



深圳市扬跃电子通信科技有限公司
Shenzhen Yangyue Electronic Communication Technology Co., Ltd.

SPECIFICATION FOR APPROVAL

承認書

Customer Name	Portable Multimedia Ltd
Product name	WIFI dual-frequency antenna /2.4Ghz/5.8Ghz/ coaxial line length 65±5mm/ with terminals / YY-SM01020-A.0/NBIQ series special /ROHS
Product number	332-200000052
Prepared By	Tony-Men
Checked By	
Approved By	
Apply Date	March 18, 2023

CUSTOMER SIGNATURE		
Prepared By	Checked By	Approved By
PLEASE RETURN TO US ONE COPY OF "SPECIFICATION FOR APPROVAL" WITH YOUR APPROVED SIGNATURES.		

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频率范围 Frequency range	2.65Dbi@2400 ~ 2500 MHz 2.63Dbi@5150 ~ 5850 MHz
驻波比系数 VSWR	<2.5
输入阻抗 Input Impedance	50±5 (Ω)
极化方式 Polarization	Horizontal polarization+ Vertical Polarization
半功率波束 (3dB) HPW	180° H-plane 120° E-plane

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Humen Town, Dongguan City

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Revision History

Date	Revision	Description of Changes
March 18, 2023	A.1	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..

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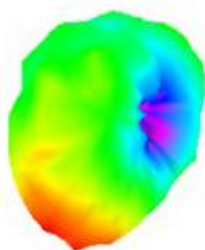
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5. Antenna – Radiation Pattern Test Data

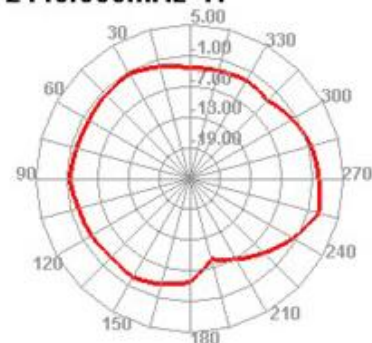
2.4G Test Data

Passive Test For wifi		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	49.86	2.65
2410	48.71	2.57
2420	48.25	2.48
2430	47.83	2.39
2440	46.29	2.27
2450	45.61	2.21
2460	45.24	2.13
2470	45.05	2.04
2480	44.11	1.98
2490	43.39	1.92
2500	42.16	1.73

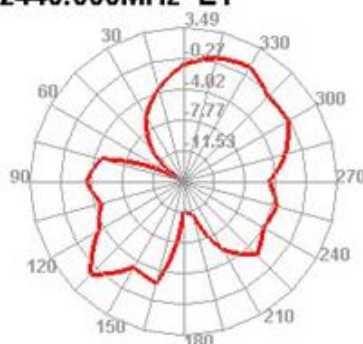
2440.000MHz



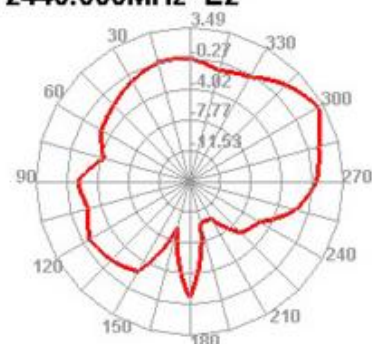
2440.000MHz H



2440.000MHz E1



2440.000MHz E2



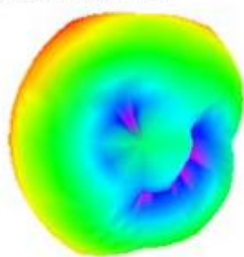
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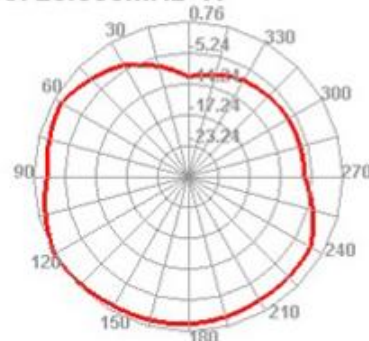
5G Test Data

Freq (MHz)	Effi (%)	Gain (dBi)
5150	40.86	2.03
5200	42.35	2.09
5250	47.47	2.06
5300	45.08	2.23
5350	49.82	2.26
5400	52.44	2.5
5450	47.22	2.03
5500	49.18	1.9
5550	51.34	2.15
5600	50.22	1.98
5650	43.22	1.65
5700	43.2	1.46
5750	47.51	2.52
5800	44.07	2.18
5850	44.24	2.63

