DreamLNK

SPECIFICATION

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

868~915Mhz Rubber Rod Antenna

Product Specification

Client Name		**Frequency Band**	868-915Mhz
Wire Name		**Version**	A1
Customer's Part Number		**DreamLNK's Part Number**	DL-J001
RF Designer	James Wang	**RF Manager**	Knight Ai
Structural Designer		**Structural Design Manager**	
Technical Director		**Date**	2020-03-27

Client confirmation:

Whether the product meets your requirements? □ OK □ NG

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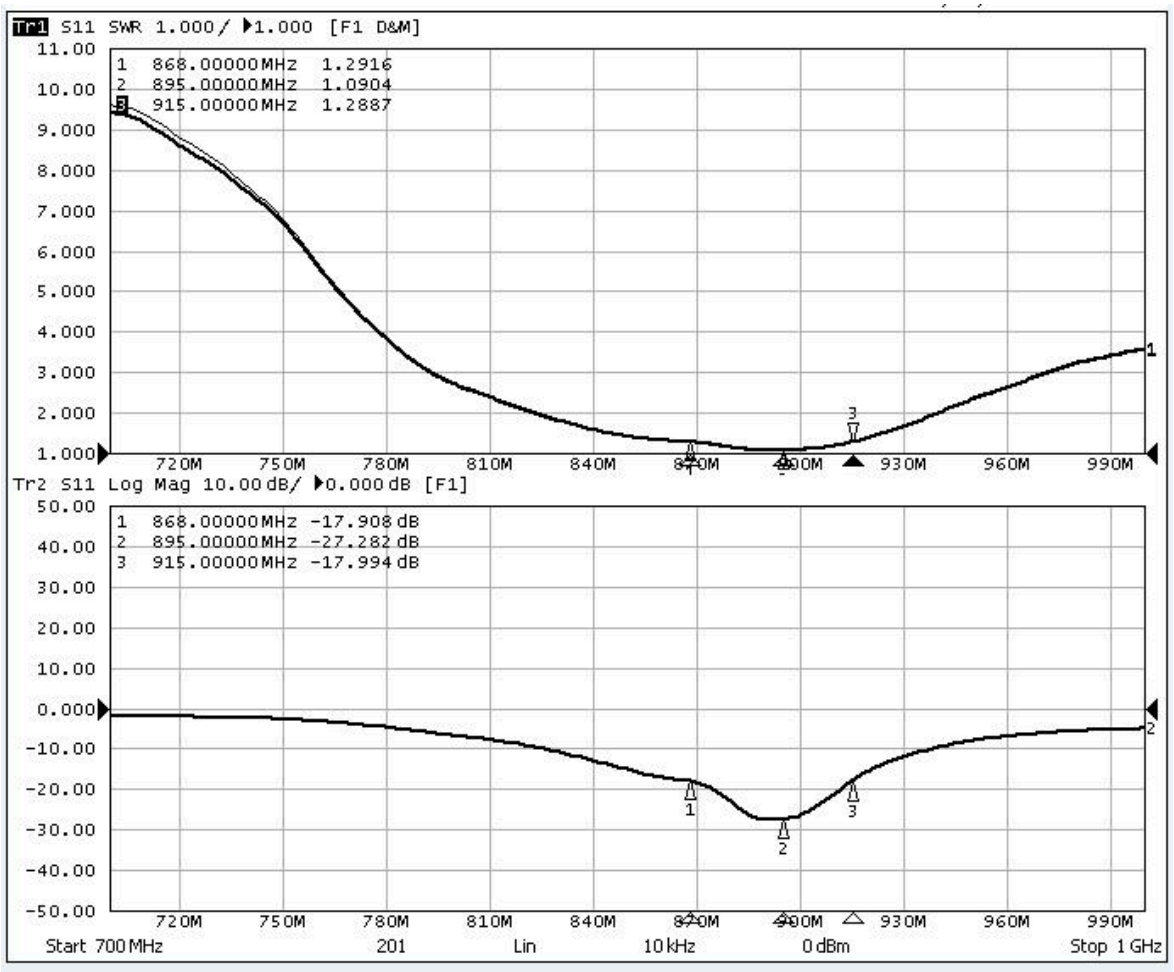
1. Photo



