

REFLEX PRO (015) Project antenna material requirements specification

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

Customer name: REFLEX PRO (015)

Product name: Right headphone antenna

Size of product: LDS ANTENNA / R FOR REFLEX PRO Yusheng

Material code: 119-0015003A2

Supplier model: 336045-IB (R) right headphone antenna

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1	R:A	editio princeps	2024-8-29	Li Jieyi	10	

The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC / Date-	Review / Date	Approval / Date
MD	<i>Close industry wisdom</i>	<i>Su Guanfeng</i>	<i>Zeng Xiang good</i>	
RF	<i>Chen Kehong</i>			

The Demander acknowledges the signature (please send it back after the confirmation):

The demander the result: ☐ qualified ☐ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

catalogue

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for **REFLEX PRO (015)** products.

This requirement applies to the selection, testing and acceptance of **REFLEX PRO (015)** antenna.

1.2 Project basic information

Antenna name:	REFLEX PRO (015)
Antenna frequency:	BT : 2400-2500MHZ
Antenna material:	LDS antenna
Antenna version:	R:A

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2 Active Reporting

2.2.1 Test instructions

Test tools: Agilent8960 instrument, R & S CMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test method: DUT is fixed in the center of the turntable with H plane, on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

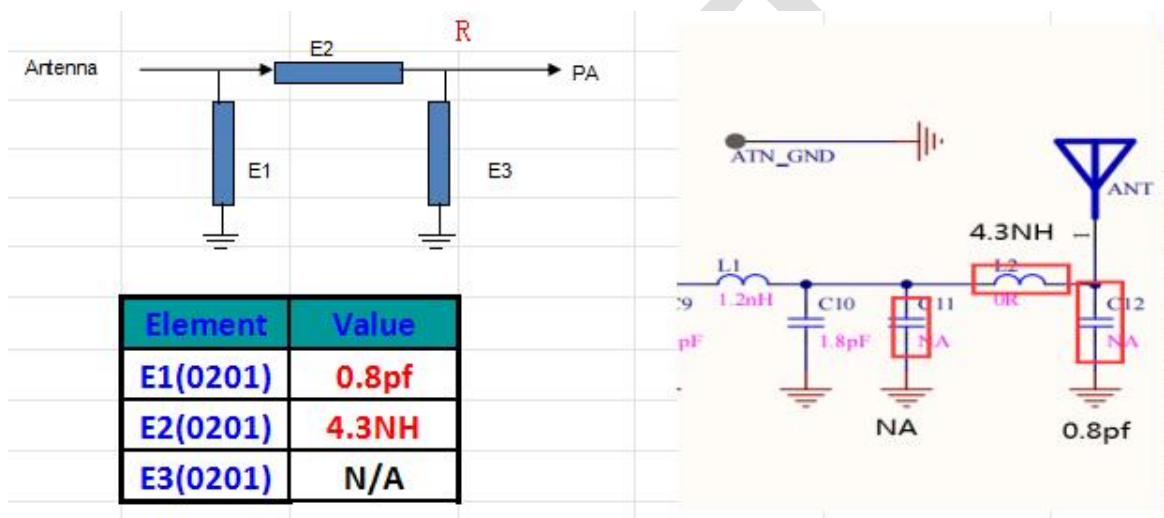
2.2.2, electrical performance parameters

Product electrical performance index	
Operating frequency range	2400MHz-2500MHz:
standing-wave ratio	2400MHz-2500MHz: < 2.0
antenna gain	2400MHz-2500MHz: 1 dBi ± 1dBi
radiation efficiency	2400MHz-2500MHz: > 20 %
impedance	50 ohm
Product material description	
LDS	Ni:2-4um,CU:8-12um
Product environment description	
working temperature	- 40℃ ~ + 80 ℃
Storage temperature	- 40℃ ~ + 80 ℃

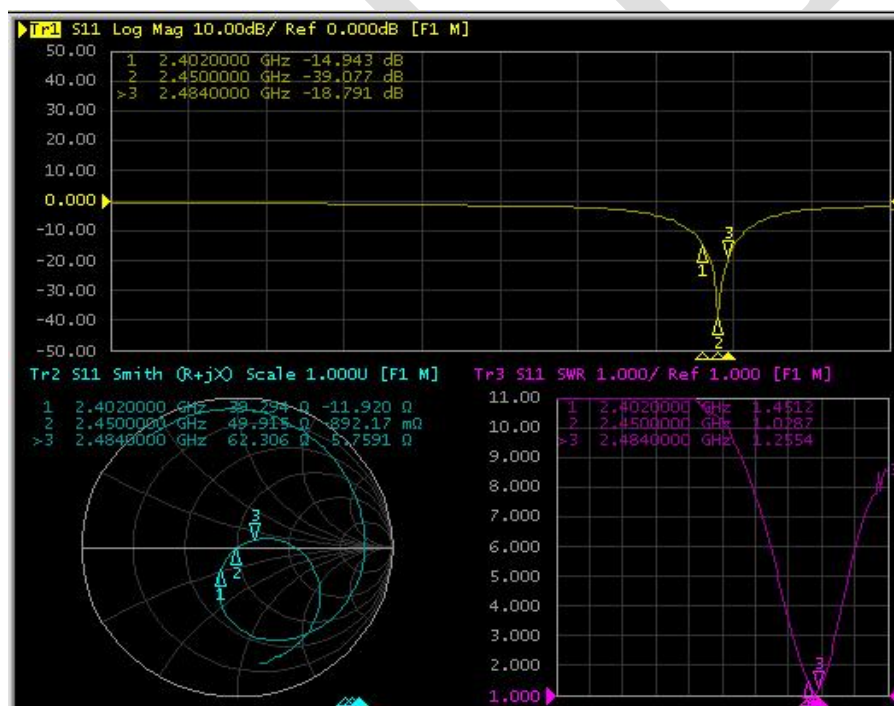
2.2.3 Conduction data

R	Channel	power	sensitivity
	0	8.1	-93.0
	39	8.1	-93.0
	78	8.5	-93.0

2.2.4 Circuit matching diagram



2.2.5 S11



2.2.6 The passive efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2410	26	0.3
2420	28	0.4
2430	30	0.5
2440	32	0.4
2450	35	0.5
2460	33	0.4
2470	32	0.5
2480	29	0.6
2490	27	0.4
2500	25	0.5

2.2.6 Modified antenna OTA

R	TRP (dBm)	TIS (dBm)	
0	5.62	-89.21	
39	5.51	-89.4	freedom
78	5.39	-89.25	

Channel	TRP (dBm)	TIS (dBm)	
0	2.15	-85.02	
39	2.02	-85.32	headform
78	1.98	-85.14	

2.2.7 Modify the front antenna OTA

	Channel	TRP (dBm)	TIS (dBm)	free space
R	0	3.54	-87.65	
	39	3.65	-87.42	
	78	4.01	-87.36	

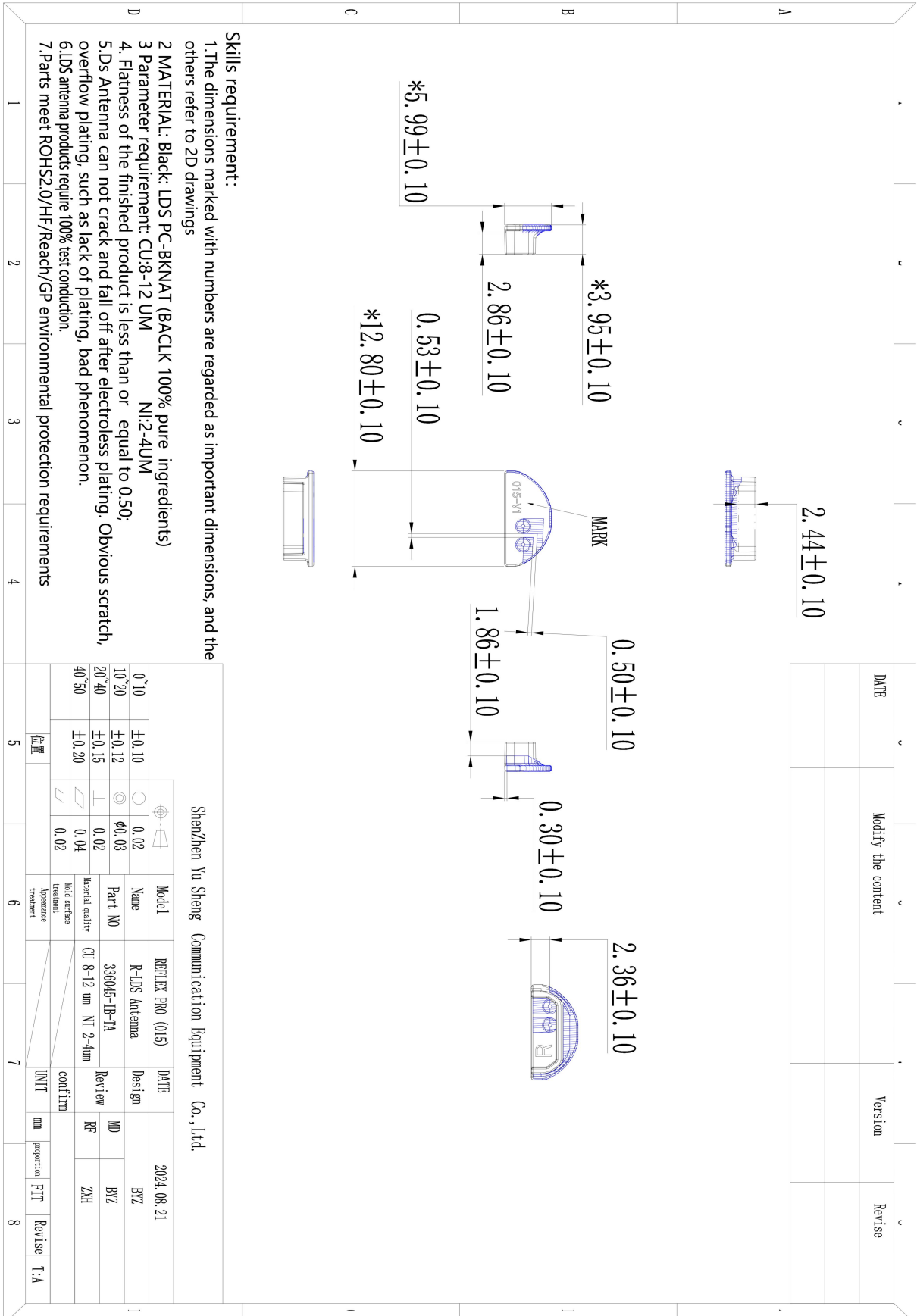
	Channel	TRP (dBm)	TIS (dBm)	Head model data
R	0	0.35	-83.14	
	39	0.14	-83.4	
	78	0.42	-83.36	

2.2.8 Saw-saw test

model machine	test controler	BMI	time	Host side	testing facility	Test location	dista nce
1#	lay out	30	14:00-15:00	auto	iphone6	THOT balcony	12m
1#	lay out	30	14:00-15:00	auto	iphone6	THOT balcony	14m

3.structural drawings

3.1 Right headphone antenna drawing



4.Bill Of Material

336045(REFLEX PRO (015))-BOM

Edition: T:A

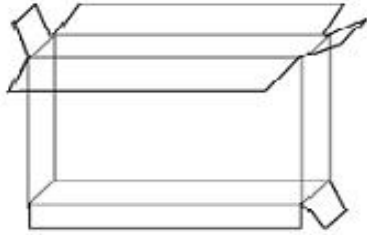
client:336

Model: 063029

date: 20240821

Item number	Material code	Name	Types of	Machine type	Specification and model	colour	Unit of measurement	dosage	remark
1	336045-IA-TA	L-LDS antenna assembly		REFLEX PRO (015)	LDS technology	Black	PCS	1	
1.1	336045-IA-01-TA	L-Plastic shell		REFLEX PRO (015)	Black fine grain LDS special material 12.80*5.99*3.95 mm	Black	PCS	1	
1.2	336045-IA-02-TA	Antenna route		REFLEX PRO (015)	CU:8-12UM、NI:2-4UM	argent	PCS	1	
2	336045-IB-TA	R-LDS antenna assembly		REFLEX PRO (015)	LDS technology	Black	PCS	1	
2.1	336045-IB-01-TA	R-Plastic shell		REFLEX PRO (015)	Black fine grain LDS special material 12.80*5.99*3.95 mm	Black	PCS	1	
2.2	336045-IB-02-TA	Antenna route		REFLEX PRO (015)	CU:8-12UM、NI:2-4UM	argent	PCS	1	
Confirm:			Review:				Make:BYZ		

5. Packaging diagram

Packaging method diagram		
product name	Antenna components	
P / N	336045	
Project model	<u>REFLEX PRO (015)</u>	
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume	
	Boating method	Packaging by order quantity
	Total number of binning	Packaging by order quantity
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag Size 2: According to customer requirements	
matters need attention		
1. Due to the limitation of order quantity, the packing method of each material is the size of the box according to the total quantity of the order or the physical volume		
2. Storage temperature: room temperature		
3. Preservation conditions: store them in a cool and dry place		

(This figure is only a packaging diagram, subject to the actual mass production)