

## M210 Antenna Test Report V1

Date: 2025/2/18

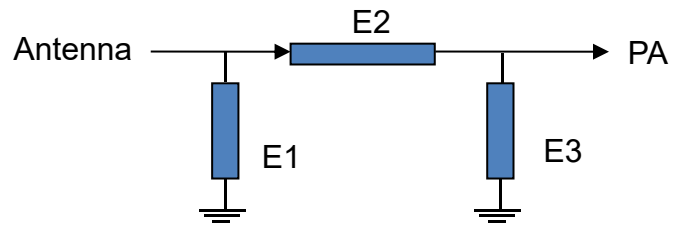
The main purpose of  
this report: New project debugging

The main conclusion  
of this report:

| Antenna | frequency band | Material        | Performance requirements |
|---------|----------------|-----------------|--------------------------|
| BT      | 2400-2480MHz   | Onboard antenna |                          |

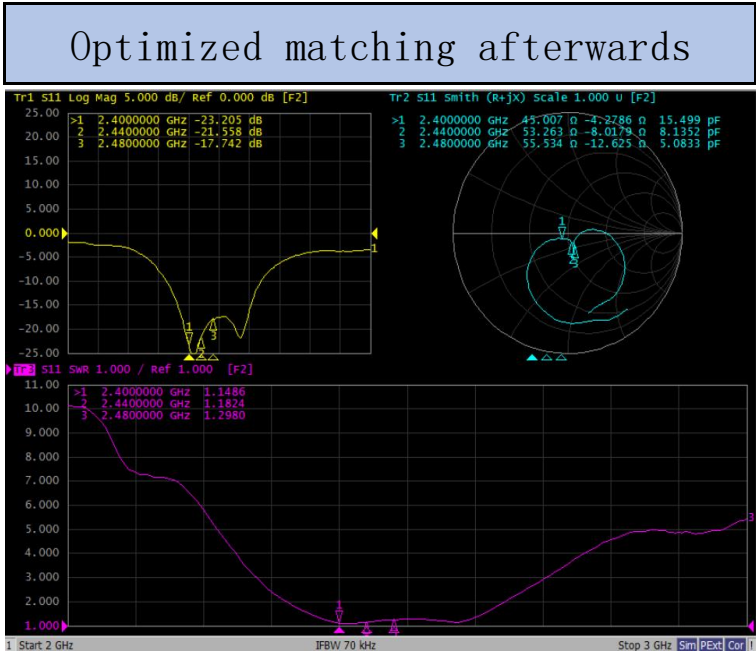
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## Antenna terminal matching circuit:



| BT       |              |
|----------|--------------|
| Element  |              |
| E1(0402) | <b>0.7pF</b> |
| E2(0402) | <b>0Ω</b>    |
| E3(0402) |              |

Antenna Passive S11 Parameter Test:



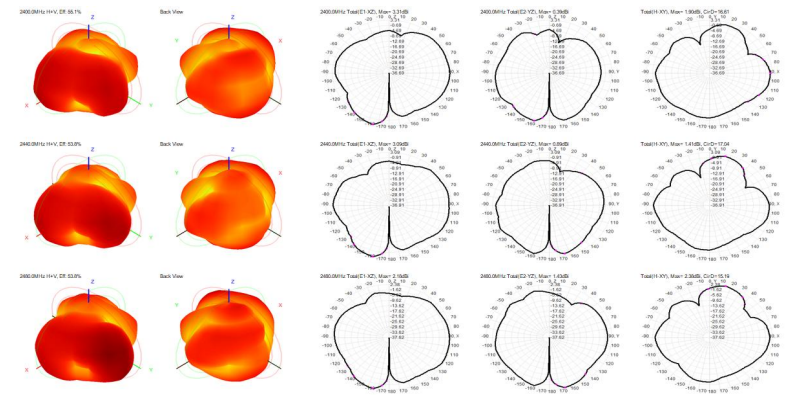
|            |        |        |        |
|------------|--------|--------|--------|
| Freq (MHz) | 2400   | 2440   | 2480   |
| SWR        | 1.15   | 1.18   | 1.30   |
| Log Mag    | -23.20 | -21.56 | -17.74 |

Antenna Passive Efficiency and Gain Testing:

| Optimized matching afterwards |            |                |
|-------------------------------|------------|----------------|
| Frequency (MHz)               | Gain (dBi) | Efficiency (%) |
| 2400                          | 3.55       | 55.07          |
| 2410                          | 3.67       | 56.39          |
| 2420                          | 3.79       | 56.05          |
| 2430                          | 3.80       | 55.40          |
| 2440                          | 3.63       | 53.82          |
| 2450                          | 3.70       | 52.62          |
| 2460                          | 3.61       | 52.69          |
| 2470                          | 3.33       | 53.38          |
| 2480                          | 3.09       | 53.84          |
| 2490                          | 3.01       | 54.88          |
| 2500                          | 2.99       | 55.22          |

Antenna Passive Radiation Pattern:

## Optimized matching afterwards



## Antenna OTA Testing

| Optimized matching afterwards |      |        |
|-------------------------------|------|--------|
| Channels                      | TRP  | TIS    |
| 0                             | 5.37 | -91.33 |
| 39                            | 5.23 | -90.27 |
| 78                            | 4.36 | -91.45 |

Antenna position and matching image:

