

MODEL SPECIFICATIONS

Project Name: Orson

WNC P/N: 81XPAF15.G01

Author: Wistron NeWeb Corporation

Revision: 1.1

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Revision History

Rev. #	Author	Summary of Changes	Date
0.1	Dennis Huang	New release	2023/3/13
0.2	Dennis Huang	Add raw data and Coordinate	2023/8/9
0.3	Dennis Huang	Add frequency 1525 to 1559 MHz and 1626.5 to 1660.5 MHz	2023/10/30
1.0	Dennis Huang	Add WNC P/N	2023/11/21
1.1	Dennis Huang	Show silkscreen	2024/01/09

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1. Introduction

This specification covers the FPC antenna for sub6G.

2. Electrical Specifications

Electrical characteristics of antenna. The antenna has the electrical characteristics given in Table 1 under WNC standard installation conditions shown in the figure.

Electrical Characteristics						
Freq. (MHz)	617~960	1156~1496	1520~1660.5	1710~2700	3300~4200	4200~5925
V.S.W.R.	≤ 3.5	≤ 3.0	≤ 2.0	≤ 2.0	≤ 1.5	≤ 2.0
Peak Gain	2.8dBi	2.4dBi	3.9dBi	5.3dBi	5.6dBi	7.9dBi
Eff.% (max./avg.)	71/62	55/53	68/62	85/70	76/71	69/62
Impedance	50 Ohm					
Cable type	ϕ 1.37					
Cable length	189.5mm(from the PCB edge) (total length:200mm)					
Connector	IPEX MHF					
Substrate	FPC					
Dimension	27mm x 116mm					

