



规格书

客户名称: _____
客户料号: _____
科信料号: _____
规格描述: 2.4G小拇指黑/SMA公头内针 _____
制作日期: 2023年05月09日 _____

出厂确认:

部 门	审 核	批 准
射频部	刘景雄	李斌
结构部	谢东展	李斌
品质部	王飞	李斌

客户确认:

检 查	审 核	批 准

1. 产品图片



2. 电气性能测试报告: VSWR:



3. 产品性能参数:

电性能指标Electrical Specifications	
频率范围Frequency Range (MHz)	2400-2500
输入阻抗Input Impedence (Ω)	50
电压驻波比V.S.W.R	≤ 2.0 (未匹配设备, 仅供参考)
增益Gain (dBi)	2.0 ± 1 (未匹配设备, 仅供参考)
极化形式Polarization Type	垂直 Vertical
辐射方向Radiation Direction	全向Omni-Directional
机械指标Mechanical Specifications	
连接器型号Connect Type	SMA公头内针
电缆型号Cable Type	/
天线尺寸Size	14* Φ 15MM
工作温度Operating Temp	-30 ~ +75 °C

2458拇指天线2.4G频段增益与性能参数列表

Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (dBi)	Efficiency (%)
1	2400	-0.38	-7.11	19.43
2	2410	-0.16	-7.04	19.76
3	2420	0.08	-7.04	19.78
4	2430	0.11	-7.26	18.77
5	2440	0.39	-7.17	19.19
6	2450	0.78	-6.86	20.58
7	2460	0.71	-7.01	19.88
8	2470	0.79	-6.97	20.07
9	2480	1.11	-6.69	21.43
10	2490	1.05	-6.74	21.21
11	2500	1.27	-6.45	22.63

2458拇指天线5G频段增益与性能参数列表

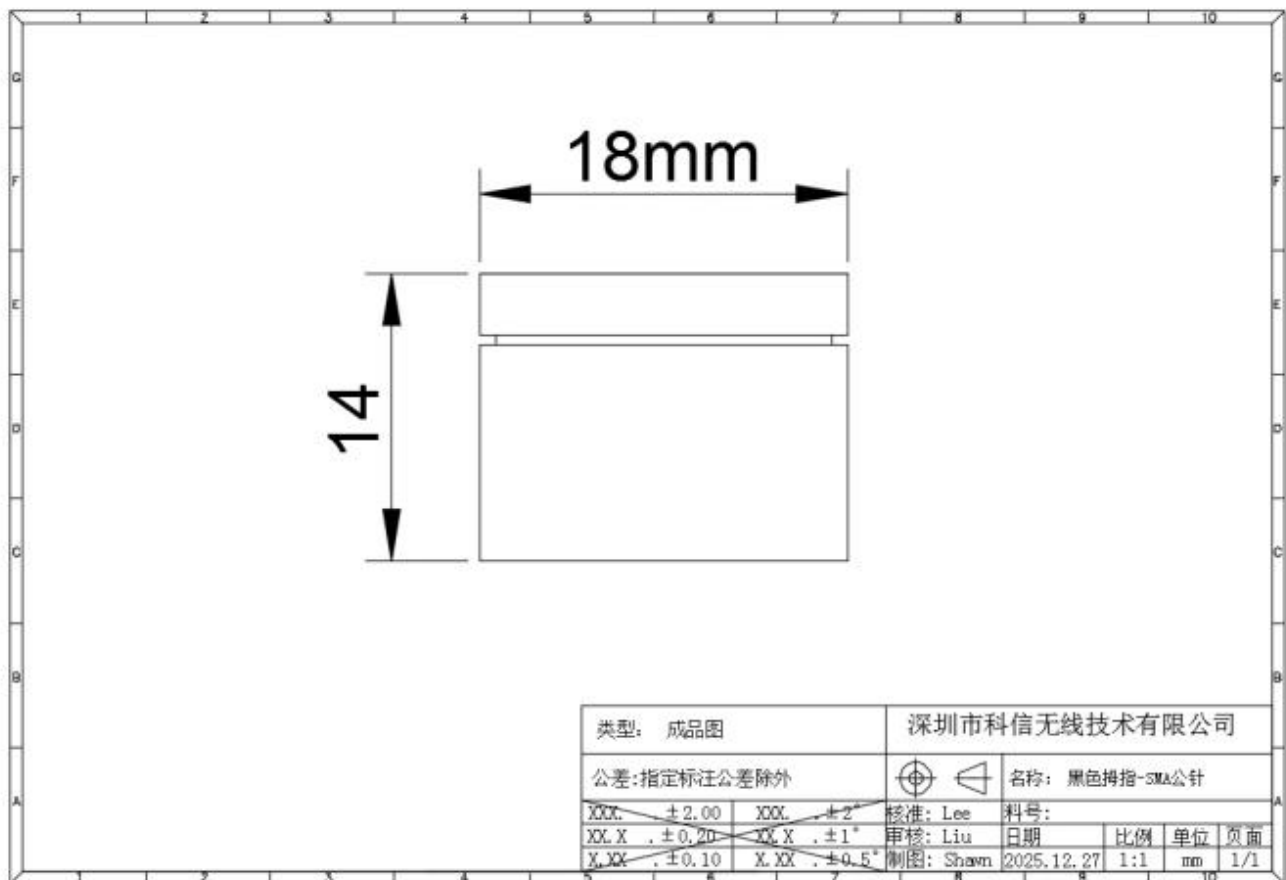
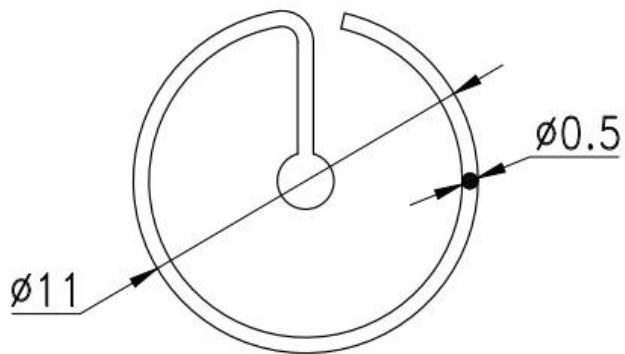
Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (dBi)	Efficiency (%)
12	5150	-4.45	-9.69	10.75
13	5170	-2.99	-8.76	13.3
14	5190	-2.25	-8.36	14.58
15	5210	-1.91	-8.03	15.75
16	5230	-1.88	-7.78	16.65
17	5250	-2.1	-7.81	16.55
18	5270	-2.14	-8.15	15.32
19	5290	-2.44	-8.53	14.02
20	5310	-2.28	-8.86	12.99
21	5330	-2.47	-9.41	11.45
22	5350	-2.55	-9.48	11.27
23	5370	-2.55	-9.42	11.42
24	5390	-3.08	-9.7	10.71
25	5410	-3.14	-9.44	11.39
26	5430	-3.22	-9.37	11.57
27	5450	-3.54	-9.87	10.31
28	5470	-3.22	-9.58	11.01
29	5490	-3.22	-9.25	11.88
30	5510	-3.65	-9.34	11.64
31	5530	-2.91	-8.65	13.64
32	5550	-1.96	-8.2	15.14
33	5570	-1.61	-8.27	14.9
34	5590	-1.03	-7.7	16.97
35	5610	-1.34	-7.59	17.4
36	5630	-1.79	-7.7	16.98
37	5650	-0.74	-6.8	20.9
38	5670	-0.07	-6.47	22.56
39	5690	0.18	-6.35	23.19
40	5710	0.95	-5.66	27.19
41	5730	1.01	-5.57	27.71
42	5750	1.07	-5.51	28.12
43	5770	1.59	-4.9	32.34
44	5790	1.52	-4.83	32.91
45	5810	1.67	-4.67	34.15
46	5830	2.08	-4.11	38.78
47	5850	2.14	-3.89	40.8

