MOTOROLA SOLUTIONS

CERTIFICATE 2518.08

SAMM 825

MOTOROLA PENANG ADV. COMM. LABORATORY
Motorola Solutions Malaysia Sdn. Bhd.
Plot 2A Medan Bayan Lepas,
Mukim 12, S.W.D. 11900 Bayan Lepas,
Penang, Malaysia.

FCC / IC TEST REPORT

Report Revision : Rev.D

Date/s Tested	:	16-January-2025 - 12-February-2025
Manufacturer/Location	:	Motorola Solutions Malaysia SDN BHD
Manufacturer Address	:	Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D.11900 Bayan Lepas, Penang, Malaysia
Requestor	:	Yeap Tee Khoon
Product Type	:	Body Worn Camera
Product Marketing Name (PMN)	:	SVX
Hardware Version Identification Number (HVIN)	:	VX650
Frequency Band	:	5180-5825 MHz
Firmware Version Identification Number (FVIN)	:	24.4.0
Applicant Name	:	Motorola Solutions Inc
Applicant Address	:	Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D.11900 Bayan Lepas, Penang, Malaysia
FCC Registrations	:	461337
ISED Registrations	:	MY0001

The equipment was tested accordance to the requirement listed below:

(5GHz Wi-Fi) FCC 47 CFR Part 15 Subpart E ISED RSS 247 Issue 3	PASS

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Revision History	Description	Date	Originator
Rev. A	Initial Report	25-February-2025	Alieya
Rev. B	Fix rules part typo, HVIN	6-March-2025	Vincent
Rev. C	Change Antenna type from Stamped Metal to PIFA	12-March-2025	Alieya
Rev. D	Change Product Marketing Name (PMN) from “VX650” to “SVX”	11-April-2025	Alieya

1.0. Summary of Test Results

FCC Clause	IC Clause	Test Item	Result	Remarks	Serial Number tested	Tested by
15.407 (a)(1/2/3)	RSS 247 6.2	Maximum Conducted Output Power (Average)	Pass	Highest output power: 802.11a: 17.903 dBm (61.702 mW) 802.11n20/ac20: 15.575 dBm (36.099 mW) 802.11n40/ac40: 15.901 dBm (38.913 mW) 802.11ac80: 12.783 dBm (18.980 mW)	9903EBA0063	Alieya
15.407(a) (1/2/3)	RSS 247 6.2	Maximum Power Spectral Density	Pass	Meet the limit requirement.	9903EBA0063	Alieya
15.407 (e)	RSS 247 6.2.4	6dB Bandwidth	Pass	a20: 16.709 MHz (16M7D1D) n20/ac20: 17.684 MHz (17M7D1D) n40/ac40: 36.231 MHz (36M2D1D) ac80: 76.166 MHz (76M2D1D)	9903EBA0063	Alieya
15.407 (g)	RSS Gen 6.11	Frequency Stability	Pass	Meet the limit requirement.	9903EBA0063	Alieya
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Band Edge Radiated Spurious Emission Measurement	Pass	Worst case emission: 47.8895dBuV/m (Margin: 6.1105dB)	9903EBA0063	Alieya
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Radiated Spurious Emission Measurement	Pass	Worst case emission: 27.1313dBuV/m (Margin: 18.8687dB)	9903EBA0048	Aiman
15.207 15.407 (b)(6)	RSS Gen 8.8	AC Powerline Conducted Emission	Pass	Meet the limit requirement.	9903EBA0048	Shidee
15.203	-	Antenna requirement	Pass	Internal antenna is not accessible to the end-user	NA	NA

1.0. Measurement Uncertainty

Measurement	Frequency	Expended Uncertainty (k=1.96) (±dB)
AC Power Line Conducted Spurious Emission	150KHz ~ 30MHz	3.43
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	5.88
	200MHz ~ 1000MHz	5.88
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.84
	18GHz ~ 40GHz	6.02
Conducted Spurious Emissions	9kHz ~ 12.75GHz	2.82

2.0. Equipment List

Bluetooth ATE # 1 (SW Version: Ate Main_3.1.12_R1)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
SPECTRUM ANALYZER	E4440A	MY46186938	29-Oct-24	29-Oct-25
POWER SUPPLY	6652A	3541A02371	11-Sep-24	11-Sep-25
CHAMBER	SH-641	92003820	04-Jul-24	04-Jul-25

Radiated Emission Station (SW Version: EMC FCC RE v1.6.5)

Description	Model #	Serial Number	Calibration Date	Calibration Due Date
EMI TEST RECEIVER	ESIB40	100307	23-Oct-24	23-Oct-25
3m Semi-anechoic Chamber	NA	888032	Not Required	Not Required
TURNTABLE FLUSH MOUNT 2M	T-200-S	N/A	Not Required	Not Required
PROGRAMMING CONTROLLER	MF-7802BS	N/A	Not Required	Not Required
POWER SUPPLY	6674A	3126A00133	13-Mar-24	13-Mar-25
SIGNAL ANALYZER	FSV40	101432	09-Aug-24	08-Aug-25
DATA LOGGER	SDL500	A.016800	26-Jun-24	26-Jun-25
BILOG ANTENNA	CBL6112D	55546	05-Jun-24	05-Jun-25
BILOG ANTENNA	CBL 6112B	2964	08-Oct-24	08-Oct-25
DRG HORN FREQ.	SAS-571	1027	01-Jul-24	01-Jul-25
DRG HORN FREQ.	SAS-571	720	18-Apr-23	18-Apr-25
PREAMPLIFIER	PAM-0118	427	15-Nov-24	15-Nov-25
SIGNAL GENERATOR	SMB100A	181117	06-Dec-21	06-May-25
LOOP ANTENNA	6502	00203479	06-Mar-24	06-Mar-25
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170255	13-Mar-24	13-Mar-25

AC Powerline Station (SW Version: EMC32 Ver.10.60.10)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
DATA LOGGER	DSB	16344143	05-Jul-24	05-Jul-25
V-NETWORK 2-LINE	ENV216V	101268	12-Jun-24	12-Jun-25
EMI TEST RECEIVER	ESCI	100225	08-May-24	08-May-25
PROGRAMMABLE AC SOURCE	61604	ABR000000926	05-Aug-24	05-Aug-25

3.0. General Information

General Description of EUT:

Product	Body Worn Camera
Brand	Motorola Solutions
Test Model	VX650
Power Supply Rating	3.8Vdc (Battery),
Mode of operation	WLAN 5GHz
Modulation Type	QPSK, BPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	OFDM
Transfer Rate	802.11a: 6.0/9.0/12.0/18.0/24.0/36.0/48.0/54.0 Mbps 802.11n: up to MCS15 802.11ac: up to MCS9
Operating Frequency	5.180 ~ 5.240 GHz, 5.260 ~ 5.320 GHz, 5.50 ~ 5.720 GHz, 5.745 ~ 5.825 GHz
Output Power (26 EBW or 99% OBW)	63.10 mW for 5.180 ~ 5.240 GHz 63.10 mW for 5.260 ~ 5.320 GHz 63.10 mW for 5.50 ~ 5.720 GHz 63.10 mW for 5.745 ~ 5.825 GHz
Antenna Type	PIFA
SW Version	24.4.0

Note:
The EUT contains following accessory devices and data cable:

Item	Brand	Model or P/N
BATTERY PACK,BATT LIION UL DIV2 IP68 4300T	MOTOROLA	PMNN4893A

Description of Test Modes:

For 5180 to 5240 MHz:

Channels for 802.11a, 802.11n, 802.11ac (HT20, VHT20)

Channel	Frequency (MHz)
36	5180
40	5200
44	5220
48	5240

Channels for 802.11n, 802.11ac (HT40, VHT40)

Channel	Frequency (MHz)
38	5190
46	5230

Channels for 802.11ac (VHT80)

Channel	Frequency (MHz)
42	5210

For 5260 to 5320 MHz:

Channels for 802.11a, 802.11n, 802.11ac (HT20, VHT20)

Channel	Frequency (MHz)
52	5260
56	5280
60	5300
64	5320

Channels for 802.11n, 802.11ac (HT40, VHT40)

Channel	Frequency (MHz)
54	5270
62	5310

Channels for 802.11ac (VHT80)

Channel	Frequency (MHz)
58	5290

For 5500 to 5720 MHz:

Channels for 802.11a, 802.11n, 802.11ac (HT20, VHT20)

Channel	Frequency (MHz)
100	5500
104	5520
108	5540
112	5560
116	5580
120	5600

Channels for 802.11n, 802.11ac (HT40, VHT40)

Channel	Frequency (MHz)
102	5510
110	5550
118	5590
126	5630
134	5670
142	5710

124	5620
128	5640
132	5660
136	5680
140	5700
144	5720

Channels for 802.11ac (VHT80)

Channel	Frequency (MHz)
106	5530
122	5610
138	5690

For 5745 to 5825 MHz:

Channels for 802.11a, 802.11n, 802.11ac (HT20, VHT40)

Channel	Frequency(MHz)
149	5745
153	5765
157	5785
161	5805
165	5825

Channels for 802.11n, 802.11ac (HT40, VHT40)

Channel	Frequency(MHz)
151	5755
159	5795

Channels for 802.11ac (VHT80)

Channel	Frequency (MHz)
155	5775

General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, the EUT is to comply with the requirements of the following standards:

FCC Part15, Subpart E (15.407)
789033 D02 General UNII Test Procedures New Rules v01r04
644545 D03 Guidance for IEEE 802 11ac New Rules v01
ANSI C63.10-2013
RSS 247 Issue 3, RSS Gen

All test have been performed and recorded as per above standards.

Deviation from standard
Not applicable as no deviation from standard test method

Modifications to EUT
No modifications were done to the UUT to facilitate the tests in this report.

4.0. Test Mode Applicability and Test Channel Detail

EUT Configure Mode	Applicable to				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Power from adapter
B	x	√	x	x	Power from carcharger (12Vdc)
C	x	√	x	x	Power from carcharger (24Vdc)

Where:
RE≥1G: Radiated Emission above 1GHz & Band edge Measurement
RE<1G: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission
APCM: Antenna Port Conducted Measurement

Note: The EUT had been pre-scanned on the position of each 3 axis planes. The worst case was found when positioned on Y-plane.

Radiated Emission Test (Above 1GHz)
☒Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band	MODE	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36-48	36,44,48	OFDM	BPSK	6.0
-	5180-5240	802.11n/ac (HT20, VHT20)	36-48	36,44,48	OFDM	BPSK	6.5
-	5180-5240	802.11n/ac (HT40,VHT40)	38-46	38,46	OFDM	BPSK	13.5
-	5180-5240	802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-	5260-5320	802.11a	52-64	52,60,64	OFDM	BPSK	6.0
-	5260-5320	802.11n/ac (HT20, VHT20)	52-46	52,60,64	OFDM	BPSK	6.5
-	5260-5320	802.11n/ac (HT40,VHT40)	54-62	54,62	OFDM	BPSK	13.5
-	5260-5320	802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-	5500-5700	802.11a	100-140	100,116,140	OFDM	BPSK	6.0
-	5500-5720	802.11n/ac (HT20, VHT20)	100-144	100,116,144	OFDM	BPSK	6.5
-	5500-5720	802.11n/ac (HT40,VHT40)	102-142	102,110,142	OFDM	BPSK	13.5
-	5500-5720	802.11ac (VHT80)	106-138	106,122,138	OFDM	BPSK	29.3
-	5745-5825	802.11a	149-165	149,157,165	OFDM	BPSK	6.0
-	5745-5825	802.11n/ac (HT20, VHT20)	149-165	149,157,165	OFDM	BPSK	6.5
-	5745-5825	802.11n/ac (HT40,VHT40)	151-159	151,159	OFDM	BPSK	13.5
-	5745-5825	802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

Radiated Emission Test (Below 1GHz)

☒Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	MODE	Frequency band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
-	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
-	802.11a	5500-5700	100 to 140		OFDM	BPSK	6.0
-	802.11a	5745-5825	149 to 165		OFDM	BPSK	6.0

Power Line Conducted Emission Test

☒Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	MODE	Frequency band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
-	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
-	802.11a	5500-5700	100 to 140		OFDM	BPSK	6.0
-	802.11a	5745-5825	149 to 165		OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

☒This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band	MODE	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36-48	36,44,48	OFDM	BPSK	6.0
-	5180-5240	802.11n/ac (HT20, VHT20)	36-48	36,44,48	OFDM	BPSK	6.5
-	5180-5240	802.11n/ac (HT40,VHT40)	38-46	38,46	OFDM	BPSK	13.5
-	5180-5240	802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-	5260-5320	802.11a	52-64	52,60,64	OFDM	BPSK	6.0
-	5260-5320	802.11n/ac (HT20, VHT20)	52-46	52,60,64	OFDM	BPSK	6.5
-	5260-5320	802.11n/ac (HT40,VHT40)	54-62	54,62	OFDM	BPSK	13.5
-	5260-5320	802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-	5500-5700	802.11a	100-140	100,116,140	OFDM	BPSK	6.0
-	5500-5720	802.11n/ac (HT20, VHT20)	100-144	100,116,144	OFDM	BPSK	6.5
-	5500-5720	802.11n/ac (HT40,VHT40)	102-142	102,110,142	OFDM	BPSK	13.5
-	5500-5720	802.11ac (VHT80)	106-138	106,122,138	OFDM	BPSK	29.3
-	5745-5825	802.11a	149-165	149,157,165	OFDM	BPSK	6.0
-	5745-5825	802.11n/ac (HT20, VHT20)	149-165	149,157,165	OFDM	BPSK	6.5
-	5745-5825	802.11n/ac (HT40,VHT40)	151-159	151,159	OFDM	BPSK	13.5
-	5745-5825	802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

Test Condition:

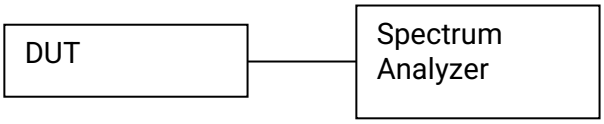
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	25°C, 50% RH	3.7V DC	Nazrin/Qawiman
RE<1G	25°C, 50% RH	3.7V DC	Nazrin/Qawiman
PLC	22.4°C, 68.6% RH	120V AC,240V AC	Madi/Rudy
APCM	25°C, 50% RH	3.7V DC	Jino Lim

Duty Cycle of Test Signal

802.11a, 802.11n and 802.11ac (HT20, VHT20): Duty cycle of test signal is 100%.
If Duty cycle of test signal is <98%, duty cycle factor shall be considered. (Refer to section 6.0 for duty cycle measurement)

5.0. Duty Cycle of Test Signal

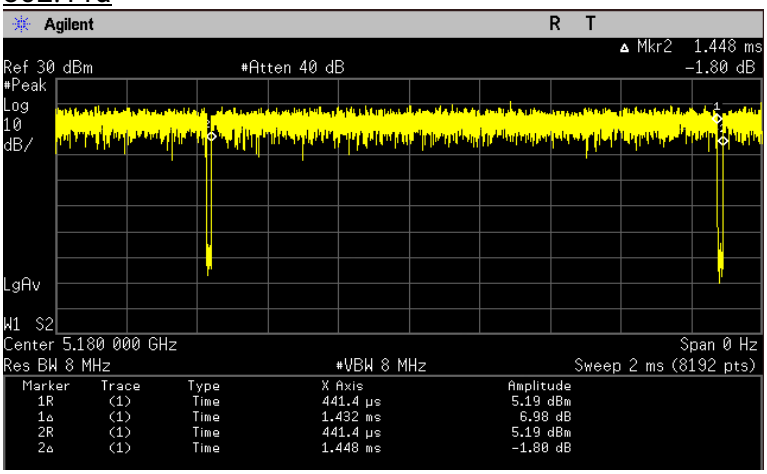
5.0.1. Test Setup



1) Set DUT to desire transmit frequency and transmit with maximum power.
2) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
3) Setting of Spectrum analyzer :
   a. Set the RBW = 10 MHz or the highest RBW available on spectrum analyzer.
   b. Set the VBW ≥ RBW.
   c. Set to Zero Span.
   d. Detector = Peak.
   e. Sweep time = 10ms or others that allow to measure accurate duty cycle.
   f. Trace mode = Max hold.
4) Record the duty cycle as X and save the plot.

5.0.2. Test Data

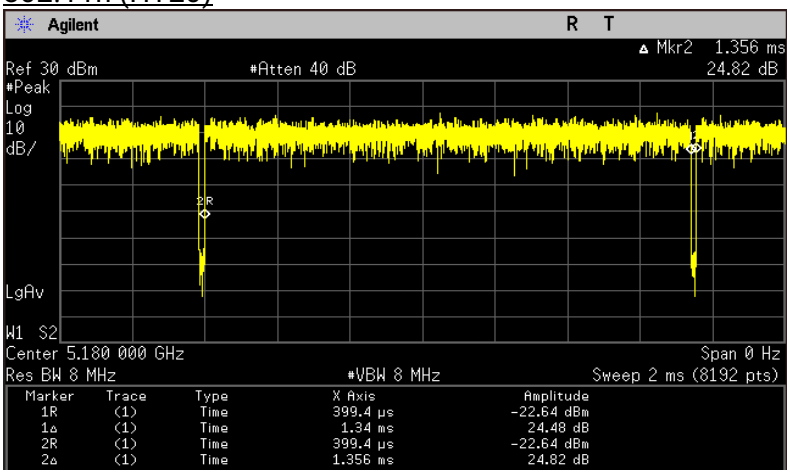
802.11a



On time	1.432	ms
On + off time	1.448	ms
Duty Cycle	0.9890	
Duty Cycle Factor	0.048	

*Duty cycle = On time/ On +off time
*Duty Cycle factor = 10*log (1/Duty Cycle)

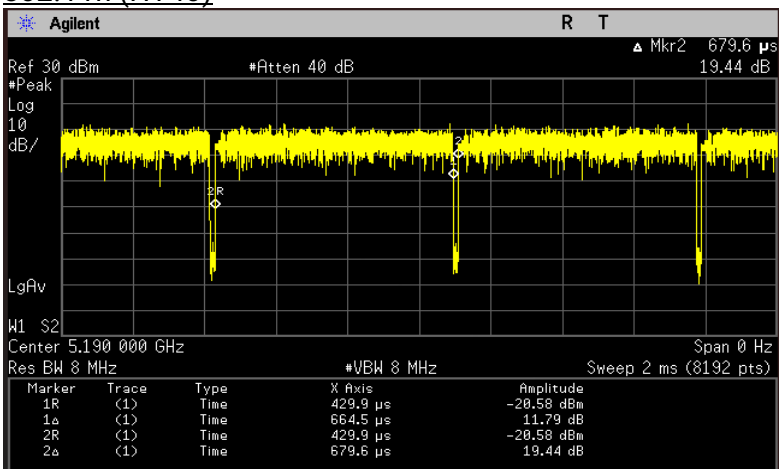
802.11n (HT20)



On time	1.340	ms
On + off time	1.356	ms
Duty Cycle	0.9882	
Duty Cycle Factor	0.052	

*Duty cycle = On time/ On +off time
*Duty Cycle factor = 10*log (1/Duty Cycle)

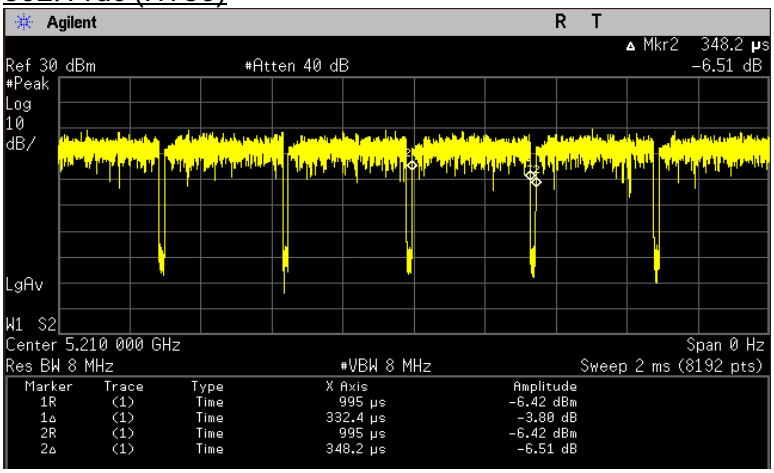
802.11n (HT40)



On time	0.665	ms
On + off time	0.680	ms
Duty cycle	0.9778	
Duty Cycle factor	0.098	

*Duty cycle = On time/ On +off time
*Duty Cycle factor = 10*log (1/Duty Cycle)

802.11ac (HT80)



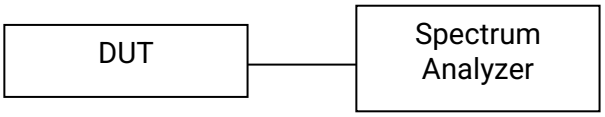
On time	0.332	ms
On + off time	0.348	ms
Duty cycle	0.9546	
Duty Cycle factor	0.202	

*Duty cycle = On time/ On +off time
*Duty Cycle factor = 10*log (1/Duty Cycle)

6.0.1. Transmitter Test Parameters

6.1. Bandwidth measurements

6.1.1. Test Setup



a) Test Setup as per illustrated above.
b) Set DUT to transmit at desire transmit frequency.
c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
d) Setting of Spectrum analyzer for 26dB EBW:
    - RBW = approximate 1% of emission bandwidth
    - VBW > RBW
    - Detector = Peak
    - Trace =Max hold
    - Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.
    - Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

e) Setting of Spectrum analyzer for 99% Occupied bandwidth:
    - Span = 1.5 times to 5.0 times the OBW
    - RBW = 1% to 5 % of the OBW
    - VBW ≥ 3·RBW
    - Detector = Peak
    - Trace = Max Hold
    - Use the 99% power bandwidth function of the instrument
f) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause C.1) & D).

6.1.2. Test Limits

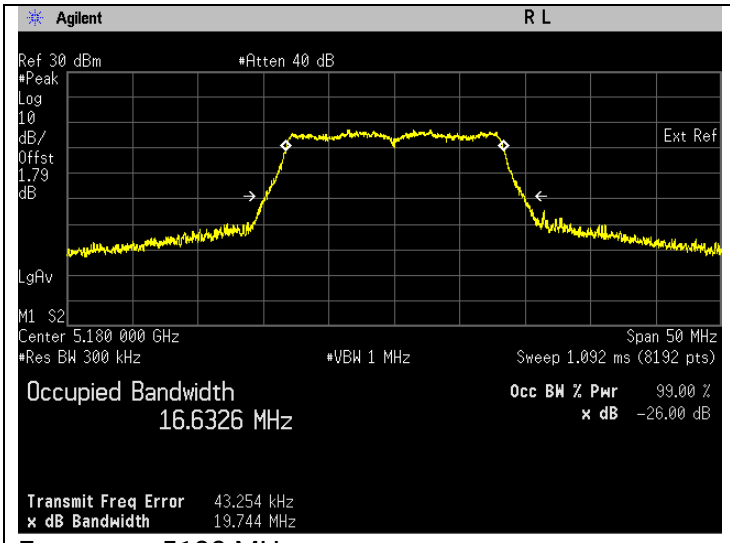
Not applicable.

6.1.3. Test Data

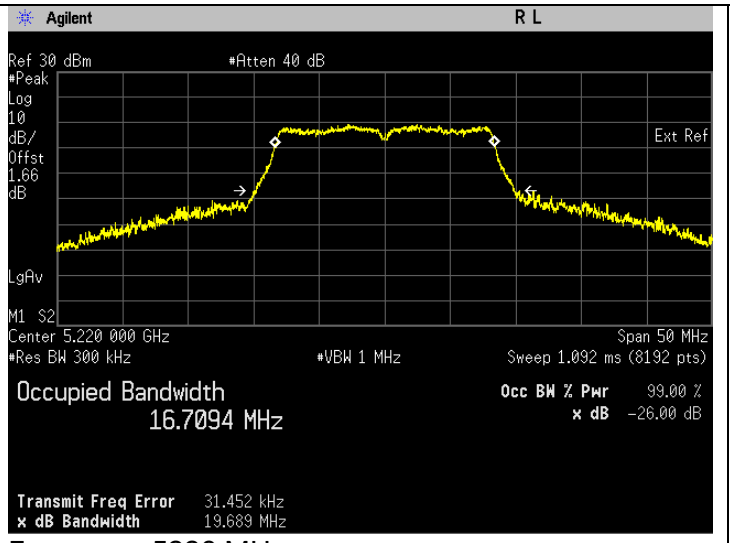
802.11a

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	19.744	Pass	16.633	Pass
5220	Mod Type: BPSK, Data Rate: 6	19.689	Pass	16.709	Pass
5240	Mod Type: BPSK, Data Rate: 6	20.171	Pass	16.709	Pass
5260	Mod Type: BPSK, Data Rate: 6	19.766	Pass	16.654	Pass
5300	Mod Type: BPSK, Data Rate: 6	19.709	Pass	16.652	Pass
5320	Mod Type: BPSK, Data Rate: 6	19.710	Pass	16.647	Pass
5500	Mod Type: BPSK, Data Rate: 6	19.741	Pass	16.636	Pass
5580	Mod Type: BPSK, Data Rate: 6	21.744	Pass	16.683	Pass
5700	Mod Type: BPSK, Data Rate: 6	19.594	Pass	16.659	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-2C	15.810	Pass	13.356	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-3	5.810	Pass	3.356	Pass
5745	Mod Type: BPSK, Data Rate: 6	20.276	Pass	16.693	Pass
5785	Mod Type: BPSK, Data Rate: 6	19.868	Pass	16.672	Pass
5825	Mod Type: BPSK, Data Rate: 6	19.746	Pass	16.659	Pass

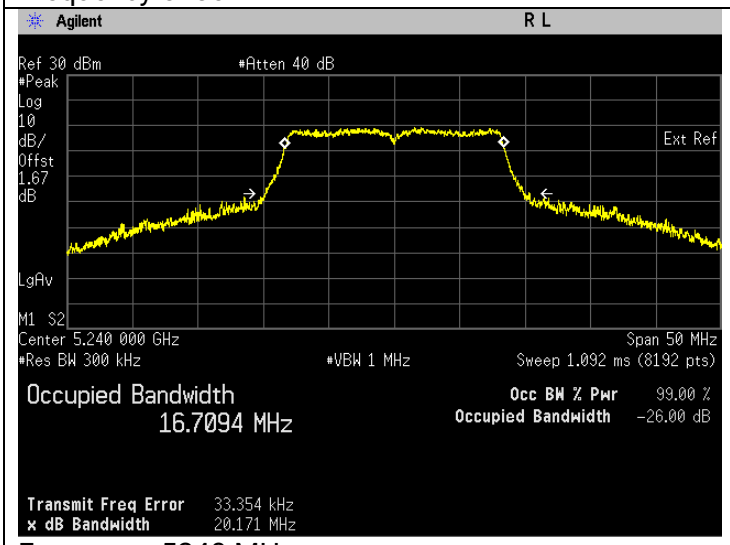
26 dB Bandwidth/ 99% Bandwidth



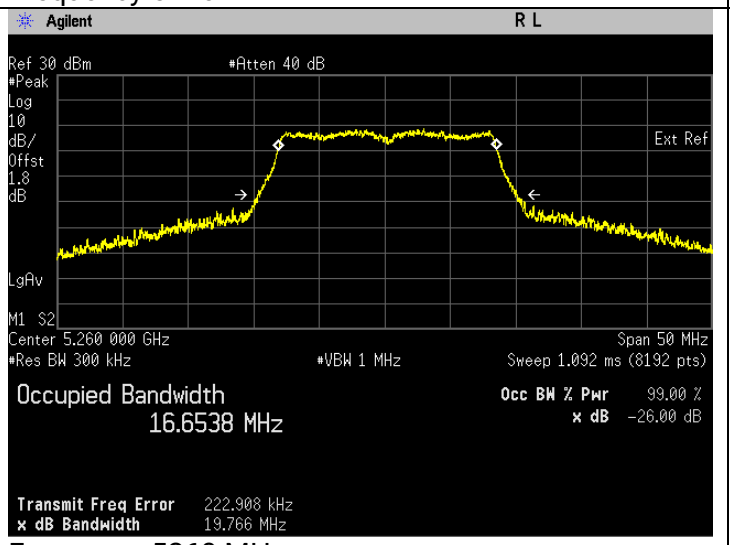
Frequency 5180 MHz



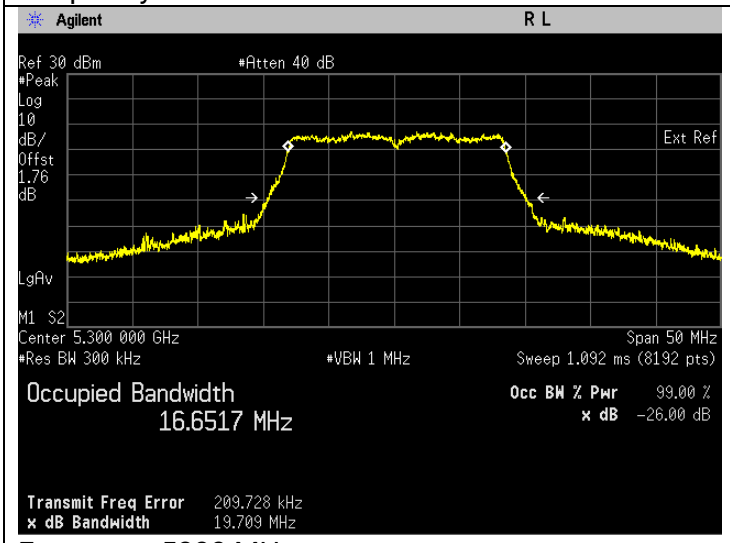
Frequency 5220 MHz



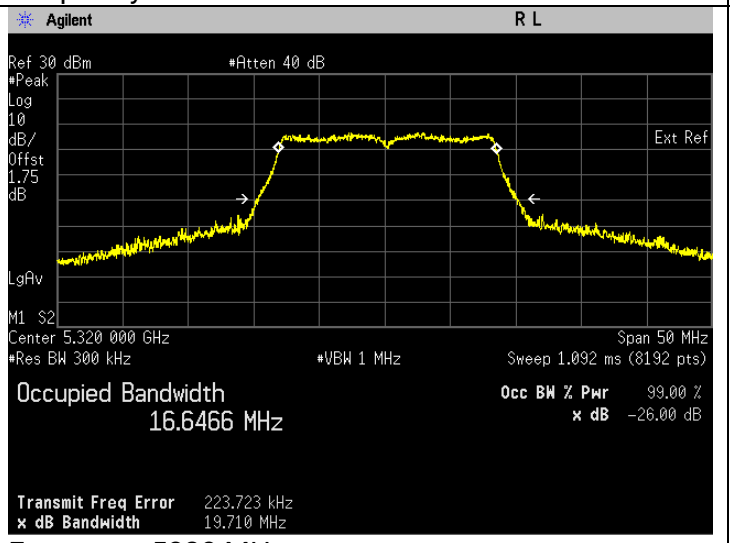
Frequency 5240 MHz



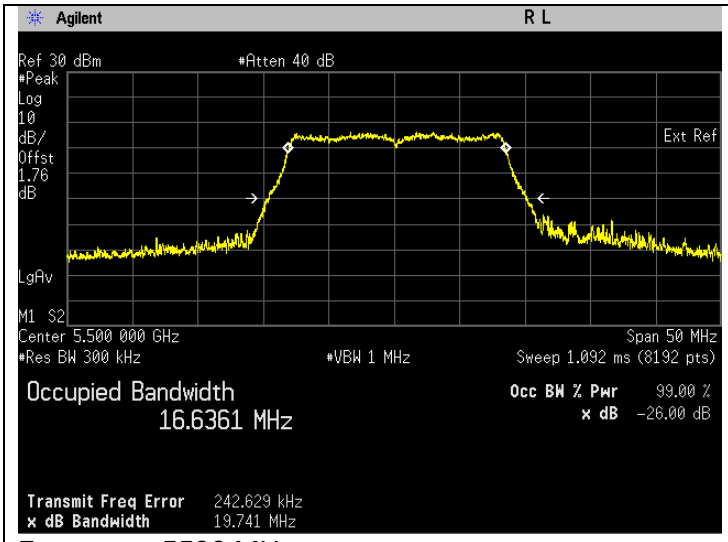
Frequency 5260 MHz



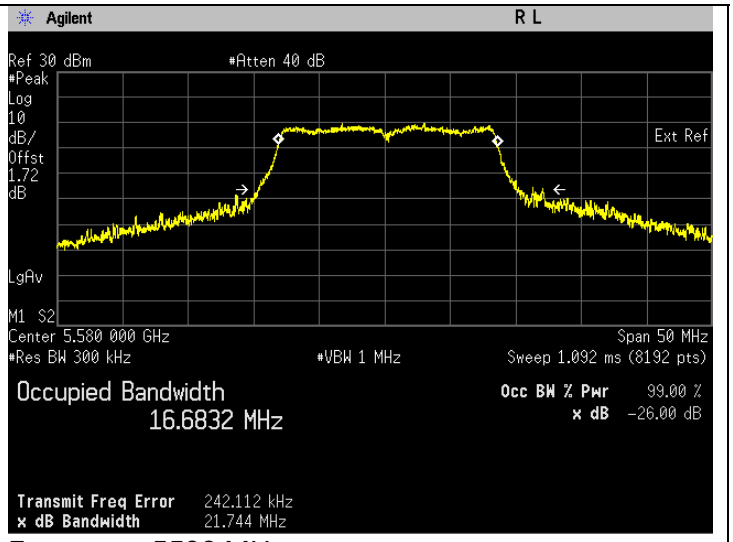
Frequency 5300 MHz



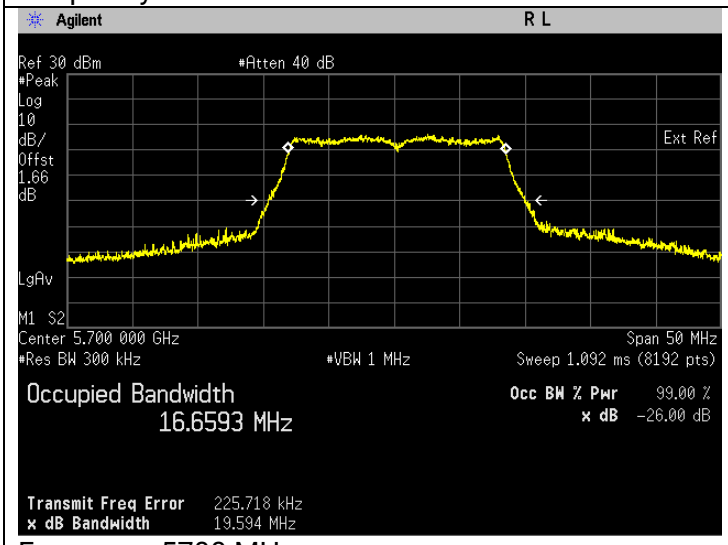
Frequency 5320 MHz



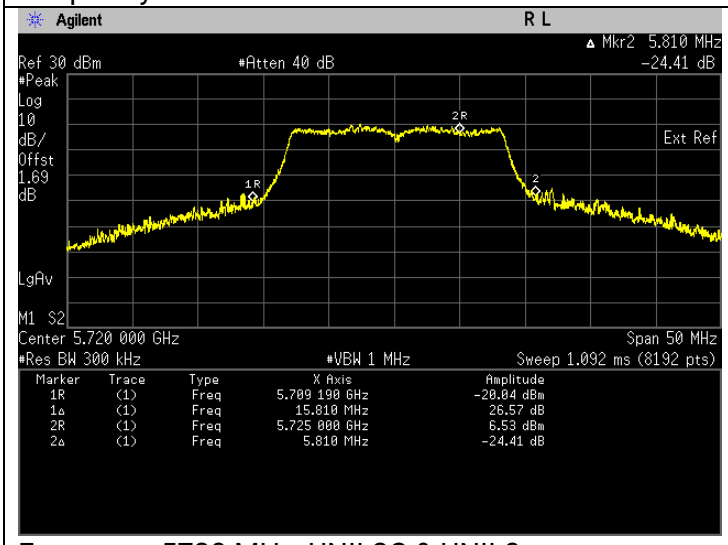
Frequency 5500 MHz



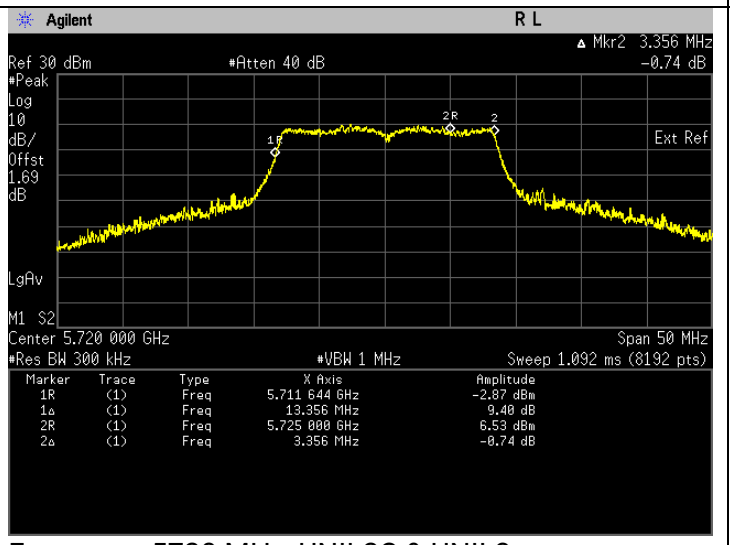
Frequency 5580 MHz



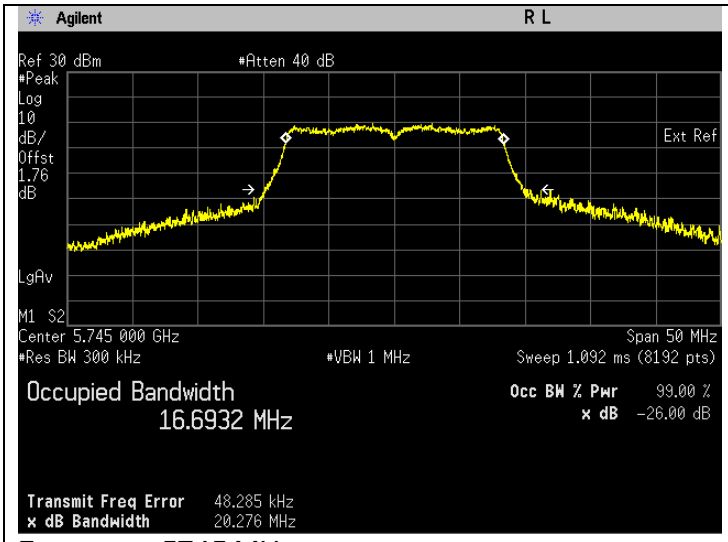
Frequency 5700 MHz



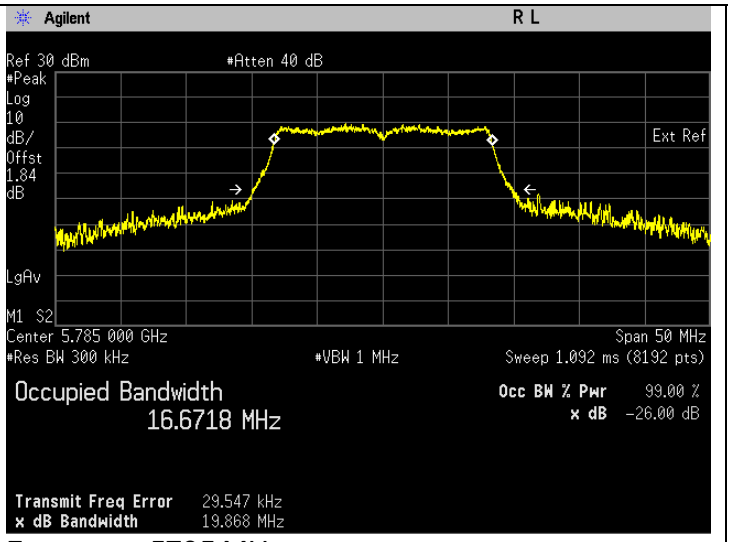
Frequency 5720 MHz, UNII-2C & UNII-3



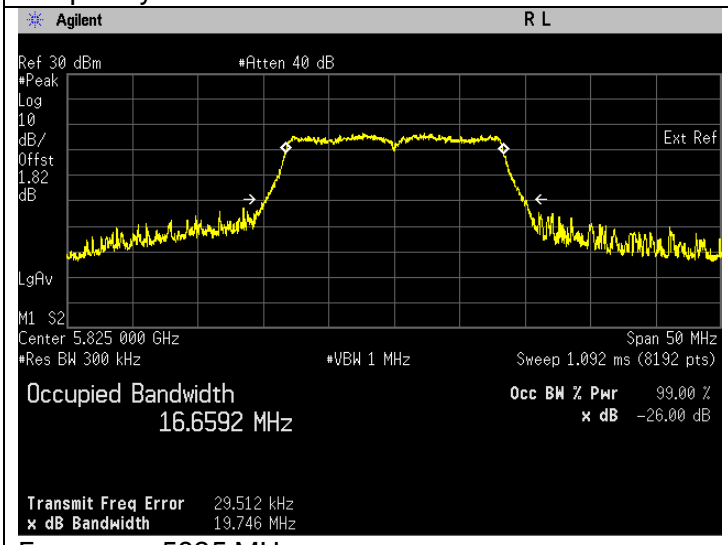
Frequency 5720 MHz, UNII-2C & UNII-3



Frequency 5745 MHz



Frequency 5785 MHz

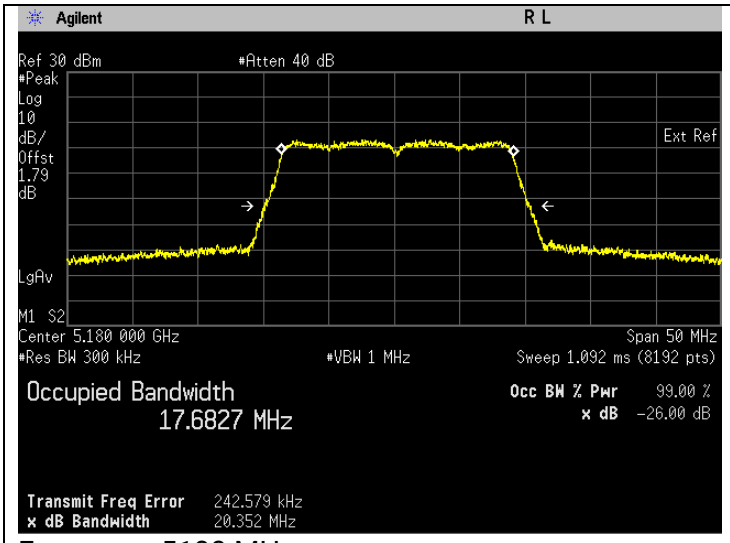


Frequency 5825 MHz

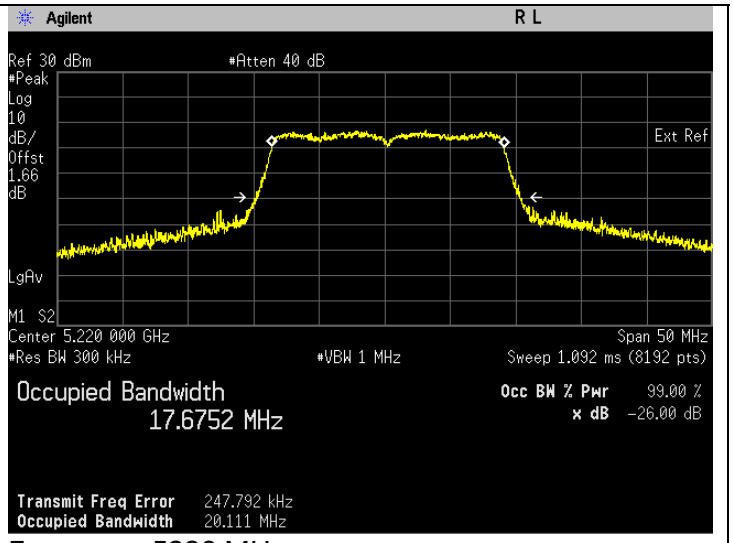
802.11n (HT20)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.352	Pass	17.683	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.111	Pass	17.675	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.328	Pass	17.677	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	19.996	Pass	17.673	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.339	Pass	17.684	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.212	Pass	17.666	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.187	Pass	17.656	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.169	Pass	17.675	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.304	Pass	17.663	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-2C	15.131	Pass	13.845	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-3	5.131	Pass	3.845	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.322	Pass	17.653	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.317	Pass	17.690	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.336	Pass	17.654	Pass

