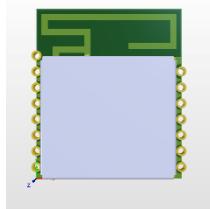


## 1. Description

BDE-ANT-2340RGEAC is an integrated PCB trace antenna designed for BDE-LE2340RGEAC



module. The dimension of the antenna area is 11.5mm x 3.8mm x 0.8mm.

## 2. Specifications

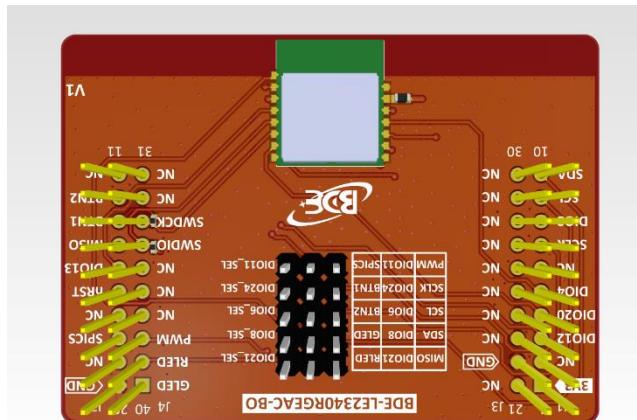
Table 1. Antenna Specifications

Electrical	
Frequency (MHz)	2400 - 2500
Efficiency	35.68%
Peak Gain	-0.31dBi
Impedance	50 ohm
Polarization	Linear
Radiation	Omni-directional
Mechanical	
Dimension	11.5mm x 3.8mm x 0.8mm
PCB Substrate	FR4
Environmental	
Temperature Range	-40°C to 85°C

## 3. Antenna Characteristics

The antenna characteristics data are measured with the module sitting on the evaluation board as Figure 1 shows.

The dimension of the evaluation board is 58mm x 42mm x1.6mm.



**Figure 1. Module Placement**

## 3.1 Return Loss



**Figure 2. Return Loss**

### 3.2 Radiation Pattern

The test setup of measuring radiation pattern is shown as Figure 3.

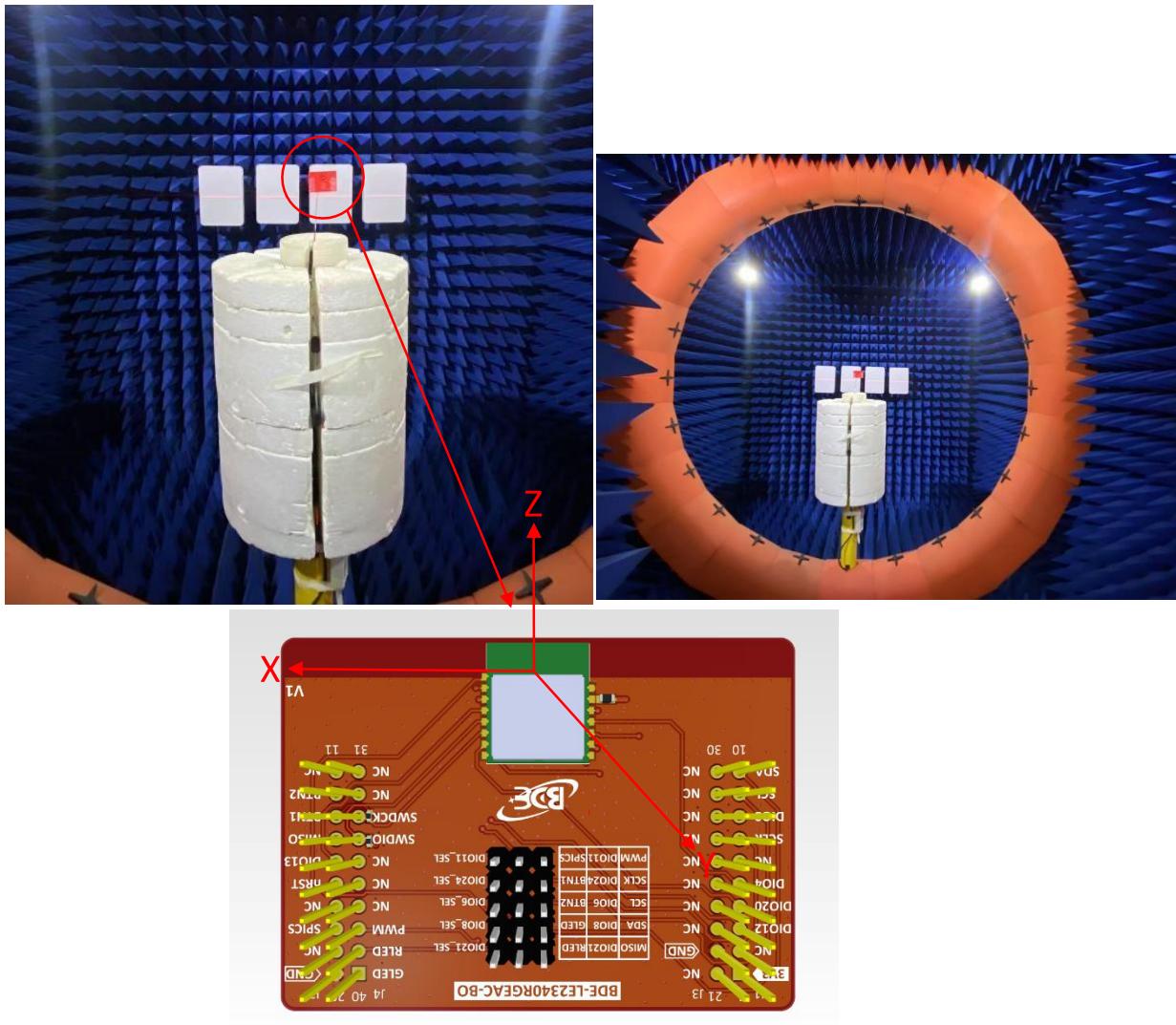


Figure 3. Test Setup

The radiation pattern is recorded as below figures.

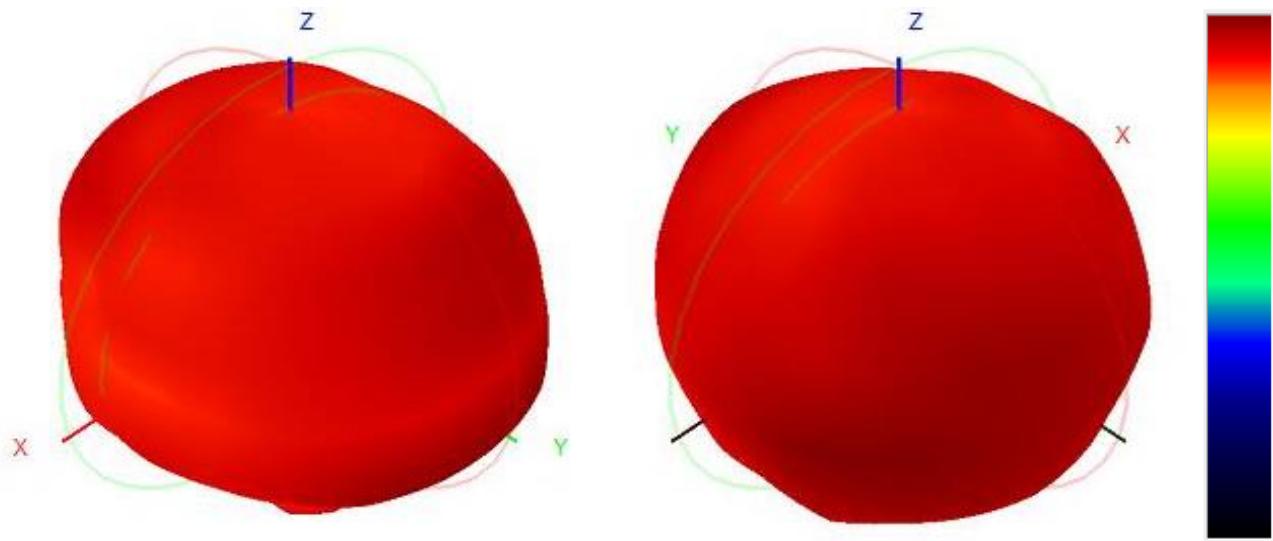


Figure 4. 3D Radiation Pattern at 2440MHz

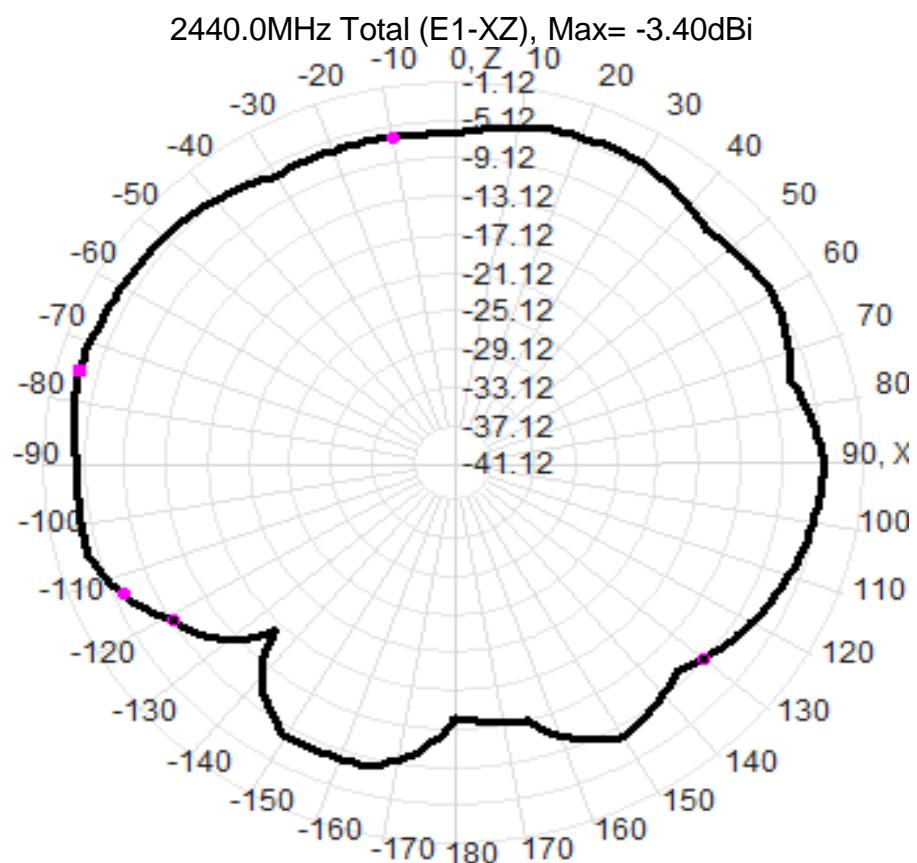


Figure 5. XZ-Plane Radiation Pattern at 2440MHz

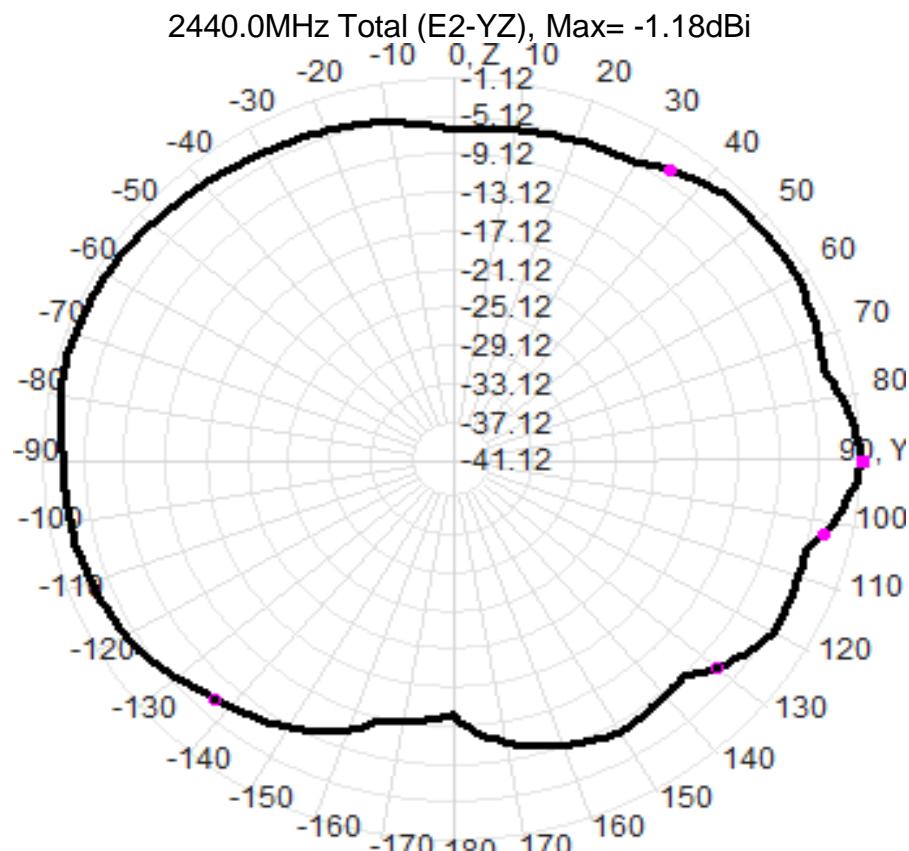


Figure 6. YZ-Plane Radiation Pattern at 2440MHz

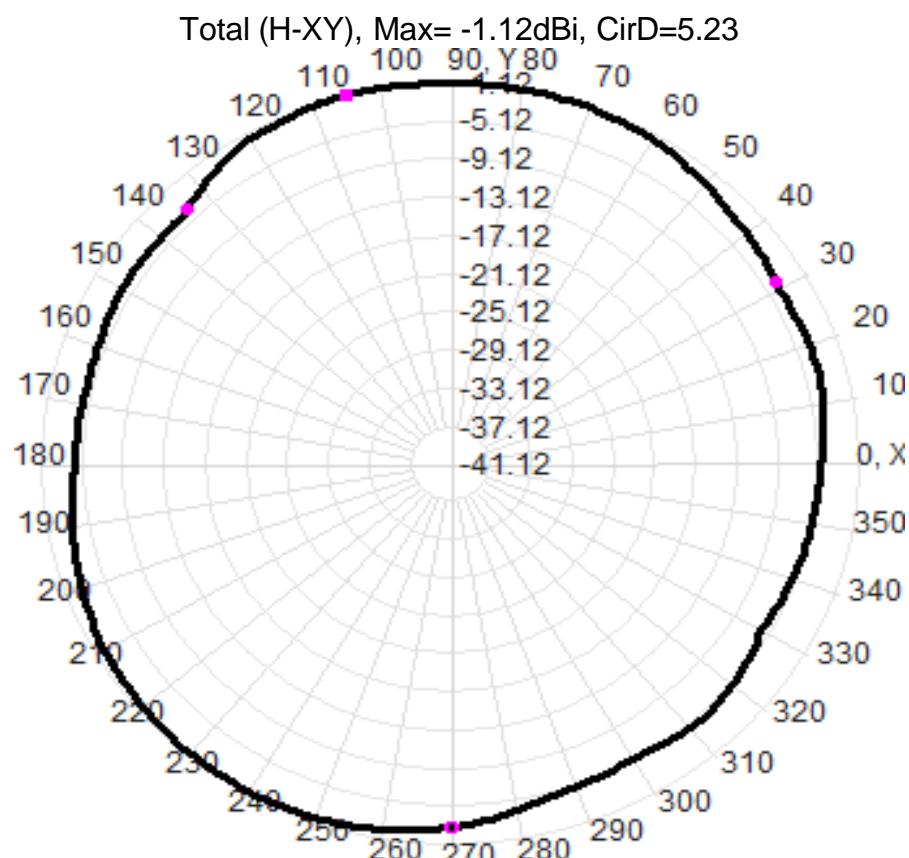


Figure 7. XY-Plane Radiation Pattern at 2440MHz

### 3.3 Efficiency and Gain

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	35.68	-0.43
2410	34.7	-0.4
2420	35.08	-0.31
2430	33.64	-0.63
2440	34.05	-0.86
2450	33.06	-1.24
2460	32.14	-1.29
2470	30.66	-1.33
2480	28.68	-1.47
2490	28.38	-1.36
2500	24.82	-1.98

## 4. Revision History

Revision	Description	Date
E1	Initial release	2025/06/13

## Important Notice and Disclaimer

The information contained herein is believed to be reliable. BDE makes no warranties regarding the information contained herein. BDE assumes no responsibility or liability whatsoever for any of the information contained herein. BDE assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for BDE products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information.

## Contact

### BDE Technology Inc.

USA: 67 E Madison St, # 1603A, Chicago, IL 60603, US

Tel: +1-312-379-9589

China: B2-403, 162 Science Avenue, Huangpu District, Guangzhou 510663, China

Tel: +86-20-28065335

Website: [www.bdecomm.com](http://www.bdecomm.com)

Email: [info@bdecomm.com](mailto:info@bdecomm.com)