Withings 2.45 GHz FPC Antenna WFA01 Specification

Subject	Withings 2.45 GHz FPC Antenna WFA01
Type	Specification
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Diffusion	Withings, Manufacturing Subcontractor, Certification Lab

I Revision History

v01

- Initial version

II Purpose

This document describes the design and gain characteristics of the Withings WFA01 2.45 GHz FPC antenna designed by Withings.

III Confidentiality

The gain information contained in this document may be made public for purposes of certification.

IV Features

- Compact, flexible and simple design
- 2.4 to 2.5 GHz operation
- 802.11b/g/n and Bluetooth applications
- VSWR better than 2.2:1

V General Description

This compact high efficiency FPC antenna has been optimized for use on small form factor products 802.11b/g/n WLAN, Bluetooth or BLE chipsets. It offers a good radiation pattern in all 3 planes, together with high efficiency. This design was created by Withings and can be easily incorporated into various products.

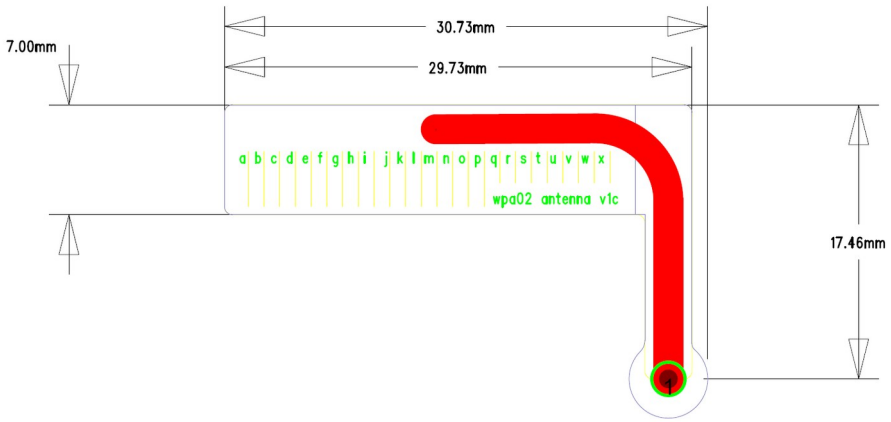
VI Antenna Gain Details

Type	Brand	Manufacturer	Model	Max Antenna Gain (dBi)	Connector
FPC	Withings	Withings	WFA01	4.1	N/A

VII Construction

The following figure shows the design of the FPC antenna which is designed to be soldered directly onto PCB solder pad.

