

<i>Uppgjord/prepared</i> Jonas Zamanian Abbasi	<i>Dokumentnummer/Doc.no</i> 1 (14)
<i>Godkänd/Approved</i>	<i>Datum/Date</i> 2010-06-02

Measurement report connectBlue WLAN EPA

1. Introduction

Measurements have been carried out according to connectBlue's specifications. Note that all figures are ranging from 0 to 350 degrees and are rotated 90 degrees to the reference images. All measurements are in dBi. The measurements are carried out without the external cables but with the housing provided by connectBlue.

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1. Three axis radiation pattern

1.1 First axis

In Fig. 1 the reference image is presented. Horizontal polarization is in the plane of rotation of the antenna.

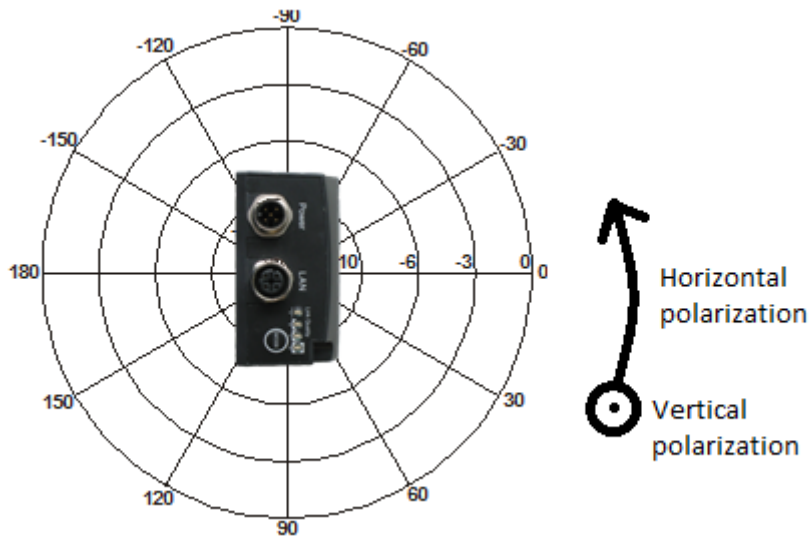


Figure 1: The reference image for measurements. Arrows are showing directions of the polarizations.

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The following figures present the measurement results.

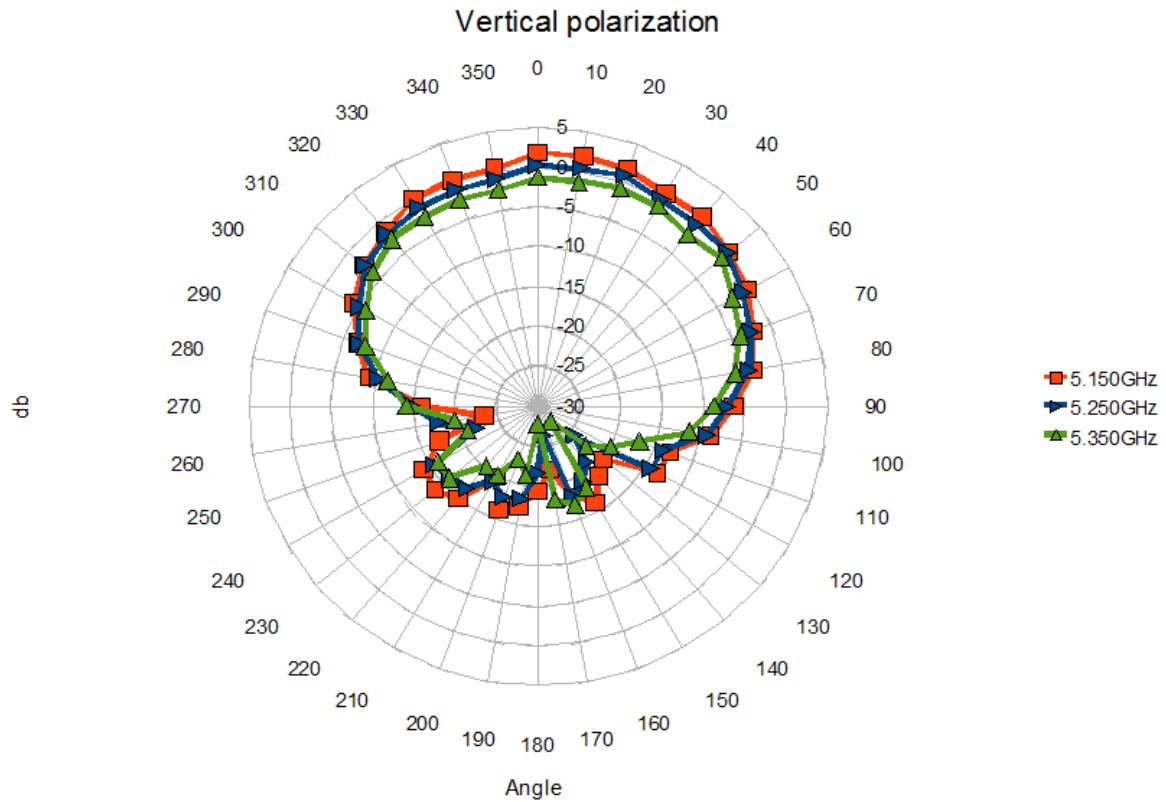


Figure 2: Measurements taken over vertical polarization.

