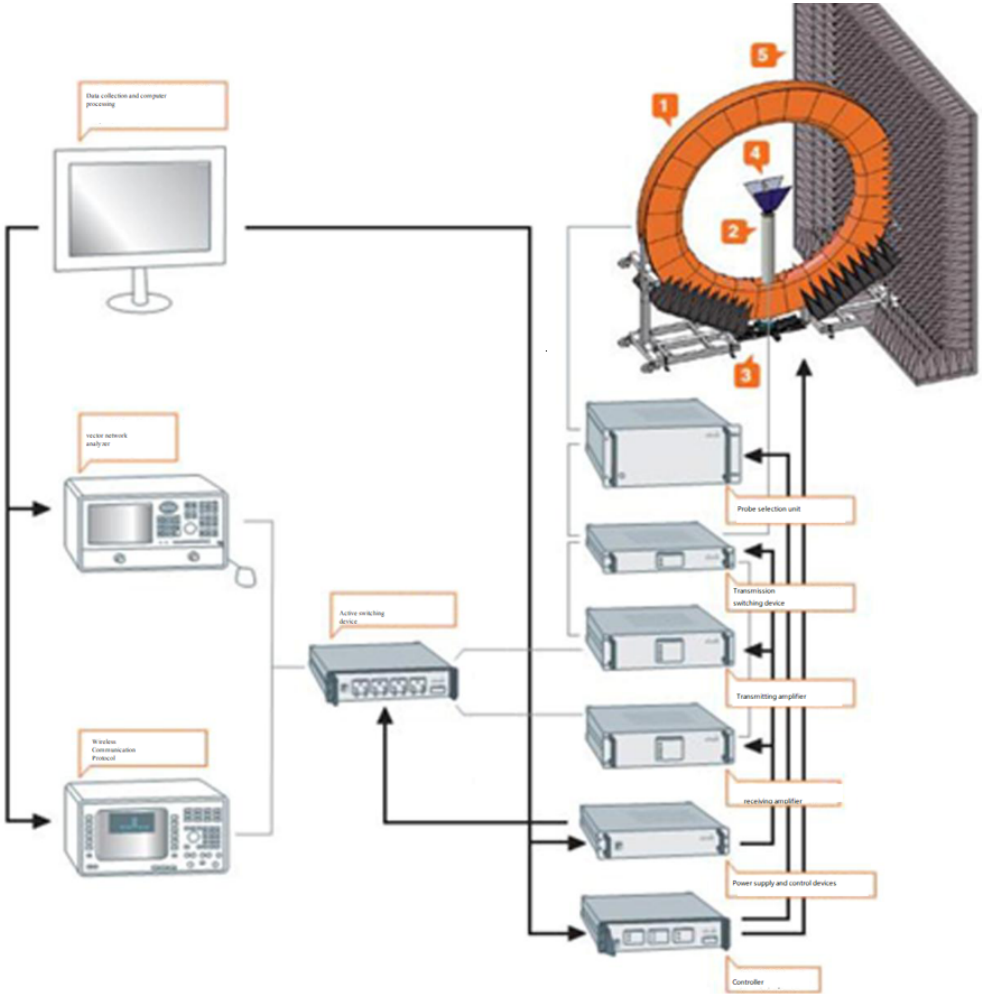
Antenna test report

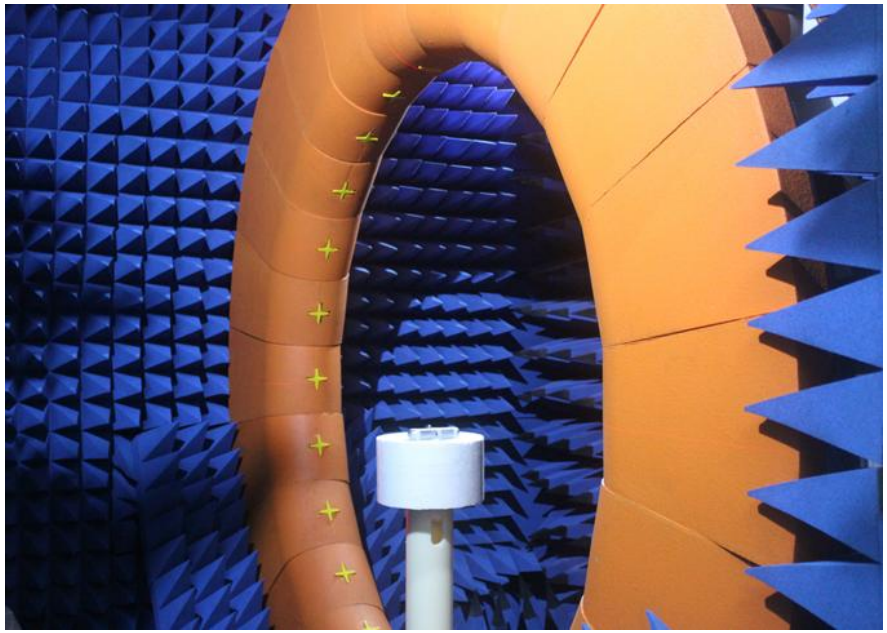
B223090

2023-11-2

Test equipment and test environment

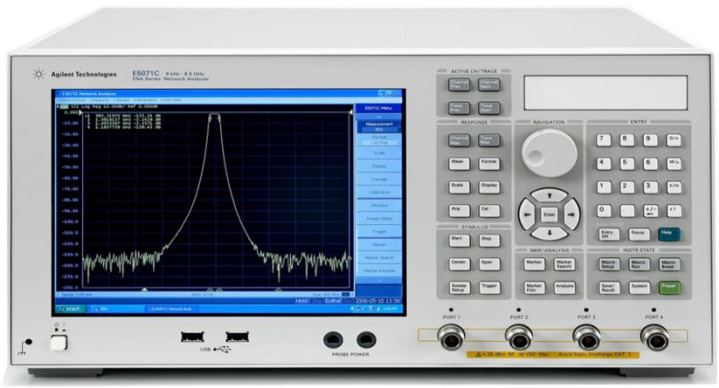


Test equipment



- 0.4GHz -6GHz

