

AW1028 Project antenna specification

Customer name: ZhenShi

Customer name: AW1028

Product name: BT antenna

Size of product: See the BOM table for details

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
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The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD				
RF				

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

The demander's judgment 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 specifies the antenna technical requirements and material requirements specifications for AW1028 products.

This requirement applies to the selection, testing and acceptance of AW1028 antennas.

1.2 Project basic information

Antenna name: :	<u>AW1028</u>
Antenna frequency :	BT
Antenna material: :	FPC
Antenna manufacturer :	SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD
Antenna type :	PIFA
Manufacturer address :	4A,4th Floor, Building 2, Nantai Cloud Innovation Valley, Guangming District, Shenzhen

2. Technical index requirements

2.2.1 Introduction of test items and equipment

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

2.2.2 Test instructions

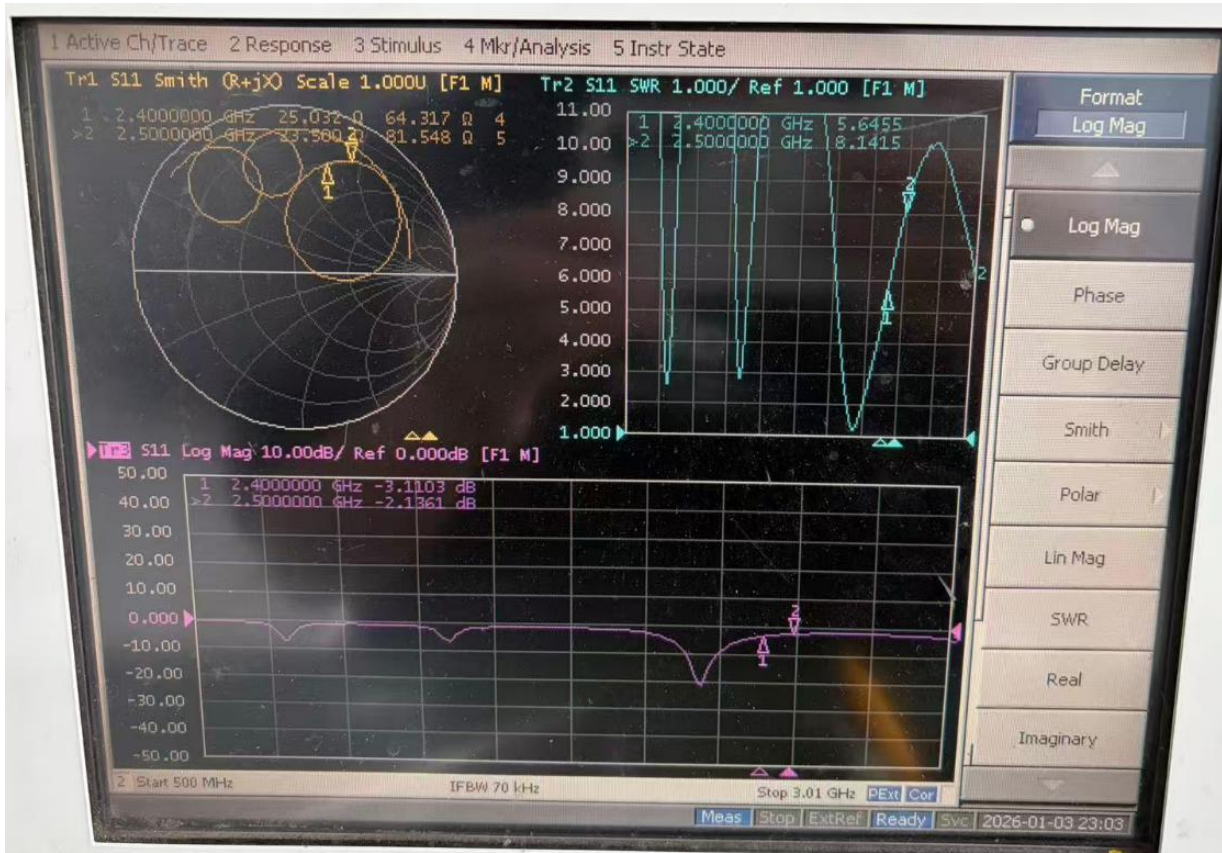
Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

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 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.

