

Prüfbericht-Nr.: <i>Test report no.:</i>	CN21QCJM 001	Auftrags-Nr.: <i>Order no.:</i>	168307454	Seite 1 von 26 <i>Page 1 of 26</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2021-02-22	
Auftraggeber: <i>Client:</i>	BlueAnt Wireless Suite 6 , 861 Doncaster Road, Doncaster East, Victoria 3109, Australia			
Prüfgegenstand: <i>Test item:</i>	BlueAnt X2 Portable Bluetooth speaker			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	X2 (Trademark: BlueAnt)			
Auftrags-Inhalt: <i>Order content:</i>	Type test			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 2.1093 RSS-247 Issue 2 February 2017 RSS-Gen Issue 5 March 2019 RSS-102 Issue 5 March 2015			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2021-02-25	Refer to photos document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003006247-007 to 008			
Prüfzeitraum: <i>Testing period:</i>	2021-03-03 – 2021-03-11			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	genehmigt von: <i>authorized by:</i>			
Datum: <i>Date:</i> 2021-06-15	Ausstellungsdatum: <i>Issue date:</i> 2021-06-15			
Stellung / Position	Senior Project Engineer	Stellung / Position	Department Manager	
Sonstiges / Other:	FCC ID: VHF-BLUEANT-X2 IC: 7252A-X2 HVIN: X2			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>			
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

V05

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 99% BANDWIDTH

RESULT: Pass

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH

RESULT: Pass

5.1.5 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.6 20dB BANDWIDTH

RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.8 NUMBER OF HOPPING FREQUENCY

RESULT: Pass

5.1.9 TIME OF OCCUPANCY

RESULT: Pass

5.1.10 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results of Conducted Testing

Appendix C: Test Results of Radiated Testing & AC Mains Conducted Emission

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China

FCC Registration No.: 694916

IC Registration No.: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

TÜV Rheinland (Shenzhen) Co., Ltd.

Conducted Emissions				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102680	19.05.2021
Artificial Mains Network	R&S	ENV216	101445	19.05.2021
EMC32 test software	R&S	EMC32(Ver.10.50.01)	N/A	N/A
Radio Spectrum Testing				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Wireless Connectivity Tester	R&S	CMW270	101375	10.08.2021
Signal Analyzer	R&S	FSV 40	101441	10.08.2021
Vector Signal Generator	R&S	SMBV100A	263301	10.08.2021
Signal Generator	R&S	SMB100A	115186	10.08.2021
OSP	R&S	OSP 150	101017	10.12.2021
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
Power Meter	R&S	NRP2	107105	10.12.2021
Power Sensor	R&S	NRP-Z81	105677	10.09.2021
Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	10.04.2021
Shielding Room 8#	Albatross	SR8	APC17151-SR8	23.07.2021
Unwanted Emission Testing				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR 7	102021	11.08.2021
Signal Analyzer	R&S	FSV 40	101439	10.08.2021
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	10.08.2021
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	10.08.2021
Amplifier	R&S	SCU-18F	180070	10.08.2021
Amplifier	R&S	SCU40A	100475	10.09.2021
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	08.08.2022
Double-Ridged Antenna (1 - 18 GHz)	ETS-LINDGREN	3117	00218717	08.08.2022
Wideband Ridged Horn Antenna (18-	Steatite	QMS-00880	19067	08.08.2022

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40 GHz)				
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	13.09.2022
Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	02.09.2021
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	06.07.2021

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

Item		Extended Uncertainty
Conducted Emission		± 2.74 dB
Radiated Emission (30-1000MHz)	Field strength (dB μ V/m)	4.27dB
Radiated Emission (above 1000MHz)	Field strength (dB μ V/m)	4.46dB
Radio Spectrum		± 1.5 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B & C of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a BlueAnt X2 Portable Bluetooth speaker which supports Bluetooth 5.0 (BDR&EDR) technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	BlueAnt X2 Portable Bluetooth speaker
Type Designation	X2
Trade Mark	BlueAnt
FCC ID	VHF-BLUEANT-X2
IC	7252A-X2
HVIN	X2
Operating Voltage	DC 5V, 2A via external AC/DC Adapter DC 3.7V, 2800mAh (supplied by internal battery)
Technical Specification of Bluetooth	
Technical Specification	Value
Operating Frequency	2402 - 2480 MHz
Type of Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Channel Number	BDR & EDR mode:79 channels
Channel Separation	BDR & EDR mode:1MHz
Wireless Technology	Bluetooth 5.0
Antenna Type	Integral Antenna
Max. Antenna Gain	-6.17 dBi

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Table 3: RF Channel and Frequency of Bluetooth

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	20	2422.00	40	2442.00	60	2462.00
01	2403.00	21	2423.00	41	2443.00	61	2463.00
02	2404.00	22	2424.00	42	2444.00	62	2464.00
03	2405.00	23	2425.00	43	2445.00	63	2465.00
04	2406.00	24	2426.00	44	2446.00	64	2466.00
05	2407.00	25	2427.00	45	2447.00	65	2467.00
06	2408.00	26	2428.00	46	2448.00	66	2468.00
07	2409.00	27	2429.00	47	2449.00	67	2469.00
08	2410.00	28	2430.00	48	2450.00	68	2470.00
09	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00	--	--

3.3 Independent Operation Modes

The basic operation modes are:

- A. On
 - 1. Bluetooth transmitting mode (BDR & EDR mode)
 - a) Low Channel
 - b) Middle Channel
 - c) High Channel
- B. On, Transmitting on Hopping channel
- C. On, Bluetooth connecting mode
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|-------------------------|----------------------------------|
| - Application Form | - FCC/IC Label and Location Info |
| - Block Diagram | - Photo Document |
| - Schematics | - User Manual |
| - Technical Description | |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	Rating
Mobile Phone	HTC	D626w	N/A
Notebook	Lenovo	ThinkPad X260	N/A
AC/DC Adapter	MI	MDY-EY-12	Input: AC 100-240V, 50/60Hz, 1.7A Output: DC 5V, 3A or DC 9V, 3A or DC 11V, 6.1A or DC 20V, 3.25A

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 30MHz)

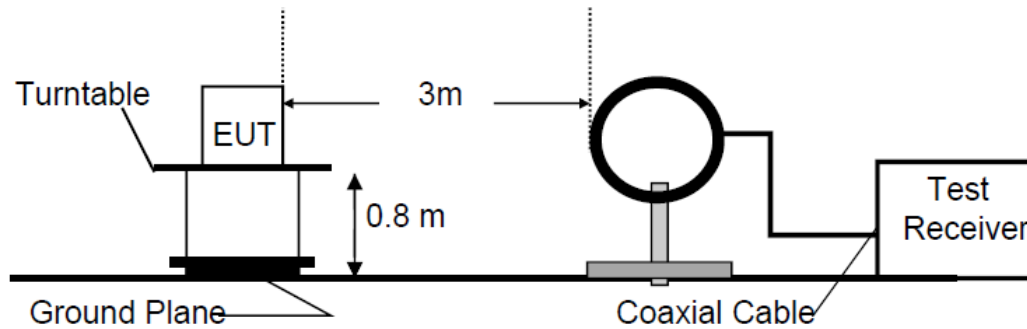


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

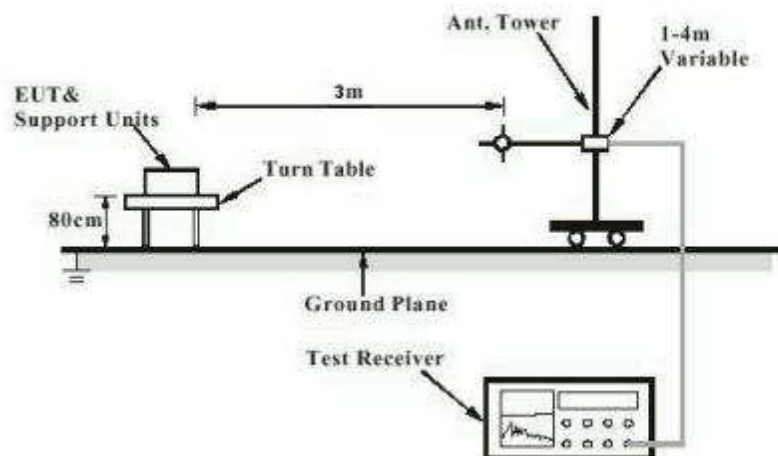


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

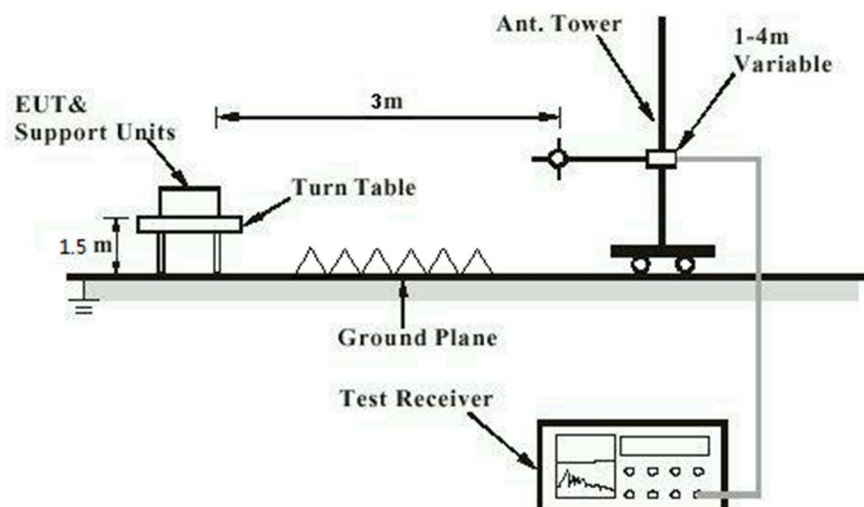


Diagram of Measurement Configuration for Mains Conduction Measurement

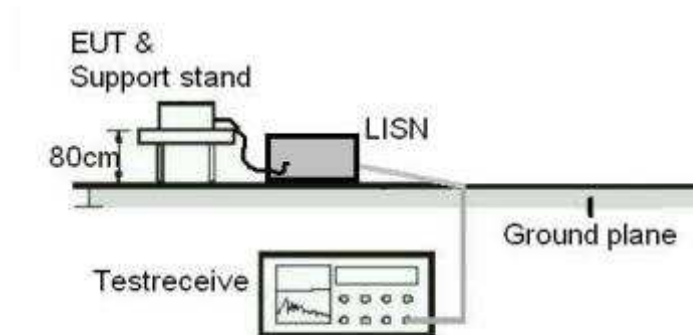
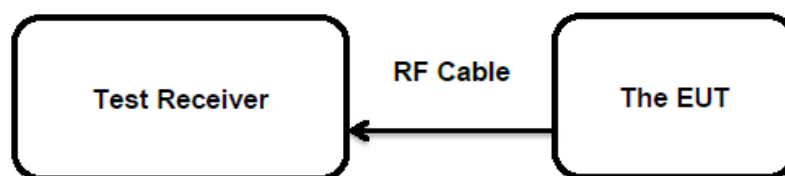


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203
RSS-Gen Clause 8.3

According to the manufacturer declared, the EUT has an integral antenna, the directional gain of antenna is -6.17 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

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5.1.2 Maximum Conducted Output Power

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(b)(1)
RSS-247 Clause 5.4(b)
Basic standard : ANSI C63.10: 2013
FHSS<0.125W(Maximum peak conducted output
Limits : power)
< 4 W (e.i.r.p.)
Kind of test site : Shielded Room

Test Setup

Date of testing : 11.03.2021
Input voltage : DC 3.7V
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 5: Test Result of Maximum Conducted Output Power

Test Mode	Channel Frequency (MHz)	Measured Peak Output Power		Measured Average Output Power		Limit (W)
		(dBm)	(W)	(dBm)	(W)	
BDR	2402	2.9	0.00195	2.8	0.00191	< 0.125
	2441	5.0	0.00316	4.9	0.00309	
	2480	4.6	0.00288	4.5	0.00282	
EDR	2402	3.9	0.00245	1.6	0.00145	< 0.125
	2441	6.2	0.00417	3.9	0.00245	
	2480	6.1	0.00407	3.9	0.00245	

Note: The cable loss is taken into account in results and the maximum e.i.r.p. is -0.07 dBm less than 4W(36dBm).

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5.1.3 99% Bandwidth

RESULT:

Pass

Test Specification

Test standard : RSS-Gen Clause 6.7
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 11.03.2021
Input voltage : DC 3.7V
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 6: Test Result of 99% Bandwidth

Test Mode	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)
BDR	2402	925	/
	2441	925	
	2480	925	
EDR	2402	1225	/
	2441	1225	
	2480	1225	

For the measurement records, refer to the appendix B

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5.1.4 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 11.03.2021
Input voltage	: DC 3.7V
Operation mode	: A.1
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test plot, and compliance is achieved as well.

For the measurement records, refer to the appendix B.

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5.1.5 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Table 6 & Table 7
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 03.03.2021 to 09.03.2021
Input voltage	: DC 3.7V
Operation mode	: A.1
Test channel	: Low / Middle / High
Ambient temperature	: 24 °C
Relative humidity	: 47 %
Atmospheric pressure	: 101 kPa

Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test set-up photos.

Testing was carried out within frequency range 9kHz to the tenth harmonics.

For the measurement records, refer to the appendix C.

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5.1.6 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(a)
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 11.03.2021
Input voltage : DC 3.7V
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 7: Test Result of 20dB Bandwidth

Test Mode	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
BDR	2402	1025	683.333	/
	2441	1025	683.333	
	2480	1025	683.333	
EDR	2402	1340	893.333	/
	2441	1370	913.333	
	2480	1370	913.333	

For the measurement records, refer to the appendix B.

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5.1.7 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(b)
Basic standard : ANSI C63.10: 2013
Limits : $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth, whichever is greater
Kind of test site : Shielded Room

Test Setup

Date of testing : 18.03.2021
Input voltage : DC 3.7V
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : $25\text{ }^{\circ}\text{C}$
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 8: Test Result of Carrier Frequency Separation

Test Mode	Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
BDR	Low Channel	2402.024752	0.980198	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
	Adjacency Channel	2403.004950			
	Middle Channel	2441.024752	0.980198		Pass
	Adjacency Channel	2442.004950			
	High Channel	2479.024752	0.980198		Pass
	Adjacency Channel	2480.004950			
EDR	Low Channel	2402.024752	0.980198	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
	Adjacency Channel	2403.004950			
	Middle Channel	2441.024752	0.980198		Pass
	Adjacency Channel	2442.004950			
	High Channel	2479.024752	1.009901		Pass
	Adjacency Channel	2480.034653			

Note:

The limit is maximum $2/3$ of the 20 dB bandwidth: 913.333 KHz .

For the measurement records, refer to the appendix B.

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5.1.8 Number of Hopping Frequency

RESULT:

Pass

Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(d)
Basic standard : ANSI C63.10: 2013
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shielded Room

Test Setup

Date of testing : 11.03.2021
Input voltage : DC 3.7V
Operation mode : B
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 9: Test Result of Number of Hopping Frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2402 to 2480 MHz	79	≥ 15	Pass

For the measurement records, refer to the appendix B.

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5.1.9 Time of Occupancy

RESULT:

Pass

Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(d)
Basic standard : ANSI C63.10: 2013
Limits : < 0.4s
Kind of test site : Shielded Room

Test Setup

Date of testing : 11.03.2021
Input voltage : DC 3.7V
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 10: Test Result of Time of Occupancy

Test Mode	Channel	Data Packet	Pulse width (ms)	Measured Dwell time(s)	Limit (s)
BDR	2441	DH1	0.400	0.128	< 0.4s
		DH3	1.667	0.267	
		DH5	2.904	0.310	
EDR	2441	3DH1	0.403	0.129	< 0.4s
		3DH3	1.610	0.258	
		3DH5	2.815	0.300	

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 x 79 (channel) = 31.6 seconds

Prüfbericht - Nr.: CN21QCJM 001
Test report no.

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5.1.10 Conducted Emission on AC Mains

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 03.03.2021
Input voltage	: AC 120V, 60Hz
Operation mode	: C
Earthing	: Not connected
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix C.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:

Pass

Test Specification

Test standard : CFR47 FCC Part 2.1093
RSS-102 Issue 5 March 2019
FCC KDB Publication 447498 v06
Limit : CFR47 FCC Part 1.1310

The measured maximum conducted average output power of the EUT is 4.9 dBm $\approx$ 3.09 mW, which is below the SAR exclusion threshold level 10mW (SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and $\leq$ 50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v06.

The measured maximum conducted average output power of the EUT is 4.9 dBm $\approx$ 3.09 mW and the measured maximum specified e.i.r.p of the EUT is -1.27dBm $\approx$ 0.75mW, which is below the SAR exclusion threshold level 4mW, hence the EUT is excluded from SAR evaluation according to RSS-102 Issue 5 section 2.5.1.

7 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

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Appendix B

Test Results of Conducted Testing

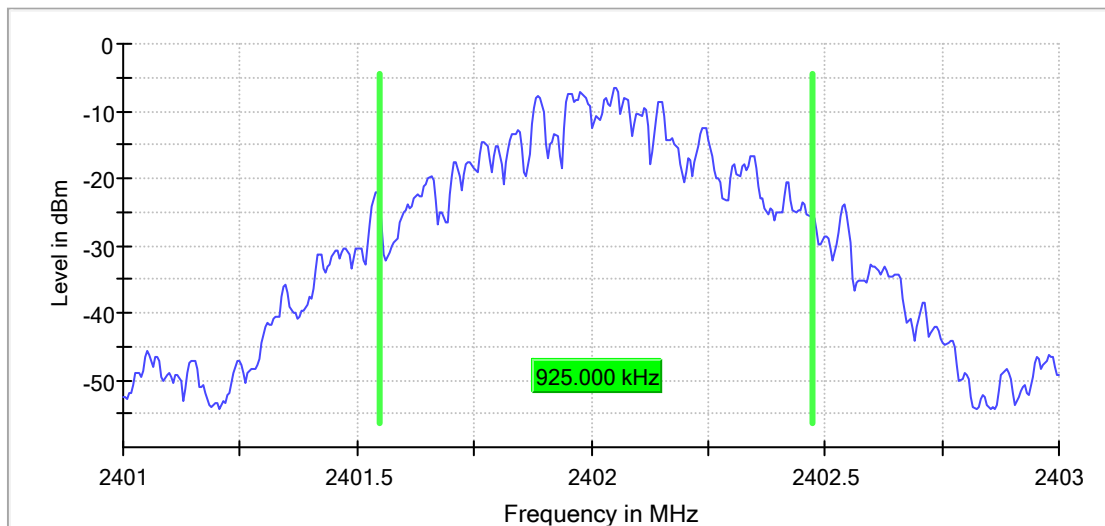
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Appendix B.1: Test Plots of 99% Bandwidth

