

# TEST REPORT

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North 2nd Road, Bao'an District, Shenzhen, 518101, China  
Report Number: 2401Y98612E-RF-00C  
FCC ID: 2APPZ-V60W

**Test Standard (s)**

FCC PART 15.247

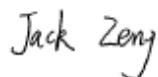
**Sample Description**

Product Type: IP Phone  
Model No.: V60W  
Multiple Model(s) No.: N/A  
Trade Mark: 

Date Received: 2024-10-10  
Issue Date: 2024-12-18

Test Result:	Pass▲
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▲ In the configuration tested, the EUT complied with the standards above.

**Prepared and Checked By:**

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RF Engineer

**Approved By:**

Jimmy Xiao  
EMC Manager

Note: The information marked<sup>#</sup> is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

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## DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2401Y98612E-RF-00C	Original Report	2024-12-18

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

<b>Frequency Range</b>	2412~2462MHz
Mode	802.11b/g/n20/n40/ax20/ax40
<b>Maximum Conducted Output Peak Power</b>	21.53dBm
<b>Modulation Technique</b>	DSSS, OFDM, OFDMA
<b>Antenna Specification<sup>#</sup></b>	3.9dBi (provided by the applicant)
<b>Voltage Range</b>	DC 5V from adapter
<b>Sample serial number</b>	2SLQ-1 for Conducted and Radiated Emissions Test 2SLQ-7 for RF Conducted Test (Assigned by BACL, Shenzhen)
<b>Sample/EUT Status</b>	Good condition
<b>Adapter Information</b>	Adapter 1 Model: DCT06W050100US-D0 Input: AC 100-240V, 50/60Hz, 200mA Output: DC 5.0V, 1.0A Adapter 2 Model: F05L5-050100SPAU Input: AC 100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1.0A, 5.0W

Note1: the EUT only supports the full RU for the 802.11ax mode.  
Note 2: For the AC Line conducted emission, the worst case is powered by the PoE according to the NII report.  
Note 3: For the radiated emission below 1GHz, the worst case is powered by the adapter 2 according to the NII report.

### Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

And KDB 558074 D01 15.247 Meas Guidance v05r02.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

## Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		109.2kHz(k=2, 95% level of confidence)
RF output power, conducted		0.86dB(k=2, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz~150 kHz	3.63dB(k=2, 95% level of confidence)
	150 kHz ~30MHz	3.66dB(k=2, 95% level of confidence)
Radiated Emissions	0.009MHz~30MHz	3.60dB(k=2, 95% level of confidence)
	30MHz~200MHz (Horizontal)	5.32dB(k=2, 95% level of confidence)
	30MHz~200MHz (Vertical)	5.43dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Horizontal)	5.77dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Vertical)	5.73dB(k=2, 95% level of confidence)
	1GHz - 6GHz	5.34dB(k=2, 95% level of confidence)
	6GHz - 18GHz	5.40dB(k=2, 95% level of confidence)
	18GHz - 40GHz	5.64dB(k=2, 95% level of confidence)
	Temperature	±1°C
Humidity		±1%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

For 2.4GHz Wi-Fi mode, total 11 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	/	/
6	2437	/	/
7	2442	/	/

802.11b, 802.11g, 802.11n20 and 802.11ax20 mode was tested with Channel 1, 6 and 11.  
802.11n40 and 802.11ax40 mode was tested with Channel 3, 6 and 9.

### EUT Exercise Software

Exercise Software <sup>#</sup>		SecureCRT_x86_7.1		
Mode	Data rate	Power Level <sup>#</sup>		
		Low Channel	Middle Channel	High Channel
802.11b	1Mbps	9	9	9
802.11g	6Mbps	15	15	15
802.11n20	MCS0	14	14	14
802.11n40	MCS0	12	12	12
802.11ax20	MCS0	14	14	14
802.11ax40	MCS0	13	13	13

### Special Accessories

No special accessory.

### Equipment Modifications

No modification was made to the EUT tested.

### Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
PHIHONG	PoE	POE29U-1AT(PL)	PH1253503JY
Lenovo	PC	G40-70m	YB08745628
Snom	Headset	A310D	3177099

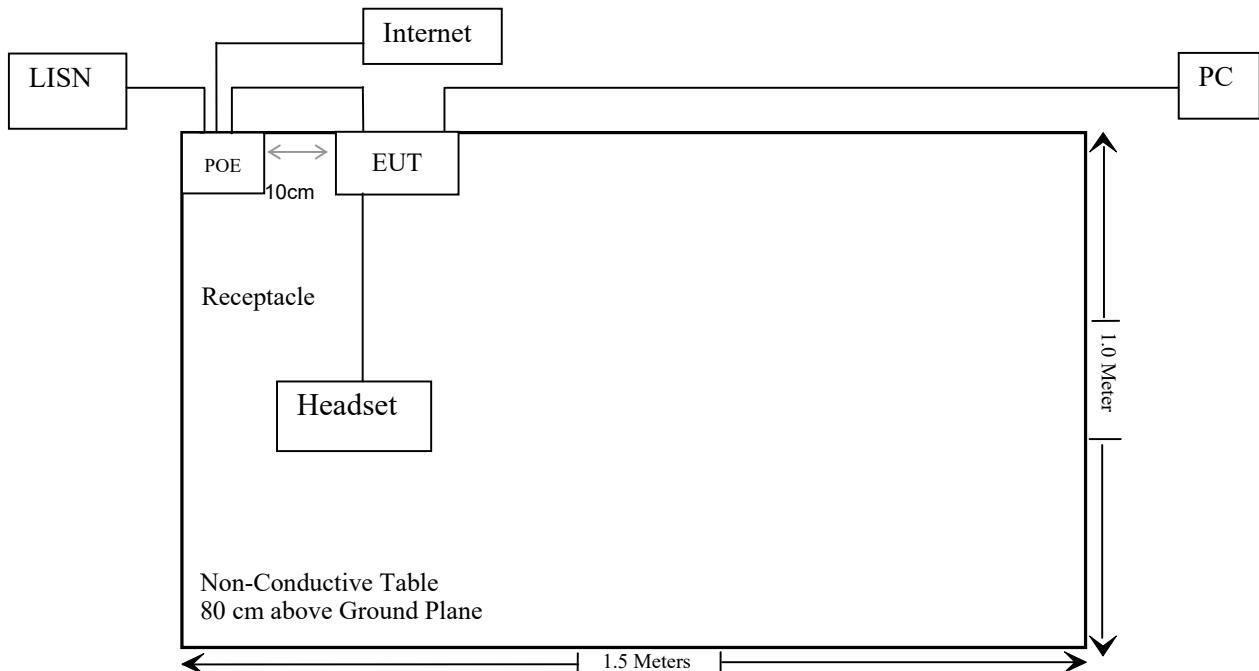
**External I/O Cable**

Cable Description	Length (m)	From Port	To
Unshielded Detachable RJ45 Cable	2.0	EUT	PC/PoE
Unshielded detachable RJ45 cable	3.0	EUT	Internet
Unshielded Un-detachable headset Cable	1.2	EUT	Headset
Unshielded Un-detachable DC Cable	1.2	EUT	Adapter

**Block Diagram of Test Setup**

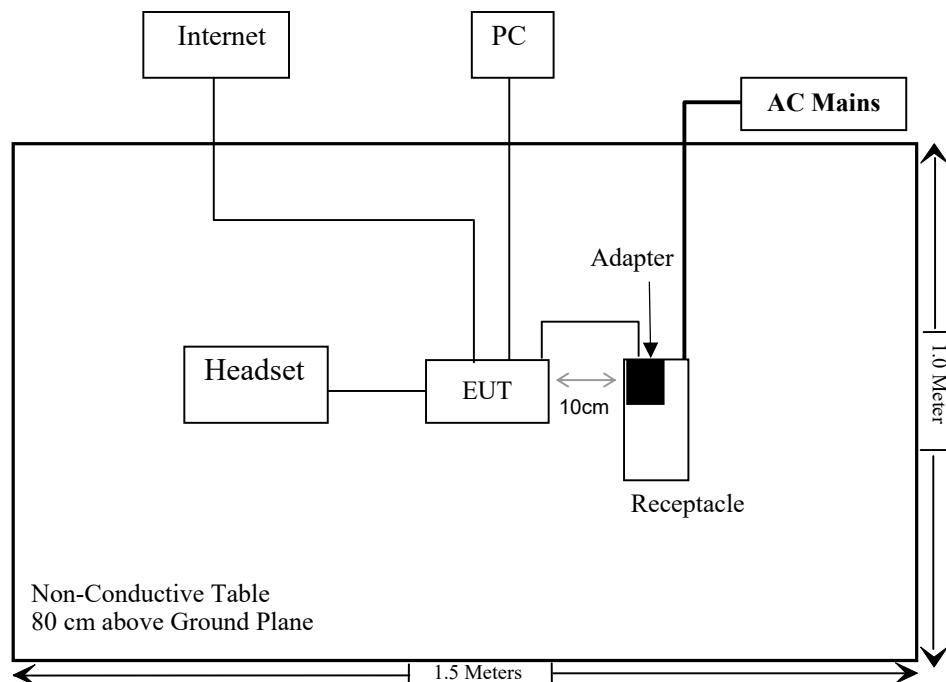
For Conducted Emissions:

For PoE

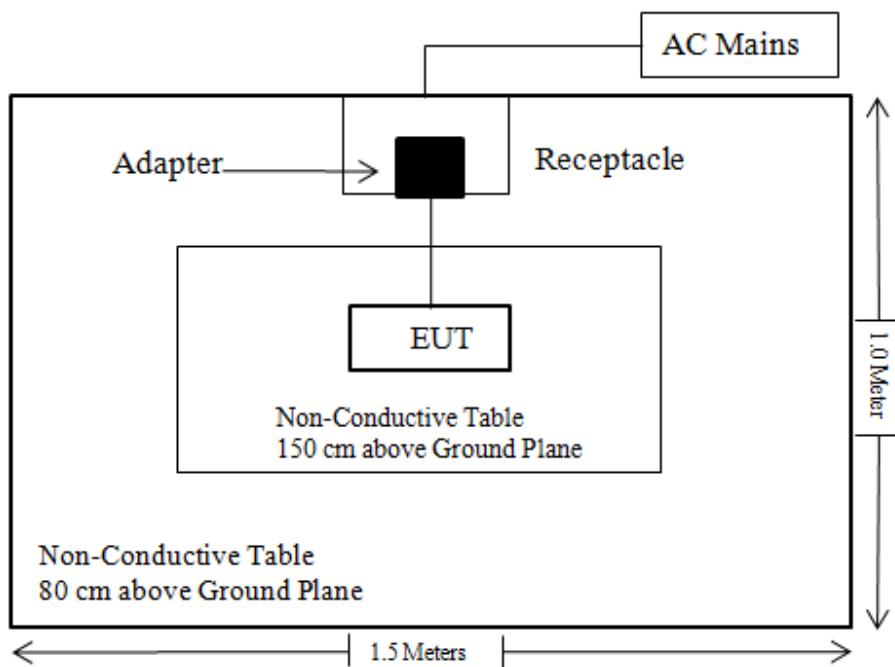


For Radiated Emissions below 1GHz:

For Adapter



For Radiated Emissions above 1GHz:



## SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.203	Antenna Requirement	Compliant
FCC §15.207(a)	AC Line Conducted Emissions	Compliant
FCC §15.205,§15.209,§15.247(d)	Radiated Spurious Emission	Compliant
FCC §15.207(a)(2)	6dB Emission Bandwidth	Compliant
FCC §15.247(b)(1)	Maximum Conducted Output Power	Compliant
FCC §15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
FCC §15.247(e)	Power Spectral Density	Compliant
C63.10 §11.6	Duty Cycle	Compliant
FCC§15.247 (i), §2.1091	Maximum Permissible Exposure(MPE)	Compliant

## TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>Conducted Emission Test</b>					
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2024/01/16	2025/01/15
Rohde & Schwarz	LISN	ENV216	101613	2024/01/16	2025/01/15
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2024/05/21	2025/05/20
Unknown	CE Cable	Unknown	UF A210B-1-0720-504504	2024/05/21	2025/05/20
Audix	EMI Test software	E3	191218(V9)	NCR	NCR
<b>Radiated Emission Test</b>					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/01/16	2025/01/15
Sonoma instrument	Pre-amplifier	310 N	186238	2024/05/21	2025/05/20
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Cable	Chamber A Cable 1	N/A	2024/06/18	2025/06/17
Unknown	Cable	XH500C	J-10M-A	2024/06/18	2025/06/17
BACL	Active Loop Antenna	1313-1A	4031911	2024/05/14	2027/05/13
Unknown	Cable	2Y194	0735	2024/05/21	2025/05/20
Unknown	Cable	PNG214	1354	2024/05/21	2025/05/20
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2024/03/27	2025/03/26
COM-POWER	Pre-amplifier	PA-122	181919	2024/06/18	2025/06/17
Schwarzbeck	Horn Antenna	BBHA9120D(12 01)	1143	2023/07/26	2026/07/25
Unknown	RF Cable	KMSE	735	2024/06/18	2025/06/17
Unknown	RF Cable	UFA147	219661	2024/06/18	2025/06/17
JD	Multiplex Switch Test Control Set	DT7220FSU	DQ77926	2024/06/18	2025/06/17
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2024/03/27	2025/03/26
A.H.System	Pre-amplifier	PAM-1840VH	190	2024/06/18	2025/06/17
Electro-Mechanics Co	Horn Antenna	3116	2026	2023/09/18	2026/09/17
UTIFLEX	RF Cable	NO. 13	232308-001	2024/06/18	2025/06/17
Audix	EMI Test software	E3	191218(V9)	NCR	NCR

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>RF Conducted Test</b>					
Rohde & Schwarz	Spectrum Analyzer	FSV40	101942	2024/09/20	2025/09/19
ANRITSU	Microwave peak power sensor	MA24418A	12622	2024/05/21	2025/05/20
Unknown	10dB Attenuator	Unknown	F-03-EM190	2024/06/27	2025/06/26
Unknown	RF Cable	65475	01670515	2024/06/27	2025/06/26

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

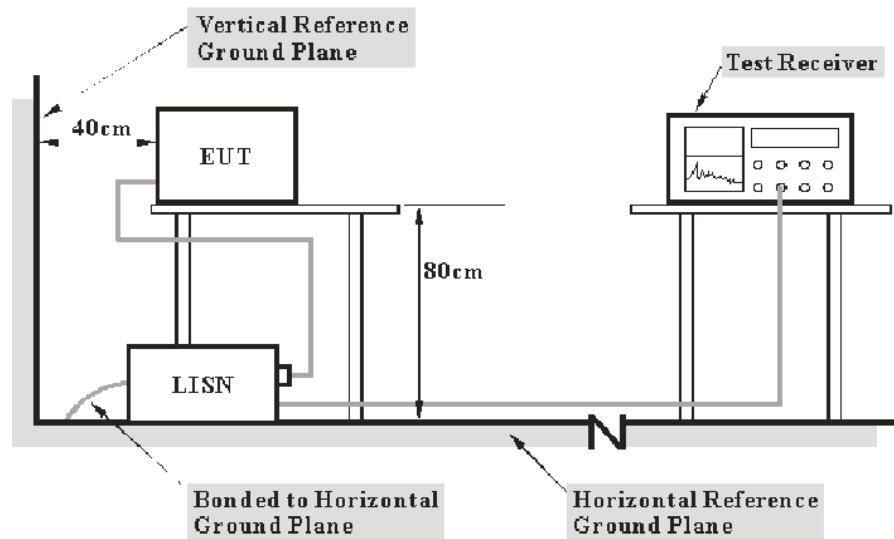
## REQUIREMENTS AND TEST PROCEDURES

### AC Line Conducted Emissions

#### Applicable Standard

FCC§15.207

#### EUT Setup



Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

#### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

### Test Procedure

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

All final data was recorded in the Quasi-peak and average detection mode.

### Factor & Over Limit Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

$$\text{Factor} = \text{LISN VDF} + \text{Cable Loss}$$

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

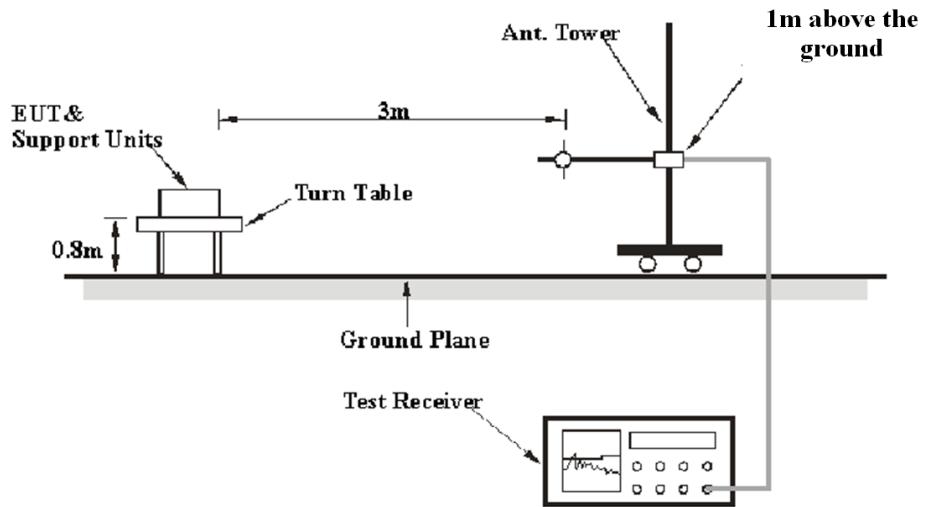
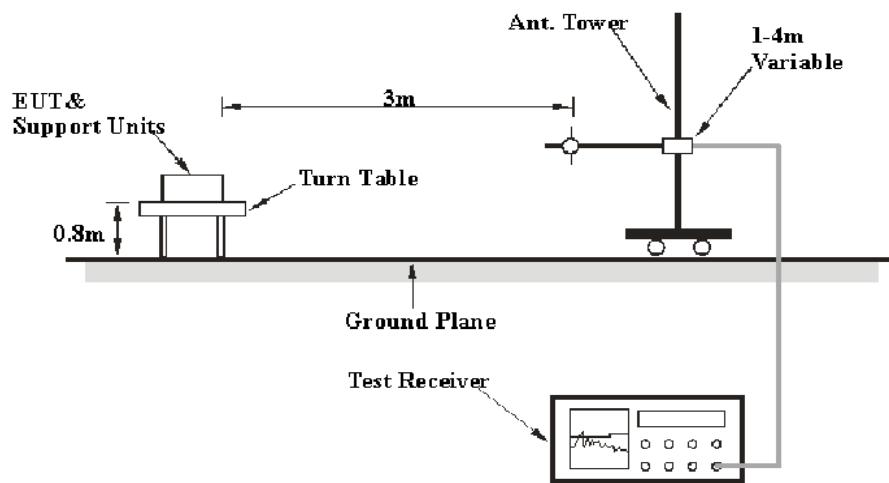
$$\text{Over Limit} = \text{level} - \text{Limit}$$

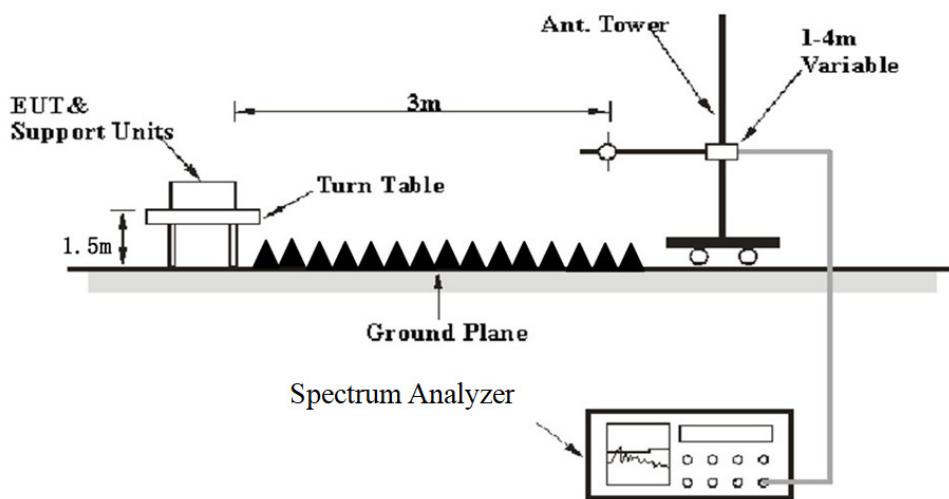
$$\text{Level} = \text{reading level} + \text{Factor}$$

Note: The term "cable loss" refers to the combination of a cable and a 10dB transient limiter (attenuator).

**Spurious Emissions****Applicable Standard**

FCC §15.247 (d); §15.209; §15.205;

**EUT Setup****9 kHz-30MHz:****30MHz-1GHz:**

**Above 1GHz:**

The radiated emission performed in the 3 meters, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, FCC 15.247 limits.

**EMI Test Receiver & Spectrum Analyzer Setup**

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9 kHz-1GHz:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	/	/	200 Hz	QP
	300 Hz	1 kHz	/	PK
150 kHz – 30 MHz	/	/	9 kHz	QP
	10 kHz	30 kHz	/	PK
30 MHz – 1000 MHz	/	/	120 kHz	QP
	100 kHz	300 kHz	/	PK

1-25GHz:  
Pre-scan

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
AV	>98%	1MHz	5 kHz
	<98%	1MHz	≥1/Ton or 5 kHz which is larger

Final measurement for emission identified during pre-scan

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
AV	>98%	1MHz	10 Hz
	<98%	1MHz	≥1/Ton

Note: Ton is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

## Test Procedure

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

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz, peak and average detection modes for frequencies above 1 GHz.

For 9 kHz–30MHz, the report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground-parallel) unless the margin is greater than 20 dB.

All emissions under the average limit and under the noise floor have not recorded in the report.

## Factor & Over Limit/Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “Over Limit/Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit/Margin} &= \text{Level/Corrected Amplitude} - \text{Limit} \\ \text{Level / Corrected Amplitude} &= \text{Read Level} + \text{Factor} \end{aligned}$$

## 6 dB Emission Bandwidth

### Applicable Standard

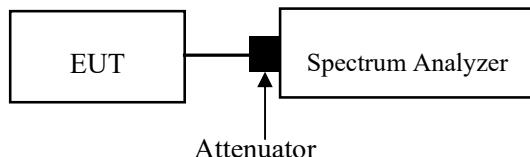
According to FCC §15.247(a) (2)

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 11.8.1

- 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.



## Maximum Conducted Output Power

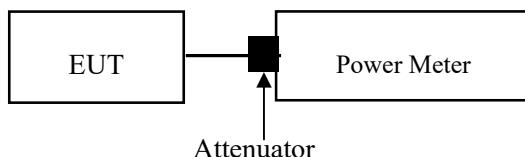
### Applicable Standard

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.

### Test Procedure

Test method: ANSI C63.10-2013 clause 11.9.1.3 for peak power method or clause 11.9.2.3.2 for average power method.

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
3. Add a correction factor to the display.



Note: A short RF cable with low cable loss connected to the EUT antenna port, which was provided by client or lab, the cable loss was add with offset into test equipment, the total offset consists of attenuator and/or RF cable and/or power splitter loss

## 100 kHz Bandwidth of Frequency Band Edge

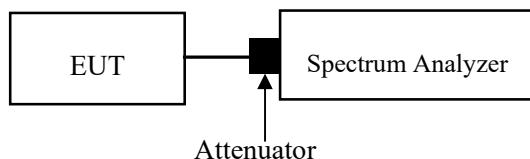
### Applicable Standard

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)).

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 11.11

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.



## Power Spectral Density

### Applicable Standard

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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 11.10.2

Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.

1. Set the RBW to:  $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$ .
2. Set the VBW  $\geq 3 \times \text{RBW}$ .
3. Set the span to 1.5 times the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level within the RBW.
9. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

Test Method: ANSI C63.10-2013 Clause 11.10.3 Method AVGPSD-1

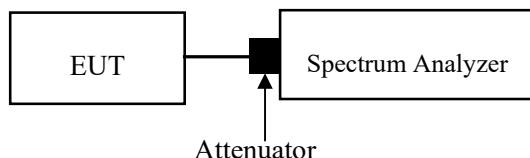
The following procedure may be used when the maximum (average) conducted output power was used to determine compliance to the fundamental output power limit. This is the baseline method for determining the maximum (average) conducted PSD level. If the instrument has a power averaging (rms) detector, then it must be used; otherwise, use the sample detector. The EUT must be configured to transmit continuously ( $D \geq 98\%$ ), or else sweep triggering/signal gating must be implemented to ensure that measurements are made only when the EUT is transmitting at its maximum power control level (no transmitter OFF time to be considered):

1. Set instrument center frequency to DTS channel center frequency.
2. Set span to at least 1.5 times the OBW.
3. Set the RBW to:  $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{BW}$ .
5. Detector = power averaging (rms) or sample detector (when rms not available)
6. Ensure that the number of measurement points in the sweep  $\geq [2 \times \text{span} / \text{RBW}]$ .
7. Sweep time = auto couple.
8. Employ trace averaging (rms) mode over a minimum of 100 traces.
9. Use the peak marker function to determine the maximum amplitude level.
10. If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

**Test Method: ANSI C63.10-2013 Clause 11.10.5 Method AVGPSD-2**

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  $\pm 2\%$ ):

1. Measure the duty cycle (D) of the transmitter output signal as described in 11.6.
2. Set instrument center frequency to DTS channel center frequency.
3. Set span to at least 1.5 times the OBW.
4. Set the RBW to:  $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$ .
5. Set the VBW  $\geq 3 \times \text{BW}$ .
6. Detector = power averaging (rms) or sample detector (when rms not available)
7. Ensure that the number of measurement points in the sweep  $\geq [2 \times \text{span} / \text{RBW}]$ .
8. Sweep time = auto couple.
9. Do not use sweep triggering; allow sweep to “free run.”
10. Employ trace averaging (rms) mode over a minimum of 100 traces.
11. Use the peak marker function to determine the maximum amplitude level.
12. If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).



Note: A short RF cable with low cable loss connected to the EUT antenna port, which was provided by client or lab, the cable loss was add with offset into test equipment, the total offset consists of attenuator and/or RF cable and/or power splitter loss

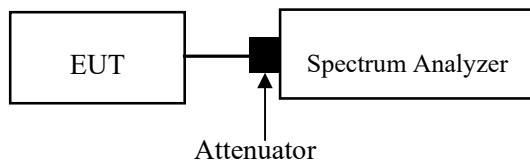
## Duty Cycle

### Test Procedure

According to ANSI C63.10-2013 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

- 1) Set the center frequency of the instrument to the center frequency of the transmission.
- 2) Set RBW  $\geq$  OBW if possible; otherwise, set RBW to the largest available value.
- 3) Set VBW  $\geq$  RBW. Set detector = peak or average.
- 4) The zero-span measurement method shall not be used unless both RBW and VBW are  $> 50/T$  and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if  $T \leq 16.7 \mu\text{s}$ .)



## **ANTENNA REQUIREMENT**

---

### **Applicable Standard**

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.

Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### **Antenna Connector Construction**

The EUT has one internal antenna arrangement, which was permanently attached, the antenna gain<sup>#</sup> is 3.9dBi, fulfill the requirement of this section. Please refer to the EUT photos.

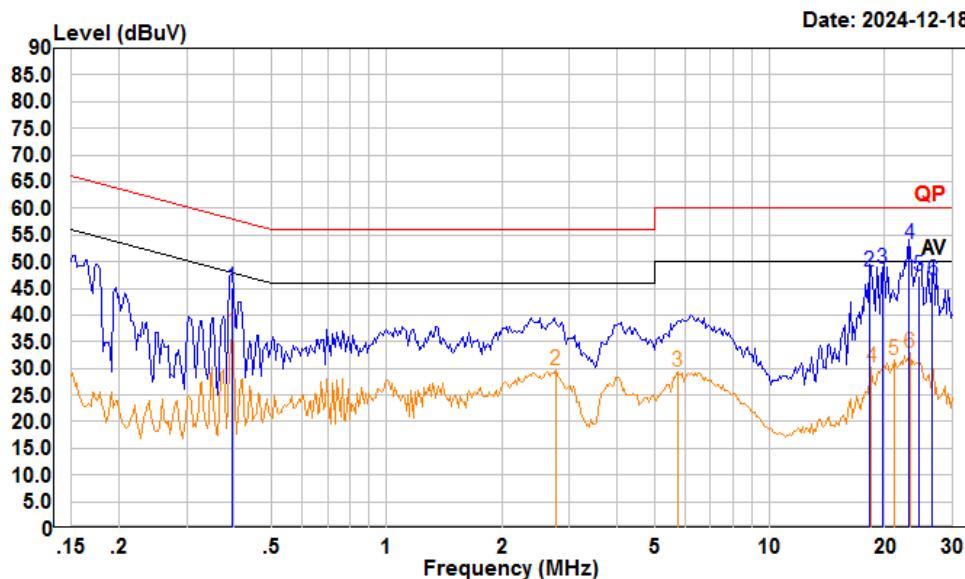
### **Result: Compliant**

## TEST DATA AND RESULTS

### AC Line Conducted Emissions

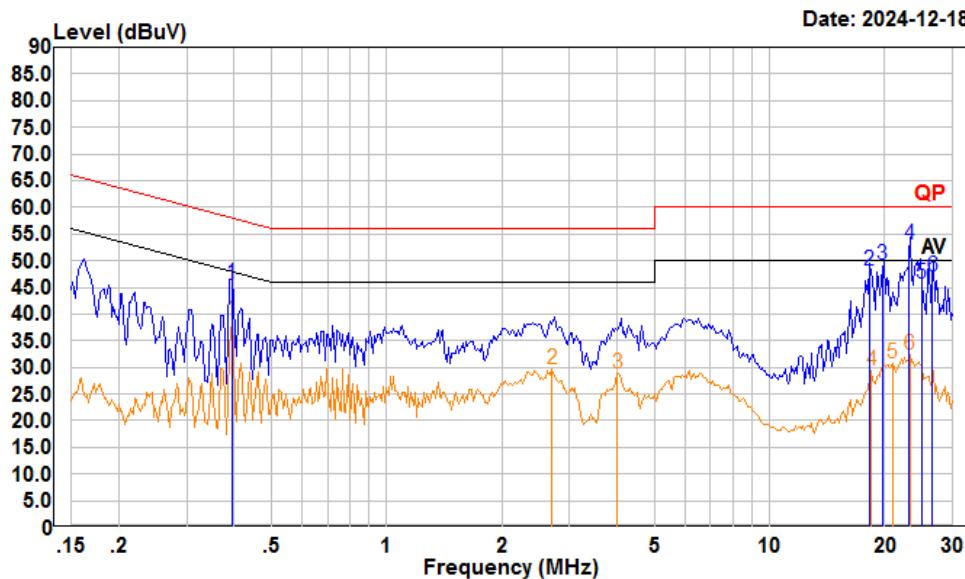
#### Environmental Conditions

Temperature (°C)	22.9	Relative Humidity (%)	38
ATM Pressure (kPa)	101.5	Test engineer	Macy Shi
Test date	2024/12/18		
EUT operation mode	Transmitting(Maximum output power mode, 802.11g Middle Channel)		

**AC 120V/60 Hz, Line**

Freq	Read	LISN	Cable	Limit	Over	Remark
	MHz	dBuV	dBuV	dB	dB	
1	0.393	24.80	45.15	10.25	10.10	57.99 -12.84 QP
2	18.242	27.50	48.26	10.57	10.19	60.00 -11.74 QP
3	19.707	27.90	48.75	10.68	10.17	60.00 -11.25 QP
4	23.129	32.41	53.25	10.66	10.18	60.00 -6.75 QP
5	24.531	26.60	47.44	10.65	10.19	60.00 -12.56 QP
6	26.607	25.60	46.43	10.63	10.20	60.00 -13.57 QP
	Read	LISN	Cable	Limit	Over	
Freq	Level	Level	Factor	Loss	Line	Limit Remark
	MHz	dBuV	dBuV	dB	dB	
1	0.393	16.33	36.68	10.25	10.10	47.99 -11.31 Average
2	2.765	9.03	29.56	10.35	10.18	46.00 -16.44 Average
3	5.744	8.53	29.24	10.53	10.18	50.00 -20.76 Average
4	18.426	9.48	30.26	10.59	10.19	50.00 -19.74 Average
5	21.147	10.77	31.63	10.69	10.17	50.00 -18.37 Average

	Freq	Read Level	LISN Level	Cable Factor	Limit Loss	Over Line Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB
6	23.263	12.04	32.88	10.66	10.18	50.00	-17.12 Average

**AC 120V/60 Hz, Neutral**

Freq	Read		LISN	Cable	Limit	Over	Remark	
	MHz	dBuV	Level	Factor	dB	dBuV	dB	
1	0.393	24.90	45.75	10.75	10.10	57.99	-12.24	QP
2	18.242	27.60	48.05	10.26	10.19	60.00	-11.95	QP
3	19.709	28.80	49.18	10.21	10.17	60.00	-10.82	QP
4	23.128	32.70	53.12	10.24	10.18	60.00	-6.88	QP
5	24.897	25.30	45.74	10.25	10.19	60.00	-14.26	QP
6	26.608	26.70	47.17	10.27	10.20	60.00	-12.83	QP
Read		LISN	Cable	Limit	Line	Over	Remark	
Freq	Level	Level	Factor	Loss	dBuV	dB		
1	0.393	18.08	38.93	10.75	10.10	47.99	-9.06	Average
2	2.707	9.23	29.63	10.23	10.17	46.00	-16.37	Average
3	4.006	8.13	28.74	10.40	10.21	46.00	-17.26	Average
4	18.426	8.89	29.34	10.26	10.19	50.00	-20.66	Average
5	20.924	10.36	30.74	10.21	10.17	50.00	-19.26	Average

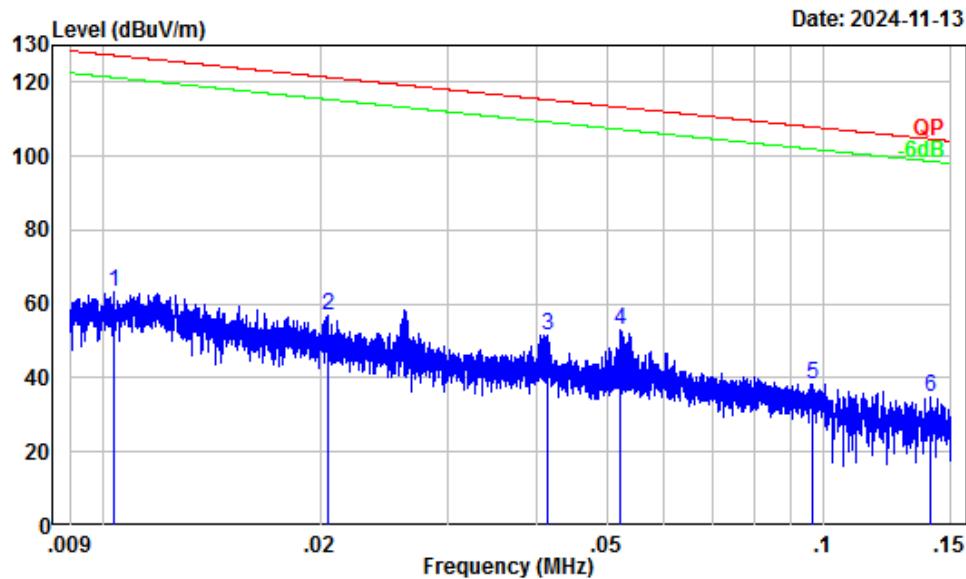
	Freq	Read Level	LISN Level	Cable Factor	Limit Loss	Line Limit	Over Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB
6	23.263	12.08	32.50	10.24	10.18	50.00	-17.50 Average

**Spurious Emissions****Environmental Conditions**

<b>Temperature (°C)</b>	22~26	<b>Relative Humidity (%)</b>	50~54
<b>ATM Pressure (kPa):</b>	101	<b>Test engineer:</b>	Anson Su & Dylan Yang
<b>Test date:</b>	2024.11.07-2024.11.14		
<b>EUT operation mode:</b>	Below 1GHz: Transmitting (Maximum output power mode, 802.11g Middle Channel) Above 1GHz: Transmitting		
<b>Note:</b>	After pre-scan in the X, Y and Z axes of orientation, the worst case z-axis of orientation were recorded.		

