

Letter of Acknowledgment

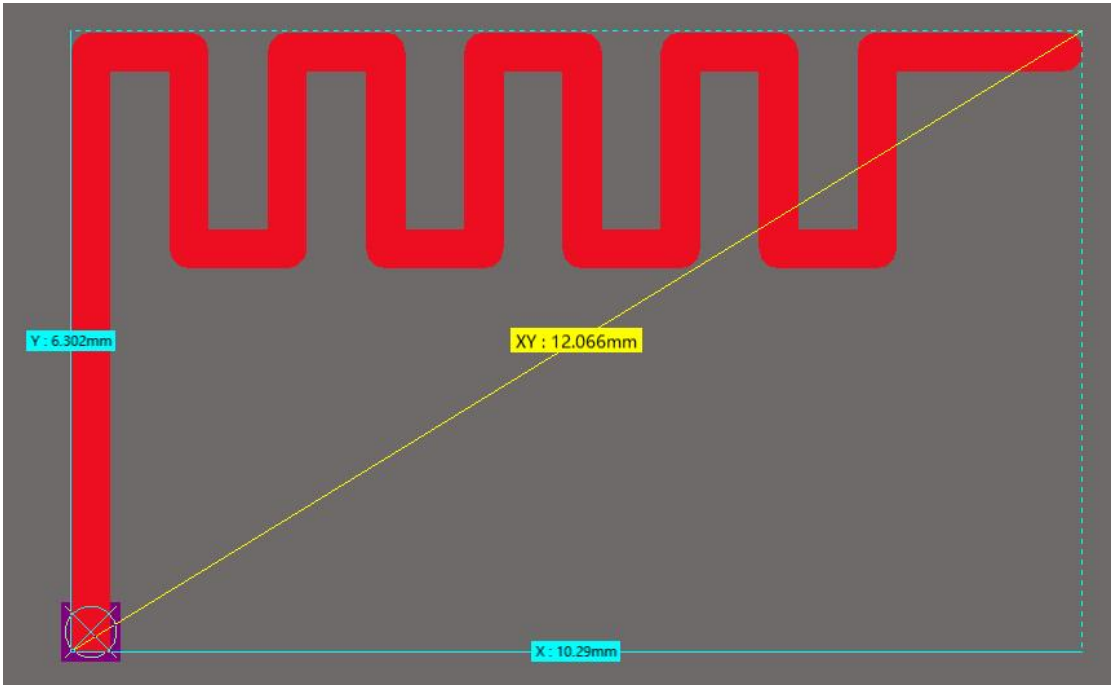
Customer Name: Kanen Electronics
Product Name: 2.4G PCB Antenna
Customer ID: 146.003
CXW Number: KN-C10-JL-Hybrid-V2.0

	Supplier	Customer
Make:	魏嘉荣	
Review:	彭军法	
Date:	2025/12/4	

1. Product specification

Frequenc Range	2400 – 2500GHz
Input Impedence (ohm)	50
Gain (dBi)	0.54
V. S. W. R	≤2.6
Polarization Type	Vertical & Horizontal
Antenna type	PCB Antenna
Manufacturer	ShenZhen BenChuang Electronic CO.,LTD.
Manufacturer Address	Building B6, Pingsha Electronics and Electrical Appliance Industrial Park, No. 999 Sanhu Avenue, Pingsha Town, Jinwan District, Zhuhai City, Guangdong Province

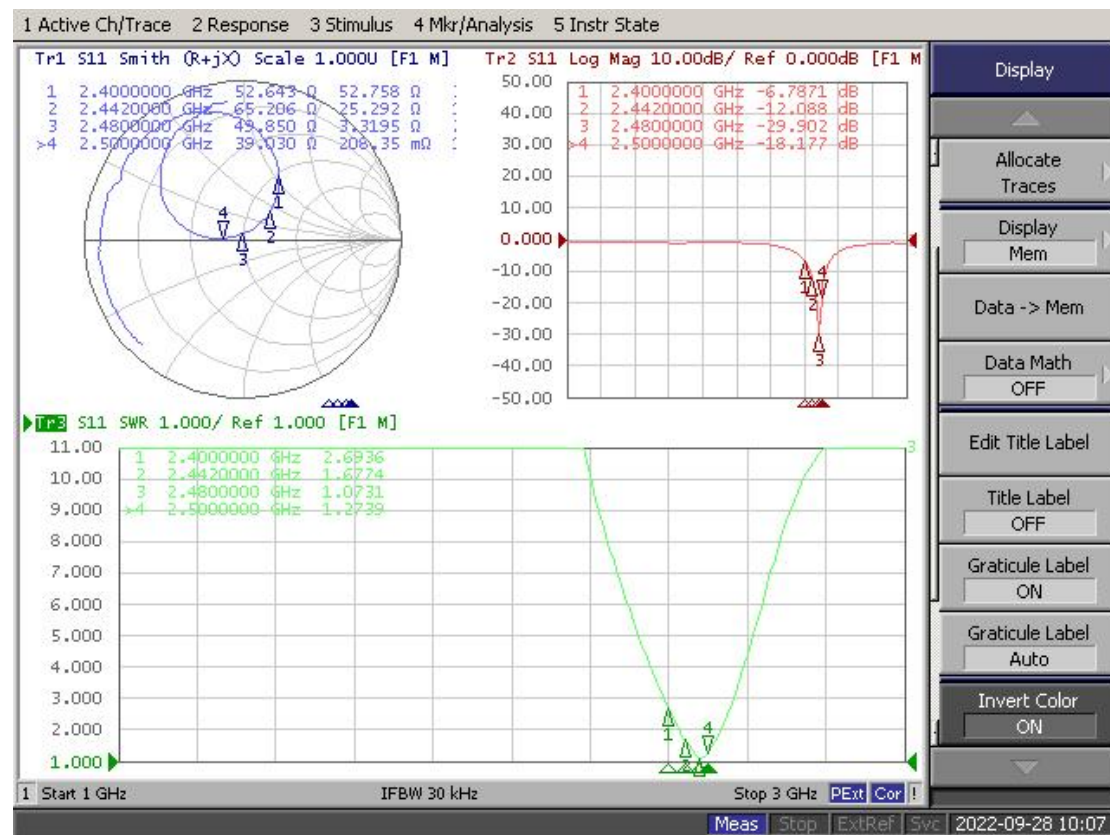
2. Antenna Layout & module on the system board



Size: 6.3mm*10.29

3. Antenna test report

3.1: S11 Parameter



3.2: Antenna Radiation

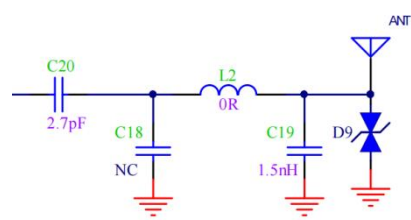
3.2.1 Gain & Efficiency

Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-1.29	-0.01	0.54
Efficiency (%)	39.72	46.4	53.26

3.2.2 OTA data

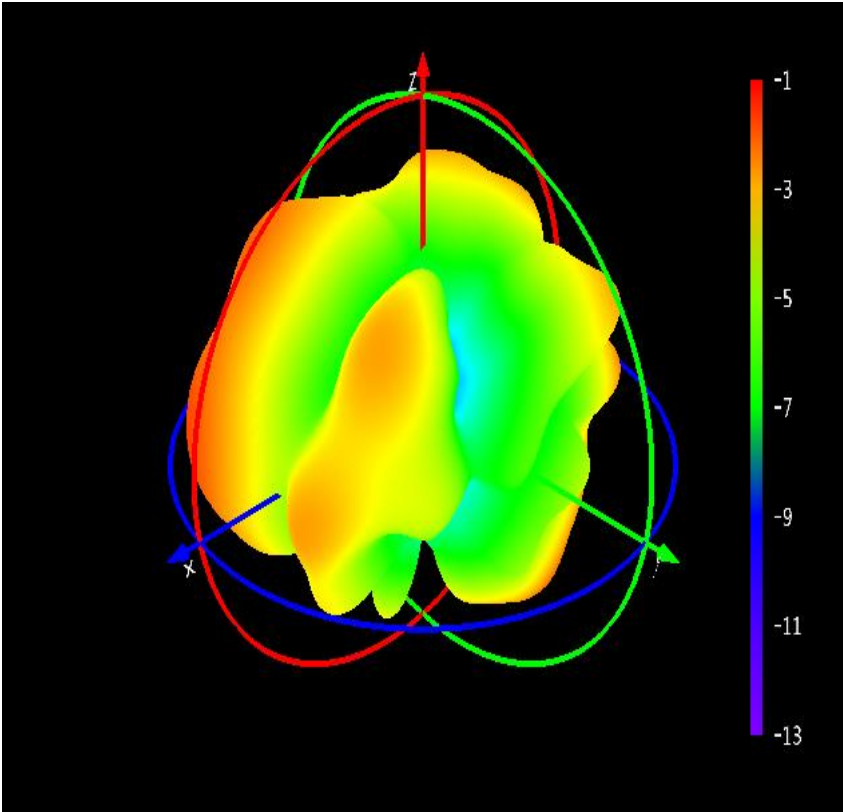
headphones	Head model		Freedom	
channel	TRP	TIS	TRP	TIS
0	4.24	-87.19	5.02	-87.94
39	6.32	-90.89	7.02	-92
78	6.88	-90.76	7.65	-91.45

