

SPECIFICATION

ANT.TYPE(LOOP-COUPLE):YES

MODLENAME: AL6013-T6-cndong(PBT+40%GF)

DATE:20230317

DATASHEET REVISION:V1.0

MANUFACTURE:HUAMAO

ADDRESS:Dongguan Huamao Electronics Co.Ltd

SUMMERY TABLE

Check Items	Information	Page
Manufacturer	Huamao	1
Antenna pattern / Test data (Tx Antenna, Rx antenna, GPS, WiFi6E, etc)	Included frequency, antenna gain, type	3~ 12
Test Setup	-	-
Test Setup Photo, Device Photo		-

Antenna Performance

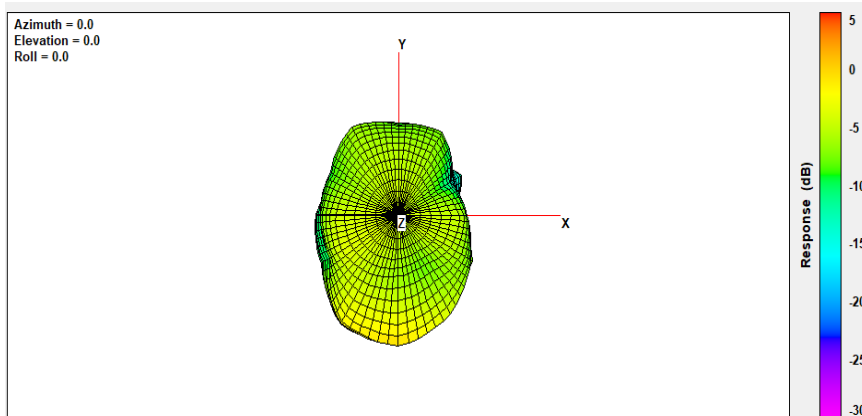
Frequency Range	2400-2500MHz;5180-5850 MHz;
Impedance	50Ω
Peak Gain	0.98dBi @ 5180MHz(test in anechoic chamber)
Admitted Power	N/A
Cable	N/A
Antenna Type	Loop
Connector	N/A
Process	N/A

ANTO (TX ANTENNA)

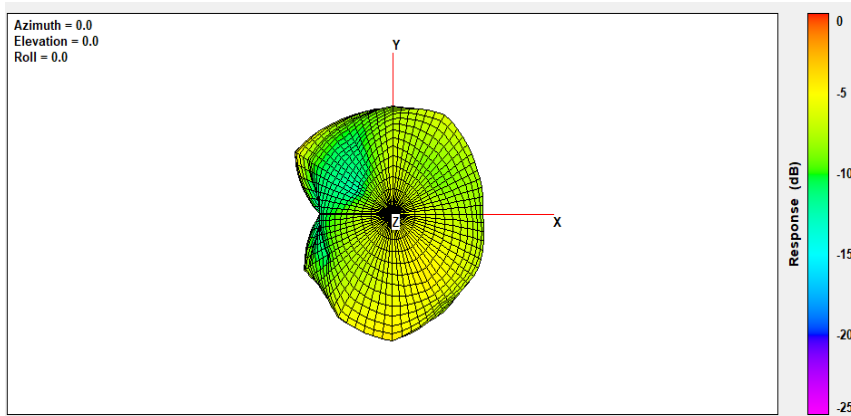
FRE.	EFF.	Gain	Drect.		FRE.	EFF.	Gain	Drect.
2400	-7.06	-0.38	6.67		5140	-6.07	0.76	6.83
2410	-6.93	-0.17	6.75		5160	-6.14	0.63	6.77
2420	-6.87	0.04	6.91		5180	-6.16	0.98	7.14
2430	-6.88	0.06	6.94		5200	-6.44	0.74	7.19
2440	-6.95	0.04	6.99		5220	-6.72	0.53	7.25
2450	-7.04	0.03	7.07		5240	-7.01	0.17	7.19
2460	-7.23	0.02	7.25		5260	-6.94	0.54	7.48
2470	-7.22	0.07	7.29		5280	-7.09	0.26	7.35
2480	-7.21	0.23	7.44		5300	-7.23	-0.01	7.22
2490	-7.13	0.58	7.71		5320	-7.34	-0.26	7.07
2500	-7.19	0.72	7.91		5340	-7.37	-0.07	7.30
					5360	-7.63	-0.50	7.13
					5380	-7.69	-0.49	7.20
					5400	-7.72	-0.64	7.08
					5420	-7.65	-0.52	7.13
					5440	-7.86	-0.72	7.14
					5460	-7.89	-0.39	7.50
					5480	-7.86	-0.27	7.60
					5500	-7.60	-0.09	7.51
					5520	-7.36	-0.03	7.33
					5540	-7.22	0.06	7.29
					5560	-7.24	-0.27	6.97
					5580	-7.35	-0.53	6.82