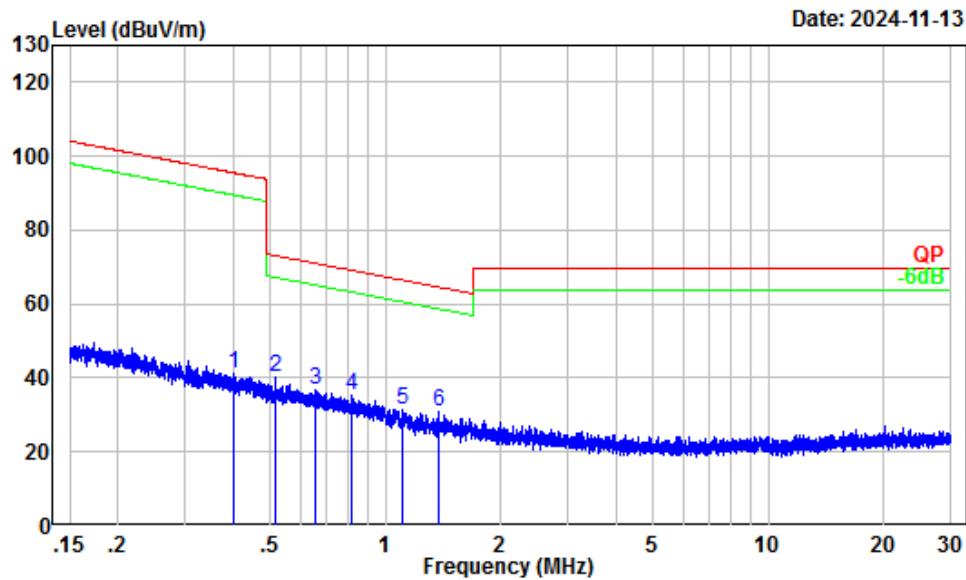
**9 kHz-30MHz:**

Parallel (worst case)



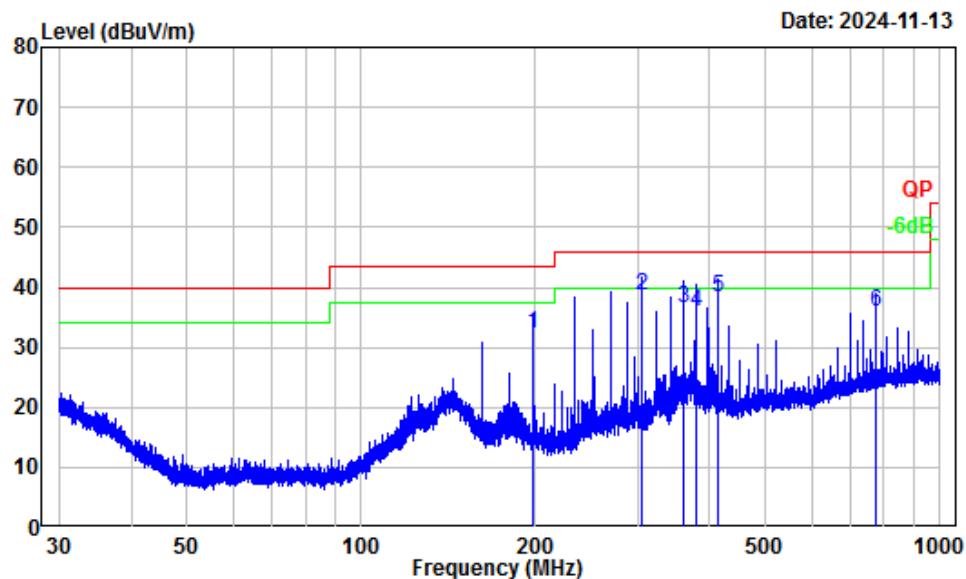
Site : Chamber A  
Condition : 3m  
Project Number: 2401Y98612E-RF  
Test Mode : 2.4G WIFI Transmitting  
Tester : Anson Su

Freq Factor	Read Level		Limit Line	Over Limit	Remark
	MHz	dB <sub>m</sub>	dB <sub>uV</sub>	dB <sub>uV/m</sub>	dB
1	0.01	37.52	25.68	63.20	-64.11 Peak
2	0.02	32.34	24.36	56.70	-64.68 Peak
3	0.04	24.98	26.65	51.63	-63.65 Peak
4	0.05	22.76	30.45	53.21	-60.02 Peak
5	0.10	17.42	20.90	38.32	-69.61 Peak
6	0.14	15.16	19.49	34.65	-69.99 Peak



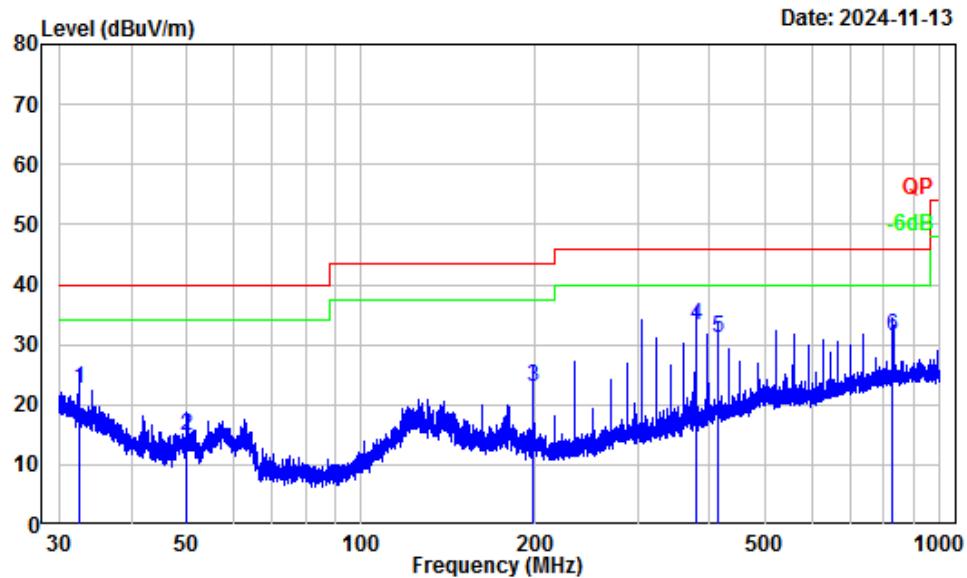
Site : Chamber A  
Condition : 3m  
Project Number: 2401Y98612E-RF  
Test Mode : 2.4G WIFI Transmitting  
Tester : Anson Su

	Freq	Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	0.40	5.53	35.56	41.09	95.49	-54.40	Peak
2	0.52	3.26	36.95	40.21	73.30	-33.09	Peak
3	0.65	1.63	34.94	36.57	71.23	-34.66	Peak
4	0.82	-0.25	35.54	35.29	69.25	-33.96	Peak
5	1.11	-1.98	33.19	31.21	66.52	-35.31	Peak
6	1.38	-2.92	33.93	31.01	64.60	-33.59	Peak

**30MHz-1GHz:****Horizontal**

Site : Chamber A  
Condition : 3m Horizontal  
Project Number: 2401Y98612E-RF  
Test Mode : 2.4G WIFI Transmitting  
Tester : Anson Su

	Freq	Factor	Read Level	Limit Level	Line	Over Limit	Remark
	MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	dB	
1	197.98	-13.28	45.52	32.24	43.50	-11.26	QP
2	306.08	-11.07	49.77	38.70	46.00	-7.30	QP
3	359.97	-9.89	46.32	36.43	46.00	-9.57	QP
4	378.09	-9.20	45.17	35.97	46.00	-10.03	QP
5	414.00	-8.04	46.46	38.42	46.00	-7.58	QP
6	774.16	-2.48	38.30	35.82	46.00	-10.18	QP

**Vertical**

Site : Chamber A  
Condition : 3m Vertical  
Project Number: 2401Y98612E-RF  
Test Mode : 2.4G WIFI Transmitting  
Tester : Anson Su

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>uV</sub>	dB <sub>uV/m</sub>		
1	32.45	-7.29	29.99	22.70	40.00	-17.30	QP
2	49.99	-17.92	32.68	14.76	40.00	-25.24	QP
3	197.98	-13.28	36.36	23.08	43.50	-20.42	QP
4	378.09	-9.20	42.32	33.12	46.00	-12.88	QP
5	414.00	-8.04	39.04	31.00	46.00	-15.00	QP
6	826.77	-1.93	33.27	31.34	46.00	-14.66	QP

**Above 1GHz:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)					
	Reading (dB $\mu$ V)	PK/Ave										
<b>802.11b</b>												
Low Channel												
4824	51.71	PK	H	2.45	54.16	74	-19.84					
4824	46.46	AV	H	2.45	48.91	54	-5.09					
4824	46.89	PK	V	2.45	49.34	74	-24.66					
4824	38.15	AV	V	2.45	40.6	54	-13.4					
Middle Channel												
4874	51.55	PK	H	2.56	54.11	74	-19.89					
4874	46.47	AV	H	2.56	49.03	54	-4.97					
4874	47.14	PK	V	2.56	49.7	74	-24.3					
4874	38.73	AV	V	2.56	41.29	54	-12.71					
High Channel												
4924	51.56	PK	H	2.63	54.19	74	-19.81					
4924	47.53	AV	H	2.63	50.16	54	-3.84					
4924	47.18	PK	V	2.63	49.81	74	-24.19					
4924	37.95	AV	V	2.63	40.58	54	-13.42					
<b>802.11g</b>												
Low Channel												
4824	57.42	PK	H	2.45	59.87	74	-14.13					
4824	44.31	AV	H	2.45	46.76	54	-7.24					
4824	50.94	PK	V	2.45	53.39	74	-20.61					
4824	37.85	AV	V	2.45	40.3	54	-13.7					
Middle Channel												
4874	58.38	PK	H	2.56	60.94	74	-13.06					
4874	44.73	AV	H	2.56	47.29	54	-6.71					
4874	51.73	PK	V	2.56	54.29	74	-19.71					
4874	38.4	AV	V	2.56	40.96	54	-13.04					
High Channel												
4924	60.33	PK	H	2.63	62.96	74	-11.04					
4924	46.23	AV	H	2.63	48.86	54	-5.14					
4924	49.41	PK	V	2.63	52.04	74	-21.96					
4924	35.78	AV	V	2.63	38.41	54	-15.59					

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)					
	Reading (dB $\mu$ V)	PK/Ave										
<b>802.11n20</b>												
Low Channel												
4824	57.56	PK	H	2.45	60.01	74	-13.99					
4824	44.28	AV	H	2.45	46.73	54	-7.27					
4824	47.9	PK	V	2.45	50.35	74	-23.65					
4824	36.32	AV	V	2.45	38.77	54	-15.23					
Middle Channel												
4874	56.56	PK	H	2.56	59.12	74	-14.88					
4874	42.71	AV	H	2.56	45.27	54	-8.73					
4874	48.23	PK	V	2.56	50.79	74	-23.21					
4874	35.76	AV	V	2.56	38.32	54	-15.68					
High Channel												
4924	56.49	PK	H	2.63	59.12	74	-14.88					
4924	42.64	AV	H	2.63	45.27	54	-8.73					
4924	47.98	PK	V	2.63	50.61	74	-23.39					
4924	35.61	AV	V	2.63	38.24	54	-15.76					
<b>802.11n40</b>												
Low Channel												
4844	50.28	PK	H	2.47	52.75	74	-21.25					
4844	37.92	AV	H	2.47	40.39	54	-13.61					
4844	46.65	PK	V	2.47	49.12	74	-24.88					
4844	33.62	AV	V	2.47	36.09	54	-17.91					
Middle Channel												
4874	50.32	PK	H	2.56	52.88	74	-21.12					
4874	38.57	AV	H	2.56	41.13	54	-12.87					
4874	46.96	PK	V	2.56	49.52	74	-24.48					
4874	34.12	AV	V	2.56	36.68	54	-17.32					
High Channel												
4904	52.31	PK	H	2.64	54.95	74	-19.05					
4904	39.42	AV	H	2.64	42.06	54	-11.94					
4904	47.16	PK	V	2.64	49.8	74	-24.2					
4904	35.48	AV	V	2.64	38.12	54	-15.88					

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)					
	Reading (dB $\mu$ V)	PK/Ave										
<b>802.11ax20</b>												
Low Channel												
4824	56.97	PK	H	2.45	59.42	74	-14.58					
4824	43.72	AV	H	2.45	46.17	54	-7.83					
4824	49.65	PK	V	2.45	52.1	74	-21.9					
4824	35.72	AV	V	2.45	38.17	54	-15.83					
Middle Channel												
4874	56.52	PK	H	2.56	59.08	74	-14.92					
4874	43.14	AV	H	2.56	45.7	54	-8.3					
4874	49.01	PK	V	2.56	51.57	74	-22.43					
4874	35.52	AV	V	2.56	38.08	54	-15.92					
High Channel												
4924	56.34	PK	H	2.63	58.97	74	-15.03					
4924	41.97	AV	H	2.63	44.6	54	-9.4					
4924	48.03	PK	V	2.63	50.66	74	-23.34					
4924	35.44	AV	V	2.63	38.07	54	-15.93					
<b>802.11ax40</b>												
Low Channel												
4844	52.66	PK	H	2.47	55.13	74	-18.87					
4844	39.11	AV	H	2.47	41.58	54	-12.42					
4844	46.52	PK	V	2.47	48.99	74	-25.01					
4844	34.23	AV	V	2.47	36.7	54	-17.3					
Middle Channel												
4874	53.18	PK	H	2.56	55.74	74	-18.26					
4874	39.91	AV	H	2.56	42.47	54	-11.53					
4874	46.62	PK	V	2.56	49.18	74	-24.82					
4874	34.61	AV	V	2.56	37.17	54	-16.83					
High Channel												
4904	53.46	PK	H	2.64	56.1	74	-17.9					
4904	39.97	AV	H	2.64	42.61	54	-11.39					
4904	47.62	PK	V	2.64	50.26	74	-23.74					
4904	34.27	AV	V	2.64	36.91	54	-17.09					

Note:

Corrected Factor = Antenna factor (RX) + Cable Loss - Amplifier Factor

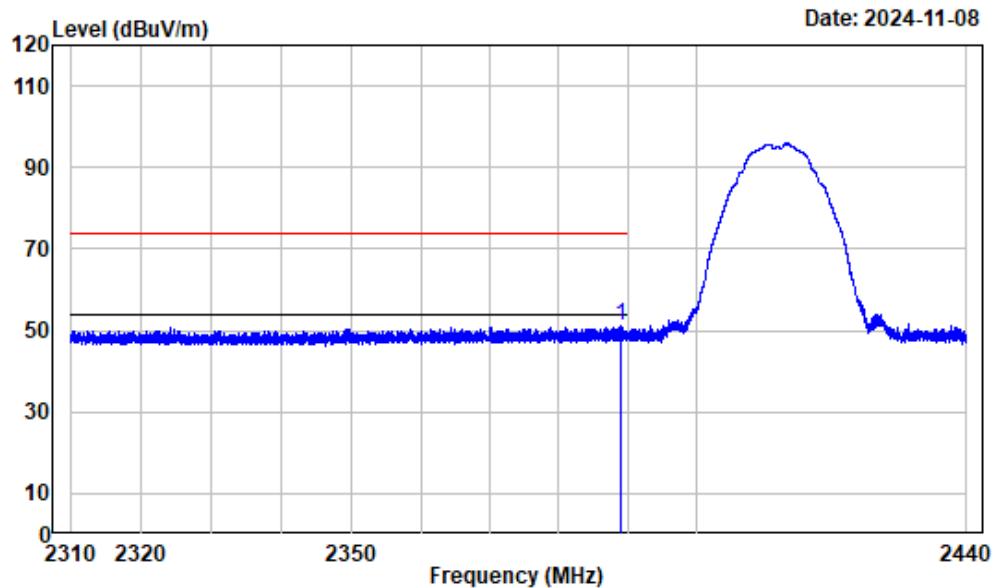
Corrected Amplitude = Corrected Factor + Reading

Margin = Corrected. Amplitude - Limit

The other spurious emission which is in the noise floor level was not recorded.

**Test plots**

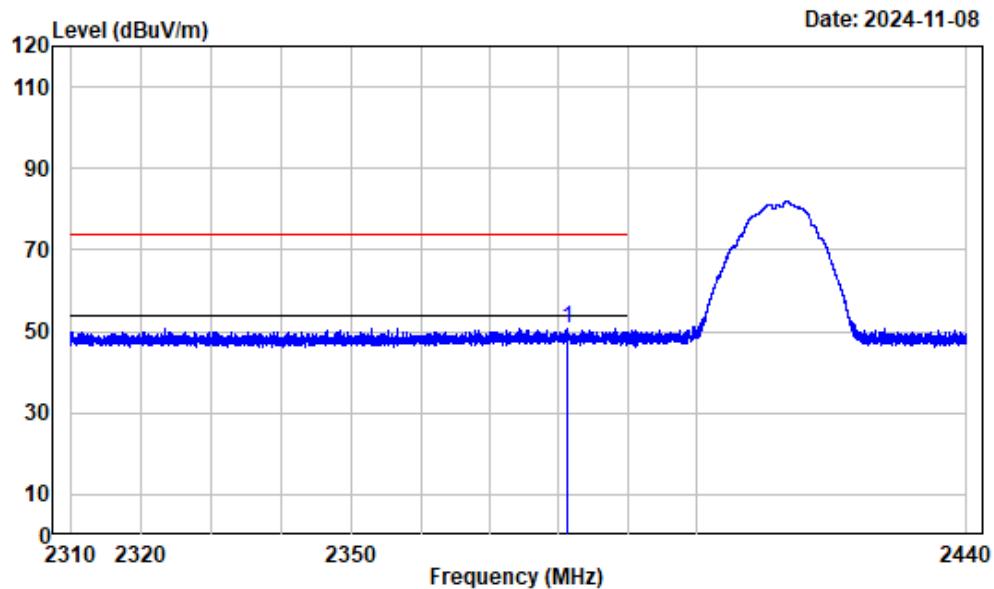
Left Band edge\_Horizontal-2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2412

	Freq	Read Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	2388.936	-3.20	54.56	51.36	74.00	-22.64 peak

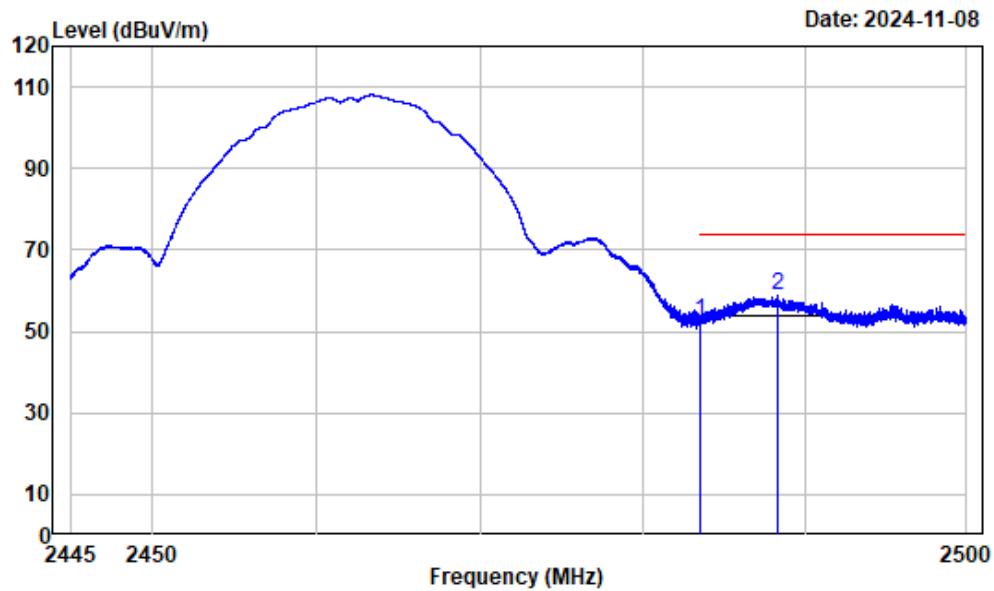
## Left Band edge\_Verical -2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2412

Freq	Factor	Read		Limit		Over	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2381.249	-3.19	53.94	50.75	74.00	-23.25	peak

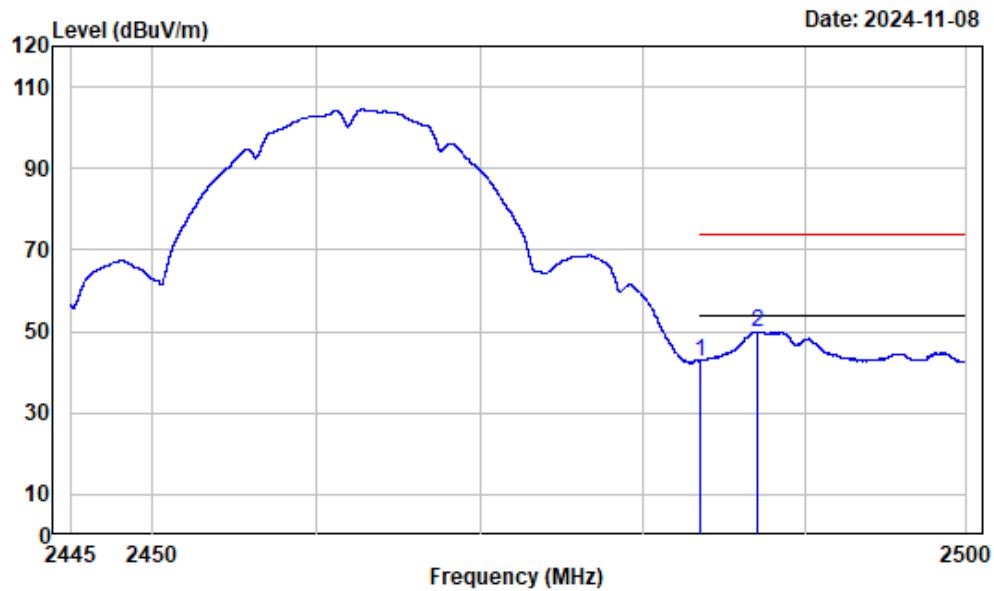
## Right Band edge\_Horizontal\_Peak-2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	55.70	52.53	74.00	-21.47	Peak
2	2488.366	-3.18	61.97	58.79	74.00	-15.21	peak

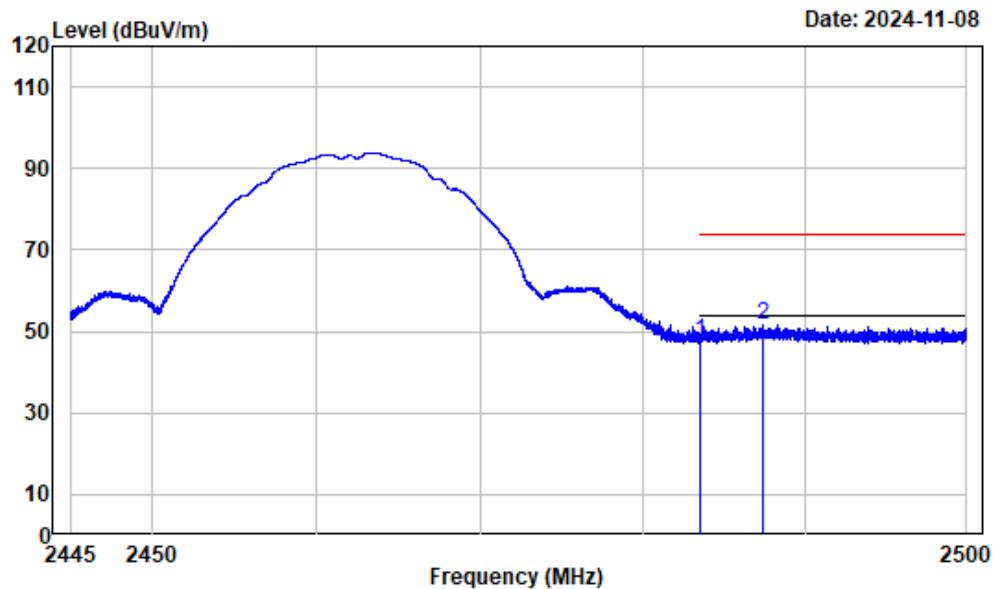
## Right Band edge\_Horizontal\_Average-2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	45.85	42.68	54.00	-11.32	Average
2	2487.066	-3.17	53.19	50.02	54.00	-3.98	Average

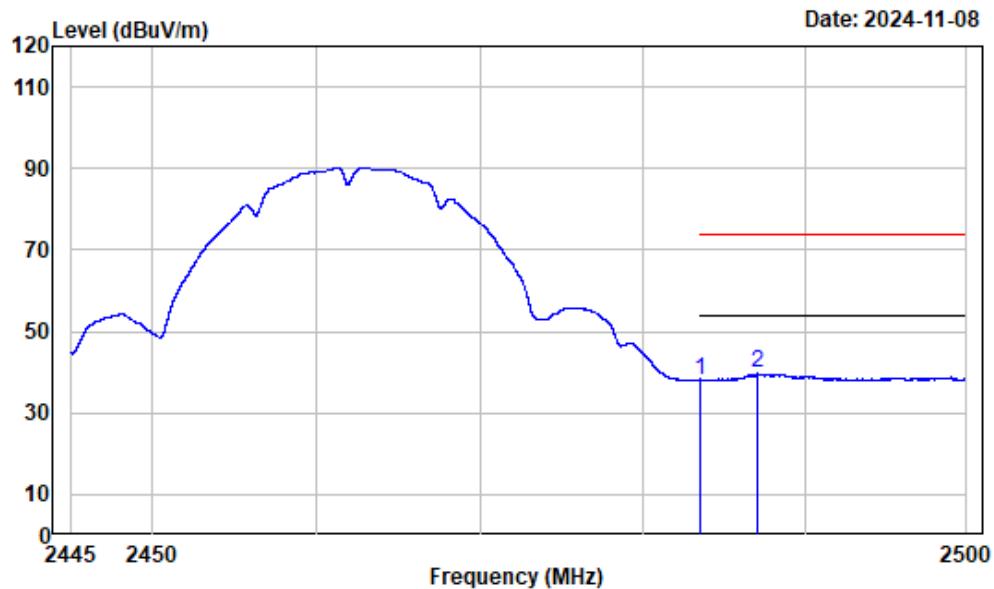
## Right Band edge\_Vertical\_Peak-2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	50.69	47.52	74.00	-26.48	Peak
2	2487.376	-3.17	54.82	51.65	74.00	-22.35	peak

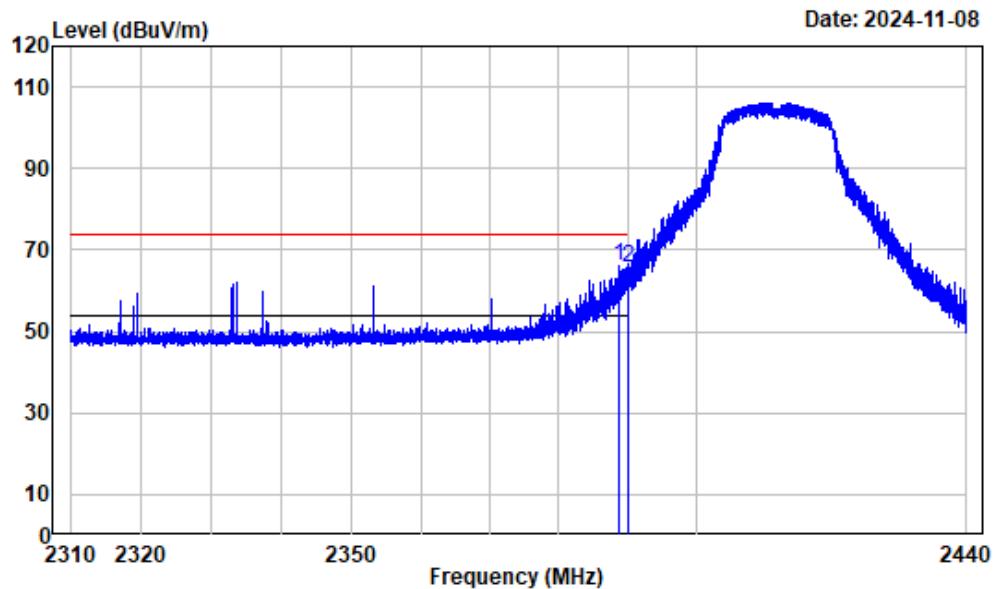
## Right Band edge\_Vertical\_Average-2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	41.28	38.11	54.00	-15.89	Average
2	2487.087	-3.17	42.84	39.67	54.00	-14.33	Average

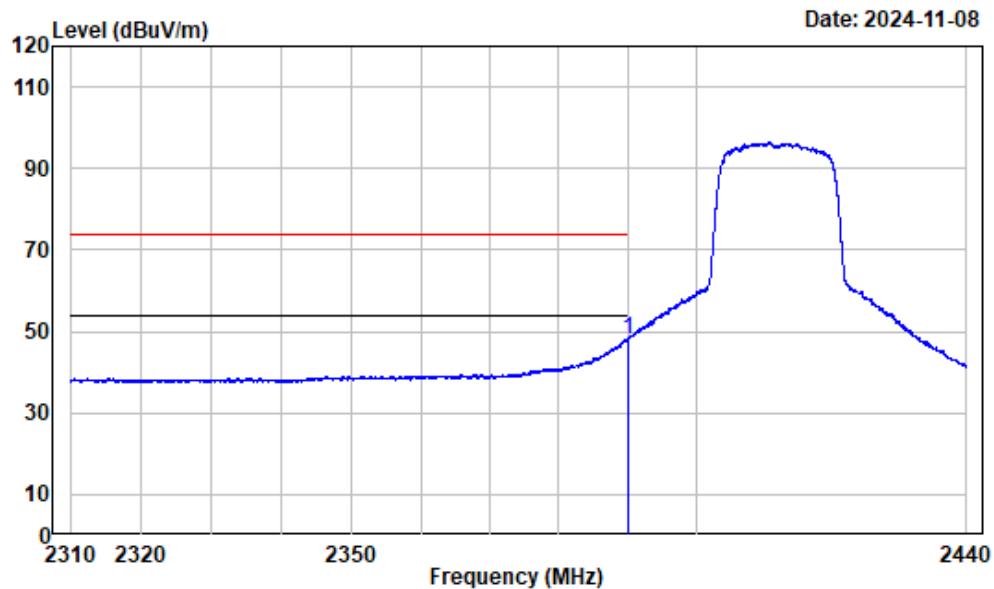
## Left Band edge\_Horizontal\_Peak\_2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m	Line	
1	2388.855	-3.20	69.44	66.24	74.00	-7.76	peak
2	2390.000	-3.20	68.91	65.71	74.00	-8.29	Peak

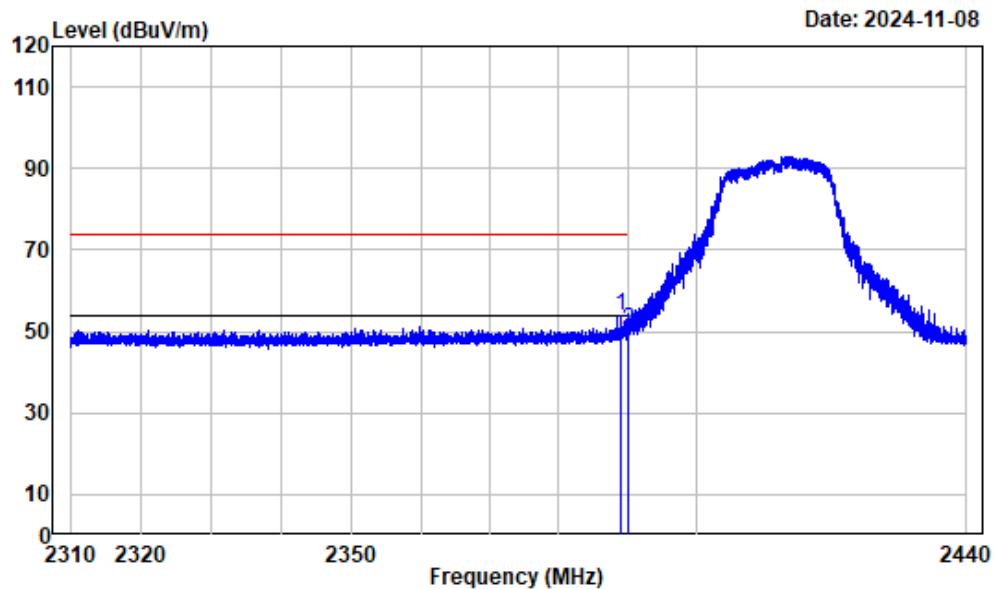
## Left Band edge\_Horizontal\_Average\_2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	51.13	47.93	54.00	-6.07	Average

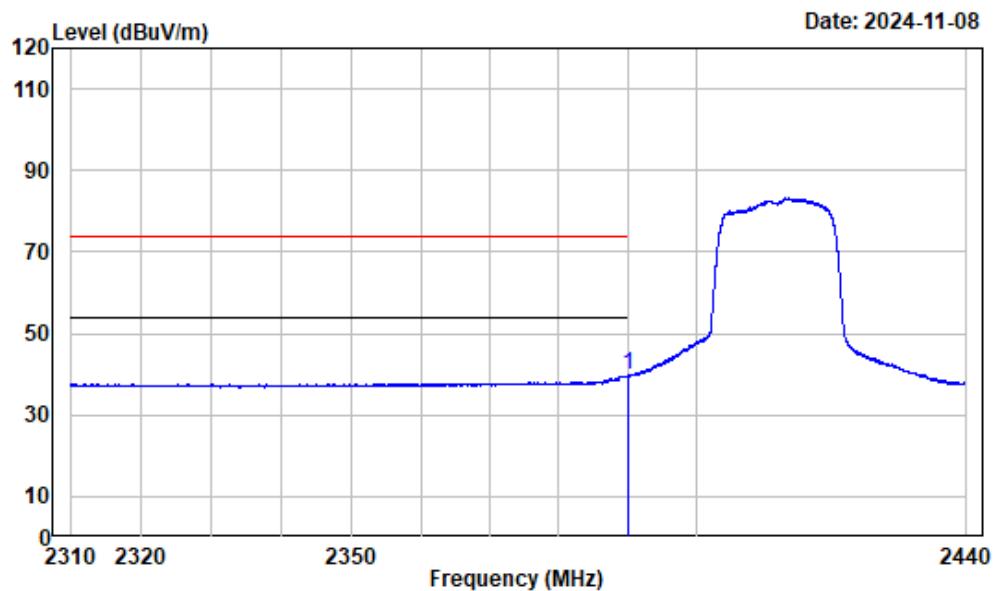
## Left Band edge\_Vertical\_Peak\_2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	2389.017	-3.20	57.12	53.92	74.00	-20.08	peak
2	2390.000	-3.20	53.45	50.25	74.00	-23.75	Peak

