

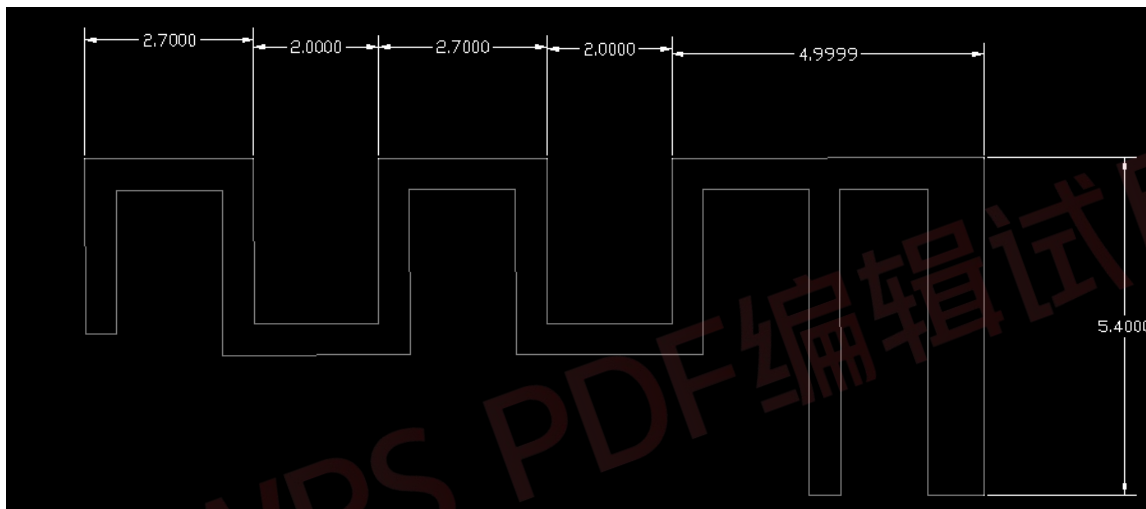
## Antenna performance test specification

### APPLications

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

### 1. Dimensions unit:mm

### Picture of antenna



### 2. Specifications

number	Item	Specifications
1	Working Central Frequency	2441 MHz
2	Band Width	(2402-2480)MHz
3	Gain	0dBi
4	VSWR	$\leq 2.0$
5	Antenna type	PCB antenna
6	Azimuth Beam width	Omni - directional
7	Impedance	50 $\Omega$
8	Modulation mode	GFSK

