

Environmental protection:
RoHS2.0/REACH
Version: A / 0

SPECIFICATION FOR APPROVAL

Customer : Jiahe Intelligent Technology Co., LTD

- Product : antenna-L

Part No.: 300116190291C00

Customer (business) confirmation and reply:

Signature :

PASSED

REJECTED

PRODUCT INFORMATION

Product : FPC antenna

Part No.: CE-2257N

Samples No.:

Drawing No.:

Date: 2026-3-27

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DATE:	DATE:	DATE:

Innovation INNOVATION Trust RELIABILITY satisfaction SATISFACTION



Shenzhen Yusheng Communication Equipment Co., LTD

SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD

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Form Number: CO-ENG-031B

CE-2257N Antenna specifications

Customer name: Jiahe Intelligent Technology Co., LTD

Customer name: CE-2257N

Product name: antenna-L

Size of product: Please see the BOM table list for more details

Material code: 300116190291C00

Change Content CV:

order number	edition	state	availability date	person liable	page number	remarks
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The Supplier acknowledges the signature of the following part:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD	Bi Yezhi	Su Guanfeng	Zeng Xiang good	
RF	Jiang Mningfei			

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

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

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1. Overview

1.1 Scope of application

This requirement applies to CE-2257N Antenna type selection, test, and acceptance.

1.2 Project basic information

Antenna name:	<u>CE-2257N</u>
Antenna frequency:	BT: 2400–2500MHZ
Antenna material:	FPC antenna

2. Technical index requirements

2.1 Introduction of test items and equipment

inventor y	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

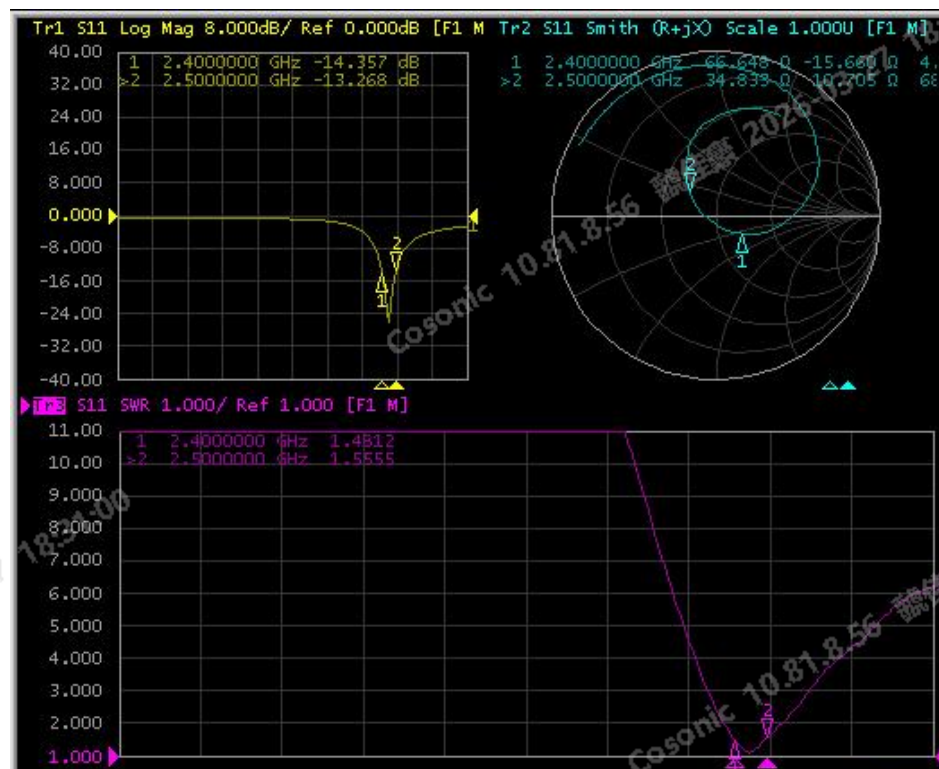
Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

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.

