

FCC PART 15C TEST REPORT FOR CERTIFICATION

On Behalf of

CHINA DRAGON TECHNOLOGY LIMITED

Bluetooth audio module

CDB-BM1048B20-00

FCC ID: ROW-CDB1048B20

Prepared for : CHINA DRAGON TECHNOLOGY LIMITED
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TABLE OF CONTENTS

<u>Description</u>	<u>Page</u>
1. SUMMARY OF STANDARDS AND RESULTS.....	5
1.1. Description of Standards and Results	5
2. GENERAL INFORMATION.....	6
2.1. Description of Equipment Under Test	6
2.2. Feature of Equipment Under Test.....	7
2.3. Tested Supporting System Details	8
2.4. Block Diagram of connection between EUT and simulators.....	8
2.5. Test information.....	8
2.6. Test Facility	10
2.7. Measurement Uncertainty (95% confidence levels, k=2).....	10
3. POWER LINE CONDUCTED EMISSION TEST	11
3.1. Test Equipments.....	11
3.2. Block Diagram of Test Setup.....	11
3.3. Power Line Conducted Emission Test Limits.....	11
3.4. Configuration of EUT on Test	11
3.5. Operating Condition of EUT.....	12
3.6. Test Procedure	12
3.7. Power Line Conducted Emission Test Results	12
4. RADIATED EMISSION MEASUREMENT	15
4.1. Test Equipments.....	15
4.2. Block Diagram of Test Setup.....	16
4.3. Radiated Emission Limits Standard:.....	17
4.4. EUT Configuration on Test	17
4.5. Operating Condition of EUT.....	17
4.6. Test Procedure	18
4.7. Radiated Emission Test Results.....	18
5. CONDUCTED SPURIOUS EMISSIONS	58
5.1. Test Equipments.....	58
5.2. Block Diagram of Test Setup.....	58
5.3. Limit.....	58
5.4. Test Procedure	58
5.5. Test result.....	58
6. 20 dB & 99% BANDWIDTH TEST	65
6.1. Test Equipments.....	65
6.2. Limit.....	65
6.3. Test Procedure	65
6.4. Test Results.....	66
7. CARRIER FREQUENCY SEPARATION TEST.....	68
7.1. Test Equipments.....	68
7.2. Limit.....	68
7.3. Test Procedure	68
7.4. Test Results.....	69
8. NUMBER OF HOPPING FREQUENCY TEST	70
8.1. Test Equipments.....	70
8.2. Limit.....	70
8.3. Test Procedure	70

8.4.	Test Results	70
9.	DWELL TIME	71
9.1.	Test Equipments.....	71
9.2.	Limit.....	71
9.3.	Test Procedure	71
9.4.	Test Results.....	71
10.	MAXIMUM PEAK OUTPUT POWER TEST.....	74
10.1.	Test Equipments.....	74
10.2.	Limit.....	74
10.3.	Test Procedure	74
10.4.	Test Results.....	74
11.	BAND EDGE COMPLIANCE TEST	75
11.1.	Test Equipments.....	75
11.2.	Limit.....	75
11.3.	Test Produce.....	75
11.4.	Test Results	75
12.	ANTENNA REQUIREMENT.....	84
12.1.	Standard Applicable.....	84
12.2.	Antenna Connected Construction	84
13.	DEVIATION TO TEST SPECIFICATIONS.....	85

Appendix A. Photograph of Test

Appendix B. Photo of the EUT

TEST REPORT

Applicant : CHINA DRAGON TECHNOLOGY LIMITED
Manufacturer : CHINA DRAGON TECHNOLOGY LIMITED
Product : Bluetooth audio module
FCC ID : ROW-CDB1048B20
(A) Model No. : CDB-BM1048B20-00
(B) Test Voltage : (1)AC 120V/60Hz
(2)DC 5V

Tested for comply with:
FCC CFR47 Part 15 Subpart C

Test procedure used:
ANSI C63.10: 2020

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to confirm comply with all the FCC Part 15 Subpart C requirements. The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements. This report contains data that are not covered by the NVLAP accreditation.

This Report is made under FCC Part 2.1074. No modifications were required during testing to bring this product into compliance.

This report applies to single evaluation of one sample of above mentioned product and shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd..

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Mar.15~21,2022 Report of date: Mar.29,2022

Prepared by : Brave Zhang Reviewed by : Sunny Lu
Brave Zhang / Assistant Sunny Lu / Deputy Manager



Approved & Authorized Signer : David Jin
David Jin / Deputy General Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT has been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Power Line Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.10: 2020	PASS
Radiated Emission Test	FCC Part 15 15.209 FCC Part 15 15.205 FCC Part 15 15.247(d) ANSI C63.10: 2020	PASS
Conducted Spurious Emissions	FCC Part 15: 15.247(d) ANSI C63.10 2020	PASS
Carrier Frequency Separation Test	FCC Part 15: 15.247(a)(1) ANSI C63.10: 2020	PASS
20dB & 99% Bandwidth Test	FCC Part 15: 15.215 ANSI C63.10: 2020	PASS
Number Of Hopping Frequency Test	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.10: 2020	PASS
Dwell Time Test	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.10: 2020	PASS
Maximum Peak Output Power Test	FCC Part 15 15.247(b)(1) ANSI C63.10: 2020	PASS
Band Edge Compliance Test	FCC Part 15 15.247(d) ANSI C63.10: 2020	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

Note: Measurement uncertainty affection to the result is considered, the EUT is technically compliant with standard requirements.

2. GENERAL INFORMATION

2.1. Description of Equipment Under Test

Applicant	CHINA DRAGON TECHNOLOGY LIMITED
Applicant Address	Room 1, 2/f, B6 building, B4 building, Haosan No.1 industry, nanpu road, shangliao community, xinqiao street, baoan district, Shenzhen China
Manufacturer	CHINA DRAGON TECHNOLOGY LIMITED
Manufacturer Address	Room 1, 2/f, B6 building, B4 building, Haosan No.1 industry, nanpu road, shangliao community, xinqiao street, baoan district, Shenzhen China
Factory	CHINA DRAGON TECHNOLOGY LIMITED
Factory Address	Room 1, 2/f, B6 building, B4 building, Haosan No.1 industry, nanpu road, shangliao community, xinqiao street, baoan district, Shenzhen China
Product	Bluetooth audio module
Model No.	CDB-BM1048B20-00
FCC ID	ROW-CDB1048B20
Sample Type	Prototype production
Date of Receipt	Mar.07,2022
Date of Test	Mar.15~21,2022
Remark: This report only for BDR+EDR.	

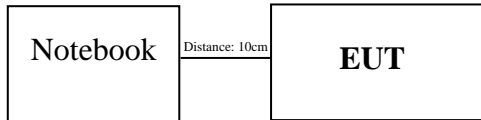
2.2. Feature of Equipment Under Test

Product Feature & Specification	
Product	Bluetooth audio module
Model No.	CDB-BM1048B20-00
Power Source	<input checked="" type="checkbox"/> Commercial Power AC 100 ~ 240V
	<input checked="" type="checkbox"/> External Power Source DC 5V
	<input type="checkbox"/> Lithium battery DC V, mAh
	<input type="checkbox"/> UM battery DC V
Bluetooth	
Radio	BDR +EDR
Frequency Range	2402-2480MHz
Type of Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Data Rate	1Mbps, 2Mbps, 3Mbps
Quantity of Channels	79
Channel Separation	1MHz
Antenna System	
Type of Antenna	PCB Antenna
Antenna Peak Gain	Bluetooth Peak Gain: 4.23dBi

2.3. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number
1.	Notebook	N/A	acer	N20C4	NXEGFCN00113 4053943400
USB Cable: Shielded, Detachable, 1.5m					

2.4. Block Diagram of connection between EUT and simulators



(EUT: Bluetooth audio module)

2.5. Test information

A special software (MV FrequencyTools v0.3.2) was used to control EUT work in continuous TX mode

Tested mode, Packet Type, Power Setting, peak output power information				
Mode	Packet Type	Power Setting	Output power(dBm) P max	Output Power(dBm) P low
GFSK	DH1	Default(0)	5.776	1.629
	DH3			
	DH5			
$\pi/4$ DQPSK	2-DH1	Default(0)	5.745	2.011
	2-DH3			
	2-DH5			
8DPSK	3-DH1	Default(0)	5.826	2.093
	3-DH3			
	3-DH5			

$\pi/4$ DQPSK mode has been verified to have the lowest power, so the final test were performed with GFSK and 8DPSK mode, the worse-case packet type were:

GFSK Mode: DH5

8DPSK Mode: 3DH5

Item		Modulation	Data Rate	Test Channel
Radiated Test Case	Radiated Band Edge	GFSK	1Mbps	00/78
		8-DPSK	3Mbps	00/78
	Radiated Spurious Emission	GFSK	1Mbps	00/39/78
		8-DPSK	3Mbps	00/39/78
Conducted Test Case	20dB Bandwidth	GFSK	1Mbps	00/39/78
		8-DPSK	3Mbps	00/39/78
	Carrier Frequency Separation	GFSK	1Mbps	39
		8-DPSK	3Mbps	39
	Time of Occupancy	GFSK	1Mbps	39
		8-DPSK	3Mbps	39
	Number of Hopping Channels	GFSK	1Mbps	39
		8-DPSK	3Mbps	39
	Maximum Peak Output Power	GFSK	1Mbps	00/39/78
		8-DPSK	3Mbps	00/39/78
	Band Edges	GFSK	1Mbps	00/78
		8-DPSK	3Mbps	00/78
	Spurious Emission	GFSK	1Mbps	00/39/78
		8-DPSK	3Mbps	00/39/78

2.6. Test Facility

Site Description

Name of Firm

: Audix Technology (Shenzhen) Co., Ltd.
 No. 6, Kefeng Road, Science & Technology Park,
 Nanshan District , Shenzhen, Guangdong, China

EMC Lab.

- : Certificated by ISED, Canada
 Company Number: 5183A
 CAB identifier: CN0034
 Valid Date: Mar.31, 2022
- : Certificated by FCC, USA
 Designation No.: CN5022
 Valid Date: Mar.31, 2022
- : Accredited by NVLAP, USA
 NVLAP Code: 200372-0
 Valid Date: Mar.31, 2022

2.7. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.6dB(150KHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.2dB(30~200MHz, Polarization: H)
	3.6dB(30~200MHz, Polarization: V)
	4.2dB(200M~1GHz, Polarization: H)
	4.2dB(200M~1GHz, Polarization: V)
Uncertainty for Radiation Emission test in 3m chamber(1GHz-25GHz)	4.6dB(1~6GHz, Distance: 3m)
	4.6dB(6~25GHz, Distance: 3m)
Uncertainty for Radiated Spurious Emission test in RF chamber	3.7dB(30MHz~1000MHz)
	3.3dB(1~26.5GHz)
Uncertainty for Conduction Spurious emission test	2.0dB
Uncertainty for Output power test	0.8dB
Uncertainty for Bandwidth test	83kHz
Uncertainty for DC power test	1%
Uncertainty for test site temperature and humidity	0.6°C
	3%

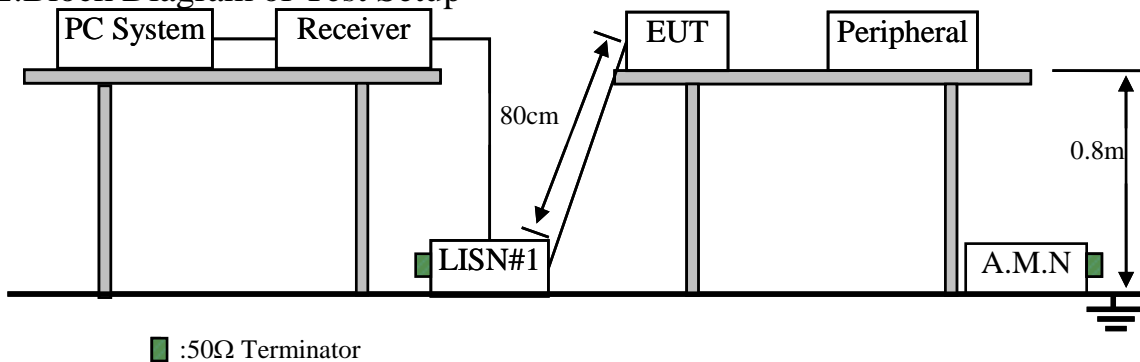
3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1# Shielding Room	AUDIX	N/A	N/A	May.17,18	5 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100842	Apr.07,21	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ENV216	102160	Oct.09,21	1 Year
4.	A.M.N	Kyoritsu	KNW-403D	8-1750-2	Apr.07,21	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	Apr.06,21	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	Apr.06,21	1 Year
7.	RF Cable	EMCI	EMCCFD300-BM-NM-2000	190422	Apr.08,21	1 Year
8.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

Note: N/A means Not applicable.

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

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

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

3. Emission Level (dBμV) = Factor (L.I.S.N.) (dB) + Cable Loss (dB)+Reading (Receiver) (dBμV)

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. Bluetooth audio module (EUT)

Model No. : CDB-BM1048B20-00

Serial No. : N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.2.

3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT as shown as Section 3.2.
- 3.5.2. Turn on the power of EUT.
- 3.5.3. PC run test software to control EUT work in Tx mode.

3.6. Test Procedure

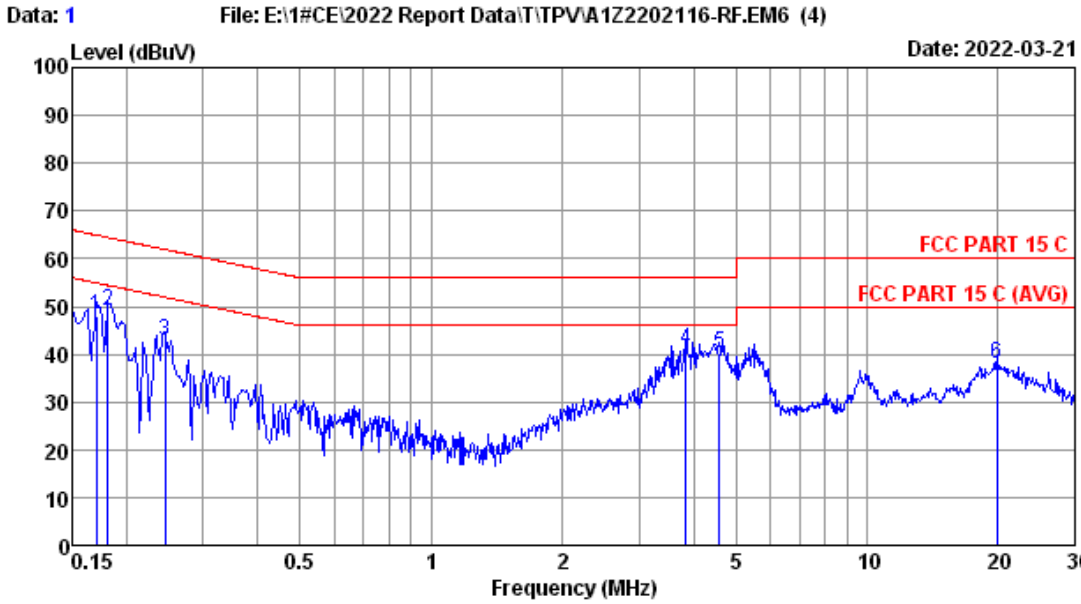
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via AC unit connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line 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: 2020 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.7. Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

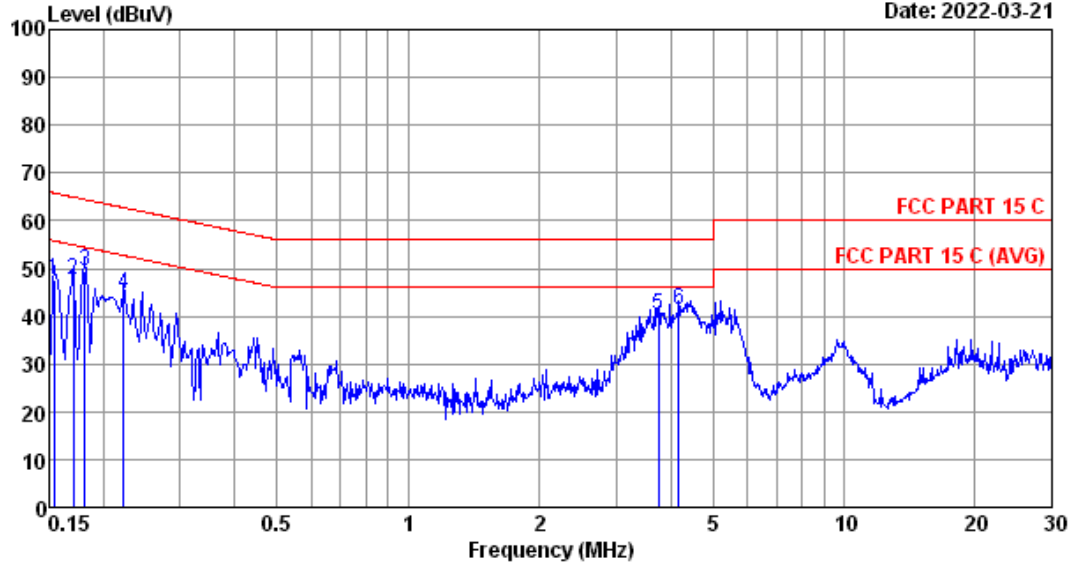


Site no :1# Conduction Data No :1
 Dis./Lisn :2021 ENV216-L LISN phase:
 Limit :FCC PART 15 C Engineer :Evan
 Env./Ins. :24.8°C/53%
 Power Rating :AC 120V/60Hz
 Test Mode :BT3.0 TX

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.170	9.50	0.01	38.29	47.80	64.94	17.14	QP
2	0.182	9.50	0.01	39.45	48.96	64.42	15.46	QP
3	0.246	9.50	0.01	33.12	42.63	61.91	19.28	QP
4	3.840	9.59	0.04	31.19	40.82	56.00	15.18	QP
5	4.574	9.60	0.04	30.70	40.34	56.00	15.66	QP
6	19.845	9.60	0.10	28.15	37.85	60.00	22.15	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Data: 2 File: E:\1#CE\2022 Report Data\ITPVA1Z2202116-RF.EM6 (4) Date: 2022-03-21



Site no :1# Conduction Data No :2
 Dis./Lisn :2021 ENV216-N LISN phase:
 Limit :FCC PART 15 C Engineer :Evan
 Env./Ins. :24.8°C/53%
 Power Rating :AC 120V/60Hz
 Test Mode :BT3.0 TX

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	10.00	0.01	37.51	47.52	65.78	18.26	QP
2	0.170	10.00	0.01	37.43	47.44	64.94	17.50	QP
3	0.182	10.00	0.01	39.57	49.58	64.42	14.84	QP
4	0.222	10.01	0.01	34.64	44.66	62.74	18.08	QP
5	3.759	10.20	0.04	29.81	40.05	56.00	15.95	QP
6	4.180	10.20	0.04	31.02	41.26	56.00	14.74	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION MEASUREMENT

4.1. Test Equipments

Frequency range: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(NSA)	AUDIX	N/A	N/A	May.02,21	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	5 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.07,21	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR3	102891	Oct.20,21	1 Year
5.	Amplifier	HP	8447D	2944A11159	Apr.07,21	1 Year
6.	Tri-log-Broadband Antenna	SCHWARZBECK	VULB 9168	710	Dec.13,21	1 Year
7.	NSA Cable	HUBER+SUHNER	CFD400NL-LW	No.3	Oct.09,21	1 Year
8.	Coaxial Switch	Anritsu	MP59B	6201397223	Apr.07,21	1 Year
9.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

