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INTRODUCTION

MIMO2x2 Mobile Hotspot External Antenna

MHEA-73-5G/LTE-CFD195-5M-SMA/M

**2x2 MIMO Antenna Kit for 4G LTE/5G
Hotspots & Routers with 2x SMA/M Wall
mount and Pole mount**

(Includes 2xSMA/F to TS-9 connectors)

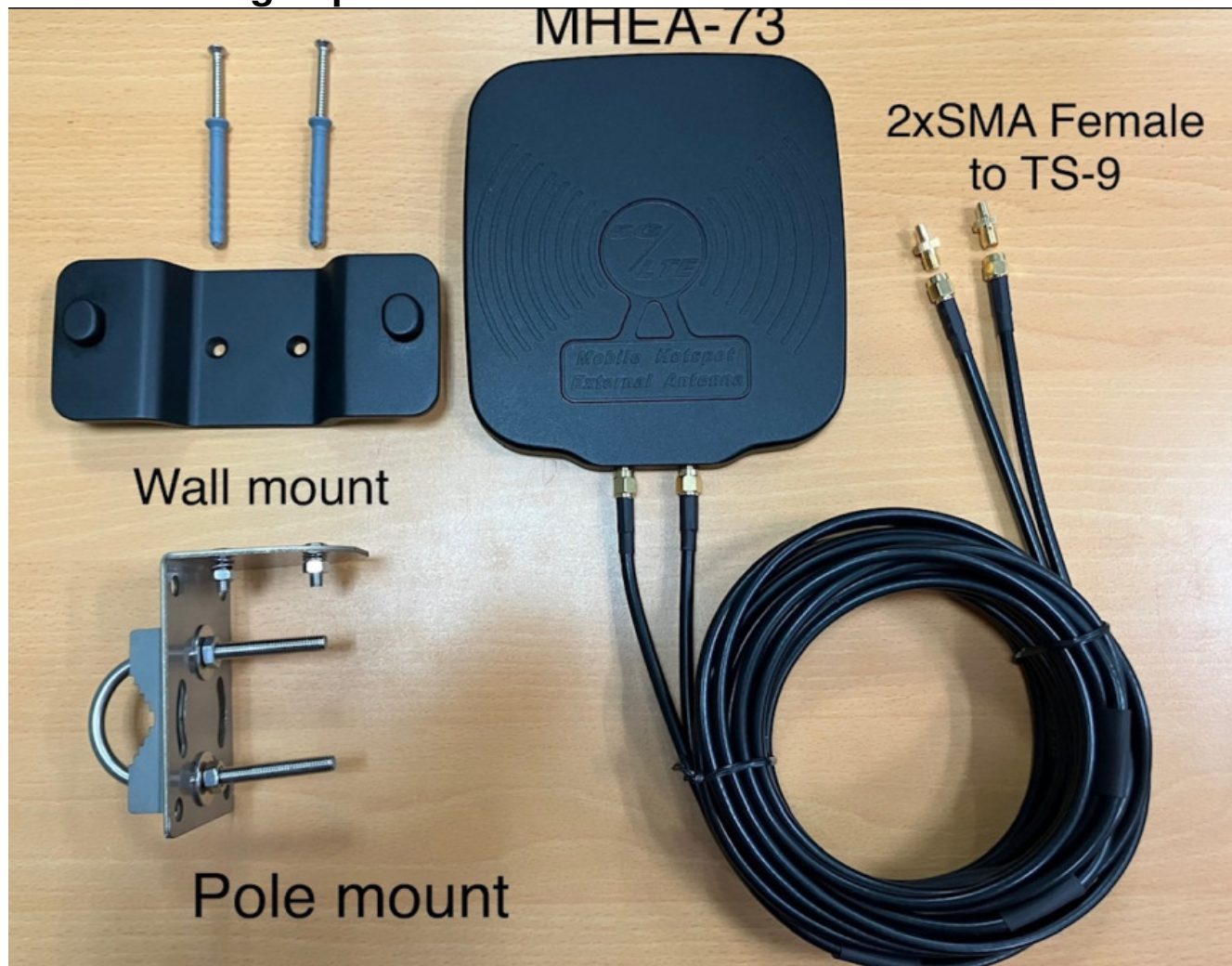
Cable 1~2 5G/LTE/4G/3G CFD195 Low loss 5M SMA/M