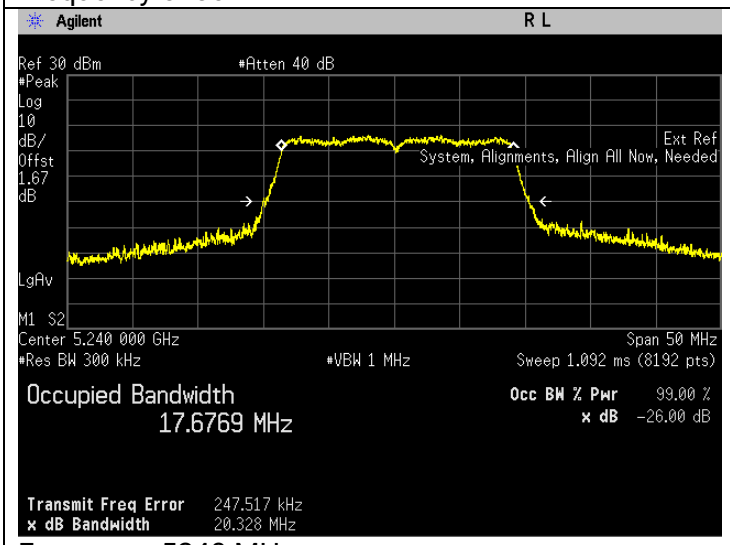
26 dB Bandwidth/ 99% Bandwidth



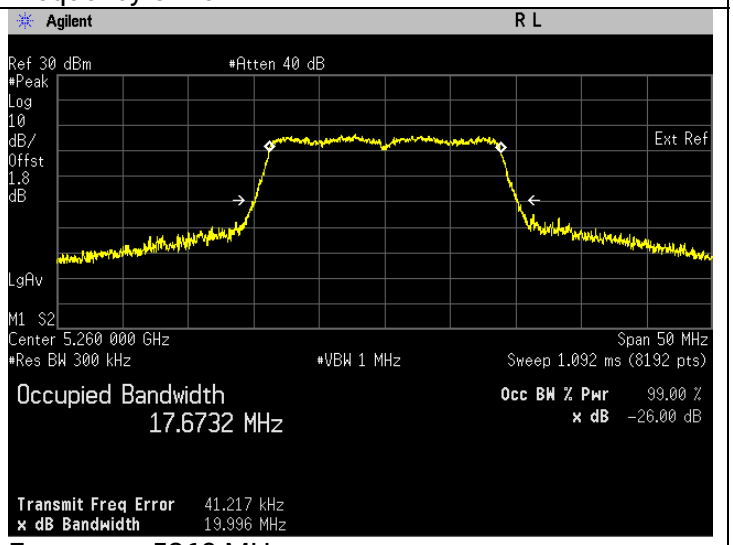
Frequency 5180 MHz



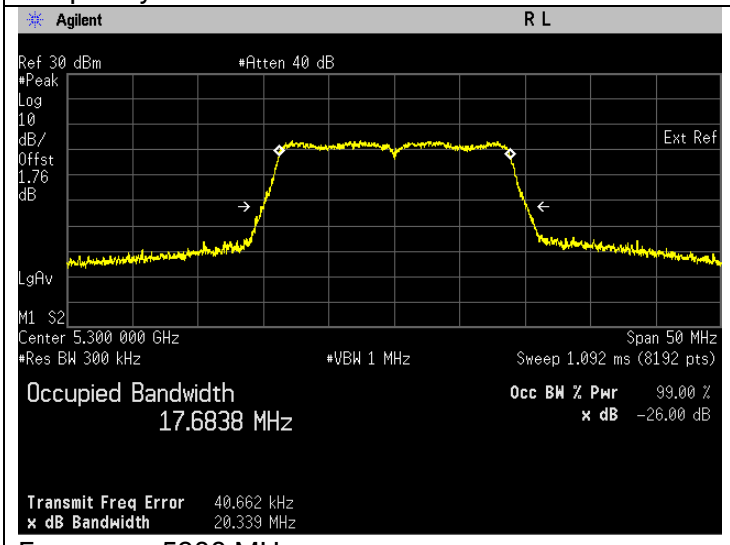
Frequency 5220 MHz



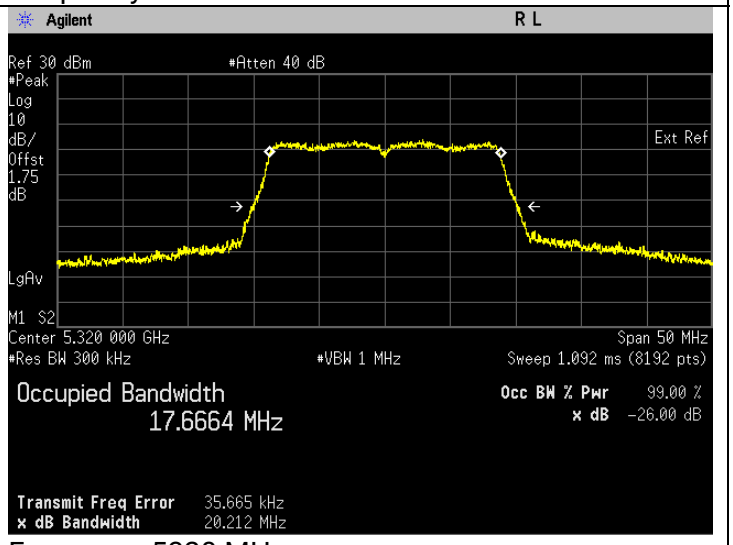
Frequency 5240 MHz



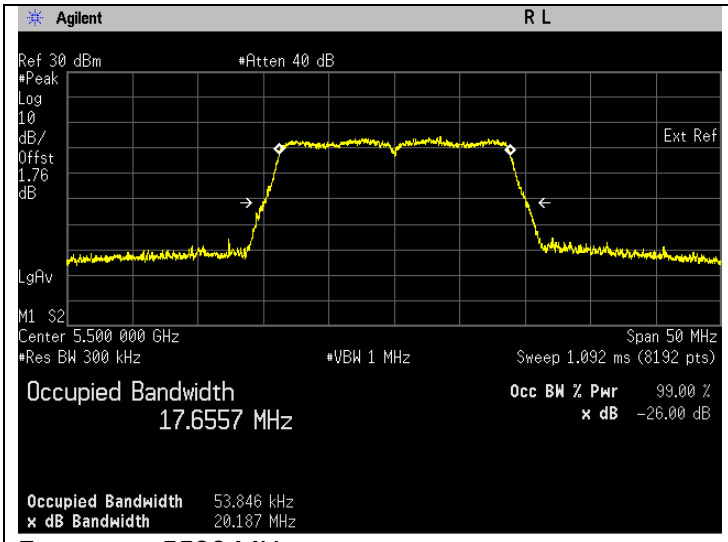
Frequency 5260 MHz



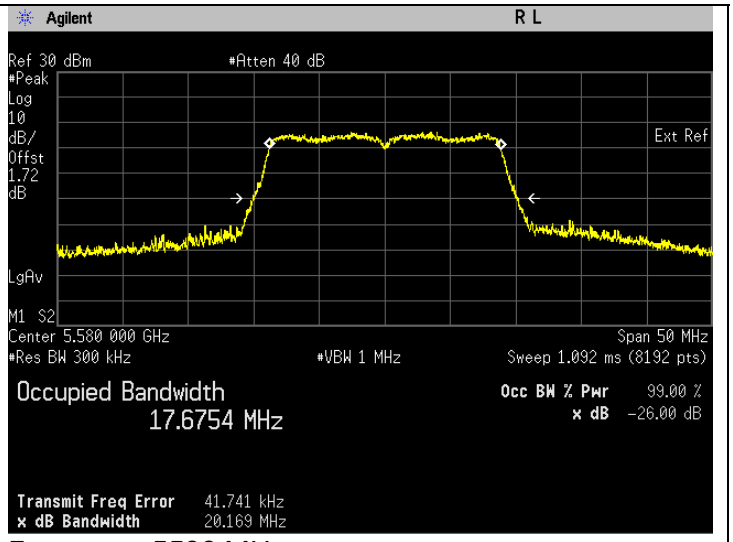
Frequency 5300 MHz



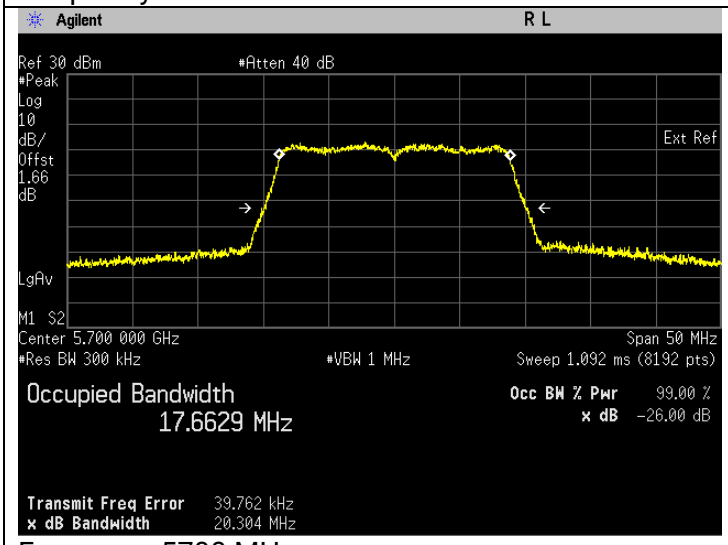
Frequency 5320 MHz



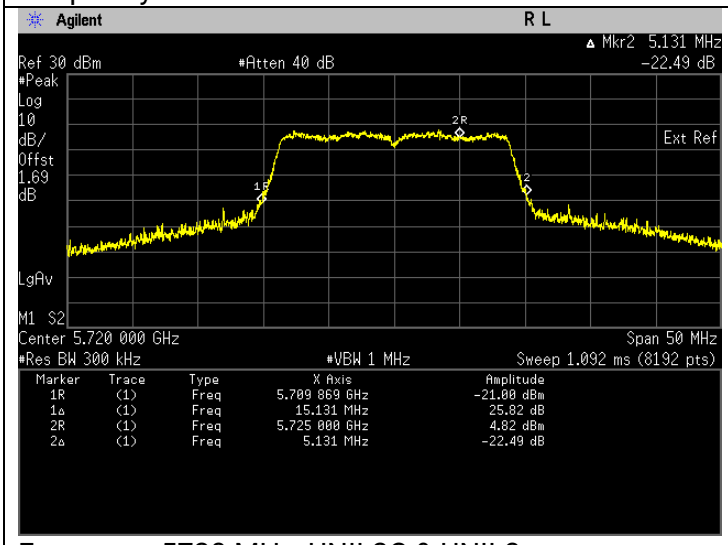
Frequency 5500 MHz



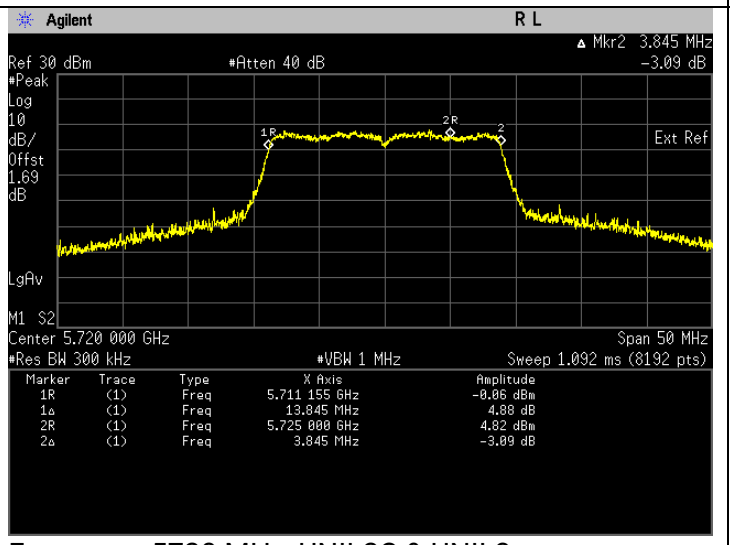
Frequency 5580 MHz



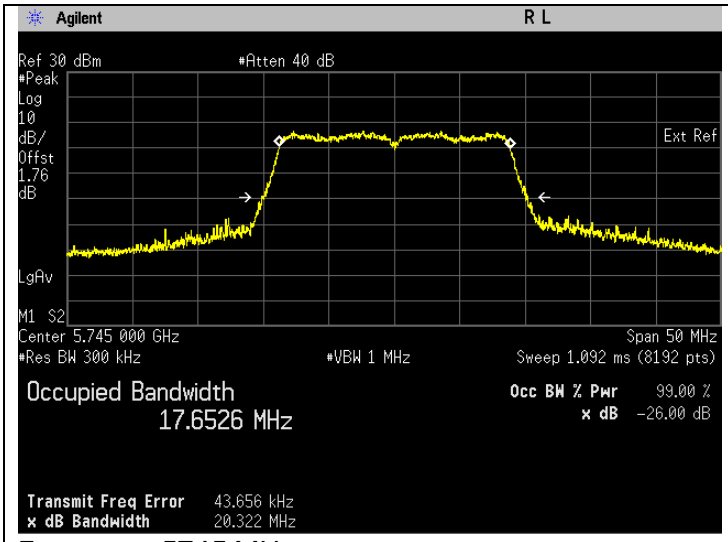
Frequency 5700 MHz



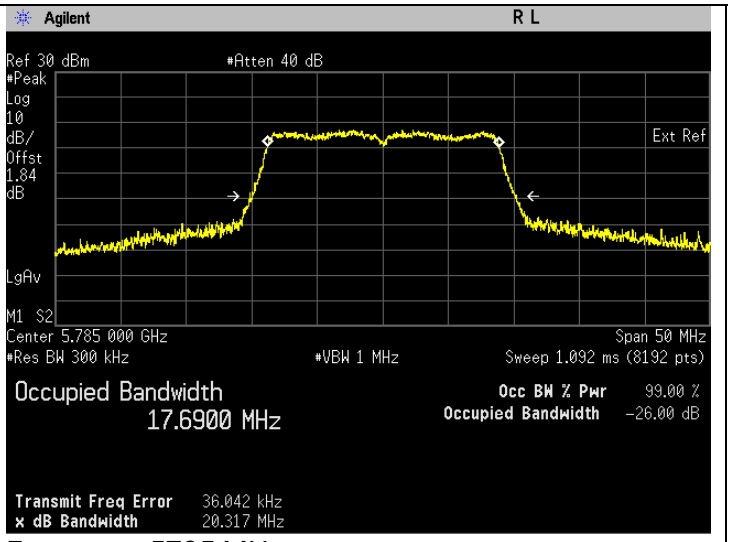
Frequency 5720 MHz, UNII-2C & UNII-3



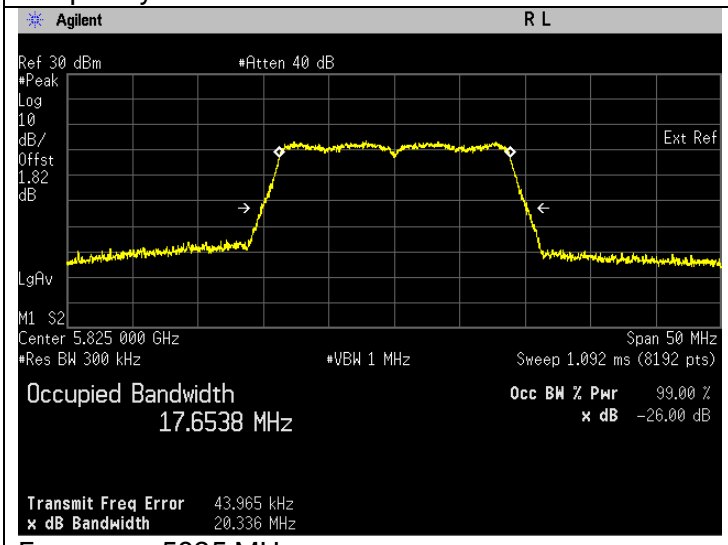
Frequency 5720 MHz, UNII-2C & UNII-3



Frequency 5745 MHz



Frequency 5785 MHz

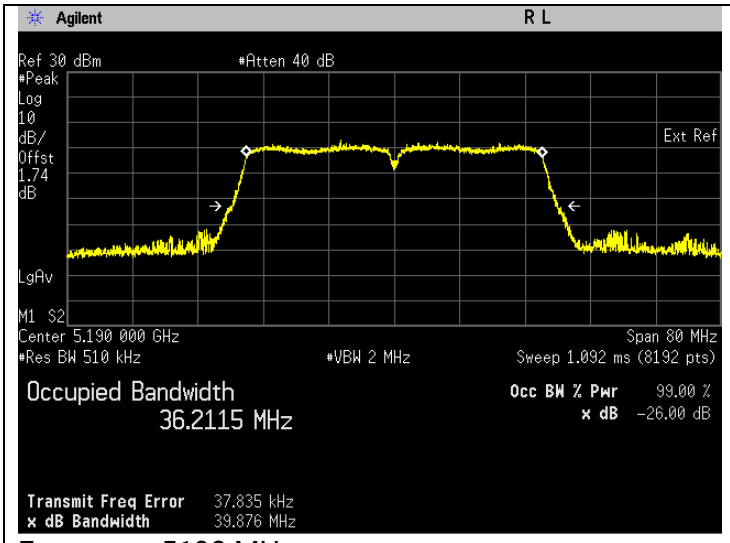


Frequency 5825 MHz

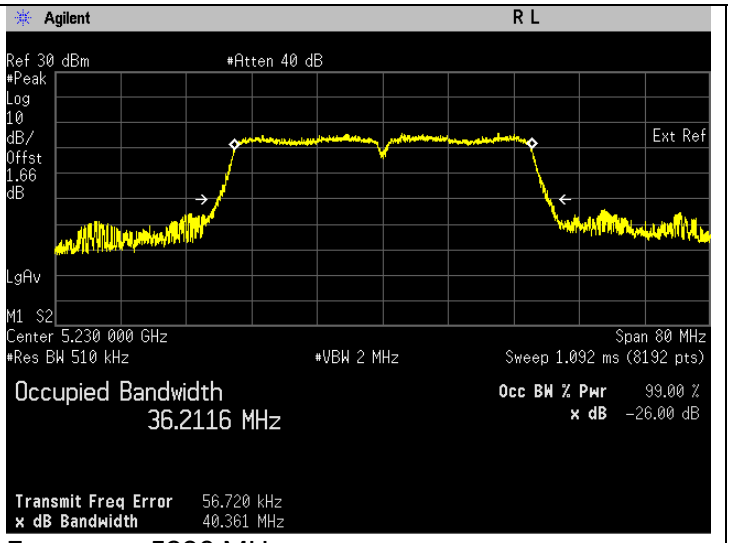
802.11n (HT40)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	39.876	Pass	36.212	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.361	Pass	36.212	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.884	Pass	36.183	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.508	Pass	36.178	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.413	Pass	36.191	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.767	Pass	36.171	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.668	Pass	36.196	Pass
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5), UNII-2C	35.297	Pass	33.110	Pass
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5), UNII-3	5.297	Pass	3.110	Pass
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.410	Pass	36.231	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	40.488	Pass	36.210	Pass

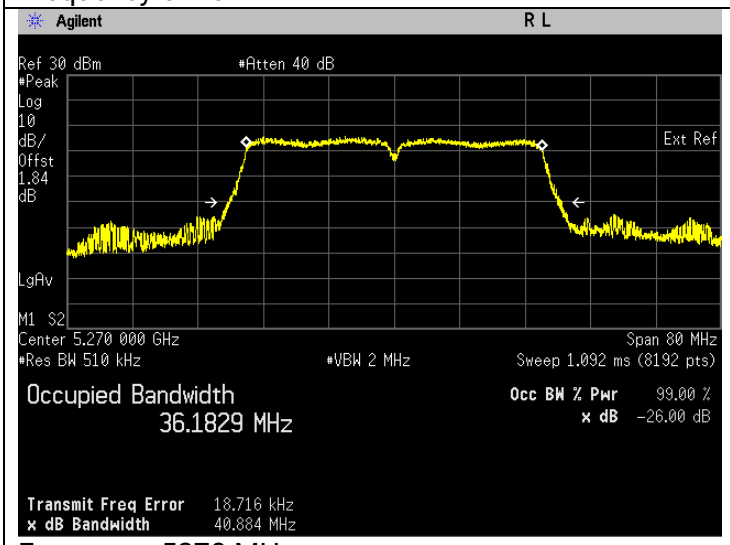
26 dB Bandwidth/ 99% Bandwidth



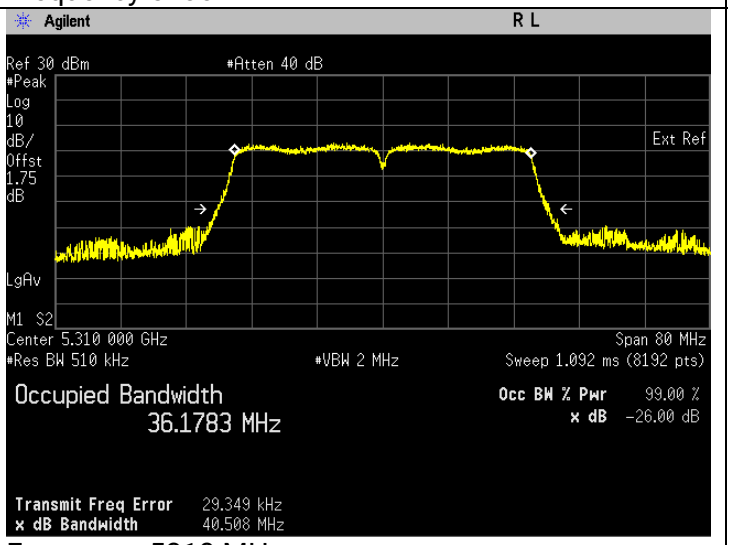
Frequency 5190 MHz



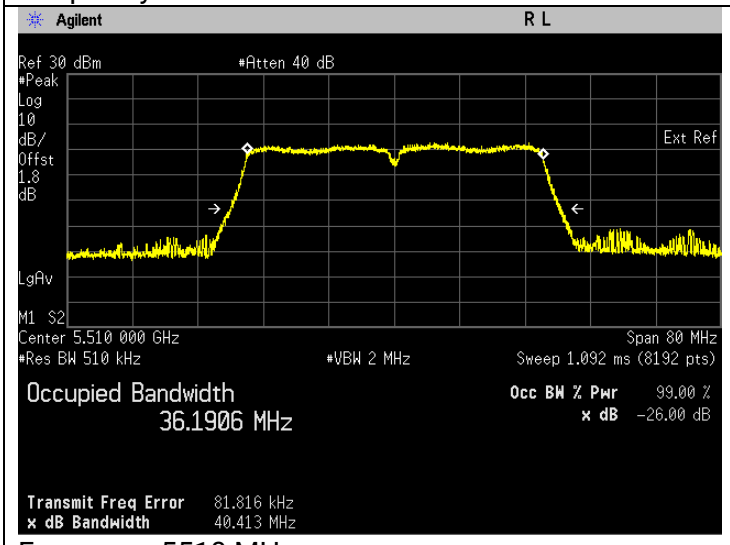
Frequency 5230 MHz



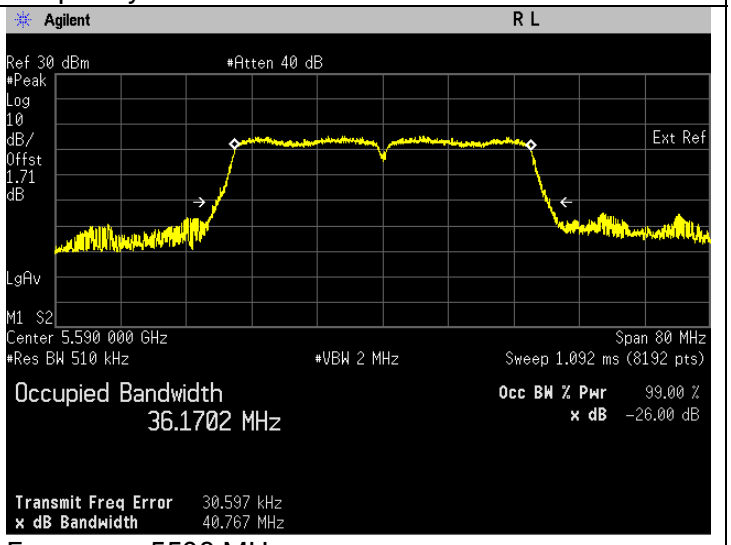
Frequency 5270 MHz



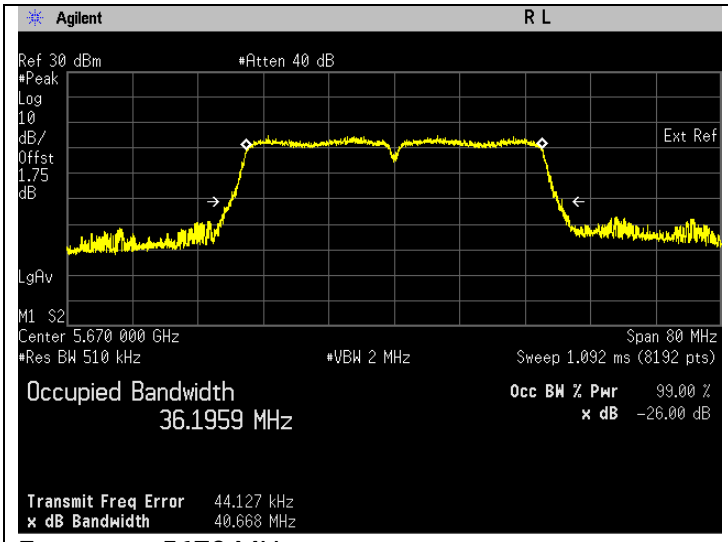
Frequency 5310 MHz



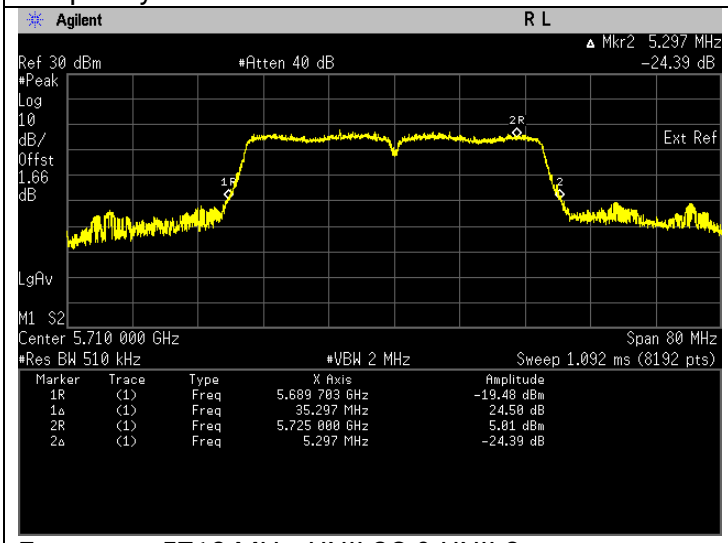
Frequency 5510 MHz



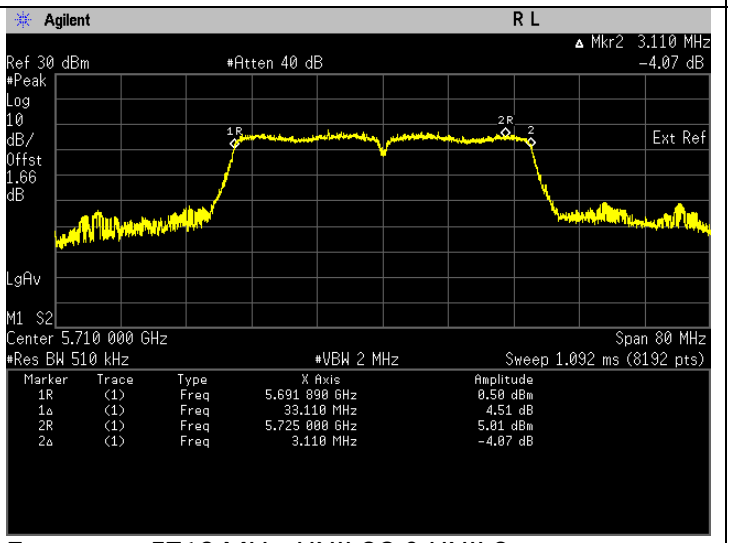
Frequency 5590 MHz



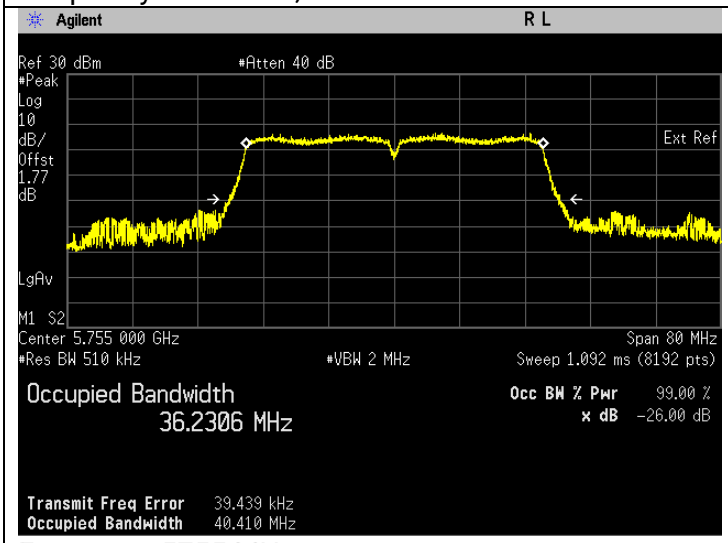
Frequency 5670 MHz



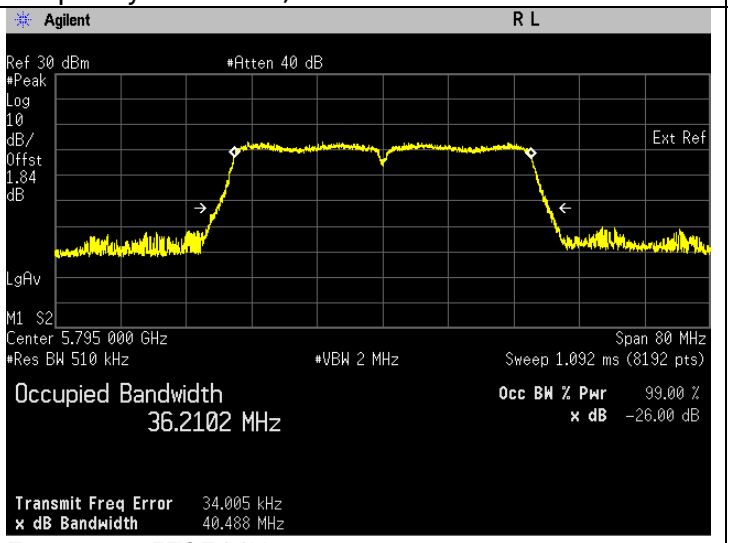
Frequency 5710 MHz, UNII-2C & UNII-3



Frequency 5710 MHz, UNII-2C & UNII-3



Frequency 5755 MHz

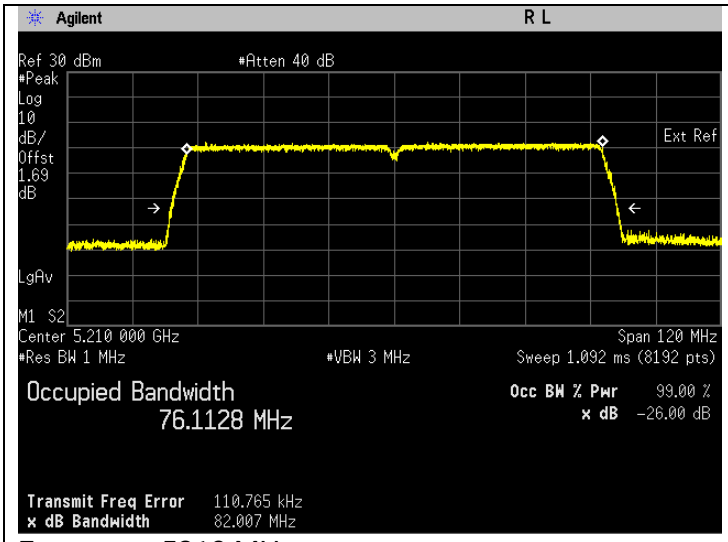


Frequency 5795 MHz

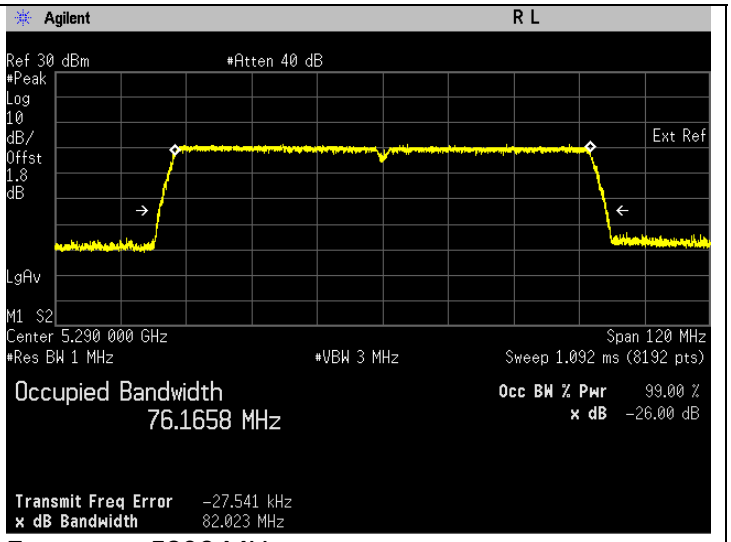
802.11ac (HT80)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5210	Mod Type: BPSK, Data Rate: MCS0 (29.3)	82.007	Pass	76.113	Pass
5290	Mod Type: BPSK, Data Rate: MCS0 (29.3)	82.023	Pass	76.166	Pass
5530	Mod Type: BPSK, Data Rate: MCS0 (29.3)	81.705	Pass	76.092	Pass
5610	Mod Type: BPSK, Data Rate: MCS0 (29.3)	81.435	Pass	76.098	Pass
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3), UNII-2C	75.974	Pass	73.047	Pass
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3), UNII-3	5.974	Pass	3.047	Pass
5775	Mod Type: BPSK, Data Rate: MCS0 (29.3)	81.563	Pass	76.093	Pass

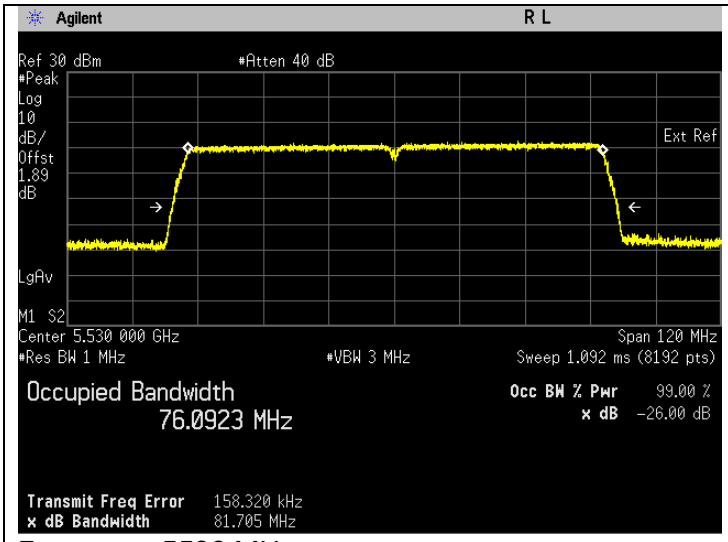
26 dB Bandwidth/ 99% Bandwidth



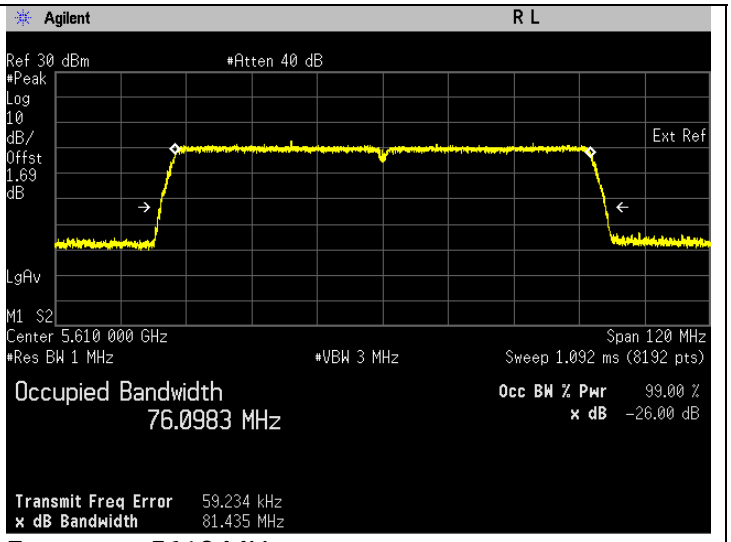
Frequency 5210 MHz



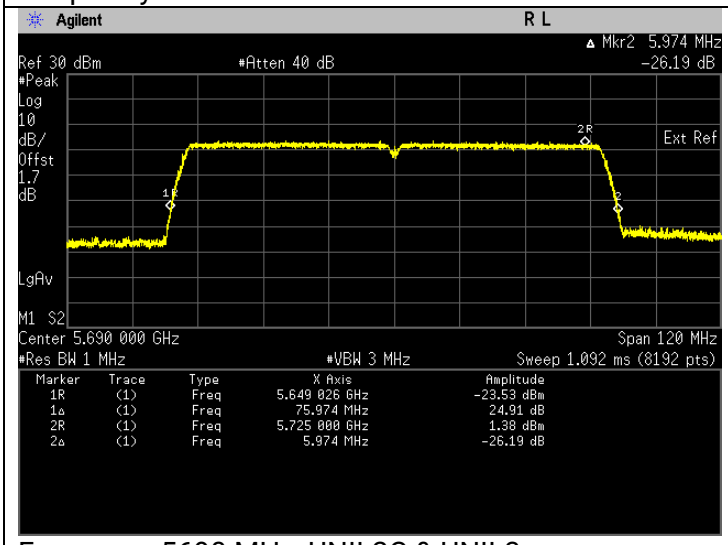
Frequency 5290 MHz



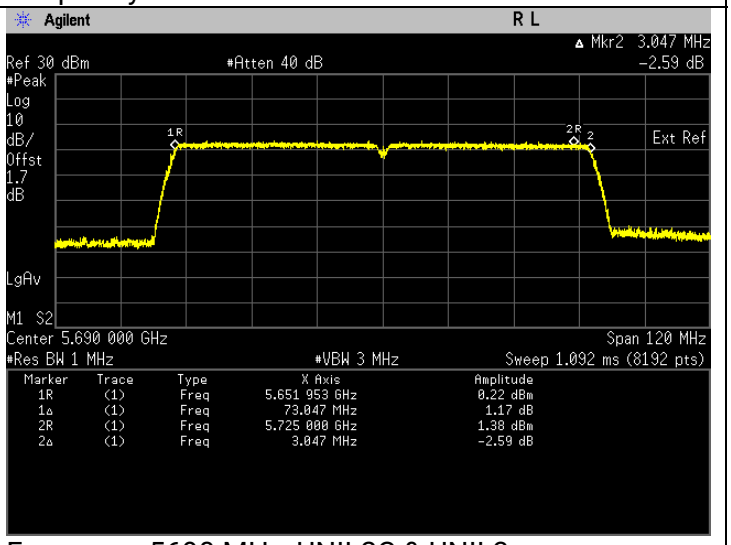
Frequency 5530 MHz



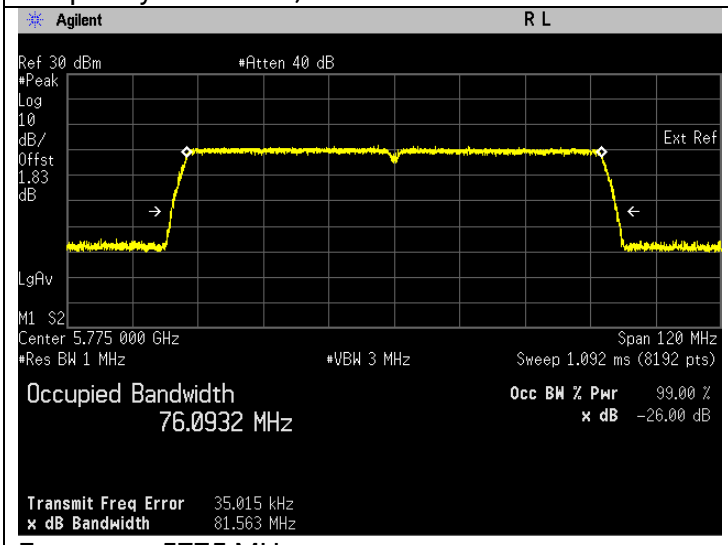
Frequency 5610 MHz



Frequency 5690 MHz, UNII-2C & UNII-3



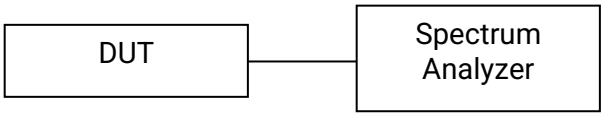
Frequency 5690 MHz, UNII-2C & UNII-3



Frequency 5775 MHz

6.2. Maximum Conducted Output Power

6.2.1. Test Setup



a) Test setup as per illustrated above.
b) Set DUT to transmit at desire transmit frequency.
c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
d) Setting of Spectrum analyzer :
   - Span to encompass the entire 26dB EBW or 99% Occupied Bandwidth.
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = power averaging (RMS)
   - Trace = Max hold
   - Number of points in sweep ≥ 2 × span / RBW
   - Sweep time = auto
   - Trace average at least 100 traces in power averaging (rms) mode
   - Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges.
   - Add 10 log (1/x), where x is the duty cycle, to the measured power to compute the average power during the actual transmission times
e) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause E.2.d) Method SA-2.
f) The Maximum output power results are included duty cycle correction factor.

6.2.2. Test Limits

FCC 15.407(a)

Range(GHz)	Condition		Output Power Limit
5.15-5.25 (UNII-1)		Outdoor AP	≤1W
		Indoor AP	≤1W
		Fixed Point to Point AP	≤1W
	√	Mobile and Portable client devices	≤250mW

5.25-5.35 (UNII-2A)	√	≤250mW or 11dBm+10log$_{10}$ B*
5.47-5.525 (UNII-2C)	√	*B is 26dB emission bandwidth in MHz

5.725-5.85 (UNII-3)	√	≤1W

RSS-247 6.2

Range(GHz)	Condition	Output Power Limit
5.15-5.25	indoor only (e.i.r.p.)	≤200mW or $10+10\log_{10}B$* *B is 99% emission bandwidth in 1MHz
5.25-5.35	(Conducted & e.i.r.p.)	Conducted: ≤250mW or $11+10\log_{10}B$* EIRP: < 1.0W or $17+10\log_{10}B$* *B is 99% emission bandwidth in 1MHz
5.47-5.6 5.65-5.725	(Conducted & e.i.r.p.)	Conducted: ≤250mW or $11+10\log_{10}B$* EIRP: < 1.0W or $17+10\log_{10}B$* *B is 99% emission bandwidth in 1MHz
5.725-5.85	(Conducted)	≤1W

6.2.3. Additional Info

Antenna	Gain (dBi)
UNII-1	1.5
UNII-2A & UNII-2C	3.5
UNII-3	5.5
Duty Cycle Correction Factor	
802.11a	0.048
802.11n20	0.052
802.11n40	0.098
802.11ac80	0.202

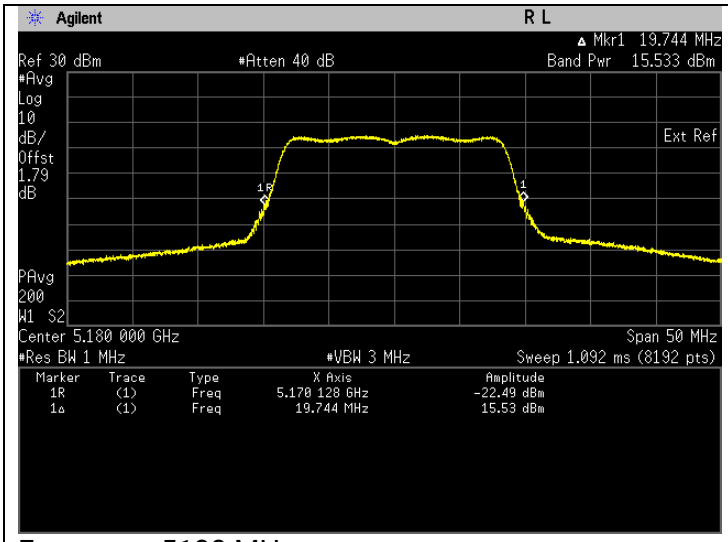
6.2.4. Test Data

Summary table

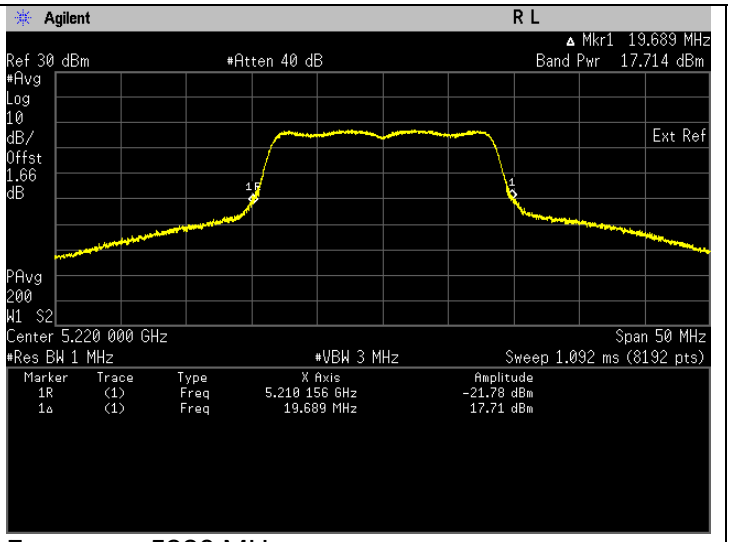
WLAN	Frequency Range (MHz)	Bandwidth (MHz)	RF Power Output		EIRP		Max Emission Designator
			Max measured (mW)	Max declared (mW)	Max measured (mW)	Max declared (mW)	
802.11a	5180-5240	20	61.70	63.10	87.16	89.13	16M7D1D
	5260-5320	20	49.43	63.10	110.66	141.25	16M7D1D
	5500-5580	20	60.51	63.10	135.46	141.25	16M7D1D
	5660-5720	20	50.89	63.10	113.92	141.25	16M7D1D
	5745-5825	20	59.51	63.10	211.15	223.87	16M7D1D
802.11n/ac (HT20)	5180-5240	20	36.10	39.81	50.99	56.23	17M7D1D
	5260-5320	20	31.54	39.81	70.62	89.13	17M7D1D
	5500-5580	20	30.28	39.81	67.80	89.13	17M7D1D
	5660-5720	20	32.76	39.81	73.33	89.13	17M7D1D
	5745-5825	20	35.85	39.81	127.20	141.25	17M7D1D
802.11n/ac (HT40)	5190-5230	40	30.04	39.81	42.43	56.23	36M2D1D
	5270-5310	40	31.67	39.81	70.89	89.13	36M2D1D
	5510-5550	40	15.69	39.81	35.13	89.13	36M2D1D
	5670-5710	40	38.91	39.81	87.12	89.13	36M2D1D
	5755-5795	40	37.10	39.81	131.64	141.25	36M2D1D
802.11ac (VHT80)	5210	80	14.74	15.85	20.82	22.39	76M1D1D
	5290	80	12.32	15.85	27.58	35.48	76M2D1D
	5530	80	14.80	15.85	33.13	35.48	76M1D1D
	5690	80	18.98	19.95	42.49	44.67	76M1D1D
	5775	80	12.48	15.85	44.29	56.23	76M1D1D

802.11a (26dB EBW)

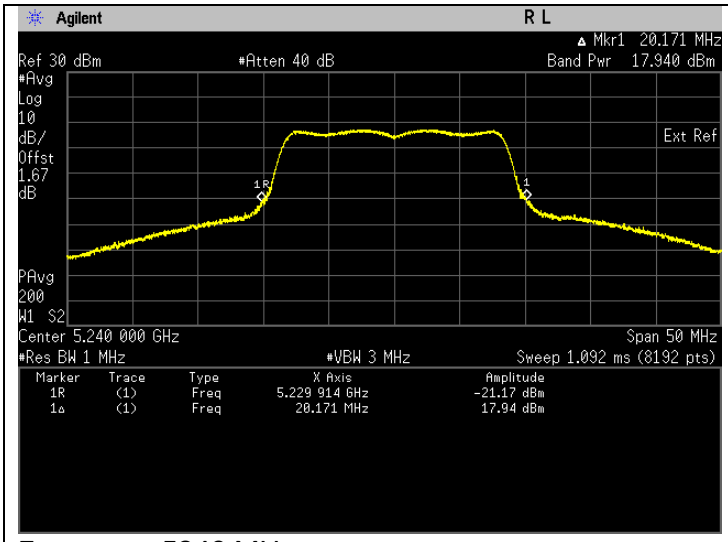
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	36.150	15.581	Pass
5220	Mod Type: BPSK, Data Rate: 6	59.732	17.762	Pass
5240	Mod Type: BPSK, Data Rate: 6	62.922	17.988	Pass
5260	Mod Type: BPSK, Data Rate: 6	50.258	17.012	Pass
5300	Mod Type: BPSK, Data Rate: 6	35.270	15.474	Pass
5320	Mod Type: BPSK, Data Rate: 6	33.971	15.311	Pass
5500	Mod Type: BPSK, Data Rate: 6	30.853	14.893	Pass
5580	Mod Type: BPSK, Data Rate: 6	62.216	17.939	Pass
5700	Mod Type: BPSK, Data Rate: 6	28.223	14.506	Pass
5745	Mod Type: BPSK, Data Rate: 6	60.744	17.835	Pass
5785	Mod Type: BPSK, Data Rate: 6	59.938	17.777	Pass
5825	Mod Type: BPSK, Data Rate: 6	32.122	15.068	Pass



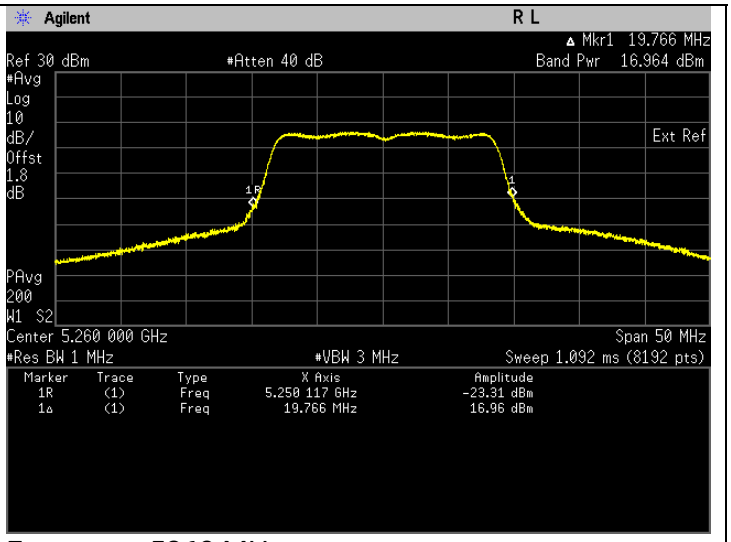
Frequency 5180 MHz



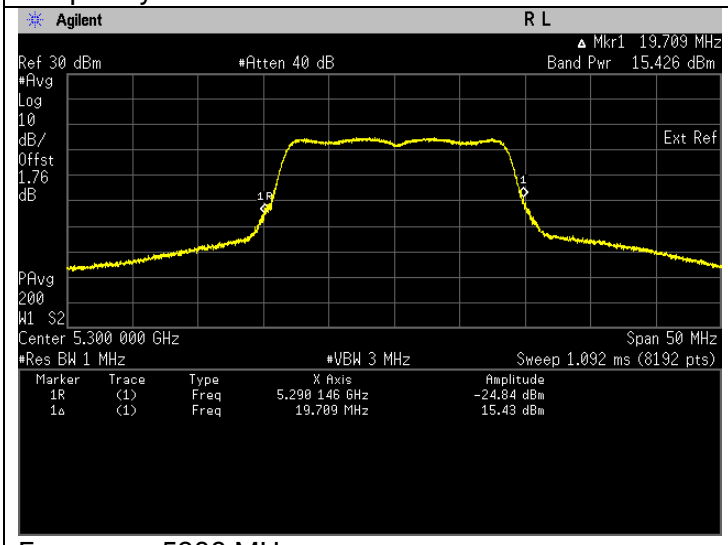
Frequency 5220 MHz



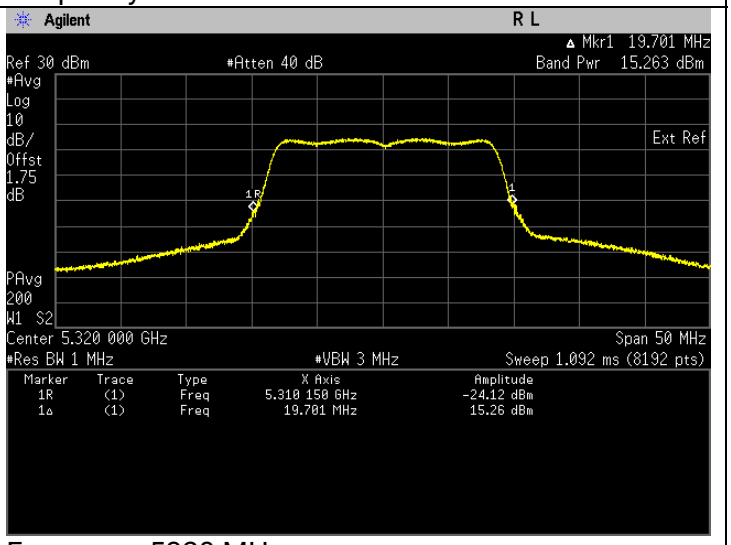
Frequency 5240 MHz



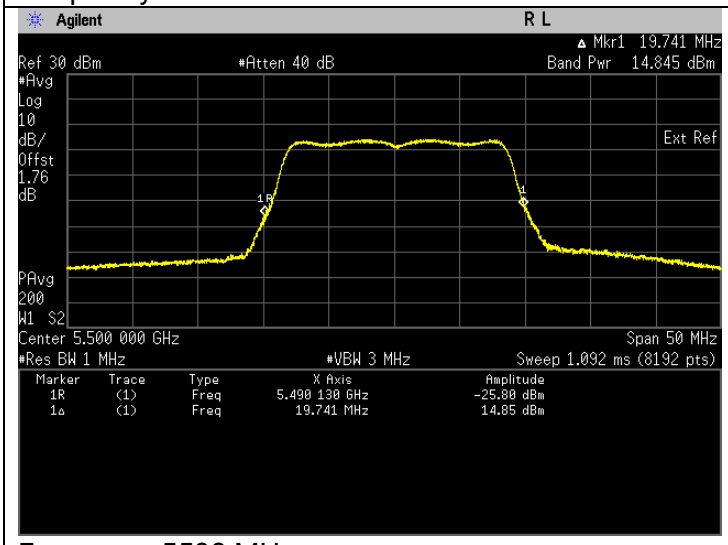
Frequency 5260 MHz



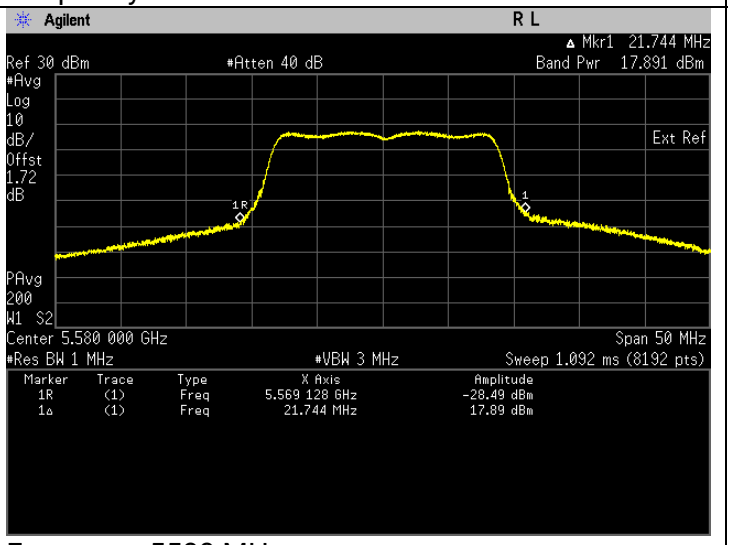
Frequency 5300 MHz



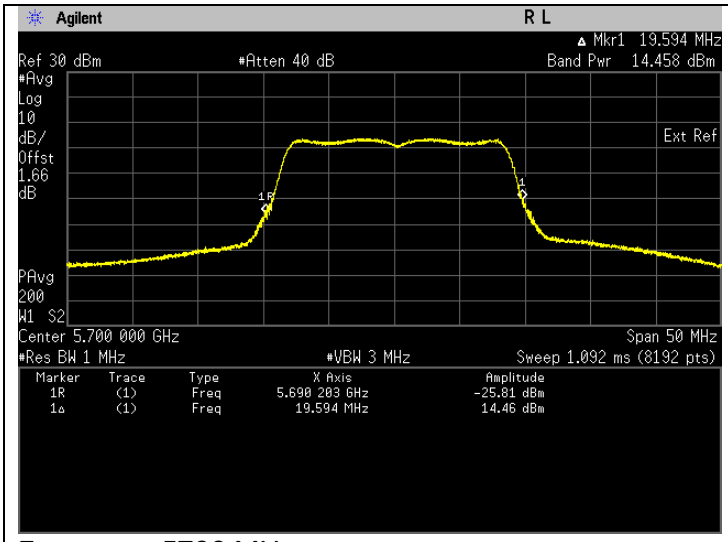
Frequency 5320 MHz



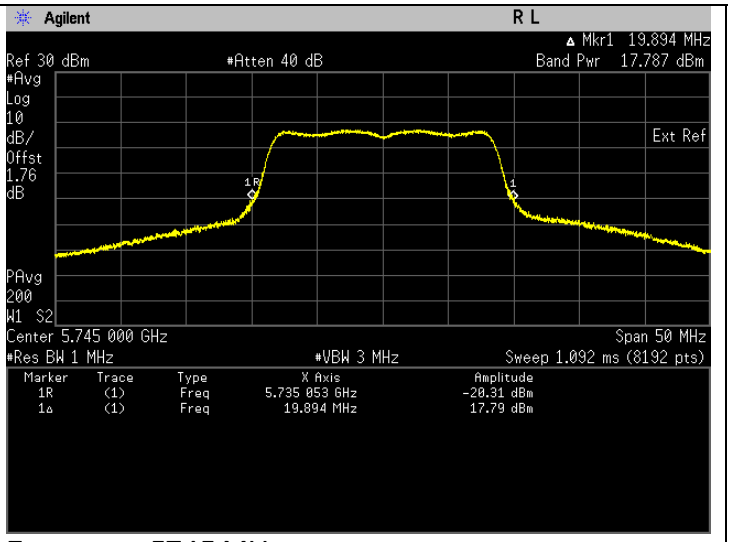
Frequency 5500 MHz



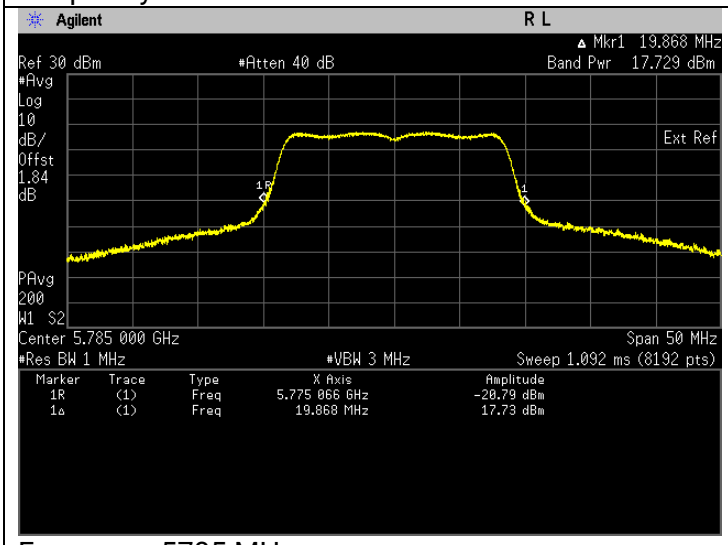
Frequency 5580 MHz



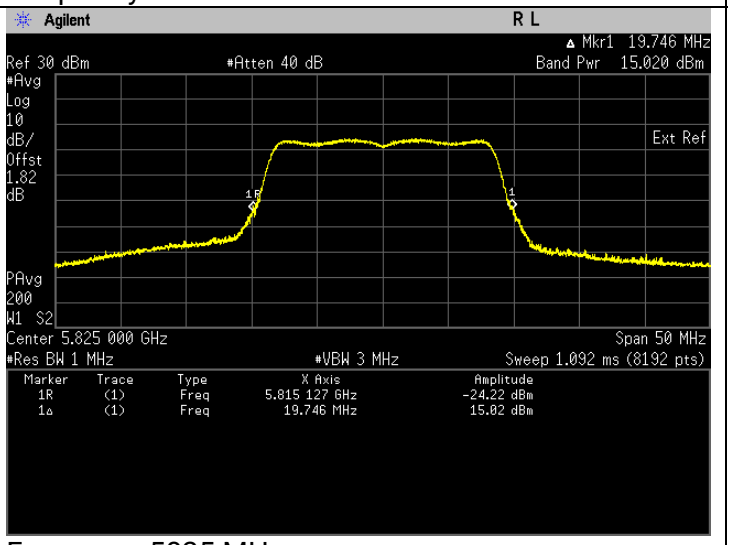
Frequency 5700 MHz



Frequency 5745 MH



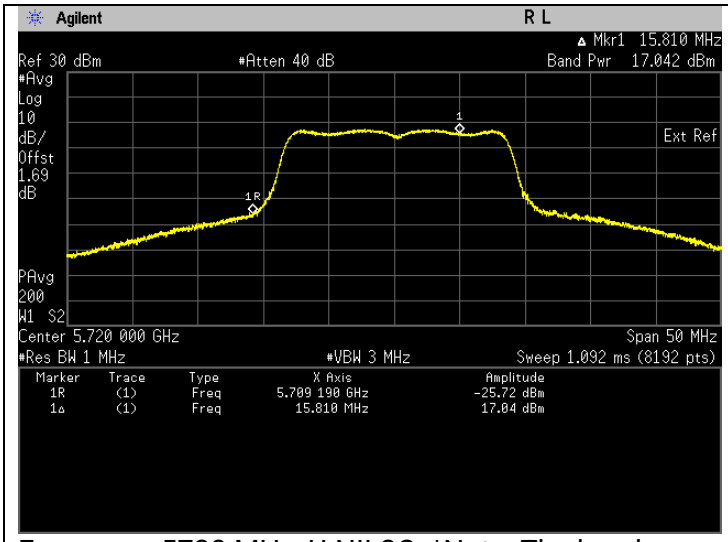
Frequency 5785 MHz



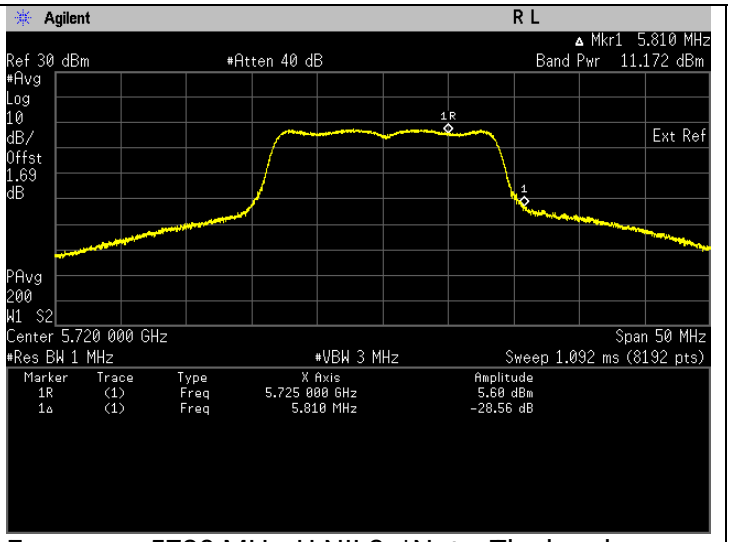
Frequency 5825 MH

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: 6	51.169	17.090	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: 6	13.244	11.220	Pass



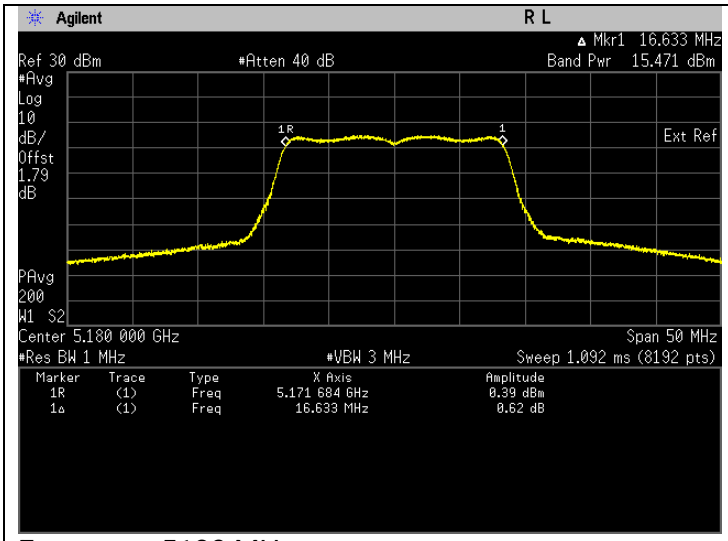
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



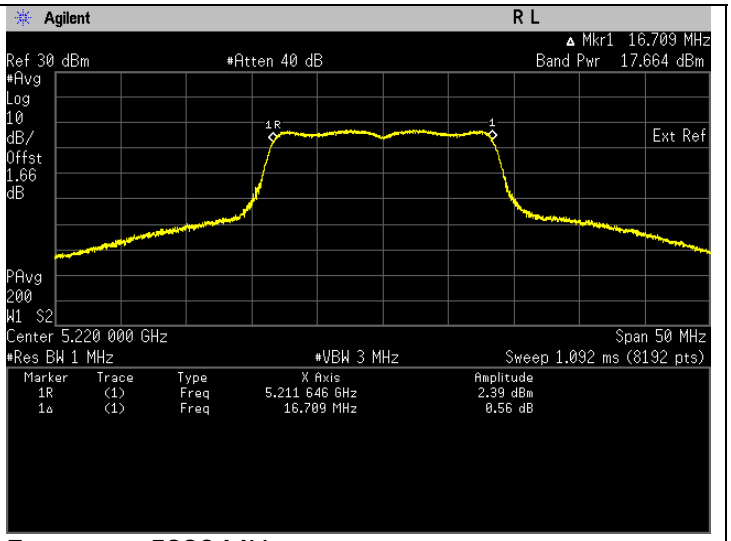
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11a (99% EBW)

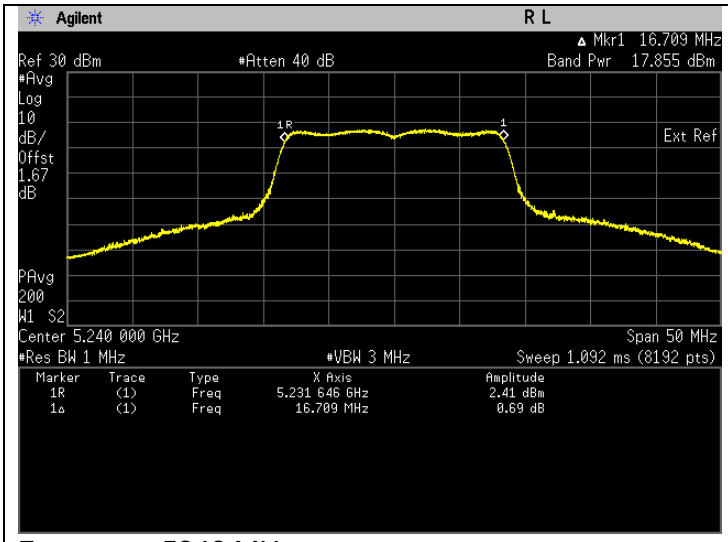
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	35.637	15.519	Pass	17.019	Pass
5220	Mod Type: BPSK, Data Rate: 6	59.048	17.712	Pass	19.212	Pass
5240	Mod Type: BPSK, Data Rate: 6	61.703	17.903	Pass	19.403	Pass
5260	Mod Type: BPSK, Data Rate: 6	49.431	16.940	Pass	20.440	Pass
5300	Mod Type: BPSK, Data Rate: 6	34.253	15.347	Pass	18.847	Pass
5320	Mod Type: BPSK, Data Rate: 6	33.698	15.276	Pass	18.776	Pass
5500	Mod Type: BPSK, Data Rate: 6	30.571	14.853	Pass	18.353	Pass
5580	Mod Type: BPSK, Data Rate: 6	60.507	17.818	Pass	21.318	Pass
5700	Mod Type: BPSK, Data Rate: 6	27.517	14.396	Pass	17.896	Pass
5745	Mod Type: BPSK, Data Rate: 6	59.512	17.746	Pass	23.246	Pass
5785	Mod Type: BPSK, Data Rate: 6	59.116	17.717	Pass	23.217	Pass
5825	Mod Type: BPSK, Data Rate: 6	31.478	14.980	Pass	20.480	Pass



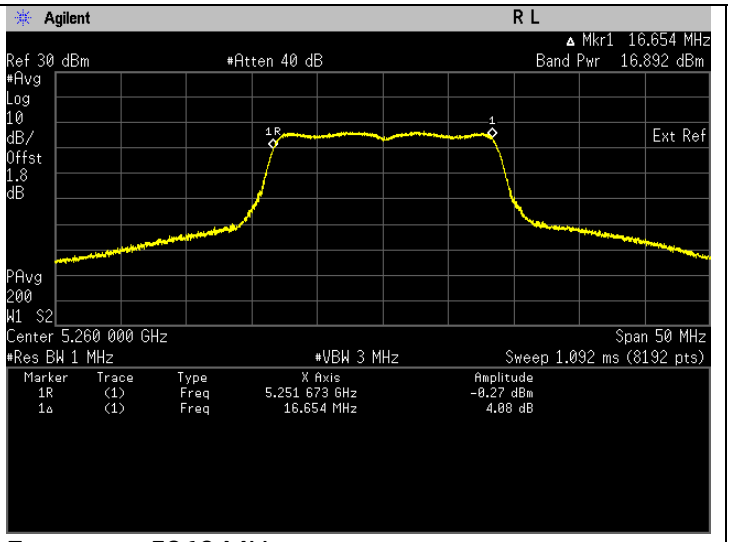
Frequency 5180 MHz



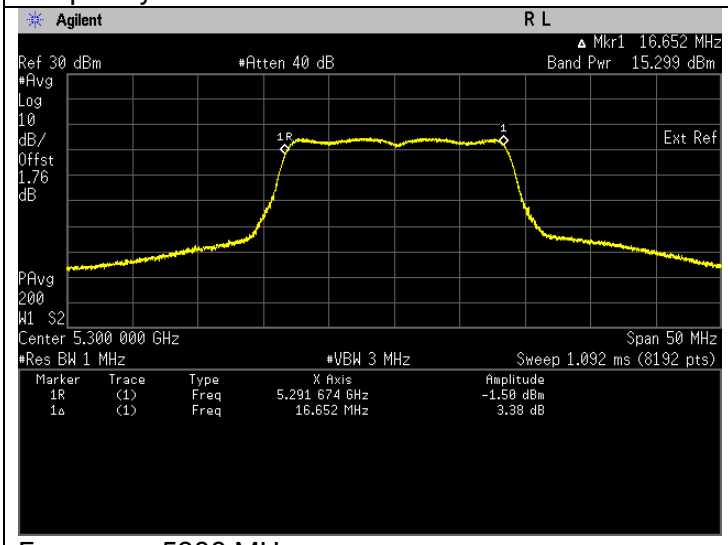
Frequency 5220 MH



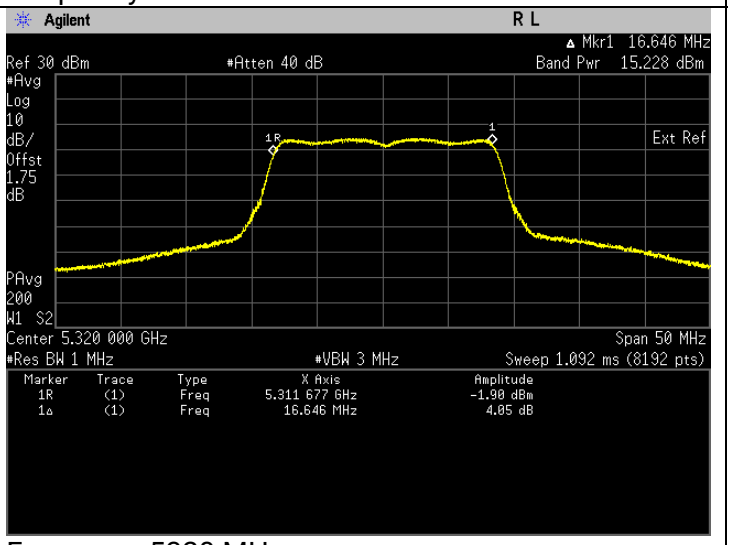
Frequency 5240 MHz



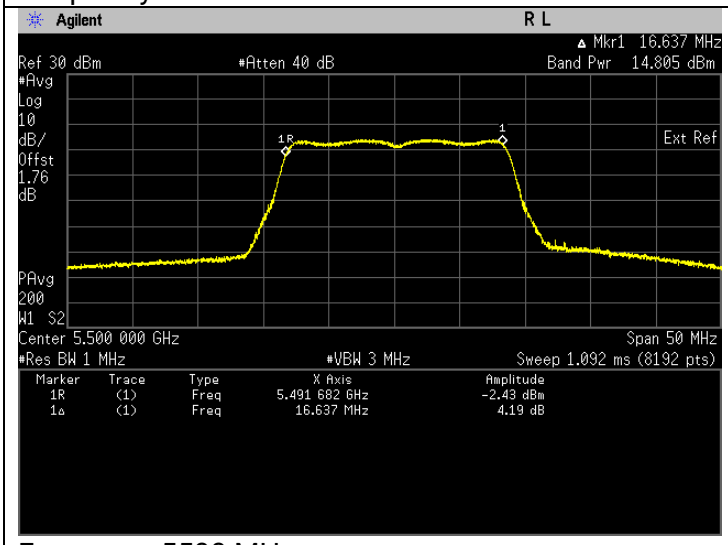
Frequency 5260 MHz



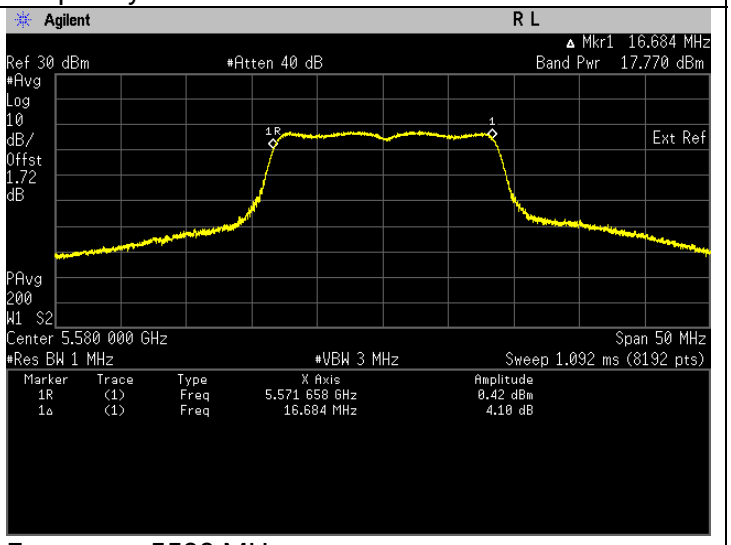
Frequency 5300 MHz



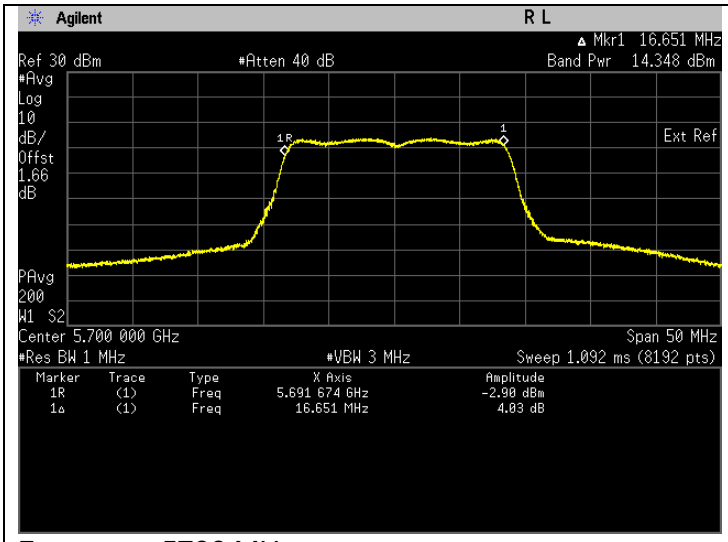
Frequency 5320 MHz



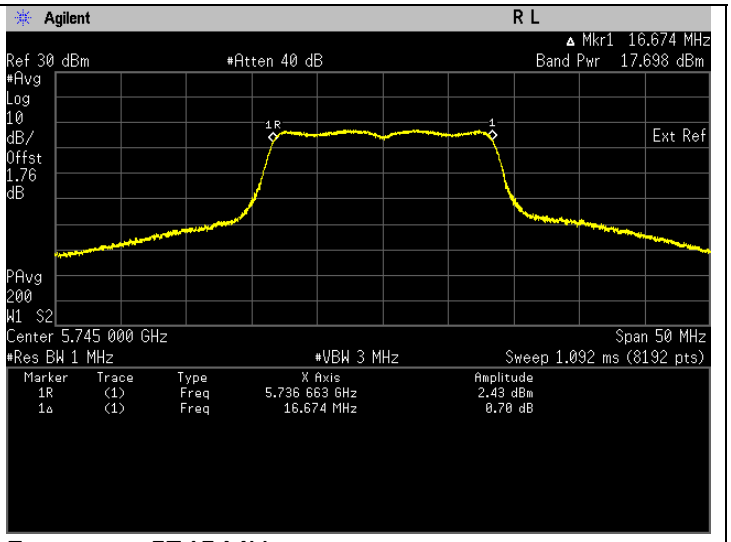
Frequency 5500 MHz



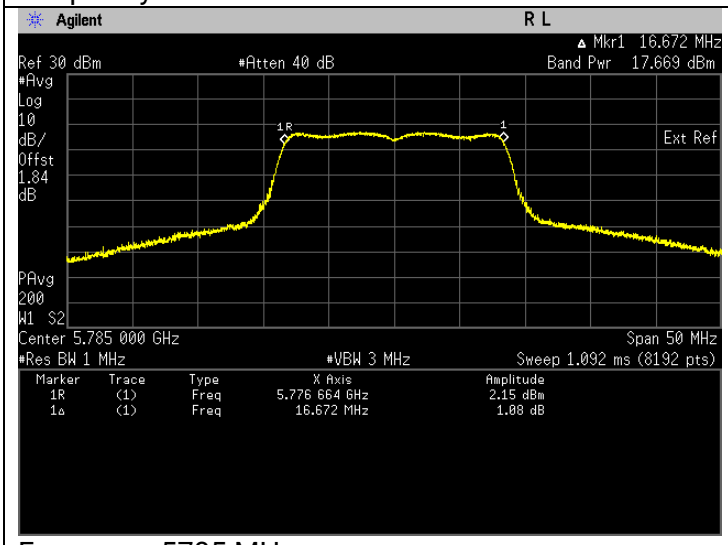
Frequency 5580 MHz



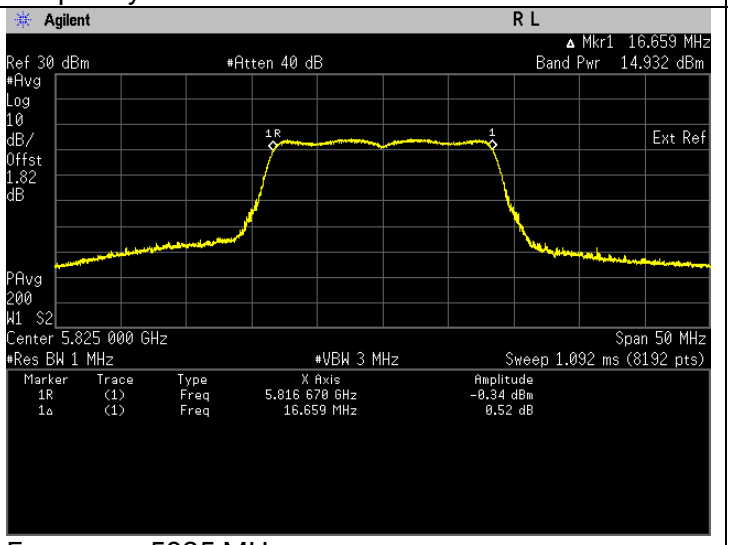
Frequency 5700 MHz



Frequency 5745 MHz



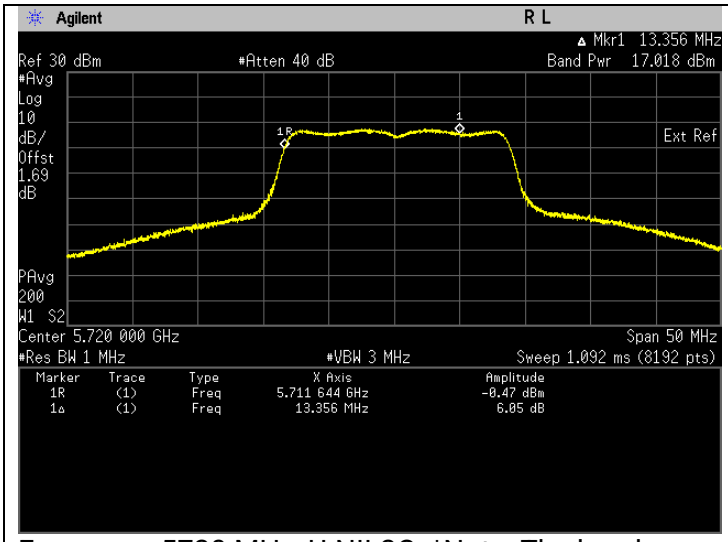
Frequency 5785 MHz



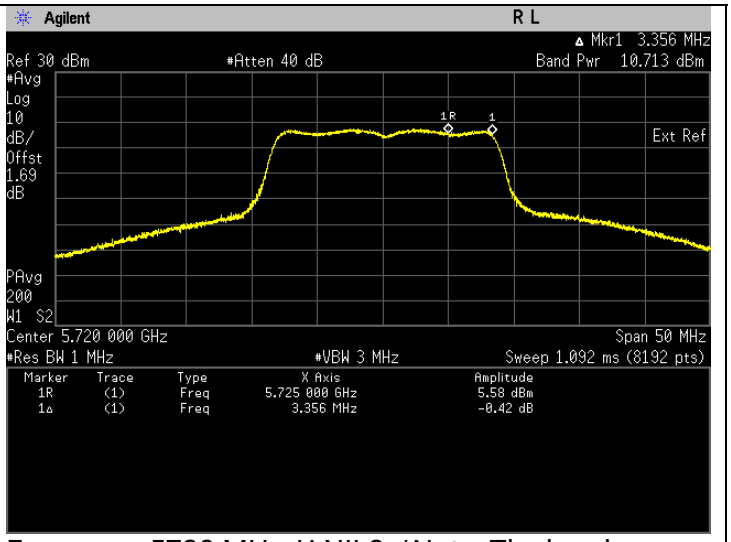
Frequency 5825 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5720	Mod Type: BPSK, Data Rate: 6	50.887	17.066	Pass	20.566	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: 6	11.915	10.761	Pass	14.261	Pass



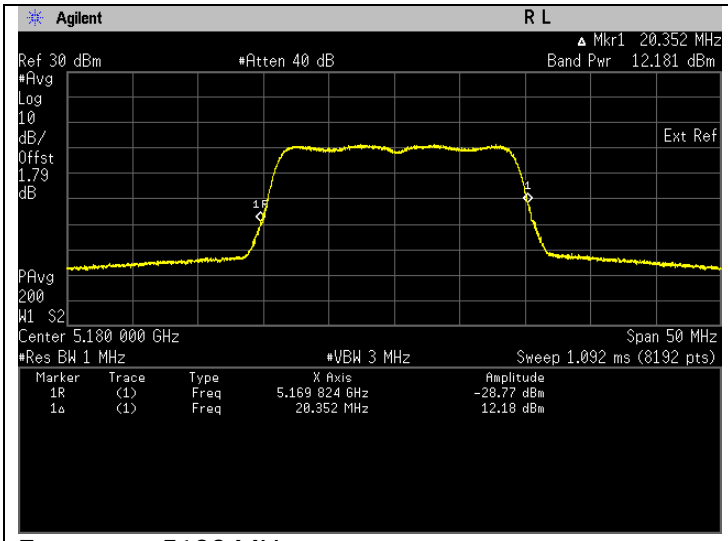
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



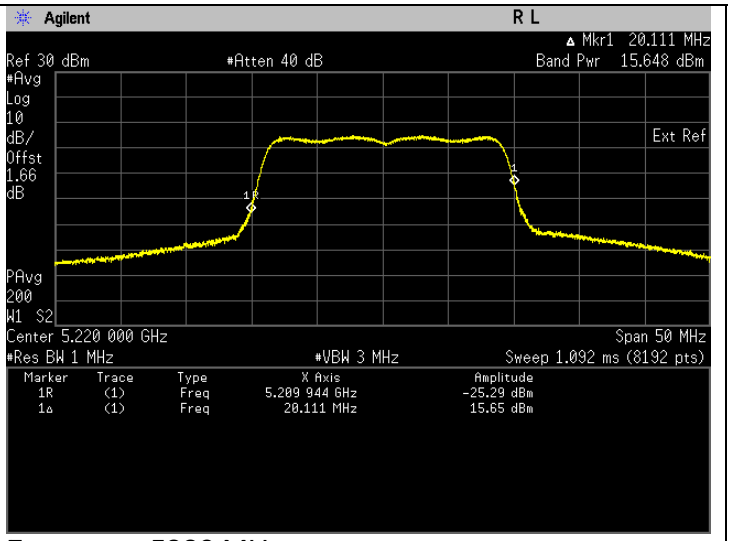
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(26dB EBW)

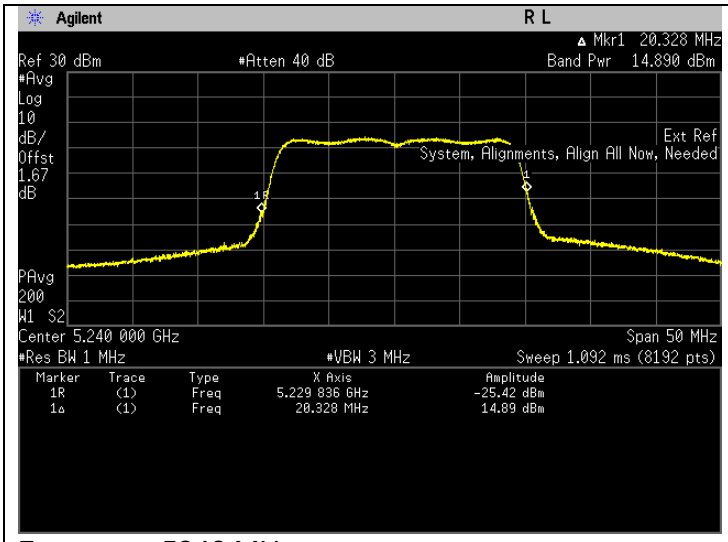
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.721	12.233	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	37.150	15.700	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	31.200	14.942	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	32.177	15.075	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	18.199	12.600	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.723	12.485	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	19.008	12.789	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	31.042	14.919	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	13.949	11.445	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	33.888	15.300	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	36.665	15.643	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.008	12.306	Pass



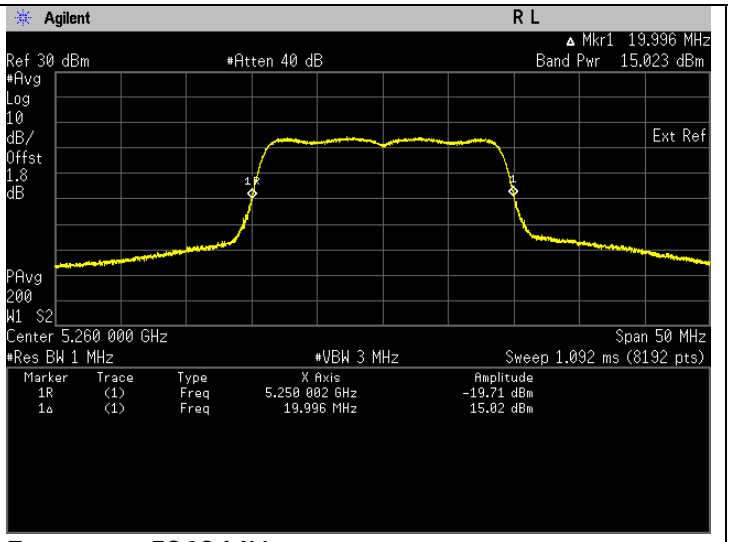
Frequency 5180 MHz



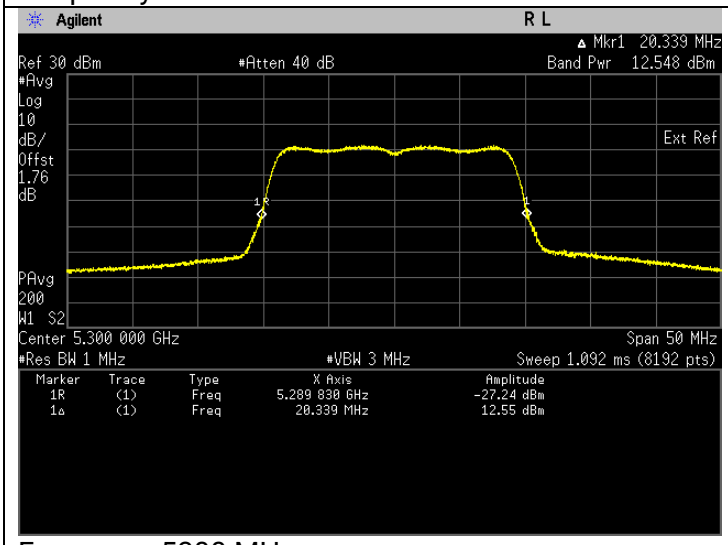
Frequency 5220 MHz



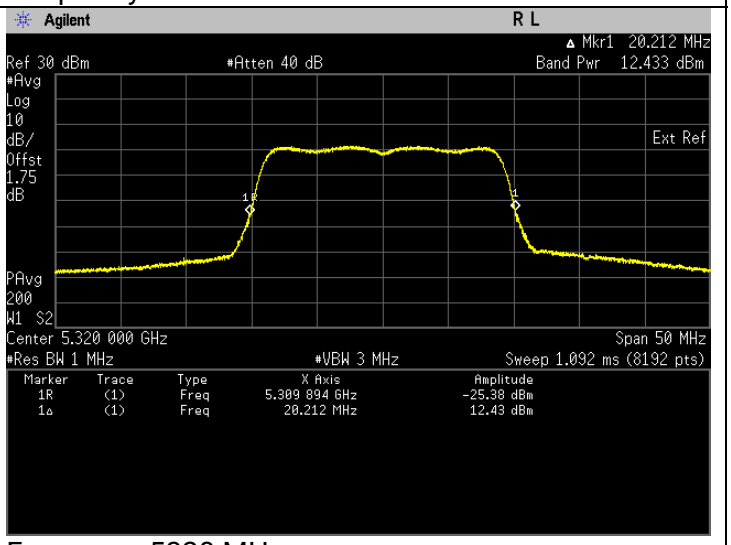
Frequency 5240 MHz



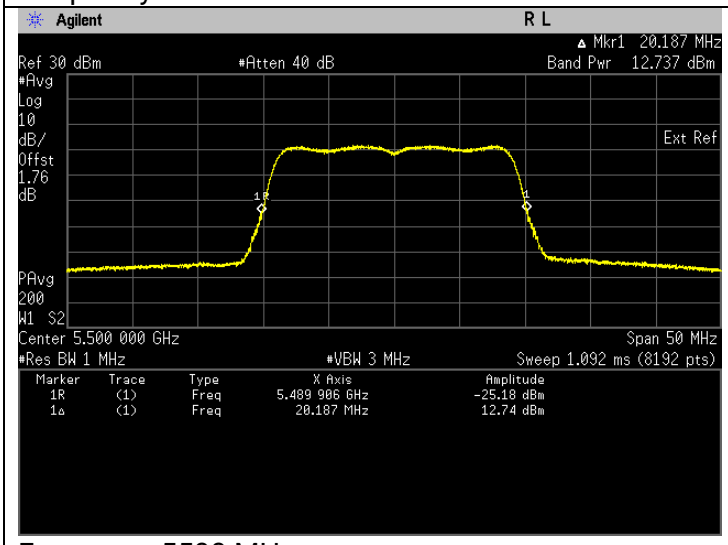
Frequency 5260 MH



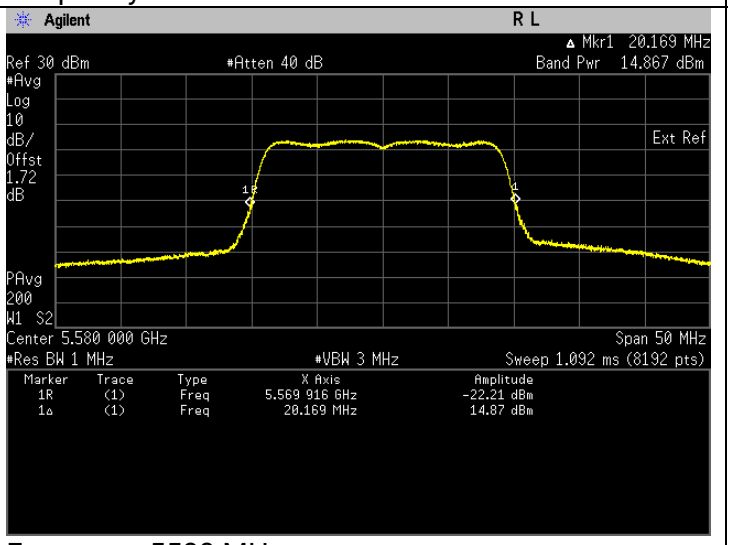
Frequency 5300 MHz



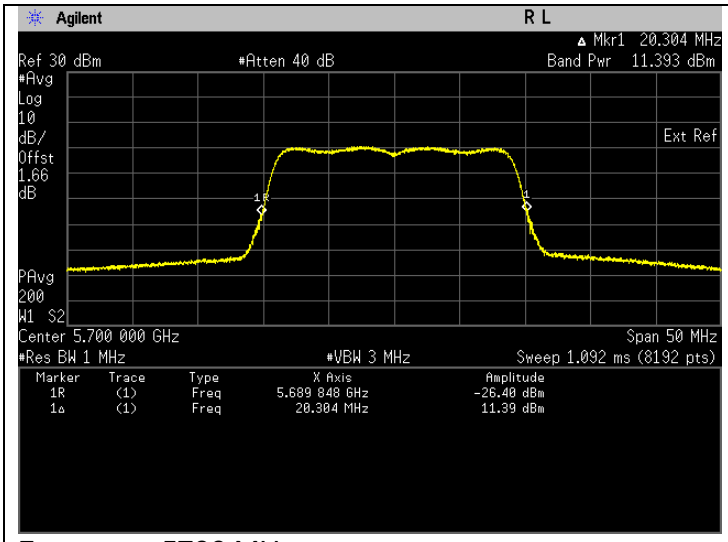
Frequency 5320 MH



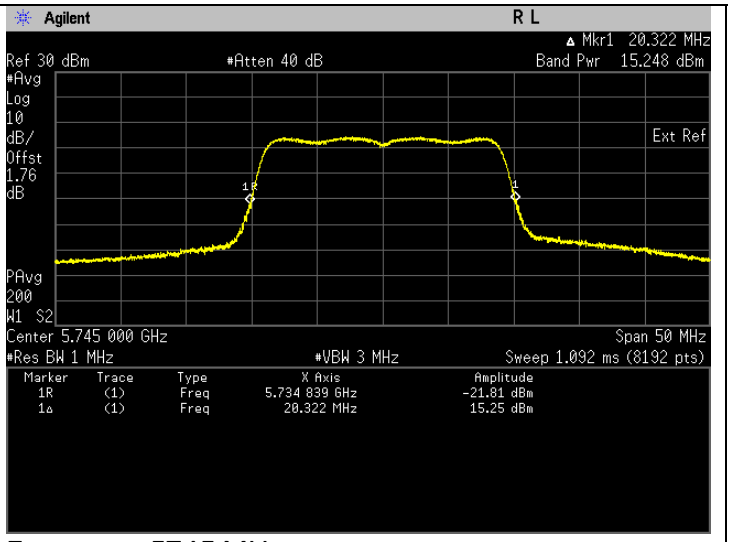
Frequency 5500 MHz



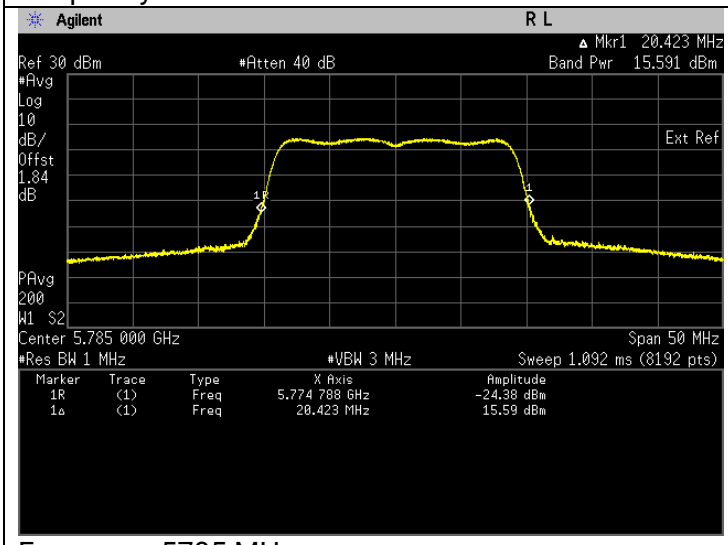
Frequency 5580 MHz



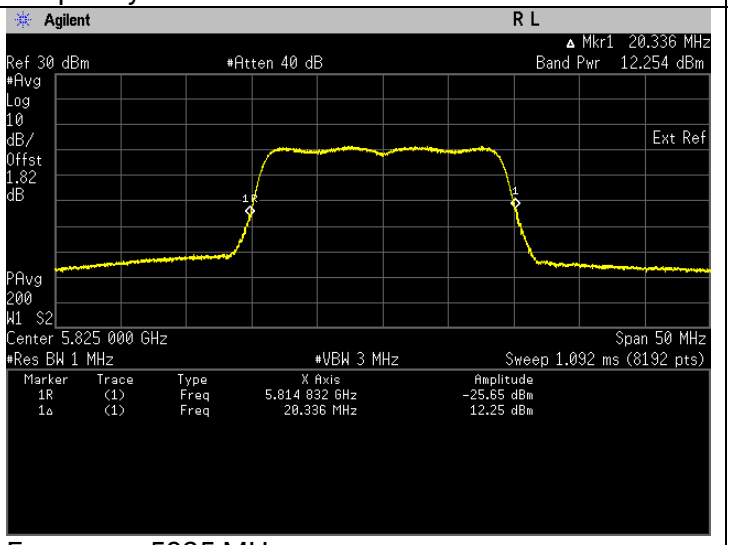
Frequency 5700 MHz



Frequency 5745 MH



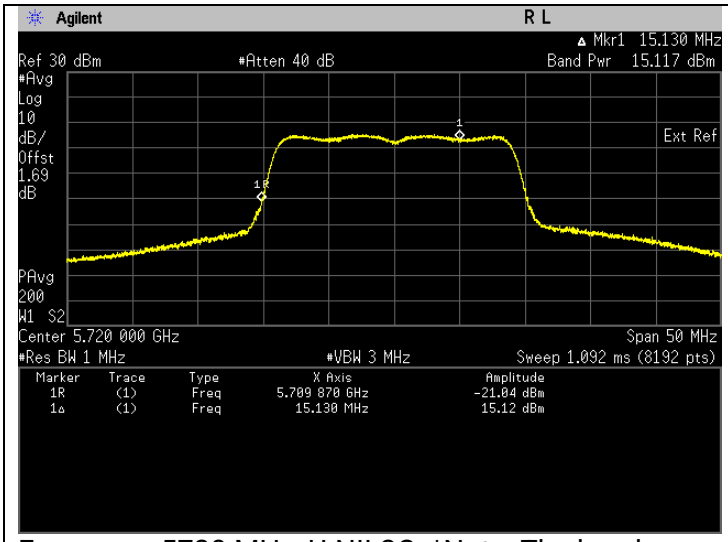
Frequency 5785 MHz



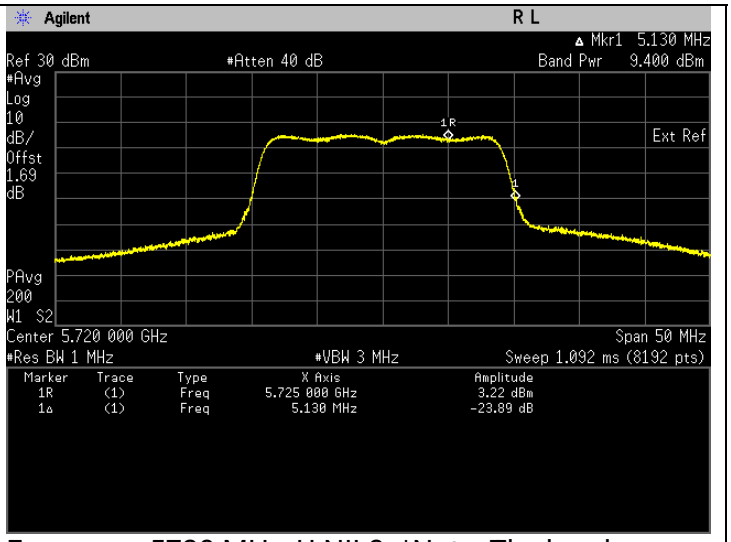
Frequency 5825 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	32.881	15.169	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.815	9.452	Pass



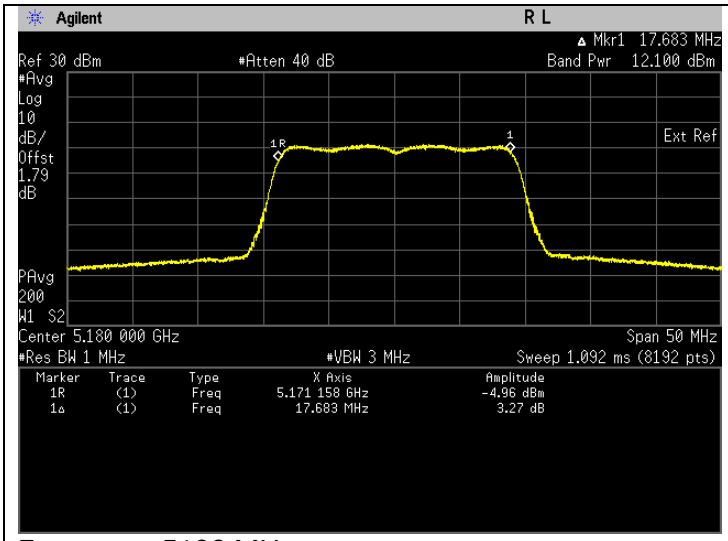
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



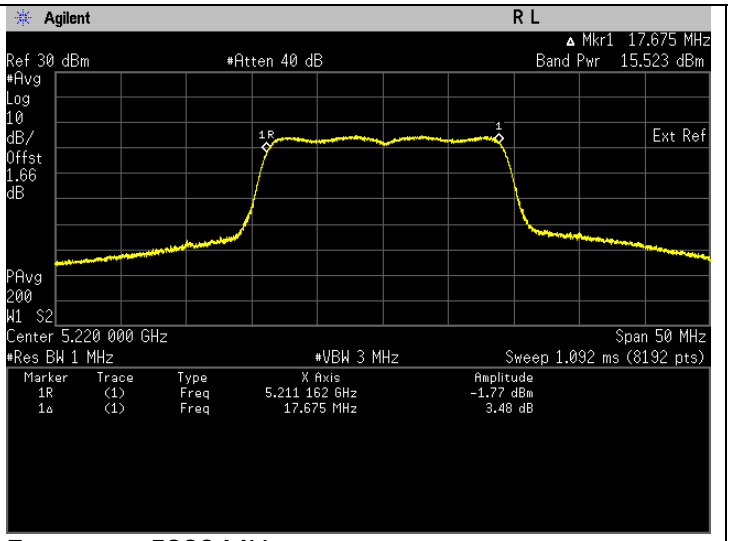
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(99% EBW)

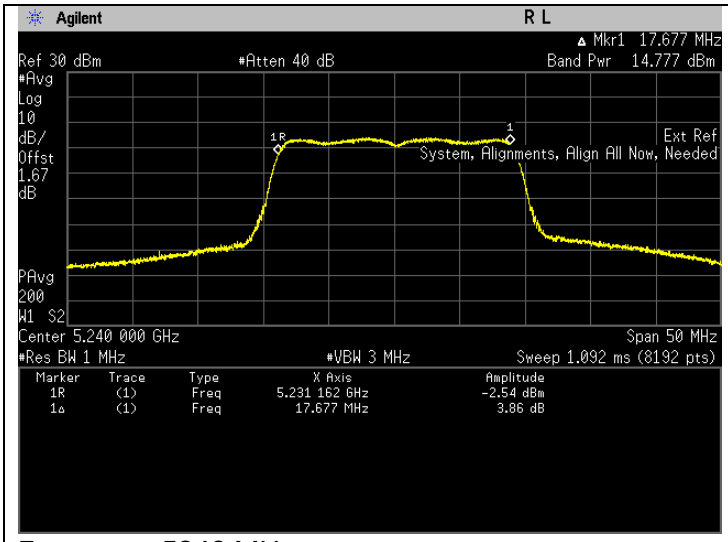
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.412	12.152	Pass	13.652	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	36.096	15.575	Pass	17.075	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	30.399	14.829	Pass	16.329	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	31.546	14.989	Pass	18.489	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.867	12.520	Pass	16.020	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.260	12.370	Pass	15.870	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	18.648	12.706	Pass	16.206	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	30.286	14.812	Pass	18.312	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	13.578	11.328	Pass	14.828	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	32.798	15.158	Pass	20.658	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	35.847	15.545	Pass	21.045	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.624	12.207	Pass	17.707	Pass



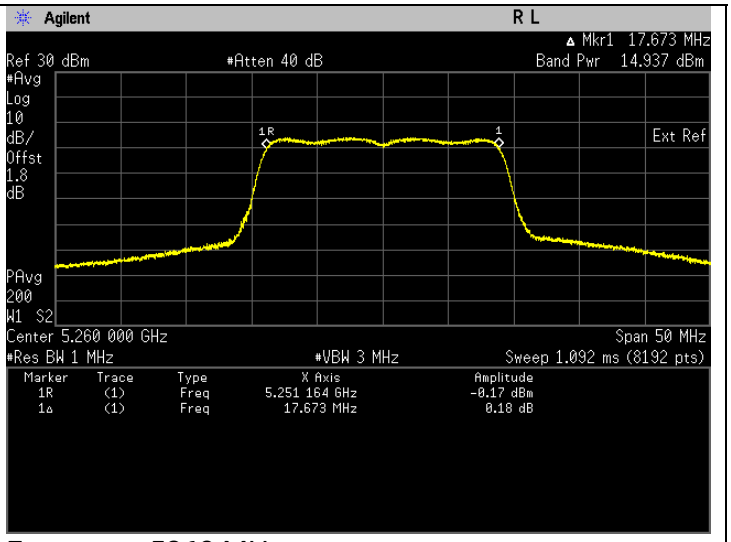
Frequency 5180 MHz



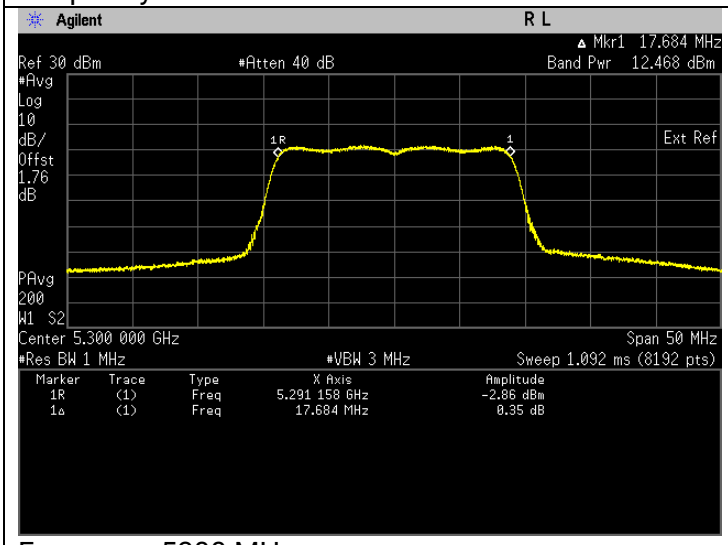
Frequency 5220 MHz



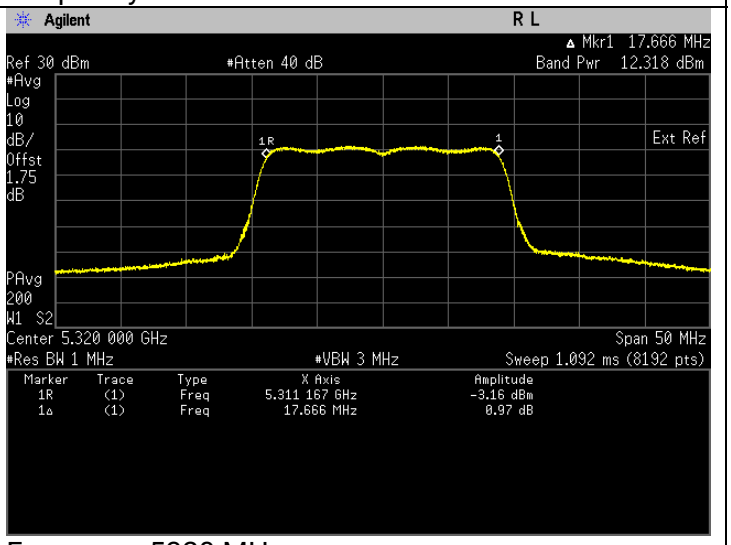
Frequency 5240 MH



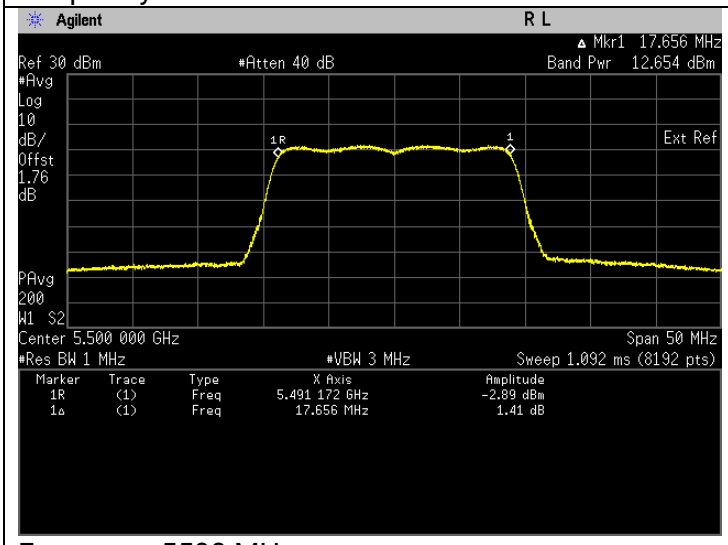
Frequency 5260 MHz



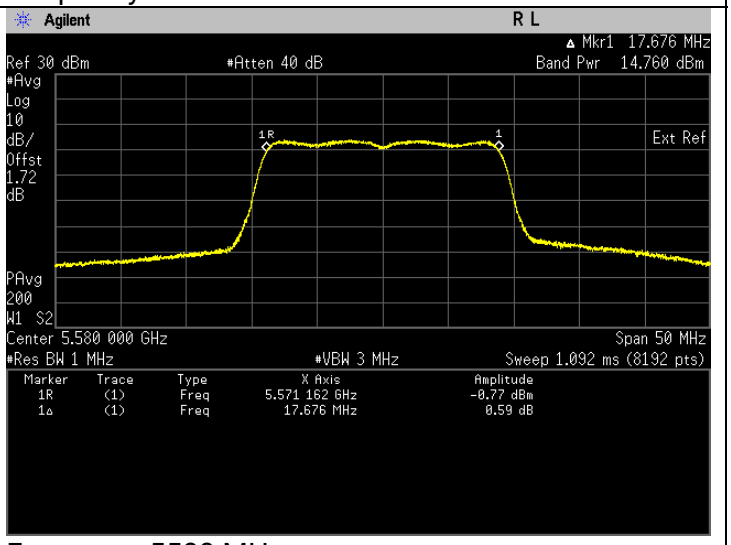
Frequency 5300 MHz



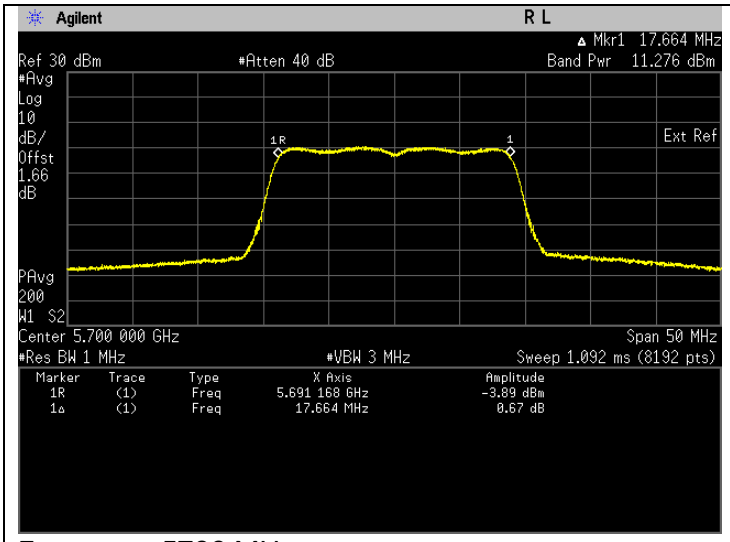
Frequency 5320 MHz



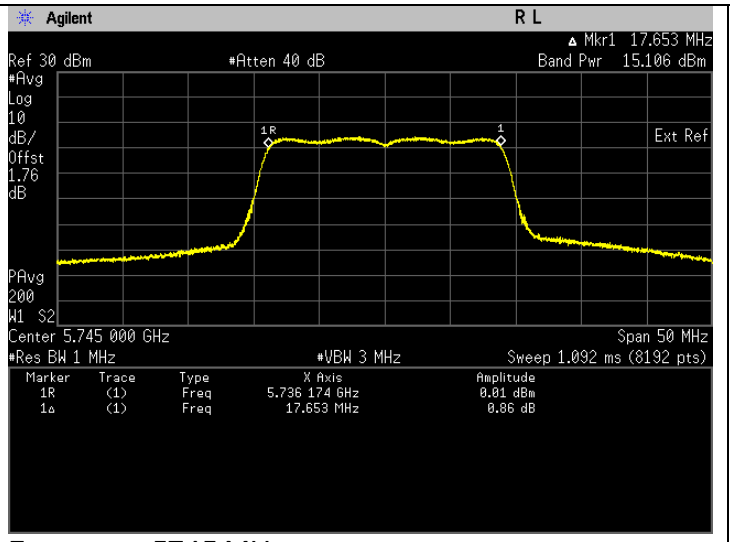
Frequency 5500 MHz



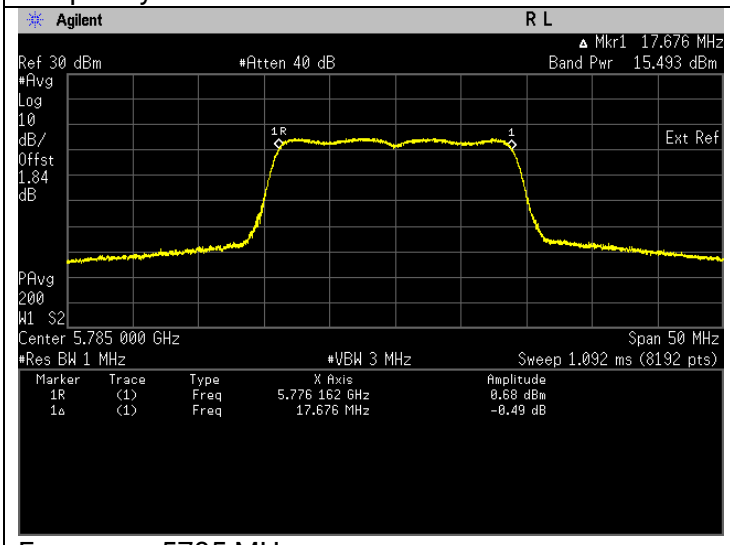
Frequency 5580 MHz



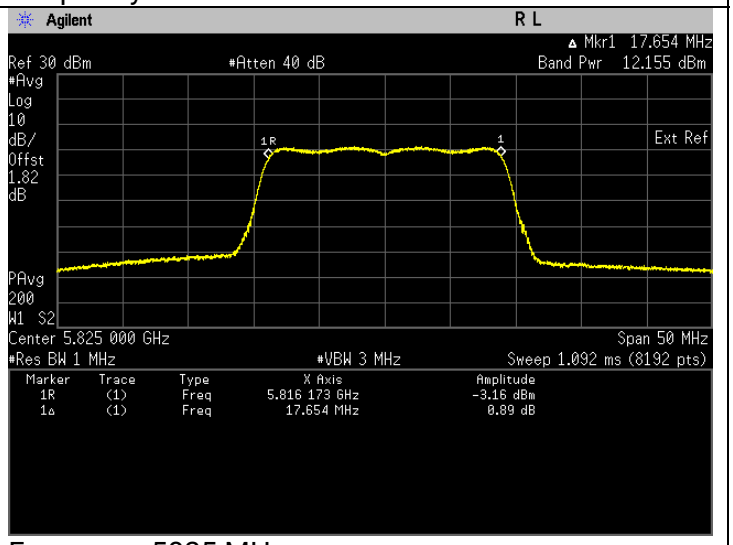
Frequency 5700 MHz



Frequency 5745 MH



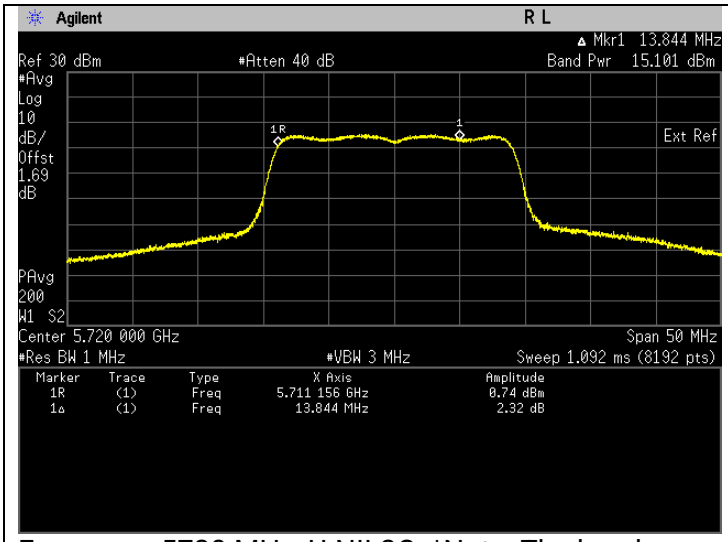
Frequency 5785 MHz



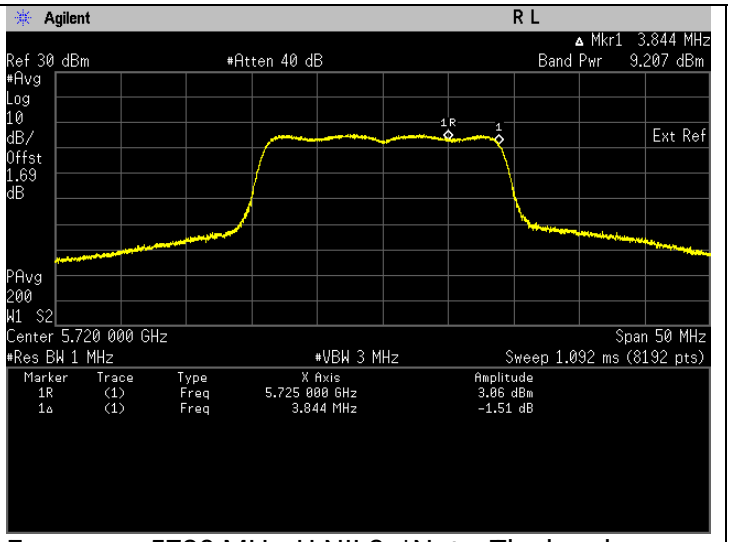
Frequency 5825 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	32.760	15.153	Pass	18.653	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.432	9.259	Pass	12.759	Pass



