



Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640

Fax: +86-755-26648637

Website: www.cqa-cert.com

Report Template Version: V05

Report Template Revision Date: 2021-11-03

Test Report

Report No.: CQASZ20211202223E-01
Applicant: Shenzhen DO Intelligent Technology Co., Ltd
Address of Applicant: 11th Floor, 3# Building, Guole Tech Park, Lirong Road, Dalang, Longhua District, Shenzhen, China
Equipment Under Test (EUT):
Product: Smart Watch
Model No.: boAt Wave Connect RTL, boAt Wave Connect F, boAt Wave Connect A, boAt Wave Connect Plus, boAt Wave Connect Pro, boAt Wave Connect Max, boAt Wave Connect, ID208, ID208 BT
Test Model No.: ID208 BT
Brand Name: IDO
FCC ID: 2AHFT418
Standards: 47 CFR Part 15, Subpart C
Date of Receipt: 2021-12-23
Date of Test: 2021-12-23 to 2021-12-30
Date of Issue: 2022-03-02
Test Result: PASS*

*In the configuration tested, the EUT complied with the standards specified above

Tested By: Lewis Zhou

(Lewis Zhou)

Reviewed By: Rock Huang

(Rock Huang)

Approved By: Jack Ai

(Jack Ai)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20211202223E-01	Rev.01	Initial report	2022-03-02

2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203/15.247 (c)	ANSI C63.10 2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 2013	PASS
Conducted Peak Output Power	47 CFR Part 15, Subpart C Section 15.247 (b)(3)	ANSI C63.10 2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.247 (a)(2)	ANSI C63.10 2013	PASS
Power Spectral Density	47 CFR Part 15, Subpart C Section 15.247 (e)	ANSI C63.10 2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 2013	PASS
Radiated Spurious Emissions	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2013	PASS

3 Contents

	Page
1 VERSION.....	2
2 TEST SUMMARY.....	3
3 CONTENTS.....	4
4 GENERAL INFORMATION.....	5
4.1 CLIENT INFORMATION.....	5
4.2 GENERAL DESCRIPTION OF EUT.....	5
4.3 ADDITIONAL INSTRUCTIONS.....	7
4.4 TEST ENVIRONMENT.....	8
4.5 DESCRIPTION OF SUPPORT UNITS.....	8
4.6 STATEMENT OF THE MEASUREMENT UNCERTAINTY.....	9
4.7 TEST LOCATION.....	10
4.8 TEST FACILITY.....	10
4.9 DEVIATION FROM STANDARDS.....	10
4.10 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	10
4.11 EQUIPMENT LIST.....	11
5 TEST RESULTS AND MEASUREMENT DATA.....	12
5.1 ANTENNA REQUIREMENT.....	12
5.2 CONDUCTED EMISSIONS.....	13
5.3 CONDUCTED PEAK OUTPUT POWER.....	19
<i>Test Graphs</i>	20
5.4 6dB OCCUPY BANDWIDTH.....	22
<i>Test Graphs</i>	23
5.5 POWER SPECTRAL DENSITY.....	25
<i>Test Graphs</i>	26
5.6 BAND-EDGE FOR RF CONDUCTED EMISSIONS.....	28
<i>Test Graphs</i>	29
5.7 SPURIOUS RF CONDUCTED EMISSIONS.....	30
<i>Test Graphs</i>	31
5.8 RADIATED SPURIOUS EMISSION & RESTRICTED BANDS.....	36
5.8.1 <i>Spurious Emissions</i>	36
6 PHOTOGRAPHS - EUT TEST SETUP.....	44
6.1 RADIATED SPURIOUS EMISSION.....	44
6.2 CONDUCTED EMISSIONS TEST SETUP.....	45
7 PHOTOGRAPHS - EUT CONSTRUCTIONAL DETAILS.....	46

4 General Information

4.1 Client Information

Applicant:	Shenzhen DO Intelligent Technology Co., Ltd
Address of Applicant:	11th Floor, 3# Building, Guole Tech Park, Lirong Road, Dalang, Longhua District, Shenzhen, China
Manufacturer:	Shenzhen DO Intelligent Technology Co., Ltd
Address of Manufacturer:	11th Floor, 3# Building, Guole Tech Park, Lirong Road, Dalang, Longhua District, Shenzhen, China
Factory:	Shenzhen DO Intelligent Technology Co., Ltd
Address of Factory:	11th Floor, 3# Building, Guole Tech Park, Lirong Road, Dalang, Longhua District, Shenzhen, China

4.2 General Description of EUT

Product Name:	Smart Watch
Model No.:	boAt Wave Connect RTL, boAt Wave Connect F, boAt Wave Connect A, boAt Wave Connect Plus, boAt Wave Connect Pro, boAt Wave Connect Max , boAt Wave Connect, ID208, ID208 BT
Test Model No.:	ID208 BT
Trade Mark:	IDO
Software Version:	V1
Hardware Version:	V1.1
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.1
Modulation Type:	GFSK
Transfer Rate:	1Mbps
Number of Channel:	40
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Test Software of EUT:	MainWindow
Antenna Type:	FPC antenna
Antenna Gain:	-0.61dBi
EUT Power Supply:	lithium battery:DC3.8V, 300mAh, 1.140Wh, Charge by DC5.0V 280mA

Note:

Model No.:boAt Wave Connect RTL, boAt Wave Connect F, boAt Wave Connect A, boAt Wave Connect Plus, boAt Wave Connect Pro, boAt Wave Connect Max, boAt Wave Connect, ID208, ID208 BT

The model ID208 BT was tested, Their electrical circuit design, layout, components used and internal wiring are identical, Only the product model is different.

The difference between 1# and 2# is the vendor of the screen

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

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

4.3 Additional Instructions

EUT Test Software Settings:		
Mode:	<input checked="" type="checkbox"/> Special software is used. <input type="checkbox"/> Through engineering command into the engineering mode. engineering command: *##3646633#**	
EUT Power level:	Class2 (Power level is built-in set parameters and cannot be changed and selected)	
Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT.		
Mode	Channel	Frequency(MHz)
GFSK	CH0	2402
	CH19	2440
	CH39	2480

Run Software:



The screenshot shows the 'Run Software' interface with the following sections:

- RF 测试 (RF Test):** Includes BLE and BT test parameters. BLE parameters: 包类型 (Packet Type) set to PRBS9, 频段 (Frequency) set to CH78:2480, 功率 (Power) set to 0x16. BT parameters: 包类型 (Packet Type) set to DM1, 频段 (Frequency) set to 跳频 (Frequency Hopping), 功率 (Power) set to 0x10.
- 单载波测试参数 (Single Carrier Test Parameters):** 频段 (Frequency) set to CH0:2402, 功率 (Power) set to 0x0a.
- 测试选项 (Test Options):** 模式 (Mode) set to 发送 (Transmit), 测试BLE (Test BLE) selected, 测试BT (Test BT) unselected. Buttons: 执行 (Execute), 停止 (Stop).
- AT命令 (AT Command):** A text area for entering AT commands with an 输入 (Input) button.
- 串口 (Serial Port):** 串口 (Serial Port) set to COM24, 波特率 (Baud Rate) set to 115200. Buttons: 打开 (Open), 关闭 (Close). 当前状态 (Current Status): 已经连接 (Flash) (Already connected).
- 配置 (Configuration):** Buttons for 导入DAT文件 (Import DAT file), 导出DAT文件 (Export DAT file), 导入程序补丁 (Import program patch), 导出程序补丁 (Export program patch), 导入DSP_CODE (Import DSP_CODE), 导出DSP_CODE (Export DSP_CODE).
- 补丁大小 (Patch Size):** 补丁大小为 0 (Patch size is 0), dsp 大小为 0 (dsp size is 0).
- 烧录 (Burn):** A progress bar and buttons for 写入所有内容 (Write all content) and 读取所有内容 (Read all content).
- 版本 (Version):** A text area for CHIP and Version information.
- 运行状态信息 (Running Status Information):** A log window showing test results, including BLE test execution and stopping times.

