Antenna Data Sheet

Uant P/N:	NPANT010	REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	**Mark**	
APPROVED BY:	**Changxing.Liu**	
DATE:	2024/08/22	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Mordecai LIU Lance SUN	2024-08-22

Content

1. Electrical Specification:

Passive Electrical Specifications	
Frequency Range	850–950 MHz
Input Impendence	50 Ω
VSWR	≤ 4.91
Gain	≤ 1.15 dBi
Polarization Type	Linear
Antenna Typa	Dipole

Detailed Passive Electrical Specifications								
Frequency Range (MHz)	**850–950**	**1176–1280**	**1400–1610**	**1710–2170**	**2170–2690**	**3400–3800**	**4000–5000**	**5000–6000**
VSWR (Max.)	4.91	-	-	-	-	-	-	-
Average Efficiency (%)	42.83	-	-	-	-	-	-	-
Max. Peak Gain (dBi) Frequency (MHz)	1.15 (882)	-	-	-	-	-	-	-

Mechanical Specifications	
Antenna Size	135 mm × 15.6 mm × 13 mm
Casing	PC + ABS & Black
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85°C
Radome Color	Black

2. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone®2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz

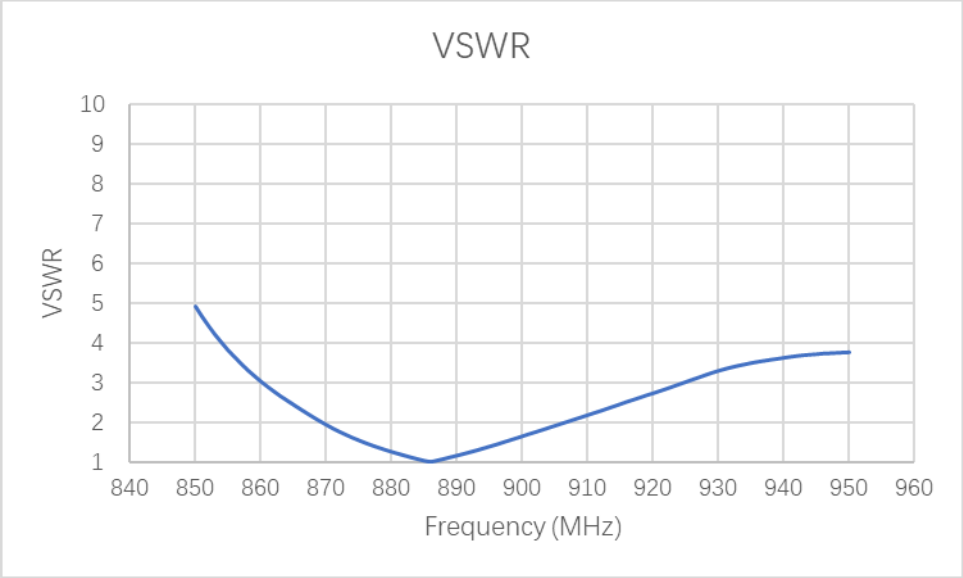
3. Detailed data

Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)	VSWR
850	-1.98	38.29	4.91
851	-1.8	39.39	4.65
852	-1.63	40.47	4.42
853	-1.47	41.66	4.20
854	-1.3	42.92	4.00
855	-1.14	44.2	3.81
856	-0.69	45.26	3.64
857	-0.52	46.52	3.47
858	-0.36	47.68	3.31
859	-0.21	48.77	3.17
860	-0.09	49.61	3.03
861	0.05	50.58	2.90
862	0.1	50.87	2.78
863	0.18	51.62	2.66
864	0.25	52.01	2.55
865	0.31	52.35	2.44
866	0.28	52.75	2.34
867	0.4	53.48	2.23
868	0.49	53.34	2.13
869	0.59	53.39	2.03
870	0.71	53.59	1.94
871	0.82	53.94	1.85
872	0.93	54.46	1.77
873	1	54.42	1.69
874	1.06	54.85	1.61
875	1.1	55.07	1.55
876	0.9	54.84	1.48
877	0.94	55.01	1.42
878	0.96	54.66	1.36
879	0.98	54.07	1.31
880	1.05	53.6	1.26
881	1.1	53.02	1.21
882	1.15	52.49	1.17
883	1.14	51.24	1.12
884	1.13	50.44	1.08
885	1.11	49.75	1.04
886	0.95	49.15	1.01
887	0.87	48.45	1.05
888	0.82	48.16	1.09