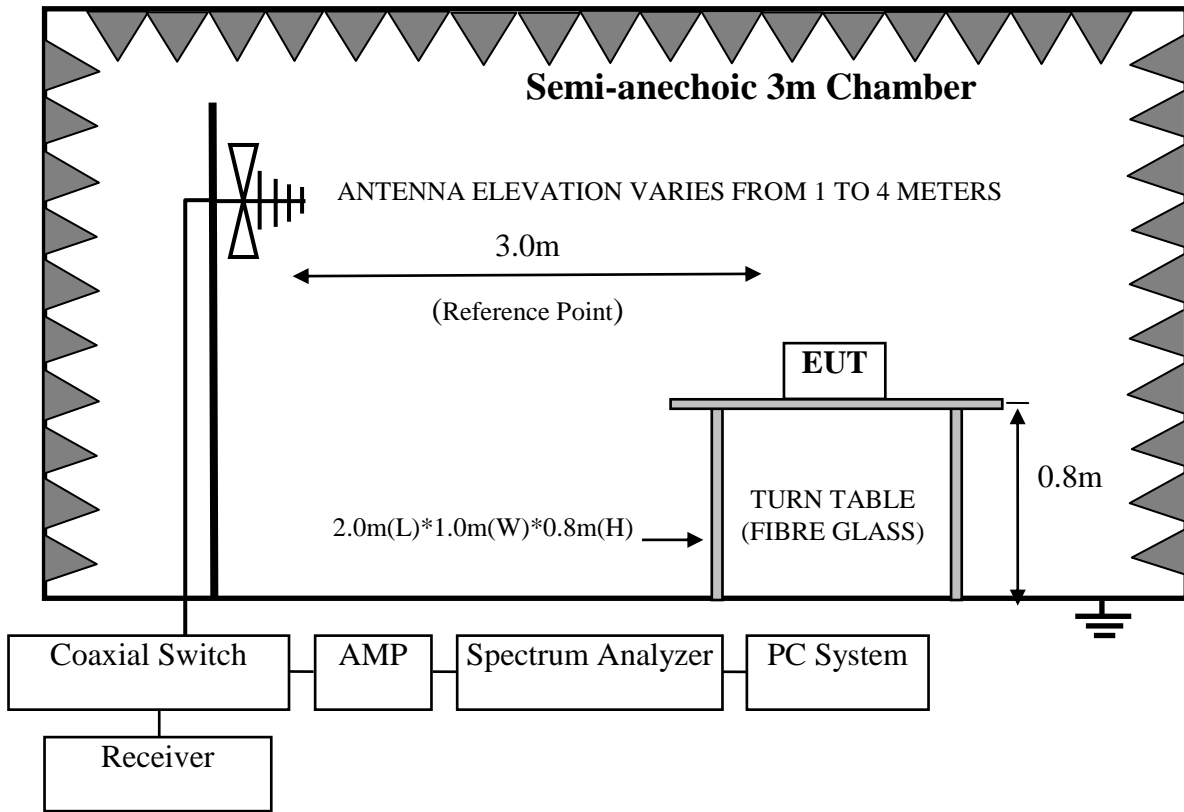
Note: N/A means Not applicable.

Frequency range: above 1000MHz

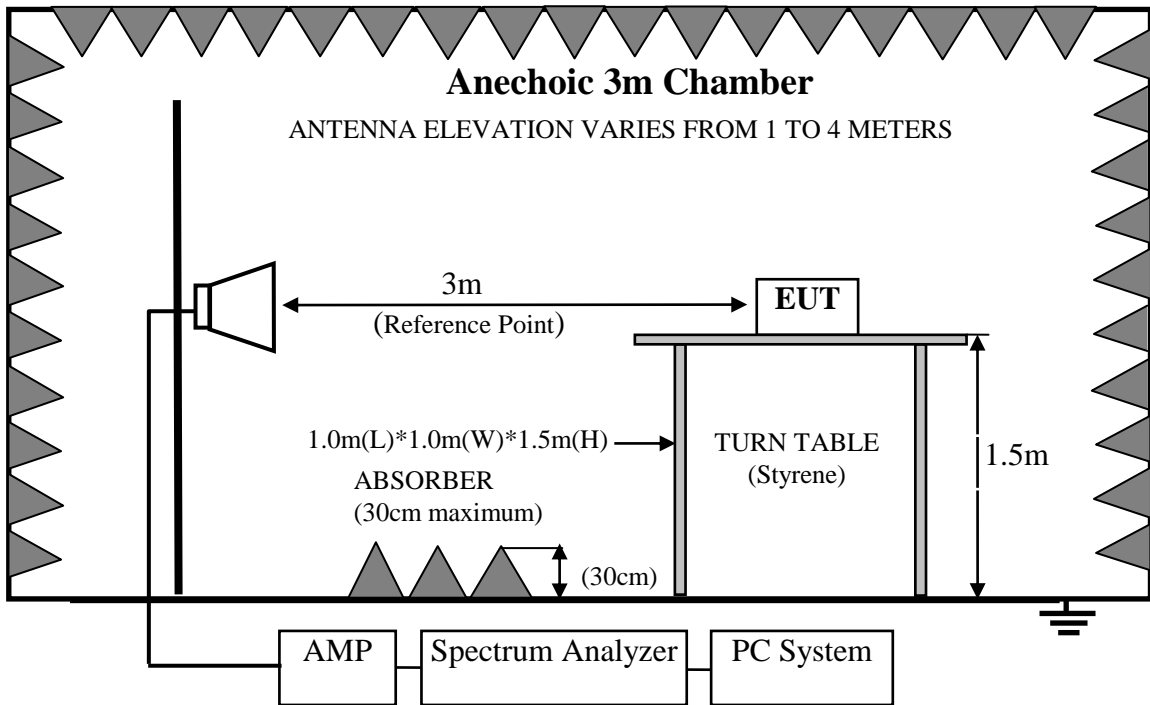
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(Svswr)	AUDIX	N/A	N/A	Apr.14,21	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	5 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.07,21	1 Year
4.	Horn Antenna	ETC	MCTD 1209	DRH15F03006	Jul.26,21	1 Year
5.	Amplifier	Agilent	83017A	MY53270084	Oct.09,21	1 Year
6.	RF Cable	EMCI	EMC104-SM-S M-15000	190407	Jul.14,21	1 Year
7.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

Note: N/A means Not applicable.

4.2. Block Diagram of Test Setup
For frequency range 30MHz-1000MHz



For frequency range above 1GHz



4.3.Radiated Emission Limits Standard:

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
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 1000MHz	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

- Remark :
- (1) Emission Level (dBμV/m) = Reading (Receiver) (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB)
Emission Level (dBμV/m) = Reading (Spectrum) (dBμV) + Antenna Factor (dB/m) – Amp Factor (dB) + Cable Loss (dB)(above 1000MHz)
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
 - (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.4.1. Bluetooth audio module (EUT)

Model Number : CDB-BM1048B20-00
Serial Number : N/A

4.5.Operating Condition of EUT

- 4.5.1. Setup the EUT and simulator as shown as Section 4.2.
- 4.5.2. Turn on the power of all equipments.
- 4.5.3. Let EUT work in Tx mode.

4.6. Test Procedure

Frequency below 30MHz:

The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2020 regulation.

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground for frequency 30MHz~1000MHz, 1.5 meter high above ground for frequency above 1GHz and put the absorbing with 2.4m(L)*2.4m(W)*0.3m(H) on the ground . The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna for frequency 30MHz~1000MHz, and the Horn antenna is used as receiving antenna for frequency above 1GHz. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10: 2020 on radiated emission Test
This test was performed with EUT in X, Y, Z position, and the worse case was found and reported in report.

The bandwidth of the EMI test receiver (R&S ESR3) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz

This device is pulse Modulated, a duty cycle factor was used to calculated average level based measured peak level.

The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

4.7. Radiated Emission Test Results

PASS.

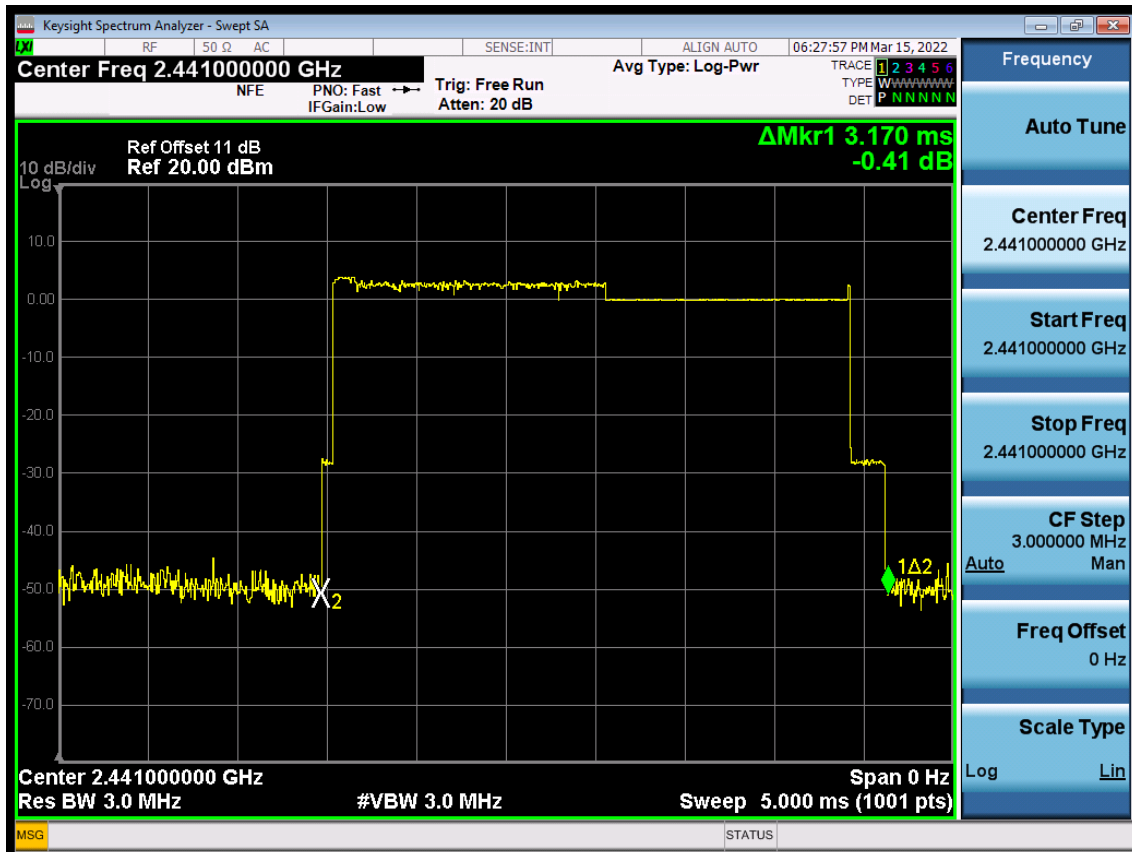
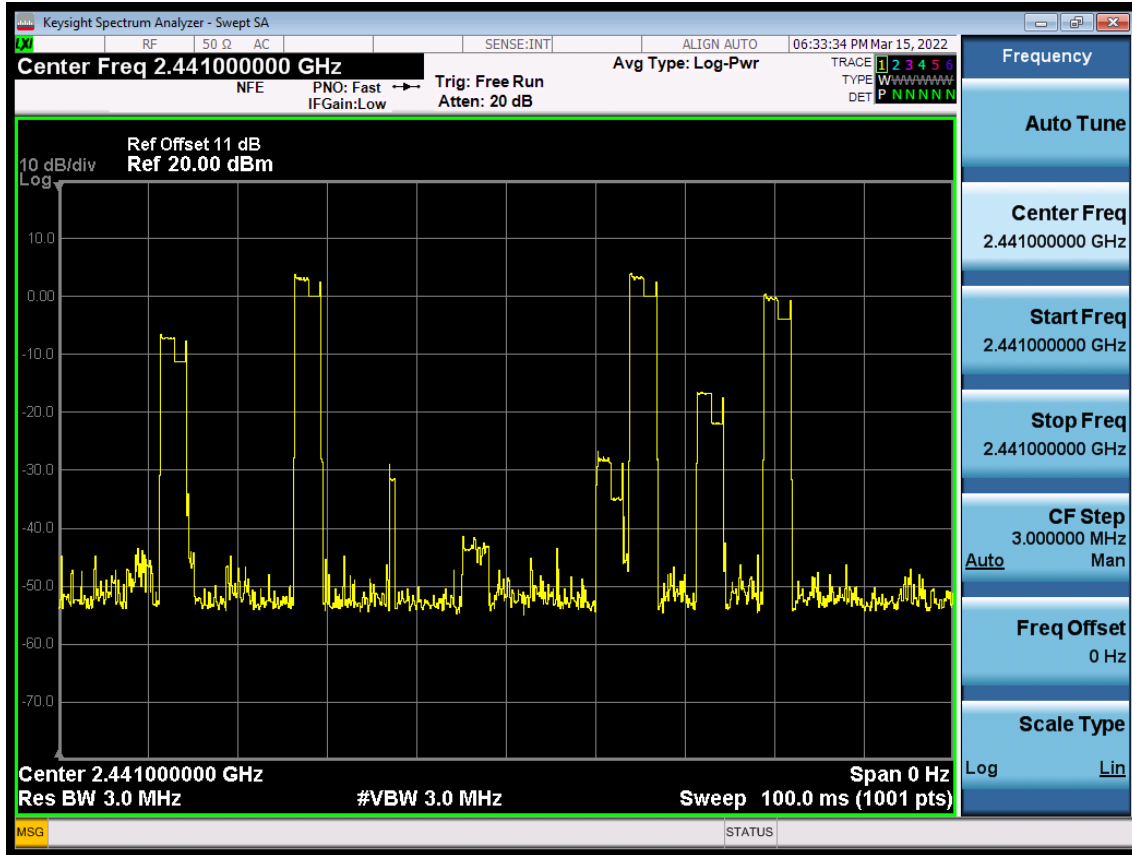
All the emissions from 30MHz to 25GHz were comply with the 15.209 Limit.

Note 1: The duty cycle factor for calculate average level is -14.416dB, and average limit is 20dB below peak limit, so if peak measured level comply with average limit, the average level was deemed to comply with average limit.

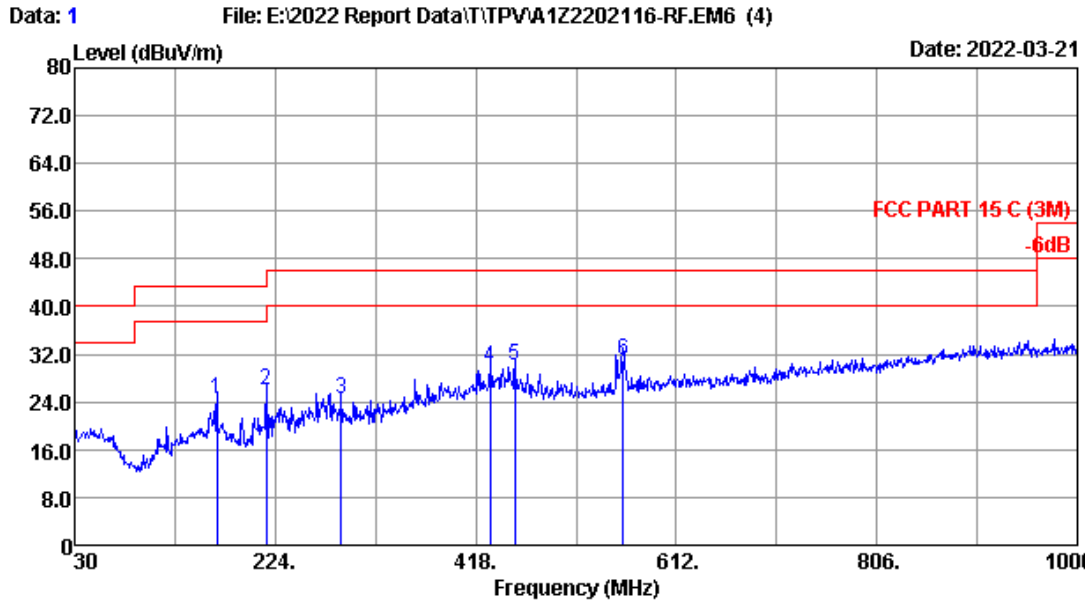
Note 2: The emissions (9kHz~30MHz) not reported for there is no emission be found.

Duty cycle factor = $20\log(\text{Dwell time}/100\text{ms}) = -14.416\text{dB}$

Dwell Time = 3.170×6



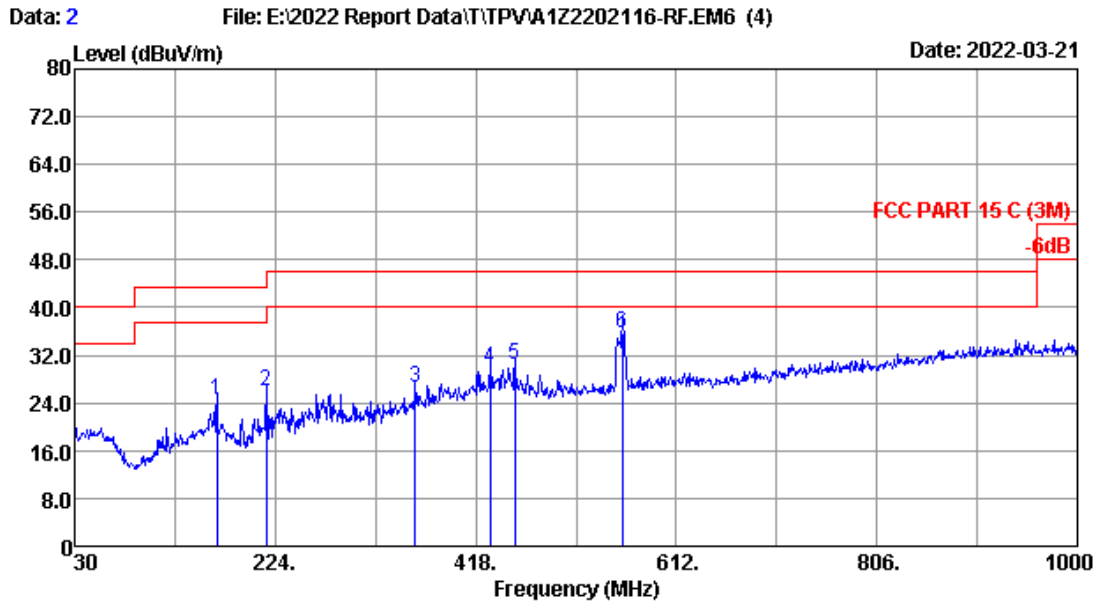
Frequency: 30MHz~1GHz



Site no. : 3m Chamber Data no. : 1
 Dis. / Ant. : 3m 2021 VULB9168-710 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 23.6°C/52% Engineer : Abel
 Test Mode : BT3.0 TX

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	167.740	19.36	1.30	3.92	24.58	43.50	18.92	QP
2	215.270	17.47	1.49	6.89	25.85	43.50	17.65	QP
3	288.020	19.45	1.72	3.21	24.38	46.00	21.62	QP
4	431.580	22.99	2.12	4.70	29.81	46.00	16.19	QP
5	455.830	23.55	2.20	4.40	30.15	46.00	15.85	QP
6	560.590	25.13	2.49	3.33	30.95	46.00	15.05	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

