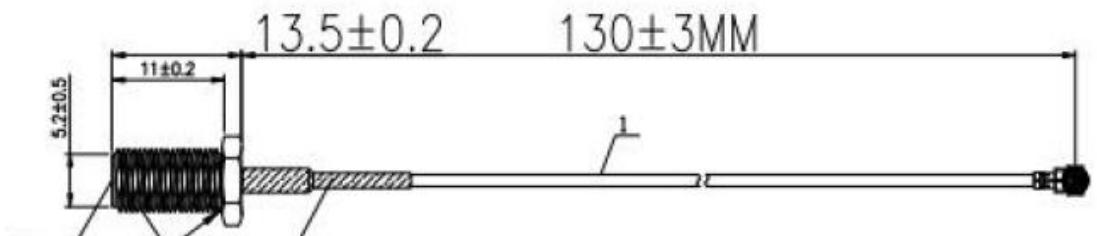
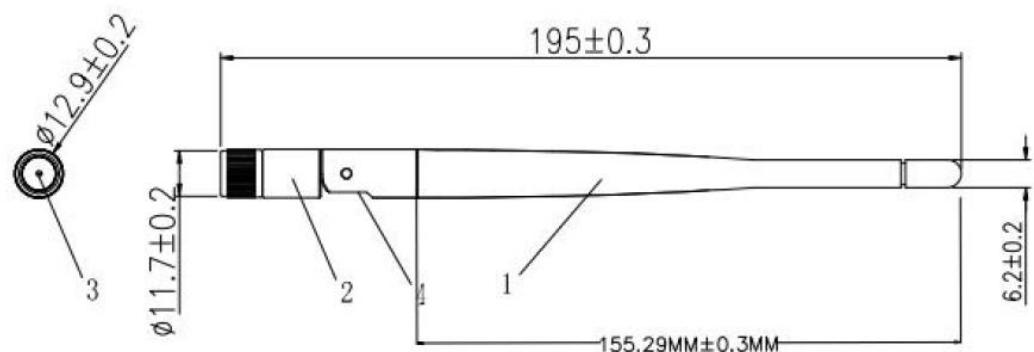
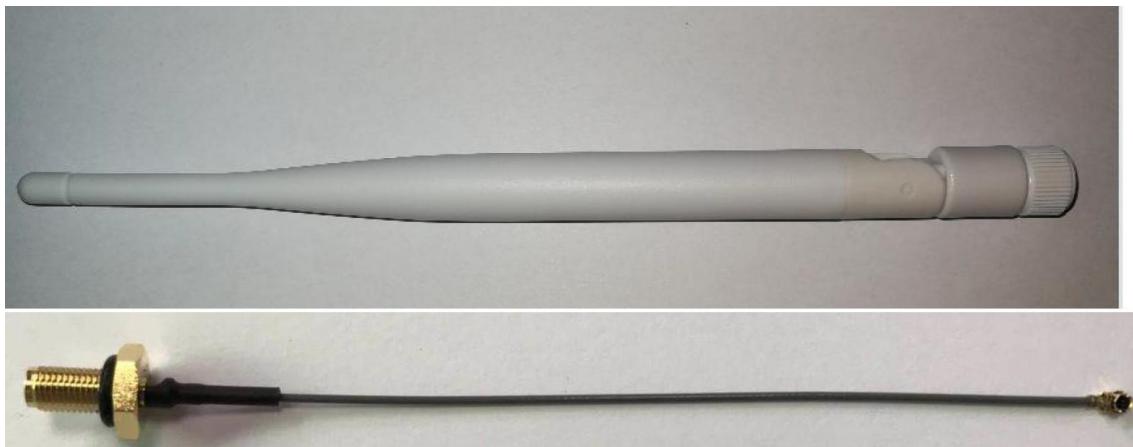


Antenna spec

1. Antenna Description:

Model	SAMA1
Frequency range	2400MHz~2500MHz 5200MHz~5800MHz
Manufacturer	Shenzhen Guandetong Electronic Co., Ltd.
Address	3F, Building D, Maoyuan Industrial Zone, No.21 Shuifeng Road, Longhua District, Shenzhen, Guangdong Province

2. Antenna Photo:



3. Antenna Efficiency and Gain:

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dB)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	Avg (dBm)	Max/Min (dB)	Max/Avg (dB)	Min/Avg (dB)
1	2400.0	2400.00	1.67	5.87	38.0%	-4.20	1.67	9000	16680	-95.99	0	0	-5.04	97.66	6.70	-90.95
2	2410.0	2410.00	1.97	6.17	38.0%	-4.20	1.97	9000	16680	-95.99	0	0	-4.84	97.96	6.81	-91.15
3	2420.0	2420.00	2.35	6.47	38.8%	-4.11	2.35	9000	16680	-95.99	0	0	-4.52	98.34	6.87	-91.47
4	2430.0	2430.00	2.95	6.73	41.8%	-3.78	2.95	9000	16680	-95.99	0	0	-4.05	98.93	7.00	-91.94
5	2440.0	2440.00	2.81	6.71	40.8%	-3.90	2.81	9000	16680	-95.99	0	0	-4.25	98.80	7.06	-91.74
6	2450.0	2450.00	2.73	6.72	39.9%	-3.99	2.73	9000	16680	-95.99	0	0	-4.37	98.72	7.09	-91.62
7	2460.0	2460.00	2.91	6.80	40.8%	-3.89	2.91	9000	6000	-95.99	0	0	-4.30	98.89	7.20	-91.69
8	2470.0	2470.00	3.01	6.78	42.0%	-3.77	3.01	9000	6000	-95.99	0	0	-4.40	99.00	7.41	-91.59
9	2480.0	2480.00	2.94	6.63	42.8%	-3.69	2.94	9000	6000	-95.99	0	0	-4.71	98.93	7.65	-91.28
10	2490.0	2490.00	3.05	6.76	42.6%	-3.71	3.05	9000	6000	-95.99	0	0	-4.81	99.04	7.85	-91.18
11	2500.0	2500.00	3.09	6.78	42.7%	-3.69	3.09	9000	6000	-95.99	0	0	-4.84	99.07	7.92	-91.15
12	5100.0	5100.00	0.23	7.41	19.1%	-7.19	0.23	7500	1500	-95.99	0	0	-7.35	96.22	7.57	-88.64
13	5120.0	5120.00	0.11	7.49	18.3%	-7.38	0.11	7500	1500	-95.99	0	0	-7.73	96.10	7.84	-88.26
14	5140.0	5140.00	1.10	7.36	23.7%	-6.26	1.10	7500	1500	-95.99	0	0	-6.56	97.09	7.66	-89.43
15	5160.0	5160.00	0.92	7.06	24.3%	-6.15	0.92	7500	1500	-95.99	0	0	-6.68	96.91	7.60	-89.31
16	5180.0	5180.00	0.96	6.88	25.6%	-5.92	0.96	7500	1500	-95.99	0	0	-6.55	96.95	7.51	-89.44
17	5200.0	5200.00	1.11	6.74	27.4%	-5.63	1.11	7500	1500	-95.99	0	0	-6.64	97.10	7.75	-89.35
18	5220.0	5220.00	0.04	6.24	24.0%	-6.20	0.04	7500	1500	-95.99	0	0	-7.38	96.03	7.41	-88.61
19	5240.0	5240.00	0.99	6.75	26.8%	-5.76	0.99	7500	1500	-95.99	0	0	-6.86	96.98	7.85	-89.13
20	5260.0	5260.00	1.10	7.11	25.1%	-6.01	1.10	7500	1500	-95.99	0	0	-6.78	97.08	7.87	-89.21
21	5280.0	5280.00	1.41	6.28	32.6%	-4.87	1.41	7500	1500	-95.99	0	0	-5.57	97.40	6.98	-90.42
22	5300.0	5300.00	2.17	6.36	38.1%	-4.20	2.17	10500	1500	-95.99	0	0	-4.85	98.16	7.02	-91.14
23	5320.0	5320.00	2.68	6.02	46.4%	-3.33	2.68	9000	10500	-95.99	0	0	-4.33	98.67	7.01	-91.66