### 3. Instrument testing, software simulation parameters

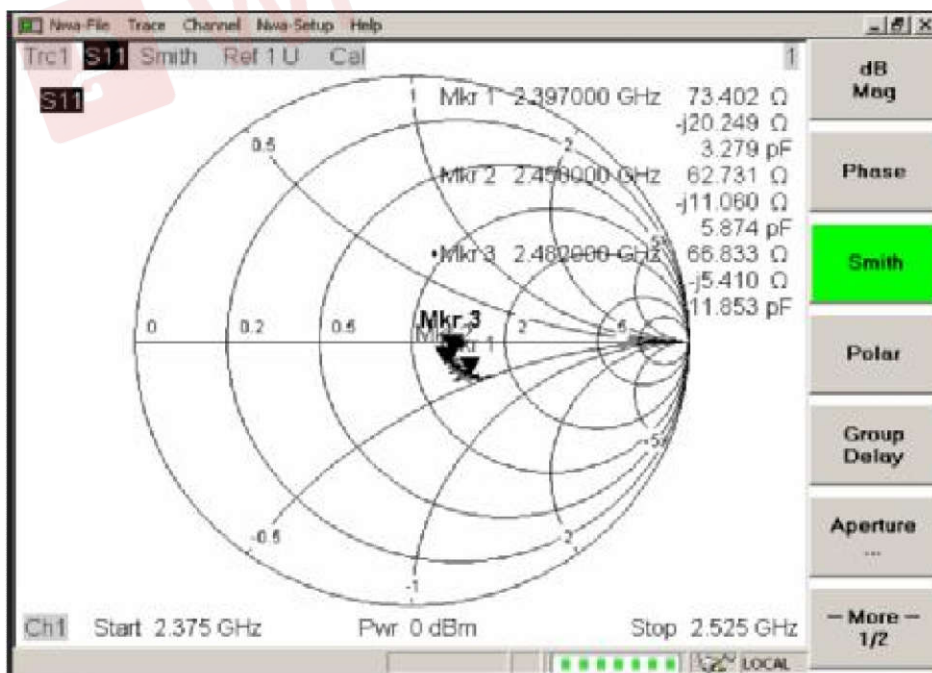
#### ① VSWR

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



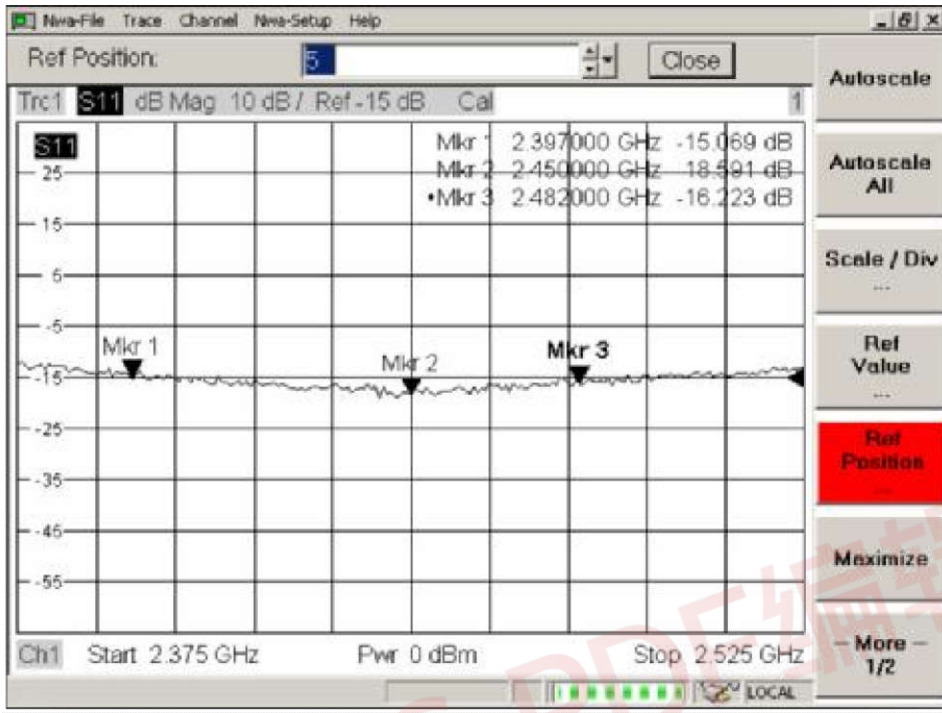
#### ② Smith Char

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



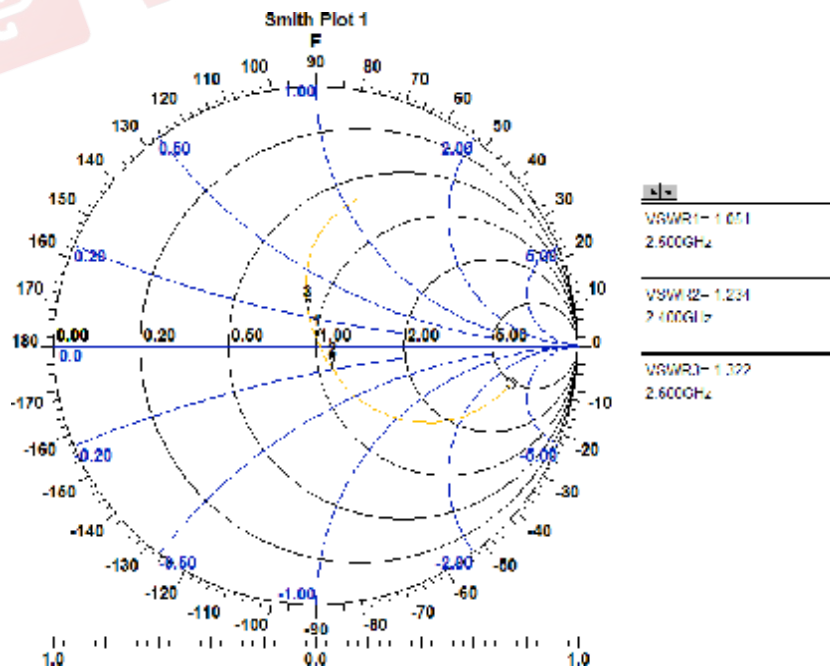
