



# **TEST REPORT**

PRODUCT NAME : Orbic Q10

- MODEL NAME : RC609L
- BRAND NAME : Orbic
- FCC ID : 2ABGH-RC609LTM
- STANDARD(S) : 47 CFR Part 15 Subpart E
- **RECEIPT DATE** : 2023-02-24
- **TEST DATE** : 2023-03-09 to 2023-03-10
- **ISSUE DATE** : 2023-03-13

Edited by:

Yong 1 77

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Approved by:

Shen Junsheng (Supervisor)

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Change History				
Version Date Reason for change				
1.0 2023-03-13		First edition		





## **1.** Technical Information

Note: Provide by applicant.

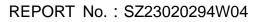
## **1.1. Applicant and Manufacturer Information**

Applicant:	Reliance Communications LLC	
Applicant Address	91 Colin Drive, Unit 1, HOLBROOK, New York 11741, United	
Applicant Address:	States	
Manufacturer: Unimaxcomm		
Monufooturer Address.	35F, HBC HuiLong Center Building-II Minzhi Street, Longhua,	
Manufacturer Address:	Shenzhen, P.R. China 518110	

### **1.2. Equipment Under Test (EUT) Description**

Product Name:	Orbic Q10		
Sample No.:	4#,5#		
Hardware Version:	V1.0		
Software Version:	ORB609L_V1.2.9_	BTM-ST	
Modulation Type:	OFDM		
Modulation Mode:	802.11a, 802.11n (HT20), 802.11n (HT40) 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80)		
Operating Frequency Range:	5180MHz-5240MH	lz; 5745MHz-5825MHz	
Channel Number:	Refer to 1.3		
Antenna Type:	PIFA Antenna		
Antenna Gain:	1.36dBi		
	Battery		
	Brand Name:	N/A	
	Model No.:	BTE-3402	
Accessory Information:	Serial No.:	N/A	
Accessory Information:	Capacity:	3400mAh	
	Rated Voltage:	3.8V	
	Charge Limit:	4.35V	
	Manufacturer:	Phenix New Energy(Hui Zhou)Co.,Ltd.	







	AC Adapter		
	Brand Name:	N/A	
	Model No.:	TPA-23A050200UU01	
Accessory Information:	Serial No.:	N/A	
	Rated Output:	5V=2000mA	
	Rated Input:	100-240V~50/60Hz, 0.3A	
	Manufacturer:	Shenzhen Tianyin Electronics Co.,Ltd.	

**Note 1:** This is a variant report to request a Class II Permissive change for the original report (Report No.: SZ22030300W04, FCC ID: 2ABGH-RC609LTM). Based on the similarity between before, apply for the following changes:

1. Add second supplier for LCD, Fingerprint, Speaker, Memory, Filter, SAW, Duplexer and GPS LNA.

- 2. Add a Band 4 compatible solution for other carrier.
- 3. Have antenna modifications, but without RF parameters and gain change.
- 4. Add conductive sponge, ground conductive cloth and sealing form for speaker in housing.

5. Remove SAR sensor and Non-Carrier Bands (B13/B14/B29), even though these functions were disabled by software in original certificate.

Due to the above changes, we have evaluated and retested worst case of conducted spurious emissions, conducted emission and restricted frequency bands the test results are better than before, all other test items are no need to be retested. We only recorded the worse case of conducted spurious emissions, conducted emission and restricted frequency bands in this report. **Note 2:** WiFi hotspot only support U-NII-1 and U-NII-3 band.

**Note 3:** We use the dedicated software to control the EUT continuous transmission.

**Note 4:** For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.





## 1.3. Modulation Type and Data Rate of EUT

Modulation technology	Modulation Type	Data Rate (Mbps)Note1
	BPSK	<b>6</b> /9
	QPSK	12/18
OFDM (802.11a)	16QAM	24/36
	64QAM	48/54
	BPSK	6.5
OFDM (802.11n)	QPSK	13/19.5
OFDM (802.111)	16QAM	26/39
	64QAM	52/58.5/65
	BPSK	6.5
	QPSK	13/19.5
OFDM (802.11ac)	16QAM	26/39
	64QAM	52/58.5/65
	256QAM	78

**Note1:** The worst-case mode(black bold) in all data rates has been determined during the pre-scan, only the test data of the worst-case were recorded in this report.

## **1.4. The Channel Number and Frequency**

(U-NII-1) 5180MH	lz-5240MHz			
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00N4LI-	36	5180	40	5200
20MHz	44	5220	48	5240
40MHz	38	5190	46	5230
80MHz	42	5210		
(U-NII-3) 5745MF	lz-5825MHz			
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
	149	5745	153	5765
20MHz	157	5785	161	5805
	165	5825		
40MHz	151	5775	159	5795
80MHz	155	5775		

Note 1: The black bold channels were selected for test.





### 1.5. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart E (U-NII band) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15(5-1-14 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
1	15.207	Conducted Emission	Mar. 09, 2023	Wu Zhaoling	PASS	No deviation
2	15.407(b)	Restricted Frequency Bands	Mar. 10, 2023	Su Zhan	PASS	No deviation
3	15.407(b)	Radiated Emission	Mar. 10, 2023	Su Zhan	PASS	No deviation

**Note 1:** Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

**Note 2:** When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

## **1.6. Environmental Conditions**

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106





## **2.** 47 CFR Part 15E Requirements

## 2.1. Conducted Emission

#### 2.1.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a  $50\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

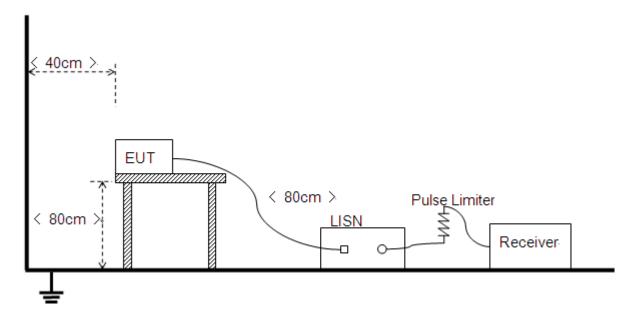
Frequency Penge (MHz)	Conducted Limit (dBµV)		
Frequency Range (MHz)	Quai-peak	Average	
0.15 - 0.50	66 to 56	56 to 46	
0.50 - 5	56	46	
5 - 30	60	50	

Note:

- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 0.50MHz.

#### 2.1.2. Test Description

#### Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference



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Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.

#### 2.1.3. Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hzwere considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

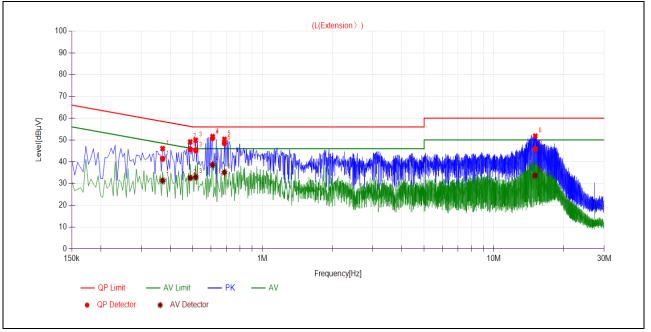
#### A.Test Setup:

Test Mode: EUT+ Adapter+Earphone WIFI TX Test Voltage: AC 120V/60Hz The measurement results are obtained as below:  $E [dB\mu V] = U_R + L_{Cable loss} [dB] + A_{Factor}$ U<sub>R</sub>: Receiver Reading A<sub>Factor</sub>: Voltage division factor of LISN





#### **B.Test Plot:**



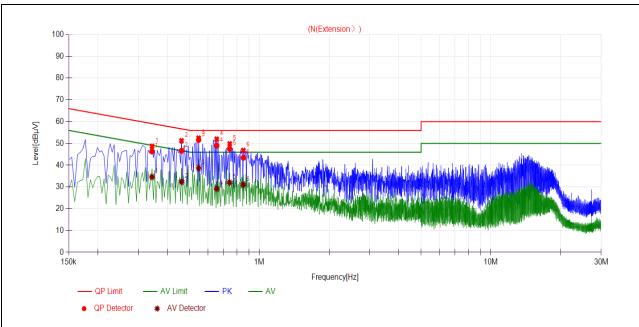
(L Phase)

No. Fre.		Emission Level (dBµV)		Limit (	dBµV)	Power-line	Verdict	
(MHz)	(MHz) Quai-peak		Quai-peak Average					
1	0.3704	41.35	31.32	58.49	48.49		PASS	
2	0.4873	45.71	32.57	56.21	46.21		PASS	
3	0.5147	45.24	32.97	56.00	46.00	Line	PASS	
4	0.6086	50.85	38.64	56.00	46.00	Line	PASS	
5	0.6850	48.51	35.11	56.00	46.00		PASS	
6	15.0990	45.87	33.65	60.00	50.00		PASS	



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#### (N Phase)

No. Fre.		Emission Level (dBµV)		Limit (	dBµV)	Power-line	Verdict	
	(MHz)	Quai-peak	Average	Quai-peak	Average		r on allot	
1	0.3432	46.36	34.63	59.12	49.12		PASS	
2	0.4607	46.65	32.39	56.68	46.68		PASS	
3	0.5458	51.64	38.67	56.00	46.00	Neutral	PASS	
4	0.6540	48.97	29.14	56.00	46.00	Neutrai	PASS	
5	0.7433	47.58	32.01	56.00	46.00		PASS	
6	0.8522	43.44	31.05	56.00	46.00		PASS	



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### 2.2. Restricted Frequency Bands

#### 2.2.1. Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBµV/m);

 $E = 1000000 \times \sqrt{30P} / 3 \text{ µV/m}$ 

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m





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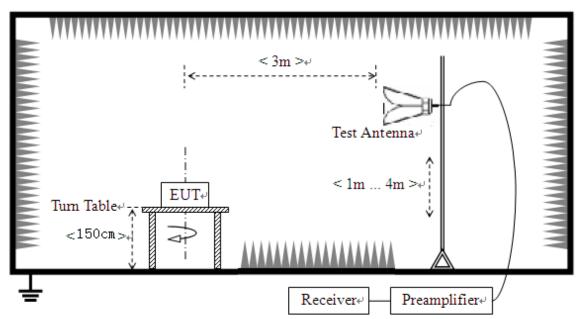
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

#### 2.2.2. Test Description

#### Test Setup



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The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

KDB 789033 Section H) 3)5)6(d)) was used in order to prove compliance

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

#### 2.2.3. Test Result

The lowest and highest channels are tested to verify Restricted Frequency Bands.

The measurement results are obtained as below:

 $E [dB\mu V/m] = U_R + A_T + A_{Factor} [dB]; A_T = L_{Cable loss} [dB] - G_{preamp} [dB]$ 

AT: Total correction Factor except Antenna; UR: Receiver Reading

Gpreamp: Preamplifier Gain; AFactor: Antenna Factor at 3m

Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

**Note 2** All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

#### 802.11n (HT40) Mode

#### A.Test Verdict:

		Detector	Receiver			Max.		
Frequency		Detector	Reading	AT	A <sub>Factor</sub>	Emission	Limit	Verdict
Channel	(MHz)		U <sub>R</sub>	(dB)	(dB@3m)	Е	(dBµV/m)	verdict
		PK/ AV	(dBµV)			(dBµV/m)		
151	5725.00	PK	43.58	-19.01	32.20	56.77	122.23	PASS





#### **B.Test Plot:**

Keysight Spectrum Analyzer - Swept SA				- ē 🖻
RL RF PRESEL 50 Ω DC arker 4 5.72500000000	0 CHZ	ALIGN OFF	12:51:41 AM Mar 03, 2023 TRACE 123456	Marker
arker 4 5.72500000000	PNO: Fast 😱 Trig: Free Run	Avg Hold:>100/100		
	IFGain:Low Atten: 10 dB			Select Marker
		Mkr4	5.725 000 GHz	4
dB/div Ref 106.99 dBµ	V		43.576 dBµV	
7.0				
7.0				Norm
7.0				
7.0				
7.0				Delt
			$\wedge^2 \wedge^2 4$	
7.0	here the strate state and the second of the second state of the se	www.www.www.	and - Marthan Martin and	
7.0				
7.0				Fixed
7.0				
art 5.4600 GHz			Stop 5.7550 GHz	
Res BW (CISPR) 1 MHz	#VBW 3.0 MHz	Sweep 1	.000 ms (1001 pts)	a
R MODE TRC SCL X	Y FI	NCTION FUNCTION WIDTH	FUNCTION VALUE	
1 N 1 f 5.68	50 000 GHz 41.649 dBµV			
	00 000 GHz 42.253 dBµV 20 000 GHz 43.151 dBµV			
<mark>4 N 1 f 5.72</mark>	25 000 GHz 43.576 dBµV			Properties
5 6			E	
7				
9				Мо
0				1 of
			•	

