



# **EMC TEST REPORT**

Applicant:	Fibocom Wireless Inc.
Address:	1101,Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen , China

Manufacturer or Supplier:	Fibocom Wireless Inc.
Address:	1101,Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen , China
Product:	LTE Module
Brand Name:	Fibocom
Model Name:	SC206-NA
FCC ID:	ZMOSC206NA
Date of tests:	Apr. 11, 2025 - May. 14, 2025

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

FCC Part 15, Subpart B, Class A
 FCC Part 15, Subpart B, Class B
 ANSI C63.4:2014

CONCLUSION: The submitted sample was found to <u>COMPLY</u> with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department Approved by Peibo Sun Manager / Mobile Department

Vanuen

Sim fei bo

Date: May. 14, 2025

Date: May. 14, 2025

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/aboutus/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot form which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall beperifically address the issue you wish to raise. A failure to raise set, use within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Huarui 7layers High Technology (Suzhou) Co., Ltd.



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# **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED	
PSZ-QSZ2504020109EM01	Original release	May. 14, 2025	

## 1 GENERAL INFORMATION

## **1.1 GENERAL DESCRIPTION OF EUT**

PRODUCT*	LTE Module			
BRAND NAME*	Fibocom	Fibocom		
MODEL NAME*	SC206-NA			
NOMINAL VOLTAGE*	3.8Vdc			
	BT_LE	GFSK		
MODULATION	Bluetooth	GFSK, π/4-DQPSK, 8DPSK		
TYPE*	WLAN	DSSS, OFDM		
	LTE	QPSK/16QAM/64QAM		
	Bluetooth/BT_LE	2402MHz ~ 2480MHz		
	WLAN	2412 ~ 2462MHz for 11b/g/n(HT20/40) 5180 ~ 5240MHz, 5260 ~ 5320 MHz, 5500 ~ 5720MHz, 5745 ~ 5825 MHz for 11a/ n(HT20)/ n(HT40) / ac(VHT80)		
OPERATING FREQUENCY*	LTE	1850.7MHz ~ 1909.3MHz       (FOR LTE Band2)         1710.7MHz ~ 1754.3MHz       (FOR LTE Band4)         824.7MHz ~ 848.3MHz       (FOR LTE Band5)         2502.5MHz ~ 2567.5MHz       (FOR LTE Band7)         699.7MHz ~ 715.3MHz       (FOR LTE Band12)         779.5MHz ~ 784.5MHz       (FOR LTE Band13)         706.5MHz ~ 713.5MHz       (FOR LTE Band17)         1850.7MHz ~ 1914.3MHz       (FOR LTE Band25)         814.7MHz ~ 848.3MHz       (FOR LTE Band26)         2498.5MHz ~ 2687.5MHz       (FOR LTE Band41)         1710.7MHz ~ 1779.3MHz       (FOR LTE Band66)         665.5MHz ~ 695.5MHz       (FOR LTE Band71)		
HW VERSION*	V1.0			
SW VERSION*	SC206-U6.400.002			
I/O PORTS*	Refer to user's manual			
CABLE SUPPLIED*	N/A			
ACCESSORY DEVICES*	NA			

#### NOTE:

1. \*Since the above data and/or information is provided by the client relevant results or

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conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.

- 2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in the test report.

## 1.2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart B					
Standard Section	Result	Test lab*			
500 D-445	Conducted Test	Compliance	А		
FCC Part 15, Subpart B, Class B ANSI C63.4:2014	Radiated Emission Test (30MHz ~ 1GHz)	Compliance	A		
ANGI 003.4.2014	Radiated Emission Test (Above 1GHz)	Compliance	А		