3.2.3 match circuit

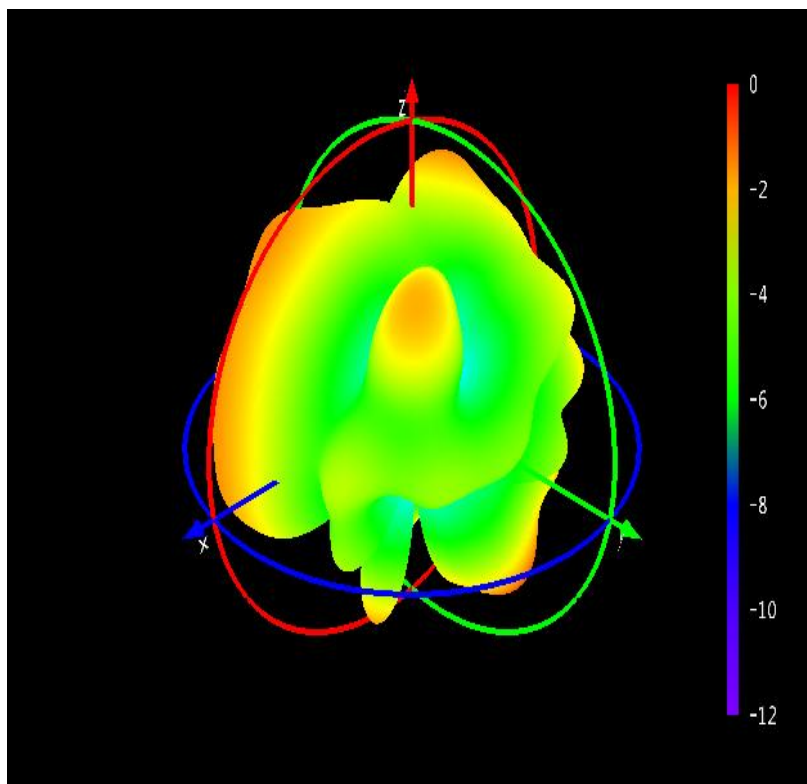


3.2.4 2D&3D radiation pattern diagram

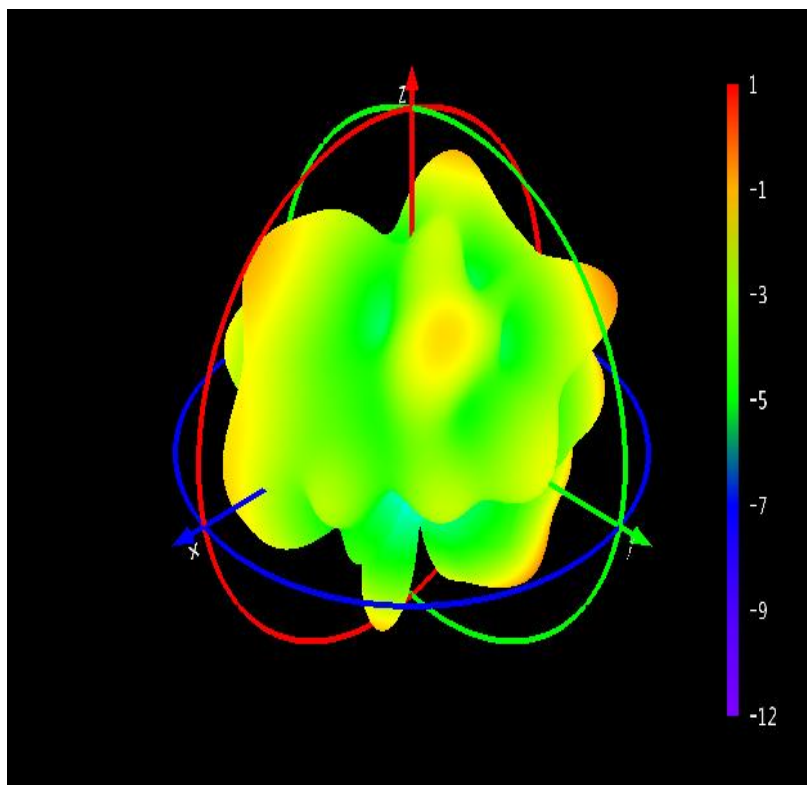
2400MHZ



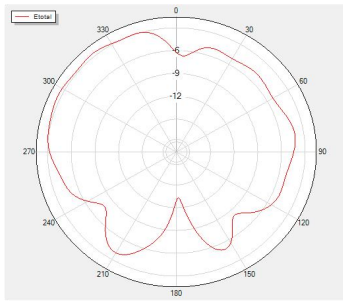
2450MHZ



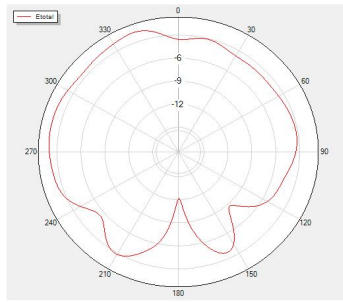
2500MHZ



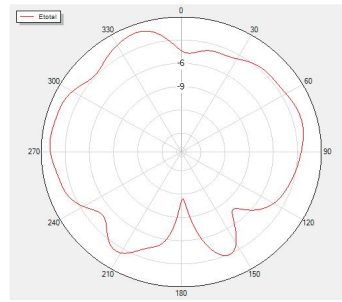
Phi=0 Freq=2400MHz



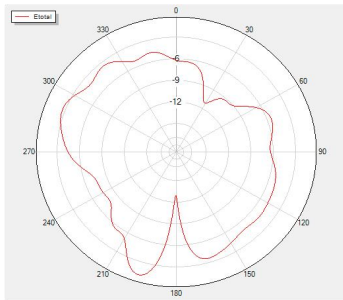