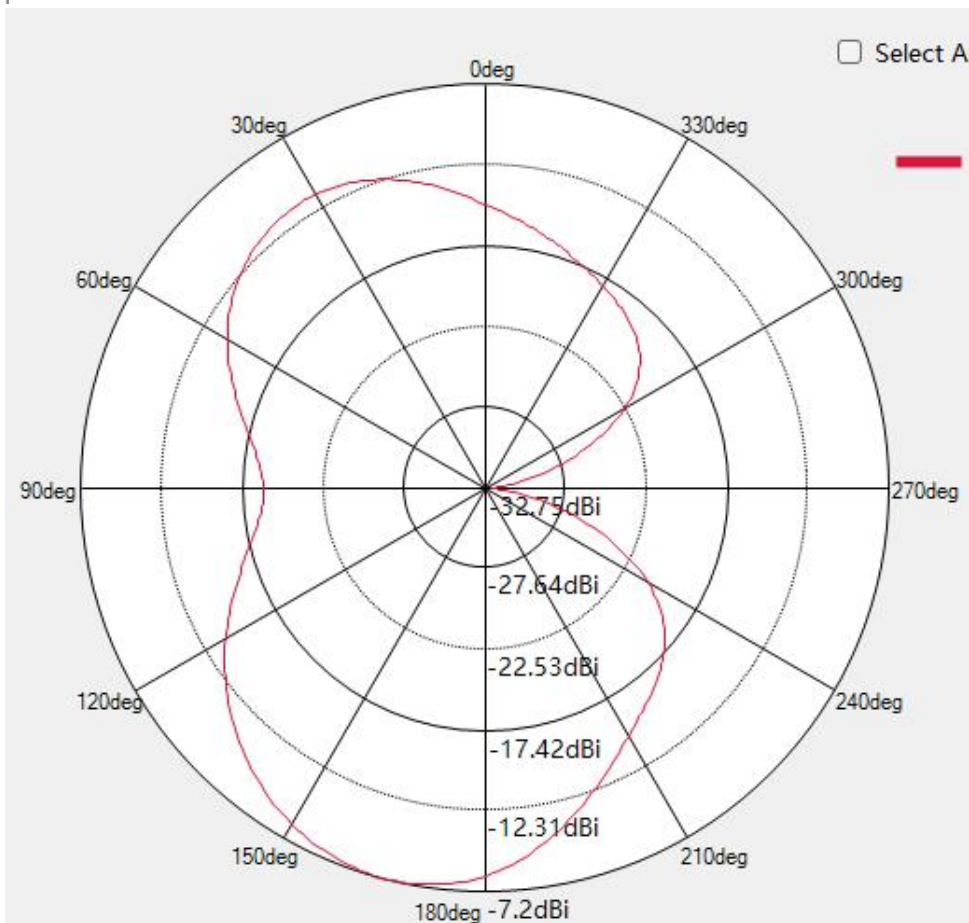
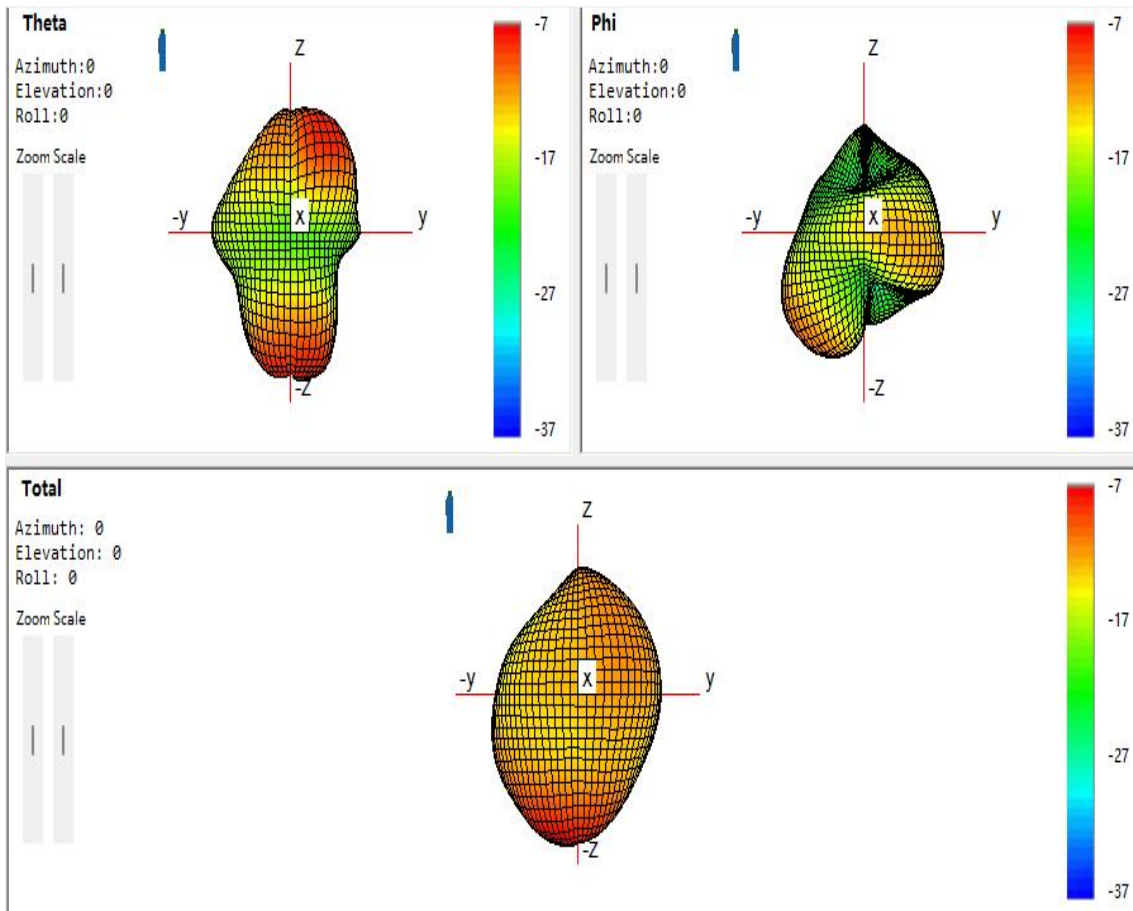
2.2.3 BT Passive Diagram



