Shenzhen Chuangkehua Technology Co.Ltd

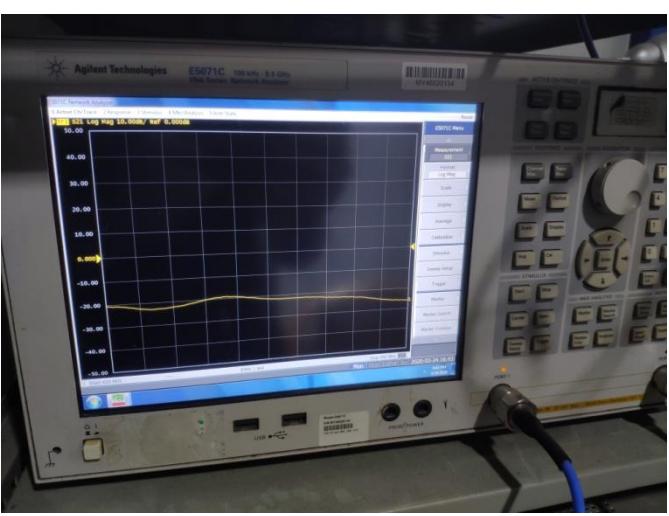|			
entry name	3S	**Working frequency band**	2.4G/5GWIFI
Antenna Engineer	詹	**Structural Engineer**	周
date	June 19, 2024	**Antenna material**	FPC

7*4*3M 3D微波暗室

MT8820C

Agilent 8960

Agilent E5071C

Matching circuit
(unchanged, original machine matching)

Element	E1	E2	E3
Value	/	/	/
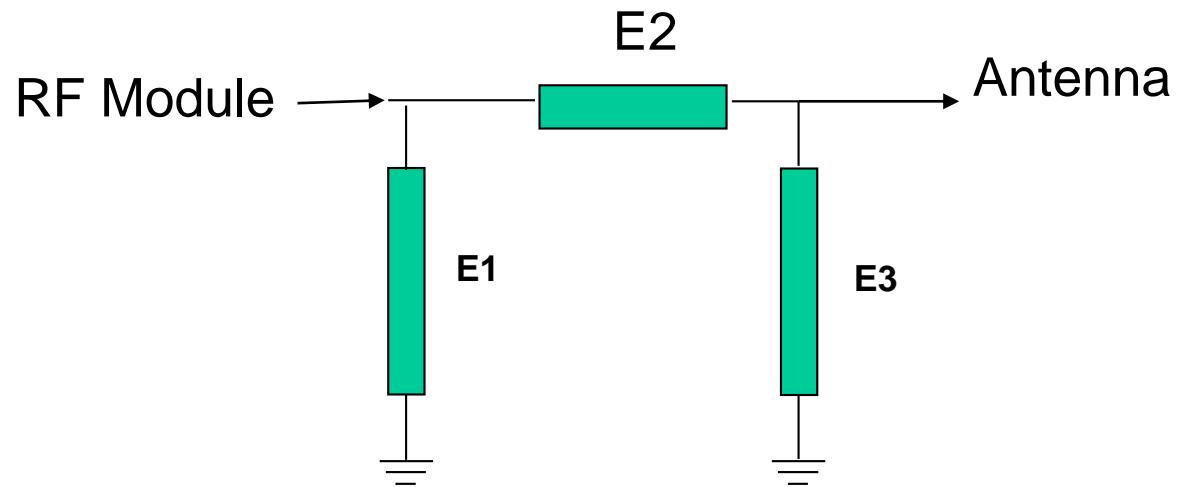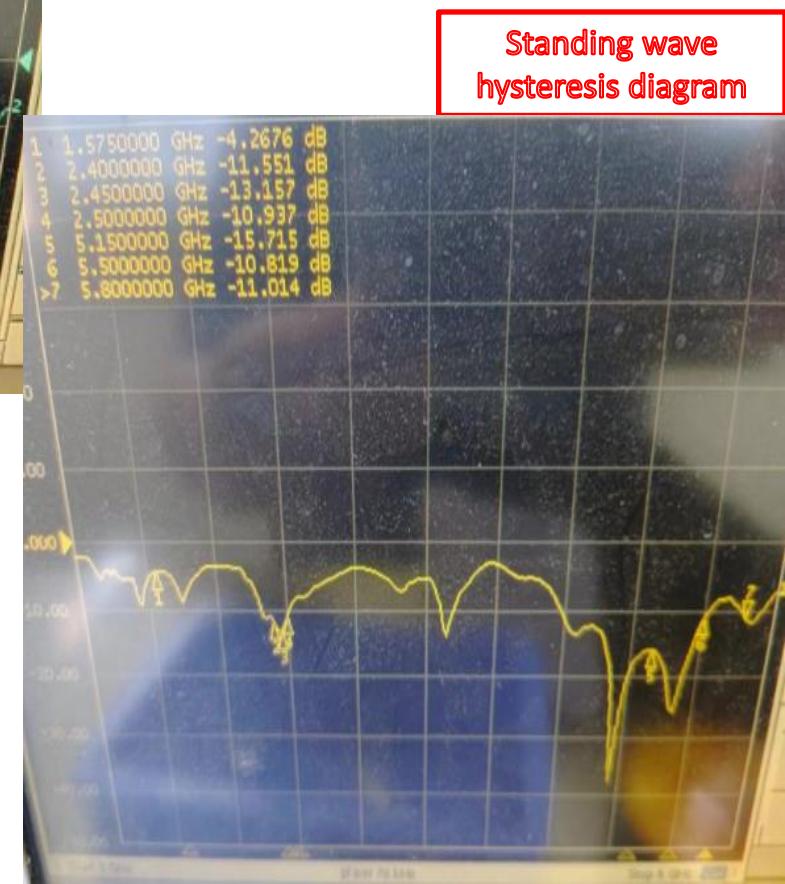
E2