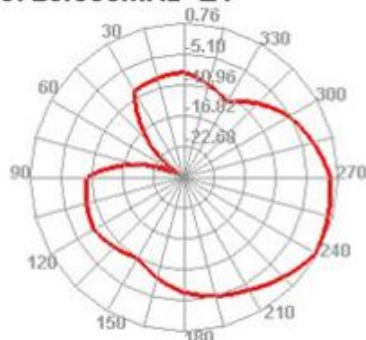
5720.000MHz



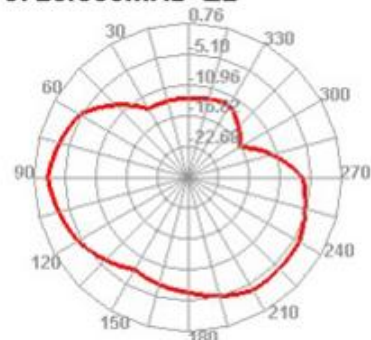
5720.000MHz H



5720.000MHz E1



5720.000MHz E2



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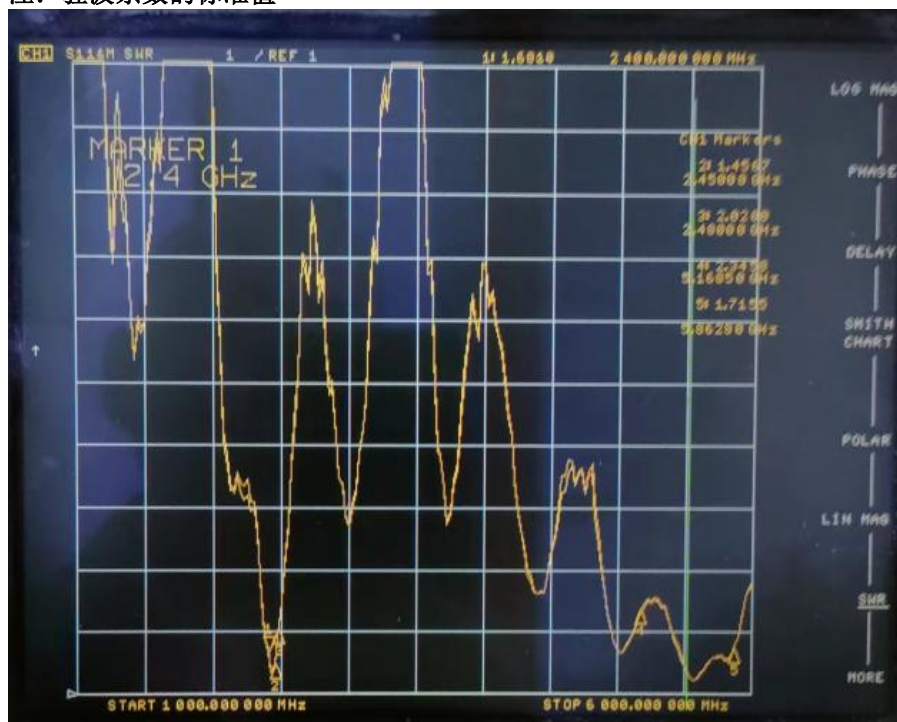
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6.Plots

VSWR

注：驻波系数的标准值



Log Mag(Return loss)

