

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

**433MHz LORA WAN Fiber-glass Antenna**

**Product Specification**

Client Name		Frequency Band	433MHz
Wire Name		Version	A1
Customer's Part Number		DreamLNK's Part Number	DL-B433W-001
RF Designer	Peter Dai	RF Manager	Knight Ai
Structural Designer		Structural Design Manager	
Technical Director		Date	2018-09-05

Client confirmation:

Whether the product meets your requirements?  OK  NG

# Contents

Cover.....	1
Contents. ....	2
1. Photos.....	3
2. Product Parameters.....	3
3. Electrical Performance Test Report.....	4
4. Structure diagram.....	6
5. Environmental reliability test report .....	7
6. Contact us.....	12

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. Photo

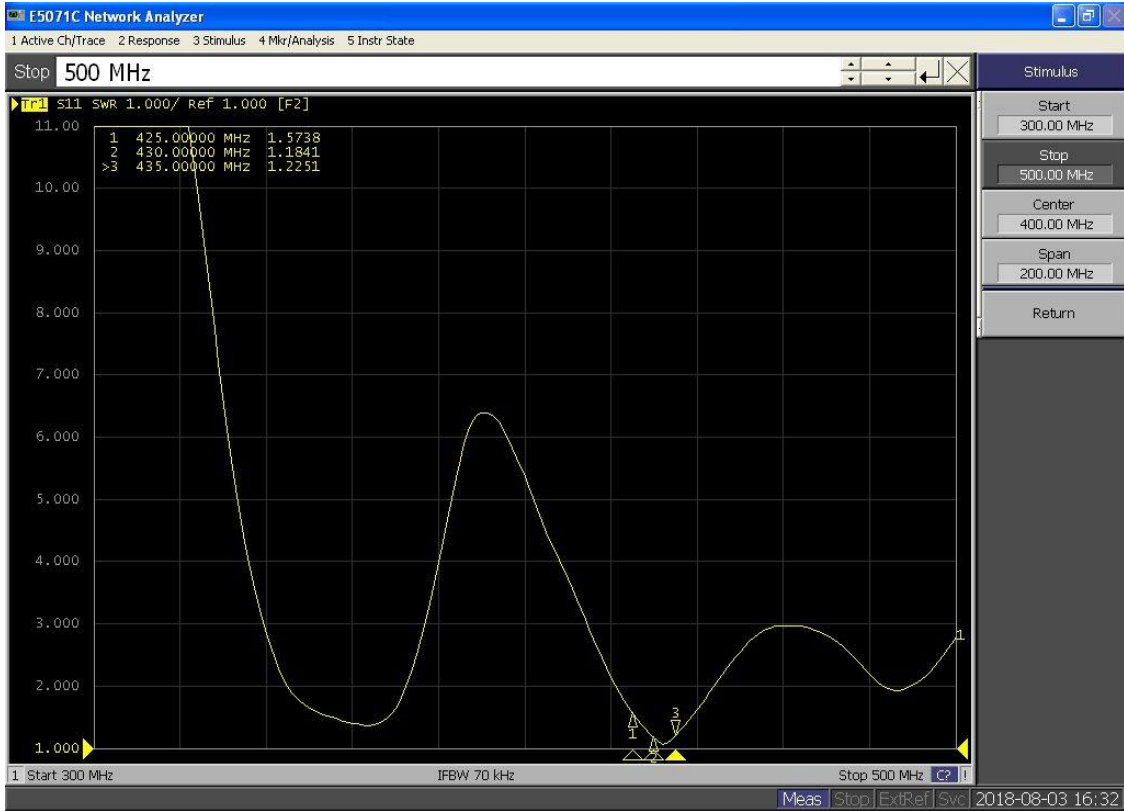


## 2. Product Parameters

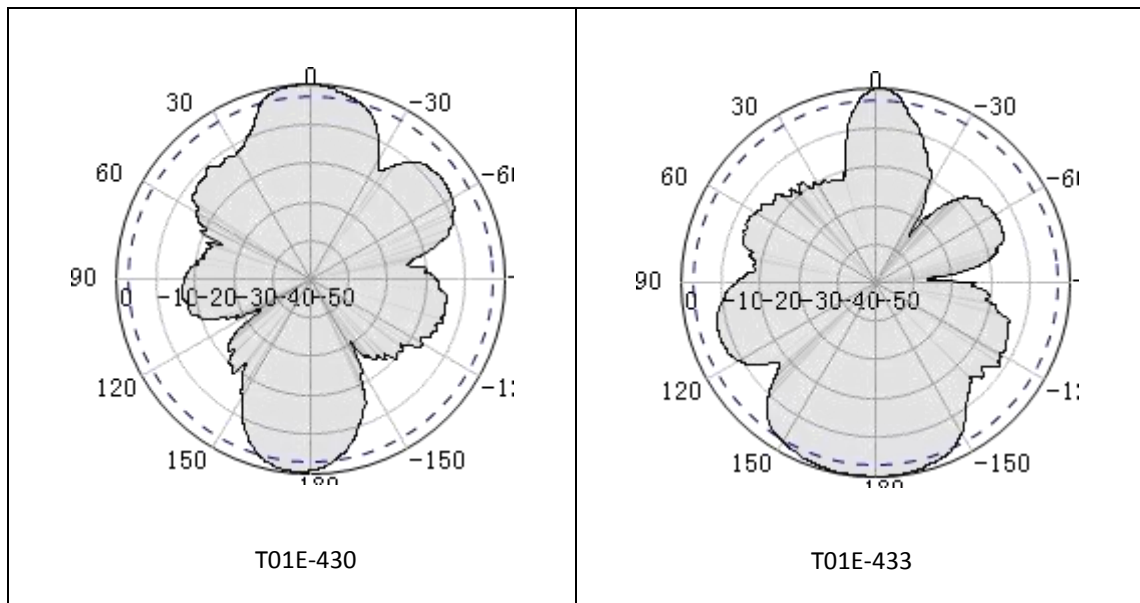
Electrical Specifications			
Product Name	Fiber-glass Antenna	Model No	DL-B433W-001
Characteristics			
Frequency	433MHz	Radiation pattern	Omni-directional
Impedance	50 Ω	VSWR	≅2
Gain	7 dBi	Polarization	Linear/Vertical
Size	D25*610mm ± 5mm	Efficiency	≥62%
Connector	N - J	Horizontal Beamwidth	360°
Environment Parameter			
Working Temperature	-20℃~+65℃	Salt Spray Test	48H
Storage Temperature	-30℃~+75℃	Relative Humidity	40-85%

