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# Antenna specification

## 1、 Antenna introduction

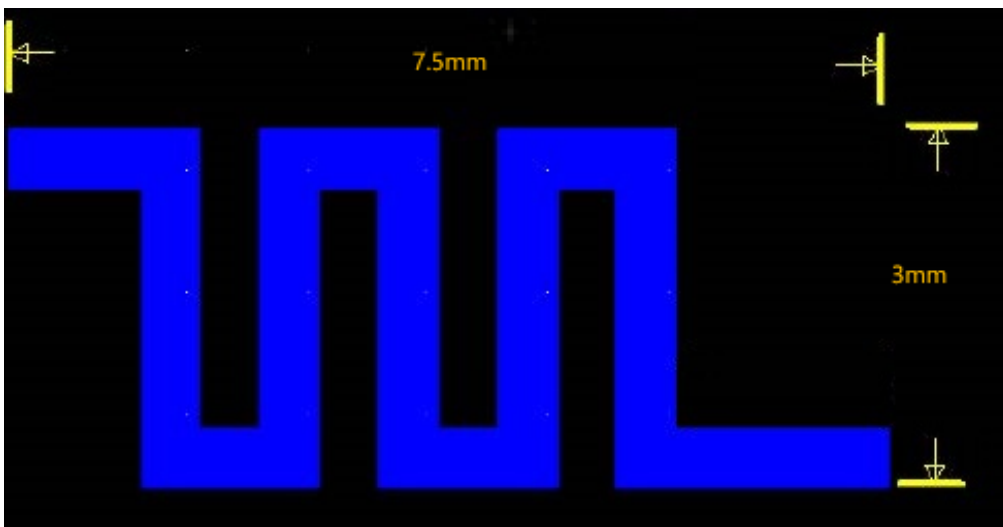
The Bluetooth module antenna is directly used on the PCB.

Manufacturer: Shenzhen XinNengDa Technology Co.,Ltd

Address :

301, Building A4, No. 11, Tianyang 4th Road, Dongfang Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China

## 2、 Antenna shape



## 3、 Antenna parameter

The Bluetooth antenna operates at 2402-2480 MHz and generates resonance in this band. The table below shows the main parameters of the antenna.

Frequency (MHz)	2402 ~ 2480 MHz
VSWR	$\leq 1.95$

Impedance	50 Ohm Nominal
Return Loss	-15 dB Max
Radiation	Omni-directional
Gain (Peak)	1.08dBi
Polarization	Linear, Vertical
Admitted Power	1MW
Connector	Tin

#### 4、 Antenna gain report

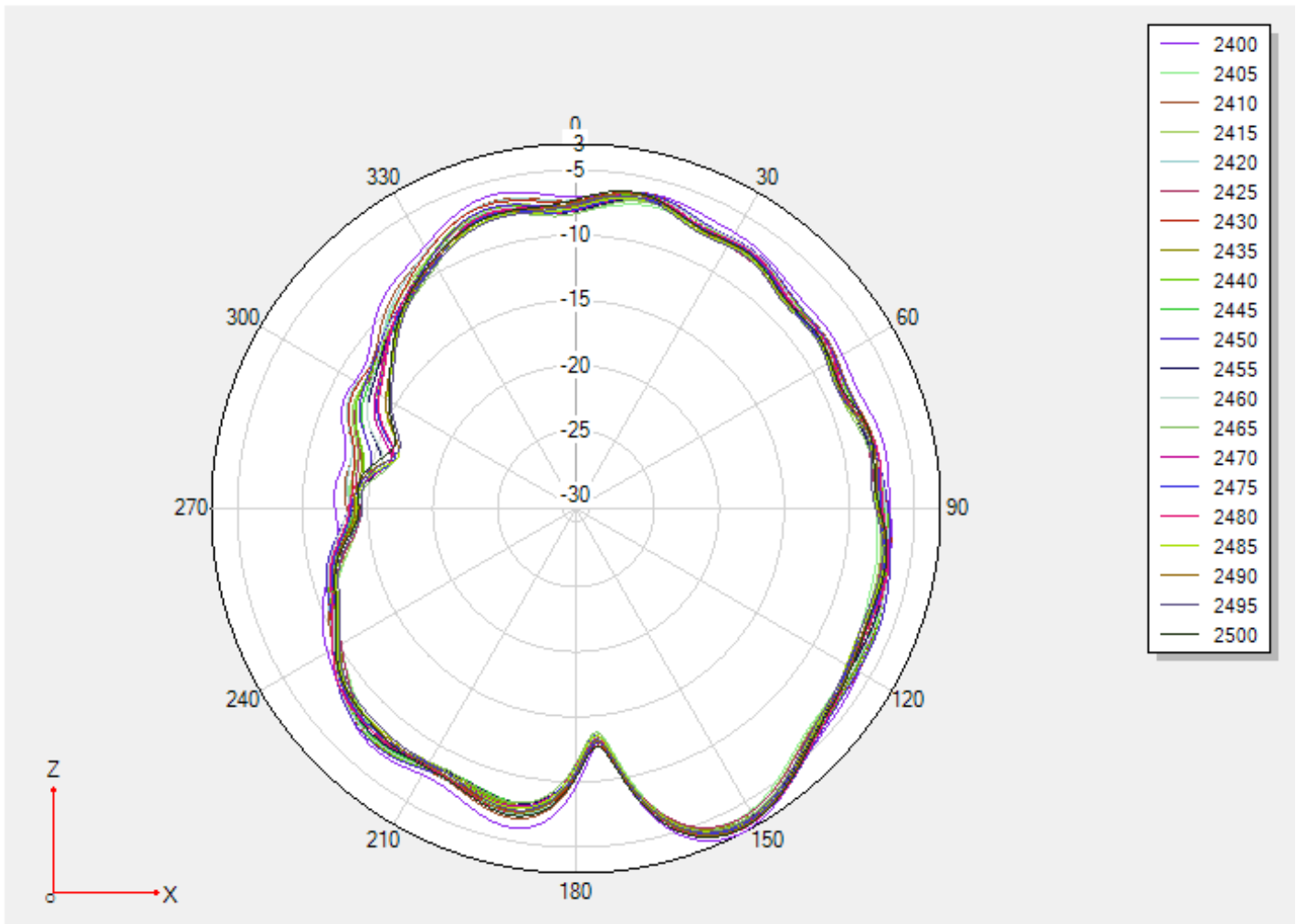
Spectrum Detector:	PK	Test Date :	July 31, 2023
Test By:	Mark	Temperature :	25°C
Test Result:	PASS	Humidity :	52 %
Modulation:	GFSK		

Frequency VNA (MHz)	E Total. dB(dB)
2400MHz	0.0403503
2410MHz	0.0886264

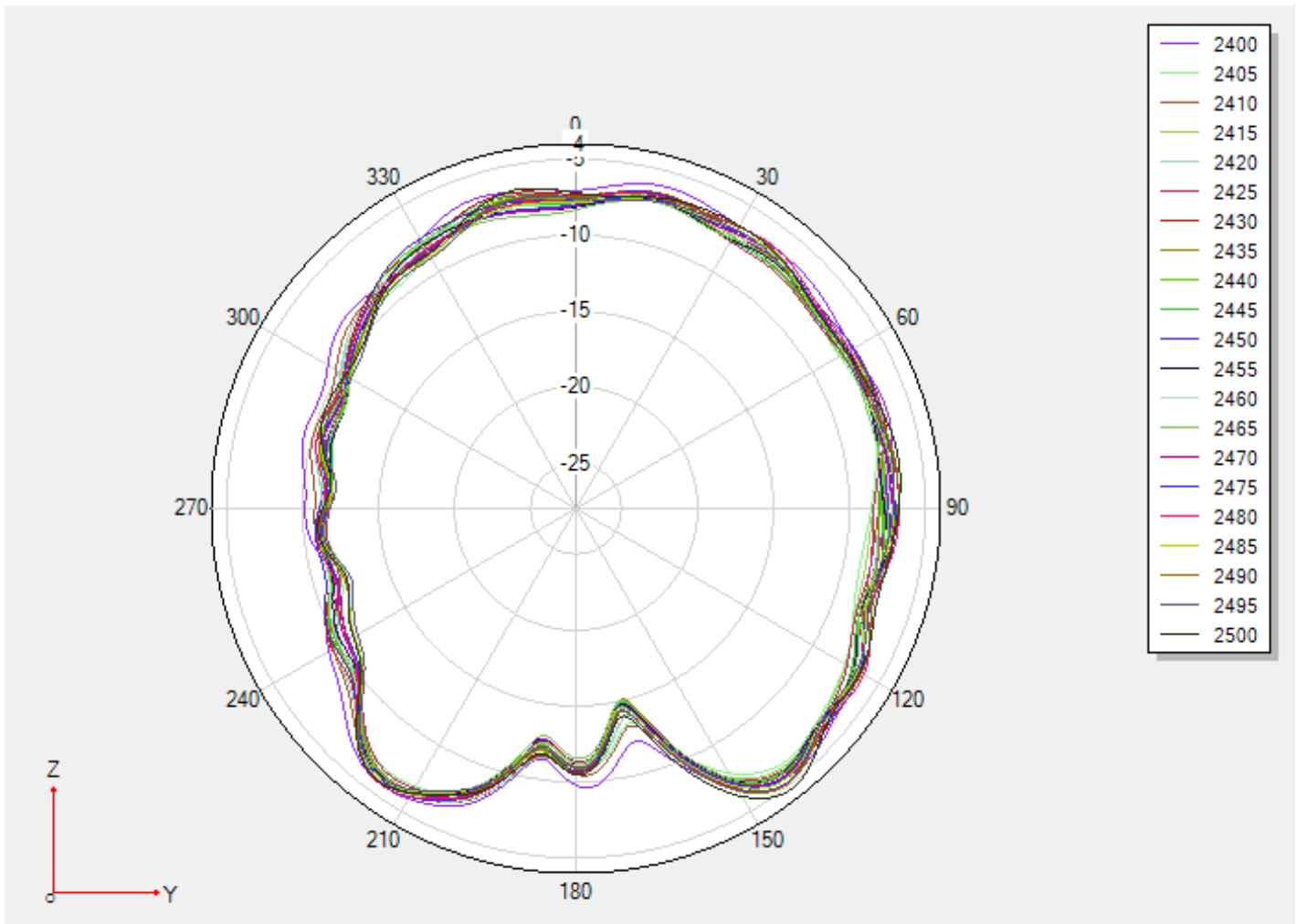
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2420MHz	0.267381
2430MHz	0.193012
2440MHz	0.26366
2450MHz	0.0723139
2460MHz	0.36895
2470MHz	0.551525
2480MHz	0.640702
2490MHz	1.05232
2500MHz	1.08443

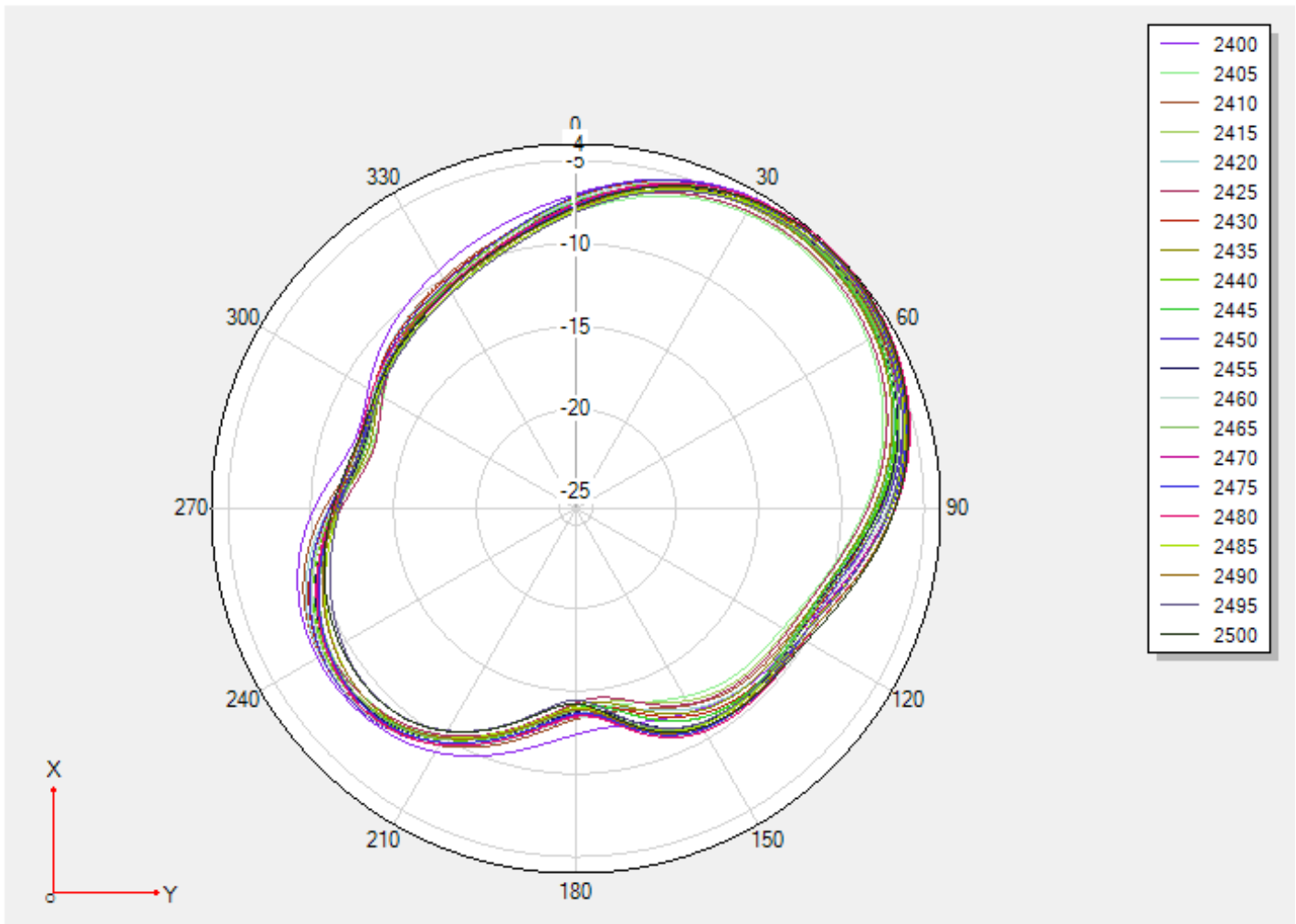
**Direction map:**



PHI 0°



PHI 90°



THETA 90°