(PEAK, Channel 151, 802.11n (HT40))





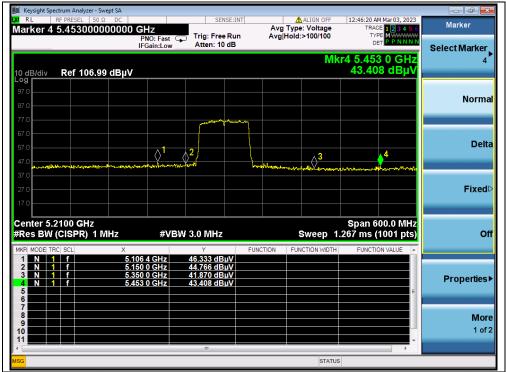
#### REPORT No. : SZ23020294W04

#### 802.11 ac (VHT80) Mode

#### A.Test Verdict:

		Detector	Receiver			Max.		
Channel	Frequency		Reading	AT	A <sub>Factor</sub>	Emission	Limit	Verdict
	(MHz)	PK/ AV	U <sub>R</sub>	(dB)	(dB@3m)	E	(dBµV/m)	
			(dBuV)			(dBµV/m)		
42	5106.40	PK	46.33	-19.54	32.2	58.99	74	PASS
42	5141.20	AV	35.71	-19.54	32.2	48.37	54	PASS
42	5453.00	PK	43.41	-19.54	32.2	56.07	74	PASS
42	5398.40	AV	32.93	-19.54	32.2	45.59	54	PASS

#### **B.Test Plot:**



(Channel 42, PEAK, 802.11ac (VHT80))



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#### REPORT No. : SZ23020294W04

Keysight Spectrum Analyz RL RF PRESEL	50 Ω DC			ALIGN OFF	12:43:30 AM Mar 03, 2 TRACE 123	5 6	narker
10 dB/div Ref 10	PNO: IFGai 16.99 dBµV	n:Low Trig: Free Atten: 10		Hold:>100/100	(r4 5.398 4 G 32.928 dB		Select Marker
97.0 97.0 87.0							Normal
77.0 67.0 57.0							Delta
47.0 37.0 27.0 17.0		<sup>2</sup> ∫		\$ <sup>3</sup>	<b>♦</b> <sup>4</sup>	÷	Fixed⊳
Center 5.2100 GH #Res BW (CISPR)		#VBW 2.2 kHz	FUNCTION	Sweep 3	Span 600.0 IV 12.8 ms (1001 p	IHz its)	Off
1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f	5.141 2 0 5.150 0 0 5.350 0 0 5.398 4 0	GHz 35.779 dB GHz 35.705 dB GHz 32.583 dB	uV uV uV	PONCTION WIDTH	FORCHON VALUE		Properties▶
6 7 8 9 10							More 1 of 2
11 MSG File <ac80-42< th=""><td>PK.png&gt; saved</td><td>m</td><td></td><td>STATU</td><td>5</td><td>•</td><td></td></ac80-42<>	PK.png> saved	m		STATU	5	•	

(Channel 42, AVG, 802.11ac (VHT80))





## 2.3. Radiated Emission

#### 2.3.1. Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

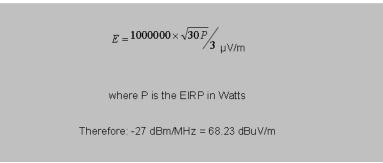
(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBµV/m);



Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3



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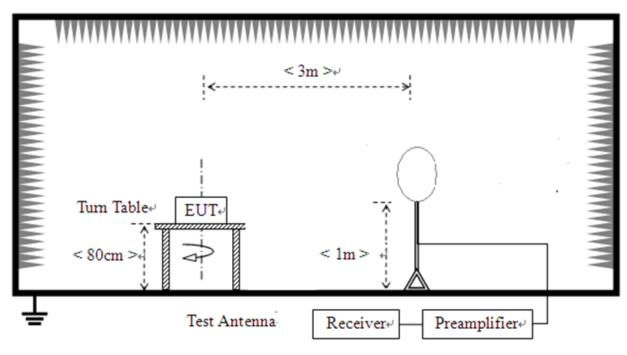


