



Model: G76792
Antenna Data Information

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VERSION HISTORY:

Version	Date	Author	Notes	Status
1.0.0	2013-07-30	PyykJar	For AT4W	Approved

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1. INTRODUCTION

1.1 Objective

This document describes detail antenna data of G76792 fitness monitor.

2. ANTENNAE USED IN G76792

The G76792 fitness monitor contains two separate antennas which are utilized by GPS and Bluetooth/WLAN systems. Both antennae are internal and the mechanics (chassis) of the device does not have any protruding radiator components.

2.1 Bluetooth / WLAN

The Bluetooth / WLAN antenna is custom-made and has been designed by Elektrobit. The antenna radiator pattern has been integrated into power-key flex (POWER_FLEX 1000906-3). Antenna is linearly polarized and the physical dimensions are presented in figure 2.1. Antenna area is 15.15 mm x 7.88mm.

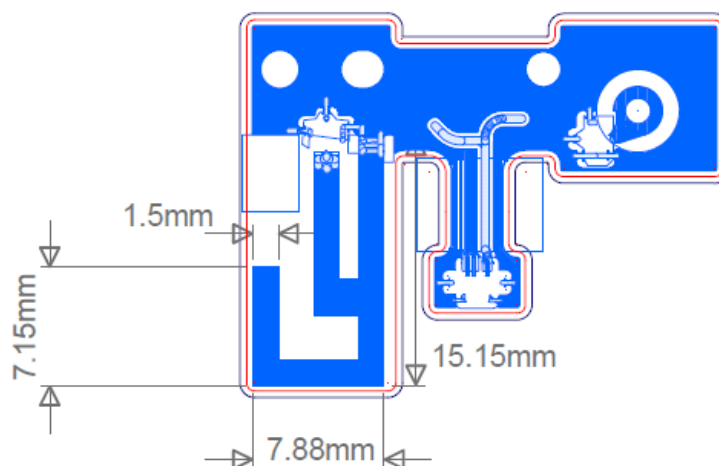


Figure 2.1. Bluetooth / WLAN antenna layout.

2.2 GPS

The GPS antenna is a dielectric antenna manufactured by Cirocomm. The product name of the antenna is PA010AA0005 and part number is 03A01B3B0051020. The antenna is right hand circularly polarized. The physical dimensions of the antenna are 10 x 10 x 4 mm.

2.3 Photographs

Photographs of the antenna assembly are presented in figures 2.2. – 2.4. Antennae are marked to figures.

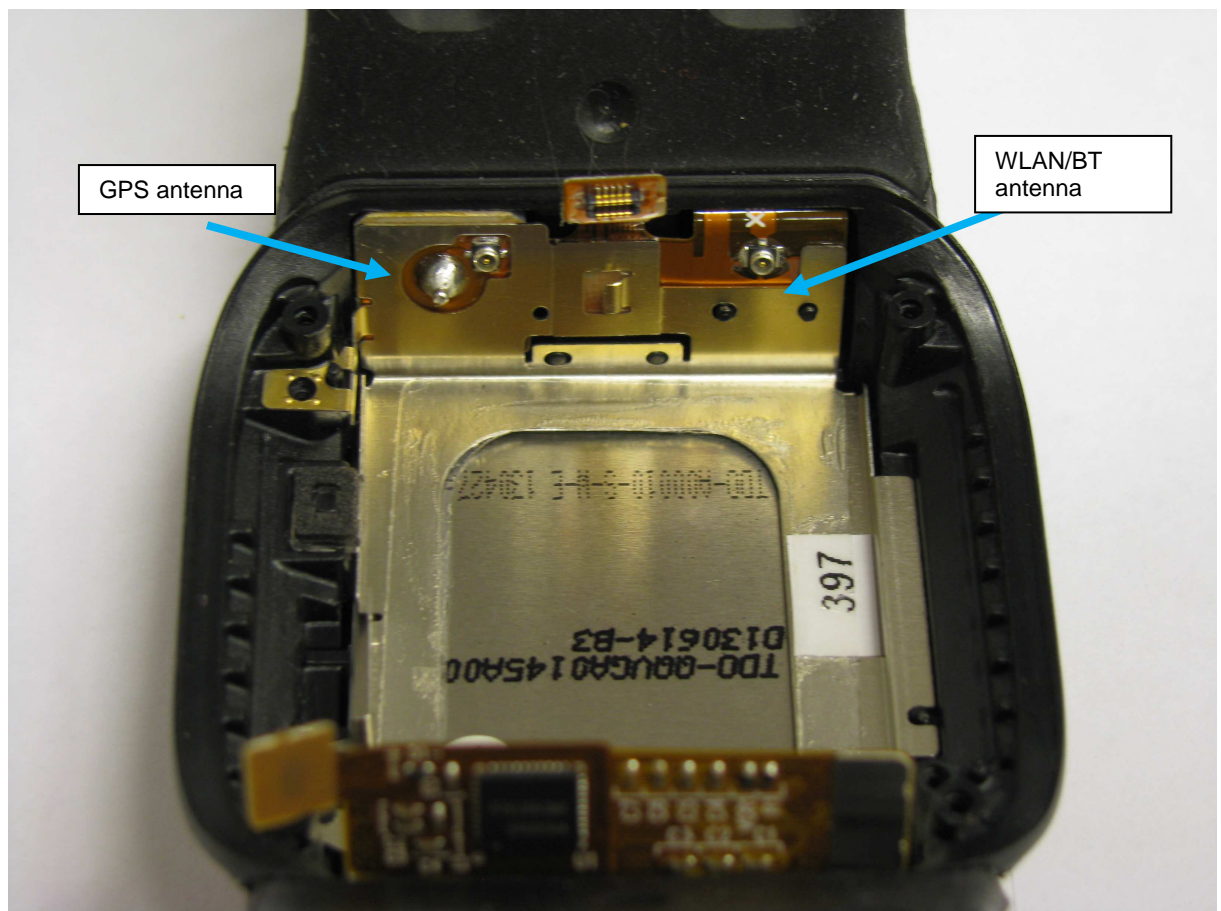


Figure 2.2. Antenna assembly installed in G76792 chassis.

