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## **INTRODUCTION 5G/4G/3G Multiband Antenna 3M Adhesive Mount T Type**

### **CP62-5G/4G/3G-2.5M-SMA/M**

**LTE/5G/4G/3G/GSM**

**690-960/1710-2170/2500-2700/3200-3600MHz 2-5dBi**

#### **1.NERAL DESCRIPTION**

| <b>Model No</b>                 | <b>Products P/N</b>     |
|---------------------------------|-------------------------|
| <b>CP62-5G/4G/3G-2.5M-SMA/M</b> | <b>CP62-5G-2.5M-SMA</b> |

**Below is a table summarizing the CP62 Type 5G/4G/3G/GSM antenna design specification**

#### **1. LTE 5G/4G/3G Multi-band Antenna Electrical Properties**

| <b>Parameter</b>                          | <b>Description</b>                              |
|---|---|
| <b>Communication System</b>               | <b>5G/4G/3G/AMPS/GSM/DCS/UMTS/LTE</b>           |
| <b>Frequency Band (MHz)</b>               | <b>690~960/1710~2170/2500~2700/3200~3600MHz</b> |
| <b>Average Efficiency</b>                 | <b>46%/62%/58%/50%/58%</b>                      |
| <b>Average Gain</b>                       | <b>2.0~5.0dBi</b>                               |
| <b>Nominal Impedance</b>                  | <b>50 ohm</b>                                   |
| <b>Polarization</b>                       | <b>Vertical</b>                                 |
| <b>Radiation Pattern</b>                  | <b>Omni-directional</b>                         |
| <b>Return Loss</b>                        | <b>Please See Data</b>                          |
| <b>V.S.W.R</b>                            | <b>&lt;1.5 : 1</b>                              |
| <b>Note: Gain includes the cable loss</b> |   |

#### **1.2 LTE/5G/4G/3G Multi-band Antenna Mechanical Properties**

| <b>Parameter</b>     | <b>Description</b>             |
|----------------------|--------------------------------|
| <b>Antenna Type</b>  | <b>External Antenna T Type</b> |
| <b>Mount Type</b>    | <b>Adhesive (3M) Mount</b>     |
| <b>Antenna cable</b> | <b>RG174 Low loss cable</b>    |

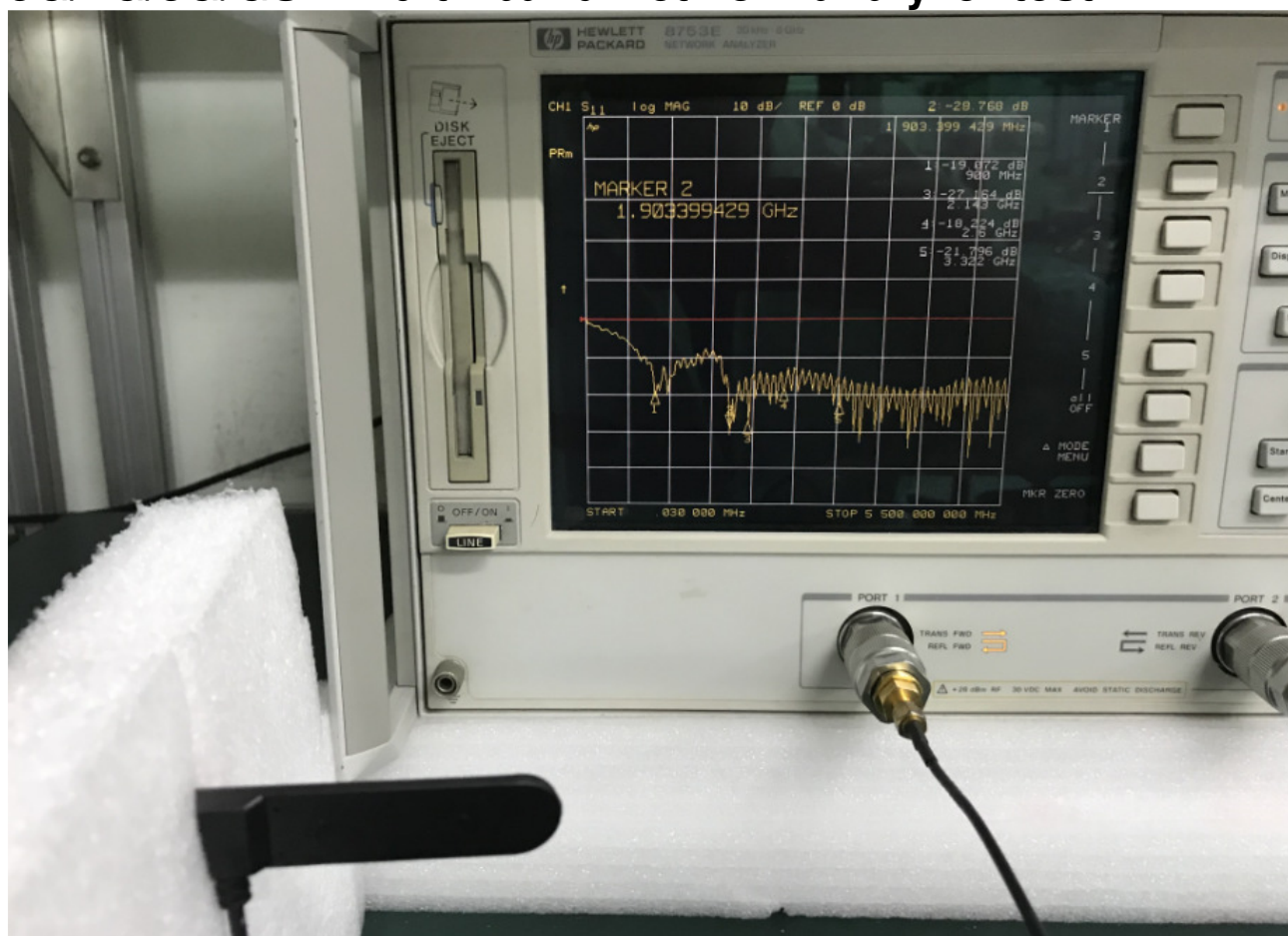
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|                             |                 |
|-----------------------------|-----------------|
| Connector Type              | SMA 180°(Male)  |
| Antenna Cable Total Length  | 2500mm ±50mm    |
| Antenna Color               | Black           |
| Waterproof                  | 100% waterproof |
| Operating Temperature Range | -35 °C~+75 °C   |
| Storage Temperature Range   | -40 °C~+80 °C   |

**1-3**

## **5G/4G/3G/GSM Multi -band Network analyzer test**



## **2. Antenna Appearance Size:**

**L : 115.5mm**

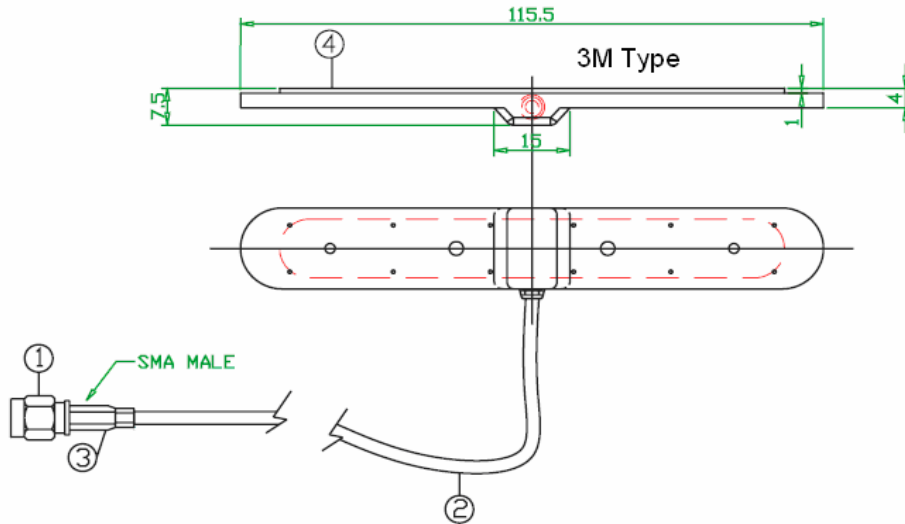
**W : 16.5 mm**

**H: 4.0mm**

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5G antenna CP62-5G/4G/3G-2.5M-SMA/M  
690-960/1710-2170/2500-2700/3200-3600MHZ

| NO. | NAME             | Material | color | QTY |
|-----|------------------|----------|-------|-----|
| 01  | SMA male         | Copper   | Cr    | 01  |
| 02  | RG-174U          | Teflon   |       | 01  |
| 03  | Heat shrink tube | PVC      | Black | 01  |
| 04  | Tape             | Foam     | Gray  | 01  |



| <br>第三角法<br>Third Angle Projection | 客戶 / CUSTOMER            |                    | 圖名 / TITLE     |                  | mm                     | 1:1                          | 1                       |                                 |
|------------------------------------|--------------------------|--------------------|----------------|------------------|------------------------|------------------------------|-------------------------|---------------------------------|
|                                    | 公差 / Tolerance           | ± 0.1mm<br>± 0.05° | 檔名 / File name | 料號 / Item number | Unit<br>核准<br>Approved | Scale<br>比例<br>審查<br>Checked | Weight<br>製圖<br>Drawing | Version<br>版本<br>設計<br>Designed |
|                                    | 表面精度 / Surface Roughness | 一般                 | CP62 . dwg     | CP62             |                        |                              |                         |                                 |

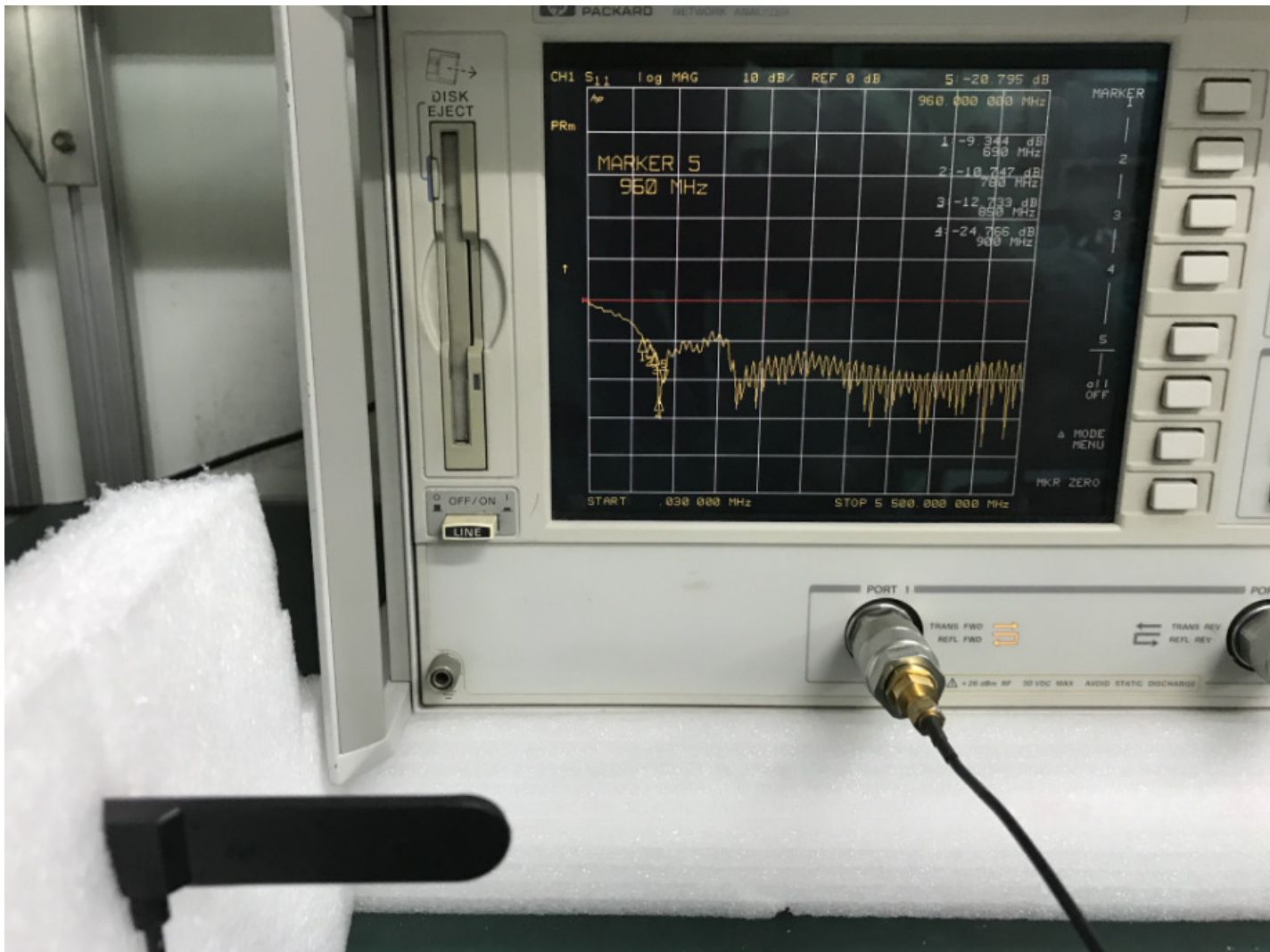


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## **3. 5G/4G/3G/GSM Multi -band Network analyzer test Frequency : 690~960/1710~2170/2500~2700/3200-3600MHz**

### **3-1 Detail band test - Frequency : 690~960MHz**

| <b>Frequency</b> | <b>Return loss</b> | <b>V.S.W.R</b> | <b>Reflection coefficient</b> |
|------------------|--------------------|----------------|-------------------------------|
| 690.000MHz       | -9.3447dB          | 2.035:1        | 0.341                         |
| 780.000MHz       | -10.747dB          | 1.818:1        | 0.290                         |
| 850.000MHz       | -12.733dB          | 1.600:1        | 0.231                         |
| 900.000MHz       | -24.766dB          | 1.123:1        | 0.058                         |
| 960.000MHz       | -20.795dB          | 1.201:1        | 0.091                         |



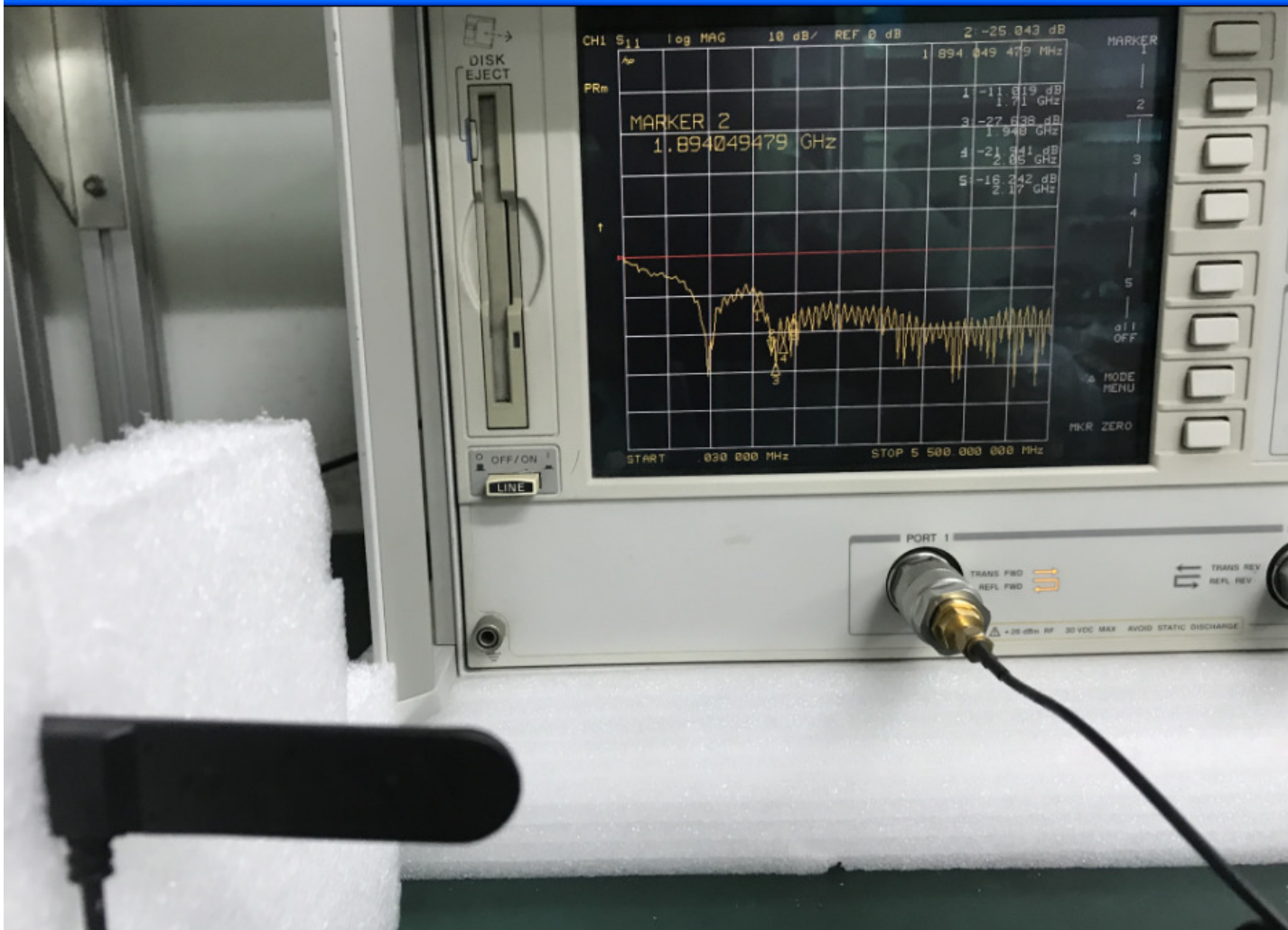


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## 3-2 Detail band test - Frequency : 1710~2170MHz

| Frequency  | Return loss | V.S.W.R | Reflection coefficient |
|------------|-------------|---------|------------------------|
| 1710.00MHz | -11.019dB   | 1.783:1 | 0.281                  |
| 1894.00MHz | -25.043dB   | 1.119:1 | 0.056                  |
| 1948.00MHz | -27.638dB   | 1.087:1 | 0.042                  |
| 2050.00MHz | -21.941dB   | 1.174:1 | 0.080                  |
| 2170.00MHz | -16.242dB   | 1.364:1 | 0.154                  |

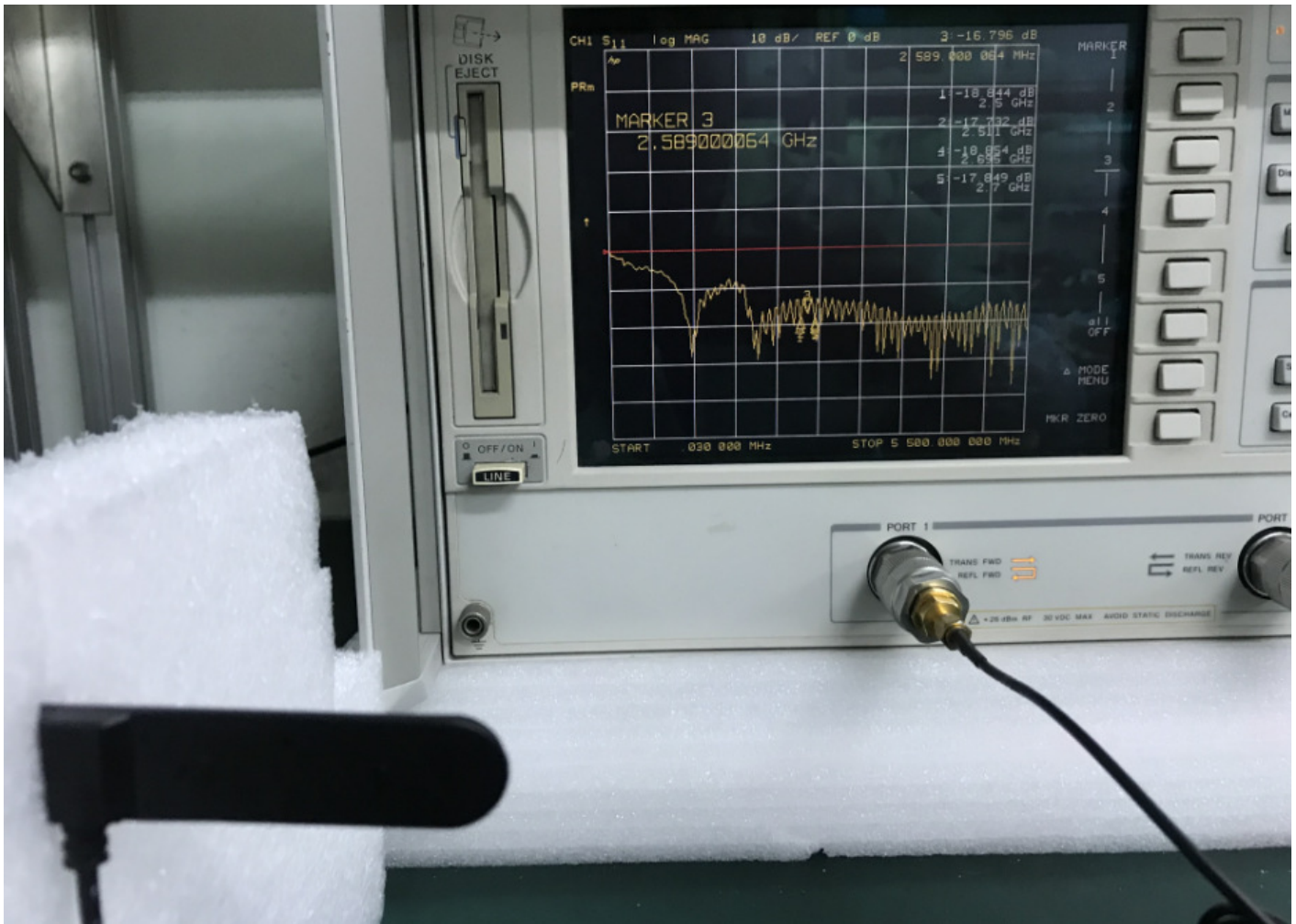
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## 3-3 Detail band test - Frequency : 2500-2700MHz

| Frequency  | Return loss | V.S.W.R | Reflection coefficient |
|------------|-------------|---------|------------------------|
| 2500.00MHz | -18.844dB   | 1.364:1 | 0.154                  |
| 2511.00MHz | -17.732dB   | 1.298:1 | 0.130                  |
| 2589.00MHz | -16.769dB   | 1.339:1 | 0.145                  |
| 2695.00MHz | -18.854dB   | 1.258:1 | 0.114                  |
| 2700.00MHz | -17.849dB   | 1.294:1 | 0.128                  |



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## **3-4 Detail band test - Frequency : 3200~3600MHz**

| <b>Frequency</b>  | <b>Return loss</b> | <b>V.S.W.R</b> | <b>Reflection coefficient</b> |
|-------------------|--------------------|----------------|-------------------------------|
| <b>3200.00MHz</b> | <b>-14.703dB</b>   | <b>1.451:1</b> | <b>0.184</b>                  |
| <b>3329.00MHz</b> | <b>-21.304dB</b>   | <b>1.188:1</b> | <b>0.086</b>                  |
| <b>3441.00MHz</b> | <b>-19.200dB</b>   | <b>1.246:1</b> | <b>0.110</b>                  |
| <b>3520.00MHz</b> | <b>-27.321dB</b>   | <b>1.090:1</b> | <b>0.043</b>                  |
| <b>3606.00MHz</b> | <b>-27.364dB</b>   | <b>1.090:1</b> | <b>0.043</b>                  |