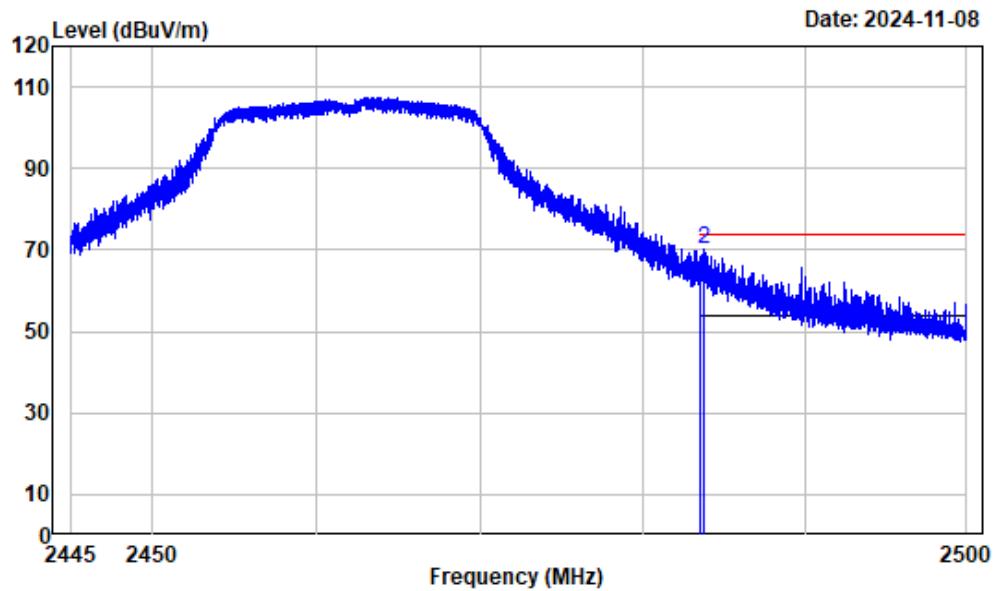
## Left Band edge\_Vertical\_Average\_2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2412

Freq	Factor	Read		Limit		Over	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	42.84	39.64	54.00	-14.36	Average

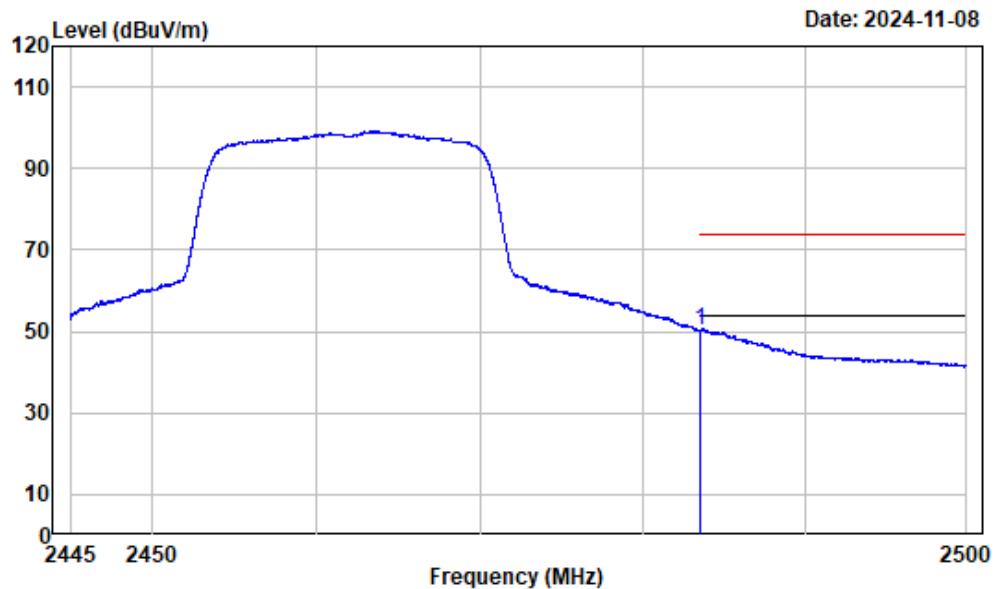
## Right Band edge\_Horizontal \_Peak\_2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	65.59	62.42	74.00	-11.58	Peak
2	2483.787	-3.17	73.41	70.24	74.00	-3.76	peak

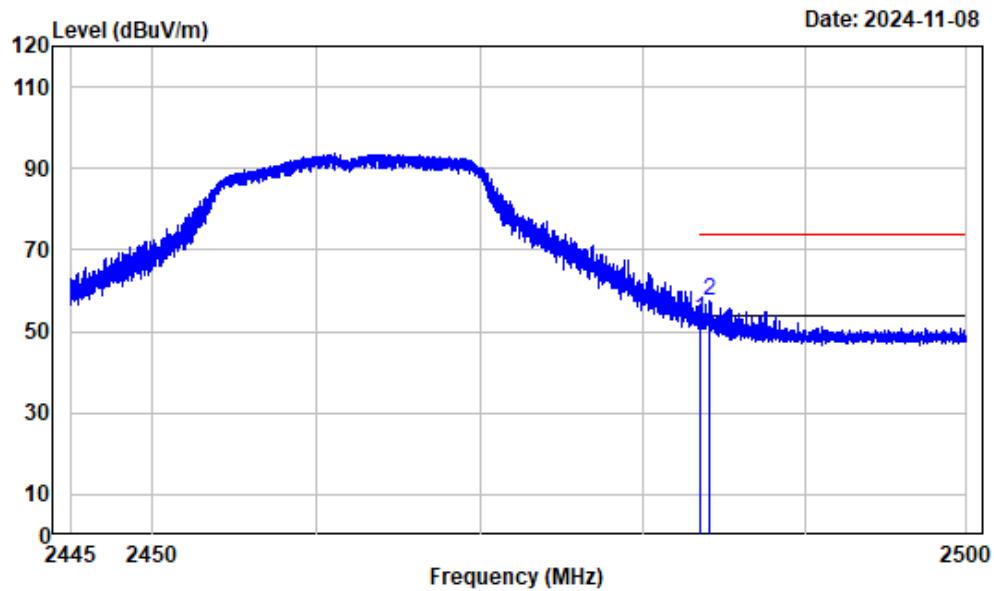
## Right Band edge\_Horizontal\_Average\_2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	53.52	50.35	54.00	-3.65	Average

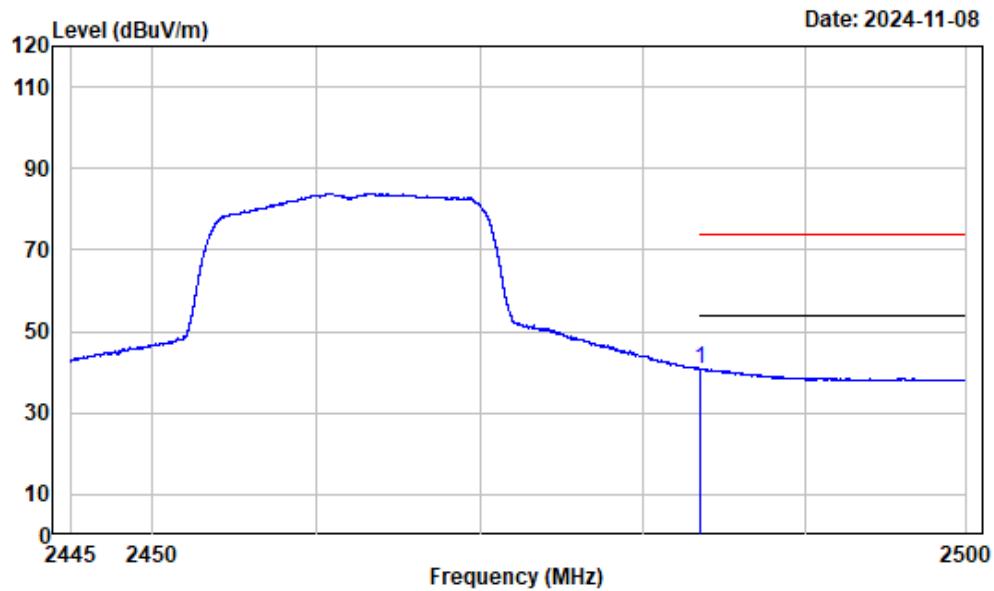
## Right Band edge\_Verical\_Peak\_2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	56.35	53.18	74.00	-20.82	Peak
2	2484.096	-3.17	60.77	57.60	74.00	-16.40	peak

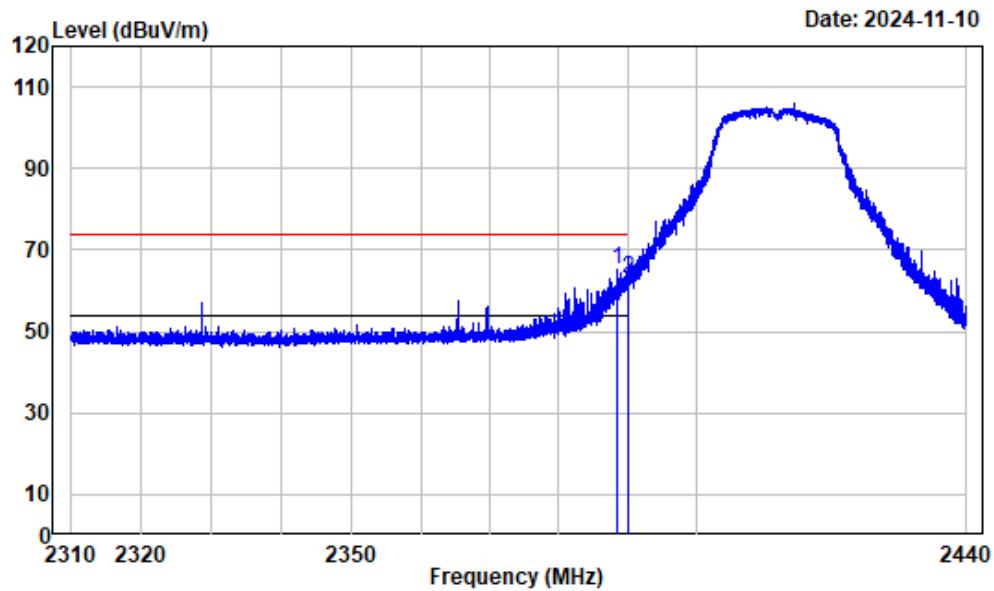
## Right Band edge\_Vertical\_Average\_2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	43.92	40.75	54.00	-13.25	Average

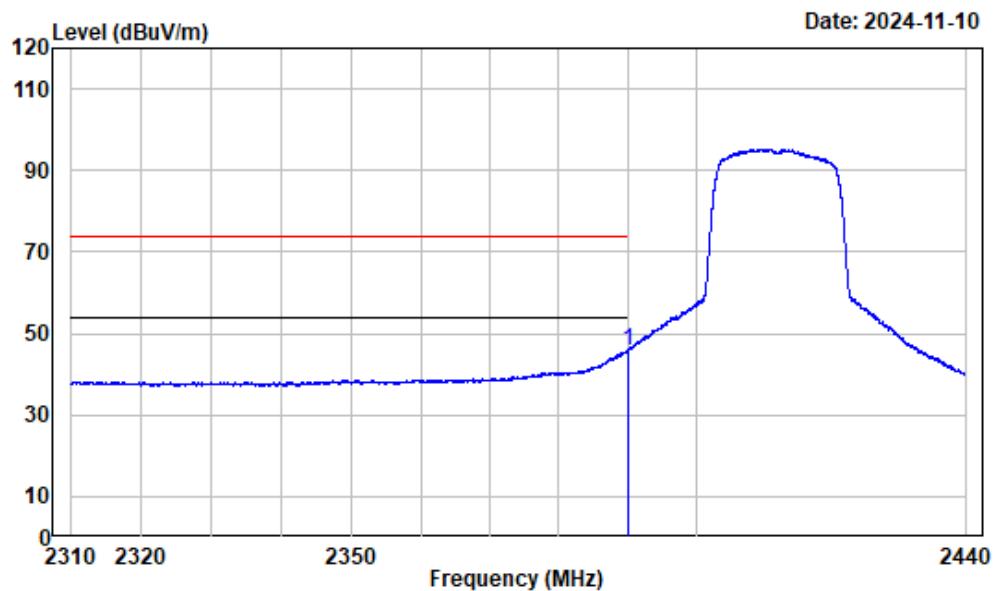
## Left Band edge\_Horizontal\_Peak-2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2388.562	-3.20	68.20	65.00	74.00	-9.00	peak
2	2390.000	-3.20	65.99	62.79	74.00	-11.21	Peak

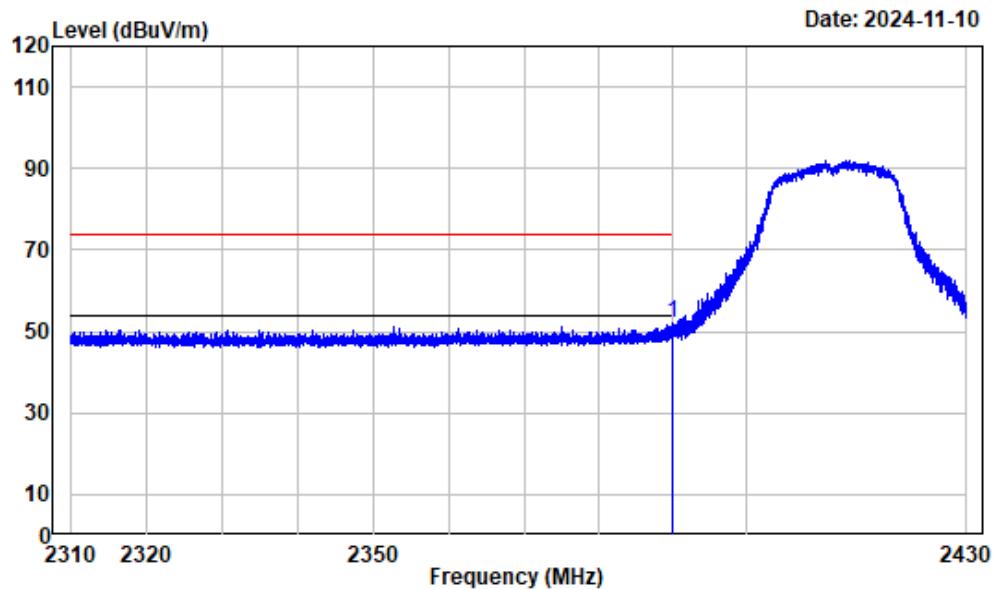
## Left Band edge\_Horizontal\_Average-2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	49.14	45.94	54.00	-8.06	Average

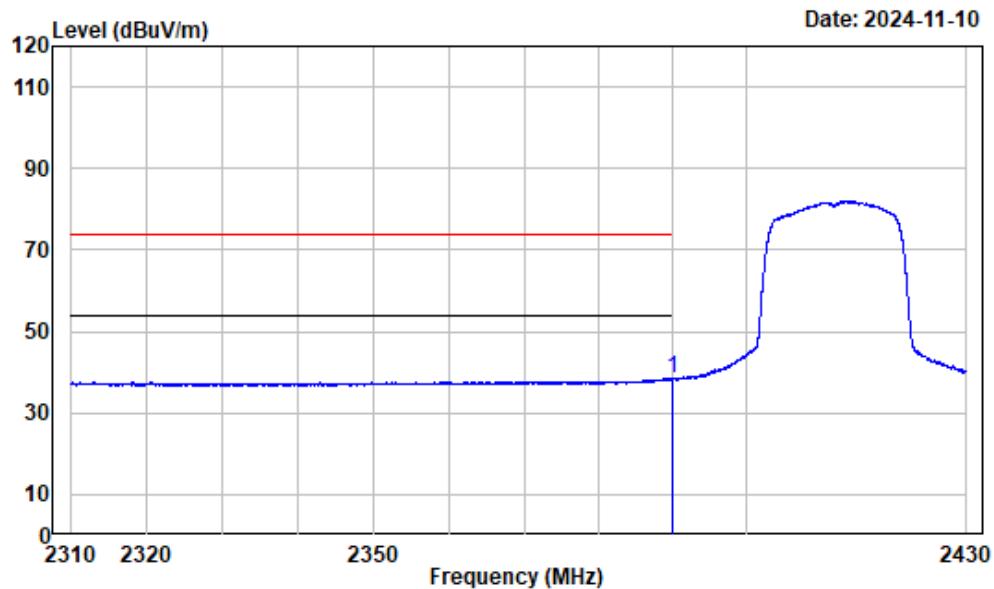
## Left Band edge\_Vertical\_Peak-2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	55.33	52.13	74.00	-21.87	peak

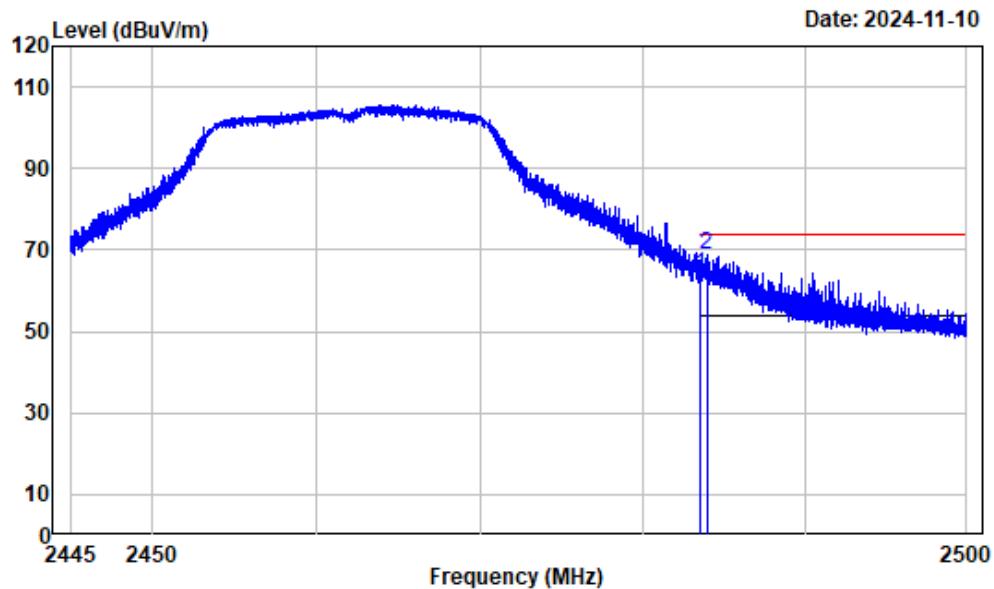
## Left Band edge\_Vertical\_Average-2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	41.74	38.54	54.00	-15.46	Average

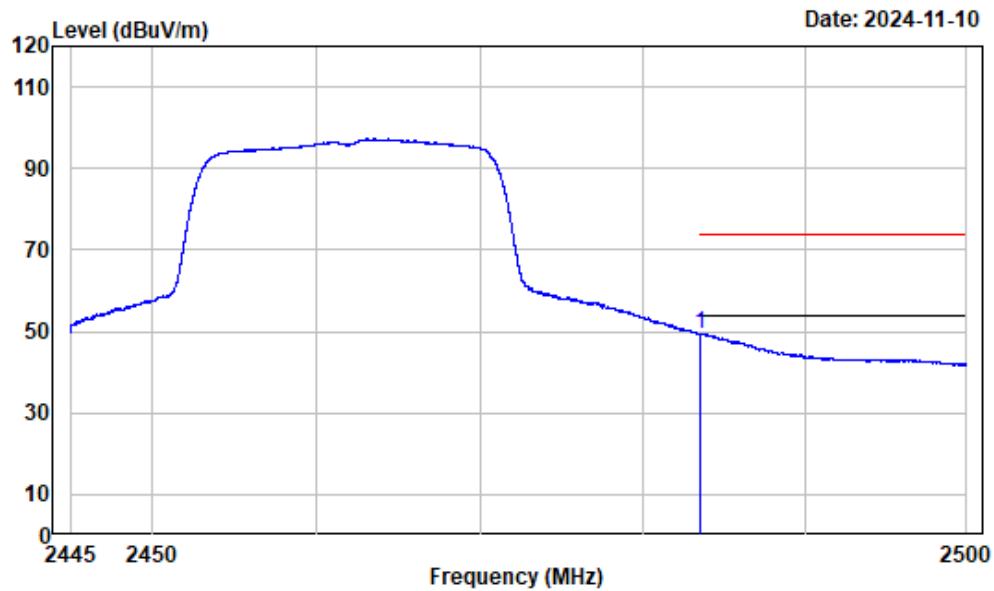
## Right Band edge\_Horizontal\_Peak-2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	66.84	63.67	74.00	-10.33	Peak
2	2483.931	-3.17	71.99	68.82	74.00	-5.18	peak

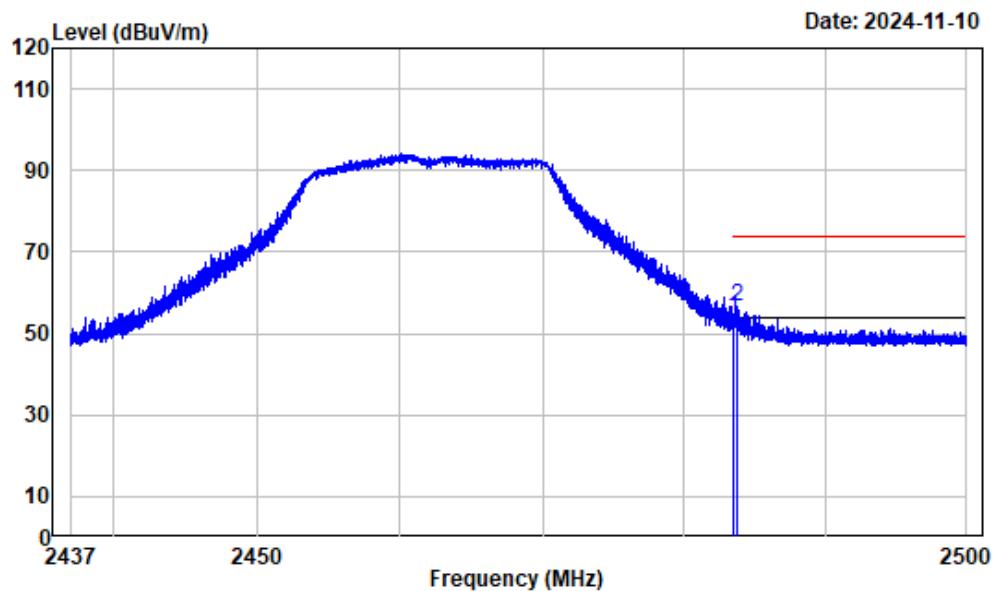
## Right Band edge\_Horizontal\_Average-2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	52.55	49.38	54.00	-4.62	Average

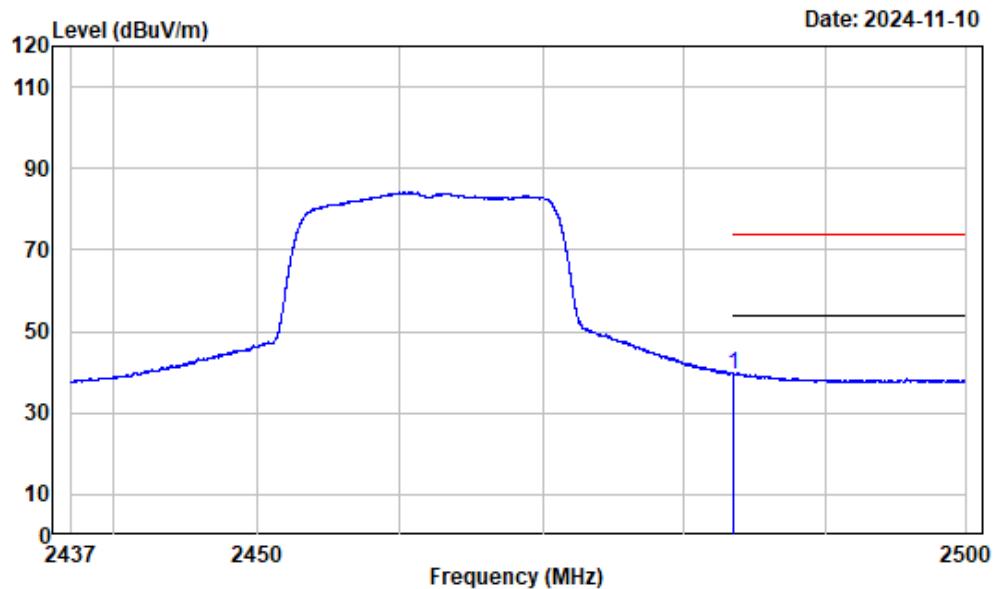
## Right Band edge\_Vertical\_Peak-2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	57.03	53.86	74.00	-20.14	Peak
2	2483.728	-3.17	59.71	56.54	74.00	-17.46	peak

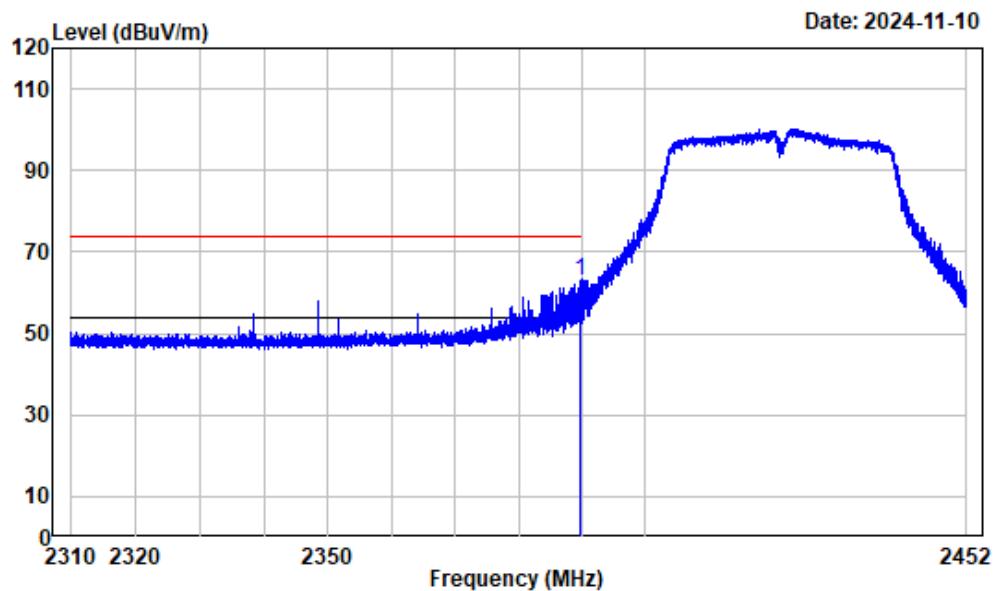
## Right Band edge\_Vertical\_Average-2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2462

Freq	Factor	Read		Limit		Over	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	42.69	39.52	54.00	-14.48	Average

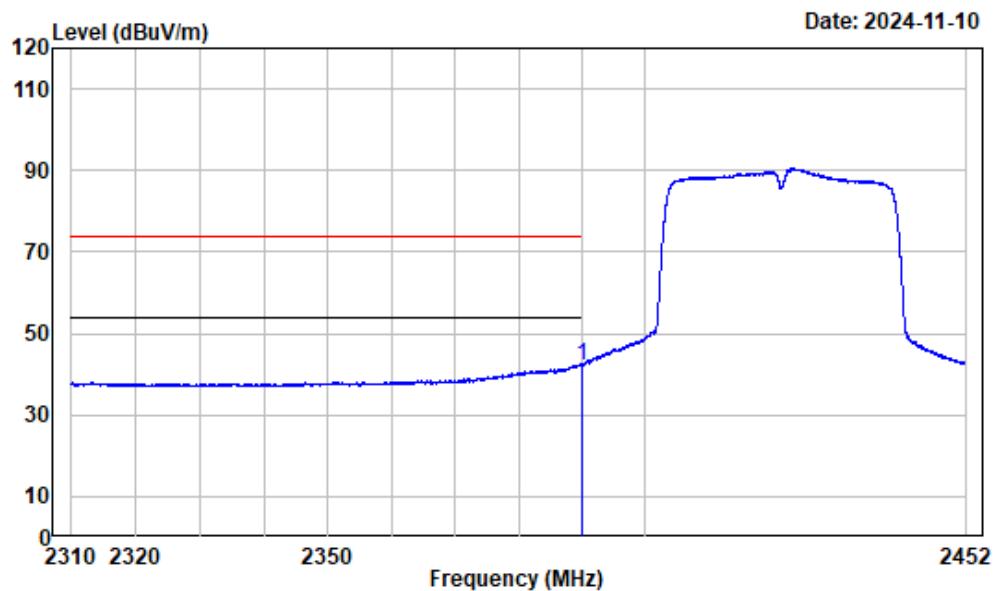
## Left Band edge\_Horizontal\_Peak-2422



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2422

Freq	Factor	Read		Limit		Over Line	Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m			
1	2389.743	-3.20	66.05	62.85	74.00	-11.15	peak	

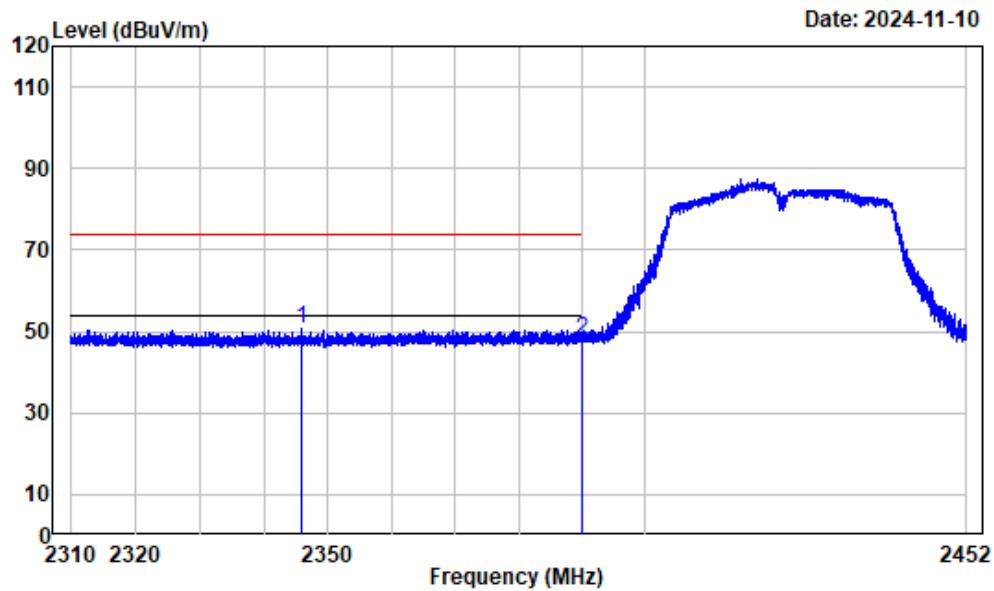
## Left Band edge\_Horizontal\_Average-2422



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2422

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	45.33	42.13	54.00	-11.87	Average

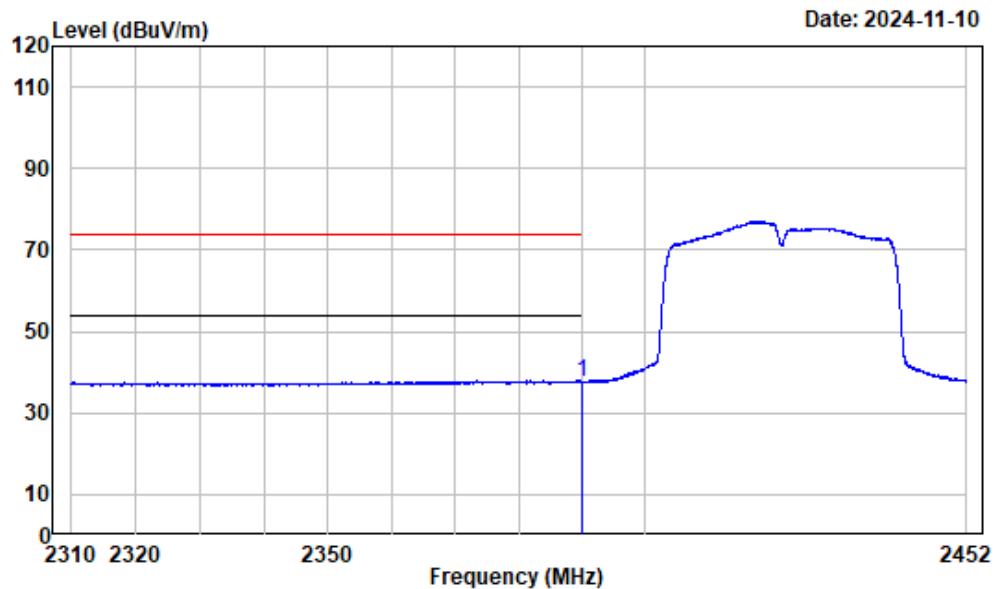
## Left Band edge\_Verical\_Peak-2422



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2422

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2345.895	-3.14	53.73	50.59	74.00	-23.41	peak
2	2390.000	-3.20	51.37	48.17	74.00	-25.83	Peak

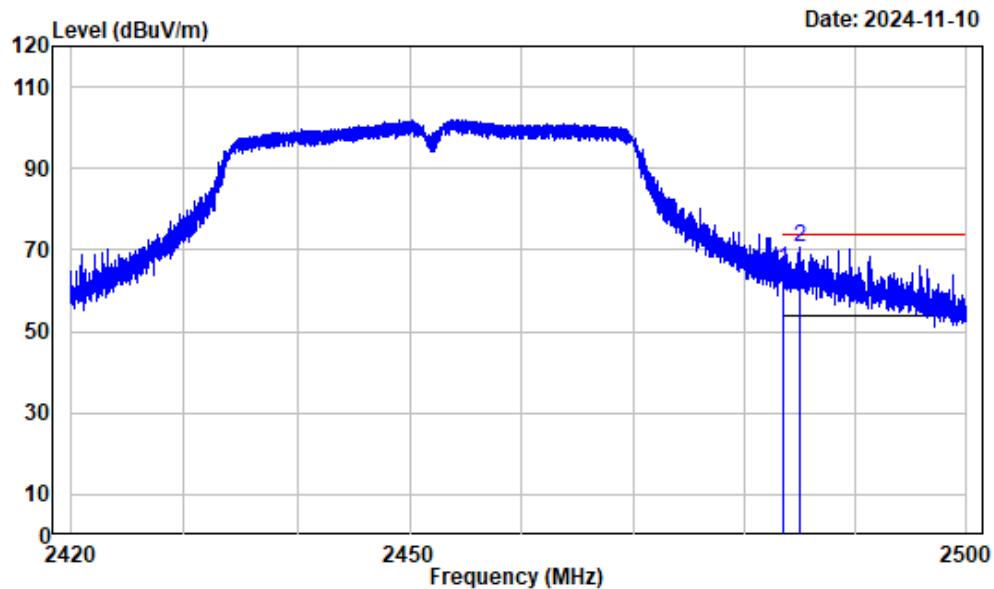
## Left Band edge\_Vertical\_Average -2422



