

## Antenna specification for approval

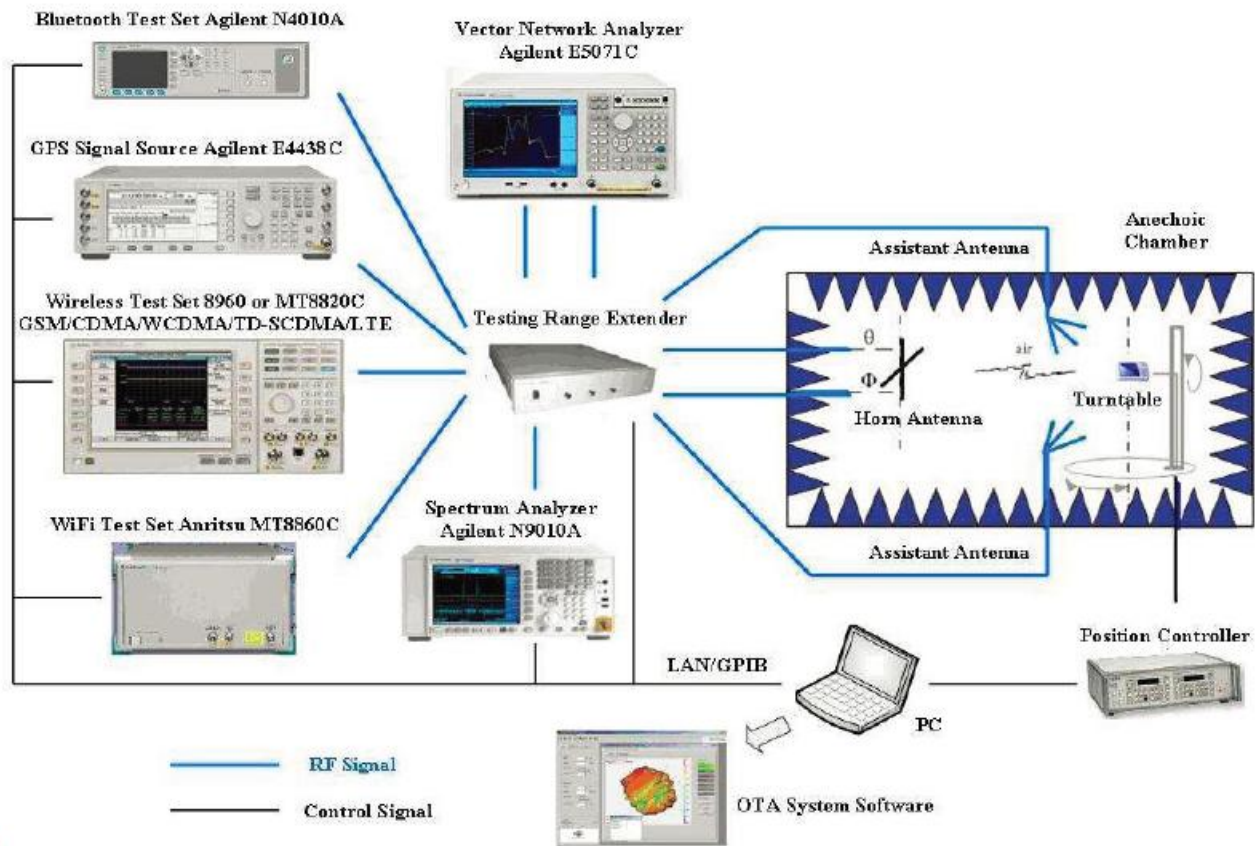
|                             |                                                           |                               |           |
|-----------------------------|-----------------------------------------------------------|-------------------------------|-----------|
| Customer name               | Qihu 360                                                  |                               |           |
| Model                       | G300H-4K Overseas Version -6132 Module -2.4G&5G Dual band |                               |           |
| Antenna frequency           | 2.4GHZ&5GHz                                               |                               |           |
| Antenna function            | WIFI antenna                                              |                               |           |
| Antenna material            | shrapnel                                                  | color                         | silvery   |
| model                       | SF2556A-3B6-A                                             |                               |           |
| Material number             | SF2556A-3B6-A                                             |                               |           |
| Customer Part Number        |                                                           |                               |           |
| Ward accepted the signature |                                                           | Client acknowledges signature |           |
| structure                   |                                                           | Purchase                      |           |
| Document control            |                                                           | structure                     |           |
| radio frequency             |                                                           | engineering                   |           |
| To examine                  |                                                           | QC                            |           |
| Responsible LTT             |                                                           | To examine                    |           |
| date<br>2025.05.19          | Seal area                                                 | date<br>2025.05.19            | Seal area |

