

深圳市和鸣微科技有限公司

Shenzhen HamyWe Technology Co., Ltd.

WBT1032 Microphone Antenna Debug Data

Version
V3



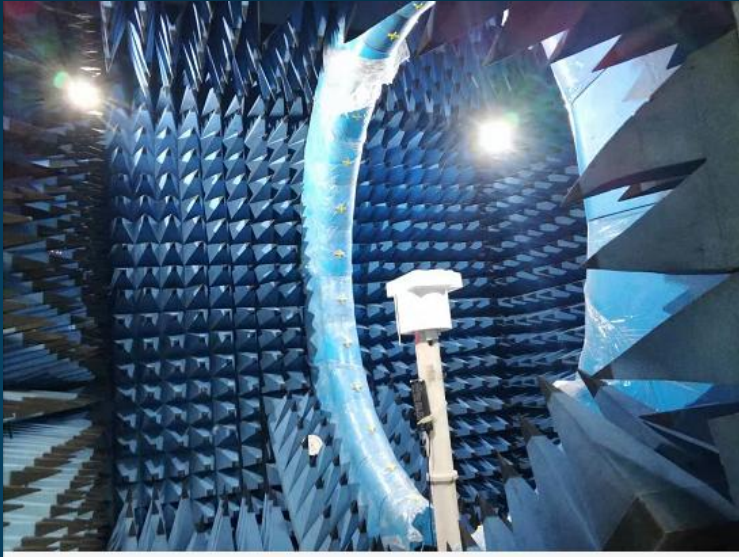
Principal: Zhao Yingjun

Phone: 17620403011

Date: 2023.08.10

Equipment Testing

SG24



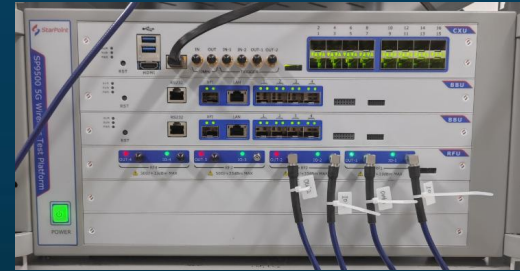
GTS



Agilent 8960



CMW 500



SP9500



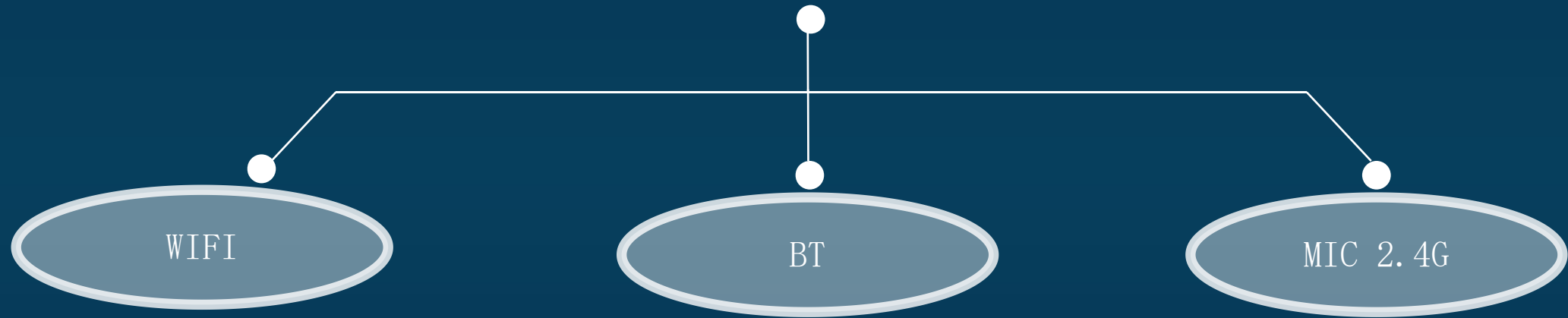
Agilent E5071B

System Testing	Testing Environment	Active Testing	Passive Testing
SG24 GTS	temperature: $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$ humidity: : $50\% \pm 15\%$	sustain 2G/3G/4G sustain BT/WIFI/GPS	600MHZ——6G

WBT1032

[illegible]

