

PROFESSOR TECHNOLOGY CO.,LTD.

INTRODUCTION 5G PCB Antenna

**PCB-5G-(105x20mm)-1.13-10cm-U.FL(IPEX)
600~960/1710~2170/2500~2700/3300-3600MHz**

1. GENERAL DESCRIPTION

Model No	Products P/N
PCB-5G-(105x20mm)1.13-10cm-U.FL(IPEX)	PCB68-5G-10cm-IPEX

Below is a table summarizing the PCB 5G/4G/3G Antenna design specification.

1.1 Electrical Properties

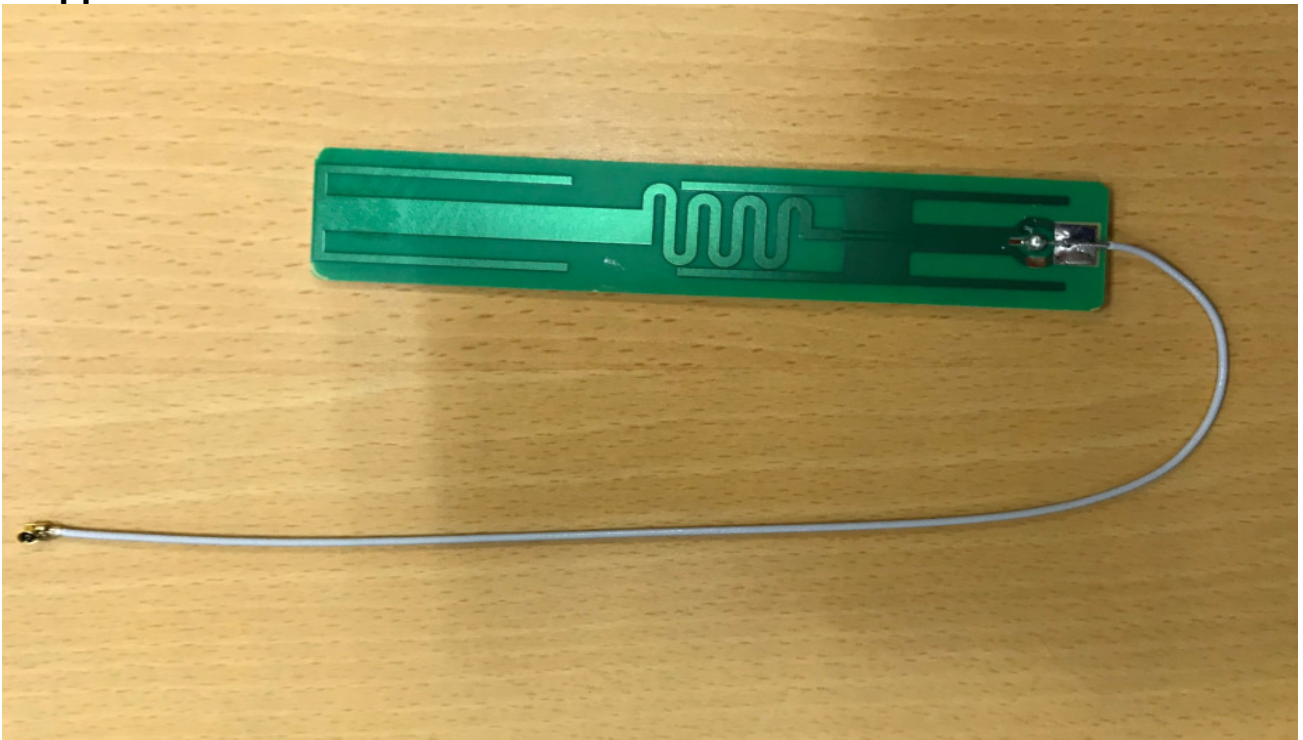
Parameter	Description
Frequency Band	600~960/1710~2170/2500-2700/3300~3600MHz
Antenna system	5G/4G/3G/LTE/GSM/GPRS/WCDMA/HSPA
Nominal Impedance	50 ohm
Polarization	Vertical
V.S.W.R	<2.0:1
Return Loss	Plaese see Data
Antenna Average Gain	2-4dB
Note: Gain includes the cable loss	

