



## RADIO TEST REPORT

## (FCC Part 15 Subpart C / IC RSS-210)

Applicant:	PAX Technology Limited
Address:	Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Hong Kong China

Manufacturer:	PAX Computer Technology (Shenzhen) Co., Ltd.
Address:	4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.
Product:	Integrated Smart Terminal
Brand Name:	PAX
Model Name:	E800
FCC ID:	V5PE800GM
Date of tests:	Sep. 01, 2021 ~ Sep. 26, 2021

The tests have been carried out according to the requirements of the following standard:

- □ Part 15 Subpart C §15. 225 / IC RSS-210 issue 10(December 2019)
- □ RSS-Gen Issue 5 Amendment 1 (March 2019)

Date: Sep. 27, 2021

**ANSI C63.10-2013** 

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang	Approved by Luke Lu
Engineer / Mobile Department	Manager / Mobile Department
Simon	luke lu

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Date: Sep. 27, 2021



## **Report Revise Record**

ISSUE NO. REASON FOR CHANGE		DATE ISSUED
W7L-P21090006RF08	Original release	Sep. 27, 2021

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## **Summary of Test RESULT**

FCC Rule	IC Rule	Description	Limit	Result	Remark
-	RSS-Gen 6.7	99% Bandwidth	-	Pass	-
15.225(a)(b)(c)	RSS-210 Annex B.6	Field Strength of Fundamental Emissions	15.225(a)(b)(c) RSS-210 Annex B.6	Pass	-
2.1049	-	20dB Spectrum Bandwidth	2.1049	Pass	-
15.225(d) 15.209	RSS-210 Annex B.6	Radiated Emission	15.225(d) & 15.209 RSS-210 Annex B.6	Pass	-
15.207	RSS-GEN 8.8	AC Conducted Emission	15.207(a)	Pass	-
15.225(e)	Annex B.6	Frequency Stability	< ±100 ppm	Pass	
15.203	RSS-Gen 6.8	Antenna Requirement	N/A	Pass	-

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District, Shenzhen, Guangdong, China

## 1. General Description

## 1.1 Applicant

#### **PAX Technology Limited**

Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Hong Kong China

#### 1.2 Manufacturer

#### PAX Computer Technology (Shenzhen) Co., Ltd.

4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.

### 1.3 General Description Of EUT

Items	Description
Tx/Rx Frequency Range	13.553 ~ 13.567MHz
Channel Number	1
20dBW	2.874 kHz
99%OBW	2.455 kHz
Antenna Type	Loop Antenna
Type of Modulation	ASK

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

#### 1.4 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.225
- ANSI C63.10-2013
- RSS-210 Issue 10
- RSS-Gen Issue 5

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## 2. Test Configuration of Equipment Under Test

## 2.1 Descriptions of Test Mode

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

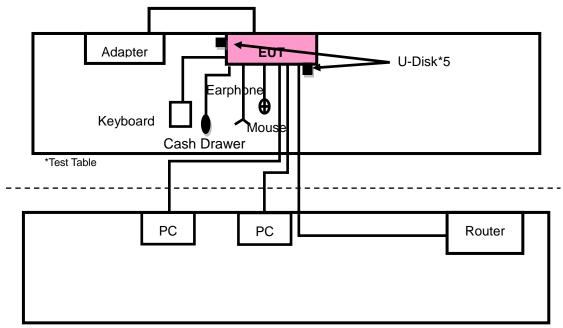
101	Tollowing table is a list of the test medes shown in this test report.					
	Test Items					
Α	C Power Line Conducted Emissions	Field Strength of Fundamental Emissions				
2	0dB Spectrum Bandwidth	Frequency Stability				
R	Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz				
No	ote:					
1.	The EUT was programmed to be in continuously transmitting mode.					
2.	2. The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmit a					
	13.56MHz and is placed around 3 cm gap to th	e EUT.				
3.	Pre-Scan has been conducted to determine the	ne worst-case mode from all possible combinations				
	between available modulations, work in modes	s and data rates. Selected for the final test as listed				
	below.					

Frequency	Work in Modes	Туре	Data Rate (Kbps)			
13.56 MHz	Card Emulation Reader/Writer Peer-to-Peer	□ A □ B ☑ F □ V	□ 106 <b>□</b> 212 □ 424 □ 848			
Remark:  The mark"  " means is chosen for testing;  The mark"  " means is not chosen for testing.						



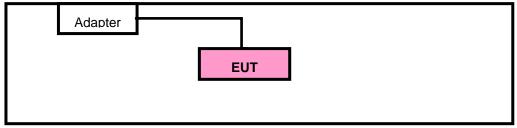
## 2.2 Test Configurations

#### <AC Conducted Emissions>



<sup>\*</sup> Kept in a remote area

#### < For Fundamental Emissions and Mask and Radiated Emissions Measurement >



\*Test Table

## 2.3 Support Equipment

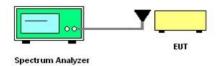
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	Thnikpad L440	R90FTFKP	N/A
2	Printer	HP	Hp LaserJet 1300	CNSJF75989	N/A
3	SD	San Disk	Ultra	N/A	N/A
4	Earphone	Nokia	WH-108	RTF	N/A
5	Wireless AP	ABOCOM	WR224GR	060500749P	N/A
6	U-Disk	HP	N/A	N/A	N/A
7	Mouse	Lenovo	N/A	N/A	N/A
8	Keyboard	PAX	N/A	N/A	N/A

## 2.4 Test Setup

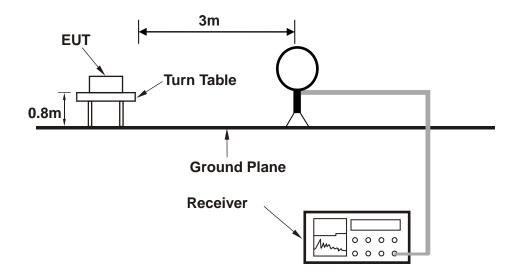
The EUT is continuously communicating during the tests.

EUT was set in the Hidden menu mode to enable NFC communications.

### **Setup diagram for Conducted Test**

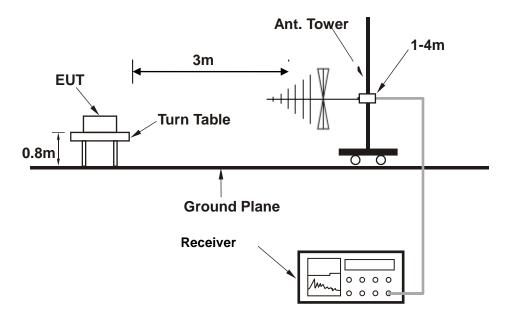


#### Setup diagram for Radiation(9KHz~30MHz) Test

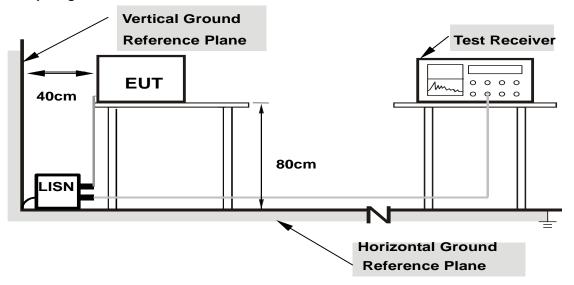




#### Setup diagram for Radiation(Below 1G) Test



#### **Setup diagram for AC Conducted Emission Test**



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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## 2.5 Measurement Results Explanation Example

#### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

#### Example:

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The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

 $Offset(dB) = RF \ cable \ loss(dB) + attenuator \ factor(dB).$ = 5 + 10 = 15 (dB)

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### 3. Test Result

### 3.1 20dB and 99% Bandwidth Measurement

#### 3.1.1 Limit of 20dB and 99% Bandwidth

Intentional radiators must be designed to ensure that the 20dB and 99% emission bandwidth in the specific band 13.553~13.567MHz.