### \*Test Lab Information Reference

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

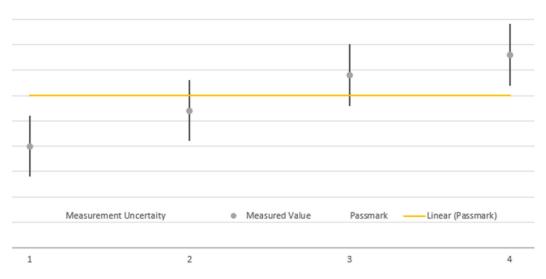


## **1.3 MEASUREMENT UNCERTAINTY**

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

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz ~ 30MHz	±2.70dB
	30MHz~1GHz	±4.98dB
De diste d'ensis sie ne	1GHz ~6GHz	±4.70dB
Radiated emissions	6GHz ~18GHz	±4.60dB
	18GHz ~40GHz	±4.12dB



The verdicts in this test report are given according the above diagram:

	1 3	3 3	
Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed
at means	the laboratory applies as decisi	ion rule (see ISO/IEC 17025.2017)	the so-called shared

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

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(Suzhou) Co., Ltd.	District, Suzhou City, Anhui Province, China	



# 1.4 DESCRIPTION OF TEST MODES

Test Mode	Test Condition		
	Radiated emission test		
1	LTE B5 Idle + SIM + DC 3.8V		
2	LTE B12 Idle + SIM + DC 3.8V		
3	LTE B13 Idle + SIM + DC 3.8V		
4	LTE B17 Idle + SIM + DC 3.8V		
5	LTE B26 Idle + SIM + DC 3.8V		
6	LTE B71 Idle + SIM + DC 3.8V		

Test Mode	Test Condition			
	Conducted emission test			
1	LTE B5 Idle + SIM + DC 3.8V			
2	LTE B12 Idle + SIM + DC 3.8V			
3	LTE B13 Idle + SIM + DC 3.8V			
4	LTE B17 Idle + SIM + DC 3.8V			
5	LTE B26 Idle + SIM + DC 3.8V			
6	LTE B71 Idle + SIM + DC 3.8V			
	For radiated emission test, test mode 2 was the verification case and only this mode was presented in this report			

2. For conducted emission test, test mode 1 was the verification case and only this mode was presented in this report



#### UREAU VERITAS 1.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

FOR All TESTS

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	Thinkpad E14	SL10W47313	N/A
2	Micro SD	SAM SUNG	N/A	N/A	N/A
3	DC Source	HYELEC	HY3010B	551016	N/A

NO	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable, 1.0m;

## 2.1.1 CONDUCTED EMISSION MEASUREMENT

## 2.1.2 IMITS OF CONDUCTED EMISSION MEASUREMENT TEST STANDARD: FCC Part 15, Subpart B (Section: 15.107 a CLASS B)

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)			
	Quasi-peak	Average		
0.15 ~ 0.5	66 to 56	56 to 46		
0.5 ~ 5	56	46		
5 ~ 30	60	50		

## TEST STANDARD: FCC Part 15, Subpart B (Section: 15.107 b CLASS A)

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)			
	Quasi-peak	Average		
0.15 ~ 0.5	79	66		
0.5 ~ 30	73	60		

**NOTE**: 1.The lower limit shall apply at the transition frequencies.

- 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
- 3. All emanations from a class A/B digital device or system, including any network of conductors
- and apparatus connected thereto, shall not exceed the level of field strengths specified above.

## **2.1.3 TEST INSTRUMENTS**

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
WIDEBANDRADIO COMMUNICATION TESTER	Rohde&Schwarz	CMW500	169399	Jun.19,24	Jun.18,26
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Mar.28,24	Mar.27,26
ELEKTRA test software	Rohde&Schwarz	ELEKTRA	NA	N/A	N/A
LISN network	Rohde&Schwarz	ENV216	102640	Mar.28,24	Mar.27,26
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.27,24	Apr.26,25
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.26,25	Apr.25,26
CABLE	Rohde&Schwarz	W601	N/A	Apr.27,24	Apr.26,25
CABLE	Rohde&Schwarz	W601	N/A	Apr.26,25	Apr.25,26

