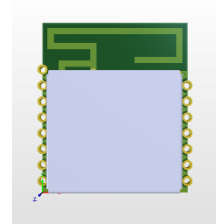


1. Description

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 x 1.6mm.

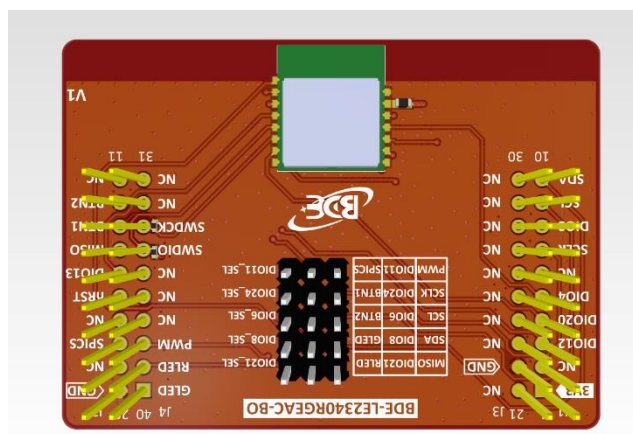


Figure 1. Module Placement

3.1 Return Loss



Figure 2. Return Loss

3.2 Radiation Pattern

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

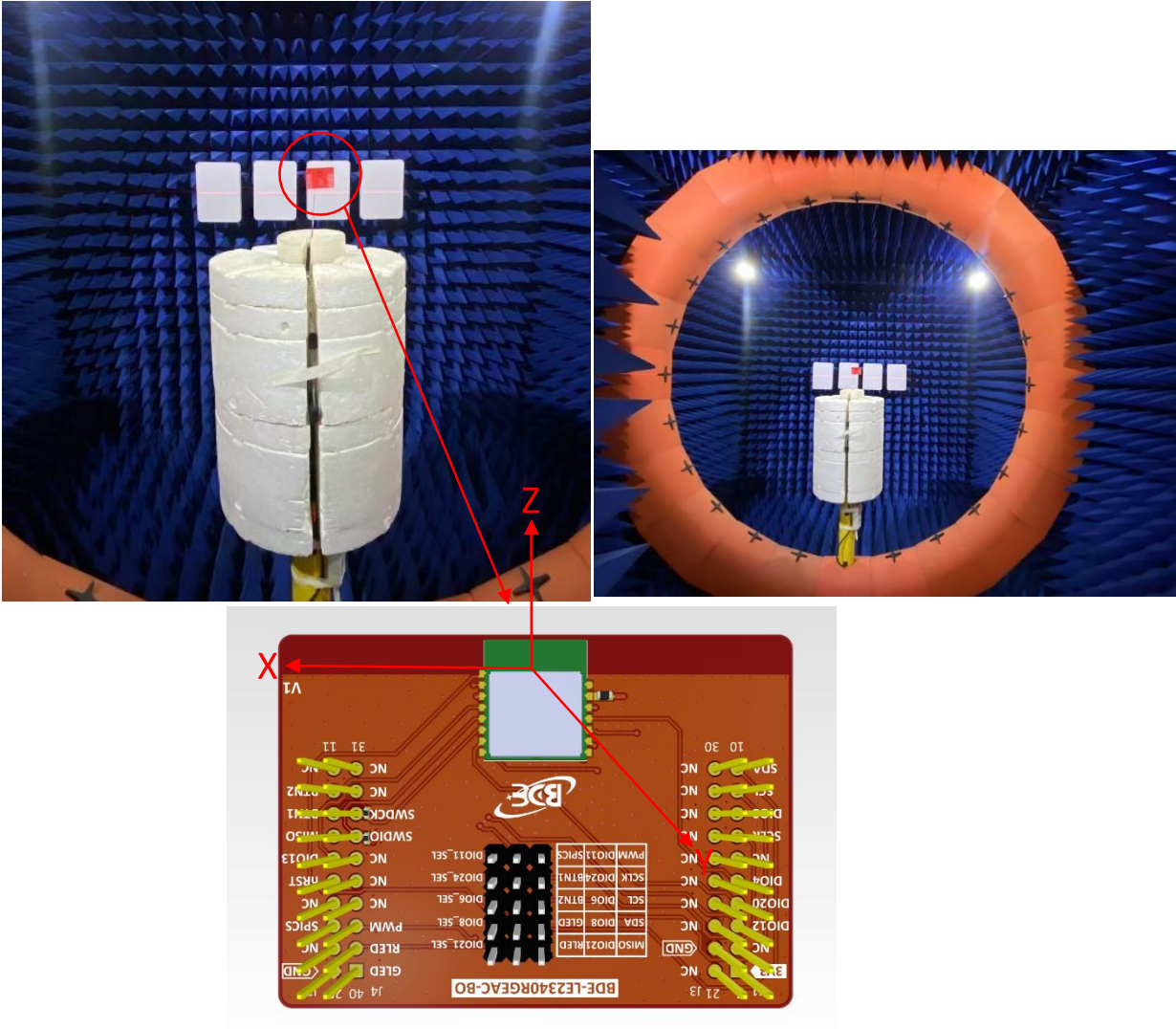


Figure 3. Test Setup

The radiation pattern is recorded as below figures.