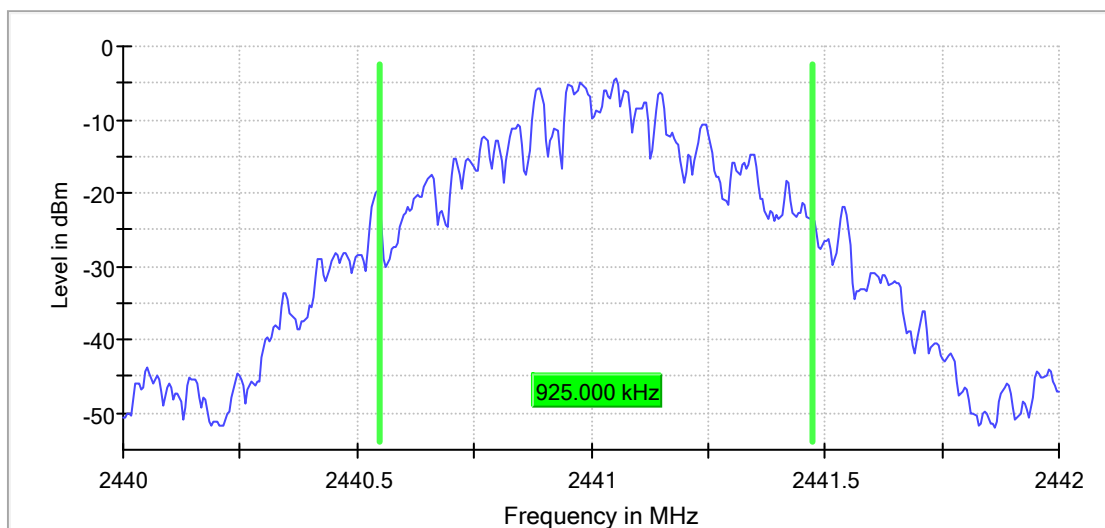
BDR Mode, DH1

RBW=10KHz, VBW=30KHz

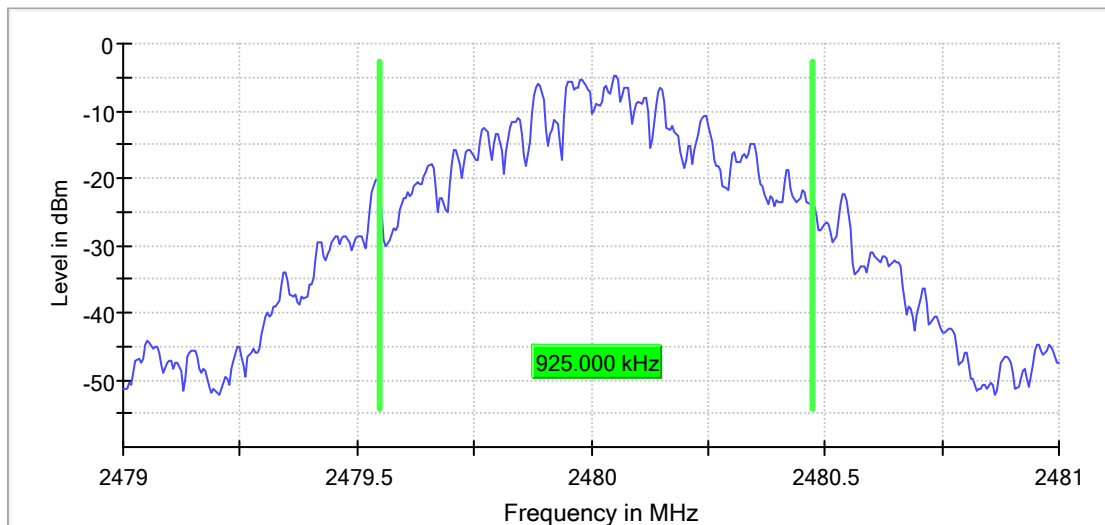
99 % Bandwidth



99 % Bandwidth



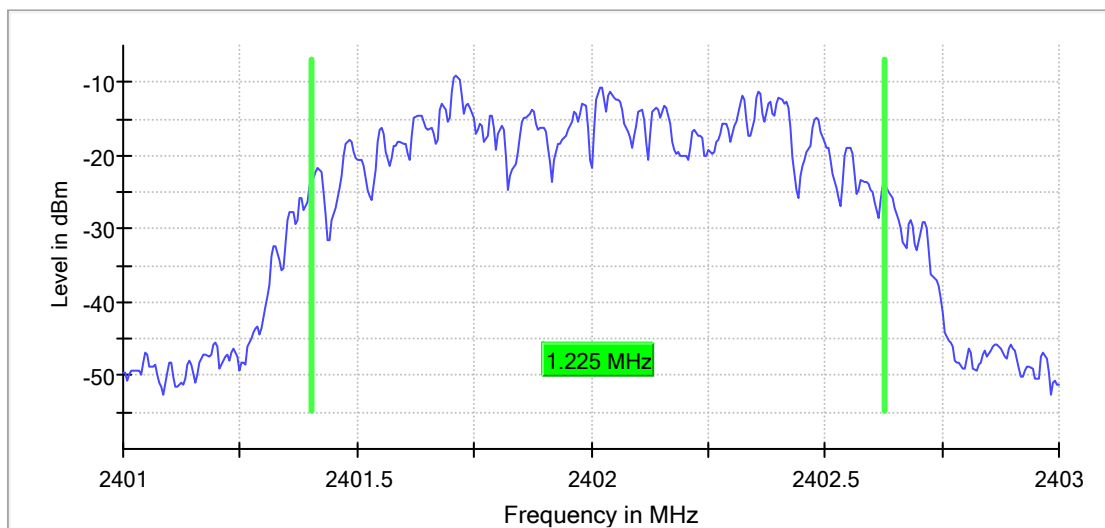
99 % Bandwidth



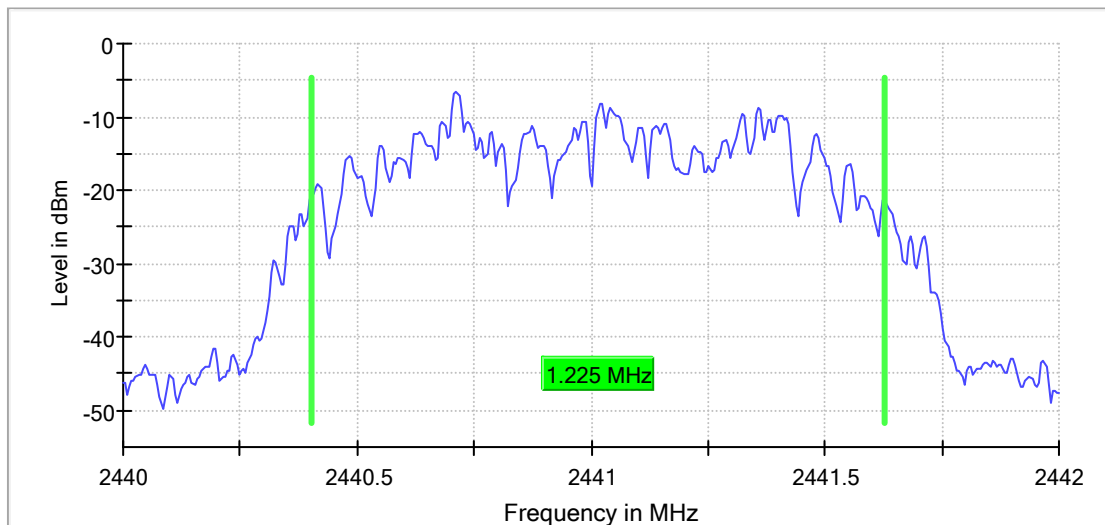
EDR Mode, 3DH1

RBW=30KHz VBW=100KHz

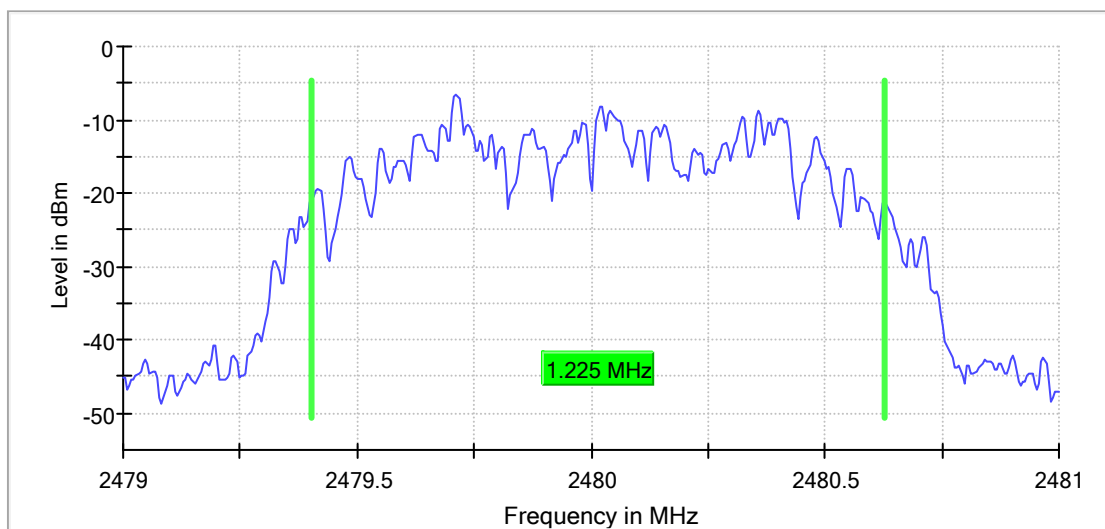
99 % Bandwidth



99 % Bandwidth



99 % Bandwidth

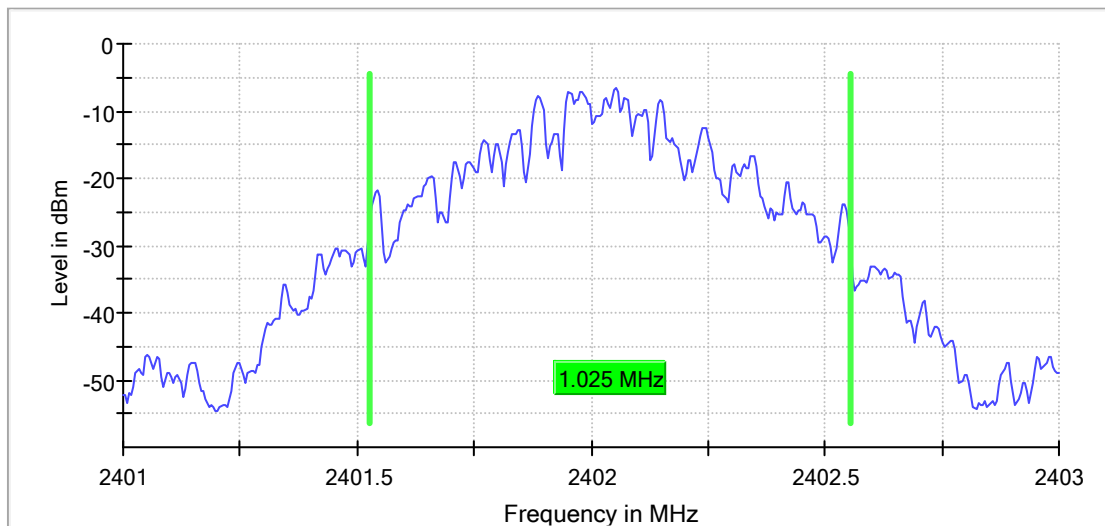


Appendix B.2: Test Plots of 20dB Bandwidth

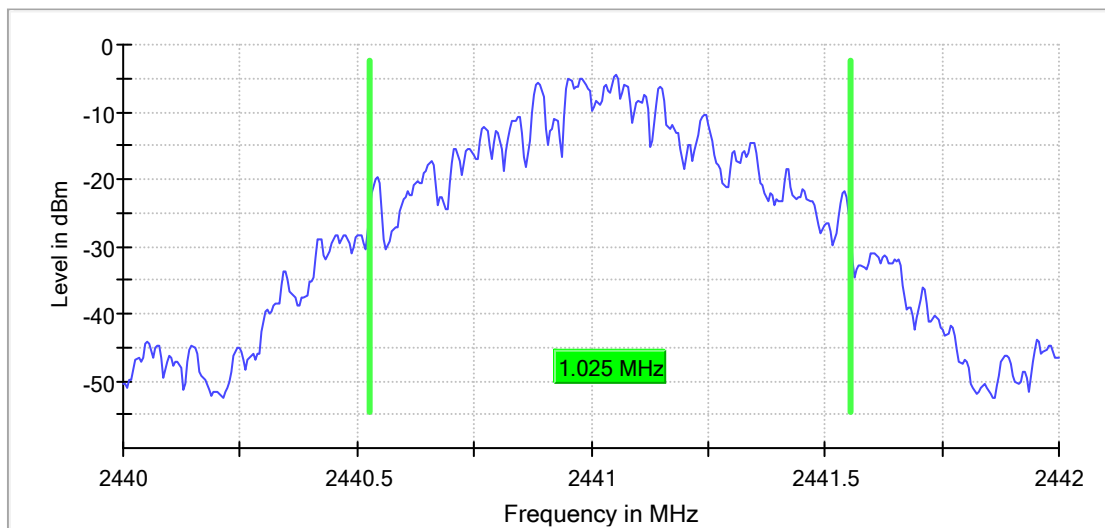
BDR Mode, DH1

RBW=10KHz VBW=30KHz

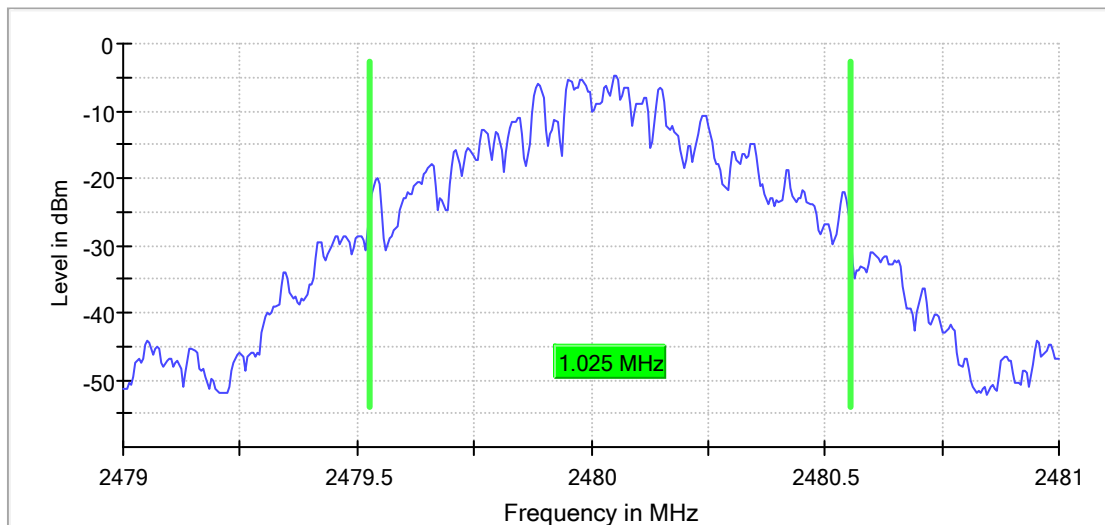
20 dB Bandwidth



20 dB Bandwidth



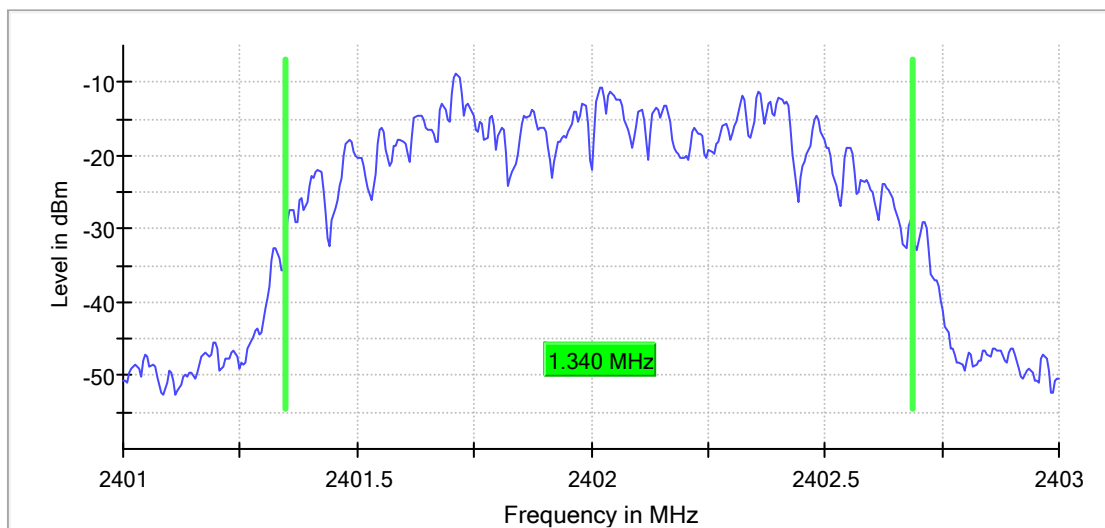
20 dB Bandwidth



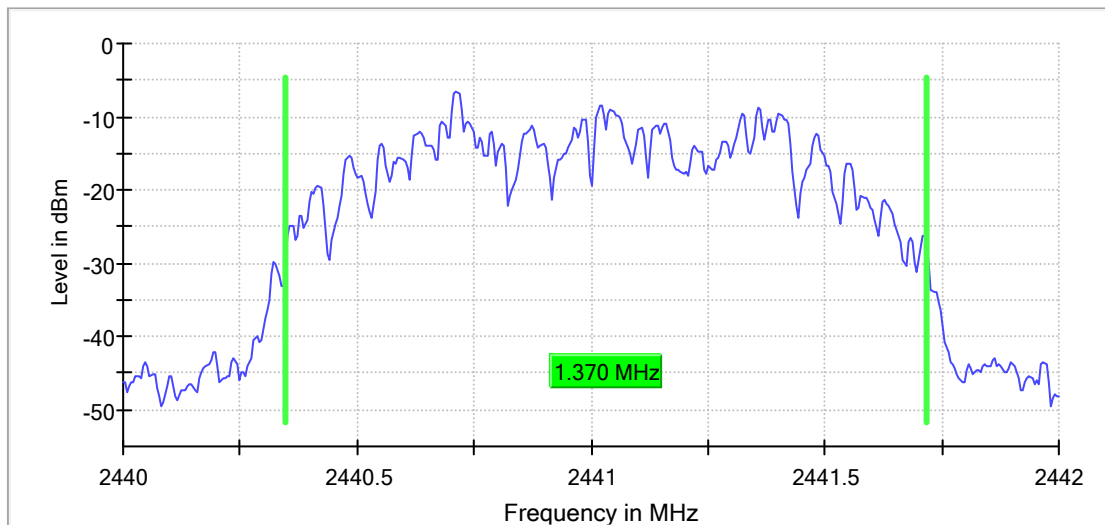
EDR Mode, 3DH1

RBW=30KHz VBW=100KHz

