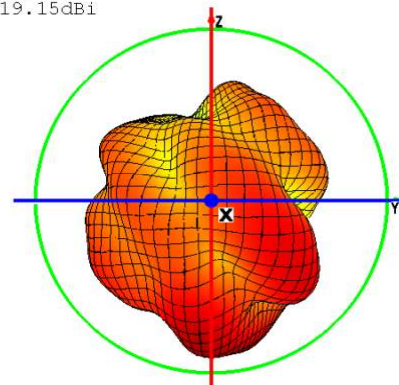


MAX: 4.34dBi
MIN: -19.15dBi

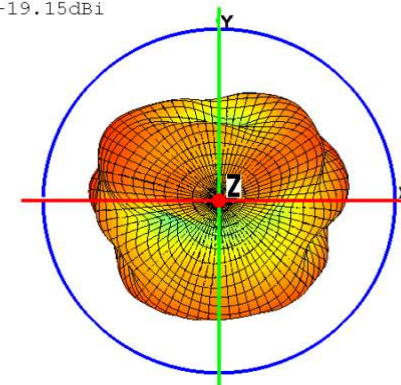


2416MHz

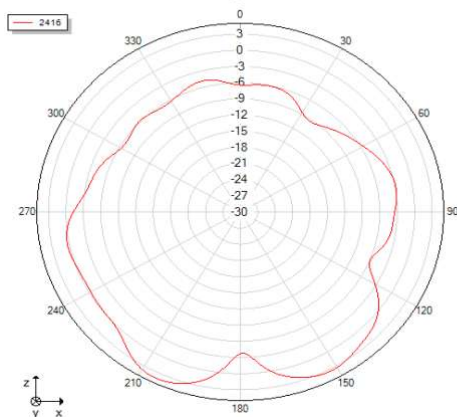
MAX: 4.34dBi
MIN: -19.15dBi



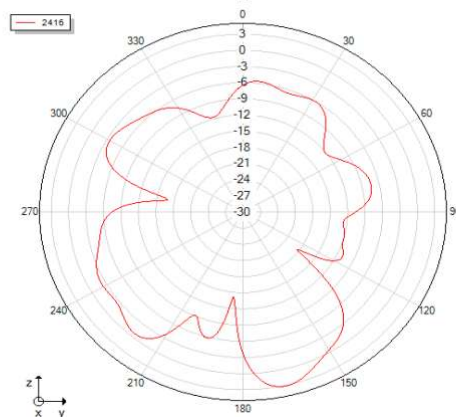
MAX: 4.34dBi
MIN: -19.15dBi



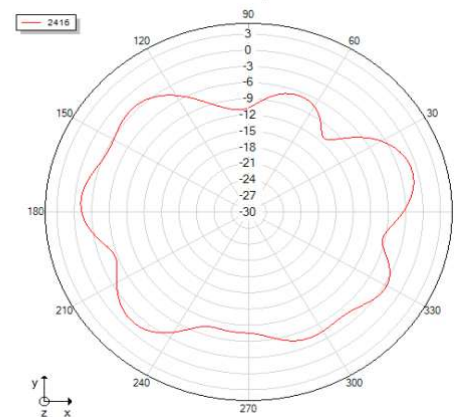
$\Phi=0$ freq=2416MHz



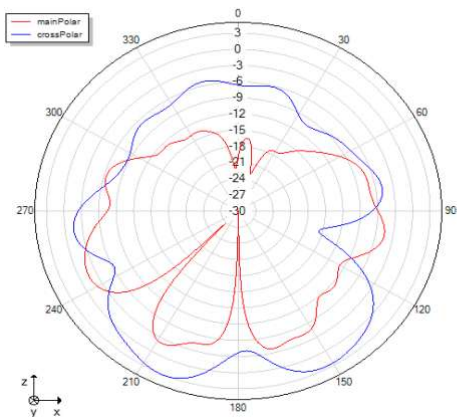
$\Phi=90$ freq=2416MHz



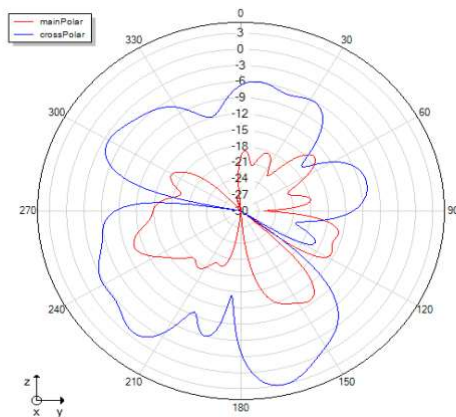
$\Theta=90$ freq=2416MHz



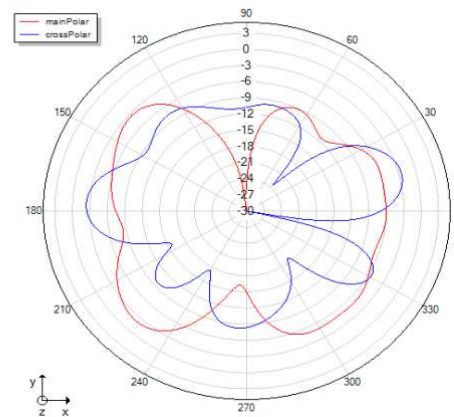
$\Phi=0$ freq=2416MHz



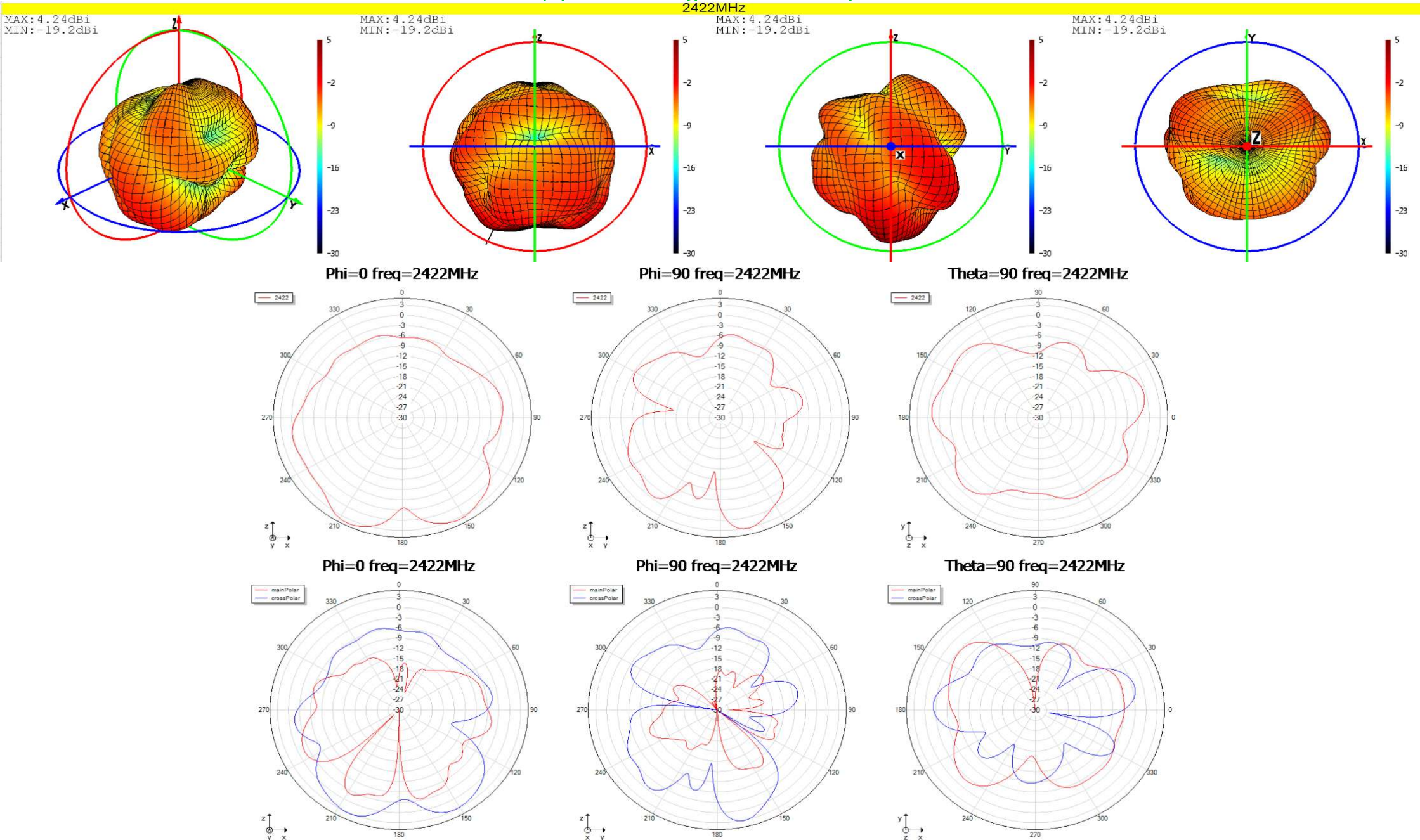
$\Phi=90$ freq=2416MHz



$\Theta=90$ freq=2416MHz

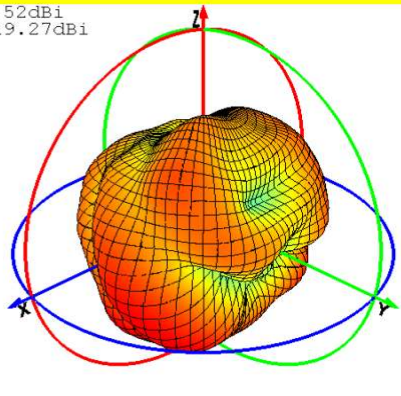


Antenna apple diagram and pattern

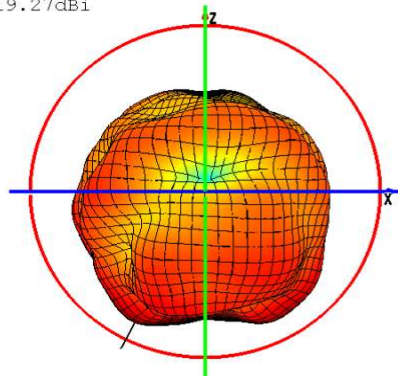


Antenna apple diagram and pattern

MAX: 4.52dBi
MIN: -19.27dBi

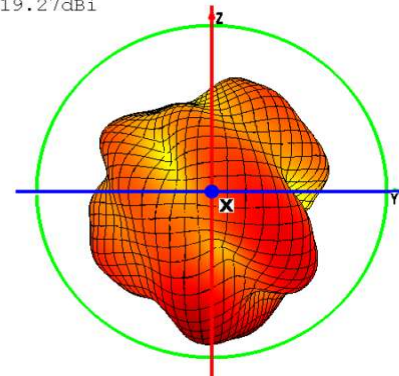


MAX: 4.52dBi
MIN: -19.27dBi

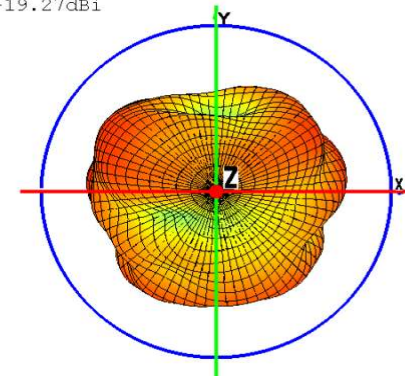


2428MHz

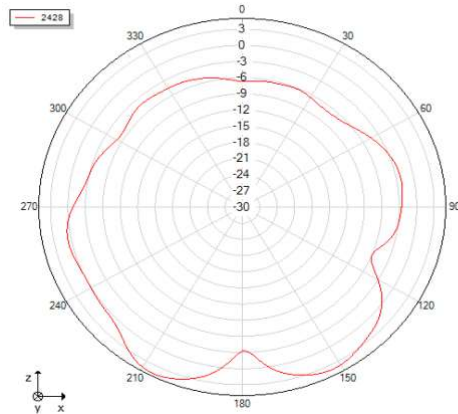
MAX: 4.52dBi