Test equipment



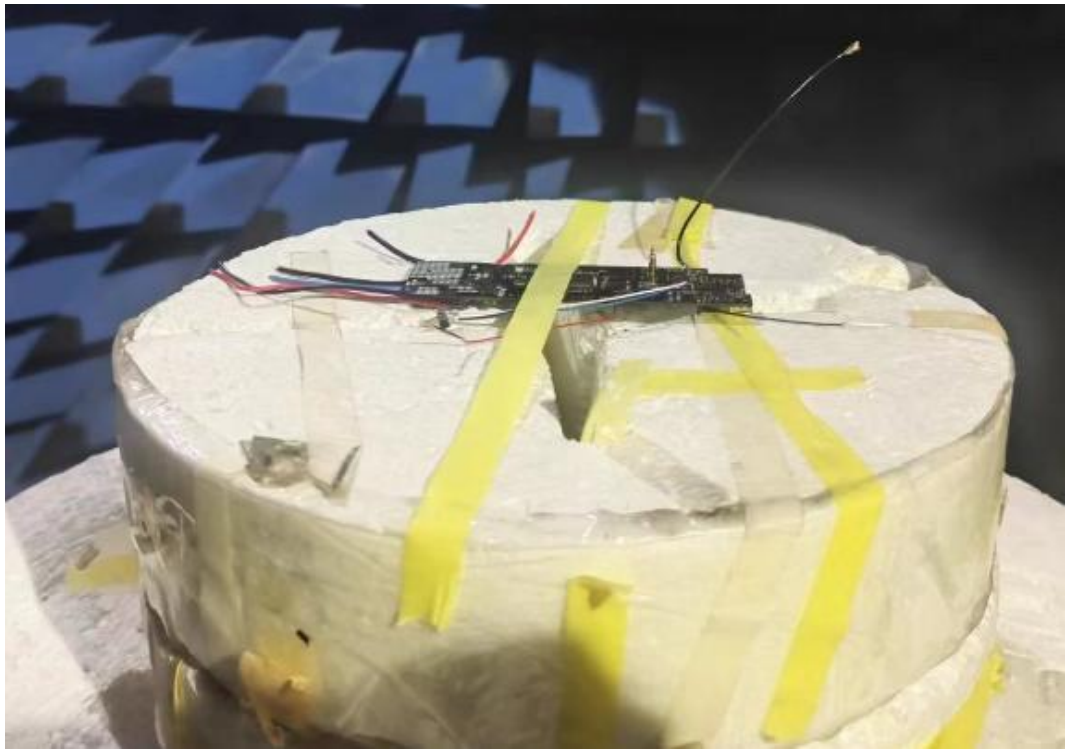
Agilent E5071C

- 300 kHz -8.5GHz

R&S CMW500

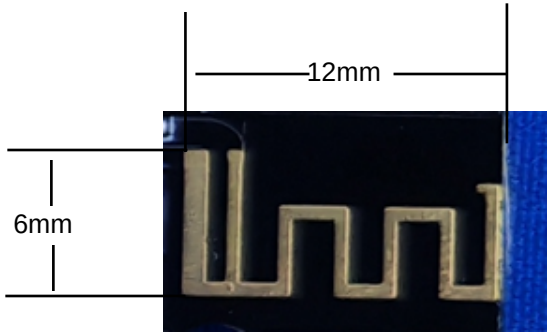
- GSM/3G/4G
- WIFI/ Bluetooth
- NB-IoT

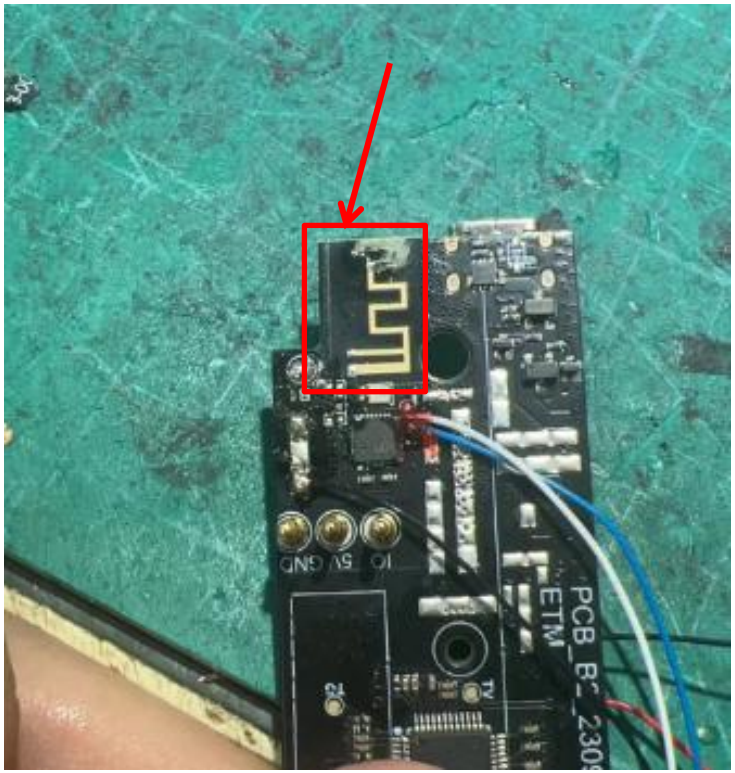
Test photos



