

SPECIFICATION



Shenzhen Daxian Technology Co., Ltd.

Fidek Luna2 BT antenna assembly

Product specification

Guest households	Fidek	frequency band	2400~2500MHz
Project name	Luna2	version	V07
Material No.	11L-UNA2-060	color	Black
R F design	ZhuDong.Liu	structure design	RuiBin.Zhou
Quality Manager	YongJie.Pan	R & D director	Lei Zhang
Date	2025-09-03		

client confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

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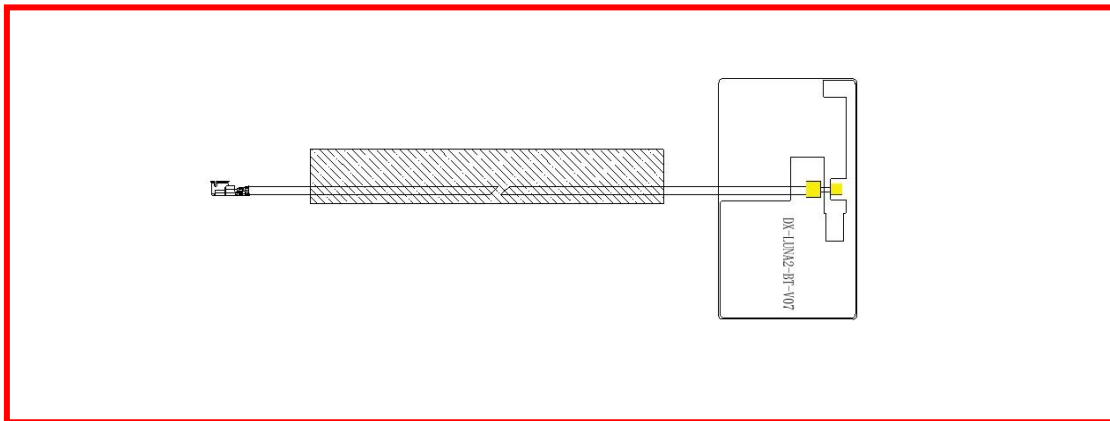
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I 、 Project description

Customer name:	Fidek
Whole machine type:	loudspeaker box
Antenna band:	2400 ~ 2500MHz
Antenna form:	FPC+Coaxial line+wire sponge
Feed form:	weld

II 、 BT antenna

This report provides a variety of measurements of the electrical performance of the LUNA2 antenna. Figure 1 shows the antenna designed by the display.



antenna appearing diagram

Figure 1

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1.1 Electrical specification standard

The frequency range of the antenna is 2400 ~ 2500 MHz. The following table indicates the electrical performance specifications of the antenna. The antenna is designed and manufactured by a large display.

Frequency Range	Frequency (MHz)	VSWR
BT	2400 ~ 2500	≤ 2

1.3 Antenna composition

The antenna is mainly composed of FPC+Coaxial line+wire sponge.

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2、 The Equipment of Active Test

Satimo 3D Chamber $4 \times 4 \times 4$ (m)

CMW500 E5071C

Network analyzer-R&S ZVL

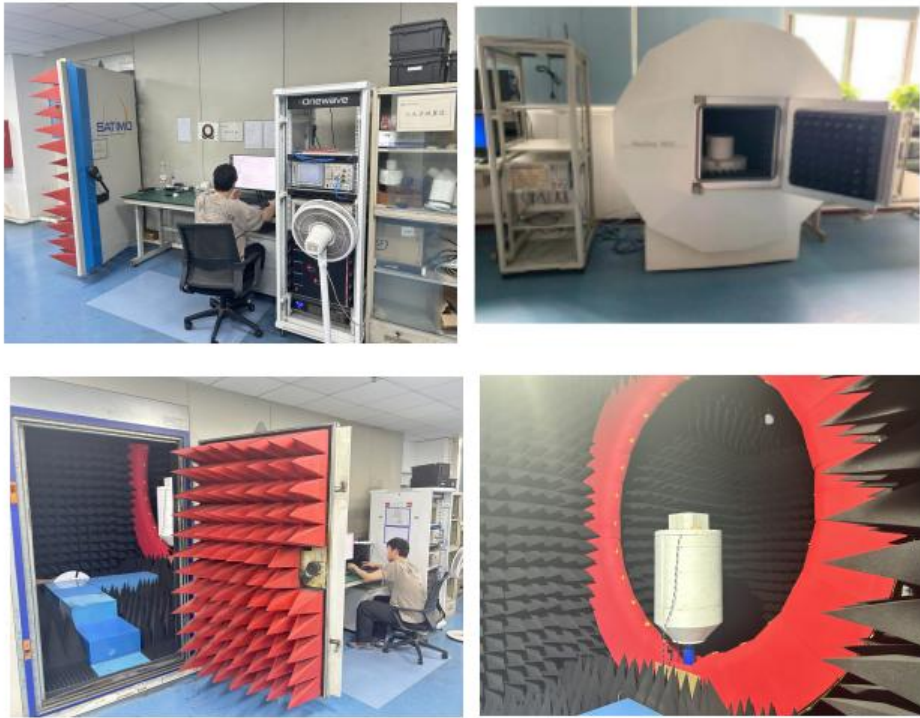


Figure 2

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3 test

3.1 The Test of standing Wave (VSWR)

3.1.1 The Test of standing Wave (VSWR): In turn, the connection of the VSWR testing device is as follows: RES ZVL Network Analyzer / testing Line / testing tool

Actual measurement (with diagram)

3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS)

3.2.1 Test site:

Large-scale microwave darkroom. The test frequency range is 400MHz / 6GHz, the static range is 50cm circumferential and the reflectivity is less than-50 dB..

3.2.2 Test instrument:

Rs ZVL Network Analyzer, CMW500 E5071C, Standard Horn Antenna, French SATIMO-SG24SYSTEM system, Printer, etc.

3.2.3 test data : In microwave anechoic chambers, the power and sensitivity values measured are shown in the following table:

OTA Active Test:

	CH	TRP (dBm)	TIS (dBm)
BT	0	6. 46	-92. 67
	39	6. 71	-92. 83
	78	6. 64	-92. 48

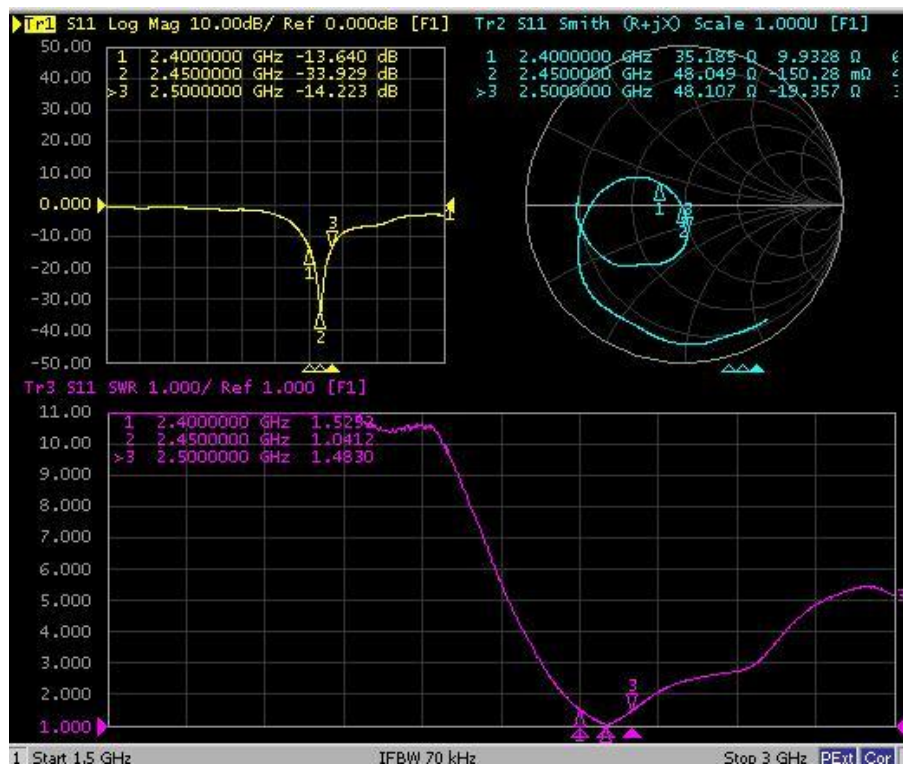
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OTA Passive Efficiency&Gain Test:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	51.21	-2.91	1.06
2410	52.01	-2.84	1.11
2420	51.87	-2.85	1.15
2430	51.55	-2.88	1.16
2440	52.53	-2.8	1.18
2450	53.17	-2.74	1.49
2460	53.83	-2.69	1.38
2470	50.84	-2.94	1.31
2480	50.23	-2.99	1.27
2490	50.14	-3	1.23
2500	50.15	-3	1.17