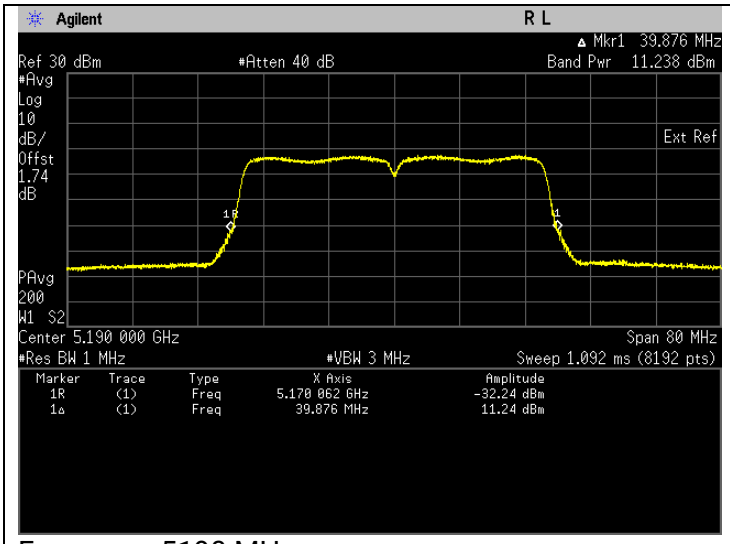
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



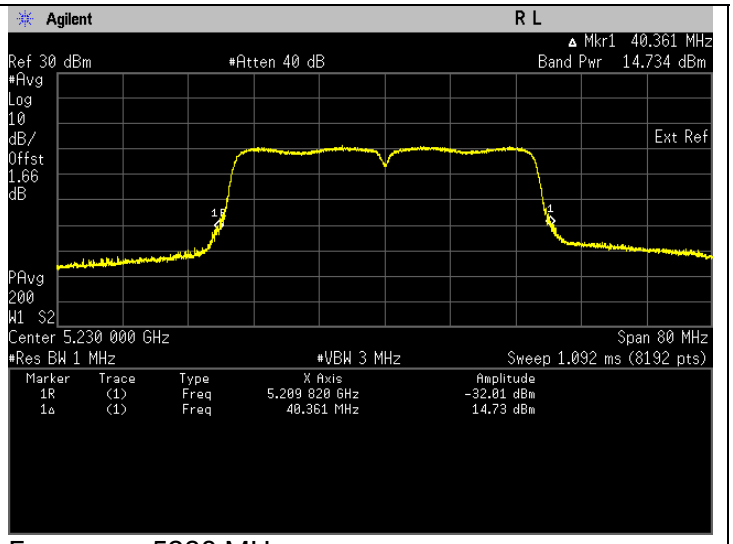
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT40)(26dB EBW)

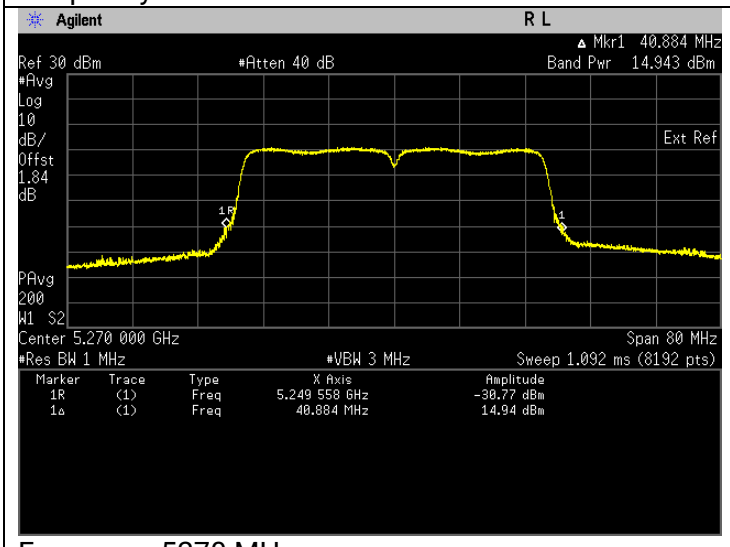
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	13.602	11.336	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	30.423	14.832	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	31.923	15.041	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	17.902	12.529	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	15.929	12.022	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	30.591	14.856	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	23.977	13.798	Pass
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	37.411	15.730	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	18.378	12.643	Pass



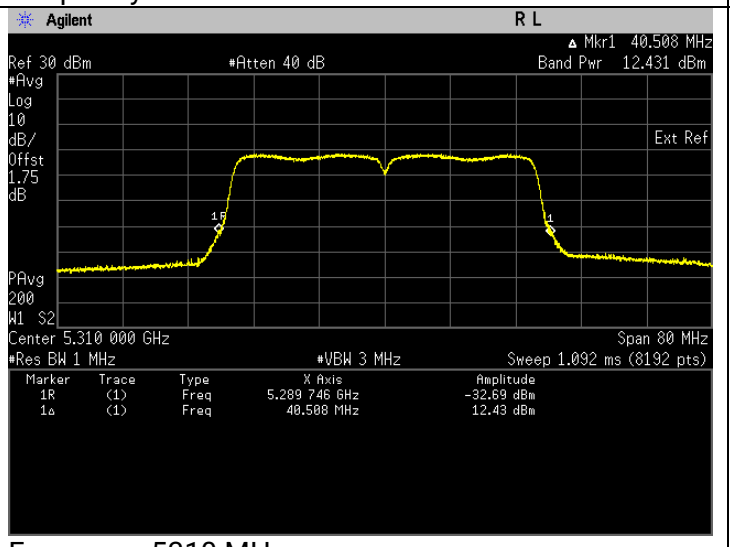
Frequency 5190 MHz



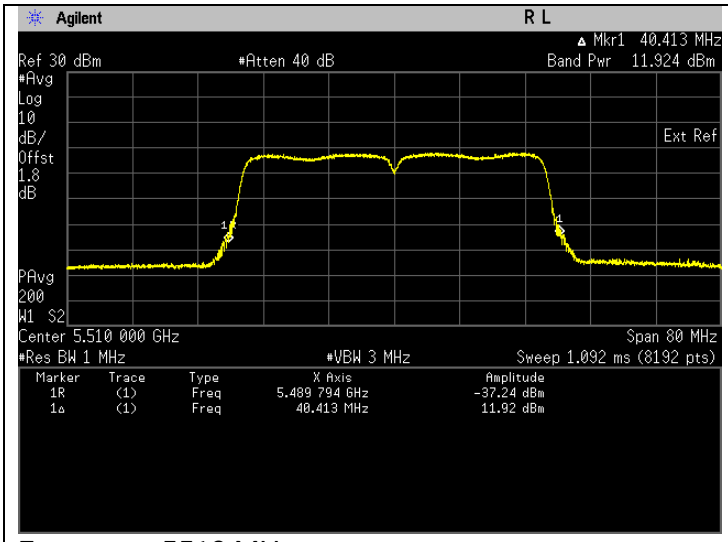
Frequency 5230 MHz



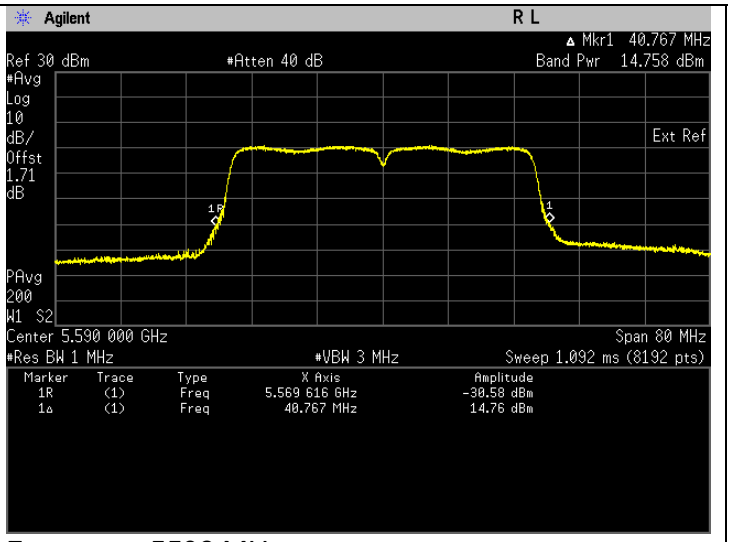
Frequency 5270 MHz



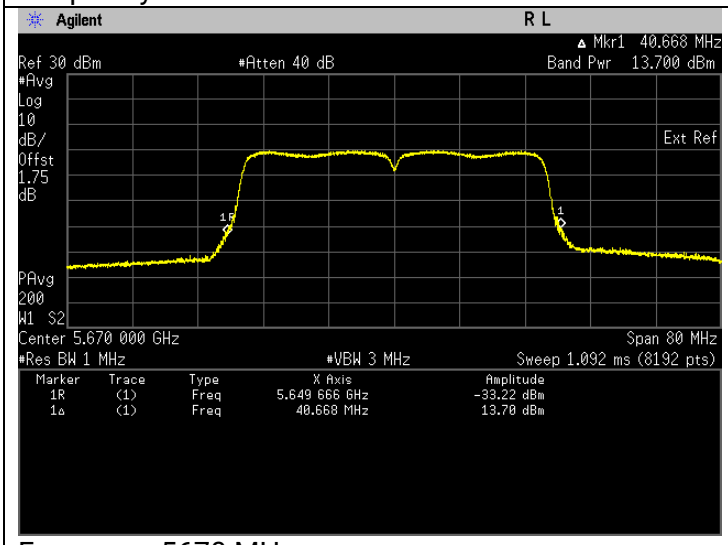
Frequency 5310 MHz



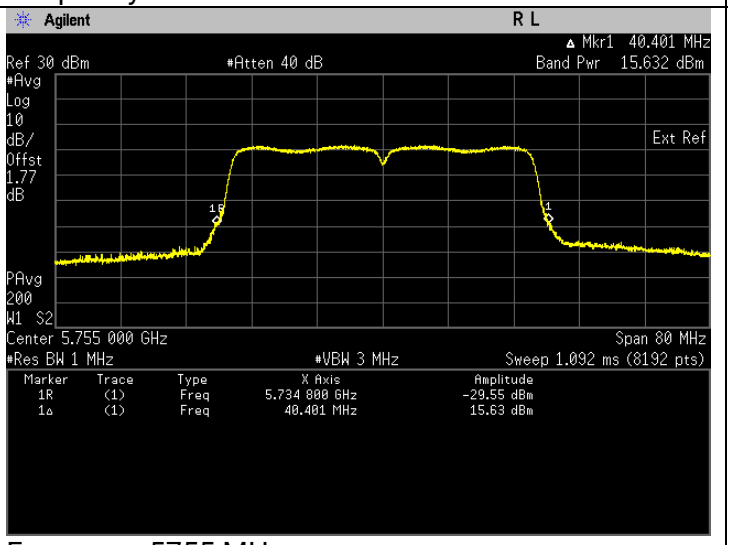
Frequency 5510 MH



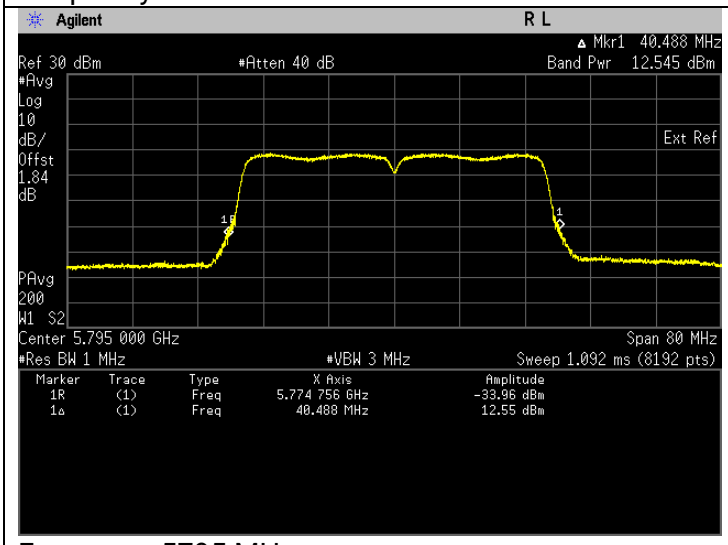
Frequency 5590 MHz



Frequency 5670 MHz



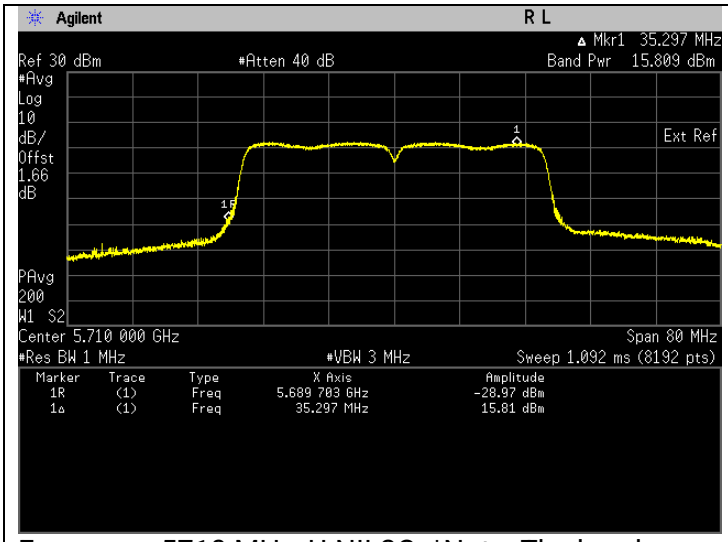
Frequency 5755 MHz



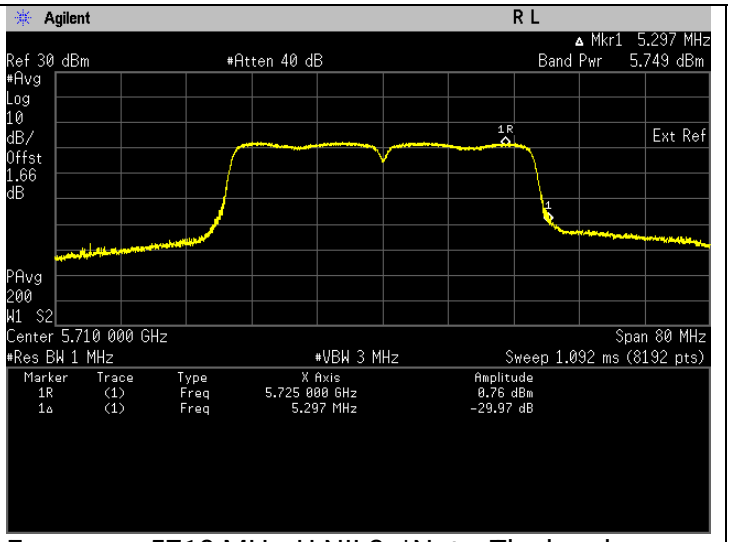
Frequency 5795 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	38.967	15.907	Pass
		U-NII-3		
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	3.843	5.847	Pass



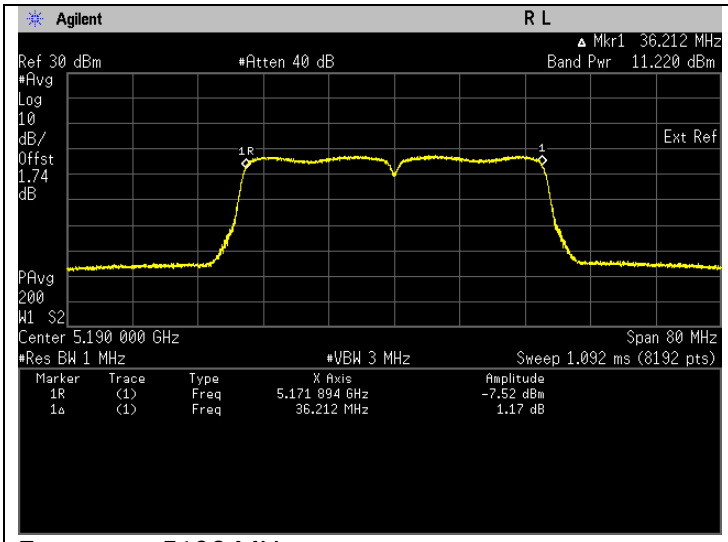
Frequency 5710 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



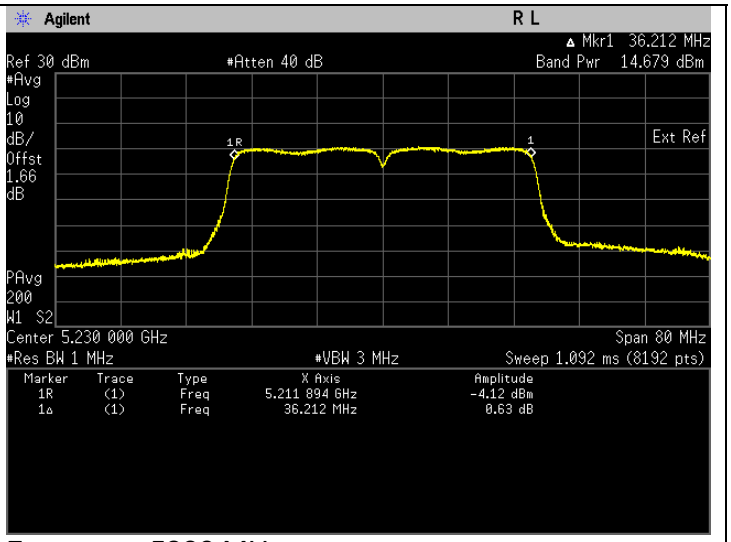
Frequency 5710 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT40)(99% EBW)

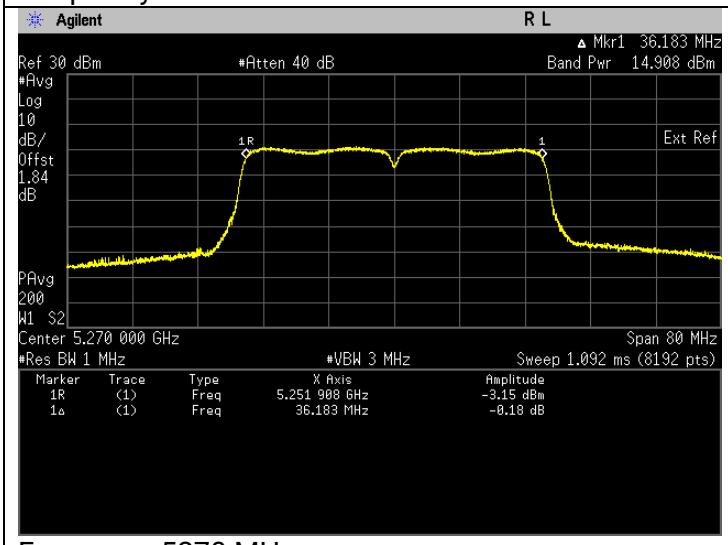
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	13.546	11.318	Pass	12.818	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	30.040	14.777	Pass	16.277	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	31.666	15.006	Pass	18.506	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	17.591	12.453	Pass	15.953	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	15.693	11.957	Pass	15.457	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	30.241	14.806	Pass	18.306	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	23.578	13.725	Pass	17.225	Pass
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	37.102	15.694	Pass	21.194	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	18.205	12.602	Pass	18.102	Pass



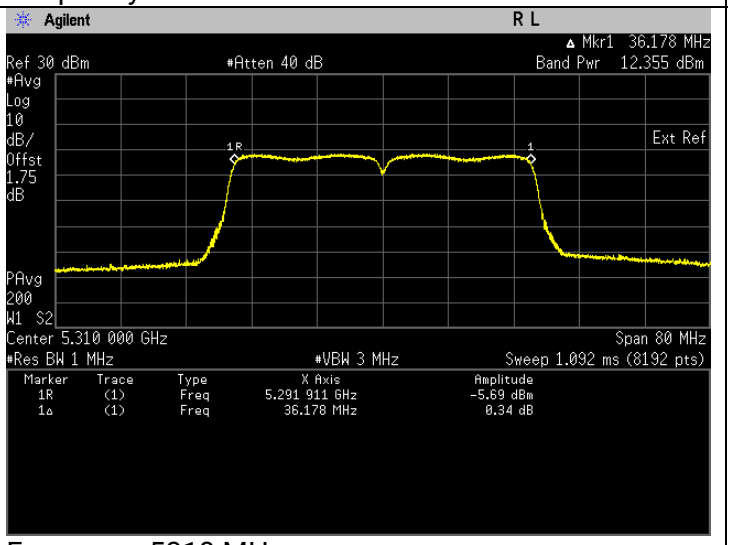
Frequency 5190 MHz



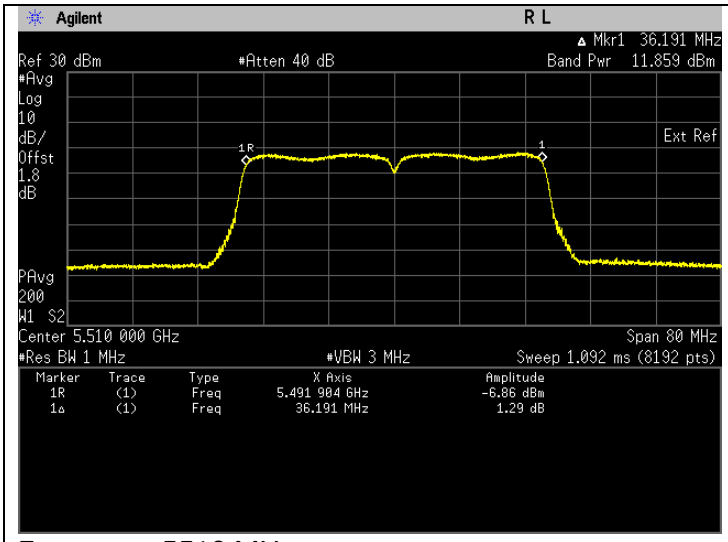
Frequency 5230 MHz



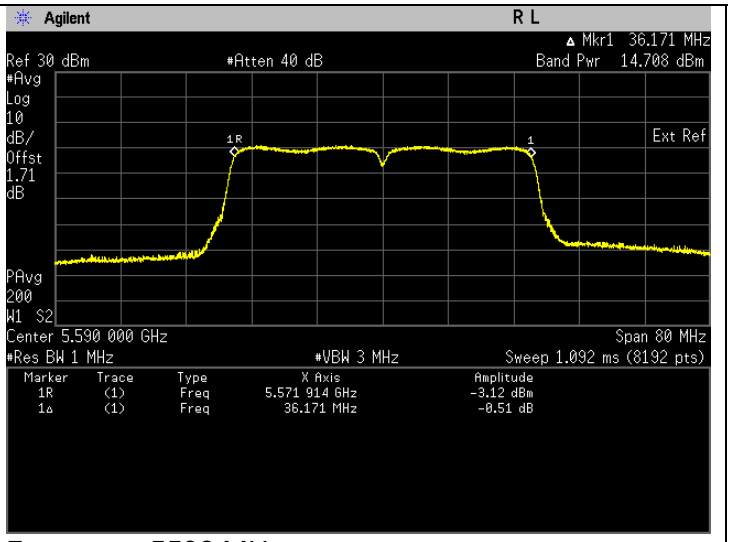
Frequency 5270 MHz



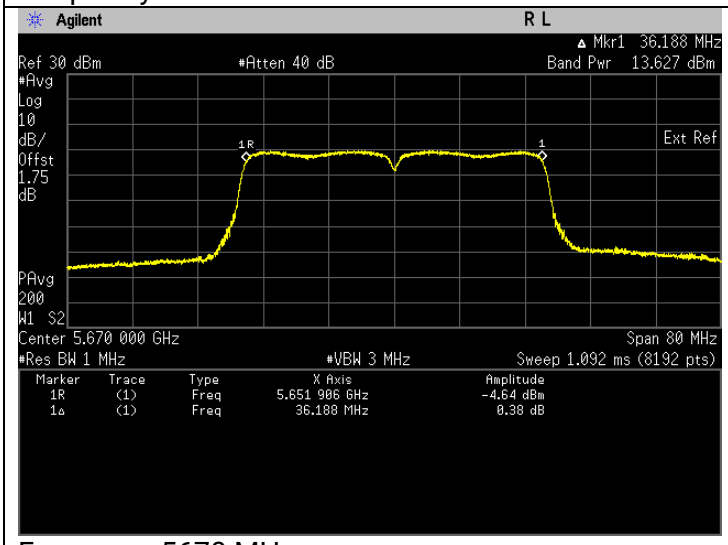
Frequency 5310 MHz



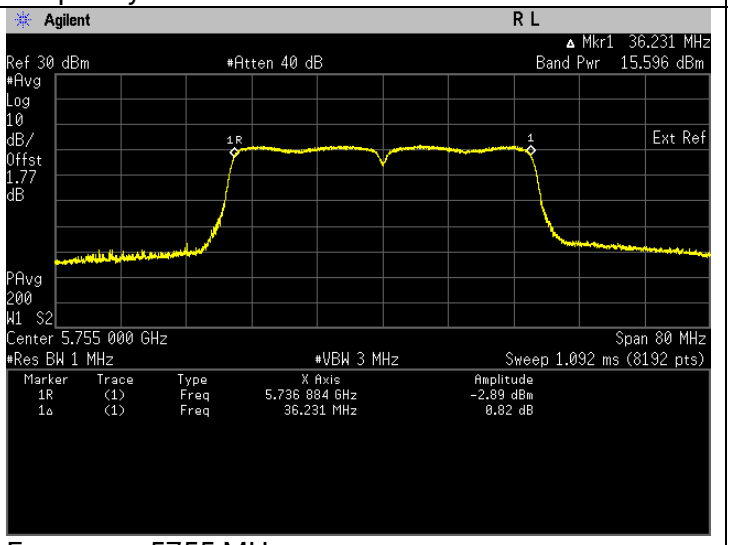
Frequency 5510 MHz



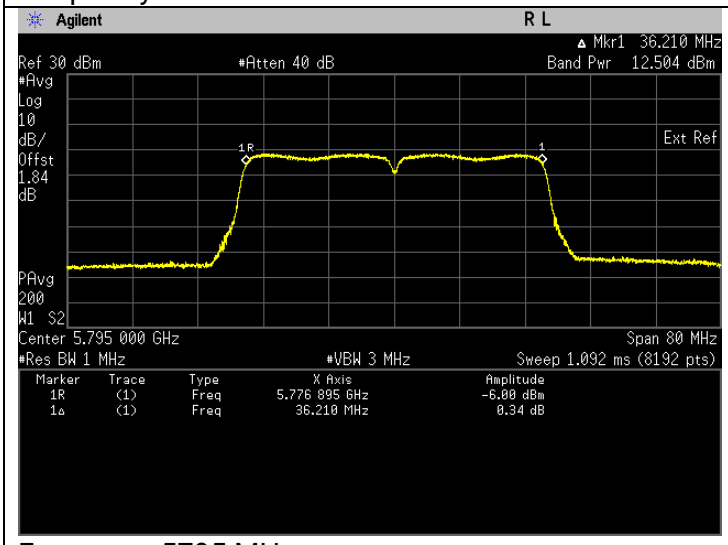
Frequency 5590 MHz



Frequency 5670 MHz



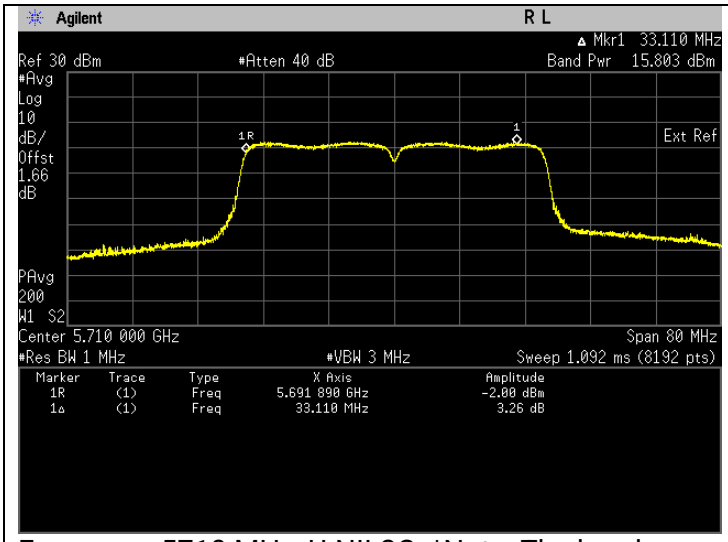
Frequency 5755 MHz



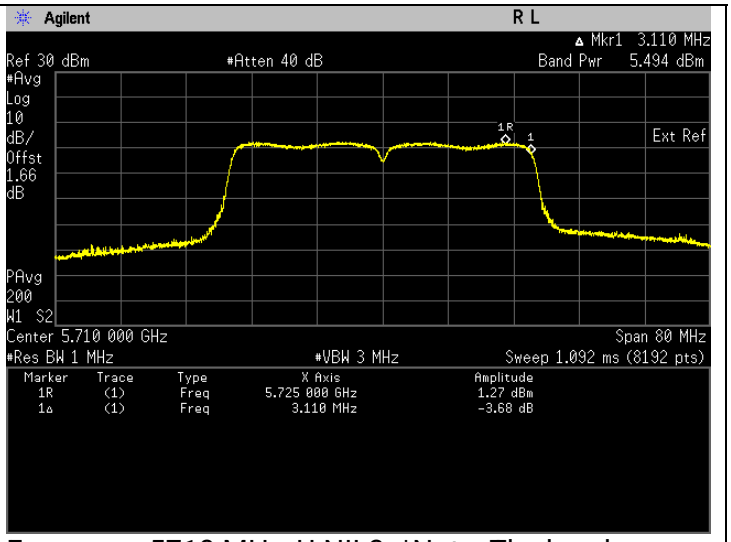
Frequency 5795 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	38.913	15.901	Pass	19.401	Pass
		U-NII-3				
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	3.624	5.592	Pass	9.092	Pass



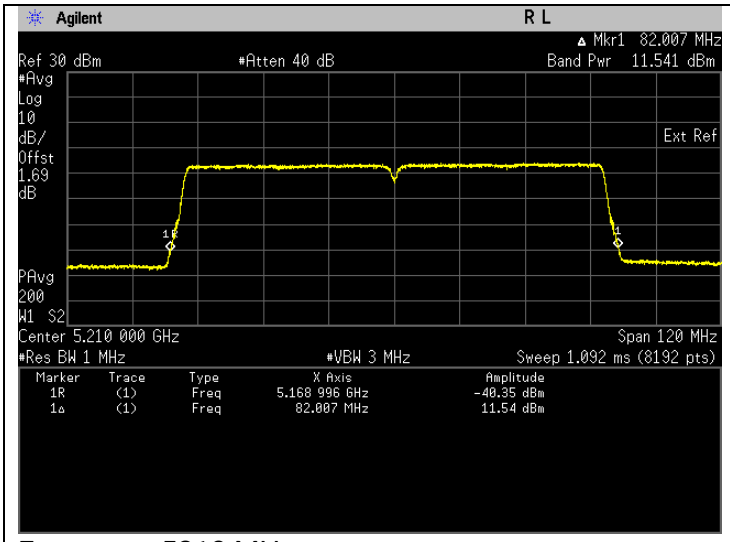
Frequency 5710 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



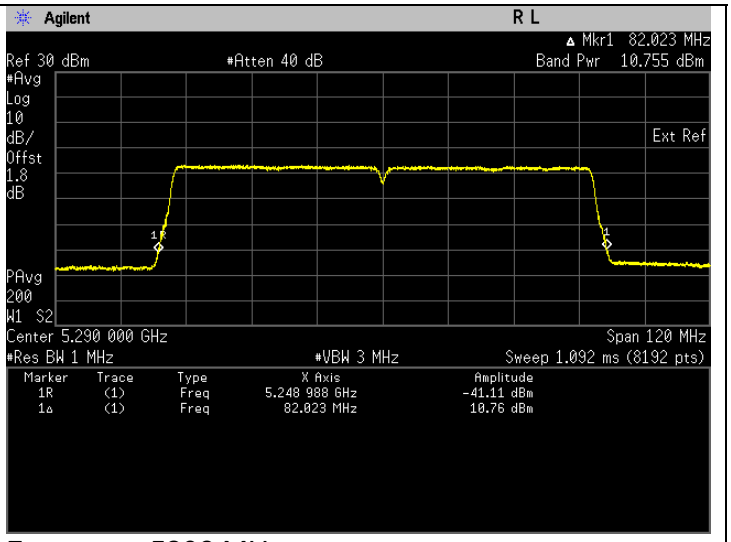
Frequency 5710 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11ac (HT80)(26dB EBW)

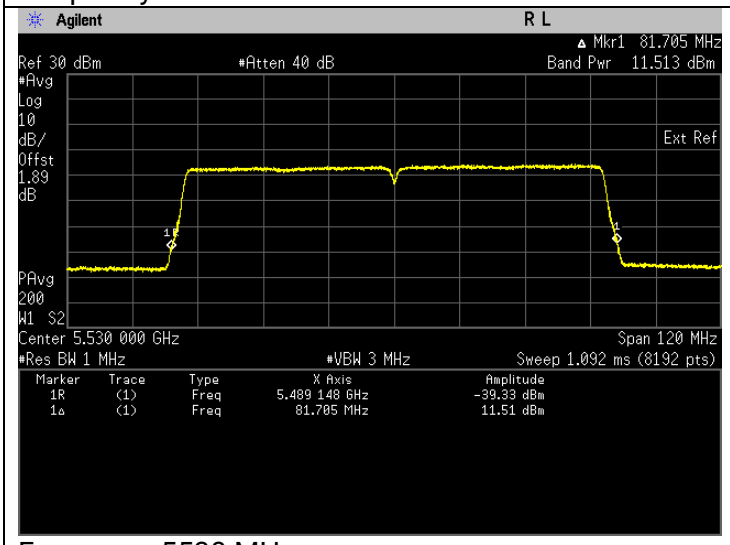
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5210	Mod Type: BPSK, Data Rate: MCS0 (29.3)	14.938	11.741	Pass
5290	Mod Type: BPSK, Data Rate: MCS0 (29.3)	12.465	10.955	Pass
5530	Mod Type: BPSK, Data Rate: MCS0 (29.3)	14.842	11.713	Pass
5610	Mod Type: BPSK, Data Rate: MCS0 (29.3)	12.442	10.947	Pass
5775	Mod Type: BPSK, Data Rate: MCS0 (29.3)	12.529	10.977	Pass



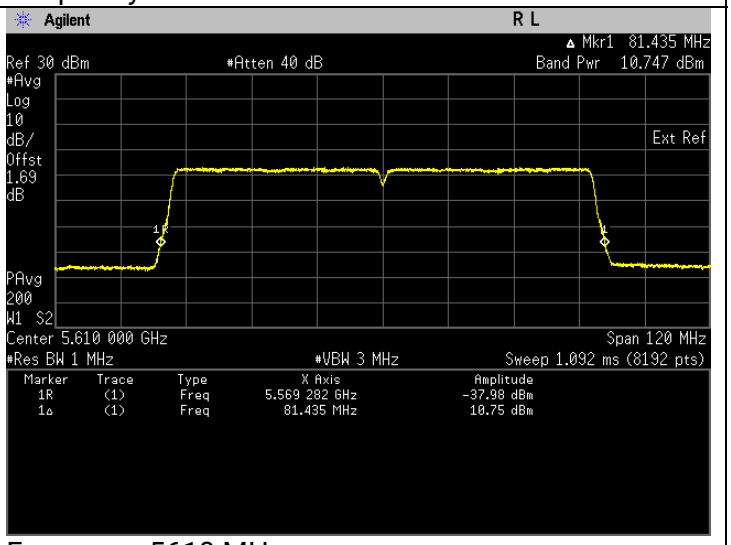
Frequency 5210 MHz



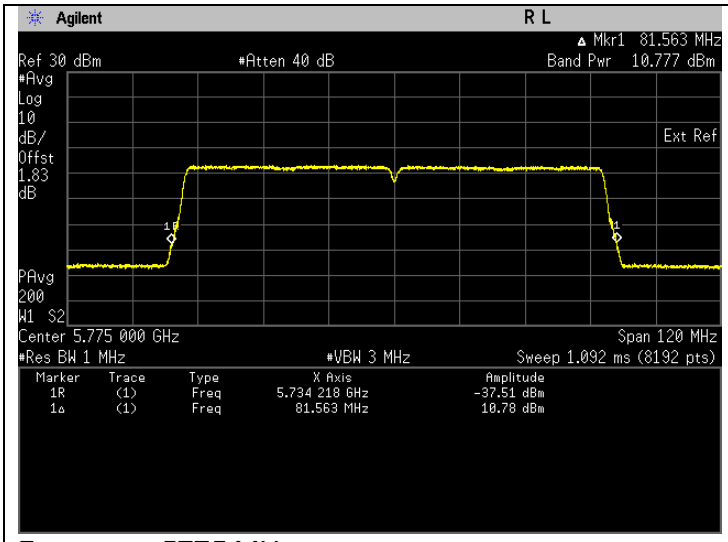
Frequency 5290 MHz



Frequency 5530 MHz



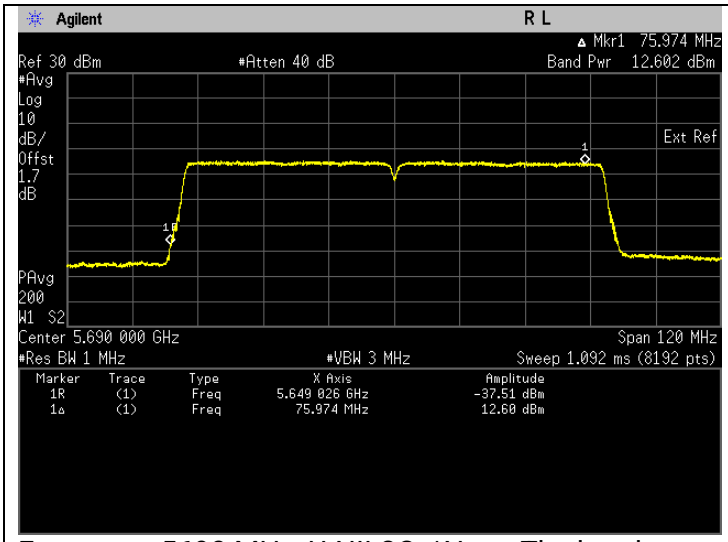
Frequency 5610 MHz



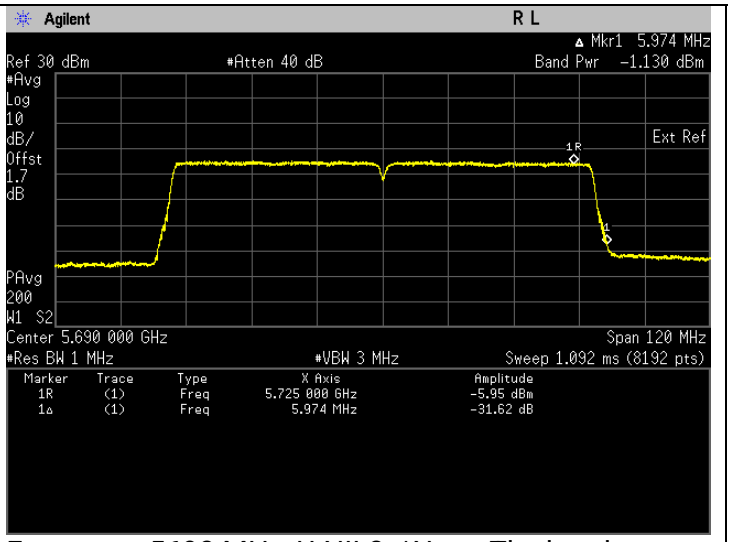
Frequency 5775 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	19.072	12.804	Pass
		U-NII-3		
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	0.808	-0.928	Pass



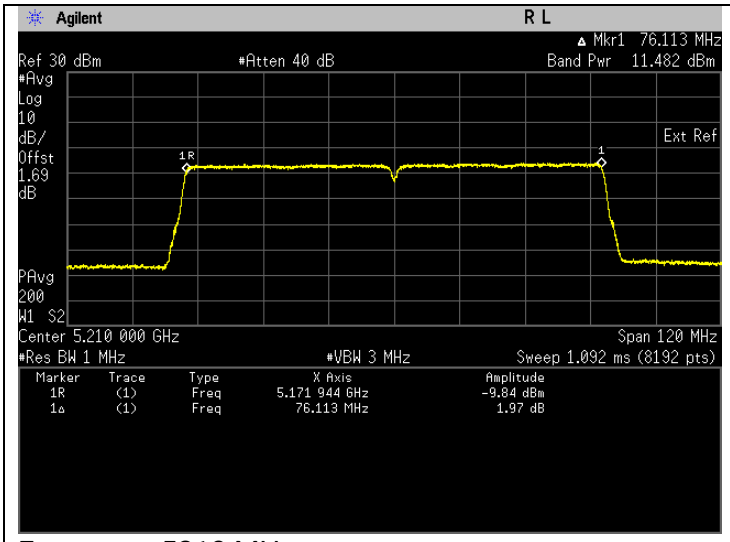
Frequency 5690 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



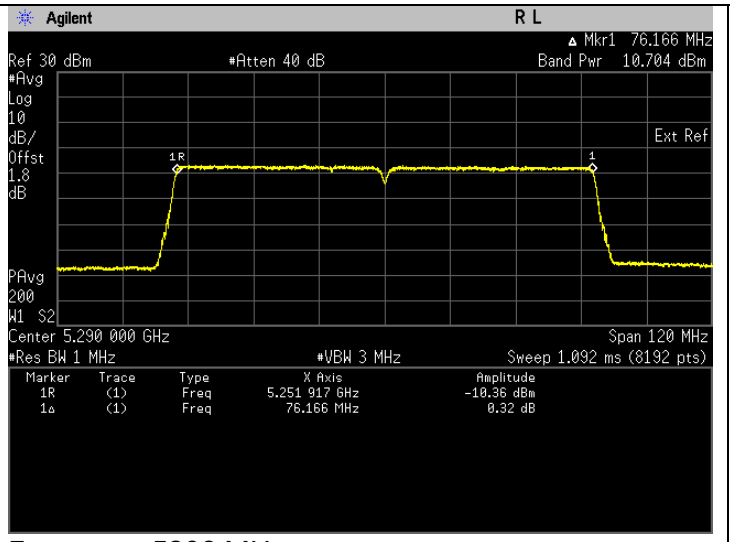
Frequency 5690 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11ac (HT80)(99% EBW)

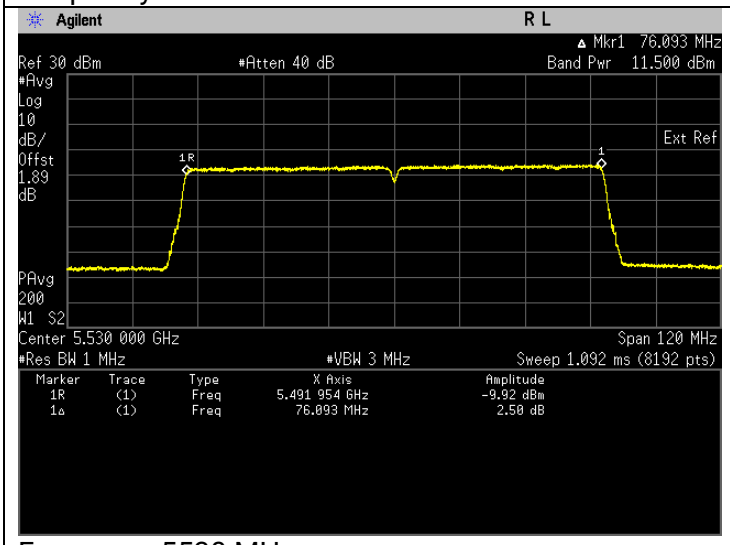
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5210	Mod Type: BPSK, Data Rate: MCS0 (29.3)	14.737	11.684	Pass	13.184	Pass
5290	Mod Type: BPSK, Data Rate: MCS0 (29.3)	12.320	10.906	Pass	14.406	Pass
5530	Mod Type: BPSK, Data Rate: MCS0 (29.3)	14.798	11.702	Pass	15.202	Pass
5610	Mod Type: BPSK, Data Rate: MCS0 (29.3)	12.348	10.916	Pass	14.416	Pass
5775	Mod Type: BPSK, Data Rate: MCS0 (29.3)	12.482	10.963	Pass	16.463	Pass



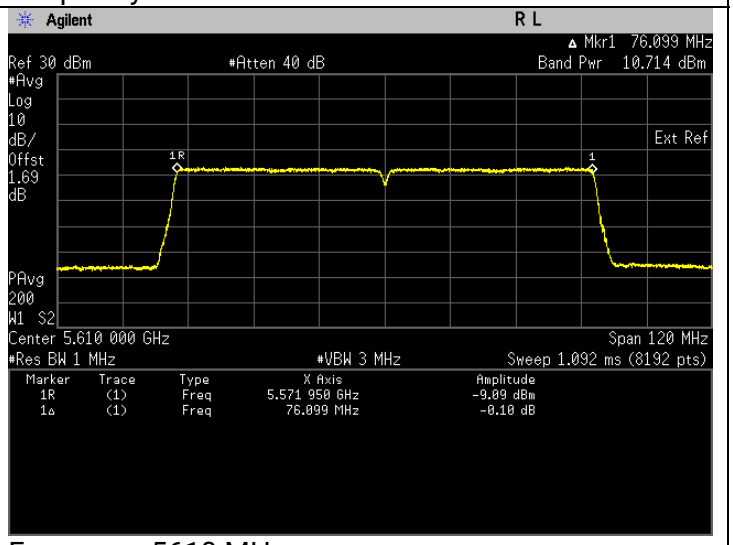
Frequency 5210 MHz



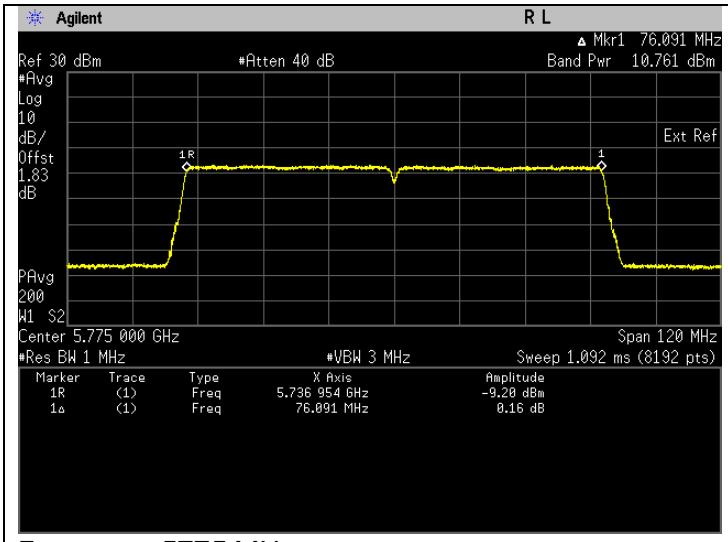
Frequency 5290 MHz



Frequency 5530 MHz



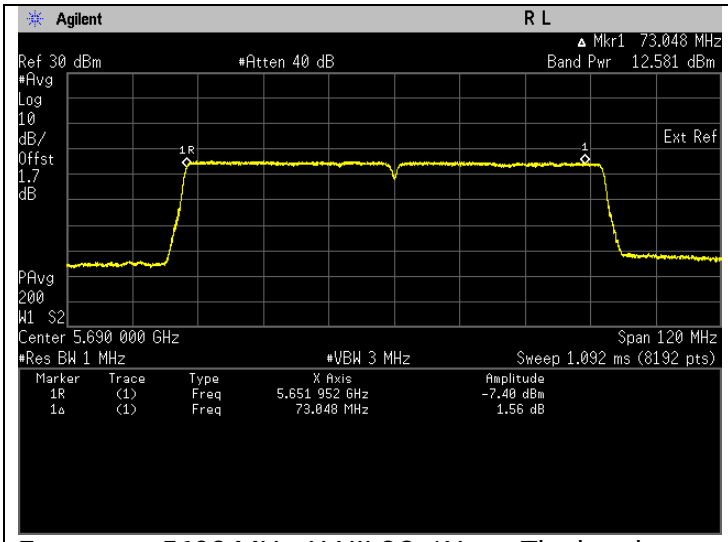
Frequency 5610 MHz



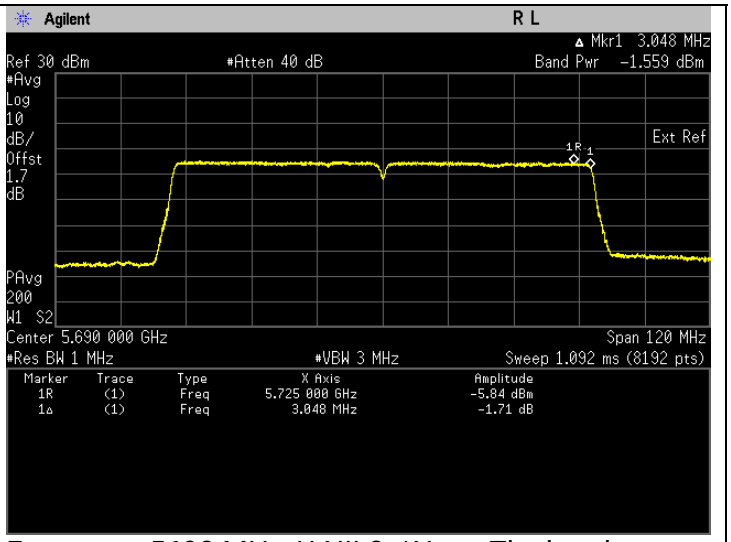
Frequency 5775 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	18.980	12.783	Pass	16.283	Pass
		U-NII-3				
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	0.732	-1.357	Pass	2.143	Pass



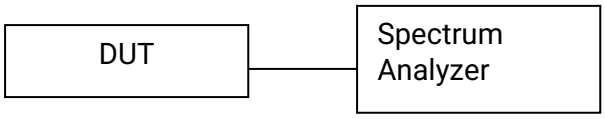
Frequency 5690 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



Frequency 5690 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

6.3. Maximum Power Spectral Density

6.3.1. Test Setup



a) Test setup as per illustrated above.
b) Set DUT to transmit at desire transmit frequency.
c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
d) Setting of Spectrum analyzer :
   - Span to encompass the entire 26dB EBW or 99% occupied bandwidth.
   - RBW = 1 MHz (5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz) / 500 kHz (5.725-5.85 GHz)
   - VBW ≥ 3·RBW
   - Detector = power averaging (RMS)
   - Trace = Max hold
   - Number of points in sweep ≥ 2 × span / RBW
   - Sweep time = auto
   - Trace average at least 100 traces in power averaging (rms) mode
e) Use the peak search function on the instrument to find the peak of the spectrum and record its value.
f) Add 10 log (1/x), where x is the duty cycle, to the peak of the spectrum.
g) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause F) Method SA-2.
h) The Maximum power spectral density results are included duty cycle correction factor.

