



东莞市扬跃电子通信科技有限公司

## SPECIFICATION FOR APPROVAL

Customer Name	Audio Partnership PLC
Product name	Dual Frequency 2,4/5GHz Connector Female Antenna
Product number	YY-JQ01013.A.0
Approved By	Tony-Meññ
Apply Date	15 Feb, 2023



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<b>A. Electrical Characteristics</b>	
<b>Frequency</b>	2400 ~ 2500 MHz 5150 ~ 5850 MHz
<b>V.S.W.R.</b>	<= 2.0 @ 2400 ~ 2500 MHz <= 3.2 @ 5150 ~ 5850 MHz
<b>Antenna Gain</b>	2.6 dBi @ 2400 ~ 2500 MHz 2.9 dBi @ 5150 ~ 5850 MHz
<b>Efficiency</b>	51% @ 2400 ~ 2500 MHz 60% @ 5150 ~ 5850 MHz
<b>Polarization</b>	Linear
<b>Impedance</b>	50 Ohm
<b>B. Material &amp; Mechanical Characteristics</b>	
<b>Material of Radiator</b>	Cu
<b>Material of Plastic</b>	TPEE / ABS
<b>Cable Type</b>	/
<b>Connector Type</b>	SMA
<b>C. Environmental</b>	
<b>Operation Temperature</b>	- 40 °C ~ + 65 °C
<b>Storage Temperature</b>	- 40 °C ~ + 80 °C

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## Revision History

Date	Revision	Description of Changes
2023-2-15	RA	Measured with 2.4GHz/5.8GHZ Antenna sample.

## 1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the 2.4GHz/5.8GHZ Antenna program. We test the antenna with the latest version handset. And it seems to be acceptable.

## 2 General Description

### 2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

## 3 Mechanical Description

## 4 Electrical Performance

### 4.1 Set-up

#### 4.1.1 VSWR

VSWR measurements (S11) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

#### 4.1.2 Gain & Radiation Patterns

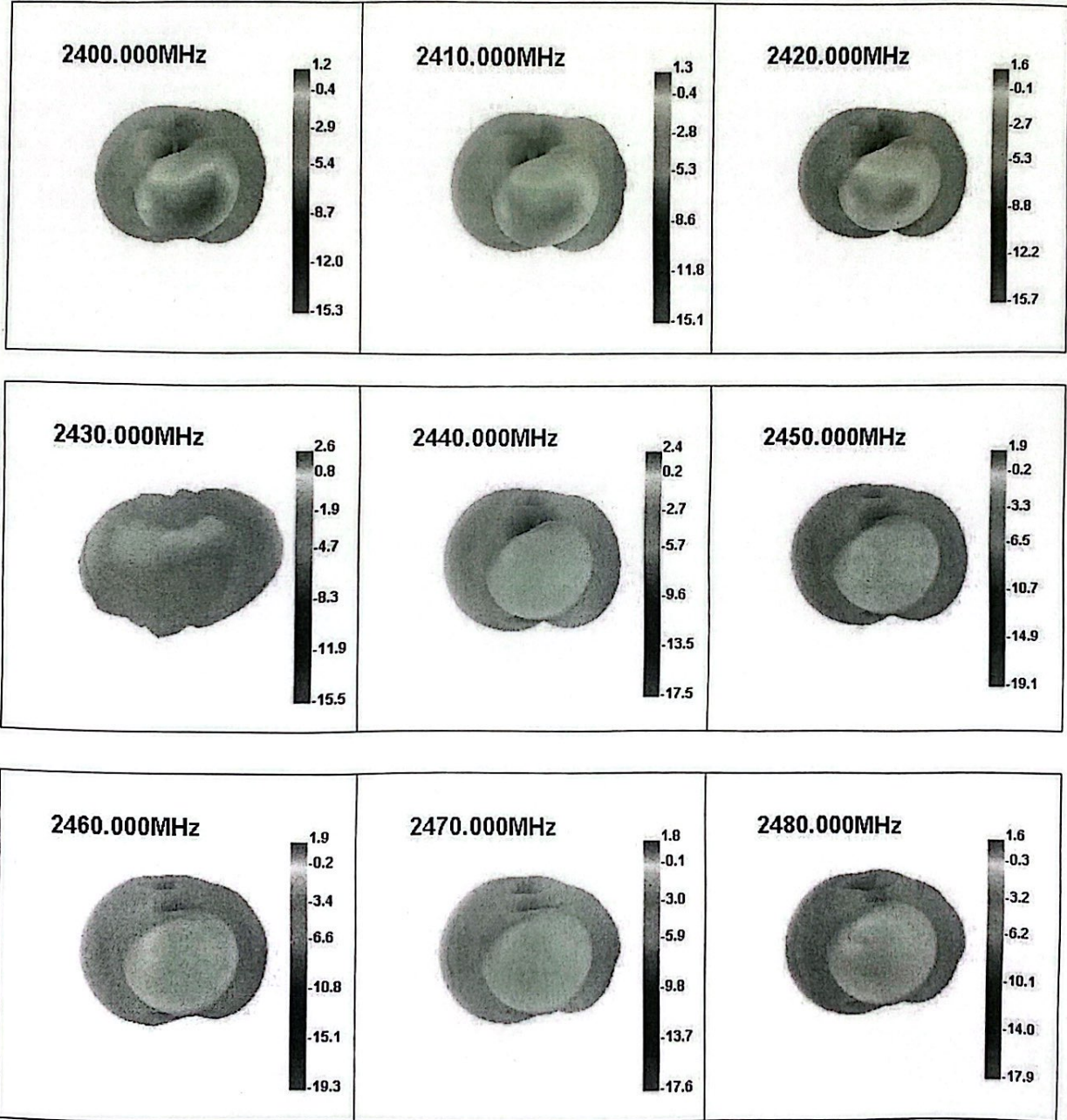
The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 300 MHz through 6 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

