



FCC Test Report

Report No: HX230905R003

Issued for

Applicant:	Skylab M&C Technology Co., Ltd.
Address:	6/F,Building 9,Lijincheng Scientific&Technical park,Gong ye East Road, Longhua District, Shenzhen, 518109 China
Product Name:	Wifi module
Model Name:	WG221BL
FCC ID:	2ACOE-WG221BL
Issued By: Shenzhen Huaxin Information Technology Service Co., Ltd Add: 101, R & D Building, No.3 guansheng 4th Road, Luhua Community, Guanhu Street, Longhua District, Shenzhen, Guangdong, China	

TABLE OF CONTENTS

Description	Page
1. Summary Of Standards And Results	5
1.1. Description of Standards and Results	5
2. General Information	6
2.1. Description of Device (EUT)	6
2.2. Accessories of Device (EUT)	7
2.3. Tested Supporting System Details	7
2.4. Block Diagram of connection between EUT and simulators	7
2.5. Test Mode Description	7
2.6. Test Conditions	7
2.7. Test Facility	8
2.8. Measurement Uncertainty	8
2.9. Test Equipment List	9
3. Spurious Emission	11
3.1. Test Limits	11
3.2. Test Procedure	12
3.3. Test Setup	12
3.4. Test Results	14
4. Power Line Conducted Emission	19
4.1. Test Limits	19
4.2. Test Procedure	19
4.3. Test Setup	19
4.4. Test Results	20
5. Conducted Maximum Output Power	22
5.1. Test limits	22
5.2. Test Procedure	22
5.3. Test Setup	22
5.4. Test Results	22
6. Peak Power Spectral Density	23
6.1. Test limits	23
6.2. Test Procedure	23
6.3. Test Setup	23
6.4. Test Results	23
7. Bandwidth	24
7.1. Test limits	24
7.2. Test Procedure	24
7.3. Test Setup	24
7.4. Test Results	24
8. Band Edge Check	25
8.1. Test limits	25
8.2. Test Procedure	25
8.3. Test Setup	25
8.4. Test Results	25
9. Antenna Requirement	28
9.1. Standard Requirement	28
9.2. Antenna Connected Construction	28
9.3. Results	28
10. Test Setup Photo	29
11. Photos of EUT	30

TEST REPORT DECLARATION

Applicant : Skylab M&C Technology Co., Ltd.
Address : 6/F,Building 9,Lijincheng Scientific&Technical park,Gongye East Road,
Longhua District, Shenzhen, 518109 China
Manufacturer : Skylab M&C Technology Co., Ltd.
Address : 6/F,Building 9,Lijincheng Scientific&Technical park,Gongye East Road,
Longhua District, Shenzhen, 518109 China
EUT Description : /
(A) Model No. : WG221BL
(B) Trademark : N/A

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247

The device described above is tested by Shenzhen Huaxin Information Technology Service Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Huaxin Information Technology Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Huaxin Information Technology Service Co., Ltd.

Tested by (name + signature).....: Eason Tan
Project Engineer

Eason Tan

Approved by (name + signature).....: Michael Wu
Project Manager

Michael Wu

Date of issue.....: Sept 05th, 2023



Revision History

Revision	Issue Date	Revisions	Revised By
V0	Sept 05th, 2023	Initial released Issue	Eason Tan

1. Summary Of Standards And Results

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Conducted Emission	FCC Part 15: 15.207	P
6dB Bandwidth	FCC PART 15:15.247(a)(2)	P
Output Power	FCC Part 15: 15.247(b)(3)	P
Radiated Spurious Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d)	P
Conducted Spurious & Band Edge Emission	FCC Part 15: 15.247(d)	P
Power Spectral Density	FCC PART 15:15.247(e)	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d)	P
Antenna Requirement	FCC Part 15: 15.203	P
Note: 1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable. 4. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.		

2. General Information

2.1. Description of Device (EUT)

Description/PMN : Wifi module

Model
Number/HVIN(s) : WG221BL
Diff. : /

Trademark : N/A

Test Voltage : DC 3.3V

Radio Technology : GFSK for Bluetooth (BT LE)

Operation
frequency : 2402-2480MHz

Channel No. : 40 channels for Bluetooth (BT LE)

Channel Separation : 2MHz

Modulation : GFSK for Bluetooth (BT LE)

Antenna Type : External antenna, Maximum Gain is 3.81dBi. (Antenna information is provided by applicant.)

Software Version : V1.0

Hardware
version/FVIN : V1.0

Remark:

1. The worst-case simultaneous transmission configuration was evaluated with no non-compliance found. Results in this report are only for Bluetooth BLE function, and there is no other transmitter involved.
2. this report only shows the worst data.

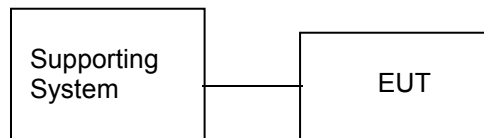
2.2. Accessories of Device (EUT)

Accessories1 : /
 Manufacturer : /
 Model : /
 INPUT : /
 OUTPUT : /

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDOC
1.	Notebook PC	Lenovo	ThinkPad E460	N/A	SDOC

2.4. Block Diagram of connection between EUT and simulators



2.5. Test Mode Description

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
GFSK	Low : CH0	2402
	Middle: CH19	2440
	High: CH39	2480

The test software “QRCT” was used to control EUT work in Continuous TX mode, and select test channel, wireless mode.

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	27℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7. Test Facility

Shenzhen Huaxin Information Technology Service Co., Ltd

101, R & D Building, No.3 guansheng 4th Road, Luhua Community, Guanhu Street, Longhua District, Shenzhen, Guangdong, China

FCC Test Firm Registration Number: 932271

Designation Number: CN1344

CAB ID : CN0147

2.8. Measurement Uncertainty

Item	MU	Remark
Conducted Emission (9K~0.15MHz)	2.18dB	
Conducted Emission (0.15M~30MHz)	2.17dB	
Radiation Emission ,3m (30MHz~1GHz)	4.45 dB	Polarize: V
	2.76 dB	Polarize: H
Radiation Emission, 3m (1GHz~6GHz)	4.02 dB	
Radiation Emission ,3m (6GHz~18GHz)	4.30 dB	
RF output power (conducted)	0.41 dB	
Power Spectral Density (conducted)	0.39 dB	
Spurious emissions (conducted)	0.59 dB	
Occupied Channel Bandwidth (conducted)	4.22%	

2.9. Test Equipment List

Equipment	Manufacture	Model No.	Firmware version	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	Mao Rui	9*6*6	N/A	N/A	2022.06.15	3Year
Spectrum analyzer	R&S	FSV40-N	V7.0-4-62-2	101795	2022.09.19	1Year
Spectrum analyzer	Agilent	N9020A	A.14.16	MY51280803	2023.04.15	1Year
Receiver	R&S	ESR7	5.812	102543	2022.10.20	1Year
Receiver	R&S	ESCI	N/A		2022.10.20	1Year
Bilog Antenna	Schwarzbeck	VULB 9168	N/A	01318	2022.06.19	2Year
Horn Antenna	A.H. Systems	SAS-571	N/A	915	2022.06.17	2Year
Active Loop Antenna	Schwarzbeck	FMZB 1519B	N/A	N/A		2Year
RF Cable	/	N/J-NJ-RG58(1G) 9m	N/A	RE1	2022.09.17	1Year
RF Cable	/	N/J-NJ-RG58(1G) 10m	N/A	RE2	2022.09.17	1Year
RF Cable	/	N/J-SMAAJ-406(18G) 9m	N/A	CE1	2022.09.17	1Year
Pre-amplifier	HP	8447D	N/A	1616A02061	2023.04.15	1Year
Pre-amplifier	Agilent	8449B	N/A	3008A00551	2023.04.15	1Year
L.I.S.N.#1	R&S	ESH3-Z5	N/A	894981/024	2023.03.28	1Year
L.I.S.N.#2	R&S	ENV216	N/A	101291	2023.03.28	1 Year
Horn Antenna	A.H. Systems	SAS-571	N/A	915	2022.06.17	2 Year
power amplifier	Micotop	MPA-80-1000-250	N/A	MPA2206215	2023.04.15	1 Year
Power Meter	Keysight	E9300A	N/A	MY45105087	2023.04.15	1 Year
Power Sensor	Keysight	E9300A	N/A	MY55060025	2023.04.15	1 Year
power amplifier	Weihuang	WHTH-1000-40-880	N/A	MPA2206216	2023.04.15	1 Year
Switching Mode Power Supply	PinHong	PH-1110	N/A	20220423007	2023.04.15	1 Year
Adjustable attenuator	MWRFTest	N/A	N/A	/	/	/
10dB Attenuator	/	10dB	N/A	N/A	2022.09.17	1 Year
Temperature and humidity test chamber	Asprey	LX-150L	N/A	N/A	2023.04.2	1 Year

Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EMC-I	SKET	V1.4.0.1
CE	EMC-I	SKET	V1.4.0.1
RF-CE	RF Test Software	TACHOY	V2.0

3. Spurious Emission

3.1. Test Limits

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009-0.490	300	2400/F(KHz)	/
0.490-1.705	30	24000/F(KHz)	/
1.705-30	30	30	29.5
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	
Note 1: The peak limit is 20 dB higher than the average limit			
Note 2: Peak limit applies (AVG limit + 20 dB) as well as RSS-247 Section 5.5			

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

3.2. Test Procedure

The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1GHz.

The EUT was placed on a rotating 0.8 m high above ground for below 1GHz and 1.5m high for above1GHz testing, The table was rotated 360 degrees to determine the position of the highest radiation.

