



WE'RE MAKING WAVES™

USA Facility

Galtronics USA, Inc.
8930 S. Beck Avenue Suite #103
Tempe, Arizona 85284-2891 USA
Tel: 1-480-496-5100
Fax: 1-480-598-2766

Balanced Bluetooth Antenna 02102073-07691-2

Engineering Data Sheets

Galtronics Embedded Antenna

8930 S. Beck Avenue Suite #103
Tempe, Arizona 85284-2891 USA
Tel: 1-480-496-5100
Fax: 1-480-598-2766

Revision History (Required)

Revisions	Date	Note
S1	11/28/2022	Initial Draft

Disclaimers

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

Contents

1. Galtronics Bluetooth Balanced Antenna	4
2. Features	4
3. Specifications and Interface	4
4. Return Loss	5
5. Peak Gain and Efficiency.....	5
6. Measurement Coordinate System.....	6
7. Radiation Pattern	7
8. Antenna Dimensions.....	9

Figures

Figure 1 Galtronics 02102073-07691-2 Balanced Bluetooth Antenna	1
Figure 2 Return Loss.....	5
Figure 3 Mesurement Orientation	6
Figure 4 Radiation Patterns in 2.4 GHz band	7
Figure 5 Antenna Layout and Dimensions	9

Tables

Table 1: Specifications and Interface	4
Table 2: Peak Gain, Directivity and Efficiency.....	5

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	1.07 dBi
VSWR	2:1
Feed Impedance	50 Ω
Power Handling	30dBm
Interface	U.FL
Antenna Dimensions	20.0 mm x 16.5 mmx 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

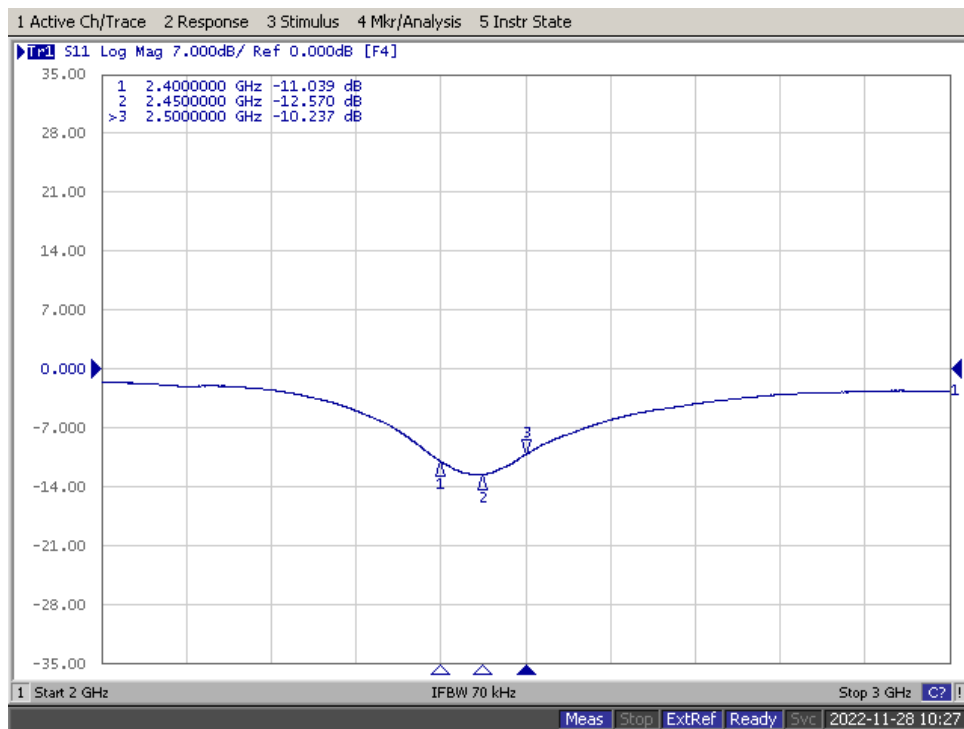


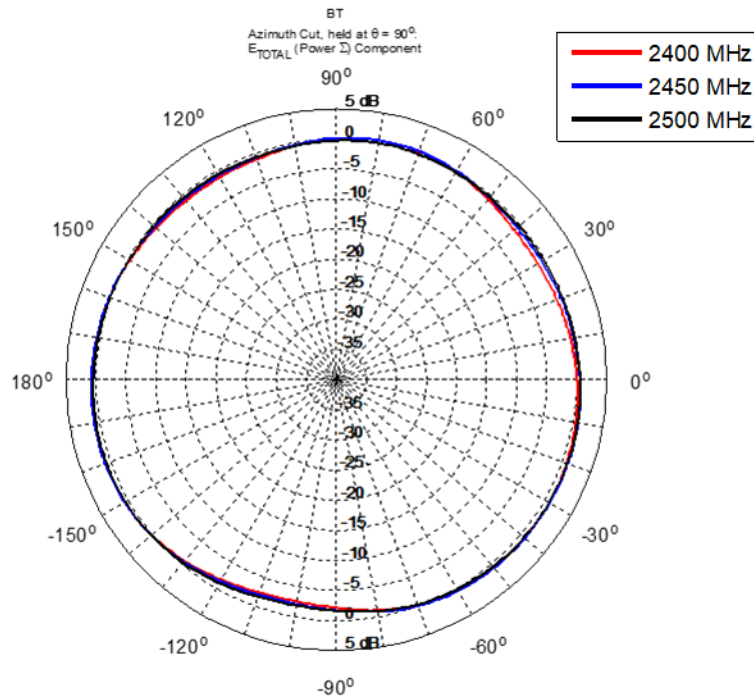
Figure 2 Return Loss

5. Peak Gain and Efficiency

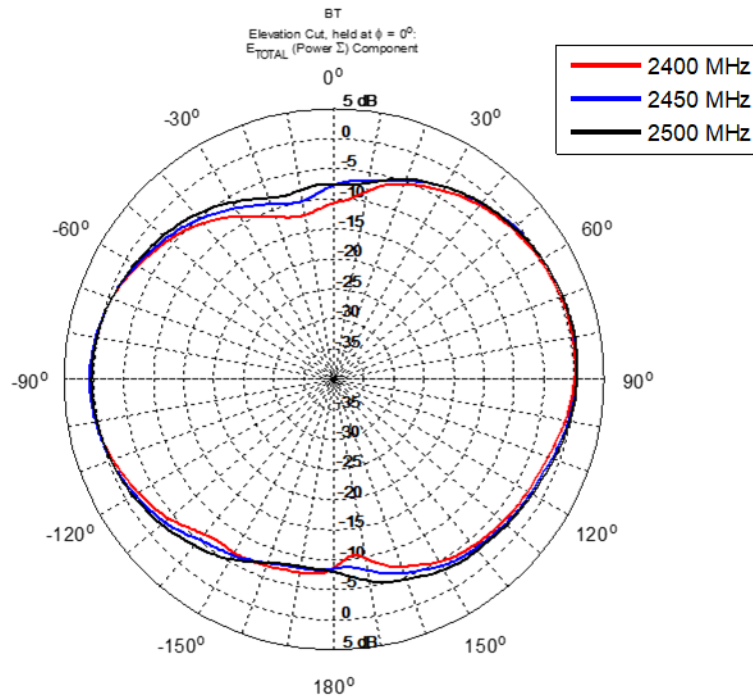
Table 2 Peak Gain, Directivity and Efficiency

BT	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	1.095	3.082	63.30 %
	2450	1.078	2.797	67.31 %
	2500	0.974	2.636	68.19 %
	Average			66.27 %

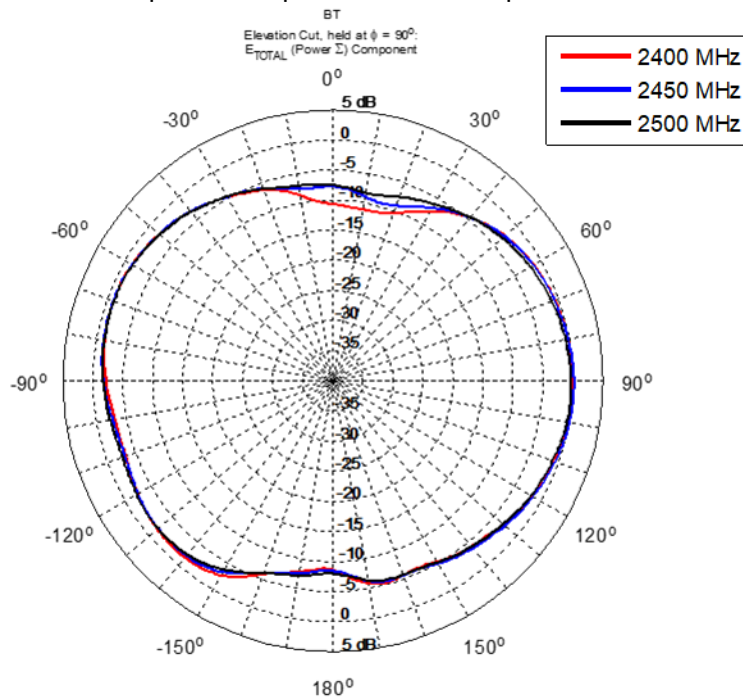
7. Radiation Pattern



(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