TEST REPORT

Applicant	:	Keeson Technology Corporation Limited
Address of Applicant	:	No. 195, Yuanfeng East Road,Wangjiangjing, Xiuzhou District,Jiaxing City,314000,China
Product Name	:	FAN CONTROL BOX
Brand Name	:	N/A
Model No.	:	CB05BF,CB05SF
Sample acquisition Method	:	Sent by Client
Sample No.	:	E23010029-01#01 E23010029-01#02
FCC ID	:	2AK23-CB05
ISED Number	:	22406-CB05
Standards	:	FCC CFR47 Part 15, Subpart C RSS-Gen (Issue 5, Amd.2-Feb 2021) RSS-247 (Issue 2, February 2017)
Date of Receipt	:	2023-01-13
Date of Test	:	2023-01-13 ~ 2023-01-30
Date of Issue	:	2023-01-30

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

Prepared by: (Erik Yang) Reviewed by: (Jennifer Zhou) Approved by: (Authorized signatory: Guoyou Chi)

Contents

1 General Information

1.1 Testing Laboratory

ISED CAB identifier #	CN0081
Company Name	ICAS Testing Technology Service (Shanghai) Co., Ltd.
Address	No.1298 Pingan Rd, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Applicant Company Name	Keeson Technology Corporation Limited
Address	No. 195, Yuanfeng East Road,Wangjiangjing, Xiuzhou District,Jiaxing City,314000,China
Contact Person	Sam xu
Telephone	18279170755
Email	xuwb@keeson.com
Manufacturer Company Name	DewertOkin Technology Group Co., Ltd.
Address	No.465, Xinnanyang Road, Wangjiangjing Development Zone, Xiuzhou District, Jiaxing City, Zhejiang Province, China.
Factory Company Name	DewertOkin Technology Group Co., Ltd.
Address	No.465, Xinnanyang Road, Wangjiangjing Development Zone, Xiuzhou District, Jiaxing City, Zhejiang Province, China.

1.3 Details of EUT

Product Name	FAN CONTROL BOX
Brand Name	N/A
Test Model No.	CB05BF
Series Model No.	CB05SF
Difference Description	CB05BF and CB05SF all the same except for the model name and terminal; CB05SF had two less terminals than CB05BF, Refer to the sample photo for details.
FCC ID	2AK23-CB05
ISED Number	22406-CB05
Mode of Operation	Bluetooth BLE Version 5.0
Frequency Range	2402MHz ~ 2480MHz
Number of Channels	40 (at intervals of 2 MHz)
Modulation Type	GFSK
Antenna Type	PCB Antenna
Antenna Gain	1.225dBi

Extreme Temperature Range	-10℃~ +40℃
Test Voltage	DC 29V supply by power adapter
Hardware Version	R5.109.00.1038C
Software Version	V1.0
Test SW Version	BL410_R; BL410_E
RF power setting in TEST SW	nRF_DTM Tool Version 0.9.1_Power setting_4dBm

Note:

1. The above information was declared by the manufacture.

2. For more details, please refer to the User's manual of the EUT.

Channel List

Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2.402GHz	14	2.430GHz	28	2.458GHz
1	2.404GHz	15	2.432GHz	29	2.460GHz
2	2.406GHz	16	2.434GHz	30	2.462GHz
3	2.408GHz	17	2.436GHz	31	2.464GHz
4	2.410GHz	18	2.438GHz	32	2.466GHz
5	2.412GHz	19	2.440GHz	33	2.468GHz
6	2.414GHz	20	2.442GHz	34	2.470GHz
7	2.416GHz	21	2.444GHz	35	2.472GHz
8	2.418GHz	22	2.446GHz	36	2.474GHz
9	2.420GHz	23	2.448GHz	37	2.476GHz
10	2.422GHz	24	2.450GHz	38	2.478GHz
11	2.424GHz	25	2.452GHz	39	2.480GHz
12	2.426GHz	26	2.454GHz		
13	2.428GHz	27	2.456GHz		

1.4 Test Methodology

47 CFR Part 15, Subpart C	Telecommunication-Radio Frequency Devices-Intentional Radiators
KDB Publication 558074 D01 v05r02	15.247 Meas Guidance.
RSS-Gen (Issue 5, Amd.2-Feb 2021)	General Requirements for Compliance of Radio Apparatus
RSS-247 (Issue 2, February 2017)	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Note(s):

All test items were verified and recorded according to the standards and without any addition/deviation/exclusion during the test.

1.5 Test Summary

Test Item	FCC Rules	ISED Rules	Result
Antenna Requirement	FCC Part 15.247(b)(4), Part 15.203	RSS-247 5.4(f) RSS-GEN 6.8	PASS
Maximum peak conducted output power and E.I.R.P	FCC Part 15.247(b)(3)	RSS-247 5.4(d)	PASS
6dB Bandwidth and 99% Bandwidth	FCC Part 15.247(a)(2)	RSS-247 5.2(a) RSS-Gen 6.7	PASS
Maximum conducted output power spectral density	FCC Part 15.247(e)	RSS-247 5.2(b)	PASS
Conducted Spurious Emission & Authorized-band band-edge	FCC Part 15.247(d)	RSS-247 5.5	PASS
Radiated Emission	FCC Part 15.247(d), 15.205, 15.209	RSS-GEN 8.9	PASS
Band Edge (Restricted-band band-edge)	FCC Part 15.247(d), 15.205, 15.209	RSS-GEN 8.10	PASS
Conducted Emission on AC Mains	FCC Part 15.207(a)	RSS-Gen 8.8	PASS

2 Test Condition

2.1 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060

2.2 Equipment List

Name of Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Keysight	N9020B	MY59260184	2022-08-02	2023-08-01
Spectrum Analyzer	Rohde & Schwarz	FSV40N	101450	2022-06-10	2023-06-09
Signal Generator	Rohde & Schwarz	SMR27	100184	2022-08-02	2023-08-01
EMI Test Receiver	Rohde & Schwarz	ESR 7	101911	2022-06-10	2023-06-09
EMI Test Receiver	Rohde & Schwarz	ESPI3	100173	2022-06-10	2023-06-09
V-network	SCHWARZBECK	NSLK8127	8127-902	2022-06-10	2023-06-09
Broadband Antenna	SCHWARZBECK	VULB9163	9163-1037	2021-06-08	2023-06-07
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1775	2021-06-08	2023-06-07
Loop Antenna	SCHWARZBECK	FMZB 1513	/	2022-06-10	2023-06-09
Broadband Preamplifier	SCHWARZBECK	BBV 9718	346	2022-06-10	2023-06-09
EMC chamber 9*6*6（L*W*H)	CHANGNING	966	N/A	2022-06-10	2023-06-09
Shielded Enclosure 8*5*4（L*W*H)	CHANGNING	854	N/A	2022-06-10	2023-06-09
Test Software	BL	BL410_E	Version:1.0.0.117	N/A	N/A
Test Software	BL	BL410_R	Version:2.1.1.409	N/A	N/A

2.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in measurement” (GUM) published by CISPR and ANSI. The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95.45%.

Parameter		Uncertainty
Antenna Port Conducted Emission	< 1GHz	± 1.5 dB
	> 1GHz	± 1.5 dB
Radiated Emission	9KHz – 30MHz	± 3.42 dB
	30 MHz – 1GHz	± 5.00 dB
	> 1GHz	± 4.88 dB
Conducted Emission on AC Mains	150kHz-30MHz	± 2.68 dB
Occupied Channel Bandwidth		±5 %

3 Test Set-up and Operation Modes

3.1 Details of Test Mode

Using test software (nRF_DTM Tool) was control EUT work in continuous transmitter and receiver mode. Select test channel as below:

Channel	Frequency
The lowest channel(CH0)	2402MHz
The middle channel(CH19)	2440MHz
The Highest channel(CH39)	2480MHz

The basic operation modes are:

A. On
   1. BLE mode
      a. Transmitting
         i. Low Channel
         ii. Middle Channel
         iii. High Channel
      b. Receiving
   2. Normal working with Bluetooth on

B. Standby

C. Off

3.2 Special Accessories and Auxiliary Equipment

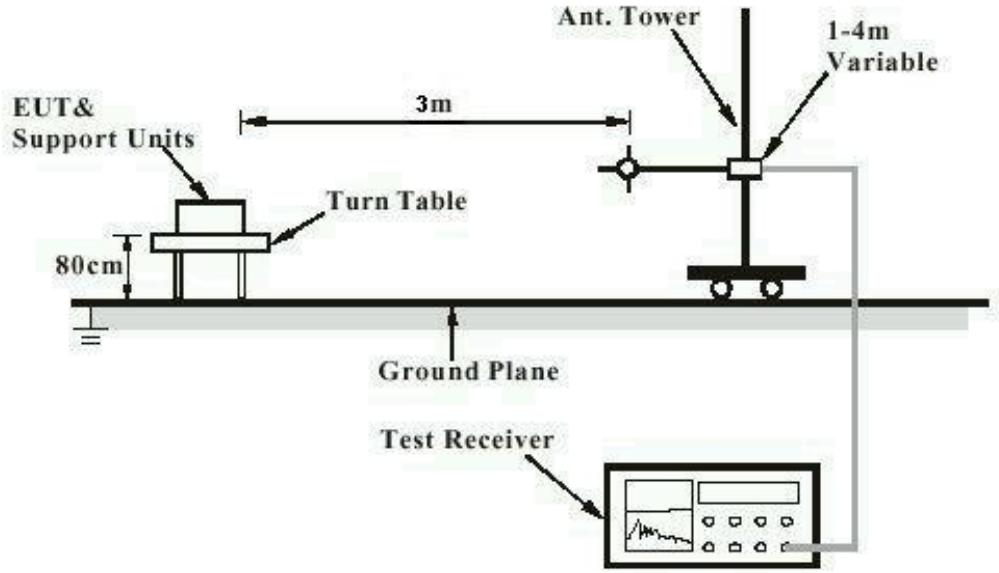
Description	Manufacturer	Model No.	Serial No.
Laptop	HP	HP ZHAN 66 Pro G1	N/A
USB Cable	N/A	1.00m Unshielded	N/A
Power Adapter	N/A	ZB-H290030-G	N/A

3.3 Support Software

Description	Manufacturer	Software Name
Software	N/A	nRF_DTM Tool Version 0.9.1

3.4 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test



Note: Measurements above 1GHz are done with a table height of 1.5m. In addition, there is RF absorbing material on the floor of the test site for above 1GHz measurement.

Diagram of Measurement Configuration for Conduction Test

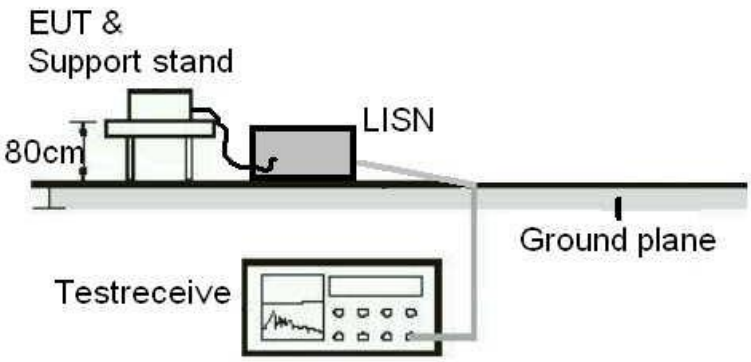
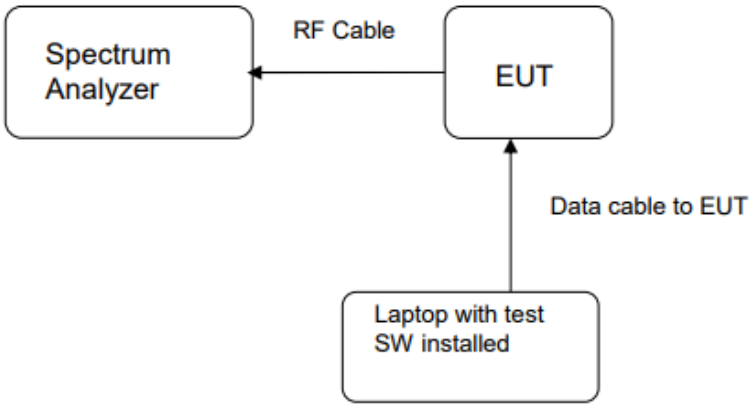


Diagram of Measurement Configuration for Transmitter Test



4 Test Results

4.1 Transmitter Requirement & Test Suites

4.1.1 Antenna Requirement

RESULT: **PASS**

Test standard	:	FCC Part 15.247(b)(4), Part 15.203 RSS-247 5.4(f), RSS-GEN 6.8
Requirement	:	The use of approved antennas only with directional gains that do not exceed 6dBi

According to the manufacturer declaration, the EUT has an antenna with a directional gain of 1.225dBi. The antenna is PCB antenna with no possibility of replacement with a non-approved antenna by the end-user.

Therefore, the EUT is considered to comply with this provision.

4.1.2 Maximum peak conducted output power and E.I.R.P

RESULT: **PASS**

Test standard : FCC Part 15.247(b)(3), RSS-247 5.4(d)
Requirement : ANSI C63.10-2013 clause 11.9.1.1,
KDB 558074 clause 8.3.1.1
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 20.8°C
Relative humidity : 51%

Table 1: Maximum peak conducted output power

Test Mode	Test Channel (MHz)	Maximum peak conducted output power		Limit (W)
		(dBm)	(mW)	
BLE-1M	2402	-0.09	0.98	< 1
	2440	-0.49	0.89	
	2480	-0.98	0.80	
BLE-2M	2402	-0.07	0.98	
	2440	-0.42	0.91	
	2480	-0.89	0.81	

Table 2: E.I.R.P

Test Mode	Test Channel (MHz)	E.I.R.P		Limit (W)
		(dBm)	(mW)	
BLE-1M	2402	1.14	1.30	< 4
	2440	0.74	1.19	
	2480	0.25	1.06	
BLE-2M	2402	1.16	1.31	
	2440	0.81	1.21	
	2480	0.34	1.08	

