

PROFESSOR TECHNOLOGY CO.,LTD..

INTRODUCTION

Manhole lid Antenna

CP822-5G/LTE-CFD195-2M-SMA/M

Permanent Screws Mount (M16x1.5P)43mm

Cables : 5G/LTE/4G/3G/GSM CFD195 Low loss 2M SMA/M

690-960/1710-2170/2400-2700/3200~3800MhzMHz 2-5dBi

1. GENERAL DESCRIPTION

Model No	Products P/N
CP822-5G/LTE-CFD195-2M-SMA/M	CP822-5G/LTE-2M

Below is a table summarizing the 5G/LTE/4G/3G/GSM antenna design specification



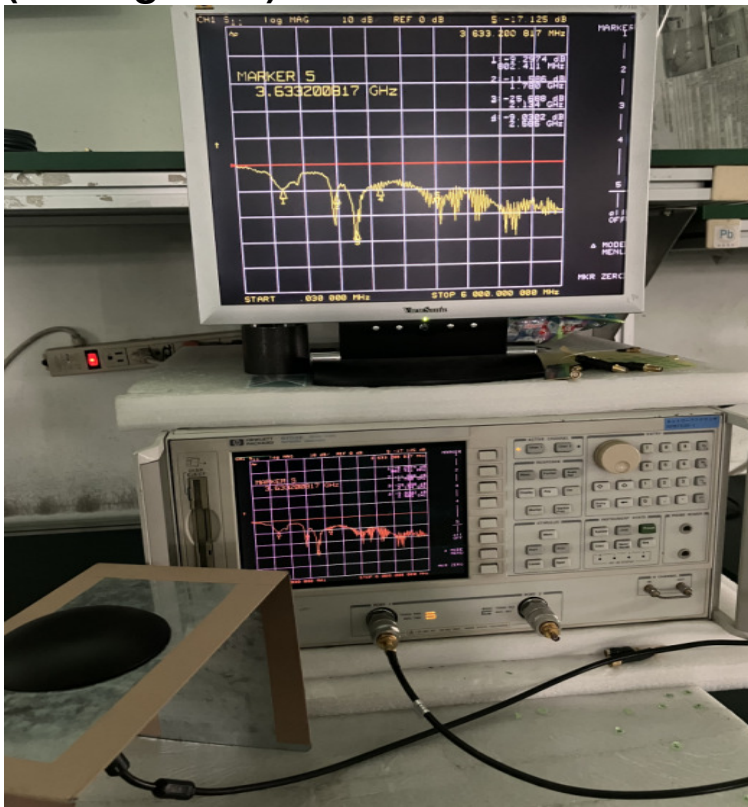
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Cable :

2.1 5G/LTE/4G/3G/GSM Multi-band Antenna Electrical Properties

Parameter	Description
Communication System	5G/LTE/4G/3G/AMPS/GSM/DCS/UMTS
Frequency Band (MHz)	600~960/1710~2170/2400~2700/3200~3800MHz
Average Efficiency	68%/73%/59%75%
Average Gain	2.0~5.0dBi
Nominal Impedance	50 ohm
Polarization	Vertical
Return Loss (Check test Data)	832.813MHz(-18.488dB),1778.00MHz(-20.429dB) 2521.00MHz(-13.838dB),3689.39MHz(-27.245dB)
V.S.W.R <1.6:1	832.813MHz(1.270:1),1778.00MHz(1.210:1) 2521.00MHz(1.510:1),3689.39MHz(1.091:1)
Reflection coefficient	832.813MHz(0.119),1778.00MHz(0.095) 2521.00MHz(0.203),3689.39MHz(0.043)

2-2 :5G/LTE/4G/3G/2G Multi-Band Network analyzer test HP8753E (31-Aug-2022)



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2-3 LTE/5G/4G/3G/2G Multi-band Antenna Mechanical Properties

