DHAN-Based Printed Antenna Performance

Abstract

This document describes the dimensions and the results of simulation, measurement and radiation pattern testing for a DHAN-based printed antenna.

Table of Contents

1. Overview

This document describes the mechanical requirements for a DHAN-based printed antenna, and presents simulation, measurement and radiation pattern results.

Since antenna performance improves as the GND reference area increases, performance is expected to improve after the antenna is embedded in the larger application/sensor PCB.

Since antenna performance is affected by the final application/sensor casing material (i.e. plastic), final antenna matching should be done after the module/antenna is enclosed in its final casing.

Contact DSP Group SupportEU@dspg.com for the DHAN printed antenna database (layout & Gerber).

2. Measurements and Results

2.1 Antenna Dimensions

See Figure 2-1 for top and bottom dimensions.

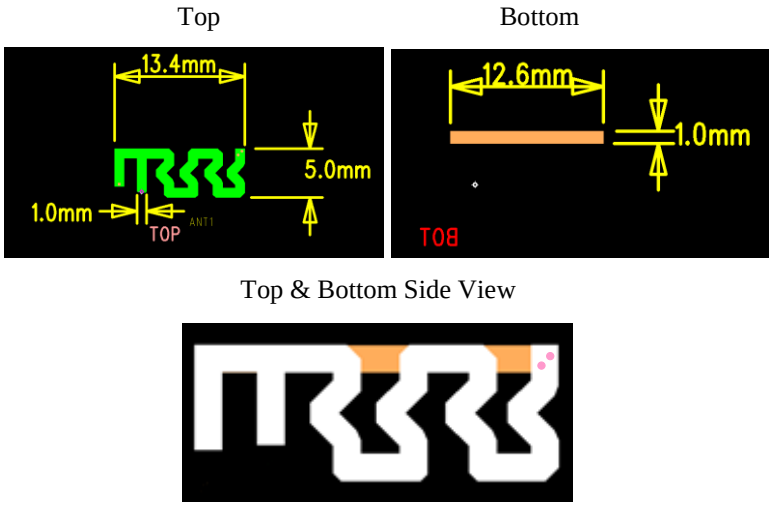

Figure 2-1: Antenna Dimensions

2.2 Radiation Pattern Visualization

See the three diagrams in Figure 2-2.

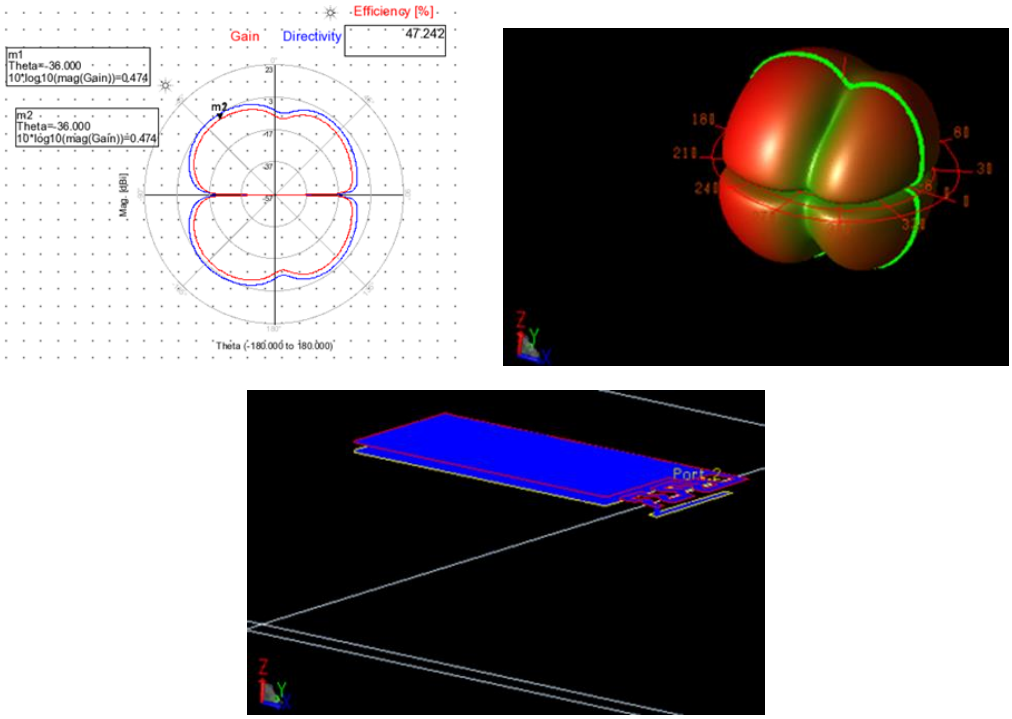

Figure 2-2: Radiation Pattern

2.3 Simulation

See the S11 parameters for simulation and measurement results in Figure 2-3.

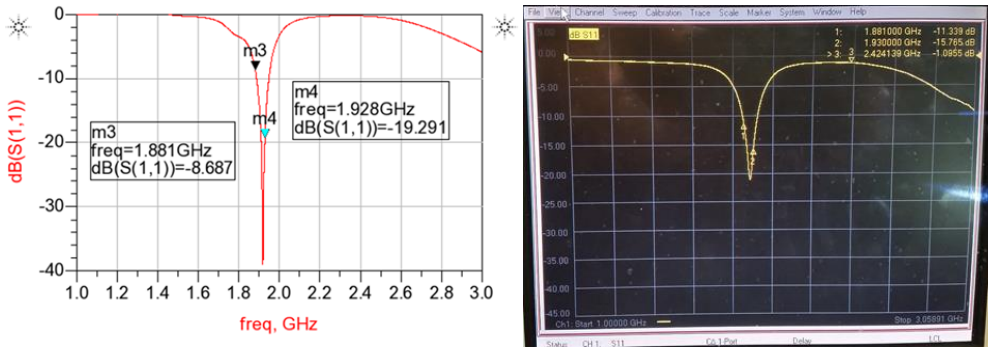

Figure 2-3: Simulation Results

2.4 Radiation Pattern

See Figure 2-4 for DHAN radiation pattern measurements.

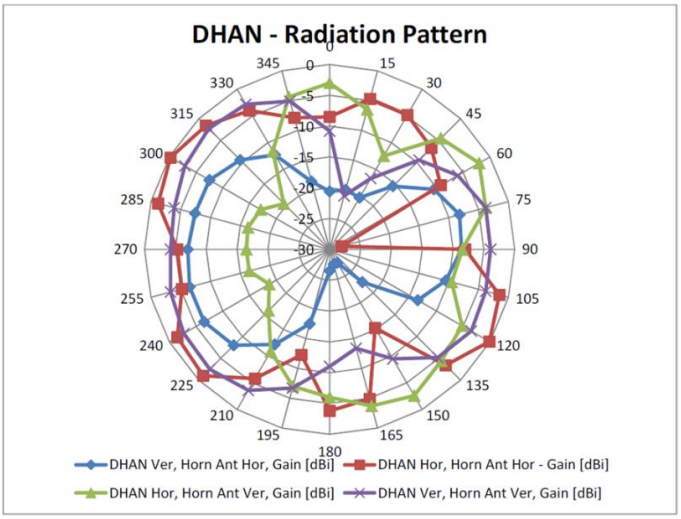

Figure 2-4: Radiation Pattern Measurements

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