| Serial number | Certification number | Material type      | Date of issue | Remarks  |
|---------------|----------------------|--------------------|---------------|----------|
| 1             | SHAEC24025471005     | Tinned copper wire | 2024-11-25    | One year |
| 2             | SHAEC24027284565     | halogen            | 2024-12-06    | One year |
| 3             | SHAEC24027480902     | Adhesive           | 2024-12-06    | One year |
| 4             | SHAEC24029171725     | FEP sheath         | 2024-12-26    | One year |
| 5             | SHAEC24027284563     | FEP insulation     | 2024-12-05    | One year |
| 6             | SZXEC24002306404     | Tin wire           | 2024-07-24    | One year |
| 7             | SZXEC24002306408     | Tin                | 2024-07-24    | One year |
| 8             | ETR24600712          | Printing ink       | 2024-06-14    | One year |
| 9             | A2250132593101001E   | Substrate          | 2025-03-10    | One year |
| 10            | CANEC24028865417     | EVA foam           | 2025-01-03    | One year |
| 11            | A2240439752101001    | Conductive cloth   | 2024-07-29    | One year |
| 12            | SZXEC24002471802     | Gold plating       | 2024-08-08    | One year |

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## one:Device support&testable antenna types



| Antenna function                                    | frequency range                                             | Testing instruments                                  | Testing method                                                   | Testing standards                                                |
|-----------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|
| 2G antenna (GSM)                                    | 824MHz-960MHz,<br>1710MHz-1990MHz                           | 5071B, 8960, OTA darkroom                            | Active testing, passive testing                                  | Soward standards, customer requirements                          |
| 3G antenna (WCDMA/TDSCDMA/CDMA-EVDO/2000)           | 824MHz-960MHz,<br>1710MHz-2170MHz                           | 5071B, 8960, OTA darkroom                            | Active testing, passive testing                                  | Soward standards, customer requirements                          |
| 4G天线 (LTE-FDD/LTE-TDD)                              |                                                             | 5071B, CMW500, SP8011, OTAdarkroom                   | Active testing, passive testing                                  | Soward standards, customer requirements                          |
| WIFI antenna                                        | 2.4GHz-2.48GHz,<br>5.15GHz-5.35GHz,<br>5.725GHz-5.825GHz    | 5071B, CMW500, OTAdarkroom, Router, PC               | Active testing, passive testing, APK testing, throughput testing | Soward standards, customer requirements                          |
| BT antenna                                          | 2.4GHz-2.48GHz                                              | 5071B, OTAdarkroom, Bluetooth Speaker                | Active testing, passive testing, actual testing                  | Soward standards, customer requirements                          |
| Positioning antenna (GPS, GLONASS, Beidou, Galileo) | 1575.42MHz ± 10MHz<br>1602MHz±0.5625MHz<br>1561MHz±2.046MHz | 5071B, OTAdarkroom, APK                              | Active testing, passive testing, actual testing                  | Soward standards, customer requirements                          |
| NFC antenna                                         | 13.56MHz                                                    | 5071B, Specialized testing fixture, OTAdarkroom, APK | Passive testing and actual measurement                           | Soward standards, customer requirements                          |
| Remote control antenna                              | 433MHz                                                      | 5071B, OTAdarkroom                                   | Passive testing and actual measurement                           | Soward standards, customer requirements                          |
| NB_IOT                                              | with LTE-FDD                                                | CMW500 (high-end version)                            | Active testing, passive testing                                  | Under construction (power standard basically consistent with 4G) |