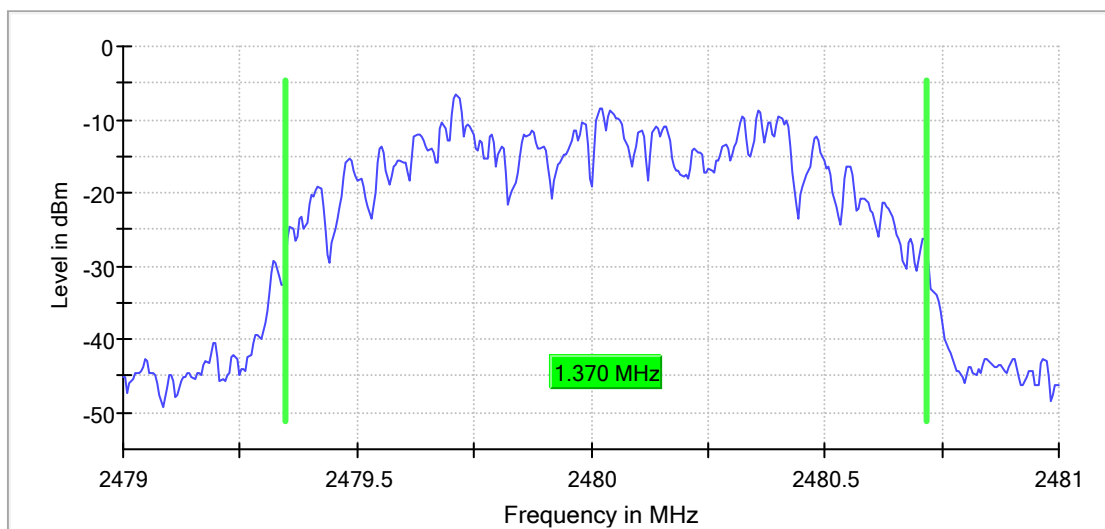
20 dB Bandwidth



20 dB Bandwidth

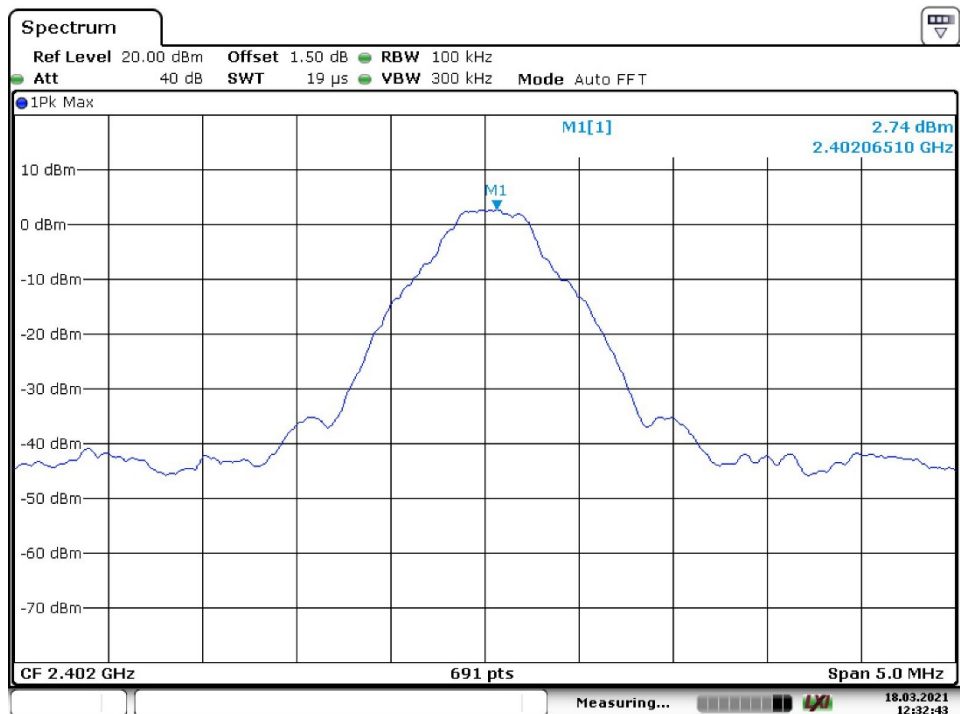


20 dB Bandwidth

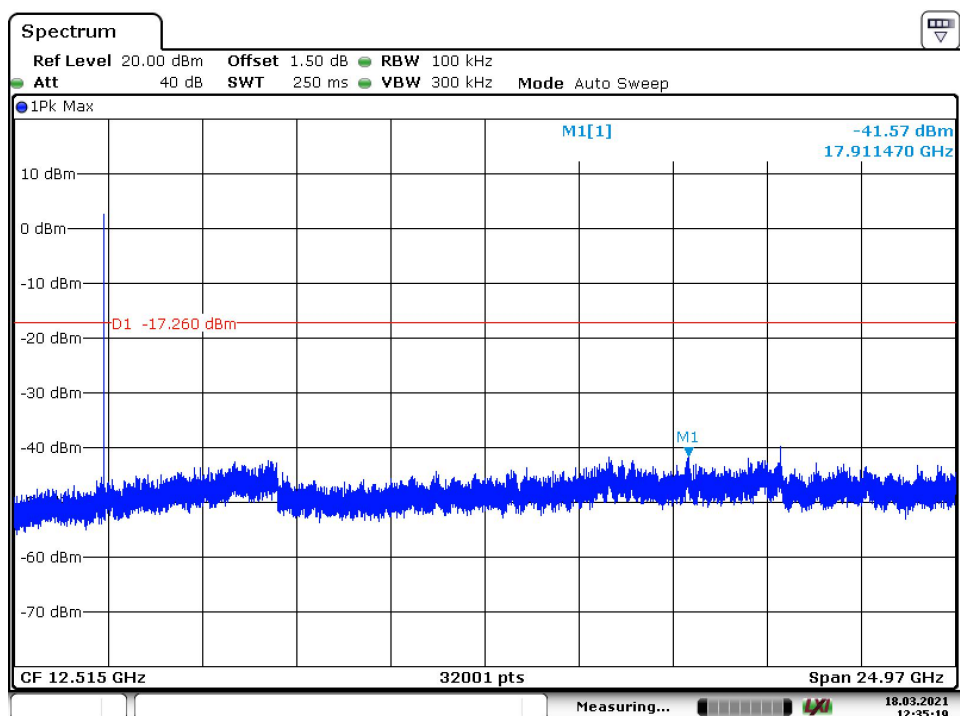


Appendix B.3: Test Plots of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

BDR Mode, Low Channel

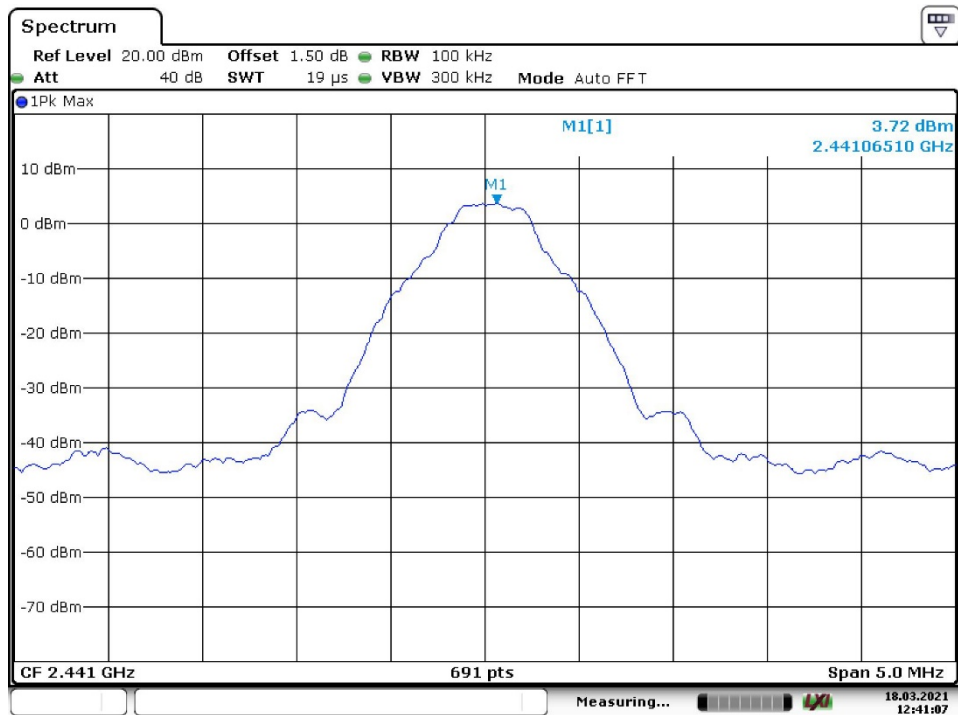


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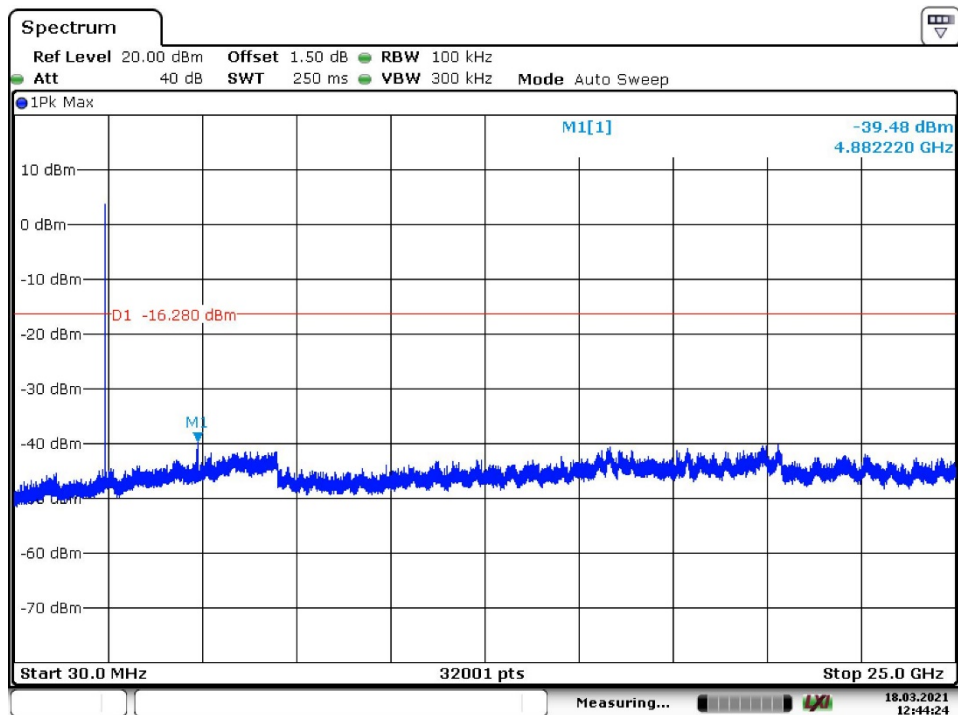


Date: 18.MAR.2021 12:35:19

BDR Mode, Middle Channel

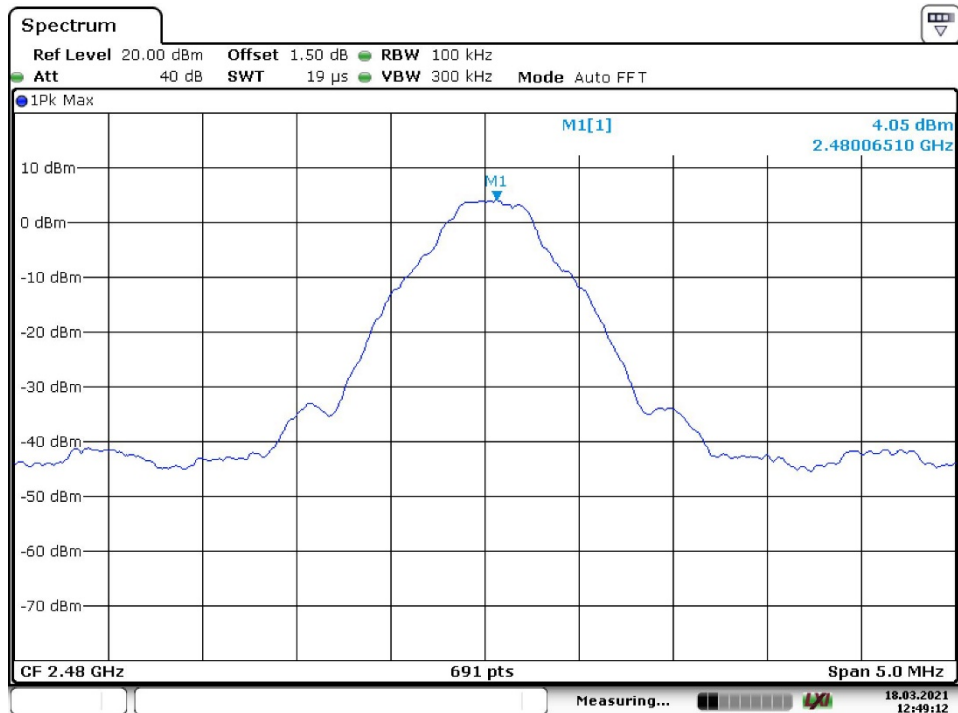


Date: 18.MAR.2021 12:41:08

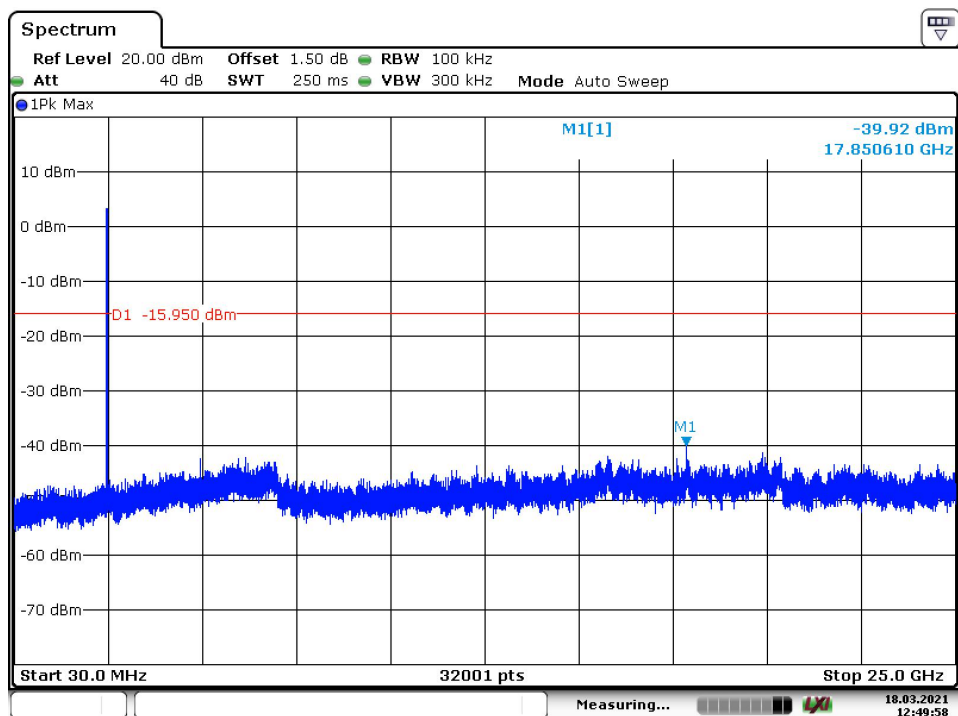


Date: 18.MAR.2021 12:44:24

BDR Mode, High Channel

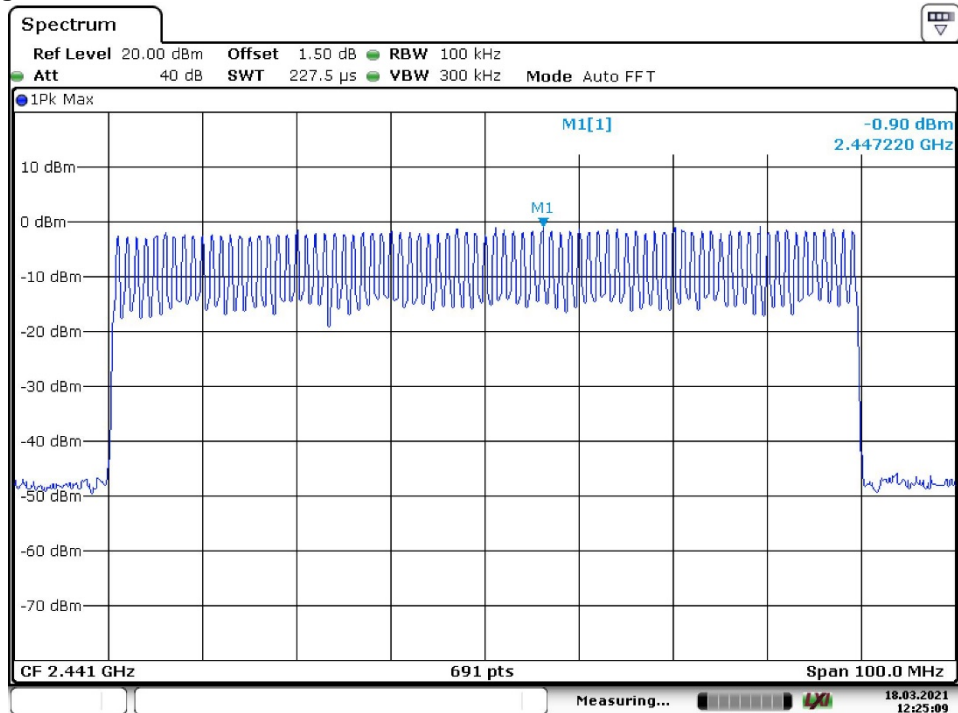


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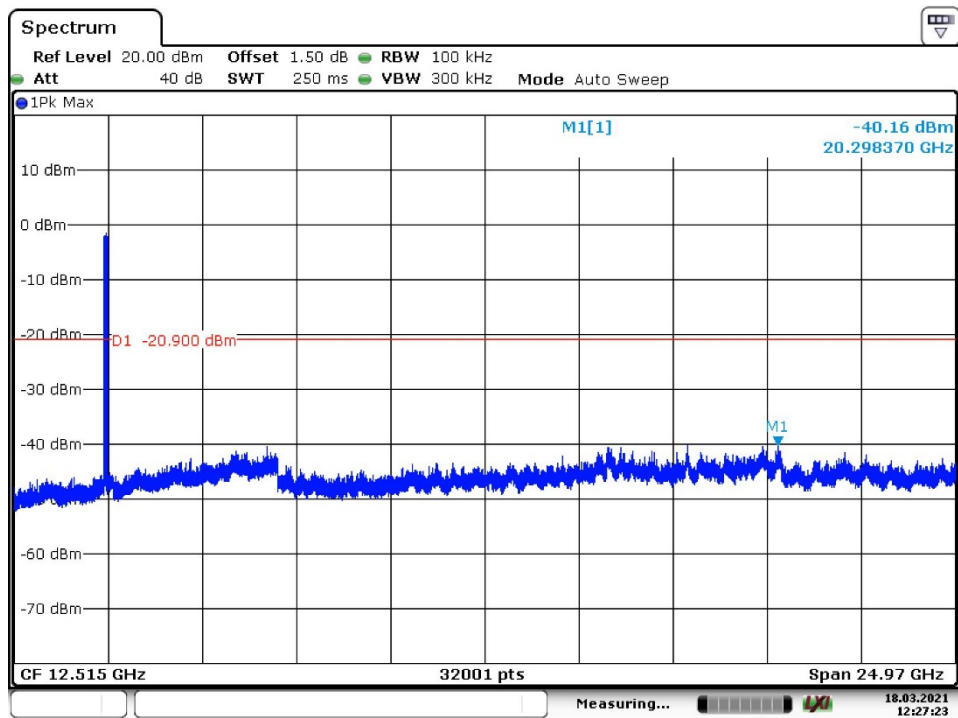


