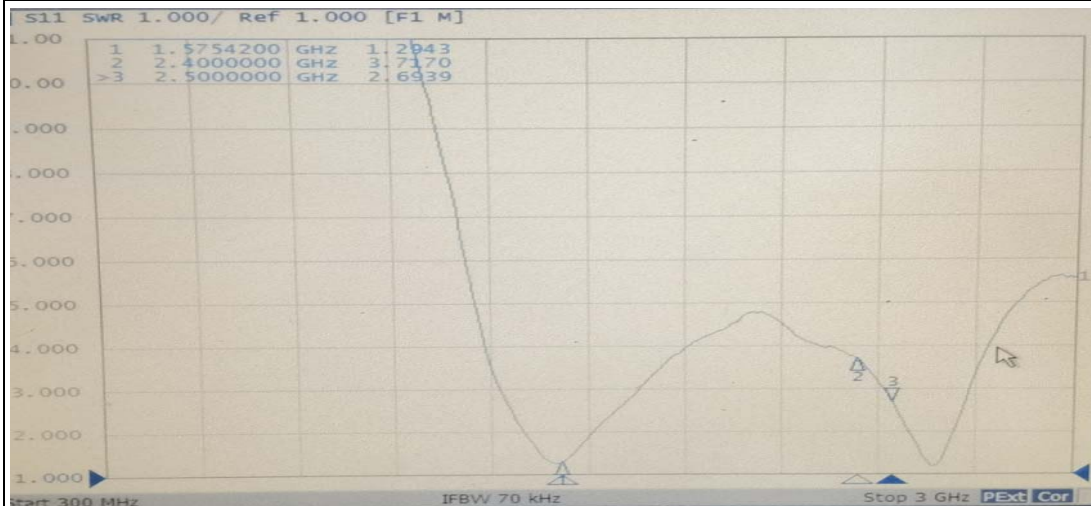


## G12 Antenna Report

## Main content of the report

Preliminary debugging results: 1. Arm GPS antenna efficiency debugging around 7%, 2. Arm BT antenna efficiency debugging around 7%

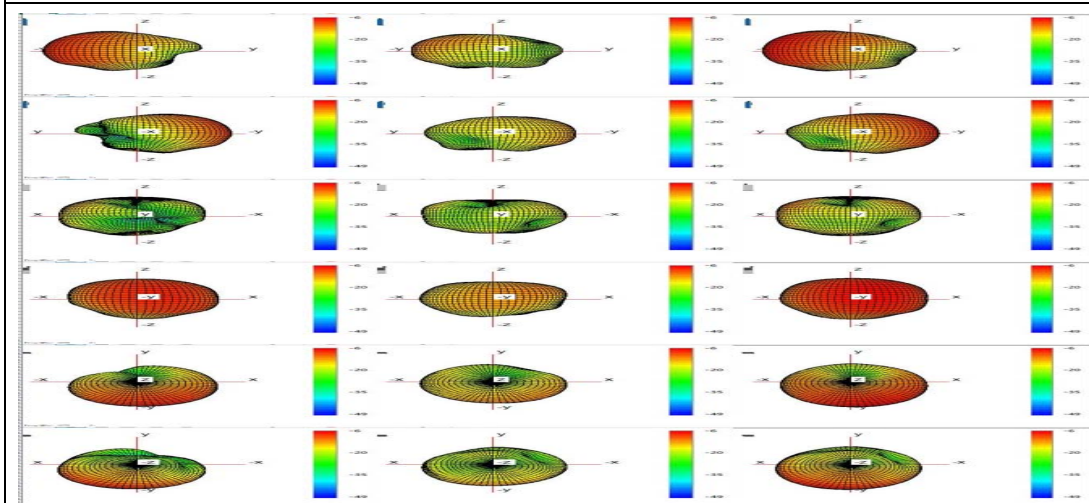
### GPS/BT passive diagram



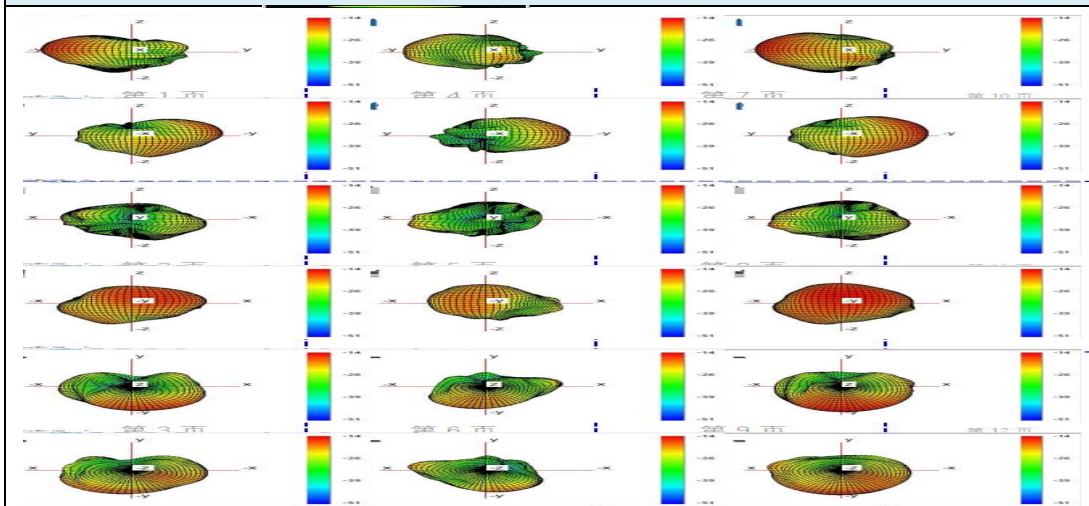
### Test results of antenna efficiency parameters

| BT Arm | 频点   | 效率%   | 效率db  | 增益   | GPS Arm | 频点   | 效率% | 效率db  | 增益   |
|--------|------|-------|-------|------|---------|------|-----|-------|------|
|        | 2400 | 3%    | -15.9 | -5.6 |         | 1550 | 3%  | -14.8 | -4.8 |
|        | 2410 | 3%    | -14.9 | -5.3 |         | 1555 | 4%  | -13.7 | -4.7 |
|        | 2420 | 4%    | -13.9 | -4.9 |         | 1560 | 5%  | -13.5 | -4.5 |
|        | 2430 | 4%    | -13.6 | -4.7 |         | 1565 | 5%  | -12.8 | -4.2 |
|        | 2440 | 5%    | -12.8 | -4.5 |         | 1570 | 6%  | -11.9 | -4.3 |
|        | 2450 | 6%    | -12.4 | -4.2 |         | 1575 | 7%  | -11.4 | -4.1 |
|        | 2460 | 5%    | -12.9 | -4.4 |         | 1580 | 6%  | -12.0 | -4.4 |
|        | 2470 | 4%    | -13.6 | -4.6 |         | 1585 | 5%  | -12.7 | -4.6 |
|        | 2480 | 4%    | -14.2 | -4.9 |         | 1590 | 4%  | -14.3 | -4.7 |
|        | 2490 | 3%    | -14.7 | -5.2 |         |      |     |       |      |
| 2500   | 3%   | -15.7 | -5.4  |      |         |      |     |       |      |

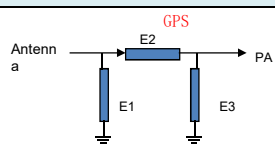
### 1575MHz passive directional diagram/field pattern diagram



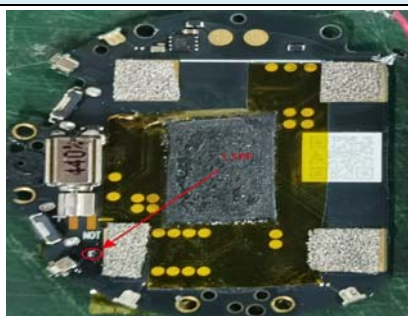
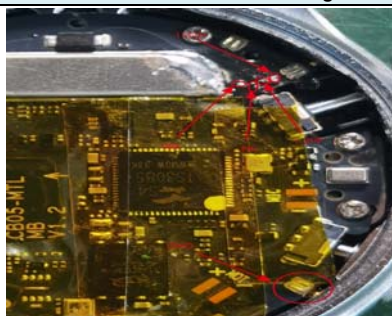
2450MHz passive directional diagram/field pattern diagram



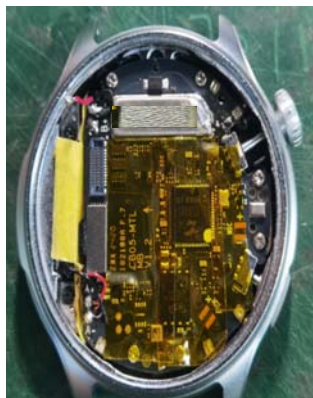
GPS matching



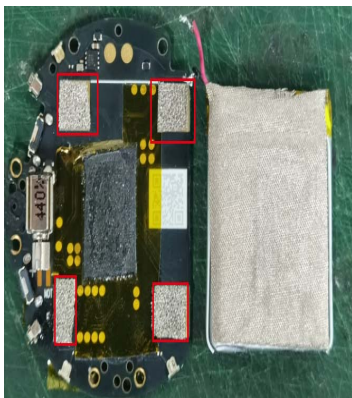
| Element  | Value |
|----------|-------|
| E1(0201) | 15NH  |
| E2(0201) | 1.2PF |
| E3(0201) | NC    |



Environmental treatment



1. Motherboard shielding cover with sponge and screen grounding

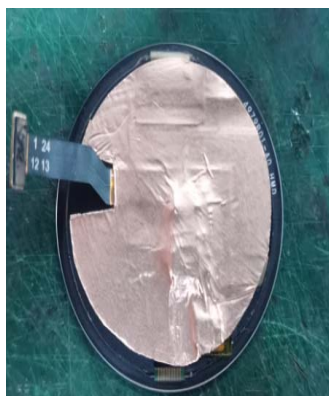


2. There are copper leaks on the back of the motherboard, and sponge pads are attached to the battery for grounding

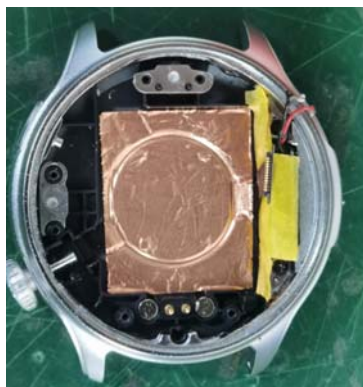


3. The side close to the arm is not covered with conductive cloth, only one side is covered with conductive cloth

#### Environmental treatment

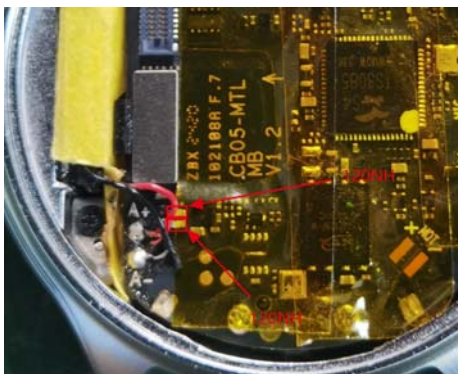


4. Screen with copper foil shielding



5. Stick insulating thick adhesive paper on the horn, and follow the same processing method as CW06. Stick copper foil on the bottom shell to shield the arm from the horn

#### Environmental treatment





1. Pay attention to welding the battery cable and horn cable away from the middle frame, which is the antenna part
2. Speaker with 120NH inductor filter

#### Arm CN value test



#### Antenna testing environment



#### Summarize

1. Environmental treatment should be grounded according to the diagram above: (1) Screen with copper foil to shield interference (2) The bottom shell is covered with copper foil to shield the arm from interference (3) Horn wire position number plus 120NH matching filter (4) The battery grounding is only attached on one side, and there is no conductive cloth attached to the side of the heart rate small board. 2. Matching with the motherboard: (1) 2-point power supply, main circuit parallel 15NH, series 1.2PF. Return to ground at 5 o'clock with 1.5PF, all other GNDs are processed in NC



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