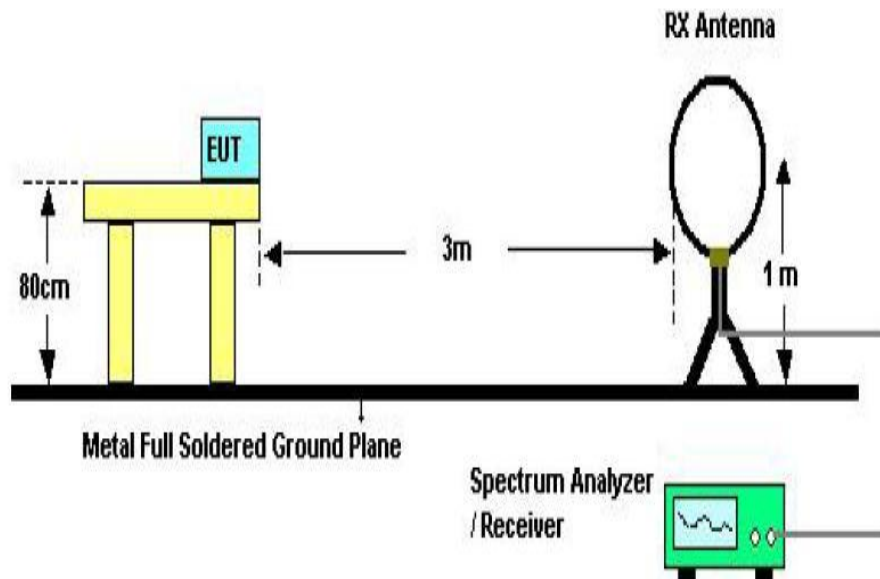
The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set of make measurement.

The initial step in collecting radiated emission data is a spectrum analyzer Peak detector mode pre-scanning the measurement frequency range. Significant Peaks are then marked. and then Quasi Peak Detector mode premeasured.

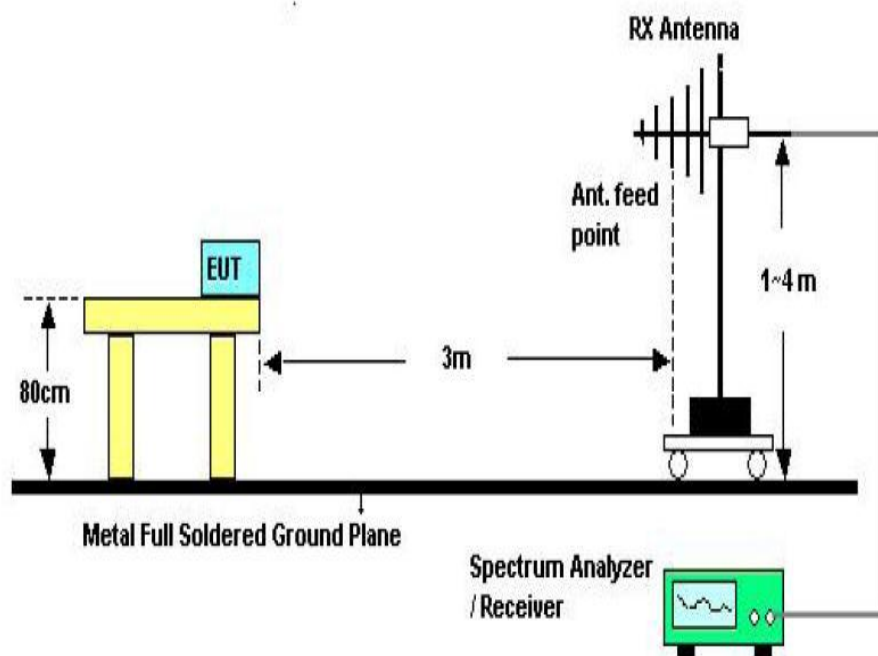
If Peak value comply with QP limit Below 1GHz, the EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.

For the actual test configuration, please see the test setup photo.

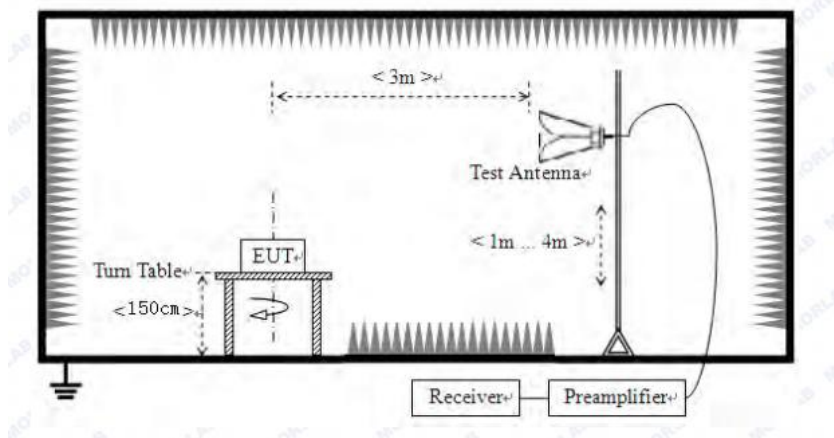
3.3. Test Setup



Below 30MHz Test Setup



Above 30MHz Test Setup



Above 1GHz Test Setup

3.4. Test Results

Test Condition

Continual Transmitting in maximum power.

