



SPECIFICATION

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

433MHZ Spring Antenna

Product Specification

| | | | |
|------------------------|------------|---------------------------|-------------|
| Client Name | | Frequency Band | 433 MHz |
| Wire Name | | Version | V1.3 |
| Customer's Part Number | | DreamLNK's Part Number | DL-T15-433M |
| RF Designer | Jason Wang | RF Manager | Knight Ai |
| Structural Designer | | Structural Design Manager | |
| Technical Director | | Date | 2024-02-19 |

Client confirmation:

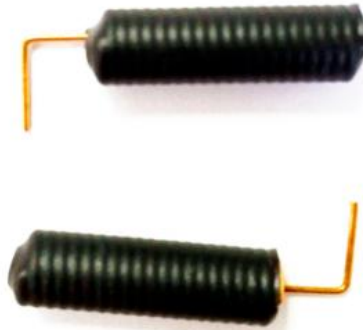
Whether the product meets your requirements? OK NG

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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

1. Photos

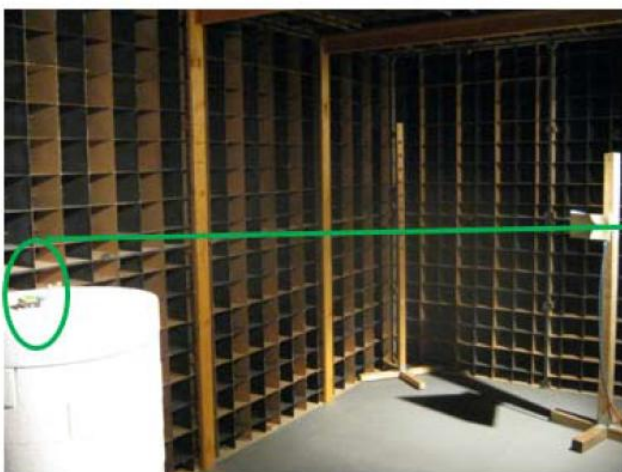
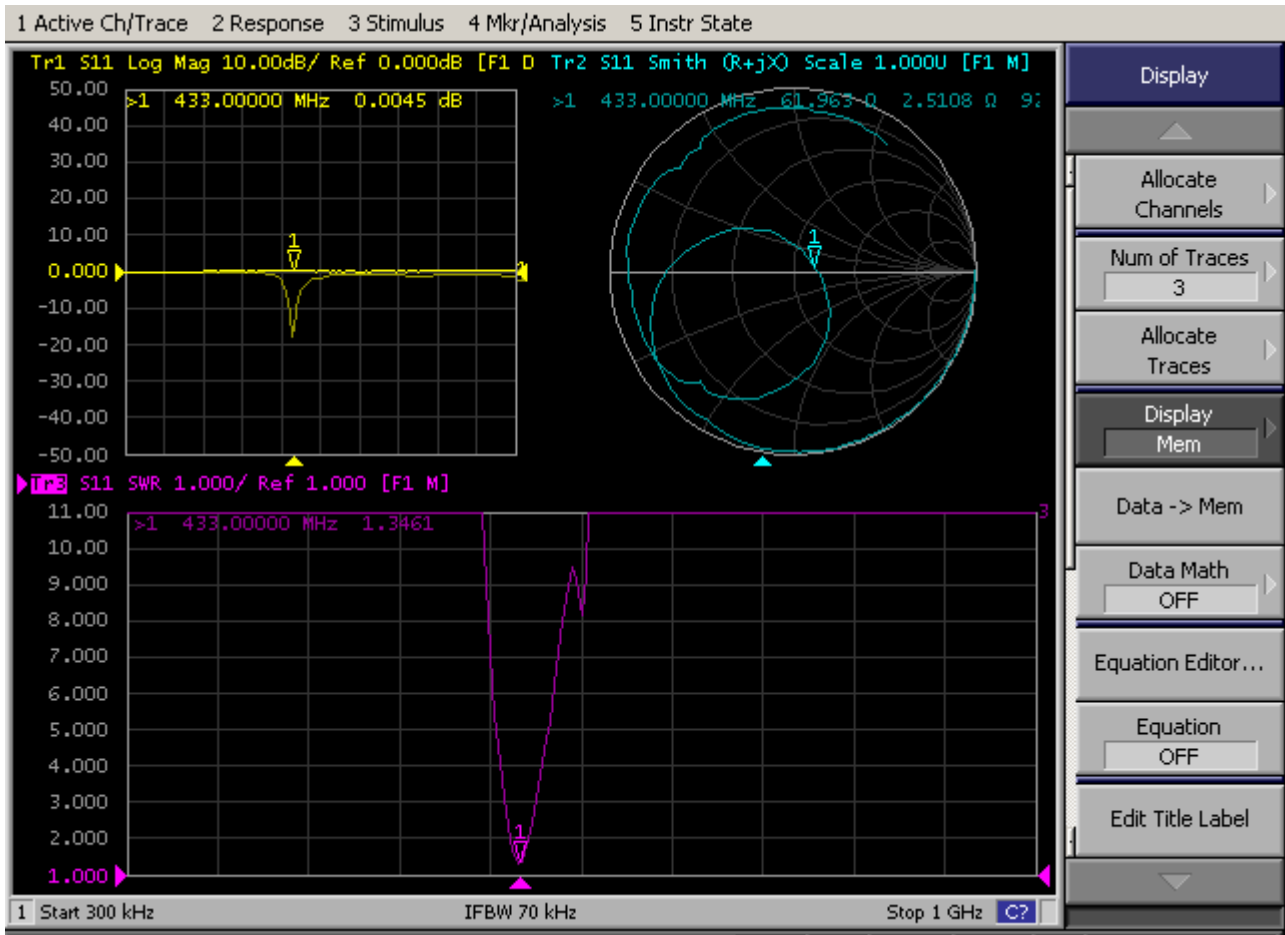


2. Parameters

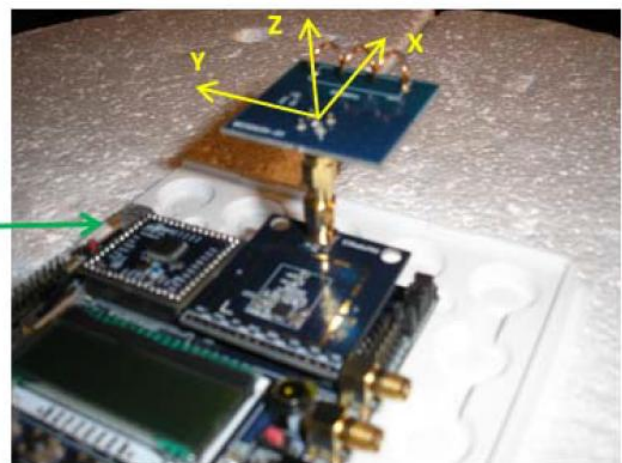
| Test parameters | | | |
|---------------------------|-------------------------------|---------------------|------------------|
| Product Name | Spring Antenna | Model No | DL-T15-433M |
| Electrical Specifications | | | |
| Frequency Range | 433MHz | Polarization | Vertical |
| Input Impedance | 50 Ω | Radiation direction | Omnidirectional |
| VSWR | ≤ 1.6 | Power Capacity | 10W |
| Gain | 3.0 dBi | Bandwidth | 433 \pm 5MHZ |
| Mechanical Specifications | | | |
| Dimensions | D5.0 * L23.5 (± 1.5) mm | Coil Color | Gold |
| Installation | Welding on PCB | Cover | PET Tube (black) |
| Antenna Material | Phosphor bronze | Storage Temperature | -30°C-+65°C |
| Working Temperature | -40°C-+85°C | Relative Humidity | 40-85% |

