

## DV8886 BT Antenna information

### Record for version modification

| Date      | Revision | Modify Content          | Author |
|-----------|----------|-------------------------|--------|
| 2022-4-24 | V1.0     | 1 <sup>st</sup> Version |        |
|           |          |                         |        |
|           |          |                         |        |
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|           |          |                         |        |
|           |          |                         |        |
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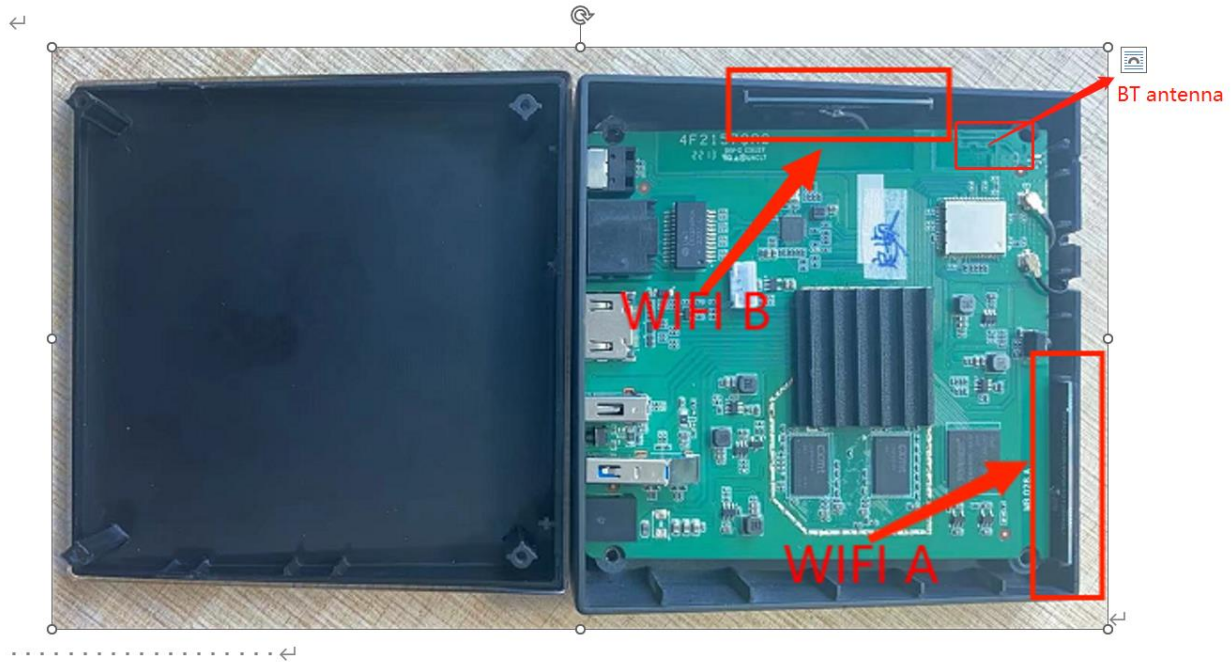
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## 1. Project information

|              |           |
|--------------|-----------|
| Model No.    | DV8886    |
| HW Version   | V1        |
| SW Version   | N/A       |
| Antenna type | PCB       |
| Date         | 2022/4/24 |

## 2. Appearance and specification



## 3. Performance parameter

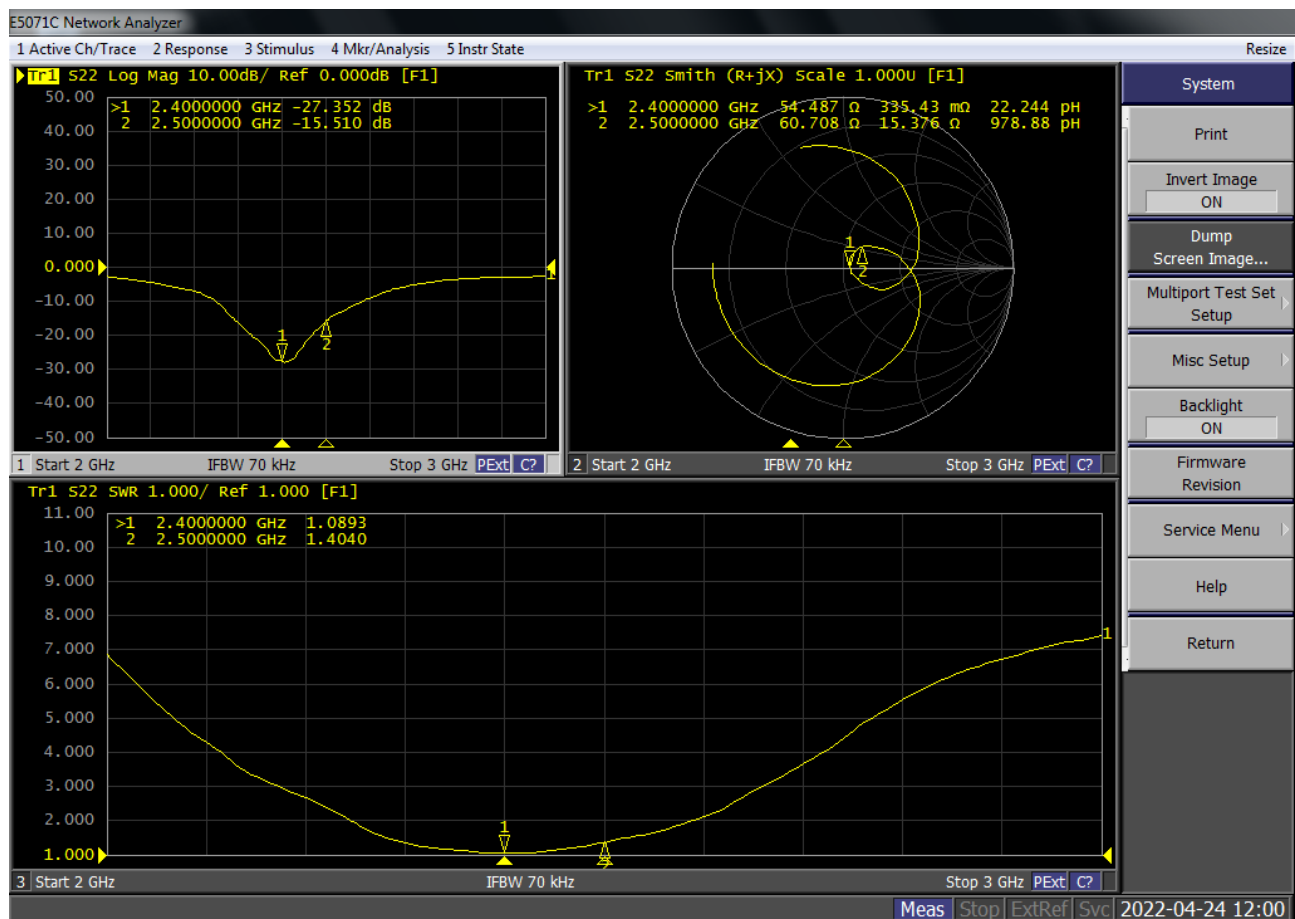
### 3.1 Antenna passive test

|                  |                  |
|------------------|------------------|
| Frequency        | 2400Mhz~2500Mhz  |
| Impedance        | 50Ω              |
| Max Antenna Gain | 2.88dBi          |
| Power capacity   | <12w             |
| Radiation        | Omni-directional |

#### 3.1.1 Reflection loss&V.S.W.R

Test tools: network analyzer

Standard: Reflection loss≤-10db    V.S.W.R≤2



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V.S.W.R

|          |     |      |     |
|----------|-----|------|-----|
| Freq/GHz | 2.4 | 2.45 | 2.5 |
| VSWR     | 1.0 | 1.6  | 1.4 |

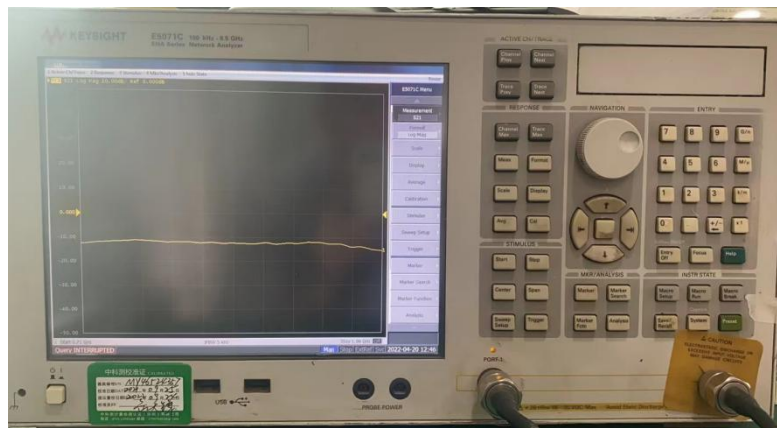
### 3.1.2 Gain & Efficiency

Test tools: Microwave Anechoic Chamber+Agiilent Technologies E5071C

Standard: 2.4G  $1.5\text{dBi} \leq \text{Gain} \leq 6\text{dBi}$  Efficiency  $\geq 50\%$

5G  $1.7\text{dBi} \leq \text{Gain} \leq 6\text{dBi}$  Efficiency  $\geq 50\%$

Testing Environment: As shown in the figure



Agilent Technologies E5071C



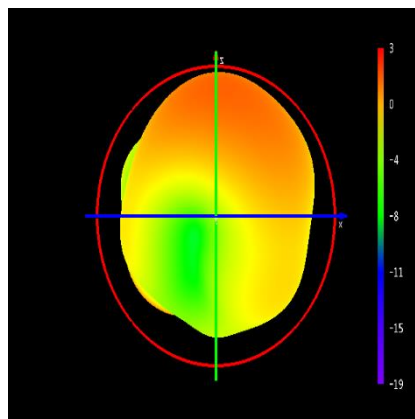
ROHDE&SCHWARZ CMW500

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| BT              |           |                |
|-----------------|-----------|----------------|
| Frequency / MHz | Gain/ dBi | Efficiency / % |
| 2400            | 2.63      | 64.74          |
| 2410            | 2.45      | 63.03          |
| 2420            | 2.31      | 61.67          |
| 2430            | 2.26      | 59.72          |
| 2440            | 2.26      | 59.16          |
| 2450            | 2.26      | 57.57          |
| 2460            | 2.41      | 56.6           |
| 2470            | 2.6       | 56.59          |
| 2480            | 2.67      | 54.99          |
| 2490            | 2.88      | 53.85          |
| 2500            | 2.81      | 51.13          |

3D directional diagram (Maximum):

2490MHz  
(unit: dBi)