Note: The antenna gain is 1.225dBi

Figure 1: The plots of Peak Conducted Output Power, 2402MHz, BLE-1M

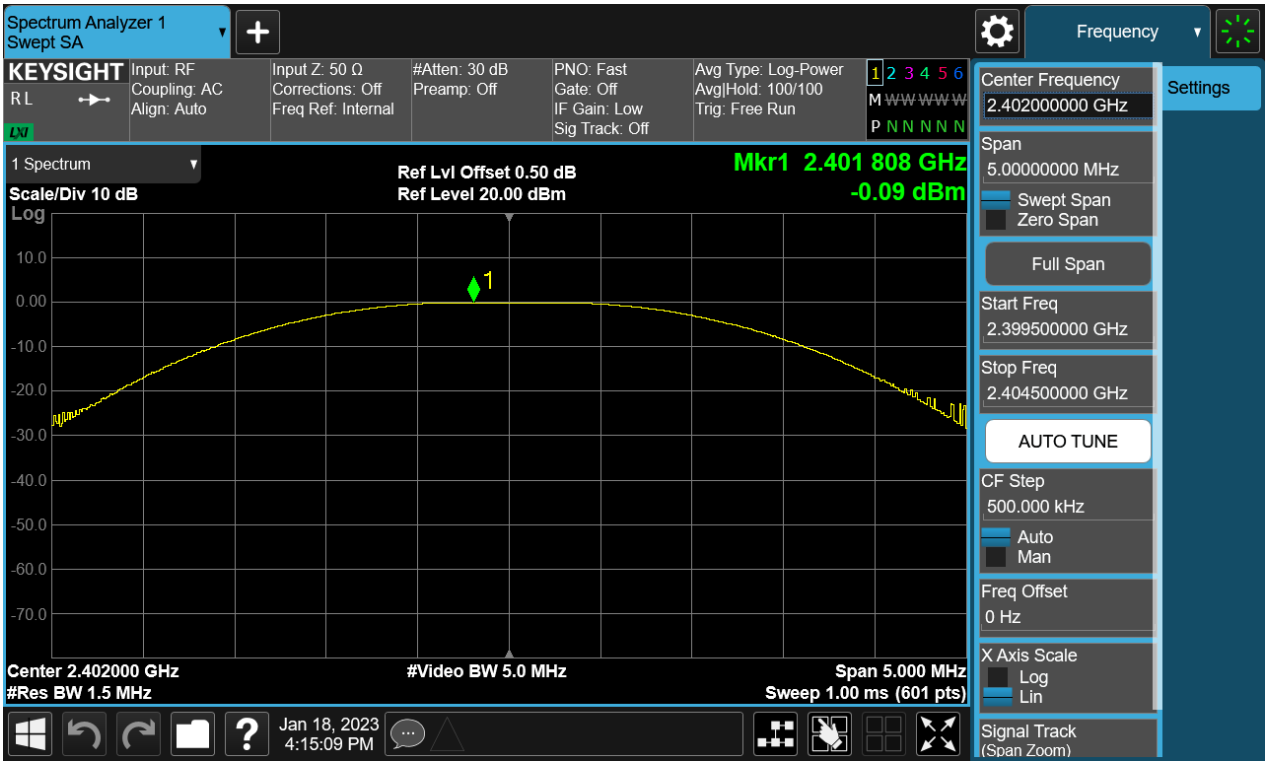


Figure 2: The plots of Peak Conducted Output Power, 2440MHz, BLE-1M

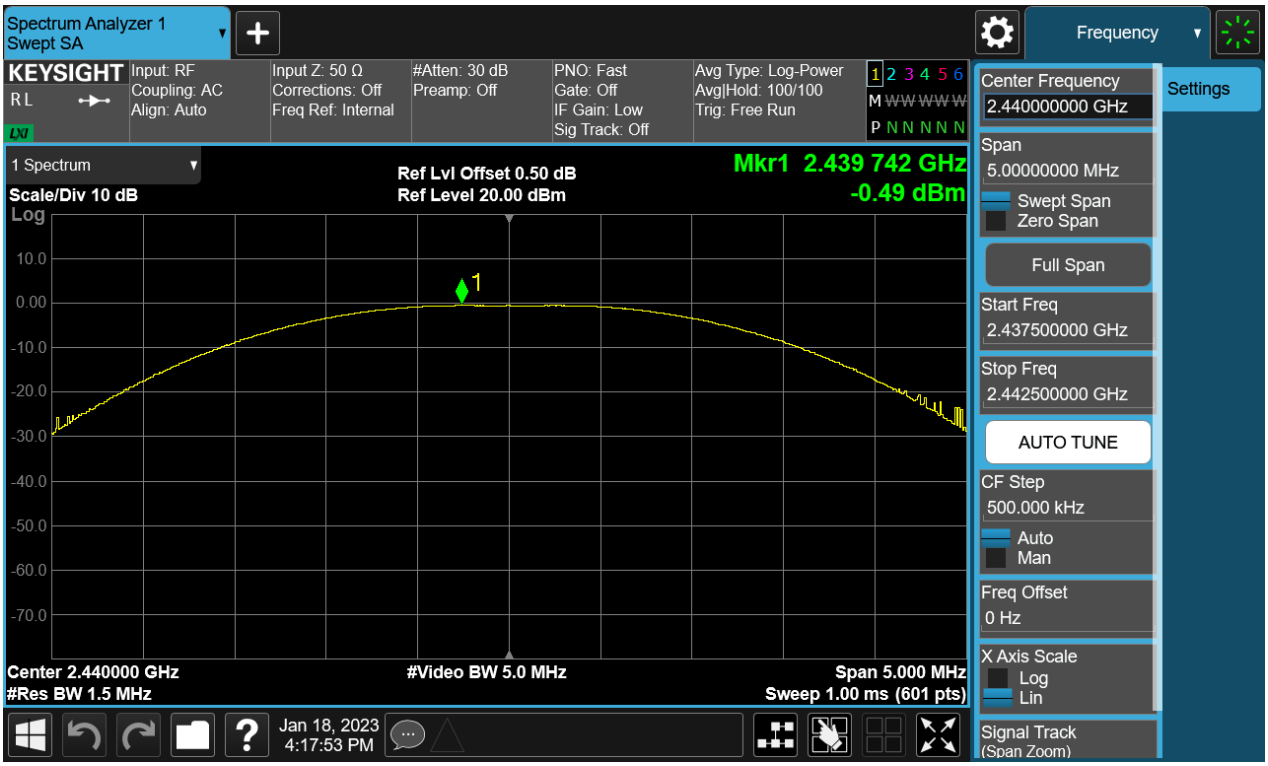


Figure 3: The plots of Peak Conducted Output Power, 2480MHz, BLE-1M

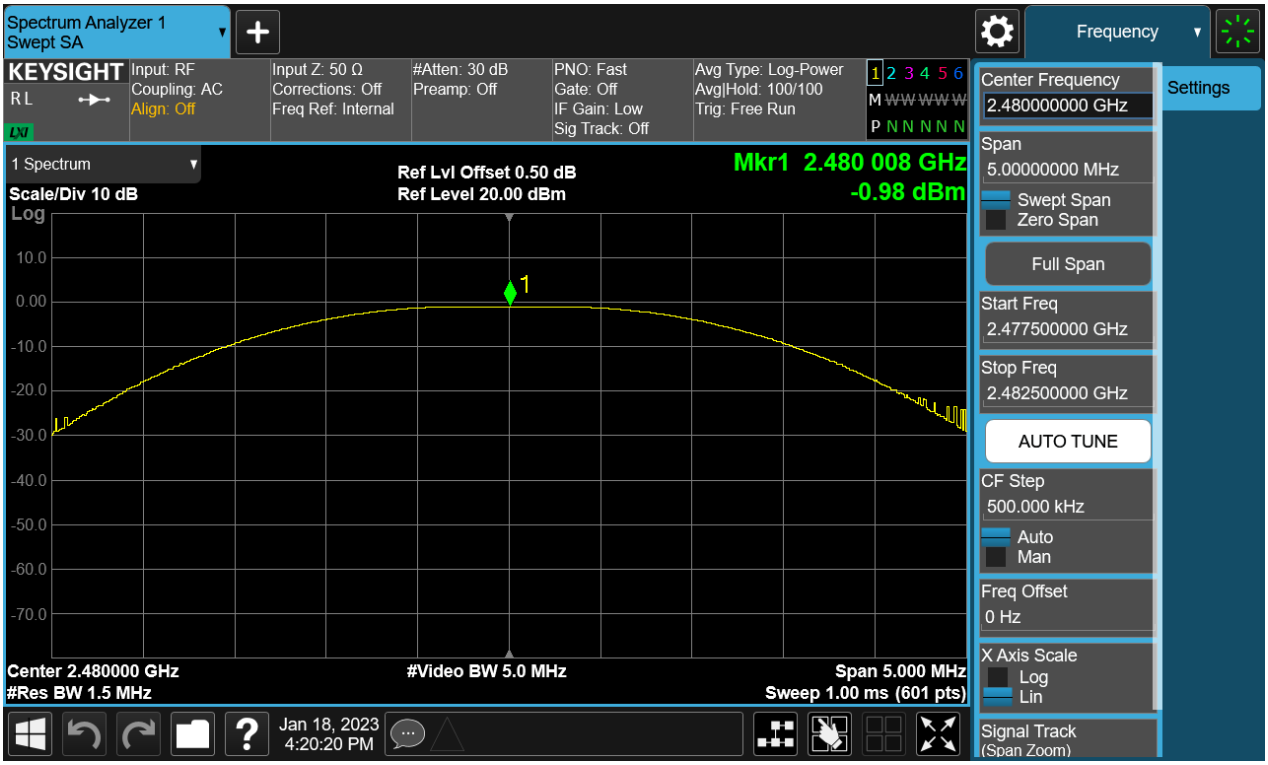


Figure 4: The plots of Peak Conducted Output Power, 2402MHz, BLE-2M

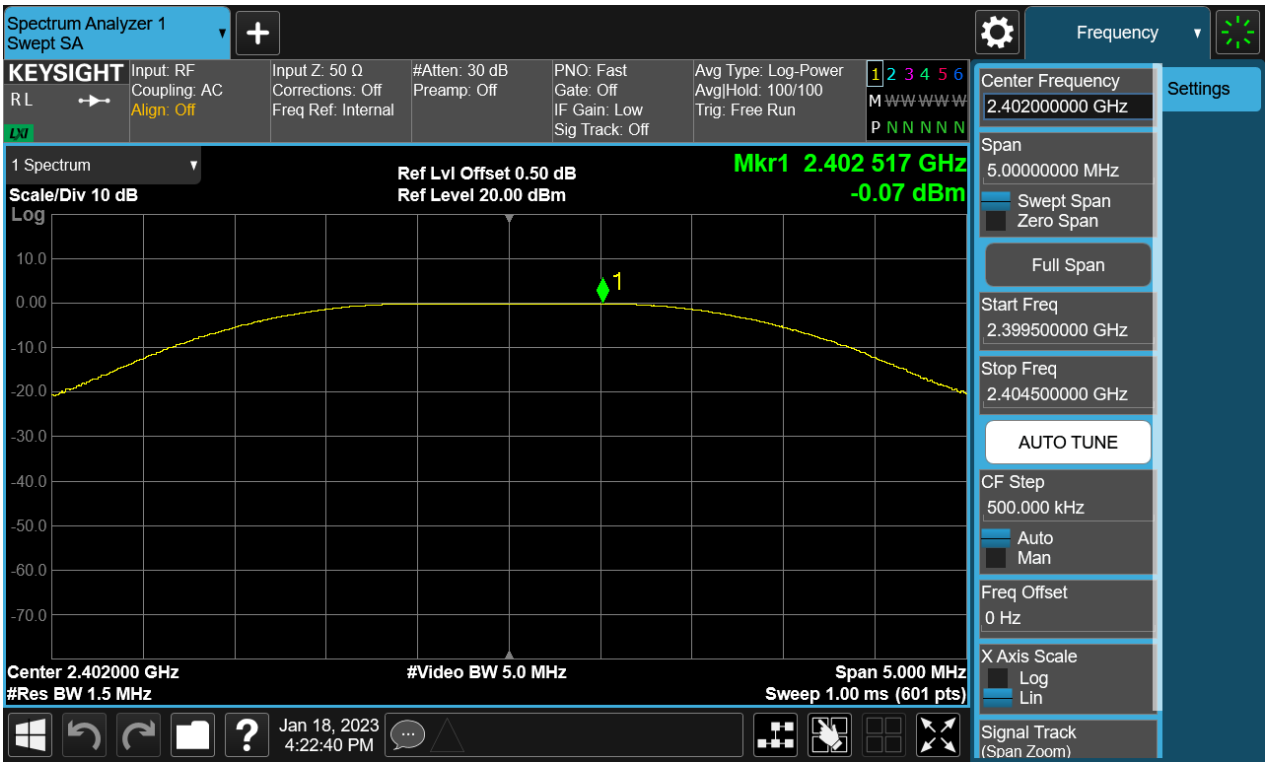


Figure 5: The plots of Peak Conducted Output Power, 2440MHz, BLE-2M

Figure 6: The plots of Peak Conducted Output Power, 2480MHz, BLE-2M

4.1.3 6dB Bandwidth and 99% Bandwidth

RESULT: **PASS**

Test standard : FCC Part 15.247(a)(2), RSS-247 5.2(a)
RSS-Gen 6.7

Requirement : ANSI C63.10-2013 clause 11.8.1,
KDB 558074 clause 8.2

Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High

Operation Mode : A.1.a

Ambient temperature : 20.8°C

Relative humidity : 51%

Table 3: 6dB Bandwidth and 99% Bandwidth

Test Mode	Test Channel (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6dB Bandwidth Limit
BLE-1M	2402	0.6869	1.0451	>0.5 MHz
	2440	0.6754	1.0522	
	2480	0.6577	1.0464	
BLE-2M	2402	1.1010	2.0598	
	2440	1.1520	2.0695	
	2480	1.3750	2.0621	

Figure 7: The plots of 6dB Bandwidth, 2402MHz, BLE-1M

Figure 8: The plots of 99% Bandwidth, 2402MHz, BLE-1M

Figure 9: The plots of 6dB Bandwidth, 2440MHz, BLE-1M

Figure 10: The plots of 99% Bandwidth, 2440MHz, BLE-1M

Figure 11: The plots of 6dB Bandwidth, 2480MHz, BLE-1M

Figure 12: The plots of 99% Bandwidth, 2480MHz, BLE-1M

Figure 13: The plots of 6dB Bandwidth, 2402MHz, BLE-2M

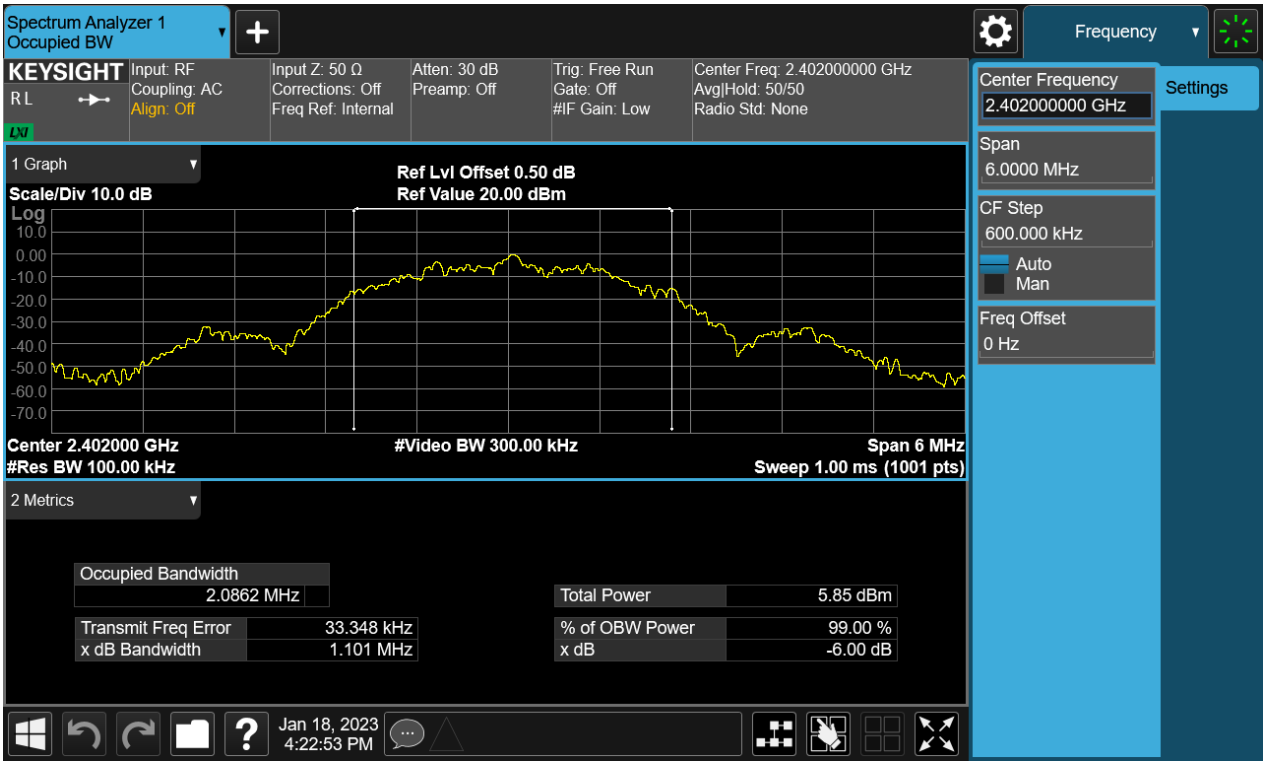


Figure 14: The plots of 99% Bandwidth, 2402MHz, BLE-2M

Figure 15: The plots of 6dB Bandwidth, 2440MHz, BLE-2M

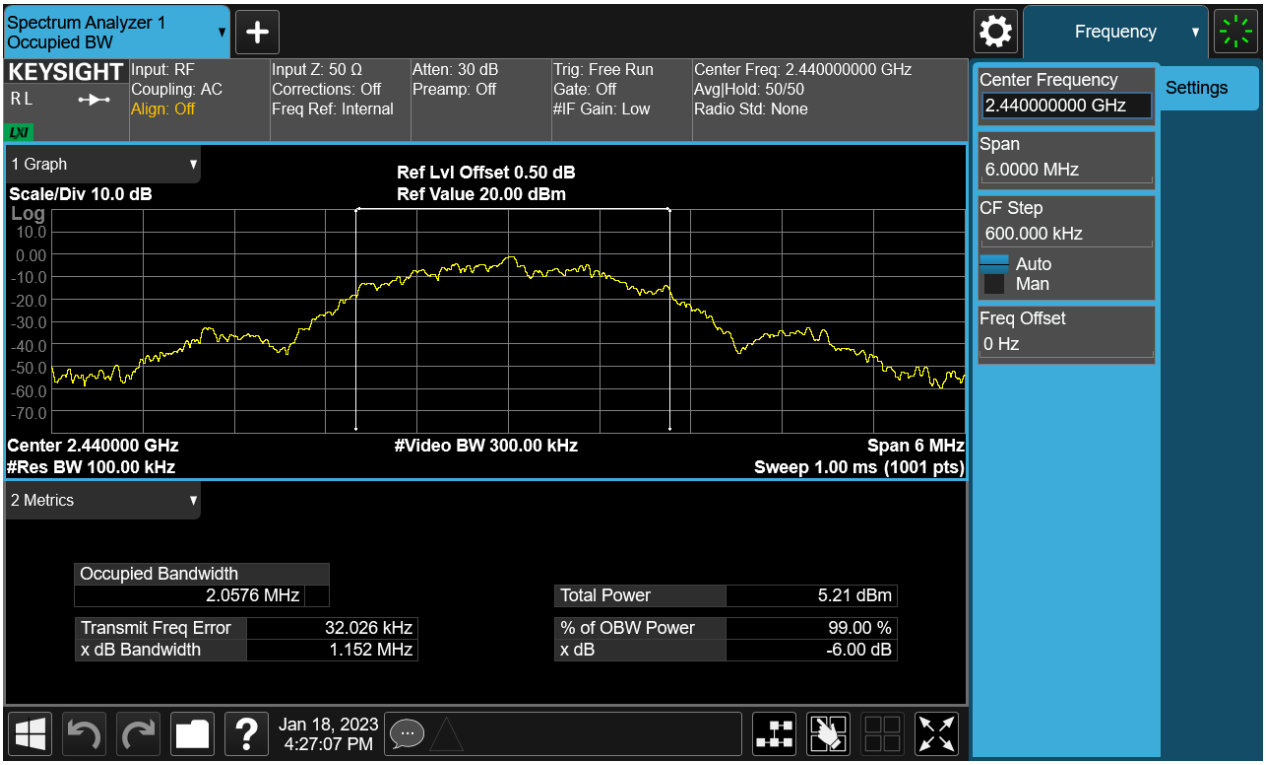


Figure 16: The plots of 99% Bandwidth, 2440MHz, BLE-2M

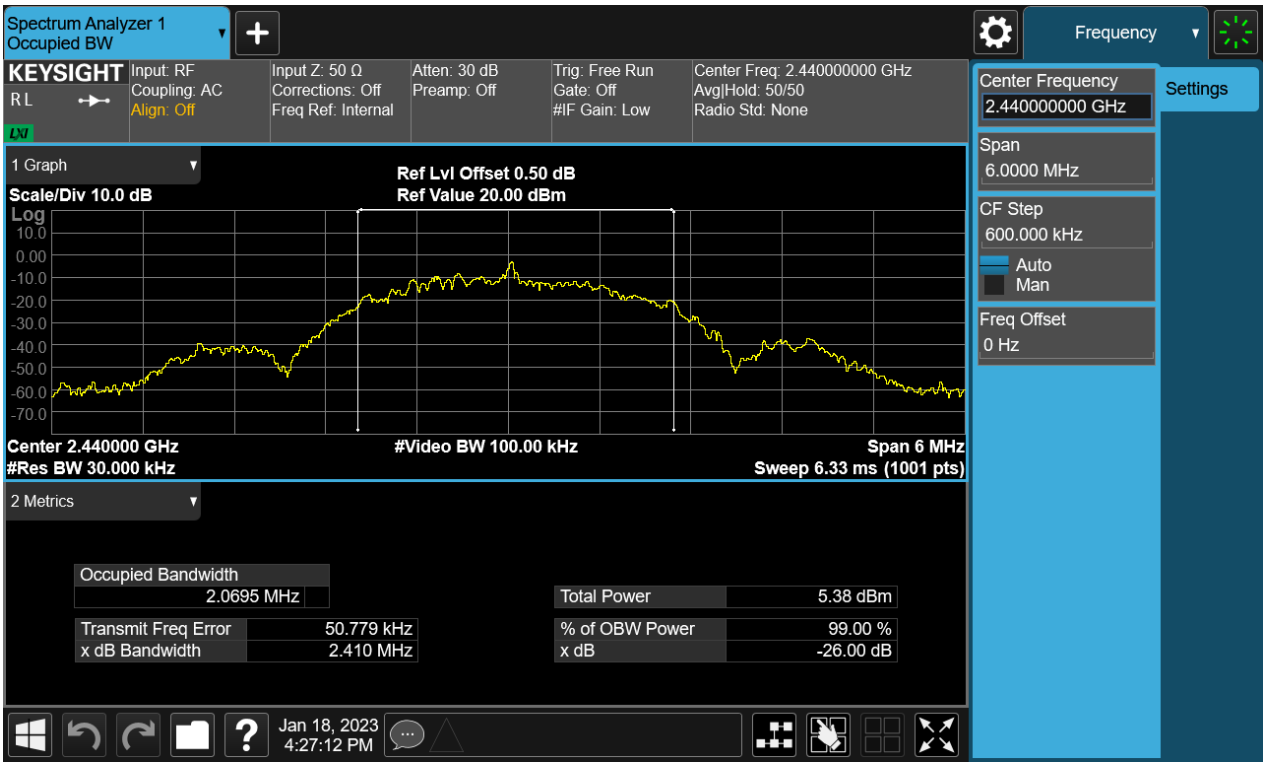
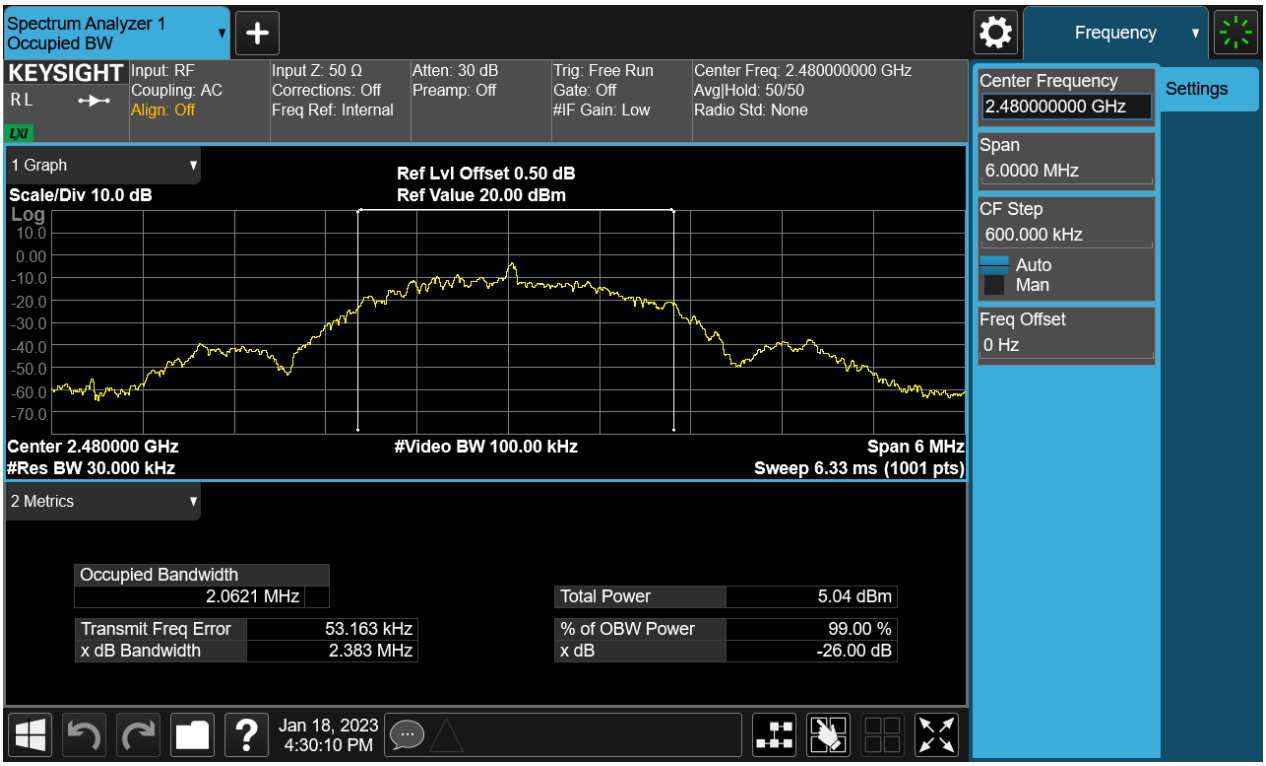