4.4 Test Environment

Operating Environment:	
Radiated Emissions:	
Temperature:	25.3 °C
Humidity:	55 % RH
Atmospheric Pressure:	1009 mbar
Radio conducted item test (RF Conducted test room):	
Temperature:	25.4 °C
Humidity:	53 % RH
Atmospheric Pressure:	1009 mbar
Test mode:	
Test Mode:	Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT. Note: In the process of transmitting of EUT, the duty cycle >98%.

4.5 Description of Support Units

The EUT has been tested with associated equipment below.

1) Support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
Adapter	HUAWEI	HW-0502000C01	/	CQA

2) Cable

Cable No.	Description	Manufacturer	Cable Type/Length	Supplied by
/	/	/	/	/

4.6 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate.

The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities.

The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the **Shenzhen Huaxia Testing Technology Co., Ltd.** quality system acc. to DIN EN ISO/IEC 17025.

Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CQA laboratory is reported:

No.	Item	Uncertainty	Notes
1	Radiated Emission (Below 1GHz)	5.12dB	(1)
2	Radiated Emission (Above 1GHz)	4.60dB	(1)
3	Conducted Disturbance (0.15~30MHz)	3.34dB	(1)
4	Radio Frequency	3×10^{-8}	(1)
5	Duty cycle	0.6 %.	(1)
6	Occupied Bandwidth	1.1%	(1)
7	RF conducted power	0.86dB	(1)
8	RF power density	0.74	(1)
9	Conducted Spurious emissions	0.86dB	(1)
10	Temperature test	0.8℃	(1)
11	Humidity test	2.0%	(1)
12	Supply voltages	0.5 %.	(1)
13	Frequency Error	5.5 Hz	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

4.7 Test Location

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

4.8 Test Facility

- **A2LA (Certificate No. 4742.01)**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

- **FCC Registration No.: 522263**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

4.9 Deviation from Standards

None.

4.10 Other Information Requested by the Customer

None.

4.11 Equipment List

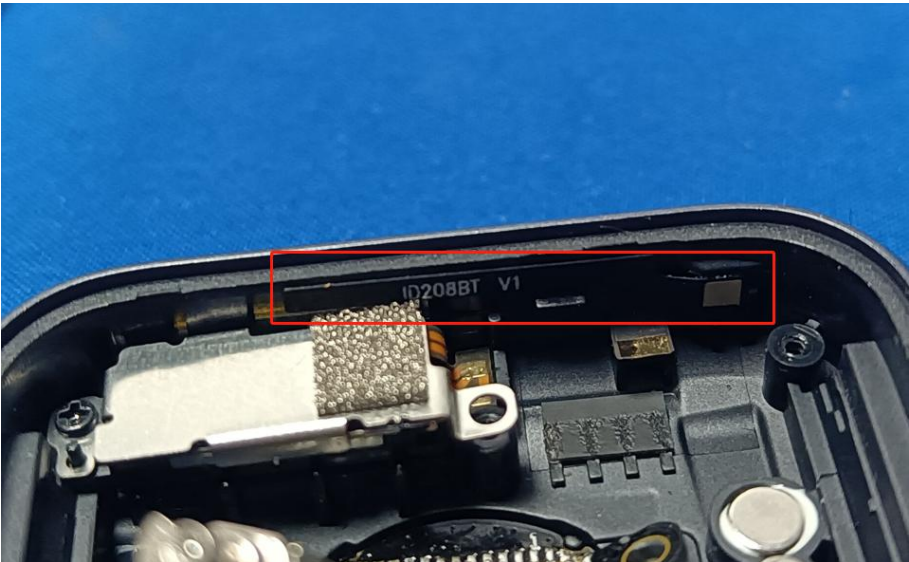
Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2021/9/10	2022/9/9
Spectrum analyzer	R&S	FSU26	CQA-038	2021/9/10	2022/9/9
Preamplifier	MITEQ	AMF-6D-02001800-29-20P	CQA-036	2021/9/10	2022/9/9
Loop antenna	Schwarzbeck	FMZB1516	CQA-060	2021/9/16	2024/9/15
Bilog Antenna	R&S	HL562	CQA-011	2021/9/16	2024/9/15
Horn Antenna	R&S	HF906	CQA-012	2021/9/16	2024/9/15
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2021/9/16	2024/9/15
Coaxial Cable (Above 1GHz)	CQA	N/A	C007	2021/9/10	2022/9/9
Coaxial Cable (Below 1GHz)	CQA	N/A	C013	2021/9/10	2022/9/9
Antenna Connector	CQA	RFC-01	CQA-080	2021/9/10	2022/9/9
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2021/9/10	2022/9/9
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2021/9/10	2022/9/9

Note:

The temporary antenna connector is soldered on the pcb board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

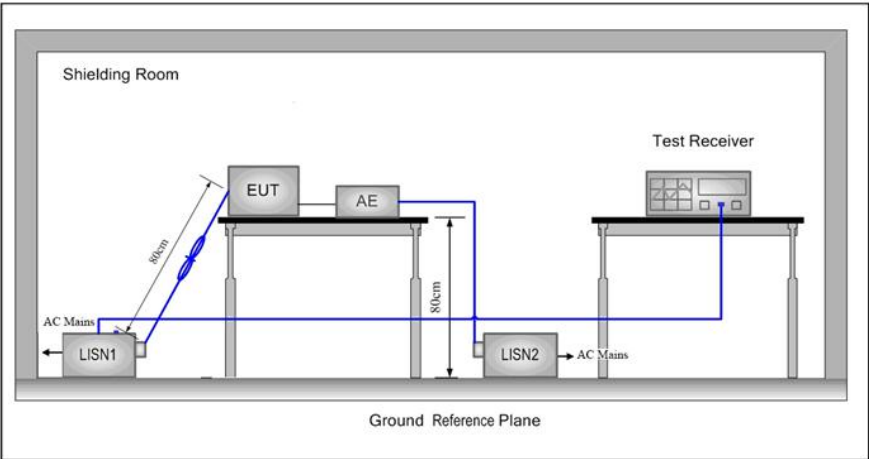
5 Test results and Measurement Data

5.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
<p>15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>	
EUT Antenna:	
The antenna is FPC antenna. The best case gain of the antenna is -0.61 dBi.	