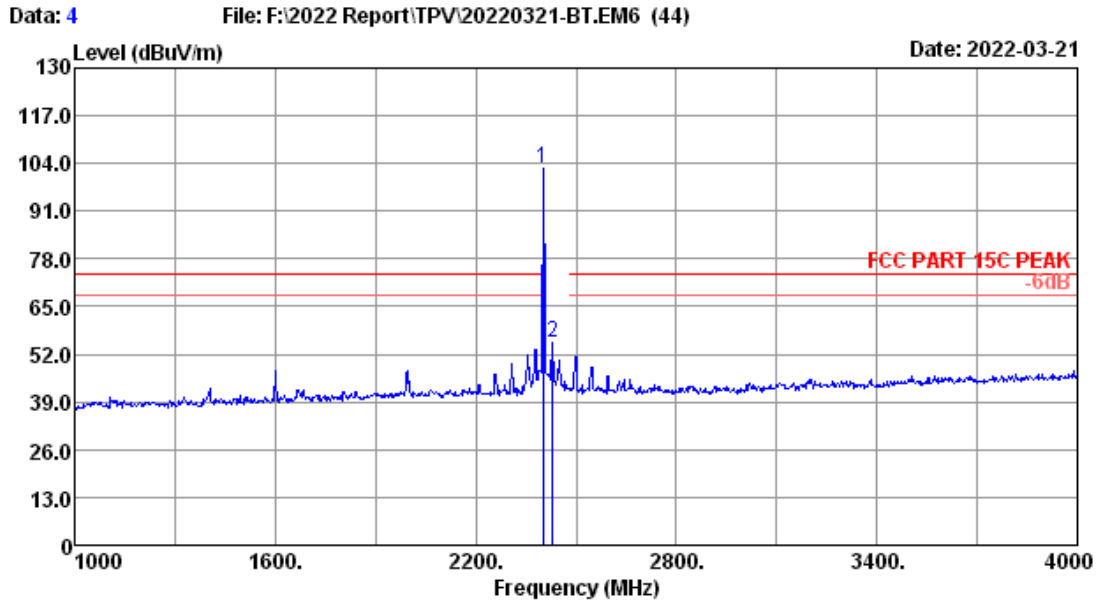


Site no. : 3m Chamber Data no. : 2
 Dis. / Ant. : 3m 2021 VULB9168-710 Ant. pol. : VERTICAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 23.6*C/52% Engineer : Abel
 Test Mode : BT3.0 TX

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	167.740	19.36	1.30	3.92	24.58	43.50	18.92	QP
2	215.270	17.47	1.49	6.89	25.85	43.50	17.65	QP
3	359.800	21.05	1.92	3.74	26.71	46.00	19.29	QP
4	431.580	22.99	2.12	4.70	29.81	46.00	16.19	QP
5	455.830	23.55	2.20	4.73	30.48	46.00	15.52	QP
6	559.620	25.11	2.49	8.18	35.78	46.00	10.22	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

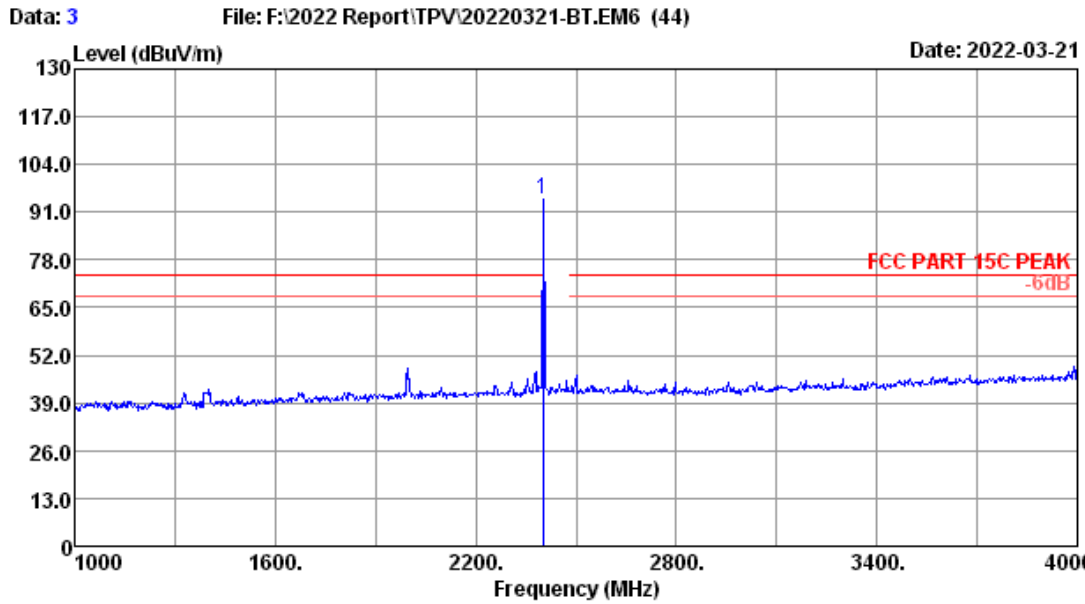
Frequency: 1GHz~18GHz



Site no. : 3m Chamber Data no. : 4
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2402MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.89	3.66	106.52	35.24	102.83	-----	-----	Peak
2	2431.00	27.96	3.67	58.70	35.24	55.09	-----	-----	Peak

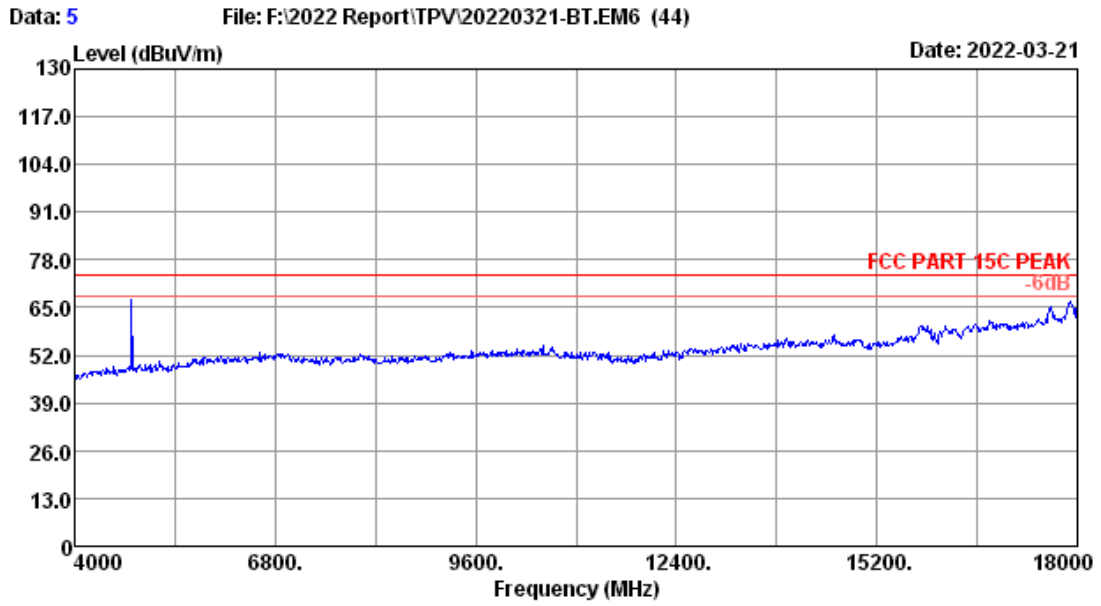
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



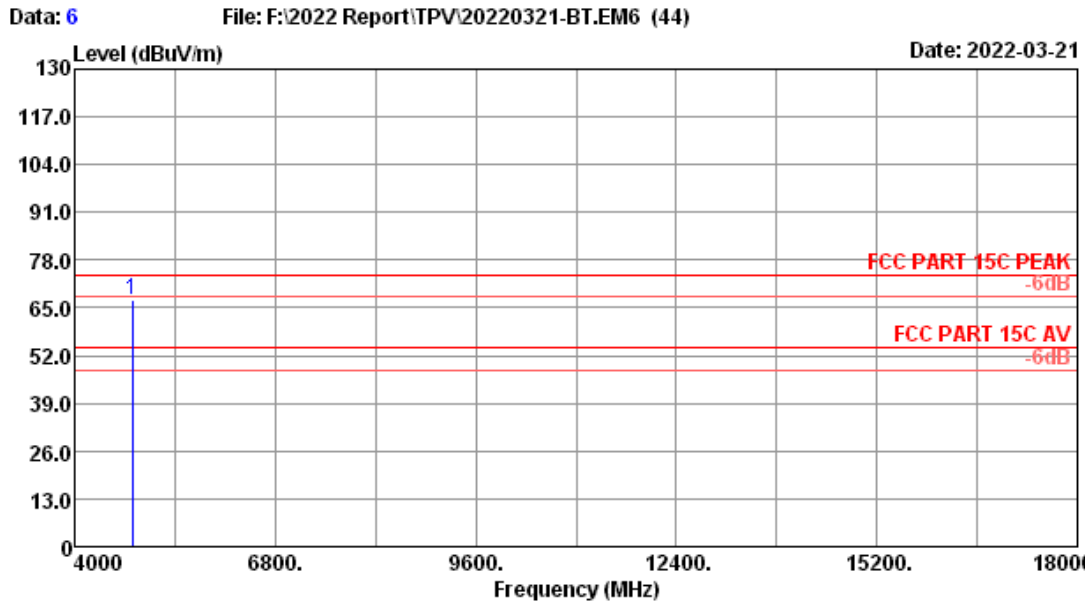
Site no. : 3m Chamber Data no. : 3
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2402MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.89	3.66	98.35	35.24	94.66	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 5
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: GFSK 2402MHz Tx		

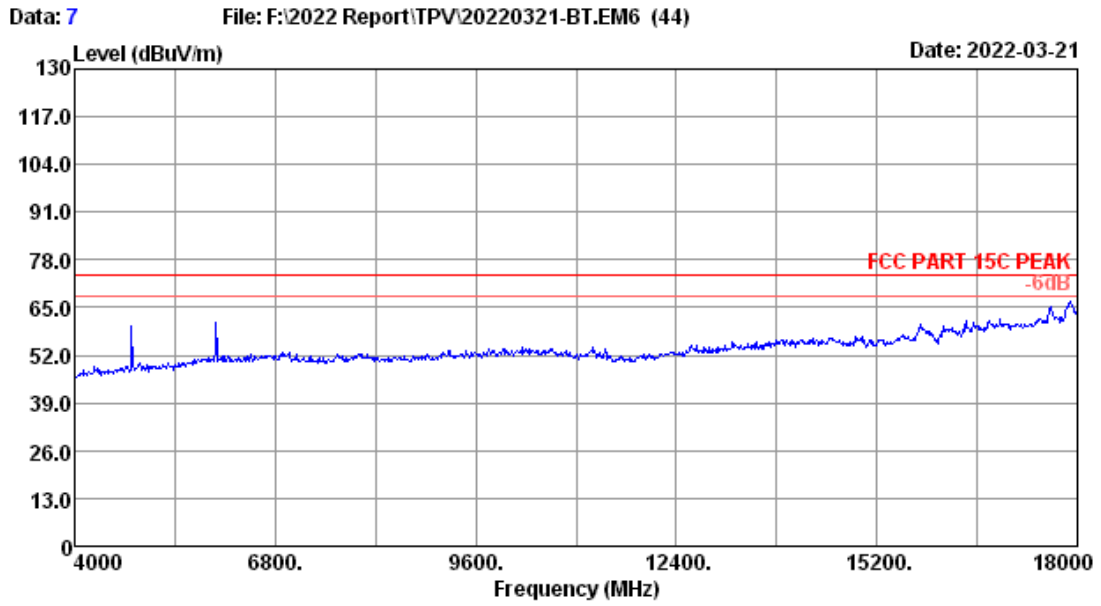


Site no. : 3m Chamber Data no. : 6
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2402MHz Tx

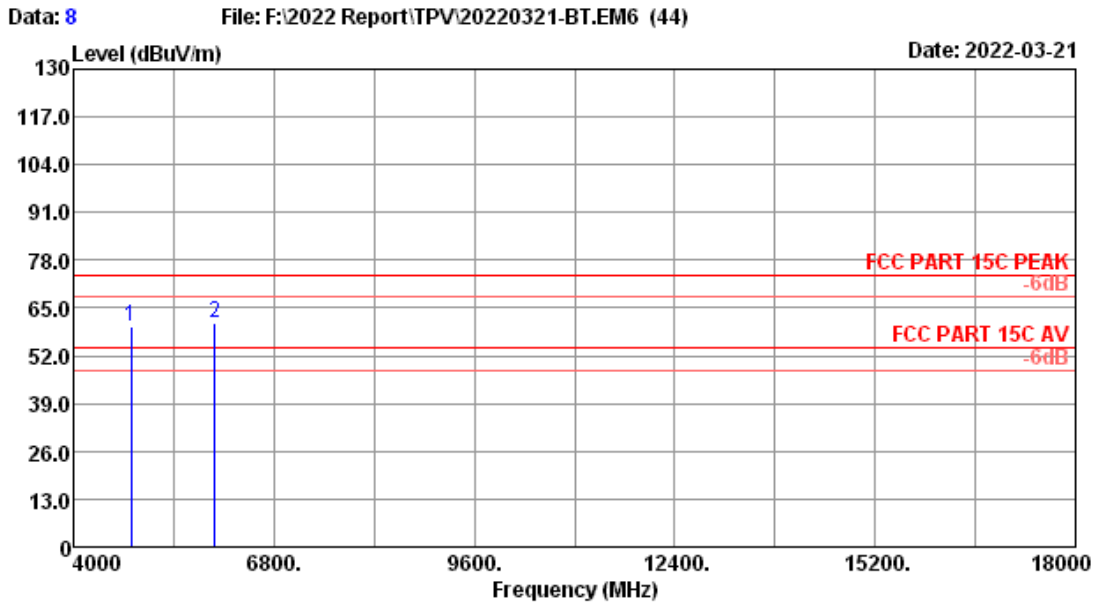
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4804.00	32.69	4.98	63.85	34.46	67.06	74.00	6.94	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4804.00	67.06	-14.416	52.644	54	Pass



Site no.	: 3m Chamber	Data no.	: 7
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: GFSK 2402MHz Tx		

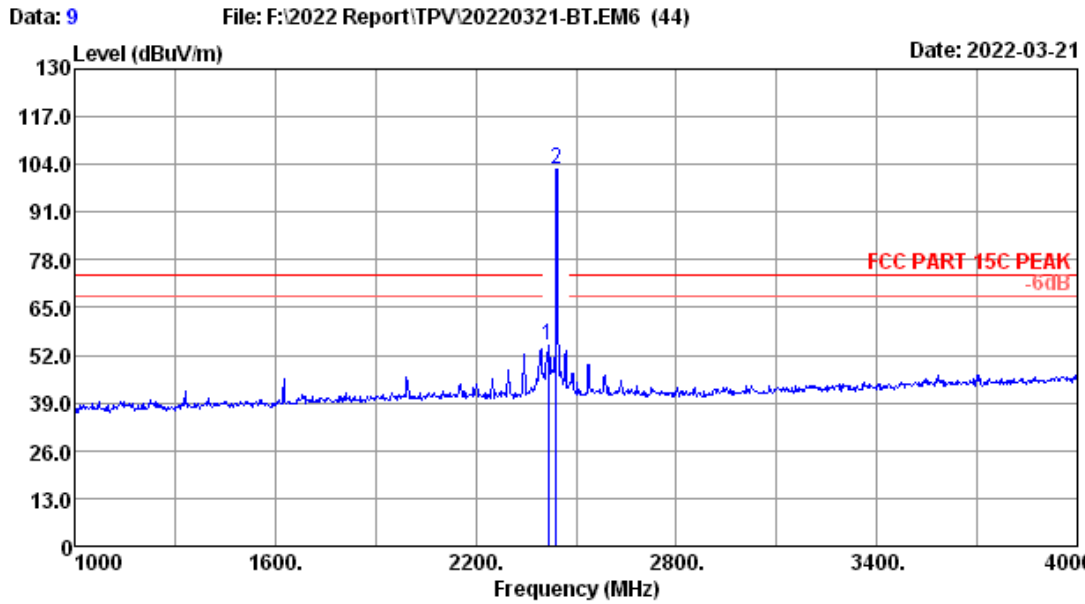


Site no. : 3m Chamber Data no. : 8
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2402MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4804.00	32.69	4.98	56.92	34.46	60.13	74.00	13.87	Peak
2	5974.00	34.47	5.39	55.46	34.50	60.82	74.00	13.18	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

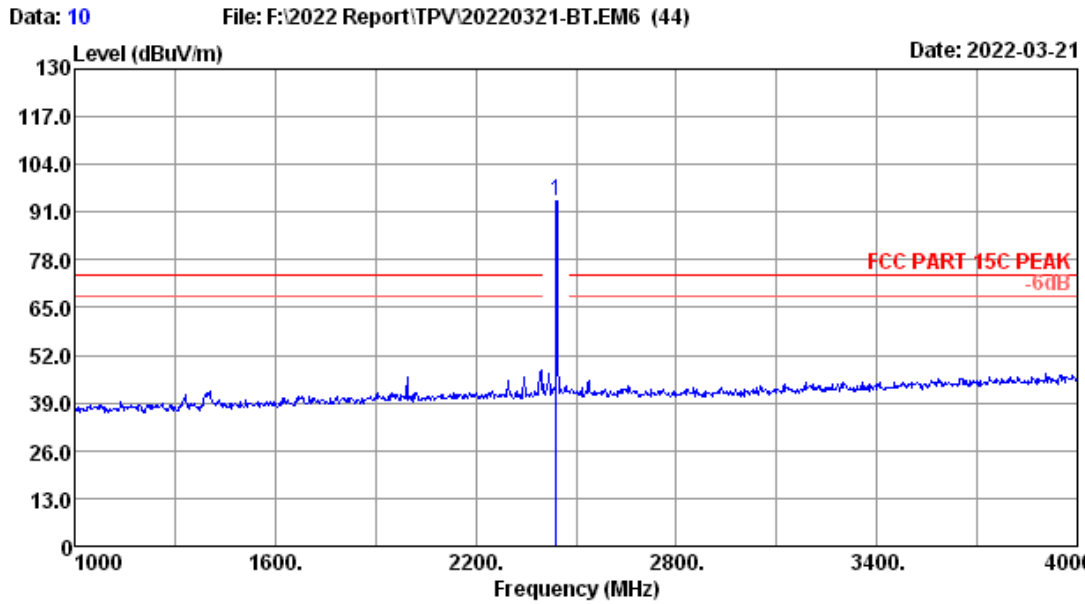
Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4804.00	60.13	-14.416	45.714	54	Pass
5974.00	60.82	-14.416	46.404	54	Pass



Site no. : 3m Chamber Data no. : 9
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2441MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2416.00	27.93	3.67	58.19	35.24	54.55	-----	-----	Peak
2	2441.00	28.00	3.68	106.06	35.25	102.49	-----	-----	Peak