600-960/1710-2170/2400-2700/3200~3800MHz 3-5.0dBi

1. INERAL DESCRIPTION

Model No	Products P/N
MHEA-73-5G/LTE-CFD195-5M-2xTS-9	MHEA-73-V1

Below is a table summarizing the 5G/LTE/4G/3G/GSM (2in1) antenna design specification.



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2.Cable 1-2: (2x2) 5G LTE 4G 3G

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

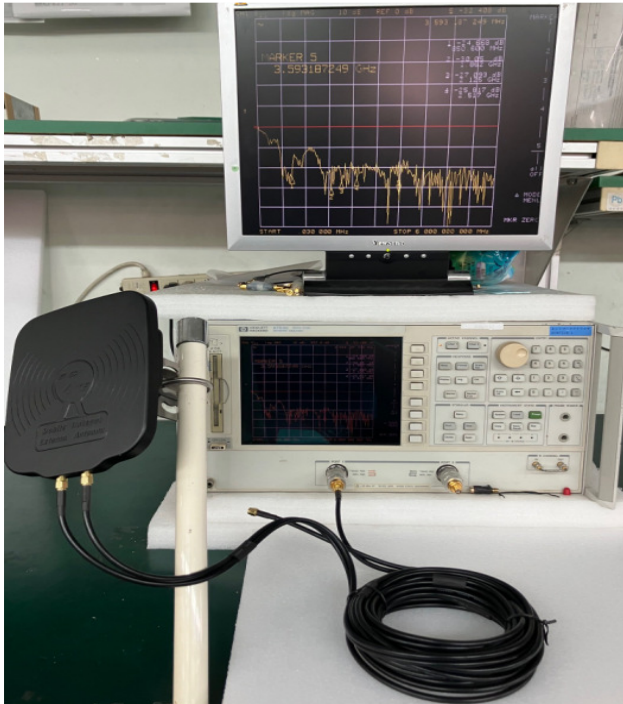
Parameter	Description
Communication System	5G/LTE/4G/3G/AMPS/GSM/DCS/UMTS
Frequency Band (MHz)	600~960/1710~2170/2400~2700/3200~3800MHz
Average Efficiency	80%/83%/76%90%
Average Gain	3.0~ 5.0dBi
Nominal Impedance	50 ohm
Polarization	Vertical
Return Loss (Check test Data)	699.00MHz(-30.806dB),1857.29MHz(-33.177dB) 2582.00MHz(-26.716dB),3600.00MHz(-40.382dB)
V.S.W.R <1.5:1	699.00MHz(1.059:1),1857.29MHz(1.045:1) 2582.00MHz(1.097:1),3600.00MHz(1.019:1)
Reflection coefficient	699.00MHz(0.029),1857.29MHz(0.022) 2582.00MHz(0.046),3600.00MHz(0.010)

2.2 5G/LTE/4G/3G/2G Multi-band Antenna Mechanical Properties

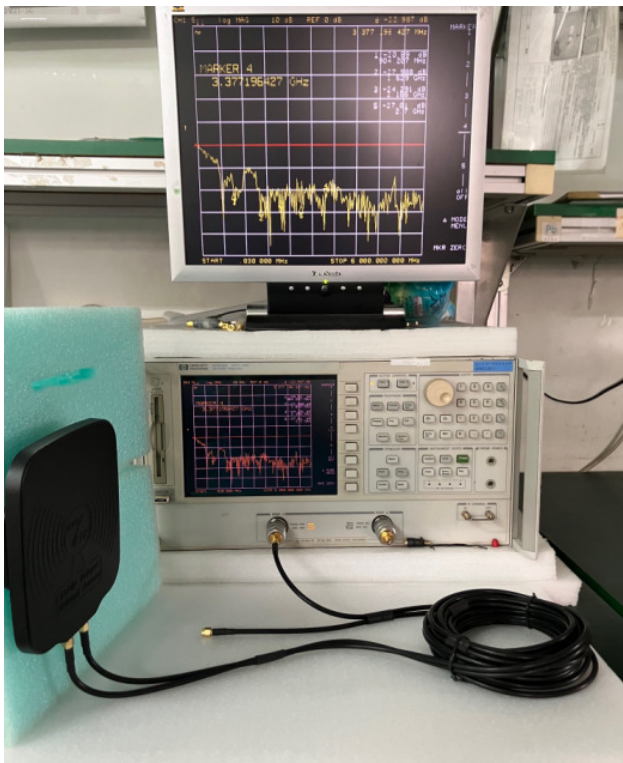
Parameter	Description
Antenna Type	Panel External Antenna
Compatible with	Modems,Routers and Mobile Hotspots
Mounting	Wall mount & Pole mount
Antenna size	L:156.0mm x W:136.0mm x H:12.2mm
Antenna Material	PC & ABS
Antenna cable	2x CFD195 Low loss
Connector Type	2x SMA/M (2x SMA Female to TS-9 male)
Antenna cable total length	5000mm (16.4ft)
Antenna Color	Black
Waterproof	100% water proof.(IP66~P67)
Operating Temperature Range	-30 °C~+70 °C
Storage Temperature Range	-40 °C~+80 °C
Shock (Drop Test)	100cm drop on concret

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Cable 1 & 2: 5G/LTE/4G/3G/GSM Multi-Band Network analyzer test HP8753E with Pole mount(17-Apr-23)



Cable 1 & 2: 5G/LTE/4 G/3G/GSM Multi-Band Network analyze test HP8753E with Wall mount (17-Apr-2023)