5.2 Conducted Emissions

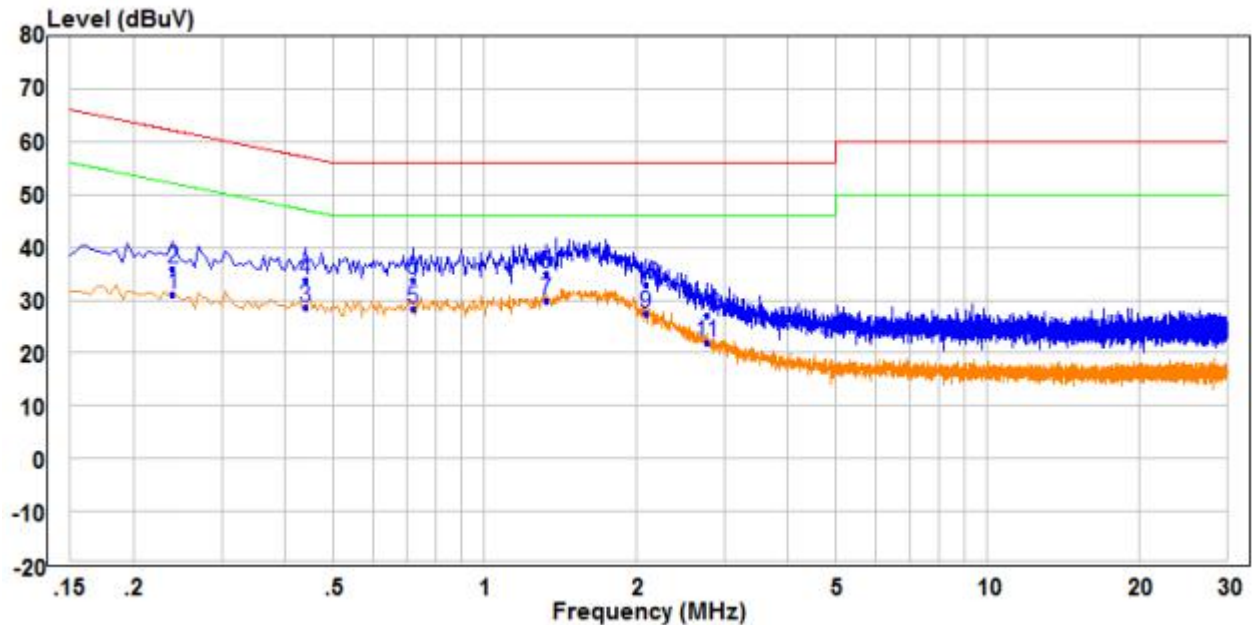
Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10: 2013		
Test Frequency Range:	150kHz to 30MHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test Procedure:	<ol style="list-style-type: none"> 1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement. 		

Test Setup:	
Test Mode:	Charging mode
Test Voltage:	AC 120V/60Hz
Test Results:	Pass

Measurement Data

1#

Live line:

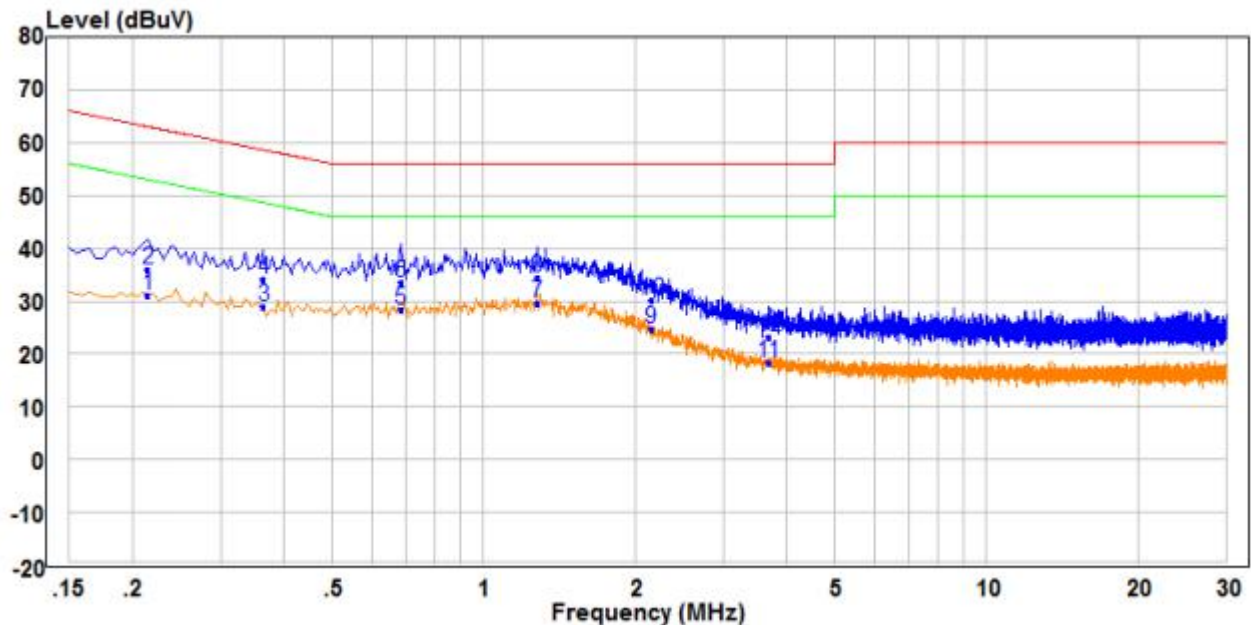


	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.240	21.45	9.56	31.01	52.10	-21.09	Average	Line
2	0.240	26.48	9.56	36.04	62.10	-26.06	QP	Line
3	0.440	19.01	9.65	28.66	47.06	-18.40	Average	Line
4	0.440	24.12	9.65	33.77	57.06	-23.29	QP	Line
5	0.720	18.53	9.89	28.42	46.00	-17.58	Average	Line
6	0.720	23.81	9.89	33.70	56.00	-22.30	QP	Line
7 PP	1.325	19.50	10.49	29.99	46.00	-16.01	Average	Line
8 QP	1.325	24.57	10.49	35.06	56.00	-20.94	QP	Line
9	2.095	15.85	11.55	27.40	46.00	-18.60	Average	Line
10	2.095	21.26	11.55	32.81	56.00	-23.19	QP	Line
11	2.770	11.14	10.96	22.10	46.00	-23.90	Average	Line
12	2.770	16.23	10.96	27.19	56.00	-28.81	QP	Line

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:



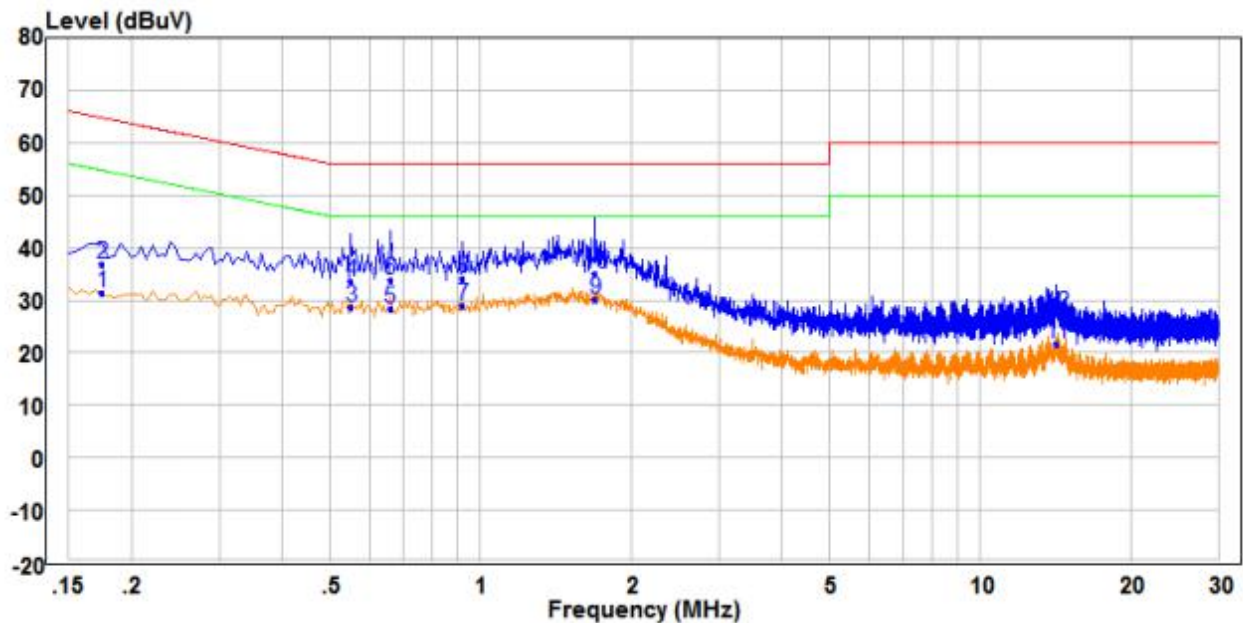
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.215	21.63	9.59	31.22	53.01	-21.79	Average	Neutral
2	0.215	26.49	9.59	36.08	63.01	-26.93	QP	Neutral
3	0.365	19.45	9.56	29.01	48.61	-19.60	Average	Neutral
4	0.365	24.41	9.56	33.97	58.61	-24.64	QP	Neutral
5	0.685	18.58	9.89	28.47	46.00	-17.53	Average	Neutral
6	0.685	23.61	9.89	33.50	56.00	-22.50	QP	Neutral
7 PP	1.280	19.85	9.71	29.56	46.00	-16.44	Average	Neutral
8 QP	1.280	24.66	9.71	34.37	56.00	-21.63	QP	Neutral
9	2.155	15.03	9.75	24.78	46.00	-21.22	Average	Neutral
10	2.155	20.29	9.75	30.04	56.00	-25.96	QP	Neutral
11	3.685	8.54	9.78	18.32	46.00	-27.68	Average	Neutral
12	3.685	13.36	9.78	23.14	56.00	-32.86	QP	Neutral

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

2#

Live line:

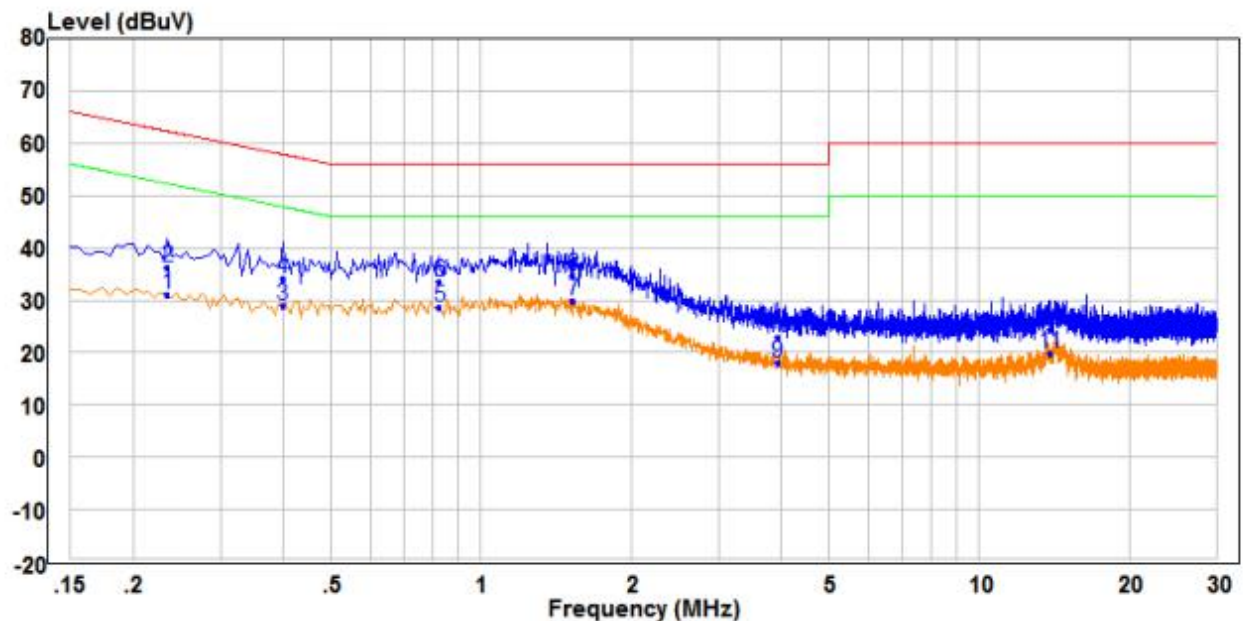


	Freq	Read		Limit	Over		
	MHz	Level	Factor	Line	Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.175	21.82	9.65	31.47	54.72	-23.25	Average
2	0.175	27.15	9.65	36.80	64.72	-27.92	QP
3	0.550	18.96	9.75	28.71	46.00	-17.29	Average
4	0.550	23.86	9.75	33.61	56.00	-22.39	QP
5	0.660	18.60	9.86	28.46	46.00	-17.54	Average
6	0.660	24.09	9.86	33.95	56.00	-22.05	QP
7	0.920	19.16	9.75	28.91	46.00	-17.09	Average
8	0.920	24.36	9.75	34.11	56.00	-21.89	QP
9 PP	1.700	18.91	11.19	30.10	46.00	-15.90	Average
10 QP	1.700	23.95	11.19	35.14	56.00	-20.86	QP
11	14.215	11.91	9.75	21.66	50.00	-28.34	Average
12	14.215	17.61	9.75	27.36	60.00	-32.64	QP

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:

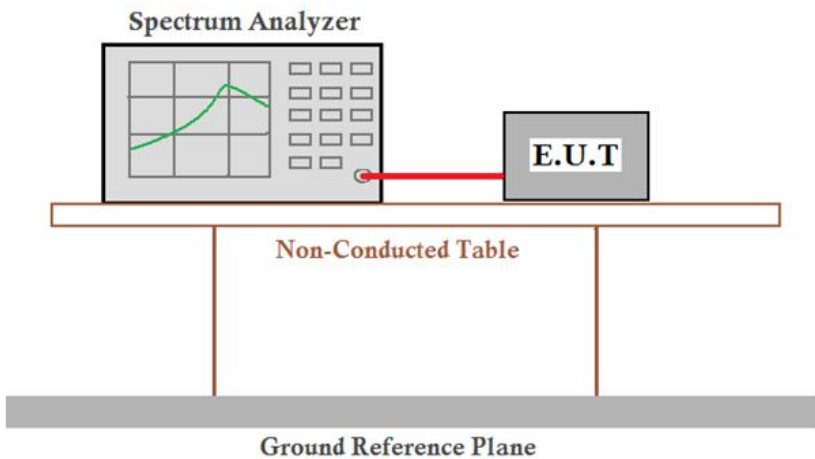


	Freq	Read		Limit	Over		
	MHz	Level	Factor	Line	Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.235	21.40	9.56	30.96	52.27	-21.31	Average
2	0.235	26.62	9.56	36.18	62.27	-26.09	QP
3	0.400	19.39	9.60	28.99	47.85	-18.86	Average
4	0.400	24.47	9.60	34.07	57.85	-23.78	QP
5	0.825	18.85	9.82	28.67	46.00	-17.33	Average
6	0.825	23.81	9.82	33.63	56.00	-22.37	QP
7 PP	1.530	20.04	9.73	29.77	46.00	-16.23	Average
8 QP	1.530	25.15	9.73	34.88	56.00	-21.12	QP
9	3.945	8.16	9.79	17.95	46.00	-28.05	Average
10	3.945	13.14	9.79	22.93	56.00	-33.07	QP
11	13.850	9.94	9.77	19.71	50.00	-30.29	Average
12	13.850	14.49	9.77	24.26	60.00	-35.74	QP

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

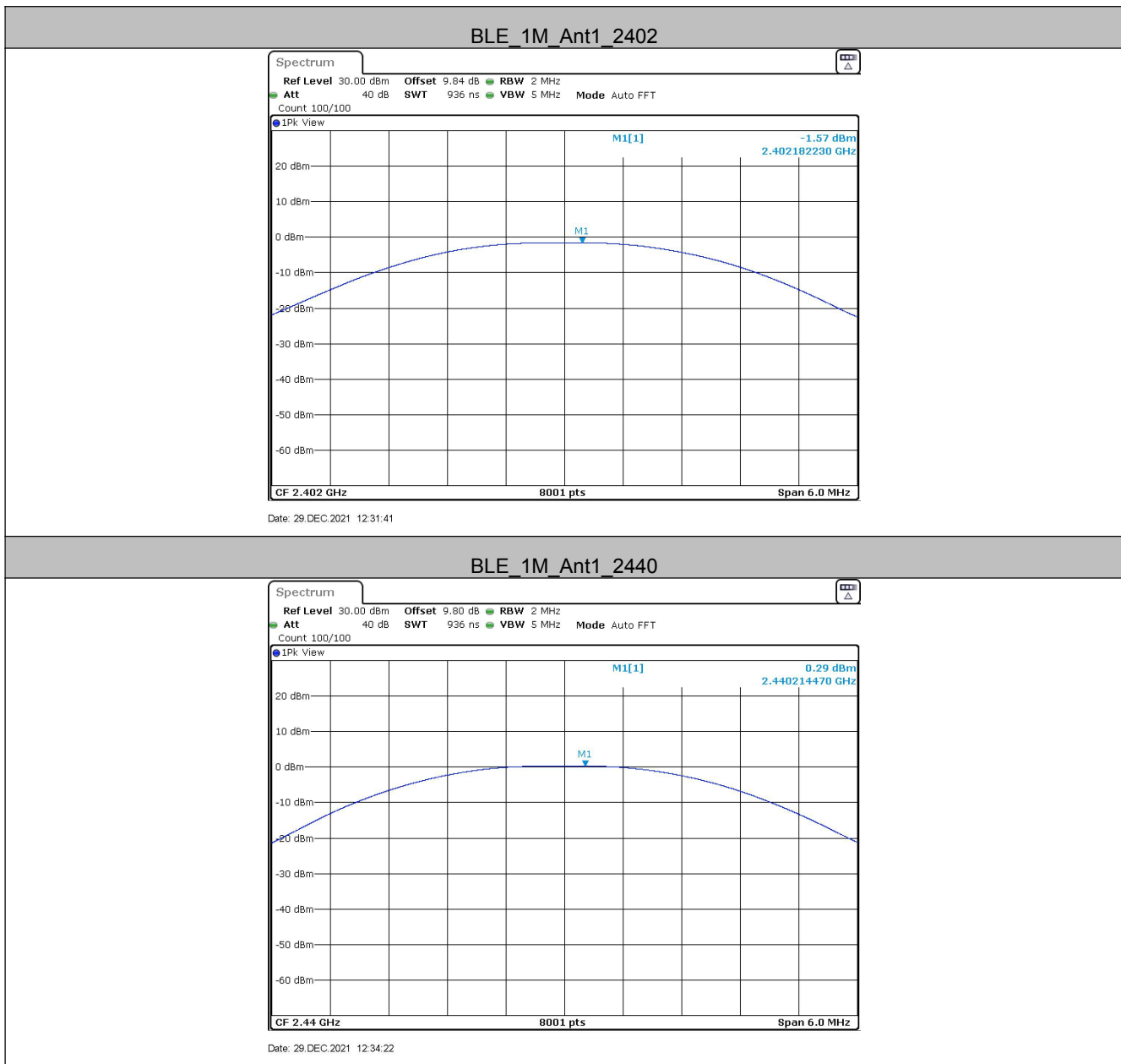
5.3 Conducted Peak Output Power

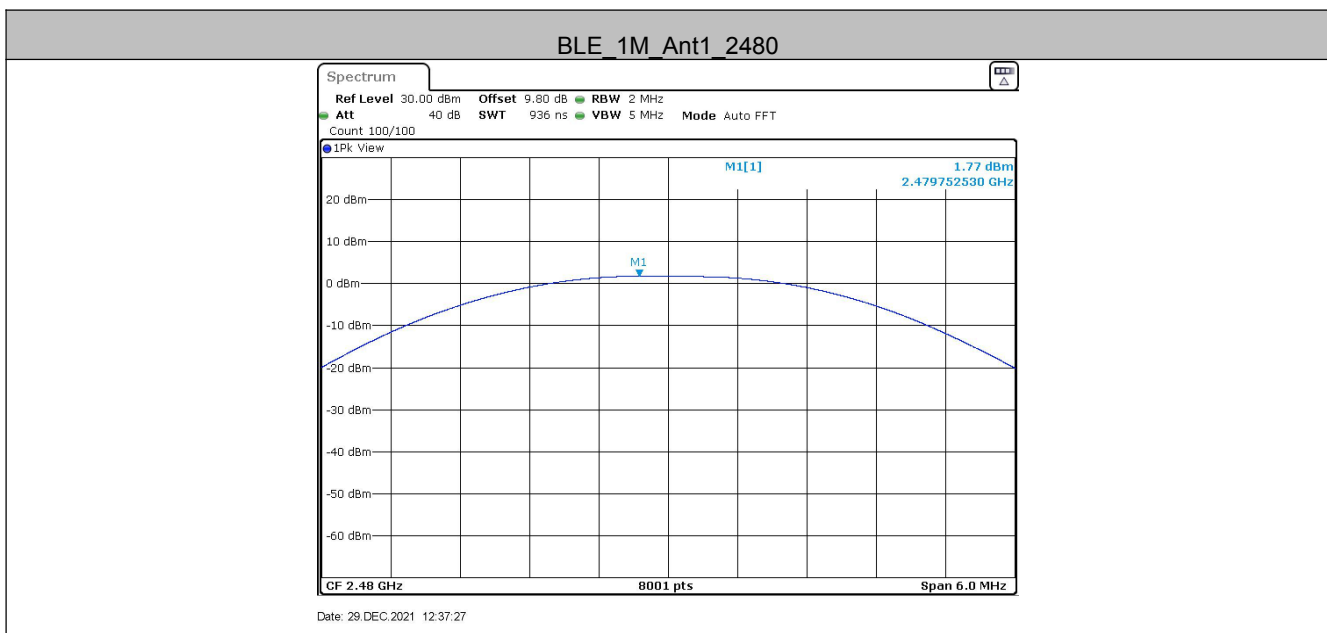
Test Requirement:	47 CFR Part 15C Section 15.247 (b)(1)
Test Method:	ANSI C63.10 2013
Test Setup:	 <p>Remark: Offset=Cable loss+ attenuation factor.</p>
Limit:	30dBm
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass

Measurement Data

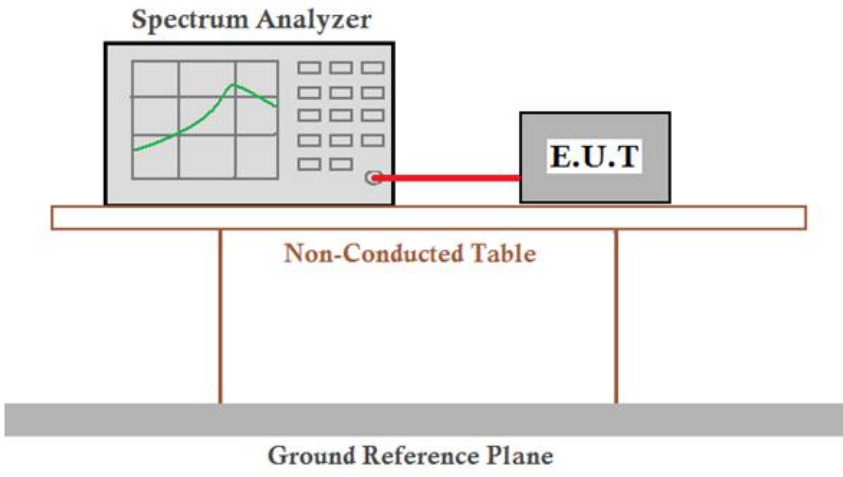
GFSK mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	-1.57	30.00	Pass
Middle	0.29	30.00	Pass
Highest	1.77	30.00	Pass

Test Graphs





5.4 6dB Occupy Bandwidth

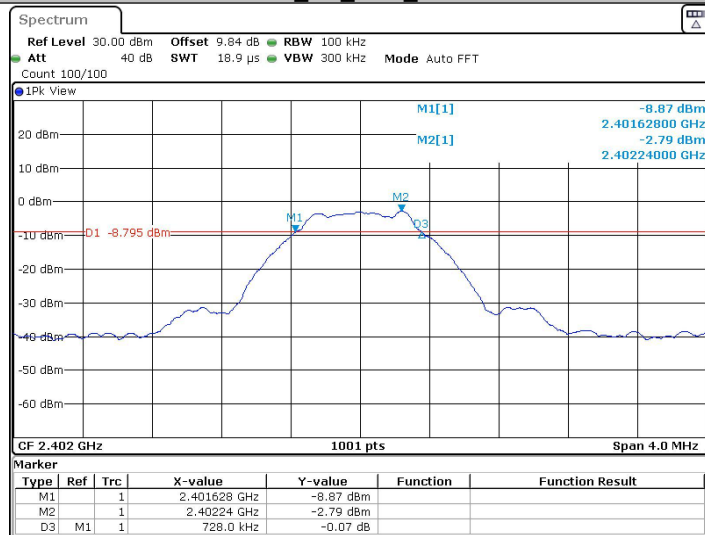
Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10 2013
Test Setup:	 <p>Remark: Offset=Cable loss+ attenuation factor.</p>
Limit:	≥ 500 kHz
Instruments Used:	Refer to section 4.11 for details.
Test Results:	Pass

Measurement Data

GFSK mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	0.728	≥500	Pass
Middle	0.724	≥500	Pass
Highest	0.724	≥500	Pass