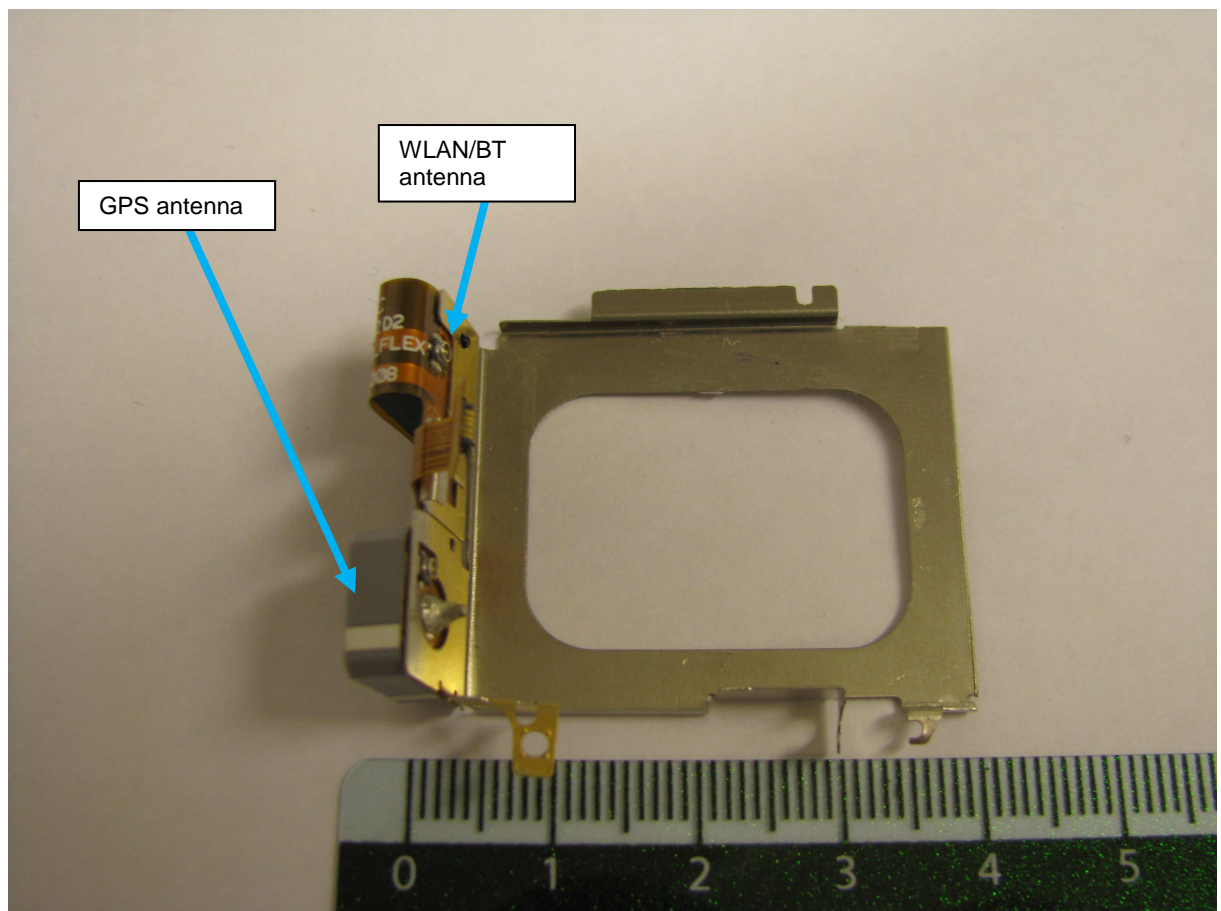


Figure 2.3. Antenna assembly bottom.

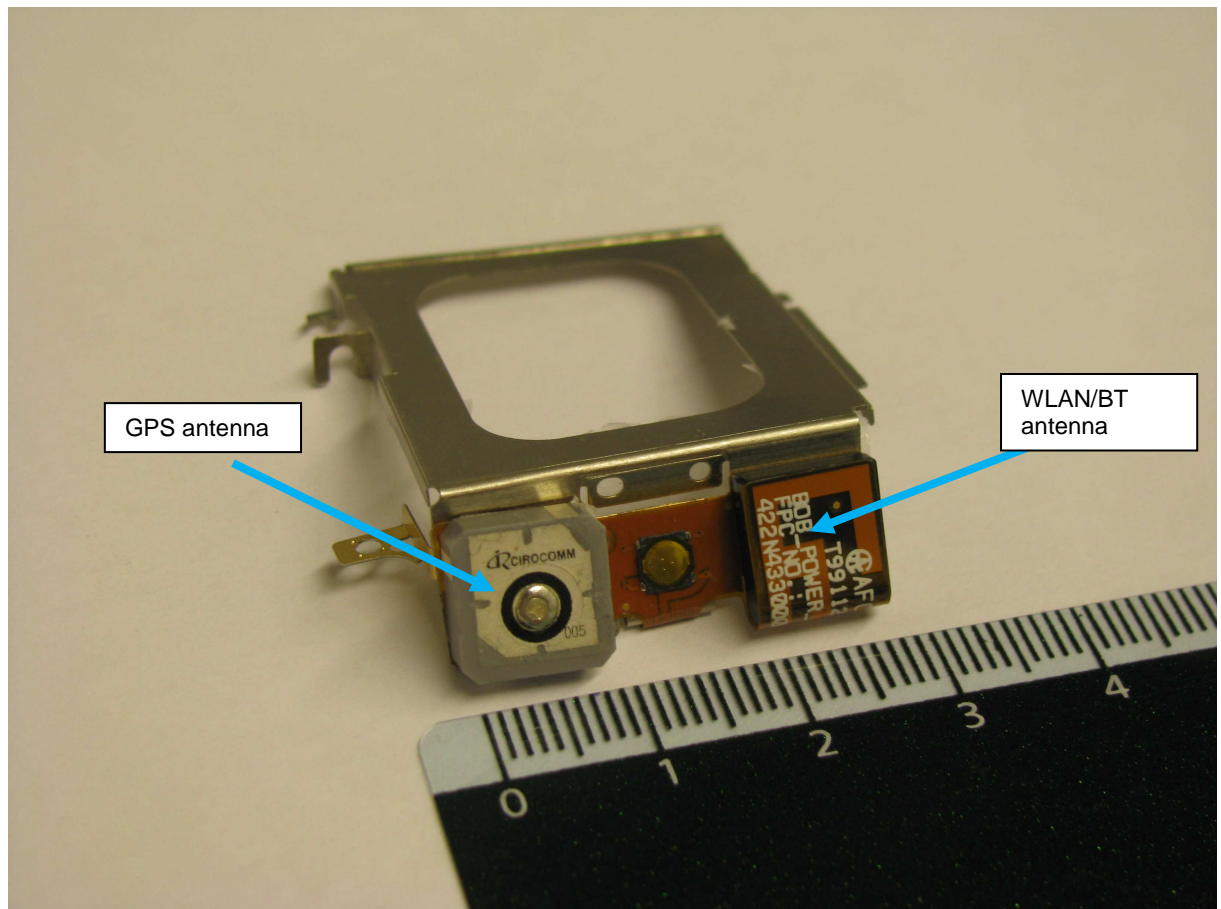


Figure 2.4. Antenna assembly front and top.

3. ANTENNA PEAK AND AVERAGE GAIN DATA

The antenna peak and average gains in this chapter are presented in XY-plane as a function of frequency. It is worth noting that only the measurement results of the XY-plane are presented here because the device produces the maximum gain on this plane, both peak and average. The Antenna orientation and positioning are shown in figure 3.1.

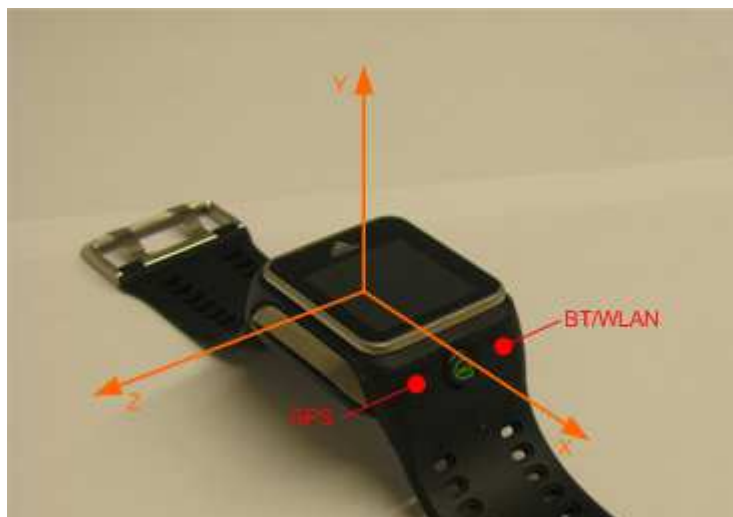


Figure 3.1. Antenna orientation and positioning.

3.1 Bluetooth / WLAN Peak Gain

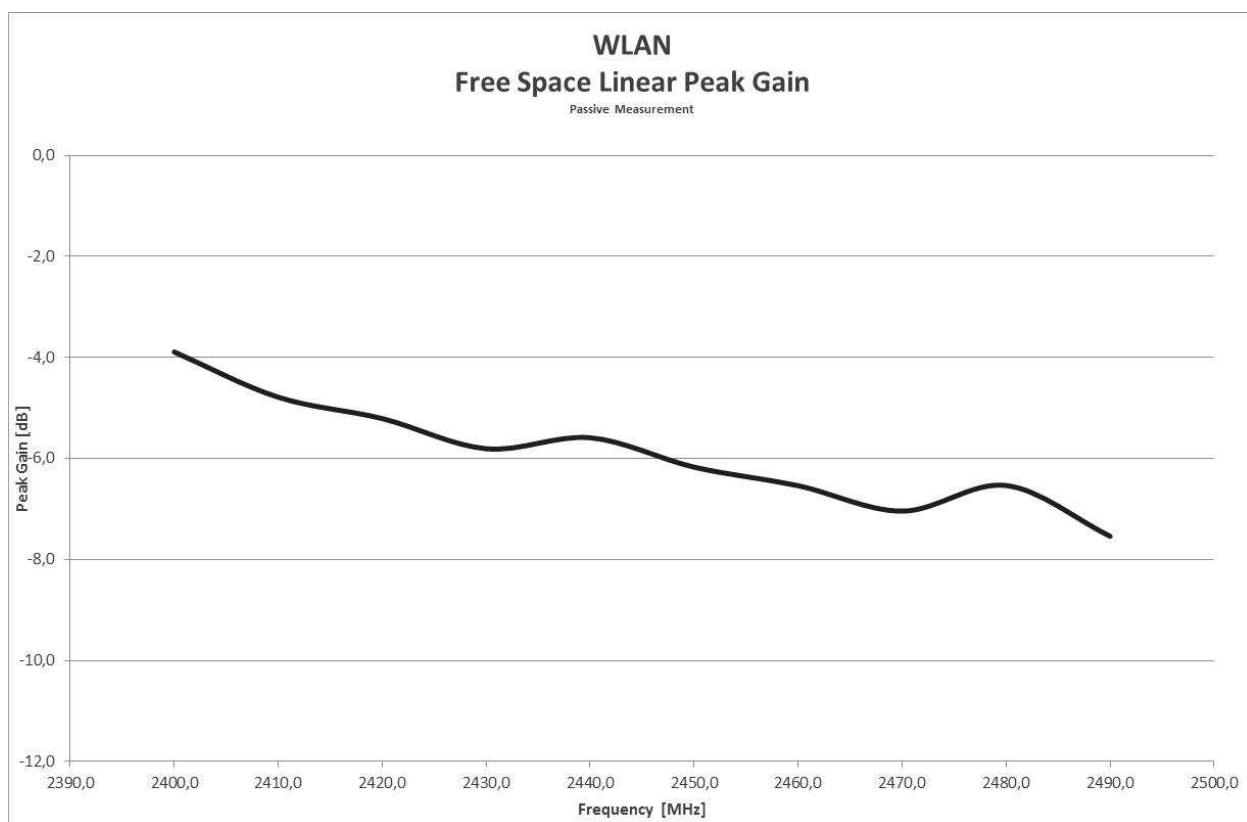


Figure 3.2. Bluetooth / WLAN antenna peak gain.

3.2 Bluetooth / WLAN Average Gain

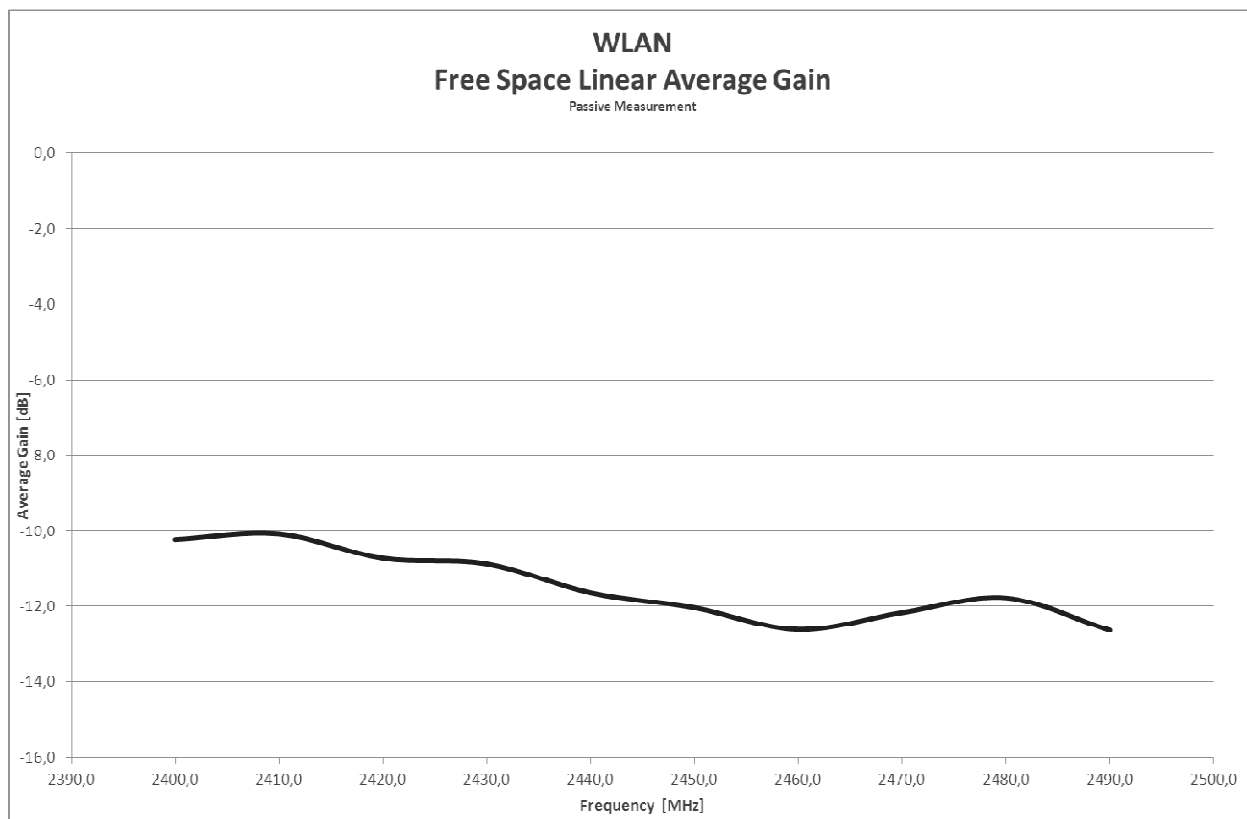


Figure 3.2. Bluetooth / WLAN antenna average gain.