Project description



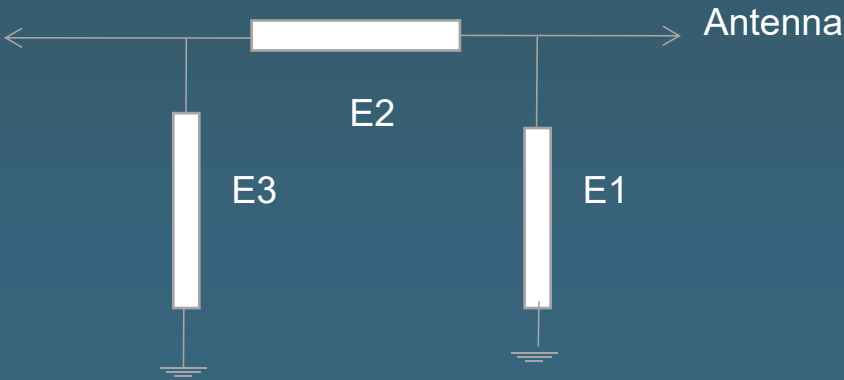
Antenna model: ANT1

Antenna type: FPC

Match change: None

WiFi antenna matching circuit

RF Module

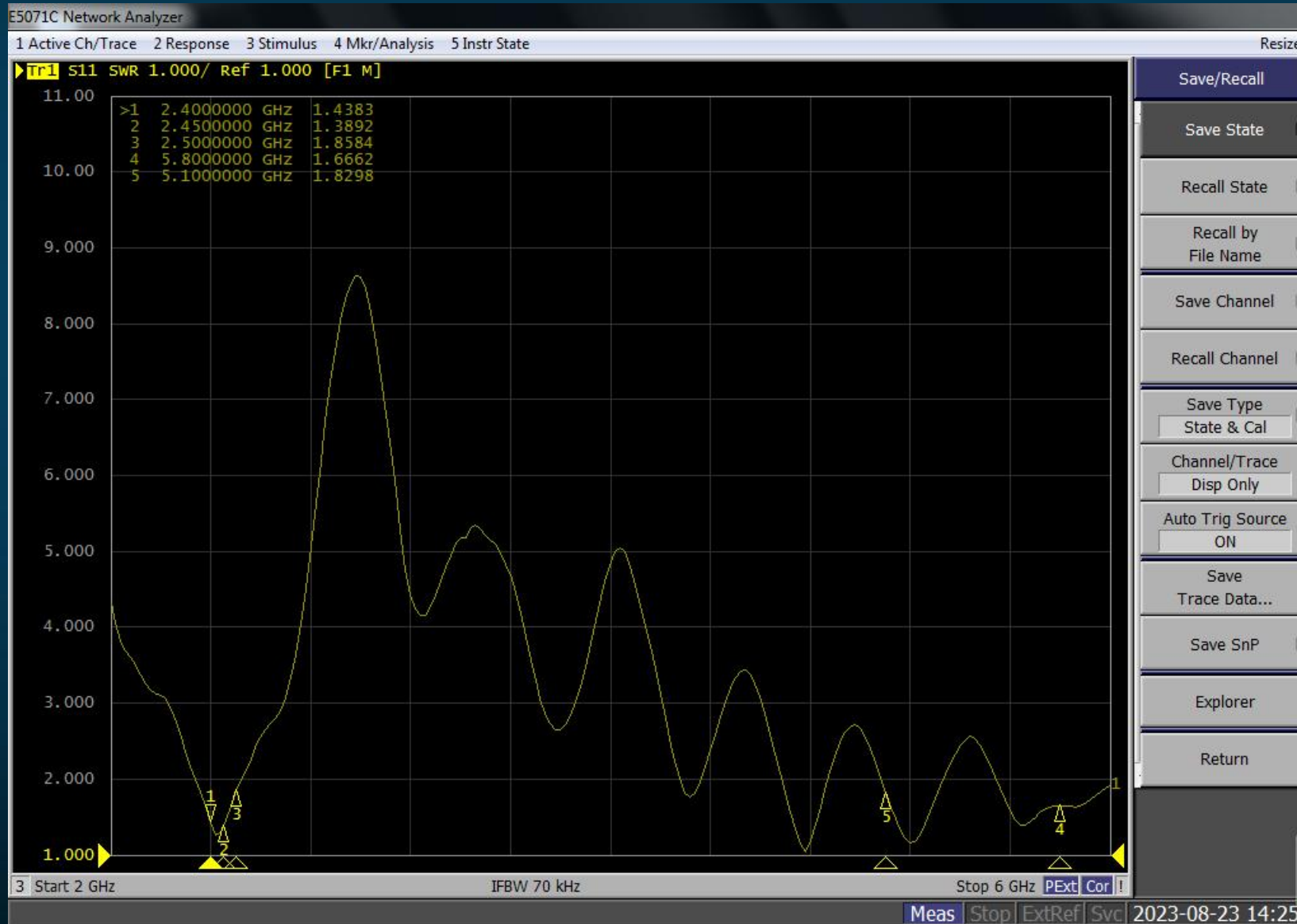


Match change

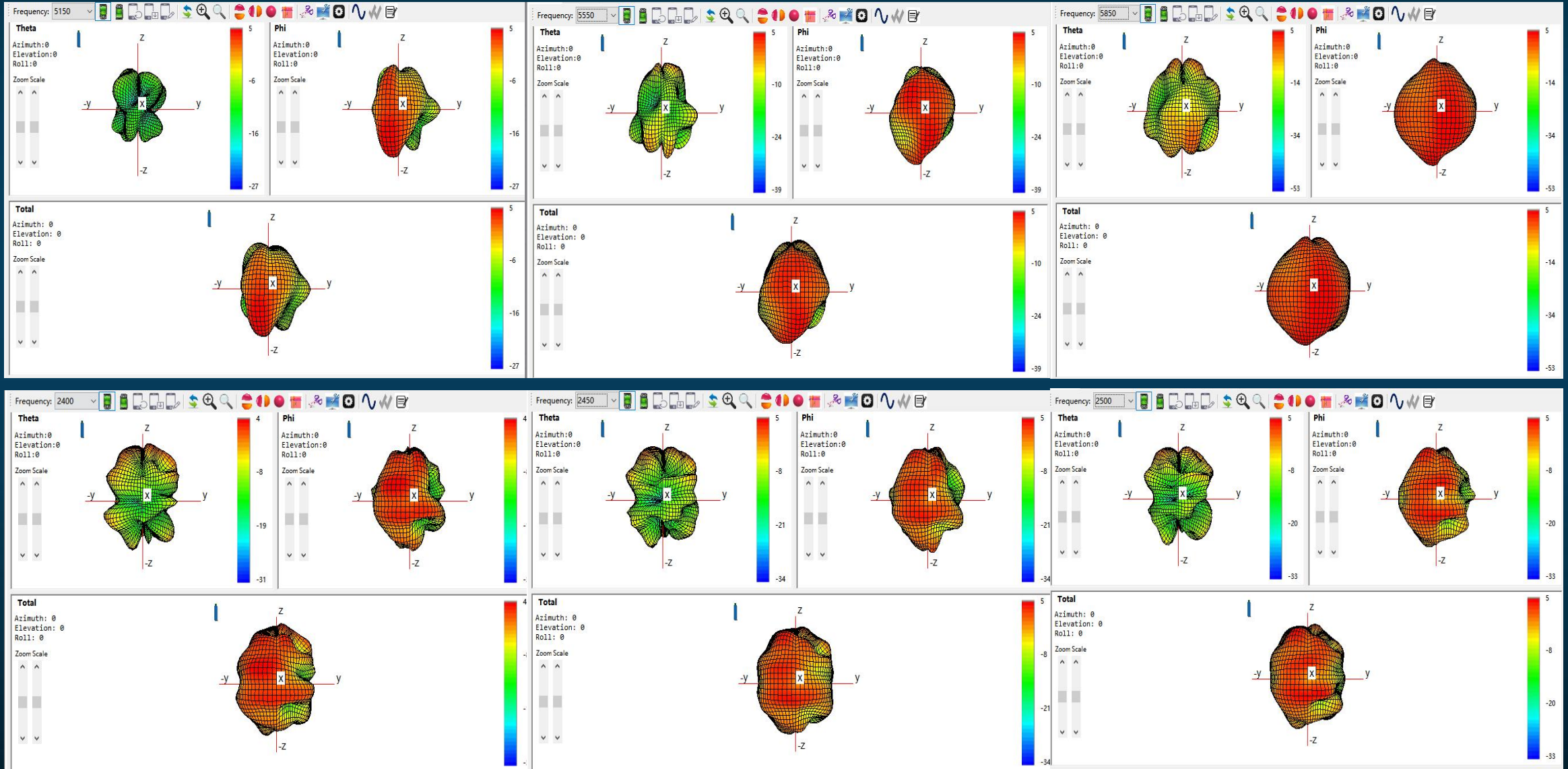
None

Antenna	
Element	Value
E1 (0402)	NC
E2 (0402)	10PF
E3 (0402)	NC

WiFi antenna S11 impedance



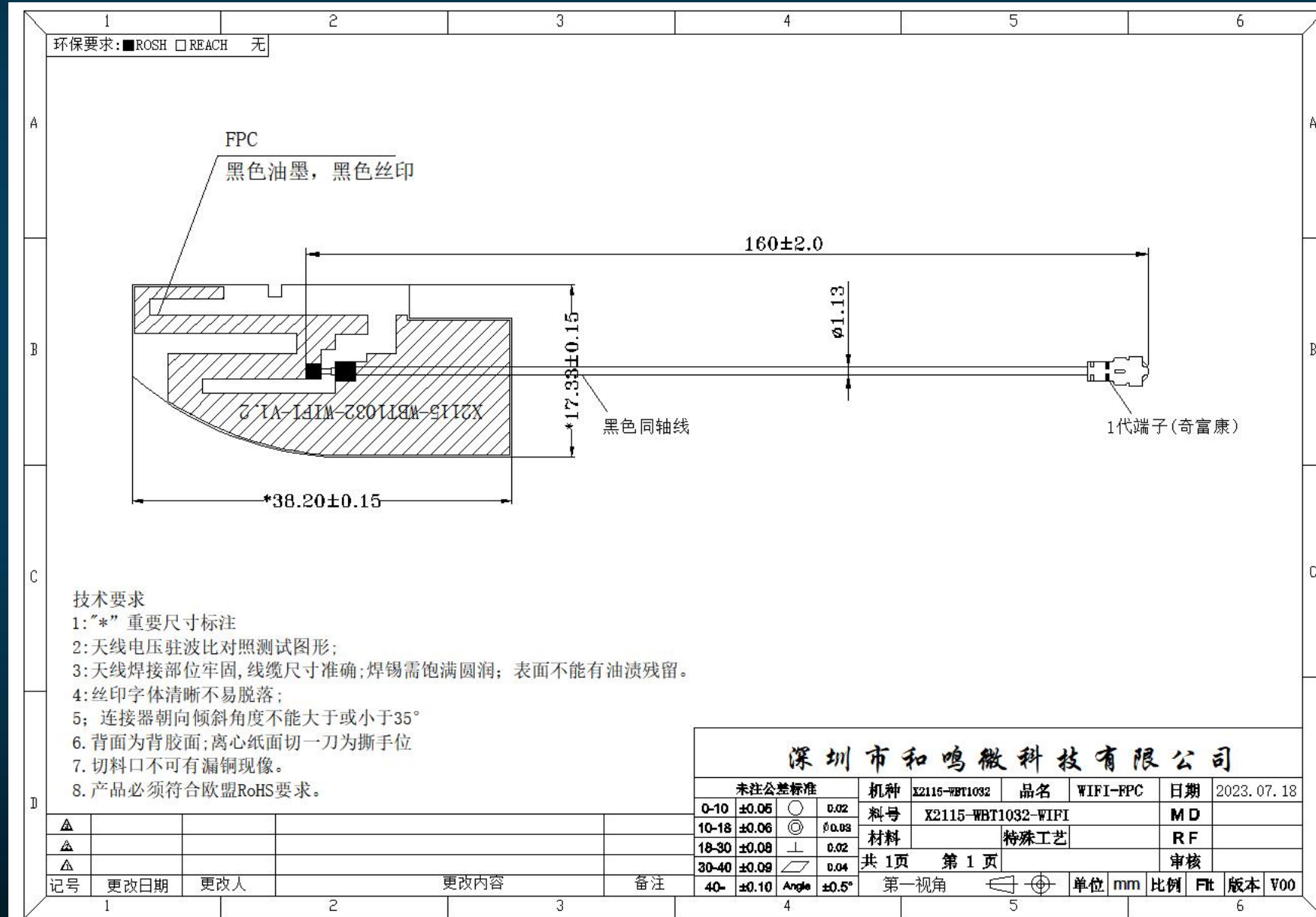
3D Radiation Pattern



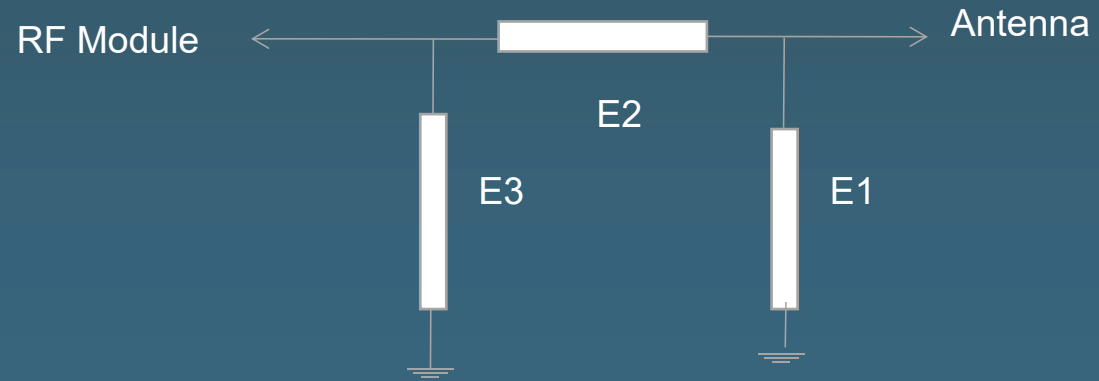
WIFI-GAIN & Efficiency

Frequency (MHz)	Gain (dB)	Efficiency (%)	Frequency (MHz)	Gain (dB)	Efficiency (%)
2400	3.96	58.87	5150	4.19	50.65
2410	4.02	55.33	5200	5.32	53.65
2420	3.91	57.72	5250	6.19	48.15
2430	3.76	55.75	5300	6.15	48.41
2440	4.09	56.69	5350	5.67	48.87
2450	4.44	54.01	5400	5.14	49.31
2460	4.51	53.91	5450	4.49	50.42
2470	4.63	52.36	5500	4.56	48.66
2480	4.77	52.45	5550	4.41	49.78
2490	4.74	52.08	5600	3.86	50.85
2500	4.9	52.81	5650	4.51	50.75
			5700	5.13	50.21
			5750	5.74	53.55
			5800	5.66	52.48
			5850	4.73	51.67