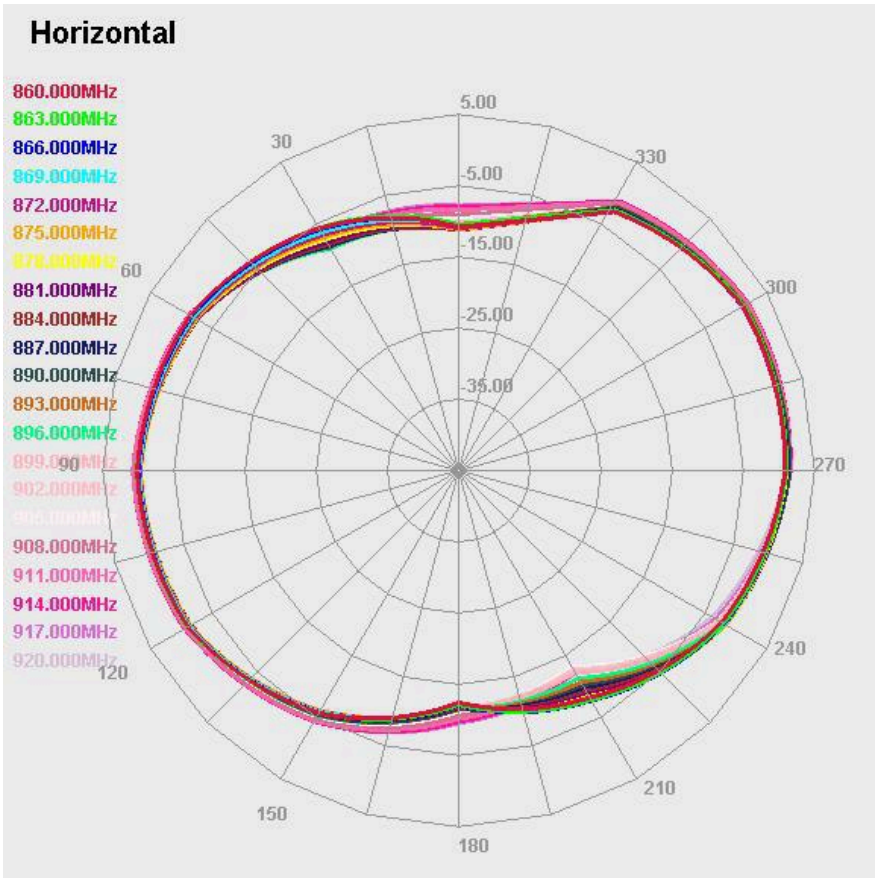
2. Parameters

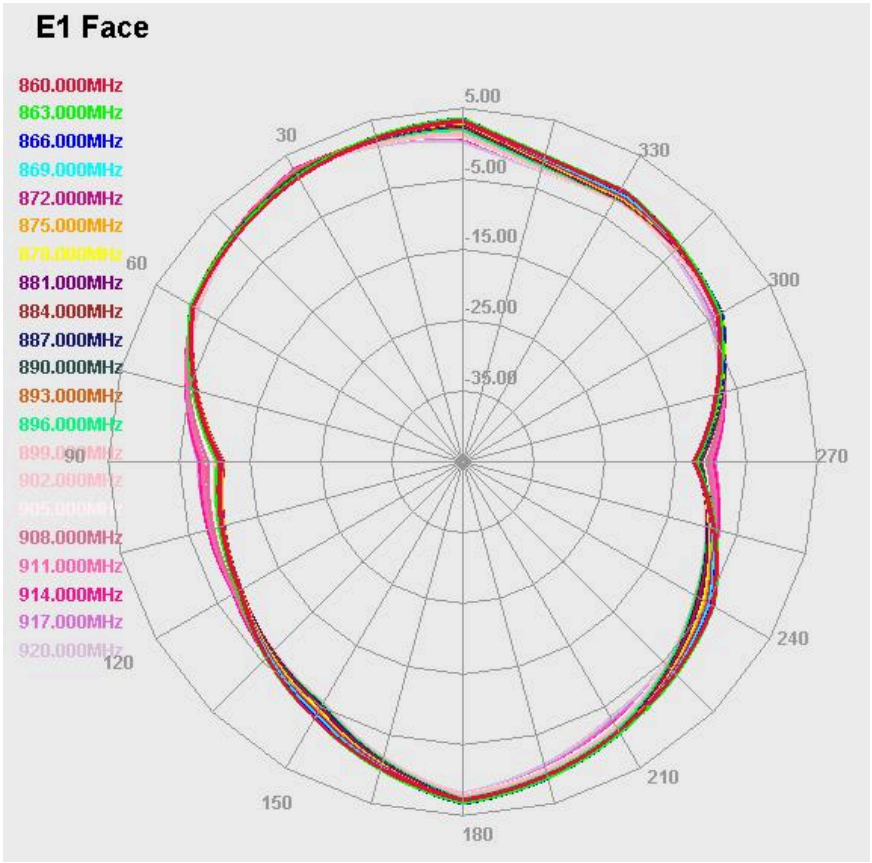
Test parameters			
Product Name	**Rubber Rod Antenna**	**Model No**	J001
Electrical Specifications			
Frequency Range	868~915MHz	**Polarization**	Linear, Vertical
Input Impedance	50 Ω	**Radiation direction**	Omni-directional
VSWR	⩽1.5	**Power Capacity**	1W
Gain	5dBi	**Return Loss**	-10dB Max
Mechanical Specifications			
Dimensions	198*13mm	**Color**	White
Connector Model	SMA-J	**Cable Length**	/
Antenna Material	ABS + Copper	**Voltage**	/
Working Temperature	-40℃ ~ +85℃	**Relative Humidity**	40~85%