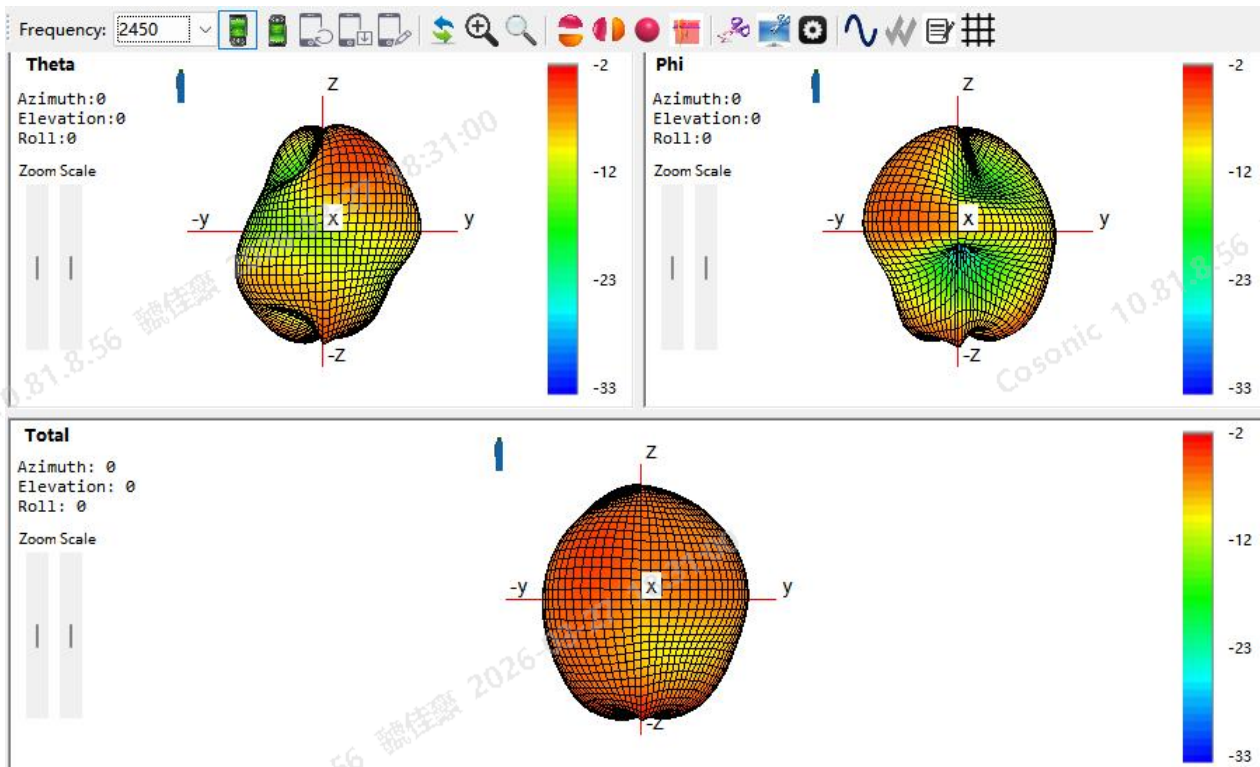
The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface

2.2.2 Antenna has no power

Freq	productiveness (%)	Productiveness(dB)	gain(dBi)
2400.0	22.87%	-6.41	-3.16
2410.0	23.22%	-6.34	-3.02
2420.0	23.95%	-6.21	-2.83
2430.0	24.53%	-6.10	-2.67
2440.0	25.65%	-5.91	-2.47
2450.0	26.33%	-5.80	-2.45
2460.0	26.12%	-5.83	-2.56
2470.0	25.42%	-5.95	-2.68
2480.0	24.78%	-6.06	-2.87
2490.0	23.96%	-6.21	-3.12
2500.0	23.43%	-6.30	-3.28



2.2.3 L-antenna passive apple diagram



2.2.4 Active antenna parameters

Channel No.	1#L/Free space test data	
	TRP (dBm)	TIS (dBm)
0	0.72	-88.84
39	1.15	-89.54
78	1.38	-89.62

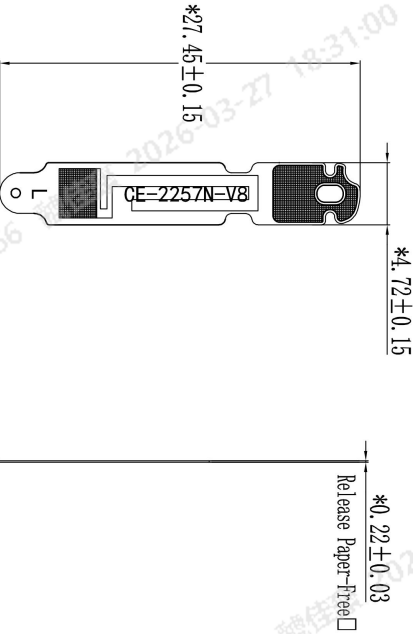
Channel No.	1#L/Head/Ear test data	
	TRP (dBm)	TIS (dBm)
0	-3.27	-83.57
39	-2.81	-83.94
78	-3.58	-84.19

2.2.5 Antenna measured data

test method:	1. Distance Test: Connect the phone to a Bluetooth headset and place it on a non-metallic stand 60cm high. The tester wears the headset and walks backward while rotating 360 degrees. Measure the maximum distance where call and music playback remain uninterrupted within the headset.	
	2. Close-range testing: The tester carries a mobile phone (preferably in the rear pocket of pants with the main earpiece facing the Bluetooth earphones) to conduct rotational tests on the human body to detect any disengagement.	
	3. Hands-overhead test: The tester wears headphones and connects to a mobile phone to play music, testing two scenarios: 1) Fingertip-up test to assess whether there is any music interruption; 2) Fingertip-back test to evaluate whether there is any music interruption.	
Test site :	In the open area outside our building (see test environment)	
testing facility :	iPhone 6	
test result :	listen to music	When the left and right ears serve as mutual primary ears, no crosstalk occurs during the 14M pull distance test.

