# DJI Antenna Datasheet
# WA140 antenna
# 2023-05-26

**SZ DJI TECHNOLOGY CO., LTD**
Lobby of T2, DJI Sky City, No. 53 Xianyuan Road, Xili Community, Xili Street, Nanshan District, Shenzhen, China.

## Revision history

| Version | Change notes | Modificator | Date |
|---|---|---|---|
| V0.1 | First draft. | Freeman.Deng | 2023.05.26 |
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# DJI Antenna Datasheet

## 1、 Basic Specifications

| No. | Specification | Descriptions | Notes | |
|---|---|---|---|---|
| 1 | Antenna Name | WA140 Ant | | |
| 2 | Brand | DJI | | |
| 3 | Operation Frequency | 2.4~2.483GHz;<br>5.15-5.25GHz;<br>5.725~5.85GHz; | | |
| 4 | Connector Type | Ipex-4 | | |
| 5 | Impedance | 50ohm | | |
| 6 | Gain | 1dBi@2.4GHz<br>1dBi@5.2GHz （Only for CE/FCC/NCC）<br>1.5dBi@5.8GHz | | |
| 7 | Efficiency | ≥50% | | |
| 8 | VSWR | ≤2 | | |
| 9 | Polarization type | Linear | | |
| 10 | 3dB Beamwidth | Omnidirectional horizon | | |
| 11 | Weight | | | |
| 12 | Antenna type | Dipole | | |

## 2、 Antenna Gain

### 3.1 LF antenna

| Frequency | Efficiency | Gain(dBi) |
|---|---|---|
| 2400MHz | 66% | 0.76119 |

| | | |
|---|---|---|
| 2420MHz | 63% | 0.81233 |
| 2450MHz | 65% | 0.99091 |
| 2470MHz | 59% | 0.80206 |

| Frequency | Efficiency | Gain(dBi) |
|---|---|---|
| 5150MHz | 43% | 0.45847 |
| 5200MHz | 40% | 0.79302 |
| 5250MHz | 44% | 0.95313 |
| **Frequency** | **Efficiency** | **Gain(dBi)** |
| 5725MHz | 55% | 1.25112 |
| 5775MHz | 52% | 1.32950 |
| 5800MHz | 53% | 1.45854 |
| 5850MHz | 52% | 1.46515 |

## 3.2 RF antenna

| Frequency | Efficiency | Gain(dBi) |
|---|---|---|
| 2400MHz | 65% | 0.72509 |
| 2420MHz | 62% | 0.86527 |
| 2450MHz | 64% | 0.92478 |
| 2470MHz | 59% | 0.65424 |
| **Frequency** | **Efficiency** | **Gain(dBi)** |
| 5150MHz | 40% | 0.88512 |
| 5200MHz | 43% | 0.73425 |
| 5250MHz | 44% | 0.23541 |

| Frequency | Efficiency | Gain(dBi) |
|---|---|---|
| 5725MHz | 47% | 1.41496 |
| 5775MHz | 49% | 1.47157 |
| 5800MHz | 51% | 1.44765 |
| 5850MHz | 52% | 1.41186 |

## 3.3 LB antenna

| Frequency | Efficiency | Gain(dBi) |
|---|---|---|
| 2400MHz | 51% | 0.82512 |

| | | |
|---|---|---|
| 2420MHz | 53% | 0.54125 |
| 2450MHz | 53% | 0.82478 |
| 2470MHz | 57% | 0.65424 |
| **Frequency** | **Efficiency** | **Gain(dBi)** |
| 5150MHz | 46% | 0.89154 |
| 5200MHz | 44% | 0.98452 |
| 5250MHz | 43% | 0.74511 |

| **Frequency** | **Efficiency** | **Gain(dBi)** |
|---|---|---|
| 5725MHz | 50% | 1.31871 |
| 5775MHz | 51% | 1.46891 |
| 5800MHz | 51% | 1.26812 |
| 5850MHz | 52% | 1.36540 |

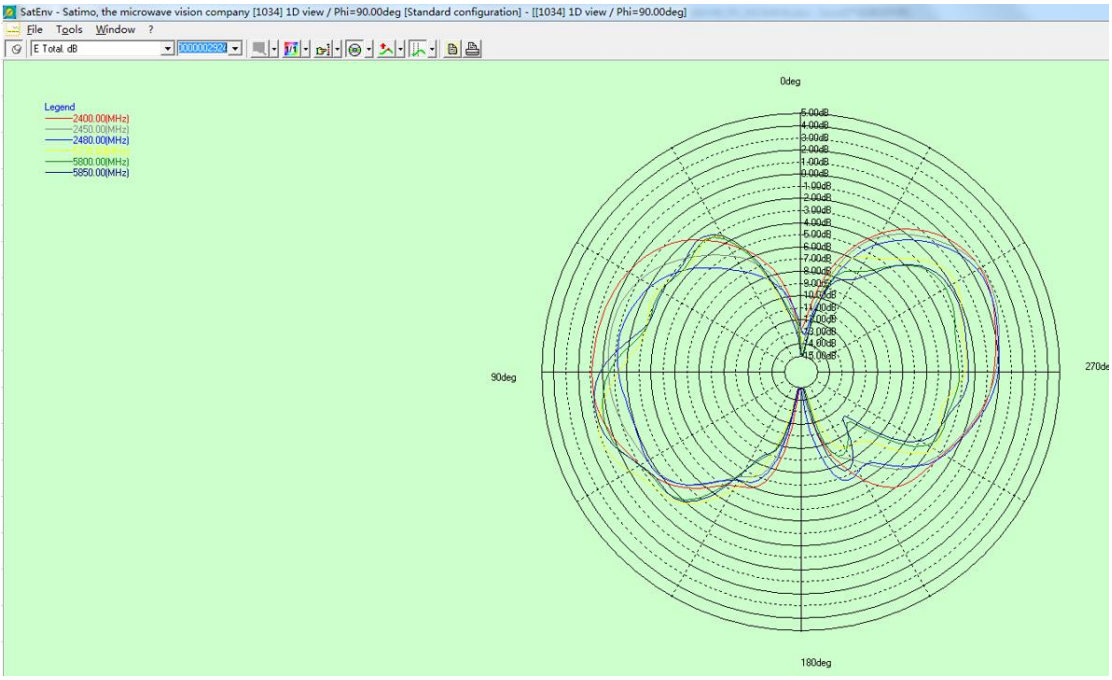
## 3.4 RB antenna

| **Frequency** | **Efficiency** | **Gain(dBi)** |
|---|---|---|
| 2400MHz | 59% | 0.81125 |
| 2420MHz | 57% | 0.91545 |
| 2450MHz | 55% | 0.91181 |
| 2470MHz | 52% | 0.75831 |
| **Frequency** | **Efficiency** | **Gain(dBi)** |
| 5150MHz | 43% | 0.86483 |
| 5200MHz | 46% | 0.98185 |
| 5250MHz | 44% | 0.69710 |

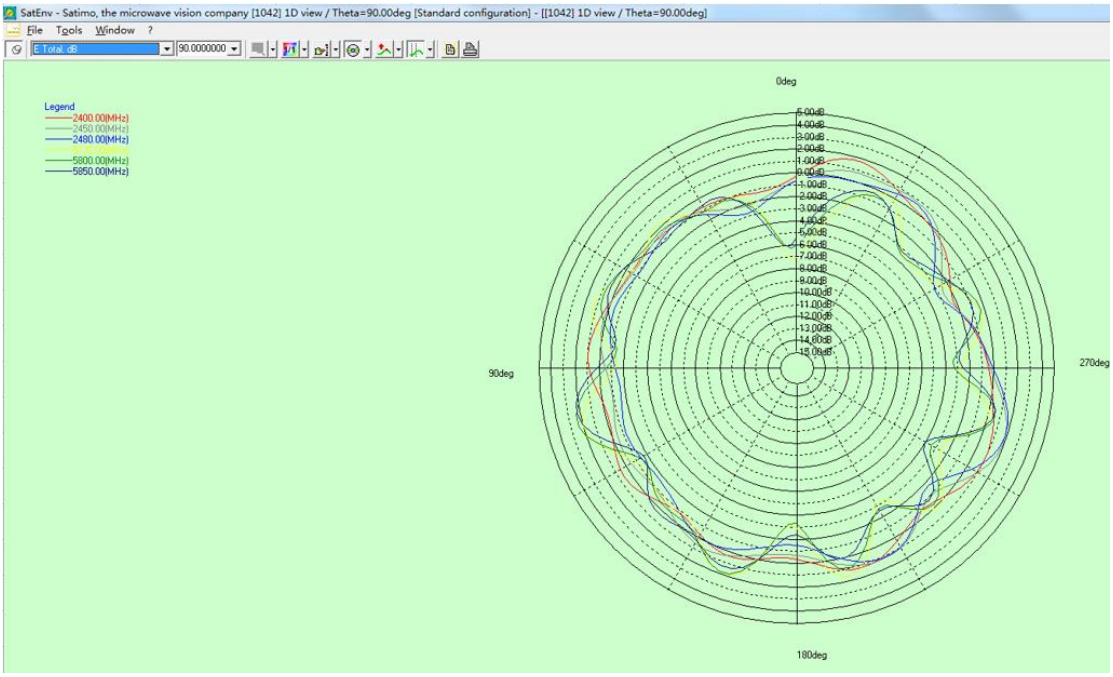
| **Frequency** | **Efficiency** | **Gain(dBi)** |
|---|---|---|
| 5725MHz | 55% | 1.48807 |
| 5775MHz | 59% | 1.25999 |
| 5800MHz | 52% | 1.44145 |
| 5850MHz | 53% | 1.33584 |

# 3、 Radiation Pattern

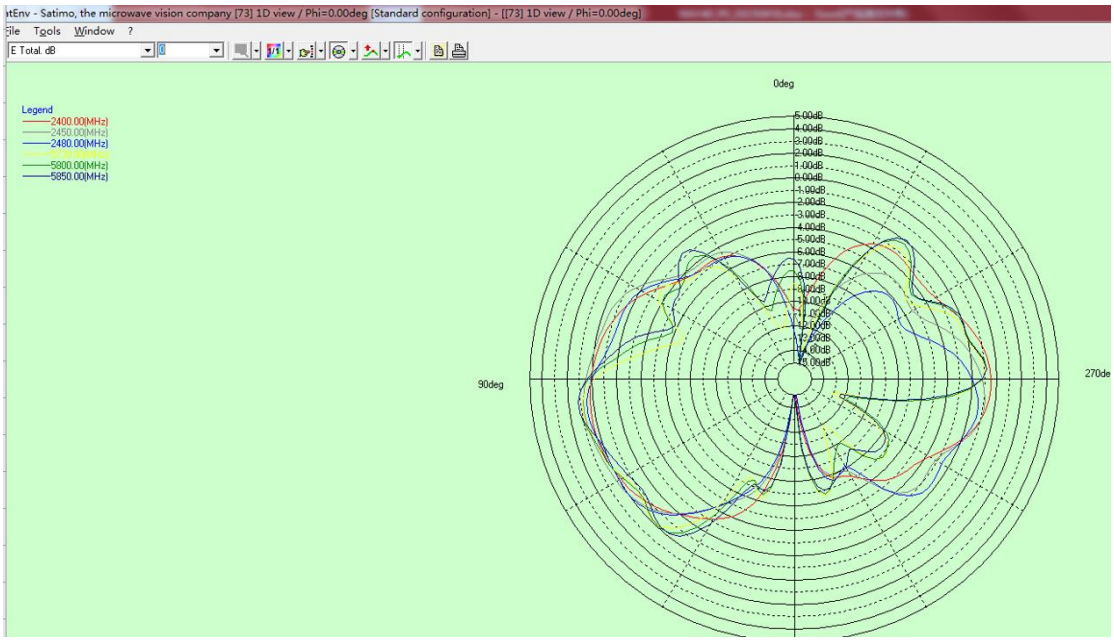
## 4.1 LF Phi 90



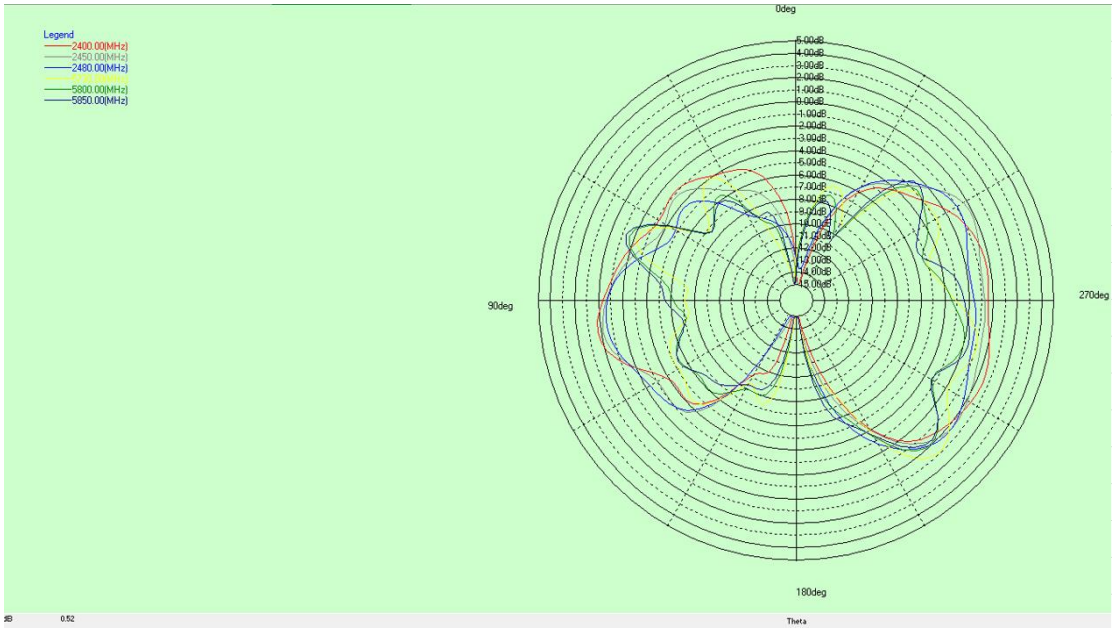

## 4.2 LF Theta90



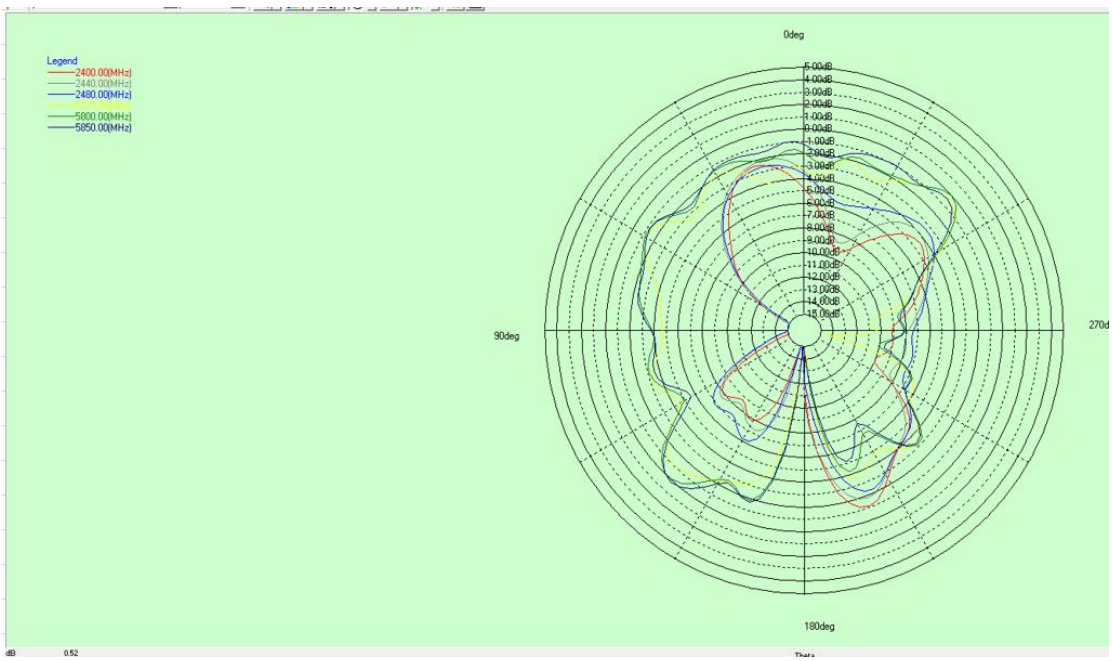

## 4.3 RF Phi 90



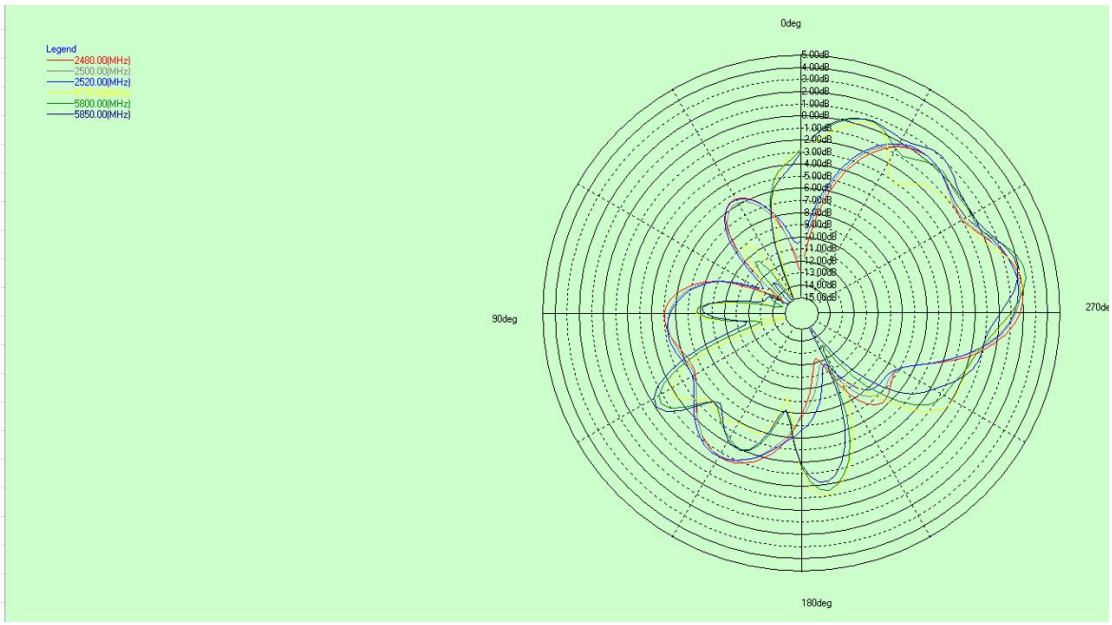

## 4.4 RF Theta 90



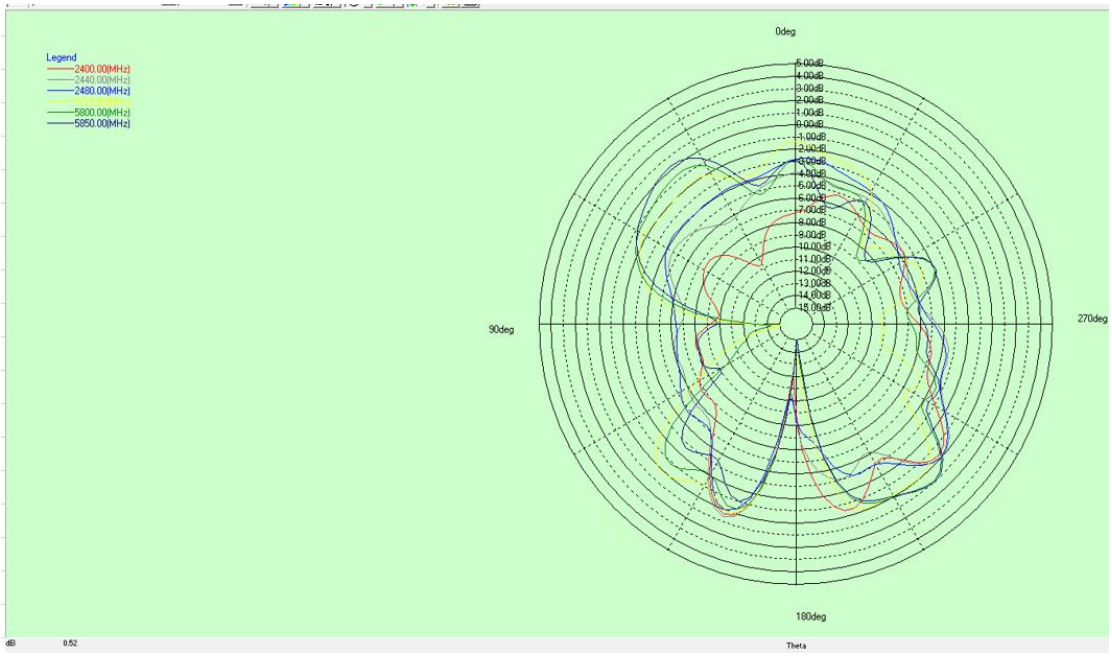

## 4.5 LB Phi90



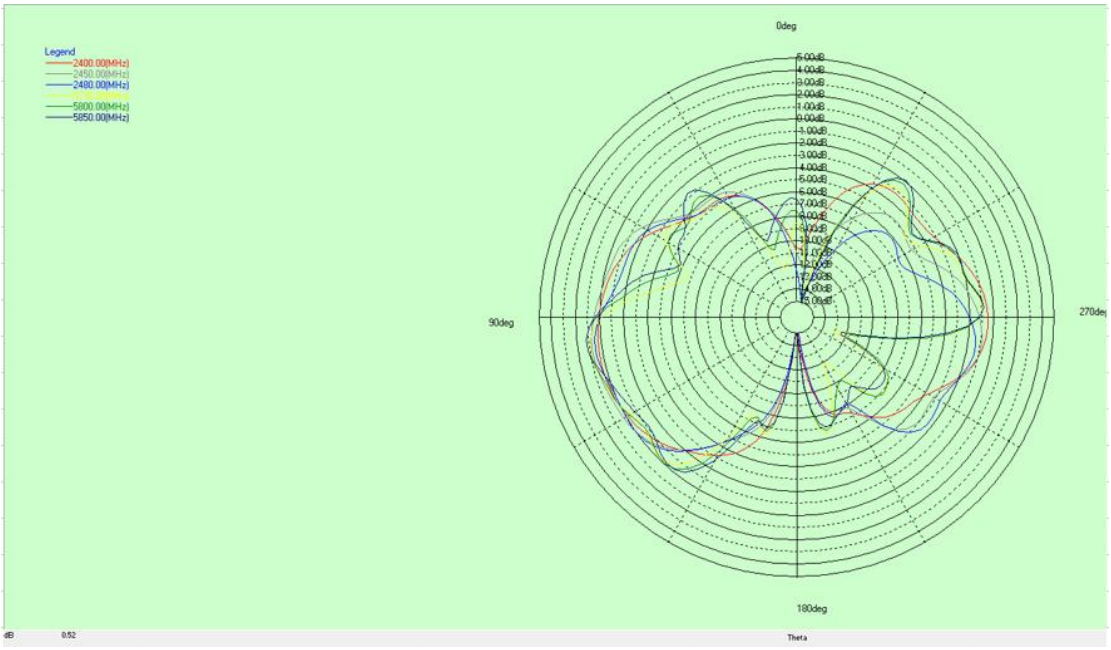

4.6 LB Theta 90




4.7 RB Phi90




## 4.8 RB Theta90




## 4、 Structure drawing