#### 4.1.3 Matching Circuit Description

No changed..



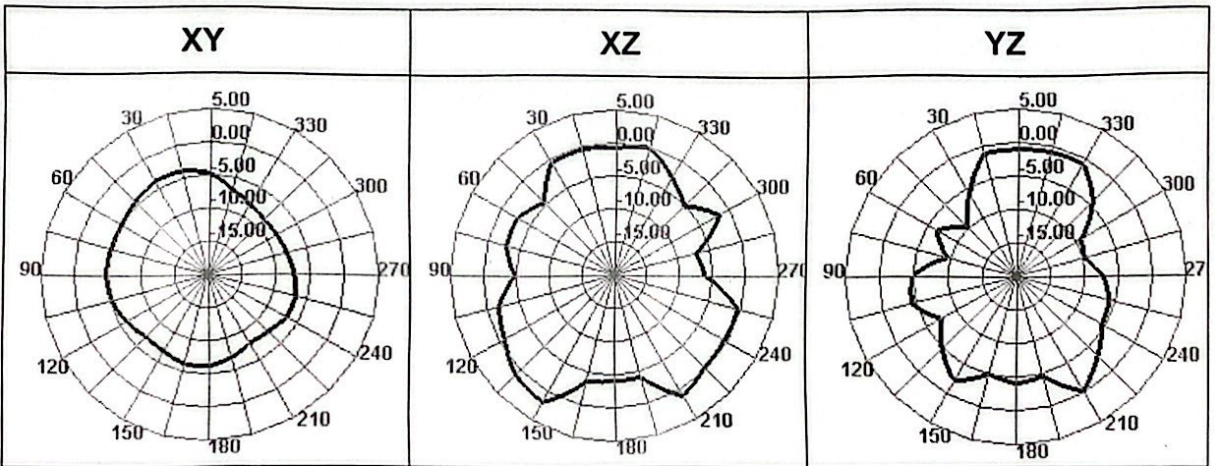
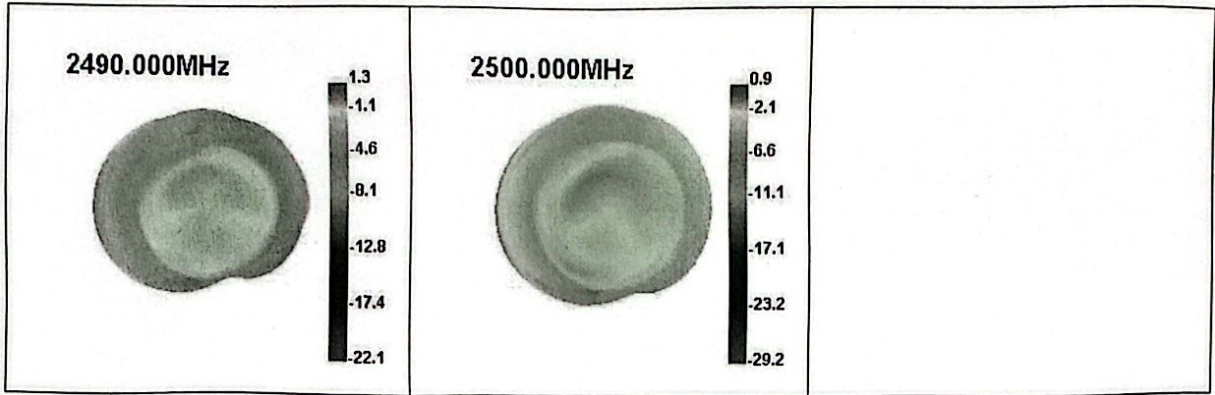
## 5. Antenna - Radiation Pattern Test Data