Parameter	Description
Antenna Type	External Antenna
Touch Type	Screw Type (M16x1.5P)
Antenna Mount Screw length	43mm
Antenna size	D:98mm x H:14.mm
Antenna Material	PC
Antenna cable	CFD195 Low loss
Connector Type	SMA 180°(Male)
Antenna Cable Total Length	2000mm
Antenna Color	Black
Waterproof	100% waterproof.(IP66~IP67)
Operating Temperature Range	-35°C~+70°C
Storage Temperature Range	-40°C~+80°C
Shock (Drop Test)	100cm drop on concrete

3. Antenna Appearance Size: M16x1.5Px43mm

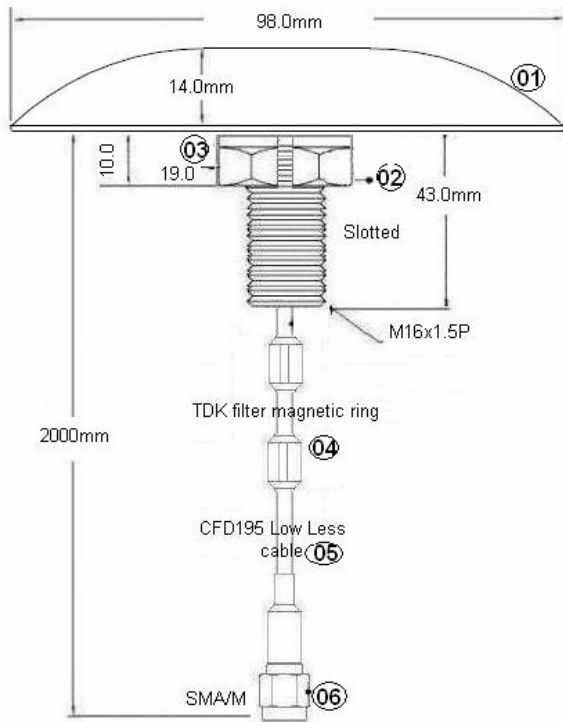
Diameter :98.0mm (3.85")

Height : 14.0mm (0.55")



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4.Appearance



NO.	NAME	FINISH	Q, TY
01	Top Plastic Shell	Black or White	01
02	NUT M16x1.5P	Stainless steel	01
03	Spring washer	Stainless steel	01
04	TDK filt magnetic ring	Gray	02
05	CFD195 Low Less cable	Black	01
06	SMA Male	AuPlated	01
07	Label	Silver	01

Manhole lid antenna

CP822-5G/LTE-CFD195-2M-SMA/M

5G/LTE

(600~960/1710~2170/2400~2700/3200~3800MHz)

ROHS

IP67 Waterproof

Third angle projection		CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
						M/M			1
PROFESSOR 普傑國際股份有限公司		TOLERANCE	X.XX±0.15	NAME	PARTS NUMBER	APPROVED	CHECKED	DRAWING	DESIGNED
		SURFACE ROUGHNESS	▽	APPEARANCE					

Manhole lid
Antenna

CP822-5G/LTE-
CFD195-2M-SMA/M



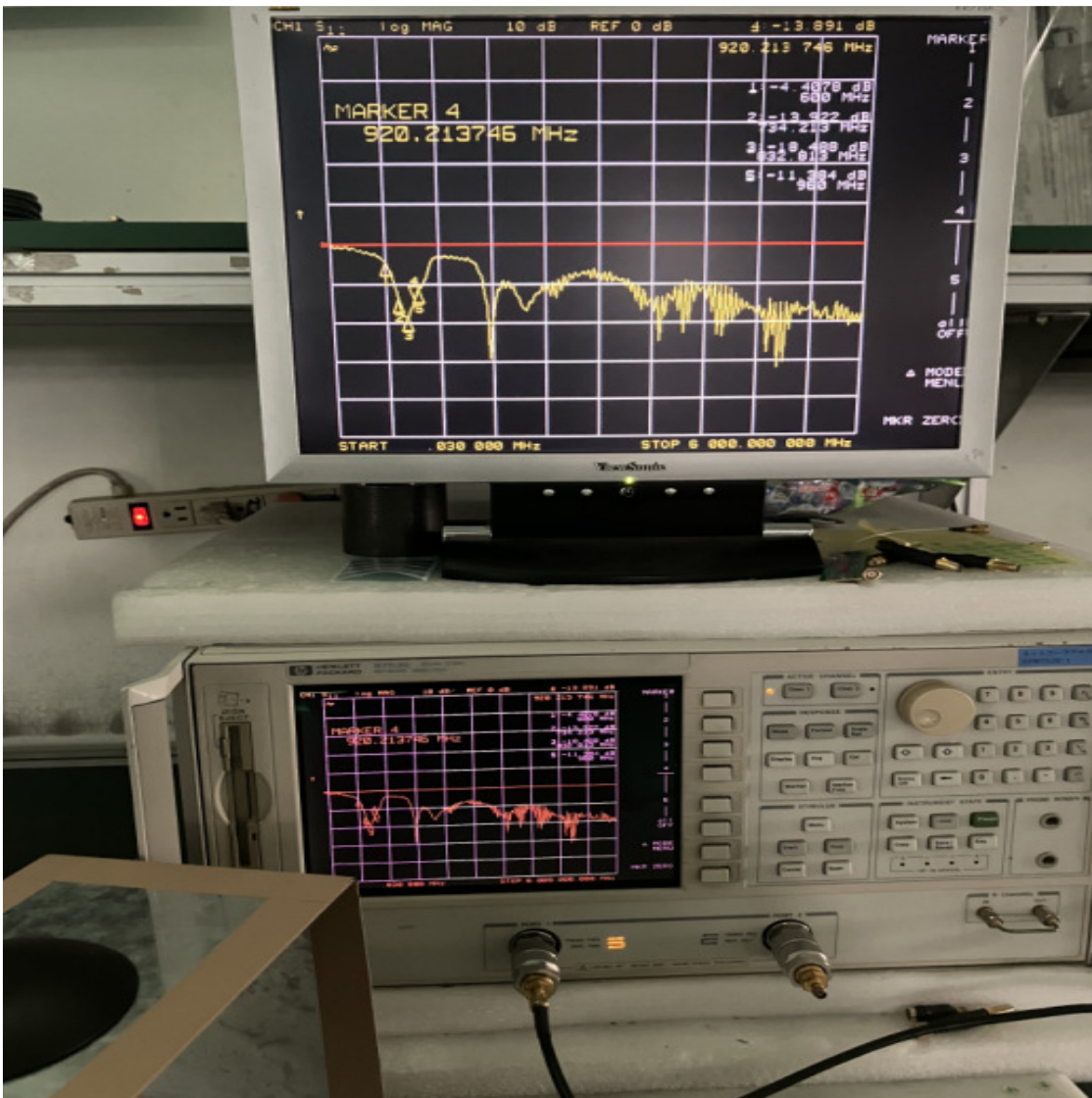
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5.LTE/4G/3G Multi-band Network analyzer test HP8753E

Frequency :690~960/1710~2170/2500~2700MHz

5-1 Detail band test - frequency : 690~960MHz

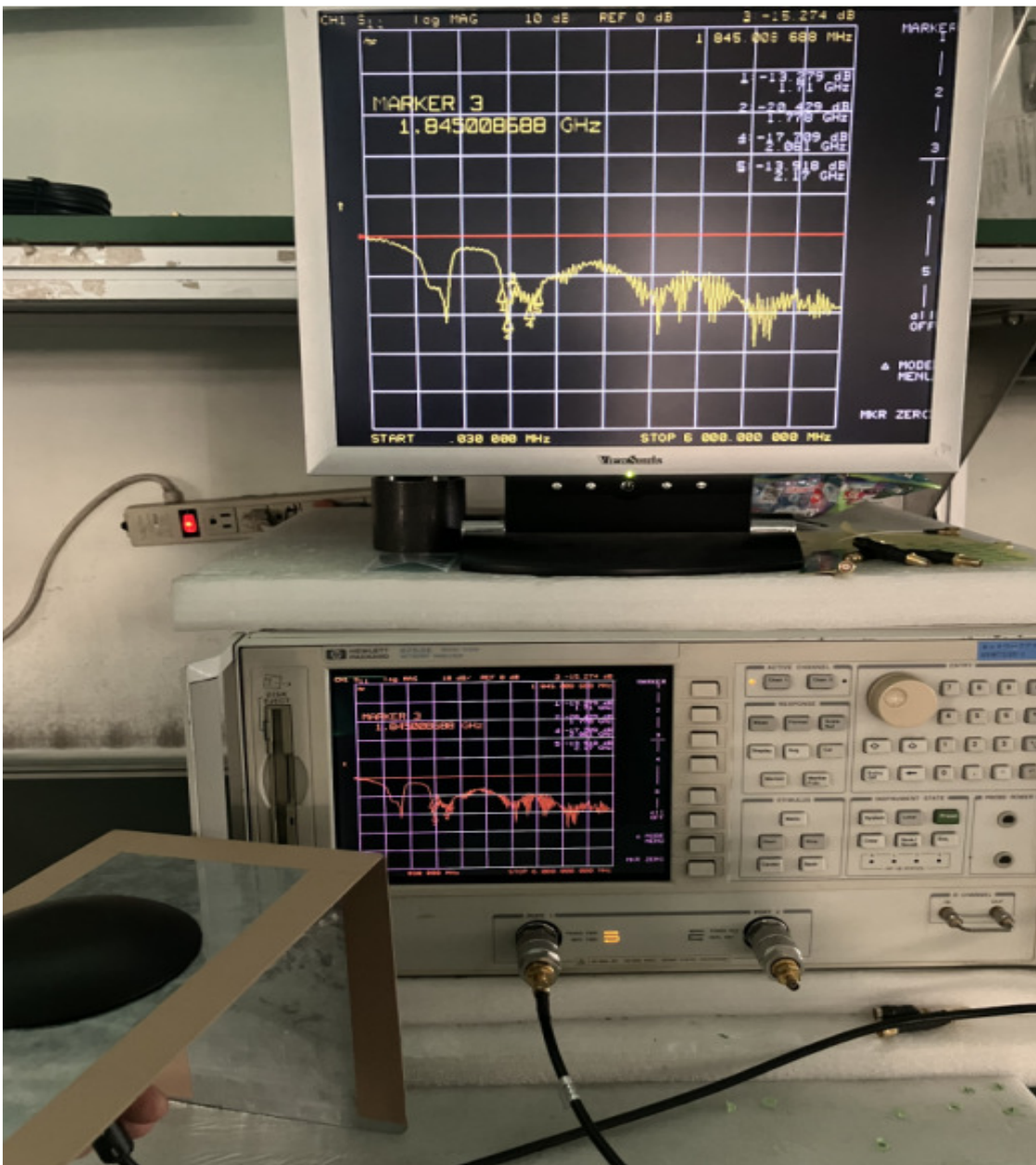
Frequency	Return loss	V.S.W.R	Reflection coefficient
600.000MHz	-4.4070dB	4.026:1	0.602
734.213MHz	-13.922dB	1.504:1	0.201
832.813MHz	-18.488dB	1.270:1	0.119
920.213MHz	-13.891dB	1.506:1	0.202
960.000MHz	-11.384dB	1.738:1	0.270



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

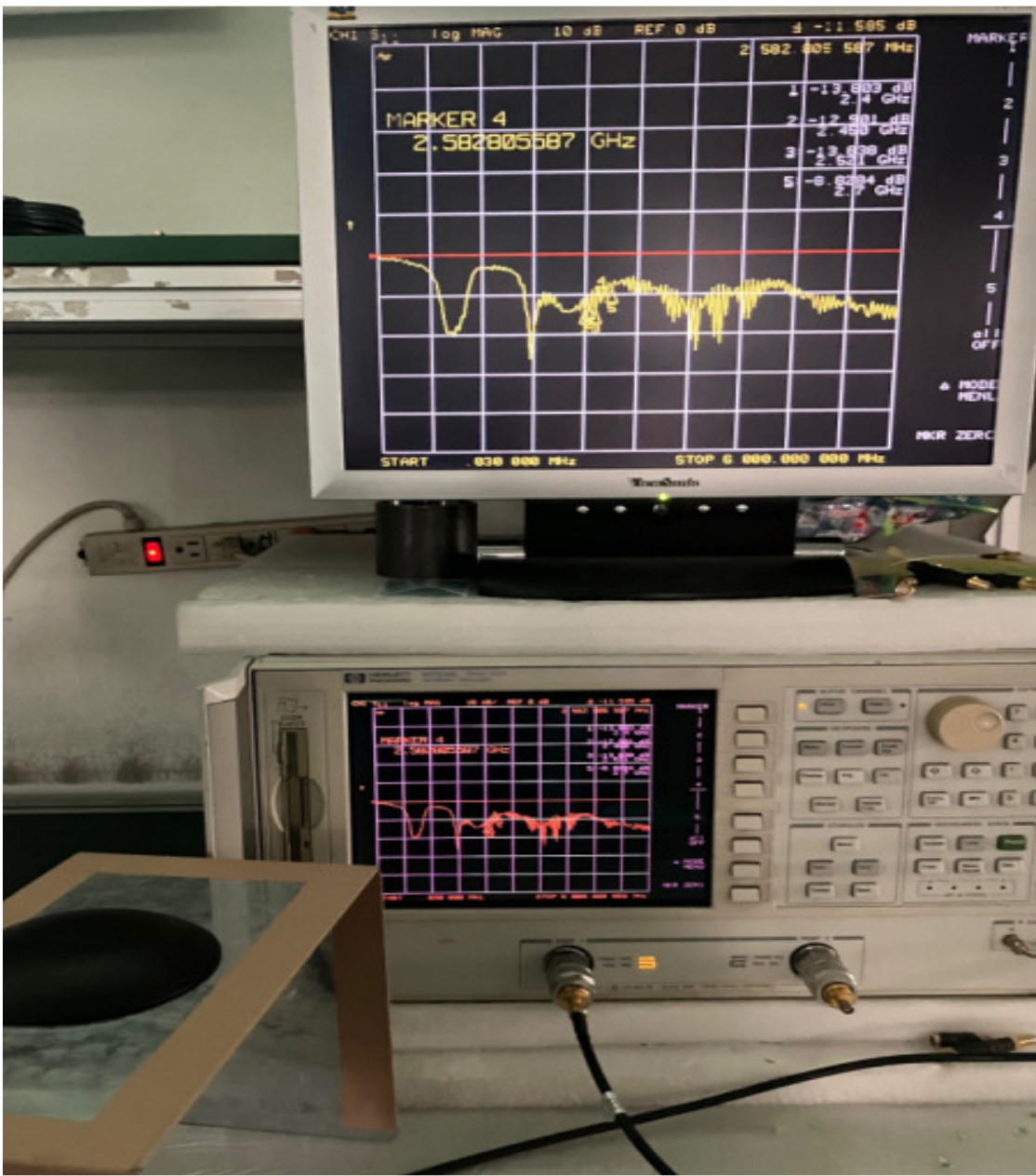
Frequency	Return loss	V.S.W.R	Reflection coefficient
1710.00MHz	-13.279dB	1.554:1	0.217
1778.00MHz	-20.429dB	1.210:1	0.095
1845.00MHz	-15.274dB	1.416:1	0.172
2016.00MHz	-17.709dB	1.299:1	0.130
2170.00MHz	-13.918dB	1.504:1	0.201



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5-3 Detail band test - frequency : 2500-2700Mhz

Frequency	Return loss	V.S.W.R	Reflection coefficient
2400.00MHz	-13.803dB	1.513:1	0.204
2450.00MHz	-12.901dB	1.585:1	0.226
2521.00MHz	-13.838dB	1.510:1	0.203
2582.80MHz	-11.585dB	1.715:1	0.263
2700.00MHz	-8.8284dB	2.134:1	0.362



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5-4 Detail band test - frequency : 3200-3800Mhz

Frequency	Return loss	V.S.W.R	Reflection coefficient
3200.00MHz	-10.232dB	1.890:1	0.308
3415.00MHz	-15.239dB	1.418:1	0.173
3635.00MHz	-17.296dB	1.316:1	0.137
3689.39MHz	-27.245dB	1.091:1	0.043
3800.00MHz	-13.458dB	1.539:1	0.212