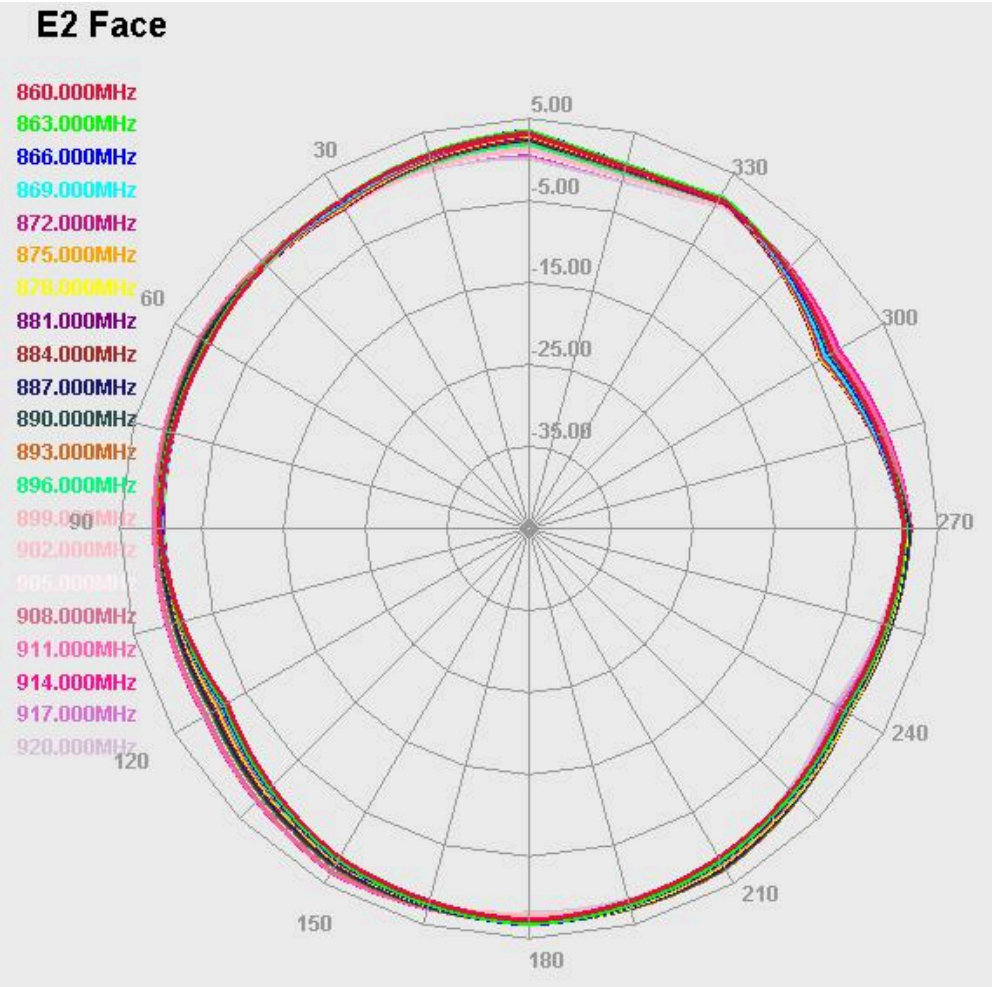
3. Passive data



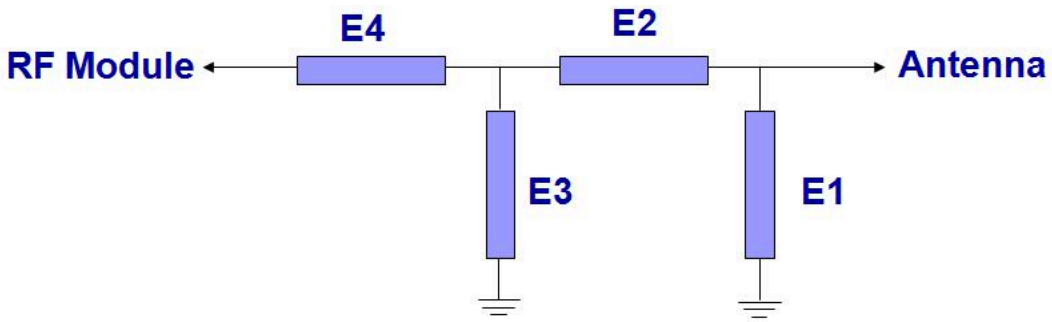
Freq (MHz)	Effi (%)	Gain (dBi)
860	44.76	3.6
870	46.4	3.73
880	47.28	4.2
890	50.76	4.87
900	49	4.71
910	51.72	4.86
920	49.9	4.67


Horizontal
860.000MHz
863.000MHz
866.000MHz
869.000MHz
872.000MHz
875.000MHz
881.000MHz
884.000MHz
887.000MHz
890.000MHz
893.000MHz
896.000MHz
908.000MHz
911.000MHz
914.000MHz
917.000MHz
5.00
-5.00
-15.00
-25.00
-35.00
30
60
90
120
150
180
210
240
270
300
330