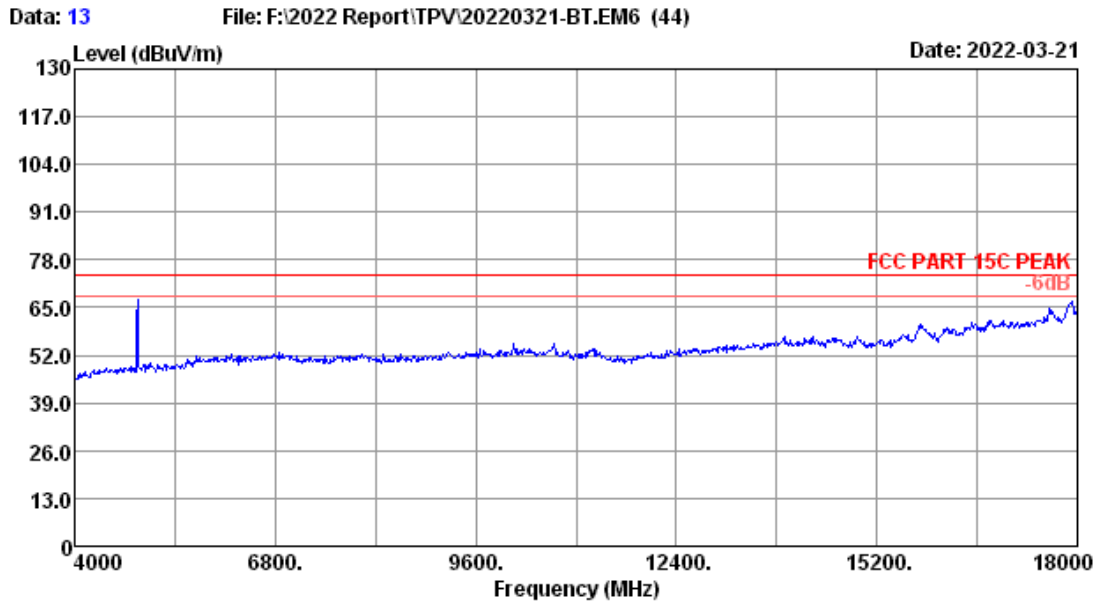
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



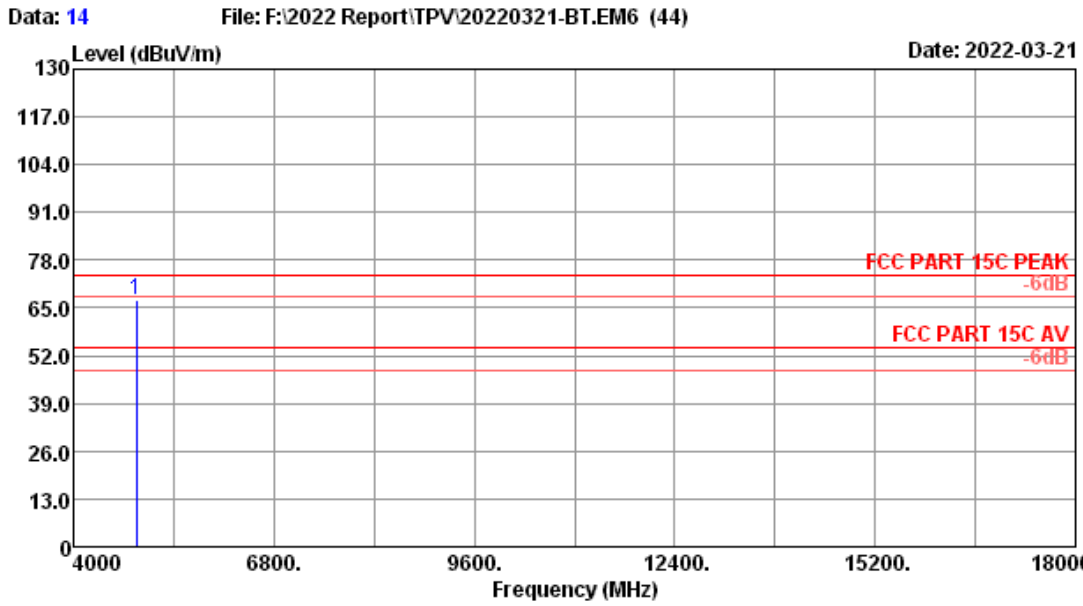
Site no. : 3m Chamber Data no. : 10
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2441MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	28.00	3.68	97.65	35.25	94.08	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 13
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: GFSK 2441MHz Tx		

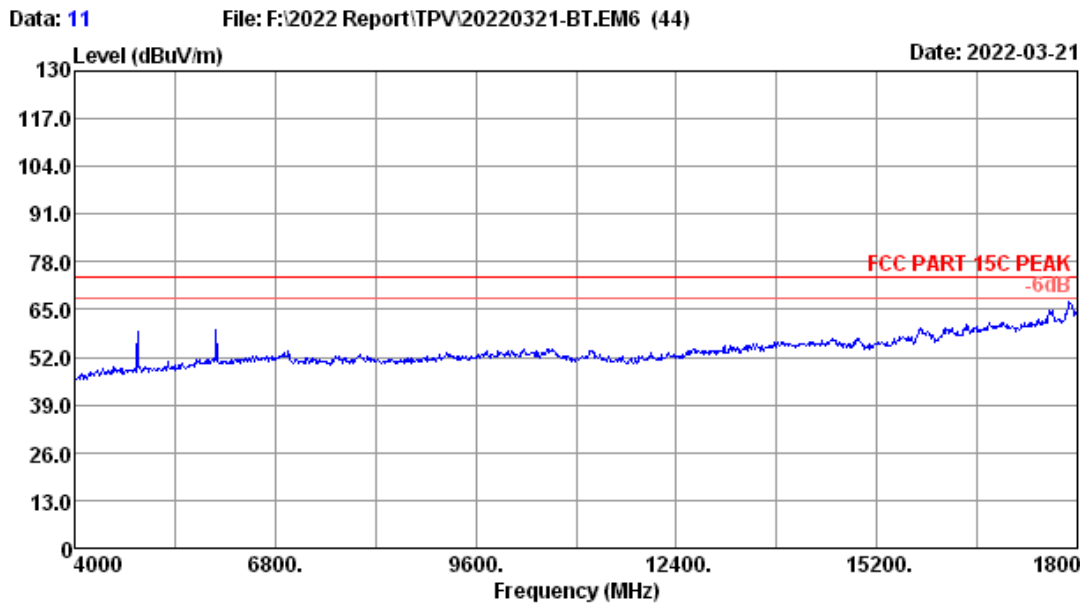


Site no. : 3m Chamber Data no. : 14
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2441MHz Tx

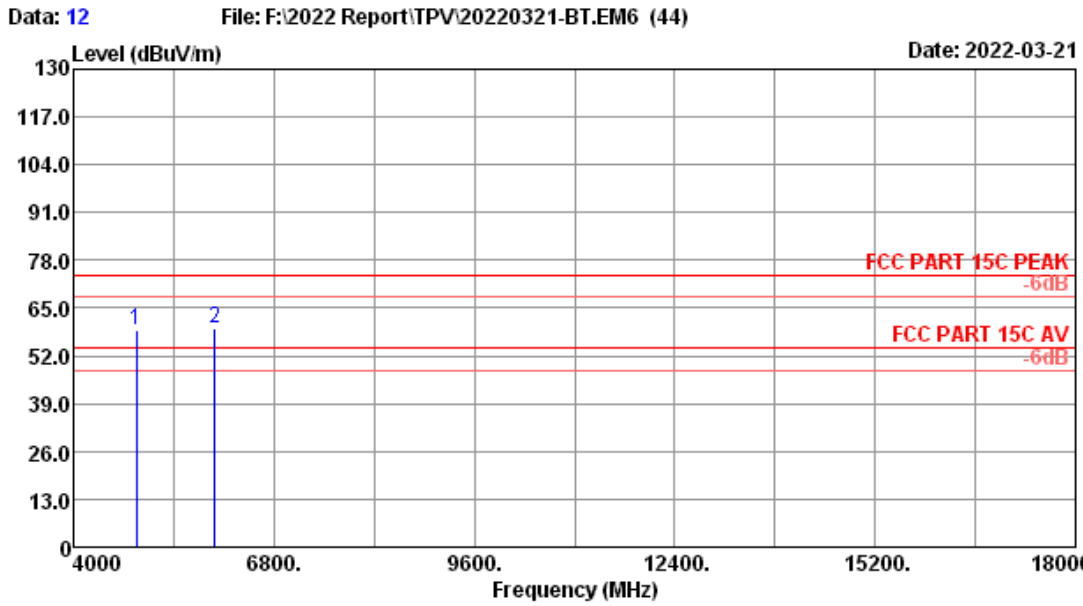
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4882.00	32.73	5.01	63.68	34.47	66.95	74.00	7.05	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4882.00	66.95	-14.416	52.534	54	Pass



Site no.	: 3m Chamber	Data no.	: 11
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: GFSK 2441MHz Tx		

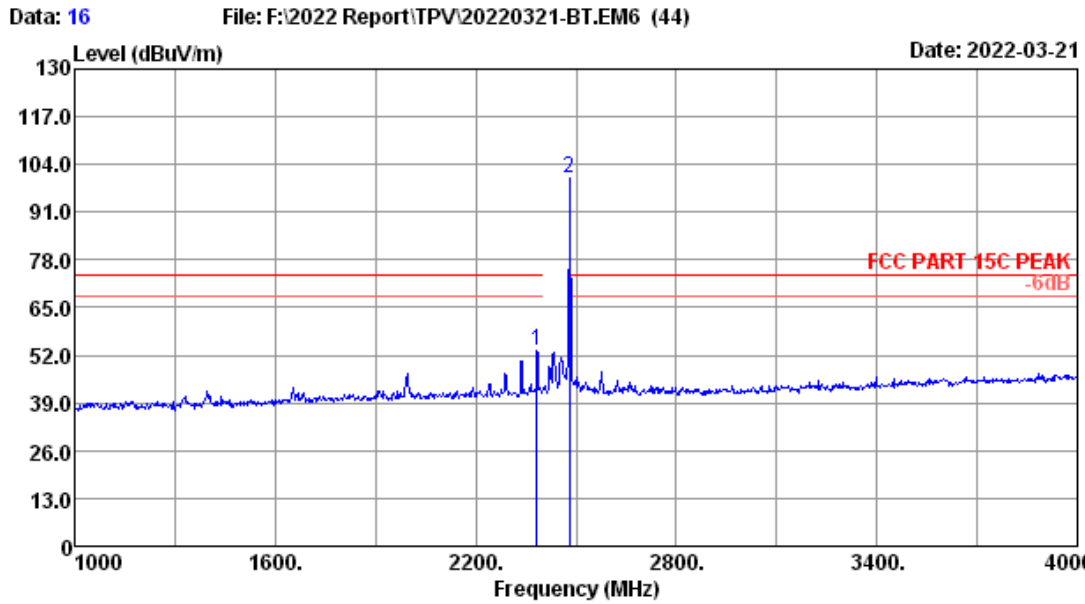


Site no. : 3m Chamber Data no. : 12
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2441MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4882.00	32.73	5.01	55.89	34.47	59.16	74.00	14.84	Peak
2	5974.00	34.47	5.39	54.00	34.50	59.36	74.00	14.64	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

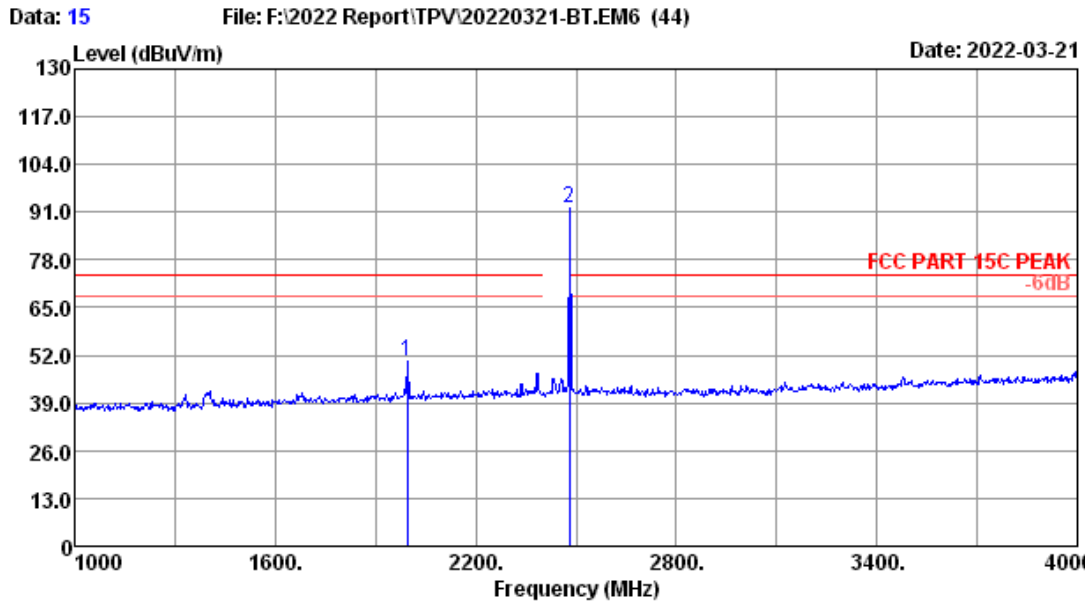
Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4882.00	59.16	-14.416	44.744	54	Pass
5974.00	59.36	-14.416	44.944	54	Pass



Site no. : 3m Chamber Data no. : 16
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2480MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2383.00	27.86	3.65	56.77	35.24	53.04	74.00	20.96	Peak
2	2480.00	28.07	3.71	103.83	35.25	100.36	-----	-----	Peak

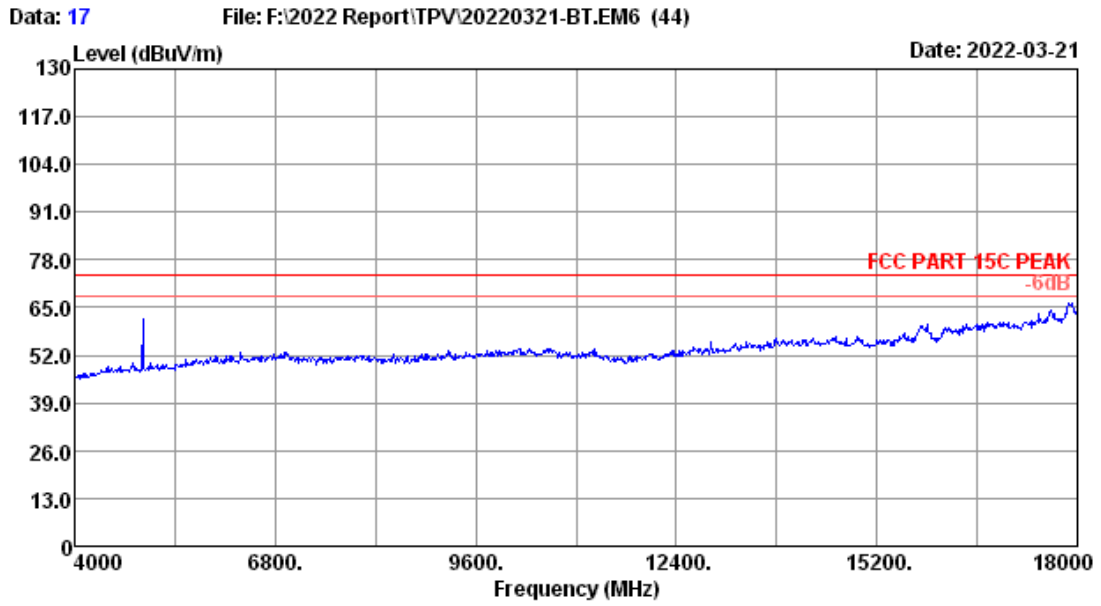
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



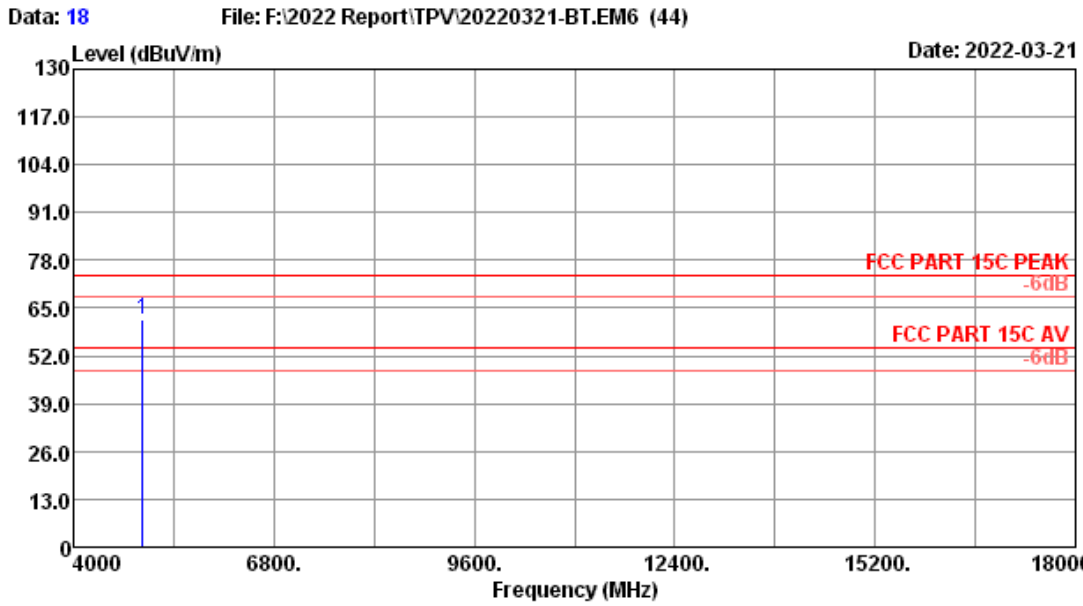
Site no. : 3m Chamber Data no. : 15
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2480MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1996.00	27.10	3.37	54.88	35.20	50.15	74.00	23.85	Peak
2	2480.00	28.07	3.71	95.45	35.25	91.98	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 17
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: GFSK 2480MHz Tx		

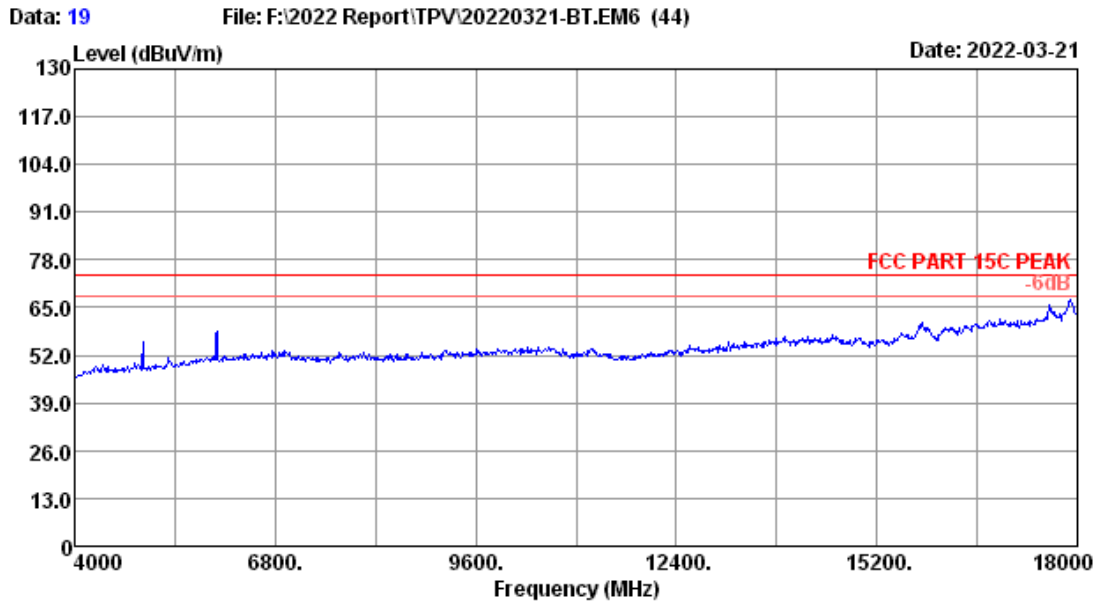


Site no. : 3m Chamber Data no. : 18
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2480MHz Tx

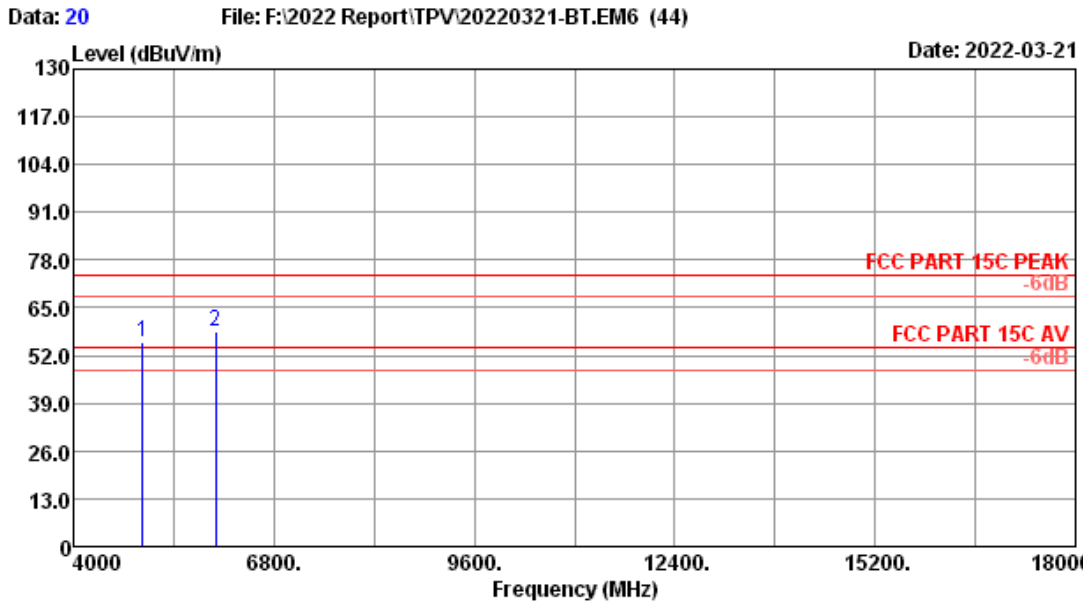
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	32.78	5.03	58.78	34.49	62.10	74.00	11.90	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4960.00	62.10	-14.416	47.684	54	Pass



Site no.	: 3m Chamber	Data no.	: 19
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: GFSK 2480MHz Tx		

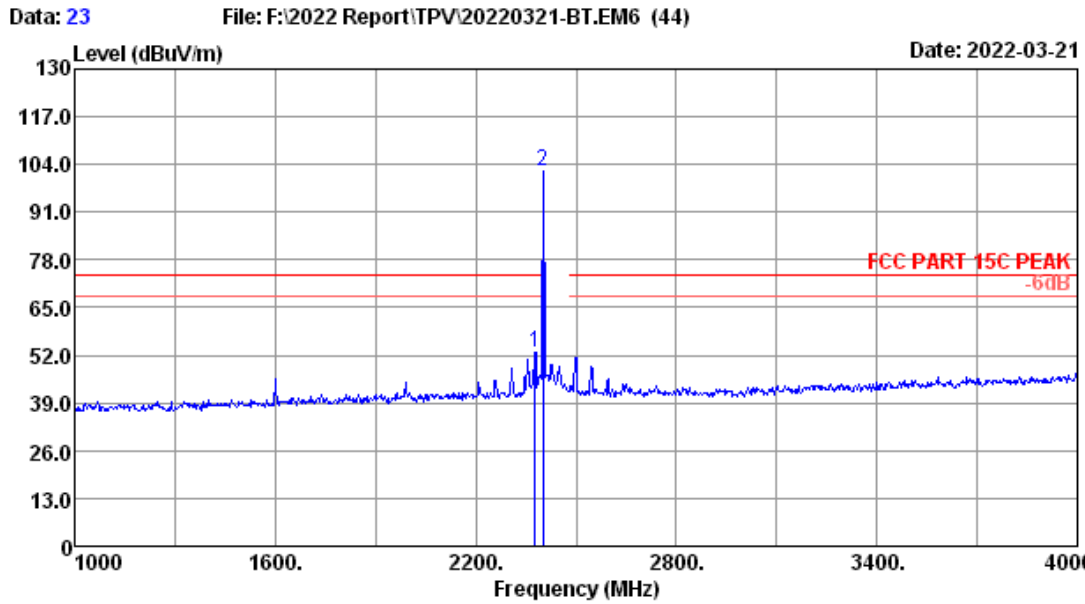


Site no. : 3m Chamber Data no. : 20
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : GFSK 2480MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	32.78	5.03	52.52	34.49	55.84	74.00	18.16	Peak
2	5988.00	34.47	5.40	53.03	34.50	58.40	74.00	15.60	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

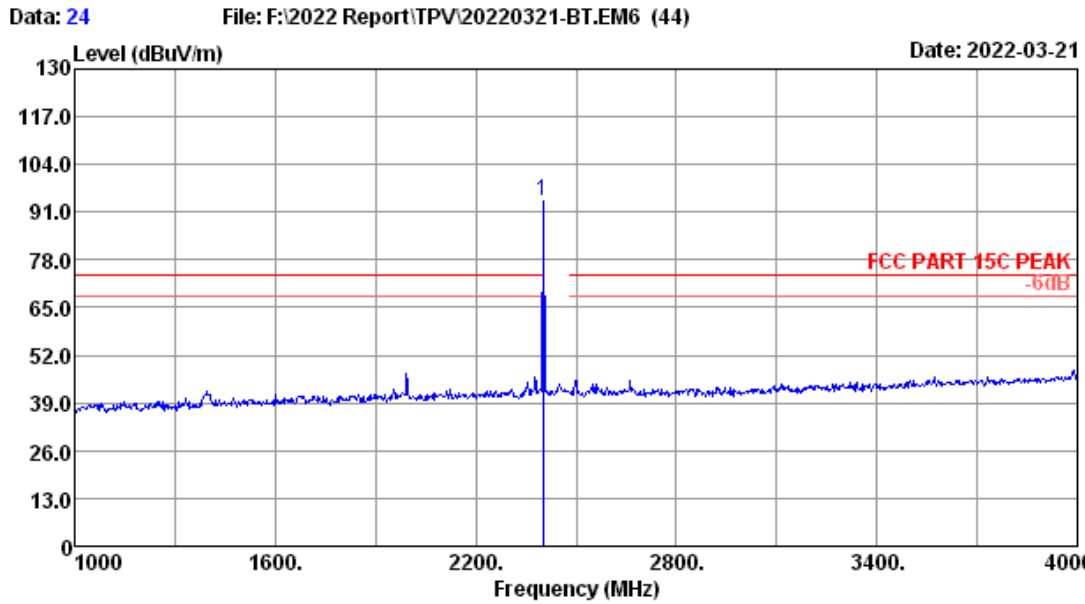
Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4960.00	55.84	-14.416	41.424	54	Pass
5988.00	58.40	-14.416	43.984	54	Pass



Site no. : 3m Chamber Data no. : 23
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2402MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2377.00	27.86	3.64	56.45	35.24	52.71	74.00	21.29	Peak
2	2402.00	27.89	3.66	106.03	35.24	102.34	-----	-----	Peak

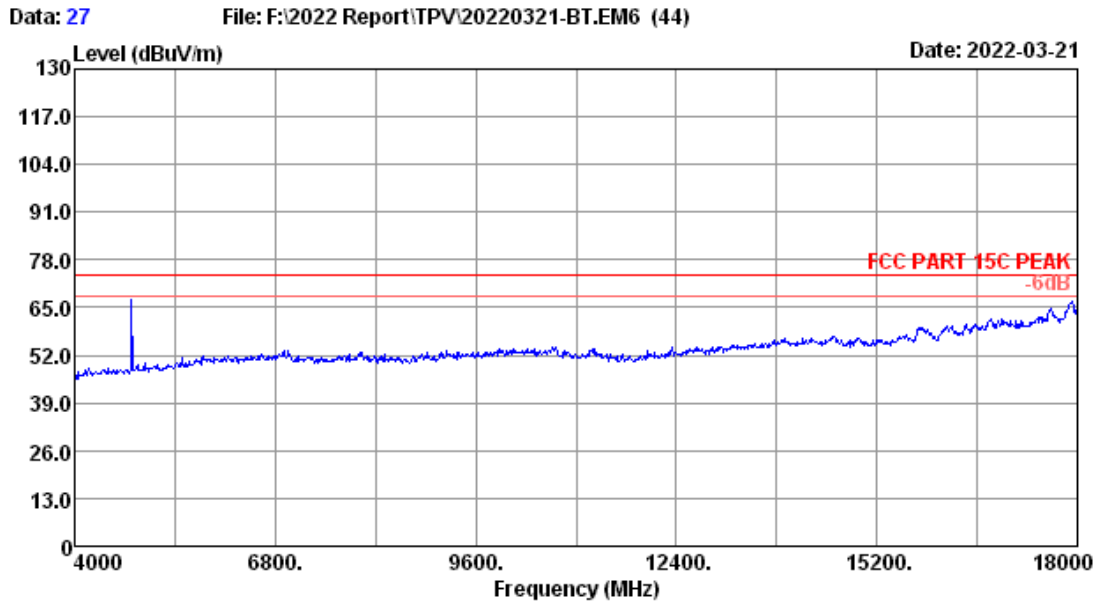
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



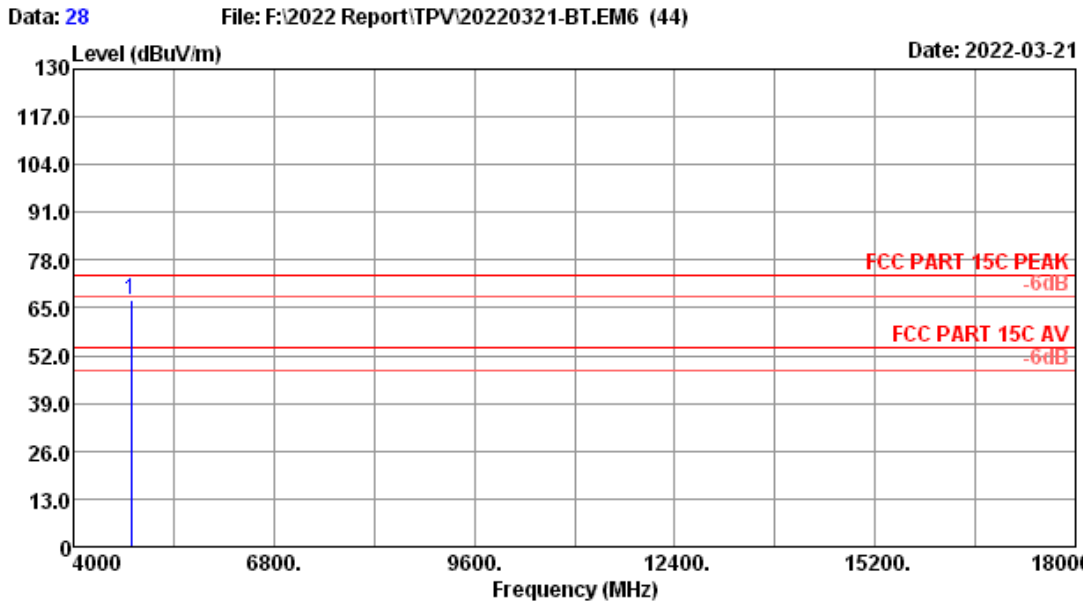
Site no. : 3m Chamber Data no. : 24
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2402MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.89	3.66	97.88	35.24	94.19	78.0	16.19	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 27
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: 8-DPSK 2402MHz Tx		

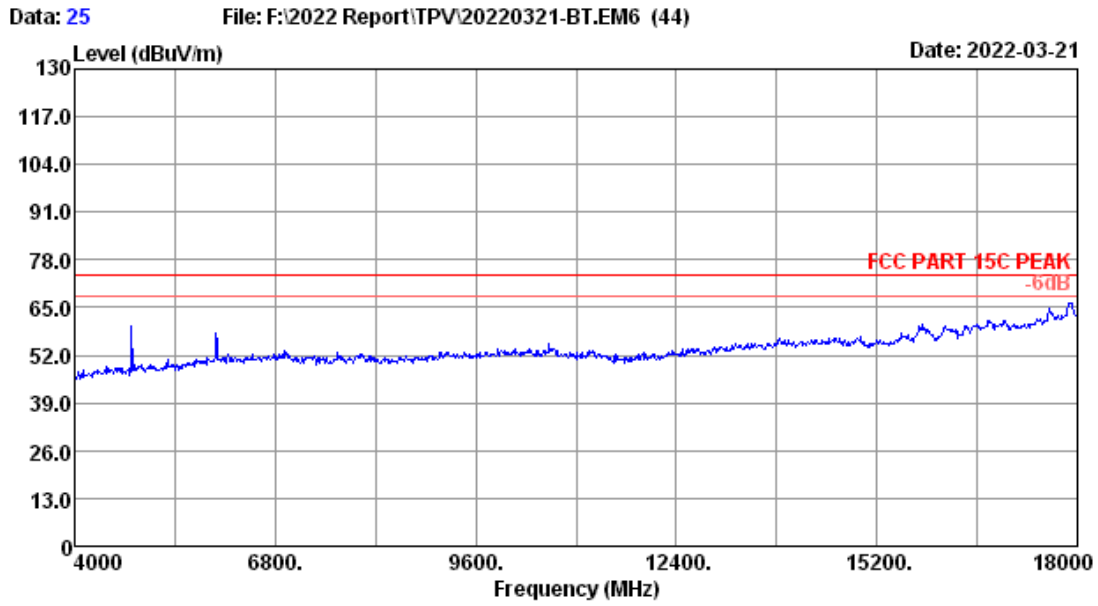


Site no. : 3m Chamber Data no. : 28
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2402MHz Tx

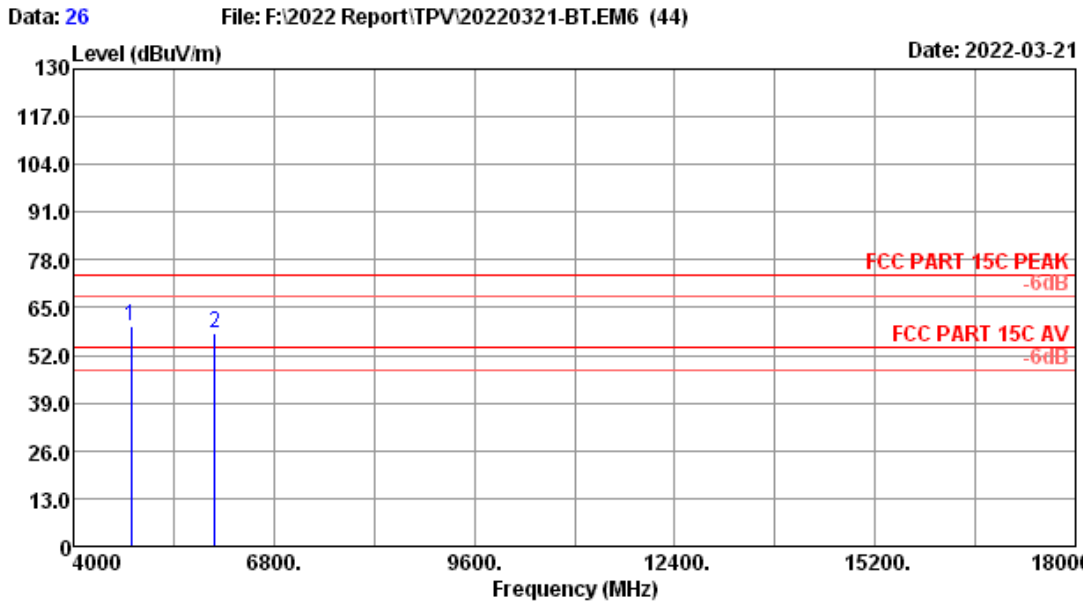
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4804.00	32.69	4.98	63.97	34.46	67.18	74.00	6.82	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4804.00	67.18	-14.416	52.764	54	Pass



Site no.	: 3m Chamber	Data no.	: 25
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: 8-DPSK 2402MHz Tx		

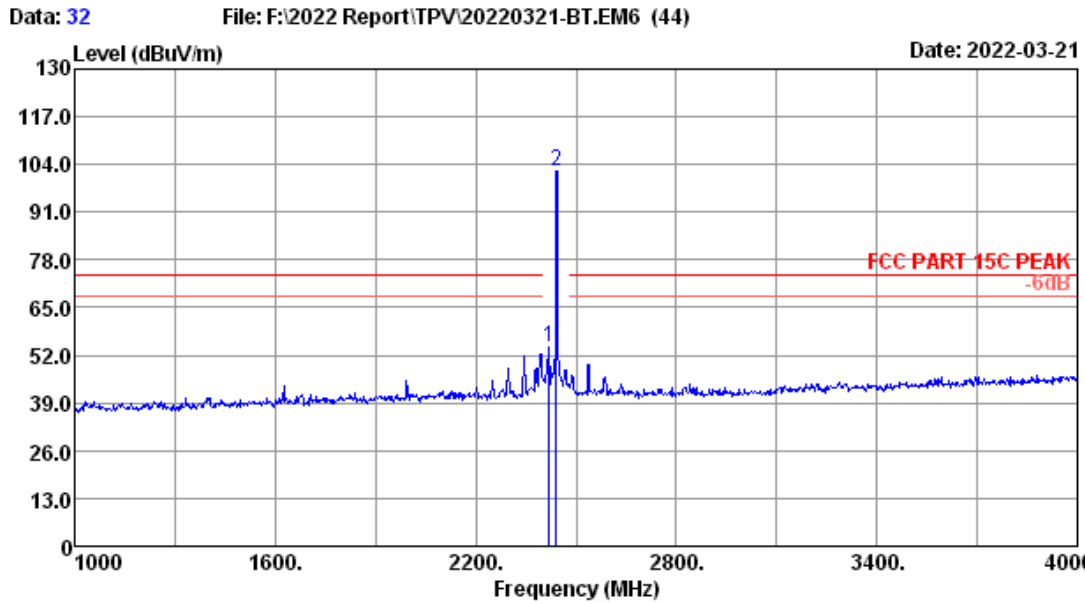


Site no. : 3m Chamber Data no. : 26
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1*C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2402MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4804.00	32.69	4.98	56.80	34.46	60.01	74.00	13.99	Peak
2	5974.00	34.47	5.39	52.74	34.50	58.10	74.00	15.90	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

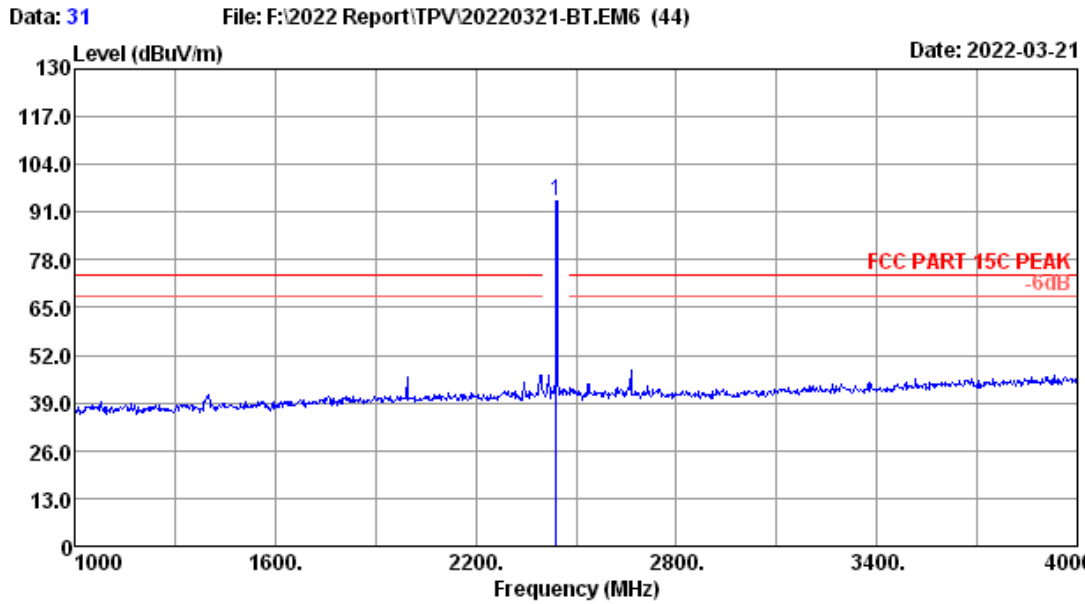
Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4804.00	60.01	-14.416	45.594	54	Pass
5974.00	58.10	-14.416	43.684	54	Pass