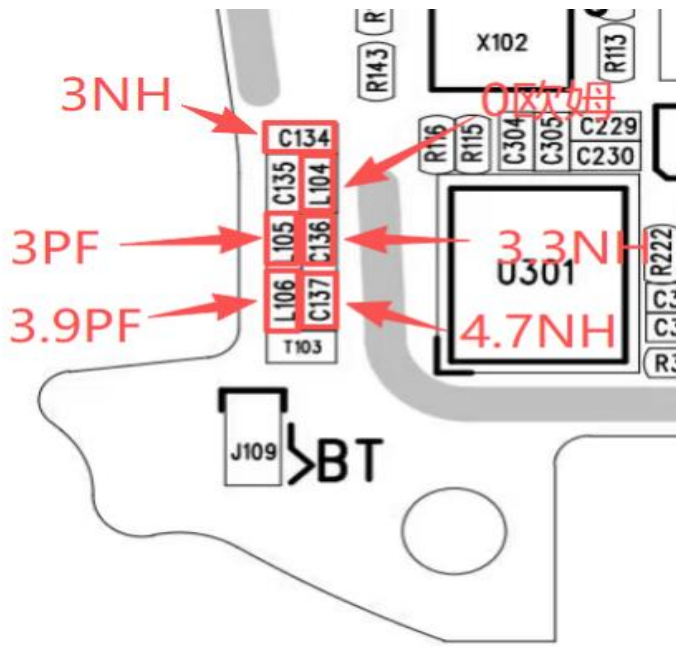
2.2.4 Test results for the antenna efficiency parameters

	frequency point	Productiveness %	Productiveness db	gain
BT Arm	2400	1.43%	-18.4	-8.53
	2410	1.55%	-18.1	-8.42
	2420	1.69%	-17.7	-8.39
	2430	1.95%	-17.1	-8.35
	2440	2.34%	-16.3	-8.14
	2450	2.61%	-15.8	-8.23
	2460	2.38%	-16.2	-8.29
	2470	2.05%	-16.9	-8.27
	2480	1.98%	-17.0	-8.29