9KHz~150KHz	RBW200Hz	VBW1KHz
150KHz~30MHz	RBW9KHz	VBW 30KHz
30MHZ~1GHz	RBW120KHz	VBW 300KHz
Above1GHz	RBW1MHz	VBW 3MHz

We have scanned from 9 kHz to the 10th harmonic of the EUT.

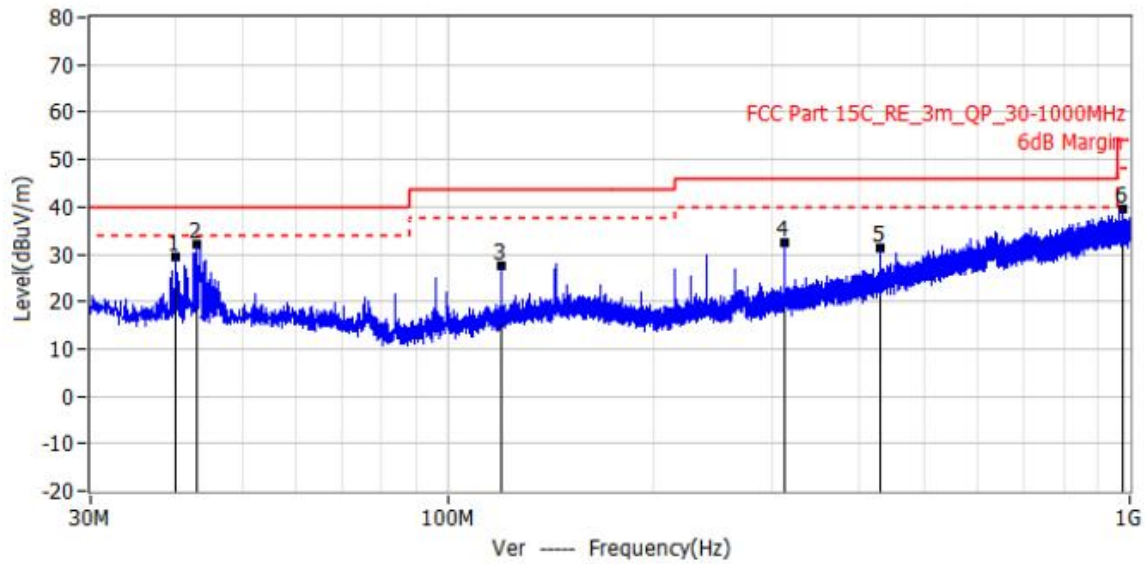
From 9KHz to 30MHz: Conclusion: PASS

Note: 1.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

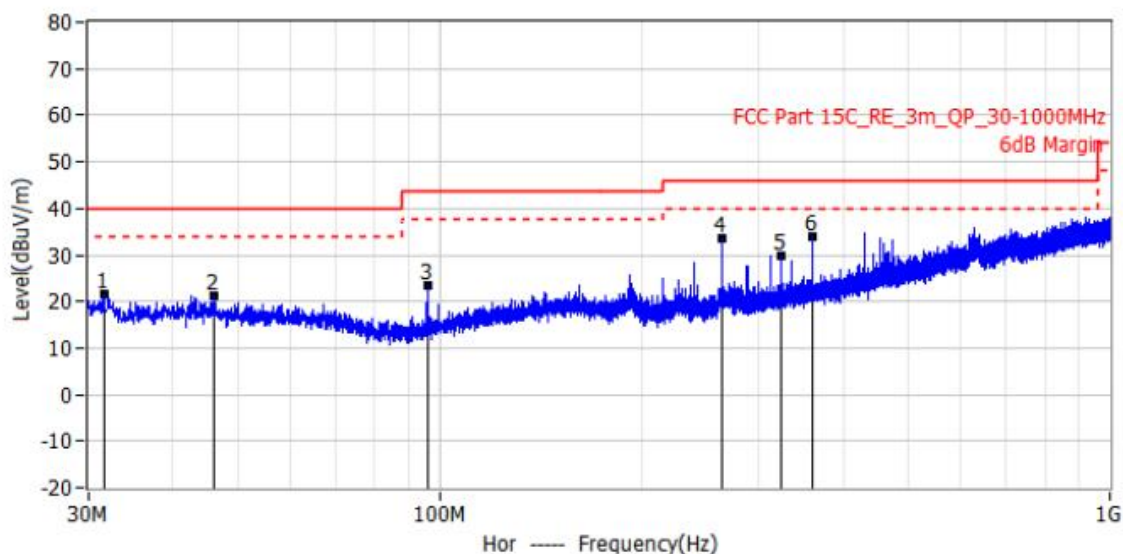
2.Only show the test data of the worst Channel in this report.

From 30MHz to 1000MHz: Conclusion: PASS

Vertical:



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Delta dB	Detector	Polar	Height cm	Angle deg
1*	40.020MHz	15.0	14.3	29.3	40.0	-10.7	QP	Ver	100.0	136.0
2*	42.900MHz	18.0	14.2	32.2	40.0	-7.8	QP	Ver	100.0	0.0
3*	119.880MHz	15.1	12.6	27.7	43.5	-15.8	QP	Ver	100.0	210.0
4*	311.760MHz	16.8	15.7	32.5	46.0	-13.5	QP	Ver	100.0	195.0
5*	431.640MHz	12.5	18.8	31.3	46.0	-14.7	QP	Ver	100.0	106.0
6*	977.940MHz	11.0	28.5	39.5	54.0	-14.5	QP	Ver	100.0	299.0

Horizontal:

No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Delta dB	Detector	Polar	Height cm	Angle deg
1*	31.680MHz	8.4	13.1	21.5	40.0	-18.5	QP	Hor	100.0	60.0
2*	46.080MHz	7.2	14.1	21.3	40.0	-18.7	QP	Hor	100.0	60.0
3*	95.880MHz	13.3	10.0	23.3	43.5	-20.2	QP	Hor	100.0	224.0
4*	263.820MHz	19.4	14.2	33.6	46.0	-12.4	QP	Hor	100.0	0.0
5*	323.760MHz	13.7	16.2	29.9	46.0	-16.1	QP	Hor	100.0	160.0
6*	359.760MHz	16.9	17.1	34.0	46.0	-12.0	QP	Hor	100.0	164.0

Notes: Above is below 1GHz test data. This report only shall the worst case mode for TX 2402MHz.

Test Mode: TX Low									
Freq (MHz)	Reading (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Remark
4804	44.22	V	33.95	10.18	34.26	54.09	74	-19.91	PK
4804	38.46	V	33.95	10.18	34.26	48.33	54	-5.67	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
4804	45.77	H	33.95	10.18	34.26	55.64	74	-18.36	PK
4804	37.89	H	33.95	10.18	34.26	47.76	54	-6.24	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
Test Mode: TX Mid									
4880	43.71	V	33.93	10.2	34.29	53.55	74	-20.45	PK
4880	33.40	V	33.93	10.2	34.29	43.24	54	-10.76	AV
7320	/	/	/	/	/	/	/	/	/
9760	/	/	/	/	/	/	/	/	/
4880	44.31	H	33.93	10.2	34.29	54.15	74	-19.85	PK
4880	34.28	H	33.93	10.2	34.29	44.12	54	-9.88	AV
7320	/	/	/	/	/	/	/	/	/
9760	/	/	/	/	/	/	/	/	/
Test Mode: TX High									
4960	45.15	V	33.98	10.22	34.25	55.10	74	-18.90	PK
4960	33.79	V	33.98	10.22	34.25	43.74	54	-10.26	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/
4960	44.87	H	33.98	10.22	34.25	54.82	74	-19.18	PK
4960	34.20	H	33.98	10.22	34.25	44.15	54	-9.85	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/

Note:

1, Level = Reading + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Conducted RF Spurious Emission

For the measurement records, refer to the appendix I.

4. Power Line Conducted Emission

4.1. Test Limits

Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

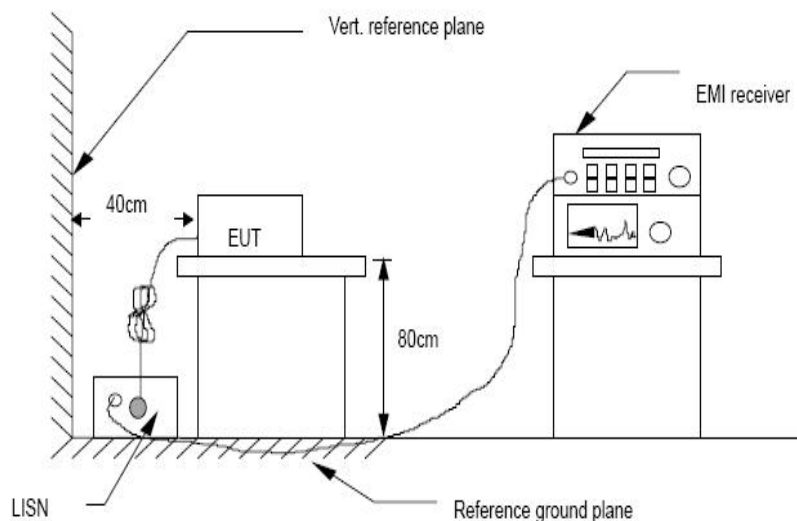
3. The limit decreases in line with the logarithm of the frequency in rang of 0.15 to 0.50 MHz.

4.2. Test Procedure

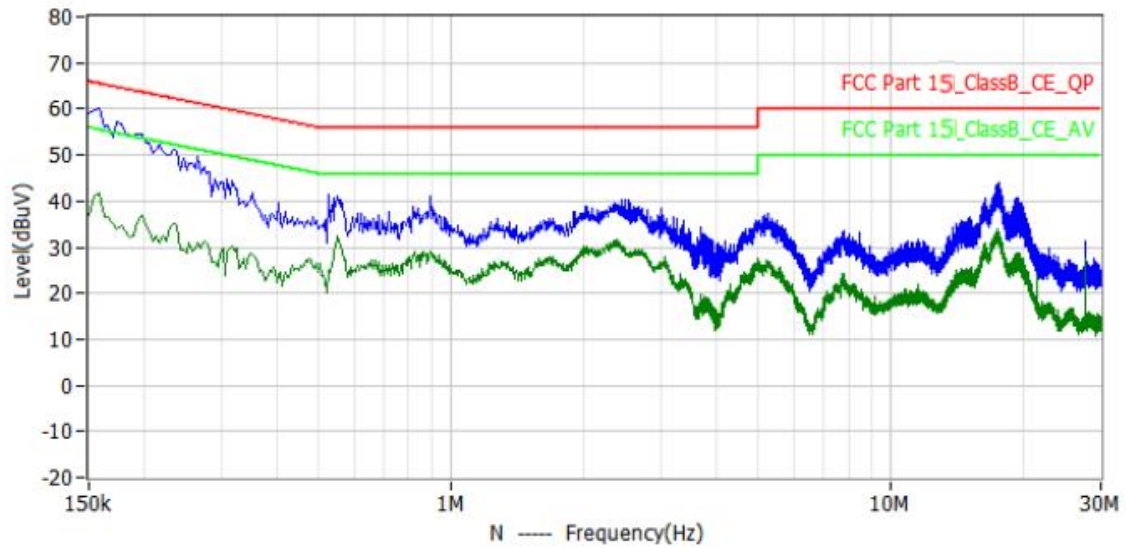
The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10:2013 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9 kHz.

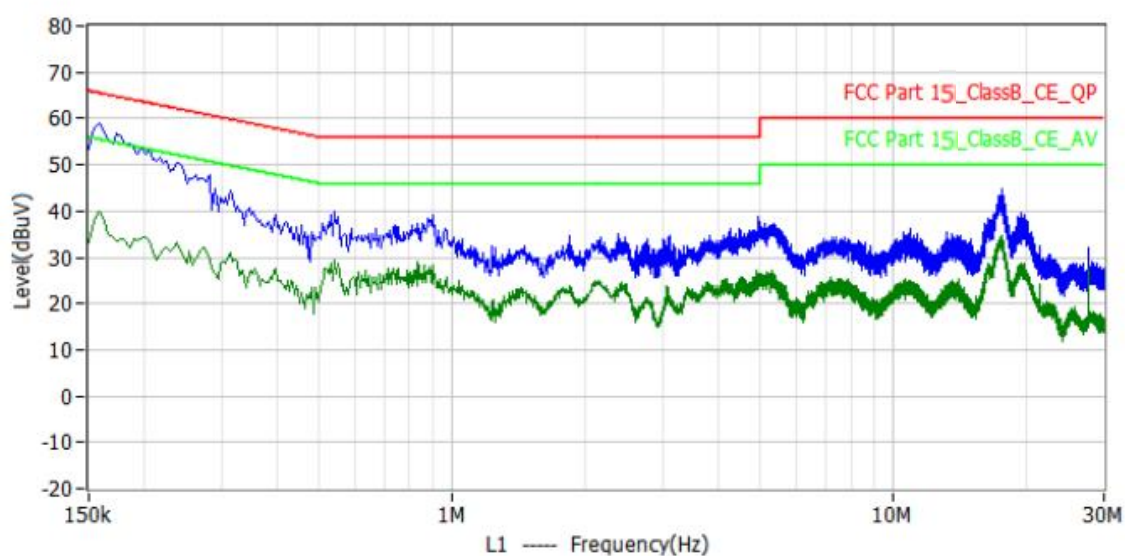
4.3. Test Setup



4.4. Test Results



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector	Polar
1*	158.000kHz	50.4	9.9	60.3	65.6	-5.3	QP	N
2*	526.000kHz	31.6	9.7	41.3	56.0	-14.7	QP	N
3*	2.478MHz	30.7	9.7	40.4	56.0	-15.6	QP	N
4*	17.634MHz	33.6	10.3	43.9	60.0	-16.1	QP	N
5*	8.458MHz	23.2	10.0	33.2	60.0	-26.8	QP	N
6*	27.646MHz	20.9	10.4	31.3	60.0	-28.7	QP	N
7*	550.000kHz	22.8	9.7	32.5	46.0	-13.5	AV	N
8*	158.000kHz	31.8	9.9	41.7	55.6	-13.8	AV	N
9*	1.998MHz	20.7	9.6	30.3	46.0	-15.7	AV	N
10*	17.526MHz	23.7	10.3	34.0	50.0	-16.0	AV	N
11*	4.966MHz	17.6	9.9	27.5	46.0	-18.5	AV	N
12*	7.790MHz	14.3	10.0	24.3	50.0	-25.7	AV	N



