

Manhole Lid Antenna

**5G NR/LTE/4G Full Frequency Bands
600~960/1710~2170/2400~2700/3200~3800MHz**

Certification compliant: IP68, IK10 and UV ISO 4892

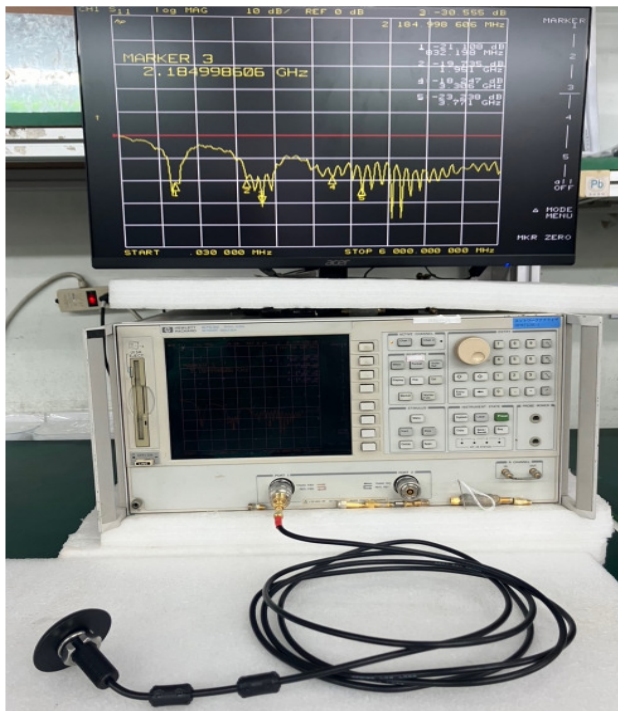
Model No
ADA-CP722-5G/LTE-CFD195-2M-SMA/M



2.1 600~3800MHz Low Profile Antenna Electrical Properties

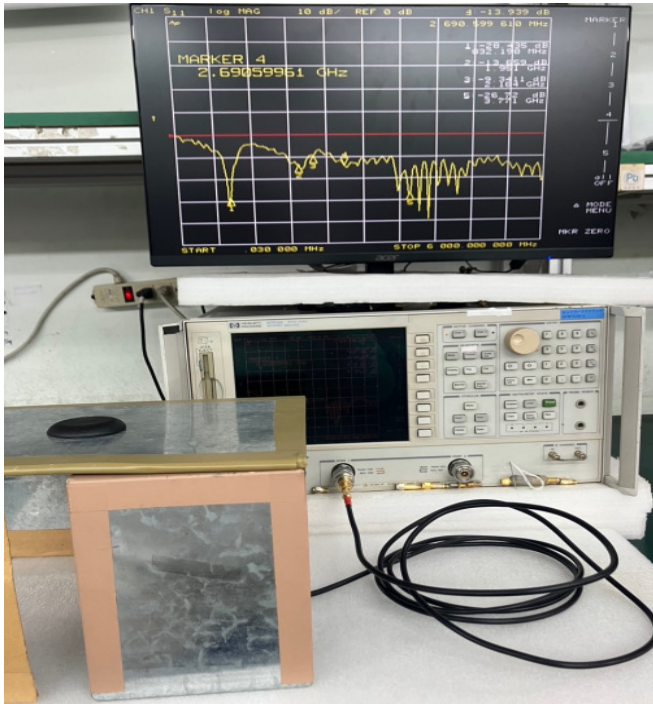
Parameter	Description
Communication System	5G/4G/LTE band
LIPD Band Frequency :	600~3800 MHz
Antenna Average Gain	2.0~3.5dBi
Nominal Impedance	50 ohm
Polarization / Max. Power	Vertical / 5W
Return Loss (Check test Data) Center Frequency 921MHz	(5-1)862.217MHz(-27.284dB) (5-2)1993.00MHz(-23.917dB) (5-3)2650.00MHz(-10.226dB) (5-4)3300.00MHz(-24.039dB)
V.S.W.R <1.5:1 Center Frequency 921MHz	(5-1)862.217MHz(1.090:1) (5-2)1993.00MHz(1.136:1) (5-3)2650.00MHz(1.885:1) (5-4)3300.00MHz(1.134:1)
Reflection coefficient Center Frequency 921MHz	(5-1)862.217MHz(0.034) (5-2)1993.00MHz(0.064) (5-3)2650.00MHz(0.307) (5-4)3300.00MHz(0.063)
Network analyzer test range	600MHz~3800MHz
Test Various scenarios	PCB design/finished product/iron plate installation testing

