



FCC PART 15, SUBPART C

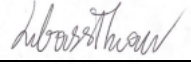
TEST REPORT

For

Silvus Technologies, Inc.

10990 Wilshire Blvd
Los Angeles, CA 90024

FCC ID: N2S-SC448-235470

Report Type: Original Report	Model: SC4480E-235470-SBST Similar Models: SC4480E-235470F-SBST
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* 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	R2505273-247	Original Report	2025-10-27

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test report is prepared on behalf of *Silvus Technologies, Inc.*, and their product model: SC4480E-235470-SBST, S/N: SC44-112398, FCC ID: N2S-SC448-235470, the “EUT” as referred to in this report. The EUT is a 2.4GHz StreamCaster SC4400E radio series.

All models have been declared by the manufacturer to be electrically identical and model SC4480E-235470-SBST was selected for testing. Please refer to the manufacturer declaration of similarity letter in Appendix D of this report.

Model Number	SC4480E-235470-SBST
Similar Models	SC4480E-235470F-SBST
FCC ID	N2S-SC448-235470
Bandwidth	10 MHz
Antenna Gain	2.15 dBi

1.2 Mechanical Description of EUT

The EUT measures approximately 13.5cm (L) x 11.5cm (W) x 5cm (H) and weighs approximately 0.85kg.

The data gathered was from a production sample provided by Silvus Technologies, Inc. with S/N: SC44-112398

1.3 Objective

This report is prepared on behalf of *Silvus Technologies, Inc.* in accordance with Part 2, Subpart J, and Part 15, Subpart C of the Federal Communication Commission’s rules.

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, Power Spectral Density, and 100 kHz spurious emissions.

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 Innovation, Science, and Economic Development Canada (ISED) a 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

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):
 - a. All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
 - b. All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
 - c. All Telephone Terminal Equipment within FCC Scope C.
2. Canada (ISED Canada) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II:
 - a. Phase I Designation Letter
 - b. 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:
 - a. All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
 - b. 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:
 - a. NIST Phase I Scope Recognition Letter from OFCA for BACL –US0057
 - b. OFCA Phase II Designation Letter
5. For Japan (Ministry of Communications):
 - a. NIST Japan Recognition
 - b. MIC Telecommunication Business Law (Terminal Equipment):
 1. All Scope A1 – Terminal Equipment for the Purpose of Calls;
 2. All Scope A2 – Other Terminal Equipment
 - c. 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
 - d. Japan VCCI – Voluntary Control Council for Interference US-Japan Telecom Treaty (VCCI Side Letter)
 1. VCCI Certificate
 - d. Japan Registered Certification Body
 1. RCB Recognition Letter
6. European Union:
 1. Radio Equipment Directive [RED] 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)

2. 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:
 1. Phase I Designation Letter
8. Chinese Taipei (Republic of China – Taiwan):
 1. NCC (National Communications Commission) APEC Tel MRA -Phase I
9. Republic of Korea (Ministry of Communications – Radio Research Laboratory) APEC Tel MRA -Phase I:
 1. NIST Phase I Scope Update Notification Letter from Korea for BACL
10. Vietnam APEC Tel MRA -Phase I (page 13)
 1. Vietnam (MIC) NIST Phase I Scope
11. Indonesia SDPPI (page 6)
 1. Phase I Listing
12. Israel Phase I
 1. 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
 1. NIST Phase I New Recognition Letter from Mexico for BACL – US0057
15. Taiwan (BSMI) Phase 1 Designation Letter and designation form.
 1. NIST Phase I Scope Update Designation Letter to BSMI for BACL – US0057
 2. 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 exercising software used during testing was “PuTTY”, provided by Silvus Technologies, Inc. The software is compliant with the standard requirements being tested against.

Channel Bandwidth	Channel	Frequency (MHz)	Power Setting
10 MHz	Low	2416	g48
	Middle	2440	g48
	High	2457	g48

2.3 Duty Cycle Correction Factor

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

Preferably, all measurements of maximum conducted (average) output power will be performed with the EUT transmitting continuously (i.e., with a duty cycle of greater than or equal to 98%). When continuous operation cannot be realized, then the use of sweep triggering/signal gating techniques can be utilized to ensure that measurements are made only during transmissions at the maximum power control level. Such sweep triggering/signal gating techniques will require knowledge of the minimum transmission duration (T) over which the transmitter is on and is transmitting at it's maximum power control level for the tested mode of operation. Sweep triggering/signal gating techniques can then be used if the measurement/sweep time of the analyzer can be set such that it does not exceed T at any time that data is being acquired (i.e., no transmitter off-time is to be considered).

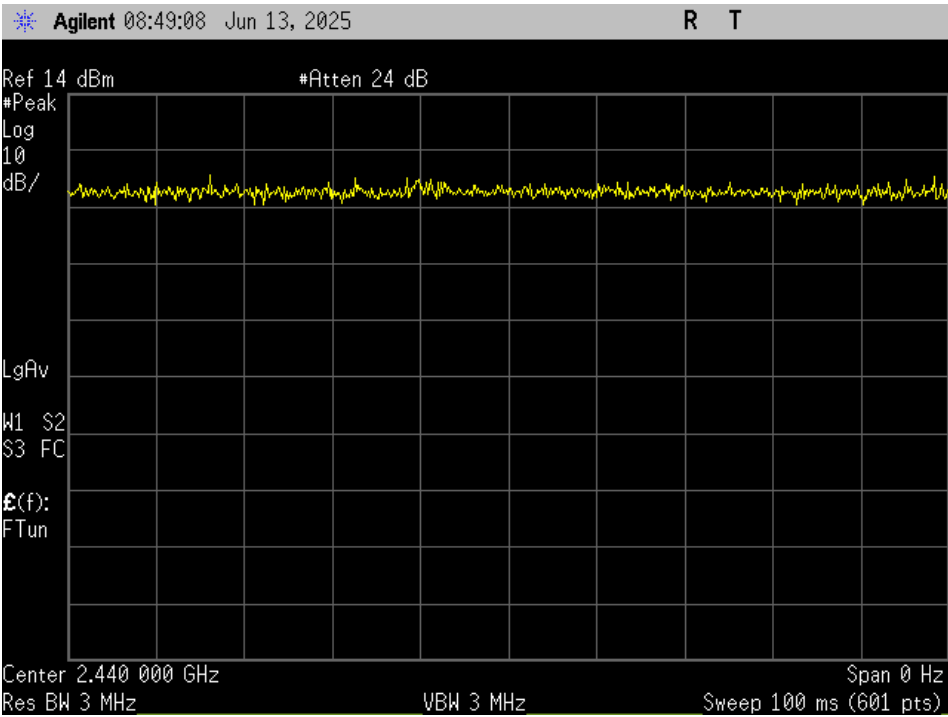
Bandwidth	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
10 MHz	-	-	100	-

Duty Cycle = On Time (ms)/ Period (ms)

Duty Cycle Correction Factor (dB) = $10 \cdot \log(1/\text{Duty Cycle})$

Please refer to the following plots.

10 MHz



2.4 Equipment Modification

No modifications were made to the EUT during testing.

2.5 Local Support Equipment

N/A

2.6 Remote Support Equipment

Manufacturer	Description	Model	Serial Number
HP	Support Laptop	14-dq0020nr	5CD44250CP
Bren-Tronics, Inc.	Rechargeable Li-Ion Batteries	BT-70716BG	20135

2.7 Power Supply and Line Filters

N/A

2.8 Interface Ports and Cabling

Cable Description	Length (m)	From	To
Ethernet Cable	< 1m	Support Laptop	EUT

3 Summary of Test Results

FCC Rules	Description of Test	Results
FCC §15.203	Antenna Requirements	Compliant
FCC §2.1091, §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)	Power Spectral Density	Compliant
FCC §2.1051, §15.247 (d)	Spurious Emissions and bandedges at Antenna Terminal (dBc)	Compliant

Note¹: AC line conducted emissions test not required since EUT is battery powered.

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	Vendor PN	Silvus PN	Antenna Type	Frequency Range (MHz)	Maximum Antenna Gain (dBi)
External	1001-071	AOV2D235515G-TM	Omnidirectional	2100-2500	2.15

The EUT is equipped with a TNC antenna connector, which complies with the requirements of FCC Part 15.203.

Note: Antenna info provided by customer

5 FCC §2.1091, FCC §15.247(i) – RF Exposure

5.1 Applicable Standards

According to FCC §15.247(i), Radio frequency devices operating under the provisions of this part are subject to the radio frequency radiation exposure requirements specified in §§ 1.1307(b), 1.1310, 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

According to FCC §2.1091 and §1.1310(e)(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.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* (100)	30
1.34-30	824/f	2.19/f	* (180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

5.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

5.3 MPE Result

Worst case: 2416 MHz

Maximum output power at antenna input terminal (dBm): 27.65

Maximum output power at antenna input terminal (mW): 582.10

Prediction distance (cm): 20

Prediction frequency (MHz): 2416

Maximum Directional Antenna Gain, typical (dBi): 8.17

Maximum Antenna Gain (numeric): 6.56

Power density of prediction frequency at 20.0 cm (mW/cm²): 0.76

FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1.0

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 20 cm is 0.76mW/cm². Limit is 1 mW/cm².

Note: gain included is array gain, calculated from 2.15dbi + 10*log(4) = 8.17dbi

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 μ H/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 and ISSED RSS-Gen §8.8 limits.

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

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 Correction Factor (CF) to indicated Amplitude (Ai) reading. The basic equation is as follows:

$$CA = Ai + CF$$

For example, a corrected amplitude of 46.2 dBuV = Indicated Reading (32.5 dBuV) + Correction Factor (13.7 dB)

The Correction Factor is calculated by adding Cable loss (CL) and attenuation of the impulse limiter and the high pass filter. The basic equation is as follows:

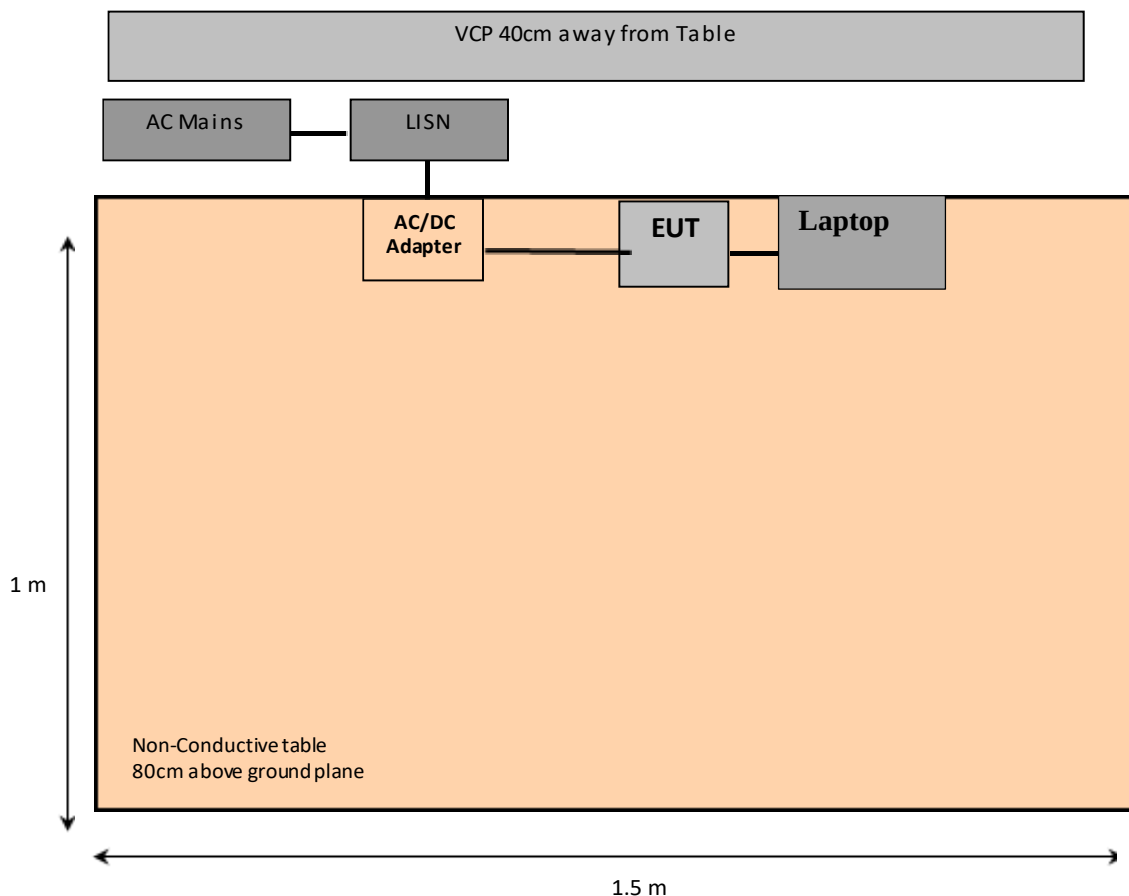
$$CF = CL + \text{Attenuator}$$

For example, a corrected amplitude of 13.7 dB = Cable Loss (3.7 dB) + Attenuation (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:

$$\text{Margin} = \text{Corrected Amplitude} - \text{Limit}$$

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
681	Rohde & Schwarz	Impulse Limiter	ESH3-Z2	101962	2025-03-11	6 months
732	FCC	LISN	FCC-LISN-50-25-2-10-CISPR16	160129	2024-09-13	1 year
725	Solar Electronics	High Pass Filter	Type 7930-100	7930150203	2025-03-11	6 months
1425	Pasternack	Ground Plane RG58 Coaxial Cable	PE3441-500CM	NA	2025-01-07	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”.

6.7 Test Environmental Conditions

Temperature:	21 to 23 °C
Relative Humidity:	59 to 60.34 %
ATM Pressure:	101.6 kPa

The testing was performed by Libass Thiaw on 2025-06-13 on ground plane.

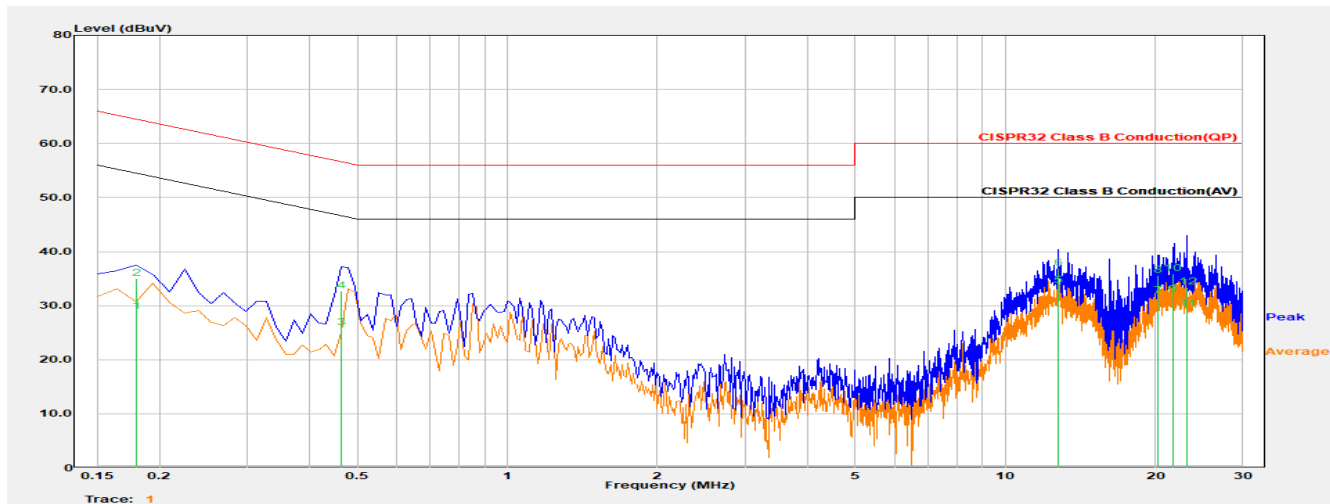
6.8 Summary of Test Results

According to the recorded data in following table, the EUT complied with the FCC 15C and ISEDC RSS-Gen standard’s conducted emissions limits, with the margin reading of:

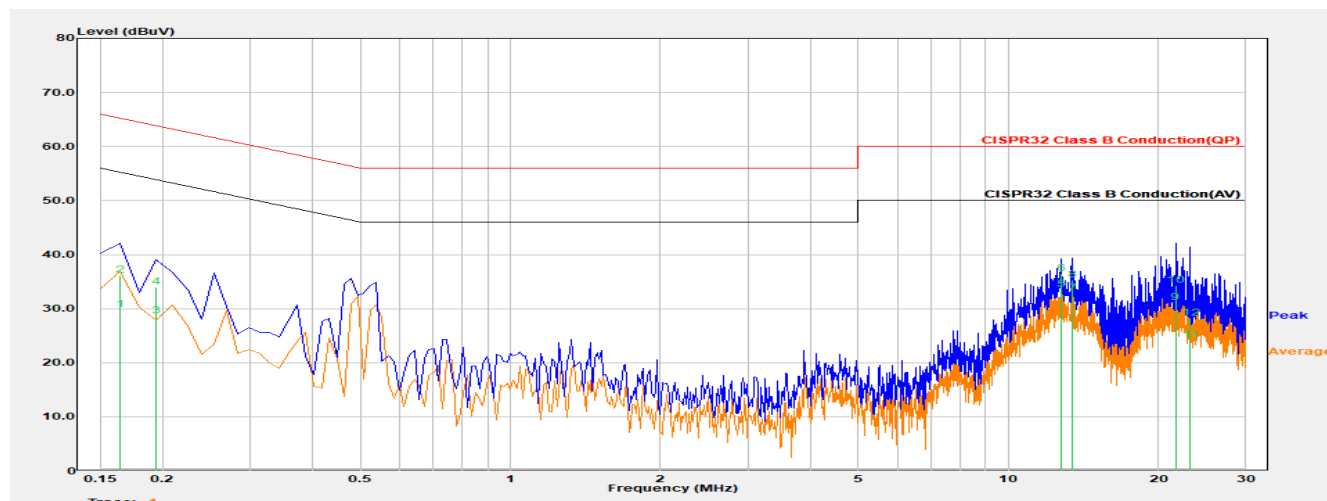
Worst Case – AC Line (via AC/DC Adapter): 120V, 60Hz			
Margin (dB)	Frequency (MHz)	Conductor Mode (Live/Neutral)	Range (MHz)
-16.32	12.747	Live	0.15 to 30

6.9 Conducted Emissions Test Plots and Data

2416MHz 120V60Hz Live



Frequency (MHz)	Ai. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBμV)	Limit (dBμV)	Margin (dB)	Detector
0.180	15.91	13.03	28.94	54.49	-25.55	Average
0.180	22.04	13.03	35.08	64.49	-29.42	QP
0.463	14.98	10.90	25.88	46.63	-20.75	Average
0.463	21.74	10.90	32.64	56.63	-24.00	QP
12.747	23.23	10.45	33.68	50.00	-16.32	Average
12.747	26.46	10.45	36.91	60.00	-23.09	QP
20.194	21.12	10.77	31.89	50.00	-18.11	Average
20.194	24.81	10.77	35.58	60.00	-24.42	QP
21.657	21.10	10.85	31.94	50.00	-18.06	Average
21.657	25.00	10.85	35.84	60.00	-24.16	QP
23.135	18.38	10.94	29.32	50.00	-20.68	Average
23.135	22.51	10.94	33.45	60.00	-26.55	QP

