

Material requirement specification for the SED070 project antenna

Customer name: XieChuang

Customer product name: SED070

Product name: BT antenna

Product specification: See the BOM table for more details

Product code: _____

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	R:A	editio princeps	2026-5-18	Li Jieyi	9	

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

Catalogue

1. OVERVIEW	3
1.1 SCOPE OF APPLICATION	3
1.2 PROJECT BASIC INFORMATION	3
2. TECHNICAL INDEX REQUIREMENTS	3
2.1 ACTIVE REPORTING	3
2.2 TEST INSTRUCTIONS	3
2.2.1 BT ANTENNA (FILE LOGMAG + VSWR + SMITH)	4
2.2.2 BT-ANTENNA EFFICIENCY AND GAIN	4
2.2.3 BT ANTENNA 3D APPLE LOGO	5
2.2.4 BT ANTENNA PRODUCTION PATTERN DIAGRAM	5
2.2.5 ANTENNA POSITION	6
3. ENGINEERING DRAWINGS	7
3.1 BT	7
4. BILL OF MATERIAL	8
5. PACKAGE SCHEMATIC DIAGRAM	9

1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for SED070 products.

This requirement is applicable to the antenna selection, testing and acceptance of SED070 products.

1.2 Project basic information

Antenna name:	SED070
Antenna band:	BT : 2. 4G
Antenna material:	FPC antenna + coaxis

2. Technical index requirements

2.1 Active Reporting

2.2 Test instructions

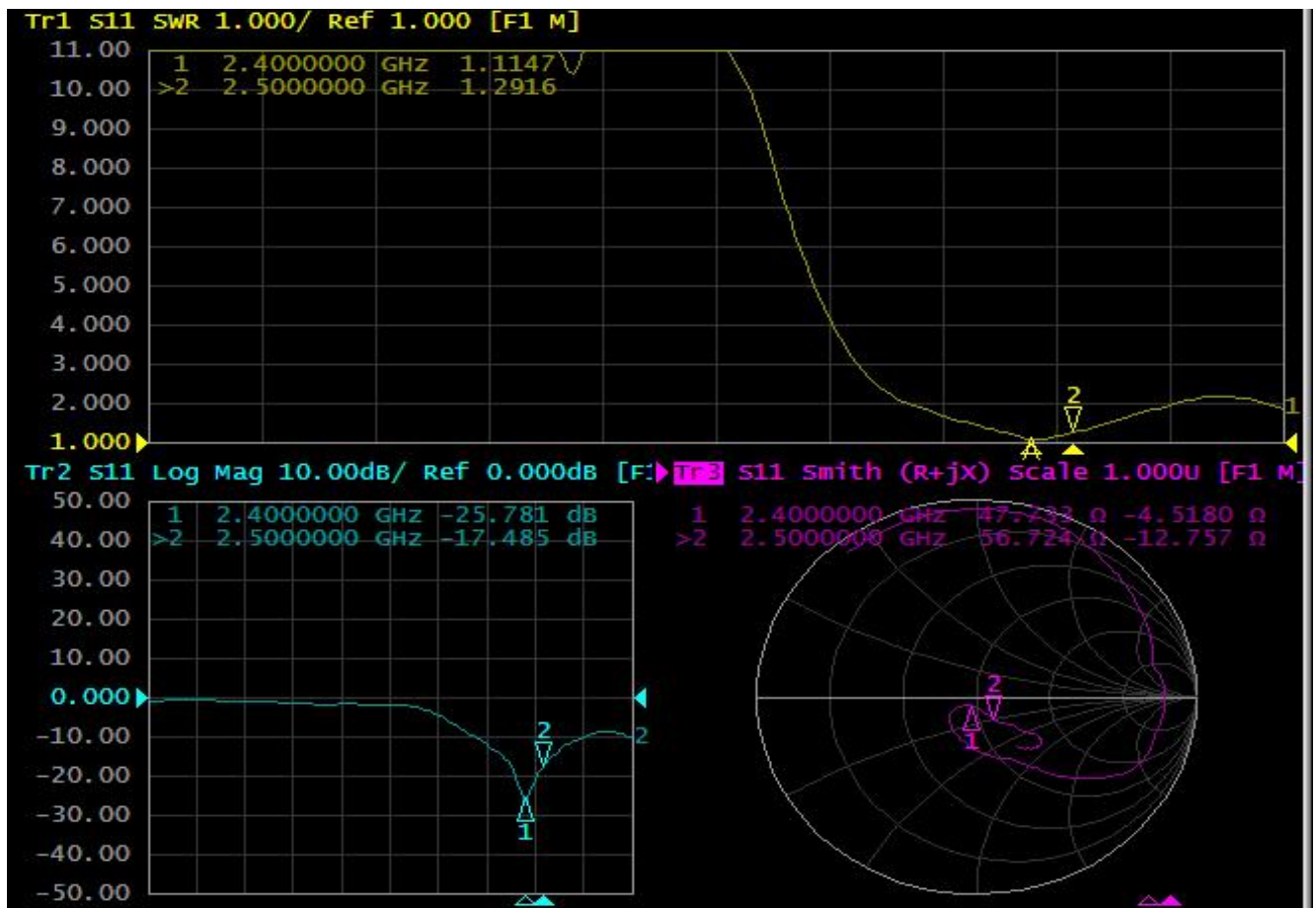
Test tools: Agilent8960 instrument, R & S CMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