2-2 :600~3800 MHz Network analyzer test HP8753E Antenna tested on a flat surface

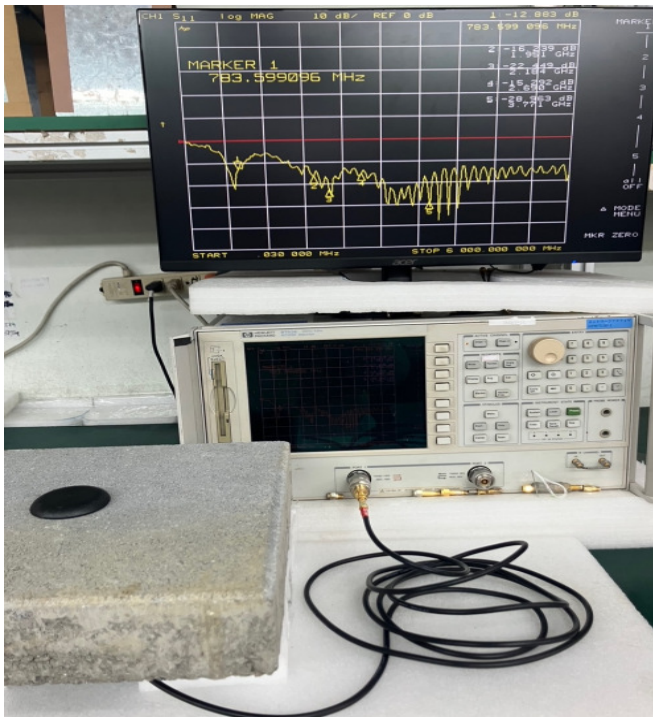


ADACTUS

2-3 :600~3800 MHz Network analyzer test HP8753E Antenna mounted on a flat iron plate for testing