Site no. : 3m Chamber Data no. : 32
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2441MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2419.00	27.93	3.67	57.75	35.24	54.11	-----	-----	Peak
2	2441.00	28.00	3.68	105.83	35.25	102.26	-----	-----	Peak

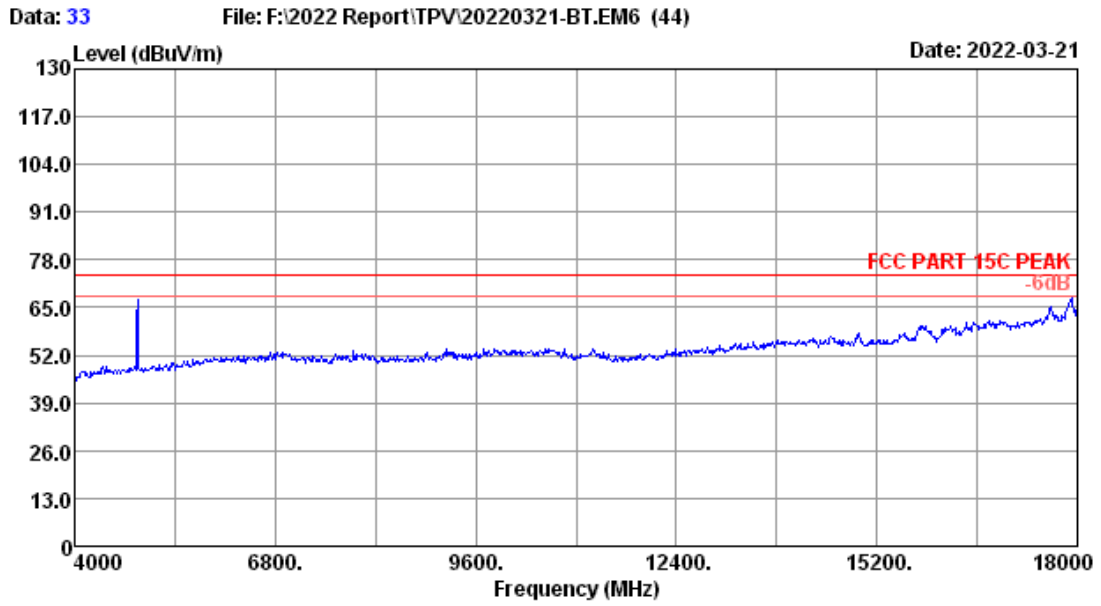
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



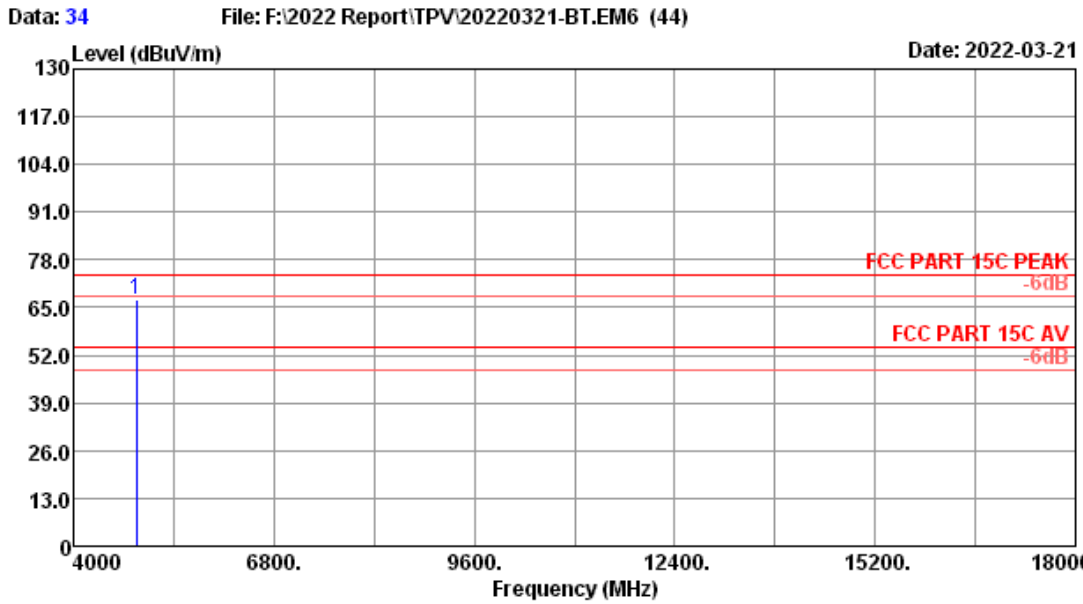
Site no. : 3m Chamber Data no. : 31
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2441MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	28.00	3.68	97.45	35.25	93.88	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 33
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: 8-DPSK 2441MHz Tx		

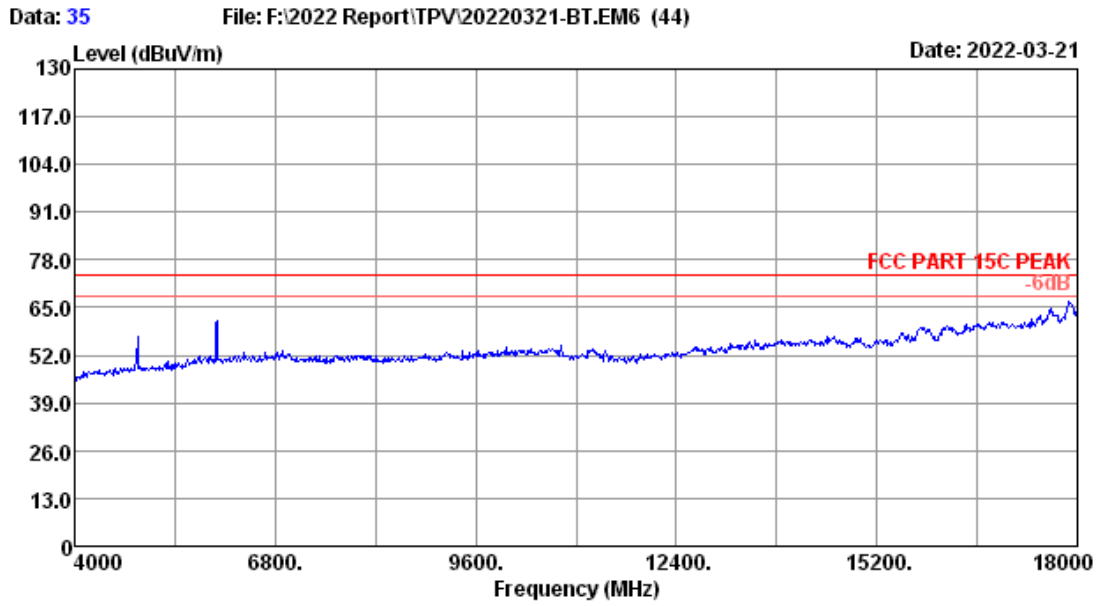


Site no. : 3m Chamber Data no. : 34
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2441MHz Tx

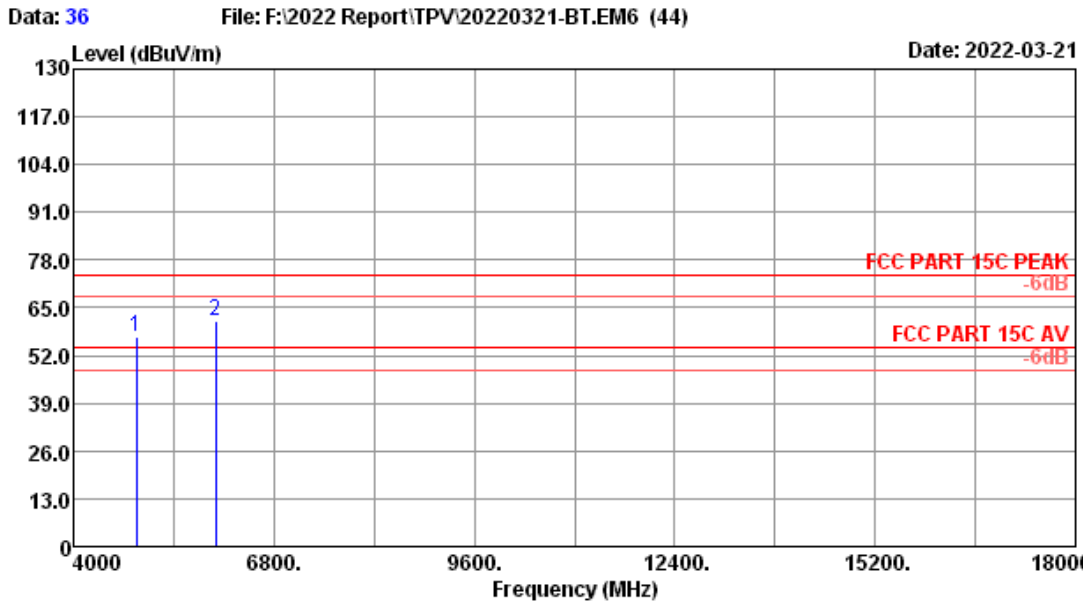
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4882.00	32.73	5.01	63.67	34.47	66.94	74.00	7.06	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4882.00	66.94	-14.416	52.524	54	Pass



Site no.	: 3m Chamber	Data no.	: 35
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: 8-DPSK 2441MHz Tx		

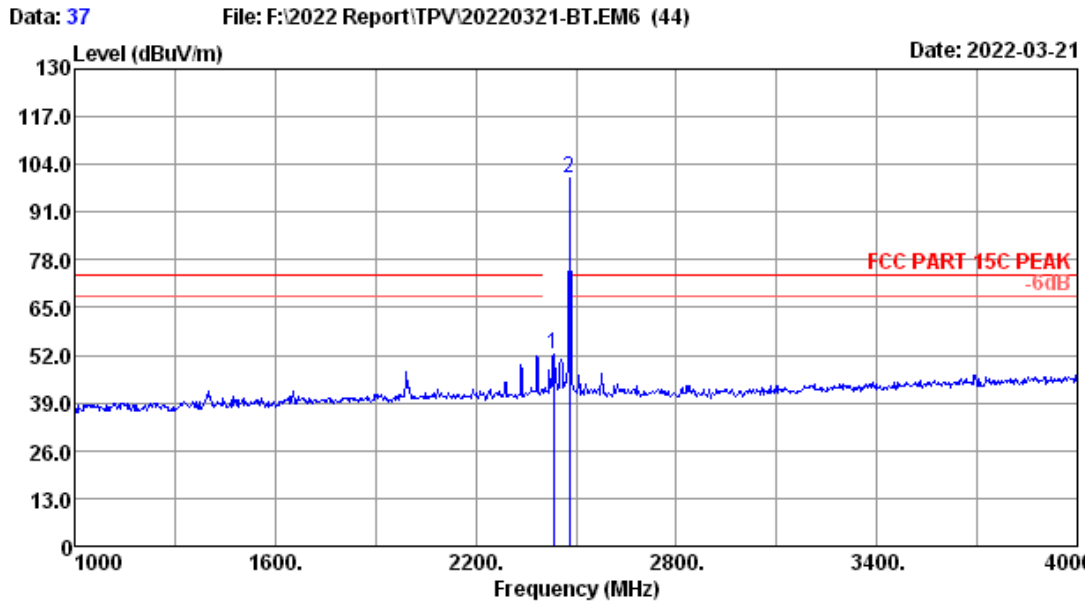


Site no. : 3m Chamber Data no. : 36
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1*C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2441MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4882.00	32.73	5.01	54.00	34.47	57.27	74.00	16.73	Peak
2	5988.00	34.47	5.40	55.93	34.50	61.30	74.00	12.70	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

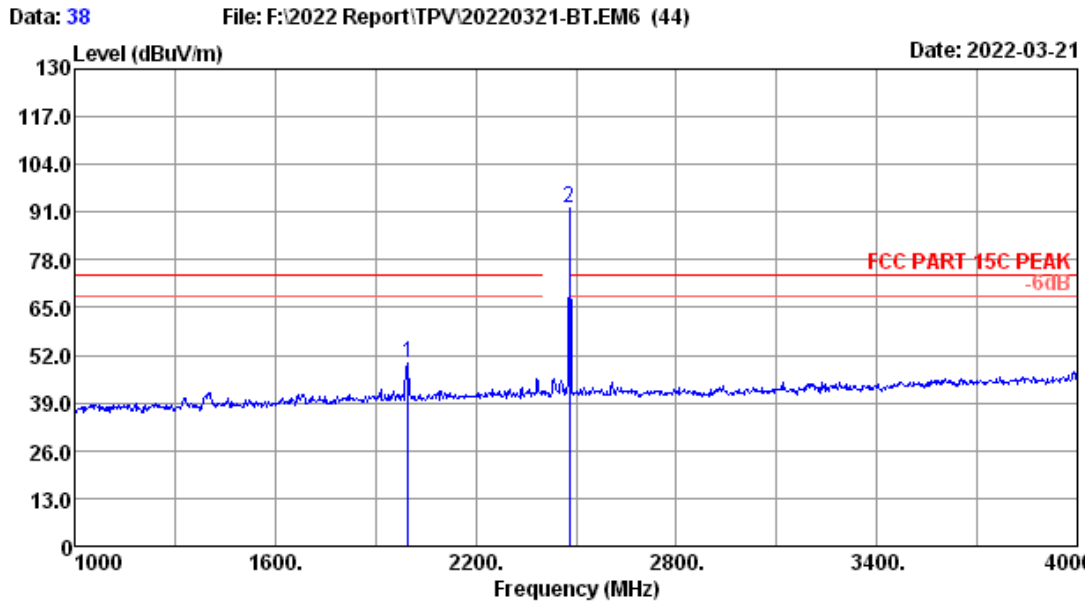
Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4882.00	57.27	-14.416	42.854	54	Pass
5988.00	61.30	-14.416	46.884	54	Pass



Site no. : 3m Chamber Data no. : 37
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2480MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2434.00	27.96	3.67	55.71	35.24	52.10	-----	-----	Peak
2	2480.00	28.07	3.71	103.84	35.25	100.37	-----	-----	Peak

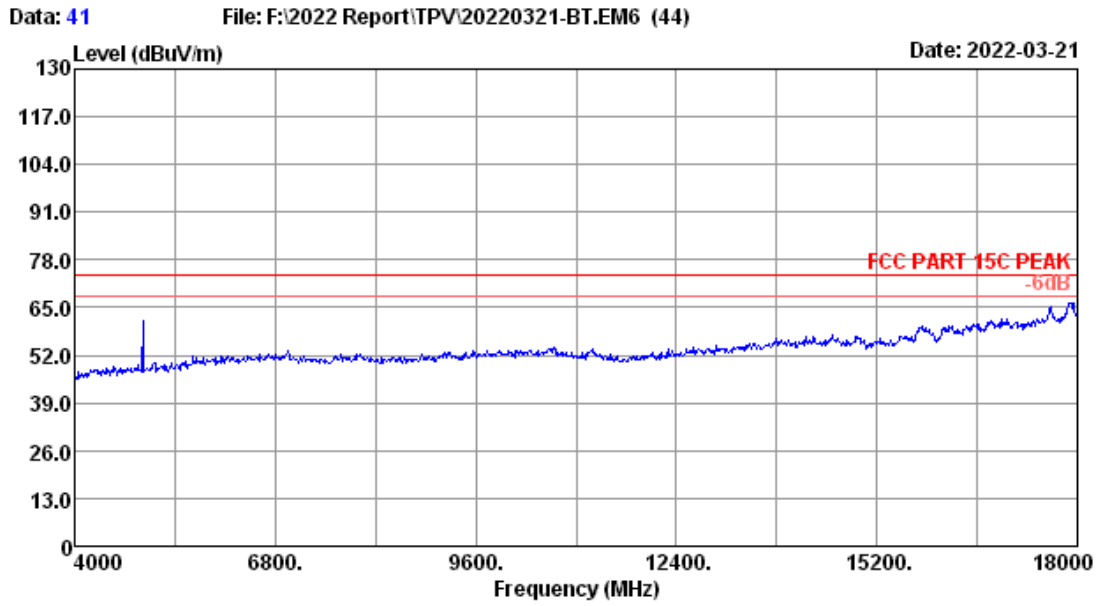
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



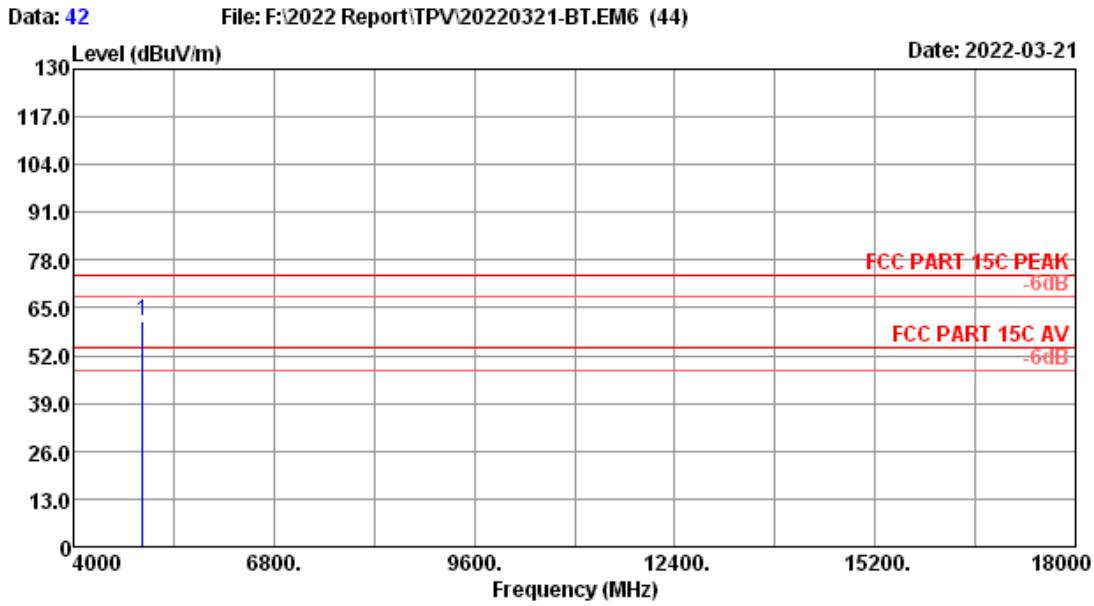
Site no. : 3m Chamber Data no. : 38
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2480MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1999.00	27.10	3.40	54.61	35.20	49.91	74.00	24.09	Peak
2	2480.00	28.07	3.71	95.36	35.25	91.89	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 41
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: 8-DPSK 2480MHz Tx		