Figure 17: The plots of 6dB Bandwidth, 2480MHz, BLE-2M

Figure 18: The plots of 99% Bandwidth, 2480MHz, BLE-2M



4.1.4 Maximum conducted output power spectral density

RESULT: **PASS**

Test standard : FCC Part 15.247(e), RSS-247 5.2(b)
Requirement : ANSI C63.10-2013 clause 11.10.2,
KDB 558074 clause 8.4
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 20.8°C
Relative humidity : 51%

Table 4: Maximum conducted output power spectral density

Test Mode	Test Channel (MHz)	Measured Result (dBm/3kHz)	Limit (dBm/3kHz)
BLE-1M	2402	-16.25	8
	2440	-16.37	
	2480	-16.97	
BLE-2M	2402	-18.69	
	2440	-18.82	
	2480	-19.31	

Figure 19: The plots of Power Spectral Density, 2402MHz, BLE-1M

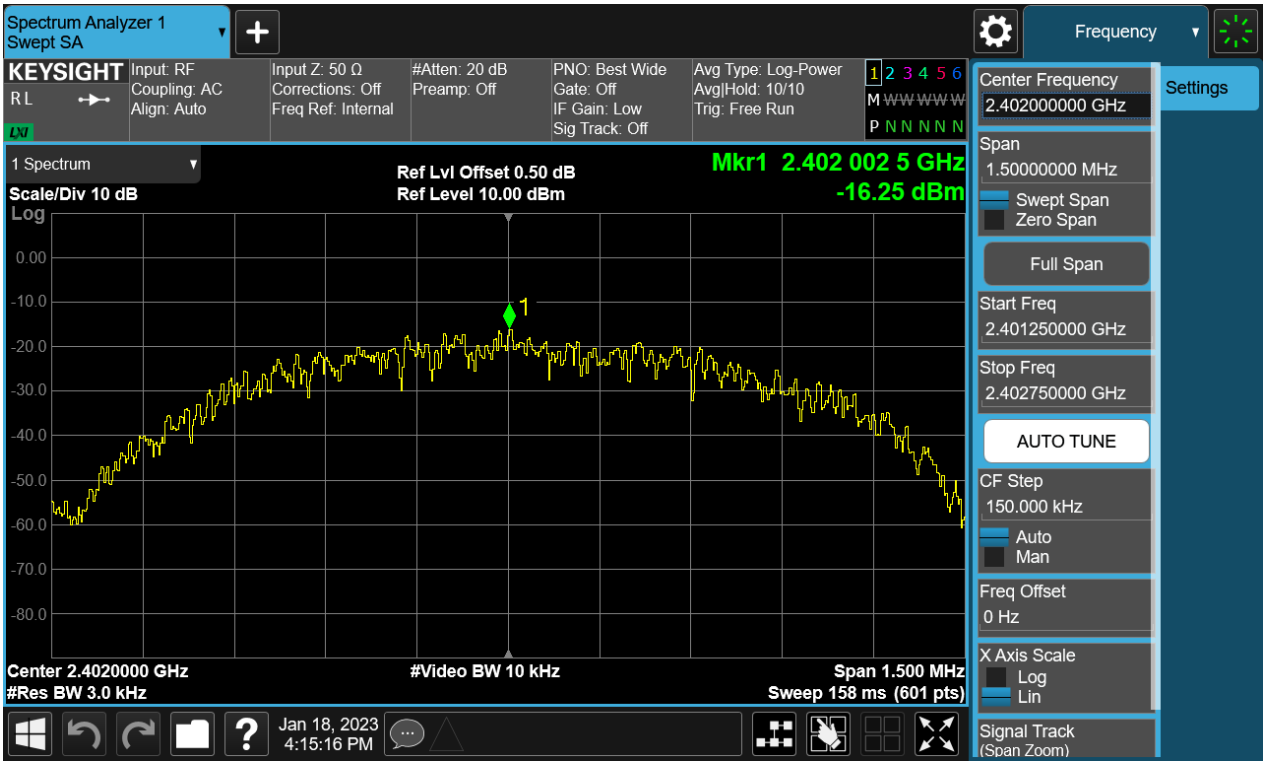


Figure 20: The plots of Power Spectral Density, 2440MHz, BLE-1M

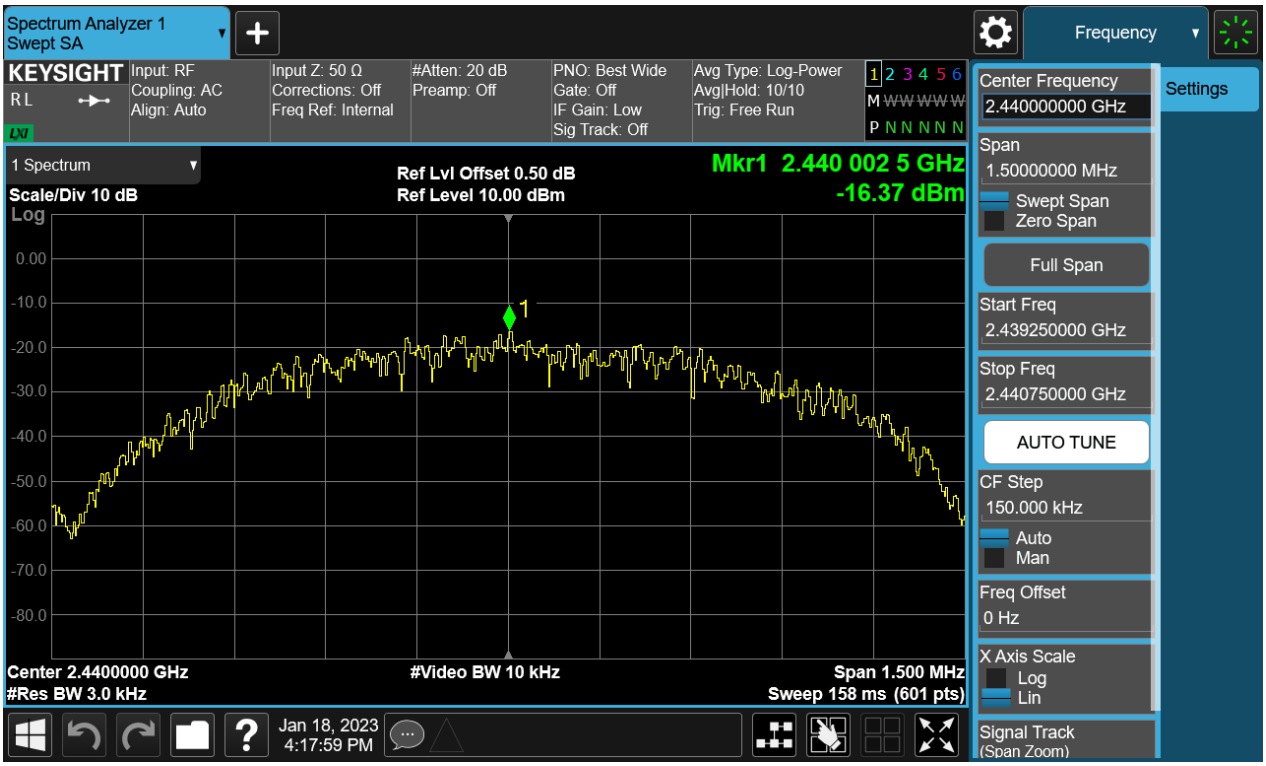


Figure 21: The plots of Power Spectral Density, 2480MHz, BLE-1M

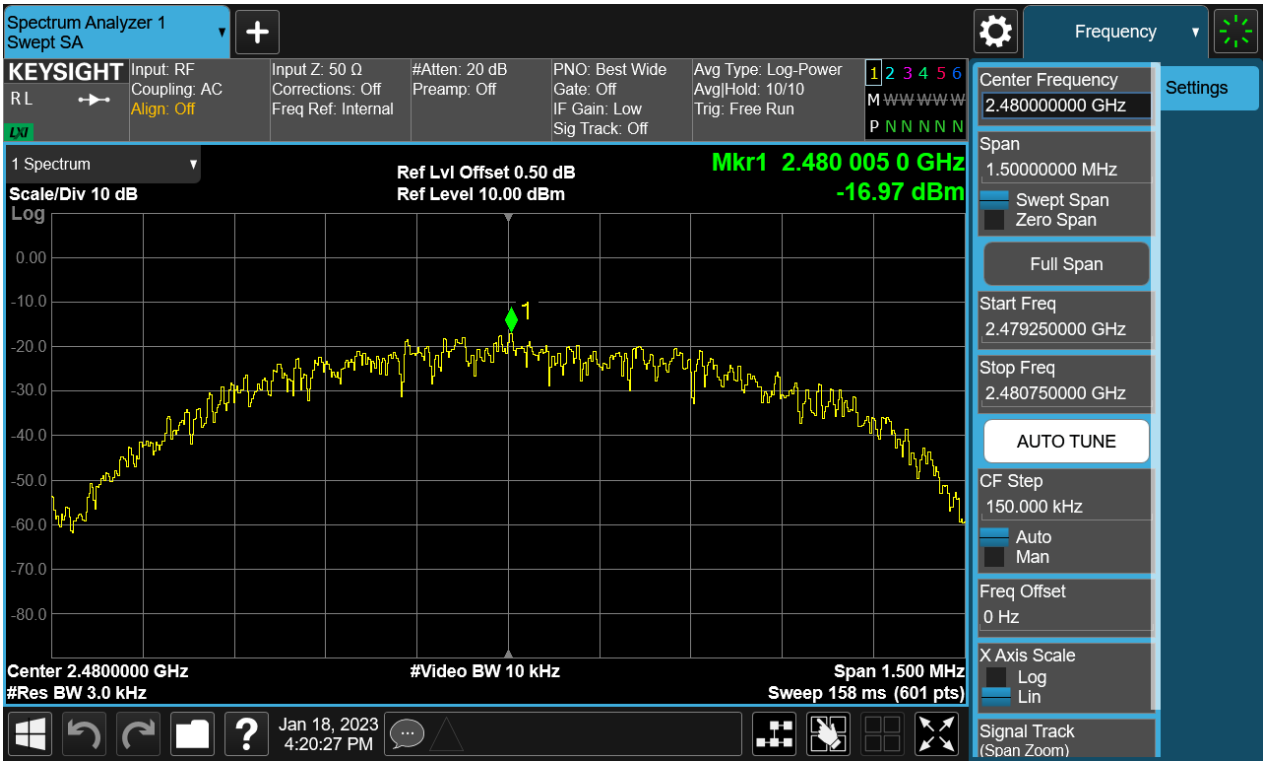


Figure 22: The plots of Power Spectral Density, 2402MHz, BLE-2M

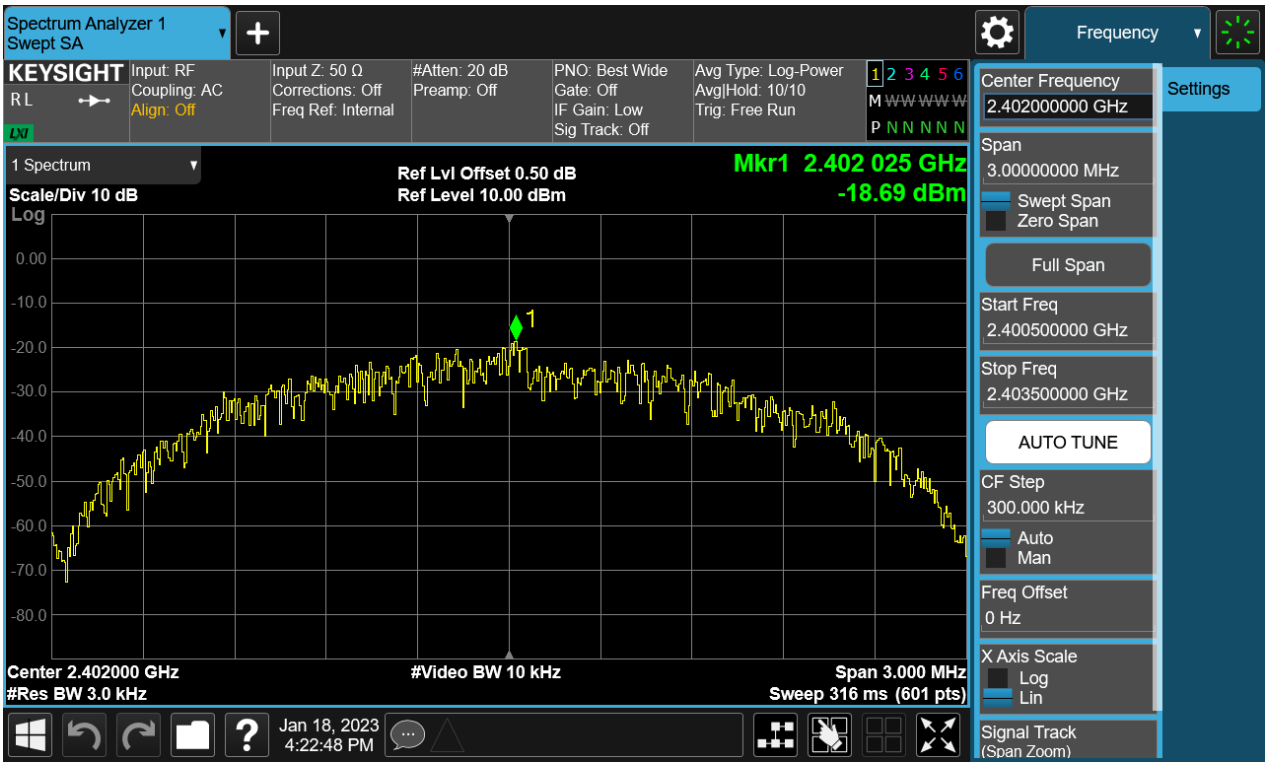


Figure 23: The plots of Power Spectral Density, 2440MHz, BLE-2M

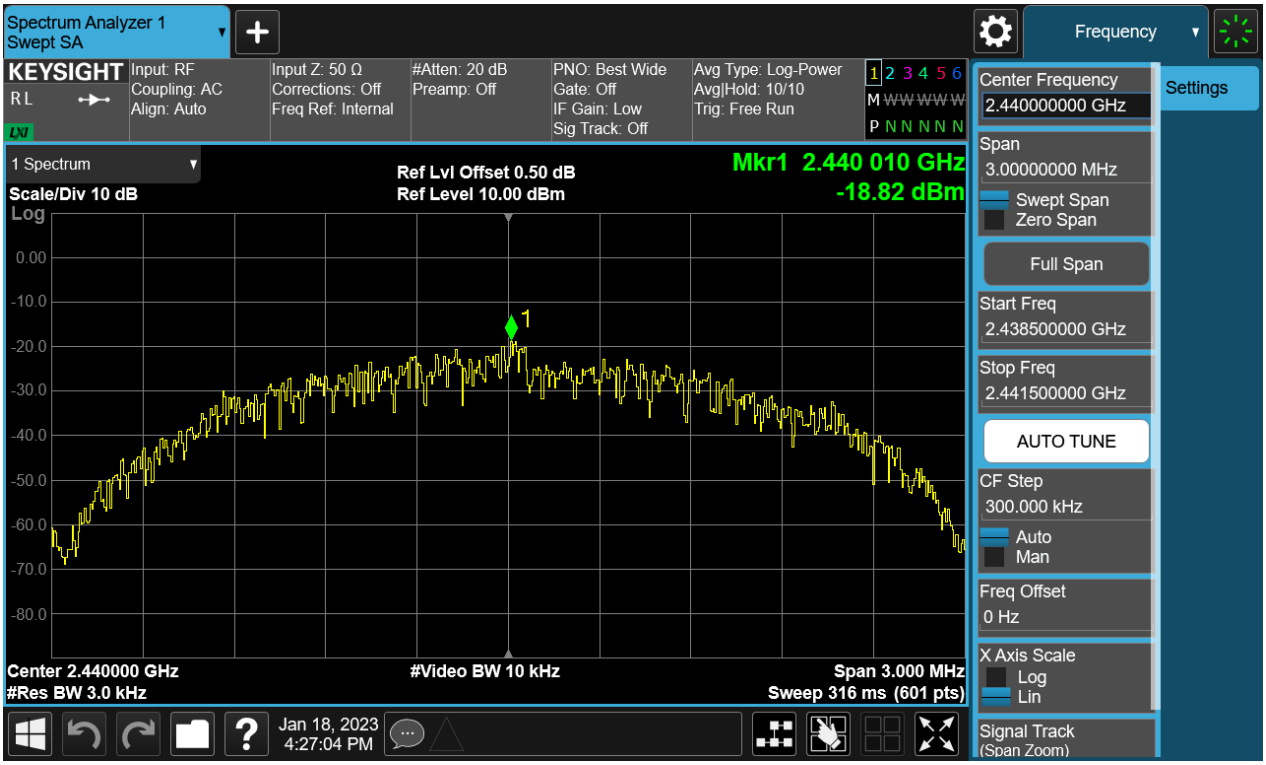
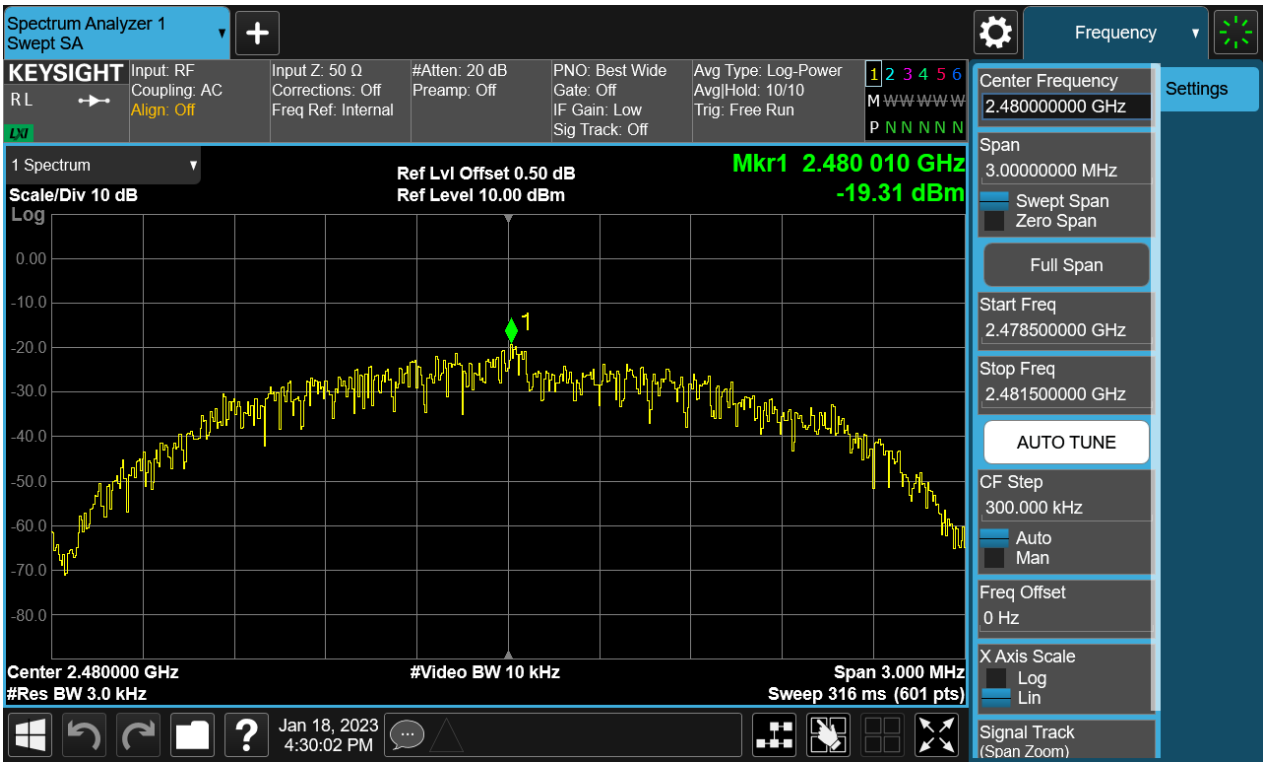


Figure 24: The plots of Power Spectral Density, 2480MHz, BLE-2M



4.1.5 Conducted Spurious Emission & Authorized-band band-edge

RESULT: **PASS**

Test standard	:	FCC Part 15.247(d), RSS-247 5.5
Requirement	:	ANSI C63.10-2013 clause 11.11, KDB 558074 clause 8.5
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/Middle/High for spurious, Low/High for Band Edge
Operation Mode	:	A.1.a
Ambient temperature	:	20.8°C
Relative humidity	:	51%

For details refer to following test plot.

Figure 25: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-1M, Carrier Level

Figure 26: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-1M, Band Edge

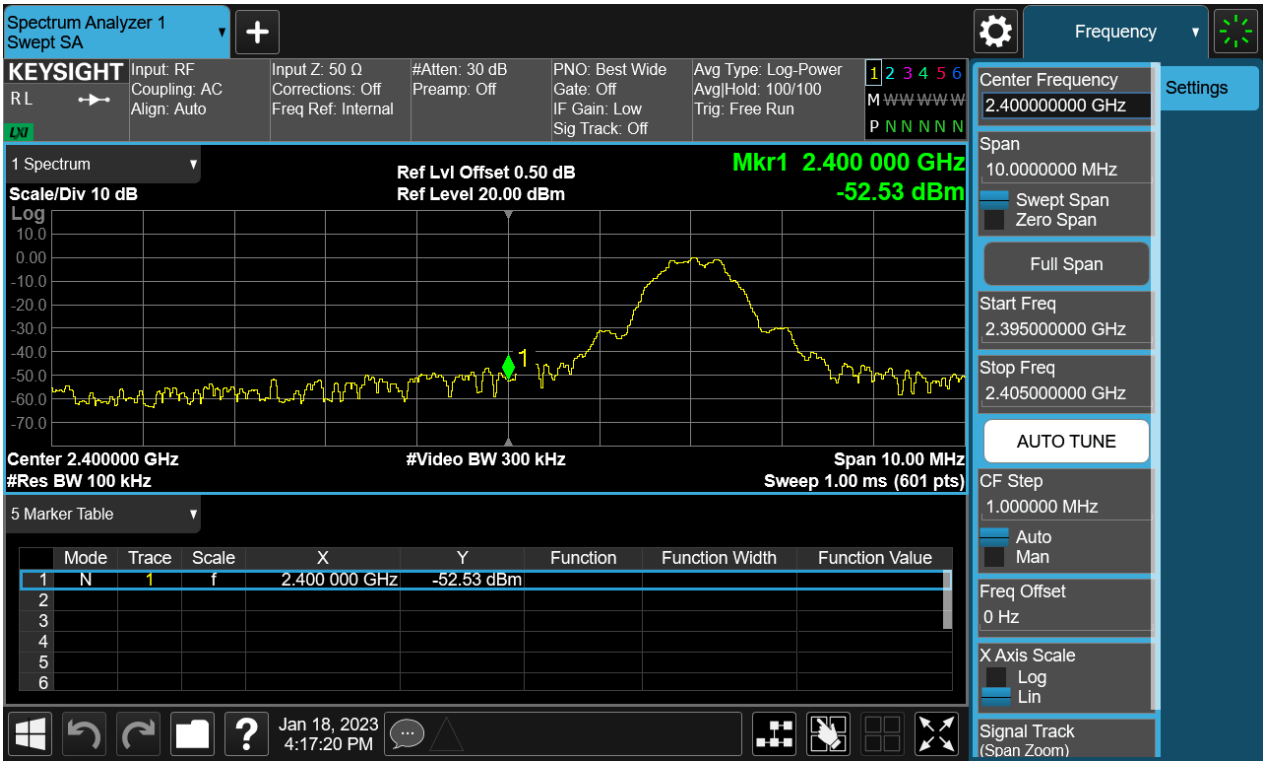


Figure 27: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-1M, Conducted spurious emissions 30MHz-3GHz

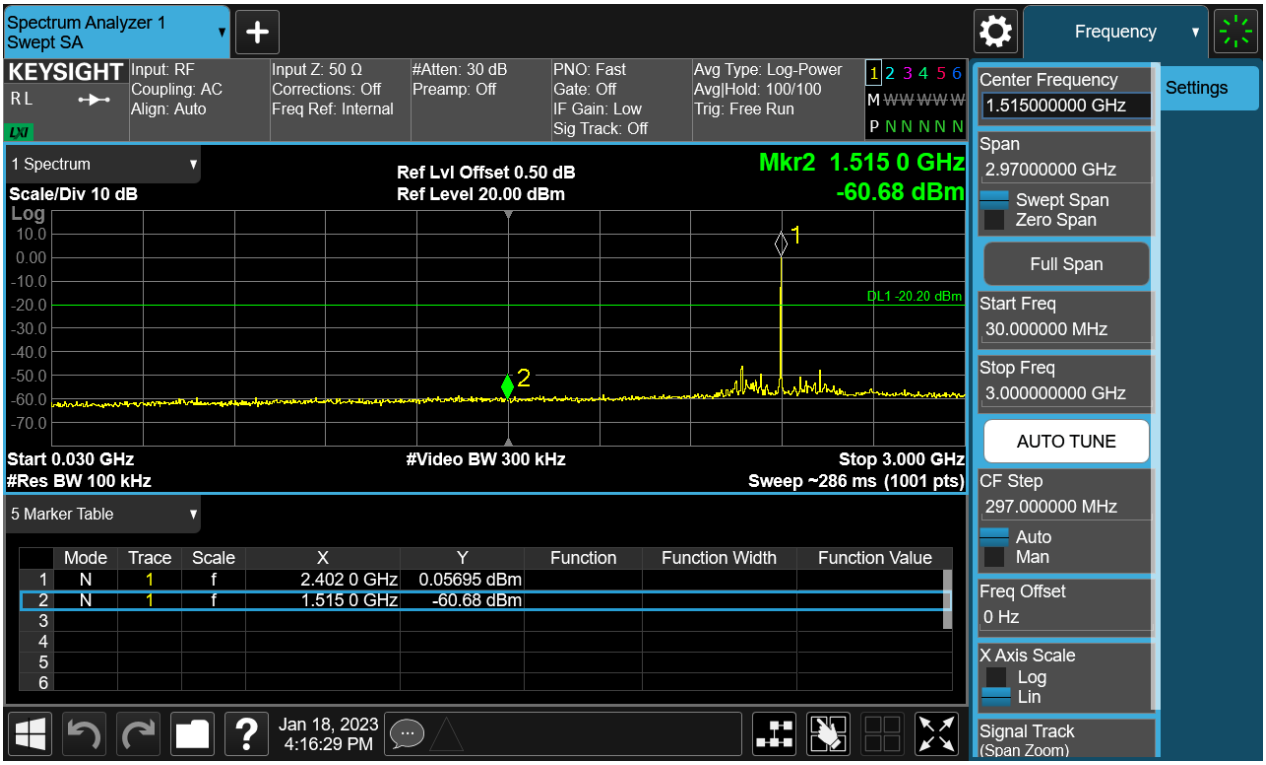


Figure 28: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-1M, Conducted spurious emissions 2GHz-25GHz

Figure 29: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-1M, Carrier Level

Figure 30: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-1M, Conducted spurious emissions 30MHz-3GHz

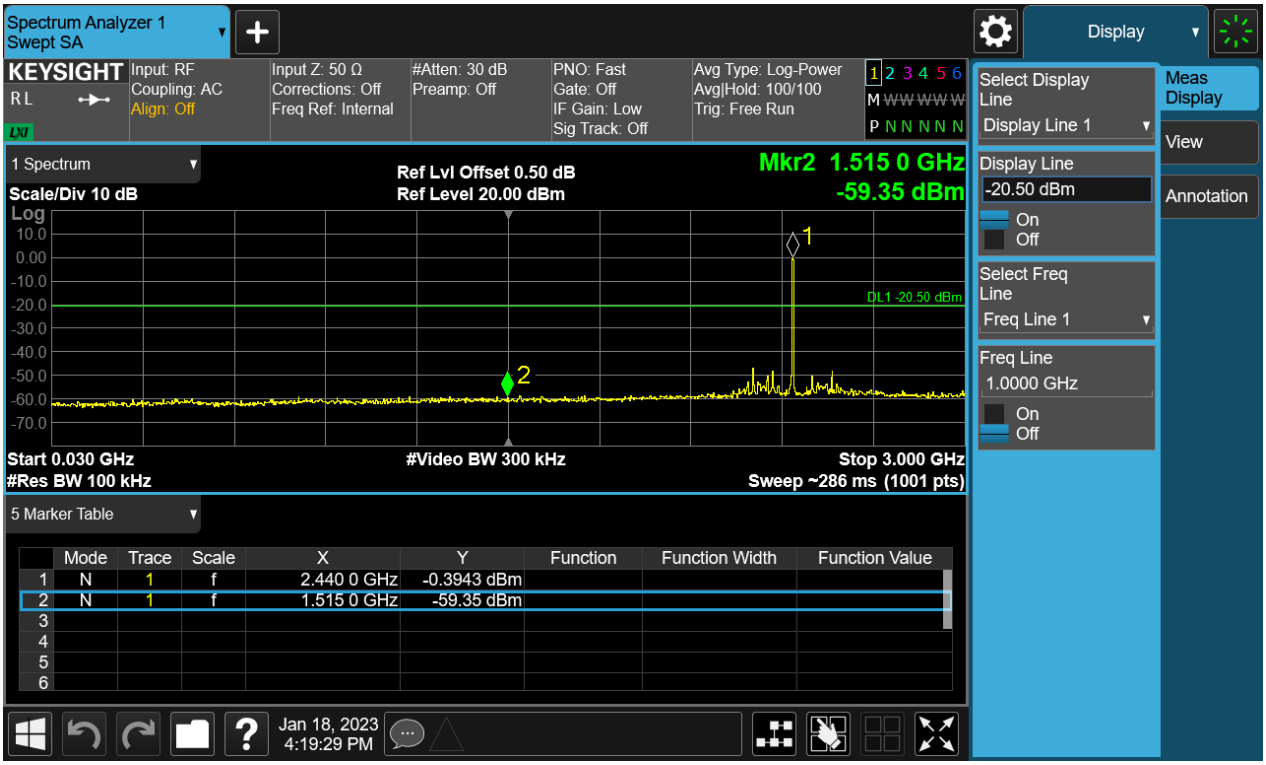


Figure 31: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-1M, Conducted spurious emissions 2GHz-25GHz

Figure 32: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-1M, Carrier Level

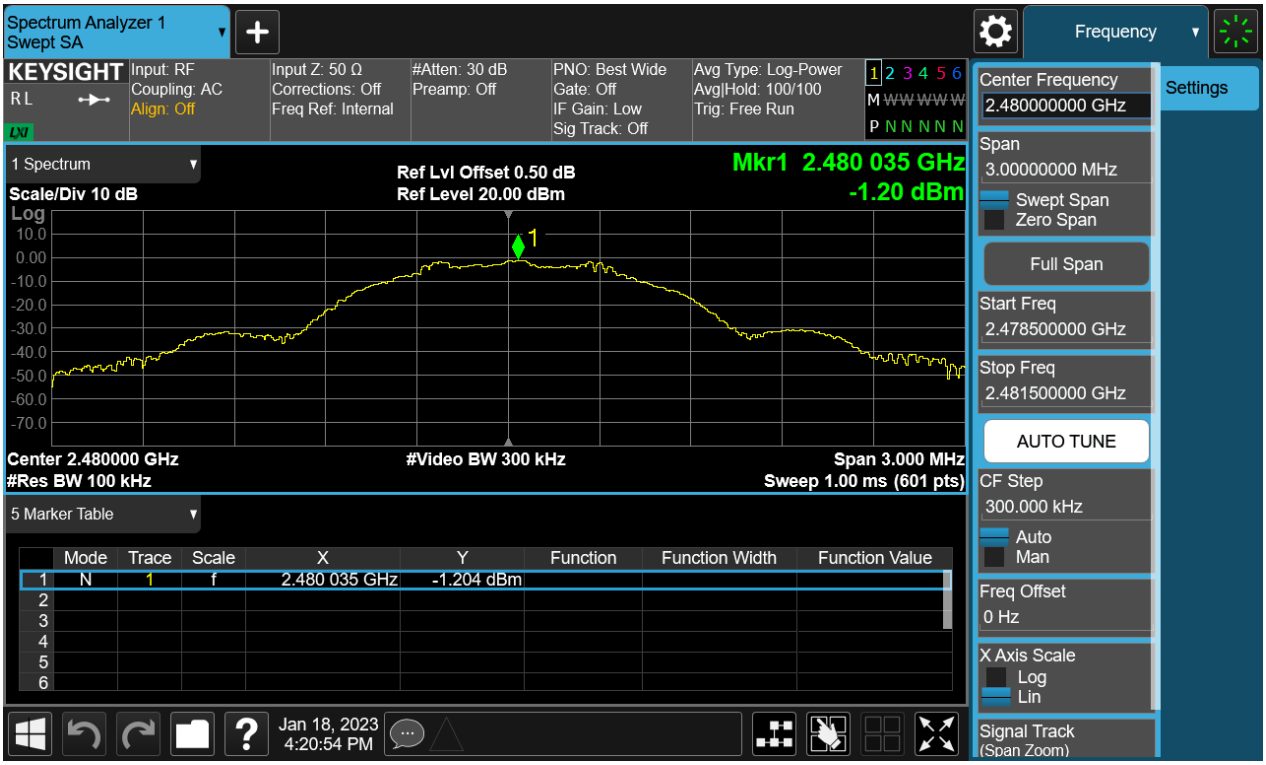


Figure 33: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-1M, Band Edge

Figure 34: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-1M, Conducted spurious emissions 30MHz-3GHz

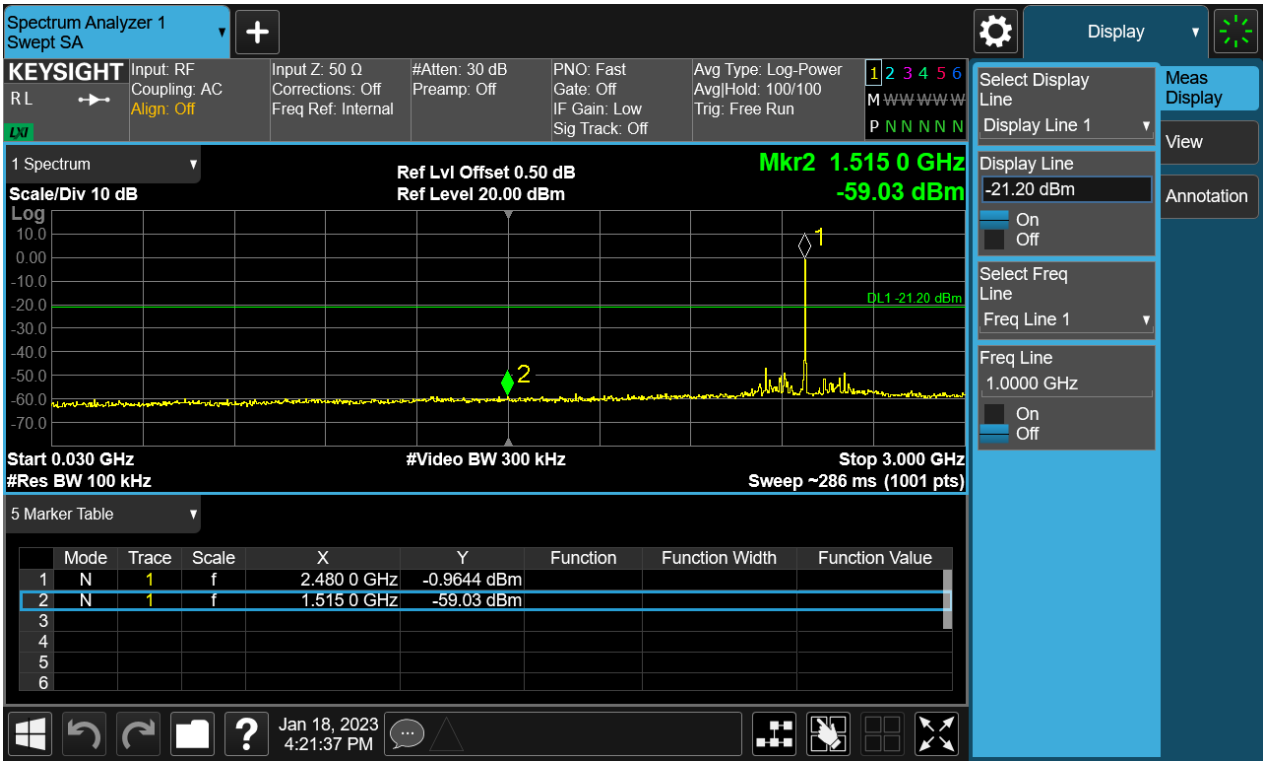


Figure 35: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-1M, Conducted spurious emissions 2GMHz-25GHz