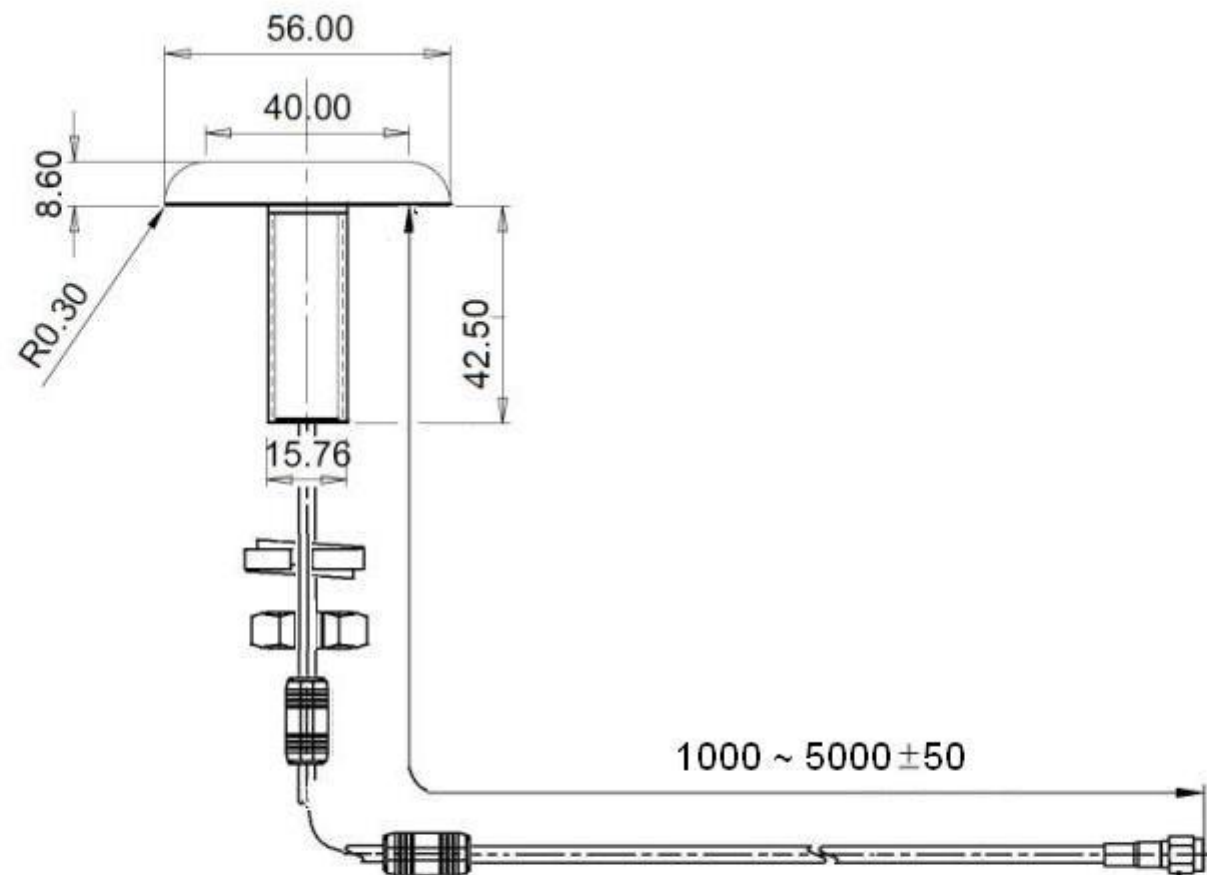


2-4 :600~3800 MHz Network analyzer test HP8753E Antenna mounted on a flat cement brick for testing



2-3 600~3800 MHz Low Profile Antenna Mechanical Properties

Parameter	Description
Antenna Type	External Antenna
Touch Type	Screw Type (M16x1.5P) Slotted
Antenna size	D:56mm x H:8.6mm
Antenna covered with injection plastic material	Nylon 6 Glass/Mineral Fiber Reinforced
Antenna Material	Nylon plastic /PCB/ABS plastic/Stainless
Antenna screw column material	ABS plastic
Antenna Nut & washer material	Stainless steel
Antenna cable	CFD195 Low loss
Connector Type	SMA 180°(Male)
Antenna Cable Total Length	3000 mm /
Antenna Color	Black
Waterproof (The antenna adopts plastic-coated design)	100% waterproof IP67 and IP68 (The antenna is waterproof up to IP68)
Antenna impact resistance	IK10 (The antenna is impact resistance up to IK10)
Antenna UV resistance compliant	ISO 4892 standards
Operating Temperature Range	-35 °C ~ +70 °C
Storage Temperature Range	-45 °C ~ +80 °C
Shock (Drop Test)	100cm drop on concrete
Anti-electromagnetic waves	Two magnetic buckles on the cable



Third angle projection



CUSTOMER' S

MODEL

PARTS NUMBER

FREQUENCY

UNIT

SCALE

DATE

VERSION

600-900/1710-2170-2400-2700MHz

M/M

1

TOLERANCE

X. XX±0. 15

NAME

PARTS NUMBER

APPROVED

CHECKED

DRAWING

DESIGNED

SURFACE ROUGHNESS



APPEARANCE

ADACTUS

**3. Antenna Appearance Material and Size: Material:
Nylon 6 Glass/Mineral Fiber Reinforced
Certification compliant: IP68, IK10 and UV ISO 4892**