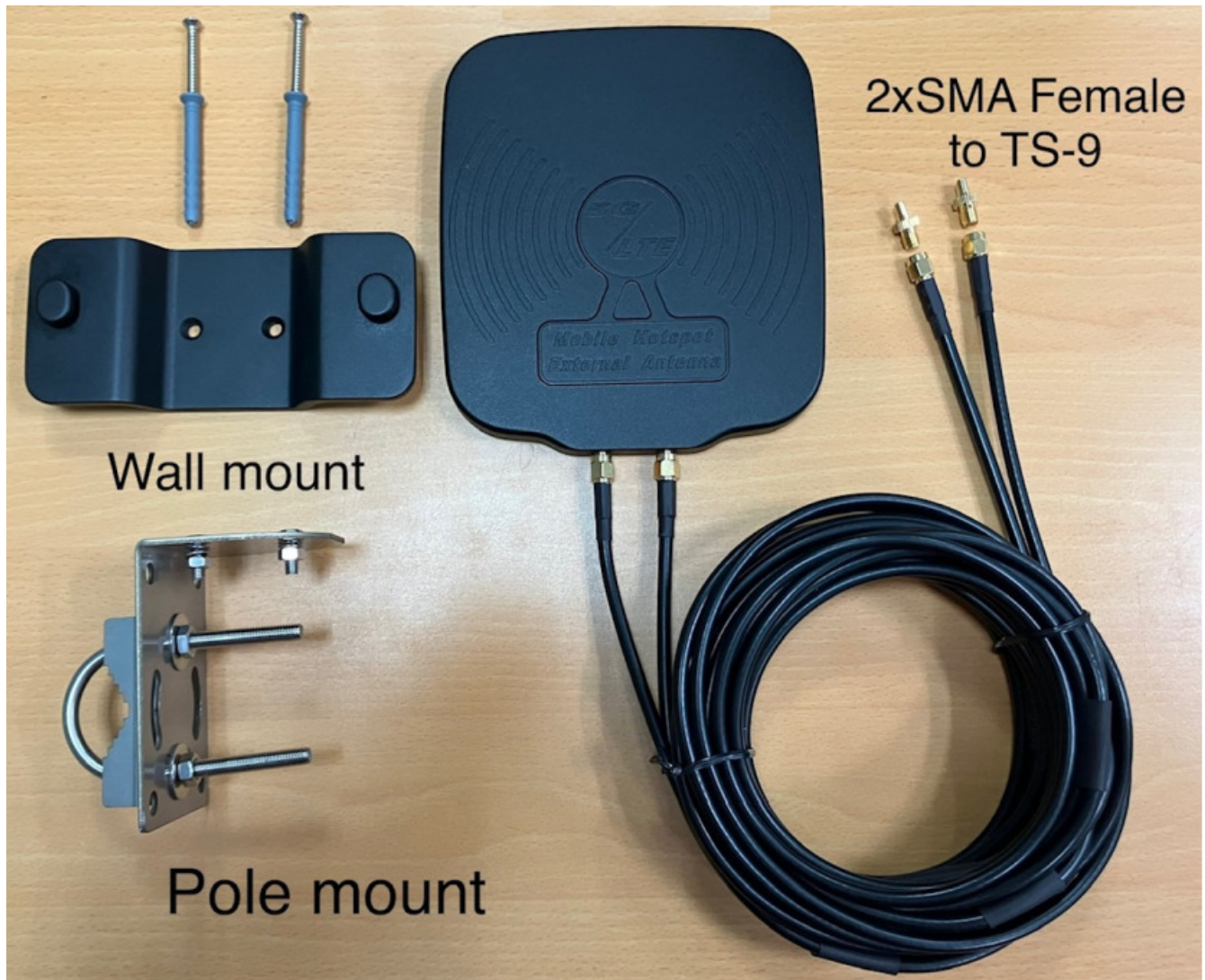
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3. Antenna Appearance Size:

Length:156.0mm (6.14")