1.2 Mechanical Properties

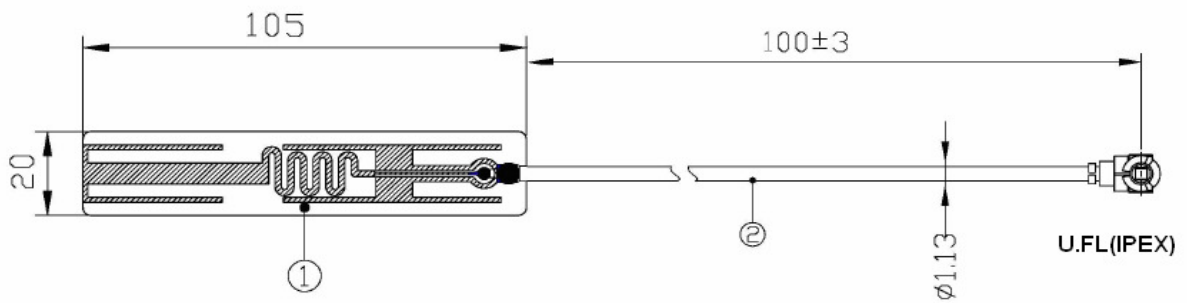
Parameter	Description
Antenna Type	Flexible Internal PCB Antenna
Antenna Material	PCB Plastic
PCB Size	105x20x0.8mm
Connector Type	U.FL(IPEX)
Antenna Cable	1.13mm Low Loss
Antenna Cable Total Length	100mm ± 5mm
Power	2.0~5.0W
Operating Temperature Range	-35°C~+75°C
Storage Temperature Range	-40°C~+80°C

