

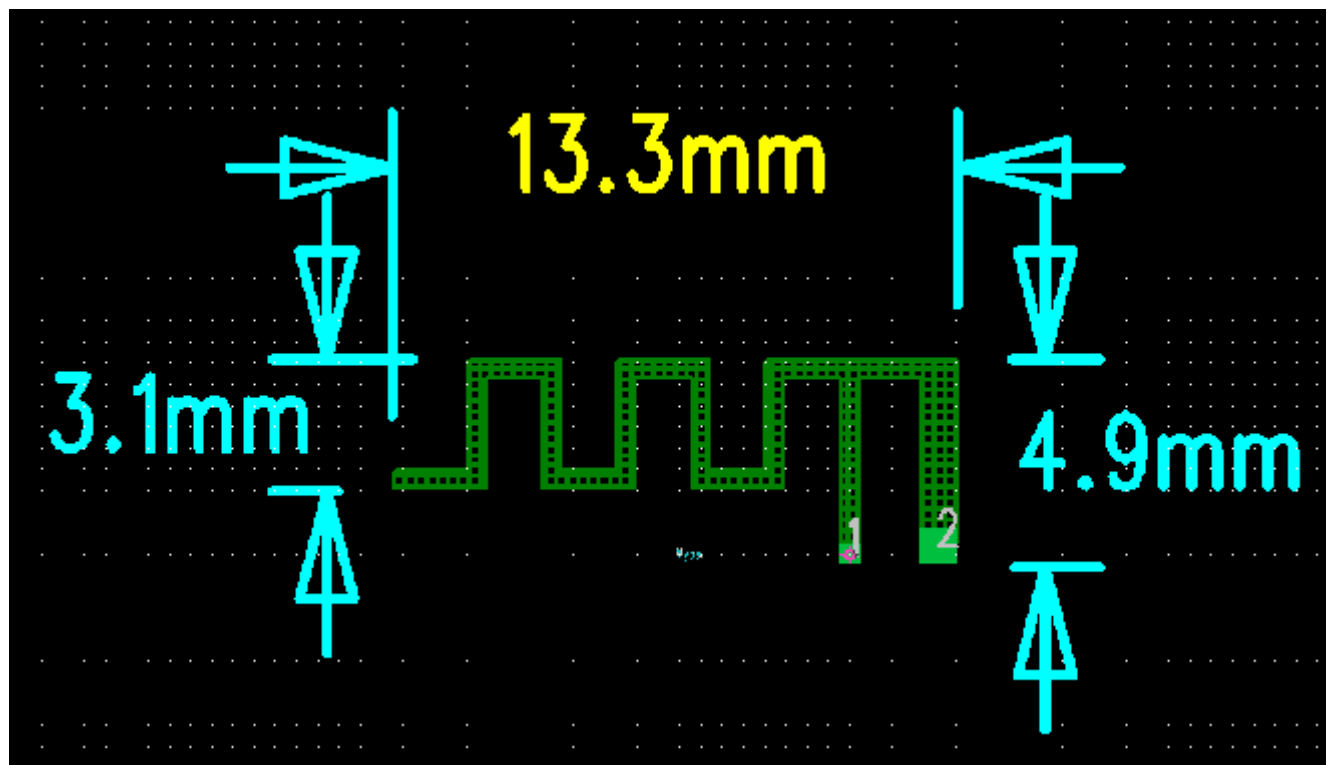
# **Antenna specification**

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## Applications

- ※Bluetooth Home RF
- ※ISM band 2.4GHz applications

### 1. Dimensions



## 2. Specifications

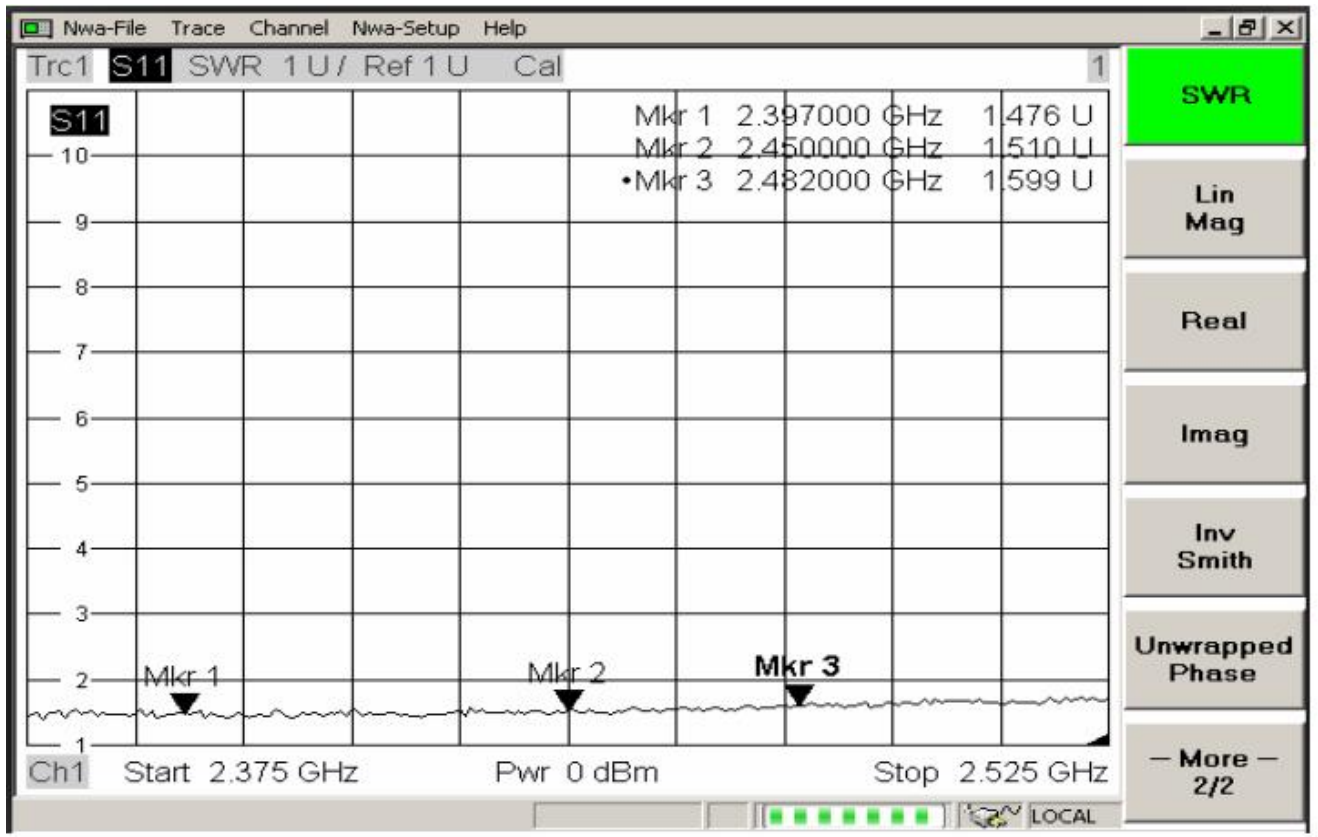
number	Item	Specifications
1	Working Central Frequency	2450 MHz
2	Band Width	(2400-2500)MHz
3	Gain	3.75dBi
4	VSWR	$\leq 2.0$
5	Antenna type	PCB antenna
6	Azimuth Beam width	Omni - directional
7	Impedance	50 ohm
8	Antenna model	X5s

Fred(MHz)	Effi (dB)	Gain(dBi)
2400	-4.39	2.24
2410	-4.32	2.34
2420	-4.31	2.44
2430	-3.85	2.89
2440	-3.75	3.03
2450	-3.71	3.23
2460	-3.32	3.65
2470	-3.48	3.61
2480	-3.48	3.62
2490	-3.23	3.75
2500	-3.11	3.61

## 3. Instrument testing, software simulation parameters

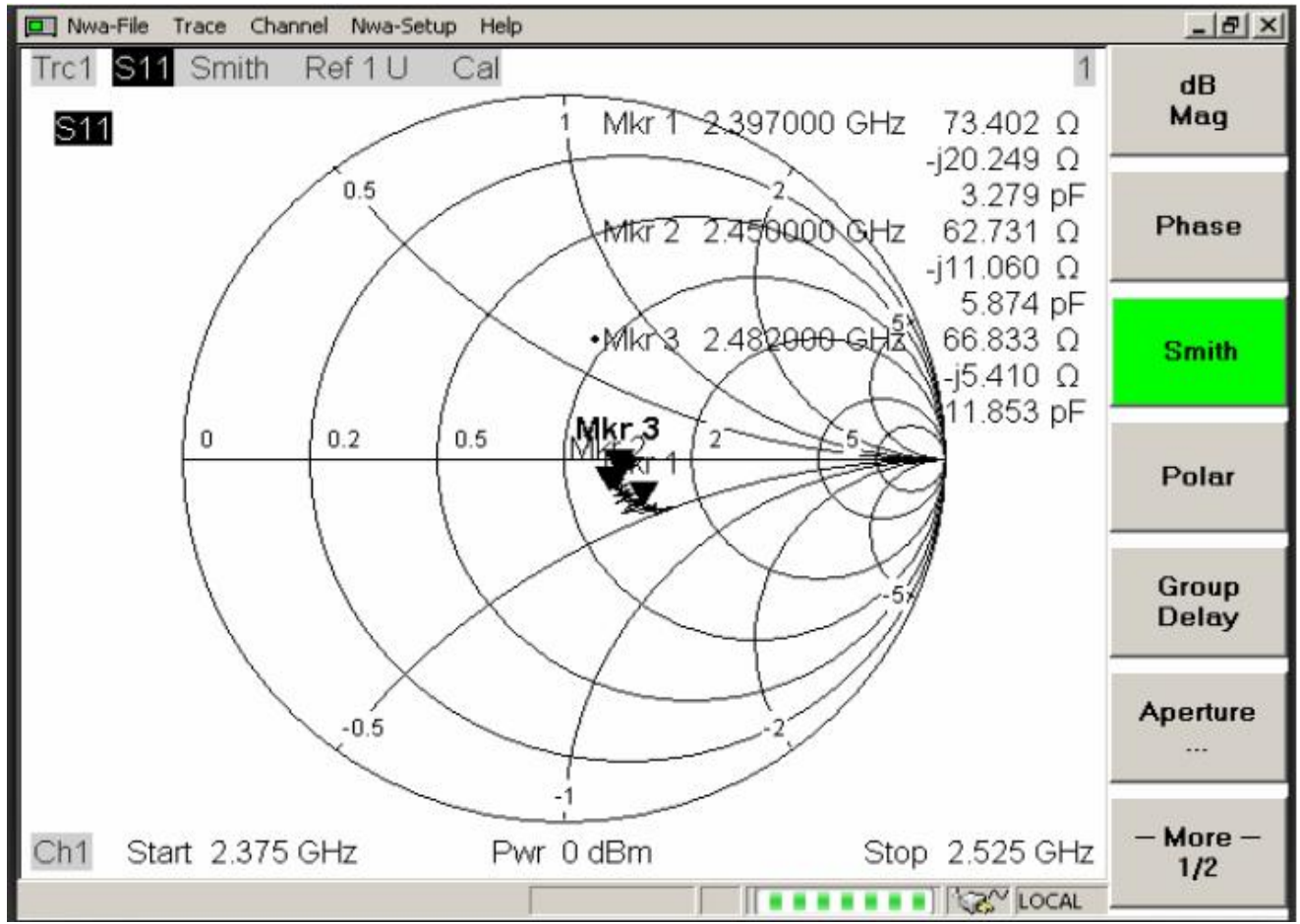
### ① VSWR

Mkr1: 2397MHz 1.47    Mkr2: 2450MHz 1.51    Mkr3: 2482 MHz 1.59



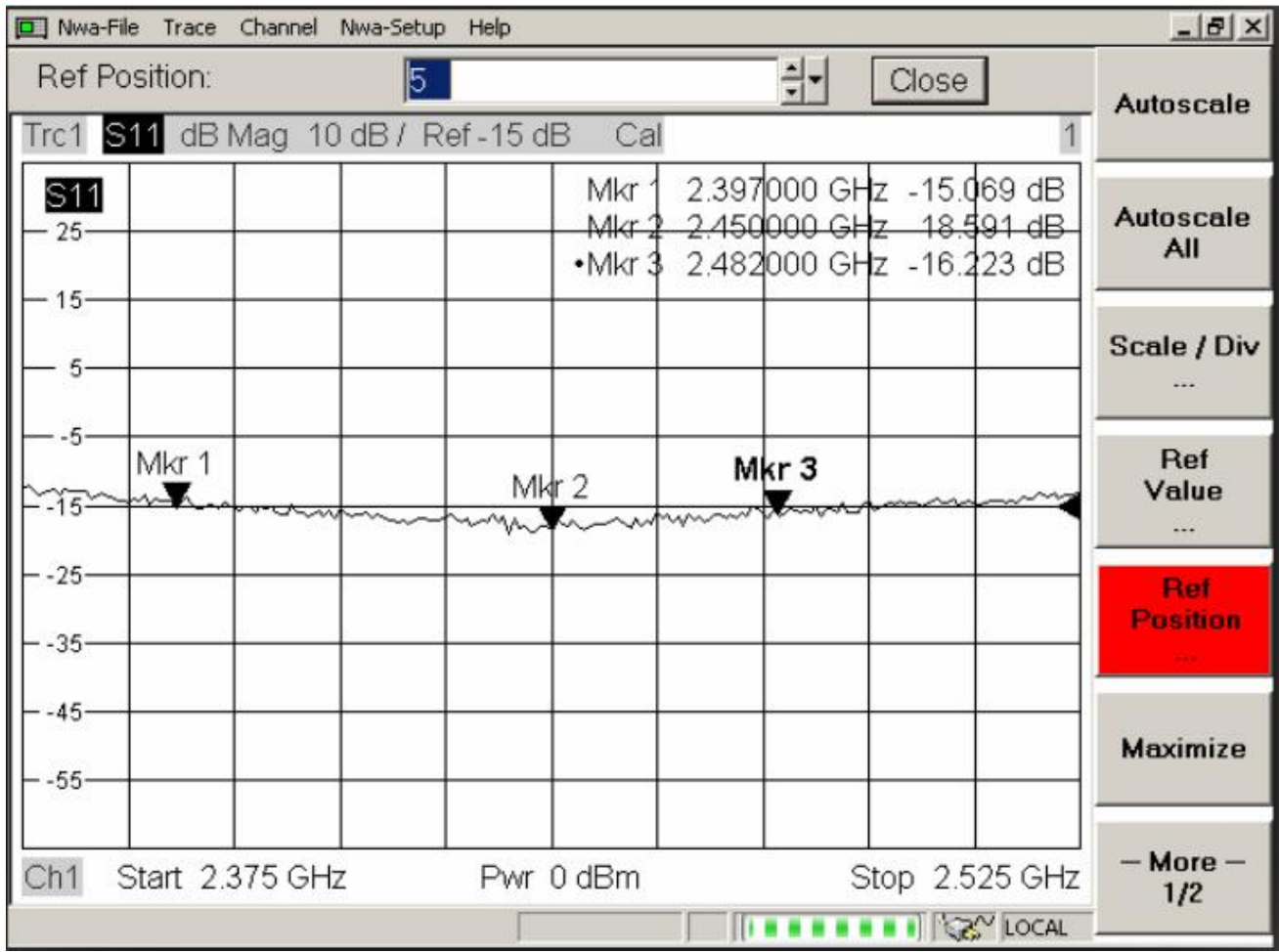
②Smith Char

Mkr1: 2397MHz 73.4      Mkr2: 2450MHz 62.7      Mkr3: 2482MHz 66.8



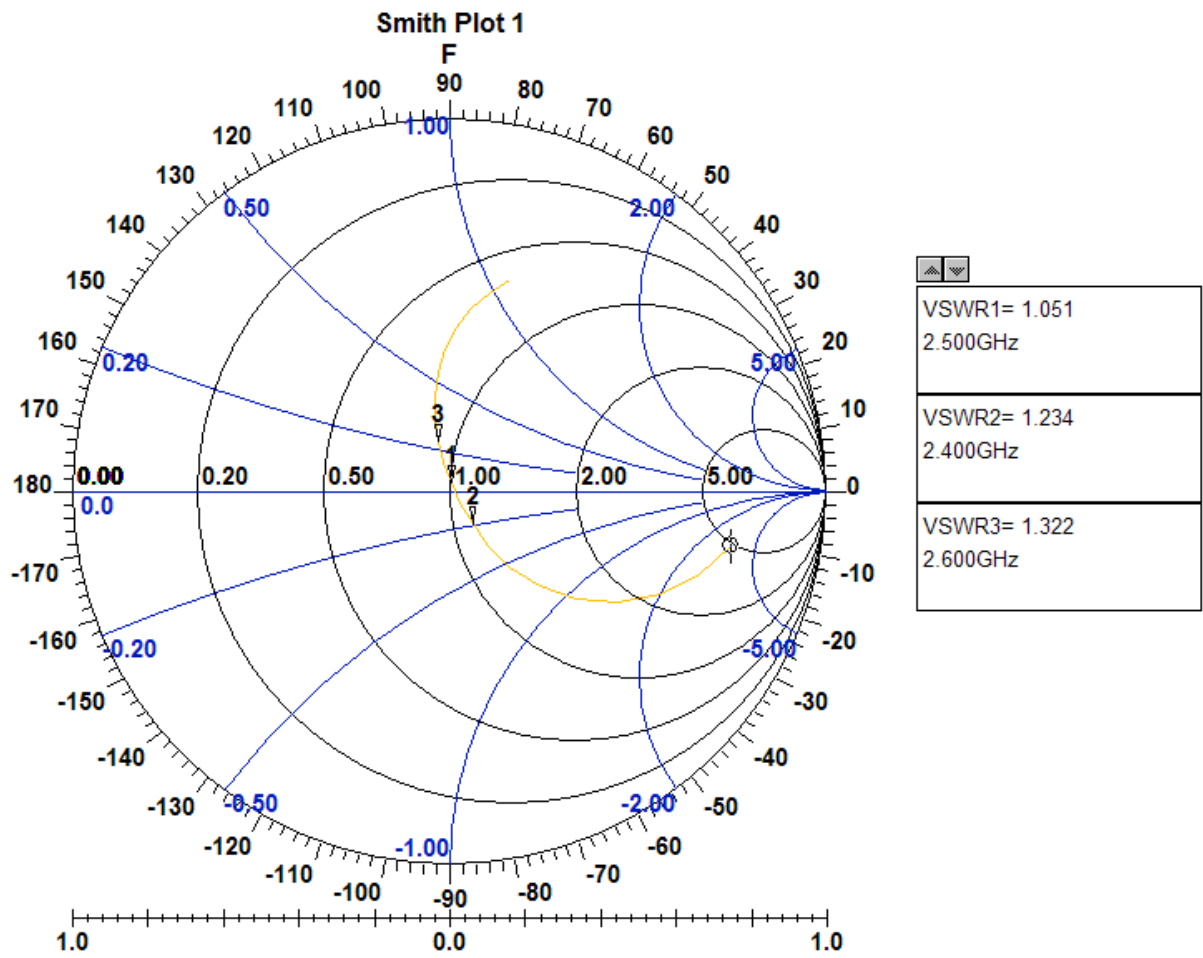
③Return Loss

Mkr1: 2397MHz -15    Mkr2: 2450MHz -18    Mkr3: 2482 MHz -16



④Smith Char The simulation

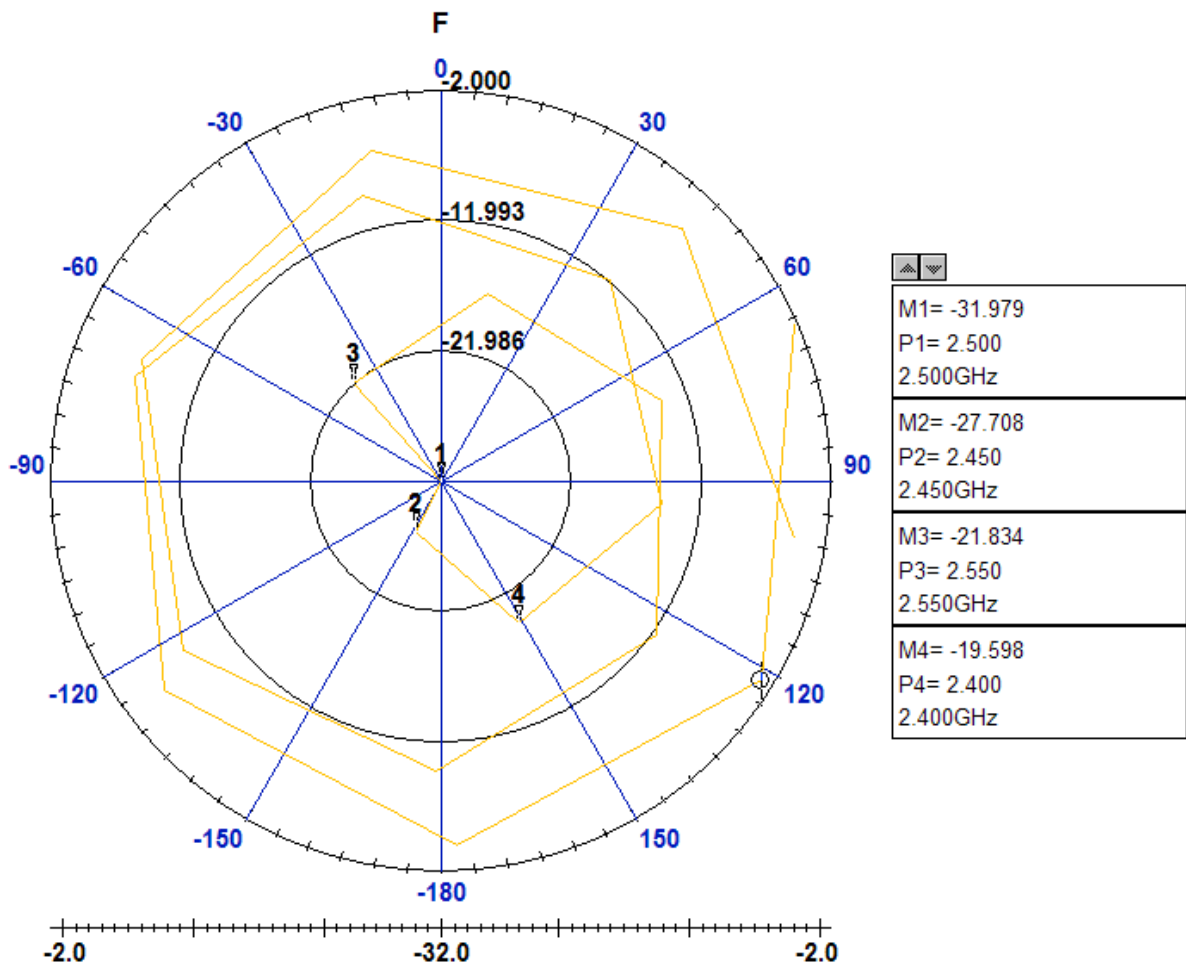
Mkr1: 2400MHz 1.234      Mkr2: 2500MHz 1.051      Mkr3: 2600MHz 1.322



⑤Return Loss The simulation

Mkr1: 2400MHz -19.59 Mkr2: 2450MHz -27.70 Mkr3: 2500MHz -31.97

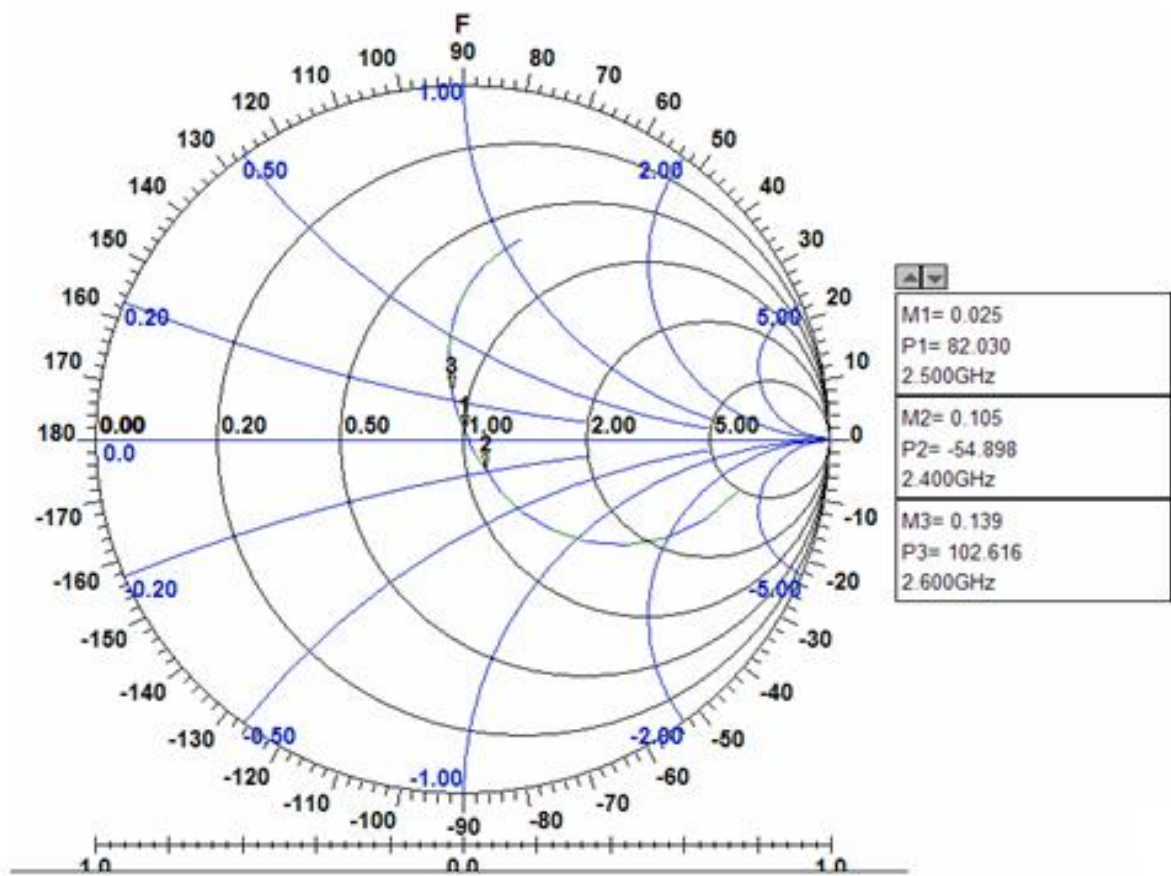
Mkr4: 2550MHz -21.83



⑥Phase The simulation

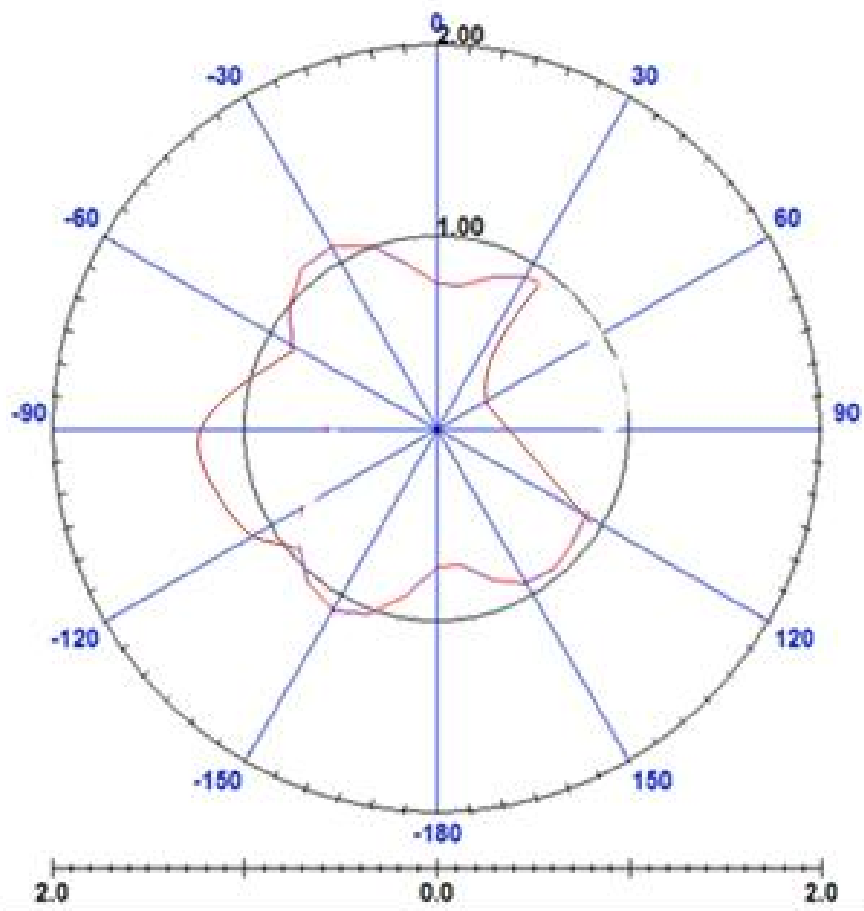
Mkr1: 2400MHz -54.89    Mkr2: 2500MHz -82.03    Mkr3: 2600MHz -102.6



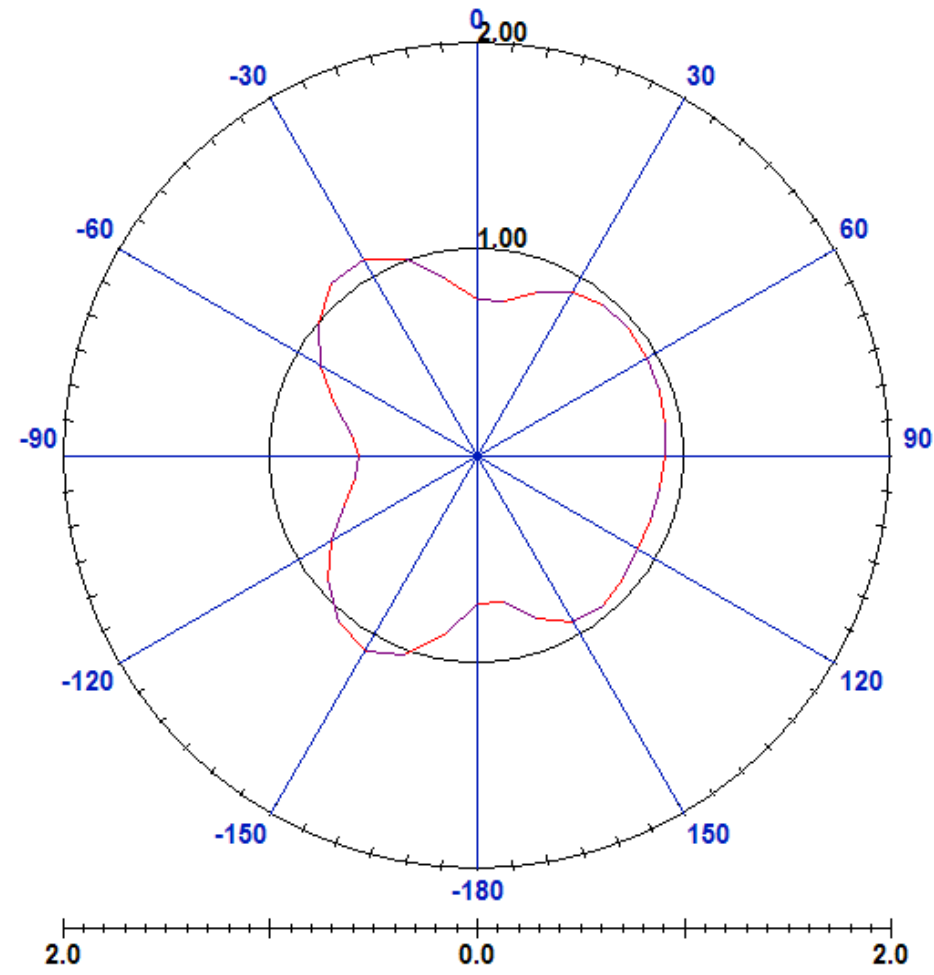


#### 4. Radiation Patterns

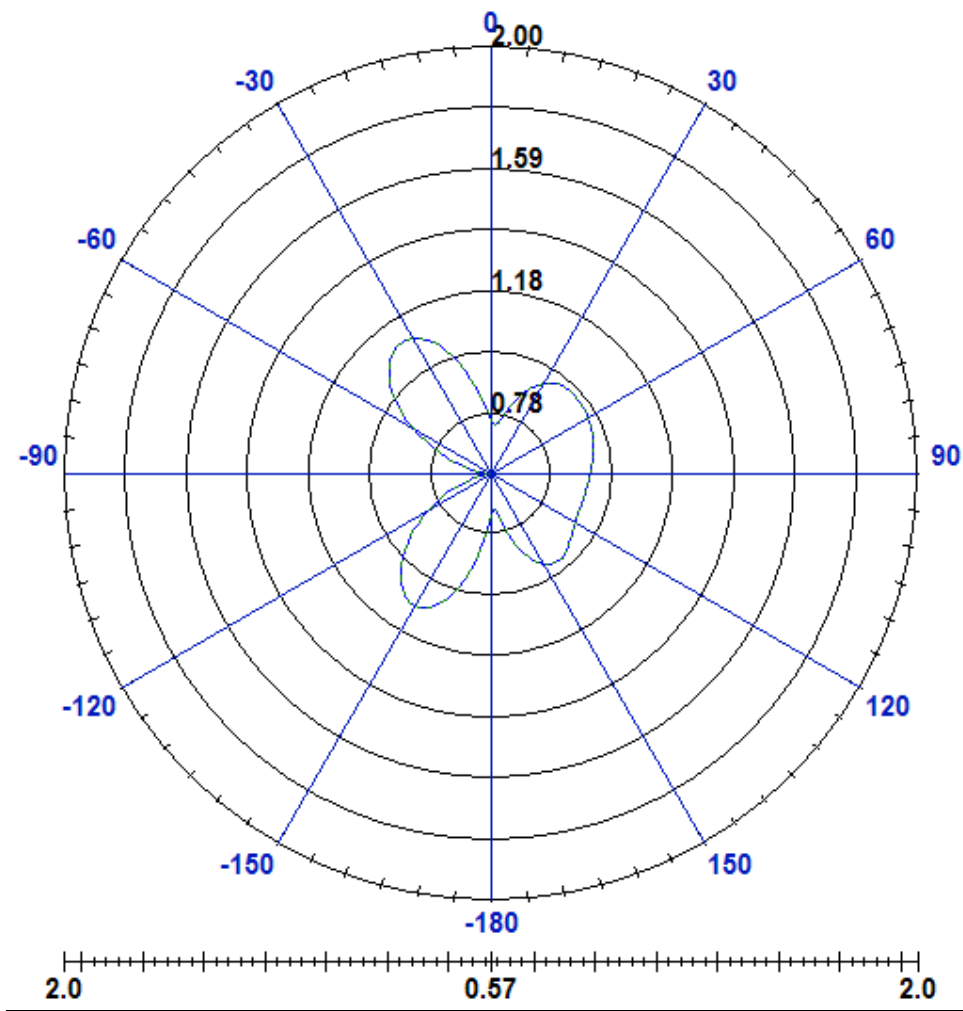
XY-plane



XZ-plane



YZ-plane



3D Radiation field type

