Sunnyway Technology(Shenzhen)Co.,LTD.

ANTENNA SPEC

Customer name： PAX	Entry name： A99LA
Workingband： GSM850/900/1900 WCDMA2/4/5/8+LTE LTE Band B2/B4/B5/B7/B8/B28/B38/B40/B41/B66	
Motherboard version：	

Sunnyway Material specification		
Specification type	Sunnyway number	Customer number
DIV Antenna	SZ23516IB75-2	

Revision history			
Date of preparation/change	Change content	Altered person	Edition
2024.06.05	New issue	XU	A

Sunnyway Countersign column				
R&D	ME：	To examine：	QE：	Approval：
	RF：	To examine：		

Customer will sign the column			
Electronic Engineer	Project manager	Structural Engineer	Quality Engineer

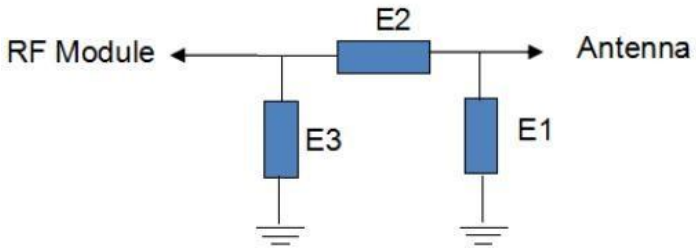
目录 Directory

1. Project information

1.1 Mockup picture

2. Matching circuit

Element	Value
E1	N/A
E2	0 欧姆
E3	N/A



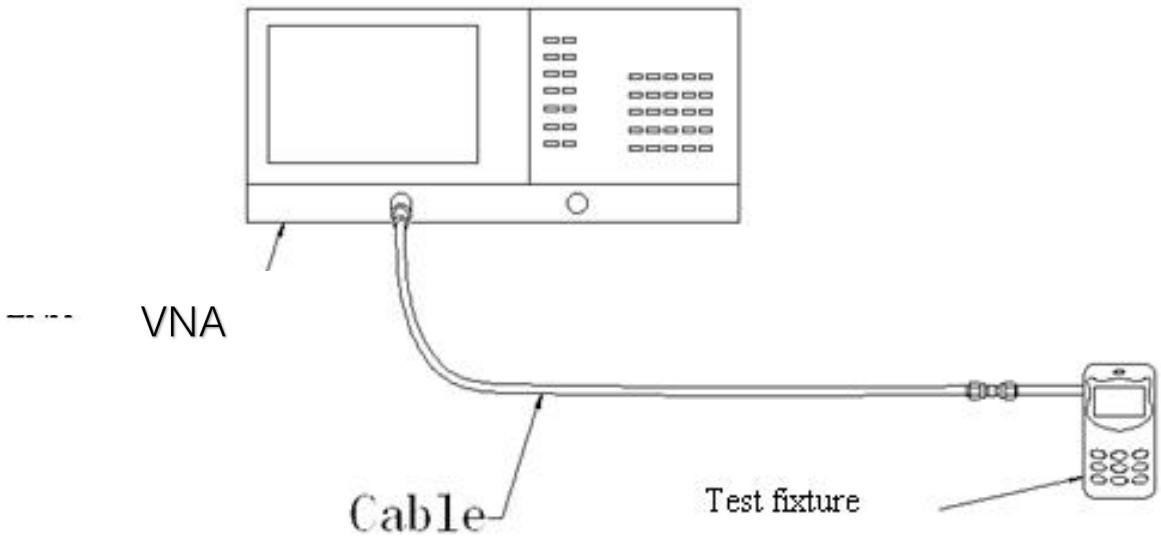
3. Antenna passive testing data

3.1 S11 Description of the test method

Test the equipment: Vector network analyzer (Agilent E5071C)

Test methodology: Use a 50 ohm CABLE cable to export from the instrument test port, use the calibration piece to calibrate and connect the SMA connector of the test fixture, and record the return loss and standing wave ratio corresponding to the relevant frequency point.

Below is a schematic picture of the test:

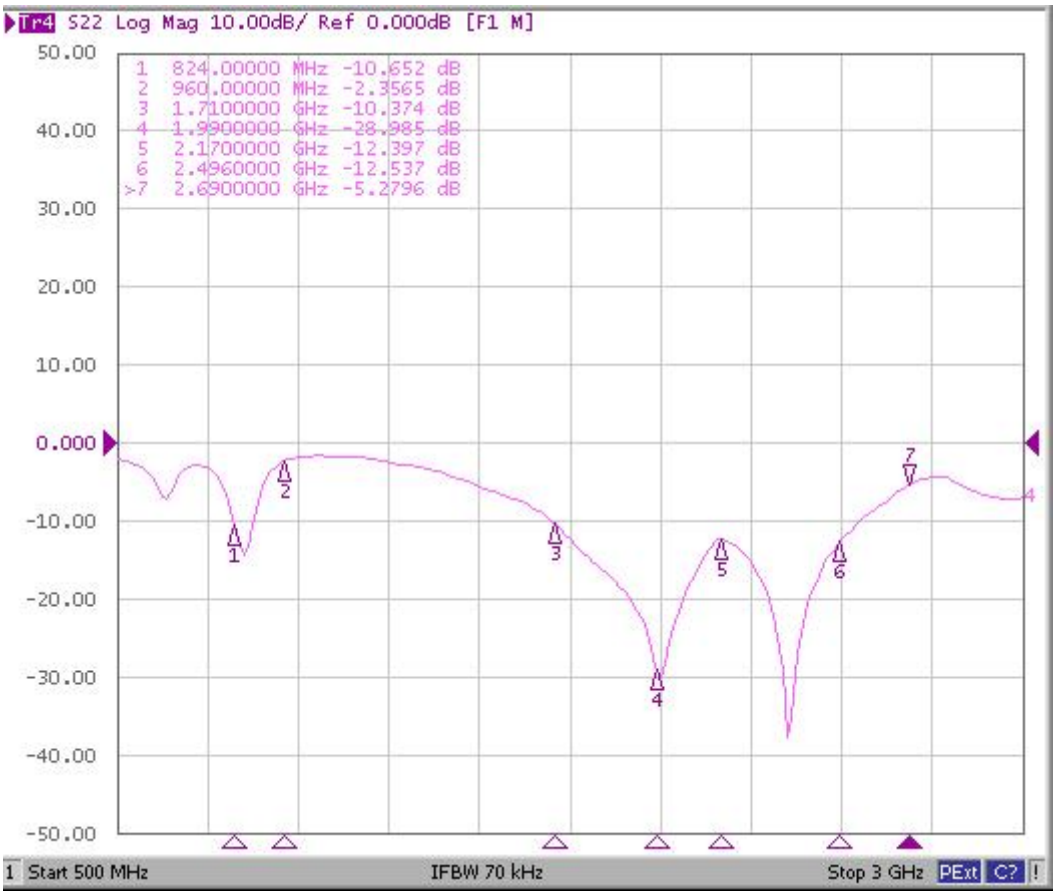


Test schematic diagram

3.2 S11 Test parameters

(Freq.) MHz	834	960	1710	2170	2450	2690
VSWR	-10.65	-2.35	-10.37	-12.39	-12.53	-5.28

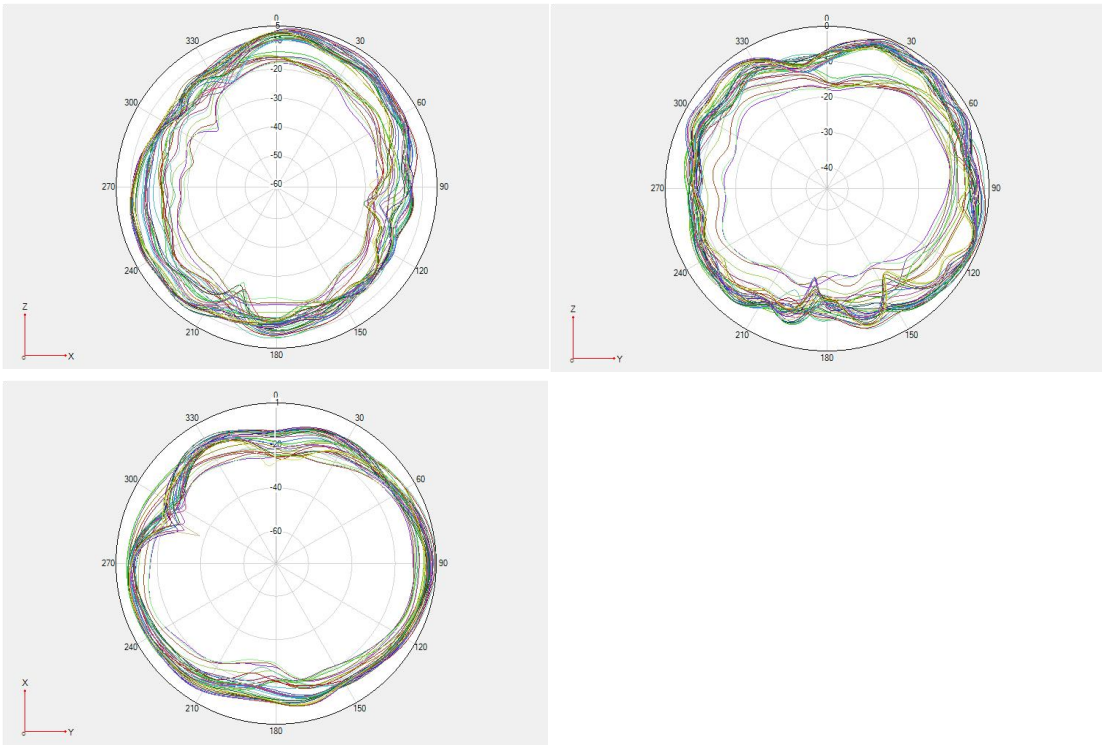
VSWR



3.3 Antenna efficiency and gain

Frequency/Mhz	MaxGain/dBi	Efficiency / %	Frequency/Mhz	MaxGain/dBi	Efficiency / %
800	-4.27	5.73	2130	-1.42	20.07
820	-2.53	7.47	2165	-1.25	20.92
840	-1.51	8.49	2200	-0.99	21.71
860	-0.7	9.3	2235	-1.02	21.9
880	-1.14	8.86	2270	-1.02	22.3
900	-2.56	7.44	2305	-0.9	22.58
1710	-0.89	21.26	2340	-0.54	22.06
1745	-0.38	21.6	2375	0.3	23.49
1780	-1.35	20.45	2410	0.18	23.84
1815	-1.29	19.55	2445	-0.73	22.74
1850	-1.04	19.29	2480	-1.05	22.42
1885	-1.47	18.18	2515	-1.19	21.37
1920	-1.42	18.3	2550	-1.32	20
1955	-1.32	18.37	2585	-1.46	18.84
1990	-1.44	17.94	2620	-2	17.82
2025	-2.3	17.59	2655	-2.52	16.67
2060	-1.65	18.52	2690	-2.51	16.07
2095	-1.04	20.28			

3.4 Directional diagram



4. Antenna active testing data

4.1 Test the environment

Test the system：Multi-probe OTA measurement system（XH-IoT）

Test the environment：Temperature 22°C±3°C, humidity 50%±15%

Test the equipment：When testing passive data, use the network analyzer R&S ZND/ Agilent E5071C
When testing active data, use the Agilent 8960/CMW500/SP9500E/SP8315

5. Environmental treatment methods

No design

6. Standard for mass production antennas

When the antenna is mass-produced, the VSWR is used as the mass production test standard.

According to the differences in the project itself, the following criteria are given:

Freq. (MHz)	Mass production standards
824-960	VSWR(Production performance)<VSWR(Confirmed performance)+0.5
1710-2690	VSWR (Production performance)<VSWR(Confirmed performance)+0.5

7. Engineering drawings