

**Antenna Type: PCB Antenna**

**Antenna Manufacture: Soundlab Technology Company Limited**

**Address:No.101, 202, Building 1, Microlab Industrial Park, No.2  
Baozi South Road, Kengzi, Pingshan District, Shenzhen, Guang  
dong,P.R. China**

**Antenna Model Number:PCB Antenna**

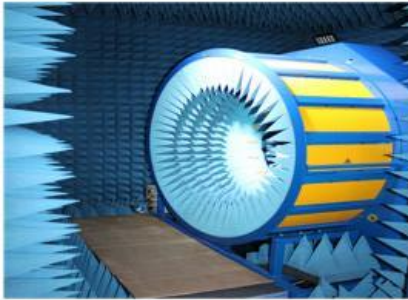
**Antenna Layout & module on the system board**



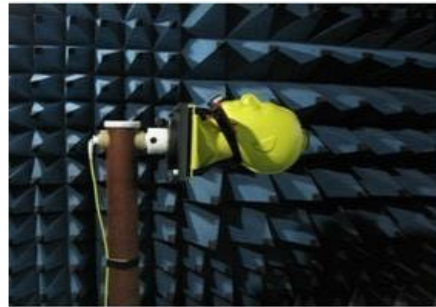
# 1. Testing Environment

## a. Test System

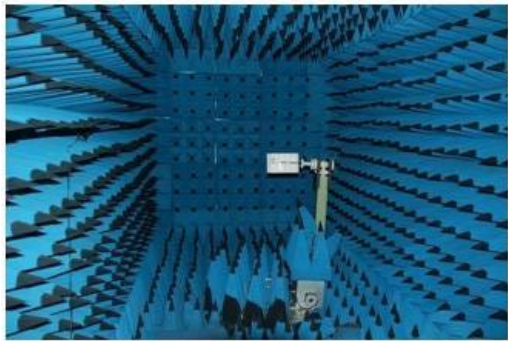
### chamber



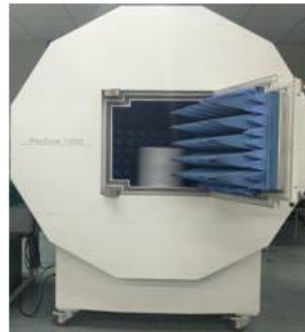
Satimo



Airlink



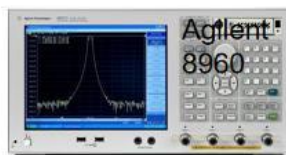
Guang Ping



GTS

b. Test Instrument

# equipment



## 2. Passive test data

### Passive Efficiency & Gain

frequency (MHz)	efficiency (%)	efficiency (dB)	Gain (dB)
2400	39.21	-4.07	1.22
2410	36.37	-4.39	1.43
2420	35.67	-4.48	0.17
2430	35.60	-4.49	0.37
2440	37.38	-4.27	1.00
2450	38.57	-4.14	0.99
2460	36.89	-4.33	0.98
2470	35.57	-4.49	0.30
2480	37.02	-4.32	0.39
AVG	36.9	-4.33	0.85

### 3. Active test data

#### a. TRP&TIS

##### free space

Channel CH	TRP (dBm)	TIS (dBm)
0	5.28	-90.51
39	4.92	-90.11
78	5.05	-90.54

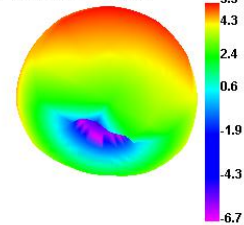
##### The head ear

Channel CH	TRP (dBm)	TIS (dBm)
0	-2.38	-84.72
39	-2.35	-84.91
78	-2.01	-85.53

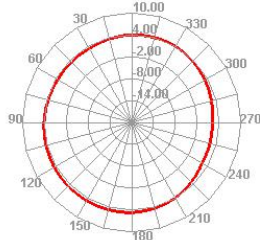
b. Directivity Diagram

free space

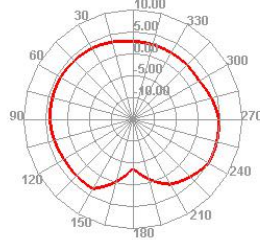
Bluetooth 0 TRP



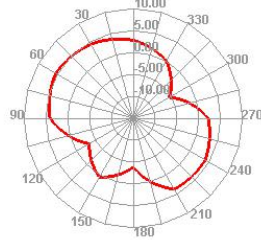
Bluetooth 0 TRP H



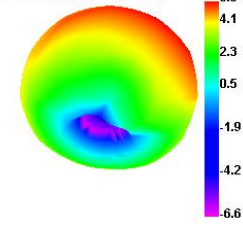
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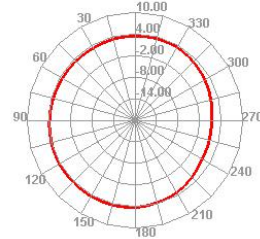
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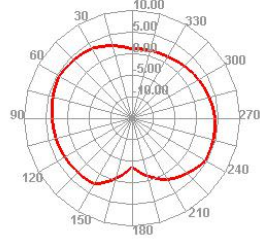
Bluetooth 39 TRP



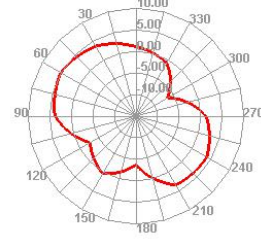
Bluetooth 39 TRP H



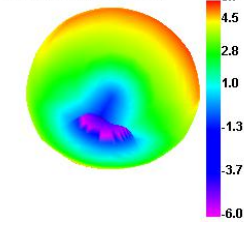
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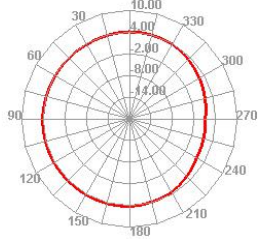
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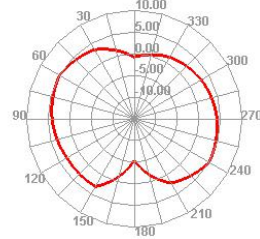
Bluetooth 78 TRP



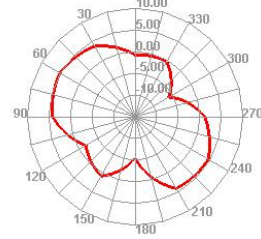
Bluetooth 78 TRP H



Bluetooth 78 TRP E1

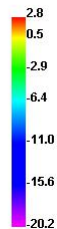
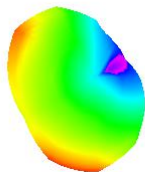


Bluetooth 78 TRP E2

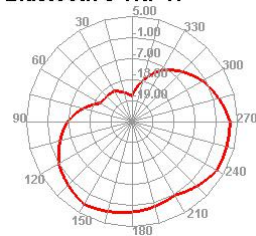


## The head ear

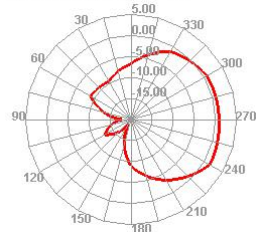
Bluetooth 0 TRP



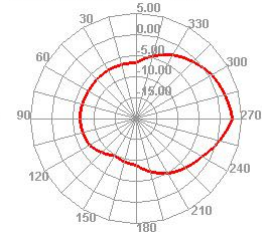
Bluetooth 0 TRP H



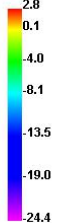
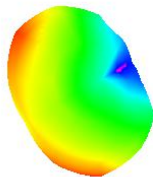
Bluetooth 0 TRP E1



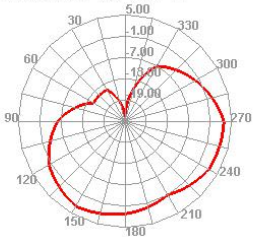
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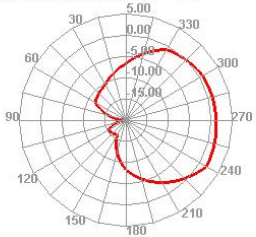
Bluetooth 39 TRP



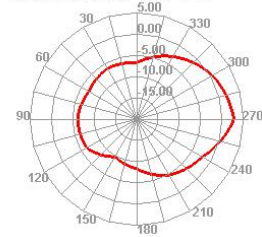
Bluetooth 39 TRP H



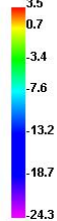
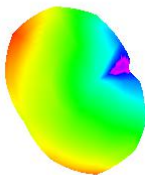
Bluetooth 39 TRP E1



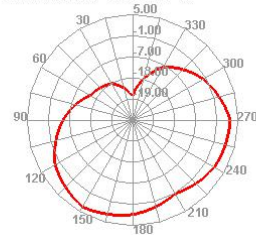
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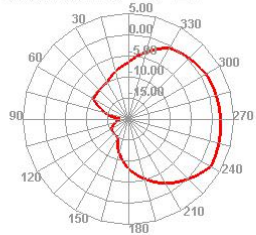
Bluetooth 78 TRP



Bluetooth 78 TRP H



Bluetooth 78 TRP E1



Bluetooth 78 TRP E2

