

Material requirement specification for the FLB440 project antenna

Customer name: XieChuang

Customer product name: FLB440

Product name: WIFI antenna

Product specification: See the BOM table for more details

Product code: _____

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1		editio princeps	2025-4-28	Li Jieyi	8	

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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 FLB440 products.

This requirement is applicable to the antenna selection, testing and acceptance of FLB440 products.

1.2 Project basic information

Antenna name:	FLB440
Antenna band:	WIFI : 2400MHz-2500MHz
Antenna material:	FPC antenna + coaxial

2. Technical index requirements

2.1 Active Reporting

2.2 Test instructions

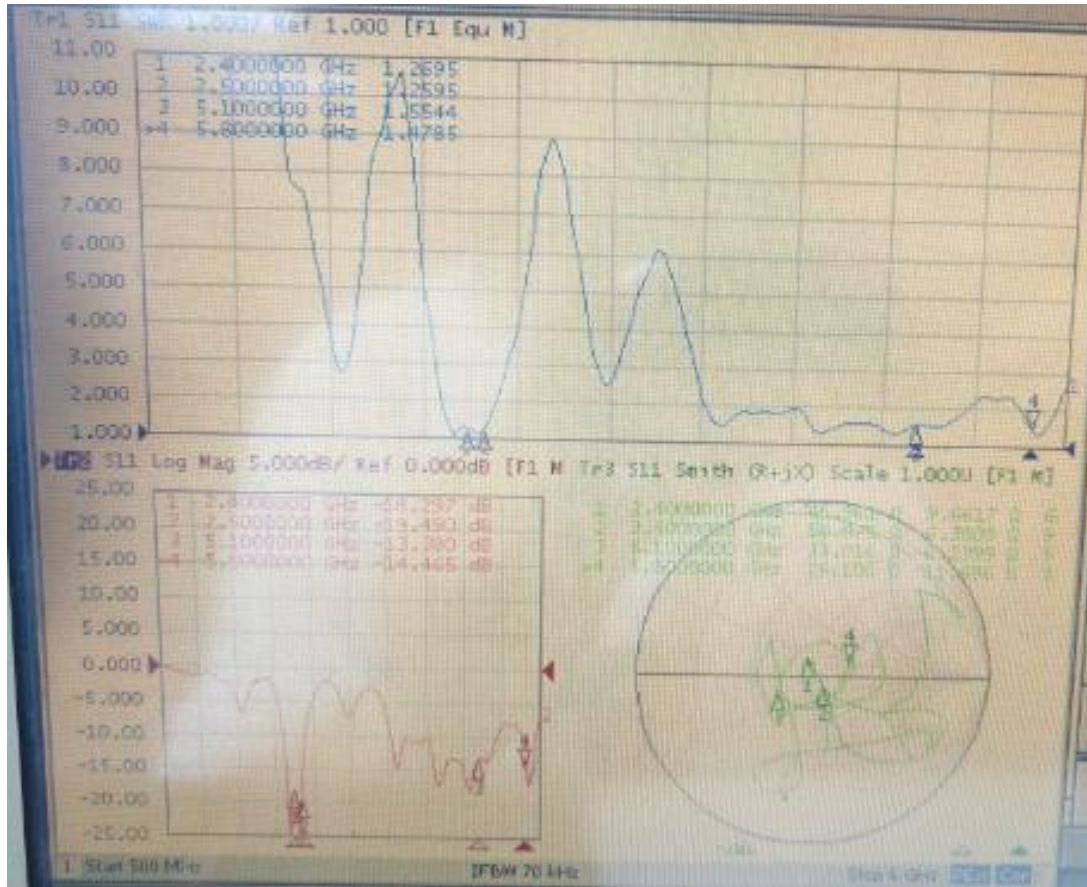
Test tools: Agilent8960 instrument, R & S CMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

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 WIFI antenna (file LOGMAG + VSWR + SMITH)



2.2.2 WIFI-Antenna efficiency and gain

Passive Test For 2400MHz~2500MHz				Passive Test For 5100MHz~5800MHz			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	49.3%	-2.27	0.13	5170.0	48.4%	-0.82	0.48
2410	50.5%	-2.04	1.05	5210.0	49.3%	-1.27	0.31
2420	51.3%	-2.06	1.31	5250.0	50.6%	-1.25	1.01
2430	52.3%	-2.13	1.45	5290.0	51.9%	-1.66	1.37
2440	53.3%	-2.34	1.51	5330.0	52.5%	-1.58	1.42
2450	54.5%	-2.48	1.68	5370.0	53.8%	-1.88	1.52
2460	53.8%	-2.61	1.59	5410.0	54.2%	-1.03	1.29
2470	52.5%	-2.97	1.29	5450.0	55.5%	-1.35	1.34
2480	51.3%	-2.66	1.39	5490.0	54.7%	-1.38	1.46
2490	50.4%	-2.64	1.13	5530.0	53.6%	-0.79	1.38
2500	49.2%	-3.17	0.32	5570.0	52.5%	-0.98	1.29
				5610.0	52.4%	-1.19	1.21
				5650.0	51.3%	-2.05	1.15
				5690.0	49.8%	-1.95	0.92
				5730.0	49.5%	-2.45	1.11
				5770.0	48.4%	-2.51	0.96
				5810.0	47.6%	-1.84	0.55
				5850.0	46.7%	-1.94	0.08

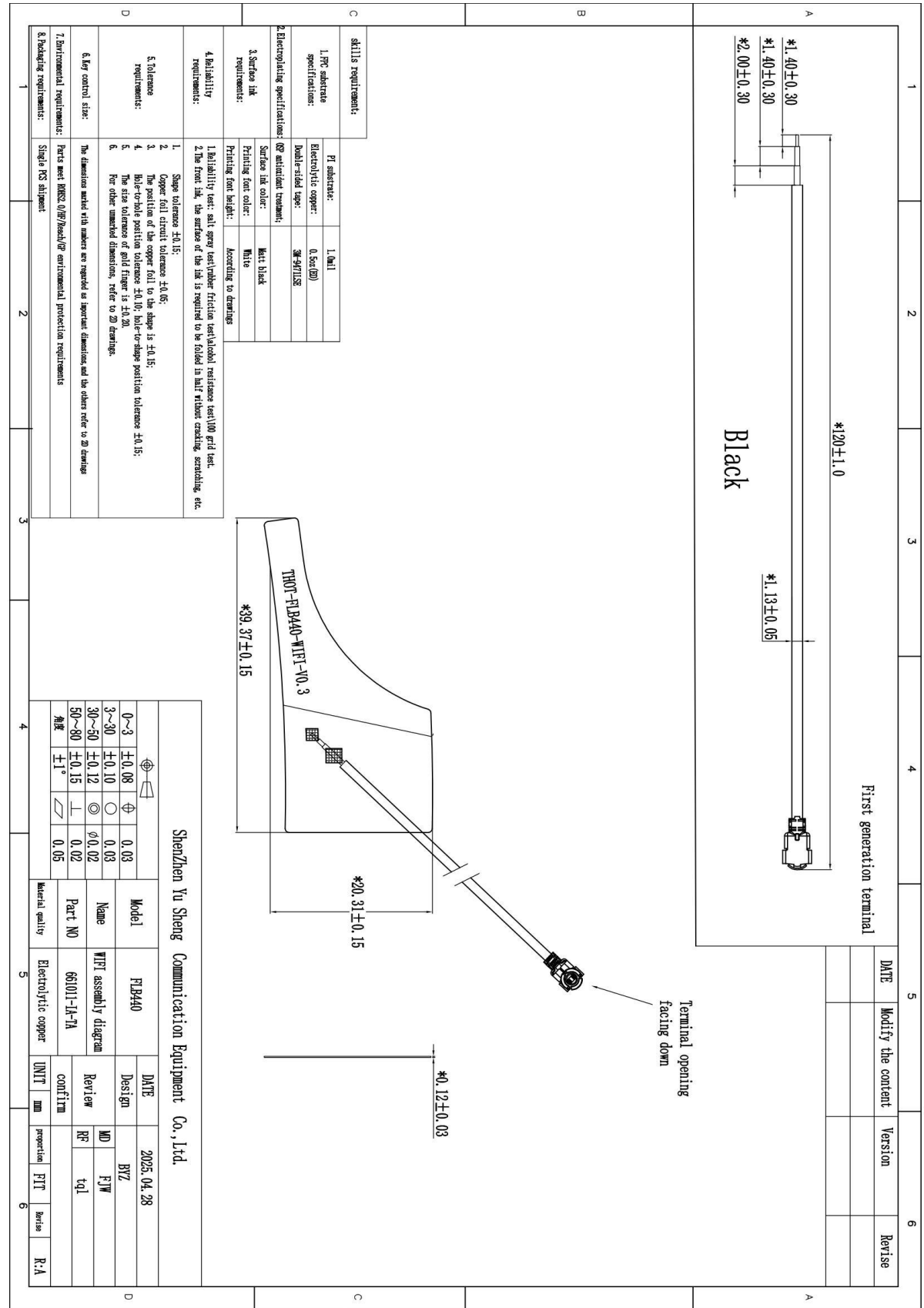
2.2.3 Antenna active parameters

	802.11	信道号		
			TRP (db)	TIS (dbm)
WIFI	11B (11M)	CH1	17.99	-70.68
		CH6	17.61	-70.45
		CH11	17.42	-69.34
	11A (6M)	CH36	16.30	-88.58
		CH149	16.48	-87.41
		CH165	16.12	-87.25

2.2.4 Antenna position



3.1 WIFI



4. Bill Of Material

661011 (FLB440)-BOM

Edition: R:A

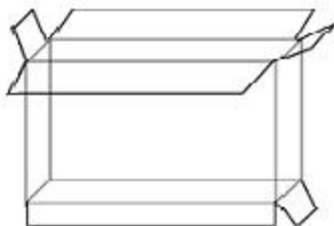
client:661

Model: 661011

date: 2025-04-28

Part No	Material code	*Material name	/	Model	specifications and models	colour	Unit	dosage	remarks
1	661011-IA-TA	WIFI assembly diagram		FLB440	CABLE+FPC+assemble		PCS	1	
1.1	661011-IA-01-TA	WIFI-FPC		FLB440	black WIFI-FPC 0.5oz(ED) 39.37*20.31*0.12mm	black	PCS	1	
1.2	661011-IA-02-TA	cable		FLB440	single-I, $\phi 1.13 \times 120$ mm	black	PCS	1	
1.3	661011-IA-03-TA	assemble		FLB440	assemble	black	PCS	1	
1.4									
verify :			examine :			manufacture : BYZ			

5. Package schematic diagram

Packaging method diagram		
product name	Antenna components	
P / N	661011	
Project model	FLB440	
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		