MIN: -19.27dBi



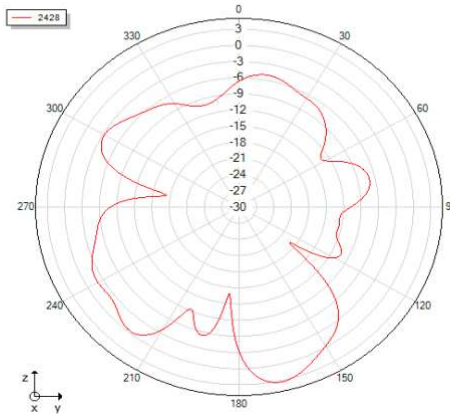
MAX: 4.52dBi
MIN: -19.27dBi



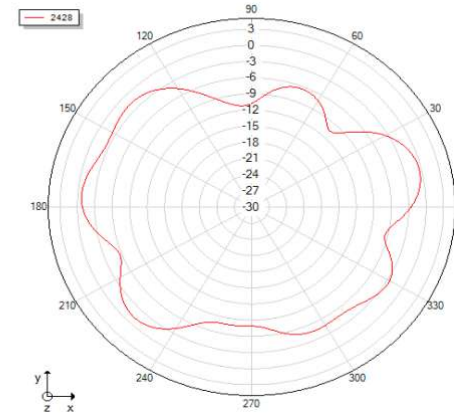
Phi=0 freq=2428MHz



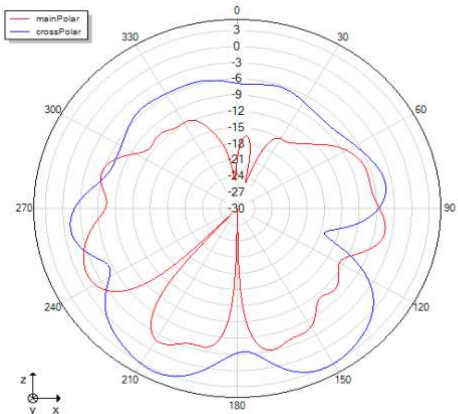
Phi=90 freq=2428MHz



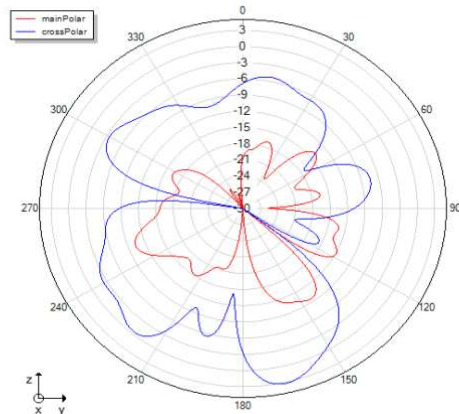
Theta=90 freq=2428MHz



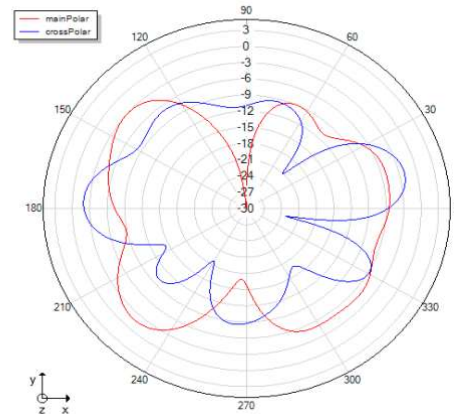
Phi=0 freq=2428MHz



Phi=90 freq=2428MHz



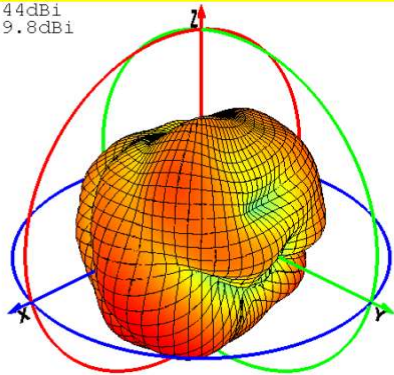
Theta=90 freq=2428MHz



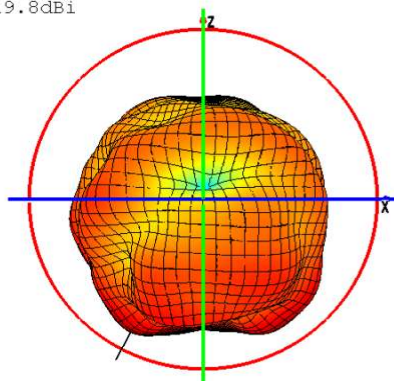
Antenna apple diagram and pattern

2434MHz

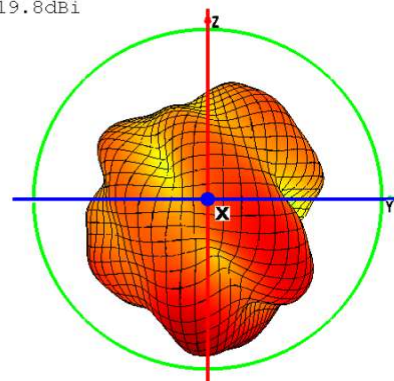
MAX: 4.44dBi
MIN: -19.8dBi



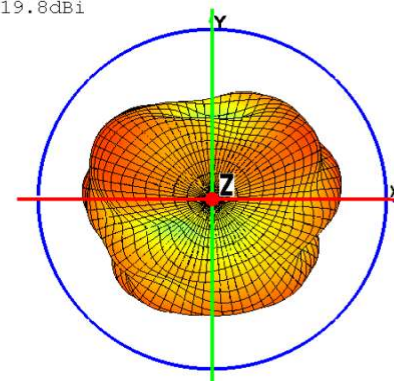
MAX: 4.44dBi
MIN: -19.8dBi



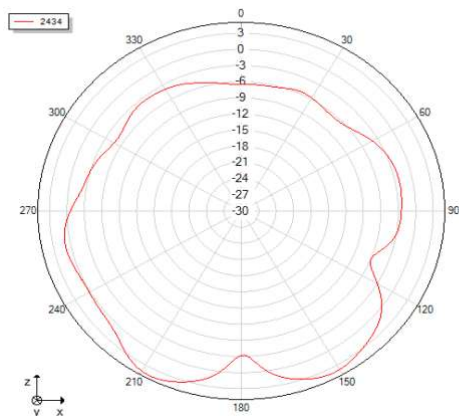
MAX: 4.44dBi
MIN: -19.8dBi



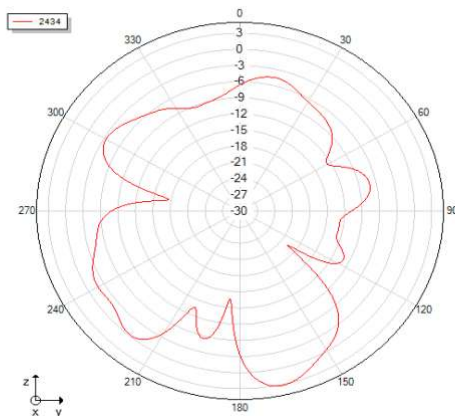
MAX: 4.44dBi
MIN: -19.8dBi



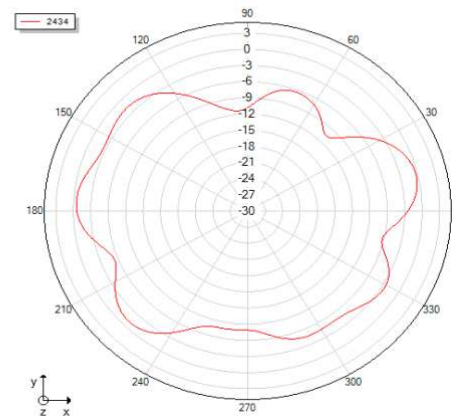
Phi=0 freq=2434MHz



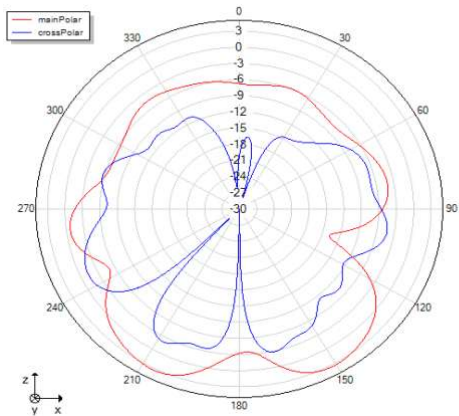
Phi=90 freq=2434MHz



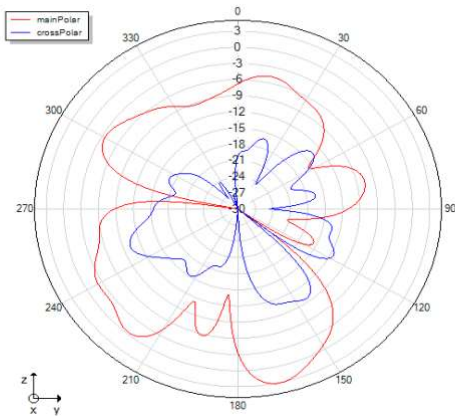