Figure 1: FPC layout design

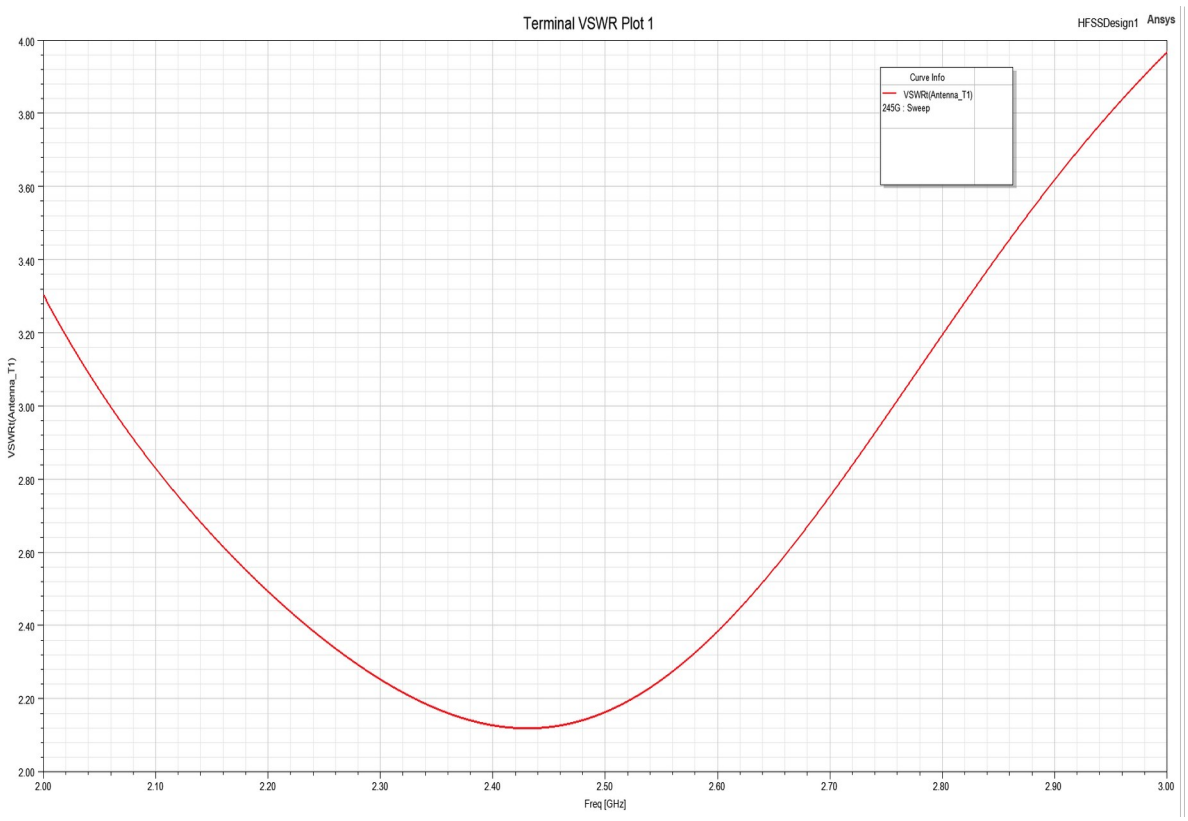


THE FOLLOWING INFORMATION IS UNDER NDA AND MAY BE MADE PUBLIC FOR THE PURPOSES OF CERTIFICATION

VIII Analysis

Reflection coefficient:

Figure 2: VSWR



The subsequent graphs show the radiation patterns:

Figure 3: 3D Polar Plot

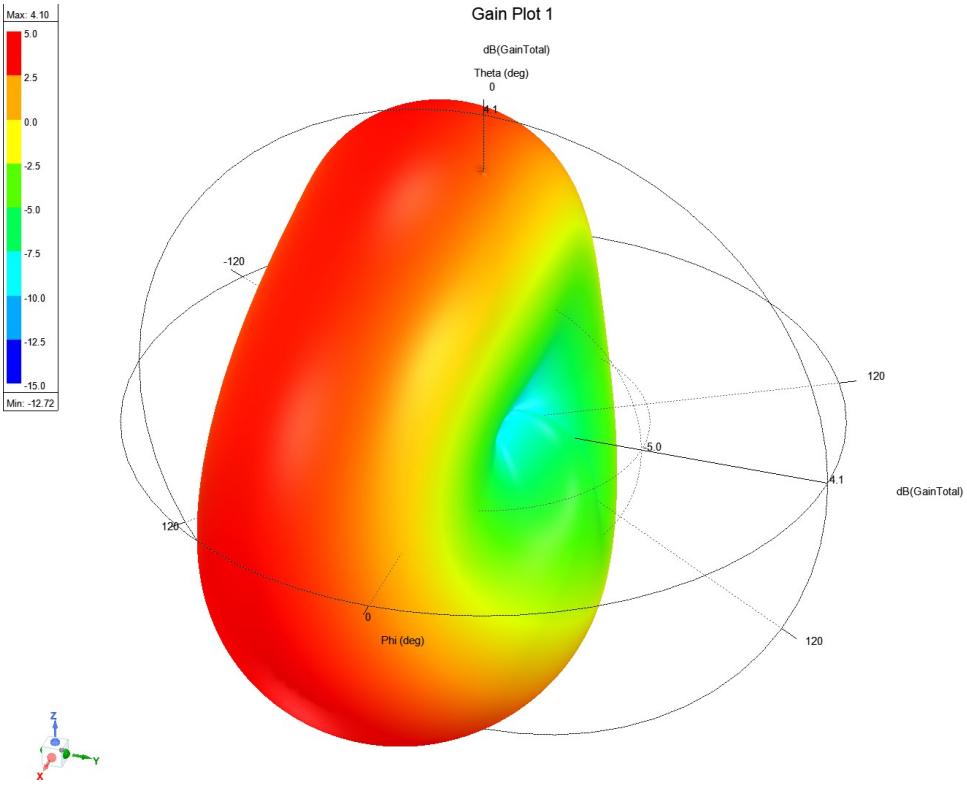


Figure 4: Elevation – Sweep Theta

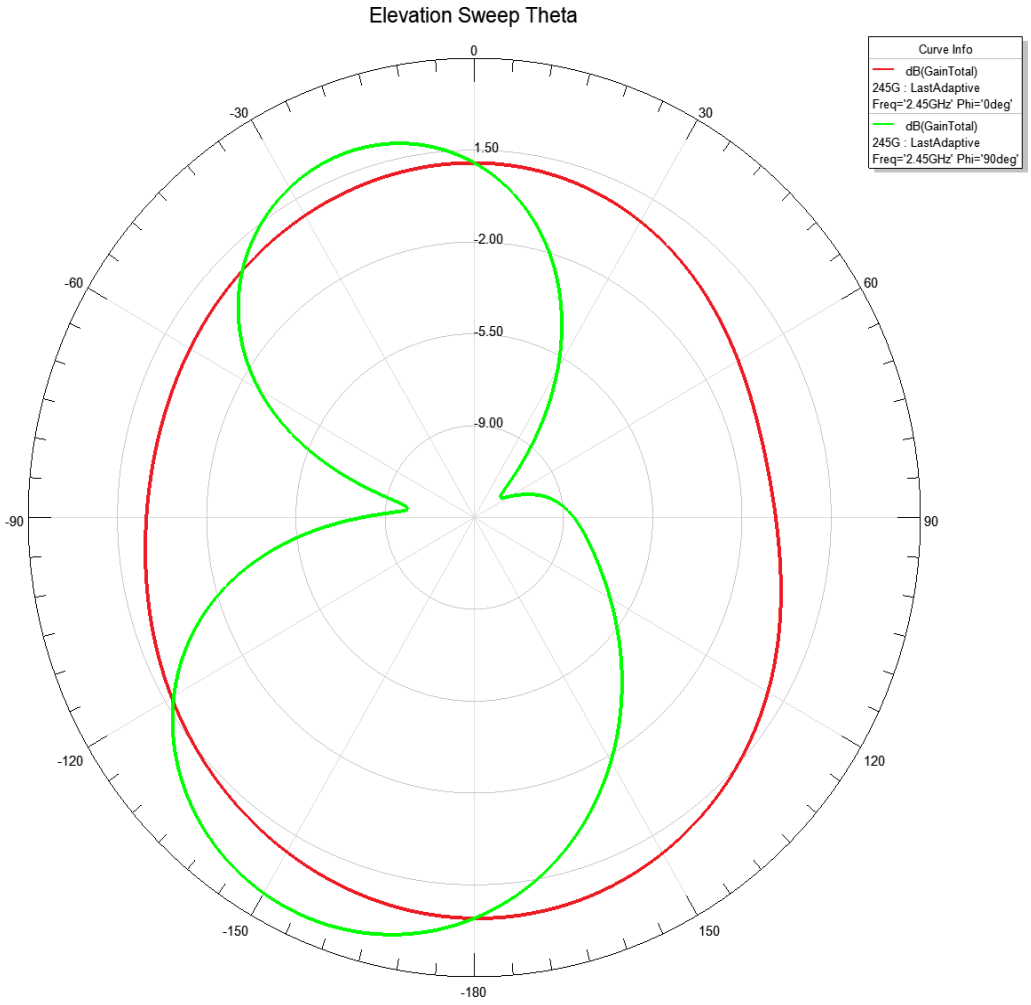


Figure 5: Azimuth – Sweep Phi