For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

#### 2.3.2. Test Description

#### **Test Setup:**

1) For radiated emissions from 9kHz to 30MHz



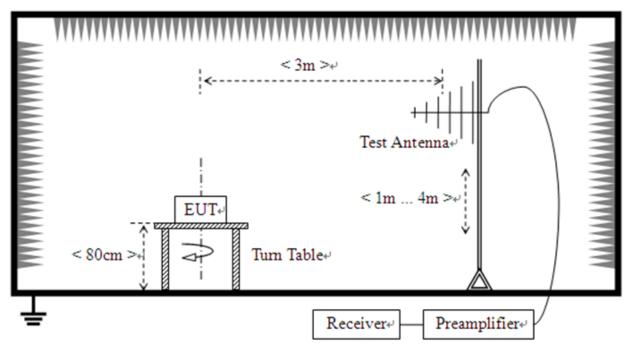


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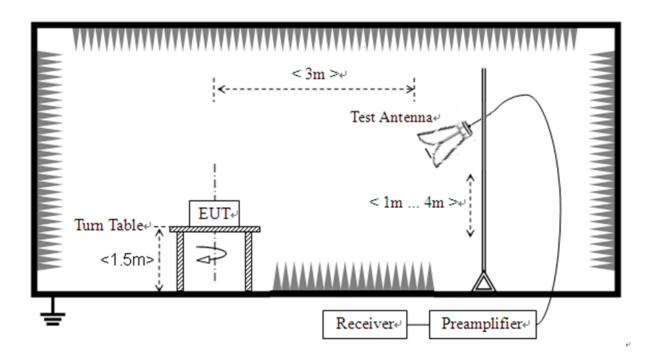
Fax: 86-755-36698525



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.



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For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

#### 2.3.3. Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

 $\mathsf{E} \ [\mathsf{dB}\mu\mathsf{V}/\mathsf{m}] = \mathsf{U}_\mathsf{R} + \mathsf{A}_\mathsf{T} + \mathsf{A}_\mathsf{Factor} \ [\mathsf{dB}]; \ \mathsf{A}_\mathsf{T} = \mathsf{L}_\mathsf{Cable \ loss} \ [\mathsf{dB}] - \mathsf{G}_\mathsf{preamp} \ [\mathsf{dB}]$ 

A<sub>T</sub>: Total correction Factor except Antenna

U<sub>R</sub>: Receiver Reading

G<sub>preamp</sub>: Preamplifier Gain

A<sub>Factor</sub>: Antenna Factor at 3m

During the test, the total correction Factor  $A_T$  and  $A_{Factor}$  were built in test software.

**Note 1:** All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

**Note 2:** For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

**Note 3:** For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

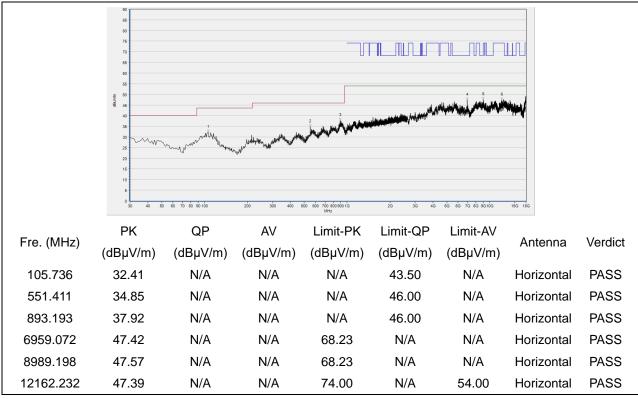
**Note 4:** All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.



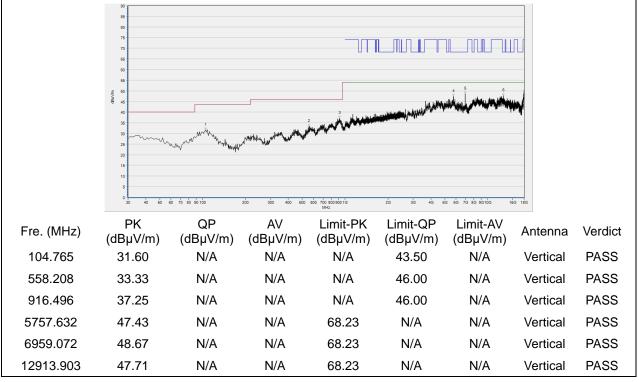


#### 802.11a Mode





(Antenna Horizontal, 30MHz to 18GHz)



#### (Antenna Vertical, 30MHz to 18GHz)



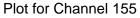
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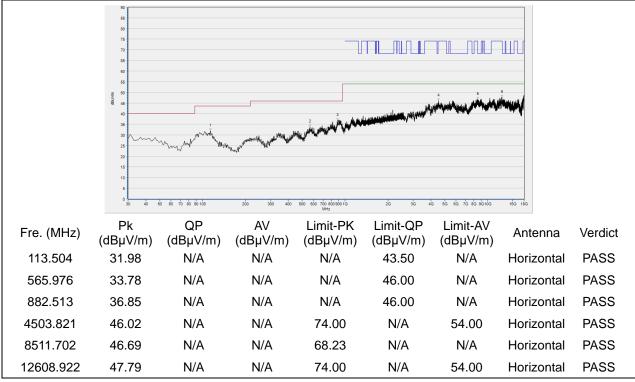
Fax: 86-755-36698525 E-mail: service@morlab.cn

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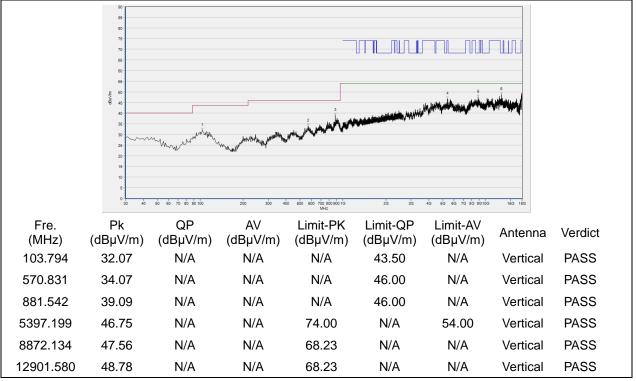


#### 802.11ac (VHT80) Mode





(Antenna Horizontal, 30MHz to 18GHz)



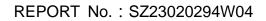
(Antenna Vertical, 30MHz to 18GHz)



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## **Annex A Test Uncertainty**

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test Items	Uncertainty
Restricted Frequency Bands	±5%
Radiated Emission	±2.95dB
Conducted Emission	±2.44dB

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



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Fax: 86-755-36698525



## **Annex B Testing Laboratory Information**

#### 1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.		
	FL.3, Building A, FeiYang Science Park, No.8 LongChang		
Laboratory Address:	Road, Block 67, BaoAn District, ShenZhen, GuangDong		
	Province, P. R. China		
Telephone:	+86 755 36698555		
Facsimile:	+86 755 36698525		

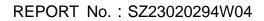
#### 2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
	FL.3, Building A, FeiYang Science Park, No.8 LongChang
Address:	Road, Block 67, BaoAn District, ShenZhen, GuangDong
	Province, P. R. China

#### 3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.







#### 4. Test Equipments Utilized

#### 4.1 Conducted Emission Test Equipments

Equipment Name	Serial No.	Туре	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2022.03.03	2023.03.02
LISN	8127449	NSLK 8127	Schwarzbeck	2022.03.03	2023.03.02
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2022.07.06	2023.07.05
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	2022.07.08	2023.07.07
Notebook	N/A	A1370	APPLE	N/A	N/A
Notebook Adapter	N/A	A1374	APPLE	N/A	N/A

#### 4.2 Radiated Test Equipments

Equipment Name	Serial No.	Туре	Manufacturer	Cal. Date	Due Date
Receiver	MY54130016	N9038A	Agilent	2022.07.06	2023.07.05
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2022.05.25	2025.05.24
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2022.02.11	2025.02.10
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2022.07.13	2025.07.12
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2022.07.14	2025.07.13
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2022.07.08	2023.07.07
Preamplifier (2GHz-18GHz)	61171/61172	S020180L32 03	LUCIX CORP.	2022.07.08	2023.07.07
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118- 40C-S	Decentest	2022.07.23	2023.07.22
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2022.07.08	2023.07.07



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RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-K K-0.5	Qualwave	2022.07.08	2023.07.07
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-K KF-2	Qualwave	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-N N-5	Qualwave	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG- 5150-5350	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG- 5725-5850	Wainwright	2022.07.08	2023.07.07
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

END OF REPORT \_\_\_\_\_



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