### 3. Electrical Performance Test Report

#### V.S.W.R. Test Report

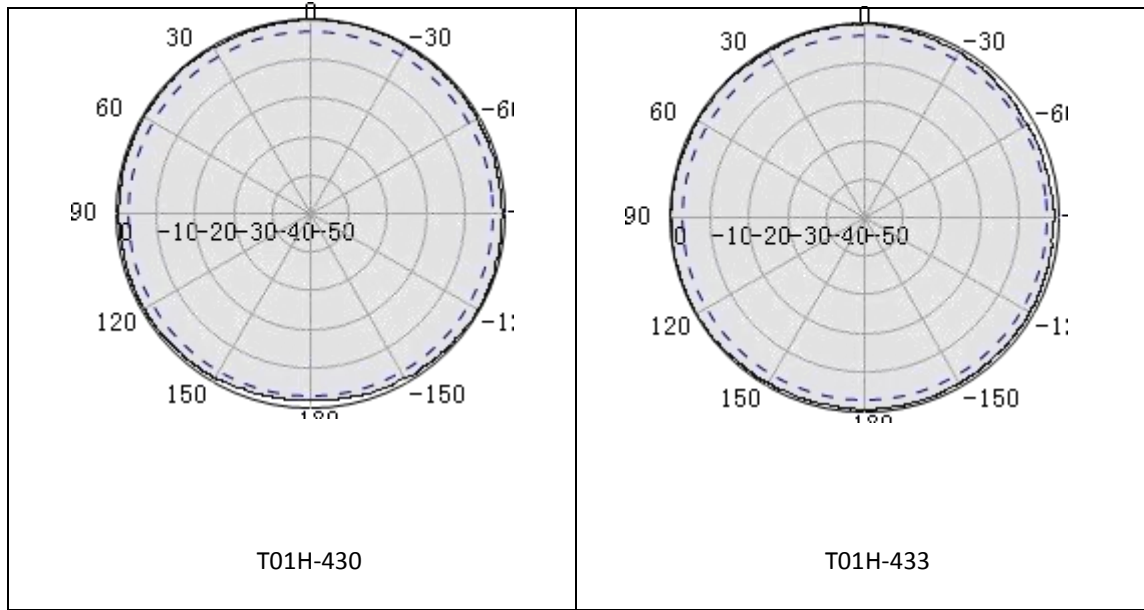


#### Element beam radiation performance

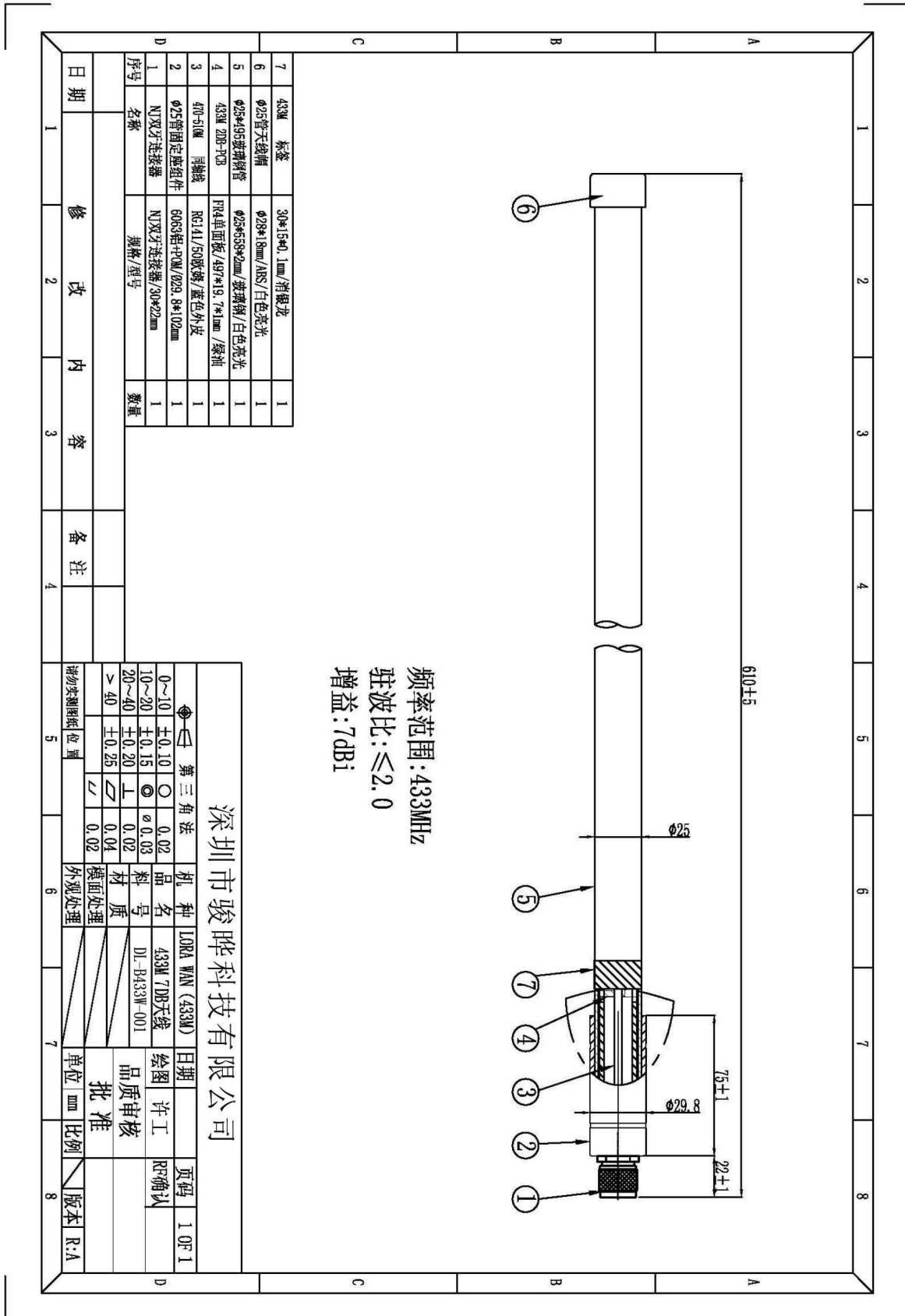


The information provided by us should be kept strictly confidential, and it is not allowed to disclose to anyone else or other companies, without prior written consent

---



### 4. Structure diagram



## 5. Environmental reliability test report

### Salt Spray Test

Test project	Salt Spray Test	Model No.: DL-B433W-001																		
Product Name	Fiber-glass Antenna	Test QTY.: 5PCS																		
Submission Date: 2018-8-15		Completion Date: 2018-08-25																		
<p>Test/Inspection Equipment</p> <p>1. HL-60-SS Salt spray tester</p>																				
<p><b>Test/Inspection Conditions:</b></p> <p>The temperature in the salt spray chamber is <math>35\pm 2^{\circ}\text{C}</math>; The temperature in the laboratory is <math>22\sim 30^{\circ}\text{C}</math></p> <p>The settling rate of salt spray after 24H spray is 1-2 ML/h on every 80cm area, the concentration of sodium chloride is <math>50\pm 10</math> G/L, and the PH value is 6.5/7.2.</p> <p><b>Judgment Criteria:</b></p> <p>After the salt spray test, the coating shall not rust, blacken, verdant, foaming, coating peeling and other corrosion phenomena.</p> <p>FRP coating should not be corroded, peeled off or blistered.</p>																				
<p>Test/Inspection Results: qualified</p> <table border="1" data-bbox="288 1373 1299 1756"> <thead> <tr> <th>No. of sample</th> <th>Evaluation Degree</th> <th>Description of Defectives</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PASS</td> <td>N/M</td> </tr> <tr> <td>2</td> <td>PASS</td> <td>N/M</td> </tr> <tr> <td>3</td> <td>PASS</td> <td>N/M</td> </tr> <tr> <td>4</td> <td>PASS</td> <td>N/M</td> </tr> <tr> <td>5</td> <td>PASS</td> <td>N/M</td> </tr> </tbody> </table>			No. of sample	Evaluation Degree	Description of Defectives	1	PASS	N/M	2	PASS	N/M	3	PASS	N/M	4	PASS	N/M	5	PASS	N/M
No. of sample	Evaluation Degree	Description of Defectives																		
1	PASS	N/M																		
2	PASS	N/M																		
3	PASS	N/M																		
4	PASS	N/M																		
5	PASS	N/M																		

## Water-spray Test

Test project	Water-spray Test	Model No.: DL-B433W-001																		
Product Name	Fiber-glass Antenna	Test QTY.: 5PCS																		
Submission Date: 2018-8-15		Completion Date: 2018-08-25																		
<p>Test/Inspection Equipment</p> <p>1. CX-L125 rain tester</p>																				
<p><b>Test/Inspection Conditions:</b></p> <p>The water flow is calculated according to the number of sprinkler holes of the swing pipe, each hole is 0.07L/min. When sprinkling, the sprinkler angle is set to 100°, the swing speed is 3 revolutions/min, the sprinkler pressure is adjusted to 0.2PMA, the rotation of the test turntable is adjusted to 50, and the water is continuously sprinkled for 10 minutes.</p>																				
<p>Test/Inspection Results: qualified</p> <table border="1" data-bbox="285 1149 1302 1635"> <thead> <tr> <th>No. of sample</th> <th>Evaluation Degree</th> <th>Description of Defectives</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>No water intrudes into the product</td> <td>N/M</td> </tr> <tr> <td>2</td> <td>No water intrudes into the product</td> <td>N/M</td> </tr> <tr> <td>3</td> <td>No water intrudes into the product</td> <td>N/M</td> </tr> <tr> <td>4</td> <td>No water intrudes into the product</td> <td>N/M</td> </tr> <tr> <td>5</td> <td>No water intrudes into the product</td> <td>N/M</td> </tr> </tbody> </table>			No. of sample	Evaluation Degree	Description of Defectives	1	No water intrudes into the product	N/M	2	No water intrudes into the product	N/M	3	No water intrudes into the product	N/M	4	No water intrudes into the product	N/M	5	No water intrudes into the product	N/M
No. of sample	Evaluation Degree	Description of Defectives																		
1	No water intrudes into the product	N/M																		
2	No water intrudes into the product	N/M																		
3	No water intrudes into the product	N/M																		
4	No water intrudes into the product	N/M																		
5	No water intrudes into the product	N/M																		



