

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: Shenzhen CANNICE Technology Co. , Ltd

Entry name: A1199-01 (L)

Product Name: BT Antenna

Part NO. : A1199. 01. L. 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	-1.76DBi
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 $\pm$ 5 $^{\circ}$ C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 $^{\circ}$ C ~ + 80 $^{\circ}$ C
Storage Temperature	- 30 $^{\circ}$ C ~ + 85 $^{\circ}$ C

● Test Equipment & Conditions

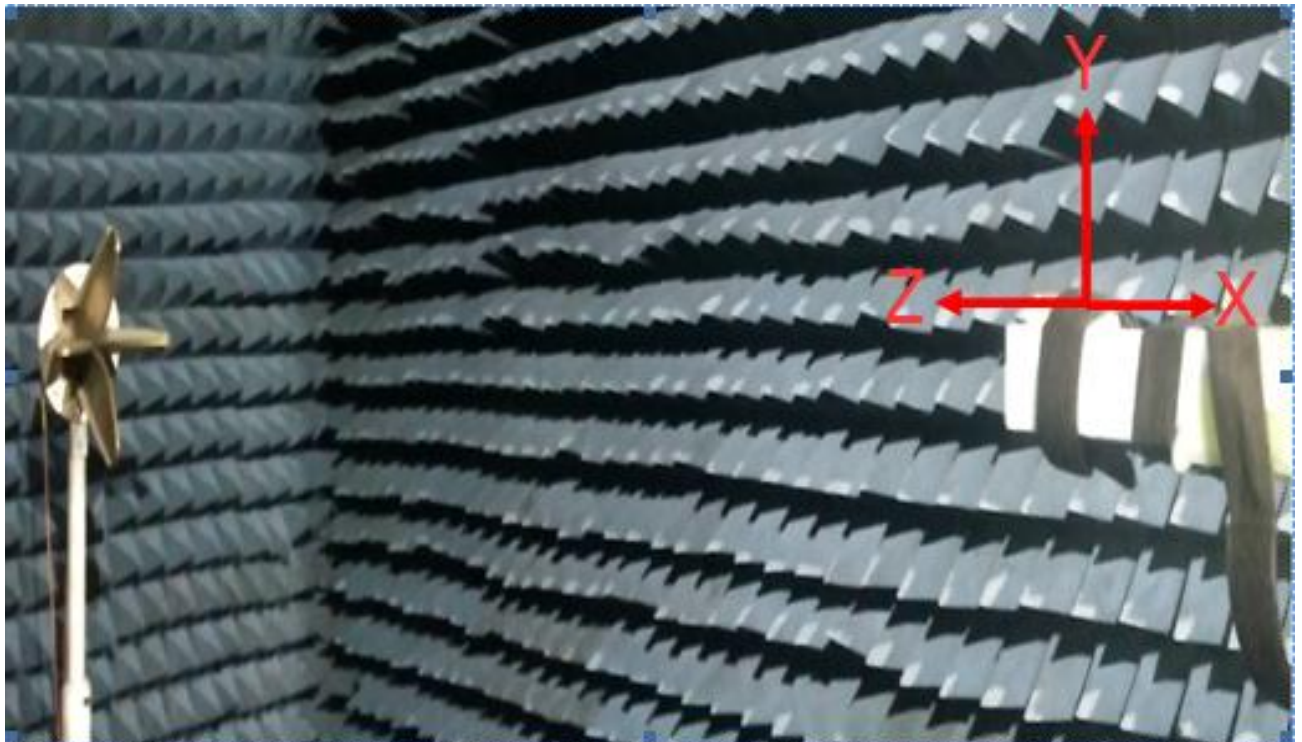
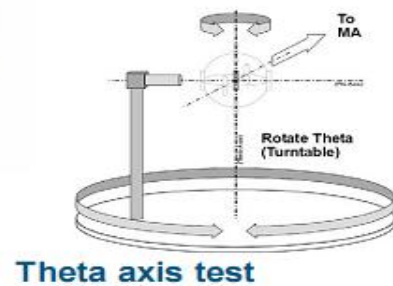
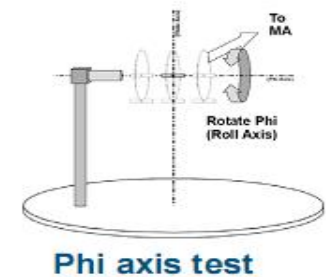
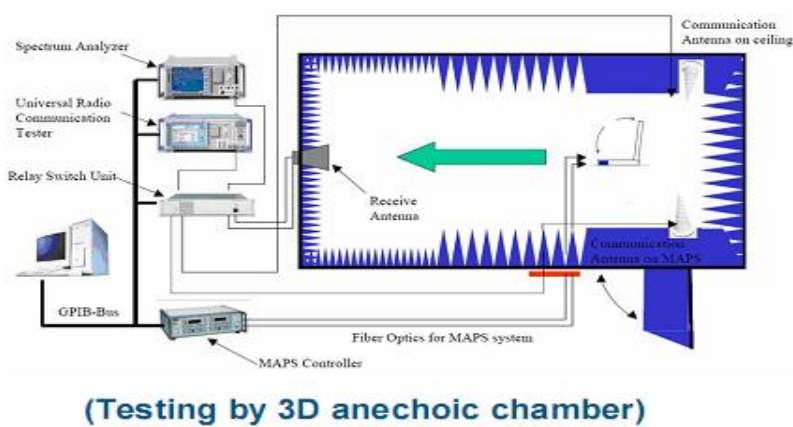
1. Network Analyzers :

Agilent 8753D 5071B

Communications Test Set:

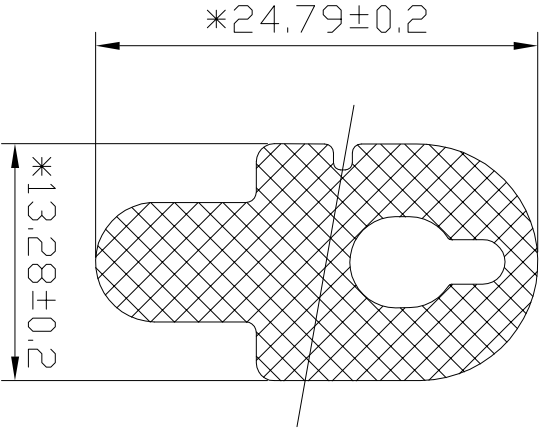
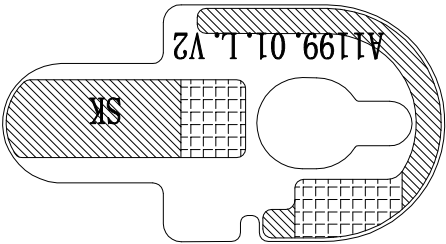
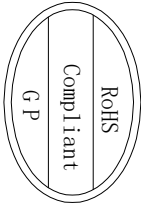
Agilent E5515C CMW500

2. 3D Chamber Test System



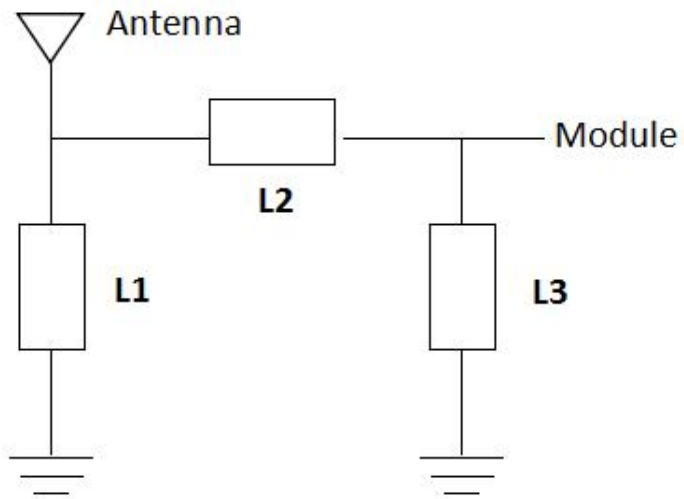
- Antenna picture





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SHEN ZHEN SKYLink CO., LTD <table><tr><td></td><td>Third Angle</td><td>Project</td><td>Date</td><td>2023-07-04</td></tr><tr><td>0~10</td><td>±0.05</td><td>○ 0.02</td><td>Part Name</td><td></td></tr><tr><td>10~18</td><td>±0.10</td><td>◎ 0.03</td><td>Part No.</td><td>A1199.01.L.V2</td></tr><tr><td>18~30</td><td>±0.12</td><td>⊥ 0.02</td><td>Material</td><td></td></tr><tr><td>30~40</td><td>±0.15</td><td>∠ 0.04</td><td>DWG No.</td><td></td></tr><tr><td>40~</td><td>±0.20</td><td>Angle ±0.5°</td><td>Approved by</td><td></td></tr><tr><td>Location</td><td></td><td></td><td>Unit</td><td>mm</td></tr><tr><td></td><td></td><td></td><td>Scale</td><td>1:1</td></tr><tr><td></td><td></td><td></td><td>Rev</td><td>A</td></tr></table>									Third Angle	Project	Date	2023-07-04	0~10	±0.05	○ 0.02	Part Name		10~18	±0.10	◎ 0.03	Part No.	A1199.01.L.V2	18~30	±0.12	⊥ 0.02	Material		30~40	±0.15	∠ 0.04	DWG No.		40~	±0.20	Angle ±0.5°	Approved by		Location			Unit	mm				Scale	1:1				Rev	A
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● **Matching circuit**



Electronics	Value
L1	/
L2	0 Ω
L3	/

● Return Loss (L ear)

BT VSWR+ Return loss

	Frequency(MHz)	Frequency (MHz)/ return loss(dB)		
	2400-2500		2400	2480
		VSWR	2.0	1.7
		Return loss	-9.18	-11.44

● 3D Test Report (L ear)

Test	Bluetooth TRP		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TRP (dBm)	3.32	4.74	4.77

Test	Bluetooth TIS		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TIS (dBm)	-88.48	-88.95	-88.84

3D Passive Test Report

Efficiency (L ear)

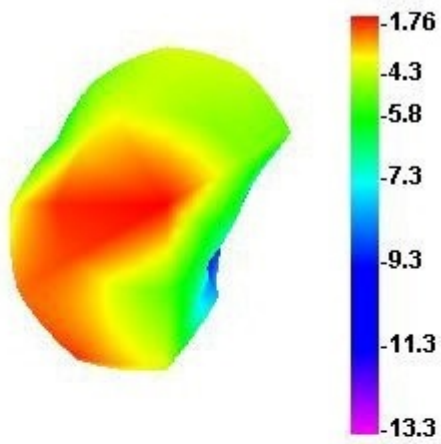
Freq	Effi
(MHz)	(%)
2400	26.59
2410	28.77
2420	30.85
2430	32.33
2440	32.22
2450	30.01
2460	27.69
2470	26.11
2480	25.38
2490	26.66
2500	25.62

Gain (L ear)

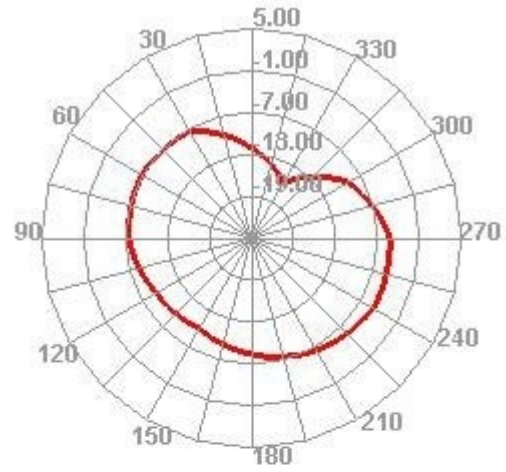
Freq	Gain
(MHz)	(dBi)
2400	-2.51
2410	-2.19
2420	-2.85
2430	-2.68
2440	-2.29
2450	-1.76
2460	-1.82
2470	-2.09
2480	-2.16
2490	-2.18
2500	-2.41

Directional pattern

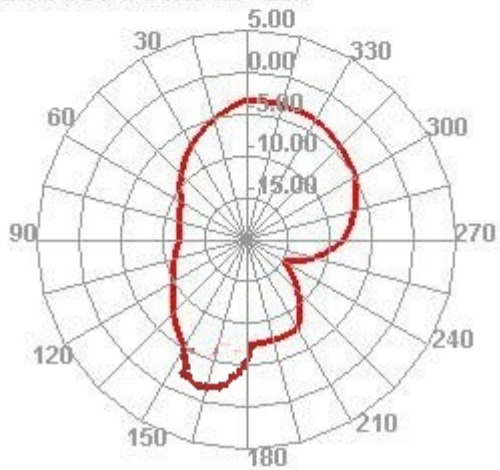
2450.000MHz



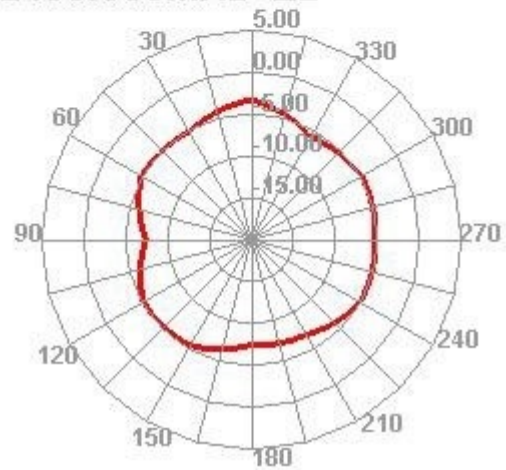
2450.000MHz H



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	24.80	24.76	24.77	24.81	24.79	OK
2	13.28	±0.2	13.26	13.28	13.27	13.25	13.29	OK
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● 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