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.

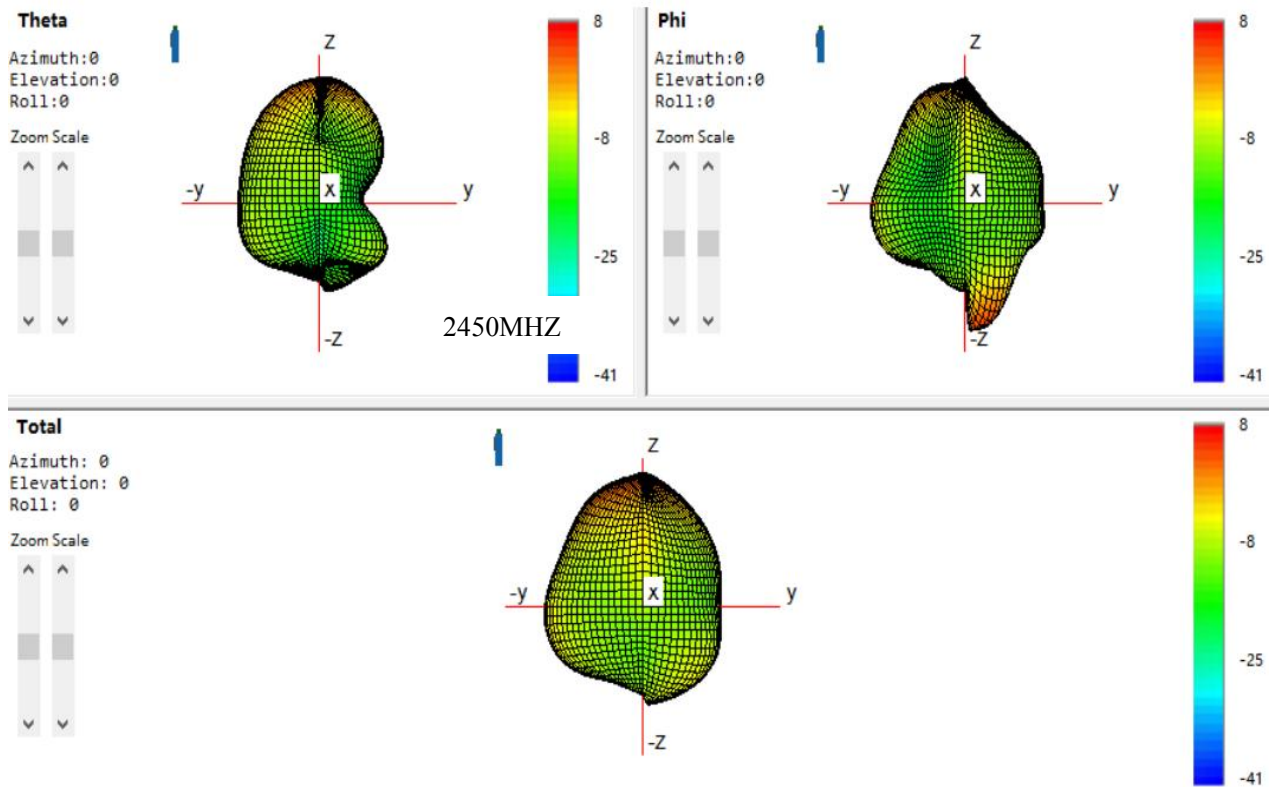
2.2.1 BT antenna (file LOGMAG + VSWR + SMITH)



