



AP-3025 Antenna Check Sheet



Revision History:

Version	Date	Change Description
1.0	2022/12/28	New Release
2.0	2023/01/09	Add pattern and gain table description



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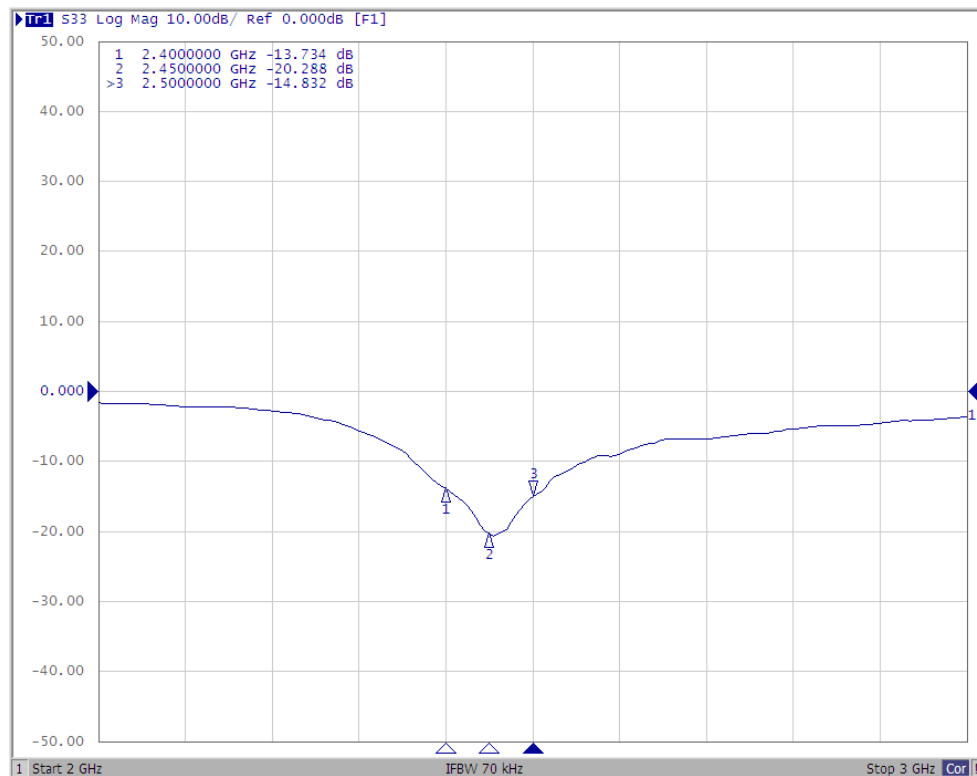
**Antenna Specification**

Ant.	Antenna. model	Antenna type	Antenna Gain (dBi)	Frequency Range from GHz to GHz	Connector type	Cable length (cm)	Remark
#1	NYS5390	Dipole	6.5	2.4~2.5	IPEX	3	2.4G-1Black
#2	NYS5390	Dipole	6.5	2.4~2.5	IPEX	3	2.4G-2 Gray
#3	NYS5390	Dipole	5	5.15~5.85	IPEX	3	5G-1 Black
#4	NYS5390	Dipole	5	5.15~5.85	IPEX	3	5G-2 Gray

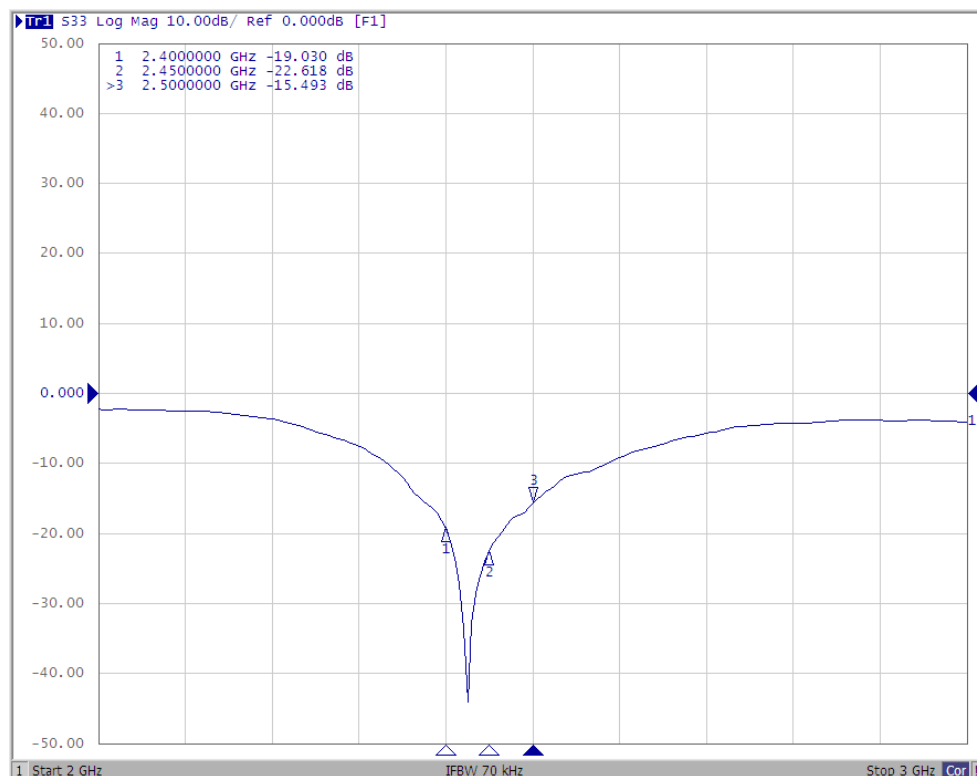
Test Result:

Return Loss

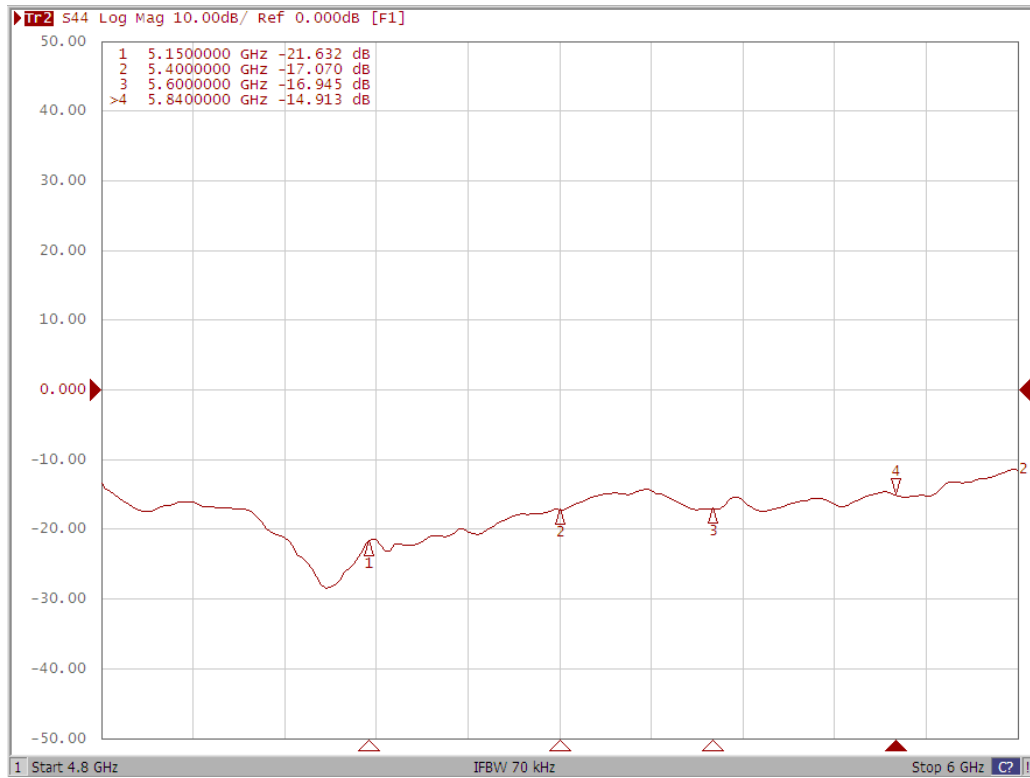
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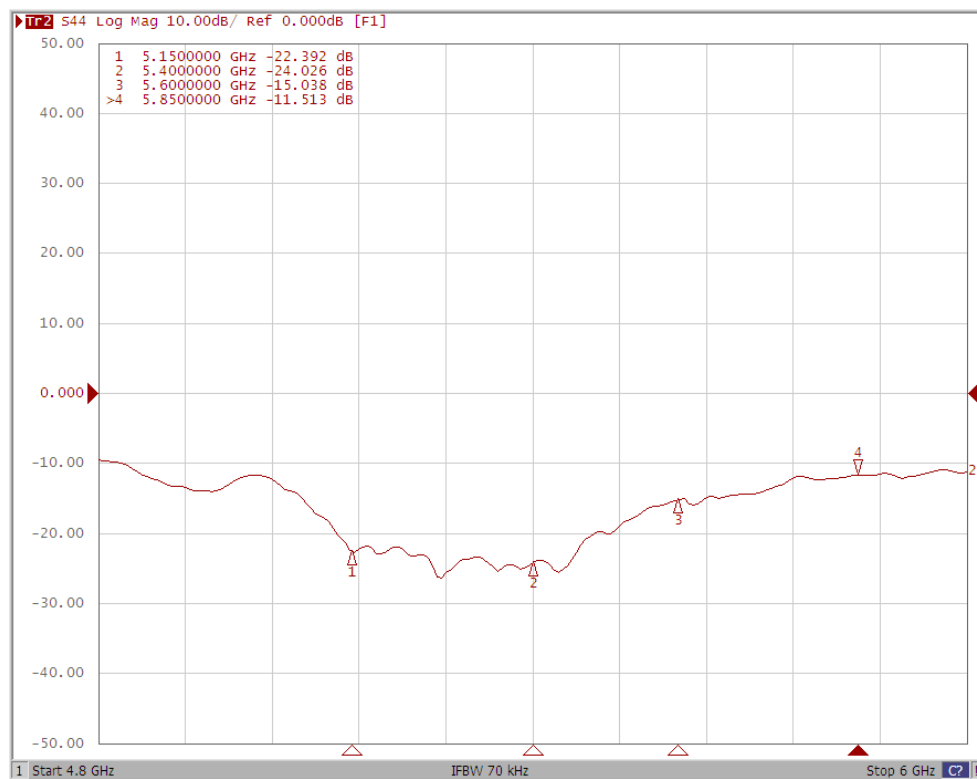
2.4G-2



5G-1

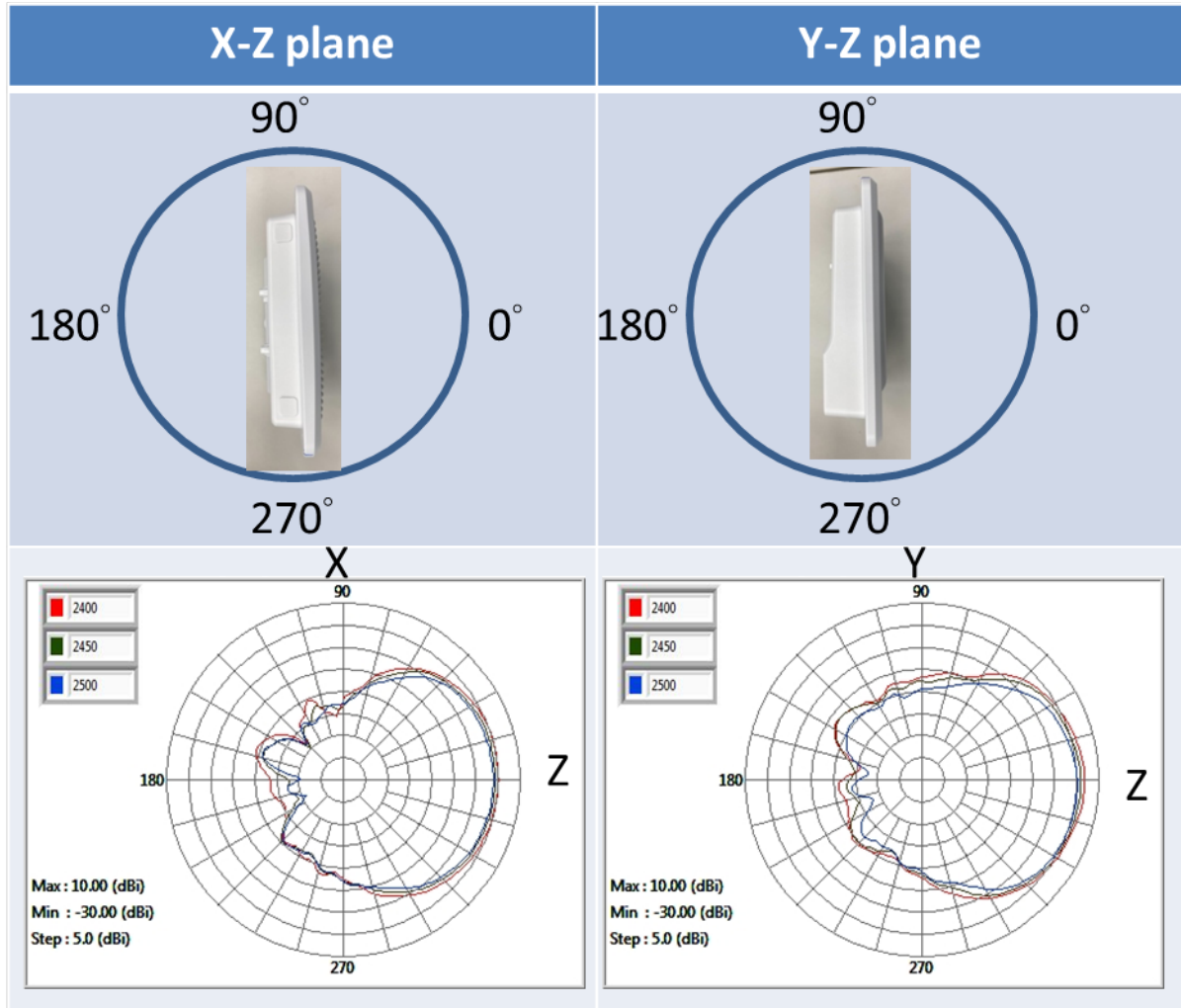


5G-2

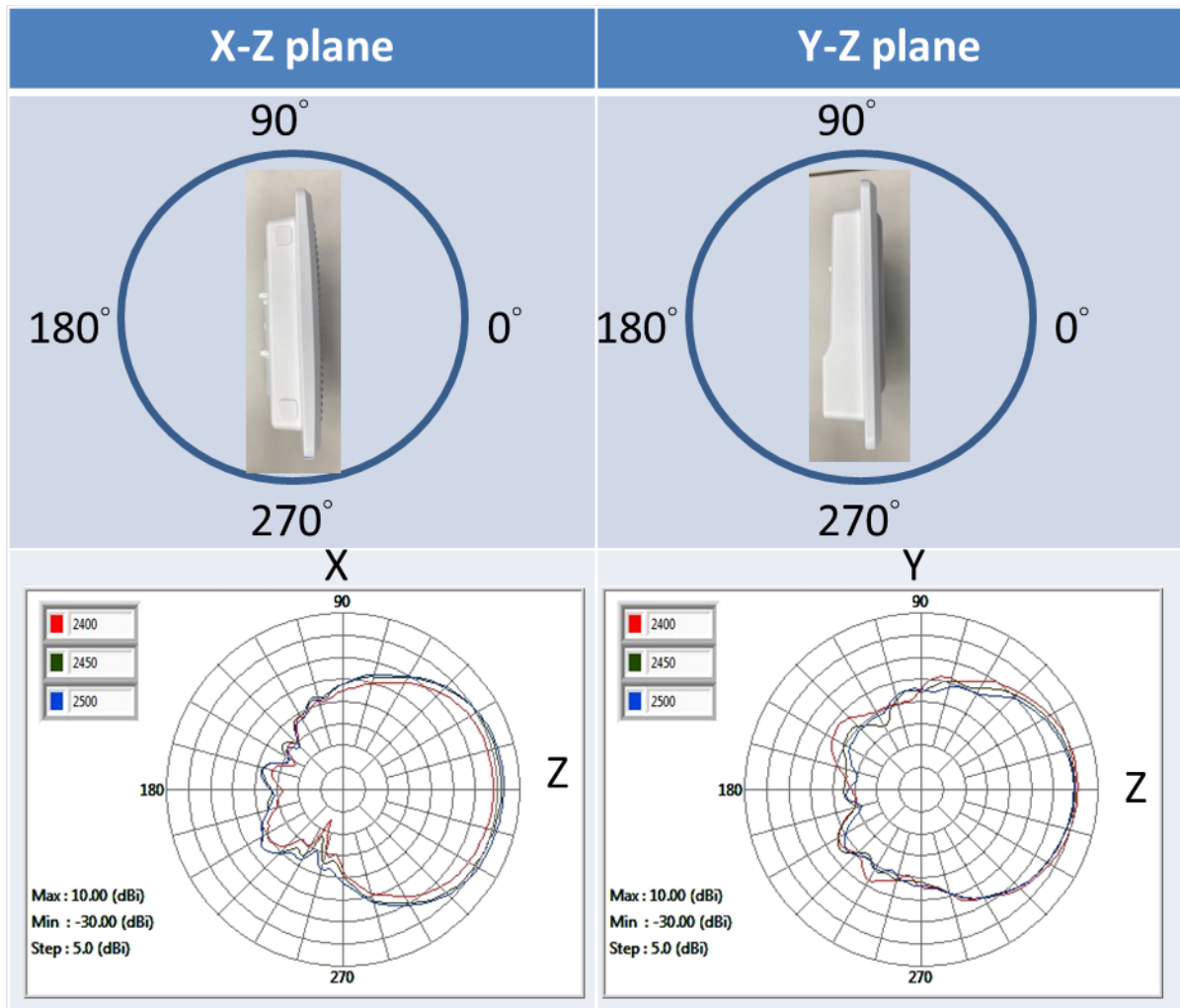


2D Radiation Patterns:

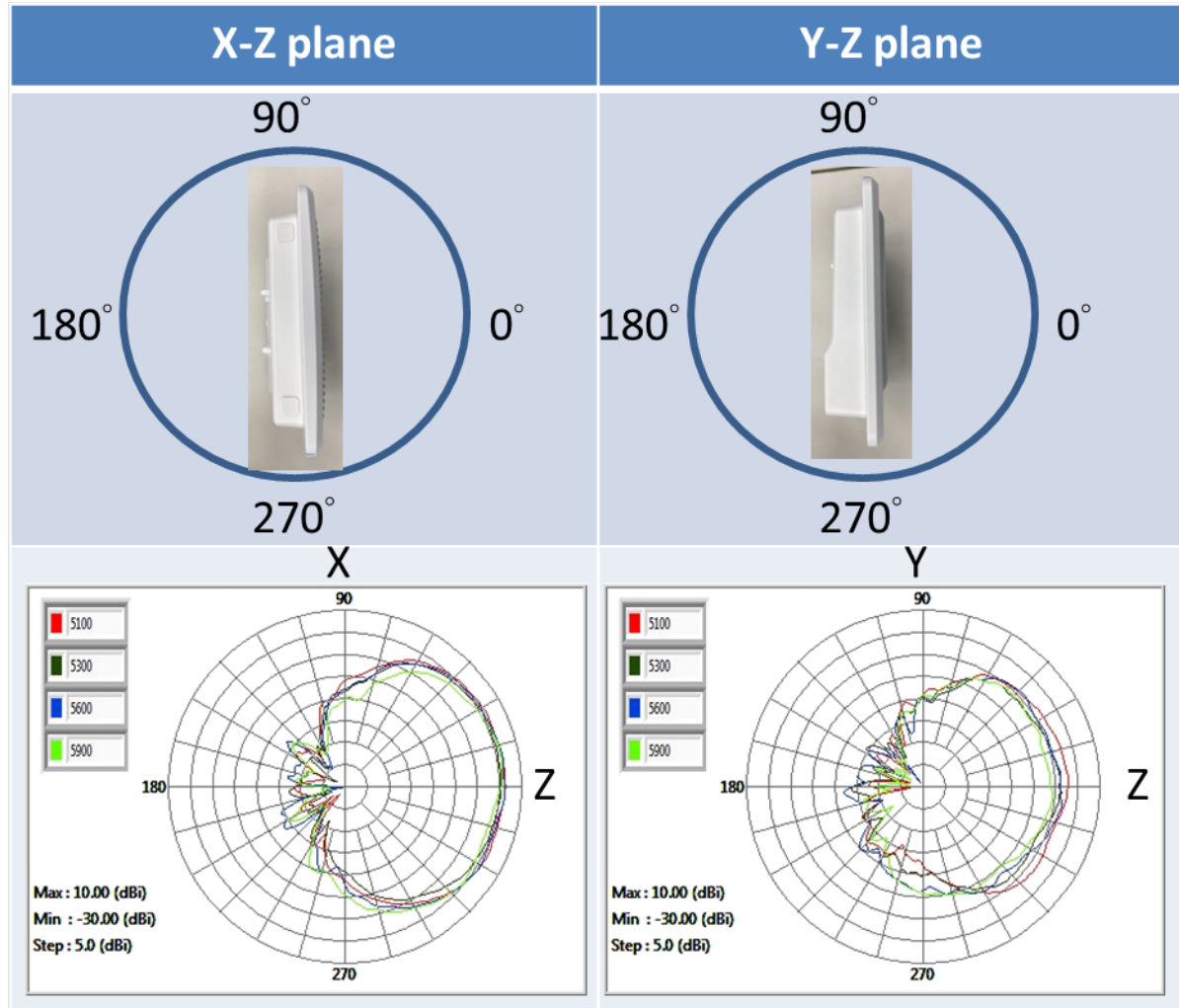
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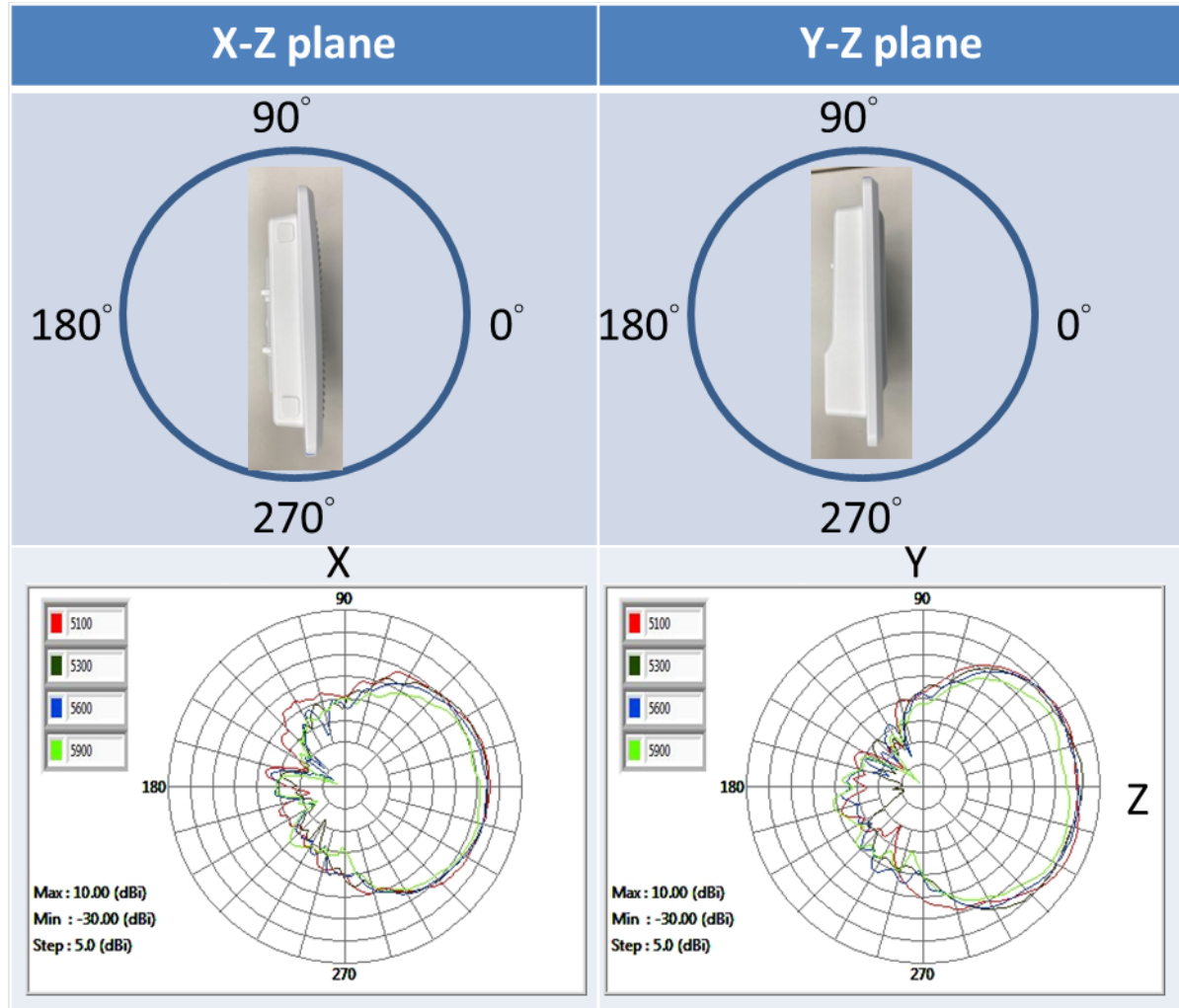
