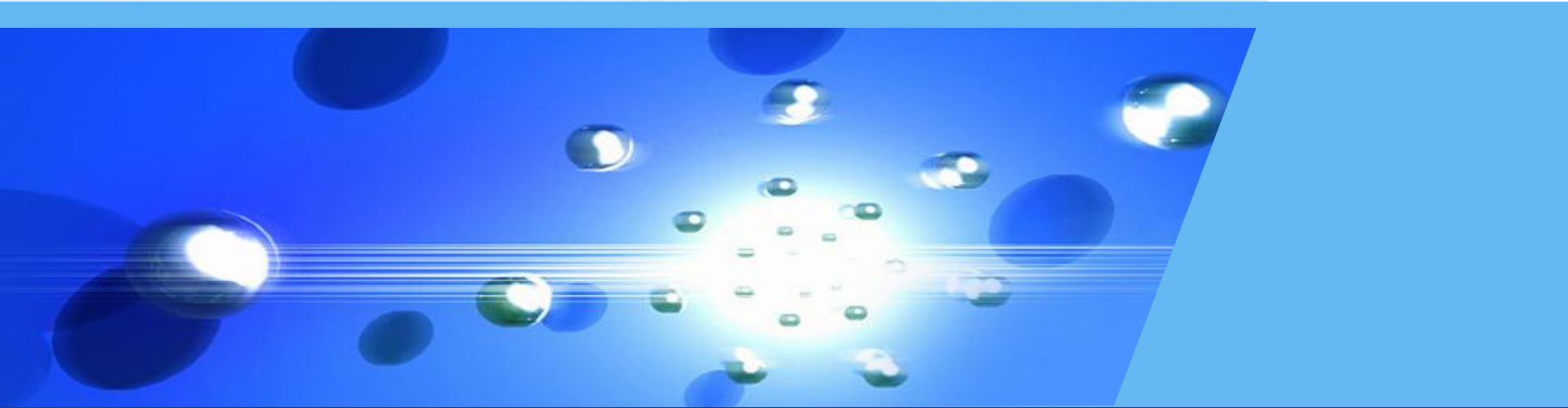


# Professional RF R&D institutions



Shenzhen Deweima Communication Equipment Co., Ltd

## Antenna Test Report

Manufacturer: Shenzhen Deweima Communication Equipment Co., Ltd

Address: 3rd Floor, 6th Floor, Building A, No. 22 Huanping Road, Gaoqiao Community, Pingdi Sub-district, Longgang District, Shenzhen City, Guangdong Province

Shenzhen R&D Center Laboratory

Completion Date: May 31, 2025

# Project Information

1

Customer Name:LEFU

2

Project:R-MS05

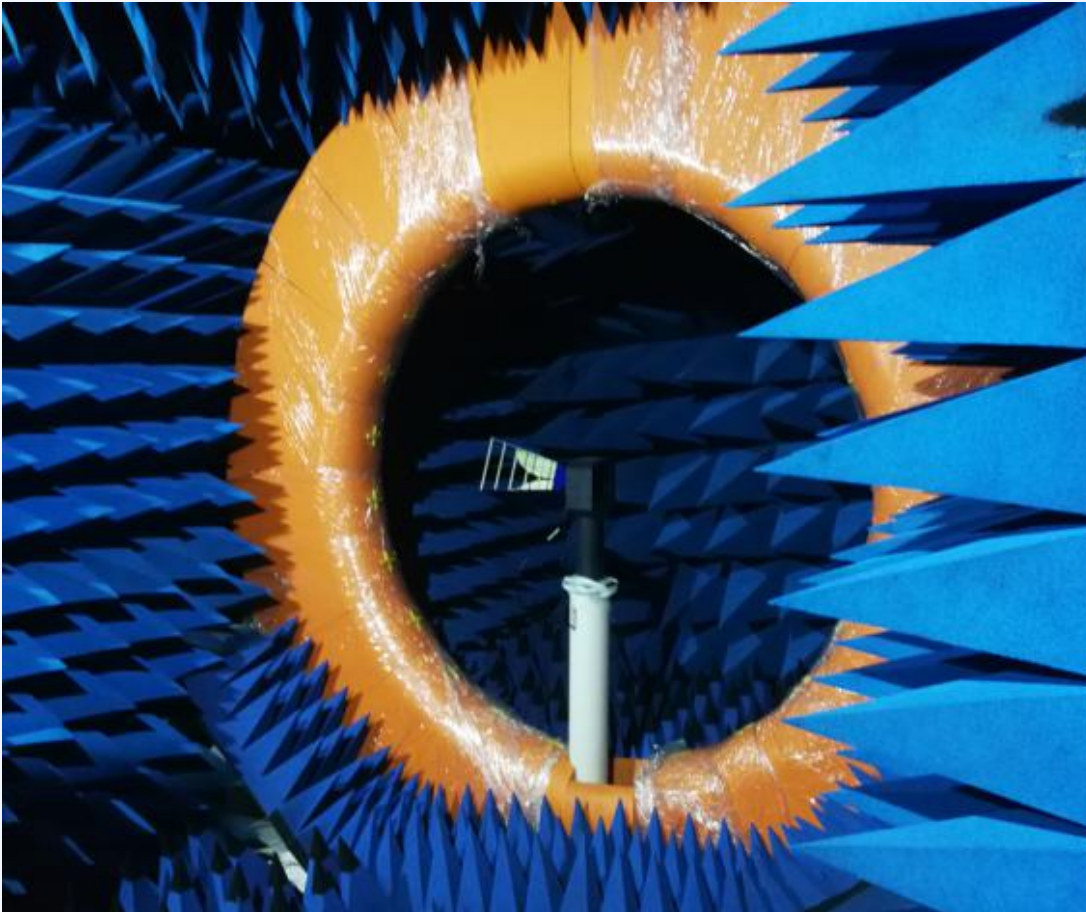
3

Frequency band: BT(2.4GHz~2.5GHz)

4

Remarks

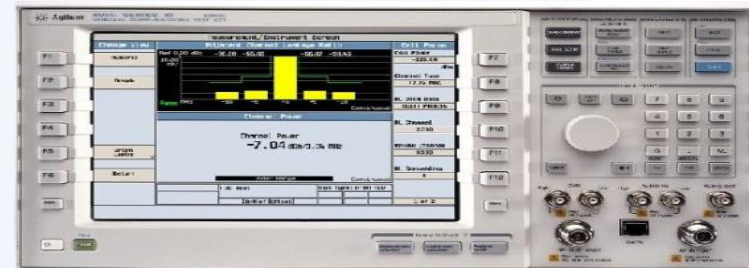
# Test Instruments and Equipment



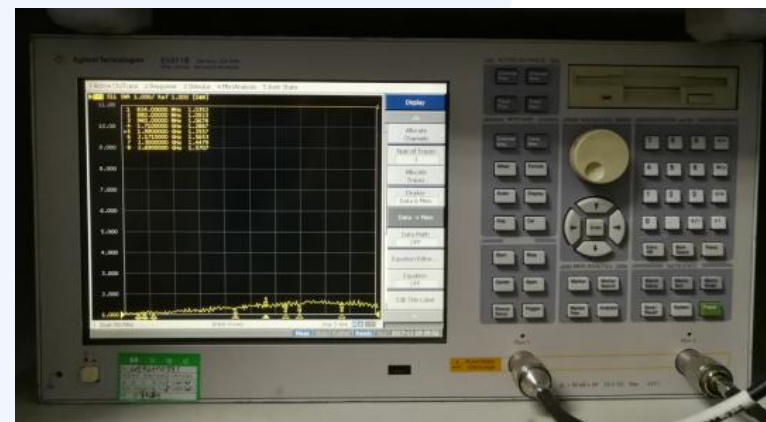
A 24-probe microwave chamber



R&S CMW500



Agilent E5515C



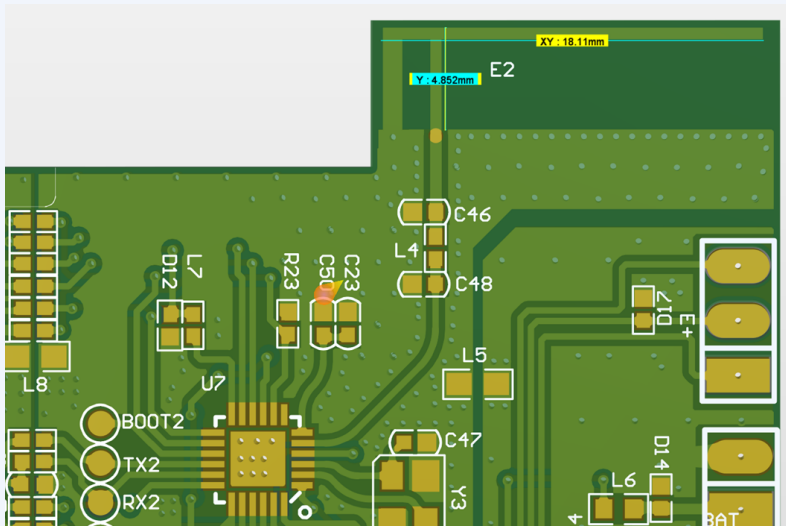
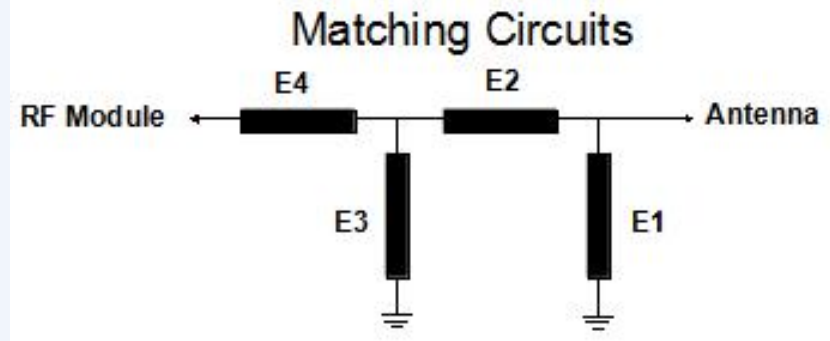
Agilent Technologies E5071B

# Antenna Project Design and Debugging Instructions

|                             |                 |                                                                                                               |  |         |              |
|-----------------------------|-----------------|---------------------------------------------------------------------------------------------------------------|--|---------|--------------|
| Operating<br>Frequency Band | BT:2400~2500MHz | Test<br>Engineer                                                                                              |  | Version | DWM-<br>V1.0 |
| Overall Machine Diagram     |                 | Antenna Remarks Description                                                                                   |  |         |              |
|                             |                 | 1. BT antenna type: IFA antenna<br>2. BT antenna matching circuit                                             |  |         |              |
|                             |                 | Antenna Environmental Treatment                                                                               |  |         |              |
|                             |                 | Debug and test according to the original<br>state of the machine without adding other<br>auxiliary materials. |  |         |              |

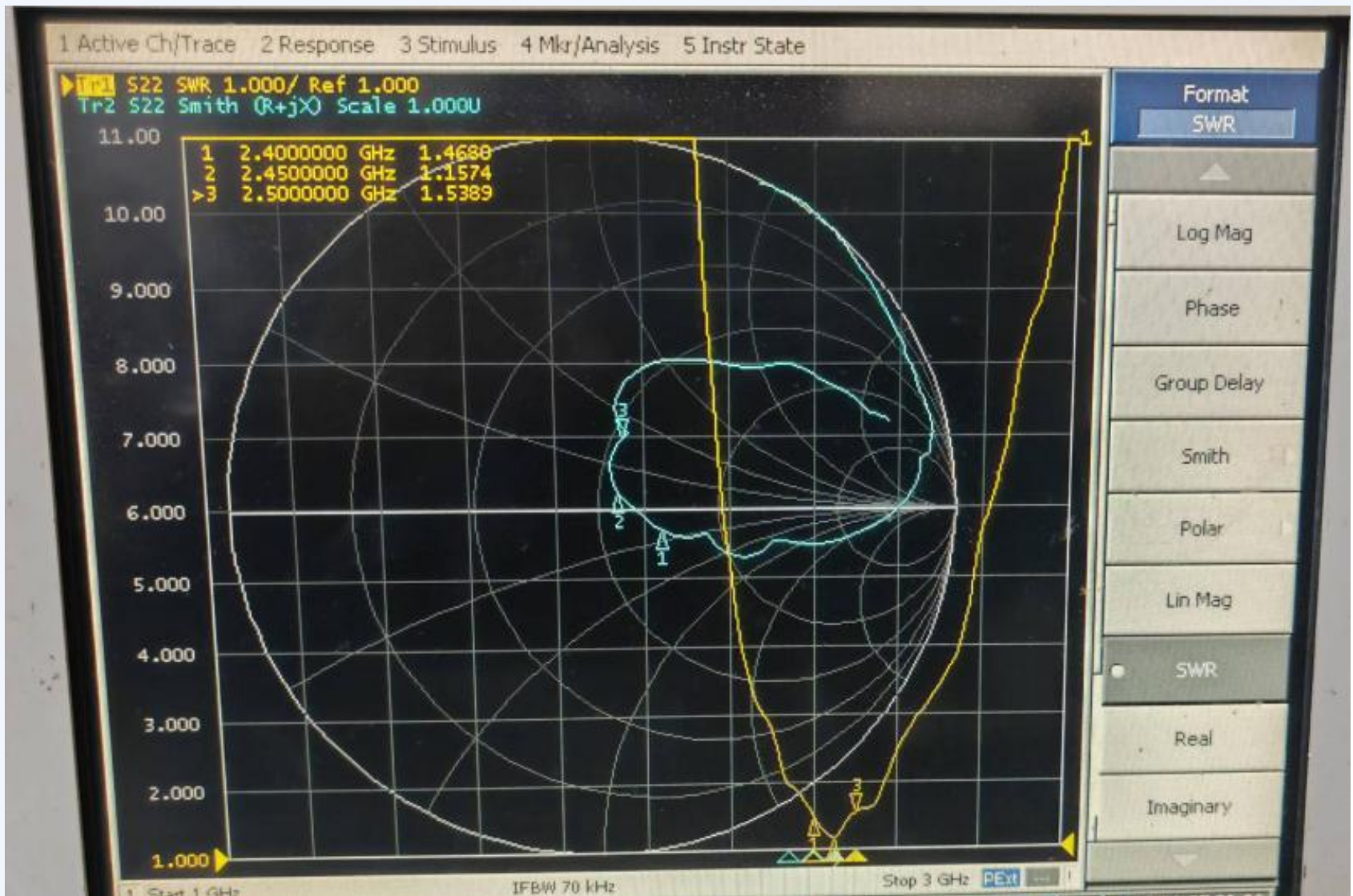
## Instructions for BT Antenna Matching Circuit

BT Technology Parameters :  
BT Frequency Range: 2400MHz-2500MHz  
BT antenna type: PCB Antenna  
Model: NA  
Company:www.lefu.cc  
Operating Humidity: 85% R.H.MAX  
Temperature Rating: 5°C~+40°C



| Element  | Value | Vender |
|----------|-------|--------|
| E1(0402) | NC    |        |
| E2(0402) | 3.9NH |        |
| E3(0402) | NC    |        |
| E4(0402) |       |        |

# BT antenna SWR & Smith parameters

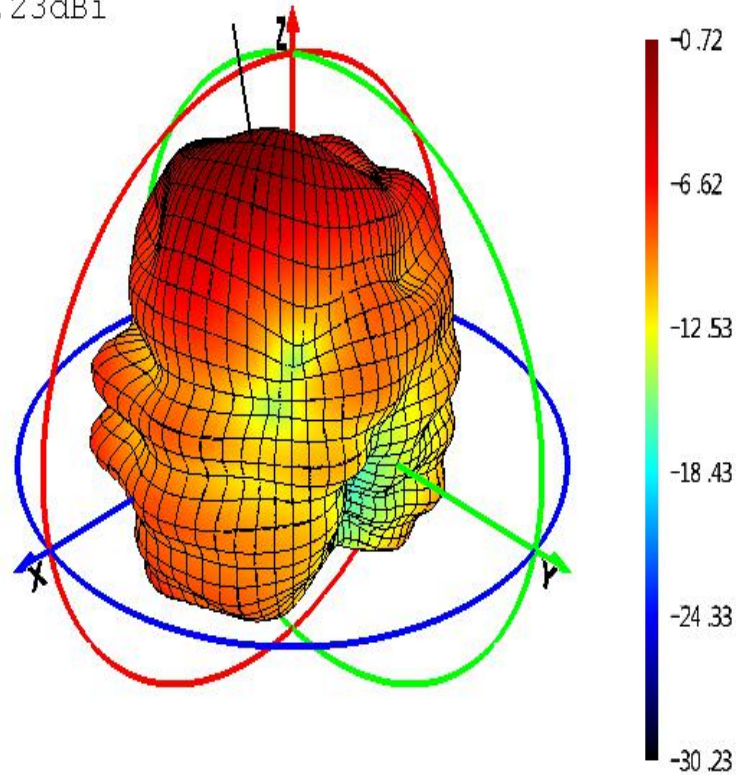


# BT antenna gain and efficiency

| Gain&Efficiency    |               |                  |                    |                   |
|--------------------|---------------|------------------|--------------------|-------------------|
| Frequency<br>(MHz) | Gain<br>(dBi) | MinGain<br>(dBi) | Efficiency<br>(dB) | Efficiency<br>(%) |
| 2400.00            | -0.72         | -30.23           | -4.72              | 35.73             |
| 2410.00            | -0.51         | -31.26           | -4.89              | 35.43             |
| 2420.00            | -0.35         | -32.90           | -4.54              | 35.16             |
| 2430.00            | -0.68         | -30.21           | -4.65              | 34.28             |
| 2440.00            | -0.58         | -29.83           | -4.9               | 34.36             |
| 2450.00            | -0.82         | -28.78           | -4.92              | 34.21             |
| 2460.00            | -0.73         | -32.73           | -5.1               | 32.9              |
| 2470.00            | -0.58         | -32.08           | -4.75              | 33.95             |
| 2480.00            | -0.81         | -30.20           | -4.82              | 32.96             |
| 2490.00            | -0.69         | -27.87           | -5.07              | 31.12             |
| 2500.00            | -0.71         | -25.41           | -5.14              | 30.62             |

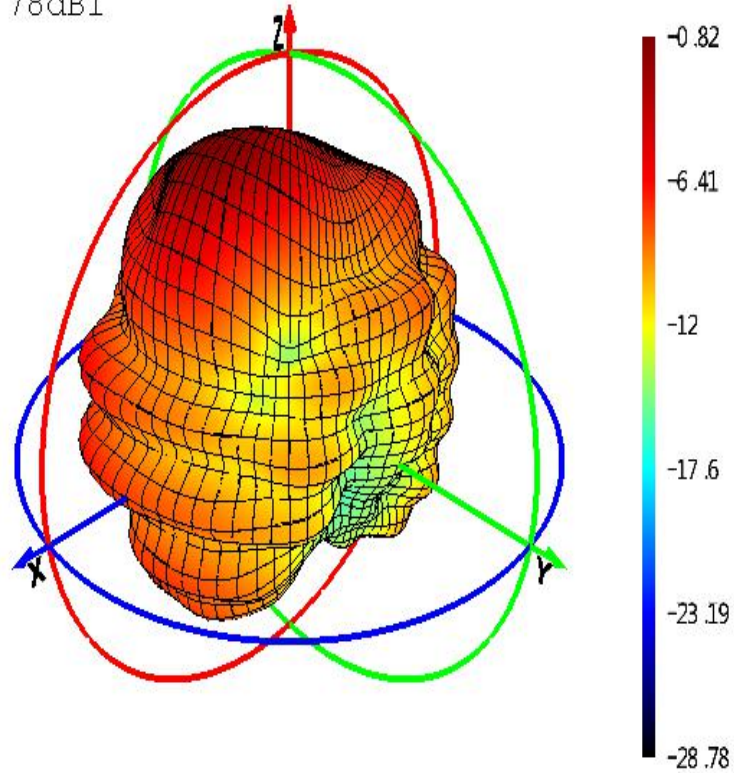
# BT antenna pattern (2400MHz)

MAX: -0.72dBi  
MIN: -30.23dBi



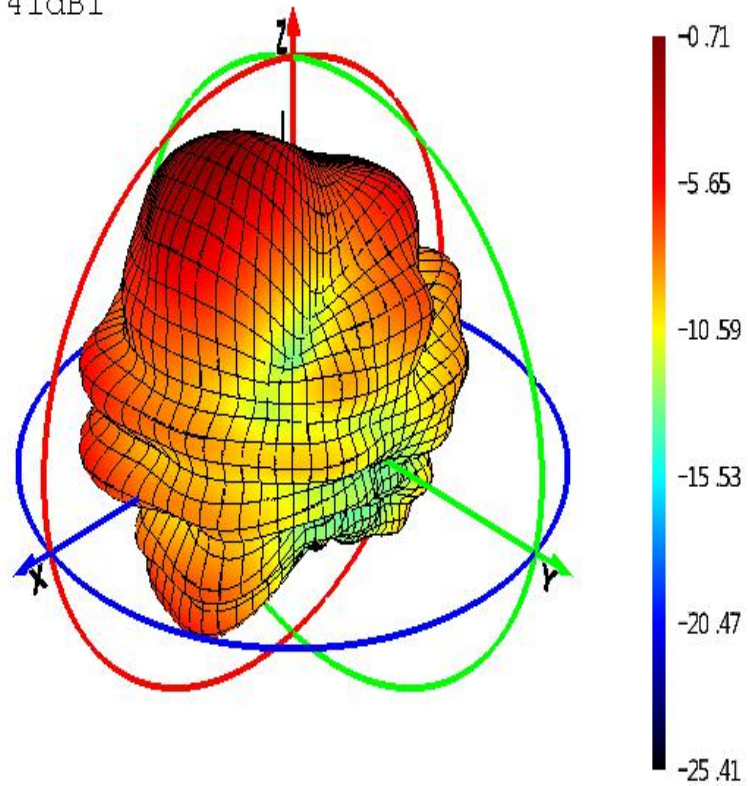
# BT antenna pattern (2450MHz)

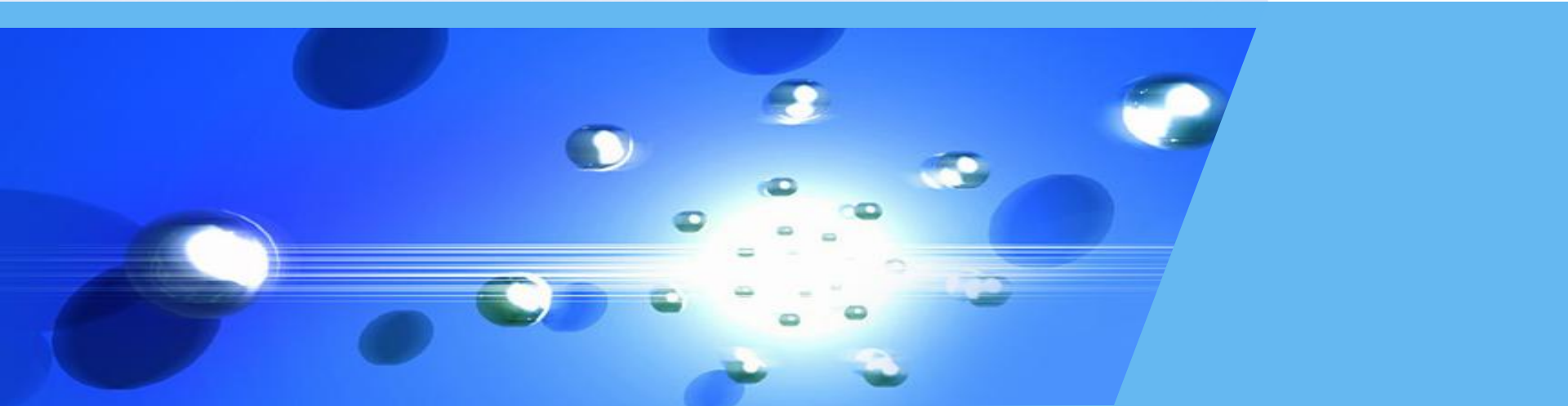
MAX:-0.82dBi  
MIN:-28.78dBi



# BT antenna pattern (2500MHz)

MAX: -0.71dBi  
MIN: -25.41dBi





Thank You !