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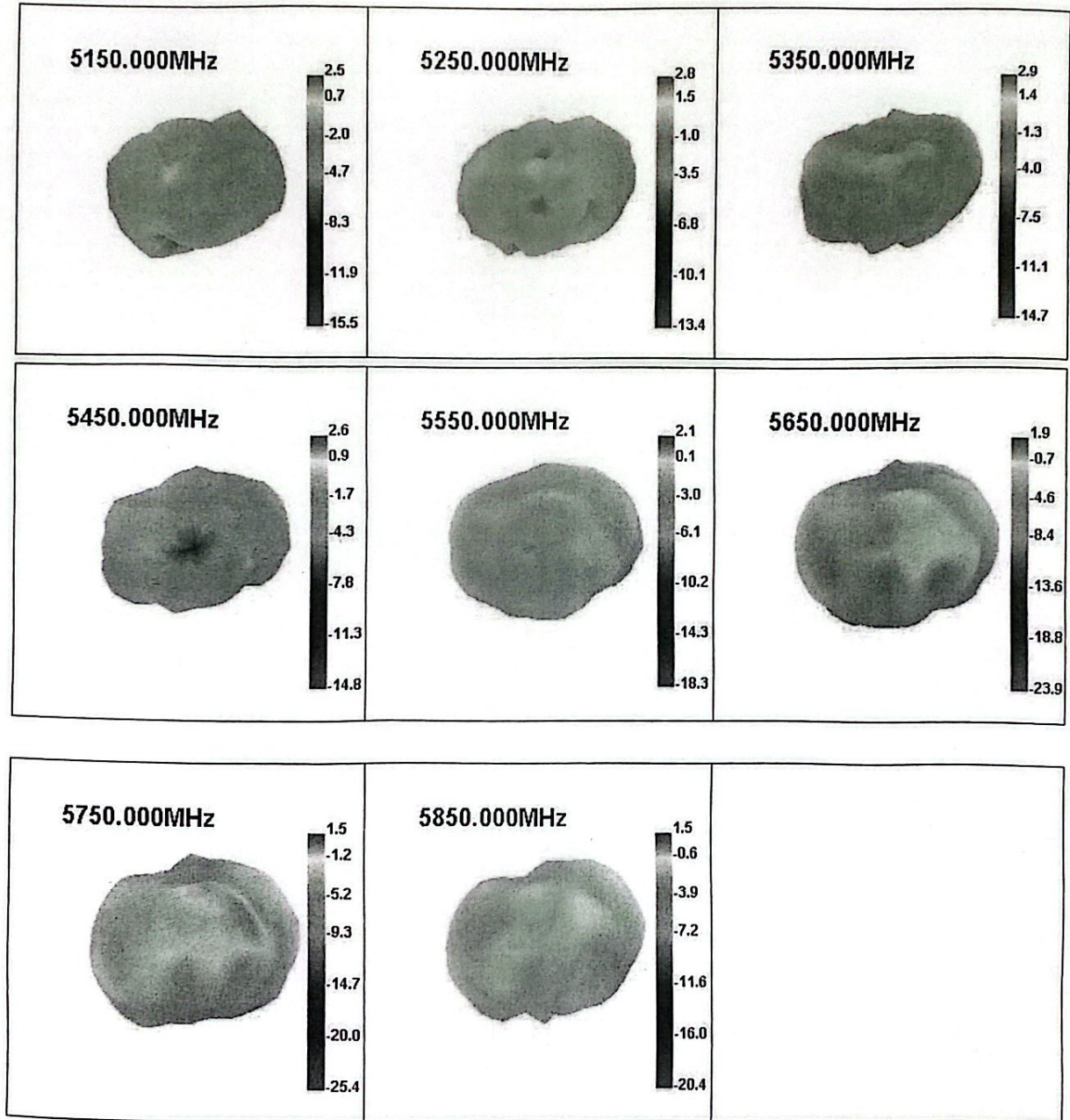


