

HM-1X PCB BT Antenna Test Report

1.Introduction of antenna

1.Antenna Introduction

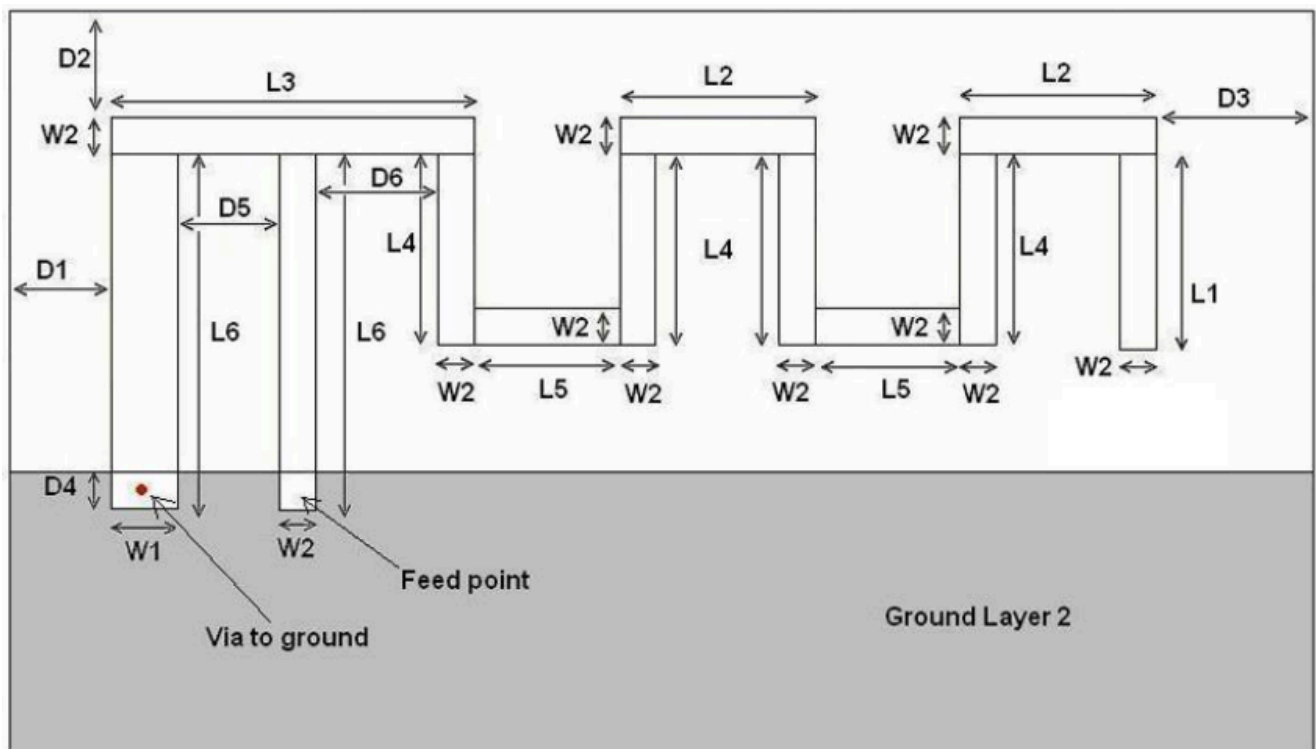
Our Bluetooth speaker's antenna is directly made on the Main PCB board.
The antenna is copper potable tin injection process, copper foil thickness: 1OZ,
sheet material is FR - 4 thickness 1.6mm material.

2.Manufacturer information

Jinan Huamao Technology Co.,Ltd

2.Antenna shape

1.Size



L1	4.3MM	L2	2.3MM
L3	4MM	L4	4MM
L5	2.3MM	L6	2.3MM
W1	0.8MM	W2	0.35MM
D1	0.8MM	D2	0.6MM
D3	0.8MM	D4	0.5MM

| 3. Antenna parameters

The Bluetooth antenna operates at 2402-2480MHz and generates resonance in this frequency band. The next table is the main parameter of the antenna.

