

SHENZHEN KINGHELM ELECTRONIC CO., LTD.

Model: KH-433-3M-XP

Product specifications

Antenna componentst

Frequency range	(433GHz)
VSWR	<2.0
Input Impedance	50 (Ω)
Polarization	Vertical Polarization
(3dB) HPW	180° H-plane 120° E-plane

RF by		Checked by	
ME by		Date	
Customer Confirm			

Revision History

Date	Revision	Description of Changes
2020-4-7	RA	Measured with SUS301 sample.

433 Sucker antenna PROJECT.....	1
ANTENNA COMPONENTST.....	1
1 TECHNICAL SUMMARY.....	2
2 GENERAL DESCRIPTION.....	3
2.1 Components/Part revisions.....	3
3 MECHANICAL DESCRIPTION.....	3
4 ELECTRICAL PERFORMANCE.....	3
4.1 Set-up.....	3
4.1.1 VSWR.....	3
4.1.2 Gain & Radiation Patterns.....	3
4.1.3 Matching Circuit Description.....	3
4.2 Measurement Data.....	4
4.2.1 Active result (GSM)	4
5 Mechanical drawing.....	5
6 RELIABILITY TESTS.....	6
6.1 Test content.....	6
6.2 Test results.....	6

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the 433 Sucker antenna program. We test the antenna with the latest version handset. And it seems to be acceptable.

2 General Description

2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

3 Mechanical Description

4 Electrical Performance

4.1 Set-up

4.1.1 VSWR

VSWR measurements (S11) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

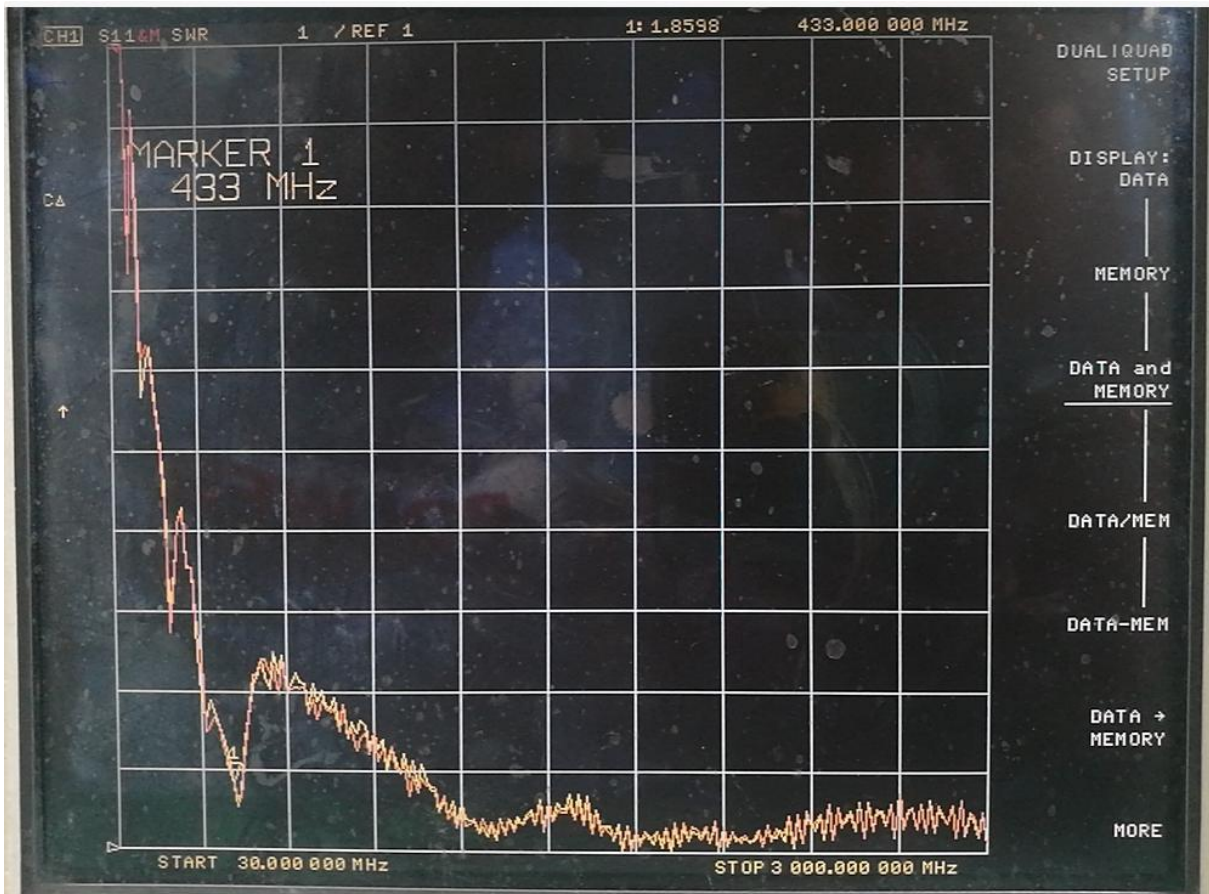
4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the KH's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 800 MHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

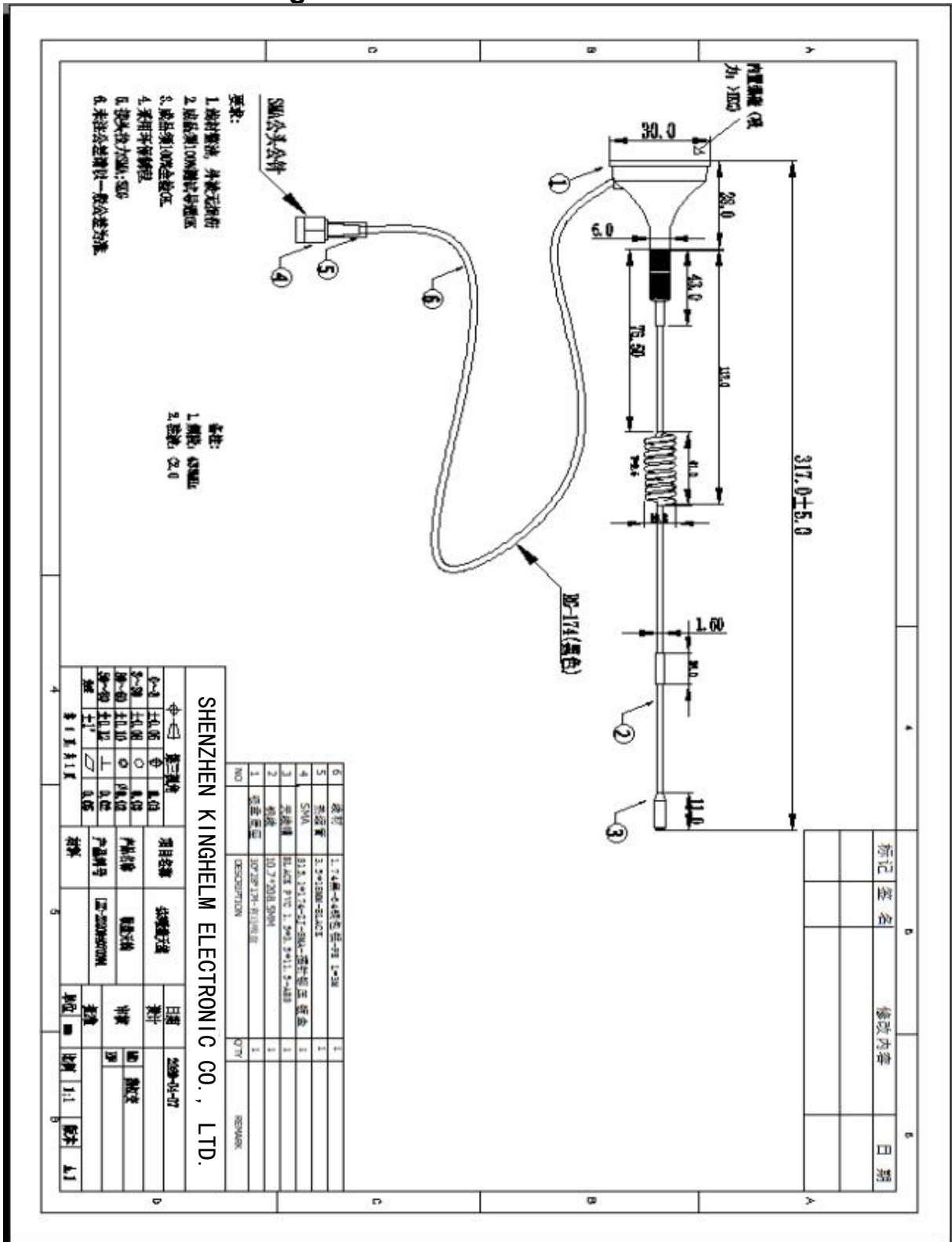
4.1.3 Matching Circuit Description

4.2 Measurement Data

4.2.1 Active result (433)



5 Mechanical drawing



6 Reliability tests

6.1 Test content

No	Test item	Test mode	Criteria
1	Salt Spray Test	48-hour salt spray test with 5% salt resolution	There shall be no discoloration, skewing (deformation) and falling off, and the corrosion area shall not be too large

6.2 Test results

NO	Sample size	Test period	Result	Remark
1	50	24 hours	OK	Technical grade: grade 9 (corrosion<0.4mm)
2	50	48 hours	OK	Technical grade: grade 9 (corrosion<0.4mm)