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2422

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	40.72	37.52	54.00	-16.48	Average

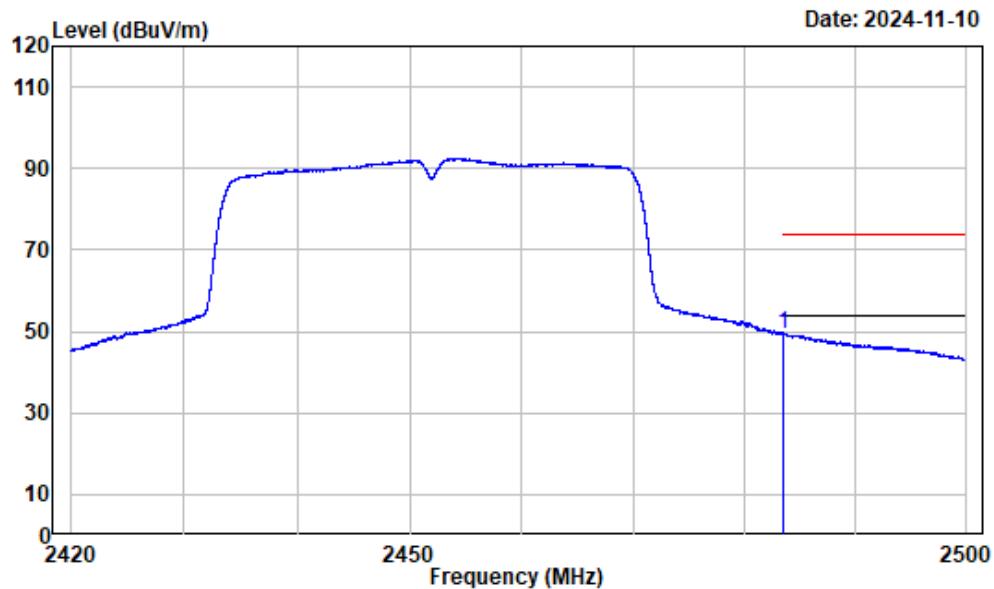
## Right Band edge\_Horizontal\_Peak-2452



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	68.30	65.13	74.00	-8.87	Peak
2	2484.918	-3.17	73.97	70.80	74.00	-3.20	peak

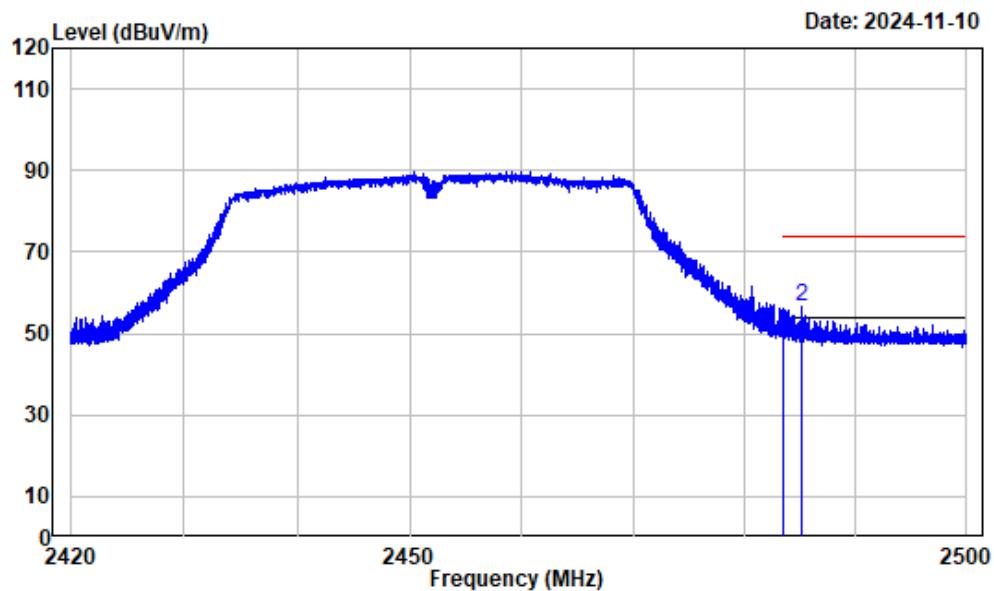
## Right Band edge\_Horizontal\_Average-2452



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	52.58	49.41	54.00	-4.59	Average

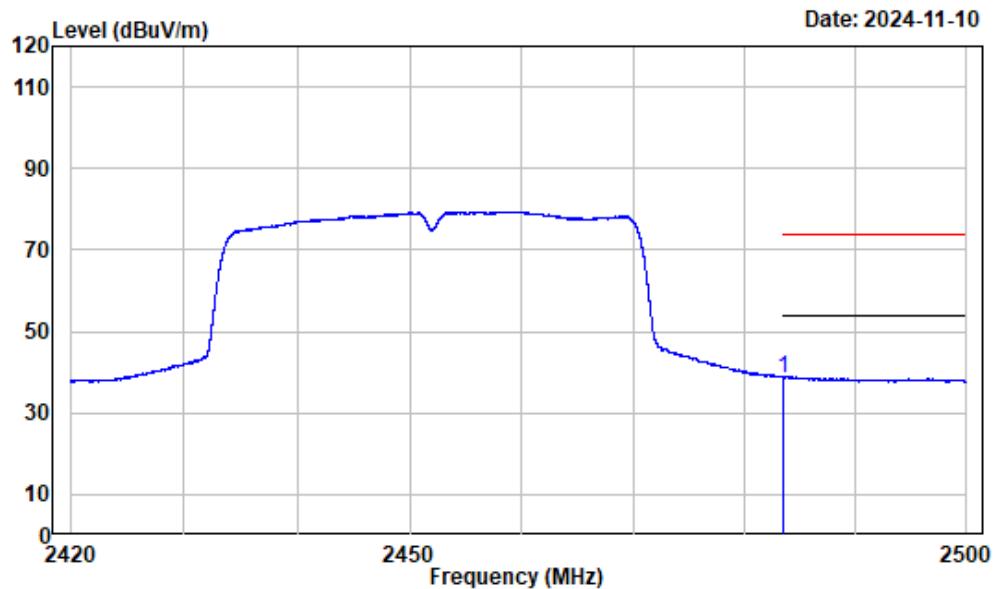
## Right Band edge\_Vertical\_Peak-2452



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	53.60	50.43	74.00	-23.57	Peak
2	2485.028	-3.17	59.70	56.53	74.00	-17.47	peak

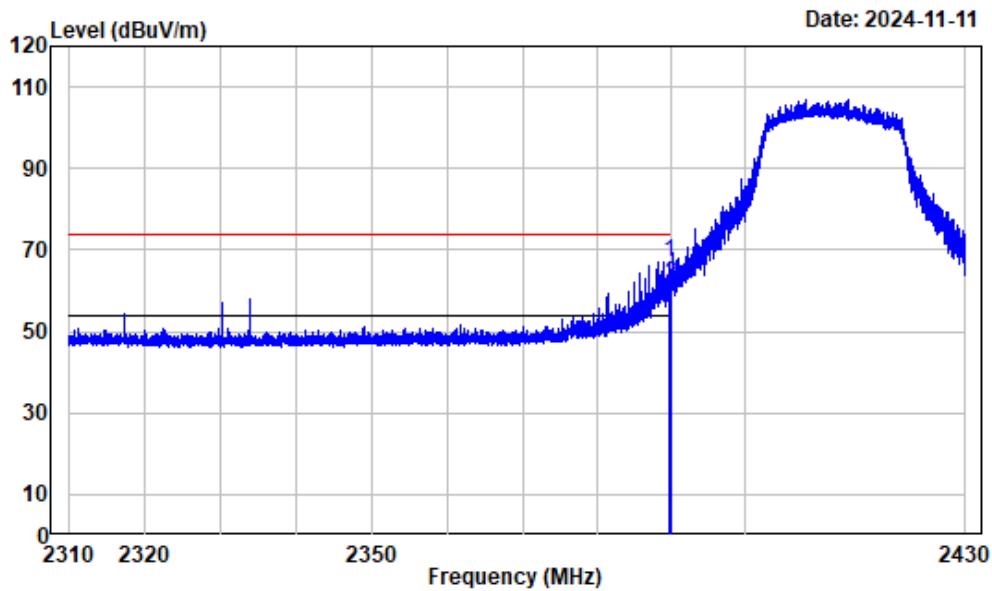
## Right Band edge\_Vertical\_Average-2452



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	41.81	38.64	54.00	-15.36	Average

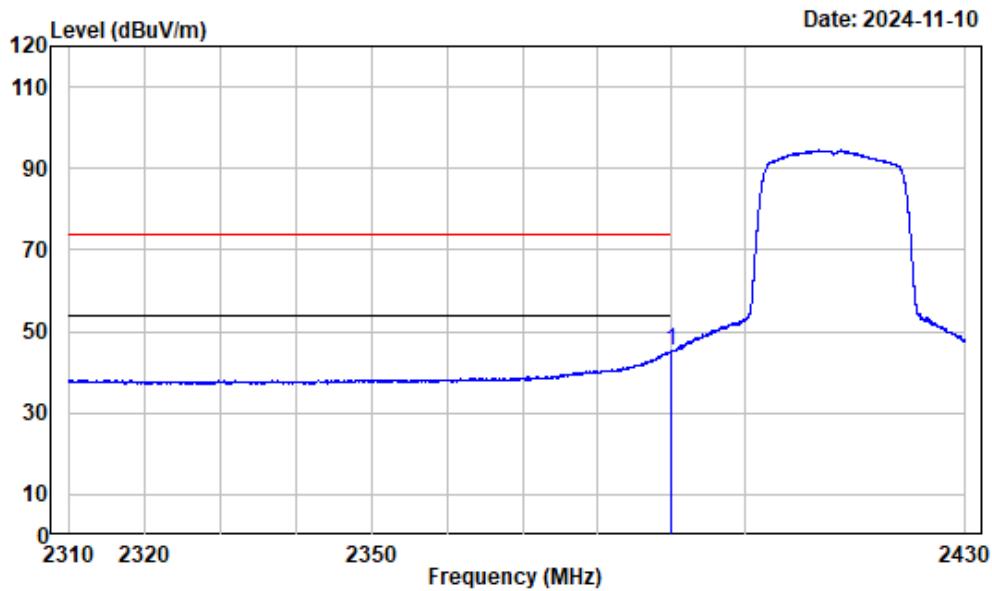
Left Band edge\_Horizontal\_Peak-2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq Factor	Read		Limit		Over	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2389.795	-3.20	70.26	67.06	74.00	-6.94 peak
2	2390.000	-3.20	64.97	61.77	74.00	-12.23 Peak

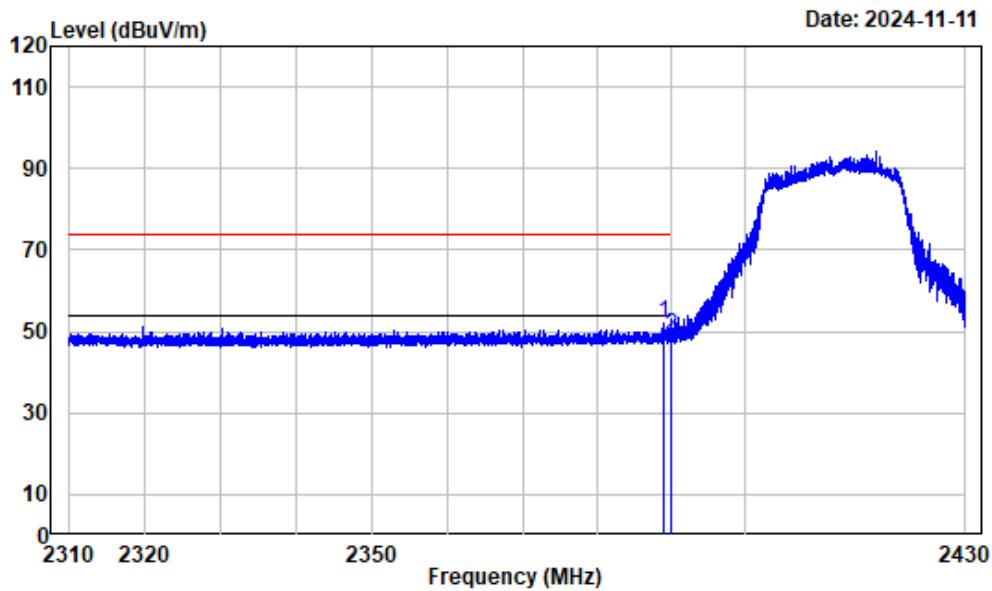
Left Band edge\_Horizontal\_Average-2412



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	48.51	45.31	54.00	-8.69 Average

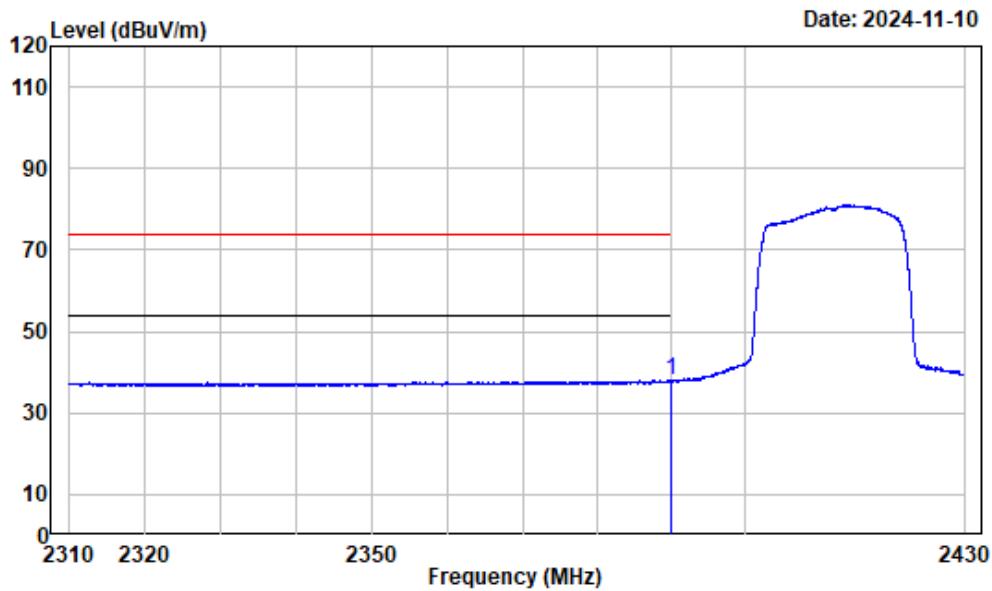
Left Band edge\_Vertical\_Peak-2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dB	
1	2389.090	-3.20	55.30	52.10	74.00	-21.90 peak
2	2390.000	-3.20	52.07	48.87	74.00	-25.13 Peak

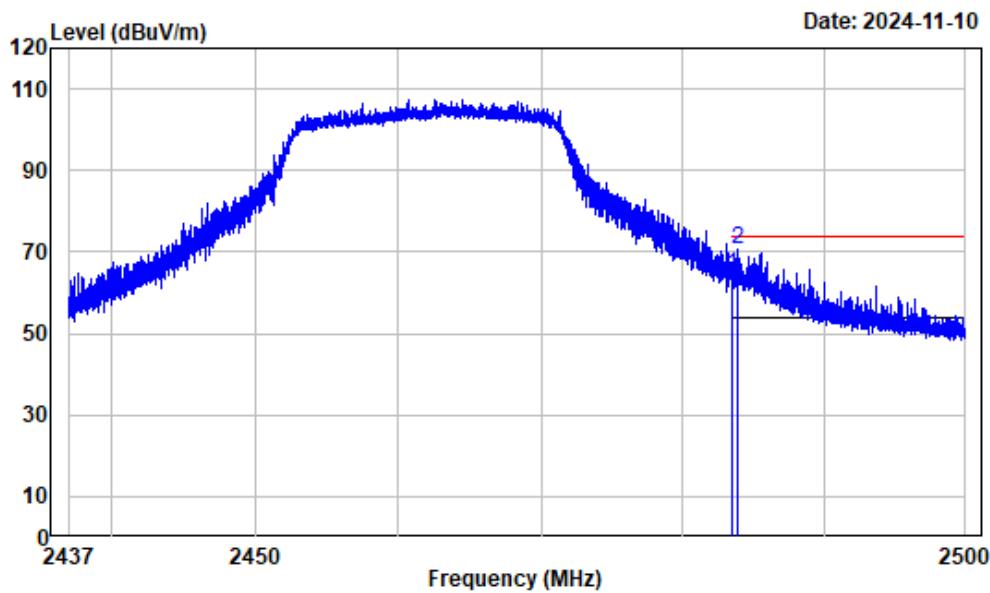
Left Band edge\_Vertical\_Average-2412



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	
1	2390.000	-3.20	41.03	37.83	54.00	-16.17 Average

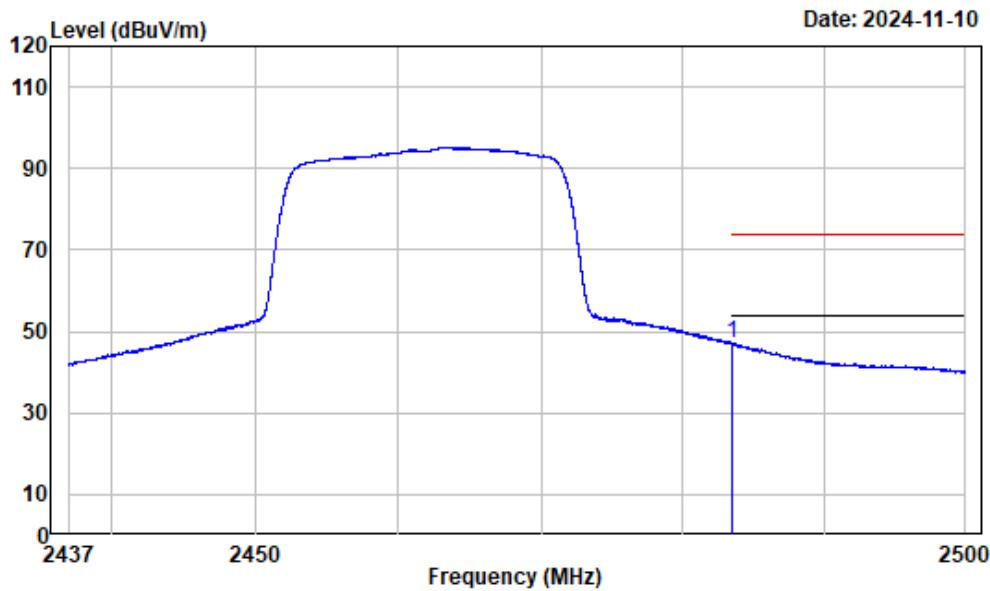
Right Band edge\_Horizontal\_Peak-2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2462

Freq Factor	MHz	Read Level		Limit Line		Over Limit	Remark
		dB/m	dBuV	dBuV/m	dBuV/m		
1	2483.500	-3.17	67.37	64.20	74.00	-9.80	Peak
2	2483.831	-3.17	73.94	70.77	74.00	-3.23	peak

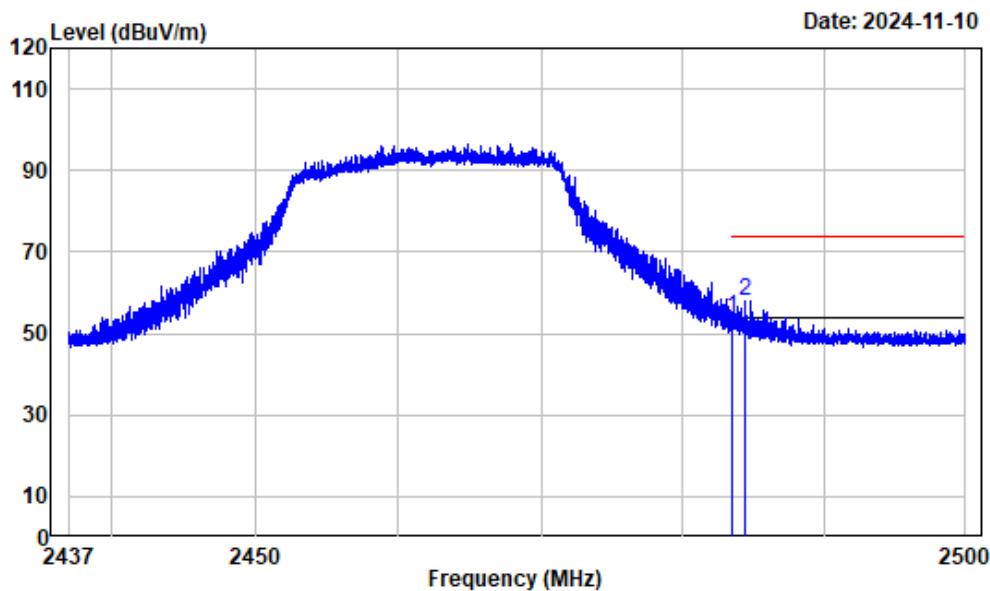
Right Band edge\_Horizontal\_Average-2462



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2462

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	50.06	46.89	54.00	-7.11 Average

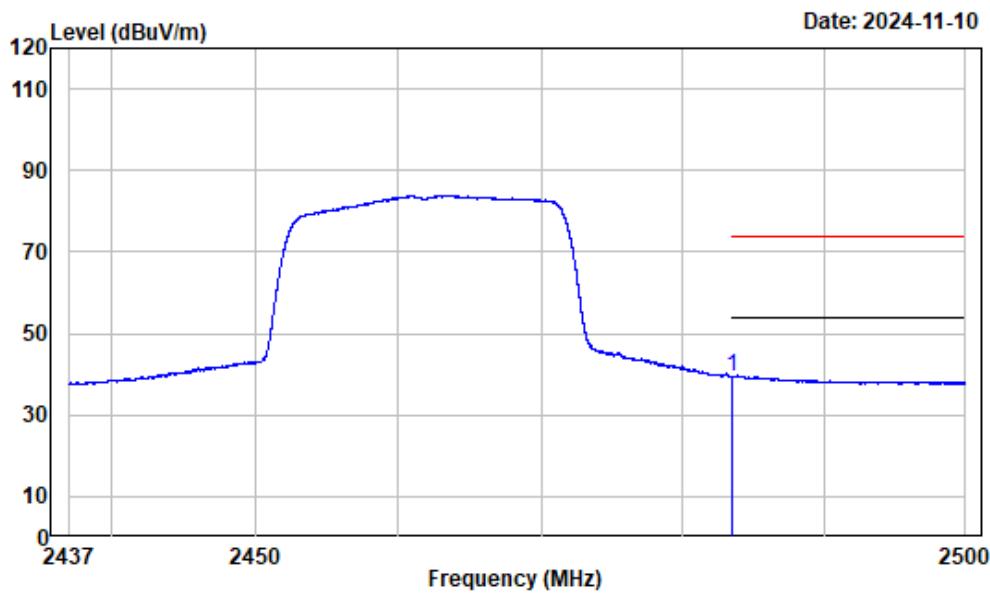
Right Band edge\_Vertical\_Peak -2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2462

Freq Factor	MHz	Read		Limit		Over	Remark
		Level	dBuV	Line	dBuV/m		
1	2483.500	-3.17	57.01	53.84	74.00	-20.16	Peak
2	2484.358	-3.17	61.29	58.12	74.00	-15.88	peak

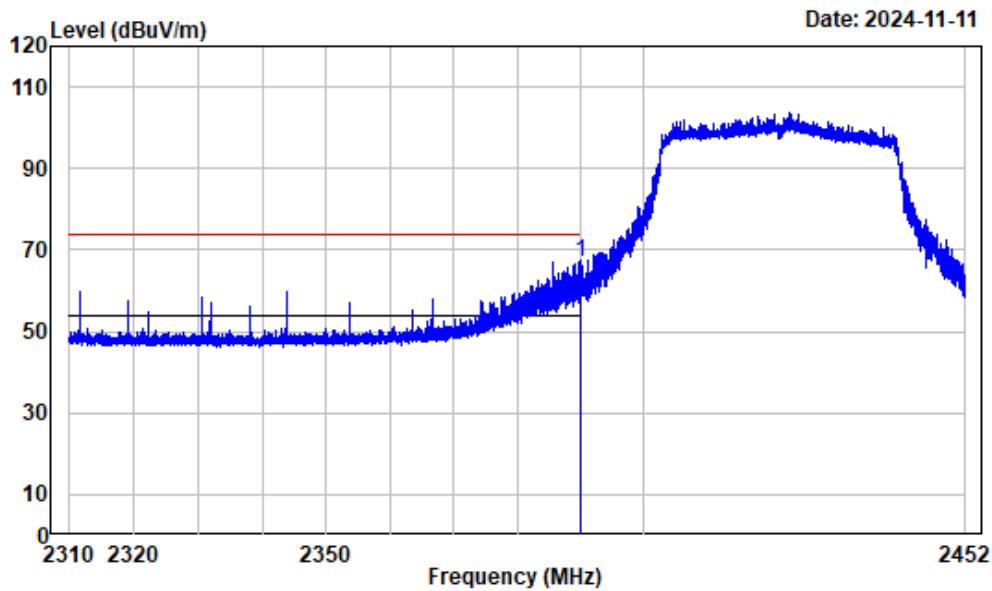
Right Band edge\_Vertical\_Average -2462



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2462

Freq Factor	Read		Limit		Over	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	42.51	39.34	54.00	-14.66 Average

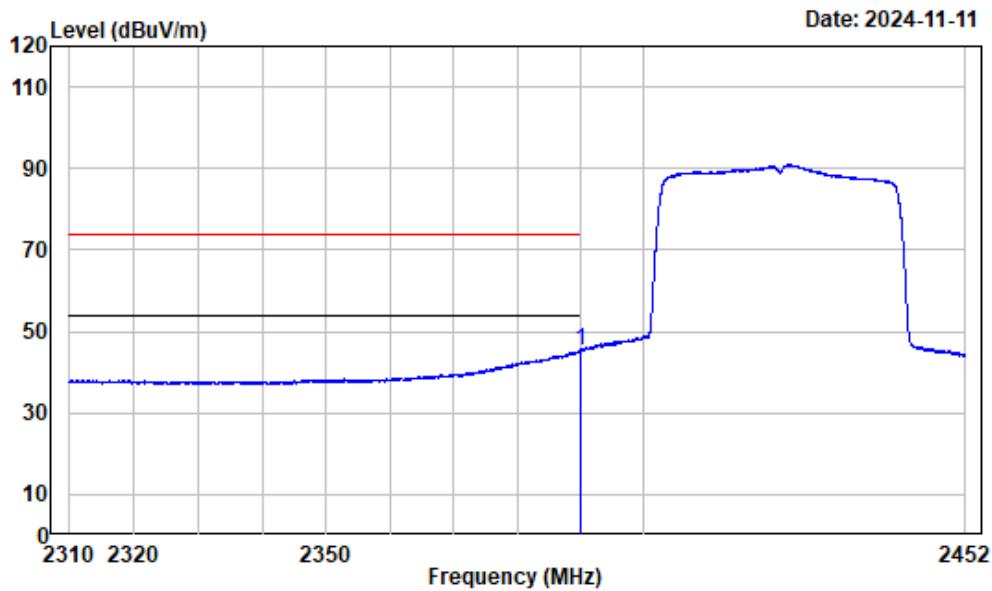
Left Band edge\_Horizontal\_Peak -2422



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2422

Freq Factor	Read Level		Limit Line		Over Limit	
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	-3.20	70.34	67.14	74.00	-6.86 peak

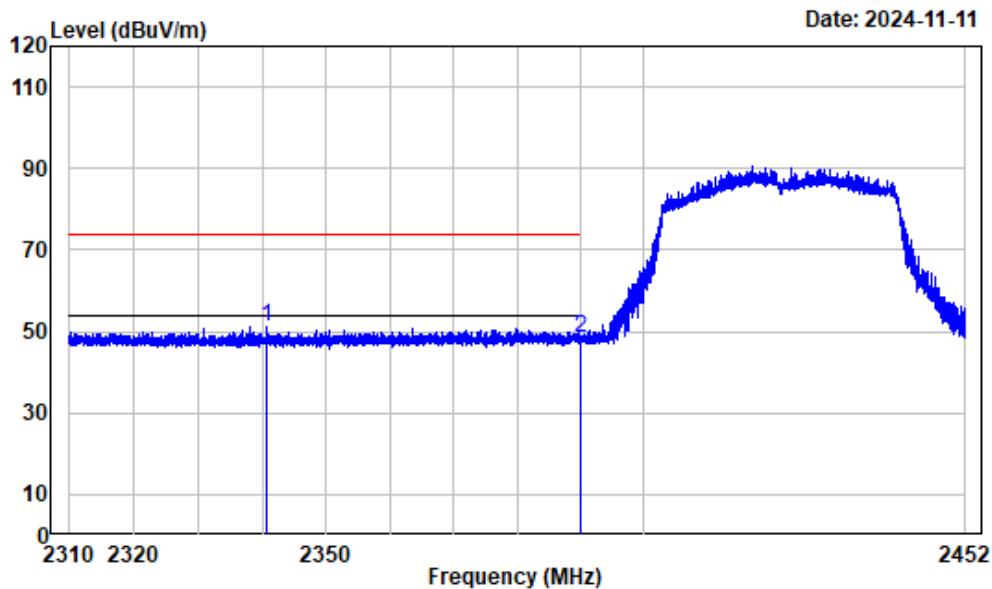
Left Band edge\_Horizontal\_Average -2422



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2422

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	48.26	45.06	54.00	-8.94 Average

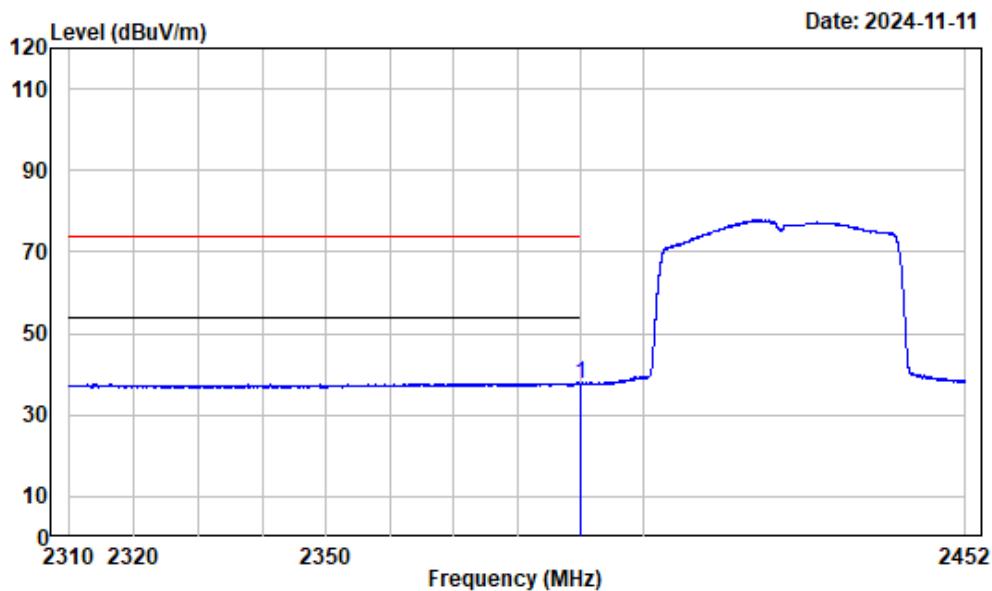
Left Band edge\_Vertical\_Peak -2422



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2422

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dB	
1	2340.623	-3.14	54.36	51.22	74.00	-22.78 peak
2	2390.000	-3.20	51.51	48.31	74.00	-25.69 Peak

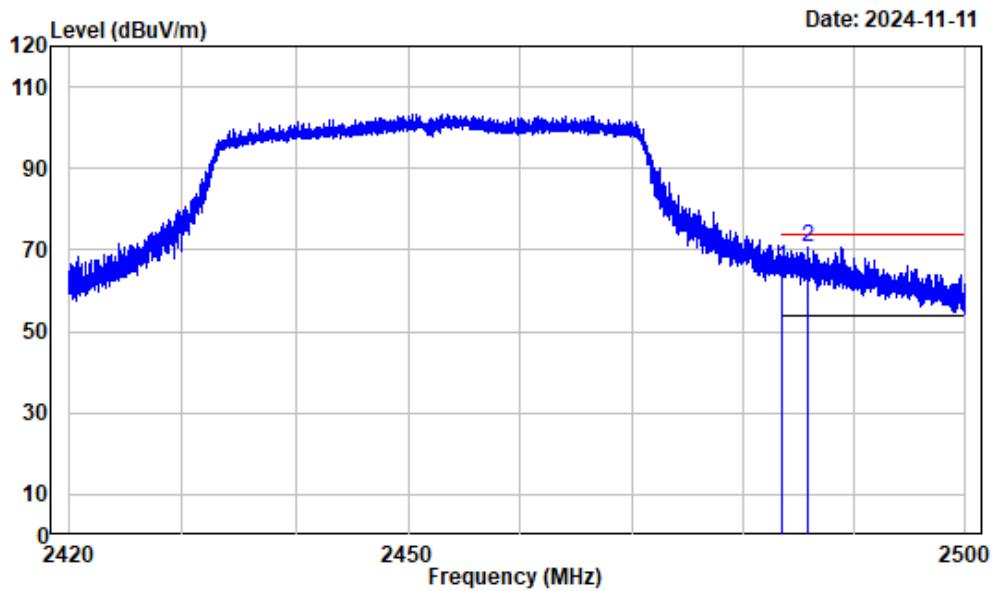
Left Band edge\_Vertical\_Average -2422



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2422

Freq Factor	Read Level		Limit Line		Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2390.000	-3.20	40.72	37.52	54.00	-16.48 Average