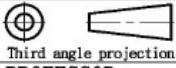

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2.Appearance



NO.	圖名	外觀	用量
01	PCB		01
02	1.13MM A/U Cable	Black	01
03	Heat-shrink tube	Polyolefin	01



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

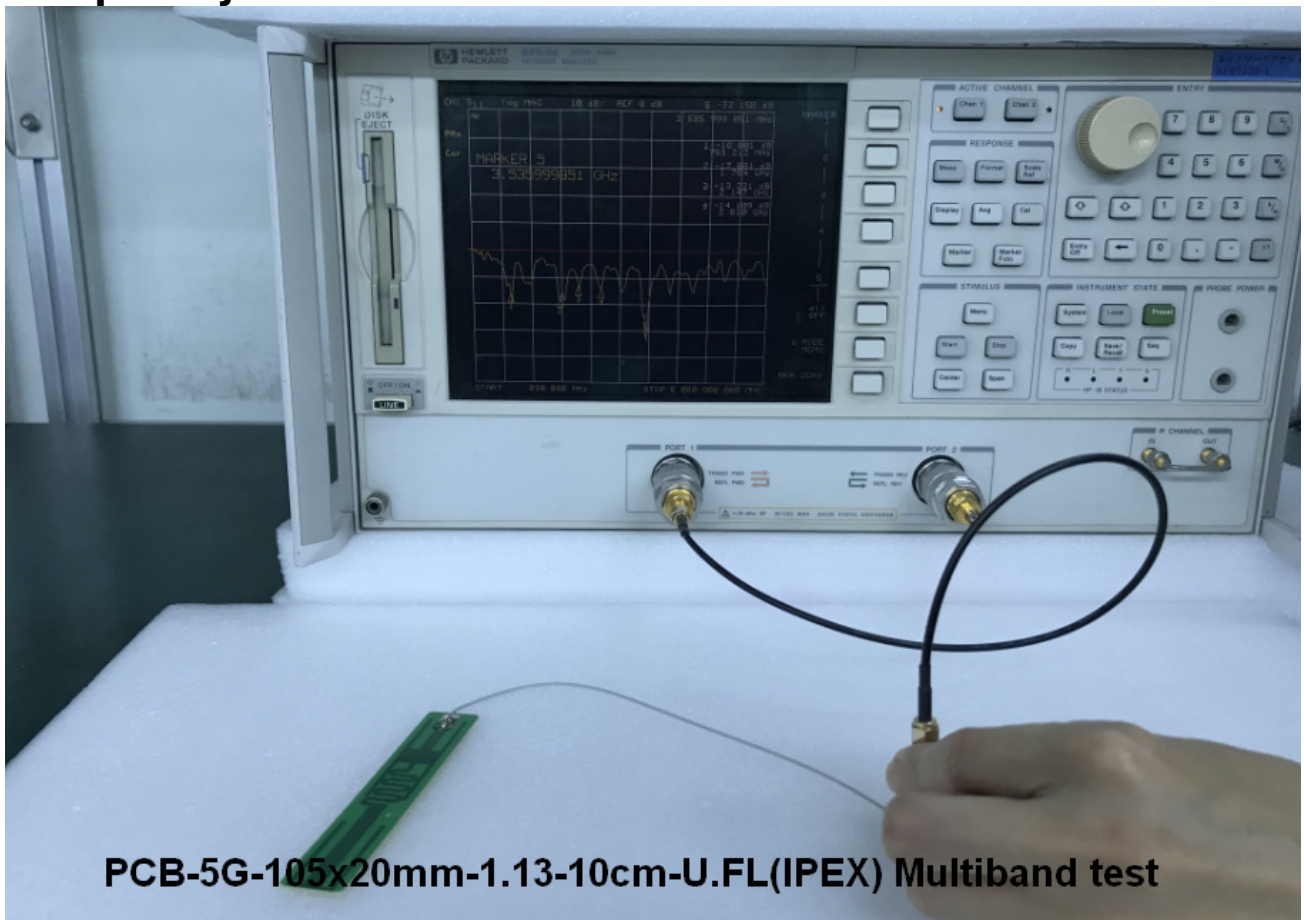
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3.FREQUENCY

PCB antenna with HP 8753E30kHz-6Ghz Network analyzer test

PCB-5G-105x20mm-1.13-10cm-U.FL(IPEX)

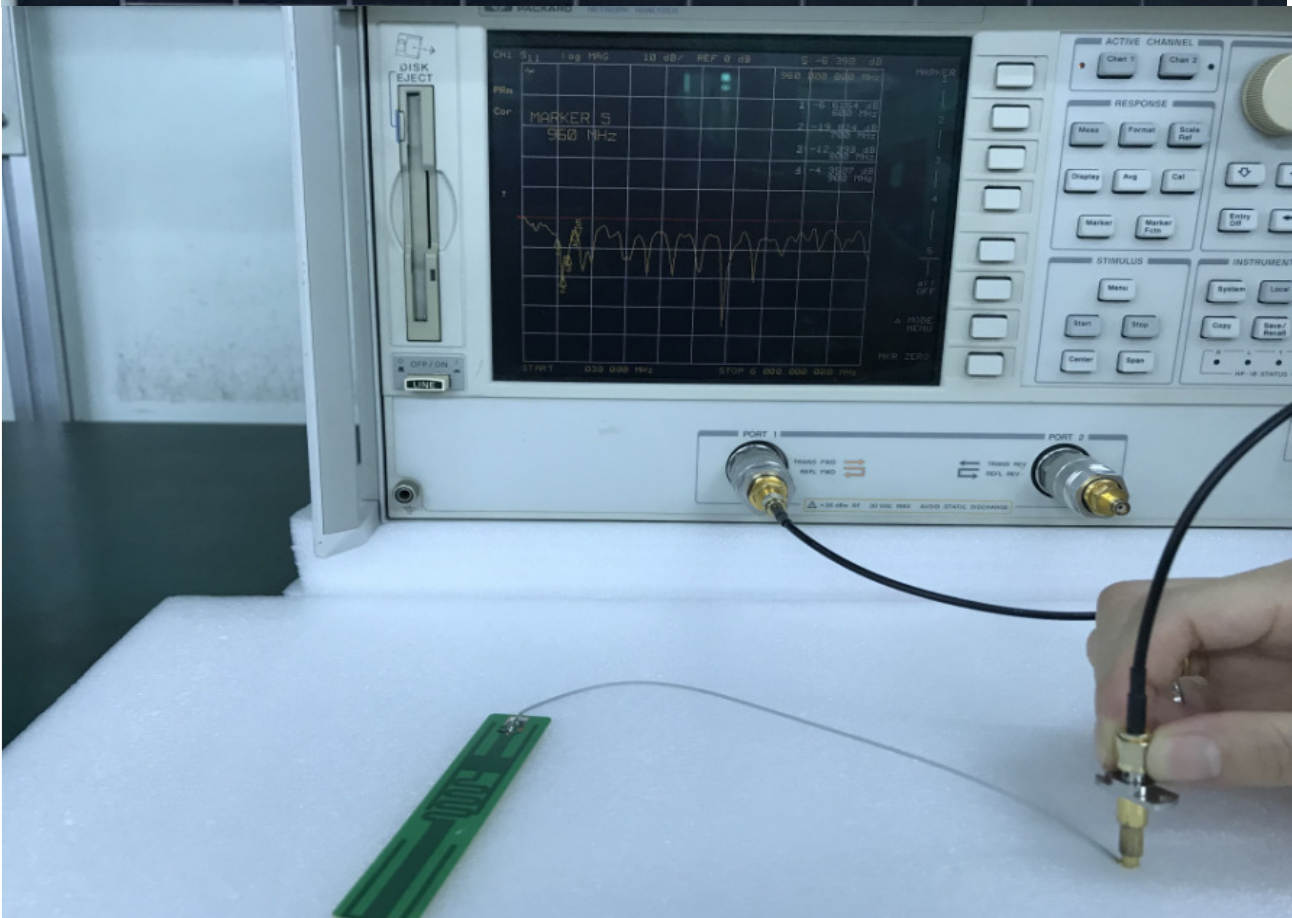
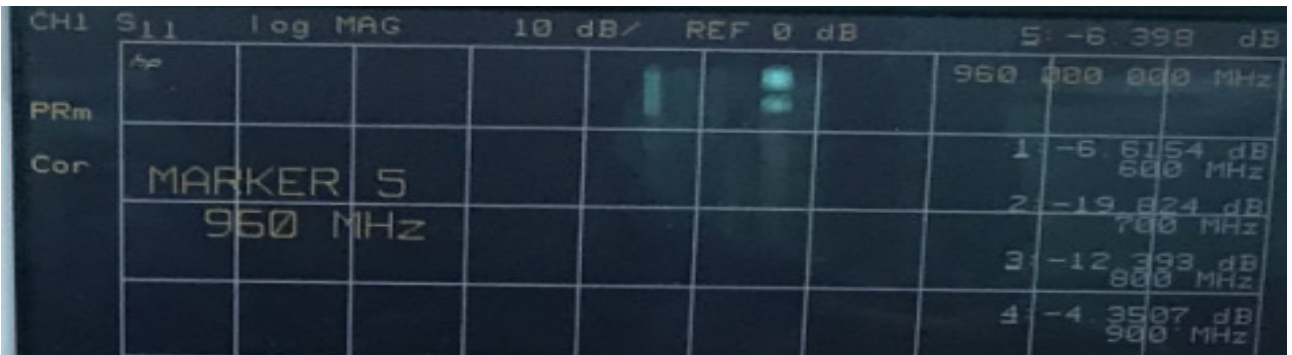
Frequency:600-960/1710-2170/2500-2700/3300-3600MHZ



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3-1 Detail band test - Frequency : 600~960/MHz (LTE 5G)

