



# Antenna Datasheet

**Product OC:** Y0RSN0CA0GA

**Version:** 1.0

**Date:** 2025-05-22

**Product Name:** FPC BT Antenna

**Key Features:**

Frequency Band: 2400–2500 MHz

Dimensions: 37 mm × 18.6 mm

Efficiency: Up to 64.73 %

RoHS and REACH Compliant

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# 1 Specification

Test Condition: Assembled in test device

## 1.1. Electrical

| Electrical        |                  |
|-------------------|------------------|
| Frequency Range   | 2400–2500 MHz    |
| Impedance         | 50 $\Omega$      |
| Polarization      | Linear           |
| Radiation Pattern | Omni-directional |
| VSWR              | $\leq 2.0$       |
| Peak Gain         | 3.02 dBi         |

## 1.2. Mechanical & Environmental

| Mechanical                  |                              |
|-----------------------------|------------------------------|
| Antenna Dimensions          | 37 mm × 18.6 mm              |
| Material & Color            | FPC & Black                  |
| Cable Type & Color & Length | $\Phi$ 0.81 & White & 140 mm |
| Connector Type              | IPEX MHF III                 |
| Mounting Type               | Adhesive                     |
| Weight                      | Typ. 0.5 g                   |
| Environmental               |                              |
| Operation Temperature       | -40 °C to +85 °C             |

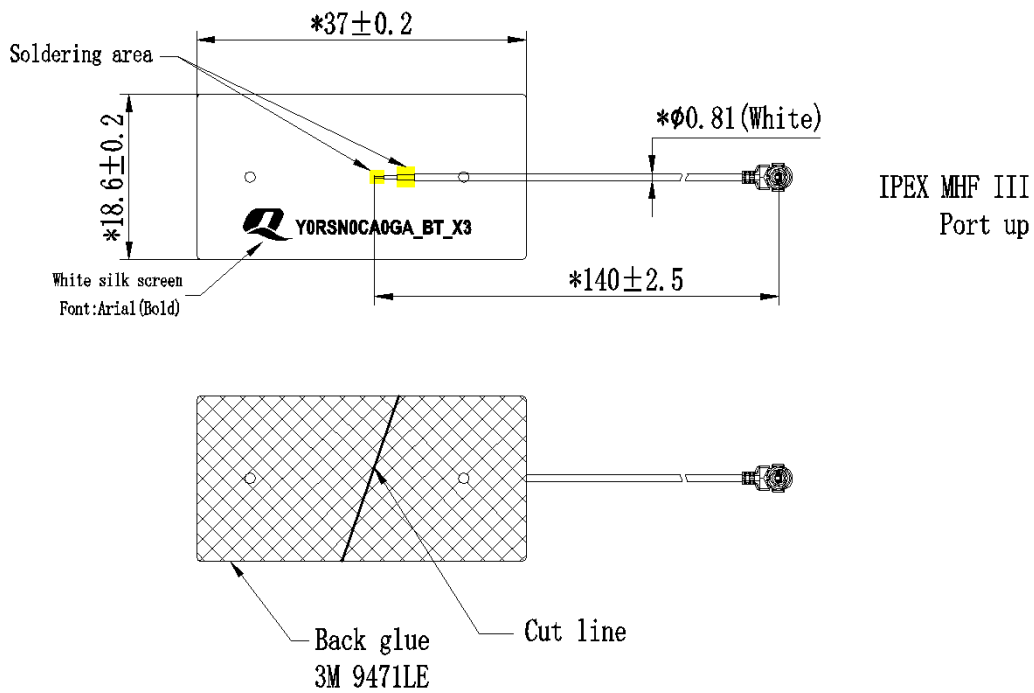
|                        |                  |
|------------------------|------------------|
| Storage Temperature    | -40 °C to +85 °C |
| RoHS & REACH Compliant | Yes              |

### 1.3. Antenna Assembly



BT

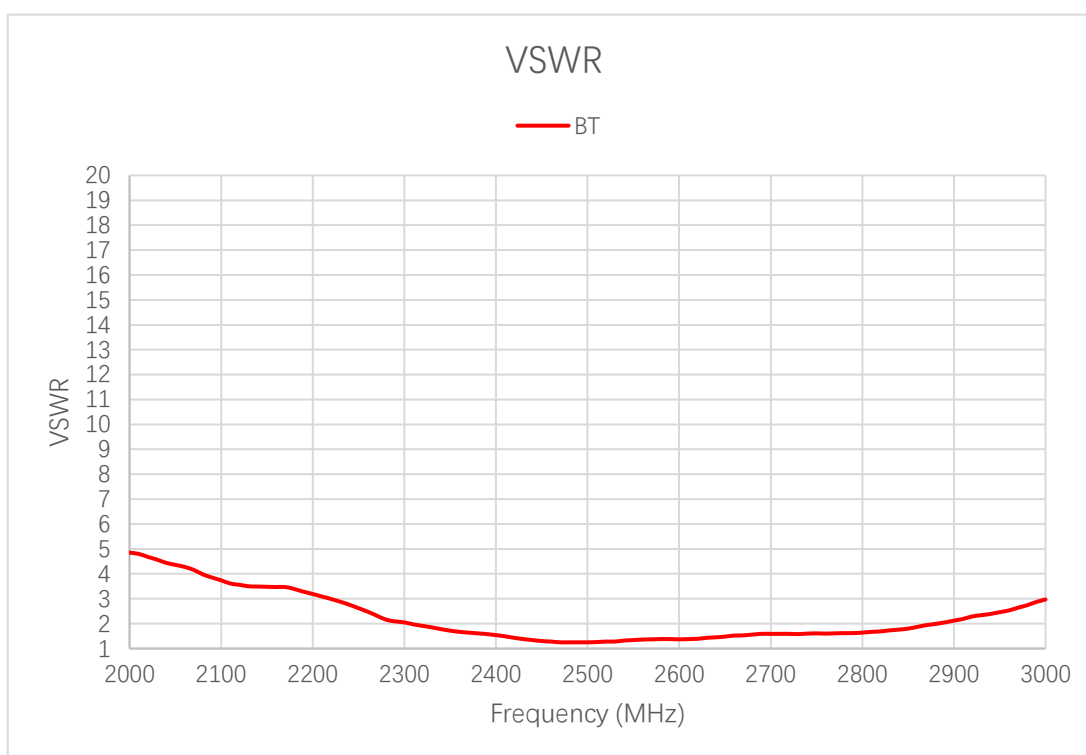
## 2 Drawing



# 3 Detailed Performance

## 3.1. S-Parameter Test

### 3.1.1. VSWR



**VSWR**

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| VSWR            | 1.5  | 1.3  | 1.3  | -    | -    | -    | -    | -    | -    | -    |

## 3.2. Radiation Performance Test

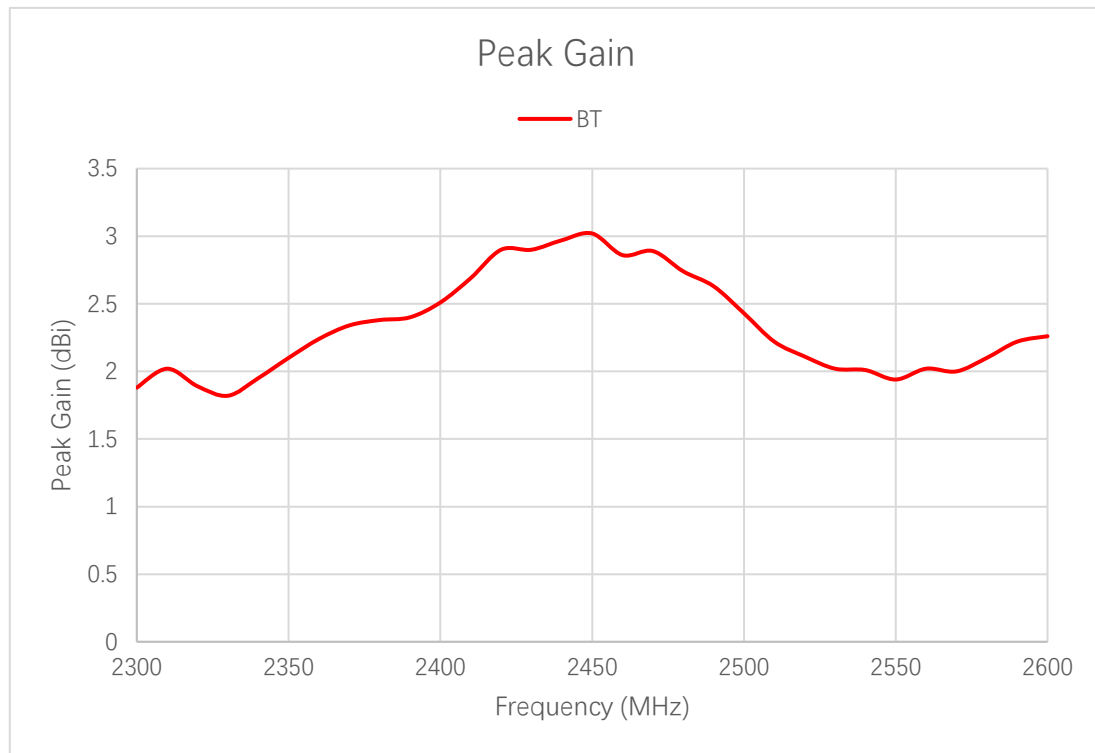
### 3.2.1. Efficiency



Efficiency (%)

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| Efficiency (%)  | 63.9 | 64.5 | 62.2 | -    | -    | -    | -    | -    | -    | -    |

### 3.2.2. Peak Gain



**Peak Gain (dBi)**

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| Peak Gain (dBi) | 2.5  | 3.0  | 2.4  | -    | -    | -    | -    | -    | -    | -    |

# Contact Us

At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

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## Revision History

| Version | Date       | Author                                 | Note                     |
|---------|------------|----------------------------------------|--------------------------|
| -       | 2025-05-22 | Charming YANG/<br>Bill MO/<br>Aria CHU | Creation of the document |
| 1.0     | 2025-05-22 | Charming YANG/<br>Bill MO/<br>Aria CHU | First official release   |



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