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector	Polar
1*	158.000kHz	49.3	9.6	58.9	65.6	-6.7	QP	L1
2*	282.000kHz	37.6	10.1	47.7	60.8	-13.0	QP	L1
3*	17.570MHz	34.5	10.2	44.7	60.0	-15.3	QP	L1
4*	538.000kHz	30.1	9.7	39.8	56.0	-16.2	QP	L1
5*	4.938MHz	28.8	9.8	38.6	56.0	-17.4	QP	L1
6*	1.850MHz	24.9	9.6	34.5	56.0	-21.5	QP	L1
7*	17.562MHz	24.4	10.2	34.6	50.0	-15.4	AV	L1
8*	158.000kHz	30.4	9.6	40.0	55.6	-15.6	AV	L1
9*	830.000kHz	19.4	9.8	29.2	46.0	-16.8	AV	L1
10*	4.910MHz	17.5	9.8	27.3	46.0	-18.7	AV	L1
11*	274.000kHz	21.9	10.0	31.9	51.0	-19.1	AV	L1
12*	27.646MHz	17.3	10.3	27.6	50.0	-22.4	AV	L1

5. Conducted Maximum Output Power

5.1. Test limits

Please refer section RSS-247 & 15.247.

5.2. Test Procedure

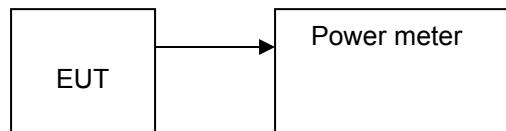
Details see the KDB558074 D01 Meas Guidance v05r02

5.2.1 Place the EUT on the table and set it in transmitting mode.

5.2.2 Measure out each mode and each bands AVG output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset.

5.3. Test Setup



5.4. Test Results

For the measurement records, refer to the appendix I.

6. Peak Power Spectral Density

6.1. Test limits

6.1.1 Please refer section RSS-247 & 15.247.

6.1.2 For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

6.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

6.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

6.2.1 Place the EUT on the table and set it in transmitting mode.

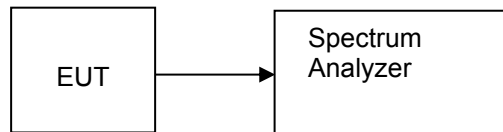
6.2.2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

6.2.3 Set the spectrum analyzer as RBW = 100kHz(Set the RBW to: $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$.), VBW = 300kHz(Set the $\text{VBW} \geq 3 \times \text{RBW}$), span $\geq 1.5 \times \text{DTS bandwidth}$., detail see the test plot.

6.2.4 Record the max reading.

6.2.5 Repeat the above procedure until the measurements for all frequencies are completed.

6.3. Test Setup



6.4. Test Results

For the measurement records, refer to the appendix I.

7. Bandwidth

7.1. Test limits

Please refer section RSS-247 & 15.247

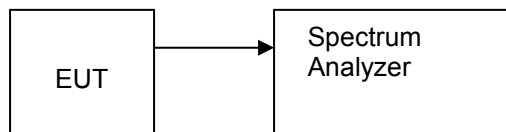
For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

7.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

- a) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.
- b) The test receiver set $RBW = 1-5\%BW$, $VBW \geq 3*RBW$, Sweep time set auto, detail see the test plot for 99% Bandwidth.
- c) The test receiver set $RBW = 100kHz$, $VBW \geq 3*RBW = 300kHz$, Sweep time set auto, detail see the test plot for 6dB Bandwidth.

7.3. Test Setup



7.4. Test Results

For the measurement records, refer to the appendix I.

8. Band Edge Check

8.1. Test limits

Please refer section RSS-GEN&15.247.

8.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

8.2.1 Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

8.2.2 Check the spurious emissions out of band.

8.2.3 RBW 1MHz ,VBW 3MHz ,peak detector for peak value , RBW 1MHz ,VBW 3MHz ,RMS detector for AV value.

8.3. Test Setup

Same as 3.3 above 1GHz.