Theta=90 freq=2434MHz



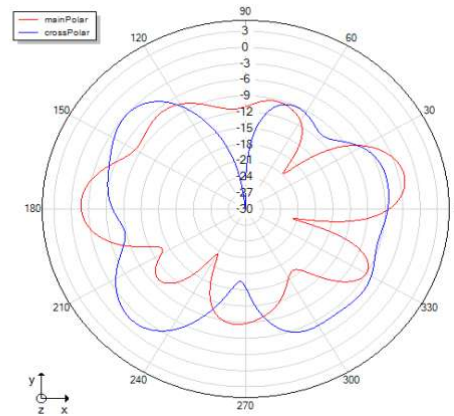
Phi=0 freq=2434MHz



Phi=90 freq=2434MHz



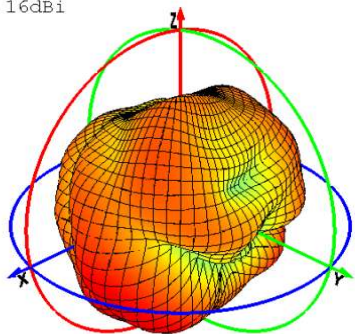
Theta=90 freq=2434MHz



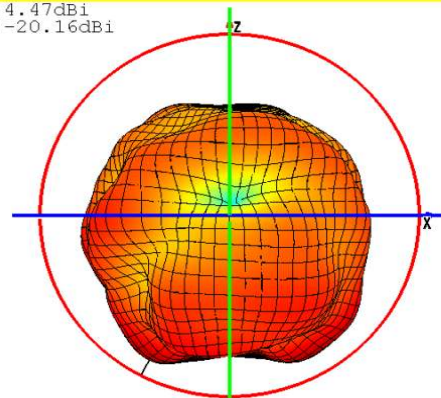
Antenna apple diagram and pattern

2440MHz

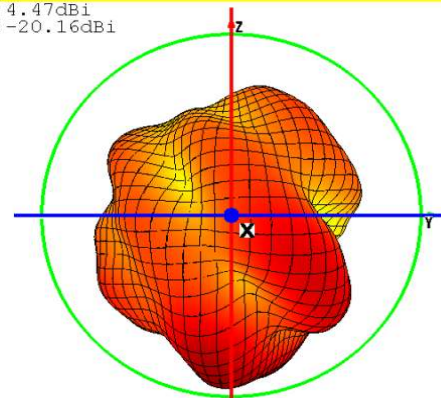
MAX: 4.47dBi
MIN: -20.16dBi



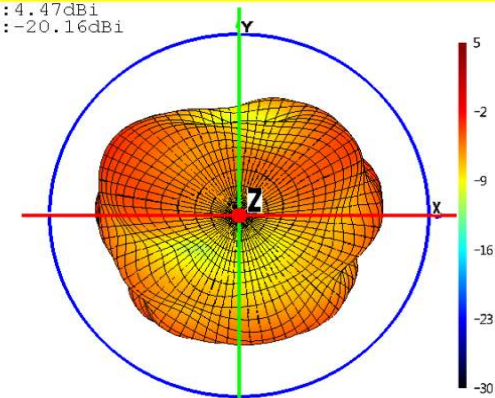
MAX: 4.47dBi
MIN: -20.16dBi



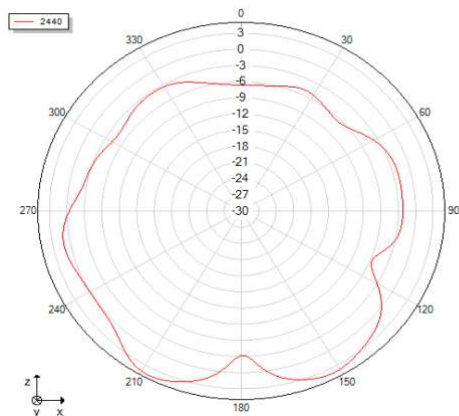
MAX: 4.47dBi
MIN: -20.16dBi



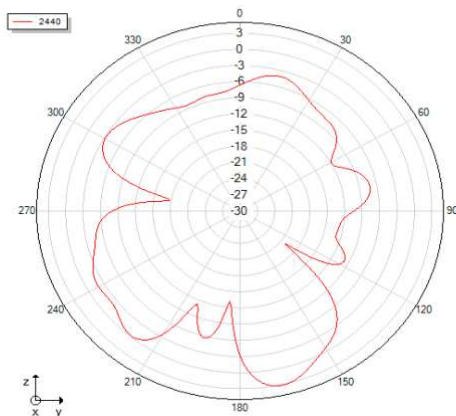
MAX: 4.47dBi
MIN: -20.16dBi



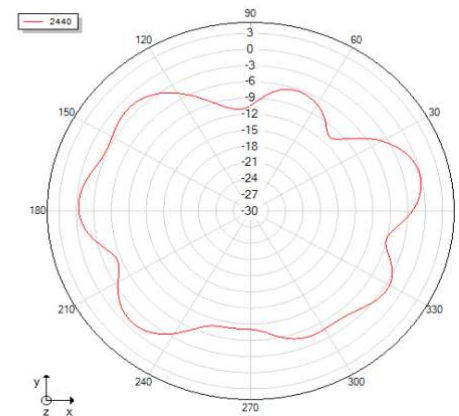
Phi=0 freq=2440MHz



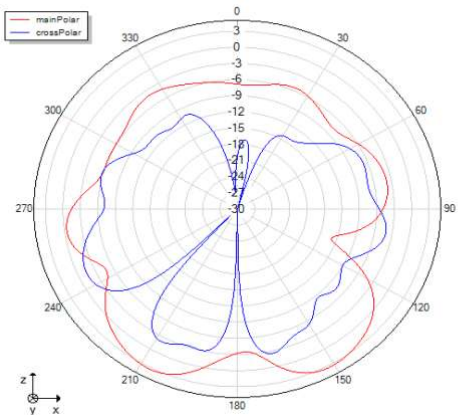
Phi=90 freq=2440MHz



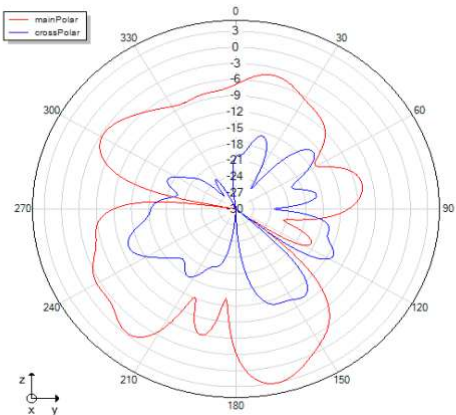
Theta=90 freq=2440MHz



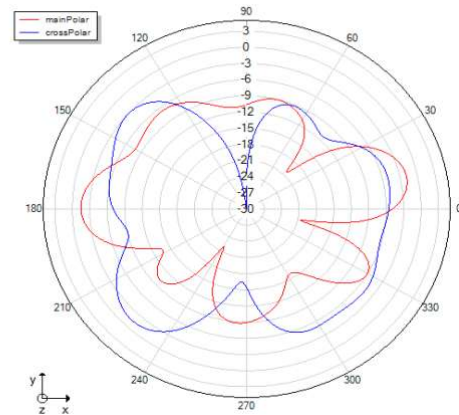
Phi=0 freq=2440MHz



Phi=90 freq=2440MHz

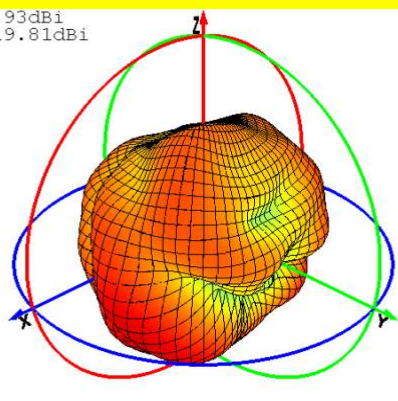


Theta=90 freq=2440MHz

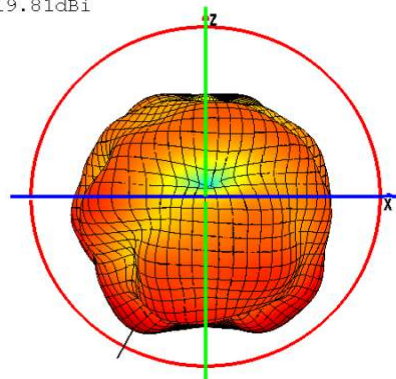


Antenna apple diagram and pattern

MAX: 4.93dBi
MIN: -19.81dBi

