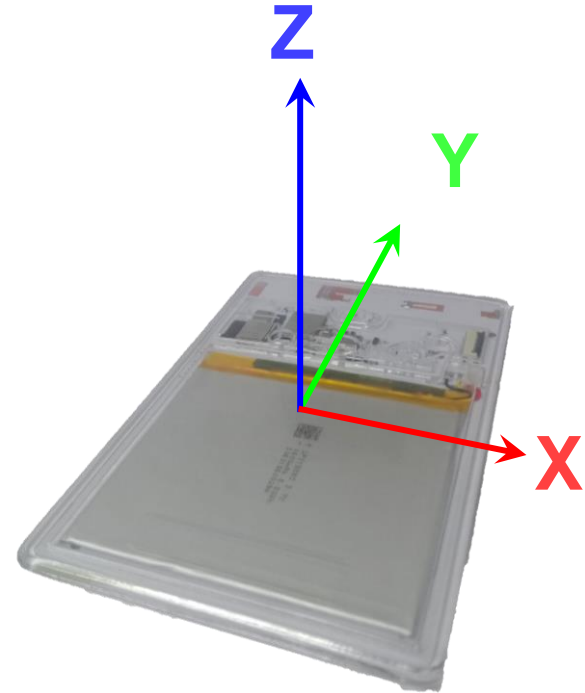


Project Overview



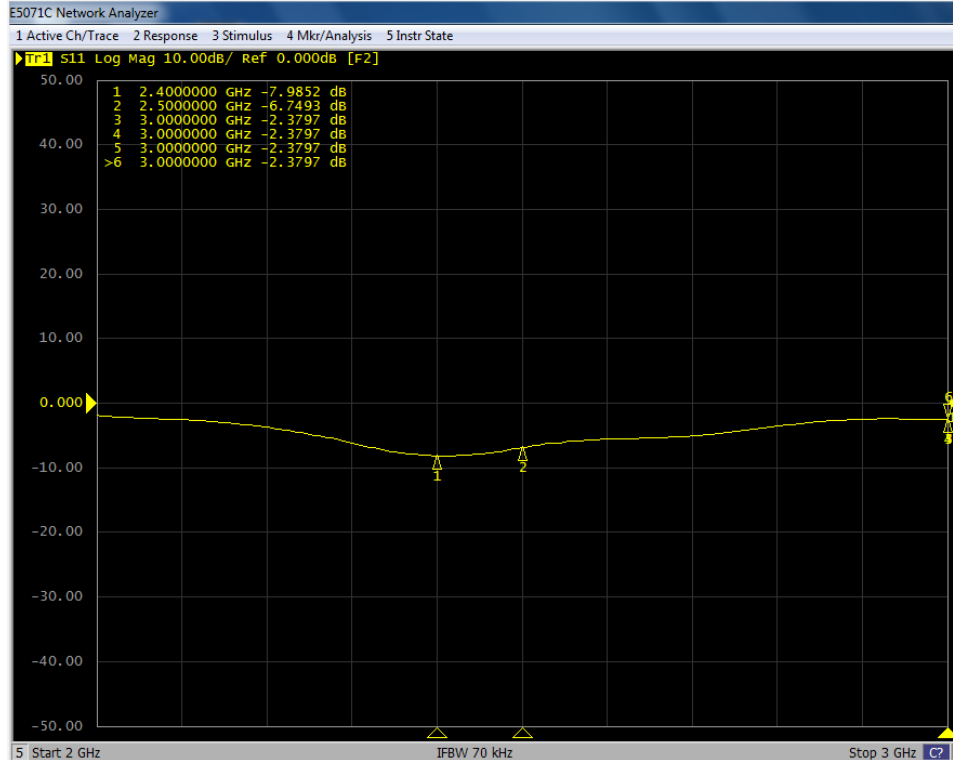
- Customer Name: Ikotek
- Project Name: QDM065-EA
- Device Dimensions: 152*101.6*4.8 mm
- Mainboard Dimensions: 144.4*93.6 mm
- Antenna Number: 2
- Antenna Network Type & Frequency Band:
 - WIFI: 2.4 GHz
- Module No.: ESP32
- Requirement:



Antenna Performance Evaluation



S11(dB)_WIFI

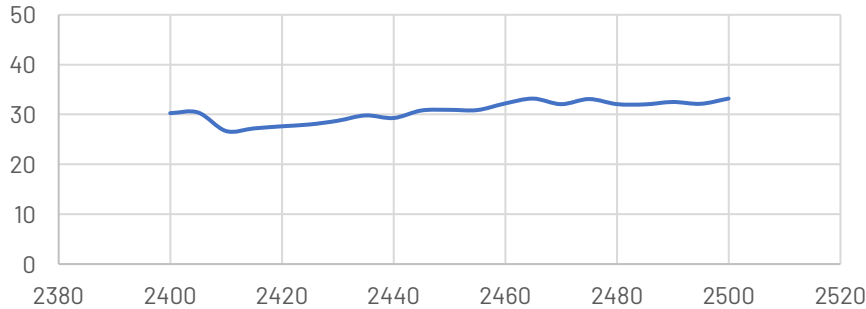


Antenna Performance Evaluation

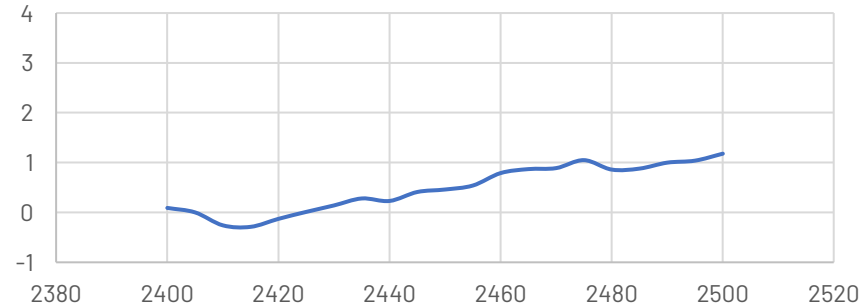


Efficiency(%) & Gain (dBi)

efficiency(%)



Gain(dBi)



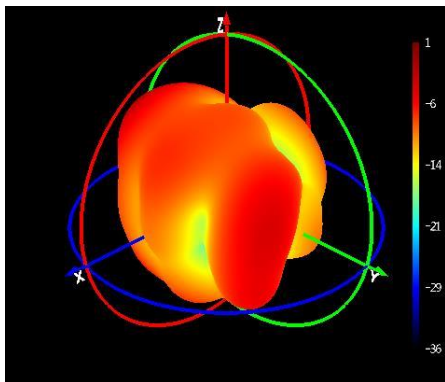
Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	0.09	-5.19	30.27
2405	0	-5.17	30.4
2410	-0.26	-5.74	26.69
2415	-0.29	-5.65	27.22
2420	-0.13	-5.58	27.64
2425	0.01	-5.53	28.01
2430	0.14	-5.41	28.75
2435	0.28	-5.25	29.82
2440	0.23	-5.33	29.3
2445	0.41	-5.11	30.81
2450	0.46	-5.09	30.94
2455	0.54	-5.1	30.89
2460	0.79	-4.92	32.22
2465	0.87	-4.79	33.19
2470	0.89	-4.94	32.07
2475	1.05	-4.8	33.1
2480	0.86	-4.94	32.08
2485	0.88	-4.94	32.03
2490	1	-4.88	32.51
2495	1.04	-4.93	32.15
2500	1.18	-4.79	33.2

Antenna Performance Evaluation

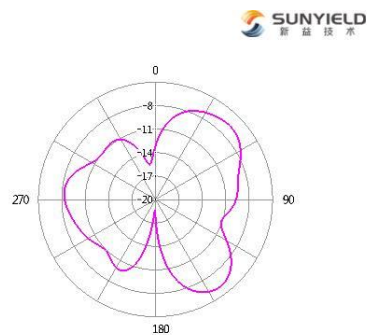
pattern

2400MHz

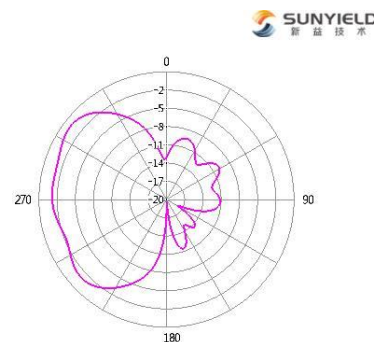
3D



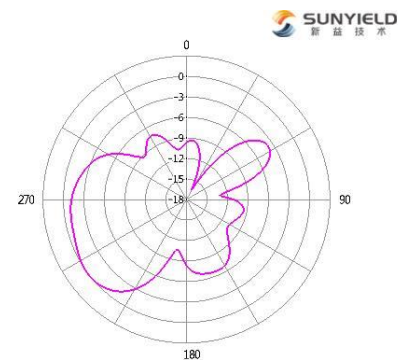
E1



E2



H

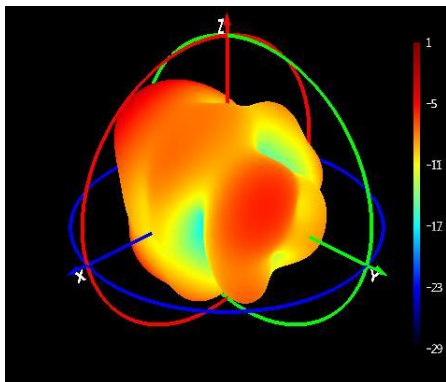


Antenna Performance Evaluation

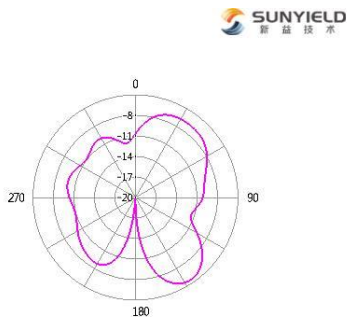
pattern

2450MHz

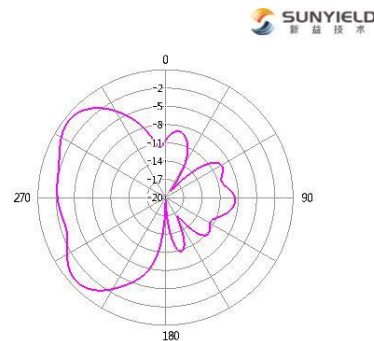
3D



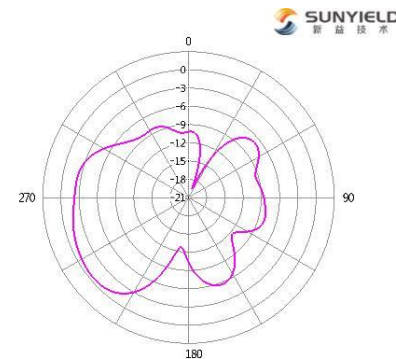
E1



E2



H

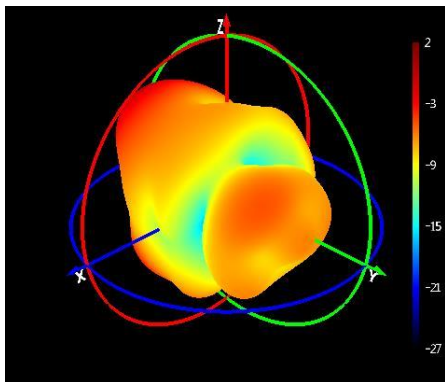


Antenna Performance Evaluation

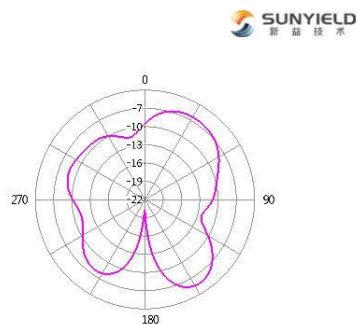
pattern

2500MHz

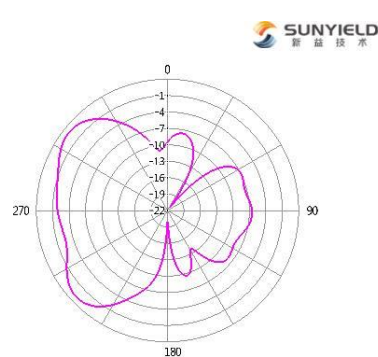
3D



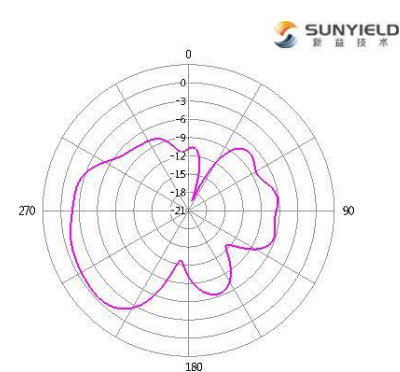
E1



E2



H



Antenna Performance Evaluation



TRP & TIS

WIFI			
	channel	TRP	TIS(-)
		11Mb/s	11Mb/s
WIFI b	1	12.81	-83.64
	6	12.63	-83.04
	13	12.46	-84.32
		6Mb/s	54Mb/s
WIFI g	1	11.16	-69.46
	6	10.76	-69.18
	13	10.83	-69.77
		MCS0	MCS7
WIFI n(20M)	1	12.08	-68.23
	6	11.5	-68.35
	13	11.37	-68.5

Solution



- 1、 The antenna performance meets customer requirements;



August 16, 2023

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