Antenna Engineer Drawing



BT antenna matching circuit



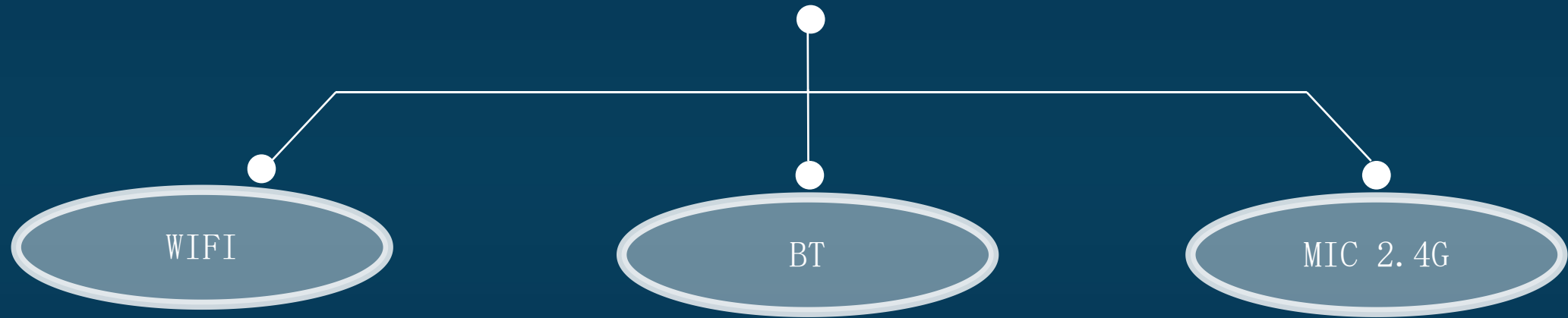
Match change

None

Antenna

Element	Value
E1 (0402)	NC
E2 (0402)	0Ω
E3 (0402)	NC

Project description

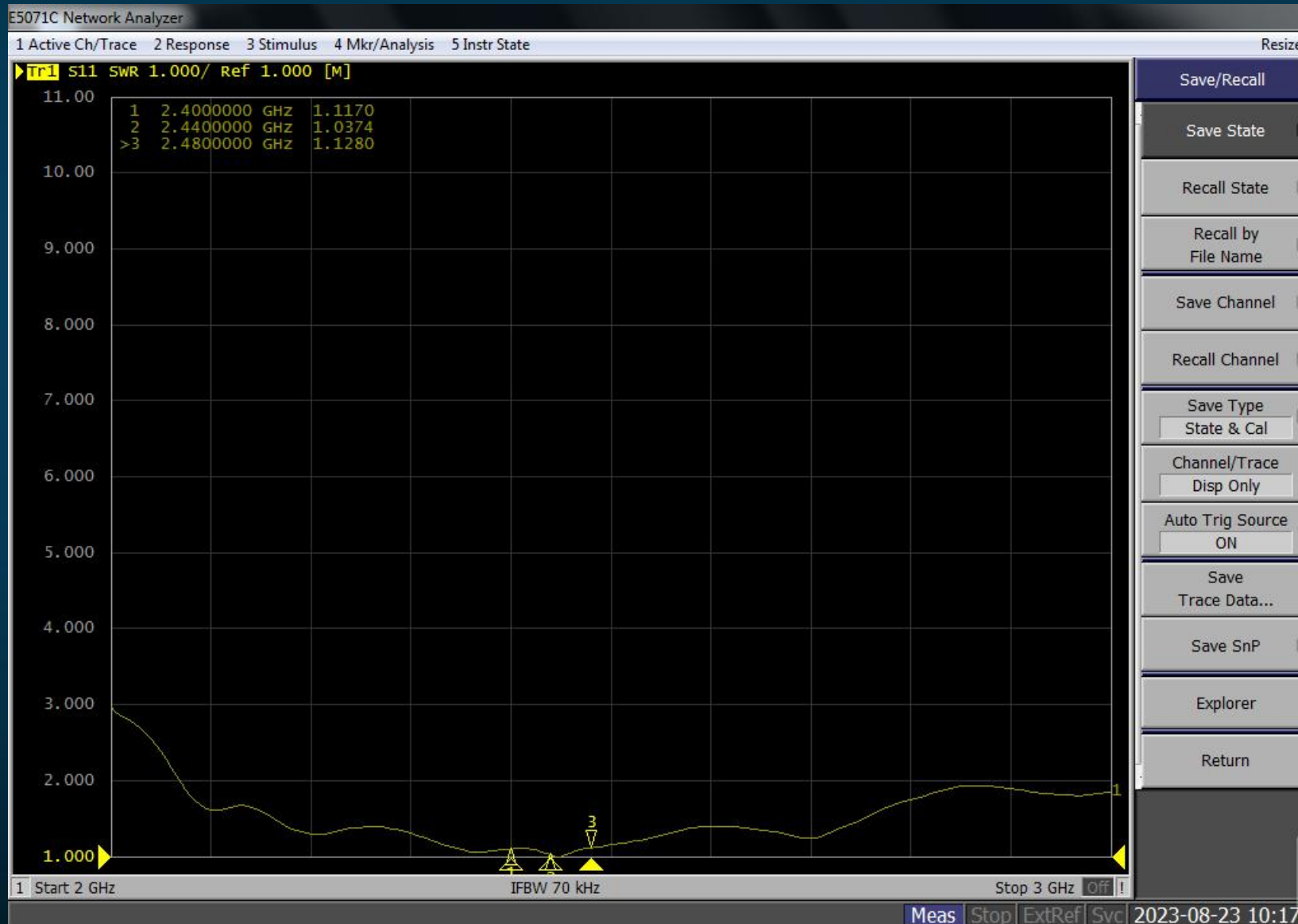


Antenna model: ANT2

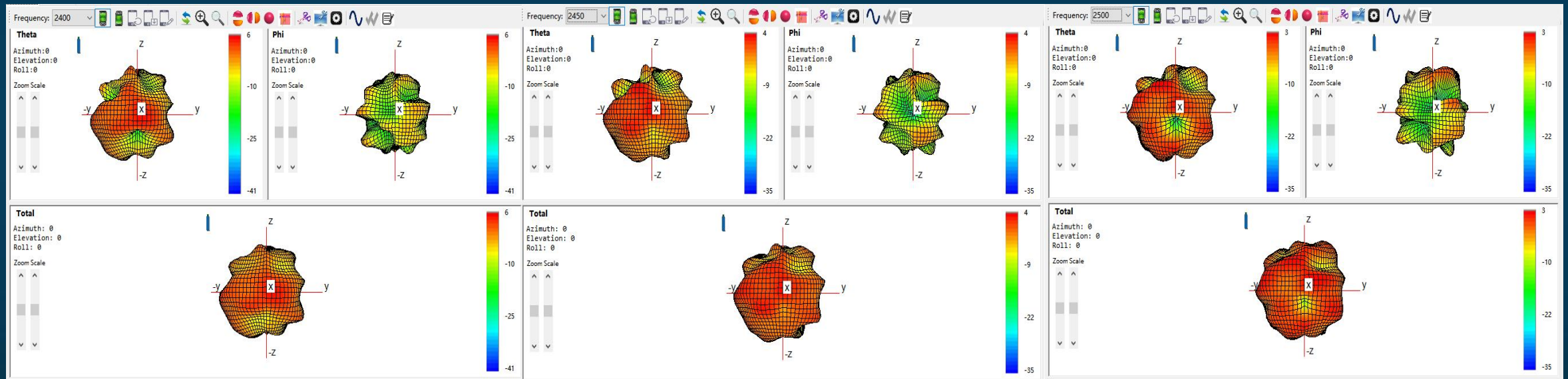
Antenna type: FPC

Match change: None

BT antenna S11 impedance



