

Antenna Product Specification

Customer Name: Lockin Technology (Beijing) Co., Ltd.
LOCKIN (U.S.) INC.

Part Name : Built-in antenna 2.4G- black 1.37 tin-tin wire -MCX-K
(integral flange)-See line length 60mm-FPC-48 ×
13mm

Product Model: BAT-V411-WIFI-AI

Customer PN: 0184000111

Antenna type: FPC Antenna

Vendor confirmation					
Department	Compilation	verify	approval		
Autograph	Qiucuiping	LvJie	Liulihua		
Date	2025.02.17	2025.02.17	2025.02.17		
Customer confirmation					
Department					
Autograph					
Date					

Name of contractor: Sichuan B&T Technology Co., Ltd.

address: Room No. 2 and 3, 5F, Building 8, No. 218, Wenwu Middle Road, Tangxun Street, Economic Development Zone, Mianyang City, Sichuan Province

Contents

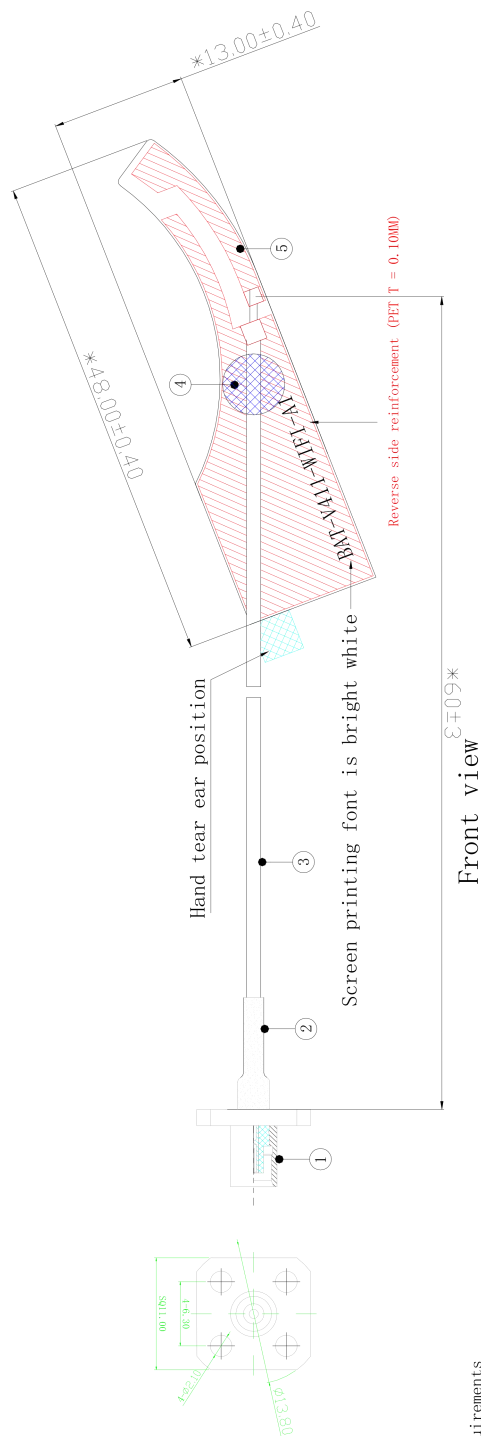
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Revision History

Version	Date	Develop/revise content	Formulate	approval
A0	2024.09.09	First formulation	Qiucui ping	LvJie/Liulihua
A0-1217	2024.12.17	Update FPC antenna and add UV glue	Qiucui ping	LvJie/Liulihua
A1	2025.02.17	Update dispensing position and add point 6 of technical requirements	Qiucui ping	LvJie/Liulihua

二、2D Drawings

Version	Modification date	Revised content
A0	24-9-10	
A0-0913	24-9-13	Heat Shrink Tubing Changeover to Shared Material Number
A0-1216	24-12-16	Update PFC Antenna with UV Adhesive
A1	25-2-17	Update Glue Dispensing Locations and Add Technical Requirement Item 6