3. Environmental conditions

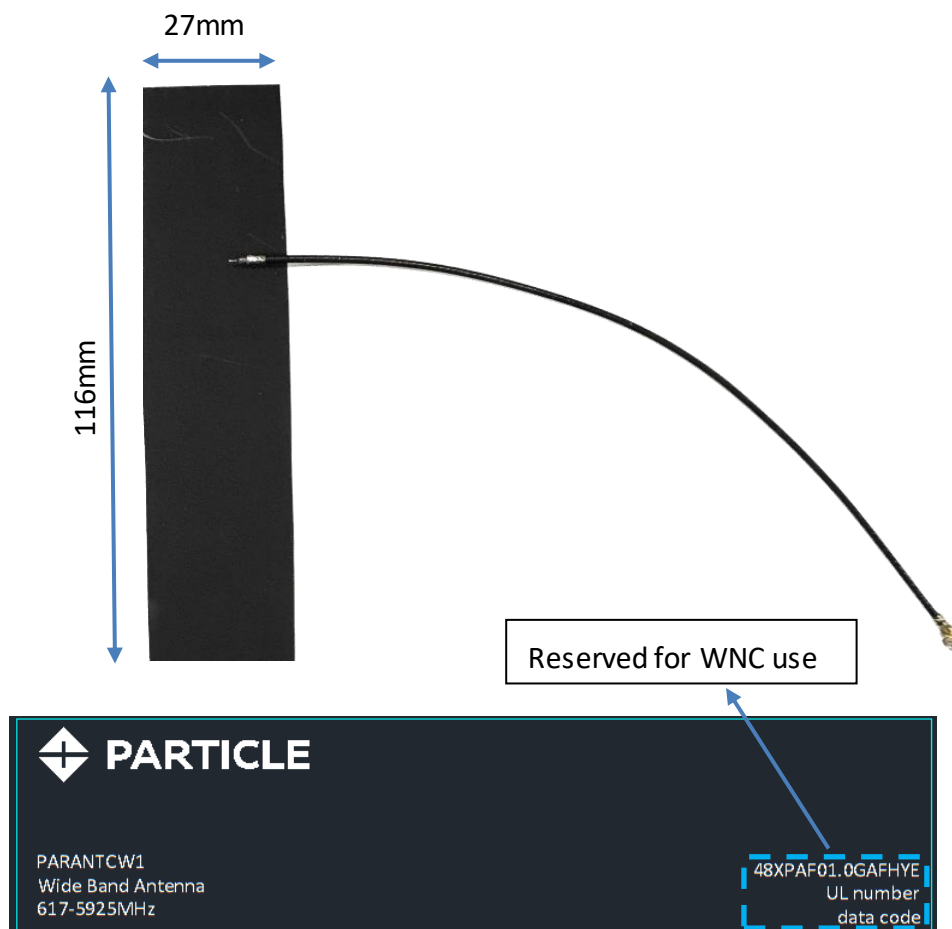
3.1 Operating conditions

The antenna has the electrical characteristics given in Tables 1 in the temperature range of -40°C to +105°C and under the environmental conditions of +40°C and 0-95% R.H.

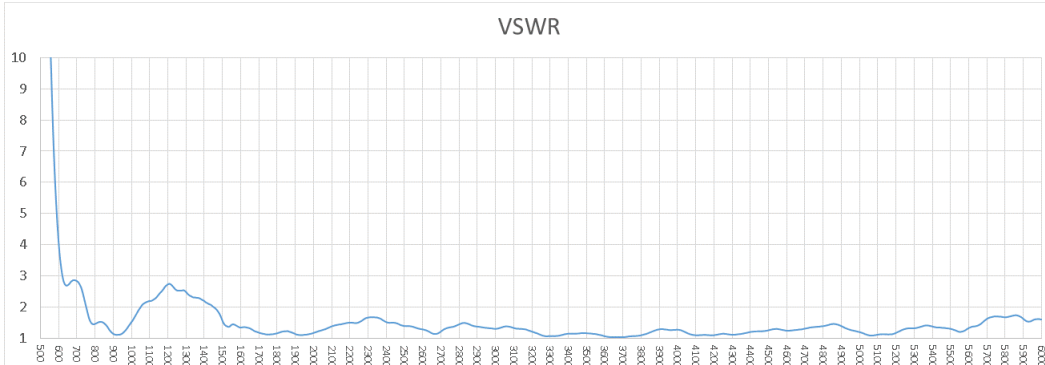
3.2 Storage temperature range

The storage temperature range of product is -40°C to +105°C.

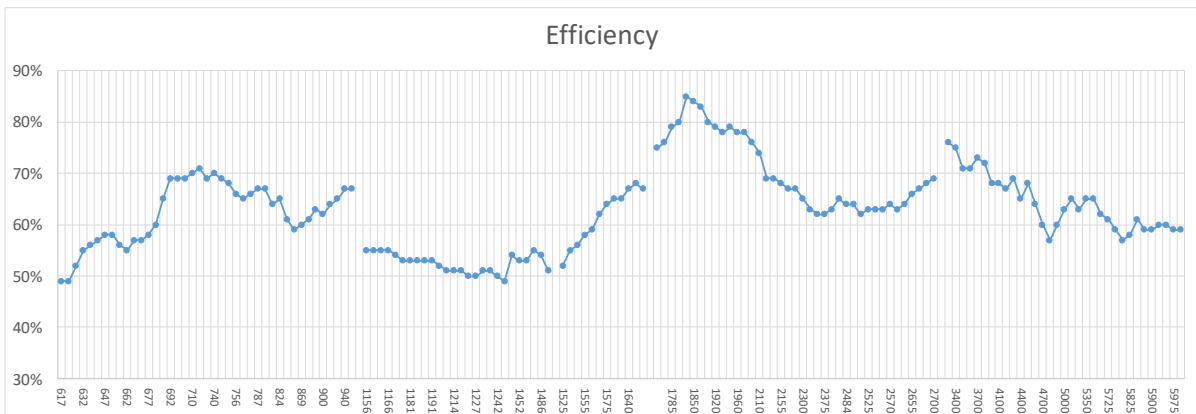
4. Shape and Dimension



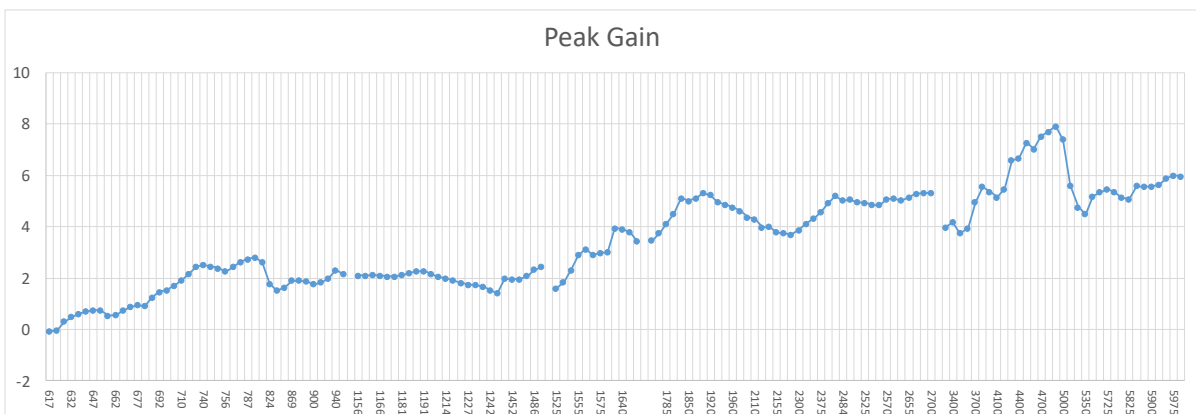
5. VSWR



6. Efficiency



7. Peak Gain



8. Raw data

Freq. (MHz)	Efficiency	Avg. Gain	Peak Gain	Freq. (MHz)	Efficiency	Avg. Gain	Peak Gain	Freq. (MHz)	Efficiency	Avg. Gain	Peak Gain	Freq. (MHz)	Efficiency	Avg. Gain	Peak Gain
617	49%	-3.07	-0.08	1156	55%	-2.63	2.09	1710	75%	-1.22	3.47	3300	76%	-1.21	3.97
622	49%	-3.09	-0.03	1161	55%	-2.59	2.10	1747	76%	-1.22	3.74	3400	75%	-1.26	4.18
627	52%	-2.81	0.30	1164	55%	-2.57	2.11	1785	79%	-1.04	4.12	3500	71%	-1.51	3.75
632	55%	-2.63	0.49	1166	55%	-2.60	2.10	1805	80%	-0.98	4.51	3600	71%	-1.50	3.95
637	56%	-2.54	0.61	1171	54%	-2.69	2.06	1840	85%	-0.69	5.11	3700	73%	-1.39	4.95
642	57%	-2.46	0.70	1176	53%	-2.76	2.07	1850	84%	-0.76	5.00	3800	72%	-1.43	5.55
647	58%	-2.39	0.75	1181	53%	-2.78	2.12	1880	83%	-0.81	5.11	4000	68%	-1.68	5.36
652	58%	-2.36	0.74	1186	53%	-2.75	2.21	1910	80%	-0.96	5.30	4100	68%	-1.67	5.14
657	56%	-2.54	0.53	1189	53%	-2.75	2.25	1920	79%	-1.02	5.23	4200	67%	-1.73	5.46
662	55%	-2.57	0.55	1191	53%	-2.75	2.27	1930	78%	-1.09	4.96	4300	69%	-1.60	6.59
667	57%	-2.47	0.73	1207	52%	-2.81	2.16	1950	79%	-1.03	4.86	4400	65%	-1.89	6.67
672	57%	-2.41	0.88	1212	51%	-2.89	2.05	1960	78%	-1.05	4.76	4500	68%	-1.69	7.27
677	58%	-2.39	0.95	1214	51%	-2.92	1.99	1980	78%	-1.10	4.61	4600	64%	-1.90	7.03
682	60%	-2.25	0.91	1217	51%	-2.97	1.90	1990	76%	-1.20	4.37	4700	60%	-2.22	7.53
687	65%	-1.87	1.24	1222	50%	-2.99	1.81	2110	74%	-1.29	4.30	4800	57%	-2.42	7.70
692	69%	-1.62	1.46	1227	50%	-2.97	1.75	2132	69%	-1.61	3.98	4900	60%	-2.21	7.92
698	69%	-1.63	1.54	1232	51%	-2.92	1.73	2140	69%	-1.59	3.99	5000	63%	-2.00	7.40
704	69%	-1.59	1.70	1237	51%	-2.92	1.67	2155	68%	-1.68	3.79	5150	65%	-1.86	5.61
710	70%	-1.52	1.92	1242	50%	-3.02	1.53	2170	67%	-1.74	3.74	5250	63%	-1.98	4.76
716	71%	-1.46	2.17	1247	49%	-3.09	1.41	2200	67%	-1.72	3.69	5350	65%	-1.90	4.50
734	69%	-1.61	2.45	1445	54%	-2.71	1.98	2300	65%	-1.90	3.87	5470	65%	-1.87	5.19
740	70%	-1.57	2.50	1452	53%	-2.73	1.96	2325	63%	-2.02	4.12	5600	62%	-2.07	5.34
746	69%	-1.62	2.46	1463	53%	-2.78	1.96	2350	62%	-2.09	4.32	5725	61%	-2.15	5.46
751	68%	-1.68	2.39	1476	55%	-2.59	2.08	2375	62%	-2.06	4.57	5750	59%	-2.30	5.34
756	66%	-1.83	2.26	1486	54%	-2.65	2.33	2400	63%	-1.98	4.92	5800	57%	-2.43	5.13
777	65%	-1.87	2.44	1496	51%	-2.95	2.43	2442	65%	-1.88	5.20	5825	58%	-2.36	5.07
782	66%	-1.79	2.63	1525	52%	-2.80	1.60	2484	64%	-1.95	5.03	5850	61%	-2.14	5.59
787	67%	-1.75	2.74	1535	55%	-2.63	1.84	2496	64%	-1.94	5.05	5875	59%	-2.29	5.55
791	67%	-1.74	2.80	1545	56%	-2.54	2.32	2500	62%	-2.05	4.96	5900	59%	-2.26	5.57
806	64%	-1.93	2.61	1555	58%	-2.34	2.90	2525	63%	-1.99	4.94	5925	60%	-2.22	5.63
824	65%	-1.90	1.78	1559	59%	-2.27	3.12	2535	63%	-2.01	4.84	5950	60%	-2.21	5.88
836	61%	-2.13	1.52	1565	62%	-2.08	2.89	2550	63%	-1.98	4.84	5975	59%	-2.31	6.00
849	59%	-2.29	1.64	1575	64%	-1.92	2.99	2570	64%	-1.95	5.07	6000	59%	-2.26	5.96
869	60%	-2.20	1.91	1585	65%	-1.86	3.01	2600	63%	-2.03	5.10				
880	61%	-2.15	1.91	1626.5	65%	-1.84	3.94	2620	64%	-1.94	5.03				
894	63%	-2.03	1.86	1640	67%	-1.75	3.91	2655	66%	-1.81	5.15				
900	62%	-2.04	1.77	1650	68%	-1.66	3.78	2675	67%	-1.71	5.29				
915	64%	-1.92	1.84	1660.5	67%	-1.75	3.42	2690	68%	-1.69	5.31				
925	65%	-1.85	1.99					2700	69%	-1.63	5.32				
940	67%	-1.74	2.32												
960	67%	-1.74	2.15												

9. Radiation Pattern

