

*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

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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

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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 ($\Phi=90^\circ$).

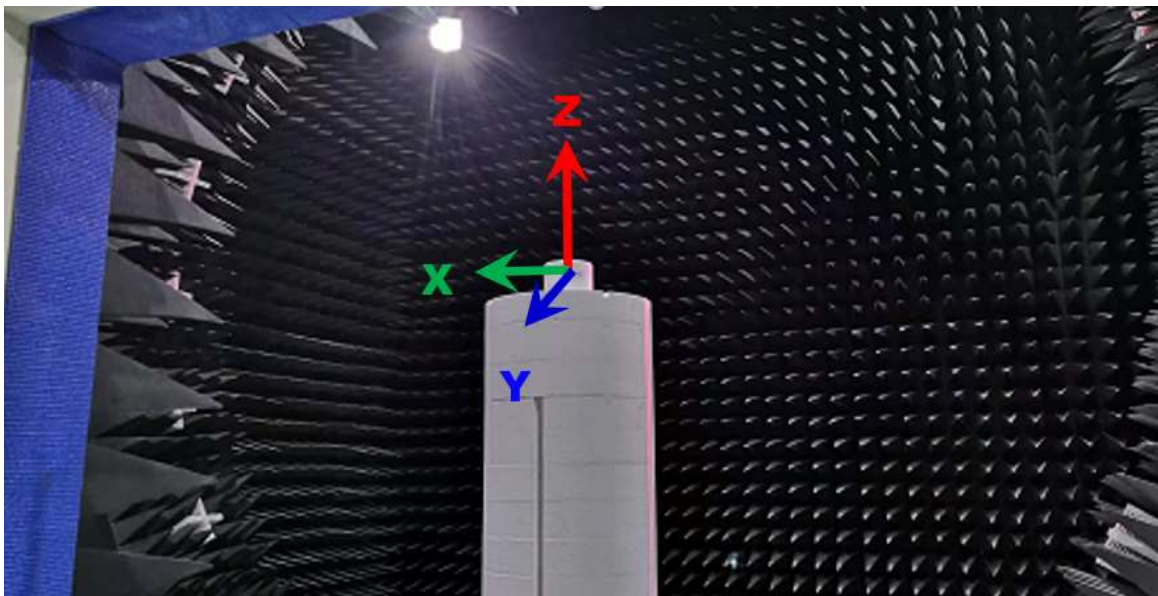
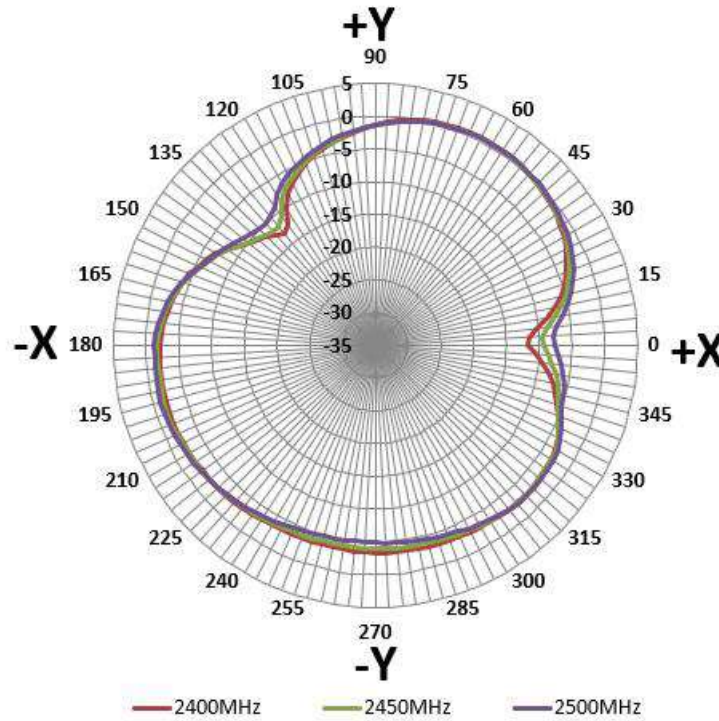


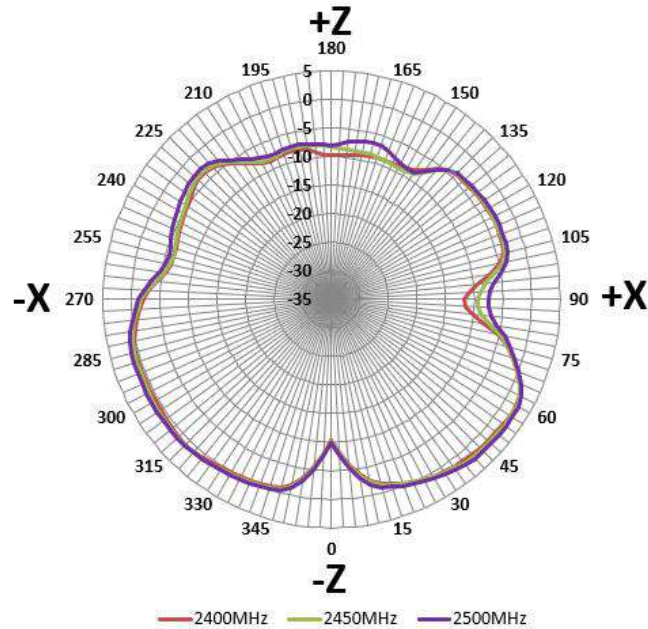
Figure 3 Measurement Orientation

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

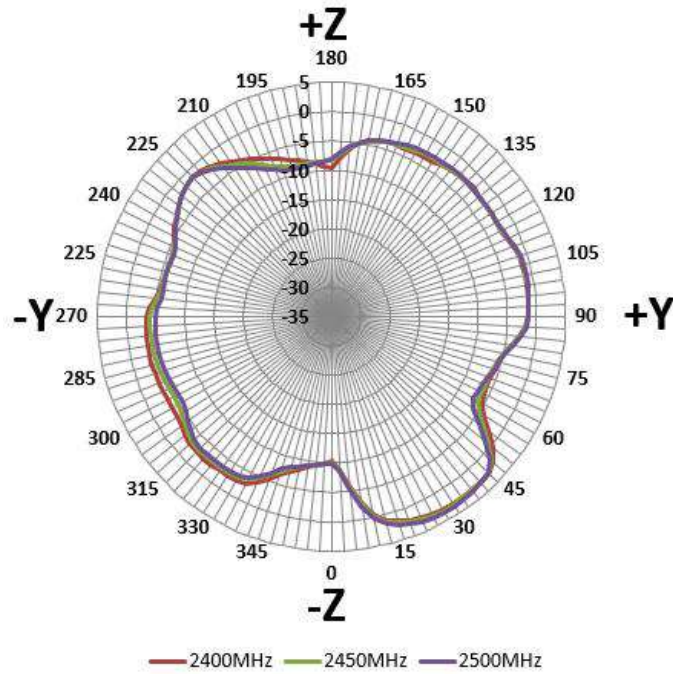


(A). Azimuth plane (XY plane) radiation pattern



(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