Freq (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Effi (%)	48.12	47.23	47.96	49.8	51.28	48.83	49.96	49.05	49.02	46.41	43.8
Gain (dBi)	1.23	1.26	1.58	2.61	2.4	1.91	1.93	1.8	1.65	1.26	0.91

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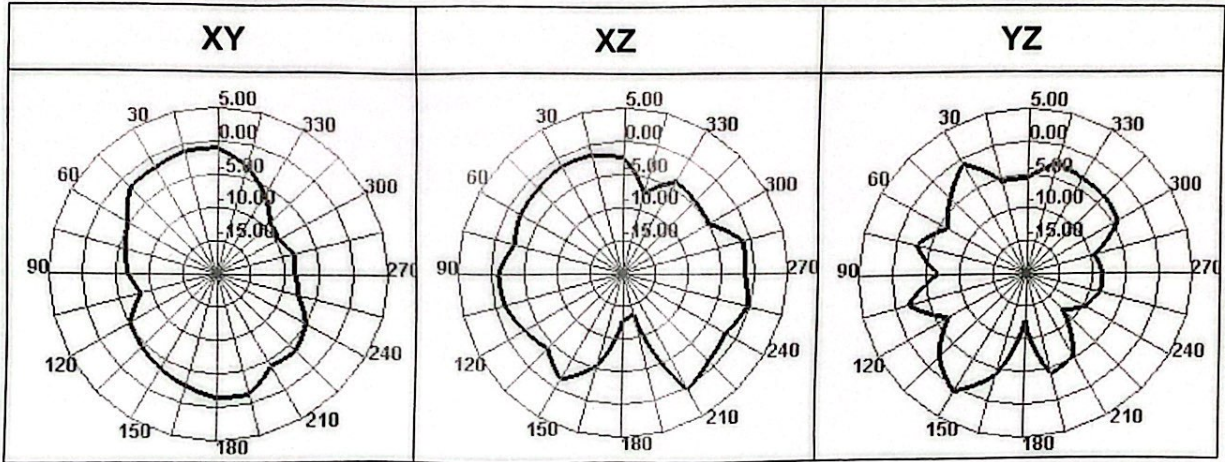
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Freq (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Effi (%)	47.28	52.97	59.08	57.26	60.96	60.74	51.81	47.61	48.14	48.8	44.85	41.84	41.65	42.66	43.58
Gain (dBi)	2.5	2.41	2.8	2.58	2.91	2.77	2.61	1.54	2.13	1.85	1.89	1.34	1.5	1.43	1.55

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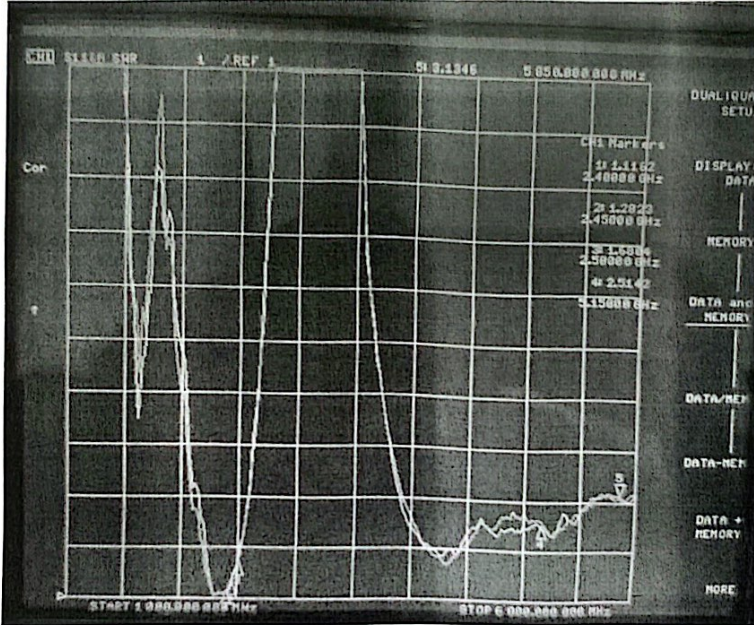


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## 6.Plots

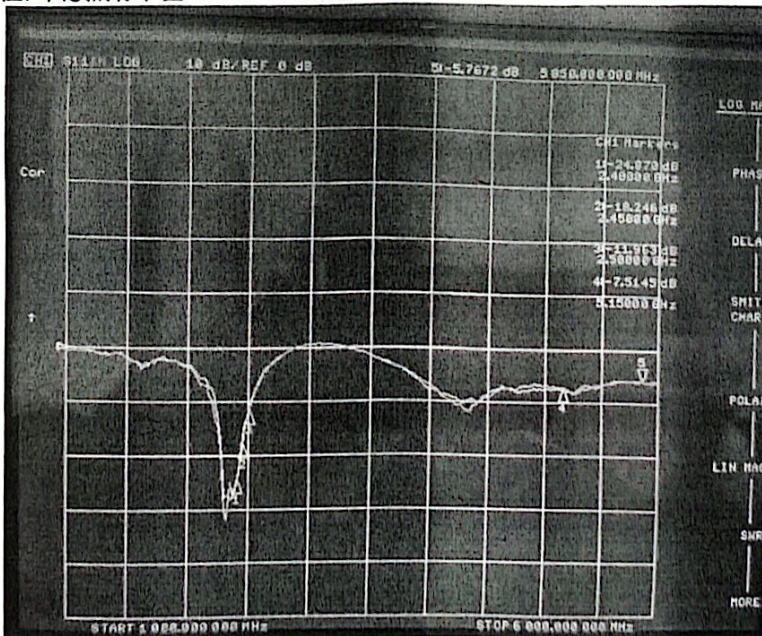
### VSWR

注：驻波系数的标准值



### Return Loss

注：回损的标准值



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## 7 Reliability tests

### 7.1 Test content

No	Test item	Test method	standard of criterion
1	Salt spray test	Spray a 5% salt solution for 24HR	There can be no discoloration, distortion (deformation) fall off and other shortcomings of the corrosion area can not be too large

### 7.2 Test results

NO	Sample number	Test duration	Found	Remarks
1	10	24H	PASS	Technical grade 9 corrosion <0.4mm

## 8 Conclusion

以上数据表明此 2.4/5.8G 天线参数均已达标。性能以装机后的实际使用效果为准。

The above data indicates that the 2.4GHz antenna parameters are up to standard. The performance depends on the actual use effect after installation.

From the above test results, we can know the electrical performance of the antenna is seems good.

DongGuan Yangyue Electronic Communication Technology Co., Ltd, look forward to your confirmation, thank you for your cooperation!

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