



**Kepu Shen**

**Shenzhen Kaipu Shen Communication Technology Co., LTD**

**Shenzhen cape deep communication technology co.,LTD**

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# **Antenna Test Report**

**Customer: Heart to heart**

**Project name: TB17**

**Radio frequency: Engineer Pang**

**Date: 2025.03.28**

**Version: V0.1**



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## Catalogue

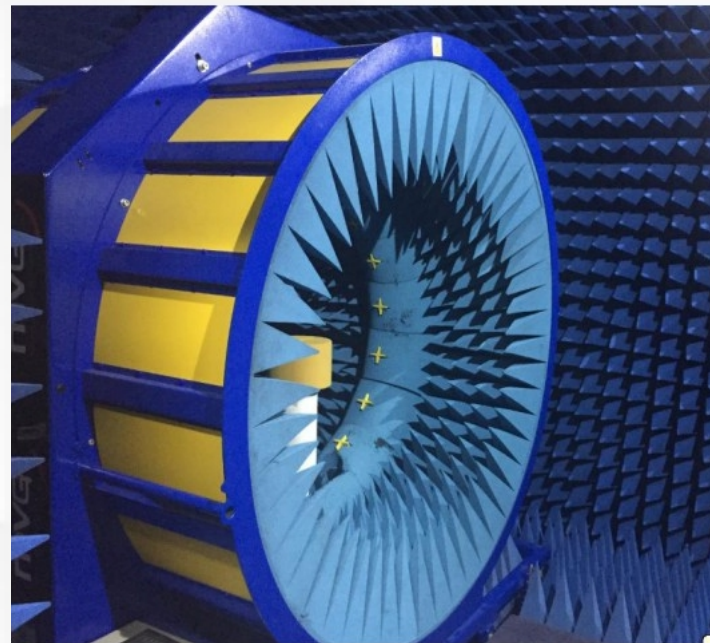
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1. Project Basic Information
2. Laboratory test environment and equipment
3. Whole machine environment analysis
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# Laboratory test environment and equipment

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| Test item                               | Testing facility                                                       |
|-----------------------------------------|------------------------------------------------------------------------|
| S11、S12、VSWR、LOSS                       | Network analyzer E5071B and E5062A                                     |
| Efficiency、Gain<br>3D Radiation Pattern | Satimo SG16 darkroom, GP7*4*3 darkroom, E5071B                         |
| TRP、TIS                                 | Satimo SG16 darkroom, GP7*4*3 darkroom, 8960, CMW500, MT8820C, E4438C, |



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# Project Details

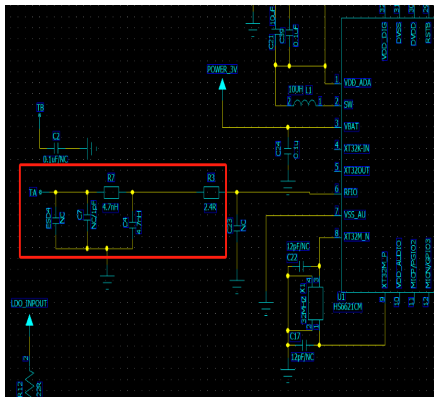
|                                             |              |                  |
|---------------------------------------------|--------------|------------------|
| Full machine description                    | Smartwatch   |                  |
|                                             |              | Band information |
| Antenna type and frequency band information | PDA BLE      | 2400-2480MHZ     |
|                                             |              |                  |
|                                             |              |                  |
| Antenna material                            | Middle frame |                  |



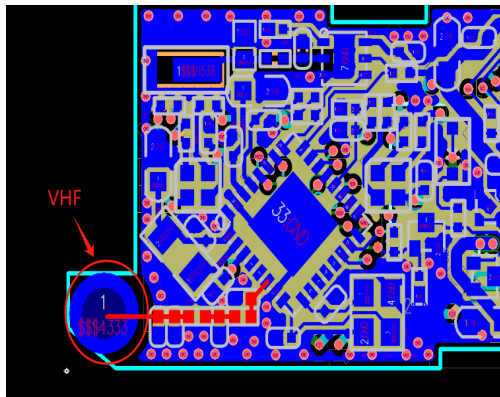
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# New Test Machine BT Antenna Matching Circuit

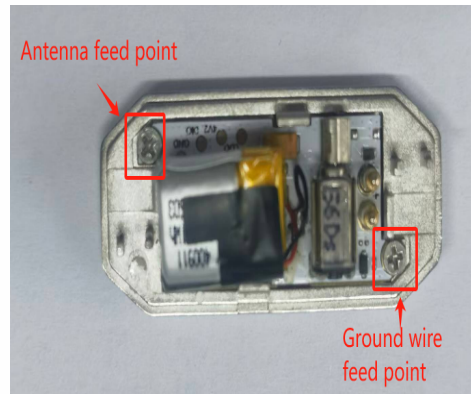
Antenna matching circuit



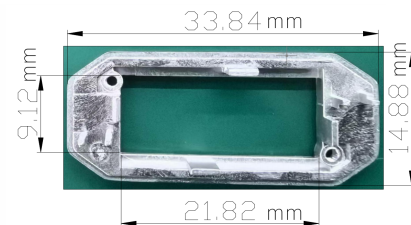
PCB feed point



Zinc Alloy Face Shell Antenna



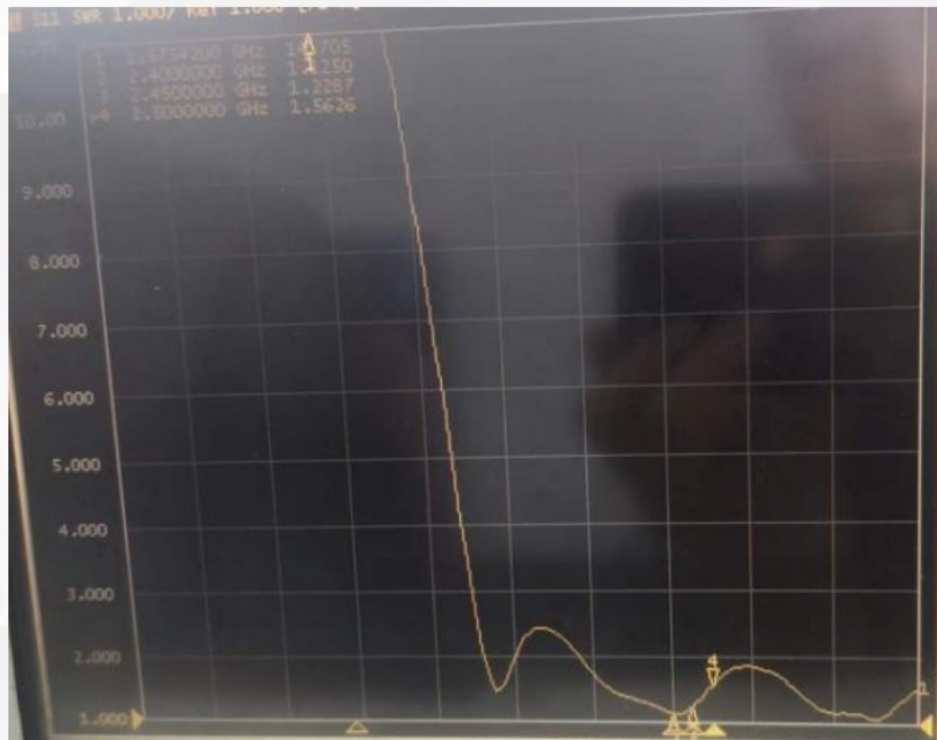
Antenna picture





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## Passive Standing Wave Pattern of the Newly Commissioned Machine





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## New Commissioning Machine Passive Efficiency Diagram

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 2400          | 2.79        | -15.54       | -8.52         |
| 2410          | 2.76        | -15.59       | -8.51         |
| 2420          | 3           | -15.23       | -8.17         |
| 2430          | 2.99        | -15.24       | -8.11         |
| 2440          | 3.26        | -14.86       | -7.74         |
| 2450          | 3.31        | -14.8        | -7.71         |
| 2460          | 3.47        | -14.6        | -7.69         |
| 2470          | 3.34        | -14.76       | -7.87         |
| 2480          | 3.65        | -14.37       | -7.62         |
| 2490          | 3.78        | -14.22       | -7.41         |
| 2500          | 4.09        | -13.89       | -7.17         |

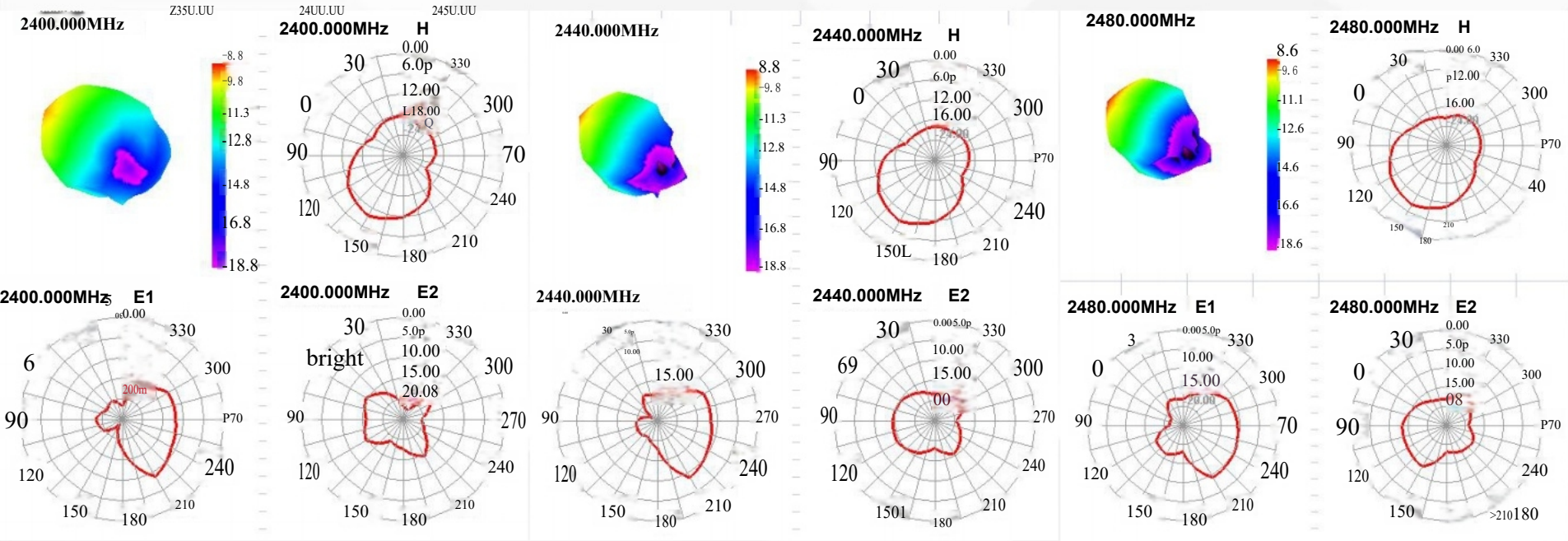
fingerprint



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## New Test Machine Active-Passive Direction Diagram

fingerprint





## Contact Way

**contact way :**

## Radio frequency: Engineer Pang

**Tel: 13819148423**

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