6.3.2. Test Limits

FCC 15.407(a)

Range (GHz)	Condition		Limit
5.15-5.25		Outdoor AP	17dBm/ 1MHz
		Indoor AP	17dBm/ 1MHz
		Fixed Point to Point AP	17dBm/ 1MHz
	√	Mobile and Portable Client Devices	11dBm/ 1MHz
5.25-5.35	√		11dBm/ 1MHz
5.47-5.525	√		11dBm/ 1MHz
5.725-5.85	√		30dBm/ 500kHz

RSS-247 6.2

Range(GHz)	Condition	Limit
5.15-5.25	Indoor Operation Only	EIRP: 10dBm/ 1MHz
5.25-5.35		11dBm/ 1MHz
5.47-5.6 5.6-5.525		11dBm/ 1MHz
5.725-5.85		30dBm/ 500kHz

6.3.3. Additional Info

Antenna Type	Gain (dBi)
UNII-1	1.5
UNII-2A & UNII-2C	3.5
UNII-3	5.5
Duty Cycle Correction Factor	
802.11a	0.048
802.11n20	0.052
802.11n40	0.098
802.11ac80	0.202

6.3.4. Test Data

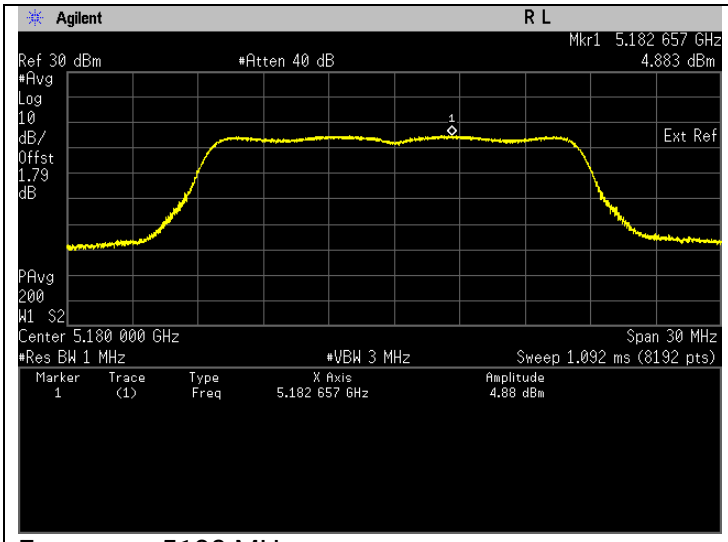
802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency(dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	4.931	Pass
5220	Mod Type: BPSK, Data Rate: 6	7.251	Pass
5240	Mod Type: BPSK, Data Rate: 6	7.308	Pass
5260	Mod Type: BPSK, Data Rate: 6	6.484	Pass
5300	Mod Type: BPSK, Data Rate: 6	5.016	Pass
5320	Mod Type: BPSK, Data Rate: 6	4.887	Pass
5500	Mod Type: BPSK, Data Rate: 6	4.443	Pass
5580	Mod Type: BPSK, Data Rate: 6	7.339	Pass
5700	Mod Type: BPSK, Data Rate: 6	3.855	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	4.389	Pass
5785	Mod Type: BPSK, Data Rate: 6	4.349	Pass
5825	Mod Type: BPSK, Data Rate: 6	1.589	Pass

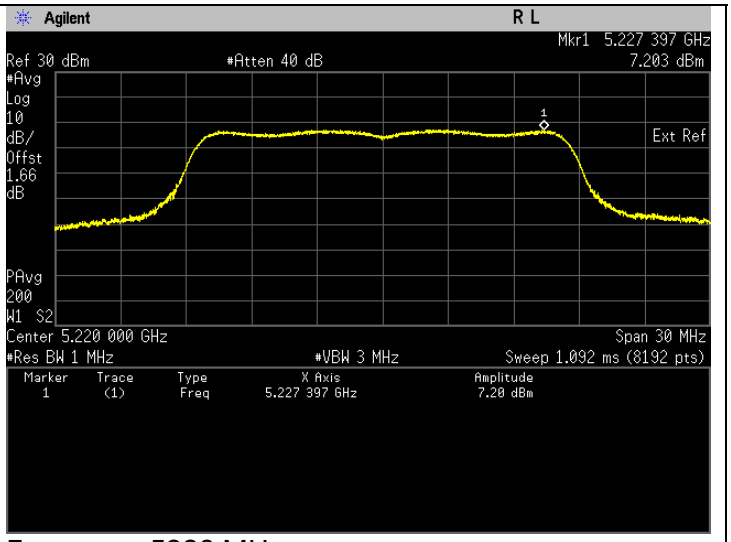
802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	4.931	Pass	6.431	Pass
5220	Mod Type: BPSK, Data Rate: 6	7.251	Pass	8.751	Pass
5240	Mod Type: BPSK, Data Rate: 6	7.308	Pass	8.808	Pass
5260	Mod Type: BPSK, Data Rate: 6	6.484	Pass	9.984	Pass
5300	Mod Type: BPSK, Data Rate: 6	5.016	Pass	8.516	Pass
5320	Mod Type: BPSK, Data Rate: 6	4.887	Pass	8.387	Pass
5500	Mod Type: BPSK, Data Rate: 6	4.443	Pass	7.943	Pass
5580	Mod Type: BPSK, Data Rate: 6	7.339	Pass	10.839	Pass
5700	Mod Type: BPSK, Data Rate: 6	3.855	Pass	7.355	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: 6	4.389	Pass	9.889	Pass
5785	Mod Type: BPSK, Data Rate: 6	4.349	Pass	9.849	Pass
5825	Mod Type: BPSK, Data Rate: 6	1.589	Pass	7.089	Pass

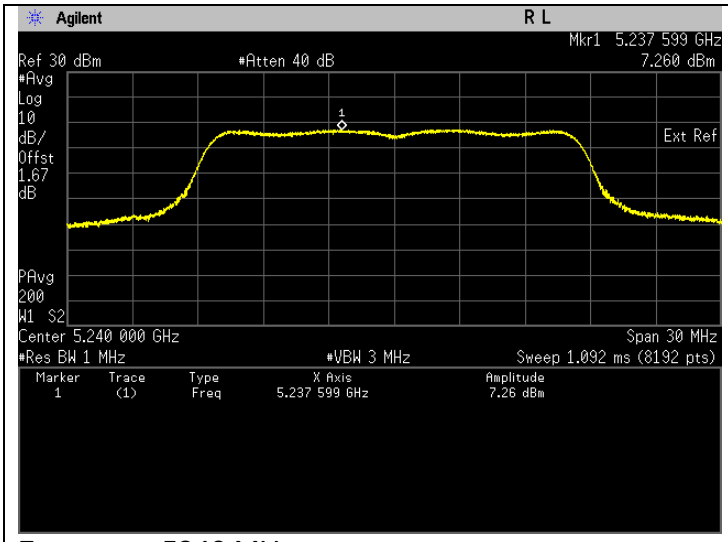
Plots for 802.11a (26dB EBW & 99% EBW)



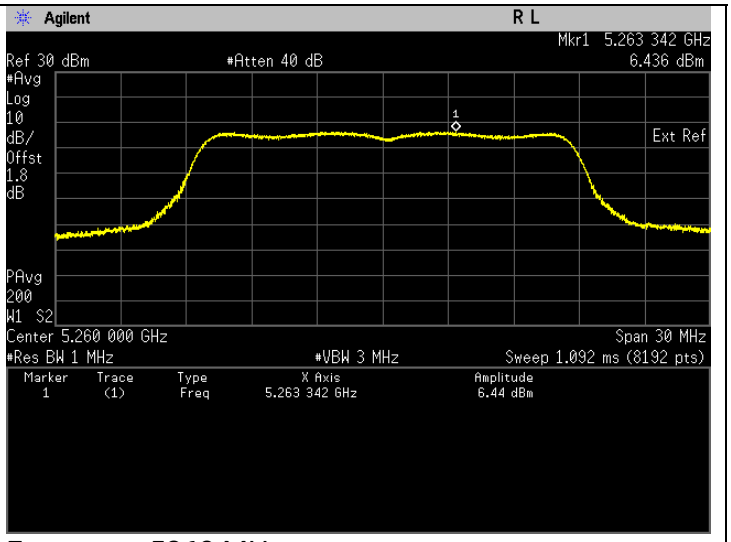
Frequency 5180 MHz



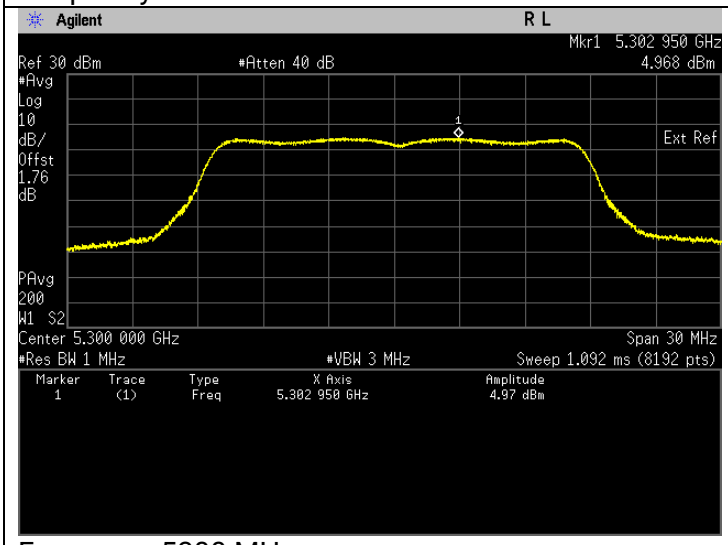
Frequency 5220 MHz



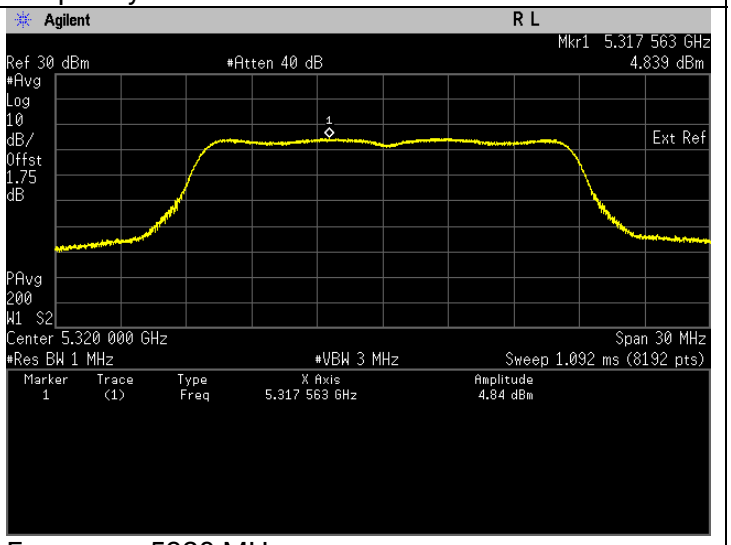
Frequency 5240 MHz



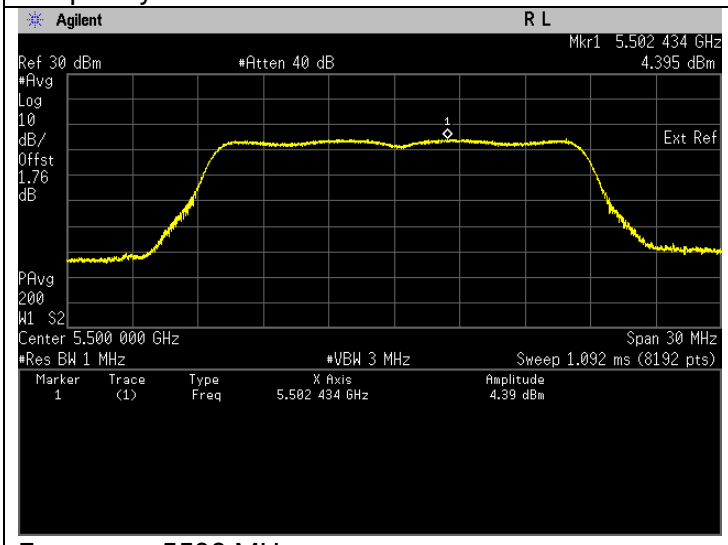
Frequency 5260 MHz



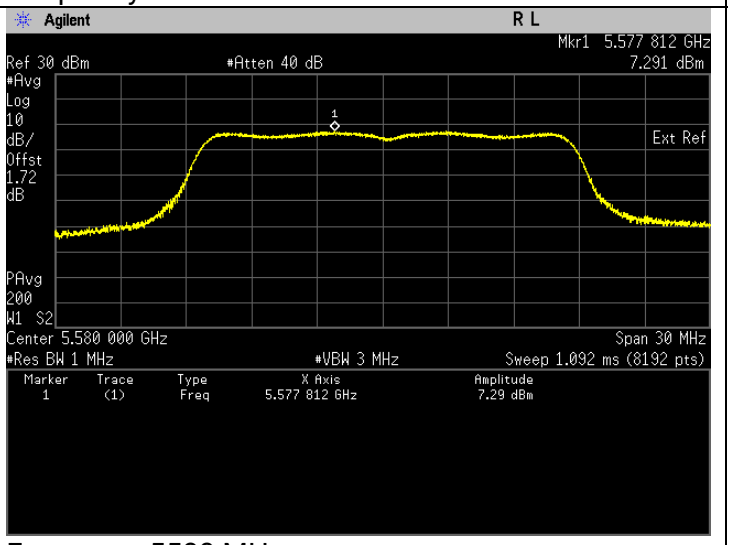
Frequency 5300 MHz



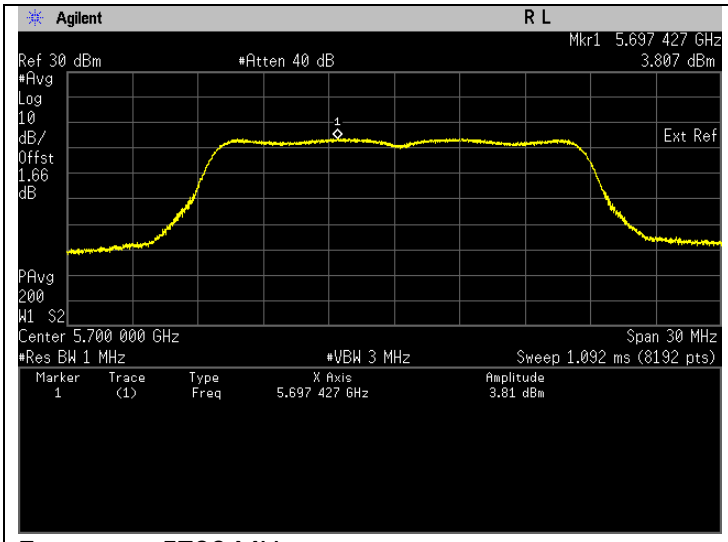
Frequency 5320 MHz



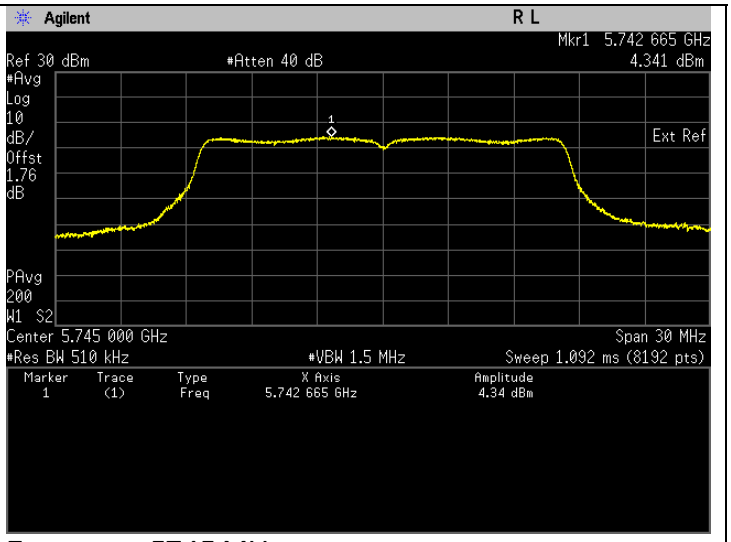
Frequency 5500 MHz



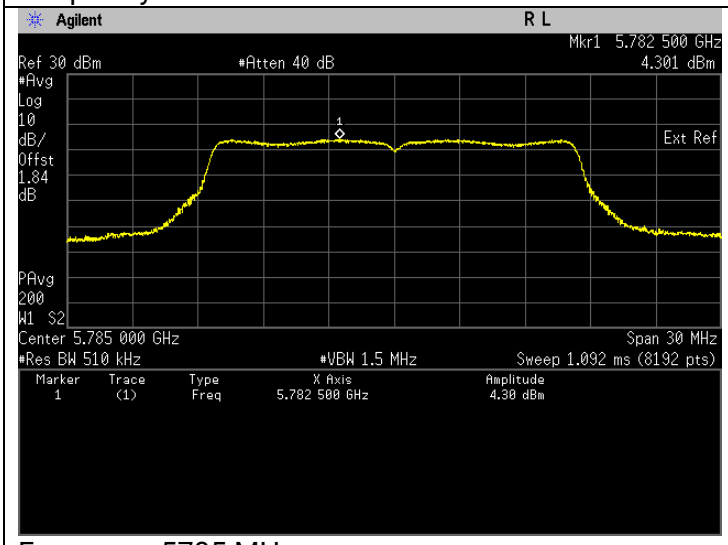
Frequency 5580 MHz



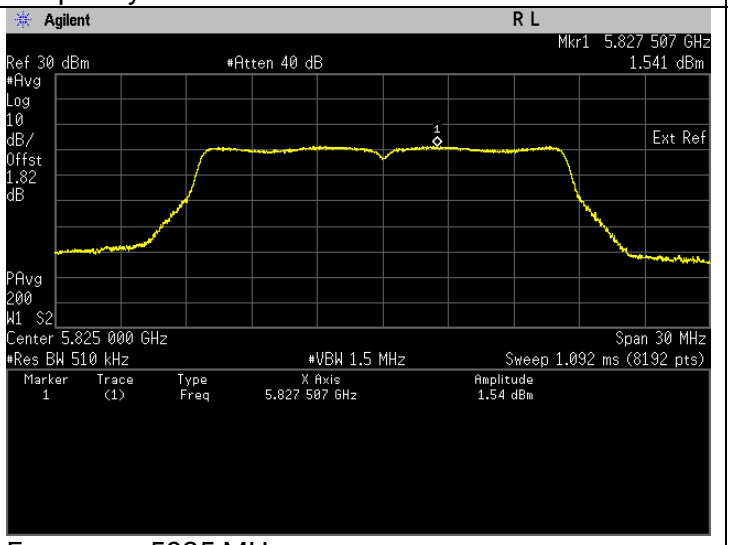
Frequency 5700 MHz



Frequency 5745 MHz



Frequency 5785 MHz



Frequency 5825 MHz

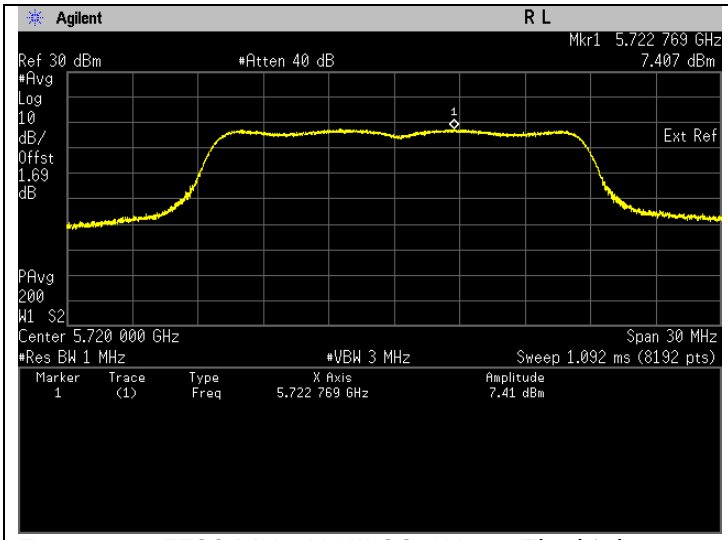
Straddle Frequency for 802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	7.455	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	6.714	Pass

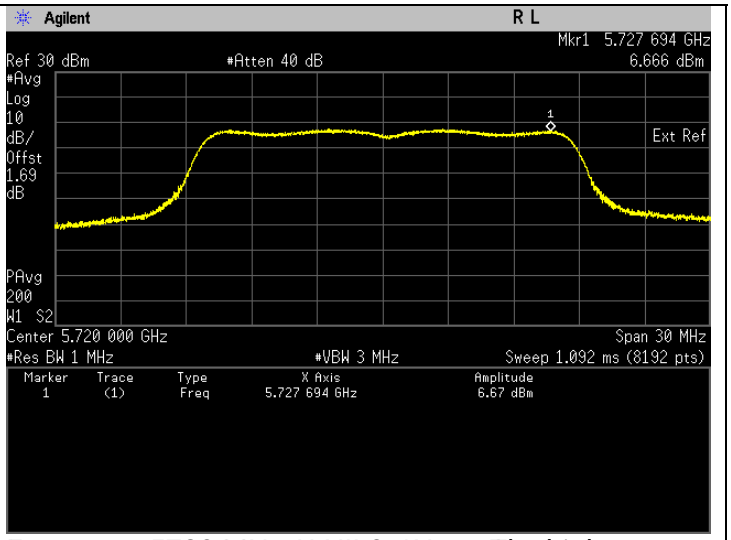
Straddle Frequency for 802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	7.455	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	6.714	Pass

Plots for 802.11a Straddle Frequency (26dB EBW & 99% EBW)



Frequency 5720 MHz, U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



Frequency 5720 MHz, U-NII-3. *Note: The highest spectral density is captured after the 5725 MHz.

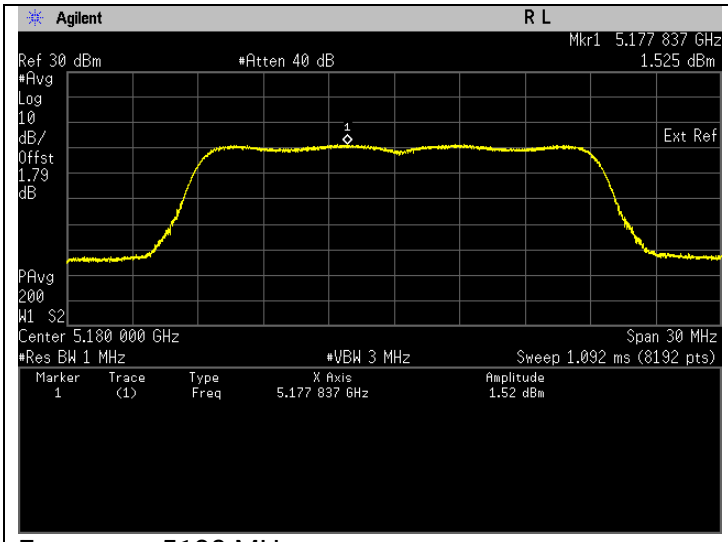
802.11n (HT20)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.577	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.809	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.026	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.188	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.798	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.645	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.035	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.267	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.542	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.475	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.381	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.3410	Pass

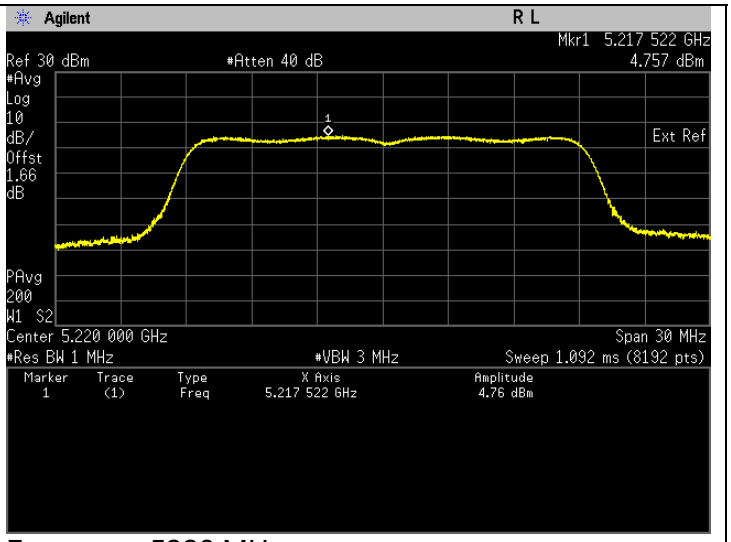
802.11n (HT20)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.577	Pass	3.077	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.809	Pass	6.309	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.026	Pass	5.526	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.188	Pass	7.688	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.798	Pass	5.298	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.645	Pass	5.145	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.035	Pass	5.535	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.267	Pass	7.767	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.542	Pass	4.042	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.475	Pass	6.975	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.381	Pass	7.881	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.3410	Pass	4.150	Pass

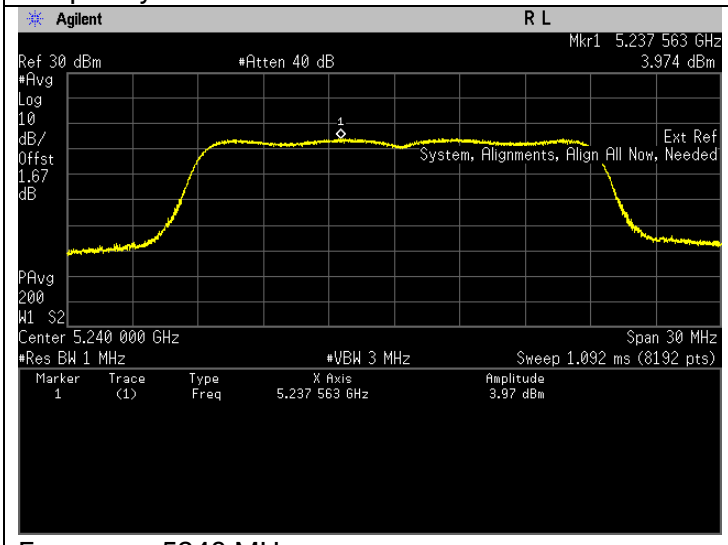
Plots for 802.11n (HT20) (26dB EBW & 99% EBW)



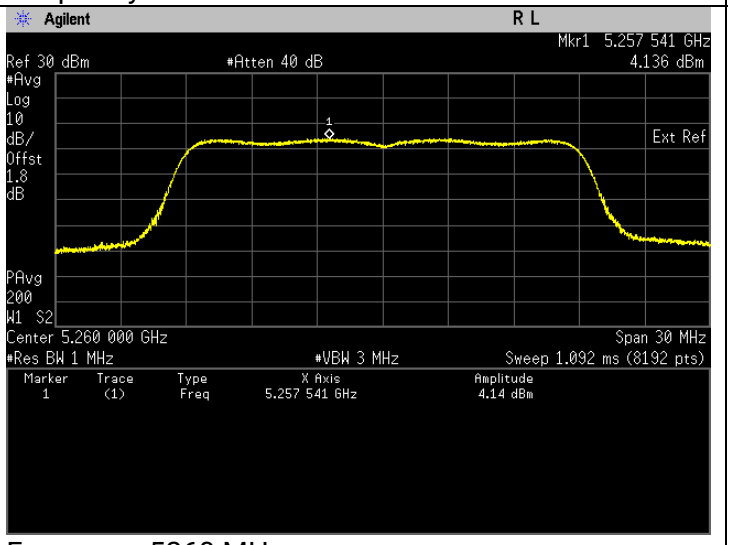
Frequency 5180 MHz



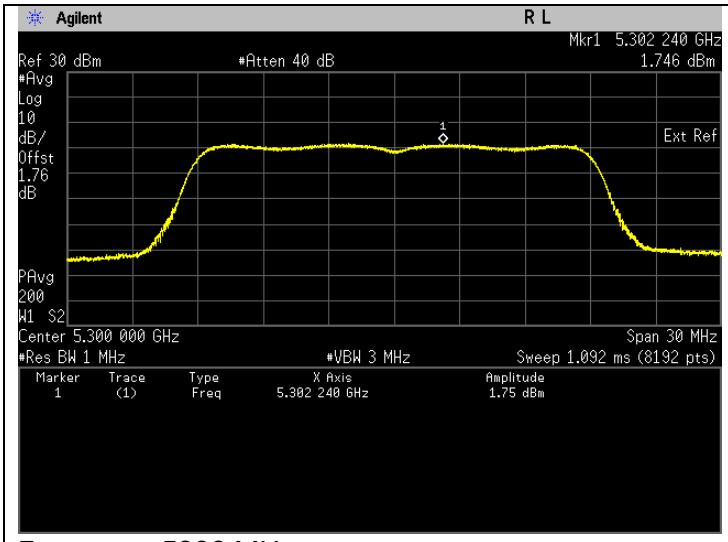
Frequency 5220 MHz



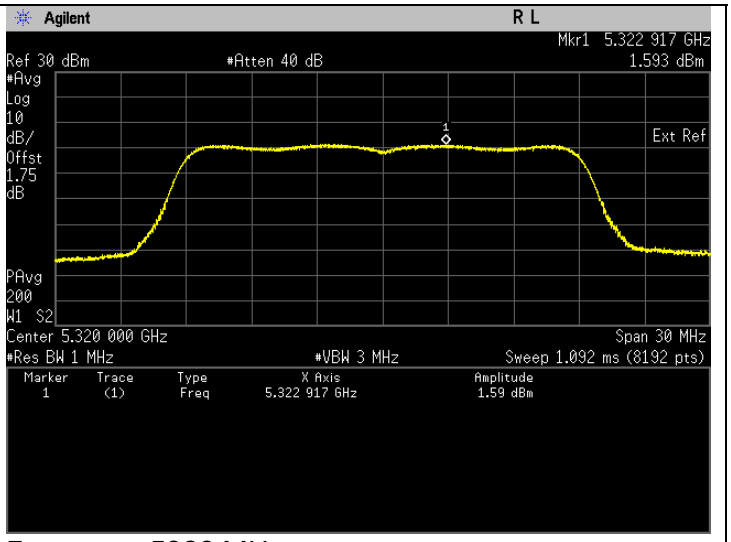
Frequency 5240 MHz



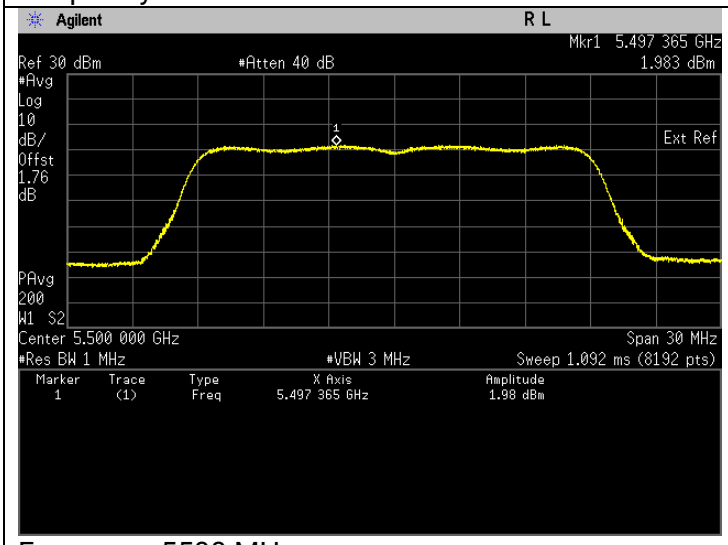
Frequency 5260 MHz



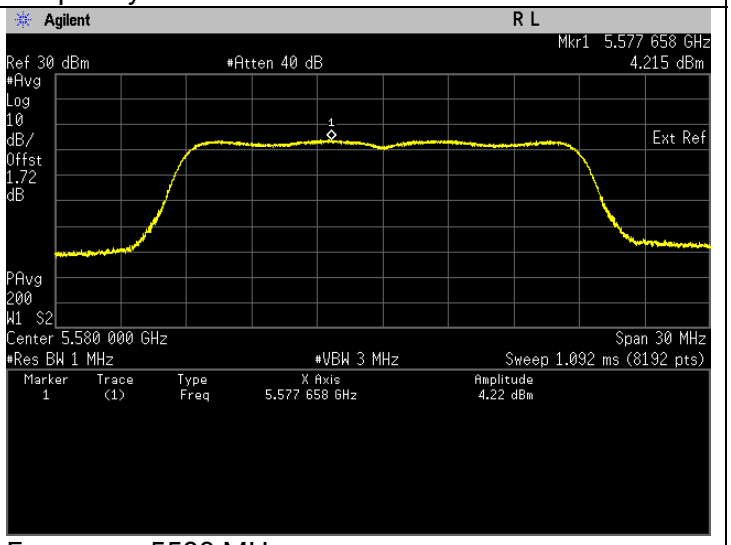
Frequency 5300 MHz



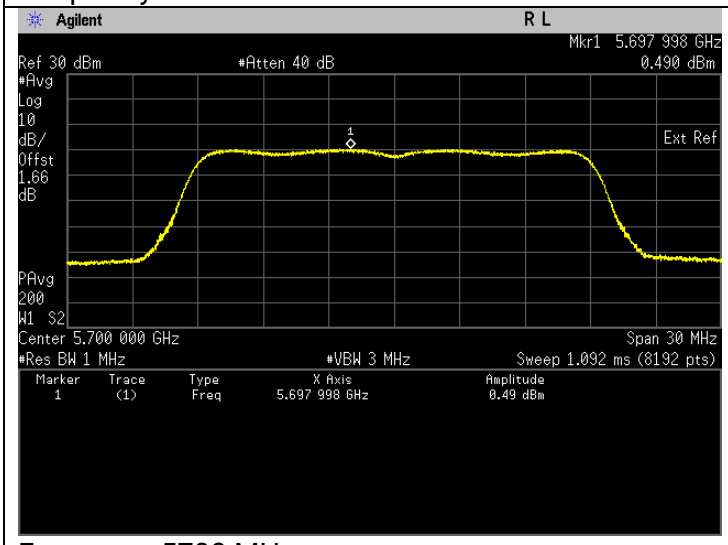
Frequency 5320 MHz



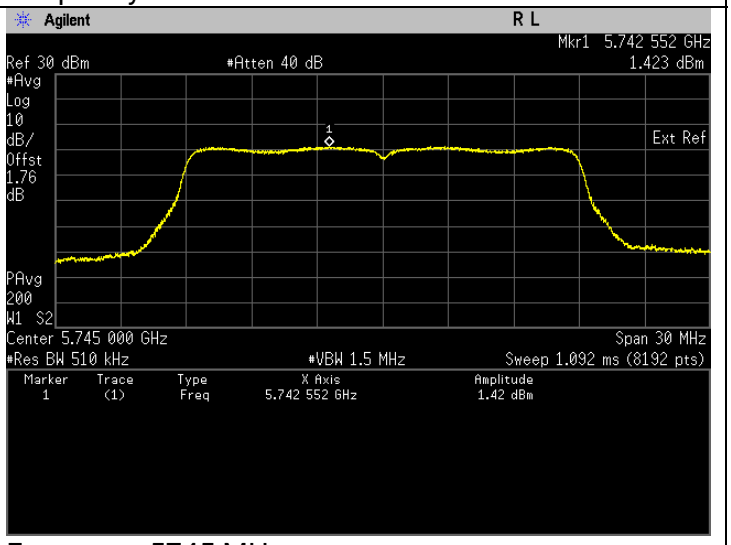
Frequency 5500 MHz



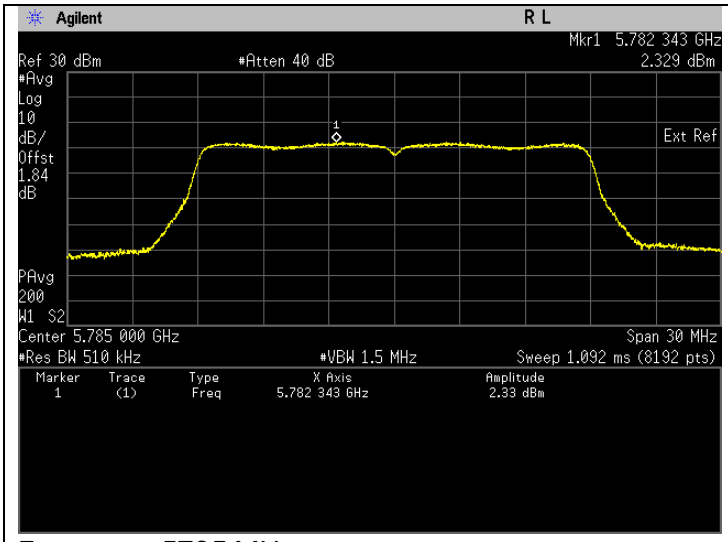
Frequency 5580 MHz



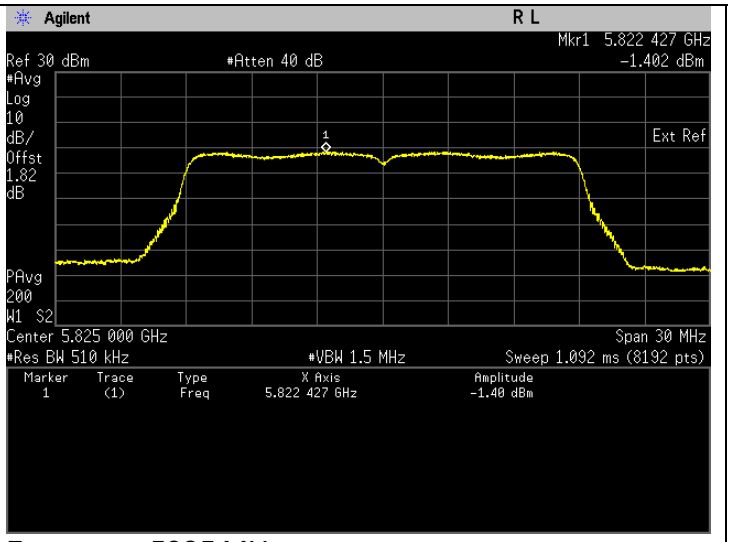
Frequency 5700 MHz



Frequency 5745 MHz



Frequency 5785 MHz



Frequency 5825 MHz

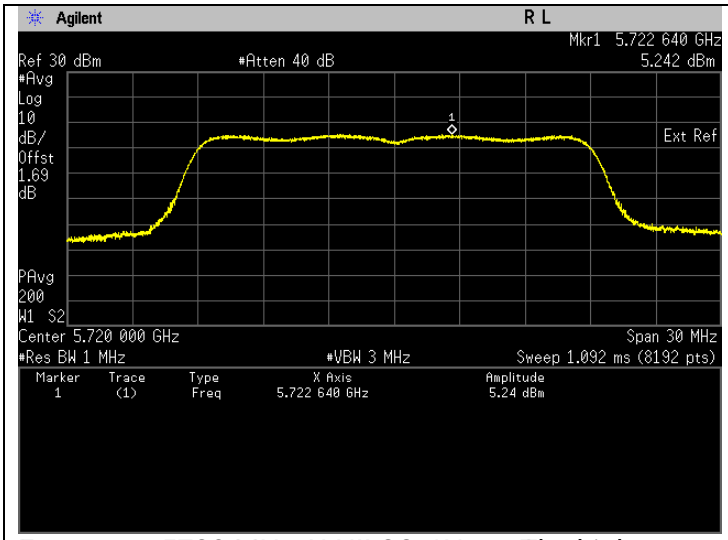
Straddle Frequency for 802.11n (HT20) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.294	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.979	Pass

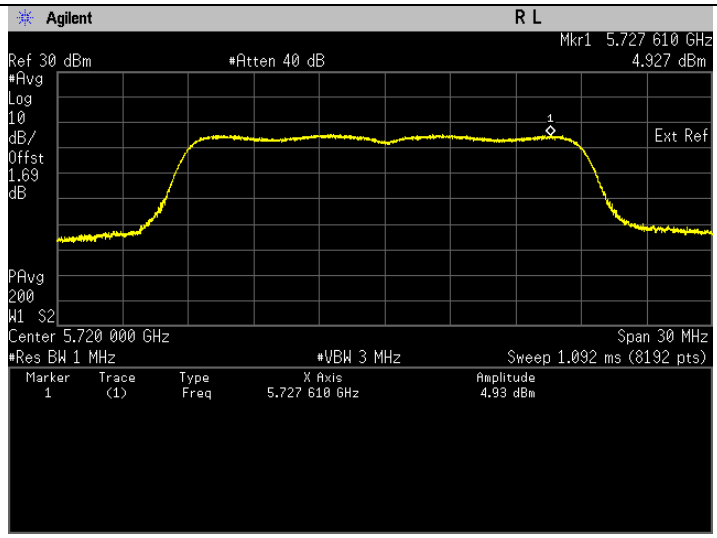
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.294	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.979	Pass

Plots for 802.11n (HT20) Straddle Frequency (26dB EBW & 99% EBW)



Frequency 5720 MHz, U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



Frequency 5720 MHz, U-NII-3. *Note: The highest spectral density is captured after the 5725 MHz.

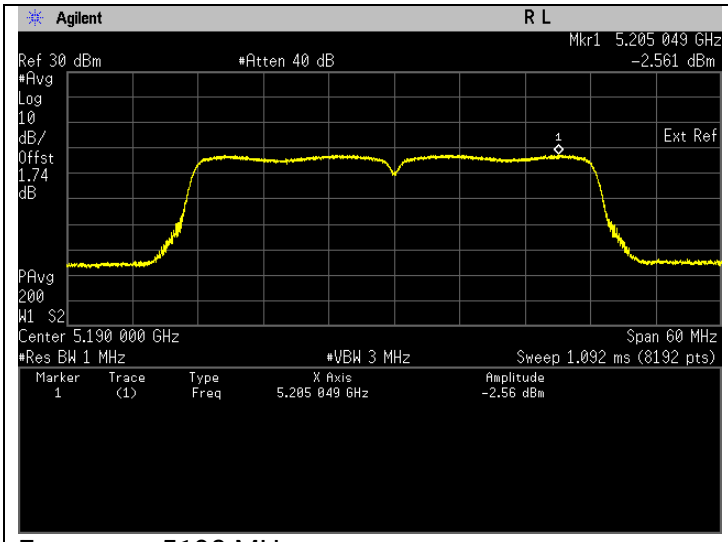
802.11n (HT40) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-2.464	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.134	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.183	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-1.416	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-1.732	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.9010	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.167	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.105	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-4.224	Pass

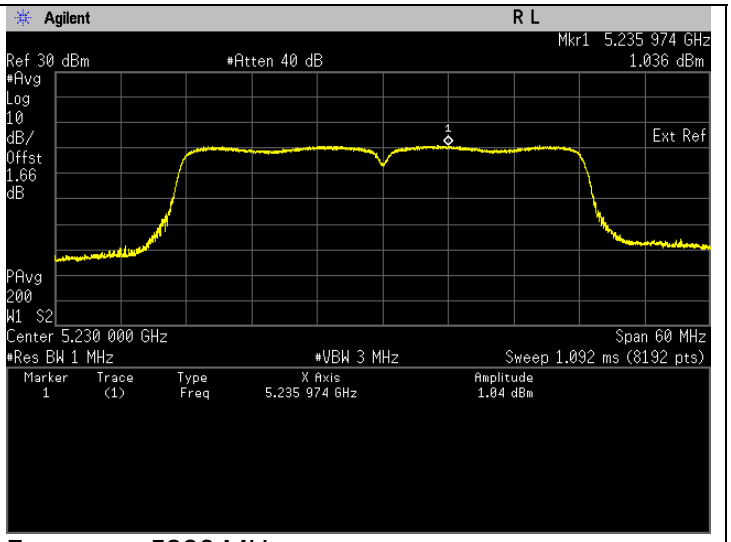
802.11n (HT40)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-2.464	Pass	0.037	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.134	Pass	2.634	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.183	Pass	4.683	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-1.416	Pass	2.084	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-1.732	Pass	1.768	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.9010	Pass	4.4010	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.167	Pass	3.667	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.105	Pass	4.605	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-4.224	Pass	1.276	Pass

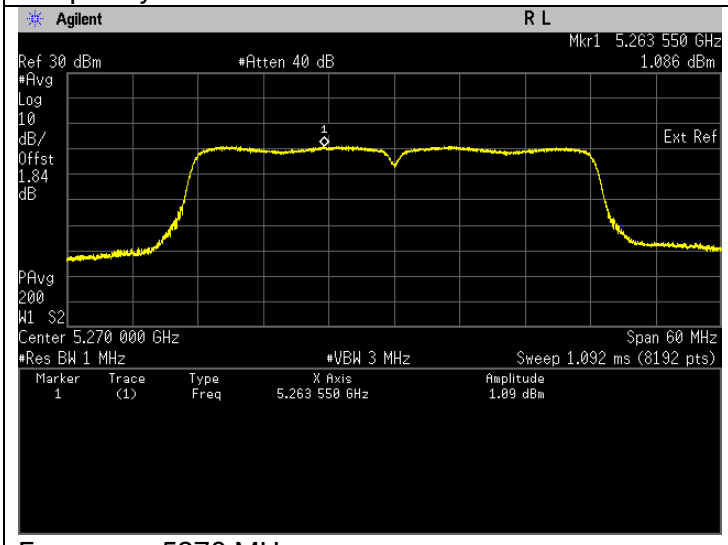
Plots for 802.11n (HT40) (26dB EBW & 99% EBW)



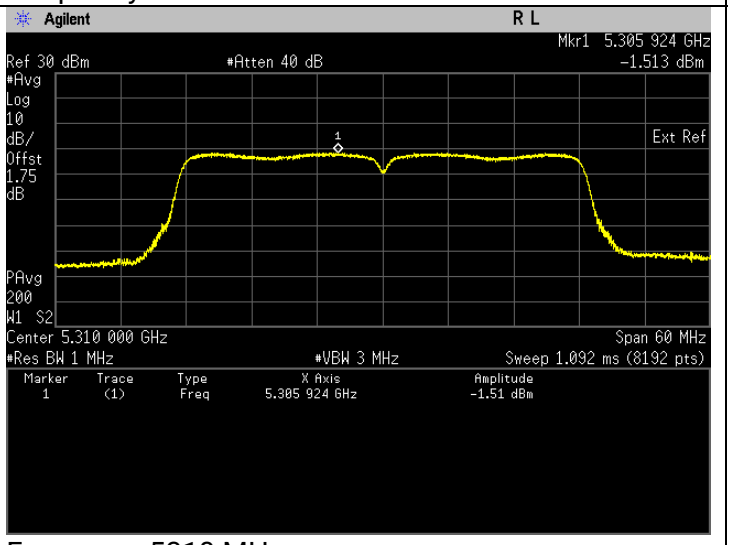
Frequency 5190 MHz



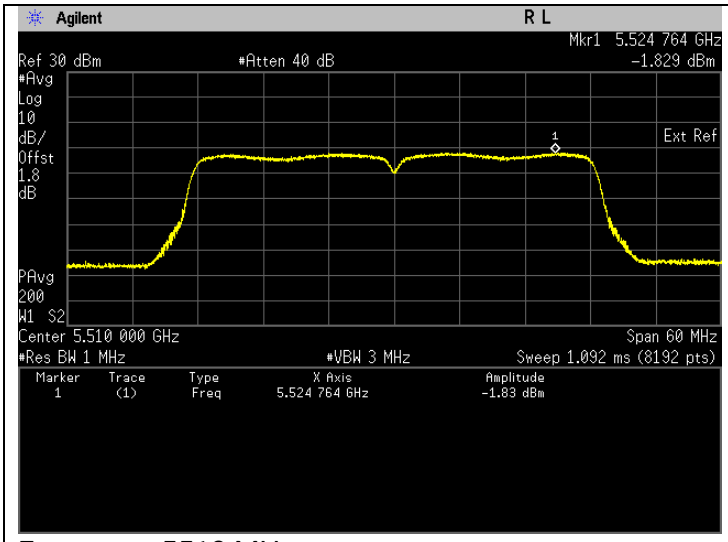
Frequency 5230 MHz



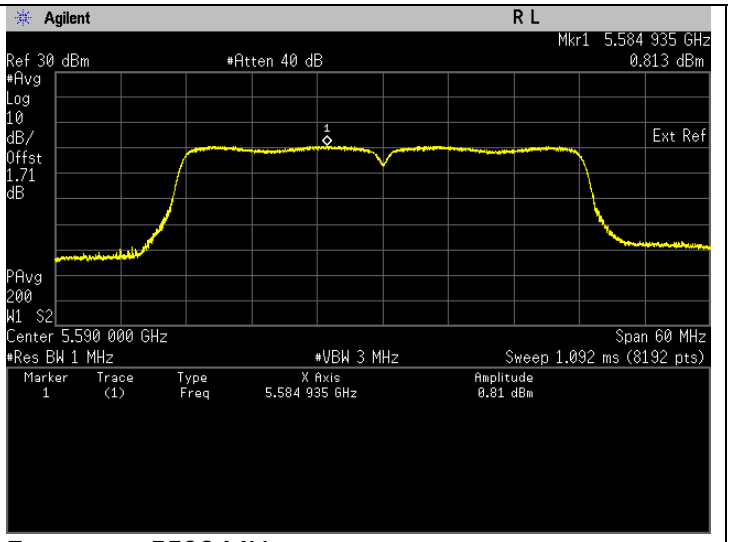
Frequency 5270 MHz



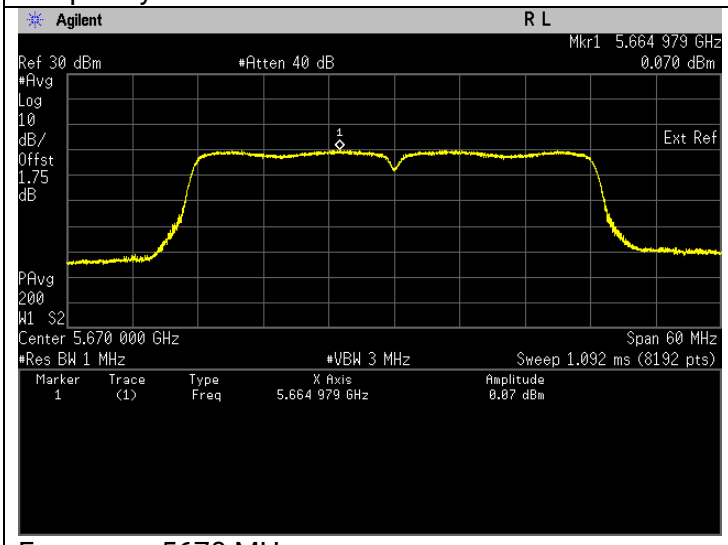
Frequency 5310 MHz



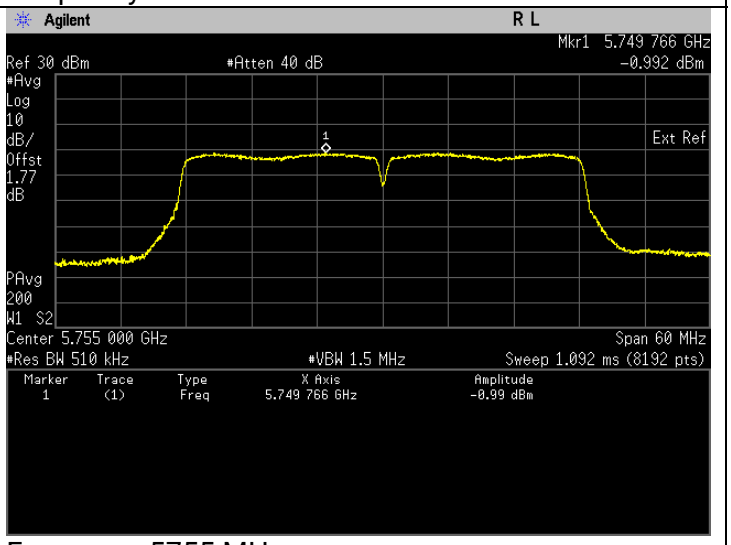
Frequency 5510 MH



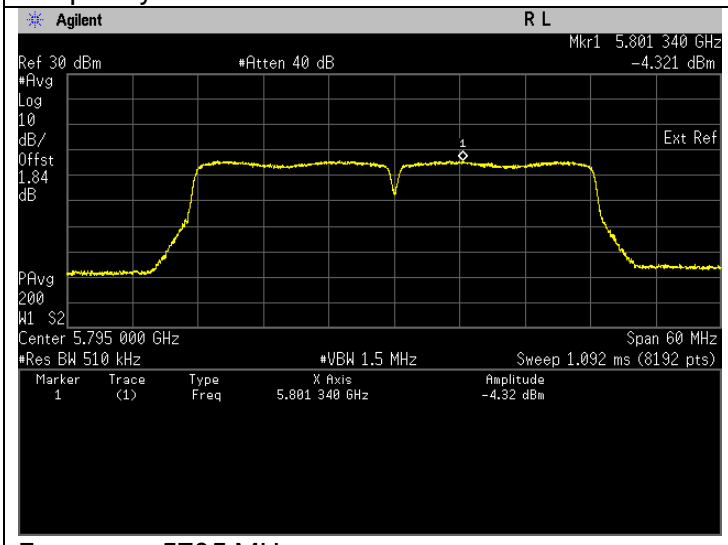
Frequency 5590 MHz



Frequency 5670 MHz



Frequency 5755 MHz



Frequency 5795 MHz

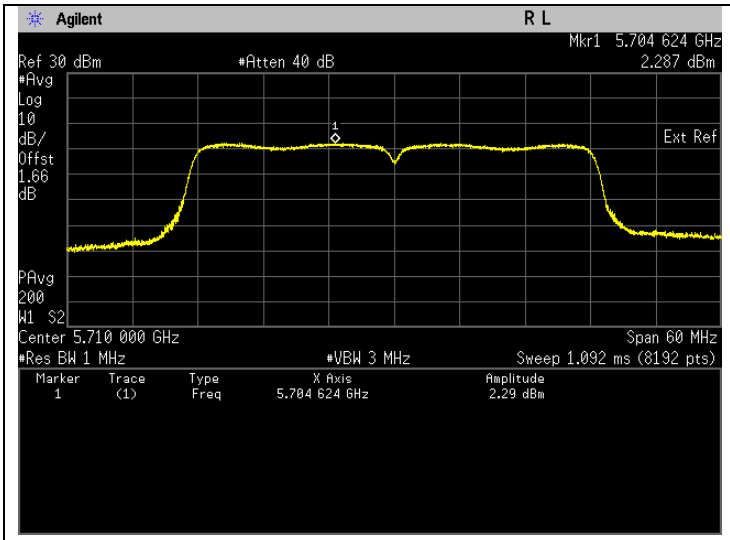
Straddle Frequency 802.11n (HT40) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.384	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.723	Pass

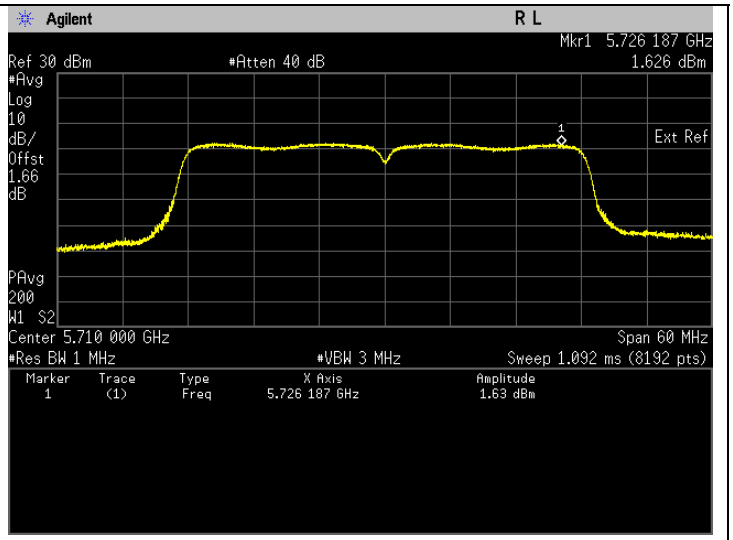
Straddle Frequency 802.11n (HT40) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.384	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.723	Pass

Plots for 802.11n (HT40) Straddle Frequency (26dB EBW & 99% EBW)



Frequency 5710 MHz, U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



Frequency 5710 MHz, U-NII-3. *Note: The highest spectral density is captured after the 5725 MHz.