216MHz 120V60Hz Neutral

Frequency (MHz)	Ai. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBμV)	Limit (dBμV)	Margin (dB)	Detector
0.165	16.51	13.29	29.79	55.21	-25.42	Average
0.165	22.90	13.29	36.19	65.21	-29.03	QP
0.195	15.87	12.84	28.71	53.83	-25.12	Average
0.195	21.21	12.84	34.05	63.83	-29.78	QP
12.747	23.03	10.48	33.50	50.00	-16.50	Average
12.747	25.94	10.48	36.41	60.00	-23.59	QP
13.478	22.30	10.50	32.80	50.00	-17.20	Average
13.478	24.85	10.50	35.35	60.00	-24.65	QP
21.657	20.16	10.92	31.08	50.00	-18.92	Average
21.657	23.36	10.92	34.28	60.00	-25.72	QP
23.120	13.20	11.02	24.21	50.00	-25.79	Average
23.120	17.21	11.02	28.22	60.00	-31.78	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	16.42 – 16.423	960 – 1240	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	1300 – 1427	5.35 – 5.46
2.1735 – 2.1905	25.5 – 25.67	1435 – 1626.5	7.25 – 7.75
4.125 – 4.128	37.5 – 38.25	1645.5 – 1646.5	8.025 – 8.5
4.17725 – 4.17775	73 – 74.6	1660 – 1710	9.0 – 9.2
4.20725 – 4.20775	74.8 – 75.2	1718.8 – 1722.2	9.3 – 9.5
6.215 – 6.218	108 – 121.94	2200 – 2300	10.6 – 12.7
6.26775 – 6.26825	123 – 138	2310 – 2390	13.25 – 13.4
6.31175 – 6.31225	149.9 – 150.05	2483.5 – 2500	14.47 – 14.5
8.291 – 8.294	156.52475 – 156.52525	2690 – 2900	15.35 – 16.2
8.362 – 8.366	156.7 – 156.9	3260 – 3267	17.7 – 21.4
8.37625 – 8.38675	162.0125 – 167.17	3.332 – 3.339	22.01 – 23.12
8.41425 – 8.41475	167.72 – 173.2	3.3458 – 3.358	23.6 – 24.0
12.29 – 12.293	240 – 285	3.600 – 4.400	31.2 – 31.8
12.51975 – 12.52025	322 – 335.4		36.43 – 36.5
12.57675 – 12.57725	399.9 – 410		Above 38.6
13.36 – 13.41	608 – 614		

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:

Below 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 = 2kHz / Sweep = Auto
Average(average bandedges): RBW = 1MHz / VBW = 1kHz / Sweep = Auto

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:

$$CA = \text{S.A. Reading} + \text{Correction Factor}$$

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:

$$\text{Correction Factor} = AF + CL + \text{Atten} - Ga$$

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:

$$\text{Margin} = \text{Corrected Amplitude} - \text{Limit}$$

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:

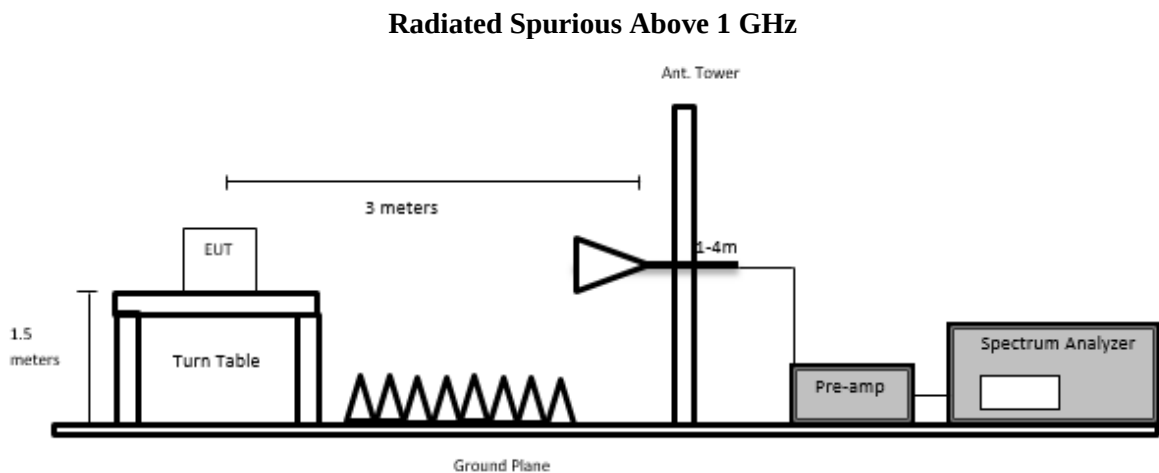
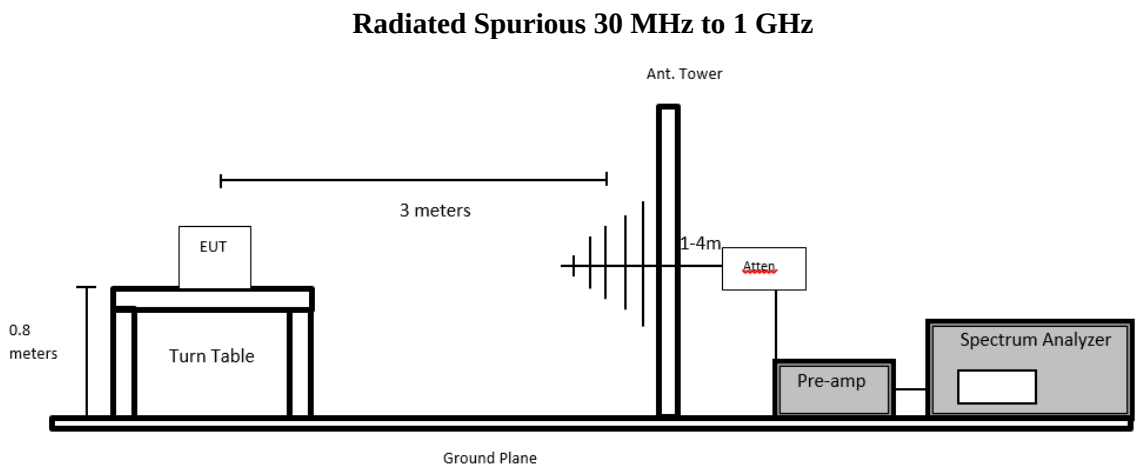
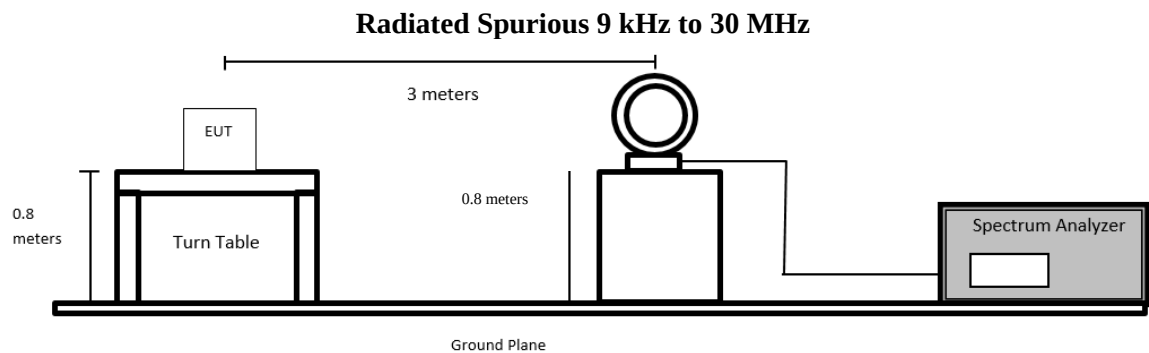
$$CA = Ai + AF + CL + \text{Atten} - Ga$$

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:

$$\text{Margin} = \text{Corrected Amplitude} - \text{Limit}$$

7.5 Test Setup Block Diagram



7.6 Test Equipment List and Details

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 Receiver, Multi-touch	N9038B	MY60180008	2025-01-03	1 year
393	COMPOWER	Active Loop Antenna, 10kHz-30MHz	AL-130	17043	2025-05-06	2 years
321	Sunol Sciences	Biconilog Antenna, 30MHz-1GHz	JB3	A020106-2; 1504	2023-12-18	2 years
1245	-	6dB Attenuator	PE7390-6	01182018A	2023-12-18	2 years
316	Sonoma Instruments	Preamplifier 10 kHz - 2.5 GHz	317	260406	2025-02-20	6 months
1248	Pasternack	RG214 COAX Cable	PE3062	-	2025-04-02	6 months
1246	Hewlet Packard	RF Limiter	11867A	01734	2025-04-07	1 year
1249	Time microwave	LMR-400 Cable Dc-3 GHz	AE13684	2k80612-5 6fts	2025-04-07	1 year
1192	ETS Lindgren	Horn Antenna, 1GHz-18GHz	3117	00218973	2024-10-23	2 years
1295	Carlisle	10m Ultra Low Loss Coaxial Cable	UFB142A-1-3937-200200	64639890912-001	2025-04-16	6 months
1449	BACL	Preamplifier, 0.1GHz-18GHz	BACL1313-A100M18G	4052472	2025-02-19	6 months
1546	Megaphase	SMA coax cable	TM26-S1S3-12	20869602 001	2025-03-05	6 months
91	Wisewave	Horn Antenna, 18GHz-26.5GHz	ARH-4223-02	10555-01	2025-05-06	2 years
1451	BACL	Preamplifier 18GHz-40GHz	BACL-1313-A1840	4052432	2025-02-19	6 months
1545	Megaphase	K-type coax cable	TM40-K1K3-12	20869601 001	2025-03-05	6 months
1334	Micro-Tronics	Notch Filter, 2.4GHz-2.5GHz	BRM50702	G361	2024-12-31	1 year
1522	Mini-Circuits	Low Pass Filter	15542 NLP-1200+	V UU42501636	2025-04-02	6 months

Note¹: cables, attenuators and notch filters included in the test set-up were checked each time before testing.

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

Temperature:	16.1 - 23 °C
Relative Humidity:	45.2 – 49.7 %
ATM Pressure:	102 – 102.5 kPa

The testing was performed by Libass Thiaw from 2025-05-30 to 2025-06-17 in 5m chamber 3.

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
-4.69	240.0113	Vertical	2440MHz

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

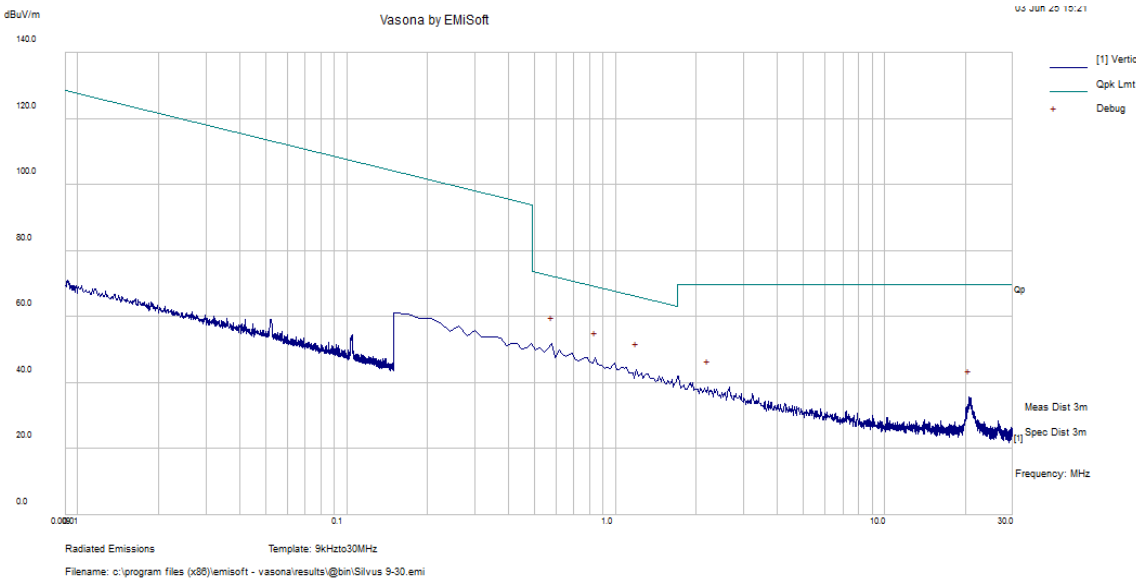
7.9 Radiated Emissions Test Results

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: See annex D for 15.209 band edge results.

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

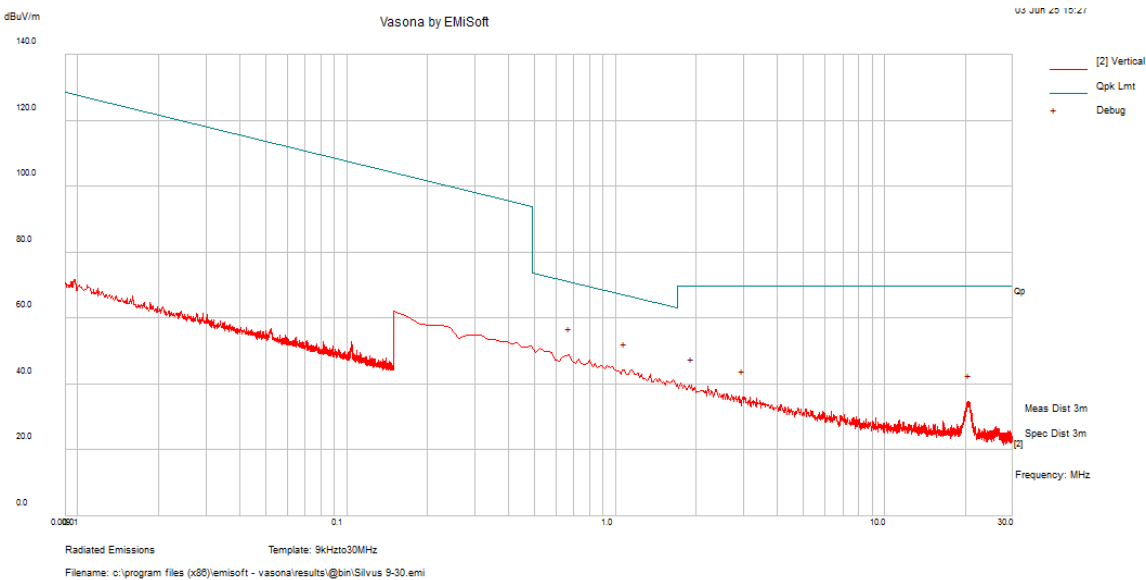
2416 MHz Horizontal



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
0.579094	41.79	10.18	51.97	72.35	-20.39	Peak
0.840281	37.31	10.08	47.39	69.12	-21.72	Peak
1.19475	33.77	10.12	43.9	66.06	-22.16	Peak
2.202188	28.21	10.35	38.57	69.54	-30.97	Peak
20.63456	26.33	9.32	35.64	69.54	-33.9	Peak

Note: The plot above shows that all peak emissions passed the quasi-peak limits.

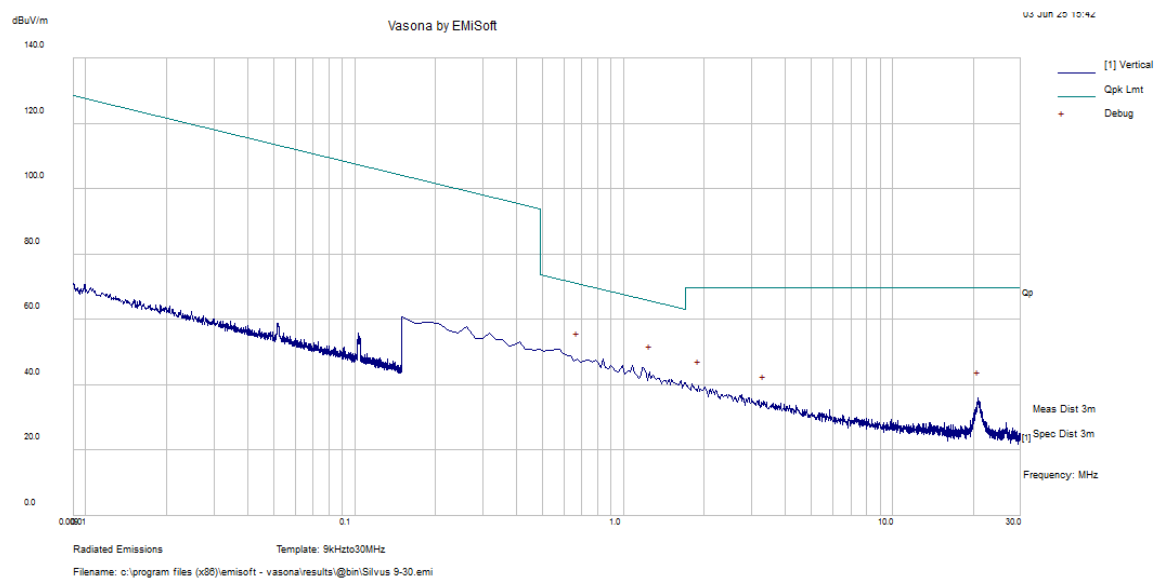
2416 MHz Vertical



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
0.672375	38.82	10.14	48.97	71.05	-22.09	Peak
1.082813	34.2	10.08	44.29	66.91	-22.63	Peak
1.922344	29.36	10.32	39.69	69.54	-29.85	Peak
2.98575	25.65	10.41	36.05	69.54	-33.49	Peak
20.67188	25.41	9.3	34.71	69.54	-34.83	Peak
10.199	16.18	10.5	26.68	69.54	-42.86	Peak

Note: The plot above shows that all peak emissions passed the quasi-peak limits.

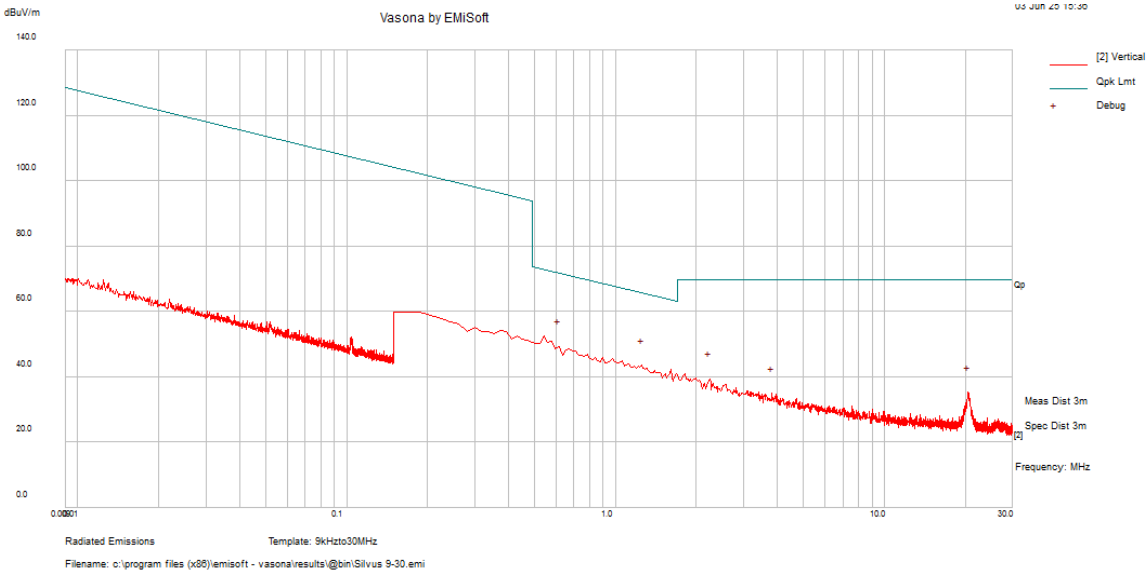
2440 MHz Horizontal



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1.250719	33.9	10.14	44.05	65.66	-21.62	Peak
0.672375	37.81	10.14	47.95	71.05	-23.1	Peak
1.903688	29.16	10.32	39.48	69.54	-30.06	Peak
20.87709	26.72	9.23	35.94	69.54	-33.6	Peak
3.321563	24.46	10.39	34.86	69.54	-34.69	Peak

Note: The plot above shows that all peak emissions passed the quasi-peak limits.

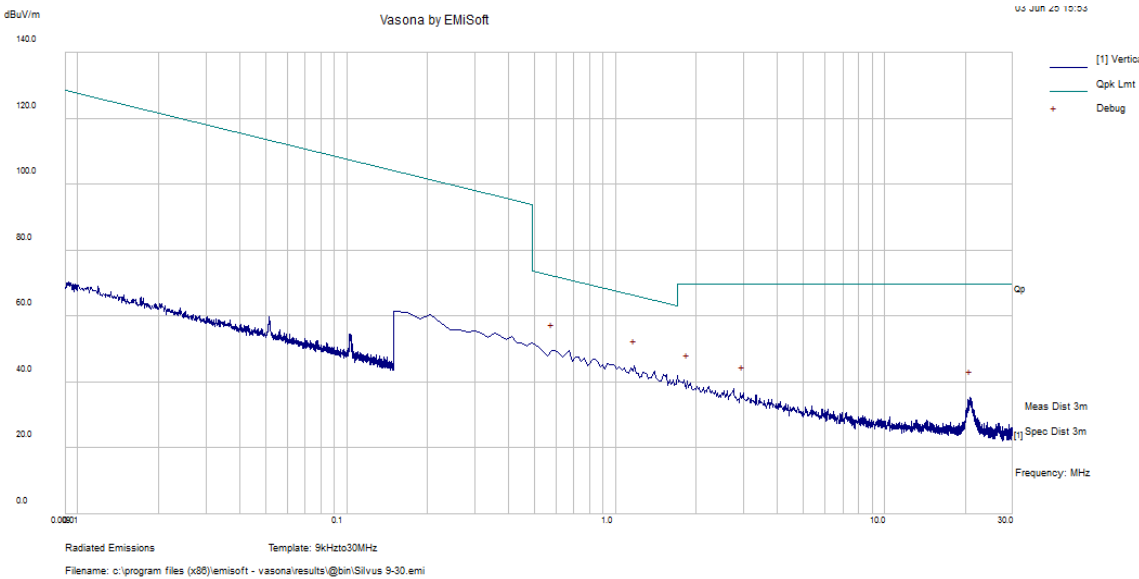
2440 MHz Vertical



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1.250719	33.34	10.14	43.48	65.66	-22.18	Peak
0.616406	39.12	10.15	49.28	71.81	-22.53	Peak
2.2395	28.96	10.36	39.32	69.54	-30.22	Peak
20.50397	25.86	9.37	35.23	69.54	-34.31	Peak
3.825281	24.54	10.37	34.91	69.54	-34.63	Peak

Note: The plot above shows that all peak emissions passed the quasi-peak limits.

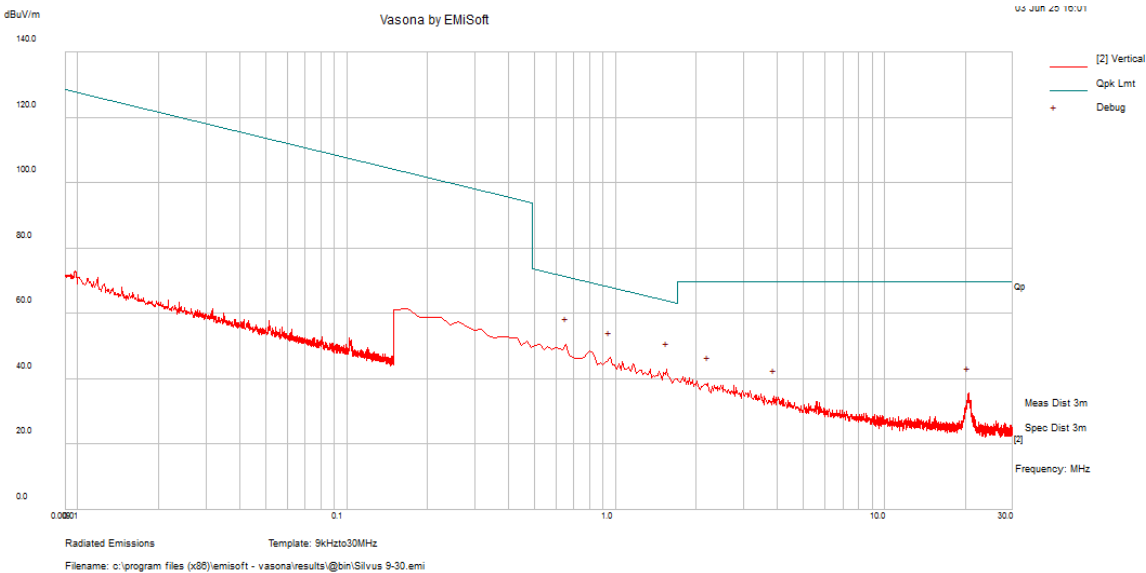
2457 MHz Horizontal



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1.176094	34.66	10.12	44.78	66.2	-21.42	Peak
0.579094	39.48	10.18	49.65	72.35	-22.7	Peak
1.847719	30.1	10.31	40.41	69.54	-29.13	Peak
2.98575	26.23	10.41	36.64	69.54	-32.9	Peak
20.83978	26.12	9.24	35.36	69.54	-34.18	Peak

Note: The plot above shows that all peak emissions passed the quasi-peak limits.

2457 MHz Vertical

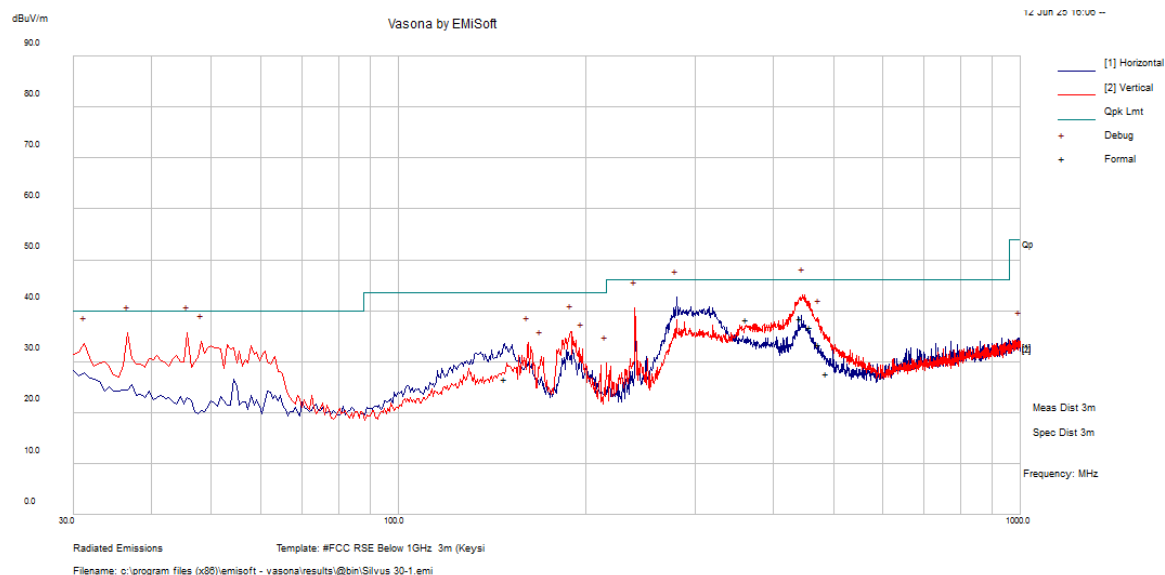


Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
0.653719	40.41	10.14	50.56	71.3	-20.74	Peak
1.549219	32.72	10.24	42.96	63.8	-20.85	Peak
0.952219	36.37	10.06	46.43	68.03	-21.6	Peak
2.202188	28.26	10.35	38.62	69.54	-30.93	Peak
20.57859	26.24	9.34	35.58	69.54	-33.96	Peak
3.899906	24.4	10.36	34.76	69.54	-34.78	Peak

Note: The plot above shows that all peak emissions passed the quasi-peak limits.

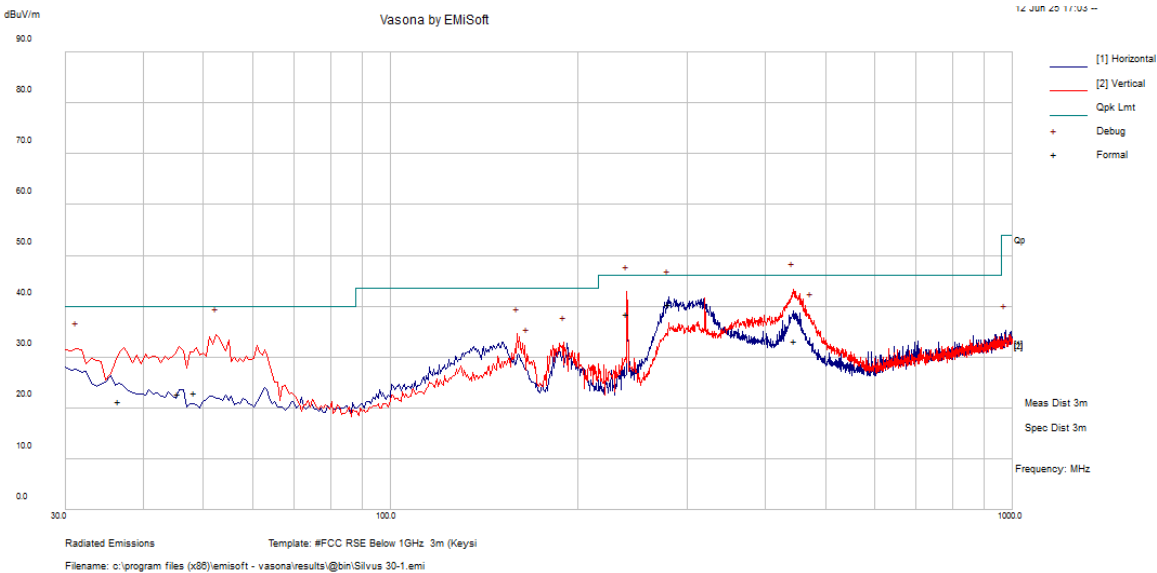
2) 30 MHz – 1 GHz, Measured at 3 meters

2416 MHz



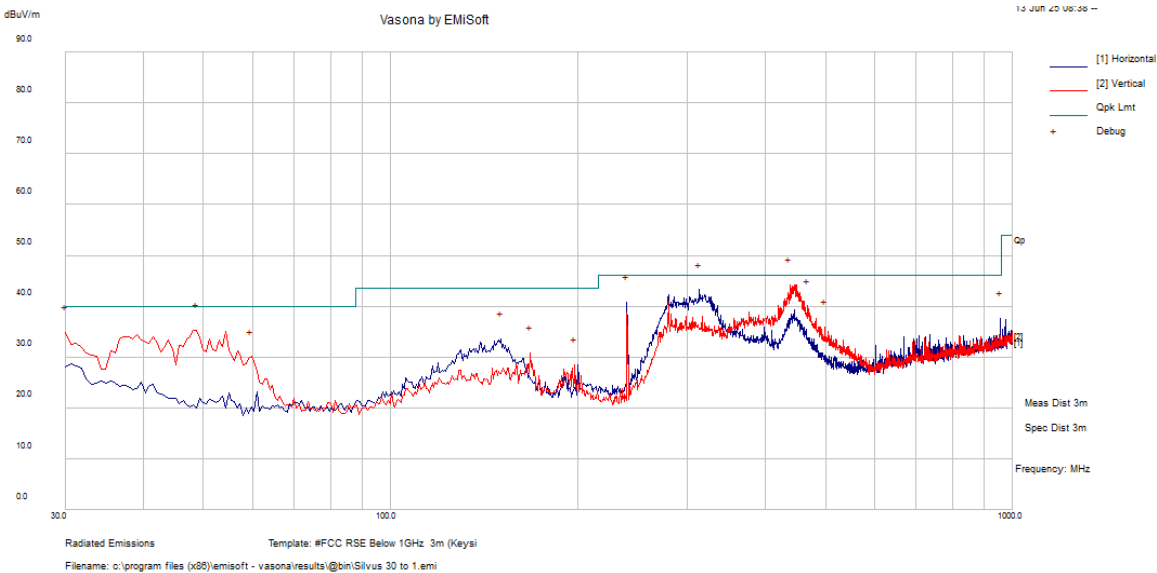
Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)	Detector
445.8091	44.73	-11.53	33.2	193	V	131	46	-12.8	QP
279.9825	56.16	-15.78	40.37	140	H	143	46	-5.63	QP
45.60875	43.8	-21	22.81	223	V	284	40	-17.19	QP
36.59281	36.16	-14.8	21.35	207	V	302	40	-18.65	QP
240.0113	56.31	-17.82	38.5	149	V	158	46	-7.5	QP
48.35813	45.45	-22.37	23.08	103	V	159	40	-16.92	QP

2440 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)	Detector
443.5088	44.97	-11.6	33.38	225	V	125	46	-12.62	QP
240.0113	59.13	-17.82	41.32	100	V	24	46	-4.69	QP
279.9559	55.09	-15.78	39.31	110	H	328	46	-6.69	QP
52.60125	48.17	-23.42	24.76	117	V	52	40	-15.24	QP
30.99688	36.5	-11.08	25.43	110	V	100	40	-14.57	QP
474.5578	42.62	-10.11	32.51	111	V	134	46	-13.49	QP
443.5088	44.97	-11.6	33.38	225	V	125	46	-12.62	QP

2457 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
437.8715	44.18	-11.73	32.46	200	V	341	46	-13.55	QP
313.8550	49.98	-15.04	34.95	136	H	337	46	-11.05	QP
48.9968	47.97	-22.68	25.28	108	V	300	40	-14.72	QP
30.0050	39.77	-10.29	29.48	102	V	184	40	-10.53	QP
239.9915	59.09	-17.82	41.27	130	H	247	46	-4.73	QP
467.8568	43.91	-10.5	33.42	105	V	230	46	-12.59	QP

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

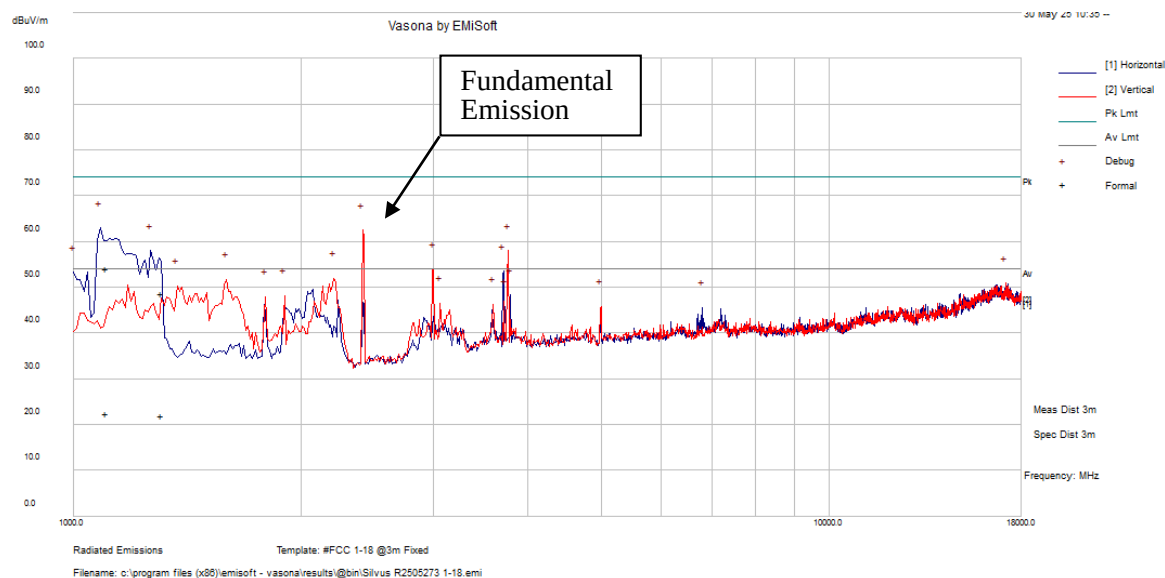
Note 1: Restricted Band Peak Limit is defined to be 20dB higher than Average Limit.

Note 2: Above 1GHz limit calculation:

$$\text{dBuV/m} = 20 \cdot \log(\text{V/m}) + 120 = 20 \cdot \log((500 [\text{uV/m}]/1000000)) + 120 = 54 [\text{dBuV/m}]$$

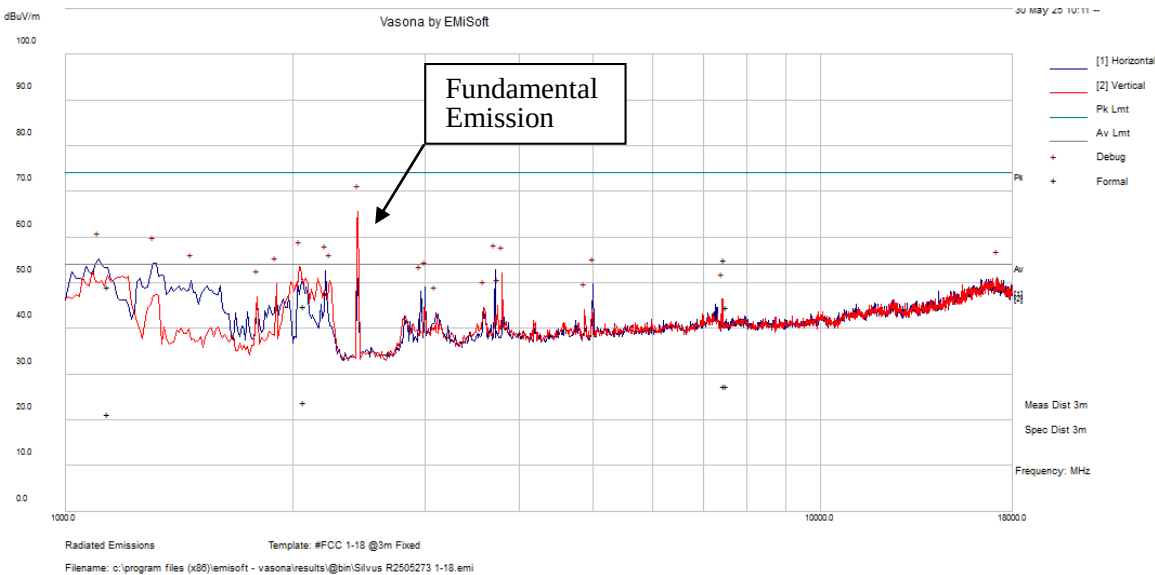
3) 1 GHz – 18 GHz, Measured at 3 meter

2416 MHz



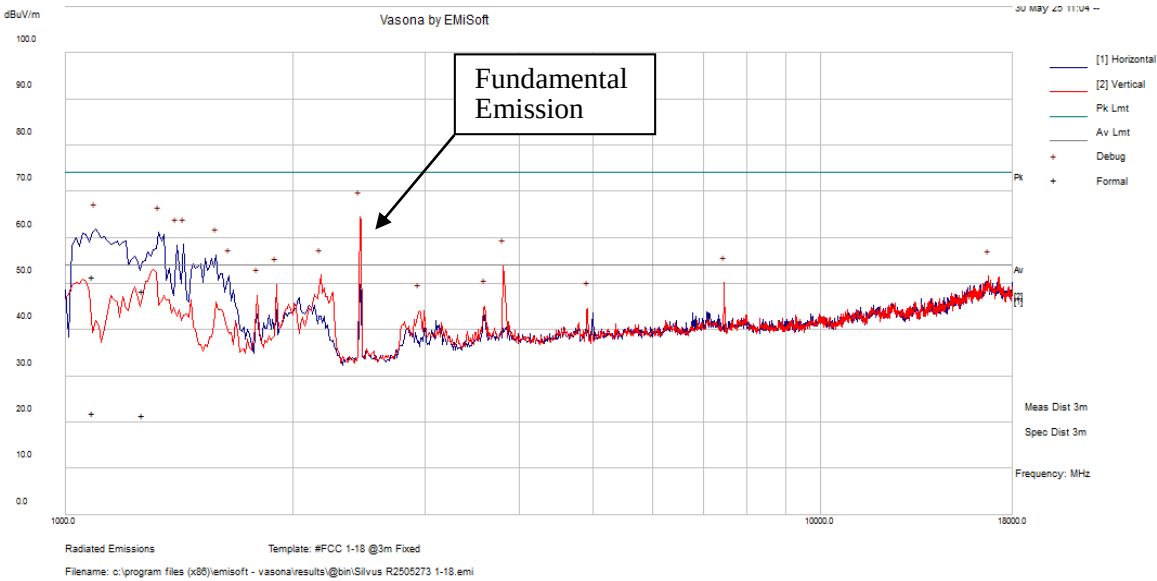
Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)	Detector
1085.988	62.13	-10.67	51.47	260	H	58	74	-22.53	Peak
1266.533	57.7	-9.36	48.35	254	H	21	74	-25.66	Peak
3762.85	42.96	-2.18	40.78	100	V	87	74	-33.22	Peak
1085.988	32.66	-10.67	21.99	260	H	58	54	-32.01	Average
1266.533	30.87	-9.36	21.52	254	H	21	54	-32.48	Average
3762.85	27.46	-2.18	25.29	100	V	87	54	-28.71	Average

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
1106.908	64.56	-10.54	54.01	272	H	66	74	-19.99	Peak
1307.535	58.2	-9.41	48.79	276	H	231	74	-25.21	Peak
1106.908	33.03	-10.54	22.48	272	H	66	54	-31.52	Average
1307.535	31.47	-9.41	22.06	276	H	231	54	-31.94	Average

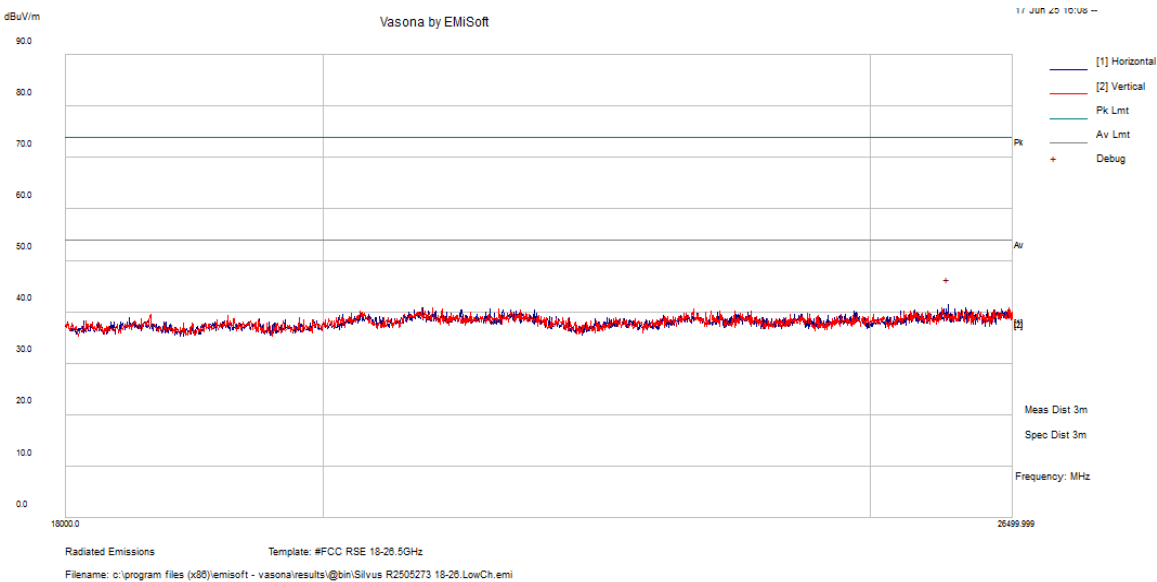
2457 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)	Detector
1097.123	64.64	-10.61	54.03	283	H	63	74	-19.97	Peak
1331.008	65.24	-9.51	55.73	267	H	22	74	-18.27	Peak
1433.665	63.51	-9.91	53.6	108	H	95	74	-20.4	Peak
1402.288	63.67	-9.75	53.93	194	H	324	74	-20.08	Peak
1584.748	56.67	-9.42	47.26	279	H	352	74	-26.74	Peak
1097.123	32.93	-10.61	22.32	283	H	63	54	-31.68	Avg.
1331.008	33.05	-9.51	23.55	267	H	22	54	-30.45	Avg.
1433.665	31.84	-9.91	21.93	108	H	95	54	-32.07	Avg.
1402.288	31.46	-9.75	21.71	194	H	324	54	-32.29	Avg.
1584.748	30.88	-9.42	21.46	279	H	352	54	-32.54	Avg.

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

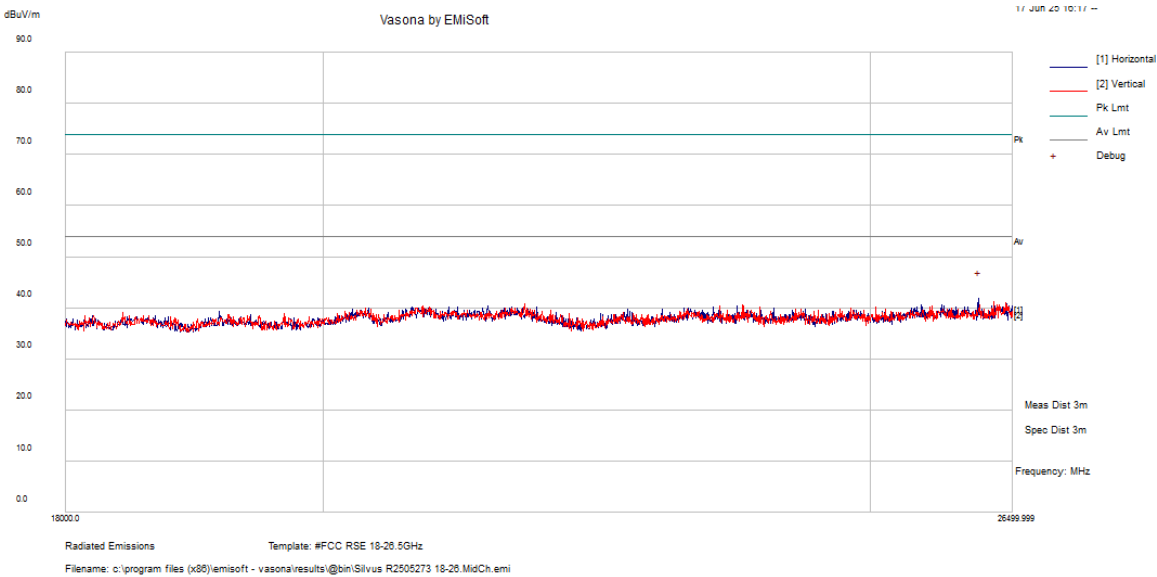
2416 MHz



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Antenna Polarity (H/V)	Limit (dBμV/m)	Margin (dB)	Detector
20737.23	39.84	-1.34	38.5	V	54	-15.5	Peak

Note 1: The plot above shows that there were no emissions above the noise floor at 18-26.5GHz frequency range.
Note 2: The plot above shows that all peak emissions passed the average limits.

2440 MHz

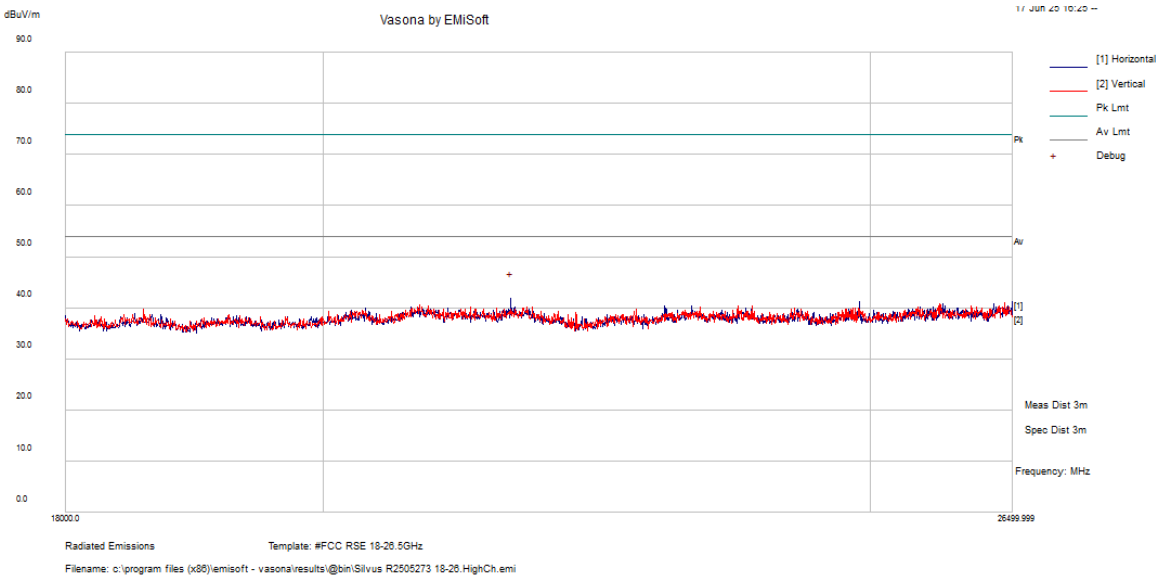


Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Antenna Polarity (H/V)	Limit (dBμV/m)	Margin (dB)	Detector
26133.44	39.37	2.51	41.87	H	54	-12.13	Peak

Note 1: The plot above shows that there were no emissions above the noise floor at 18-26.5GHz frequency range.

Note 2: The plot above shows that all peak emissions passed the average limits.

2457 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
21591.25	42	-0.27	41.74	H	54	-12.26	Peak

Note 1: The plot above shows that there were no emissions above the noise floor at 18-26.5GHz frequency range.
Note 2: The plot above shows that all peak emissions passed the average limits.

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 4.1.5.2.
- 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: DTS bandwidth

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

Option 1:

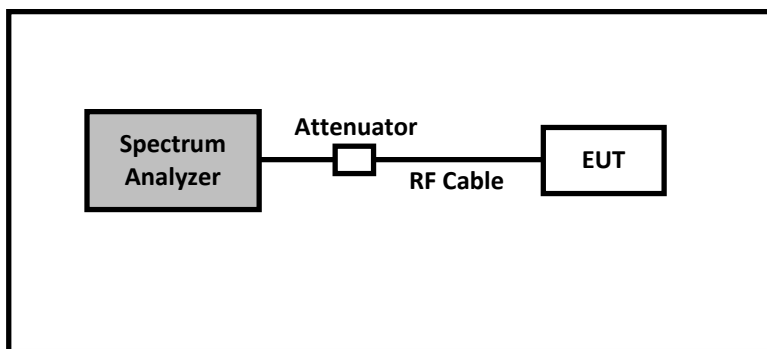
- a. Set RBW = 100 kHz.
- b. Set the VBW $\geq [3 \times \text{RBW}]$.
- c. Detector = peak.
- d. Trace mode = max hold.
- e. Sweep = auto couple.
- f. Allow the trace to stabilize.
- g. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Option 2:

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 $\geq 3 \times \text{RBW}$, 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 ≥ 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
287	Agilent	Spectrum Analyzer	E4446A	US44300386	2025-05-29	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-03-10	6 months
1539	-	10 dB Attenuator	C18S5W-10	-	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”.

8.5 Test Environmental Conditions

Temperature:	19.8 - 21.3 °C
Relative Humidity:	49 - 58 %
ATM Pressure:	102 - 102.2 kPa

The testing was performed by Libass Thiaw from 2025-05-29 to 2025-06-04, at test bench.

8.6 Test Results

Channel	Frequency (MHz)	99% OBW (MHz)				6 dB OBW (MHz)				6 dB OBW Limit (kHz)	Result
		Port 1	Port 2	Port 3	Port 4	Port 1	Port 2	Port 3	Port 4		
Low	2416	8.850	8.829	8.832	8.824	8.682	8.815	8.715	8.770	≥ 500	Pass
Middle	2440	8.803	8.810	8.858	8.819	8.801	8.759	8.683	8.724	≥ 500	Pass
High	2457	8.850	8.833	8.788	8.825	8.729	8.663	8.709	8.673	≥ 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.

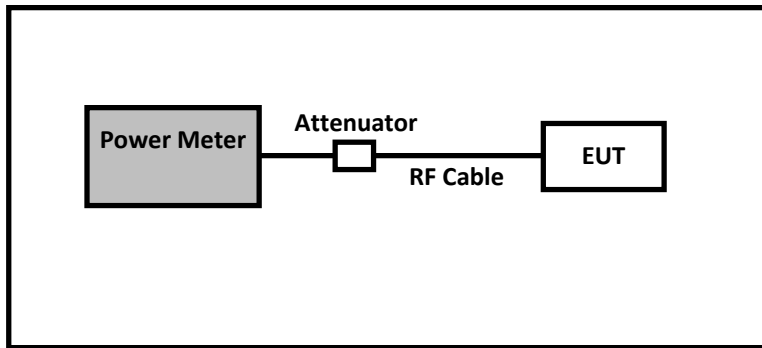
9.2 Measurement Procedure

The measurements are based on ANSI C63.10-2020, Section 11.9.2.3.1

Method AVGPM is a measurement using an RF average power meter, as follows:

- a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent (see Figure 24) if all of the conditions listed below are satisfied:
 - 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
 - 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
 - 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- b) If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal as described in 11.6.
- c) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
- d) Correct the measurement in dBm by adding $[10 \log (1 / D)]$, where D is the duty cycle.

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
1395	Mini-Circuits	CBL ASSY 2.92MM PLUG TO PLUG 12"	FL086-12KM+	QN2318110- 2318	2025-10-15	6 months
1540	-	Attenuator, SMA	MCL BW- S20W5	-	2025-01-17	1 year
697	ETS-Lindgren	USB RF Power Sensor	7002-006	00160097	2025-03-20	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:	19.8 - 21.3 °C
Relative Humidity:	49 - 58 %
ATM Pressure:	102 - 102.2 kPa

The testing was performed by Libass Thiaw from 2025-10-27 at test bench.

9.6 Test Results

Channel	Frequency (MHz)	Conducted Output Power (dBm)					Conducted Output Power Limit (dBm)	Result
		P1	P2	P3	P4	MIMO		
Low	2416	21.99	21.06	20.76	22.49	27.65	< 27.83	Pass
Middle	2440	21.76	20.83	20.83	22.24	27.47	< 27.83	Pass
High	2457	21.44	20.55	20.53	21.86	27.15	< 27.83	Pass

Note: Limit = 30 [dBm] – [Array Gain (2.15 + 10*log(4)) – 6dBi] = 30 – [8.17-6] = 27.83dBm

Note: MIMO = 10*log((10^(Port 1 [dBm]/10)) + (10^(Port 2 [dBm]/10)) + (10^(Port 3 [dBm]/10)) + (10^(Port 4 [dBm]/10)))

Note: P1 stands for Port 1, and so on and so forth

10 FCC §15.247(e) – 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.

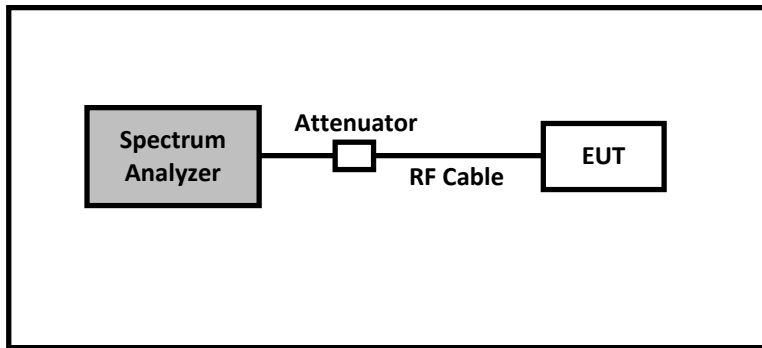
As per ANSI C63.10 Clause 11.10: Maximum power spectral density level in the fundamental emission

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 AVGPSD-2: Method AVGPSD-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction. The following procedure is applicable when the EUT cannot be configured to transmit continuously (i.e., $D < 98\%$), when sweep triggering/signal gating cannot be used to measure only when the EUT is transmitting at its maximum power control level, and when the transmission duty cycle is constant (i.e., duty cycle variations are less than $\pm 2\%$):

- a) Measure the duty cycle (D) of the transmitter output signal as described in 11.6.
- b) Set instrument center frequency to DTS channel center frequency.
- c) Set span to > 1.5 times the OBW.
- d) Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- e) Set VBW $\geq [3 \times \text{RBW}]$.
- f) Detector = power averaging (rms) or sample detector (when rms not available).
- g) Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span} / \text{RBW}]$.
- h) Sweep time = auto couple.
- i) Do not use sweep triggering; allow sweep to “free run.”
- j) Employ trace averaging (rms) mode over a minimum of 100 traces.
- k) Use the peak marker function to determine the maximum amplitude level.
- l) Add $[10 \log (1 / D)]$, where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.
- m) If measured value exceeds requirement specified by regulatory agency, then reduce RBW (but no less than 3 kHz) and repeat (note that this might require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

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
912	Rohde & Schwarz	Signal analyzer	FSV40	1321.3008K39-101203-UW	2025-08-04	1 year
1395	Mini-Circuits	CBL ASSY 2.92MM PLUG TO PLUG 12"	FL086-12KM+	QN2318110-2318	2025-10-15	6 months
1540	-	Attenuator, SMA	MCL BW-S20W5	-	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".

10.5 Test Environmental Conditions

Temperature:	19.8 - 21.3 °C
Relative Humidity:	49 - 58 %
ATM Pressure:	102 - 102.2 kPa

The testing was performed by Libass Thiaw from 2025-10-27 at test bench.

10.6 Test Results

Channel	Frequency (MHz)	PSD [dBm/20kHz]					Limit (dBm/3kHz)	Result
		P1	P2	P3	P4	MIMO		
Low	2416	-1.03	-1.04	-1.64	-0.74	4.92	< 5.83	Pass
Middle	2440	-1.39	-2.23	-2.09	-1.42	4.25	< 5.83	Pass
High	2457	-1.29	-2.58	-2.40	-1.28	4.18	< 5.83	Pass

*Note: Limit = 8 [dBm/3kHz] – [Array Gain (2.15 + 10*log(4)) – 6dBi] = 8 – [8.17-6] = 5.83dBm/3kHz*

Note: The EUT passed with wider RBW of 20kHz, thus it complies with FCC RBW requirement of 3kHz as compliance is shown under a worse-case circumstance.

Note: P1 stands for Port 1, and so on and so forth

Please refer to Annex B for detailed 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

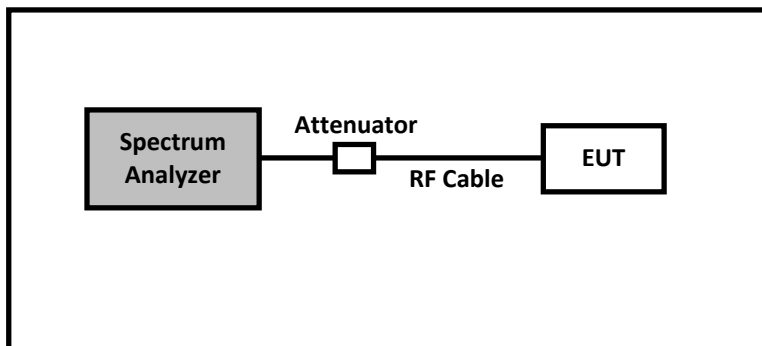
VBW = 300 kHz

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
287	Agilent	Spectrum Analyzer	E4446A	US44300386	2025-05-29	1 year
1550	-	SMA coax cable 1.5m	SMA-J/SWA-500/SMA-J/1.5m	-	2025-03-10	6 months
1539	-	10 dB Attenuator	C18S5W-10	-	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".

11.5 Test Environmental Conditions

Temperature:	19.8 - 21.3 °C
Relative Humidity:	49 - 58 %
ATM Pressure:	102 - 102.2 kPa

The testing was performed by Libass Thiaw from 2025-05-29 to 2025-06-04, at test bench.

11.6 Test Results

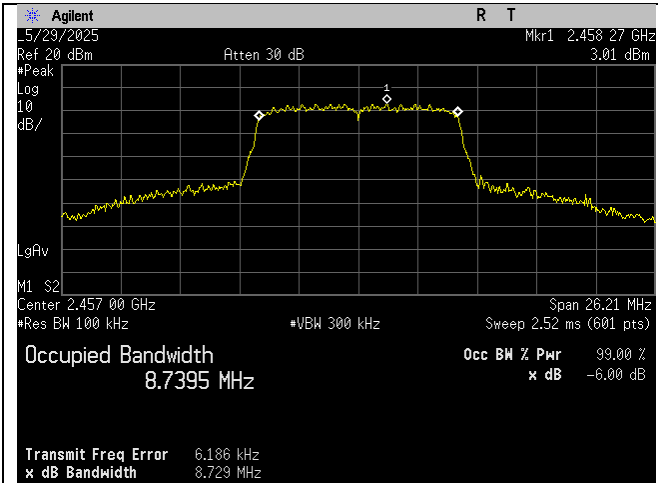
Test Result: Pass

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

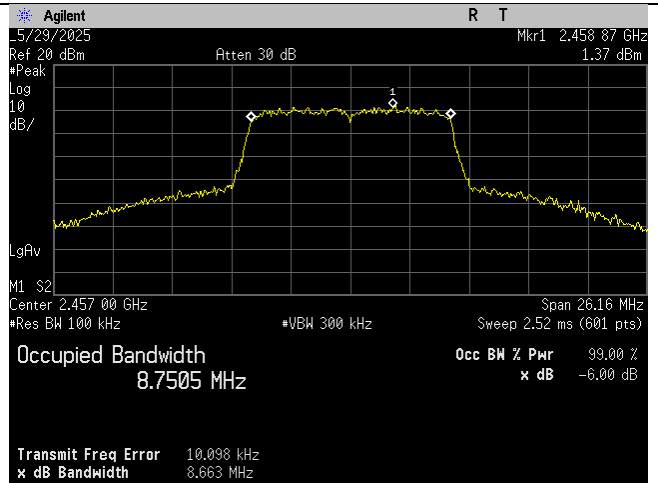
12 Annex A (Normative) – Emission Bandwidth

[Naming Convention]

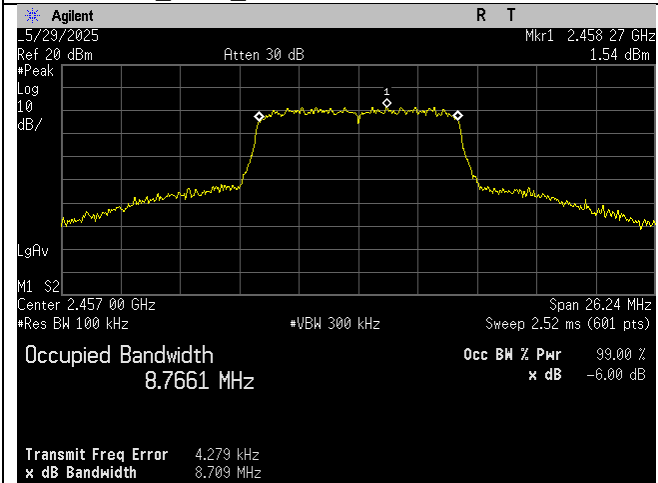
Radio (WIFI)_Channel (Low, Mid, High)_ Frequency (MHz)_Bandwidth (MHz)_ Measurement (Occupied Bandwidth)_Type (-6dB, 99percent)_Port(1,2,3,4)



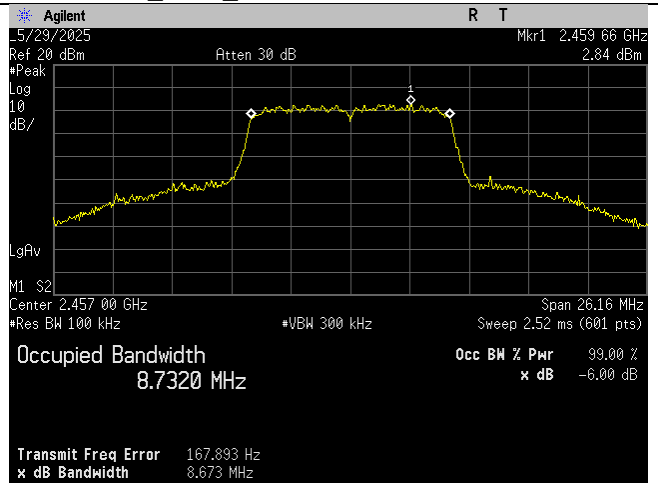
WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 1



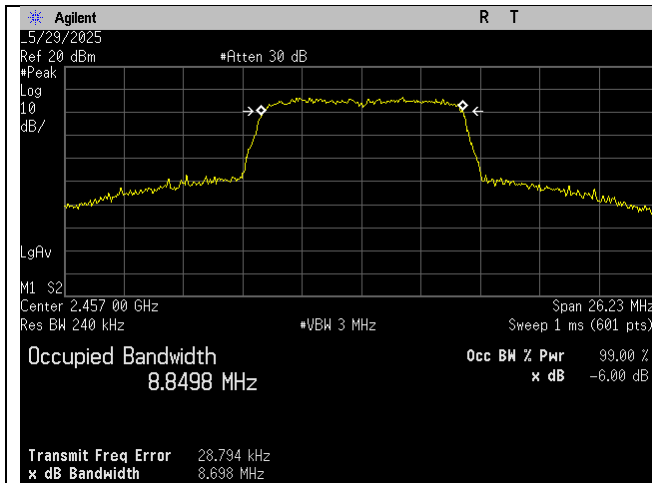
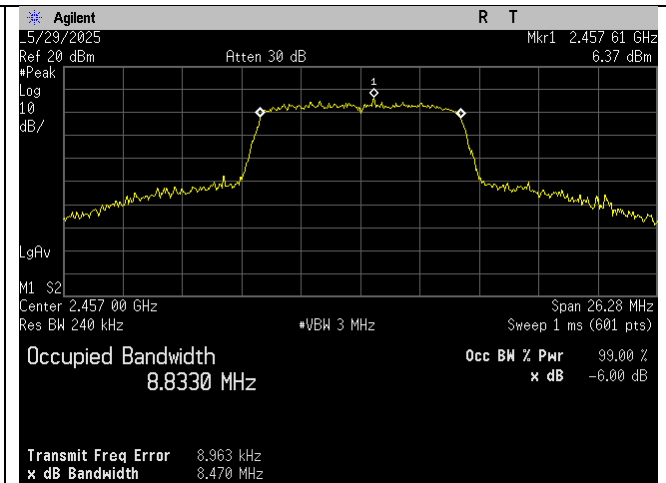
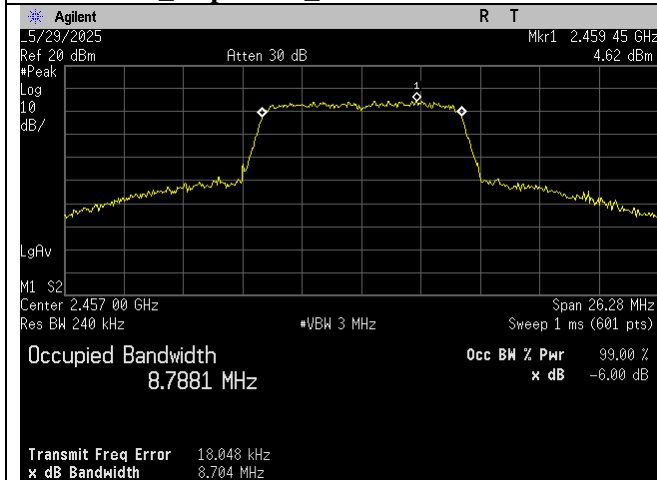
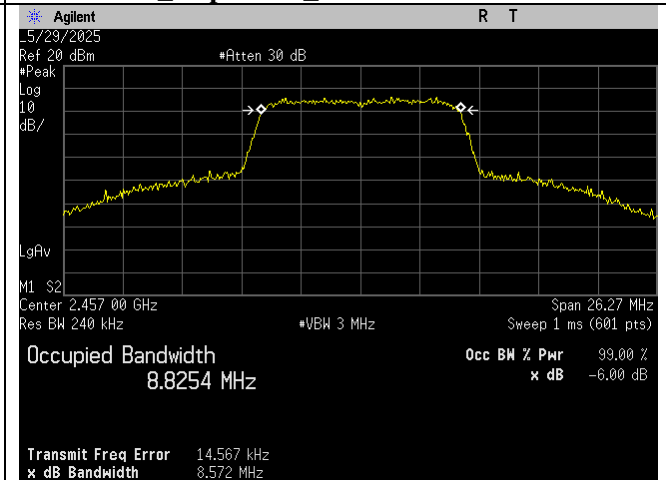
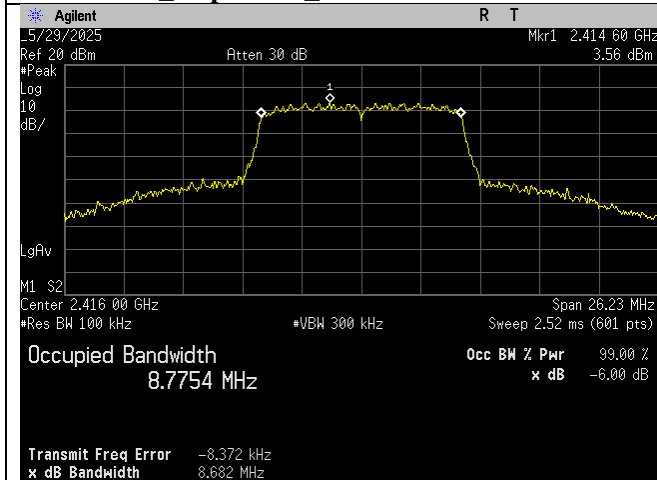
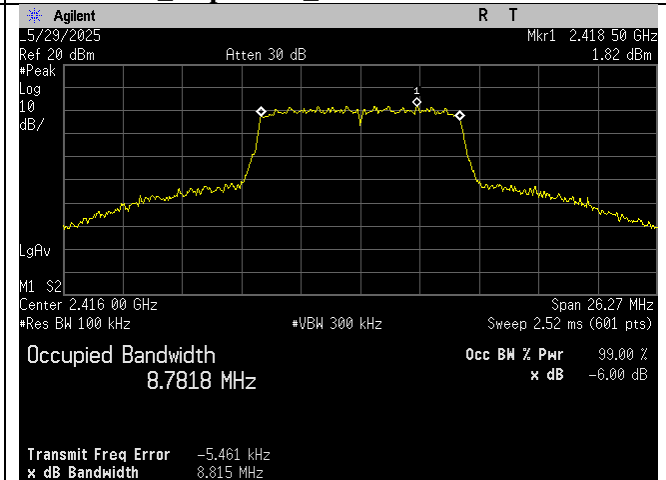
WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 2

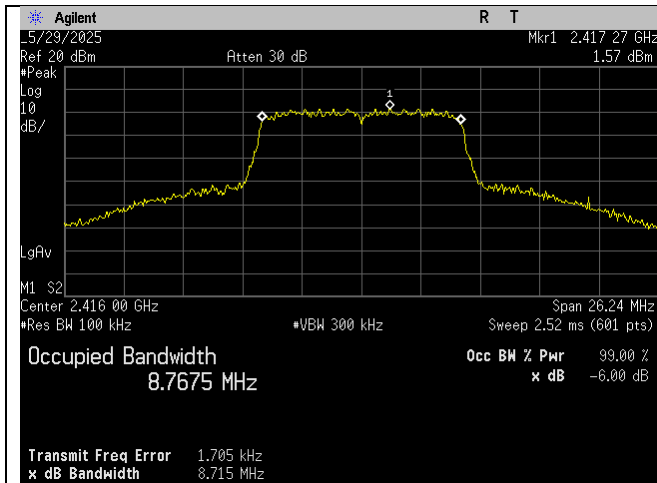
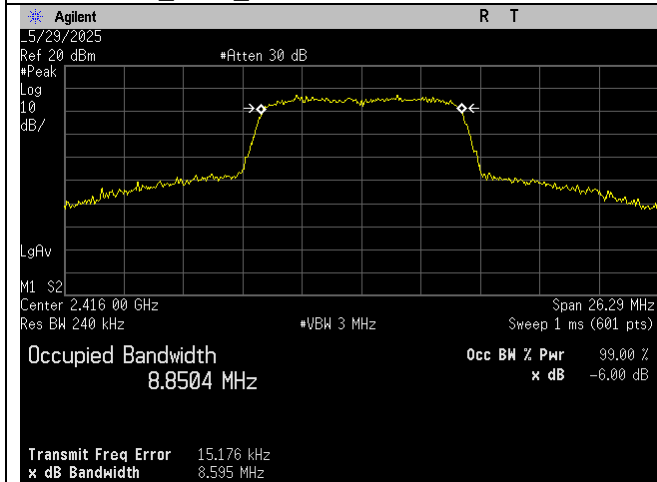
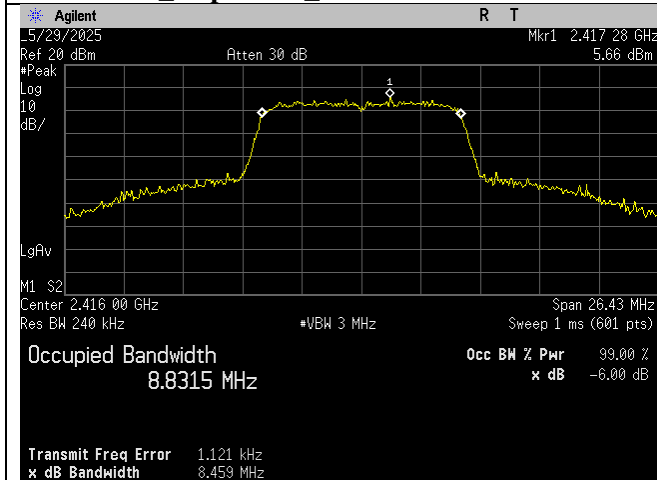
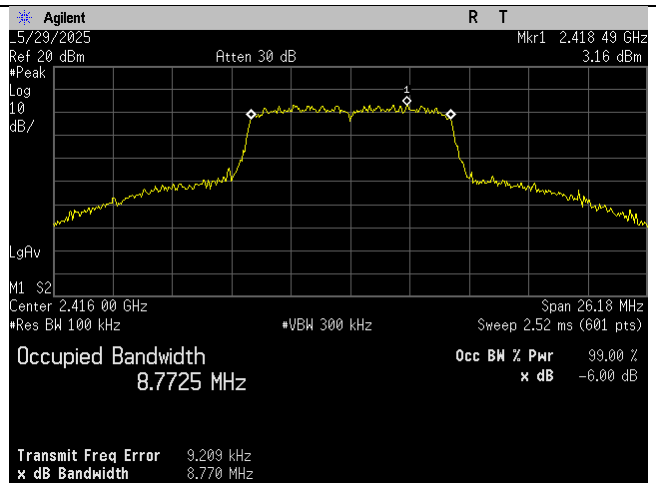
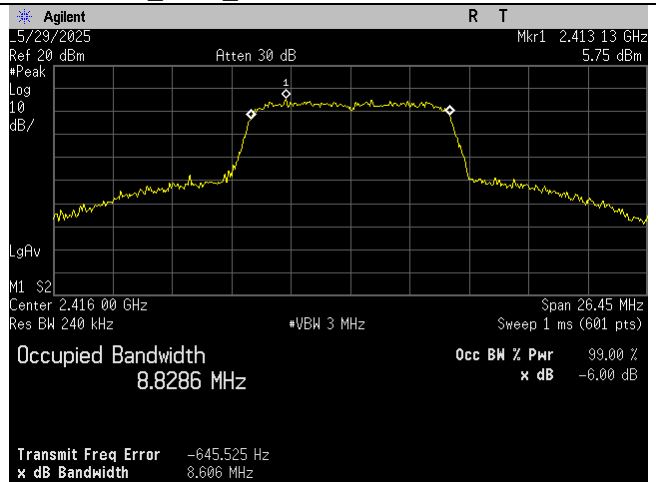
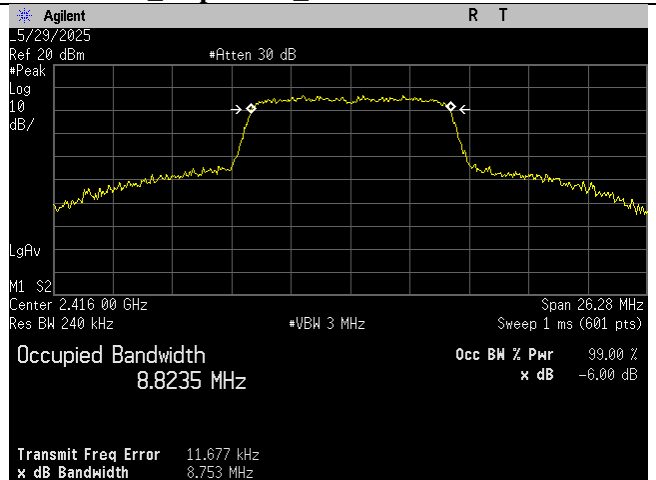


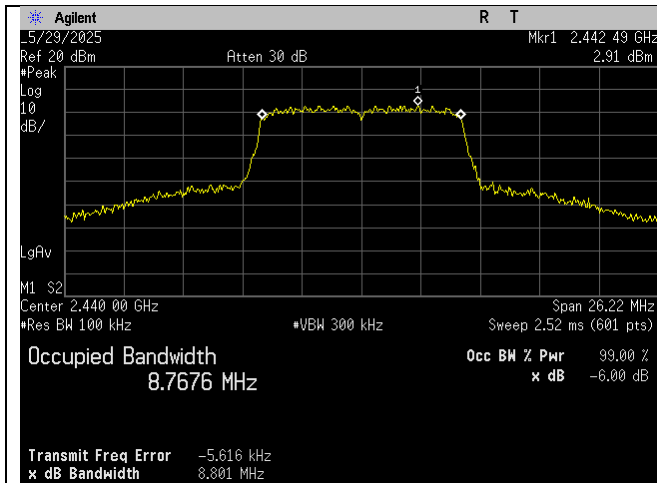
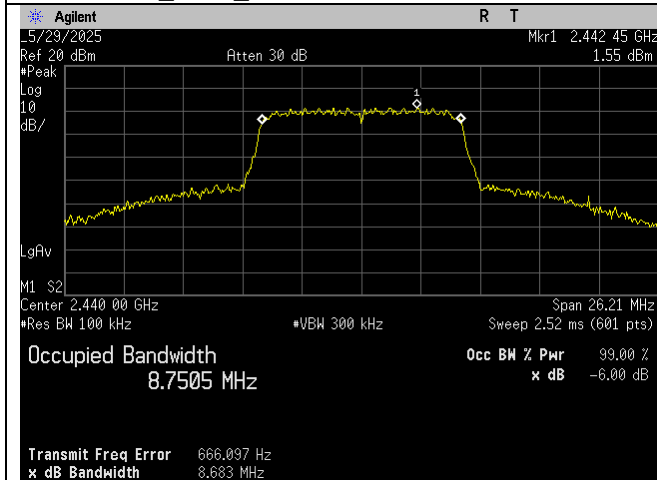
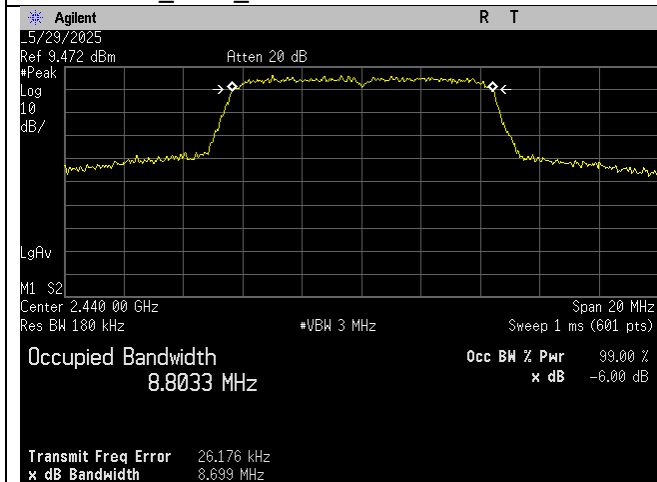
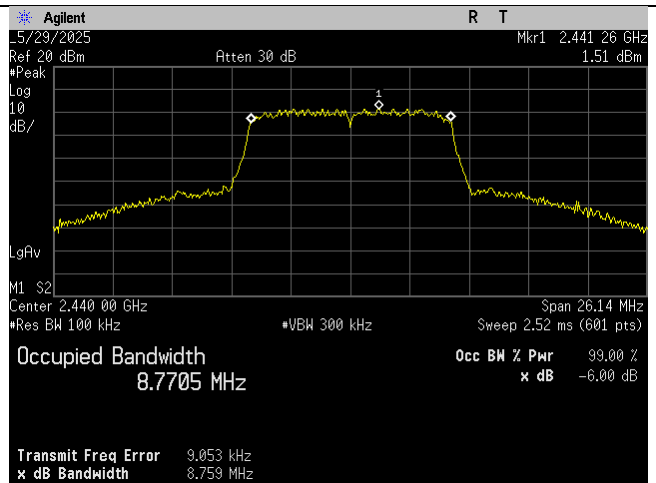
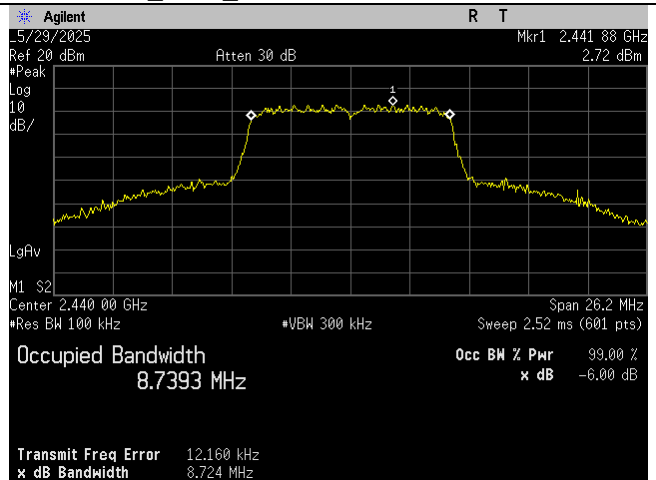
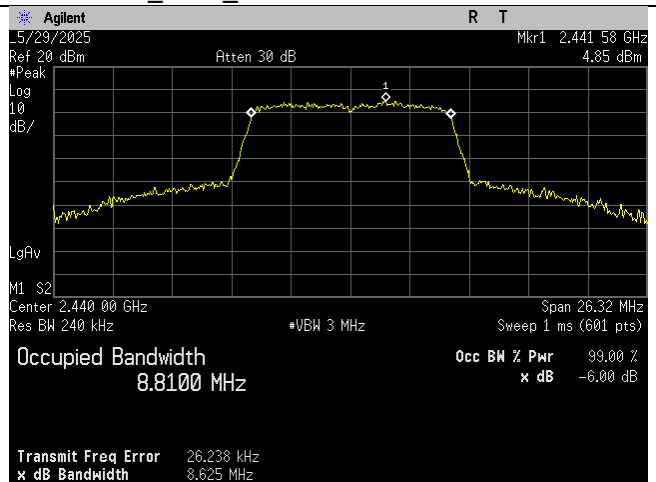
WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 3

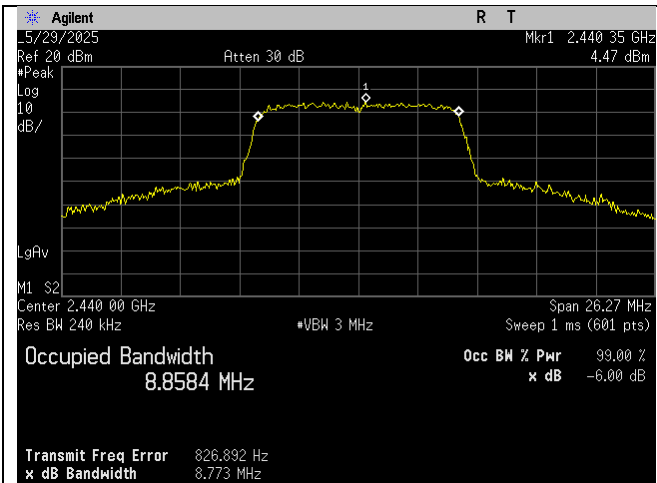


WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 4

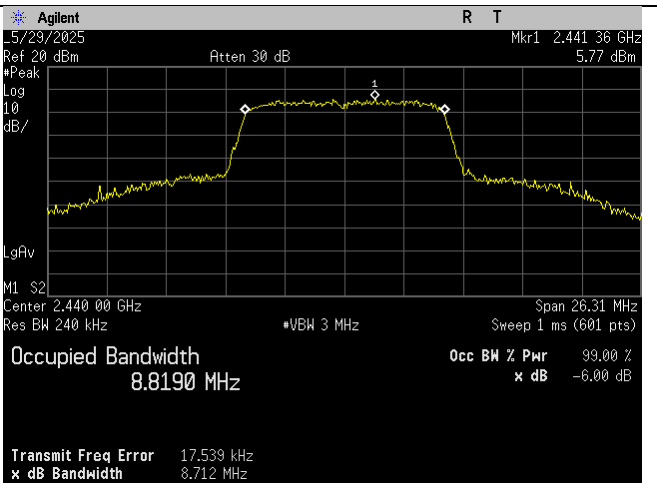
**WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 1****WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 2****WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 3****WIFI_High Ch_2457MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 4****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 1****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 2**

**WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 3****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 1****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 3****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 4****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 2****WIFI_Low Ch_2416MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 4**

**WIFI_Mid Ch_2440MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 1****WIFI_Mid Ch_2440MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 3****WIFI_Mid Ch_2440MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 1****WIFI_Mid Ch_2440MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 2****WIFI_Mid Ch_2440MHz_10MHz BW_Occupied Bandwidth_-6dB_Port 4****WIFI_Mid Ch_2440MHz_10MHz BW_Occupied Bandwidth_99 percent_Port 2**



WIFI_Mid Ch_2440MHz_10MHz BW_Occupied
Bandwidth_99 percent_Port 3

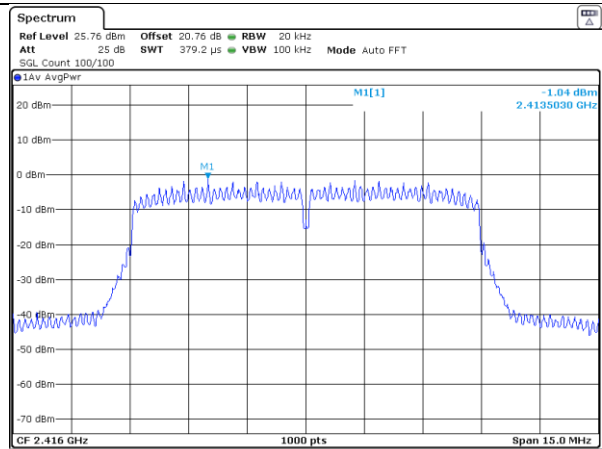
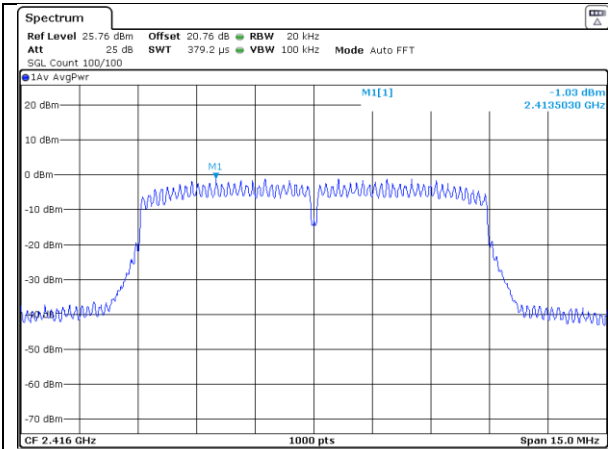


WIFI_Mid Ch_2440MHz_10MHz BW_Occupied
Bandwidth_99 percent_Port 4

13 Annex B (Normative) – Power Spectral Density

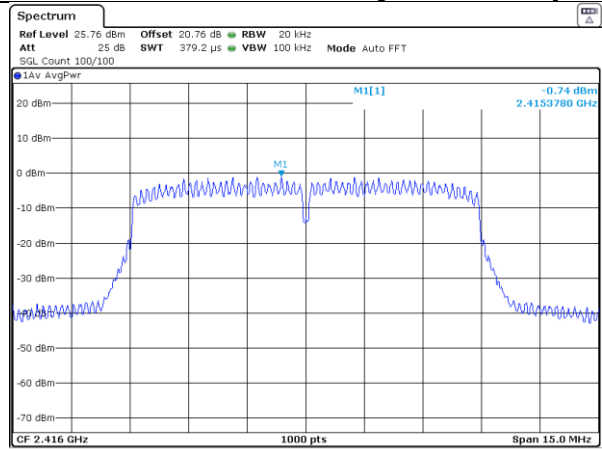
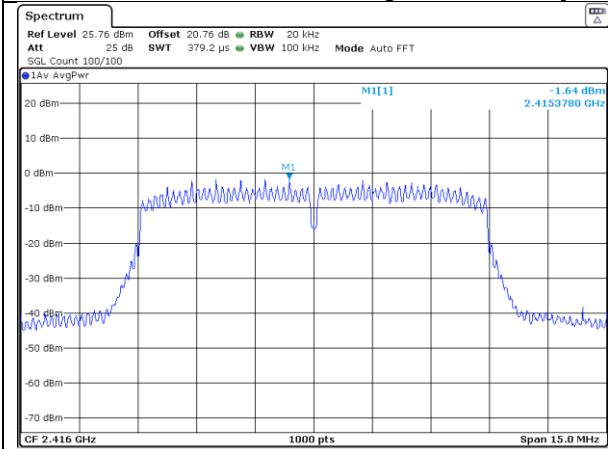
[Naming Convention]

Radio (WIFI)_Channel (Low, Mid, High)_ Frequency (MHz)_Bandwidth (MHz)_ Measurement (Spectral Density)_Port (1,2,3,4)



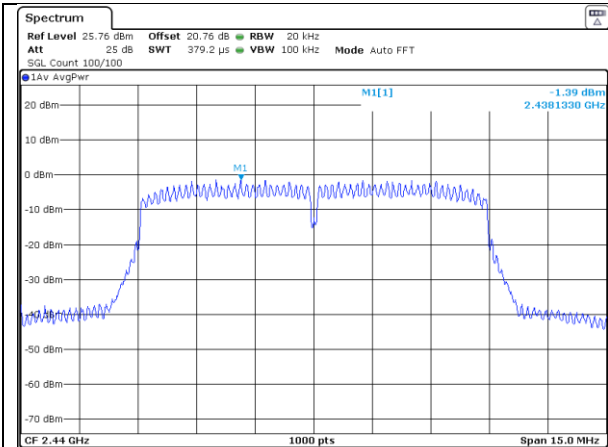
Low Ch 2416 MHz_10MHz Spectral Density Port 1

Low Ch 2416 MHz_10MHz Spectral Density Port 2



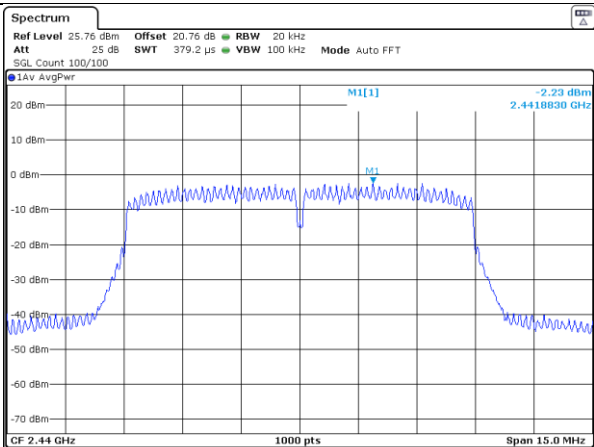
Low Ch 2416 MHz_10MHz Spectral Density Port 3

Low Ch 2416 MHz_10MHz Spectral Density Port 4



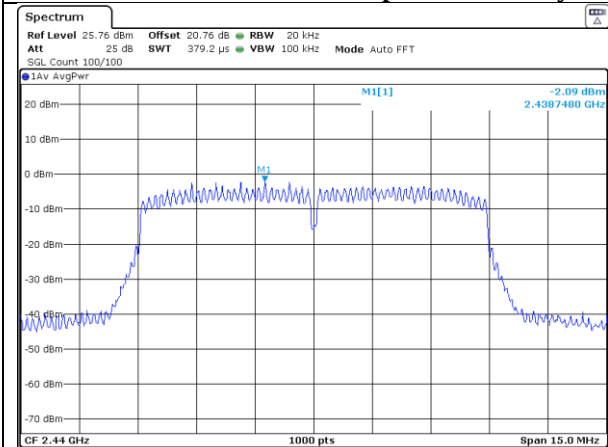
Date: 27.OCT.2025 14:48:45

Mid Ch 2440 MHz_10MHz Spectral Density Port 1



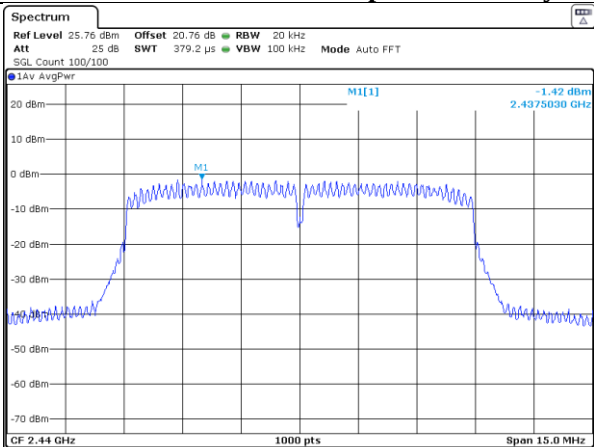
Date: 27.OCT.2025 14:43:49

Mid Ch 2440 MHz_10MHz Spectral Density Port 2



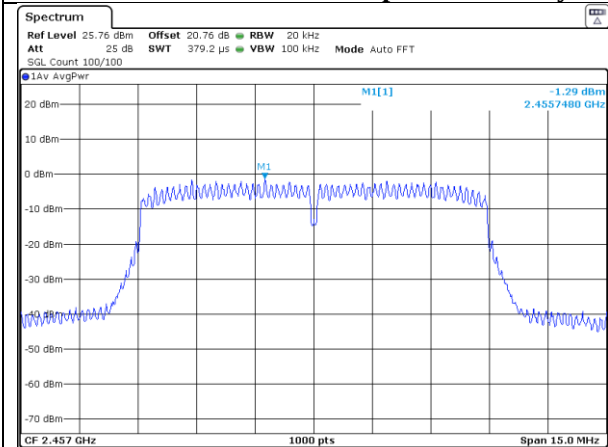
Date: 27.OCT.2025 14:53:20

Mid Ch 2440 MHz_10MHz Spectral Density Port 3



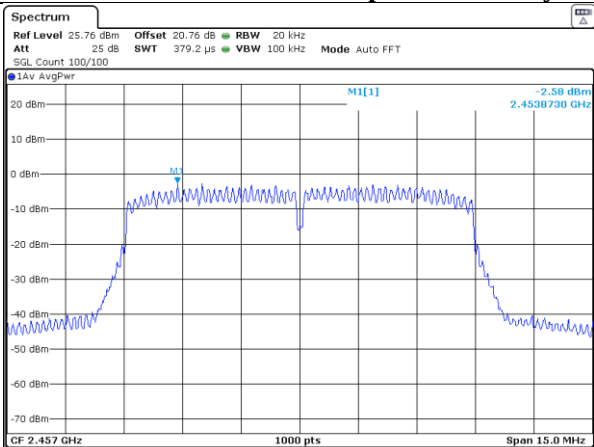
Date: 27.OCT.2025 14:55:45

Mid Ch 2440 MHz_10MHz Spectral Density Port 4



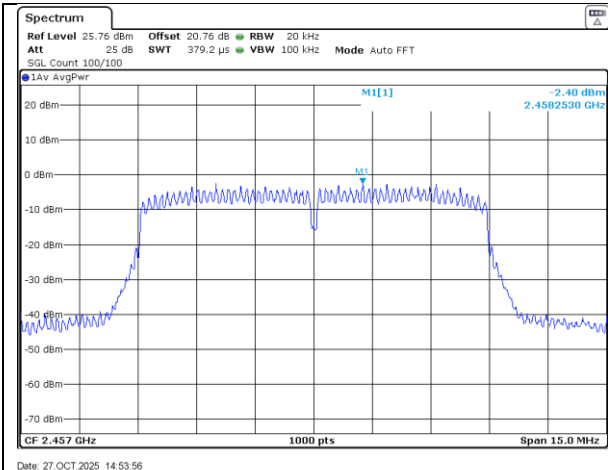
Date: 27.OCT.2025 14:51:29

High Ch 2457 MHz_10MHz Spectral Density Port 1

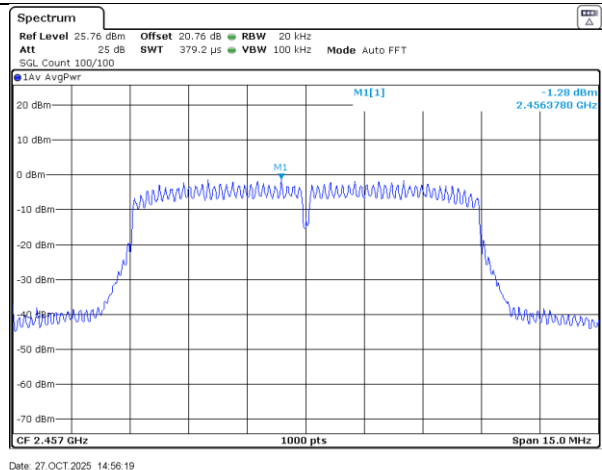


Date: 27.OCT.2025 14:47:03

High Ch 2457 MHz_10MHz Spectral Density Port 2



High Ch 2457 MHz_10MHz Spectral Density Port
3

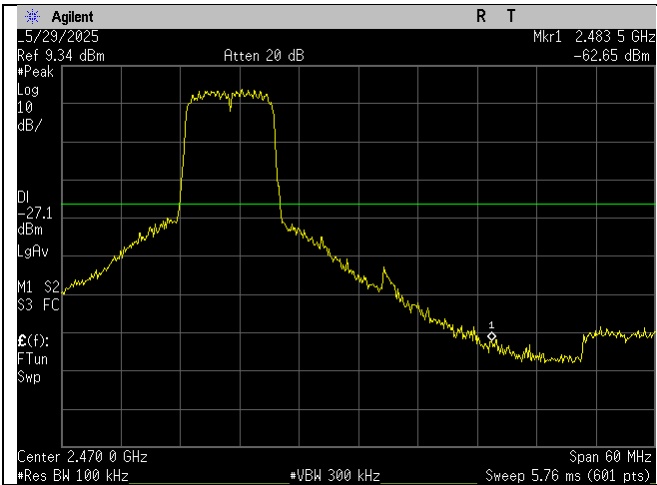


High Ch 2457 MHz_10MHz Spectral Density Port
4

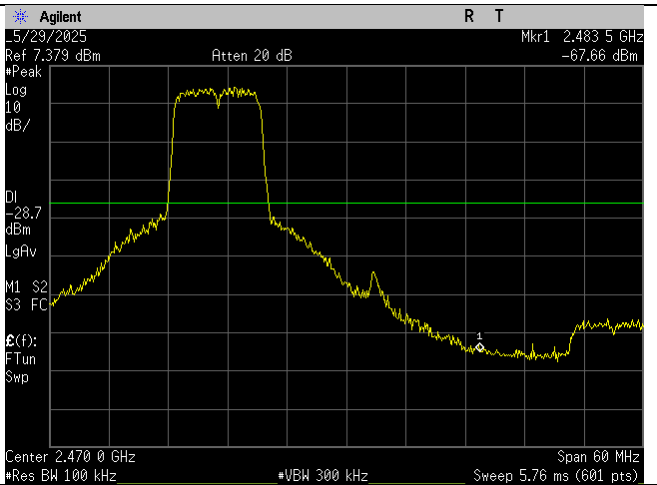
14 Annex C (Normative) – 100 kHz Spurious Emissions and Band Edges at Antenna Terminal (dBc)

[Naming Convention]

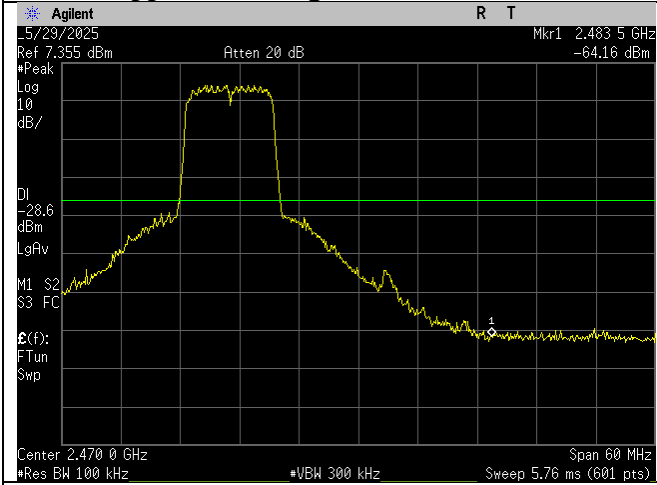
Radio (WIFI)_Channel (Low, Mid, High)_ Frequency (MHz)_ Bandwidth (MHz)_ Measurement (20dBc)_Frequency Range (MHz, GHz, Upper Band Edge, Lower Band Edge)_Port(1,2,3,4)