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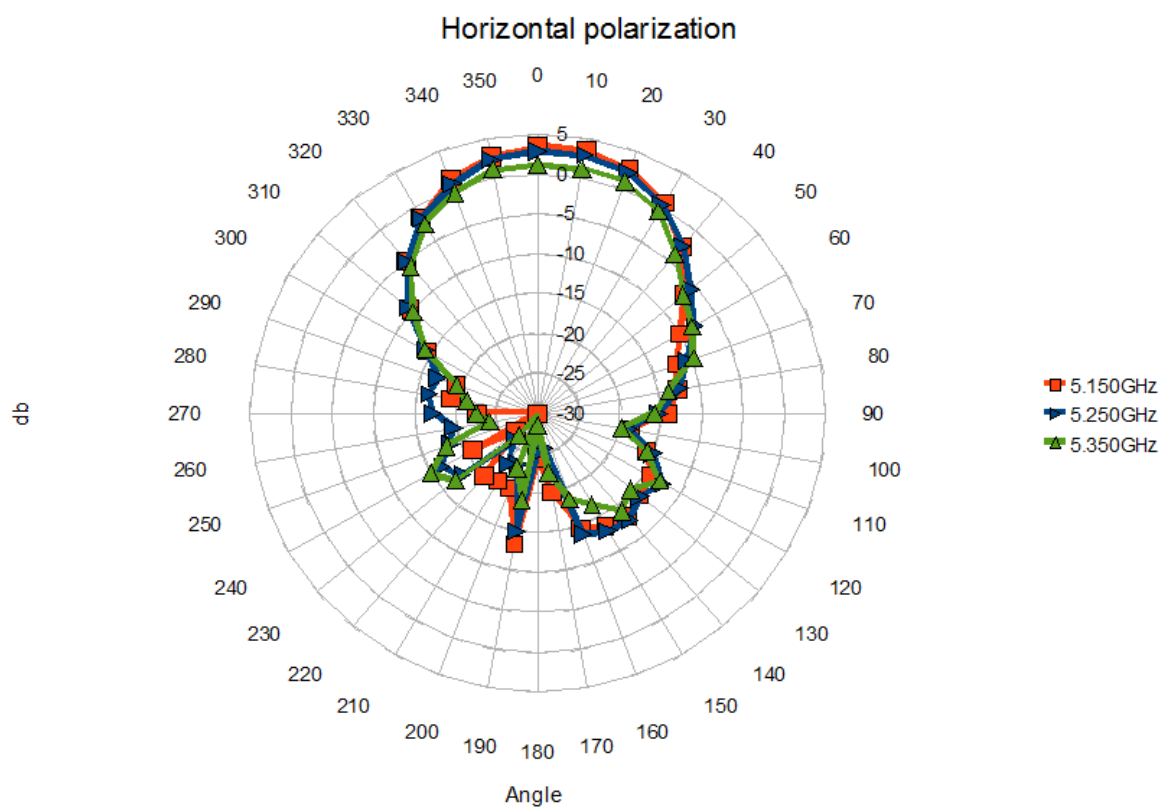


Figure 3: Measurements taken over a horizontal polarization.

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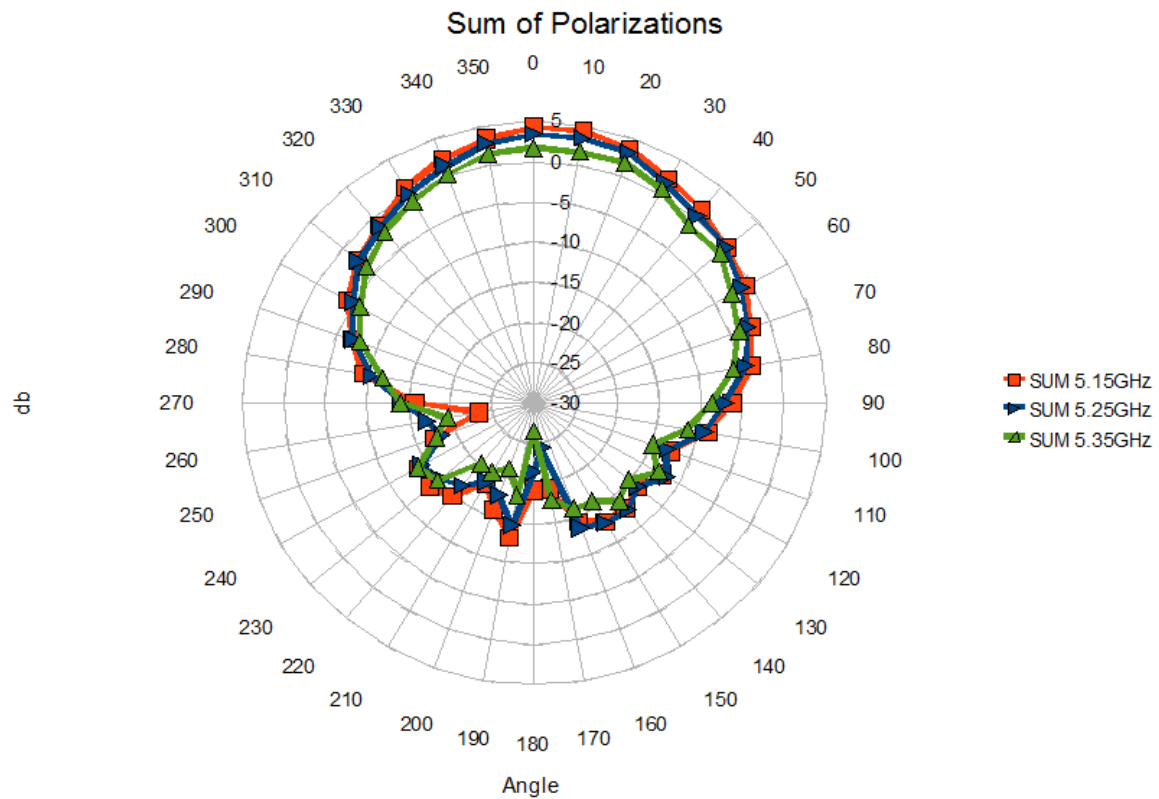


Figure 4: The sum of the radiations in the different polarizations.

1.2 Second axis

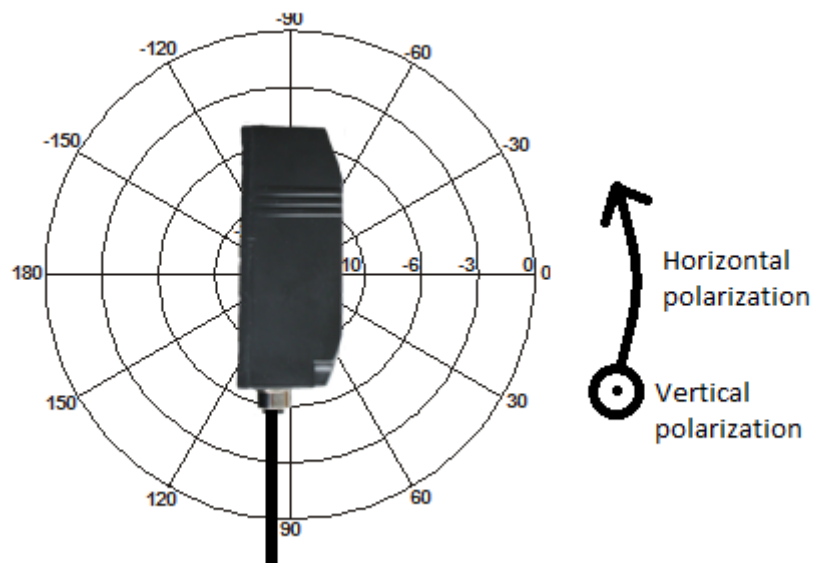


Figure 5: The reference image for measurements. Arrows are showing directions of the polarizations.

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Our measurements:

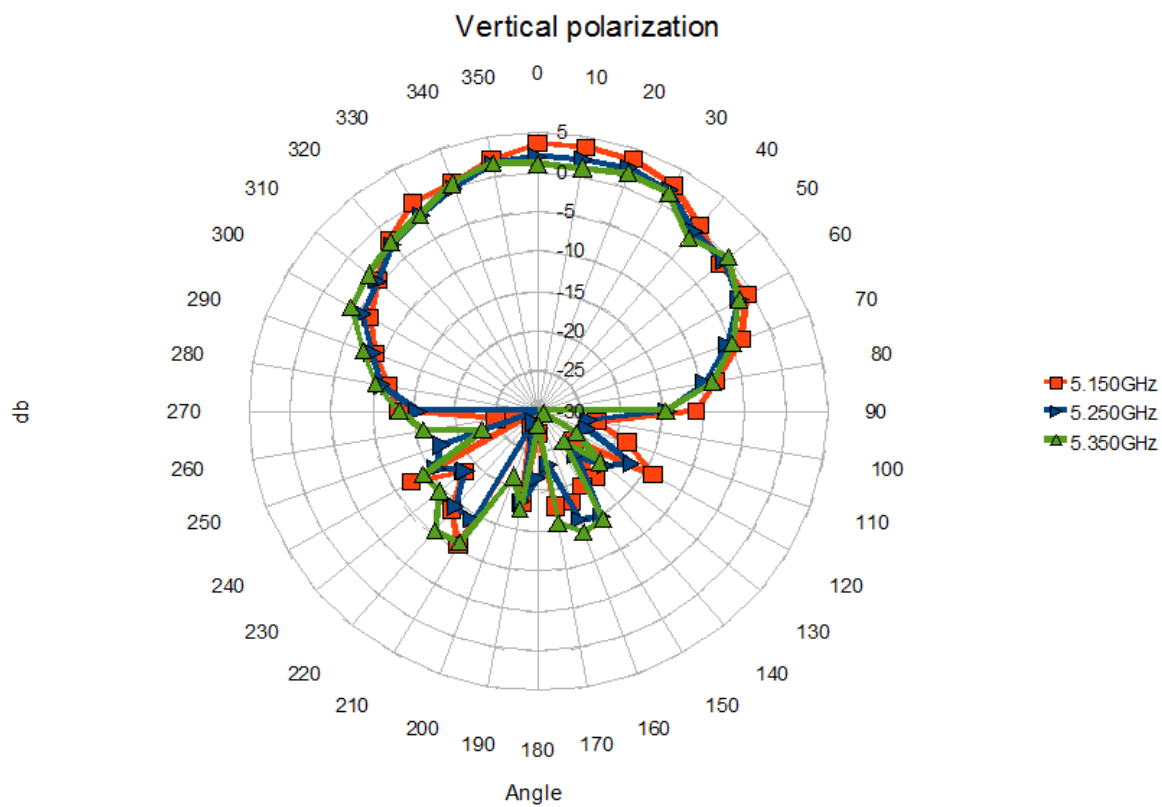


Figure 6: Vertical polarization.

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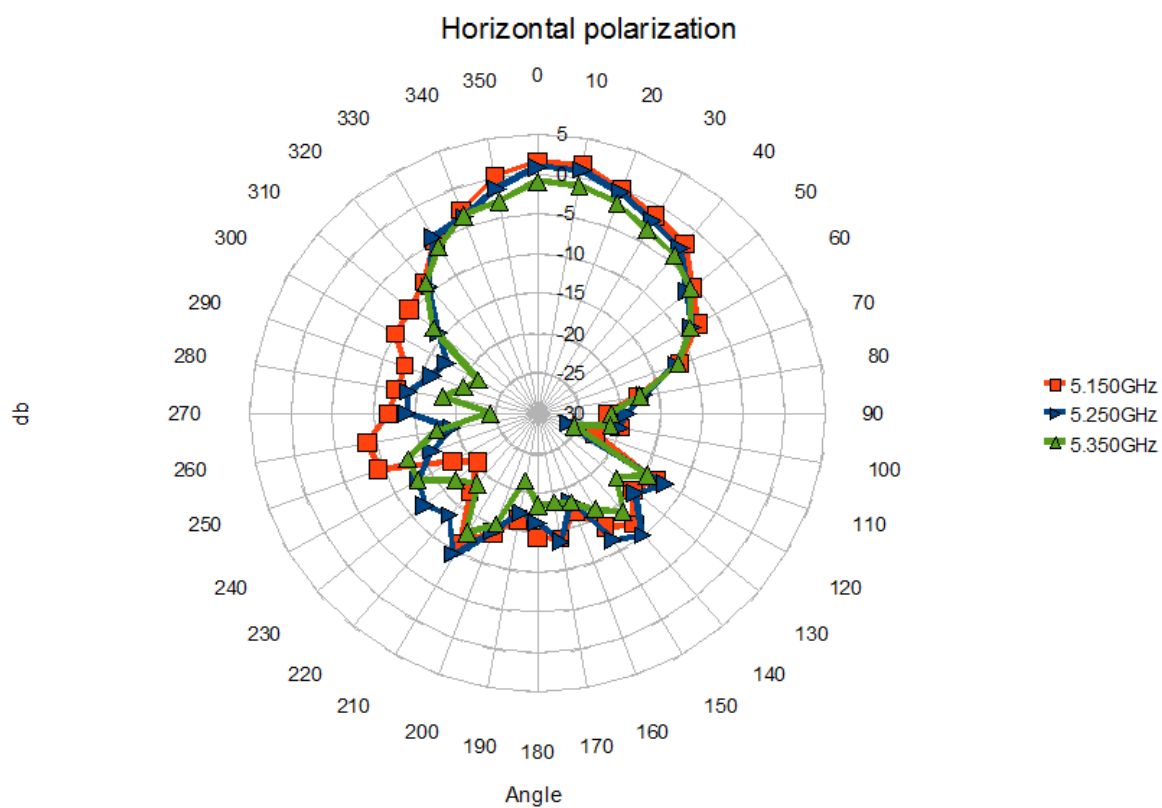


Figure 7: Horizontal polarization

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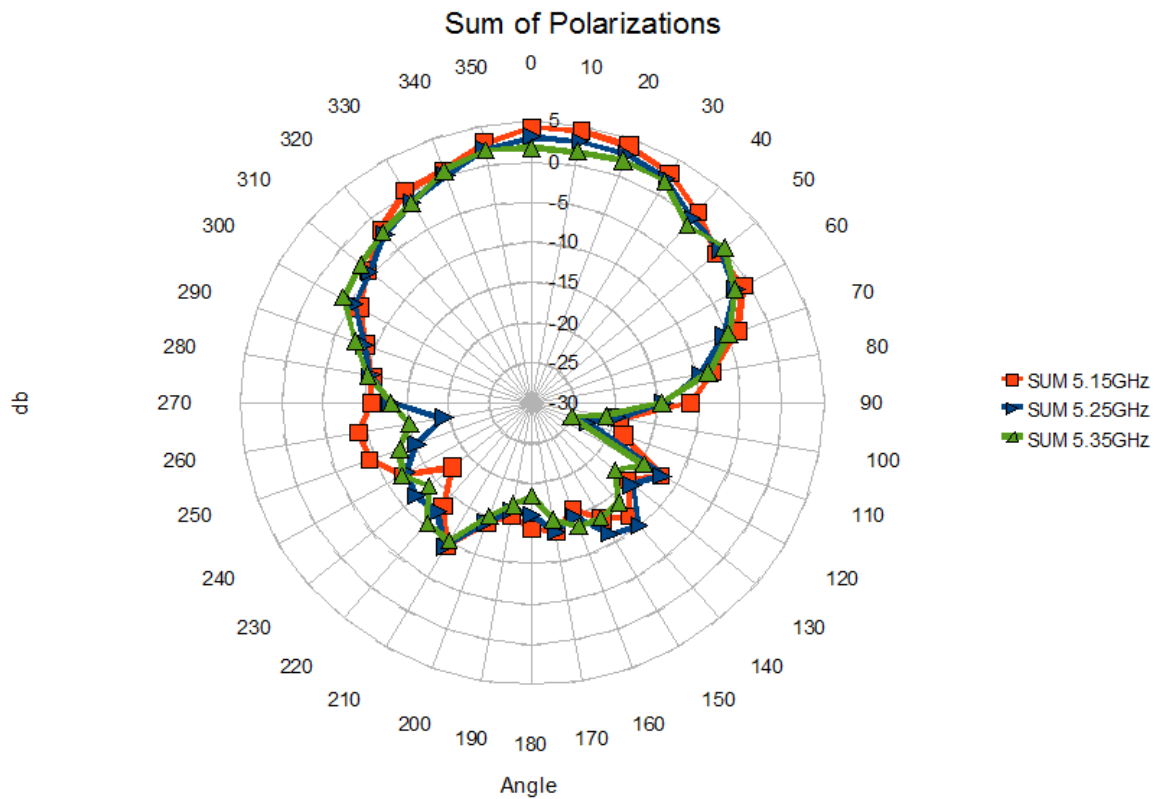


Figure 8: Sum of polarizations.

1.3 Third axis

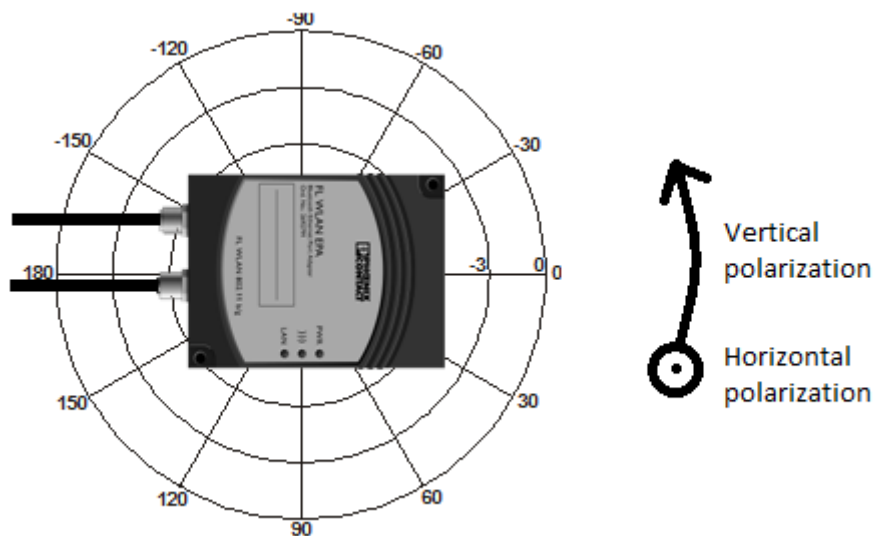


Figure 9: Reference image. Arrows are showing the directions of the polarizations. For this third axis measurement, the direction of the vertical polarization will be in the plane of rotation of the antenna.

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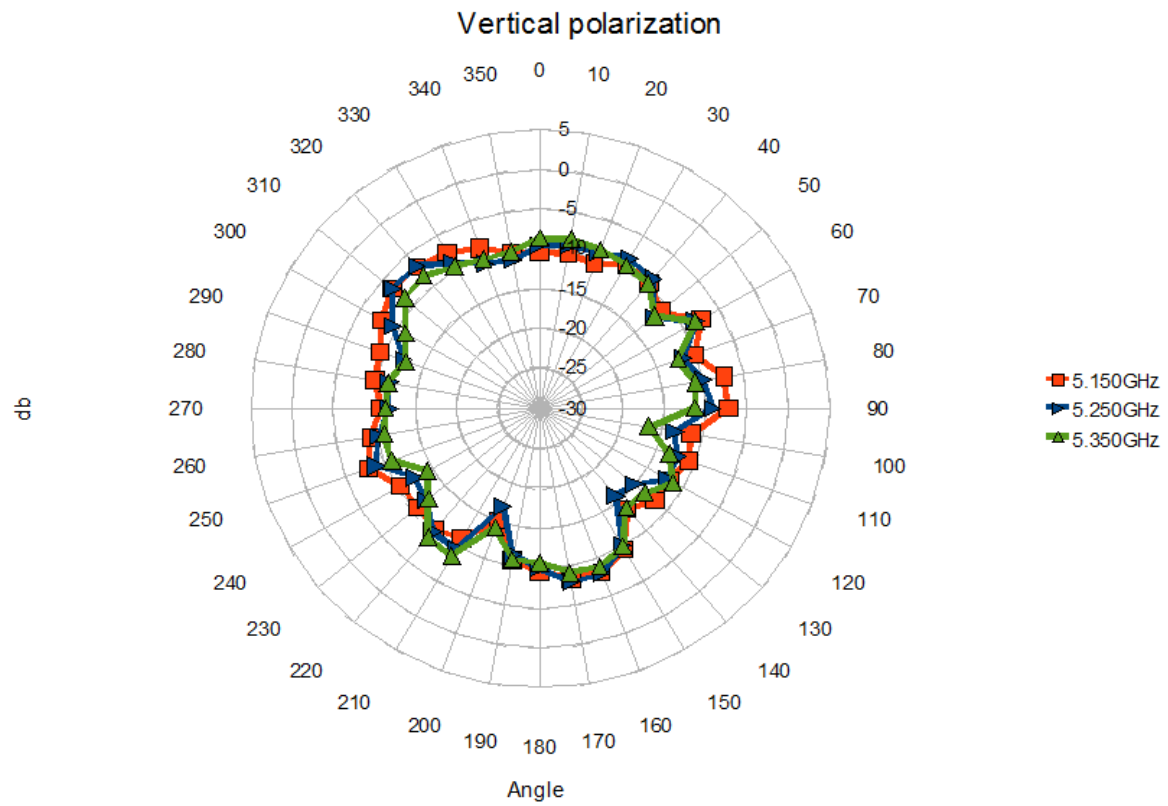


Figure 10: Results from measurements taken over a vertical polarization.

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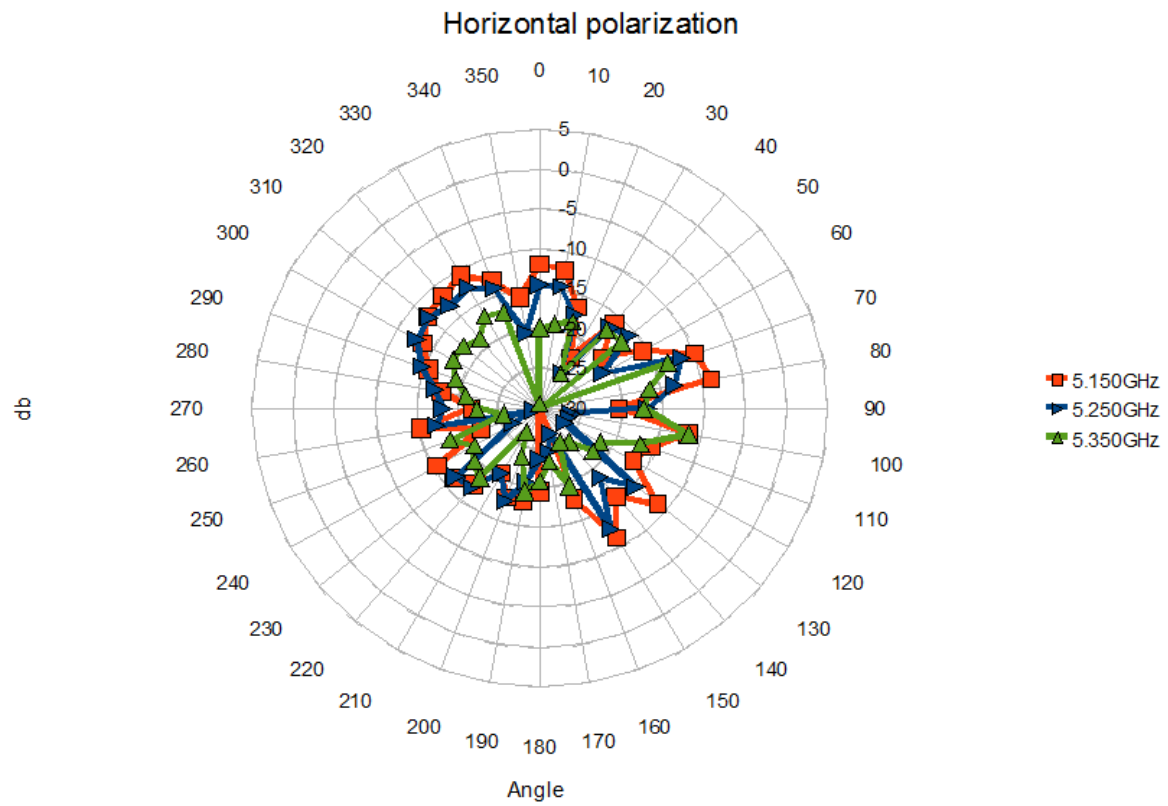


Figure 11: Horizontal polarization.