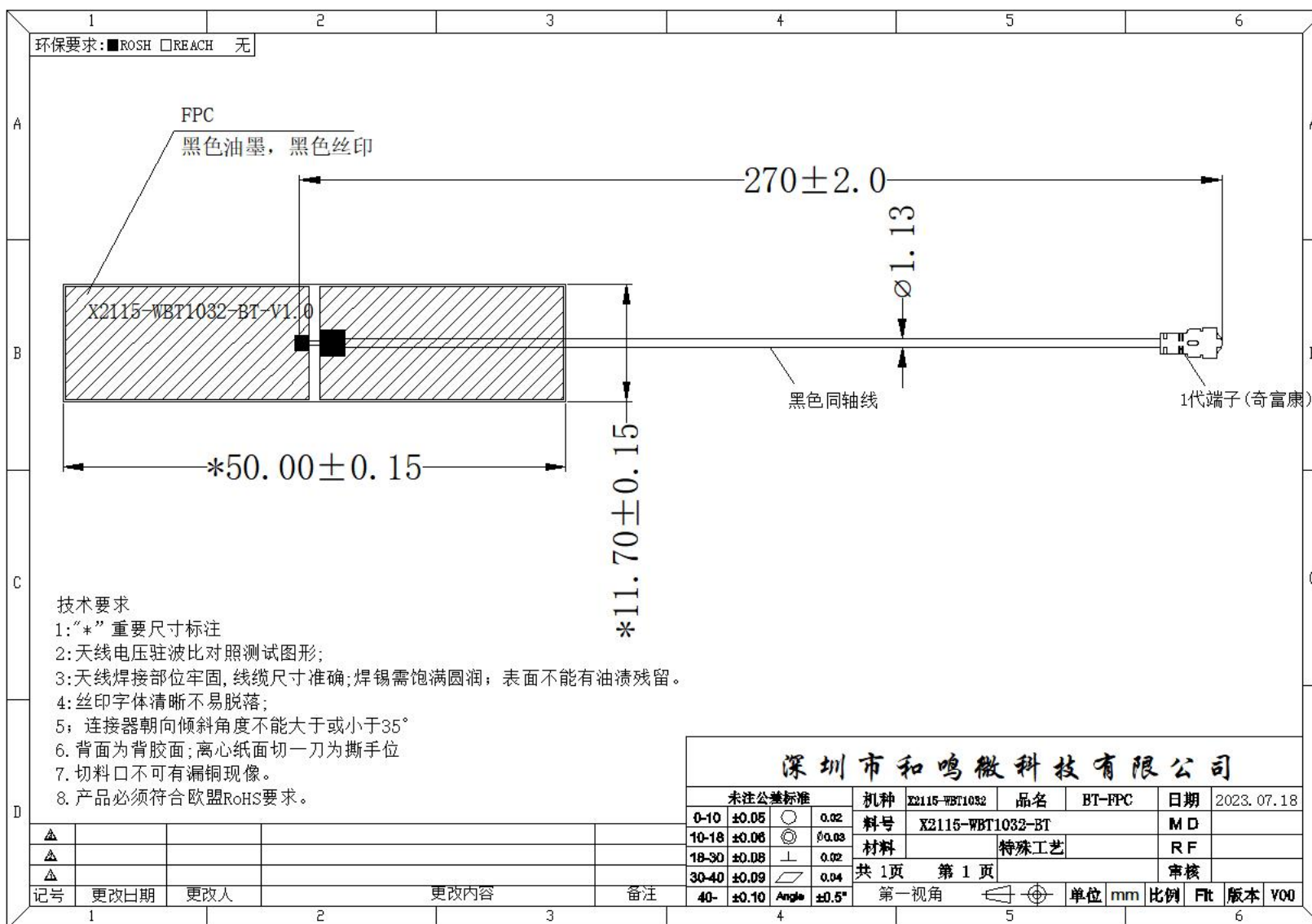
3D Radiation Pattern



BT-GAIN & Efficiency

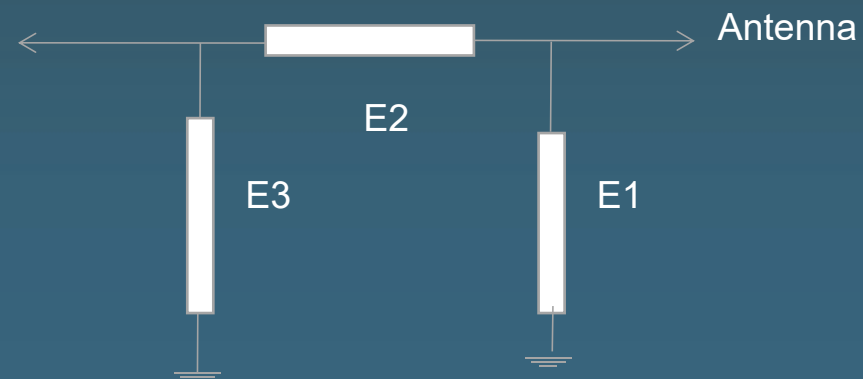
Frequency (MHz)	Gain (dB)	Efficiency (%)
2400	5. 4	56. 55
2410	5. 25	55. 57
2420	4. 69	58. 34
2430	4. 78	54. 91
2440	4. 44	55. 57
2450	3. 92	55. 31
2460	3. 21	55. 03
2470	2. 71	55. 63
2480	2. 26	55. 56
2490	2. 37	54. 57
2500	2. 31	54. 71

Antenna Engineer Drawing



ANT4 antenna matching circuit

RF Module



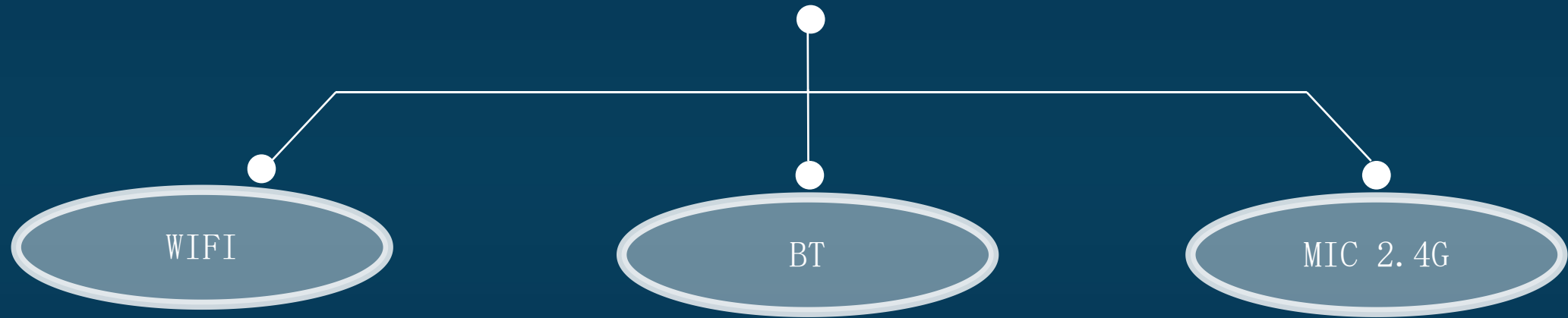
Match change

None

Antenna

Element	Value
E1 (0402)	NC
E2 (0402)	1PF
E3 (0402)	4.7NH

Project description

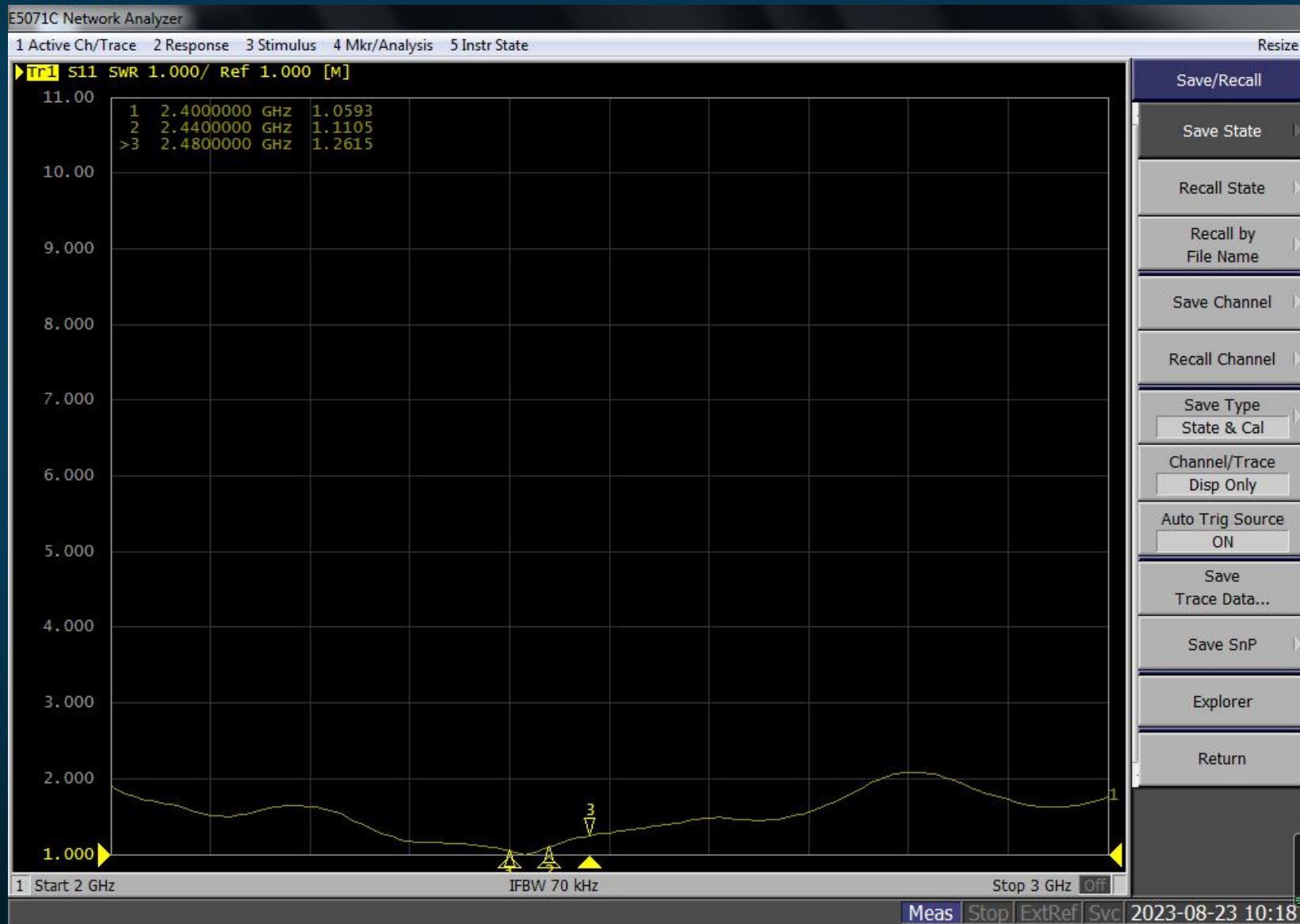


Antenna model: ANT4

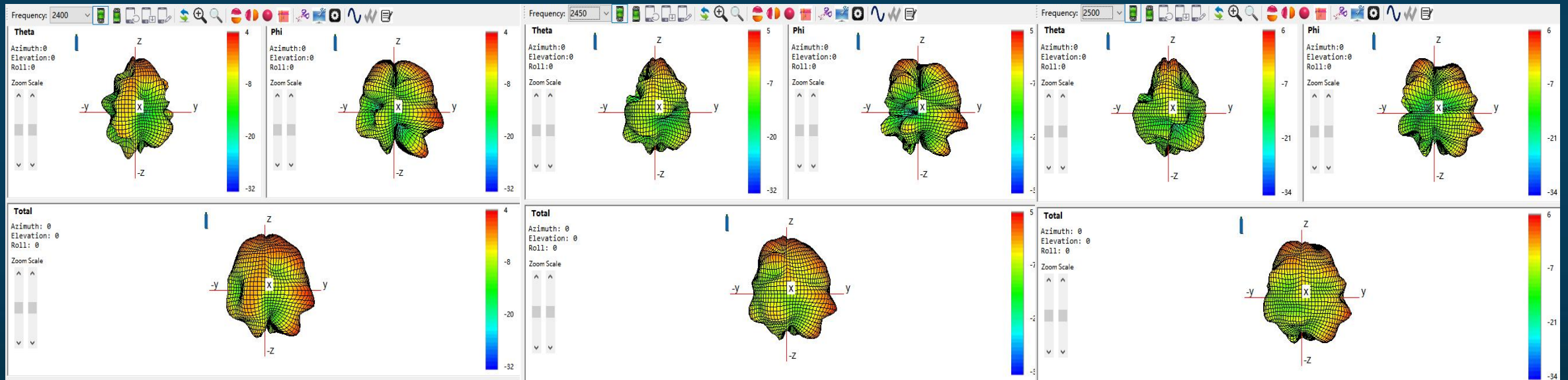
Antenna type: FPC

Match change: None

ANT4 antenna S11 impedance