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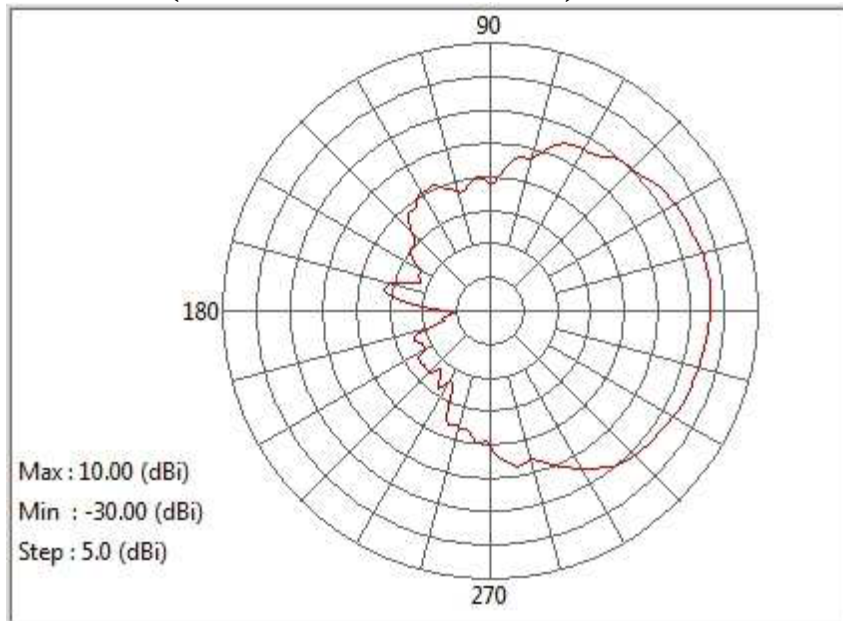
5G-1