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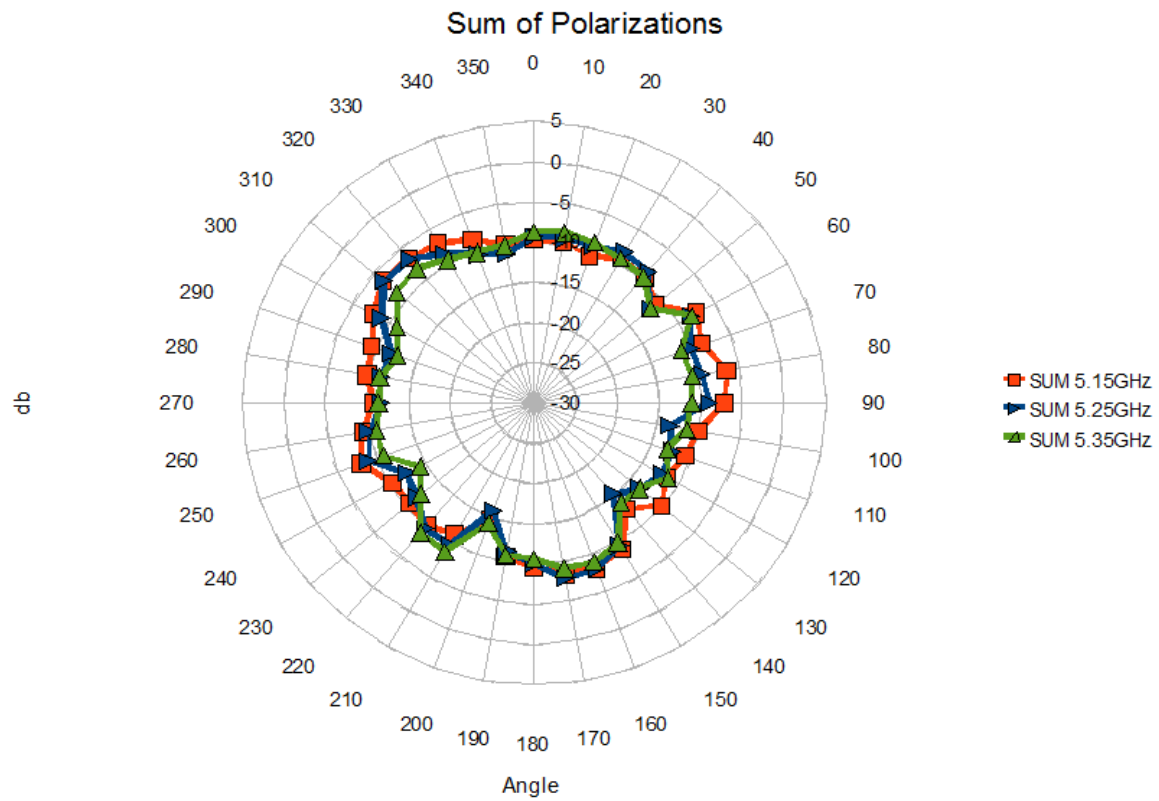


Figure 12: The sum of polarizations.

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2. SWR of antenna

Full range SWR:

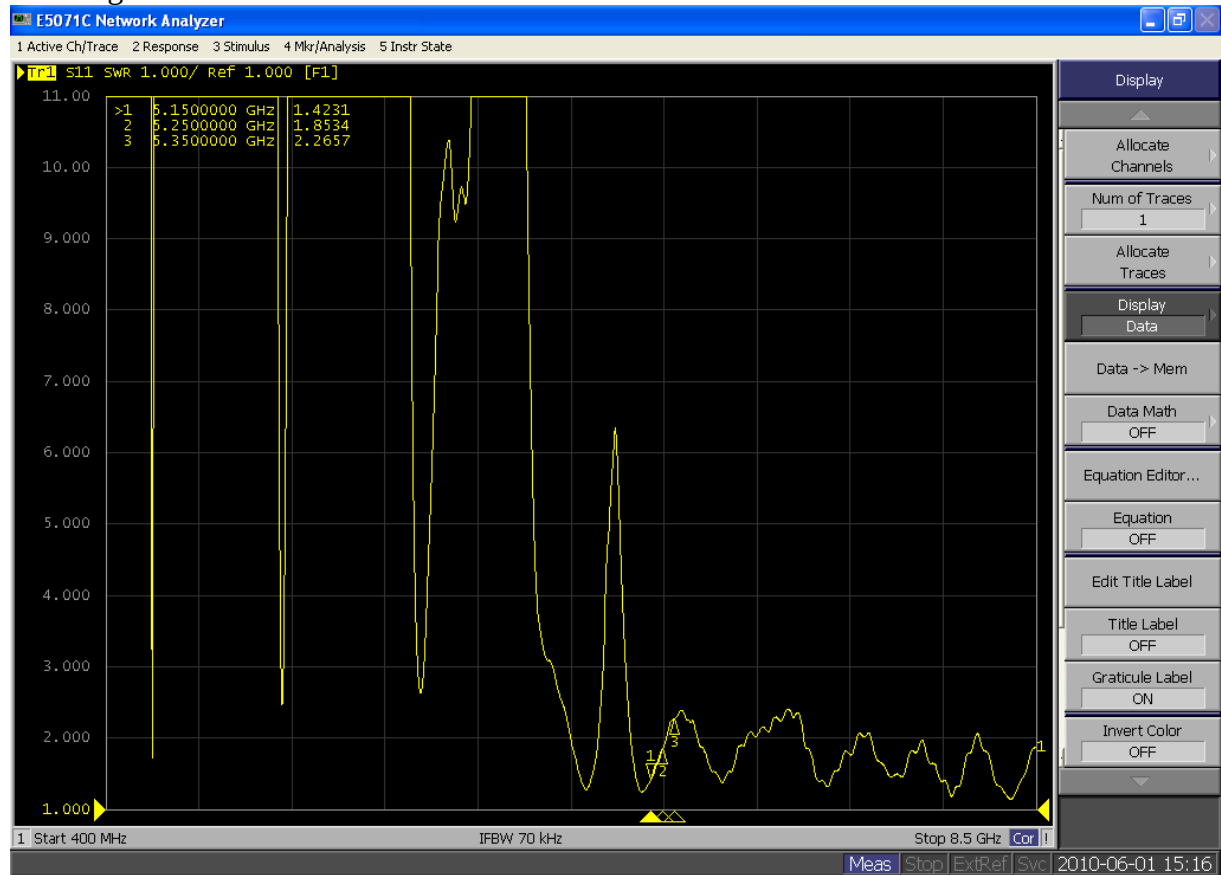


Figure 13: SWR of antenna in full range.

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The range of interest.

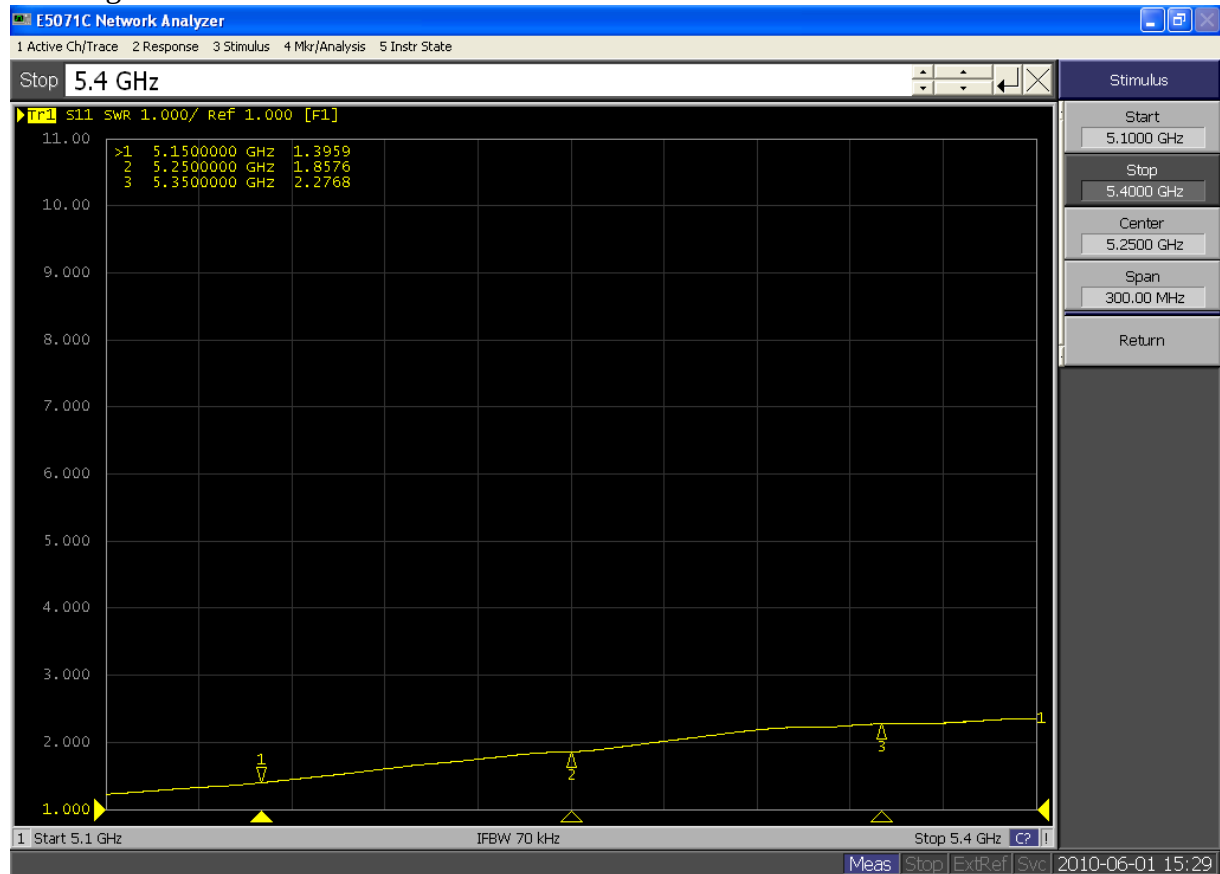


Figure 14: A 5.1GHz-5.4GHz representation with markers.

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3. Electrical properties

Frequency range: 5.15 – 5.35GHz

Impedance: 50 Ohm

VSWR @ 5.15 – 5.35GHz: < 2.5 nominal

VSWR @ 5.0 – 6.0GHz: < 3.5 nominal

Polarization: Circular

3 dB beam width horizontal: +/- 40°

3 dB beam width vertical: +/- 40°

Downtilt: 0°

Axial ratio: < 3dB

Connector: No connector, soldered directly on to PCB.