**Homologation**

# *Prince Zoom - Antenna Datasheet*



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# 1. Introduction

This document states information regarding the RF performance of Prince Zoom. This document should only be used by the test-house as a source of information for the product homologation.

# 2. Prince Zoom – RF Design

Our transceiver (Shannon-P) is located inside a folded PCB (WH6 hybrid) which is the heart of the HI. In figure 1 one can find a high level block diagram of our Prince Zoom HI.

## *2.1* Antenna - Generic Information

The transceiver and matching network are located in the 2nd level PCB. This PCB connects to the Antenna PCB through the pads highlighted in orange in Figure 1.

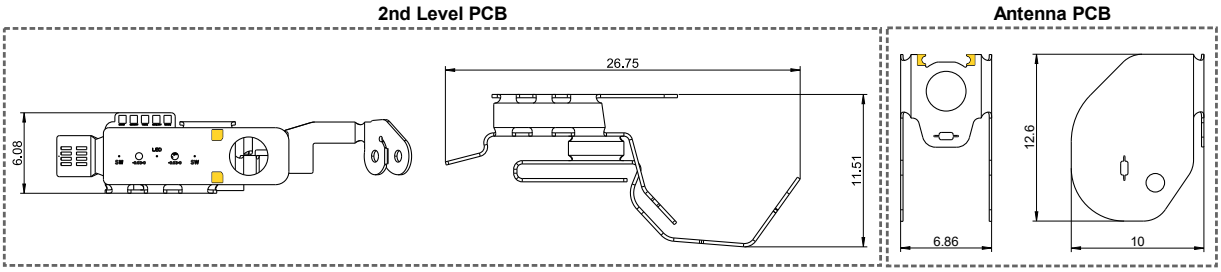


**Figure 2** – Mechanical drawings of the 2nd Level PCB and Antenna PCB.

**Table 1** – Generic data regarding the antenna used for Prince Zoom.

| **Model name and manufacture of the antenna:** | |
|---|---|
| Brand/Manufacturer: | Sonova AG |
| Model Name: | FPCB 02 ANT RIC, 006-0649-03 |
| **Technical antenna key-information:** | |
| Antenna Pattern: | Omnidirectional pattern on free field, with max on the plane of the antenna |
| Antenna Type: | Loop antenna |
| Antenna Gain: | -9.2 dBi (built in final HI) |
| Connector Type: | Soldered pad connection on flexible PCB |

## *2.2* Antenna - Radiation pattern cuts

This section shows the different 2D radiation pattern cuts by measuring the EIRP in different planes. The dynamic range was set to 20 dB and the frequency measured was 2441 MHz. The graph on the left shows a vertical cut with Azimuth = 0°, the graph on the center shows a vertical cut with azimuth=90° and the graph on the right shows an horizontal cut with elevation = 90°.

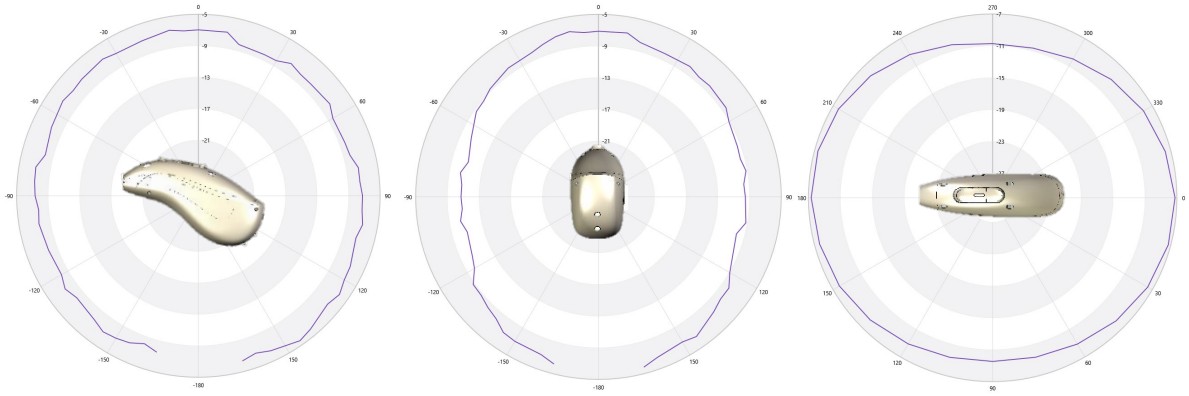

**Figure 4** – Different radiation pattern cuts.

## 2.3 Prince Zoom – Conducted Sample

For the conducted sample, the Antenna PCB is removed and an external balun PCB (probe) is connected instead. This is a 2:1 Balun that converts a differential 100 Ohm into single-ended 50 Ohm. The insertion of loss of this probe is 1.5 dB.

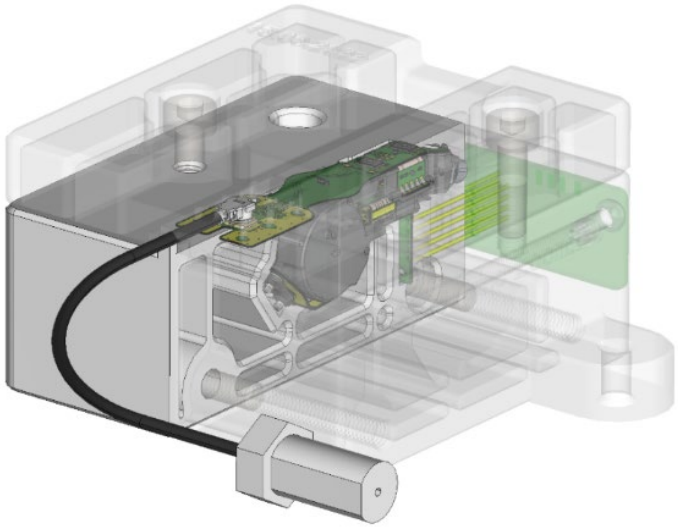

**Figure 4** – Look into the mechanics of the fixture used for the conducted sample.

# 3. Appendix

## 3.1 References

| Reference | Title |
|---|---|
| [1] | |
| [2] | |
| [3] | |
| [4] | |

## 3.2 Definitions, terms, abbreviations

| Abbreviation | Description |
|---|---|
| | |
| | |
| | |
| | |

# 4. Modification Log

| Old version | New version | short description of the modification / remarks | Date | Signature |
|---|---|---|---|---|
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