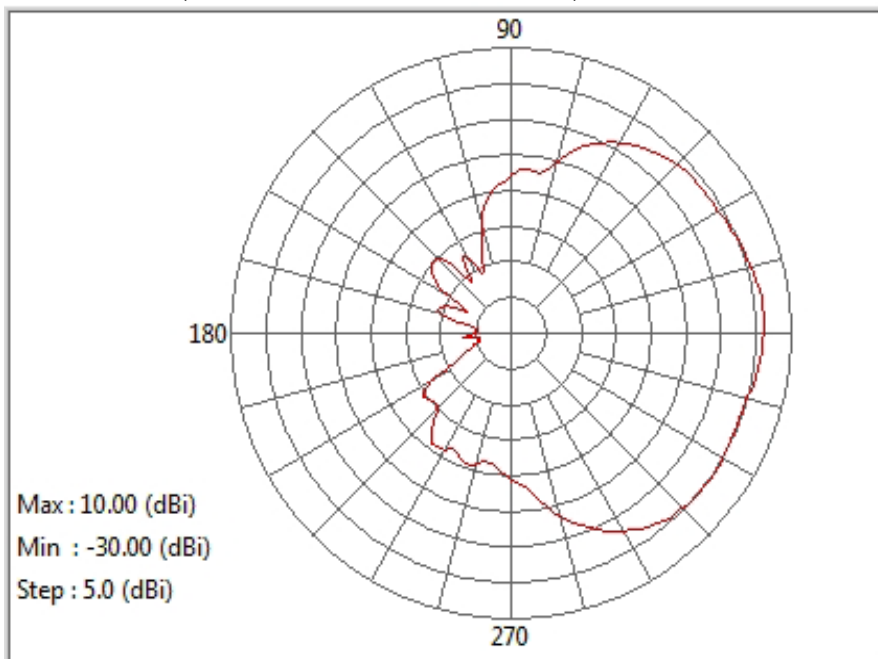
5G-2



5150 MHz(Antenna 5G-2, Plane X-Z)



5150 MHz(Antenna 5G-2, Plane Y-Z)





Antenna Gain Table:

Frequency(MHz)	2.4G-1(dBi)	2.4G-2(dBi)
2400	5.88	5.98
2450	6.50	6.50
2500	5.53	5.61

Frequency(MHz)	5G-1(dBi)	5G-2(dBi)
5150	3.97	4.93
5600	4.51	4.6
5850	5.00	5.00



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Antenna Gain Table(5150 MHz-Antenna 5G-2, Plane X-Z):

angle	(dBi)	angle	(dBi)
0	2.83	182	-24.5
2	2.91	184	-23.87
4	2.95	186	-23.9
6	2.99	188	-23.45
8	3.03	190	-22.86
10	3.06	192	-22.87
12	3.02	194	-21.27
14	2.94	196	-19.6
16	2.82	198	-18.47
18	2.66	200	-17.94
20	2.5	202	-17.83
22	2.32	204	-18.19
24	2.19	206	-18.81
26	2.09	208	-18.86
28	1.96	210	-18.83
30	1.93	212	-17.55
32	1.8	214	-17.01
34	1.57	216	-17.07
36	1.29	218	-17.11
38	0.9	220	-17.31
40	0.51	222	-17.09
42	0.18	224	-17.04
44	-0.06	226	-17.02
46	-0.13	228	-18.01
48	-0.15	230	-18.53
50	-0.32	232	-17.65
52	-0.79	234	-16.57
54	-1.42	236	-15.91
56	-1.94	238	-16.67
58	-2.16	240	-17.9
60	-2.24	242	-17.94
62	-2.25	244	-16.73
64	-2.44	246	-14.54



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66	-2.67	248	-12.76
68	-3.25	250	-11.94
70	-4.1	252	-12.06
72	-5.23	254	-12.27
74	-6.09	256	-11.97
76	-6.48	258	-11.87
78	-6.53	260	-11.81
80	-6.79	262	-10.96
82	-7.56	264	-10.16
84	-8.42	266	-10.26
86	-9.53	268	-10.62
88	-10.84	270	-9.9
90	-11.32	272	-8.75
92	-10.53	274	-7.84
94	-9.81	276	-7.38
96	-9.84	278	-6.79
98	-10.32	280	-6.33
100	-10.99	282	-6.52
102	-11.83	284	-6.98
104	-11.87	286	-6.94
106	-11.27	288	-6.45
108	-10.9	290	-5.78
110	-10.61	292	-5.2
112	-9.91	294	-4.51
114	-9.35	296	-3.93
116	-9.34	298	-3.33
118	-9.56	300	-2.81
120	-9.58	302	-2.22
122	-9.53	304	-1.73
124	-10.24	306	-1.05
126	-11	308	-0.58
128	-11.1	310	-0.1
130	-11.02	312	0.19
132	-11.56	314	0.38
134	-12.98	316	0.56
136	-14.19	318	0.72



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138	-14.9	320	0.9
140	-15.23	322	1.03
142	-14.95	324	1.13
144	-15.29	326	1.19
146	-15.85	328	1.32
148	-17.04	330	1.52
150	-18.17	332	1.74
152	-18.08	334	1.93
154	-17.97	336	2.07
156	-18.43	338	2.1
158	-18.67	340	2.15
160	-17.62	342	2.17
162	-16.37	344	2.19
164	-14.81	346	2.19
166	-14.3	348	2.24
168	-13.86	350	2.4
170	-14.26	352	2.54
172	-15.24	354	2.64
174	-16.7	356	2.72
176	-18.74	358	2.73
178	-21.23	360	2.83
180	-23.26		