Frequency ID	Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)	Directivity (dB)	Peak Gain Position (Theta)	Peak Gain Position (Phi)	Efficiency ThetaPol (%)	Efficiency PhiPol (%)	Upper Hem. Efficiency (%)	Lower Hem. Efficiency (%)
1	2400	-7.11	-0.38	19.43	6.73	145	121	17.5601387	1.87458992	5.02	14.41
2	2410	-7.04	-0.16	19.76	6.89	145	121	17.79513168	1.967181802	5.01	14.75
3	2420	-7.04	0.08	19.78	7.12	146	122	17.73951721	2.04384017	4.88	14.90
4	2430	-7.26	0.11	18.77	7.37	146	122	16.77608681	1.998530746	4.46	14.31
5	2440	-7.17	0.39	19.19	7.56	146	123	17.11293983	2.077914715	4.37	14.82
6	2450	-6.86	0.78	20.58	7.65	147	125	18.35038185	2.234603405	4.48	16.10
7	2460	-7.01	0.71	19.88	7.73	148	128	17.74703407	2.137454271	4.17	15.71
8	2470	-6.97	0.79	20.07	7.76	149	131	17.94238091	2.126104593	4.18	15.89
9	2480	-6.69	1.11	21.43	7.80	150	133	19.20110512	2.228911877	4.49	16.94
10	2490	-6.74	1.05	21.21	7.79	150	133	19.03130722	2.176061392	4.55	16.66
11	2500	-6.45	1.27	22.63	7.72	150	134	20.32645226	2.306426764	4.94	17.70
12	5150	-9.69	-4.45	10.75	5.24	145	159	5.407288074	5.343538284	4.68	6.07
13	5170	-8.76	-2.99	13.30	5.77	5	340	6.86497879	6.430990696	6.13	7.17
14	5190	-8.36	-2.25	14.58	6.11	5	312	7.648591042	6.933897972	7.03	7.55
15	5210	-8.03	-1.91	15.75	6.11	6	287	8.42061615	7.333577633	7.90	7.85
16	5230	-7.78	-1.88	16.65	5.90	9	266	9.022294044	7.632187843	8.69	7.97
17	5250	-7.81	-2.10	16.55	5.71	30	121	9.057425499	7.495347023	8.89	7.66
18	5270	-8.15	-2.14	15.32	6.01	26	182	8.431304932	6.886974335	8.40	6.92
19	5290	-8.53	-2.44	14.02	6.09	27	186	7.598773479	6.422503471	8.00	6.02
20	5310	-8.86	-2.28	12.99	6.58	19	50	6.753330231	6.234375	7.79	5.20
21	5330	-9.41	-2.47	11.45	6.94	18	55	5.570597172	5.881094933	7.15	4.30
22	5350	-9.48	-2.55	11.27	6.93	18	74	5.122101784	6.146167755	7.17	4.10
23	5370	-9.42	-2.55	11.42	6.87	18	87	4.863507748	6.552270889	7.31	4.11
24	5390	-9.70	-3.08	10.71	6.62	19	92	4.325973034	6.379311085	6.79	3.92
25	5410	-9.44	-3.14	11.39	6.30	20	94	4.414092064	6.972569466	7.15	4.23
26	5430	-9.37	-3.22	11.57	6.15	18	93	4.390854359	7.182014942	7.22	4.35
27	5450	-9.87	-3.54	10.31	6.33	14	93	3.877815485	6.43266201	6.45	3.86
28	5470	-9.58	-3.22	11.01	6.36	13	97	4.183312416	6.824030399	6.98	4.02
29	5490	-9.25	-3.22	11.88	6.03	17	103	4.520980835	7.359215736	7.63	4.25
30	5510	-9.34	-3.65	11.64	5.70	20	101	4.304873943	7.33134985	7.44	4.20
31	5530	-8.65	-2.91	13.64	5.74	15	118	4.863574982	8.774595261	8.69	4.95
32	5550	-8.20	-1.96	15.14	6.24	13	121	5.300961971	9.835204124	9.54	5.59
33	5570	-8.27	-1.61	14.90	6.66	12	114	5.258985996	9.641905785	9.33	5.57
34	5590	-7.70	-1.03	16.97	6.67	12	104	6.118649006	10.84994793	10.59	6.38
35	5610	-7.59	-1.34	17.40	6.26	12	97	6.384974957	11.01777267	10.87	6.54
36	5630	-7.70	-1.79	16.98	5.91	13	105	6.287993431	10.6944313	10.60	6.38
37	5650	-6.80	-0.74	20.90	6.06	12	114	7.704583168	13.19244289	13.01	7.89
38	5670	-6.47	-0.07	22.56	6.40	11	125	8.318450928	14.2384119	13.99	8.57
39	5690	-6.35	0.18	23.19	6.52	12	135	8.645209312	14.5427103	14.22	8.97
40	5710	-5.66	0.95	27.19	6.61	12	138	10.34141541	16.84929848	16.44	10.75
41	5730	-5.57	1.01	27.71	6.58	12	134	10.6905489	17.0210228	16.67	11.04
42	5750	-5.51	1.07	28.12	6.58	11	128	11.03558922	17.08524323	17.18	10.94
43	5770	-4.90	1.59	32.34	6.49	10	139	12.85165215	19.48993301	20.29	12.05
44	5790	-4.83	1.52	32.91	6.35	8	184	12.9800005	19.92965126	21.01	11.90
45	5810	-4.67	1.67	34.15	6.33	9	199	13.24697113	20.89900208	21.72	12.43
46	5830	-4.11	2.08	38.78	6.19	10	195	15.00409603	23.7716732	24.43	14.35
47	5850	-3.89	2.14	40.80	6.03	15	110	16.01569366	24.78198051	25.40	15.40



