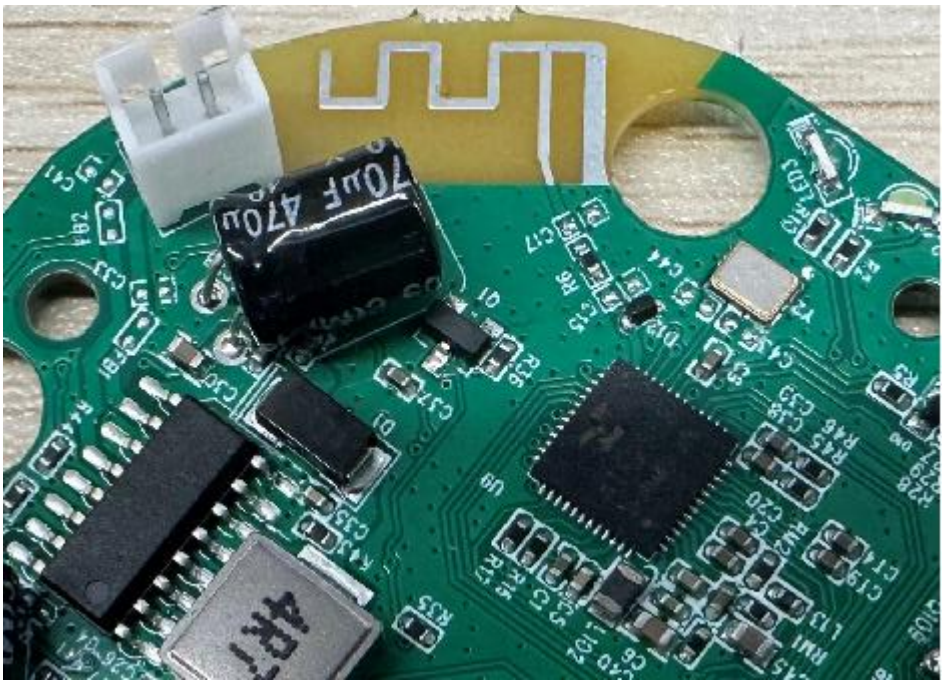
Anker A3101 PCB antenna test report

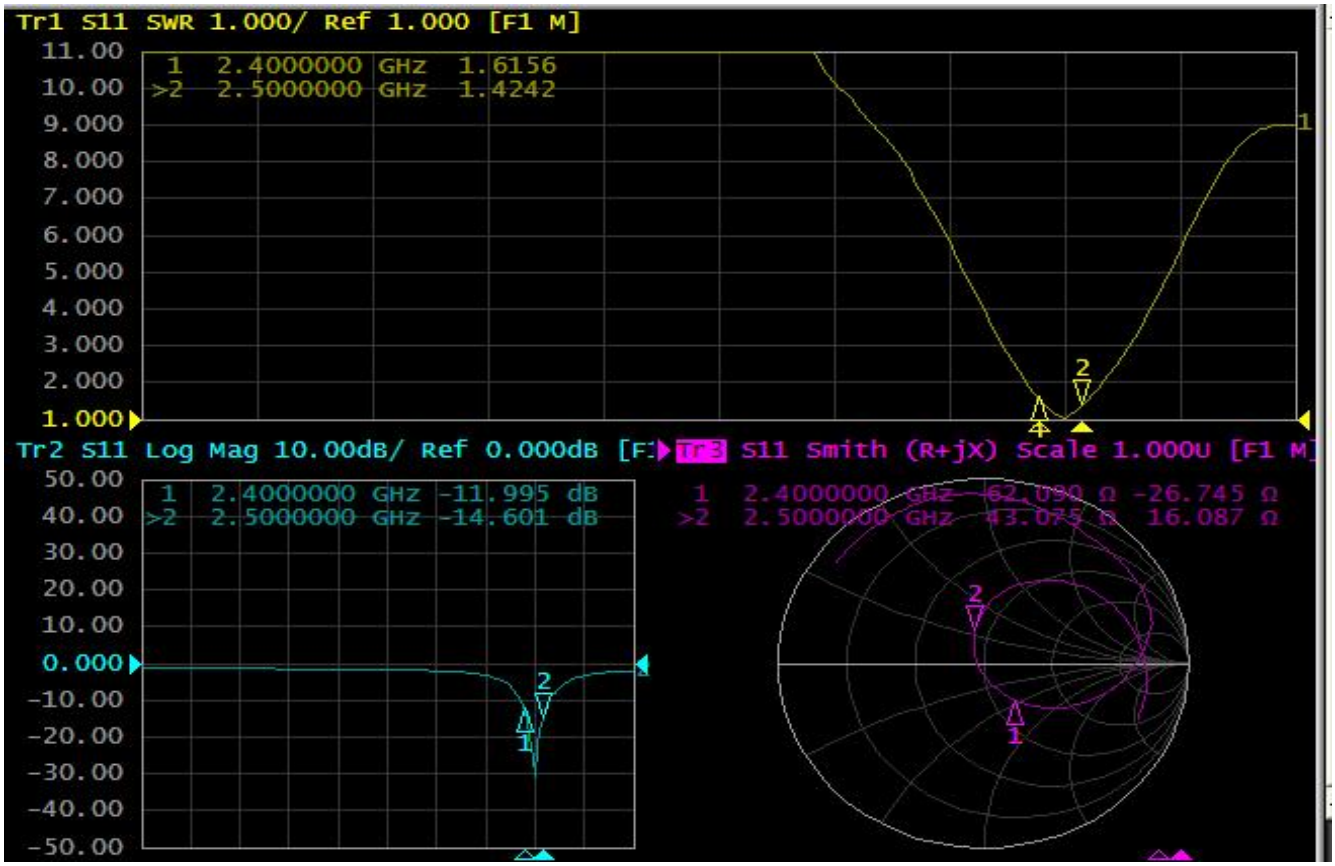
1. **Product features**
   Antenna type:PCB antenna
   Antenna material:PCB
   PCB manufacturers：Shiyu (Shenzhen) PCB Electronics Co., Ltd.
   Frequency　2400-2500MHz
   Impedance　50Ω
   Peak Gain　2.4G:0.82dBi(max)
   Efficiency is high
   Antenna size L12.2mmxW5.4mm

2,**PCB antenna position**



3.1 Measuring Method
1.A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
2.Keeping this jig away from metal at least 20cm

Frequency(MHz)	2400	2500
VSWR	1.61	1.42



4. **Anechoic chamber**

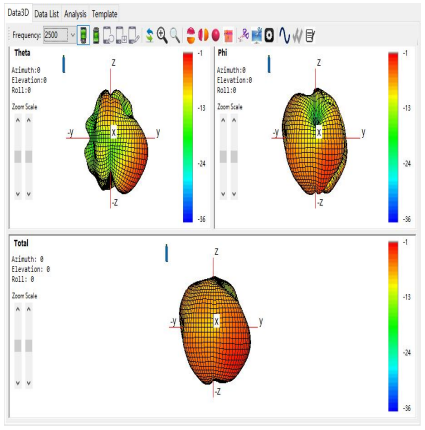
Microwave darkroom and no reflection chamber, absorbing short wave darkroom dark room. Microwave darkroom by electromagnetic shielding room, filtering and isolation, grounding device, the ventilation duct, indoor distribution system, monitoring system, ceiling wave material part. It is based on the wave absorbing material as the lining of the shield room, it can absorb the most of the electromagnetic energy into the six wall is a better simulation of the free space conditions.

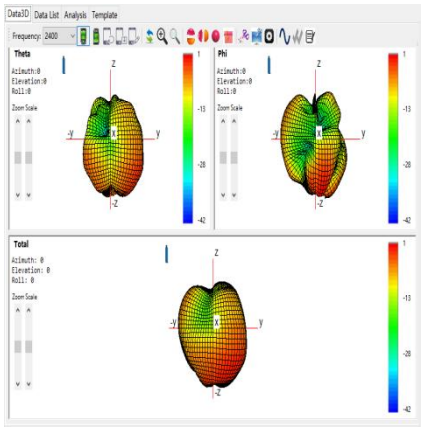
The main working principle of microwave anechoic chamber is according to the electromagnetic wave in the medium from the low magnetic guide magnetic direction of propagation rules, absorbing materials to guide the electromagnetic wave using high permeability, through resonance, a substantial absorption of electromagnetic wave radiation energy, by coupling the electromagnetic energy into heat energy.

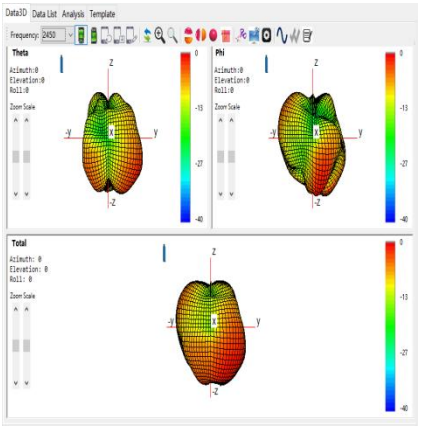
main performance :

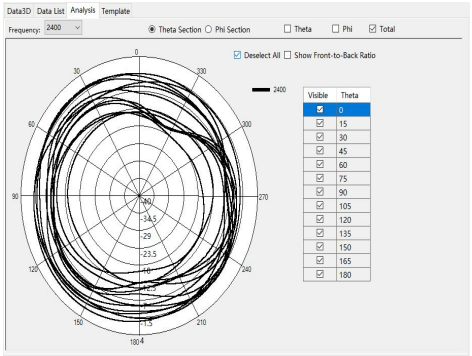
Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite)

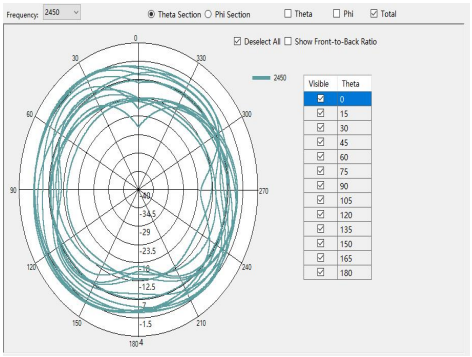
5.Antenna 3D&2D radiation diagram

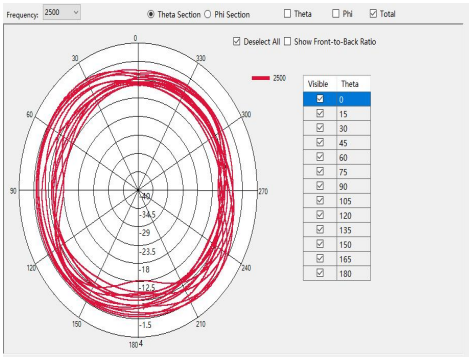












6.**Gain table of Antenna**

Passive Test For 2400MHz~2500MHz			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	35.21%	-4.79	0.82
2410	34.24%	-4.92	0.45
2420	34.39%	-5.03	0.16
2430	33.81%	-5.11	0.2
2440	32.34%	-5.18	-0.11
2450	31.43%	-5.03	-0.13
2460	32.13%	-4.93	-0.37
2470	33.45%	-4.76	-0.63
2480	34.1%	-4.67	-0.78
2490	33.22%	-4.79	-1.15
2500	31.98%	-4.95	-1.3

7.**Antenna Dimensions**