

Antenna specification

Manufacturer: GEOMATE POSITIONING PTE. LTD.
Address: 13 Tampines Lane #09-53 Singapore 528479

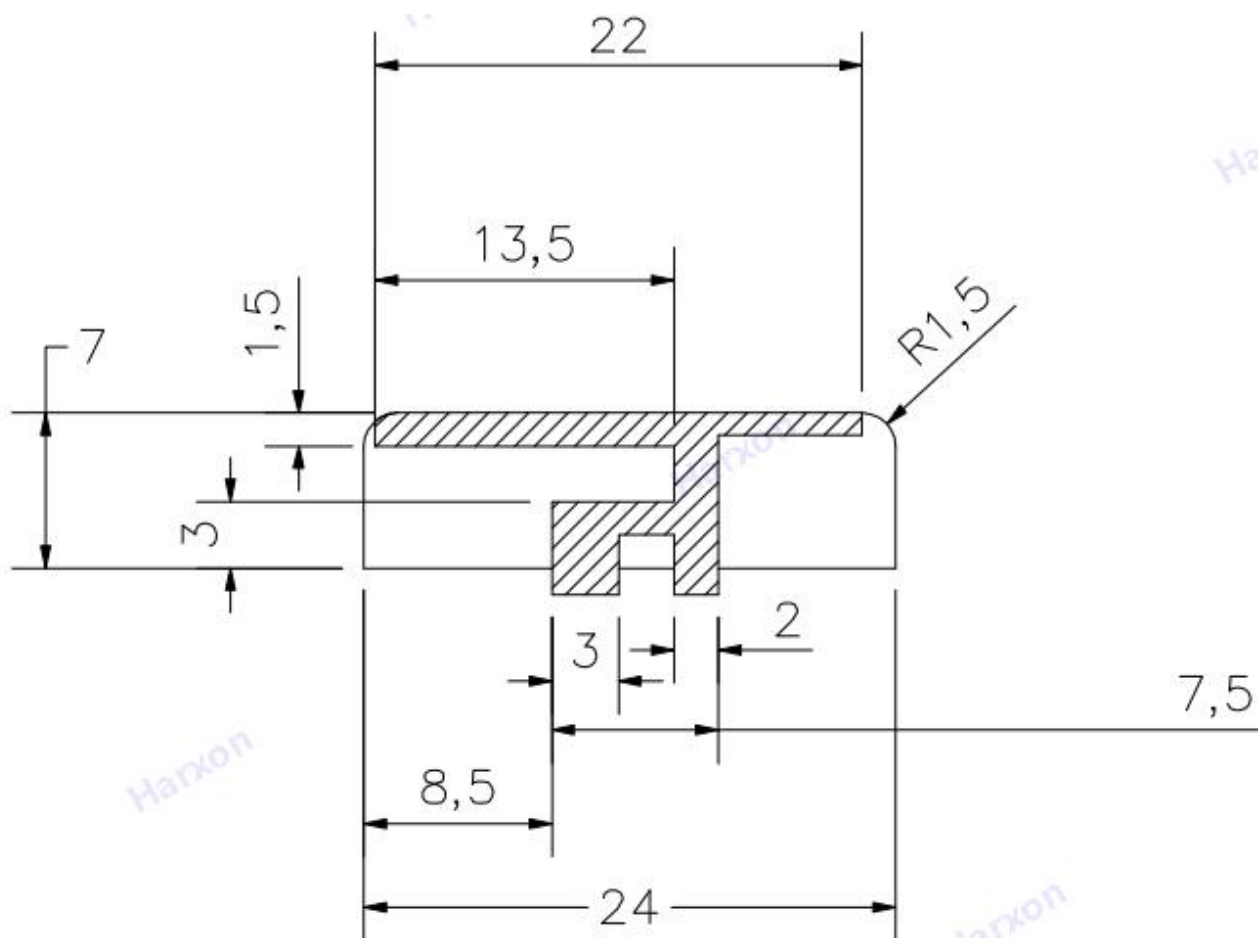
Antenna model: MARB AT V1.0

APPLications

※WIFI/Bluetooth Home RF

※ISM band 2.4GHz/5.5GHz applications

1. Dimensions



2. Specifications

number	Item	Specifications
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Antenna specification