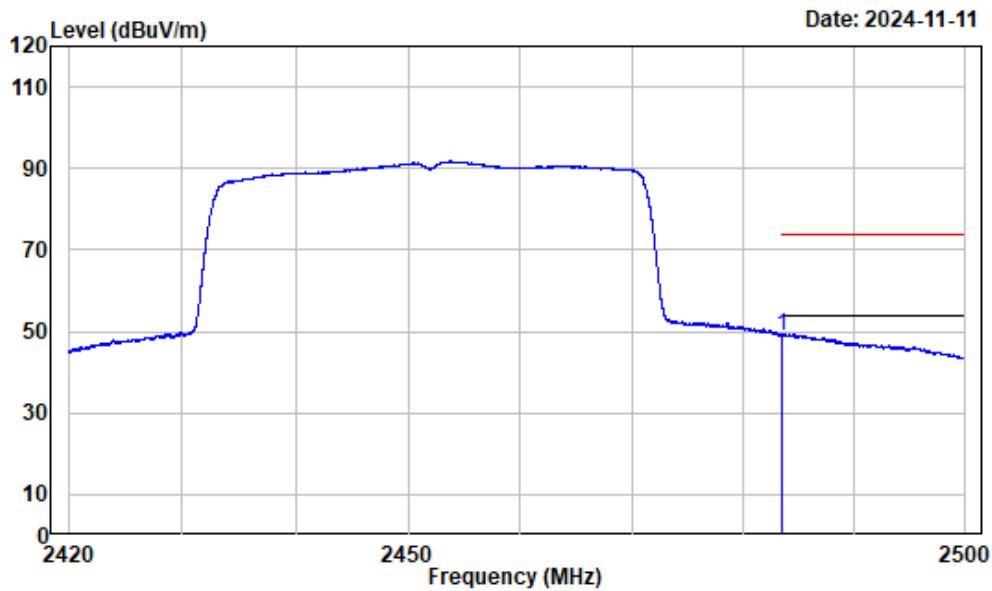
Right Band edge\_Horizontal\_Peak -2452



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over	Remark
		Level	Level	Line	dBuV/m		
1	2483.500	-3.17	68.95	65.78	74.00	-8.22	Peak
2	2485.748	-3.17	73.99	70.82	74.00	-3.18	peak

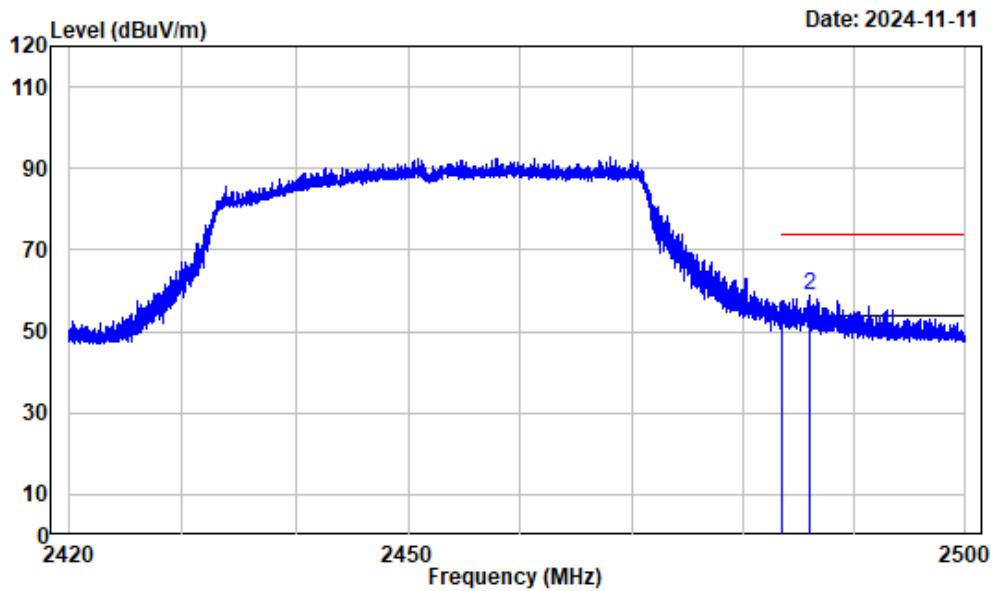
Right Band edge\_Horizontal\_Average -2452



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq Factor	Read Level		Limit Line		Over Limit	
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	2483.500	-3.17	52.18	49.01	54.00	-4.99 Average

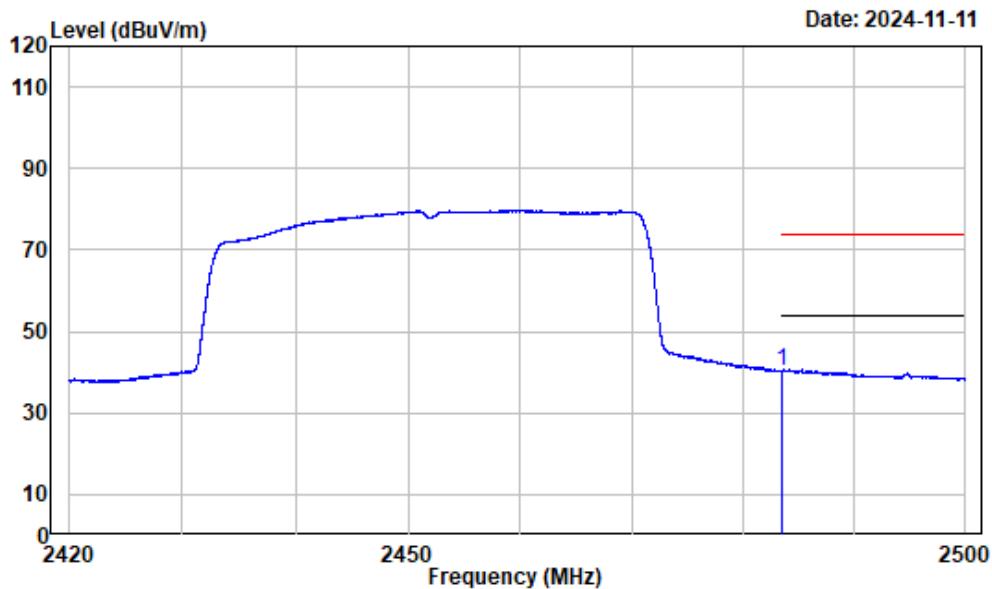
Right Band edge\_Vertical\_Peak -2452



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq Factor	MHz	Read Level		Limit Line		Over Limit	Remark
		dB/m	dBuV	dBuV/m	dBuV/m		
1	2483.500	-3.17	54.80	51.63	74.00	-22.37	Peak
2	2485.948	-3.17	61.85	58.68	74.00	-15.32	peak

Right Band edge\_Vertical\_Average -2452

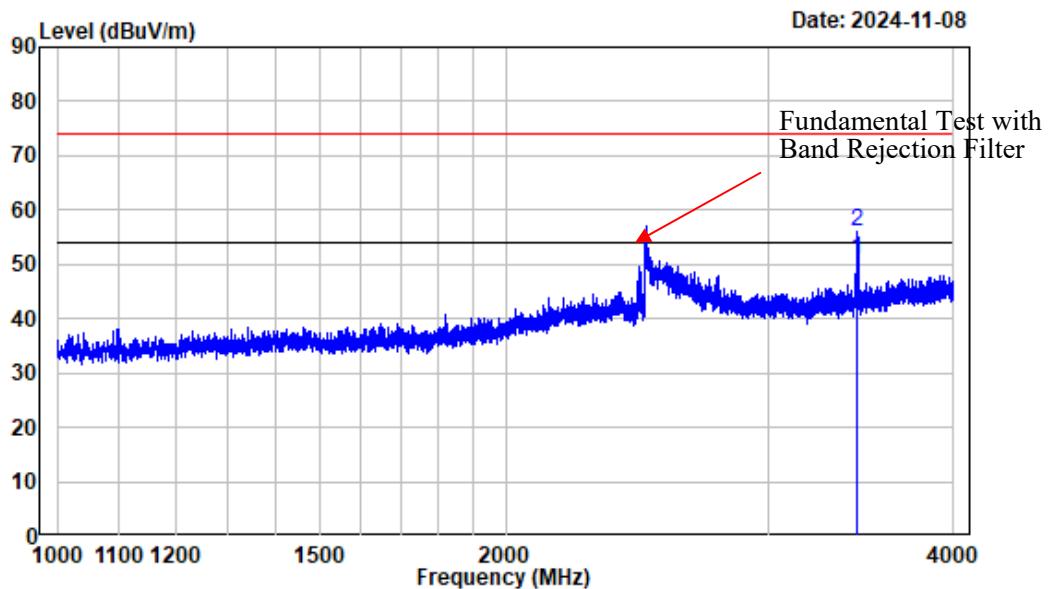


Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq Factor	Read Level		Limit Level		Over Line Limit	Remark
	MHz	dB/m	dBuV	dBuV/m		
1	2483.500	-3.17	43.38	40.21	54.00	-13.79 Average

**1-18GHz Worst case harmonic plots:**

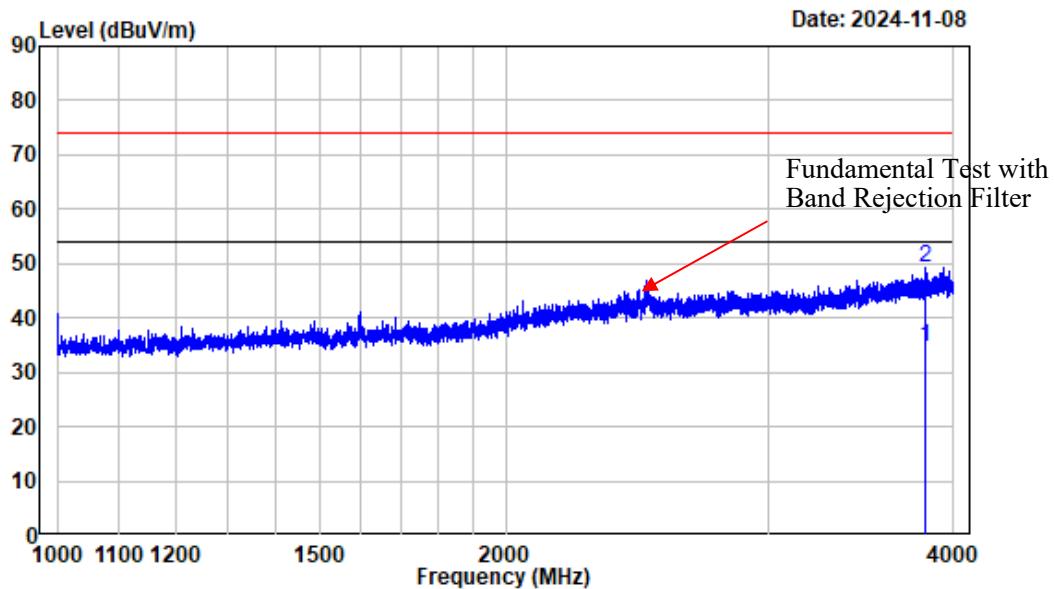
1-4GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	3449.056	-2.43	53.31	50.88	54.00	-3.12	Average
2	3449.056	-2.43	58.41	55.98	74.00	-18.02	Peak

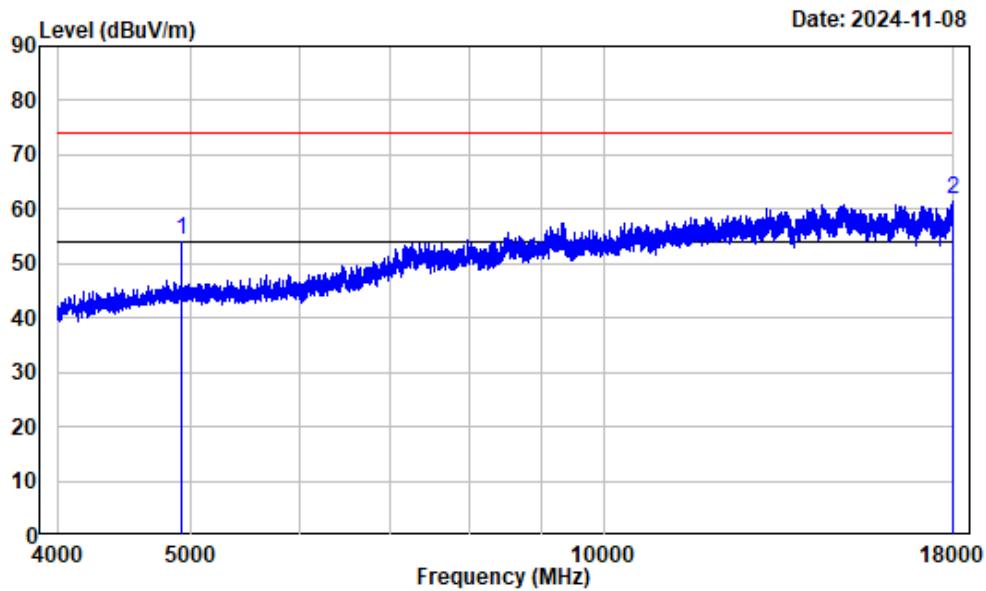
## 1-4GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m	dBuV/m	
1	3834.229	-0.77	35.48	34.71	54.00	-19.29	Average
2	3834.229	-0.77	49.96	49.19	74.00	-24.81	Peak

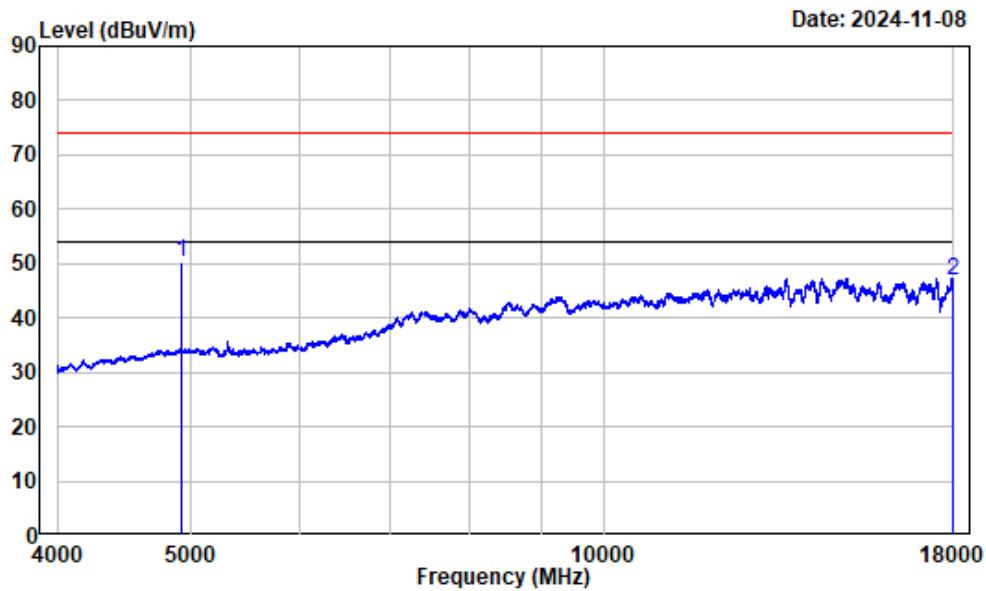
## 4-18GHz\_Horizontal\_Peak



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4924.000	2.63	51.56	54.19	74.00	-19.81	Peak
2	18000.000	24.62	37.11	61.73	74.00	-12.27	Peak

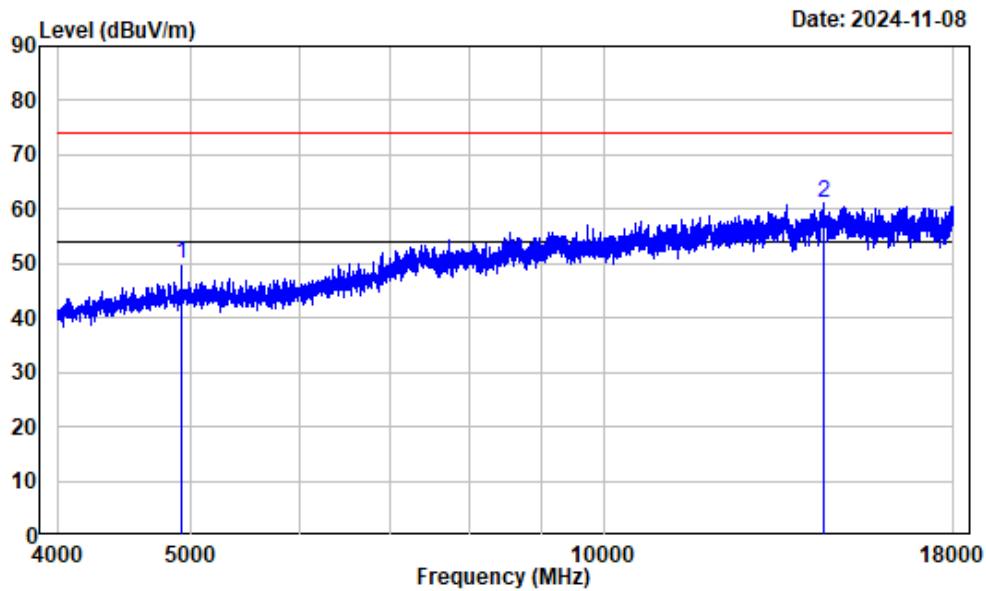
## 4-18GHz\_Horizontal\_Average



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	
1	4924.000	2.63	47.53	50.16	54.00	-3.84	Average
2	17986.000	24.52	22.50	47.02	54.00	-6.98	Average

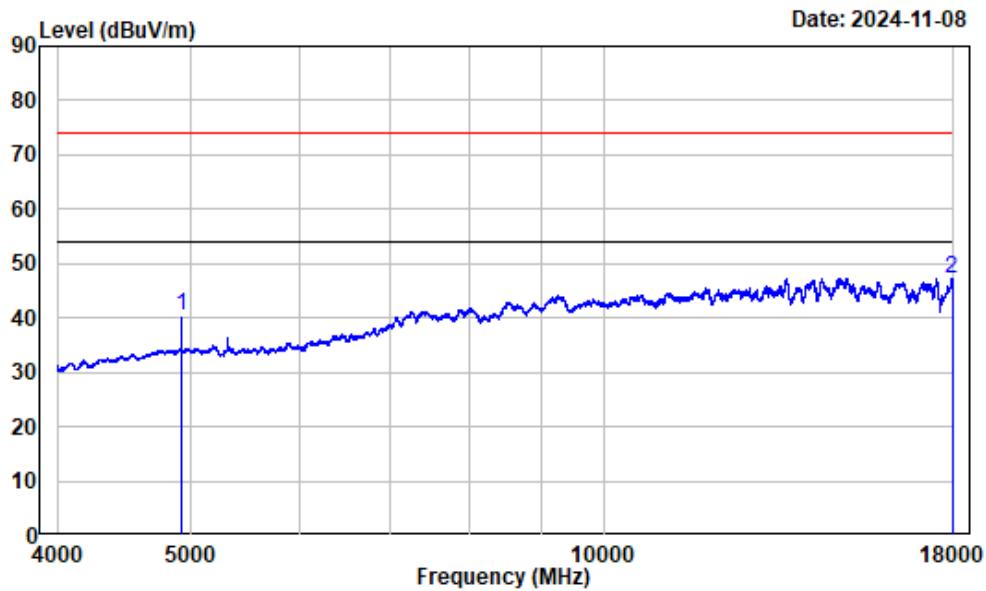
## 4-18GHz\_Vertical\_Peak



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4924.000	2.63	47.18	49.81	74.00	-24.19	Peak
2	14494.310	17.46	43.72	61.18	74.00	-12.82	Peak

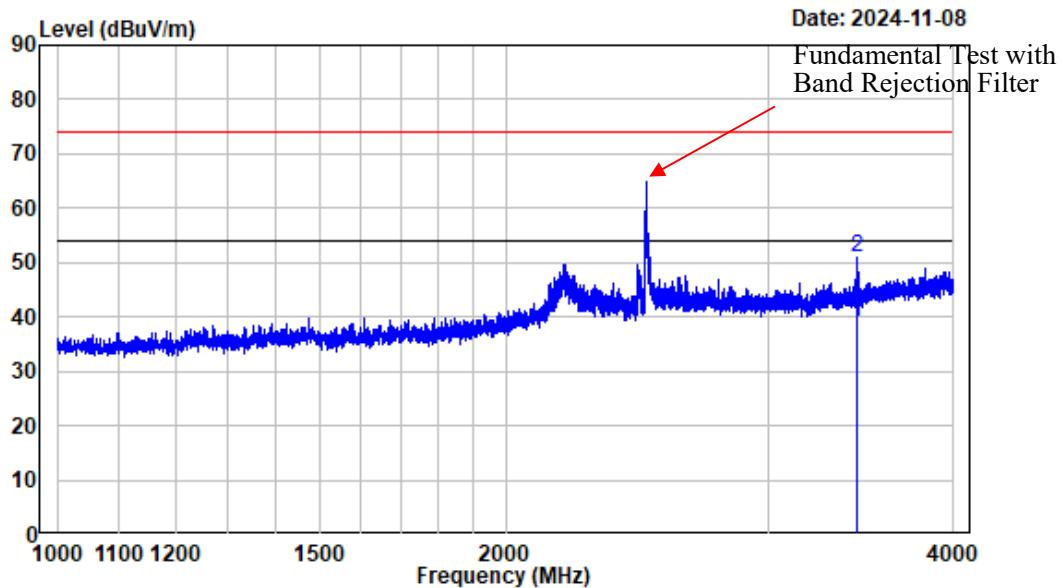
## 4-18GHz\_Vertical\_Average



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	
1	4924.000	2.63	37.95	40.58	54.00	-13.42	Average
2	17956.240	24.31	22.92	47.23	54.00	-6.77	Average

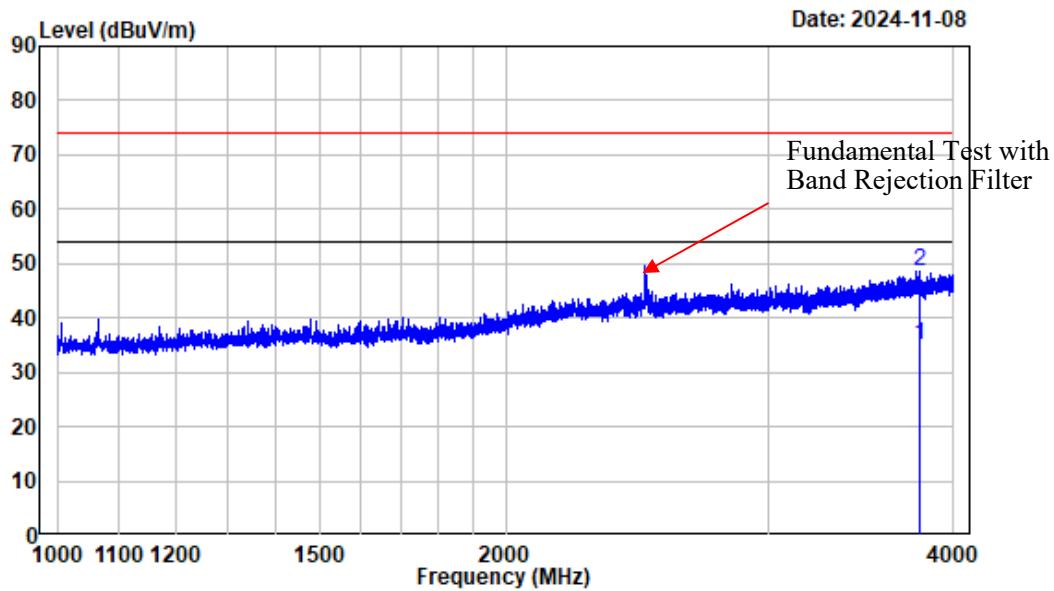
## 1-4GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

	Freq	Read Factor	Level	Limit Level	Over Line	Over Limit	Remark
1	3447.556	-2.43	41.36	38.93	54.00	-15.07	Average
2	3447.556	-2.43	53.51	51.08	74.00	-22.92	Peak

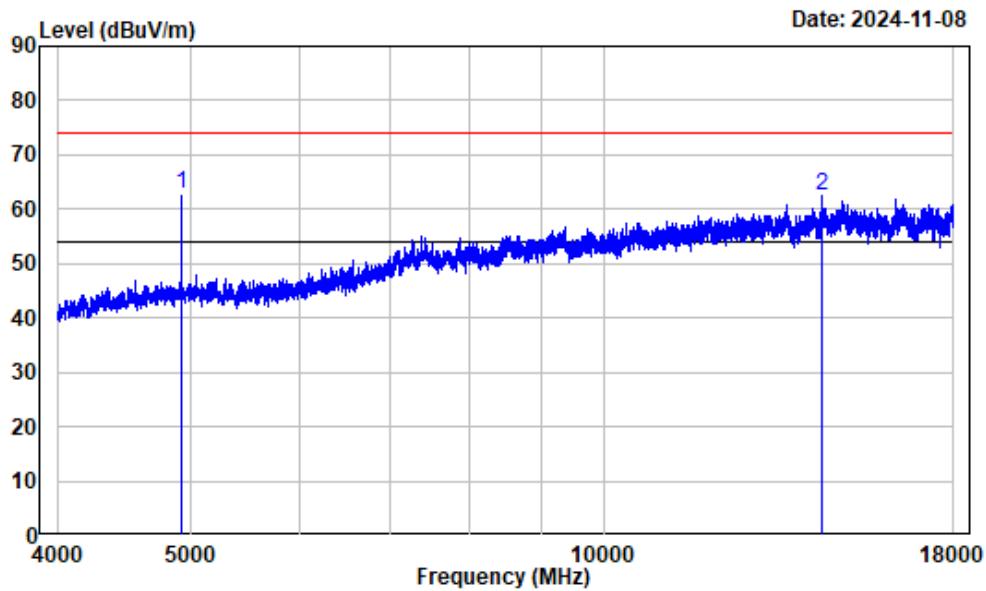
## 1-4GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m	dBuV/m	
1	3798.975	-0.74	35.73	34.99	54.00	-19.01	Average
2	3798.975	-0.74	49.25	48.51	74.00	-25.49	Peak

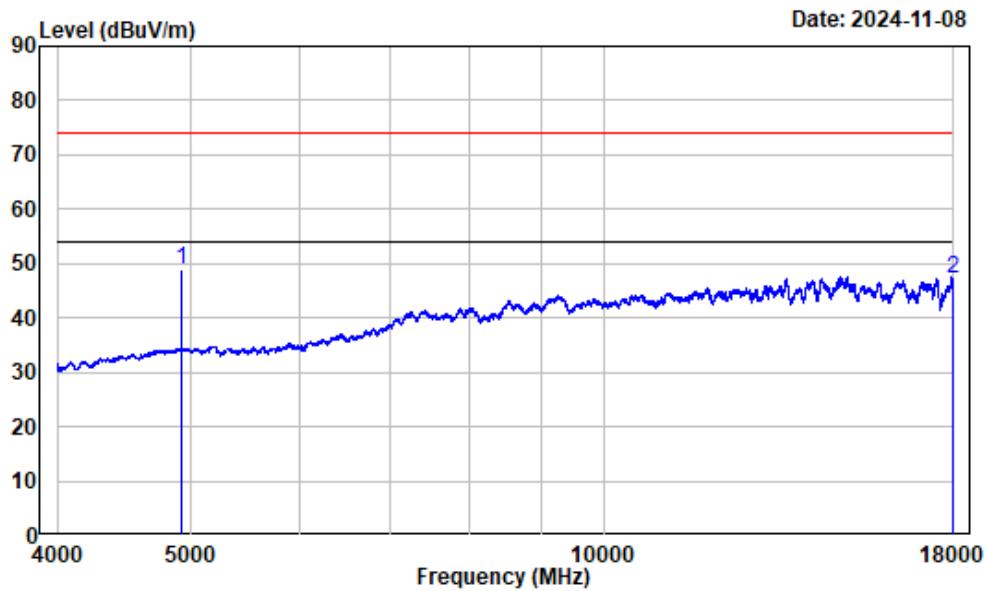
## 4-18GHz\_Horizontal\_Peak



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4924.000	2.63	60.33	62.96	74.00	-11.04	Peak
2	14424.300	17.29	45.17	62.46	74.00	-11.54	Peak

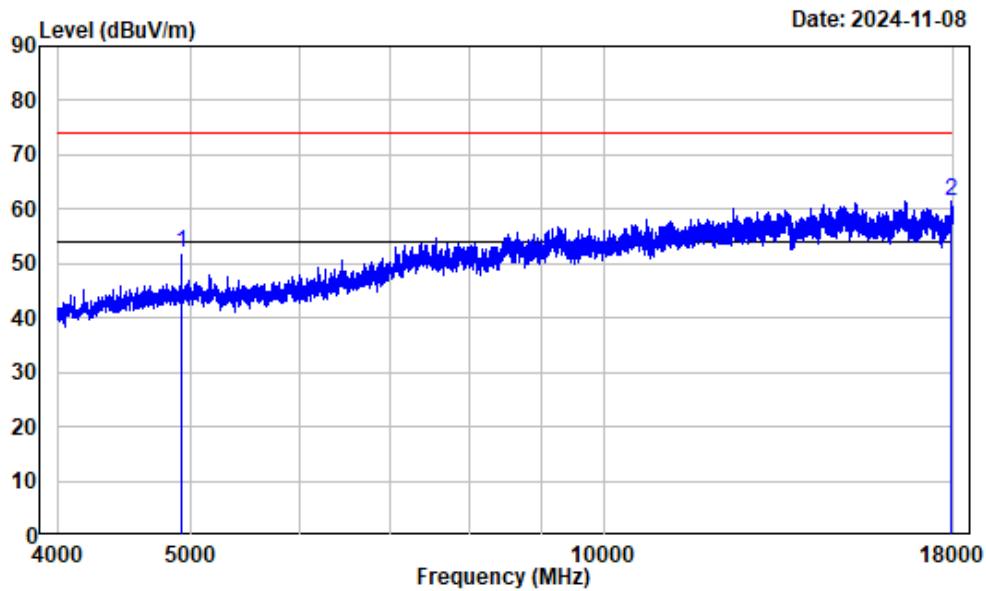
## 4-18GHz\_Horizontal\_Average



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	
1	4924.000	2.63	46.23	48.86	54.00	-5.14	Average
2	18000.000	24.62	22.61	47.23	54.00	-6.77	Average

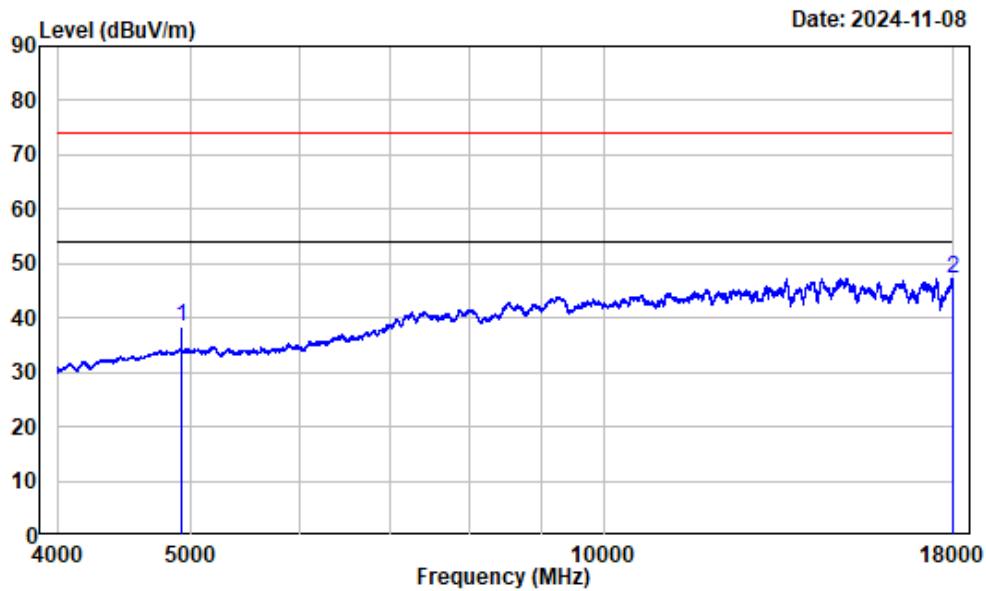
## 4-18GHz\_Vertical\_Peak



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4924.000	2.63	49.41	52.04	74.00	-21.96	Peak
2	17950.990	24.28	37.08	61.36	74.00	-12.64	Peak

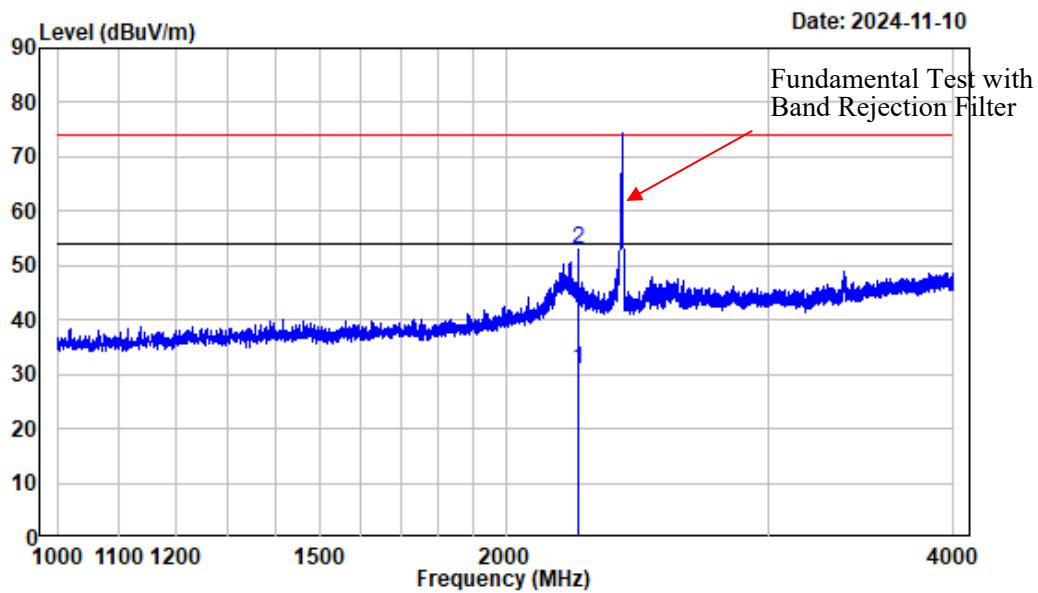
## 4-18GHz\_Vertical\_Average



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11G\_2462

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4924.000	2.63	35.78	38.41	54.00	-15.59	Average
2	17989.500	24.55	22.53	47.08	54.00	-6.92	Average

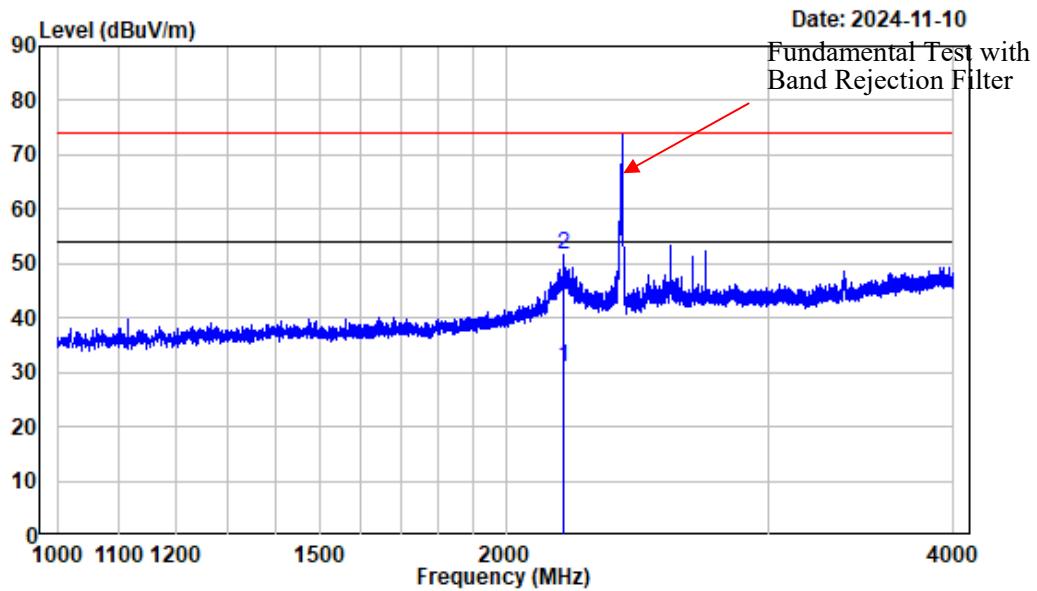
## 1-4GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2236.155	-3.36	34.36	31.00	54.00	-23.00	Average
2	2236.155	-3.36	56.37	53.01	74.00	-20.99	Peak

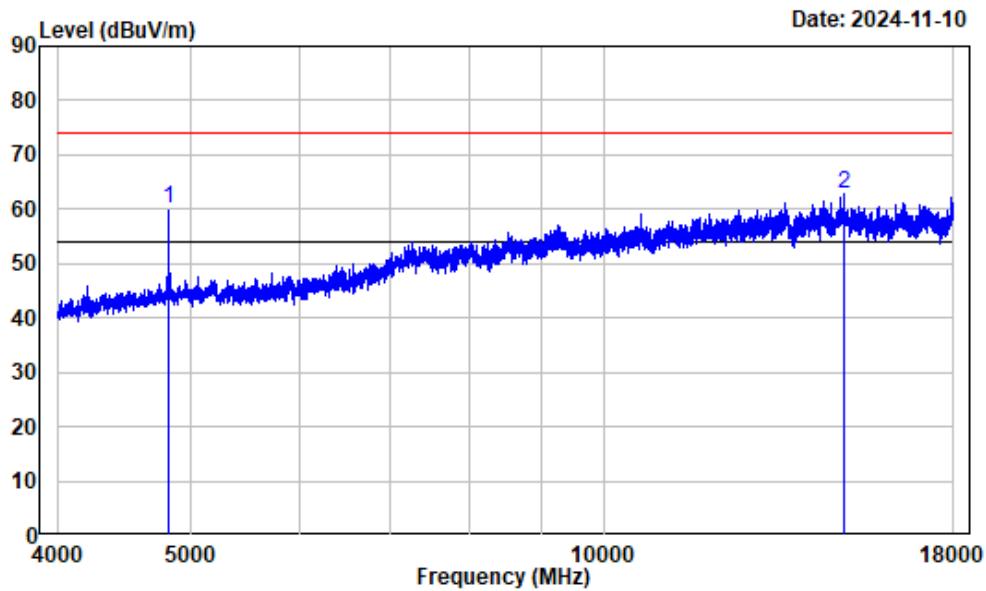
## 1-4GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2187.773	-3.36	34.27	30.91	54.00	-23.09	Average
2	2187.773	-3.36	55.06	51.70	74.00	-22.30	Peak

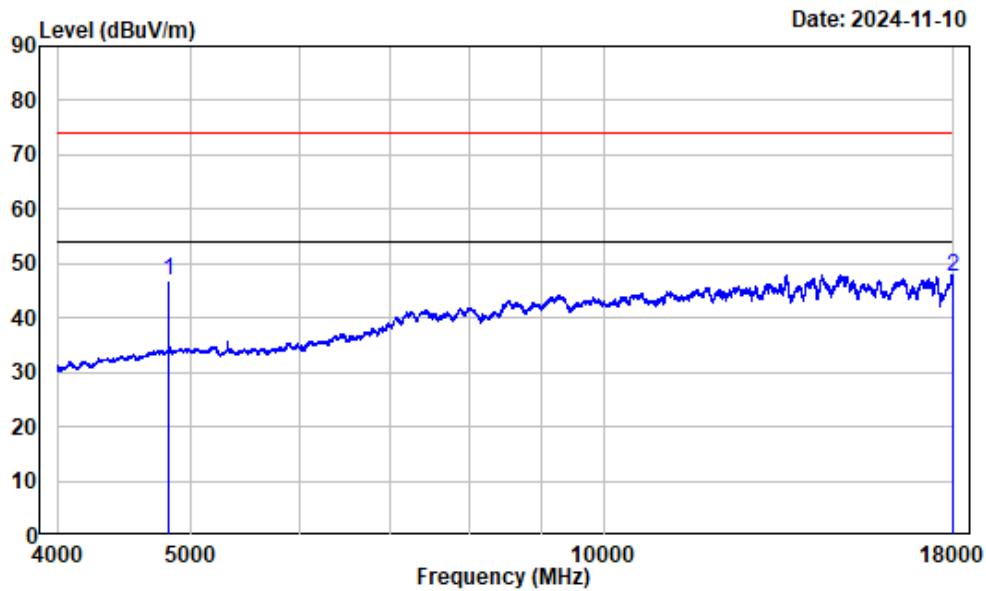
## 4-18GHz\_Horizontal\_Peak



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	
1	4824.000	2.45	57.56	60.01	74.00	-13.99	Peak
2	14966.870	16.40	46.41	62.81	74.00	-11.19	Peak

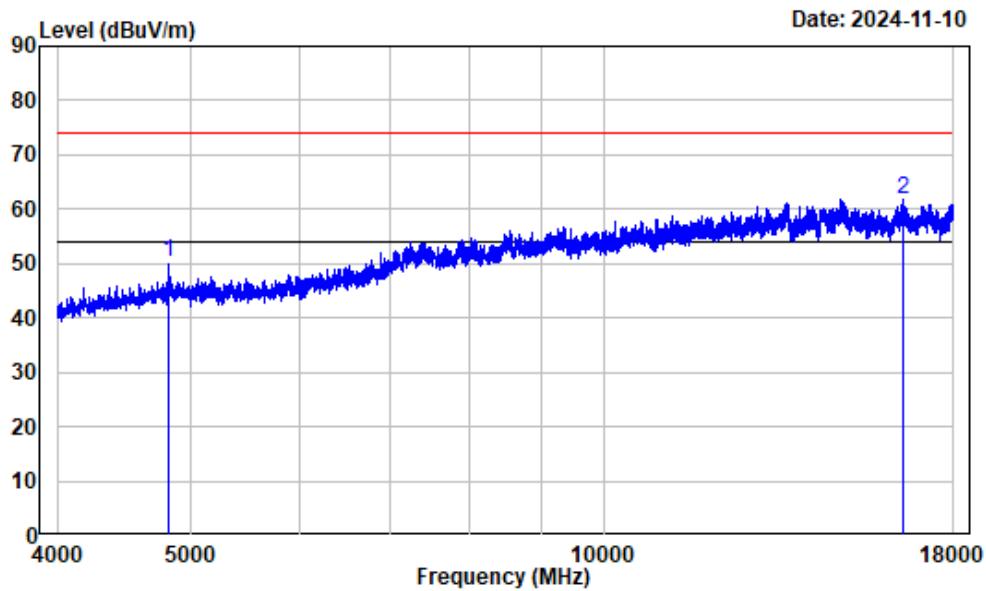
## 4-18GHz\_Horizontal\_Average



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4824.000	2.45	44.28	46.73	54.00	-7.27	Average
2	17991.250	24.56	22.85	47.41	54.00	-6.59	Average

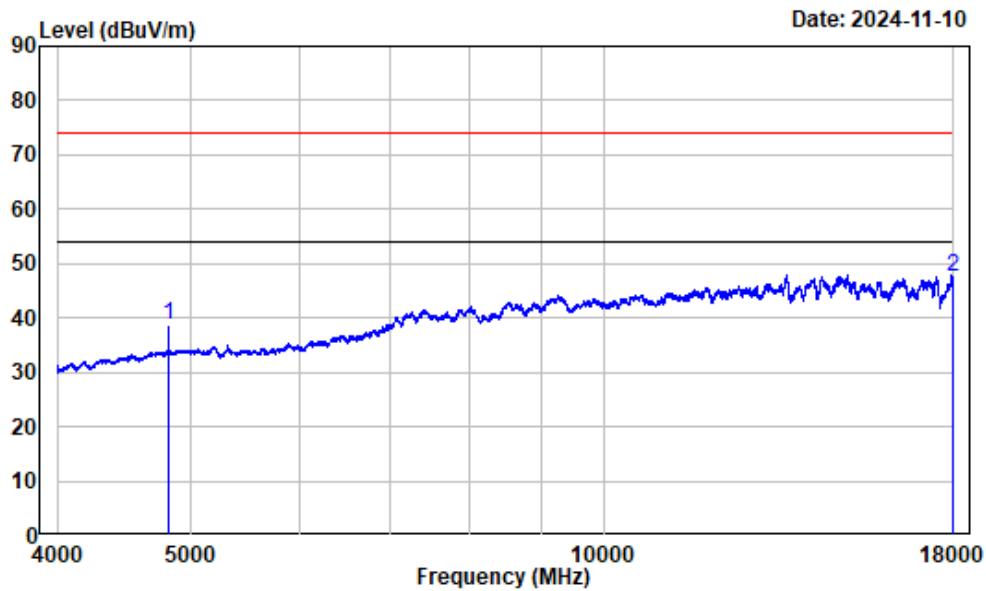
## 4-18GHz\_Vertical\_Peak



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4824.000	2.45	47.90	50.35	74.00	-23.65	Peak
2	16550.820	15.86	46.07	61.93	74.00	-12.07	Peak

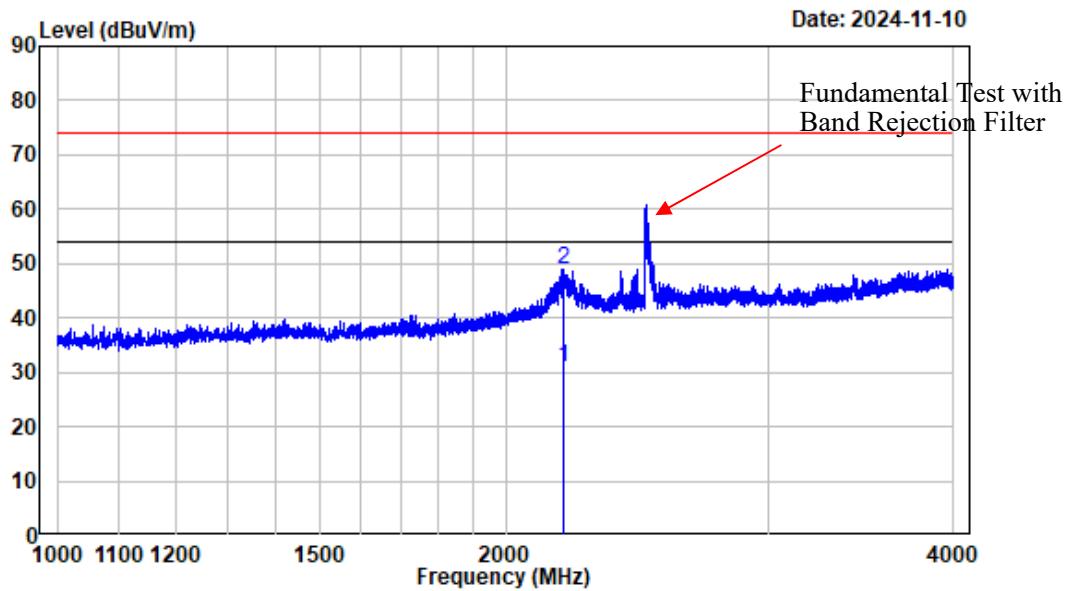
## 4-18GHz\_Vertical\_Average



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N20\_2412

	Freq	Factor	Read Level	Limit Level	Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4824.000	2.45	36.32	38.77	54.00	-15.23	Average
2	18000.000	24.62	22.98	47.60	54.00	-6.40	Average

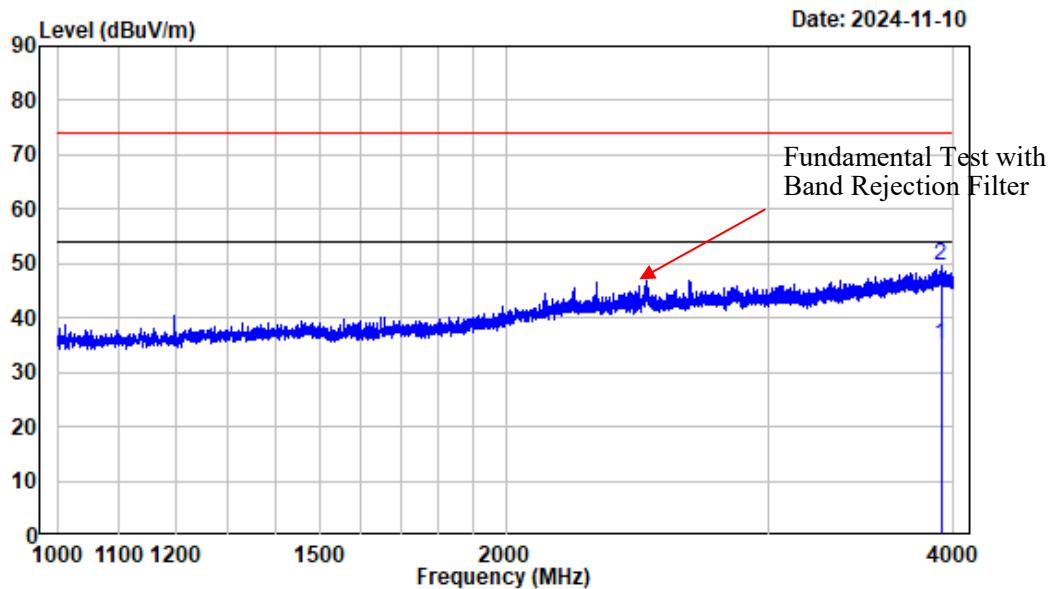
## 1-4GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2191.149	-3.30	34.25	30.95	54.00	-23.05	Average
2	2191.149	-3.30	52.21	48.91	74.00	-25.09	Peak

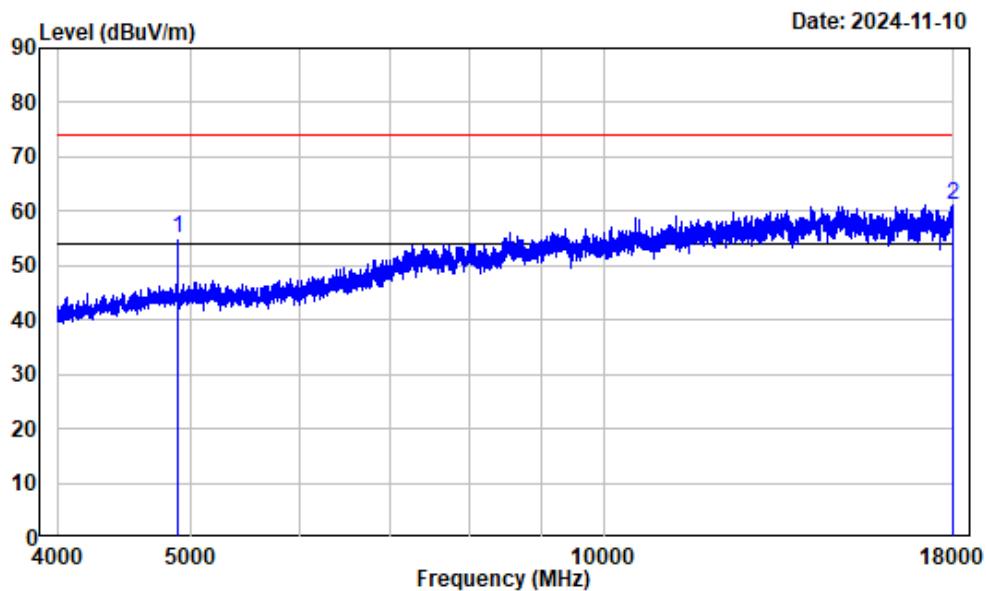
## 1-4GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m	dBuV/m	
1	3923.490	-0.36	35.48	35.12	54.00	-18.88	Average
2	3923.490	-0.36	50.01	49.65	74.00	-24.35	Peak

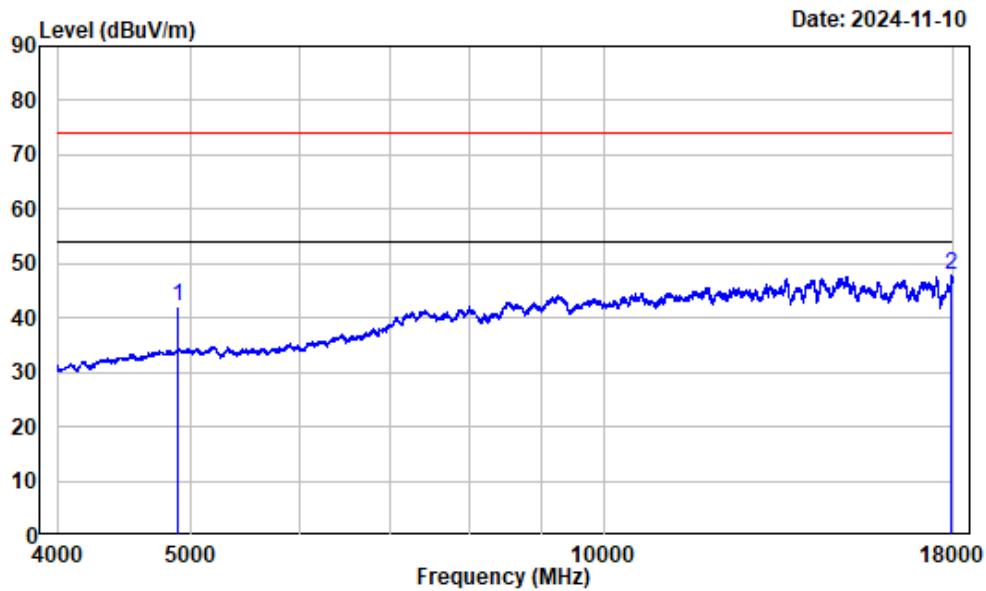
## 4-18GHz\_Horizontal\_Peak



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4904.000	2.64	52.31	54.95	74.00	-19.05	Peak
2	17993.000	24.57	36.51	61.08	74.00	-12.92	Peak

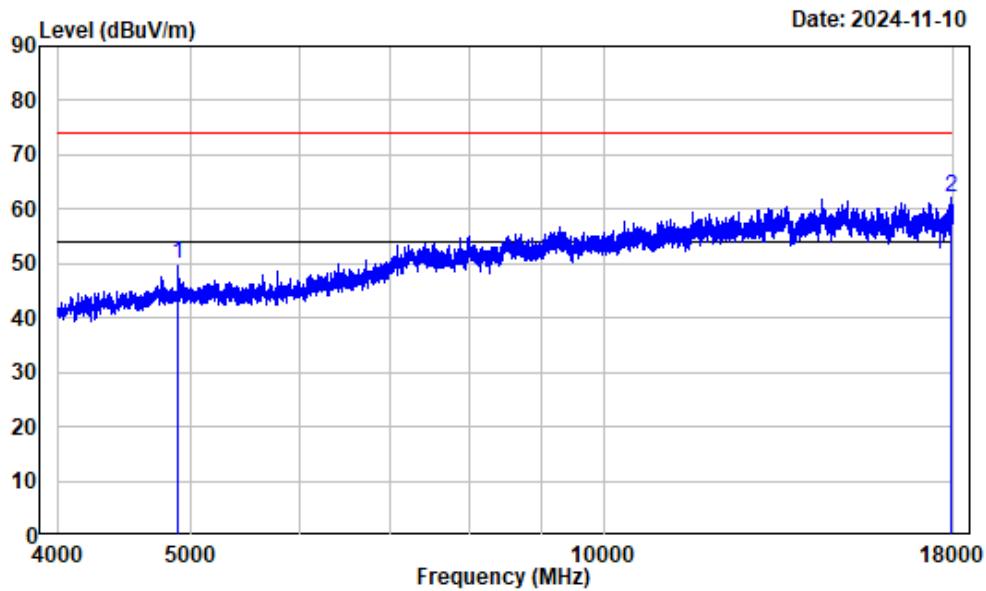
## 4-18GHz\_Horizontal\_Average



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4904.000	2.64	39.42	42.06	54.00	-11.94	Average
2	17954.490	24.30	23.50	47.80	54.00	-6.20	Average

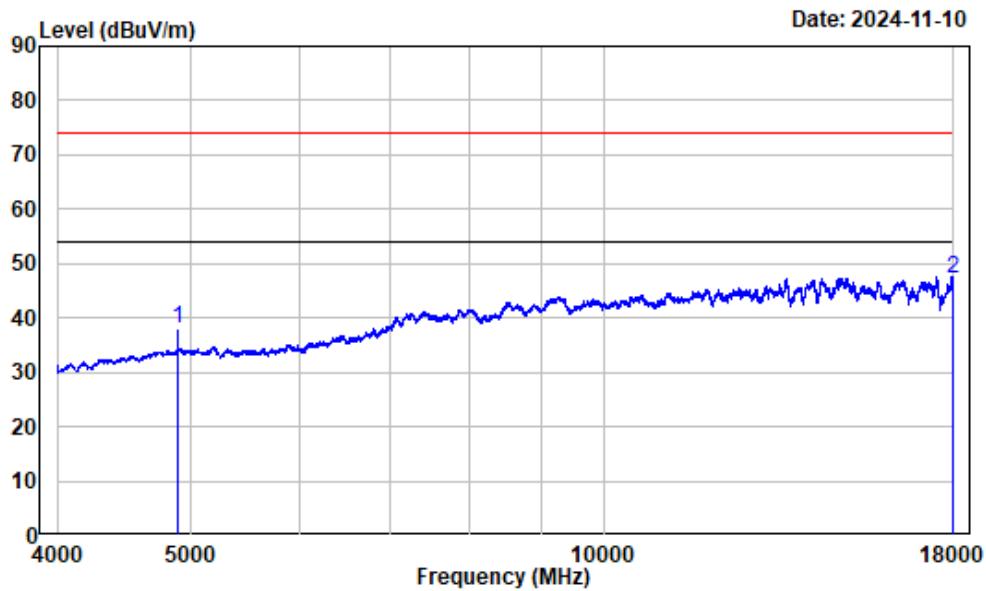
## 4-18GHz\_Vertical\_Peak



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4904.000	2.64	47.16	49.80	74.00	-24.20	Peak
2	17949.240	24.25	37.99	62.24	74.00	-11.76	Peak

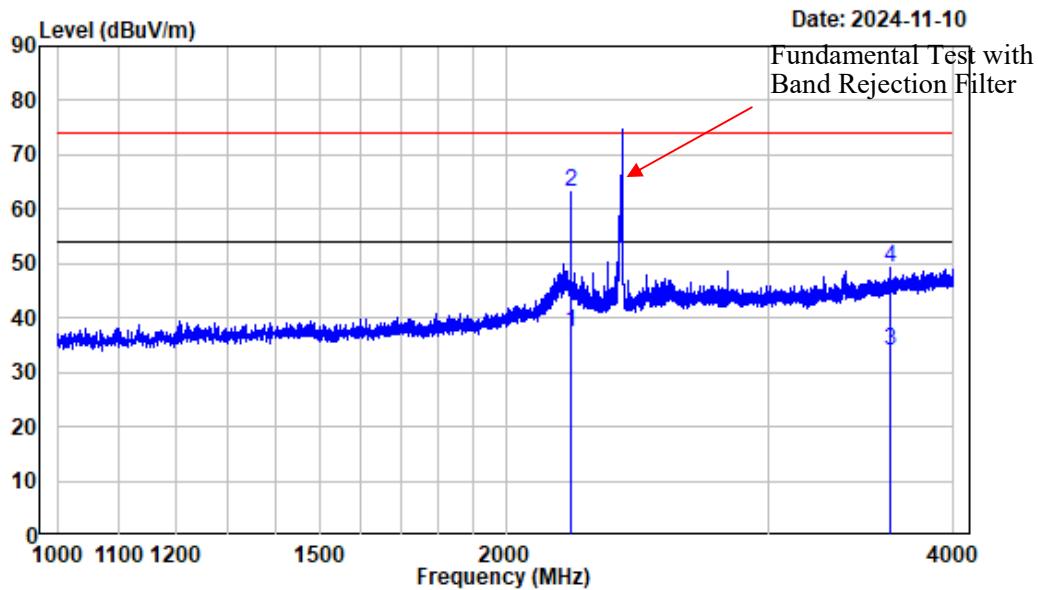
## 4-18GHz\_Vertical\_Average



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11N40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4904.000	2.64	35.48	38.12	54.00	-15.88	Average
2	17991.250	24.56	22.64	47.20	54.00	-6.80	Average

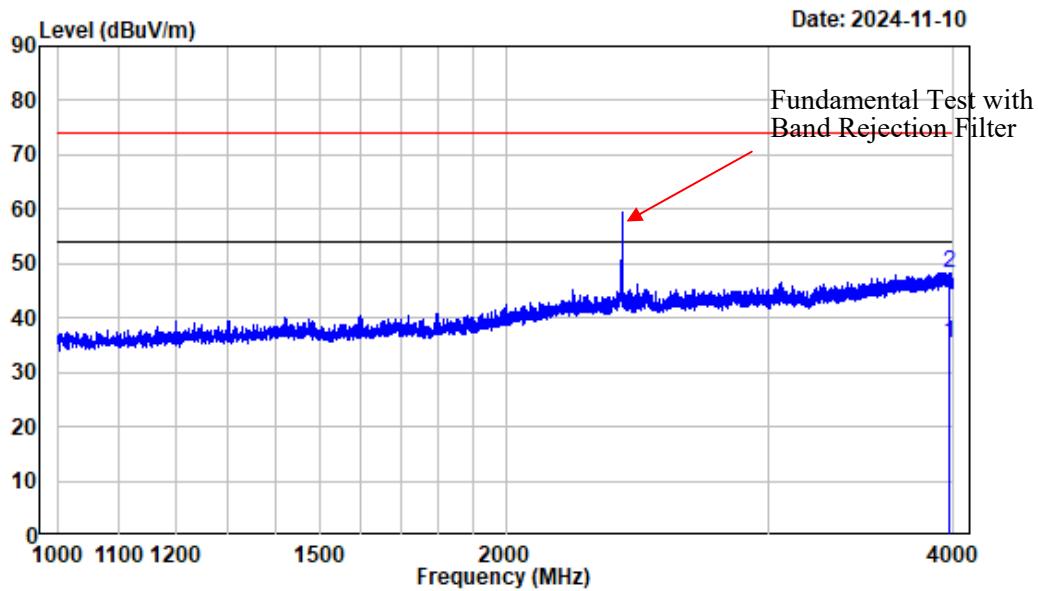
## 1-4GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

	Freq	Factor	Read Level	Limit Level	Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2212.527	-3.23	40.71	37.48	54.00	-16.52	Average
2	2212.527	-3.23	66.31	63.08	74.00	-10.92	Peak
3	3625.328	-1.59	35.48	33.89	54.00	-20.11	Average
4	3625.328	-1.59	50.89	49.30	74.00	-24.70	Peak

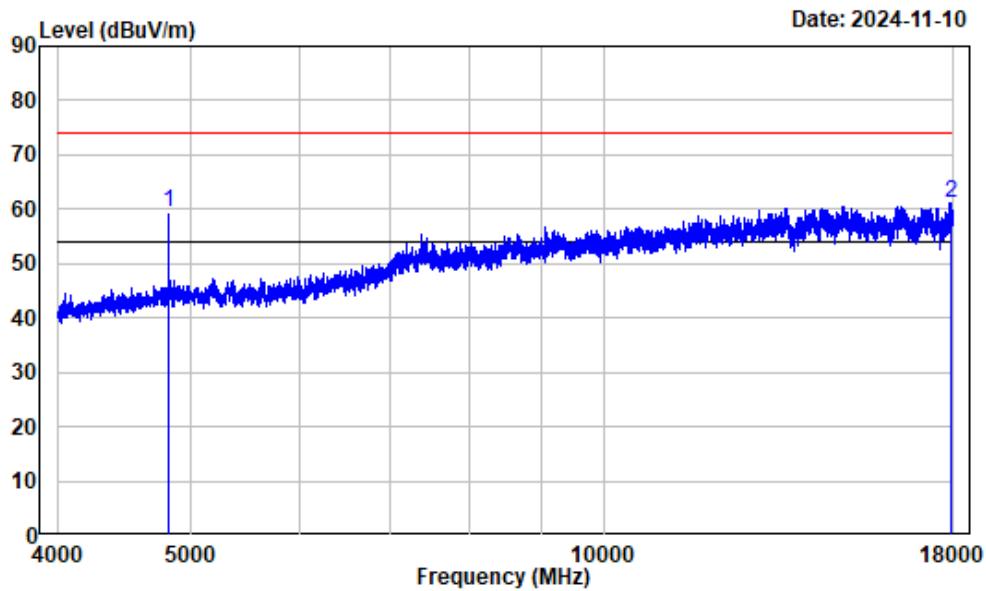
## 1-4GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	3972.247	-0.18	35.51	35.33	54.00	-18.67	Average
2	3972.247	-0.18	48.56	48.38	74.00	-25.62	Peak

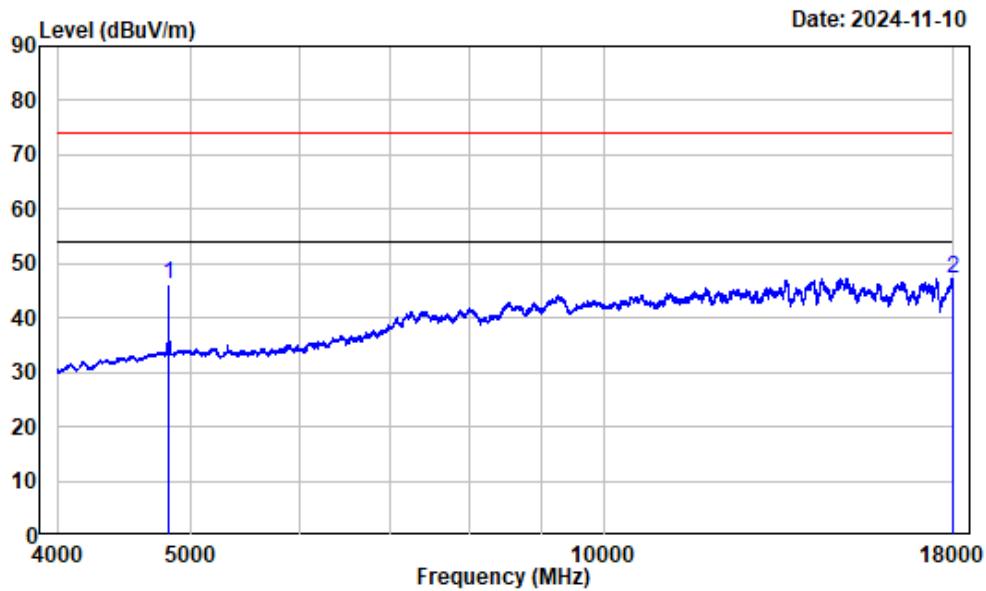
## 4-18GHz\_Horizontal\_Peak



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4824.000	2.45	56.97	59.42	74.00	-14.58	Peak
2	17935.240	24.16	36.93	61.09	74.00	-12.91	Peak

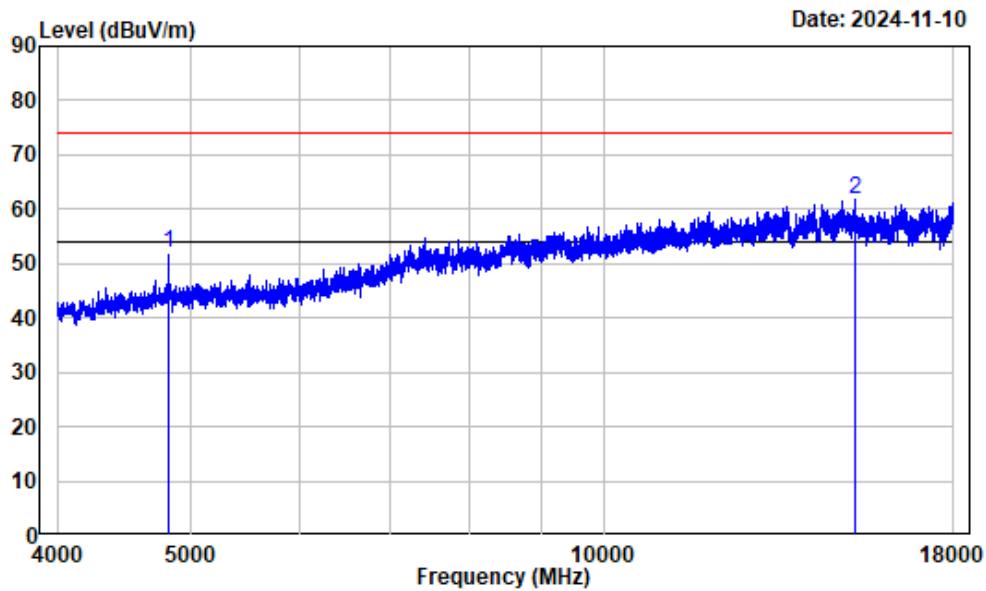
## 4-18GHz\_Horizontal\_Average



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	
1	4824.000	2.45	43.72	46.17	54.00	-7.83	Average
2	17998.250	24.61	22.53	47.14	54.00	-6.86	Average

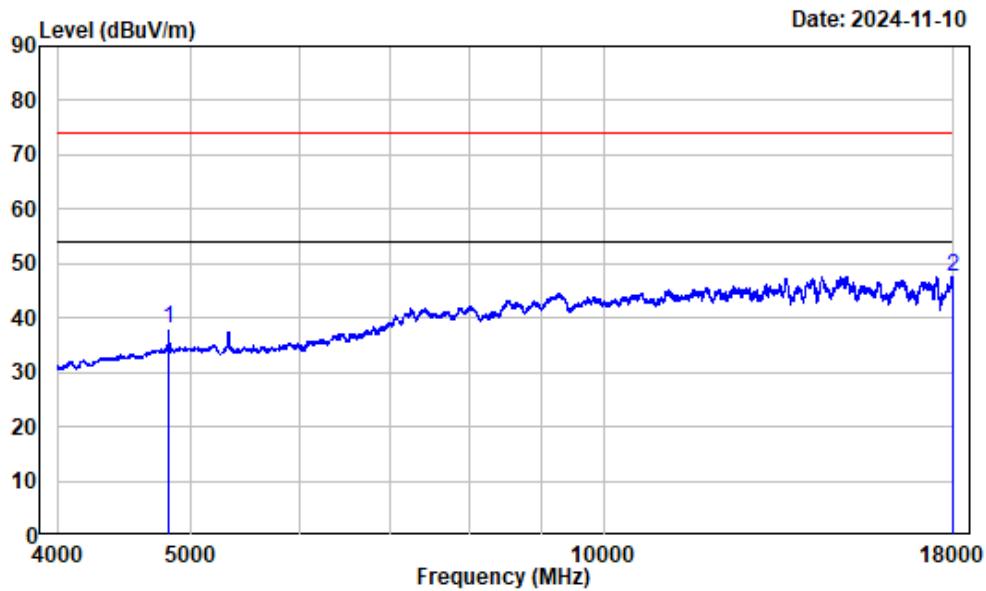
## 4-18GHz\_Vertical\_Peak



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4824.000	2.45	49.65	52.10	74.00	-21.90	Peak
2	15241.660	15.00	46.67	61.67	74.00	-12.33	Peak

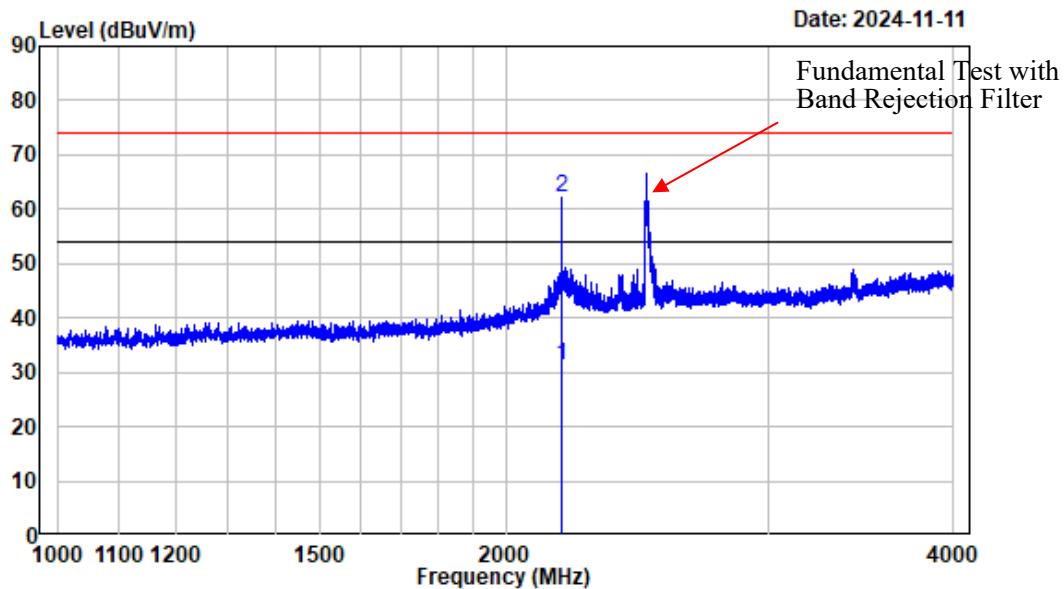
## 4-18GHz\_Vertical\_Average



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX20\_2412

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4824.000	2.45	35.72	38.17	54.00	-15.83	Average
2	17998.250	24.61	23.03	47.64	54.00	-6.36	Average

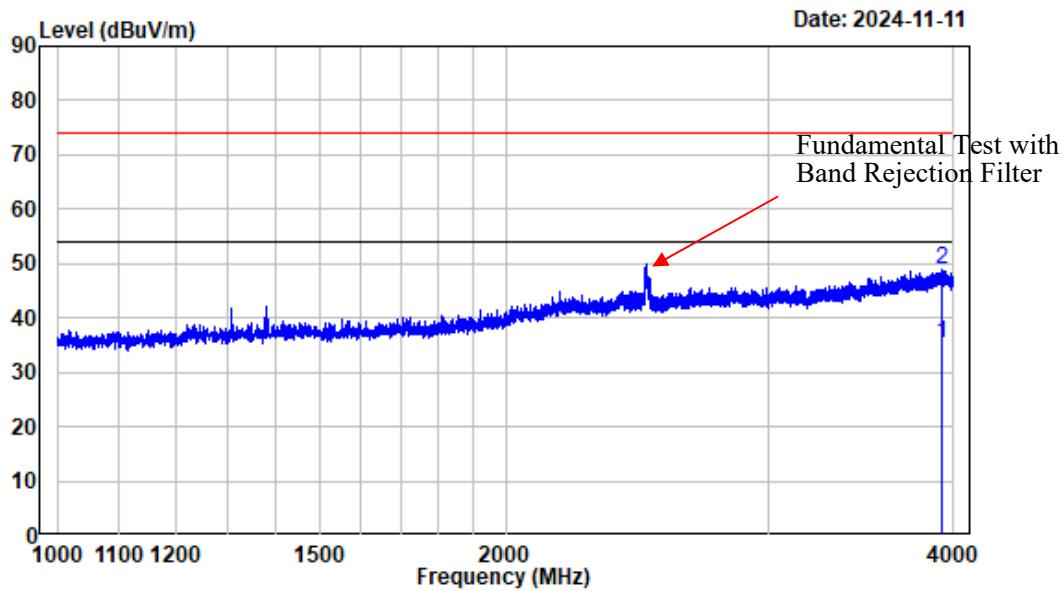
## 1-4GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	2180.647	-3.48	34.59	31.11	54.00	-22.89	Average
2	2180.647	-3.48	65.75	62.27	74.00	-11.73	Peak

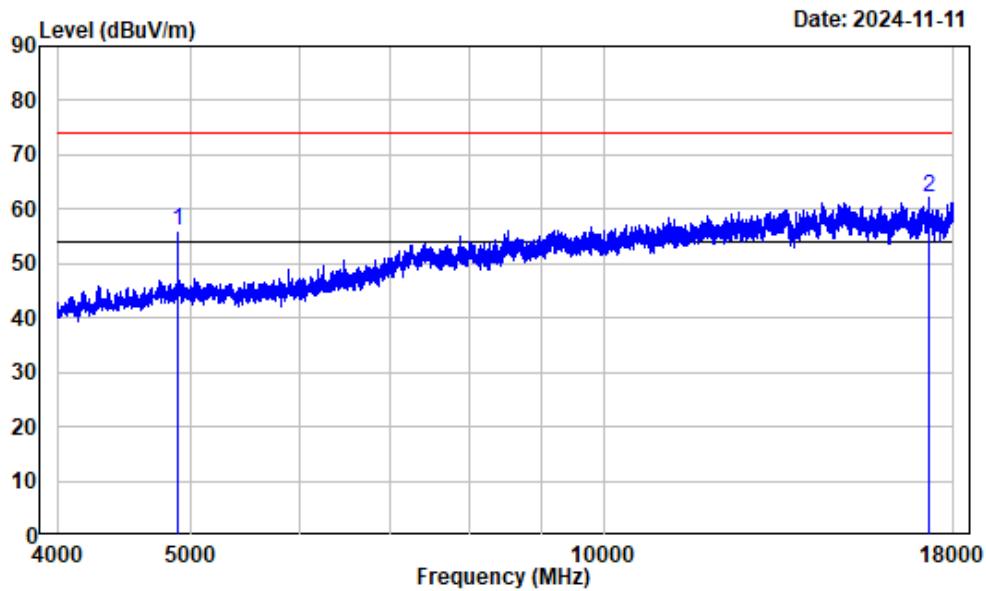
## 1-4GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	3923.865	-0.36	35.62	35.26	54.00	-18.74	Average
2	3923.865	-0.36	49.35	48.99	74.00	-25.01	Peak

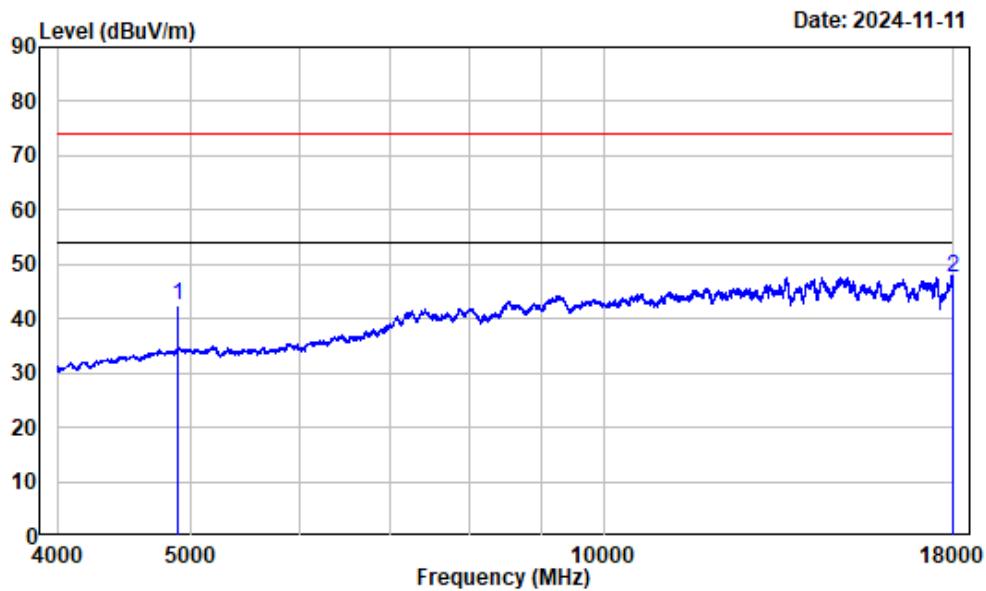
## 4-18GHz\_Horizontal\_Peak



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	4904.000	2.64	53.46	56.10	74.00	-17.90	Peak
2	17282.410	19.21	42.89	62.10	74.00	-11.90	Peak

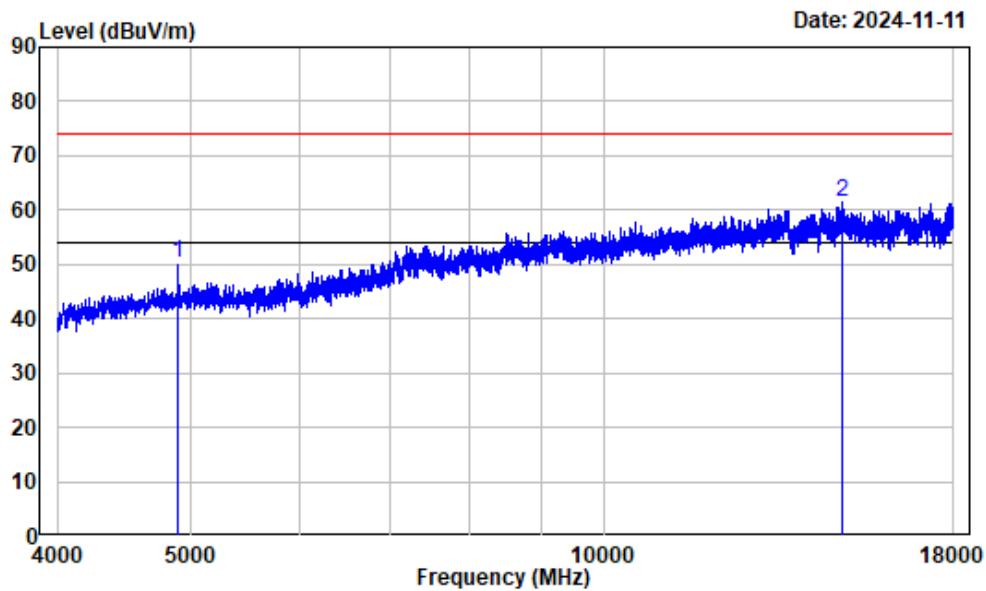
## 4-18GHz\_Horizontal\_Average



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4904.000	2.64	39.97	42.61	54.00	-11.39	Average
2	17993.000	24.57	22.82	47.39	54.00	-6.61	Average

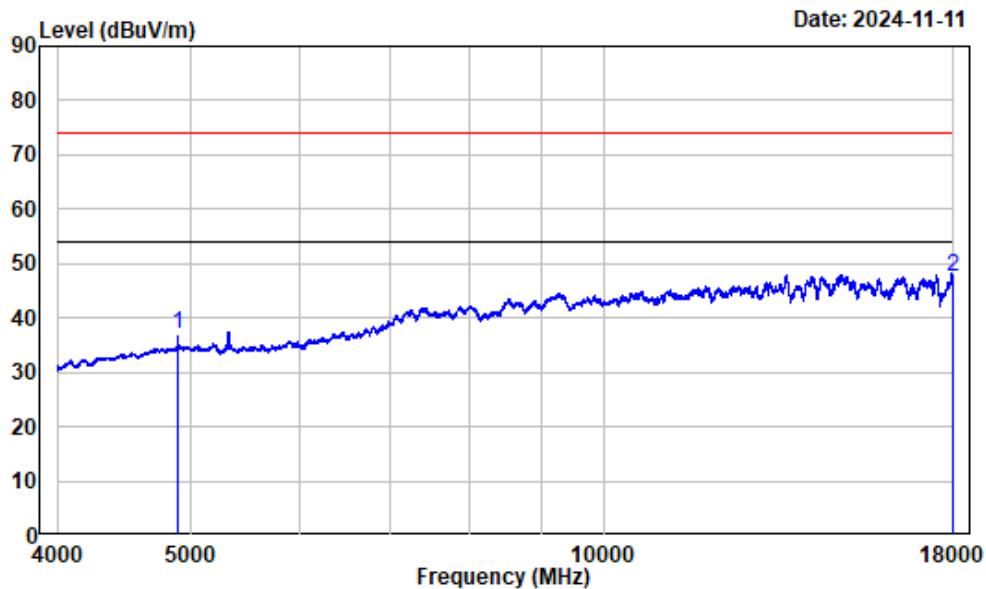
## 4-18GHz\_Vertical\_Peak



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4904.000	2.64	47.62	50.26	74.00	-23.74	Peak
2	14947.620	16.45	44.93	61.38	74.00	-12.62	Peak

## 4-18GHz\_Vertical\_Average

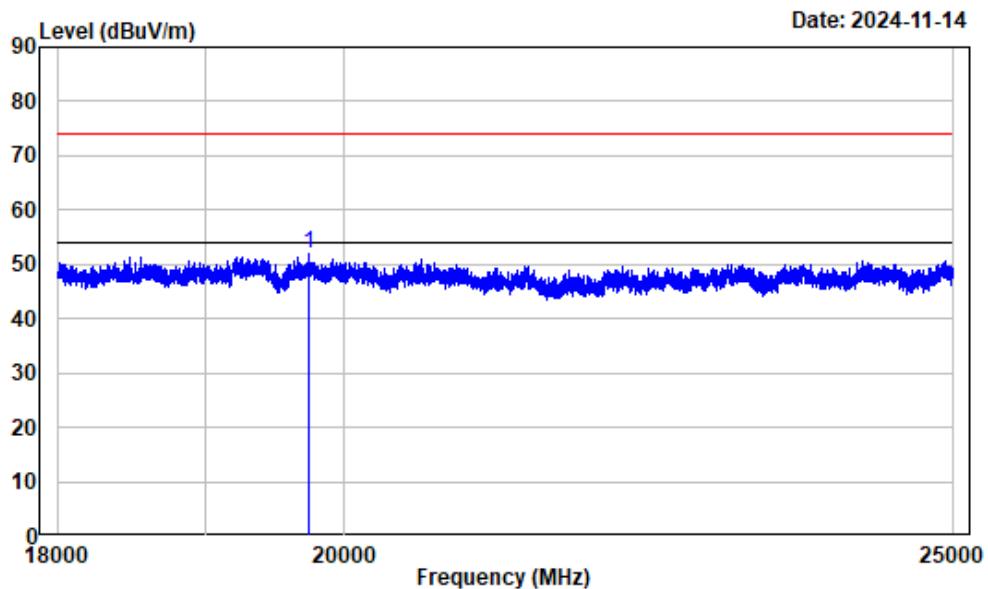


Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11AX40\_2452

Freq	Factor	Read		Limit		Over Limit	Remark
		MHz	dB/m	dBuV	dBuV/m		
1	4904.000	2.64	34.27	36.91	54.00	-17.09	Average
2	18000.000	24.62	22.88	47.50	54.00	-6.50	Average

**18-25GHz Worst case emission plots:**

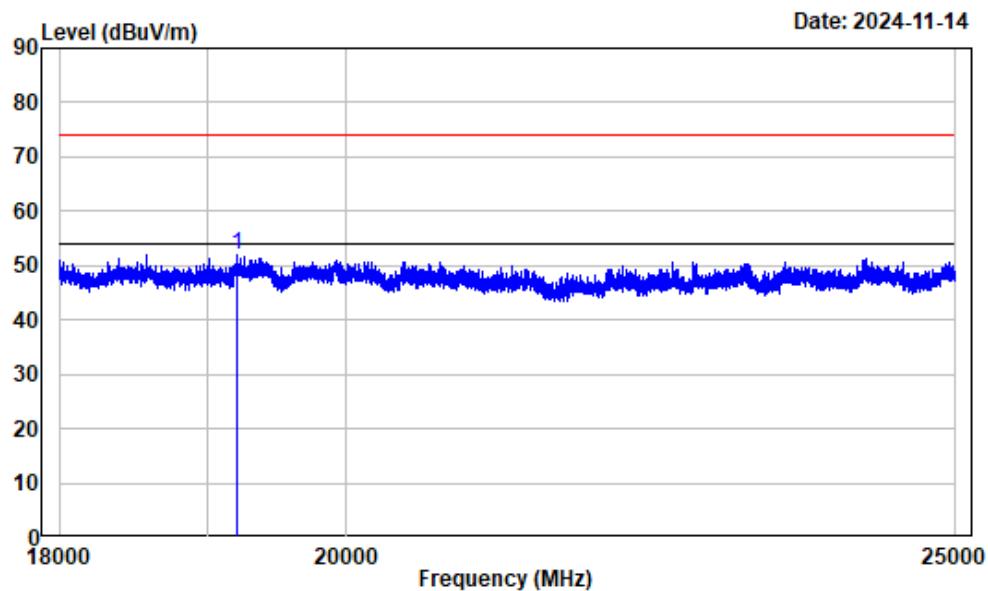
18-25GHz\_Horizontal



Condition : Horizontal  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read Level	Limit Level	Line	Over Limit	Remark
1 19737.090	15.39	36.73	52.12	74.00	-21.88	Peak

## 18-25GHz\_Vertical



Condition : Vertical  
Project No.: 2401Y98612E-RF  
Tester : Dylan.Yang  
Note : 802.11B\_2462

Freq	Factor	Read		Limit		Over	Remark
		MHz	dB/m	dB <sub>UV</sub>	dB <sub>UV</sub> /m		
1	19216.400	15.30	36.61	51.91	74.00	-22.09	Peak

**6dB Emission Bandwidth****Test Information:**

<b>Sample No.:</b>	2SLQ-7	<b>Test Date:</b>	2024/11/14~2024/12/10
<b>Test Site:</b>	RF	<b>Test Mode:</b>	Transmitting
<b>Tester:</b>	Brian Li	<b>Test Result:</b>	Pass

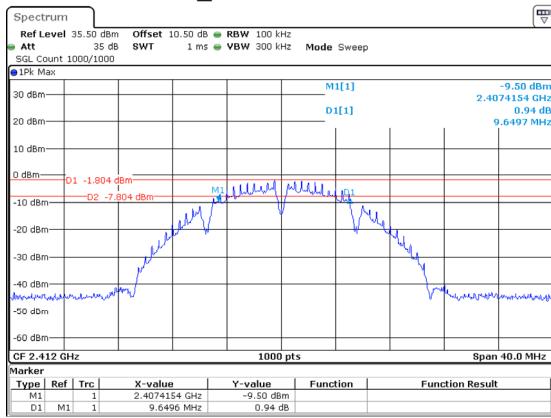
**Environmental Conditions:**

<b>Temperature:</b> (°C):	25-26	<b>Relative Humidity:</b> (%)	45-47	<b>ATM Pressure:</b> (kPa)	101
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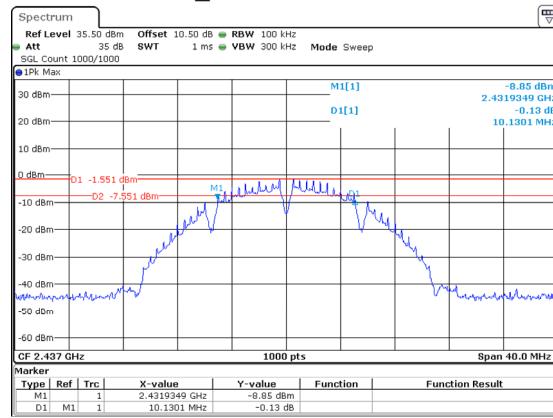
**Test Data:**

<b>Mode</b>	<b>Test Frequency (MHz)</b>	<b>Result (MHz)</b>	<b>Limit (MHz)</b>	<b>Verdict</b>
802.11b	2412	9.650	≥0.5	Pass
	2437	10.130	≥0.5	Pass
	2462	10.130	≥0.5	Pass
802.11g	2412	15.495	≥0.5	Pass
	2437	15.175	≥0.5	Pass
	2462	15.736	≥0.5	Pass
802.11n20	2412	17.658	≥0.5	Pass
	2437	16.336	≥0.5	Pass
	2462	16.977	≥0.5	Pass
802.11n40	2422	34.194	≥0.5	Pass
	2437	34.835	≥0.5	Pass
	2452	36.436	≥0.5	Pass
802.11ax20	2412	18.418	≥0.5	Pass
	2437	16.737	≥0.5	Pass
	2462	17.738	≥0.5	Pass
802.11ax40	2422	35.956	≥0.5	Pass
	2437	37.477	≥0.5	Pass
	2452	35.956	≥0.5	Pass

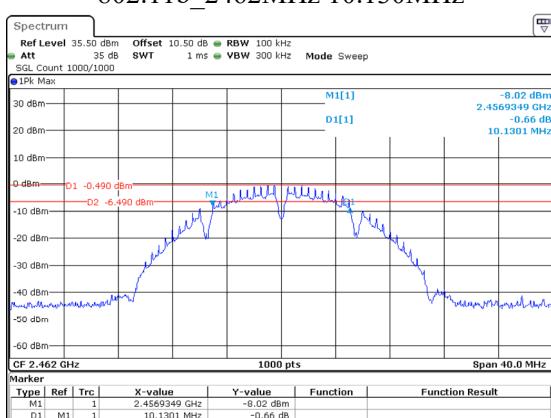
## 802.11b\_2412MHz 9.650MHz



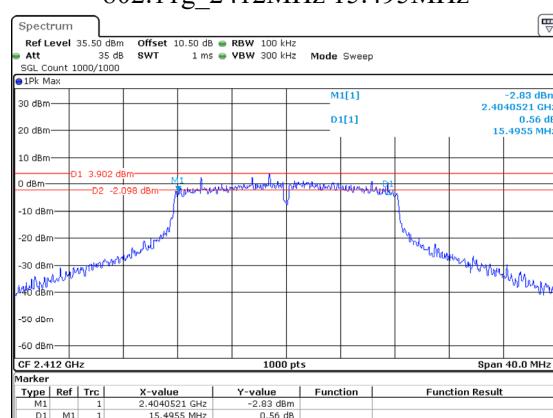
## 802.11b\_2437MHz 10.130MHz



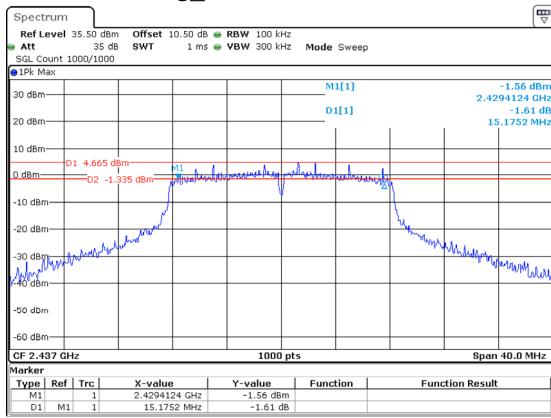
## 802.11b\_2462MHz 10.130MHz



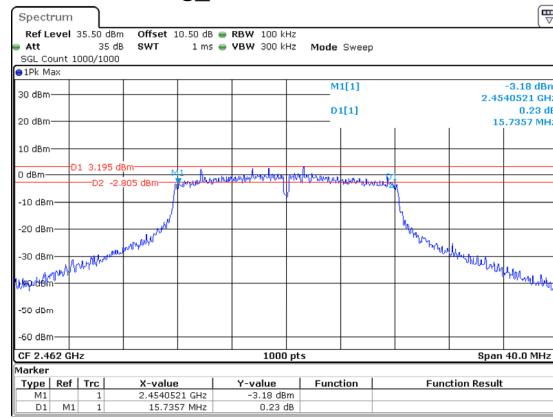
## 802.11g\_2412MHz 15.495MHz



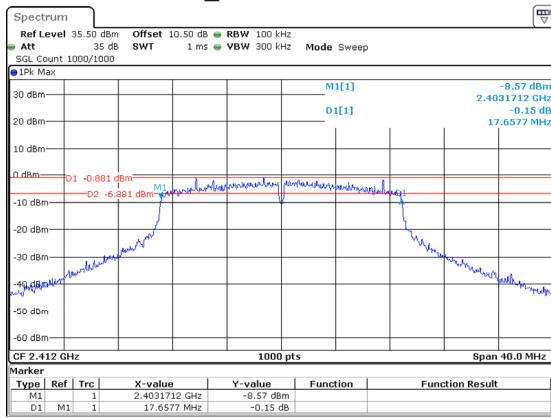
## 802.11g\_2437MHz 15.175MHz



## 802.11g\_2462MHz 15.736MHz



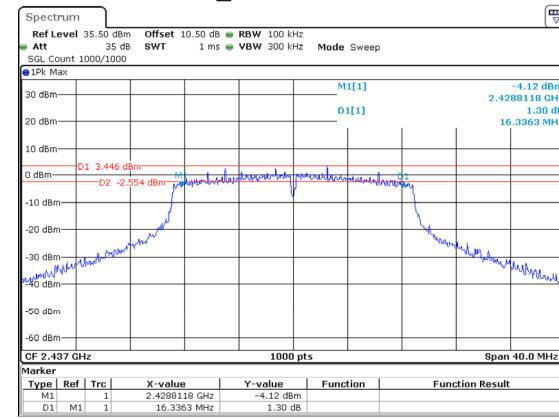
## 802.11n20\_2412MHz 17.658MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 00:25:23

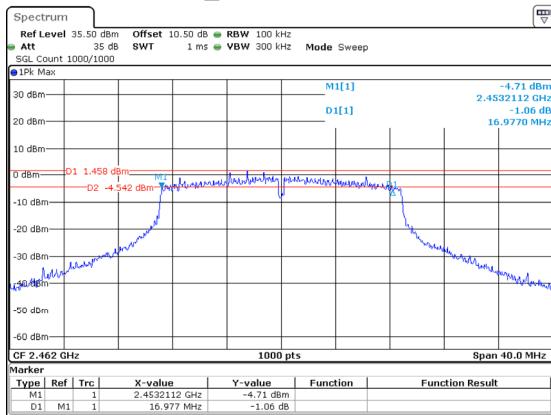
## 802.11n20\_2437MHz 16.336MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 00:31:14

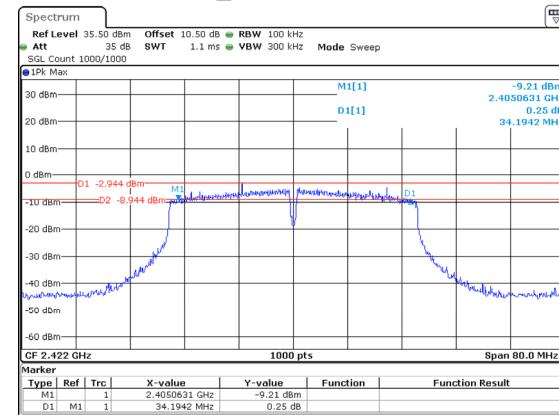
## 802.11n20\_2462MHz 16.977MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 00:35:04

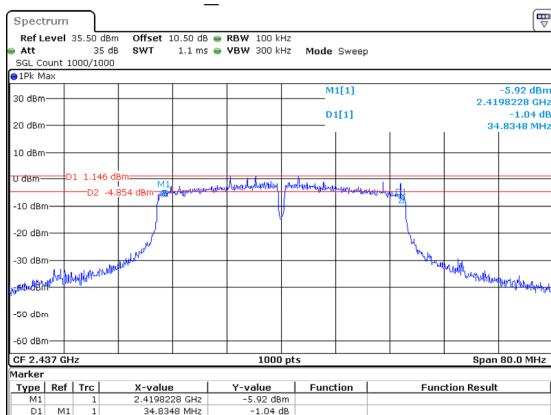
## 802.11n40\_2422MHz 34.194MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 00:44:51

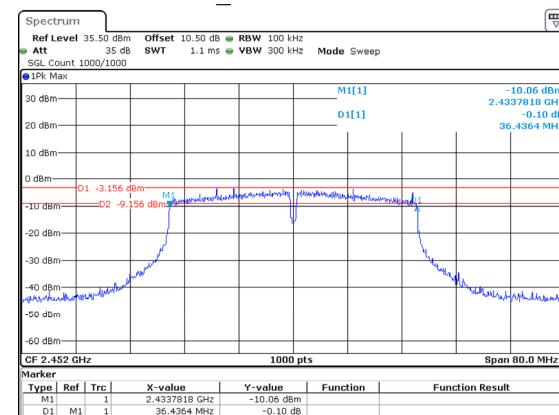
## 802.11n40\_2437MHz 34.835MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 10.DEC.2024 20:06:47

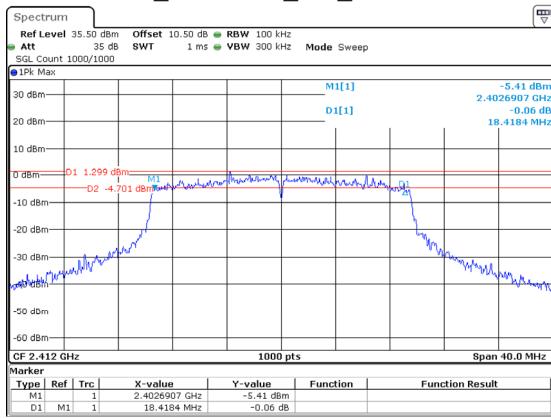
## 802.11n40\_2452MHz 36.436MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 01:01:19

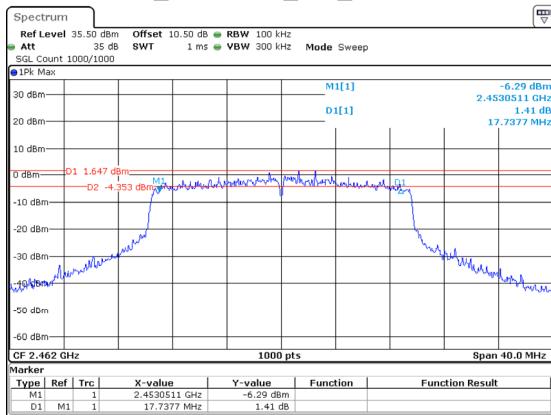
## 802.11ax20\_2412MHz\_RU\_Full 18.418MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 22:57:40

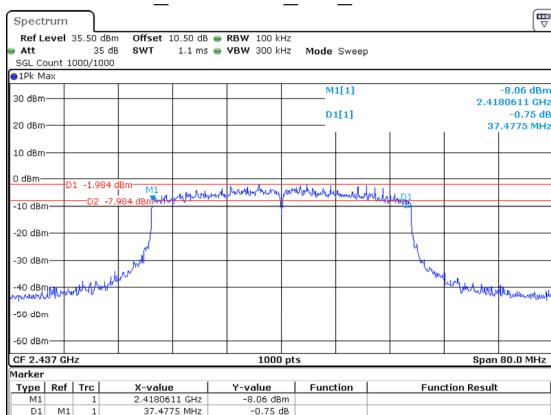
## 802.11ax20\_2462MHz\_RU\_Full 17.738MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 23:08:10

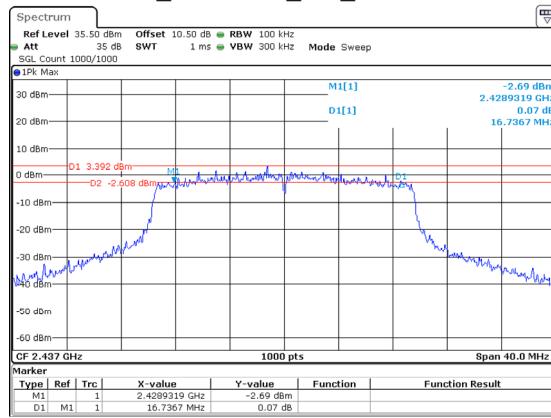
## 802.11ax40\_2437MHz\_RU\_Full 37.477MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 23:17:48

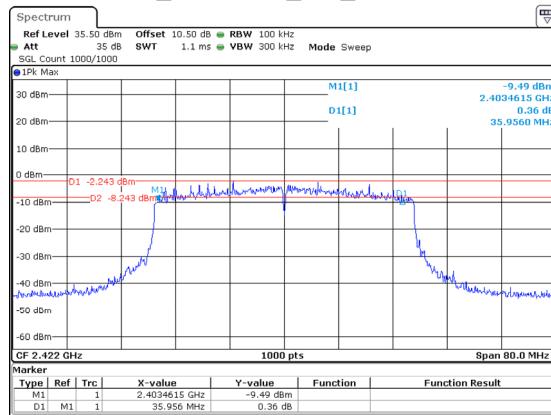
## 802.11ax20\_2437MHz\_RU\_Full 16.737MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 22:57:57

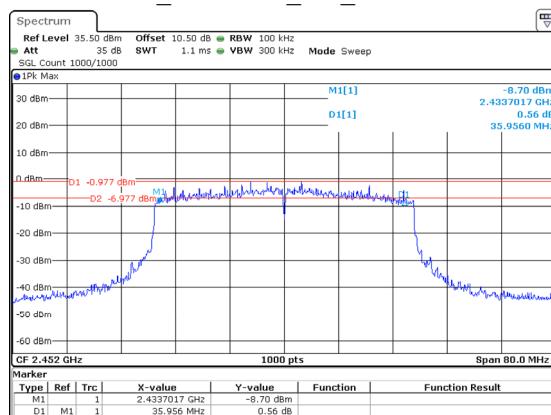
## 802.11ax40\_2422MHz\_RU\_Full 35.956MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 23:12:40

## 802.11ax40\_2452MHz\_RU\_Full 35.956MHz



ProjectNo.:12401Y98612E-RF Tester:Brian Li

Date: 15.NOV.2024 23:22:27

**Maximum Conducted Output Power****Test Information:**

Sample No.:	2SLQ-7	Test Date:	2024/11/14~2024/11/15
Test Site:	RF	Test Mode:	Transmitting
Tester:	Brian Li	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C):	25-26	Relative Humidity: (%)	45-47	ATM Pressure: (kPa)	101
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**Test Data:**

Mode	Test Frequency (MHz)	Peak Output Power(dBm)	Average Output Power(dBm)	Limit (dBm)	Verdict
802.11b	2412	10.16	7.22	30	Pass
	2437	10.36	7.70	30	Pass
	2462	11.39	8.43	30	Pass
802.11g	2412	20.94	13.90	30	Pass
	2437	21.53	12.76	30	Pass
	2462	20.25	14.40	30	Pass
802.11n20	2412	20.16	13.63	30	Pass
	2437	20.96	13.97	30	Pass
	2462	19.86	13.48	30	Pass
802.11n40	2422	18.17	11.24	30	Pass
	2437	19.18	12.71	30	Pass
	2452	18.91	12.35	30	Pass
802.11ax20	2412	20.53	13.50	30	Pass
	2437	21.44	14.38	30	Pass
	2462	19.97	12.91	30	Pass
802.11ax40	2422	19.57	12.35	30	Pass
	2437	20.37	13.34	30	Pass
	2452	20.08	13.35	30	Pass

## Power Spectral Density

### Test Information:

<b>Sample No.:</b>	2SLQ-7	<b>Test Date:</b>	2024/11/14~2024/11/15
<b>Test Site:</b>	RF	<b>Test Mode:</b>	Transmitting
<b>Tester:</b>	Brian Li	<b>Test Result:</b>	Pass

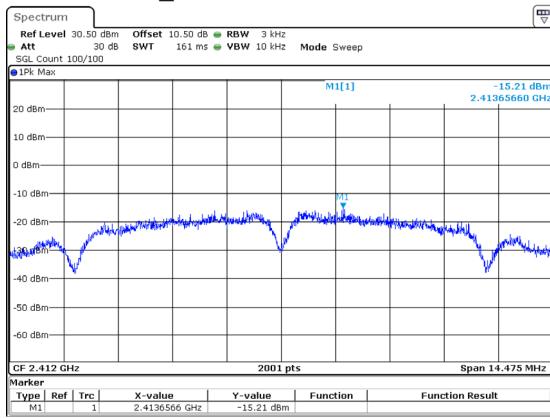
### Environmental Conditions:

<b>Temperature:</b> (°C):	25-26	<b>Relative Humidity:</b> (%)	45-47	<b>ATM Pressure:</b> (kPa)	101
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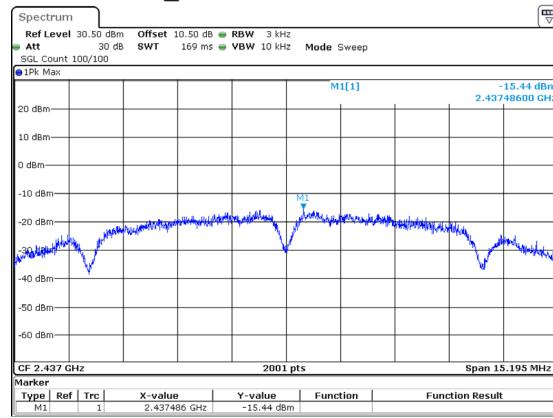
### Test Data:

<b>Mode</b>	<b>Test Frequency (MHz)</b>	<b>Result (dBm/3kHz)</b>	<b>Limit (dBm/3kHz)</b>	<b>Verdict</b>
802.11b	2412	-15.21	8	Pass
	2437	-15.44	8	Pass
	2462	-14.90	8	Pass
802.11g	2412	-9.97	8	Pass
	2437	-8.90	8	Pass
	2462	-10.78	8	Pass
802.11n20	2412	-13.30	8	Pass
	2437	-9.11	8	Pass
	2462	-10.99	8	Pass
802.11n40	2422	-15.66	8	Pass
	2437	-12.51	8	Pass
	2452	-14.47	8	Pass
802.11ax20	2412	-12.53	8	Pass
	2437	-10.68	8	Pass
	2462	-12.18	8	Pass
802.11ax40	2422	-16.05	8	Pass
	2437	-15.28	8	Pass
	2452	-14.81	8	Pass

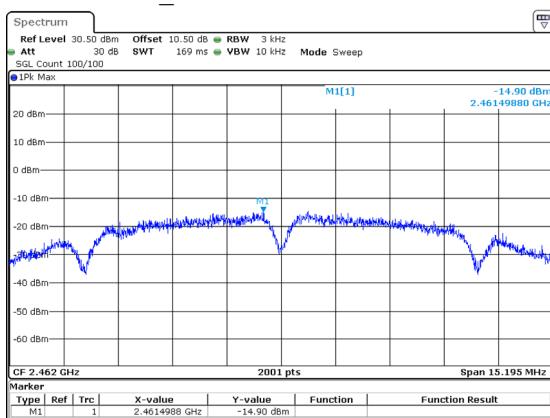
## 802.11b\_2412MHz -15.21dBm/3kHz



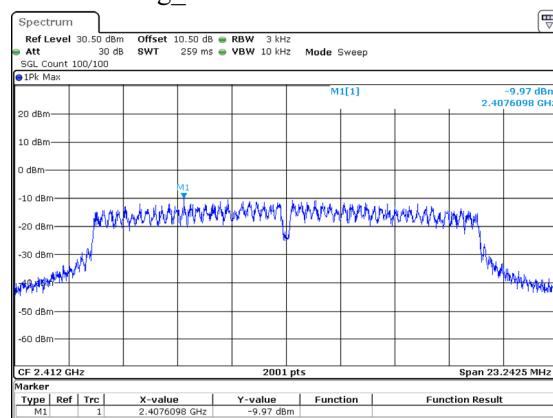
## 802.11b\_2437MHz -15.44dBm/3kHz



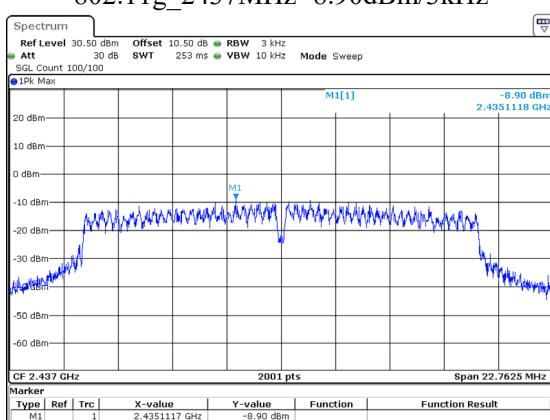
## 802.11b\_2462MHz -14.90dBm/3kHz



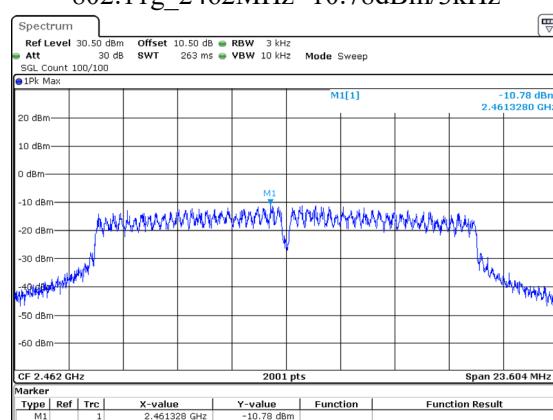
## 802.11g\_2412MHz -9.97dBm/3kHz



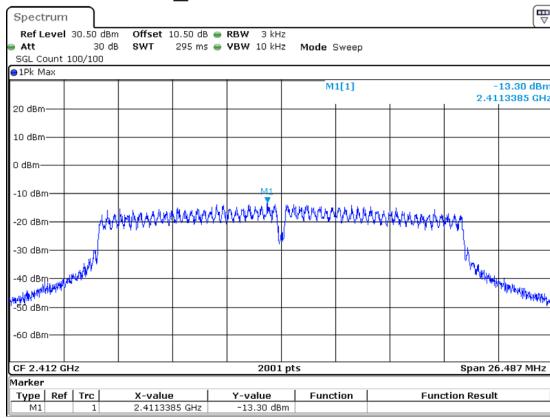
## 802.11g\_2437MHz -8.90dBm/3kHz



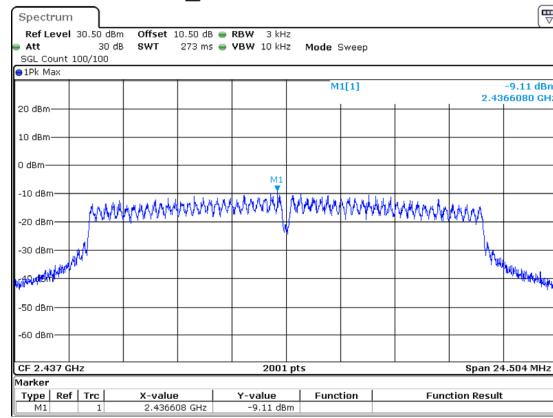
## 802.11g\_2462MHz -10.78dBm/3kHz



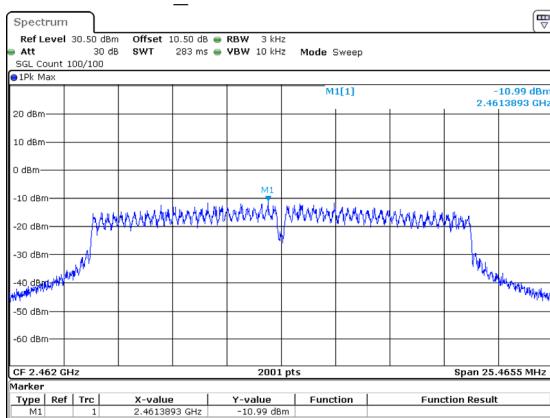
## 802.11n20\_2412MHz -13.30dBm/3kHz



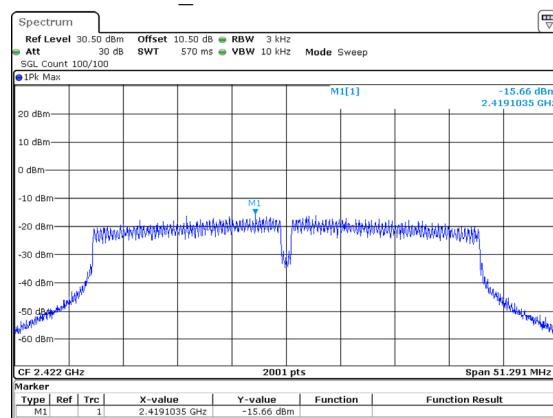
## 802.11n20\_2437MHz -9.11dBm/3kHz



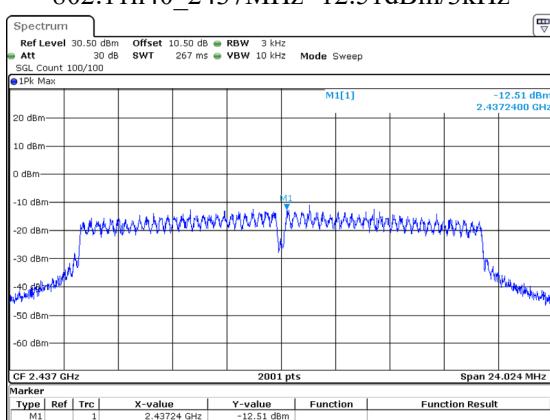
## 802.11n20\_2462MHz -10.99dBm/3kHz



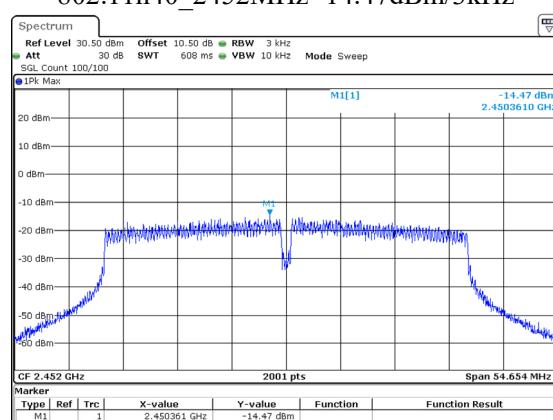
## 802.11n40\_2422MHz -15.66dBm/3kHz



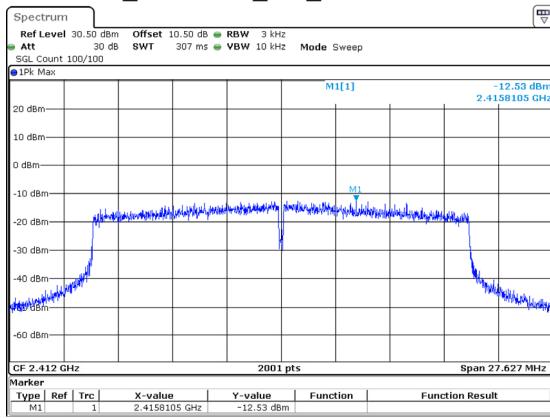
## 802.11n40\_2437MHz -12.51dBm/3kHz



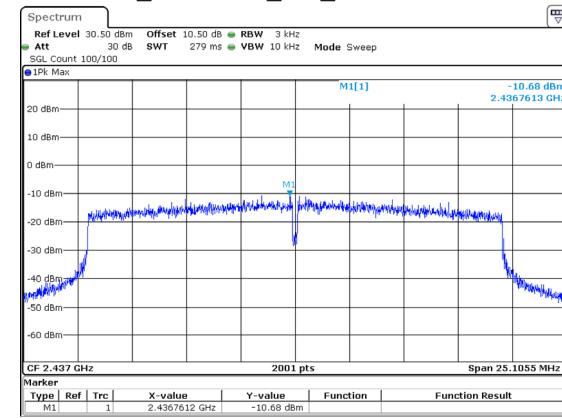
## 802.11n40\_2452MHz -14.47dBm/3kHz



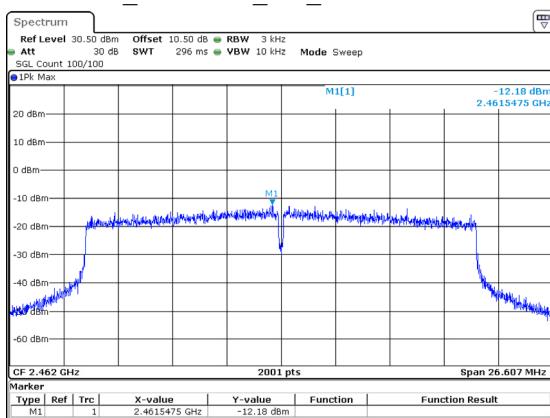
## 802.11ax20\_2412MHz\_RU\_Full -12.53dBm/3kHz



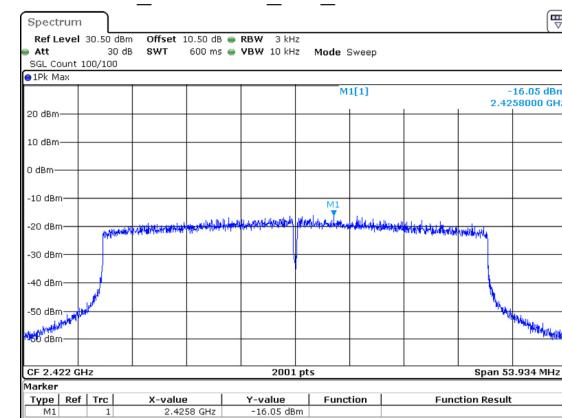
## 802.11ax20\_2437MHz\_RU\_Full -10.68dBm/3kHz



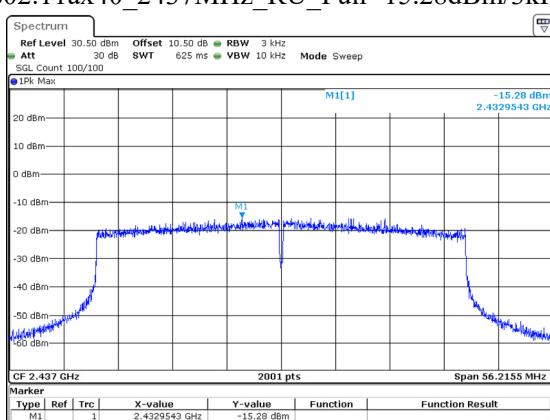
## 802.11ax20\_2462MHz\_RU\_Full -12.18dBm/3kHz



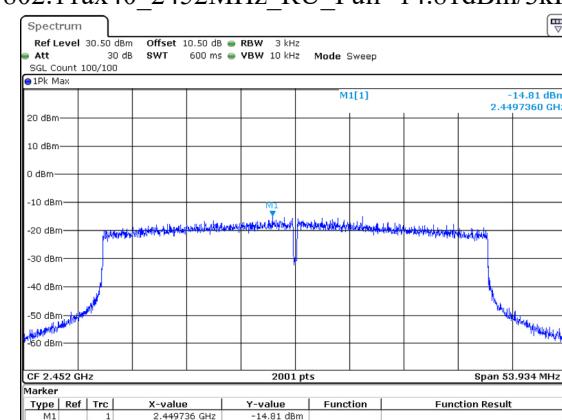
## 802.11ax40\_2422MHz\_RU\_Full -16.05dBm/3kHz



## 802.11ax40\_2437MHz\_RU\_Full -15.28dBm/3kHz



## 802.11ax40\_2452MHz\_RU\_Full -14.81dBm/3kHz



**100 kHz Bandwidth of Frequency Band Edge****Test Information:**

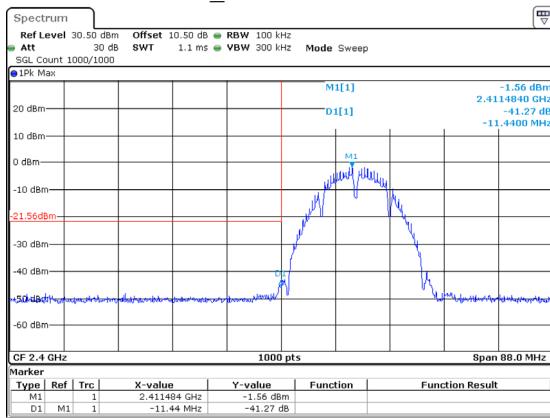
<b>Sample No.:</b>	2SLQ-7	<b>Test Date:</b>	2024/11/14~2024/11/15
<b>Test Site:</b>	RF	<b>Test Mode:</b>	Transmitting
<b>Tester:</b>	Brian Li	<b>Test Result:</b>	Pass

**Environmental Conditions:**

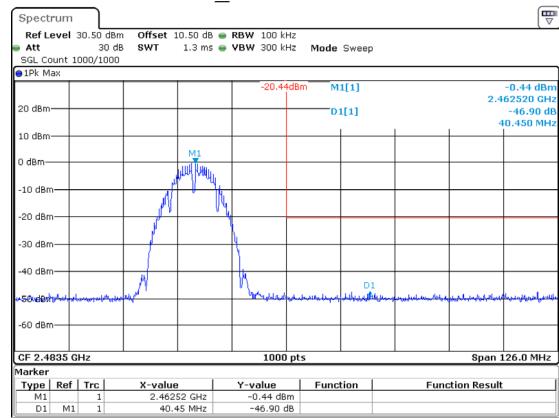
<b>Temperature:</b> (°C):	25-26	<b>Relative Humidity:</b> (%)	45-47	<b>ATM Pressure:</b> (kPa)	101
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**Test Data:**

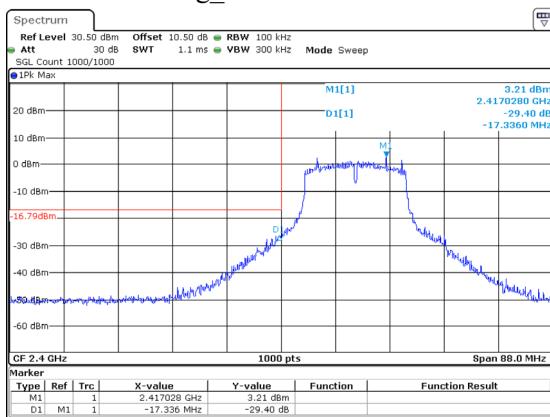
802.11b\_2412MHz 41.27dB



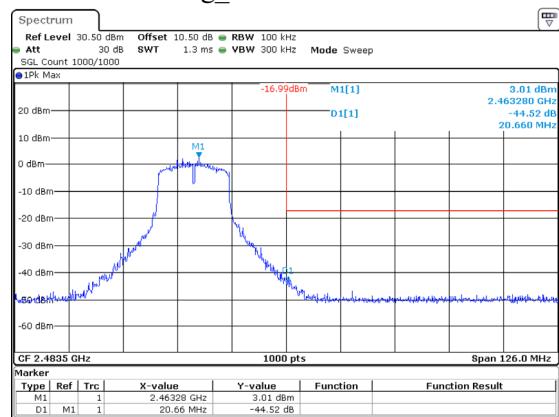
802.11b\_2462MHz 46.90dB



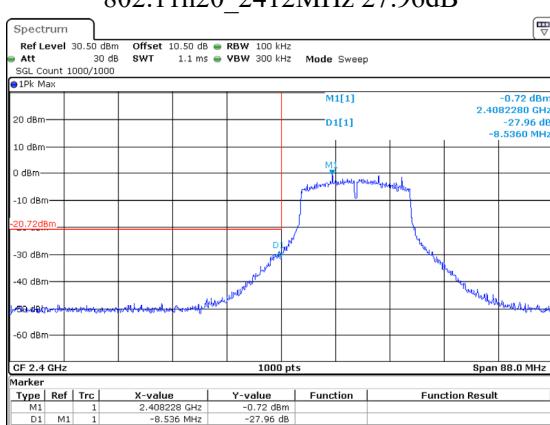
802.11g\_2412MHz 29.40dB



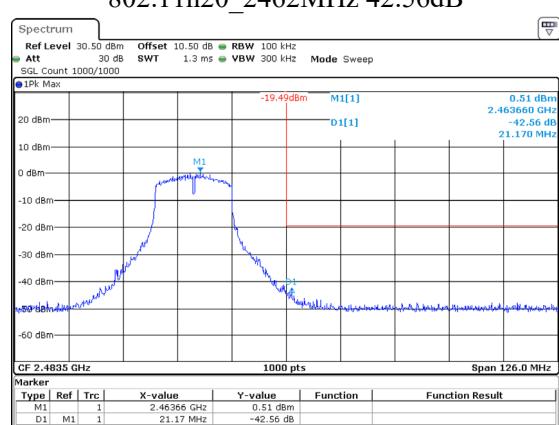
802.11g\_2462MHz 44.52dB



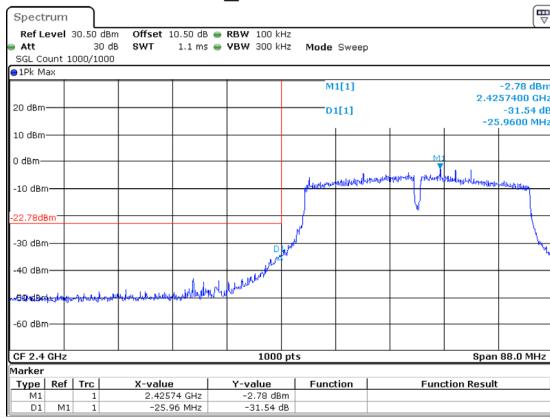
802.11n20\_2412MHz 27.96dB



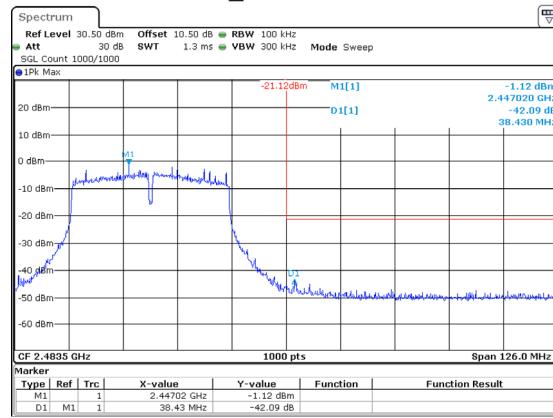
802.11n20\_2462MHz 42.56dB



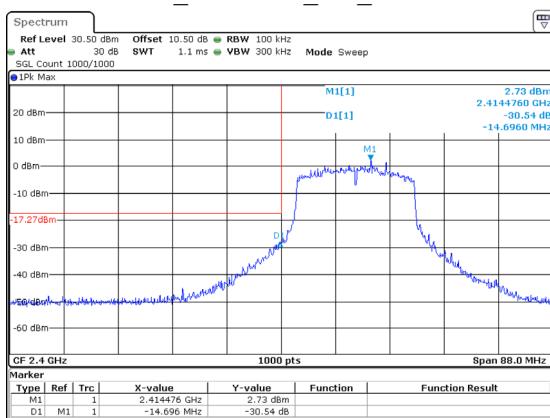
## 802.11n40\_2422MHz 31.54dB



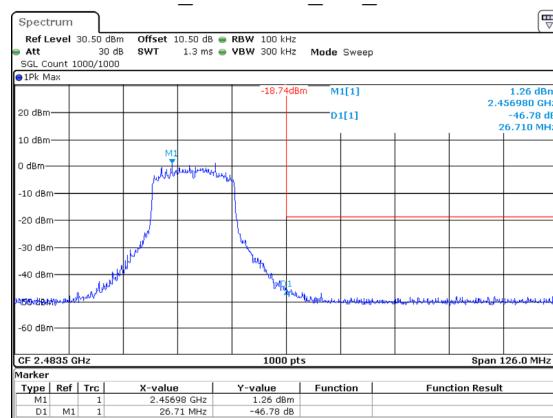
## 802.11n40\_2452MHz 42.09dB



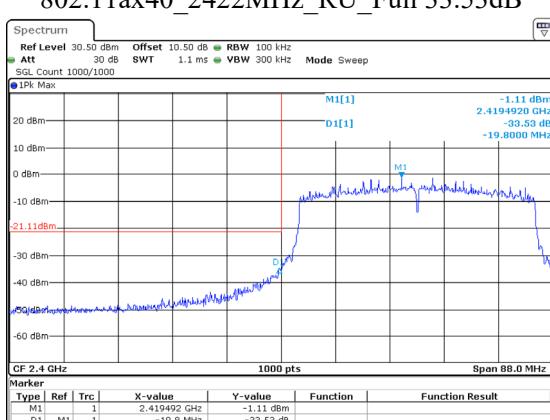
## 802.11ax20\_2412MHz\_RU\_Full 30.54dB



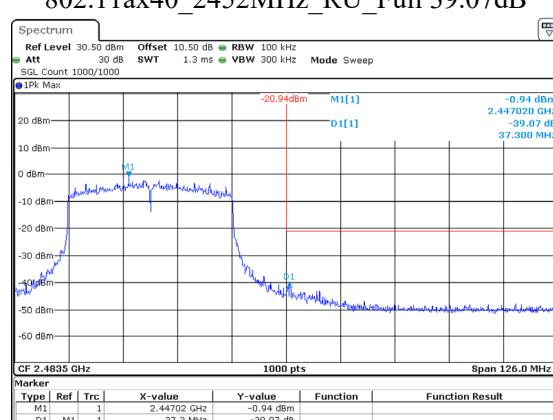
## 802.11ax20\_2462MHz\_RU\_Full 46.78dB



## 802.11ax40\_2422MHz\_RU\_Full 33.53dB



## 802.11ax40\_2452MHz\_RU\_Full 39.07dB



**Duty Cycle****Test Information:**

<b>Sample No.:</b>	2SLQ-7	<b>Test Date:</b>	2024/11/14~2024/11/15
<b>Test Site:</b>	RF	<b>Test Mode:</b>	Transmitting
<b>Tester:</b>	Brian Li	<b>Test Result:</b>	N/A

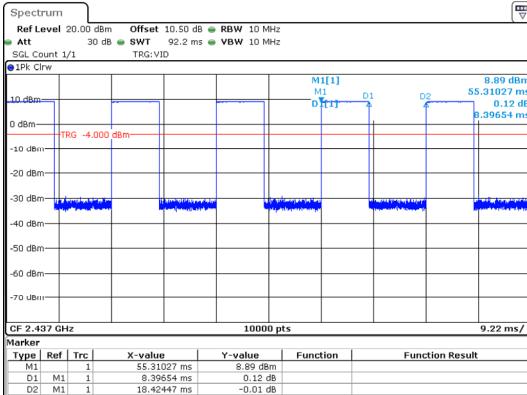
**Environmental Conditions:**

<b>Temperature:</b> (°C):	25-26	<b>Relative Humidity:</b> (%)	45-47	<b>ATM Pressure:</b> (kPa)	101
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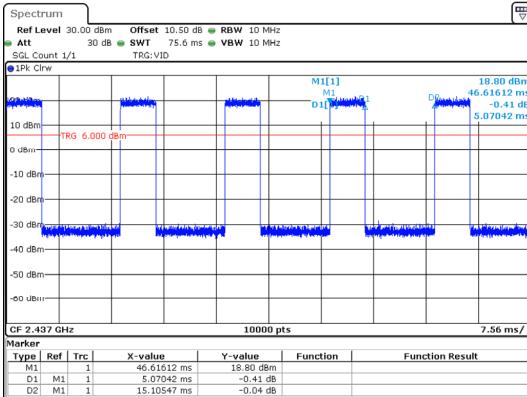
**Test Data:**

<b>Mode</b>	<b>Test Frequency (MHz)</b>	<b>Ton (ms)</b>	<b>Ton+Toff (ms)</b>	<b>Duty Cycle (%)</b>	<b>Duty Cycle Factor(dB)</b>	<b>1/Ton (Hz)</b>	<b>VBW Setting (kHz)</b>
802.11b	2437	8.397	18.424	45.58	3.41	119	0.300
802.11g	2437	1.394	11.434	12.19	9.14	717	1.000
802.11n20	2437	5.070	15.105	33.57	4.74	197	0.300
802.11n40	2437	4.877	14.913	32.70	4.85	205	0.300
802.11ax20	2437	3.873	13.891	27.88	5.55	258	0.300
802.11ax40	2437	3.869	13.886	27.86	5.55	258	0.300

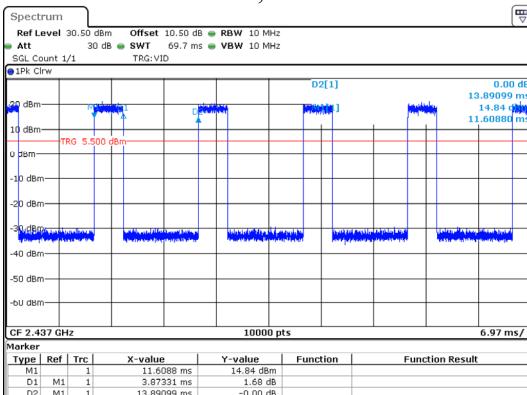
$$\text{Duty Cycle} = \frac{\text{Ton}}{(\text{Ton}+\text{Toff})} * 100\%$$

802.11b\_2437MHz  
8.397ms,18.424ms

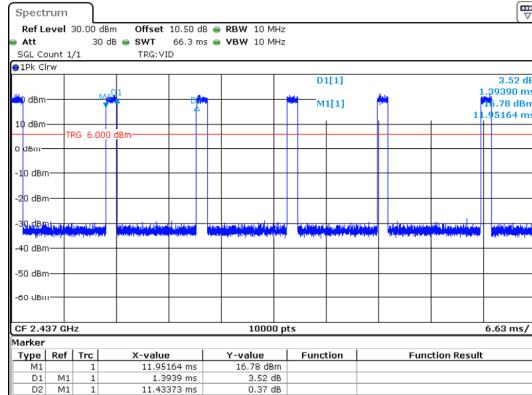
ProjectNo.:2401Y98612E-RF Tester:Brian Li  
Date: 14.NOV.2024 23:30:16

802.11n20\_2437MHz  
5.070ms,15.105ms

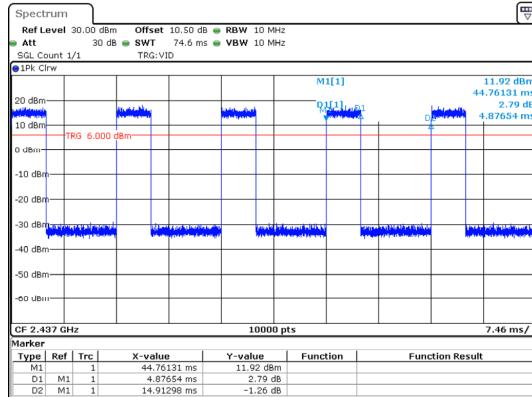
ProjectNo.:2401Y98612E-RF Tester:Brian Li  
Date: 14.NOV.2024 23:32:53

802.11ax20\_2437MHz\_RU\_Full  
3.873ms,13.891ms

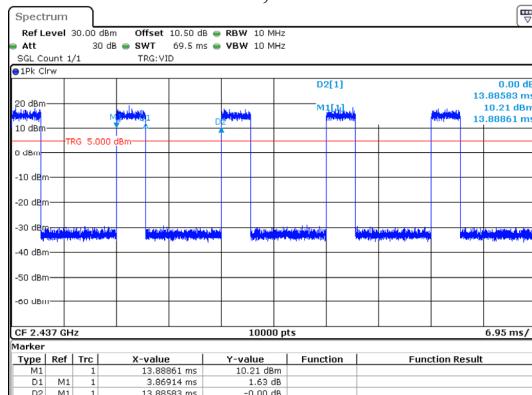
ProjectNo.:2401Y98612E-RF Tester:Brian Li  
Date: 15.NOV.2024 22:51:16

802.11g\_2437MHz  
1.394ms,11.434ms

ProjectNo.:2401Y98612E-RF Tester:Brian Li  
Date: 14.NOV.2024 23:32:11

802.11n40\_2437MHz  
4.877ms,14.913ms

ProjectNo.:2401Y98612E-RF Tester:Brian Li  
Date: 14.NOV.2024 23:33:56

802.11ax40\_2437MHz\_RU\_Full  
3.869ms,13.886ms

ProjectNo.:2401Y98612E-RF Tester:Brian Li  
Date: 15.NOV.2024 22:52:43

## RF EXPOSURE EVALUATION

### MAXIMUM PERMISSIBLE EXPOSURE (MPE)

#### Applicable Standard

According to subpart 15.247 (i) and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 Interim General RF Exposure Guidance

#### MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(3)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R <sup>2</sup> .
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .
30-300	3.83 R <sup>2</sup> .
300-1,500	0.0128 R <sup>2</sup> f.
1,500-100,000	19.2R <sup>2</sup> .

R is the minimum separation distance in meters

f = frequency in MHz

#### Result

Mode	Frequency (MHz)	Tune up conducted power <sup>#</sup> (dBm)	Antenna Gain#		ERP		Evaluation Distance (m)	ERP Limit (W)
			(dBi)	(dBd)	(dBm)	(W)		
Wi-Fi	2412-2462	22	3.9	1.75	23.75	0.237	0.2	0.768

Note: The tune up conducted power and antenna gain was declared by the applicant.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

**Result: Compliant**

## **EUT PHOTOGRAPHS**

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Please refer to the attachment 2401Y98612E-RF External photo and 2401Y98612E-RF Internal photo.

## **TEST SETUP PHOTOGRAPHS**

Please refer to the attachment 2401Y98612E-RF-00A Test Setup photo.

\*\*\*\*\* END OF REPORT \*\*\*\*\*