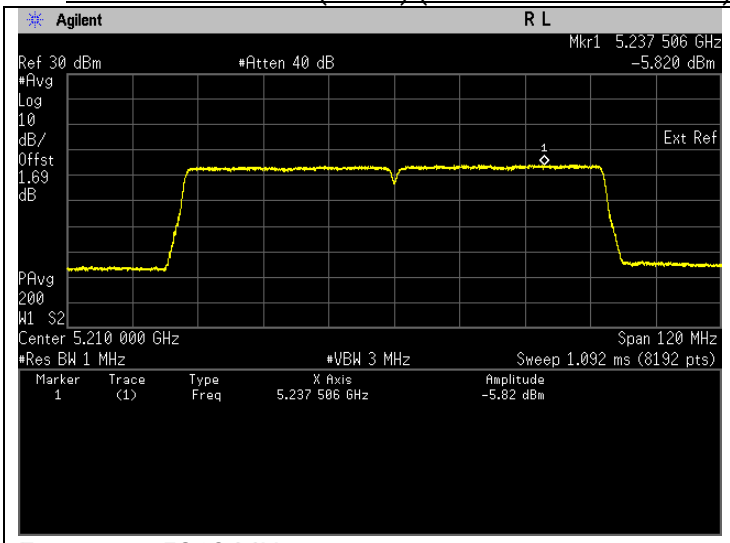
802.11ac (HT80)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5210	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-5.620	Pass
5290	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-6.347	Pass
5530	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-5.604	Pass
5610	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-6.370	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5775	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-9.145	Pass

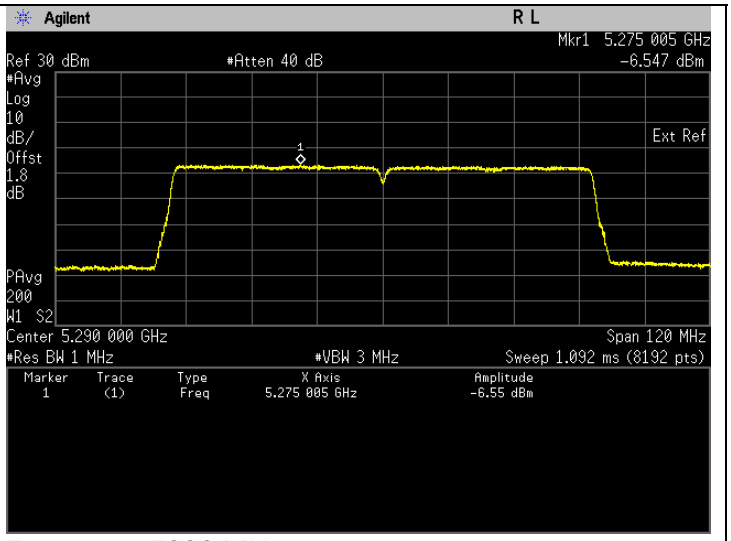
802.11ac (HT80)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5210	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-5.620	Pass	-4.120	Pass
5290	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-6.347	Pass	-2.847	Pass
5530	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-5.604	Pass	-2.104	Pass
5610	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-6.370	Pass	-2.870	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5775	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-9.145	Pass	-3.645	Pass

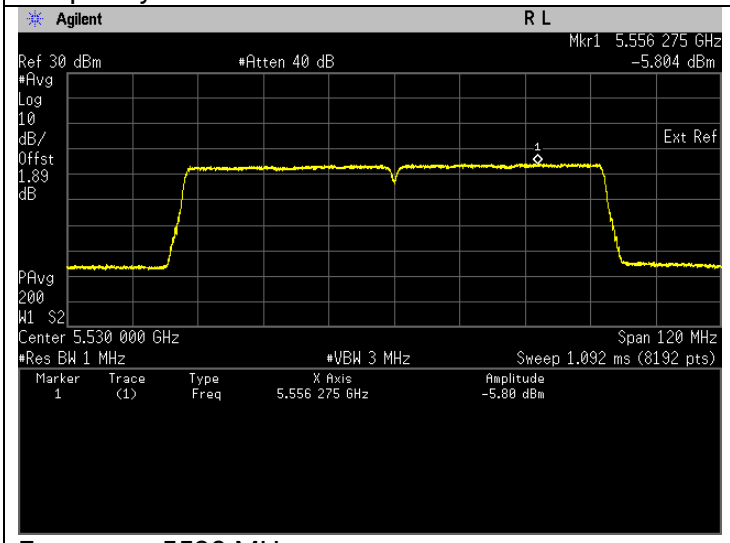
Plots for 802.11ac (HT80) (26dB EBW & 99% EBW)



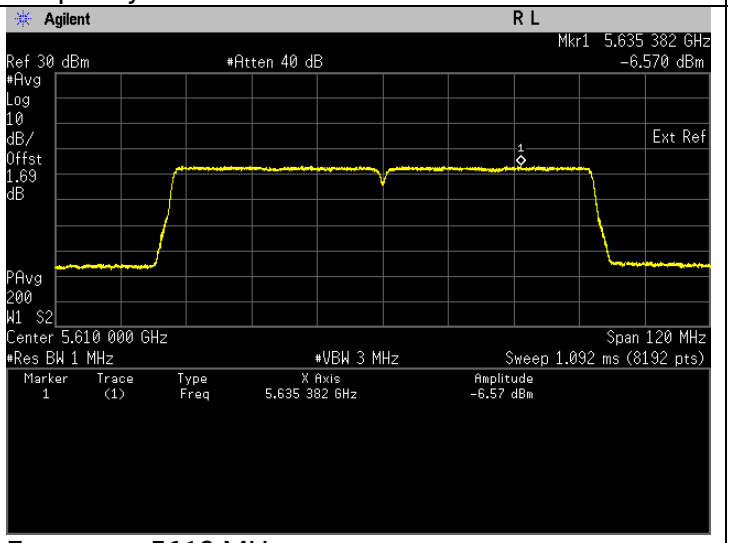
Frequency 5210 MHz



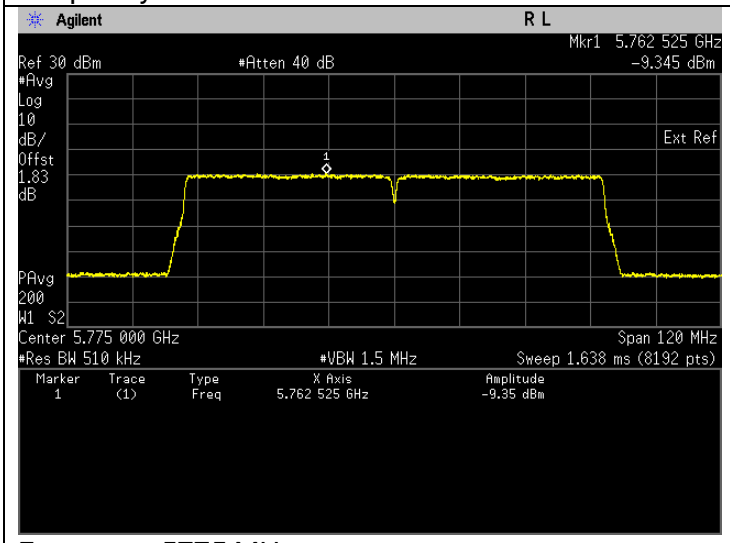
Frequency 5290 MHz



Frequency 5530 MHz



Frequency 5610 MHz



Frequency 5775 MHz

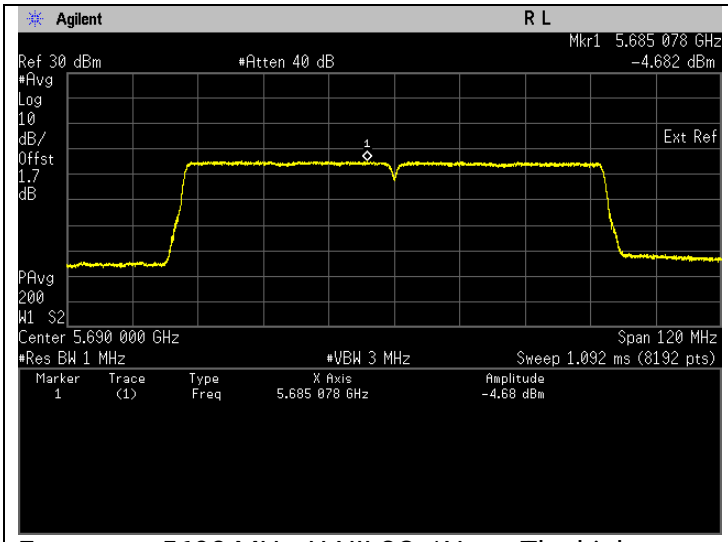
Straddle Frequency 802.11ac (HT80) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-4.482	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-5.233	Pass

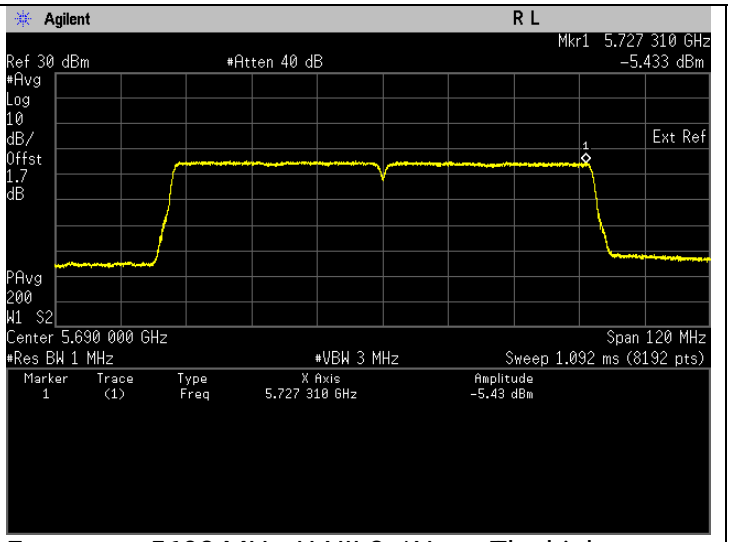
Straddle Frequency 802.11ac (HT80) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-4.482	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	-5.233	Pass

Plots for 802.11ac (HT80) Straddle Frequency (26dB EBW & 99% EBW)



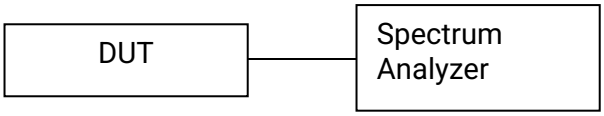
Frequency 5690 MHz, U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



Frequency 5690 MHz, U-NII-3. *Note: The highest spectral density is captured after the 5725 MHz.

6.4. 6dB Bandwidth

6.4.1. Test Setup



a) Test setup as per illustrated above.
b) Set DUT to transmit at desire transmit frequency.
c) 6dB bandwidth is applicable for the band 5.725-5.85GHz only.
d) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
e) Setting of Spectrum analyzer :
    - RBW = 100 kHz
    - VBW ≥ 3·RBW
    - Detector = Peak
    - Trace = Max Hold
    - Sweep = Auto couple

f) Allow 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.
h) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause C.2).

6.4.2. Test Limits

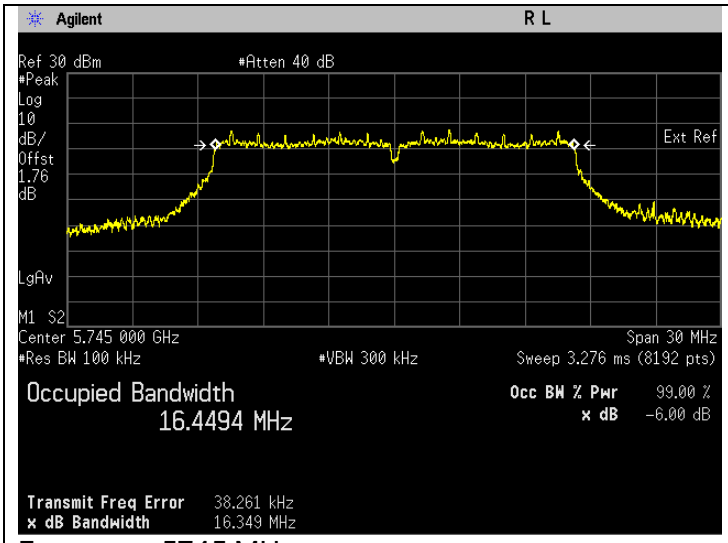
FCC 15.407(e)
Within the 5.725-5.85GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

RSS 247 6.2.4
For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

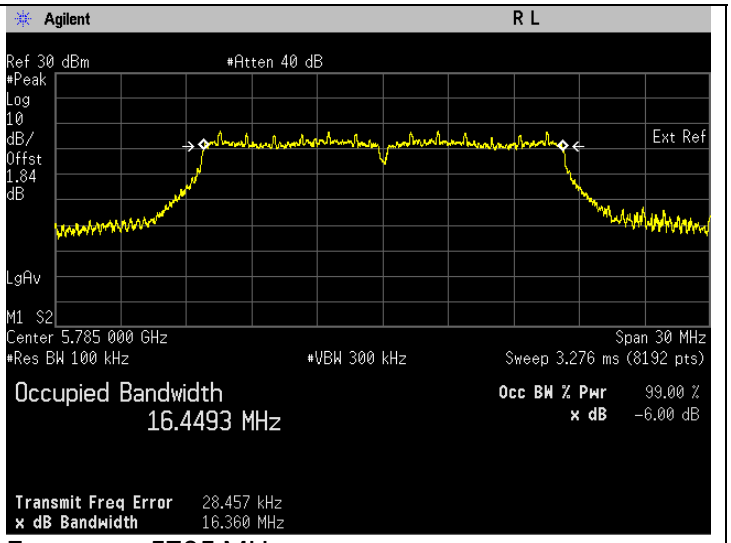
6.4.3. Test Data

802.11a

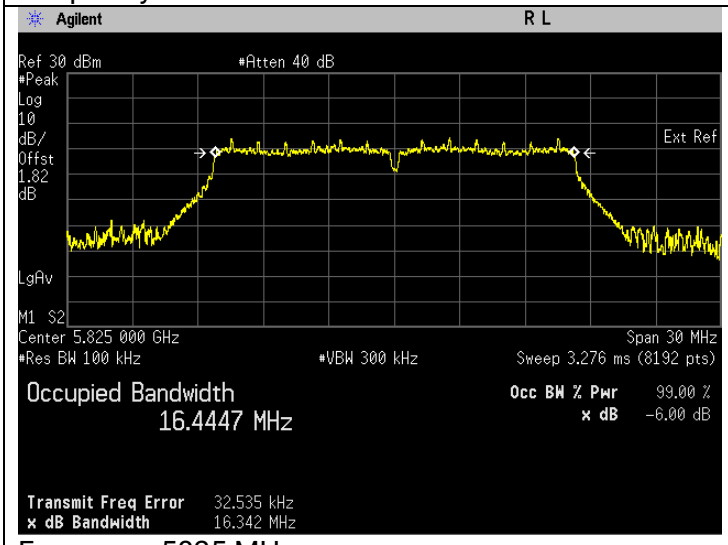
Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	16.349	Pass
5785	Mod Type: BPSK, Data Rate: 6	16.360	Pass
5825	Mod Type: BPSK, Data Rate: 6	16.342	Pass



Frequency 5745 MHz



Frequency 5785 MHz

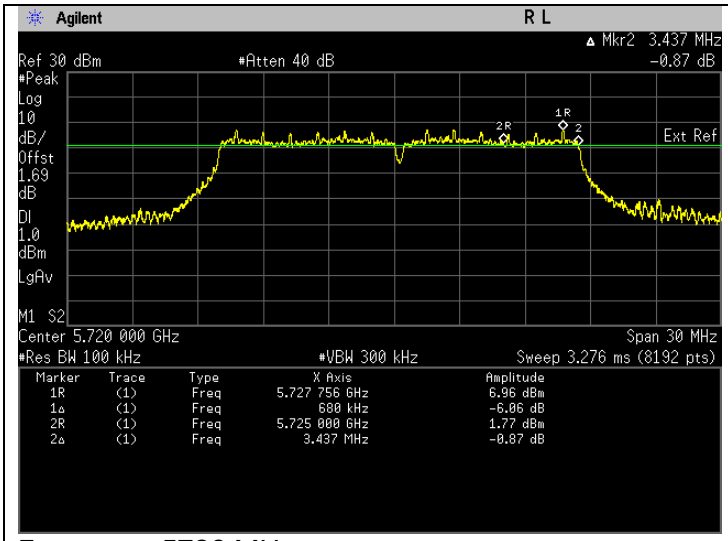


Frequency 5825 MHz

Straddle Frequency for 802.11a

Freq. (MHz)	Test Conditions	Results	
		Bandwidth(MHz)	Status
		U-NII- 3	
5720	Mod Type: BPSK, Data Rate: 6	3.437	Pass

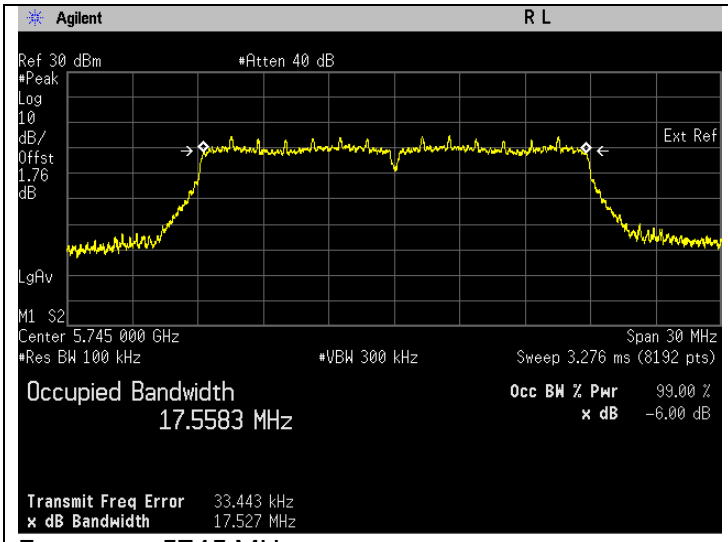
Plots for 802.11a Straddle Frequency



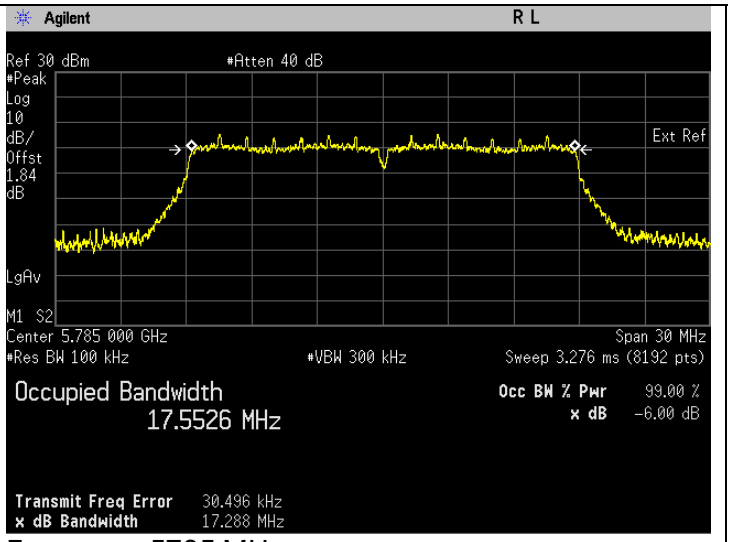
Frequency 5720 MHz

802.11n (HT20)

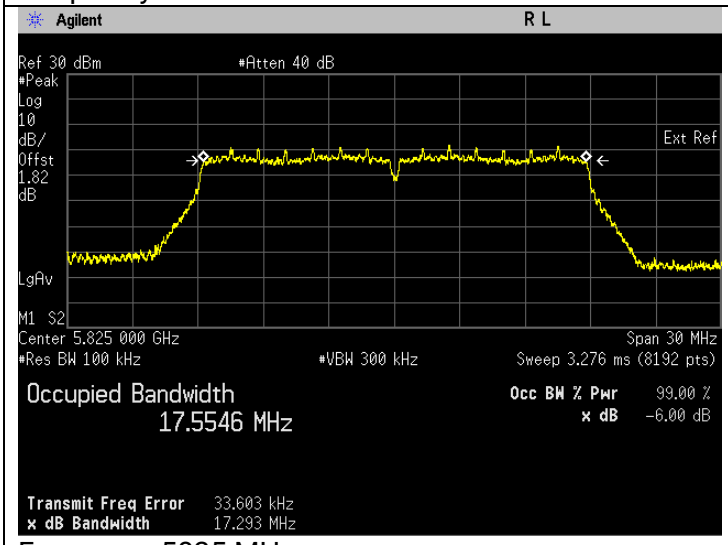
Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.527	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.288	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.293	Pass



Frequency 5745 MHz



Frequency 5785 MHz

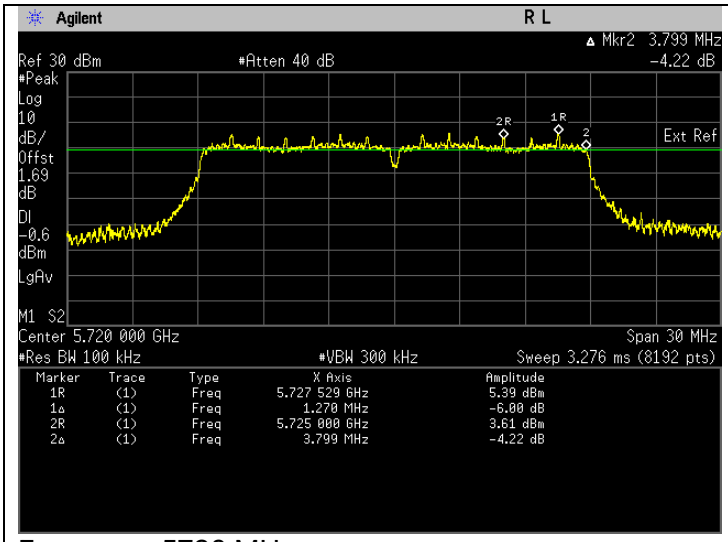


Frequency 5825 MHz

Straddle Frequency for 802.11n (HT20)

Freq. (MHz)	Test Conditions	Results	
		Bandwidth(MHz)	Status
		U-NII- 3	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.799	Pass

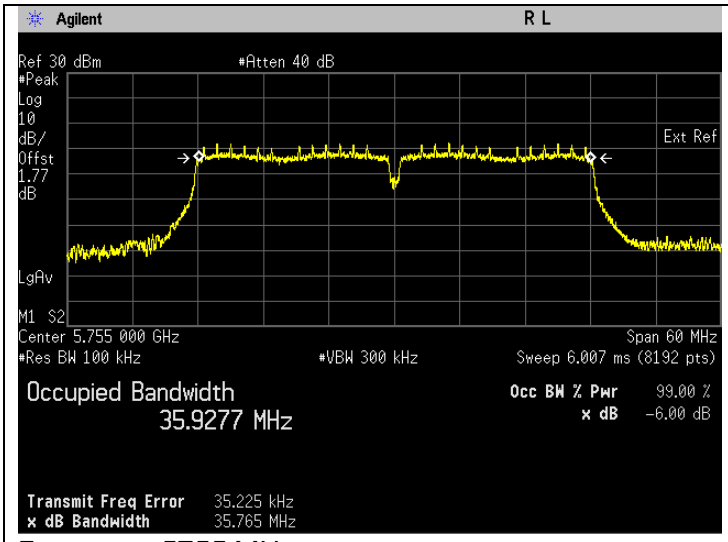
Plots for 802.11n (HT20) Straddle Frequency



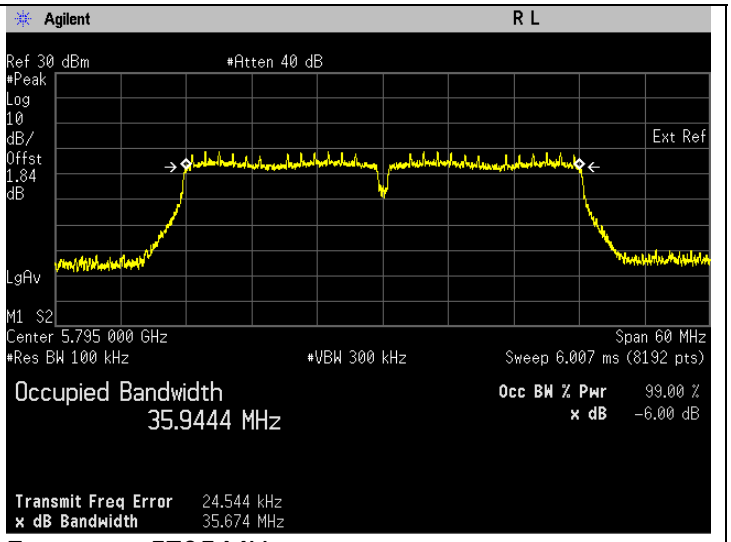
Frequency 5720 MHz

802.11n (HT40)

Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	35.765	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	35.674	Pass



Frequency 5755 MHz

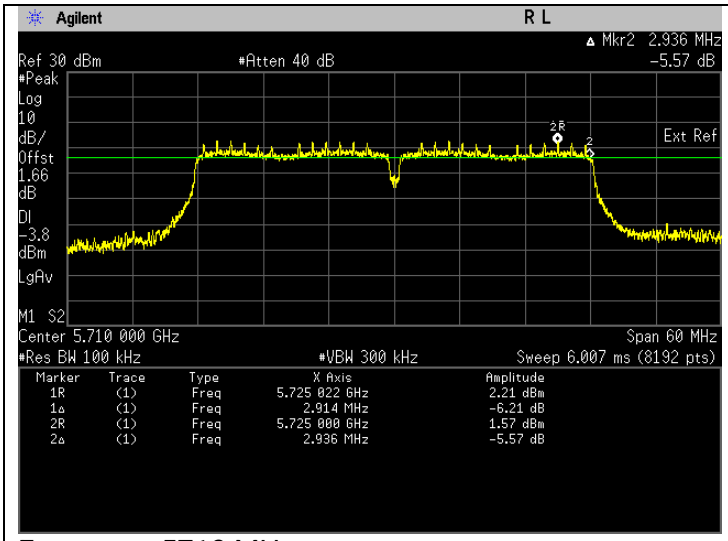


Frequency 5795 MHz

Straddle Frequency for 802.11n (HT40)

Freq. (MHz)	Test Conditions	Results	
		Bandwidth(MHz)	Status
		U-NII- 3	
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.936	Pass

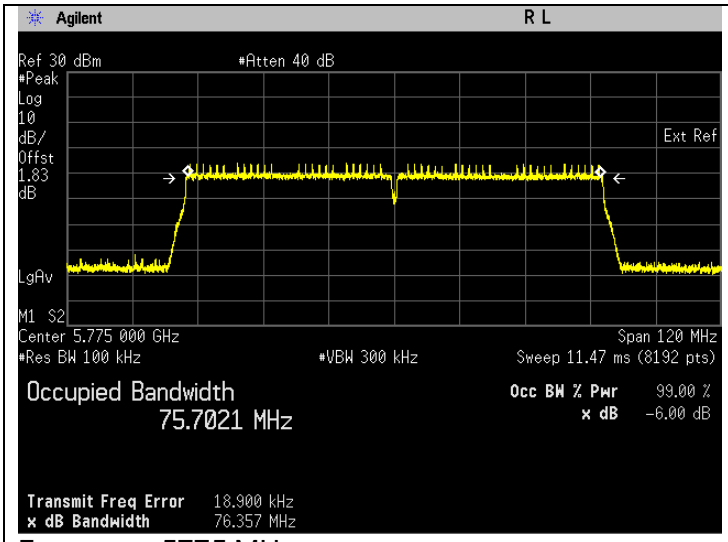
Plots for 802.11n (HT40) Straddle Frequency



Frequency 5710 MHz

802.11ac (HT80)

Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5775	Mod Type: BPSK, Data Rate: MCS0 (29.3)	76.357	Pass

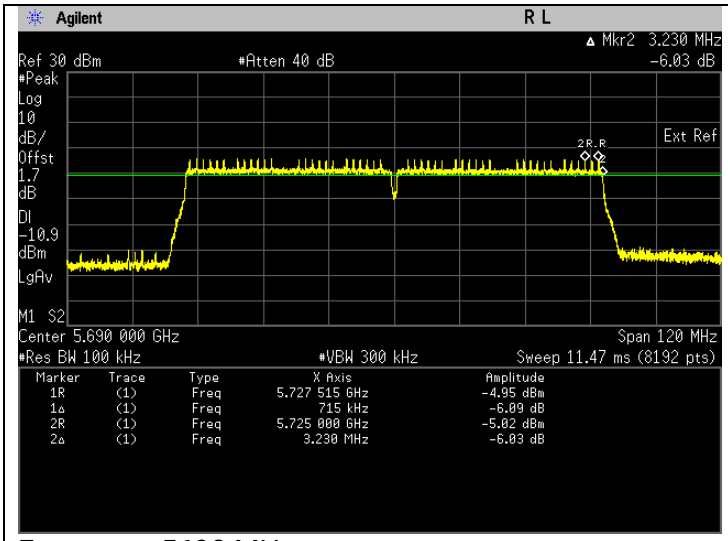


Frequency 5775 MHz

Straddle Frequency for 802.11ac (HT80)

Freq. (MHz)	Test Conditions	Results	
		Bandwidth(MHz)	Status
		U-NII- 3	
5690	Mod Type: BPSK, Data Rate: MCS0 (29.3)	3.230	Pass

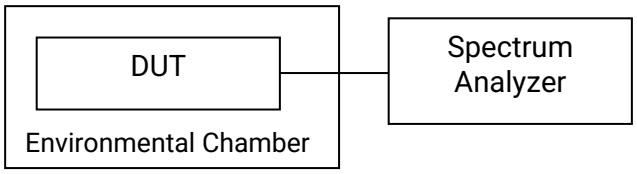
Plots for 802.11ac (HT80) Straddle Frequency



Frequency 5690 MHz

6.5. Frequency Stability

6.5.1. Test Setup



a) Test setup as per illustrated above.
b) Set DUT to transmit un-modulated signal at desire transmit frequency.
c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
d) The DUT was operated at the maximum output power, and spectrum which is set to maximum hold function and peak detector.
e) The peak value of the power envelope was measured and noted.
f) Test was conducted from temperature range from -30ºC to 50ºC with step size of 10ºC on manufacturer's rated supply voltage.
g) At temperature of 20ºC, +/-15% of manufacturer's rated voltage are to be applied.
h) The frequency stability is measured and recorded of frequency deviation due to temperature and supply voltage variations as mentioned at condition f) & g) above.

6.5.2. Test Limits

FCC 15.407(g)
Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

RSS-GEN 6.11

6.5.3. Test Data

802.11a

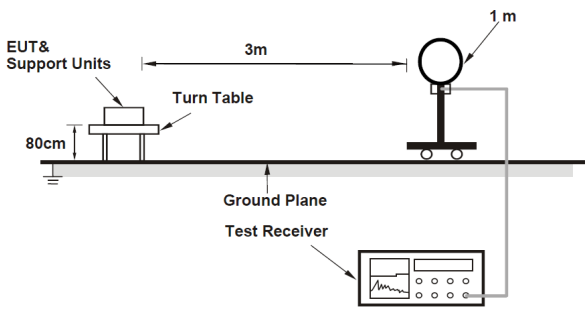
Test Configuration	Test Frequency
	Tx (MHz)
Mod Type: BPSK, Data Rate: 6	5180

		Results			
Temperature(°C)	Voltage	Measured Frequency(MHz)	Frequency Error(kHz)	Frequency Error(%)	Status
20	+15%	5180.065097	65.097000	0.001257	Pass
	±0%	5180.061826	61.826000	0.001194	Pass
	-15%	5180.051897	51.897000	0.001002	Pass
-30		5180.040437	40.437000	0.000781	Pass
-20		5180.030361	30.361000	0.000586	Pass
-10		5180.025635	25.635000	0.000495	Pass
0		5180.039172	39.172000	0.000756	Pass
10		5180.038287	38.287000	0.000739	Pass
30		5180.025931	25.931000	0.000501	Pass
40		5180.025798	25.798000	0.000498	Pass
50		5180.025643	25.643000	0.000495	Pass

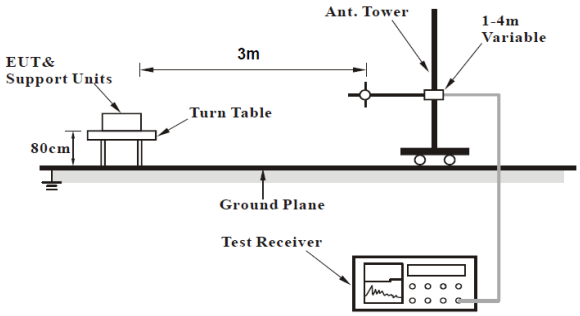
6.6. Band Edge Radiated Spurious Emission Measurement

6.6.1. Test Setup

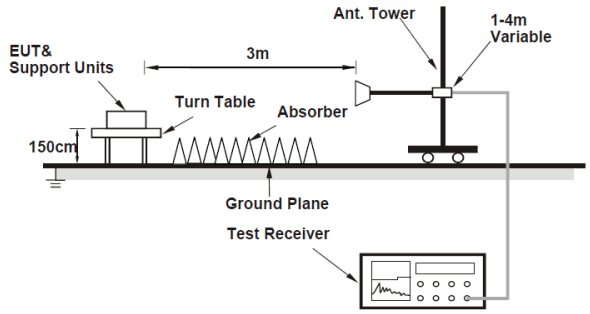
<Radiated emission below 30MHz>



<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



1. The EUT is placed on the top of a rotating table 0.8m/1.5m above the ground at a 3m semi-anechoic chamber. The table is rotated 360 degrees to determine the position of the highest radiation.
2. The EUT is set 3m away from the interference-receiving antenna, which is mounted on the top of a variable-height antenna tower.
3. The antenna is Bilog/Horn antenna depend on which frequency range uses, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT is arranged to its worst case and then the antenna is tuned to heights from 1m to 4m and the rotatable table is turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system is set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode is fall within the range of 10dB from the limit specified, the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Otherwise, the testing could be stopped and the peak values of the EUT would be reported.

NOTE:

a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection at frequency below 1GHz.
b. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1 GHz.
c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection using reduced video bandwidth (Duty cycle ≥98%) at frequency above 1GHz.
d. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1/τ Hz, where τ is minimum transmitter on time (Duty cycle <98%) for Average detection using reduced video bandwidth at frequency above 1GHz.
e. All modes of operation were investigated and the worst-case emissions are reported.

6.6.2. Test Limits

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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

NOTE:

a. The lower limit shall apply at the transition frequencies.
b. Emission level (dBuV/m) = 20 log Emission level (uV/m).
c. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

For Radiated emissions which fall out of the restricted bands must comply with the radiated emission limits specified as below table.

Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v01r03		Field Strength at 3 m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	**Applicable To**	**EIRP Limit**	**Equivalent Field Strength at 3 m**
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2 (dBµV/m) *1 PK:105.2 (dBµV/m) *2 PK: 110.8 (dBµV/m) *3 PK:122.2 (dBµV/m) *4
	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

NOTE:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$E = ((1000000\sqrt{} (30P)) / 3)$ μV/m, where P is the eirp (Watts)

6.6.3. Test Result

802.11a

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5180.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (14)

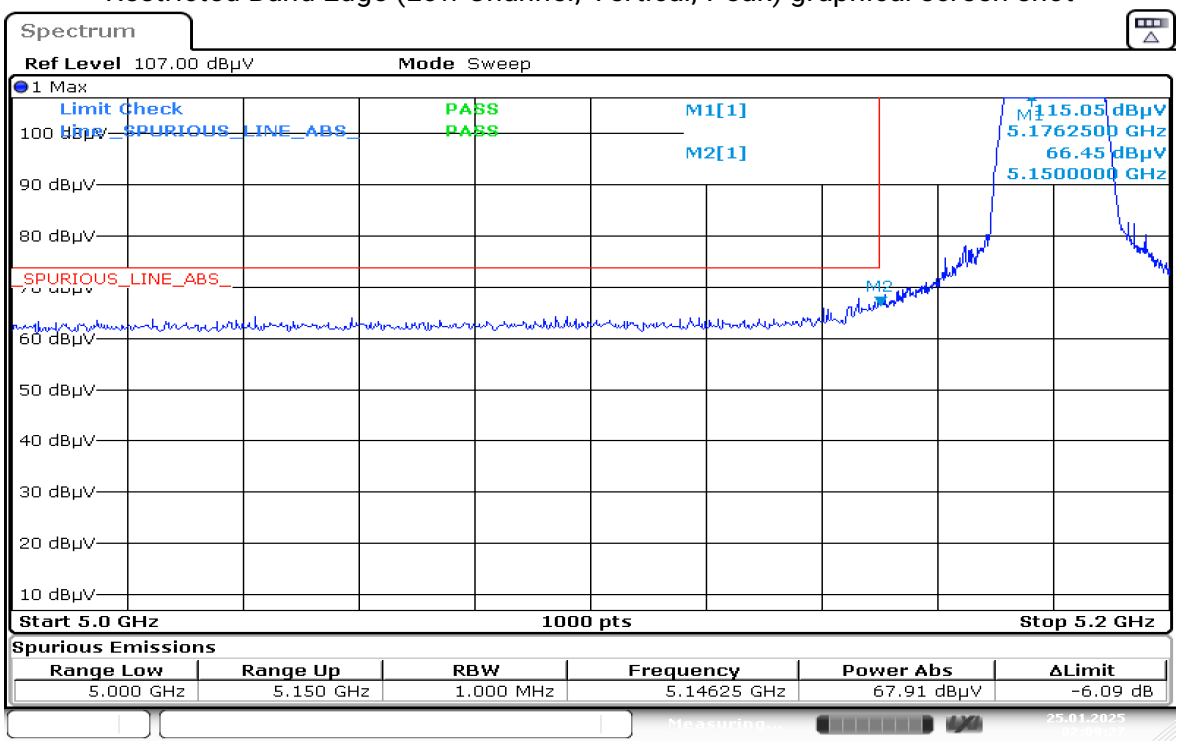
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5150.0000	-	66.4464	45.7026	-	74.0000	54.0000	-	7.5536	8.2974	-
Horizontal Radiated Emission Result										
5150.0000	-	62.8973	43.4842	-	74.0000	54.0000	-	11.1027	10.5158	-

Remarks: Pass Result	Marginal Result	Fail Result

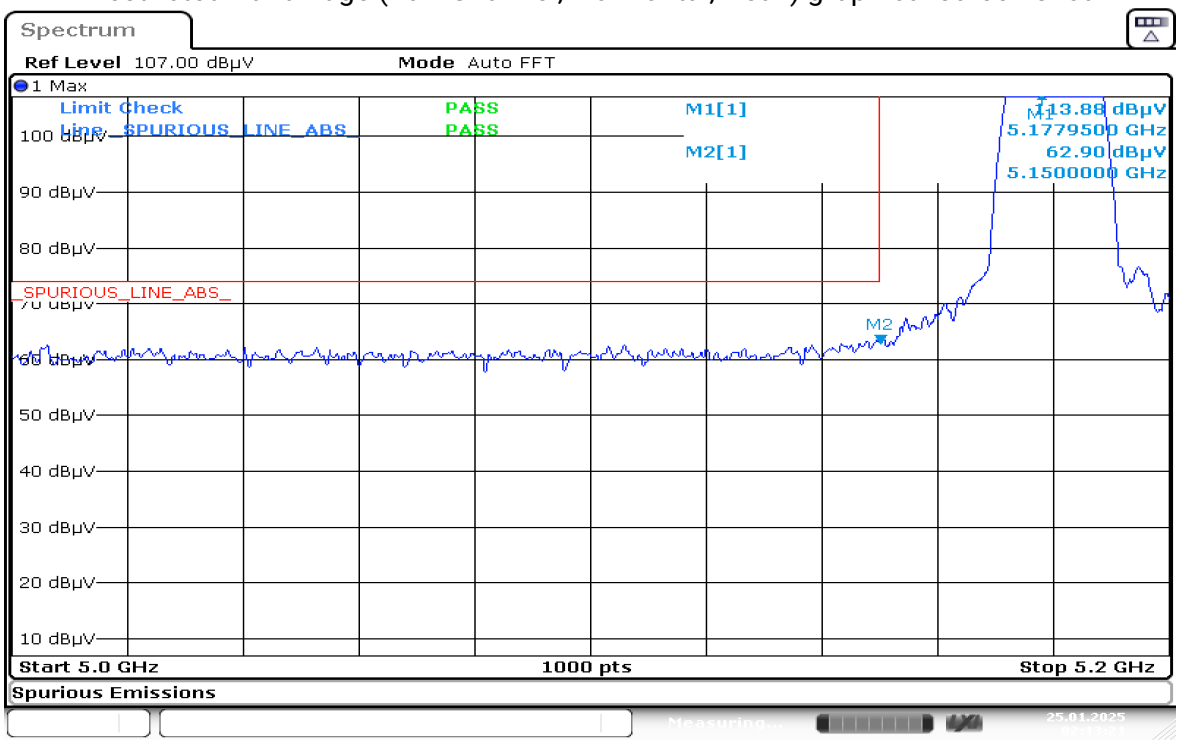
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



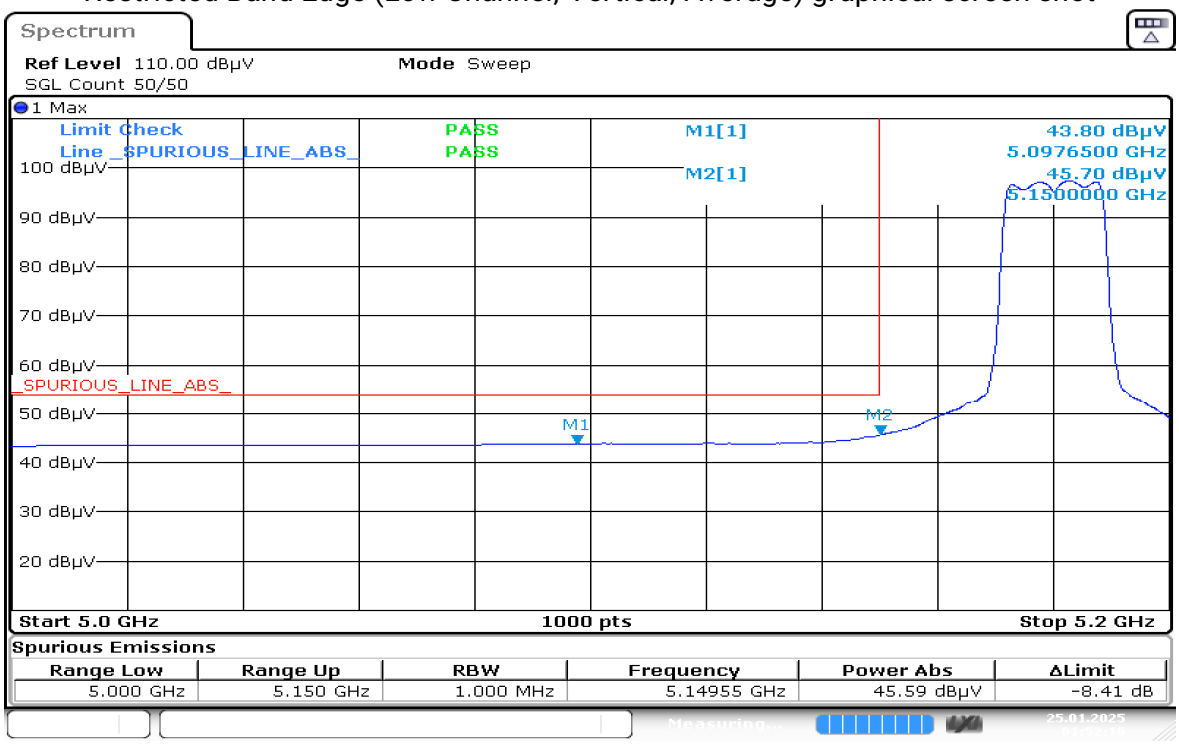
Date: 25.JAN.2025 02:09:28

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



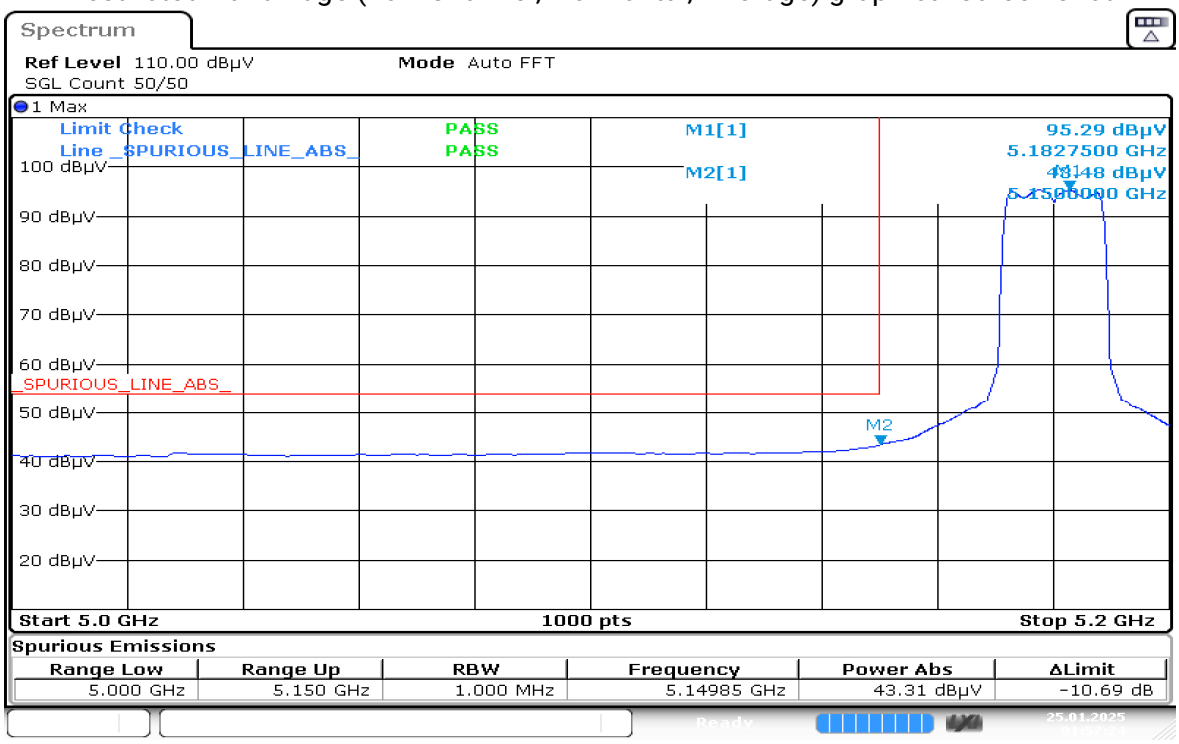
Date: 25.JAN.2025 02:13:22

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 25.JAN.2025 01:52:16

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 01:57:24

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5320.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (14)

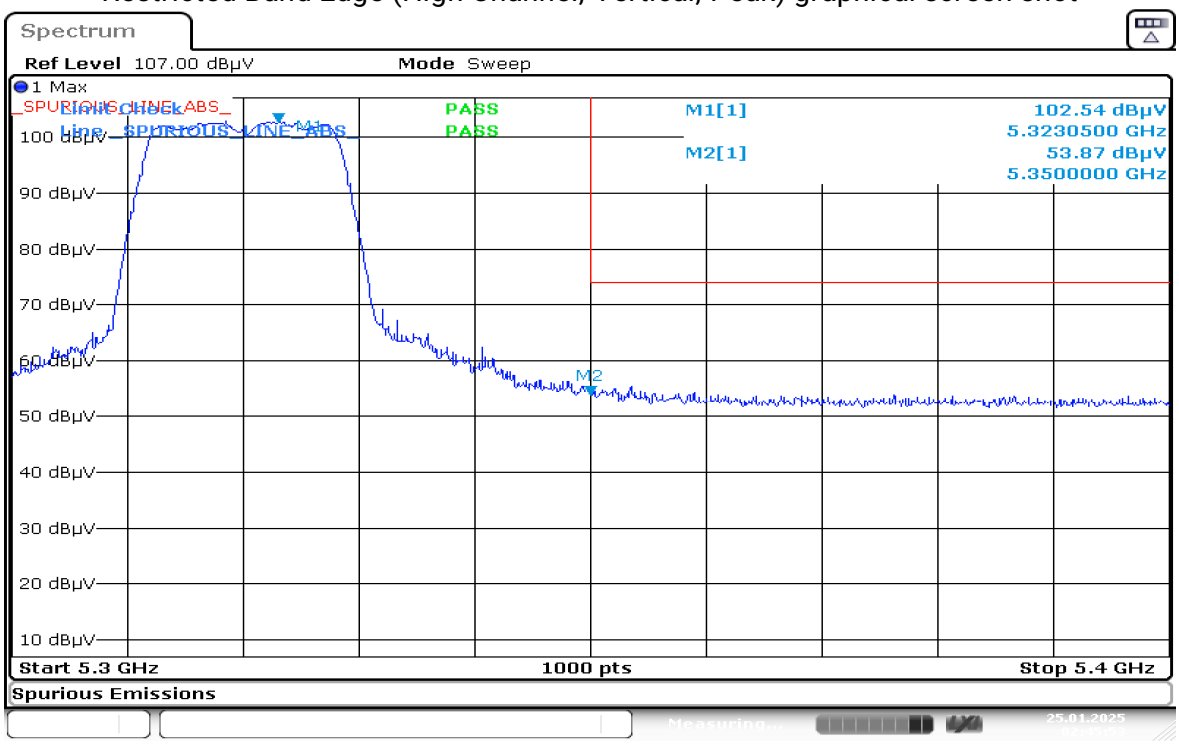
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5350.0000	-	53.8695	44.3228	-	74.0000	54.0000	-	20.1305	9.6772	-
Horizontal Radiated Emission Result										
5350.0000	-	52.8926	42.7870	-	74.0000	54.0000	-	21.1074	11.2130	-

Remarks: Pass Result	Marginal Result	Fail Result

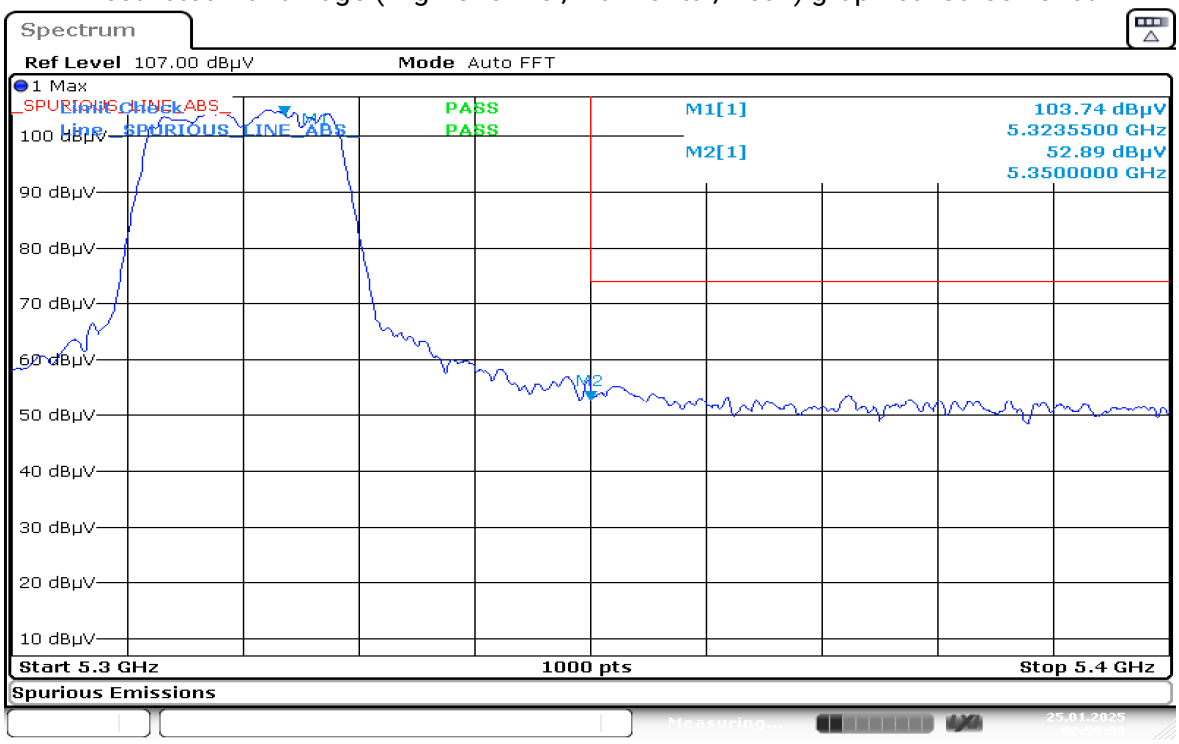
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