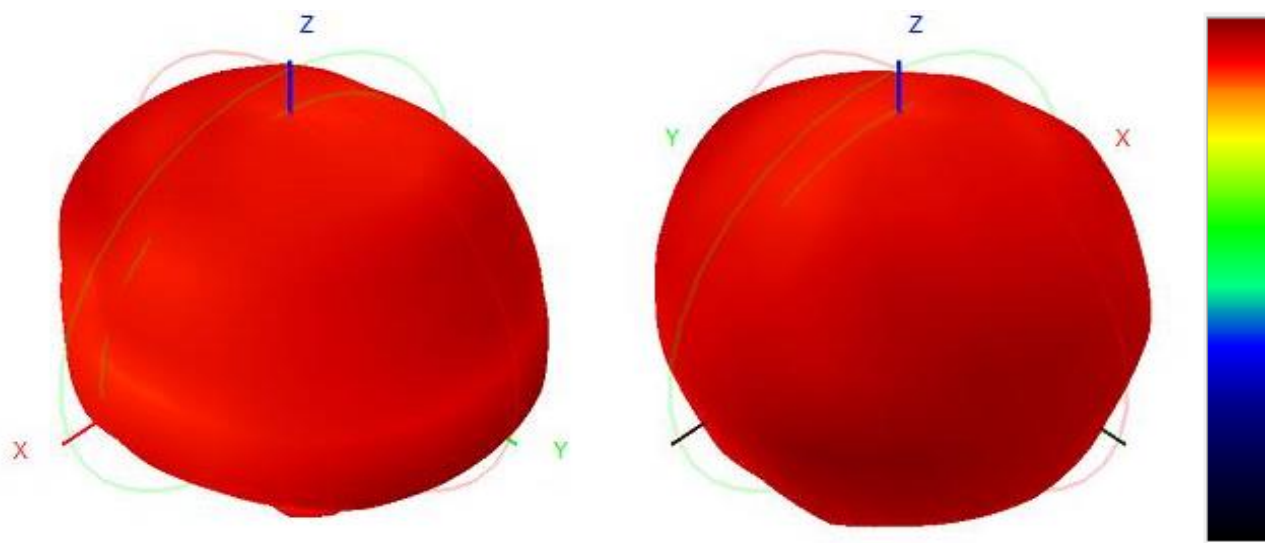


Figure 4. 3D Radiation Pattern at 2440MHz

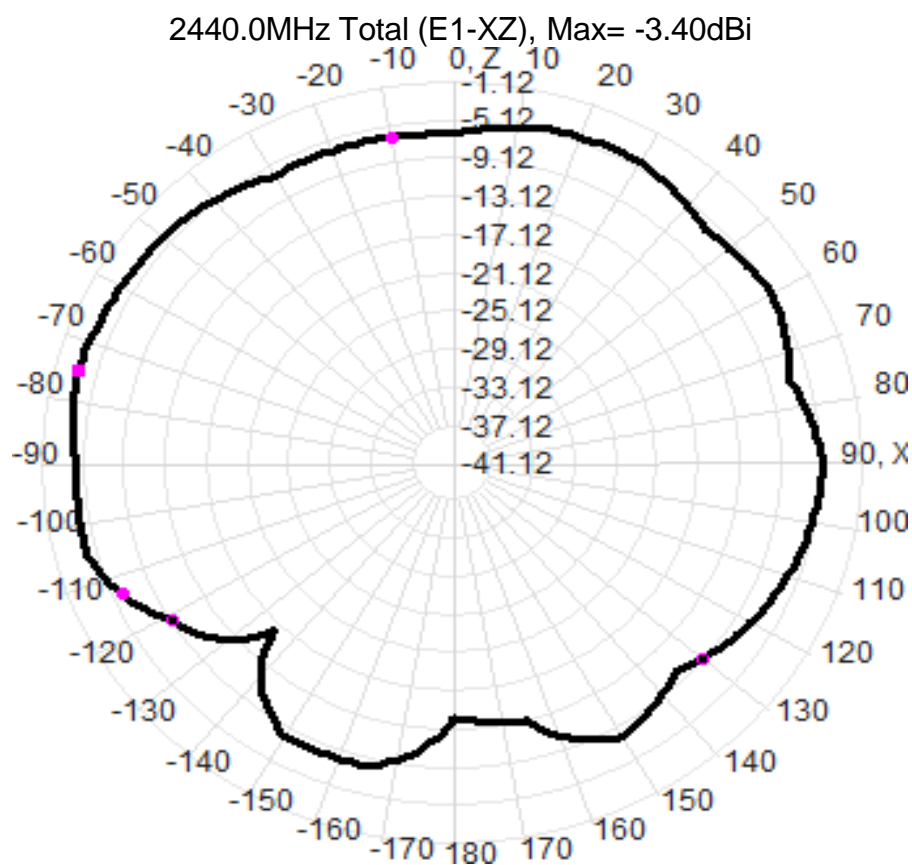


Figure 5. XZ-Plane Radiation Pattern at 2440MHz