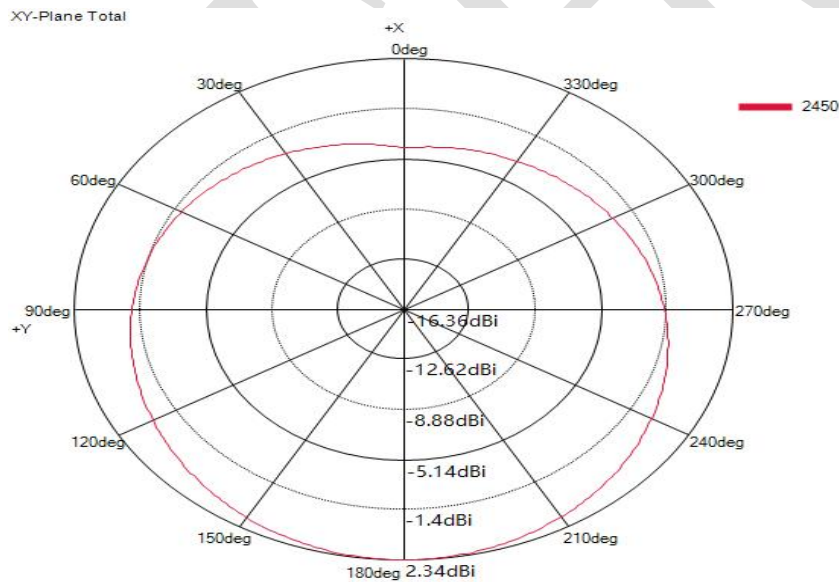
2.2.2 BT-Antenna efficiency and gain

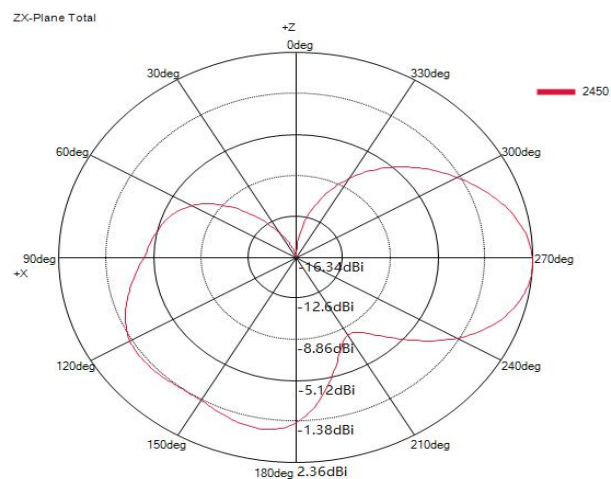
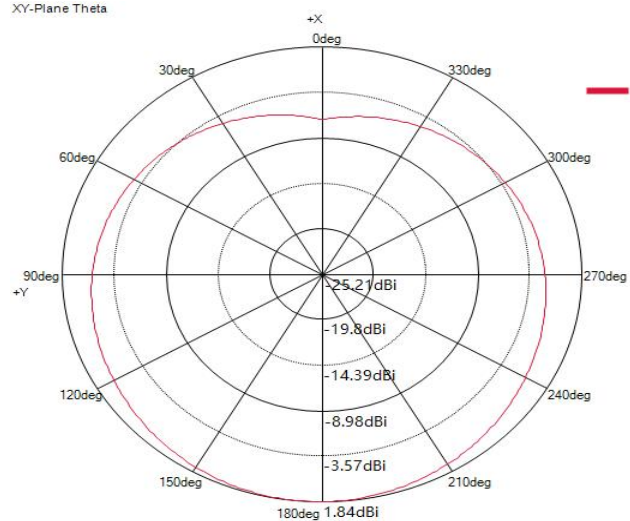
Passive Test For 2400MHz~2500MHz				
Freq	Effi	Effi	Gain	
(MHz)	(%)	(dB)	(dBi)	
2400	48.3%	-3.16	1.39	
2410	49.1%	-3.09	1.47	
2420	50.9%	-2.93	1.79	
2430	51.2%	-2.91	2.04	
2440	52.7%	-2.78	2.15	
2450	53.1%	-2.75	2.33	
2460	52.3%	-2.81	2.13	
2470	51.8%	-2.86	2.04	
2480	50.7%	-2.95	1.95	
2490	49.1%	-3.09	1.71	
2500	48.4%	-3.15	1.41	