注：回损的标准值



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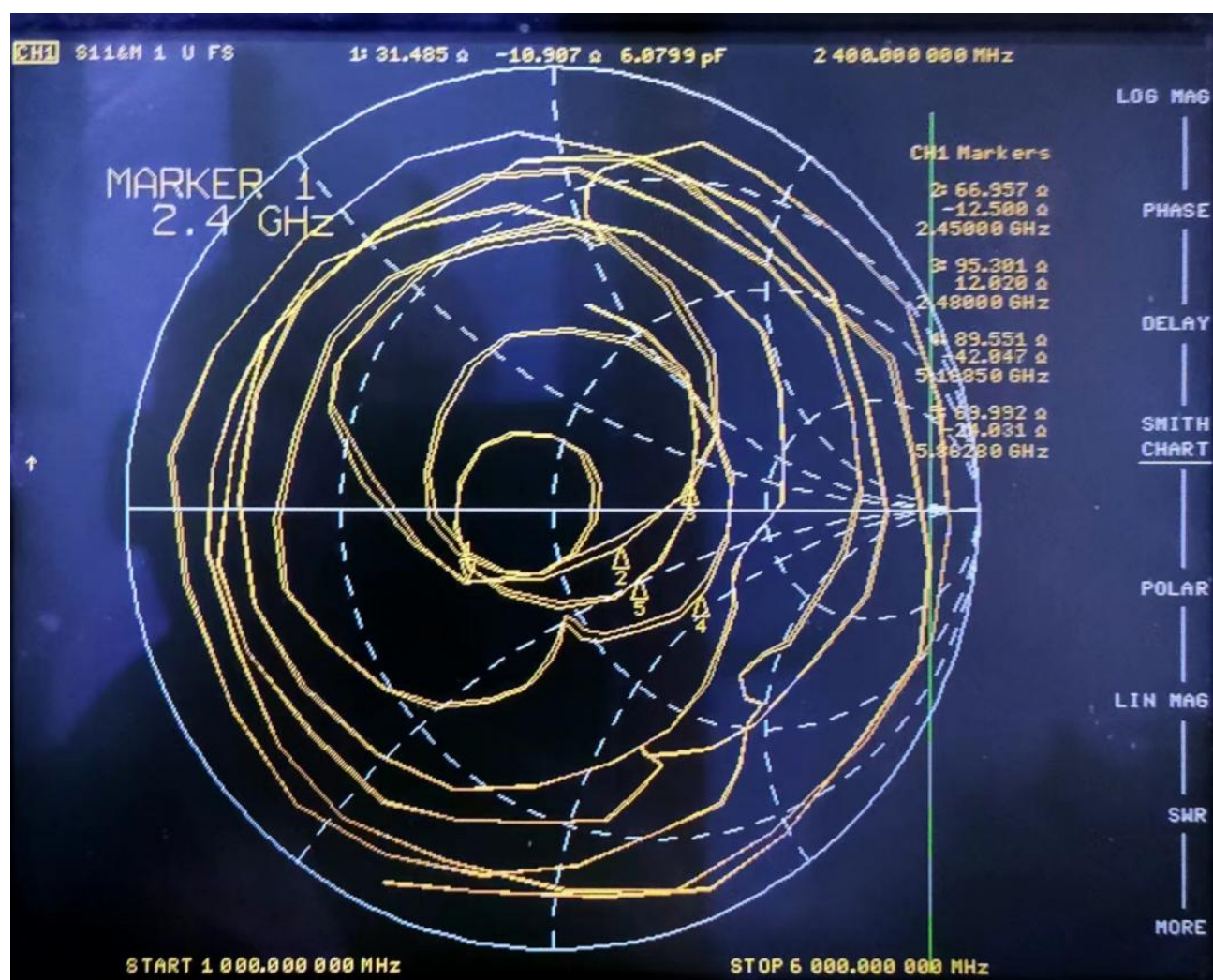
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3.Smith

3.史密斯图

chart



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RoHS		
REV.	ORDER NO	DATE
A.0	New edition	Nov 4, 2022
A.1	The glue on the back of the RFT soldering wire area became the glue free zone	Mar 18, 2023

Front view

Back view

Glue-free zone

RF0.81 black Cable

The top of the cup is up

4 generation original I-PEX terminals

Technical requirements:

- Test frequency:
2.4~2.5Ghz/5.15~5.85Ghz

NO	PARTNAME	DESCRIPTION	PART NO.	QTY
3	FPC	29.4*23.4	000<20230>-01	1
2	I-PEX terminal	I-PEX terminals(20448-001R-081)	000<201300>-00	1
1	线材	RF0.81 black Cable L=65.0mm	0100<001000>-01	1