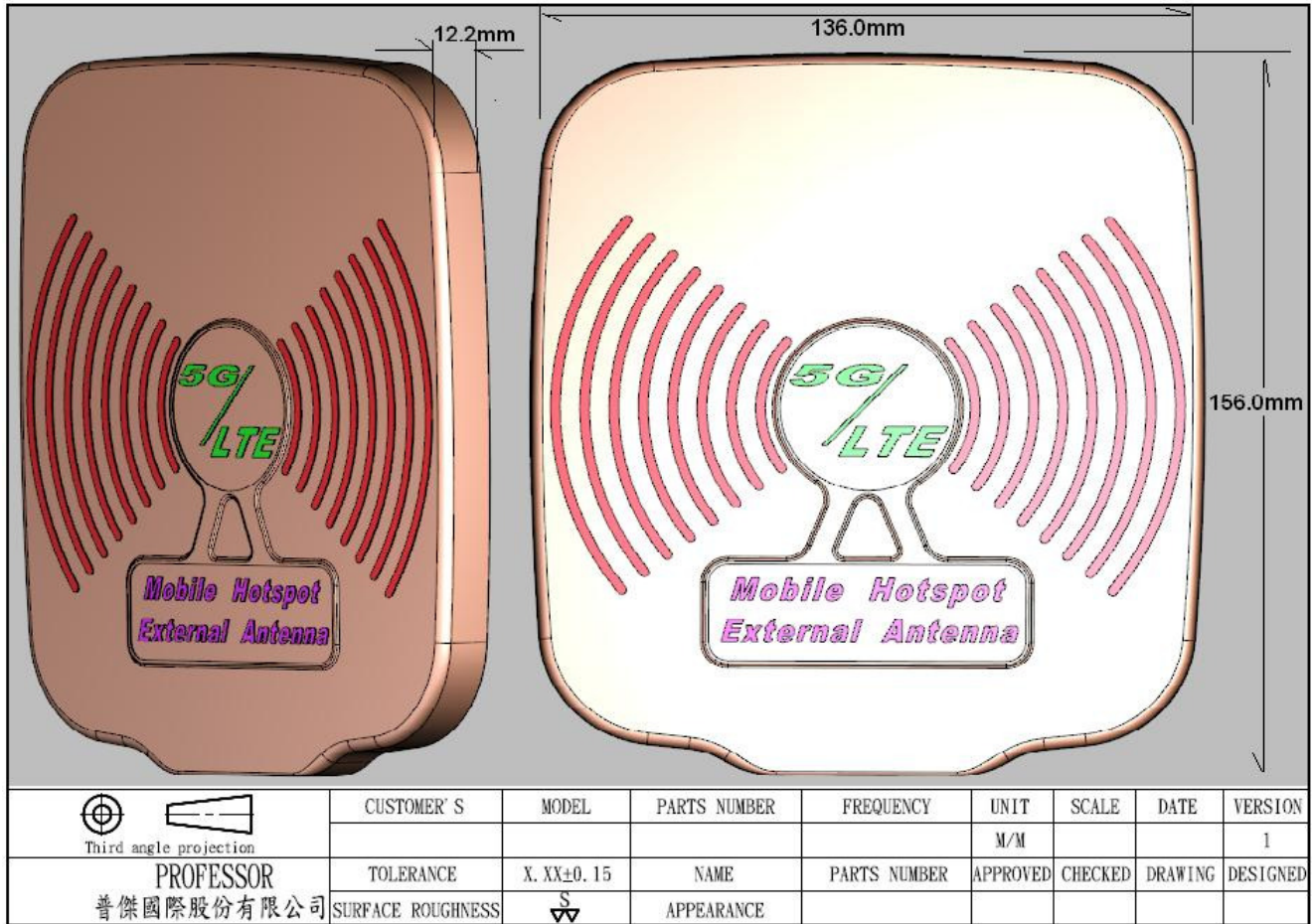
Width:136.0mm (5.35")

Height :12.2mm (0.48")



