

P5 Antenna Datasheet

RAKwireless Technology Limited

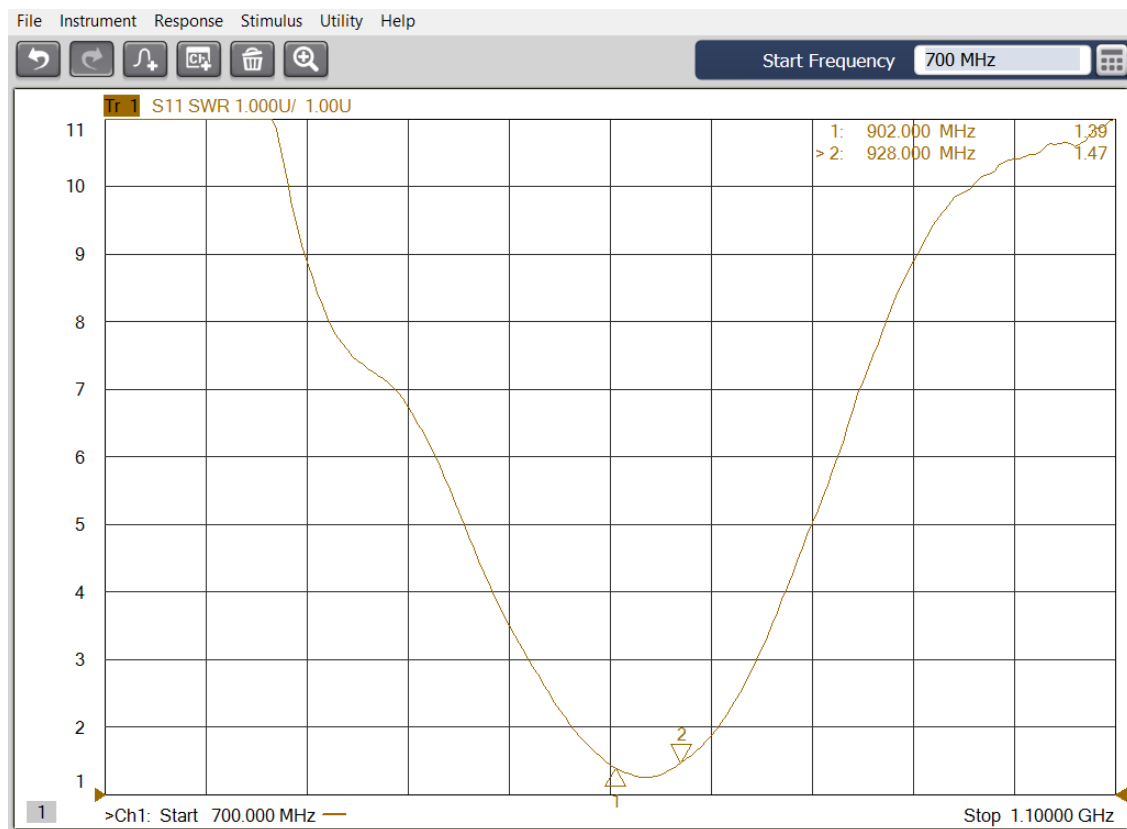
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253-261 Hennessy Road Wan Chai, Hong Kong SAR**

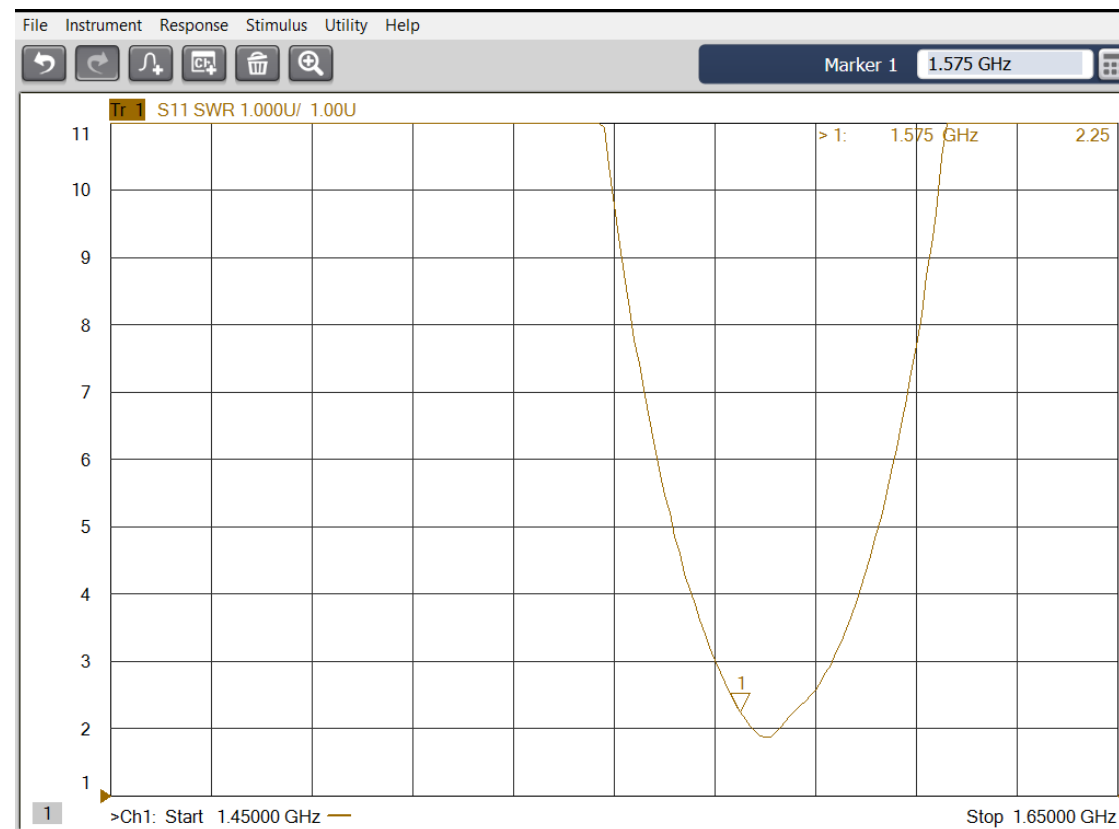
Antenna Model	LORA ANTENNA free space	LORA ANTENNA Test with head	GPS ANTENNA
Frequency Range	902~ 928 MHz		1575.42 ± 1.023MHz
Gain	2 dBi	-1 dBi	1 dBi
VSWR	< 2	< 2	< 2
Efficiency	60%	35%	50%
Feed Impedance	50 Ω	50 Ω	50 Ω
Polarization	linear polarization		RHCP
Antenna sizes	51.5×24×15.5mm		
Cable length	50±5mm		
Operation Temperature	-40°C to + 85°C		
Storage Temperature	-40°C to + 85°C		
Relative Humidity	40% to 95%		

VSWR

LORA ANTENNA



GPS ANTENNA



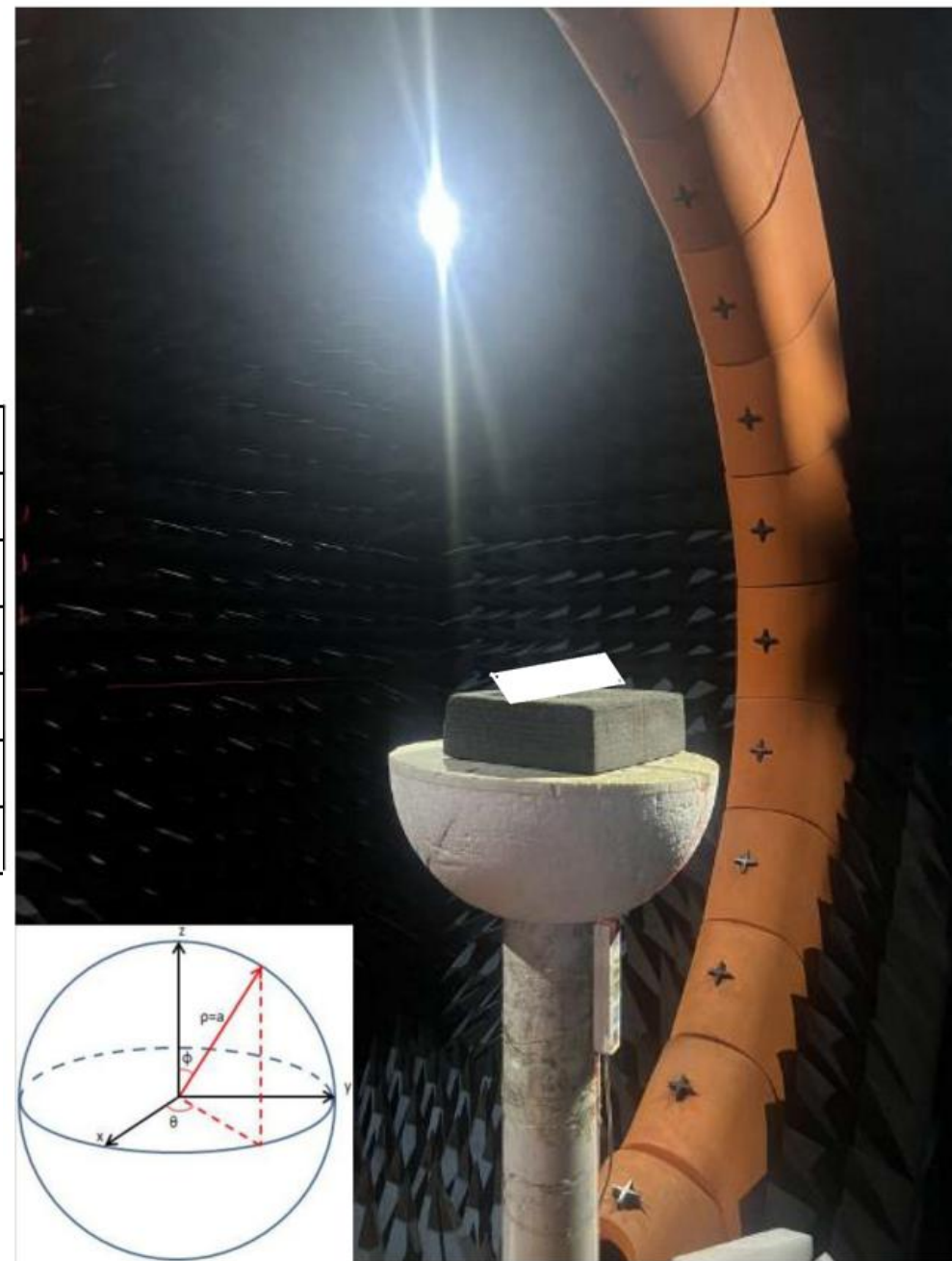
Frequency	E Total. dB(dB)	Frequency	Efficiency()
902MHz	2.28	902MHz	58%
903MHz	2.36	903MHz	59%
904MHz	2.42	904MHz	59%
905MHz	2.51	905MHz	60%
906MHz	2.50	906MHz	60%
907MHz	2.55	907MHz	60%
908MHz	2.56	908MHz	60%
909MHz	2.64	909MHz	61%
910MHz	2.65	910MHz	60%
911MHz	2.70	911MHz	60%
912MHz	2.69	912MHz	60%
913MHz	2.67	913MHz	60%
914MHz	2.65	914MHz	60%
915MHz	2.61	915MHz	60%
916MHz	2.47	916MHz	59%
917MHz	2.36	917MHz	59%
918MHz	2.31	918MHz	59%
919MHz	2.23	919MHz	58%
920MHz	2.14	920MHz	57%
921MHz	2.17	921MHz	57%
922MHz	2.16	922MHz	57%
923MHz	2.10	923MHz	57%
924MHz	2.06	924MHz	57%
925MHz	2.00	925MHz	57%
926MHz	2.21	926MHz	60%
927MHz	2.37	927MHz	59%
928MHz	2.36	928MHz	59%
929MHz	2.41	929MHz	59%
930MHz	2.33	930MHz	59%

Antenna chamber test data

free space

GPS

Frequency	Efficiency()	Frequency	E Total. dB(dB)
1572.4MHz	48%	1570.4MHz	1.06
1573.4MHz	50%	1571.4MHz	1.19
1574.4MHz	50%	1572.4MHz	1.24
1575.4MHz	50%	1573.4MHz	1.34
1576.4MHz	49%	1574.4MHz	1.13
1577.4MHz	47%	1575.4MHz	0.73

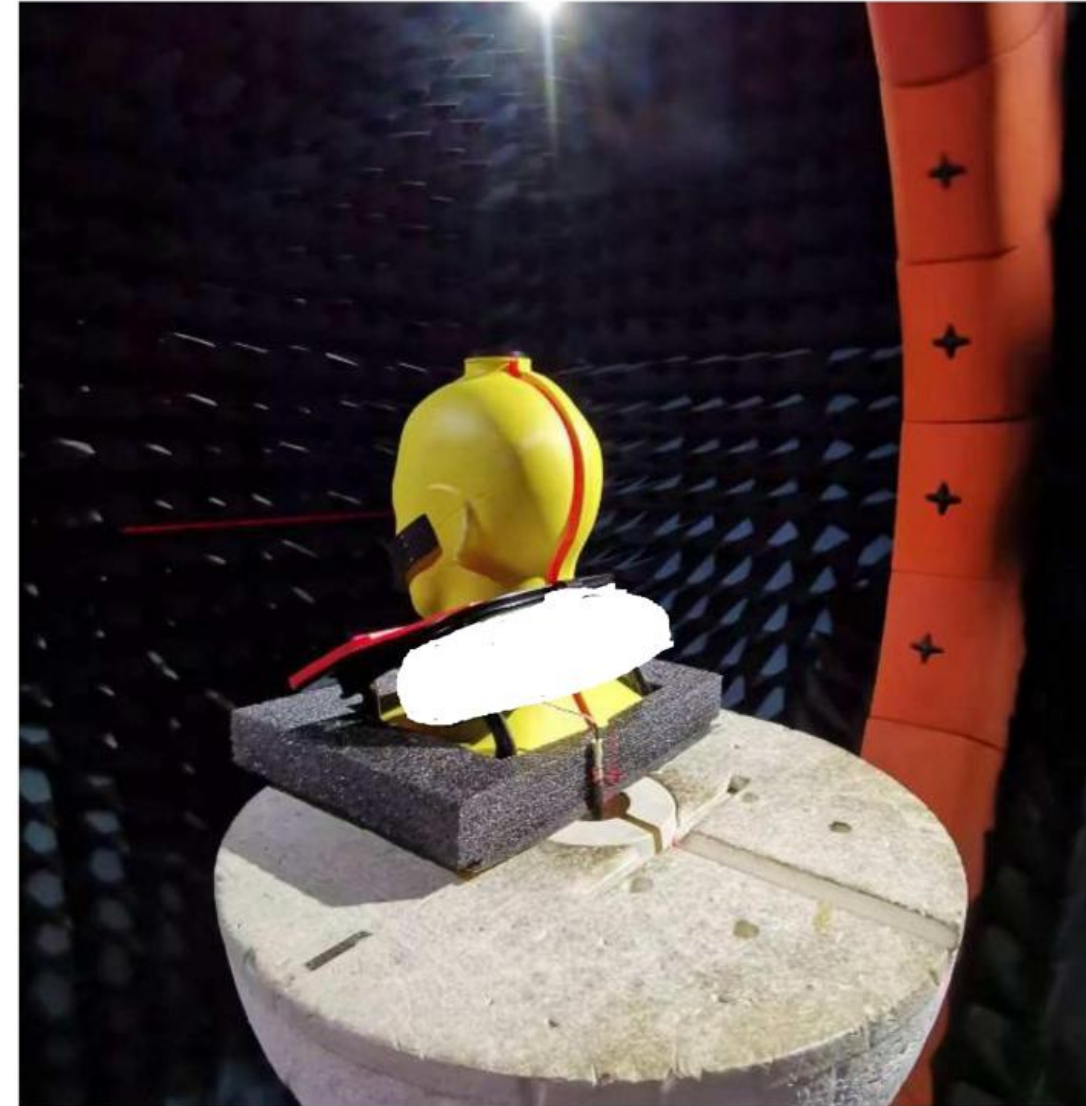


Frequency	E Total. dB(dB)	Frequency	Efficiency()
902MHz	-1.09	902MHz	35%
903MHz	-0.99	903MHz	35%
904MHz	-0.91	904MHz	36%
905MHz	-0.81	905MHz	36%
906MHz	-0.80	906MHz	36%
907MHz	-0.75	907MHz	37%
908MHz	-0.70	908MHz	37%
909MHz	-0.68	909MHz	37%
910MHz	-0.71	910MHz	37%
911MHz	-0.66	911MHz	37%
912MHz	-0.65	912MHz	36%
913MHz	-0.63	913MHz	36%
914MHz	-0.64	914MHz	36%
915MHz	-0.65	915MHz	36%
916MHz	-0.78	916MHz	35%
917MHz	-0.88	917MHz	35%
918MHz	-0.91	918MHz	34%
919MHz	-1.00	919MHz	34%
920MHz	-1.12	920MHz	33%
921MHz	-1.14	921MHz	33%
922MHz	-1.13	922MHz	32%
923MHz	-1.23	923MHz	32%
924MHz	-1.06	924MHz	35%
925MHz	-1.01	925MHz	35%
926MHz	-1.04	926MHz	35%
927MHz	-1.07	927MHz	34%
928MHz	-1.10	928MHz	34%
929MHz	-1.05	929MHz	33%
930MHz	-1.09	930MHz	33%

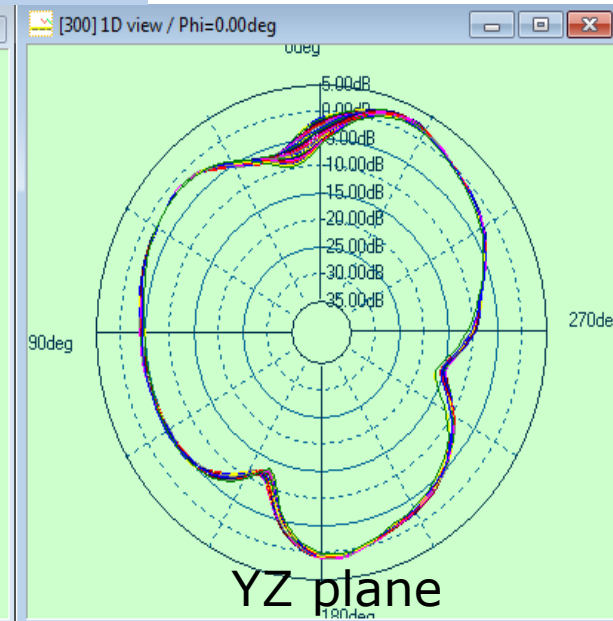
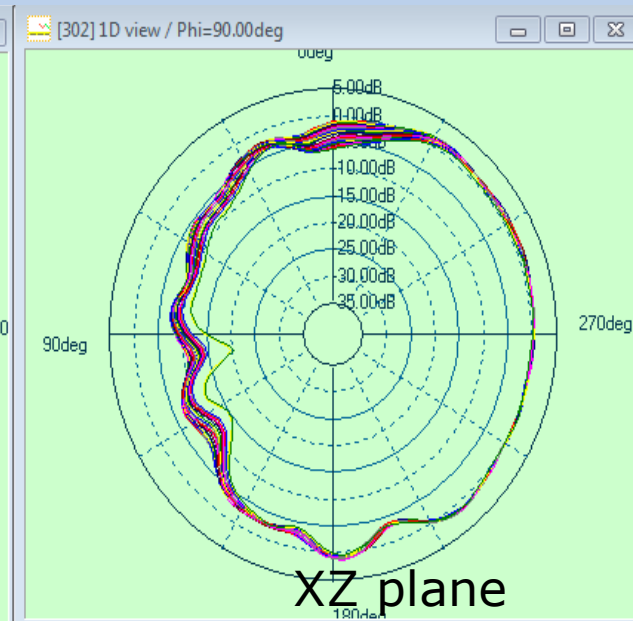
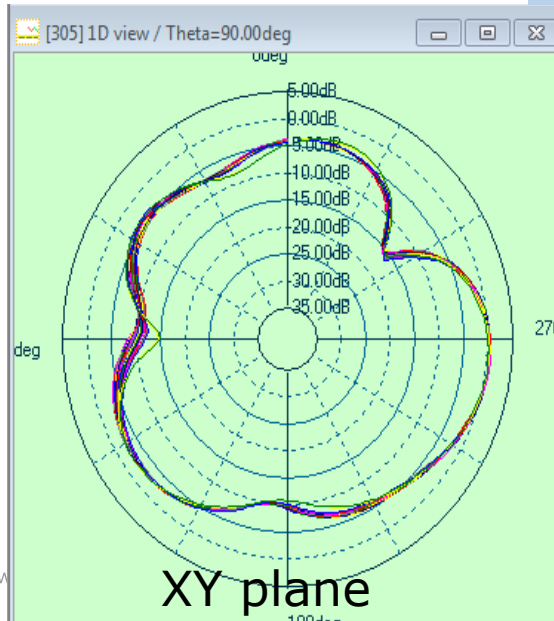
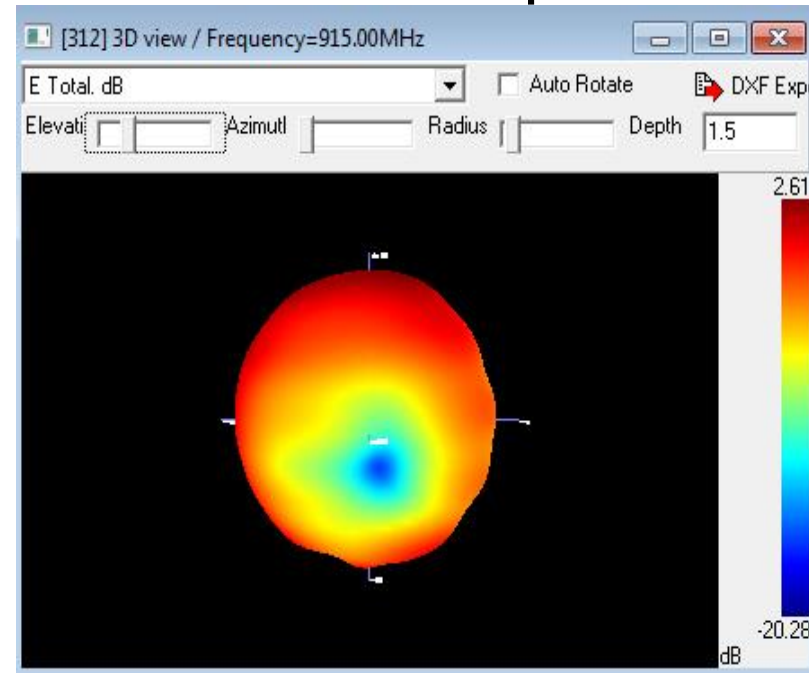
Antenna chamber test data

Test with head

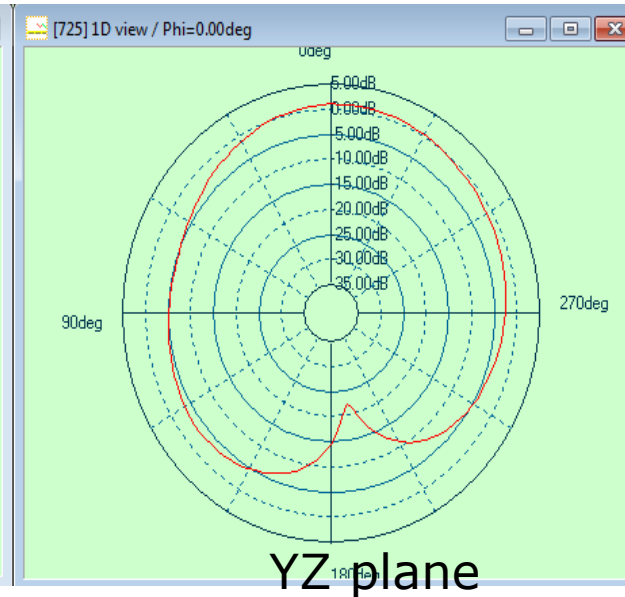
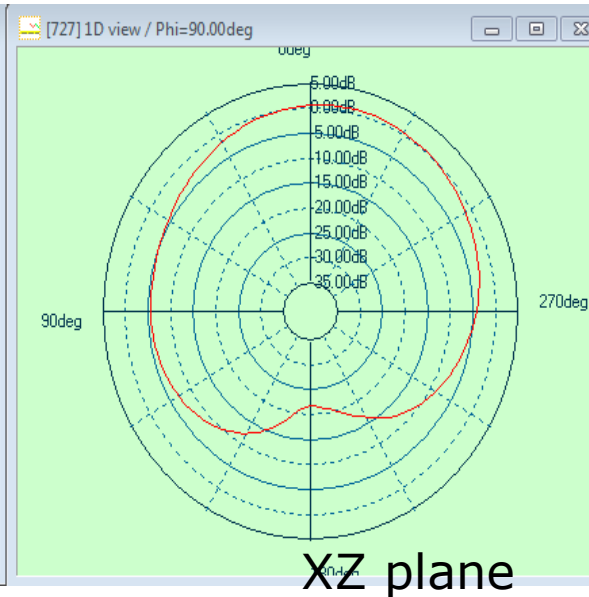
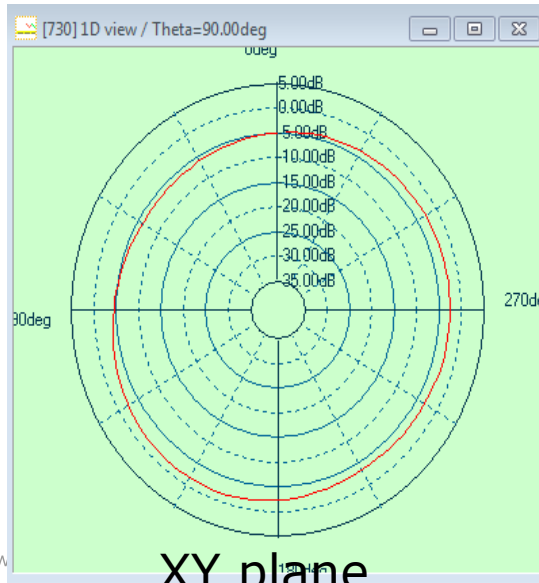
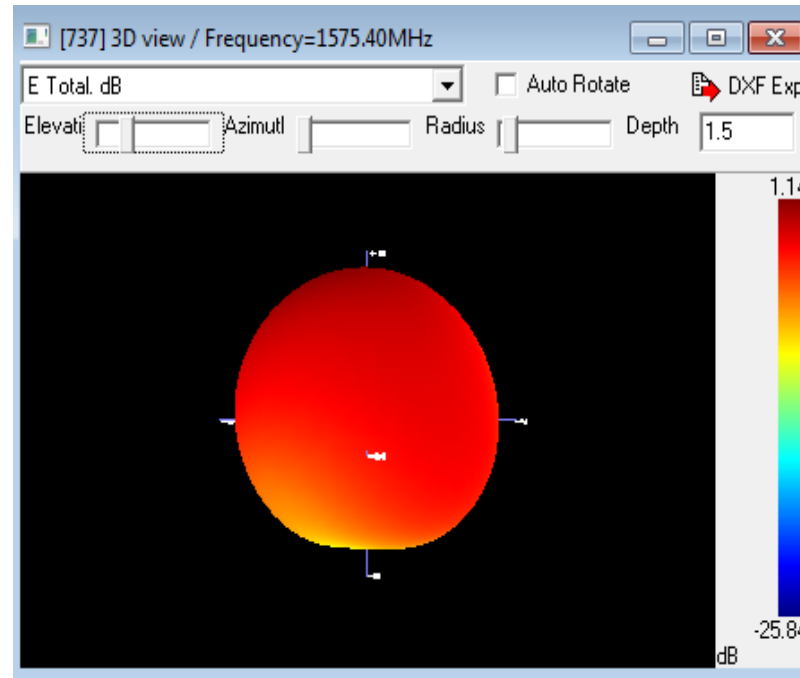
Frequency	Efficiency()	Frequency	E Total. dB(dB)
1572.4MHz	49%	1570.4MHz	1.30
1573.4MHz	51%	1571.4MHz	1.47
1574.4MHz	52%	1572.4MHz	1.56
1575.4MHz	52%	1573.4MHz	1.57
1576.4MHz	51%	1574.4MHz	1.45
1577.4MHz	49%	1575.4MHz	1.14
1578.4MHz	46%	1576.4MHz	0.56



LORA Antenna pattern



GPS Antenna pattern



THANK YOU



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