

Robert Bosch GmbH  
Postfach 13 42  
72703 Reutlingen  
Germany  
Visitor:  
Markwiesenstraße 58  
72770 Kusterdingen  
Tel 07121 35-0  
[www.bosch.com](http://www.bosch.com)

## **Antenna Technical Data Sheet, BRC3600**



## Table of Contents

Page 2 of 7

1	Introduction .....	3
1.1	Objective.....	3
2	Antenna in BRC3600 .....	3
2.1	BLE Antenna.....	3
3	BRC3600 antenna peak and average gain data.....	4
3.1	BLE-antenna peak gain .....	4
3.2	BLE-antenna average gain .....	5
3.3	Antenna 3D Radiation Diagrams.....	5

## Table of Figures

Figure 2.1	BLE-antenna.....	3
Figure 3.1	Antenna measurements system.....	4
Figure 3.2	Antenna 3D peak gain .....	4
Figure 3.3	Antenna 3D average gain .....	5
Figure 3.4	3D radiation patter, linear peak gain @2402MHz.....	5
Figure 3.5	3D radiation patter, linear peak gain @2440MHz.....	6
Figure 3.6	3D radiation patter, linear peak gain @2480MHz.....	7

# 1 Introduction

Page 3 of 7

## 1.1 Objective

This document describes the antenna used in BRC3600 device, detailed antenna placement and main antenna radiation properties are presented.

## 2 Antenna in BRC3600

BRC3600 includes integrated antenna inside to device mechanics, more specifically in to the BRC3600 main PCB (Printed Circuit Board). Antenna is IFA -type, linearly polarized and antenna is designed to operate Bluetooth operating band 2402-2483.5MHz and utilized by BLE (Bluetooth Low Energy) system at BRC3600 device.

### 2.1 BLE Antenna

Antenna radiator and physical dimension are presented in Figure 2.1. Total length of the antenna 23mm. Metal free antenna area (marked red dots): 49.7mm<sup>2</sup>.

