



**SKIDATA**<sup>®</sup>  
KUDELSKI GROUP

## BLE Module

Specification of the BLE PCB Antenna Type 2

Belongs to: FCC ID:QSS-BLE

Belongs to: IC:6215A-BLE

Author: SCMN

Version: 1.1

2022-11-16

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## SKIDATA GmbH

Untersbergstraße 40

A-5083 Grödig/Salzburg

Phone: +43 6246 888-0

Fax: +43 6246 888-7

Internet: <http://www.skidata.com>

e-mail: [info@skidata.com](mailto:info@skidata.com)

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## Version History

Date	Version	Changed by	Description of Changes
2022-11-14	1.0	SCMN	
2022-11-16	1.1	SOCH	Modifications due to FCC requirements

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## 2. Overview

The **BLE PCB Antenna Type 2** is a linearly polarized Inverted-F Antenna intended to work in the 2,4 GHz ISM Band (2,4 GHz – 2,5 GHz) especially for BLE operation (2,402 GHz – 2,480 GHz). It is manufactured as a PCB (FR4) antenna.

### 2.1 Technical Characteristics

- Dimensions: 24,3 mm × 58,7 mm × 1,6 mm (approximately)
- Operating frequencies: 2,402 GHz – 2,480 GHz (2,4 GHz ISM Band)

## 3. Specification

The given data are based on simulation.

### 3.1. Electrical Characteristics

Frequency (GHz)	2,400	2,440	2,480
Peak realized gain (dBi)	1,78	2,30	2,49
Efficiency (%)	80	84	87
Axial ratio (dB) @ theta = 0°	-	-	-
Return loss (dB)	< -10	< -10	< -10
Polarization	Linear		
Feed impedance (Ohm)	50		

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## 3.2. Antenna Characteristics – Radiation Pattern

