

Peak4 project antenna material requirements specification

Customer name: Guoheng Intelligent Technology (Huizhou) Co., LTD

Customer product name: Peak4-L antenna

Size of product: See BOM for details

Material code: _____

Supplier model: 336056-IA

Change of content history:

order number	edition	state	Start and end dates	person liable	page number	remarks
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Supplier's acknowledged signature:

Responsible person/date		IQC/ date	Review/date	Approved/Date
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Signature of the buyer (please send it back after signing):

Result of buyer's judgment: ☐ Qualified ☐ Unqualified			
Development design engineer/date	SQE Engineer/date	Procurement officer/date	Approved by the Development Manager / Date

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements for product Peak4.
This requirement applies to the selection, testing and acceptance of Peak4 antennas.

1.2 Project basic information

Antenna name:	<u>Peak4</u>
Antenna frequency:	BT
Antenna material:	FPC

2. Technical requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
S11 parameters	Standing ratio, return loss	network analyzer
Active testing	TRP,TIS	Comprehensive tester, microwave anechoic chamber
Passive testing	Gain, efficiency	Network analyzer

2.2 Passive reporting

2.2.1 Passive test description

Test equipment: network analyzer

Test method: A 50 ohm CABLE cable is exported from the instrument test port, and the SMA connector of the mobile phone fixture is connected after calibration with a calibration piece, and the echo loss or standing wave ratio corresponding to the relevant frequency points are recorded.