Figure 36: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-2M, Carrier Level

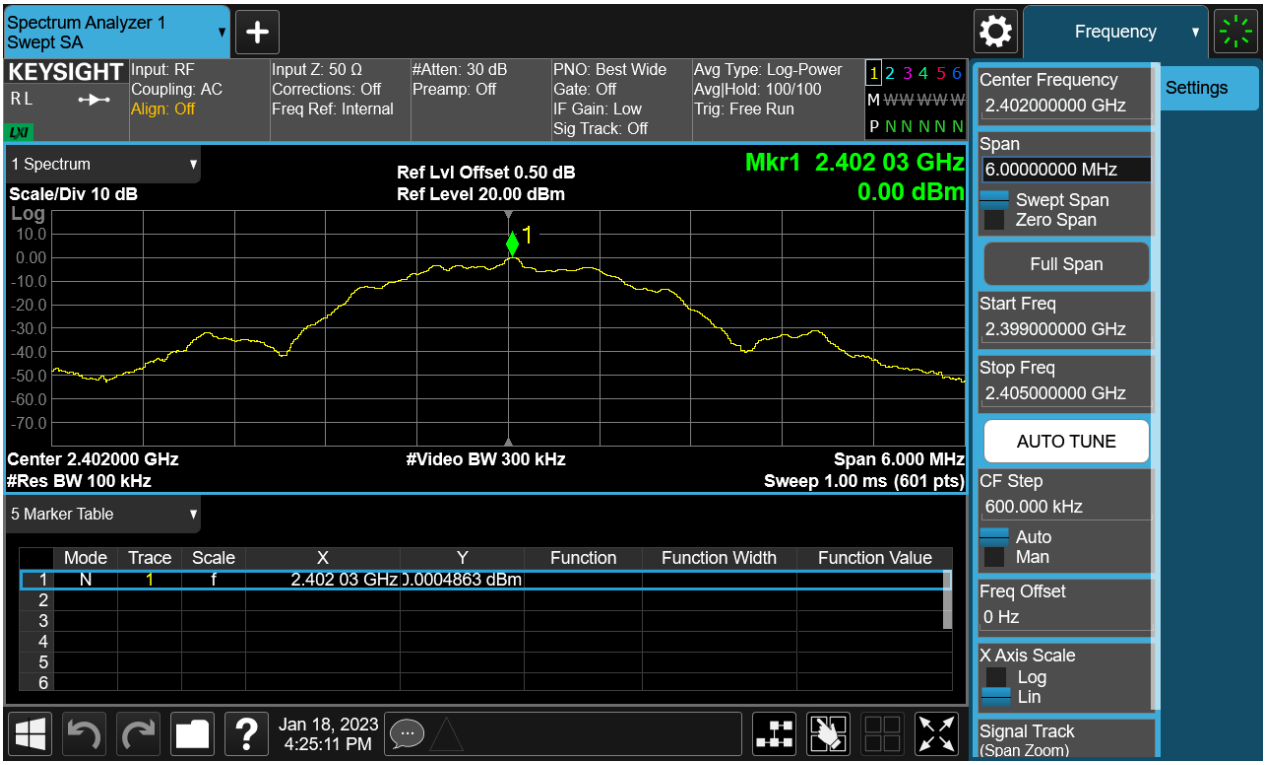


Figure 37: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-2M, Band Edge

Figure 38: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-2M, Conducted spurious emissions 30MHz-3GHz

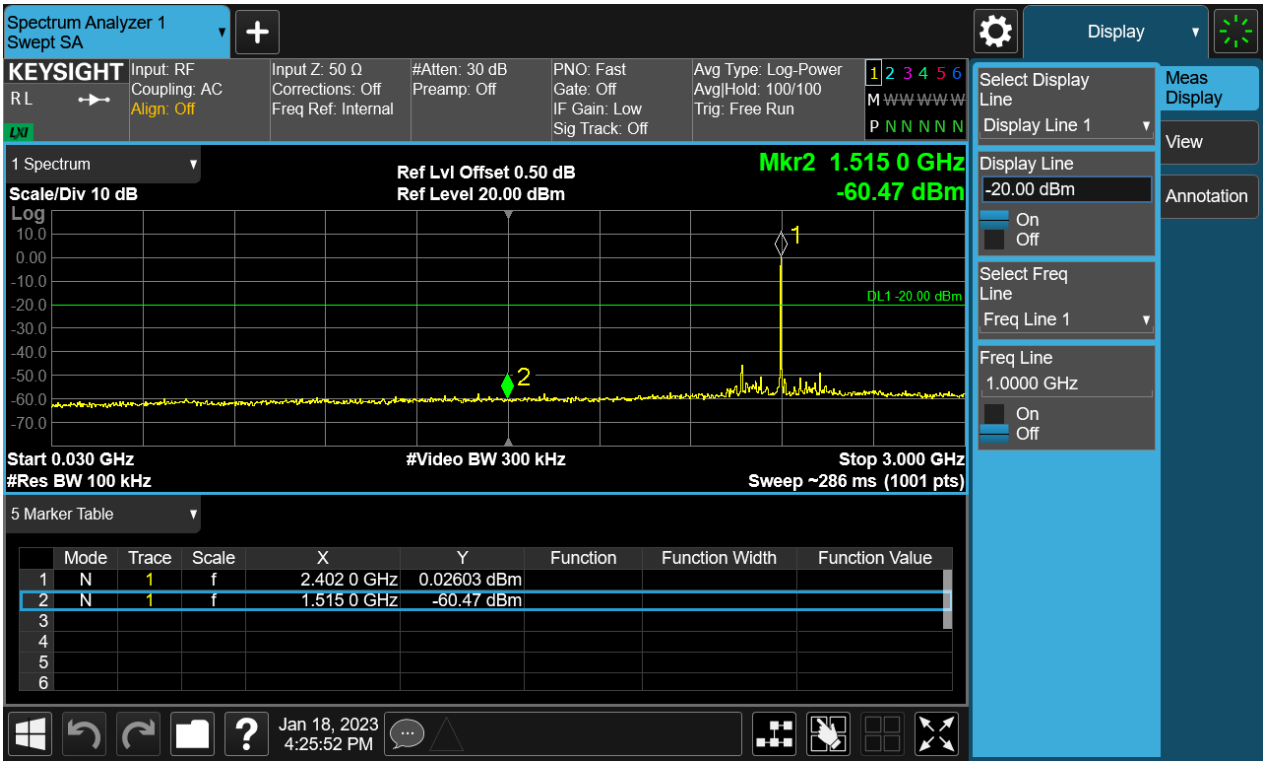


Figure 39: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-2M, Conducted spurious emissions 2GHz-25GHz

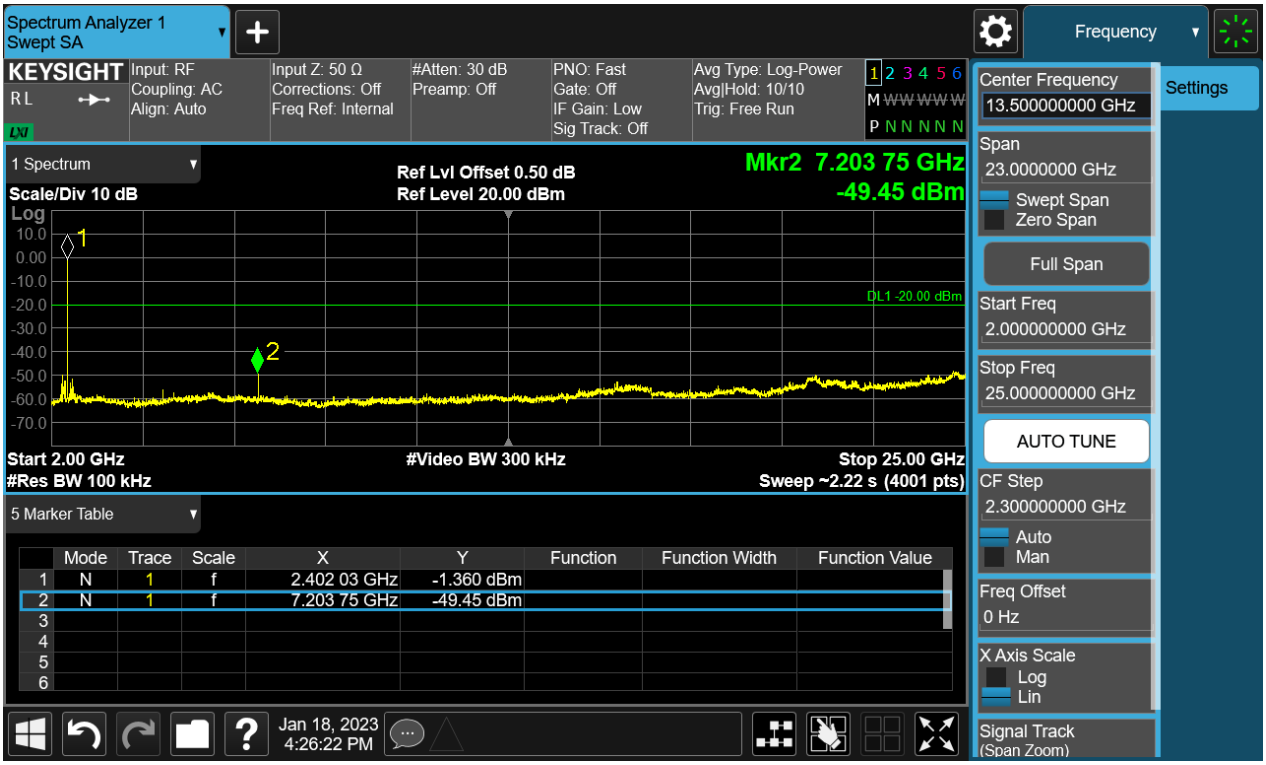


Figure 40: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-2M, Carrier Level

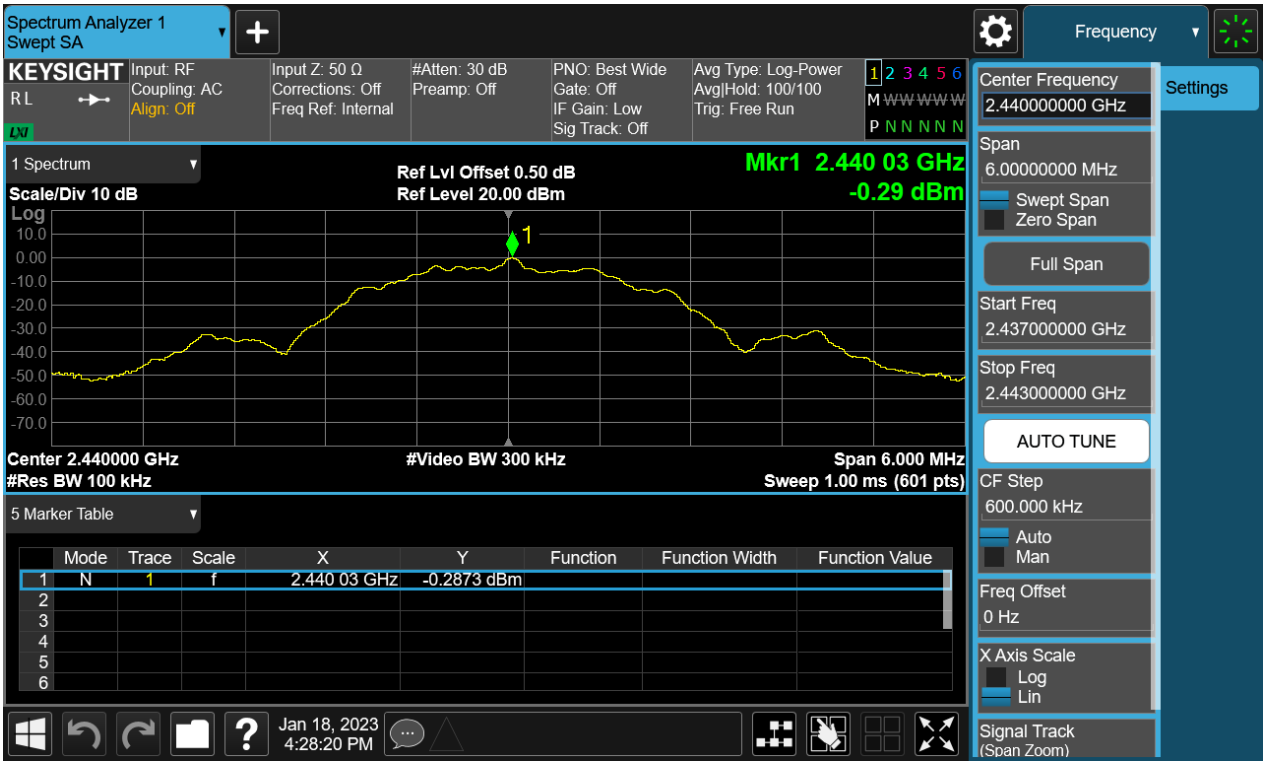


Figure 41: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-2M, Conducted spurious emissions 30MHz-3GHz

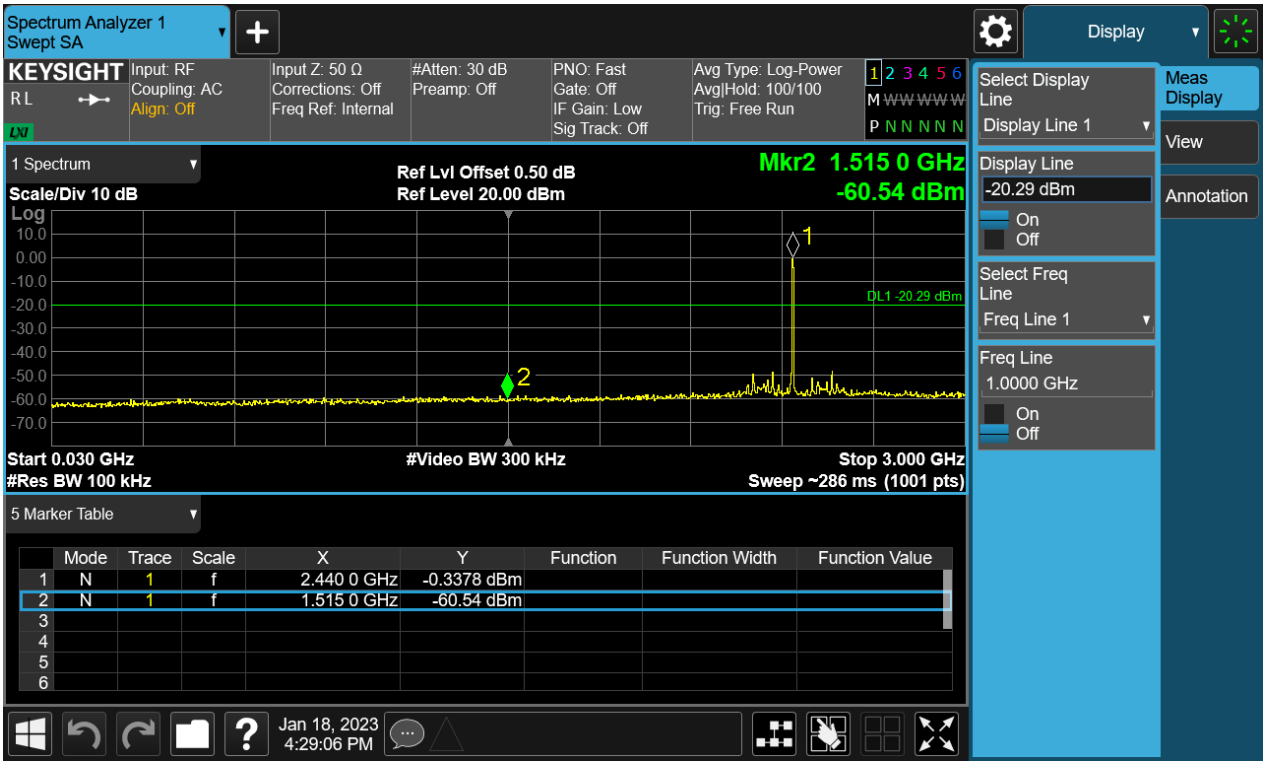


Figure 42: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-2M, Conducted spurious emissions 2GHz-25GHz

Figure 43: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-2M, Carrier Level

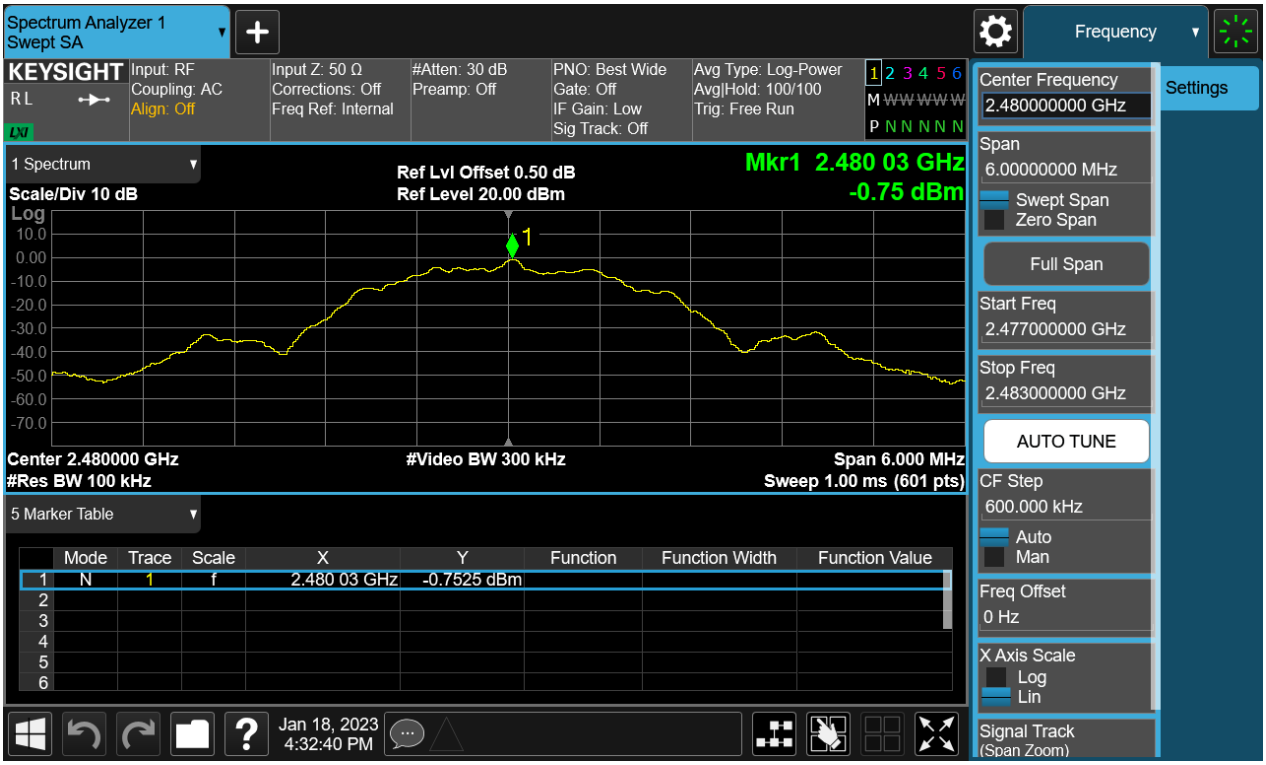


Figure 44: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-2M, Band Edge

Figure 45: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-2M, Conducted spurious emissions 30MHz-3GHz

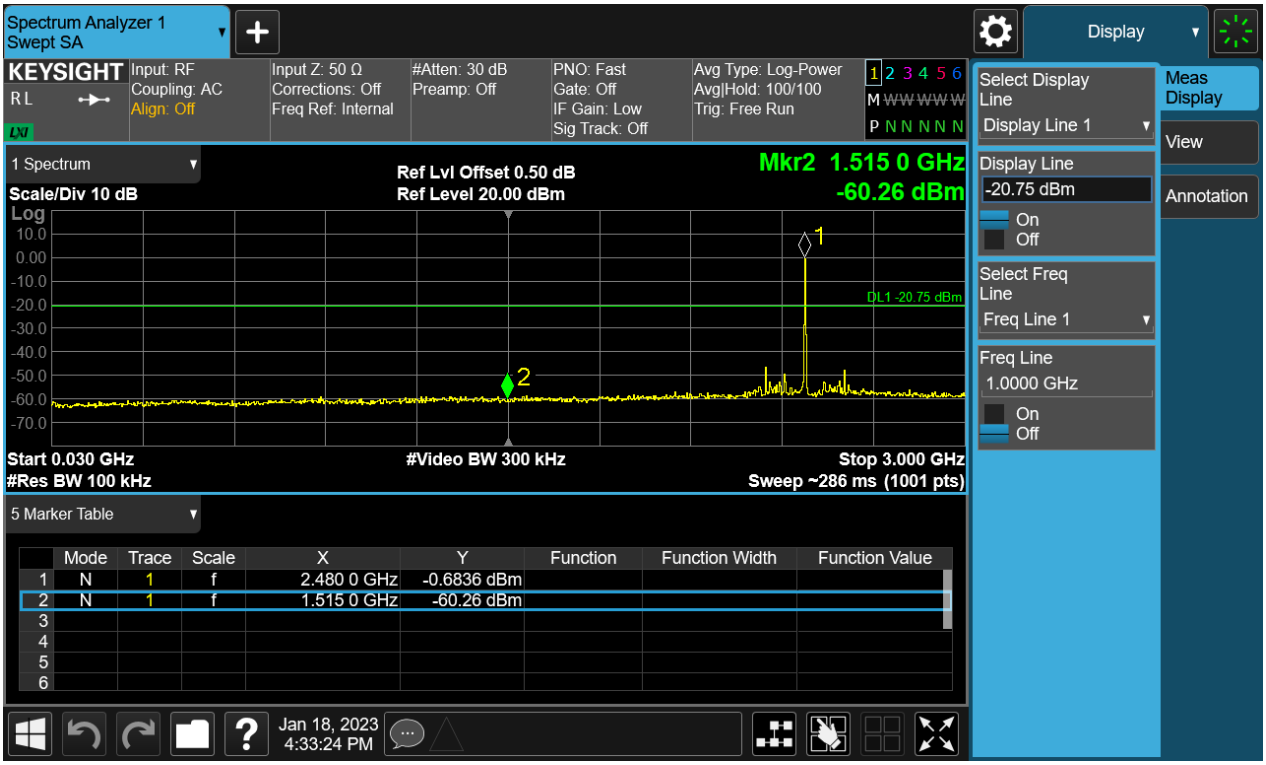
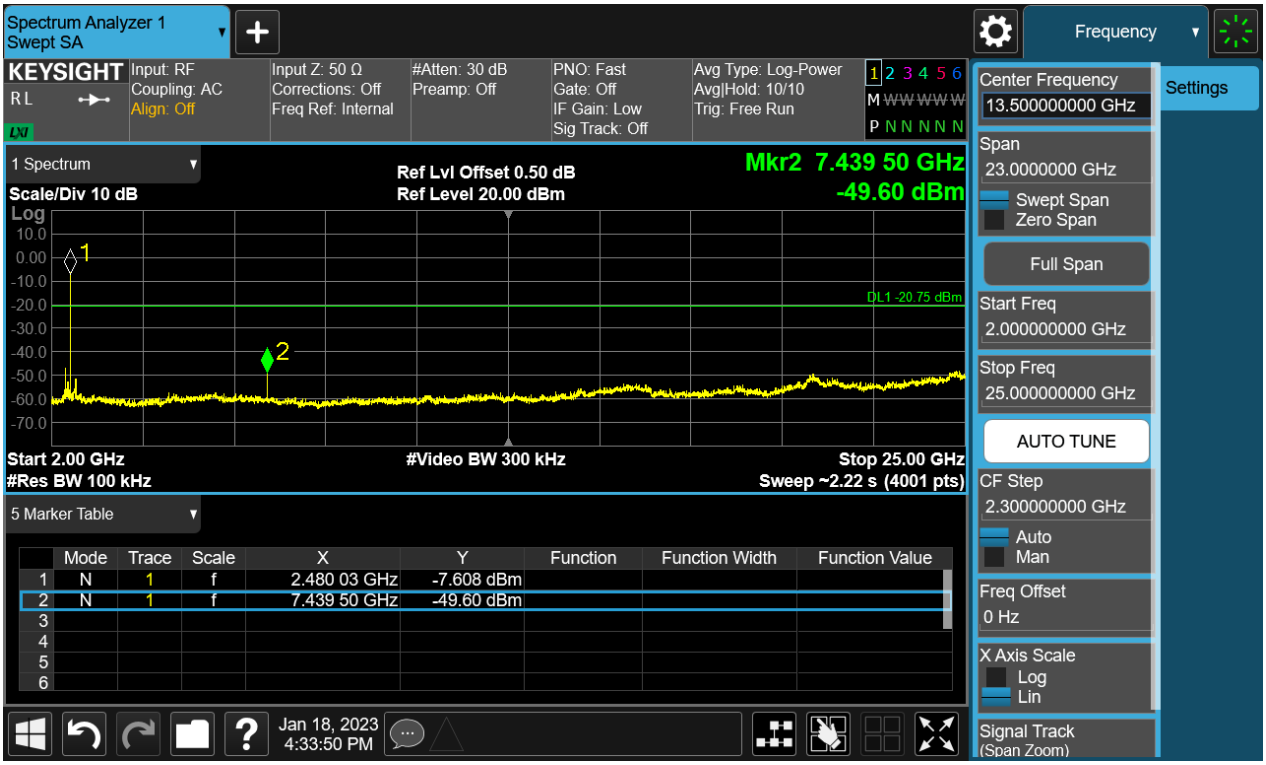


Figure 46: The plots of Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-2M, Conducted spurious emissions 2GMHz-25GHz



4.1.6 Radiated Emission

RESULT: **PASS**

Test standard	:	FCC Part 15.247(d), 15.205, 15.209 RSS-GEN 8.9
Requirement	:	ANSI C63.10-2013 clause 11.12, KDB 558074 clause 8.6
Kind of test site	:	3m Semi-Anechoic Chamber

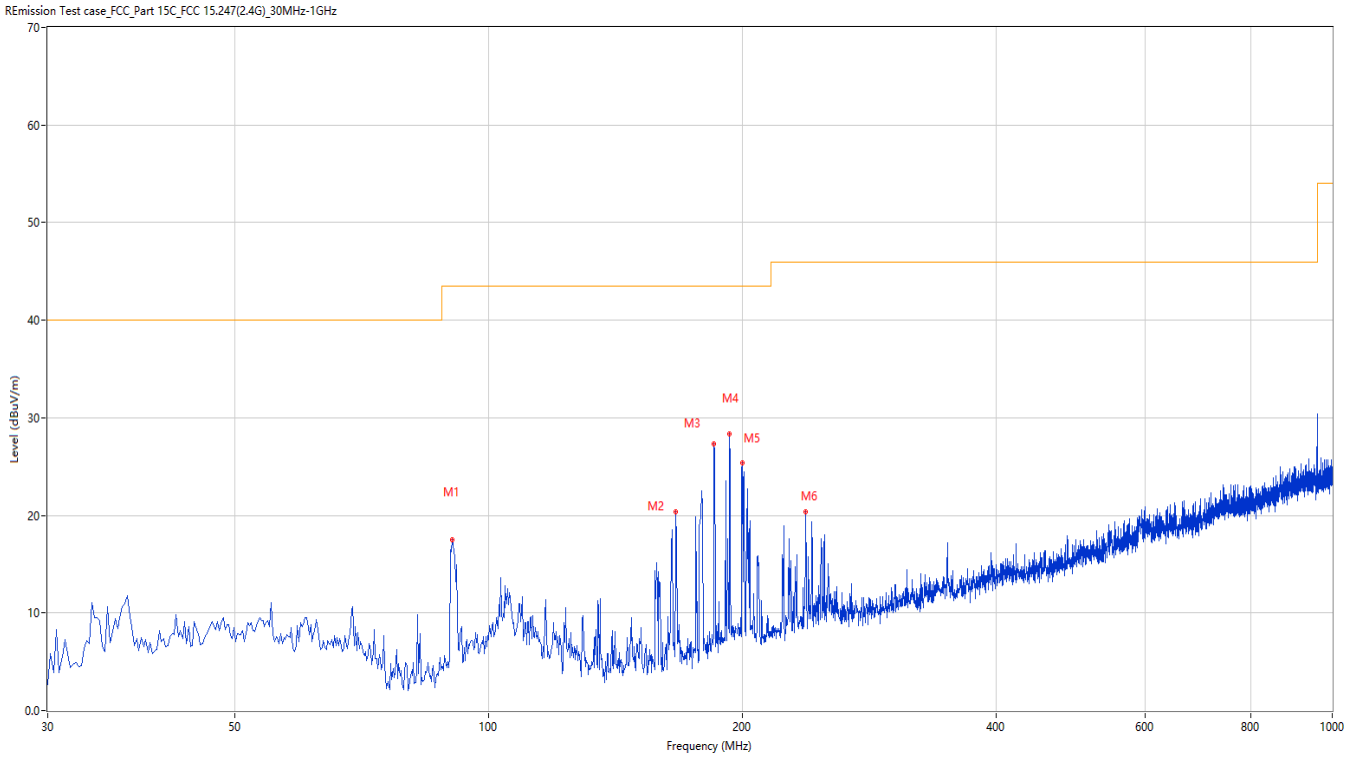
Test setup

Test Channel	:	Low/Middle/High
Operation Mode	:	A.1.a
Ambient temperature	:	21°C
Relative humidity	:	51%

Notes

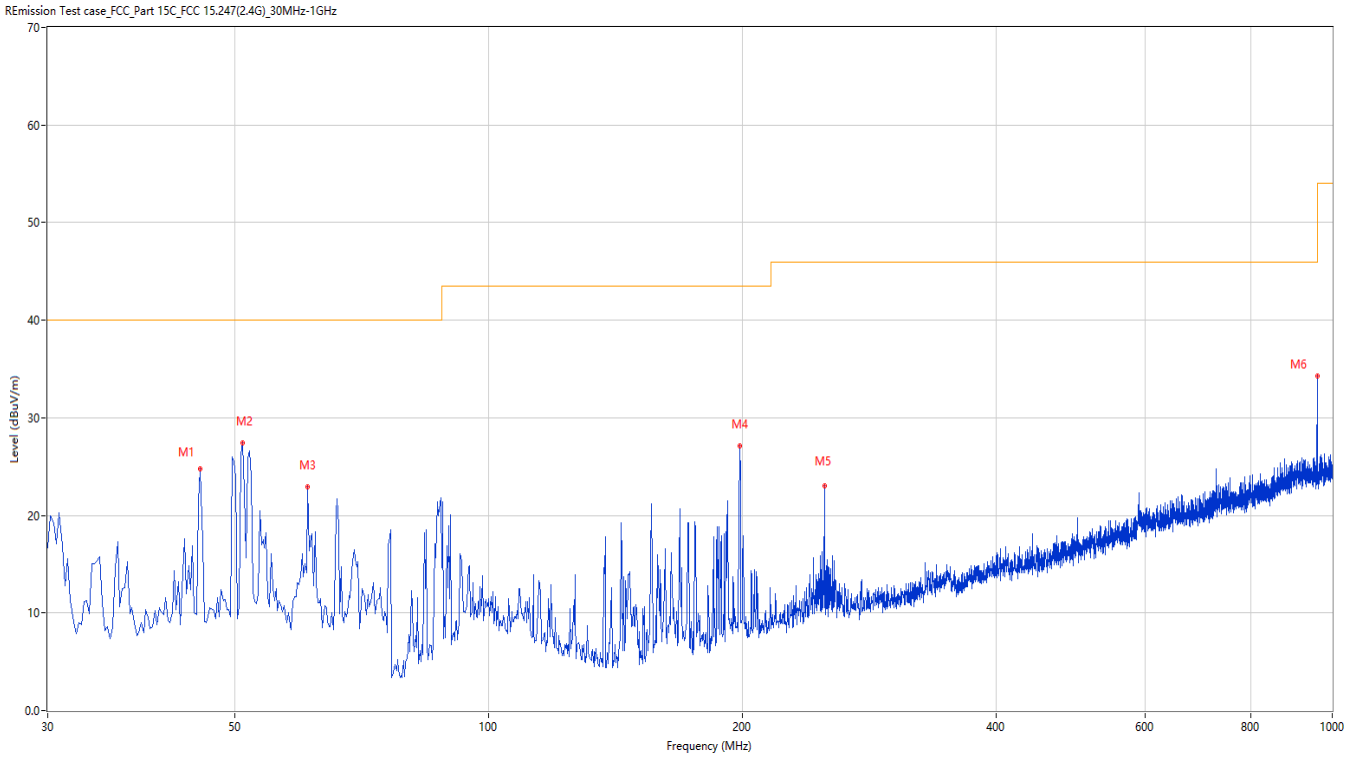
1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported. In addition, During 30MHz to 1GHz test frequency range, only the worst mode data was reported in this report.
2. The spurious above 18GHz is noise only and 20dB below the limit. The value has no need to be reported.
3. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement –X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

Figure 47: The plots of Radiated Emission, 2402MHz,30MHz-1GHz, BLE-1M, Horizontal polarization



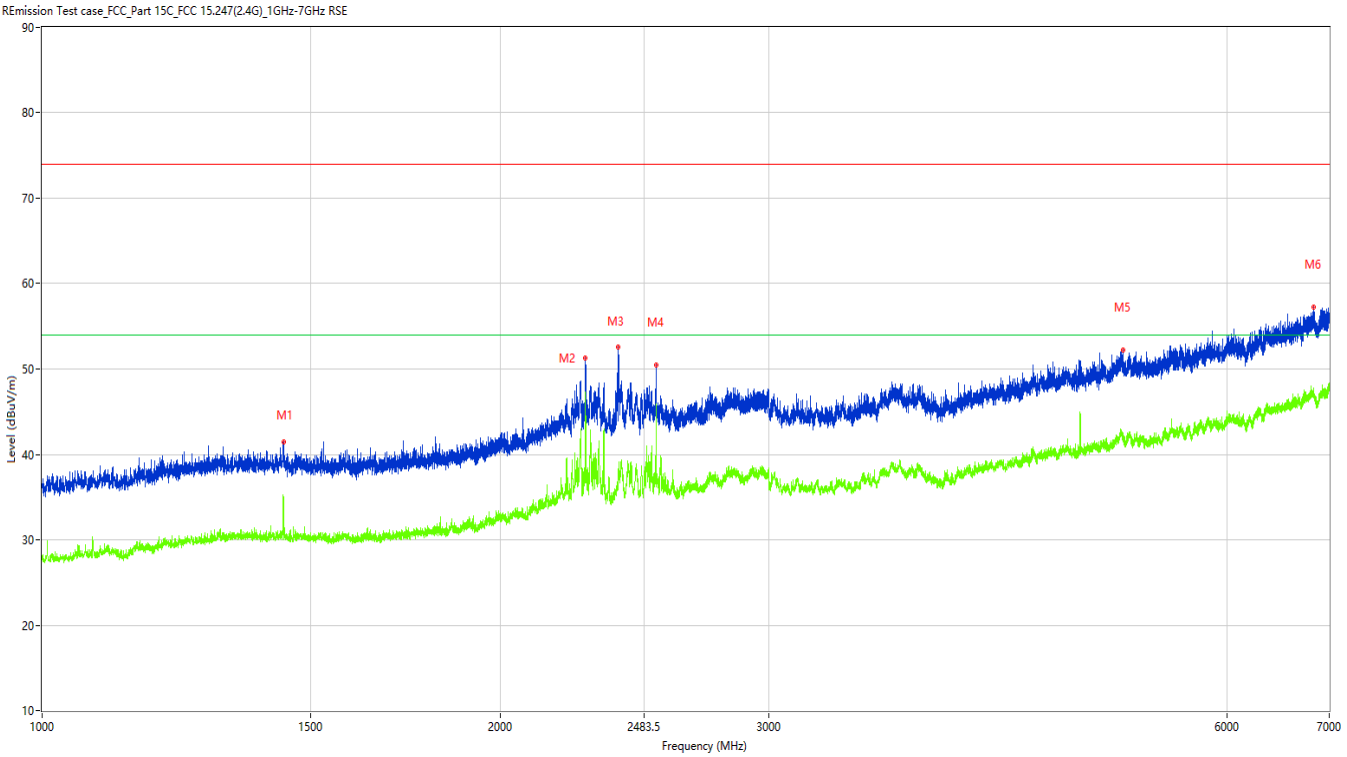
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	90.610	17.45	-28.57	43.5	26.05	Peak	6.80	100	Horizontal	Pass
2	166.736	20.35	-29.11	43.5	23.15	Peak	173.10	100	Horizontal	Pass
3	184.919	27.30	-27.64	43.5	16.20	Peak	295.50	100	Horizontal	Pass
4	192.919	28.30	-26.53	43.5	15.20	Peak	270.60	100	Horizontal	Pass
5	199.708	25.42	-26.16	43.5	18.08	Peak	17.90	100	Horizontal	Pass
6	237.528	20.33	-25.36	46.0	25.67	Peak	12.30	100	Horizontal	Pass

Figure 48: The plots of Radiated Emission, 2402MHz,30MHz-1GHz, BLE-1M, Vertical polarization



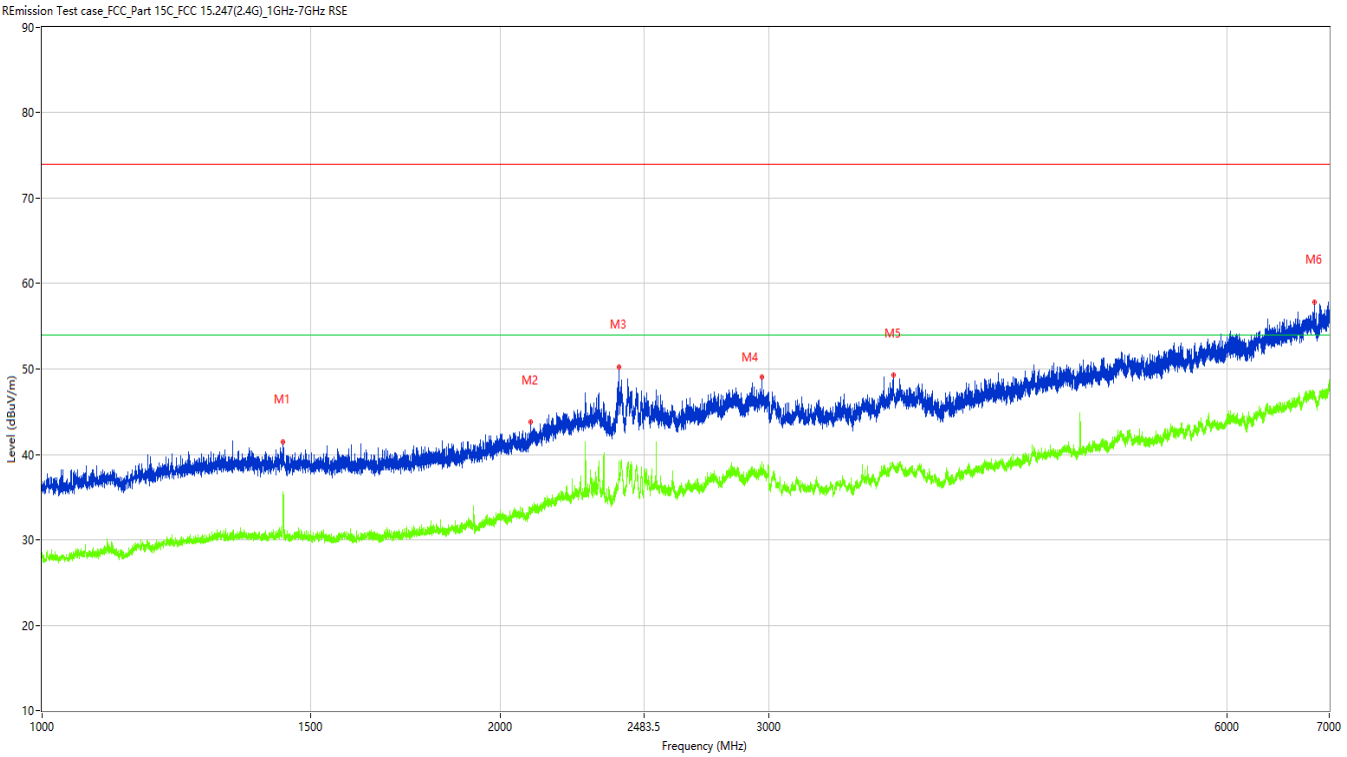
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	45.516	24.79	-25.24	40.0	15.21	Peak	237.90	100	Vertical	Pass
2	51.092	27.45	-25.02	40.0	12.55	Peak	286.30	100	Vertical	Pass
3	61.032	22.90	-26.54	40.0	17.10	Peak	350.30	100	Vertical	Pass
4	198.495	27.09	-26.09	43.5	16.41	Peak	302.30	100	Vertical	Pass
5	249.893	23.02	-24.60	46.0	22.98	Peak	73.10	100	Vertical	Pass
6	959.513	34.32	-9.31	46.0	11.68	Peak	148.90	100	Vertical	Pass

Figure 49: The plots of Radiated Emission, 2402MHz,1GHz-7GHz, BLE-1M, Horizontal polarization



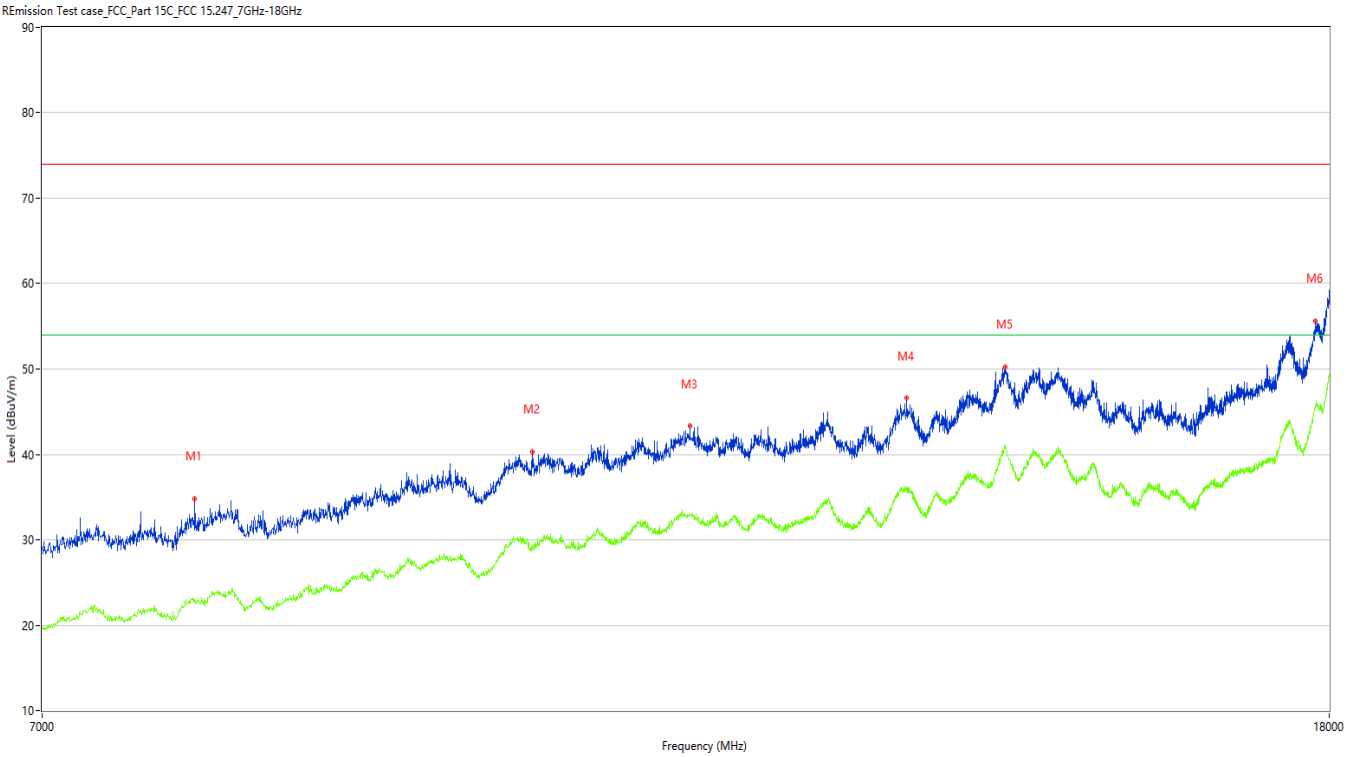
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.195	41.43	-12.73	74.0	32.57	Peak	2.80	100	Horizontal	Pass
1**	1440.195	34.95	-12.73	54.0	19.05	AV	2.80	100	Horizontal	Pass
2	2274.341	51.24	-7.36	74.0	22.76	Peak	182.50	100	Horizontal	Pass
2**	2274.341	45.50	-7.36	54.0	8.50	AV	182.50	100	Horizontal	Pass
3	2390.326	52.60	-5.90	74.0	21.40	Peak	98.40	100	Horizontal	Pass
3**	2390.326	38.35	-5.90	54.0	15.65	AV	98.40	100	Horizontal	Pass
4	2529.809	50.52	-6.68	74.0	23.48	Peak	223.40	100	Horizontal	Pass
4**	2529.809	45.88	-6.68	54.0	8.12	AV	223.40	100	Horizontal	Pass
5	5127.234	52.27	1.23	74.0	21.73	Peak	50.90	100	Horizontal	Pass
5**	5127.234	41.51	1.23	54.0	12.49	AV	50.90	100	Horizontal	Pass
6	6836.520	57.25	5.07	74.0	16.75	Peak	198.60	100	Horizontal	Pass
6**	6836.520	47.78	5.07	54.0	6.22	AV	198.60	100	Horizontal	Pass

Figure 50: The plots of Radiated Emission, 2402MHz,1GHz-7GHz, BLE-1M, Vertical polarization



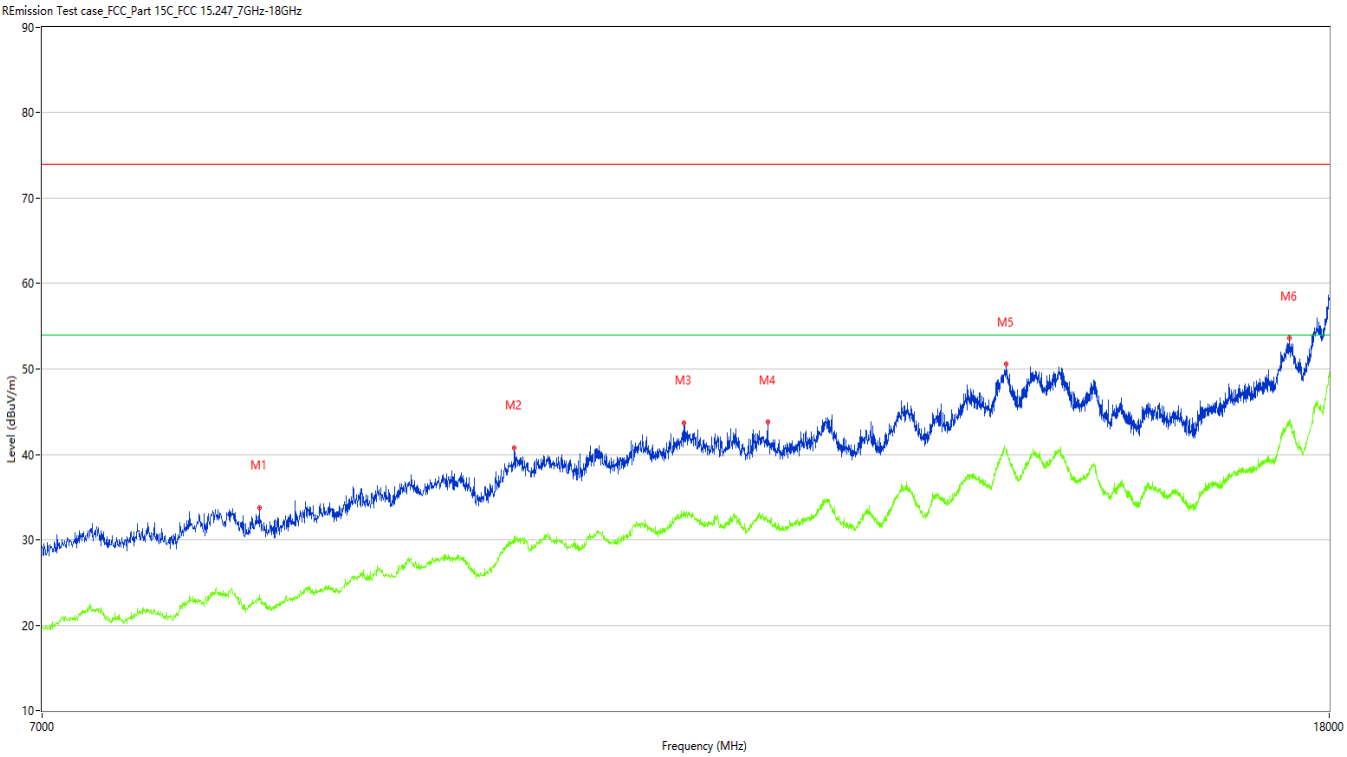
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.695	41.49	-12.72	74.0	32.51	Peak	94.20	100	Vertical	Pass
1**	1439.695	34.69	-12.72	54.0	19.31	AV	94.20	100	Vertical	Pass
2	2092.613	43.75	-9.37	74.0	30.25	Peak	249.00	100	Vertical	Pass
2**	2092.613	33.52	-9.37	54.0	20.48	AV	249.00	100	Vertical	Pass
3	2391.576	50.28	-4.80	74.0	23.72	Peak	224.40	100	Vertical	Pass
3**	2391.576	38.10	-4.80	54.0	15.90	AV	224.40	100	Vertical	Pass
4	2970.254	49.06	-3.29	74.0	24.94	Peak	232.60	100	Vertical	Pass
4**	2970.254	39.15	-3.29	54.0	14.85	AV	232.60	100	Vertical	Pass
5	3620.922	49.24	-1.68	74.0	24.76	Peak	46.40	100	Vertical	Pass
5**	3620.922	38.53	-1.68	54.0	15.47	AV	46.40	100	Vertical	Pass
6	6846.019	57.81	5.05	74.0	16.19	Peak	227.60	100	Vertical	Pass
6**	6846.019	46.48	5.05	54.0	7.52	AV	227.60	100	Vertical	Pass

Figure 51: The plots of Radiated Emission, 2402MHz,7GHz-18GHz, BLE-1M, Horizontal polarization



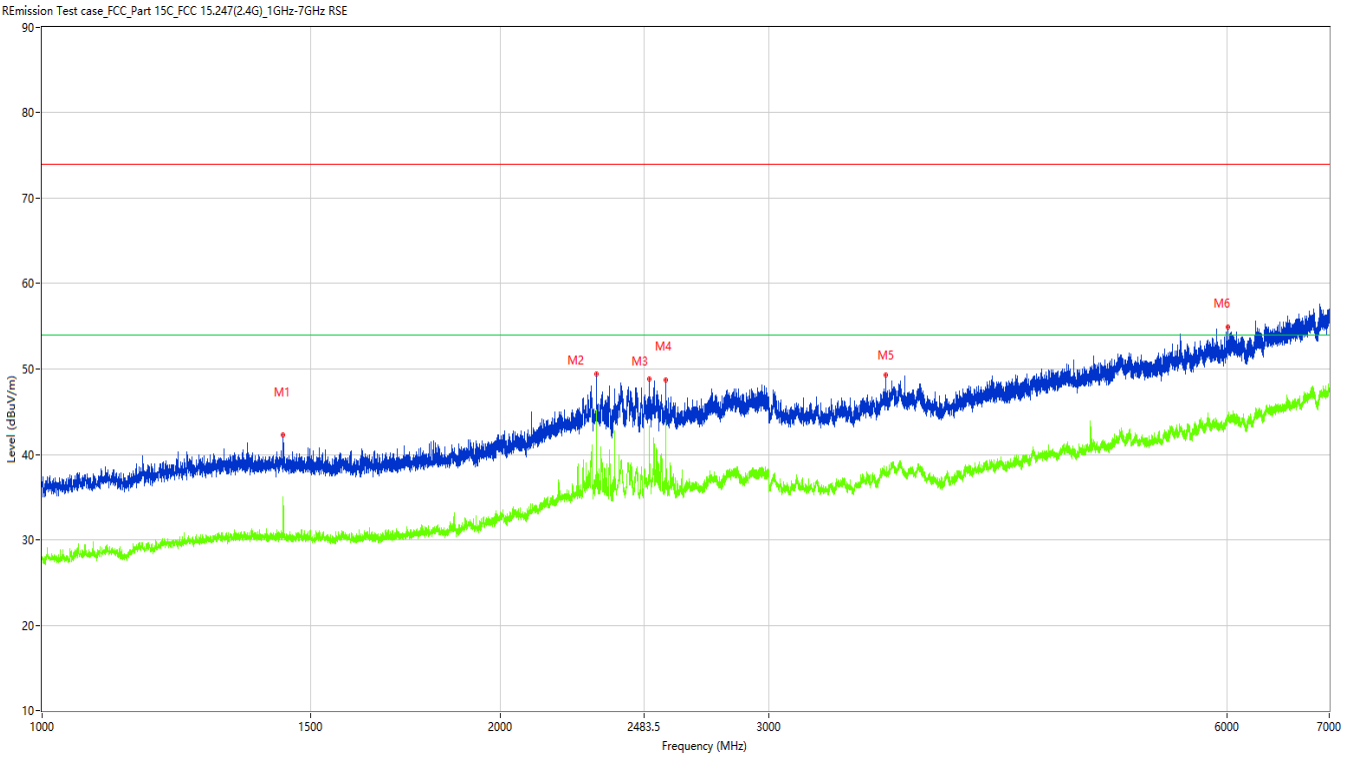
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	7830.292	34.81	2.72	74.0	39.19	Peak	164.20	100	Horizontal	Pass
1**	7830.292	22.94	2.72	54.0	31.06	AV	164.20	100	Horizontal	Pass
2	10032.492	40.27	9.16	74.0	33.73	Peak	343.60	100	Horizontal	Pass
2**	10032.492	29.06	9.16	54.0	24.94	AV	343.60	100	Horizontal	Pass
3	11261.435	43.28	12.04	74.0	30.72	Peak	301.90	100	Horizontal	Pass
3**	11261.435	33.06	12.04	54.0	20.94	AV	301.90	100	Horizontal	Pass
4	13199.700	46.56	14.08	74.0	27.44	Peak	358.90	100	Horizontal	Pass
4**	13199.700	36.18	14.08	54.0	17.82	AV	358.90	100	Horizontal	Pass
5	14189.453	50.25	19.73	74.0	23.75	Peak	99.10	100	Horizontal	Pass
5**	14189.453	41.11	19.73	54.0	12.89	AV	99.10	100	Horizontal	Pass
6	17815.796	55.57	22.09	74.0	18.43	Peak	346.20	100	Horizontal	Pass
6**	17815.796	45.53	22.09	54.0	8.47	AV	346.20	100	Horizontal	Pass

Figure 52: The plots of Radiated Emission, 2402MHz,7GHz-18GHz, BLE-1M, Vertical polarization