③ Return Loss

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



④ Smith Char simulation

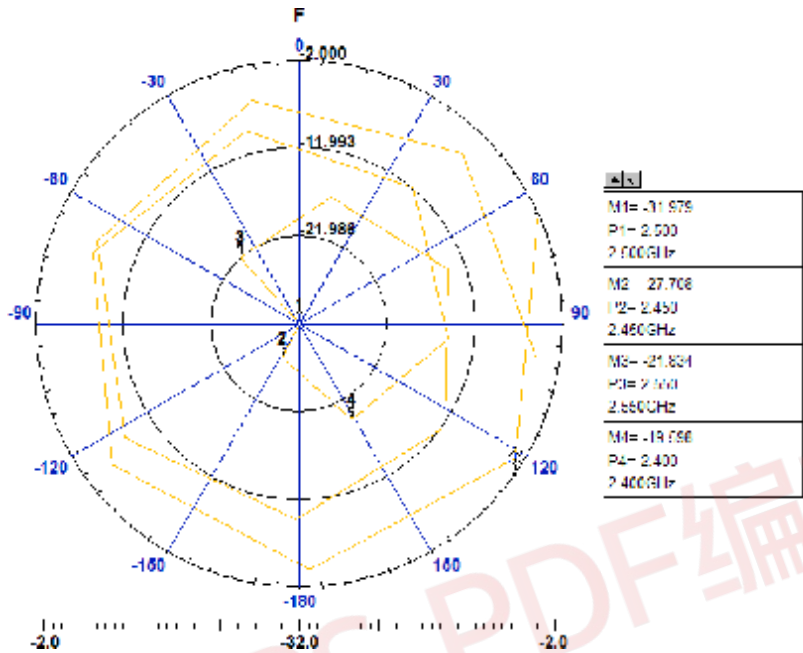
Mkr1: 2400MHz 1.234    Mkr2: 2500MHz 1.051    Mkr3: 2600MHz 1.322



⑤ Return Loss simulation

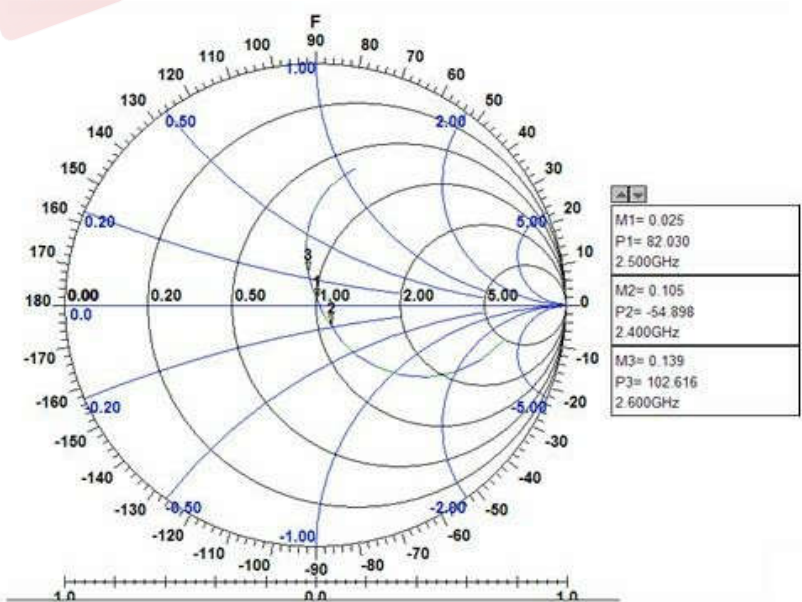
Mkr1: 2400MHz -19.59 Mkr2: 2450MHz -27.70 Mkr3: 2500MHz -31.97

Mkr4: 2550MHz -21.83



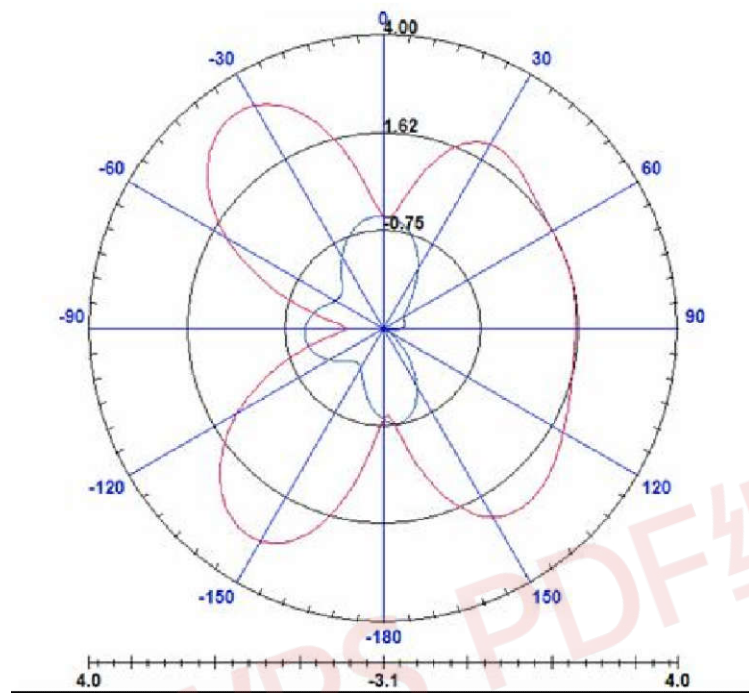
⑥ Phase simulation

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

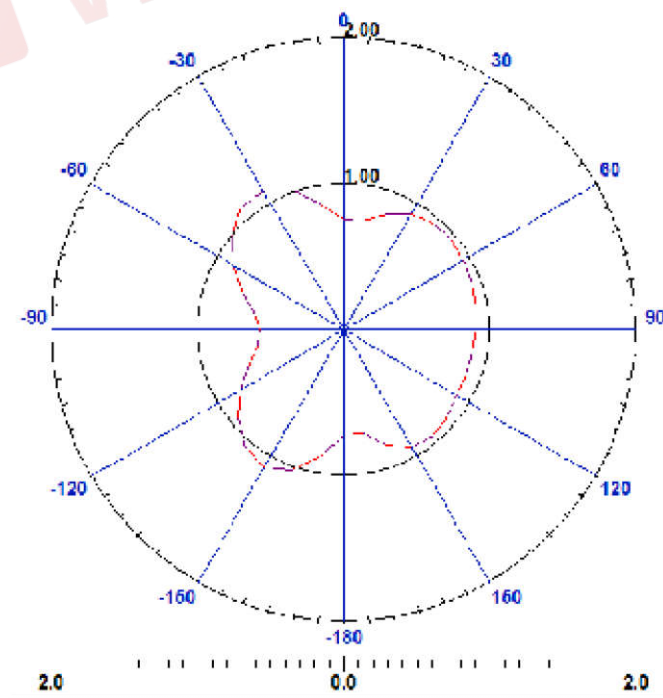


#### 4. Radiation Patterns

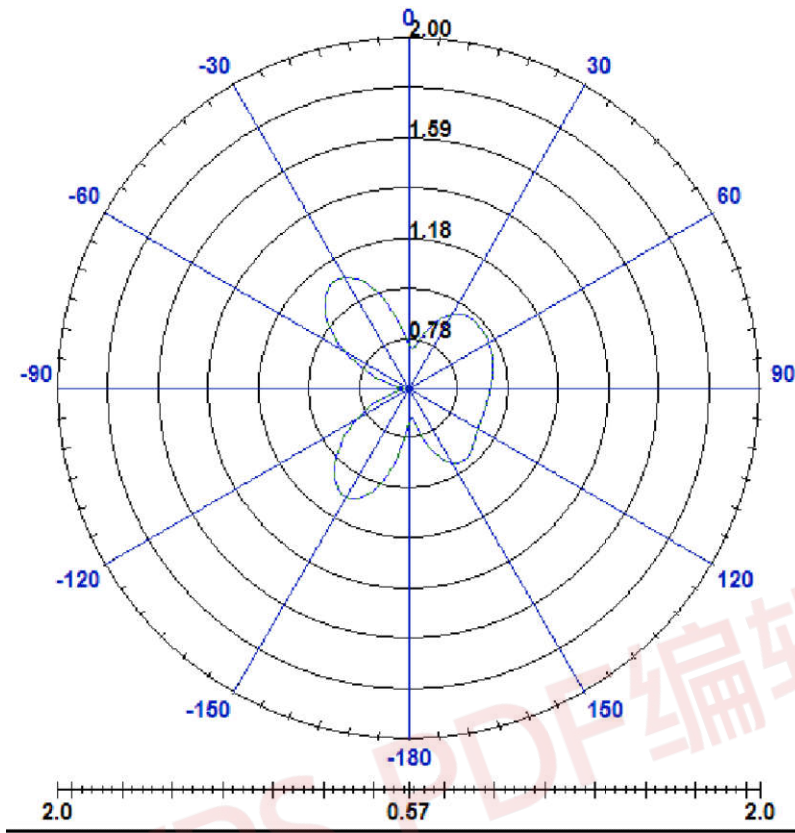
XY- plane



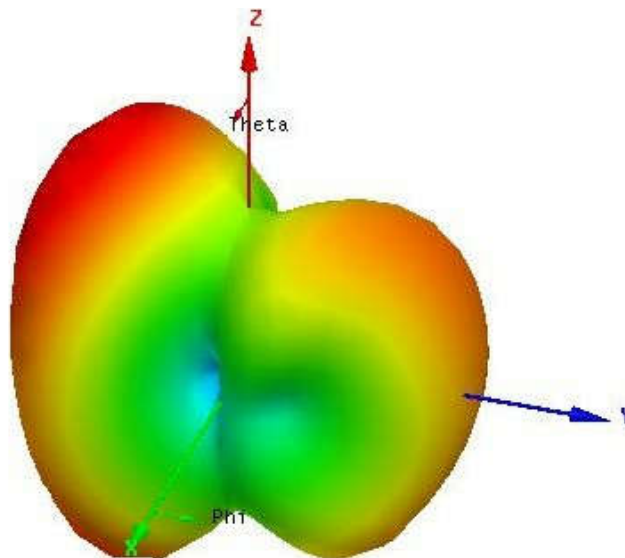
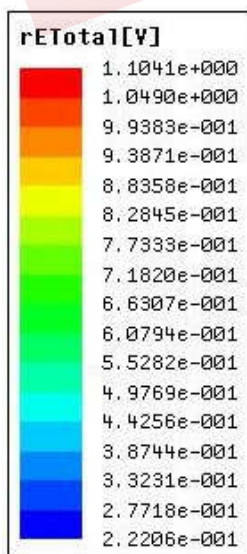
XZ- plane



YZ- plane



3D Radiation Field



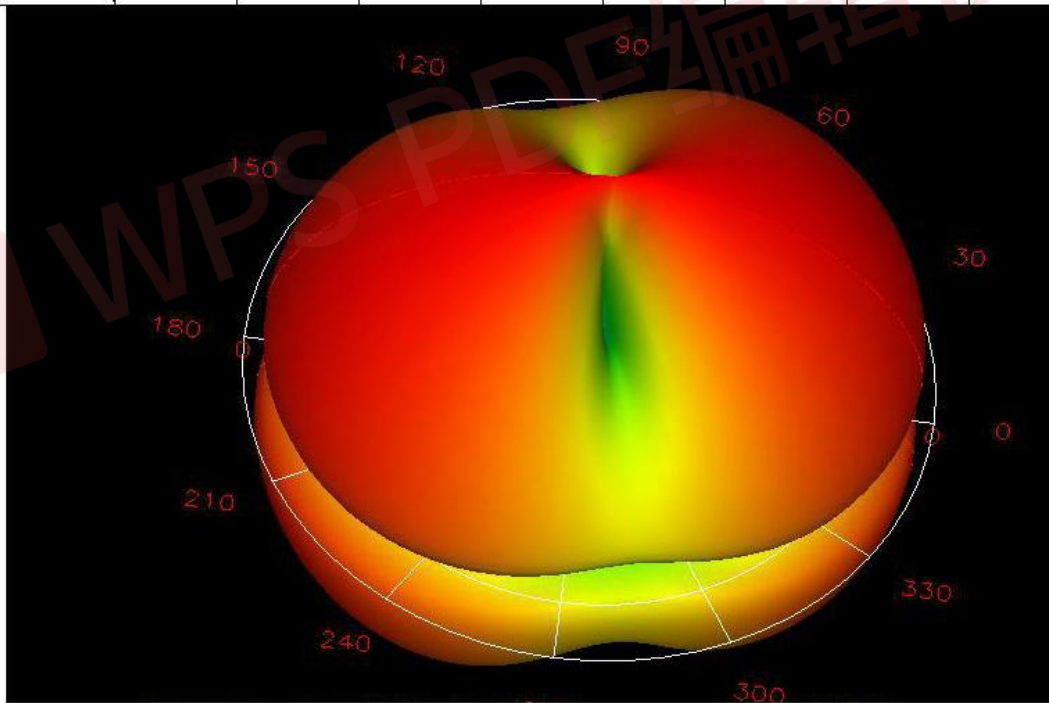


### 3. Antenna Radiation Pattern

Radiation pattern@2.402GHZ

Total Average Gain:-0.475dbi

Phi	0	45	90	135	180	235	270	315
-0.1	-0.3	-0.8	-0.5	-0.2	-0.6	-0.8	-0.8	-0.5
Gain								

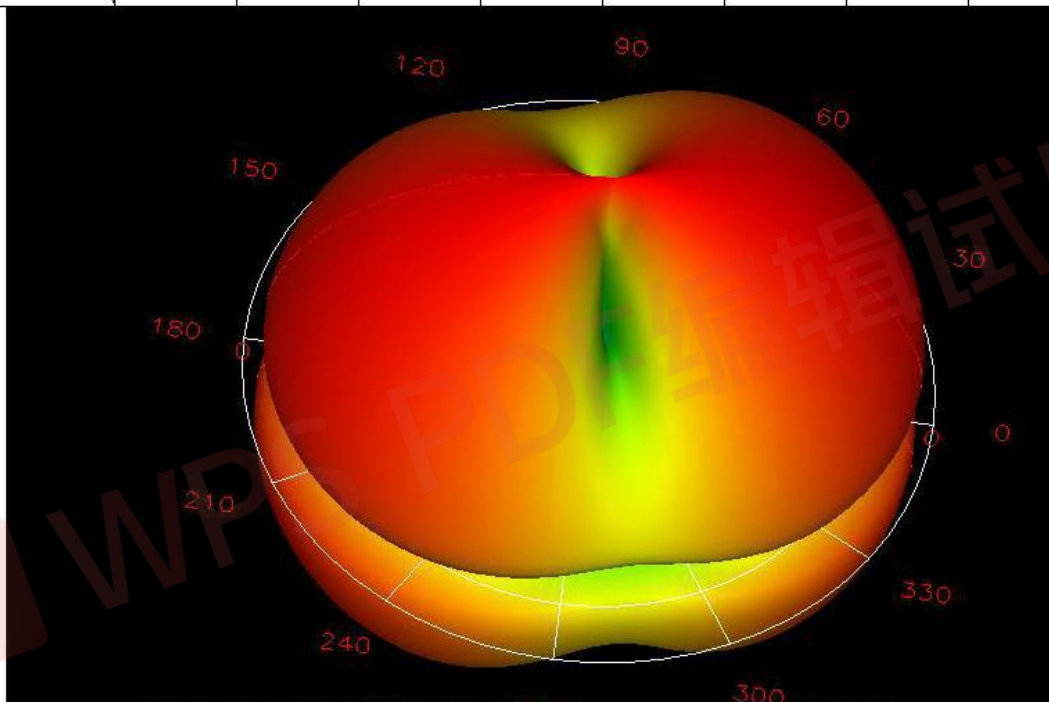




Radiation pattern@2.441GHZ

Total Average Gain:-0.265dbi

Phi	0	45	90	135	180	235	270	315
Gain	0	-0.1	-0.3	-0.6	-0.1	-0.2	-0.5	-0.4



Radiation pattern@2.480GHZ

Total Average Gain:-0.237dbi

Phi	0	45	90	135	180	235	270	315
Gain	0	-0.1	-0.2	-0.5	0.6	-0.3	-0.6	-0.2