3.3 GPS Peak Gain

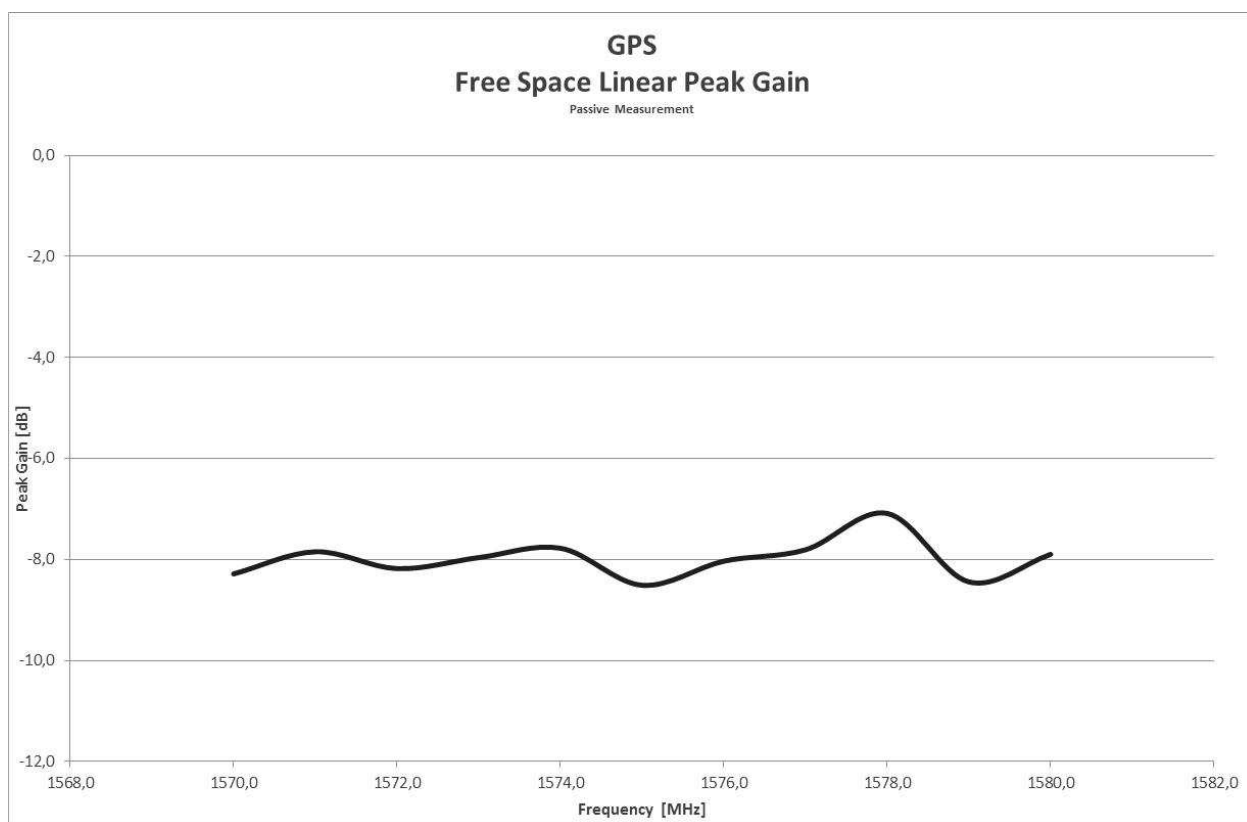


Figure 3.3. GPS antenna peak gain.