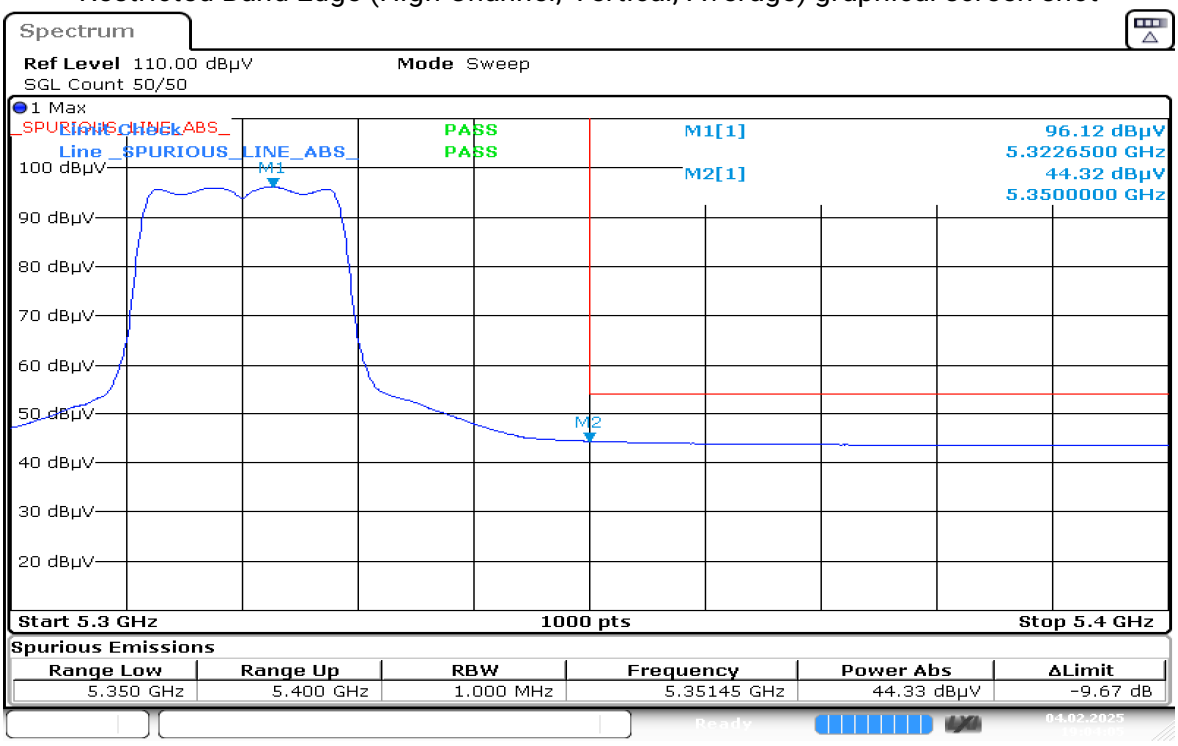
Date: 25.JAN.2025 02:45:53

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot

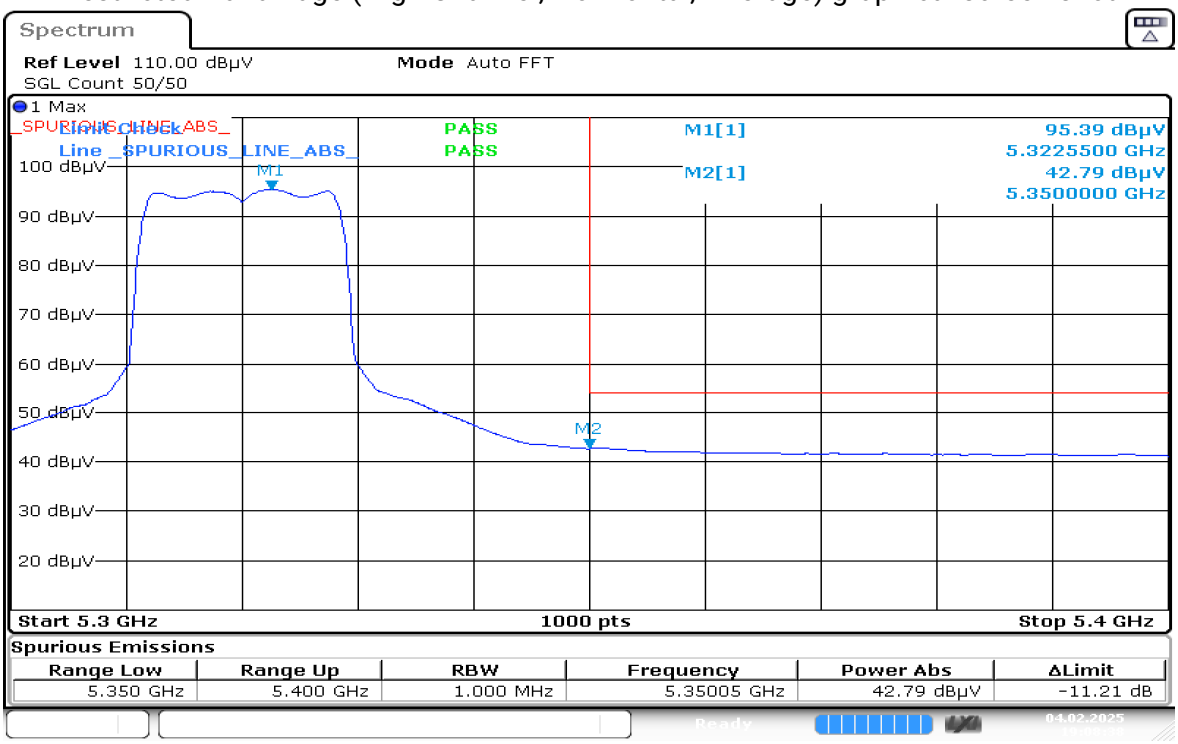


Date: 25.JAN.2025 02:50:01

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5500.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (13)

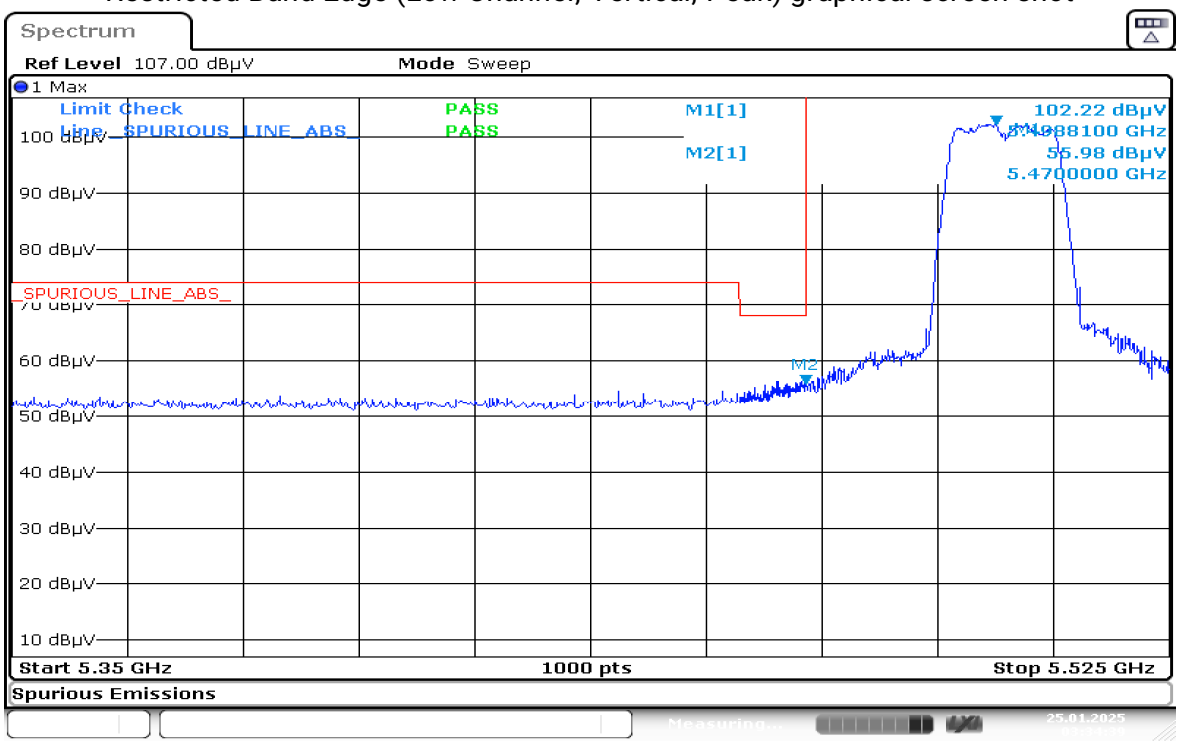
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5469.9750	-	-	44.6605	-	-	54.0000	-	-	9.3395	-
5470.0000	-	55.9843	-	-	68.2000	-	-	12.2157	-	-
Horizontal Radiated Emission Result										
5469.9750	-	-	43.4791	-	-	54.0000	-	-	10.5209	-
5470.0000	-	54.8579	-	-	68.2000	-	-	13.3421	-	-

Remarks: Pass Result	Marginal Result	Fail Result

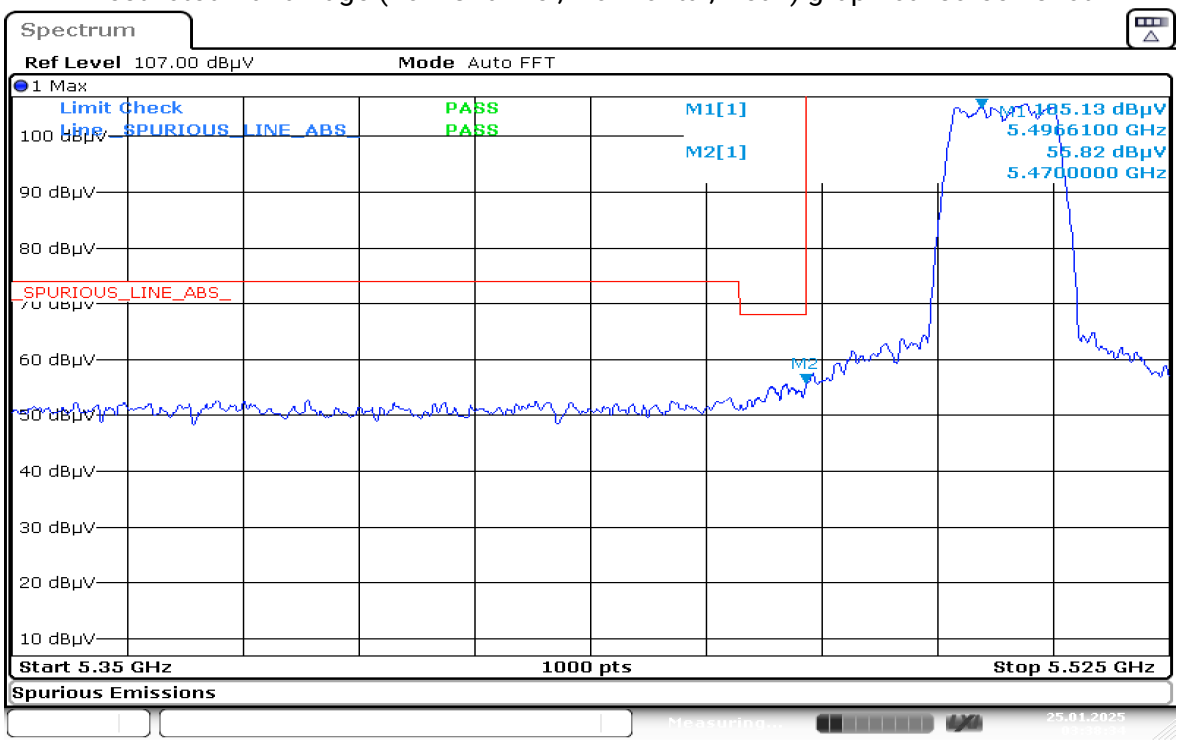
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



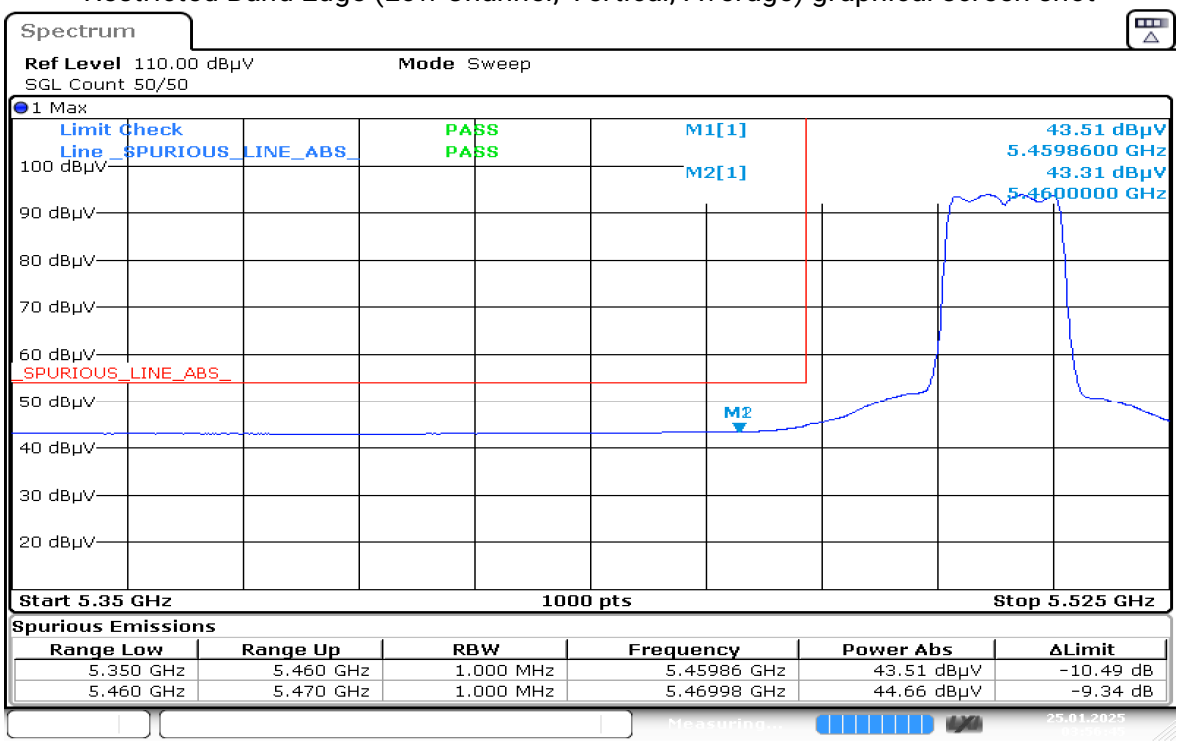
Date: 25.JAN.2025 03:34:39

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



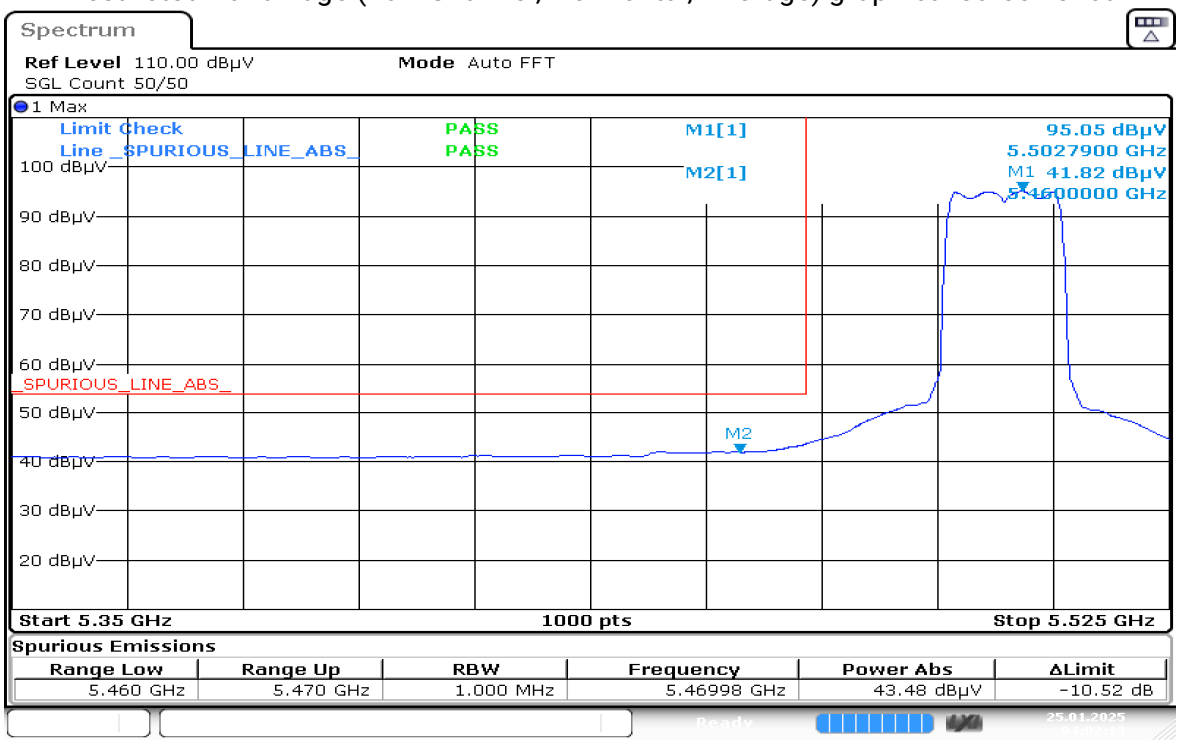
Date: 25.JAN.2025 03:38:34

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 25.JAN.2025 03:56:45

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 04:02:14

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5700.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (12)

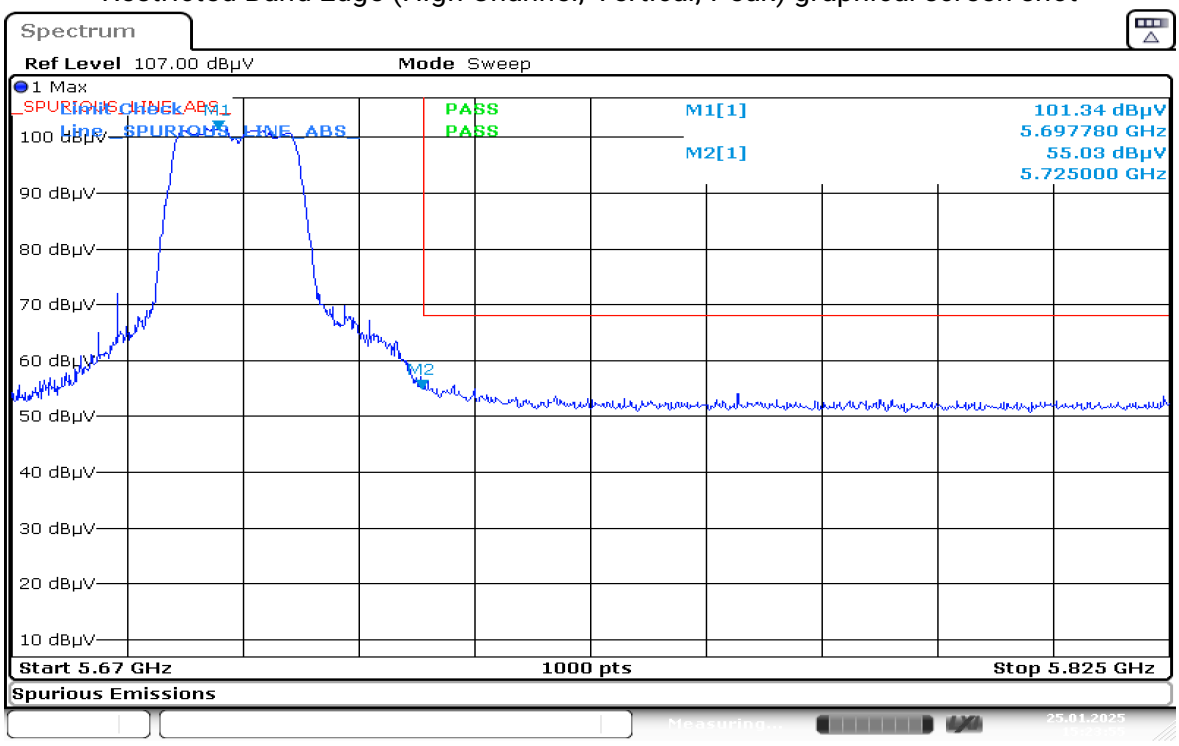
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	54.6341	-	-	68.2000	-	-	13.5659	-	-
Horizontal Radiated Emission Result										
5725.0000	-	54.0447	-	-	68.2000	-	-	14.1553	-	-

Remarks: Pass Result	Marginal Result	Fail Result

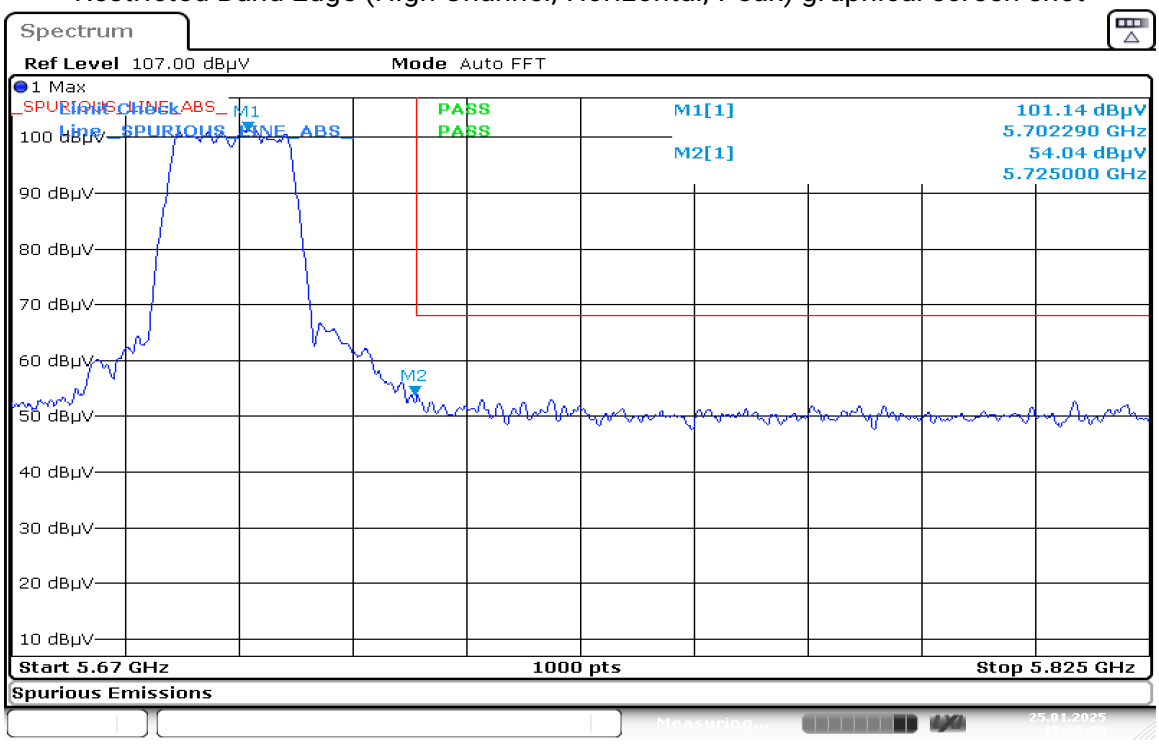
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 15:23:56

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 15:28:20

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Straddle	Test Frequency: 5720.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (16)

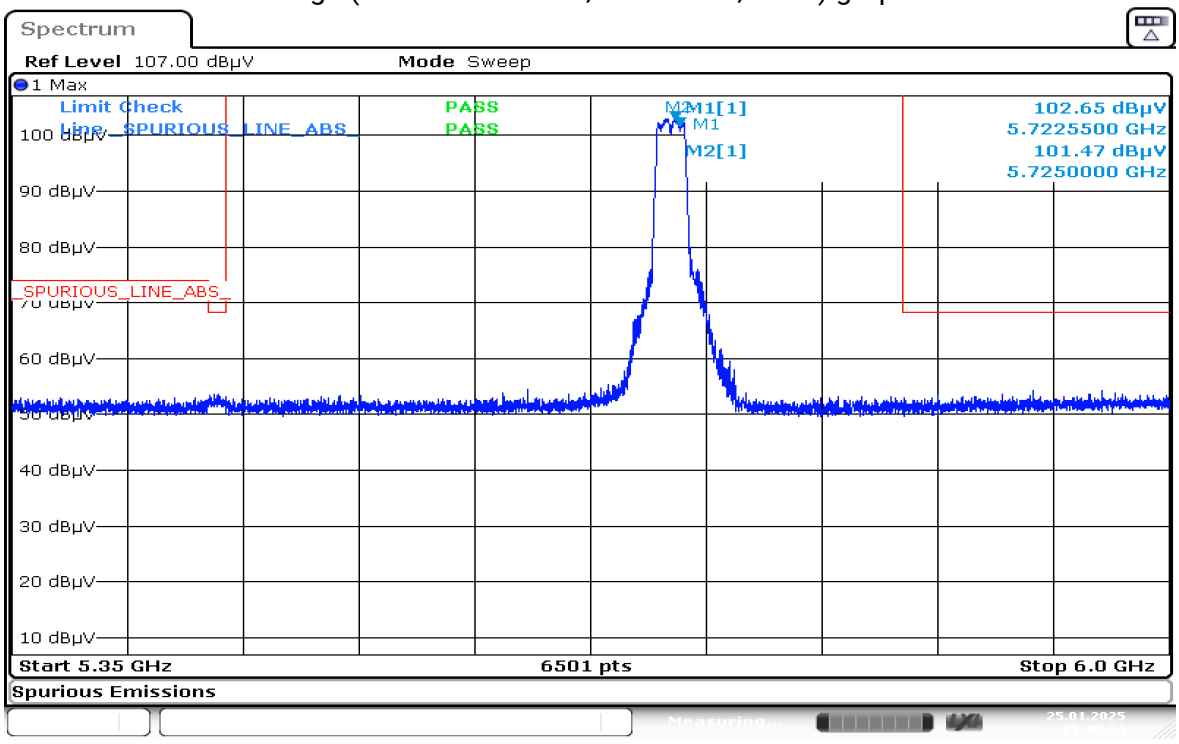
Restricted Band Edge (Straddle Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
Horizontal Radiated Emission Result										

Remarks: Pass Result	Marginal Result	Fail Result

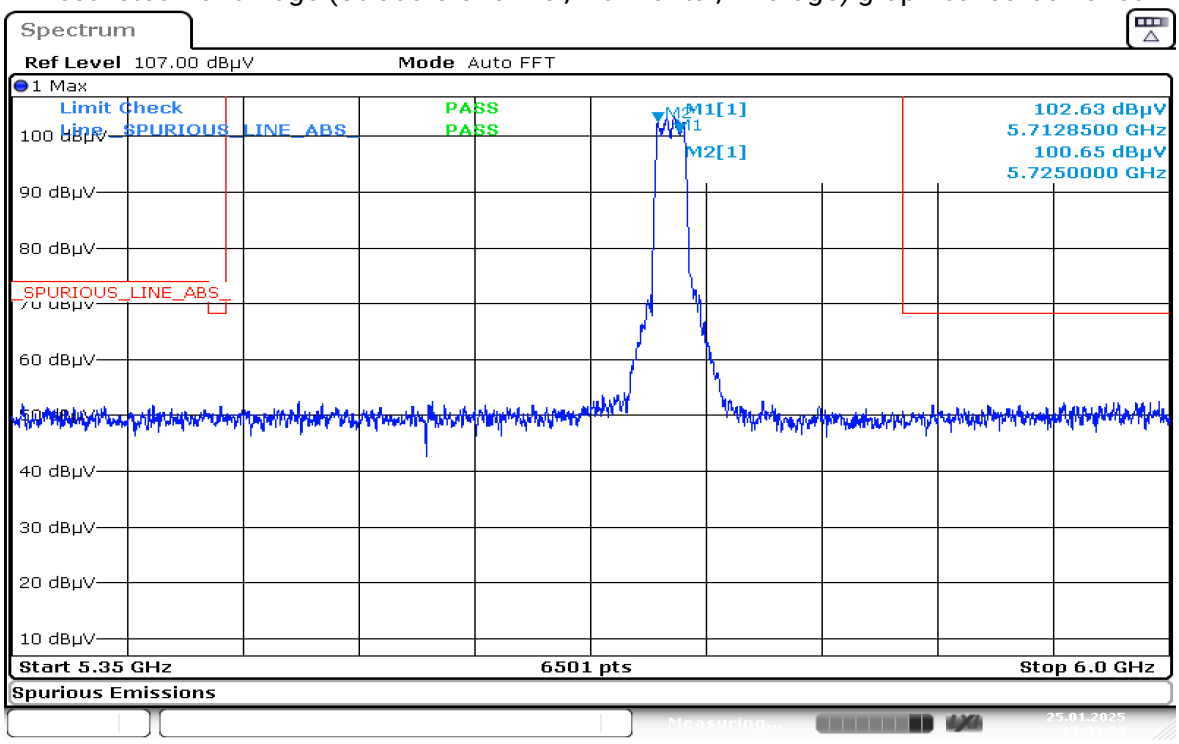
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Straddle Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 15:40:04

Restricted Band Edge (Straddle Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 15:43:59

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5745.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (15)

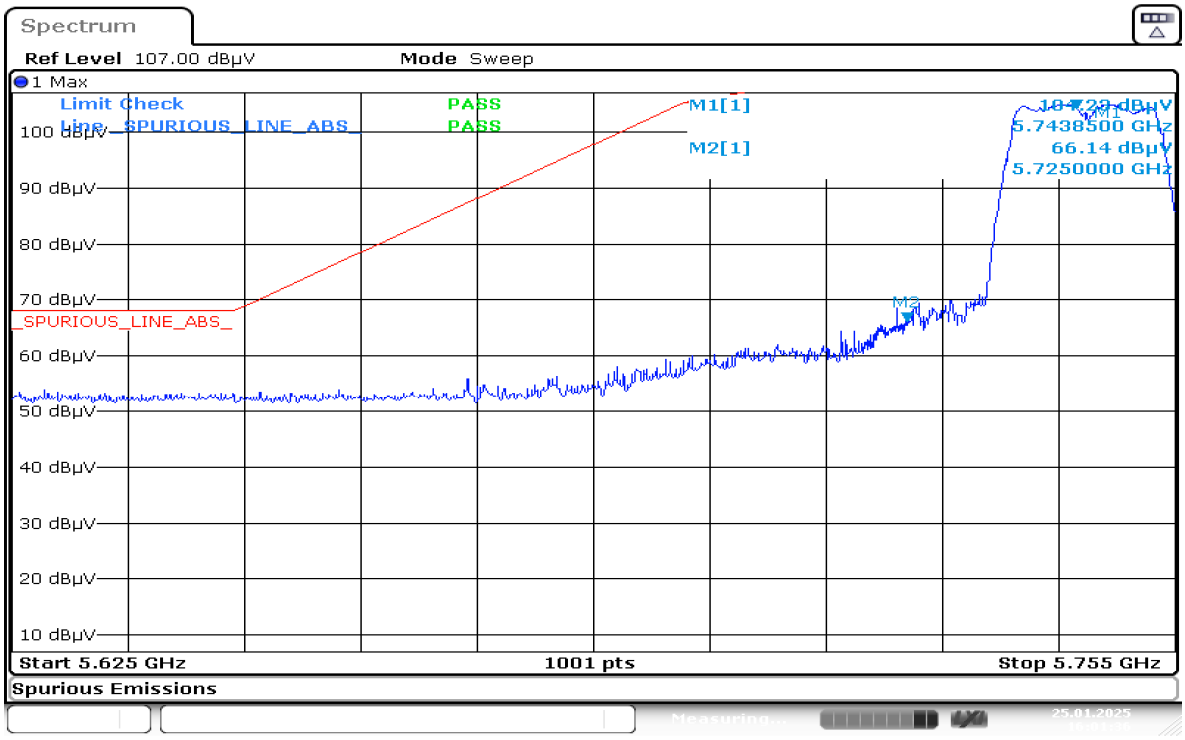
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	-	66.1360	-	-	122.2000	-	-	56.0640	-
Horizontal Radiated Emission Result										
5725.0000	-	-	58.3735	-	-	122.2000	-	-	63.8265	-

Remarks: Pass Result	Marginal Result	Fail Result

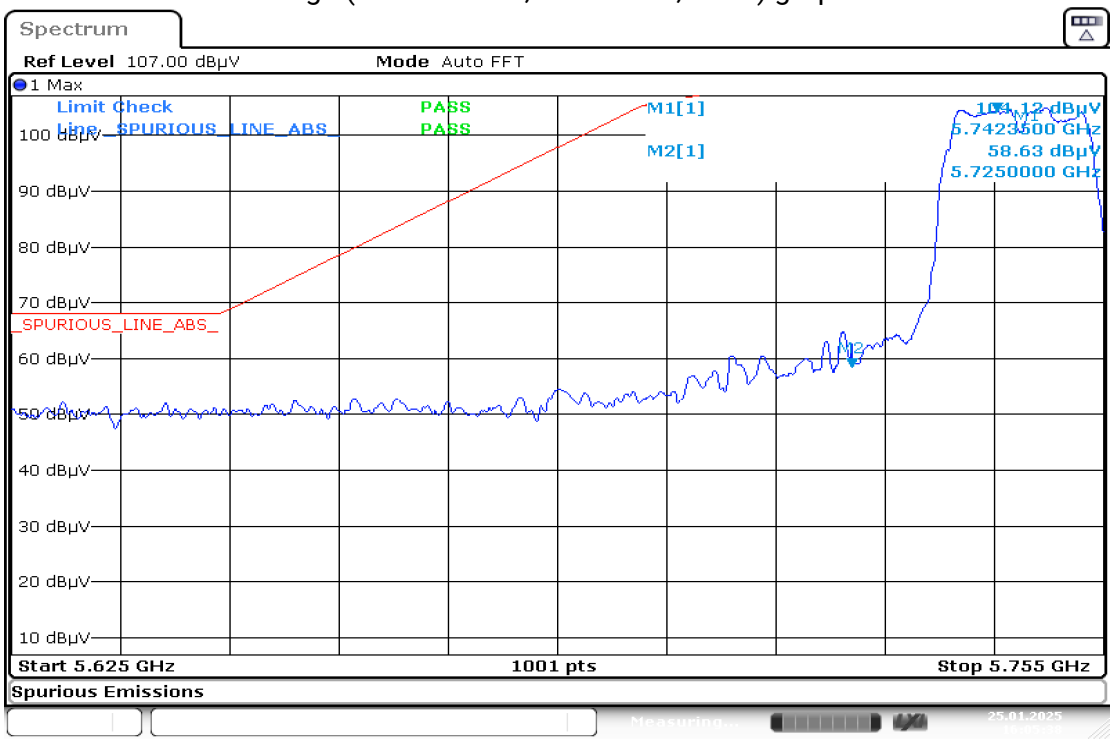
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 16:01:36

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 16:05:38

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5825.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (12)

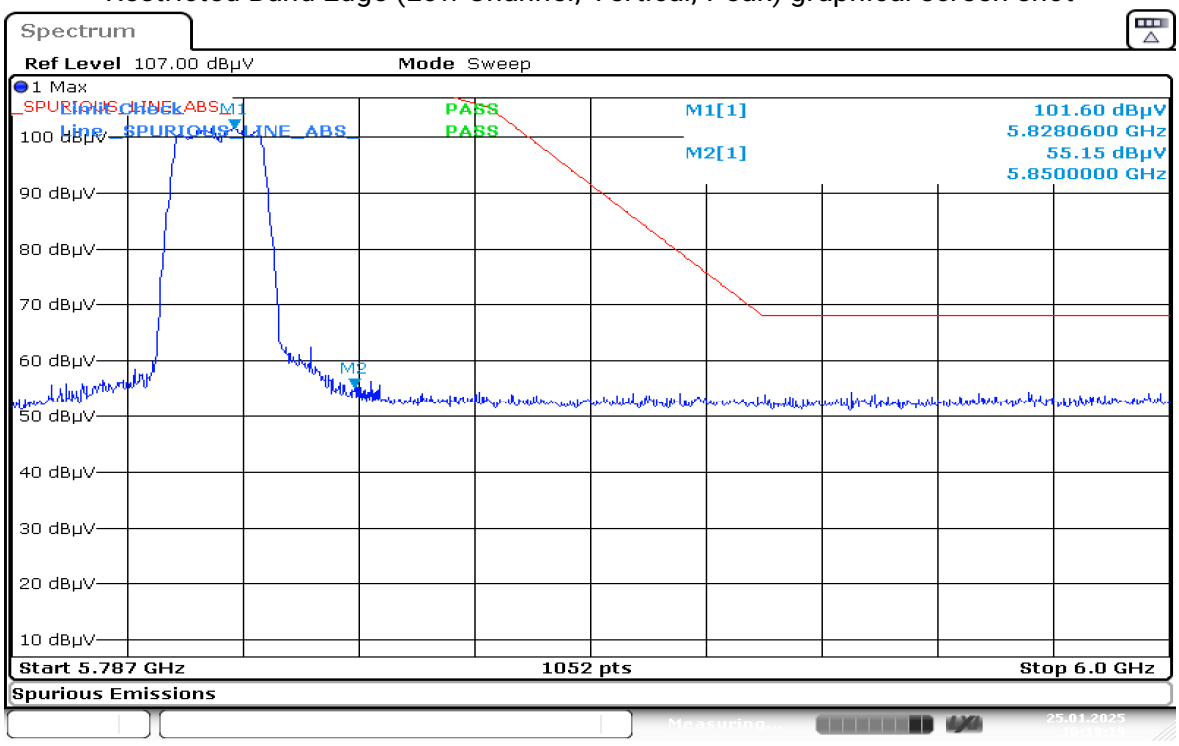
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5850.0000	-	-	54.7528	-	-	122.2000	-	-	67.4472	-
Horizontal Radiated Emission Result										
5850.0000	-	-	51.8210	-	-	122.2000	-	-	70.3790	-

Remarks: Pass Result	Marginal Result	Fail Result

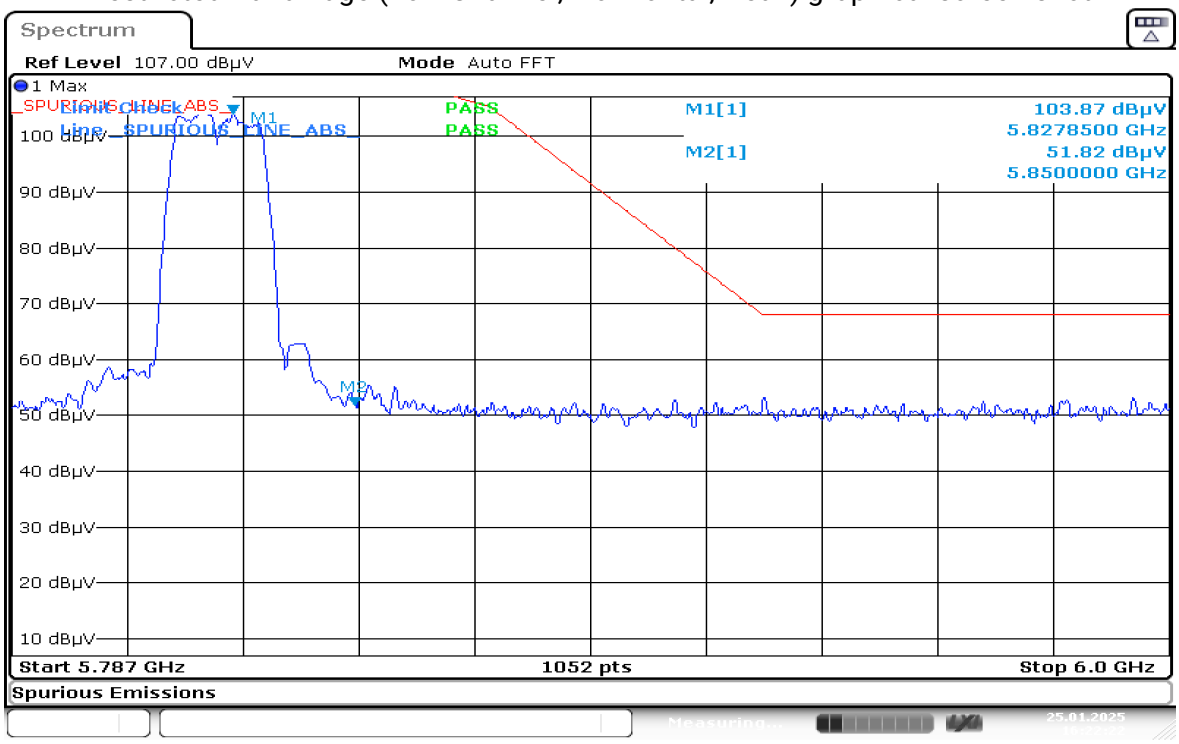
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 16:18:19

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 16:22:22

802.11n (HT20)

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5180.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

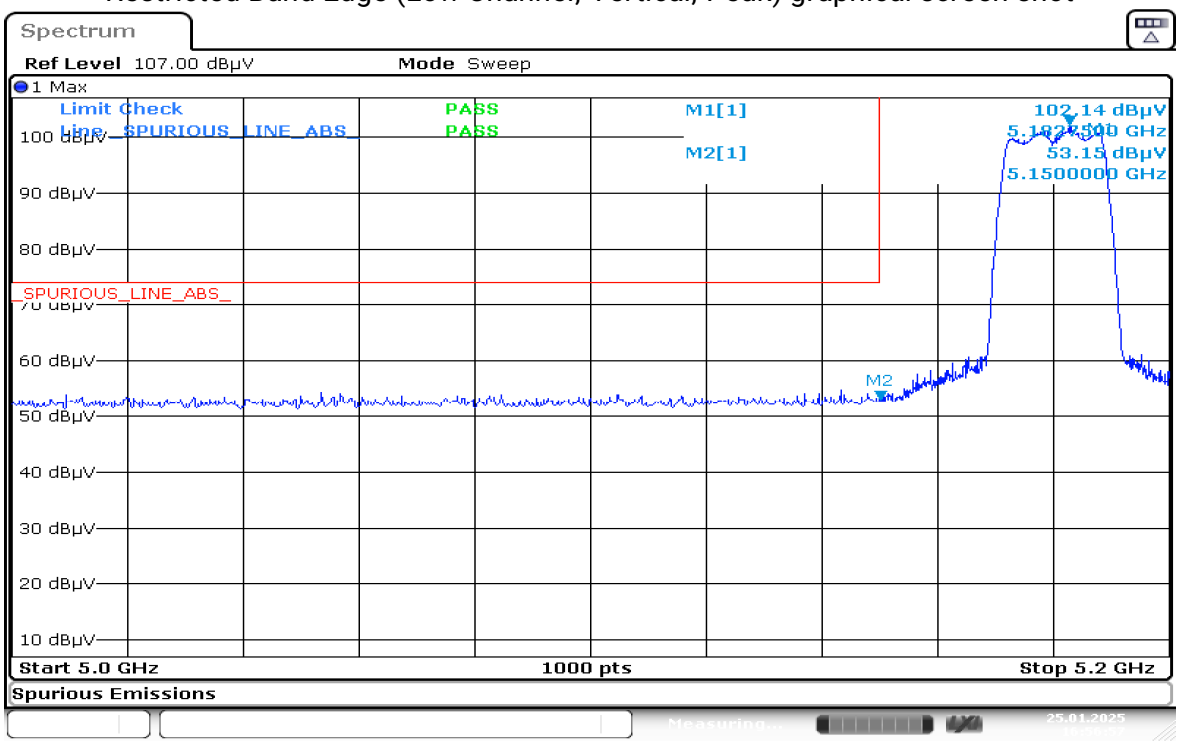
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5150.0000	-	51.9802	43.8206	-	74.0000	54.0000	-	22.0198	10.1794	-
Horizontal Radiated Emission Result										
5150.0000	-	50.9697	41.9968	-	74.0000	54.0000	-	23.0303	12.0032	-

Remarks: Pass Result	Marginal Result	Fail Result

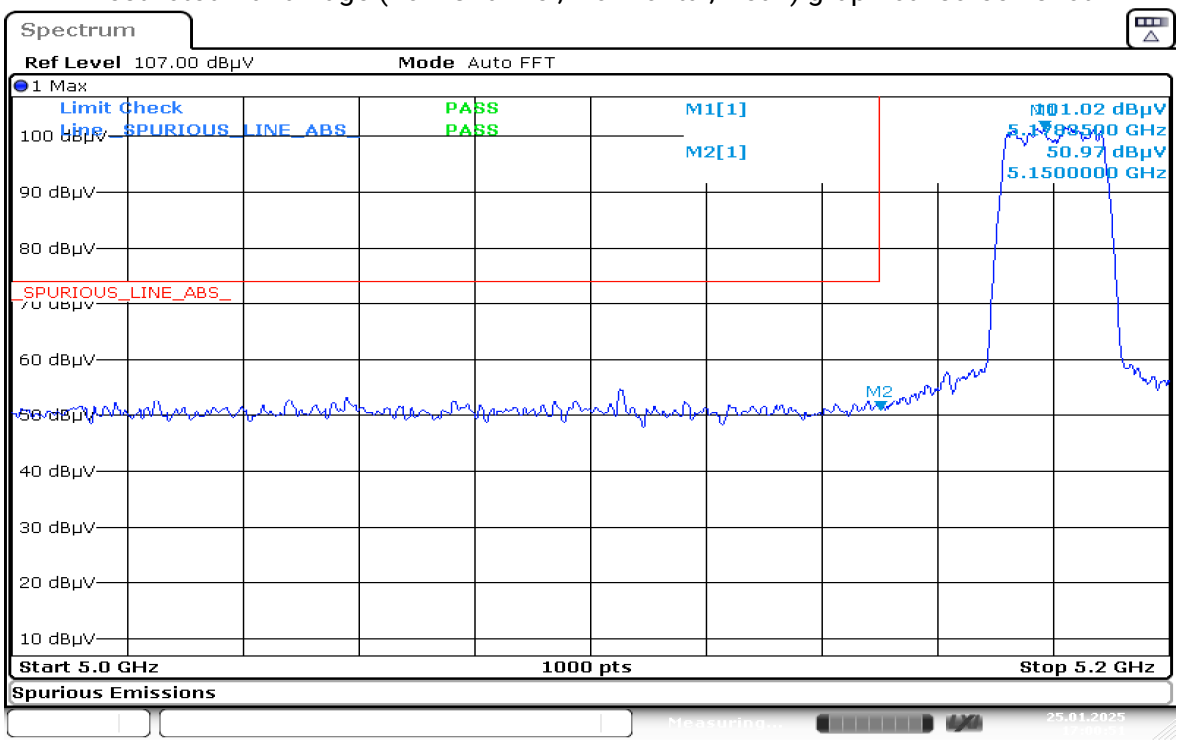
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



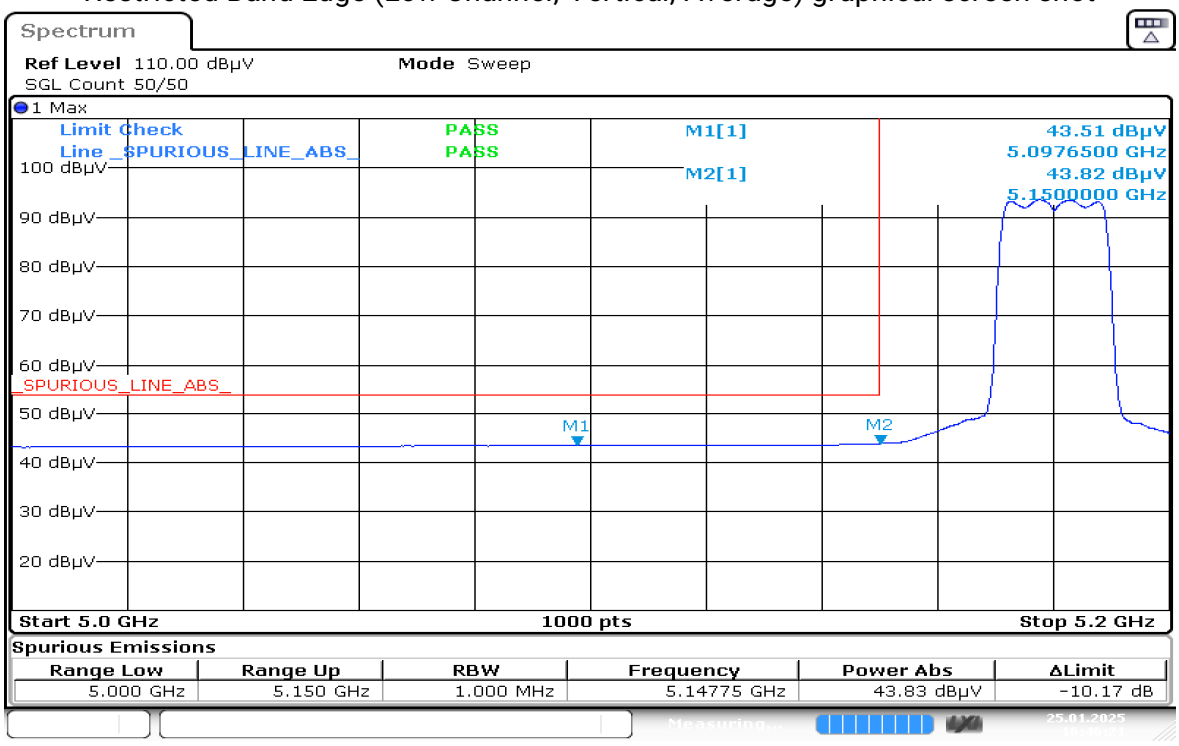
Date: 25.JAN.2025 16:56:57

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



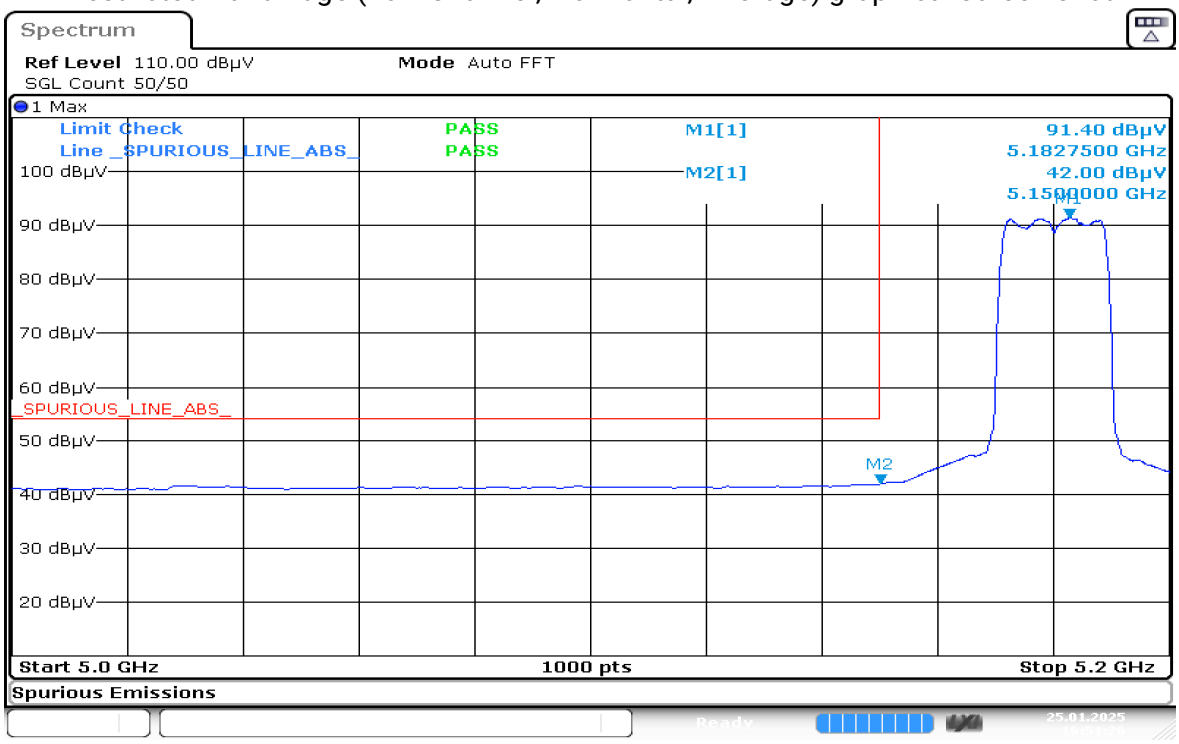
Date: 25.JAN.2025 17:00:51

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 25.JAN.2025 16:46:21

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 16:51:27

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5320.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

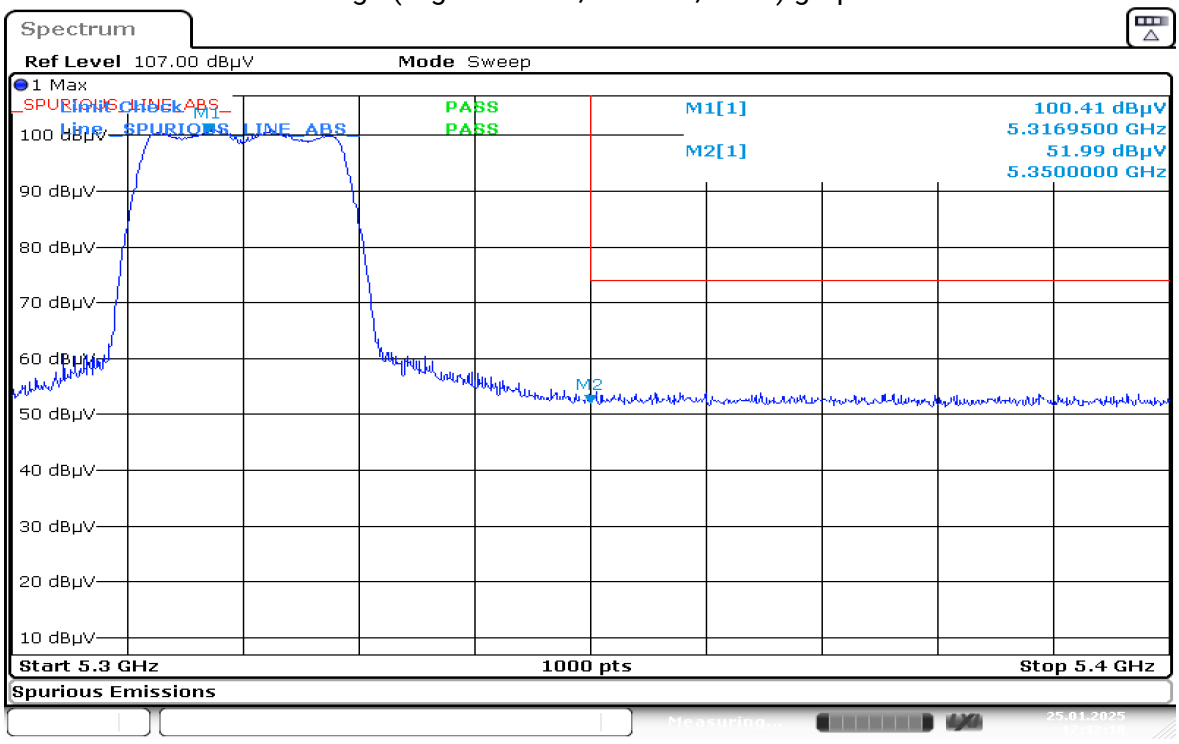
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5350.0000	-	51.8823	43.1089	-	74.0000	54.0000	-	22.1177	10.8911	-
Horizontal Radiated Emission Result										
5350.0000	-	49.7179	41.3732	-	74.0000	54.0000	-	24.2821	12.6268	-

