



Beijing Honeycomb Century Technology Co., Ltd.

Acknowledgment Letter

APPROVAL SHEET

Form Number: Version Number: V1.0

Product Description Part Description	Manufacturer: Shenzhen Daxian Technology Co., Ltd. Model/Version: 2S-S2XXX-042/R6 Vendor: Description: Product Name: SS2 Bluetooth Antenna FPC Component_R Right Accepted Item: ss2 Product Name: Project: 物料代码: 36050001 环保属性: p HSF1.0 (RoHS) Part No. HSF: p HSF2.0 (RoHS+HF) ☐ HSF2.1 (GP) Dimensions: 13.1*6.86*0.13 mm, Net weight per unit. Finish size: Weights: Supplier Level, Material Category, Antenna Supplier grade: Item Category:
Number of samples provided: situation.	provided: 7 pieces each for the samples and sample labels. For samples involving disassembled components, the appropriate quantity will be provided based on the actual situation.
Attachments	☐ Acknowledgment Letter Cover * ☐ C Report ☒ Q ☒ Sample ☒ Approval Sheet Cpk Report QC Flow Chart Sample disassembly pictures ☐ Specification sheet ☒ Batch production yield report ☐ Reliability test report* (☒ 3C certification certificate Spec Mass production yield report Reliability Report China Compulsory Certification ☐ Engineering drawings ☒ Material BOM list ☒ Safety report ☐ Packaging method* ☒ Drawing BOM list Safety Report Packing Content ☐ Sample images ☒ Manufacturing process diagrams ☒ ROHS/HF restricted substances ☒ Sample pictures Process Flow Chart RoHS and HF Questionnaire ☐ FAI full-size report ☒ Process parameters ☐ Sample change history ☒ FAI Report technological parameter Sample ECN record (The above documents must be signed and stamped with the company seal. The files should be uploaded in PDF format.) Environmental-related information: For inquiries regarding restricted substances like ROHS, HF, and REACH, please log into the environmental management system to submit your reports.
Supplier Approval Vendor	Prepared by: Li Juanjuan Reviewed by: Hu Peng Approved by: Zhang Lei Company Seal Design 2024.12.18 C2024.12.18 A2024.12.18 Official Seal
Technical Confirmation Technology Check	Structure: Hardware: Industrial/Package Design: Supply and Cooperation Department: Mechanical Hardware ID Sourcing Software: Components: Engineering: Supplier Quality: Software Keypart Engineering SQE Project Manager: Product Manager: Customer
Acknowledged Approval condition	☐ Officially recognized Approved ☐ Conditional Recognition: Conditions to be met: _____ Condition Approved ☐ Temporary recognition Temporary Approved ☐ Limited quantity available. Only _____Pcs can be purchased. Limited Approved _____
Final confirmation:	Quality planning: Acknowledgment document version number
Final check	Quality Planning
Distribution Department Distribute	QC ☐ Hardware ☐ Structure ☐ Software ☐ Components ☐ Industrial Design ☐ Suppliers ☐ Customers ☐ Subcontractors ☐ Engineering ☐ Others _____ ☐ Others _____

*Electronic version accessible for archiving purposes

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— Project Description

Customer Name: Hive Technology
Device Type: Bluetooth Headphones
Antenna frequency band: 2400 ~ 2500MHz
Antenna type: FPC
Power supply method: Pin feeding
Number of feed pins: 2
Hardware Version: Motherboard:

I. BT Antenna

This report primarily provides various test conditions of the electrical performance of the 2 project antenna. Figure 1 shows the antenna designed by Daxian. Left appearance of the antenna

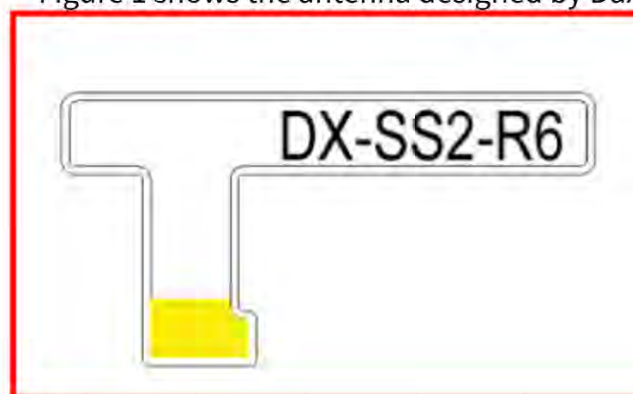


Figure 1

1.1 Electrical Performance Specifications

1.1.1 Electrical Specifications

The antenna operates in the frequency range of 2400–2500 MHz. The table below outlines the antenna's electrical specifications. This antenna was designed and manufactured by DaXian.

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

1.2 Structural Specification Standards

1.2.1 Antenna Composition The antenna is primarily composed of FPCs.

2. The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (m)

Agilent 8960 E5515c

Network analyzer-R&S ZVL



Figure 2

3 Tests

3.1 Testing of VSWR

3.1.1 Test Connection: The connection sequence of the VSWR testing equipment is as follows: R&S ZVL network analyzer → test cable → test fixture
Actual measurements (with diagrams)

3.2 Testing of efficiency, power (TRP), and sensitivity (TIS)

3.2.1 Test location: Large-scale microwave anechoic chamber. The test frequency range is 400 MHz–6 GHz. The quiet zone extends over a 50-cm circle, with a reflectivity of less than -50 dB.

3.2.2 Instruments used for testing: R&S CMW500, Anritsu 8960, network analyzer E5071C, standard horn antenna, France

SATIMO-SG24SYSTEM, printers, etc.

3.2.3 Test Data: In the microwave anechoic chamber, the values related to power and sensitivity during testing are shown in the table below:
Free-space active testing:

1#-R (Right Ear) Free Space			
BAND	CH	TRP	TIS
9BB9A4E	0	5.12	-91.43
	39	5.31	-91.92
	78	5.39	-91.55

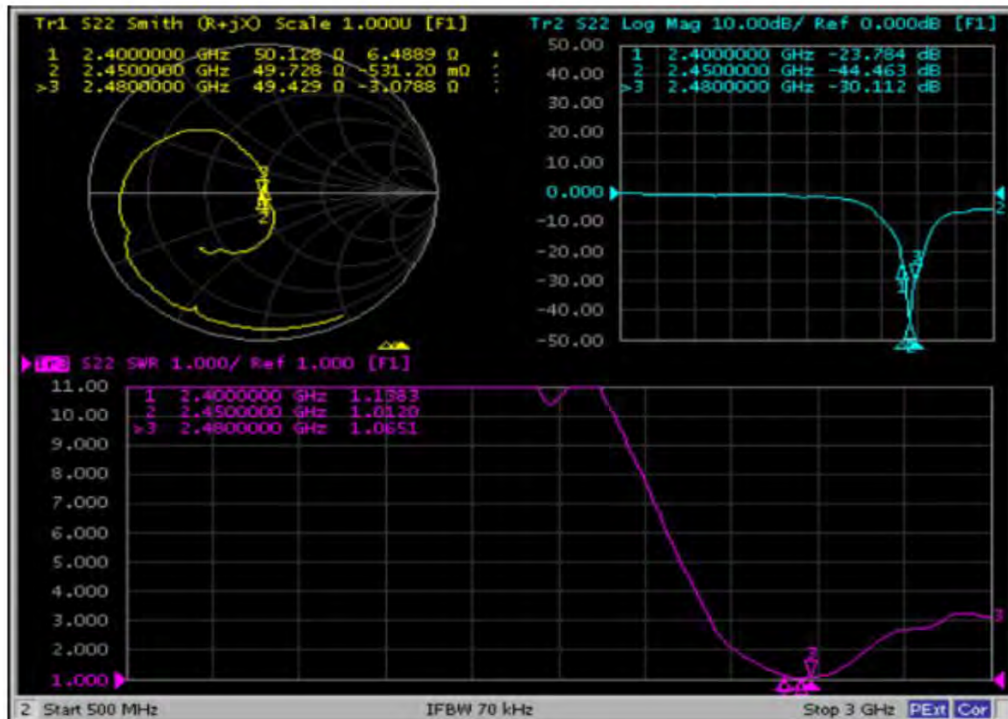
Head mold active testing:

1#-R (Right Ear) Head Mold			
BAND	CH	TRP	TIS
9BB9A4E	0	-0.46	-85.11
	39	-0.67	-85.35
	78	-0.31	-85.17

Passive efficiency testing:

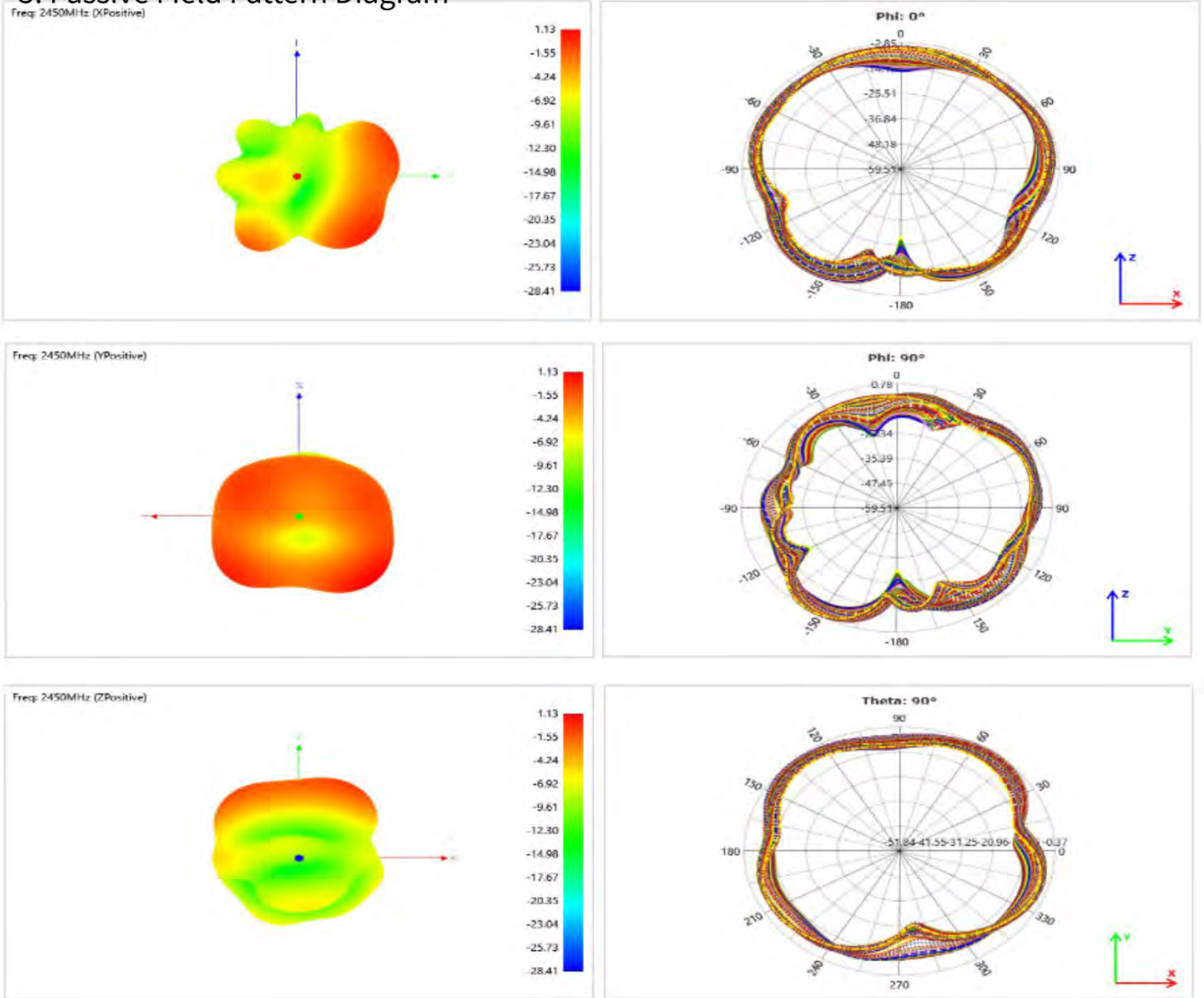
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	40.09	-3.97	0.85
2410	39.92	-3.99	0.9
2420	40.13	-3.97	0.83
2430	40.58	-3.92	0.74
2440	41.03	-3.87	0.9
2450	41.26	-3.84	1.13
2460	41.05	-3.87	1.05
2470	40.36	-3.94	0.95
2480	40.45	-3.93	0.8
2490	40.11	-3.97	0.75
2500	39.87	-3.99	0.73

4. VSWR Parameter Chart



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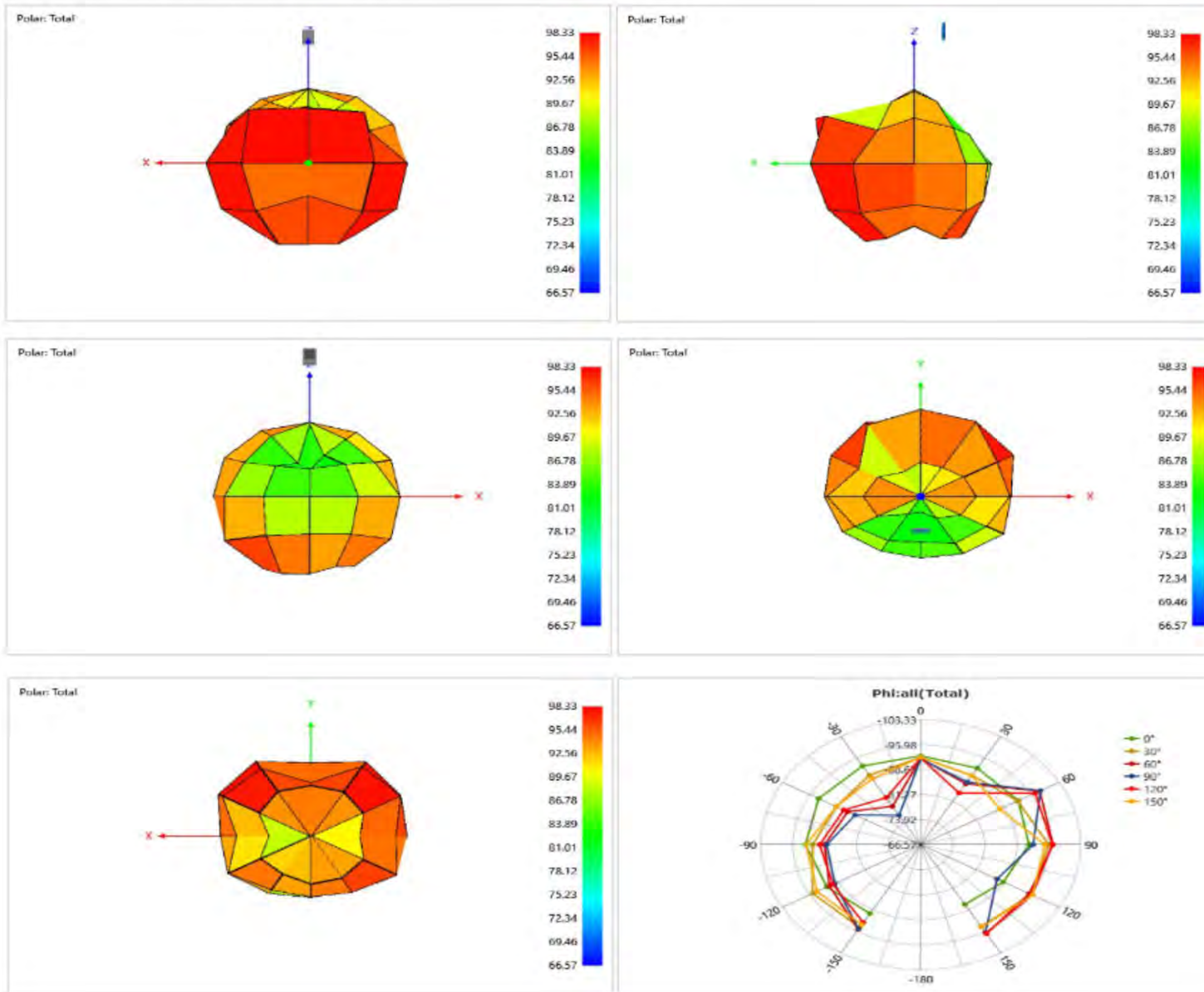
5. Passive Field Pattern Diagram



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6. Active Field Pattern Diagram



7. Conclusion:

This antenna was designed based on the prototype provided by the customer. Its electrical parameters and structural performance meet the technical requirements. Please confirm.

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