Frequency ID	Frequency (MHz)	T90(H)四度	E1(XZ)波瓣宽度	E1(XZ)前后比	E2(YZ)波瓣宽度	E2(YZ)前后比	最大增益处轴比(P)	仰角10度最差(大)轴比(P)	Hc(XY)波瓣宽度	Hc(XY)前后比
1	2400	4.889296532	29	0	37	0.901847482	1.5	1.5	294	1.383461952
2	2410	5.337224007	28	0	36	0.807484388	1.5	1.5	275	1.247576714
3	2420	5.809682846	27	0	35	0.764918685	1.5	1.5	254	1.15581131
4	2430	5.606244087	27	0	35	0.726934791	1.5	1.5	247	0.972354889
5	2440	5.061712265	27	0	35	0.668709457	1.5	1.5	247	0.855932236
6	2450	5.249324799	27	0	35	0.560757458	1.5	1.5	248	1.102816582
7	2460	4.805914879	27	0	35	0.385466814	1.5	1.5	264	1.26574707
8	2470	4.026927948	26	0	35	0.198494434	1.5	1.5	288	1.230659485
9	2480	3.189193726	26	0	35	0.066388845	1.5	1.5	337	1.230899811
10	2490	2.56817627	24	0	34	0.02598238	1.5	1.5	360	1.332748413
11	2500	2.446526527	24	0	34	0.032983363	1.5	1.5	360	1.278610229
12	5150	6.859544754	57	0.986454487	57	0.957701683	1.5	1.5	279	2.125713348
13	5170	6.683321953	52	1.763755322	42	2.10234642	1.5	1.5	267	2.974129677
14	5190	6.677249432	52	2.005790949	36	2.88258791	1.5	1.5	206	3.598941326
15	5210	6.693003178	56	1.67642355	37	3.271126509	1.5	1.5	216	3.905637264
16	5230	6.70173645	65	0.993978024	63	2.351774216	1.5	1.5	225	4.126194
17	5250	7.739937782	68	1.247479439	32	1.155979872	1.5	1.5	226	5.017977715
18	5270	8.856749535	28	1.406345367	36	0.681880474	1.5	1.5	168	5.620591164
19	5290	8.574481964	26	1.512186766	39	0.529744864	1.5	1.5	176	5.550573349
20	5310	8.271945953	26	1.534673691	42	0.912109375	1.5	1.5	198	4.577811241
21	5330	9.301986694	74	1.746576786	69	1.386578321	1.5	1.5	212	4.104986191
22	5350	12.86932087	73	1.819229603	65	1.66802001	1.5	1.5	213	4.638426781
23	5370	17.50775909	72	1.862315416	67	1.874914646	1.5	1.5	84	5.955406189
24	5390	18.41714478	75	1.720742702	72	1.92536211	1.5	1.5	73	6.790631294
25	5410	18.56285667	78	1.562602997	78	1.962081909	1.5	1.5	72	6.444141388
26	5430	18.51864052	88	1.384094238	81	2.206132412	1.5	1.5	71	6.507356644
27	5450	19.79455948	90	0.99853611	75	2.909101486	1.5	1.5	73	5.454815865
28	5470	17.56522751	86	0.96402359	78	3.598926306	1.5	1.5	80	3.881271362
29	5490	15.97092533	90	0.75523591	91	4.021306038	1.5	1.5	126	3.727817535
30	5510	15.71378422	92	0.518250942	98	4.288864136	1.5	1.5	132	3.874950409
31	5530	14.81004906	76	0.571977854	101	4.579559326	1.5	1.5	136	3.728528976
32	5550	14.55133247	73	0.943073988	96	5.34811306	1.5	1.5	137	3.888782501
33	5570	11.62719917	72	1.322052479	61	6.3977771358	1.5	1.5	143	3.3584795
34	5590	10.18872643	72	1.351088881	60	6.604280949	1.5	1.5	140	3.421370506
35	5610	9.582807541	75	1.109003663	74	6.135640621	1.5	1.5	134	2.901257992
36	5630	9.249500275	77	1.074645758	88	5.370707989	1.5	1.5	121	2.15373373
37	5650	9.086408615	75	1.548074603	92	5.074262619	1.5	1.5	117	1.995452881
38	5670	9.685752869	67	2.160577059	74	4.993140697	1.5	1.5	118	2.387891293
39	5690	10.35870075	53	2.592269182	73	4.616182327	1.5	1.5	125	2.458615303
40	5710	9.832733154	55	2.917025089	73	4.653717995	1.5	1.5	144	1.931698322
41	5730	8.39589119	54	2.968124151	69	5.018708229	1.5	1.5	72	1.701146603
42	5750	7.687556267	62	2.947479725	68	5.27085495	1.5	1.5	144	1.44782877
43	5770	7.584657192	63	2.958170652	72	5.010661125	1.5	1.5	65	1.091406822
44	5790	7.259018898	63	3.15865016	93	4.399339199	1.5	1.5	68	0.838534832
45	5810	6.517559528	66	3.459939957	81	4.1272645	1.5	1.5	127	1.125189304
46	5830	6.232298851	67	3.589317322	81	4.183895588	1.5	1.5	131	1.504063606
47	5850	6.919361115	69	3.252655268	76	4.715230942	1.5	1.5	118	1.303871155

WiFi天线内部实际线圈尺寸图



3D Pattern

