| 00000000000 | 00000 | 00000 | 000000 |
|-------------|-------|--------|--------|
| 00000000000 | 00000 | 000000 | 000000 |
| 00000000000 | 00000 | 00000 | 000000 |
| 00000000000 | 00000 | 00000 | 000000 |
| 00000000000 | | | |
| 00000000000 | 00000 | 00000 | 000000 |



ANTENNA MEASUREMENT

Report

Publication date: 01 december, 2020 Revision: V002

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Version History

| Date | Version | Author | Revision | Remarks | |
|-------------|---------|--------------|----------|---------|--|
| 01 December | V001 | Chris De Vos | | | |
| 2020 | | | | | |
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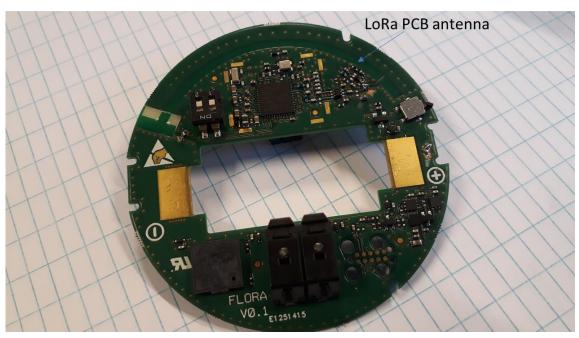
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1 USED MEASUREMENT EQUIPMENT REFERENCES

| Equipment | ser number | |
|-----------------------------|------------|--|
| Antenna chamber Satimo SG32 | | |
| Network analyser R&S ZVB-8 | | |
| | | |

2 PRODUCT OVERVIEW

The measurements were carried out on PCB antenna as in Error! Reference source not found.



3 ANTENNA MEASUREMENT SETUP

Fig. 2 illustrates the near-field coordinate system and orientations. Efficiency of the antenna is measured.

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Fig. 1



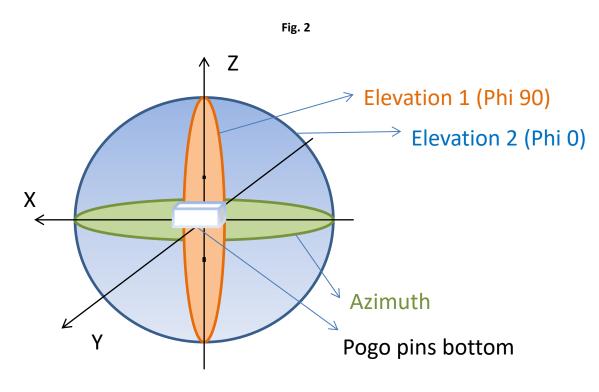


Fig. 3

4 MEASUREMENT RESULTS

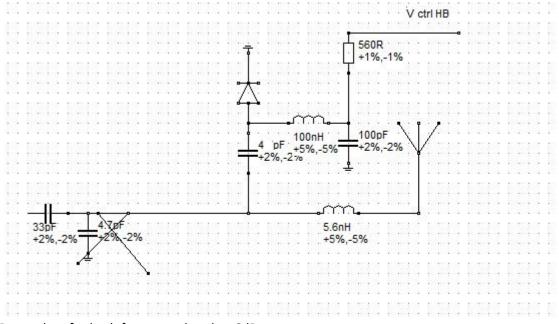
4.1 Main antenna

4.1.1.1 Matching main antenna

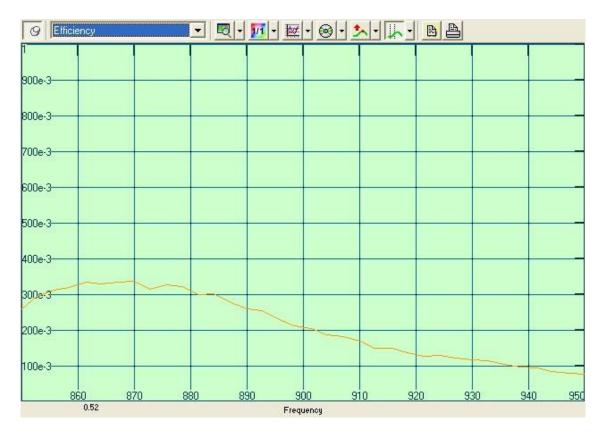
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Return loss for both frequency bands < 6dB



4.1.1.2 Efficiency Main antenna Low Band (868Mhz)

4.1.1.3 Peak Gain Main antenna Low Band (868Mhz)

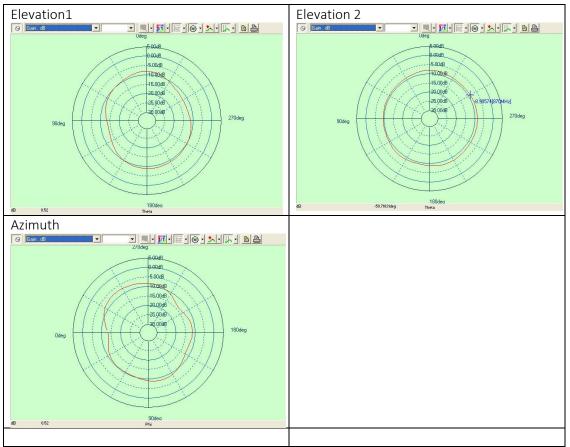
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| 00 | |
|----|---------------------|
| 00 | PTION |
| 00 | WIRELESS TECHNOLOGY |

| 9 | E Total, dB | | • | - 🗾 - | × • 0 | - <u>*</u> - [] | <u>B</u> | A | |
|-------------------|-------------|-----|----------|-------|--------------|-----------------|----------|-----|---------|
| -1 | | | | | | | i. | | |
| -2 | | | | | | | | | _ |
| / | | | \sim | | | | | | 4121 |
| -3 | | | | 5 | | | | | |
| -4 | | | | | ~ | | | | |
| -5 | | | | | | | | | |
| -6 | | | | | | | | | |
| -/ | | | | | | | | | |
| -8 | 860 | 870 | 880 | 890 | 900 | 910 | 920 | 930 | 940 950 |
| dB 0.52 Frequency | | | | | | | | | |

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4.1.1.4 Patterns Main Antenna Low band

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4.1.1.5 Efficiency Main antenna High Band (902-928Mhz)

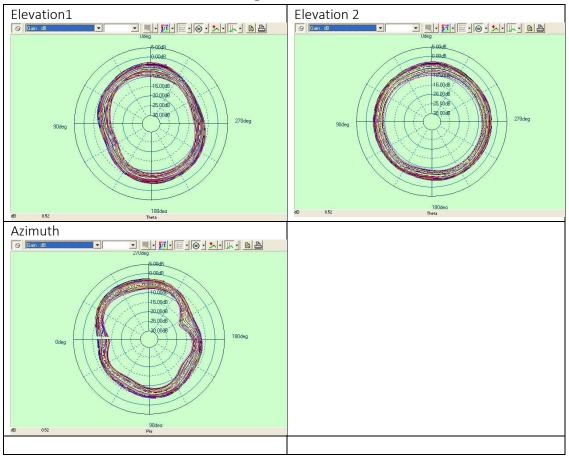
4.1.1.6 Peak Gain Main antenna High Band (902-928Mhz)



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4.1.1.7 Patterns Main Antenna High band

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5 REFERENCES

| Ref | Reference documents | Owner |
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