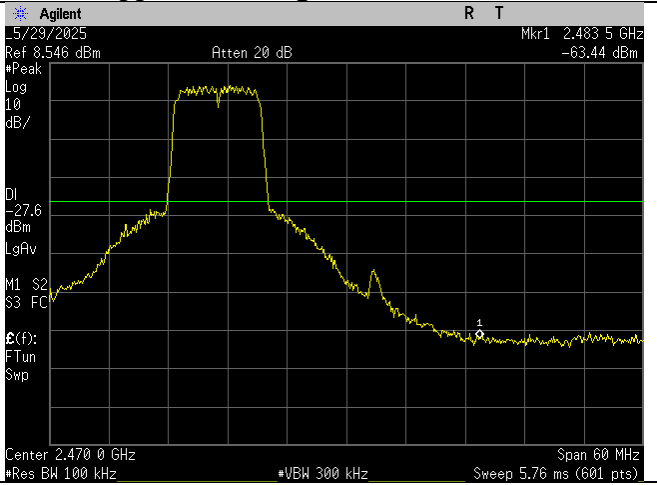
WIFI_High Ch_2457MHz_10MHz BW_-
20dBc_Upper Band Edge_Port 1



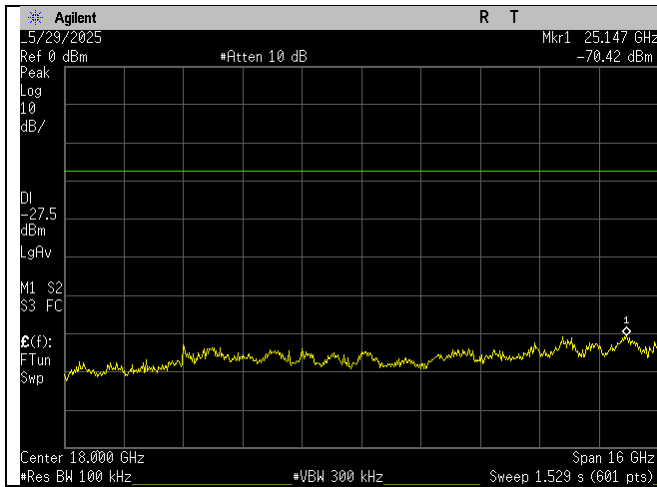
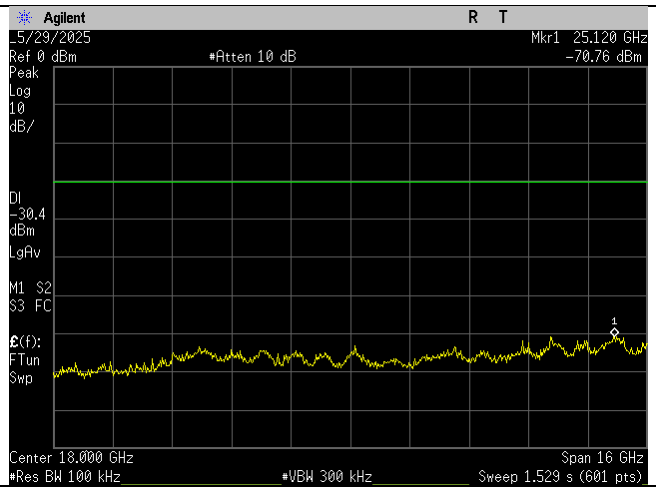
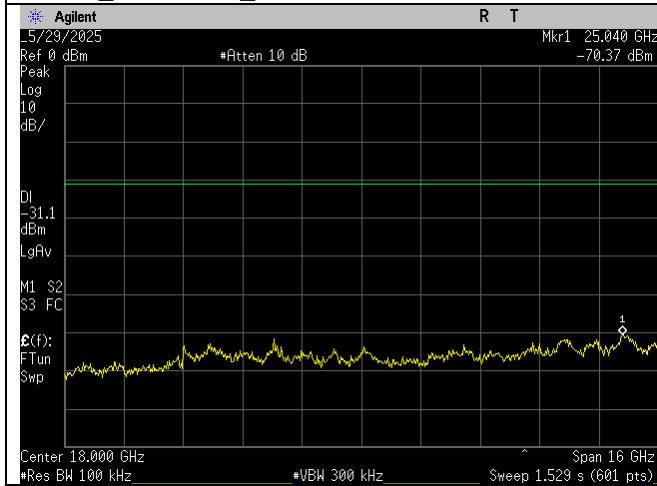
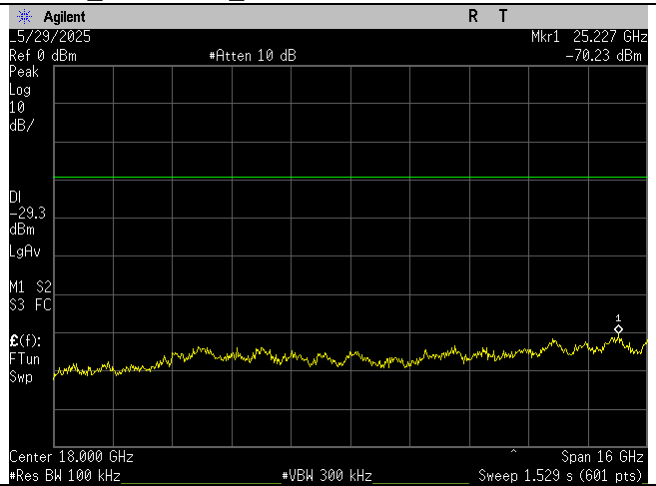
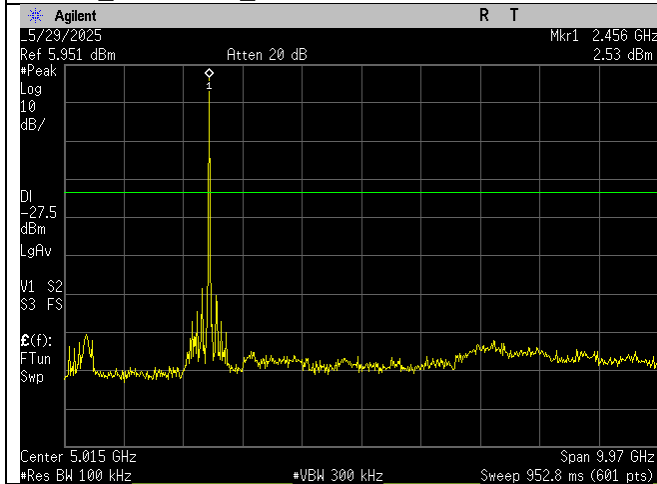
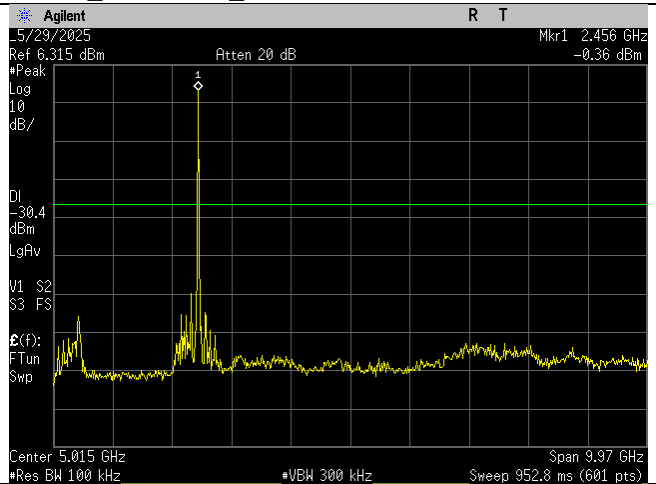
WIFI_High Ch_2457MHz_10MHz BW_-
20dBc_Upper Band Edge_Port 2

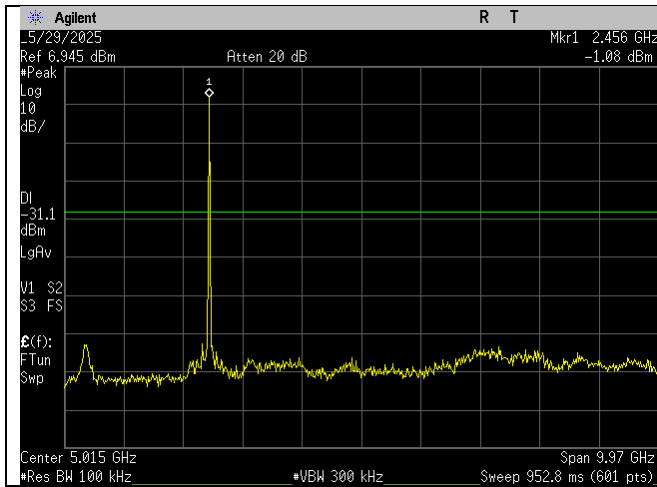


WIFI_High Ch_2457MHz_10MHz BW_-
20dBc_Upper Band Edge_Port 3

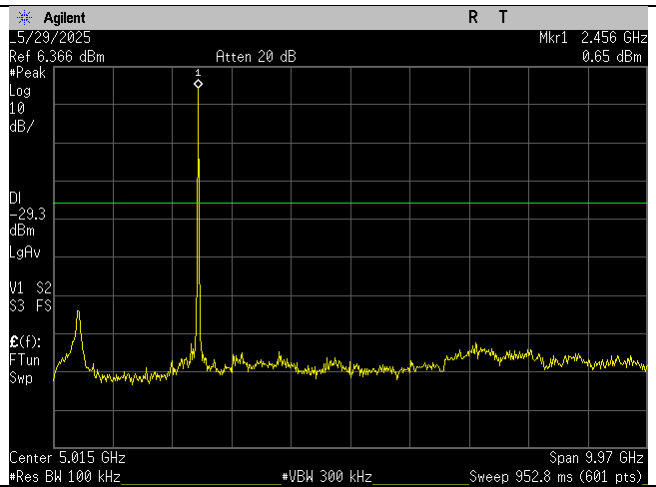


WIFI_High Ch_2457MHz_10MHz BW_-
20dBc_Upper Band Edge_Port 4

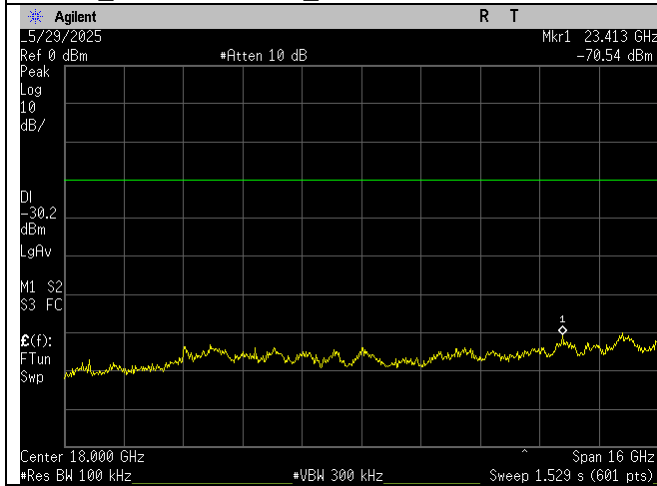
**WIFI_High Ch_2457MHz_10MHz BW_-
30dBc_10-26GHz_Port 1****WIFI_High Ch_2457MHz_10MHz BW_-
30dBc_10-26GHz_Port 2****WIFI_High Ch_2457MHz_10MHz BW_-
30dBc_10-26GHz_Port 3****WIFI_High Ch_2457MHz_10MHz BW_-
30dBc_10-26GHz_Port 4****WIFI_High Ch_2457MHz_10MHz BW_-
30dBc_30MHz-10GHz_Port 1****WIFI_High Ch_2457MHz_10MHz BW_-
30dBc_30MHz-10GHz_Port 2**



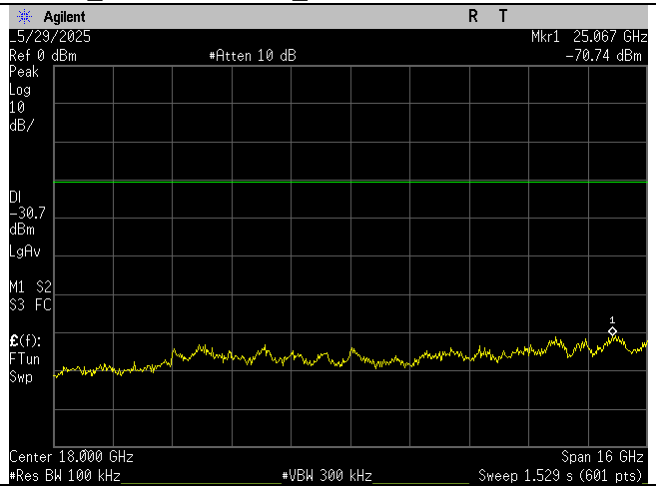
WIFI_High Ch_2457MHz_10MHz BW_-30dBc_30MHz-10GHz_Port 3



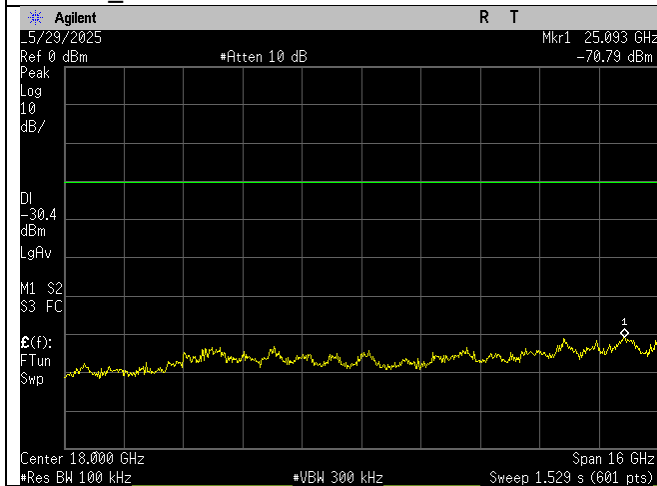
WIFI_High Ch_2457MHz_10MHz BW_-30dBc_30MHz-10GHz_Port 4



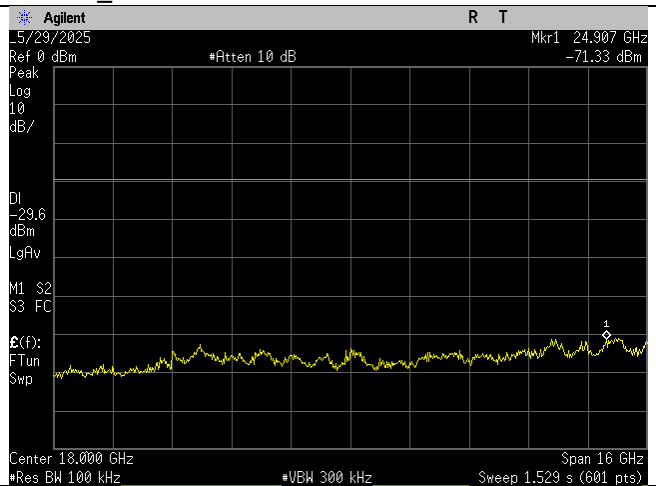
WIFI_Low Ch_2416MHz_10MHz BW_-30dBc_10-26GHz_Port 1



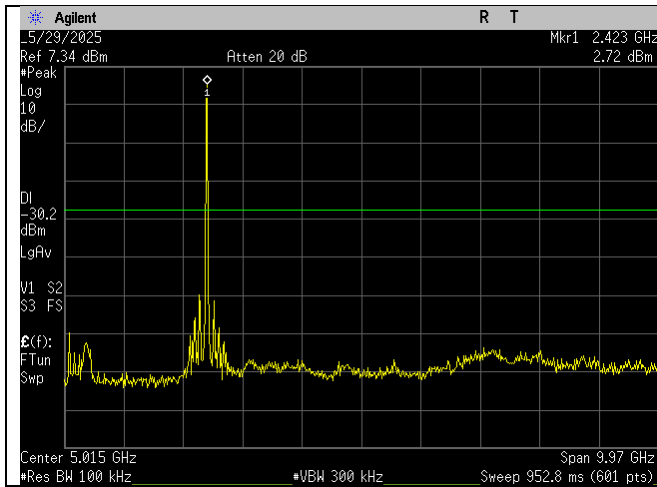
WIFI_Low Ch_2416MHz_10MHz BW_-30dBc_10-26GHz_Port 2



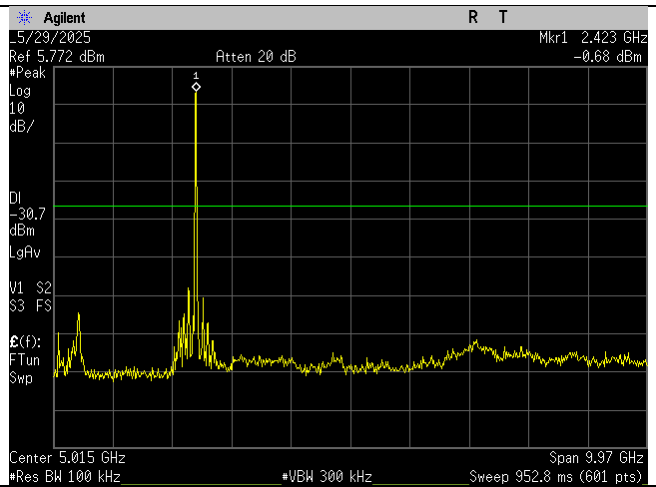
WIFI_Low Ch_2416MHz_10MHz BW_-30dBc_10-26GHz_Port 3



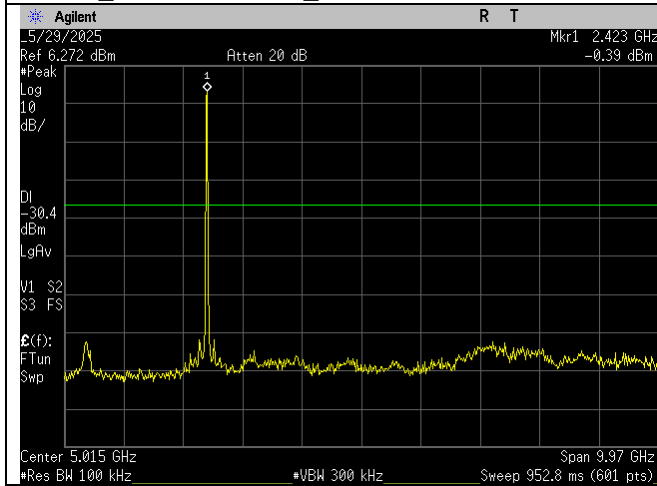
WIFI_Low Ch_2416MHz_10MHz BW_-30dBc_10-26GHz_Port 4



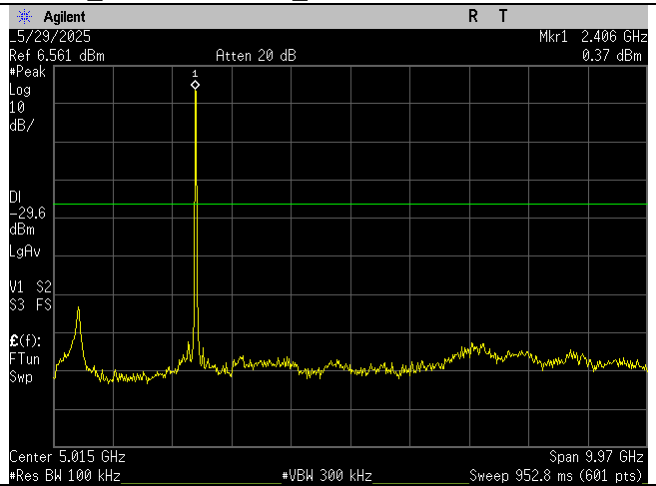
WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_30MHz-10GHz_Port 1



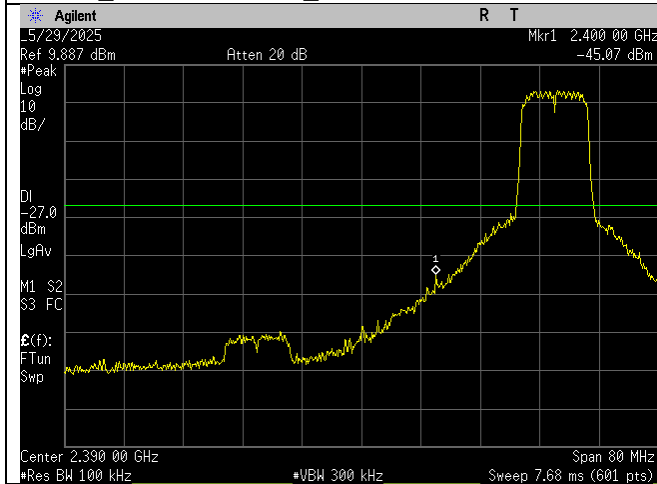
WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_30MHz-10GHz_Port 2



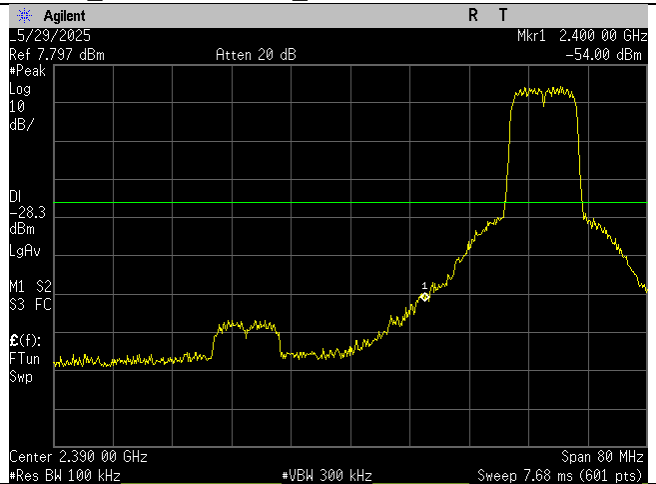
WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_30MHz-10GHz_Port 3



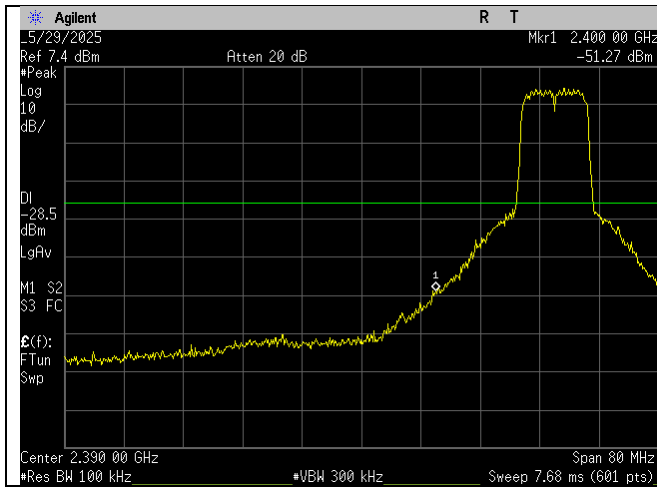
WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_30MHz-10GHz_Port 4



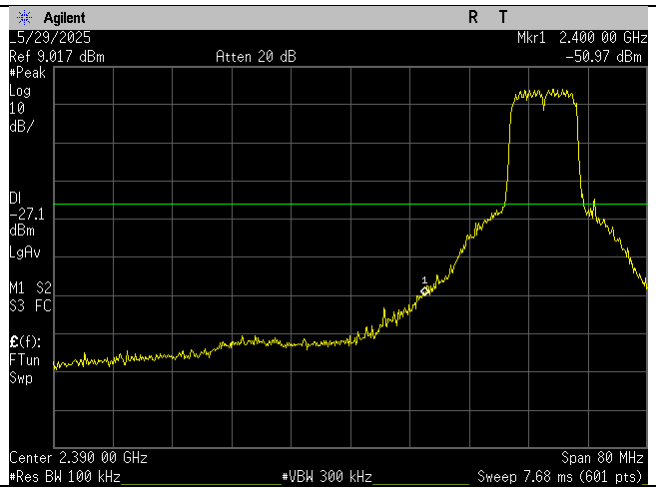
WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_Lower Band Edge_Port 1



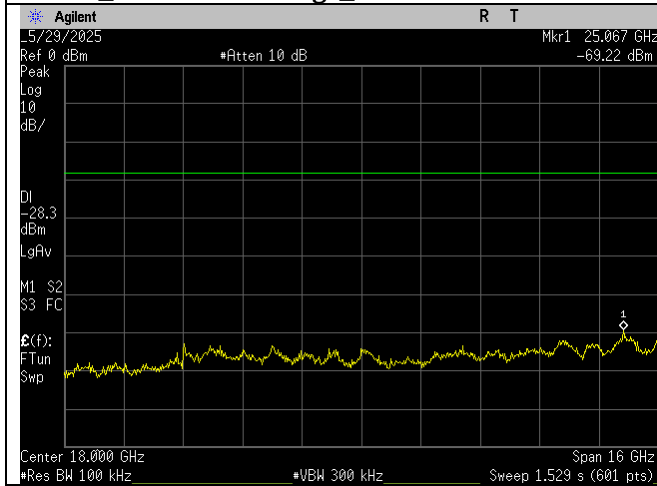
WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_Lower Band Edge_Port 2



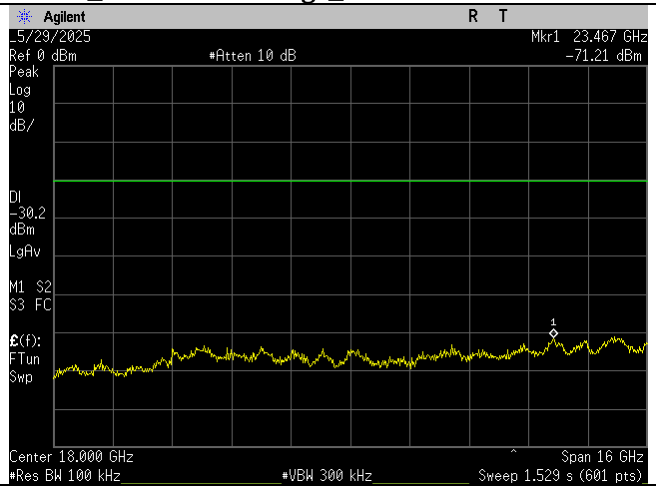
**WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_Lower Band Edge_Port 3**



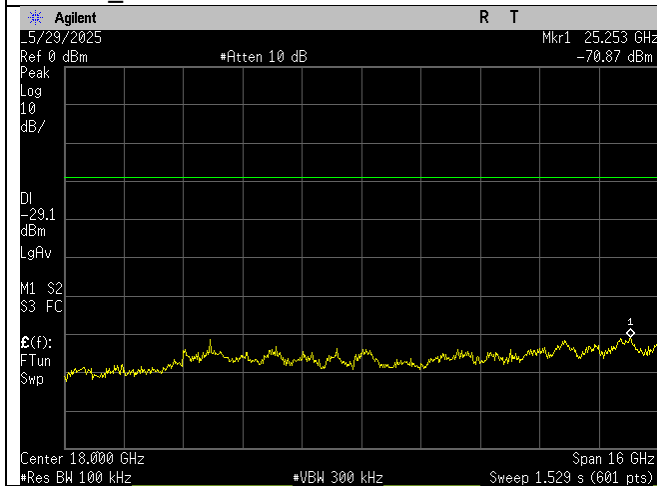
**WIFI_Low Ch_2416MHz_10MHz BW_-
30dBc_Lower Band Edge_Port 4**



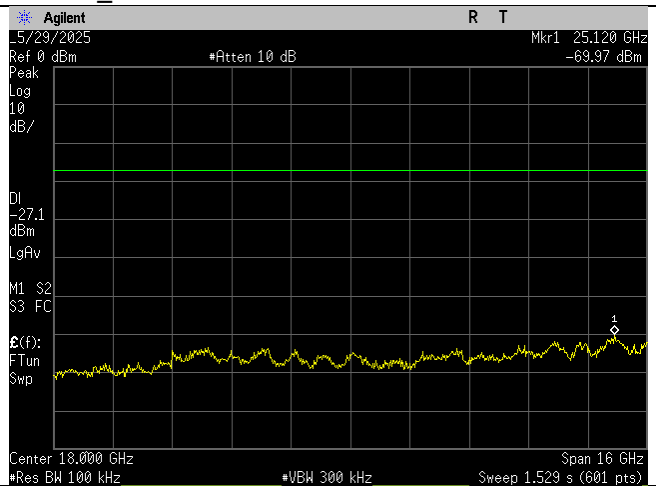
**WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_10-
26GHz_Port 1**



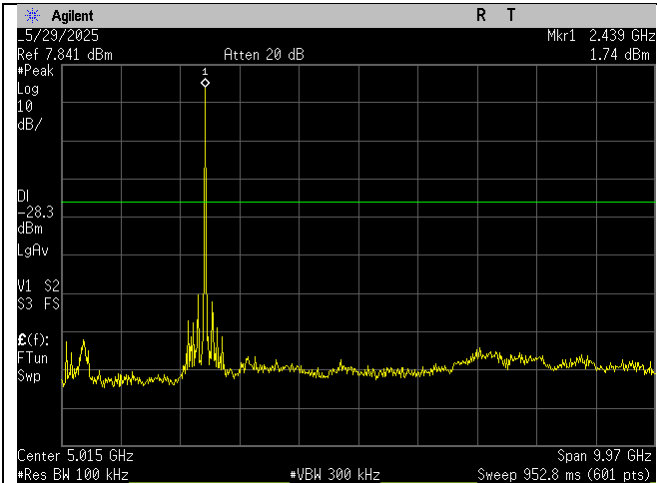
**WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_10-
26GHz_Port 2**



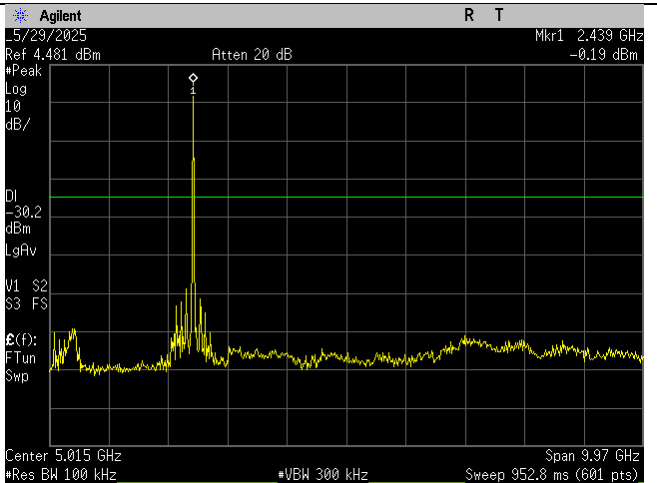
**WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_10-
26GHz_Port 3**



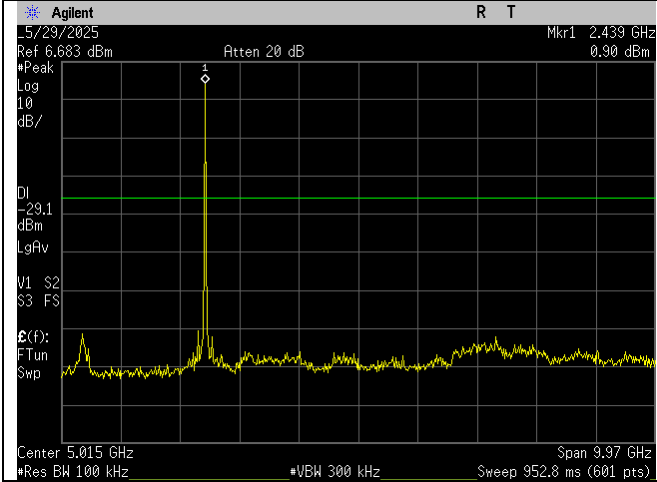
**WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_10-
26GHz_Port 4**



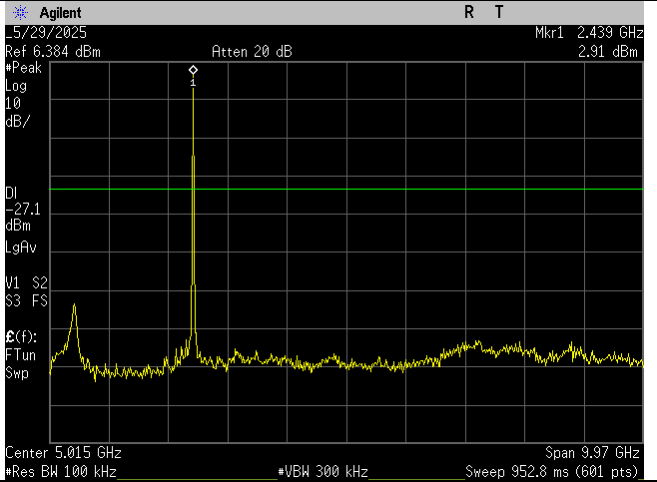
WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_30MHz-10GHz_Port 1



WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_30MHz-10GHz_Port 2



WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_30MHz-10GHz_Port 3

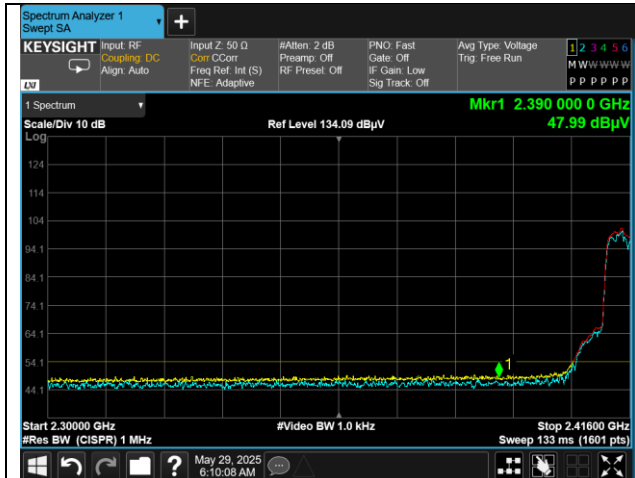


WIFI_Mid Ch_2440MHz_10MHz BW_-30dBc_30MHz-10GHz_Port 4

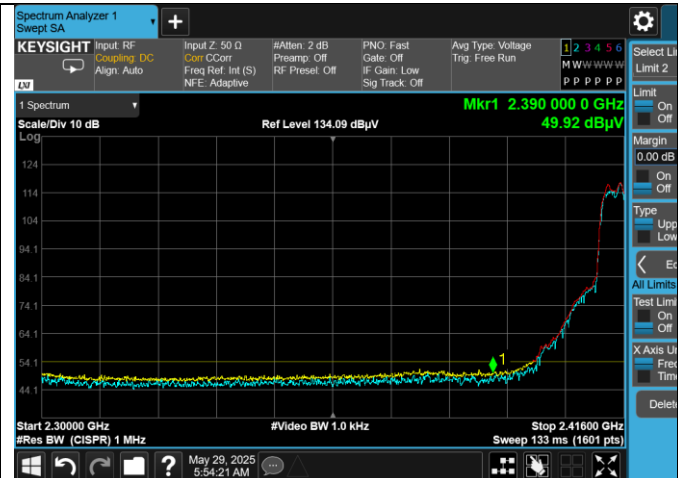
15 Annex D (Normative) – Band Edges

[Naming Convention]

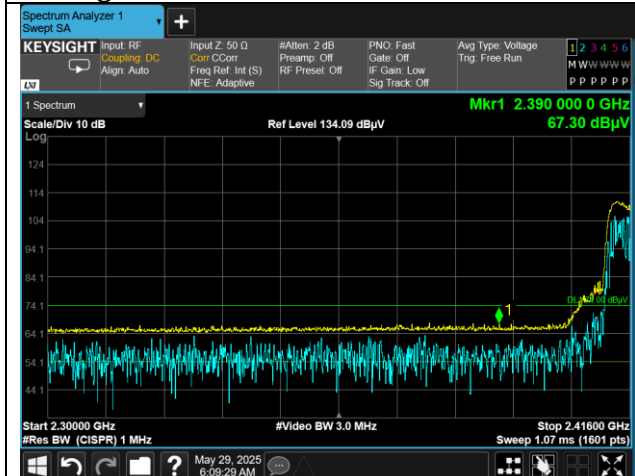
Radio (WIFI)_Channel (Low, High)_ Frequency (MHz)_ Bandwidth (MHz)_ Measurement (Lower Band Edge, Upper Band Edge) Type (Peak, Average) Polarization (Vertical, Horizontal)



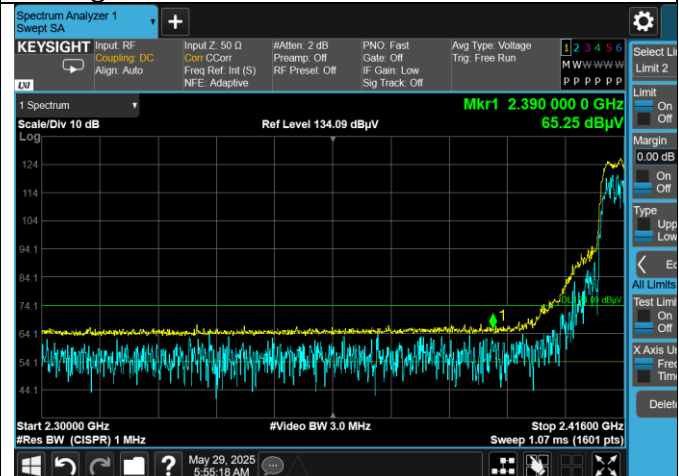
**WIFI_Low Ch 2416 MHz Lower Band Edge
Average Horizontal**



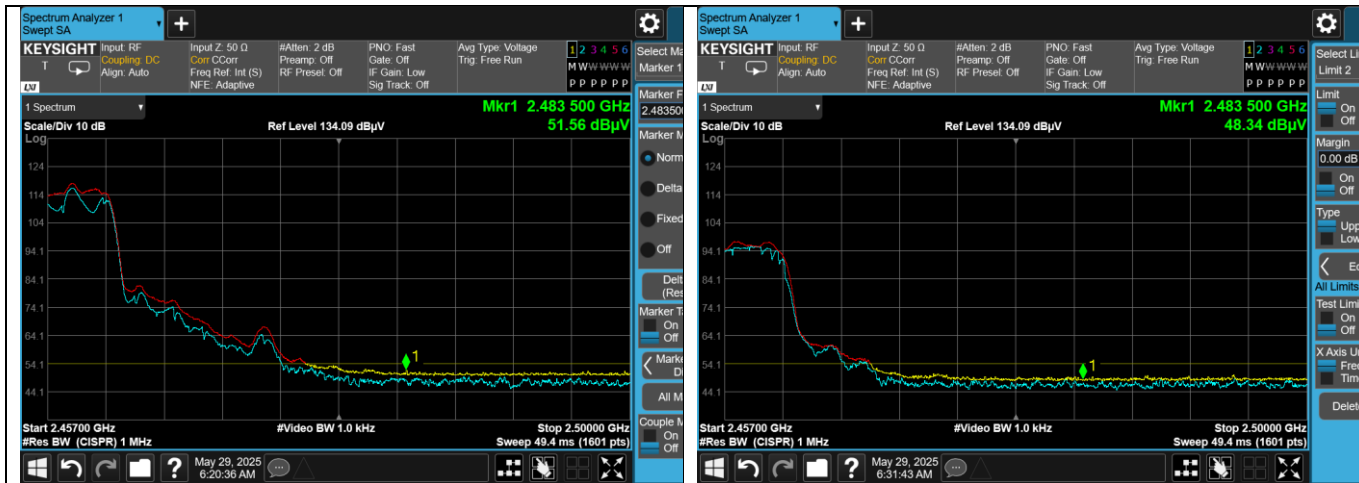
**WIFI_Low Ch 2416 MHz Lower Band Edge
Average Vertical**



**WIFI_Low Ch 2416 MHz Lower Band Edge Peak
Horizontal**



**WIFI_Low Ch 2416 MHz Lower Band Edge Peak
Vertical**



**WIFI_High Ch 2457 MHz Upper Band Edge
Average Vertical**

**WIFI_High Ch 2457 MHz Upper Band Edge
Average Horizontal**



**WIFI_High Ch 2457 MHz Upper Band Edge Peak
Horizontal**

**WIFI_High Ch 2457 MHz Upper Band Edge Peak
Vertical**

16 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 (Informative) – Declaration of Similarity (DOS)



Silvus Technologies, Inc.

10990 Wilshire Blvd., Suite 1500

Los Angeles, California 90024

Ph 310-479-3333

April 3, 2025

To Whom It May Concern,

Models Similarity Letter:

- SC4480E-235470-SBST
- SC4480E-235470F-SBST

SC4480E-235470-SBST is FCC certified radios with FCC ID: N2S-SC448-235470.

SC4480E-235470**F**-SBST is the 2nd model number of the same radio.

Sincerely,

A handwritten signature in blue ink that reads "Cyrus S. Naim".

Signature

Cyrus S. Naim

General Counsel

Silvus Technologies, Inc.

Tel.: (310) 773-5490

21 Appendix E (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.

A blue ink signature of Mr. Trace McInturff.

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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