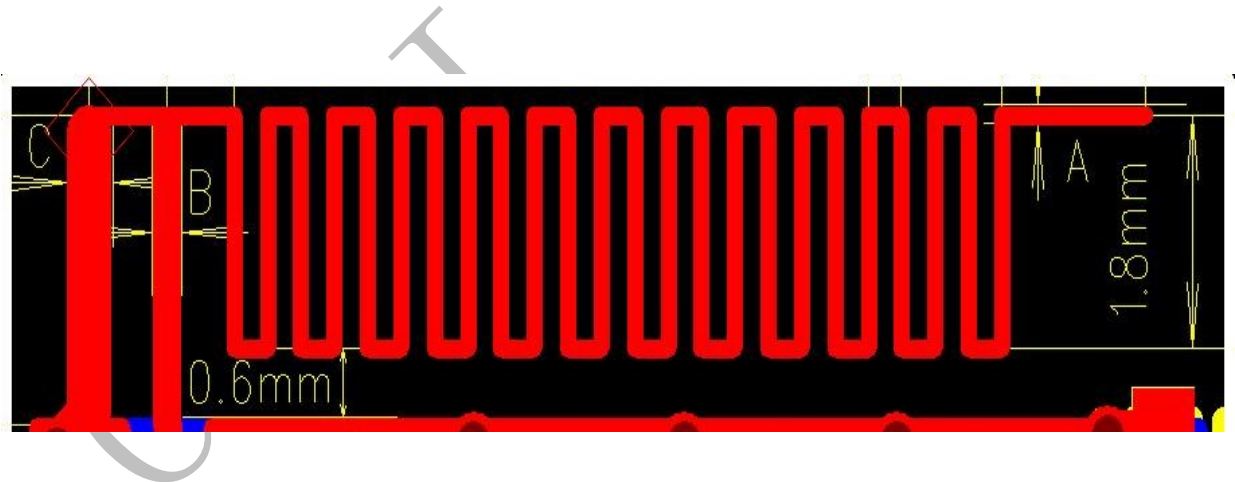


2.4G PCB antenna

This section mainly discusses 2.4G PCB antenna, if you do not consider the cost and volume, you can choose other antennas, such as patch antenna (small size, medium performance, medium cost) or external whip antenna (large size, high performance, high cost), and PCB antenna is the lowest cost, medium size, as long as the design is proper and can obtain sufficient performance antenna.

- ◆ Ultra-small PIFA antenna: PCB antenna for Nano Dongle, due to the limited PCB space, the maximum gain will be about 6dB smaller than other antennas, that is, the working distance will be half shorter. The complete board size made by the antenna and MCU is about 11mm*18mm.

Small size Nano Dongle with antenna design



Nano Dongle Antenna

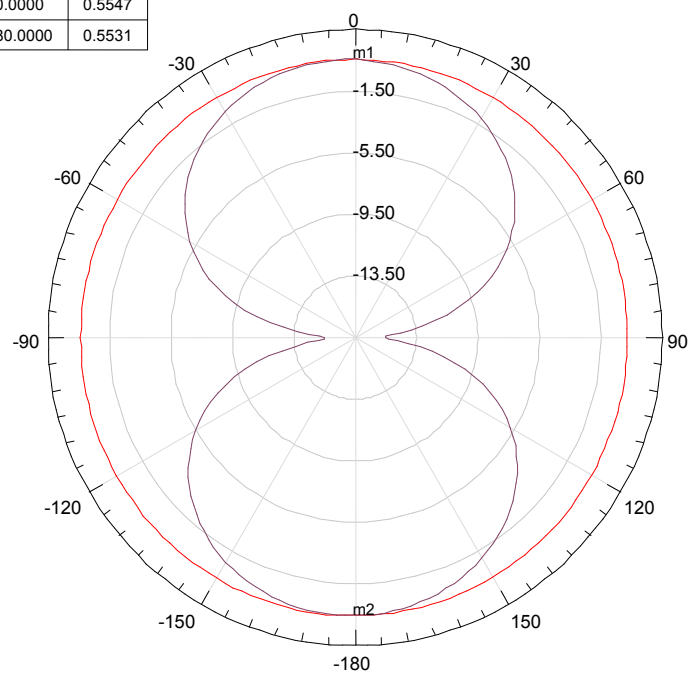
The antenna performance is as follows, and the operating band covers the entire 2.4G ISM band:



Normal Module Wiggle Antenna

2D and 3D Gain as follows

Name	Theta	Ang	Mag
m1	0.0000	0.0000	0.5547
m2	180.0000	180.0000	0.5531



Curve Info	
— dB(GainTotal)	Setup1 : Sweep1
— dB(GainTotal)	Phi='0deg'
— dB(GainTotal)	Setup1 : Sweep1
— dB(GainTotal)	Phi='90deg'

Radiation Patterns(GAIN @ 2440MHz)

Plane	XY			XZ			YZ		
Frequency(MHz)	2400	2440	2480	2400	2440	2480	2400	2440	2480
Peak Gain(dBi)	0.54	0.55	0.55	0.55	0.55	0.54	0.55	0.55	0.55

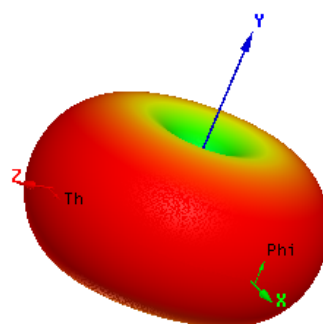
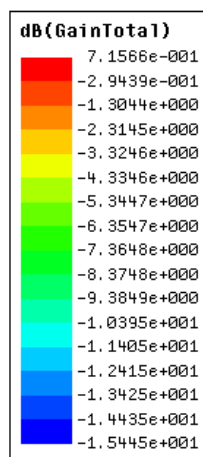


图 Normal Module Wiggle Antenna Gain