

# Shenzhen Yimingshengchang Technology Co., Ltd

## Approval Sheet

### APPROVAL SHEET

Customer	Huashengchang	Specs	BS-20-V1
Part Number	YMY006-BS-20-V1-021-A0	= Frequency Band	2.4G WIFI
Color	Black	Edition	REV:A0
Salesperson	Yang Yiming	Design	Huang He
Structure	Qin Yunlin	Confirm	Huang He
Date	2023.11.29	Signing Date	
Customer confirmation:			
Join hands to create the future			

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## 一、Product Specifications

The report mainly provides parameter testing of the BS-20-V1 antenna performance.

The BS-20-V1 antenna is a 2.4G WIFI antenna. (As shown in Figure 1)

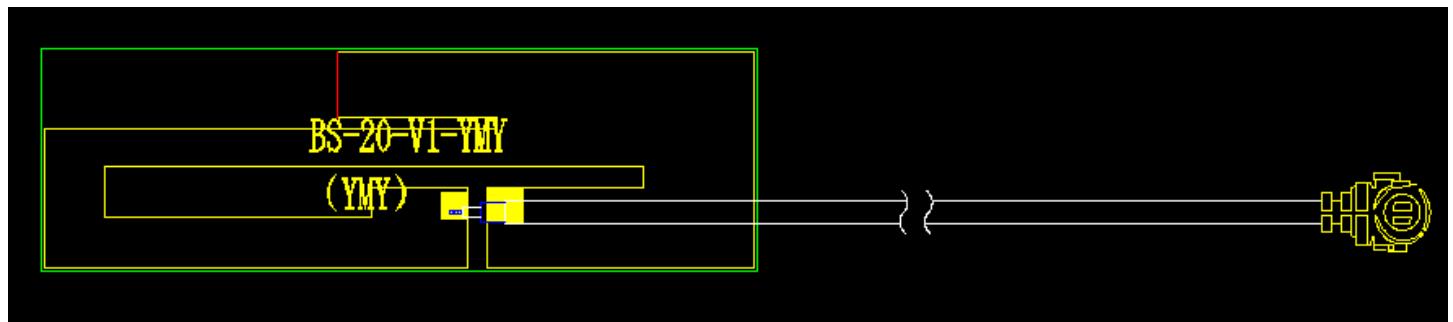
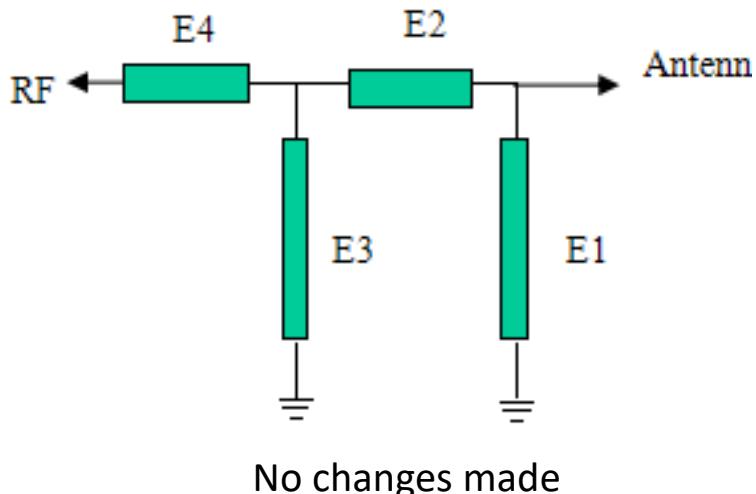


Figure 1 BS-20-V1 antenna

## 二、Electrical Performance

1. Specification Standards: The BS-20-V1 antenna operates in the 2400-2480MHZ frequency band, generating resonance in this band.
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2. Antenna Matching Circuit: The structure of the antenna is FPC + coaxial line (first generation terminal). No change to the match.



### 三、Parameter Testing

1. Testing Setup: VSWR test setup sequentially connected as: E5071B Network Analyzer → 50 Ohm Coaxial Cable → 110mm Copper Tube → Testing Jig. Processing of the testing jig: An SMA-J connector is drawn out with a rigid cable from the 50 Ohm test point of the antenna on the mobile phone PCB, connected to the copper tube with a choke coil, and then connected to other devices in sequence.

2. Testing Results: Everything is normal.

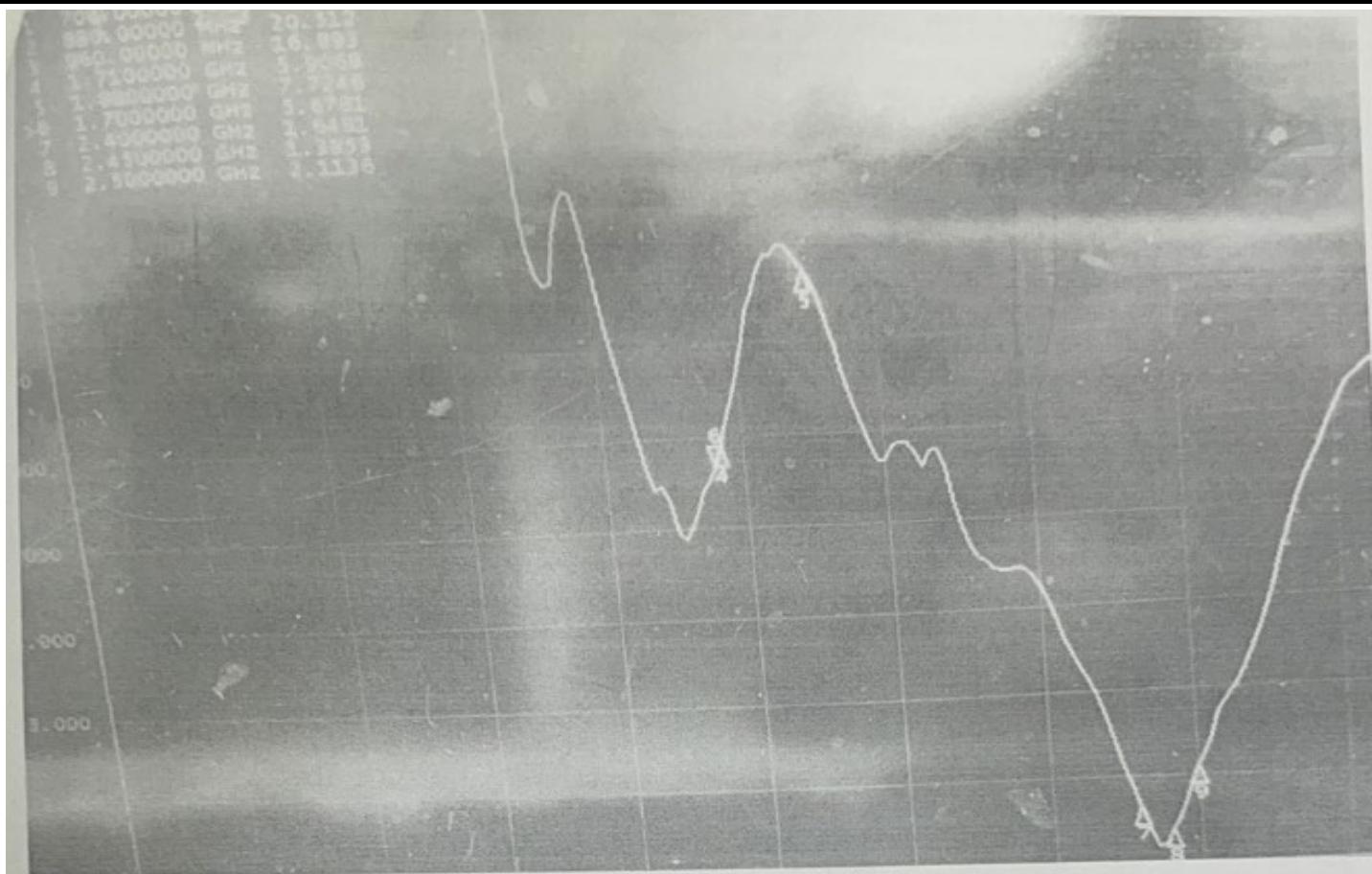
### 四、Active Testing Setup

1. Active testing setup sequentially connected as: Agilent8960 → 50 Ohm Coaxial Cable → Satimo S716 Testing System → Mobile Phone Under Test. Testing Site: YMY Microwave Anechoic Chamber: Testing frequency range is 400MHz—6GHz, quiet zone

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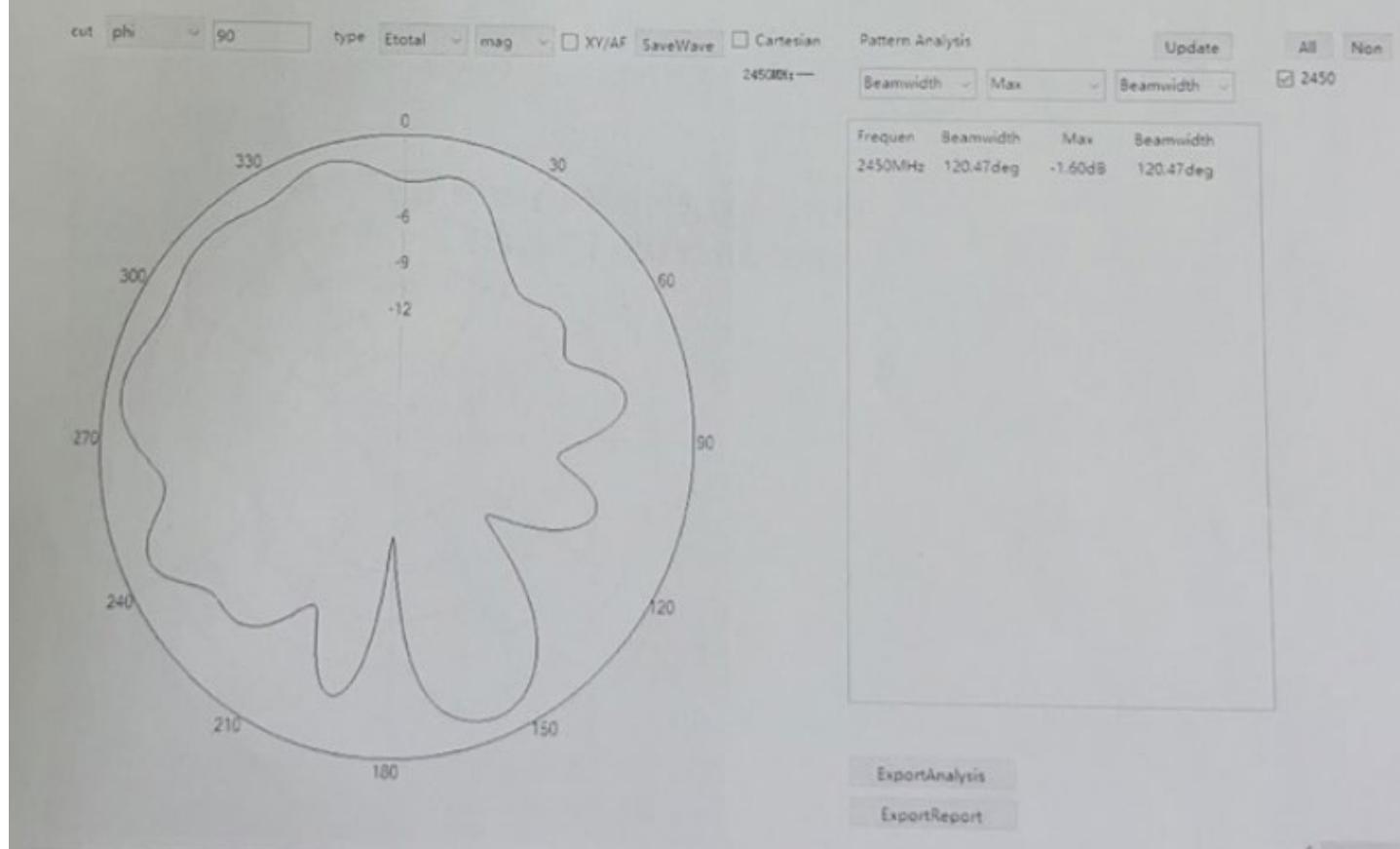
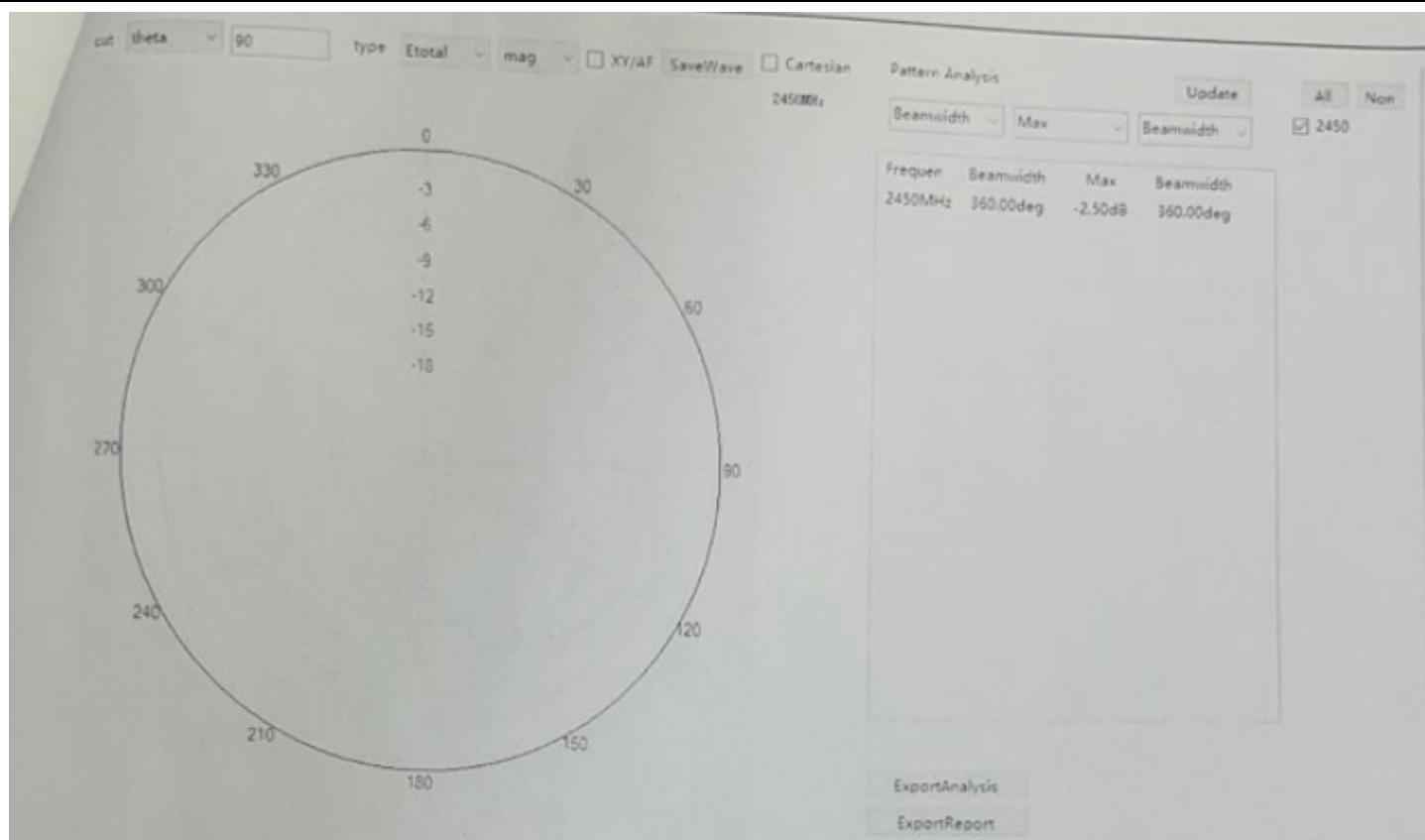
range is 40cm diameter, reflectivity less than -90 dB.

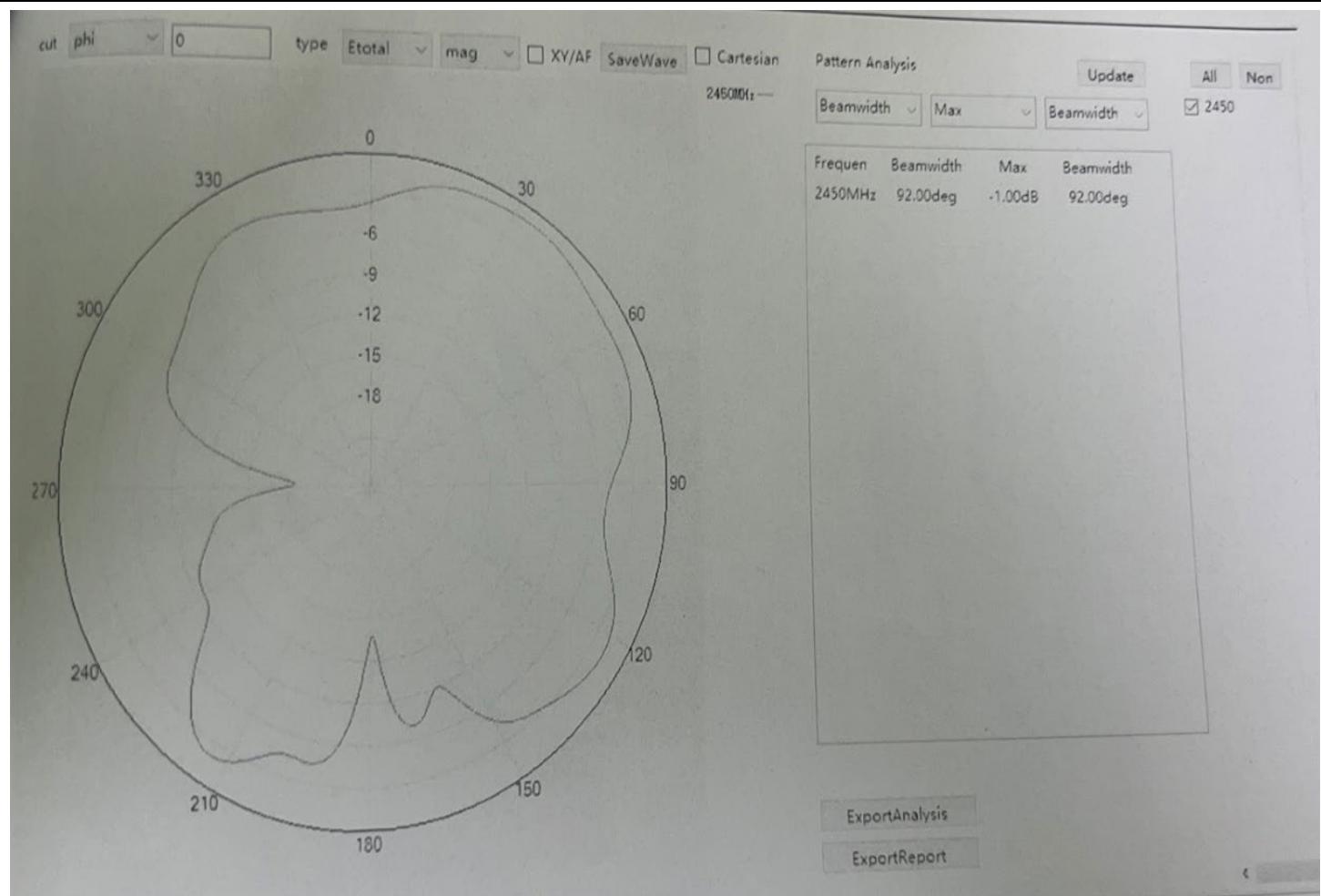
2. Testing Results: Maximum radiated power and maximum receive sensitivity reflect the antenna's maximum power radiation value and optimal reception performance in the entire radiation space. TRP and TIS reflect the antenna's average radiated power and average receive sensitivity, indicating the overall reception performance of the antenna.



Gain&Efficiency 增益和效率						
frequency 频率(MHz)	gain 增益(dB)	mingain 最小增益	CO Gain 主极化最	CP Gain 交叉极化	efficiency 效率(dB)	efficiency 效率
2450	0.07	-26.19	-1.19	-1.62	-4.01	39.69%
Analysis Theta=90						
Frequency 频率(MHz)						
2450						
Phi=90 垂直面分析						
Frequency 频率(MHz)	Roundness 不圆度(dB)					
2450	8.33					

方向图:





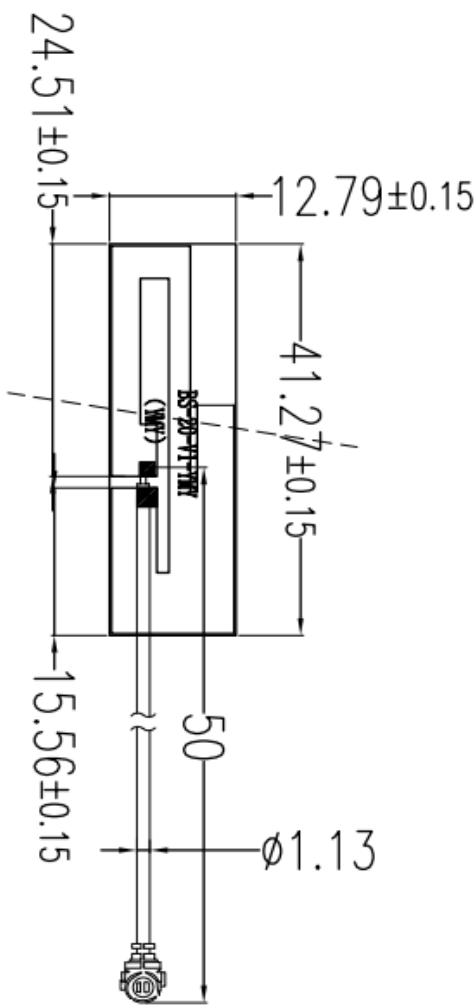
## 五、Recommendations and Conclusions

This report is based on the antenna's electrical performance measured from the customer-provided prototype. Please review it carefully.

## 六、structural drawings



丝印亮光字符 Silk-screened bright characters



正面 TOP

1. 材料 : 一对半电解铜基材, 采用环保制程, 符合ROHS要求。

Material: A pair of semi-electrolytic copper substrates, using environmentally friendly manufacturing process, in line with ROHS requirements.

2. 镀金: NI:1-2um AU:min0.5u" 油墨: 无卤油墨。

Gold plating: NI:1-2um AU:min0.5u" Ink: Halogen-free ink.

3. 胶带: 3M9471.

Duct tape: 3M9471.

 4. 带“\*”尺寸为重点尺寸。  
 With "\*" dimensions as the key dimensions.

5. 表面无压伤、划痕、无油污、斑点等缺陷。

The surface has no defects such as crushing, scratches, oil stains, spots, etc.

6. 图面尺寸用以检验外形功能和装配。

The drawing size is used to check the appearance, function and assembly.

 7. 本图档为内部受控文件, 未经我司允许严禁以任何形式进行传播。  
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Shenzhen YiMingYuan Technology Co., Ltd.

 -般公差 General tolerance:  
 unit: mm

 Model: BS-20-V1 date: 2022-02-18  
 Part No: YMY006-BS-20-V1 ID: QYL  
 -021-A0

Material: FPC

R/F: HH

Surface treatment: clean

Color: matt black proportion: 1:1 version: A1

 ANGULAR  $\triangle$  ± 0.5°

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