FCC PART 15, SUBPART C

TEST REPORT

For

Bluush LLC

410 Terry Avenue North
Seattle, WA 98109, USA

FCC ID: 2BN4DPIONEERAUDIO15

Report Type:	Product Type:
Original Report	Wireless BLE Microphone

Prepared By:	Libass Thiaw RF Test Engineer
Report Number:	R2511113-247
Report Date:	2026-04-02
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ACCREDITED
CERTIFICATE #3297.02

* This test report may contain data and test methods that are not covered by BACL's scope of accreditation as of the test report date shown above. These items are marked within the test report text with an asterisk "*"

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R2511113-247	Original Report	2026-04-02

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test report is prepared on behalf of *Bluush LLC*, and their product model: PIONEER AUDIO V15, FCC ID: 2BN4DPIONEERAUDIO15, the "EUT" as referred to in this report. The EUT is a wearable wireless Bluetooth LE Microphone.

1.2 Mechanical Description of EUT

The EUT measures approximately 5 cm (L) x 2 cm (W) x 1 cm (H) and weights < 1kg.

The data gathered is from production samples provided by Bluush LLC, with BACL assigned no: R2511113-1

1.3 Objective

This report is prepared on behalf of *Bluush LLC* in accordance with Part 2, Subpart J, and Part 15, Subpart C of the Federal Communication Commission's.

The objective is to determine compliance with FCC Part 15.247 for Antenna Requirement, RF Exposure, AC Line Conducted Emissions, Radiated & Conducted Spurious Emissions, Emission Bandwidth, Maximum Output Power, Peak Power Spectral Density, and 100 kHz Band Edges.

In order to determine compliance, the manufacturer or a contracted laboratory makes measurements and takes the necessary steps to ensure that the equipment complies with the appropriate technical standards.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the immunity should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing and/or I/O cable changes, etc.).

1.4 Related Submittal(s)/Grant(s)

N/A

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and FCC KDB 558074 D01 DTS Meas Guidance v05r02: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.57 dB
Power Spectral Density, conducted	±1.48dB
Unwanted Emissions, conducted	±1.57dB
All emissions, radiated	±4.0 dB
AC power line Conducted Emission	±2.0 dB
Temperature	±2 ° C
Humidity	±5 %
DC and low frequency voltages	±1.0 %
Time	±2 %
Duty Cycle	±3 %

1.7 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0428.

1.8 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- ***An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2017 by A2LA (Test Laboratory Accreditation Certificate Number 3297.02),*** in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2017 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report..

BACL's ISO/IEC 17025:2017 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio/Wireless, RF Exposure, Safety, and Wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include, but are not limited to: Central Office Telecommunications Equipment [including NEBS – Network Equipment Building Systems], Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial Equipment, Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, Railway Equipment, Marine Equipment, and Energy Efficient Lighting. Additionally, BACL offers comprehensive test capabilities for both Unlicensed and Licensed Wireless and RF Devices, per the requirements of the FCC (USA), ISED Canada (Canada), the EU/EEA/EFTA Nations (per the ETSI Standards applicable under the Radio Equipment Directive), Singapore, MIC (Japan), South Korea, Vietnam, and Taiwan ROC.

B- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.03)*** to certify

- For the USA (Federal Communications Commission):
  - 1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
  - 2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
  - 3- All Telephone Terminal Equipment within FCC Scope C.
- For the Canada (Innovation, Science and Economic Development Canada):
  - 1 All Scope 1-Licence-Exempt Radio Frequency Devices;
  - 2 All Scope 2-Licensed Personal Mobile Radio Services;
  - 3 All Scope 3-Licensed General Mobile & Fixed Radio Services;
  - 4 All Scope 4-Licensed Maritime & Aviation Radio Services;
  - 5 All Scope 5-Licensed Fixed Microwave Radio Services
  - 6 All Broadcasting Equipment Technical Standards (BETS) in the Category I Equipment Standards List.
  - 7. RSS-HAC Radio Scope 6 Hearing Aid Compatibility and Volume Control
- For Singapore (Info-Comm Media Development Authority (IMDA)):
  - 1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
  - 2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase II
- For the Hong Kong Special Administrative Region & (Office of the Communications Authority-OFCA) – APEC Tel MRA- Phase I and Phase II:
  - 1 Radio Equipment, per KHCA 10XX-series Specifications; HKCA 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1010, 1015, 1016, 1019, 1020, 1022, 1026, 1033, 1034, 1035, 1036, 1037, 1039, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1052, 1053, 1054, 1056, 1057, 1061, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1080, 1081

2 GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications; HKCA 1218, 1223, 1224, 1225, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1277, 1281, 1282, 1283

3 Fixed Network Equipment, per HKCA 20XX-series Specifications; HKCA 2001, 2011, 2014, 2015, 2017, 2026, 2027, 2028, 2029, 2030, 2031

- For Japan:

1 MIC Telecommunication Business Law (Terminal Equipment):
- All Scope A1 - Terminal Equipment for the Purpose of Calls;
- All Scope A2 - Other Terminal Equipment

2 Radio Law (Radio Equipment):
- All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
- All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
- All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.01)*** to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

1 Appliances:
- for Clothes Washers (ver. 8.1)
- for Residential Dishwashers (ver. 6.0)
- for Residential Refrigerators and/or Freezers (ver. 5.0)

2 Commercial Food Service Equipment:
- for Commercial Dishwashers (ver. 3.0)
- for Commercial Ice Machines (ver. 3.0)

3 Data Center Equipment:
- for Large Network Equipment (ver. 1.1)

4 Electronics and Office Equipment:
- for Audio/Video Equipment (ver. 3.0)
- for Computers (ver. 8.0)
- for Data Center Storage (ver. 2.1)
- for Displays (ver. 8.0)
- for Enterprise Servers (ver. 4.0)
- for Imaging Equipment (ver. 3.1)
- for Set-top Boxes & Cable Boxes (ver. 5.1)
- for Small Network Equipment (ver. 1.0)
- for Telephony (ver. 3.0)
- for Televisions (ver. 9.0), Title 10 Chapter II CFR Part 430 Subpart B –Appendix BB, Title 10 Chapter II CFR Part 430 Subpart B –Appendix DD

3 Lighting and Fans
- for Decorative Light Strings (ver. 1.5)
- for Downlights (ver. 1.0)
- for Lamps (Light Bulbs)(ver. 2.1)
- for Luminaires (including sub-components) (ver. 2.2)
- for Residential Ceiling Fans (ver. 4.0)
- for Residential Ventilating Fans (ver. 4.1)

4 Other
- for Residential Ceiling Fans (ver. 4.0)
- for Electric Vehicle Supply Equipment (ver. 1.2)(Electric Vehicle Supply Equipment Final Test Method for DC-output EVSE Rev March 2021)
- for Water Coolers (ver. 3.0)
- for Smart Home Energy Management Systems (ver. 1.1)

D- ***A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:***

1. For the USA (Federal Communications Commission), as a Telecommunications Certification Body (TCB):
   - All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
   - All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
   - All Telephone Terminal Equipment within FCC Scope C.

2. Canada (ISED Canada) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II:
   - Phase I Designation Letter
   - Phase II ISED Canada recognition as a Product Certification Body for unlicensed wireless devices, licensed radios, radars, etc.:

3. For Singapore (InfoComm Media Development Authority (IMDA)) APEC Tel MRA -Phase I & Phase II:
   - All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
   - All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase II

4. For the Hong Kong Special Administrative Region & (Office of the Communications Authority – OFCA) – APEC Tel MRA -Phase I & Phase II:
   - NIST Phase I Scope Recognition Letter from OFCA for BACL –US0057
   - OFCA Phase II Designation Letter

5. For Japan (Ministry of Communications):
   - NIST Japan Recognition
   - MIC Telecommunication Business Law (Terminal Equipment):
     1. All Scope A1 – Terminal Equipment for the Purpose of Calls;
     2. All Scope A2 – Other Terminal Equipment
   - Radio Law (Radio Equipment):
     1. All Scope B1 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
     2. All Scope B2 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
     3. All Scope B3 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law
   - Japan VCCI – Voluntary Control Council for Interference US-Japan Telecom Treaty (VCCI Side Letter)
     1. VCCI Certificate
   - Japan Registered Certification Body
     1. RCB Recognition Letter

6. European Union:
   - Radio Equipment Directive [RED] 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
   - EMC Directive [EMCD] 2014/30/EU US-EU EMC & Telecom MRA CAB (NB):

7. Australia ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I:
   - Phase I Designation Letter

8. Chinese Taipei (Republic of China – Taiwan):
   - NCC (National Communications Commission) APEC Tel MRA -Phase I

9. Republic of Korea (Ministry of Communications – Radio Research Laboratory) APEC Tel MRA - Phase I:
   - NIST Phase I Scope Update Notification Letter from Korea for BACL

10. Vietnam APEC Tel MRA -Phase I (page 13)
    - Vietnam (MIC) NIST Phase I Scope

11. Indonesia SDPPI (page 6)
    - Phase I Listing

12. Israel Phase I
    - NIST Phase I Scope Update Recognition Letter from Israel for BACL –US0057

13. UK Radio and EMC NIST Designation Letters
    - UK website: https://www.gov.uk/uk-market-conformity-assessment-bodies/bay-area-compliance-laboratories-corp-bacl

      1. Electromagnetic Compatibility Regulations (SI 2016/1091)
      https://assets.publishing.service.gov.uk/media/5fe1e344e90e07452fce4e5a/AB_1313_BACL_UK_EMC_Regs_NIST_Designation_Extended.pdf

      2. Radio Equipment Regulations 2017 (SI 2017/1206)
      https://assets.publishing.service.gov.uk/media/5fe1e351e90e074525bf7be6/AB_1313_BACL_UK_Radio_Regs_NIST_Designation_Extended.pdf

14. IFT Mexico Phase I
    - NIST Phase I New Recognition Letter from Mexico for BACL – US0057

15. Taiwan (BSMI) Phase 1 Designation Letter and designation form.
    - NIST Phase I Scope Update Designation Letter to BSMI for BACL – US0057
    - NIST Phase I Scope Update Designation Form to BSMI for BACL – US0057

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.10-2020 and FCC KDB 558074 D01 DTS Meas Guidance v05r02.

The EUT was tested in a testing mode to represent worst-case results during the final qualification test.

2.2 EUT Exercise Software

The test software used was *J-Link* commands provided by *Bluush LLC* The software is compliant with the standard requirements being tested against.

Radio	Channel	Frequency (MHz)	Power Setting
BLE 1M	Low	2402	8
	Middle	2440	8
	High	2480	8
BLE 2M	Low	2402	8
	Middle	2440	8
	High	2480	8

2.3 Duty Cycle Correction Factor

According to KDB 558074 D01 DTS Meas Guidance v05r02 section 6.0:

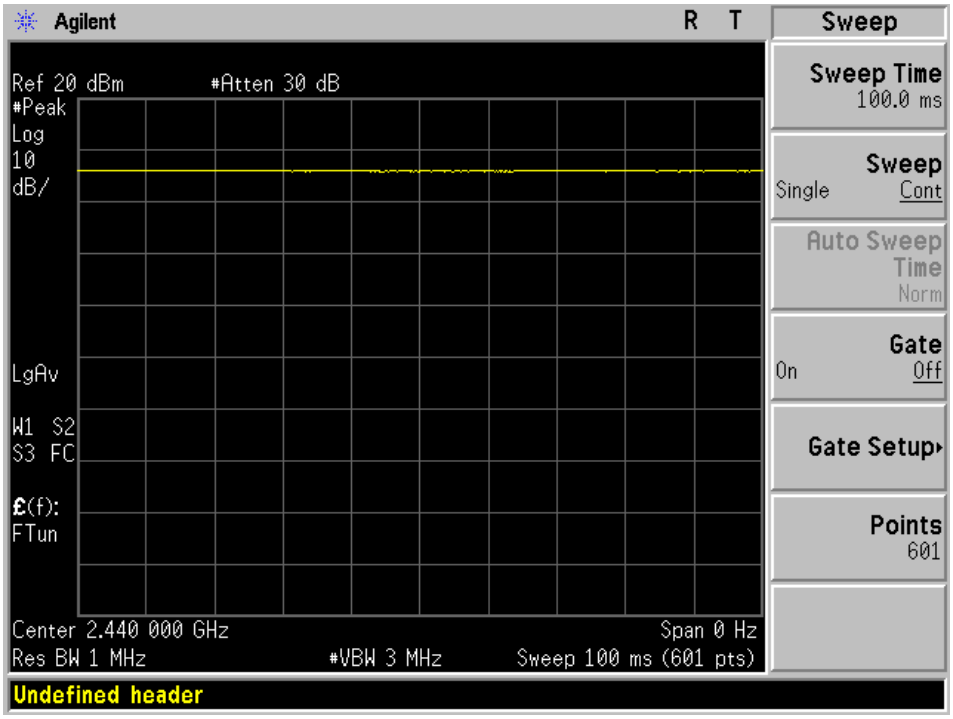
All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum-power transmission duration, T, are required for each tested mode of operation.

Radio Mode	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
BLE 1M	-	-	100	0
BLE 2M	-	-	100	0

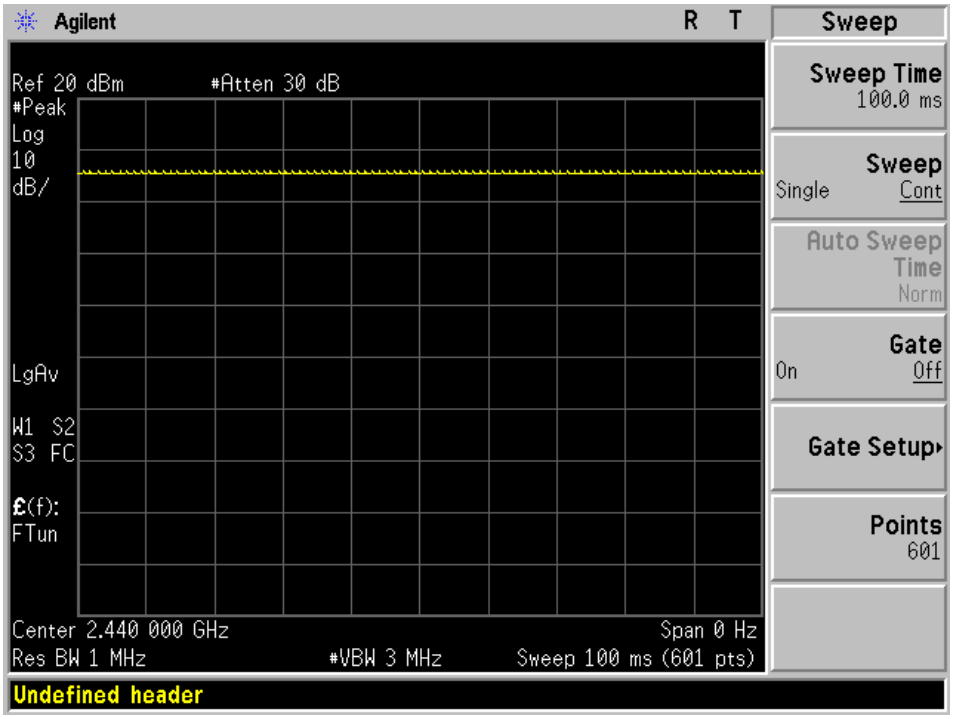
Note 1: Duty Cycle = On Time (ms) / Period (ms) * 100%
Note 2: Duty Cycle Correction Factor (dB) = 10*log(1/duty cycle)

Please refer to plots below for detailed Duty Cycle measurement.

BLE 1M, Middle Channel, 2440 MHz



BLE 2M, Middle Channel, 2440 MHz



2.4 Equipment Modification

No modifications were made to the EUT during testing.

2.5 Local Support Equipment

Manufacturer	Description	Model	Serial Number
Dell	Laptop	Latitude 5401	8CKH733

2.6 Remote Support Equipment

Manufacturer	Description	Model	Serial Number
Nordic Semiconductor	Debug Board	nRF52840	-

2.7 Power Supply and Line Filters

Manufacturer	Description	Model	Serial Number
-	AC/DC Adapter	MST-0501000D	-

2.8 Interface Ports and Cabling

Cable Description	Length (m)	From	To
Communication Cable	< 1	EUT	Debug Board
USB Cable	< 1	Debug Board	Laptop

3 Summary of Test Results

FCC Rules	Description of Test	Results
FCC §15.203	Antenna Requirements	Compliant
FCC §2.1093, §15.247(i)	RF Exposure	Compliant
FCC §15.207	AC Line Conducted Emissions	Compliant
FCC §2.1053, §15.35(b), §15.205, §15.209, §15.247(d)	Radiated Spurious Emissions	Compliant
FCC §15.247(a)(2)	6 dB & 99% Emission Bandwidth	Compliant
FCC §15.247(b)(3)	Maximum Output Power	Compliant
FCC §15.247(e)	Peak Power Spectral Density	Compliant
FCC §2.1051, §15.247 (d)	Spurious Emissions at Antenna Terminal (dBc)	Compliant
FCC §2.1051, §15.247(d)	100 kHz Bandwidth of Frequency Band Edges	Compliant

BACL is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report. Information provided by the customer, e.g., antenna gain, can affect the validity of results.

4 FCC §15.203 – Antenna Requirements

4.1 Applicable Standards

According to FCC §15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. 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.

And according to FCC §15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2 Antenna Description

External/Internal/ Integral	Model Number	Antenna Type	Frequency Range (MHz)	Maximum Antenna Gain (dBi)
Integral	BPA-WA-01	Wire Monopole	2400-2483.5	5.4

Note: Antenna information is provided by customer.

5 FCC §2.1093, §15.247(i) - RF Exposure

5.1 Applicable Standards

According to FCC §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to FCC KDB 447498 D01 General RF Exposure Guidance v06 Section 4.3.1, Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition, listed below, is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander (see 5) of section 4.1). To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, typically in the SAR measurement or SAR analysis report, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting is required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for the SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops & tablets etc.

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

   • f (GHz) is the RF channel transmit frequency in GHz
   • Power and distance are rounded to the nearest mW and mm before calculation
   • The result is rounded to one decimal place for comparison
   • 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

   The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:

   a) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
   b) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion, and as illustrated in Appendix C:

a) The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by [1 + log(100/f(MHz))] for test separation distances > 50 mm and < 200 mm
b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by ½ for test separation distances ≤ 50 mm
c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

Test exclusion is applied to the required test channels on a channel by channel basis.

When SAR evaluation is required by the hotspot mode or UMPC mini-tablet procedures, that is, where an antenna is ≤ 2.5 cm from a surface or edge, the test separation distance from the phantom to the antenna or device enclosure, as appropriate, should be applied to determine further SAR test exclusion according to the criteria in this document. Do not use the antenna to device surface or edge distance.

This is equivalent to the formula written as: [(max. power of channel, including tune-up tolerance, mW)/(60 √ f(GHz) mW)] • [20 mm/(min. test separation distance, mm)] ≤ 1.0 for 1-g SAR; also see Appendix A for approximate exclusion threshold numerical values at selected frequencies and distances.

Appendix A

***SAR Test Exclusion Thresholds* for 100 MHz – 6 GHz and ≤ 50 mm**

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	*SAR Test Exclusion Threshold* (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

MHz	30	35	40	45	50	mm
150	232	271	310	349	387	*SAR Test Exclusion Threshold* (mW)
300	164	192	219	246	274	
450	134	157	179	201	224	
835	98	115	131	148	164	
900	95	111	126	142	158	
1500	73	86	98	110	122	
1900	65	76	87	98	109	
2450	57	67	77	86	96	
3600	47	55	63	71	79	
5200	39	46	53	59	66	
5400	39	45	52	58	65	
5800	37	44	50	56	62	

Note: 10-g Extremity SAR Test Exclusion Power Thresholds are 2.5 times higher than the 1-g *SAR Test Exclusion Thresholds* indicated above. These thresholds do not apply, by extrapolation or other means, to occupational exposure limits.

5.2 Test Exclusion

BLE Standalone

Maximum output power at antenna input terminal (dBm):	6.517
Maximum output power at antenna input terminal with tune up tolerance (dBm):	7.517
Maximum output power at antenna input terminal (mW):	5.645
Transmit frequency (GHz):	2.480
Minimum test separation distance (mm):	5
Calculated SAR test exclusion threshold:	1.778
SAR test exclusion threshold limit:	≤ 3

The device is compliant with the SAR test exclusion threshold limit. The maximum SAR test exclusion threshold calculated is 1.778. Limit is ≤ 3.

6 FCC §15.207 – AC Line Conducted Emissions

6.1 Applicable Standards

As per FCC §15.207: Conducted limits

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56 Note1	56 to 46 Note2
0.5-5	56	46
5-30	60	50

Note1: Decreases with the logarithm of the frequency.
Note2: A linear average detector is required

6.2 Test Setup

The measurement was performed at shield room, using the setup per ANSI C63.10-2020 measurement procedure. The specification used were FCC §15.207.

The AC/DC power adapter of the EUT was connected with LISN-1 which provided 120 V / 60 Hz AC power.

6.3 Test Procedure

During the conducted emissions test, the power cord of the EUT host system was connected to the mains outlet of the LISN-1.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data were recorded in the peak, quasi-peak, and average detection mode. Quasi-Peak readings are distinguished with a “QP.” Average readings are distinguished with an “Ave”.

6.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Cable Loss (CL), the Attenuator Factor (Atten) to indicated Amplitude (Ai) reading. The basic equation is as follows:

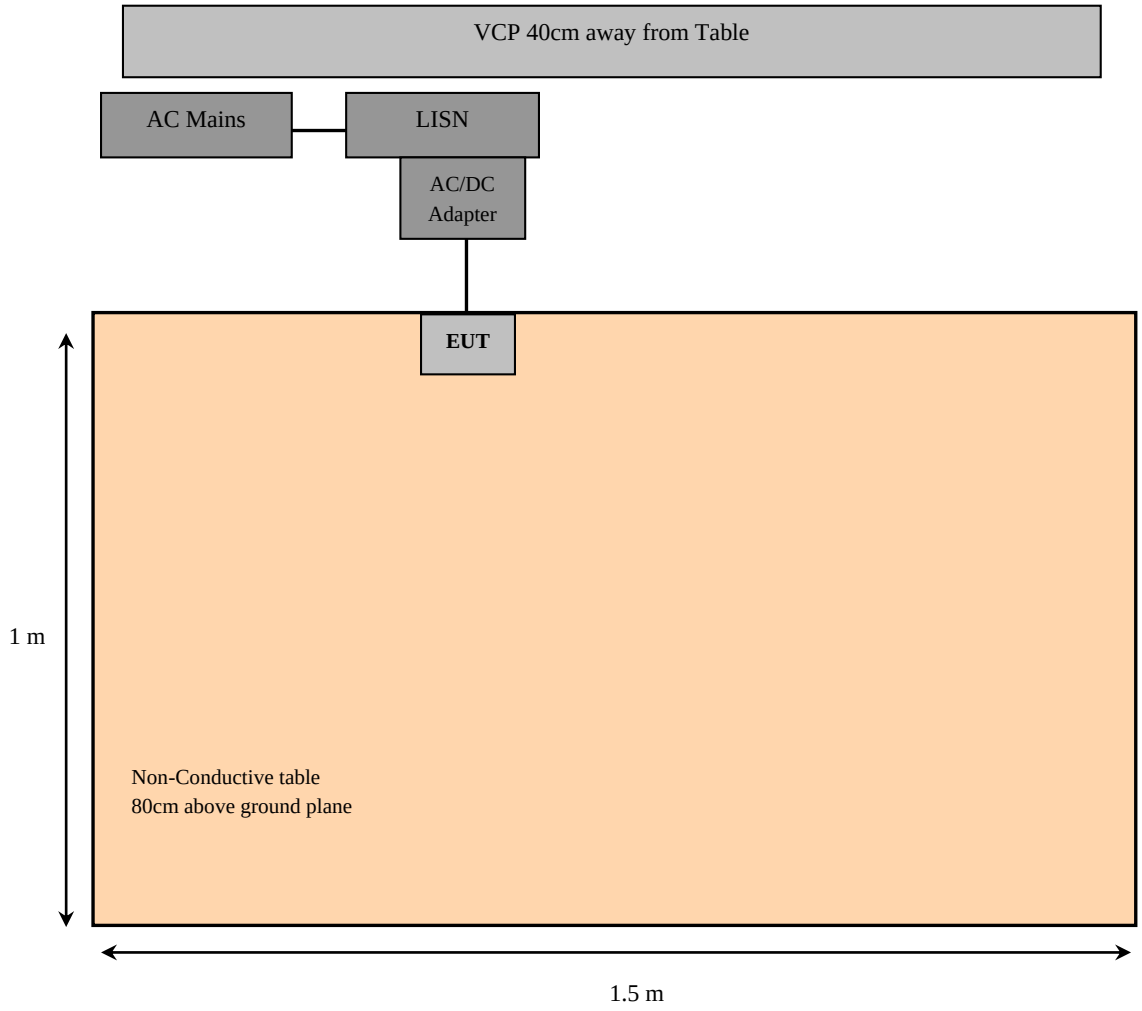
$$CA = Ai + CL + Atten$$

For example, a corrected amplitude of 46.2 dBuV = Indicated Reading (32.5 dBuV) + Cable Loss (3.7 dB) + Attenuator (10 dB)

The "Margin" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

$$Margin = Corrected\ Amplitude - Limit$$

6.5 Test Setup Block Diagram



6.6 Test Equipment List and Details

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
1432	Keysight Technologies	MXE EMI Receiver, Multi-touch	N9038B	MY60180008	2025-01-03	1 year
1599	Pasternack	N-type RG58 Coax Cable, 5m	PE3441-500CM	W383627	2025-11-18	6 months
726	Solar Electronics Company	High Pass Filter	Type 7930-100	7930150204	2025-09-09	6 months
680	Rohde & Schwarz	Impulse Limiter	ESH3-Z2	101964	2025-09-09	6 months
733	FCC	LISN	FCC-LISN-50-25-2-10-CISPR16	160130	2025-02-28	1 year

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

6.7 Test Environmental Conditions

Temperature:	22 °C
Relative Humidity:	49 %
ATM Pressure:	101.4 kPa

The testing was performed by Libass Thiaw from 2025-12-12 on Ground Plane

6.8 Summary of Test Results

According to the recorded data in following table, the EUT complied with the FCC 15C conducted emissions limits, with the margin reading of:

Worst Case – AC Line: 120V, 60Hz			
Margin (dB)	**Frequency (MHz)**	**Conductor Mode (Live/Neutral)**	**Range (MHz)**
-18.82	1.307	Live	0.15 to 30

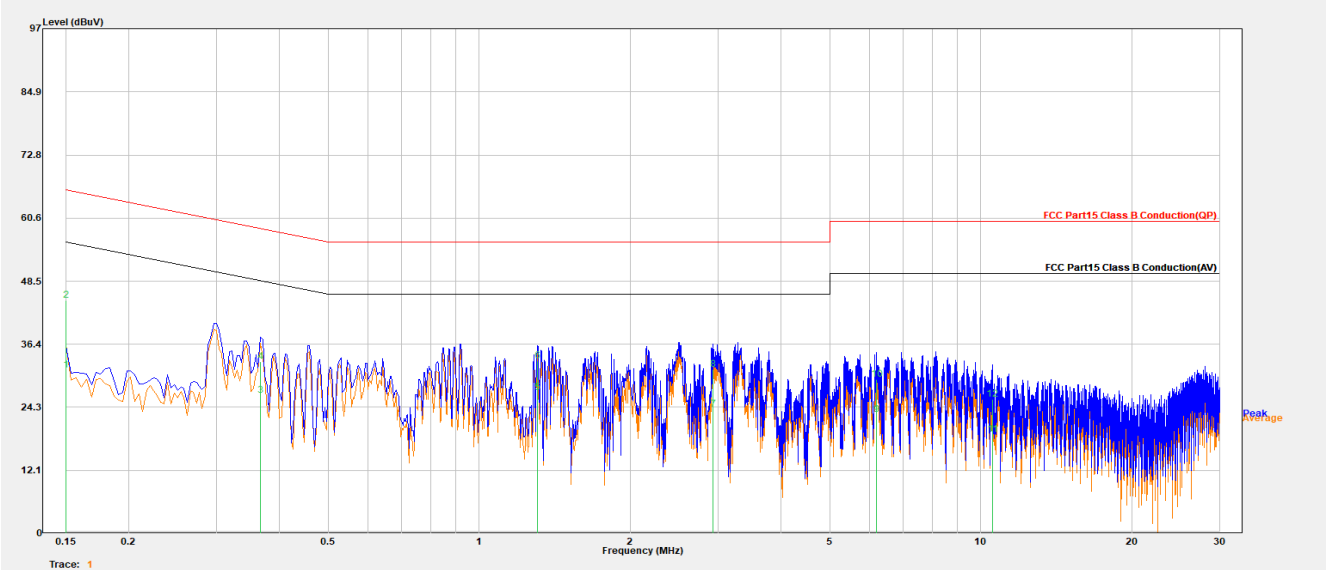
Please refer to the tables and plots in the next section for detailed test results.

6.9 Conducted Emissions Test Plots and Data

Note: Highest Power is measured at 2402MHz at 2Mbps data rate and used as worst case to perform AC Line Conducted Emissions test.

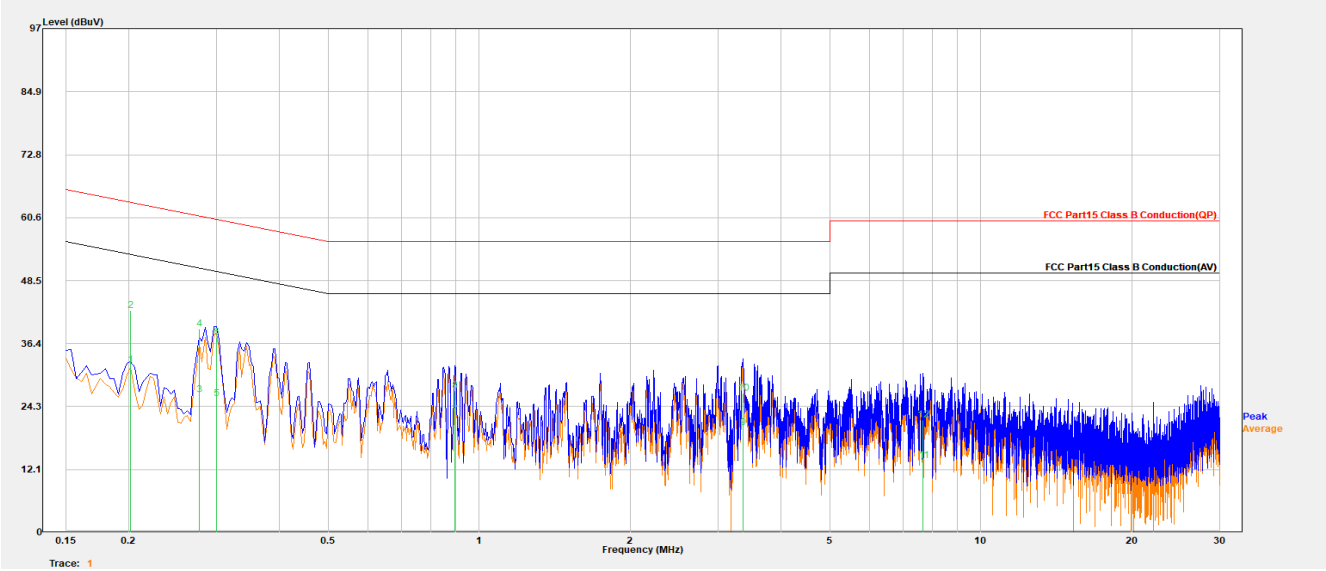
Note:

AC Line: 120V, 60Hz – Live Conductor



Frequency (MHz)	Ai. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBµV)	Limit (dBµV)	Margin (dB)	Detector
0.150	19.54	11.89	31.43	56.00	-24.57	Average
0.150	32.99	11.89	44.88	66.00	-21.12	QP
0.366	15.76	10.80	26.56	48.58	-22.02	Average
0.366	22.28	10.80	33.09	58.58	-25.49	QP
1.307	**16.86**	**10.31**	**27.18**	**46.00**	**-18.82**	**Average**
1.307	22.85	10.31	33.16	56.00	-22.84	QP
2.930	13.74	10.21	23.95	46.00	-22.05	Average
2.930	21.38	10.21	31.60	56.00	-24.40	QP
6.199	12.64	10.24	22.88	50.00	-27.12	Average
6.199	19.34	10.24	29.58	60.00	-30.42	QP
10.547	8.67	10.35	19.03	50.00	-30.97	Average
10.547	15.50	10.35	25.85	60.00	-34.15	QP

AC Line: 120V, 60Hz – Neutral Conductor



Frequency (MHz)	Ai. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBµV)	Limit (dBµV)	Margin (dB)	Detector
0.202	20.73	11.51	32.24	53.52	-21.28	Average
0.202	31.21	11.51	42.72	63.52	-20.80	QP
0.277	15.52	11.07	26.58	50.91	-24.33	Average
0.277	28.20	11.07	39.27	60.91	-21.64	QP
0.299	14.87	10.94	25.81	50.26	-24.46	Average
0.299	26.65	10.94	37.59	60.26	-22.67	QP
0.896	12.37	10.40	22.77	46.00	-23.23	Average
0.896	16.85	10.40	27.24	56.00	-28.76	QP
3.356	10.01	10.22	20.23	46.00	-25.77	Average
3.356	16.63	10.22	26.85	56.00	-29.15	QP
7.688	3.63	10.27	13.91	50.00	-36.09	Average
7.688	11.32	10.27	21.60	60.00	-38.40	QP

7 FCC §15.35(b), §15.205, §15.209, §15.247(d) – Spurious Radiated Emissions

7.1 Applicable Standards

As per FCC §15.35(b): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz.

As Per FCC §15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110 0.495 – 0.505 2.1735 – 2.1905 4.125 – 4.128 4.17725 – 4.17775 4.20725 – 4.20775 6.215 – 6.218 6.26775 – 6.26825 6.31175 – 6.31225 8.291 – 8.294 8.362 – 8.366 8.37625 – 8.38675 8.41425 – 8.41475 12.29 – 12.293 12.51975 – 12.52025 12.57675 – 12.57725 13.36 – 13.41	16.42 – 16.423 16.69475 – 16.69525 25.5 – 25.67 37.5 – 38.25 73 – 74.6 74.8 – 75.2 108 – 121.94 123 – 138 149.9 – 150.05 156.52475 – 156.52525 156.7 – 156.9 162.0125 –167.17 167.72 – 173.2 240 – 285 322 – 335.4 399.9 – 410 608 – 614	960 – 1240 1300 – 1427 1435 – 1626.5 1645.5 – 1646.5 1660 – 1710 1718.8 – 1722.2 2200 – 2300 2310 – 2390 2483.5 – 2500 2690 – 2900 3260 – 3267 3.332 – 3.339 3 3458 – 3 358 3.600 – 4.400	4. 5 – 5. 15 5. 35 – 5. 46 7.25 – 7.75 8.025 – 8.5 9.0 – 9.2 9.3 – 9.5 10.6 – 12.7 13.25 – 13.4 14.47 – 14.5 15.35 – 16.2 17.7 – 21.4 22.01 – 23.12 23.6 – 24.0 31.2 – 31.8 36.43 – 36.5 Above 38.6

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As per FCC §15.247 (d),

in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

7.2 Test Setup

The radiated emissions tests were performed in the 5-meter chamber, using the setup in accordance with ANSI C63.10-2020. The specification used was the FCC §15.247 limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundled when necessary.

7.3 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT was set 3 meter away from the testing antenna, which was varied from 1-4 meters, and the EUT was placed on a turntable, which was 0.8 meters and 1.5 meters above the ground plane for below and above 1000 MHz measurements, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna's polarity should be changed between horizontal and vertical.

The spectrum analyzer or receiver was set as:

9 kHz to 150 kHz:

RBW = 200 Hz / VBW = 1 kHz / Sweep = Auto

150 kHz to 30 MHz:

RBW = 9 kHz / VBW = 30 kHz / Sweep = Auto

30MHz to 1000 MHz:

RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

Above 1000 MHz:

(1) Peak: RBW = 1MHz / VBW = 3MHz / Sweep = Auto
(2) Average: RBW = 1MHz / VBW = 3MHz / Sweep = Auto / Trace averaging for 100 traces

7.4 Corrected Amplitude and Margin Calculation

For emissions below 1 GHz,

The Corrected Amplitude (CA) is calculated by adding the Correction Factor to the S.A. Reading. The basic equation is as follows:

CA = S.A. Reading + Correction Factor

For example, a corrected amplitude of 40.3 dBuV/m = S.A. Reading (32.5 dBuV) + Correction Factor (7.8 dB/m)

The Correction Factor is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) together. This calculation is done in the measurement software, and reported in the test result section. The basic equation is as follows:

Correction Factor = AF + CL + Atten – Ga

The "Margin" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Corrected Amplitude – Limit

For emission above 1 GHz,

The Corrected Amplitude (CA) is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) to indicated Amplitude (Ai) reading. The basic equation is as follows:

CA = Ai + AF + CL + Atten – Ga

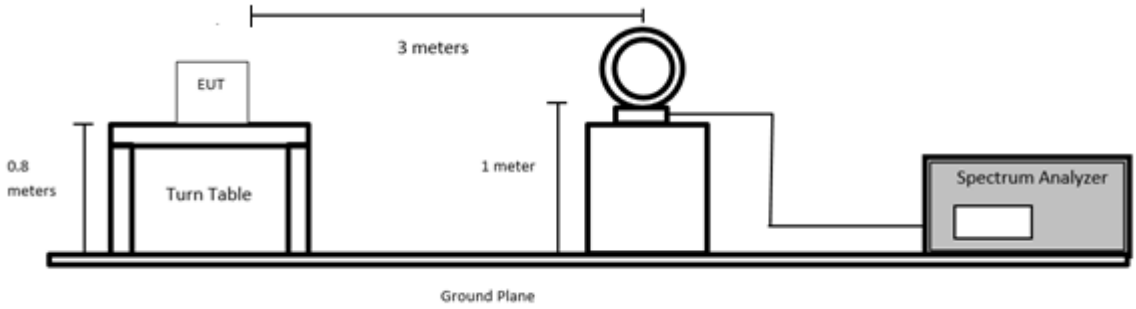
For example, a corrected amplitude of 40.3 dBuV/m = Indicated Reading (32.5 dBuV) + Antenna Factor (+23.5dB) + Cable Loss (3.7 dB) + Attenuator (10 dB) - Amplifier Gain (29.4 dB)

The "Margin" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

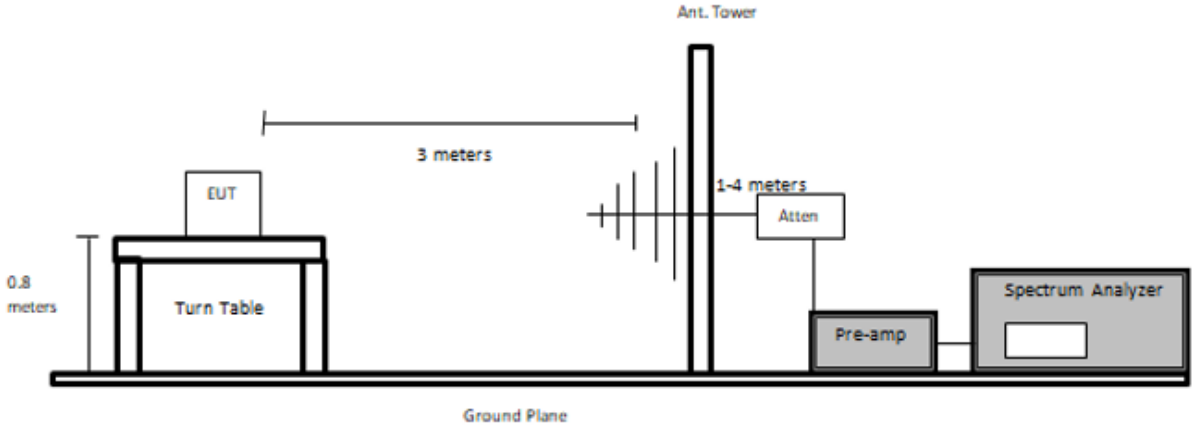
Margin = Corrected Amplitude – Limit

7.5 Test Setup Block Diagram

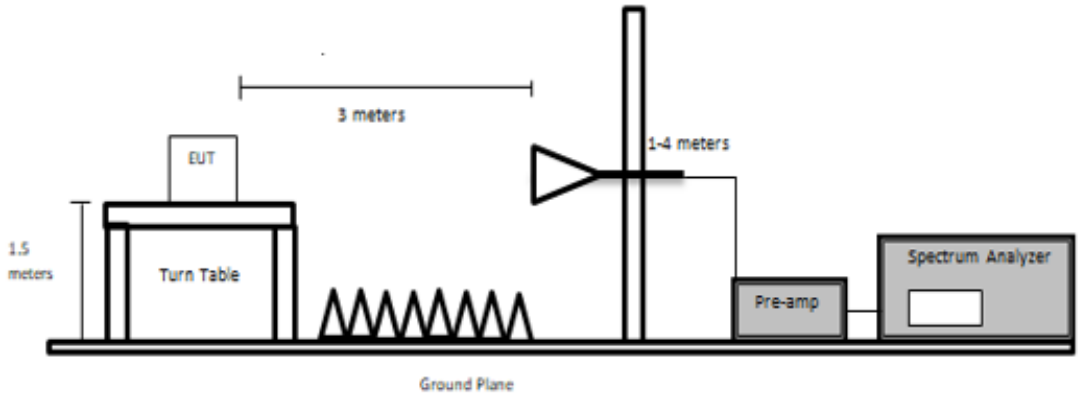
9 kHz to 30 MHz



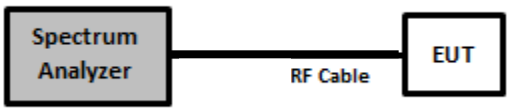
30 MHz to 1 GHz



Above 1 GHz



Conducted Band-Edges



7.6 Test Equipment List and Details

Radiated

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
327	Sunol Sciences	System Controller	SC110V	122303-1	N/R	N/R
1075	Sunol Sciences	Boresight Tower	TLT3	050119-7	N/R	N/R
1388	Sunol Sciences	Flush Mount Turntable	FM	112005-2	N/R	N/R
1432	Keysight Technologies	MXE EMI Reciever	N9038B	MY60180008	2025-01-03	1 year
316	Sonoma Instruments	Preamplifier 10 kHz - 2.5 GHz	317	260406	2025-11-12	6 months
321	Sunol Sciences	Biconilog Antenna	JB3	A020106-2; 1504	2023-12-18	2 years
1245	Pasternack	6dB Attenuator	PE7390-6	01182018A	2023-12-18	2 years
1246	Hewlet Packard	RF Limiter	11867A	01734	2025-09-09	6 months
1248	Pasternack	RG214 COAX Cable	PE3062	-	2025-10-03	6 months
1210	Pasternack	N-type Coax Cable, 50ft RG213	PE3496-0600	2103161	2025-11-12	6 months
1359	Pasternack	N 600in RF Cable	PE3496LF-600	-	2025-07-02	6 months
1192	ETS Lindgren	Horn Antenna	3117	00218973	2024-10-23	2 years
1295	Carlisle	10m Ultra Low Loss Coaxial Cable	UFB142A-1-3937-200200	64639890912-001	2025-10-16	6 months
1334	Micro-Tronics	2.4 GHz Notch Filter	BRM50702	G361	2024-12-31	1 year
90	Wisewave	Horn Antenna 18-26.5GHz	ARH-4223-02	10555-01	2025-05-06	2 years
1449	BACL	Preamplifier 100MHz-18GHz	BACL1313-A100M18G	4052472	2025-08-18	6 months
1451	BACL	Preamplifier 18-40GHz	BACL-1313-A1840	4052432	2025-08-18	6 months
1545	Megaphase	K-type coax cable	TM40-K1K3-12	20869601 001	2025-08-18	6 months
1546	Megaphase	SMA coax cable	TM26-S1S3-12	20869602 001	2025-08-18	6 months
393	Com-Power	Loop Antenna, Active	AL-130	17043	2025-05-06	2 years

Conducted Band-Edges

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
624	Agilent	PSA Series Spectrum Analyzer	E4446A	MY48250238	2025-06-09	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-09-10	6 months

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

7.7 Test Environmental Conditions

Radiated

Temperature:	20 to 23 ºC
Relative Humidity:	40 to 50 %
ATM Pressure:	101.3 kPa

The testing was performed by Libass Thiaw from 2025-12-08 to 2025-12-09 in 5m chamber 3.

Conducted Band-Edges

Temperature:	22 ºC
Relative Humidity:	42 %
ATM Pressure:	101.9 kPa

The testing was performed by Libass Thiaw on 2025-12-05 at RF Site.

7.8 Summary of Test Results

According to the data hereinafter, the EUT complied with the FCC Part 15.209, 15.247 standards' radiated emissions limits, and had the worst margin of:

Worst Case – Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Configuration**
-1.12	19221.88	Vertical	BLE 1M, 2402 MHz

Please refer to the tables and plots in the next section for detailed test results.

7.9 Radiated Emissions Test Results

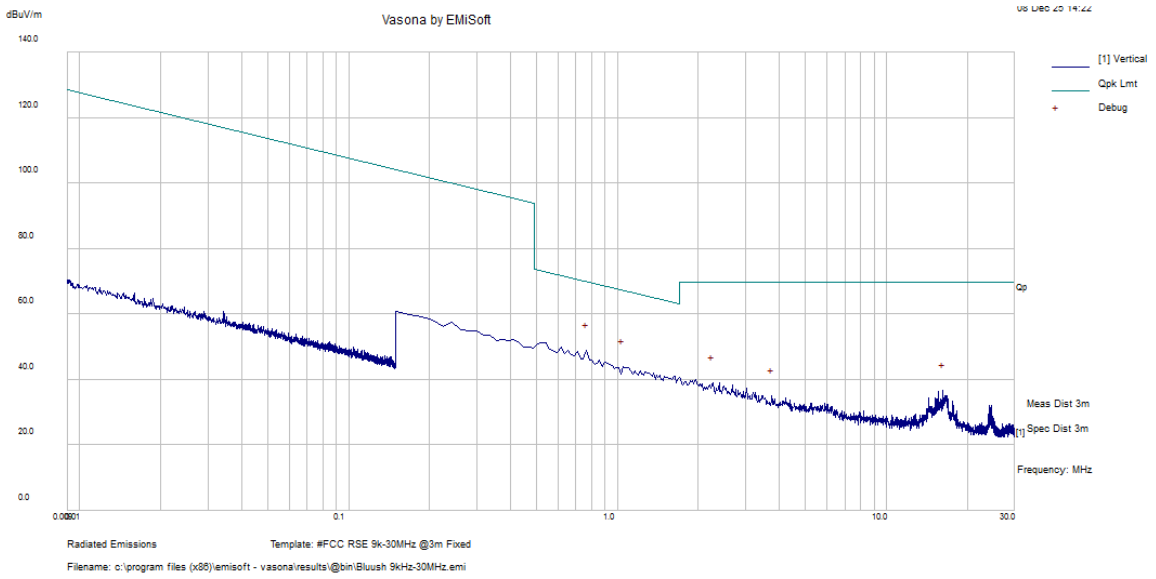
Note: The test data presented below are for radiated spurious emissions. For conducted band-edges test data, please refer to Annex E.

Note: Pre-scan was performed in order to determine worst-case orientation of device with respect to measurement antenna in the X/Y/Z axis. Plots/data shown represent measurements made in worst-case orientation.

Note: As per ANSI 63.10 section 5.6.2.2, middle channel was used to determine the worst-case mode. Highest Power & Power Spectral Density is measured at 1Mbps data rate and used as worst case to perform radiated spurious emissions test.

1) 9 kHz – 30 MHz Worst Case, Measured at 3 meters

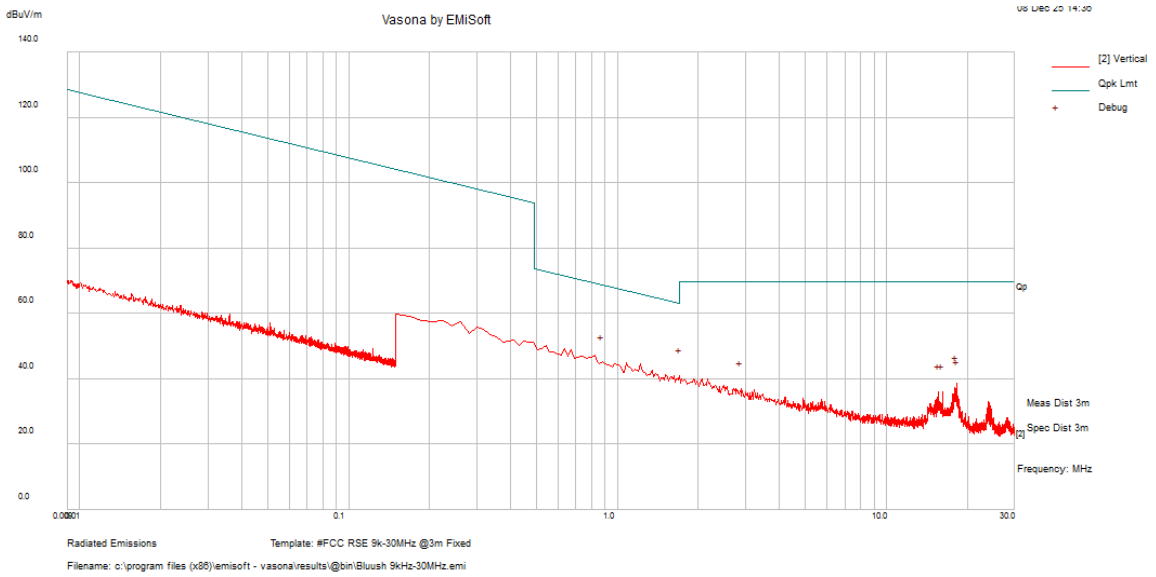
BLE 1M, Low Channel, 2402 MHz, Perpendicular



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
0.765656	38.77	10.1	48.88	69.92	-21.05	Peak
1.0455	33.98	10.07	44.04	67.22	-23.18	Peak
2.258156	28.57	10.39	38.96	69.54	-30.58	Peak
16.23169	26.13	10.61	36.74	69.54	-32.8	Peak
3.750656	24.5	10.43	34.93	69.54	-34.61	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

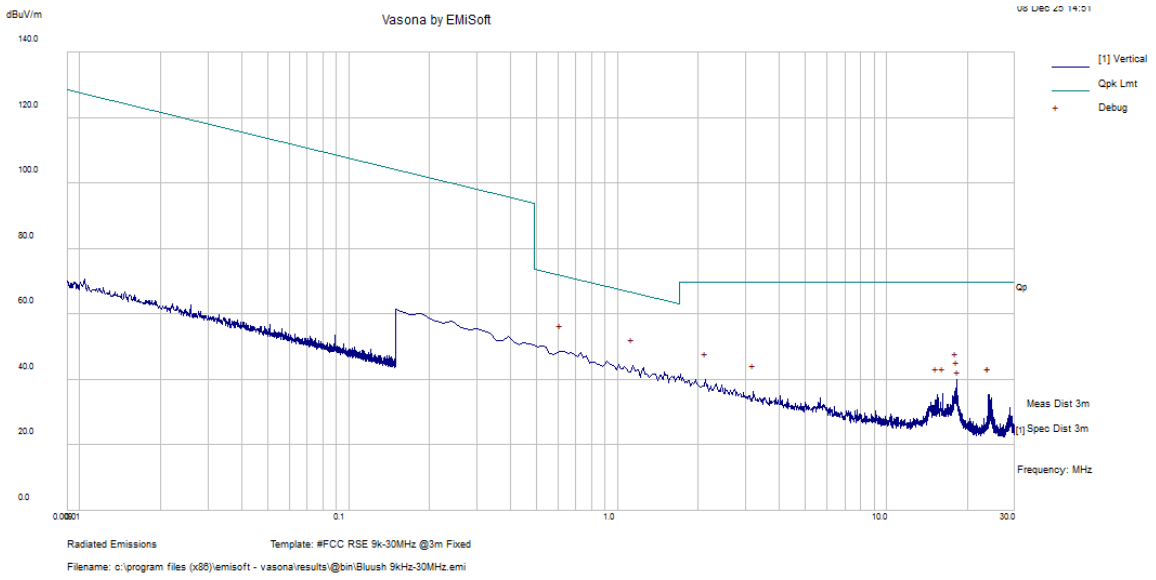
BLE 1M, Low Channel, 2402 MHz, Parallel



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1.698469	30.64	10.28	40.92	63	-22.08	Peak
0.877594	35.04	10.07	45.11	68.74	-23.63	Peak
18.24656	28.36	10.41	38.77	69.54	-30.77	Peak
18.30253	27.19	10.39	37.57	69.54	-31.97	Peak
2.873813	26.65	10.44	37.1	69.54	-32.44	Peak
16.17572	25.48	10.61	36.09	69.54	-33.45	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

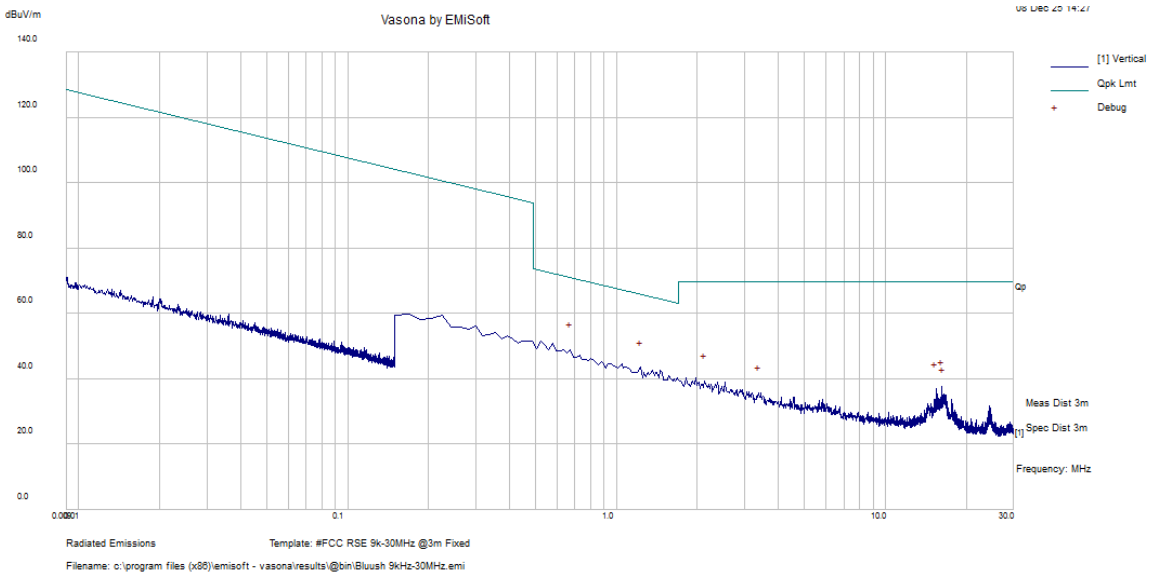
BLE 1M, Low Channel, 2402 MHz, Ground-Parallel



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1.138781	34.16	10.1	44.26	66.48	-22.22	Peak
0.616406	38.38	10.15	48.54	71.81	-23.27	Peak
18.24656	29.62	10.41	40.03	69.54	-29.51	Peak
2.127563	29.65	10.38	40.03	69.54	-29.52	Peak
18.30253	27.17	10.39	37.55	69.54	-31.99	Peak
3.209625	25.9	10.45	36.35	69.54	-33.19	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

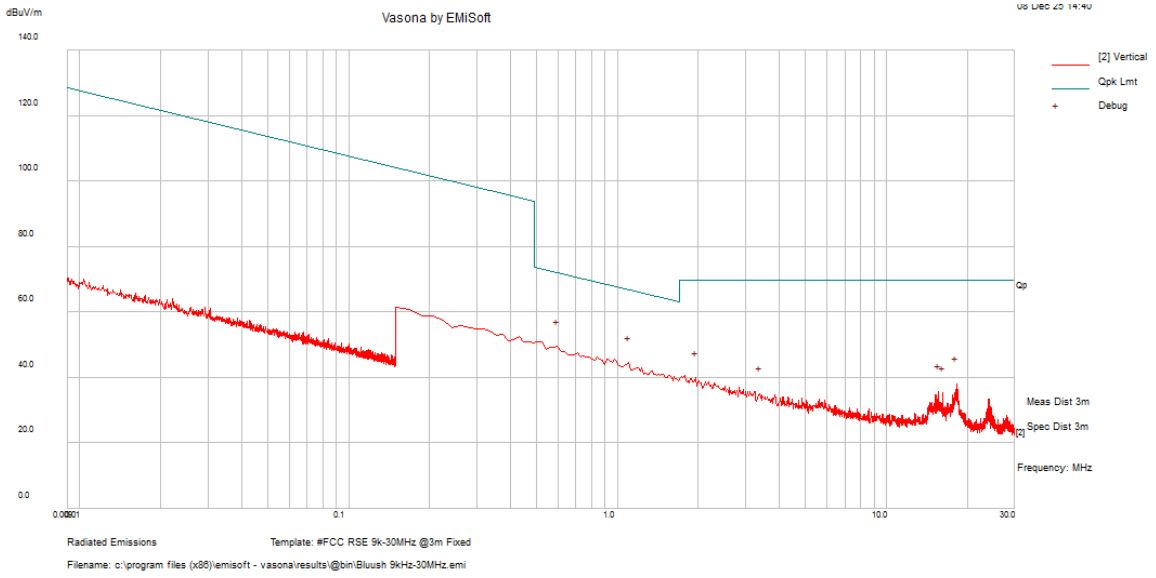
BLE 1M, Middle Channel, 2440 MHz, Perpendicular



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
0.672375	38.72	10.14	48.85	71.05	-22.2	Peak
1.232063	33.27	10.13	43.41	65.79	-22.39	Peak
2.127563	28.94	10.38	39.32	69.54	-30.22	Peak
16.23169	26.87	10.61	37.48	69.54	-32.06	Peak
15.42947	26.3	10.57	36.88	69.54	-32.66	Peak
3.377531	25.32	10.44	35.76	69.54	-33.78	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

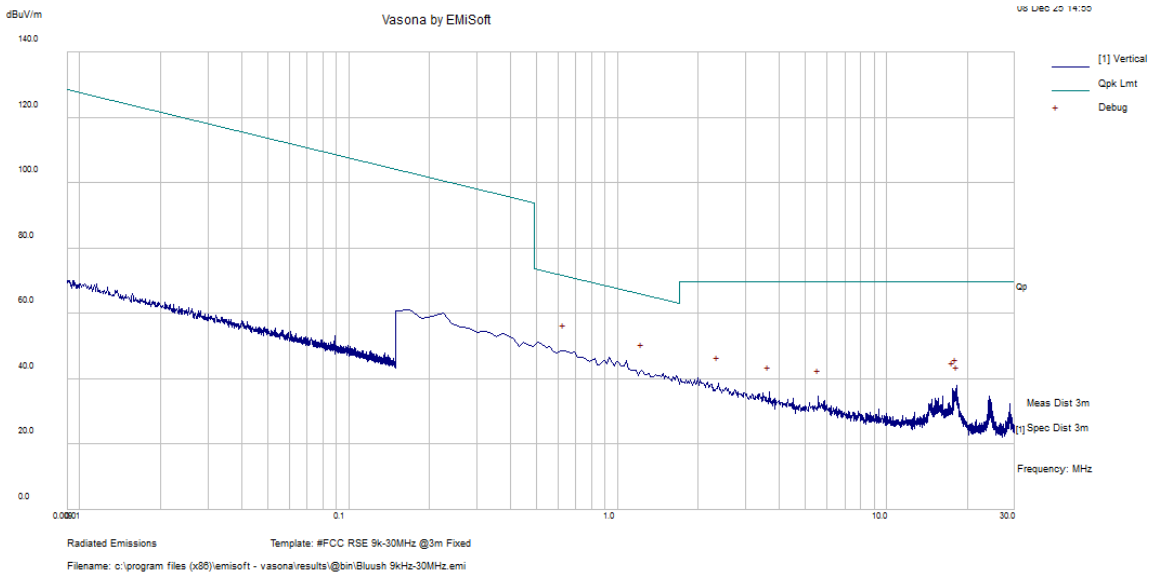
BLE 1M, Middle Channel, 2440 MHz, Parallel



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1.101469	34.4	10.09	44.49	66.77	-22.28	Peak
0.59775	39.22	10.16	49.38	72.08	-22.7	Peak
1.959656	29.44	10.35	39.8	69.54	-29.74	Peak
18.24656	27.5	10.41	37.91	69.54	-31.63	Peak
15.61603	25.13	10.6	35.73	69.54	-33.81	Peak
16.23169	24.61	10.61	35.22	69.54	-34.32	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

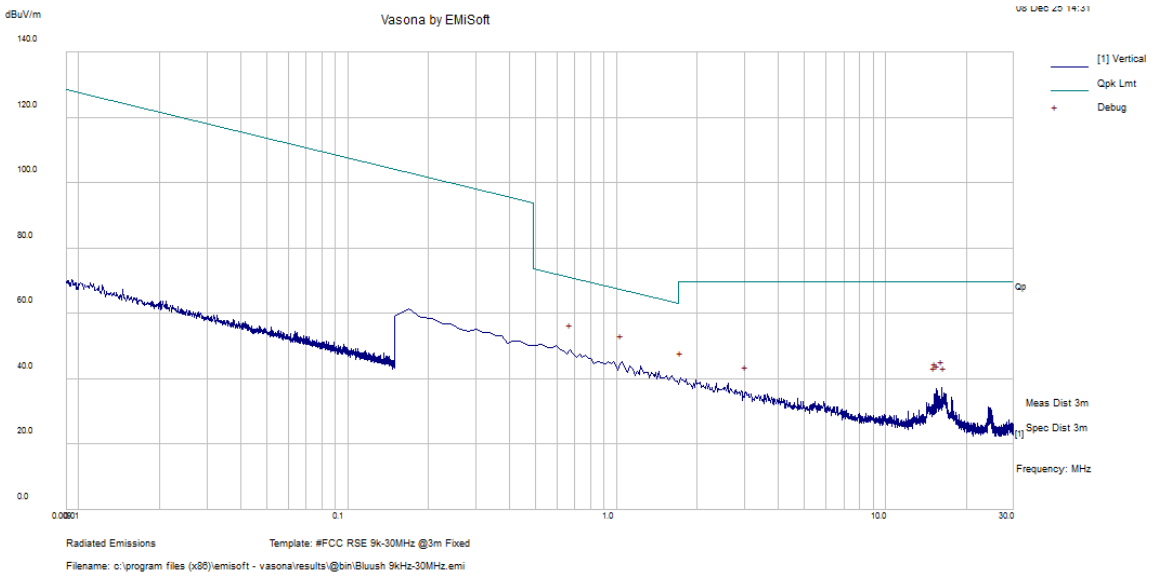
BLE 1M, Middle Channel, 2440 MHz, Ground-Parallel



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
0.635063	38.42	10.15	48.56	71.55	-22.99	Peak
1.232063	32.55	10.13	42.69	65.79	-23.1	Peak
2.370094	28.17	10.41	38.57	69.54	-30.97	Peak
18.24656	27.58	10.41	37.98	69.54	-31.56	Peak
17.68688	26.47	10.53	37	69.54	-32.54	Peak
3.657375	25.41	10.44	35.85	69.54	-33.69	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

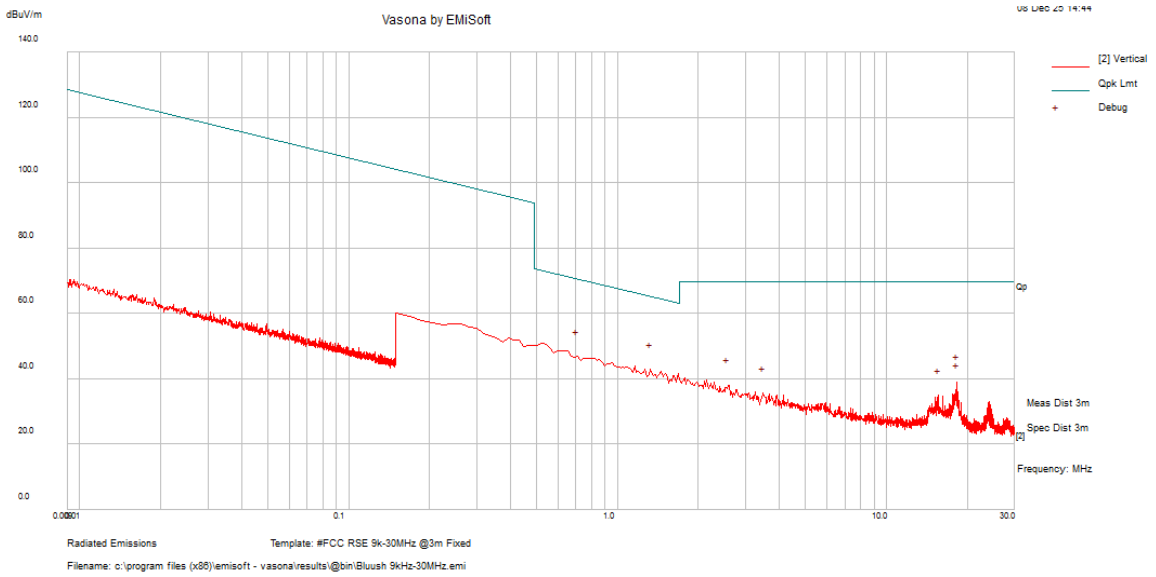
BLE 1M, High Channel, 2480 MHz, Perpendicular



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1.0455	35.2	10.07	45.27	67.22	-21.95	Peak
0.672375	38.68	10.14	48.81	71.05	-22.24	Peak
1.735781	29.85	10.29	40.15	69.54	-29.4	Peak
16.23169	26.64	10.61	37.25	69.54	-32.29	Peak
15.42947	26.23	10.57	36.81	69.54	-32.73	Peak
15.61603	25.62	10.6	36.22	69.54	-33.33	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

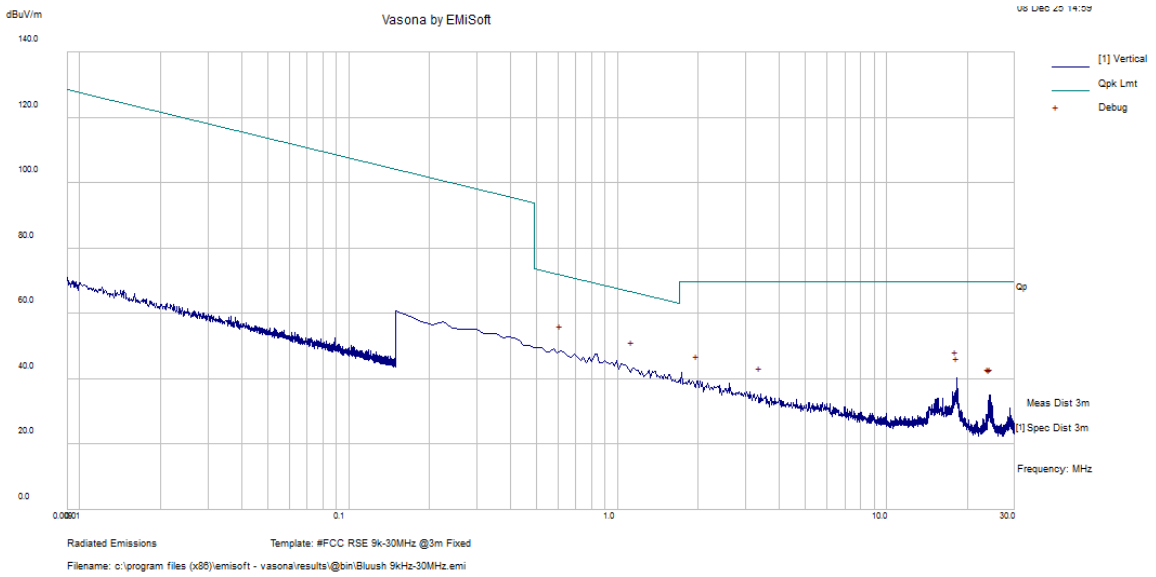
BLE 1M, High Channel, 2480 MHz, Parallel



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1.325344	32.59	10.17	42.76	65.16	-22.4	Peak
0.709688	36.64	10.13	46.76	70.58	-23.82	Peak
18.30253	28.55	10.39	38.94	69.54	-30.61	Peak
2.575313	27.67	10.42	38.09	69.54	-31.45	Peak
18.3585	26.09	10.36	36.44	69.54	-33.1	Peak
3.489469	25.14	10.44	35.58	69.54	-33.96	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

BLE 1M, High Channel, 2480 MHz, Ground-Parallel

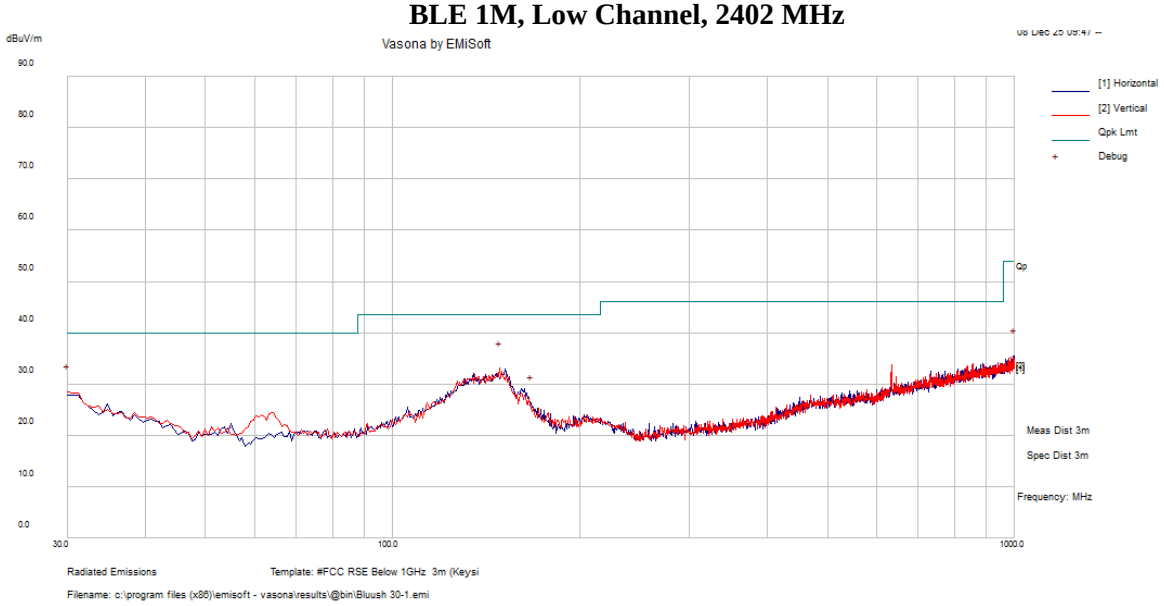


Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1.138781	33.22	10.1	43.33	66.48	-23.15	Peak
0.616406	38.3	10.15	48.45	71.81	-23.36	Peak
18.24656	30	10.41	40.41	69.54	-29.13	Peak
1.978313	28.81	10.36	39.17	69.54	-30.37	Peak
18.3585	27.89	10.36	38.25	69.54	-31.29	Peak
3.396188	24.84	10.44	35.28	69.54	-34.26	Peak

Note: Peak measurement is used to compare to the QP limit to show compliance.

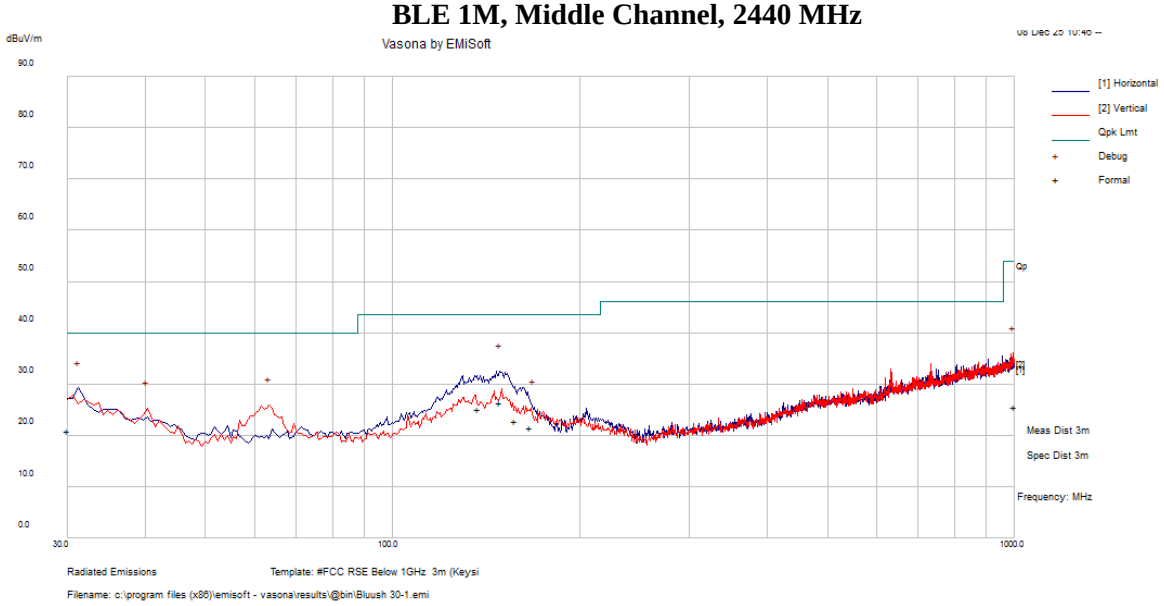
2) 30 MHz – 1 GHz, Measured at 3 meters

BLE 1M, Low Channel, 2402 MHz



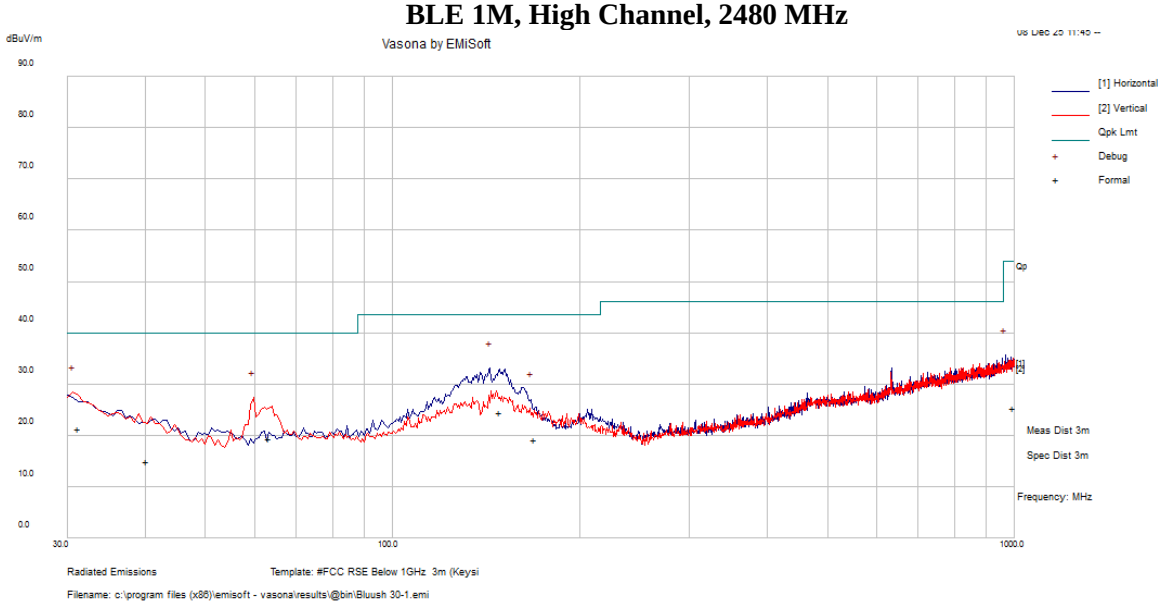
Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector
148.9994	43.82	-17.39	26.43	182	V	104	43.5	-17.07	QP
30	31.19	-10.38	20.81	215	V	70	40	-19.19	QP
137.3081	41.84	-16.68	25.16	298	H	167	43.5	-18.34	QP
157.1177	40.36	-17.61	22.75	255	H	282	43.5	-20.75	QP
166.7741	39.41	-17.93	21.47	165	H	97	43.5	-22.03	QP
999.6912	28.4	-2.94	25.46	210	H	132	54	-28.54	QP

BLE 1M, Middle Channel, 2440 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector
31.27969	32.76	-11.38	21.38	279	H	280	40	-18.62	QP
148.9094	41.92	-17.39	24.53	253	H	256	43.5	-18.97	QP
63.31781	42.32	-23	19.32	176	V	111	40	-20.68	QP
40.32031	32.43	-17.53	14.9	139	V	36	40	-25.1	QP
169.0181	37.16	-18.08	19.09	241	H	205	43.5	-24.41	QP
994.4044	28.26	-2.99	25.26	283	V	136	54	-28.74	QP

BLE 1M, High Channel, 2480 MHz



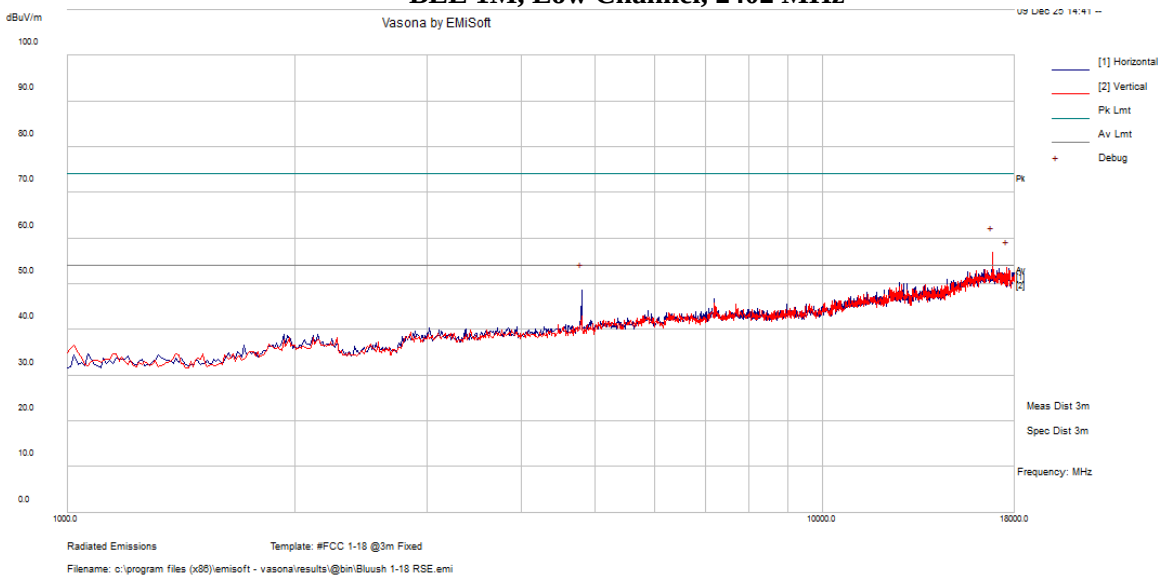
Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector
143.4069	42.86	-17.2	25.67	189	H	267	43.5	-17.83	QP
30.39563	31.31	-10.69	20.62	237	V	323	40	-19.38	QP
139.2198	41.35	-16.84	24.5	182	H	131	43.5	-19	QP
59.86813	37.17	-23.34	13.83	216	V	232	40	-26.17	QP
166.9506	38.64	-17.94	20.7	255	H	287	43.5	-22.8	QP
965.9384	28.29	-3.46	24.83	242	H	52	54	-29.17	QP