Antenna Gain Table(5150 MHz-Antenna 5G-2, Plane Y-Z):

angle	(dBi)	angle	(dBi)
0	4.56	182	-26.09
2	4.78	184	-25.15
4	4.93	186	-26.12
6	4.67	188	-27.44
8	4.39	190	-27.4
10	4.12	192	-27.02
12	3.83	194	-27.31
14	3.67	196	-26.37
16	3.51	198	-26.28
18	3.29	200	-25.96
20	3.12	202	-25.08
22	2.95	204	-24.61
24	2.77	206	-23.26
26	2.59	208	-21.44
28	2.41	210	-19.3
30	1.91	212	-17.48
32	1.9	214	-16.74
34	1.88	216	-16.64
36	1.84	218	-16.95
38	1.78	220	-17.15
40	1.75	222	-17.45
42	1.69	224	-17.53
44	1.56	226	-16.92
46	1.37	228	-15.67
48	1.06	230	-14.14
50	0.75	232	-13.39
52	0.38	234	-12.8
54	-0.02	236	-12.86
56	-0.36	238	-13.05
58	-0.75	240	-13.17
60	-1.19	242	-13.62
62	-1.69	244	-13.67
64	-2.28	246	-13.51



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66	-2.87	248	-12.95
68	-3.63	250	-12.66
70	-4.5	252	-12.54
72	-5.6	254	-12.61
74	-6.78	256	-13.12
76	-8.06	258	-13.72
78	-8.87	260	-13.58
80	-9.21	262	-13.61
82	-8.99	264	-13.16
84	-8.81	266	-12.48
86	-8.95	268	-12.01
88	-9.38	270	-11.55
90	-9.97	272	-11.21
92	-10.64	274	-10.82
94	-11.11	276	-10.12
96	-11.34	278	-9.13
98	-11.86	280	-7.93
100	-12.83	282	-6.85
102	-13.9	284	-5.81
104	-15.1	286	-4.92
106	-16.82	288	-4.13
108	-18.41	290	-3.46
110	-19.39	292	-2.7
112	-20.56	294	-1.85
114	-22.39	296	-1.15
116	-22.59	298	-0.51
118	-21.28	300	0.01
120	-19.81	302	0.5
122	-19.27	304	1.04
124	-20.42	306	1.32
126	-22.23	308	1.42
128	-22.76	310	1.49
130	-20.96	312	1.52
132	-18.94	314	1.56
134	-17.5	316	1.69
136	-16.96	318	1.72



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138	-16.96	320	1.74
140	-17.13	322	1.77
142	-17.77	324	1.82
144	-18.35	326	1.85
146	-19.08	328	1.88
148	-19.98	330	1.92
150	-22.05	332	2.94
152	-24.09	334	2.84
154	-24.91	336	2.78
156	-23.25	338	2.77
158	-21.84	340	2.78
160	-21.46	342	2.84
162	-21.1	344	2.91
164	-21.43	346	3.08
166	-22.25	348	3.31
168	-23.54	350	3.49
170	-25.64	352	3.65
172	-26.74	354	3.8
174	-27.24	356	4.18
176	-27.23	358	4.31
178	-26.86	360	4.56
180	-26.8		

Antenna Vendor information:

Nienyi Industrial Corp.

Address: 4F, 15, Lane 360, Sec.1 Neihu Rd., Taipei 11445 , Taiwan



年益實業股份有限公司

Nienyi Industrial Corp.



Antenna Vendor:Nienyi

Test date:2022/03/02

Test Engineer:JJ Wang

Address of test site: 4F, 15, Lane 360, Sec.1 Neihu Rd., Taipei 11445 , Taiwan

Measurement Setup:

Reflection Coefficient Measurement:

-Instrument:Keysight VNA E5071C

-Setup:

VNA RF port connect to DUT

Pattern Measurement:

-Chamber: Atenlab OTA800

-TestProgram: CTIA_OTA_Test_Plan_Rev_3.8.2

-Setup Photo: See Appendix.

Test instrument calibration information:

Vendor	Model	Calibrated Date	Calibrated Until
Keysight	VNA E5071C	2021/07/01	2022/06/31

Appendix

Antenna Vendor: Nienyi

Test date: 2022/03/02

Test Engineer: JJ Wang

Measurement Setup:

Reflection Coefficient Measurement:

-Instrument: Keysight VNA E5071C

-Setup:

VNA RF port connect to DUT

Pattern Measurement:

-Chamber: Atenlab OTA800

-Test Program: CTIA_OTA_Test_Plan_Rev_3.8.2

-Setup Photo:

