

# Product specification

|                           |              |                                   |                                              |
|---------------------------|--------------|-----------------------------------|----------------------------------------------|
| <b>Model Name:</b>        | <b>TR868</b> | <b>Number :</b>                   | <b>N/A</b>                                   |
| <b>Antenna material :</b> | <b>FPC</b>   | <b>Frequency</b><br><b>Band :</b> | <b>2400~2500 MHz</b><br><b>5150~5850 MHz</b> |
| <b>Item number :</b>      | <b>N/A</b>   | <b>Date :</b>                     |                                              |

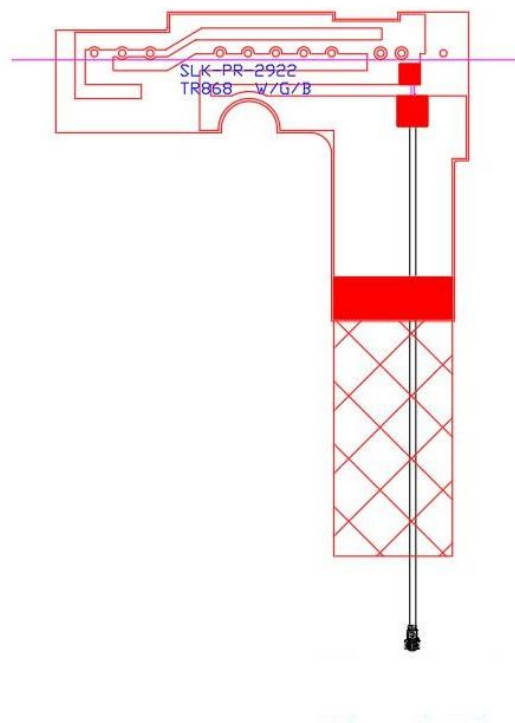
Manufacturer: Shenzhen Yishengbang Technology Co., Ltd  
Address: 101, Building C, Qianwan Hard Technology Industrial Park, Bao'an  
District, Shenzhen

## W/G/B Antenna (2922)

### 1. Explanation of Product number :

**S L K - P R - 2 9 2 2 - M - 1 2 3 I I I - B - 0 . 8 1 D S**

**1                      2                      3                      4                      5**



Product Code:

(1) Customer:

PR:

(2) Project:

2922: SLK-PR-2922 (W/G/B antenna)

(3) Welding Position

M: Middle

(4) Cable Length:

123III: 123\*0.81MM

(5) Cable Color

B: Black

### 2. Features

\*Stable and reliable in performances

\*Compact size

\*RoHS compliance

### 3. Applications

- \* IEEE802.11 (a/b/g/n)
- \* Hand-held devices when W/G/B (802.11a/b/g/n) functions are needed

### 4. Description

Holy bond's FPC antenna series are specially designed for W/G/B (802.11 a/b/g/n) applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

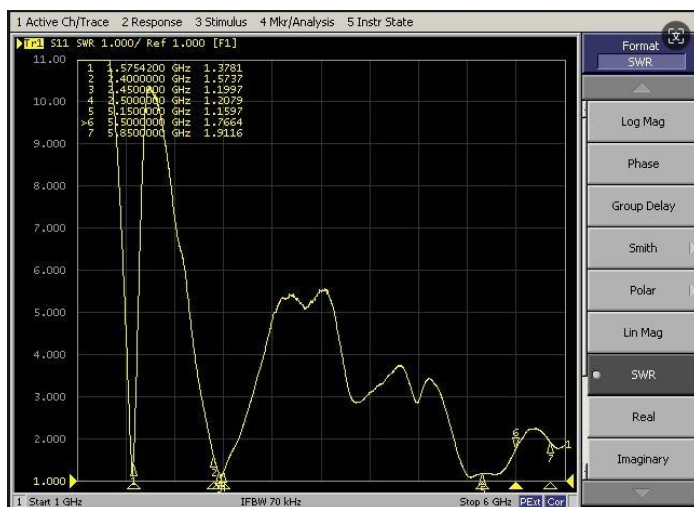
### 5. Electrical Specifications

5-1

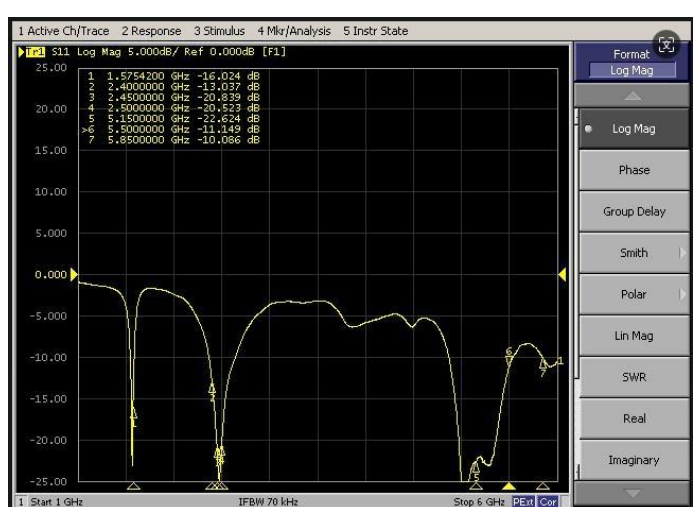
| Characteristics    | Specifications      | Unit     |
|--------------------|---------------------|----------|
| Outline Dimensions | 29.55x22.15x 0.12   | mm       |
| Center Frequency   | 2.4-2.5/5.15-5.85   | GHz      |
| VSWR               | 3max                |          |
| Impedance          | 50                  | $\Omega$ |
| Polarization       | Linear Polarization |          |

5-2.

VSWR



S11

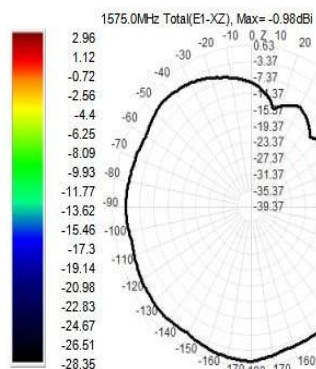
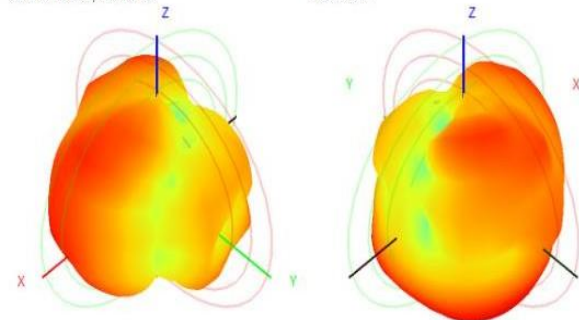


### 5-3.WIFI+GPS Antenna Gain/Efficiency/3D DATE

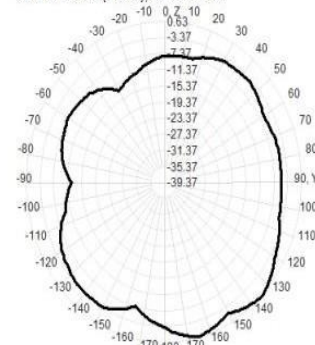
| Frequency (MHz) | Efficiency (dBi) | Gain (dBi) | Efficiency (%) |
|-----------------|------------------|------------|----------------|
| 1570.0          | -4.87            | 1.81       | 32.59          |
| 1575.0          | -4.68            | 1.83       | 34.07          |
| 1580.0          | -4.71            | 1.85       | 33.80          |
| 2400.0          | -4.77            | 1.16       | 33.33          |
| 2410.0          | -4.35            | 1.28       | 36.77          |
| 2420.0          | -4.04            | 1.18       | 39.46          |
| 2430.0          | -3.91            | 1.13       | 40.61          |
| 2440.0          | -4.00            | 1.25       | 39.80          |
| 2450.0          | -4.05            | 1.11       | 39.36          |
| 2460.0          | -3.91            | 1.55       | 40.61          |
| 2470.0          | -4.16            | 1.61       | 38.41          |
| 2480.0          | -3.97            | 1.52       | 40.07          |
| 2490.0          | -4.00            | 1.63       | 39.79          |
| 2500.0          | -4.23            | 1.58       | 37.76          |
| 5150.0          | -5.24            | 2.33       | 29.95          |
| 5350.0          | -5.04            | 1.52       | 31.31          |
| 5550.0          | -5.40            | 2.09       | 28.83          |
| 5750.0          | -5.75            | 2.11       | 26.61          |
| 5850.0          | -5.09            | 2.04       | 31.01          |

1575.0MHz H+V, Eff: 34.1%

Back View

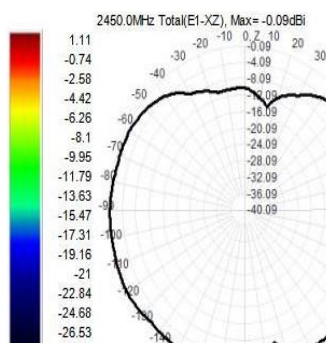
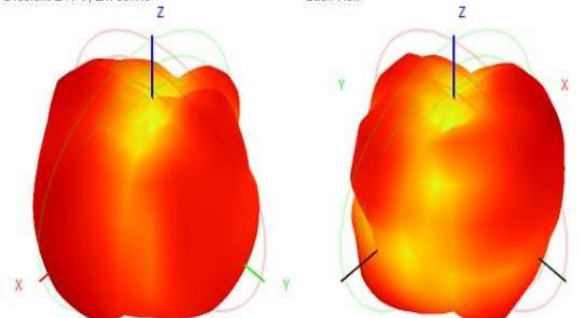


1575.0MHz Total(E2-YZ), Max= 0.63dBi

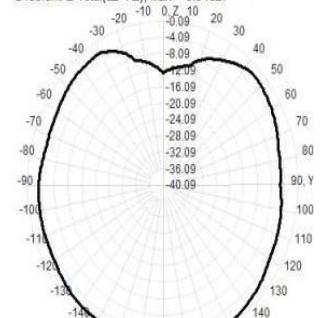


2450.0MHz H+V, Eff: 39.4%

Back View

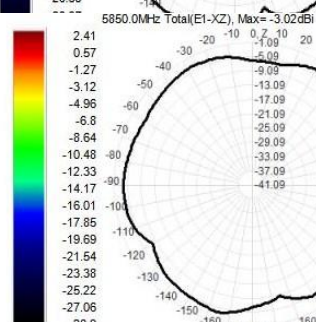
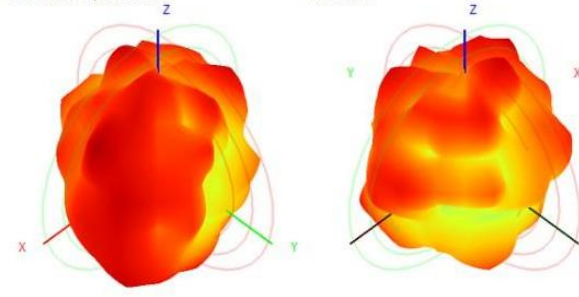


2450.0MHz Total(E2-YZ), Max=- 0.94dBi

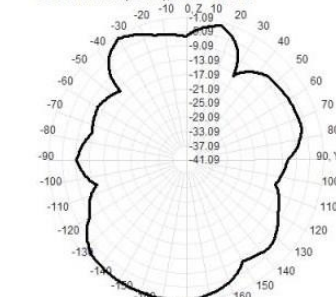


5850.0MHz H+V, Eff: 31.0%

Back View



5850.0MHz Total(E2-YZ), Max=- 1.57dBi



5-4.WIFI throughput test

2.5 WIFI throughput test

|       |             |     |             |                |       |             |     |             |                |
|-------|-------------|-----|-------------|----------------|-------|-------------|-----|-------------|----------------|
| 4]    | 8.01-9.01   | sec | 10.1 MBytes | 84.4 Mbits/sec | ]     | 8.01-9.00   | sec | 12.8 MBytes | 108 Mbits/sec  |
| 4]    | 9.01-10.00  | sec | 11.2 MBytes | 94.8 Mbits/sec | ]     | 9.00-10.01  | sec | 12.9 MBytes | 107 Mbits/sec  |
| 4]    | 10.00-11.00 | sec | 10.4 MBytes | 87.3 Mbits/sec | ]     | 10.01-11.01 | sec | 11.2 MBytes | 95.0 Mbits/sec |
| 4]    | 11.00-12.00 | sec | 11.0 MBytes | 92.4 Mbits/sec | ]     | 11.01-12.01 | sec | 12.6 MBytes | 106 Mbits/sec  |
| 4]    | 12.00-13.00 | sec | 11.1 MBytes | 92.6 Mbits/sec | ]     | 12.01-13.00 | sec | 11.8 MBytes | 99.3 Mbits/sec |
| 4]    | 13.00-14.01 | sec | 10.6 MBytes | 88.7 Mbits/sec | ]     | 13.00-14.01 | sec | 10.9 MBytes | 90.6 Mbits/sec |
| 4]    | 14.01-15.01 | sec | 10.9 MBytes | 91.6 Mbits/sec | ]     | 14.01-15.00 | sec | 13.0 MBytes | 110 Mbits/sec  |
| 4]    | 15.01-16.00 | sec | 10.5 MBytes | 88.3 Mbits/sec | ]     | 15.00-16.01 | sec | 12.8 MBytes | 106 Mbits/sec  |
| 4]    | 16.00-17.00 | sec | 10.8 MBytes | 90.3 Mbits/sec | ]     | 16.01-17.01 | sec | 11.6 MBytes | 98.2 Mbits/sec |
| 4]    | 17.00-18.00 | sec | 10.3 MBytes | 86.4 Mbits/sec | ]     | 17.01-18.01 | sec | 12.4 MBytes | 103 Mbits/sec  |
| 4]    | 18.00-19.01 | sec | 10.9 MBytes | 90.7 Mbits/sec | ]     | 18.01-19.00 | sec | 12.9 MBytes | 109 Mbits/sec  |
| 4]    | 19.01-20.00 | sec | 10.6 MBytes | 89.6 Mbits/sec | ]     | 19.00-20.00 | sec | 12.6 MBytes | 106 Mbits/sec  |
| 4]    | 20.00-21.01 | sec | 9.55 MBytes | 79.3 Mbits/sec | ]     | 20.00-21.02 | sec | 13.2 MBytes | 110 Mbits/sec  |
| 4]    | 21.01-22.00 | sec | 9.44 MBytes | 80.0 Mbits/sec | ]     | 21.02-22.01 | sec | 12.8 MBytes | 107 Mbits/sec  |
| 4]    | 22.00-23.00 | sec | 10.5 MBytes | 87.7 Mbits/sec | ]     | 22.01-23.02 | sec | 12.8 MBytes | 106 Mbits/sec  |
| 4]    | 23.00-24.01 | sec | 10.3 MBytes | 85.9 Mbits/sec | ]     | 23.02-24.00 | sec | 12.6 MBytes | 108 Mbits/sec  |
| 4]    | 24.01-25.00 | sec | 10.5 MBytes | 88.2 Mbits/sec | ]     | 24.00-25.03 | sec | 12.8 MBytes | 104 Mbits/sec  |
| 4]    | 25.00-26.01 | sec | 10.7 MBytes | 90.1 Mbits/sec | ]     | 25.03-26.01 | sec | 12.2 MBytes | 105 Mbits/sec  |
| 4]    | 26.01-27.01 | sec | 11.0 MBytes | 92.1 Mbits/sec | ]     | 26.01-27.00 | sec | 12.6 MBytes | 106 Mbits/sec  |
| 4]    | 27.01-28.00 | sec | 10.8 MBytes | 91.6 Mbits/sec | ]     | 27.00-28.01 | sec | 12.9 MBytes | 108 Mbits/sec  |
| 4]    | 28.00-29.00 | sec | 10.9 MBytes | 91.4 Mbits/sec | ]     | 28.01-29.00 | sec | 11.8 MBytes | 98.8 Mbits/sec |
| 4]    | 29.00-30.00 | sec | 10.7 MBytes | 90.0 Mbits/sec | ]     | 29.00-30.01 | sec | 12.6 MBytes | 106 Mbits/sec  |
| ----- |             |     |             |                | ----- |             |     |             |                |
| ID]   | Interval    |     | Transfer    | Bandwidth      | 0]    | Interval    |     | Transfer    | Bandwidth      |
| 4]    | 0.00-30.00  | sec | 318 MBytes  | 88.9 Mbits/sec | 4]    | 0.00-30.01  | sec | 366 MBytes  | 102 Mbits/sec  |
| 4]    | 0.00-30.00  | sec | 317 MBytes  | 88.7 Mbits/sec | 4]    | 0.00-30.01  | sec | 366 MBytes  | 102 Mbits/sec  |

## 2.5 WIFI throughput test

|       |             |     |             |               |
|-------|-------------|-----|-------------|---------------|
| 4]    | 8.00-9.01   | sec | 26.0 MBytes | 216 Mbits/sec |
| 4]    | 9.01-10.01  | sec | 27.0 MBytes | 226 Mbits/sec |
| 4]    | 10.01-11.00 | sec | 27.4 MBytes | 232 Mbits/sec |
| 4]    | 11.00-12.00 | sec | 26.8 MBytes | 225 Mbits/sec |
| 4]    | 12.00-13.01 | sec | 25.9 MBytes | 216 Mbits/sec |
| 4]    | 13.01-14.00 | sec | 27.4 MBytes | 231 Mbits/sec |
| 4]    | 14.00-15.01 | sec | 28.6 MBytes | 238 Mbits/sec |
| 4]    | 15.01-16.01 | sec | 28.9 MBytes | 241 Mbits/sec |
| 4]    | 16.01-17.00 | sec | 27.8 MBytes | 235 Mbits/sec |
| 4]    | 17.00-18.00 | sec | 27.8 MBytes | 233 Mbits/sec |
| 4]    | 18.00-19.00 | sec | 29.5 MBytes | 247 Mbits/sec |
| 4]    | 19.00-20.00 | sec | 29.2 MBytes | 245 Mbits/sec |
| 4]    | 20.00-21.00 | sec | 28.0 MBytes | 235 Mbits/sec |
| 4]    | 21.00-22.01 | sec | 27.4 MBytes | 229 Mbits/sec |
| 4]    | 22.01-23.00 | sec | 26.8 MBytes | 226 Mbits/sec |
| 4]    | 23.00-24.00 | sec | 28.6 MBytes | 240 Mbits/sec |
| 4]    | 24.00-25.01 | sec | 29.5 MBytes | 244 Mbits/sec |
| 4]    | 25.01-26.01 | sec | 25.8 MBytes | 217 Mbits/sec |
| 4]    | 26.01-27.00 | sec | 24.0 MBytes | 204 Mbits/sec |
| 4]    | 27.00-28.00 | sec | 29.2 MBytes | 245 Mbits/sec |
| 4]    | 28.00-29.00 | sec | 30.4 MBytes | 255 Mbits/sec |
| 4]    | 29.00-30.00 | sec | 27.0 MBytes | 227 Mbits/sec |
| ----- |             |     |             |               |
| ID]   | Interval    |     | Transfer    | Bandwidth     |
| 4]    | 0.00-30.00  | sec | 827 MBytes  | 231 Mbits/sec |
| 4]    | 0.00-30.00  | sec | 827 MBytes  | 231 Mbits/sec |

|       |             |     |             |               |
|-------|-------------|-----|-------------|---------------|
| 4]    | 8.00-9.00   | sec | 29.7 MBytes | 249 Mbits/sec |
| 4]    | 9.00-10.00  | sec | 24.9 MBytes | 209 Mbits/sec |
| 4]    | 10.00-11.00 | sec | 27.3 MBytes | 229 Mbits/sec |
| 4]    | 11.00-12.00 | sec | 26.2 MBytes | 220 Mbits/sec |
| 4]    | 12.00-13.00 | sec | 27.7 MBytes | 232 Mbits/sec |
| 4]    | 13.00-14.01 | sec | 30.1 MBytes | 251 Mbits/sec |
| 4]    | 14.01-15.00 | sec | 31.4 MBytes | 265 Mbits/sec |
| 4]    | 15.00-16.00 | sec | 32.7 MBytes | 273 Mbits/sec |
| 4]    | 16.00-17.00 | sec | 27.6 MBytes | 233 Mbits/sec |
| 4]    | 17.00-18.00 | sec | 27.7 MBytes | 232 Mbits/sec |
| 4]    | 18.00-19.00 | sec | 27.0 MBytes | 226 Mbits/sec |
| 4]    | 19.00-20.00 | sec | 26.2 MBytes | 220 Mbits/sec |
| 4]    | 20.00-21.00 | sec | 25.4 MBytes | 213 Mbits/sec |
| 4]    | 21.00-22.00 | sec | 26.4 MBytes | 222 Mbits/sec |
| 4]    | 22.00-23.00 | sec | 26.3 MBytes | 221 Mbits/sec |
| 4]    | 23.00-24.00 | sec | 25.8 MBytes | 216 Mbits/sec |
| 4]    | 24.00-25.00 | sec | 25.1 MBytes | 210 Mbits/sec |
| 4]    | 25.00-26.00 | sec | 28.3 MBytes | 237 Mbits/sec |
| 4]    | 26.00-27.00 | sec | 31.9 MBytes | 267 Mbits/sec |
| 4]    | 27.00-28.00 | sec | 30.3 MBytes | 254 Mbits/sec |
| 4]    | 28.00-29.00 | sec | 27.0 MBytes | 226 Mbits/sec |
| 4]    | 29.00-30.00 | sec | 29.9 MBytes | 251 Mbits/sec |
| ----- |             |     |             |               |
| ID]   | Interval    |     | Transfer    | Bandwidth     |
| 4]    | 0.00-30.00  | sec | 847 MBytes  | 237 Mbits/sec |
| 4]    | 0.00-30.00  | sec | 847 MBytes  | 237 Mbits/sec |

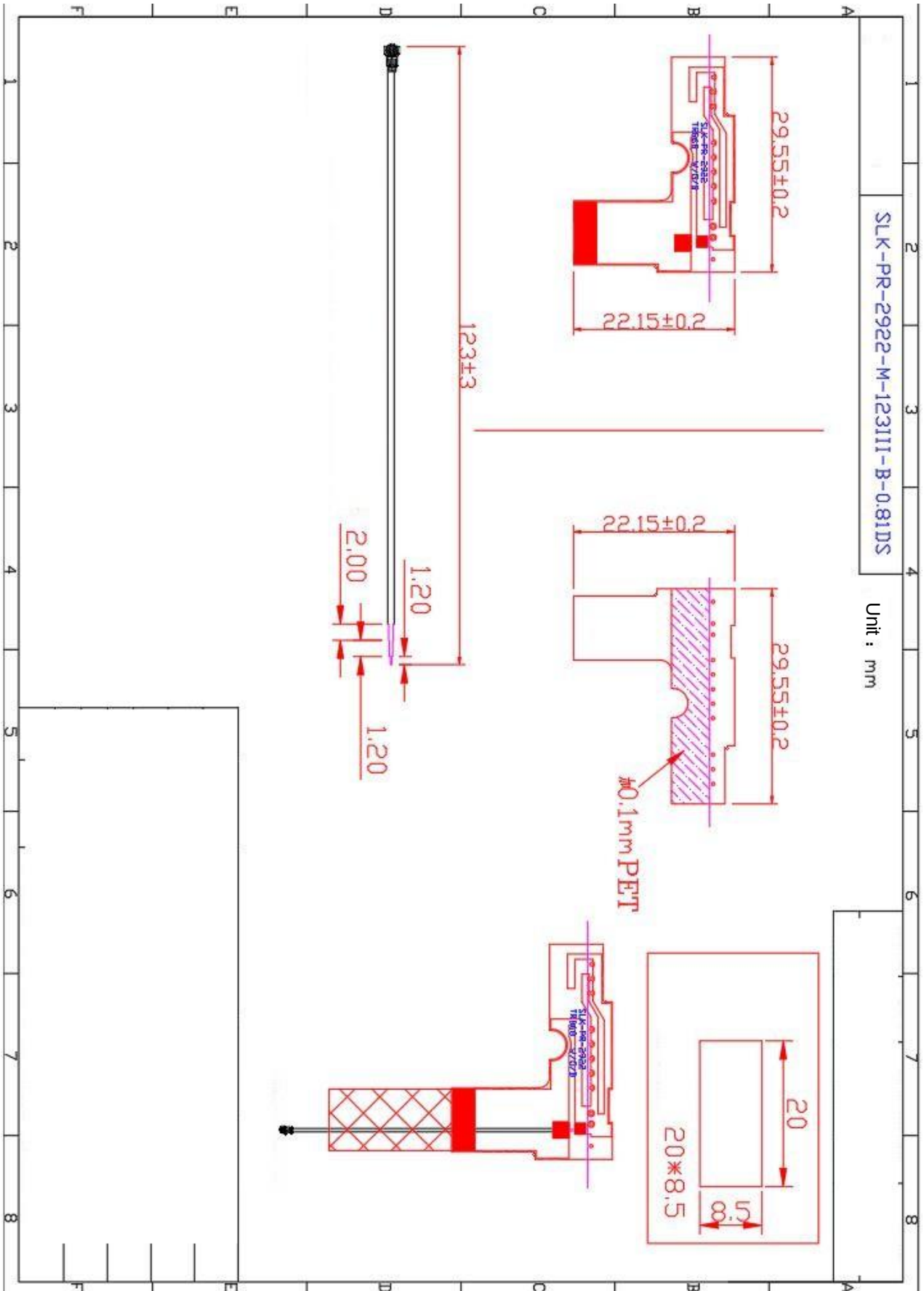
## 5-5.WIFI active test

| WIFI Active testing |        |        |        |
|---------------------|--------|--------|--------|
| Frequency band      | 1      | 6      | 11     |
| B-TRP-11MBps        | 15.76  | 16.03  | 15.99  |
| B-TIS-11MBps        | -81.93 | -80.46 | -81.62 |
| G-TRP-54MBps        | 14.36  | 15.15  | 14.33  |
| G-TIS-54MBps        | -72.43 | -70.61 | -71.72 |
| N-TRP-MCS7          | 14.23  | 15.77  | 14.45  |
| N-TIS-MCS7          | -66.89 | -65.61 | -66.79 |
| Frequency band      | 36     | 149    | 165    |
| A-TRP-54MBps        | 10.40  | 10.98  | 10.68  |
| A-TIS-54MBps        | -70.28 | -71.04 | -71.42 |

5-6.GPS practical Test



6. Antenna Dimensions (unit: mm)



7. Antenna Picture