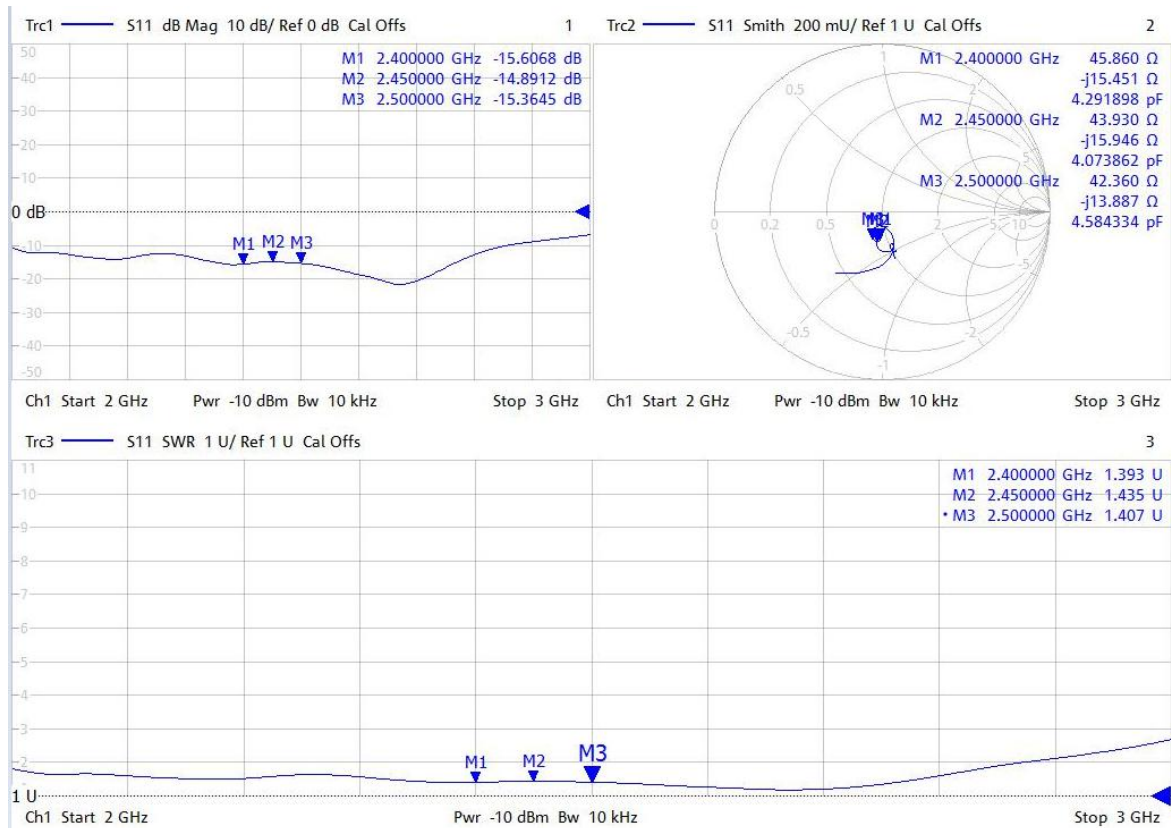
Technical requirements

1. The antenna welding part is firm and the cable size is accurate (the holding force of the connector is $\geq 1\text{kgf}$).
2. The silk screen color is the original color of the substrate, and the font is clear and not easy to fall off.
3. "*" indicates the dimensions that are key to IQC inspection.
4. The packaging and quality standards refer to the Boantong Packaging Specifications and B&T Quality Standards respectively.
5. The materials comply with ROHS.
6. The glue dispensing thickness must be less than 2.5mm (excluding the thickness of the FPC).

[illegible]

三、Electrical performance test report(Whole machine testing)

S11 Parameter



Standing wave ratio data

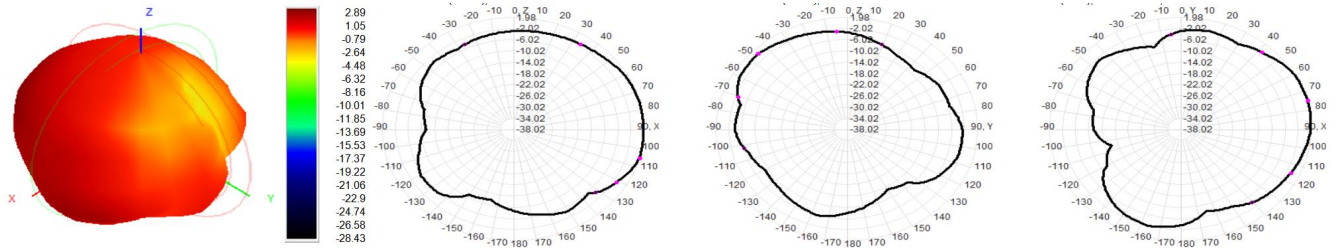
Freq/MHz	2400MHz	2450MHz	2500MHz
VSWR	1.39	1.43	1.40

Antenna darkroom test data

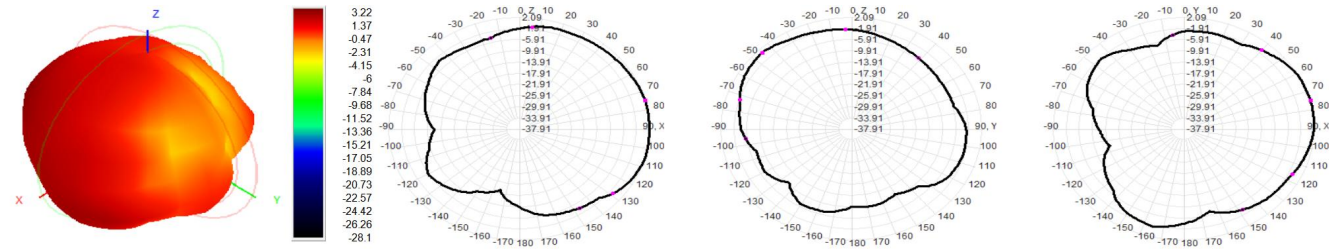
Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2400.0	-3.37	2.89	45.98
2410.0	-3.40	2.92	45.76
2420.0	-3.23	3.08	47.56
2430.0	-3.11	3.11	48.81
2440.0	-3.05	3.11	49.50
2450.0	-2.92	3.22	51.08
2460.0	-2.81	3.24	52.34
2470.0	-2.77	3.18	52.88
2480.0	-2.72	3.09	53.48
2490.0	-2.67	2.97	54.04
2500.0	-2.59	2.91	55.03

Antenna direction diagram

2400M 3D-E1-E2-H



2450M 3D-E1-E2-H



2500M 3D-E1-E2-H