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3. S11 DATA (VSWR, Return loss, Smith)

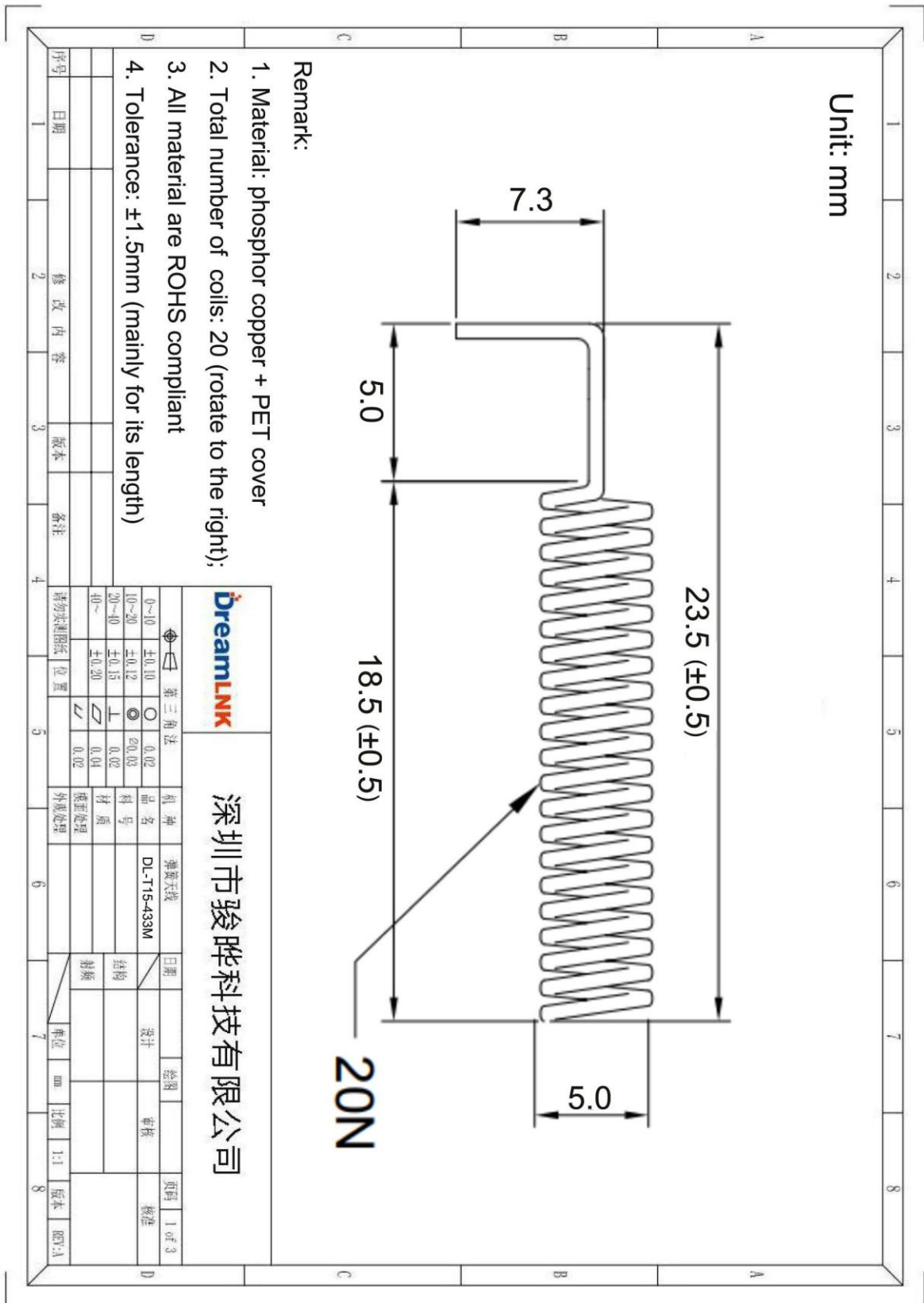


Anechoic Chamber Test

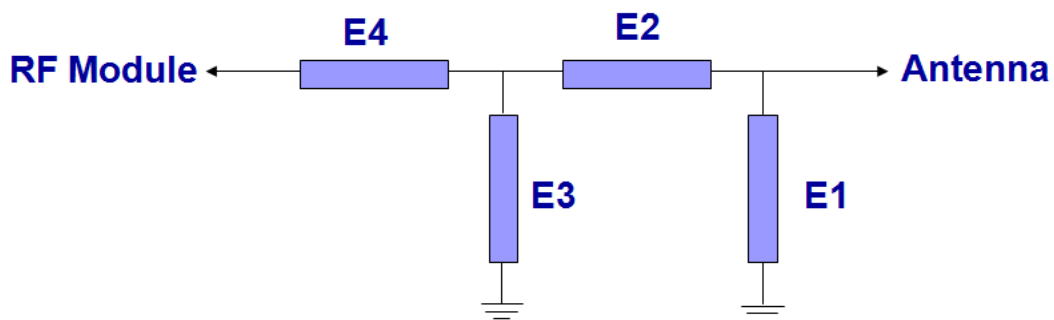
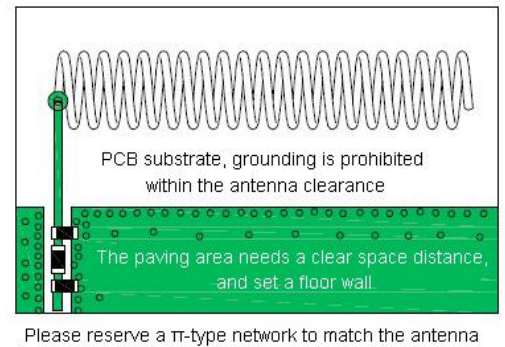
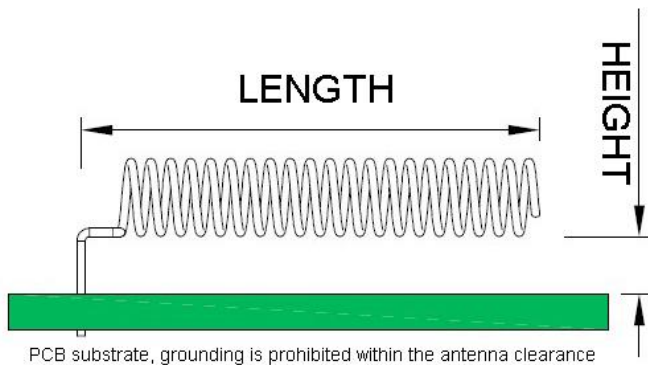


XYZ direction test

4. Structure Diagram



5. Application & Design Guidance



Note: The antenna design process needs to combine the product shape and structure, the position of the RF module signal input and output interface, and the position of the interference source inside the product to determine the position, angle, distance from the floor, and height from the PCB substrate.

Please reserve a π -type network to match the antenna. When debugging the antenna, be sure to provide a complete product shell and internal PCBA function board, calculate the external interference source and parasitic capacitance into the matching, so that the antenna can achieve the best performance indicators and work efficiency.

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 spacing to maintain good impedance characteristics.

If you have any questions, please send PCB documents to this e-mail support@dreamlnk.com

6. Environmental reliability experiment report

| Item | Test condition | Specification |
|---|---|---|
| Storage environment | Tested temperature, humidity and air pressure as following without specifying: 1. The temperature is -30 °C ~ + 80 °C 2. Relative humidity is 45% -85% 3. The air pressure is 86kpa-106kpa | The electrical mechanical performance is normal |
| High and low temperature test | Perform 5 cycles between 70 °C and 40 °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 ± 3%, Test temperature: 40 °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 |

7. Contact us

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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