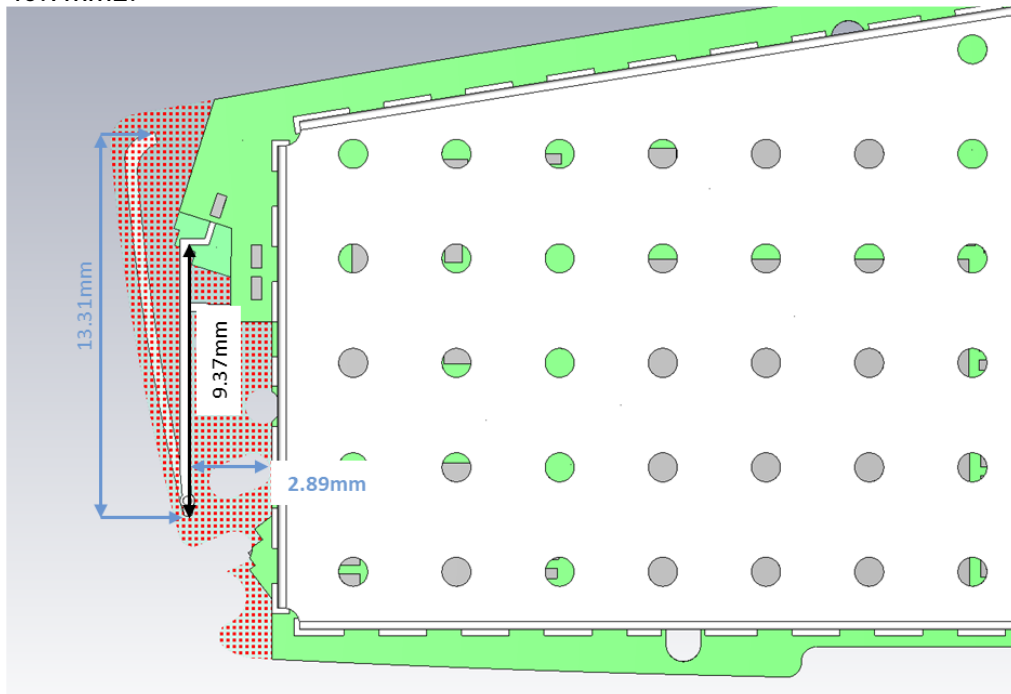


Figure 2.1 BLE-antenna

### 3 BRC3600 antenna peak and average gain data

Page 4 of 7

Antenna peak and average gain are presented as function of frequency (figure 3.2 and figure 3.3). 3D radiation patterns from frequencies 2402MHz, 2440MHz and 2480MHz are presented in figure 3.4, figure 3.5 and figure 3.6.

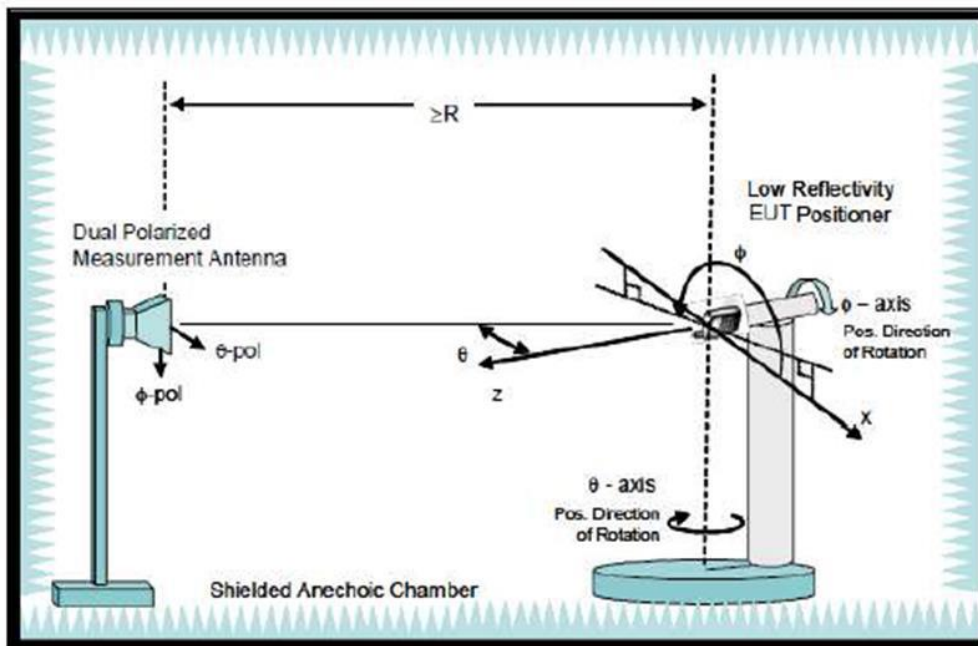


Figure 3.1 Antenna measurements system  
Theta  $\Theta$  axis 0 - 345, Phi  $\Phi$  axis 0 – 180

#### 3.1 BLE-antenna peak gain

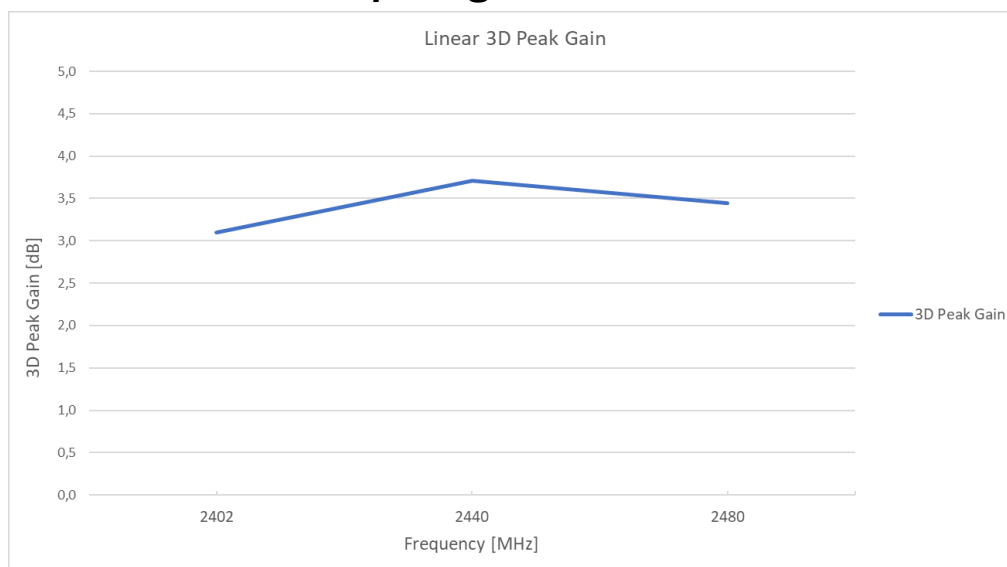


Figure 3.2 Antenna 3D peak gain

3.2 BLE-antenna average gain

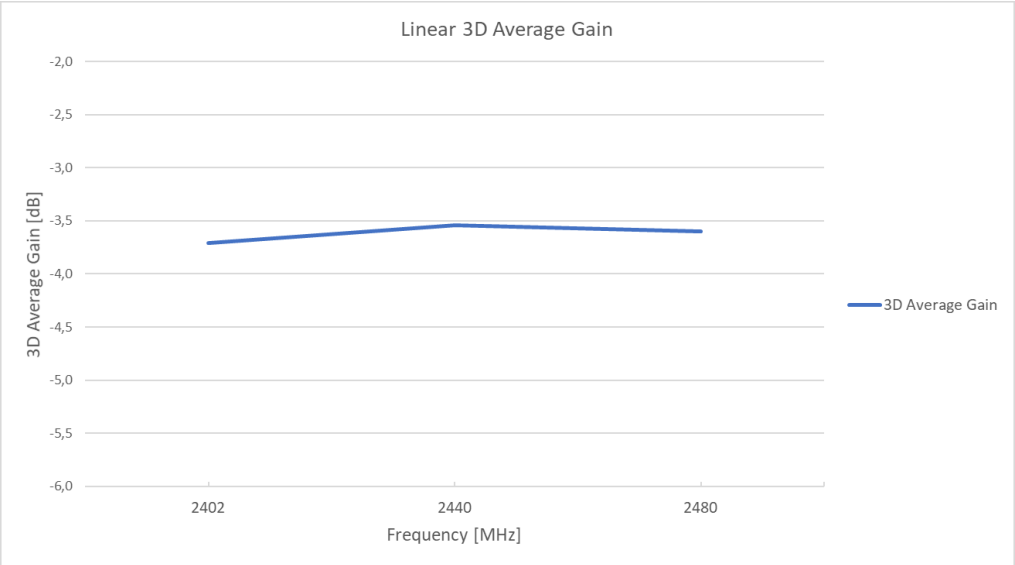


Figure 3.3 Antenna 3D average gain

3.3 Antenna 3D Radiation Diagrams

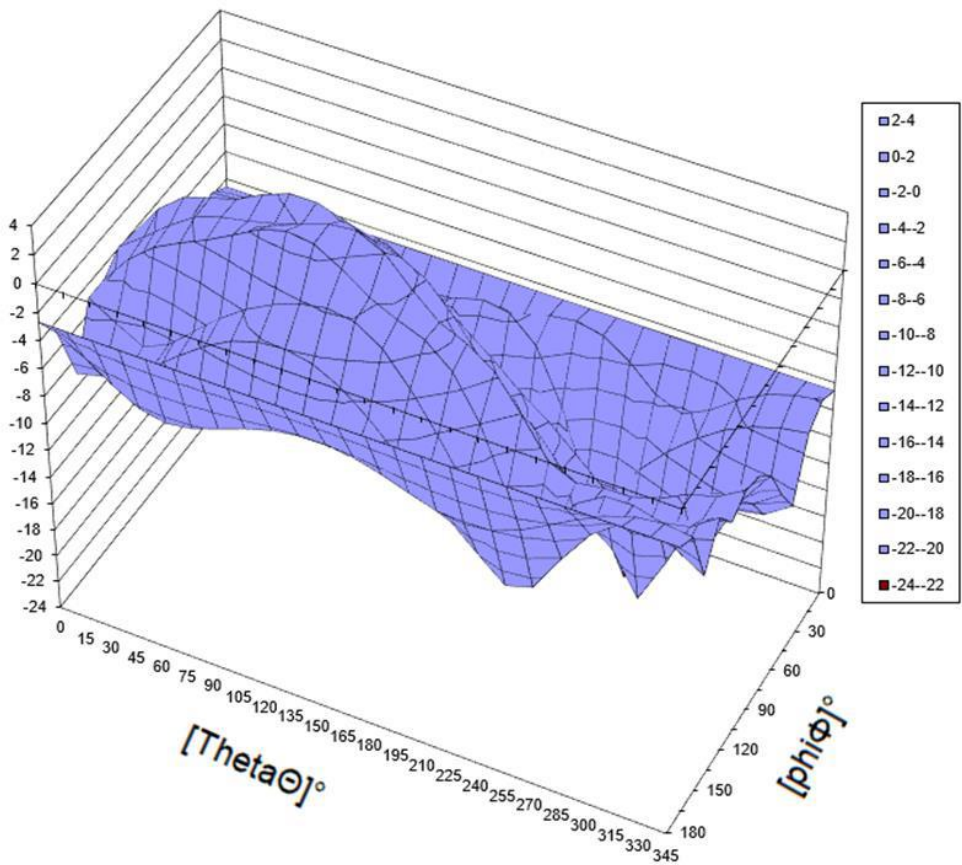


Figure 3.4 3D radiation patter, linear peak gain @2402MHz