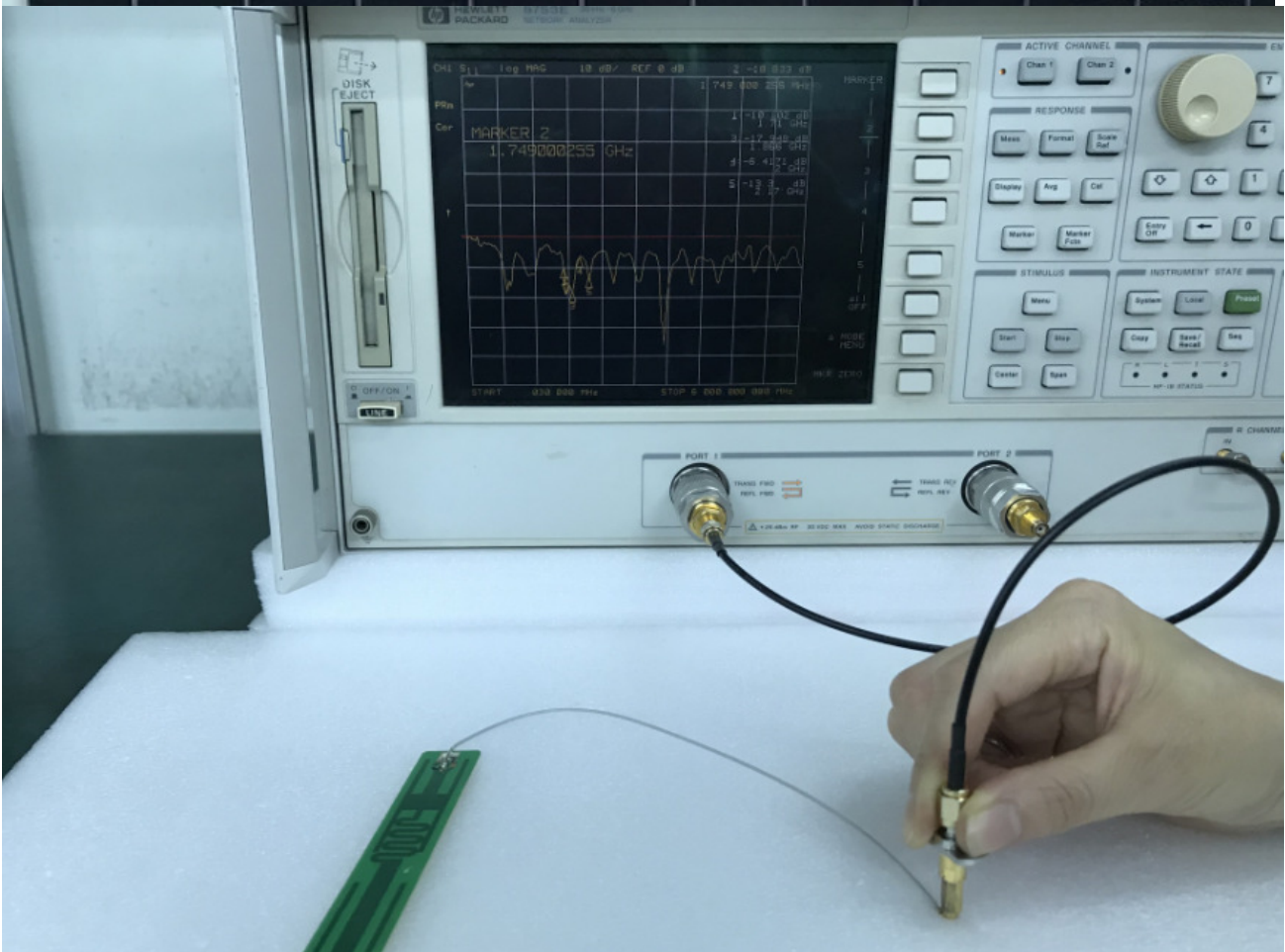
Frequency	Return loss	V.S.W.R	Reflection coefficient
600.000MHz	-6.6154dB	2.752:1	0.467
700.000MHz	-19.824dB	1.227:1	0.102
800.000MHz	-12.393dB	1.632:1	0.240
900.000MHz	-14.350dB	1:474:1	0.192
960.000MHz	-6.3980dB	2.837:1	0.479



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3-2 Detail band test - Frequency : 1710-2170MHz (LTE)

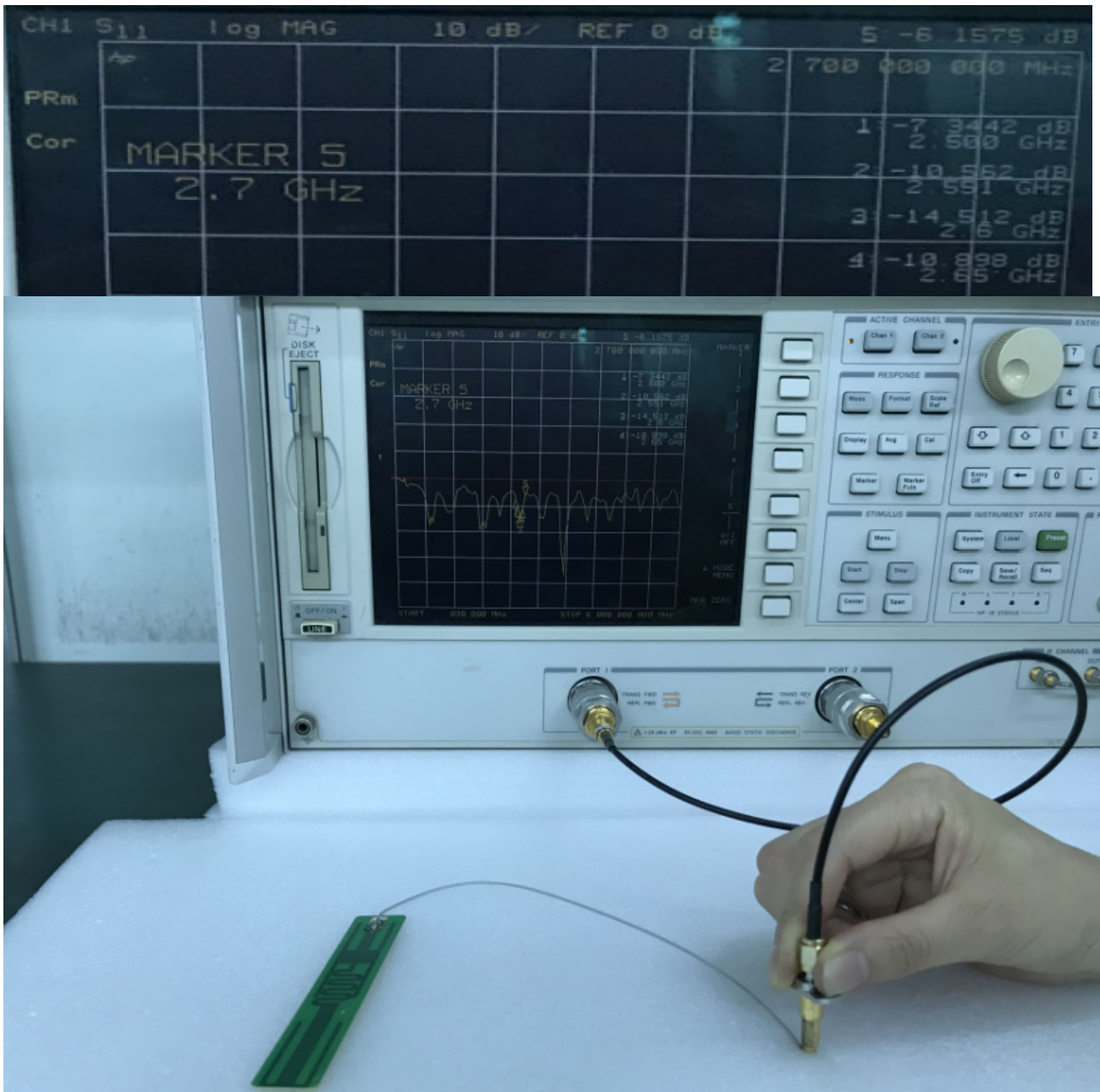
Frequency	Return loss	V.S.W.R	Reflection coefficient
1710.00MHz	-10.102dB	1.909:1	0.313
1749.00MHz	-18.833dB	1.258:1	0.114
1866.00MHz	-17.948dB	1.290:1	0.127
2000.00MHz	-14.417dB	1.470:1	0.190
2170.00MHz	-13.300dB	1.552:1	0.216



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3-3 Detail band test- Frequency:2500-2700MHz (LTE2600)

Frequency	Return loss	V.S.W.R	Reflection coefficient
2500.00MHz	-7.3442dB	2.505:1	0.429
2551.00MHz	-10.562dB	1.843:1	0.296
2600.00MHz	-14.512dB	1.463:1	0.188
2650.00MHz	-10.898dB	1.798:1	0.285
2700.00MHz	-6.1575dB	2.938:1	0.492



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3-5 Detail band test- Frequency:3300-3500MHz (5G 3300)

Frequency	Return loss	V.S.W.R	Reflection coefficient
3418.99MHz	-9.0920dB	2.082:1	0.351
3454.00MHz	-19.044dB	1.251:1	0.112
3494.00MHz	-19.298dB	1.243:1	0.108
3541.00MHz	-34.638dB	1.038:1	0.019
3600.00MHz	-15.905dB	1.382:1	0.160

