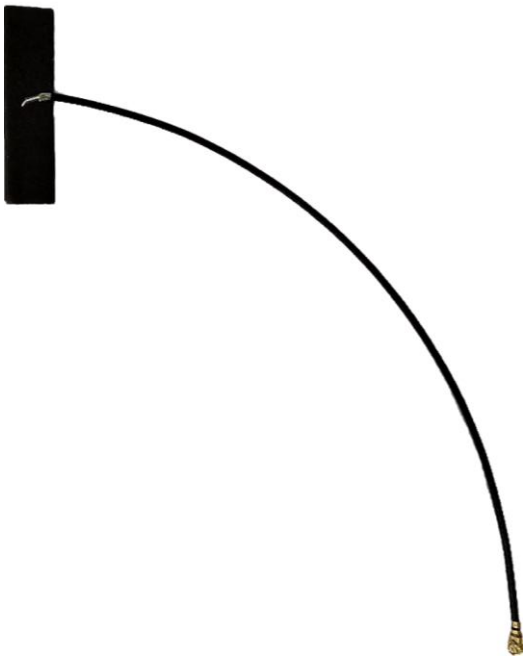
Wistron NeWeb Corp.



# MODEL SPECIFICATIONS

**Project Name:** Orson

**Author:** Wistron NeWeb Corporation

**Revision:** 1.0

**Revision Date:** 2023/12/5

# Contact Information

| | |
|---|---|
| **Sale and Technical Support** | Bonnie.wu@wnc.com.tw |
| **Website** | www.wnc.com.tw |

# Revision History

| Rev. # | Author | Summary of Changes | Date |
|---|---|---|---|
| 0.1 | Evan Chen | New release | 2023/12/5 |
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# 1. Introduction

This specification covers the PCB antenna for Wi-Fi dual band.

# 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 | | |
|---|---|---|
| Wi-Fi<br>Freq. (MHz) | 2G<br>2400~2500 | 5G<br>5150~5850 |
| V.S.W.R. | ≤ 2.0 | ≤ 2.0 |
| Peak Gain | 3.0dBi | 6.8dBi |
| Eff.%(max./avg.) | 70/66 | 73/70 |
| Impedance | 50 Ohm | |
| Cable type | $\phi$ 1.37 | |
| Cable length | 145mm (from the PCB edge)<br>(total length:151mm) | |
| Connector | IPEX MHF | |
| Substrate | PCB | |
| Dimension | 35mm x 8mm | |

# 3. Environmental conditions

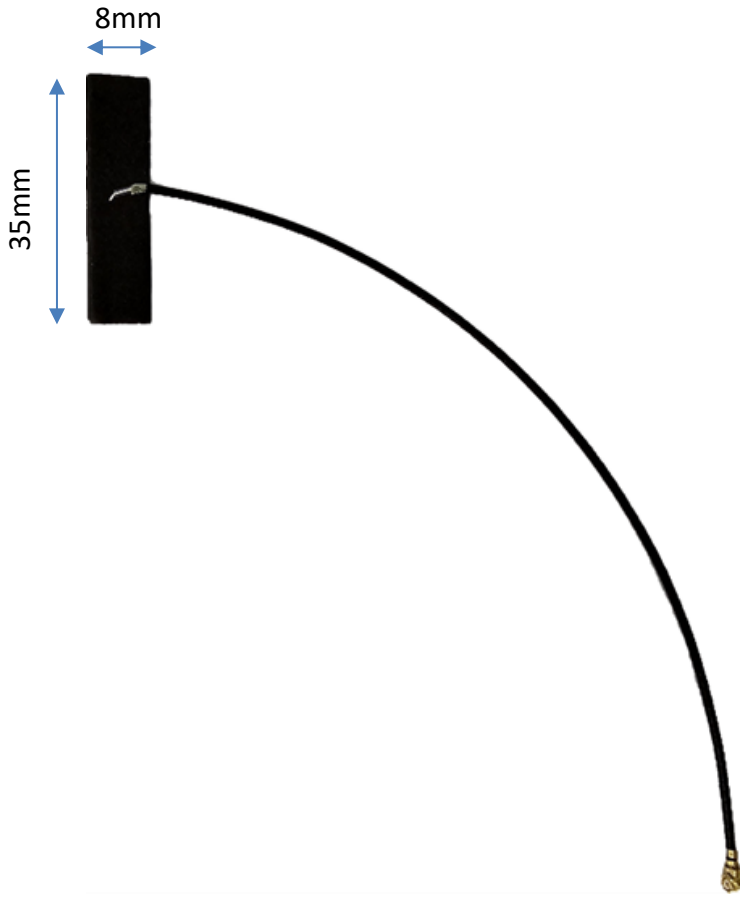
### 3.1 Operating conditions

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.

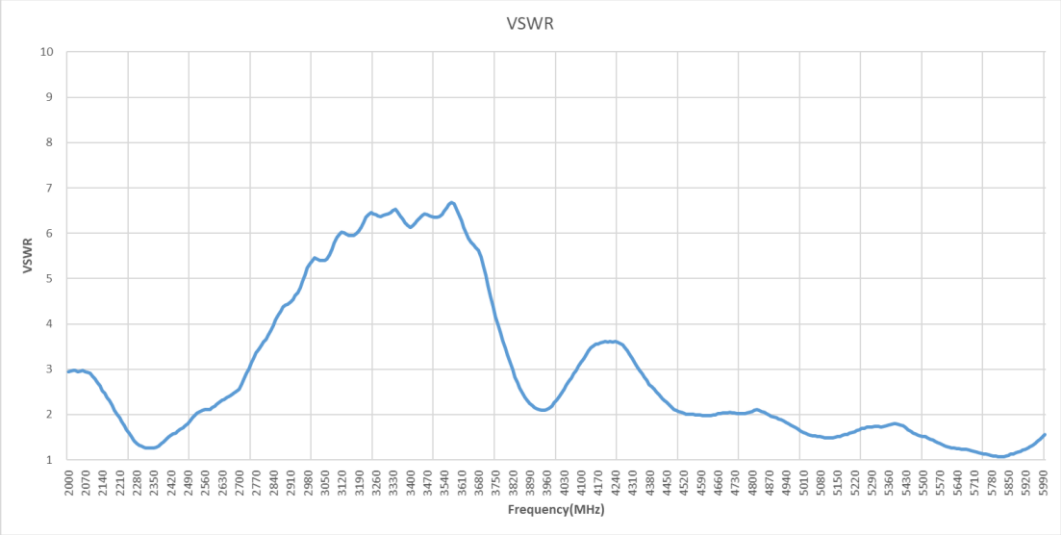
### 3.2 Storage temperature range

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

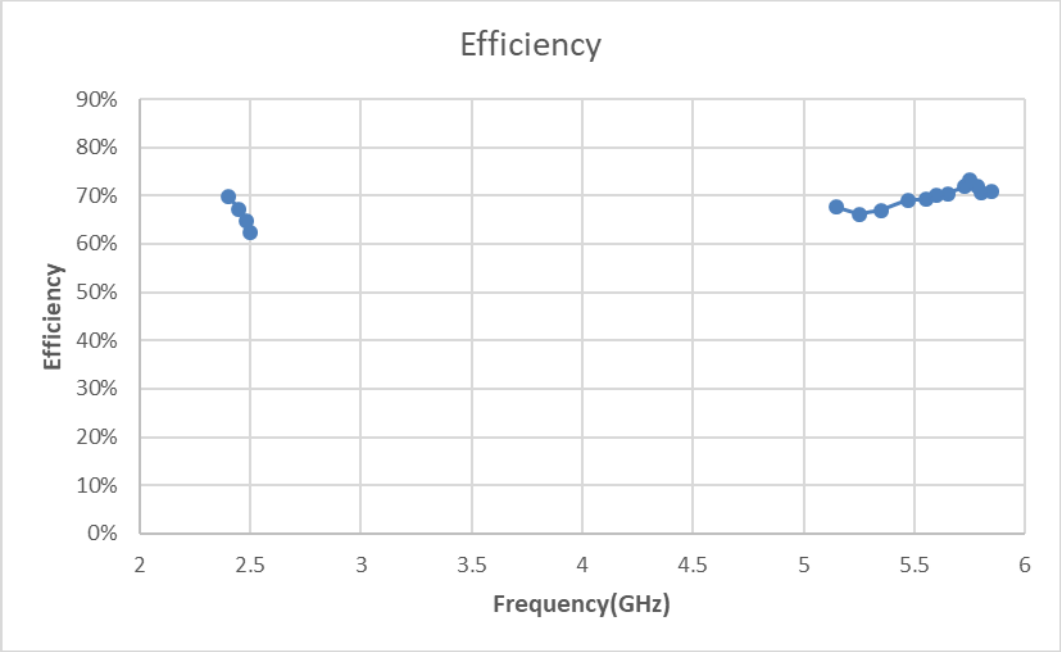
# 4. Shape and Dimension



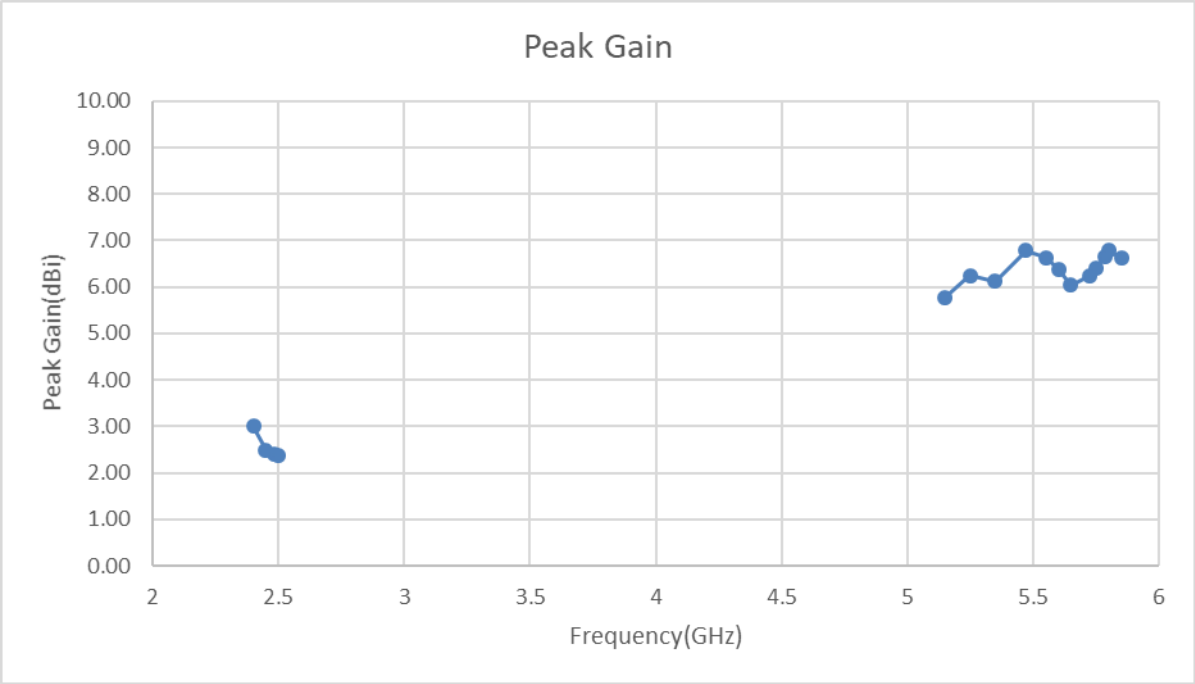
# 5. VSWR




# 6. Efficiency

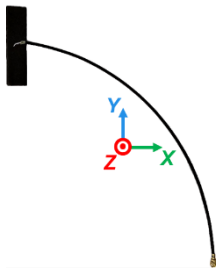
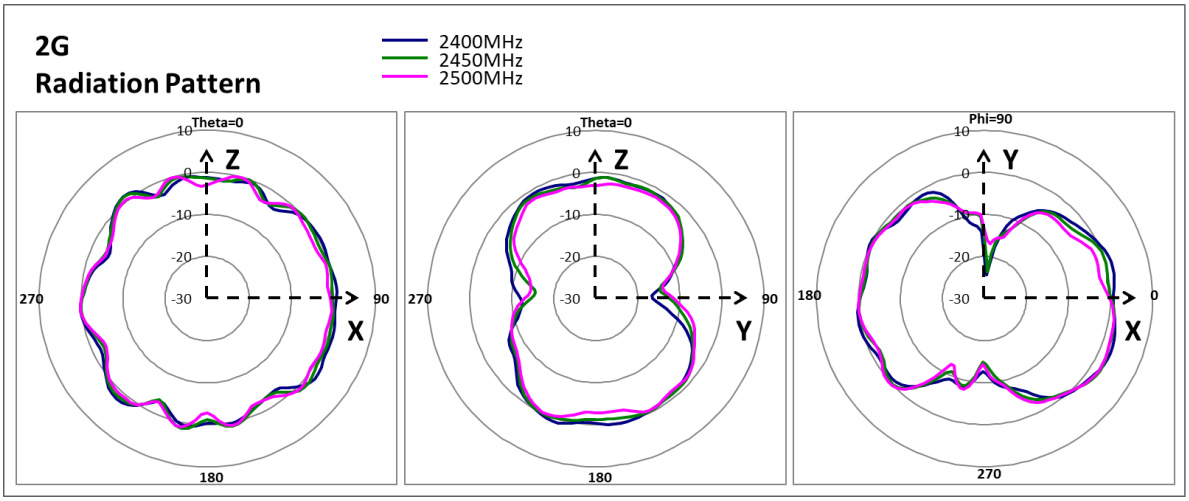
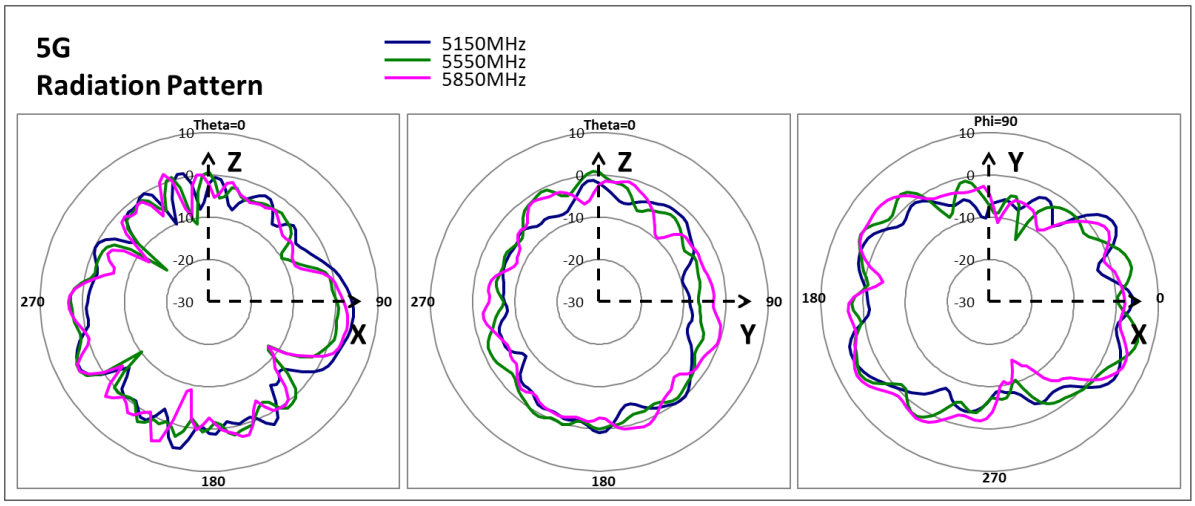


# 7. Peak Gain




# 8. Raw data

| | Frequency | 2400 | 2450 | 2484 | 2500 | Avg. |
|---|---|---|---|---|---|---|
| 2G | Efficiency | 70% | 67% | 65% | 62% | 66% |
| | Average Gain | -1.55 | -1.72 | -1.89 | -2.05 | |
| | Peak Gain | 3.00 | 2.49 | 2.41 | 2.38 | |

| | Frequency | 5150 | 5250 | 5350 | 5470 | 5550 | 5600 | 5650 | 5725 | 5750 | 5785 | 5800 | 5850 | Avg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5G | Efficiency | 68% | 66% | 67% | 69% | 69% | 70% | 70% | 72% | 73% | 72% | 71% | 71% | 70% |
| | Average Gain | -1.70 | -1.79 | -1.74 | -1.61 | -1.60 | -1.55 | -1.52 | -1.44 | -1.35 | -1.42 | -1.52 | -1.50 | |
| | Peak Gain | 5.78 | 6.25 | 6.13 | 6.79 | 6.63 | 6.38 | 6.04 | 6.24 | 6.40 | 6.65 | 6.79 | 6.61 | |

# 9. Radiation Pattern