## two:overview

### (1)Antenna performance

- 1.This approval sheet supports for MID project.Shrapnel antennas include in this project. This report is for the performance of WIFI antenna.
- 2.Antenna shape size: Meet the requirement of MID
- 3.Antenna band: 2.4GHz~5GHz
- 4.Antenna material: Antenna material meet the requirement of MID
- 5.Adhesive performance: Adhesive performance meet the requirement of MID
- 6.Antenna performance meet the spec below:

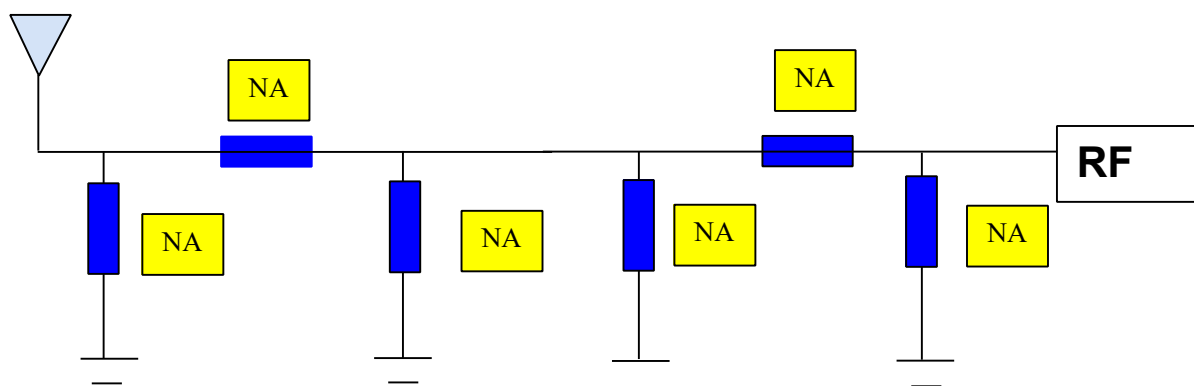
| Description            | 2.4GHz~5GHz               | Units |
|------------------------|---------------------------|-------|
| VSWR                   | $\leq 2.0$                |       |
| Average Antenna Gain   | $\geq -4.5$               | dB    |
|                        |                           |       |
| Feed Impedance         | 50 ohms                   |       |
| Operating Temperature  | -40 to +85 deg C          |       |
| Polarization / Azimuth | Linear / Omni-directional |       |