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4.Appearance



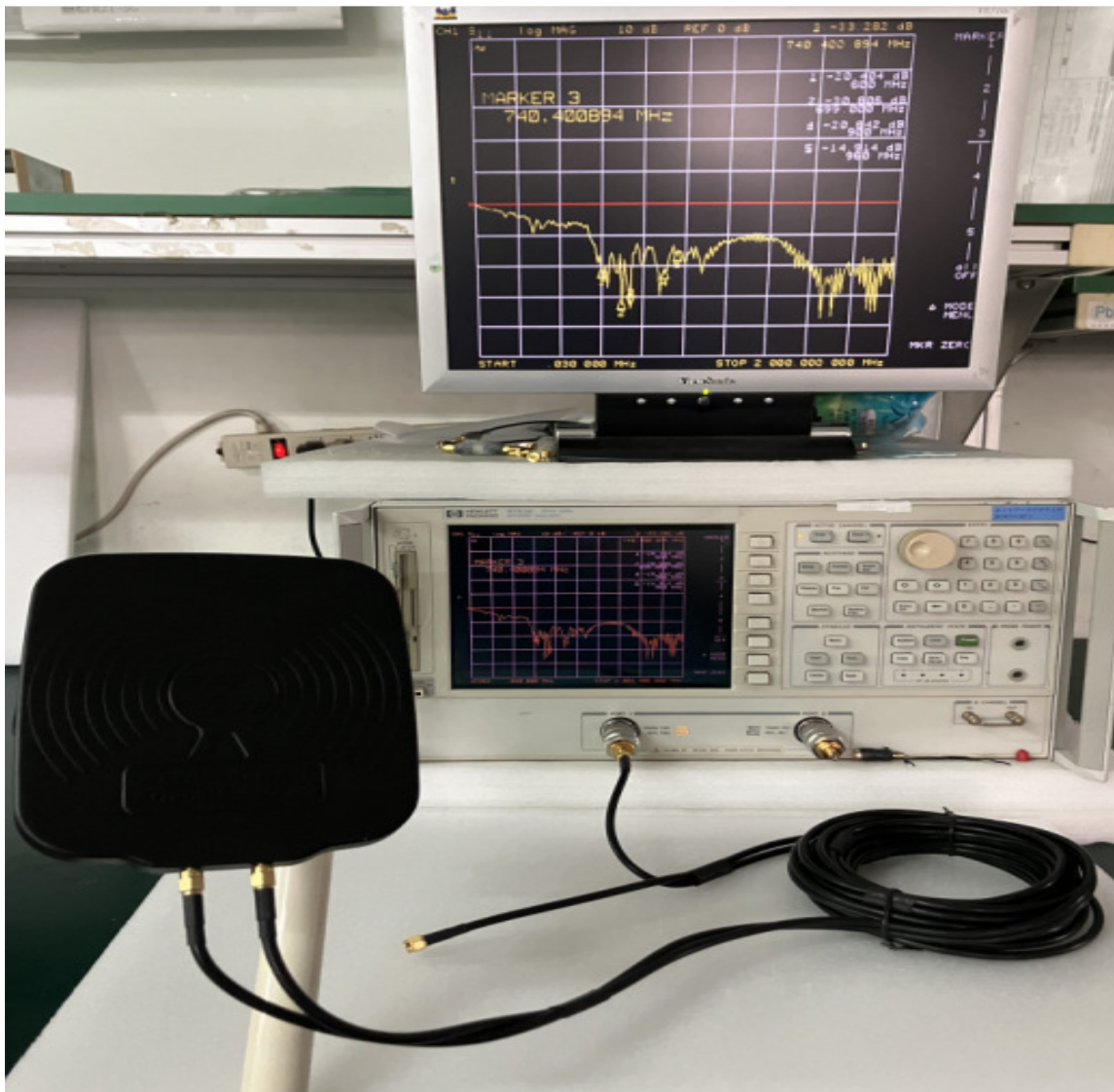
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5. 5G/LTE/4G/3G/GSM Multi-band Network analyzer test HP8753E (17-Apr-2023)