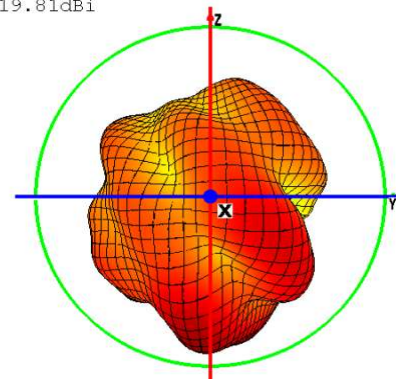


MAX: 4.93dBi
MIN: -19.81dBi

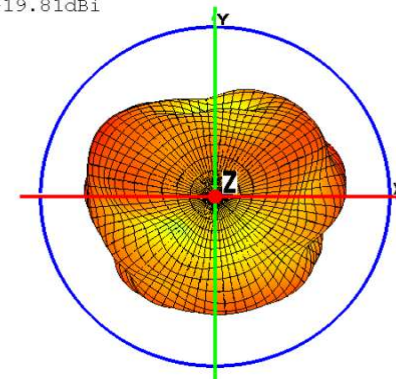


2446MHz

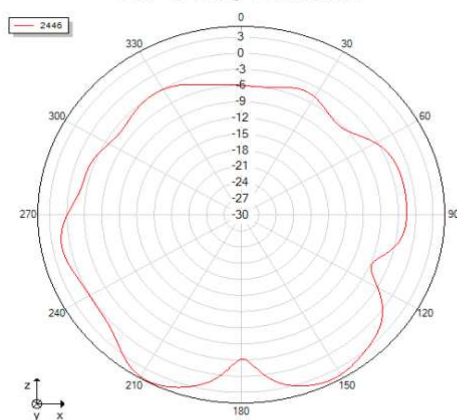
MAX: 4.93dBi
MIN: -19.81dBi



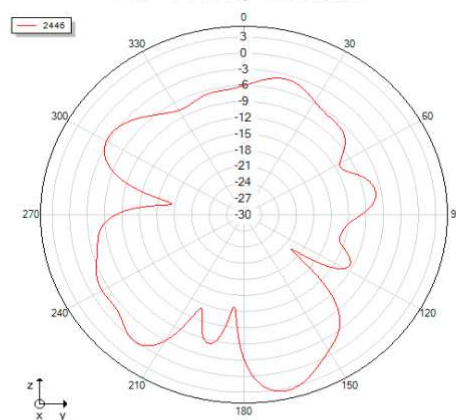
MAX: 4.93dBi
MIN: -19.81dBi



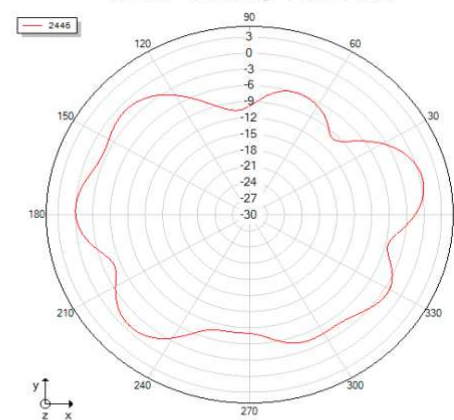
Phi=0 freq=2446MHz



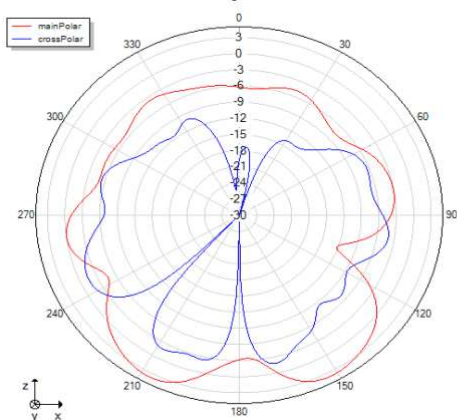
Phi=90 freq=2446MHz



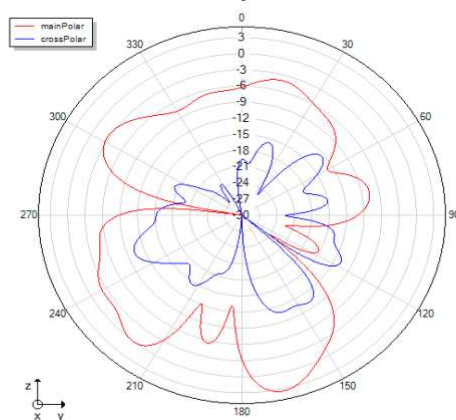
Theta=90 freq=2446MHz



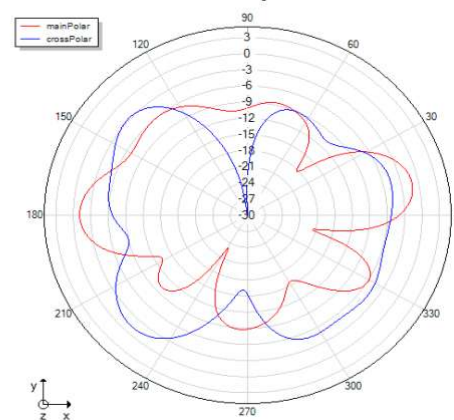
Phi=0 freq=2446MHz



Phi=90 freq=2446MHz

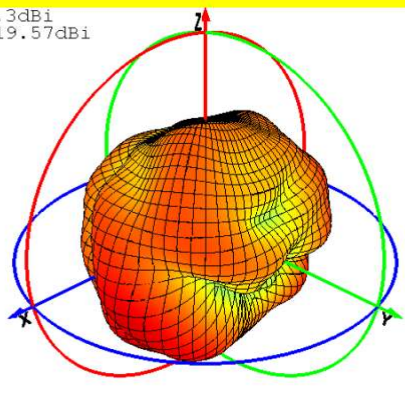


Theta=90 freq=2446MHz

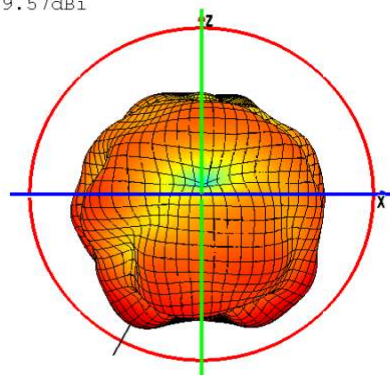


Antenna apple diagram and pattern

MAX:5.3dBi
MIN:-19.57dBi

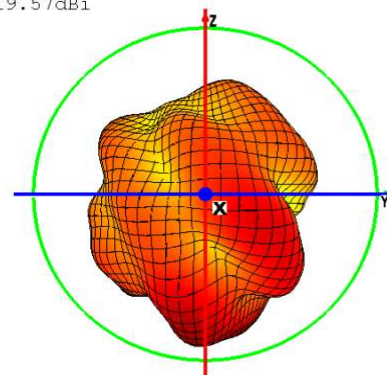


MAX:5.3dBi
MIN:-19.57dBi

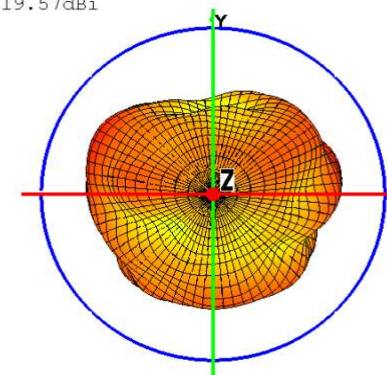


2454MHz

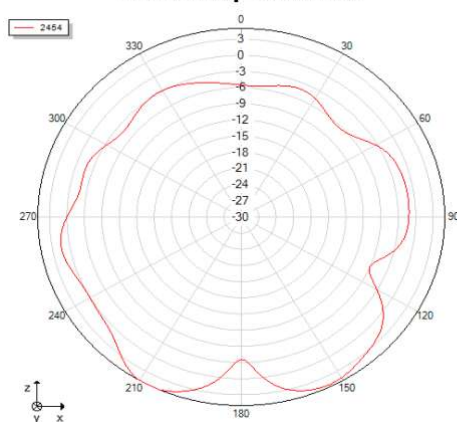
MAX:5.3dBi
MIN:-19.57dBi



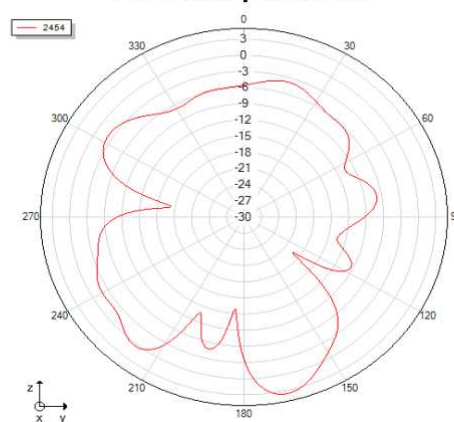
MAX:5.3dBi
MIN:-19.57dBi



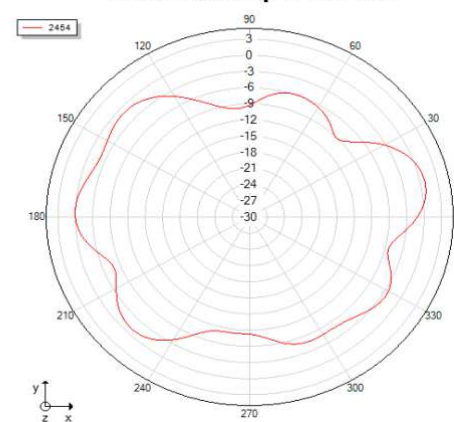
Phi=0 freq=2454MHz



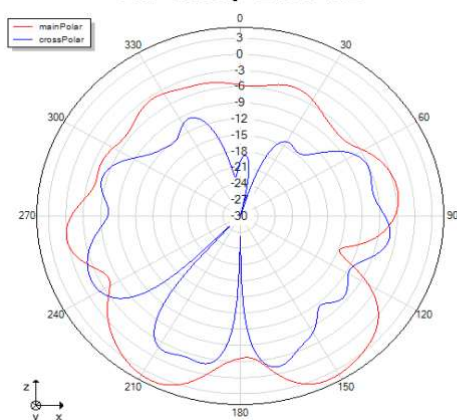
Phi=90 freq=2454MHz



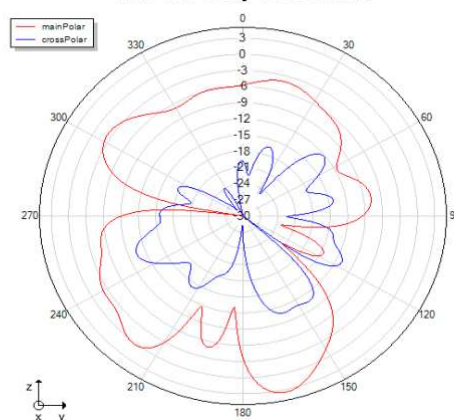
Theta=90 freq=2454MHz



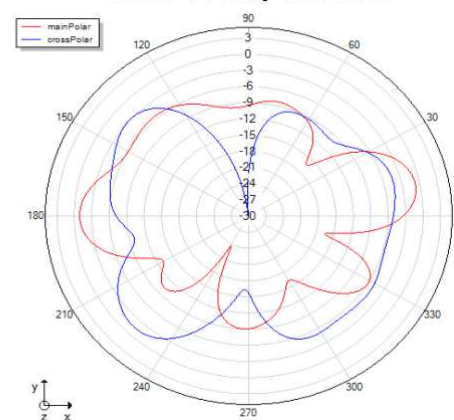
Phi=0 freq=2454MHz



Phi=90 freq=2454MHz

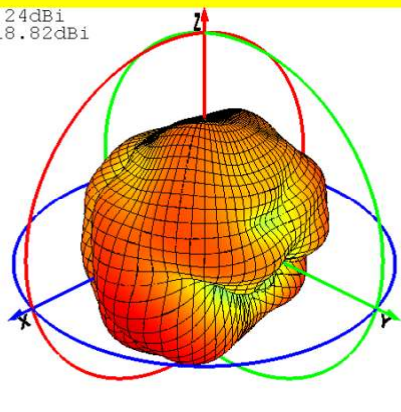


Theta=90 freq=2454MHz

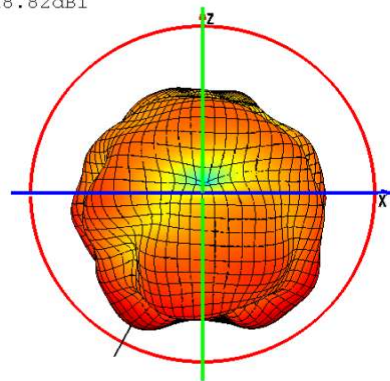


Antenna apple diagram and pattern

MAX:5.24dBi
MIN:-18.82dBi

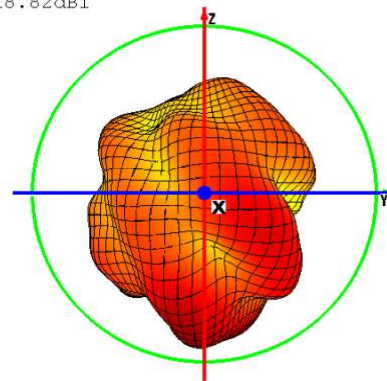


MAX:5.24dBi
MIN:-18.82dBi

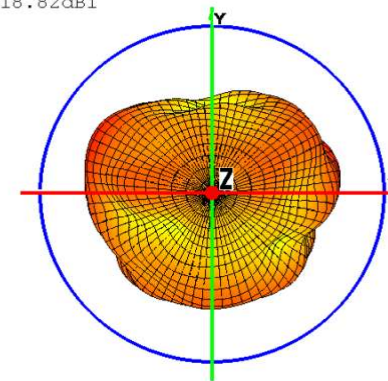


2460MHz

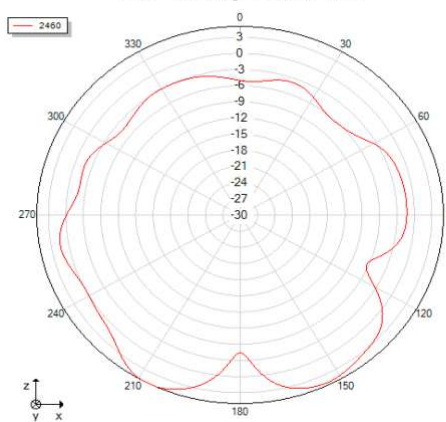
MAX:5.24dBi
MIN:-18.82dBi



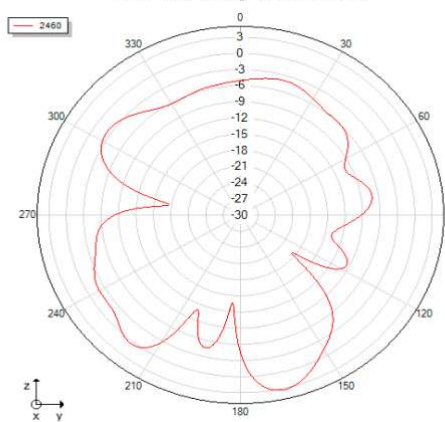
MAX:5.24dBi
MIN:-18.82dBi



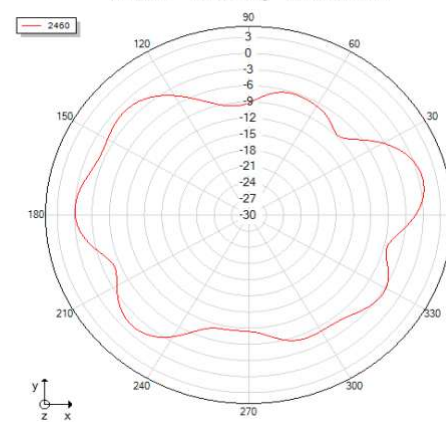
$\Phi=0$ freq=2460MHz



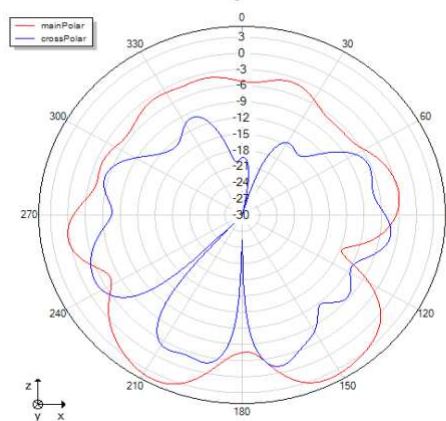
$\Phi=90$ freq=2460MHz



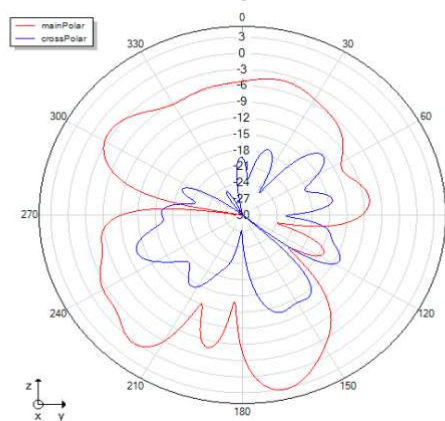
$\Theta=90$ freq=2460MHz



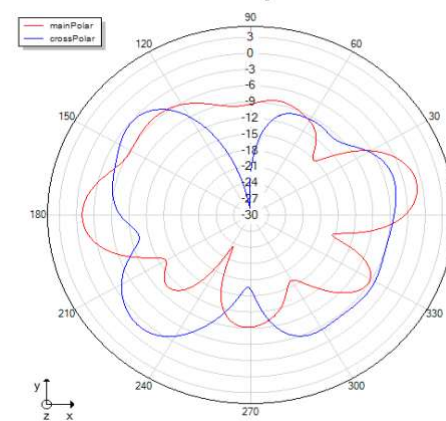
$\Phi=0$ freq=2460MHz



$\Phi=90$ freq=2460MHz