### (2)Mechanical Information

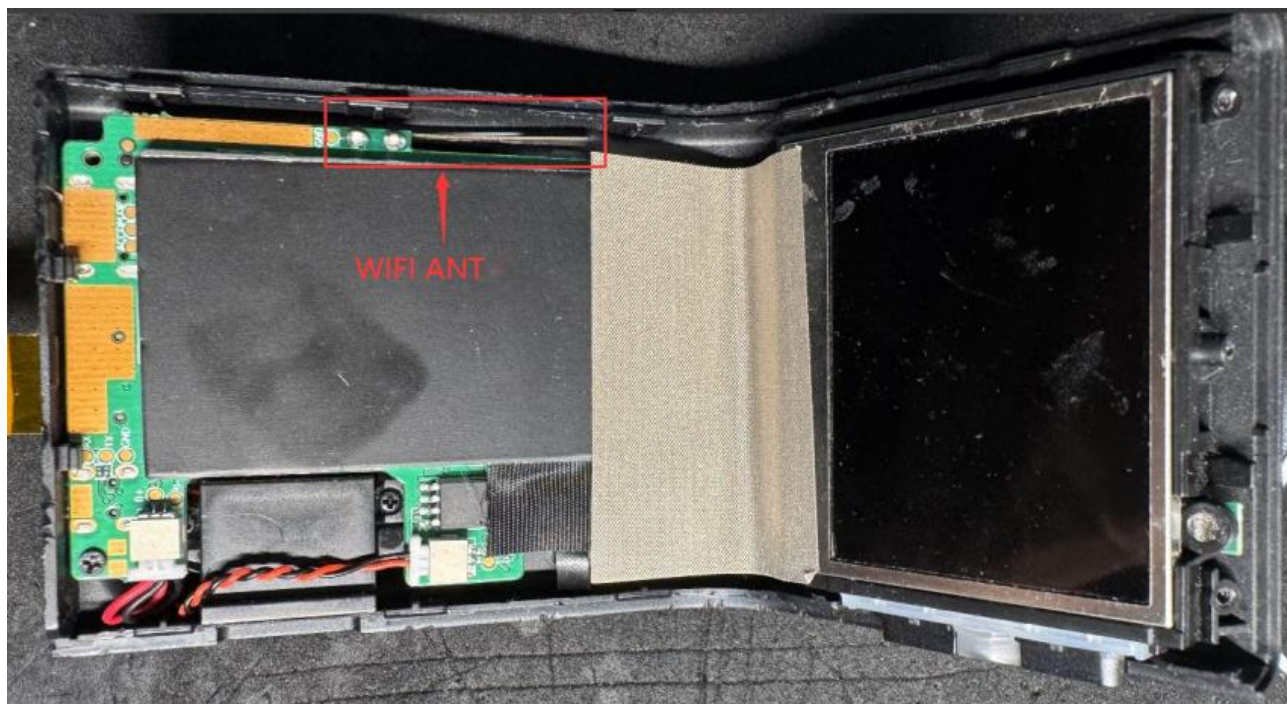
| Mechanical Dimension  |                  |
|-----------------------|------------------|
| Cable Length          | NA               |
| Description           | WIFI antenna     |
| Material              | Shrapnel         |
| Coaxial Cable         | NA               |
| Environmental         |                  |
| Operation Temperature | -40 to +85 deg C |
| Storage Temperature   | -40 to +85 deg C |

## three: Match circuit diagrams, machine images, and antenna images

### (1) matching circuit

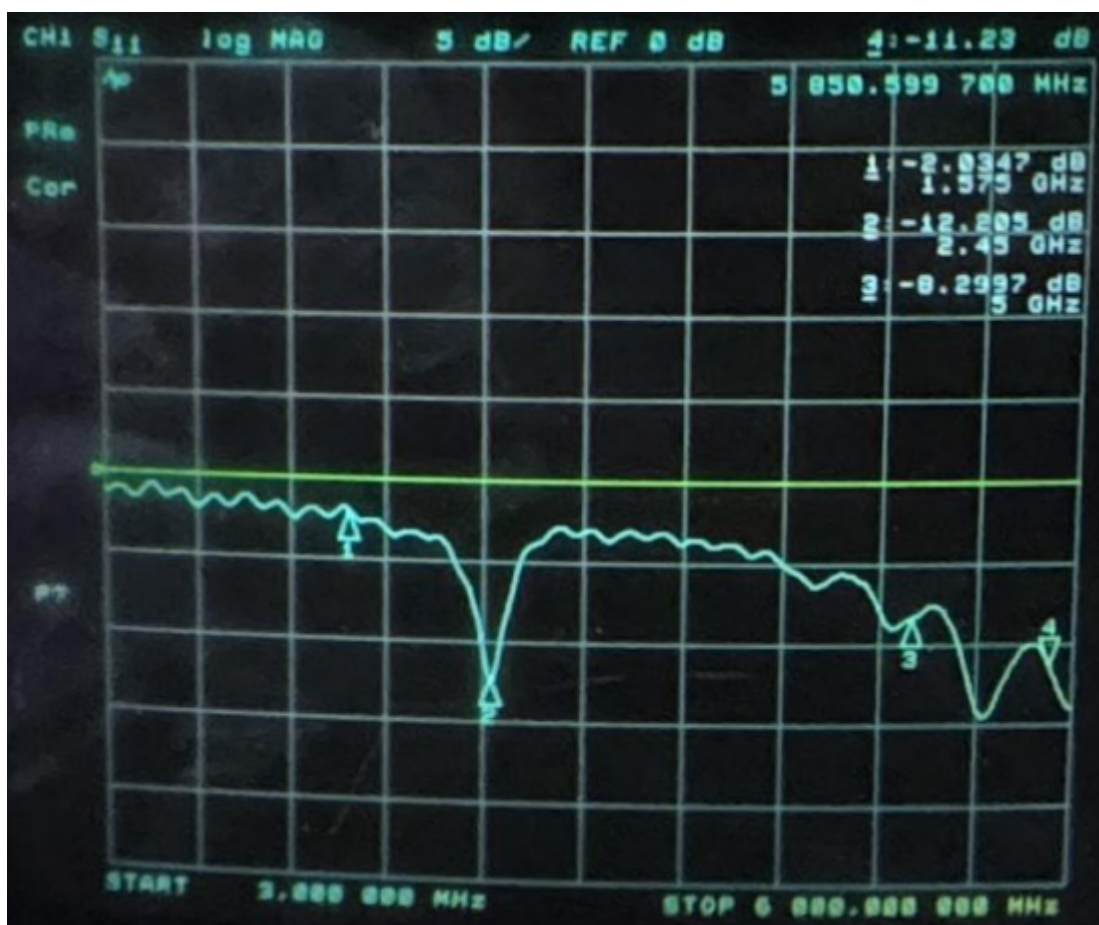


### (2) Machine images&antenna images





## four:Antenna Standing Wave Ratio&Antenna Efficiency (VSWR)



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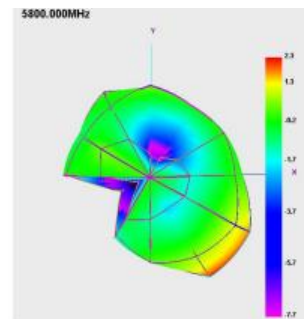
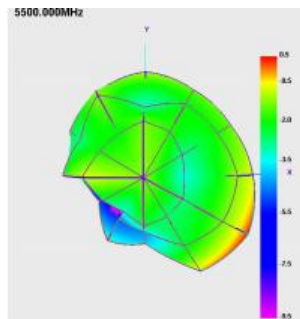
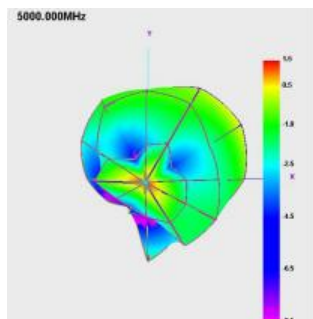
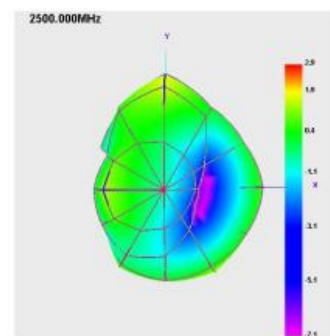
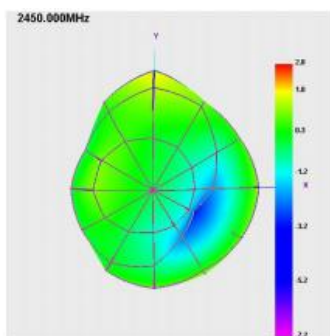
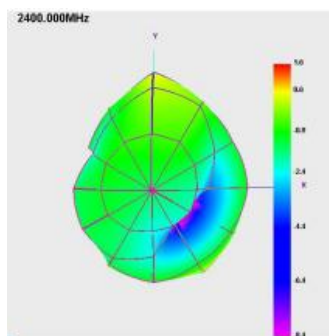
| Passive Test For 2.4G |             |              |               |               |            |            |             |             |                      |                    |              |              |
|-----------------------|-------------|--------------|---------------|---------------|------------|------------|-------------|-------------|----------------------|--------------------|--------------|--------------|
| Freq<br>(MHz)         | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Gain<br>(dBd) | UHS<br>(%) | DHS<br>(%) | Max<br>(dB) | Min<br>(dB) | Directivity<br>(dBi) | Beamwidth<br>(3dB) | AttH<br>(dB) | AttV<br>(dB) |
| 2400                  | 33.79       | -4.71        | 1.58          | -0.57         | 23.345     | 30.444     | 1.58        | -13.99      | 4.28                 | 60                 | 48.8         | 48.37        |
| 2410                  | 35.16       | -4.54        | 1.8           | -0.35         | 22.841     | 32.321     | 1.8         | -18.02      | 4.39                 | 0                  | 48.75        | 48.39        |
| 2420                  | 42.89       | -3.68        | 2.57          | 0.42          | 26.105     | 36.788     | 2.57        | -17.39      | 4.59                 | 0                  | 49.41        | 49.14        |