889	0.79	47.94	1.13
890	0.78	47.73	1.17
891	0.8	47.63	1.21
892	0.89	48.03	1.25
893	0.93	47.99	1.30
894	1	47.83	1.35
895	1.06	47.66	1.40
896	1.1	47.46	1.44
897	1.11	47.12	1.50
898	1.08	46.42	1.55
899	1.02	45.88	1.60
900	0.92	45.05	1.65
901	0.84	44.44	1.71
902	0.72	43.46	1.76
903	0.65	42.81	1.81
904	0.6	42	1.86
905	0.56	41.53	1.92
906	0.54	40.98	1.97
907	0.57	40.69	2.02
908	0.64	40.69	2.08
909	0.69	40.53	2.13
910	0.72	40.4	2.18
911	0.8	40.74	2.24
912	0.82	40.76	2.29
913	0.84	40.76	2.35
914	0.85	40.62	2.40
915	0.86	40.57	2.46
916	0.82	40.46	2.52
917	0.79	39.87	2.57
918	0.8	39.49	2.63
919	0.8	38.98	2.68
920	0.75	38.18	2.73
921	0.72	37.7	2.79
922	0.68	37.24	2.84
923	0.63	36.57	2.90
924	0.65	36.17	2.96
925	0.54	35.64	3.02
926	-0.18	34.07	3.08
927	-0.21	33.88	3.13
928	-0.18	33.9	3.19
929	-0.17	33.79	3.25
930	-0.15	33.81	3.30
931	-0.12	33.86	3.34

932	-0.11	33.71	3.39
933	-0.08	33.8	3.42
934	-0.07	33.74	3.46
935	-0.09	33.49	3.49
936	-0.02	32.8	3.52
937	-0.04	32.56	3.55
938	-0.08	32.26	3.58
939	-0.13	31.89	3.60
940	-0.21	31.24	3.62
941	-0.23	30.93	3.65
942	-0.24	30.7	3.67
943	-0.24	30.39	3.69
944	-0.21	30.23	3.70
945	-0.19	30.18	3.71
946	-0.22	29.96	3.73
947	-0.17	30.06	3.74
948	-0.13	30.04	3.75
949	-0.04	30.32	3.76
950	-0.02	30.3	3.76

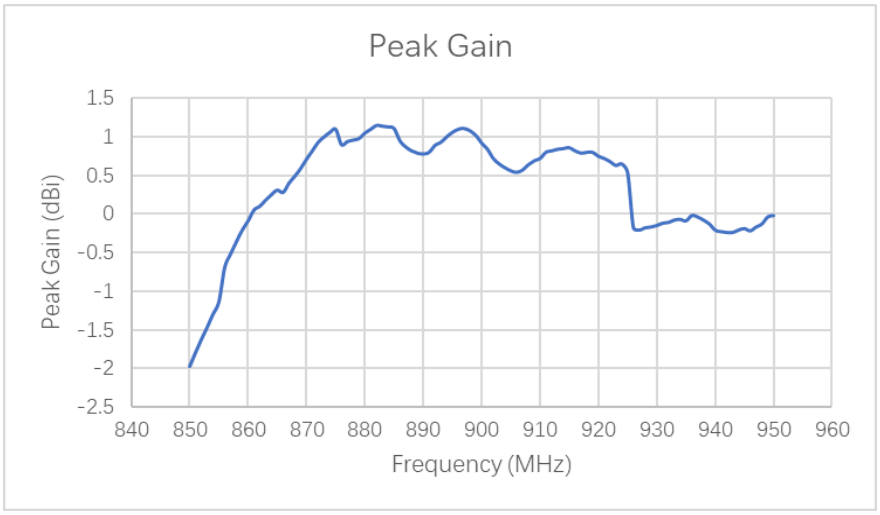
4. S Parameter



Frequency (MHz)	850	860	870	880	890	902	910	928	930	950
VSWR	4.91	3.03	1.94	1.26	1.17	1.76	2.18	3.19	3.30	3.76

5. Efficiency and Gain

Frequency (MHz)	850	860	870	880	890	902	910	928	930	950
Efficiency (%)	38.29	49.61	53.59	53.60	47.73	43.46	40.40	33.90	33.81	30.30