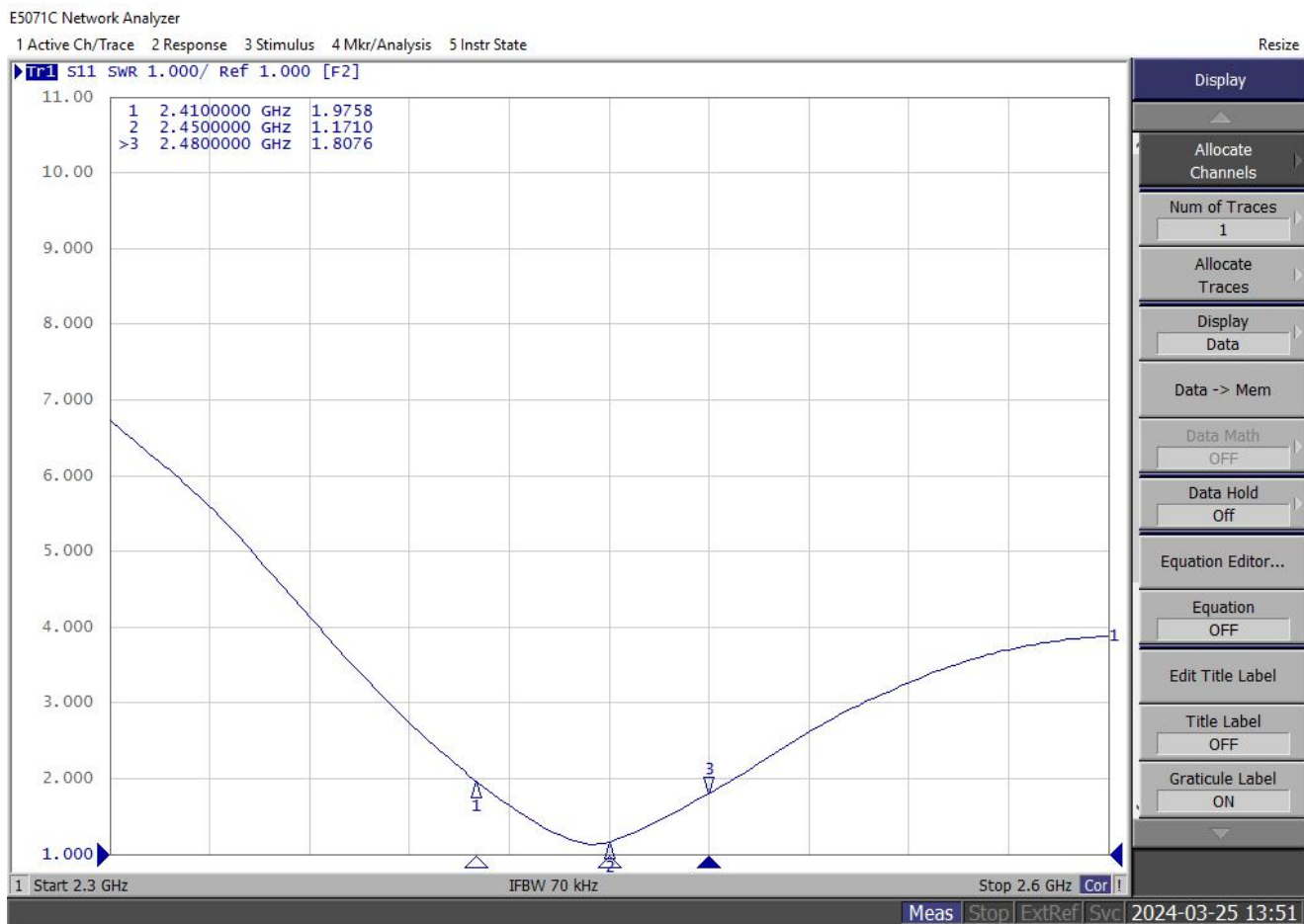
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1	Working Central Frequency	2441 MHz/5560MHz
2	Band Width	(2402-2480)MHz (5150-5850)MHz
3	Gain	0dBi
4	VSWR	Resonance point $\leq$ 2.0
5	Antenna type	PCB antenna
6	Azimuth Beam width	Omni - directional
7	Impedance	50ohm
8	Modulation mode	GFSK

3.simulation parameter

① VSWR

Mkr1: 2410MHz 1.97 Mkr2: 2450MHz 1.17 Mkr3: 2480 MHz 1.8



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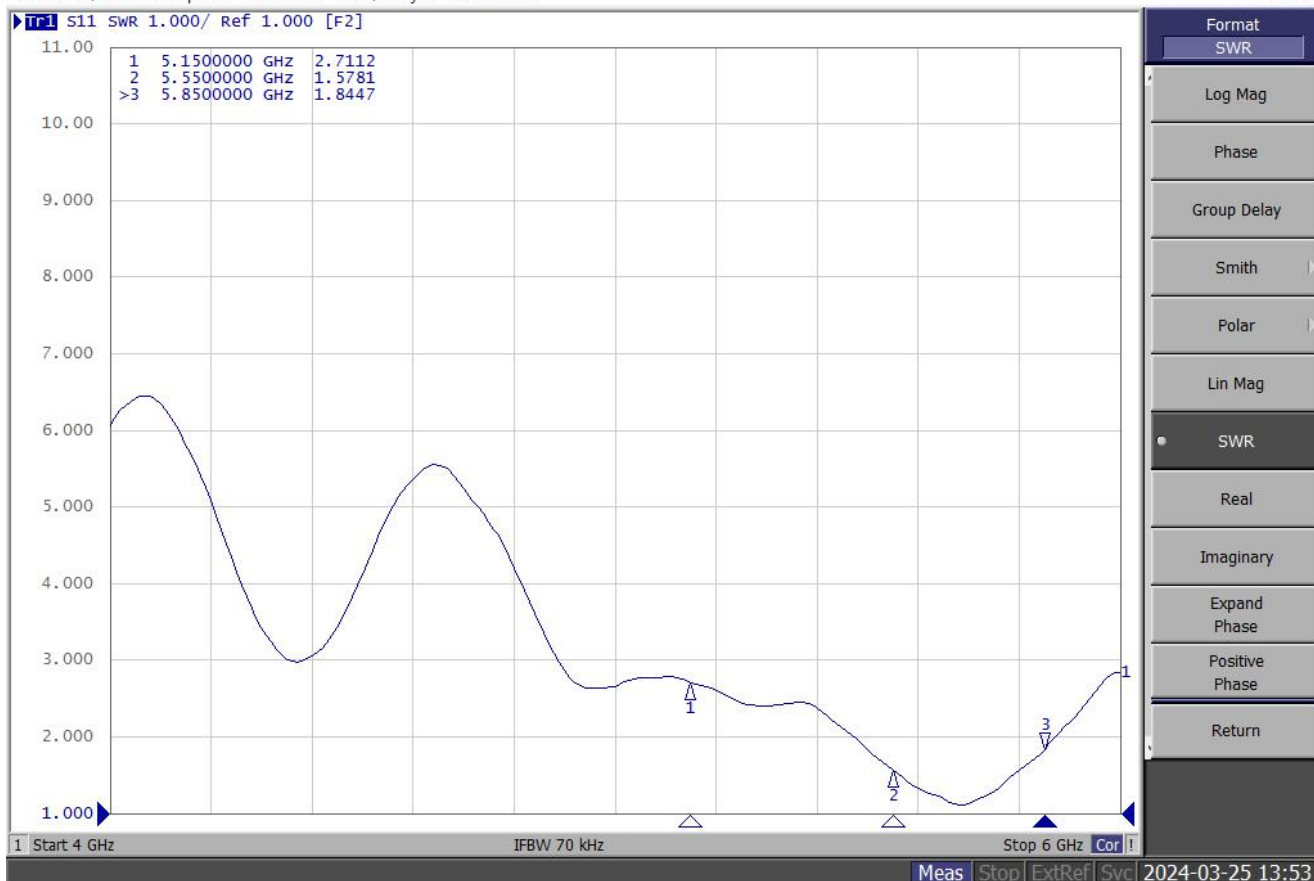
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Mkr1: 5150MHz 2.7 Mkr2: 5550MHz 1.57 Mkr3: 5850 MHz 1.84

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize



②Smith Chart

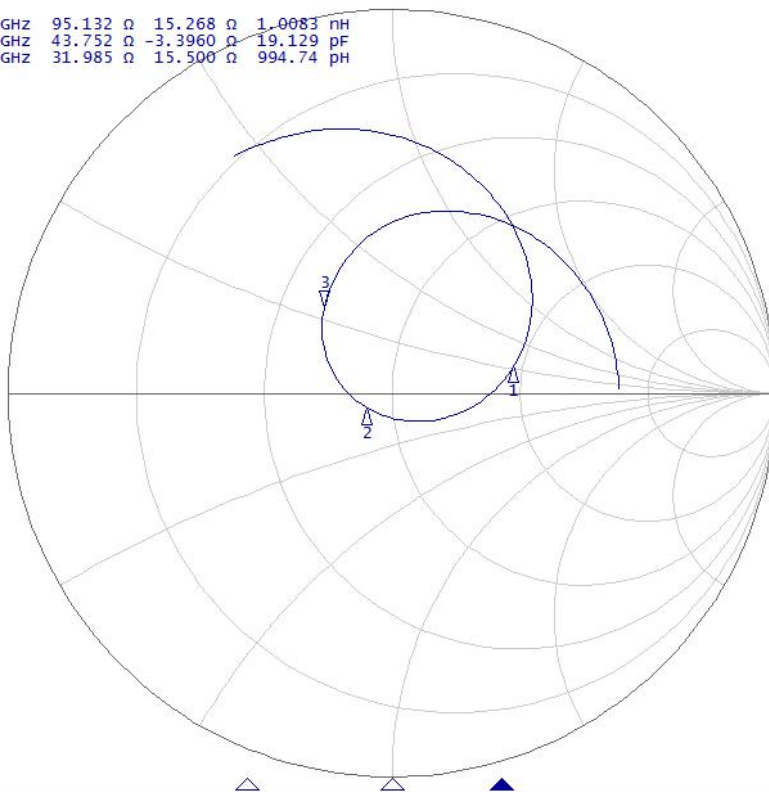
Mkr1: 2410MHz 95.1 Mkr2: 2450MHz 43.7 Mkr3: 2480MHz 31.9

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

► Tr1 S11 Smith (R+jX) Scale 1.000U [F2]

1	2.410000	GHZ	95.132	Ω	15.268	Ω	1.0083	nH
2	2.450000	GHZ	43.752	Ω	-3.3960	Ω	19.129	pF
>3	2.480000	GHZ	31.985	Ω	15.500	Ω	994.74	pH



1 Start 2.3 GHz

IFBW 70 kHz

Stop 2.6 GHz

Cor

Meas

Stop

ExtRef

Svc

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Resize

Format

Smith (R+jX)

Log Mag

Phase

Group Delay

Smith

R + jX

Polar

Lin Mag

SWR

Real

Imaginary

Expand

Phase

Positive

Phase

Return

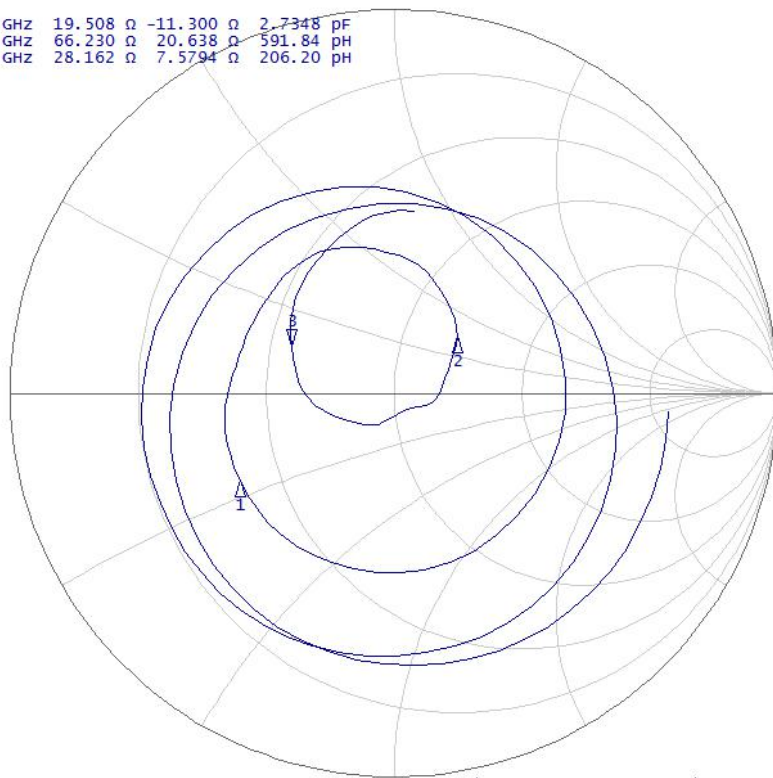
E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize

► Tr1 S11 Smith (R+jX) Scale 1.000U [F2]

1	5.1500000	GHZ	19.508	Ω	-11.300	Ω	2.7348	pF
2	5.5500000	GHZ	66.230	Ω	20.638	Ω	591.84	pH
>3	5.8500000	GHZ	28.162	Ω	7.5794	Ω	206.20	pH



1 Start 4 GHz

IFBW 70 kHz

Stop 6 GHz

Cor

Meas

Stop

ExtRef

Svc

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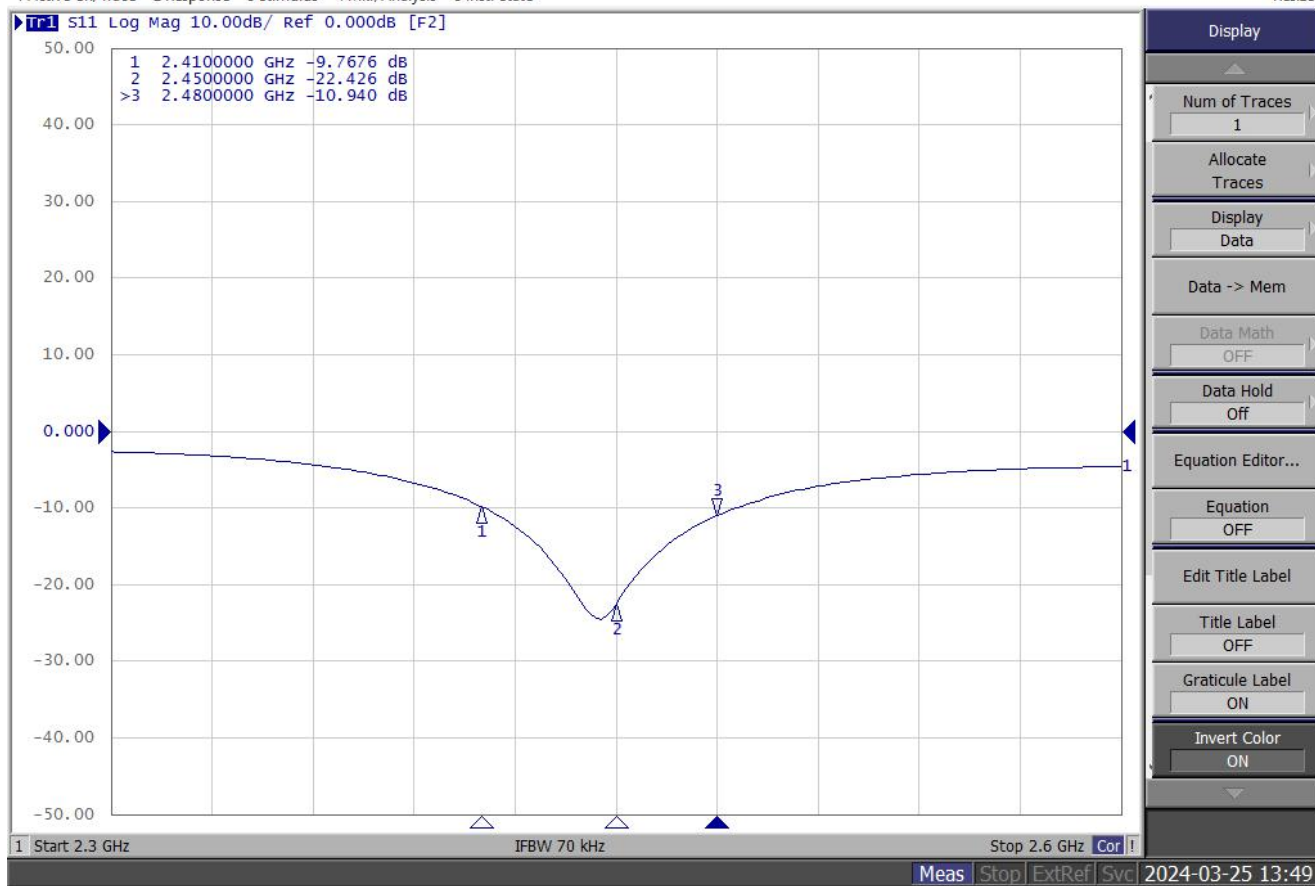
③Return Loss

Mkr1: 2410MHz -9.7 Mkr2: 2450MHz -22.4 Mkr3: 2480 MHz -10.9

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize

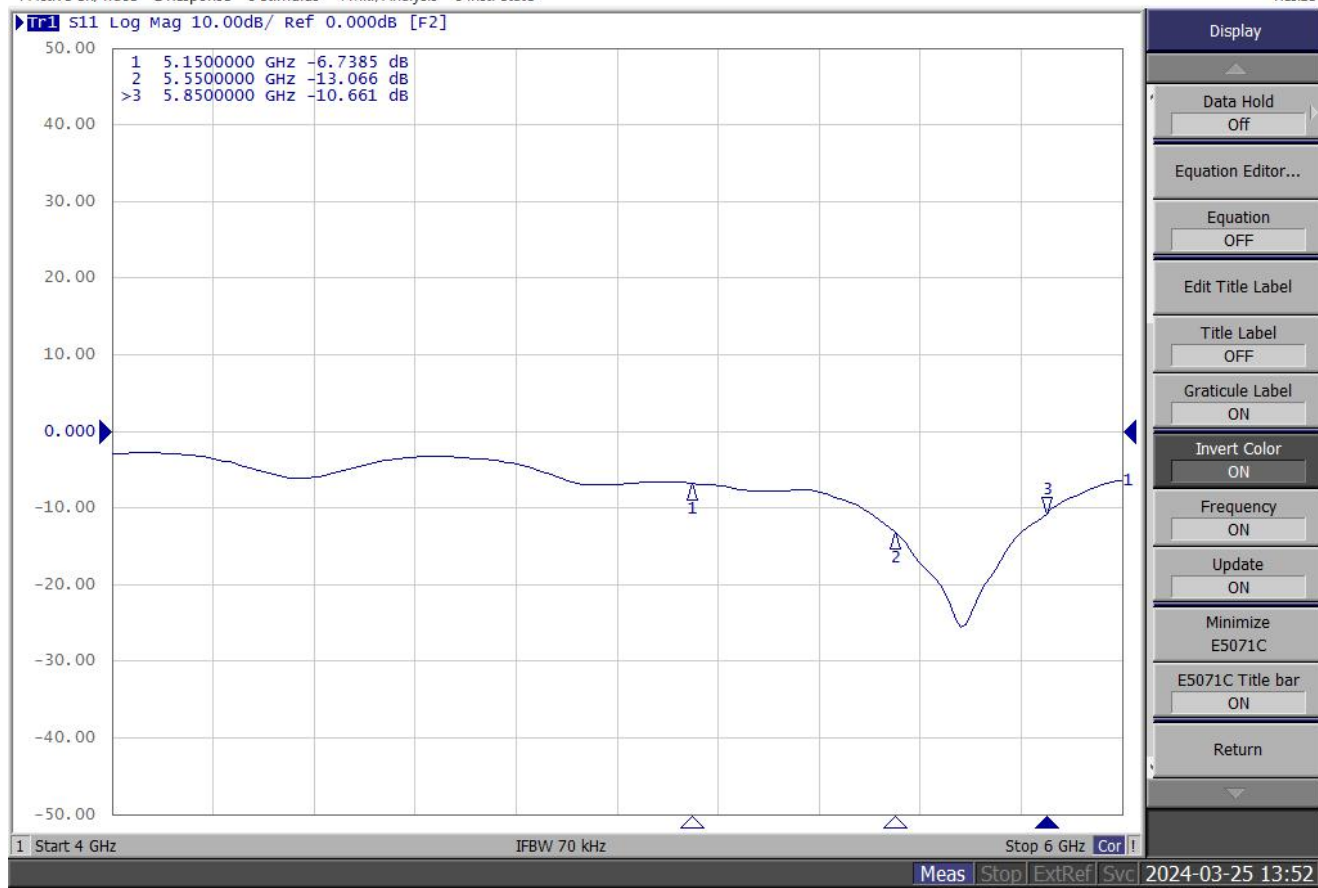


Mkr1: 5150MHz -6.7 Mkr2: 5550MHz -13 Mkr3: 5850 MHz -10.6

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize



④Smith Chart

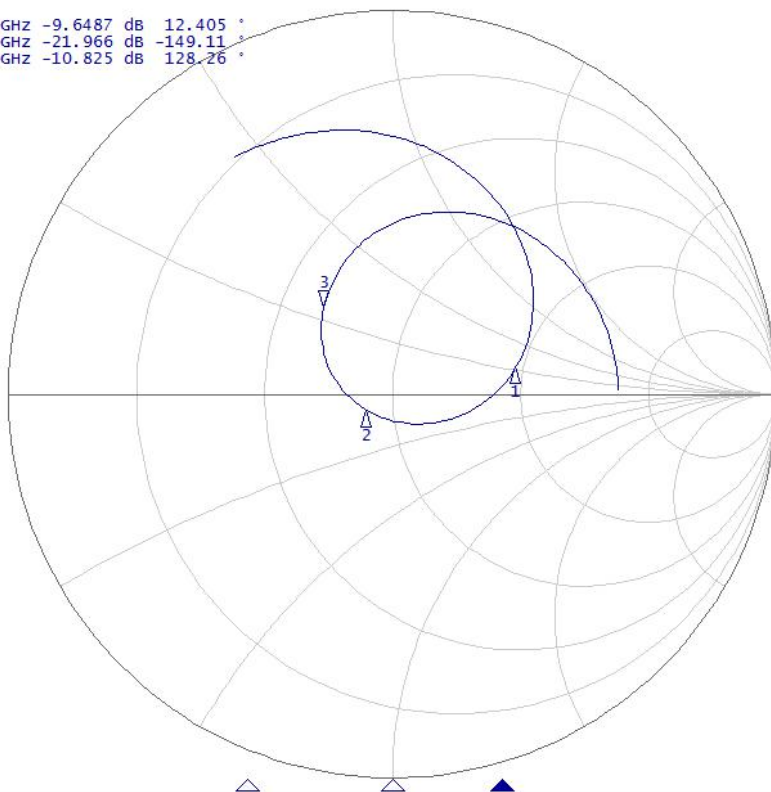
Mkr1: 2410MHz -9.6 Mkr2: 2450MHz -21.9 Mkr3: 2480 MHz -10.8

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

► S11 Smith (Log/Phase) Scale 1.000u [F2]

1 2.410000 GHz -9.6487 dB 12.405 °
2 2.450000 GHz -21.966 dB -149.11 °
>3 2.480000 GHz -10.825 dB 128.26 °



1 Start 2.3 GHz

IFBW 70 kHz

Stop 2.6 GHz Cor I

Meas Stop ExtRef Svc

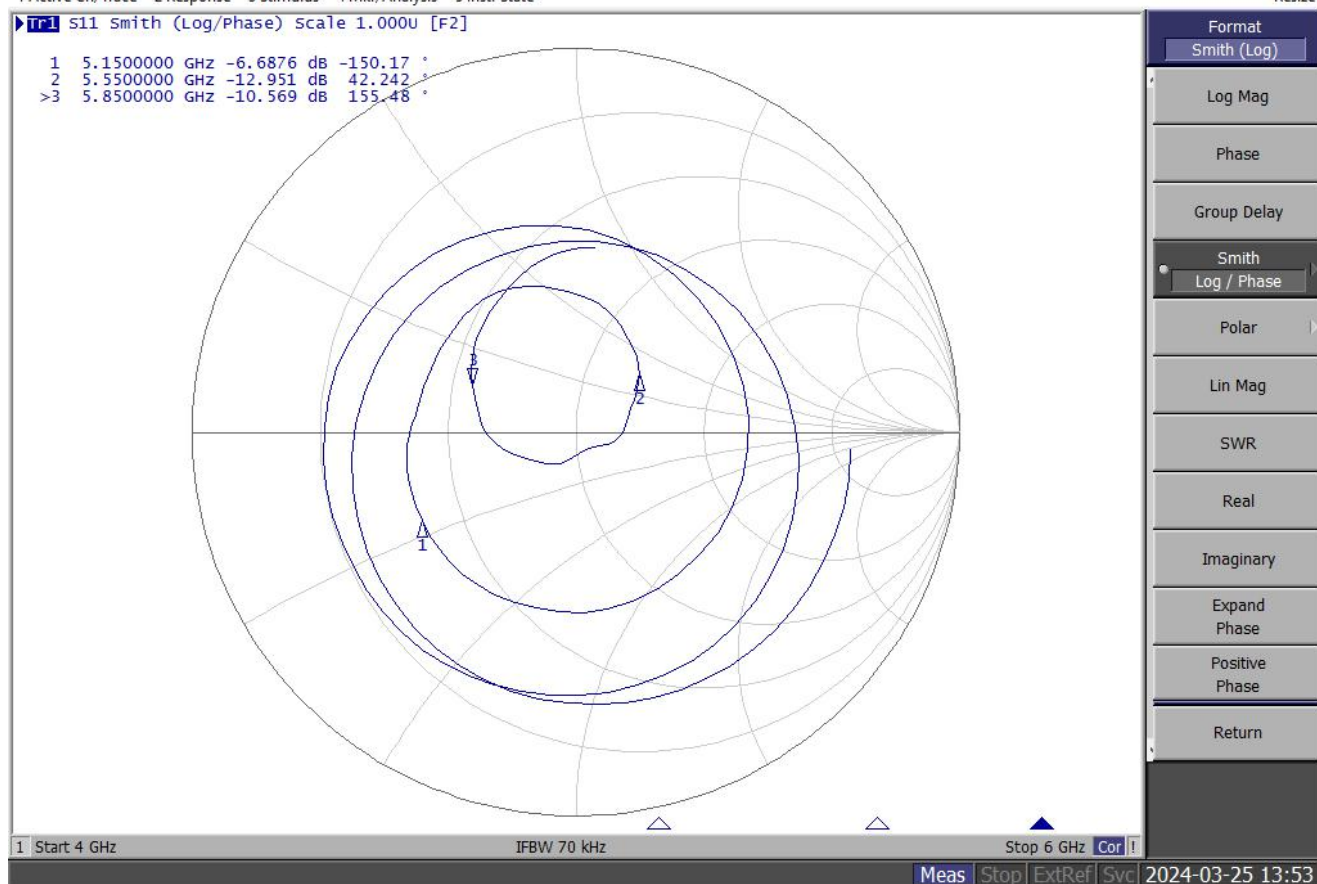
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Mkr1: 5150MHz -17.3 Mkr2: 5550MHz -11.4 Mkr3: 5850 MHz -11.6

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize



⑤Phase

Mkr1: 2410MHz 59 Mkr2: 2450MHz -98 Mkr3: 2480MHz 174

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1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

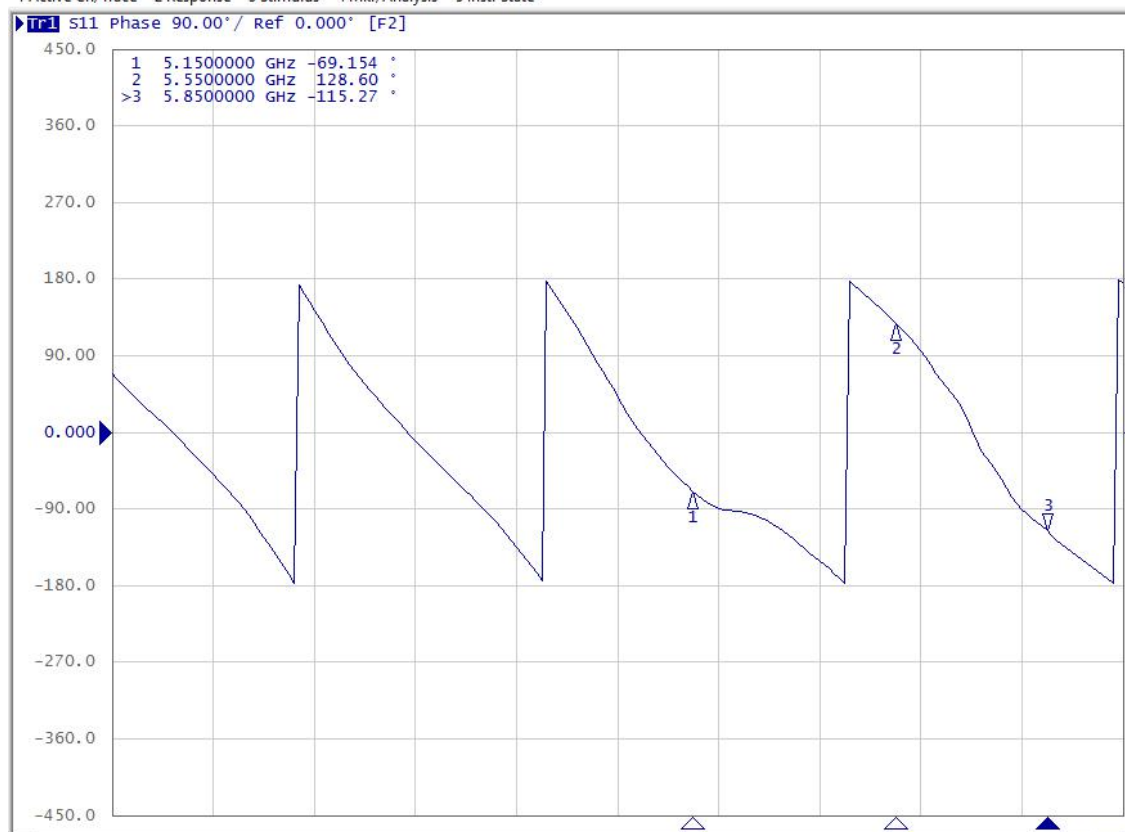
Resize



Mkr1: 5180MHz -69.1 Mkr2: 5560MHz 128.6 Mkr3: 5825 MHz -115.2

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State



Resize

Display

Data Hold

Off

Equation Editor...

Equation

OFF

Edit Title Label

Title Label

OFF

Graticule Label

ON

Invert Color

ON

Frequency

ON

Update

ON

Minimize

E5071C

E5071C Title bar

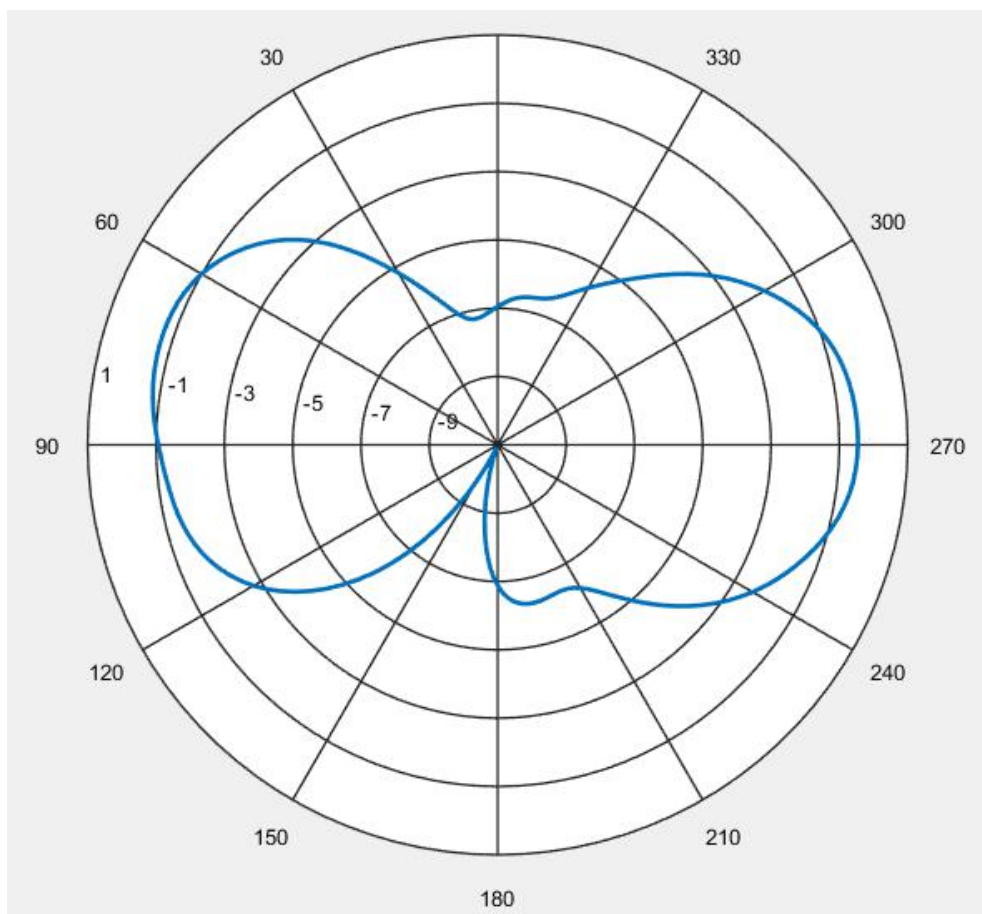
ON

Return

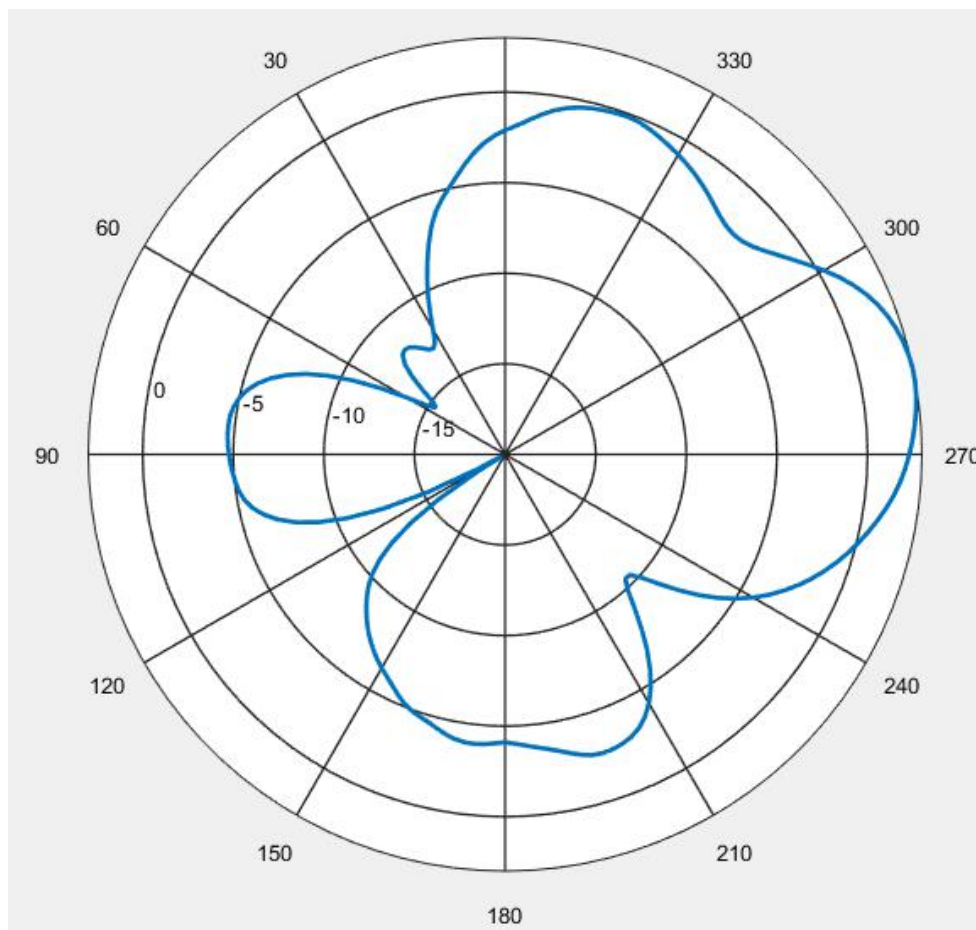
