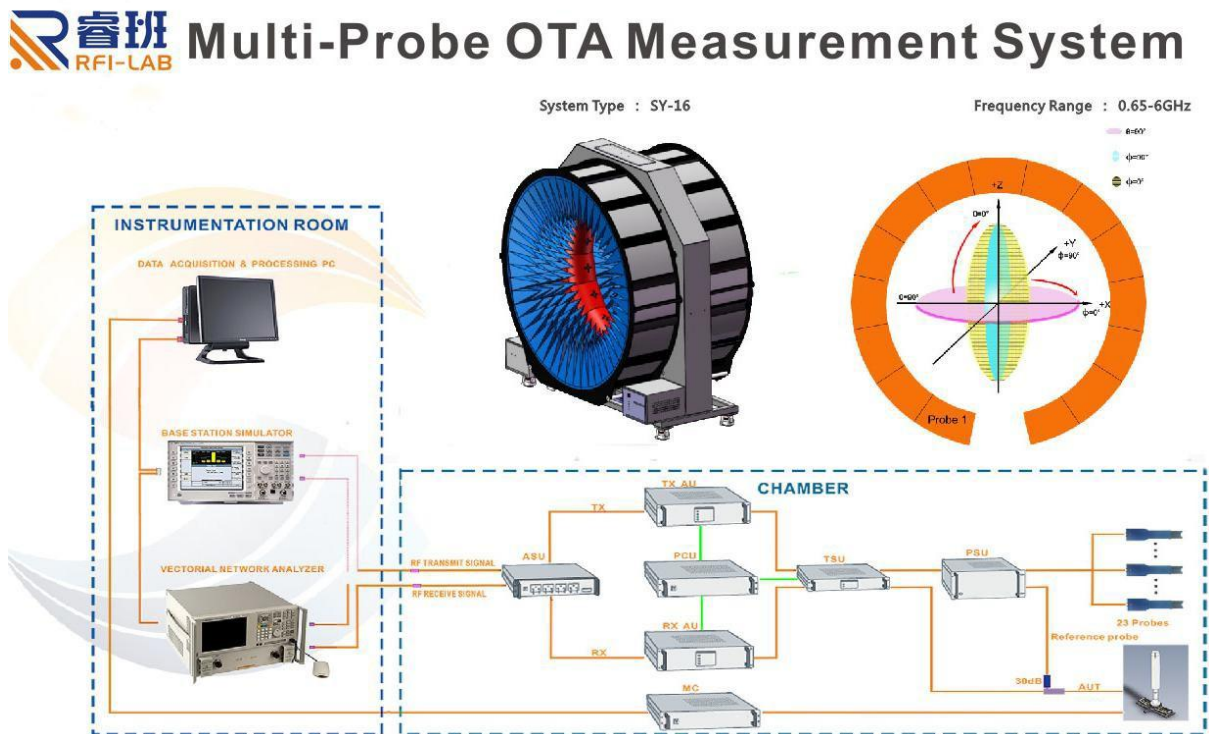


1. Basic information

1.1 POSTEK Technology Development Co., Ltd.

Address: Floor 18, Block 2, Building B, Wisdom Plaza,
No. 4068, Qiaoxiang Road, Nanshan District,
Shenzhen, China

1.2 Test Principle



2020.01.03

1.1 Test equipment

Name	Model	Device ID	Manufactures	Calibration Date	Next Cal date
Network Analyzer	E5071B	RFI-LAB-012	Agilent	2019.10.23	2020.10.22
Network Analyzer	E5071C	RFI-LAB-032	Agilent	2019.10.23	2020.10.22
16 probes microwave chamber	3*3*2.5	RFI-LAB-010	Sunyield	2019.03.15	2021.03.14

1.2 Test enviroment

Ambient temperature	23.2℃
Relative humidity	61%RH
Atmospher presure	101.10kPa

2. Sample information

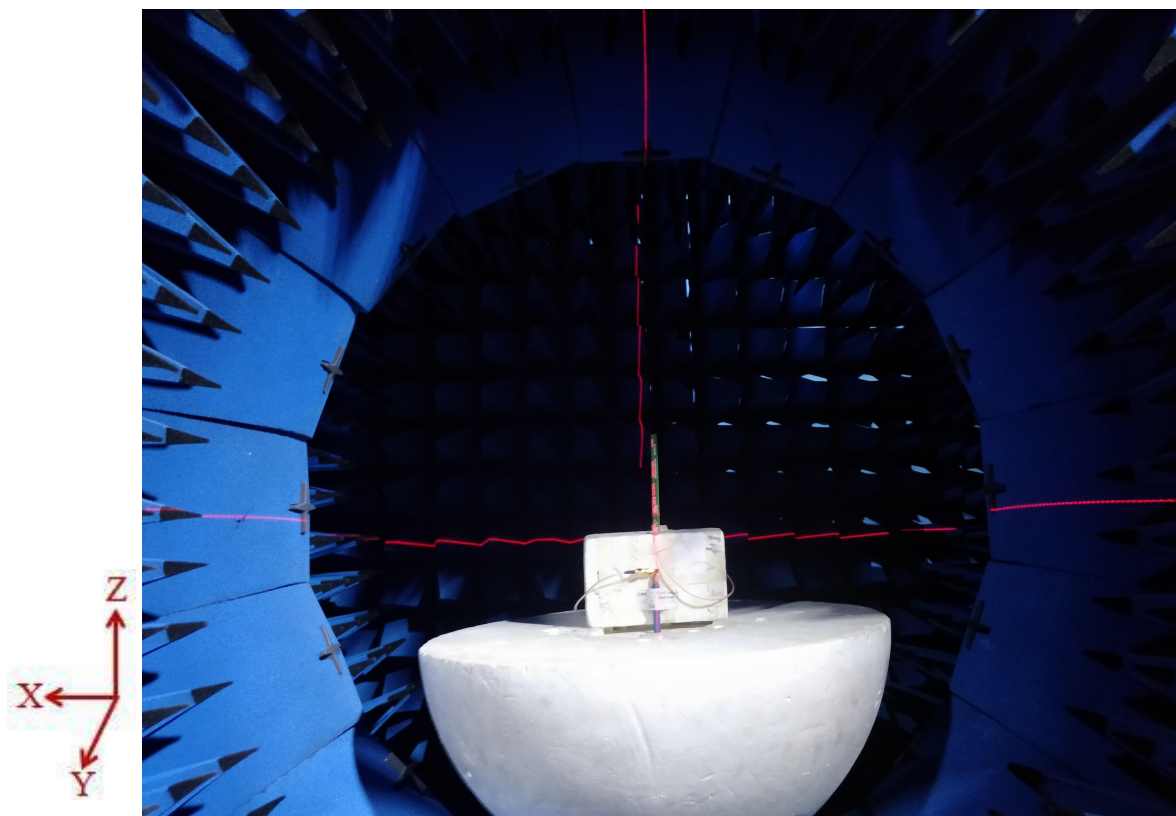
2.1 Sample information

Product name	UHF PCB Antenna
Sample model	POSTEK_A1
Standard size	Antenna size: 10.5mm*130mm; Line length: 625mm
Factory serial number	/
Test items	VSWR; radiation pattern; antenna gain; efficiency; pattern circularity
Frequency range	800-960MHz
Received date	12/31/2019
Test date	01/02/2020
Remark	/

2.2 Sample physical picture



2.3 Placement of actual samples



3. Test results

3.1 Test basis

Object name	Parameter name	Method name	Standard number
Mobile communication antenna	VSWR	General Technical Specifications for Mobile Communication Antennas	GB/T 9410-2008
	Radiation pattern		
	Antenna gain		
	Efficiency		
	Pattern circularity		
Antenna	Efficiency	IEEE Antenna test standard procedure	ANSI/IEEE Std 149-1979

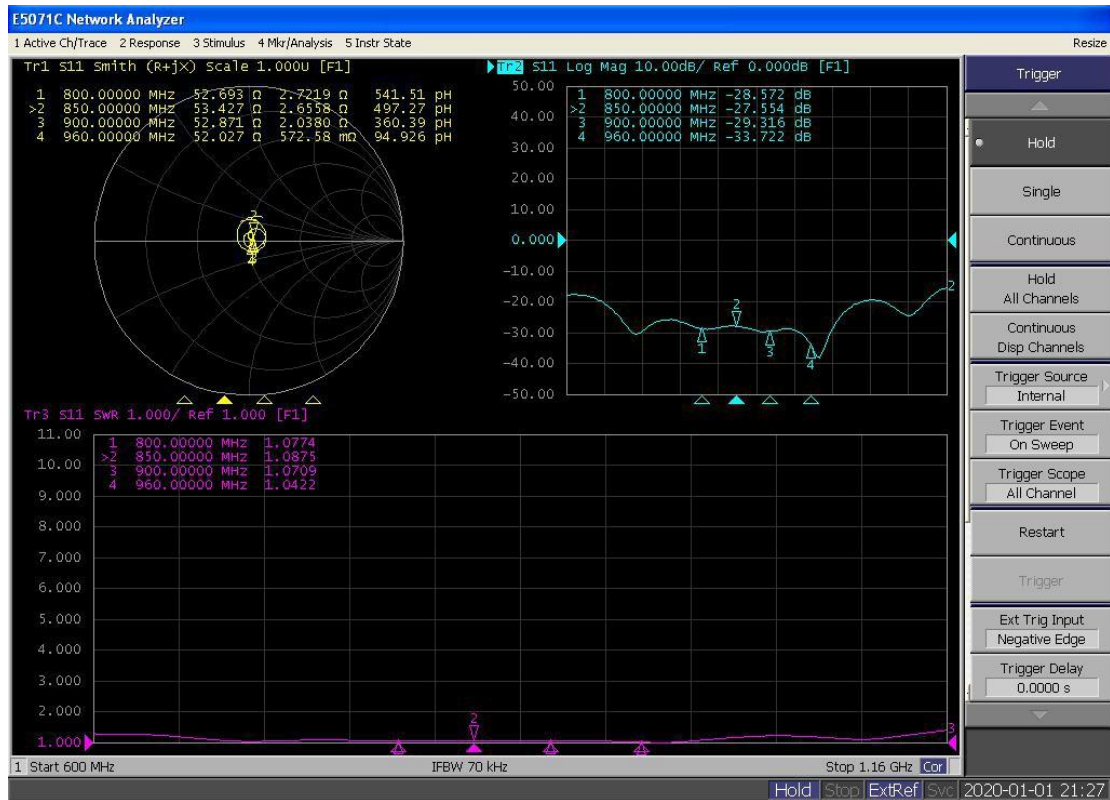
3.2 Test uncertainty

The calculation of uncertainty is based on the "Guide to the Expression of Uncertainty in Measurement" (GUM) issued by ISO, and the expanded uncertainty is represented by a coverage factor of K=2 and a 95% confidence level.

Project	Uncertainty
VSWR	± 0.3
Gain	$\pm 1\text{dB}$
Efficiency	$\pm 10\%$

3.3 Test data

3.3.1 Antenna network analyzer test



3.3.2 S11 Parameter data

Frequency/MHz	800	850	900	960
VSWR	1.0774	1.0875	1.0709	1.0422

3.3.3 Antenna gain and efficiency

Frequency/ MHz	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960
Max gain/ dBi	-22.57	-22.93	-23.41	-23.50	-23.77	-23.96	-24.18	-24.18	-24.42	-24.64	-24.67	-24.88	-25.02	-24.92	-24.80	-24.79	-24.68
Efficiency /%	0.18	0.16	0.14	0.13	0.14	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09

3.3.4 Pattern circularity

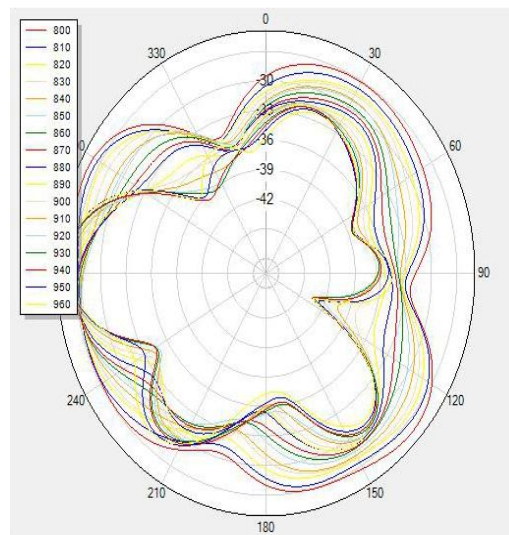
Phi=90

Freq /MHz	80 0	81 0	82 0	83 0	84 0	85 0	86 0	87 0	88 0	89 0	90 0	91 0	92 0	93 0	94 0	95 0	96 0
Out of round ness/ dB	12.17	10.43	09.19	08.86	08.47	08.92	10.46	10.76	10.20	09.30	11.26	14.40	14.44	12.56	10.95	12.56	18.22

3.3.5 Radiation pattern

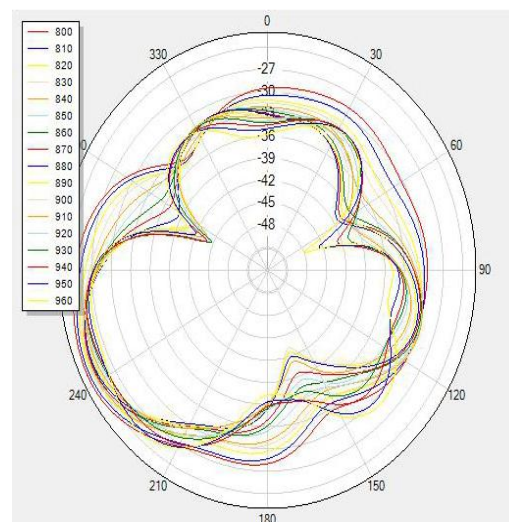
(1) X-Z Plane:

V Phi=0



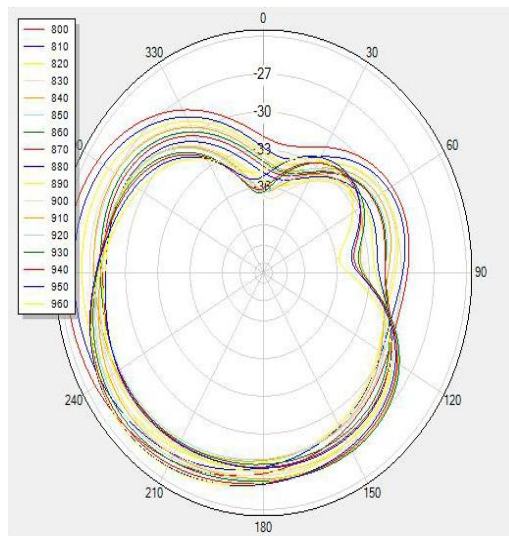
(2) Y-Z Plane:

V Phi=90



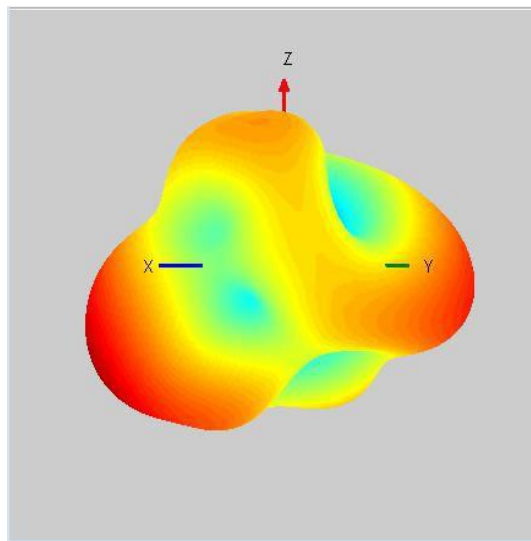
(3) X-Y Plane:

H Theta=90



(4)

3D pattern at 880MHz:



-----End-----

(The following content is blank)