| 2430                  | 45.18       | -3.45        | 2.83          | 0.68          | 27.23      | 37.951     | 2.83        | -17.35      | 4.69                 | 0                  | 49.46        | 49.18        |
| 2440                  | 48.34       | -3.16        | 3.04          | 0.89          | 28.586     | 39.757     | 3.04        | -16.95      | 4.69                 | 0                  | 49.98        | 49.71        |
| 2450                  | 45.29       | -3.44        | 2.75          | 0.6           | 27.283     | 38.004     | 2.75        | -16.76      | 4.61                 | 0                  | 49.51        | 49.21        |
| 2460                  | 46.71       | -3.31        | 2.74          | 0.59          | 27.697     | 39.016     | 2.74        | -16.27      | 4.5                  | 0                  | 49.47        | 49.17        |
| 2470                  | 41.98       | -3.77        | 2.35          | 0.2           | 25.599     | 36.383     | 2.35        | -15.86      | 4.42                 | 30                 | 48.99        | 48.63        |
| 2480                  | 41.28       | -3.84        | 2.21          | 0.06          | 25.302     | 35.981     | 2.21        | -15.02      | 4.33                 | 30                 | 49.31        | 48.95        |
| 2490                  | 43.76       | -3.59        | 2.4           | 0.25          | 26.272     | 37.486     | 2.4         | -14.09      | 4.36                 | 0                  | 49.18        | 48.93        |
| 2500                  | 48.95       | -3.10        | 2.88          | 0.73          | 28.238     | 40.712     | 2.88        | -13.03      | 4.49                 | 0                  | 50.23        | 50.02        |

| Passive Test For 5G-WIFI |             |              |               |               |            |            |             |             |                      |                    |              |              |
|--------------------------|-------------|--------------|---------------|---------------|------------|------------|-------------|-------------|----------------------|--------------------|--------------|--------------|
| Freq<br>(MHz)            | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Gain<br>(dBd) | UHS<br>(%) | DHS<br>(%) | Max<br>(dB) | Min<br>(dB) | Directivity<br>(dBi) | Beamwidth<br>(3dB) | AttH<br>(dB) | AttV<br>(dB) |
| 5000                     | 41.12       | -3.86        | 1.47          | -0.68         | 20.779     | 20.339     | 1.47        | -12.86      | 5.33                 | 0                  | 57.26        | 55.86        |
| 5100                     | 37.87       | -4.22        | 0.07          | -2.08         | 16.931     | 20.942     | 0.07        | -13.64      | 4.28                 | 0                  | 57.2         | 56.24        |
| 5200                     | 41.83       | -3.78        | 0.84          | -1.31         | 17.979     | 23.855     | 0.84        | -12.74      | 4.63                 | 0                  | 56.96        | 56.12        |
| 5300                     | 48.05       | -3.18        | 0.76          | -1.39         | 21.82      | 26.225     | 0.76        | -12.9       | 3.94                 | 0                  | 58.41        | 57.7         |
| 5400                     | 44.25       | -3.54        | 0.49          | -1.66         | 20.265     | 23.988     | 0.49        | -19.34      | 4.03                 | 90                 | 57.25        | 56.5         |
| 5500                     | 35.27       | -4.53        | 0.47          | -1.68         | 16.404     | 18.868     | 0.47        | -20.44      | 5                    | 90                 | 56.18        | 55.67        |
| 5600                     | 42.37       | -3.73        | 1.02          | -1.13         | 19.869     | 22.502     | 1.02        | -17.13      | 4.75                 | 120                | 56.67        | 56.39        |
| 5700                     | 41          | -3.87        | 1.35          | -0.8          | 18.773     | 22.228     | 1.35        | -17.16      | 5.22                 | 120                | 56.24        | 55.88        |
| 5800                     | 47.68       | -3.22        | 2.31          | 0.16          | 22.784     | 24.894     | 2.31        | -19.17      | 5.53                 | 30                 | 56.72        | 56.25        |
| 5900                     | 36.77       | -4.35        | 0.79          | -1.36         | 19.359     | 17.408     | 0.79        | -18.5       | 5.14                 | 30                 | 56.71        | 56.24        |
| 6000                     | 34.2        | -4.66        | 1.85          | -0.3          | 18.798     | 15.401     | 1.85        | -15.36      | 6.51                 | 30                 | 56.85        | 56.73        |

## five:Active data

| 802.11b : 11Mbps 20M |        |        | 802.11a : 54Mbps 20M |        |        |
|----------------------|--------|--------|----------------------|--------|--------|
| 1                    | 6      | 11     | 36                   | 64     | 165    |
| 2412                 | 2437   | 2462   | 5180                 | 5320   | 5825   |
| 16.6                 | 17.13  | 17.83  | 13.55                | 13.15  | 12.15  |
| -78.93               | -80.49 | -77.35 | -66.06               | -65.6  | -67.32 |
| 802.11n : MCS7 20M   |        |        | 802.11n : MCS7 20M   |        |        |
| 1                    | 6      | 11     | 36                   | 64     | 165    |
| 2412                 | 2437   | 2462   | 5180                 | 5320   | 5825   |
| 15.02                | 15.8   | 15.8   | 13.21                | 13.91  | 13.23  |
| -60.69               | -58.75 | -58.24 | -65.42               | -67.05 | -65.76 |
| 802.11g : 54Mbps 20M |        |        |                      |        |        |
| 1                    | 6      | 11     |                      |        |        |
| 2412                 | 2437   | 2462   |                      |        |        |
| 15.19                | 15.45  | 15.17  |                      |        |        |
| -65.15               | -64.76 | -63.05 |                      |        |        |

## seven:3D pattern



## seven:structural drawings

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## eight:Package Drawing

### 1. Packaging photos (pictures):

|                                                                                                   |                                                                                                  |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1、Photos or pictures of individual material packaging                                             | 2、Photos or pictures of single-layer placement of inner packaging                                |
|  <p>notes:</p>   |  <p>notes:</p> |
| 3、Photos or pictures of the outer packaging                                                       | 4、Supplier material packaging anti-counterfeiting mark                                           |
|  <p>notes:</p> | <p>notes:</p>                                                                                    |