Date: 18.MAR.2021 12:49:58

BDR, Hopping

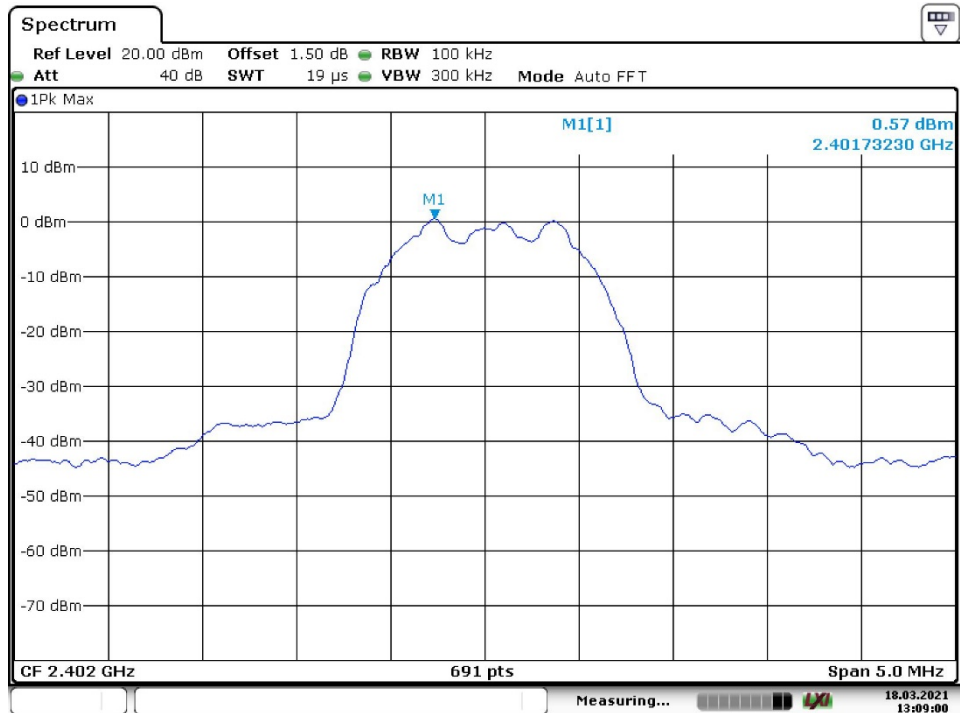


Date: 18.MAR.2021 12:25:09

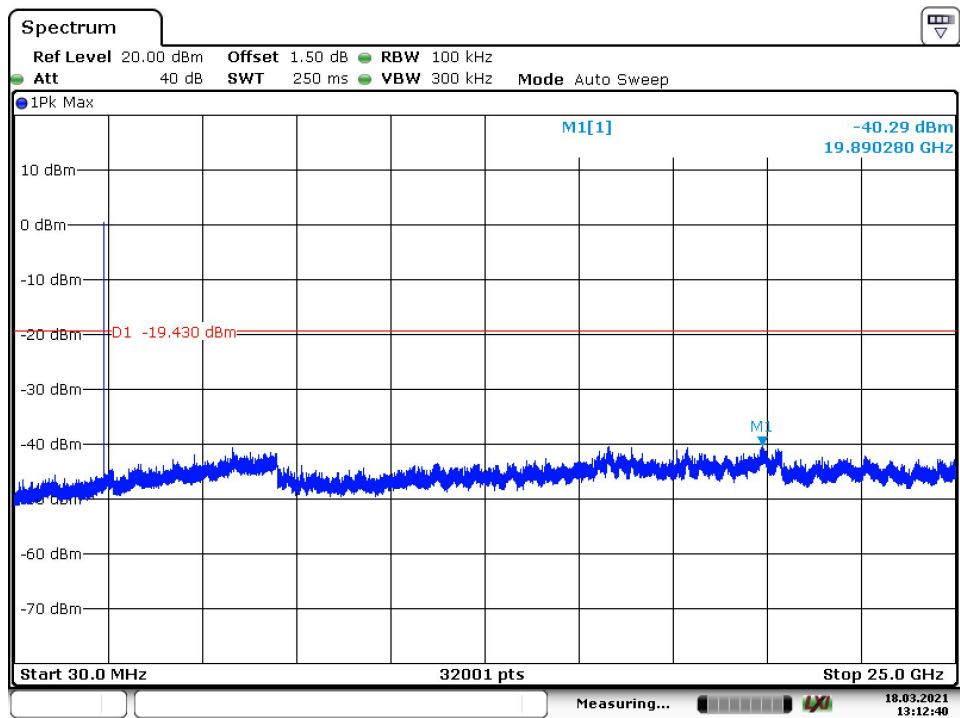


Date: 18.MAR.2021 12:27:23

EDR Mode, Low Channel

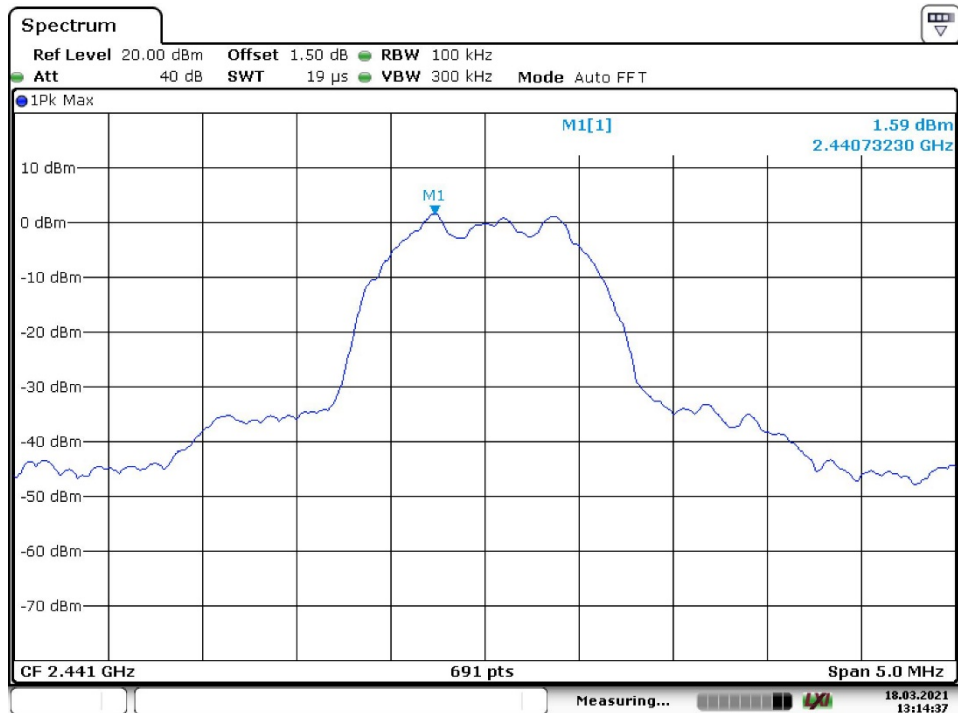


Date: 18.MAR.2021 13:09:00

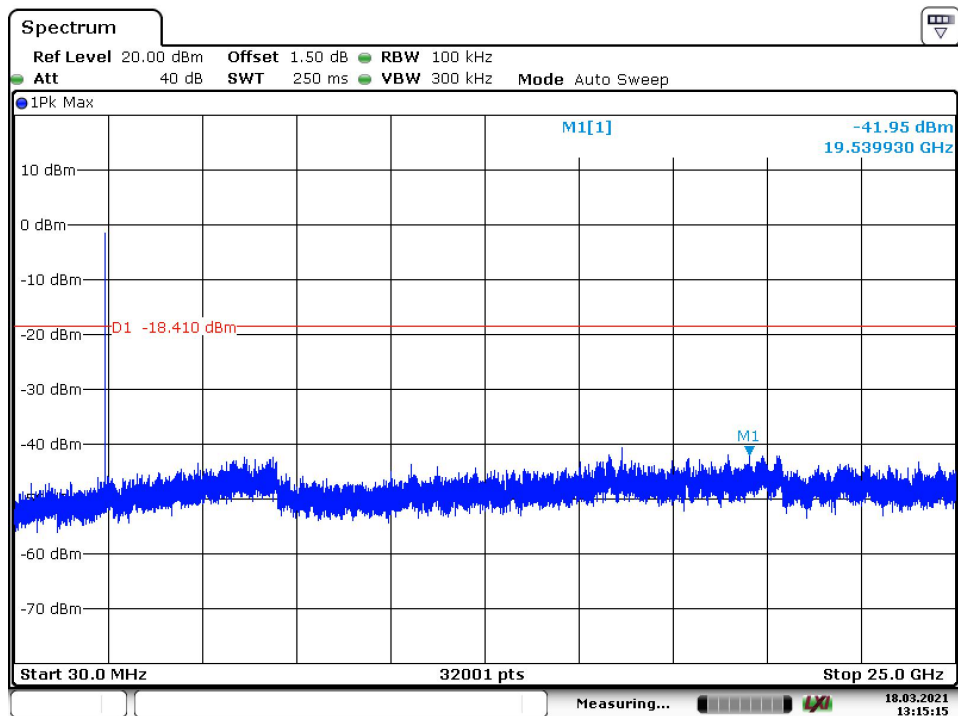


Date: 18.MAR.2021 13:12:41

EDR Mode, Middle Channel

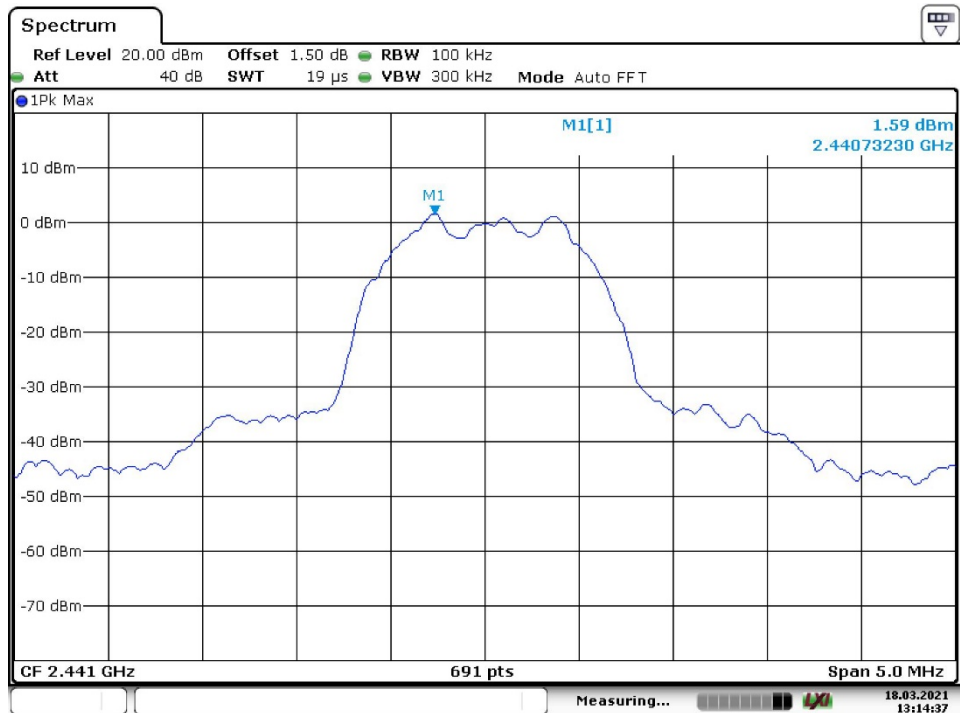


Date: 18.MAR.2021 13:14:38

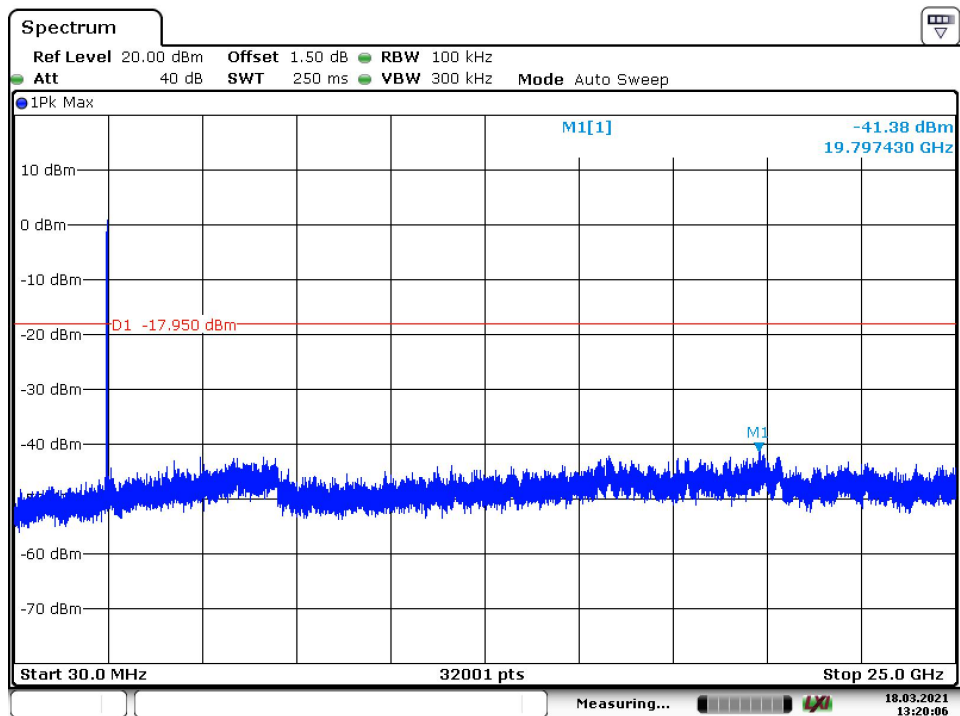


Date: 18.MAR.2021 13:15:15

EDR Mode, High Channel

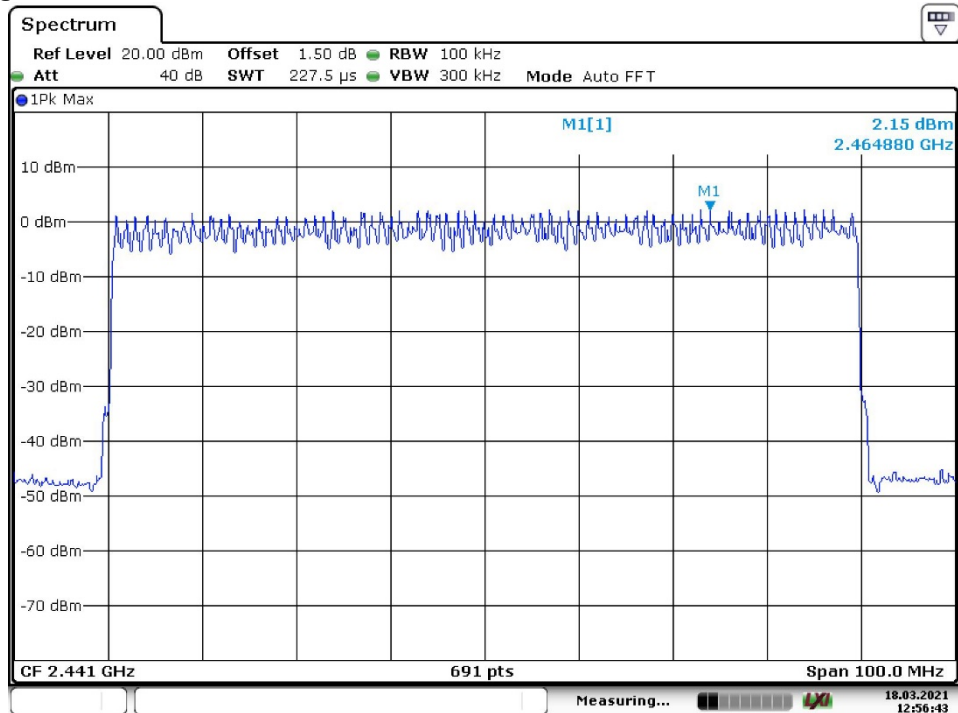


Date: 18.MAR.2021 13:14:38

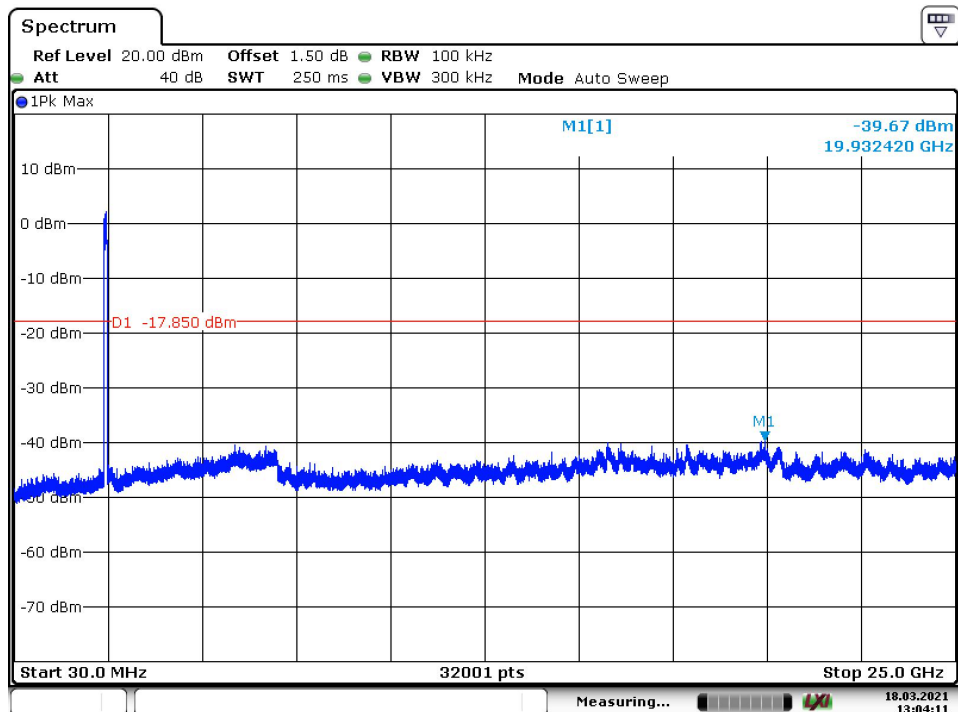


Date: 18.MAR.2021 13:20:07

EDR, Hopping

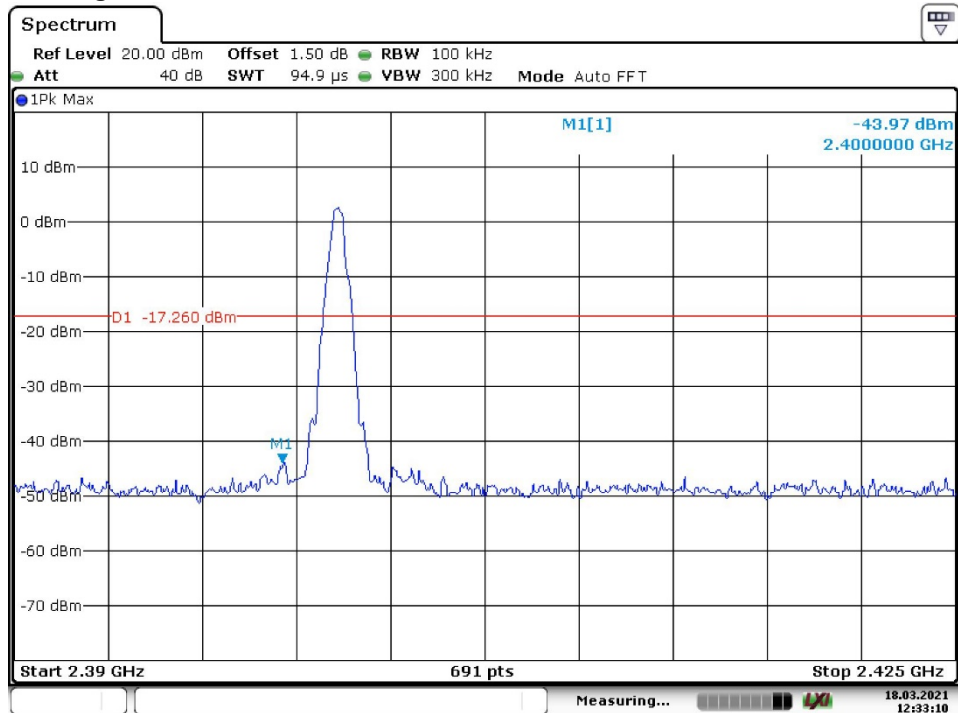


Date: 18.MAR.2021 12:56:44



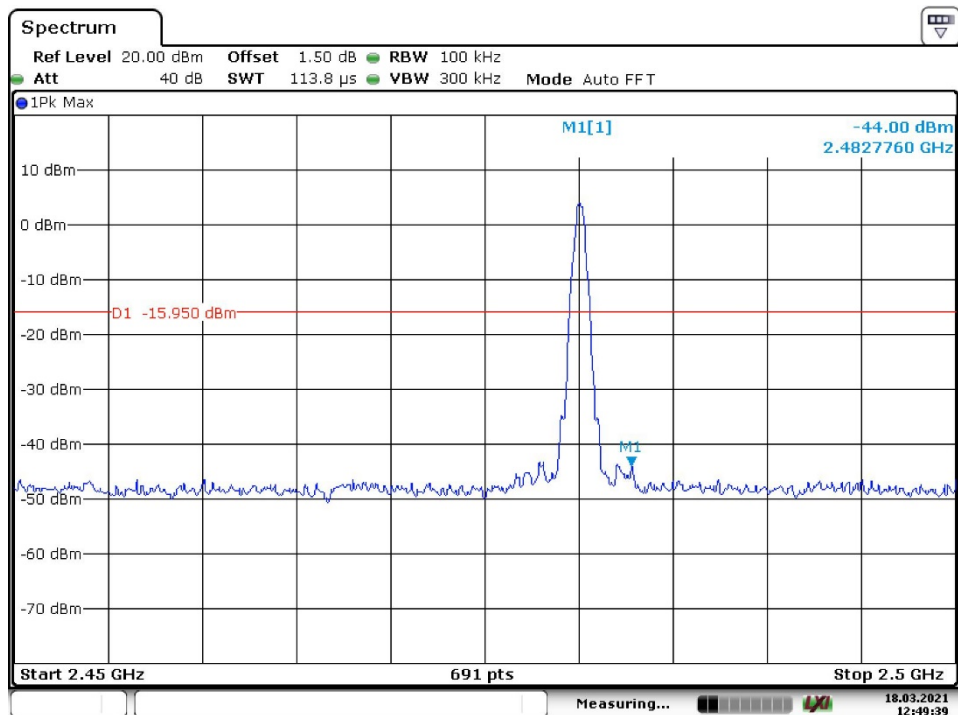
Date: 18.MAR.2021 13:04:11

BDR Mode, Band Edge, Low Channel



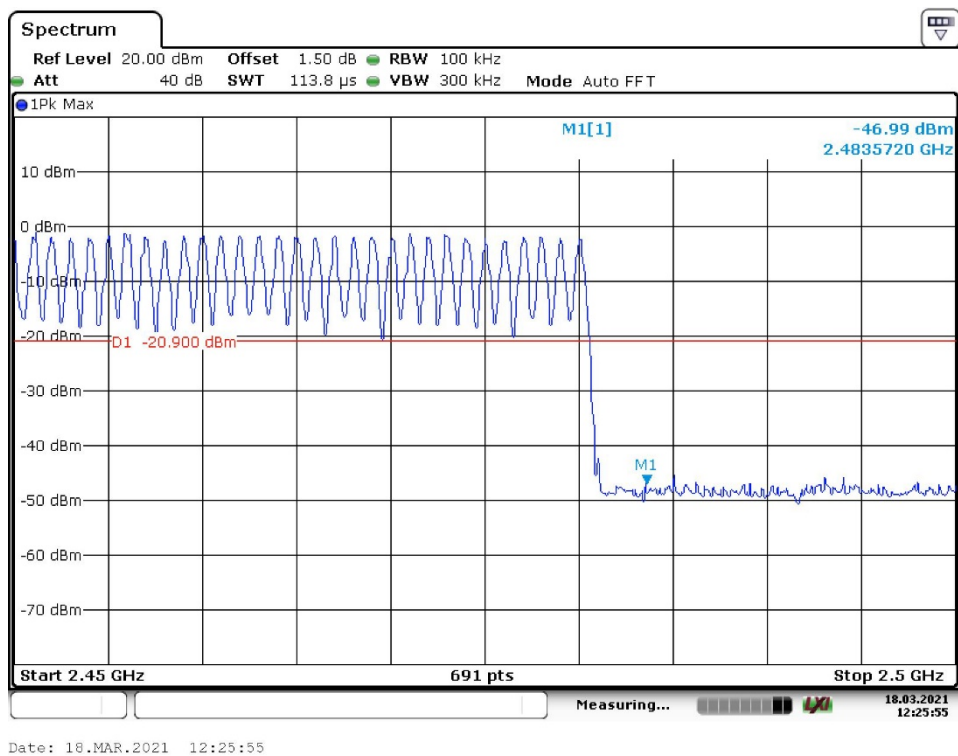
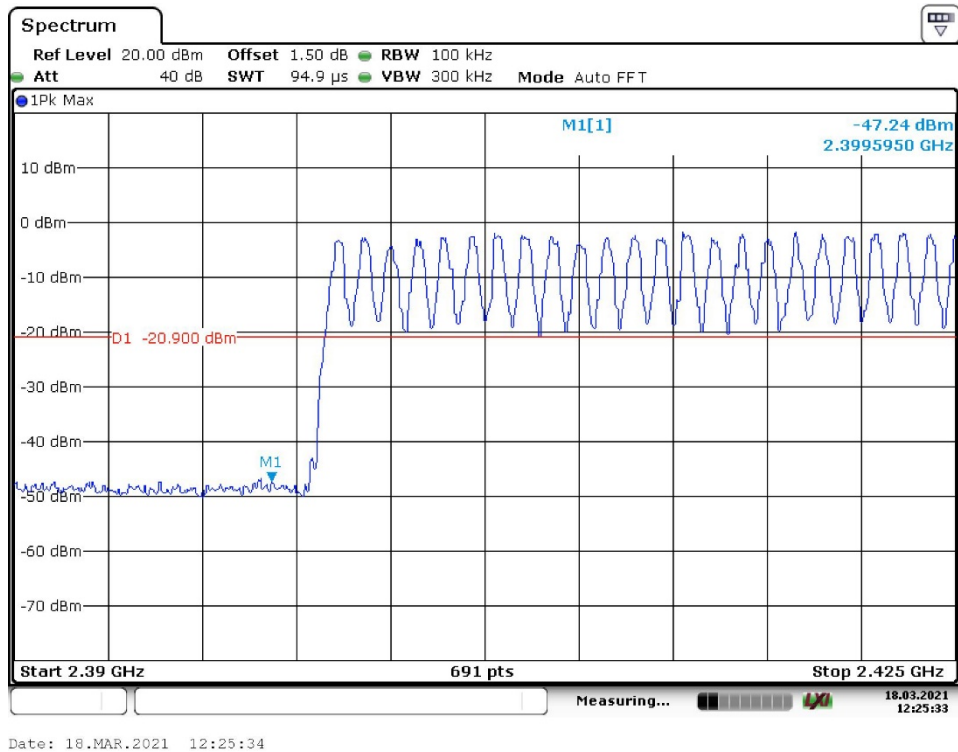
Date: 18.MAR.2021 12:33:11

BDR Mode, Band Edge, High Channel

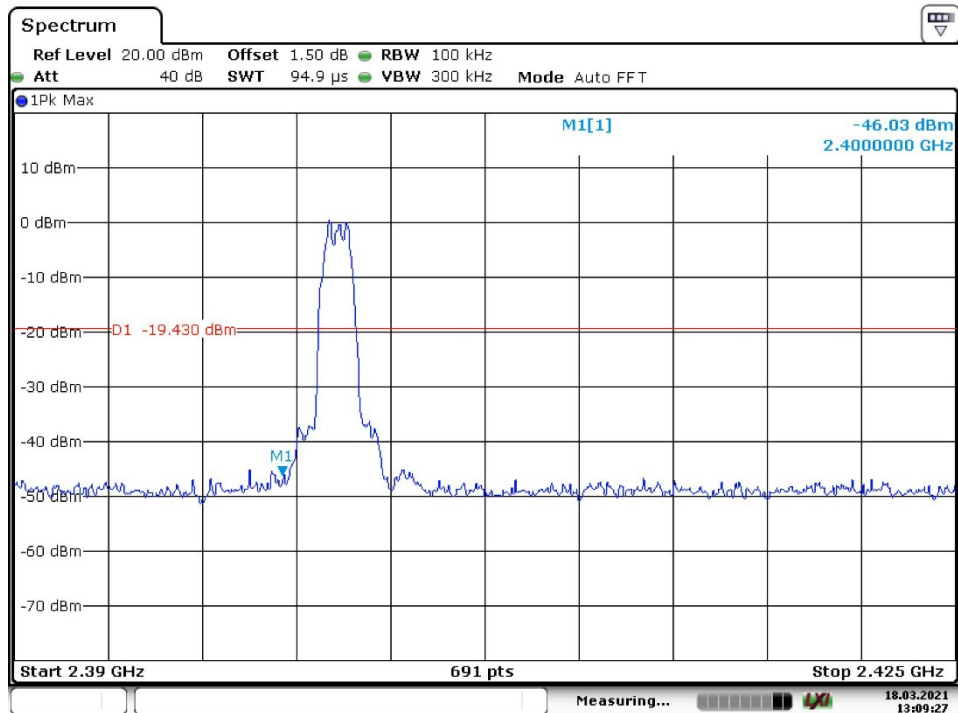


Date: 18.MAR.2021 12:49:39

BDR Mode, Hopping Band Edge

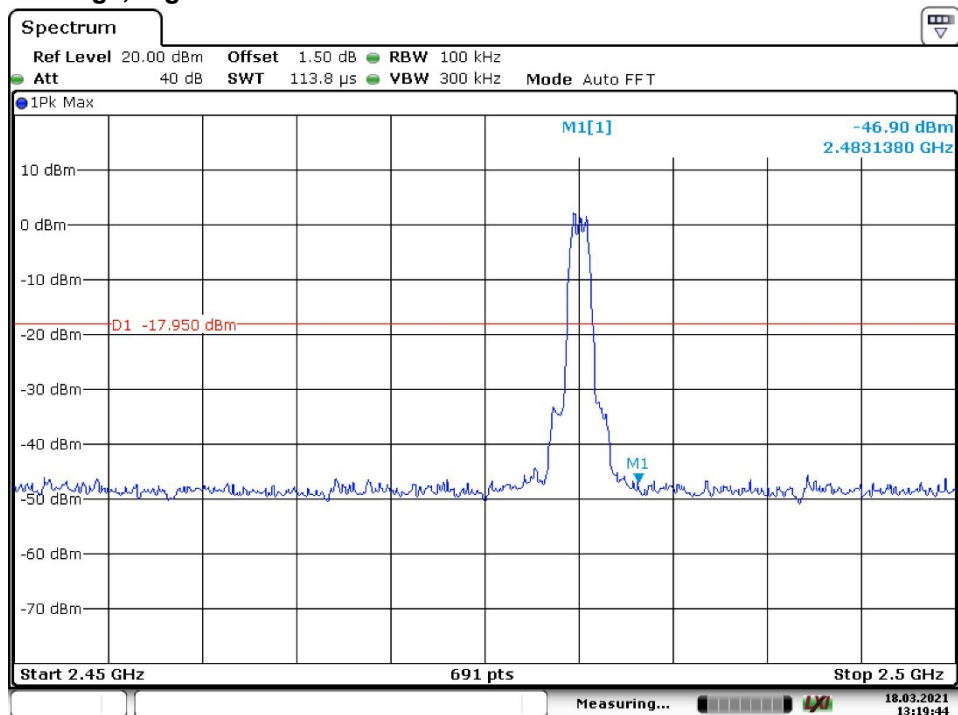


EDR Mode, Band Edge, Low Channel



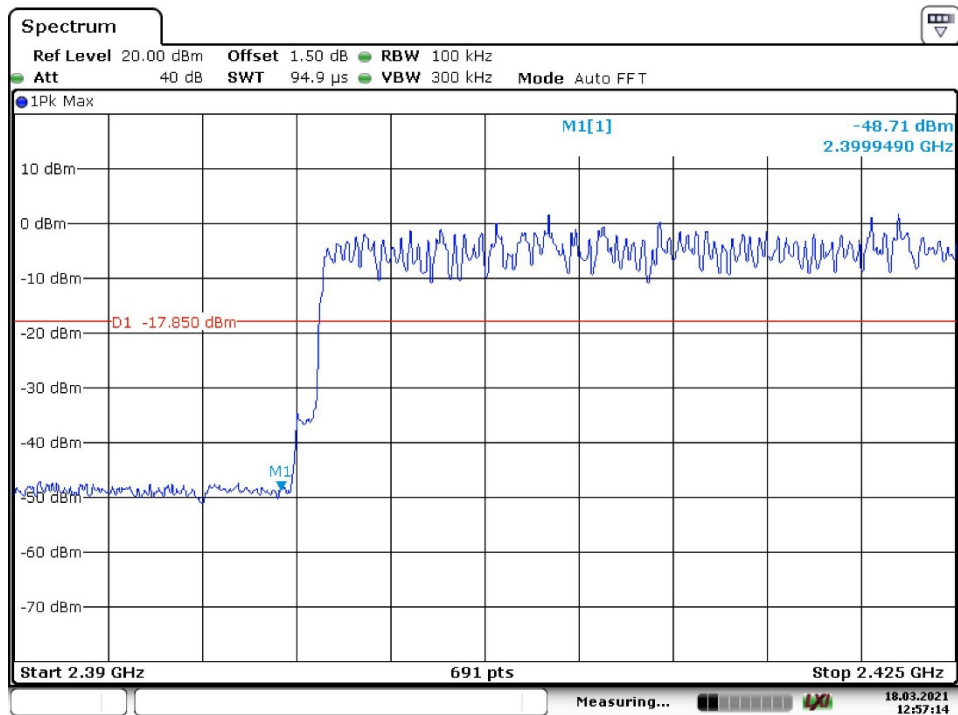
Date: 18.MAR.2021 13:09:27

EDR Mode, Band Edge, High Channel

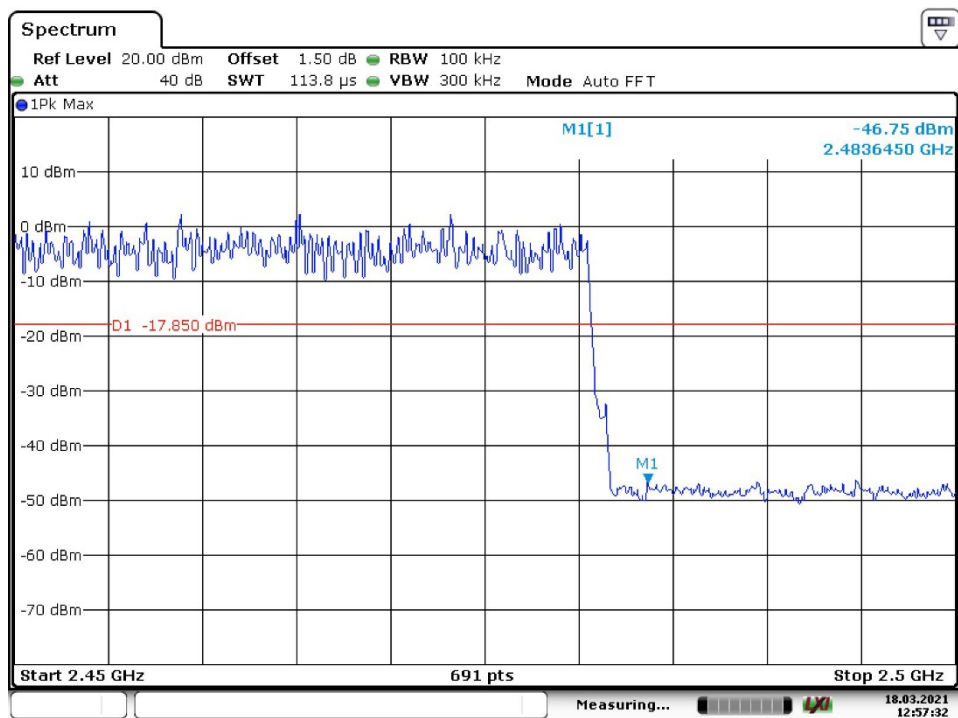


Date: 18.MAR.2021 13:19:44

EDR Mode, Hopping Band Edge



Date: 18.MAR.2021 12:57:14

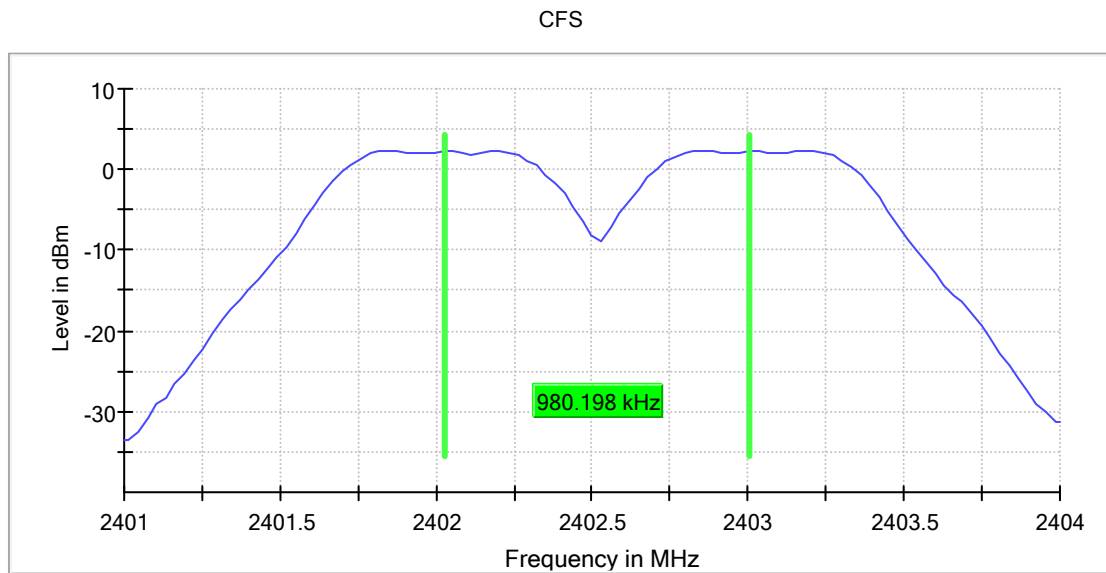


Date: 18.MAR.2021 12:57:32

Appendix B.4: Test Plots of Carrier Frequency Separation

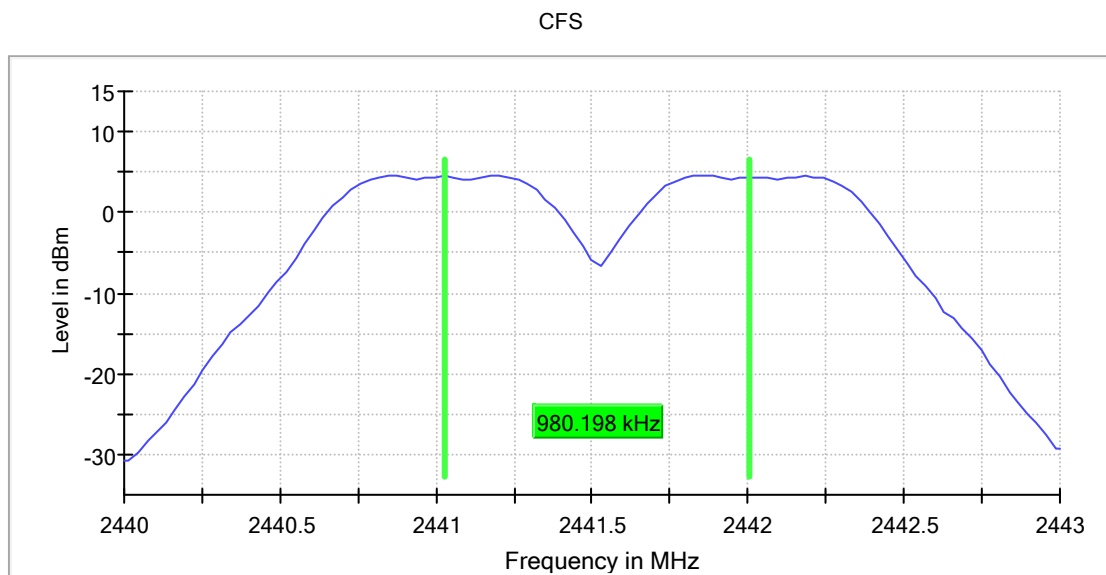
BDR, Low Channel

RBW=300KHz, VBW=300KHz



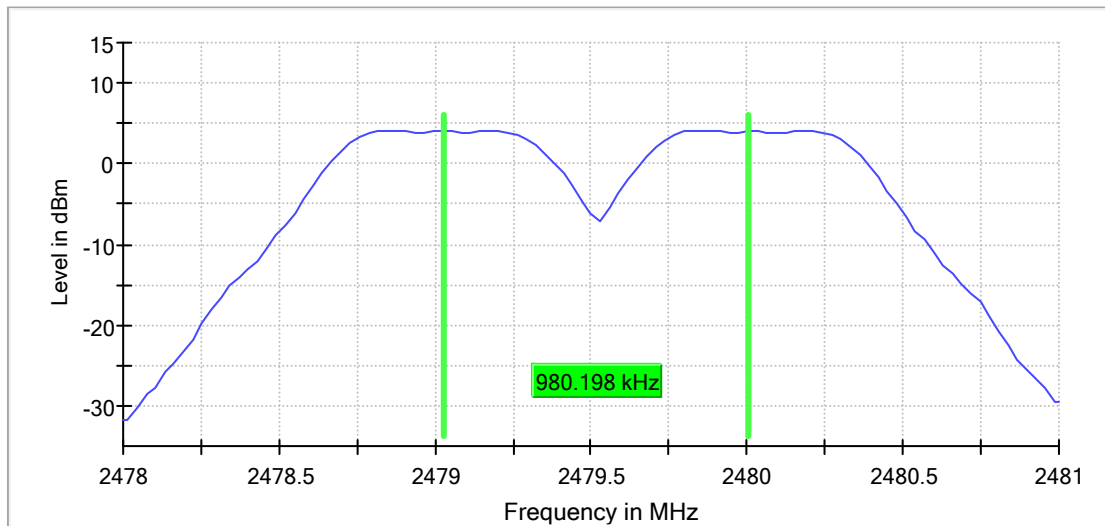
BDR, Middle Channel

RBW=300KHz, VBW=300KHz



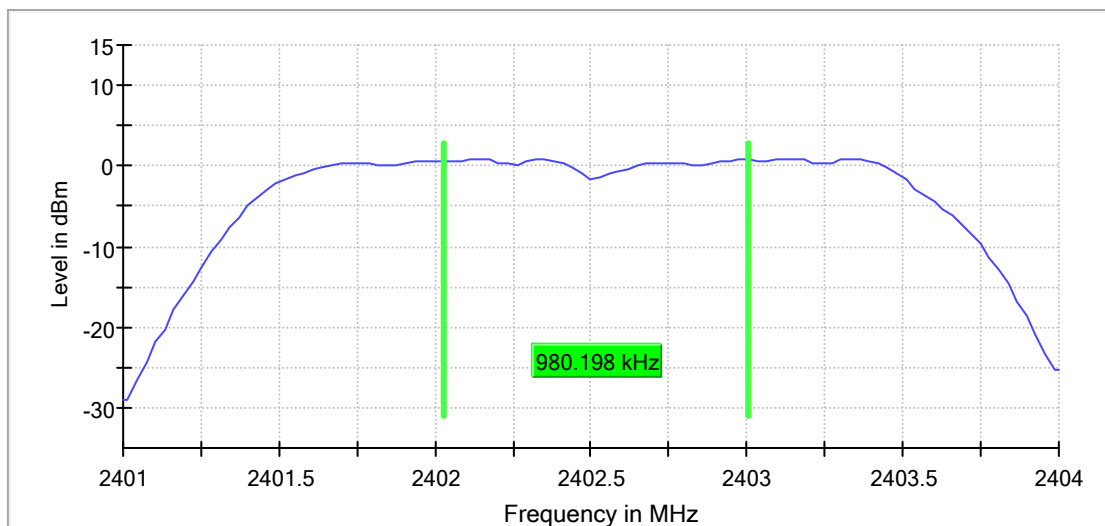
BDR, High Channel
RBW=300KHz, VBW=300KHz

