Bluetooth antenna of PCB on-board specification

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Document Type: 2.4GHZ PCB antenna
Document Version: V1.0
Release Date: Oct. 30，2018

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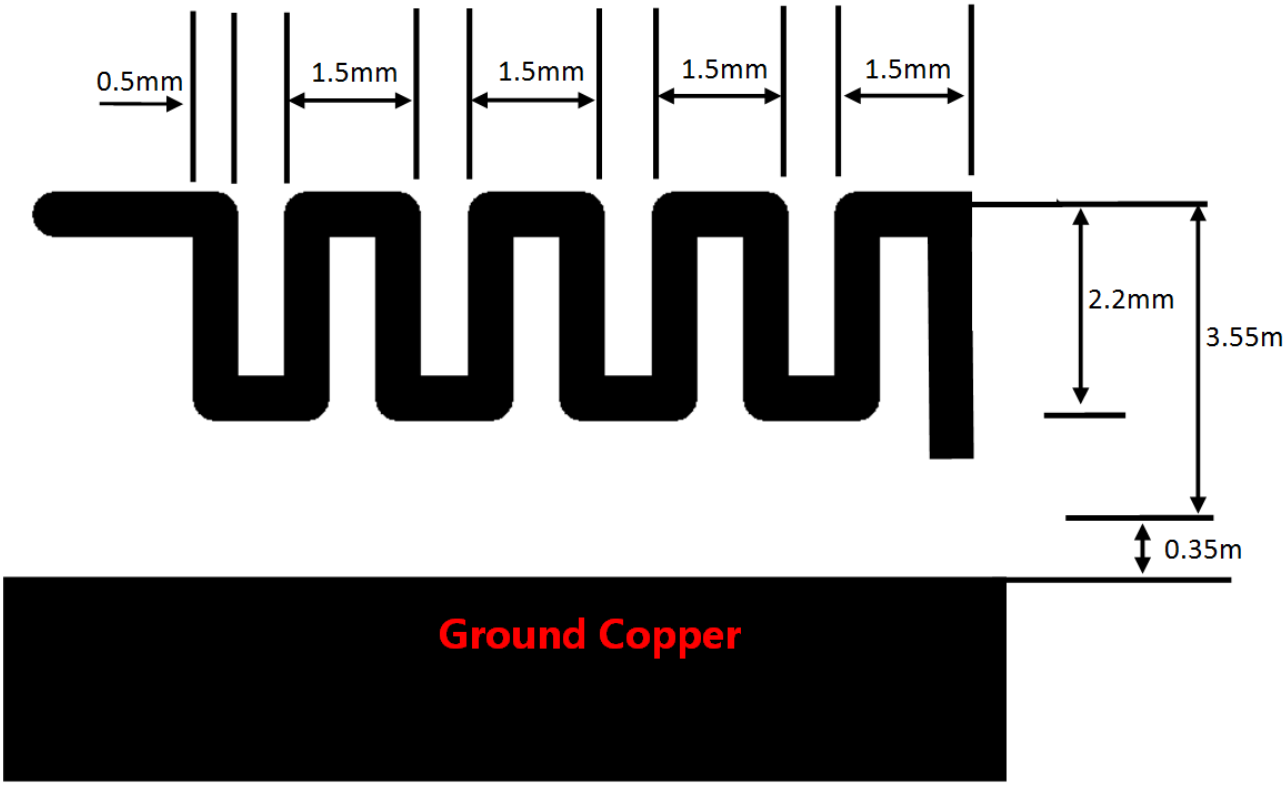
2，Spec Drawing



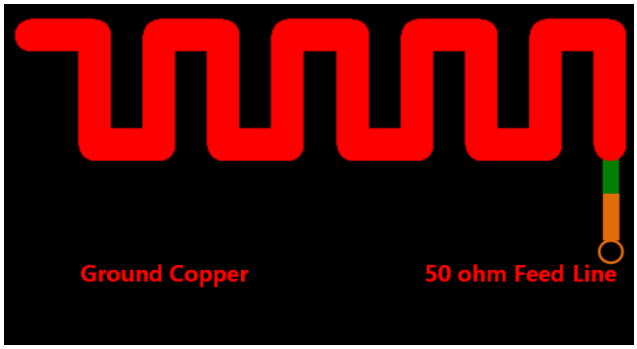
3，Specification

Product Number: 2.4GHZ PCB antenna
Sample Photo:

A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
S.W.R.	<=2.0
Gain	2.03 dBi
Efficiency	~ 50%
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Gold-plated copper

