RADIO PERFORMANCE TEST REPORT

Test Report No.	**: OT-21O-RWD-003**
Reception No.	**: 2109004307**
Applicant	**: LG Electronics USA**
Address	**: 111 Sylvan Avenue North Building, Englewood Cliffs, New Jersey, United States**
Manufacturer	**: LG Electronics Inc.**
Address	**: 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do 17709, Rep of Korea**
Type of Equipment	**: Bluetooth Adapter Card**
FCC ID.	**: BEJ-MB8811QD**
Model Name	**: MB8811QD**
Multiple Model Name	**: N/A**
Serial number	**: N/A**
Total page of Report	**: 34 pages (including this page)**
Date of Incoming	**: September 27, 2021**
Date of issue	**: October 07, 2021**

SUMMARY

The equipment complies with the regulation; ***FCC PART 15 SUBPART C Section 15.247***

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Tested by	Reviewed by	Approved by
/ Ha-Ram Lee / Manager	Tae-Ho, Kim / Senior Manager	Ki-Hong, Nam / General Manager
ONETECH Corp.	ONETECH Corp.	ONETECH Corp.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

CONTENTS

Page

1. VERIFICATION OF COMPLIANCE **5**

2. TEST SUMMARY **6**

2.1 Test items and results 6

2.2 Additions, deviations, exclusions from standards 6

2.3 Related Submittal(s) / Grant(s) 6

2.4 Purpose of the test 6

2.5 Test Methodology 6

2.6 Test Facility 6

3. GENERAL INFORMATION **7**

3.1 Product Description 7

3.2 Alternative type(s)/model(s); also covered by this test report. 7

4. EUT MODIFICATIONS **7**

5. SYSTEM TEST CONFIGURATION **8**

5.1 Justification 8

5.2 Peripheral equipment 8

5.3 Mode of operation during the test 8

6. PRELIMINARY TEST **10**

6.1 AC Power line Conducted Emissions Tests 10

6.2 General Radiated Emissions Tests 10

7. MINIMUM 6 dB BANDWIDTH **11**

7.1 Operating environment 11

7.2 Test set-up 11

7.3 Test Date 11

7.4 Test data 12

8. MAXIMUM PEAK OUTPUT POWER **14**

8.1 Operating environment 14

8.2 Test set-up 14

8.3 Test Date 14

8.4 Test data 15

9. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND **17**

9.1 Operating environment 17
9.2 Test set-up for conducted measurement 17
9.3 Test set-up for radiated measurement 17
9.4 Test Date 17
9.5 Test data for conducted emission 18
9.6 Test data for radiated emission 23
9.6.1 Radiated Emission which fall in the Restricted Band *23*
9.6.2 Spurious & Harmonic Radiated Emission *24*
10. PEAK POWER SPECTRAL DENSITY **25**
10.1 Operating environment 25
10.2 Test set-up 25
10.3 Test Date 25
10.4 Test data 26
11. RADIATED EMISSION TEST **28**
11.1 Operating environment 28
11.2 Test set-up 28
11.3 Test Date 28
11.4 Test data 29
11.4.1 Test data for 30 MHz ~ 1000 MHz *29*
11.4.2 Test data for Below 30 MHz *30*
11.4.3 Test data for above 1 GHz *30*
12. CONDUCTED EMISSION TEST **31**
12.1 Operating environment 31
12.2 Test set-up 31
12.3 Test Date 31
12.4 Test data 32
13. LIST OF TEST EQUIPMENT **34**

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-21O-RWD-003	October 07, 2021	Initial Release	All

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1. VERIFICATION OF COMPLIANCE

Applicant : LG Electronics USA

Address : 111 Sylvan Avenue North Building, Englewood Cliffs, New Jersey, United States

Contact Person : Sung Soo Kim / Director, Regulatory and Environmental Affairs

Telephone No. : 201-266-2215

FCC ID : BEJ-MB8811QD

Model Name : MB8811QD

Brand Name : N/A

Serial Number : N/A

Date : October 07, 2021

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	Bluetooth Adapter Card
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2020
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247 KDB 558074 D01 15.247 Meas Guidance v05r02
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.247 (a) (2)	Minimum 6 dB Bandwidth	Met the Limit / PASS
15.247 (b) (3)	Maximum Peak Conducted Output Power	Met the Limit / PASS
15.247 (d)	100 kHz Bandwidth Outside the Frequency Band	Met the Limit / PASS
15.247 (d)	Radiated Emission which fall in the Restricted Band	Met the Limit / PASS
15.247 (e)	Peak Power Spectral Density	Met the Limit / PASS
15.209	Radiated Emission Limits	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met requirement / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.247.

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2020. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

3. GENERAL INFORMATION

3.1 Product Description

The LG Electronics USA, Model MB8811QD (referred to as the EUT in this report) is a Bluetooth Adapter Card. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	Bluetooth Adapter Card	
Operating Frequency	2 402 MHz ~ 2 480 MHz	
RF Output Power	Bluetooth	7.46 dBm
	Bluetooth LE	7.49 dBm
Number of Channel	Bluetooth	79 Channels
	Bluetooth LE	40 Channels
Modulation Type	Bluetooth	GFSK for 1 Mbps, π/4-DQPSK for 2 Mbps, 8-DPSK for 3 Mbps
	Bluetooth LE	GFSK
Antenna Type	PCB Antenna	
Antenna Gain	1.19 dBi	
Rated Supply Voltage	DC 3.3 V	
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	26 MHz	

3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	LG Electronics Inc.	N/A	N/A

5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
MB8811QD	LG Electronics Inc.	Bluetooth Adapter Card (EUT)	-
HP Probook	HP	Notebook PC	EUT
PPP009L-E	LIE-ON TECHNOLOGY (CHANGZHOU)CO.,LTD.	AC Adapter	Notebook PC

5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set at 2 402 MHz, 2 440 MHz, and 2 480 MHz to get a maximum emission levels from the EUT. The EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis, but the worst data was recorded in this report.

-. Frequency / Channel Operations

Channel	Frequency
0	2 402
19	2 440
39	2 480

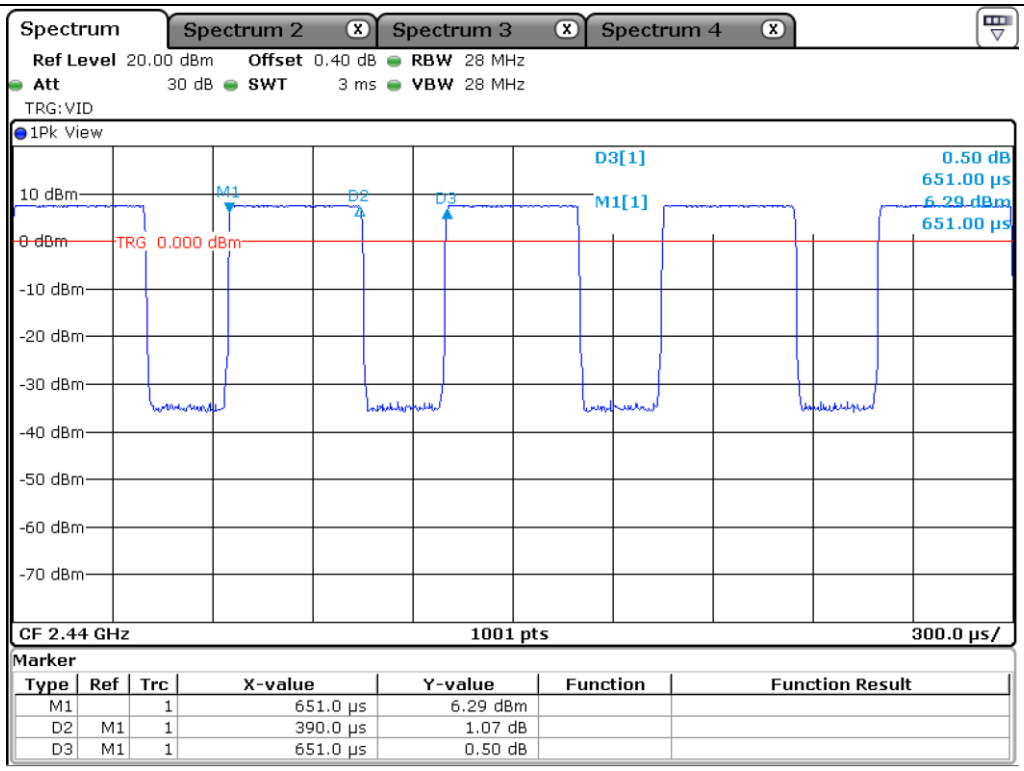
-. Duty Cycle

Mode	Tx On Time [ms]	Tx Off Time [ms]	Duty Cycle [%]	Correction Factor [dB]
Bluetooth LE	0.390	0.261	59.91	2.23

Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) * 100

Correction Factor : 10 * Log(1 / (Duty Cycle / 100))

-. Test Plot



Bluetooth LE

5.4 Configuration of Test System

Line Conducted Test: The EUT was tested in the Transmitting mode. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2020 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2020 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

For intentional device, according to section 15.203, 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.