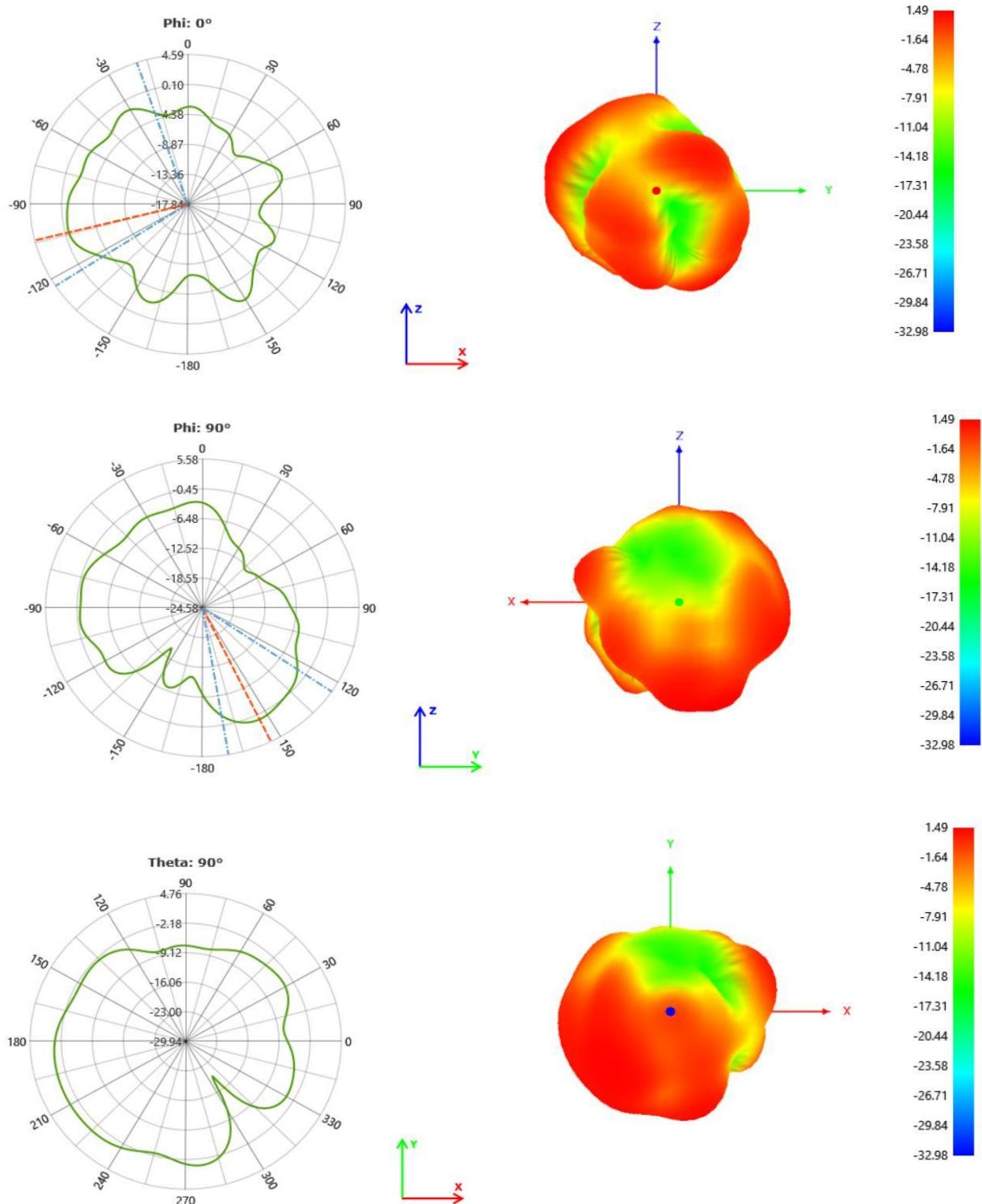
4、 Attachment chart**4.1 VSWR parameter diagram**

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5、Antenna passive field pattern diagram



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6 Field test data (Pull distance test)

Pull distance test

Test direction	ahead	empress	left	right
	Test Distance			
BT	100m	100m	100m	100m

Attenuation test

Test direction	ahead	empress	left	right
	Attenuation value			
BT	30	30	28	30

AuraCasttest

Apple mobile phone 16Pro							
1# is the master and 2# is the slave							
	mainframe 0°		mainframe 90°		mainframe 180°		mainframe 270°
Auxiliary 0°	65M+	Auxiliary 0°	65M+	Auxiliary 0°	65M+	Auxiliary 0°	65M+
Auxiliary 90°	65M+	Auxiliary 9 0°	65M+	Auxiliary 90°	65M+	Auxiliary 90°	65M+
Auxiliary 180°	65M+	Auxiliary 180°	65M+	Auxiliary 180°	65M+	Auxiliary 180°	65M+
Auxiliary 270°	65M+	Auxiliary 270°	65M+	Auxiliary 270°	65M+	Auxiliary 270°	65M+

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TWS test

Apple mobile phone 16Pro							
1# is the master and 2# is the slave							
	mainframe 0°		mainframe 90°		mainframe 180°		mainframe 270°
Auxiliary 0°	70M+	Auxiliary 0°	70M+	Auxiliary 0°	70M+	Auxiliary 0°	70M+
Auxiliary 90°	70M+	Auxiliary 9 0°	70M+	Auxiliary 90°	70M+	Auxiliary 90°	70M+
Auxiliary 180°	70M+	Auxiliary 180°	70M+	Auxiliary 180°	70M+	Auxiliary 180°	70M+
Auxiliary 270°	70M+	Auxiliary 270°	70M+	Auxiliary 270°	70M+	Auxiliary 270°	70M+

7、 conclusion:

This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

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1		2		3		4		5		6																																															
A		B		C		D																																																			
Dot UV glue (1) $\varnothing 33.30 \pm 0.15$ (2) $\varnothing 19.35 \pm 0.15$ (3) 53 ± 3.0 (4) 33 ± 3.0 (5) 1.13 ± 0.05 (6) $\varnothing 1.13 \pm 0.05$ (Terminal port facing out)		Shenzhen Daxian Technology Co., Ltd. Machine model LUNA2 Project Code CL-UNA2-060 Part Name RF antenna Part Number 1L-UNA2-060 material FPC+sponge+RF connector Save Path		Technical requirement: 1. " " is the key dimension; 2. Please refer to the drawing for unspecified dimensions; 3. There should be no poor operation such as faulty soldering, missing soldering, short wires, broken wires, etc; 4. Meet RoHS requirements.		<table><tr><td>C</td><td>Cable sponge</td><td>PU</td><td>black</td><td></td></tr><tr><td>B</td><td>RF connector</td><td>Cable</td><td>black</td><td></td></tr><tr><td>A</td><td>FPC</td><td>Electrolytic copper PI</td><td>black</td><td></td></tr><tr><td>Serial number</td><td>Part Name</td><td>Material</td><td>Colour</td><td>Note</td></tr></table>		C	Cable sponge	PU	black		B	RF connector	Cable	black		A	FPC	Electrolytic copper PI	black		Serial number	Part Name	Material	Colour	Note	<table><tr><td>Product Color</td><td>Black</td><td>Date</td><td>2025/09/03</td></tr><tr><td>Mold surface treatment</td><td>NA</td><td>MD</td><td>RuibinZhou</td></tr><tr><td>Unit</td><td>mm</td><td>比例 (scale)</td><td>1:1</td></tr><tr><td>Third perspective</td><td></td><td>Check</td><td>ChuanShen</td></tr><tr><td></td><td></td><td>Ratify</td><td>KangZhou</td></tr><tr><td></td><td></td><td></td><td>LeiZhang</td></tr><tr><td>Current version</td><td>A</td><td></td><td></td></tr></table>		Product Color	Black	Date	2025/09/03	Mold surface treatment	NA	MD	RuibinZhou	Unit	mm	比例 (scale)	1:1	Third perspective		Check	ChuanShen			Ratify	KangZhou				LeiZhang	Current version	A		
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