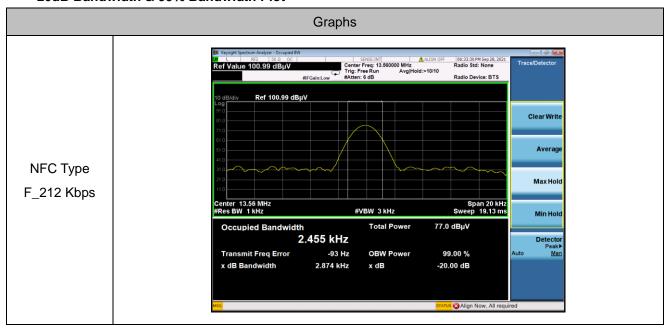
#### 3.1.2 Test Procedures

- 1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
- 2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
- 3. Measured the spectrum width with power higher than 20dB below carrier.
- 4. Measured the 99% OBW.

#### 3.1.3 Test Result of 20dB and 99% Bandwidth

Test Mode :	NFC		Temperature :		23℃	
Test Engineer :	Jace hu		Relative Humidity :		70%	
Mode	Frequency	20dB Ban	dwidth [kHz]	99	% OBW[kHz]	Verdict
NFC Type F_212 Kbps	13.56MHz	2	.874		2.455	PASS

#### 20dB Bandwidth & 99% Bandwidth Plot



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## 3.2 Frequency Stability Measurement

### 3.2.1 Limit of Frequency Stability

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

#### 3.2.2 Test Procedures

- The spectrum analyzer connected via a receive antenna placed near the EUT.
- 2. EUT have transmitted signal and fixed channelize.
- Set the spectrum analyzer span to view the entire emissions bandwidth. 3.
- Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.
- The fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10<sup>6</sup> ppm and the limit is less than ±100ppm.
- Extreme temperature rule is -20°C~50°C.

### 3.2.3 Test Result of Frequency Stability

The NFC Type F\_212 Kbps is the worst case, Only report worst mode data

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### NFC Type F\_212 Kbps

Voltage (Vdc)	Temperature	Measurement Frequency (MHz)	Frequency Tolerance(ppm)	Limit(ppm)	Result
22	20	13.55994	-4.42		Pass
26	20	13.55991	-6.64	1400	Pass
	-20	13.55995	-3.69		Pass
	-10	13.55993	-5.16		Pass
	0	13.55995	-3.69		Pass
24	10	13.55995	-3.69	±100	Pass
24	24 20	13.55996	-2.95		Pass
	30	13.55994	-4.42		Pass
	40	13.55996	-2.95		Pass
	50	13.55994	-4.42		Pass

### 3.3 Field Strength of Fundamental Emissions and Mask Measurement

#### 3.3.1 Limit of Field Strength of Fundamental Emissions and Mask

Rules and specifications	FCC CFR 47 Part 15 section 15.225 IC RSS-210 B.6							
Description	Compliance with th	e spectrum mask is t	ested with RBW set t	o 9kHz.				
Frog of Emission (MUT)	Field Strength	Field Strength	Field Strength	Field Strength				
Freq. of Emission (MHz)	(µV/m) at 30m	(dBµV/m) at 30m	(dBµV/m) at 10m	(dBµV/m) at 3m				
1.705~13.110	30	29.5	48.58	69.5				
13.110~13.410	106	40.5	59.58	80.5				
13.410~13.553	334	50.5	69.58	90.5				
13.553~13.567	15848	84.0	103.08	124.0				
13.567~13.710	334	50.5	69.58	90.5				
13.710~14.010	106	40.5	59.58	80.5				
14.010~30.000	30	29.5	48.58	69.5				

#### 3.3.2 Test Procedures

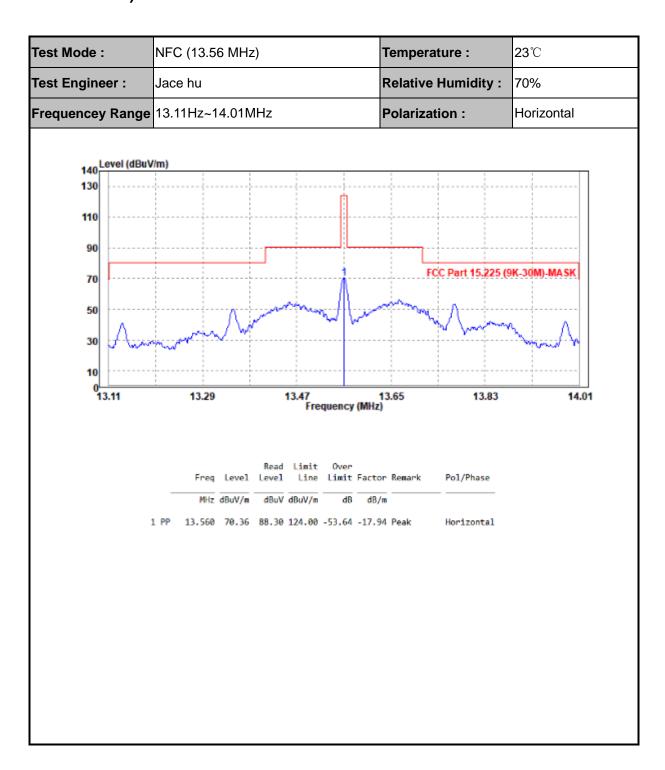
- Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the receiving antenna was fixed at one meter above ground to find the maximum emissions field strength.
- 4. For Fundamental emissions, use the receiver to measure QP reading.
- 5. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
- 6. Compliance with the spectrum mask is tested with RBW set to 9kHz.