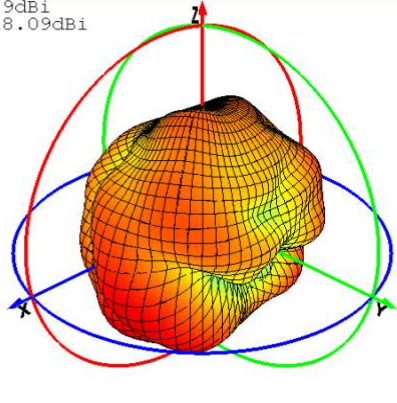
$\Theta=90$ freq=2460MHz



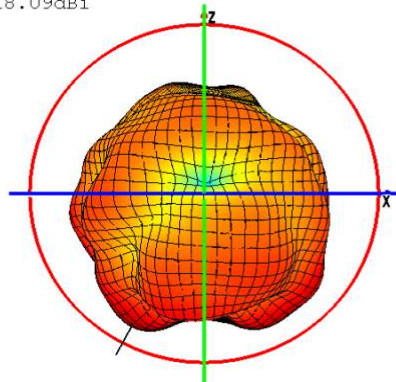
Antenna apple diagram and pattern

2466MHz

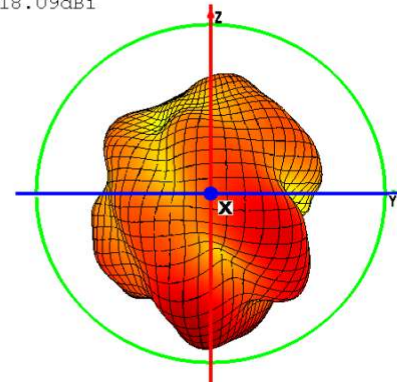
MAX: 4.9dBi
MIN: -18.09dBi



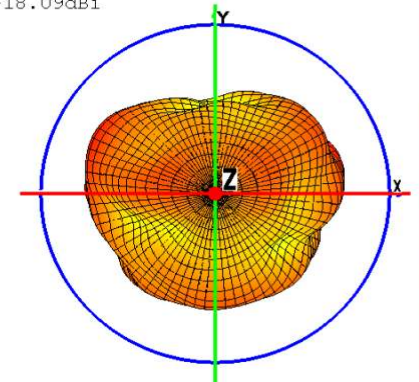
MAX: 4.9dBi
MIN: -18.09dBi



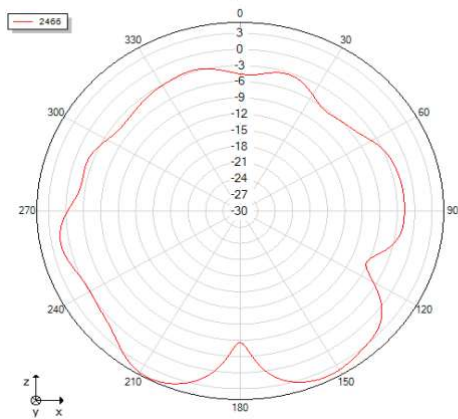
MAX: 4.9dBi
MIN: -18.09dBi



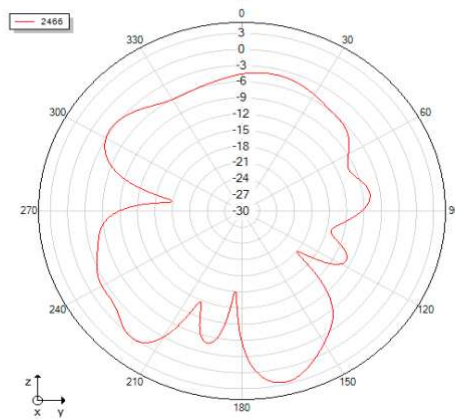
MAX: 4.9dBi
MIN: -18.09dBi



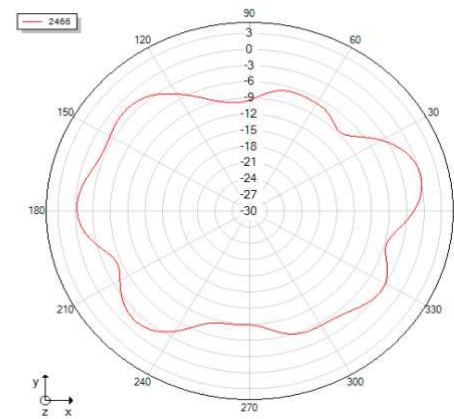
Phi=0 freq=2466MHz



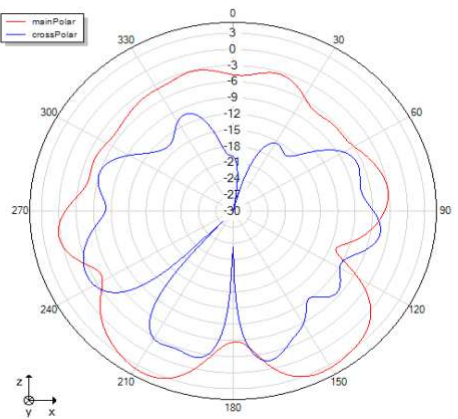
Phi=90 freq=2466MHz



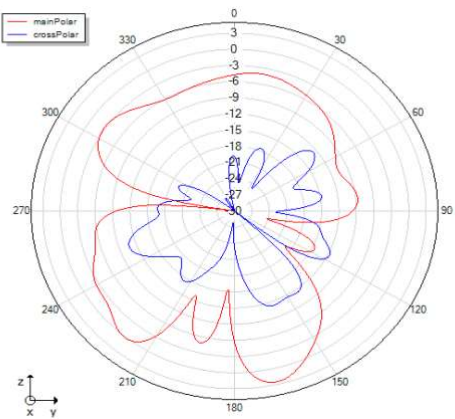
Theta=90 freq=2466MHz



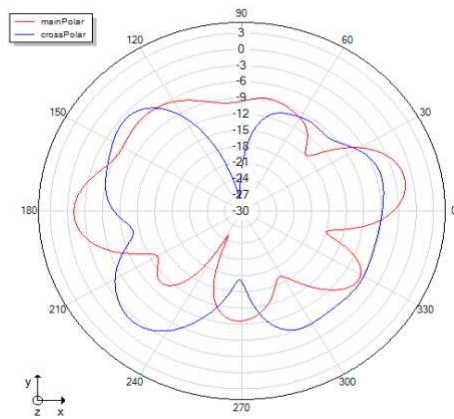
Phi=0 freq=2466MHz



Phi=90 freq=2466MHz

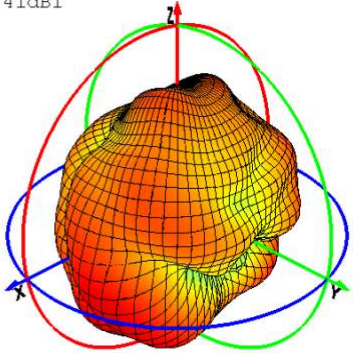


Theta=90 freq=2466MHz

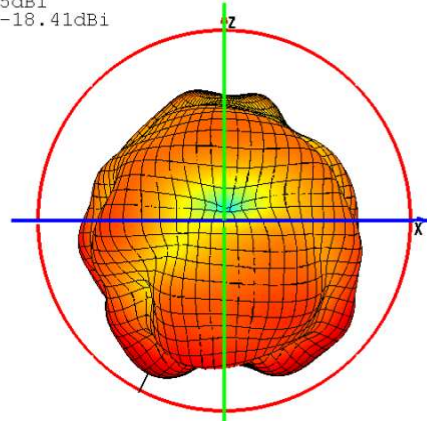


Antenna apple diagram and pattern

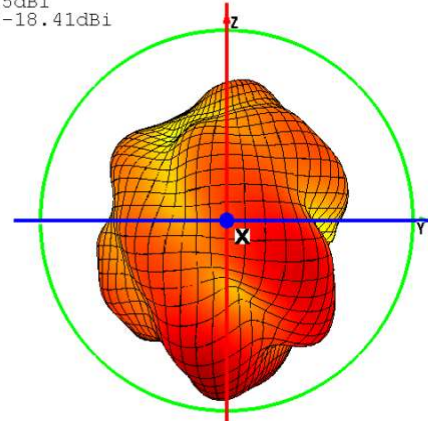
MAX: 5dBi
MIN: -18.41dBi



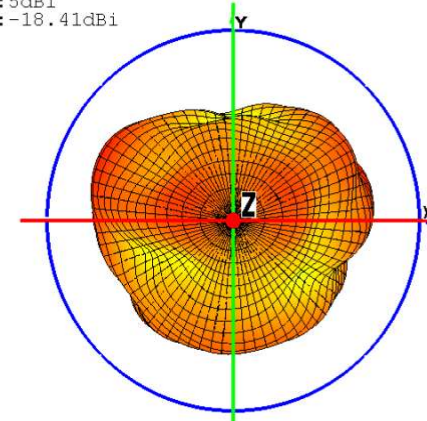
MAX: 5dBi