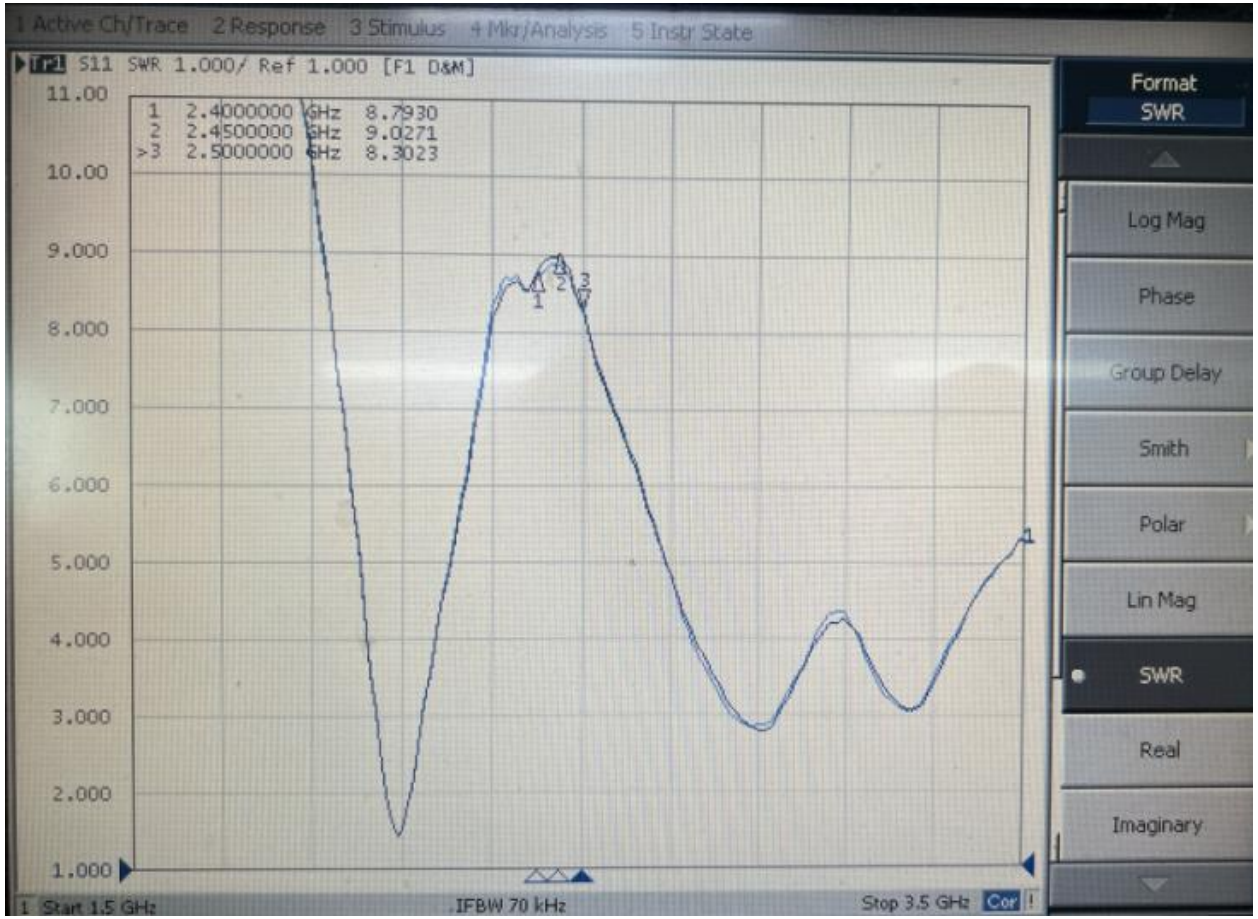
Passive antenna data

Antenna Type: PCB

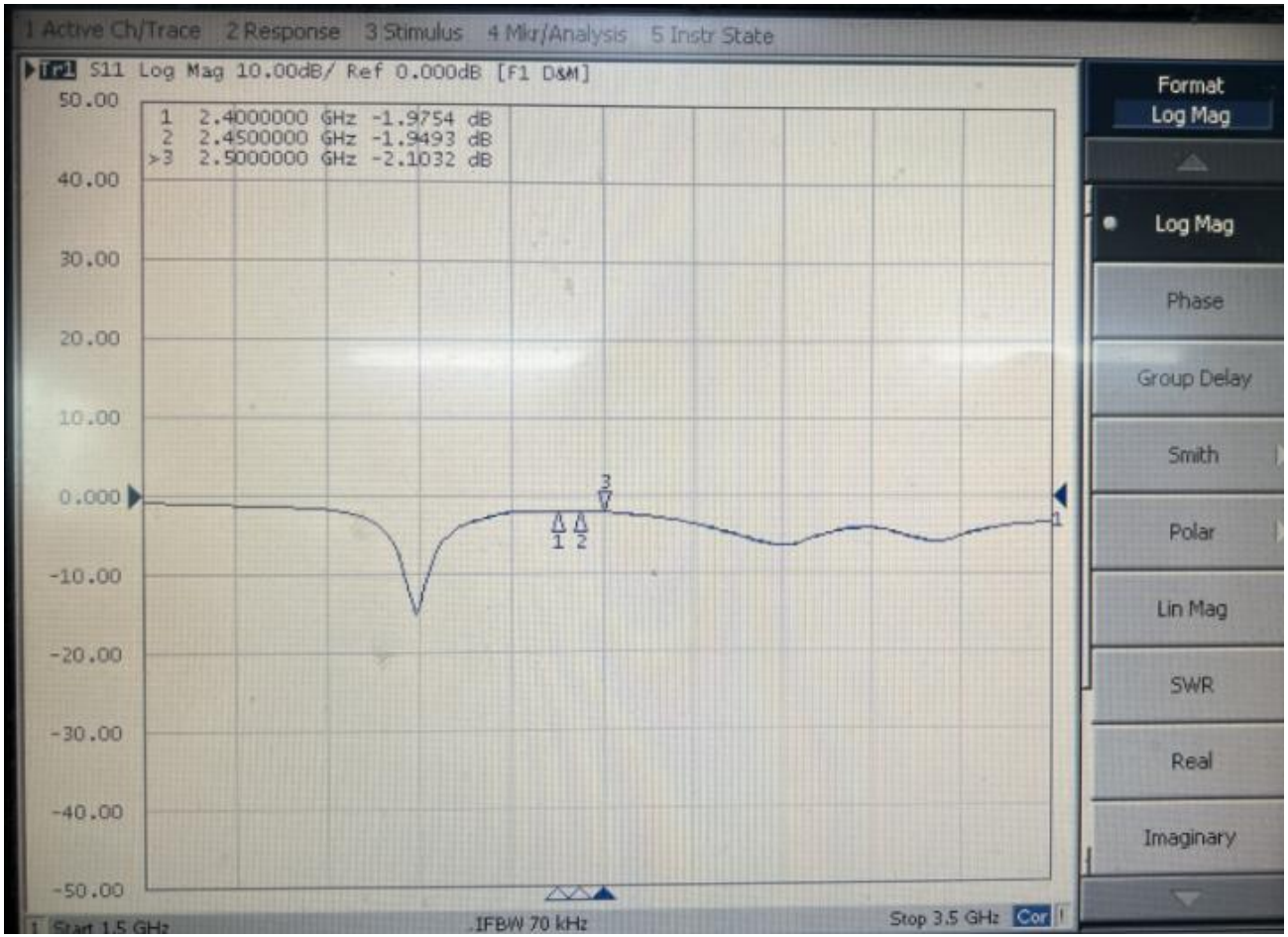




Antenna SWR


1 Active Ch/Trace
2 Response
3 Stimulus
4 Mkr/Analysis
5 Instr State
S11 SWR 1.000/ Ref 1.000 [F1 D&M]
1 2.4000000 GHz 8.7930
2 2.4500000 GHz 9.0271
>3 2.5000000 GHz 8.3023
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
Start 1.5 GHz
IFBW 70 kHz
Stop 3.5 GHz
Format
SWR
Log Mag
Phase
Group Delay
Smith
Polar
Lin Mag
SWR
Real
Imaginary

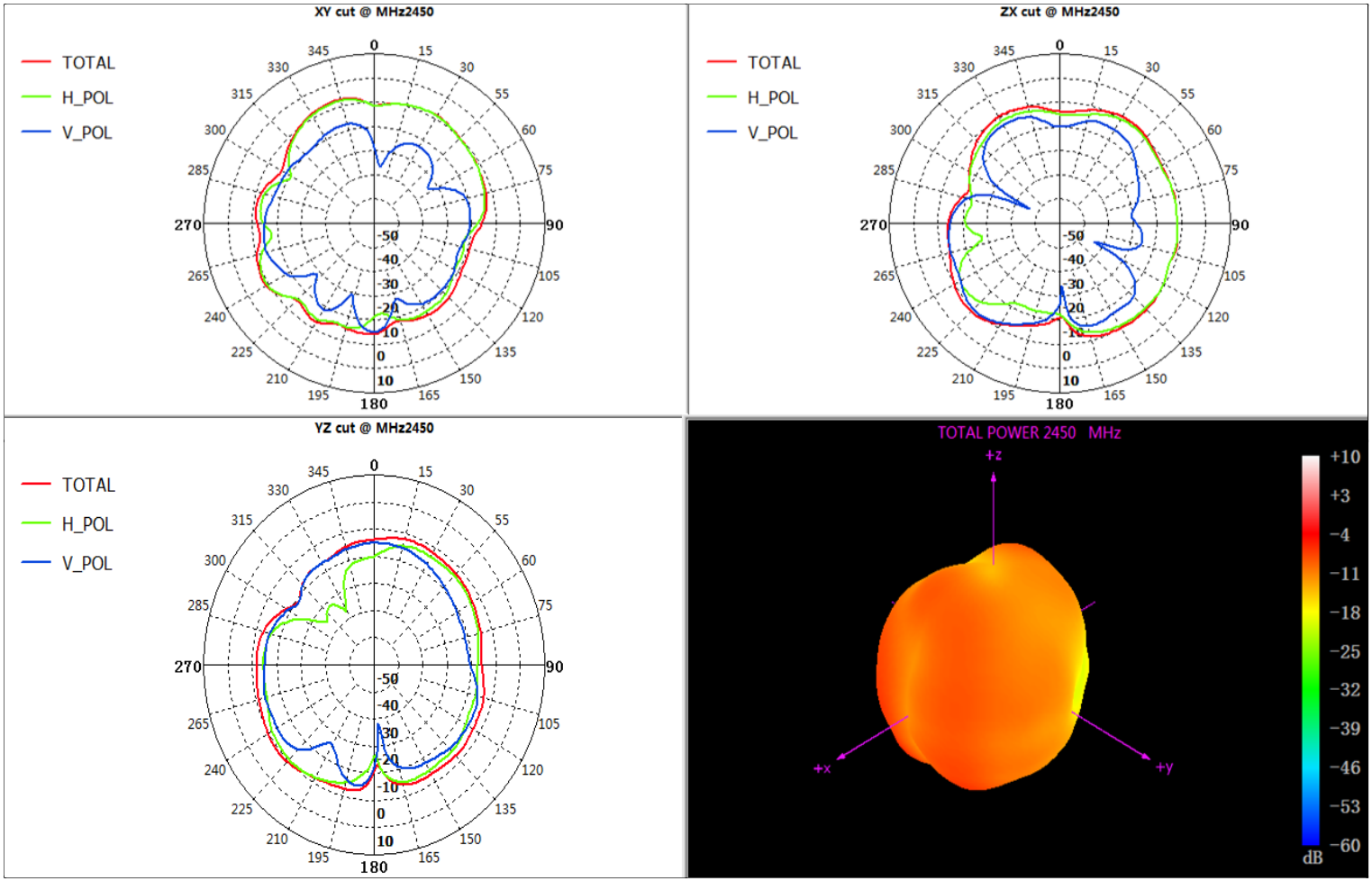
Antenna Return loss



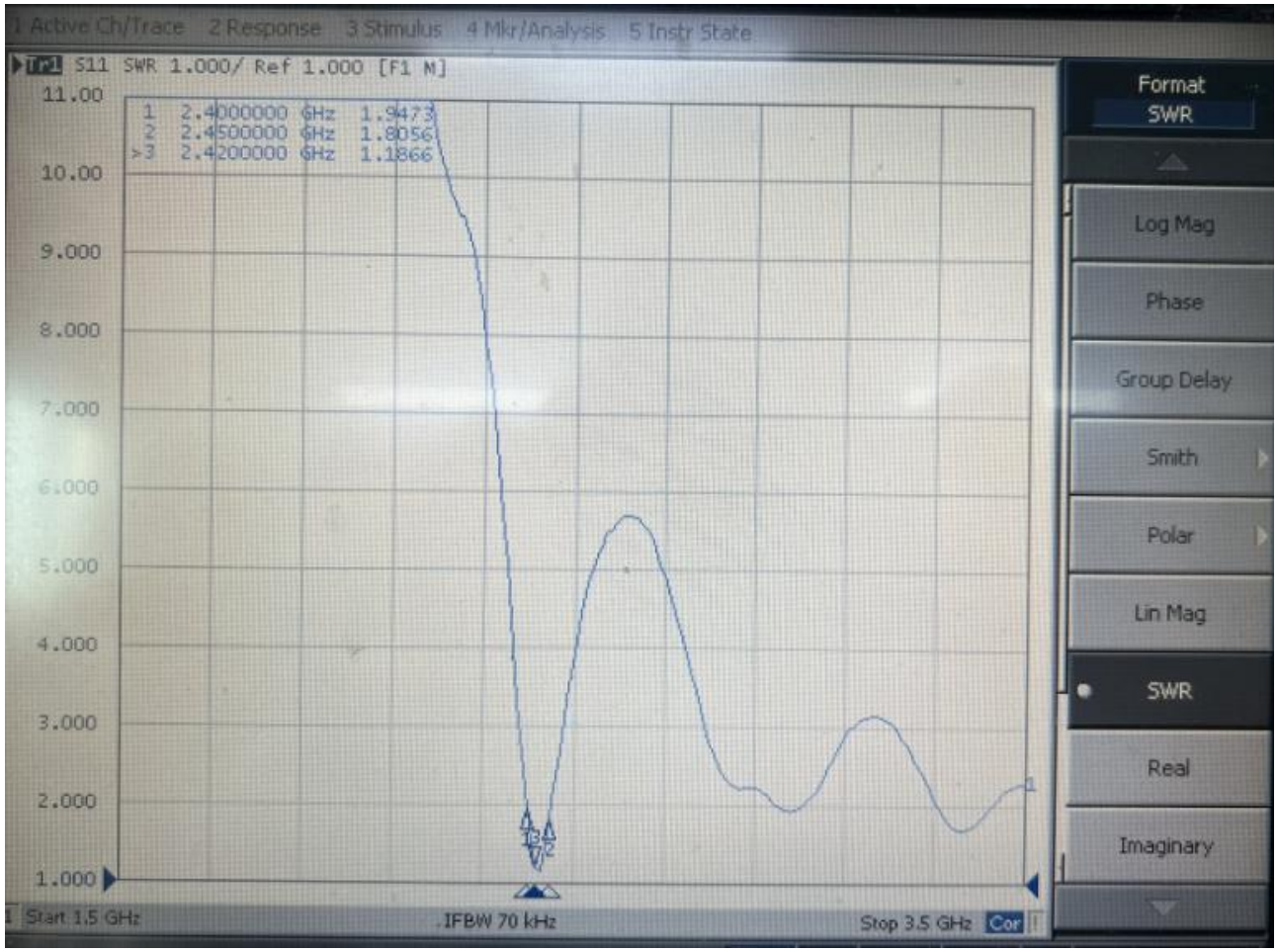
Antenna gain and efficiency

Freq(MHz)	Efficiency (%)	Gain(dBi)
2400 MHz	9.03	-5.1
2410 MHz	8.37	-5.04
2420 MHz	8.38	-5.17
2430 MHz	8.12	-5.33
2440 MHz	8.19	-4.87
2450 MHz	8.04	-5.46
2460 MHz	7.65	-5.65
2470 MHz	7.56	-5.32
2480 MHz	7.33	-5.67
2490 MHz	7.42	-5.57
2500 MHz	7.63	-5.21

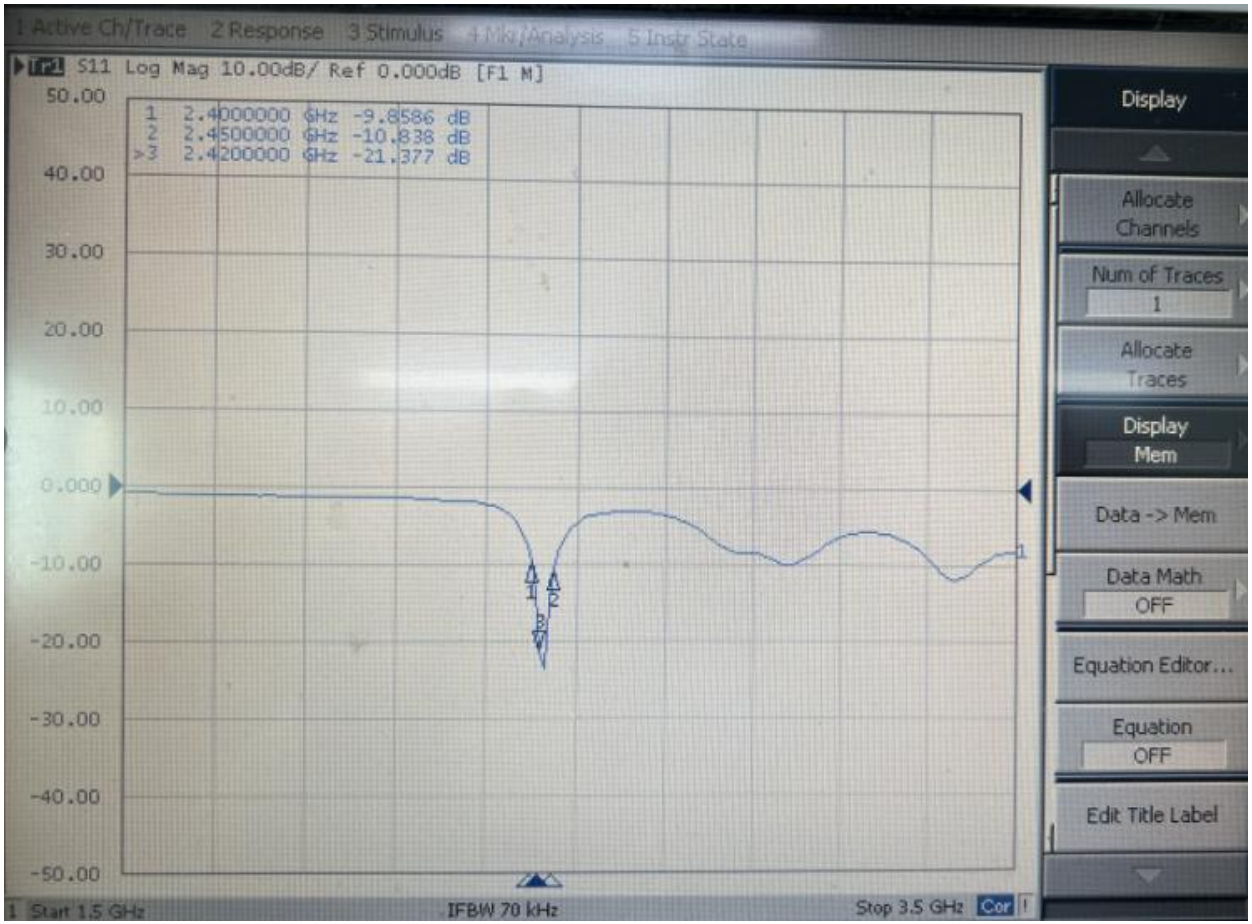
Antenna Radiation Pattern



Antenna SWR


1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Tr1 S11 SWR 1.000/ Ref 1.000 [F1 M]
1 2.4000000 GHz 1.9473
2 2.4500000 GHz 1.8056
>3 2.4200000 GHz 1.1866
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
Start 1.5 GHz
IFBW 70 kHz
Stop 3.5 GHz
Cor
Format
SWR
Log Mag
Phase
Group Delay
Smith
Polar
Lin Mag
SWR
Real
Imaginary

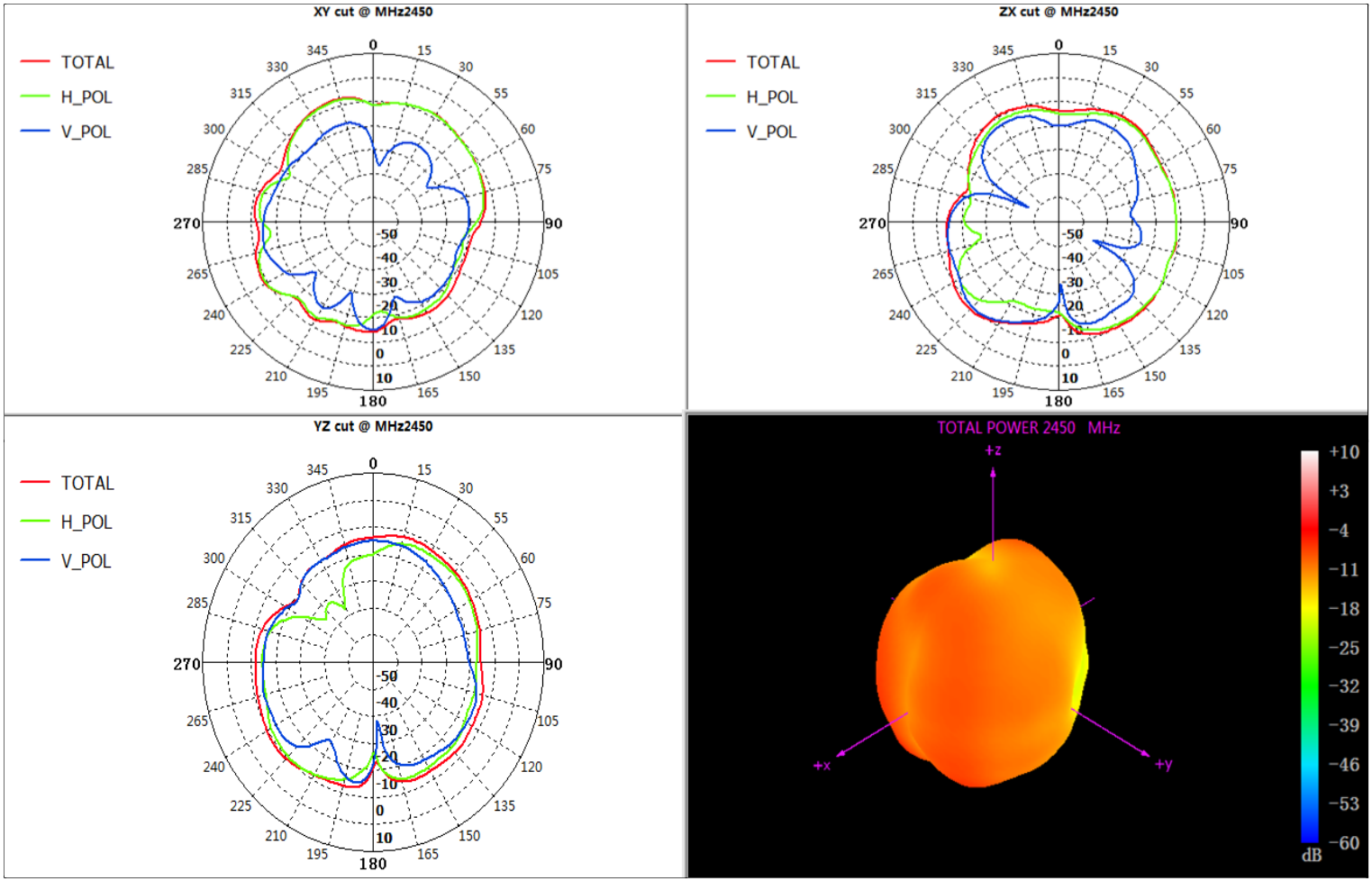
Antenna Return loss



Antenna gain and efficiency

Freq(MHz)	Efficiency (%)	Gain(dBi)
2400 MHz	15.66	-6.72
2410 MHz	16.31	-5.74
2420 MHz	17.9	-4.54
2430 MHz	16.69	-3.71
2440 MHz	18.99	-3
2450 MHz	18.46	-2.55
2460 MHz	19.71	-2.38
2470 MHz	19.42	-2.52
2480 MHz	18.28	-2.86
2490 MHz	17.12	-2.95
2500 MHz	16.18	-2.96

Antenna Radiation Pattern



Thanks for your support !

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