▼

Meas Stop ExtRef Svc 2024-03-25 14:27

4. Radiation Patterns

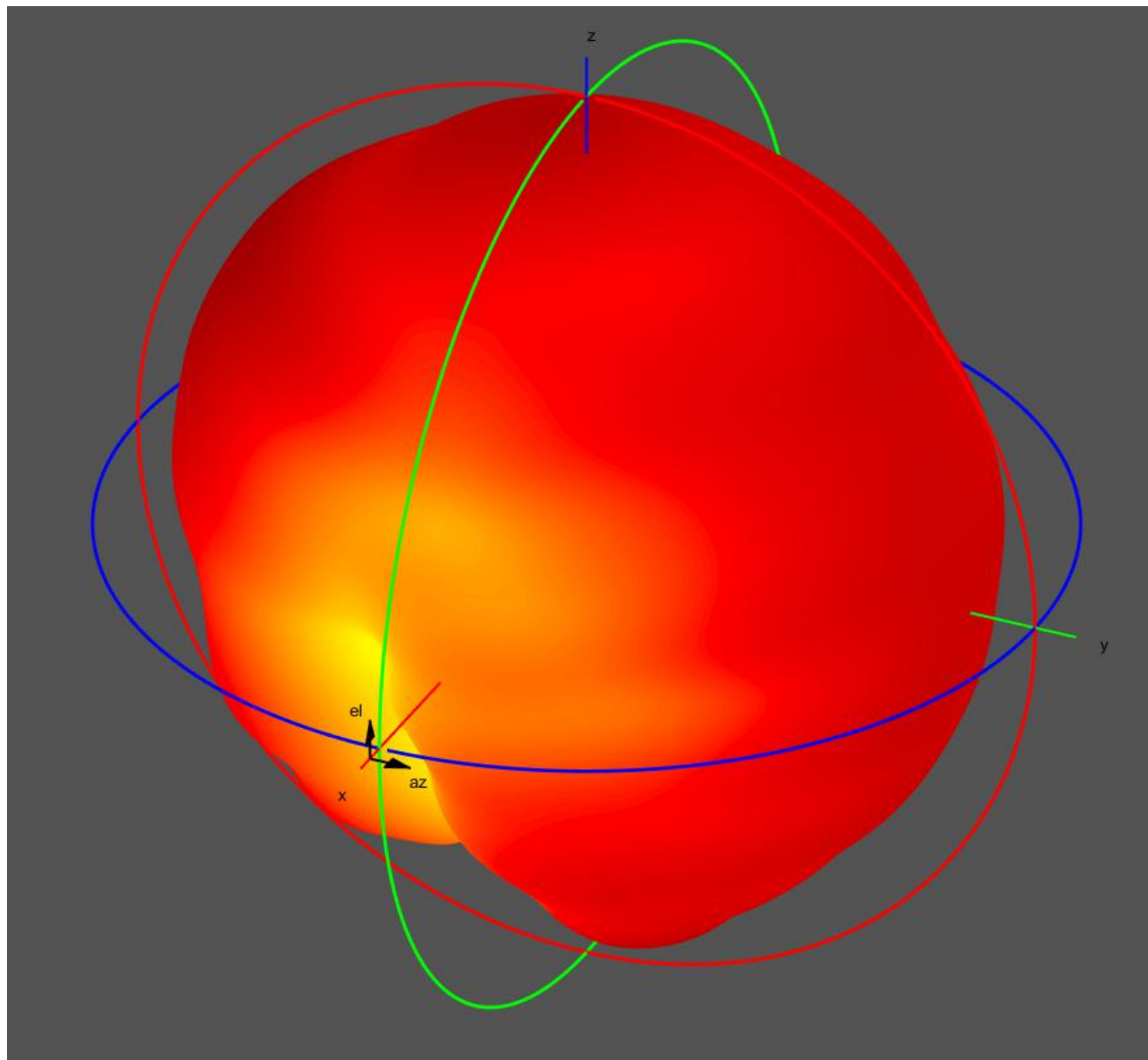


2450MHz

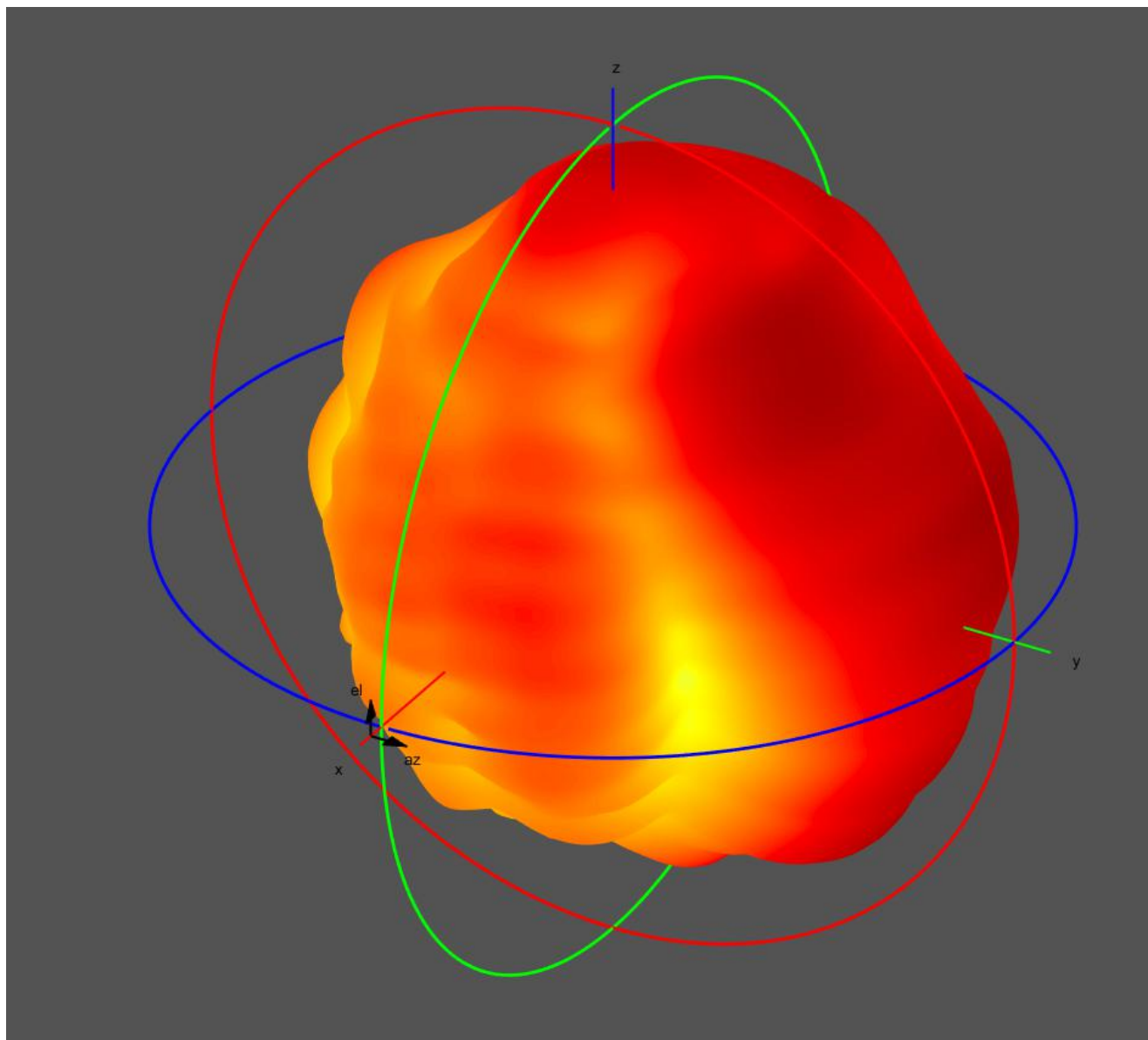


5550MHz

- 3D Radiation patterns



2450MHz



5550MHz