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**Project:** doctorgram Stethoscope DES-I  
**DHF:** DHF1xxxx  
**Report #:** AS10001 Rev. A  
**Title:** Antenna Specifications for doctorgram stethoscope DES-I  
**Originator:** Ching-Kay Chow  
**Date Prepared:** March 2, 2020

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**Abstract:** This Antenna Specification details the defined integral antenna specification of the doctorgram Stethoscope DES-I.

**Approvals:**

This document has been routed for approvals via xxx.

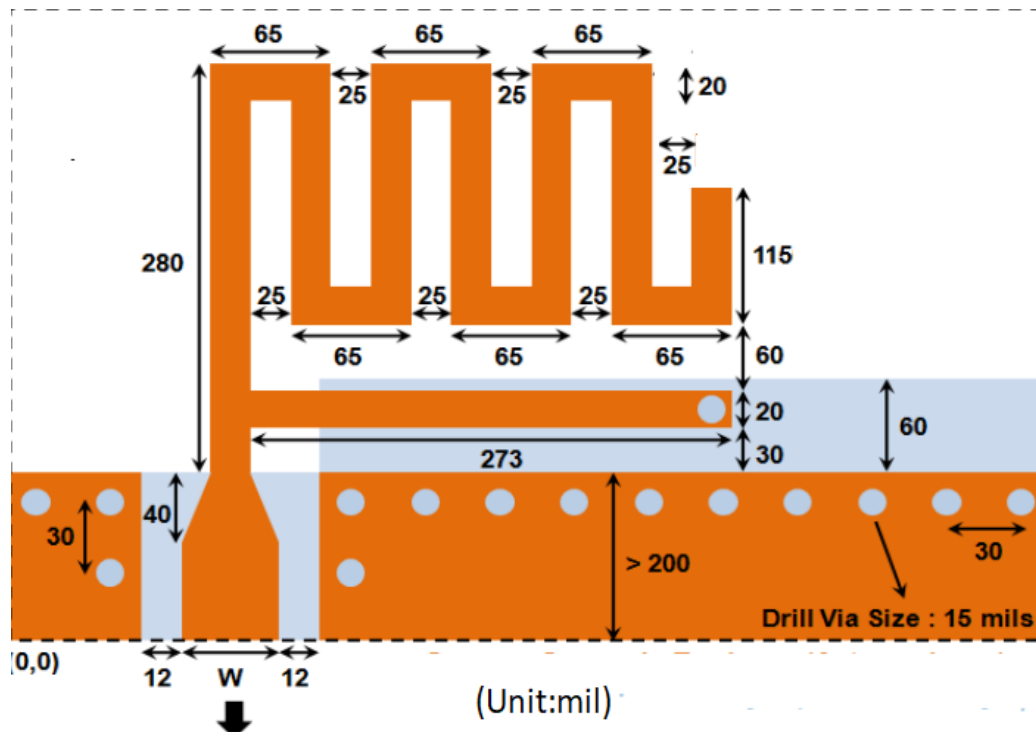
## 1.0 OBJECTIVE

- 1.1. The objective of this document is to provide technical details of the integral antenna of doctorgram stethoscope DES-I and the translation of these needs into quantitative design requirements.

## 2.0 ANTENNA SPECIFICATION

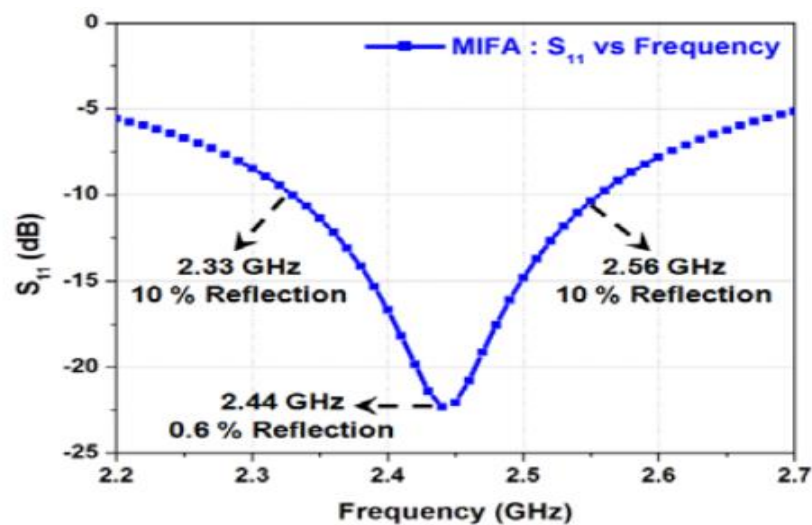
- 2.1 Antenna: Meandered Inverted-F Antenna (MIFA)
- 2.2 Designer: Cypress Semiconductor Corporation
- 2.3 Antenna Gain: 0 dbi
- 2.4 Frequency Range: 2.4 GHz – 2.483 GHz
- 2.5 Connect Type: Direct
- 2.6 Location of measurement: Cypress Semiconductor Corporation

### 3.0 DRAWING



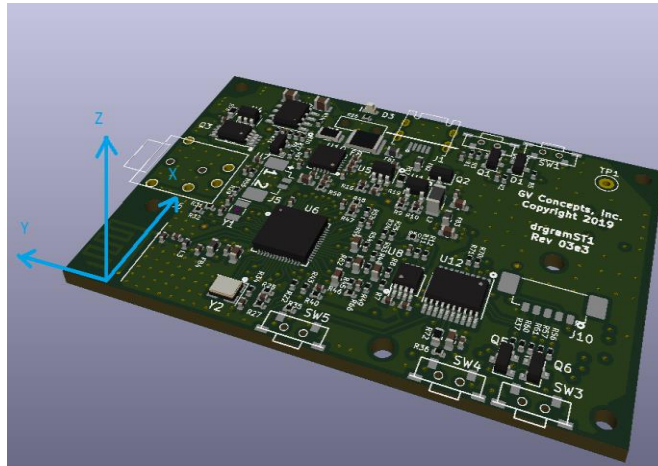
### 4.0 ANTENNA RADIATION PATTERN

#### 4.1 Return loss $S_{11}$



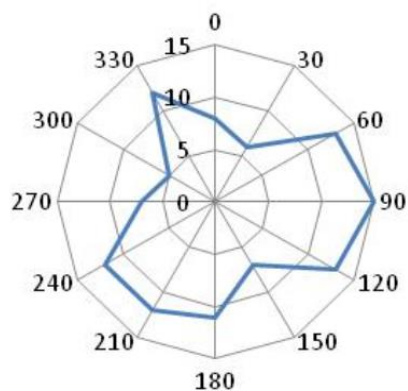
Antenna has a bandwidth ( $S_{11} \leq -10$  dB) of 230 MHz around 2.44GHz.

#### 4.2 PCB image with coordinary

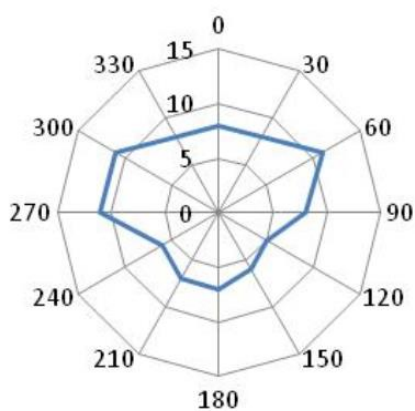


### 4.3 Antenna Radiation Pattern

#### About X axis



#### About Y axis



#### About Z axis