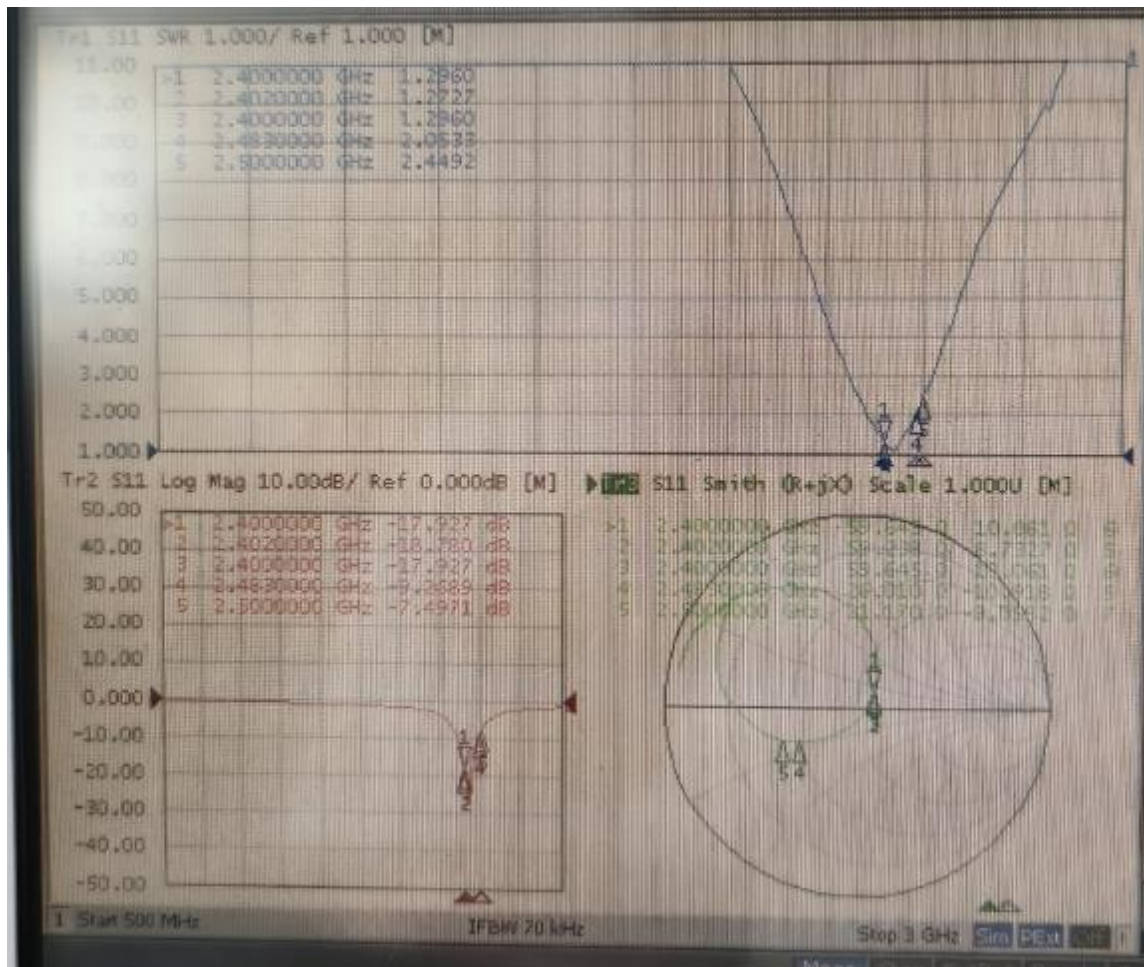
2.2.2 Mainboard conduction

L edge	Channel	power	sensitivity
	0	10.8	-92.0
	39	11.0	-92.0
	78	11.1	-93.0

2.2.3 Antenna matching circuit

The antenna matches the left and right ears with M6 and 2.2nH inductors

2.2.3 Antenna passive S11



2.2.4 Passive antenna data

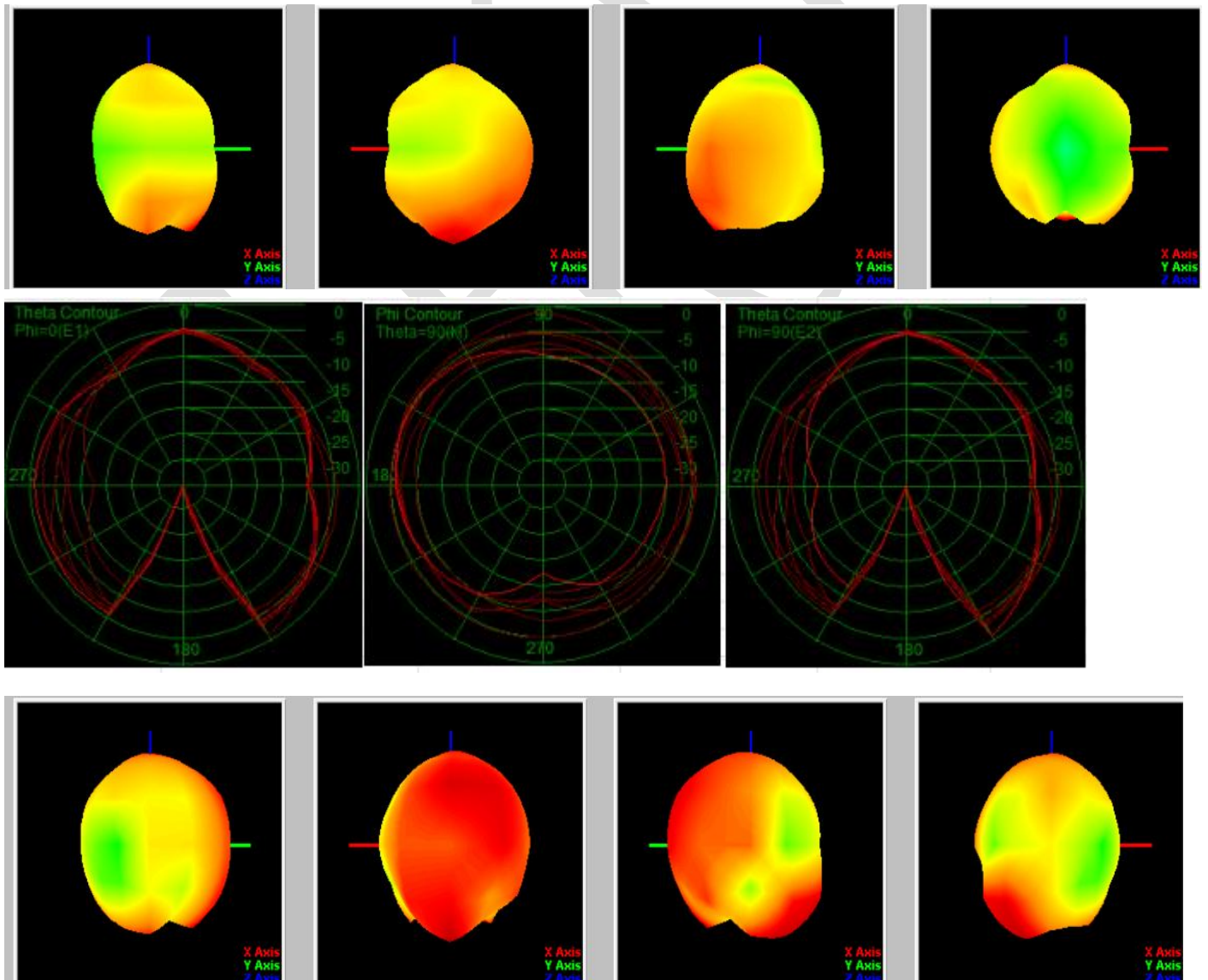
L-side free space test

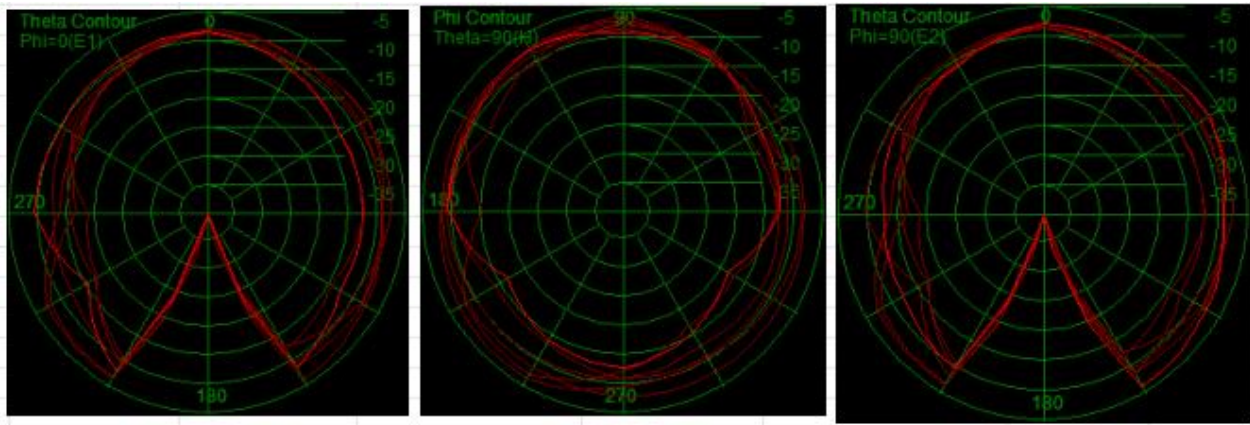
Freq (MHz)	Effi (%)	Gain (dBi)
2400	23.4	-1.8
2410	23.7	-1.8
2420	24.1	-1.7
2430	24.7	-1.6
2440	25.5	-1.4
2450	26.1	-1.2
2460	25.4	-1.3
2470	24.6	-1.5
2480	23.9	-1.6
2490	23.6	negative one point seven
2500	23.2	negative one point nine

L side head model test

Freq (MHz)	Effi (%)	Gain (dBi)
2400	9.8	-5.9
2410	10.1	-5.7
2420	10.4	-5.6
2430	10.6	-5.5
2440	11.1	-5.3
2450	11.5	-5.1
2460	12.1	-4.9
2470	11.6	-5.2
2480	11.1	-5.3
2490	10.6	-5.4
2500	10.2	-5.5

2.2.5, antenna pattern





2.2.6 Dark room test environment



2.2.7 Antenna OTA test data

2# L side head model test

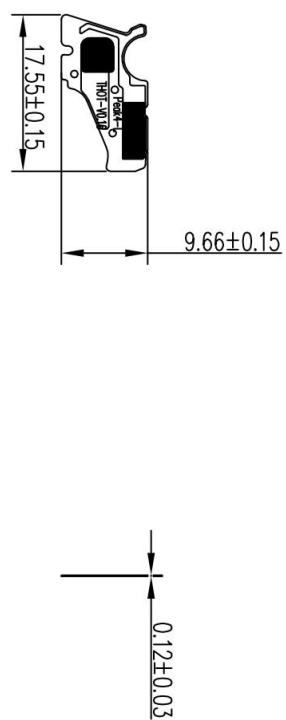
	Channel	TRP (dBm)	TIS(dBm)
L	0	1.8	-82.9
	39	1.9	-83.1
	78	1.7	-82.7