**4 Antenna Size: M16x1.5P (Thread length :43MM) Slotted
Nut & Washer Diameter :56 mm Height : 8.6mm**



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4-1.Appearance



SMA Male connector



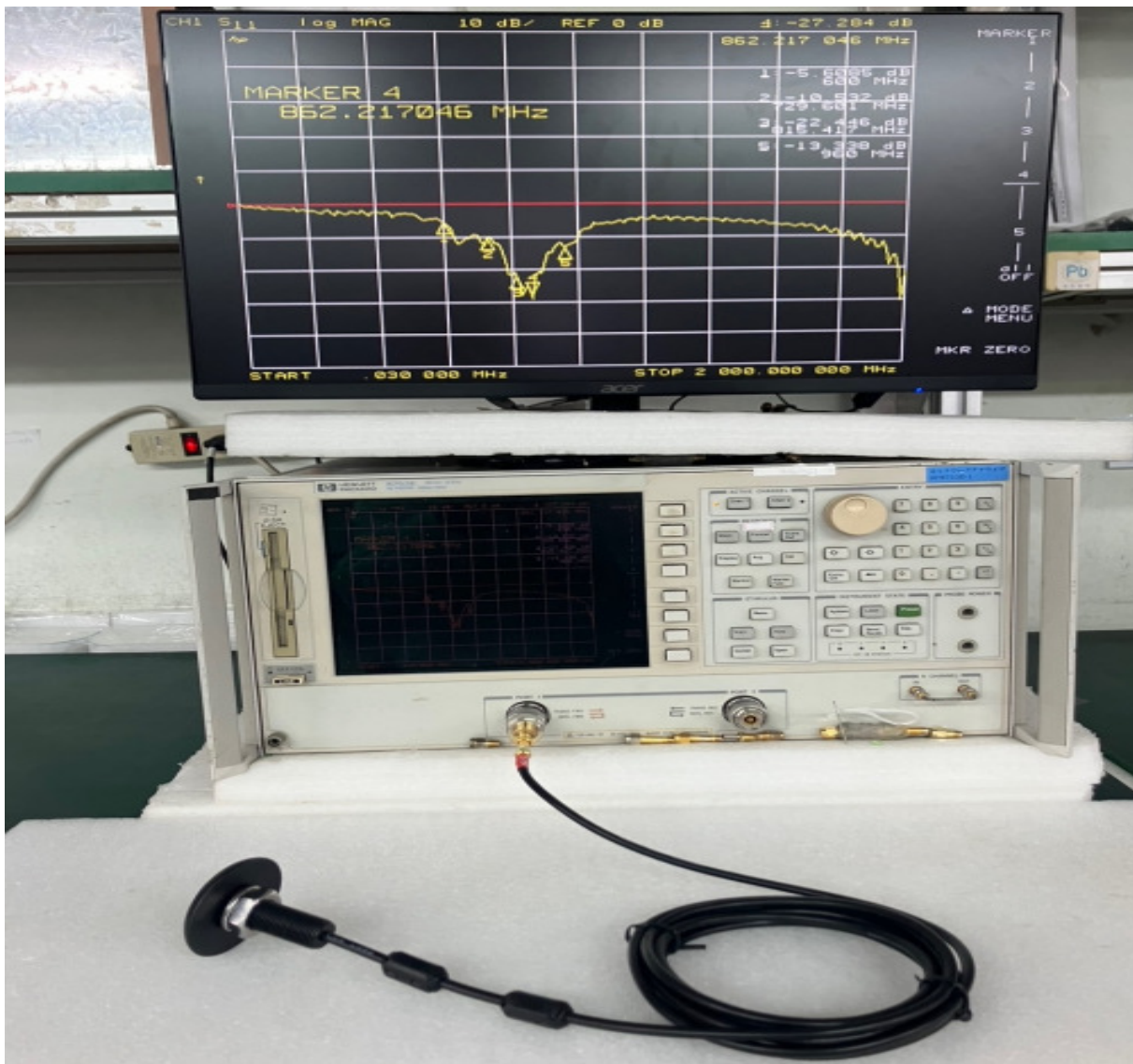
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5. 600~960MHz Network analyzer test HP8753E

Antenna test

5-1 Detail band test - frequency : 600~960 MHz

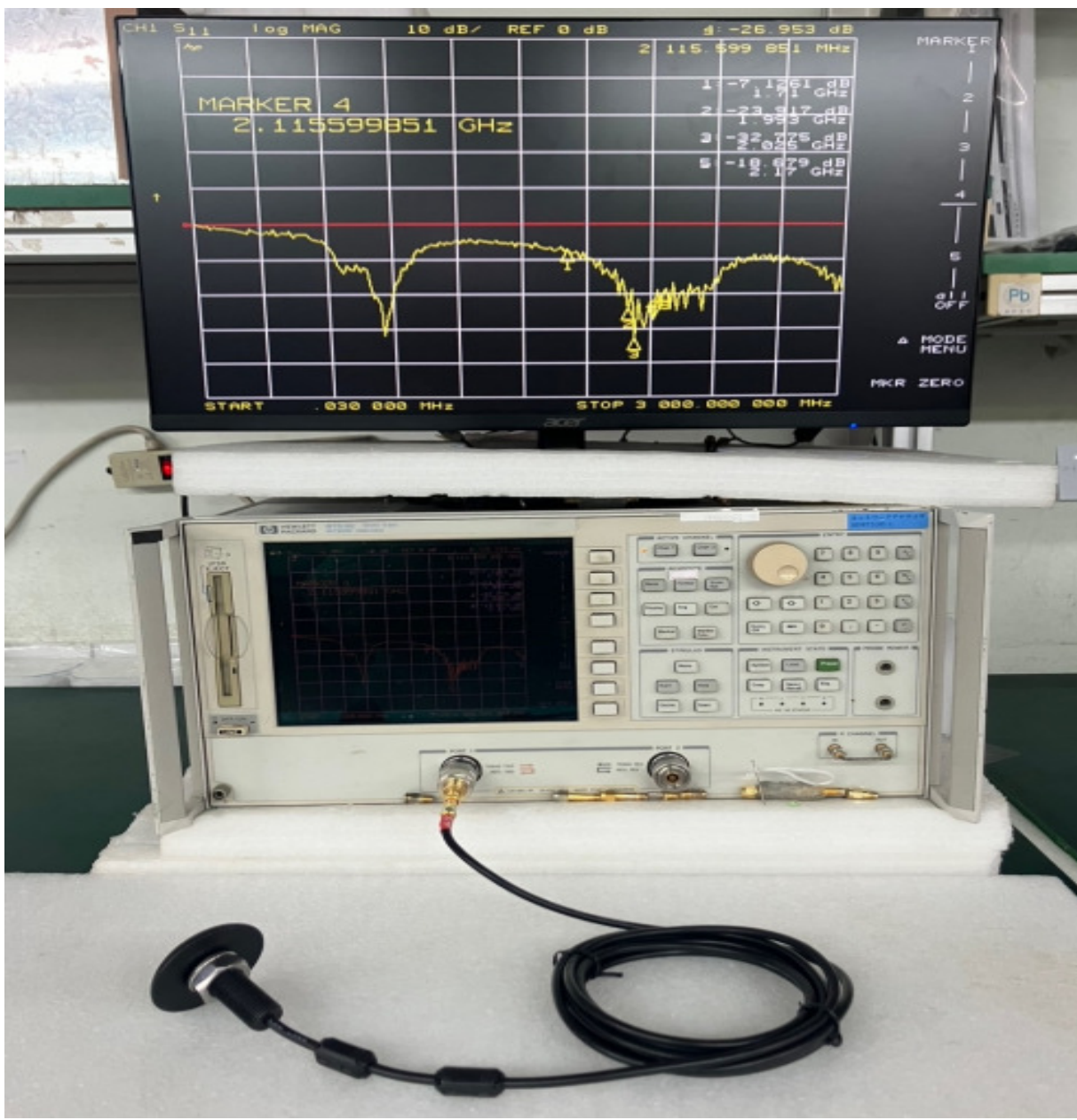
Frequency	Return loss	V.S.W.R	Reflection coefficient
600.000MHz	-5.6085dB	3.204:1	0.524
729.601MHz	-10.532dB	1.847:1	0.297
815.417MHz	-22.446dB	1.163:1	0.075
862.217MHz	-27.284dB	1.090:1	0.043
960.000MHz	-13.338dB	1.549:1	0.215



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5-2 Detail band test - frequency : 1710~2170 MHz

Frequency	Return loss	V.S.W.R	Reflection coefficient
1710.00MHz	-7.1261dB	2.573:1	0.440
1993.00MHz	-23.917dB	1.136:1	0.064
2025.00MHz	-32.775dB	1.047:1	0.023
2115.59MHz	-26.953dB	1.094:1	0.045
2170.00MHz	-18.679dB	1.264:1	0.116



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Frequency 2400~2700MHz Network analyzer test HP8753E

5-3 Detail band test - frequency : 2400~2700 MHz

Frequency Return loss V.S.W.R Reflection coefficient

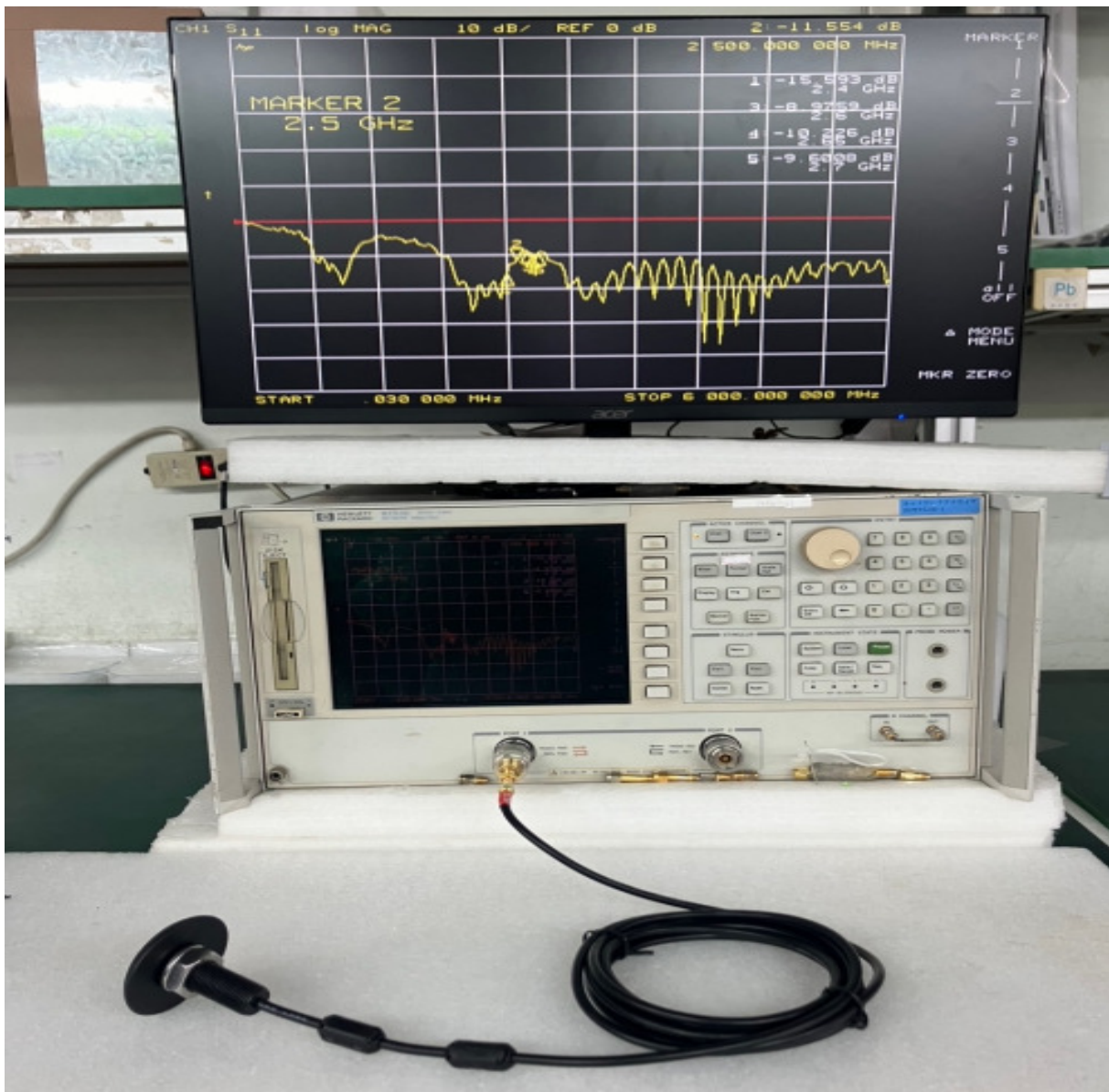
2400.00MHz -15.593dB 1.398:1 0.166

2500.00MHz -11.554dB 1.719:1 0.264

2600.00MHz -8.9759dB 2.105:1 0.356

2650.00MHz -10.226dB 1.885:1 0.307

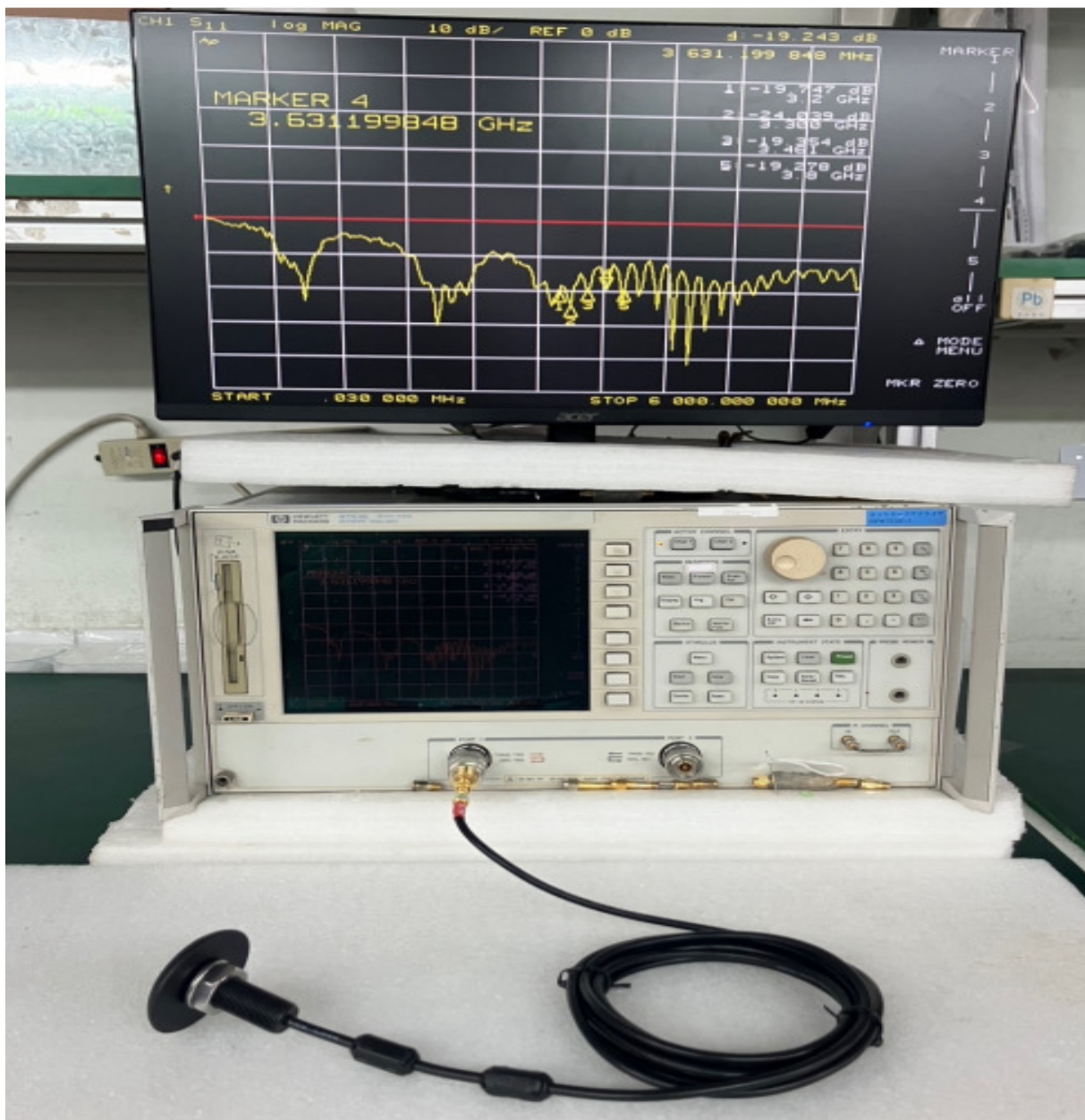
2700.00MHz -9.6008dB 1.990:1 0.331



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5-4 Detail band test - frequency : 3200~3800 MHz

Frequency	Return loss	V.S.W.R	Reflection coefficient
3200.00MHz	-19.747dB	1.230:1	0.103
3300.00MHz	-24.039dB	1.134:1	0.063
3461.00MHz	-19.534dB	1.236:1	0.106
3631.19MHz	-19.234dB	1.245:1	0.109
3800.00MHz	-19.278dB	1.244:1	0.109



Certification compliant: Waterproof rating IP68

TEST REPORT EN/ IEC 60529 Degrees of protection provided by enclosures (IP Code)	
Report Number.....	NTS2509136S
Tested by (+ signature)	Tim Tang
Compiled by (+ signature)	Sailor Jiang
Date of issue.....	Sep. 16, 2025
Total number of pages.....	8 pages
Testing laboratory	NOWD Testing Services Co., Ltd.
Address	5A, Building 29B, Yintian Industrial Zone, Yantian Community, Xixiang Street, Bao'an District, Shenzhen, China
Testing location	Same as above
Applicant's name.....	Proje International Co., Ltd.
Address.....	5F, No. 25-1, Ji Lin Rd., Zhong Li Dist. Taoyuan, Taiwan 32062
Manufacturer.....	Proje International Co., Ltd. 5F, No. 25-1, Ji Lin Rd., Zhong Li Dist. Taoyuan, Taiwan 32062
Test specification:	
Standard.....	EN 60529: 1992 +A1: 2000+A2: 2013 IEC 60529: 2013 +A1: 2013
Test Item.....	IP68
Test Result	PASS
This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of NOWD Testing Services Co., Ltd.	
Test item description.....	Manhole Lid Antenna
Trade Mark.....	N/A
Model/Type reference.....	/
Adding Models.....	N/A
Ratings.....	/



Certification compliant: Impact resistance rating IK10



TEST REPORT

No.: SZIN2602000338PL01_EN

Issue Date: 2026-02-12

Page: 3 of 4

Test Item: IK10
Sample Description: A-Finished part
Test Method: IEC 62262:2021and Client's Requirement
Client's Requirement: number of shocks: 1 time
Test Condition:
 Impact energy: 20 J
 Number of shocks: 1 time
Lab Environmental Condition: 18°C - 28 °C, 25 %RH - 75 %RH
Test Result:
Sample A

Specimen	Appearance
1	The sample is intact

Note: The test method was carried out by SGS-CSTC Standards Technical Services (ShangHai) Co., Ltd.



TEST REPORT

No.: SZIN2602000338PL01_EN

Issue Date: 2026-02-12

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Test Photo:

During Test-Sample A

Before Test-Sample A

After Test-Sample A

Certification compliant: UV resistance with ISO 4892 standards

TEST REPORT ISO 4892-3 Plastics — Methods of exposure to laboratory light sources —Part 3: Fluorescent UV lamps	
Report Number.....	NTS2508140S
Tested by (+ signature)	Alex Hu
Compiled by (+ signature)	Sailor Jiang
Date of issue.....	Aug. 25, 2025
Total number of pages.....	12 pages
Testing laboratory	NOWD Testing Services Co., Ltd.
Address	5A, Building 29B, Yintian Industrial Zone, Yantian Community, Xixiang Street, Bao'an District, Shenzhen, China
Testing location	As above
Applicant's name.....	Projye International Co., Ltd.
Address.....	5F, No. 25-1, Ji Lin Rd., Zhong Li Dist. Taoyuan, Taiwan 32062
Factory.....	Projye International Co., Ltd.
Address.....	5F, No. 25-1, Ji Lin Rd., Zhong Li Dist. Taoyuan, Taiwan 32062
Test specification:	
Standard.....	ISO 4892-3:2024
Test procedure.....	ISO Attestation
Non-standard test method.....	N/A
Test Report Form No.....	ISO 4892-3
Test Report Form(s) Originator.....	N/A
Master TRF.....	Dated 2024-12
This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of NOWD Testing Services Co., Ltd.	
Test item description.....	Manhole Lid Antenna
Trade Mark.....	N/A
Model/Type reference.....	/
Ratings.....	N/A



Fig. 1- Test pattern 1