

DM66 Project Antenna Material Requirements Specification

Customer Name: Shenzhen Domino Times Technology Co., Ltd.

Customer Product Name: DM66

Product Name: FPC

Product Specifications: See the BOM list for details

Material Code: DM66-006

Change History:

order number	edition	state	Start and End Dates	person liable	page number	remarks
1	R:A	editio princeps	2026-6-3	Li Jieyi	11	
2						

Supplier's acknowledgment signature:

Responsible Person/Date		IQC/ date	Review/Date	Approved/Date
MD				
RF				

Buyer's acknowledgment signature (please return after signing):

Buyer's determination result: ☐ Qualified ☐ Unqualified			
Development and Design Engineer / Date	SQE Engineer/Date	Procurement Manager/Date	Development Department Manager's Approval/Date

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1. Overview

1.1 Scope of Application

This specification defines the technical requirements for antennas and material specifications for DM66 products.

These requirements apply to the antenna selection, testing, and acceptance of DM66 products.

1.2 Basic Project Information

Antenna Name:	DM66
Antenna Frequency Band:	GPS+BT:1575.42Mhz 2400Mhz-2500Mhz
Antenna Material:	FPC

2. Requirements for Technical Specifications

2.1 Test Items and Equipment Overview

List	test item	equipment
S11 Parameters	Standing Wave Ratio, Echo Loss	network analyzer
Active Testing	TRP,TIS	Comprehensive tester, microwave anechoic chamber
Passive Testing	Gain, Efficiency	network analyzer

2.2 Testing Instructions

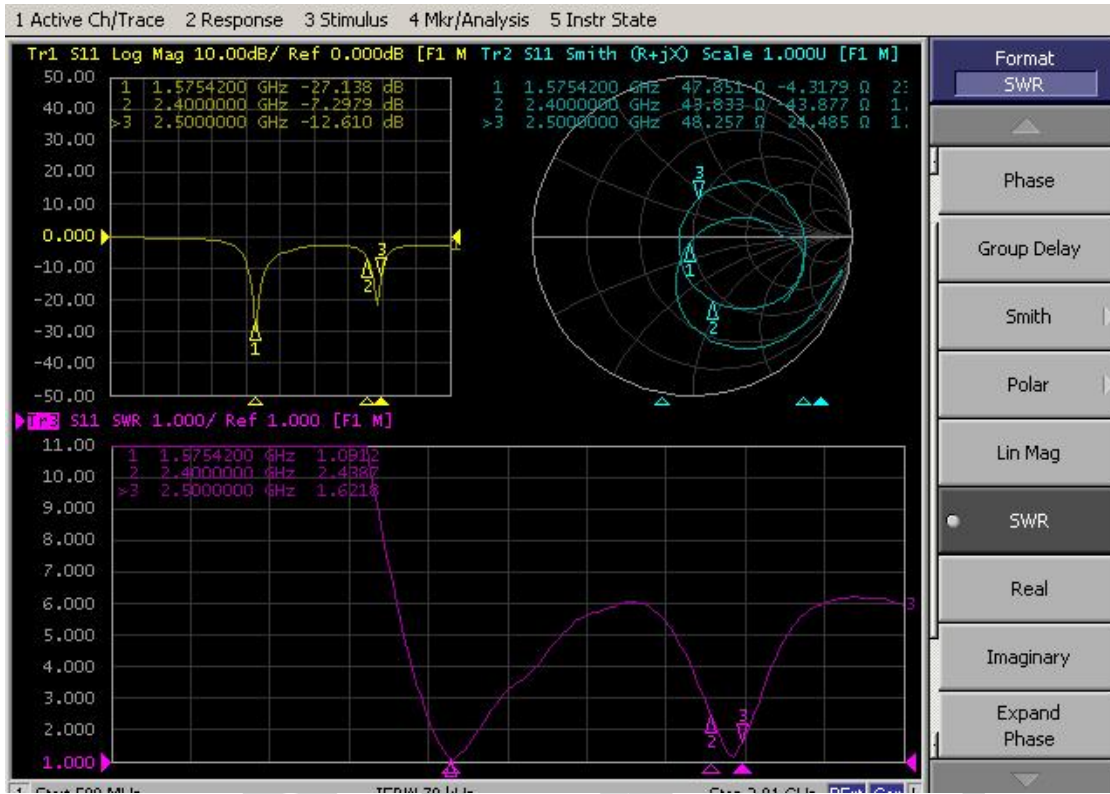
Testing equipment: Agilent 8960 comprehensive tester, R&SC MW500, fully electromagnetic far-field ETS anechoic chamber, high-precision positioning system with its controller, and a computer equipped with automated testing software.