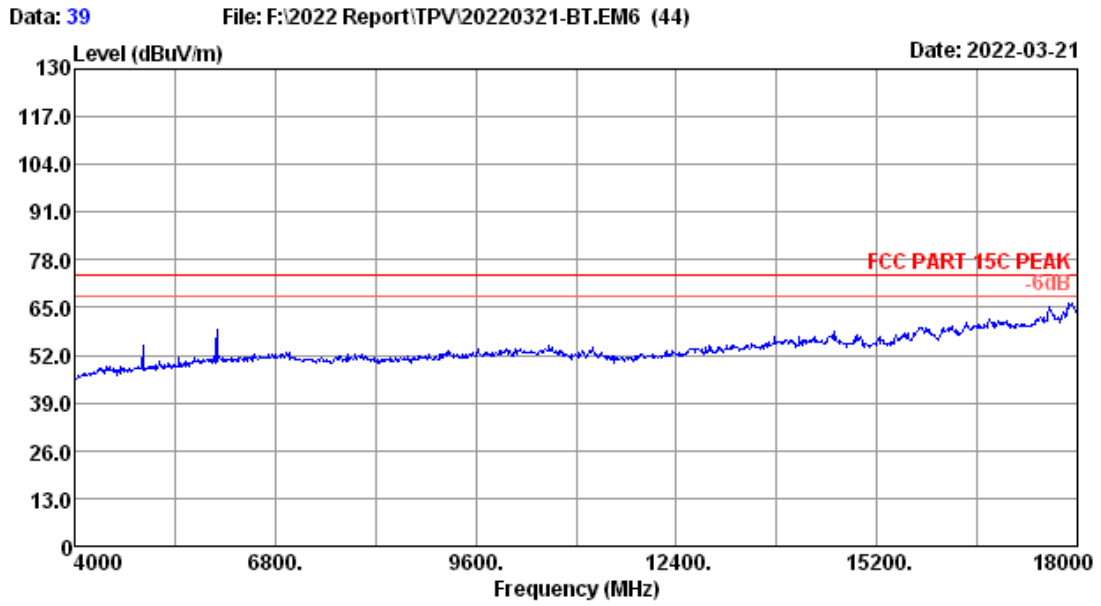


Site no. : 3m Chamber Data no. : 42
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2480MHz Tx

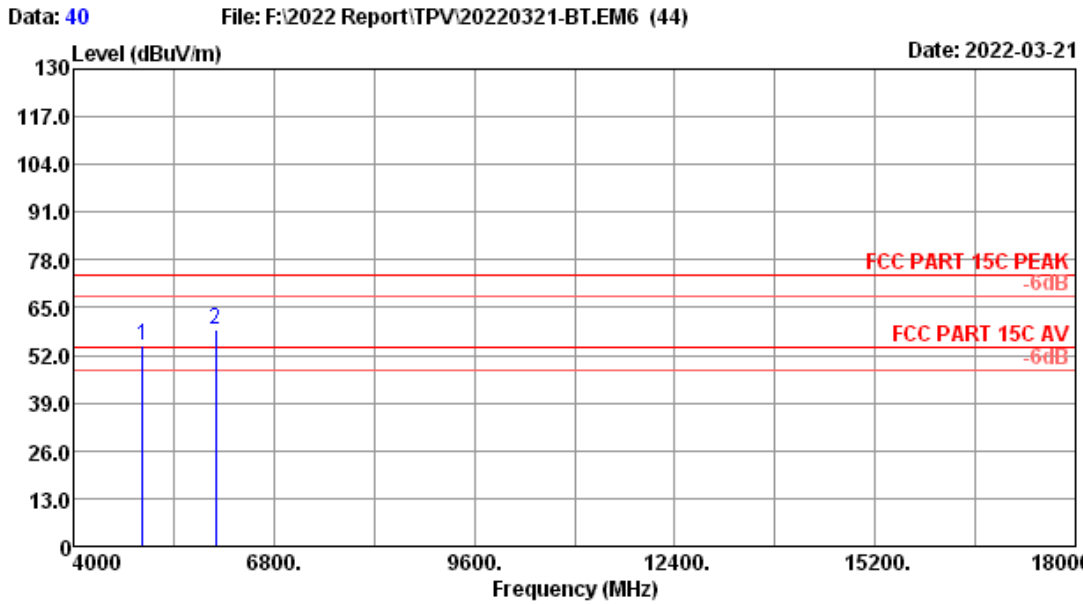
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	32.78	5.03	58.16	34.49	61.48	74.00	12.52	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4960.00	60.19	-14.416	45.774	54	Pass



Site no.	: 3m Chamber	Data no.	: 39
Dis. / Ant.	: 3m 2021 MCTD1209-3006	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 22.1°C/51.5%	Engineer	: winter
Test Mode	: 8-DPSK 2480MHz Tx		



Site no. : 3m Chamber Data no. : 40
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 22.1°C/51.5% Engineer : winter
 Test Mode : 8-DPSK 2480MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	32.78	5.03	51.16	34.49	54.48	74.00	19.52	Peak
2	5988.00	34.47	5.40	53.67	34.50	59.04	74.00	14.96	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.

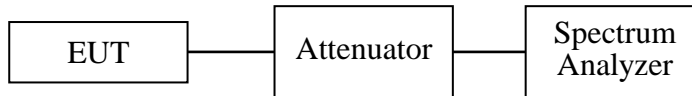
Frequency (MHz)	Peak level (dBuV/m)	Duty cycle factor (dB)	AV level (dBuV/m)	Limit(dBuV/m)	Conclusion
4960.00	54.48	-14.416	40.064	54	Pass
5988.00	59.04	-14.416	44.624	54	Pass

5. CONDUCTED SPURIOUS EMISSIONS

5.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,21	1 Year
2.	Attenuator	Agilent	8491B	MY39269201	Oct.09,21	1 Year
3.	RF Cable	HUBER+SUHNER	SUCOFLEX-106	505238/6	Apr.07,21	1 Year

5.2. Block Diagram of Test Setup



5.3. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

5.4. Test Procedure

Use the test method described in ANSI C63.10 clause 7.8.8:

The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions With peak detector.

Note: The cable loss and attenuator loss were offset into spectrum analyzer as an amplitude offset.

5.5. Test result

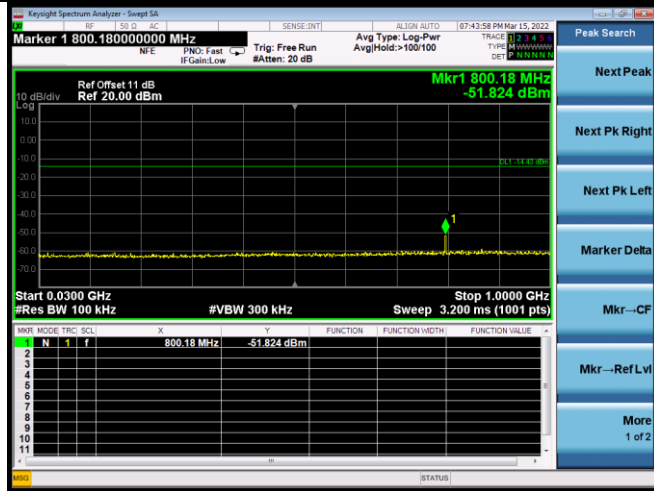
PASS (The testing data was attached in the next pages.)

EUT: Bluetooth audio module		
M/N: CDB-BM1048B20-00		
Test date: 2022-03-15~16	Pressure: 102.1 ±1.0 kpa	Humidity: 53.2 ±3.0%
Tested by: Faker	Test site: RF site	Temperature: 22.3 ±0.6°C

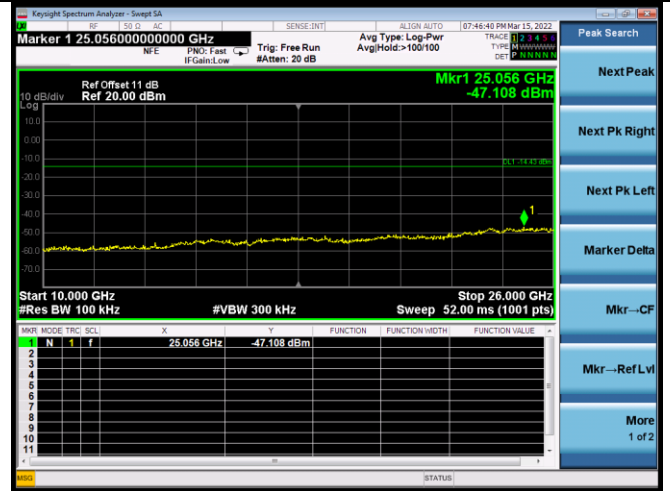
Hopping off

GFSK

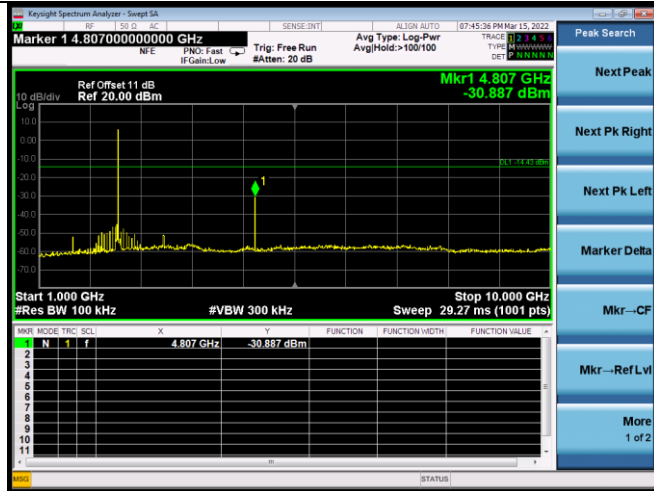
2402MHz(30MHz – 1GHz)



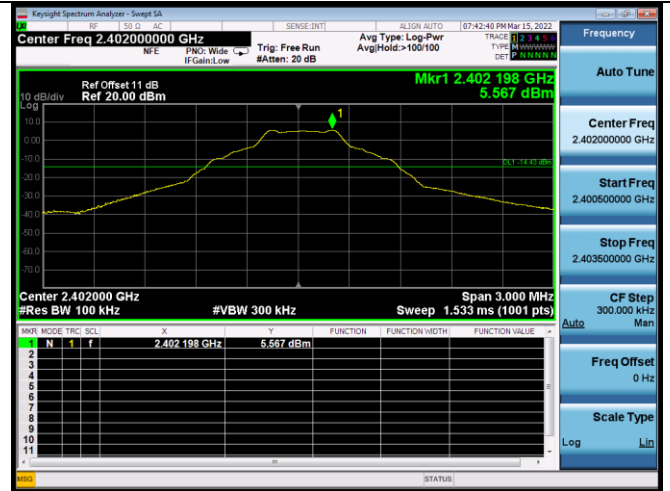
2402MHz(10GHz – 26GHz)



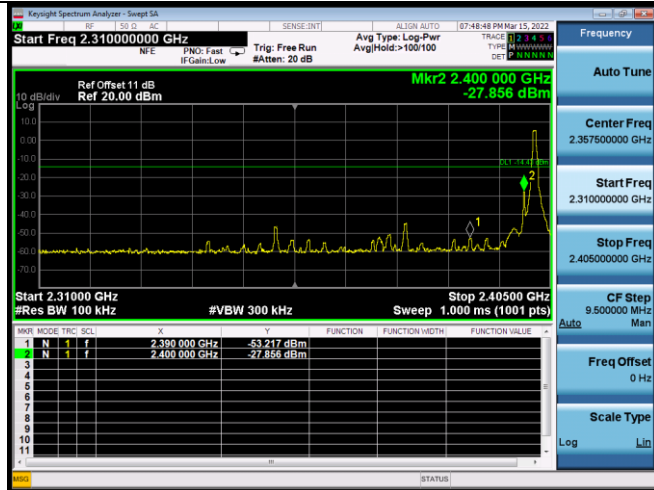
2402MHz(1GHz – 10GHz)



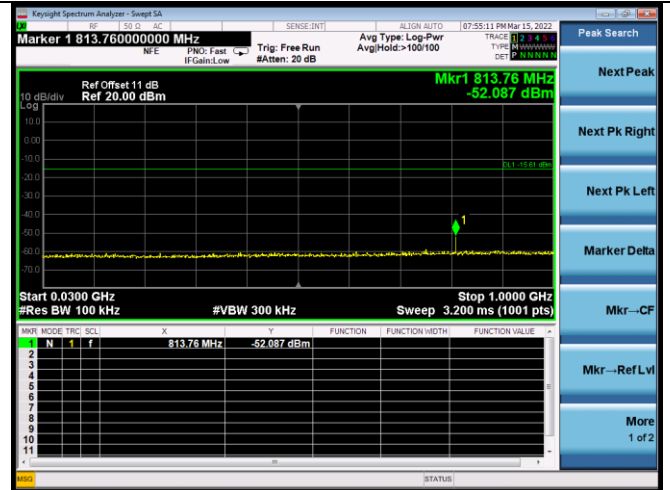
2402MHz



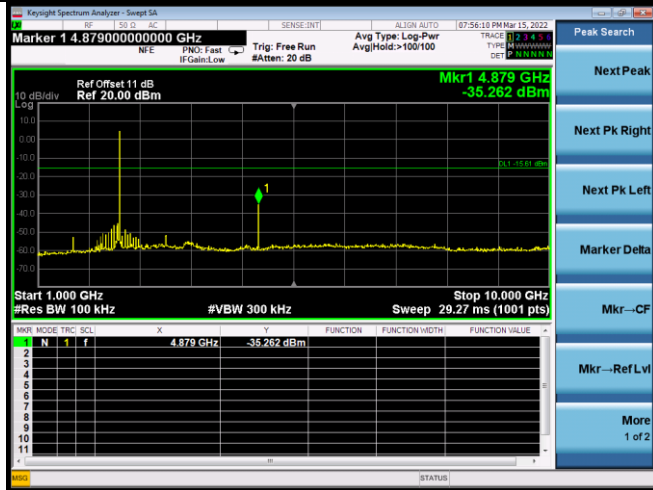
2402MHz(2.3GHz – 2.4GHz)



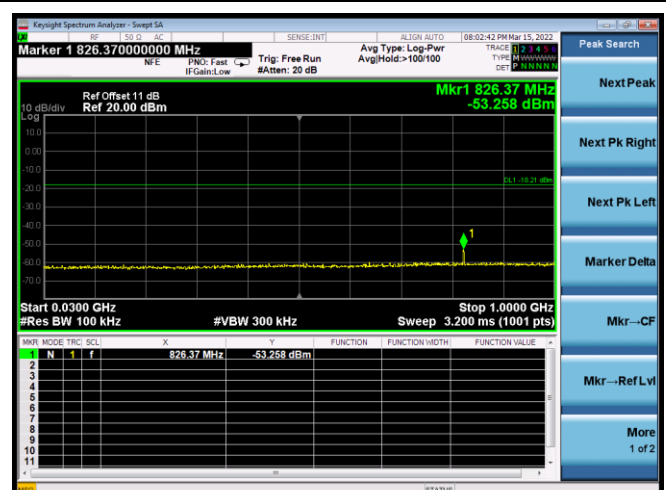
2441MHz(30MHz – 1GHz)



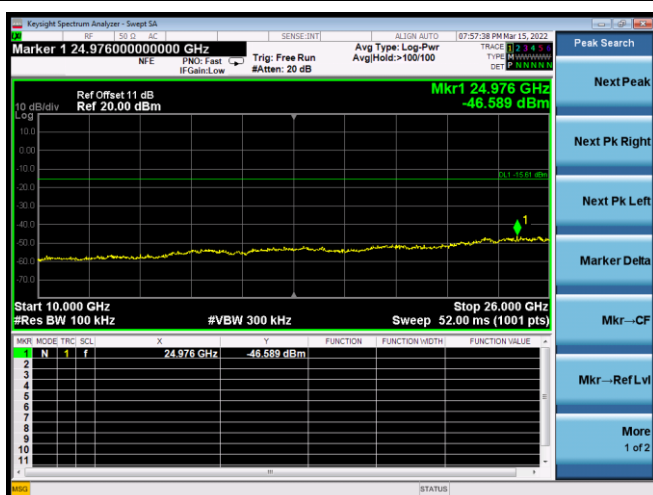
2441MHz (1GHz – 10GHz)



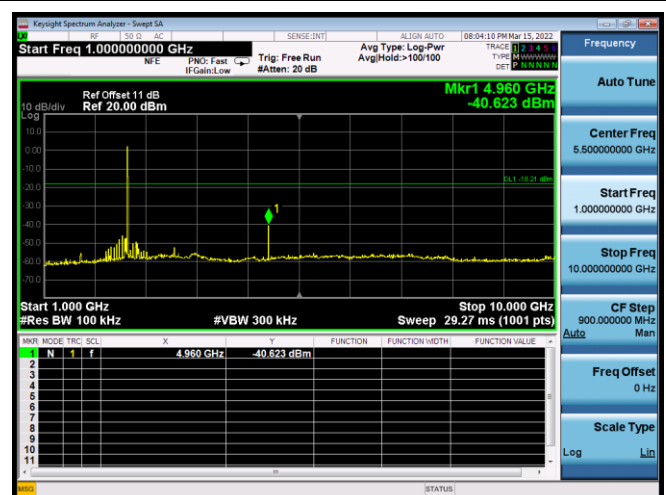
2480MHz(30MHz – 1GHz)



2441MHz (10GHz – 26GHz)



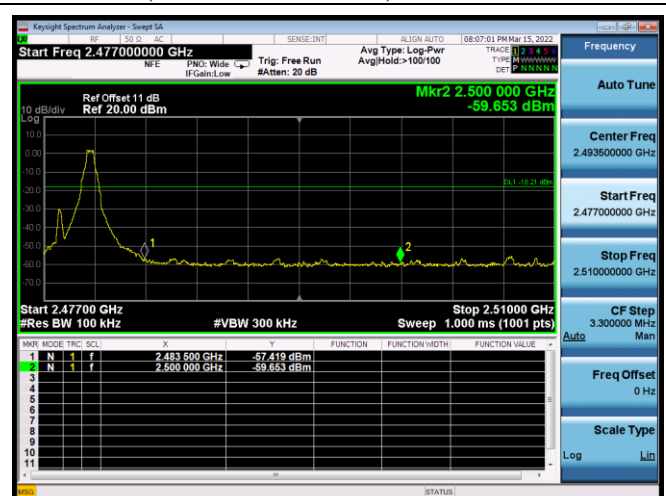
2480MHz(1GHz – 10GHz)



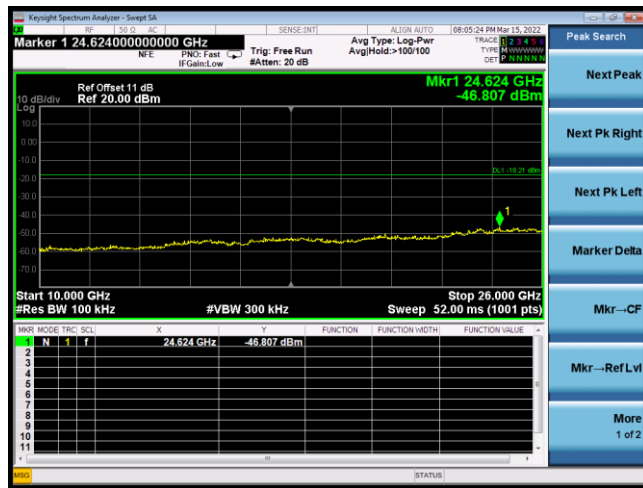
2441MHz



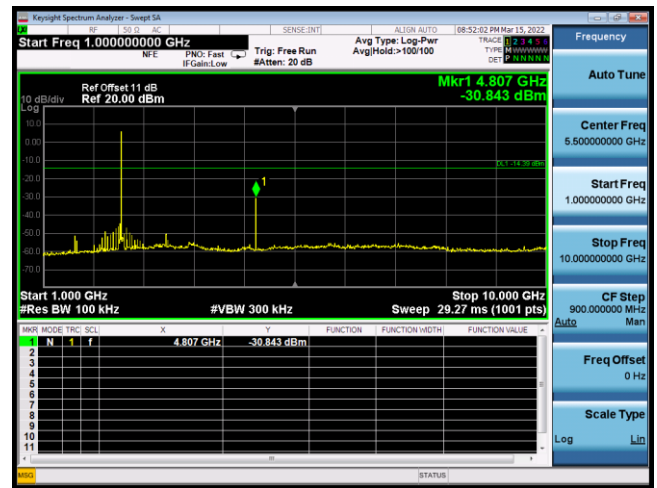
2480MHz(2.4GHz – 2.5GHz)



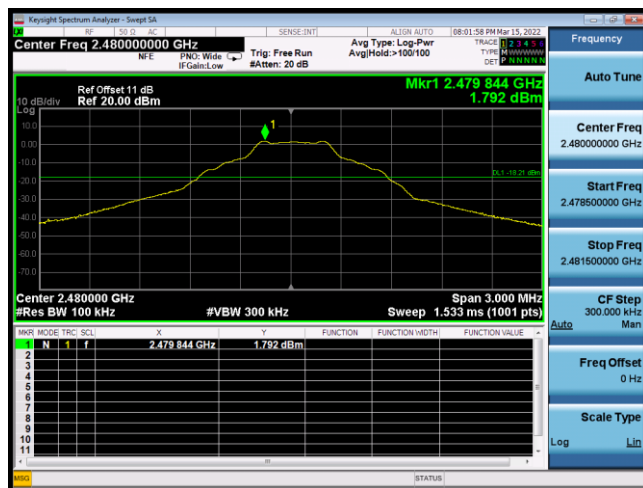
2480MHz(10GHz – 26GHz)



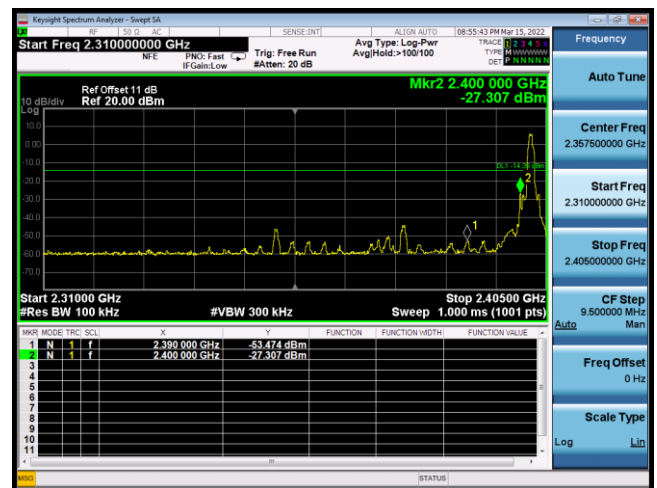
2402MHz(1GHz – 10GHz)



2480MHz

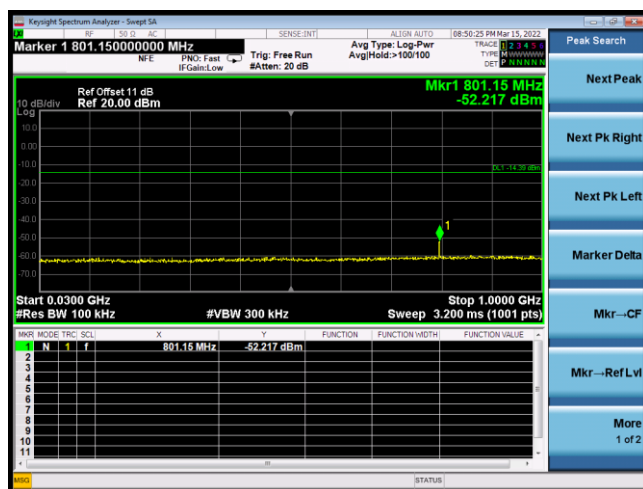


2402MHz(2.3GHz – 2.4GHz)

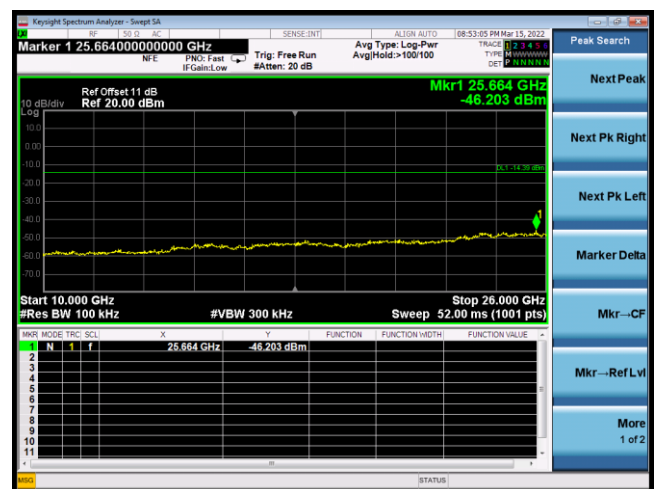


8-DPSK

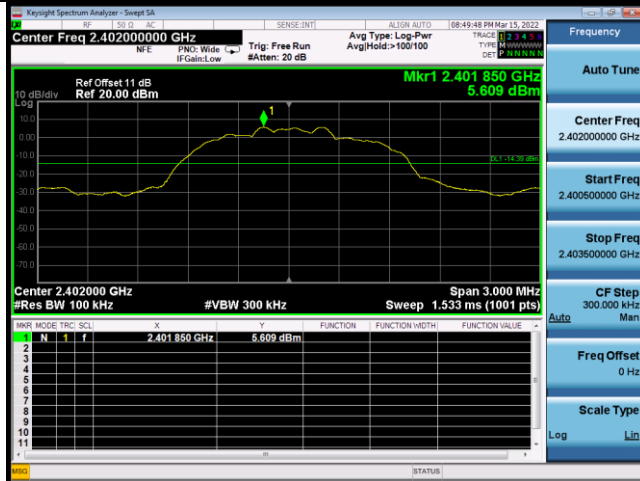
2402MHz(30MHz – 1GHz)



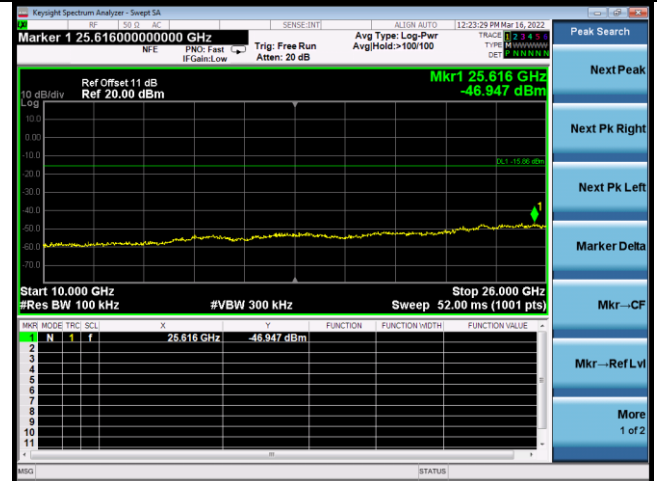
2402MHz(10GHz – 26GHz)



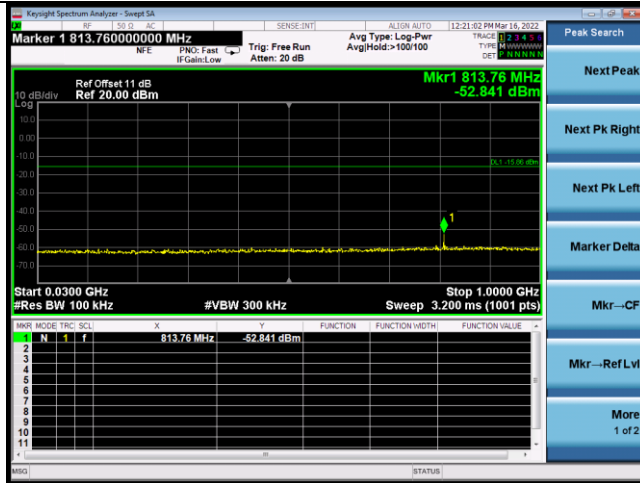
2402MHz



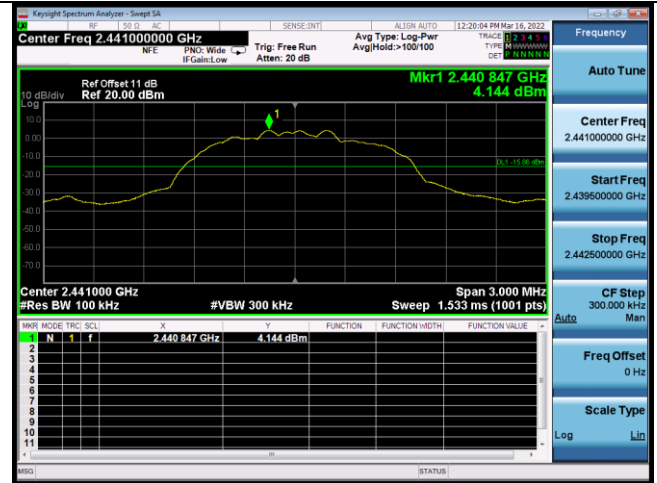
2441MHz(10GHz – 26GHz)



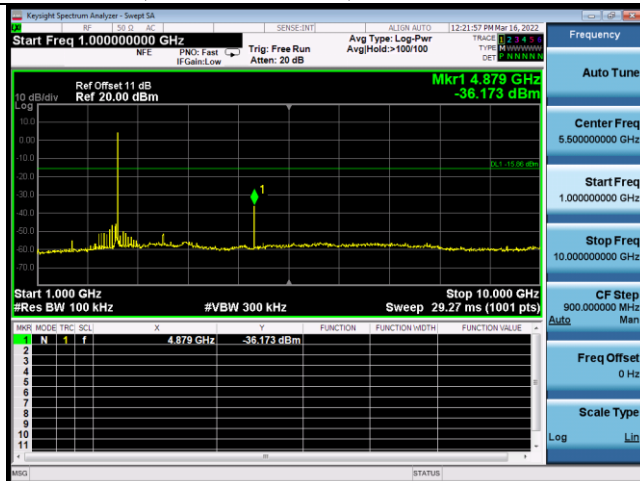
2441MHz (30MHz – 1GHz)



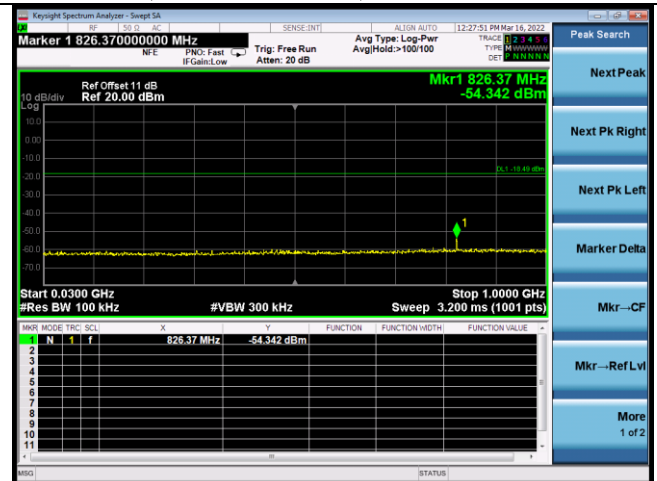
2441MHz



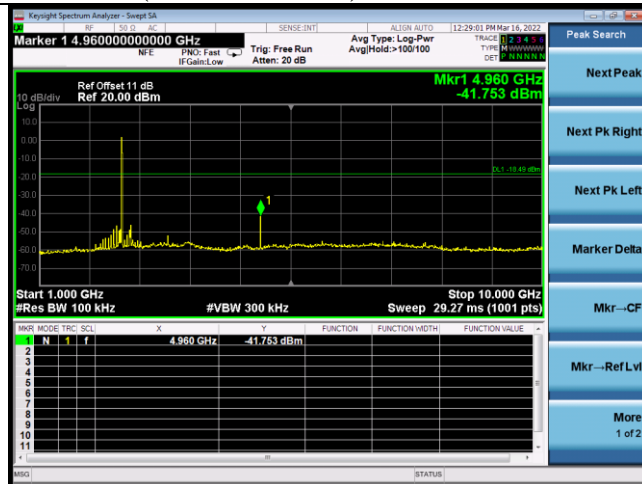
2441MHz(1GHz – 10GHz)



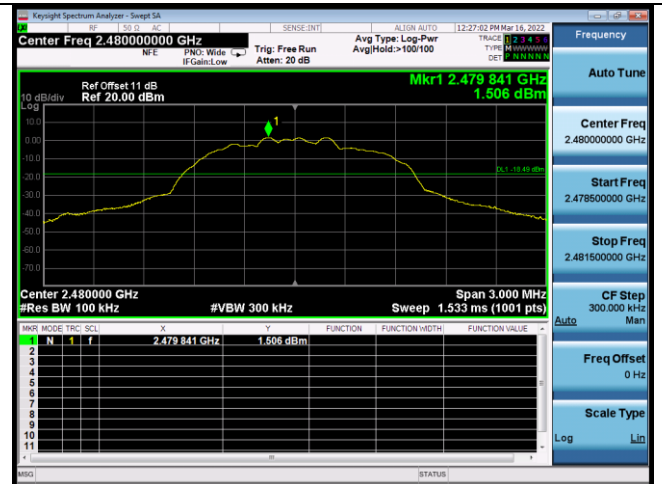
2480MHz(30MHz – 1GHz)



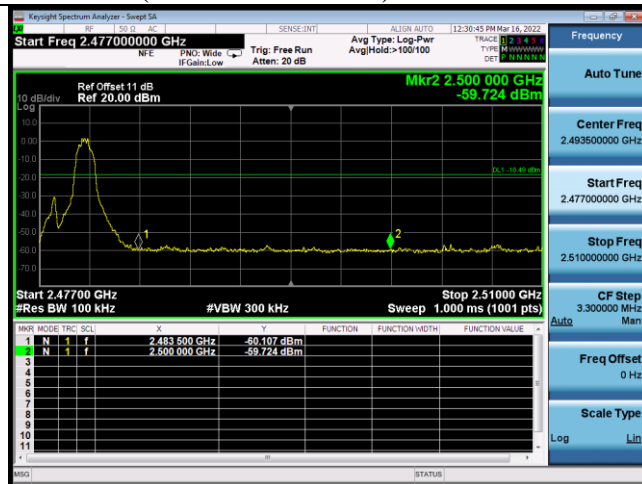
2480MHz(1GHz – 10GHz)



2480MHz

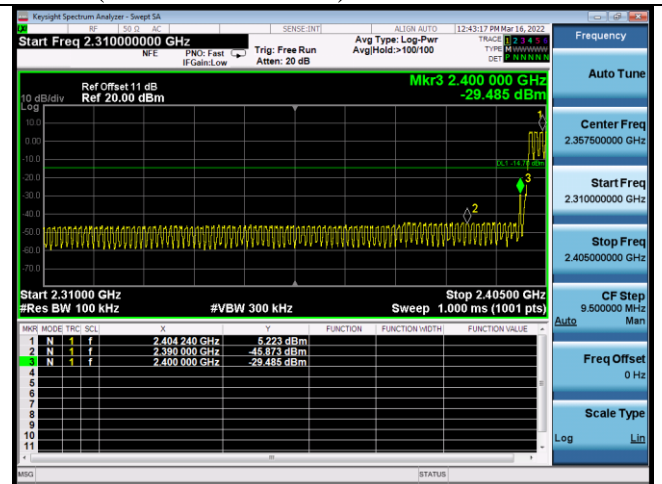


2480MHz(2.4GHz – 2.5GHz)

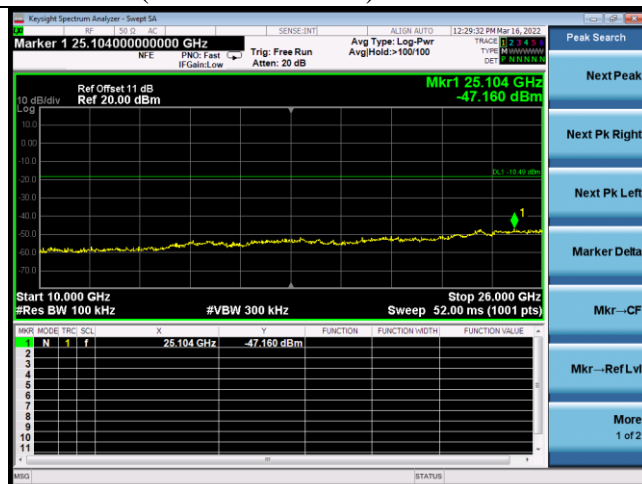


Hopping on

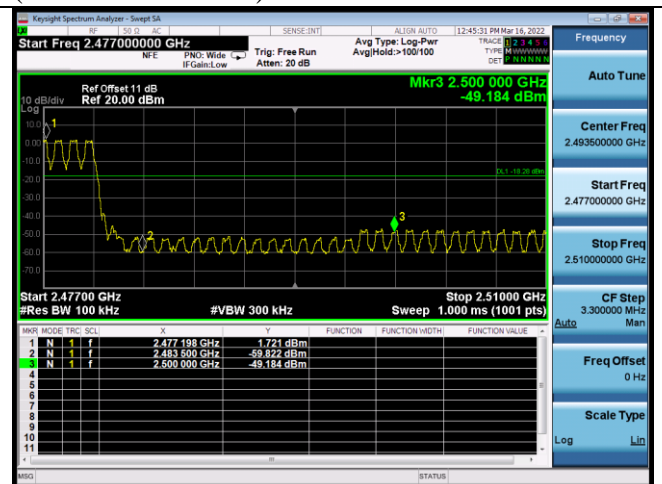
GFSK(2.3GHz – 2.4GHz)



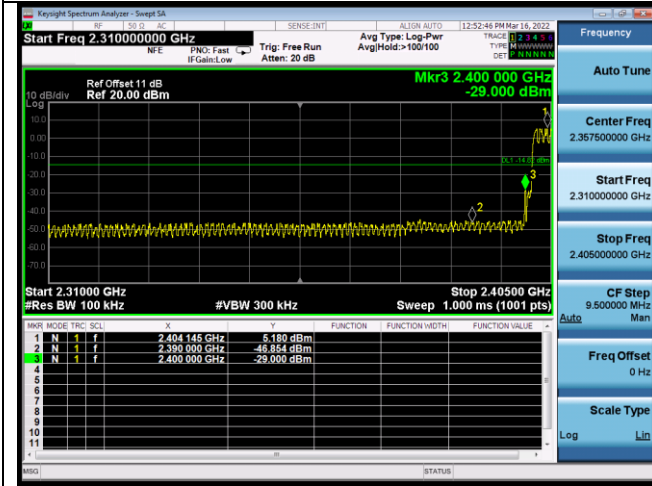
2480MHz(10GHz – 26GHz)



(2.4GHz – 2.5GHz)



8-DPSK(2.3GHz – 2.4GHz)



(2.4GHz – 2.5GHz)

