DreamLNK

# SPECIFICATION

## Shenzhen DreamLNK Technology Co., Ltd.
## 深圳市骏眸科技有限公司

868Mhz Rubber Rod Antenna

## Product Specification

| | | | |
|---|---|---|---|
| **Client Name** | | **Frequency Band** | 868MHz |
| **Wire Name** | | **Version** | V1.0 |
| **Customer's Part Number** | | **DreamLNK's Part Number** | DL-J017-868M |
| **RF Designer** | Jason Huang | **RF Manager** | Knight Ai |
| **Structural Designer** | | **Structural Design Manager** | |
| **Technical Director** | | **Date** | 2023-03-02 |

Client confirmation:

Whether the product meets your requirements? □ OK □ NG

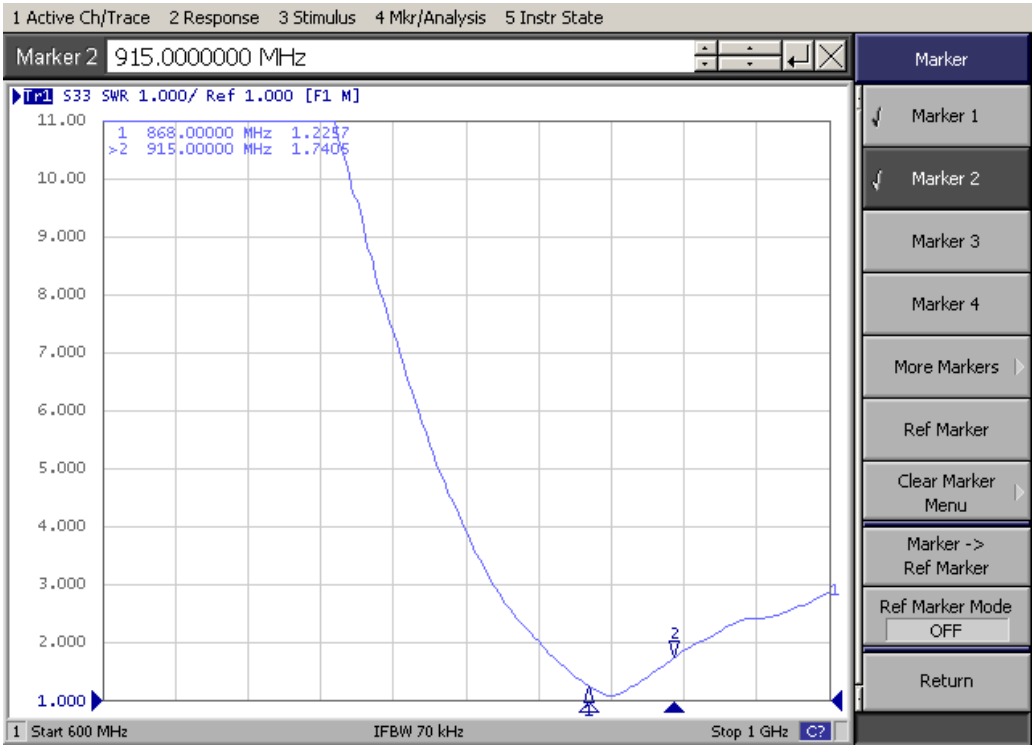
# Contents

## 1. Photos

## 2. Parameters

| Test parameters | | | |
|---|---|---|---|
| **Product Name** | **868Mhz Rubber Rod Antenna** | **Model No** | DL-J017-868M |
| **Electrical Specifications** | | | |
| **Frequency Range** | 868MHz | **Polarization** | Linear |
| **Input Impedance** | 50 Ω | **Radiation direction** | Omnidirectional |
| **VSWR** | ≦2.0 | **Max Power** | 10W |
| **Gain** | 868MHZ @ 1.4dBi | **Bandwidth** | |
| **Mechanical Specifications** | | | |
| **Dimensions** | D8.0 * W17 * L47 (mm) | **Color** | Black |
| **Connector Model** | SMA-J (Male) | **Antenna Material** | ABS + Copper |
| **Working Temperature** | -30℃-+80℃ | **Storage Temp.** | -30-+60℃ |
| **IP Level** | IP65 | **Relative Humidity** | 40~85% |

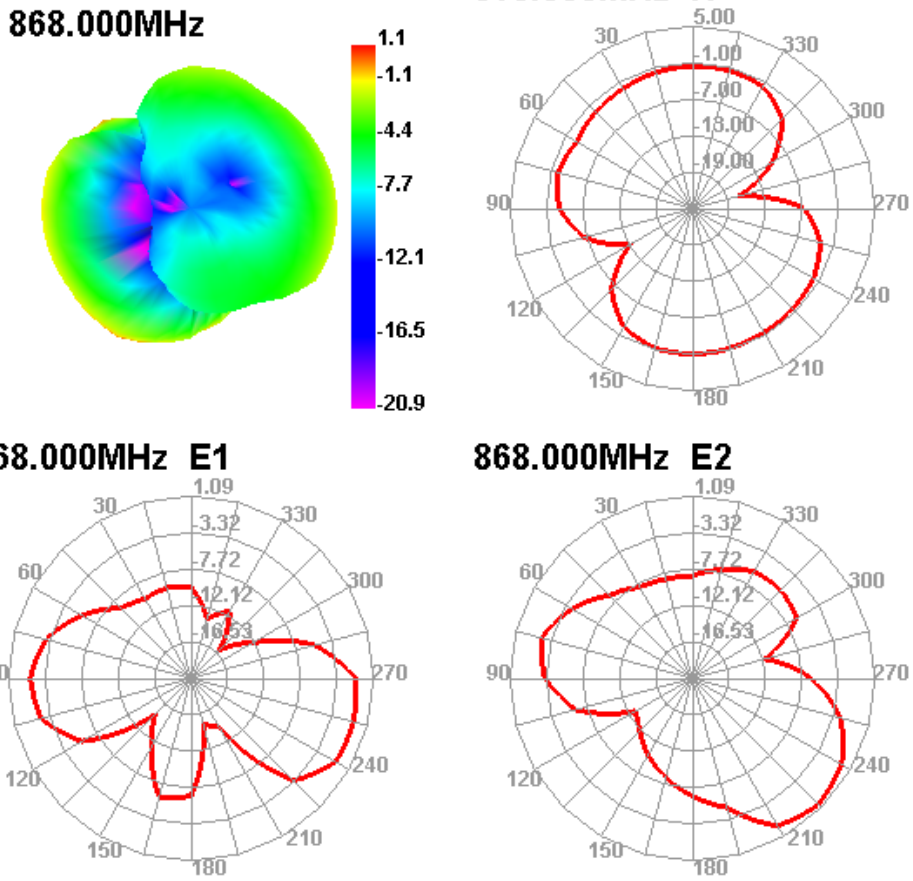
# 3. S11 Data (VSWR, Return loss, Smith)




## Antenna Efficiency

| Passive Test For 868-915 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | UHIS (%) | DHIS (%) | Max (dB) | Min (dB) | Attenut Hor | Attenut Ver |
| 860 | 59.15 | -1.6 | 1.68 | -0.47 | 17.965 | 31.19 | 1.68 | -9.35 | 40.12 | 39.6 |
| 861 | 59.53 | -1.58 | 1.65 | -0.5 | 18.115 | 31.417 | 1.65 | -9.18 | 40.12 | 39.61 |
| 862 | 60.56 | -1.51 | 1.75 | -0.4 | 18.61 | 31.955 | 1.75 | -9.13 | 40.13 | 39.62 |
| 863 | 61.54 | -1.45 | 1.77 | -0.38 | 18.996 | 32.549 | 1.77 | -9.07 | 40.13 | 39.63 |
| 864 | 61.92 | -1.43 | 1.83 | -0.32 | 19.178 | 32.739 | 1.83 | -8.98 | 40.13 | 39.64 |
| 865 | 61.15 | -1.48 | 1.82 | -0.33 | 18.877 | 32.277 | 1.82 | -8.87 | 40.14 | 39.65 |
| 866 | 59.26 | -1.6 | 1.73 | -0.42 | 18.185 | 31.075 | 1.73 | -9.35 | 40.14 | 39.66 |
| 867 | 56.83 | -1.75 | 1.57 | -0.58 | 17.207 | 29.624 | 1.57 | -9.44 | 40.14 | 39.67 |
| 868 | 54.34 | -1.92 | 1.42 | -0.73 | 16.258 | 28.08 | 1.42 | -9.75 | 40.14 | 39.68 |
| 869 | 52.29 | -2.06 | 1.26 | -0.89 | 15.456 | 26.83 | 1.26 | -9.95 | 40.15 | 39.69 |
| 870 | 51.14 | -2.14 | 1.15 | -1 | 15.053 | 26.09 | 1.15 | -10.21 | 40.15 | 39.7 |
| 900 | 48.74 | -3.12 | 1.62 | -0.53 | 20.979 | 27.762 | 1.62 | -11.54 | 39.76 | 39.62 |
| 901 | 47.22 | -3.26 | 1.51 | -0.64 | 20.384 | 26.833 | 1.51 | -11.57 | 39.76 | 39.62 |
| 902 | 44.82 | -3.48 | 1.34 | -0.81 | 19.326 | 25.498 | 1.34 | -12.07 | 39.77 | 39.63 |
| 903 | 42.14 | -3.75 | 0.96 | -1.19 | 18.147 | 23.997 | 0.96 | -12.27 | 39.77 | 39.63 |
| 904 | 40.04 | -3.97 | 0.83 | -1.32 | 17.208 | 22.835 | 0.83 | -12.08 | 39.78 | 39.64 |
| 905 | 38.63 | -4.13 | 0.69 | -1.46 | 16.579 | 22.055 | 0.69 | -12.41 | 39.78 | 39.64 |
| 906 | 38.23 | -4.18 | 0.54 | -1.61 | 16.374 | 21.859 | 0.54 | -12.26 | 39.78 | 39.64 |
| 907 | 38.68 | -4.12 | 0.71 | -1.44 | 16.512 | 22.172 | 0.71 | -12.28 | 39.79 | 39.65 |
| 908 | 40.02 | -3.98 | 0.92 | -1.23 | 17.052 | 22.969 | 0.92 | -11.92 | 39.79 | 39.65 |
| 909 | 41.81 | -3.79 | 1.09 | -1.06 | 17.781 | 24.032 | 1.09 | -11.58 | 39.8 | 39.66 |
| 910 | 43.63 | -3.6 | 1.34 | -0.81 | 18.484 | 25.144 | 1.34 | -11.46 | 39.8 | 39.66 |
| 911 | 44.58 | -3.51 | 1.43 | -0.72 | 18.861 | 25.715 | 1.43 | -10.99 | 39.78 | 39.66 |
| 912 | 44.3 | -3.54 | 1.46 | -0.69 | 18.68 | 25.621 | 1.46 | -11.05 | 39.77 | 39.67 |
| 913 | 42.72 | -3.69 | 1.22 | -0.93 | 17.948 | 24.771 | 1.22 | -10.79 | 39.75 | 39.67 |
| 914 | 40.57 | -3.92 | 0.89 | -1.26 | 16.95 | 23.625 | 0.89 | -10.87 | 39.73 | 39.67 |
| 915 | 38.12 | -4.19 | 0.58 | -1.57 | 15.853 | 22.264 | 0.58 | -11.31 | 39.72 | 39.67 |
| 916 | 36.38 | -4.39 | 0.43 | -1.72 | 15.048 | 21.329 | 0.43 | -11.39 | 39.7 | 39.68 |
| 917 | 35.24 | -4.53 | 0.33 | -1.82 | 14.462 | 20.773 | 0.33 | -10.96 | 39.68 | 39.68 |
| 918 | 34.9 | -4.57 | 0.2 | -1.95 | 14.271 | 20.632 | 0.2 | -11.12 | 39.66 | 39.68 |
| 919 | 35.67 | -4.48 | 0.26 | -1.89 | 14.467 | 21.208 | 0.26 | -11.12 | 39.65 | 39.69 |
| 920 | 37.32 | -4.28 | 0.43 | -1.72 | 15.034 | 22.282 | 0.43 | -10.79 | 39.63 | 39.69 |

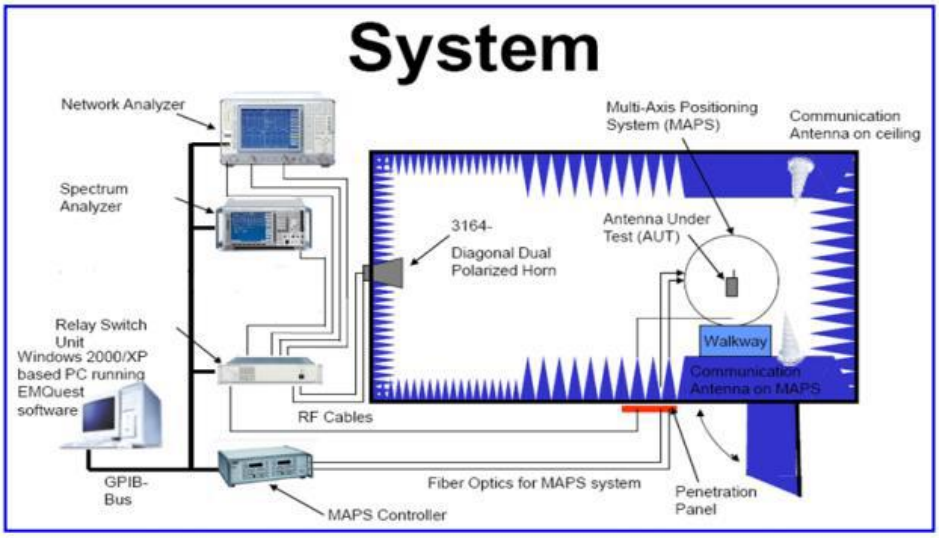
## Antenna Pattern:



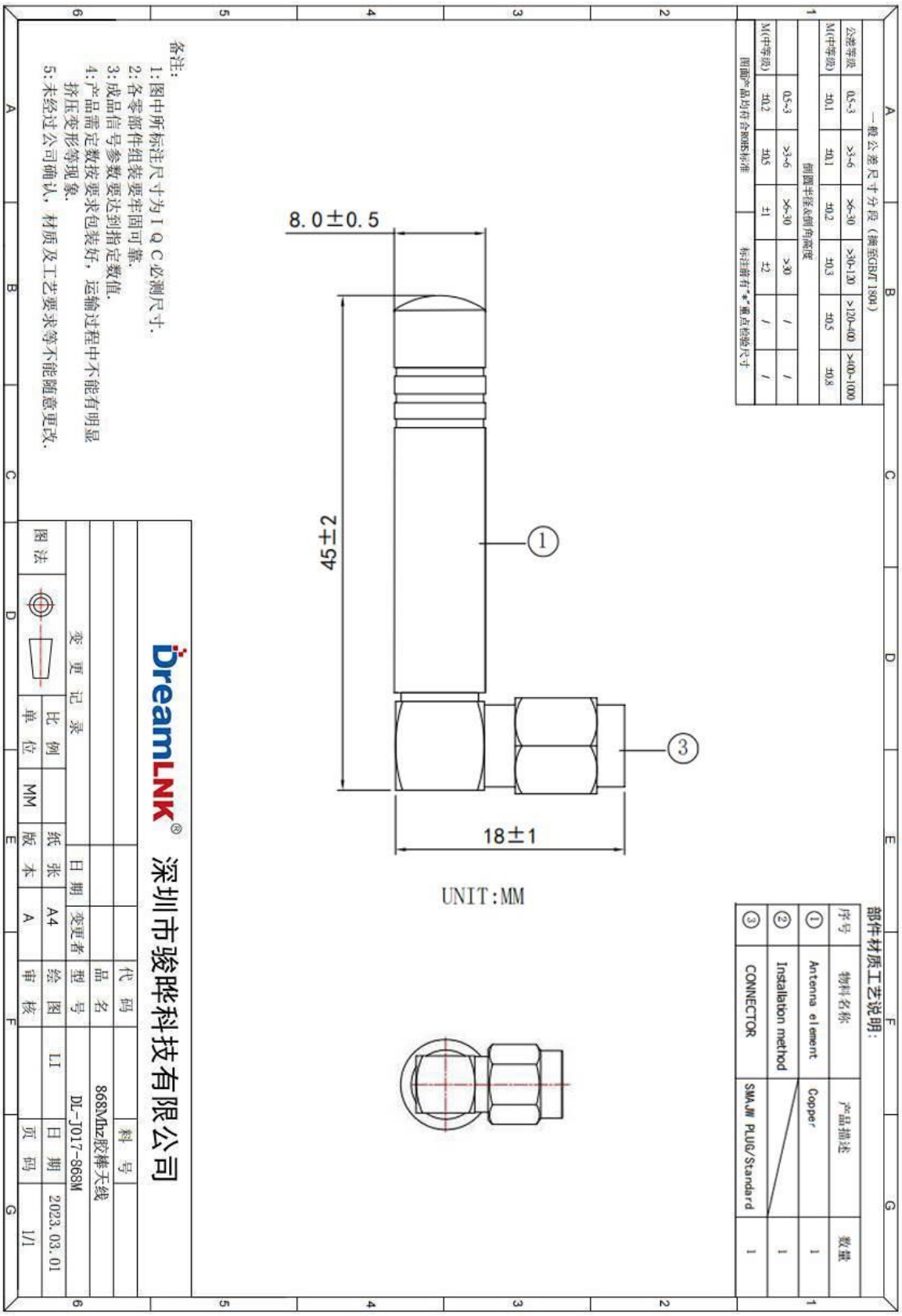

## Testing Equipment and Principle:

Network Analyzers: Agilent 8753D 5071B
Communications Test Set: Agilent E5515C

## 3D Chamber Test System:



# 4. Structure diagram



## 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 ℃~+ 80 ℃<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 ℃ and 40 ℃, 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 ℃. 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

**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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