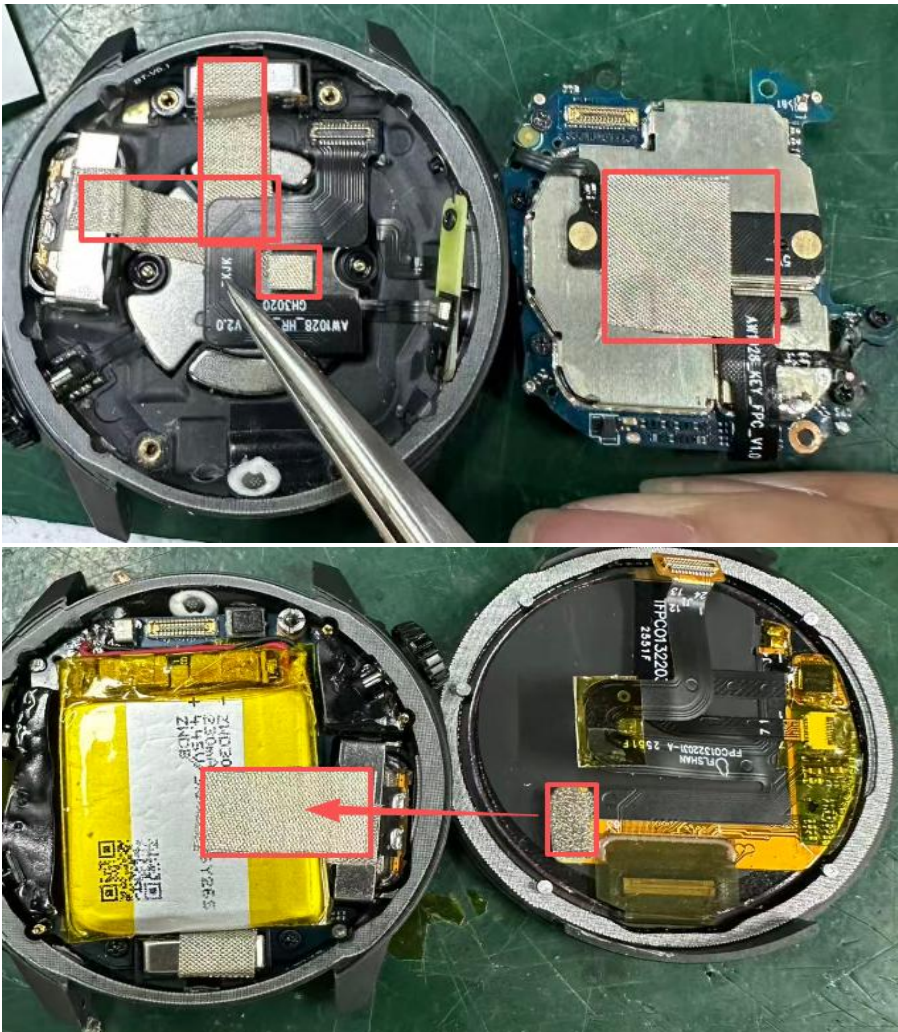
2.2.5 BT Passive Direction Pattern/Field Pattern Diagram



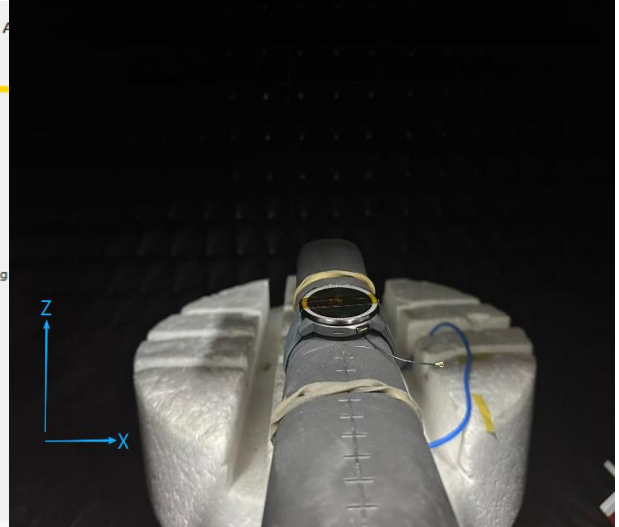
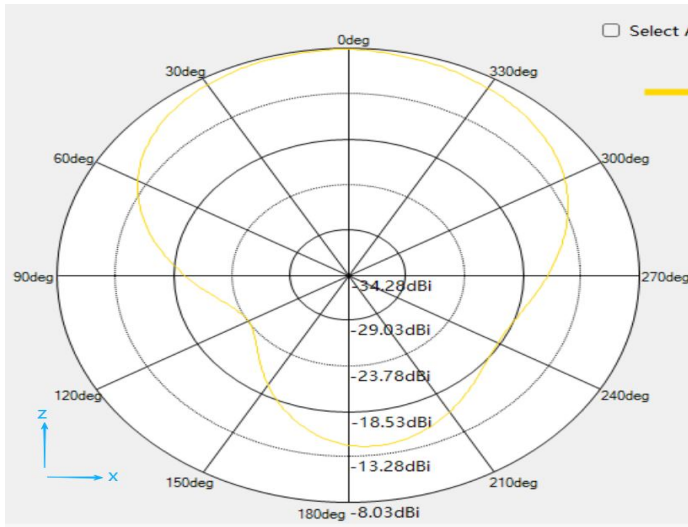
2.2.6 BT Matching Changes



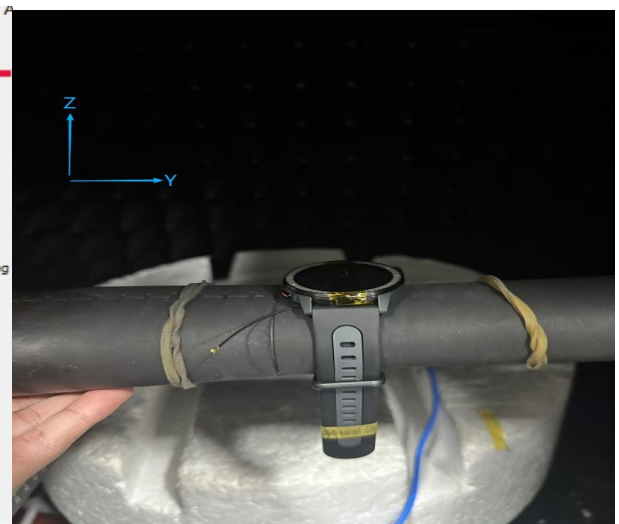
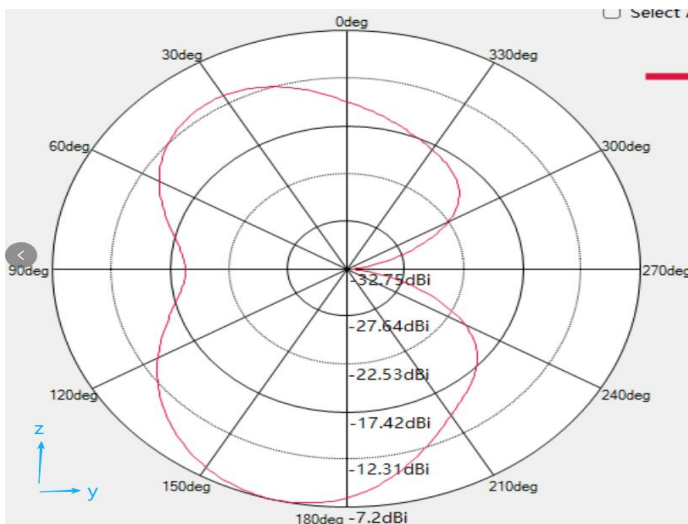
2.2.7 Environmental Treatment