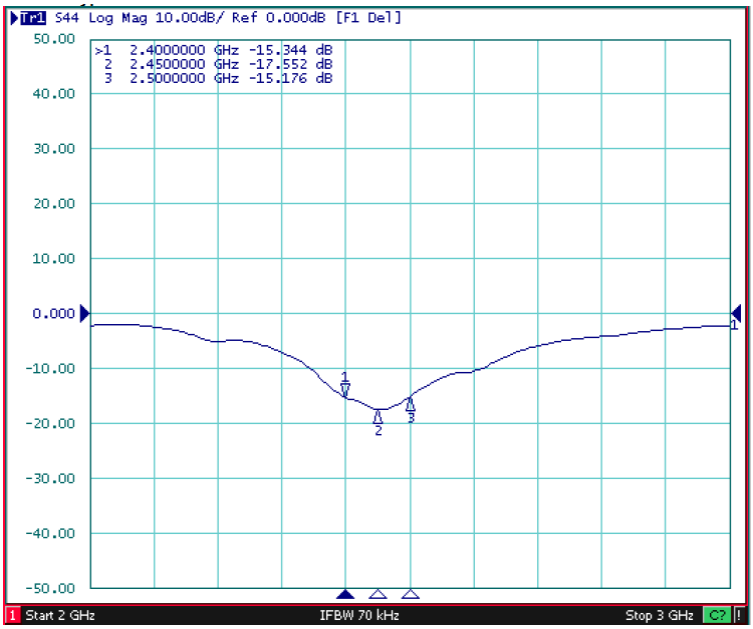
C. Environmental	
Operation Temperature	- 40℃ ~ + 85℃
Storage Temperature	- 40℃ ~ + 105℃

4，Antenna On Test Board



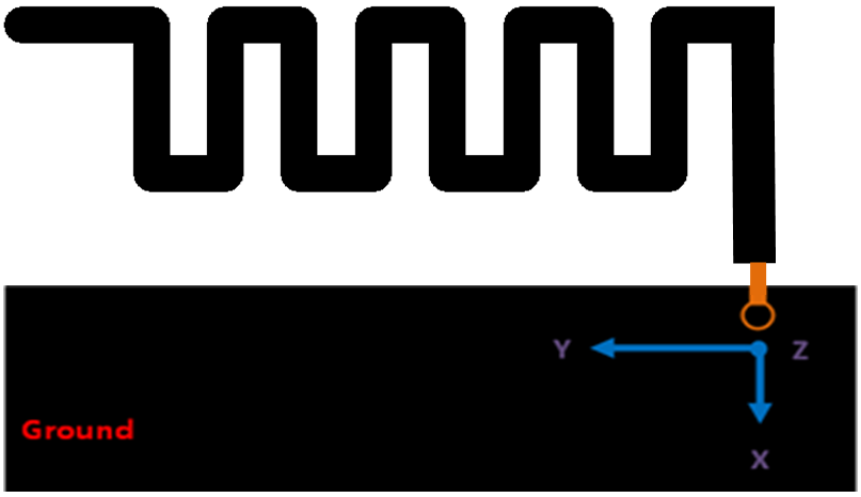
FR4 Thickness 0.8mm

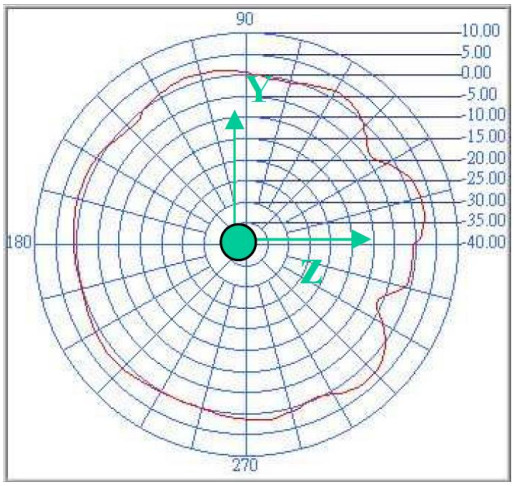
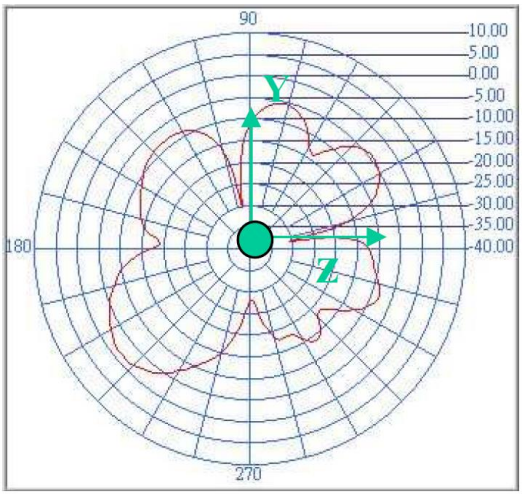
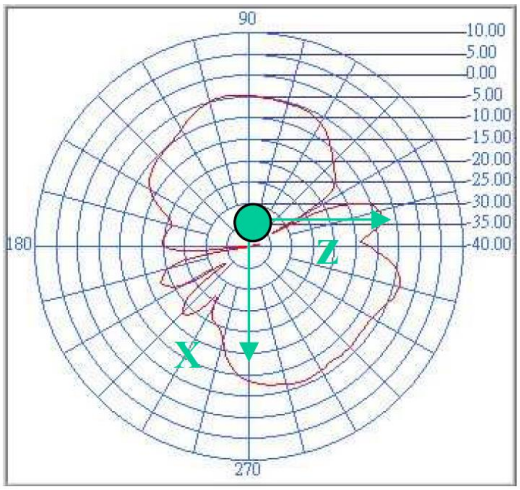
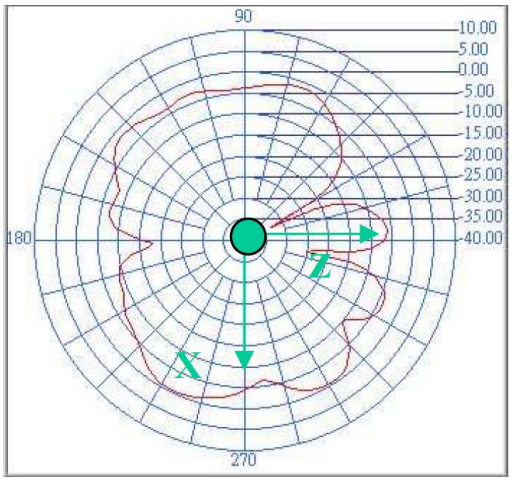
5， Return Loss

