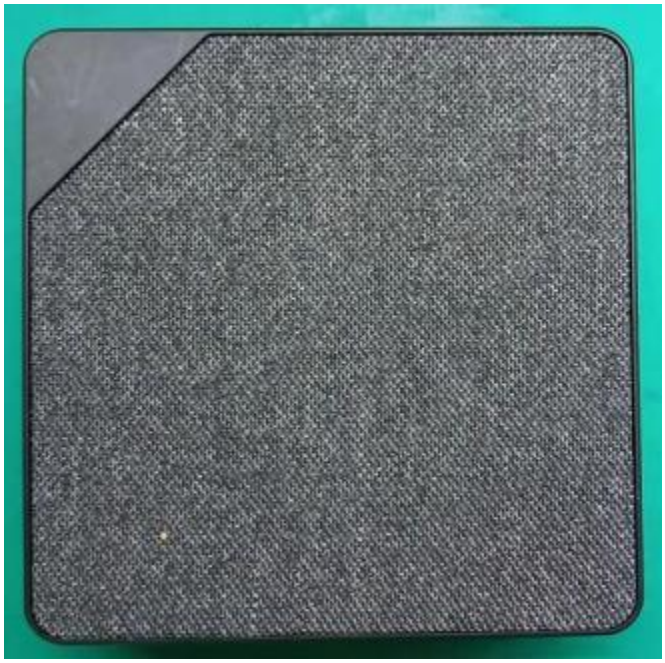
shenzhenTian wei xun wireless technology co.,ltd.

Product performance and specification

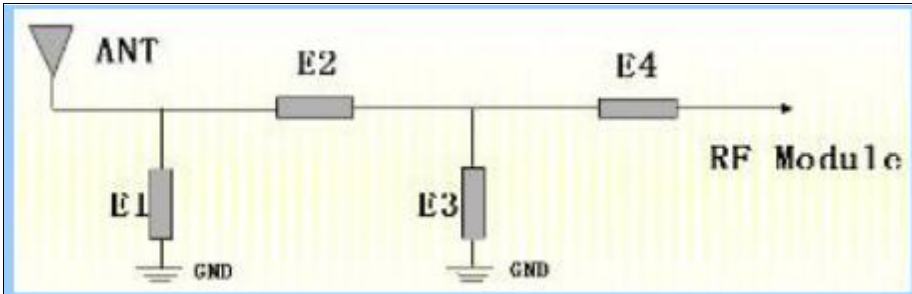
Indexing

1.1 Project drawing



IPC-A

1.1.1 Antenna matching pattern



Element	Capacitance	Inductance
E1(0402)	--	--
E2(0402)	--	--
E3(0402)	--	--
E4(0402)	--	--

The match says: has the match been changed according to the original motherboard

2.1 Purpose

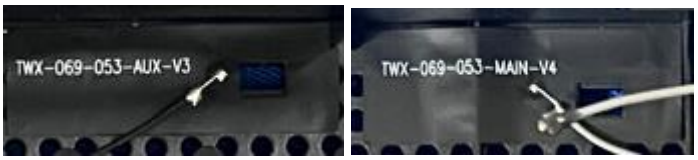
Regulate the product specifications and test methods of mobile communication terminal antennas produced by Shenzhen Tianwei Wireless Technology Co., Ltd.

Fan, avoid errors caused by different test conditions and methods

3.1 Antenna

3.1.1 Electrical specifications and materials of antennas

This report mainly provides the test status of the structural performance parameters of the IPC-A antenna.