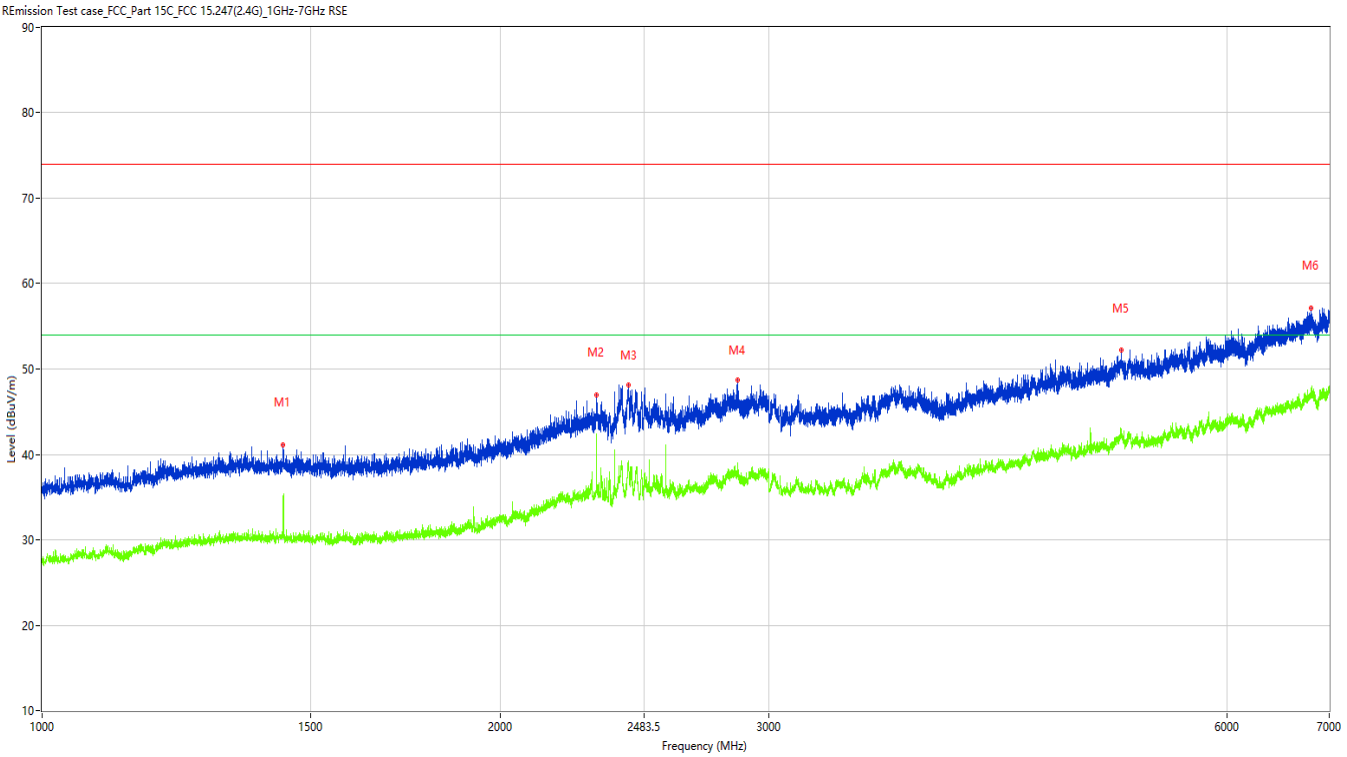
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	8209.698	33.72	3.82	74.0	40.28	Peak	195.70	100	Vertical	Pass
1**	8209.698	23.51	3.82	54.0	30.49	AV	195.70	100	Vertical	Pass
2	9900.525	40.73	9.71	74.0	33.27	Peak	233.30	100	Vertical	Pass
2**	9900.525	30.22	9.71	54.0	23.78	AV	233.30	100	Vertical	Pass
3	11209.198	43.69	11.37	74.0	30.31	Peak	131.20	100	Vertical	Pass
3**	11209.198	33.36	11.37	54.0	20.64	AV	131.20	100	Vertical	Pass
4	11921.270	43.82	11.95	74.0	30.18	Peak	45.60	100	Vertical	Pass
4**	11921.270	32.12	11.95	54.0	21.88	AV	45.60	100	Vertical	Pass
5	14200.450	50.55	19.49	74.0	23.45	Peak	302.90	100	Vertical	Pass
5**	14200.450	40.62	19.49	54.0	13.38	AV	302.90	100	Vertical	Pass
6	17480.380	53.57	21.45	74.0	20.43	Peak	332.80	100	Vertical	Pass
6**	17480.380	43.48	21.45	54.0	10.52	AV	332.80	100	Vertical	Pass

Figure 53: The plots of Radiated Emission, 2440MHz,1GHz-7GHz, BLE-1M, Horizontal polarization



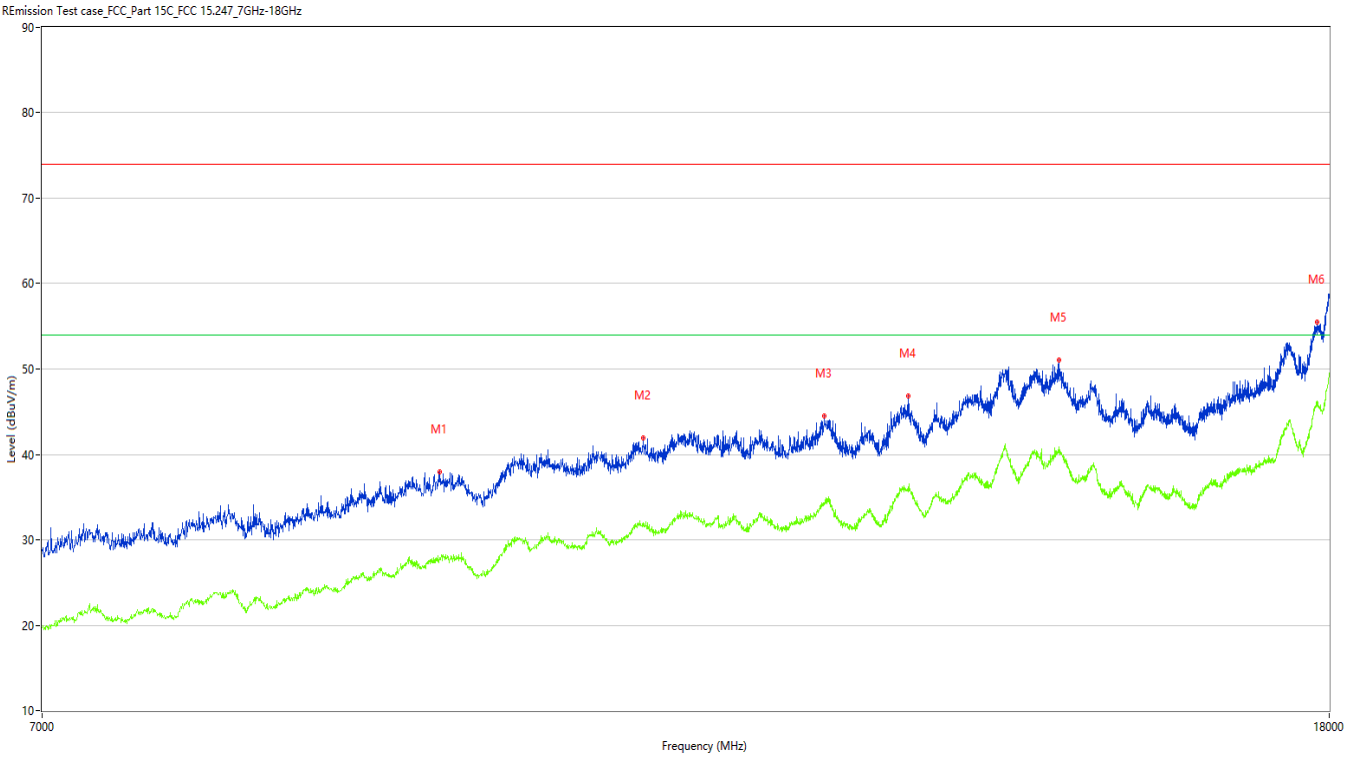
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.945	42.32	-12.72	74.0	31.68	Peak	32.10	100	Horizontal	Pass
1**	1439.945	34.49	-12.72	54.0	19.51	AV	32.10	100	Horizontal	Pass
2	2312.086	49.43	-7.25	74.0	24.57	Peak	195.40	100	Horizontal	Pass
2**	2312.086	44.90	-7.25	54.0	9.10	AV	195.40	100	Horizontal	Pass
3	2503.812	48.86	-6.67	74.0	25.14	Peak	217.40	100	Horizontal	Pass
3**	2503.812	43.34	-6.67	54.0	10.66	AV	217.40	100	Horizontal	Pass
4	2568.054	48.77	-6.71	74.0	25.23	Peak	225.20	100	Horizontal	Pass
4**	2568.054	43.54	-6.71	54.0	10.46	AV	225.20	100	Horizontal	Pass
5	3579.928	49.35	-2.31	74.0	24.65	Peak	162.60	100	Horizontal	Pass
5**	3579.928	37.81	-2.31	54.0	16.19	AV	162.60	100	Horizontal	Pass
6	6003.625	54.92	2.64	74.0	19.08	Peak	276.80	100	Horizontal	Pass
6**	6003.625	44.48	2.64	54.0	9.52	AV	276.80	100	Horizontal	Pass

Figure 54: The plots of Radiated Emission, 2440MHz,1GHz-7GHz, BLE-1M, Vertical polarization



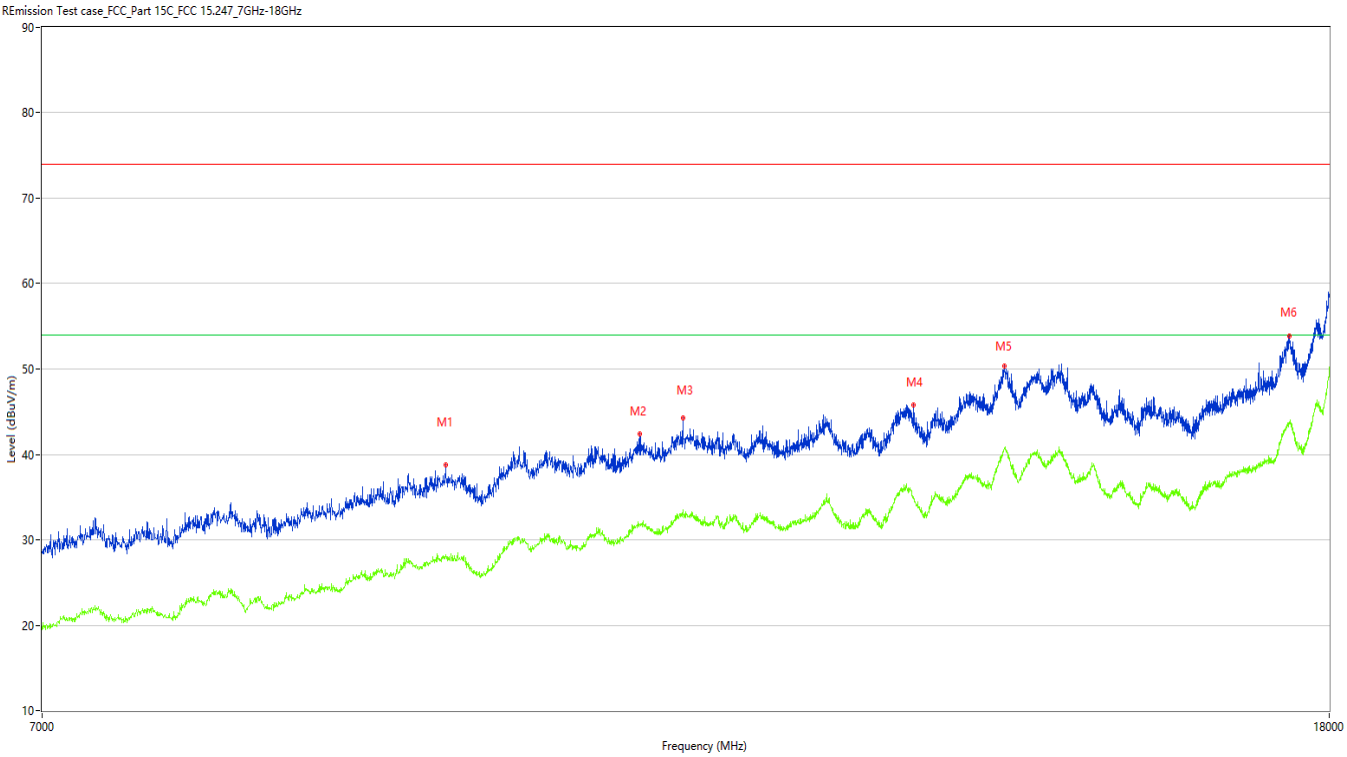
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.195	41.11	-12.71	74.0	32.89	Peak	324.20	100	Vertical	Pass
1**	1439.195	34.15	-12.71	54.0	19.85	AV	324.20	100	Vertical	Pass
2	2311.586	46.94	-7.22	74.0	27.06	Peak	169.80	100	Vertical	Pass
2**	2311.586	41.66	-7.22	54.0	12.34	AV	169.80	100	Vertical	Pass
3	2425.322	48.11	-4.71	74.0	25.89	Peak	275.40	100	Vertical	Pass
3**	2425.322	39.23	-4.71	54.0	14.77	AV	275.40	100	Vertical	Pass
4	2863.017	48.69	-3.81	74.0	25.31	Peak	250.90	100	Vertical	Pass
4**	2863.017	38.33	-3.81	54.0	15.67	AV	250.90	100	Vertical	Pass
5	5112.736	52.21	1.31	74.0	21.79	Peak	345.20	100	Vertical	Pass
5**	5112.736	42.22	1.31	54.0	11.78	AV	345.20	100	Vertical	Pass
6	6807.524	57.12	5.14	74.0	16.88	Peak	0.90	100	Vertical	Pass
6**	6807.524	47.30	5.14	54.0	6.70	AV	0.90	100	Vertical	Pass

Figure 55: The plots of Radiated Emission, 2440MHz,7GHz-18GHz, BLE-1M, Horizontal polarization



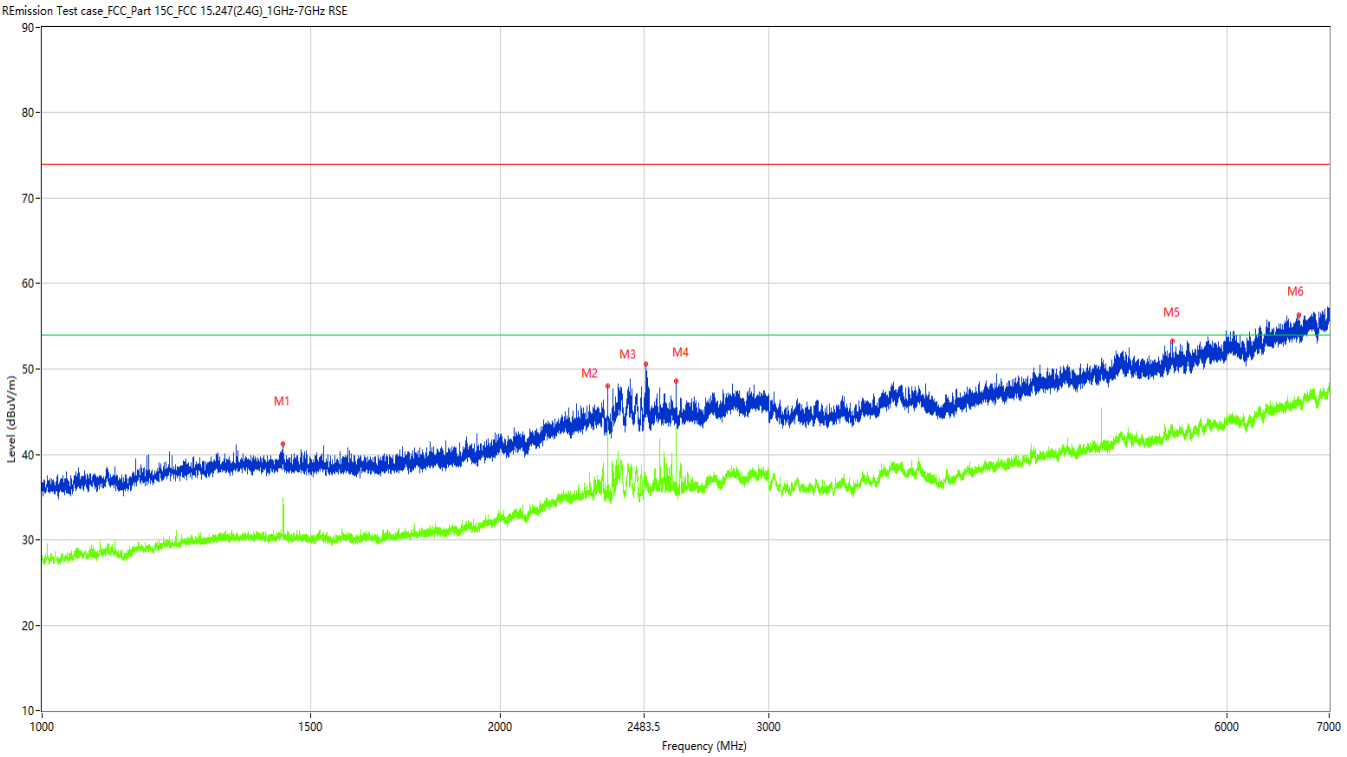
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	9372.657	37.98	7.61	74.0	36.02	Peak	161.20	100	Horizontal	Pass
1**	9372.657	27.83	7.61	54.0	26.17	AV	161.20	100	Horizontal	Pass
2	10882.029	41.95	11.12	74.0	32.05	Peak	96.80	100	Horizontal	Pass
2**	10882.029	31.72	11.12	54.0	22.28	AV	96.80	100	Horizontal	Pass
3	12427.143	44.55	12.39	74.0	29.45	Peak	300.80	100	Horizontal	Pass
3**	12427.143	34.28	12.39	54.0	19.72	AV	300.80	100	Horizontal	Pass
4	13218.945	46.82	14.15	74.0	27.18	Peak	107.60	100	Horizontal	Pass
4**	13218.945	35.81	14.15	54.0	18.19	AV	107.60	100	Horizontal	Pass
5	14761.310	51.03	18.84	74.0	22.97	Peak	59.30	100	Horizontal	Pass
5**	14761.310	40.85	18.84	54.0	13.15	AV	59.30	100	Horizontal	Pass
6	17846.038	55.46	22.49	74.0	18.54	Peak	188.00	100	Horizontal	Pass
6**	17846.038	46.22	22.49	54.0	7.78	AV	188.00	100	Horizontal	Pass

Figure 56: The plots of Radiated Emission, 2440MHz,7GHz-18GHz, BLE-1M, Vertical polarization



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	9411.147	38.71	7.64	74.0	35.29	Peak	152.80	100	Vertical	Pass
1**	9411.147	28.23	7.64	54.0	25.77	AV	152.80	100	Vertical	Pass
2	10851.787	42.43	11.12	74.0	31.57	Peak	5.90	100	Vertical	Pass
2**	10851.787	31.80	11.12	54.0	22.20	AV	5.90	100	Vertical	Pass
3	11200.950	44.25	11.27	74.0	29.75	Peak	266.30	100	Vertical	Pass
3**	11200.950	33.47	11.27	54.0	20.53	AV	266.30	100	Vertical	Pass
4	13271.182	45.76	13.77	74.0	28.24	Peak	179.60	100	Vertical	Pass
4**	13271.182	34.85	13.77	54.0	19.15	AV	179.60	100	Vertical	Pass
5	14186.703	50.38	19.72	74.0	23.62	Peak	192.90	100	Vertical	Pass
5**	14186.703	40.59	19.72	54.0	13.41	AV	192.90	100	Vertical	Pass
6	17477.631	53.90	21.40	74.0	20.10	Peak	307.20	100	Vertical	Pass
6**	17477.631	43.68	21.40	54.0	10.32	AV	307.20	100	Vertical	Pass

Figure 57: The plots of Radiated Emission, 2480MHz,1GHz-7GHz, BLE-1M, Horizontal polarization



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.445	41.28	-12.72	74.0	32.72	Peak	0.30	100	Horizontal	Pass
1**	1439.445	32.98	-12.72	54.0	21.02	AV	0.30	100	Horizontal	Pass
2	2351.831	48.05	-8.02	74.0	25.95	Peak	181.70	100	Horizontal	Pass
2**	2351.831	43.89	-8.02	54.0	10.11	AV	181.70	100	Horizontal	Pass
3	2491.814	50.59	-5.66	74.0	23.41	Peak	217.00	100	Horizontal	Pass
3**	2491.814	37.18	-5.66	54.0	16.82	AV	217.00	100	Horizontal	Pass
4	2607.799	48.60	-6.11	74.0	25.40	Peak	219.60	100	Horizontal	Pass
4**	2607.799	43.13	-6.11	54.0	10.87	AV	219.60	100	Horizontal	Pass
5	5525.184	53.23	1.44	74.0	20.77	Peak	28.20	100	Horizontal	Pass
5**	5525.184	42.59	1.44	54.0	11.41	AV	28.20	100	Horizontal	Pass
6	6685.039	56.26	4.49	74.0	17.74	Peak	270.10	100	Horizontal	Pass
6**	6685.039	46.12	4.49	54.0	7.88	AV	270.10	100	Horizontal	Pass