Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: Shenzhen CANNICE Technology Co., Ltd

Entry name: A1109-07 (R)

Product Name: BT Antenna

Part NO.: A1109.07.R.V2

Write By: yan pei hai

Issued Date: 2023-06-29

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz~2500MHz
Return Loss	<-12
Efficiency	>30%
Peak Gain	-0.23DBi
Impedance	50Ω
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	FPC
Cable Type	N/A
Connector Type	N/A
Dimension	At Attachment
Heat-durability	280±5˚C，10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 ˚C ~ + 80 ˚C
Storage Temperature	- 30 ˚C ~ + 85 ˚C

● Test Equipment & Conditions

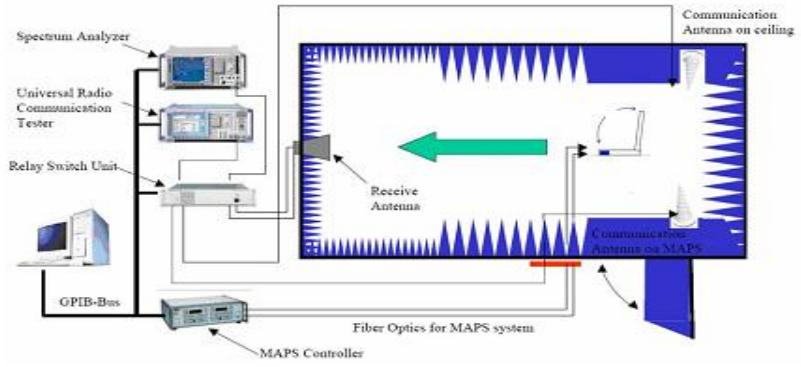
1. Network Analyzers :

Agilent 8753D 5071B

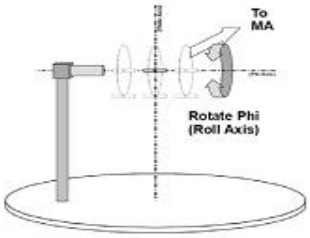
Communications Test Set:

Agilent E5515C CMW500

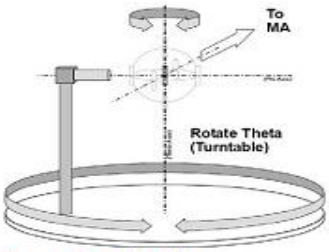
2. 3D Chamber Test System



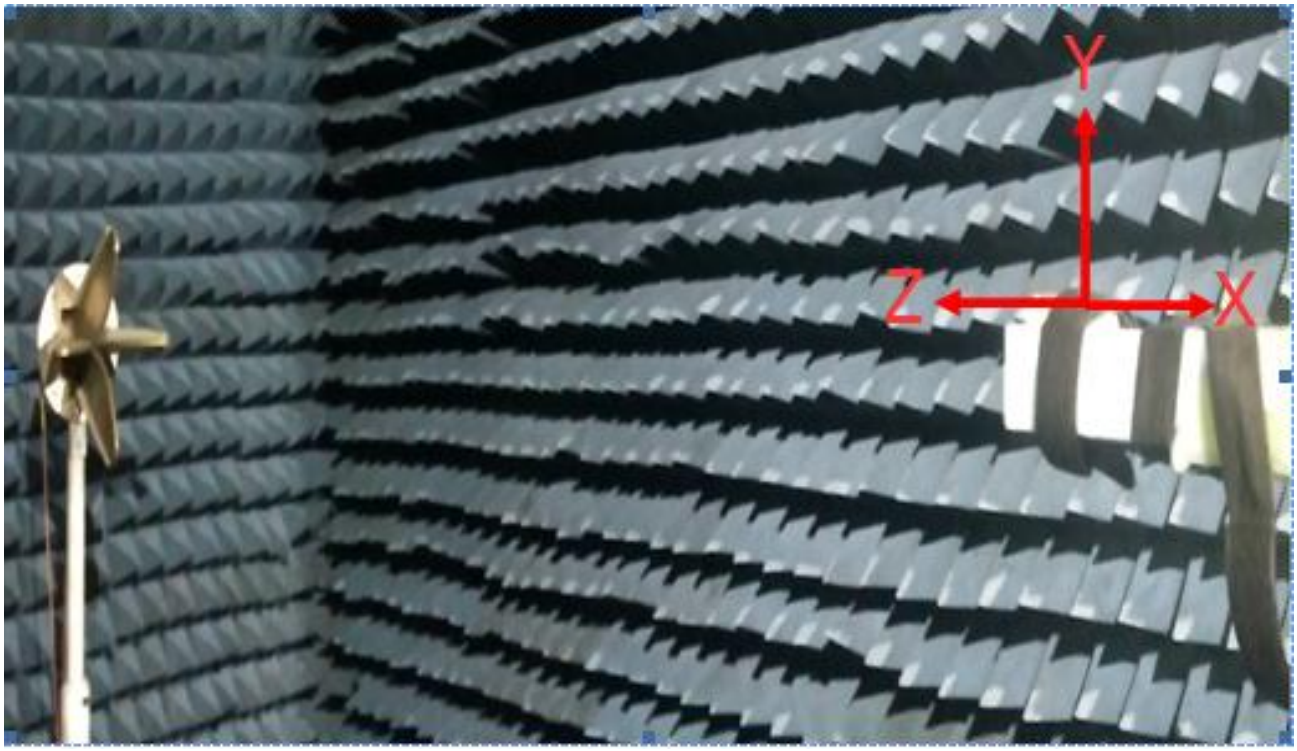
(Testing by 3D anechoic chamber)



Phi axis test

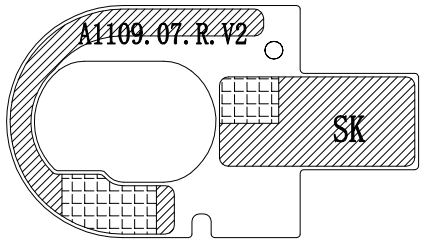


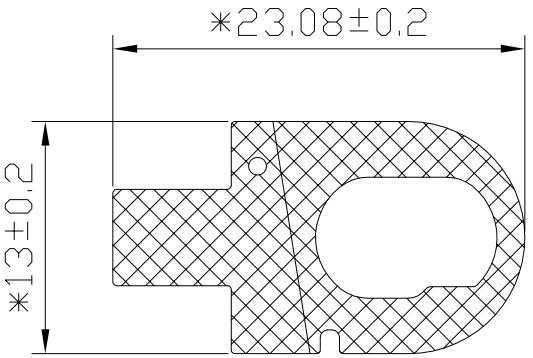
Theta axis test



- Antenna picture

RoHS
Compliant
G P



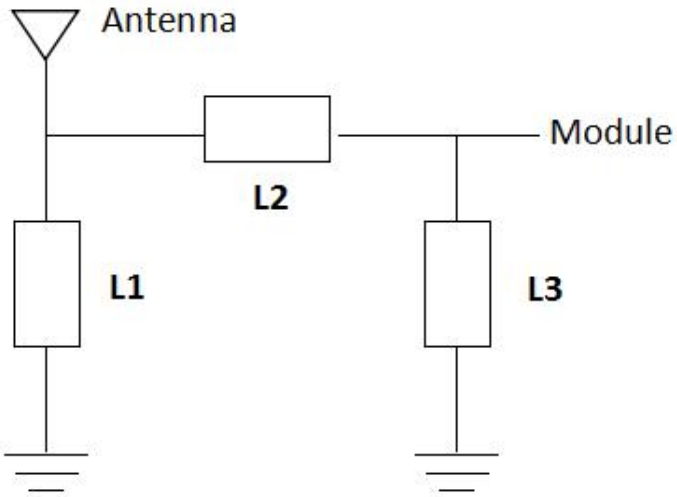


SHEN ZHEN SKYLink CO.,LTD

Third Angle				Project		Date	2023-06-29
0～10	±0.05	○	0.02	Part Name		Designed by	
10～18	±0.10	◎	⌀0.03	Part No.	A1109.07.R.V2	Checked by	MD
18～30	±0.12	⊥	0.02	Material			RF
30～40	±0.15	▱	0.04	DWG No.		Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale 1:1 Rev A
Location							

Rev	Description	Date	Remark
A	New drawing		

- **Matching circuit**



Electronics	Value
L1	/
L2	0 Ω
L3	/

Return Loss (R ear)

BT VSWR+ Return loss

	Frequency(MHz)	Frequency (MHz)/ return loss(dB)		
	2400-2500		2400	2480
		VSWR	1.32	2.28
		Return loss	-16.23	-9.68

3D Test Report (R ear)

Test	Bluetooth TRP		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TRP(dBm)	3.52	3.85	3.39

Test	Bluetooth TIS		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TIS(dBm)	-89.62	-89.48	-89.41

3D Passive Test Report

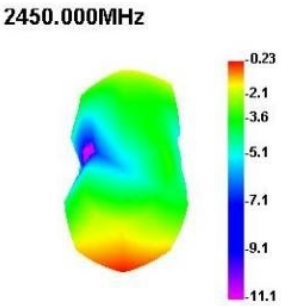
Efficiency (R ear)

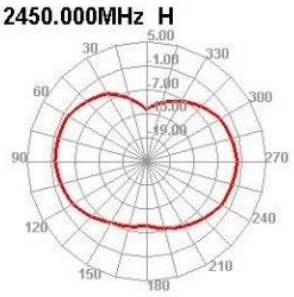
Freq	Effi
(MHz)	(%)
2400	31.88
2410	32.45
2420	32.52
2430	30.59
2440	30.28
2450	31.12
2460	29.68
2470	29.56
2480	27.63
2490	27.32
2500	26.32

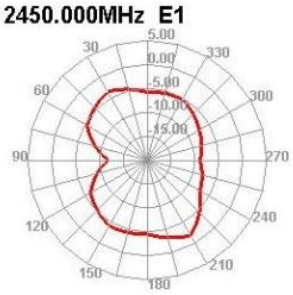
Gain (R ear)

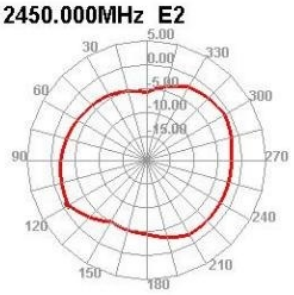
Freq	Gain
(MHz)	(dBi)
2400	-0.28
2410	-0.27
2420	-0.33
2430	-0.34
2440	-0.26
2450	-0.23
2460	-0.41
2470	-0.43
2480	-0.46
2490	-0.38
2500	-0.45

Directional pattern









● Dimension Inspection

	Customer	CANNICE	Project name	A1109-07		Date	2023-06-29	
	Supplier	Skylink	Measuring tool	Caliper		Unit	mm	
NO	Dimension	Tolerance	Measured1	Measured2	Measured3	Measured4	Measured5	determine
1	23.08	±0.2	23.07	23.05	23.11	23.06	23.05	OK
2	13	±0.2	12.98	13.03	13.07	13.01	13.03	OK
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

- Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃， Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition ， Temp: 35±2℃ Humidity: 85% NaCl salt spray :5 ±1 %.PH value :6.5~7.2 Test time:48hours	Salt-Spray Tester	No color change No appear rusting	PASS