3.4 GPS Average Gain

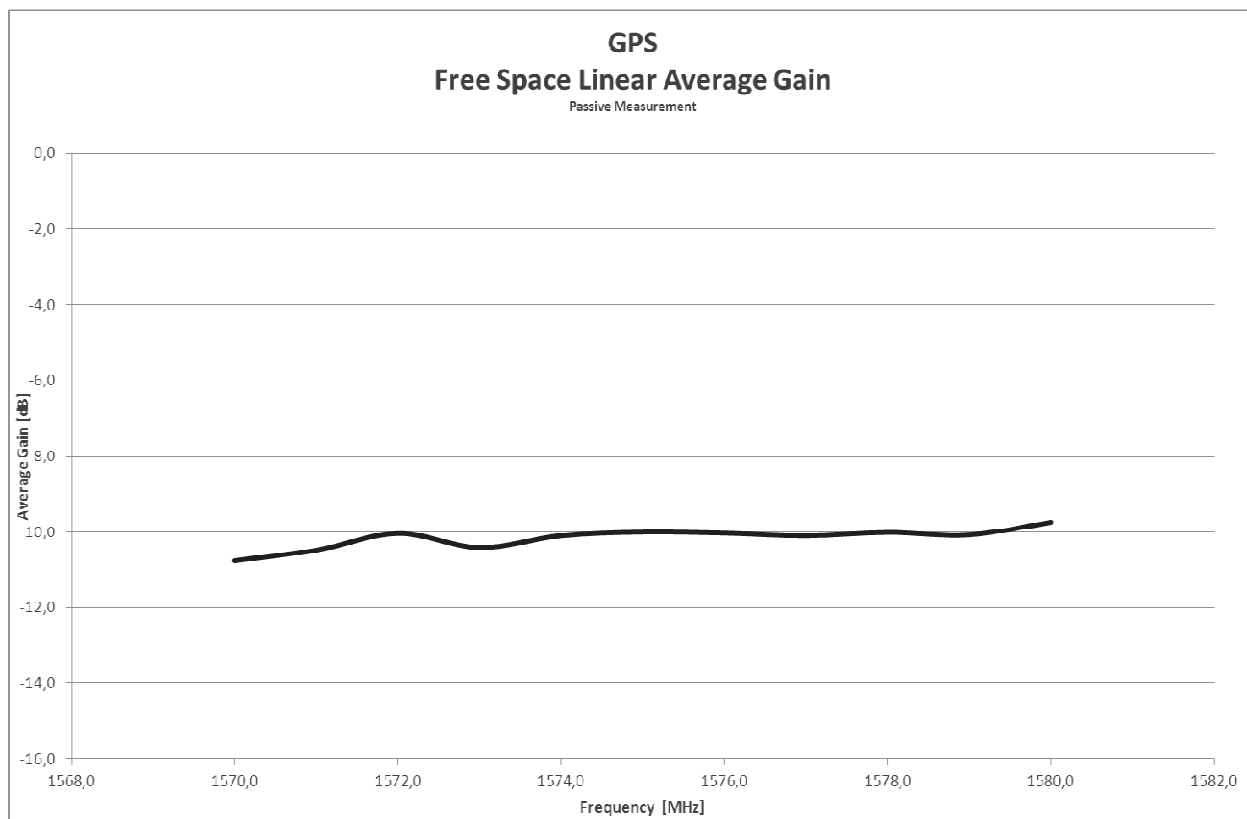


Figure 3.4. GPS antenna average gain.

4. ANTENNA 360° RADIATION DIAGRAMS

The antenna radiation diagrams in this chapter are presented in XY-plane. Again, the XY-plane is presented here because the device produces maximum gain in this plane. Antenna orientation and positioning are shown in figure 3.1.

4.1 Bluetooth/WLAN radiation diagram

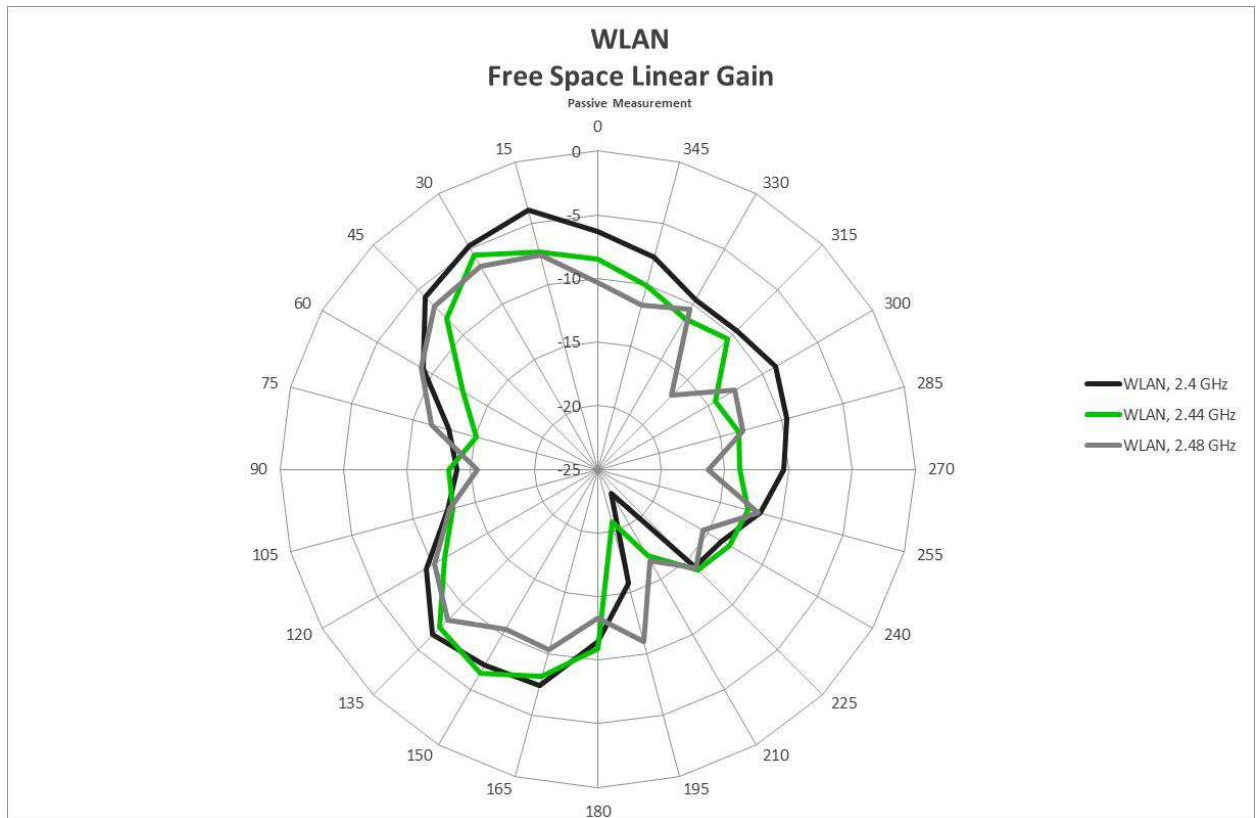


Figure 4.1. Bluetooth / WLAN antenna radiation diagram.

4.2 GPS radiation diagram

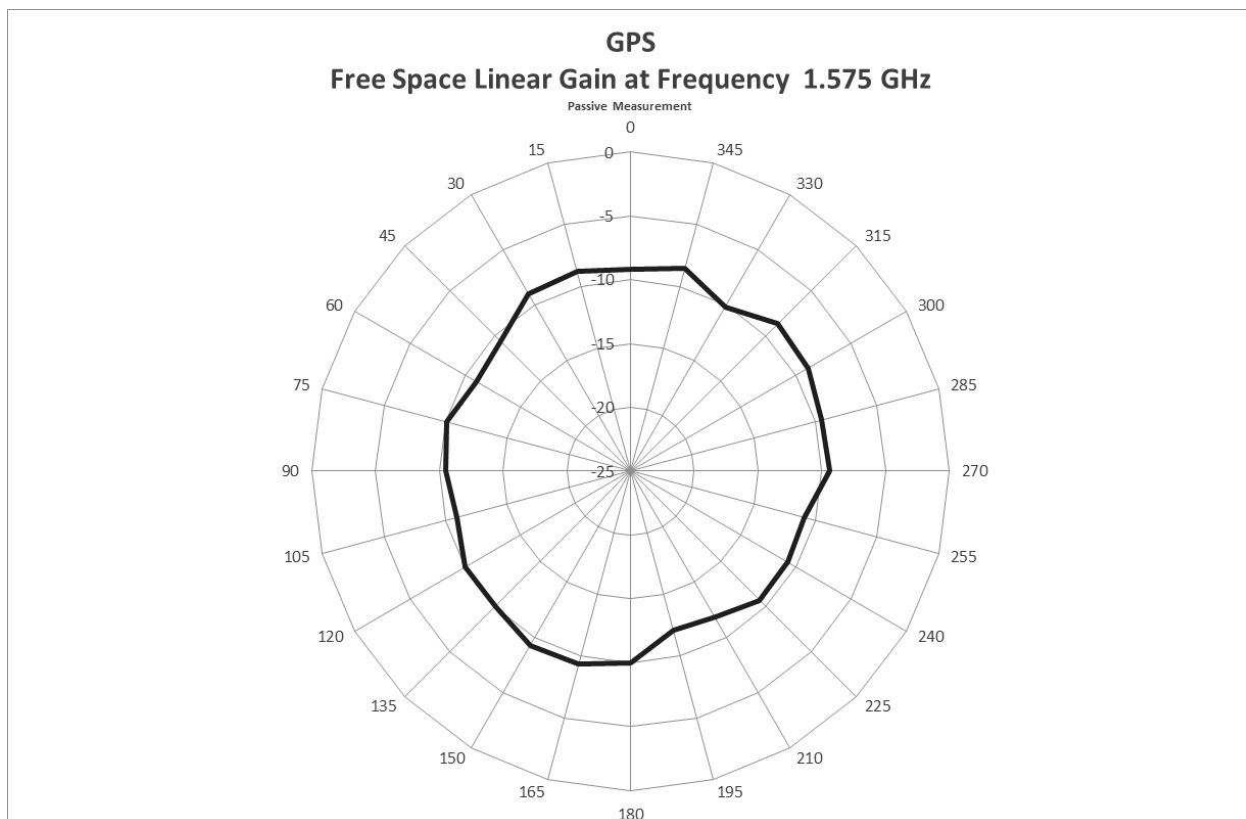


Figure 4.2. GPS antenna radiation diagram.