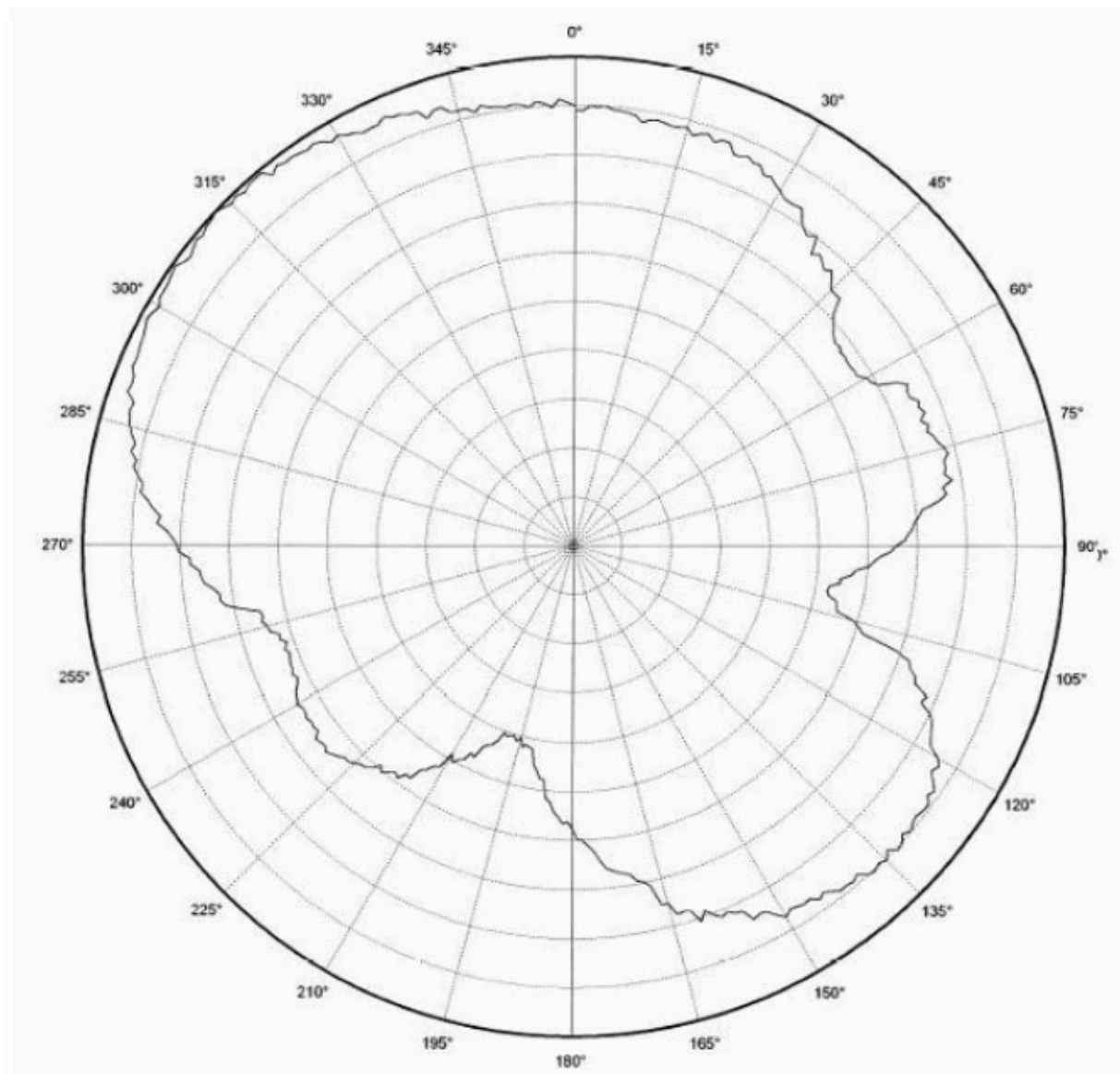
	Bluetooth built-in antenna
Frequency(MHz)	2402 ~ 2480 MHz
Impedance	50 Ohm Nominal
Gain (Peak)	3.3dBi
Polarization	Linear, Vertical
Modulation	GFSK(Gaussian Frequency Shift Keying)
Connector	Tin