CFS

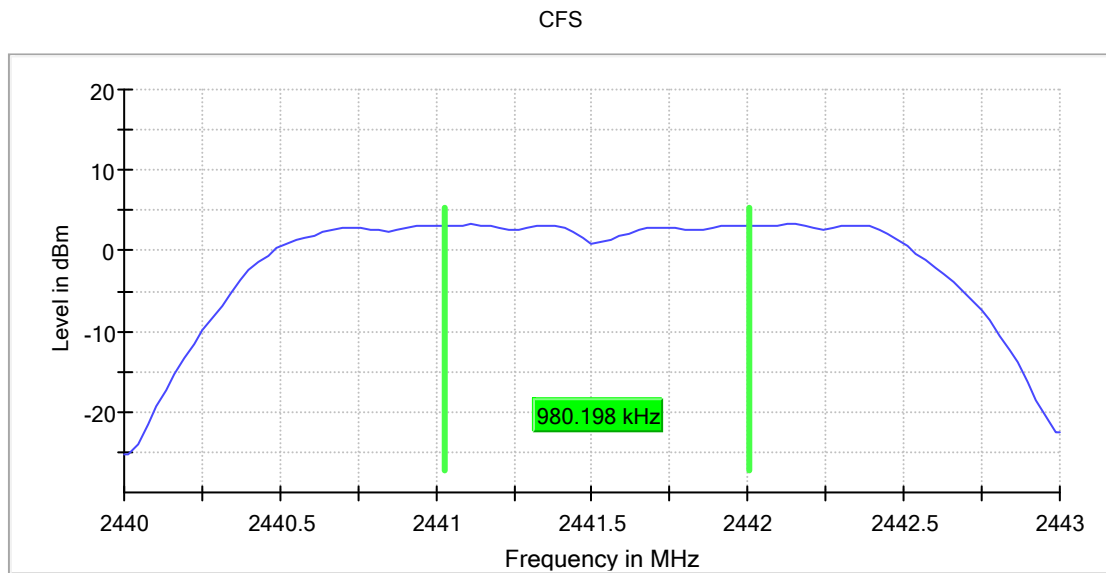


EDR, Low Channel
RBW=300KHz, VBW=300KHz

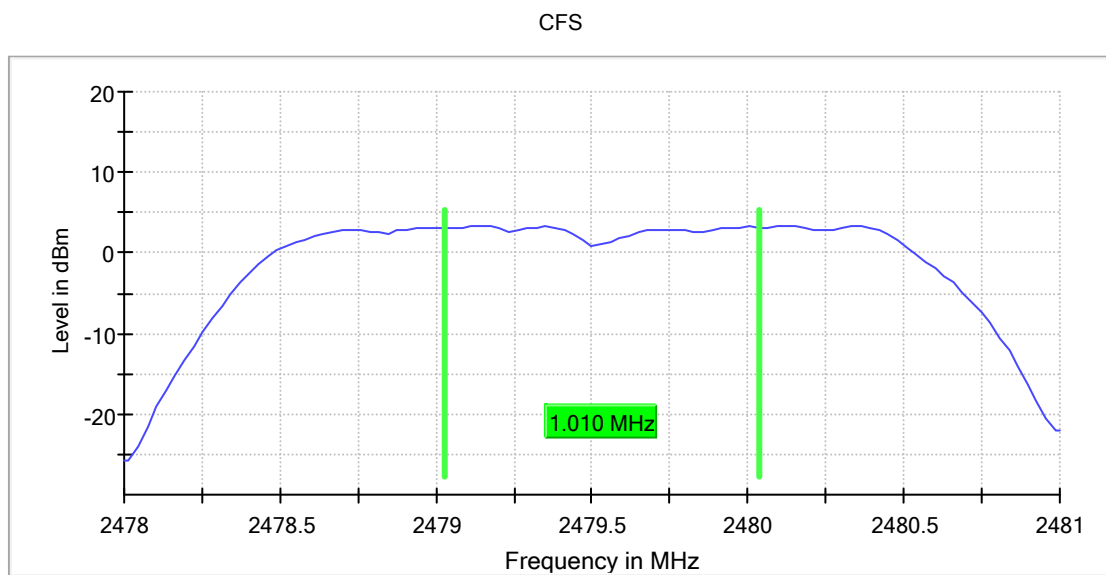
CFS



EDR, Middle Channel
RBW=300KHz, VBW=300KHz

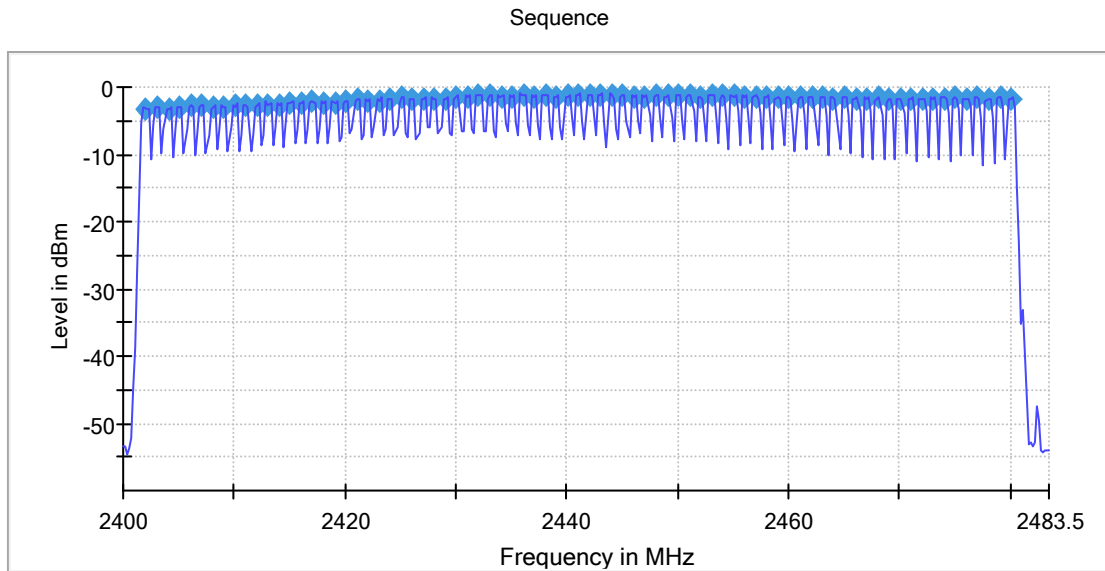


EDR, High Channel
RBW=300KHz, VBW=300KHz

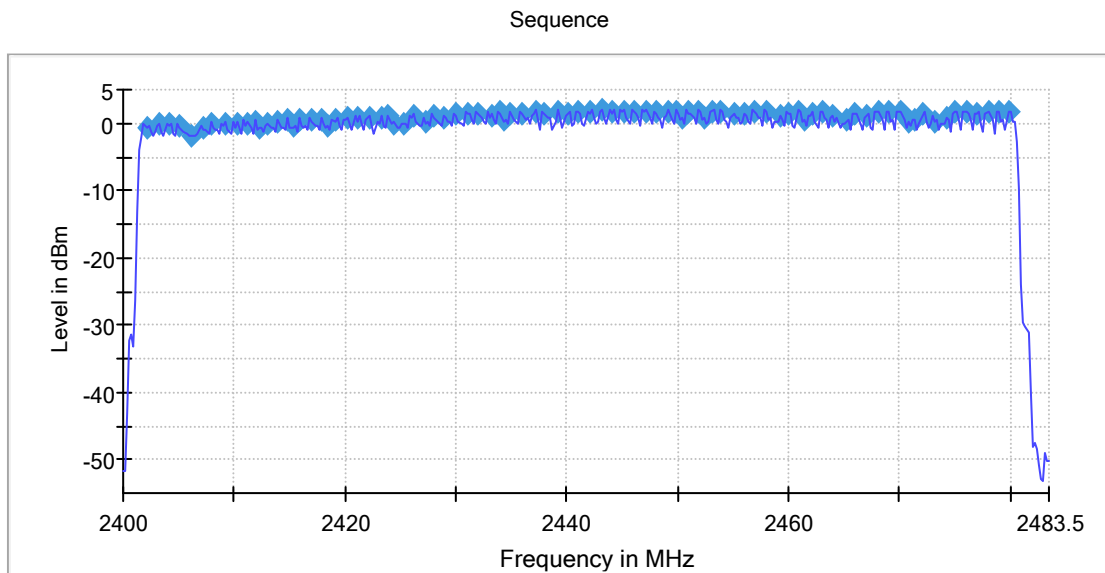


Appendix B.5: Test Plots of Number of Hopping Frequency

BDR, Hopping



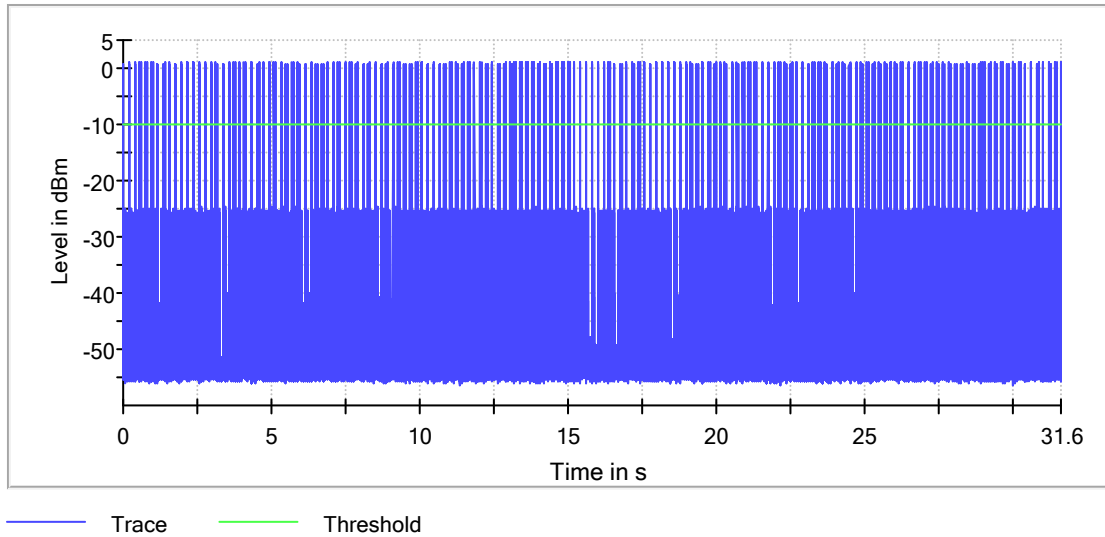
EDR, Hopping



Appendix B.6: Test Plots of Time of Occupancy

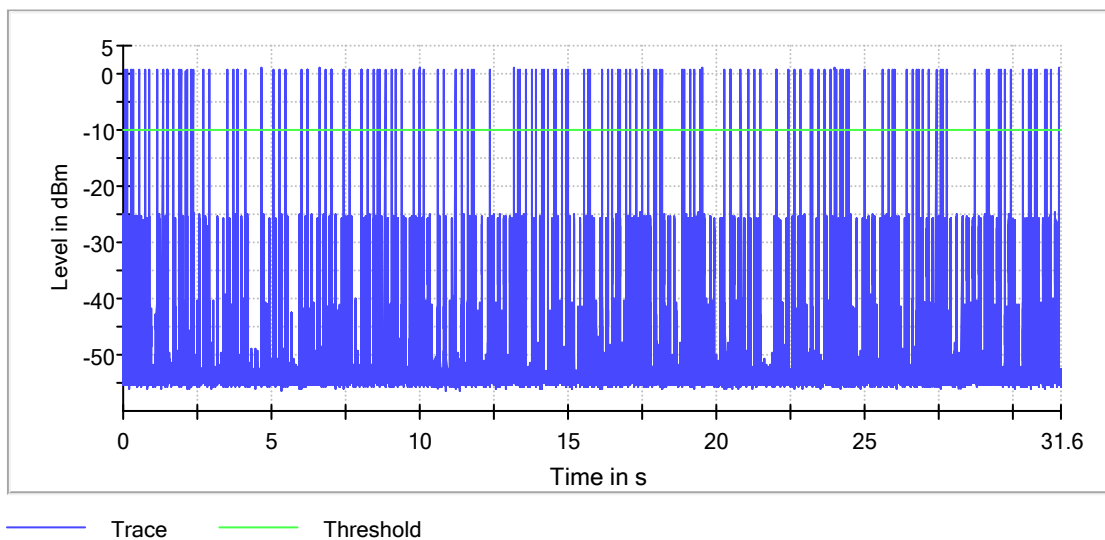
BDR Mode, DH1, Middle Channel

Time of Channel Occupancy



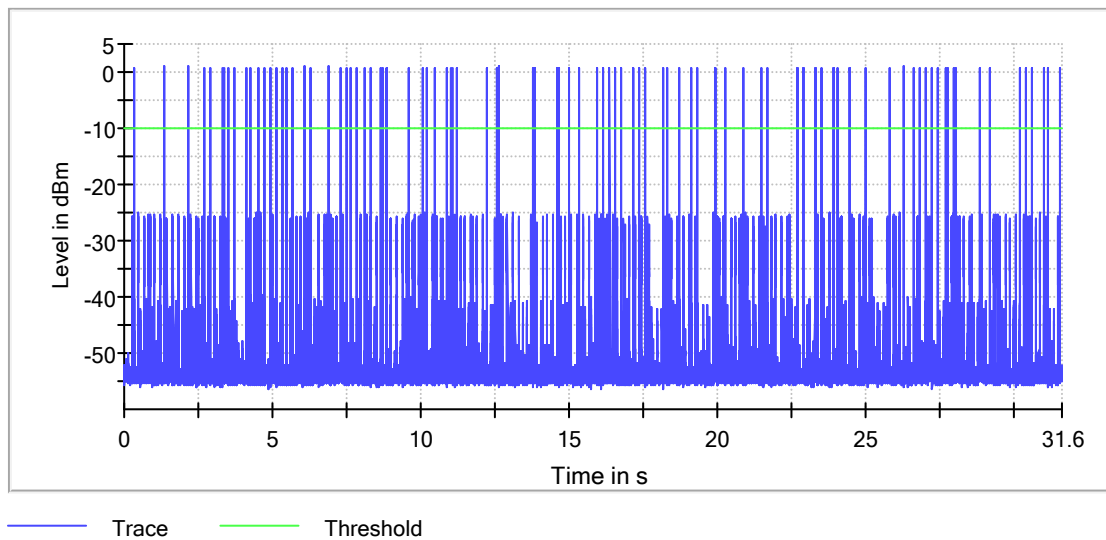
BDR Mode, DH3, Middle Channel

Time of Channel Occupancy(2)



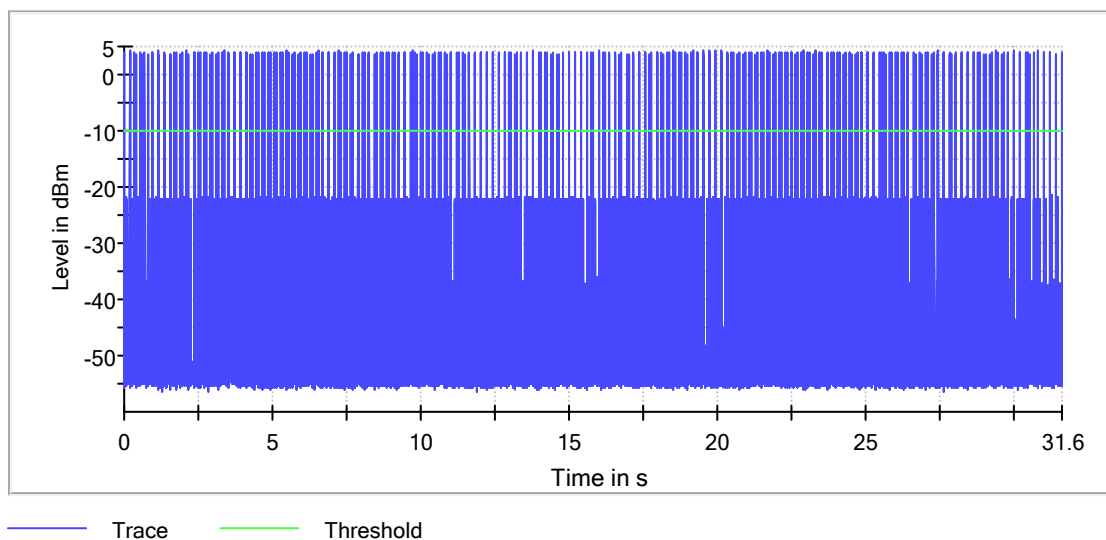
BDR Mode, DH5, Middle Channel

Time of Channel Occupancy(3)



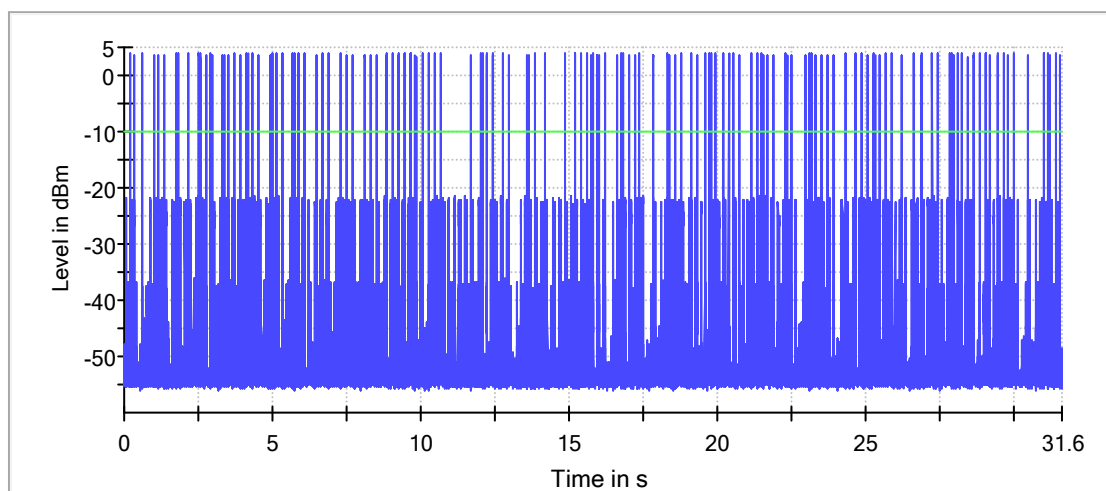
EDR Mode, 3DH1, Middle Channel

Time of Channel Occupancy



EDR Mode, 3DH3, Middle Channel

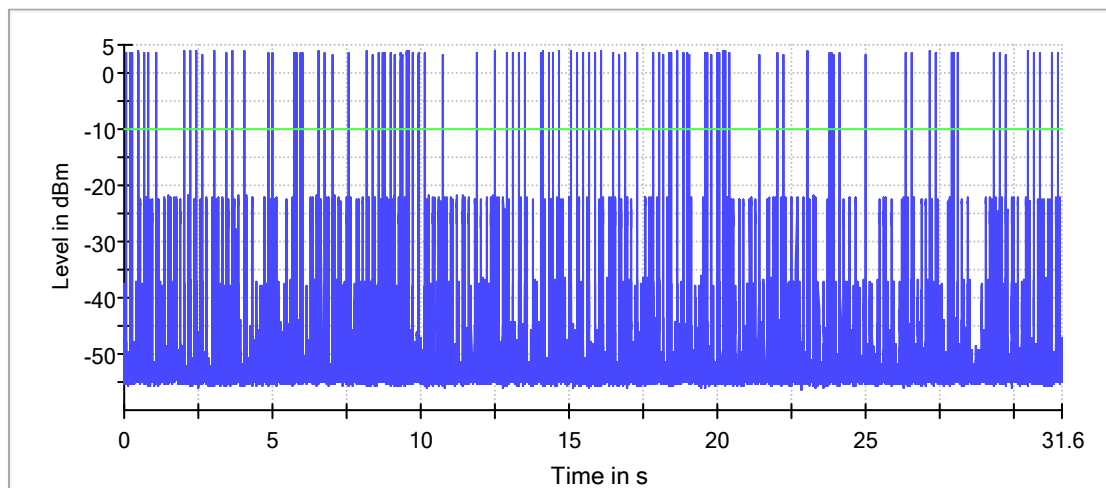
Time of Channel Occupancy(2)



Trace Threshold

EDR Mode, 3DH5, Middle Channel

Time of Channel Occupancy(3)



Trace Threshold

Appendix C

Test Results of Radiated Emission & AC Mains Conducted Emission

APPENDIX C	1
APPENDIX C.1: TEST PLOTS OF RADIATED SPURIOUS EMISSION	2
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APPENDIX C.3: TEST PLOTS OF AC MAINS CONDUCTED EMISSION	22

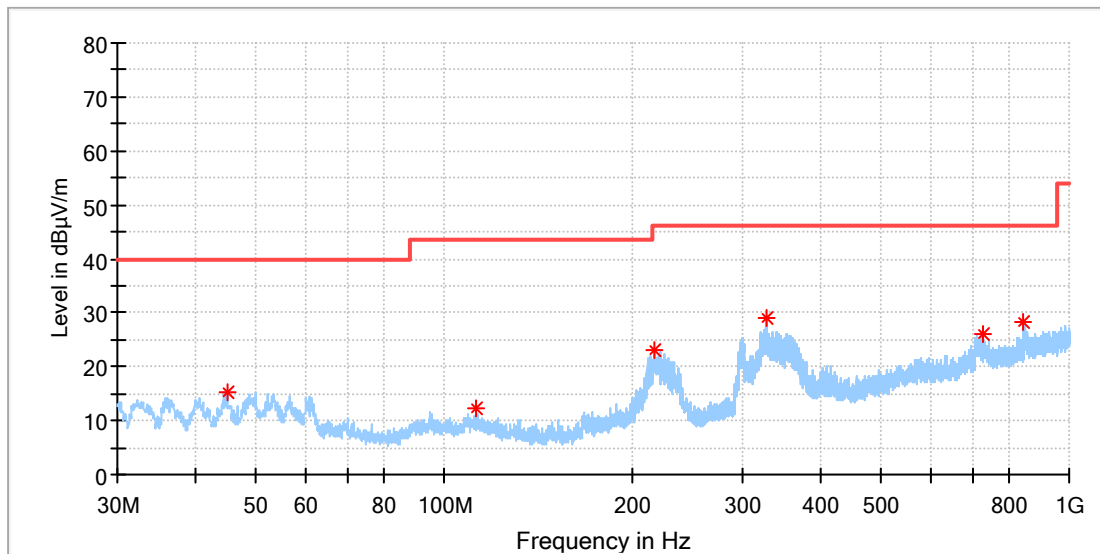
Note: The radiated spurious emission were measured from 9KHz to 26.5GHz, the measurement results below 30MHz and above 18GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

Appendix C.1: Test Plots of Radiated Spurious Emission

BDR mode, 30MHz - 1GHz

EUT Information

EUT Name:	Bluetooth Speaker
Model:	X2
Test Mode:	BT_DH5_High CH
Test Voltage::	Battery
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

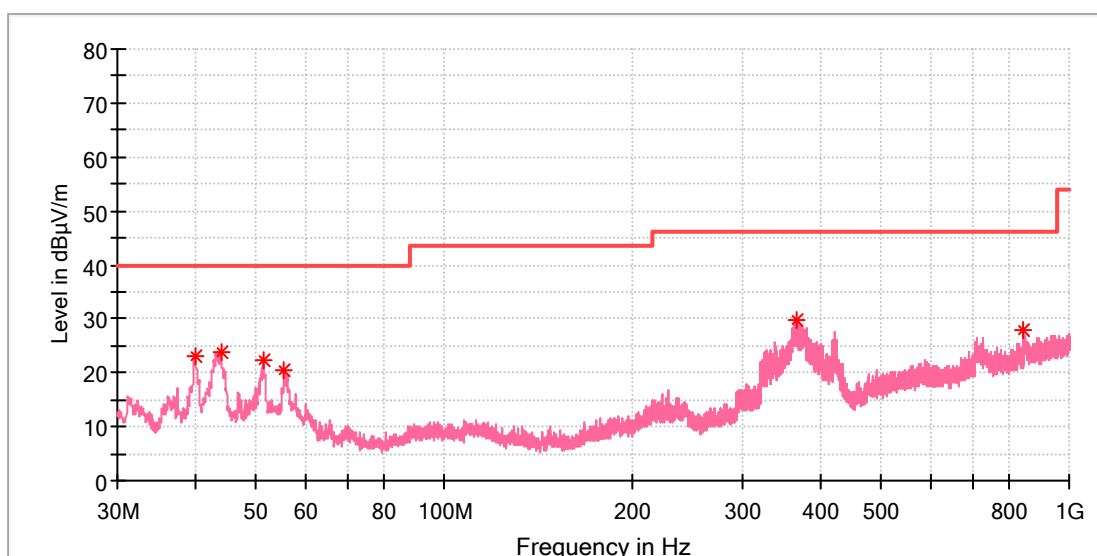


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.986500	15.30	40.00	24.70	100.0	H	209.0	-19.2
112.644000	12.35	43.50	31.15	100.0	H	104.0	-19.7
216.870500	23.09	46.00	22.91	100.0	H	236.0	-19.0
327.984000	28.87	46.00	17.13	100.0	H	36.0	-15.8
728.594000	26.19	46.00	19.81	100.0	H	255.0	-7.9
844.848500	28.14	46.00	17.86	100.0	H	209.0	-6.0

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_High CH
Test Voltage:: Battery
Remark: Temp 23 Humi:55%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

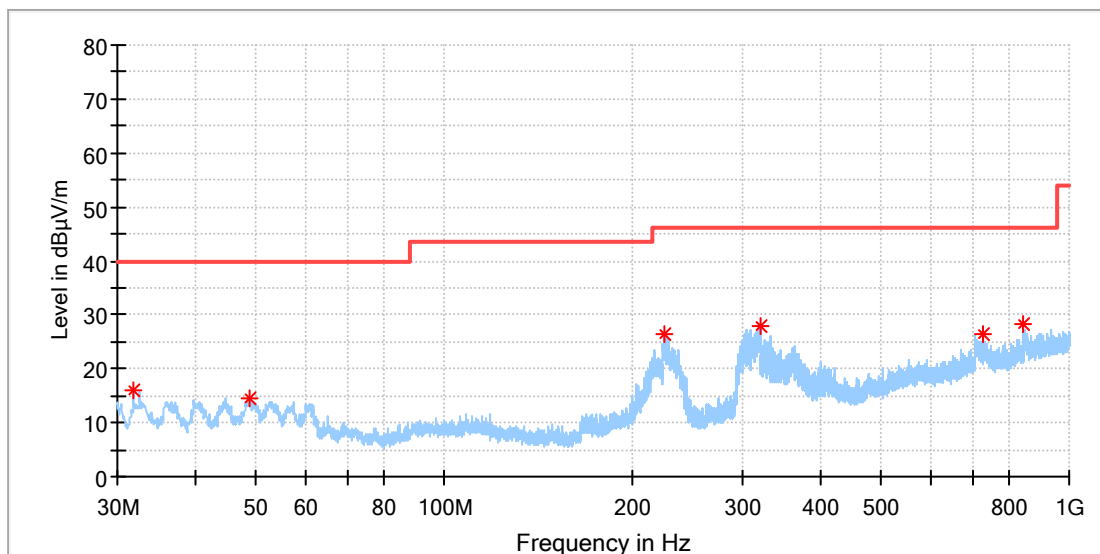


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.942500	23.10	40.00	16.90	100.0	V	47.0	-20.4
43.968000	23.83	40.00	16.17	100.0	V	240.0	-19.4
51.437000	22.21	40.00	17.79	100.0	V	200.0	-18.6
55.511000	20.58	40.00	19.42	100.0	V	173.0	-18.8
367.172000	29.63	46.00	16.37	100.0	V	39.0	-14.8
845.479000	27.98	46.00	18.02	100.0	V	98.0	-6.0

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Low CH
Test Voltage:: Battery
Remark: Temp 23 Humi:55%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