Phi=0 Freq=2450MHz



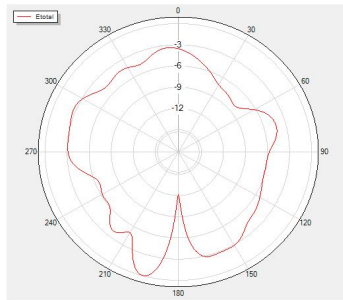
Phi=0 Freq=2500MHz



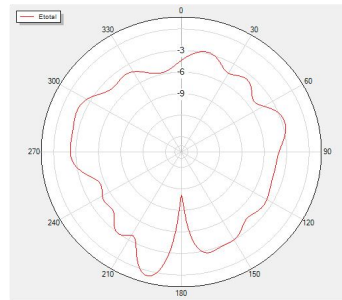
Phi=90 Freq=2400MHz



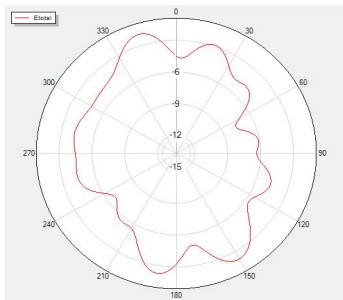
Phi=90 Freq=2450MHz



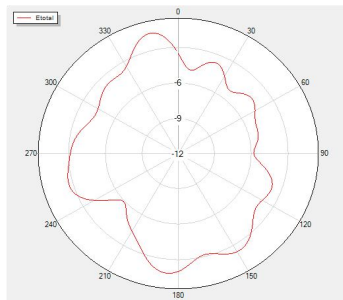
Phi=90 Freq=2500MHz



Theta=90 Freq=2400MHz



Theta=90 Freq=2450MHz



Theta=90 Freq=2500MHz