2.2.3 BT antenna 3D Apple logo

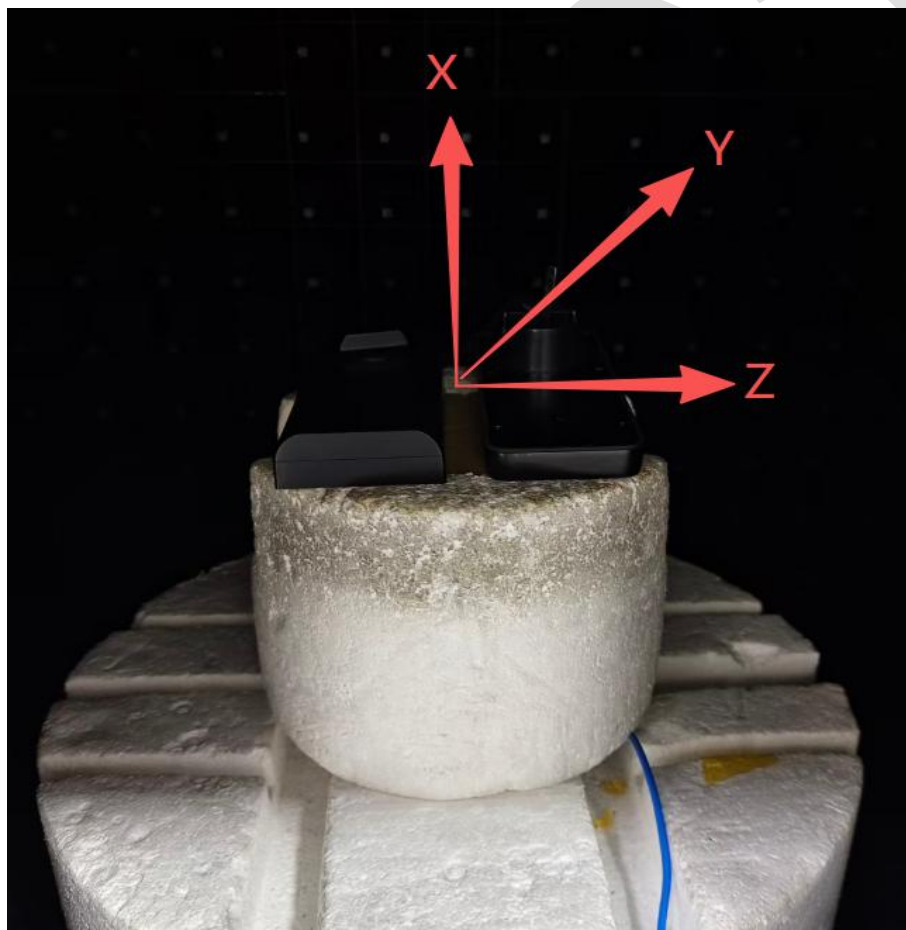


2.2.4 BT antenna Production pattern diagram





2.2.5 Antenna position



3. Engineering drawings

3.1 BT

A																																						
B	Centrifugal paper separation line skills requirement: <table><tr><td>P1 substrate:</td><td>Electrolytic copper (I to II)</td></tr><tr><td>1. FPC substrate specifications:</td><td>0.5oz (ED) 3M-9471LSE Double-sided tape:</td></tr><tr><td>Nickel plated:</td><td>38um Gilded: 0.025um</td></tr><tr><td>Surface ink color:</td><td>Matt black</td></tr><tr><td>Printing font color:</td><td>WHITE</td></tr><tr><td>Printing font height:</td><td>According to drawings</td></tr></table> 3. Surface ink requirements: <table><tr><td>Reliability test:</td><td>sot sproy test\rubber friction test\alcohol resistance test\100 grid test.</td></tr><tr><td>The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.</td><td></td></tr></table> 4. Reliability requirements: <table><tr><td>1. Shape tolerance ±0.10;</td><td></td></tr><tr><td>2. Copper foil circuit tolerance ±0.05;</td><td></td></tr><tr><td>3. The position of the copper foil to the shape is ±0.15;</td><td></td></tr><tr><td>4. Hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15;</td><td></td></tr><tr><td>5. The size tolerance of gold finger is ±0.20;</td><td></td></tr><tr><td>6. For other unmarked dimensions, refer to 2D drawings.</td><td></td></tr></table> 5. Tolerance requirements: The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings 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 ROHS2.0/HF/Reach/GP environmental protection requirements 8. Packaging requirements: Packed in PE bags, the quantity of each bag is 100PCS, there is a mark on the outside of the bag										P1 substrate:	Electrolytic copper (I to II)	1. FPC substrate specifications:	0.5oz (ED) 3M-9471LSE Double-sided tape:	Nickel plated:	38um Gilded: 0.025um	Surface ink color:	Matt black	Printing font color:	WHITE	Printing font height:	According to drawings	Reliability test:	sot sproy test\rubber friction test\alcohol resistance test\100 grid test.	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 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.	
P1 substrate:	Electrolytic copper (I to II)																																					
1. FPC substrate specifications:	0.5oz (ED) 3M-9471LSE Double-sided tape:																																					
Nickel plated:	38um Gilded: 0.025um																																					
Surface ink color:	Matt black																																					
Printing font color:	WHITE																																					
Printing font height:	According to drawings																																					
Reliability test:	sot sproy test\rubber friction test\alcohol resistance test\100 grid test.																																					
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 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.																																						
D	DATE Modify the content Version Revise 1 2 3 4 5 6 7 8 Shenzhen Yu Sheng Communication Equipment Co., Ltd. <table><tr><td>Model</td><td>SED070</td><td>DATE</td><td>20260407</td></tr><tr><td>Name</td><td>BT antenna</td><td>Design</td><td>JFB</td></tr><tr><td>Part NO</td><td>661028-1B</td><td>Review</td><td>JFB</td></tr><tr><td>Material quality</td><td>Electrolytic copper (I to II)</td><td>RF</td><td>CNH</td></tr><tr><td>Weld surface treatment</td><td></td><td>confirm</td><td></td></tr><tr><td>Appearance treatment</td><td></td><td>UNIT</td><td>mm proportion FIT Revise R.A</td></tr></table>										Model	SED070	DATE	20260407	Name	BT antenna	Design	JFB	Part NO	661028-1B	Review	JFB	Material quality	Electrolytic copper (I to II)	RF	CNH	Weld surface treatment		confirm		Appearance treatment		UNIT	mm proportion FIT Revise R.A				
Model	SED070	DATE	20260407																																			
Name	BT antenna	Design	JFB																																			
Part NO	661028-1B	Review	JFB																																			
Material quality	Electrolytic copper (I to II)	RF	CNH																																			
Weld surface treatment		confirm																																				
Appearance treatment		UNIT	mm proportion FIT Revise R.A																																			



Shenzhen Yusheng Communication Equipment Co., LTD

4. Bill Of Material



Shenzhen Yusheng Communication Equipment Co., LTD

661028 (SED070) -BOM

edition: R:A

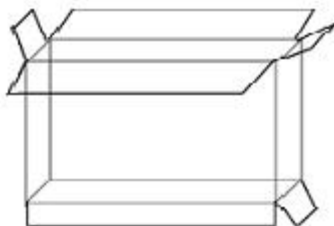
client: 661

Type of aircraft: 661026

Set a date: 20260127

Item	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
2	661028-IB-RA	BT module		SED070	BLACK BT-FPC weldCoaxial line	black	PCS	1	
2.1	661028-IB-01-RA	BT-FPC		SED070	BLACK BT-FPC Electrolytic copper weld 24.75*23.73*0.14MM	black	PCS	1	
2.2	661028-IB-02-RA	BT-Coaxial line		SED070	BLACK weld 1.13*56.00MM	black	PCS	1	
2.3	661028-IB-03-RA	assemble		SED070	assemble	black	PCS	1	
verify:			examine:			manufacture: FJW			

5. Package schematic diagram

Packaging method diagram		
product name	BT module	
P / N	661028	
Project model	SED070	
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		