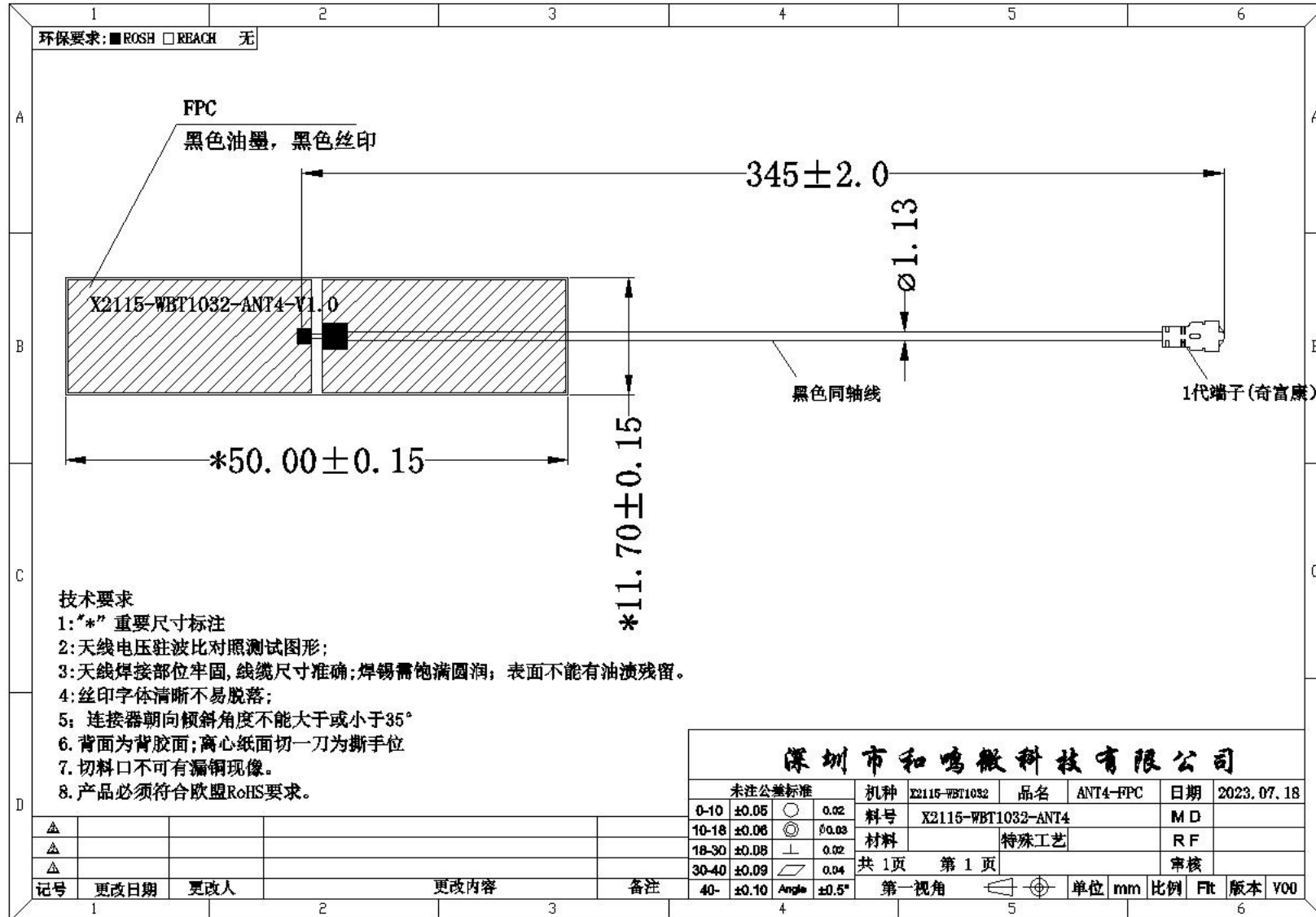
3D Radiation Pattern



ANT4-GAIN & Efficiency

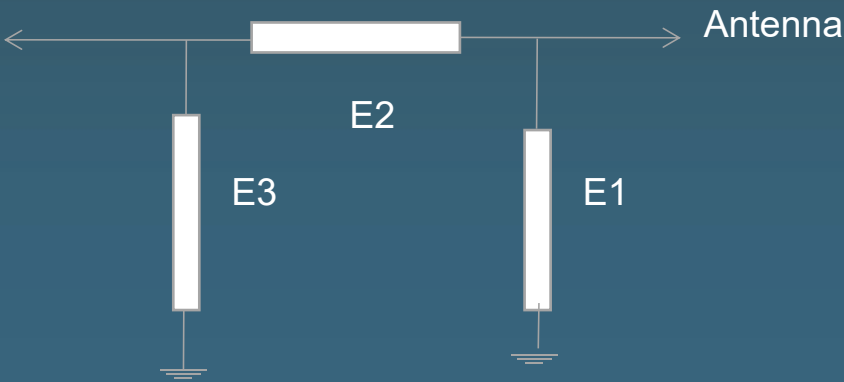
Frequency (MHz)	Gain (dB)	Efficiency (%)
2400	3. 84	56. 27
2410	4. 06	55. 94
2420	4. 07	54. 55
2430	4. 41	55. 68
2440	4. 62	55. 41
2450	4. 94	56. 94
2460	5. 12	57. 07
2470	5. 38	58. 33
2480	5. 45	58. 63
2490	5. 4	58. 26
2500	5. 21	57. 63