MIN: -18.41dBi



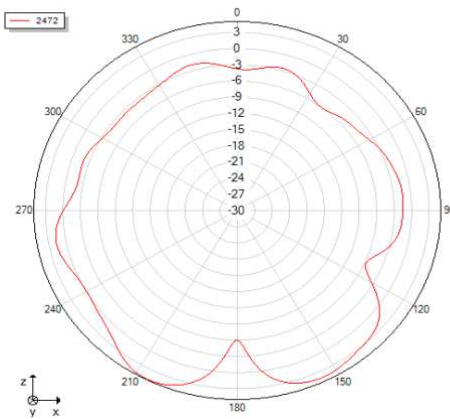
MAX: 5dBi
MIN: -18.41dBi



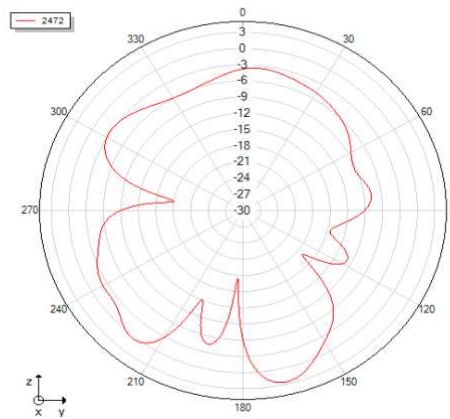
MAX: 5dBi
MIN: -18.41dBi



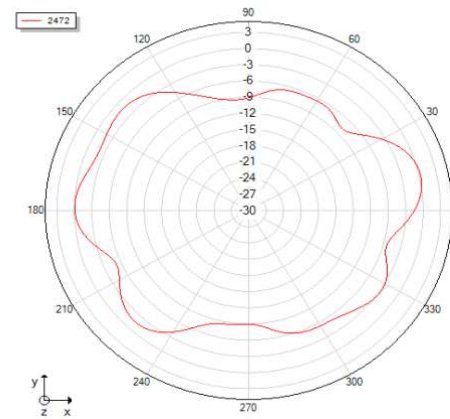
Phi=0 freq=2472MHz



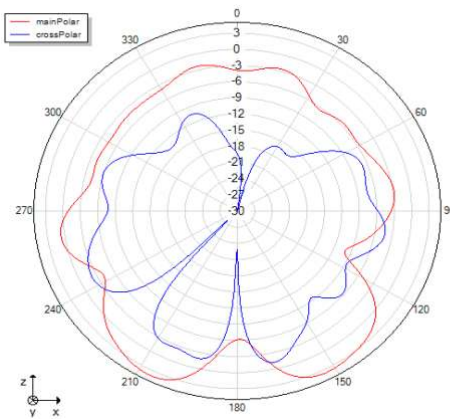
Phi=90 freq=2472MHz



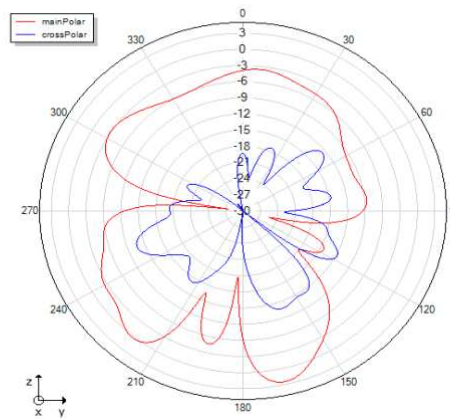
Theta=90 freq=2472MHz



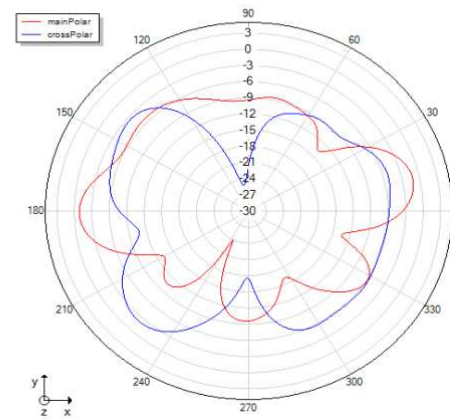
Phi=0 freq=2472MHz



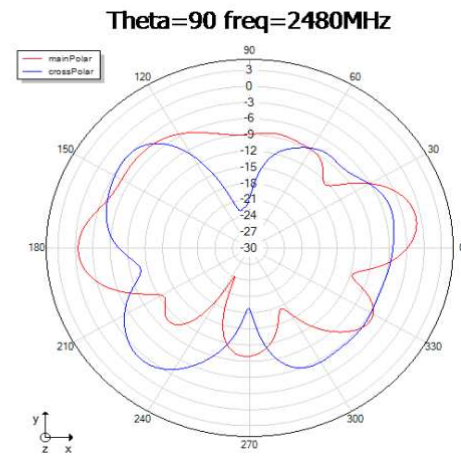
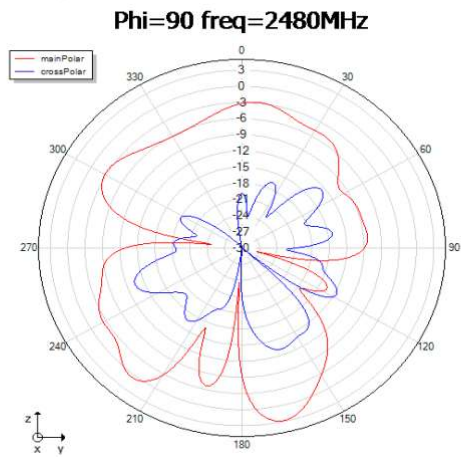
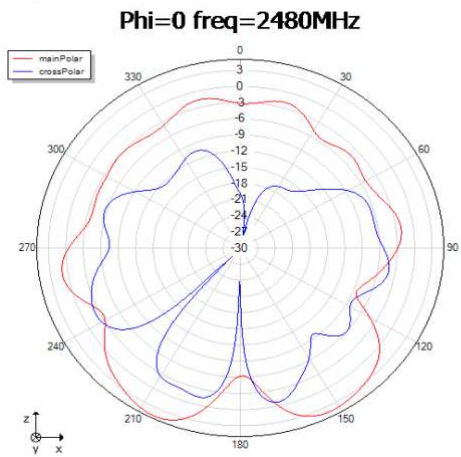
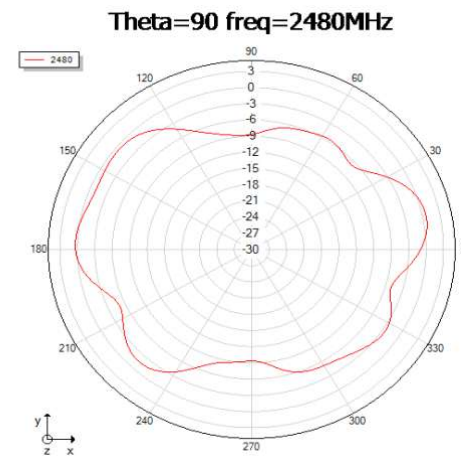
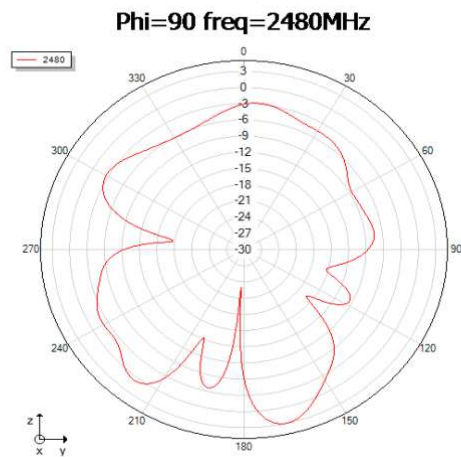
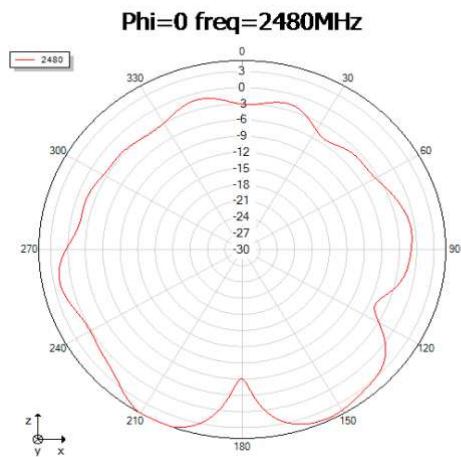
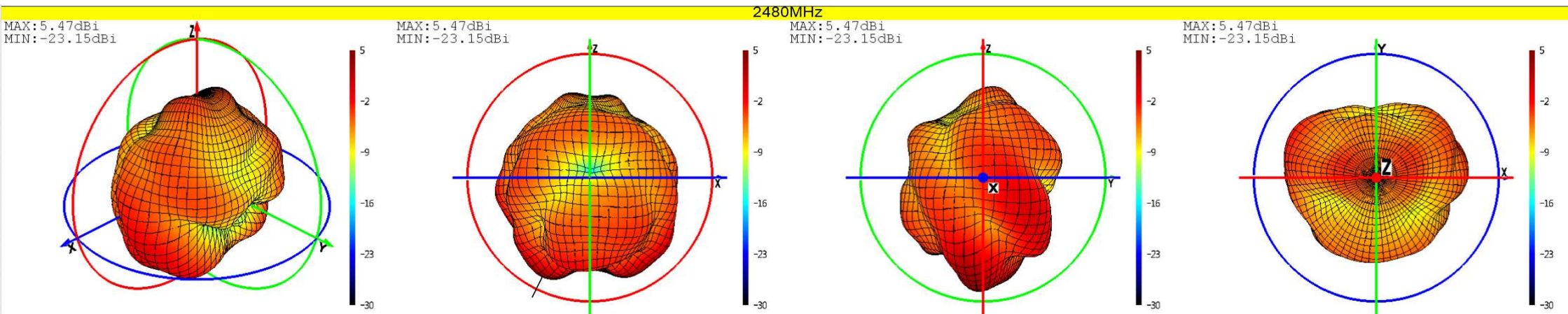
Phi=90 freq=2472MHz



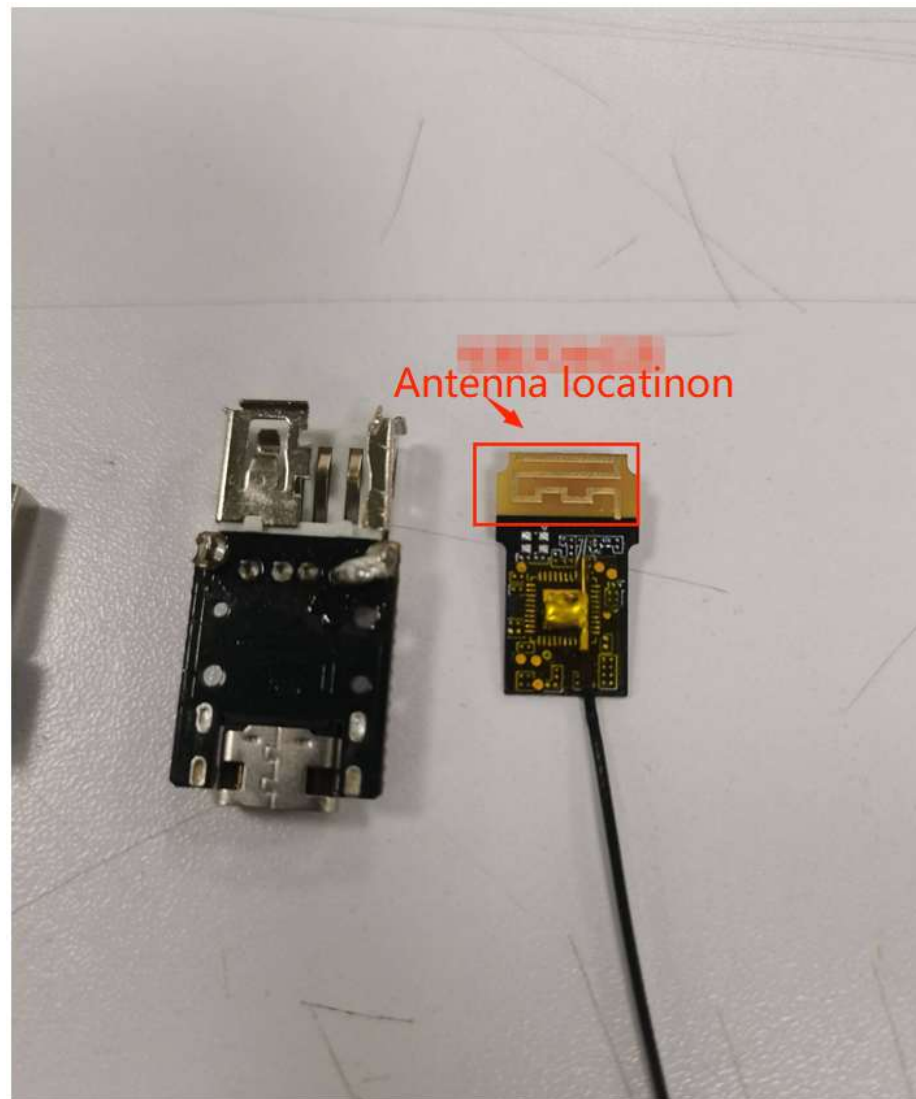
Theta=90 freq=2472MHz



Antenna apple diagram and pattern



Antenna sticking position and positioning



Additional notes

- 📶 Please double-check whether the matching circuitry mentioned in the report has been modified and whether environmental treatment has been introduced, which will directly affect the antenna performance.
- 📶 The parameters provided in this report are only the parameters given by the customer to our company's commissioning prototype, and do not represent the final mass production status of your company's final project.
- 📶 If your company has the latest trial production, or updated status (replacement of materials, update software, change of environmental treatment, etc.) of the prototype, please submit it to our company for verification as soon as possible to confirm whether the antenna performance is affected.
- 📶 If your company needs to send it to a third party for re-testing or to the customer for testing, please be sure to hand over the machine to our company for testing and confirmation, because the consistency of the motherboard, the consistency of the assembly, and the difference in antenna assembly and other factors may lead to the deviation of antenna parameters.