Frequency :600~960/1710~2170/2400~2700/3200~3800MHz

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

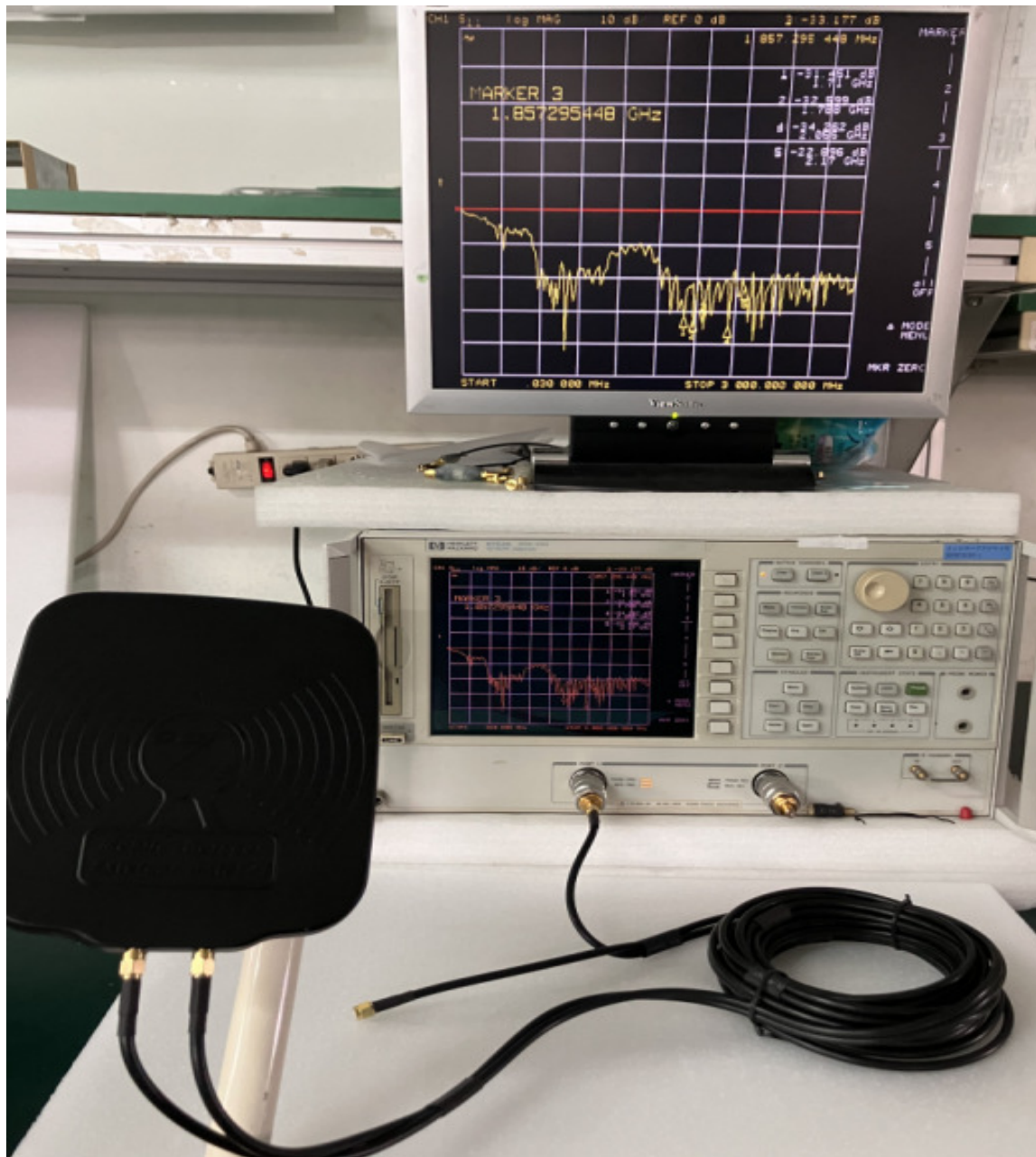
Frequency	Return loss	V.S.W.R	Reflection coefficient
600.000MHz	-20.404dB	1.211:1	0.095
699.000MHz	-30.806dB	1.059:1	0.029
740.400MHz	-30.282dB	1.044:1	0.022
900.000MHz	-20.842dB	1.200:1	0.091
960.000MHz	-14.914dB	1.438:1	0.180



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

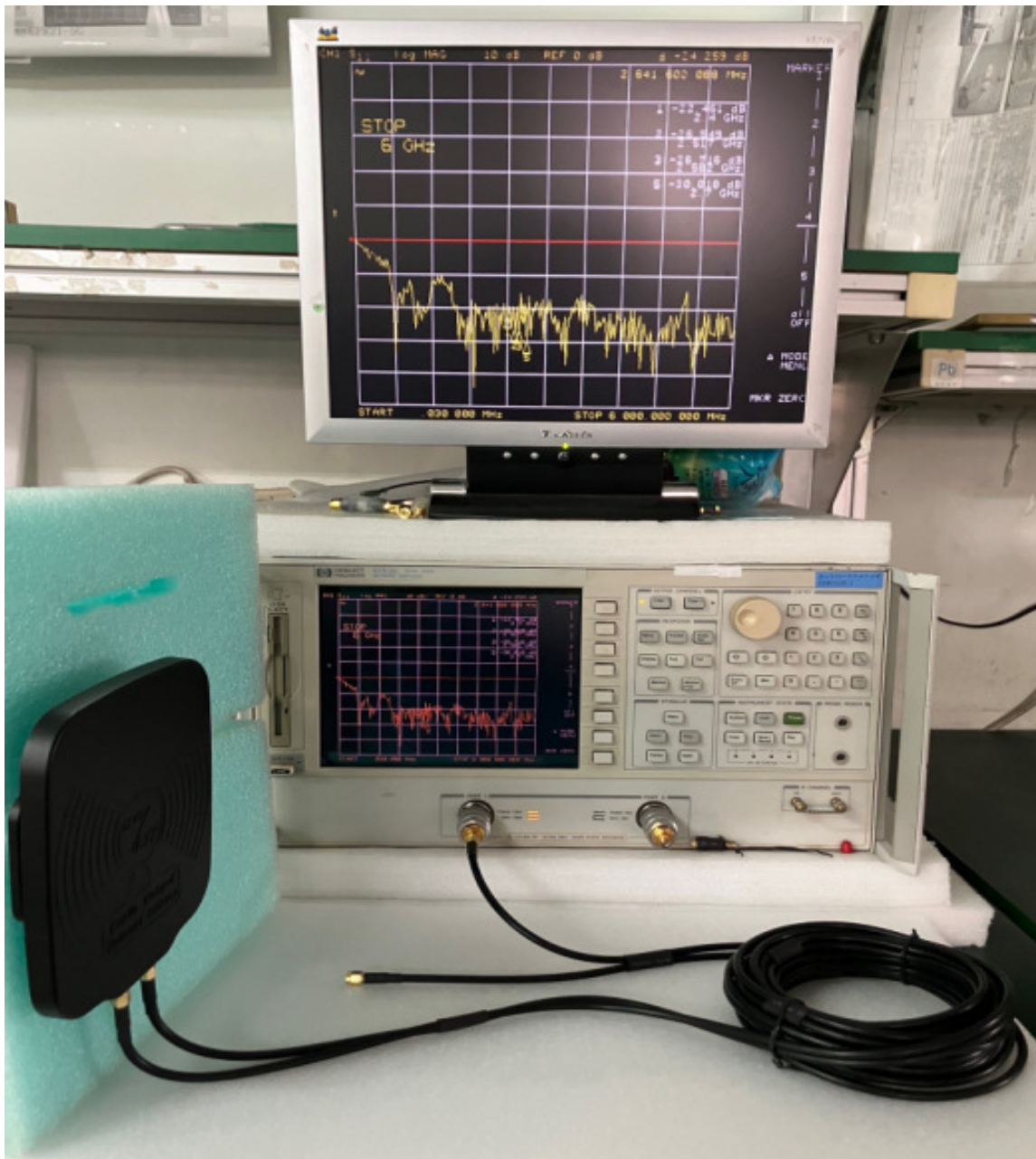
Frequency	Return loss	V.S.W.R	Reflection coefficient
1710.00MHz	-31.451dB	1.055:1	0.027
1788.00MHz	-32.599dB	1.048:1	0.023
1857.29MHz	-33.177dB	1.045:1	0.022
2055.00MHz	-34.262dB	1.039:1	0.019
2170.00MHz	-22.896dB	1.154:1	0.072



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

Frequency	Return loss	V.S.W.R	Reflection coefficient
2400.00MHz	-22.461dB	1.163:1	0.075
2517.00MHz	-26.549dB	1.099:1	0.047
2582.00MHz	-26.716dB	1.097:1	0.046
2641.00MHz	-24.259dB	1.130:1	0.061
2700.00MHz	-30.018dB	1.065:1	0.032



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

Frequency	Return loss	V.S.W.R	Reflection coefficient
3200.00MHz	-23.456dB	1.144:1	0.067
3335.80MHz	-35.303dB	1.035:1	0.017
3500.00MHz	-18.618dB	1.266:1	0.117
3600.00MHz	-40.382dB	1.019:1	0.010
3800.00MHz	-20.882dB	1.199:1	0.090