				5600	-7.57	-0.60	6.97
				5620	-7.84	-0.64	7.20
				5640	-7.83	-0.38	7.45
				5660	-7.96	-0.34	7.62
				5680	-8.06	-0.40	7.65
				5700	-7.88	-0.31	7.56
				5720	-7.84	-0.35	7.49
				5740	-8.12	-0.89	7.23
				5760	-8.31	-1.60	6.71
				5780	-8.56	-1.51	7.05
				5800	-8.69	-1.14	7.55
				5820	-8.76	-0.97	7.80
				5840	-8.56	-0.27	8.29
				5860	-8.47	0.08	8.55
				5880	-8.45	0.25	8.70

Antenna 3D Radiation Pattern



2450MHz



5740MHz

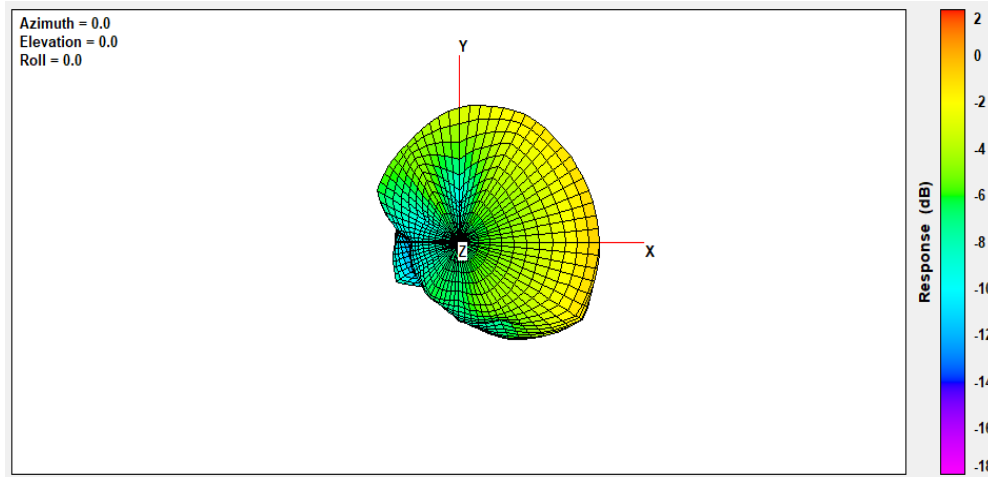
ANT1 (TX ANTENNA)

Frequency Range	2400-2500MHz;5180-5850 MHz;
Impedance	50Ω
Peak Gain	1.22dBi @ 2440MHz(test in anechoic chamber)
Admitted Power	N/A
Cable	N/A
Antenna Type	Loop
Connector	N/A
Process	N/A

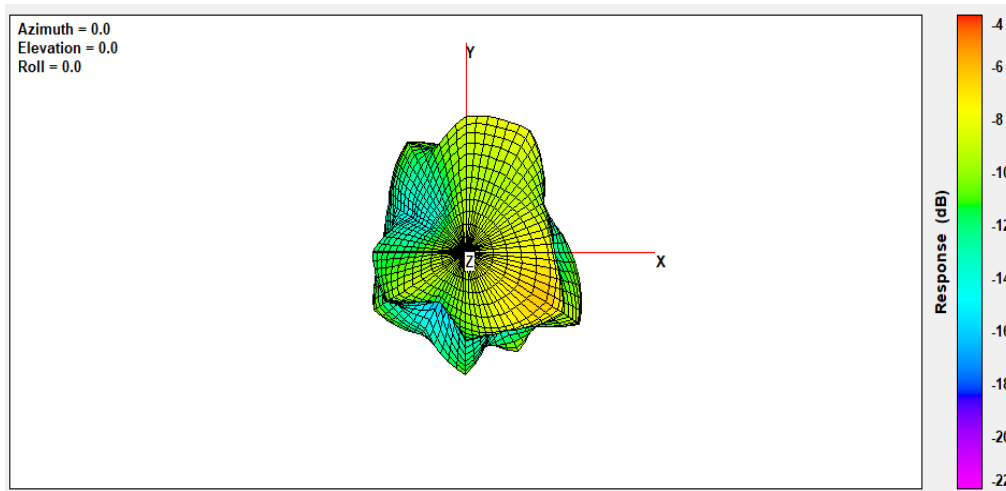
FRE.	EFF.	Gain	Drect.		FRE.	EFF.	Gain	Drect.
2400	-6.27	-0.54	5.73		5140	-8.72	-3.89	4.83
2410	-5.67	0.21	5.88		5160	-8.68	-3.69	4.99
2420	-5.23	0.72	5.95		5180	-8.68	-4.27	4.41
2430	-4.91	1.12	6.03		5200	-8.87	-4.59	4.29
2440	-4.80	1.22	6.02		5220	-9.08	-4.54	4.54
2450	-4.82	1.15	5.97		5240	-9.29	-4.56	4.73
2460	-5.09	0.73	5.82		5260	-8.94	-3.64	5.30
2470	-5.29	0.55	5.84		5280	-8.76	-3.61	5.15
2480	-5.63	0.11	5.74		5300	-8.69	-3.73	4.96
2490	-5.96	-0.23	5.73		5320	-8.52	-3.79	4.73
2500	-6.38	-0.66	5.72		5340	-8.44	-3.66	4.78
					5360	-8.72	-3.93	4.80
					5380	-8.74	-3.72	5.02
					5400	-8.78	-3.11	5.67
					5420	-8.72	-2.96	5.76
					5440	-9.03	-3.16	5.87
					5460	-9.17	-3.51	5.66
					5480	-9.17	-3.15	6.02
					5500	-9.02	-2.84	6.18
					5520	-9.08	-2.65	6.43
					5540	-9.10	-3.02	6.08
					5560	-9.25	-3.44	5.81
					5580	-9.32	-3.57	5.75
					5600	-9.42	-3.82	5.59
					5620	-9.67	-4.31	5.36
					5640	-9.65	-4.60	5.04

				5660	-9.79	-4.95	4.83
				5680	-9.97	-4.99	4.98
				5700	-9.98	-5.06	4.92
				5720	-10.08	-5.38	4.70
				5740	-10.61	-5.67	4.93
				5760	-10.89	-5.91	4.98
				5780	-11.16	-6.22	4.94
				5800	-11.21	-6.35	4.87
				5820	-11.20	-6.34	4.86
				5840	-10.87	-6.17	4.70
				5860	-10.63	-5.95	4.68
				5880	-10.48	-5.46	5.02

Antenna 3D Radiation Pattern



2450MHz



5740MHz

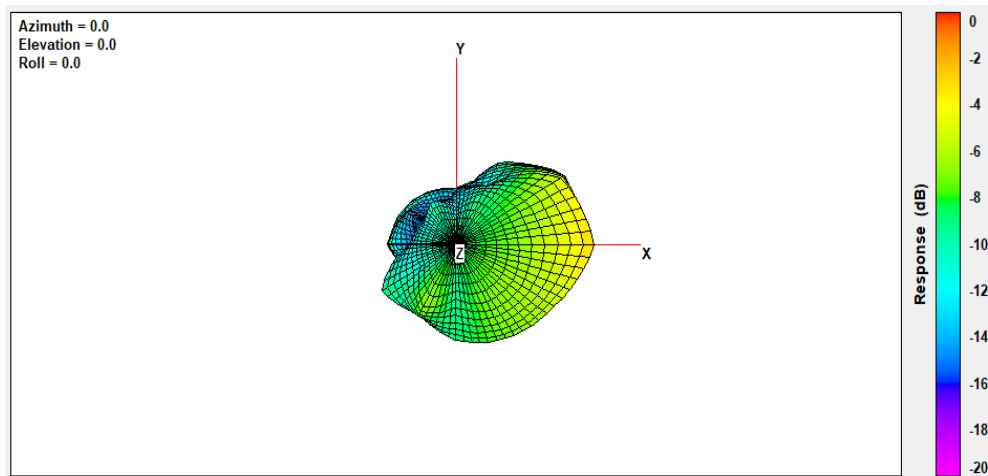
ANT2 (TX ANTENNA)

Frequency Range	2400-2500MHz;5180-5850 MHz;
Impedance	50Ω
Peak Gain	0.82dBi @ 2400MHz(test in anechoic chamber)
Admitted Power	N/A
Cable	N/A
Antenna Type	LOOP
Connector	N/A
Process	N/A