E1 Face
860.000MHz
863.000MHz
866.000MHz
869.000MHz
872.000MHz
875.000MHz
881.000MHz
884.000MHz
887.000MHz
890.000MHz
893.000MHz
896.000MHz
908.000MHz
911.000MHz
914.000MHz
917.000MHz
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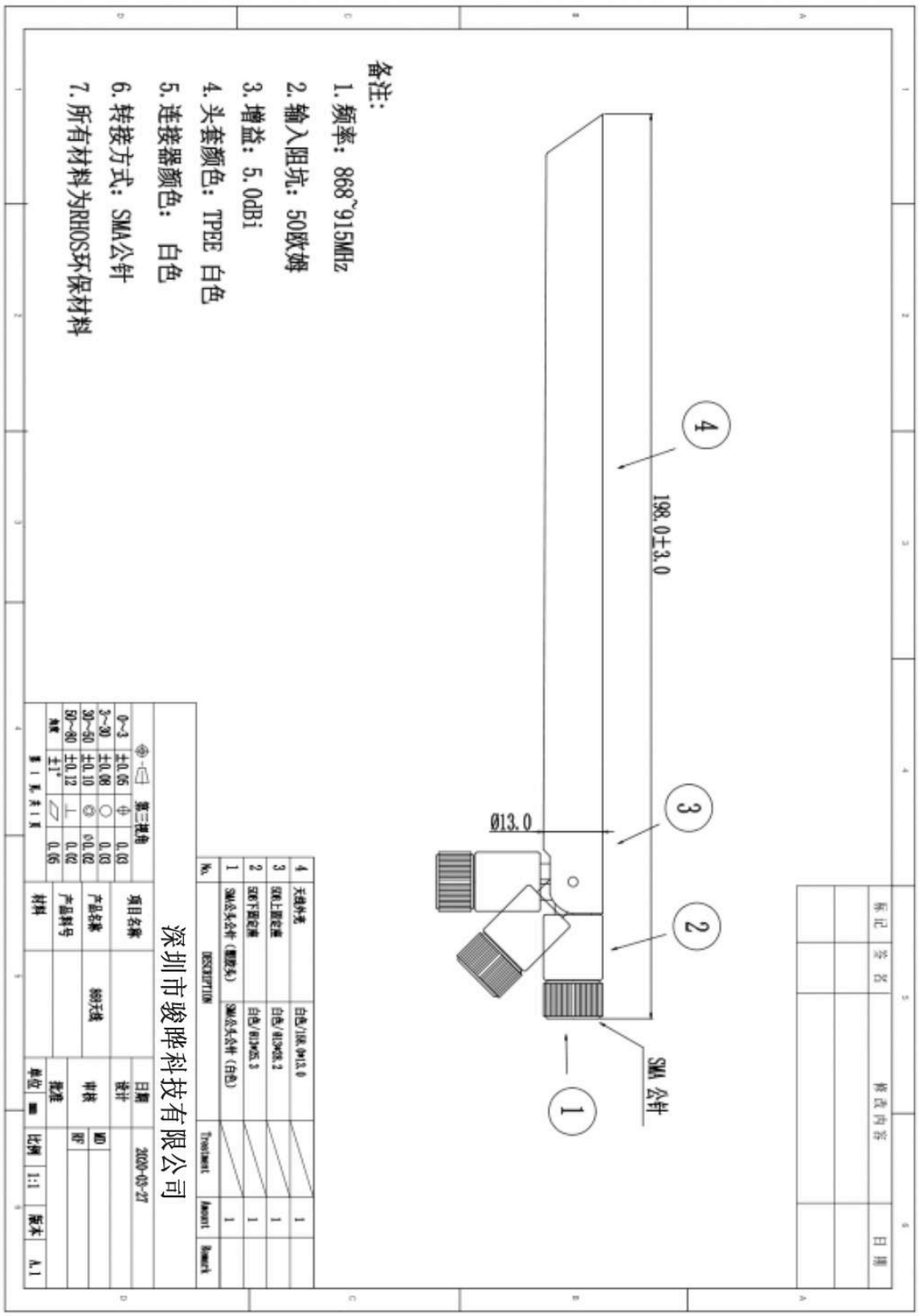


4. Matching Circuits



Element	Value		Vender
E1(0402)			
E2(0402)	0Ω		
E3(0402)			
E4(0402)	0Ω		

5. Structure diagram



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 π-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

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 ℃ ～ + 80 ℃ 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 ℃ 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

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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