2# L side free space

	Channel	TRP (dBm)	TIS (dBm)
L	0	4.1	-86.8
	39	4.3	-87.3
	78	4.0	-86.3

3.structural drawings

A		1		2		3		4		5		6		7		8		A	
skills requirements: 1. IPC substrate specifications: 2. Electroplating specifications: 3. Surface ink requirements: 4. Reliability requirements: 5. Tolerance requirements: 6. Key control size: 7. Environmental requirements: 8. Packaging requirements:		PI substrate:		0.5mm		Heads													
		Electrolytic copper:		0.5oz(1D)															
		Double-sided tape:		3M-9471LSE															
		Nickel plated:		38um															
		Surface ink color:		Matt black															
		Printing font color:		Bright black															
		Printing font height:		According to drawings															
		1. Reliability test: salt spray test\rubber friction test\alcohol resistance test\100 grid test. 2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.																	
		1. Shape tolerance ± 0.10 ; 2. Copper foil circuit tolerance ± 0.05 ; 3. The position of the copper foil to the shape is ± 0.15 ; 4. Hole-to-hole position tolerance ± 0.10 ; hole-to-shape position tolerance ± 0.15 ; 5. The size tolerance of gold finger is ± 0.20 . 6. For other unmarked dimensions, refer to 2D drawings.																	
		The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings																	
D		Parts meet ROHS2.0/REACH/CP environmental protection requirements																	
		Packed in PE bags, the quantity of each bag is 100PCS, there is a mark on the outside of the bag																	
DATE		Modify the content		Version		Revise													
1		2		3		4		5		6		7		8					



Gold plated Area

Shenzhen Yu Sheng Communication Equipment Co., Ltd.

Model	pk4	DATE	20250515
Name	BT-L-FPC	Design	JFB
Part NO	336056-1A	Review	JFB
Material quality	Electrolytic copper (half to half)	RF	CKH
Gold surface treatment		confirm	
Appearance treatment		UNIT	
		mm	
		proportion	
		FTT	
		Revised	R: A

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4. Bill Of Material

YUSHENG COMMUNICATION TECHNOLOGY CO.,LTD.

336056 (PK4) –BOM

Edition: R:A

client:336

Model: 0336056

date: 20250515

Item	Part No	Name	Types of	version	specification	Material quality	colour	unit	Quantity	Craft
1	336056-IA-RA	L-FPC	Z	R:A	17.55*9.60*0.12MM	Electrolytic copper (half to half)	black	Gold plated	PCS	1
1.1	336056-IA-01-RA	L-FPC	Z	R:A	17.55*9.60*0.12MM	Electrolytic copper (half to half)	black	Gold plated	PCS	1

The above parts meet the environmental requirements of ROHS2.0 HF Reach GP

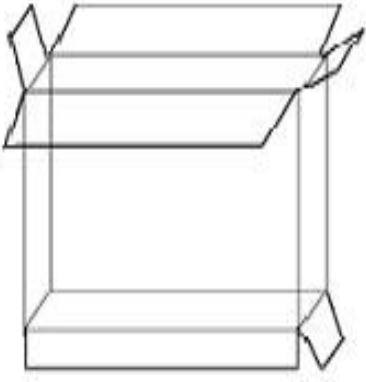
Type: W. Outsourcing B. Semi-finished products Z. Finished products C. Customer supply

Confirmation:

Review:

Production: FJW

5. Packaging diagram

Packaging method diagram		
P / N	336056	
Project model	<u>Peak4</u>	
Details of packing	Box size 1: 270*260*200MM Carton size 2: 260*200*200MM Box size 3: Depending on the number/volume of orders	
	Packaging method	Pack according to order quantity
	Total number of boxes	Pack according to order quantity
labeling requirement	Label size 1: General 100*100mm Label size 2: According to customer requirements	
matters need attention		
1. Due to the order quantity limit, the packing method of each material is selected according to the total number of orders or the actual volume of the box		
2. Storage temperature: room temperature		
3. Storage conditions: store in a cool and dry place		