Physical drawing

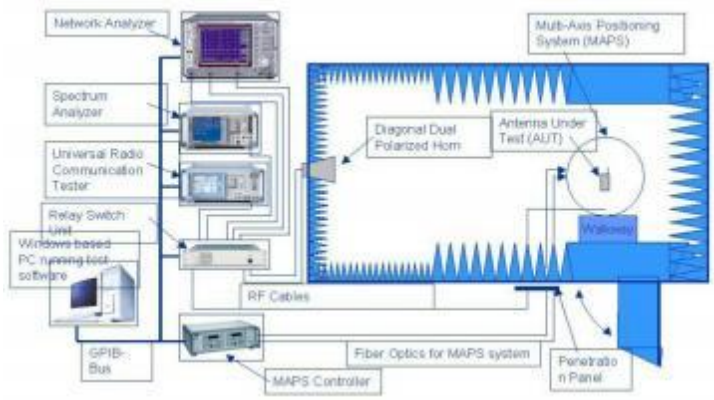
3.1.2 Antenna form**:**

Implementation type: PIFA antenna material: FPC+ coaxial line

3.1.3 Working band of antenna design:

The antenna operates in the frequency band 2412MHz ~ 2472MHz\ 5100MHz~5820MHz

3.1.4 Measurement data of main Antenna in ETS-SG24SYSTEM 3D Test system



picture (1) ETS test system

picture(2) Three-dimensional positioning device for mobile phone in darkroom

Passive performance index:

Main antenna

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-2.92	-3.00	-3.01	-3.09	-3.11	-2.92	-2.84	-2.98	-2.87	-3.08	-2.91
Peak EIRP (dBm)	2.06	2.02	2.03	2.08	2.15	2.34	2.42	2.23	2.23	2.03	2.15
Directivity (dBi)	4.98	5.03	5.05	5.17	5.26	5.26	5.26	5.21	5.10	5.11	5.06
Efficiency (dB)	-2.92	-3.00	-3.01	-3.09	-3.11	-2.92	-2.84	-2.98	-2.87	-3.08	-2.91
Efficiency (%)	51.10	50.10	50.00	49.10	48.90	51.00	52.00	50.40	51.60	49.20	51.20
Gain (dBi)	2.06	2.02	2.03	2.08	2.15	2.34	2.42	2.23	2.23	2.03	2.15

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	5700.0	5710.0	5720.0	5730.0	5740.0	5750.0	5760.0	5770.0	5780.0	5790.0	5800.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-2.79	-2.88	-2.72	-2.68	-2.60	-2.83	-2.94	-2.90	-2.52	-2.34	-2.43
Peak EIRP (dBm)	3.57	3.89	3.66	3.73	3.92	3.68	3.51	3.66	4.02	4.26	4.12
Directivity (dBi)	6.37	6.78	6.39	6.41	6.53	6.51	6.45	6.56	6.54	6.60	6.55
Efficiency (dB)	-2.79	-2.88	-2.72	-2.68	-2.60	-2.83	-2.94	-2.90	-2.52	-2.34	-2.43
Efficiency (%)	52.60	51.50	53.40	53.90	54.90	52.20	50.80	51.30	56.00	58.40	57.20
Gain (dBi)	3.57	3.89	3.66	3.73	3.92	3.68	3.51	3.66	4.02	4.26	4.12

AUX antenna

Frequency ID	1	3	5	7	9	11	13	15	17	19	21
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-3.30	-3.21	-3.26	-3.25	-3.28	-3.18	-3.24	-3.19	-3.12	-3.06	-2.95
Peak EIRP (dBm)	1.87	1.94	1.88	1.81	1.70	1.73	1.59	1.54	1.61	1.69	1.79
Directivity (dBi)	5.17	5.15	5.14	5.07	4.98	4.91	4.82	4.73	4.73	4.75	4.74
Efficiency (dB)	-3.30	-3.21	-3.26	-3.25	-3.28	-3.18	-3.24	-3.19	-3.12	-3.06	-2.95
Efficiency (%)	46.70	47.80	47.20	47.30	47.00	48.10	47.40	47.90	48.70	49.40	50.70
Gain (dBi)	1.87	1.94	1.88	1.81	1.70	1.73	1.59	1.54	1.61	1.69	1.79