Note: Emission level (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m).

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# 3.3.3 Test Results of Field Strength of Fundamental Emissions and Mask (1.705 MHz ~ 30 MHz)



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Test Mode	est Mode :			lHz)			Temp	erature :	23℃	
Test Engine	st Engineer : Jace hu				Relat	ive Humidity	: 70%			
requencey	equencey Range 13.11Hz~14.01MHz					Polar	ization :	Vertical		
140 130	evel (dBuV	/m)								
110										
90								_		
70						1		FCC Part 15.225	(9K-30M)-MA	sk
					and the		Marine .			
50	Λ.	~	mer /	Maria	0.00	l (,.v		my min	m /	
30	77 VAIV	W							JAN.	
10 0	3.11		13.29		13.47 Freq		13.65	13.83	!	14.01
			Level		Limit Line dBuV/m				ol/Phase	
	L PP 13								ertical	

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#### 3.4 Radiated Emissions Measurement

#### 3.4.1 Limit

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

Frequencies	Field Strength	Measurement Distance
(MHz)	(μV/m)	(meters)
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

### 3.4.2 Measuring Instrument Setting

The following table is the setting of receiver.

Receiver Parameter	Setting
Attenuation	Auto
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

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

#### 3.4.3 Test Procedures

- Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the

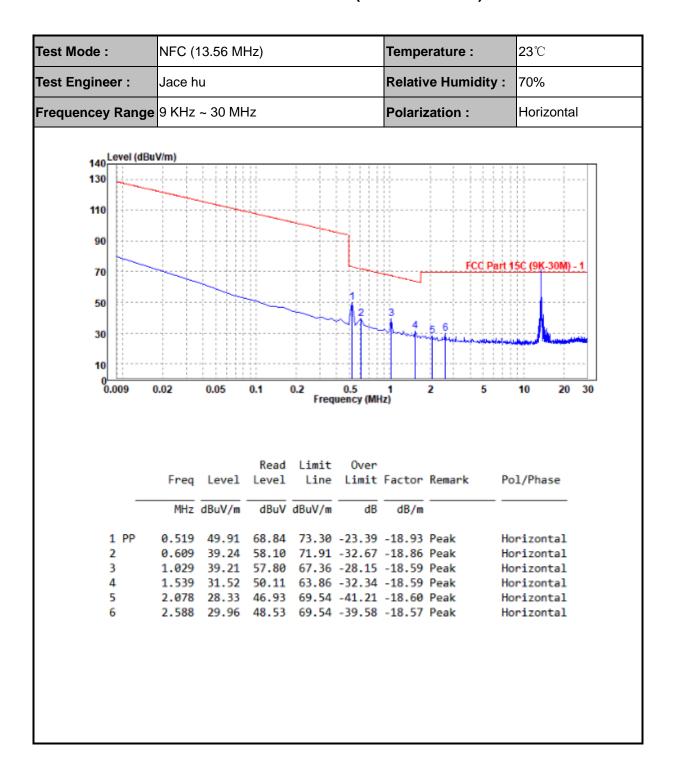


turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.

- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
- 7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver.

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#### 3.4.4 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

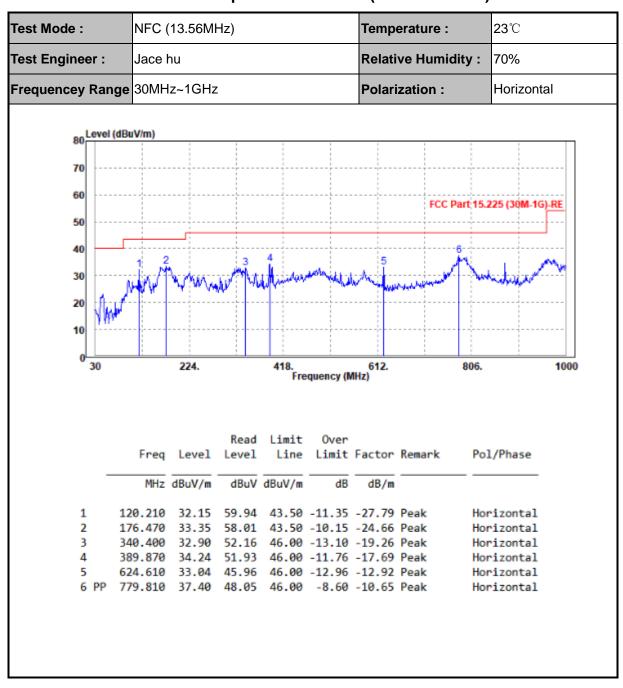


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		INFC (	(13.56 M	1Hz)			Temp	erature :		23℃
st Engineer : Jace hu				Relative Humidity :			70%			
quencey Range 9 KHz ~ 30 MHz							Polarization : Vertice			Vertical
140 Leve	el (dBuV	/m)	11111			1 1 1 1 1 1			1111	: 1
130	_					*****				
110			++++							
					-					
90			-1-1-1-1							
70						L		FCC Pa	art 15C (	(9K-30M) - 1
		1					7			
50						2 3	456		11111	
			-			~\\\i\	What ha			
30										
30								M-Andrew	-	J. Charles
10 0 0.009	0.0	02	0.05 0	.1 0.	2 Freque	0.5 ency (MHz)	1 2	5	10	20 30
10	0.0		0.05 0	Read	Freque	Over		5 Remark		20 30 /Phase
10	0.0	Freq		Read Level	Freque	Over Limit		Remark		
0.009	%	Freq	Level	Read Level	Limit Line dBuV/m	Over Limit	Factor dB/m	Remark	Pol	/Phase
0.005	PP	Freq	Level	Read Level	Limit Line dBuV/m	Over Limit	Factor dB/m	Remark Peak	Pol Ver	
10 0.000	PP	Freq MHz 0.579 0.759 0.939	Level dBuV/m 49.54 36.15 39.75	Read Level dBuV 68.42 54.89 58.37	Limit Line dBuV/m 72.35 70.00 68.15	Over Limit -22.81 -33.85 -28.40	Factor  dB/m  -18.88 -18.74 -18.62	Remark Peak Peak Peak Peak	Pol Ver Ver Ver	/Phase tical tical tical
10 0.009	PP	MHz 0.579 0.759 0.939 1.179	Level dBuV/m 49.54 36.15 39.75 33.96	Read Level dBuV 68.42 54.89 58.37 52.55	Limit Line dBuV/m 72.35 70.00 68.15 66.18	Over Limit -22.81 -33.85 -28.40 -32.22	Factor dB/m -18.88 -18.74 -18.62 -18.59	Remark  Peak Peak Peak Peak Peak	Ver Ver Ver Ver	/Phase tical tical tical tical
10 0.009	PP	Freq MHz 0.579 0.759 0.939	Level dBuV/m 49.54 36.15 39.75 33.96 33.57	Read Level dBuV 68.42 54.89 58.37 52.55 52.16	Limit Line dBuV/m 72.35 70.00 68.15 66.18	Over Limit -22.81 -33.85 -28.40 -32.22 -31.00	Factor  dB/m  -18.88 -18.74 -18.62 -18.59 -18.59	Remark  Peak Peak Peak Peak Peak Peak	Ver Ver Ver Ver Ver	/Phase tical tical tical

## 3.4.5 Test Result of Radiated Spurious Emission (30MHz ~ 1GHz)



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Mode: NFC (13.56MHz)						Tempe	23℃	
st Engineer :	Jace hu	Jace hu				Relativ	e Humidity	: 70%
quencey Rang	<b>e</b> 30MHz-	30MHz~1GHz			Polarization :		Vertical	
					•			
80 Level (dBuV/m	i) :					-		
70								
60								
50							FCC Part 15.225	(30M-1G)-RE
					-			
40 2	3			5			July 1	بيا مستمال
30	/ Now M	MANAGE PARTY	MARPHANIA	WAY CO	المنار	Shirt Hard	Manage by	Thursday, 1
Whaley "Tex								
20								
111.								
10								
111.	224.		418.		612		806.	1000
10	224.		418. F	requency (	612 (MHz)		806.	1000
10	224.		418. F	requency (	612. (MHz)		806.	1000
10	224.		F		(MHz)		806.	1000
10		Level	418. F Read Level		(MHz) Over		806.	1000 Pol/Phase
10	Freq		Read Level	Limit Line	Over Limit	Factor	Remark	
10	Freq	Level dBuV/m	Read Level	Limit	(MHz) Over	Factor	Remark	
10 30	Freq MHz 45.520	dBuV/m 30.96	Read Level dBuV	Limit Line dBuV/m	Over Limit dB	Factor dB/m -26.10	Remark Peak	Pol/Phase  Vertical
10 30	Freq MHz 45.520 120.210	30.96 33.89	Read Level dBuV 57.06 61.48	Limit Line dBuV/m 40.00 43.50	Over Limit dB -9.04	Factor dB/m -26.10 -27.59	Remark Peak Peak	Pol/Phase  Vertical Vertical
10 0 30	Freq MHz 45.520 120.210 163.860	30.96 33.89 34.29	Read Level dBuV 57.06 61.48 58.11	Limit Line dBuV/m 40.00 43.50 43.50	Over Limit dB -9.04 -9.61 -9.21	Factor dB/m -26.10 -27.59 -23.82	Remark Peak Peak Peak Peak	Pol/Phase  Vertical Vertical Vertical
10 0 30	Freq MHz 45.520 120.210 163.860 317.120	30.96 33.89 34.29 38.57	Read Level dBuV 57.06 61.48 58.11 57.69	Limit Line dBuV/m 40.00 43.50 43.50 46.00	Over Limit dB -9.04 -9.61 -9.21 -7.43	Factor dB/m -26.10 -27.59 -23.82 -19.12	Remark  Peak Peak Peak Peak	Pol/Phase  Vertical Vertical Vertical Vertical
10 0 30	Freq MHz 45.520 120.210 163.860 317.120 486.870	30.96 33.89 34.29 38.57 36.34	Read Level dBuV 57.06 61.48 58.11 57.69 51.59	Limit Line dBuV/m 40.00 43.50 43.50 46.00 46.00	Over Limit -9.04 -9.61 -9.21 -7.43 -9.66	Factor  dB/m  -26.10 -27.59 -23.82 -19.12 -15.25	Peak Peak Peak Peak Peak Peak	Pol/Phase  Vertical Vertical Vertical

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#### 3.5 AC Conducted Emission Measurement

#### 3.5.1 Limit of AC Conducted Emission

For equipment 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 or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission	Conducted Limit (dBμV)				
(MHz)	Quasi-Peak	Average			
0.15-0.5	66 to 56*	56 to 46*			
0.5-5	56	46			
5-30	60	50			

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### 3.5.2 Test Procedures

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

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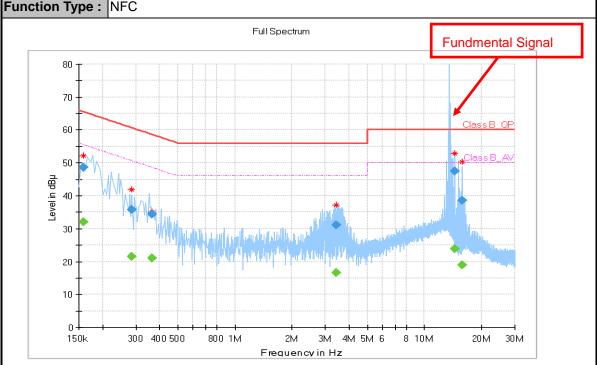


(Shenzhen) Co. Ltd

#### Test Report No.: W7L-P21090006RF08

#### 3.5.3 Test Result of AC Conducted Emission

Test Mode :	NFC	Temperature :	25°C
Test Engineer :	Carl Xie	Relative Humidity :	55%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Time	NEC		

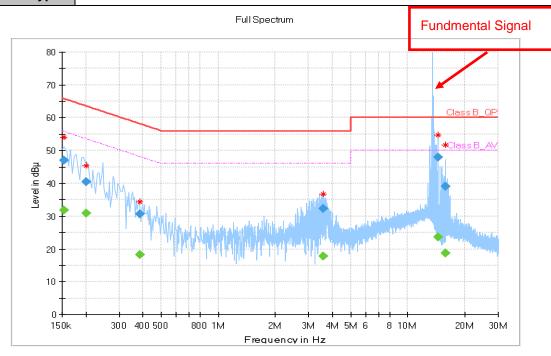


Frequency	QuasiPeak	CAverage	Limit	Margin	Line	Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dBµV)	(dB)			(dB)
0.158000		32.08	55.57	23.49	L1	ON	9.7
0.158000	48.59		65.57	16.98	L1	ON	9.7
0.284000		21.45	50.70	29.25	L1	ON	9.7
0.284000	35.70		60.70	25.00	L1	ON	9.7
0.364000		21.10	48.64	27.54	L1	ON	9.7
0.364000	34.29		58.64	24.35	L1	ON	9.7
3.412000		16.54	46.00	29.46	L1	ON	9.7
3.412000	31.08		56.00	24.92	L1	ON	9.7
14.408000		23.93	50.00	26.07	L1	ON	9.8
14.408000	47.52		60.00	12.48	L1	ON	9.8
15.784000		18.86	50.00	31.14	L1	ON	9.8
15.784000	38.71		60.00	21.29	L1	ON	9.8



Test Mode :	NFC	Temperature :	25℃
Test Engineer :	Carl Xie	Relative Humidity :	55%
Test Voltage :	AC 120V/60Hz	Phase :	Neutral

Function Type: NFC



Frequency	QuasiPeak	CAverage	Limit	Margin	Line	Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dBµV)	(dB)			(dB)
0.154000		31.88	55.78	23.90	N	ON	9.7
0.154000	47.03		65.78	18.75	N	ON	9.7
0.200000		30.88	53.61	22.73	N	ON	9.7
0.200000	40.55		63.61	23.06	N	ON	9.7
0.388000		18.34	48.11	29.77	N	ON	9.7
0.388000	30.63		58.11	27.48	N	ON	9.7
3.568000		17.67	46.00	28.33	N	ON	9.8
3.568000	32.26		56.00	23.74	N	ON	9.8
14.408000		23.51	50.00	26.49	N	ON	9.8
14.408000	47.92		60.00	12.08	N	ON	9.8
15.784000		18.61	50.00	31.39	N	ON	9.8
15.784000	38.98		60.00	21.02	N	ON	9.8

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3.6 Antenna Requirements

3.6.1 Standard Applicable

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with

any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to

ensure that no antenna other than that furnished by the responsible party shall be used with the

device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to

the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The

manufacturer may design the unit so that the user can replace a broken antenna, but the use of a

standard antenna jack or electrical connector is prohibited.

3.6.2 Antenna Connected Construction

An Loop Antenna design is used.

3.6.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi.

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## 4 List of Measuring Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn- CT0001143-1216	May. 19,20	May. 18,23
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 05,21	Mar. 04,22
Test Software	E3	V 9.160323	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,21	Apr. 21,22
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Loop Antenna	SCHWARZBEC K	FMZB1519B	00173	Sep. 04,21	Sep. 05,22

**NOTE:** 1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

- 2. The test was performed in 3m Chamber.
- 3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

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## 5 Uncertainty of Evaluation

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.42dB
Radiated emission	30MHz ~ 1GMHz	2.50dB
	1GHz ~ 18GHz	3.51dB
	18GHz ~ 40GHz	3.96dB

MEASUREMENT	UNCERTAINTY
Occupied Channel Bandwidth	±196.4Hz
RF output power, conducted	±2.31dB
Power density, conducted	±2.31dB

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

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