| 4. Antenna gain detection report

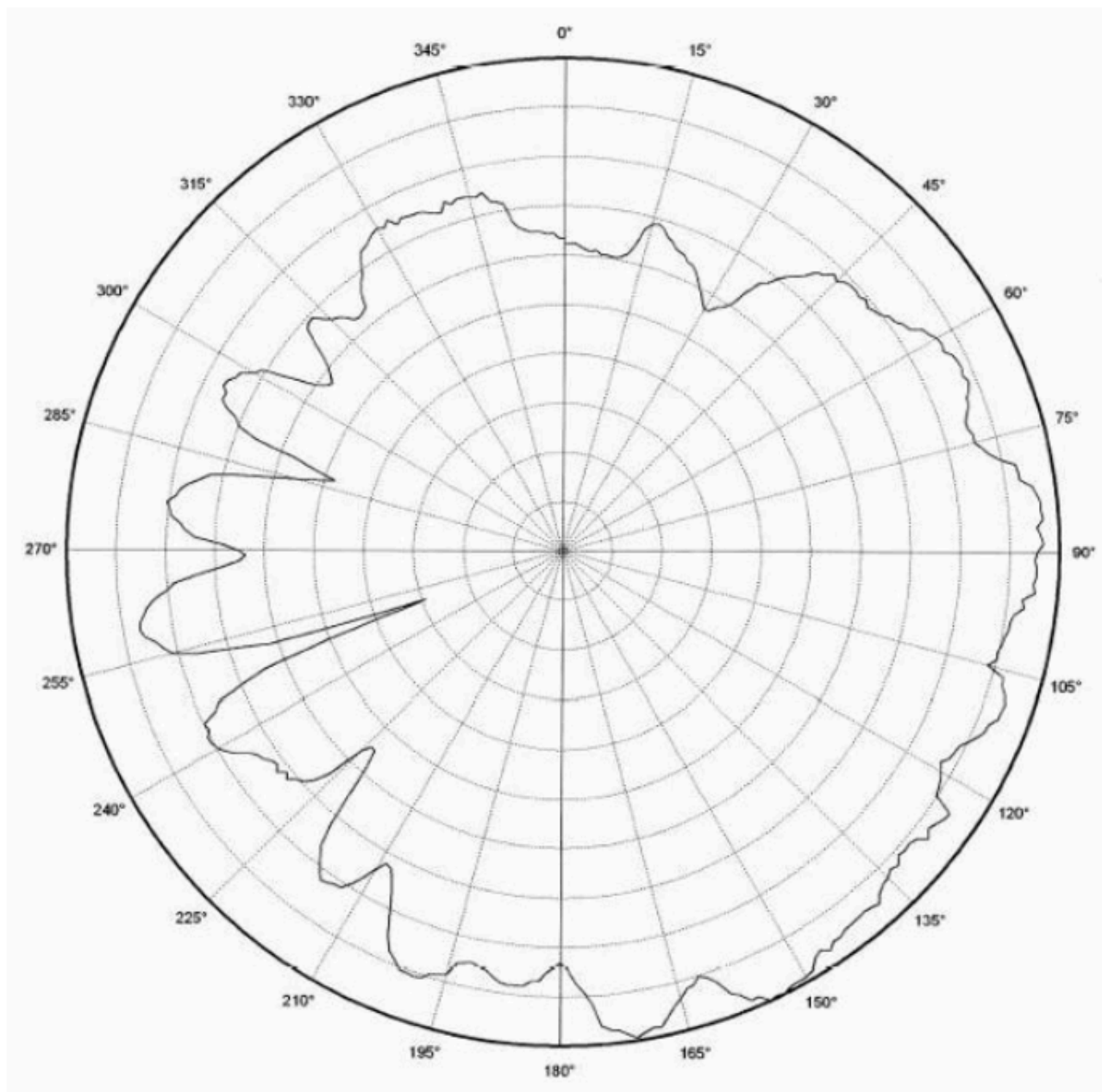
| 1. Maximum gain value

2400MHz	-1.2dBi	4dB/div
2450MHz	3.3dBi	4dB/div
2500MHz	2.2dBi	4dB/div

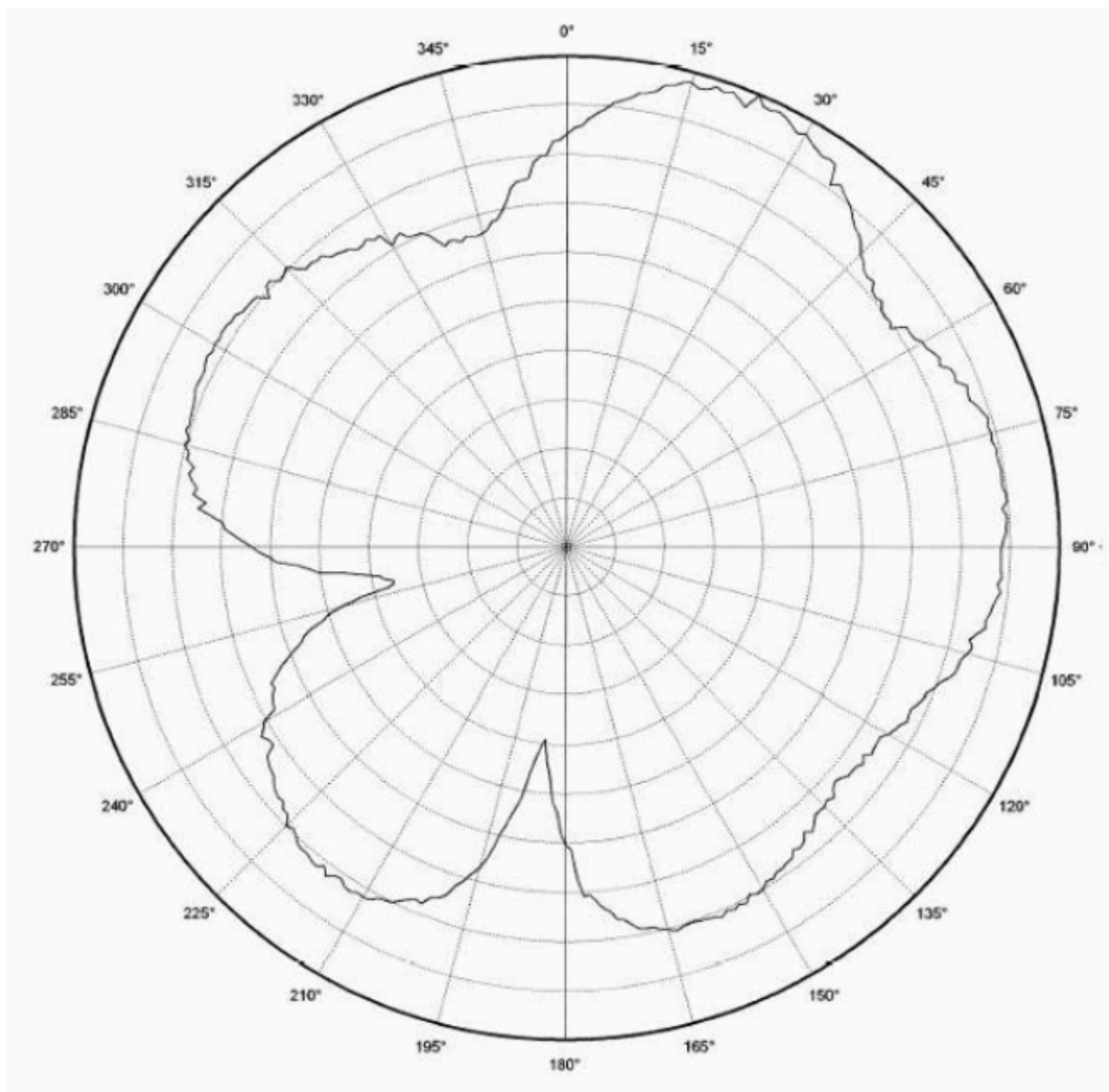
| 2. Directional map



2400MHZ, Gain -1.2dBi