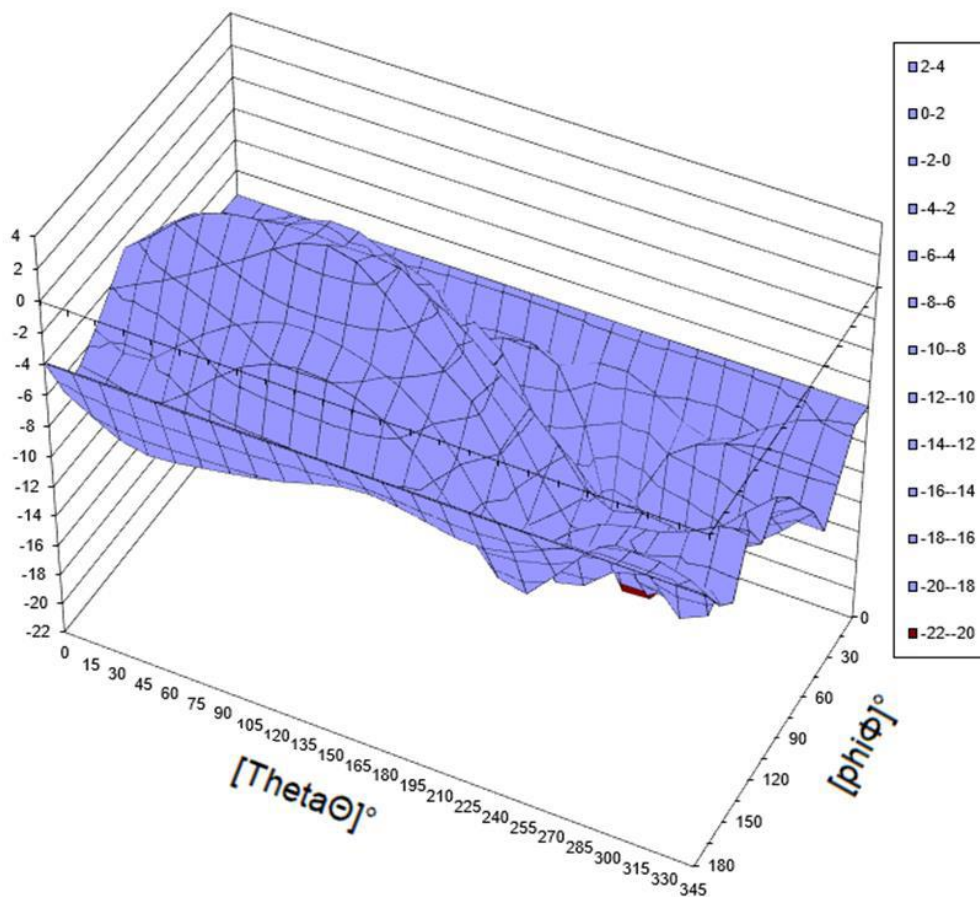


Figure 3.5 3D radiation patter, linear peak gain @2440MHz

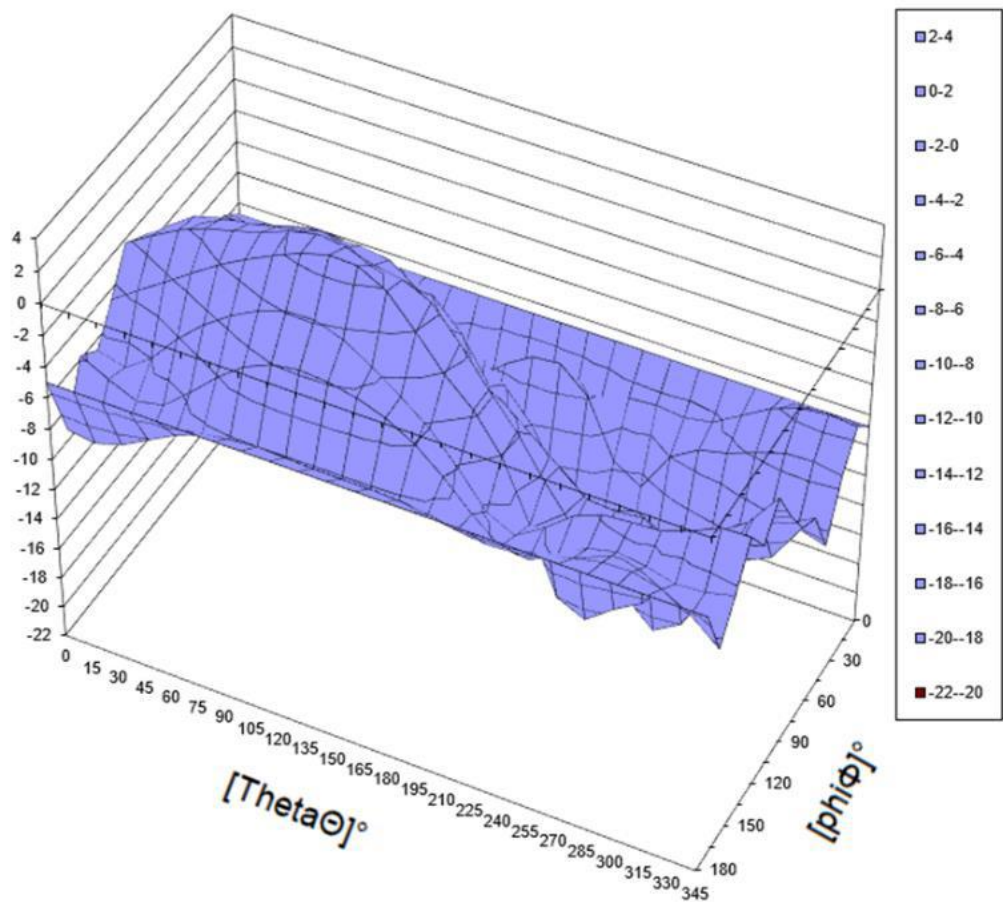


Figure 3.6 3D radiation patter, linear peak gain @2480MHz