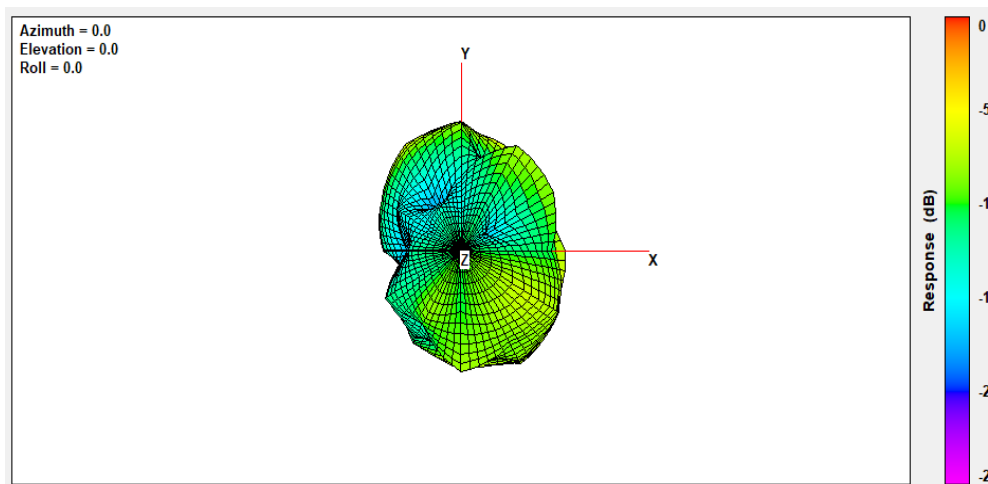
FRE.	EFF.	Gain	Direct.		FRE.	EFF.	Gain	Direct.
2400	-7.16	0.82	7.98		5140	-9.08	-3.98	5.10
2410	-7.29	0.59	7.88		5160	-9.17	-4.37	4.80
2420	-7.49	0.42	7.90		5180	-9.05	-3.53	5.52
2430	-7.70	0.17	7.88		5200	-9.18	-3.54	5.63
2440	-7.99	-0.18	7.82		5220	-9.12	-3.11	6.02
2450	-8.27	-0.48	7.79		5240	-9.15	-3.15	5.99
2460	-8.57	-0.80	7.77		5260	-8.78	-2.87	5.92
2470	-8.65	-0.87	7.79		5280	-8.70	-2.92	5.78
2480	-8.80	-1.19	7.61		5300	-8.76	-2.94	5.82
2490	-8.94	-1.40	7.54		5320	-8.90	-3.56	5.34
2500	-9.08	-1.51	7.58		5340	-9.02	-3.95	5.07
					5360	-9.42	-4.95	4.47
					5380	-9.56	-5.58	3.97
					5400	-9.64	-5.66	3.98
					5420	-9.69	-5.66	4.04
					5440	-10.03	-5.57	4.46
					5460	-10.15	-5.92	4.23
					5480	-10.13	-5.92	4.22
					5500	-9.88	-5.40	4.48
					5520	-9.64	-4.73	4.91
					5540	-9.38	-4.14	5.24
					5560	-9.26	-4.02	5.25
					5580	-9.19	-3.95	5.24
					5600	-9.17	-3.99	5.18
					5620	-9.18	-4.15	5.03
					5640	-9.00	-3.44	5.55
					5660	-8.95	-2.76	6.18
					5680	-8.93	-2.50	6.43
					5700	-8.72	-2.06	6.66

				5720	-8.61	-1.82	6.79
				5740	-8.93	-2.70	6.24
				5760	-9.23	-3.38	5.85
				5780	-9.58	-3.38	6.19
				5800	-9.72	-3.23	6.50
				5820	-9.88	-2.77	7.11
				5840	-9.78	-2.35	7.43
				5860	-9.76	-2.34	7.41
				5880	-9.78	-2.37	7.41

Antenna 3D Radiation Pattern



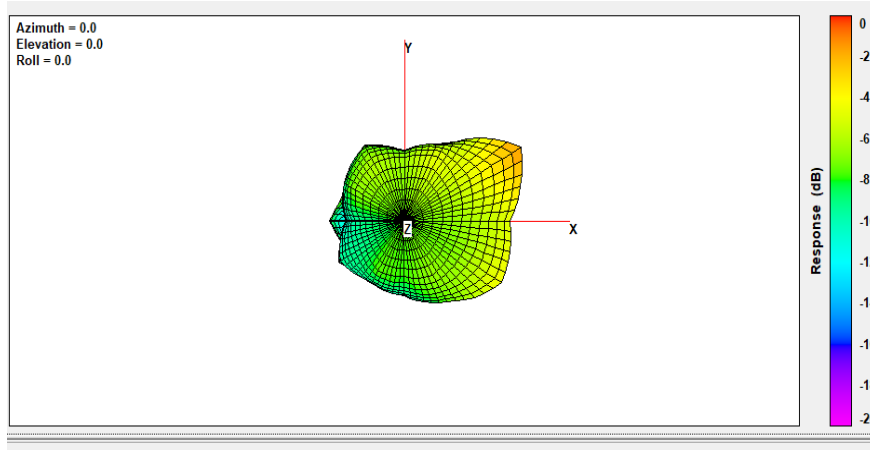
2450MHz



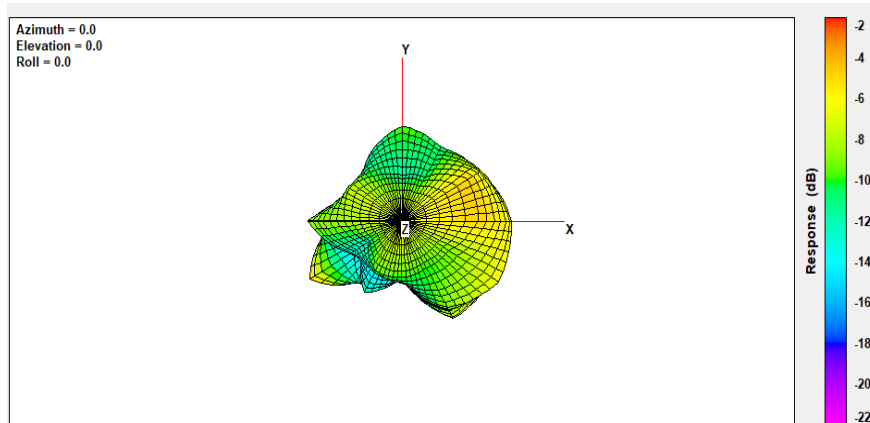
5740MHz

				5660	-10.10	-3.69	6.41
				5680	-9.92	-3.45	6.48
				5700	-9.60	-3.25	6.35
				5720	-9.40	-3.05	6.35
				5740	-9.46	-3.31	6.15
				5760	-9.45	-3.73	5.73
				5780	-9.55	-3.71	5.84
				5800	-9.46	-2.74	6.72
				5820	-9.40	-2.04	7.36
				5840	-9.11	-1.62	7.49
				5860	-8.96	-1.76	7.21
				5880	-8.92	-1.78	7.14

Antenna 3D Radiation Pattern



2450MHz



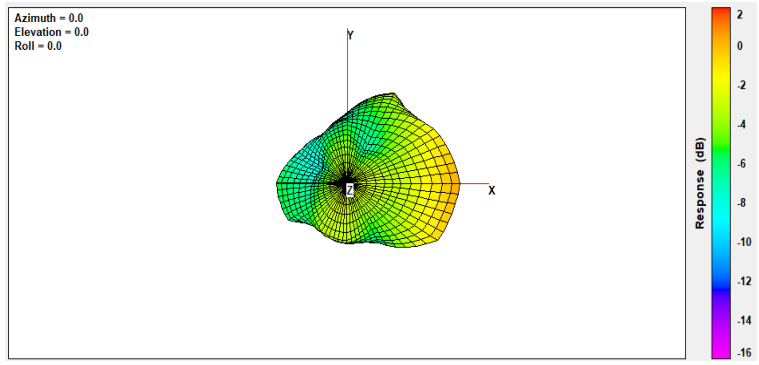
5740MHz

Frequency Range	1500-1600MHz;
Impedance	50Ω
Peak Gain	0.68dBi @ 1570MHz(test in anechoic chamber)
Admitted Power	N/A
Cable	N/A
Antenna Type	LOOP
Connector	N/A
Process	N/A

GPS ATN(RX ANTENNA)

FRE.	EFF.	Gain	Drect.
1500	-10.18	-5.06	5.11
1505	-9.73	-4.65	5.08
1510	-9.28	-4.19	5.09
1515	-8.89	-3.68	5.21
1520	-8.50	-3.32	5.18
1525	-8.09	-2.87	5.22
1530	-7.67	-2.42	5.26
1535	-7.22	-1.88	5.34
1540	-6.84	-1.47	5.38
1545	-6.42	-1.01	5.41
1550	-6.00	-0.54	5.47
1555	-5.64	-0.07	5.57
1560	-5.38	0.18	5.57
1565	-5.16	0.44	5.60
1570	-5.08	0.68	5.75
1575	-5.09	0.62	5.71
1580	-5.16	0.58	5.74
1585	-5.36	0.37	5.73
1590	-5.59	0.09	5.68
1595	-5.93	-0.24	5.69
1600	-6.31	-0.76	5.55

Antenna 3D Radiation Pattern



1575MHz