RF Module → Antenna

E1   E3

Antenna parameters

1	1.5750000 GHz	4.1430
2	2.4000000 GHz	1.6940
3	2.4500000 GHz	1.5318
4	2.5000000 GHz	1.7366
5	5.1500000 GHz	1.4062
6	5.5000000 GHz	1.8344
>7	5.8000000 GHz	1.8020

Standing wave diagram

Standing wave hysteresis diagram

1	1.5750000 GHz	-4.2676 dB
2	2.4000000 GHz	-11.551 dB
3	2.4500000 GHz	-13.157 dB
4	2.5000000 GHz	-10.937 dB
5	5.1500000 GHz	-15.715 dB
6	5.5000000 GHz	-10.819 dB
>7	5.8000000 GHz	-11.014 dB

Antenna parameters

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
				Passive Test For WIFI2.4						
2400	39.34	-4.05	-0.69	-2.84	19.851	19.49	-0.69	-13.3	47.51	47.63
2410	39.15	-4.07	-0.78	-2.93	19.674	19.476	-0.78	-13.35	47.34	47.64
2420	36.45	-4.38	-1.07	-3.22	18.368	18.083	-1.07	-14.04	47.27	47.45
2430	33.34	-4.77	-1.53	-3.68	16.695	16.641	-1.53	-15	47.09	47.44
2440	32.85	-4.83	-1.64	-3.79	16.444	16.406	-1.64	-15.94	47.25	47.56
2450	32.94	-4.82	-1.52	-3.67	16.407	16.533	-1.52	-16.85	47.42	47.77
2460	36.18	-4.42	-0.93	-3.08	17.96	18.217	-0.93	-17.18	47.67	47.91
2470	40.09	-3.97	-0.51	-2.66	19.627	20.46	-0.51	-16.97	47.7	48.04
2480	45.49	-3.42	0.22	-1.93	22.202	23.287	0.22	-16.58	47.89	48.23
2490	48.42	-3.15	0.48	-1.67	23.293	25.124	0.48	-16.26	48.1	48.34
2500	44.85	-3.48	0.27	-1.88	21.434	23.418	0.27	-16.8	47.94	48.19

3D image of antenna

2400.000MHz
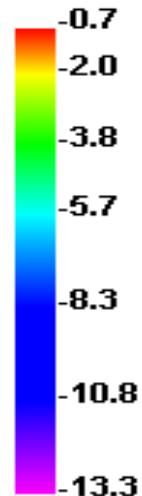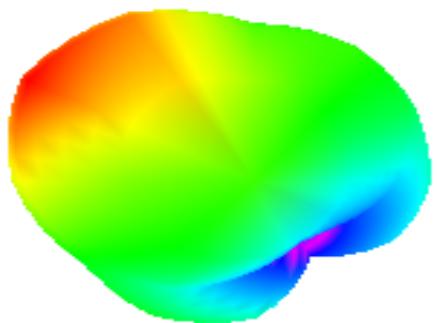
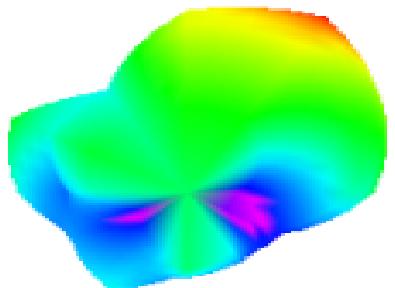2400.000MHz H
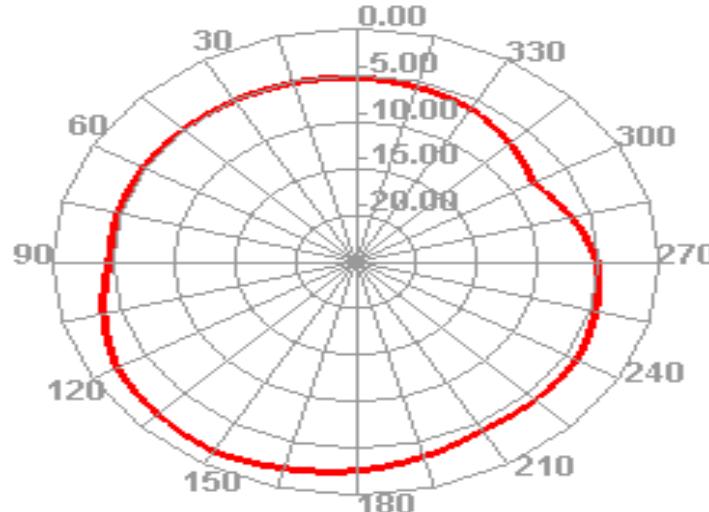
2400.000MHz E1
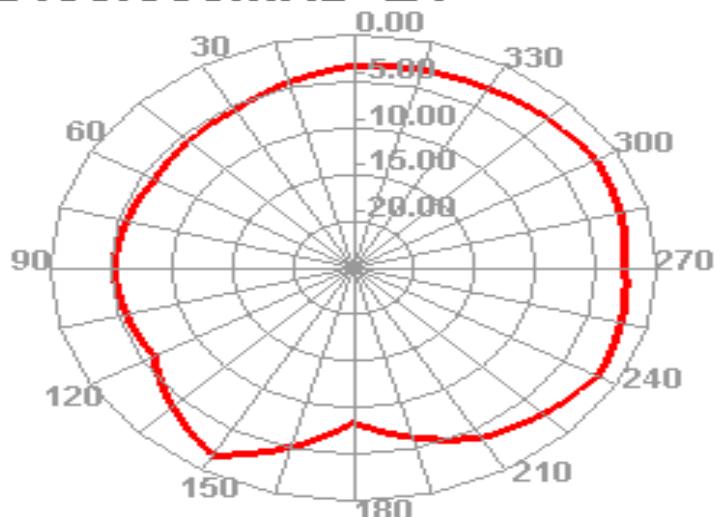
2400.000MHz E2
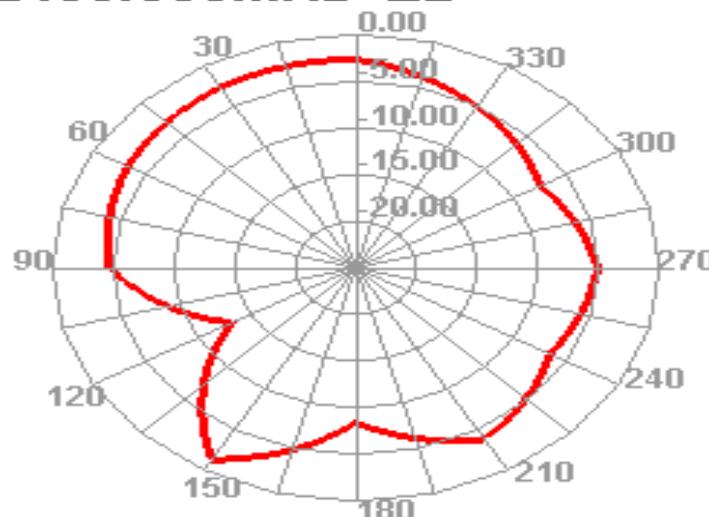
5G Passive Data

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
				Passive Test For WIFI5.8						
5150	33	-4.82	1.65	-0.5	14.651	18.345	1.65	-19.36	56.04	56.11
5160	38.06	-4.19	2.14	-0.01	16.867	21.196	2.14	-18.9	55.94	55.86
5170	38.09	-4.19	2.12	-0.03	16.858	21.236	2.12	-18.99	55.74	55.67
5180	45.61	-3.41	2.81	0.66	20.139	25.476	2.81	-18.79	56.03	55.65
5190	44.76	-3.49	2.59	0.44	19.777	24.981	2.59	-19.2	55.68	55.83
5200	43.56	-3.61	2.46	0.31	19.225	24.34	2.46	-18.83	55.87	55.81
5210	46.83	-3.29	2.78	0.63	20.596	26.231	2.78	-18.01	55.94	55.96
5220	47.21	-3.26	2.91	0.76	20.688	26.517	2.91	-17.75	55.86	55.79
5230	45.54	-3.42	2.89	0.74	20.02	25.523	2.89	-18.18	55.99	55.84
5240	45.11	-3.46	3.01	0.86	19.721	25.387	3.01	-18.09	56.05	55.72
5250	43.14	-3.65	2.99	0.84	18.69	24.453	2.99	-17.92	55.81	55.6
5260	44.89	-3.48	3.07	0.92	19.727	25.164	3.07	-18.25	55.61	55.43
5270	43.87	-3.58	3.15	1	19.297	24.573	3.15	-17.41	55.78	55.36
5280	45.02	-3.47	3.33	1.18	19.782	25.237	3.33	-16.57	55.63	55.51
5290	46.62	-3.31	3.56	1.41	20.598	26.023	3.56	-16.05	55.97	55.74
5300	47.38	-3.24	3.71	1.56	21.032	26.352	3.71	-16.82	55.77	55.91
5310	50.88	-2.93	4.16	2.01	22.642	28.242	4.16	-17.67	56.17	56.1
5320	46.82	-3.3	3.94	1.79	20.959	25.858	3.94	-19.4	56.2	56.14
5330	47.36	-3.25	3.96	1.81	21.253	26.112	3.96	-20.35	56.64	56.39
5340	46.73	-3.3	4.03	1.88	21.059	25.672	4.03	-22.67	56.47	56.34
5350	44.54	-3.51	3.87	1.72	19.931	24.613	3.87	-24.19	56.43	56.64
5360	44.44	-3.52	3.93	1.78	19.921	24.52	3.93	-25.14	56.34	56.36
5370	46.12	-3.36	4.05	1.9	20.681	25.443	4.05	-24.62	56.12	56.43
5380	46.19	-3.35	4.06	1.91	20.785	25.41	4.06	-25.72	55.97	56.11
5390	46.86	-3.29	4.21	2.06	21.033	25.829	4.21	-25.32	55.88	56.4
5400	49.36	-3.07	4.54	2.39	22.187	27.175	4.54	-22.44	56.99	57.12
5410	49.54	-3.05	4.55	2.4	22.424	27.119	4.55	-22.17	56.78	57.1
5420	43.52	-3.61	3.98	1.83	19.64	23.878	3.98	-21.43	56.82	57.07
5430	44.51	-3.52	4.18	2.03	20.065	24.449	4.18	-21	56.67	56.92
5440	45.56	-3.41	4.3	2.15	20.454	25.103	4.3	-19.6	56.4	57.01
5450	51.57	-2.88	4.85	2.7	23.18	28.394	4.85	-18.2	56.77	57.2
5460	61.16	-2.14	5.49	3.34	27.241	33.918	5.49	-16.94	56.77	57.86
5470	62.82	-2.02	5.59	3.44	27.767	35.049	5.59	-15.62	56.93	57.46
5480	66.18	-1.79	5.67	3.52	29.064	37.121	5.67	-15.4	57.18	58.28
5490	59.72	-2.24	5.39	3.24	26.072	33.643	5.39	-15.04	57.75	58.05
5500	60.48	-2.18	5.37	3.22	26.229	34.248	5.37	-15.5	57.51	58.66
5510	54.71	-2.62	5.02	2.87	23.772	30.941	5.02	-15.81	58.01	58.63
5520	59.09	-2.28	5.26	3.11	25.588	33.502	5.26	-15.52	58.12	59.28
5530	51.23	-2.9	4.67	2.52	22.152	29.079	4.67	-15.9	58.14	59.07
5540	52.7	-2.78	4.58	2.43	22.748	29.948	4.58	-14.35	58.38	59.54
5550	57.7	-2.39	4.86	2.71	25.144	32.554	4.86	-13.05	58.62	59.51
5560	58.89	-2.3	4.97	2.82	25.627	33.266	4.97	-12.6	58.45	59.46
5570	63.04	-2	5.15	3	27.387	35.654	5.15	-12.26	58.46	59.67

Antenna parameters

5580	56.76	-2.46	4.61	2.46	24.61	32.151	4.61	-12.38	58.81	59.4
5590	56.9	-2.45	4.53	2.38	24.828	32.074	4.53	-12.98	58.36	59.49
5600	49.38	-3.06	3.98	1.83	21.652	27.73	3.98	-13.57	58.64	59.51
5610	51.15	-2.91	4.16	2.01	22.308	28.846	4.16	-12.71	58.68	59.72
5620	53.87	-2.69	4.54	2.39	23.646	30.224	4.54	-12.53	58.86	59.73
5630	55.48	-2.56	4.55	2.4	24.529	30.949	4.55	-13.28	58.61	60.11
5640	54.7	-2.62	4.44	2.29	24.342	30.36	4.44	-14.05	59.03	59.48
5650	54.61	-2.63	4.49	2.34	24.379	30.232	4.49	-14.97	58.72	59.67
5660	61.09	-2.14	4.92	2.77	27.491	33.598	4.92	-16.35	58.75	59.52
5670	65.35	-1.85	5.14	2.99	29.501	35.854	5.14	-17.95	58.69	59.35
5680	62.07	-2.07	4.85	2.7	27.938	34.128	4.85	-18.77	58.38	59.25
5690	59.8	-2.23	4.67	2.52	27.078	32.724	4.67	-19.74	58.39	59.33
5700	53.09	-2.75	4.36	2.21	24.08	29.012	4.36	-21.87	58.69	59.26
5710	52.84	-2.77	4.34	2.19	24.082	28.754	4.34	-23.48	58.69	59.44
5720	60.35	-2.19	4.69	2.54	27.781	32.569	4.69	-24.62	58.79	59.84
5730	58.7	-2.31	4.63	2.48	26.905	31.794	4.63	-23.76	58.98	59.61
5740	58.34	-2.34	4.64	2.49	26.831	31.511	4.64	-22.3	59.16	59.57
5750	63.78	-1.95	4.89	2.74	29.495	34.289	4.89	-20.15	58.87	59.81
5760	65.23	-1.86	4.99	2.84	30.378	34.849	4.99	-19.25	59.25	59.37
5770	68.65	-1.63	5.15	3	31.951	36.695	5.15	-18.98	58.49	59.49
5780	65.91	-1.81	4.99	2.84	30.707	35.204	4.99	-17.81	58.71	59.37
5790	55.8	-2.53	4.3	2.15	26.049	29.75	4.3	-17.22	58.45	59.66
5800	47.6	-3.22	3.88	1.73	22.044	25.552	3.88	-16.89	58.86	59.22
5810	46.3	-3.34	3.7	1.55	21.679	24.618	3.7	-17.1	58.41	59.69
5820	40.69	-3.91	3.41	1.26	18.922	21.764	3.41	-18.88	59.04	59.38
5830	43.46	-3.62	3.48	1.33	20.32	23.145	3.48	-19.3	58.69	59.65
5840	49.67	-3.04	4.04	1.89	23.235	26.431	4.04	-19.34	58.84	59.65
5850	60.49	-2.18	4.98	2.83	28.194	32.299	4.98	-17.06	58.91	60.12

3D image of antenna

5150.000MHz

5150.000MHz H
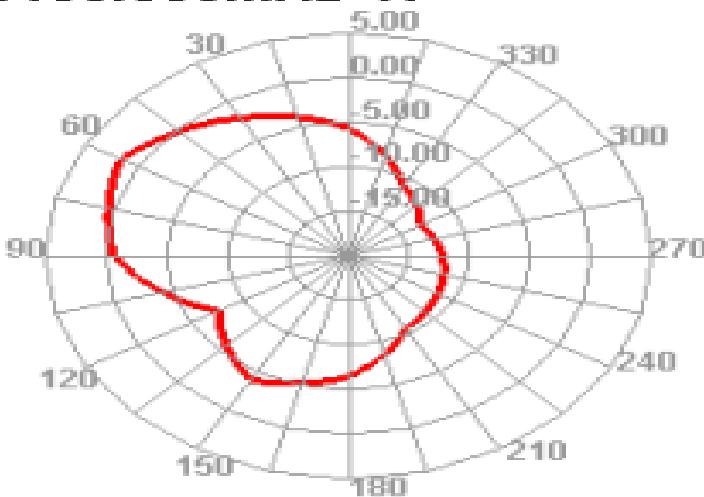
5150.000MHz E1

5150.000MHz E2
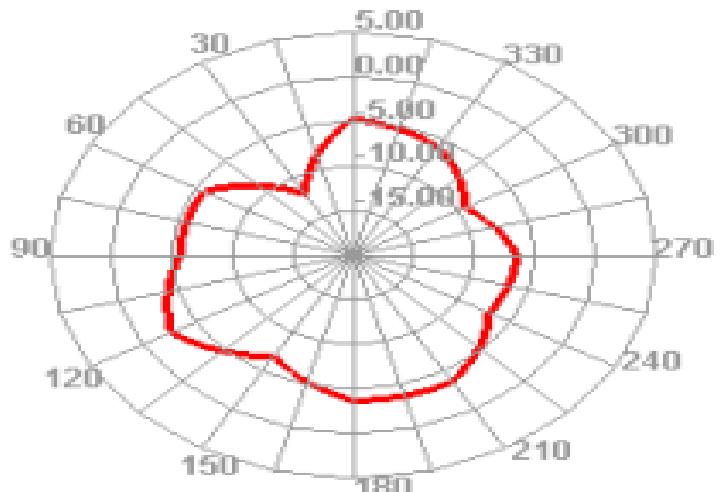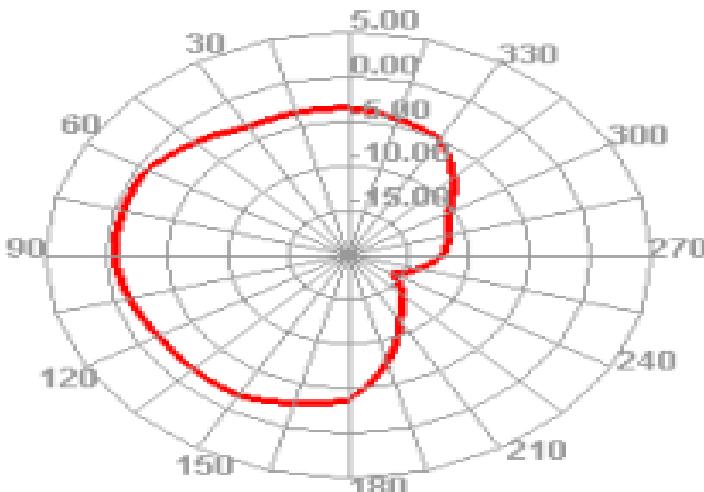
As shown in the figure:
antenna location map

Summary Explanation

Summary: The above data only represents the performance parameters of the debugging machine. If your company needs trial production/mass production, you need to arrange for the trial production/mass production machine to be tested and verified by our company;

Please confirm the feasibility of the matching modifications and overall environment treatment mentioned above. If there are any objections, please keep in touch at any time;

If there are any changes to the entire machine of your company, you need to arrange for the machine to be tested and verified for performance by our company to ensure normal production in the future;

CKH

Shenzhen Chuangkehua Technology Co.Ltd

Thank you for supporting the collaboration!