

Bluetooth antenna of PCB on-board specification

1, Index

Item	Content	Page	Remark
1	Index	1	
2	Spec Drawing	2	
3	Specification	2	
4	Antenna On Test Board	3	
5	Return Loss	3	
6	Radiation Pattern	3	

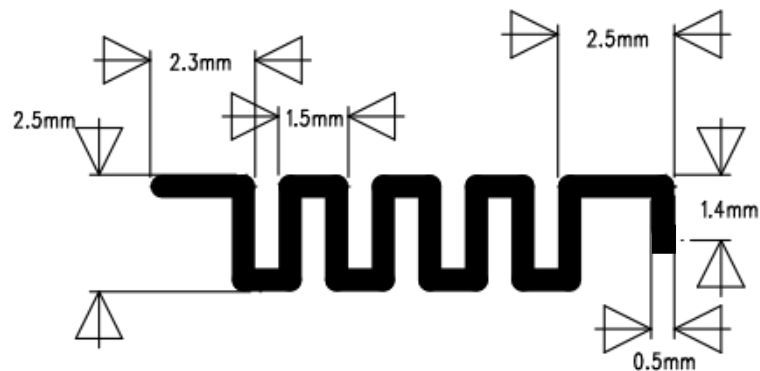
Document Type: 2.4GHZ PCB antenna
Document Version: V1.0
Release Date: Aug. 22, 2023

Shenzhen Feasycom Co., LTD

Telephone: 86-755-27924639

www.feasycom.com

2, Spec Drawing



Ground copper

3, Specification

Product Number: 2.4GHZ PCB antenna

Sample Photo:



A. Electrical Characteristics

Frequency	2400 ~ 2500 MHz
S.W.R.	≤ 2.0
Gain	-0.49 dBi
Efficiency	~ 35%
Polarization	Linear
Impedance	50 Ohm

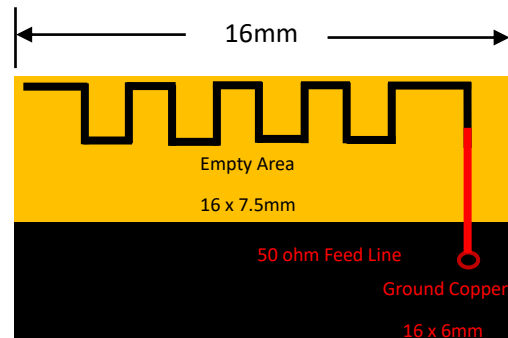
B. Material & Mechanical Characteristics

Material of Radiator	Gold-plated copper
----------------------	--------------------

C. Environmental

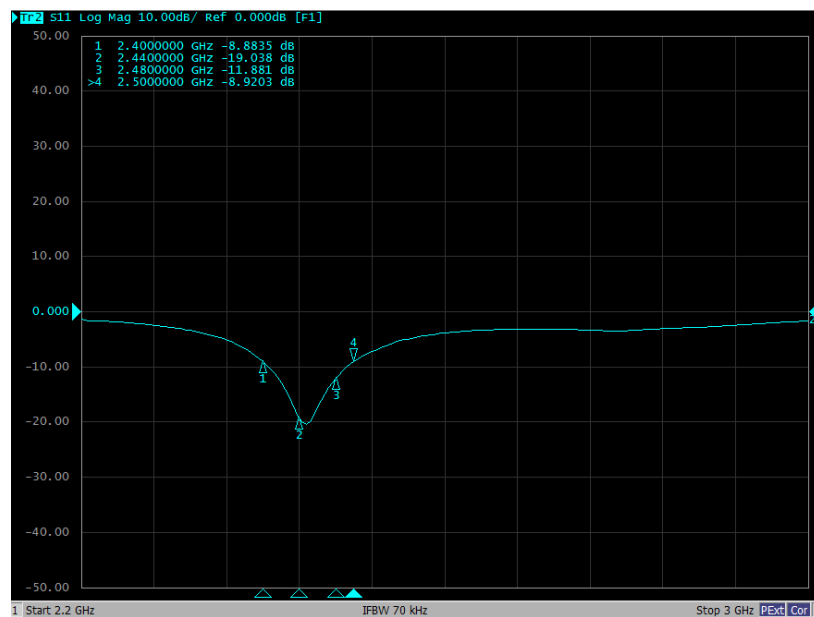
Operation Temperature	- 40°C ~ + 85°C
Storage Temperature	- 40°C ~ + 105°C

4, Antenna On Test Board



FR4 Thickness 0.8mm

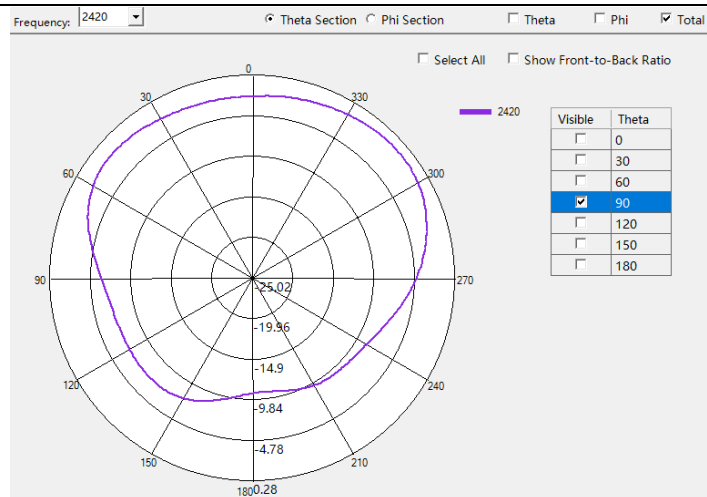
5, Return Loss



6, Radiation Pattern

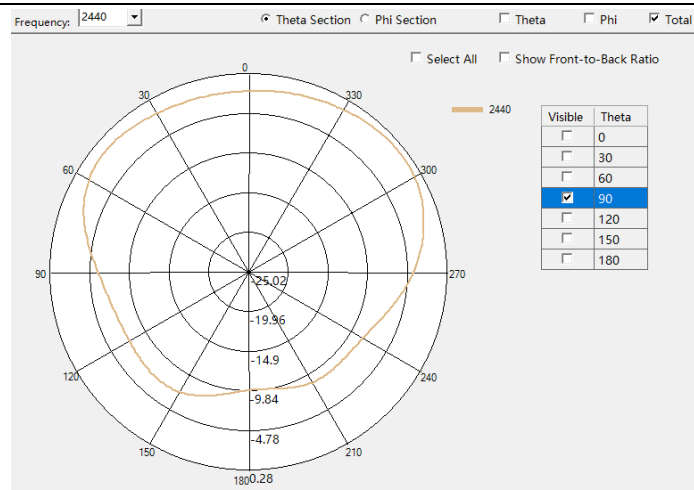
Radiation Pattern and Gain were dependent on measurement board design. The specification of PCB antenna was measured based on the PCB size and installation position as shown in the below figure Test Board.





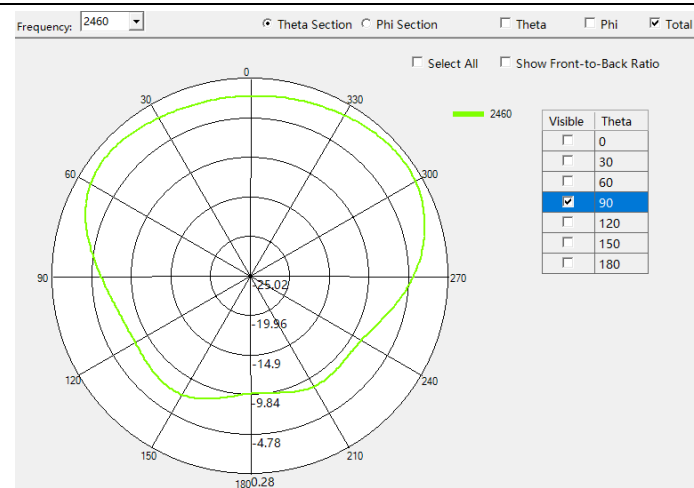
Frequency: 2420MHz

Gain: -1.14 dBi



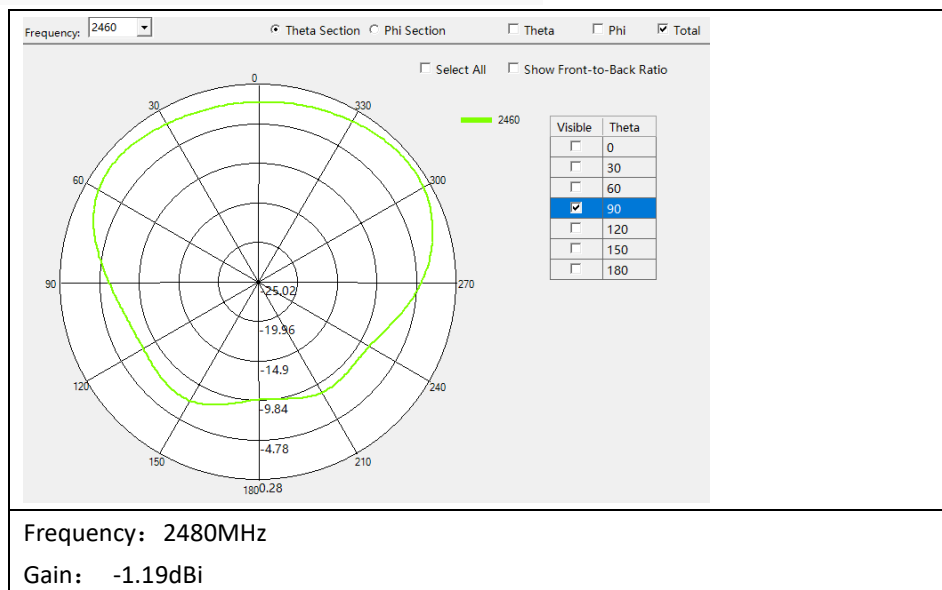
Frequency: 2440MHz

Gain: -0.61 dBi



Frequency: 2460MHz

Gain: -0.65dBi



Test Result:

Frequency VNA	E Total. dBi(dB)	Efficiency
2400MHz	-2.29	24.83%
2410MHz	-1.50	28.94%
2420MHz	-1.14	30.75%
2430MHz	-0.92	31.75%
2440MHz	-0.61	33.30%
2450MHz	-0.49	34.67%
2460MHz	-0.65	33.15%
2470MHz	-0.83	31.96%
2480MHz	-1.19	29.85%
2490MHz	-1.52	27.58%
2500MHz	-1.71	26.26%