Fig 1: XZ plane: 2,40 GHz, 2,44 GHz, 2,48 GHz

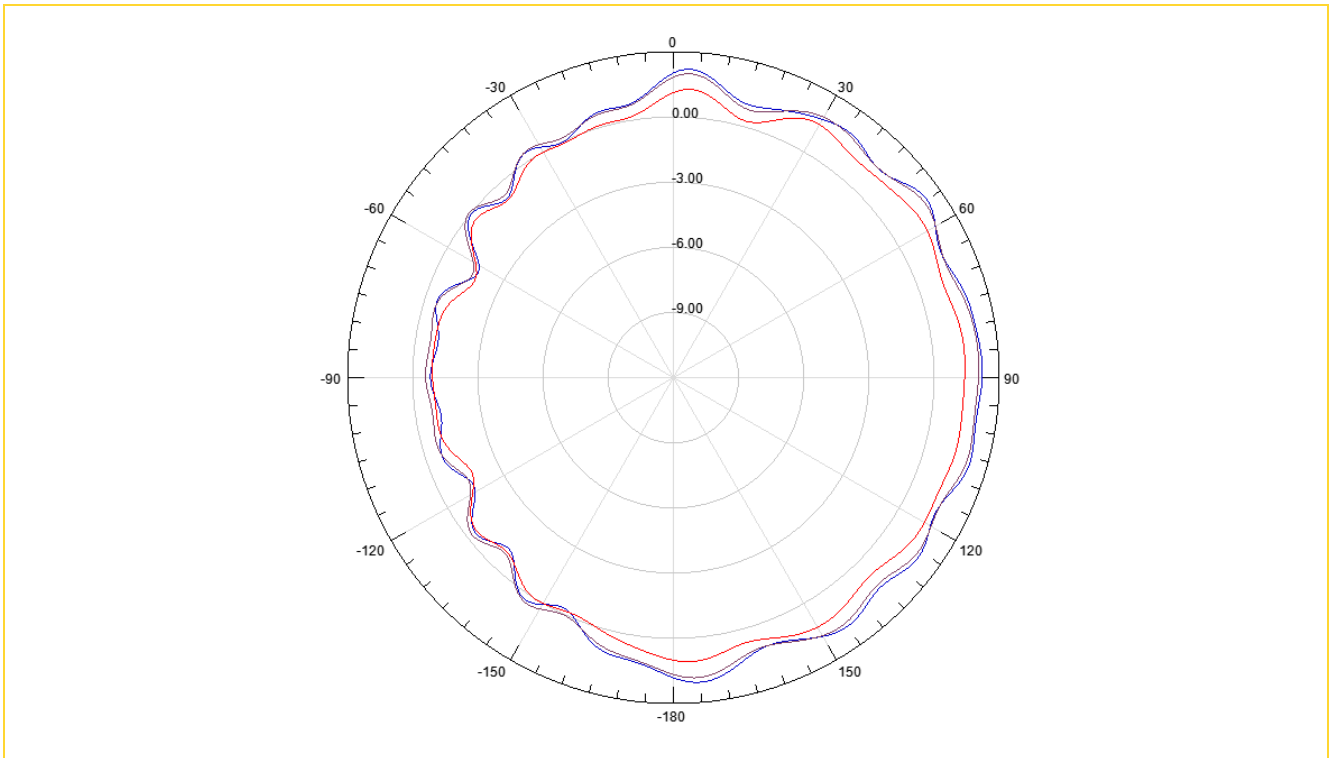
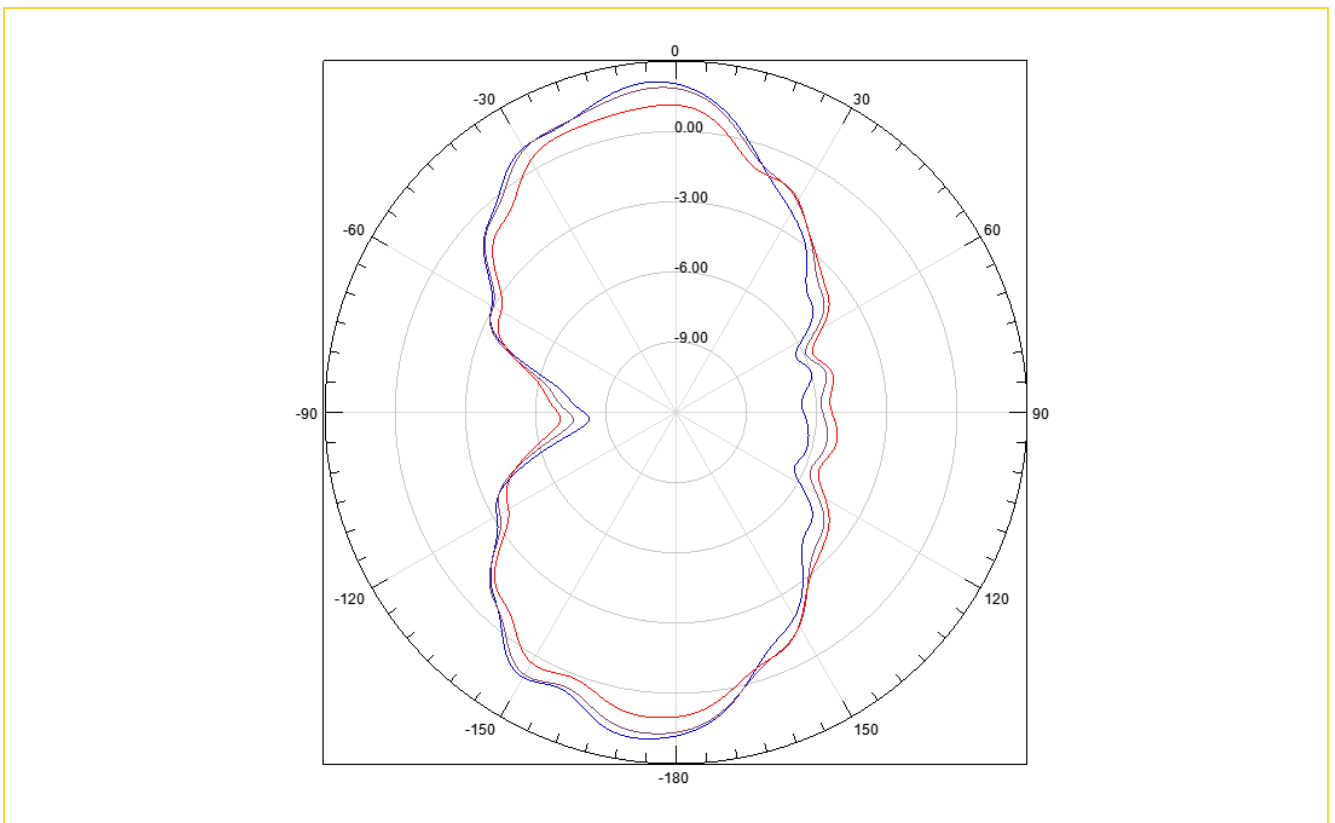


Fig 2: YZ plane: 2,40 GHz, 2,44 GHz, 2,48 GHz



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Fig 3: XY plane: 2,40 GHz, 2,44 GHz, 2,48 GHz