Antenna Construction:

The antenna of the EUT is PCB Antenna on the main board in the EUT, so no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

7. MINIMUM 6 dB BANDWIDTH

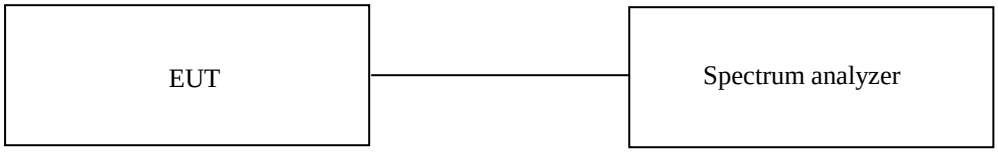
7.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



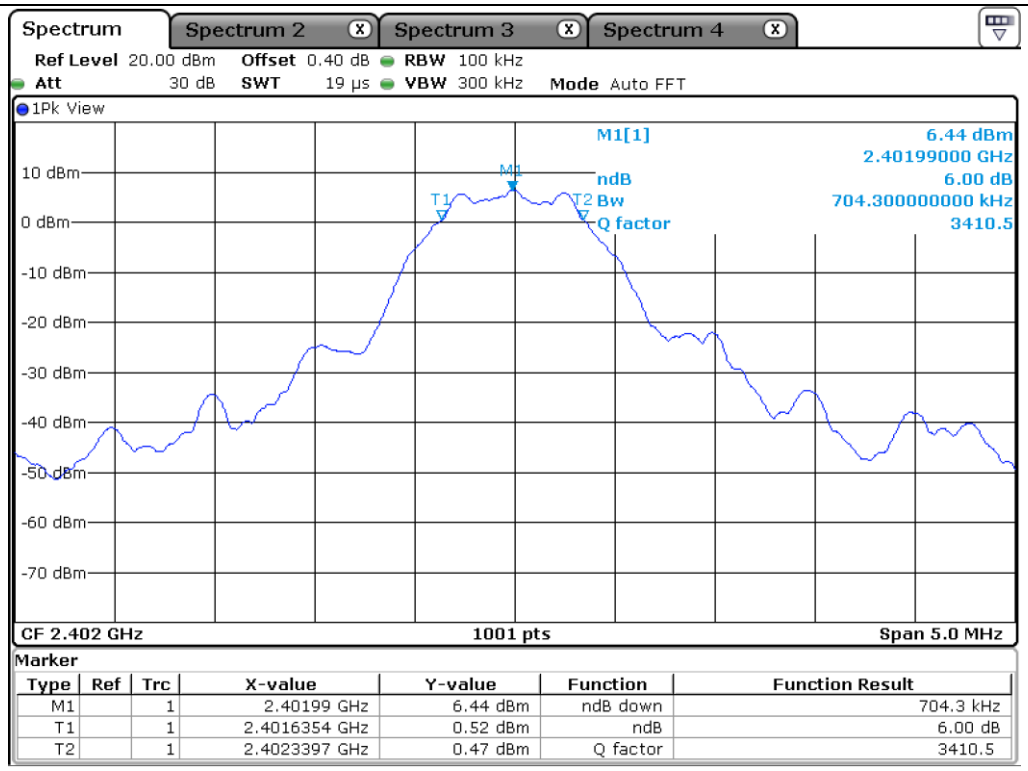
7.3 Test Date

September 28, 2021 ~ September 30, 2021

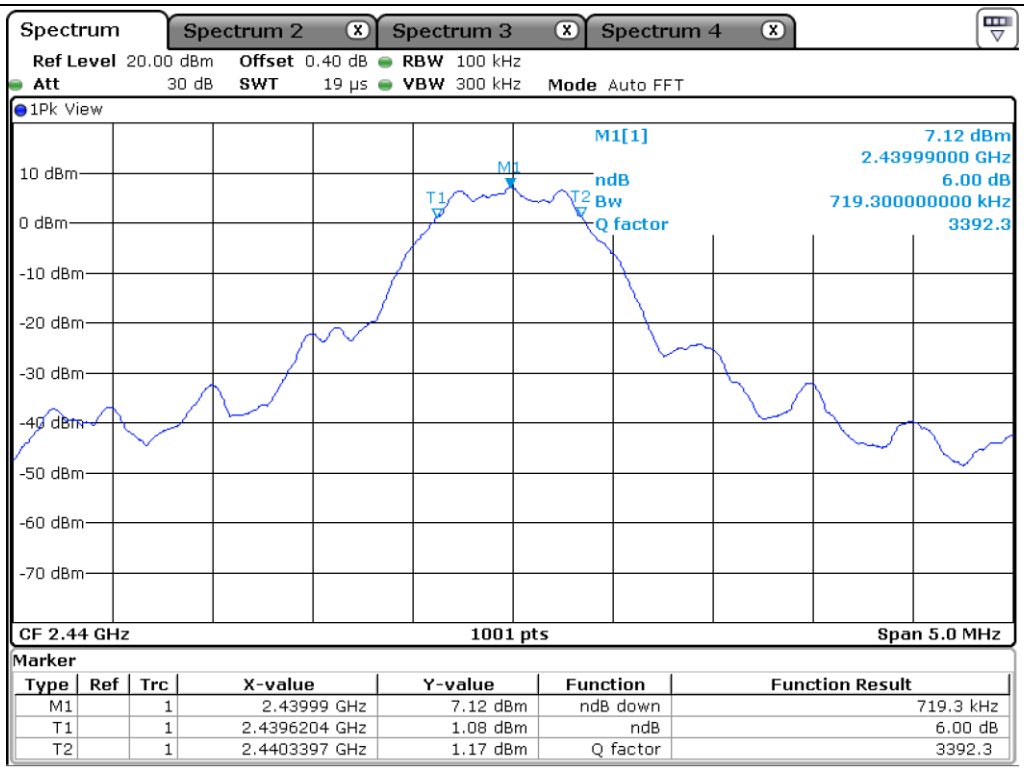
7.4 Test data

Channel	Frequency (MHz)	Measured Value (kHz)	Limit (kHz)	Margin (kHz)
Low	2 402.00	704.30	500.00	204.30
Middle	2 440.00	719.30	500.00	219.30
High	2 480.00	719.30	500.00	219.30

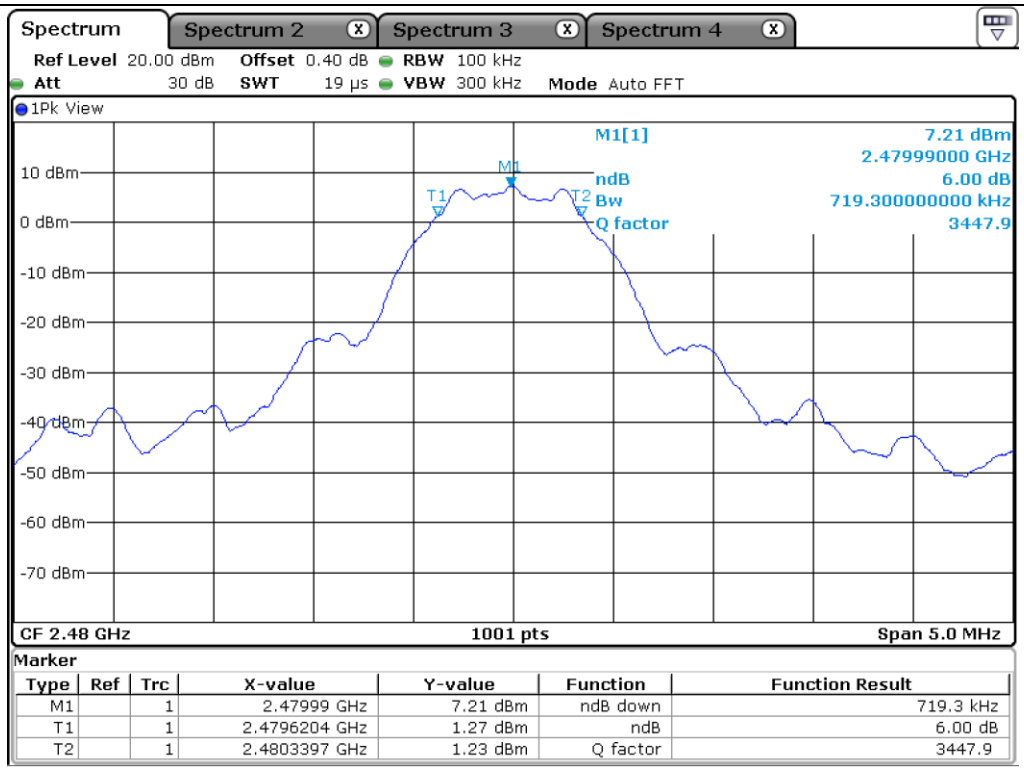
Remark. Margin = Measured Value - Limit



Low Channel



Middle Channel



High Channel

8. MAXIMUM PEAK OUTPUT POWER

8.1 Operating environment

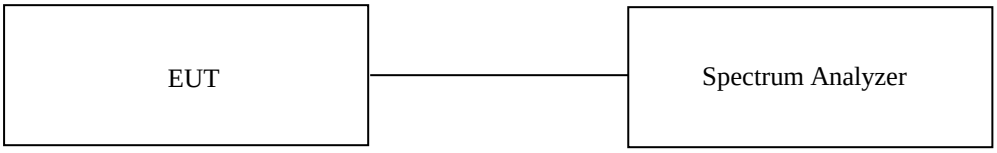
Temperature : 23 °C

Relative humidity : 45 % R.H.

8.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to ≥ DTS Bandwidth, the video bandwidth is set to 3 times the resolution bandwidth.