Antenna Engineer Drawing



ANT5 antenna matching circuit

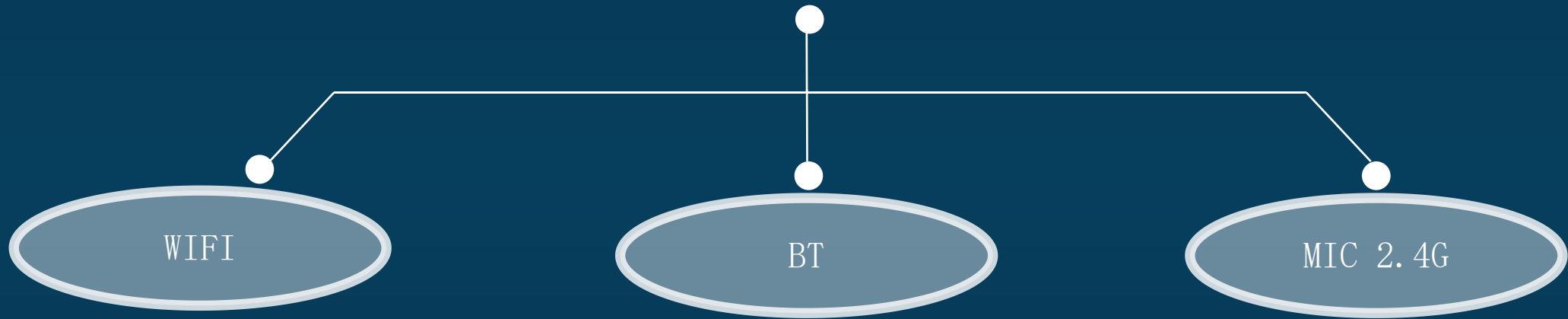
RF Module



Match change
None

Antenna	
Element	Value
E1 (0402)	NC
E2 (0402)	1PF
E3 (0402)	4.7NH

Project description

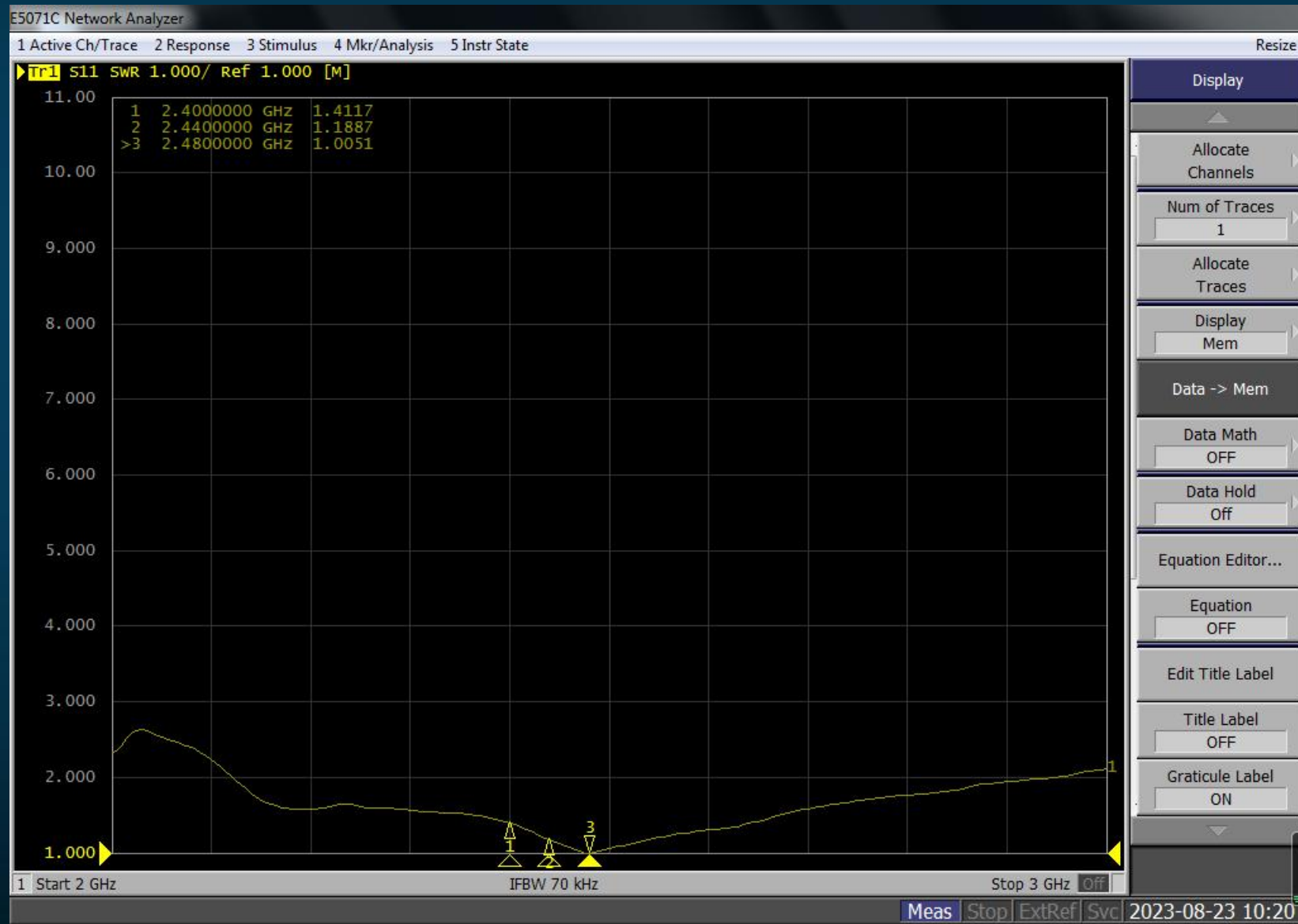


Antenna model: ANT5

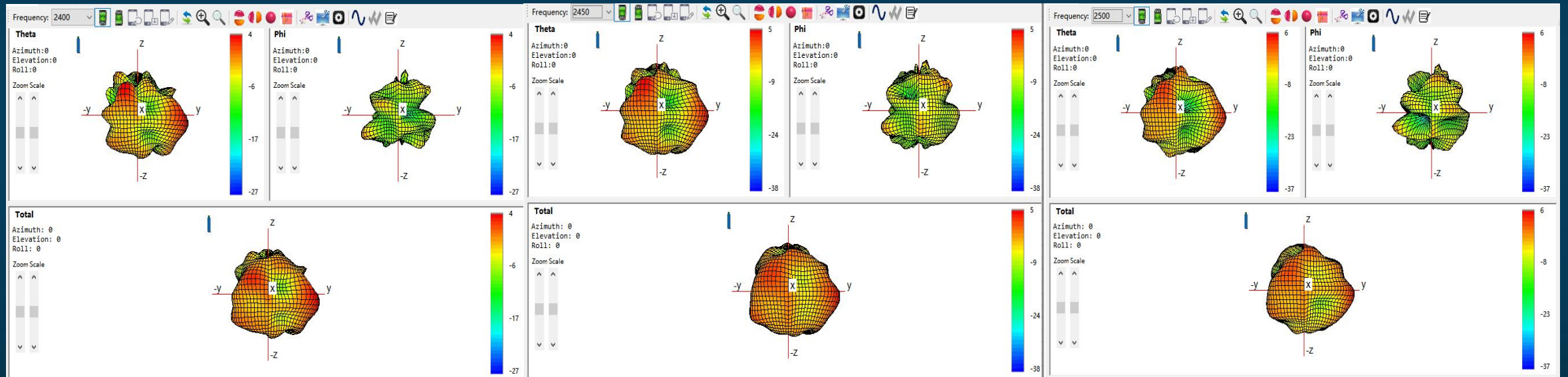
Antenna type: FPC

Match change: None

ANT5 antenna S11 impedance



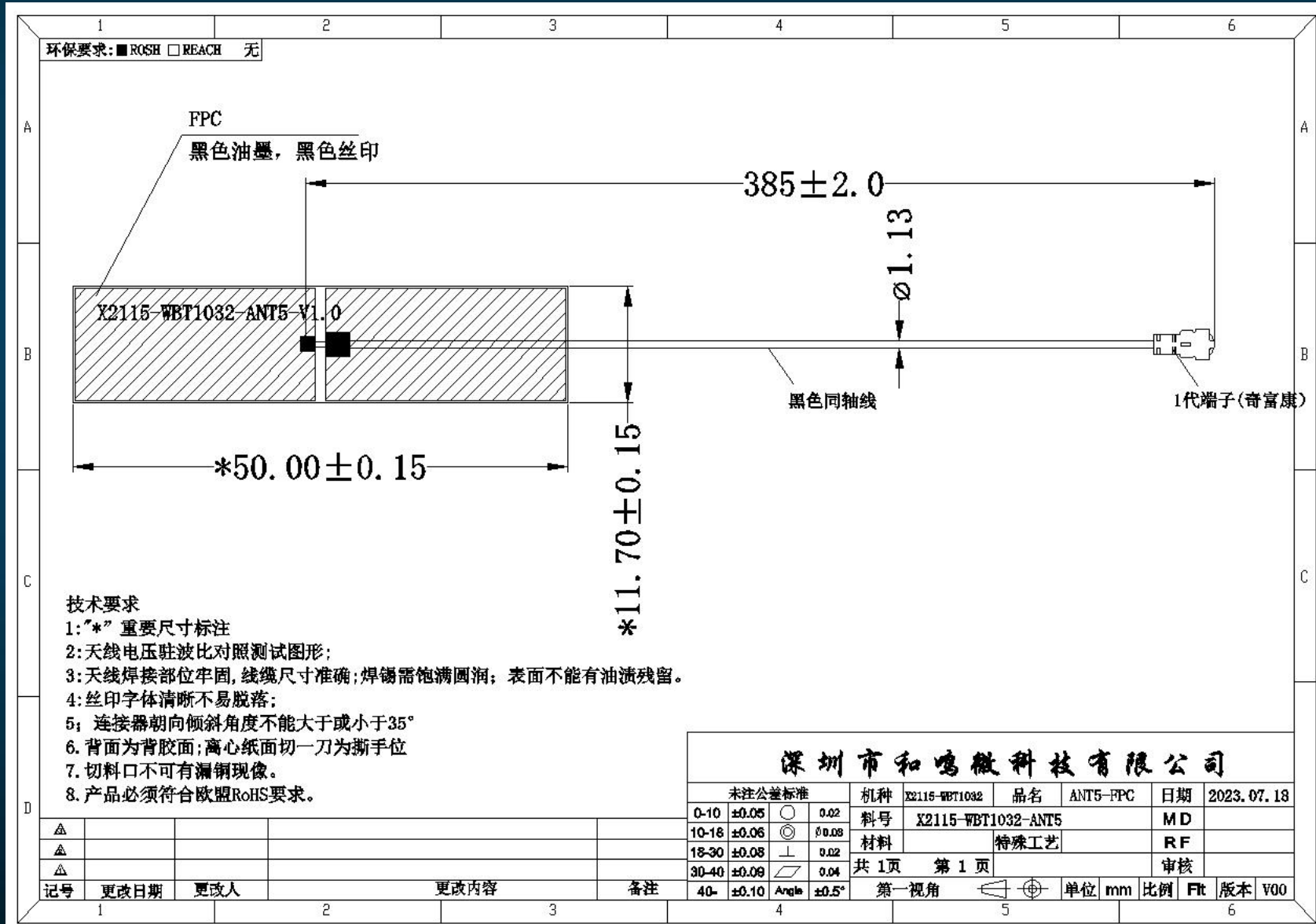
3D Radiation Pattern



ANT5-GAIN & Efficiency

Frequency (MHz)	Gain (dB)	Efficiency (%)
2400	3.93	57.37
2410	3.84	56.36
2420	3.53	53.49
2430	3.71	55.09
2440	4.17	54.64
2450	4.65	56.26
2460	5.03	56.52
2470	5.3	57.48
2480	5.65	58.51
2490	5.75	58.29
2500	5.74	58.31

Antenna Engineer Drawing



NOTICE



1

Please pay attention to whether the matching in the report has changed and whether the environmental treatment is feasible; This will directly affect the antenna performance, if you have any objections, please contact us in time;

2

If your machine has replacement materials, updated software, environmental processing changes, etc., you must provide the latest status of the machine to our company for verification in time

3

If your company's machine needs to be sent to a third party for verification or inspection, it is best to provide the test machine to our company to test and verify OK before sending it for testing (because the consistency of the motherboard, environmental treatment, antenna assembly and so on will affect the antenna deviation)