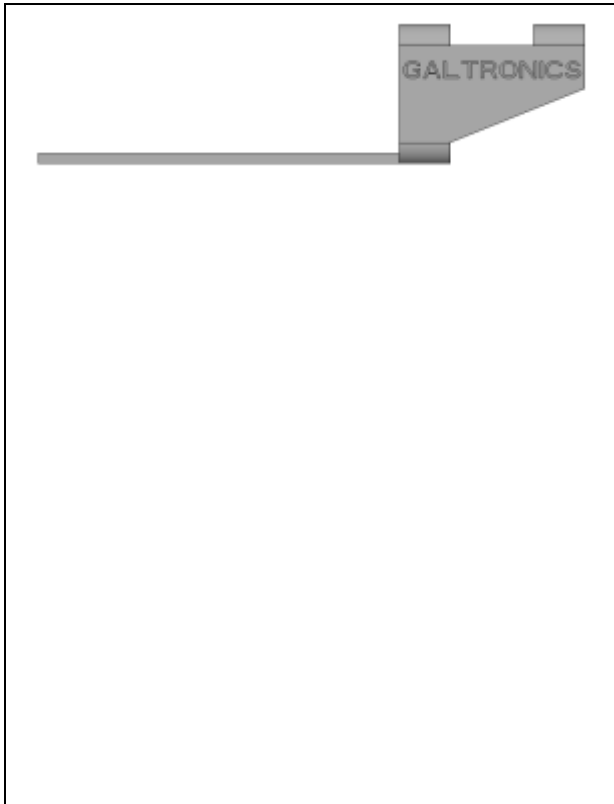




*Figure 1 Galtronics 02036073-07315 BT
2.4Ghz Band Antenna*

BT 2.4GHz Band Antenna

02036073-07315

Engineering Data Sheets

Galtronics Embedded Antenna

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Revision History (Required)

Revisions	Date	Note
S1	Jan 16, 2024	Initial draft

Disclaimers

The document is proprietary, which may be changed without notice. Please communicate with Galtronics sale team to verify before finalizing your product design.

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1. Galtronics BT 2.4GHz Band Antenna

The Galtronics 02036073-07315 antenna is a metal onboard BT 2.4GHz Antenna that operates in 2400-2500 MHz band. It provides high efficient radiation with good cost benefit.

2. Features

- Operates in 2400-2500 MHz band
- Peak gain: 3.53 dBi in 2400 MHz band
- High efficiency
- U.FL connector interface
- Mounted by double sided adhesive foam tape or antenna carrier

3. Specifications and Interface

Standard	2.4GHz Band
Frequency Range	2400-2500 MHz
Peak Gain	3.53 dBi in 2400 MHz band
VSWR	2:1
Feed Impedance	50Ω
Power Handling	30 dBm
Interface	U.FL
Antenna Dimensions	21.35 x 5.4 x 4.8 mm (L x W x T)
Temperature Range	Operating: -20 °C to +60 °C (-4 °F to +140 °F) Storage: -20 °C to +60 °C (-4 °F to +140 °F)
Humidity Range	Operating: 10% to 85% non-condensing Storage: 5% to 90% non-condensing

4. Return Loss

The antenna was mounted on the motherboard.



Figure 2 Return Loss

5. Gain, Directivity and Efficiency

Table 1. Peak Gain, Directivity and Efficiency

	Freq (MHz)	Peak Gain (dBi)	Antenna Directivity (dBi)	Terminal Efficiency (%)
2.4GHz	2400	3.31	5.15	65.40%
	2450	3.41	5.20	66.29%
	2500	3.53	5.13	69.21%
	Average			66.97%

6. Radiation Pattern

Figure 3 shows the antenna measurement coordinate system in anechoic chamber. Azimuth plane is XY plane ($\Theta=0^\circ$), Elevation 1 plane is XZ plane ($\Phi=0^\circ$) and Elevation 2 plane is YZ plane ($\Phi=90^\circ$).

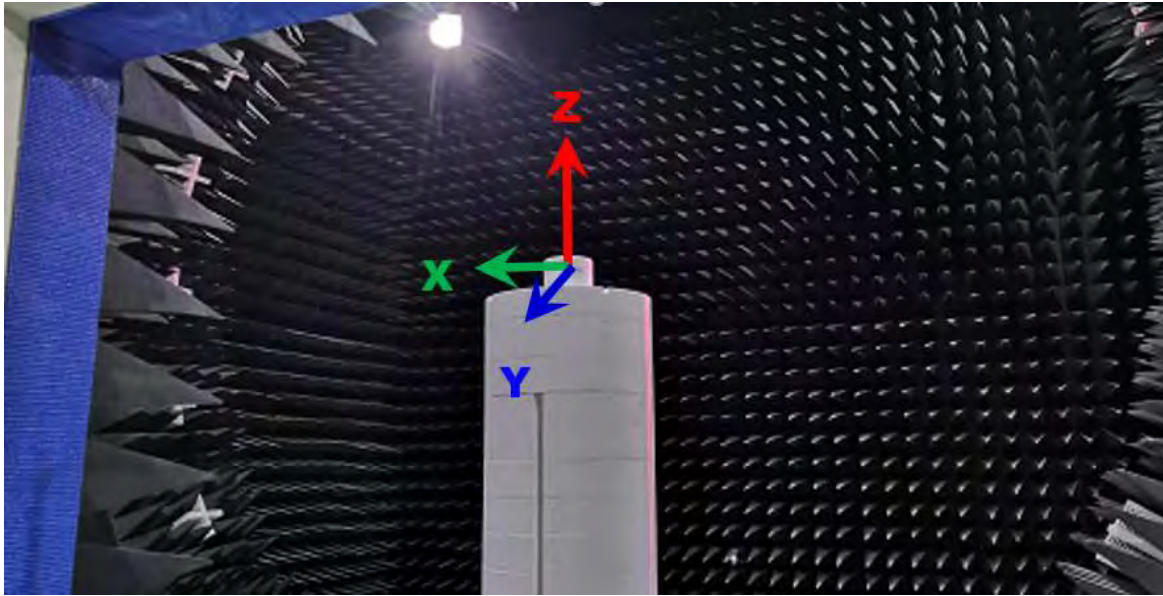
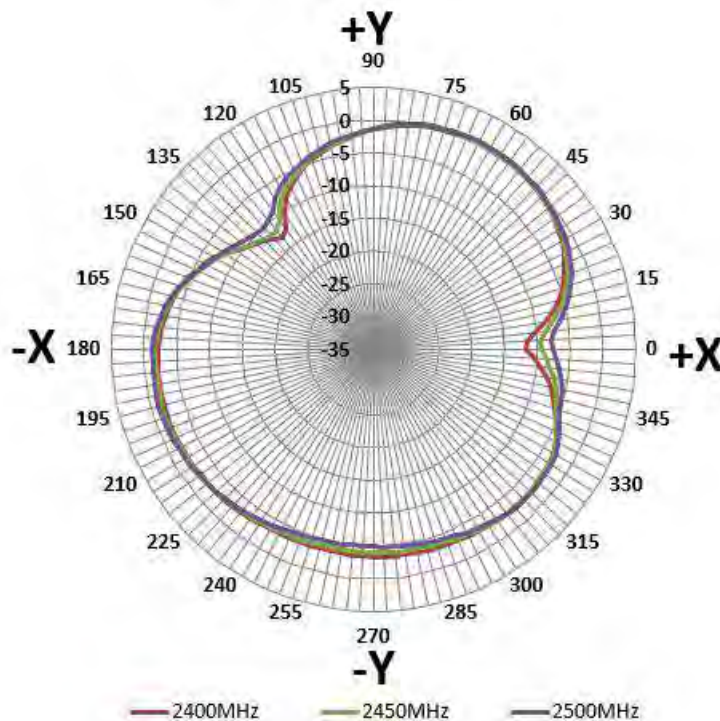


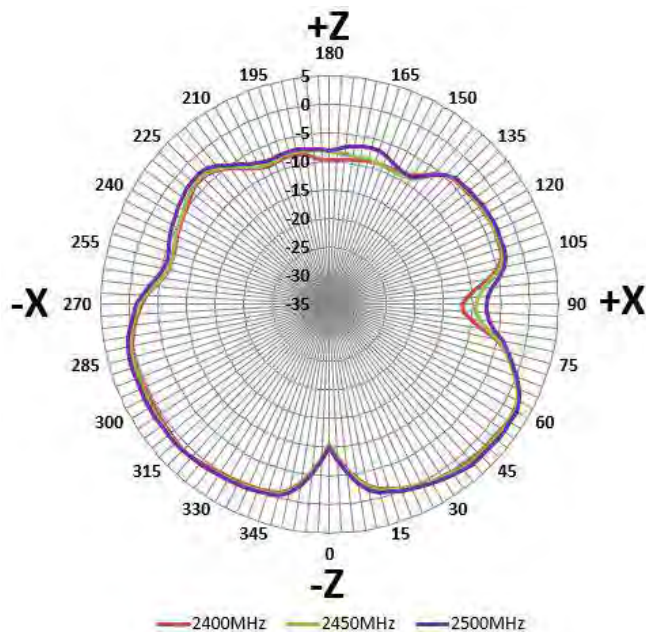
Figure 3 Measurement Orientation

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Figure 3 (A), (B) and (C) show the radiation pattern in three major planes.

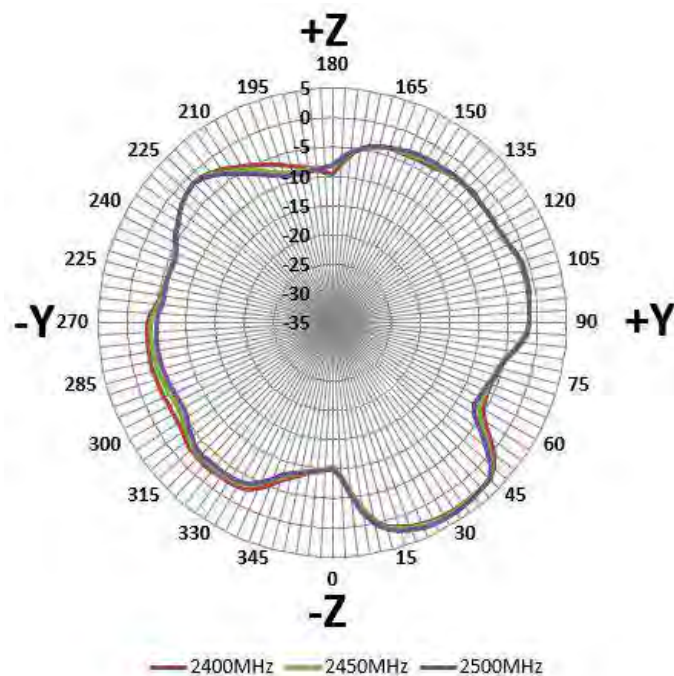


(A). Azimuth plane (XY plane) radiation pattern



(B). Elevation 1 plane (XZ plane) radiation pattern

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(C). Elevation 2 plane (YZ plane) radiation pattern

Figure 4 Radiation Patterns of BT 2.4GHz Antenna