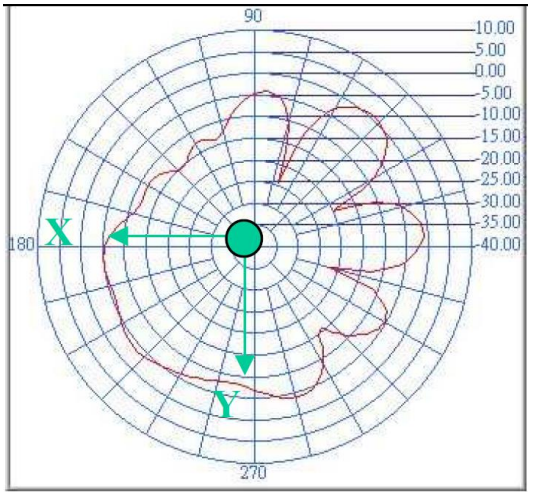
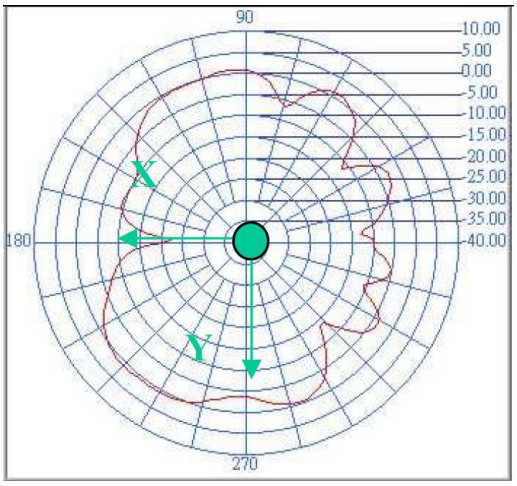


6，Radiation Pattern

Radiation Pattern and Gain were dependent on measurement board design. The specification of PCB antenna was measur ed based on the PCB size and installation position as shown in the below figure Test Board.



	Vertical	Horizontal
Y - Z Plane Average Gain=1.19 dBi		
	Peak Gain = 2.03 dBi Average Gain = 0.71 dBi	Peak Gain= -1.37 dBi Average Gain=-8.6 dBi
X - Z Plane Average Gain=-2.91dBi		
	Peak Gain= -3.76 dBi Average Gain= -8.72dBi	Peak Gain= -0.25 dBi Average Gain= -4.24 dBi

X - Y Plane Average Gain=-0.95 dBi		
	Peak Gain= 0.76 dBi Average Gain= -5.81dBi	Peak Gain= 1.37 dBi Average Gain= -2.67 dBi

Test Result:

Frequency VNA	E Total. dB(dB)	Efficiency
2400MHz	0.646765	40.28%
2410MHz	1.13986	47.12%
2420MHz	0.236575	40.99%
2430MHz	-0.12543	32.97%
2440MHz	0.35978	37.89%
2450MHz	1.038567	42.61%
2460MHz	2.03415	50.94%
2470MHz	0.627546	40.28%
2480MHz	-0.225765	36.87%
2490MHz	-0.467887	34.54%
2500MHz	0.709677	49.95%