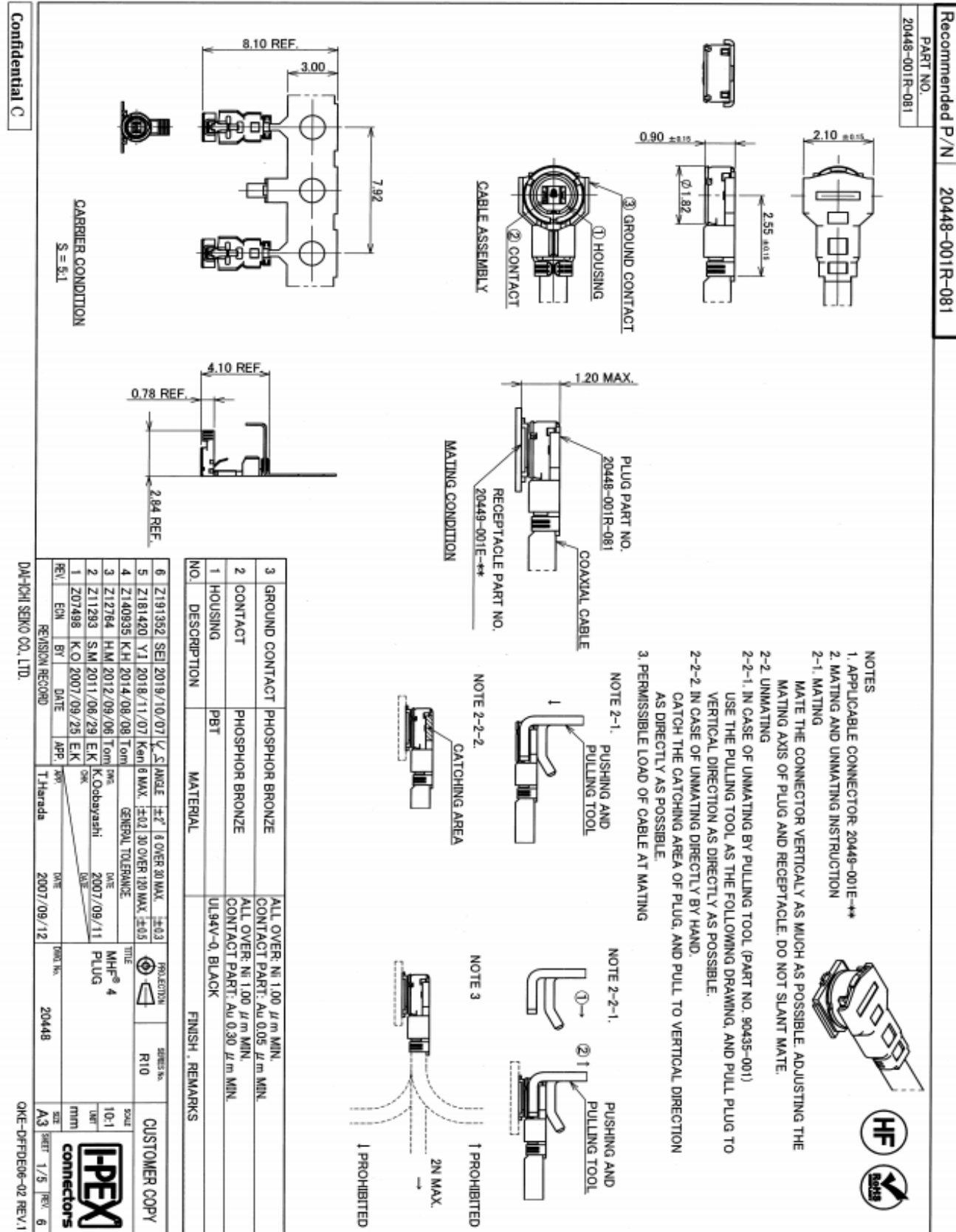
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PART NAME: 117T dual-frequency antenna / 2 Pin 1.8MM, overall length 62.5mm with terminals / 7Pin-01R12-4 VERO series special / JHE			
PART NO.: 117-5001029-A.0		Customer P/N : 332-9000000052	
APPROVED BY	CHECKED BY	DESIGNED BY	Tolerance
		Tong-shen	X.X ±0.50 X.YY ±0.2 REVISION: A.1p X' ±3°
		2022-11-04	

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Original
generation terminal
drawing

4



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7 Reliability tests

7.1 Test content

No	Test item	Test method	Decision criteria
1	Salt spray test	Spray a 5% salt solution for 24 hours	Can not have discoloration, distortion (deformation) fall off and other shortcomings of the corrosion area can not be too large

7.2 Test results

NO	Sample quantity	Test duration	Experimental result	remarks
1	10	24H	OK	技术等级为 9 级 腐蚀<0.4mm

8 Conclusion

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

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

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