**Constant Temperature and Humidity Test:**

Test project	Constant temperature and humidity test		Model No.: DL-B433W-001																
Product Name	Fiber-glass Antenna		Test QTY.: 5PCS																
Submission Date: 2018-8-15			Completion Date: 2018-08-25																
<p>Test/Inspection Equipment</p> <ol style="list-style-type: none"> <li>1. Programmable constant temperature and humidity test chamber</li> <li>2. Network Analyzer</li> </ol>																			
<p><b>Test/Inspection Conditions:</b></p> <ol style="list-style-type: none"> <li>1. Test at indoor temperature 25°C and humidity 65%</li> <li>2. +80° &amp; 85 ~ 90%RH 4 hours a cycle, a total of 24 hours;</li> </ol>																			
<p>Test/Inspection Results: qualified</p> <table border="1"> <thead> <tr> <th>Test Item</th> <th>Before the test</th> <th>After the test</th> <th>Description of Defectives</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Appearance</td> <td>Normal product with good quality</td> <td>Without discoloration, cracking, deformed, nor degummed</td> <td>N/M</td> <td>Pass</td> </tr> <tr> <td>Electrical performance</td> <td>VSWR Test Qualified</td> <td>VSWR Test Qualified</td> <td>N/M</td> <td>Pass</td> </tr> </tbody> </table>					Test Item	Before the test	After the test	Description of Defectives	Result	Appearance	Normal product with good quality	Without discoloration, cracking, deformed, nor degummed	N/M	Pass	Electrical performance	VSWR Test Qualified	VSWR Test Qualified	N/M	Pass
Test Item	Before the test	After the test	Description of Defectives	Result															
Appearance	Normal product with good quality	Without discoloration, cracking, deformed, nor degummed	N/M	Pass															
Electrical performance	VSWR Test Qualified	VSWR Test Qualified	N/M	Pass															
<p><b>Judgment criteria:</b></p> <ol style="list-style-type: none"> <li>1. The metal surface coating should not peel, crack wrinkle, separation, etc.; Non-metal parts should not be discolored, cracking, deformation, degumming and other defects;</li> <li>2. The electrical test meets the standard requirements: the VSWR (voltage standing wave ratio) test is qualified</li> </ol>																			

**High and low temperature thermal shock test:**

Test project	High and low temperature thermal shock test		Model No.: DL-B433W-001	
Product Name	Fiber-glass Antenna		Test QTY.: 5PCS	
Submission Date: 2018-8-15			Completion Date: 2018-08-25	
<b>Test/Inspection Equipment</b> 1. Cold and hot impact test chamber 2. Network Analyzer				
<b>Test/Inspection Conditions:</b> -40 °C (2H) - interval 2H + 80 °C (2H), 12 cycles, a total of 48 hours				
<b>Test/Inspection Results: qualified</b>				
Test Item	Before the test	After the test	Description of Defectives	Result
Appearance	Normal product with good quality	Without discoloration, cracking, deformed, nor degummed	N/M	Pass
Electrical performance	VSWR Test Qualified	VSWR Test Qualified	N/M	Pass
<b>Judgment criteria:</b> 1. The metal surface coating should not peel, crack wrinkle, separation, etc.; Non-metal parts should not be discolored, cracking, deformation, degumming and other defects; 2. The electrical test meets the standard requirements: the VSWR (voltage standing wave ratio) test is qualified				

### Vibration Test:

Test project	Vibration Test	Model No.: DL-B433W-001		
Product Name	Fiber-glass Antenna	Test QTY.: 5PCS		
Submission Date: 2018-8-15		Completion Date: 2018-08-25		
<b>Test/Inspection Equipment</b> 1. CX-Z-100 vibration tester 2. Network Analyzer				
<b>Test/Inspection Conditions:</b> Fix the product on the shaking table, adjust the test time to 0.5 hours, turn on the shaking table, adjust the rotation of the shaking table to 200 + / - 10 rpm, and the amplitude is 25.4mm + / - 3%				
<b>Test/Inspection Results: qualified</b>				
Test Item	Before the test	After the test	Description of Defectives	Result
Appearance	Normal product with good quality	The package of the product is not deformed, and the appearance of the product is not affected	N/M	Pass
Electrical performance	VSWR Test Qualified	VSWR Test Qualified	N/M	Pass
<b>Judgment criteria:</b> 1. The package of the product is not deformed, and the appearance of the product is not affected 2. The electrical test meets the standard requirements: the VSWR (voltage standing wave ratio) test is qualified				

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

---

## 6. Contact us

### Shenzhen DreamLnk Technology Co., Ltd

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

**Office Add.:** Room 603, Unit C, Zone A, Huameiju Business Center, Xihu Rd., Bao'an District, Shenzhen, Guangdong Province, China

**Factory Add.:** 5th Floor, Building B, Huazhi Innovation Valley, No. 7 Yuhua Street, 138 Industrial Zone, Tangxia Town, Dongguan, Guangdong Province, China

**TEL.:** +86-755-29369047

**FAX:** +86-755-27844601

**Mobile:** +86 13760215716

**Wechat:** wsj\_james

**E-mail:** [james@dreamlnk.com](mailto:james@dreamlnk.com)

**Web:** [www.iot-rf.com](http://www.iot-rf.com)