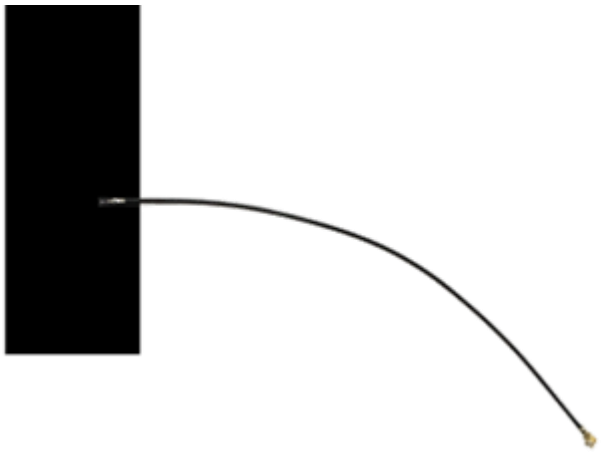
Wistron NeWeb Corp.



MODEL SPECIFICATIONS

Project Name: Orson

WNC P/N: 81XPAF15.G02

Author: Wistron NeWeb Corporation

Revision: 1.1

Revision Date: 2023/12/20

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Revision History

Rev. #	Author	Summary of Changes	Date
0.1	Dennis Huang	New release	2023/10/30
1.0	Dennis Huang	Add WNC P/N	2023/12/06
1.1	Dennis Huang	Add silkscreen	2023/12/20

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1. Introduction

This specification covers the FPC antenna for GNSS.

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			
GNSS Freq. (MHz)	L1 1559~1610	L2 1215~1247	L5 1164~1215
V.S.W.R.	<2.0	<2.0	<2.0
Peak Gain	3.9dBi	3.8dBi	3.9dBi
Eff.%(max./avg.)	77/77	81/79	81/80
Impedance	50 Ohm		
Cable type	ϕ 1.37		
Cable length	189mm(from the PCB edge) (total length:200mm)		
Connector	IPEX MHF		
Dimension	27mm x 79mm (FPC)		

3. Environmental conditions

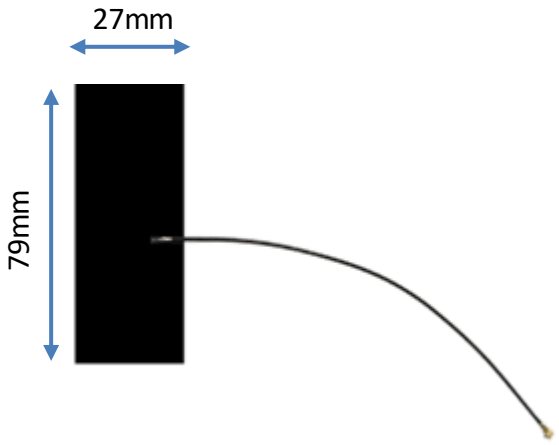
3.1 Operating conditions

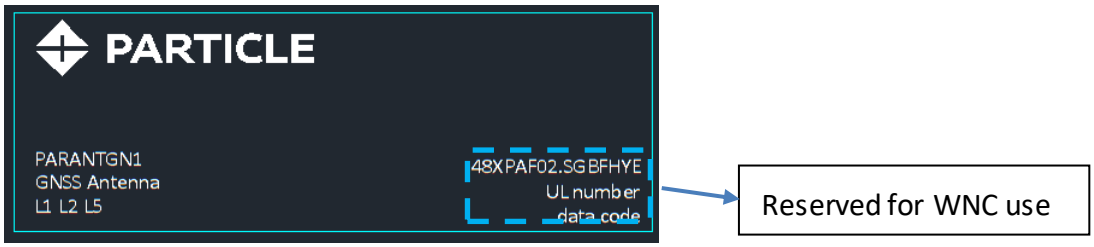
The antenna has the electrical characteristics given in Tables 1 in the temperature range of -40℃ to +105℃ and under the environmental conditions of +40℃ and 0-95% R.H.

3.2 Storage temperature range

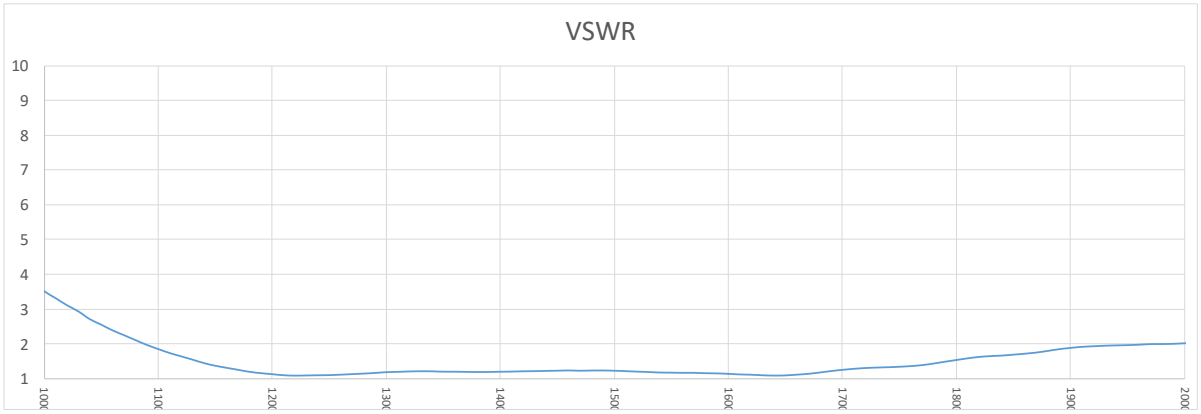
The storage temperature range of product is -40℃ to +105℃.

4. Shape and Dimension

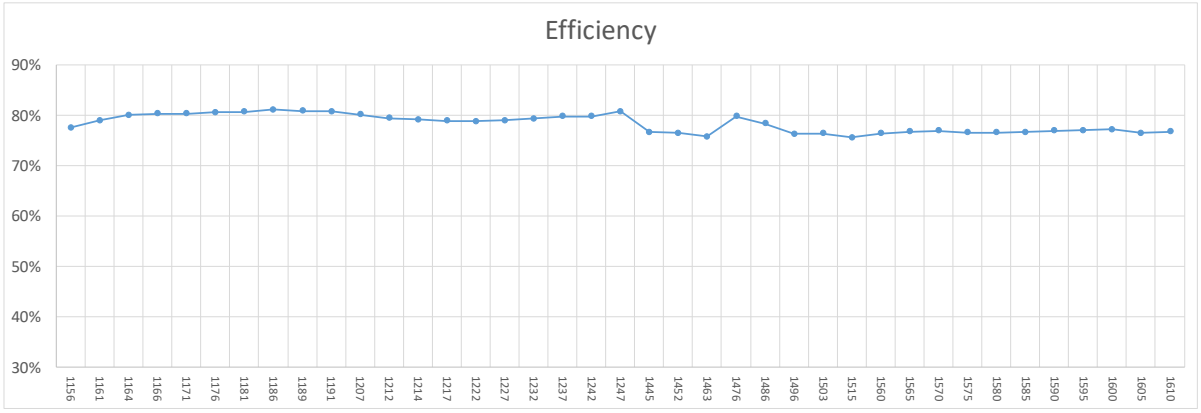




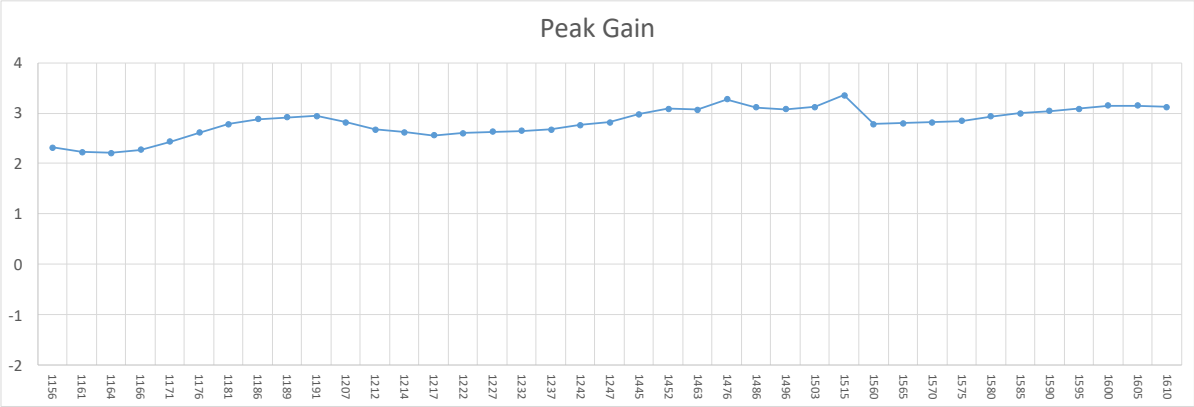
5. VSWR



6. Efficiency



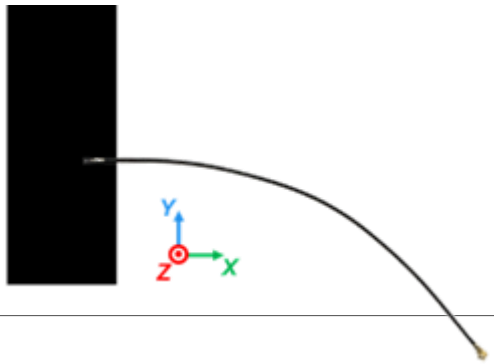
7. Peak Gain


Peak Gain
4
3
2
1
0
-1
-2
1156
1161
1164
1166
1171
1176
1181
1186
1189
1191
1207
1212
1214
1217
1222
1227
1232
1237
1242
1247
1445
1452
1463
1476
1486
1496
1503
1515
1560
1565
1570
1575
1580
1585
1590
1595
1600
1605
1610

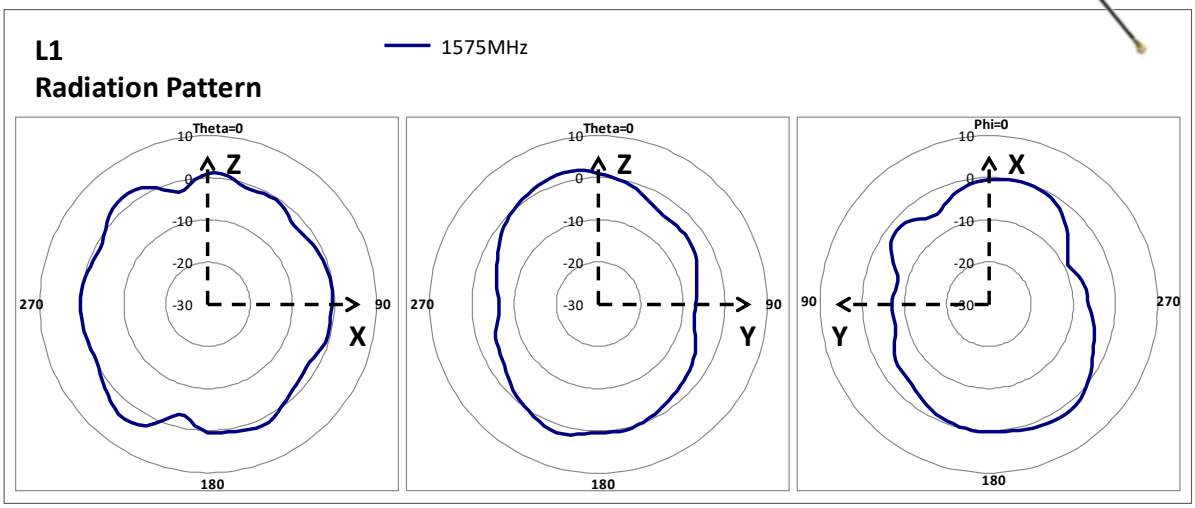
8. Raw Data

Freq. (MHz)	Efficiency	Avg. Gain	Peak Gain
1156	78%	-1.1	2.8
1161	79%	-1.0	3.0
1164	80%	-1.0	3.2
1166	80%	-0.9	3.3
1171	80%	-1.0	3.5
1176	81%	-0.9	3.7
1181	81%	-0.9	3.7
1186	81%	-0.9	3.8
1189	81%	-0.9	3.8
1191	81%	-0.9	3.8
1207	80%	-1.0	3.9
1212	79%	-1.0	3.8
1214	79%	-1.0	3.8
1217	79%	-1.0	3.7
1222	79%	-1.0	3.7
1227	79%	-1.0	3.6
1232	79%	-1.0	3.5
1237	80%	-1.0	3.4
1242	80%	-1.0	3.4
1247	81%	-0.9	3.4
1445	77%	-1.2	3.9
1452	77%	-1.2	4.0
1463	76%	-1.2	3.9
1476	80%	-1.0	4.2
1486	78%	-1.1	3.9
1496	76%	-1.2	3.7
1503	76%	-1.2	3.6
1515	76%	-1.2	3.6
1560	76%	-1.2	3.9
1565	77%	-1.1	3.9
1570	77%	-1.1	3.8
1575	77%	-1.2	3.7
1580	77%	-1.2	3.7
1585	77%	-1.2	3.7
1590	77%	-1.1	3.7
1595	77%	-1.1	3.6
1600	77%	-1.1	3.6
1605	77%	-1.2	3.5
1610	77%	-1.2	3.4

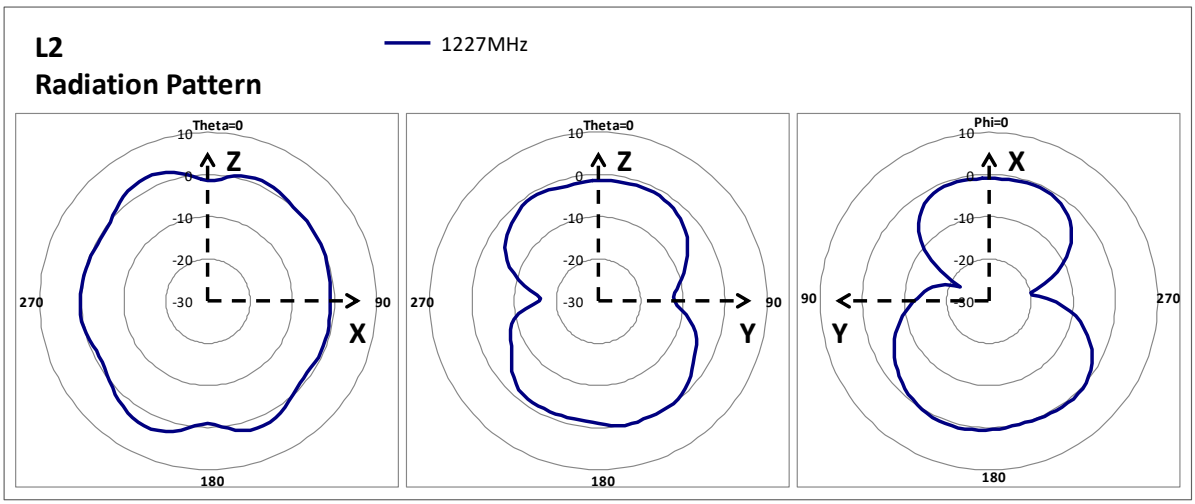
9. Radiation Pattern



L1
Radiation Pattern



L2
Radiation Pattern



L5
Radiation Pattern