24	5340.0	5340.00	2.55	5.69	48.5%	-3.15	2.55	9000	10500	-95.99	0	0	-4.04	98.54	6.58	-91.95
25	5360.0	5360.00	2.73	5.74	50.1%	-3.01	2.73	9000	10500	-95.99	0	0	-3.85	98.72	6.58	-92.14
26	5380.0	5380.00	2.44	5.68	47.4%	-3.24	2.44	7500	1500	-95.99	0	0	-3.88	98.43	6.32	-92.11
27	5400.0	5400.00	2.55	6.33	41.9%	-3.78	2.55	9000	10500	-95.99	0	0	-4.33	98.54	6.88	-91.65
28	5420.0	5420.00	2.66	6.59	40.4%	-3.93	2.66	4500	3000	-95.99	0	0	-4.16	98.65	6.82	-91.83
29	5440.0	5440.00	3.27	7.01	42.2%	-3.75	3.27	4500	3000	-95.99	0	0	-3.88	99.26	7.15	-92.11
30	5460.0	5460.00	3.67	7.51	41.3%	-3.84	3.67	4500	3000	-95.99	0	0	-3.90	99.66	7.57	-92.08
31	5480.0	5480.00	3.67	7.35	42.9%	-3.88	3.67	4500	3000	-95.99	0	0	-3.98	99.66	7.65	-92.01
32	5500.0	5500.00	4.80	7.55	53.0%	-2.76	4.80	4500	3000	-95.99	0	0	-3.13	100.78	7.93	-92.86
33	5520.0	5520.00	4.39	6.91	56.0%	-2.52	4.39	4500	3000	-95.99	0	0	-3.11	100.38	7.50	-92.88
34	5540.0	5540.00	3.87	7.10	47.6%	-3.22	3.87	4500	3000	-95.99	0	0	-3.96	99.86	7.83	-92.03
35	5560.0	5560.00	3.71	6.96	47.4%	-3.24	3.71	4500	3000	-95.99	0	0	-4.06	99.70	7.78	-91.93
36	5580.0	5580.00	3.58	6.71	48.6%	-3.13	3.58	4500	3000	-95.99	0	0	-3.85	99.57	7.43	-92.14
37	5600.0	5600.00	3.88	6.93	49.6%	-3.05	3.88	4500	3000	-95.99	0	0	-3.98	99.87	7.86	-92.01
38	5620.0	5620.00	2.64	5.92	46.9%	-3.29	2.64	7500	1500	-95.99	0	0	-4.02	98.63	6.66	-91.97
39	5640.0	5640.00	3.87	6.73	51.7%	-2.87	3.87	7500	1500	-95.99	0	0	-3.59	99.82	7.22	-92.60
40	5660.0	5660.00	3.83	6.36	55.8%	-2.54	3.83	6000	1500	-95.99	0	0	-3.39	99.82	7.22	-92.60
41	5680.0	5680.00	4.67	6.57	64.5%	-1.90	4.67	12000	7500	-95.99	0	0	-3.00	100.66	7.67	-92.99
42	5700.0	5700.00	5.40	7.57	60.6%	-2.17	5.40	12000	6000	-95.99	0	0	-3.06	101.39	8.45	-92.93
43	5720.0	5720.00	4.89	7.02	61.2%	-2.13	4.89	12000	6000	-95.99	0	0	-2.86	100.88	7.75	-93.13
44	5740.0	5740.00	4.26	6.63	57.9%	-2.37	4.26	12000	1500	-95.99	0	0	-3.24	100.25	7.49	-92.75
45	5760.0	5760.00	3.86	6.41	55.6%	-2.55	3.86	12000	6000	-95.99	0	0	-3.38	99.85	7.24	-92.61
46	5780.0	5780.00	3.30	5.96	54.1%	-2.67	3.30	9000	7500	-95.99	0	0	-3.55	99.29	6.85	-92.44
47	5800.0	5800.00	2.80	6.09	46.9%	-3.29	2.80	12000	1500	-95.99	0	0	-4.49	98.79	7.29	-91.50

4. Radiation Pattern:

