

**Shenzhen DreamLNK Technology Co., Ltd.**  
**深圳市骏晔科技有限公司**

**5G Rubber Rod Antenna**

**Product Specification**

|                        |            |                           |  |
|------------------------|------------|---------------------------|--|
| Client Name            |            | Frequency Band            | 824-960/1710-2680/<br>3400-3600/4800-4900MHz |
| Wire Name              |            | Version                   | A1   |
| Customer's Part Number |            | DreamLNK's Part Number    | J011   |
| RF Designer            | James Wang | RF Manager                | Knight Ai                                    |
| Structural Designer    |            | Structural Design Manager |  |
| Technical Director     |            | Date                      | 2018-10-07                                   |

Client confirmation:

Whether the product meets your requirements?  OK  NG

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The information provided by us should be kept strictly confidential, and it is not allowed to disclose to anyone else or other companies, without prior written consent

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## 1. Photo

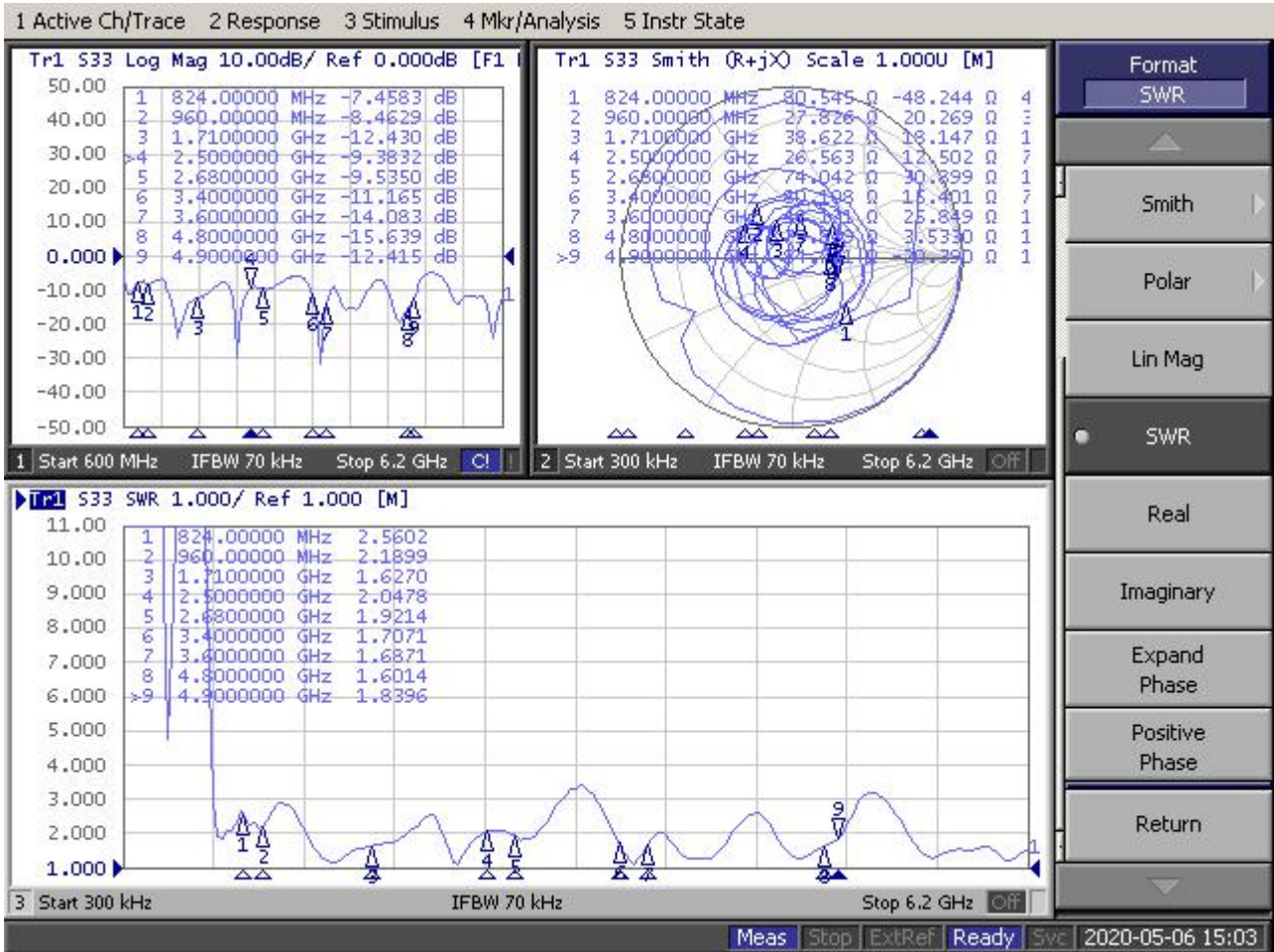


## 2. Parameters

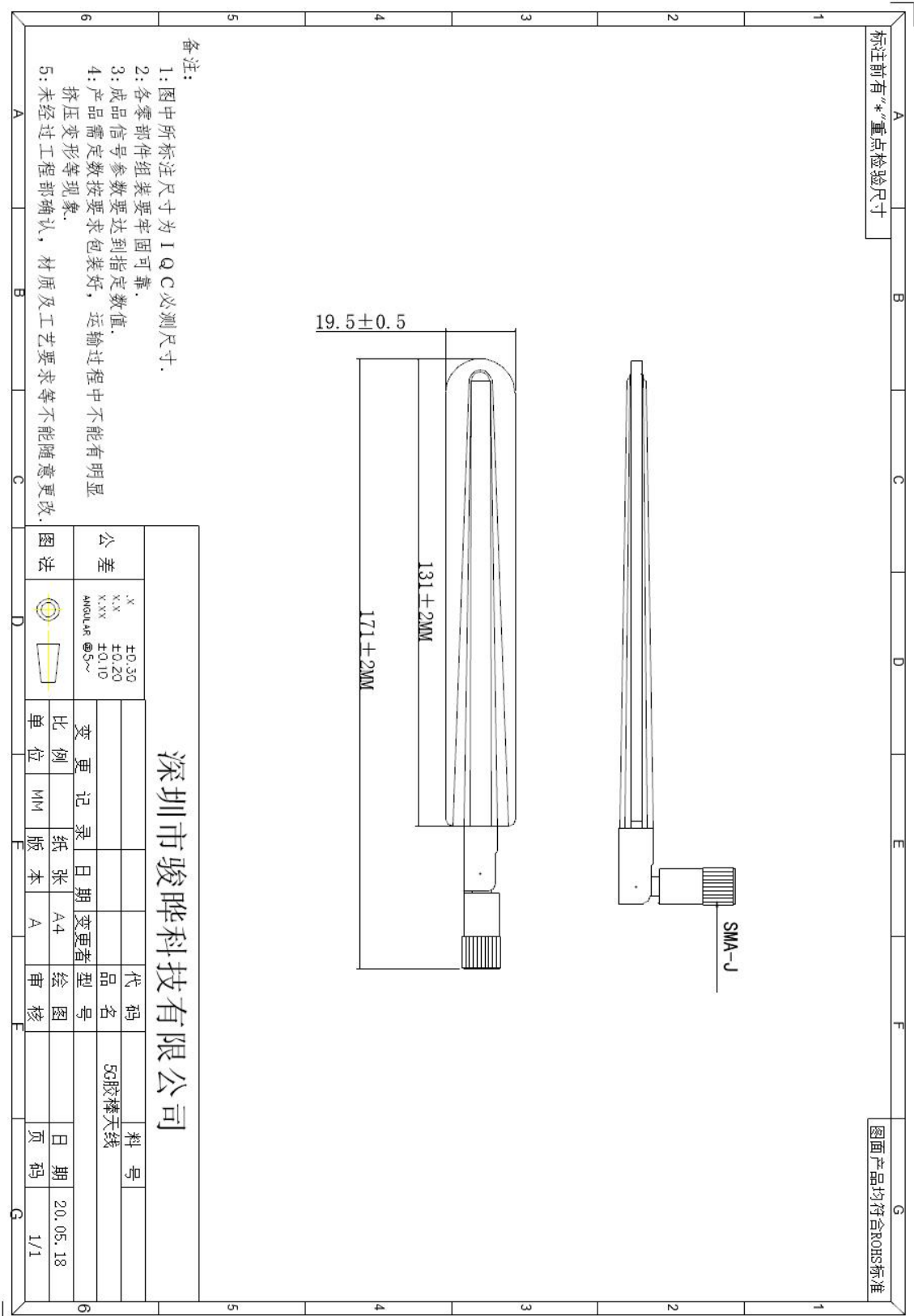
| Test parameters           |  |                     |                |
|---------------------------|--|---------------------|----------------|
| Product Name              | 5G Rubber Rod Antenna                        | Model No            | J011           |
| Electrical Specifications |  |                     |                |
| Frequency Range           | 824-960/1710-2680/<br>3400-3600/4800-4900MHZ | Polarization        | Vertical       |
| Input Impedance           | 50 $\Omega$                                  | Radiation direction | Full direction |
| VSWR                      | $\leq 2.0$                                   | Power Capacity      | 10W            |
| Gain                      | 5dBi   | Bandwidth           | /              |
| Mechanical Specifications |  |                     |                |
| Dimensions                | 171*19.5mm                                   | Color               | Black          |
| Connector Model           | SMA-J  | Cable Length        | /              |
| Antenna Material          | ABS + Copper                                 | Voltage             | /              |
| Working Temperature       | -30 $^{\circ}$ C ~ +60 $^{\circ}$ C          | Relative Humidity   | 40~85%         |

