



SKIDATA[®]
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

Specification of the BLE PCB Antenna Type 2

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

Copyright

© 2022 by SKIDATA GmbH. All rights reserved. All information in the following document is protected by copyright law. No part of this document may be reproduced without the written consent of SKIDATA GmbH. SKIDATA GmbH reserves the right to make any changes of specification and other information in this document without further notice.

Note

Great care was taken to make the information contained in this documentation as correct and accurate as possible. Although the documentation is updated regularly, SKIDATA GmbH cannot guarantee absolute correctness and completeness of the information contained therein.

Trademarks

This documentation may contain representations of registered product or service trademarks owned by SKIDATA GmbH or third parties, as well as references to proprietary know-how protected by copyright laws or other legal provisions. In any case all rights remain exclusively with their respective owners.

SKIDATA® is a registered trademark of SKIDATA GmbH in the USA, the European Union and other countries.

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

Specification of the BLE PCB Antenna Type 2

- 1. Table of Contents
- 1. Table of Contents 3
- 2. Overview..... 4
 - 2.1 Technical Characteristics 4
- 3. Specification 4
- 3.1. Electrical Characteristics 4
- 3.2. Antenna Characteristics – Radiation Pattern..... 5

Specification of the BLE PCB Antenna Type 2

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		

Specification of the BLE PCB Antenna Type 2

3.2. Antenna Characteristics – Radiation Pattern

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

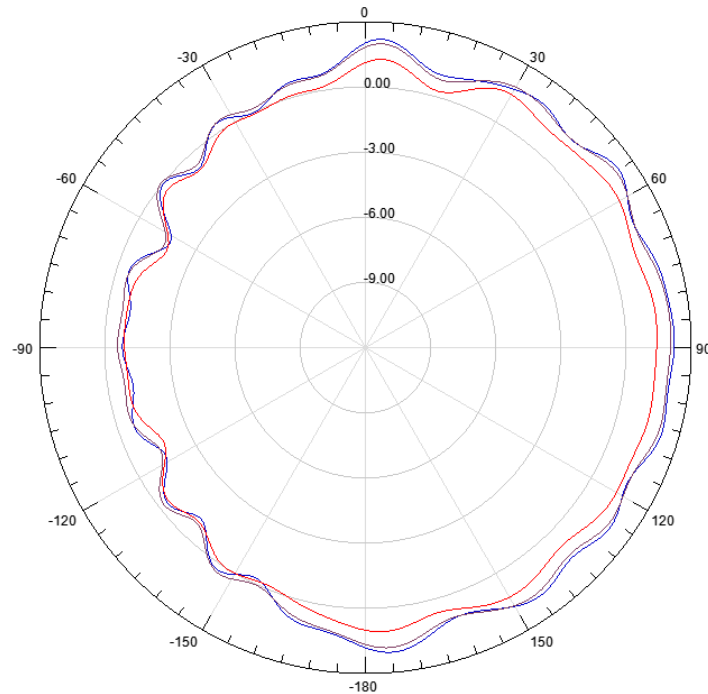
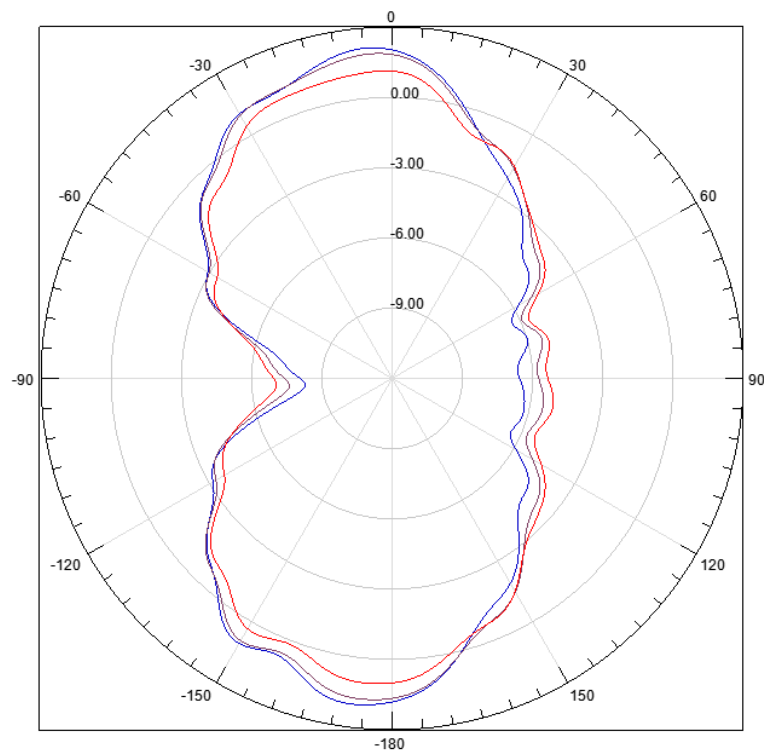


Fig 2: YZ plane: 2,40 GHz, 2,44 GHz, 2,48 GHz



Specification of the BLE PCB Antenna Type 2

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

