TEST REPORT

Applicant Name:	Grandstream Networks, Inc.
Address:	126 Brookline Ave., 3rd Floor Boston, MA 02215, USA
Report Number:	2401Y48404E-RF-00B
FCC ID:	YZZWP836

Test Standard (s)

FCC PART 15.407

Sample Description

Product Type:	Cordless Wi-Fi IP Phone
Model No.:	WP836
Multiple Model(s) No.:	N/A
Trade Mark:	GRANDSTREAM
Date Received:	2024/10/09
Issue Date:	2024/12/10

Test Result:	Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ekko. Wu

Ekko Wu
RF Engineer

Approved By:

Nancy Wang

Nancy Wang
RF Supervisor

Note: The information marked# 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	2401Y48404E-RF-00B	Original Report	2024/12/10

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Cordless Wi-Fi IP Phone
Tested Model	WP836
Multiple Model(s)	N/A
Frequency Range	5850-5895 MHz
Mode	802.11a /n20/n40/ac20/ac40/ac80/ax20/ax40/ax80
Maximum Conducted Average Output Power	5850-5895 MHz: 19.13dBm
Maximum EIRP	5850-5895 MHz: 26.02dBm
Modulation Technique	OFDM, OFDMA
Antenna Specification#	ANT0: 4.16dBi; ANT1: 3.6dBi (provided by the applicant)
Voltage Range	DC 5V from Adapter/Charger or DC 3.7V from Battery
Sample serial number	2SGE-1 for Conducted and Radiated Emissions Test 2SGE-14 for RF Conducted Test (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	Adapter 1 Model: GQ12-050200-AU Input: 100-240V~50/60Hz 0.4A Max Output: 5.0V, 2.0A Adapter 2 Model: GLH0502000 Input: 100-240V~50/60Hz 0.5A Output: 5.0V, 2.0A Adapter 3 Model: DCT12W050200US-A2 Input: 100-240V~50/60Hz 0.3A max Output: 5.0V, 2.0A
Note: The EUT charged by Type-C Port or Charger, the worst case charger power supply was selected to test for AC line conducted and radiated emission below 1GHz according to BT report test result.	

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 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 KDB789033 D02 General U-NII Test Procedures New Rules v02r01.

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 Frequency		56.6Hz(k=2, 95% level of confidence)
RF output power, conducted		0.86dB(k=2, 95% level of confidence)
Unwanted Emission, conducted		1.60dB(k=2, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz-150kHz	3.63dB(k=2, 95% level of confidence)
	150kHz-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℃
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

The system was configured for testing in an engineering mode, which was provided by manufacturer.

For 5850-5895MHz band, 5725-5850MHz & 5850-5895MHz bands span channels: 6 channels are provided to testing:

Channel	Frequency(MHz)	Channel	Frequency(MHz)
167	5835	173	5865
169	5845	175	5875
171	5855	177	5885

For 802.11a/ac20/ax20 mode: channel 169, 173, 177 were tested;
For 802.11ac40/ax40 mode: channel 167, 175 were tested;
For 802.11ac80/ax80 mode, channel 171 was tested

EUT Exercise Software

"SecureCRTPortable.exe"# software was used and power level as below. The software and power level was provided by the applicant. The device was tested with the worst case was performed as below:

5850-5895MHz Band, 5725-5850MHz & 5850-5895MHz Bands span channels:					
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting#	
				ANT0	ANT1
802.11a	Lowest	5845	6Mbps	default	default
	Middle	5865	6Mbps	default	default
	Highest	5885	6Mbps	default	default
802.11ac-VHT20	Lowest	5845	MCS0	default	default
	Middle	5865	MCS0	default	default
	Highest	5885	MCS0	default	default
802.11ac-VHT40	Lowest	5835	MCS0	default	default
	Highest	5875	MCS0	default	default
802.11ac-VHT80	Middle	5855	MCS0	21	21
802.11ax-HE20	Lowest	5845	MCS0	default	default
	Middle	5865	MCS0	default	default
	Highest	5885	MCS0	default	default
802.11ax-HE40	Lowest	5835	MCS0	default	default
	Highest	5875	MCS0	default	default
802.11ax-HE80	Middle	5855	MCS0	default	default

Note:
1. The worst-case data rates are determined to be as follows for each mode based upon inverstigation by measuring the average power, power and PSD across all data rates bandwidths, and modulations.
2. The device supports SISO in all modes, and MIMO 2T2R in 802.11n/ac/ax modes, per pretest, 2T2R mode was the worst mode and reported for 802.11n/ac/ax modes.
2. The n20/n40 mode was reduced test as identical parameter with ac20/ac40 mode.
3. For 802.11ax modes, the device not support partial RU mode.

Duty cycle

Please refer to the Appendix.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

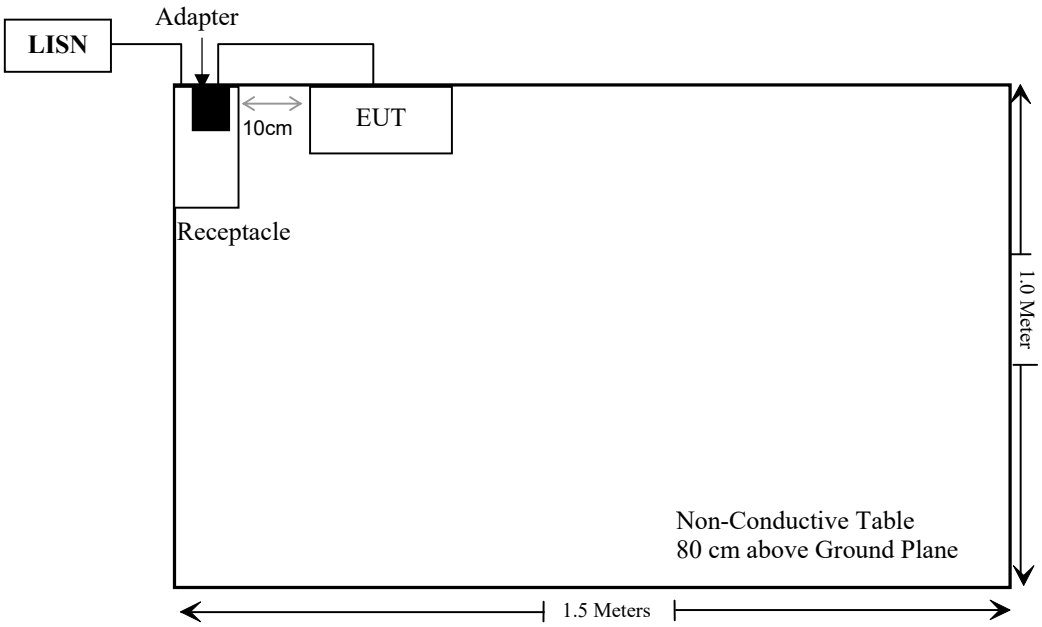
Manufacturer	Description	Model	Serial Number
Unknown	Receptacle	Unknown	Unknown

External I/O Cable

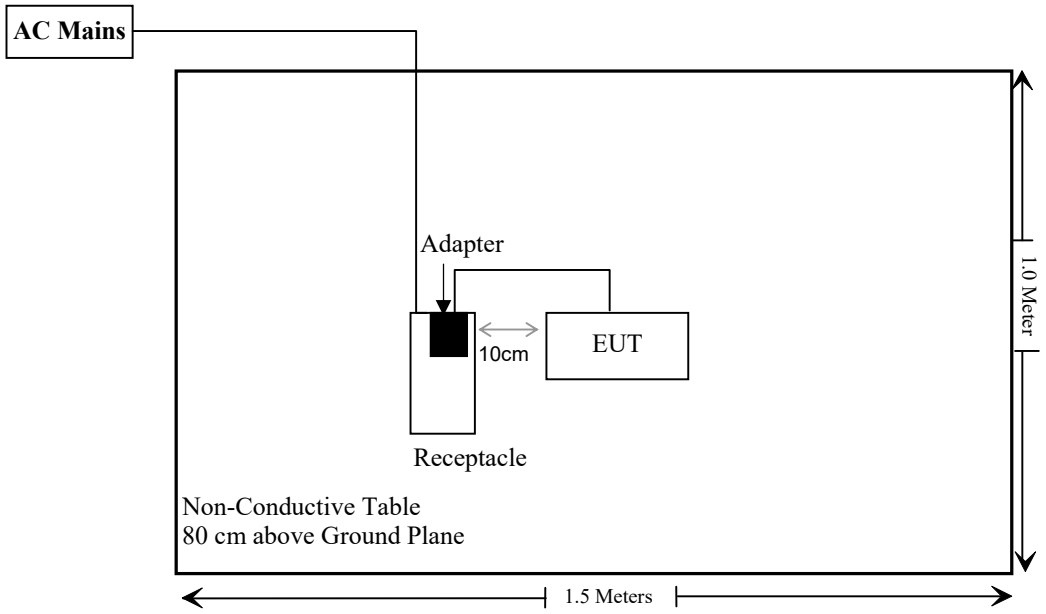
Cable Description	Length (m)	From Port	To
Un-shielding Un-Detachable DC Cable	1.5	EUT	Adapter
Unshielded Un-detachable AC Cable	1.5	Receptacle	LISN/AC Mains

Block Diagram of Test Setup

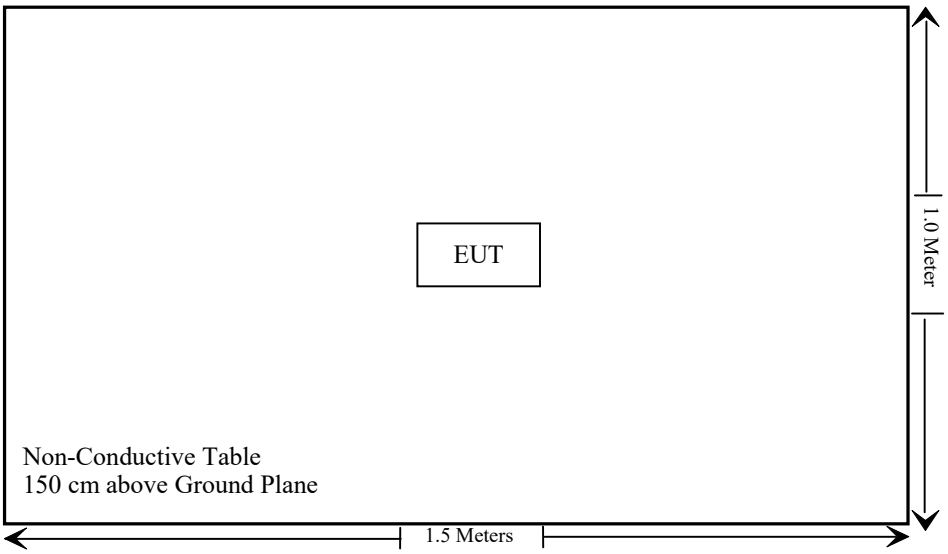
For Conducted Emissions:



For Radiated Emissions below 1GHz:



For Radiated Emissions above 1GHz:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.407(b)(9)& §15.207(a)	Conducted Emissions	Compliant
§15.205& §15.209 &§15.407(b)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (e)	26 dB Emission Bandwidth & 6dB Bandwidth	Compliant
§15.407(a)	Conducted Transmitter Output Power	Compliant
§15.407 (a)	Power Spectral Density	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
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
Radiated Emissions Test					
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(1201)	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
Unknown	RF Cable	XH750A-N	J-10M	2024/06/18	2025/06/17
JD	Multiplex Switch Test Control Set	DT7220FSU	DQ77926	2024/06/18	2025/06/17
A.H.System	Pre-amplifier	PAM-1840VH	190	2024/06/18	2025/06/17
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	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
RF Conducted Test					
Tonscend	RF control Unit	JS0806-2	19D8060154	2024/08/06	2025/08/05
ANRITSU	Microwave peak power sensor	MA24418A	12622	2024/05/21	2025/05/20
Rohde & Schwarz	Spectrum Analyzer	FSV40	101473	2024/01/16	2025/01/15
Narda	20dB Attenuator	99899	0107	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).

FCC §15.203 - 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 two internal antennas which was permanently attached, and the maximum antenna gain# is ANT0 for 4.16dBi, ANT1 for 3.6dBi, fulfill the requirement of this section. Please refer to the EUT photos.

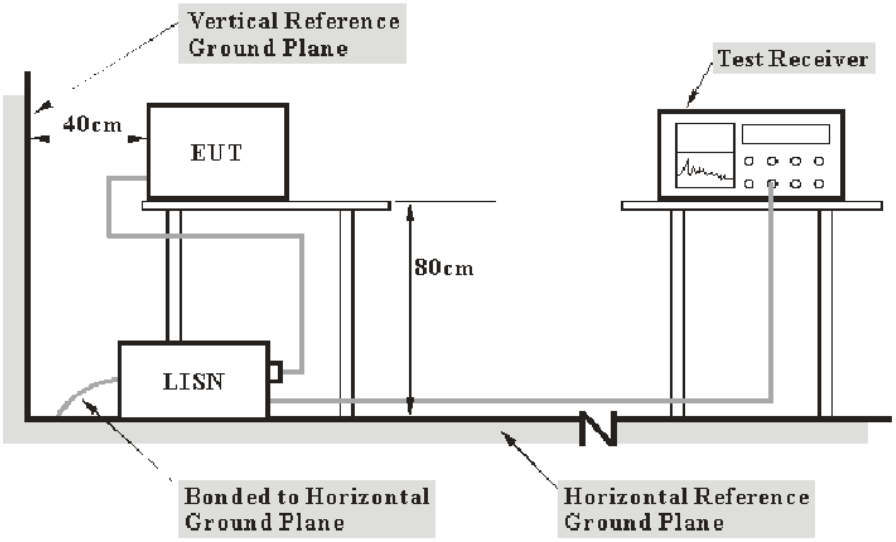
Result: Compliant

FCC §15.407 (b) (6) §15.207 (a) - CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (6)

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

During the conducted emission test, the adapter was connected to the LISN.

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

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

Corrected Factor & Margin Calculation

The Corrected Factor (Corr.) is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Correction Factor (Corr.) = LISN VDF + Cable Loss + Transient Limiter Attenuation

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

Margin = Limit – Corrected Amplitude

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

Test Data

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	51 %
ATM Pressure:	101.1 kPa

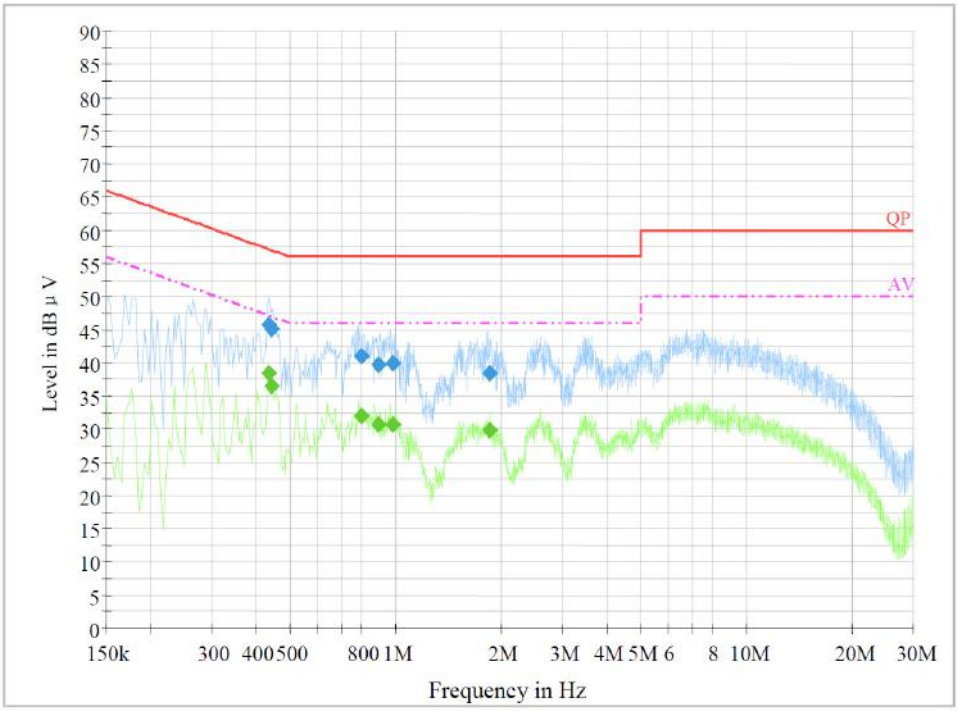
The testing was performed by Macy Shi on 2024-12-10.

EUT operation mode: Transmitting (Maximum output power mode, 802.11ac80, 5855MHz)

Note: Worst Case is Powered by Type-C with Adapter 1

AC 120V/60 Hz, Line

Project No.:	2401Y48404E-RF	**Environmental Conditions:**	23.5°C 51%RH 101.1kPa
EUT Number:	2SGE-1	**Tested By:**	Macy Shi
Test Mode:	802.11ac80, 5855MHz	**Date:**	2024.12.10



Final Result 1

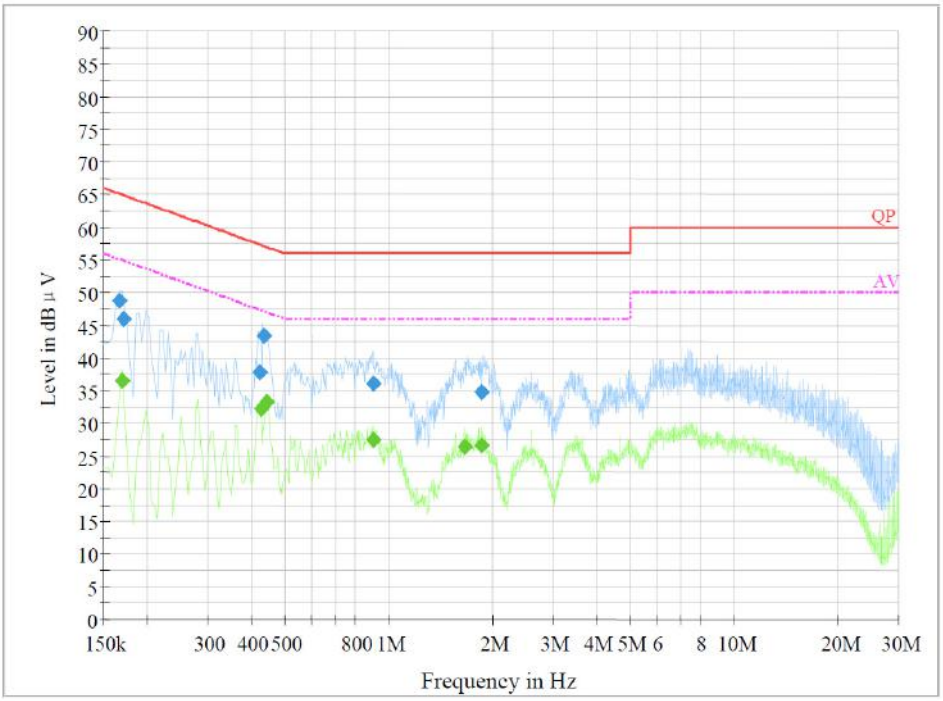
Frequency (MHz)	QuasiPeak (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.435550	45.8	9.000	L1	20.4	11.3	57.1
0.444570	45.1	9.000	L1	20.4	11.9	57.0
0.798150	41.0	9.000	L1	20.5	15.0	56.0
0.900410	39.8	9.000	L1	20.3	16.2	56.0
0.983450	40.0	9.000	L1	20.4	16.0	56.0
1.861510	38.5	9.000	L1	20.4	17.5	56.0

Final Result 2

Frequency (MHz)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.435550	38.5	9.000	L1	20.4	8.6	47.1
0.444570	36.5	9.000	L1	20.4	10.5	47.0
0.798150	32.0	9.000	L1	20.5	14.0	46.0
0.900410	30.8	9.000	L1	20.3	15.2	46.0
0.983450	30.7	9.000	L1	20.4	15.3	46.0
1.861510	29.9	9.000	L1	20.4	16.1	46.0

AC 120V/60 Hz, Neutral

Project No.:	2401Y48404E-RF	**Environmental Conditions:**	23.5°C 51%RH 101.1kPa
EUT Number:	2SGE-1	**Tested By:**	Macy Shi
Test Mode:	802.11ac80, 5855MHz	**Date:**	2024.12.10



Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.165500	48.7	9.000	N	20.4	16.5	65.2
0.170501	45.9	9.000	N	20.4	19	64.9
0.423670	37.8	9.000	N	20.4	19.6	57.4
0.435490	43.4	9.000	N	20.4	13.7	57.1
0.908470	36.1	9.000	N	20.3	19.9	56.0
1.861890	34.8	9.000	N	20.6	21.2	56.0

Final Result 2

Frequency (MHz)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.170000	36.6	9.000	N	20.4	18.4	55.0
0.426000	32.3	9.000	N	20.4	15.0	47.3
0.446000	33.3	9.000	N	20.4	13.6	46.9
0.902000	27.5	9.000	N	20.3	18.5	46.0
1.666000	26.4	9.000	N	20.5	19.6	46.0
1.854000	26.6	9.000	N	20.6	19.4	46.0

§15.205 & §15.209 & §15.407(B) - UNDESIRABLE EMISSION

Applicable Standard

FCC §15.407 (b); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(5) For transmitters operating solely in the 5.850-5.895 GHz band or operating on a channel that spans across 5.725-5.895 GHz:

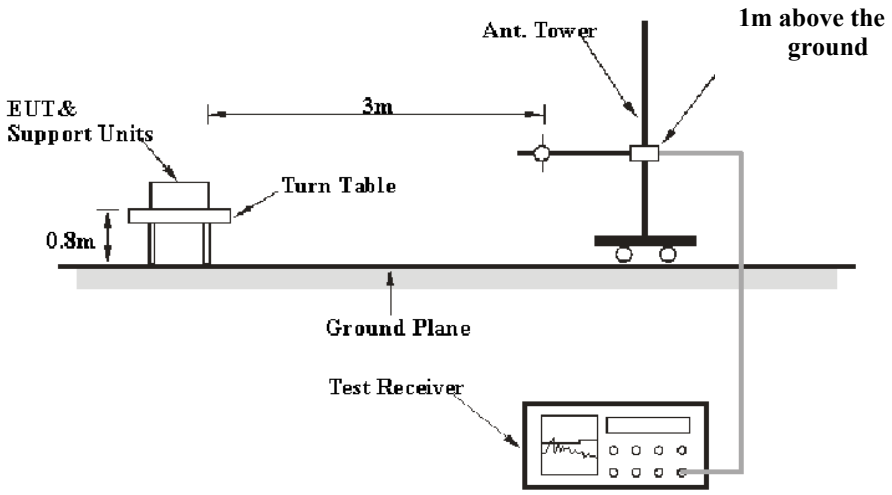
(ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of −5 dBm/MHz and shall decrease linearly to an e.i.r.p. of −27 dBm/MHz at or above 5.925 GHz.

(iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of −27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.

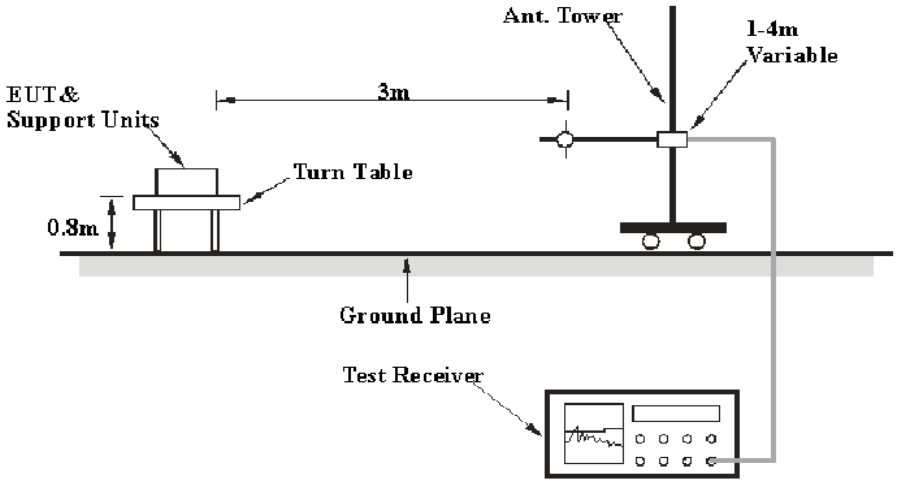
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

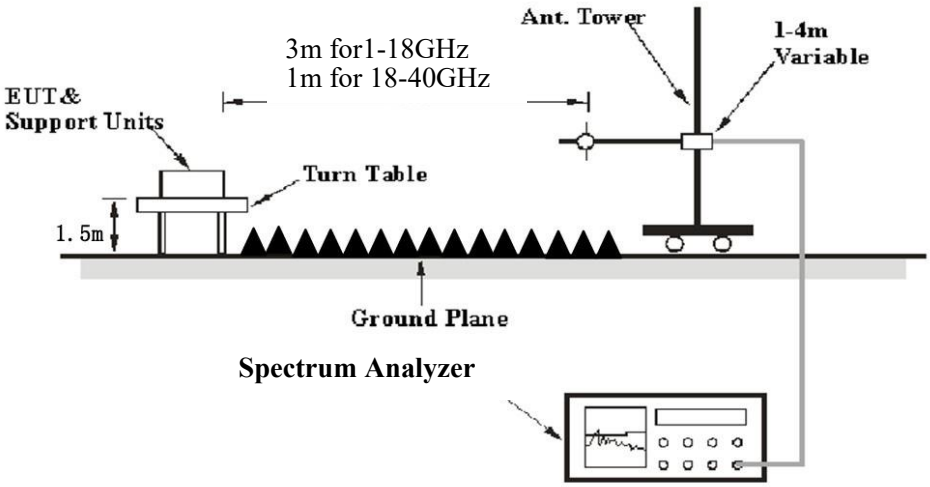
9 kHz-30MHz:



30MHz-1GHz:



Above 1 GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 40 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

1-40GHz:

Pre-scan

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
AV	>98%	1MHz	5 kHz
	<98%	1MHz	≥1/Ton, not less than 5 kHz

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

Radiated Spurious Emission

During the radiated emission test, the adapter was connected to the AC floor outlet.

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

According to ANSI C63.10-2013,9.4: For field strength measurements made at other than the distance at which the applicable limit is specified, extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance). In some cases, a different distance correction factor may be required;

$$E_{\mathrm{SpecLimit}} = E_{\mathrm{Meas}} + 20\log\left(\frac{d_{\mathrm{Meas}}}{d_{\mathrm{SpecLimit}}}\right)$$

where

$E_{\mathrm{SpecLimit}}$	is the field strength of the emission at the distance specified by the limit, in dBμV/m
E_{Meas}	is the field strength of the emission at the measurement distance, in dBμV/m
d_{Meas}	is the measurement distance, in m
$d_{\mathrm{SpecLimit}}$	is the distance specified by the limit, in m

So the extrapolation factor of 1m is 20*log(1/3)= -9.5 dB, for 18-40GHz range, the limit of 1m distance was added by 9.5dB from limit of 3m to compared with the result measurement at 1m distance.

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:

Factor = Antenna Factor + Cable Loss - 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:

Over Limit = Level – Limit; Margin = Limit–Corrected Amplitude
Level / Corrected Amplitude = Read Level + Factor

Test Data

Environmental Conditions

Temperature:	22~25 °C
Relative Humidity:	50~54 %
ATM Pressure:	101 kPa

The testing was performed by Anson Su on 2024-10-29 for below 1GHz and Zenos Qiao on 2024-10-26 for above 1GHz.

EUT operation mode: Transmitting

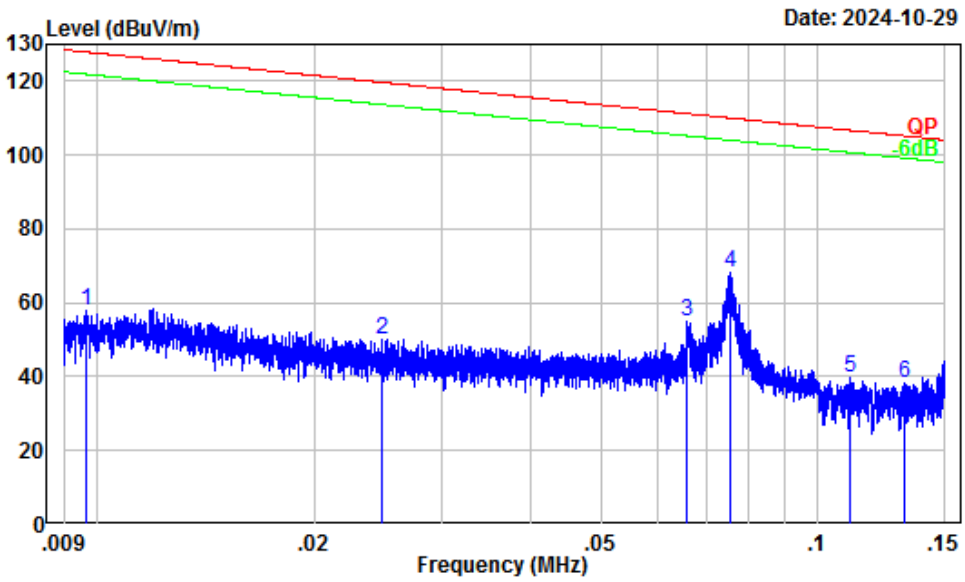
Note: Pre-scan in the X, Y and Z axes of orientation, the worst case Y-axis of orientation was recorded.

For 9 kHz-1GHz, Worst Case is powered by Type-C with Adapter 2

9 kHz-30MHz: *(Maximum output power mode, 802.11ac80, 5855MHz)*

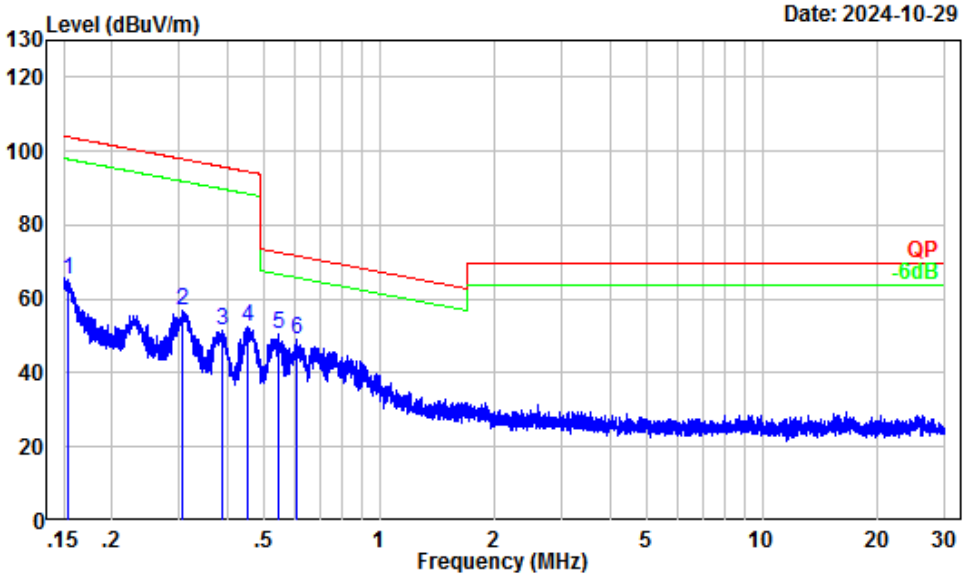
Note: When the test result of peak was less than the limit of QP/Average more than 6dB, just peak value were recorded.

Parallel (worst case)




```
Site           : Chamber A
Condition      : 3m
Project Number: 2401Y48404E-RF
Test Mode      : 5G WIFi Transmitting
Tester         : Anson Su
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.01	32.37	25.75	58.12	127.92	-69.80	Peak
2	0.02	29.48	20.79	50.27	119.71	-69.44	Peak
3	0.07	24.81	30.16	54.97	111.22	-56.25	Peak
4	0.08	23.84	44.29	68.13	110.04	-41.91	Peak
5	0.11	21.36	18.55	39.91	106.70	-66.79	Peak
6	0.13	20.12	18.19	38.31	105.20	-66.89	Peak

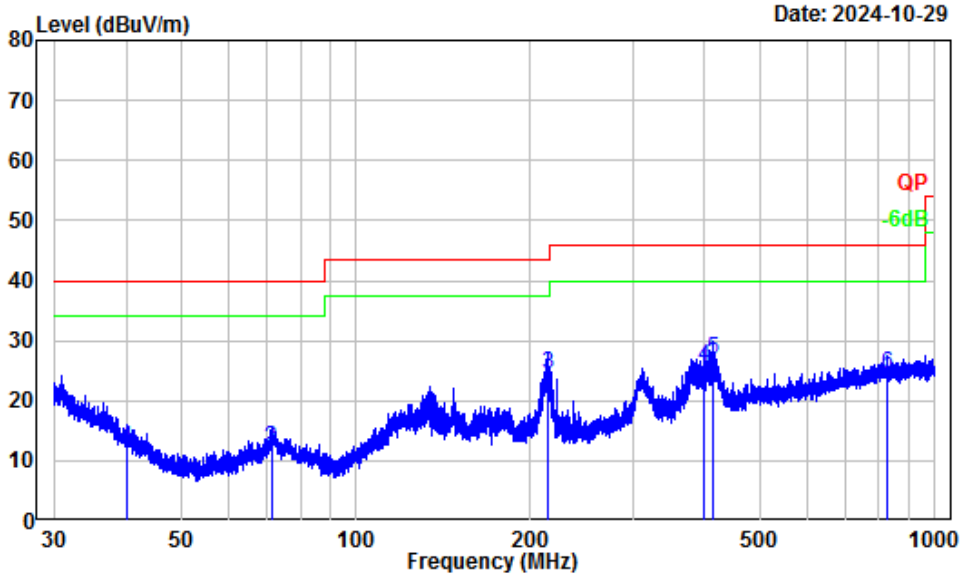


Site : Chamber A
Condition : 3m
Project Number: 2401Y48404E-RF
Test Mode : 5G WIFi Transmitting
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.15	18.81	46.47	65.28	103.85	-38.57	Peak
2	0.31	10.10	46.64	56.74	97.90	-41.16	Peak
3	0.39	8.52	42.97	51.49	95.82	-44.33	Peak
4	0.45	7.31	44.97	52.28	94.50	-42.22	Peak
5	0.55	5.81	44.88	50.69	72.82	-22.13	Peak
6	0.61	5.03	43.83	48.86	71.85	-22.99	Peak

30 MHz–1 GHz: *(Maximum output power mode, 802.11ac80, 5855MHz)*

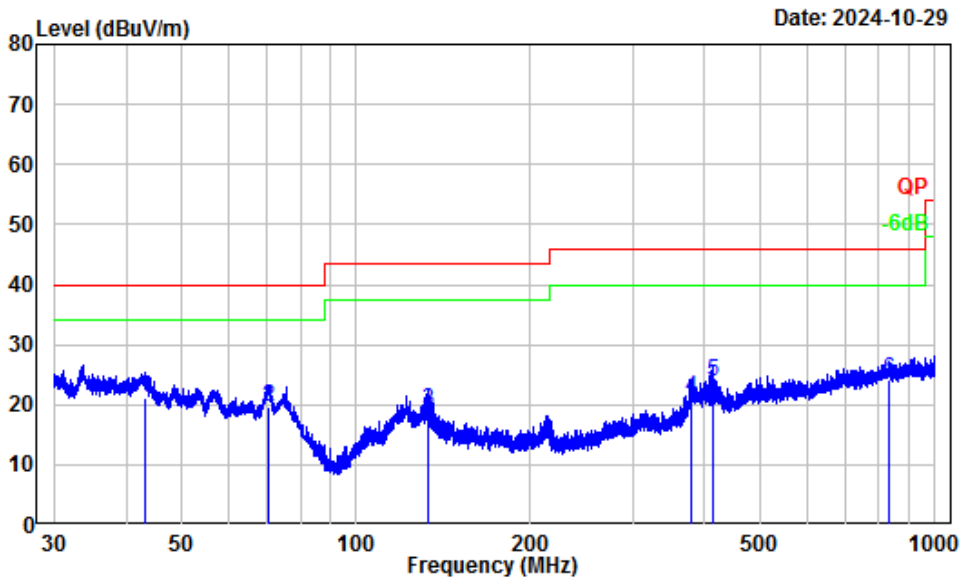
Horizontal



Site : Chamber A
Condition : 3m Horizontal
Project Number: 2401Y48404E-RF
Test Mode : 5G WIFi Transmitting
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.05	-12.40	24.35	11.95	40.00	-28.05	QP
2	71.27	-17.86	30.03	12.17	40.00	-27.83	QP
3	214.70	-14.20	38.70	24.50	43.50	-19.00	QP
4	398.51	-8.48	34.08	25.60	46.00	-20.40	QP
5	412.37	-8.10	35.03	26.93	46.00	-19.07	QP
6	829.67	-1.94	26.35	24.41	46.00	-21.59	QP

Vertical



Site : Chamber A
Condition : 3m Vertical
Project Number: 2401Y48404E-RF
Test Mode : 5G WIFi Transmitting
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	43.14	-14.67	35.95	21.28	40.00	-18.72	QP
2	70.34	-17.87	37.51	19.64	40.00	-20.36	QP
3	132.80	-11.38	30.53	19.15	43.50	-24.35	QP
4	380.41	-9.14	30.28	21.14	46.00	-24.86	QP
5	412.37	-8.10	31.90	23.80	46.00	-22.20	QP
6	835.51	-1.83	25.85	24.02	46.00	-21.98	QP

Above 1GHz:

5850-5895MHz:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/AV					
802.11a (ANT 0)							
5845MHz							
11690.00	48.57	PK	H	13.76	62.33	74	-11.67
11690.00	36.15	AV	H	13.76	49.91	54	-4.09
11690.00	49.48	PK	V	13.76	63.24	74	-10.76
11690.00	36.71	AV	V	13.76	50.47	54	-3.53
5865MHz							
11730.00	49.08	PK	H	13.74	62.82	74	-11.18
11730.00	36.43	AV	H	13.74	50.17	54	-3.83
11730.00	49.97	PK	V	13.74	63.71	74	-10.29
11730.00	37.02	AV	V	13.74	50.76	54	-3.24
5885MHz							
11770.00	49.64	PK	H	13.73	63.37	74	-10.63
11770.00	36.73	AV	H	13.73	50.46	54	-3.54
11770.00	50.56	PK	V	13.73	64.29	74	-9.71
11770.00	37.30	AV	V	13.73	51.03	54	-2.97
802.11a (ANT 1)							
5845MHz							
11690.00	46.58	PK	H	13.76	60.34	74	-13.66
11690.00	31.60	AV	H	13.76	45.36	54	-8.64
11690.00	46.91	PK	V	13.76	60.67	74	-13.33
11690.00	31.83	AV	V	13.76	45.59	54	-8.41
5865MHz							
11730.00	46.15	PK	H	13.74	59.89	74	-14.11
11730.00	31.46	AV	H	13.74	45.20	54	-8.80
11730.00	46.39	PK	V	13.74	60.13	74	-13.87
11730.00	31.62	AV	V	13.74	45.36	54	-8.64
5885MHz							
11770.00	45.72	PK	H	13.73	59.45	74	-14.55
11770.00	31.29	AV	H	13.73	45.02	54	-8.98
11770.00	46.07	PK	V	13.73	59.80	74	-14.20
11770.00	31.44	AV	V	13.73	45.17	54	-8.83

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	PK/AV					
802.11AC20							
5845MHz							
11690.00	47.97	PK	H	13.76	61.73	74	-12.27
11690.00	35.73	AV	H	13.76	49.49	54	-4.51
11690.00	48.88	PK	V	13.76	62.64	74	-11.36
11690.00	36.26	AV	V	13.76	50.02	54	-3.98
5865MHz							
11730.00	48.54	PK	H	13.74	62.28	74	-11.72
11730.00	36.15	AV	H	13.74	49.89	54	-4.11
11730.00	49.47	PK	V	13.74	63.21	74	-10.79
11730.00	36.69	AV	V	13.74	50.43	54	-3.57
5885MHz							
11770.00	49.20	PK	H	13.73	62.93	74	-11.07
11770.00	36.52	AV	H	13.73	50.25	54	-3.75
11770.00	50.13	PK	V	13.73	63.86	74	-10.14
11770.00	37.08	AV	V	13.73	50.81	54	-3.19
802.11AC40							
5835MHz							
11670.00	46.30	PK	H	13.79	60.09	74	-13.91
11670.00	32.92	AV	H	13.79	46.71	54	-7.29
11670.00	46.87	PK	V	13.79	60.66	74	-13.34
11670.00	33.26	AV	V	13.79	47.05	54	-6.95
5875MHz							
11750.00	45.34	PK	H	13.73	59.07	74	-14.93
11750.00	32.19	AV	H	13.73	45.92	54	-8.08
11750.00	45.98	PK	V	13.73	59.71	74	-14.29
11750.00	32.55	AV	V	13.73	46.28	54	-7.72
802.11AC80							
5855MHz							
11710.00	45.76	PK	H	13.73	59.49	74	-14.51
11710.00	31.82	AV	H	13.73	45.55	54	-8.45
11710.00	46.01	PK	V	13.73	59.74	74	-14.26
11710.00	32.14	AV	V	13.73	45.87	54	-8.13

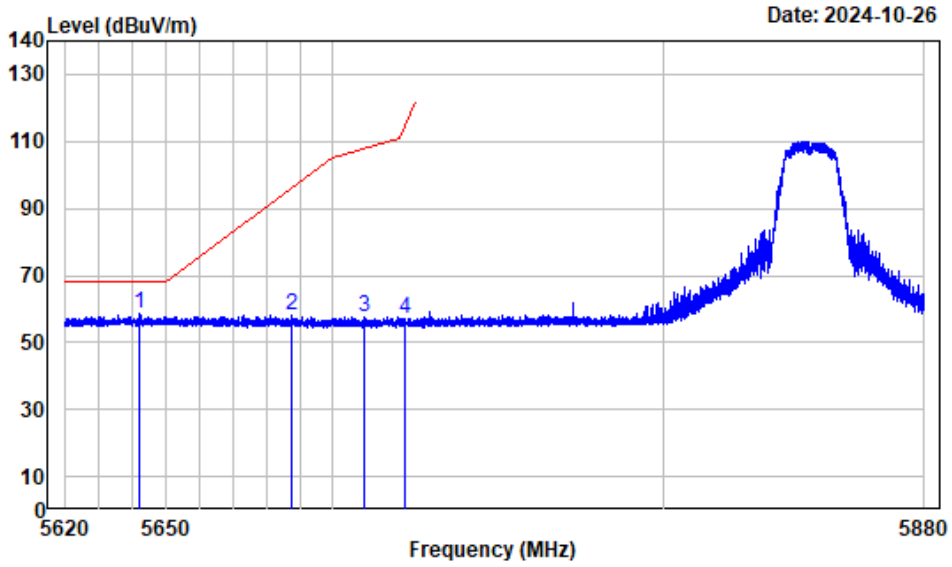
Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	PK/AV					
802.11AX20							
5845MHz							
11690.00	48.07	PK	H	13.76	61.83	74	-12.17
11690.00	35.76	AV	H	13.76	49.52	54	-4.48
11690.00	48.90	PK	V	13.76	62.66	74	-11.34
11690.00	36.25	AV	V	13.76	50.01	54	-3.99
5865MHz							
11730.00	48.42	PK	H	13.74	62.16	74	-11.84
11730.00	35.93	AV	H	13.74	49.67	54	-4.33
11730.00	49.34	PK	V	13.74	63.08	74	-10.92
11730.00	36.45	AV	V	13.74	50.19	54	-3.81
5885MHz							
11770.00	48.81	PK	H	13.73	62.54	74	-11.46
11770.00	36.14	AV	H	13.73	49.87	54	-4.13
11770.00	49.72	PK	V	13.73	63.45	74	-10.55
11770.00	36.68	AV	V	13.73	50.41	54	-3.59
802.11AX40							
5835MHz							
11670.00	46.24	PK	H	13.79	60.03	74	-13.97
11670.00	32.99	AV	H	13.79	46.78	54	-7.22
11670.00	46.87	PK	V	13.79	60.66	74	-13.34
11670.00	33.35	AV	V	13.79	47.14	54	-6.86
5875MHz							
11750.00	45.89	PK	H	13.73	59.62	74	-14.38
11750.00	32.28	AV	H	13.73	46.01	54	-7.99
11750.00	46.45	PK	V	13.73	60.18	74	-13.82
11750.00	32.61	AV	V	13.73	46.34	54	-7.66
802.11AX80							
5855MHz							
11710.00	45.98	PK	H	13.73	59.71	74	-14.29
11710.00	31.75	AV	H	13.73	45.48	54	-8.52
11710.00	46.30	PK	V	13.73	60.03	74	-13.97
11710.00	32.03	AV	V	13.73	45.76	54	-8.24

Note:
Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Factor + Reading
Margin = Corrected. Amplitude - Limit
The other spurious emission which is in the noise floor level was not recorded.

Test plots for Band Edge Measurements (Radiated)

5850-895MHz:

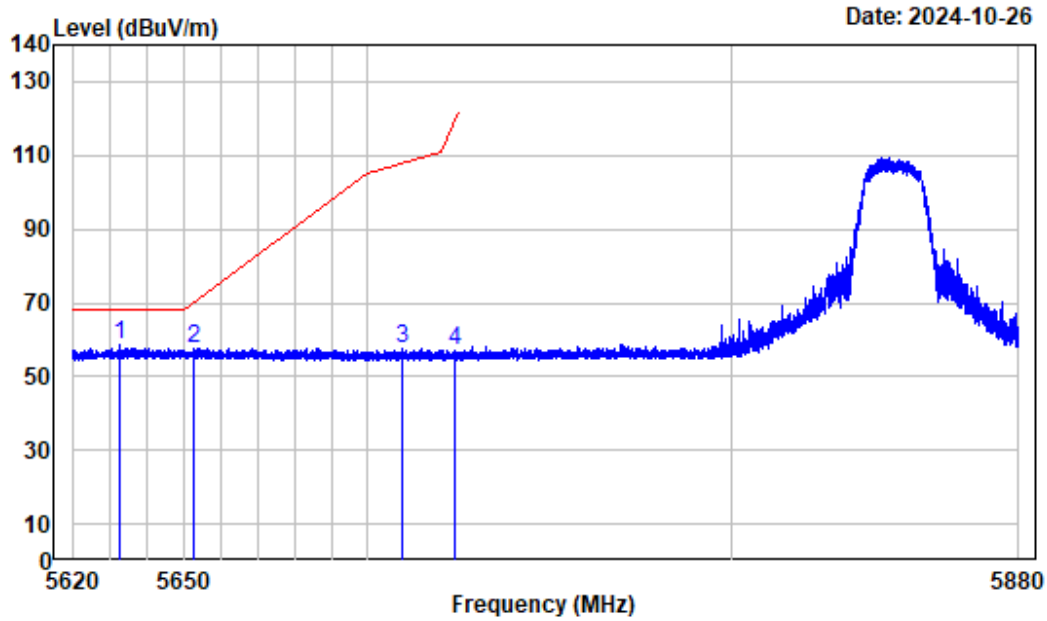
802.11a_ANT 0			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5642.428	3.21	55.64	58.85	68.20	-9.35	Peak
2	5687.381	3.40	54.91	58.31	95.89	-37.58	Peak
3	5709.549	3.46	54.37	57.83	107.88	-50.05	Peak
4	5721.803	3.48	53.72	57.20	114.91	-57.71	Peak

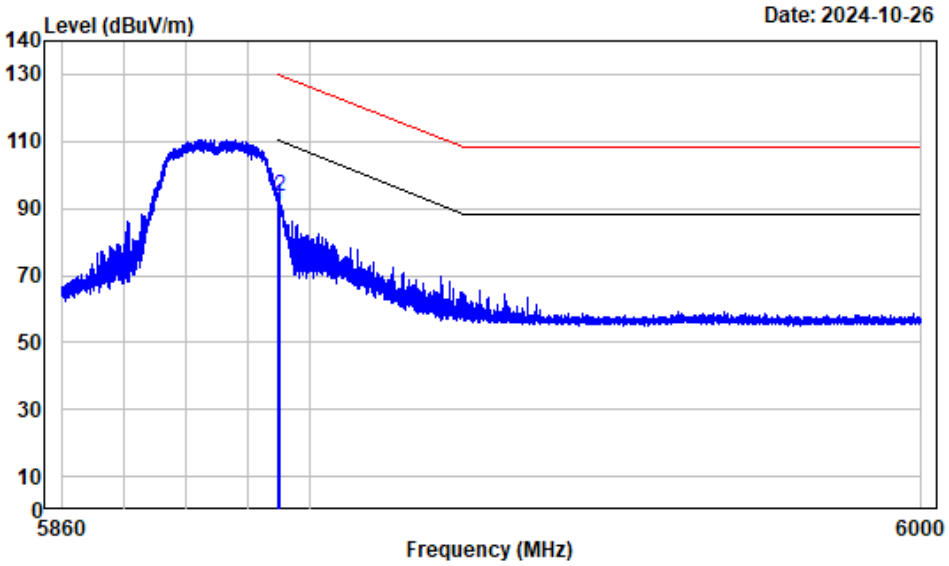
802.11a_ANT 0			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5632.644	3.13	55.26	58.39	68.20	-9.81	Peak
2	5652.927	3.28	54.54	57.82	70.37	-12.55	Peak
3	5709.191	3.46	54.35	57.81	107.78	-49.97	Peak
4	5723.493	3.48	53.76	57.24	118.77	-61.53	Peak

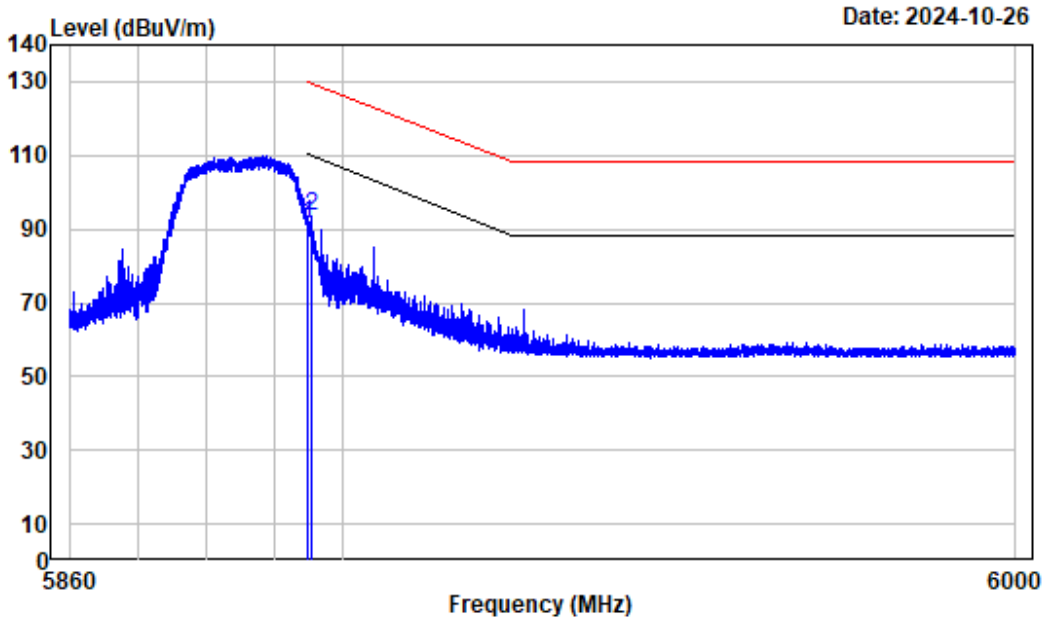
802.11a_ANT 0			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	86.97	90.81	130.20	-39.39	Peak
2	5895.109	3.84	89.85	93.69	130.12	-36.43	Peak

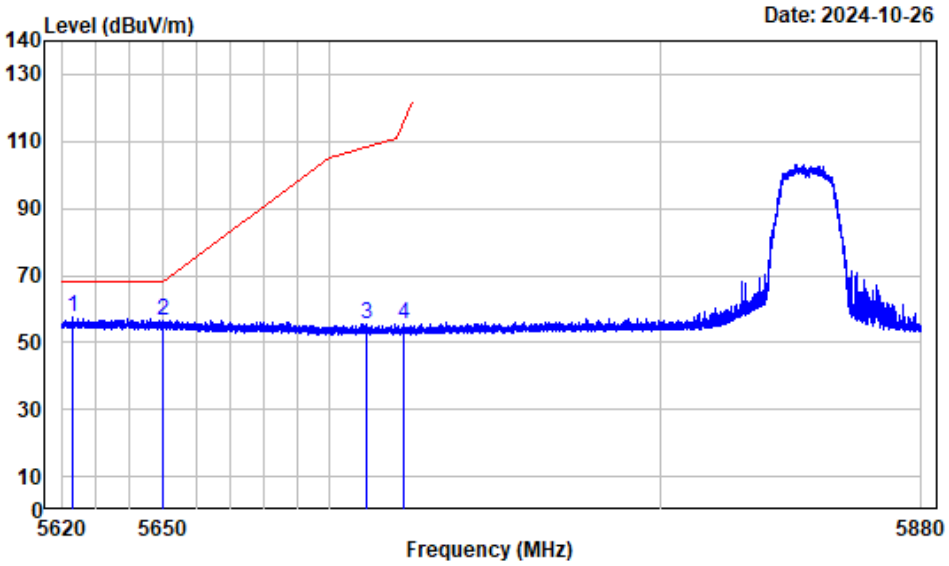
802.11a_ANT 0			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	87.46	91.30	130.20	-38.90	Peak
2	5895.424	3.84	89.42	93.26	129.89	-36.63	Peak

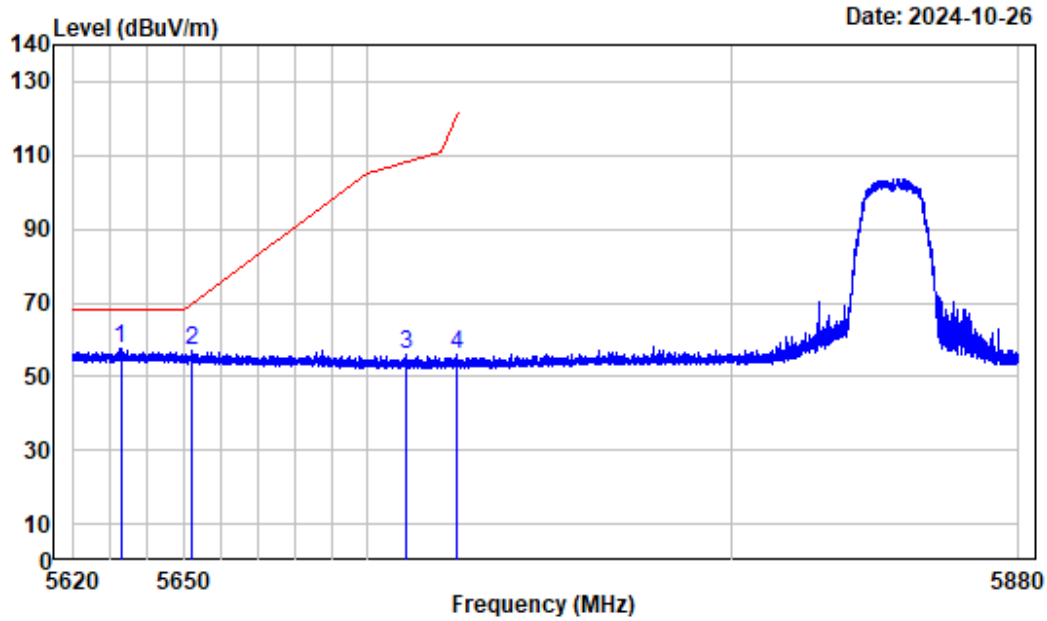
802.11a_ANT 1			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5623.348	3.07	54.36	57.43	68.20	-10.77	Peak
2	5650.261	3.27	53.46	56.73	68.39	-11.66	Peak
3	5710.979	3.47	51.89	55.36	108.28	-52.92	Peak
4	5722.258	3.48	51.73	55.21	115.95	-60.74	Peak

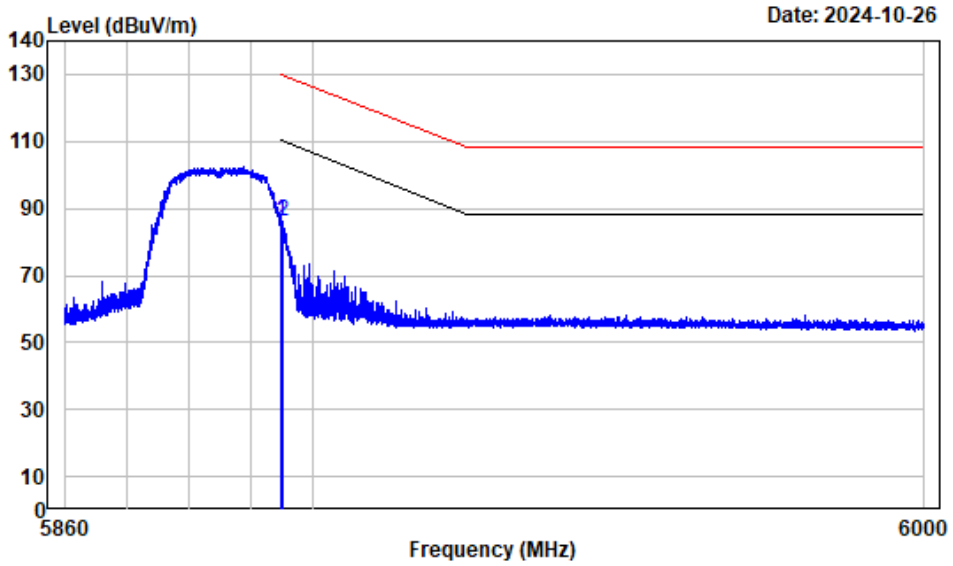
802.11a_ANT 1			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5633.001	3.14	54.34	57.48	68.20	-10.72	Peak
2	5652.341	3.28	53.87	57.15	69.94	-12.79	Peak
3	5710.589	3.46	52.64	56.10	108.17	-52.07	Peak
4	5724.110	3.48	52.41	55.89	120.17	-64.28	Peak

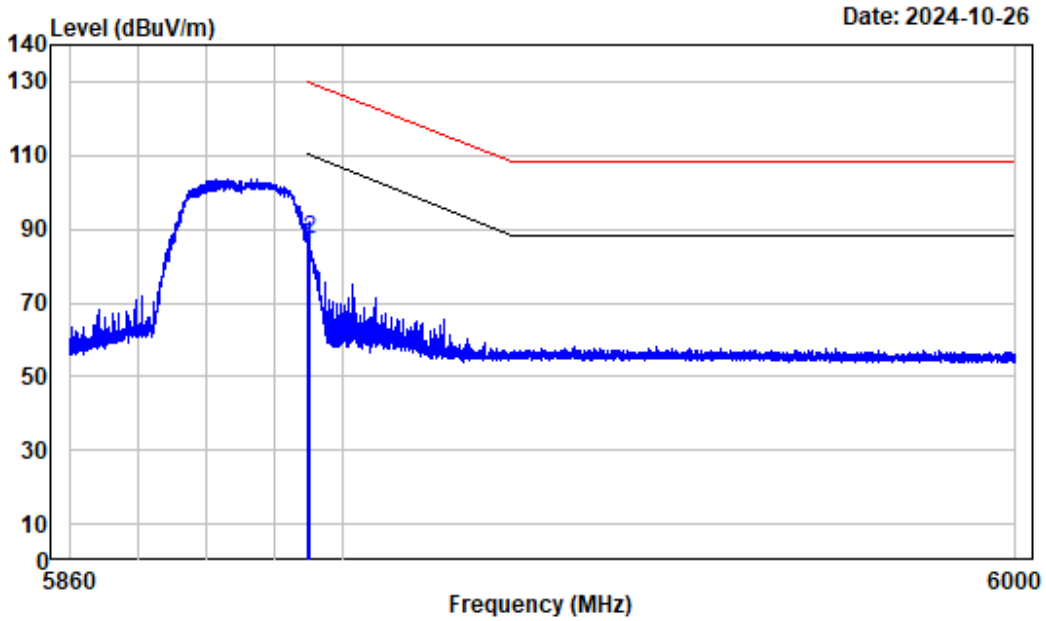
802.11a_ANT 1			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	82.16	86.00	130.20	-44.20	Peak
2	5895.197	3.84	82.25	86.09	130.06	-43.97	Peak

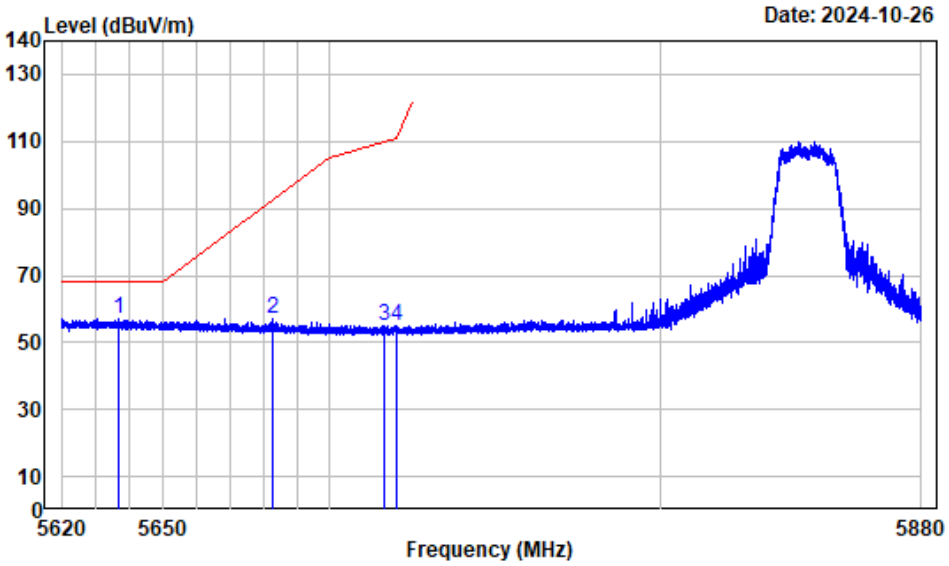
802.11a_ANT 1			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	81.52	85.36	130.20	-44.84	Peak
2	5895.109	3.84	83.37	87.21	130.12	-42.91	Peak

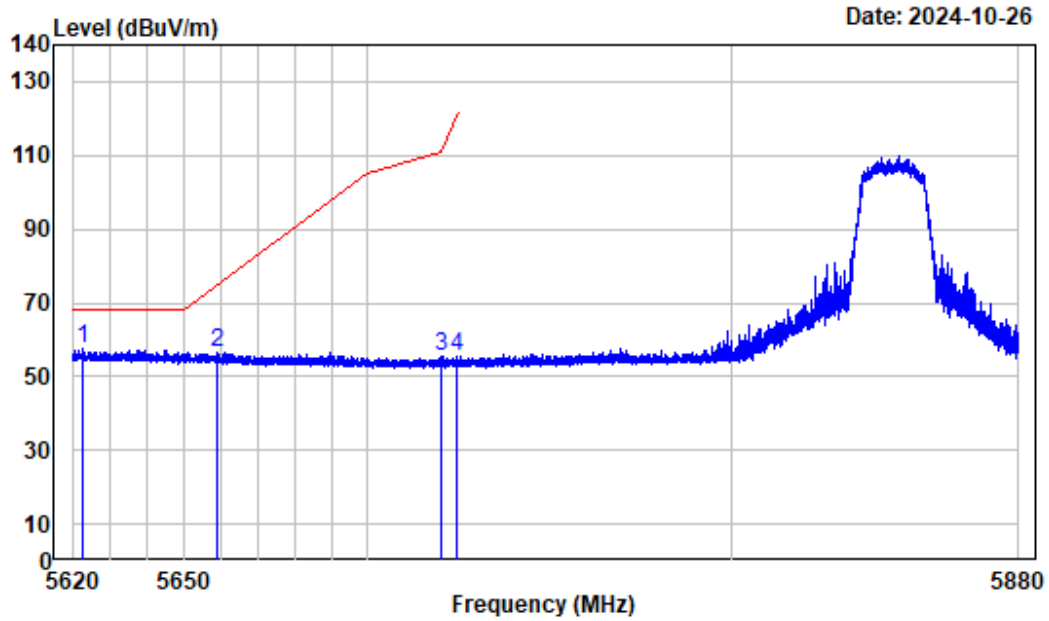
802.11ac20			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5637.162	3.18	53.83	57.01	68.20	-11.19	Peak
2	5682.700	3.39	53.67	57.06	92.43	-35.37	Peak
3	5716.277	3.47	51.58	55.05	109.76	-54.71	Peak
4	5720.145	3.48	51.53	55.01	111.13	-56.12	Peak

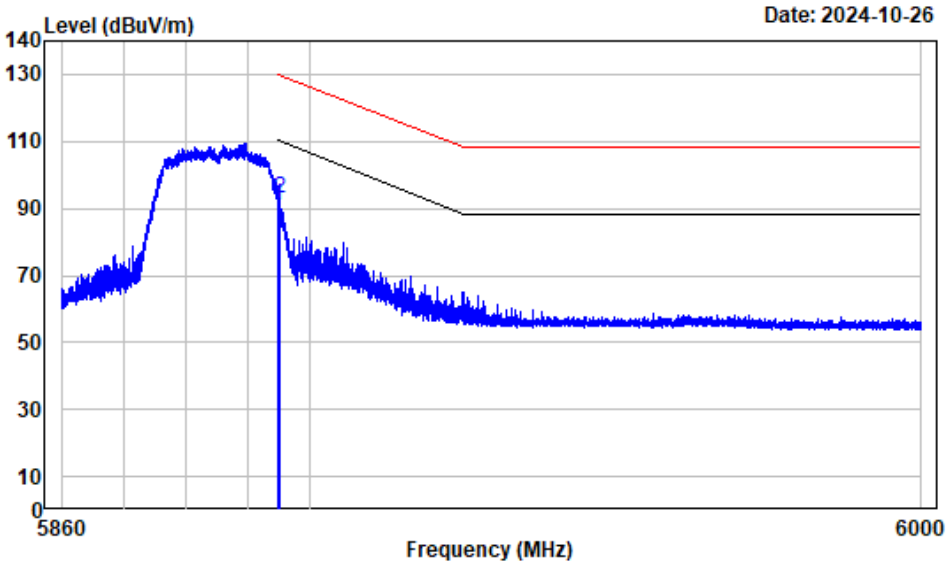
802.11ac20			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5622.828	3.06	54.38	57.44	68.20	-10.76	Peak
2	5659.232	3.30	53.45	56.75	75.06	-18.31	Peak
3	5719.788	3.48	52.09	55.57	110.74	-55.17	Peak
4	5724.078	3.48	52.21	55.69	120.10	-64.41	Peak

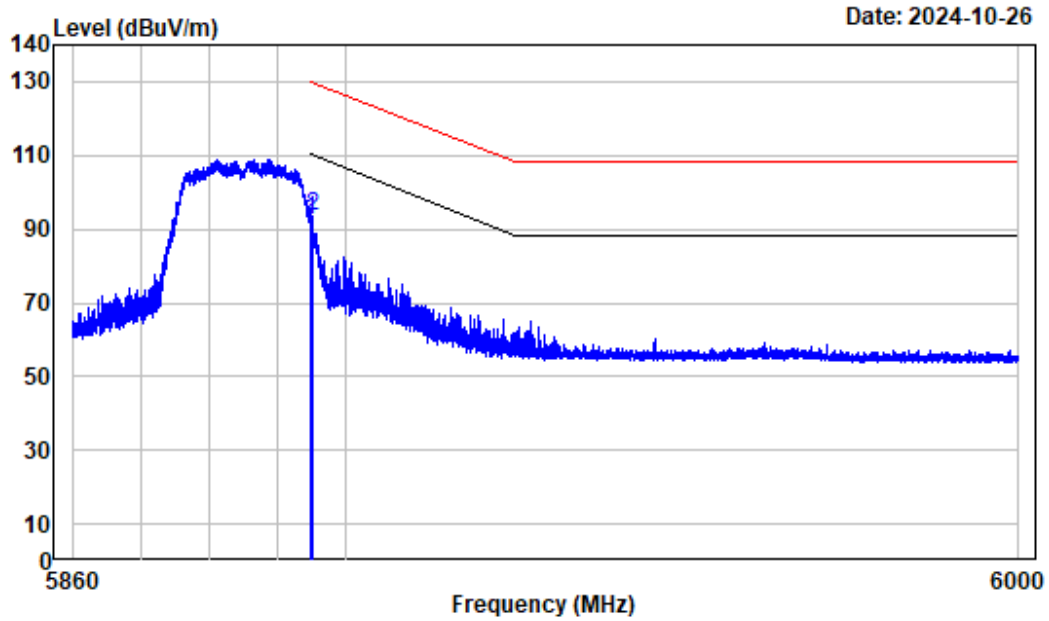
802.11ac20			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	87.09	90.93	130.20	-39.27	Peak
2	5895.109	3.84	88.99	92.83	130.12	-37.29	Peak

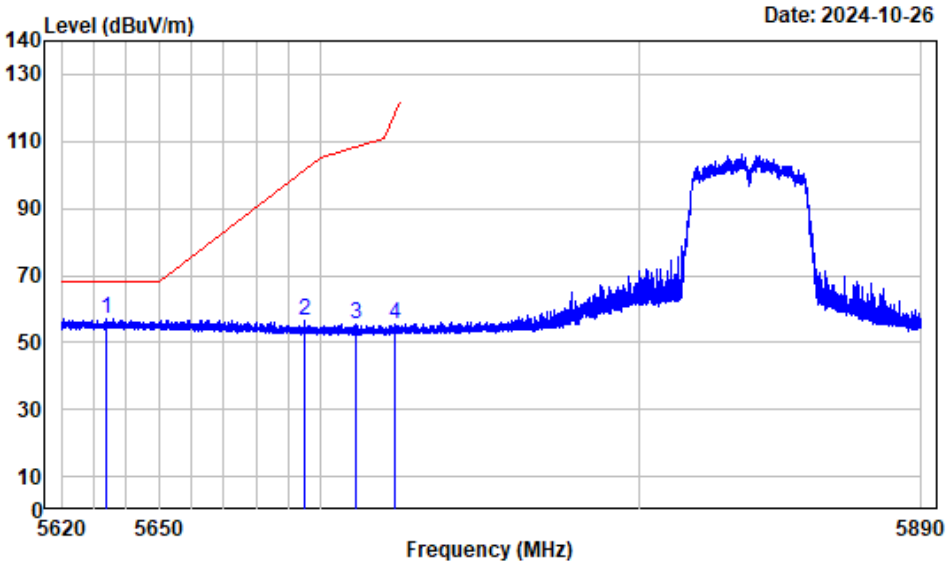
802.11ac20			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	88.44	92.28	130.20	-37.92	Peak
2	5895.162	3.84	89.81	93.65	130.08	-36.43	Peak

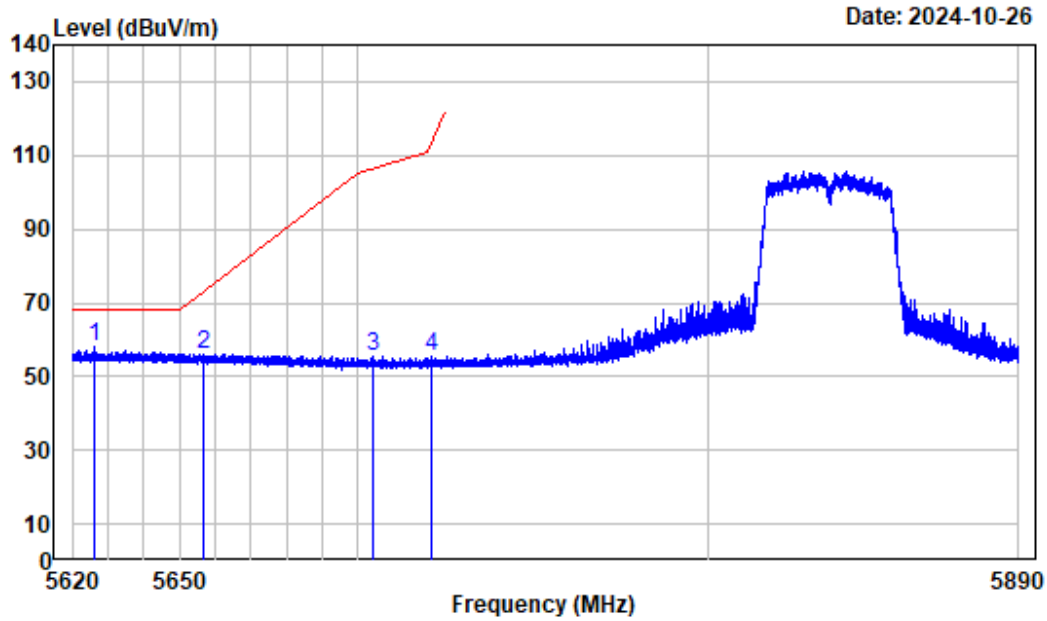
802.11ac40			
Test Channel:	**5835MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5633.771	3.15	53.99	57.14	68.20	-11.06	Peak
2	5695.306	3.43	53.20	56.63	101.74	-45.11	Peak
3	5711.035	3.47	51.92	55.39	108.29	-52.90	Peak
4	5723.187	3.48	51.84	55.32	118.07	-62.75	Peak

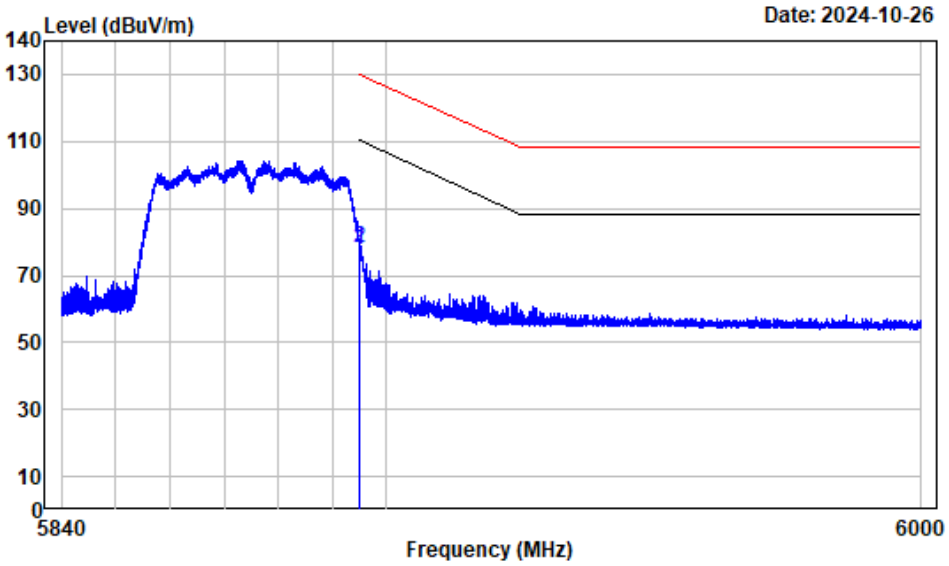
802.11ac40			
Test Channel:	**5835MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5626.312	3.09	55.20	58.29	68.20	-9.91	Peak
2	5656.556	3.30	52.96	56.26	73.07	-16.81	Peak
3	5704.588	3.45	51.95	55.40	106.49	-51.09	Peak
4	5721.060	3.48	51.84	55.32	113.22	-57.90	Peak

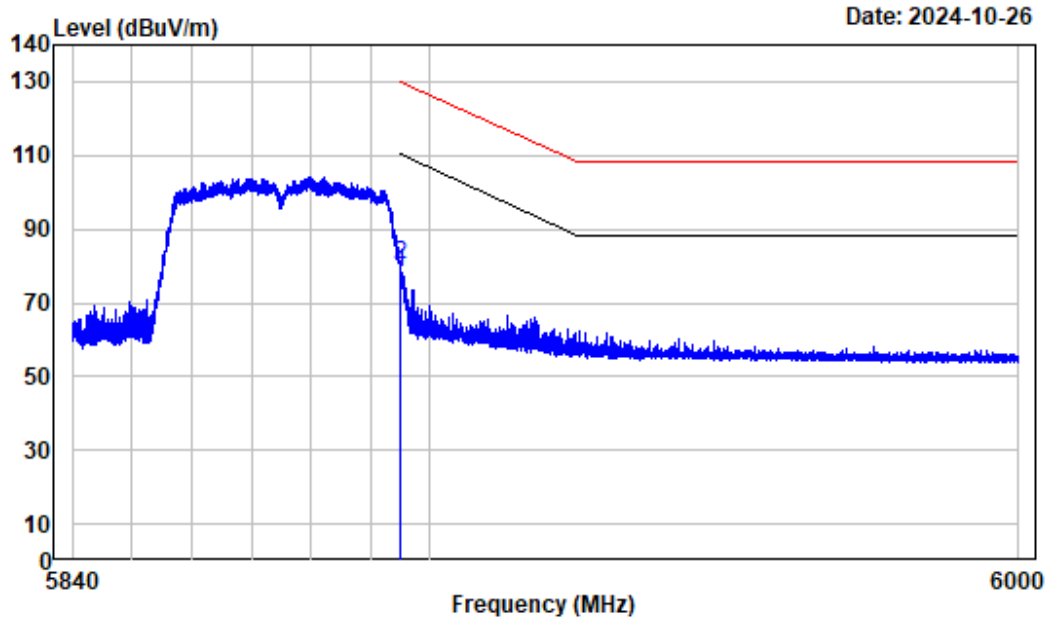
802.11ac40			
Test Channel:	**5875MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5875

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	73.76	77.60	130.20	-52.60	Peak
2	5895.047	3.84	74.54	78.38	130.17	-51.79	Peak

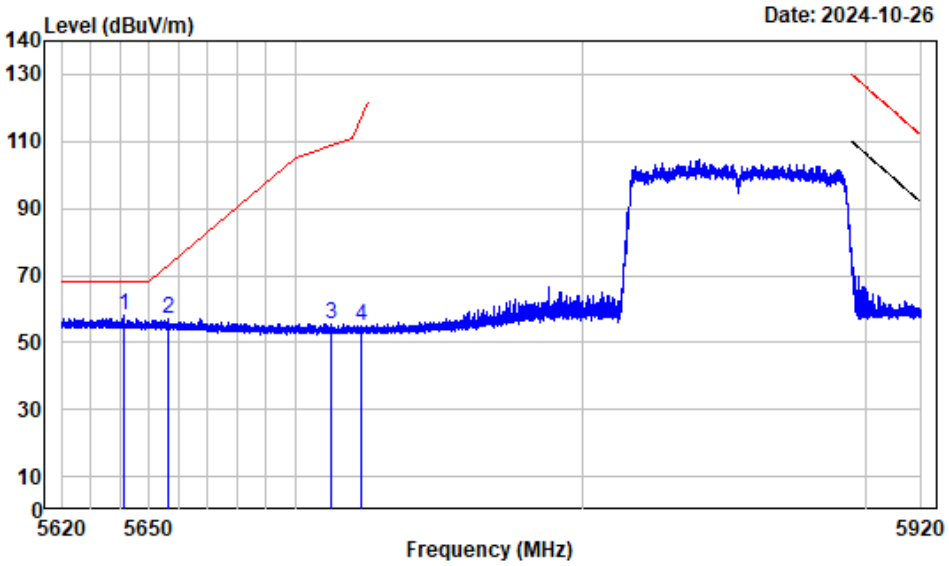
802.11ac40			
Test Channel:	**5875MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5875

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	74.39	78.23	130.20	-51.97	Peak
2	5895.047	3.84	76.26	80.10	130.17	-50.07	Peak

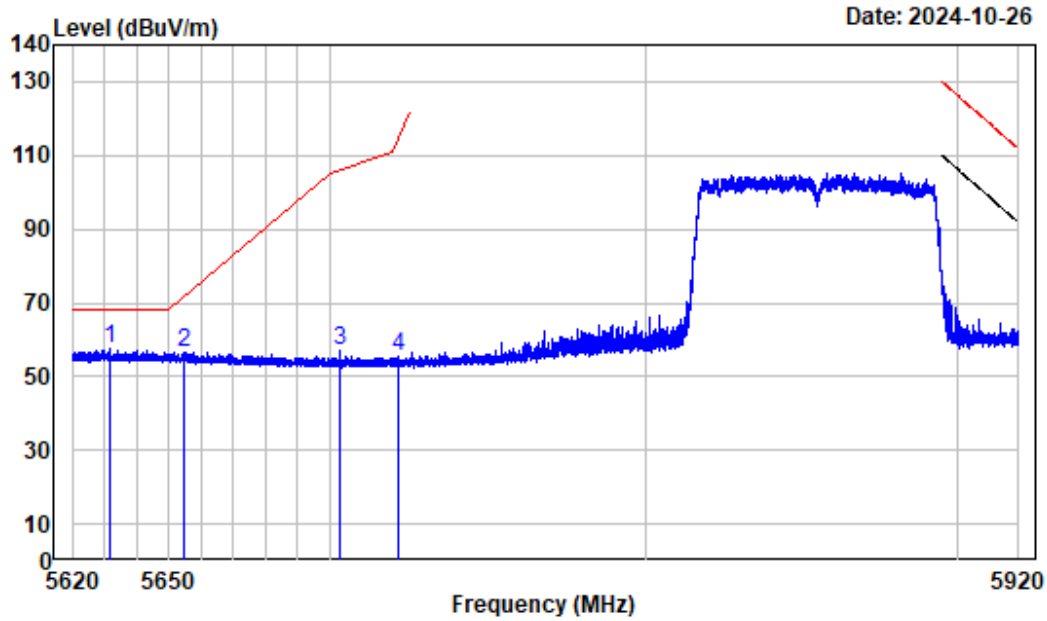
802.11ac80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5641.490	3.20	54.82	58.02	68.20	-10.18	Peak
2	5656.379	3.30	53.69	56.99	72.94	-15.95	Peak
3	5712.299	3.47	52.10	55.57	108.65	-53.08	Peak
4	5722.613	3.49	51.62	55.11	116.76	-61.65	Peak

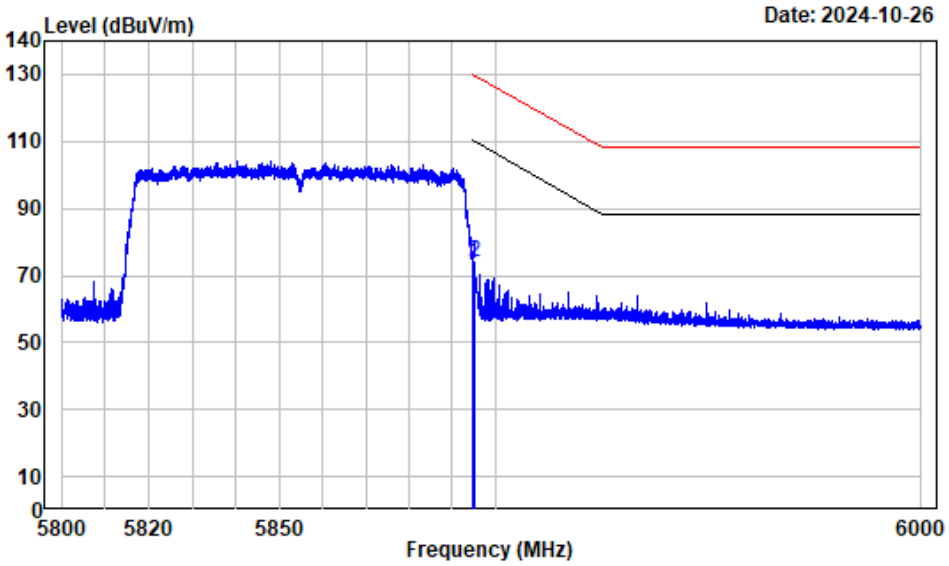
802.11ac80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5631.626	3.13	54.21	57.34	68.20	-10.86	Peak
2	5654.392	3.29	53.42	56.71	71.46	-14.75	Peak
3	5703.073	3.46	53.50	56.96	106.06	-49.10	Peak
4	5721.750	3.48	52.01	55.49	114.79	-59.30	Peak

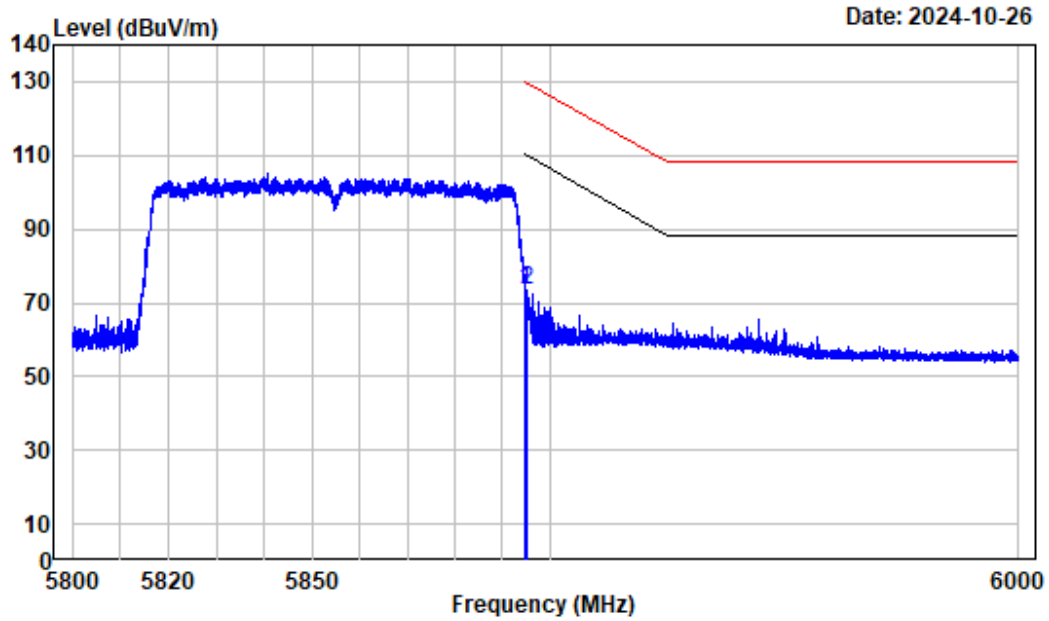
802.11ac80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	69.50	73.34	130.20	-56.86	Peak
2	5895.287	3.84	69.96	73.80	129.99	-56.19	Peak

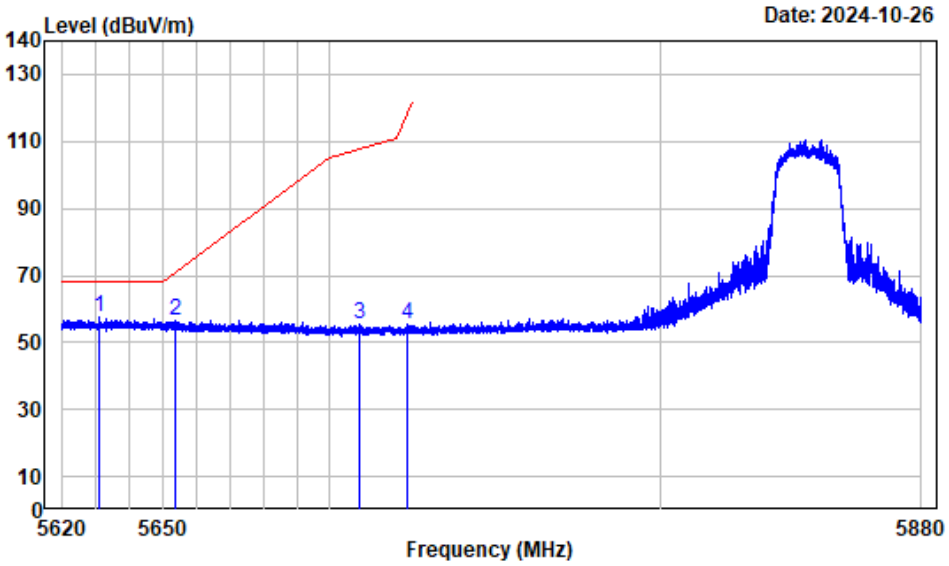
802.11ac80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	69.66	73.50	130.20	-56.70	Peak
2	5895.112	3.84	69.78	73.62	130.12	-56.50	Peak

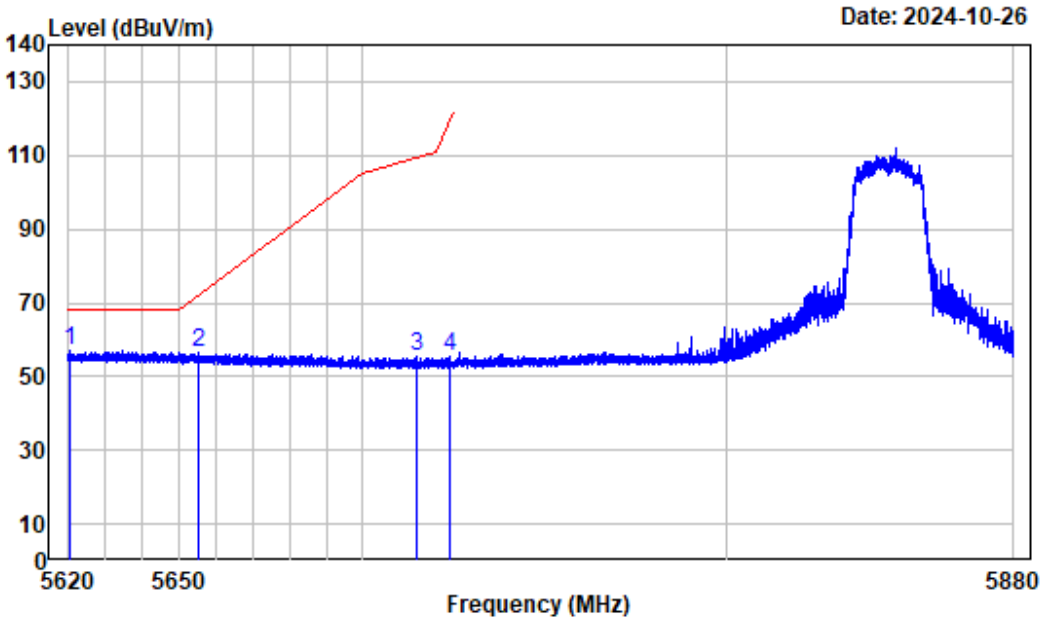
802.11ax20			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5631.312	3.13	54.25	57.38	68.20	-10.82	Peak
2	5653.544	3.28	53.49	56.77	70.83	-14.06	Peak
3	5708.898	3.46	51.82	55.28	107.69	-52.41	Peak
4	5723.168	3.48	52.12	55.60	118.02	-62.42	Peak

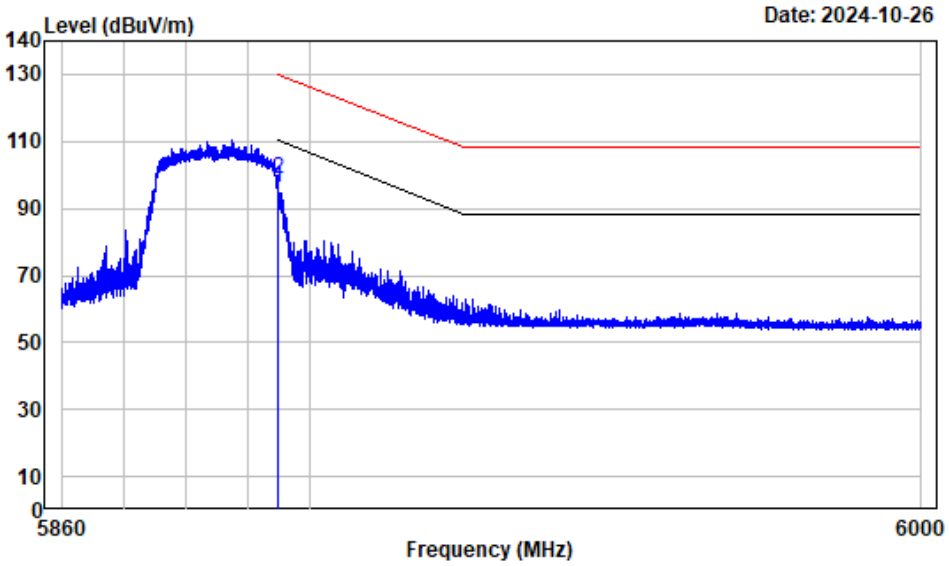
802.11ax20			
Test Channel:	**5845MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5620.877	3.06	54.18	57.24	68.20	-10.96	Peak
2	5655.234	3.29	53.40	56.69	72.09	-15.40	Peak
3	5714.619	3.47	51.79	55.26	109.30	-54.04	Peak
4	5723.851	3.48	52.06	55.54	119.58	-64.04	Peak

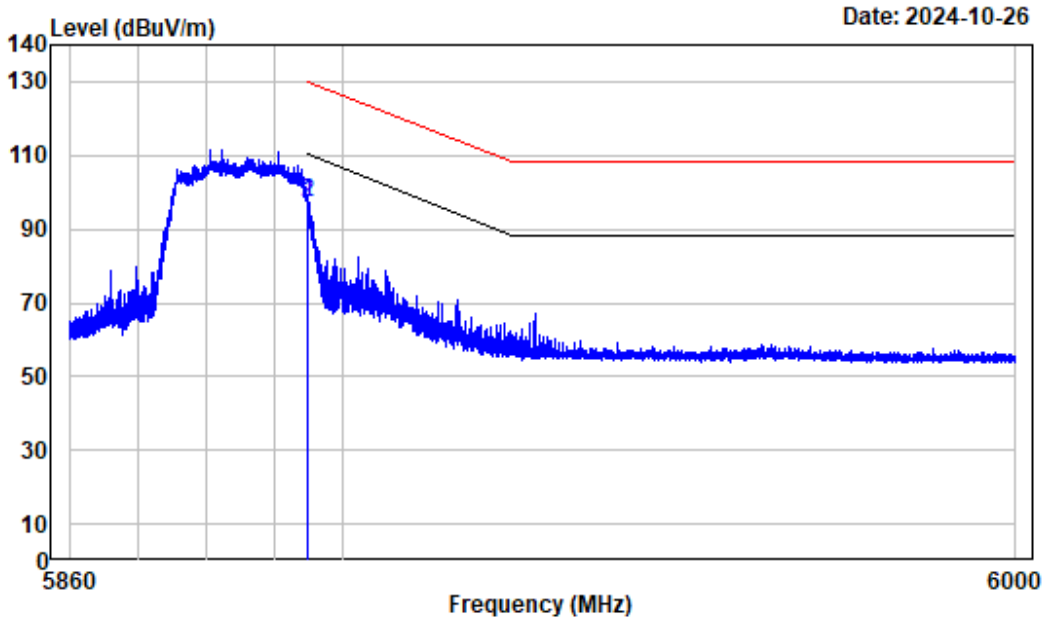
802.11ax20			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	92.32	96.16	130.20	-34.04	Peak
2	5895.040	3.84	94.74	98.58	130.17	-31.59	Peak

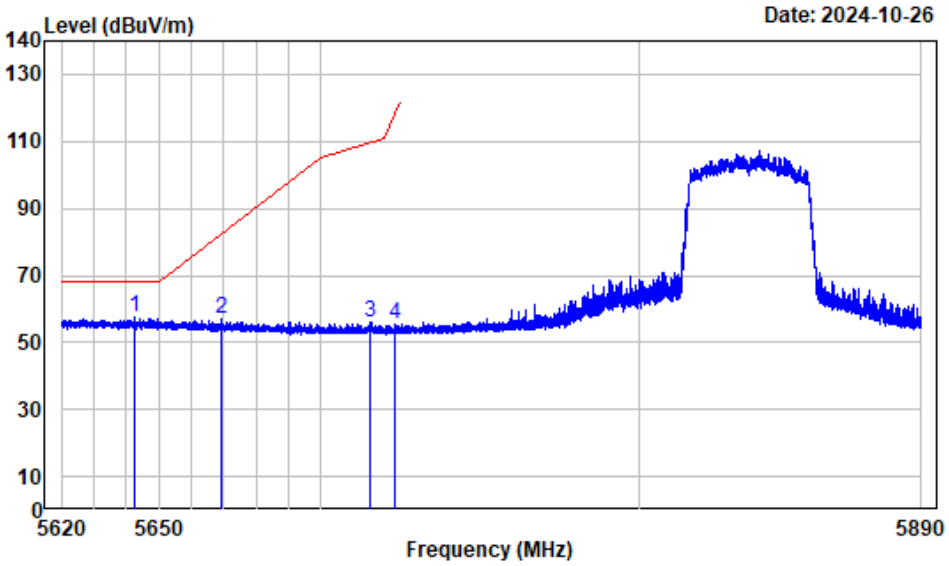
802.11ax20			
Test Channel:	**5885MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	93.39	97.23	130.20	-32.97	Peak
2	5895.040	3.84	93.61	97.45	130.17	-32.72	Peak

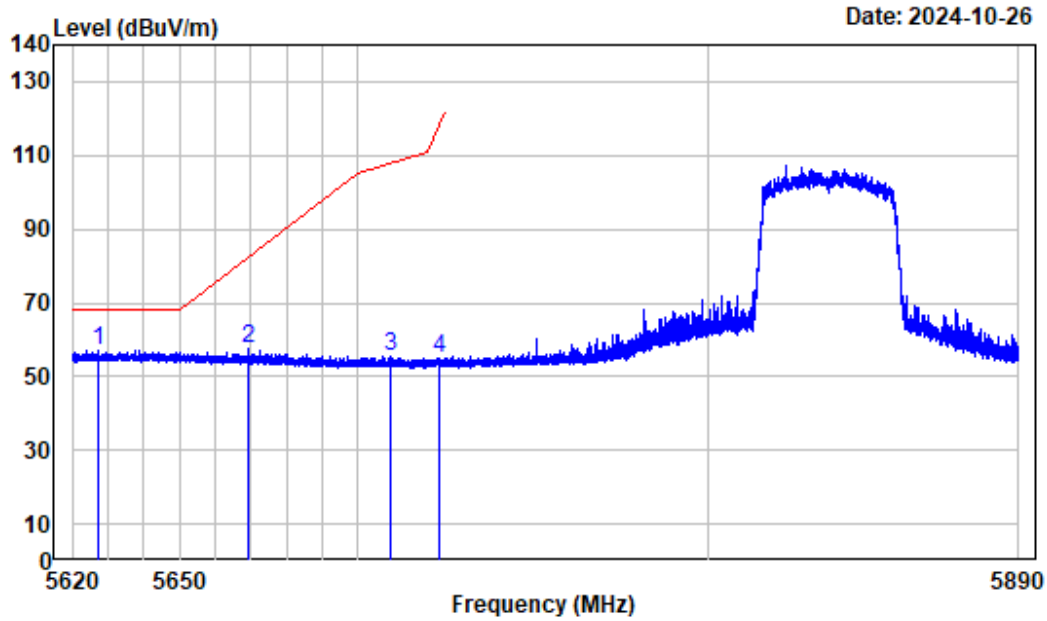
802.11ax40			
Test Channel:	**5835MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5642.480	3.21	54.34	57.55	68.20	-10.65	Peak
2	5669.382	3.34	53.58	56.92	82.58	-25.66	Peak
3	5715.288	3.47	52.53	56.00	109.48	-53.48	Peak
4	5723.254	3.48	51.90	55.38	118.22	-62.84	Peak

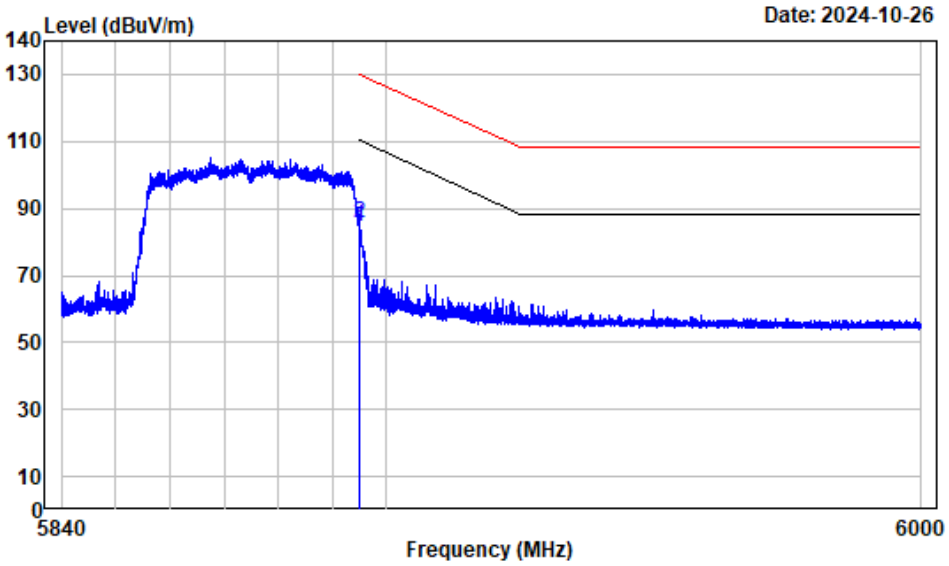
802.11ax40			
Test Channel:	**5835MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5627.325	3.10	53.89	56.99	68.20	-11.21	Peak
2	5669.079	3.34	54.16	57.50	82.36	-24.86	Peak
3	5709.145	3.46	52.16	55.62	107.76	-52.14	Peak
4	5723.355	3.48	51.65	55.13	118.45	-63.32	Peak

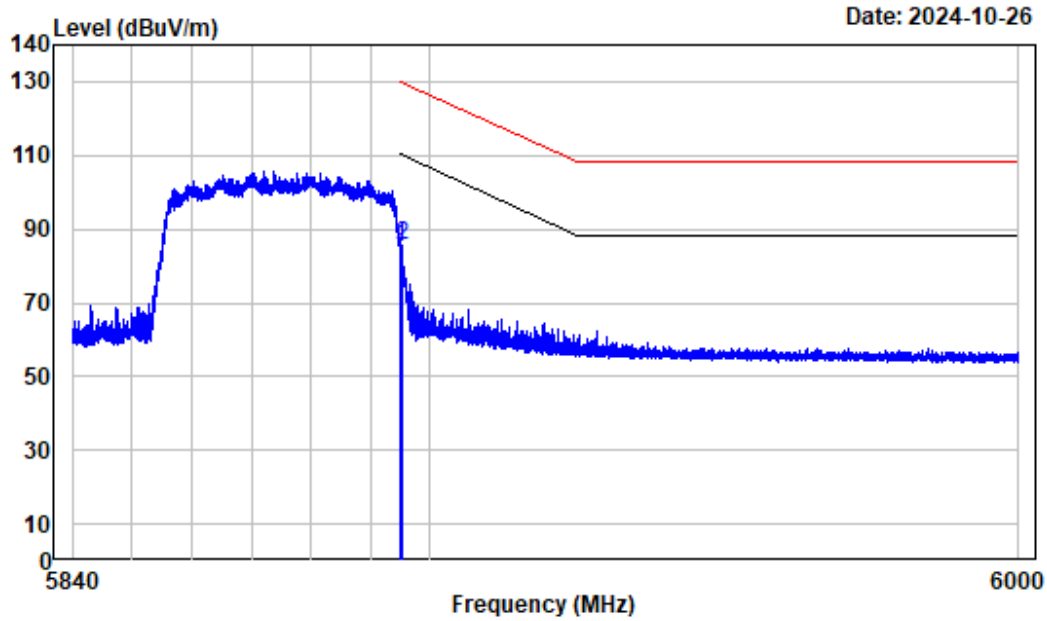
802.11ax40			
Test Channel:	**5875MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5875

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	80.68	84.52	130.20	-45.68	Peak
2	5895.067	3.84	81.62	85.46	130.15	-44.69	Peak

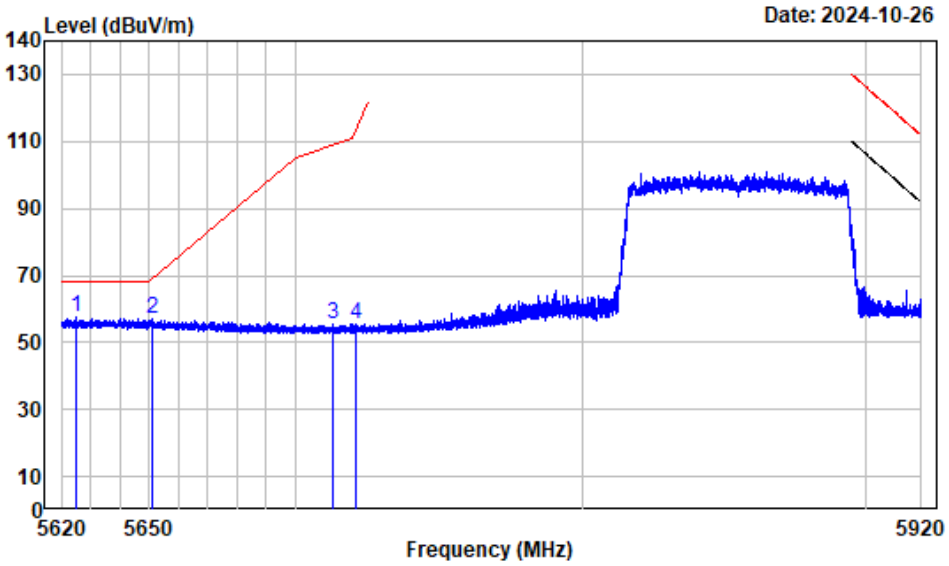
802.11ax40			
Test Channel:	**5875MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5875

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	81.03	84.87	130.20	-45.33	Peak
2	5895.227	3.84	81.78	85.62	130.03	-44.41	Peak

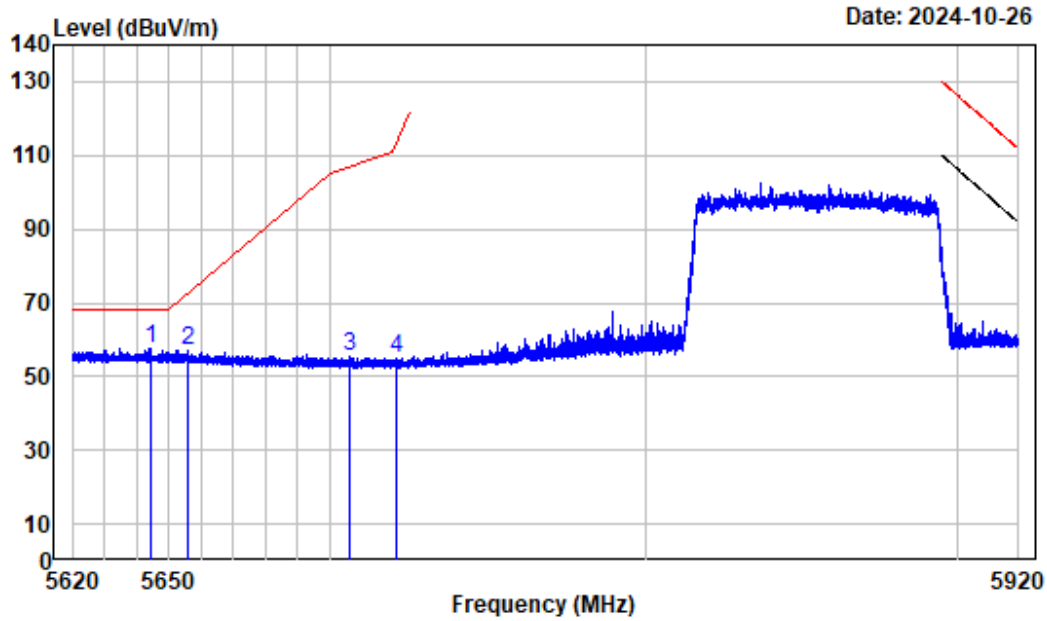
802.11ax80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5625.101	3.08	54.29	57.37	68.20	-10.83	Peak
2	5651.054	3.27	53.58	56.85	68.98	-12.13	Peak
3	5713.199	3.48	51.82	55.30	108.90	-53.60	Peak
4	5721.113	3.48	51.84	55.32	113.34	-58.02	Peak

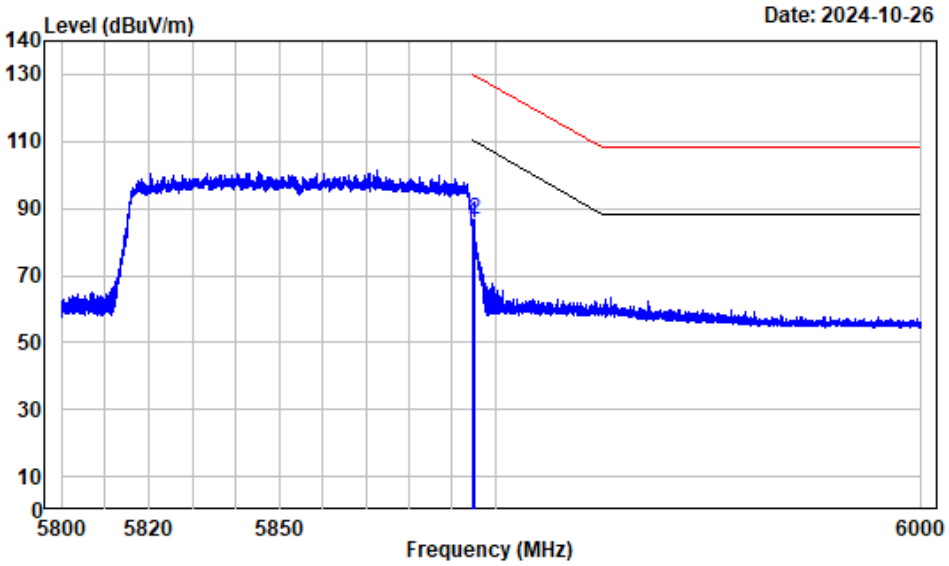
802.11ax80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5644.303	3.22	54.62	57.84	68.20	-10.36	Peak
2	5655.592	3.29	53.90	57.19	72.35	-15.16	Peak
3	5706.598	3.45	51.93	55.38	107.05	-51.67	Peak
4	5721.113	3.48	51.69	55.17	113.34	-58.17	Peak

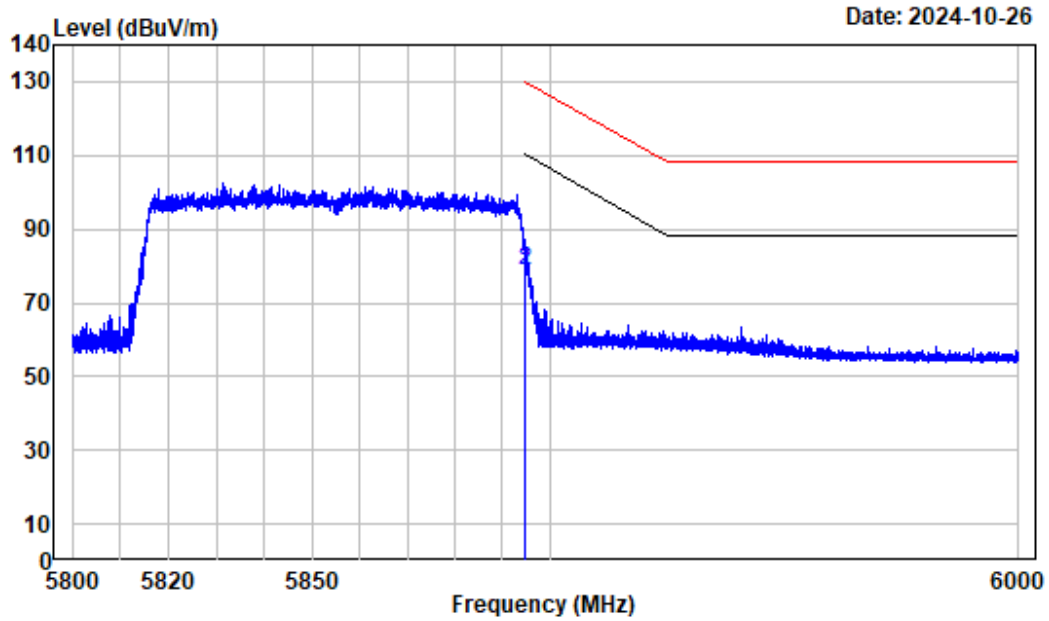
802.11ax80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Horizontal_Peak**



Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	81.81	85.65	130.20	-44.55	Peak
2	5895.062	3.84	82.74	86.58	130.15	-43.57	Peak

802.11ax80			
Test Channel:	**5855MHz**	**Ant. Polar. :**	**Vertical_Peak**



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

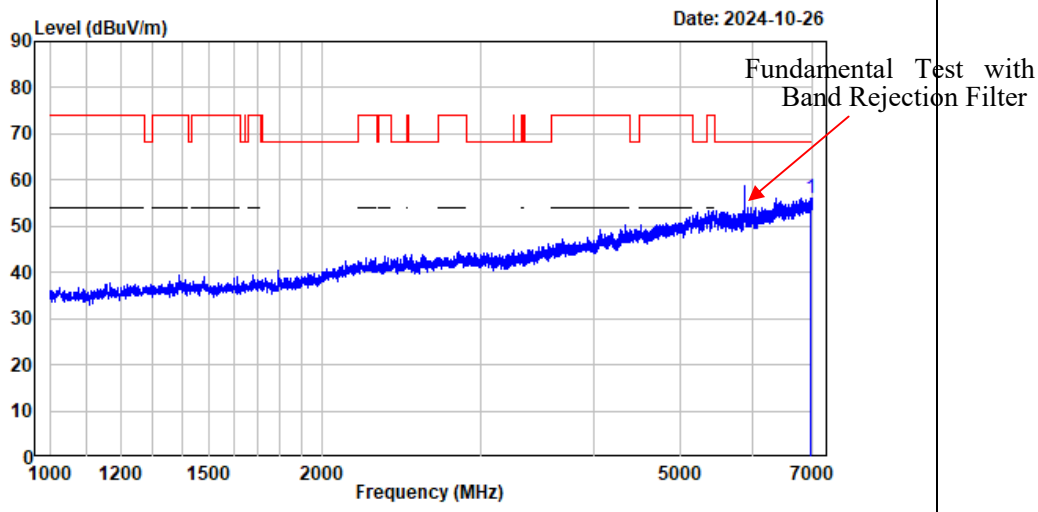
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	5895.000	3.84	74.57	78.41	130.20	-51.79	Peak
2	5895.012	3.84	75.11	78.95	130.19	-51.24	Peak

1-18GHz (*Listed with the worst harmonic margin test plots***):**

ANT0, 802.11a

Horizontal

1-7GHz

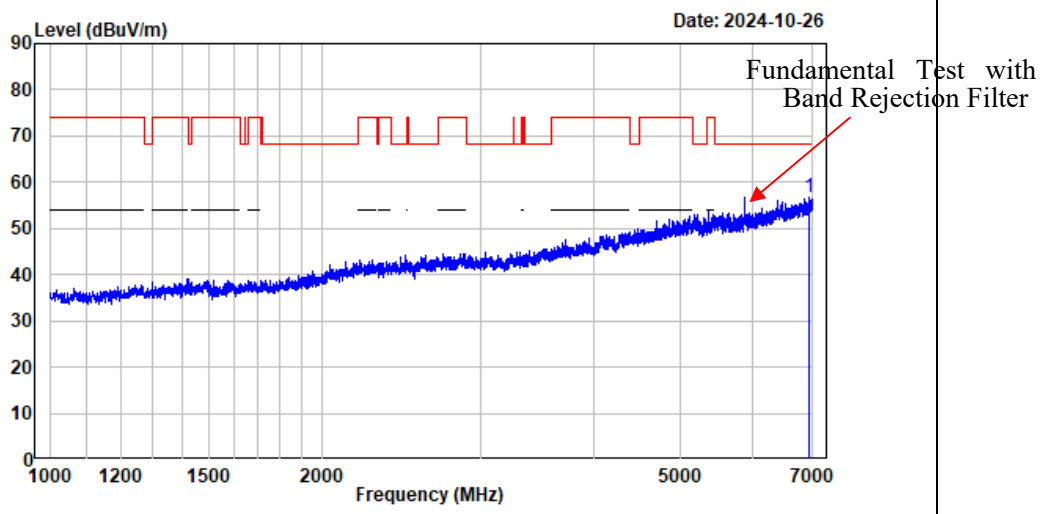



```
Condition   : Horizontal
Project No.: 2401Y48404E-RF
Tester      : Zenos Qiao
Note        : 5GWiFi-ANT0-A-5885
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6975.247	8.66	47.48	56.14	68.20	-12.06	Peak

Vertical

1-7GHz

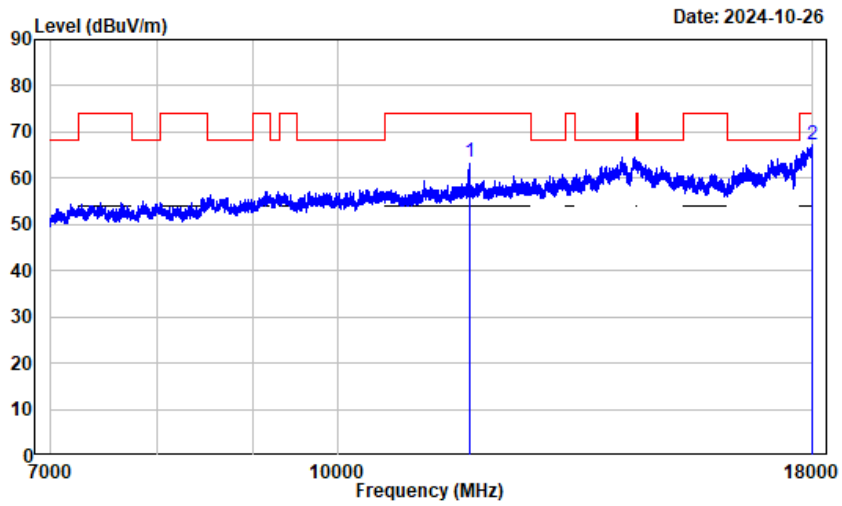


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6943.743	8.62	48.12	56.74	68.20	-11.46	Peak

Horizontal_Peak

7-18GHz

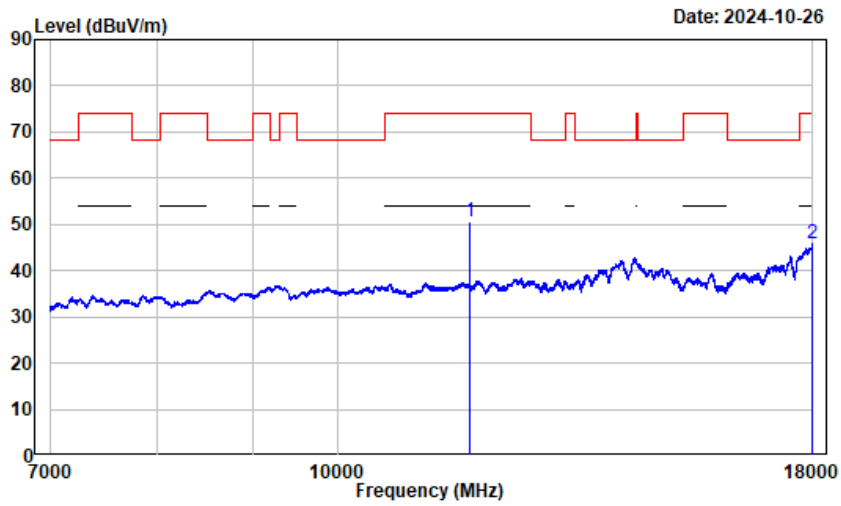


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	49.64	63.37	74.00	-10.63	Peak
2	17978.000	24.46	42.70	67.16	74.00	-6.84	Peak

Horizontal_Average

7-18GHz



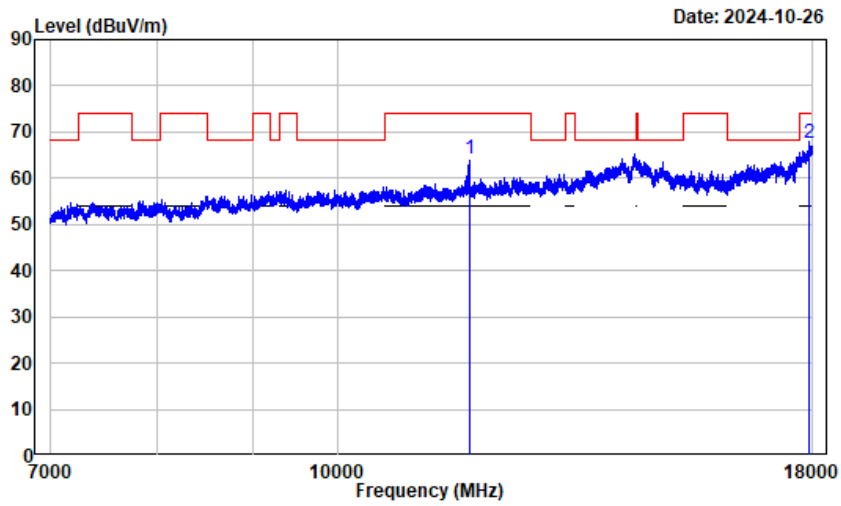
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	36.73	50.46	54.00	-3.54	Average
2	17997.250	24.60	21.31	45.91	54.00	-8.09	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

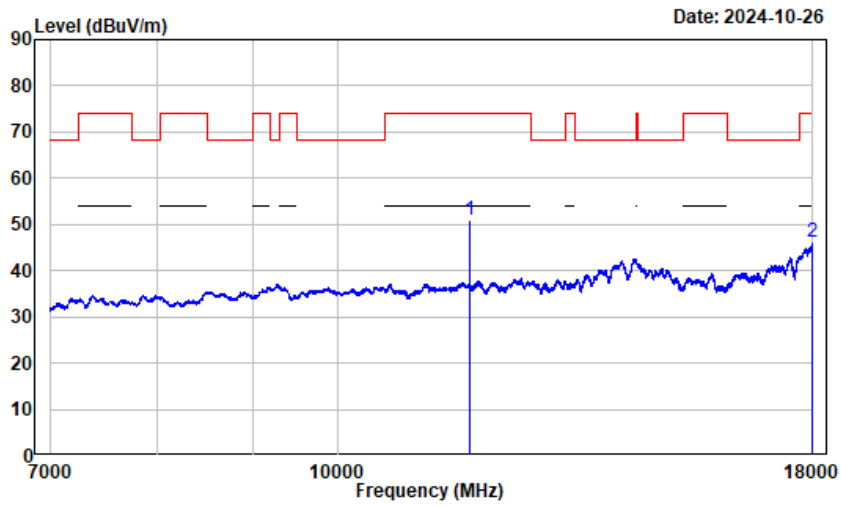


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	50.56	64.29	74.00	-9.71	Peak
2	17935.370	24.16	43.27	67.43	74.00	-6.57	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

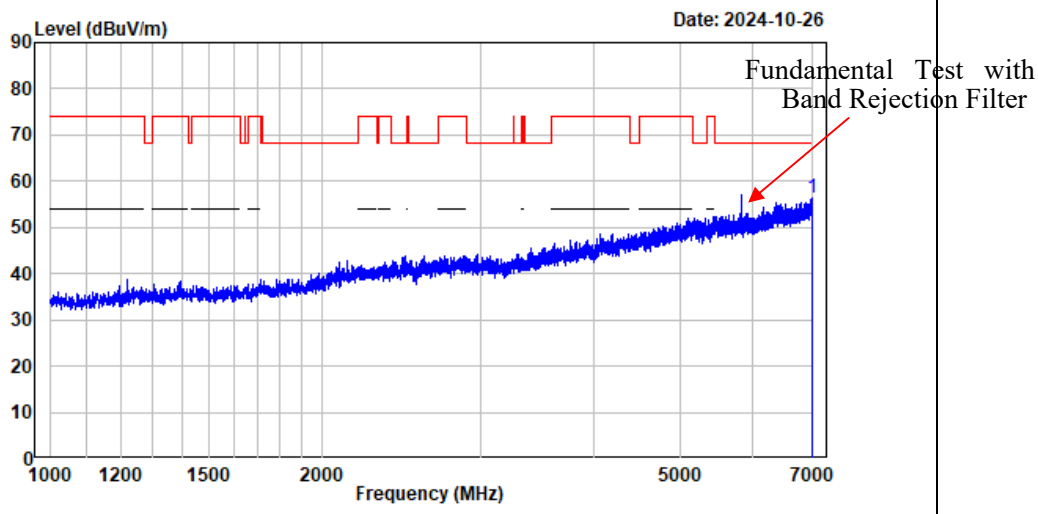
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	37.30	51.03	54.00	-2.97	Average
2	17997.250	24.60	21.51	46.11	54.00	-7.89	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

ANT1, 802.11a

Horizontal

1-7GHz

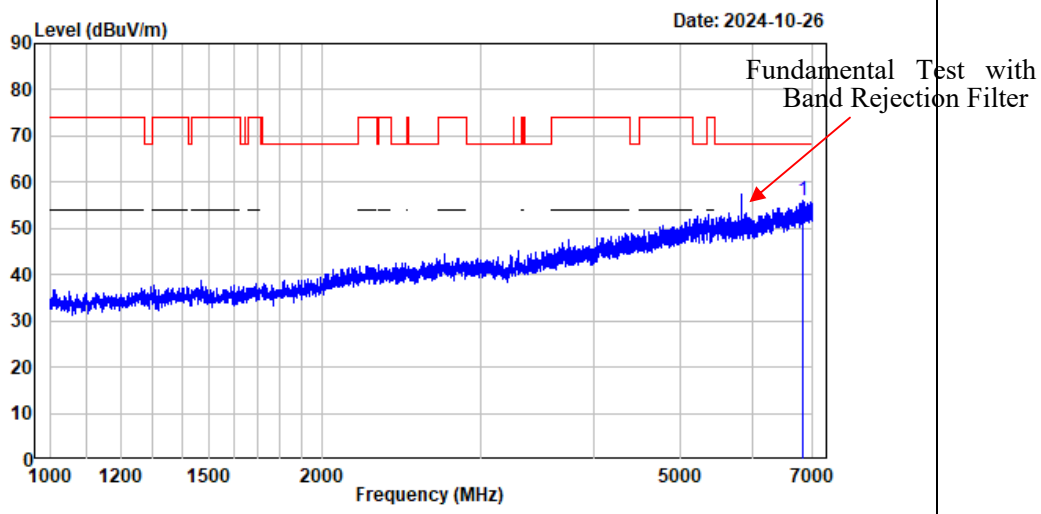



```
Condition   : Horizontal
Project No.: 2401Y48404E-RF
Tester      : Zenos Qiao
Note        : 5GWiFi-ANT1-A-5845
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6980.498	8.64	47.62	56.26	68.20	-11.94	Peak

Vertical

1-7GHz

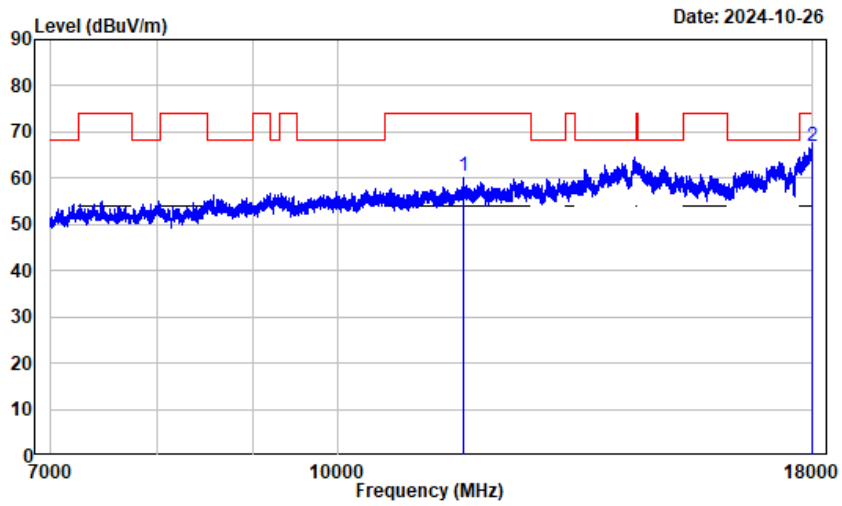


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6813.977	7.50	48.66	56.16	68.20	-12.04	Peak

Horizontal_Peak

7-18GHz

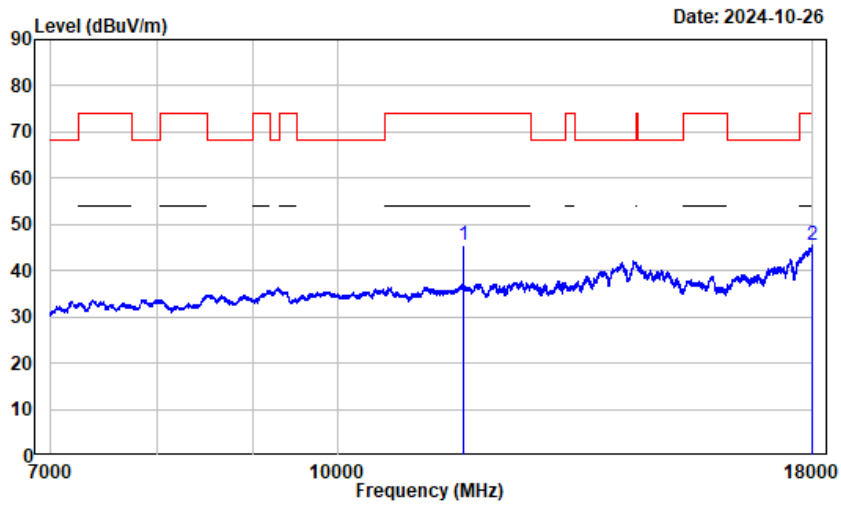


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11690.000	13.76	46.58	60.34	74.00	-13.66	Peak
2	17990.870	24.62	42.29	66.91	74.00	-7.09	Peak

Horizontal_Average

7-18GHz



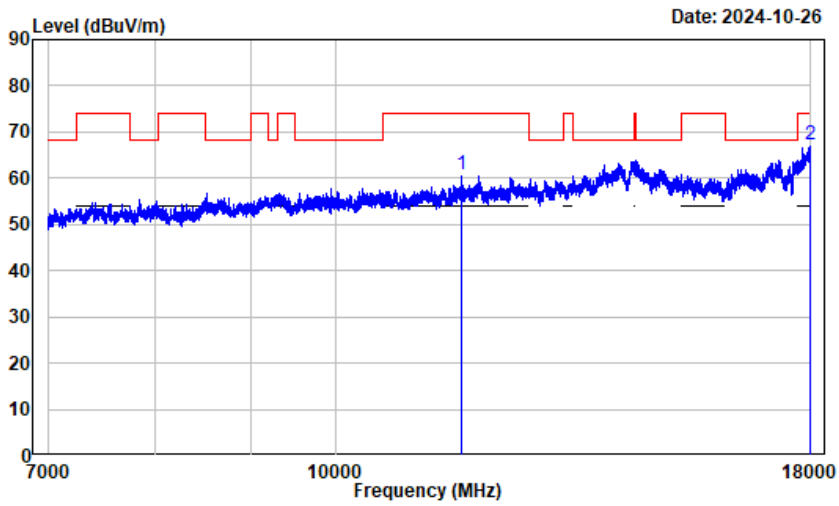
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11690.000	13.76	31.60	45.36	54.00	-8.64	Average
2	17995.880	24.59	20.99	45.58	54.00	-8.42	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

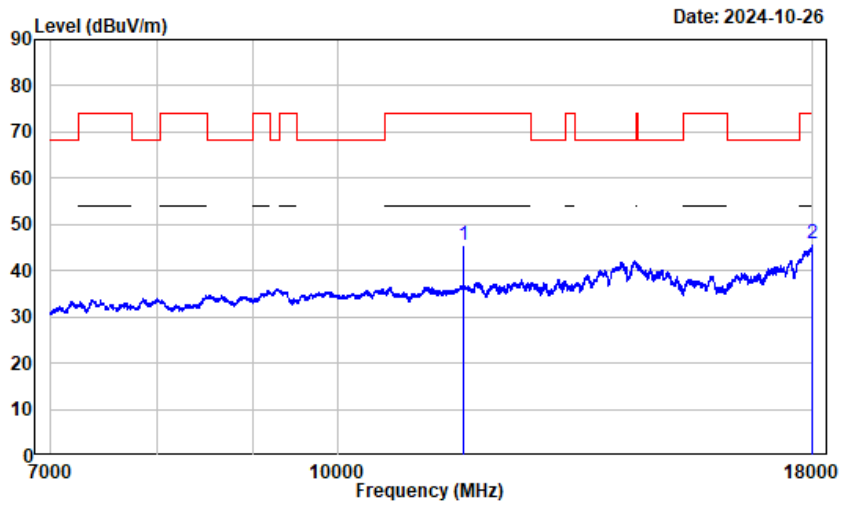


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11690.000	13.76	46.91	60.67	74.00	-13.33	Peak
2	17976.620	24.45	42.69	67.14	74.00	-6.86	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT1-A-5845

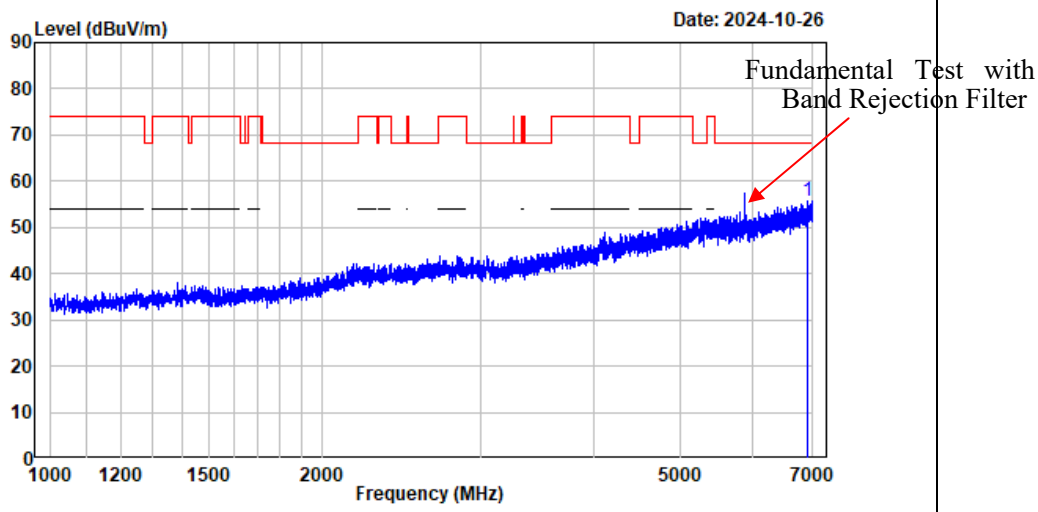
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11690.000	13.76	31.83	45.59	54.00	-8.41	Average
2	17995.880	24.59	21.14	45.73	54.00	-8.27	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

802.11ac20

Horizontal

1-7GHz

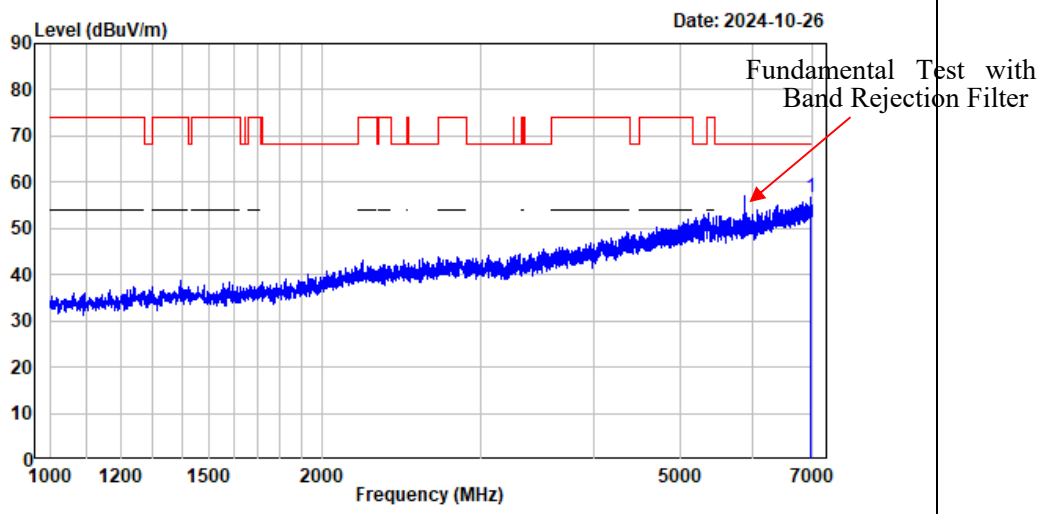


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6900.237	8.08	47.72	55.80	68.20	-12.40	Peak

Vertical

1-7GHz

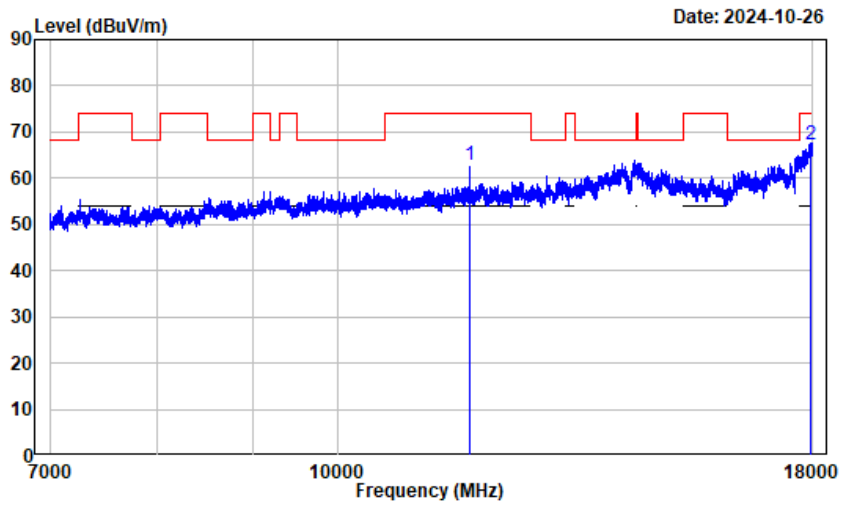


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6969.996	8.66	47.97	56.63	68.20	-11.57	Peak

Horizontal_Peak

7-18GHz

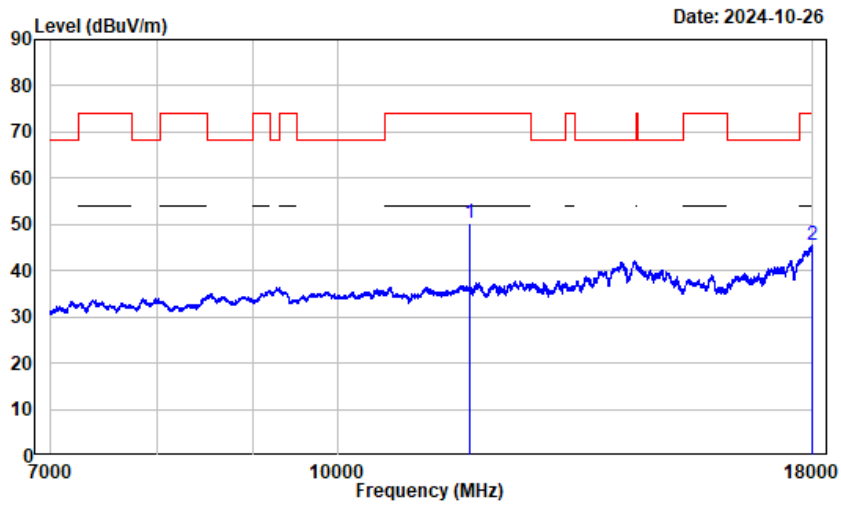


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	49.20	62.93	74.00	-11.07	Peak
2	17961.500	24.35	43.04	67.39	74.00	-6.61	Peak

Horizontal_Average

7-18GHz



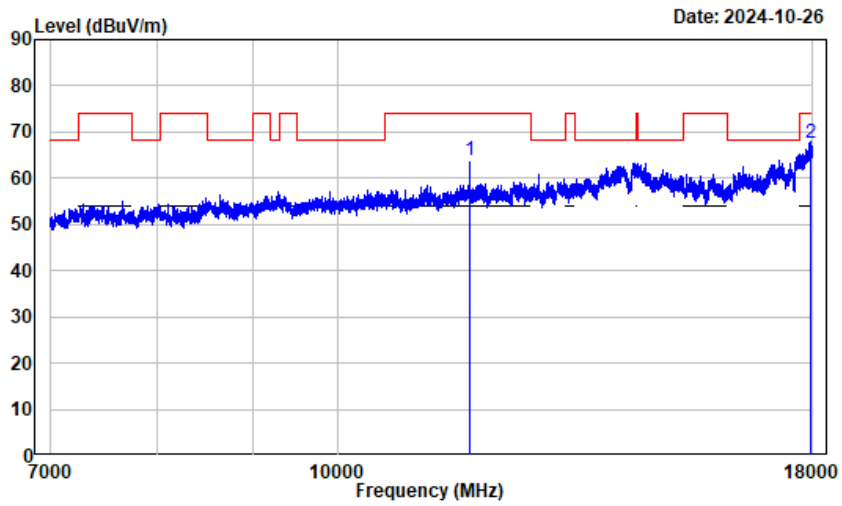
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	36.52	50.25	54.00	-3.75	Average
2	17995.880	24.59	21.07	45.66	54.00	-8.34	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

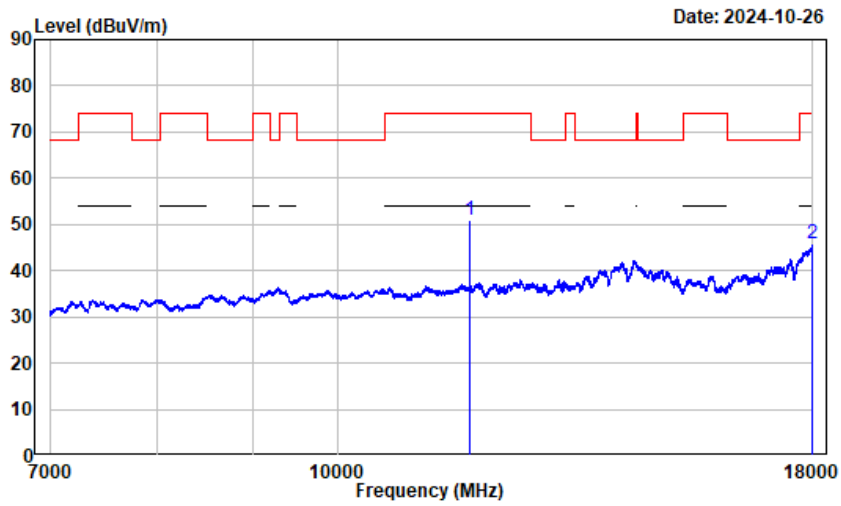


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	50.13	63.86	74.00	-10.14	Peak
2	17969.750	24.41	43.17	67.58	74.00	-6.42	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC20-5885

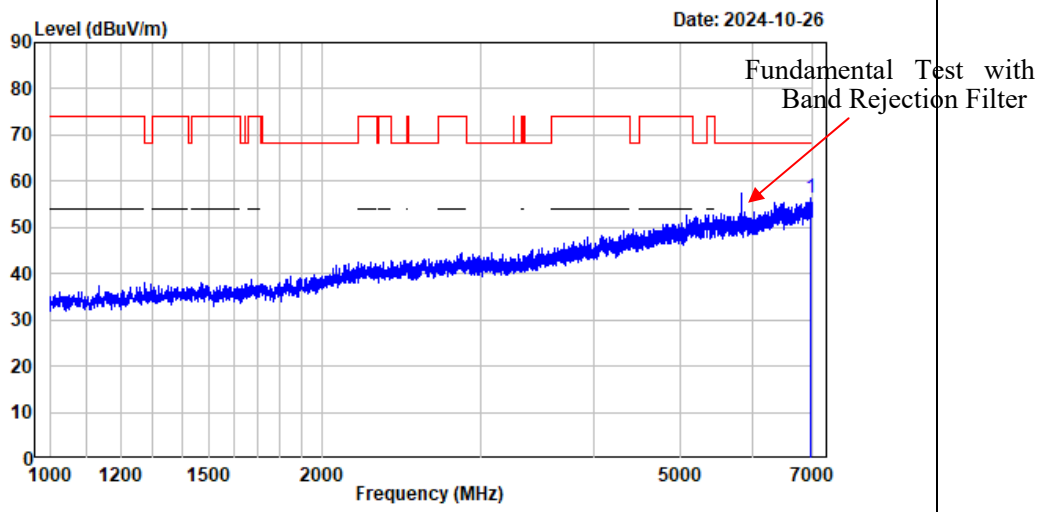
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	37.08	50.81	54.00	-3.19	Average
2	17991.750	24.56	21.28	45.84	54.00	-8.16	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

802.11ac40

Horizontal

1-7GHz

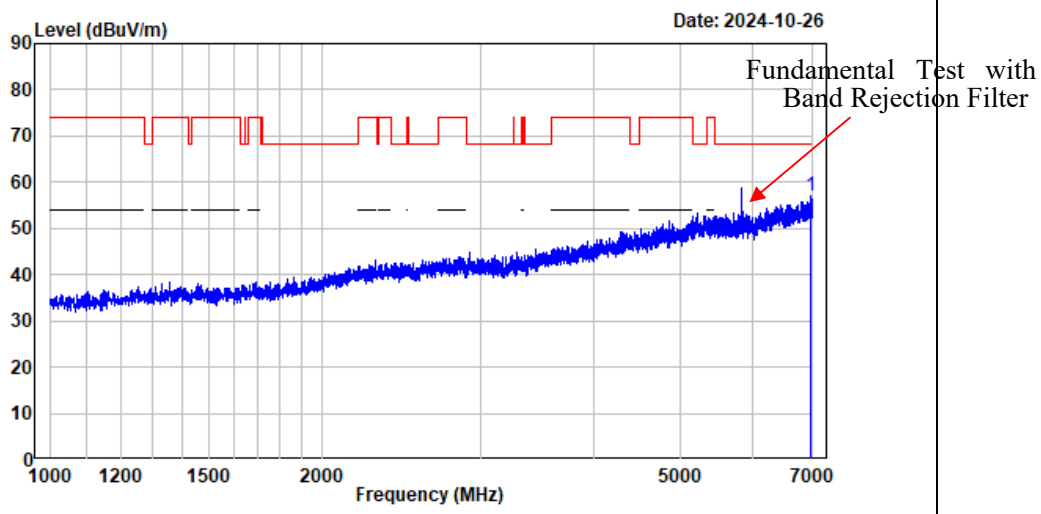


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6955.745	8.69	47.69	56.38	68.20	-11.82	Peak

Vertical

1-7GHz

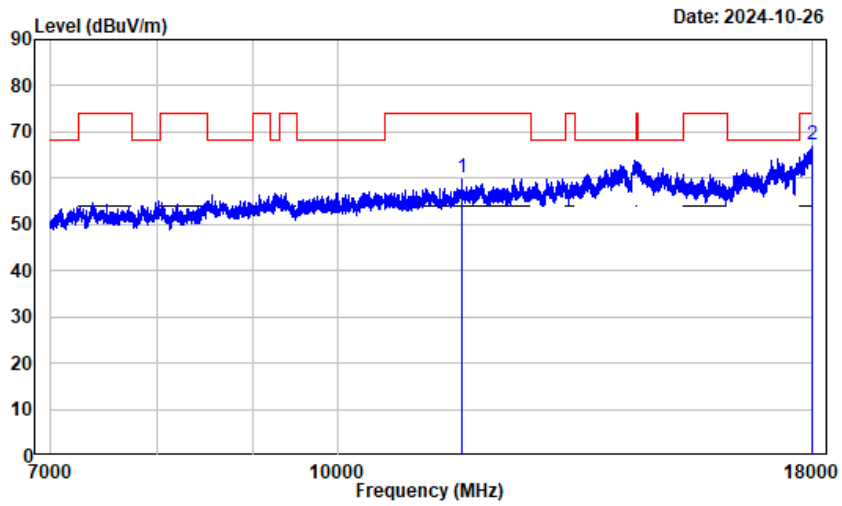


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6960.245	8.68	48.21	56.89	68.20	-11.31	Peak

Horizontal_Peak

7-18GHz

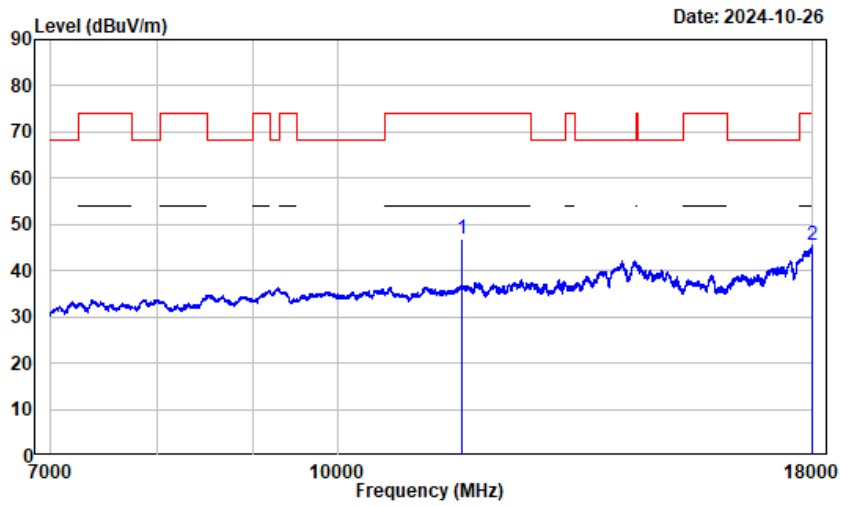


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	46.30	60.09	74.00	-13.91	Peak
2	17997.250	24.60	42.52	67.12	74.00	-6.88	Peak

Horizontal_Average

7-18GHz



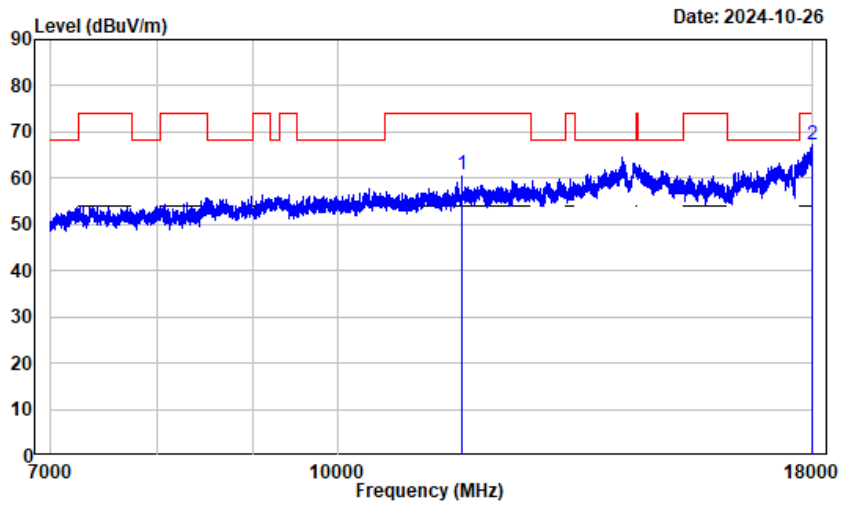
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	32.92	46.71	54.00	-7.29	Average
2	17998.630	24.61	20.78	45.39	54.00	-8.61	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

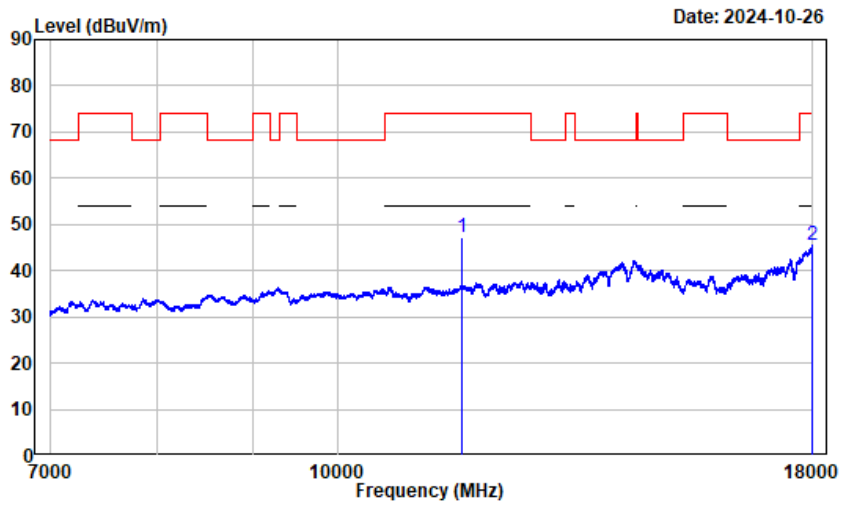


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	46.87	60.66	74.00	-13.34	Peak
2	17975.250	24.44	42.91	67.35	74.00	-6.65	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC40-5835

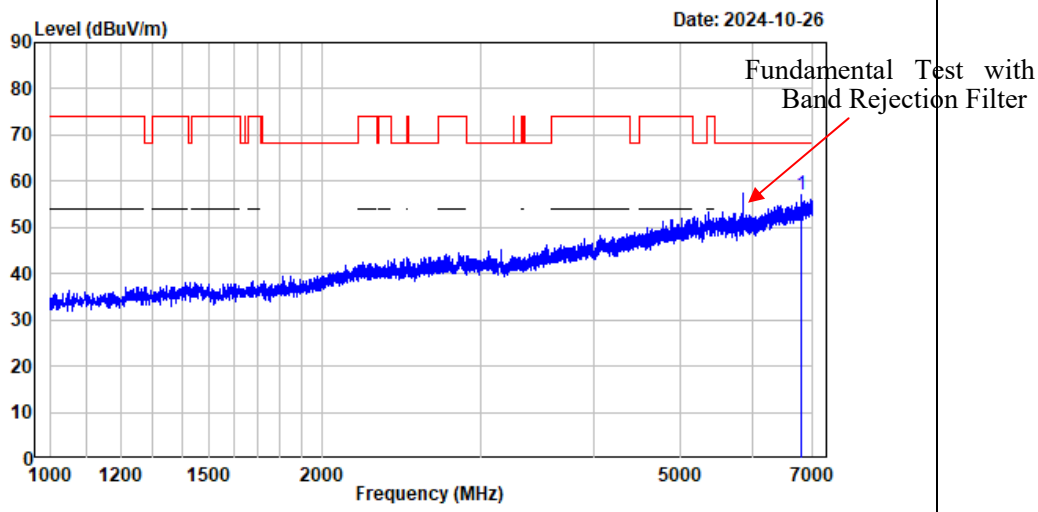
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	33.26	47.05	54.00	-6.95	Average
2	17994.500	24.58	21.02	45.60	54.00	-8.40	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

802.11ac80

Horizontal

1-7GHz

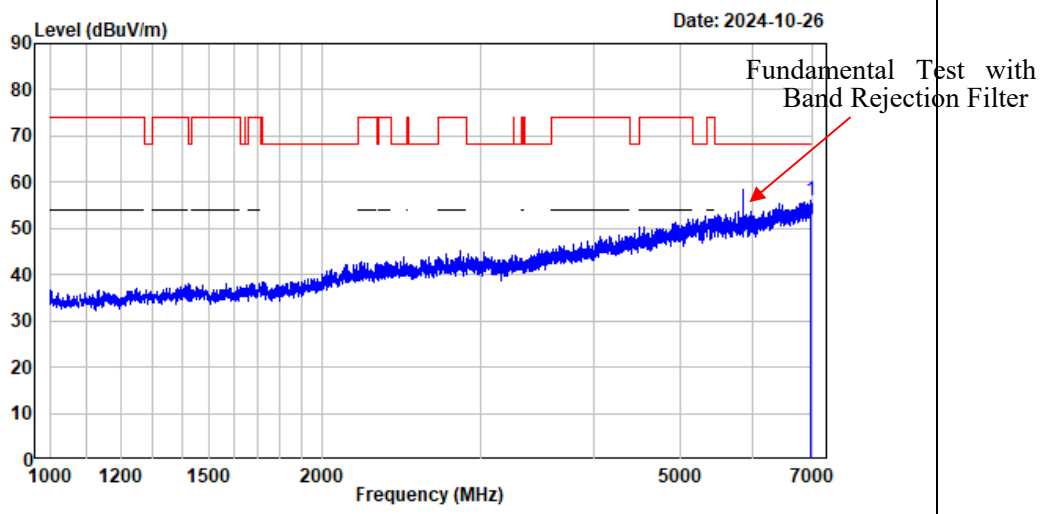


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6798.225	7.36	49.76	57.12	68.20	-11.08	Peak

Vertical

1-7GHz

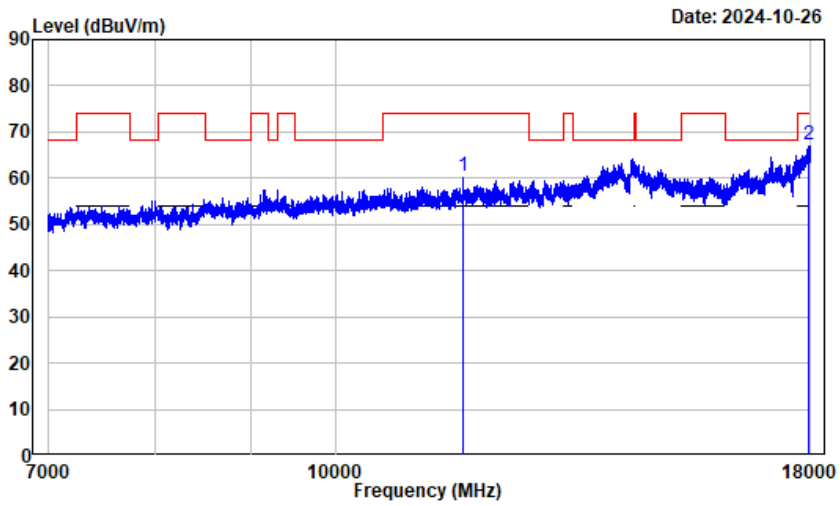


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6977.497	8.65	47.47	56.12	68.20	-12.08	Peak

Horizontal_Peak

7-18GHz

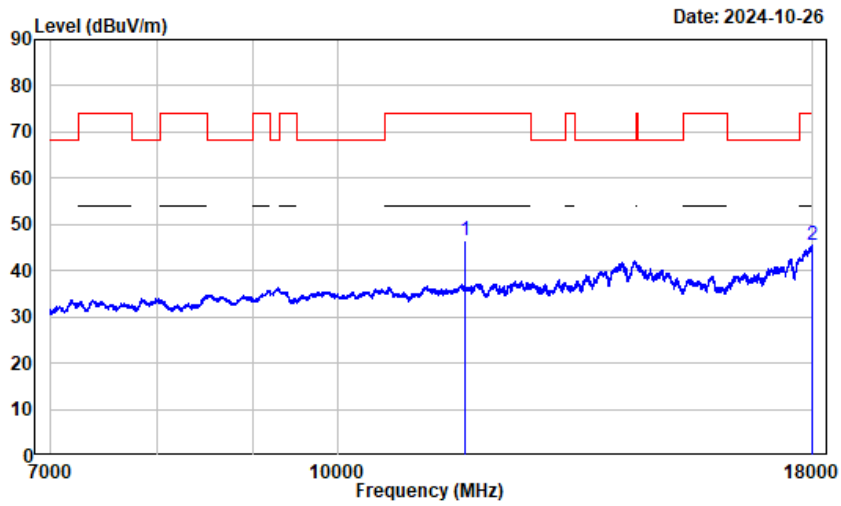


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	46.85	60.58	74.00	-13.42	Peak
2	17949.120	24.25	42.98	67.23	74.00	-6.77	Peak

Horizontal_Average

7-18GHz



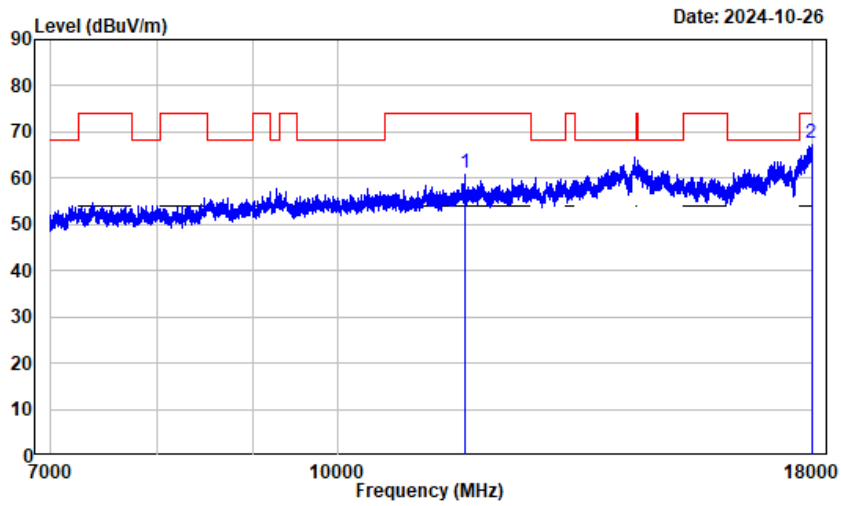
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	32.78	46.51	54.00	-7.49	Average
2	17991.750	24.56	20.91	45.47	54.00	-8.53	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

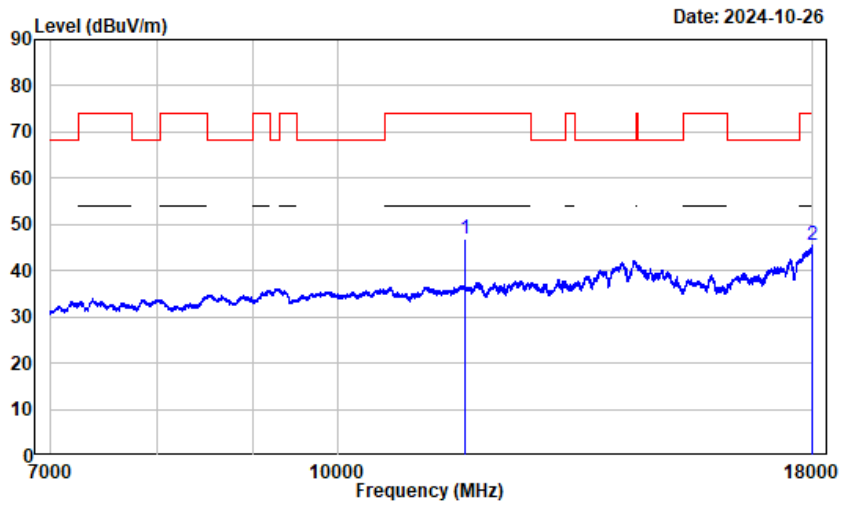


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	47.37	61.10	74.00	-12.90	Peak
2	17973.870	24.44	43.04	67.48	74.00	-6.52	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AC80-5855

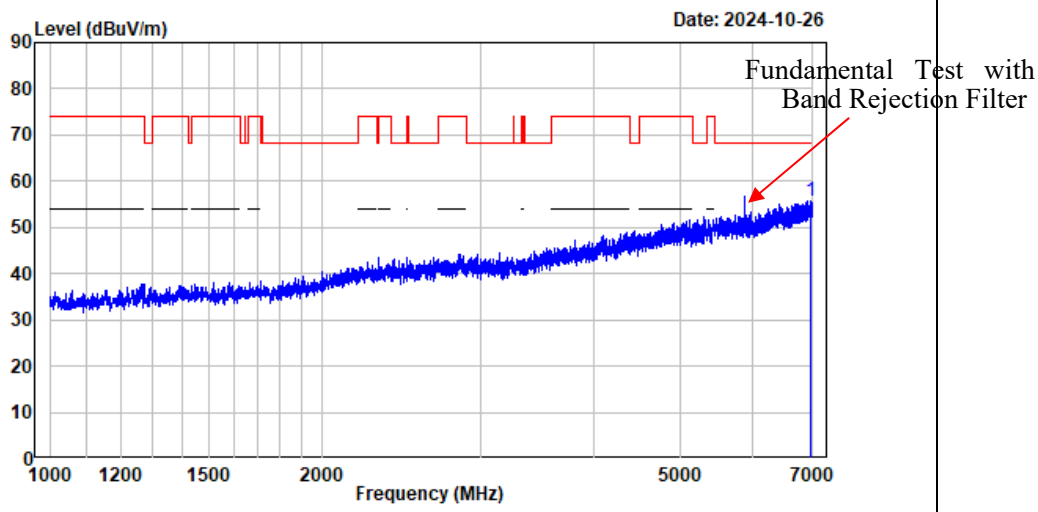
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	33.09	46.82	54.00	-7.18	Average
2	17982.120	24.48	21.20	45.68	54.00	-8.32	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

802.11ax20

Horizontal

1-7GHz

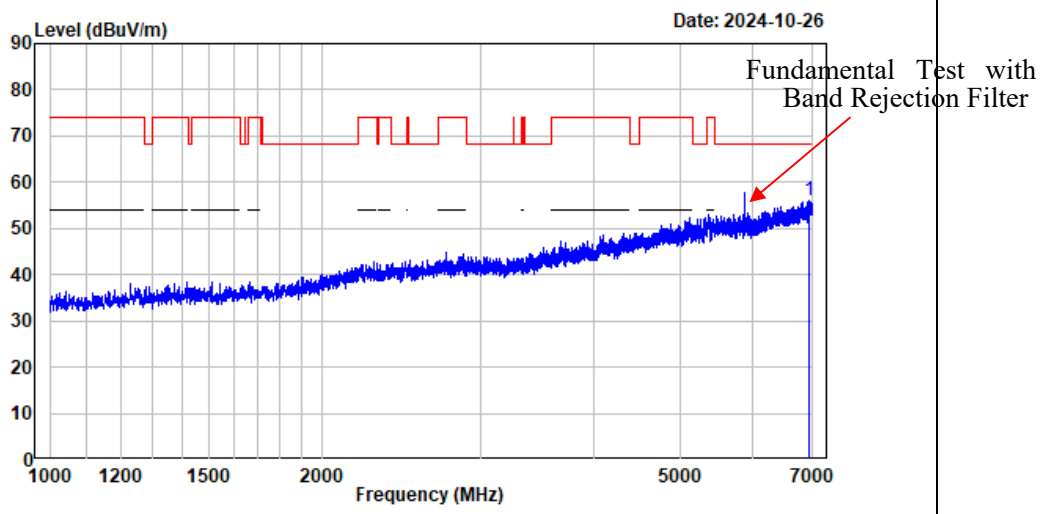


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6955.745	8.69	47.13	55.82	68.20	-12.38	Peak

Vertical

1-7GHz

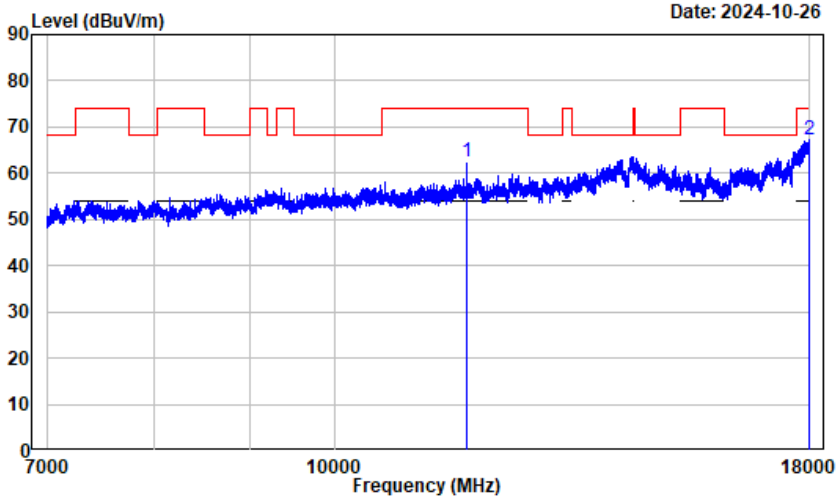


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6930.991	8.46	47.54	56.00	68.20	-12.20	Peak

Horizontal_Peak

7-18GHz

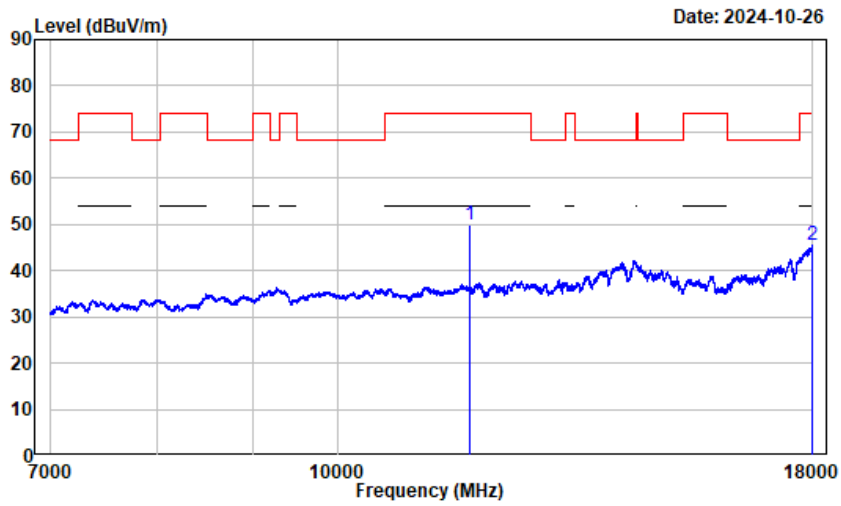


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	48.81	62.54	74.00	-11.46	Peak
2	17979.370	24.47	42.93	67.40	74.00	-6.60	Peak

Horizontal_Average

7-18GHz



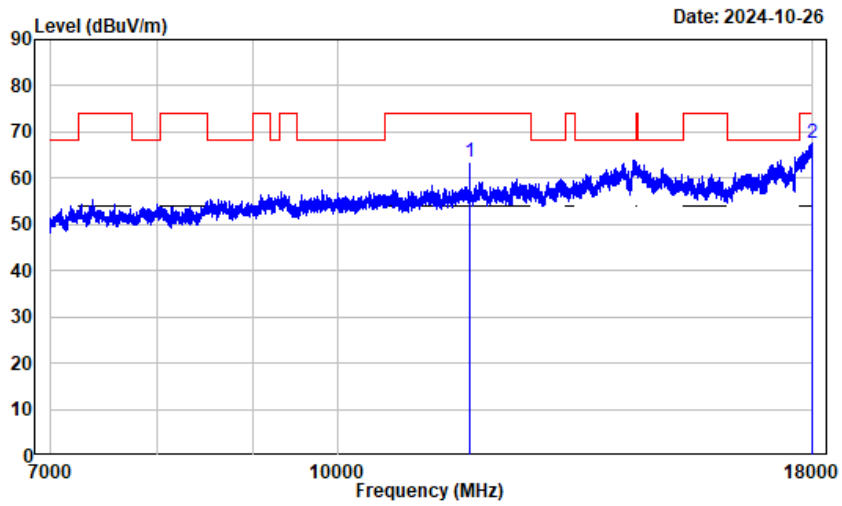
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	36.14	49.87	54.00	-4.13	Average
2	17998.630	24.61	20.75	45.36	54.00	-8.64	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

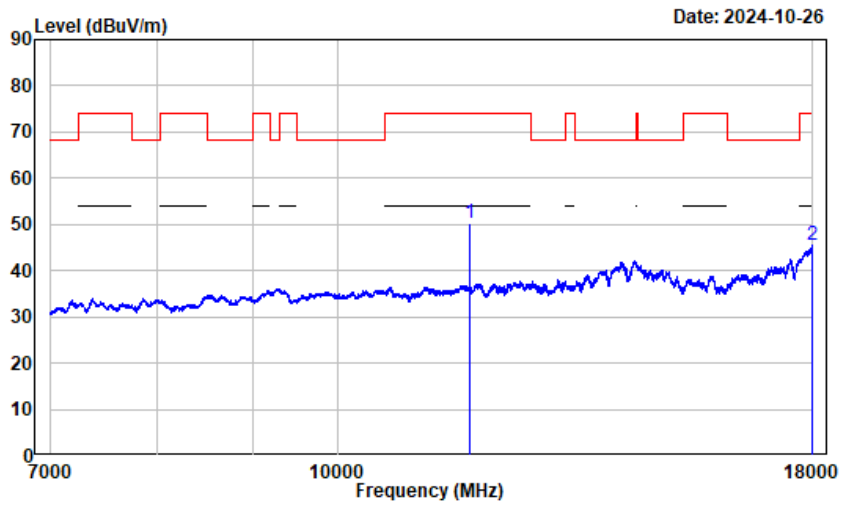


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	49.72	63.45	74.00	-10.55	Peak
2	17983.500	24.50	43.10	67.60	74.00	-6.40	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX20-5885

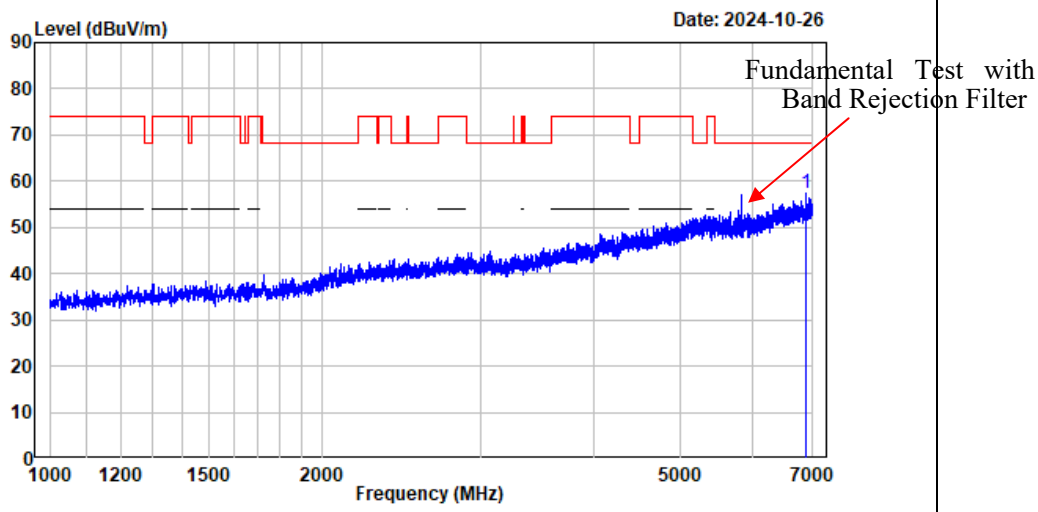
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11770.000	13.73	36.68	50.41	54.00	-3.59	Average
2	17986.250	24.52	21.10	45.62	54.00	-8.38	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

802.11ax40

Horizontal

1-7GHz

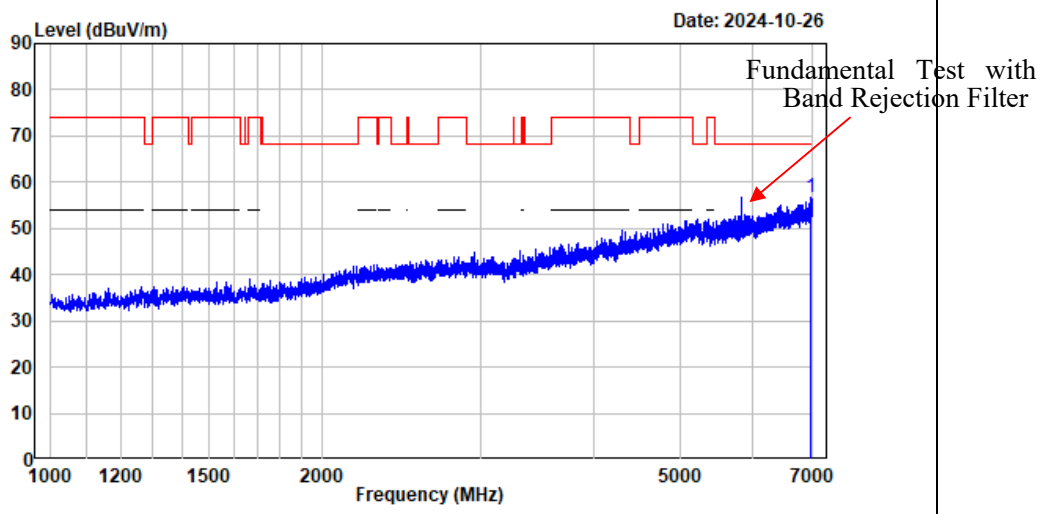


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6888.236	8.03	49.53	57.56	68.20	-10.64	Peak

Vertical

1-7GHz

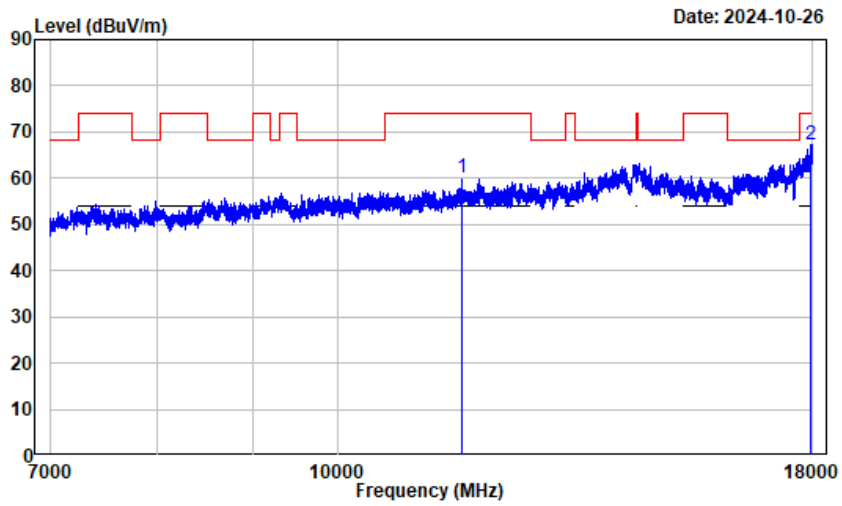


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6976.747	8.65	47.98	56.63	68.20	-11.57	Peak

Horizontal_Peak

7-18GHz

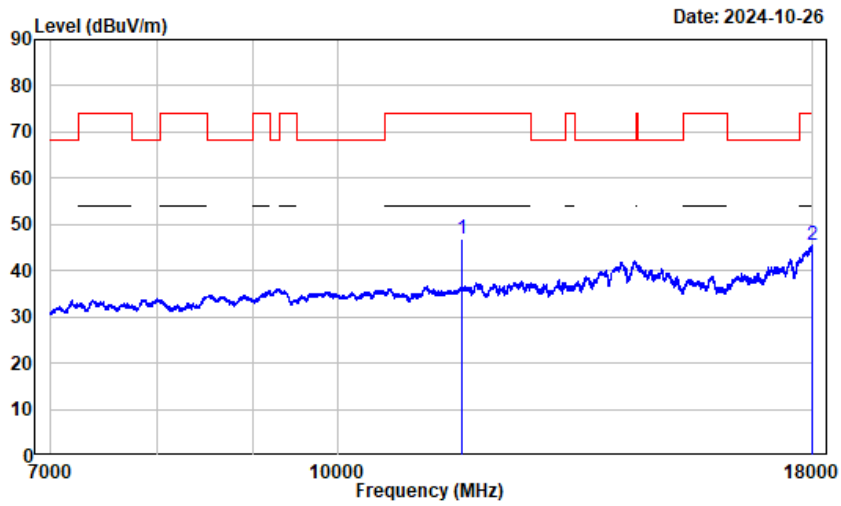


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	46.24	60.03	74.00	-13.97	Peak
2	17965.620	24.38	42.93	67.31	74.00	-6.69	Peak

Horizontal_Average

7-18GHz



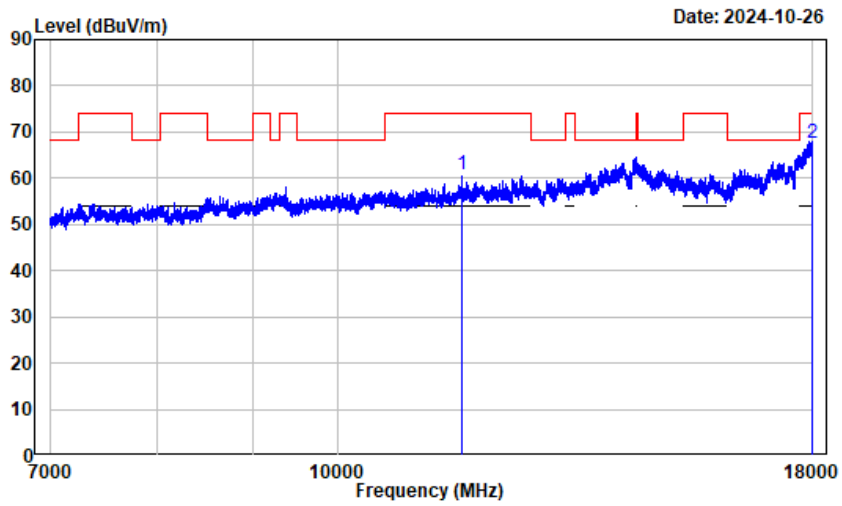
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	32.99	46.78	54.00	-7.22	Average
2	17995.880	24.59	20.76	45.35	54.00	-8.65	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

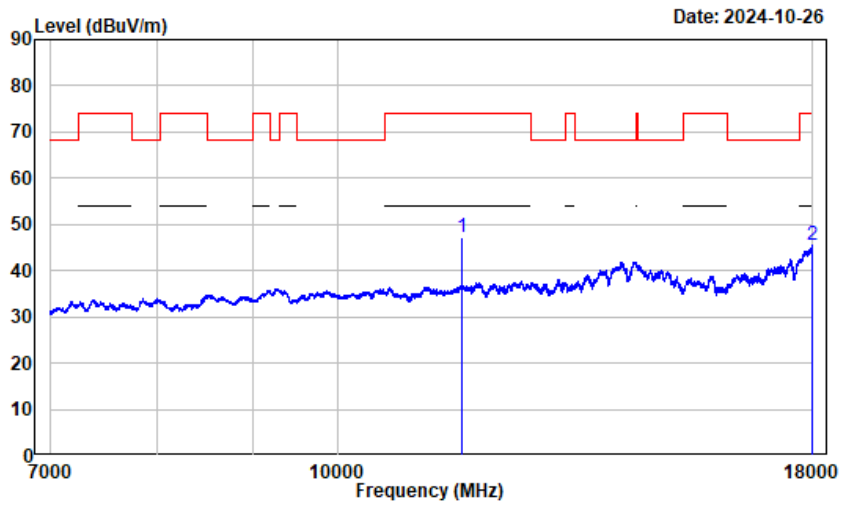


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	46.87	60.66	74.00	-13.34	Peak
2	17994.500	24.58	43.01	67.59	74.00	-6.41	Peak

Vertical_Average

7-18GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX40-5835

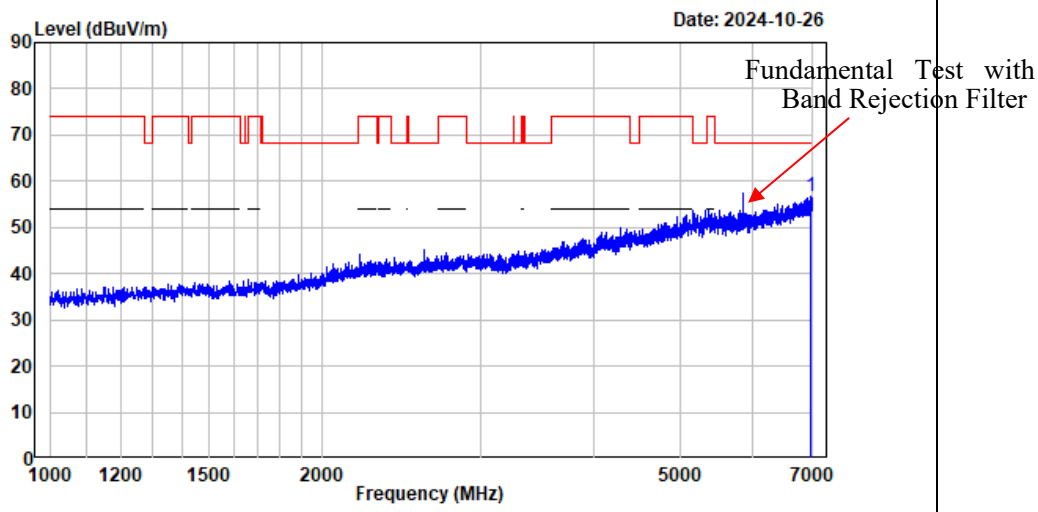
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11670.000	13.79	33.35	47.14	54.00	-6.86	Average
2	17991.750	24.56	21.00	45.56	54.00	-8.44	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

802.11ax80

Horizontal

1-7GHz

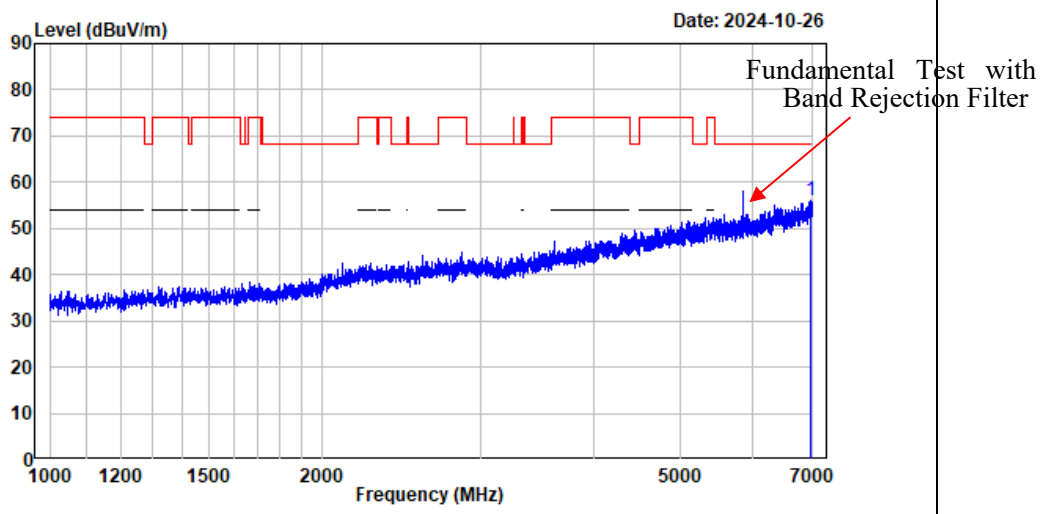


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6959.495	8.68	47.87	56.55	68.20	-11.65	Peak

Vertical

1-7GHz

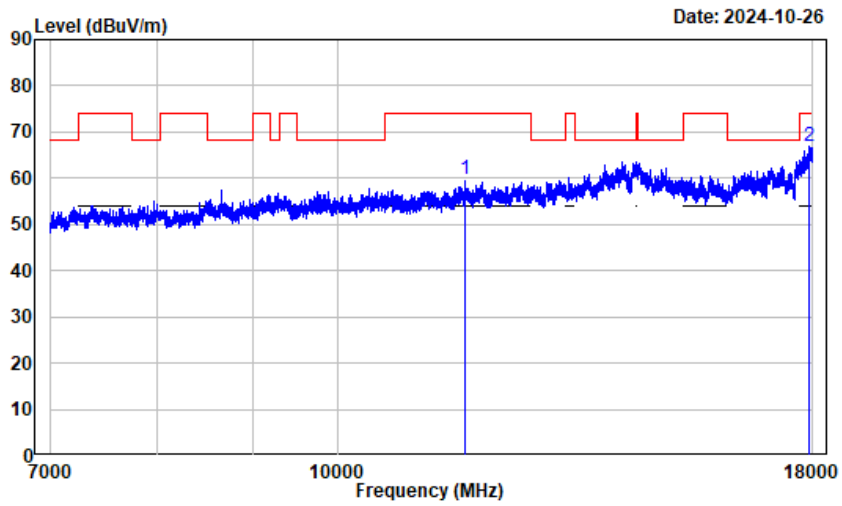


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	6975.997	8.66	47.38	56.04	68.20	-12.16	Peak

Horizontal_Peak

7-18GHz

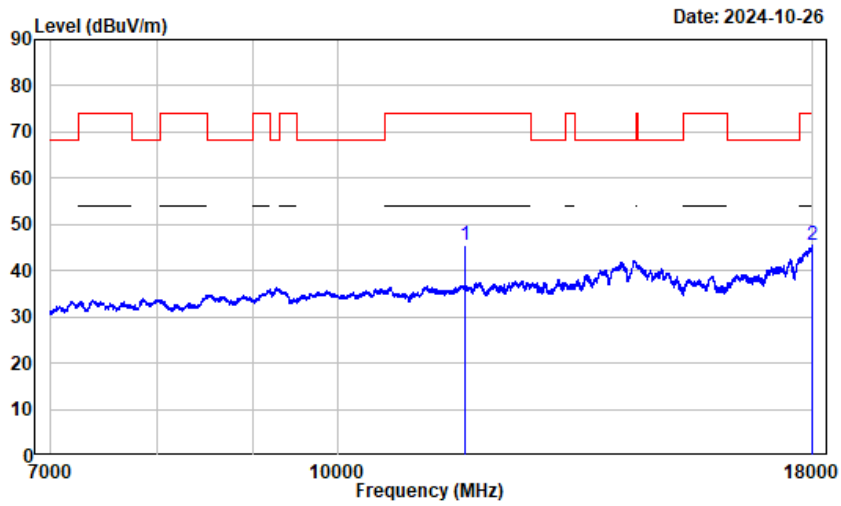


Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	45.98	59.71	74.00	-14.29	Peak
2	17929.870	24.12	42.82	66.94	74.00	-7.06	Peak

Horizontal_Average

7-18GHz



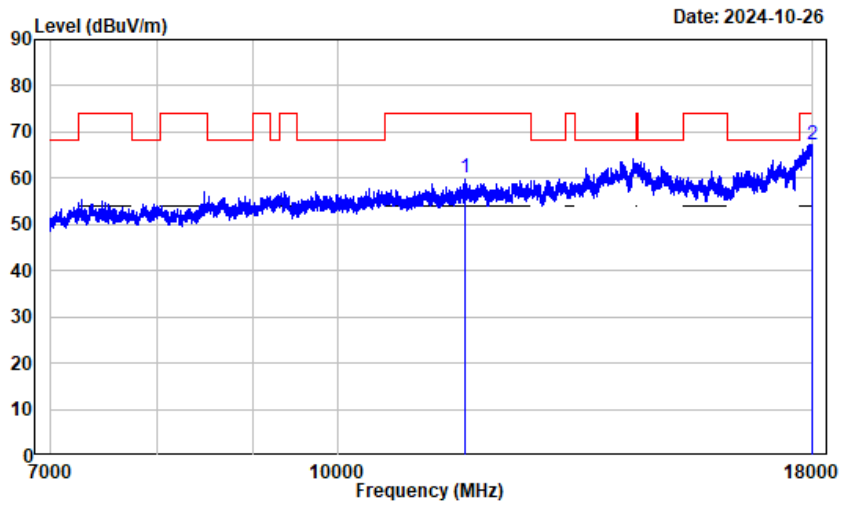
Condition : Horizontal
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	31.75	45.48	54.00	-8.52	Average
2	17995.880	24.59	20.77	45.36	54.00	-8.64	Average

Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

Vertical_Peak

7-18GHz

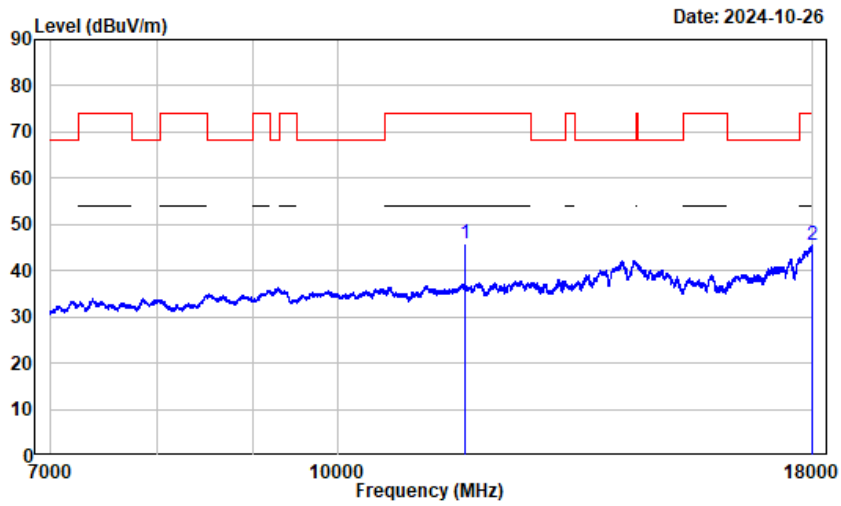


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	46.30	60.03	74.00	-13.97	Peak
2	17982.120	24.48	42.84	67.32	74.00	-6.68	Peak

Vertical_Average

7-18GHz

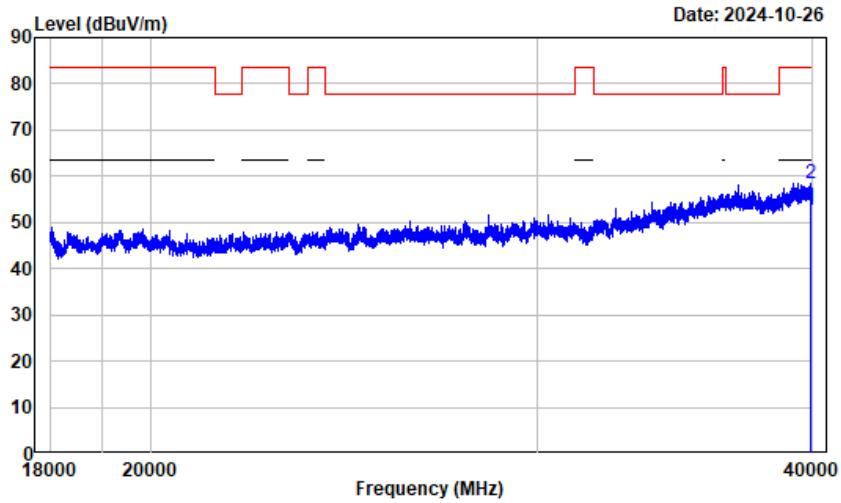


Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-AX80-5855

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	11710.000	13.73	32.03	45.76	54.00	-8.24	Average
2	17994.500	24.58	20.99	45.57	54.00	-8.43	Average

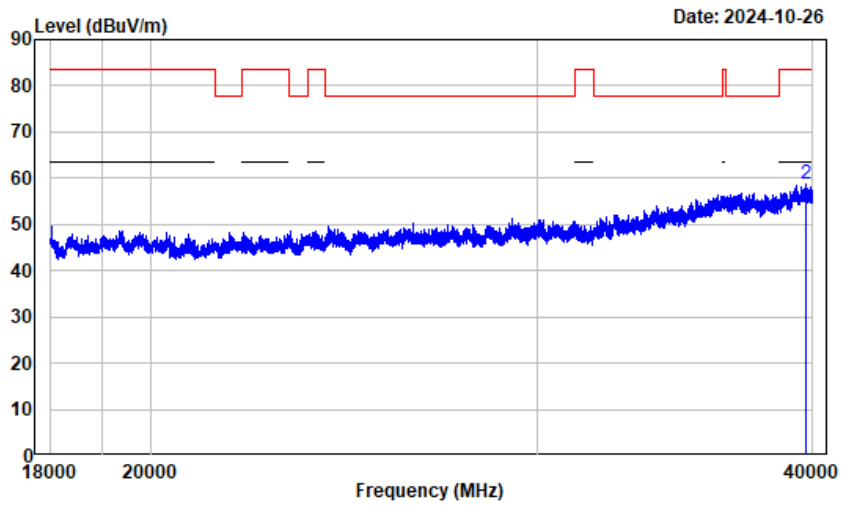
Note: Spectrum analyzer setting: RBW=1 MHz, VBW=5 kHz

18-40GHz (*Only test with the worst harmonic margin***):**

Horizontal	
18-40GHz	 Condition : Horizontal Project No.: 2401Y48404E-RF Tester : Zenos Qiao Note : 5GWiFi-ANT0-A-5885 Freq Factor Read Level Level Limit Line Over Limit Remark MHz dB/m dBuV dBuV/m dBuV/m dB 1 39909.240 22.55 30.63 53.18 63.50 -10.32 Average 2 39909.240 22.55 35.90 58.45 83.50 -25.05 Peak

Vertical

18-40GHz



Condition : Vertical
Project No.: 2401Y48404E-RF
Tester : Zenos Qiao
Note : 5GWiFi-ANT0-A-5885

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	39722.210	22.61	30.82	53.43	63.50	-10.07	Average
2	39722.210	22.61	36.01	58.62	83.50	-24.88	Peak

FCC §15.407(a), (e) - 26 dB & 6dB EMISSION BANDWIDTH

Applicable Standard

Within the 5.850-5.895 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

According to KDB789033 D02 section II.C and section II.D

1. Minimum Emission Bandwidth for the band 5.850-5.895 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × 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.

2. 99% Occupied Bandwidth:

According to ANSI C63.10-2013 Section 12.4.2&6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

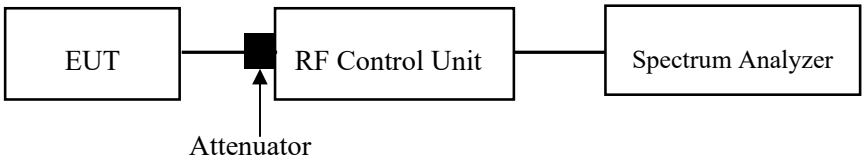
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning

at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101 kPa

The testing was performed by Lee Li on 2024-10-31.

EUT operation mode: Transmitting

Test Result: Compliant. Please refer to the Appendix.

FCC §15.407(a) - CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

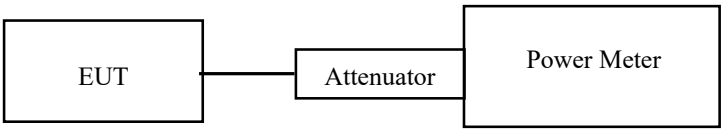
For an indoor access point operating in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 20 dBm e.i.r.p. in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. Indoor access points operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 36 dBm.

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method PM-G should be applied

a. Place the EUT on a bench and set it in transmitting mode.
b. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.



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.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	55 %
ATM Pressure:	101 kPa

The testing was performed by Lee Li on 2024-10-31.

EUT operation mode: Transmitting

Test Result: Compliant. Please refer to the Appendix.

FCC §15.407(a) - POWER SPECTRAL DENSITY

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Duty cycle ≥98%

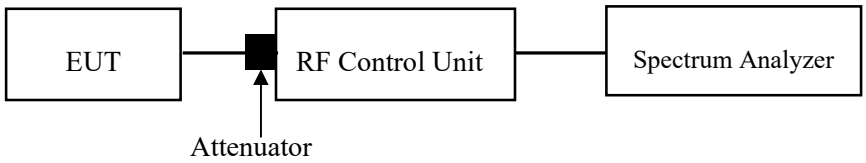
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-1 should be applied.

Duty cycle <98%, duty cycle variations are less than ±2%

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied.

Duty cycle <98%, duty cycle variations exceed ±2%

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 should be applied.



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.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	55 %
ATM Pressure:	101 kPa

The testing was performed by Lee Li on 2024-10-31.

EUT operation mode: Transmitting

Test Result: Compliant. Please refer to the Appendix.

EUT PHOTOGRAPHS

Please refer to the attachment 2401Y48404E-RF External photo and 2401Y48404E-RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2401Y48404E-RFC Test Setup photo.

APPENDIX

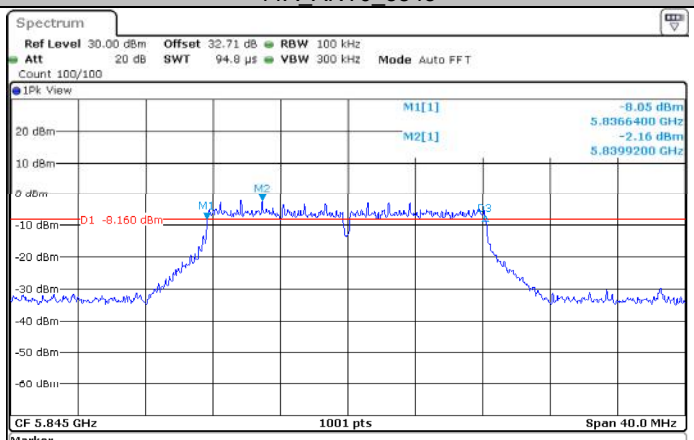
Appendix A: Min emission bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	6dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	ANT0	5845	16.48	5836.64	5853.12	0.5	PASS
	ANT1	5845	16.52	5836.68	5853.20	0.5	PASS
	ANT0	5865	16.60	5856.64	5873.24	0.5	PASS
	ANT1	5865	16.60	5856.64	5873.24	0.5	PASS
	ANT0	5885	16.56	5876.64	5893.20	0.5	PASS
	ANT1	5885	16.60	5876.64	5893.24	0.5	PASS
11AC20MIMO	ANT0	5845	17.80	5836.04	5853.84	0.5	PASS
	ANT1	5845	17.80	5836.04	5853.84	0.5	PASS
	ANT0	5865	17.72	5856.12	5873.84	0.5	PASS
	ANT1	5865	17.64	5856.12	5873.76	0.5	PASS
	ANT0	5885	17.64	5876.12	5893.76	0.5	PASS
	ANT1	5885	17.64	5876.12	5893.76	0.5	PASS
11AC40MIMO	ANT0	5835	35.12	5817.40	5852.52	0.5	PASS
	ANT1	5835	34.08	5817.24	5851.32	0.5	PASS
	ANT0	5875	35.20	5857.40	5892.60	0.5	PASS
	ANT1	5875	35.36	5857.24	5892.60	0.5	PASS
11AC80MIMO	ANT0	5855	74.56	5817.40	5891.96	0.5	PASS
	ANT1	5855	76.00	5816.76	5892.76	0.5	PASS
11AX20MIMO	ANT0	5845	19.16	5835.36	5854.52	0.5	PASS
	ANT1	5845	19.12	5835.40	5854.52	0.5	PASS
	ANT0	5865	19.04	5855.44	5874.48	0.5	PASS
	ANT1	5865	19.12	5855.44	5874.56	0.5	PASS
	ANT0	5885	19.04	5875.44	5894.48	0.5	PASS
	ANT1	5885	19.20	5875.32	5894.52	0.5	PASS
11AX40MIMO	ANT0	5835	35.20	5817.40	5852.60	0.5	PASS
	ANT1	5835	36.32	5816.68	5853.00	0.5	PASS
	ANT0	5875	33.92	5858.68	5892.60	0.5	PASS
	ANT1	5875	35.28	5857.24	5892.52	0.5	PASS
11AX80MIMO	ANT0	5855	74.88	5817.72	5892.60	0.5	PASS
	ANT1	5855	77.60	5815.96	5893.56	0.5	PASS

Test Graphs

11A_ANT0_5845

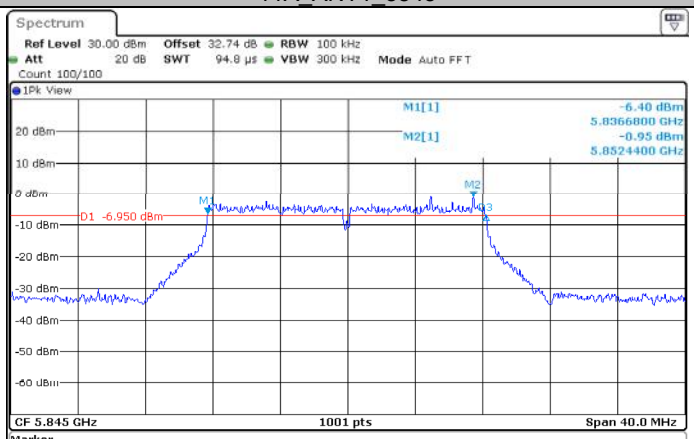


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.83664 GHz	-8.05 dBm		
M2		1	5.83992 GHz	-2.16 dBm		
D3	M1	1	16.48 MHz	1.12 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 04:46:19

11A_ANT1_5845

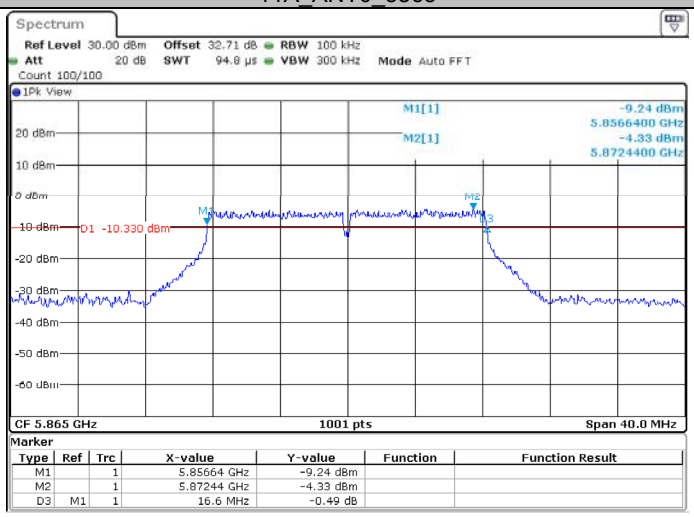


Marker

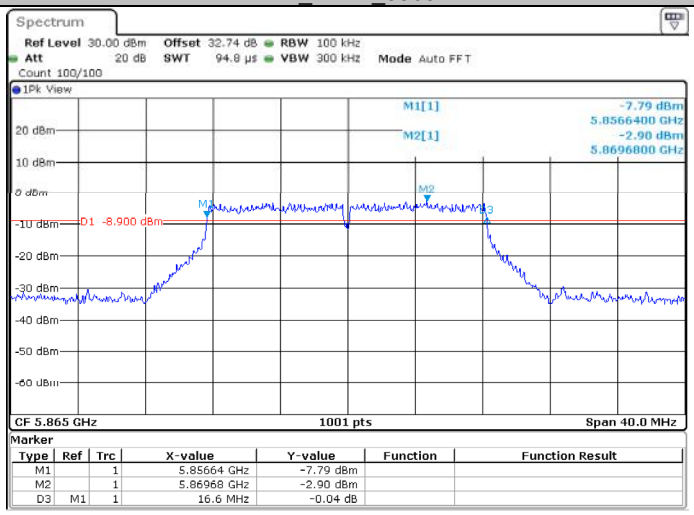
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.83668 GHz	-6.40 dBm		
M2		1	5.85244 GHz	-0.95 dBm		
D3	M1	1	16.52 MHz	-0.36 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 05:12:20

11A_ANT0_5865



11A_ANT1_5865



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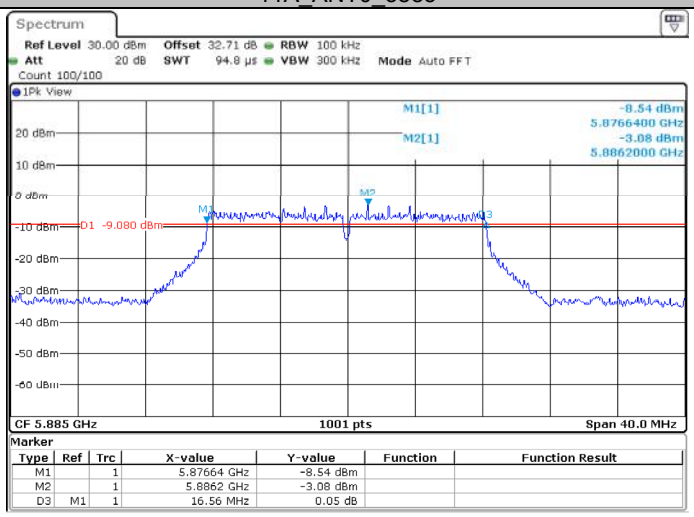

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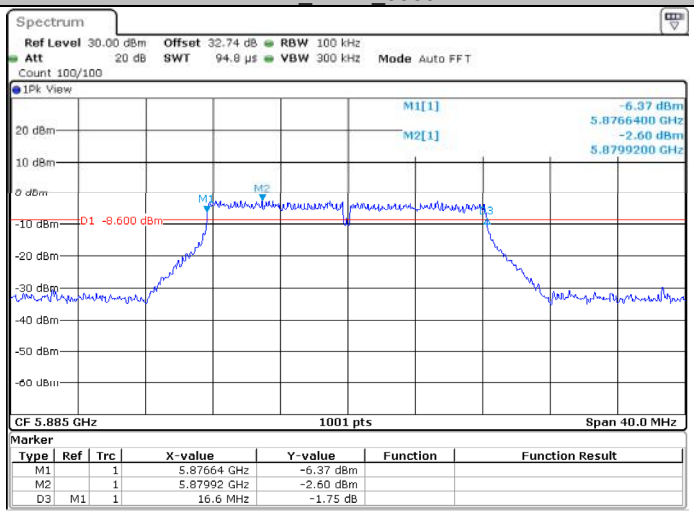

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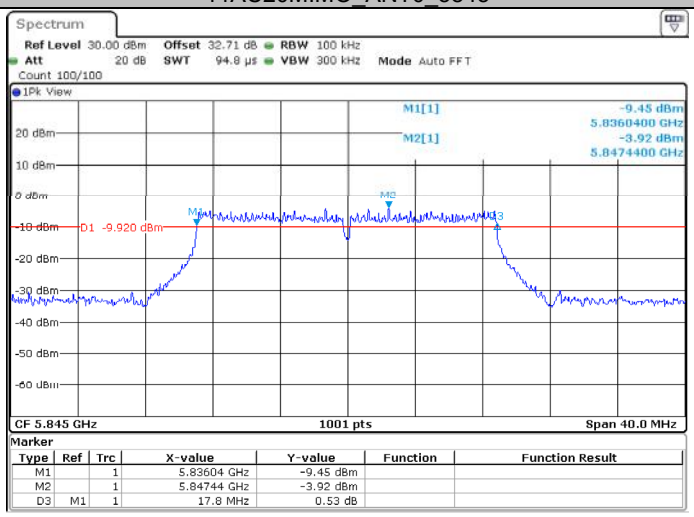

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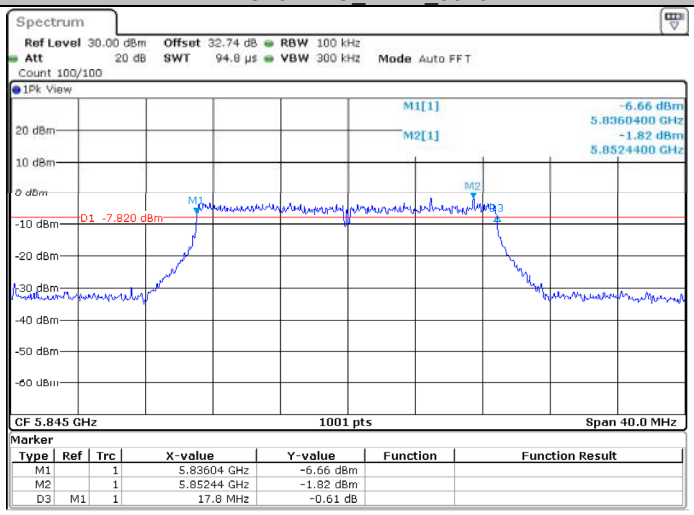

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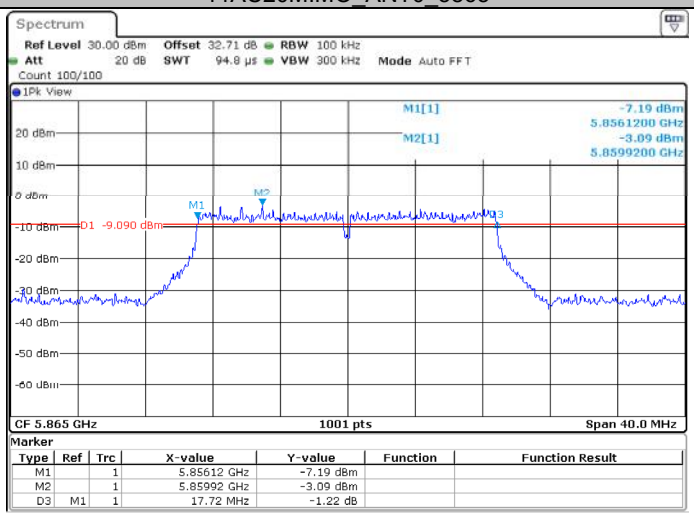

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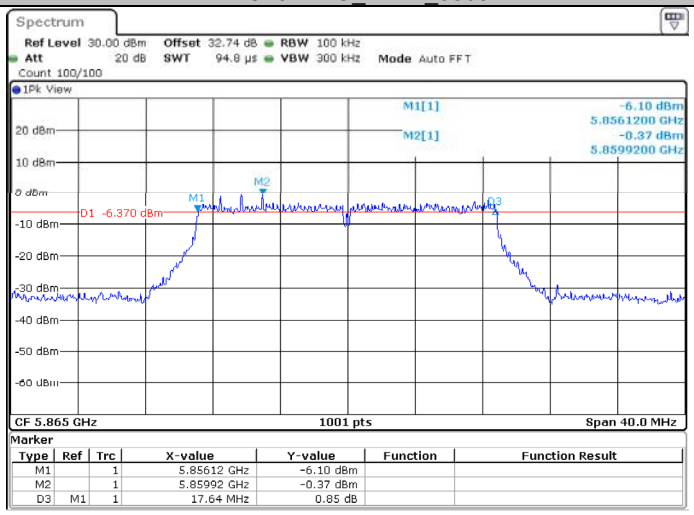

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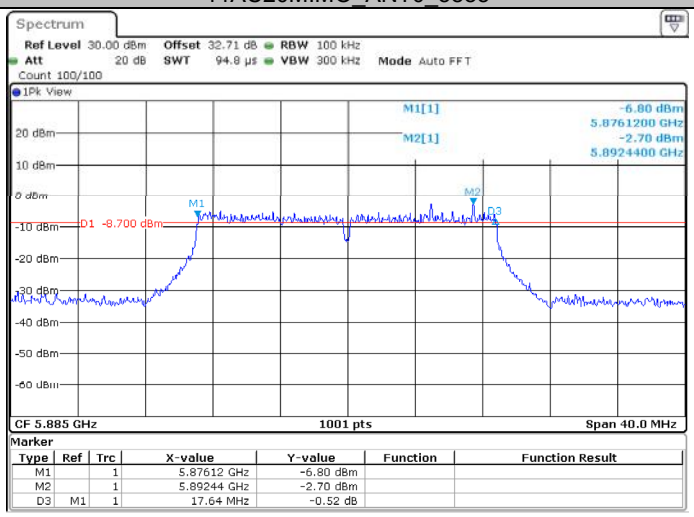

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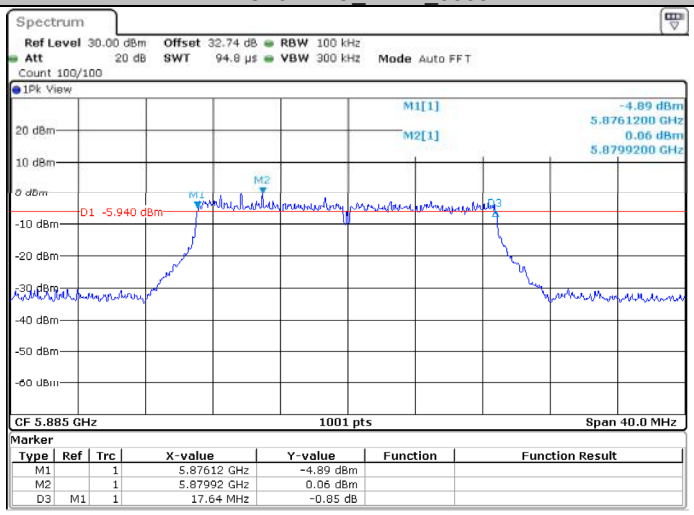
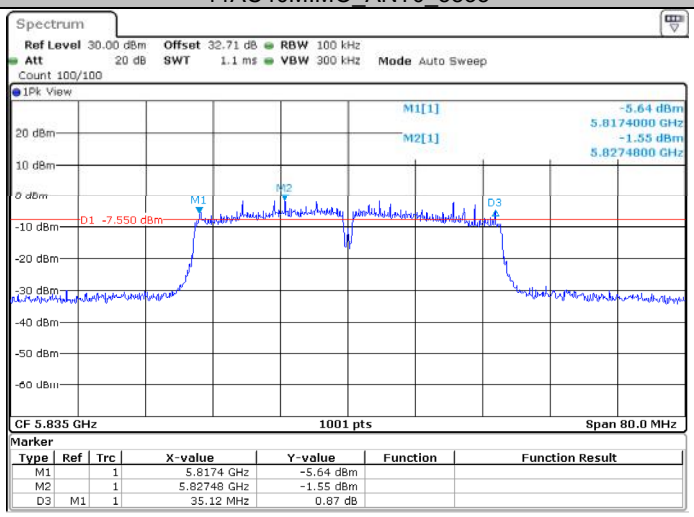


11AC40MIMO_ANT0_5835



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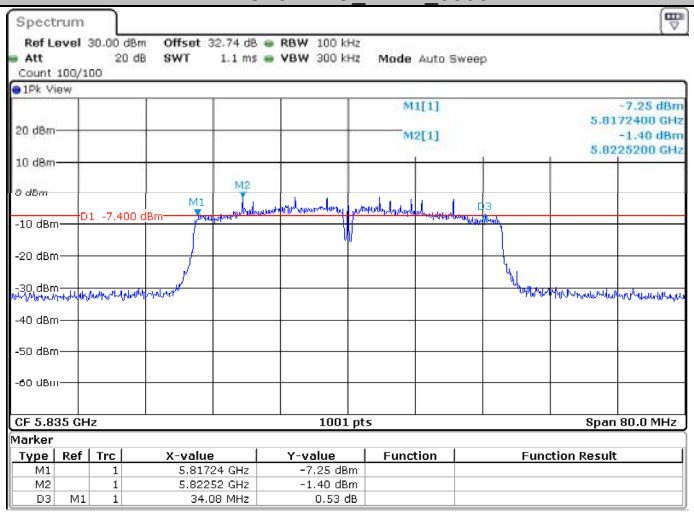

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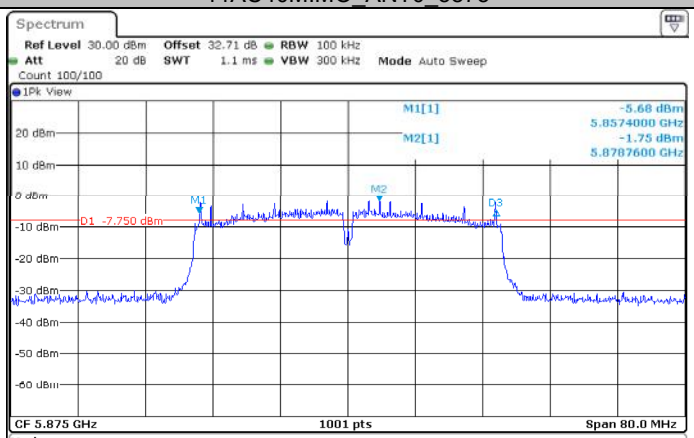

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.8574 GHz	-5.68 dBm		
M2		1	5.87876 GHz	-1.75 dBm		
D3	M1	1	35.2 MHz	1.08 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
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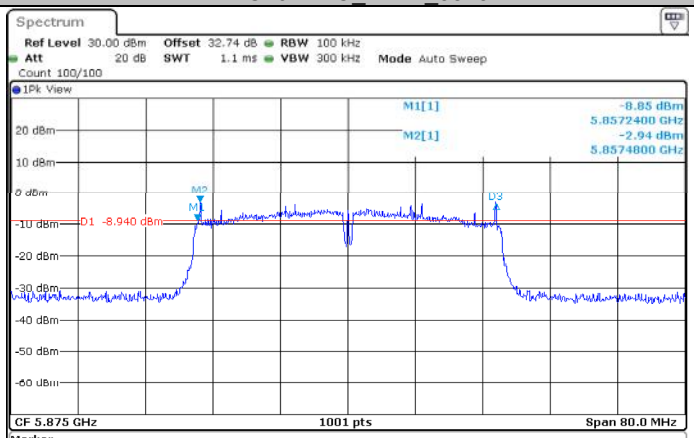
11AC40MIMO_ANT1_5875

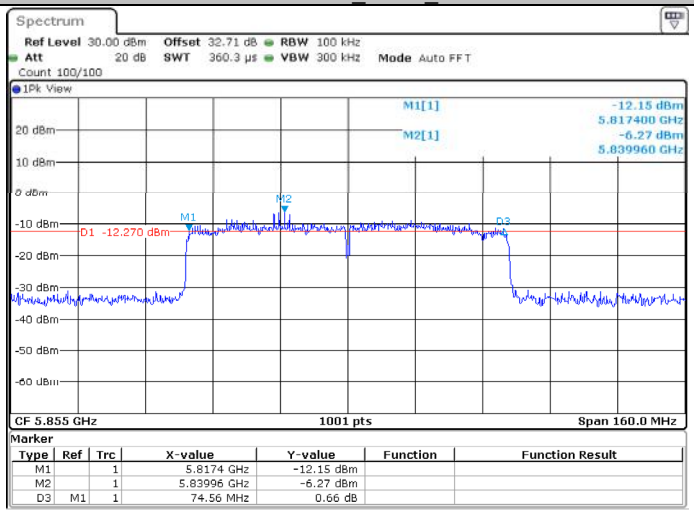


Marker

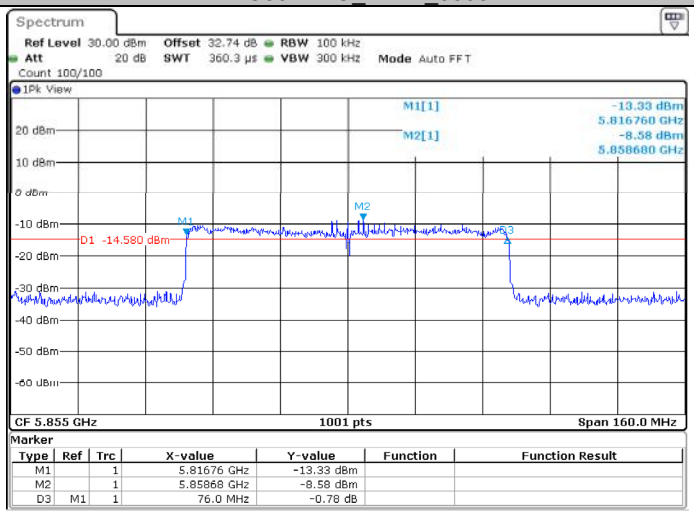
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.85724 GHz	-8.85 dBm		
M2		1	5.85748 GHz	-2.94 dBm		
D3	M1	1	35.36 MHz	5.34 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:40:38

11AC80MIMO_ANT0_5855



11AC80MIMO_ANT1_5855



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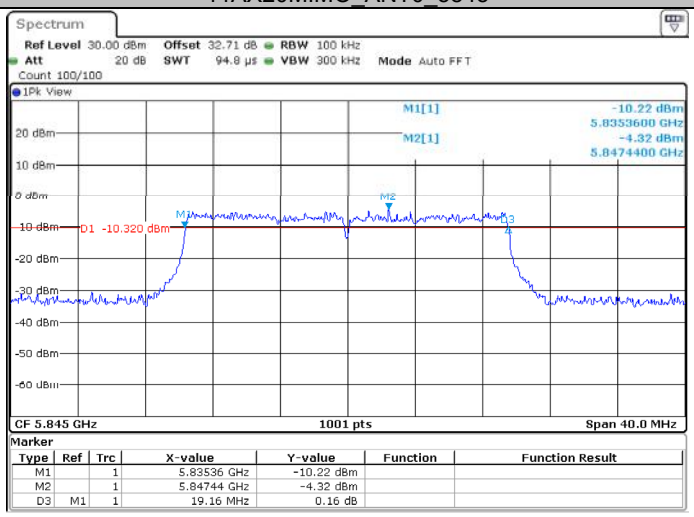

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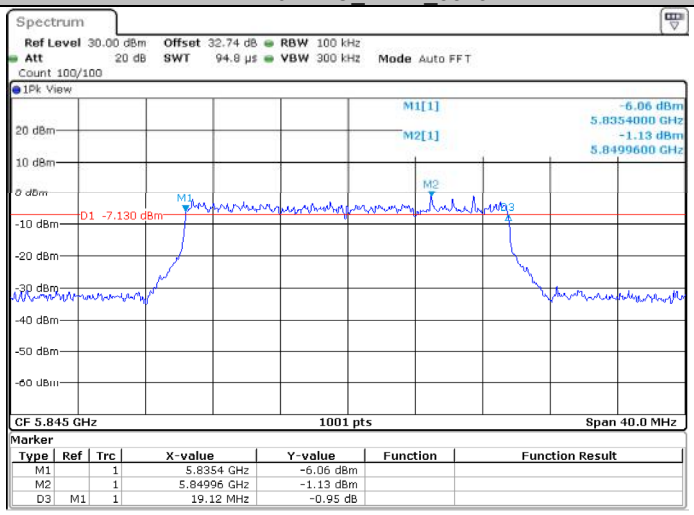

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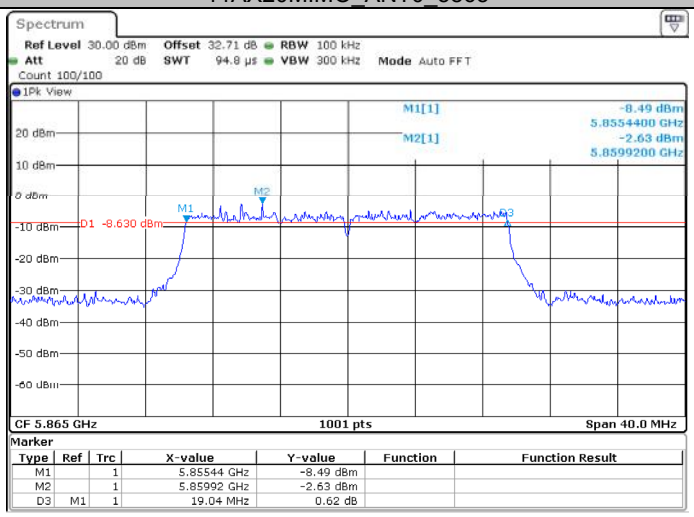

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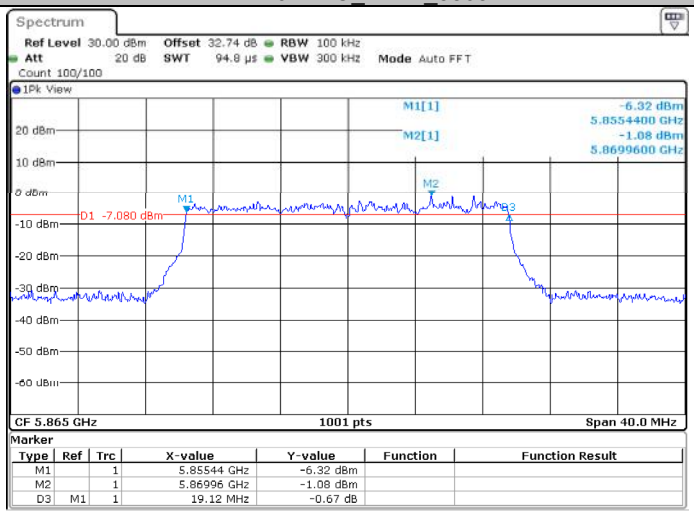
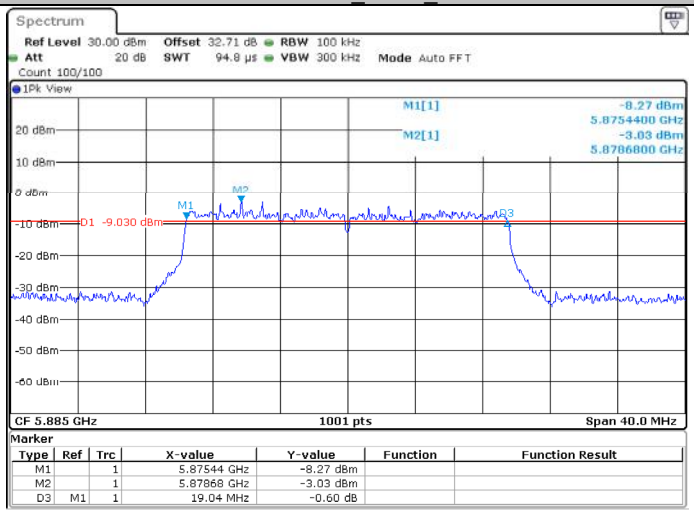


11AX20MIMO_ANT0_5885



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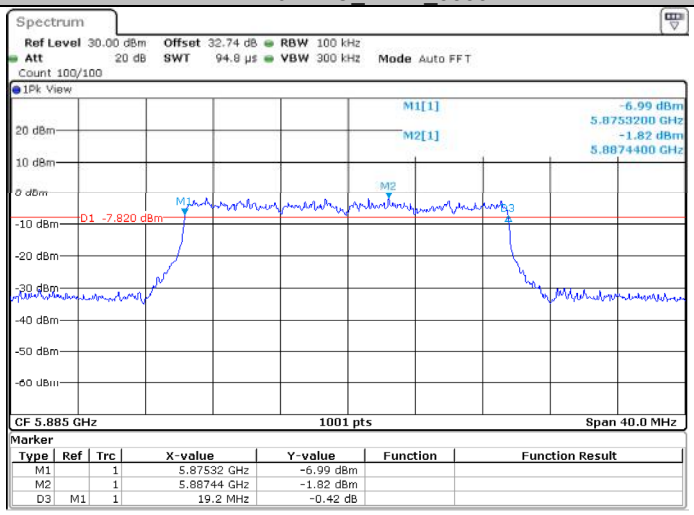
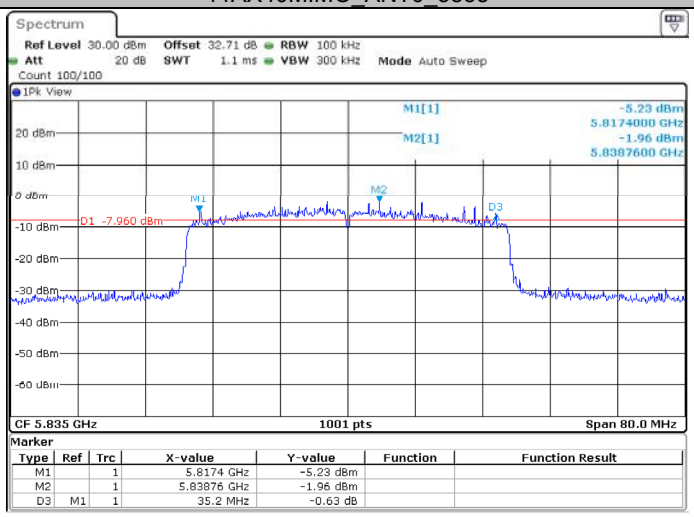


11AX40MIMO_ANT0_5835



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Date: 31.OCT.2024 08:02:54

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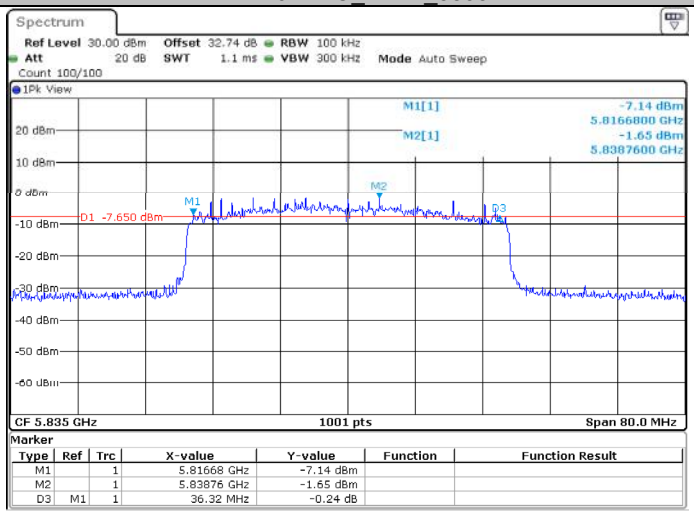
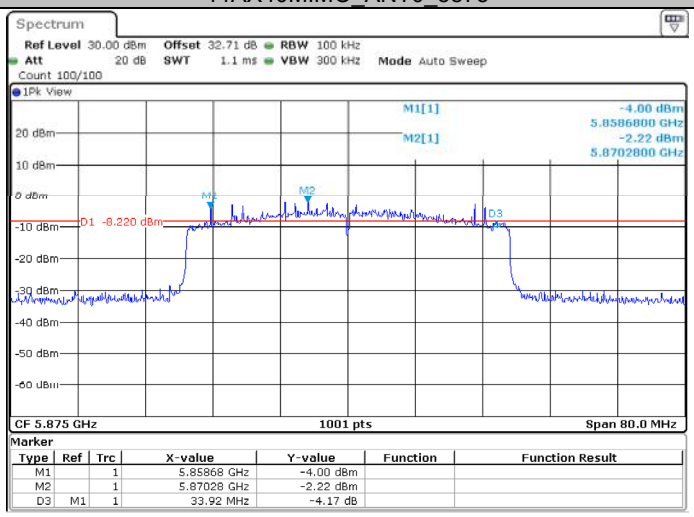
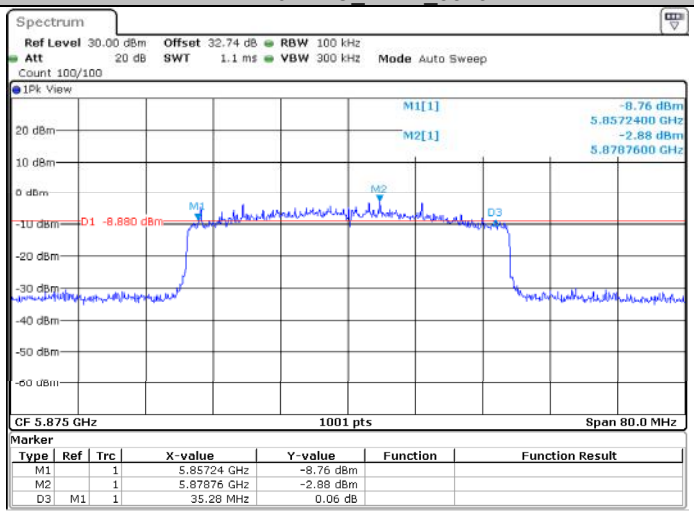


ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:03:54

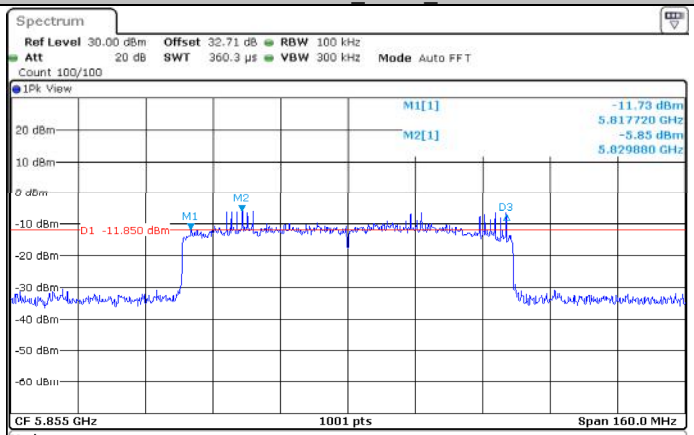
11AX40MIMO_ANT0_5875



11AX40MIMO_ANT1_5875



11AX80MIMO_ANT0_5855

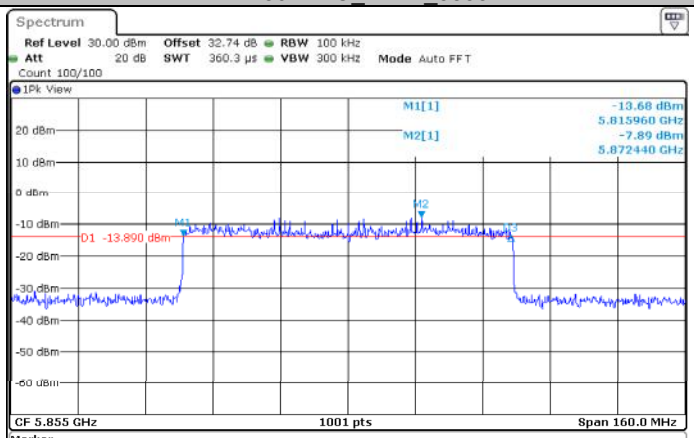


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.81772 GHz	-11.73 dBm		
M2		1	5.82988 GHz	-5.85 dBm		
D3	M1	1	74.88 MHz	4.60 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:23:08

11AX80MIMO_ANT1_5855



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.81596 GHz	-13.68 dBm		
M2		1	5.87244 GHz	-7.89 dBm		
D3	M1	1	77.6 MHz	0.19 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:24:08

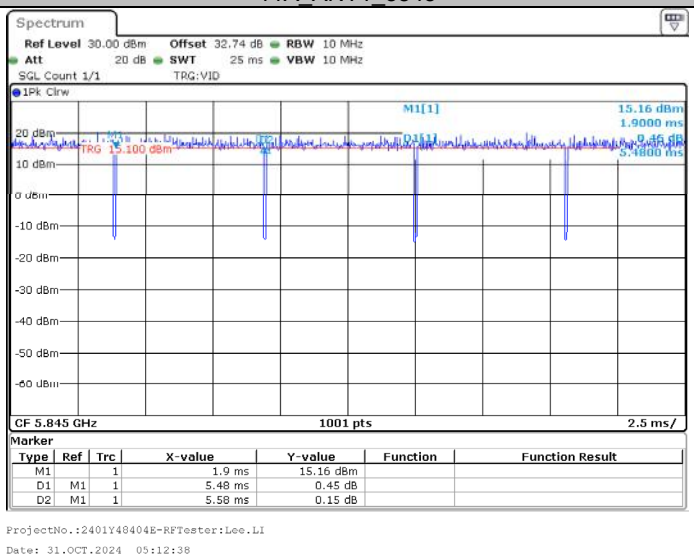
Appendix B: Duty Cycle

Test Result

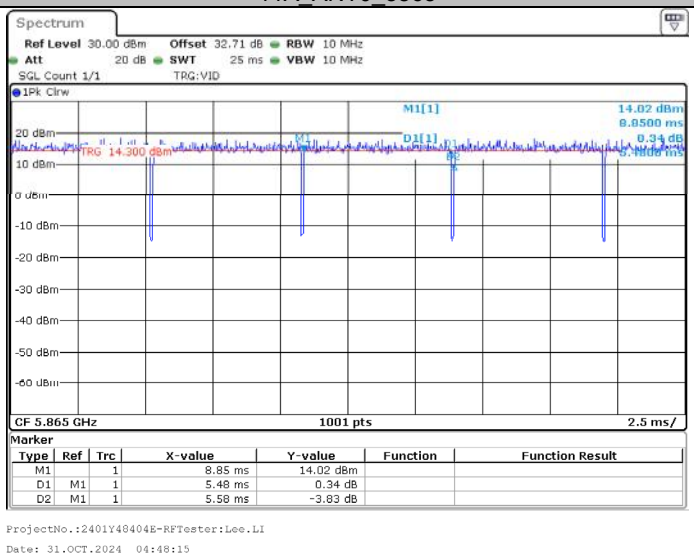
Test Mode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]	1/T [Hz]	VBW Setting [Hz]
11A	ANT0	5845	5.48	5.58	98.21	/	/	10
	ANT1	5845	5.48	5.58	98.21	/	/	10
	ANT0	5865	5.48	5.58	98.21	/	/	10
	ANT1	5865	5.48	5.58	98.21	/	/	10
	ANT0	5885	5.47	5.57	98.20	/	/	10
	ANT1	5885	5.48	5.58	98.21	/	/	10
11AC20MIMO	ANT0	5845	5.37	5.47	98.17	/	/	10
	ANT1	5845	5.40	5.48	98.54	/	/	10
	ANT0	5865	5.40	5.48	98.54	/	/	10
	ANT1	5865	5.38	5.48	98.18	/	/	10
	ANT0	5885	5.38	5.48	98.18	/	/	10
	ANT1	5885	5.40	5.47	98.72	/	/	10
11AC40MIMO	ANT0	5835	5.15	5.25	98.10	/	/	10
	ANT1	5835	5.18	5.28	98.11	/	/	10
	ANT0	5875	5.15	5.25	98.10	/	/	10
	ANT1	5875	5.15	5.25	98.10	/	/	10
11AC80MIMO	ANT0	5855	4.78	4.85	98.56	/	/	10
	ANT1	5855	4.75	4.85	97.94	0.09	211	300
11AX20MIMO	ANT0	5845	4.63	4.73	97.89	0.09	216	300
	ANT1	5845	4.65	4.75	97.89	0.09	215	300
	ANT0	5865	4.62	4.72	97.88	0.09	216	300
	ANT1	5865	4.65	4.75	97.89	0.09	215	300
	ANT0	5885	4.65	4.75	97.89	0.09	215	300
	ANT1	5885	4.65	4.75	97.89	0.09	215	300
11AX40MIMO	ANT0	5835	4.65	4.75	97.89	0.09	215	300
	ANT1	5835	4.63	4.73	97.89	0.09	216	300
	ANT0	5875	4.62	4.72	97.88	0.09	216	300
	ANT1	5875	4.63	4.73	97.89	0.09	216	300
11AX80MIMO	ANT0	5855	4.42	4.52	97.79	0.10	226	300
	ANT1	5855	4.45	4.52	98.45	/	/	10

Test Graphs

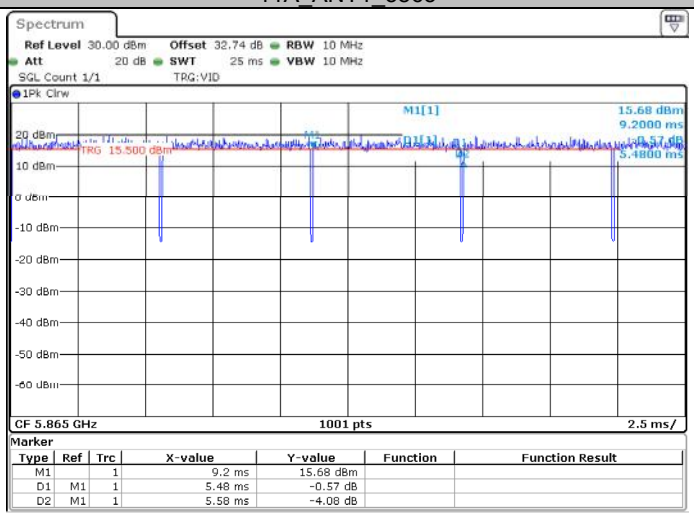
11A_ANT1_5845



11A_ANT0_5865

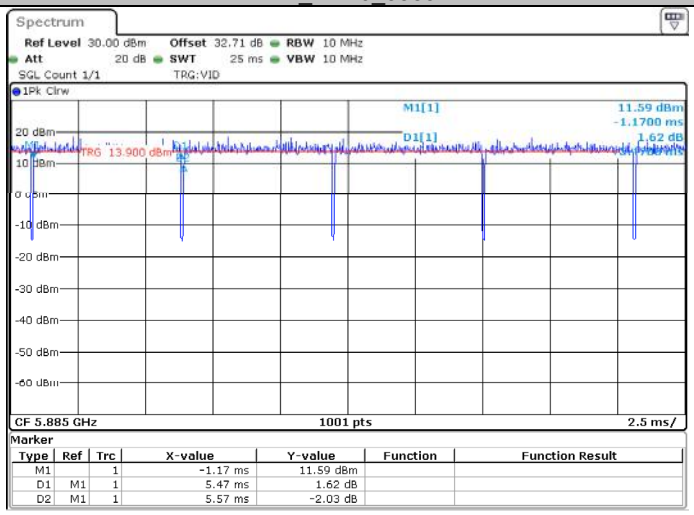


11A_ANT1_5865



ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 05:14:09

11A_ANT0_5885



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Date: 31.OCT.2024 04:49:47

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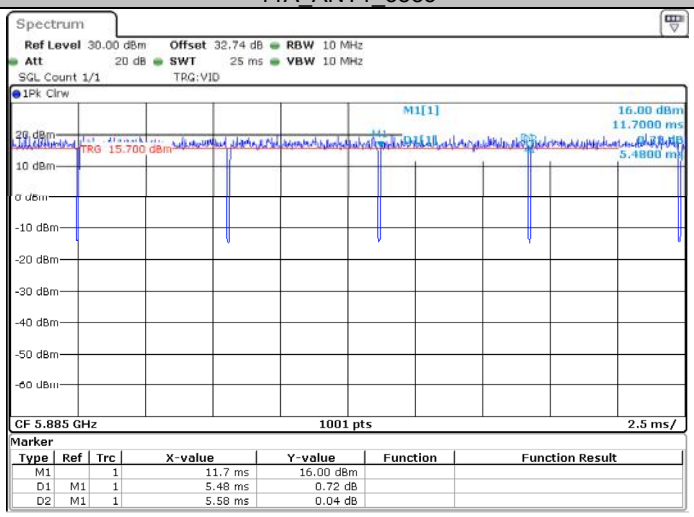
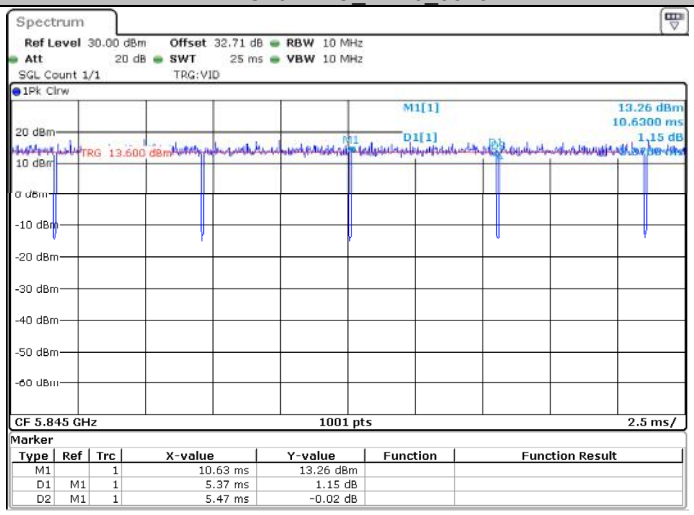


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	11.7 ms	16.00 dBm		
D1	M1	1	5.48 ms	0.72 dB		
D2	M1	1	5.58 ms	0.04 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 05:16:06

11AC20MIMO_ANT0_5845

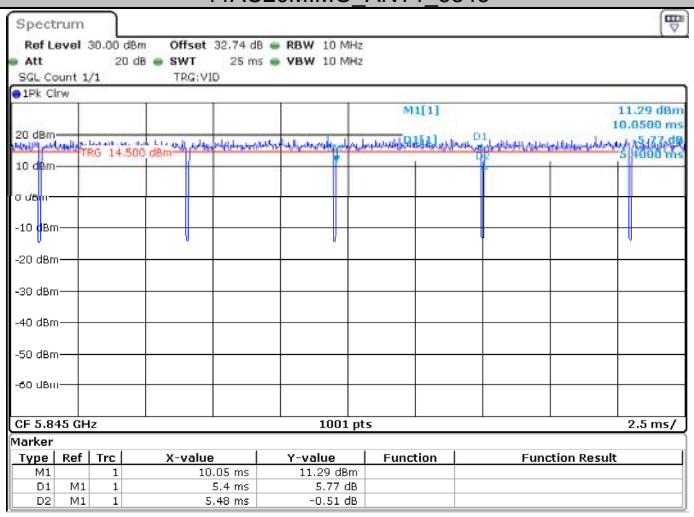


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	10.63 ms	13.26 dBm		
D1	M1	1	5.37 ms	1.15 dB		
D2	M1	1	5.47 ms	-0.02 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 05:57:11

11AC20MIMO_ANT1_5845



ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 05:58:11

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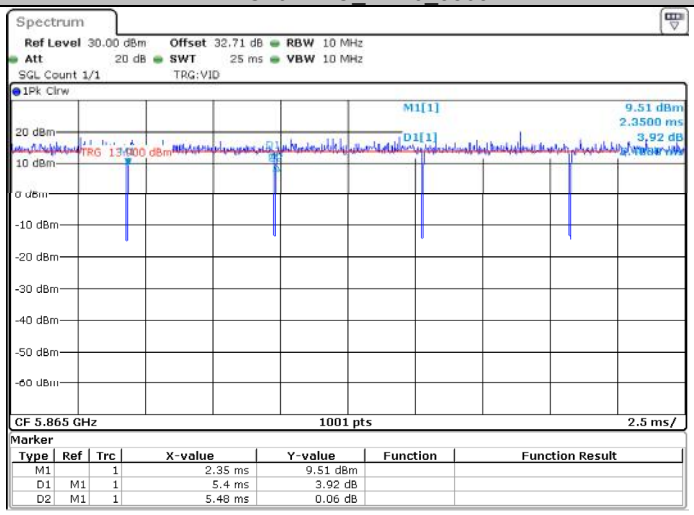

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:00:10

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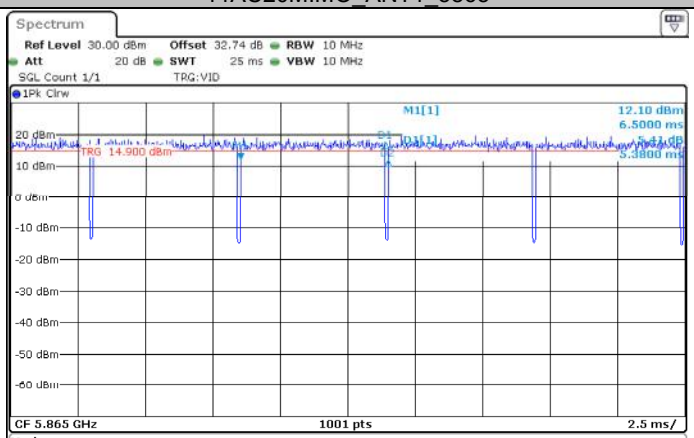
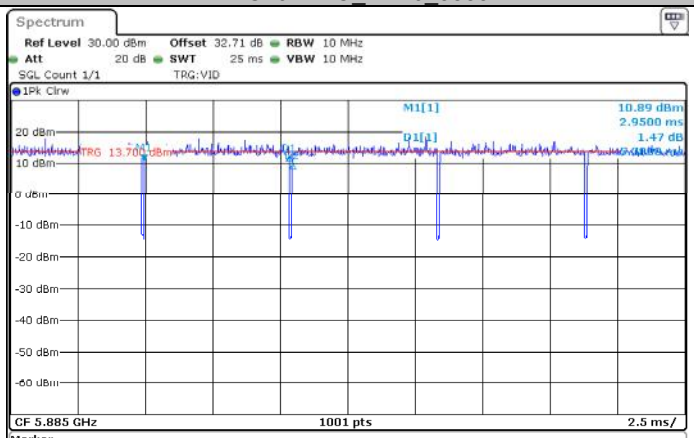


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	6.5 ms	12.10 dBm		
D1	M1	1	5.38 ms	5.41 dB		
D2	M1	1	5.48 ms	-0.13 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:01:10

11AC20MIMO_ANT0_5885

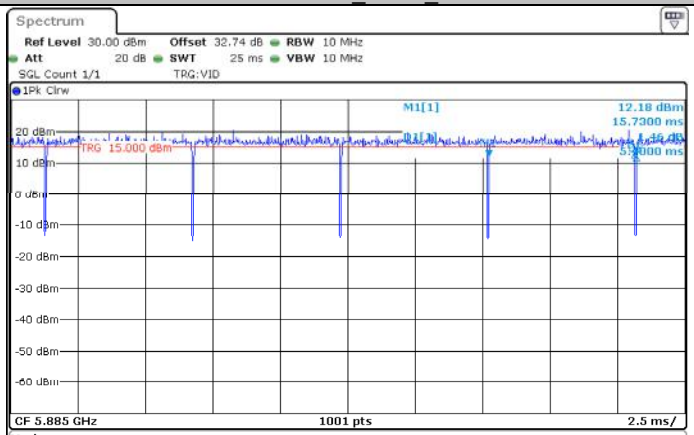


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.95 ms	10.89 dBm		
D1	M1	1	5.38 ms	1.47 dB		
D2	M1	1	5.48 ms	-0.87 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:02:48

11AC20MIMO_ANT1_5885

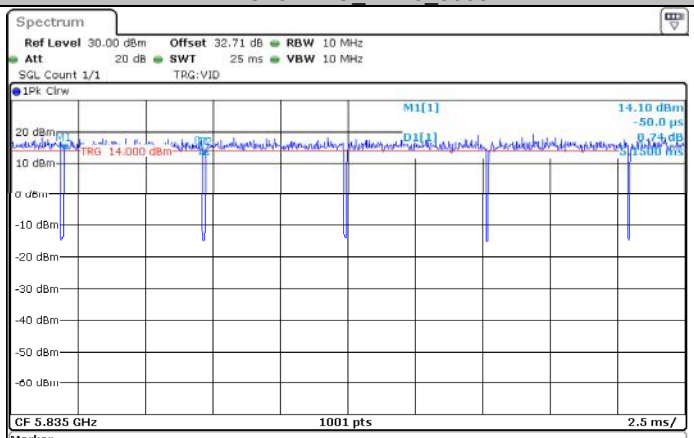


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	15.73 ms	12.18 dBm		
D1	M1	1	5.4 ms	1.46 dB		
D2	M1	1	5.47 ms	0.23 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:03:48

11AC40MIMO_ANT0_5835

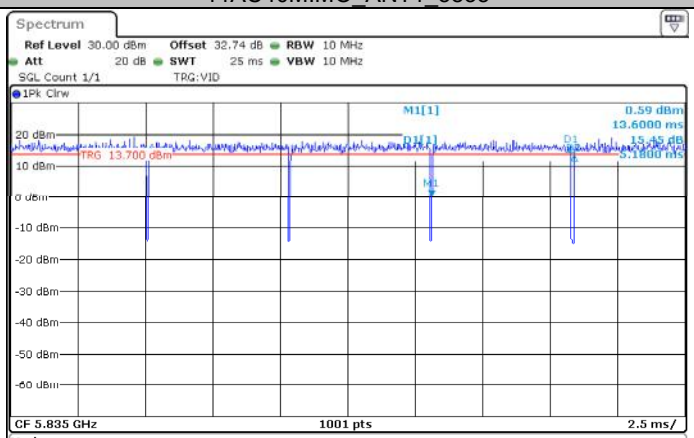


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	-50.0 µs	14.10 dBm		
D1	M1	1	5.15 ms	0.74 dB		
D2	M1	1	5.25 ms	0.37 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:37:29

11AC40MIMO_ANT1_5835

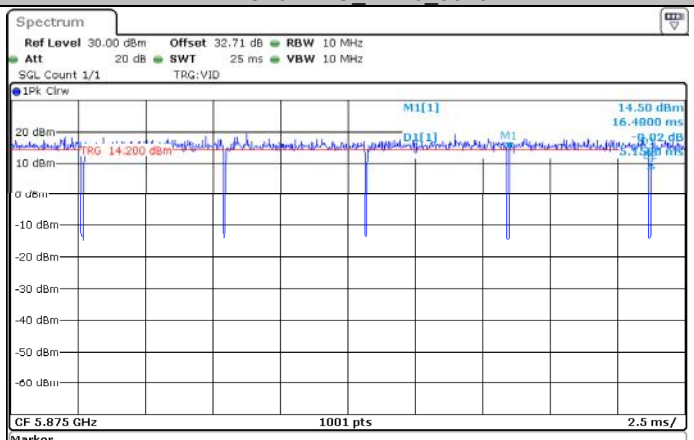


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	13.6 ms	0.59 dBm		
D1	M1	1	5.18 ms	15.45 dB		
D2	M1	1	5.28 ms	12.84 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:38:28

11AC40MIMO_ANT0_5875

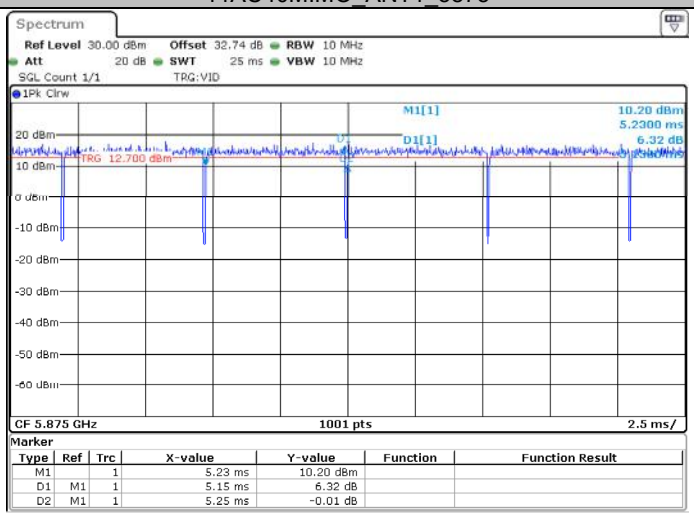


Marker

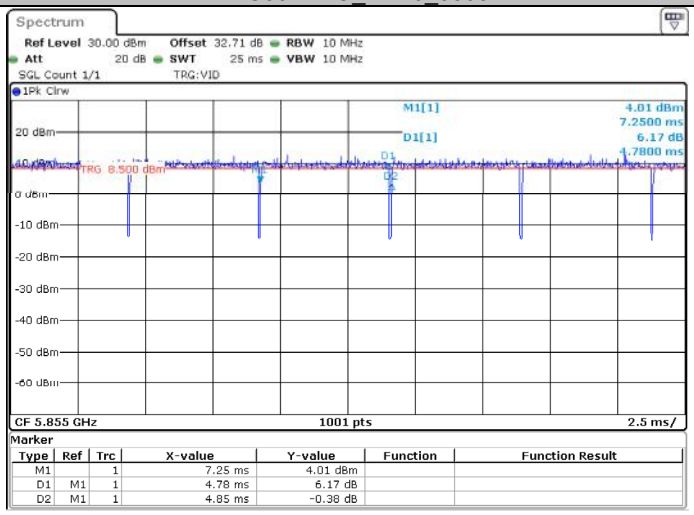
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	16.48 ms	14.50 dBm		
D1	M1	1	5.15 ms	-0.02 dB		
D2	M1	1	5.25 ms	-4.23 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:39:56

11AC40MIMO_ANT1_5875



11AC80MIMO_ANT0_5855



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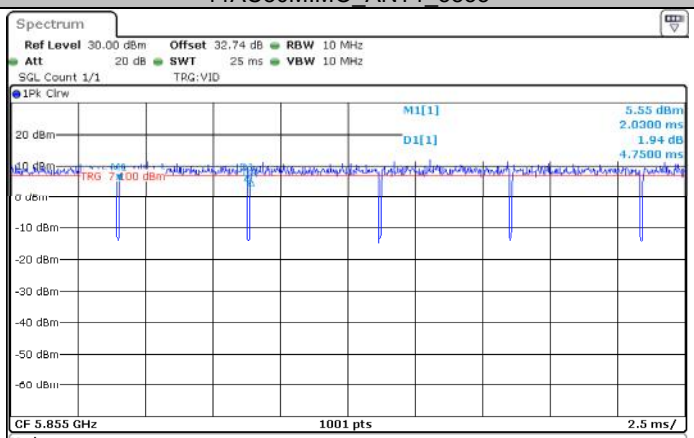
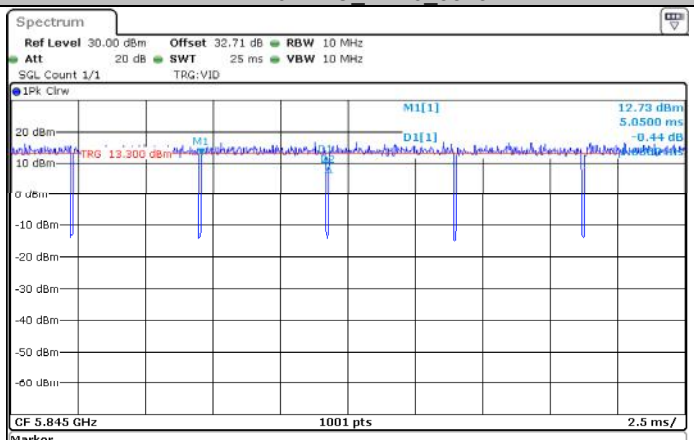


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.03 ms	5.55 dBm		
D1	M1	1	4.75 ms	1.94 dB		
D2	M1	1	4.85 ms	0.28 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 06:58:50

11AX20MIMO_ANT0_5845

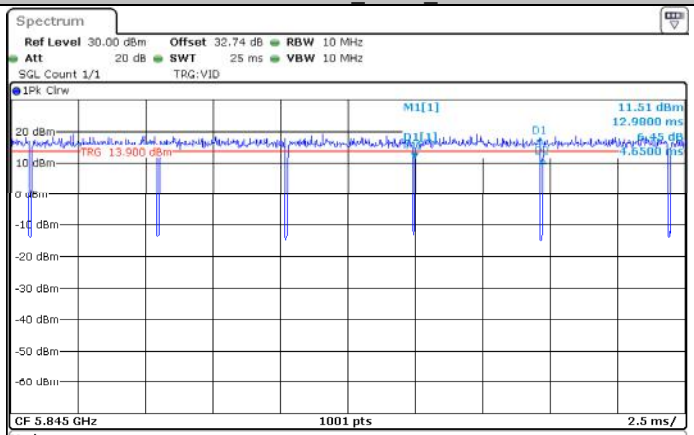


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.05 ms	12.73 dBm		
D1	M1	1	4.63 ms	-0.44 dB		
D2	M1	1	4.73 ms	-3.62 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 07:32:35

11AX20MIMO_ANT1_5845

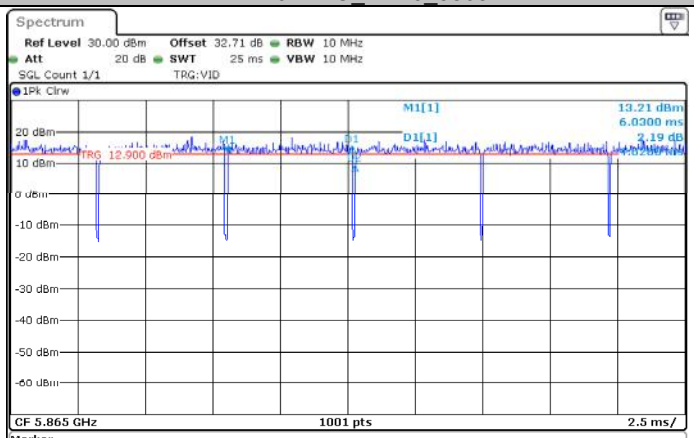


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	12.98 ms	11.51 dBm		
D1	M1	1	4.65 ms	6.45 dB		
D2	M1	1	4.75 ms	0.07 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 07:33:35

11AX20MIMO_ANT0_5865

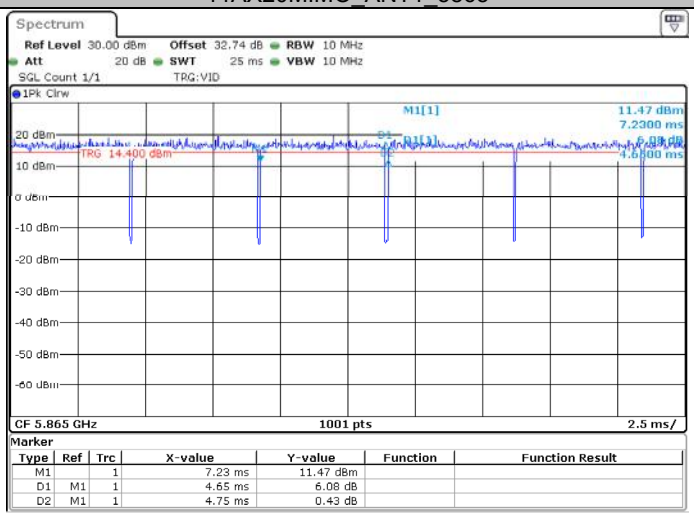


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	6.03 ms	13.21 dBm		
D1	M1	1	4.62 ms	2.19 dB		
D2	M1	1	4.72 ms	-3.73 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 07:34:53

11AX20MIMO_ANT1_5865

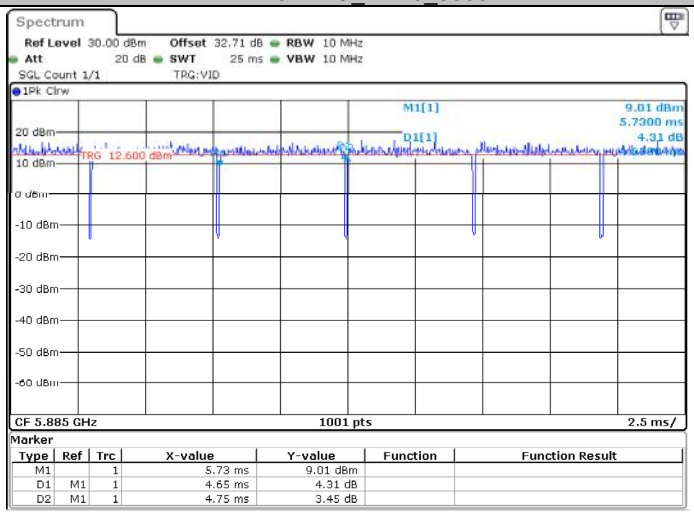


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	7.23 ms	11.47 dBm		
D1	M1	1	4.65 ms	6.08 dB		
D2	M1	1	4.75 ms	0.43 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 07:35:53

11AX20MIMO_ANT0_5885

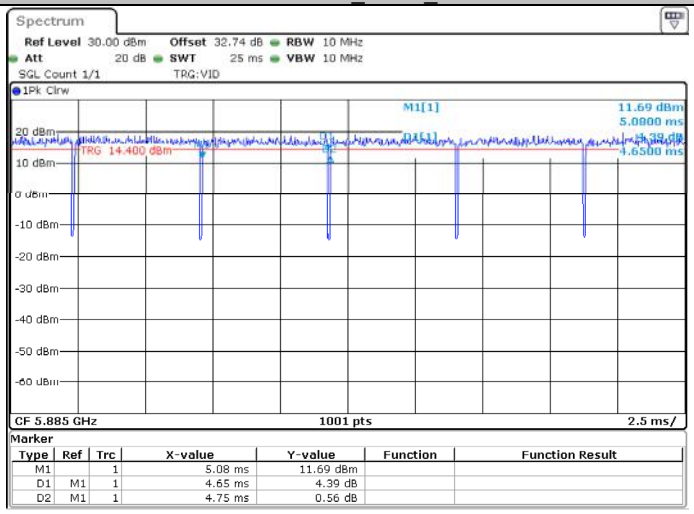


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.73 ms	9.01 dBm		
D1	M1	1	4.65 ms	4.31 dB		
D2	M1	1	4.75 ms	3.45 dB		

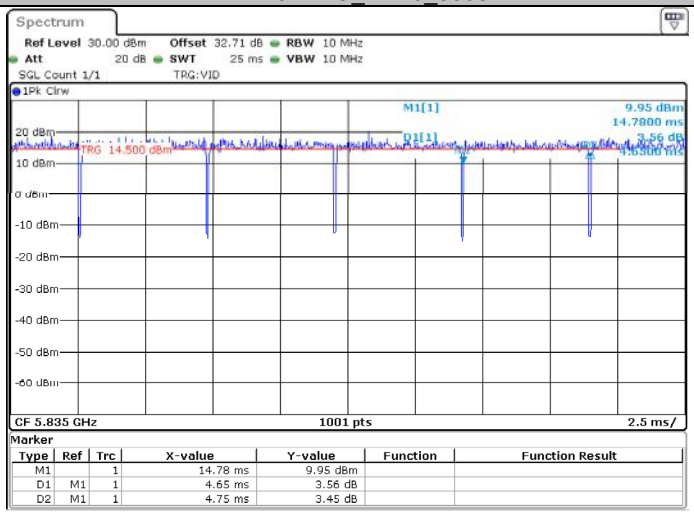
ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 07:37:11

11AX20MIMO_ANT1_5885



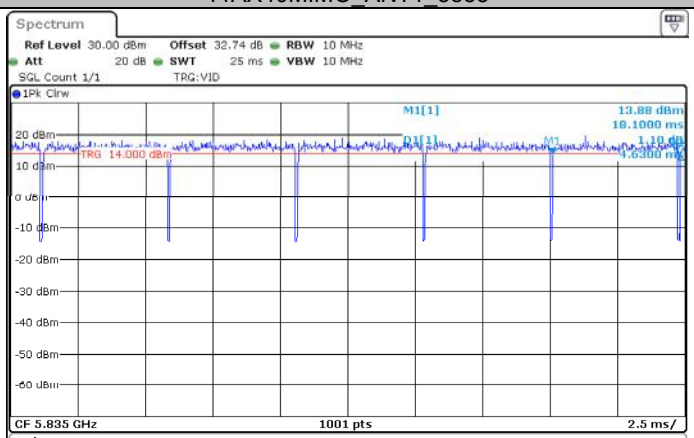
ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 07:38:10

11AX40MIMO_ANT0_5835



ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:03:12

11AX40MIMO_ANT1_5835

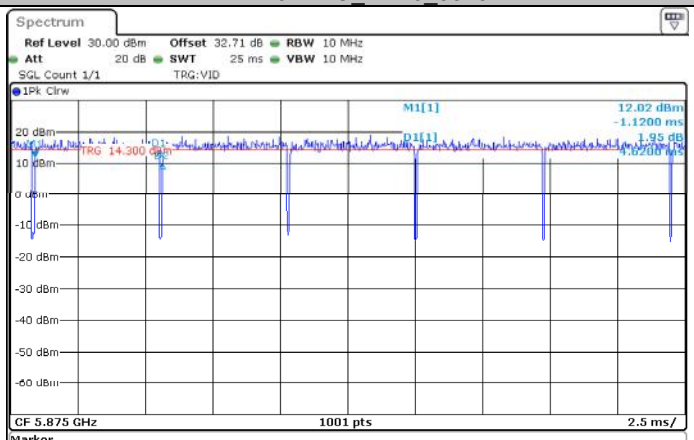


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	18.1 ms	13.88 dBm		
D1	M1	1	4.63 ms	1.10 dB		
D2	M1	1	4.73 ms	-0.20 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:04:12

11AX40MIMO_ANT0_5875

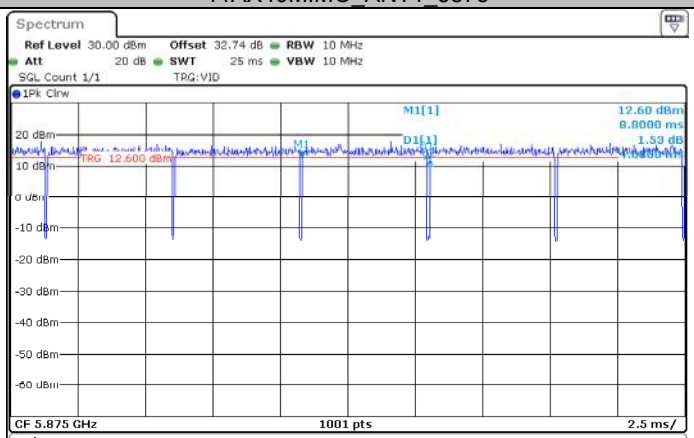


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	-1.12 ms	12.02 dBm		
D1	M1	1	4.62 ms	1.95 dB		
D2	M1	1	4.72 ms	-2.00 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:05:31

11AX40MIMO_ANT1_5875

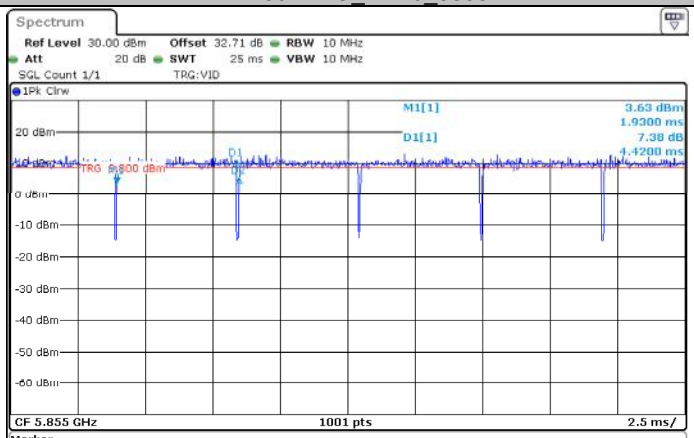


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	8.8 ms	12.60 dBm		
D1	M1	1	4.63 ms	1.53 dB		
D2	M1	1	4.73 ms	-0.59 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:06:30

11AX80MIMO_ANT0_5855

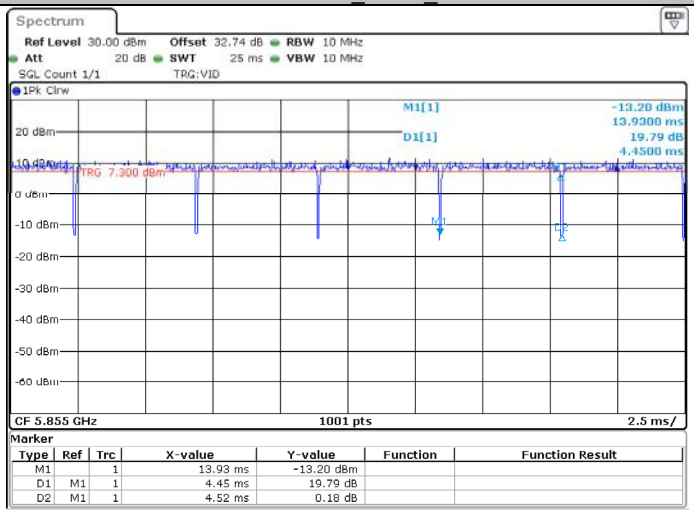


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.93 ms	3.63 dBm		
D1	M1	1	4.42 ms	7.38 dB		
D2	M1	1	4.52 ms	1.96 dB		

ProjectNo.:2401Y48404E-RFTester:Lee.LI
Date: 31.OCT.2024 08:23:27

11AX80MIMO_ANT1_5855



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11A	ANT0	5845	9.54	4.16	13.70	≤30.00	PASS
	ANT1	5845	10.91	3.60	14.51	≤30.00	PASS
	ANT0	5865	9.85	4.16	14.01	≤30.00	PASS
	ANT1	5865	11.15	3.60	14.75	≤30.00	PASS
	ANT0	5885	9.24	4.16	13.40	≤30.00	PASS
	ANT1	5885	11.51	3.60	15.11	≤30.00	PASS
11AC20MIMO	ANT0	5845	13.94	6.89	20.83	≤30.00	PASS
	ANT1	5845	14.60	6.89	21.49	≤30.00	PASS
	total	5845	17.29	6.89	24.18	≤30.00	PASS
	ANT0	5865	13.90	6.89	20.79	≤30.00	PASS
	ANT1	5865	14.35	6.89	21.24	≤30.00	PASS
	total	5865	17.14	6.89	24.03	≤30.00	PASS
	ANT0	5885	13.77	6.89	20.66	≤30.00	PASS
	ANT1	5885	14.82	6.89	21.71	≤30.00	PASS
	total	5885	17.34	6.89	24.23	≤30.00	PASS
11AC40MIMO	ANT0	5835	12.25	6.89	19.14	≤30.00	PASS
	ANT1	5835	12.44	6.89	19.33	≤30.00	PASS
	total	5835	15.36	6.89	22.25	≤30.00	PASS
	ANT0	5875	12.06	6.89	18.95	≤30.00	PASS
	ANT1	5875	11.19	6.89	18.08	≤30.00	PASS
	total	5875	14.66	6.89	21.55	≤30.00	PASS
11AC80MIMO	ANT0	5855	16.58	6.89	23.47	≤30.00	PASS
	ANT1	5855	15.61	6.89	22.50	≤30.00	PASS
	total	5855	19.13	6.89	26.02	≤30.00	PASS
11AX20MIMO	ANT0	5845	13.68	6.89	20.57	≤30.00	PASS
	ANT1	5845	14.29	6.89	21.18	≤30.00	PASS
	total	5845	17.01	6.89	23.90	≤30.00	PASS
	ANT0	5865	13.69	6.89	20.58	≤30.00	PASS
	ANT1	5865	14.04	6.89	20.93	≤30.00	PASS
	total	5865	16.88	6.89	23.77	≤30.00	PASS
	ANT0	5885	13.53	6.89	20.42	≤30.00	PASS
	ANT1	5885	14.54	6.89	21.43	≤30.00	PASS
	total	5885	17.07	6.89	23.96	≤30.00	PASS
11AX40MIMO	ANT0	5835	12.17	6.89	19.06	≤30.00	PASS
	ANT1	5835	12.33	6.89	19.22	≤30.00	PASS
	total	5835	15.26	6.89	22.15	≤30.00	PASS
	ANT0	5875	11.98	6.89	18.87	≤30.00	PASS
	ANT1	5875	11.08	6.89	17.97	≤30.00	PASS
	total	5875	14.56	6.89	21.45	≤30.00	PASS

11AX80MIMO	ANT0	5855	10.59	6.89	17.48	≤30.00	PASS
	ANT1	5855	10.01	6.89	16.90	≤30.00	PASS
	total	5855	13.32	6.89	20.21	≤30.00	PASS

Note:
1. The device is a client device.
2. For 802.11ac/ax modes, the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01:

- $$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where
Each antenna is driven by no more than one spatial stream;
N_{SS} = the number of independent spatial streams of data;
N_{ANT} = the total number of antennas
$g_{j,k} = 10^{G_k/20}$ if the k_{th} antenna is being fed by spatial stream j, or zero if it is not;
G_k is the gain in dBi of the k_{th} antenna.

ANT0 Gain:	4.16	dBi	Directional gain:	6.89	dBi
ANT1 Gain:	3.60	dBi			

Appendix D: Maximum power spectral density

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	EIRP [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	ANT0	5845	-4.69	-0.53	≤14.00	PASS
	ANT1	5845	-3.22	0.38	≤14.00	PASS
	ANT0	5865	-1.18	2.98	≤14.00	PASS
	ANT1	5865	-0.16	3.44	≤14.00	PASS
	ANT0	5885	-1.96	2.20	≤14.00	PASS
	ANT1	5885	0.43	4.03	≤14.00	PASS
11AC20MIMO	ANT0	5845	0.07	6.96	≤14.00	PASS
	ANT1	5845	1.15	8.04	≤14.00	PASS
	total	5845	3.65	10.54	≤14.00	PASS
	ANT0	5865	2.99	9.88	≤14.00	PASS
	ANT1	5865	3.75	10.64	≤14.00	PASS
	total	5865	6.4	13.29	≤14.00	PASS
	ANT0	5885	2.84	9.73	≤14.00	PASS
	ANT1	5885	3.88	10.77	≤14.00	PASS
	total	5885	6.4	13.29	≤14.00	PASS
11AC40MIMO	ANT0	5835	-4.24	2.65	≤14.00	PASS
	ANT1	5835	-4.07	2.82	≤14.00	PASS
	total	5835	-1.14	5.75	≤14.00	PASS
	ANT0	5875	-1.54	5.35	≤14.00	PASS
	ANT1	5875	-2.30	4.59	≤14.00	PASS
	total	5875	1.1	7.99	≤14.00	PASS
11AC80MIMO	ANT0	5855	-0.72	6.17	≤14.00	PASS
	ANT1	5855	-1.60	5.29	≤14.00	PASS
	total	5855	1.87	8.76	≤14.00	PASS
11AX20MIMO	ANT0	5845	-0.19	6.70	≤14.00	PASS
	ANT1	5845	0.89	7.78	≤14.00	PASS
	total	5845	3.39	10.28	≤14.00	PASS
	ANT0	5865	2.82	9.71	≤14.00	PASS
	ANT1	5865	3.60	10.49	≤14.00	PASS
	total	5865	6.24	13.13	≤14.00	PASS
	ANT0	5885	2.70	9.59	≤14.00	PASS
	ANT1	5885	3.61	10.50	≤14.00	PASS
	total	5885	6.19	13.08	≤14.00	PASS
11AX40MIMO	ANT0	5835	-4.59	2.30	≤14.00	PASS
	ANT1	5835	-3.64	3.25	≤14.00	PASS
	total	5835	-1.08	5.81	≤14.00	PASS
	ANT0	5875	-1.73	5.16	≤14.00	PASS
	ANT1	5875	-2.74	4.15	≤14.00	PASS
	total	5875	0.8	7.69	≤14.00	PASS

11AX80MIMO	ANT0	5855	-6.68	0.21	≤14.00	PASS
	ANT1	5855	-7.33	-0.44	≤14.00	PASS
	total	5855	-4.08	2.81	≤14.00	PASS

Note:
1. The device is a client device.
2. The Duty Cycle Factor is compensated in the graph.
3. For 802.11ac/ax modes, the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01:

- $$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where
Each antenna is driven by no more than one spatial stream;
N_{SS} = the number of independent spatial streams of data;
N_{ANT} = the total number of antennas
$g_{j,k} = 10^{G_k/20}$ if the k_{th} antenna is being fed by spatial stream j, or zero if it is not;
G_k is the gain in dBi of the k_{th} antenna.

ANT0 Gain:	4.16	dBi	Directional gain:	6.89	dBi

Test Graphs

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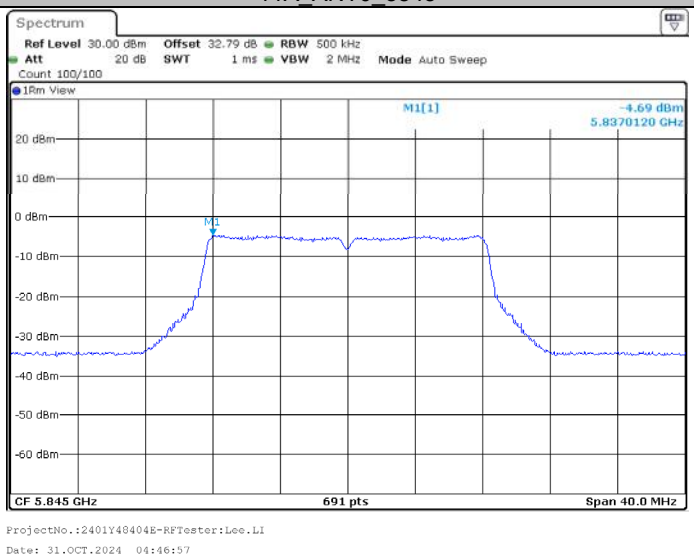

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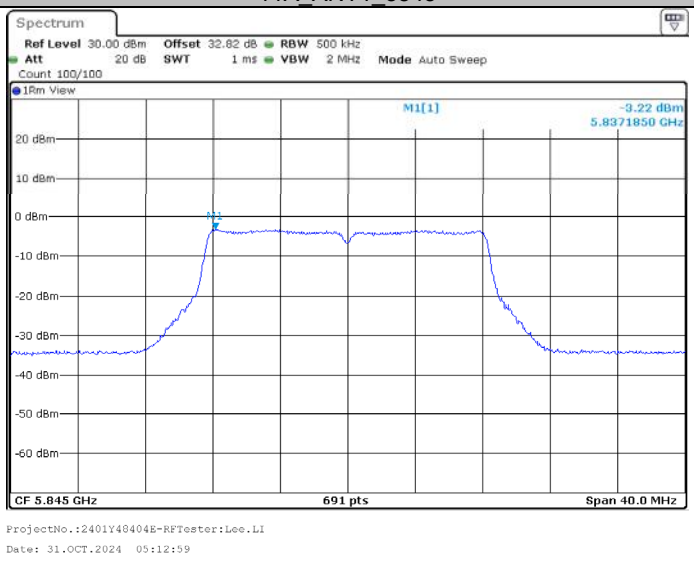

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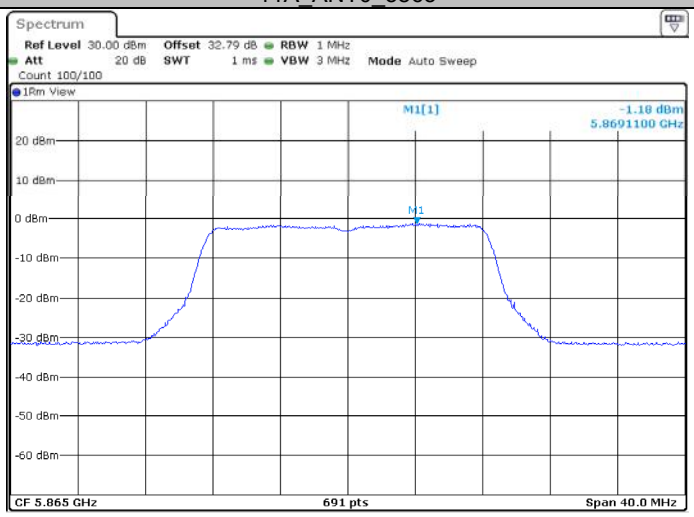

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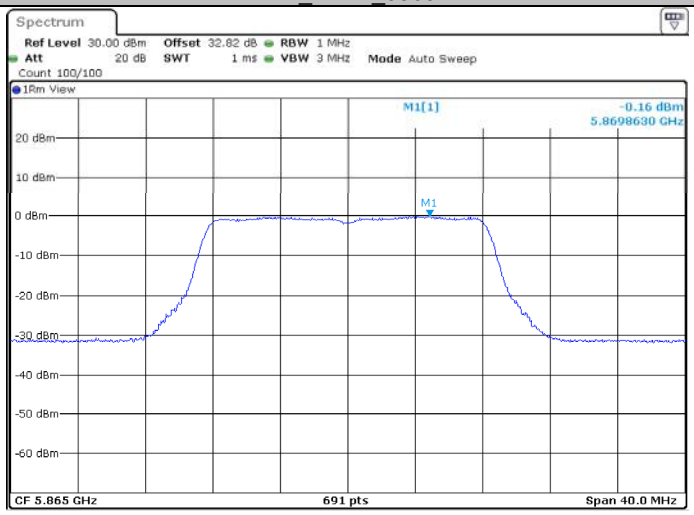

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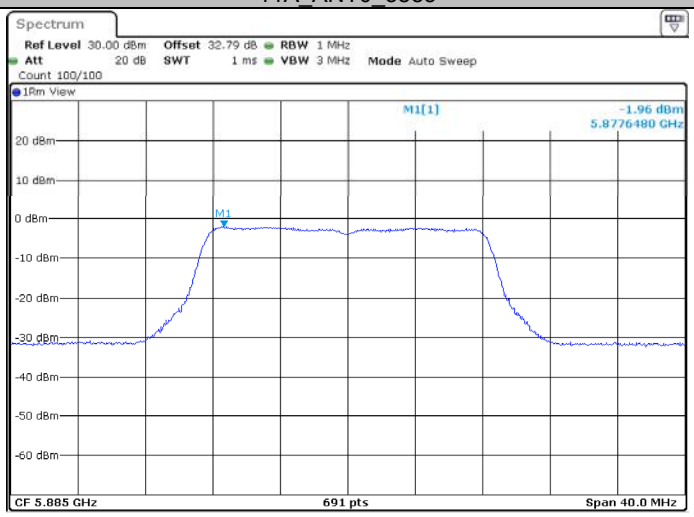

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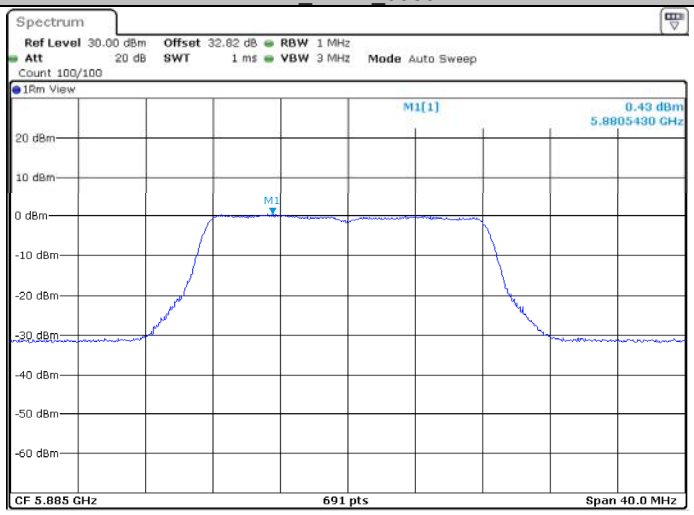

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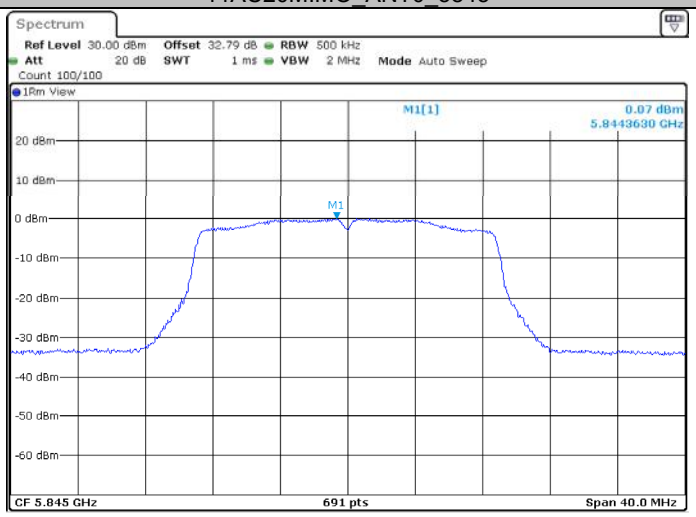

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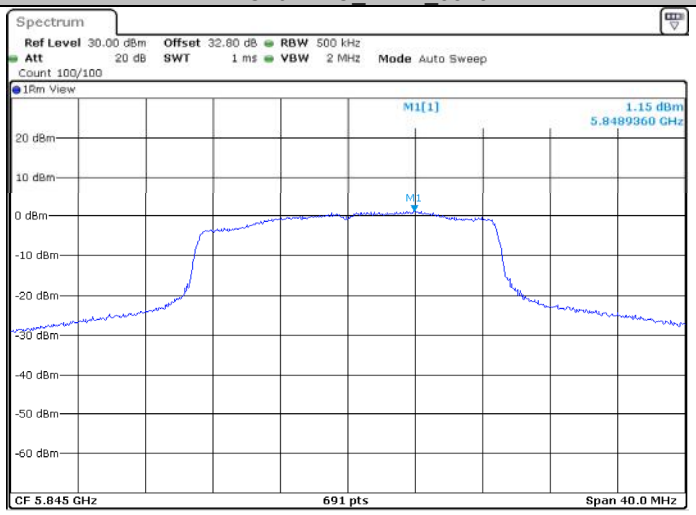

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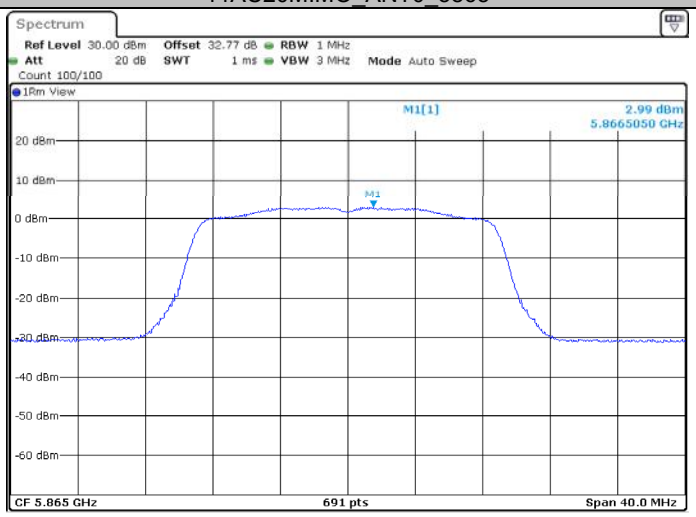

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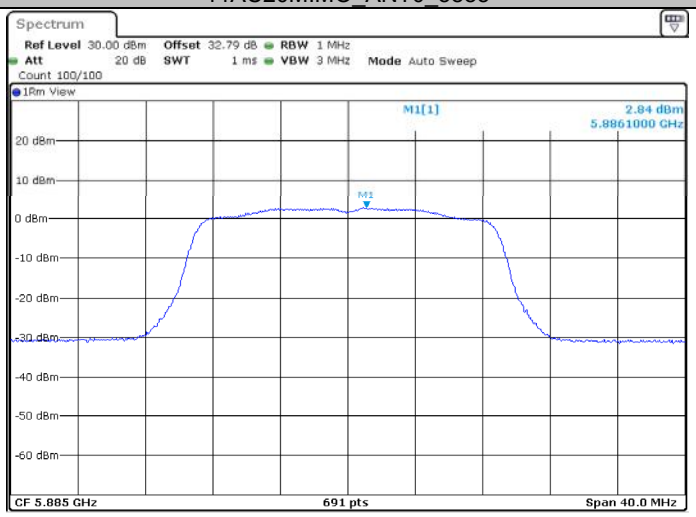

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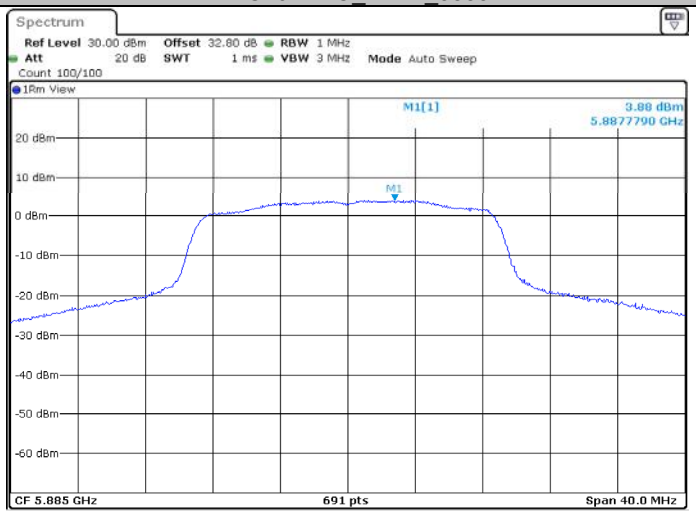

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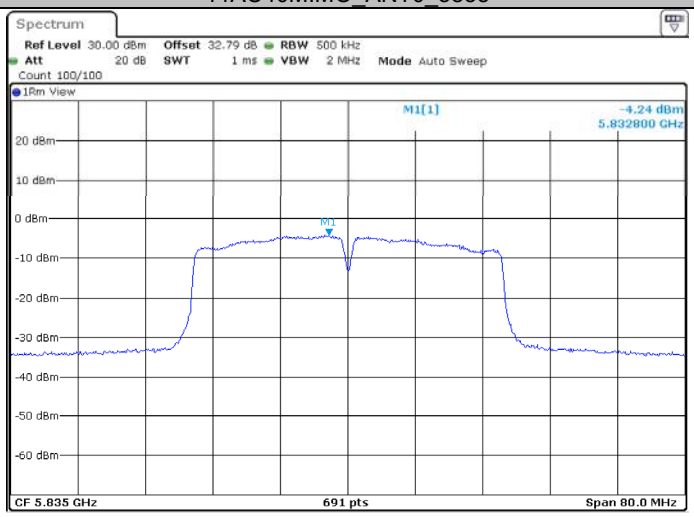

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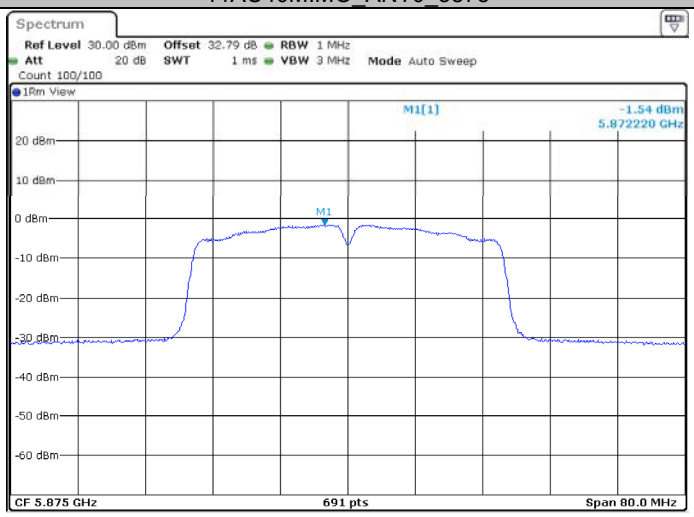

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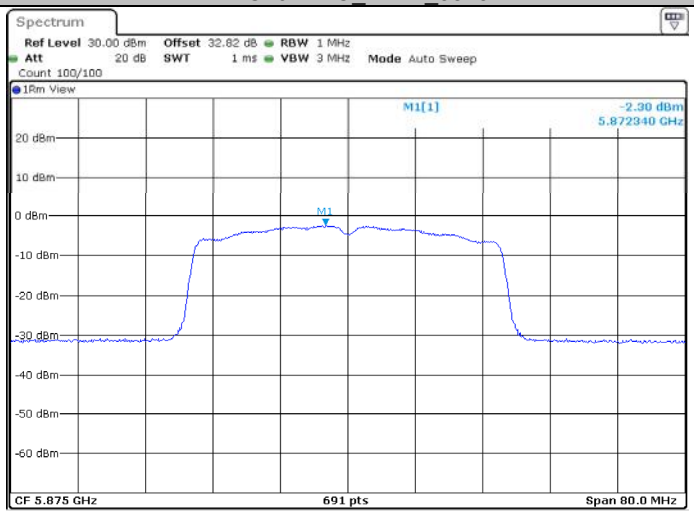

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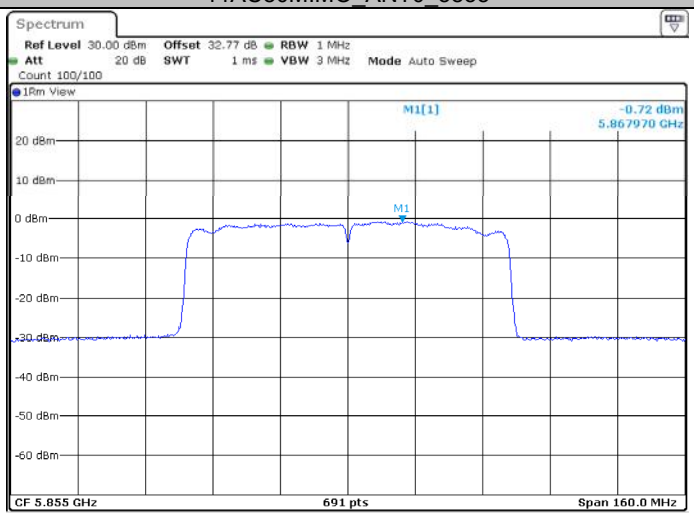

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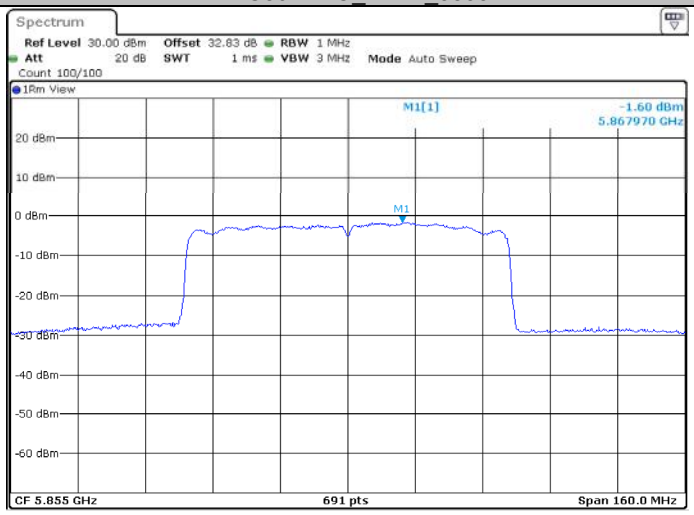

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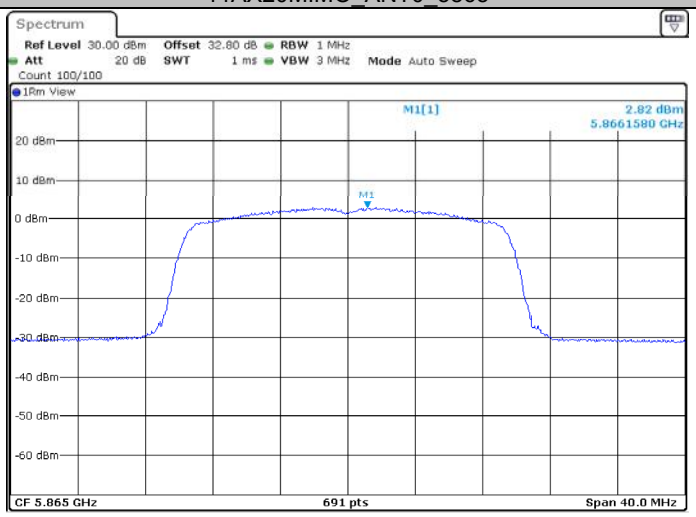

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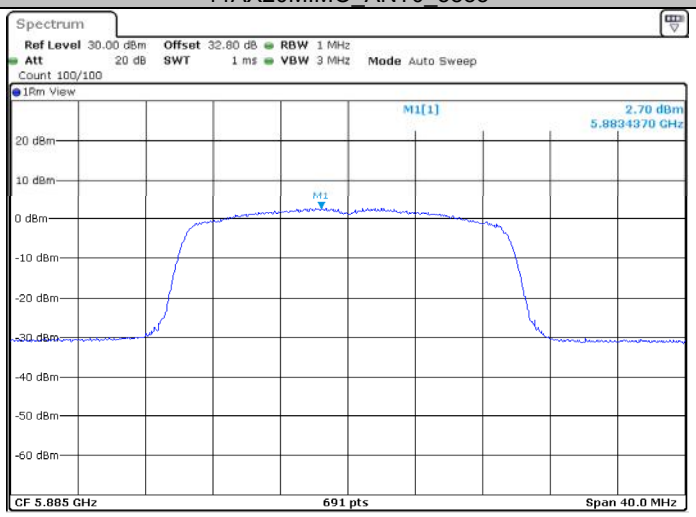

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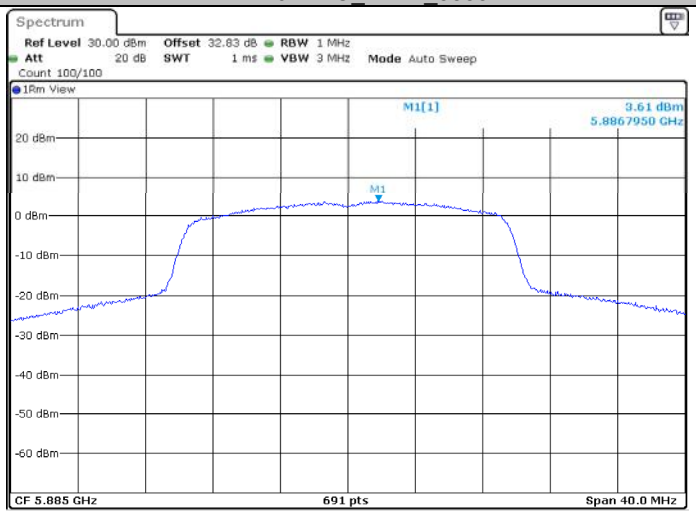

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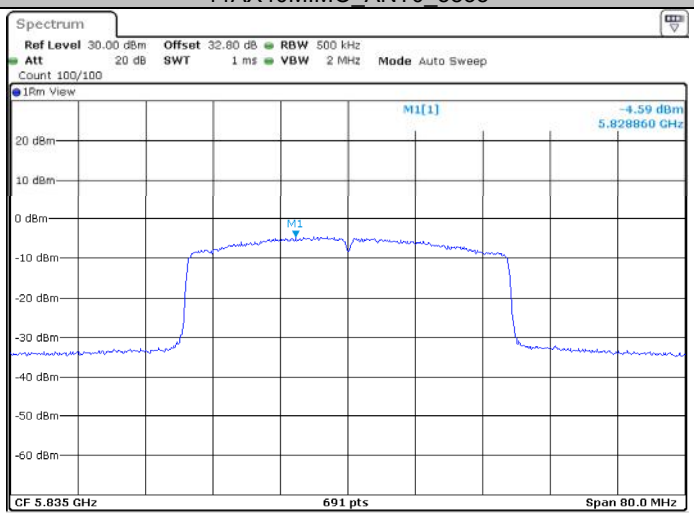

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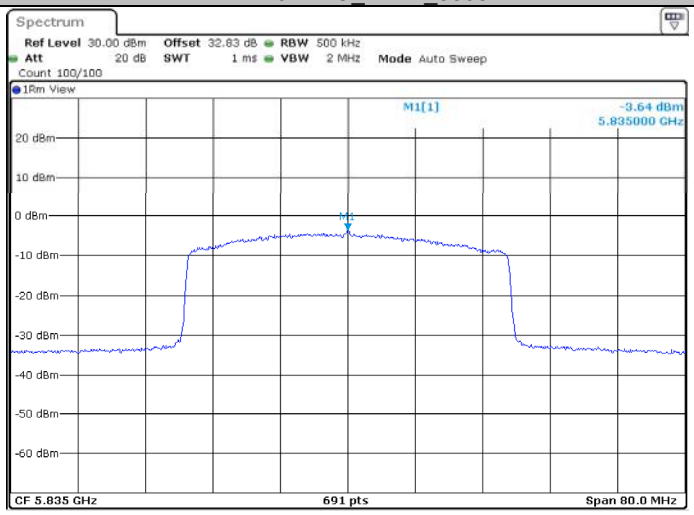

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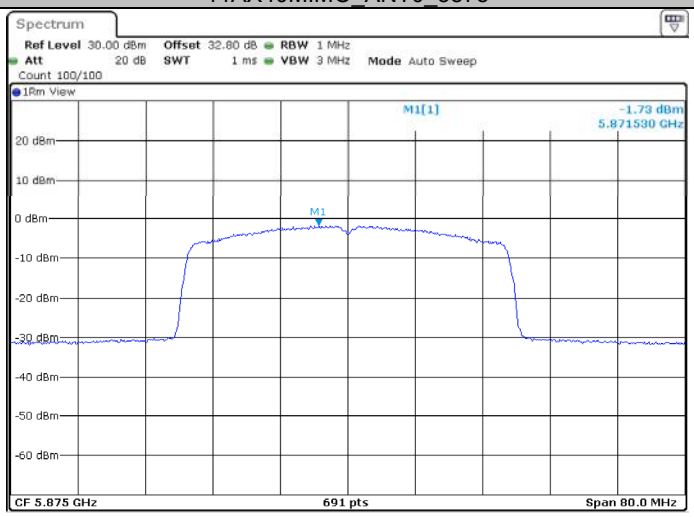

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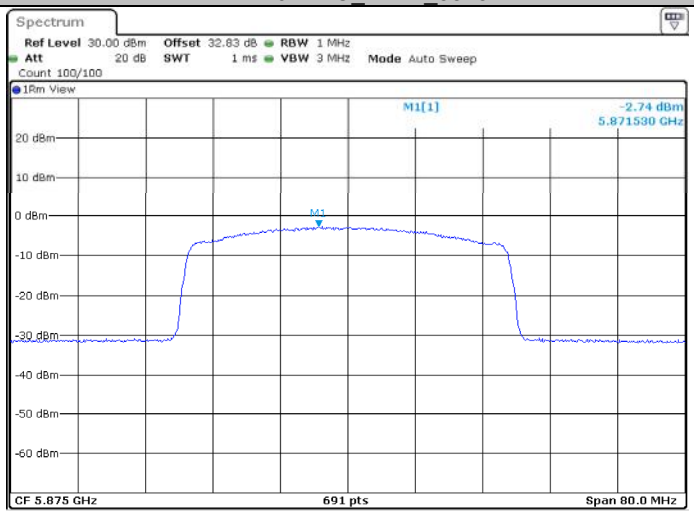

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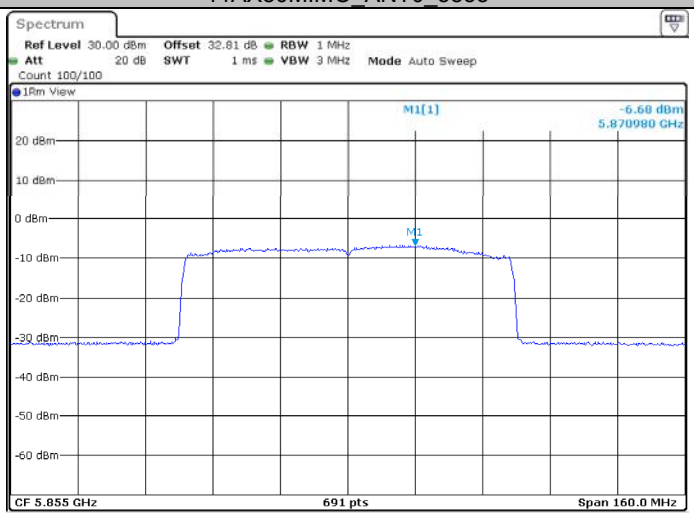

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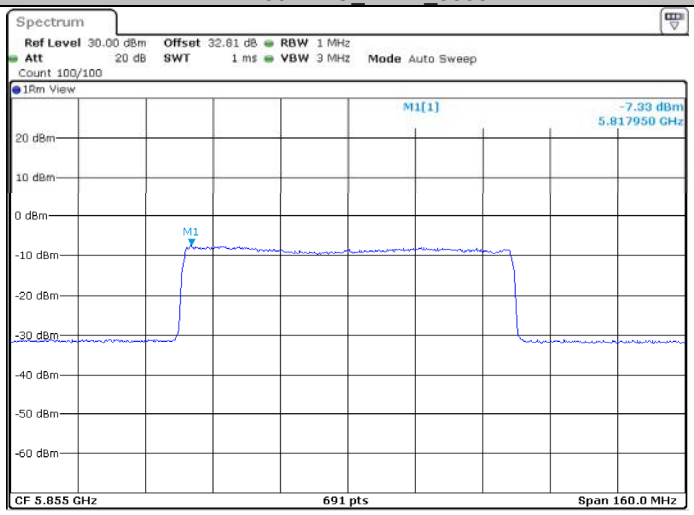

******* END OF REPORT *******