FCC Limits for 1 GHz to 26.5 GHz			
Applicability	**(dBm)**	**(uV/m at 3meters)**	**(dBuV/m at 3meters)**
Restricted Band Average Limit	-	500	54[2]
Restricted Band Peak Limit[1]	-	-	74

Note 1: Restricted Band Peak Limit is defined to be 20dB higher than Average Limit.
Note 2: Above 1GHz limit calculation:
dBuV/m = 20*log(V/m) + 120 = 20*log((500 [uV/m]/1000000)) + 120 = 54 [dBuV/m]

3) 1 GHz – 18 GHz, Measured at 3 meters

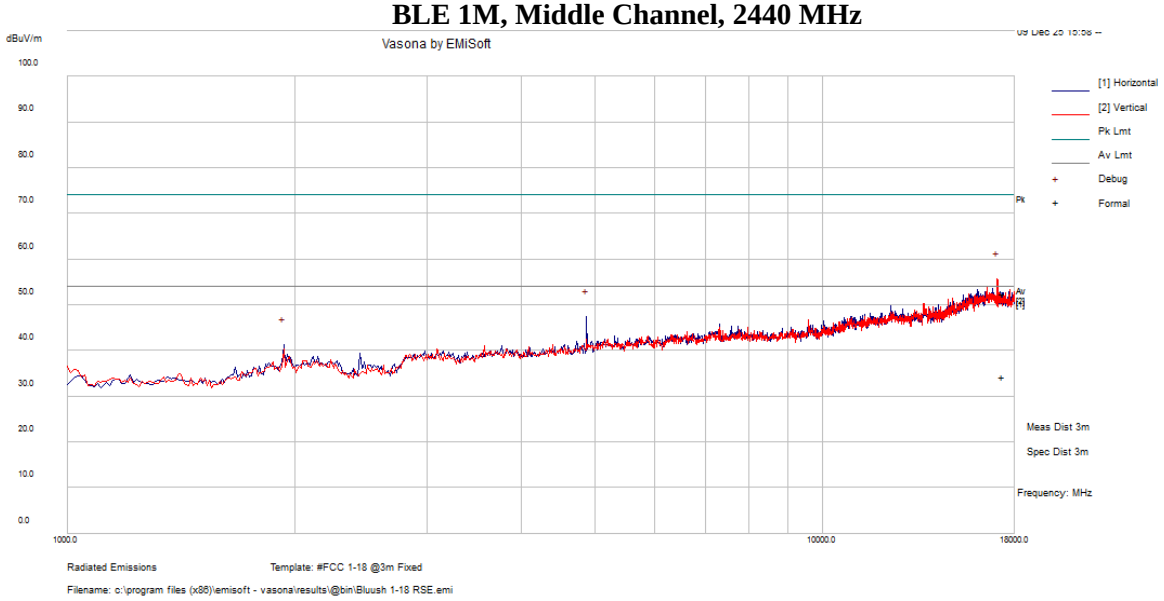
BLE 1M, Low Channel, 2402 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Detector
16810.53	39.65	18.57	58.22	V	74	-15.78	Peak
16810.53	26.65	18.57	45.22	V	54	-8.78	Average

Note: Peak measurement is used to compare to the average limit to show compliance.

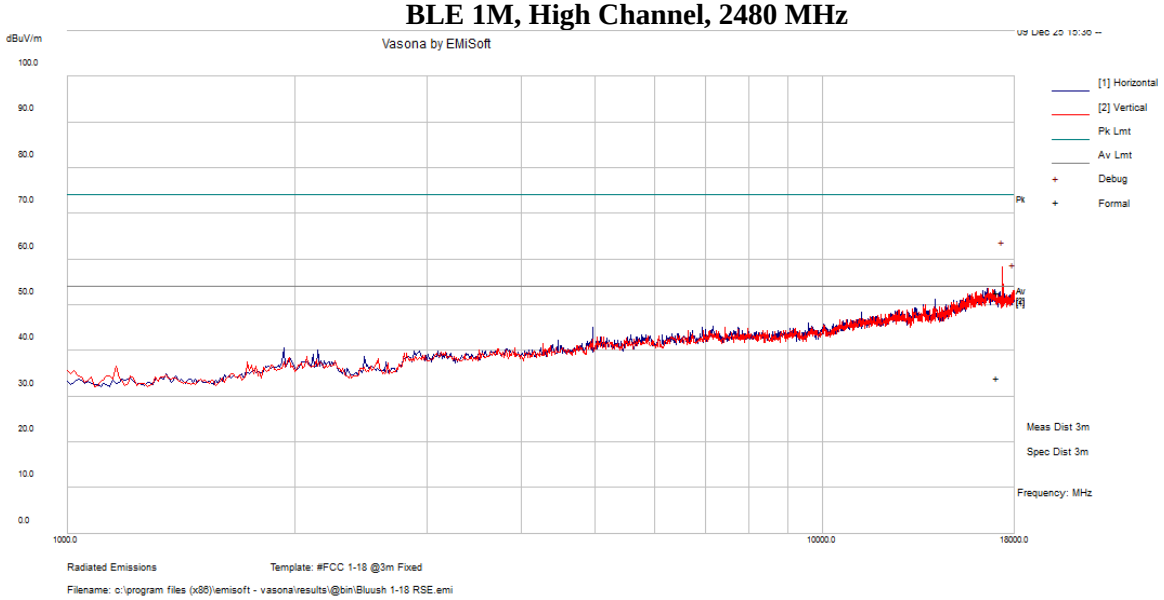
BLE 1M, Middle Channel, 2440 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Detector
17076.34	41.01	17.59	58.61	V	74	-15.4	Peak
17076.34	28.72	17.59	46.32	V	54	-7.68	Average

Note: Peak measurement is used to compare to the average limit to show compliance.

BLE 1M, High Channel, 2480 MHz

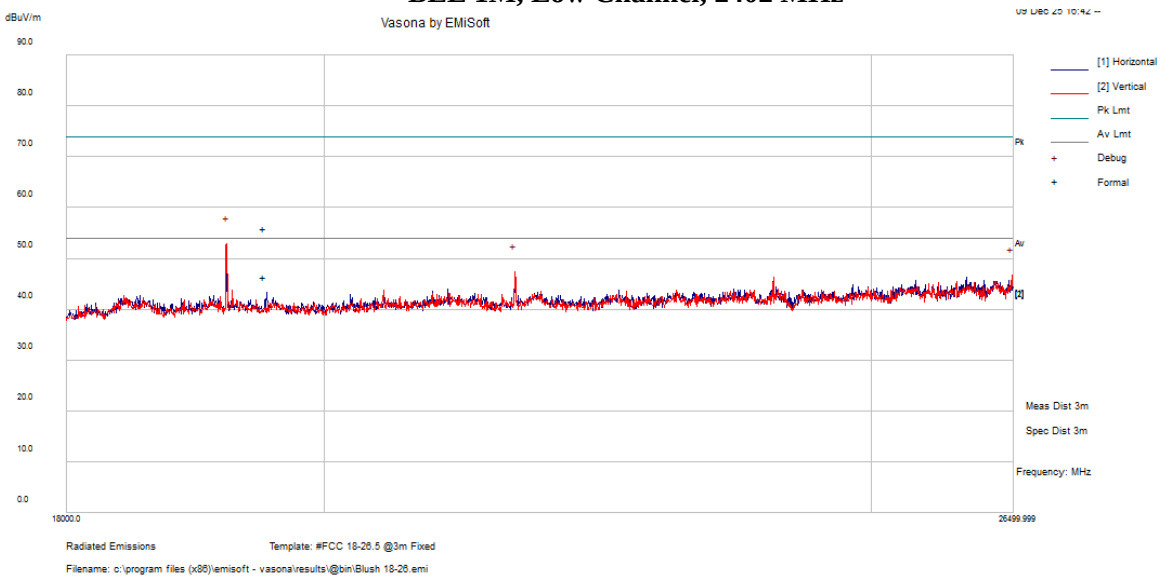


Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Detector
17350.97	35.44	17.03	52.46	V	74	-21.54	Peak
17350.97	17.31	17.03	34.33	V	54	-19.67	Average

Note: Peak measurement is used to compare to the average limit to show compliance.

4) 18 GHz – 26.5 GHz, Measured at 3 meters

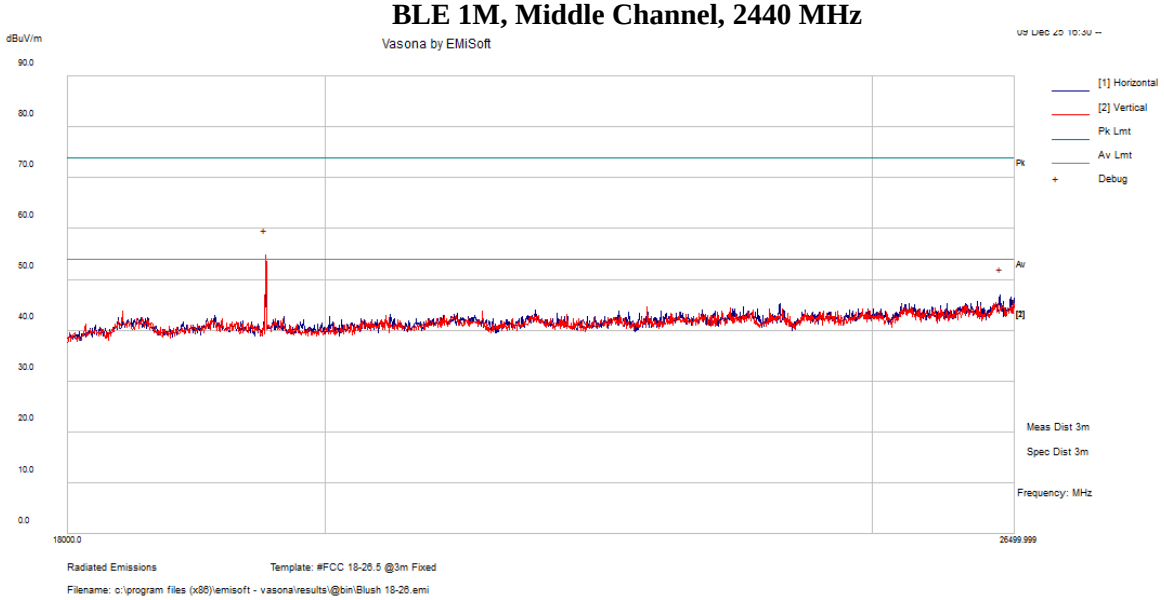
BLE 1M, Low Channel, 2402 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Detector
19221.88	**56.23**	**-3.35**	**52.88**	**V**	**54**	**-1.12**	**Peak**
21612.5	45.9	1.47	47.38	V	54	-6.62	Peak
26478.75	38.95	7.85	46.8	V	54	-7.2	Peak

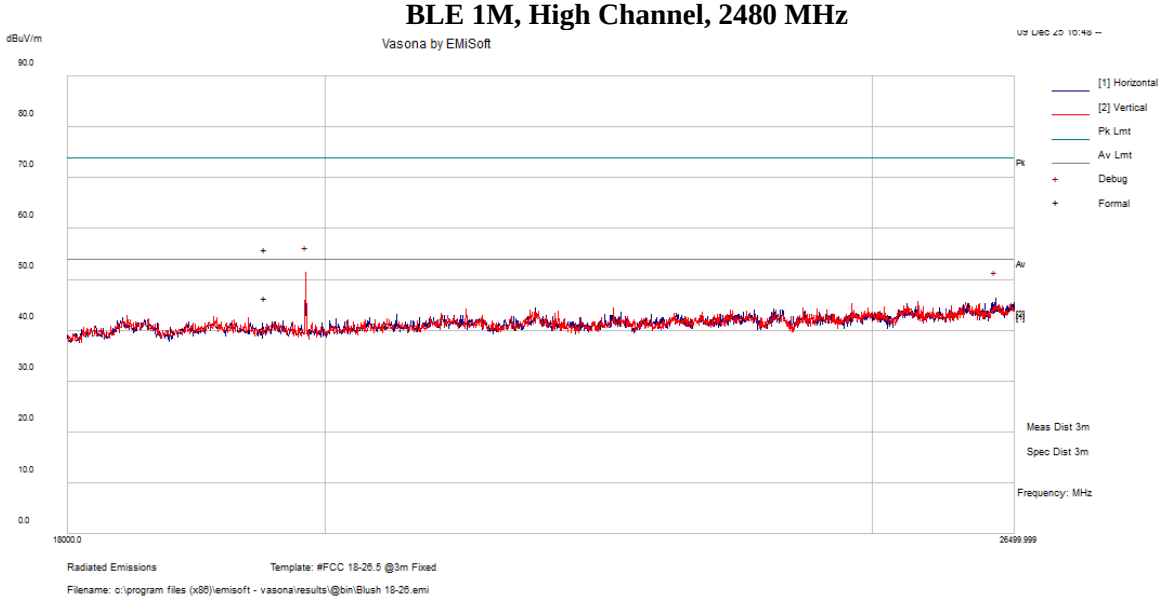
Note: Peak measurement is used to compare to the average limit to show compliance.

BLE 1M, Middle Channel, 2440 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Detector
19515.99	58.88	-2.97	55.91	V	74	-18.09	Peak
19515.99	49.44	-2.97	46.47	V	54	-7.53	Average

BLE 1M, High Channel, 2480 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Detector
19843.44	52.95	-1.64	51.31	V	54	-2.69	Peak
26292.81	38.44	7.87	46.31	H	54	-7.69	Peak

Note: Peak measurement is used to compare to the average limit to show compliance.

8 FCC §15.247(a) (2) – Emission Bandwidth

8.1 Applicable Standards

According to FCC §15.247(a) (2): the minimum 6 dB bandwidth shall be 500 kHz.

8.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v05r02: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 8: DTS bandwidth.

As per ANSI C63.10 Clause 6.9.3: Occupied bandwidth—power bandwidth (99%) measurement procedure

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

The following procedure shall be used for measuring 99% power bandwidth:

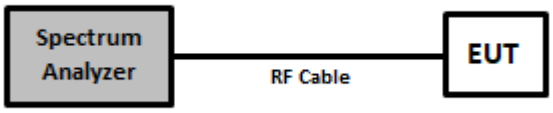
a. The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b. The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
c. Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2.
d. Step a) through step c) might require iteration to adjust within the specified range.
e. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f. Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g. If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
h. The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

As per ANSI C63.10 Clause 11.8.2: DTS bandwidth

One of the following procedures may be used to determine the modulated DTS bandwidth.

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW $\geqslant 3 \times$ RBW, and peak detector with maximum hold) is implemented by the instrumentation function.
When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be $\geqslant$6 dB.

8.3 Test Setup Block Diagram



8.4 Test Equipment List and Details

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
624	Agilent	PSA Series Spectrum Analyzer	E4446A	MY48250238	2025-06-09	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-09-10	6 months

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

8.5 Test Environmental Conditions

Temperature:	22 ºC
Relative Humidity:	42 %
ATM Pressure:	101.9 kPa

The testing was performed by Libass Thiaw on 2025-12-05 at RF Site.

8.6 Test Results

Radio	Channel	Frequency (MHz)	99% OBW (MHz)	6 dB OBW (MHz)	6 dB OBW Limit (MHz)	Result
BLE 1M	Low	2402	1.0675	0.703	≥ 0.500	Pass
	Middle	2440	1.0457	0.685	≥ 0.500	Pass
	High	2480	1.0826	0.720	≥ 0.500	Pass
BLE 2M	Low	2402	2.1367	1.279	≥ 0.500	Pass
	Middle	2440	2.1177	1.319	≥ 0.500	Pass
	High	2480	2.1495	1.318	≥ 0.500	Pass

Please refer to Annex A for detailed Emissions Bandwidth test results.

9 FCC §15.247(b)(3) – Maximum Output Power

9.1 Applicable Standards

According to FCC §15.247(b)(3): For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

9.2 Measurement Procedure

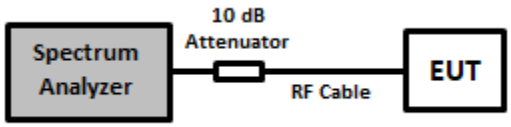
The measurements are based on ANSI C63.10, Section 11.9.

11.9.1.1 RBW ≥ DTS bandwidth

The procedure for this method is as follows:

a. Set the RBW ≥ DTS bandwidth.
b. Set VBW ≥ [3 × RBW].
c. Set span ≥ [3 × RBW].
d. Sweep time = No faster than coupled (auto) time.
e. Detector = peak.
f. Trace mode = max-hold.
g. Allow trace to fully stabilize.
h. Use peak marker function to determine the peak amplitude level.

9.3 Test Setup Block Diagram



9.4 Test Equipment List and Details

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
1128	Agilent	EXA Signal Analyzer	N9010A	MY48250238	2025-06-11	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-09-10	6 months
1541	Pasternack	Attenuator, SMA	PE7395-10	NA	2025-01-17	1 year

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

9.5 Test Environmental Conditions

Temperature:	22 ºC
Relative Humidity:	42 %
ATM Pressure:	101.9 kPa

The testing was performed by Rachana Khanduri on 2025-11-25 at RF Site.

9.6 Test Results

Radio	Channel	Frequency (MHz)	Conducted Output Power (dBm)	Conducted Output Power Limit (dBm)	Result
BLE 1M	Low	2402	6.487	≤ 30	Pass
	Middle	2440	6.401	≤ 30	Pass
	High	2480	6.218	≤ 30	Pass
BLE 2M	Low	2402	6.517	≤ 30	Pass
	Middle	2440	6.399	≤ 30	Pass
	High	2480	6.246	≤ 30	Pass

*Note 2: Conducted Output Power Limit [dBm] = 10*log(Power[mW]/1mW) = 10*log(1000mW/1mW) = 30 dBm*

Please refer to Annex B for detailed Maximum Output Power test results.

10 FCC §15.247(e) – Peak Power Spectral Density

10.1 Applicable Standards

According to ECFR §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

10.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v05r02: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 8.4: Maximum power spectral density level in the fundamental emission.

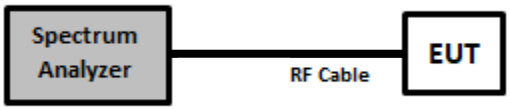
As per ANSI C63.10 Clause 11.10: Maximum power spectral density level in the fundamental emission

Some regulatory requirements specify a conducted PSD limit within the DTS bandwidth during any time interval of continuous transmission.88 Such specifications require that the same method as used to determine the conducted output power shall be used to determine the power spectral density. If maximum peak conducted output power was measured, then the peak PSD procedure 11.10.2 (method PKPSD) shall be used. If maximum conducted output power was measured, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option):

Method PKPSD (peak PSD): The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:

a. Set analyzer center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the DTS bandwidth.
c. Set the RBW to 3 kHz $\leqslant$ RBW $\leqslant$ 100 kHz.
d. Set the VBW $\geqslant$ [3 $\times$ RBW].
e. Detector = peak.
f. Sweep time = auto couple.
g. Trace mode = max hold.
h. Allow trace to fully stabilize.
i. Use the peak marker function to determine the maximum amplitude level within the RBW.
j. If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

10.3 Test Setup Block Diagram



10.4 Test Equipment List and Details

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
624	Agilent	PSA Series Spectrum Analyzer	E4446A	MY48250238	2025-06-09	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-09-10	6 months

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

10.5 Test Environmental Conditions

Temperature:	22 ºC
Relative Humidity:	42 %
ATM Pressure:	101.9 kPa

The testing was performed by Libass Thiaw on 2025-12-05 at RF Site.

10.6 Test Results

Radio	Channel	Frequency (MHz)	PSD[1] (dBm/10kHz)	Limit (dBm/3kHz)	Result
BLE 1M	Low	2402	-0.10	≤ 8	Pass
	Middle	2440	0.77	≤ 8	Pass
	High	2480	-0.52	≤ 8	Pass
BLE 2M	Low	2402	-3.97	≤ 8	Pass
	Middle	2440	-3.91	≤ 8	Pass
	High	2480	-4.57	≤ 8	Pass

Note 1: The EUT passed with wider RBW of 10 kHz, thus it complies with RBW requirement of 3 kHz as compliance is shown under a worse-case circumstance

Please refer to Annex C for detailed Peak Power Spectral Density test results.

11 FCC §15.247(d) – 100 kHz Spurious Emissions and Band Edges at Antenna Terminal (dBc)

11.1 Applicable Standards

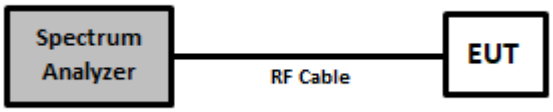
According to FCC §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emissions limits specified in §15.209(a) see §15.205(c).

11.2 Measurement Procedure

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation

RBW = 100 kHz
VBW = 300 kHz
Sweep = coupled
Detector function = peak
Trace = max hold

11.3 Test Setup Block Diagram



11.4 Test Equipment List and Details

BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
624	Agilent	PSA Series Spectrum Analyzer	E4446A	MY48250238	2025-06-09	1 year
912	Rhode & Schwarz	Signal Analyzer	FSV40	1321.3008k39-101203-UW	2025-08-04	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-09-10	6 months

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

11.5 Test Environmental Conditions

Temperature:	22 ºC
Relative Humidity:	42 %
ATM Pressure:	101.9 kPa

The testing was performed by Libass Thiaw on 2025-12-05 and 2026-04-02 at RF Site.

11.6 Test Results

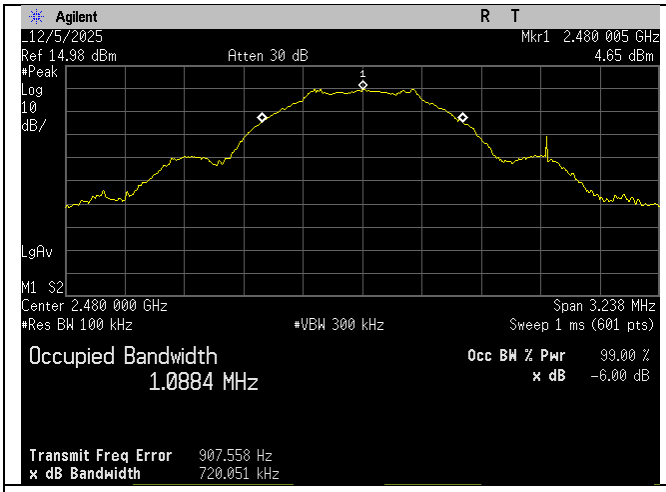
Test Result: Pass

Please refer to Annex D for detailed 100 kHz Spurious Emissions at Antenna Terminal (dBc) test results.

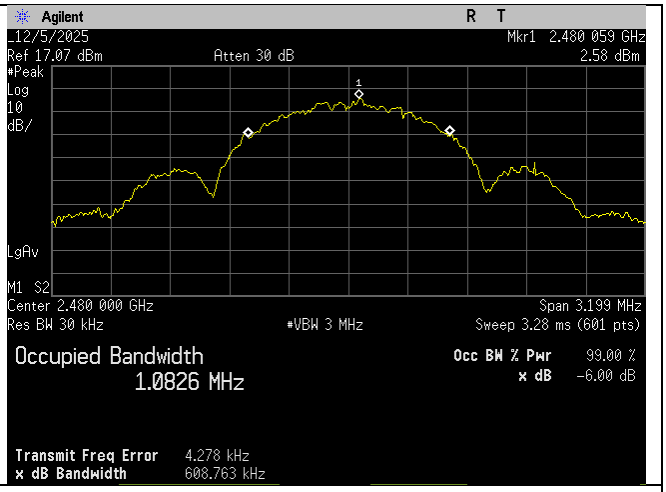
12 Annex A – Emission Bandwidth

Naming Convention

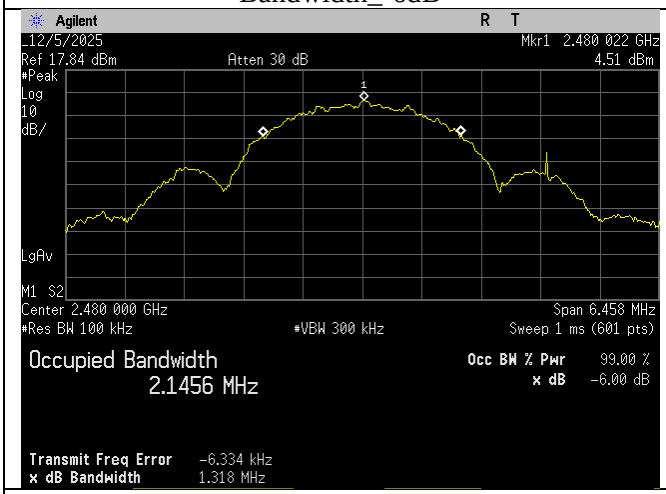
Radio (BLE)_Channel (Low Ch,Mid Ch, High Ch)_Frequency (MHz)_ Rate (MBit)_Measurement (Occupied Bandwidth, -6dB, Occupied Bandwidth 99 Percent)



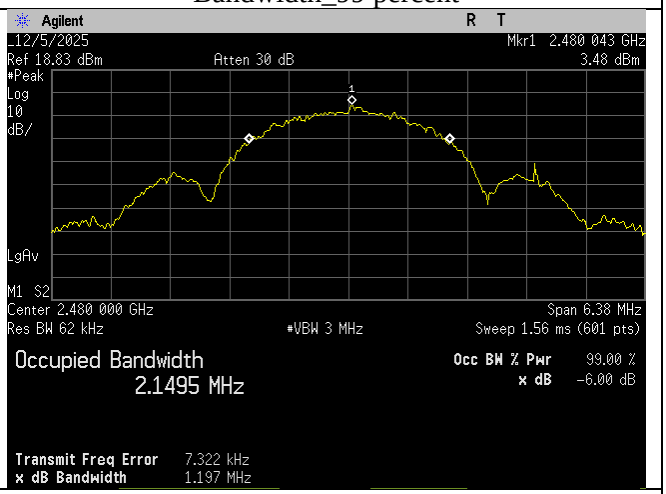
BLE_High Ch_2480MHz_1MBit_Occupied Bandwidth_-6dB



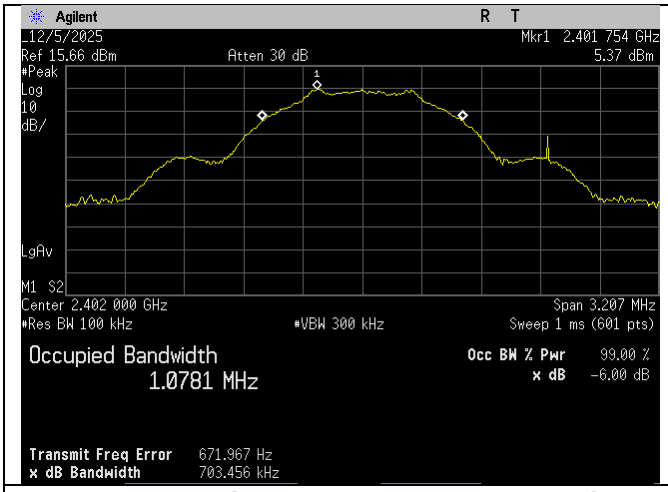
BLE_High Ch_2480MHz_1MBit_Occupied Bandwidth_99 percent



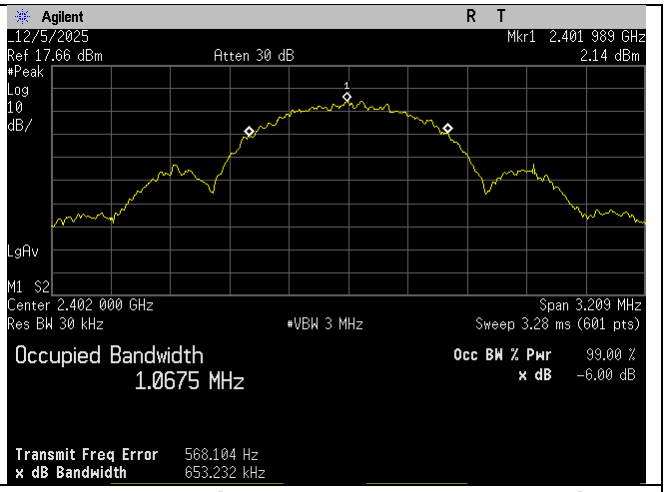
BLE_High Ch_2480MHz_2MBit_Occupied Bandwidth_-6dB



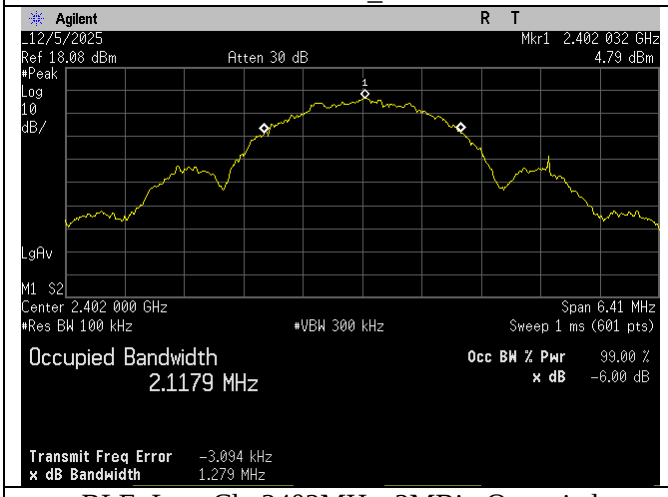
BLE_High Ch_2480MHz_2MBit_Occupied Bandwidth_99 percent



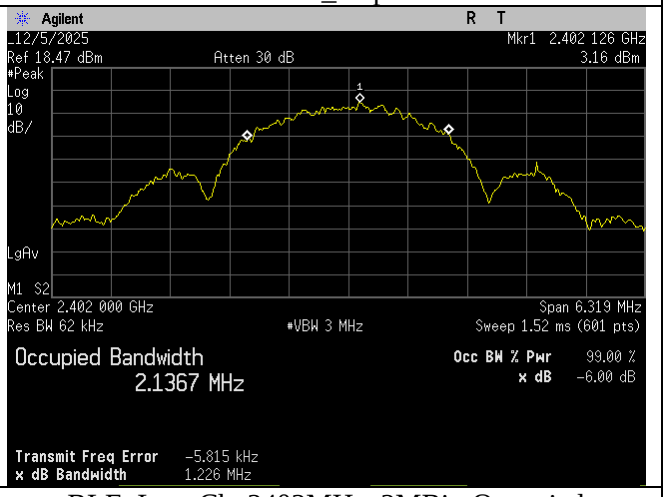
BLE_Low Ch_2402MHz_1MBit_Occupied Bandwidth_-6dB



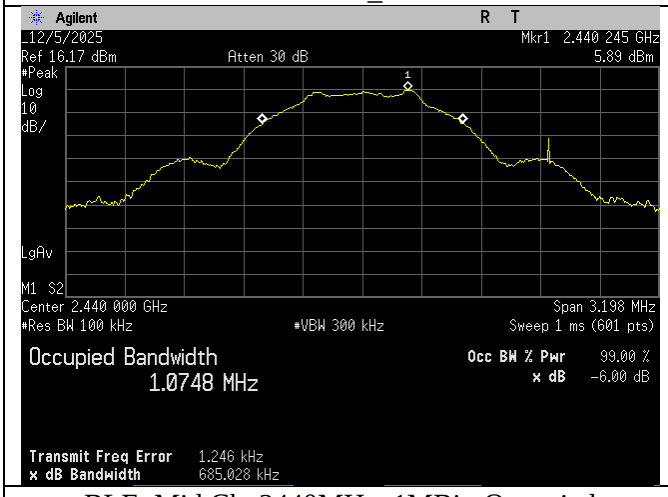
BLE_Low Ch_2402MHz_1MBit_Occupied Bandwidth_99 percent



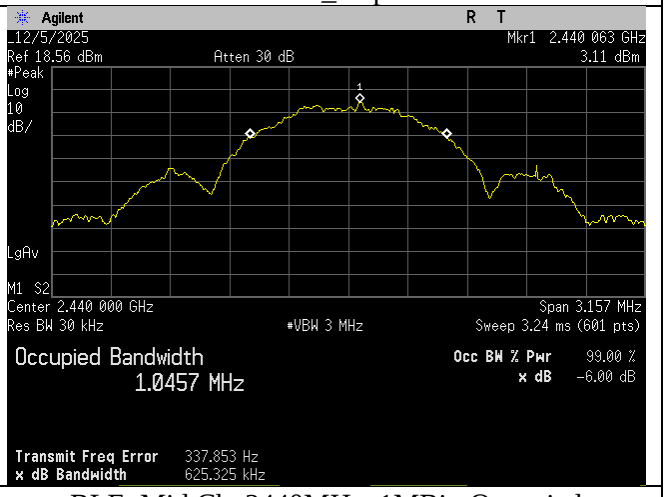
BLE_Low Ch_2402MHz_2MBit_Occupied Bandwidth_-6dB



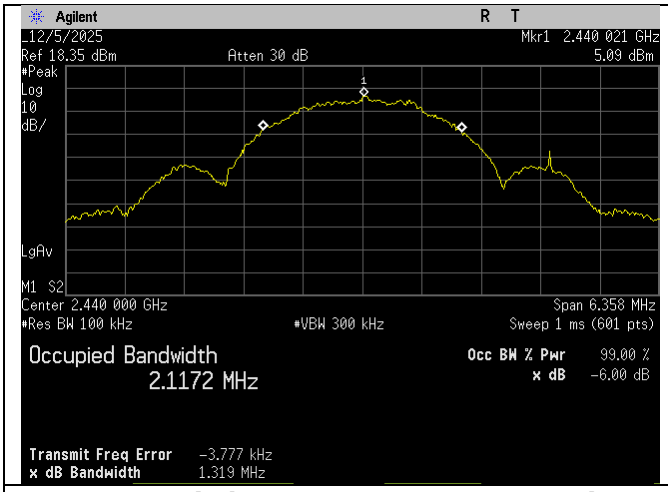
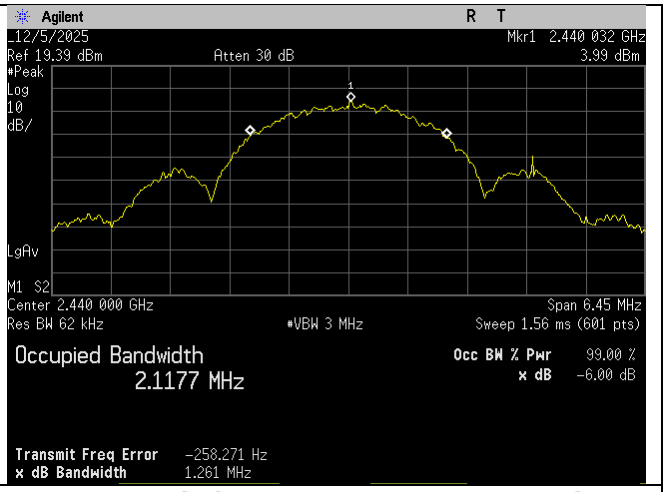
BLE_Low Ch_2402MHz_2MBit_Occupied Bandwidth_99 percent



BLE_Mid Ch_2440MHz_1MBit_Occupied Bandwidth_-6dB



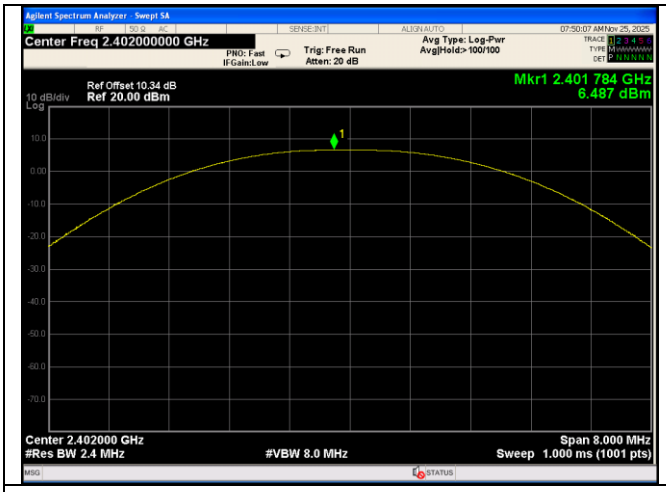
BLE_Mid Ch_2440MHz_1MBit_Occupied Bandwidth_99 percent

	
BLE_Mid Ch_2440MHz_2MBit_Occupied Bandwidth_-6dB	BLE_Mid Ch_2440MHz_2MBit_Occupied Bandwidth_99 percent

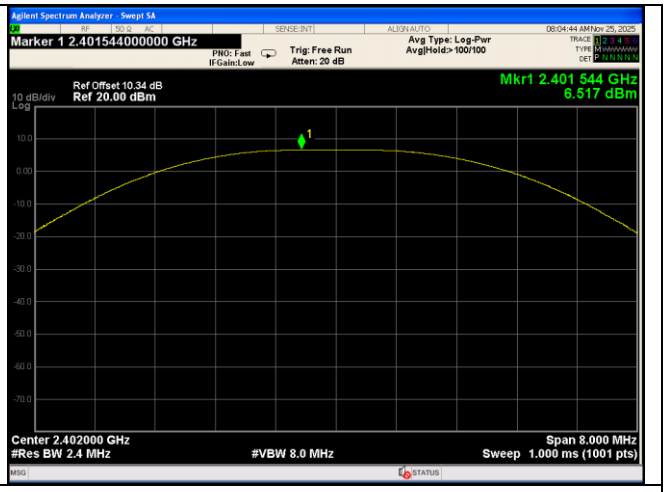
13 Annex B – Maximum Output Power

Naming Convention

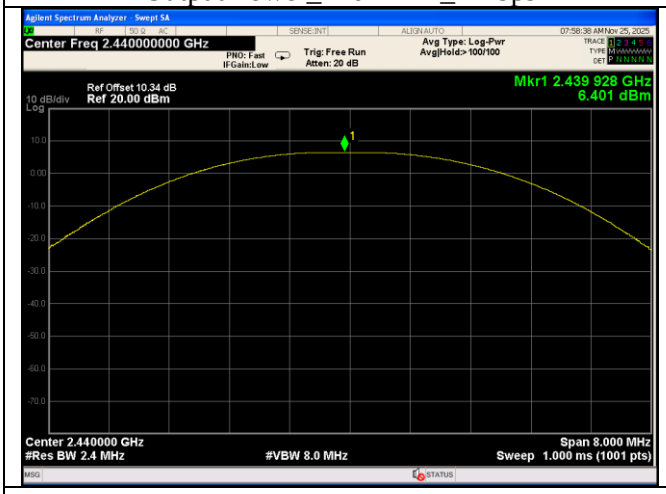
Measurement (Output Power)_Frequency (MHz)_Rate (Mbps)



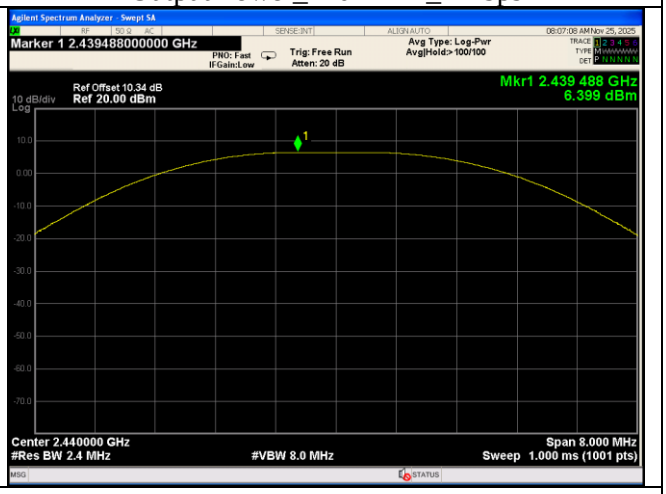
Output Power_2402MHz_1Mbps



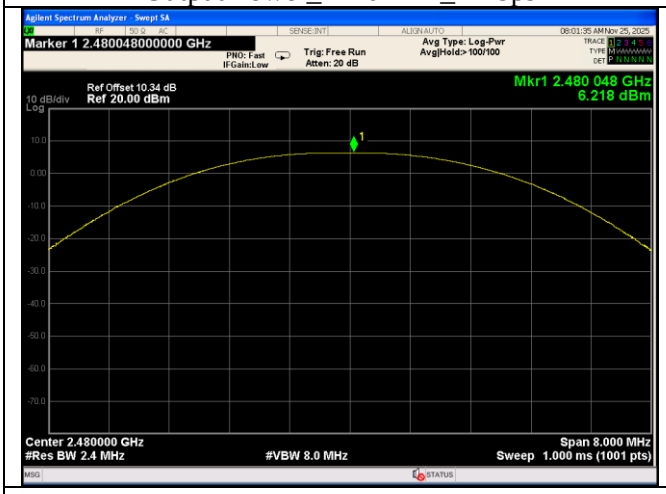
Output Power_2402MHz_2Mbps



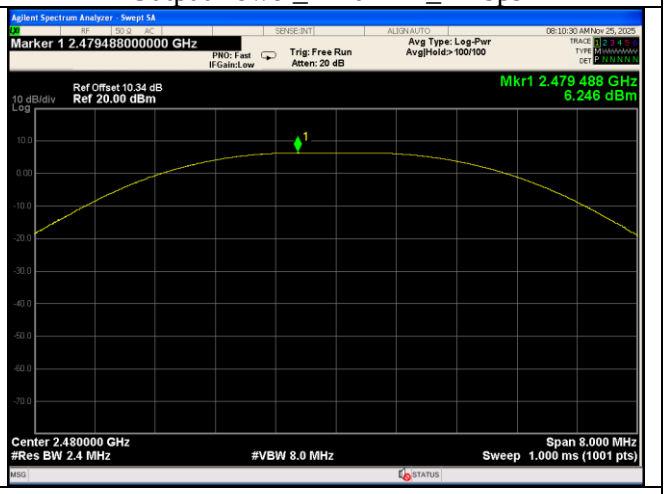
Output Power_2440MHz_1Mbps



Output Power_2440MHz_2Mbps



Output Power_2480MHz_1Mbps

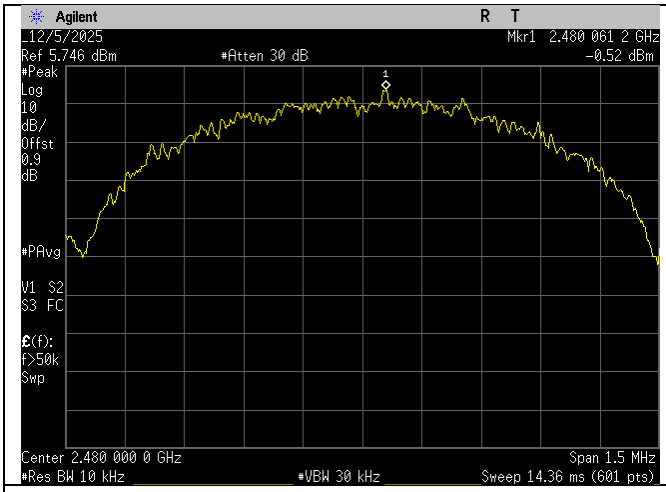


Output Power_2480MHz_2Mbps

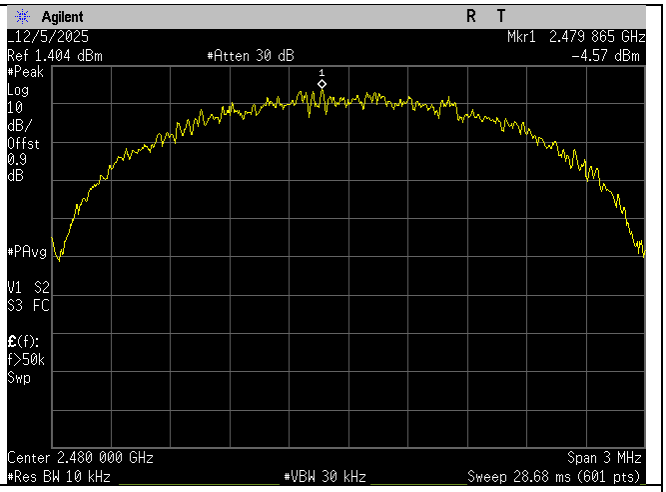
14 Annex C – Peak Power Spectral Density

Naming Convention

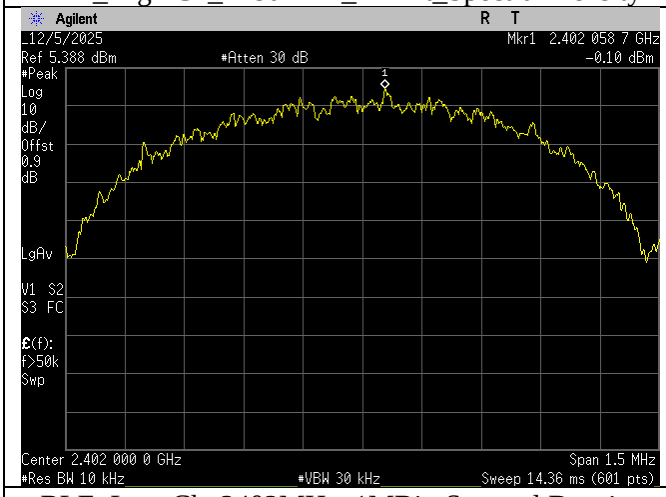
Radio (BLE)_Channel (Low Ch, Mid Ch, High Ch)_Frequency (MHz)_Mode (Mbit)_Measurement (Spectral Density)



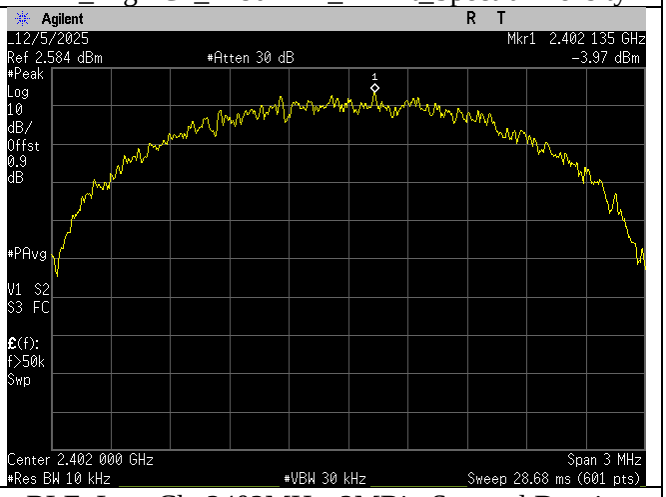
BLE_High Ch_2480MHz_1MBit_Spectral Density



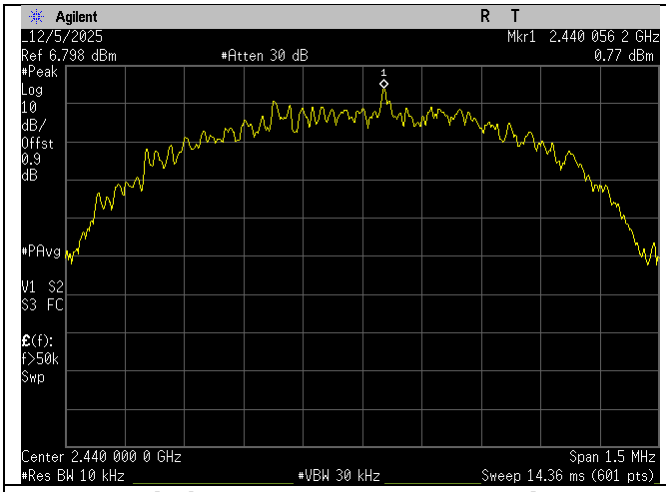
BLE_High Ch_2480MHz_2MBit_Spectral Density



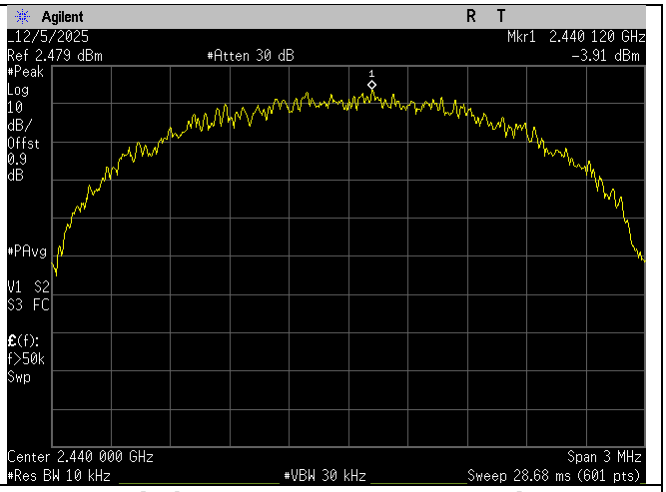
BLE_Low Ch_2402MHz_1MBit_Spectral Density



BLE_Low Ch_2402MHz_2MBit_Spectral Density



BLE_Mid Ch_2440MHz_1MBit_Spectral Density

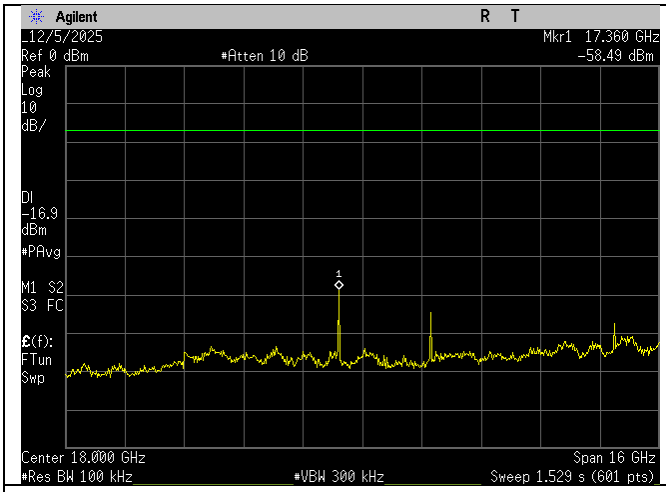


BLE_Mid Ch_2440MHz_2MBit_Spectral Density

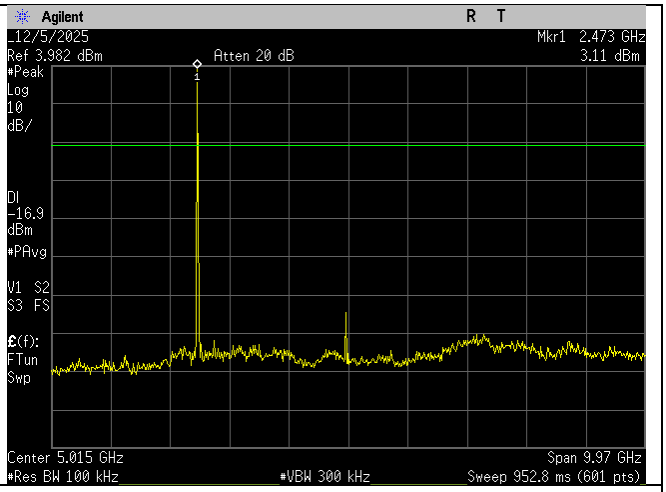
15 Annex D – 100 kHz Spurious Emissions at Antenna Terminal (dBc)

Naming Convention

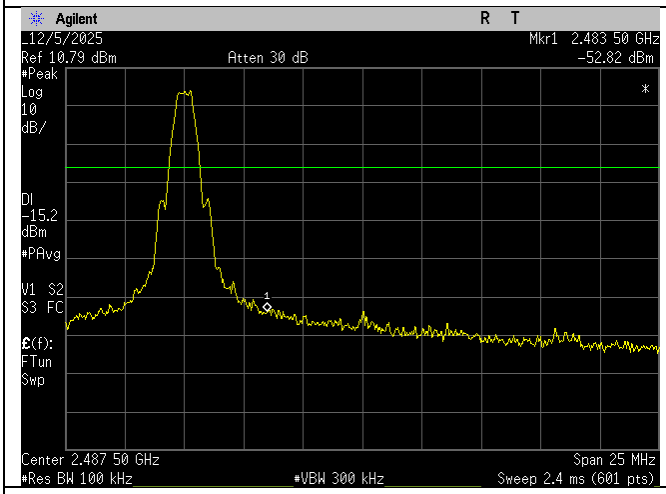
Radio (BLE)_Channel (Low Ch, Mid Ch. High Ch)_Frequency (MHz)_Rate(Mbit)_Measurement (dBc)_Range (MHz, GHz, Lower Band Edge, Upper Band Edge)



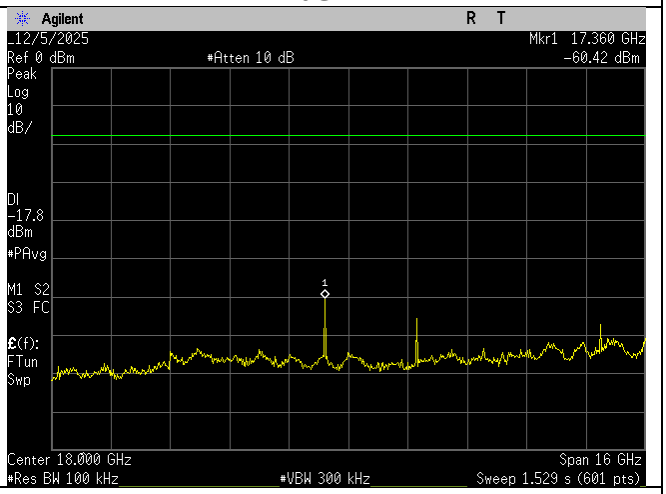
BLE_High Ch_2480MHz_1MBit_-20dBc_10-26GHz



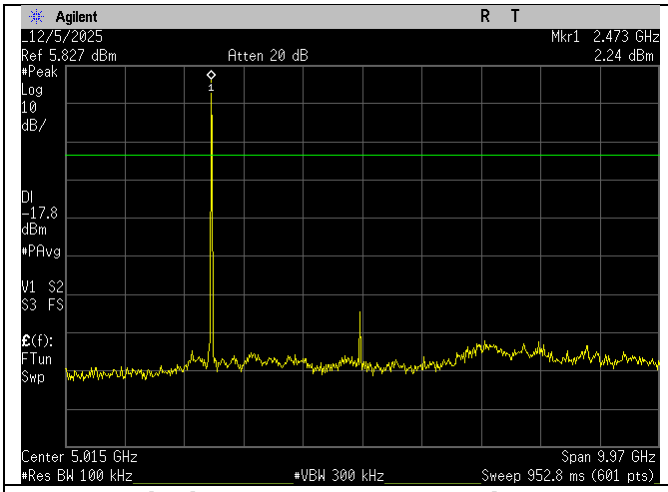
BLE_High Ch_2480MHz_1MBit_-20dBc_30MHz-10GHz



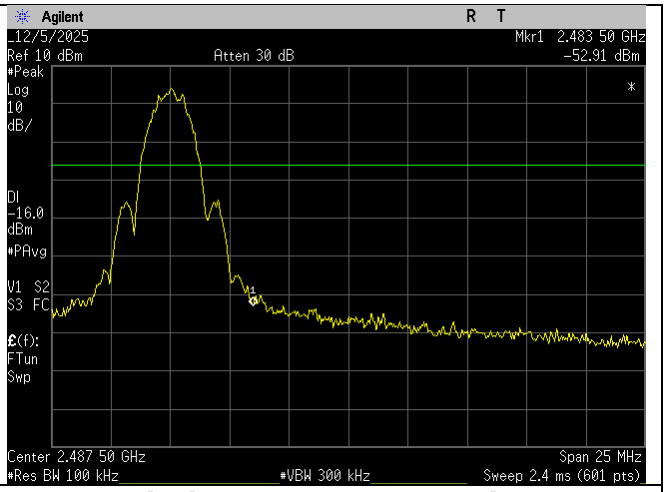
BLE_High Ch_2480MHz_1MBit_-20dBc_Upper Band Edge



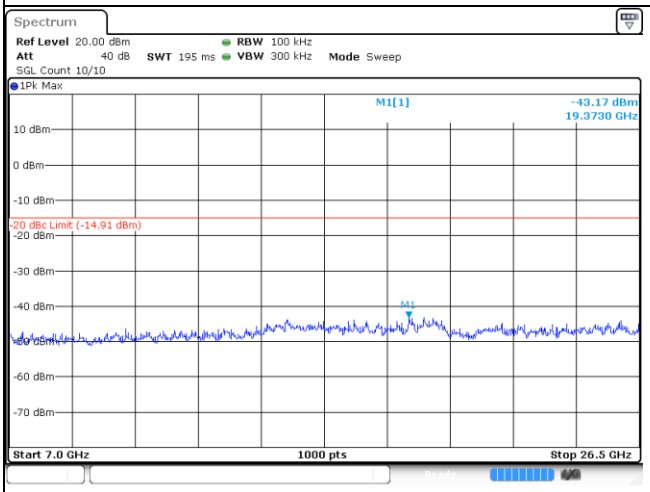
BLE_High Ch_2480MHz_2MBit_-20dBc_10-26GHz



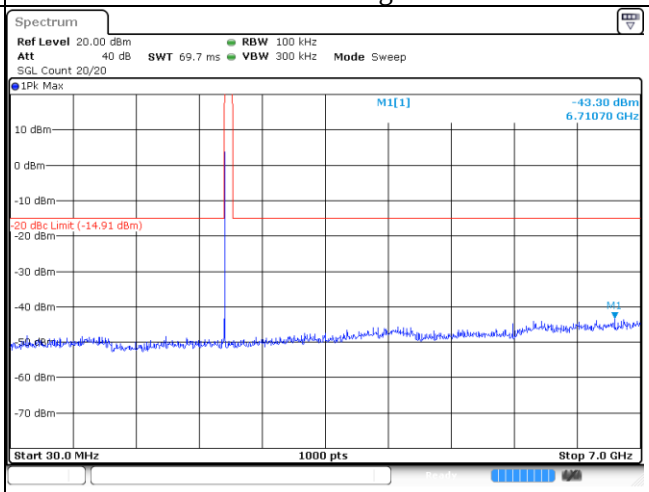
BLE_High Ch_2480MHz_2MBit_-20dBc_30MHz-10GHz



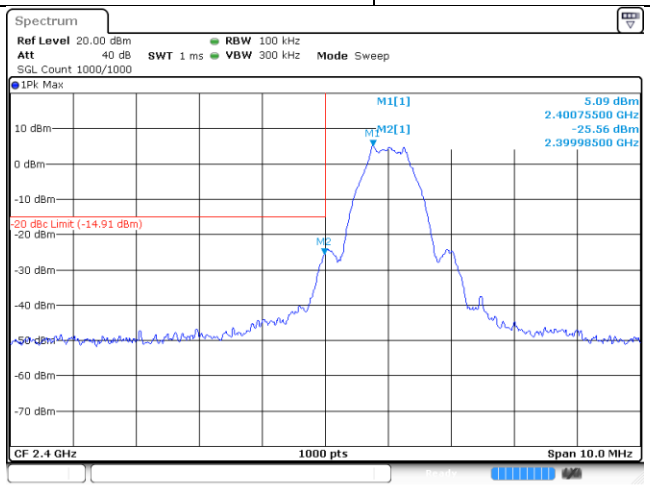
BLE_High Ch_2480MHz_2MBit_-20dBc_Upper Band Edge



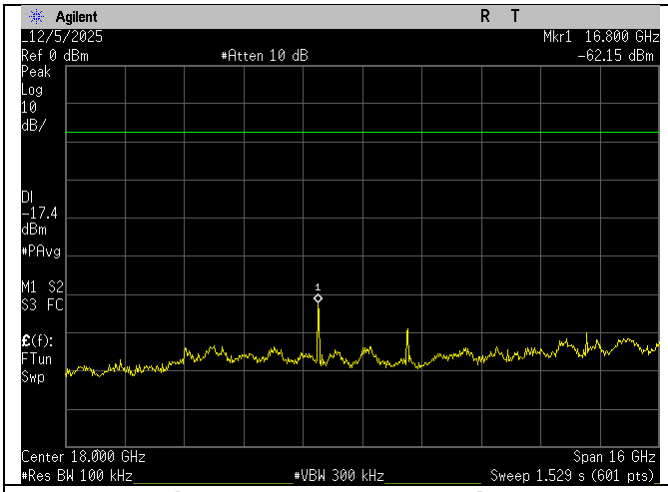
BLE_Low Ch_2402MHz_1MBit_-20dBc_7-26.5GHz



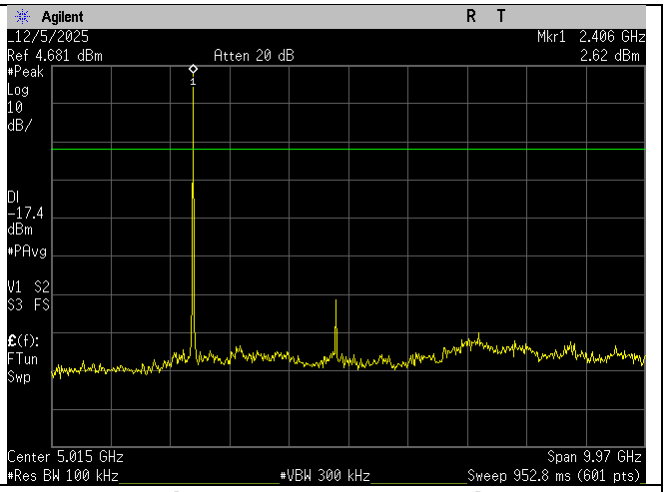
BLE_Low Ch_2402MHz_1MBit_-20dBc_30MHz-7GHz



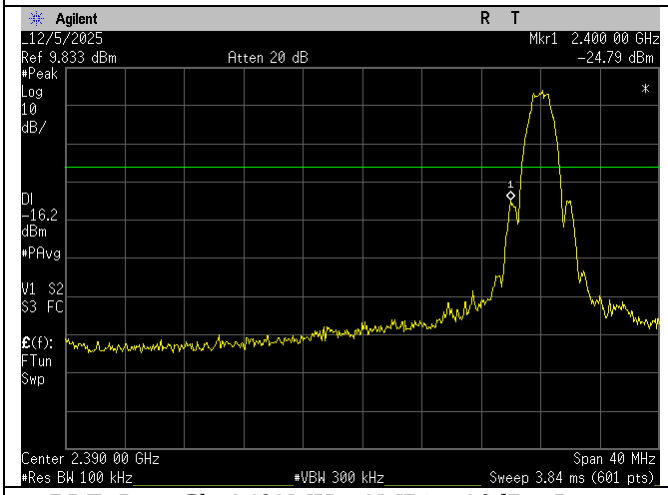
BLE_Low Ch_2402MHz_1MBit_-20dBc_Lower Band Edge



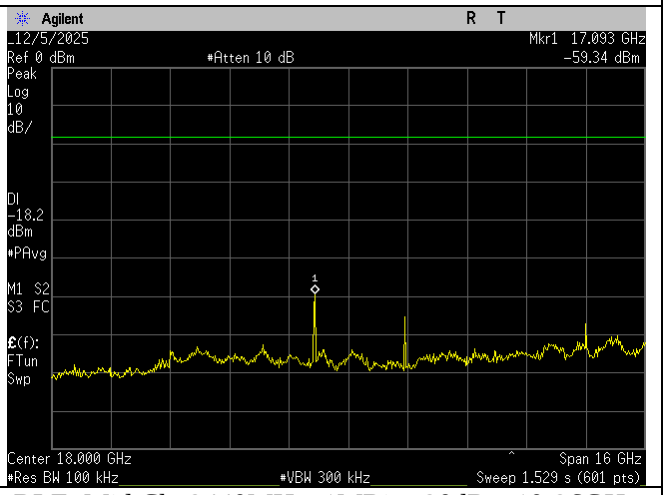
BLE_Low Ch_2402MHz_2MBit_-20dBc_10-26GHz



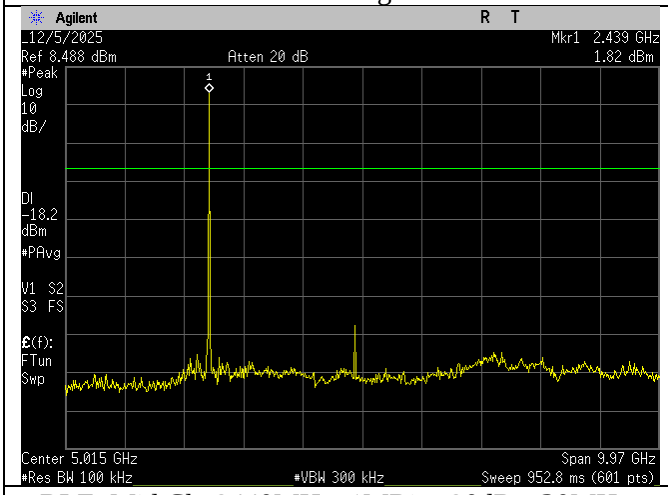
BLE_Low Ch_2402MHz_2MBit_-20dBc_30MHz-10GHz



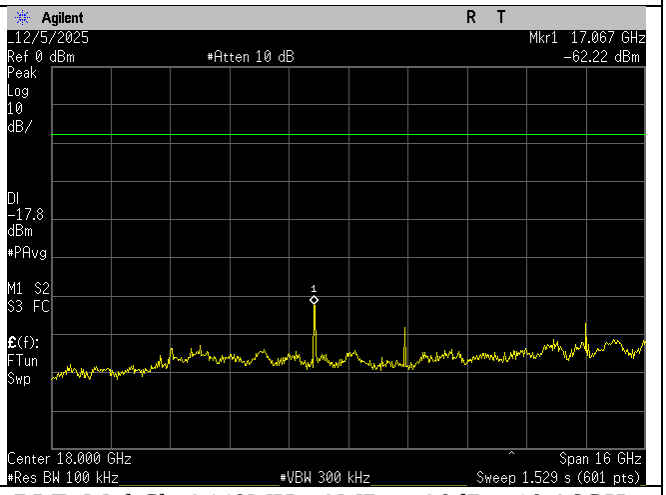
BLE_Low Ch_2402MHz_2MBit_-20dBc_Lower Band Edge



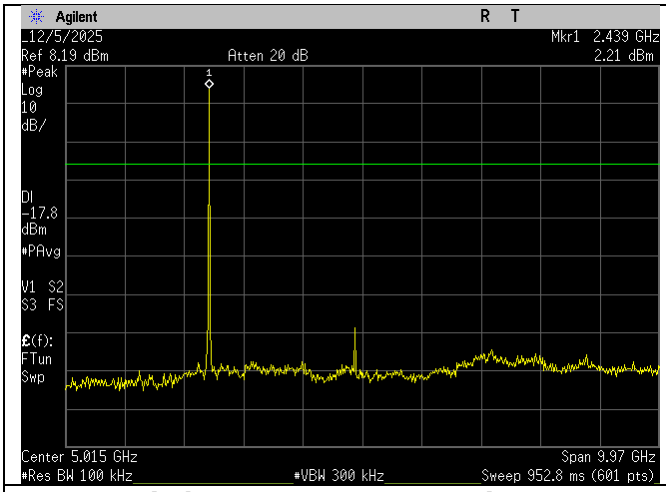
BLE_Mid Ch_2440MHz_1MBit_-20dBc_10-26GHz



BLE_Mid Ch_2440MHz_1MBit_-20dBc_30MHz-10GHz



BLE_Mid Ch_2440MHz_2MBit_-20dBc_10-26GHz

	
BLE_Mid Ch_2440MHz_2MBit_-20dBc_30MHz-10GHz	

16 Annex E – FCC §15.209 Band Edges Measurement

Below measurements are in units of dBuV/m at 3meters. These measurements are performed conducted in lieu of radiated as permitted by ANSI C63.10-2020. The formulas presented below were used in making such conversions.

Above 1 GHz:

$$E[dB\mu V/m] = EIRP[dBm] - 20 \log (d[m]) + 104.77$$

where E is field strength and d is distance at which the field strength limit is specified in the applicable requirements.

$$E[dB\mu V/m] = EIRP[dBm] + 95.2$$

for d = 3 m.

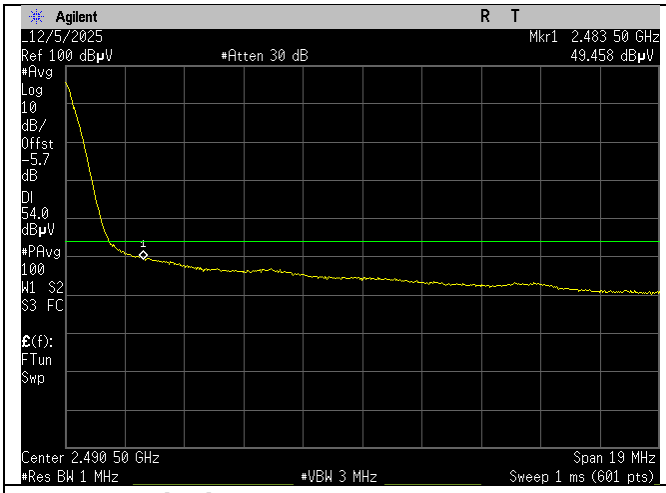
Straight conversion between E[dBuV/m] and EIRP[dBm] = 107, thus offset for dBuV/m at 3meters is

E[dBμV/m] = EIRP[dBm] + 95.2 - 107 + Antenna Gain (dBi)

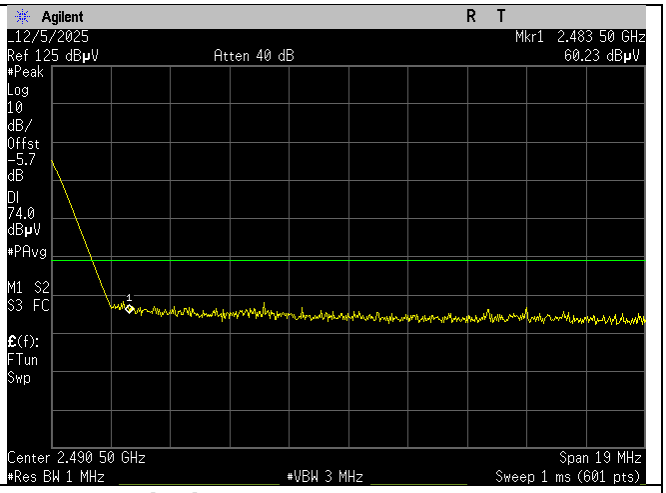
Note: Cable loss was also accounted for in reference level offset

Naming Convention

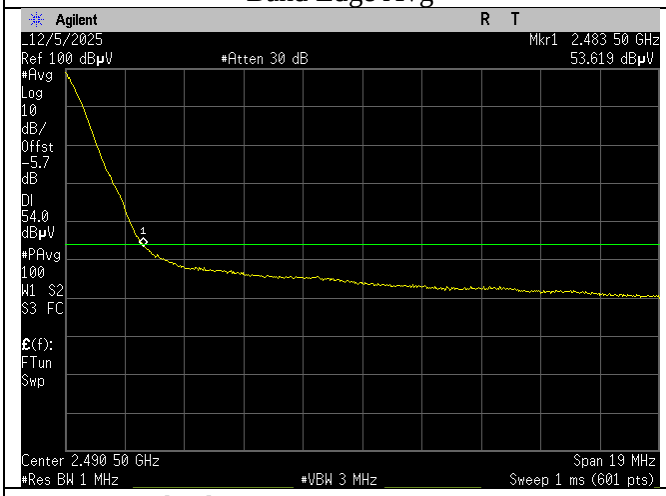
Radio (BLE)_Channel (Low Ch, Mid Ch. High Ch)_Frequency (MHz)_Rate(Mbit)_Measurement (15.209)_Range (Lower Band Edge, Upper Band Edge)



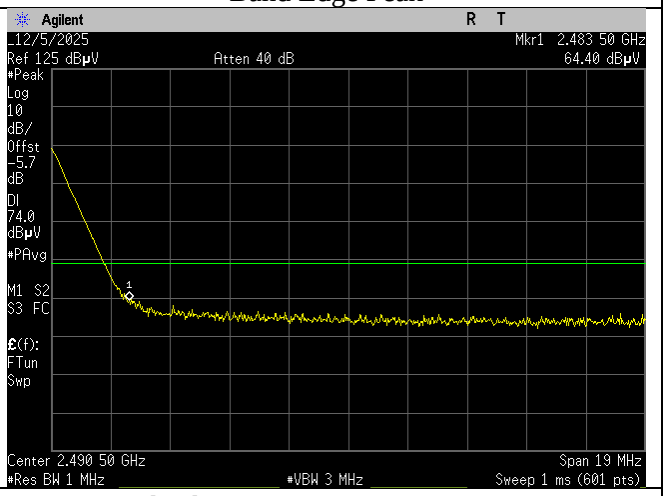
BLE_High Ch_2480MHz_1MBit_15.209_Upper Band Edge Avg



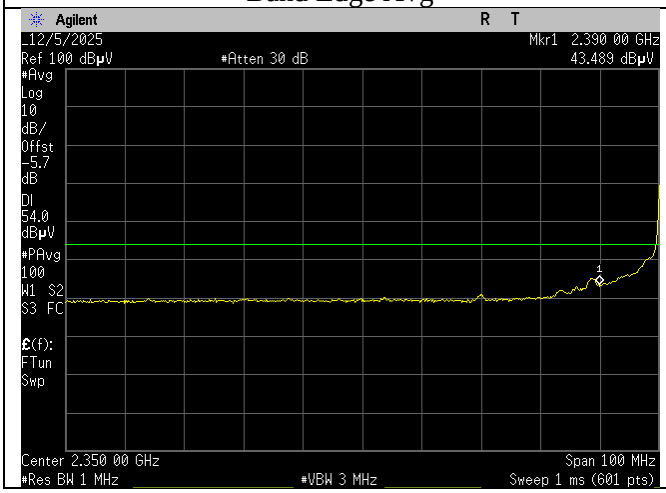
BLE_High Ch_2480MHz_1MBit_15.209_Upper Band Edge Peak

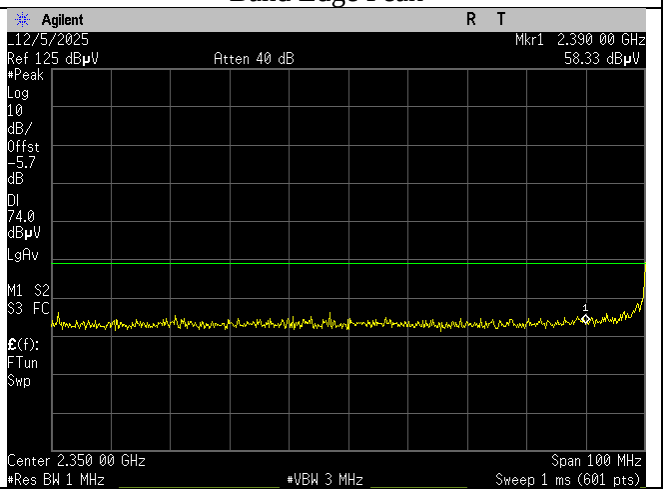


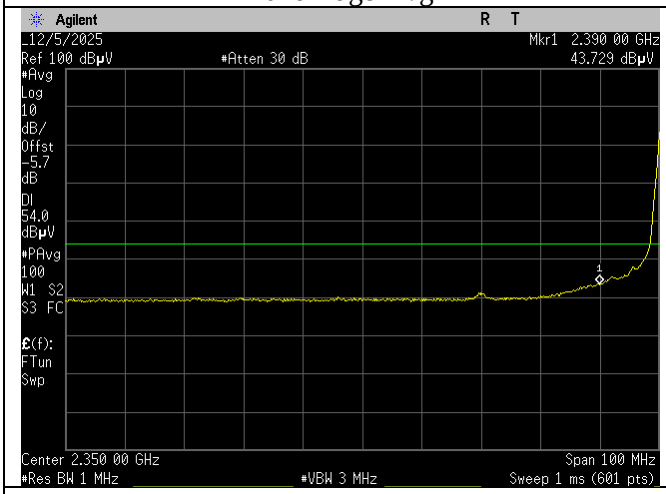
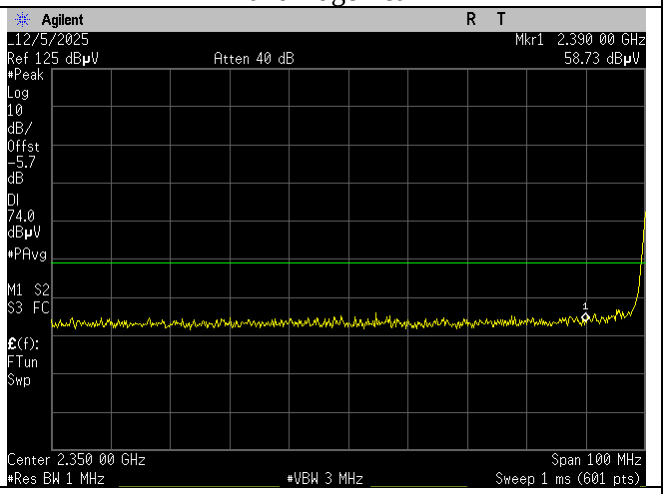
BLE_High Ch_2480MHz_2MBit_15.209_Upper Band Edge Avg



BLE_High Ch_2480MHz_2MBit_15.209_Upper Band Edge Peak





BLE_Low Ch_2402MHz_1MBit_15.209_Lower Band Edge Avg	BLE_Low Ch_2402MHz_1MBit_15.209_Lower Band Edge Peak
	
BLE_Low Ch_2402MHz_2MBit_15.209_Lower Band Edge Avg	BLE_Low Ch_2402MHz_2MBit_15.209_Lower Band Edge Peak

17 Appendix A (Normative) – EUT Test Setup Photographs

Please refer to the attachment.

18 Appendix B (Normative) – EUT External Photographs

Please refer to the attachment.

19 Appendix C (Normative) – EUT Internal Photographs

Please refer to the attachment.

20 Appendix D (Normative) – A2LA Electrical Testing Certificate

Accredited Laboratory

A2LA has accredited

BAY AREA COMPLIANCE LABORATORIES CORP.

Sunnyvale, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets A2LA R222 - Specific Requirements EPA ENERGY STAR Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 13th day of September 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3297.02
Valid to September 30, 2026

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

Please follow the web link below for a full ISO 17025 scope

https://www.a2la.org/scopepdf/3297-02.pdf

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