

# Irish Antenna Information

*English Language Required for Intel Regulatory Review / Approval*

**(OEM/ODM or antenna vendor is required to complete this document with platform antenna information.  
Remove Intel references and make this your own document)**

| Platform information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                          |                            |                                    |                                                           |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------|-----------------------------------------------------------|------------------------------|
| Brand                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ODM                                                                                                                                      | ****End product model name | Intel platform (ex: Yes, No or NA) | Platform type (ex: regular NB, convertible PC, AIO...etc) | *SAR minimum separation (mm) |
| ETHETA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                          |                            |                                    |                                                           |                              |
| *****Please fill in exact product model name and make sure the model name is visible on product cover or any parts for end users recognize for authority inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                          |                            |                                    |                                                           |                              |
| Antenna information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |                            |                                    |                                                           |                              |
| Vendor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Vendor address                                                                                                                           |                            | Type                               | Antenna Part number (WIFI_0)                              | Antenna Part number(WIFI_1)  |
| Etheta Communication Technology CO.,LTD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Area B and D, 3rd Floor, Building 1, Baisha Science and Technology Industrial Park, No. 3011 Shahe West Road, Nanshan District, Shenzhen |                            | FPC+Cable                          | RD1202302NB87-1                                           | RD1202302NB87-2              |
| Peak gain w/ cable loss (dBi)*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                          |                            |                                    |                                                           |                              |
| Band                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2.4GHz<br>2400-2483.5MHz                                                                                                                 | 5.2GHz<br>5150-5250MHz     | 5.3GHz<br>5250-5350MHz             | 5.6GHz<br>5350-5725MHz                                    | 5.8GHz<br>5725-5850MHz       |
| Wifi 0#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.9                                                                                                                                      | 2.8                        | 2.9                                | 3.0                                                       | 1.7                          |
| Wifi 1#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.5                                                                                                                                      | 1.8                        | 2.4                                | 2.9                                                       | 1.6                          |
| <p>Notes (marked with *)</p> <ul style="list-style-type: none"><li>* SAR minimum separation (mm)</li><li>- Regular NB: Minimum antenna-to-body (from antenna bottom to the bottom of the device)</li><li>- Tablet / Convertible PC: Minimum antenna-to-edge (5 sides of the device)</li><li>- Mini-tablet: Minimum antenna-to-edge (6 sides of the device)</li><li>* 3D Peak Antenna gain should be equal or greater than -2 dBi</li><li>- If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.</li></ul> |                                                                                                                                          |                            |                                    |                                                           |                              |

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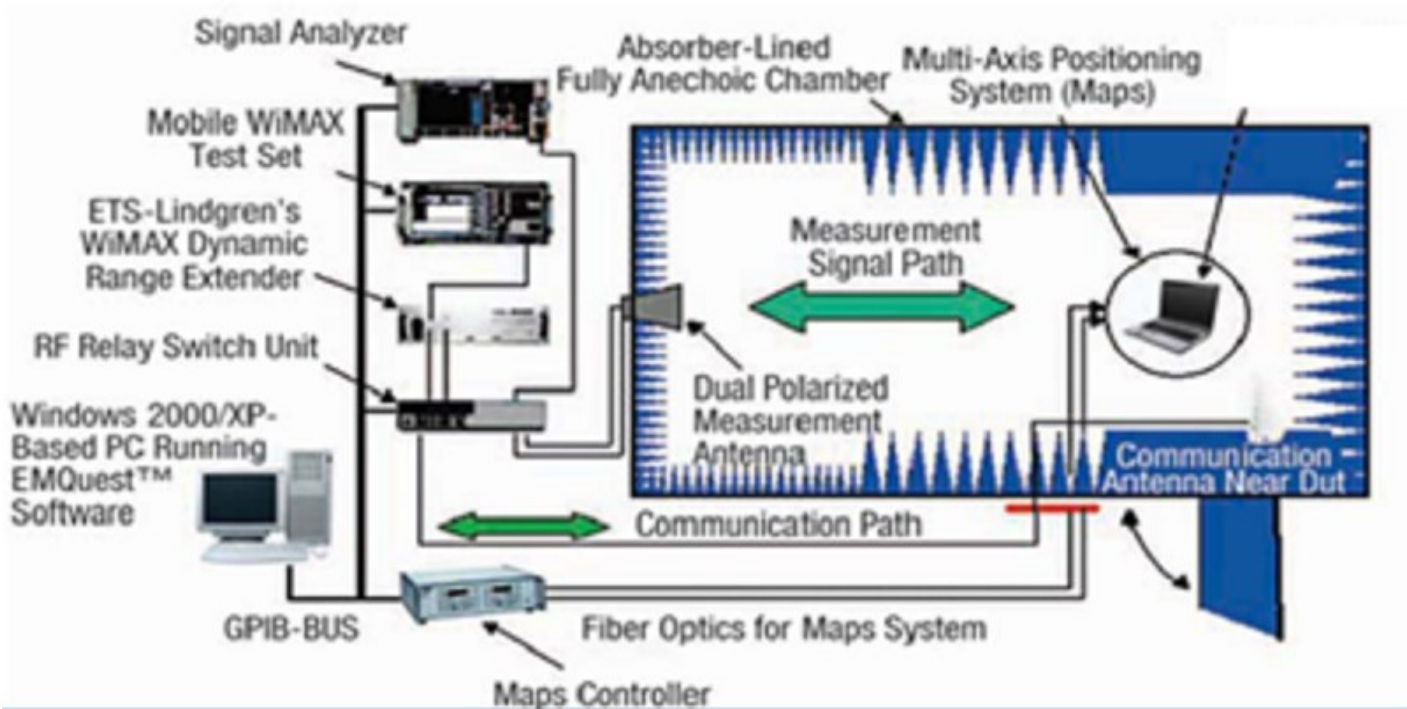
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1. Applicable test methods

This test report is prepared for host antenna testing under a Full Anechoic Chamber.

2. Test & System Description

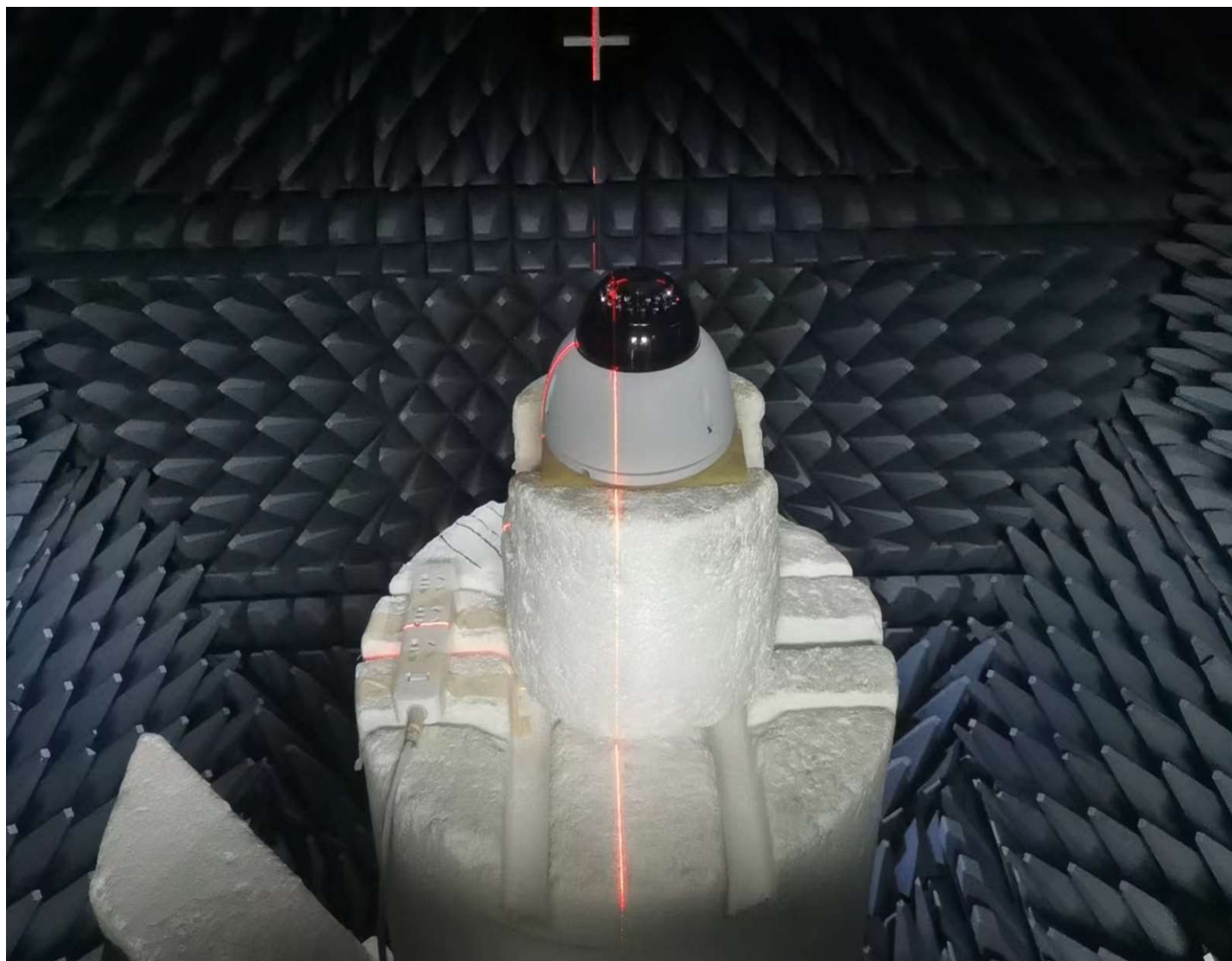
a. Test setup



b. Equipment list

| Number | Device                              | Manufacter | Cal. Date  | Cal. Due. Date |
|--------|-------------------------------------|------------|------------|----------------|
| 1      | Turn table control box              | EMT        | 2022/11/20 | 2023/11/20     |
| 2      | Turn table control computer         | EMT        | 2022/11/20 | 2023/11/20     |
| 3      | TX/RX RF power and its control unit | EMT        | N/A        | N/A            |
| 4      | Probe switch array                  | EMT        | N/A        | N/A            |
| 5      | Test system host                    | EMT        | N/A        | N/A            |
| 6      | Notwork analyzer                    | EMT        | 2022/11/20 | 2023/11/20     |
| 7      | RF line TX                          | EMT        | N/A        | N/A            |
| 8      | RF line RX                          | EMT        | N/A        | N/A            |
| 9      | UPS uninterruptible power supply    | EMT        | N/A        | N/A            |
| 10     | Cable 2m 1GHz 8.5GHz                | Atem       | 2022/11/20 | 2023/11/20     |
| 11     | Chamber                             | EMT        | 2022/11/20 | 2023/11/20     |
| 12     | Horn antenna                        | EMT        | N/A        | N/A            |

### 3. Setup photo



# Antenna Information

## Section 1. Antenna Assembly Specifications

### (WIFI0#)Passive test data

| frequency(Mhz) | efficiency(%) | efficiency(db) |
|----------------|---------------|----------------|
| 2400           | 38%           | -4.16          |
| 2410           | 38%           | -4.21          |
| 2420           | 37%           | -4.32          |
| 2430           | 37%           | -4.33          |
| 2440           | 37%           | -4.37          |
| 2450           | 36%           | -4.40          |
| 2460           | 37%           | -4.35          |
| 2470           | 37%           | -4.29          |
| 2480           | 37%           | -4.31          |
| 2490           | 37%           | -4.36          |
| 2500           | 36%           | -4.38          |
| 5150           | 33%           | -4.76          |
| 5200           | 34%           | -4.75          |
| 5250           | 30%           | -5.17          |
| 5300           | 30%           | -5.29          |
| 5350           | 29%           | -5.36          |
| 5400           | 28%           | -5.46          |
| 5450           | 29%           | -5.30          |
| 5500           | 32%           | -4.89          |
| 5550           | 36%           | -4.43          |
| 5600           | 37%           | -4.30          |
| 5650           | 36%           | -4.46          |
| 5700           | 33%           | -4.80          |
| 5750           | 31%           | -5.10          |
| 5800           | 29%           | -5.44          |
| 5850           | 24%           | -6.13          |

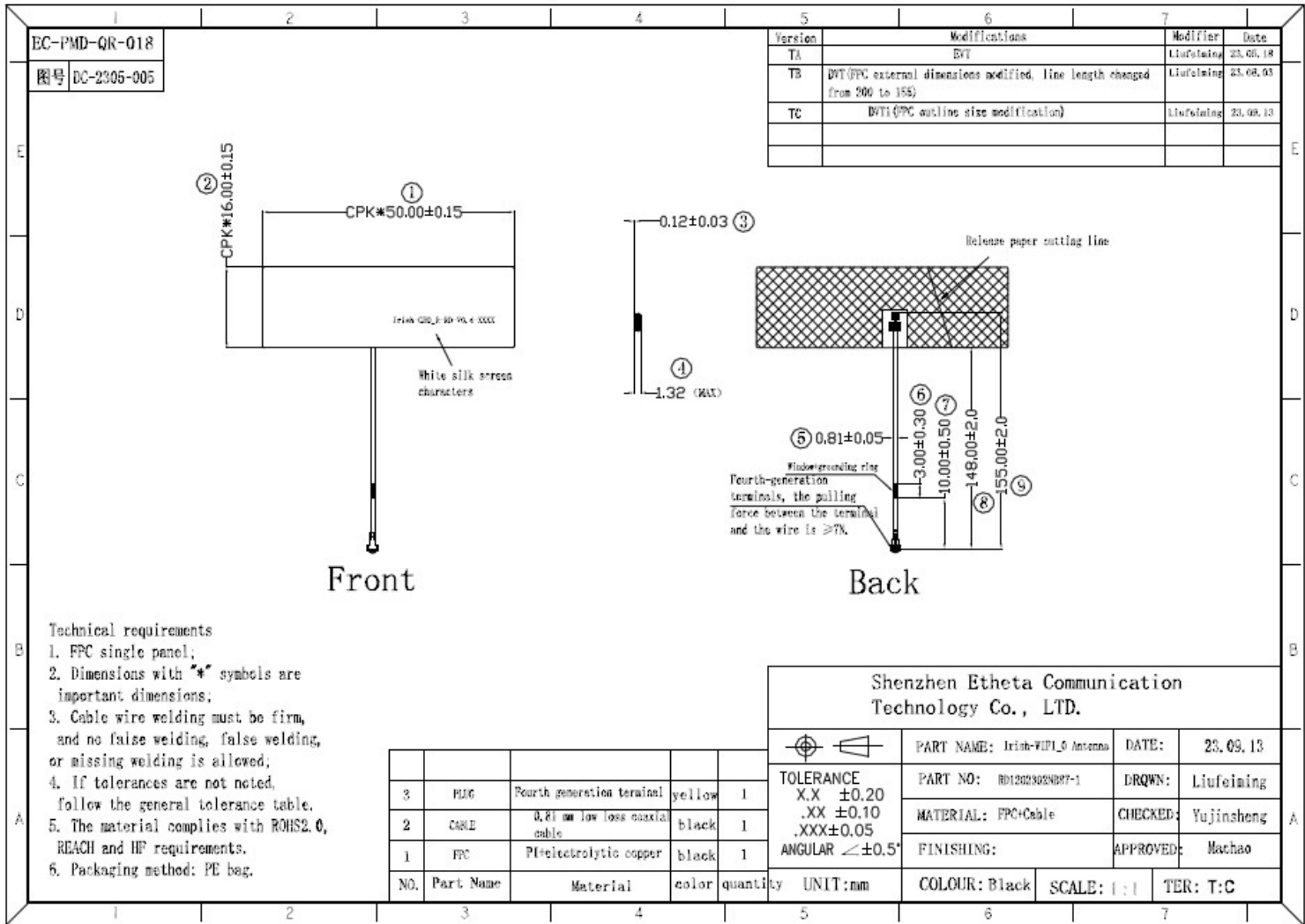
(WIFI1#)Passive test data

| frequency(Mhz) | efficiency(%) | efficiency(db) |
|----------------|---------------|----------------|
| 2400           | 41%           | -3.87          |
| 2410           | 39%           | -4.07          |
| 2420           | 37%           | -4.30          |
| 2430           | 36%           | -4.47          |
| 2440           | 34%           | -4.65          |
| 2450           | 33%           | -4.82          |
| 2460           | 33%           | -4.87          |
| 2470           | 33%           | -4.88          |
| 2480           | 32%           | -4.88          |
| 2490           | 32%           | -4.89          |
| 2500           | 33%           | -4.84          |
| 5150           | 40%           | -4.02          |
| 5200           | 41%           | -3.91          |
| 5250           | 39%           | -4.09          |
| 5300           | 38%           | -4.20          |
| 5350           | 35%           | -4.54          |
| 5400           | 33%           | -4.81          |
| 5450           | 35%           | -4.52          |
| 5500           | 37%           | -4.34          |
| 5550           | 38%           | -4.16          |
| 5600           | 39%           | -4.12          |
| 5650           | 38%           | -4.20          |
| 5700           | 35%           | -4.61          |
| 5750           | 32%           | -4.96          |
| 5800           | 30%           | -5.29          |
| 5850           | 26%           | -5.78          |

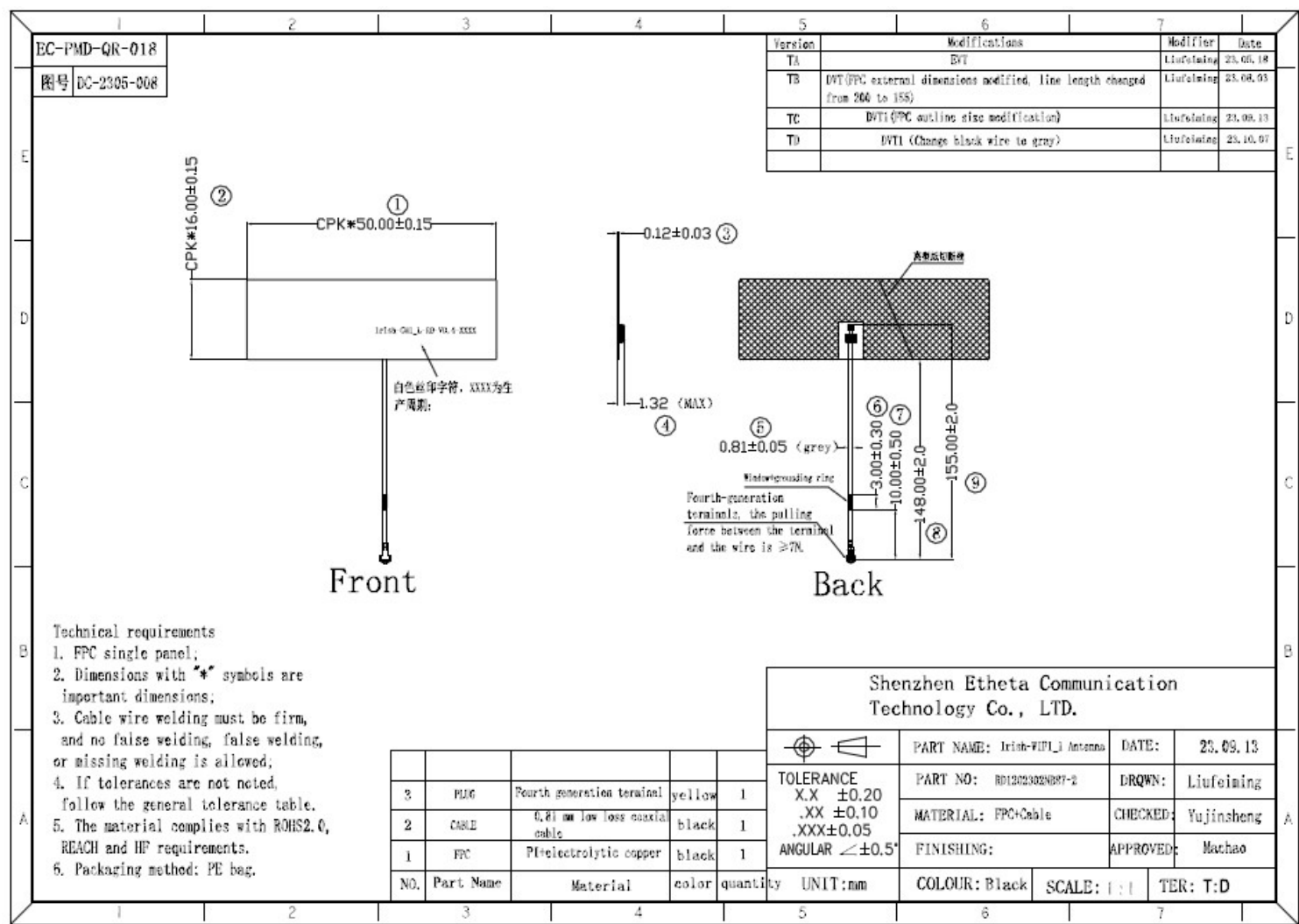
Section 2. Dimensioned Photos and Drawings of Antennas

Include the dimensioned photo and drawing of Main antenna here.

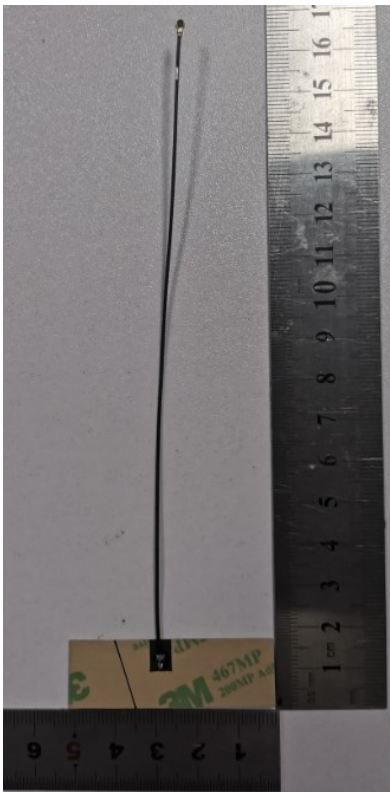
Irish WIFI\_0 Antenna Drawing:



Irish WIFI\_1 Antenna Drawing:



Irish WIFI\_0 Antenna Photo (Front/Back):



Irish WIFI\_1 Antenna Photo (Front/Back):

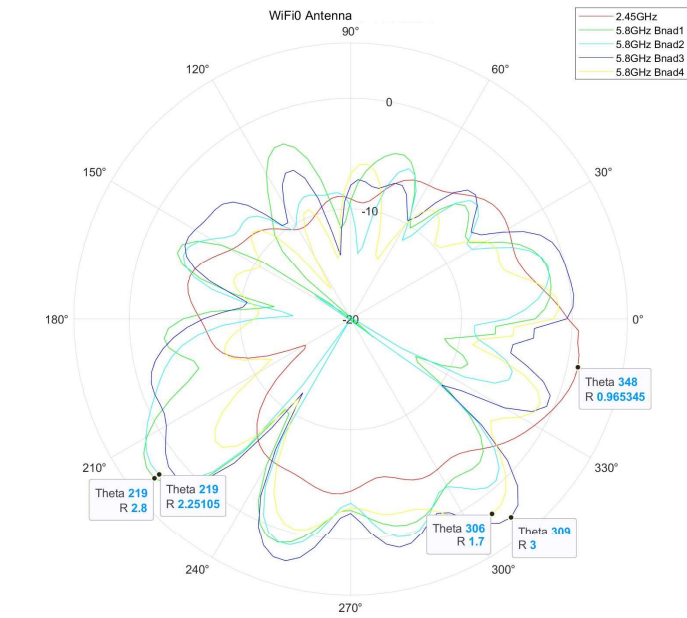


**Note: antenna photo should include L type ruler**

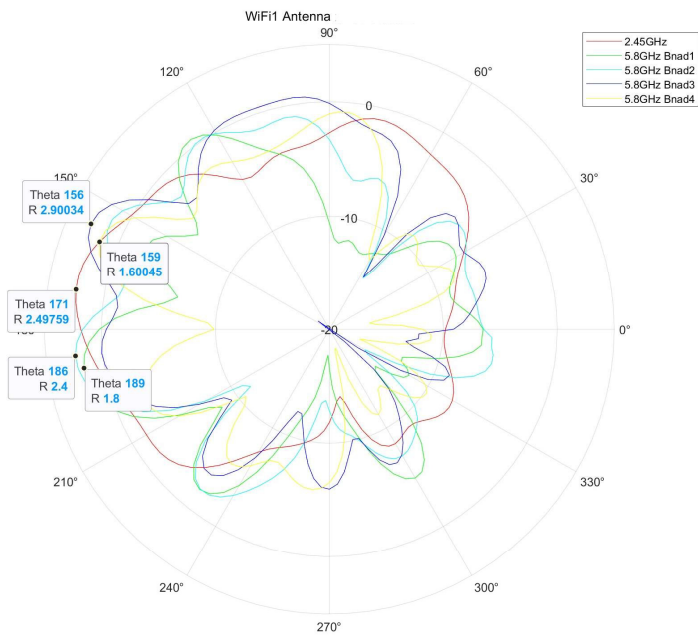
**Include the dimensioned photo and drawing of Aux antenna here.**

Section 3. Radiation characteristics of antenna loaded in Host Platform

WiFi 0#



WiFi 1#



Section 4. Antenna Host Platform Location Information

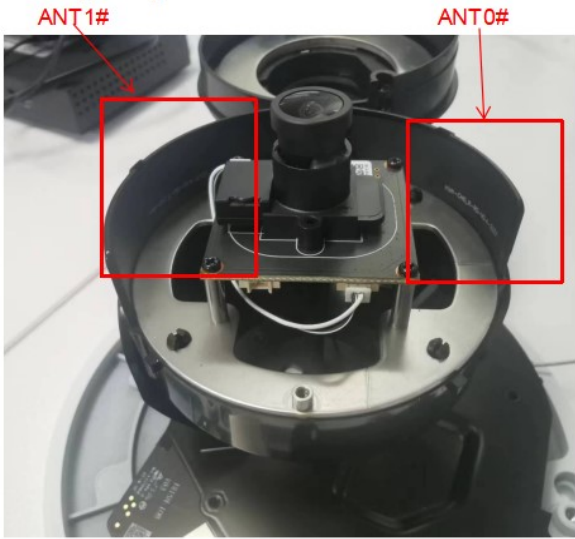
Include a **dimensioned photo(s) or dimensioned drawing(s)** of Main and Aux antenna placements (measurements are not required for receive-only antenna).

Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.

Section 5. Antenna dimensional information for SAR evaluation

Include a **dimensioned photo(s) or dimensioned drawing(s)** showing the distance (mm) between the transmit antennas and the user. For notebook/laptop hosts show lapheld position (example below). For tablet hosts show all orientations including lapheld, primary & secondary portrait, primary & secondary landscape positions. Include a description of any proximity sensors or power throttling implementations that limit or exclude use of any host orientation.

Antenna layout diagram



## Section 6. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between **all WLAN transmit antennas** and other co-located radiator transmit antenna such as Bluetooth, WWAN,..

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)