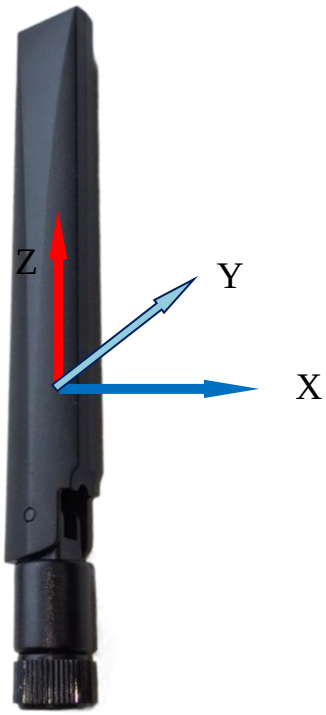
Frequency (MHz)	850	860	870	880	890	902	910	928	930	950
Gain (dBi)	-1.98	-0.09	0.71	1.05	0.78	0.72	0.72	-0.18	-0.15	-0.02

Max Peak Gain (dBi)

Band	850-900	902-928	930-950
Frequency (MHz)	882	915	950
Peak Gain (dBi)	1.15	0.86	-0.02

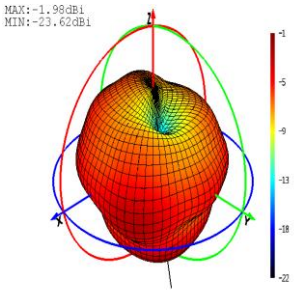
6. Radiation Pattern

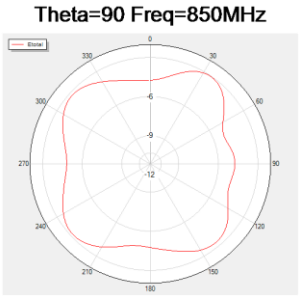
- Antenna 2D Radiation Pattern

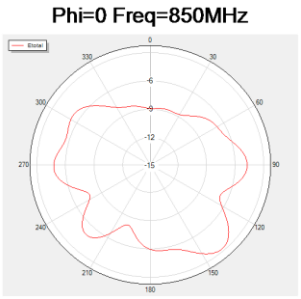


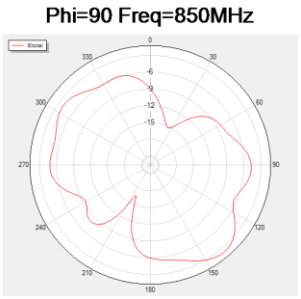
H plane: the tangent of XY
E1 plane: the tangent of XZ
E2 plane: the tangent of YZ

850 MHz

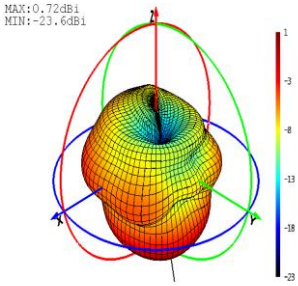


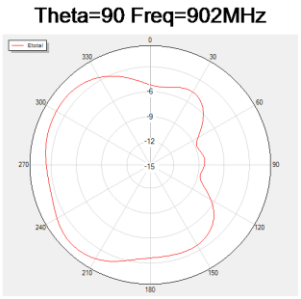


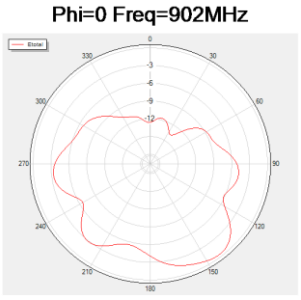


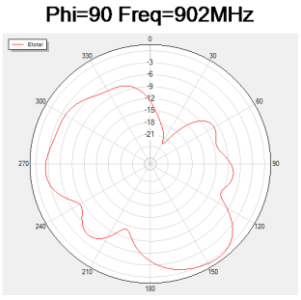


902 MHz

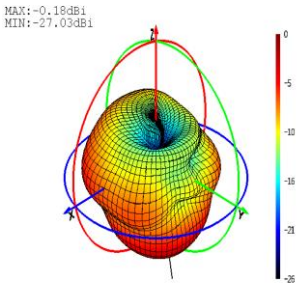


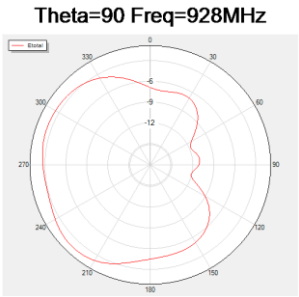


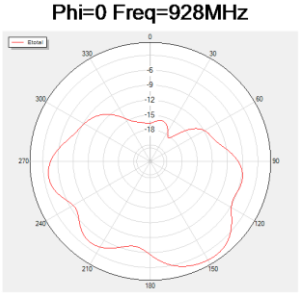


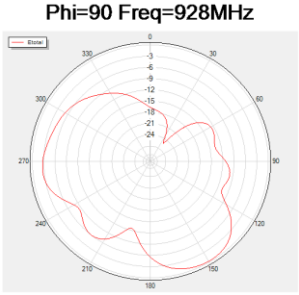


928 MHz

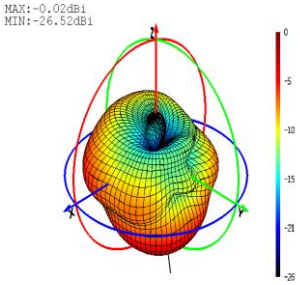


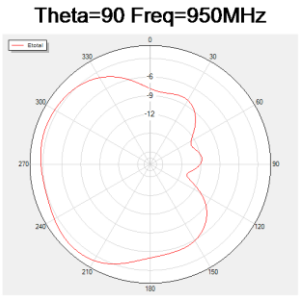


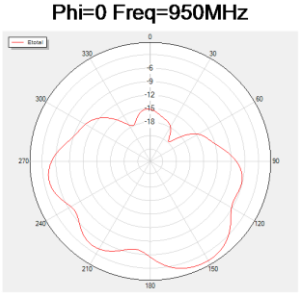


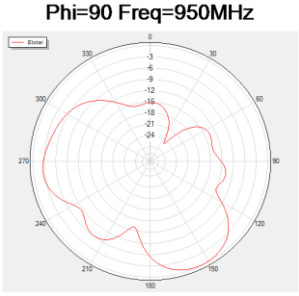


950 MHz



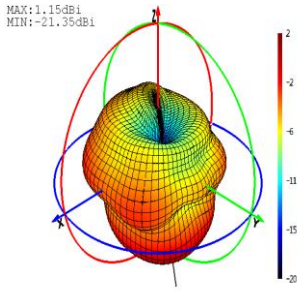


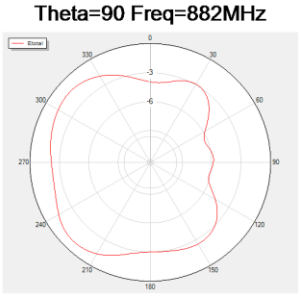


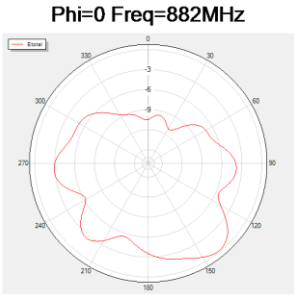


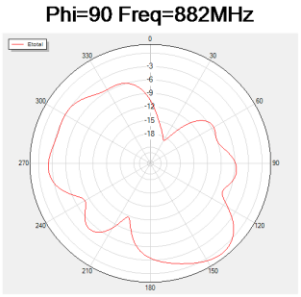
MAX Peak Gain

882 MHz

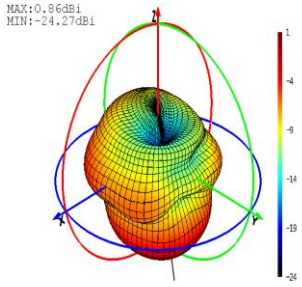


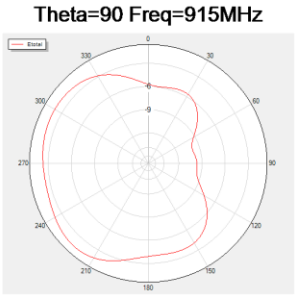


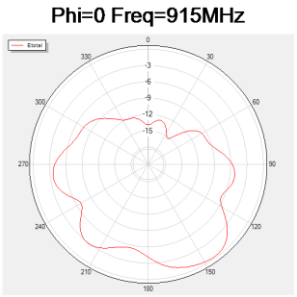


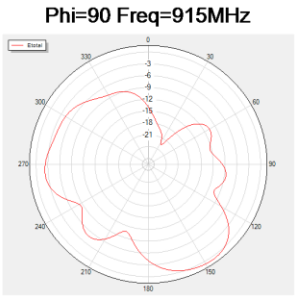


915 MHz

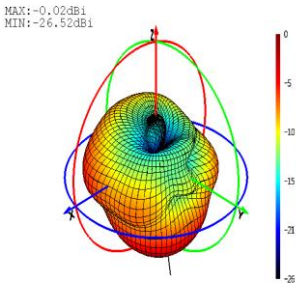


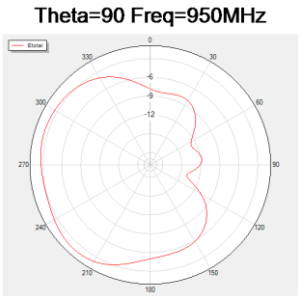


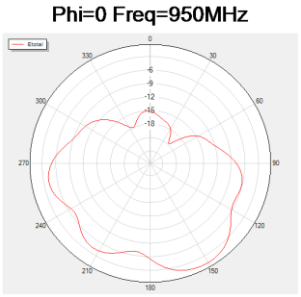


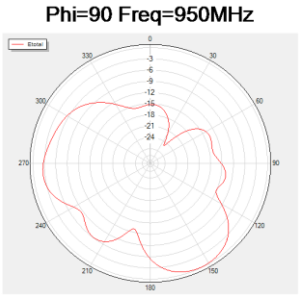


950 MHz


MAX:-0.02dBi
MIN:-26.52dBi
0
-5
-10
-15
-21
-26

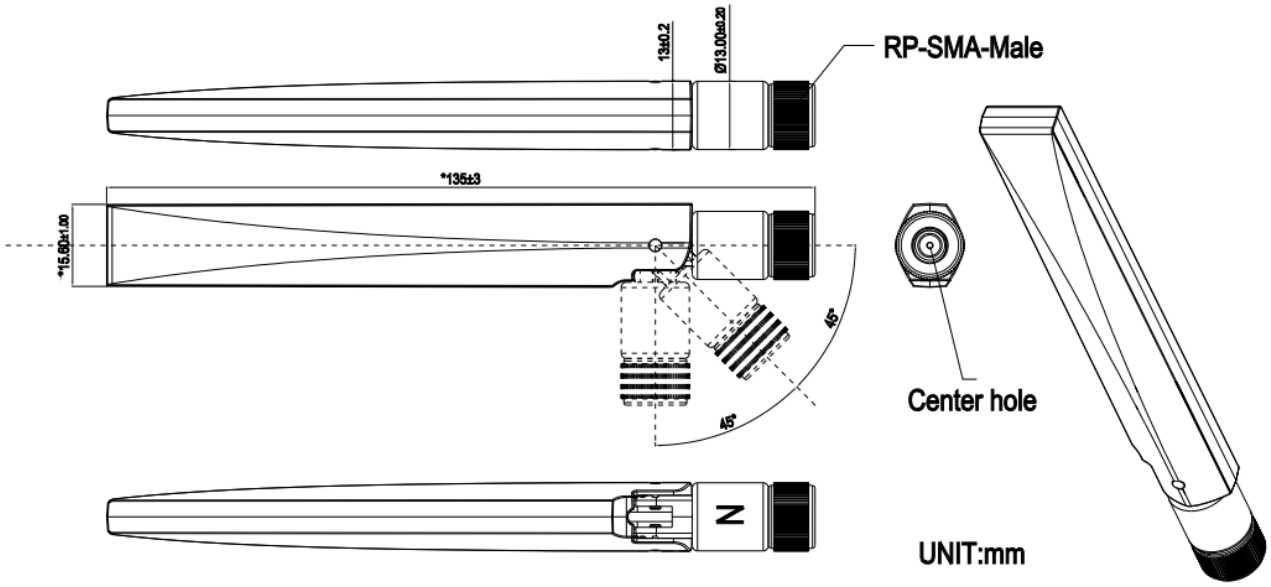

Theta=90 Freq=950MHz


Phi=0 Freq=950MHz


Phi=90 Freq=950MHz

7. Mechanical Specification:

RoHS



Note: If you use a torque wrench, the recommended force for mounting the antenna is 0.9Nm and the maximum torque to prevent antenna damage is 1.17Nm.