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	5700.0	5710.0	5720.0	5730.0	5740.0	5750.0	5760.0	5770.0	5780.0	5790.0	5800.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-2.35	-2.50	-2.50	-2.51	-2.50	-2.69	-2.73	-2.79	-2.55	-2.45	-2.59
Peak EIRP (dBm)	4.75	4.47	4.40	4.63	4.48	4.29	4.73	4.45	4.51	4.67	4.66
Directivity (dBi)	7.09	6.98	6.90	7.14	6.98	6.98	7.46	7.24	7.05	7.12	7.25
Efficiency (dB)	-2.35	-2.50	-2.50	-2.51	-2.50	-2.69	-2.73	-2.79	-2.55	-2.45	-2.59
Efficiency (%)	58.20	56.20	56.30	56.10	56.20	53.80	53.40	52.60	55.60	56.90	55.10
Gain (dBi)	4.75	4.47	4.40	4.63	4.48	4.29	4.73	4.45	4.51	4.67	4.66

3.1.5 Data of main antenna measured by network analyzer

SWR

Return loss

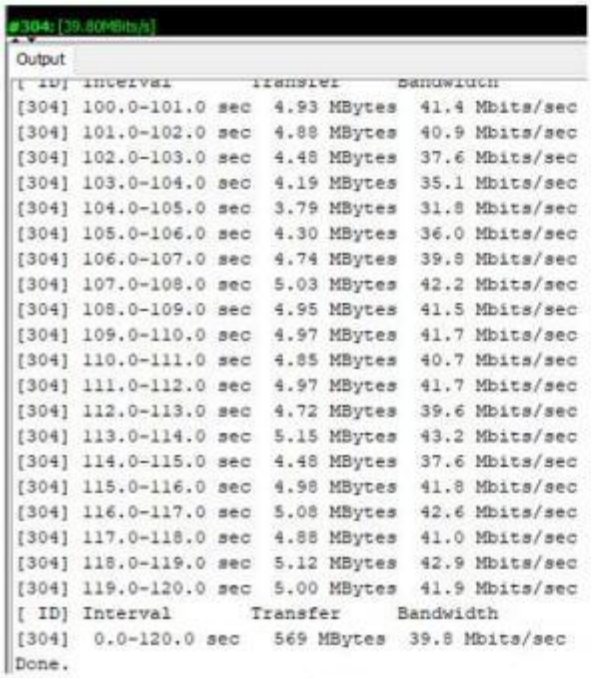
Main antenna

SWR

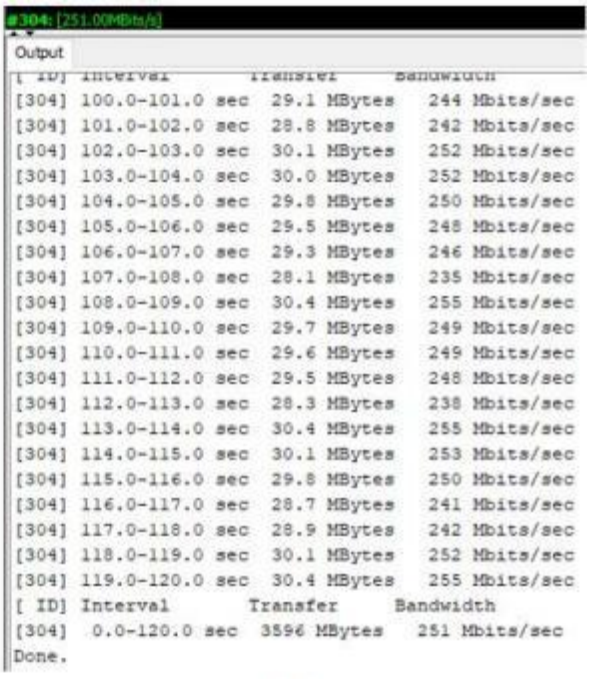
Return loss

AUX antenna

3.1.6 Actual test results of antenna



2.4G



5G