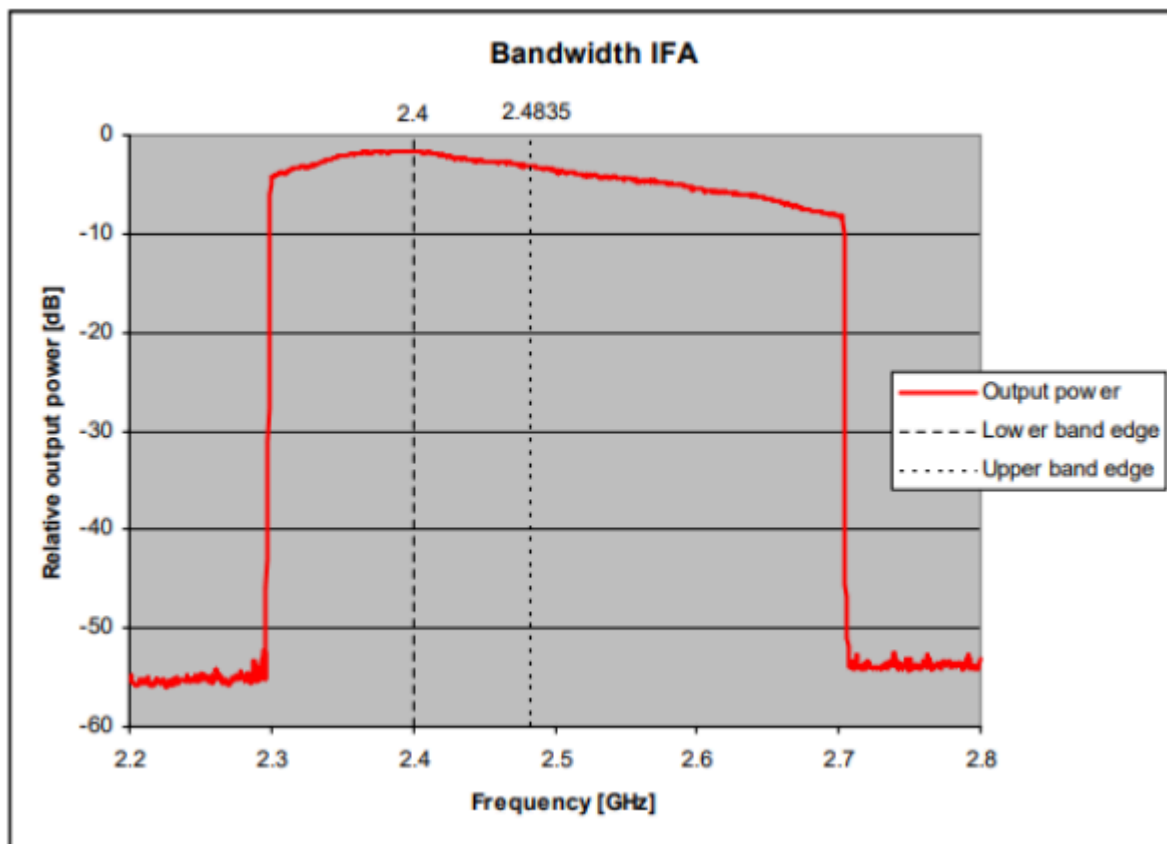


2450MHZ, Gain 3.3dBi



2500MHz, Gain 2.2dBi

3. Bandwidth



4.Reflection