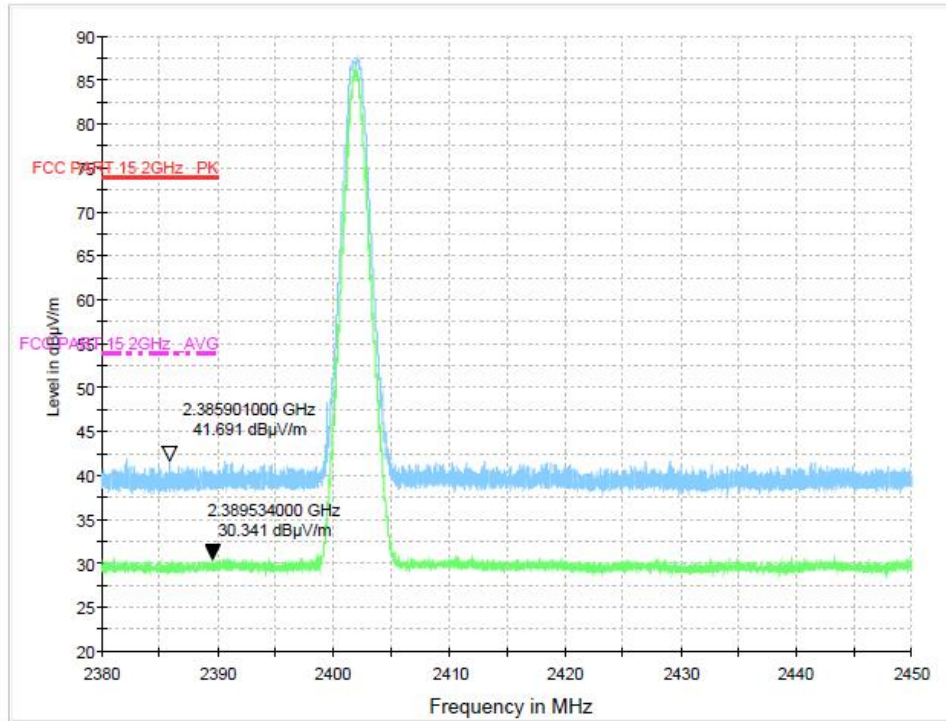
8.4. Test Results

PASS. (See below detailed test data)

Radiated Method:

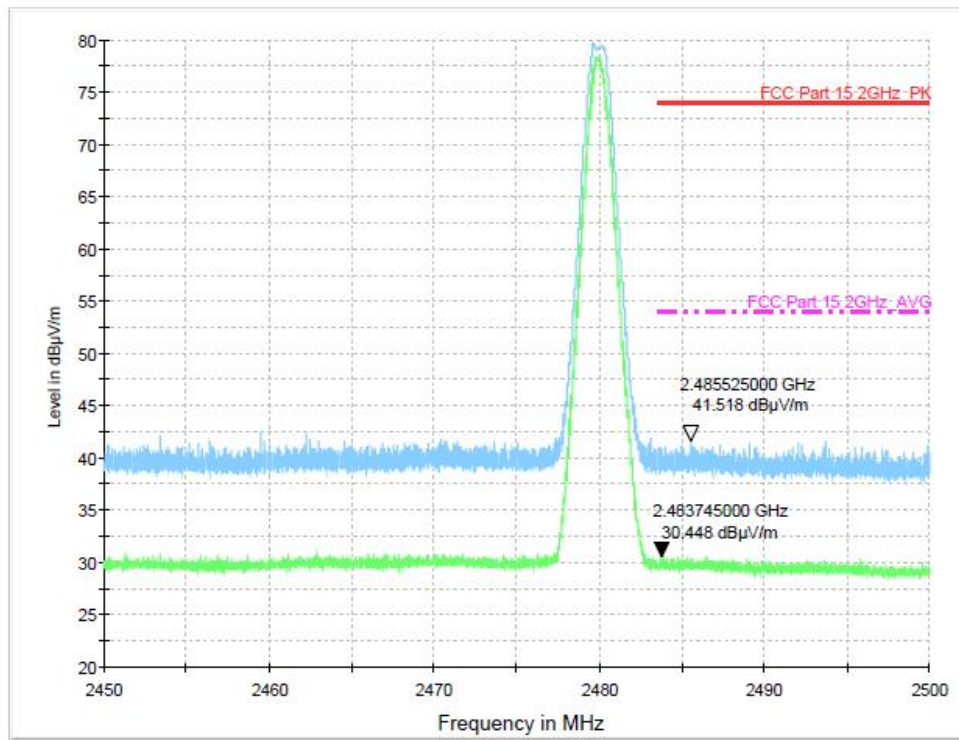
Test Mode:

GFSK-Low



Test Mode:

GFSK-High



Conducted Method:

For the measurement records, refer to the appendix I.

9. Antenna Requirement

9.1. Standard Requirement

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 a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

9.2. Antenna Connected Construction

The antenna is External antenna and no consideration of replacement. Please see EUT photo for details.

9.3. Results

The EUT antenna is External antenna. It comply with the standard requirement.

10. Test Setup Photo

Please refer to separated files for APPENDIX IV Test Setup Photos.

11. Photos of EUT

Please refer to the report appendix II and appendix III.

-----THE END OF REPORT-----