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Balanced Bluetooth Antenna 02102073-07691

Engineering Data Sheets

Galtronics Embedded Antenna

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Revision History (Required)

Revisions	Date	Note
S1	1/21/2022	Initial Draft
S2	11/29/2022	Updated

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 Bluetooth Balanced Antenna

The Galtronics antenna is a Balanced Bluetooth antenna that operates in 2400-2485 MHz band. It provides highly efficient radiation with good cost benefit.

2. Features

- Operates in 2400-2485 MHz bands
- U.FL connector interface

3. Specifications and Interface

Table 1 Specifications and Interface

Standard	Bluetooth
Frequency Range	2400-2485 MHz
Peak Gain	2.56 dBi
VSWR	2:1
Feed Impedance	50 Ω
Power Handling	30dBm
Interface	U.FL
Antenna Dimensions	33.6 mm x 10.31 mm x 0.8 mm
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

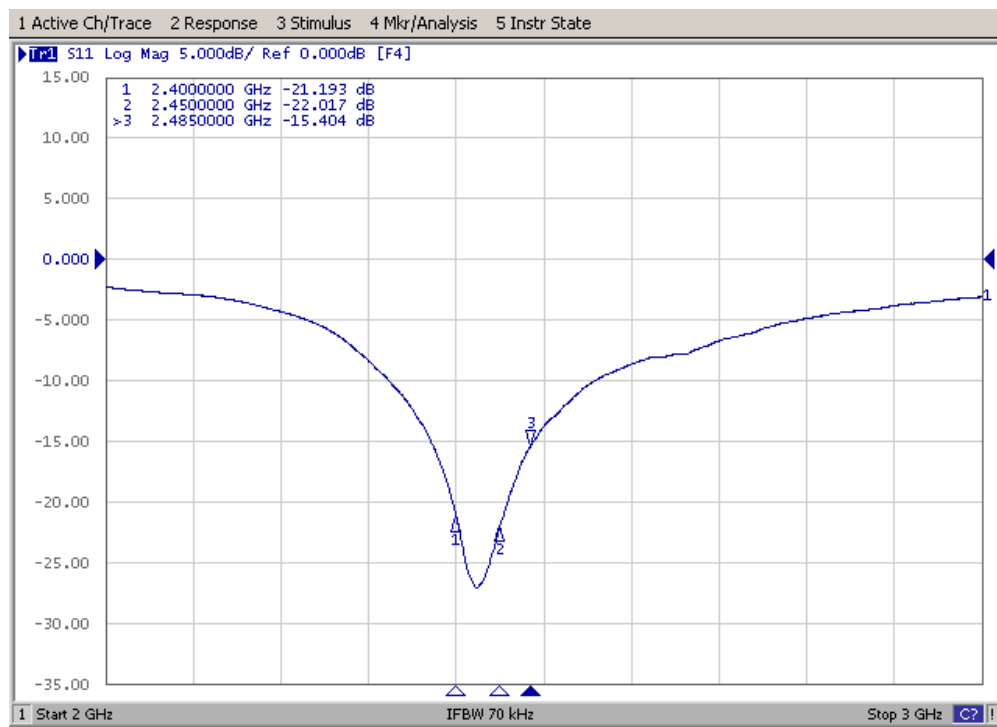


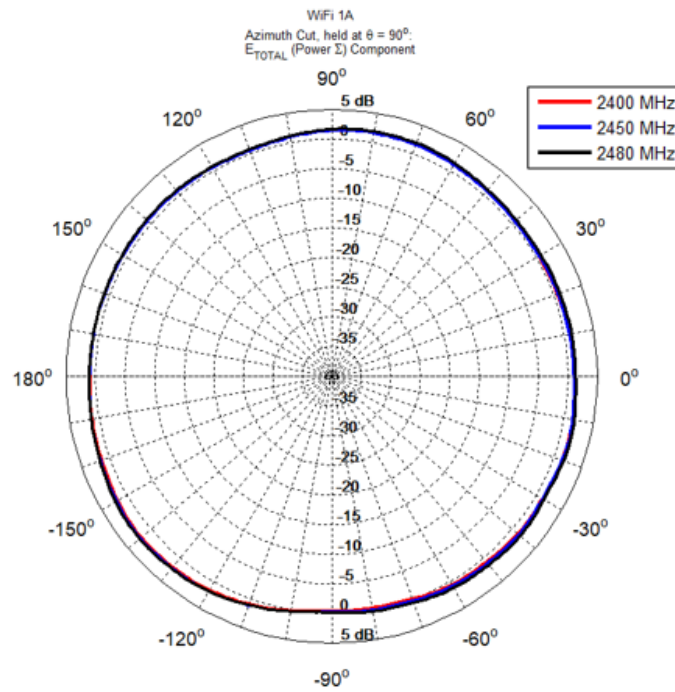
Figure 2 Return Loss

5. Peak Gain and Efficiency

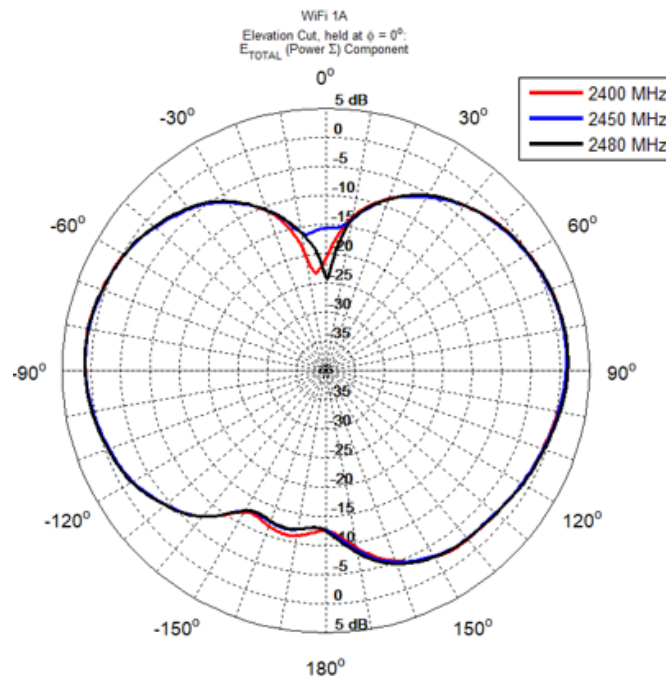
Table 2 Peak Gain, Directivity and Efficiency

BT	Freq (MHz)	Peak Gain (dBi)	Directivity (dB)	Efficiency
	2400	2.264	3.180	80.97 %
	2450	2.442	3.325	81.61 %
	2480	2.562	3.284	84.68 %
	Average			82.42 %

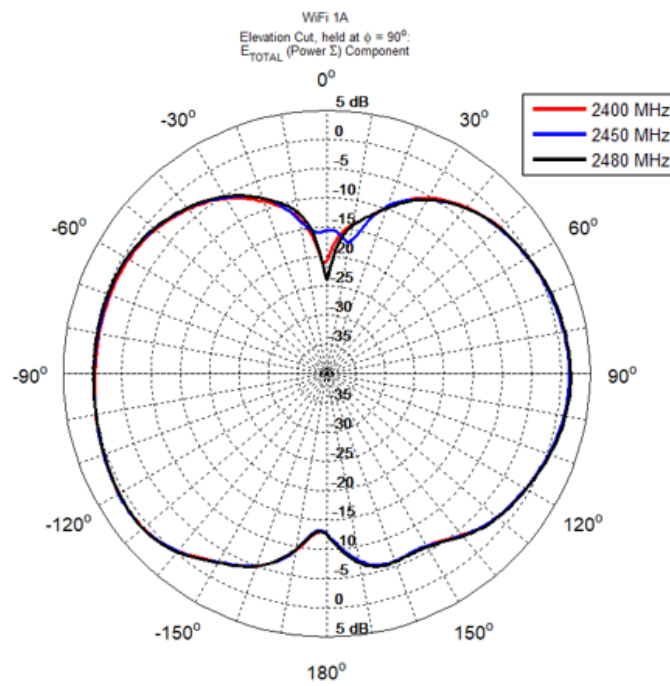
7. Radiation Pattern



(A). Azimuth plane (XY plane) radiation pattern of 2.4 GHz band



(B). Elevation 1 plane (XZ plane) radiation pattern of 2.4 GHz band



(C). Elevation 2 plane (YZ plane) radiation pattern of 2.4 GHz band

Figure 4 Radiation Patterns in 2.4 GHz Band