

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: Shenzhen CANNICE Technology Co. , Ltd

Entry name: A1199-01 (R)

Product Name: BT Antenna

Part NO. : A1199. 01. R. V2

Write By: yan pei hai

Issued Date: 2023-07-06

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	<-13
Efficiency	>28%
Peak Gain	-1.93DBi
Impedance	50 Ω
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

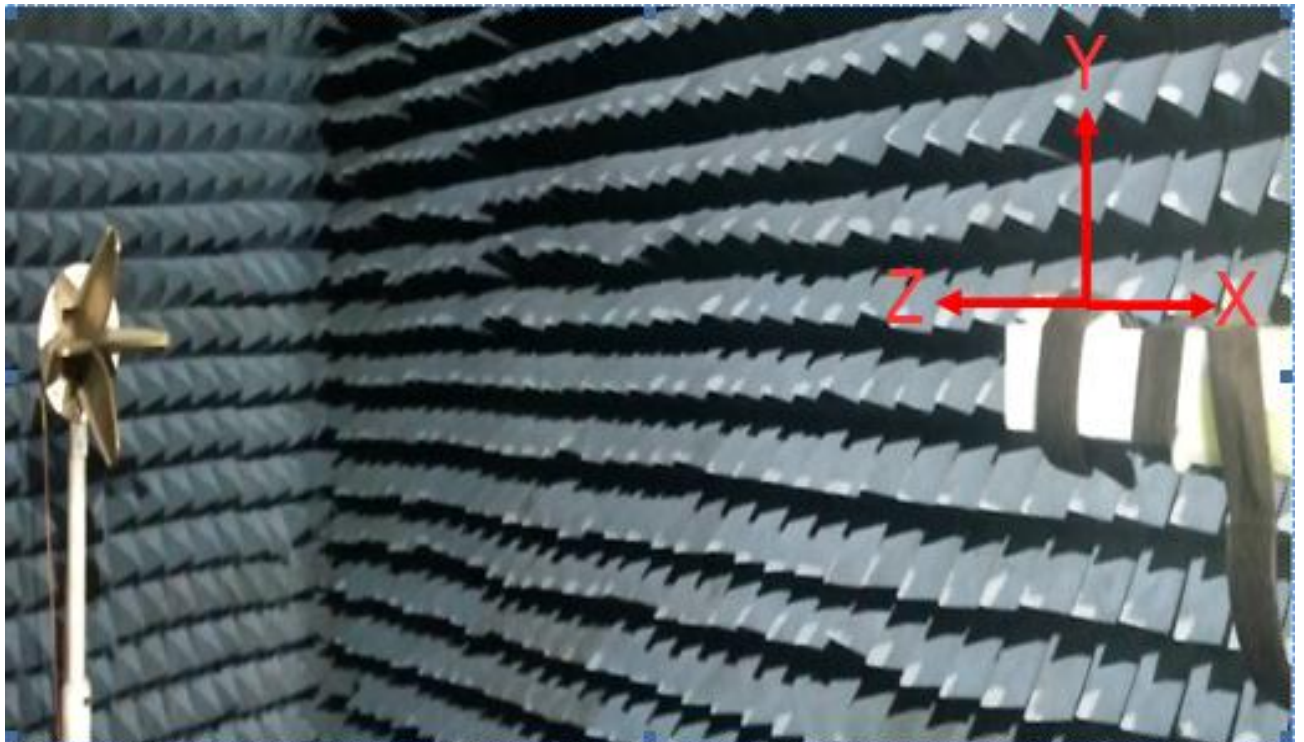
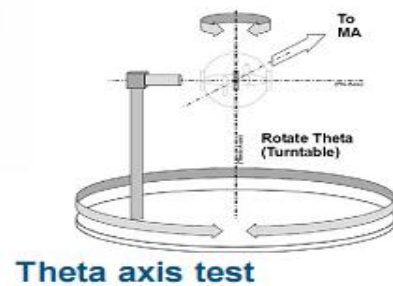
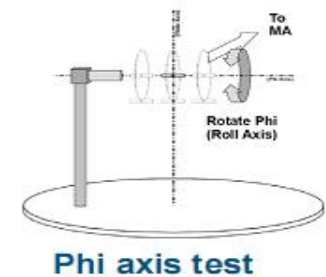
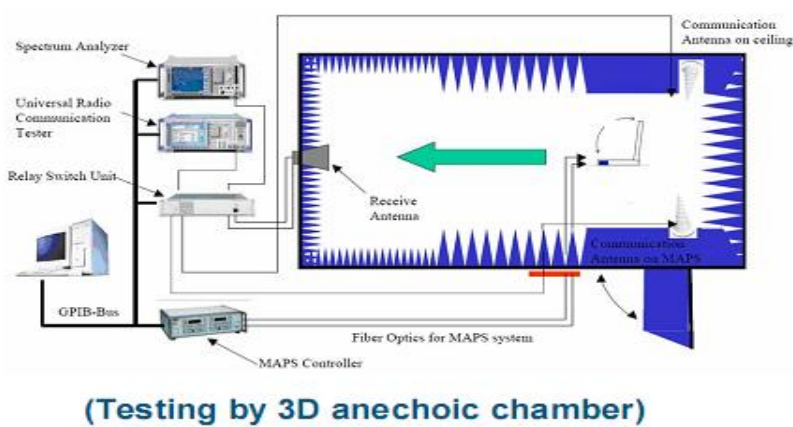
1. Network Analyzers :

Agilent 8753D 5071B

Communications Test Set:

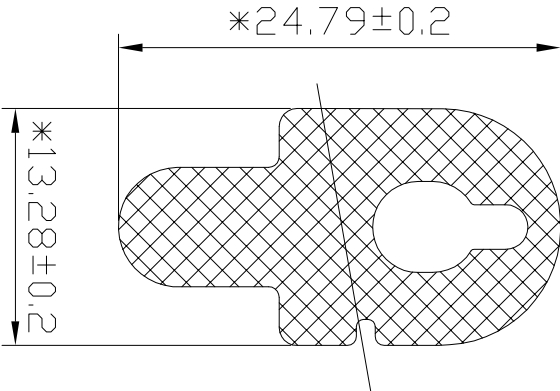
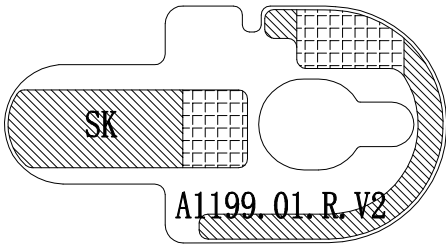
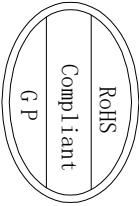
Agilent E5515C CMW500

2. 3D Chamber Test System



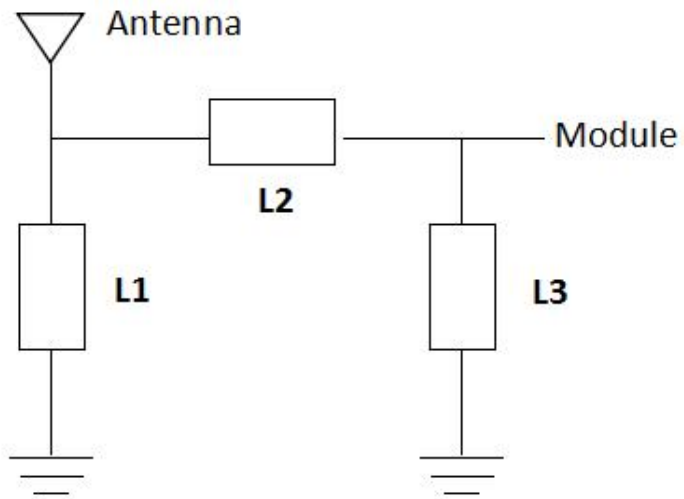
- Antenna picture





1	2	3	4	5	6	7	8
A							
B							
C							
D							
Rev 1 2 3 4 5 6 7 8							
RoHS Compliant G.P.							
SK A1199.01.R.V2							
*24.79±0.2 *13.28±0.2							
SHEN ZHEN SKYLink CO., LTD							
Third Angle Project Date 2023-07-04							
0~10 ±0.05 10~18 ±0.10 18~30 ±0.12 30~40 ±0.15 40~ ±0.20 Angle ±0.5°							
Part Name Part No. Material DWG No.							
Designed by Checked by Approved by Unit mm Scale 1:1 Rev A							
MD RF							

● **Matching circuit**



Electronics	Value
L1	/
L2	$0\ \Omega$
L3	/

● Return Loss (R ear)

BT VSWR+ Return loss

	Frequency(MHz)	Frequency (MHz)/ return loss(dB)		
	2400-2500		2400	2480
		VSWR	1.3	2.2
		Return loss	-15.6	-10.85

● 3D Test Report (R ear)

Test	Bluetooth TRP		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TRP (dBm)	3.62	4.88	4.16

Test	Bluetooth TIS		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TIS (dBm)	-88.94	-90.12	-90.32

3D Passive Test Report

Efficiency (R ear)

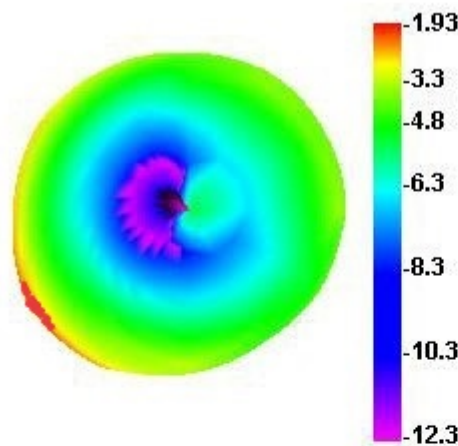
Freq	Effi
(MHz)	(%)
2400	26.97
2410	27.06
2420	27.58
2430	27.58
2440	28.94
2450	28.74
2460	30.53
2470	30.36
2480	31.58
2490	33.33
2500	32.93

Gain (R ear)

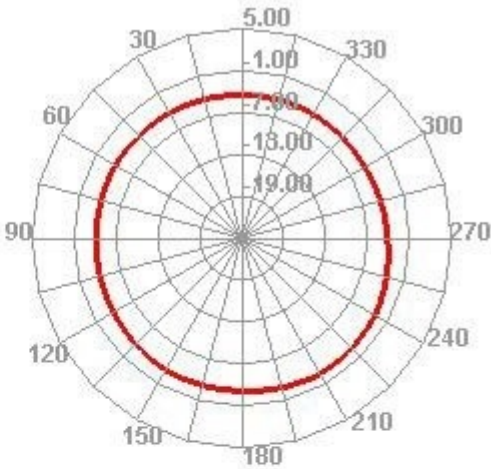
Freq	Gain
(MHz)	(dBi)
2400	-2.63
2410	-2.46
2420	-2.51
2430	-2.24
2440	-2.33
2450	-1.93
2460	-2.7
2470	-2.78
2480	-2.68
2490	-2.51
2500	-2.64

Directional pattern

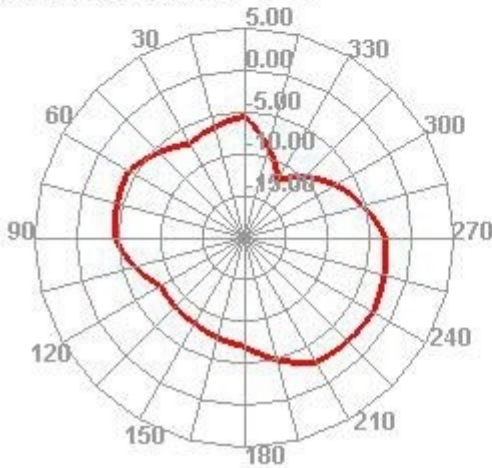
2450.000MHz



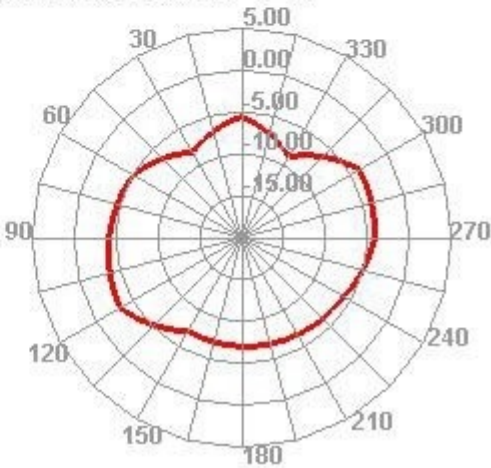
2450.000MHz H



2450.000MHz E1



2450.000MHz E2



● Dimension Inspection

	Customer	CANNICE	Project name	A1199-01		Date	2023-07-06	
	Supplier	Skylink	Measuring tool	Caliper		Unit	mm	
NO	Dimension	Tolerance	Measured1	Measured2	Measured3	Measured4	Measured5	determine
1	24.79	± 0.2	24.77	24.79	24.80	24.76	24.78	OK
2	13.28	± 0.2	13.27	13.28	13.26	13.29	13.25	OK
3								
4								
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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