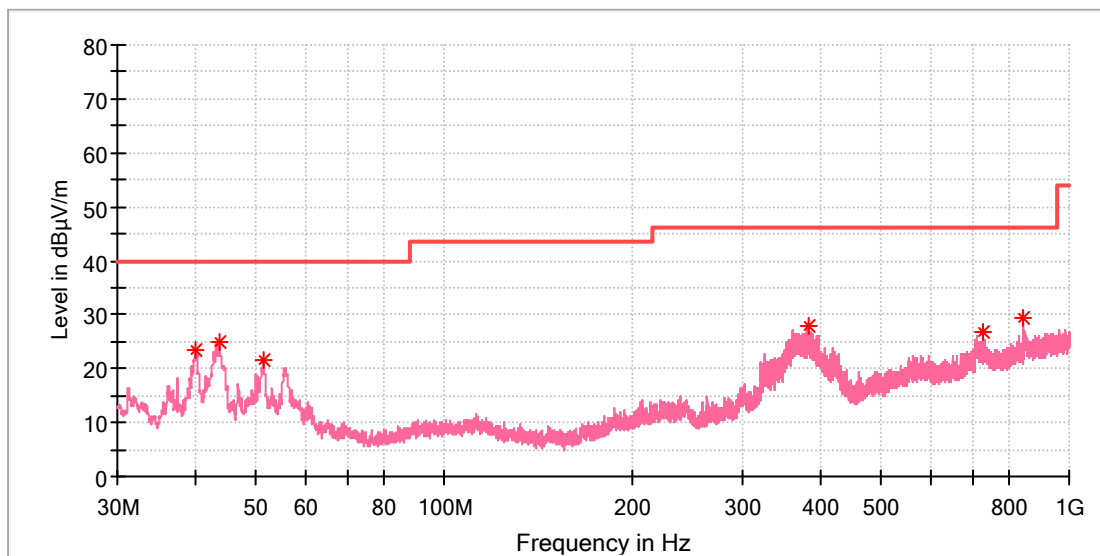


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.843000	15.99	40.00	24.01	100.0	H	287.0	-23.0
48.866500	14.48	40.00	25.52	100.0	H	33.0	-18.6
225.649000	26.25	46.00	19.75	100.0	H	255.0	-18.6
320.854500	27.93	46.00	18.07	100.0	H	255.0	-16.0
729.224500	26.24	46.00	19.76	100.0	H	0.0	-7.9
844.897000	28.13	46.00	17.87	100.0	H	193.0	-6.0

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Low CH
Test Voltage:: Battery
Remark: Temp 23 Humi:55%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



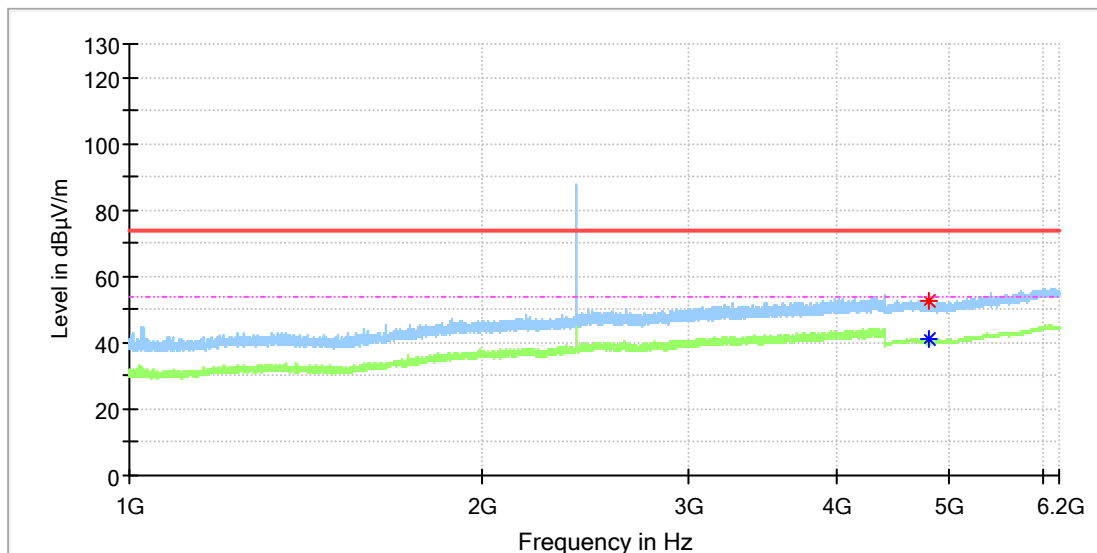
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.991000	23.27	40.00	16.73	100.0	V	186.0	-20.4
43.725500	24.94	40.00	15.06	100.0	V	186.0	-19.4
51.388500	21.65	40.00	18.35	100.0	V	0.0	-18.6
382.692000	27.99	46.00	18.01	100.0	V	242.0	-14.5
728.448500	26.94	46.00	19.06	100.0	V	314.0	-7.9
844.945500	29.28	46.00	16.72	100.0	V	350.0	-6.0

BDR mode, 1GHz - 6.2GHz

EUT Information

EUT Name:	Bluetooth Speaker
Model:	X2
Test Mode:	BT_DH5_Low CH
Test Voltage::	DC 5V from USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

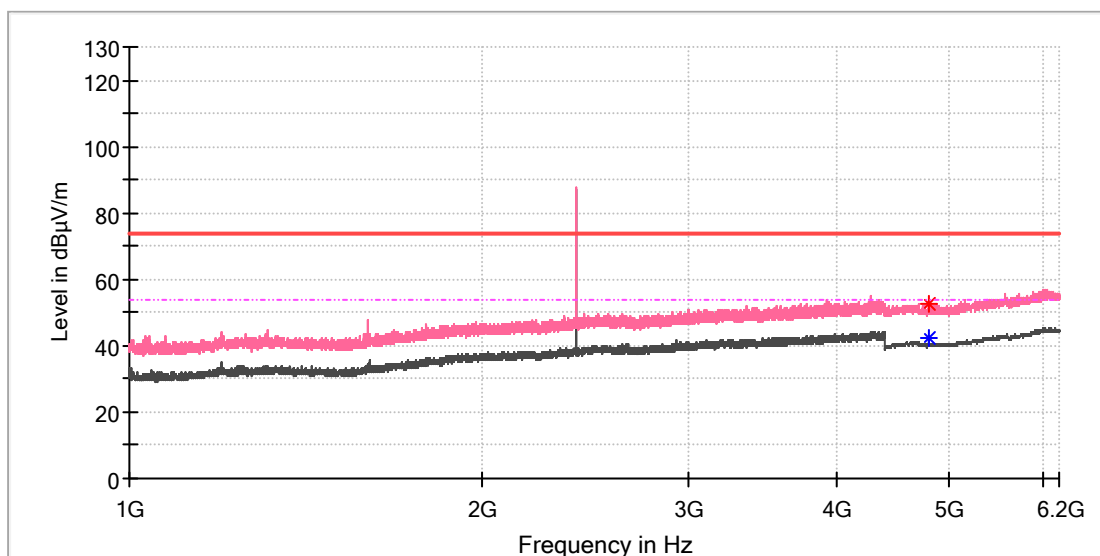


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4799.500000	52.78	---	74.00	21.22	100.0	H	47.0	11.8
4803.500000	---	41.22	54.00	12.78	100.0	H	130.0	11.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Low CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

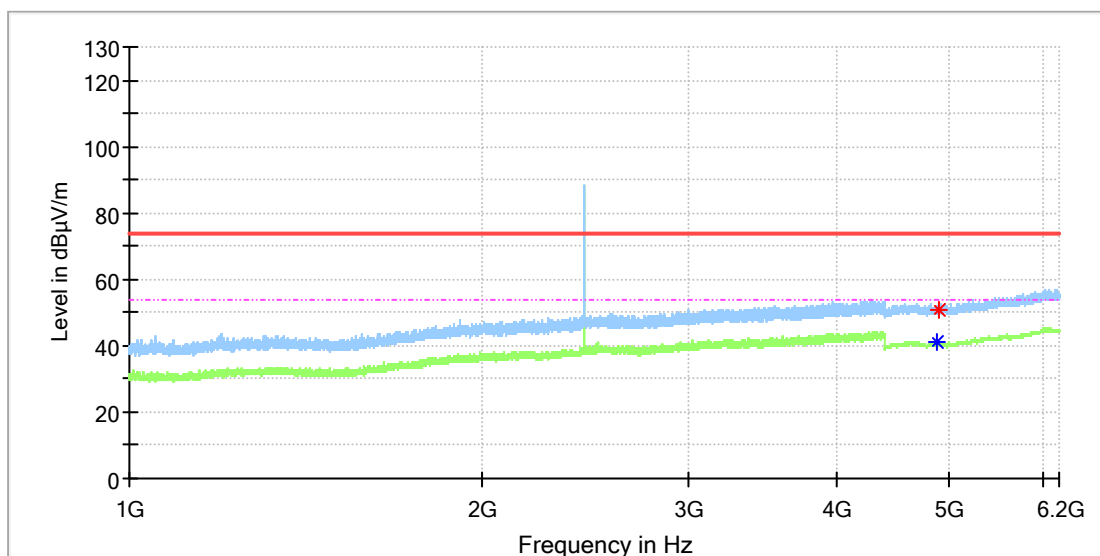


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.500000	52.42	---	74.00	21.58	100.0	V	220.0	11.8
4803.500000	---	42.57	54.00	11.43	100.0	V	220.0	11.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Mid CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

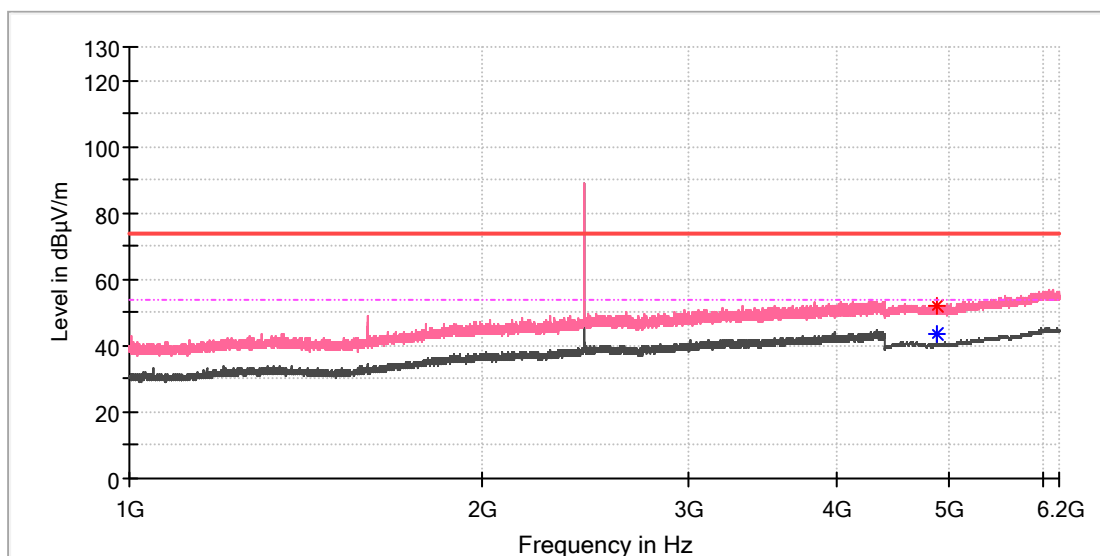


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.000000	---	41.23	54.00	12.77	100.0	H	15.0	11.8
4889.500000	50.92	---	74.00	23.08	100.0	H	23.0	11.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Mid CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

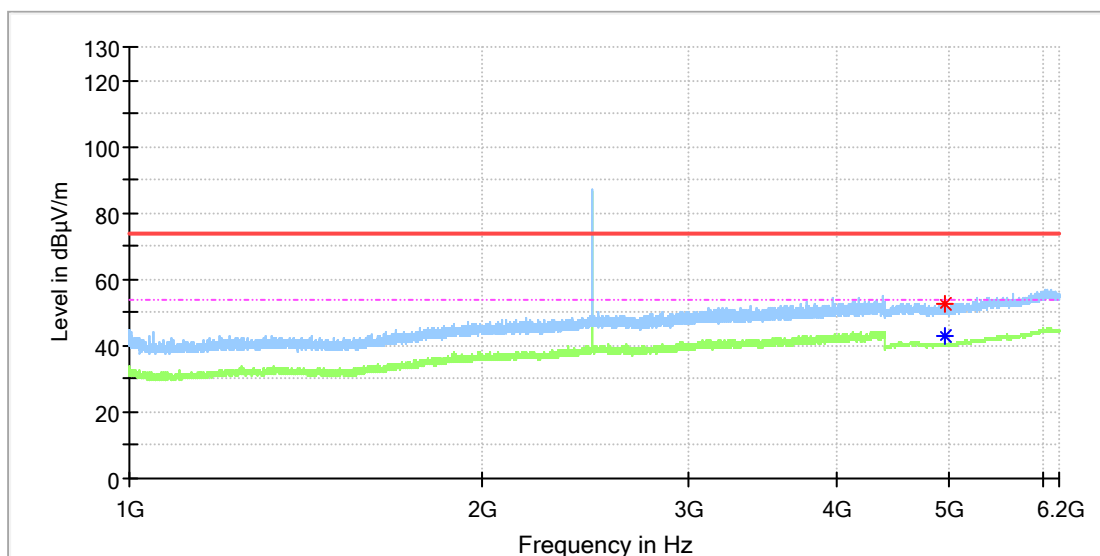


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4881.500000	52.17	---	74.00	21.83	100.0	V	48.0	11.8
4882.000000	---	43.31	54.00	10.69	100.0	V	126.0	11.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_High CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

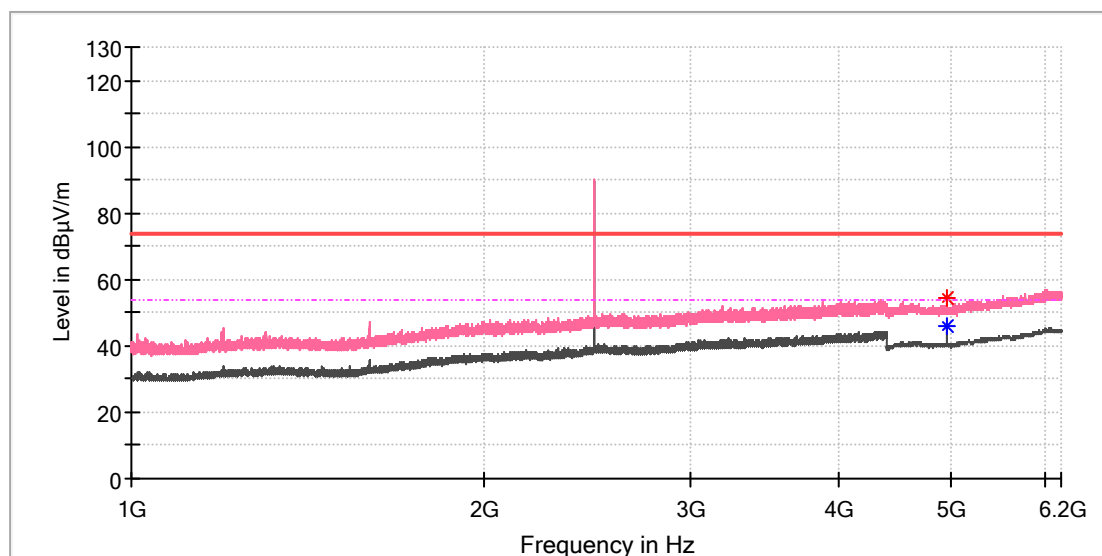


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4960.000000	52.31	---	74.00	21.69	100.0	H	13.0	11.8
4960.000000	---	43.00	54.00	11.00	100.0	H	13.0	11.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_High CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



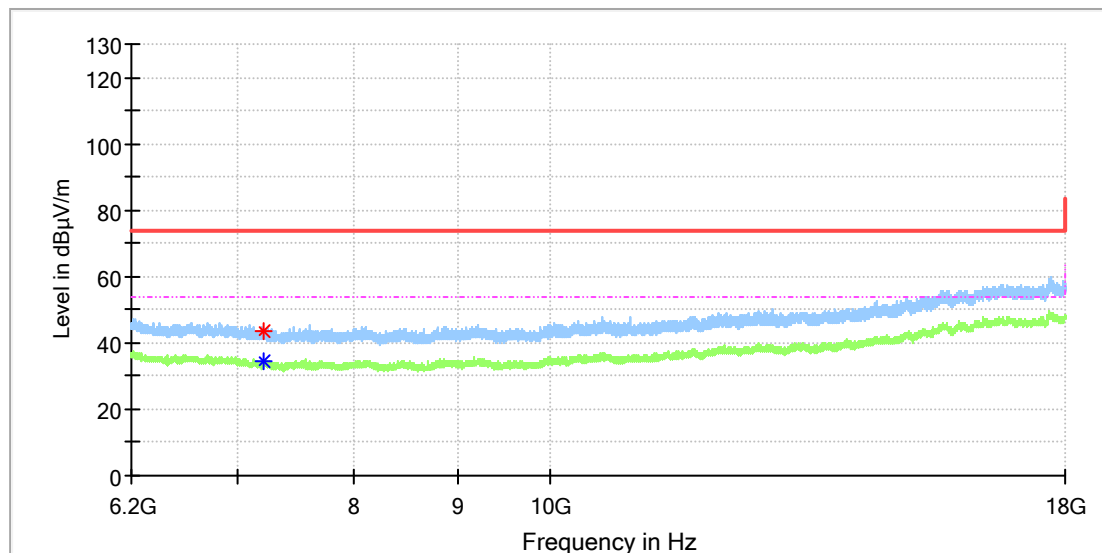
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4960.000000	---	46.03	54.00	7.97	100.0	V	39.0	11.8
4960.500000	54.46	---	74.00	19.54	100.0	V	234.0	11.8

BDR mode, 6.2GHz - 18GHz

EUT Information

EUT Name:	Bluetooth Speaker
Model:	X2
Test Mode:	BT_DH5_Low CH
Test Voltage::	DC 5V from USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

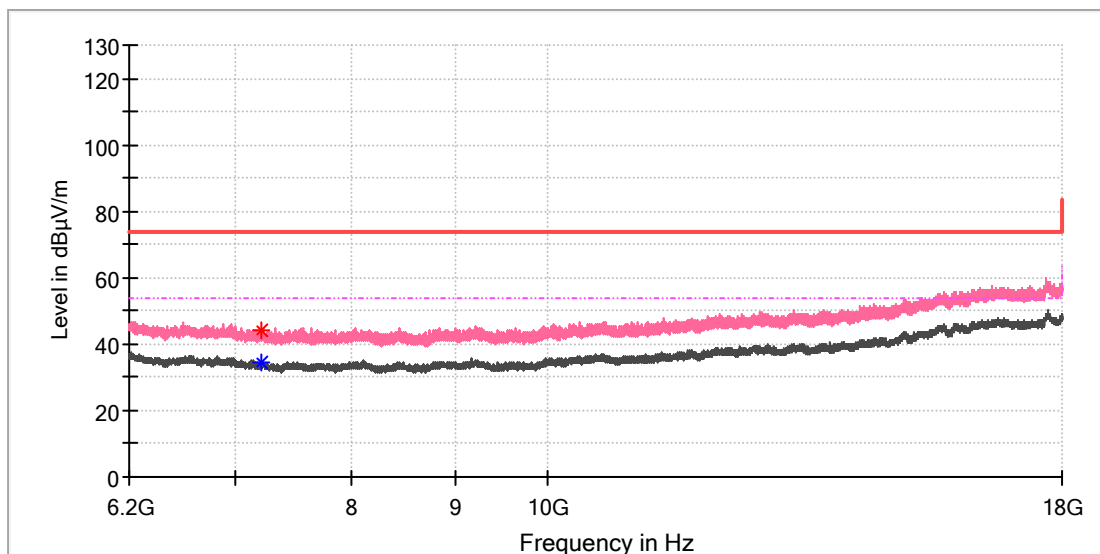


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7203.983333	43.38	---	74.00	30.62	100.0	H	355.0	8.8
7206.933333	---	34.24	54.00	19.76	100.0	H	62.0	8.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Low CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

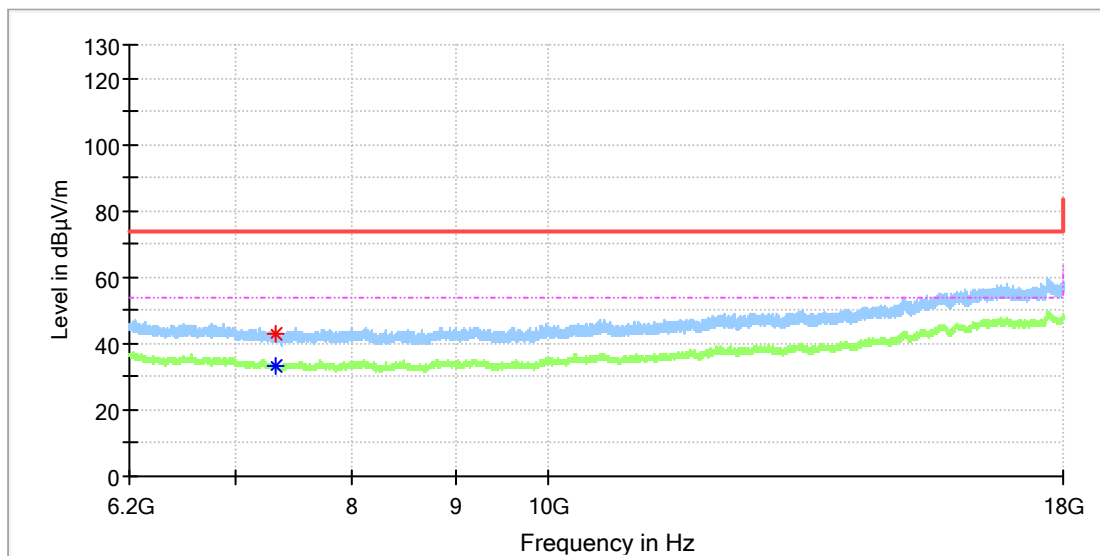


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7203.491667	---	34.18	54.00	19.82	100.0	V	185.0	8.8
7208.408333	44.15	---	74.00	29.85	100.0	V	36.0	8.8

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Mid CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

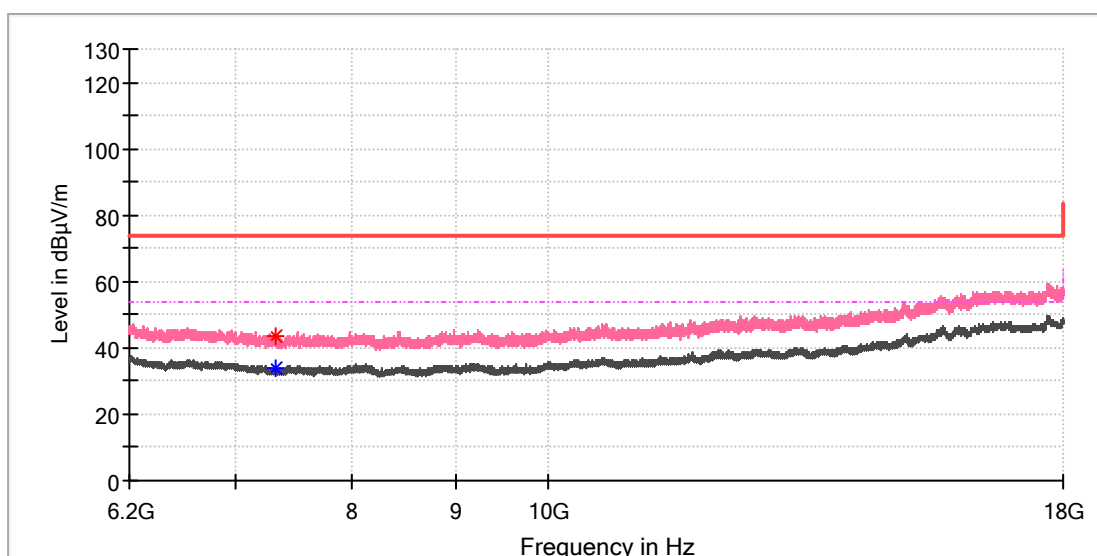


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7321.983333	43.01	---	74.00	30.99	100.0	H	29.0	8.2
7322.966667	---	33.20	54.00	20.80	100.0	H	4.0	8.2

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Mid CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

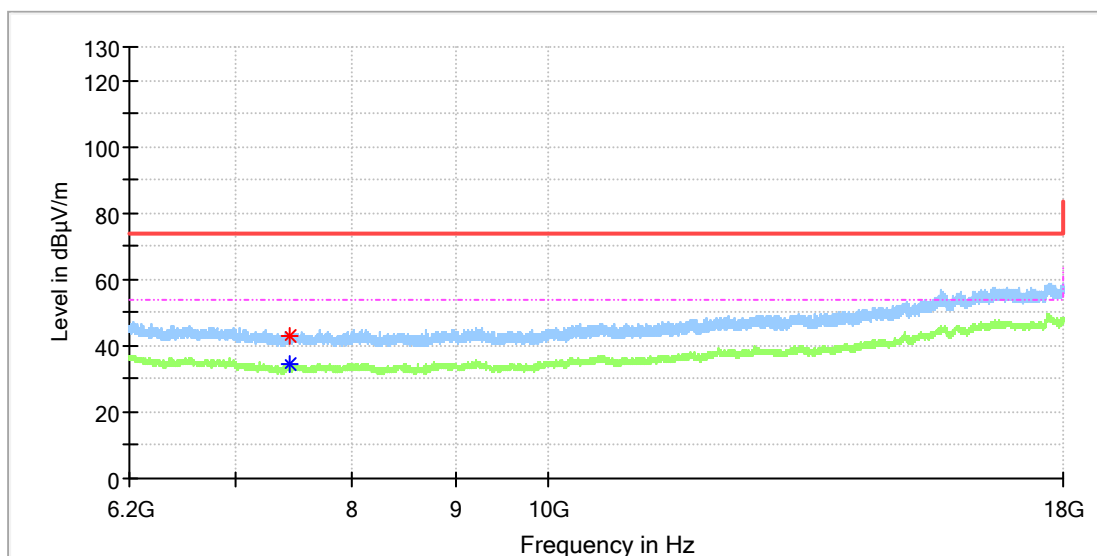


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7321.491667	---	33.85	54.00	20.15	100.0	V	203.0	8.2
7322.475000	43.40	---	74.00	30.60	100.0	V	215.0	8.2

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_High CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

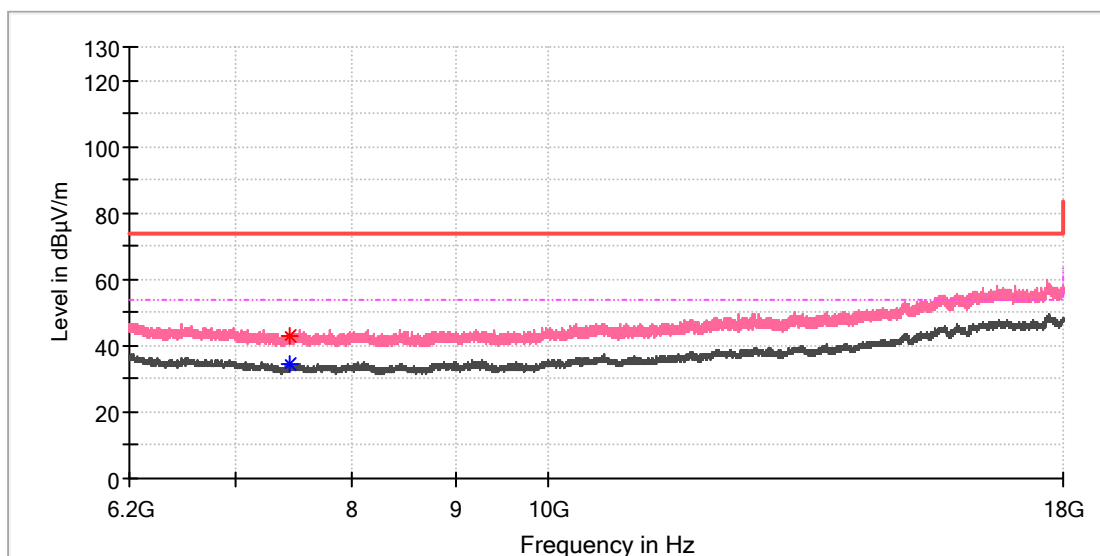


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7437.033333	---	34.70	54.00	19.30	100.0	H	233.0	8.4
7440.966667	43.05	---	74.00	30.95	100.0	H	275.0	8.4

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_High CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

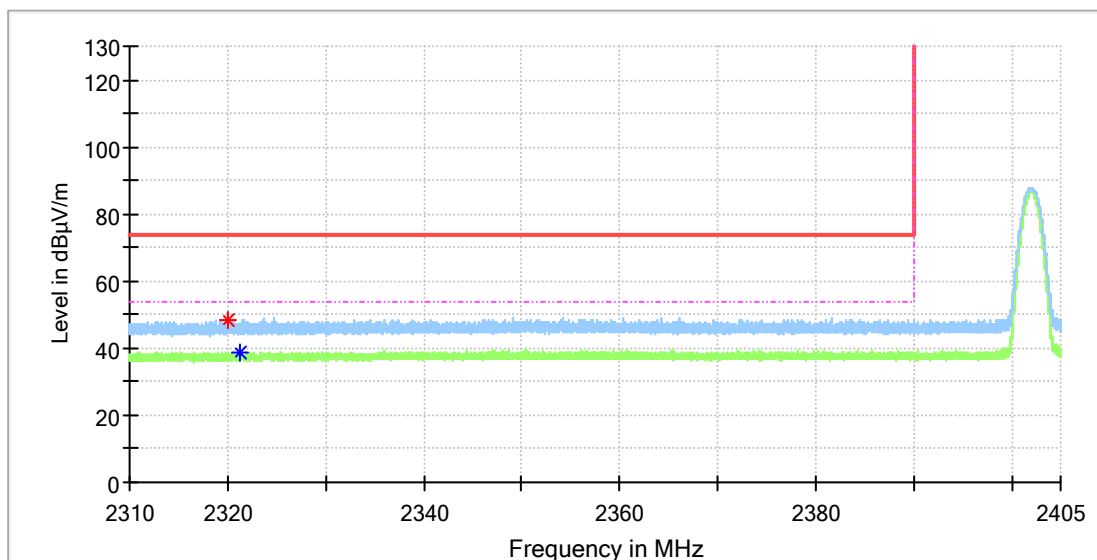
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7436.541667	---	34.33	54.00	19.67	100.0	V	115.0	8.4
7440.475000	42.71	---	74.00	31.29	100.0	V	168.0	8.4

Appendix C.2: Test Plots of Band Edge (Radiated)

BDR mode, Low Channel

EUT Information

EUT Name:	Bluetooth Speaker
Model:	X2
Test Mode:	BT_DH5_Low CH
Test Voltage::	DC 5V from USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

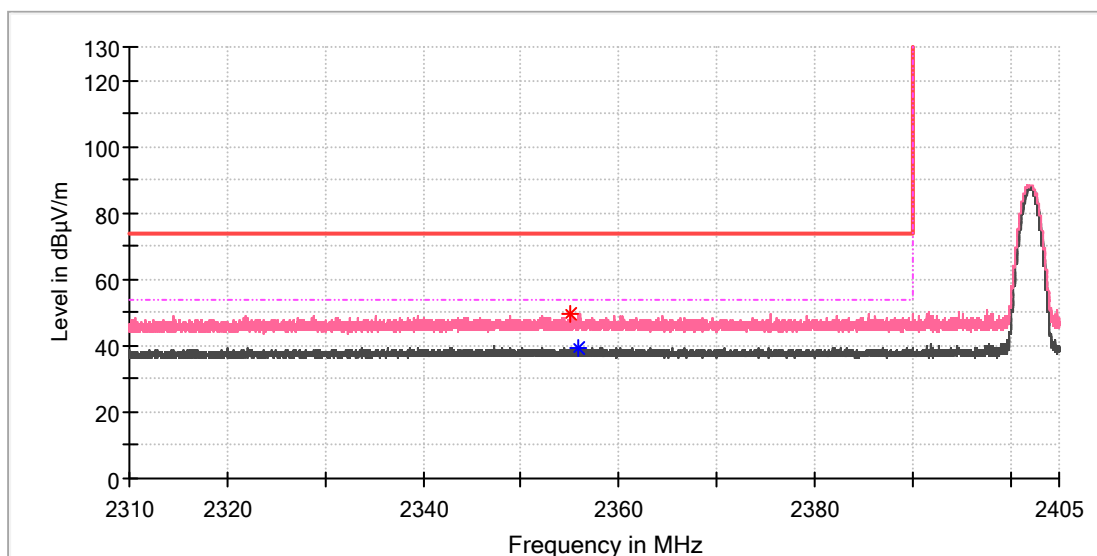


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2320.089000	48.64	---	74.00	25.36	100.0	H	356.0	6.6
2321.195750	---	38.90	54.00	15.10	100.0	H	280.0	6.6

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_Low CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



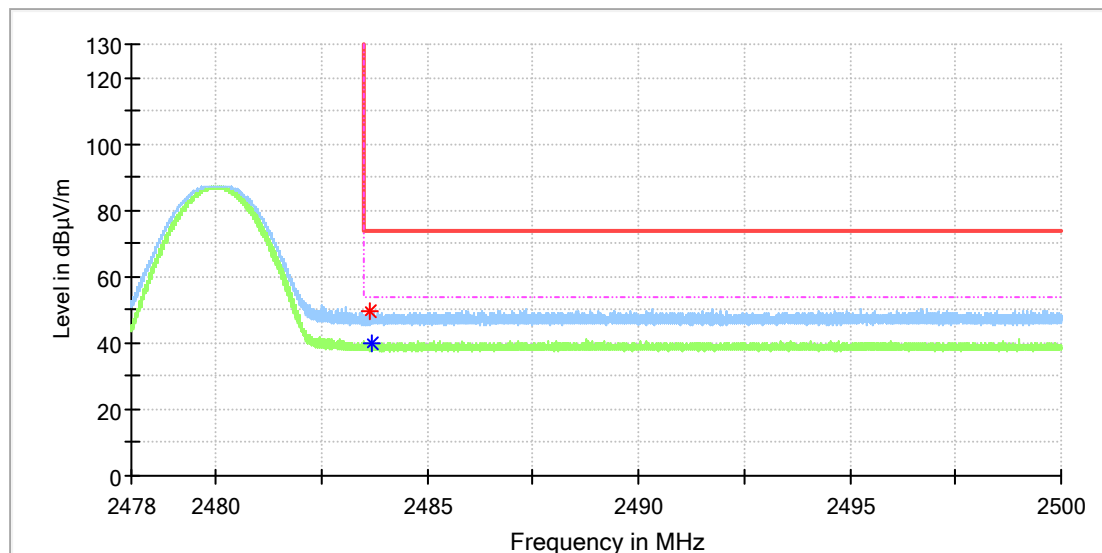
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2355.087000	49.63	---	74.00	24.37	100.0	V	137.0	6.9
2355.842250	---	39.13	54.00	14.87	100.0	V	0.0	6.9

BDR mode, High Channel

EUT Information

EUT Name:	Bluetooth Speaker
Model:	X2
Test Mode:	BT_DH5_High CH
Test Voltage::	DC 5V from USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

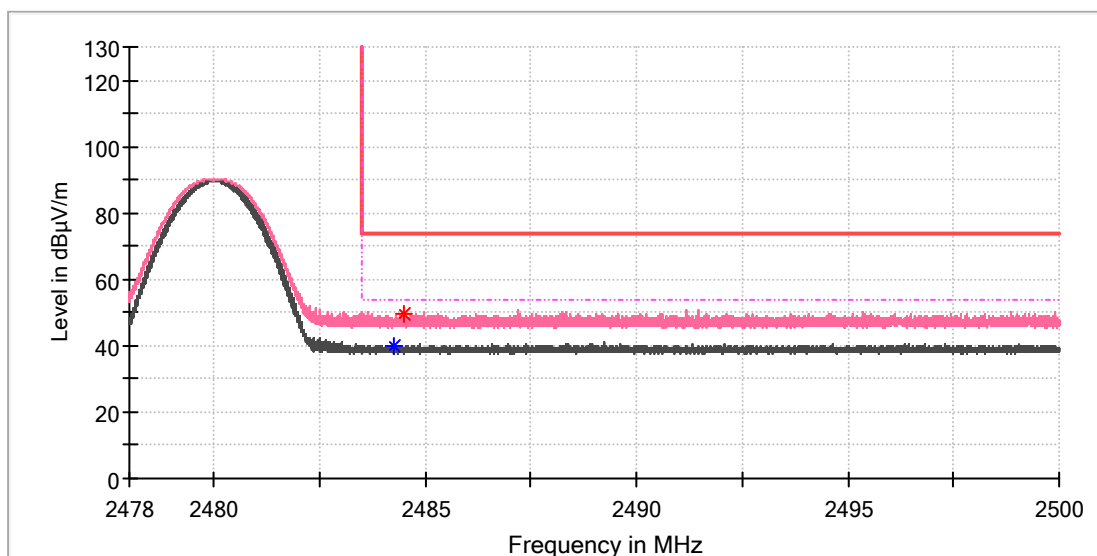


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.645200	49.76	---	74.00	24.24	100.0	H	262.0	7.4
2483.673800	---	39.77	54.00	14.23	100.0	H	328.0	7.4

EUT Information

EUT Name: Bluetooth Speaker
Model: X2
Test Mode: BT_DH5_High CH
Test Voltage:: DC 5V from USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



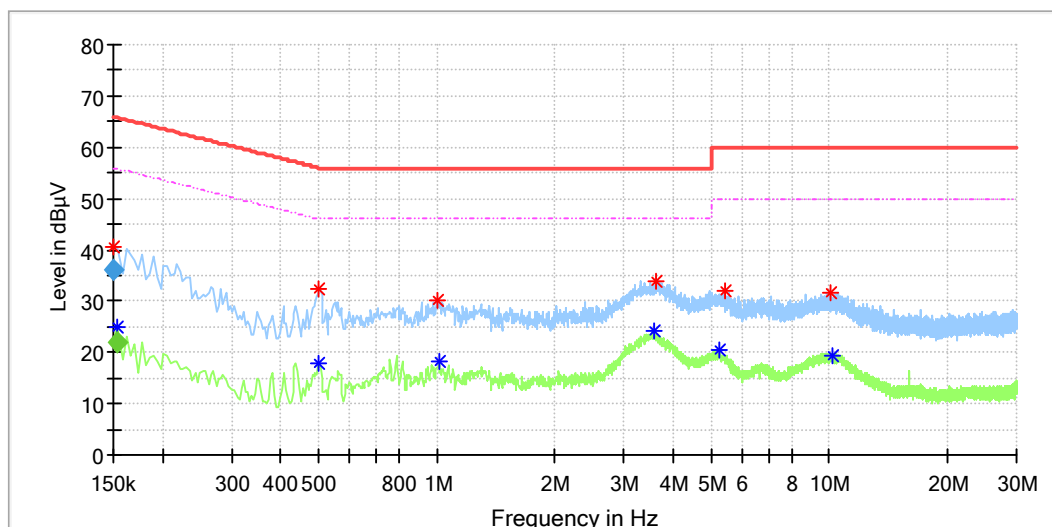
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.277700	---	39.83	54.00	14.17	100.0	V	116.0	7.4
2484.497700	49.81	---	74.00	24.19	100.0	V	27.0	7.4

Appendix C.3: Test Plots of AC Mains Conducted Emission

EUT Information

EUT Name: Bluetooth speaker
Order No: 168307454 item 100
Model: X2
Test Model: Charging+BT Playing
Test Voltage: DC 5V by Adapter
Test By: PerLe Xia
Review By: Gary Chen
Remark: SR2



Critical_Freqs

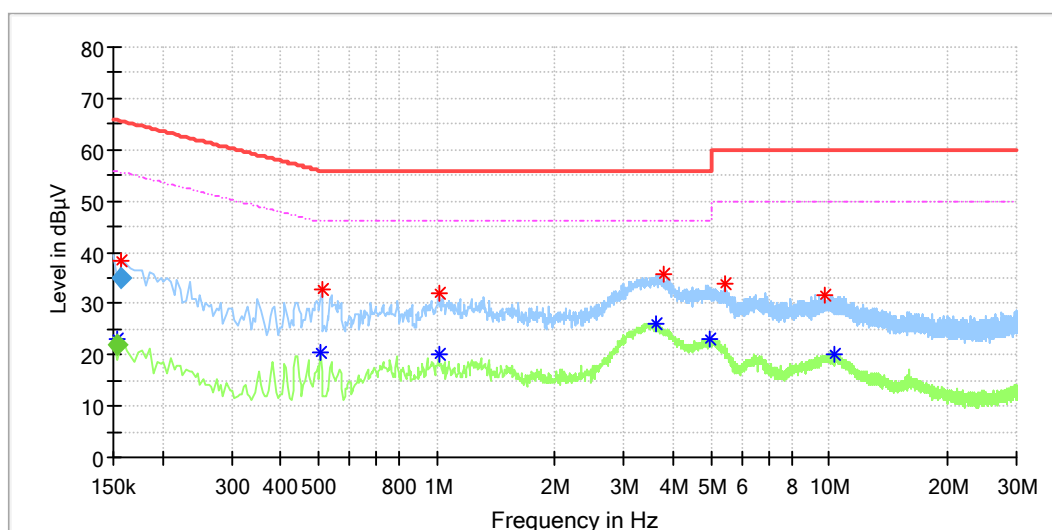
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line
0.150000	40.68	---	65.78	25.10	---	L1
0.154000	---	25.10	55.78	30.68	---	L1
0.498000	---	18.01	46.03	28.02	---	L1
0.502000	32.39	---	56.00	23.61	---	L1
1.002000	30.26	---	56.00	25.74	---	L1
1.014000	---	18.33	46.00	27.67	---	L1
3.566000	---	24.07	46.00	21.93	---	L1
3.634000	33.99	---	56.00	22.01	---	L1
5.258000	---	20.32	50.00	29.68	---	L1
5.422000	31.87	---	60.00	28.13	---	L1
10.114000	31.46	---	60.00	28.54	---	L1
10.214000	---	19.52	50.00	30.48	---	L1

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.150000	36.02	---	66.00	29.98	1000.0	9.000	L1
0.154000	---	22.07	55.78	33.72	1000.0	9.000	L1

EUT Information

EUT Name: Bluetooth speaker
Order No: 168307454 item 100
Model: X2
Test Model: Charging+BT Playing
Test Voltage: DC 5V by Adapter
Test By: PerLe Xia
Review By: Gary Chen
Remark: SR2



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line
0.153500	---	23.13	55.57	32.43	---	N
0.157500	38.24	---	65.57	27.33	---	N
0.506000	---	20.39	46.00	25.61	---	N
0.510000	32.77	---	56.00	23.23	---	N
1.010000	---	20.19	46.00	25.81	---	N
1.010000	31.84	---	56.00	24.16	---	N
3.602000	---	26.06	46.00	19.94	---	N
3.790000	35.63	---	56.00	20.37	---	N
4.958000	---	22.96	46.00	23.04	---	N
5.398000	33.75	---	60.00	26.25	---	N
9.726000	31.69	---	60.00	28.31	---	N
10.286000	---	20.19	50.00	29.81	---	N

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.153500	---	21.86	55.81	33.95	1000.0	9.000	N
0.157500	34.99	---	65.60	30.60	1000.0	9.000	N