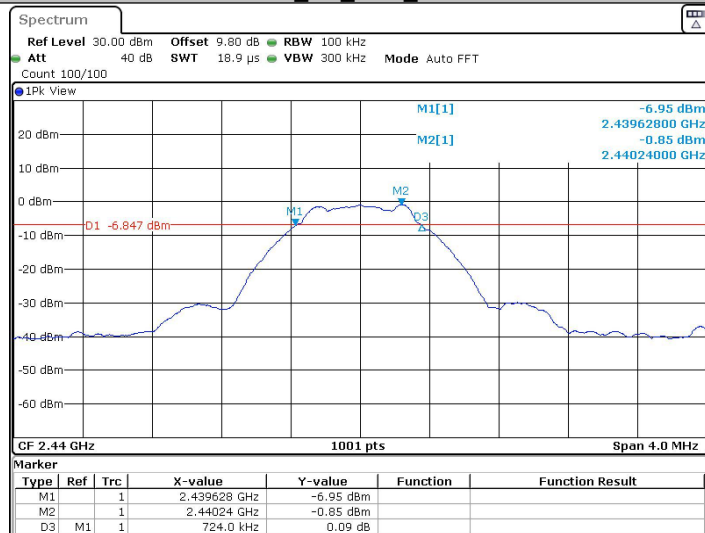
Test Graphs

BLE_1M_Ant1_2402

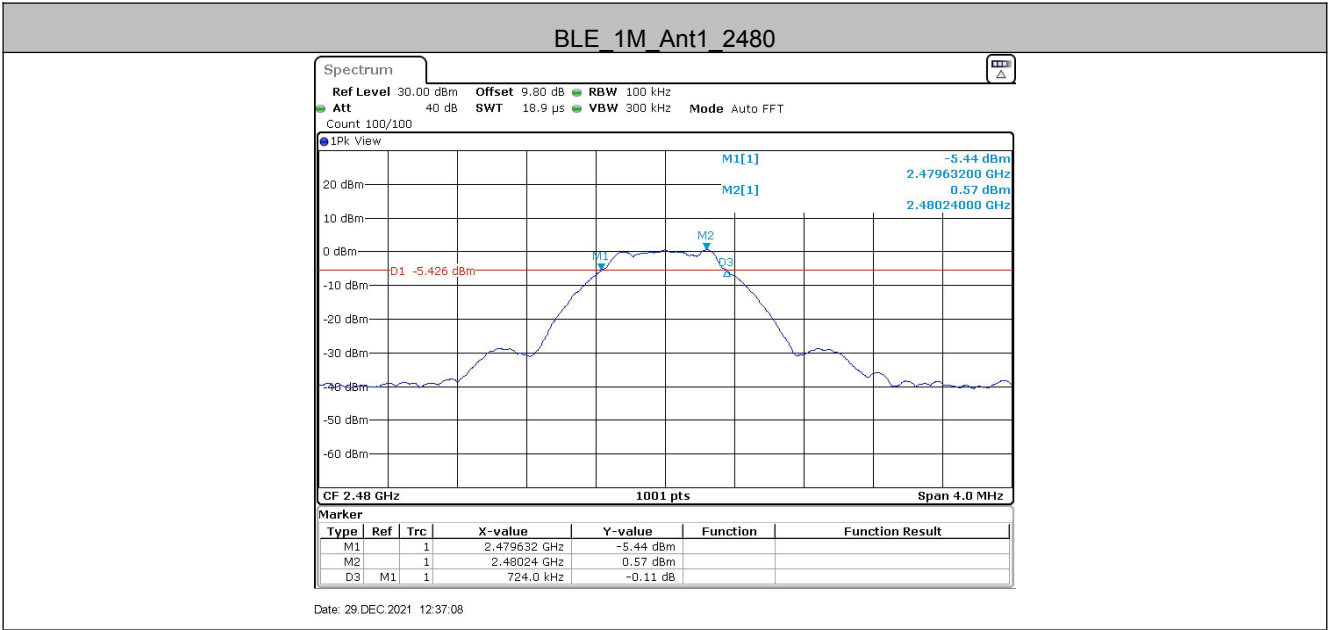


Date: 29 DEC.2021 12:31:23

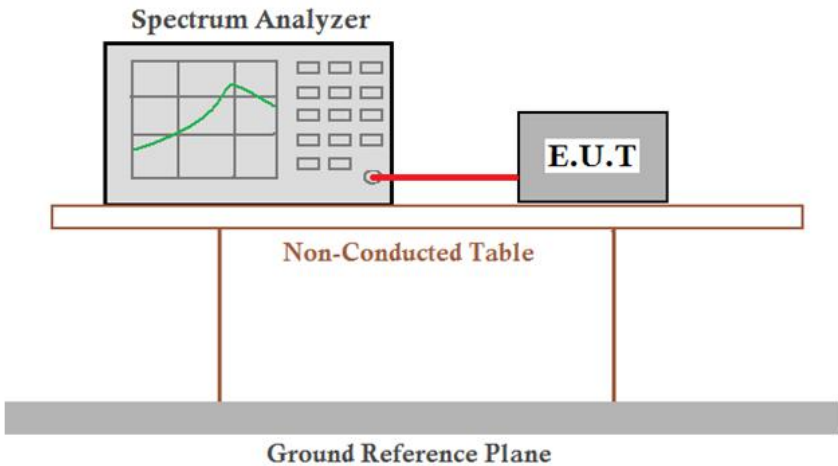
BLE_1M_Ant1_2440



Date: 29 DEC.2021 12:34:04



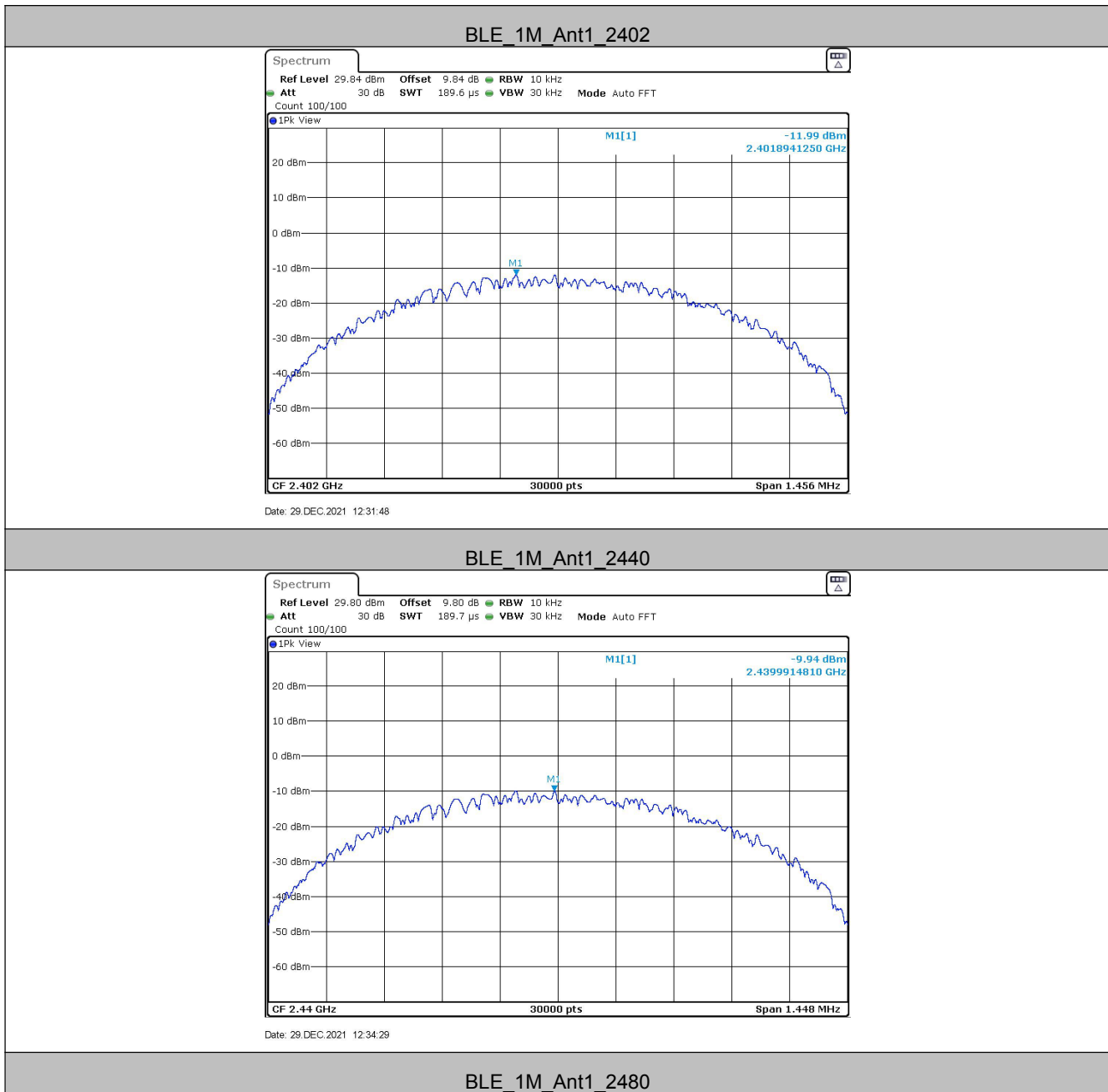
5.5 Power Spectral Density

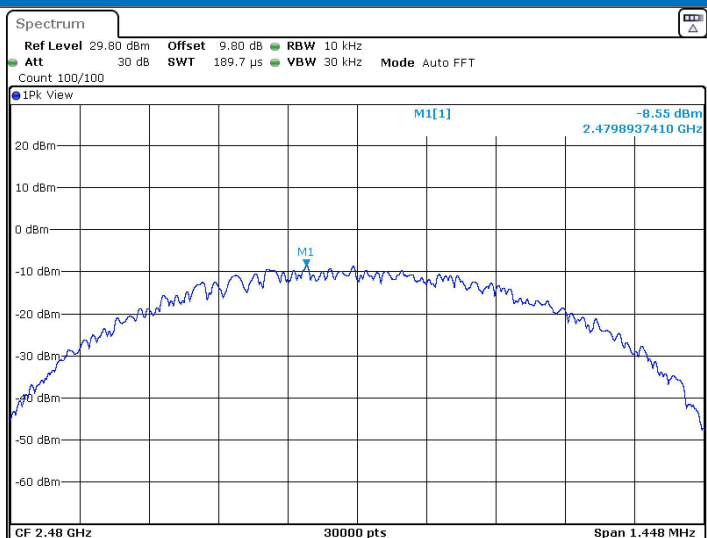
Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 2013
Test Setup:	 <p>Remark: Offset=Cable loss+ attenuation factor.</p>
Limit:	≤8.00dBm/3kHz
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass

Measurement Data

GFSK mode			
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	-11.99	≤8.00	Pass
Middle	-9.94	≤8.00	Pass
Highest	-8.55	≤8.00	Pass

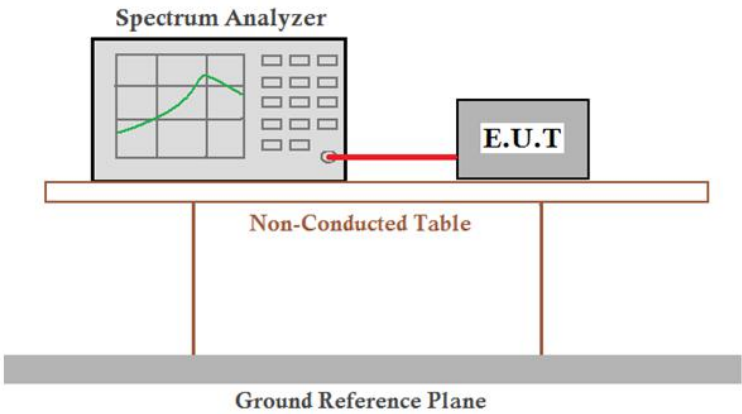
Test Graphs





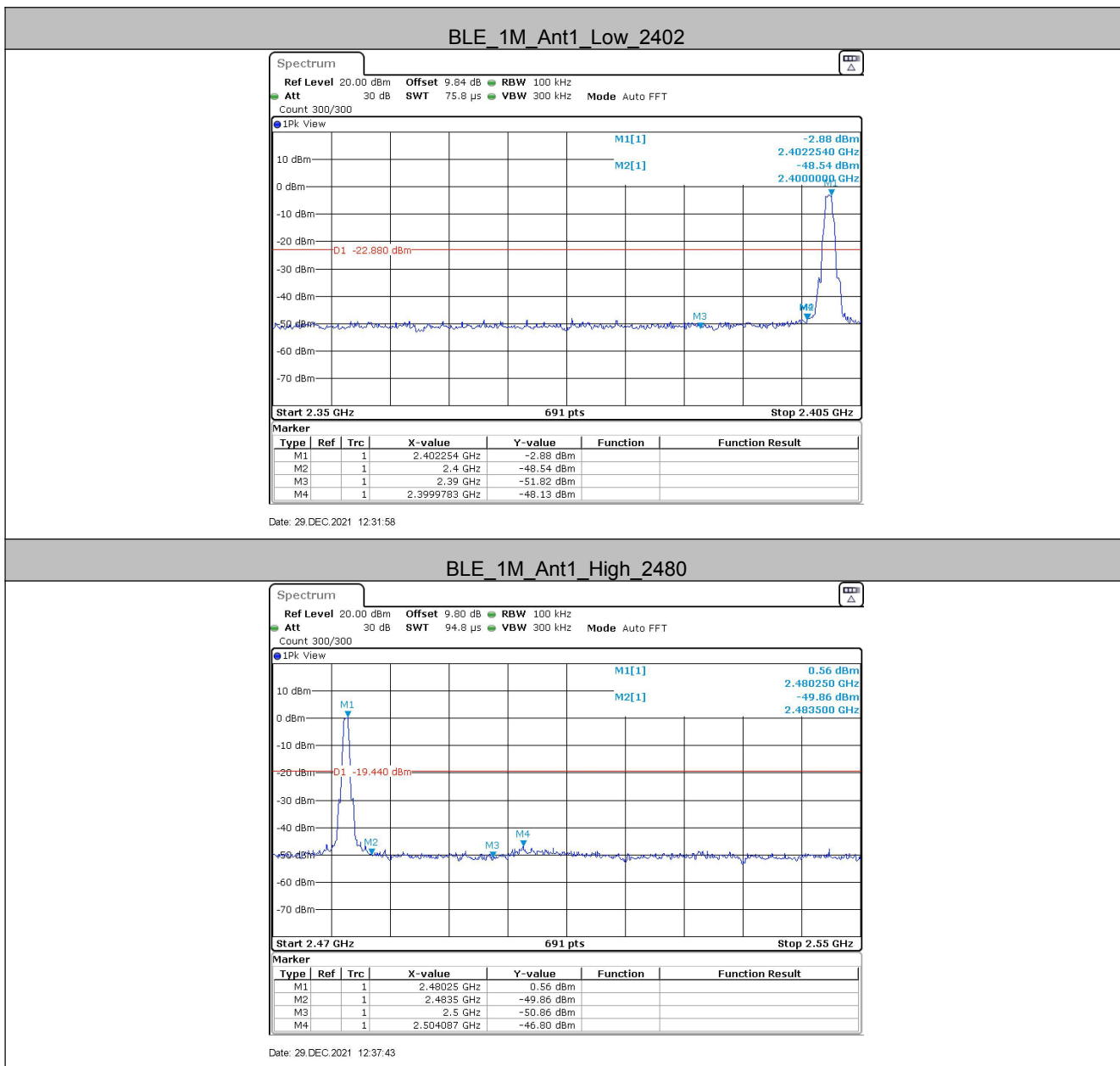
Date: 29 DEC.2021 12:37:33

5.6 Band-edge for RF Conducted Emissions

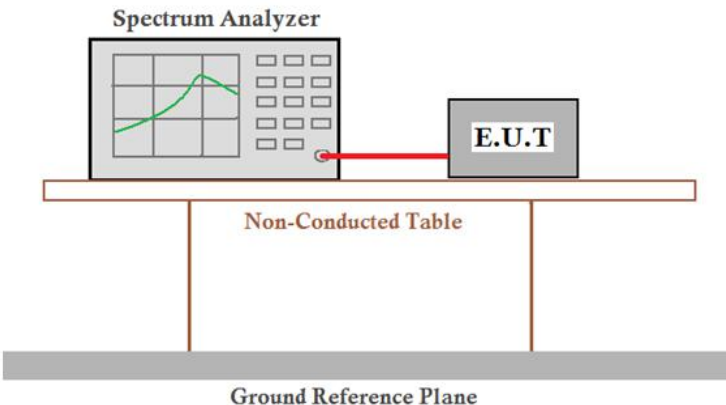
Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2013
Test Setup:	 <p>Remark: Offset=Cable loss+ attenuation factor.</p>
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass

GFSK mode				
Test channel	Frequency(MHz)	Emission Level(dBm)	Limit(dBm)	Result
Lowest	2400	-48.13	-22.88	Pass
Highest	2483.5	-46.8	-19.44	Pass

Test Graphs



5.7 Spurious RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2013
Test Setup:	 <p><i>Remark: Offset=Cable loss+ attenuation factor.</i></p>
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass