Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: 433 Antenna

Part NO.: SKL.TH27.433

Write By: zhangchanghua

Issued Date: 2025-07-10

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

R & D Center：Room D 5th Floor Building L,Block E ,71 Baocheng District ,Baoan District ,Shenzhen
Factory：6 Floor,GangHuaXing Industrial Park,Rongshu Road 2nd ,Fuyong,Baoan ,shenzhen
Email:damoncui@tllskylink.com

● Specification Summary

A. Electrical Characteristics	
Frequency	**433MHz**
VSWR	**<2.0**
Efficiency	**>30%**
Peak Gain	**-1.29dbi**
Impedance	**50 Ohm**
Polarization	**Line**
Type of Antenna	**Integral Antenna**
B. Material & Mechanical Characteristics	
Material of Radiator	**Cu**
Cable Type	/
Connector Type	/
Dimension	At Attachment
Heat-durability	**280±5°C，10sec.**
C. Environmental Characteristics	
Operation Temperature	**- 20 °C ~ + 80 °C**
Storage Temperature	**- 30 °C ~ + 85 °C**

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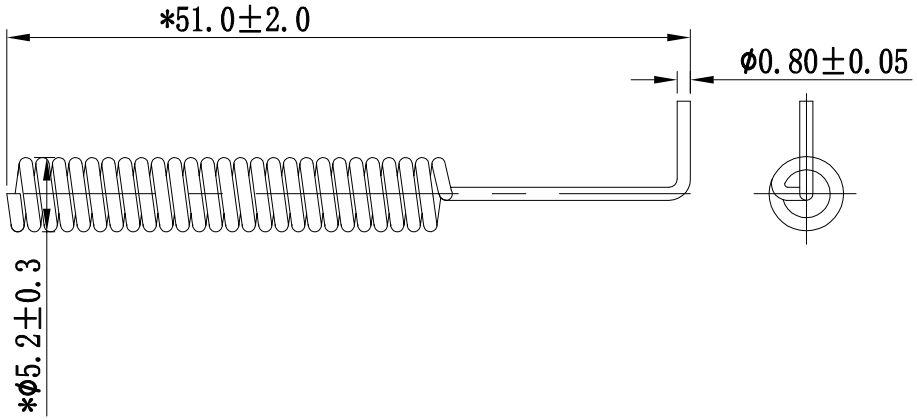
RoHS
Compliant
G P



Rev	Description	Date	Remark
A	New drawing		

Third Angle			
0～10	±0.05	○	0.02
10～18	±0.10	◎	⌀0.03
18～30	±0.12	⊥	0.02
30～40	±0.15	▱	0.04
40～	±0.20	Angle	±0.5°
Location			

SHEN ZHEN SKYLink CO.,LTD

Project		Date	2025-07-11
Part Name		Designed by	
Part No.	SKL TH27-433	Checked by	MD / RF
Material			
DWG No.		Approved by	
		Unit mm	Scale 1:1 Rev A

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● Test Equipment & Conditions

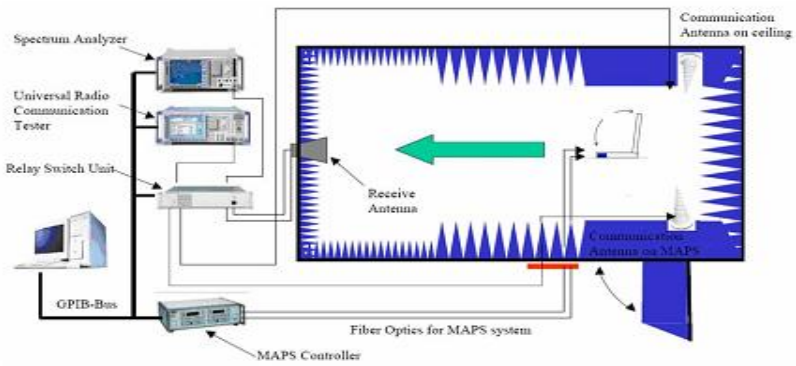
1. Network Analyzers :

Agilent 8753D 5071B

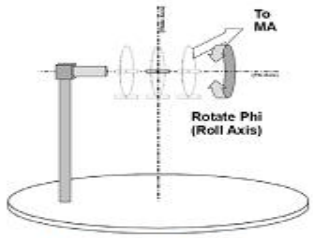
Communications Test Set:

Agilent E5515C CMW500

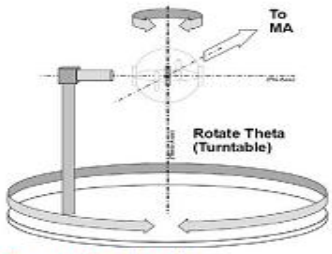
2. 3D Chamber Test System



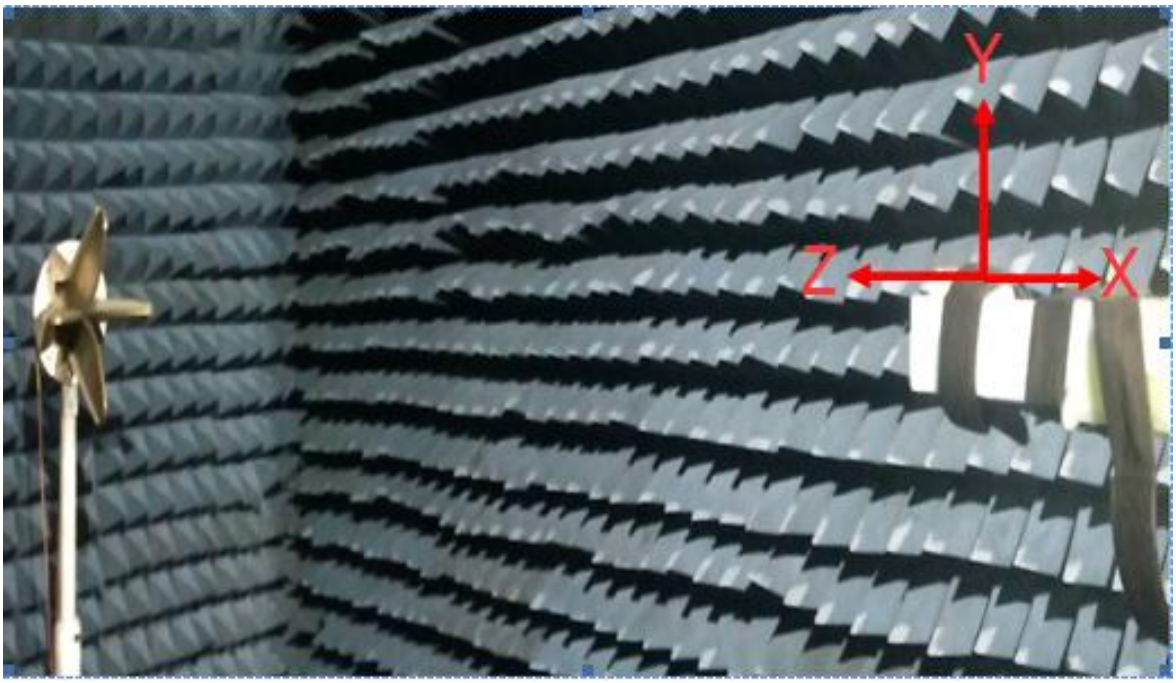
(Testing by 3D anechoic chamber)



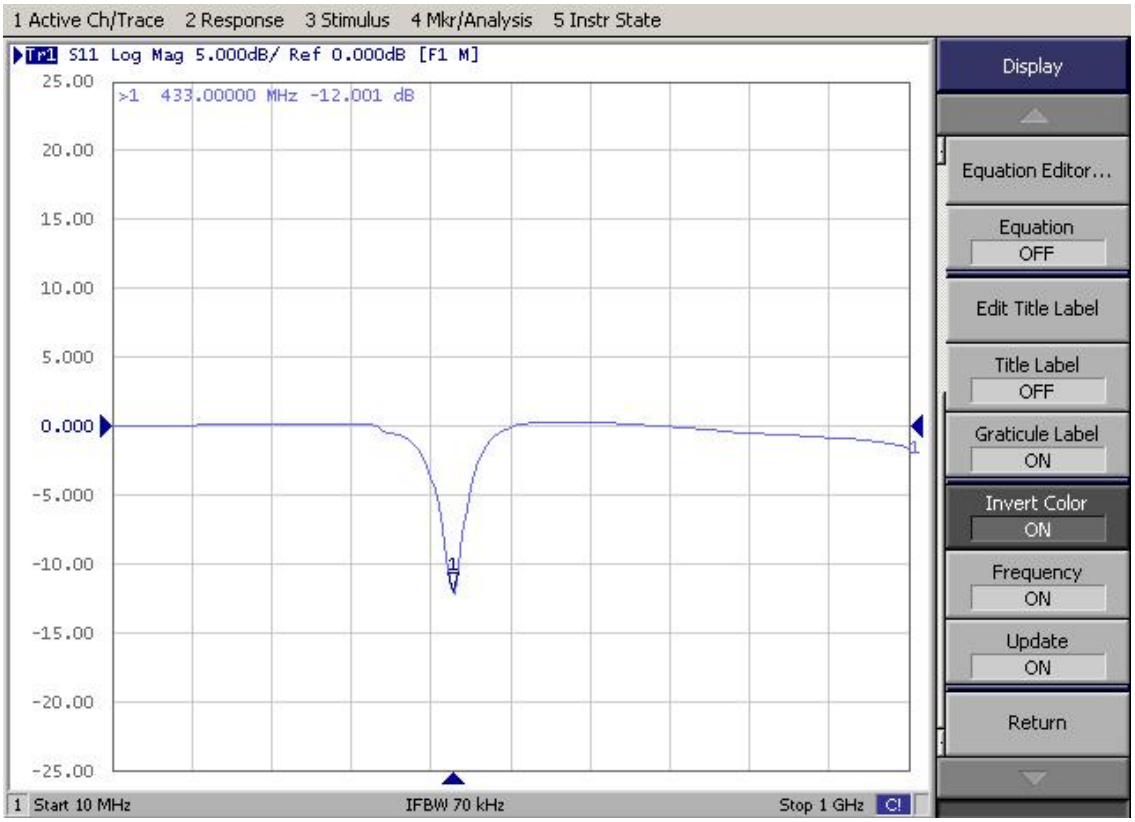
Phi axis test



Theta axis test



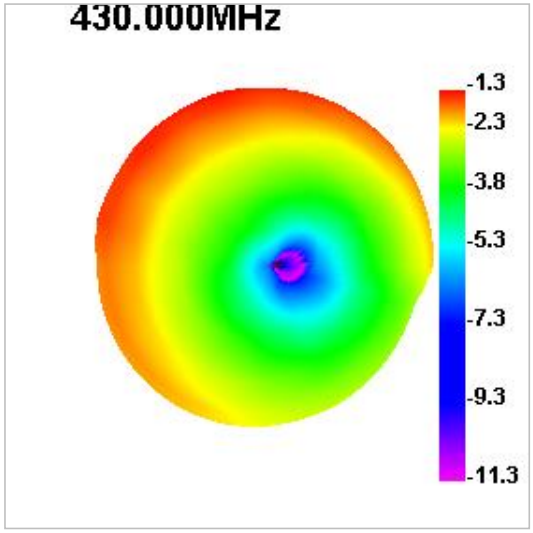
◆ Return Loss

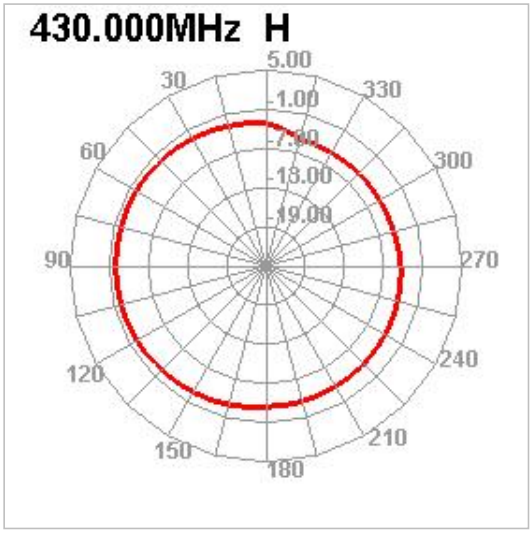


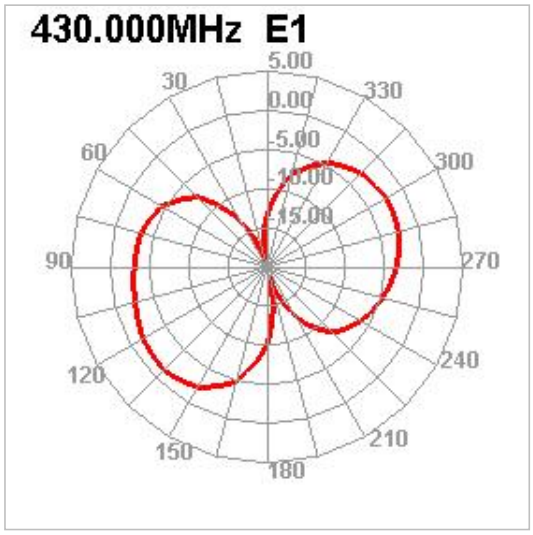
◆ Gain & Efficiency

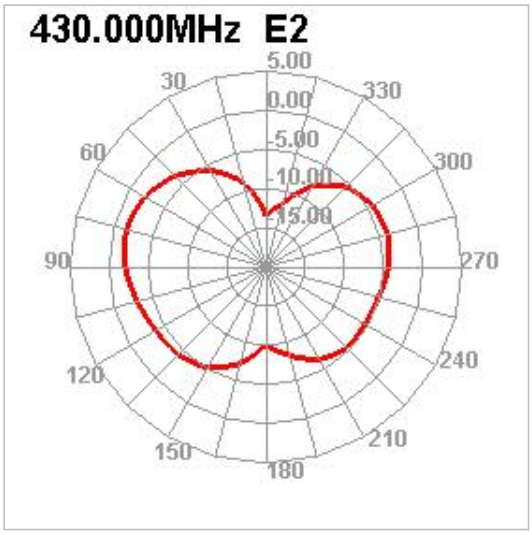
Freq	Effi	Gain
(MHz)	(%)	(dBi)
420	30.5	-2.73
430	37.27	-1.29
440	33.67	-1.93

◆ Radiation Pattern









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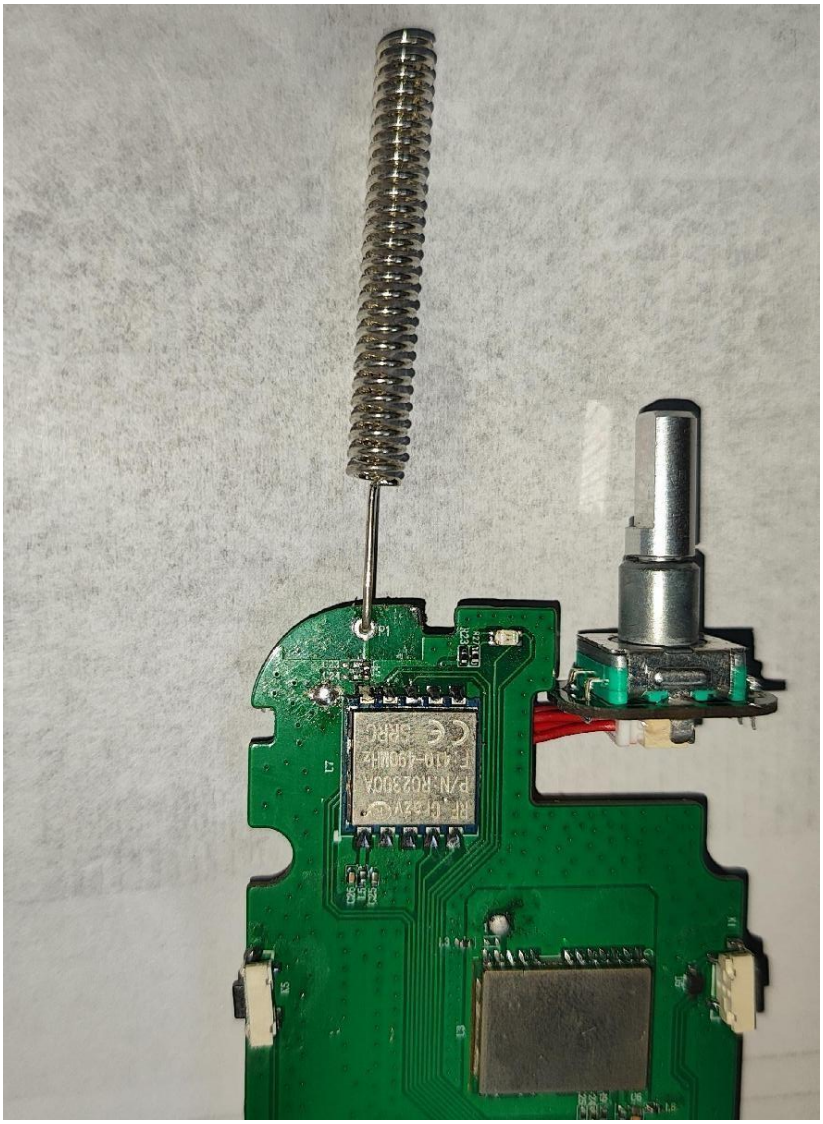
◆ Antenna Picture



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◆ Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃， Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition ， Temp: 35±2℃ Humidity: 85% NaCl salt spray :5 ±1 %.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS

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