8.3 Test Date

September 28, 2021 ~ September 30, 2021

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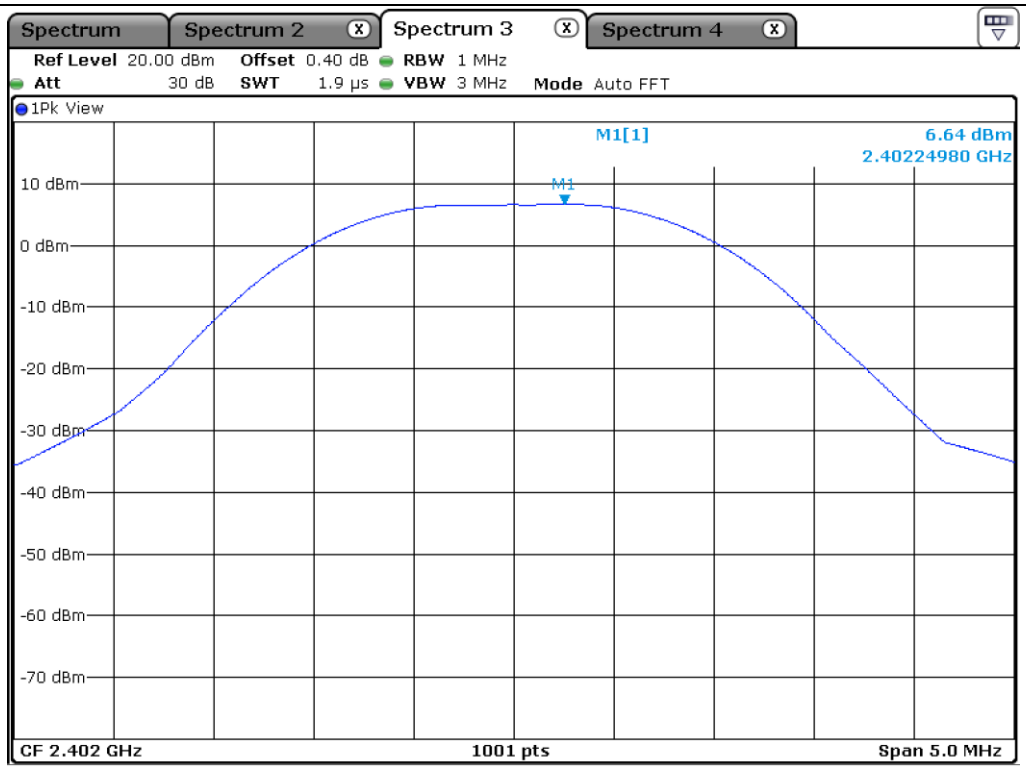
8.4 Test data

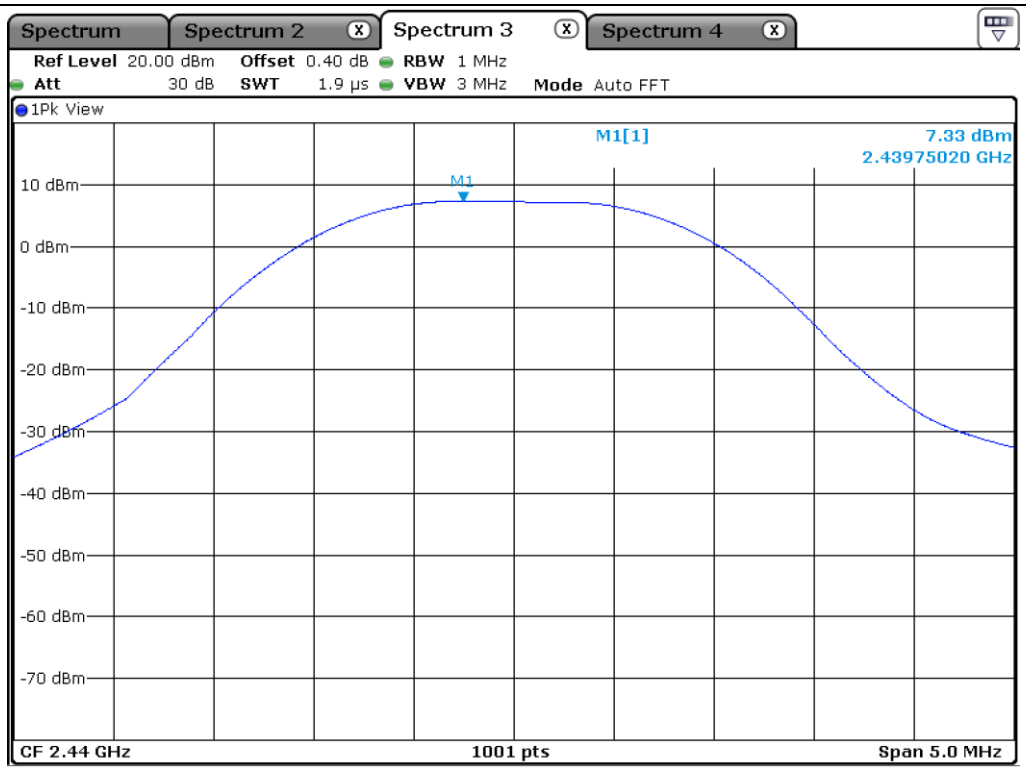
-. Test Result : Pass

Channel	Frequency (MHz)	6 dB Bandwidth (kHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
Low	2 402.00	704.30	6.64	30.00	23.36
Middle	2 440.00	719.30	7.33	30.00	22.67
High	2 480.00	719.30	7.49	30.00	22.51

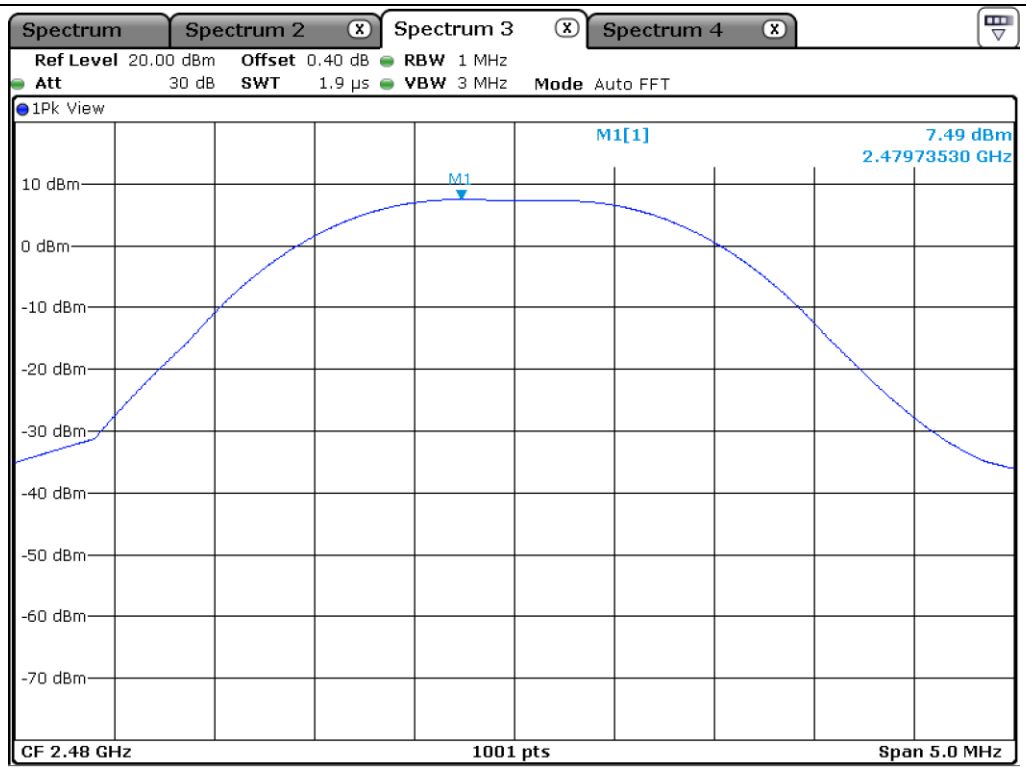
Remark. Margin = Limit – Measured value (=Receiver Reading + Cable Loss)



Low Channel



Middle Channel



High Channel

9. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

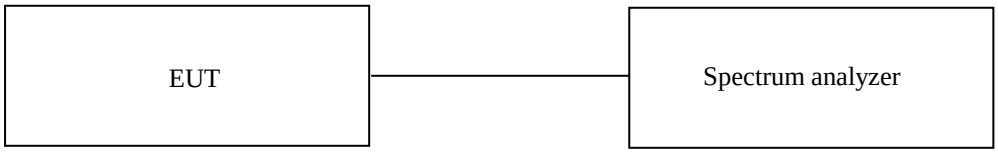
9.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

9.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, the video bandwidth is set to 3 times the resolution bandwidth and peak detection was used.



9.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m semi anechoic chamber. The EUT was placed on turntable approximately 1.5 m above the ground plane.

The frequency spectrum from 30 MHz to 26.5 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

9.4 Test Date

September 28, 2021 ~ September 30, 2021

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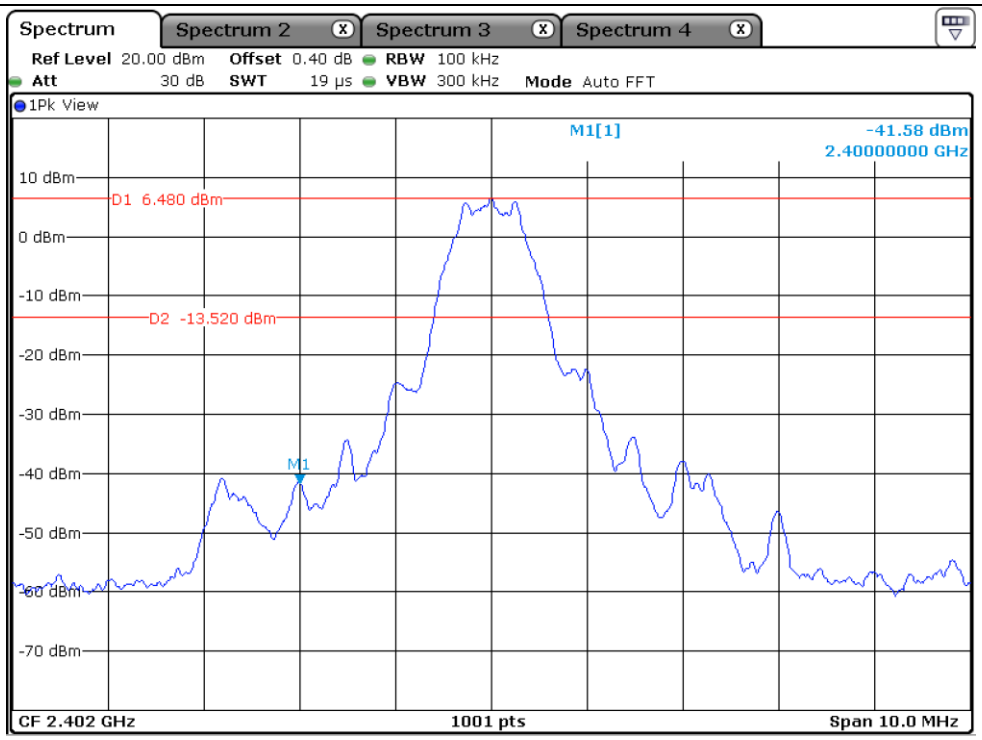
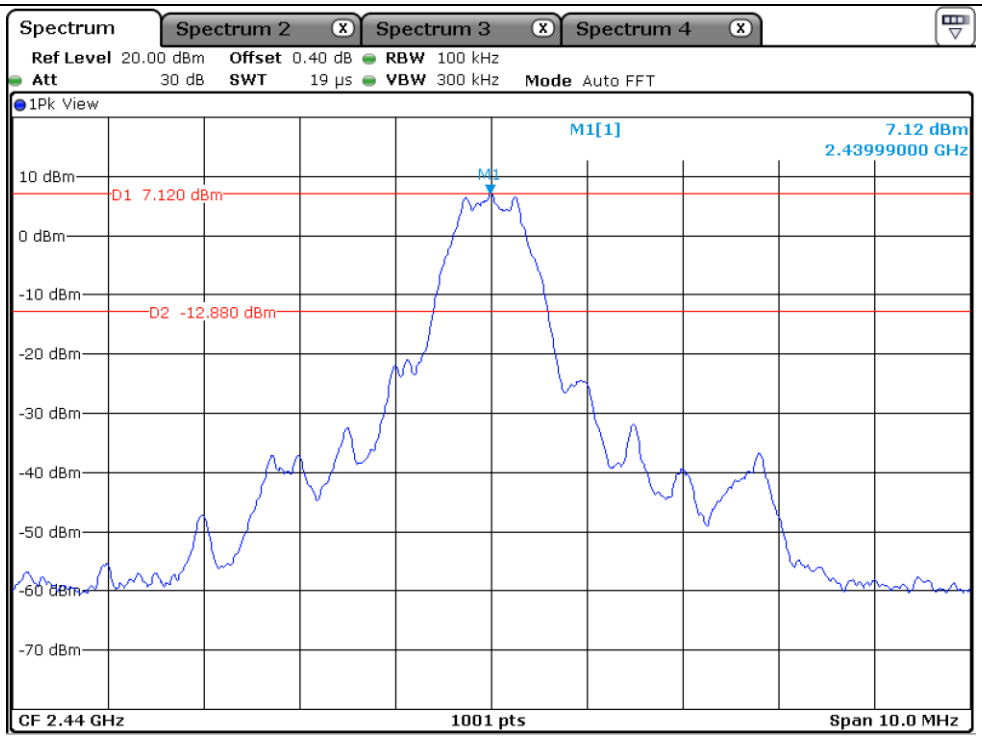
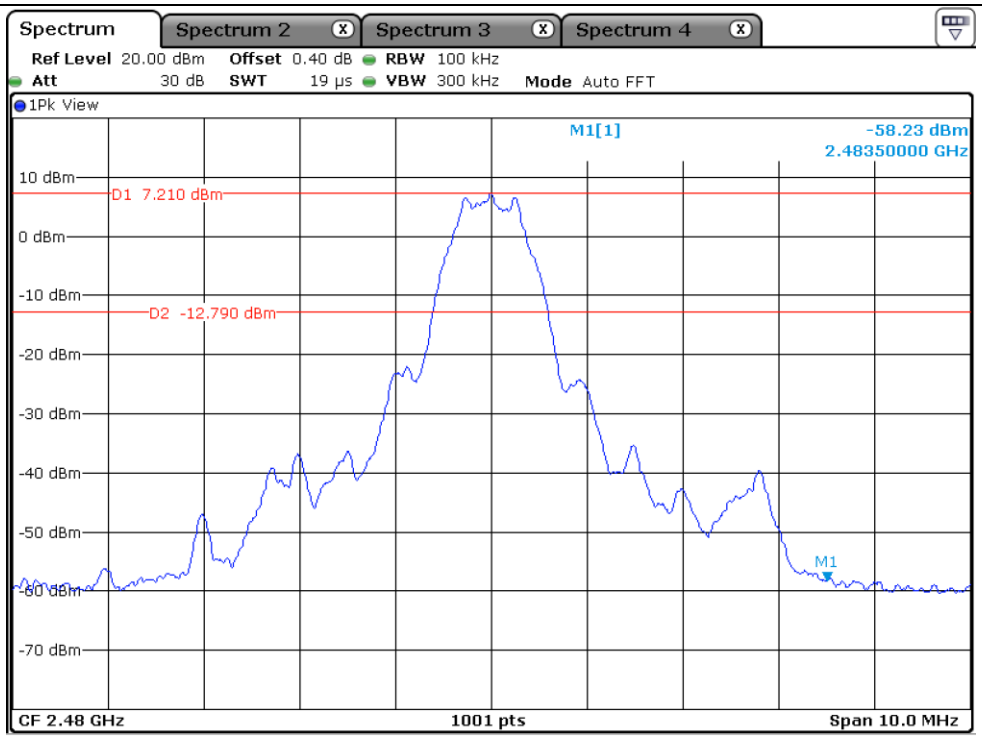
9.5 Test data for conducted emission



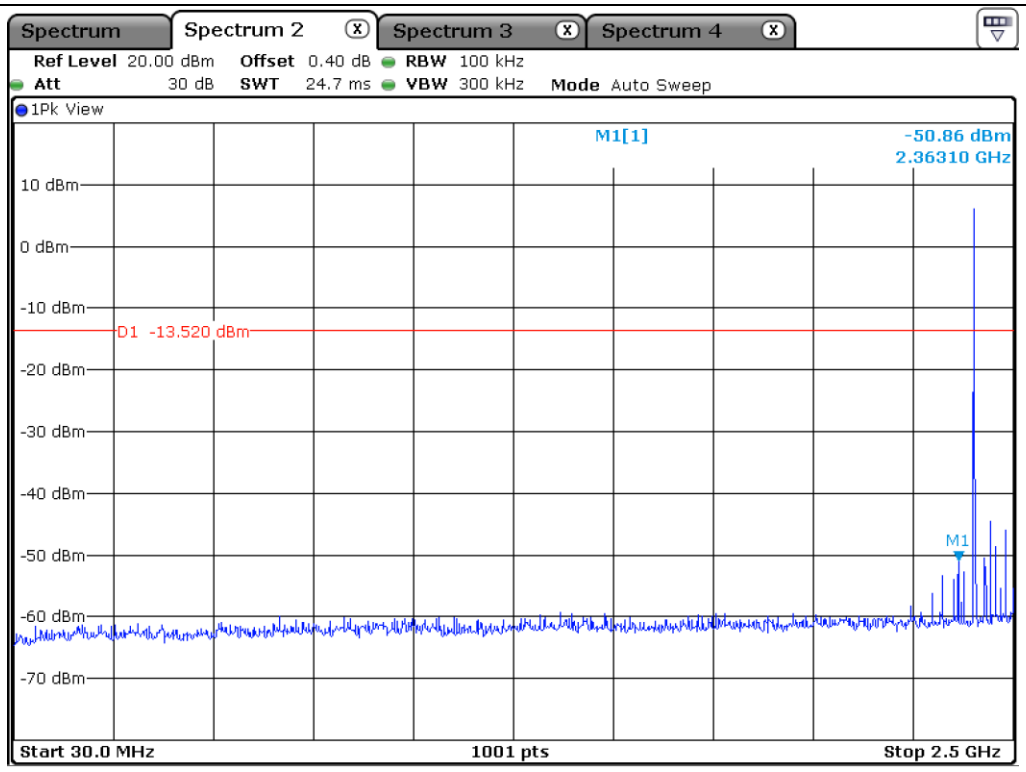
Low Channel



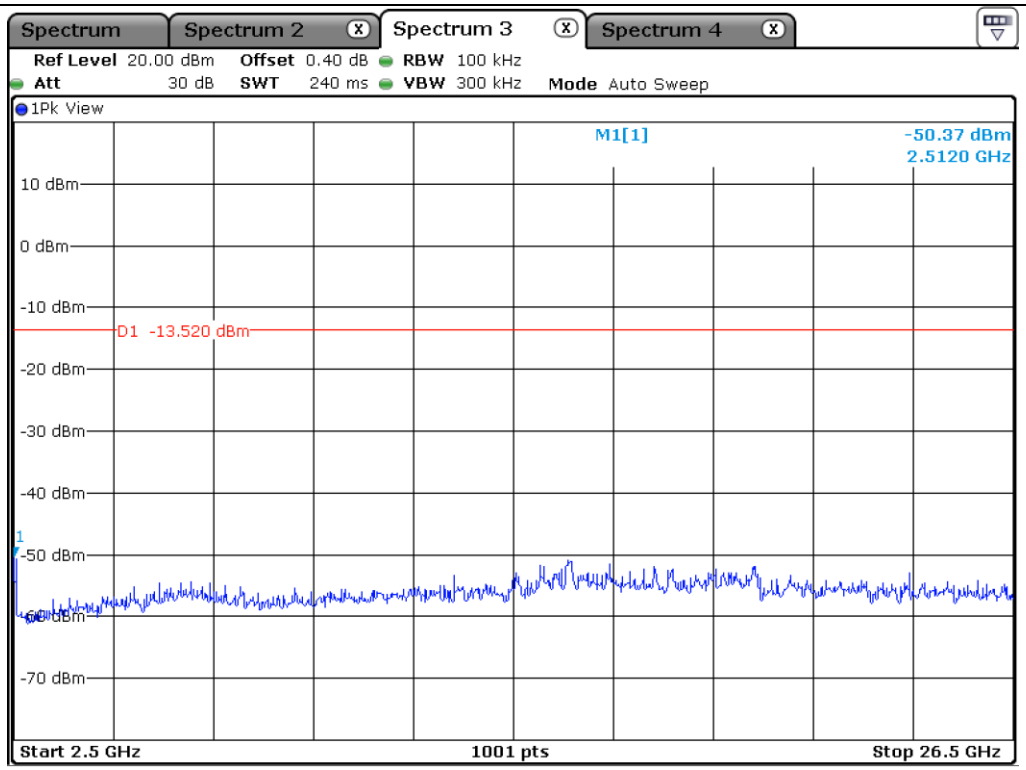
Middle Channel



High Channel



Low Channel



Low Channel

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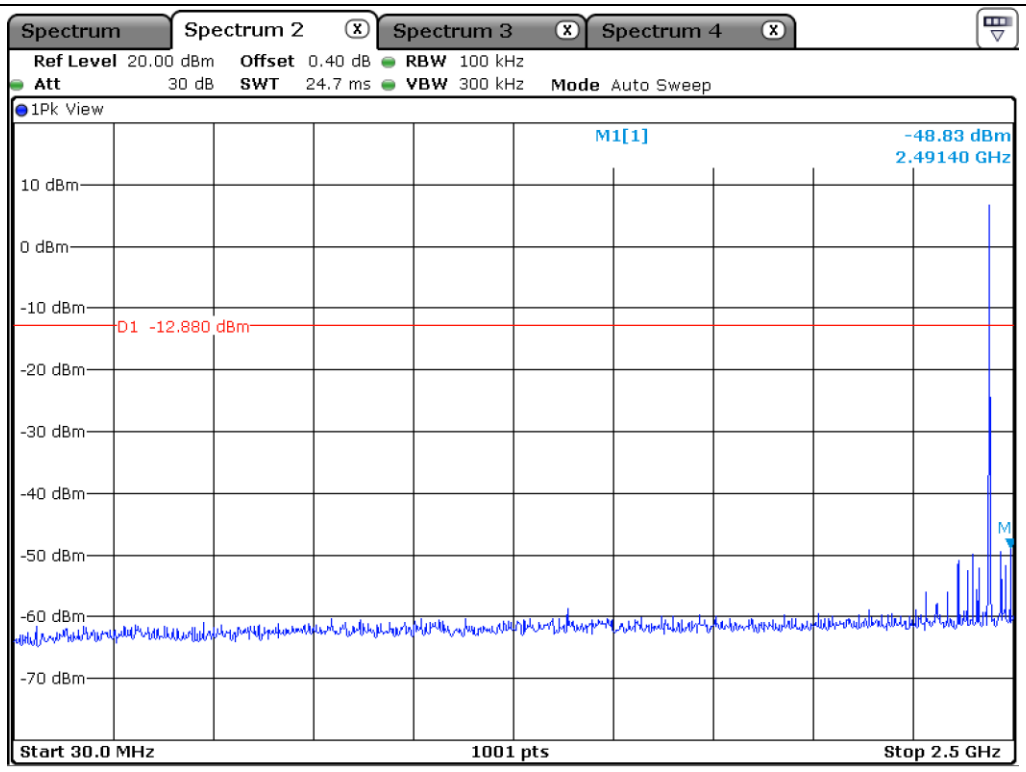
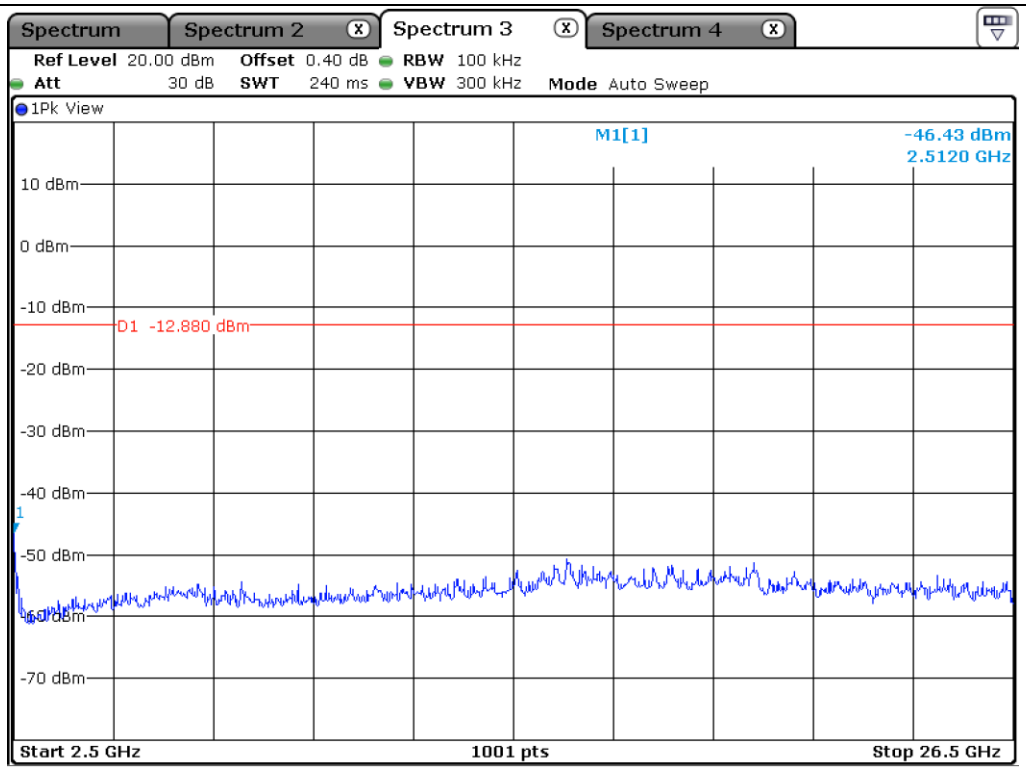


Middle Channel



Middle Channel

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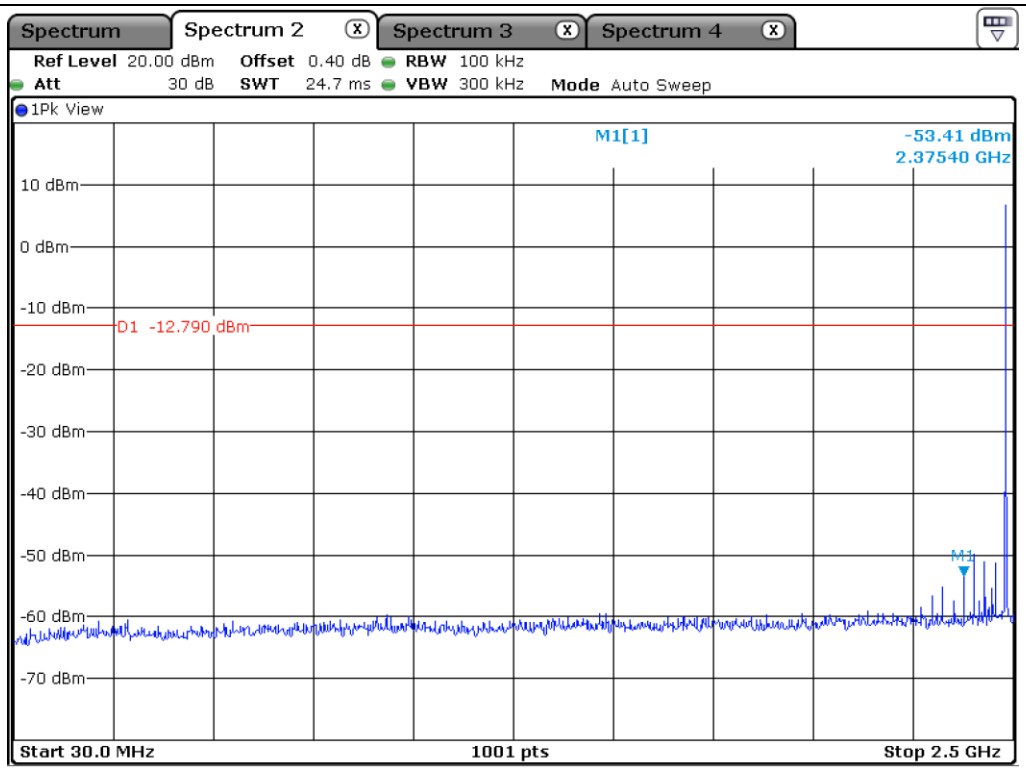
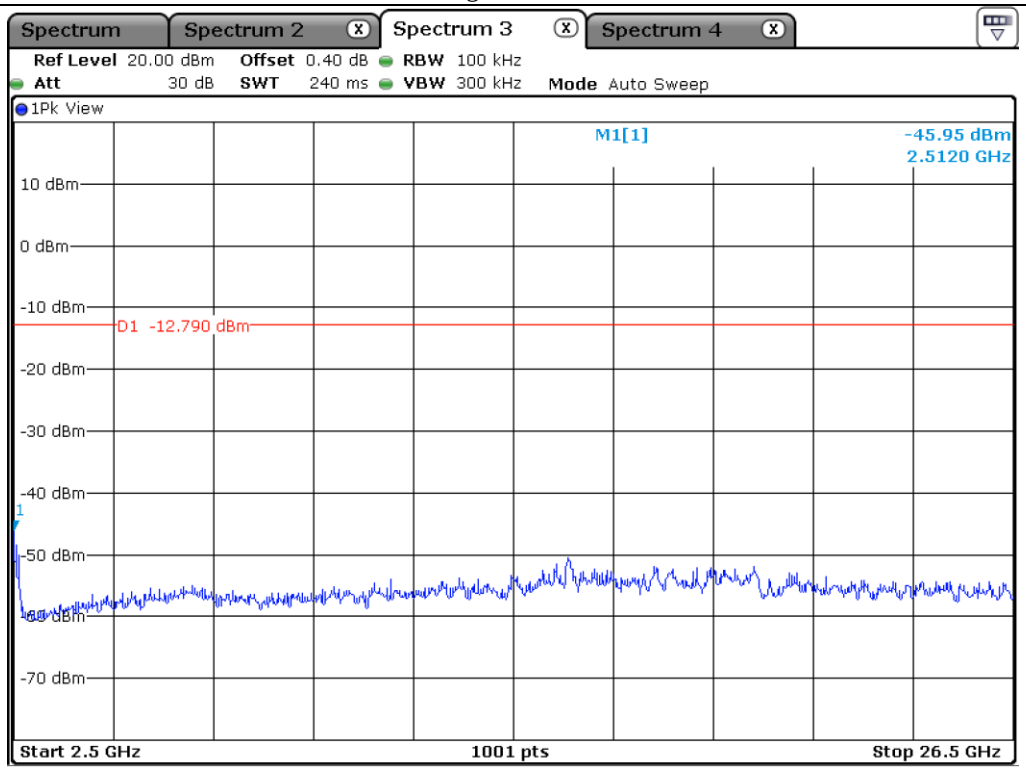


High Channel



High Channel

9.6 Test data for radiated emission

9.6.1 Radiated Emission which fall in the Restricted Band

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 59.91 %

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
2 362.10	59.93	Peak	H	28.30	8.20	46.15	-	50.28	74.00	23.72
2 350.05	51.76	Average	H	28.30	8.20	46.15	2.23	44.34	54.00	9.66
2 323.98	55.53	Peak	V	28.30	8.20	46.15	-	45.88	74.00	28.12
2 323.98	48.22	Average	V	28.30	8.20	46.15	2.23	40.80	54.00	13.20
Test Data for High Channel										
2 483.50	61.50	Peak	H	28.70	8.33	46.06	-	52.47	74.00	21.53
2 483.50	50.89	Average	H	28.70	8.33	46.06	2.23	44.09	54.00	9.91
2 483.50	61.53	Peak	V	28.70	8.33	46.06	-	52.50	74.00	21.50
2 483.50	51.12	Average	V	28.70	8.33	46.06	2.23	44.32	54.00	9.68

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss + Duty Factor - AMP Gain

9.6.2 Spurious & Harmonic Radiated Emission

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,
1 MHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 59.91 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Low Channel										
4 804.00	51.51	Peak	H	33.40	11.21	45.73	-	50.39	74.00	23.61
4 804.00	42.04	Average	H	33.40	11.21	45.73	2.23	43.15	54.00	10.85
4 804.00	52.58	Peak	V	33.40	11.21	45.73	-	51.46	74.00	22.54
4 804.00	42.82	Average	V	33.40	11.21	45.73	2.23	43.93	54.00	10.07
Test Data for Middle Channel										
4 880.00	53.01	Peak	H	33.40	11.23	45.80	-	51.84	74.00	22.16
4 880.00	42.46	Average	H	33.40	11.23	45.80	2.23	43.52	54.00	10.48
4 880.00	52.36	Peak	V	33.40	11.23	45.80	-	51.19	74.00	22.81
4 880.00	42.83	Average	V	33.40	11.23	45.80	2.23	43.89	54.00	10.11
Test Data for High Channel										
4 960.00	52.76	Peak	H	33.40	11.31	45.89	-	51.58	74.00	22.42
4 960.00	42.57	Average	H	33.40	11.31	45.89	2.23	43.62	54.00	10.38
4 960.00	52.04	Peak	V	33.40	11.31	45.89	-	50.86	74.00	23.14
4 960.00	42.84	Average	V	33.40	11.31	45.89	2.23	43.89	54.00	10.11

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss + Duty Factor - AMP Gain

10. PEAK POWER SPECTRAL DENSITY

10.1 Operating environment

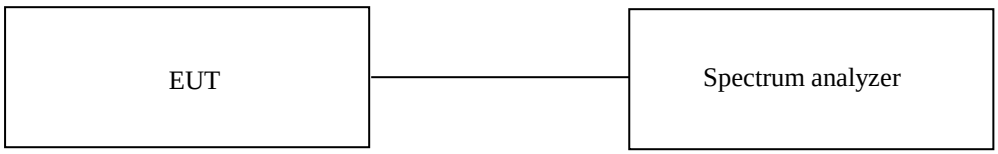
Temperature : 23 °C

Relative humidity : 45 % R.H.

10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to 3 kHz ≤ RBW ≤100 kHz, the video bandwidth is set to 3 times the resolution bandwidth.



10.3 Test Date

September 28, 2021 ~ September 30, 2021

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

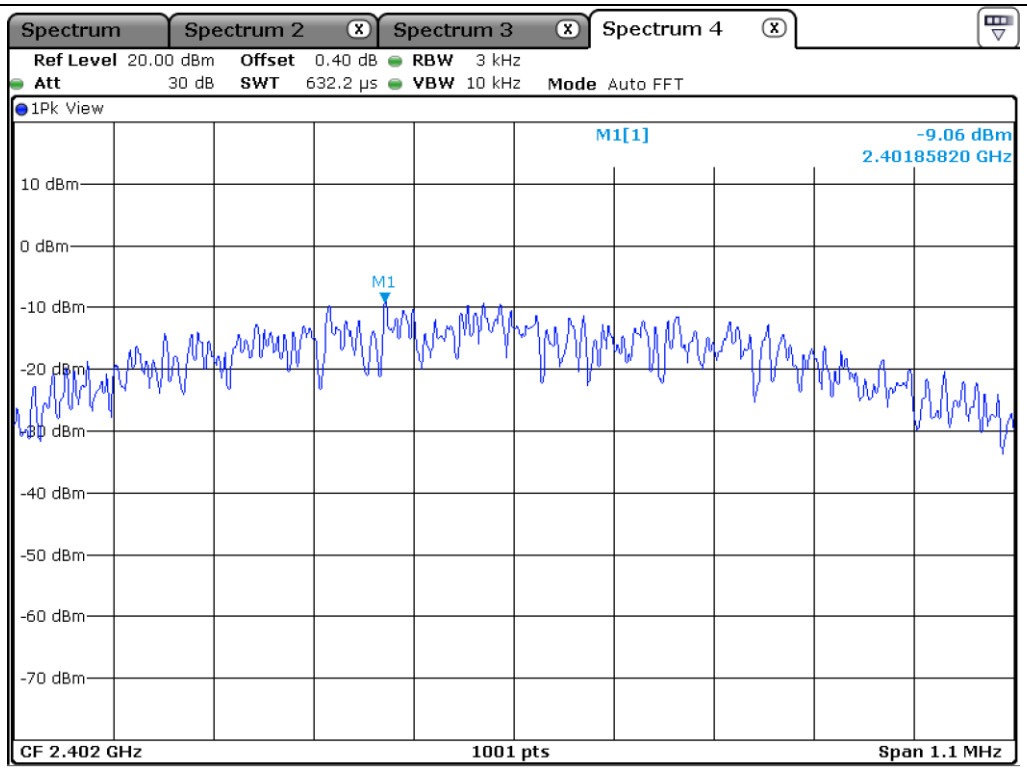
10.4 Test data

-. Test Result : Pass

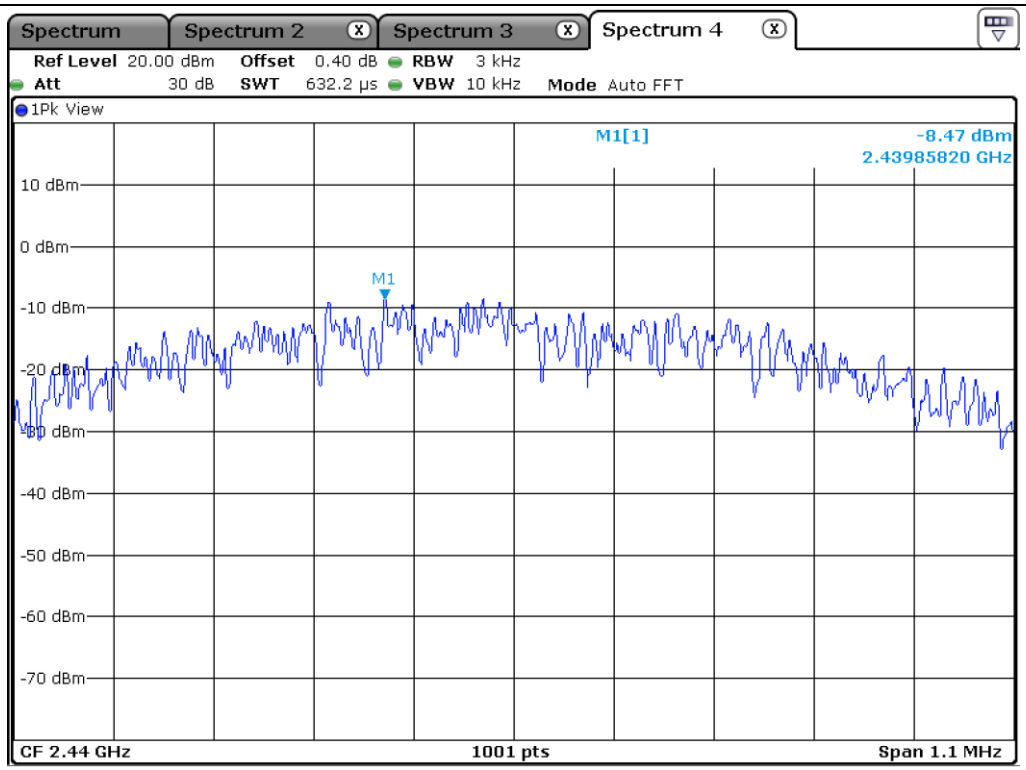
-. Operating Condition : Continuous transmitting mode

Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
Low	2 402.00	-9.06	8.00	17.06
Middle	2 440.00	-8.47	8.00	16.47
High	2 480.00	-8.43	8.00	16.43

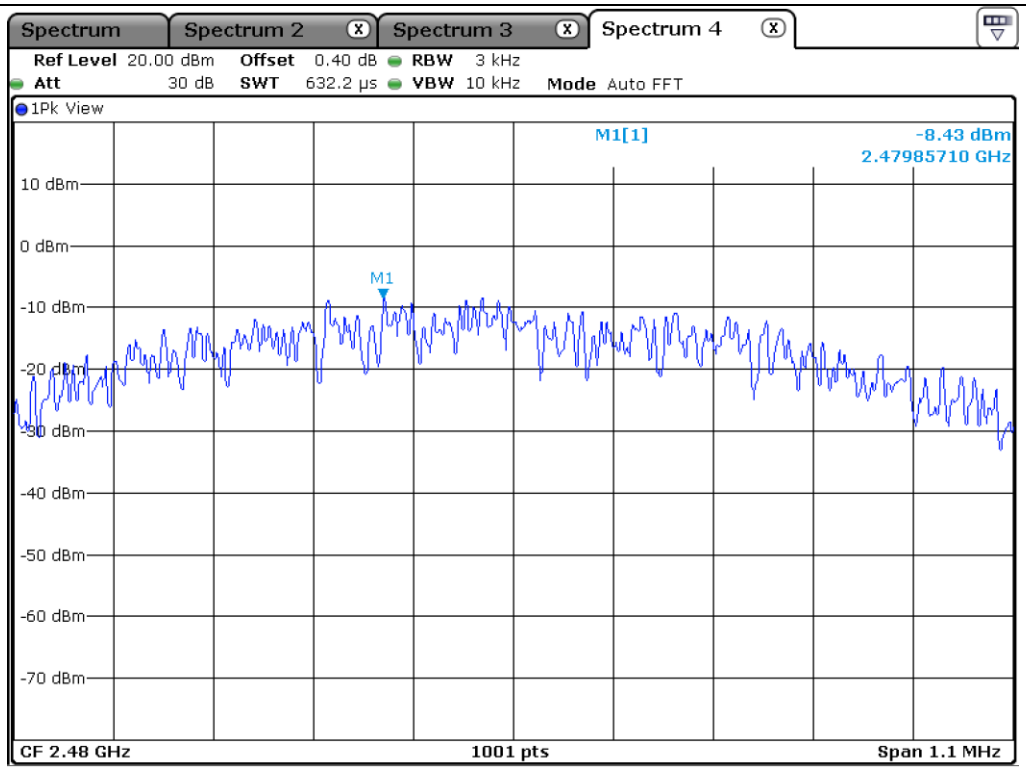
Remark. Margin = Limit – Measured value (=Receiver Reading + Cable Loss)



Low Channel



Middle Channel



High Channel

11. RADIATED EMISSION TEST

11.1 Operating environment

Temperature	:	23 °C
Relative humidity	:	45 % R.H.

11.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 MHz to 26.5 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

11.3 Test Date

September 28, 2021 ~ September 30, 2021

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

11.4 Test data

11.4.1 Test data for 30 MHz ~ 1000 MHz

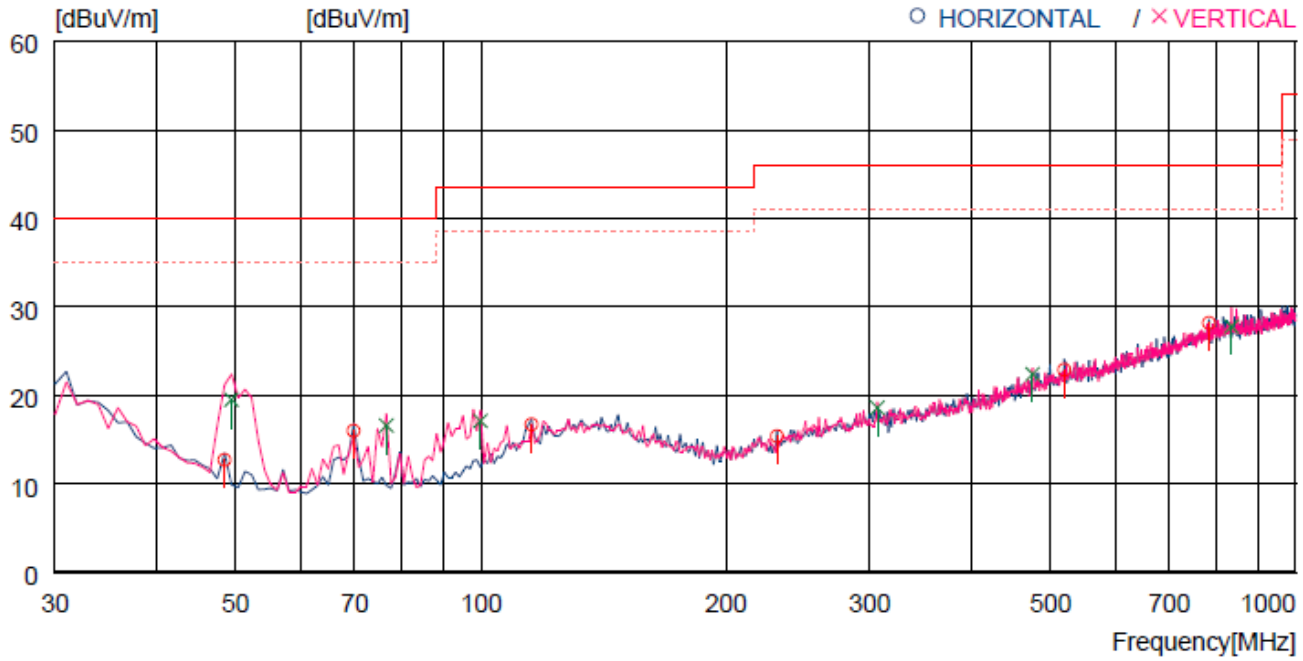
Humidity Level : 45 % R.H. Temperature: 23 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Bluetooth Adapter Card

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING [dBuV]	ANT [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	48.430	29.6	13.8	1.4	32.1	12.7	40.0	27.3	200	0
2	69.770	33.6	12.9	1.6	32.1	16.0	40.0	24.0	200	131
3	115.360	29.0	17.8	1.9	32.0	16.7	43.5	26.8	311	359
4	230.790	27.8	17.0	2.6	32.0	15.4	46.0	30.6	200	0
5	519.850	28.0	23.3	3.9	32.3	22.9	46.0	23.1	100	253
6	782.712	28.6	26.8	4.9	32.1	28.2	46.0	17.8	300	41
----- Vertical -----										
7	49.400	36.8	13.4	1.4	32.1	19.5	40.0	20.5	200	0
8	76.560	34.1	12.9	1.6	32.0	16.6	40.0	23.4	200	0
9	99.840	32.0	15.3	1.8	32.0	17.1	43.5	26.4	200	256
10	306.450	28.3	19.3	3.0	32.0	18.6	46.0	27.4	400	0
11	475.231	28.4	22.5	3.8	32.3	22.4	46.0	23.6	200	0
12	834.121	27.4	27.2	5.1	31.9	27.8	46.0	18.2	200	138

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11.4.2 Test data for Below 30 MHz

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

11.4.3 Test data for above 1 GHz

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

12. CONDUCTED EMISSION TEST

12.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

12.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μH + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

12.3 Test Date

September 28, 2021 ~ September 30, 2021

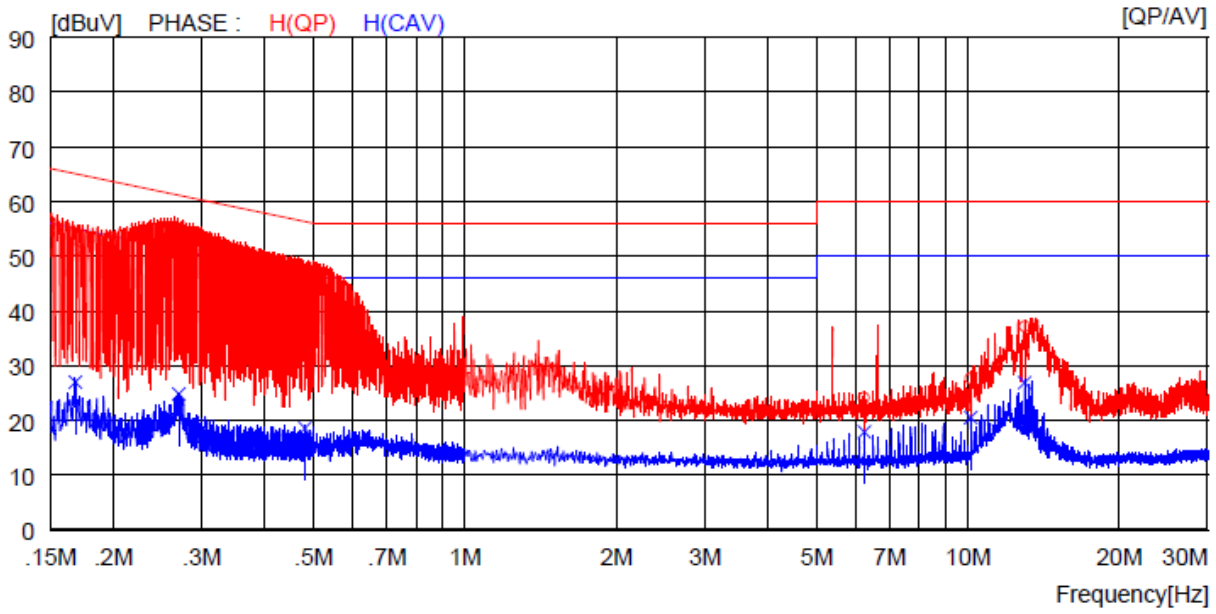
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

12.4 Test data

-. Resolution bandwidth : 9 kHz

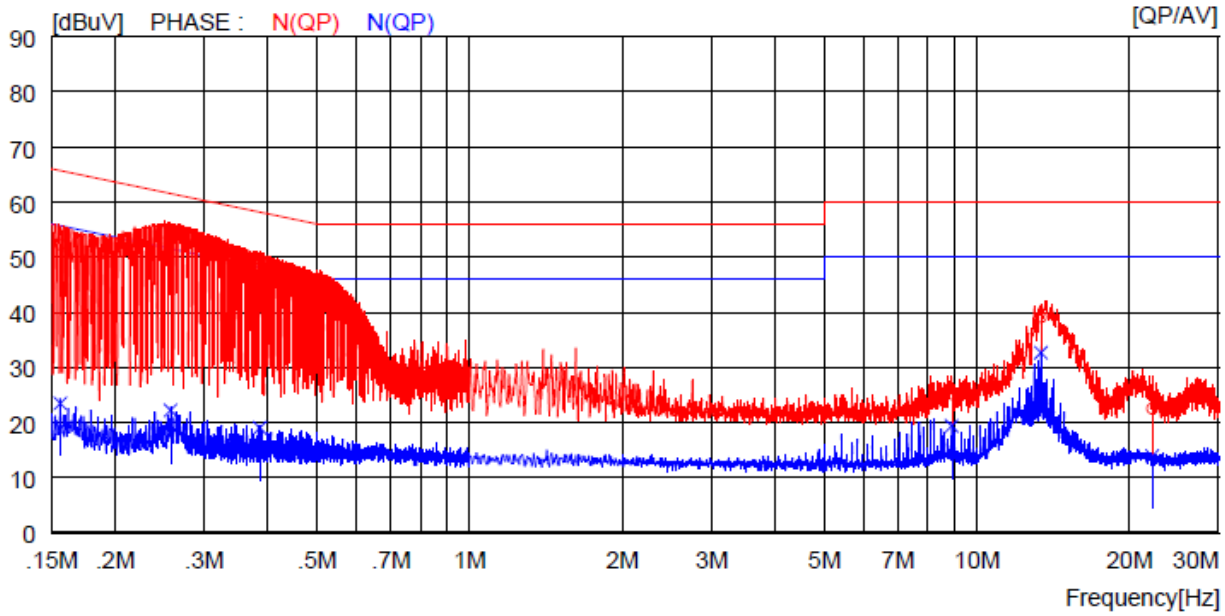
-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : LIVE LINE



NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.16800	41.1	----	10.0	51.1	----	65.1	----	14.0	----	H(QP)
2	0.27000	43.3	----	10.0	53.3	----	61.1	----	7.8	----	H(QP)
3	0.48000	35.0	----	10.0	45.0	----	56.3	----	11.3	----	H(QP)
4	6.22000	13.9	----	10.2	24.1	----	60.0	----	35.9	----	H(QP)
5	10.14000	17.4	----	10.2	27.6	----	60.0	----	32.4	----	H(QP)
6	12.98000	26.9	----	10.3	37.2	----	60.0	----	22.8	----	H(QP)
7	0.16800	----	17.0	10.0	----	27.0	----	55.1	----	28.1	H(CAV)
8	0.27000	----	14.8	10.0	----	24.8	----	51.1	----	26.3	H(CAV)
9	0.48000	----	8.6	10.0	----	18.6	----	46.3	----	27.7	H(CAV)
10	6.22000	----	7.7	10.2	----	17.9	----	50.0	----	32.1	H(CAV)
11	10.14000	----	10.3	10.2	----	20.5	----	50.0	----	29.5	H(CAV)
12	12.98000	----	16.6	10.3	----	26.9	----	50.0	----	23.1	H(CAV)

-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15600	42.3	----	10.0	52.3	----	65.7	----	13.4	----	N(QP)
2	0.25700	44.1	----	10.0	54.1	----	61.5	----	7.4	----	N(QP)
3	0.38600	39.7	----	10.0	49.7	----	58.1	----	8.4	----	N(QP)
4	8.92500	14.9	----	10.2	25.1	----	60.0	----	34.9	----	N(QP)
5	13.39000	28.8	----	10.3	39.1	----	60.0	----	20.9	----	N(QP)
6	22.20000	12.1	----	10.4	22.5	----	60.0	----	37.5	----	N(QP)
7	0.15600	----	13.5	10.0	----	23.5	----	55.7	----	32.2	N(CAV)
8	0.25700	----	12.2	10.0	----	22.2	----	51.5	----	29.3	N(CAV)
9	0.38600	----	9.0	10.0	----	19.0	----	48.1	----	29.1	N(CAV)
10	8.92500	----	9.2	10.2	----	19.4	----	50.0	----	30.6	N(CAV)
11	13.39000	----	22.4	10.3	----	32.7	----	50.0	----	17.3	N(CAV)
12	22.20000	----	3.5	10.4	----	13.9	----	50.0	----	36.1	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

13. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV40-N	Rohde & Schwarz	Signal Analyzer	102177	Apr. 16, 2021 (1Y)
ESW 44	Rohde & Schwarz	EMI Test Receiver	101851	Mar. 23, 2021 (1Y)
310N	Sonoma Instrument	Pre-Amplifier	392756	Oct. 16, 2020 (1Y)
PAM-118A	Com-Power	Pre-Amplifier	18040081	Oct. 12, 2020 (1Y)
PAM-840A	Com-Power	Pre-Amplifier	461339	Oct. 16, 2020 (1Y)
DT3000-3t	Innco System	Turn Table	DT3000/093	N/A
MA-4000XPET	Innco System	Antenna Master	MA4000/509	N/A
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 24, 2020 (2Y)
HLP-2008	TDK	Hybrid Antenna	131316	Feb. 27, 2020 (2Y)
AH-118	Com-Power	Horn Antenna	10050061	Oct. 15, 2020 (1Y)
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 07, 2021(1Y)
HPF 3GHz	Rohde & Schwarz	High Pass Filter (1-3 GHz)	N/A	Feb. 08, 2021(1Y)
ESCI	Rohde & Schwarz	EMI Test RECEIVER	101012	Oct. 19, 2020 (1Y)
NSLK8128	Schwarzbeck	AMN	8218-216	Oct. 19, 2020 (1Y)
ESH3-Z2	Rohde & Schwarz	PULSE LIMITER	100655	Mar. 15, 2021 (1Y)

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