Test Environment: Temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$.

Testing Method: The DUT is fixed at the center of the turntable with its H-face aligned horizontally with the center of the horn antenna. The positioning system rotates the DUT across the entire spherical surface to achieve high-precision three-dimensional positioning. All RF instruments, the turntable controller, and the PC equipped with automatic testing software communicate via a GPIB interface.

3. Test Report

3.1 Passive Antenna Parameters



3.2 Antenna Efficiency and Gain – ARM

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
1550	10.18%	-4.87	2400	4.55%	-6.61
1560	10.30%	-4.73	2420	5.27%	-6.54
1570	10.76%	-4.68	2440	6.14%	-6.48
1575	11.28%	-4.62	2450	6.38%	-6.42
1580	11.12%	-4.75	2460	5.86%	-6.53
1590	10.65%	-4.87	2480	5.28%	-6.65
			2500	4.94%	-6.74

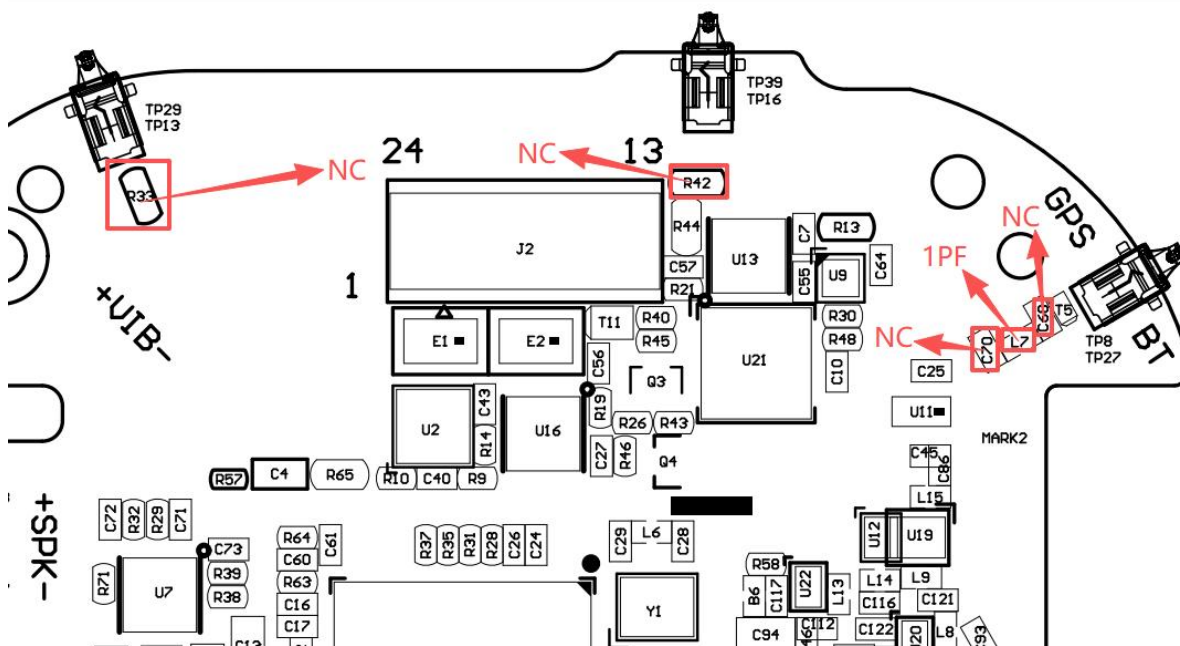
3.3 Actual Measurement of Antenna Star Search – ARM



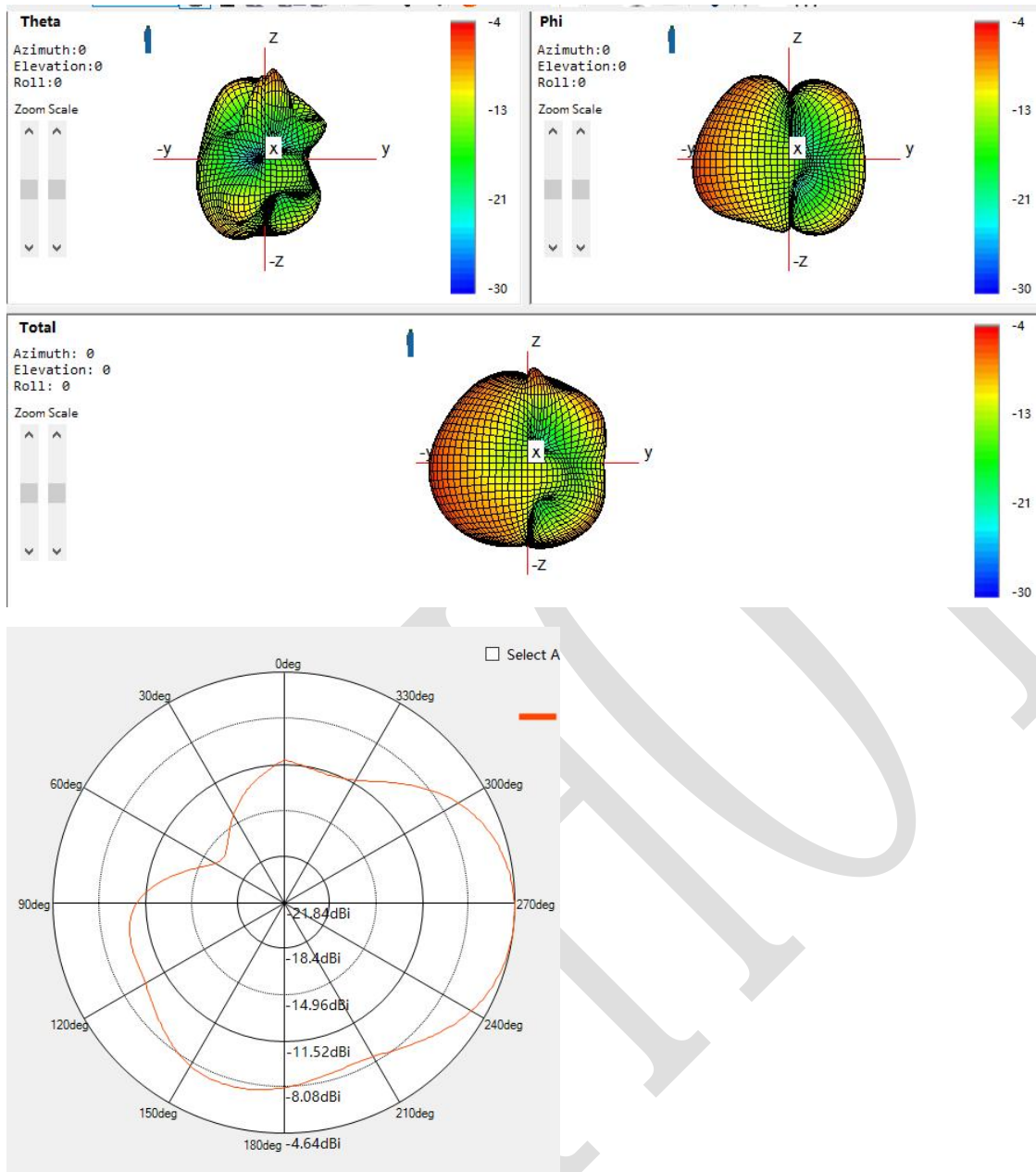
3.4 Actual Measurement Data from BT

Test Location:	In the open area outside our building
testing facility :	Xiaomi 15
test result :	1. Call Test: Stand directly facing the phone at 14 meters; stand with your back to the phone at 10 meters 2. Mobile phone testing: Stand facing the phone at 18 meters; stand with your back to the phone at 16 meters.

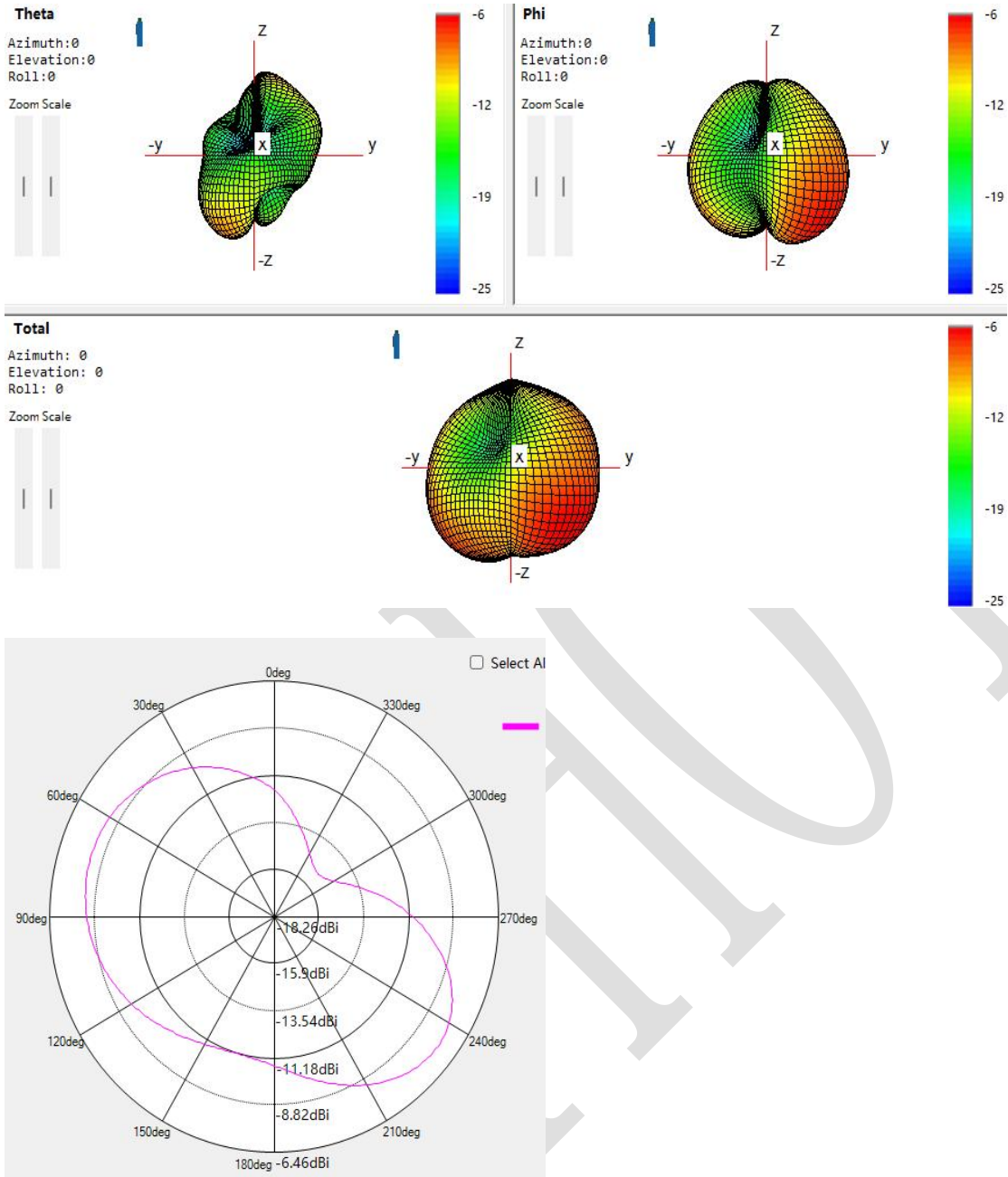
3.5 Matching Changes



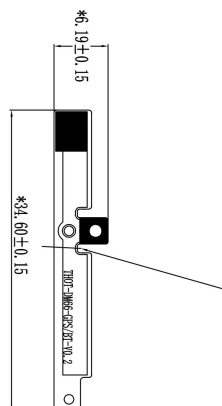
3.6 Antenna Apple Chart/Directional Pattern – 1575 MHz



3.7 Antenna Apple Chart/Directional Pattern – 2450 MHz



4. Structural Drawings

A										B									
Centrifugal paper separation line 										skills requirement:									
										1. PFC substrate specifications:					Electrolytic copper (half to half) 0.5oz (ED) Double-sided tape: 3M-9471LSE				
										2. Electroplating specifications:					Nickel plated: 3~8um Gilded: 0.0125um				
										3. Surface ink requirements:					Surface ink color: Matt black Printing font color: Bright black				
										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 ±0.10; 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.									
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/RE/Reach/CF 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									
DATE										Modify the content									
										Version									
										Revise									
1										2									
3										4									
5										6									
7										8									

ShenZhen Yu Sheng Communication Equipment Co., Ltd.									
		Model		DW66		DATE		20260603	
0~10		±0.10		○ 0.02		Name		GPS/BT-FPC	
10~20		±0.12		◎ 0.03		Part NO		098034-1A-PA	
20~40		±0.15		┘ 0.02		Material quality		Electrolytic copper (half to half)	
40~50		±0.20		┘ 0.04		Weld surface treatment		confirm	
位置		✓		0.02		Appearance treatment		UNIT	
5		6		7		mm		proportion	
8		FIT		Revised		R.A			



Shenzhen Yusheng Communication Equipment Co., Ltd.

5. BOM List (Bill of Materials)



Shenzhen Yusheng Communication Equipment Co., LTD

098034 (DM66) BOM

edition: R:A

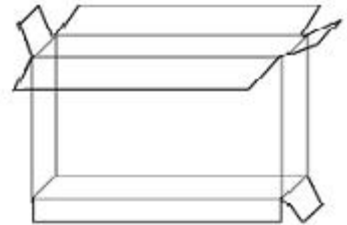
client: 098

Type of aircraft: 098034

Set a date: 20260603

Item	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	098034-IA-RA	GPS+BT-FPC		DM66	BLACK GPS/BT-FPC Electrolytic 34.60*6.19*0.12MM	black	PCS	1	
1.1	098034-IA-01-RA	GPS+BT-FPC		DM66	BLACK GPS/BT-FPC Electrolytic 34.60*6.19*0.12MM	black	PCS	1	
verify: examine: manufacture: FJW									

6. Packaging Diagram

Packaging Method Diagram														
product name	FPC antenna													
P / N	098034													
Project Model	DM66													
Packaging Details	Carton Size 1: 270*260*200MM Paper Box Size 2: 260*200*200MM Carton Size 3: Based on order quantity/volume													
	Packaging Method	Pack by order quantity												
	Total number of boxes packed	Pack by order quantity												
labeling requirement	Label Size 1: General 100*100 mm Label Size 2: According to customer requirements	深圳市昱晟通讯设备有限公司 <table><tr><td>客户名称</td><td>*****</td></tr><tr><td>订单编号</td><td>*****</td></tr><tr><td>项目名称</td><td>*****</td></tr><tr><td>物料编码</td><td>*****</td></tr><tr><td>数 量</td><td>****pcs</td></tr><tr><td>出货日期</td><td>****年**月**日</td></tr></table> 地址：深圳市光明新区光明大道南太云创谷园区2栋4楼4A	客户名称	*****	订单编号	*****	项目名称	*****	物料编码	*****	数 量	****pcs	出货日期	****年**月**日
客户名称	*****													
订单编号	*****													
项目名称	*****													
物料编码	*****													
数 量	****pcs													
出货日期	****年**月**日													
matters need attention														
1. Due to order quantity limits, the packaging size for each material is determined based on the total order quantity or actual volume.														
2. Storage temperature: Room temperature														
3. Storage conditions: Store in a cool, dry place														