

Tianpin Intelligent IoT Technology (Shenzhen) Co., Ltd	Name: Sample Approval
	Ver: V1.0
	date: 2025.1.1

Sample Approval Sheet

Project Name: DM35R

Sample Name: WIFI A/B

Sample SPEC:

Customer PN.:

Transfer Date: 2025.1.1

Supplier Confirm	Project	Engineer	Quality
date	2025.1.1	2025.1.1	2025.1.1

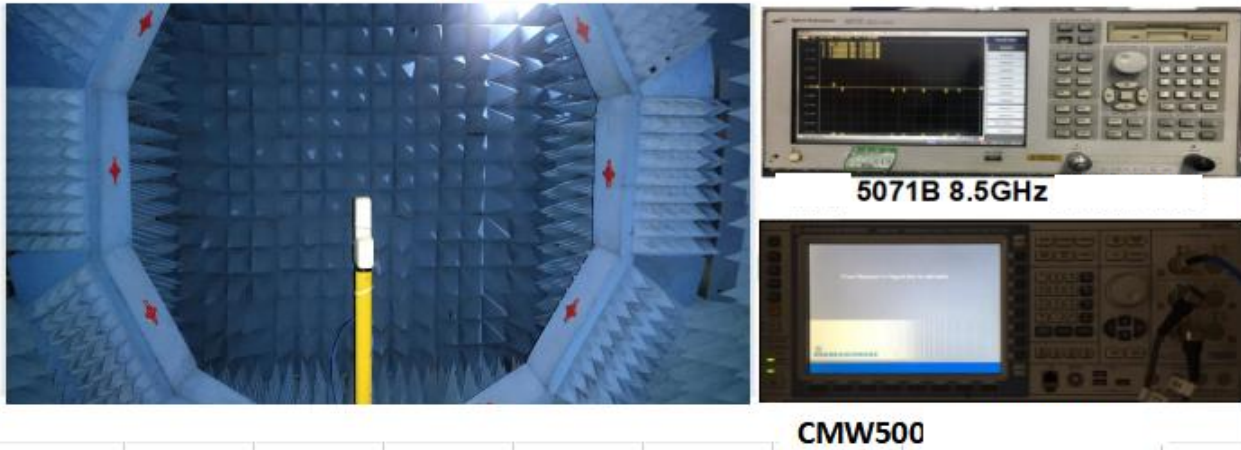
Customer confirm	PM	Electron	MD	PD	QE
date					

conclusion	☐ MP	☐ Limits use () K
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☐ ROHS

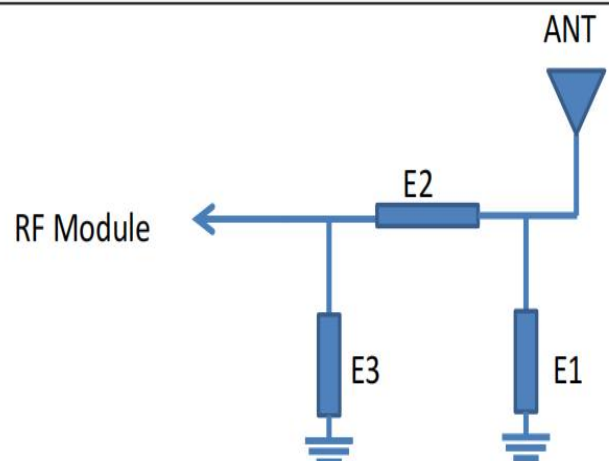
Supplier name: Tianpin Intelligent IoT Technology (Shenzhen) Co., Ltd
Phone: 15817520845

Testing equipment and environment



Antenna circuit matching description

Element	Value
E1	
E2	



3.1 Passive gain efficiency of antenna WIFI A

Frequency ID	1	2	3	4	5	6	7	8
Frequency (MHz)	2400.0	2500.0	5200.0	5250.0	5500.0	5600.0	5750.0	5850.0
Efficiency (dBi)	-3.03	-2.86	-1.52	-1.57	-1.52	-1.38	-1.77	-1.48
Gain (dBi)	3.86	4.98	5.79	5.75	4.47	4.13	3.24	4.20
Efficiency (%)	49.79	51.76	70.48	69.65	70.44	72.74	66.54	71.16
Directivity (dB)	6.89	7.84	7.31	7.32	6.00	5.51	5.01	5.68
Peak Gain Position (Theta)	171.00	171.00	53.00	54.00	52.00	51.00	154.00	153.00
Peak Gain Position (Phi)	196.00	197.00	246.00	249.00	251.00	256.00	259.00	263.00
Efficiency ThetaPol (%)	28.65	33.19	20.24	19.79	23.02	25.07	27.42	31.70
Efficiency PhiPol (%)	21.14	18.57	50.23	49.86	47.42	47.66	39.12	39.46
Upper Hem. Efficiency (%)	20.87	21.06	42.93	43.42	44.40	45.44	41.88	43.76
Lower Hem. Efficiency (%)	28.92	30.71	27.55	26.23	26.04	27.30	24.66	27.40

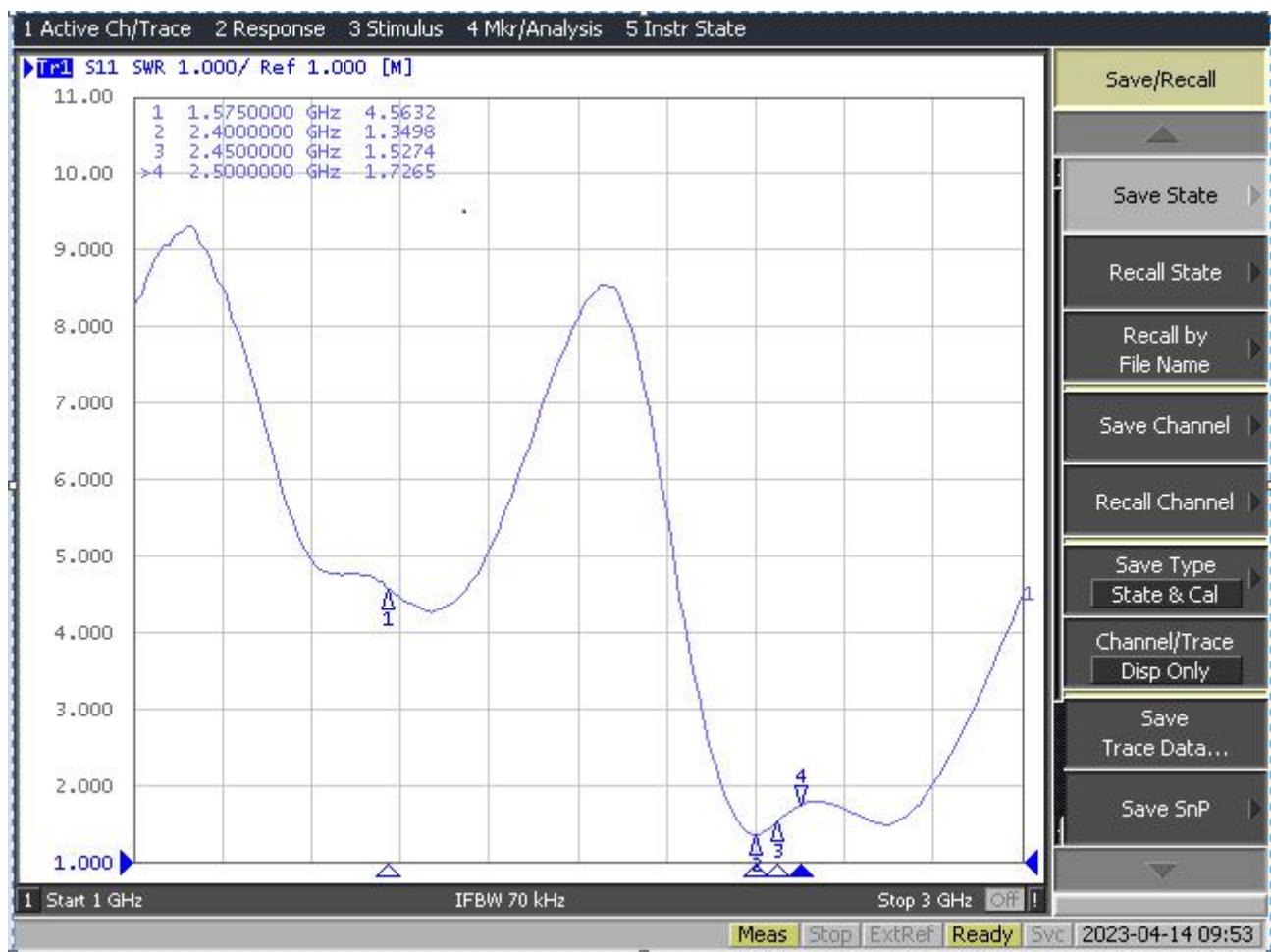
T90(H)圆度	10.12	12.01	15.17	13.92	14.22	13.28	14.04	10.83
Gain 15deg (dBi)								
E1(XZ)波瓣宽度	17.00	16.00	65.00	63.00	61.00	60.00	82.00	56.00
E1(XZ)前后比	0.00	0.00	4.69	5.18	3.92	2.05	1.80	1.13
E2(YZ)波瓣宽度	20.00	18.00	89.00	67.00	95.00	86.00	71.00	34.00
E2(YZ)前后比	0.00	0.00	0.58	0.09	0.00	0.03	0.28	0.00
最大增益处轴比(P)	5.81	8.91	14.31	13.43	11.14	10.43	18.86	19.32
仰角 10 度最差(大)轴比(P)	51.75	68.69	83.77	65.01	57.54	55.22	70.68	81.56
Hc(XY)波瓣宽度	225.00	47.00	75.00	88.00	85.00	95.00	99.00	115.00
Hc(XY)前后比	4.03	5.27	6.34	5.11	5.38	4.31	4.85	3.40
Empty								

3.2 Passive gain efficiency of antenna WIFI B

Frequency ID	1	2	3	4	5	6	7	8
Frequency (MHz)	2400.0	2500.0	5200.0	5500.0	5600.0	5650.0	5750.0	5850.0
Efficiency (dBi)	-2.74	-2.07	-1.44	-1.01	-1.10	-0.91	-0.82	-0.92
Gain (dBi)	2.64	3.48	4.54	4.58	4.73	5.03	5.07	4.68
Efficiency (%)	53.24	62.02	71.82	79.32	77.68	81.01	82.88	80.83
Directivity (dB)	5.38	5.56	5.98	5.58	5.83	5.94	5.89	5.61
Peak Gain Position (Theta)	41.00	175.00	68.00	81.00	82.00	68.00	69.00	68.00
Peak Gain Position (Phi)	284.00	106.00	241.00	154.00	142.00	252.00	225.00	227.00
Efficiency ThetaPol (%)	30.99	34.03	66.05	75.61	73.94	77.46	79.37	77.46
Efficiency PhiPol (%)	22.25	27.99	5.77	3.71	3.74	3.55	3.51	3.37
Upper Hem. Efficiency (%)	31.69	33.34	40.07	44.26	43.55	45.80	45.83	44.49
Lower Hem. Efficiency (%)	21.55	28.69	31.75	35.06	34.13	35.21	37.05	36.35

T90(H)圆度	15.12	10.06	16.22	15.04	19.64	18.43	19.49	16.81
Gain 15deg (dBi)								
E1(XZ)波瓣宽度	24.00	25.00	54.00	59.00	62.00	65.00	62.00	63.00
E1(XZ)前后比	0.00	0.00	11.33	10.49	8.59	8.71	8.76	8.11
E2(YZ)波瓣宽度	51.00	18.00	26.00	23.00	21.00	29.00	24.00	23.00
E2(YZ)前后比	0.22	0.00	8.47	8.83	12.47	8.84	11.03	10.70
最大增益处轴比(P)	3.74	10.76	28.22	25.63	27.09	32.11	54.28	37.44
仰角 10 度最差(大)轴比(P)	86.08	65.17	54.64	64.73	72.78	77.60	68.99	76.38
Hc(XY)波瓣宽度	77.00	138.00	206.00	185.00	185.00	189.00	196.00	194.00
Hc(XY)前后比	0.16	0.04	0.06	0.00	0.00	0.00	0.00	0.00
Empty								

4.1 WIFI A Standing wave diagram





Darkroom Limit Antenna+Matching Absorption Darkroom - Distance of 2 meters

FPC ANT		75mm+IPEX							
2. 4G	0	45	90	135	180	225	270	315	
RX	76. 2	77. 2	73. 6	75. 2	72. 9	73. 4	76. 8	75. 6	
TX	69. 3	66. 5	68. 9	66. 1	64. 6	68. 5	68. 7	68. 6	
5G	0	45	90	135	180	225	270	315	
RX	147. 7	148. 3	142. 6	144. 1	144. 6	140. 4	145. 8	146. 9	
TX	138. 1	131. 1	135. 7	134. 6	133. 7	133. 6	142. 3	135. 4	



7 Antenna assembly and pasting position