3. Structural drawings

L antenna

				1	2	3	4	5	6	7	8				
A															
				B											
				skills requirement:											
				1. PCB substrate specifications: 2. Electroplating specifications: 3. Surface ink requirements:											
				4. Reliability requirements:											
C				1. Shape tolerance ± 0.15; 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.											
				5. Tolerance requirements:											
				6. Key control size:											
				7. Environmental requirements:											
				8. Packaging requirements:											
D				Parts meet MIL-STD-883C environmental protection requirements											
				Full page without release paper packaging											
DATE				Modify the content				Version		Revise					
1				2				3				4			

Shenzhen Yu Sheng Communication Equipment Co., Ltd.

Model	CE-2257N	DATE	20260104	
Name	L antenna	Design	BYZ	
Part NO	095033-1A-1A	Review	MD	BYZ
Material quality	Rolled copper foil	CFI	RF	CKH
Mold surface treatment		confirm		
Appearance treatment		UNIT	mm	
proportion	FIT	Revise	R:A	



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4. List of materials



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095033 (CE-2257N) BOM

Edition : T:A

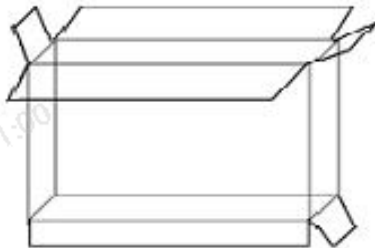
client : 095

Type of aircTCft : 095033

Set a date : 2026/01/04

Item number	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	095033 -IA-TA	L antenna		CE-2257N	Black L-Style FPC with 1-Side Half-Half ETP Copper & Selective Gold Plating, 27.45*4.72*0.12MM	black	PCS	1	
1.2	095033 -IA-01-TA	L-FPC		CE-2257N	Black L-Style FPC with 1-Side Half-Half ETP Copper & Selective Gold Plating, 27.45*4.72*0.12MM	black	PCS	1	
verify :			examine :			manufacture : BYZ			

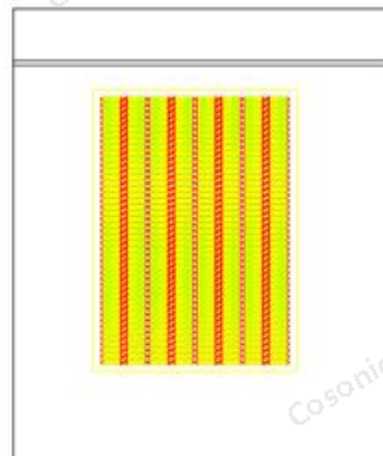
5. Package schematic diagram

Packaging method diagram		
product name	antenna	
Project model	CE-2257N	
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	The minimum package of 100 bags, in turn with waterproof bags, a waterproof bag with up to 1000 materials
	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. Storage conditions: store them in a cool and dry place		

1、小包装

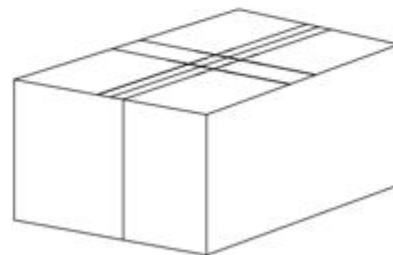
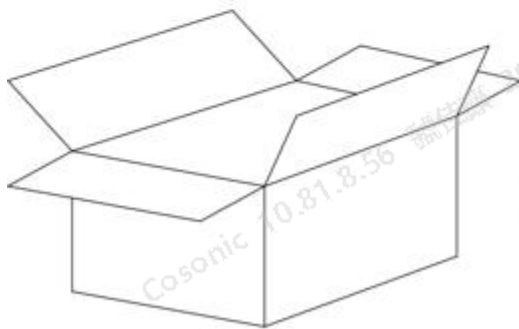


FPC antenna (full plate half cut shipment): 250*198



PE bag 5000PCS antenna

2、大包装



One box of 1-16 bags | 5000-80000pcs antenna |

3. Note :FPC products are manufactured by micromucous membrane.

Quantity of small package :5000PCS/ bag;

Large package quantity :5000-80000PCS/ box.

4. Precautions

4.1 The storage of products should ensure that the ambient temperature is $-10^{\circ}\text{C}\sim 24^{\circ}\text{C}$, the humidity is less than 90%, there is no rain leakage in the warehouse, the ground should be moisture-proof, and the acid fog and salt spray around the warehouse should be avoided Corrosion. The shelf life of the product is 180 days;

4.2 The product can be transported by land, water or air, and should be rainproof during transportation;

4.3 Stacking requirements :XXX;

(Other examples: It is strictly prohibited to throw, throw, etc... Require)