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### 3. S11 Data ( VSWR, Return loss, Smith)



## 4. Structure diagram



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**Note:** The antenna design process needs to consider the placement position, angle, distance/ height (from the floor and from the PCB substrate), which is highly related to the product shape and structure, the position of the RF module signal input and output interface, as well as the position of the interference source inside the product etc.

The  $\pi$ -type network is reserved to match the antenna. When debugging the antenna, be sure to provide the entire product casing and internal PCBA function board, please also take into account external interference sources and parasitic capacitance, so that the antenna achieves the best performance index and working efficiency.

The above picture is just FYI. The PCB trace of the matching network refers to the 0.5mm line width, and the grounding on both sides of the network refers to the 0.35mm pitch to maintain good impedance characteristics.

If you have any questions, please send PCB documents to this e-mail [support@dreamlnk.com](mailto:support@dreamlnk.com)

## 5. Environmental reliability experiment report

| Item                                    | Test condition  | Specification   |
|---|---|---|
| Storage environment                     | Tested temperature, humidity and air pressure as following without specifying:<br>1. The temperature is $-30\text{ }^{\circ}\text{C} \sim +80\text{ }^{\circ}\text{C}$<br>2. Relative humidity is 45% -85%<br>3. The air pressure is 86kpa-106kpa                                     | The electrical mechanical performance is normal                                       |
| High and low temperature test           | Perform 5 cycles between $70\text{ }^{\circ}\text{C}$ and $40\text{ }^{\circ}\text{C}$ , then check the appearance quality, under normal conditions 1-2H  | The size should meet the requirements for mechanical and electrical performance       |
| Resistant to constant heat and humidity | Test Relative humidity: $95 \pm 3\%$ , Test temperature: $40\text{ }^{\circ}\text{C}$ . After continuous 2H running, take out the sample, and measure its electrical properties within 5 minutes, put the sample in a normal condition for another 1-2H, check the appearance quality | The size should meet the standard, and meet for mechanical and electrical performance |
| Vibration test                          | Vibration frequency range 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M / S, frequency of sweeping cycle: 30 times   | Normal electrical and mechanical performance  |
| Drop test                               | 1M high-altitude free fall 3 times, in the direction of mutually perpendicular axes   | Normal electrical and mechanical performance  |

## 6. Contact us

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## Shenzhen DreamLnk Technology Co., Ltd

★ Data collection, Smart home, Internet of Things applications, Wireless remote control technology, Remote active RFID, Antennas ★

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