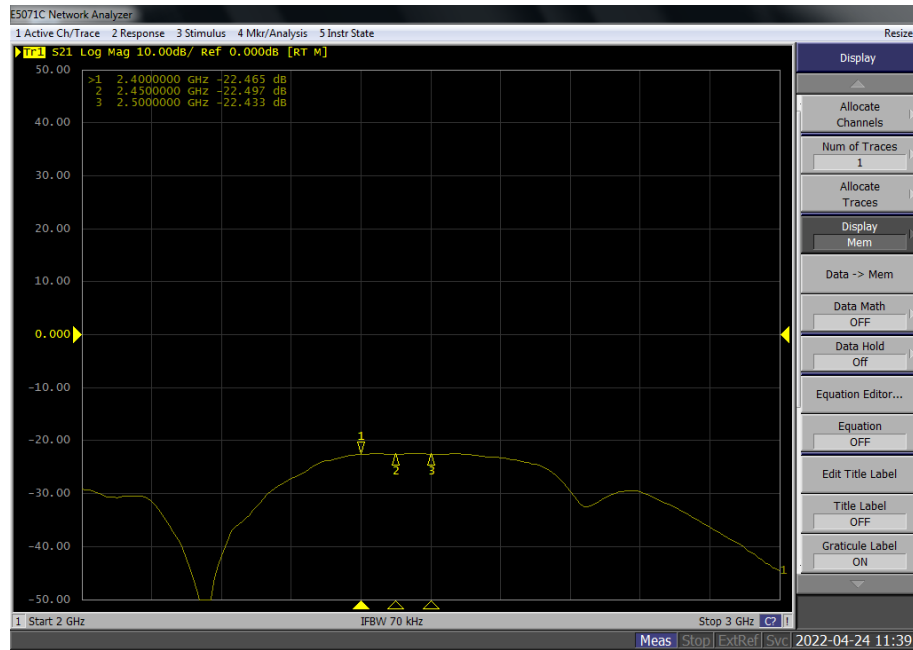


### 3.1.3 Antenna isolation

Test tools: network analyzer

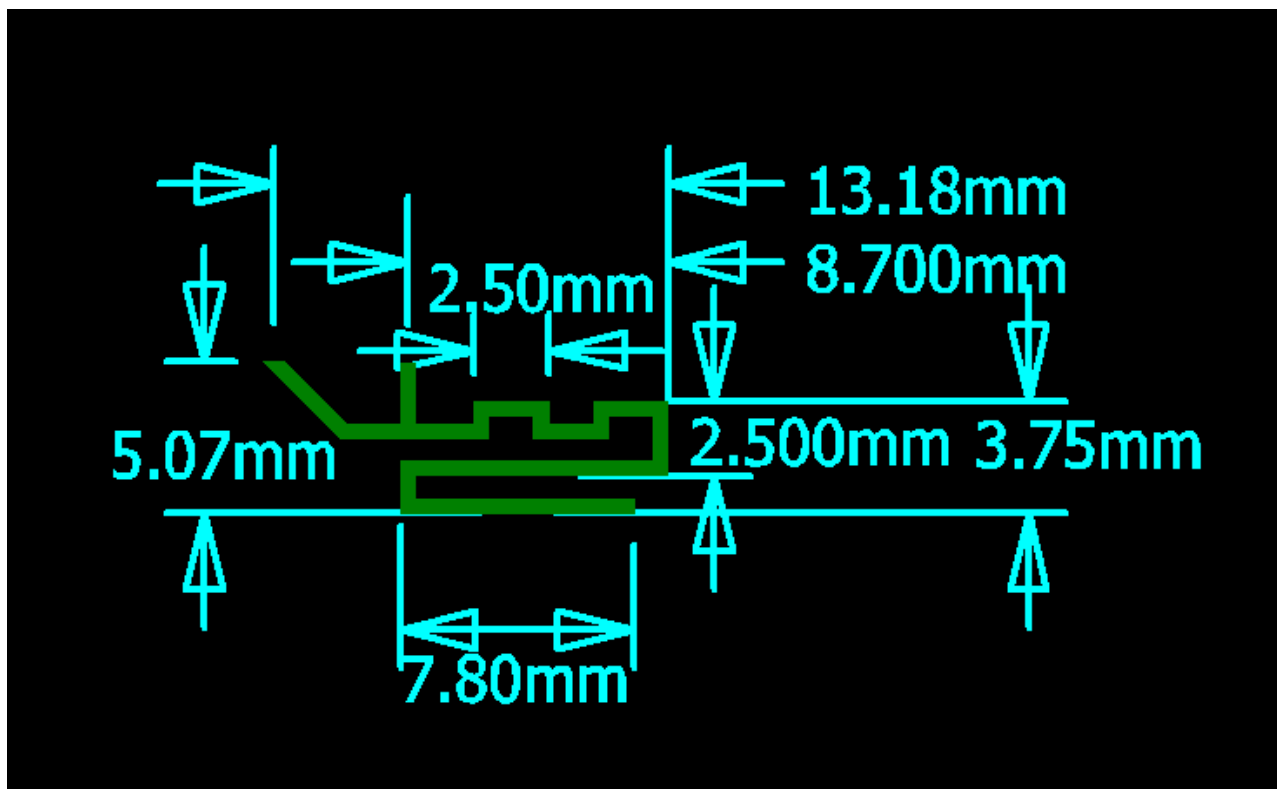
Standard: Isolation $\leq$ -20dB

Isolation of BT antenna



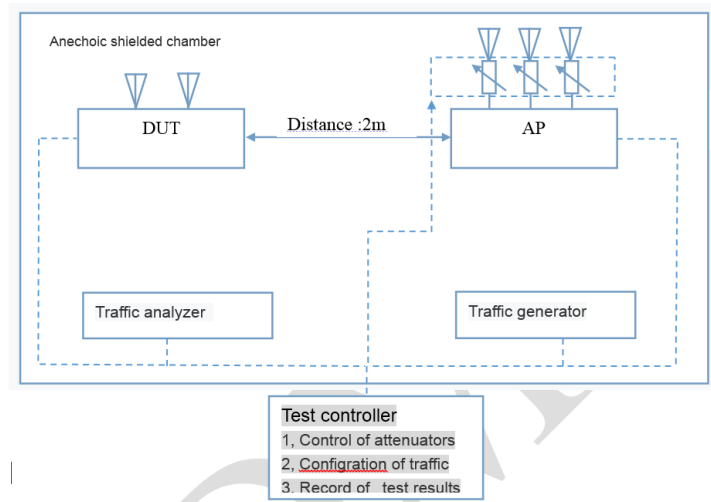
Isolation of BT antenna

3.1.4 Drawing 产品结构图(BT Antenna)



## 4.Throughput Test

### 4.1 Test Setup



1. The test setup SHALL locate in the anechoic shielded chamber.
2. A Traffic Generator/Analyzer, sending the Ethernet packets, connects to the LAN interface of the AP. The peer AP antenna is located in 2 meter to the DUT.
3. Additional attenuation is added in each RF chain of AP to simulate the incremental distance.
4. The host SHALL send the Ethernet packet at the maximum rate which the DUT can achieve theoretically.
5. TCP connection SHALL be used for Ethernet packet transmission in the test.