### 2. Material Packaging Information Form:

| Serial Number                                                                                                                                  | Material name    | material specification | material               | Is it anti-static | Quantity of single box packaging | Single box packaging weight (KG) | notes |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------|------------------------|-------------------|----------------------------------|----------------------------------|-------|
| 1                                                                                                                                              | WIFI antenna     | 25.80*5.70*0.3mm       | nickel silver          | deny              | NA                               | NA                               |       |
| 2                                                                                                                                              | external packing | 26.2*20*20mm           | Corrugated paper (B-B) | deny              | NA                               |                                  |       |
| The shipping packaging method is (4): 1. Roll packaging; 2. Disk installation; 3. Bulk; 4. Carton packaging; 5. Rubber box packaging; 6. Other |                  |                        |                        |                   |                                  |                                  |       |

# nine: Inspection standards

## Inspection standards

|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------|------------------|----------------------|------------|-----------|
| customer                          | Qihu 360                                                                                                                                        | Product name and specifications                                                                          | SF2556A-3B6-A         | Number of samples                           | 3PCS             | Sample delivery date | 2025.05.19 |           |
| Inspection standards              | <input checked="" type="checkbox"/> normal inspection <input type="checkbox"/> tightened inspection <input type="checkbox"/> Reduced inspection |                                                                                                          |                       |                                             |                  |                      |            |           |
| Sampling method                   | MIL-STD-105E Sampling Table AQL:0.040%                                                                                                          |                                                                                                          |                       |                                             |                  |                      |            |           |
| Sampling number                   | 10                                                                                                                                              |                                                                                                          |                       |                                             | Sampling results | OK                   |            |           |
| project                           | inspection content                                                                                                                              | Inspection standards                                                                                     | Testing method        | Inspection results                          |                  |                      | judge      |           |
| Packaging inspection              | IQC inspection                                                                                                                                  | 1.Packaging method that meets customer requirements, without mixing.                                     |                       | OK                                          |                  |                      | qualified  |           |
|                                   |                                                                                                                                                 | 2.Accurate quantity and clear spare parts                                                                |                       | OK                                          |                  |                      | qualified  |           |
|                                   |                                                                                                                                                 | 3.Clear, complete, and error free labeling, with clear markings on the tail box                          |                       | OK                                          |                  |                      | qualified  |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
| Dimensional and visual inspection | IQC inspection                                                                                                                                  | 1.Main body size inspection, meeting accuracy requirements (main body external dimensions and thickness) | Calipers/microimeters | Standard size                               |                  |                      |            | qualified |
|                                   |                                                                                                                                                 |                                                                                                          |                       | Outline Tolerance Positive or negative 0.01 | Sample 1         | Sample 2             | Sample 3   |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       | long                                        | 25.80            | 25.80                | 25.80      |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       | wide                                        | 5.70             | 5.70                 | 5.70       |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       | tall                                        | 0.30             | 0.30                 | 0.30       |           |
|                                   |                                                                                                                                                 | 2.The color is consistent with the drawing requirements, with no color difference                        | 样品对比                  | OK                                          |                  |                      | qualified  |           |
|                                   |                                                                                                                                                 | 3.The surface is free of indentation, dirt, burrs, and oxidation                                         | 目测                    | OK                                          |                  |                      | qualified  |           |
|                                   |                                                                                                                                                 | 4.Surface treatment must comply with the drawings and whether tin has been applied                       | 目测/烙铁实验               | OK                                          |                  |                      | qualified  |           |
| other                             |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
|                                   |                                                                                                                                                 |                                                                                                          |                       |                                             |                  |                      |            |           |
| Final judgment                    | <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG&                                                                             |                                                                                                          |                       |                                             |                  |                      |            |           |

approval: Yang Wende to examine: Tang Liuxing tabulation: Li Tingting