Sunnyway Technology （China） Co.， Ltd.

Antenna SPEC

Customer name:SUNMI	Project name: S2CC
Operating Band: 2.4 G/5GWIFI	
Motherboard version:D2P/S_3288_MB60B	

Material specifications

Specifications and models	Material No	Customer data
FPC+cable	SH21417IB77	T16020039

Change your resume			
Date of establishment/change	Change the content	Changers	Version

SUNNYWAY Will sign the box				
R & D	ME:	Audit:	QE:	Approved:
	RF:	Audit:		

The customer will sign the bar			
Electrical engineer	PM	ME	QE

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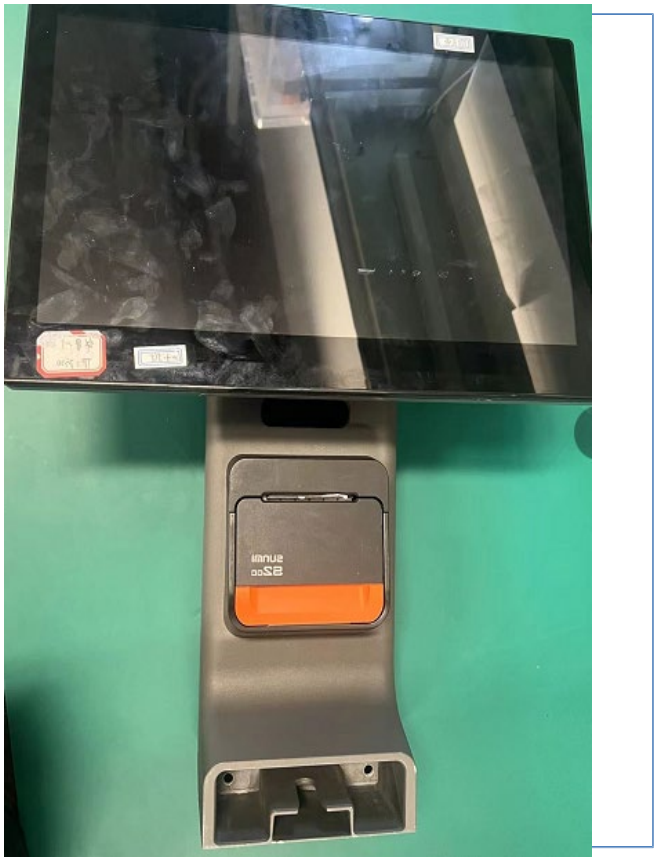
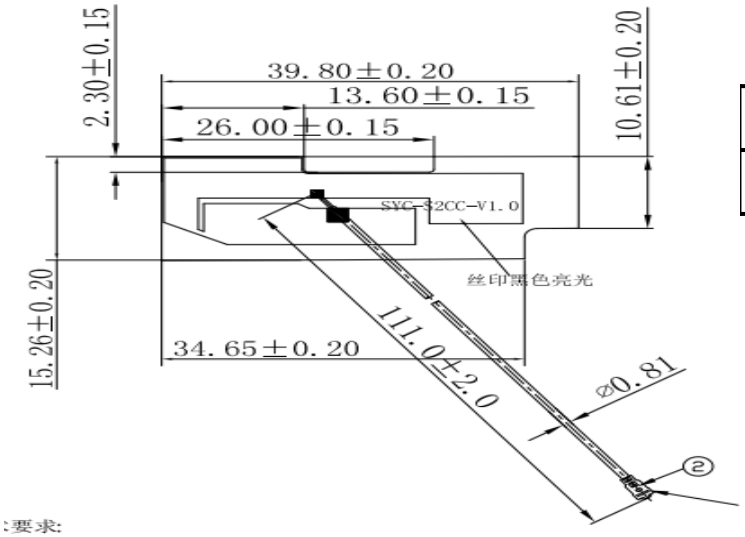
目录

1. Project information

Machine Information



Antenna information



WIFI	SYC-S2CC-V1.0
Motherboard	D2P/S_3288_MB60B

:要求:

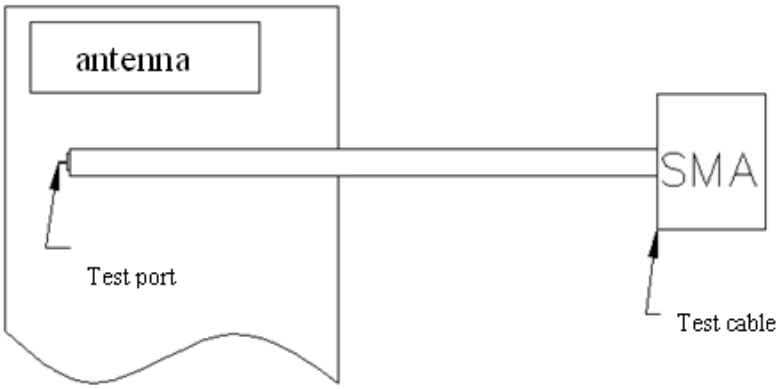
The final verification antenna performance prototype is kept in our company for at least one year to facilitate the analysis and resolution of antenna production anomalies,

Ensure the quality of
antenna shipment

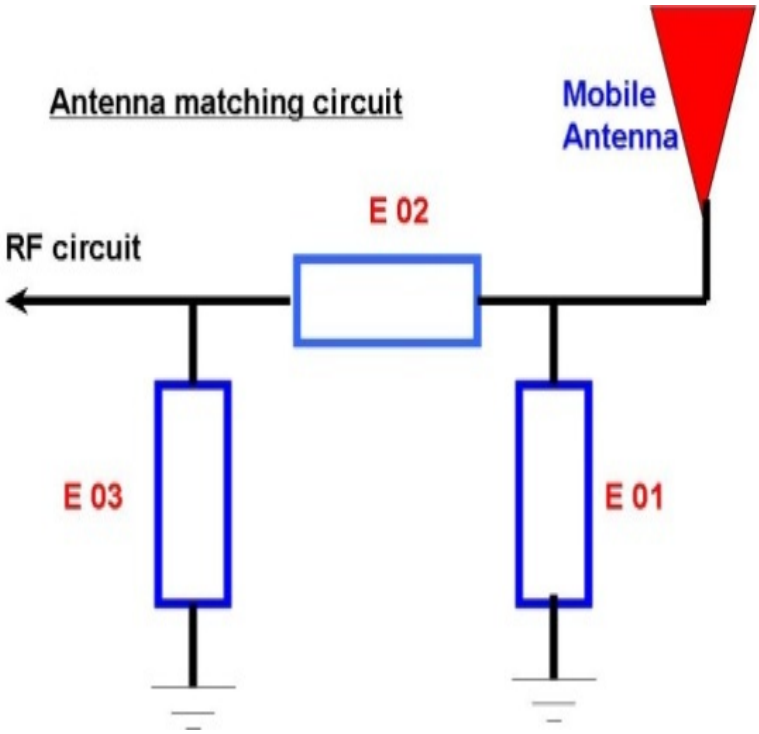
2. Test fixture

Purpose: To test antenna passive parameters as accurately as possible。

methods: the fixture is to use a 50 ohm coaxial cable, one end is connected to the pad after the antenna ‘s matching circuit (the front of the antenna switch) , and the other end is connected to the



3. Matching circuit



Element	Value
E1	N/A
E2	0欧姆
E3	N/A

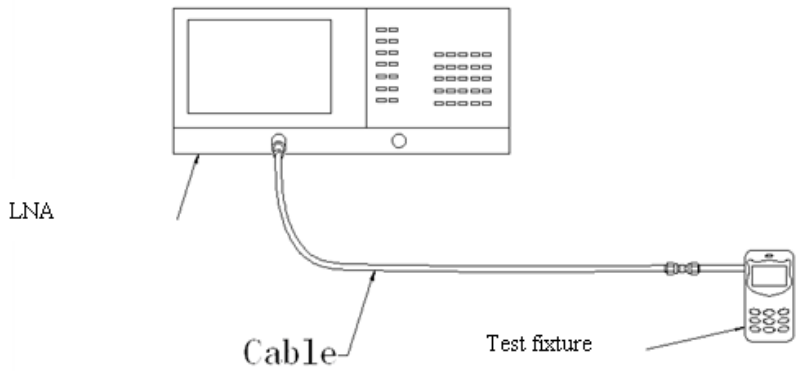
4. S11 Test

1. S11 test method instructions

Test equipment: LNA(E5062A)

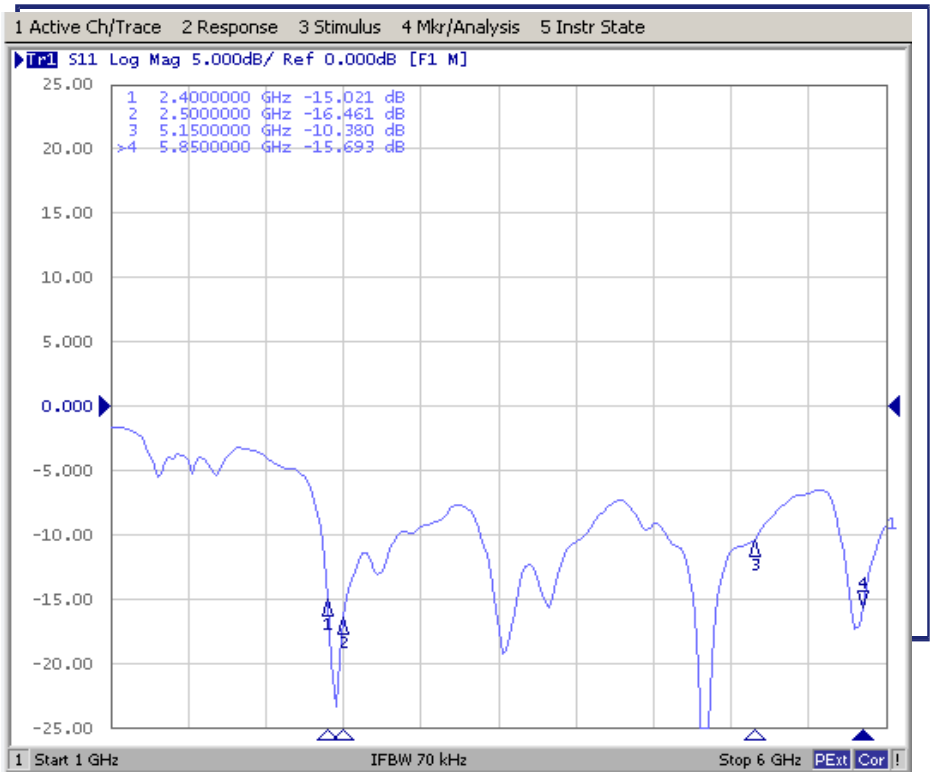
Test method: With a 50 ohm CABLE ,CABLE export from instrument testing port , After the calibration with calibration Key, connected to the SMA connector, Records the return loss and VSWR of the related frequency points.

Test schematic diagram is as follows:



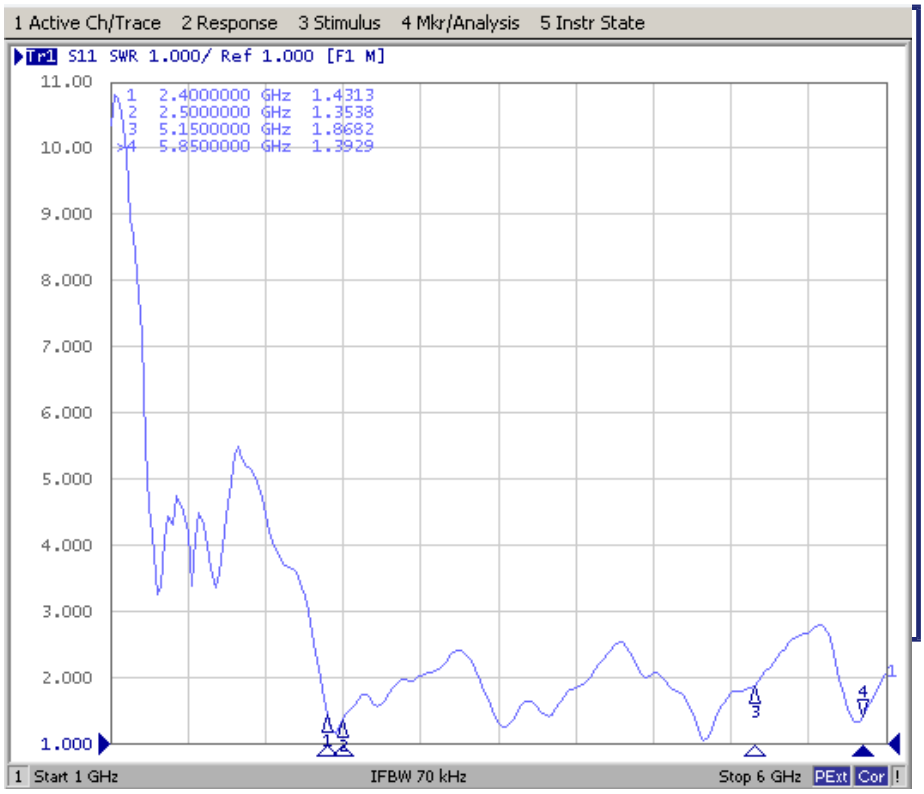
4.2 S11 Parameter

Wi-fi antenna



FRq (MHz)	Return loss
2400	-15.02
2500	-16.16
5150	-10.38
5850	-15.69

Wi-fi antenna



FRq (MHz)	VSWR
2400	1.43
2500	1.35
5150	1.86
5850	1.39

5. Anechoic Chamber test data test system: SHIELDED ANECHOIC chamber test environment: temperature 22 ° C ± 3 ° C, humidity 50% ± 15% test equipment: when testing passive data, when testing active data using Network analyzer Agilent E5062C, agilent 8960/CMW500/E4438C was used

5.1 Passive test data

Passive efficiency of WIFI antennas

Freq (MHz)	Effi (%)	Effi (dB)	Freq (MHz)	Effi (%)	Effi (dB)
2400	40.91	-3.88	5440	34.74	-4.59
2410	41.46	-3.82	5450	34.63	-4.61
2420	41.95	-3.77	5460	34.13	-4.67
2430	41.97	-3.77	5470	35.96	-4.44
2440	42.04	-3.76	5480	35.14	-4.54
2450	42.64	-3.7	5490	35.47	-4.5
2460	43.13	-3.65	5500	36.08	-4.43
2470	42.91	-3.67	5510	36.97	-4.32
2480	43.29	-3.64	5520	36.12	-4.42
2490	42.77	-3.69	5530	36.18	-4.42
2500	42.46	-3.72	5540	36.93	-4.33
5150	37.63	-4.25	5550	37.39	-4.27
5160	37.05	-4.31	5560	37.53	-4.26
5170	37.15	-4.3	5570	37.18	-4.3
5180	37.88	-4.22	5580	38.12	-4.19
5190	37.52	-4.26	5590	37.73	-4.23
5200	37.07	-4.31	5600	37.93	-4.21
5210	37.82	-4.22	5610	37.25	-4.29
5220	37.68	-4.24	5620	38.35	-4.16
5230	36.05	-4.43	5630	38.05	-4.2
5240	36.44	-4.38	5640	38.47	-4.15
5250	36.11	-4.42	5650	37.68	-4.24
5260	36.05	-4.43	5660	37.38	-4.27
5270	36.87	-4.33	5670	37.28	-4.28
5280	36.82	-4.34	5680	37.9	-4.21
5290	35.21	-4.53	5690	37.89	-4.21
5300	35.41	-4.51	5700	38.54	-4.14
5310	35.58	-4.49	5710	38.36	-4.16
5320	35.37	-4.51	5720	38.08	-4.19
5330	35.85	-4.45	5730	37.52	-4.26
5340	35.44	-4.51	5740	38.33	-4.16
5350	35.6	-4.49	5750	38.03	-4.2
5360	35.95	-4.44	5760	38.38	-4.16
5370	35.42	-4.51	5770	38.57	-4.14
5380	35.79	-4.46	5780	38.16	-4.18
5390	35.39	-4.51	5790	38.93	-4.1
5400	35.24	-4.53	5800	38.67	-4.13
5410	35.98	-4.44			
5420	35.08	-4.55			
5430	34.92	-4.57			

WI-FI antenna gain

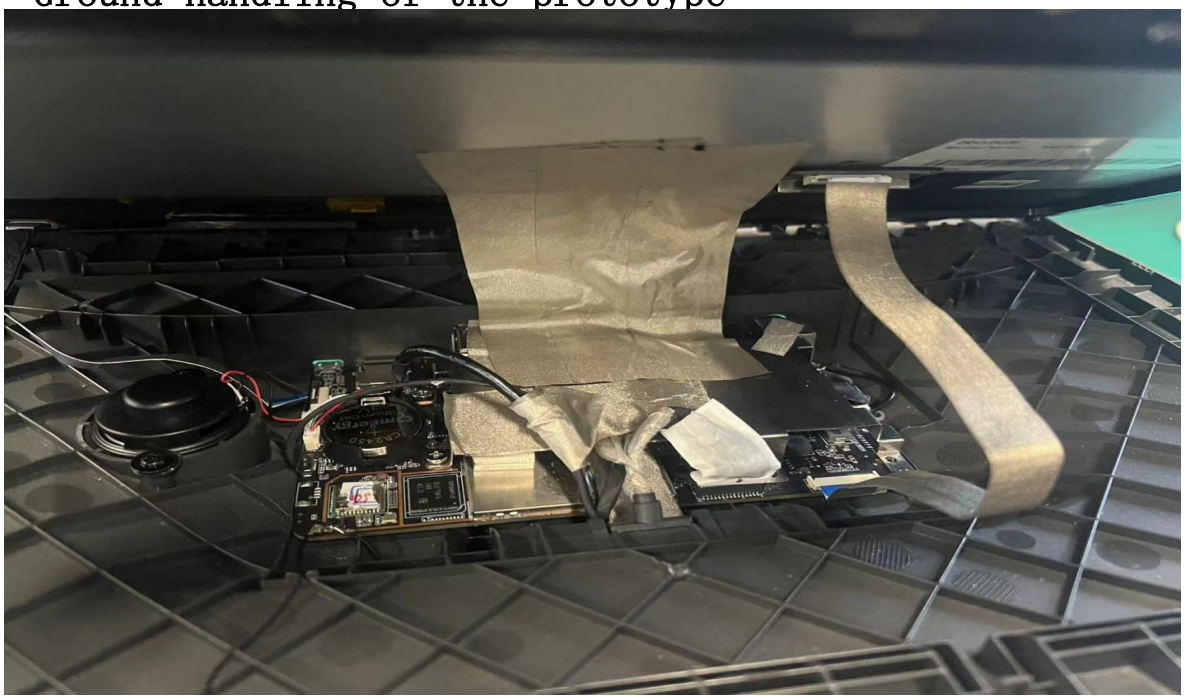
Band	Gain (dbi)
2.4G 802.11B	1.58
2.4G 802.11G	1.58
2.4G 802.11N	1.58
5.15G 802.11A	0.36
5.8G 802.11A	1.02

5.2 Active test data

WIFI antenna active test data (free space, screen off)

频段	信道	OTA(dB)	
		TRP	TIS
802.11B	1	14.37	-87.27
	7	14.18	-86.05
	13	14.1	-87.11
802.11G	1	12.29	-71.97
	7	12.27	-75.22
	13	12.6	-73.28
802.11N	1	12.35	-72.5
	7	12.1	-69
	13	12.47	-72.54
802.11A	36	10.13	-66.82
	149	10.1	-71.94
	165	10.67	-72.49

6. Ground handling of the prototype



7. The standing wave ratio (SWR) is used as the test standard for antenna mass production. Based on the differences of the project itself, the following criteria are given:

Frequence	SPEC ,Mass Production
2400MHz--2500MHz 5150MHz--5850MHz	VSWR (MP performance) <VSWR(Verify performance)+0.5