**NOTE:** 1. The test was performed in CE shielded room.

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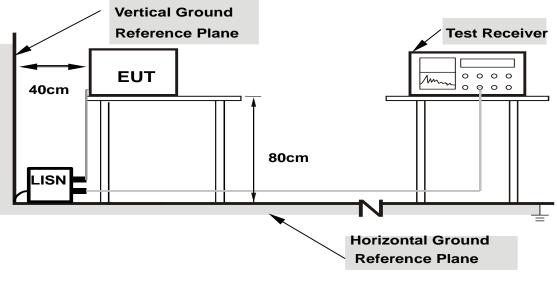
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30MHz was searched. Emission levels under (Limit 20dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

## 2.1.4 DEVIATION FROM TEST STANDARD

No deviation.





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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

# 2.1.6 EUT OPERATING CONDITIONS

- a. Turned on the power and connected of all equipment.
- b. EUT was operated according to the use type described in the manufacturer's specifications or the user's manual.



## 2.1.7 TEST RESULTS

TEST VOLTAGE DC				DC 3.8V			tor Func ution Ba	Quasi-Peak (QP) / Average (AV), 9 kHz			
ENVIRONMENTAL CONDITIONS			26deg. C, 51%RH			TEST	ED BY	Hanwen Xu			
Rg	Frequency [MHz]		Level µV]	QPK Limit [dBµV]	QPK Margin [dB]	CAV Level [dBµV]	CAV: AVG Limit [dBµV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.182	51	.72	64.42	12.70	47.95	54.42	6.47	12.21	L1	9.000
1	0.420	23	.94	57.45	33.51	23.32	47.45	24.13	11.76	L1	9.000
1	1.680	13	.10	56.00	42.90	10.24	46.00	35.76	11.75	L1	9.000
1	5.033	16	.29	60.00	43.71	13.78	50.00	36.22	11.79	L1	9.000
1	14.262	35	.40	60.00	24.60	34.71	50.00	15.29	11.84	L1	9.000
1	26.840	27	.33	60.00	32.67	23.02	50.00	26.98	11.90	L1	9.000
RFM	ARKS:										

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- The emission levels of other frequencies were very low against the limit. 2.
- 3. Margin value = Limit value- Emission level



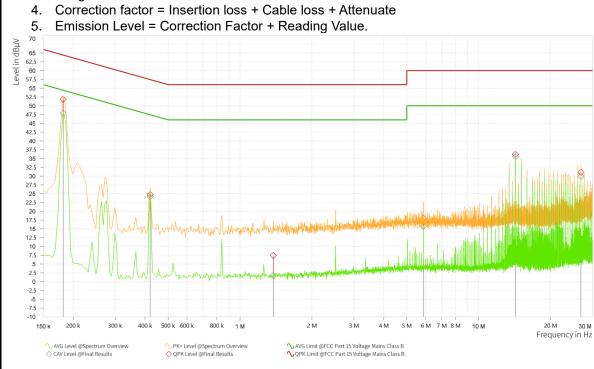
Correction factor = Insertion loss + Cable loss + Attenuate 4.



TEST VOLTAGE DC 3.8V				FUN RES	ECTOR CTION & OLUTION DWIDTH		Quasi-Peak (QP) / Average (AV), 9 kHZ					
	IVIRONMENTAL         26deg. C, 51%RH         TESTED BY         Hanwen X				Hanwen X	u						
Rg	Frequency [MHz]		ί Level 3μV]	QPK Limit [dBµV]	QPK Margin [dB]		/ Level BµV]	CAV: AVG Limit [dBµV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.182	51	1.85	64.42	12.57	4	7.87	54.42	6.55	12.23	Ν	9.000
1	0.420	24	4.77	57.45	32.68	2	4.14	47.45	23.31	12.81	Ν	9.000
1	1.379	7	.44	56.00	48.56	1	.70	46.00	44.30	12.74	Ν	9.000
1	5.874	17	7.99	60.00	42.01	1	5.70	50.00	34.30	12.77	Ν	9.000
1	14.262	36	6.20	60.00	23.80	3	5.52	50.00	14.48	12.82	Ν	9.000
1	26.844	31	1.08	60.00	28.92	2	9.94	50.00	20.06	12.88	Ν	9.000

#### **REMARKS:**

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Limit value- Emission level



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## 2.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

## **TEST STANDARD: FCC Part 15, Subpart B (Section: 15.109)**

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

	Radiated Emissions Limits at 3 meters (dBµV/m)									
Frequencies (MHz)	FCC 15B Class B									
30-88	49	40								
88-216	53.5	43.5								
216-960	56	46								
960-1000	59.5	54								
Above 1000	Avg: 59.5 Peak: 79.5	Avg: 54 Peak: 74								

### Frequency Range (For unintentional radiators)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40GHz, whichever is lower

- **NOTE:** 1. The lower limit shall apply at the transition frequencies.
  - 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
  - 3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
  - 4. QP detector shall be applied if not specified.



BUREAU VERITAS 2.2.2 TEST INSTRUMENTS

#### Equipment Manufacturer Model No. Serial No. Last Cal. Next Cal. WIDEBANDRADIO COMMUNICATION Rohde&Schwarz CMW500 169399 Jun.19,24 Jun.18,26 TESTER HRSW-SZ-3m Semi-anechoic TDK 9m\*6m\*6m EMC-Nov.24,22 Nov.23,25 Chamber 02Chamber Bilog Antenna SCHWARZBECK VULB 9163 1264 Dec.26,23 Dec.25,25 EMI Test Receiver R&S ESW44 101973 Mar.28,24 Mar.27,26 Measurement Software R&S ELEKTRA N/A N/A N/A Tonscend 6DB attenuator Technology Co., N/A 23062787 N/A N/A Ltd Pre-Amplifier R&S SCU08F1 101028 Jan.22,24 Jan.21,26 R&S Apr.26,25 CABLE W13.01 N/A Apr.27,24 CABLE R&S W13.01 N/A Apr.26,25 Apr.25,26 Apr.<u>27,</u>24 CABLE N/A R&S W13.02 Apr.26,25 N/A CABLE R&S W13.02 Apr.26,25 Apr.25,26 W12.14 CABLE R&S N/A Apr.27,24 Apr.26,25 CABLE R&S W12.14 N/A Apr.26,25 Apr.25,26

#### Frequency range below 1GHz

#### Frequency range above 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
WIDEBANDRADIO COMMUNICATION TESTER	Rohde&Schwarz	CMW500	169399	Jun.19,24	Jun.18,26
3m Fully-anechoic Chamber	ток	9m*6m*6m	HRSW-SZ- EMC- 01Chamber	Nov.24,22	Nov.23,25
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,23	Aug.21,25
EMI Test Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
Measurement Software	R&S	ELEKTRA	N/A	N/A	N/A
CABLE	R&S	W13.01	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W13.01	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W13.02	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.26,25	Apr.25,26

**NOTE:** 1. The calibration interval of the above test instruments is 12/24/36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Chamber.



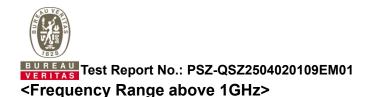
## <Frequency Range below 1GHz>

The basic test procedure was in accordance with ANSI C63.4:2014 (section 12).

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from 1 meter to 4 meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.

#### NOTE:

- 1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) (if the raw value not contains the amplifier);
- 4. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) Amplifier Gain(dB) (if the raw value contains the amplifier).
- 5. Margin value = Limit value -Emission level.



- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. The bore sight should be used during the test above 1GHz.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz

#### NOTE:

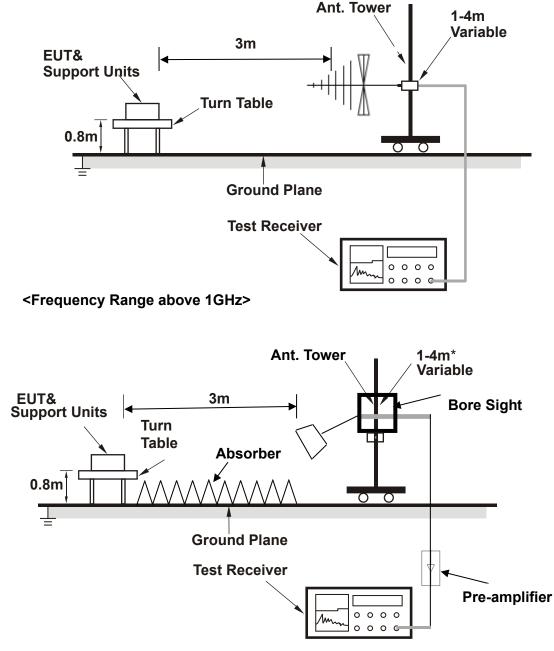
- 1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth of test receiver/spectrum analyzer is 1Hz for Average detection (AV) at frequency above 1GHz.
- 3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.
- 4. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) (if the raw value not contains the amplifier);
- 6. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) Amplifier Gain(dB) (if the raw value contains the amplifier)
- 7. Margin value = Limit value- Emission level.

## 2.2.4 DEVIATION FROM TEST STANDARD

No deviation.



### <Frequency Range below 1GHz>



**Note**: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB bandwidth both, refer to section 7.3 of CISPR 16-2-3.

# 2.2.6 EUT OPERATING CONDITIONS

Same as item 2.1.6.

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# 2.2.7 TEST RESULTS

TEST VOLTAGE	DC 3.8V	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120 kHz
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BV [kHz]	
1	34.581	28.26	40.00	11.74	-11.68	н	299.3	1.00	120.000	
1	51.825	24.47	40.00	15.53	-9.00	н	359.1	1.00	120.000	
1	76.129	15.70	40.00	24.30	-15.84	н	147.5	1.00	120.000	
1	149.472	30.90	43.50	12.60	-14.04	н	71	1.00	120.000	
1	251.322	33.09	46.00	12.91	-7.53	н	71	1.00	120.000	
1	896.533	26.34	46.00	19.66	2.31	н	222.8	1.00	120.000	
55 50	4. Marg				ission lev	gainst the l el.				
50 47.5 45 42.5 40 37.5 35	4. Marg									
50 47.5 45 42.5 40 37.5 32.5 30 27.5 25 22.5	4. Marg									
50 47.5 45 42.5 40 37.5 35 32.5 32.5 32.5 22.5 22.5 20 17.5 15 12.5 10 7.5	4. Marg									
50 47.5 45 40 37.5 35 32.5 30 27.5 25 22.5 22.5 15 12.5 12.5 10 7.5 5 5 2.5 0 0 0 -2.5	4. Marg									
50 47.5 42.5 30 37.5 32.5 30 27.5 25 22.5 20 17.5 10 7.5 5 5 2.5 2.5 0 -2.5 -7.5 -7.5 -7.5 -10 -12.5	4. Marg									
- 50 - 47.5 45 42.5 40 37.5 25 25 25 20 27.5 20 27.5 10 7.5 10 7.5 5 5 5 - 5 - 5 - 5 - - - - - - - - - - - - -	4. Marg									
$\begin{array}{c} 50\\ 47.5\\ 42.5\\ 42.5\\ 42.5\\ 42.5\\ 42.5\\ 42.5\\ 35\\ 32.5\\ 32.5\\ 20\\ 22.5\\ 20\\ 22.5\\ 20\\ 22.5\\ 10\\ 12.5\\ 5\\ 12.5\\ 10\\ 12.5\\ 5\\ -5\\ -5\\ -5\\ -10\\ 5\\ -22.5\\ -20\\ -22.5\\ -27.5\\ -30\\ 0\\ 22.5\\ -27.5\\ -30\\ 22.5\\ -32$	4. Marg									
47.5         50           42.5         45           45.7         45           30.7         25           22.5         20           20.7         15           10.7         7.5	4. Marg									

♦ QPK Level @Final Results



TEST VOLTAGE	DC 3.8V	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120 kHz
TESTED BY	Hanwen Xu		

g	Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. B [kHz]
1	33.341	30.05	40.00	9.95	-13.78	v	359.1	1.00	120.00
1	49.616	29.11	40.00	10.89	-9.67	v	138.4	2.00	120.00
1	83.134	31.94	40.00	8.06	-14.70	v	356.7	1.00	120.00
1	149.526	37.84	43.50	5.66	-13.64	v	299.3	1.00	120.00
	251.429	31.82	46.00	14.18	-8.47	v	359.1	1.00	120.00
	615.395	22.60	46.00	23.40	-1.99	v	290.2	2.00	120.00
55 50 47.5 45	4. Marg				very low a nission lev	gainst the l el.	imit.		
50 47.5 45 42.5 40 37.5	3. The 4. Marg						imit.		
50 47.5 45 42.5 40 37.5 35 32.5 30 27.5	3. The 4. Marg						imit.		
50 47.5 45 42.5 37.5 32.5 30 27.5 25 22.5 20	3. The 4. Marg						imit.		
50 47.5 45 42.5 37.5 32.5 30 27.5 25 22.5 20 17.5 15 12.5	3. The 4. Marg						imit.		
50 47.5 45 42.5 37.5 32.5 30 27.5 25 22.5 20 17.5 12.5 12.5 12.5 5 2.5	3. The 4. Marg						imit.		
50 47.5 42.5 40 37.5 35 32.5 25 20 17.5 12.5 10 7.5 5 2.5 0 0.5 -2.5 -5	3. The 4. Marg						imit.		
50 47.5 45 42.5 40 37.5 325 32.5 30 27.5 5 20 17.5 5 20 17.5 5 20 17.5 5 5 2.5 5 0 0 -2.5 5 -7.5 -10 -12.5	3. The 4. Marg						imit.		
50 47.5 45 42.5 30 37.5 5 20 17.5 5 20 17.5 5 5 2.5 0 0 -2.5 -7.5 -7.5 -7.5 -10 0 -2.5 -7.5 -7.5 -7.5 -7.5 -7.5 -7.5 -7.5 -7	3. The 4. Marg						imit.		
$\begin{array}{c} 50\\ 47.5\\ 45\\ 5\\ 40\\ 37.5\\ 325\\ 525\\ 22.5\\ 20\\ 7.5\\ 12.5\\ 25\\ 20\\ 7.5\\ 10\\ 7.5\\ 5\\ 5\\ 5\\ -7.5\\ -10\\ -12.5\\ -20\\ -22.5\\ -27.5\\ -27.5\\ -30\\ -30\\ -30\\ -30\\ -2.5\\ -27.5\\ -30\\ -30\\ -30\\ -30\\ -30\\ -30\\ -30\\ -30$	3. The 4. Marg						imit.		
$\begin{array}{c} 50\\ 47.5\\ 45.5\\ 40.5\\ 37.5\\ 22.5\\ 20\\ 27.5\\ 25\\ 20\\ 17.5\\ 12.5\\ 10\\ 7.5\\ 5\\ 2.5\\ 5\\ -7.5\\ -10\\ -12.5\\ -17.5\\ -10\\ -22.5\\ -30\\ -22.5\\ -30\\ -32.5\\ -37.5\\ -37.5\end{array}$	3. The 4. Marg						imit.		
50 47.5 45 32.5 32.5 32.5 32.5 22.5 20 17.5 12.5 20 17.5 12.5 20 17.5 5 2.5 0 2.5 0 2.5 5 -7.5 -17.5 -17.5 -20 0 2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5	3. The 4. Marg						imit.		



TEST VOLTAGE	DC 3.8V	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	1,982.000	42.61	74.00	31.39	30.59	54.00	23.41	5.54	н	170.2	1.00
1	3,574.000	46.18	74.00	27.82	32.94	54.00	21.06	8.74	н	53.5	2.00
1	7,421.500	50.98	74.00	23.02	38.91	54.00	15.09	15.81	н	1	2.00
	is m 2. Neg 3. Freq 40G 20dt 4. Only	easured ative sig luency r Hz, whic b below	l corresp in (-) in t ange sc chever is the limit	oonding the mar anned: s lower. so the	to relev gin colu 1GHz to For free data not	rant limit mn sign 5 5th hai quency a t recorde	and red ify level rmonic d above 1 ed in the	corded in s below of the his 8GHz, t e sheet.	quasi-pea n the data the limit. ghest free he emiss or are rep	a table. quency o ion was	or
57	-							φ			
52 52	.5 – i0 –										
52 52 5 47 4	.5 - .0 - .5 - .5 -		~			φ					
52 52 47 4 42 42	.5 - .5 - .5 - .5 - .5 - .5 - .0 -		P		(	Ρ		Φ			
52 52 47 42 42 37 3	.5 - .5 -		Ŷ			<b>φ</b>		•			
52 52 47 4 42 4 37	.5 - .5 -		P			φ 		0			
52 52 47 42 42 37 32 32 32 32	.5		<b>P</b>			φ 					
52 52 47 42 42 37 32 32 32 27 2	.5		<b>P</b>			<ul> <li>₽</li> <li>1</li> <li>1</li></ul>					
5 52 57 47 42 42 43 33 27 27 22 22 22 22 22	.5		P			φ					
52 52 47 4 42 47 33 27 22 22 22 22 17 1 12 12 1	.5		P								
52 52 47 4 42 37 32 27 22 22 22 22 17 1 12 12 7	.5         -           00         -           05         -           16         -           17         -           18         -           19         -           10         -           10         -           10         -           10         -           10         -           10         -           10         -										



TEST VOLTAGE	DC 3.8V	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	23dea C 70 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Hanwen Xu		

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M AVG Margin [dB] Antenna PK+ PK+ Limit [dBµV/m] Frequency [MHz] PK+ Level [dBµV/m] AVG Level AVG Limit Correction Azimuth Rg Margin [dB] Polarization Height [m] [dBµV/m] [dBµV/m] [dB] [deg] 43.24 74.00 v 2.027.000 30.76 30.74 54.00 23.26 5.78 359 2.00 1 3.858.500 47.15 74.00 33.95 9.72 v 359 26.85 54.00 20.05 2.00 1 7,463.500 51.88 15.81 v 1 74.00 22.12 39.57 54.00 14.43 355.1 2.00 **REMARKS:** 1. Peak detector quick scan is shown on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table. 2. Negative sign (-) in the margin column signify levels below the limit. 3. Frequency range scanned: 1GHz to 5th harmonic of the highest frequency or 40GHz, whichever is lower. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet. 4. Only emissions significantly above the equipment noise floor are reported. 80 -evel in dBµV/m 75 72.5 70 67.5 65 -62.5 -60 57.5 55 52.5 50 47.5 45 42.5 40 37.5 35 32.5 30 27.5 25 22.5 20 17.5 15 12.5 10 7.5 2.5 0 зĠ 1 G 2 G 4 G 5 G 6 G 7 G 8 G 9 G 10 G 18 G Frequency in Hz O PK+ Level @CriticalPoint AVG Limit @FCC\_RE\_HF\_LIMIT\_\_PK+Limit @FCC\_RE\_HF\_LIMIT ○ AVG Level @CriticalPoint



## 3 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

---END----