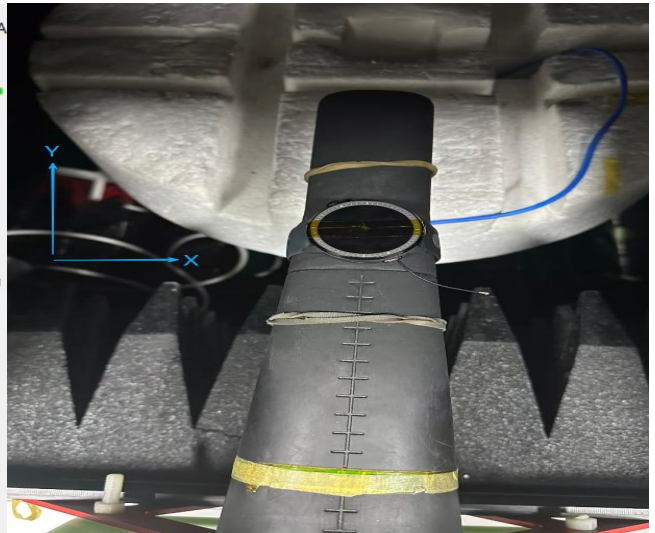
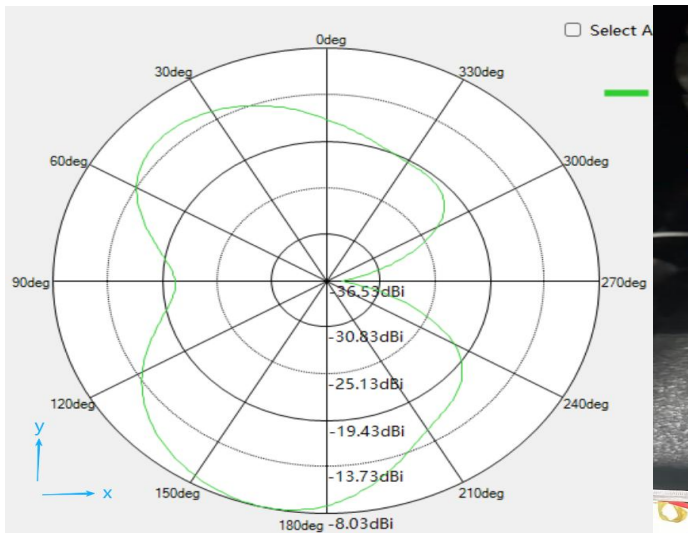
2.2.8 BT Passive Direction Pattern-Phi0 2400



2.2.9 BT Passive Direction Pattern-Phi0 2450



2.2.10 BT Passive Direction Pattern-Phi0 2480



3.Engineering drawing

1				2		3		4		5		6		7		8			
A																			
B																			
skills requirement:																			
1. PFC substrate specifications:				PI substrate:				1.0 mil											
2. Electroplating specifications:				Electrolytic copper:				0.5oz (D)											
				Double-sided tape:				3M6525BP											
				Nickel plated: 3µm				Al: 0.025um											
3. Surface ink requirements:				Surface ink color:				Matte White Ink											
				Printing font color:				Black											
				Printing font height:				According to drawings											
C																			
4. Reliability requirements:				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.															
5. Tolerance requirements:				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 ±0.30; 6. For other unmarked dimensions, refer to 2D drawings.															
D																			
6. Key control size:				The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings															
7. Environmental requirements:				Parts meet MGS2 (0HP/Heavily)P environmental protection requirements															
8. Packaging requirements:				Ship half-cut (on line)															
				0~10		±0.10		⌀		0.02		Model		AM1028		DATE		2026/5/8	
				10~20		±0.12		⊙		00.03		Name		BT-FPC		Design		BYZ	
				20~40		±0.15		⊥		0.02		Part NO		676004-1A-7B		Review		MD BYZ	
				40~50		±0.20		∠		0.04		Material quality		Rolled copper foil		RF		CKH	
								∠		0.02		Mold surface treatment				confirm			
DATE				Modify the content		Version		Revise											
1		2		3		4		5		6		7		8		Revise		R.A	

ShenZhen Yu Sheng Communication Equipment Co., Ltd.

Gold plated Area

*24.61±0.15

*7.19±0.15

*0.12±0.03

Release Paper-Free

4. Bill of Materials

676004 (AW1028) –BOM

Edition : T:B

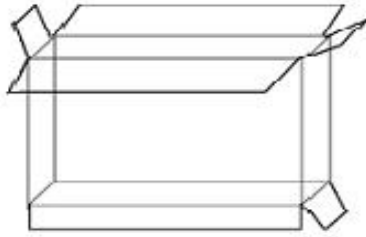
client : 676

Type of aircTCft : 676004

Set a date : 2026/5/8

NO.	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	676004-IA-TB	BT antenna		AW1028	White BT-FPC, Electrolytic Copper, 0.5oz Base, Hard Gold Plated (Electroplated Gold), 7.19×24.61×0.12mm	White	PCS	1	
1.1	676004-IA-01-TB	BT-FPC		AW1028	White BT-FPC, Electrolytic Copper, 0.5oz Base, Hard Gold Plated (Electroplated Gold), 7.19×24.61×0.12mm	White	PCS	1	
verify : examine : manufacture : BYZ									

5.Package drawing

Packaging method diagram		
product name	BT antenna	
P / N	676004	
Project model	AW1028	
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		