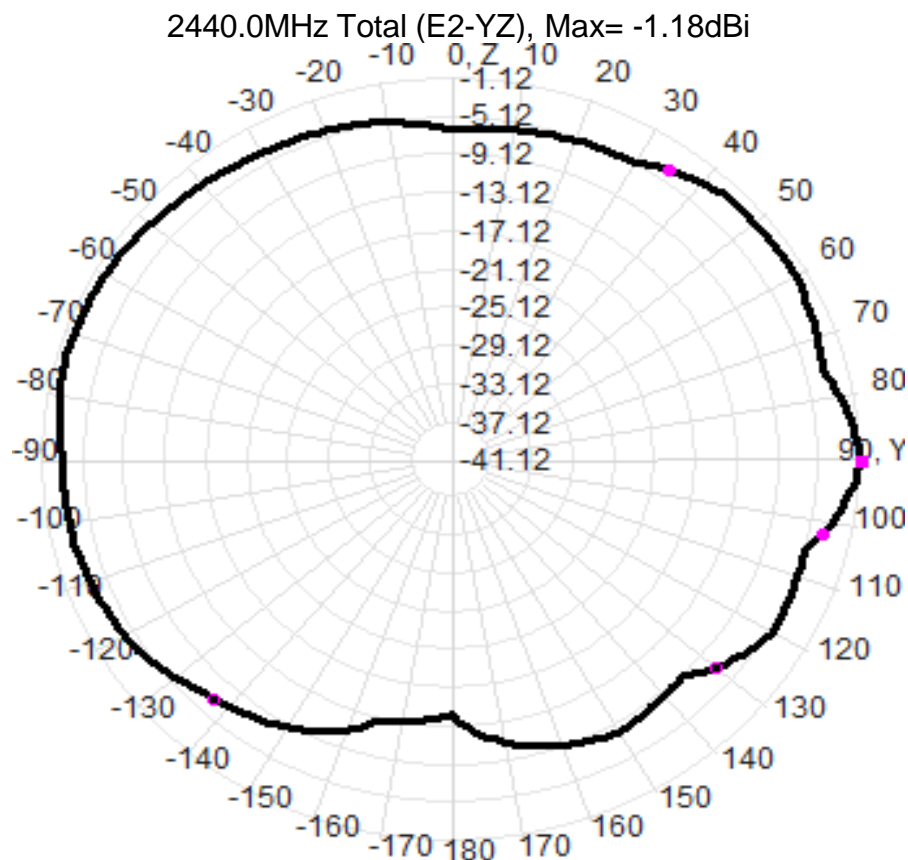


Figure 6. YZ-Plane Radiation Pattern at 2440MHz

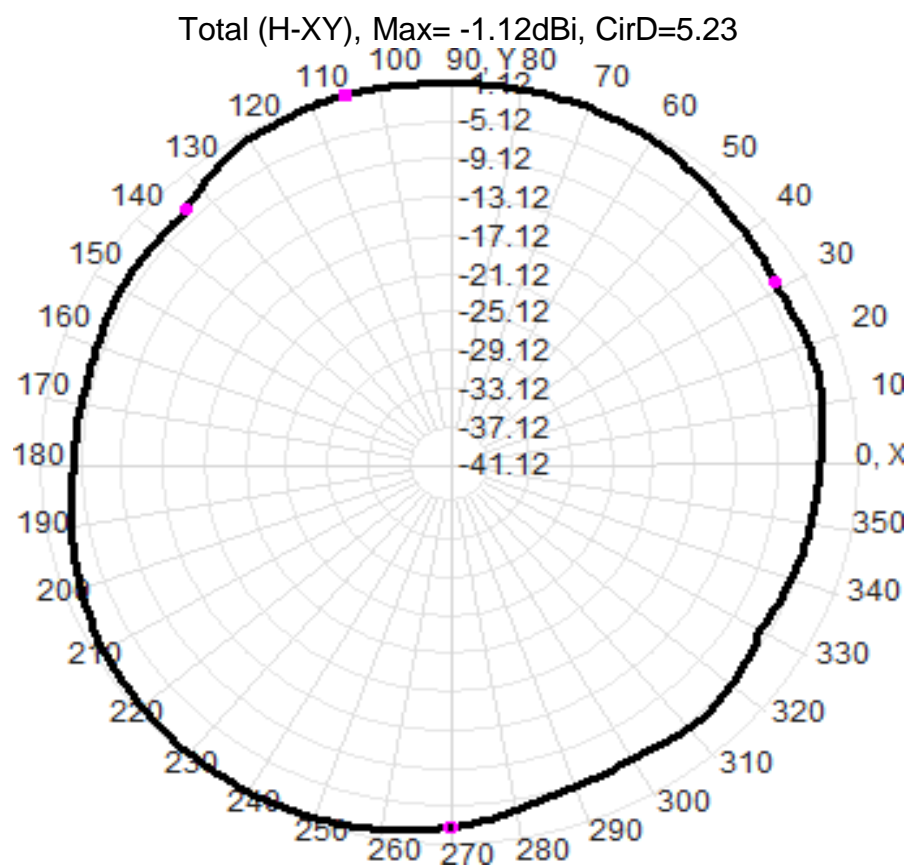


Figure 7. XY-Plane Radiation Pattern at 2440MHz

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

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