Remarks: Pass Result	Marginal Result	Fail Result

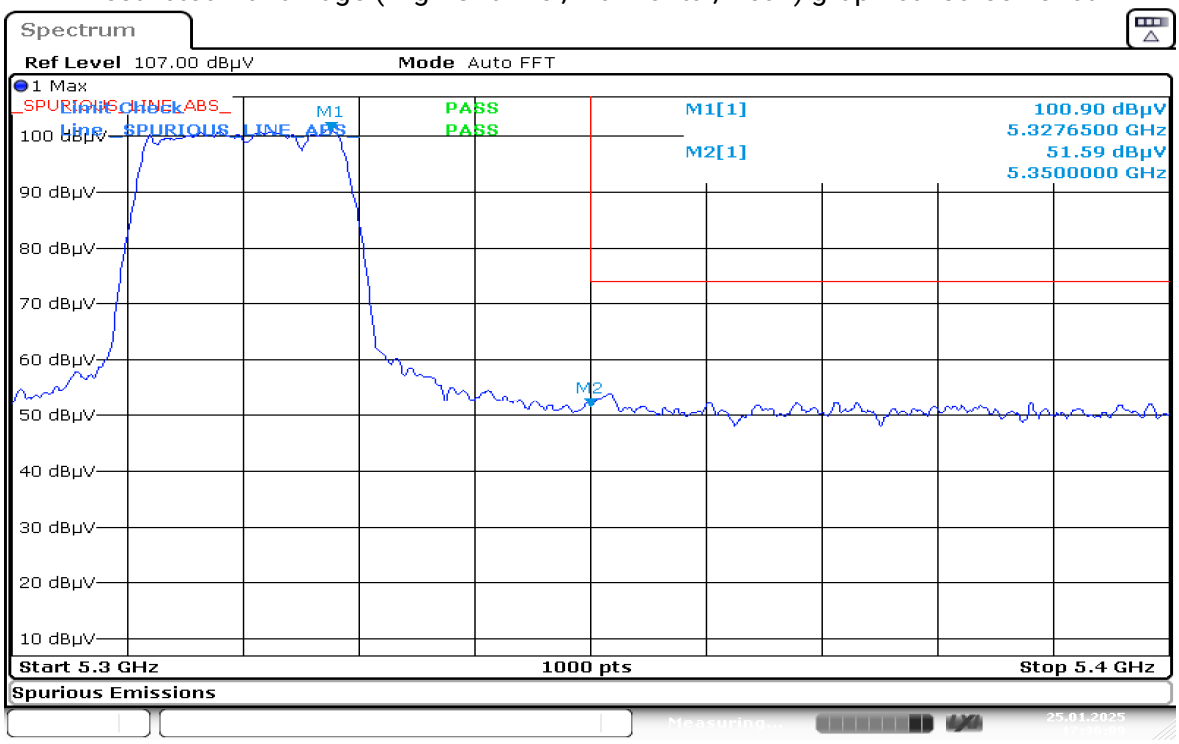
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sat, 25 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



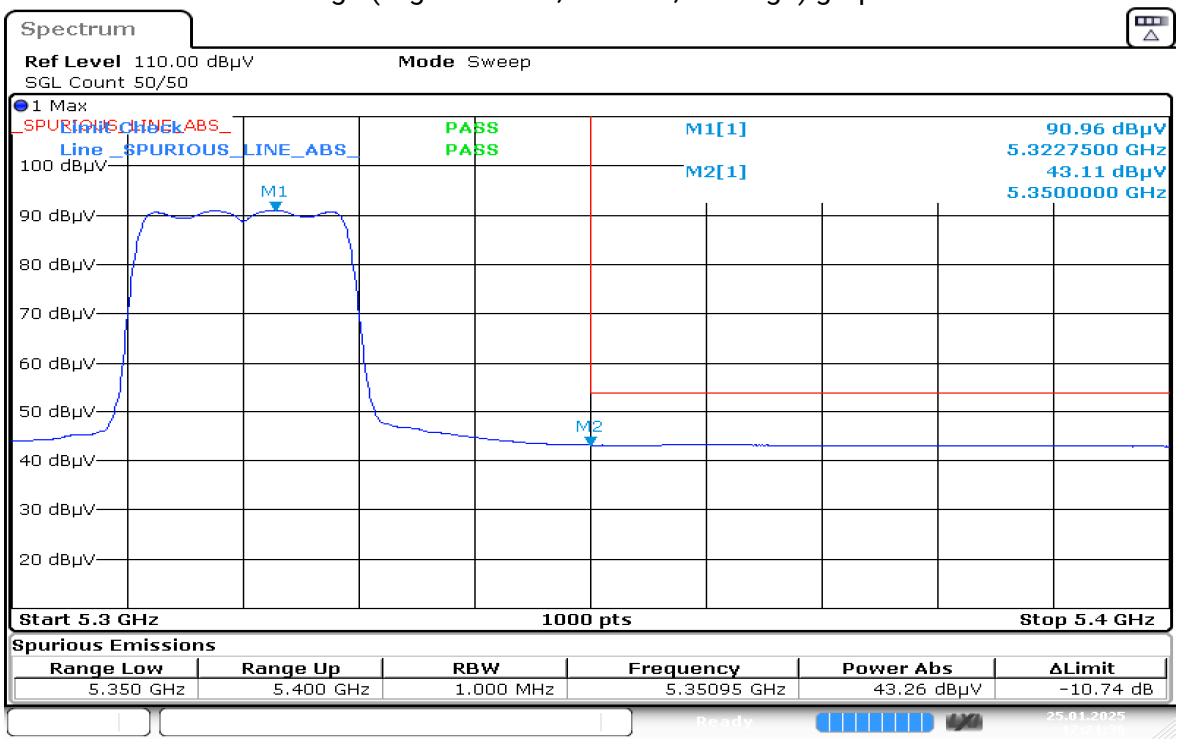
Date: 25.JAN.2025 17:32:18

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



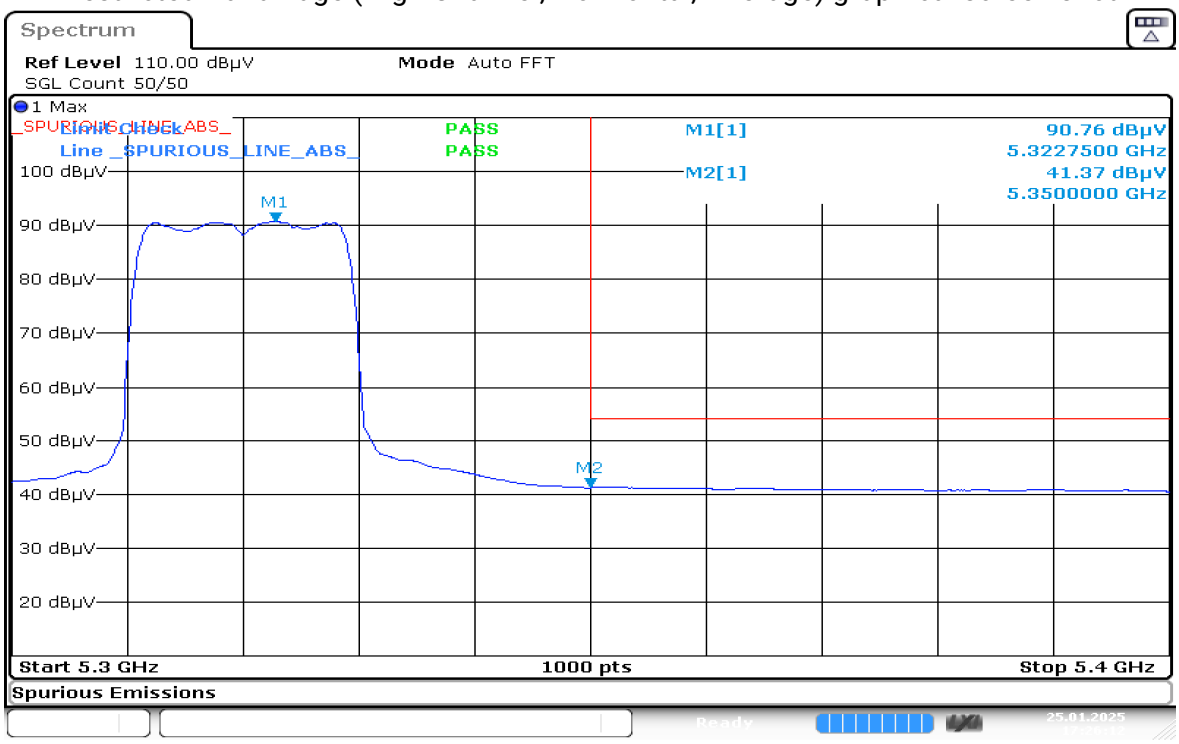
Date: 25.JAN.2025 17:36:09

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



Date: 25.JAN.2025 17:21:37

Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 17:26:13

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5500.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

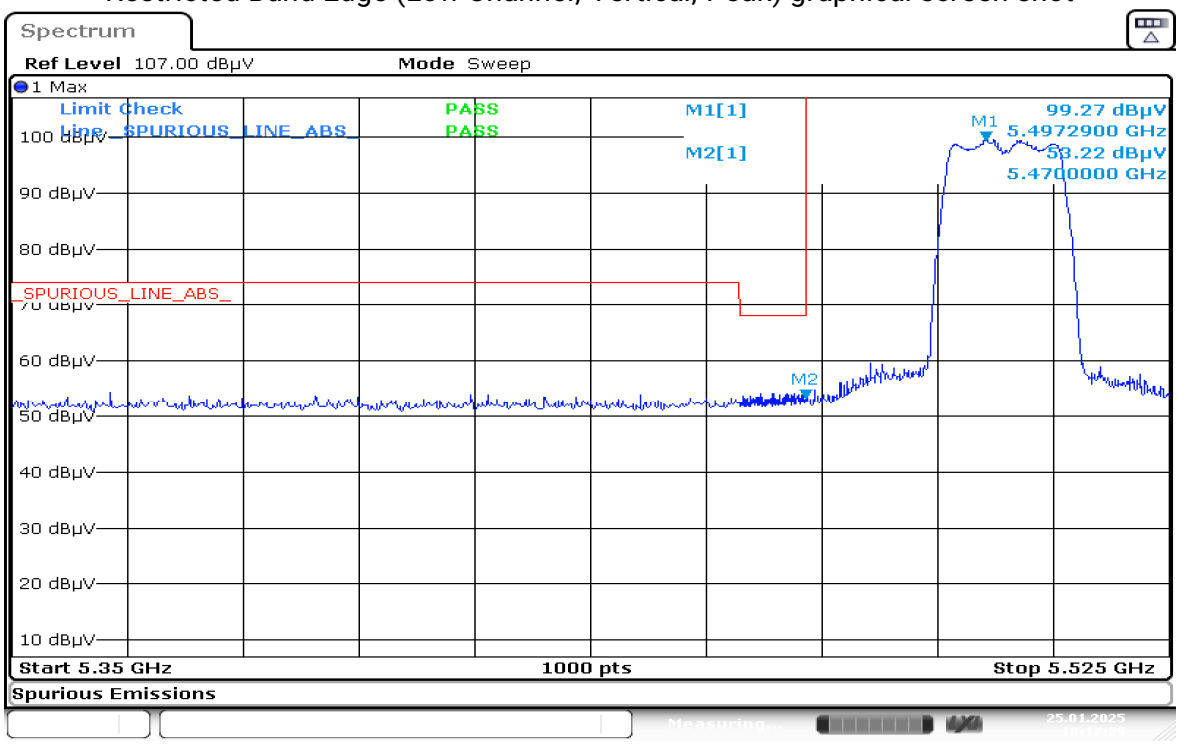
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5460.0000	-	-	43.0236	-	-	54.0000	-	-	10.9764	-
5470.0000	-	52.5480	-	-	68.2000	-	-	15.6520	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	41.1751	-	-	54.0000	-	-	12.8249	-
5470.0000	-	53.5426	-	-	68.2000	-	-	14.6574	-	-

Remarks: Pass Result	Marginal Result	Fail Result

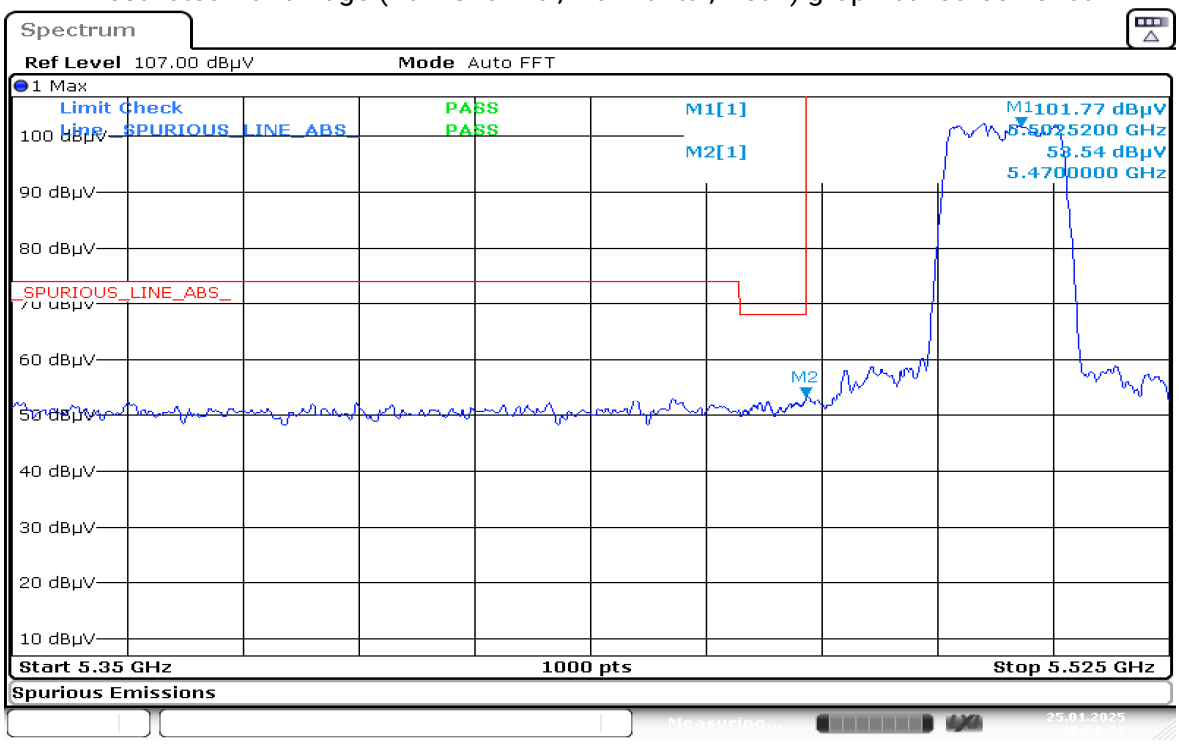
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



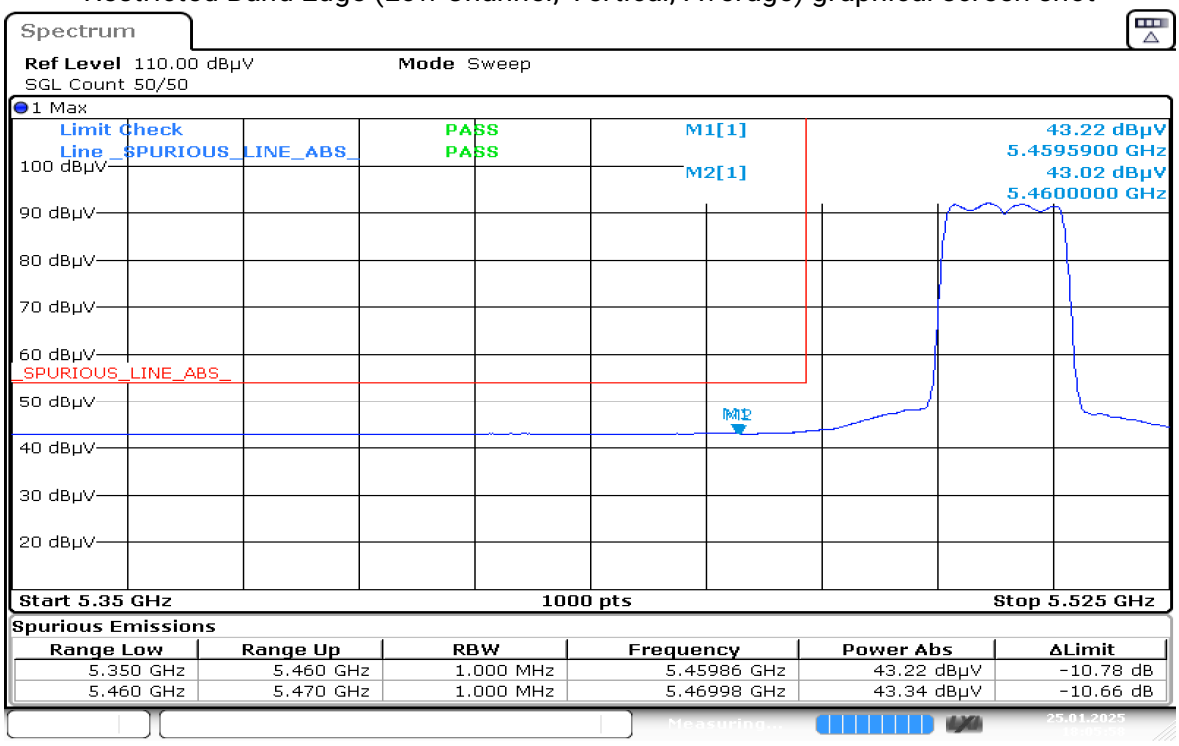
Date: 25.JAN.2025 18:17:29

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



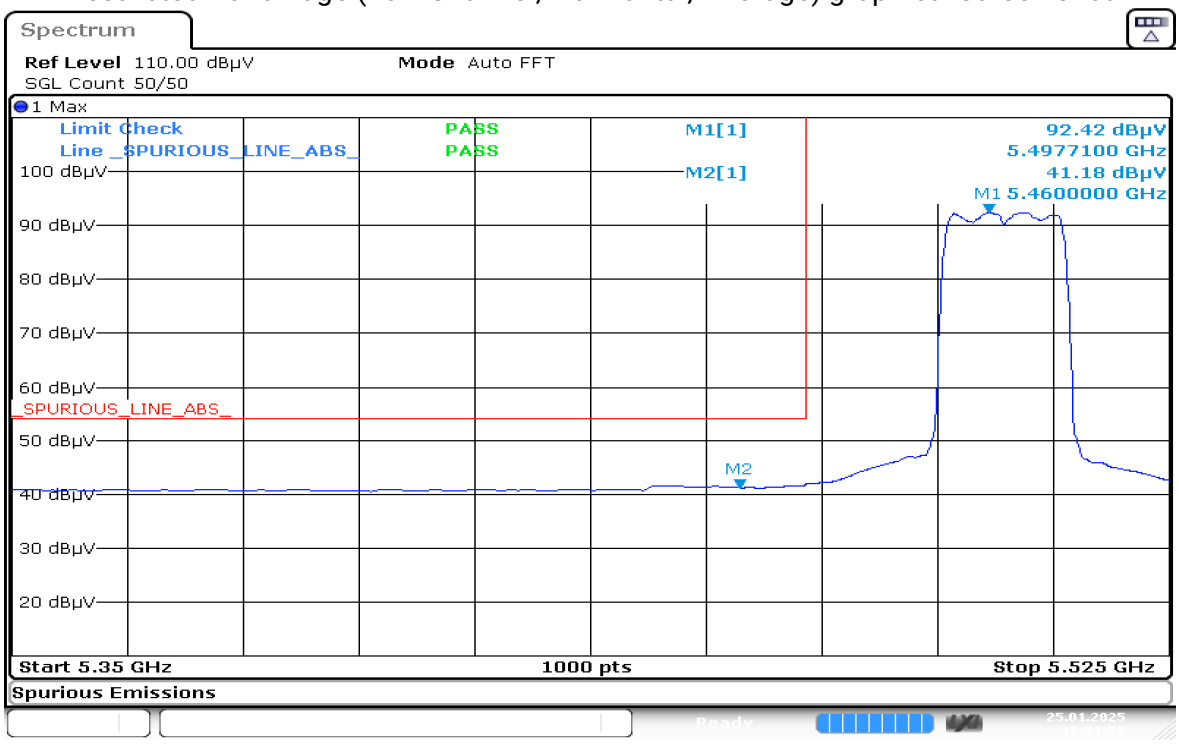
Date: 25.JAN.2025 18:21:53

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 25.JAN.2025 18:05:58

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 18:11:56

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5700.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (9)

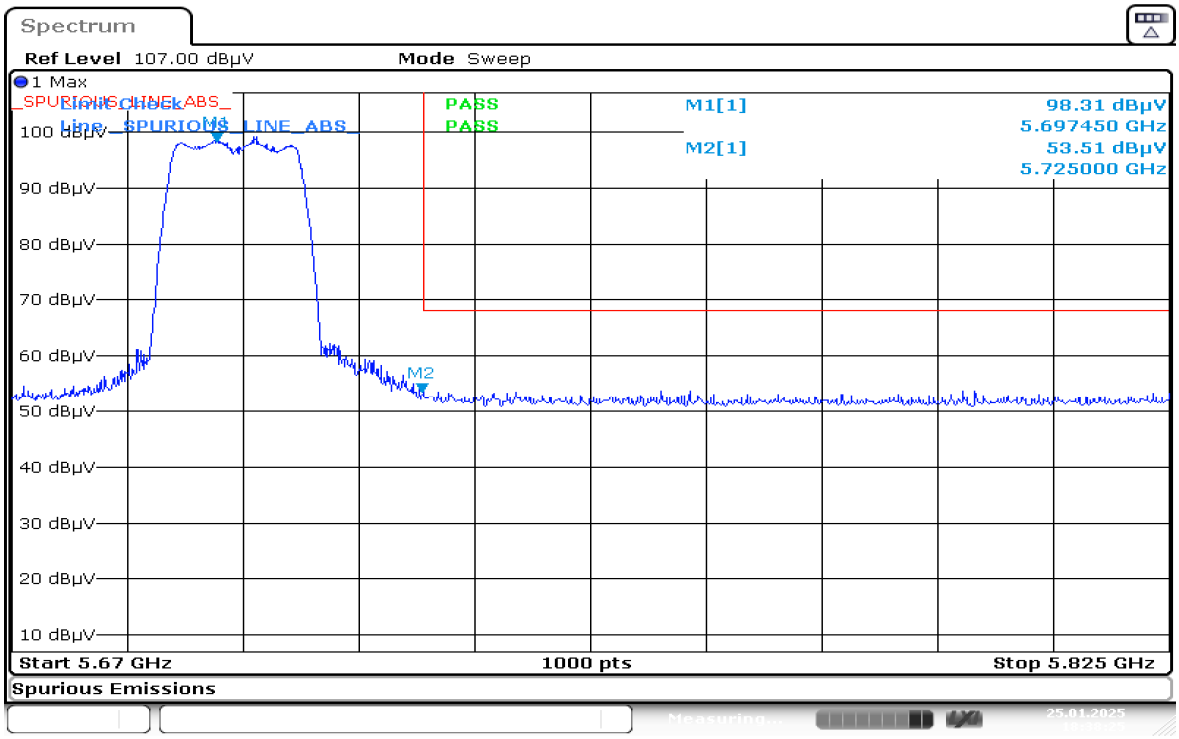
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	53.5141	-	-	68.2000	-	-	14.6859	-	-
Horizontal Radiated Emission Result										
5725.0000	-	51.8325	-	-	68.2000	-	-	16.3675	-	-

Remarks: Pass Result	Marginal Result	Fail Result

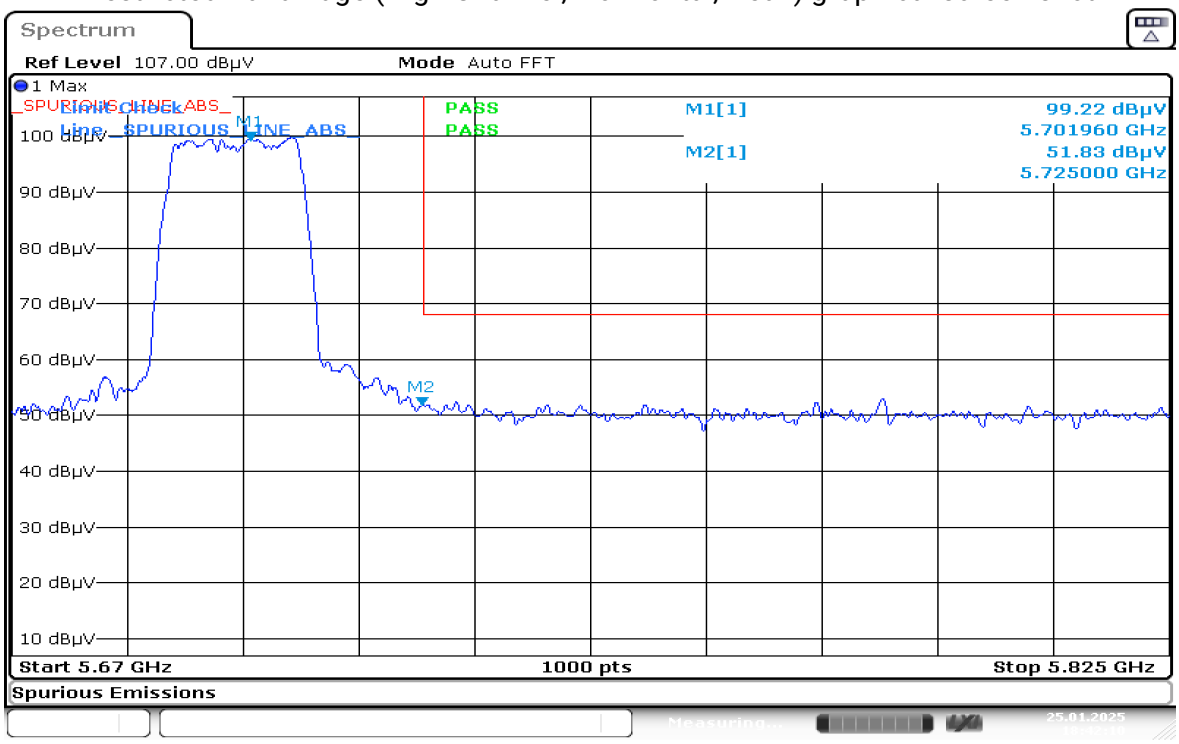
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 18:38:25

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 18:42:10

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Straddle	Test Frequency: 5720.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (14)

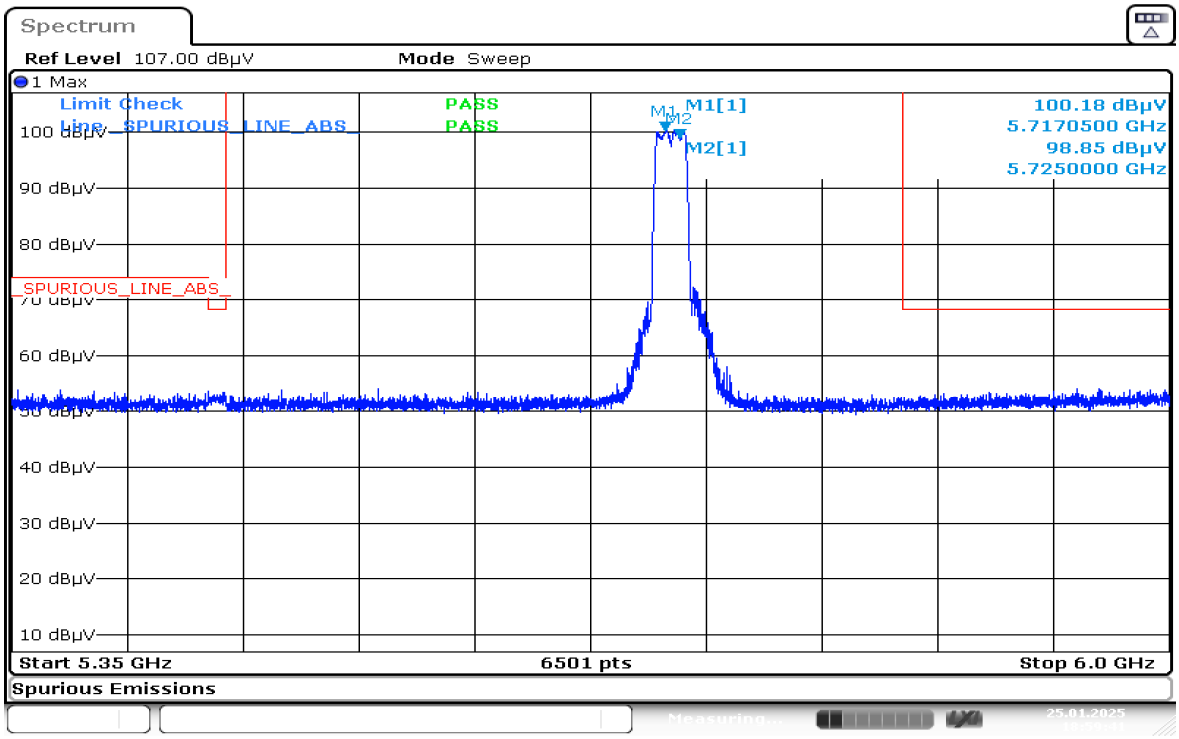
Restricted Band Edge (Straddle Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
Horizontal Radiated Emission Result										

Remarks: Pass Result	Marginal Result	Fail Result

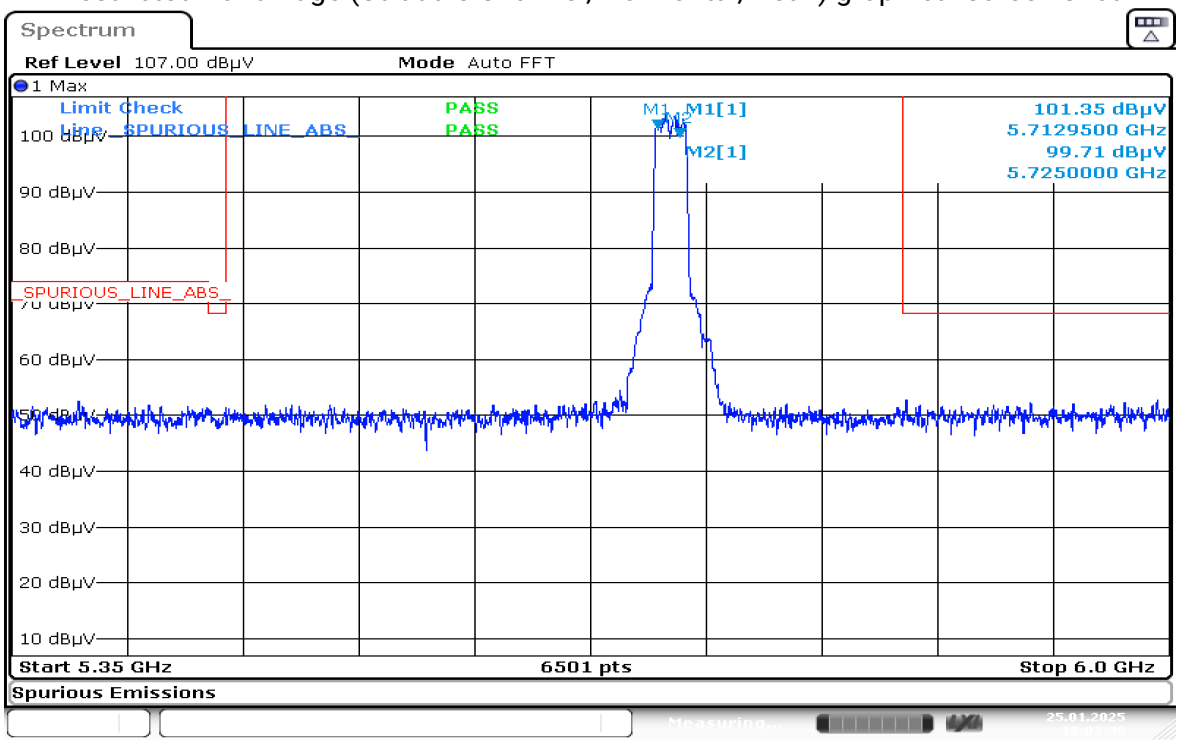
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Straddle Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 18:59:41

Restricted Band Edge (Straddle Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 19:03:48

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5745.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (12)

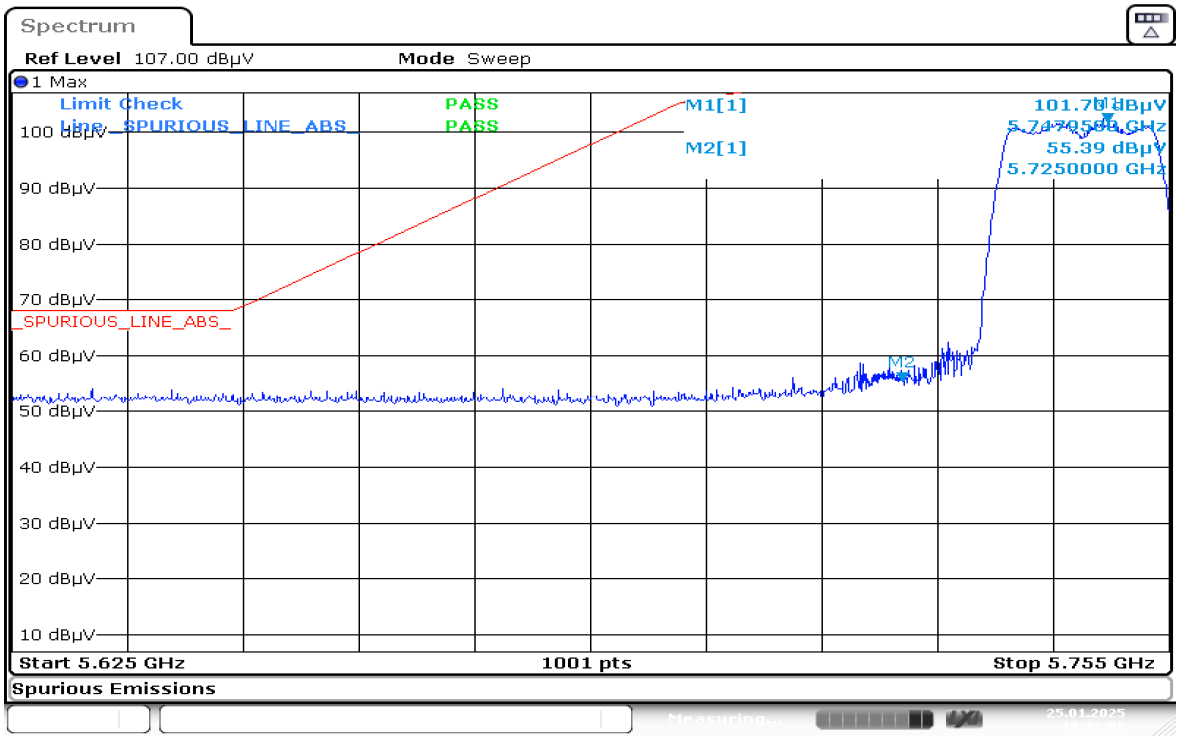
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	-	55.1060	-	-	122.2000	-	-	67.0940	-
Horizontal Radiated Emission Result										
5725.0000	-	-	61.5916	-	-	122.2000	-	-	60.6084	-

Remarks: Pass Result	Marginal Result	Fail Result

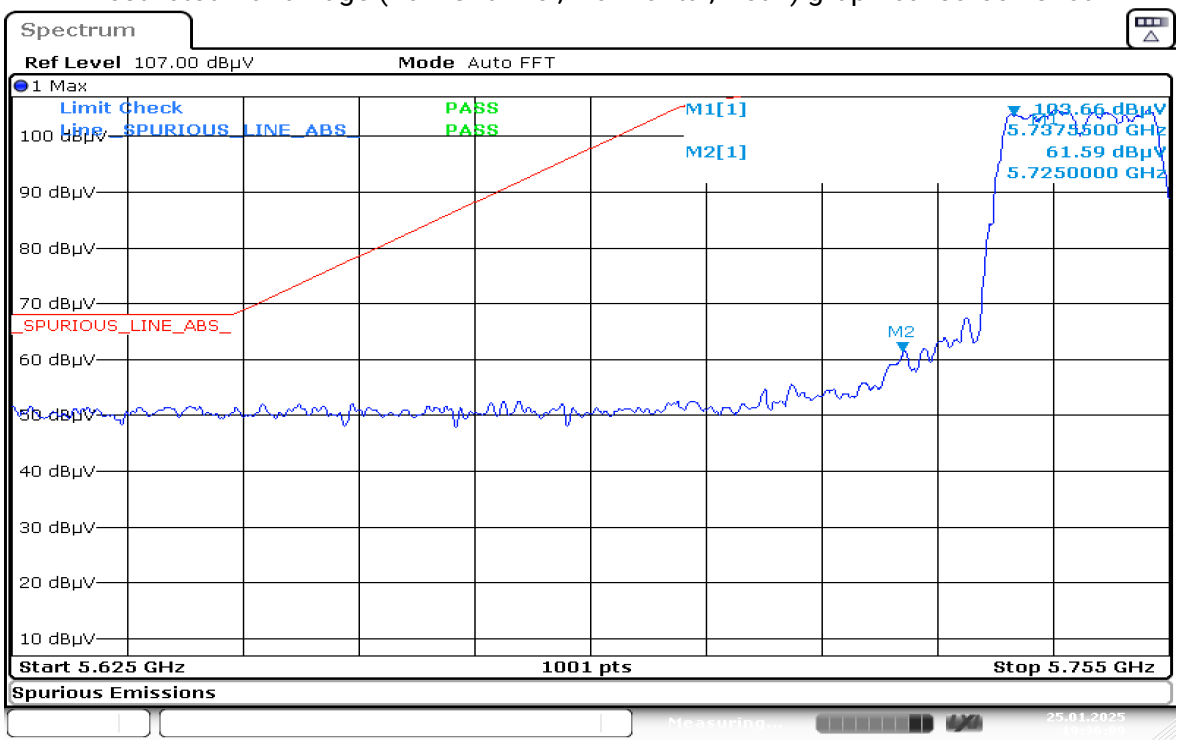
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 19:32:07

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 19:36:09

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5825.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (9)

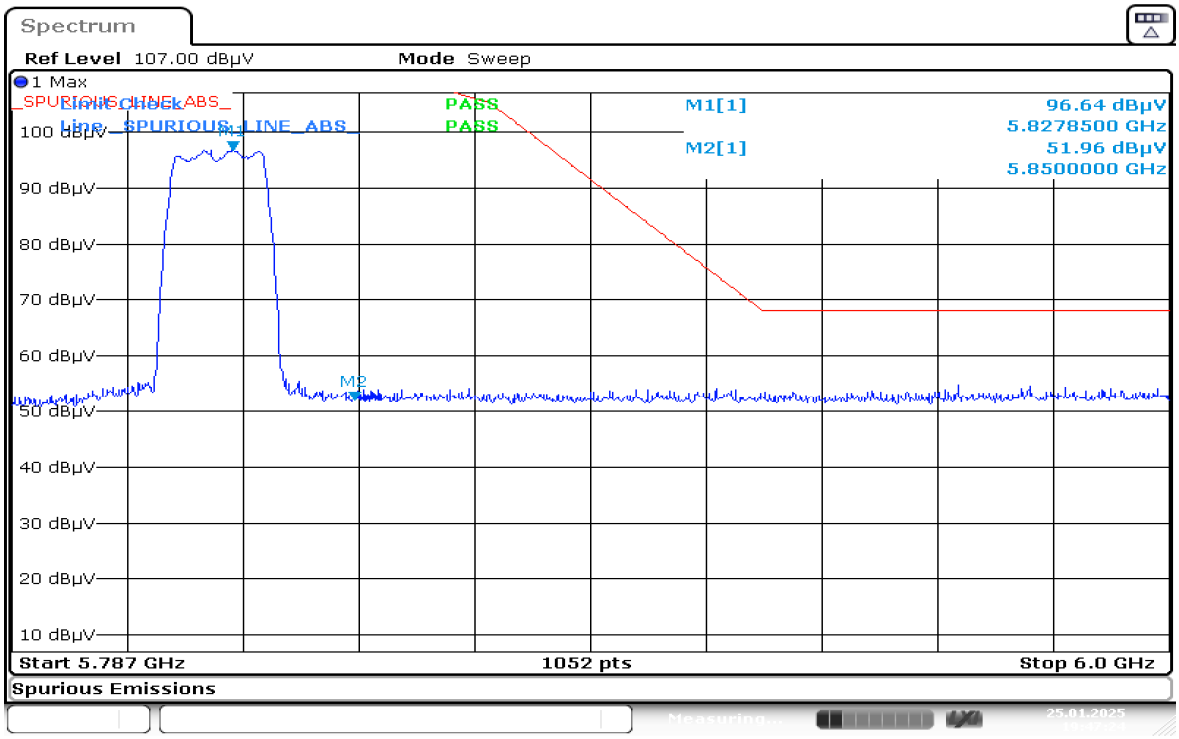
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5850.0000	-	-	51.8639	-	-	122.2000	-	-	70.3361	-
Horizontal Radiated Emission Result										
5850.0000	-	-	49.4616	-	-	122.2000	-	-	72.7384	-

Remarks: Pass Result	Marginal Result	Fail Result

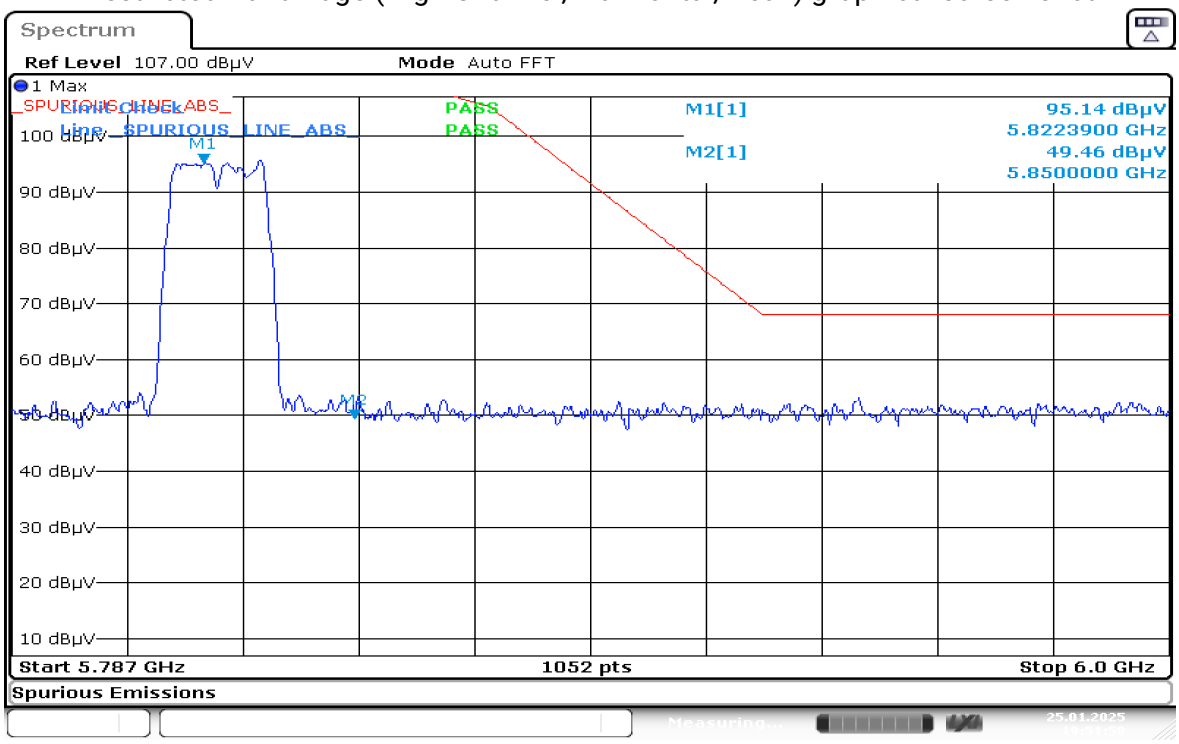
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 25.JAN.2025 19:47:24

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 25.JAN.2025 19:51:58

802.11n (HT40)

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5190.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (10)

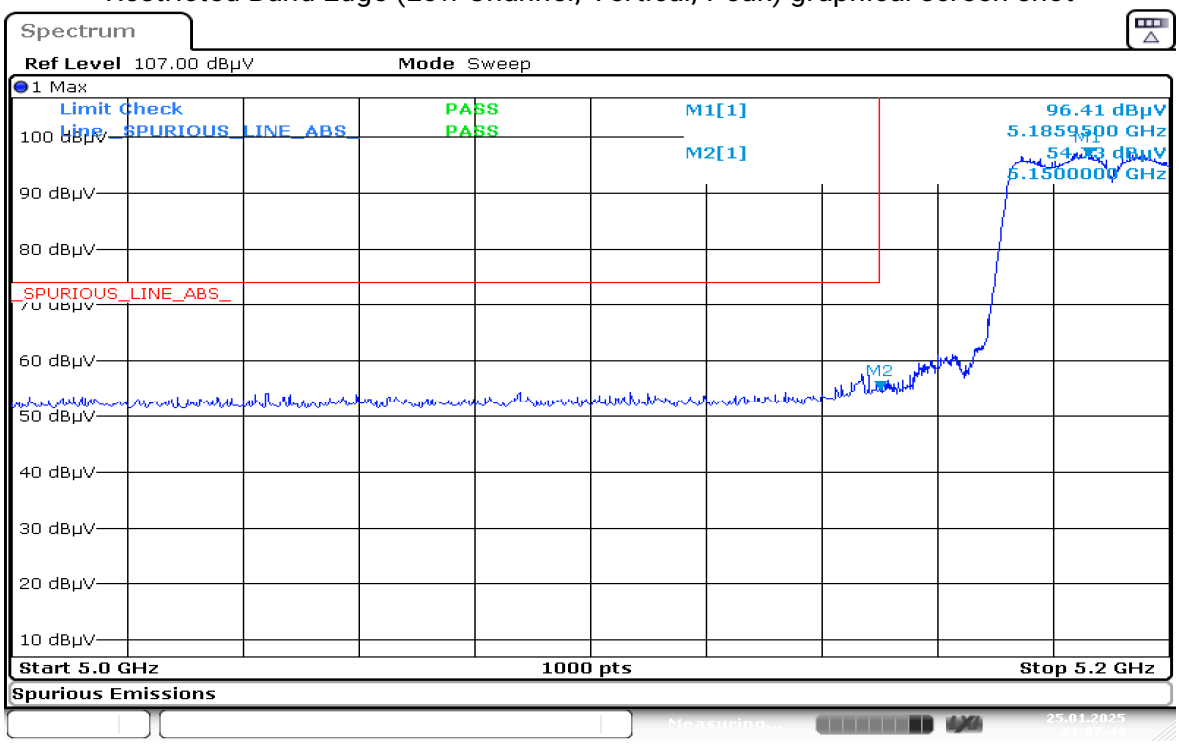
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5150.0000	-	54.7321	45.3574	-	74.0000	54.0000	-	19.2679	8.6426	-
Horizontal Radiated Emission Result										
5150.0000	-	53.8165	43.2702	-	74.0000	54.0000	-	20.1835	10.7298	-

Remarks: Pass Result	Marginal Result	Fail Result

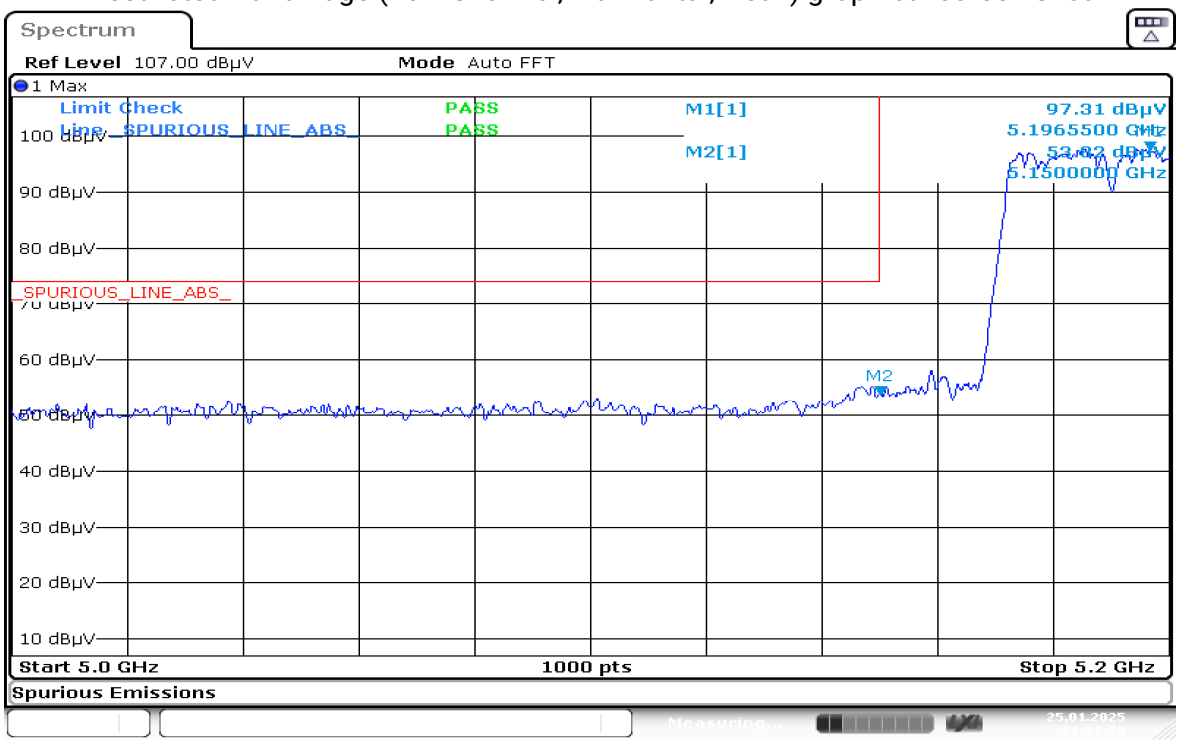
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



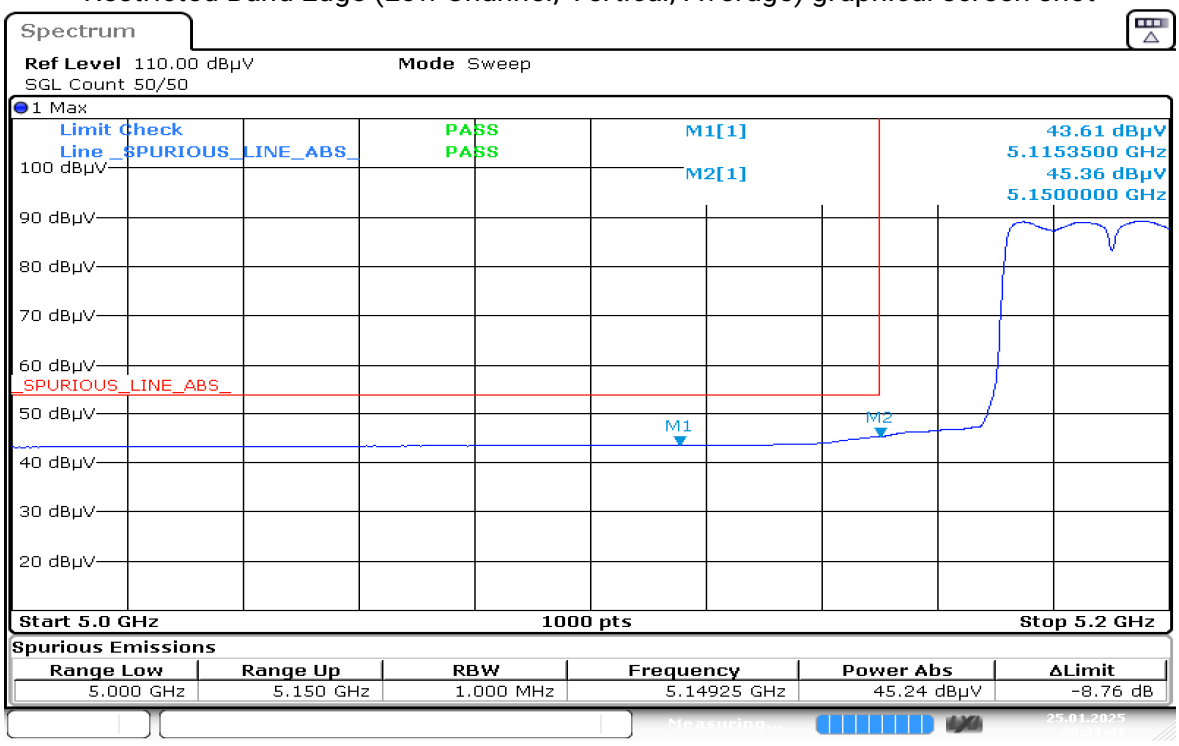
Date: 25.JAN.2025 21:07:45

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



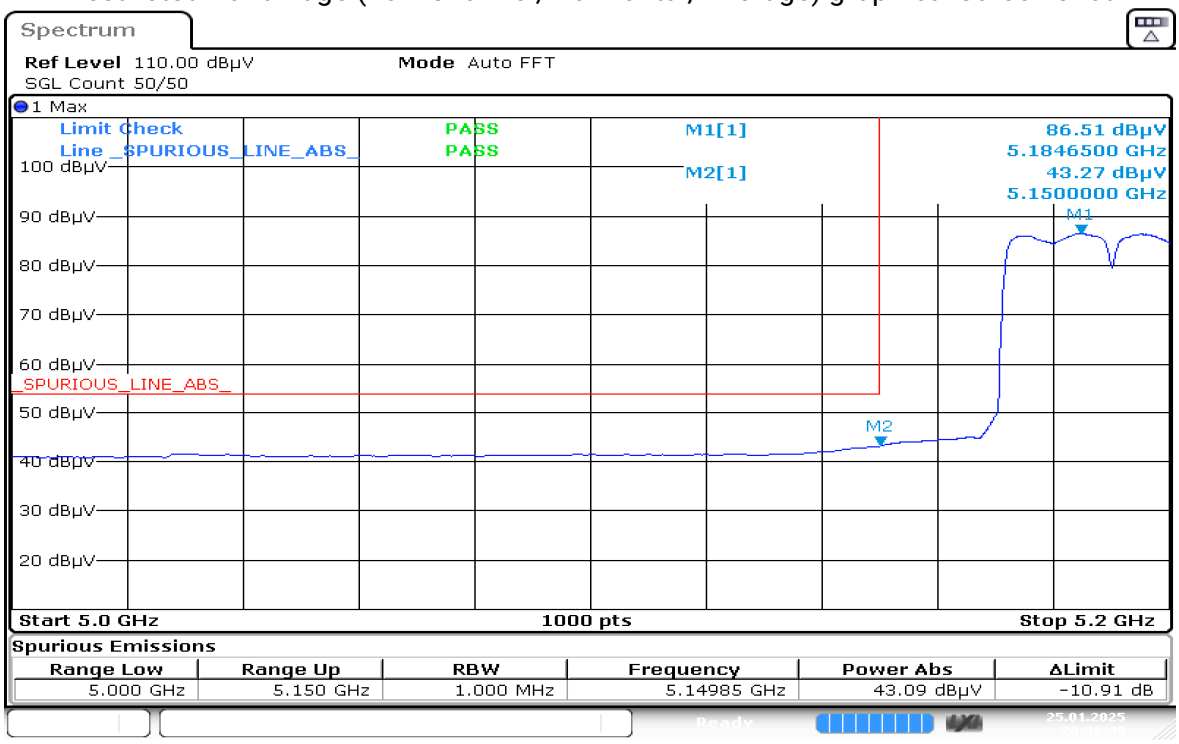
Date: 25.JAN.2025 21:11:29

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 25.JAN.2025 20:31:41

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 25.JAN.2025 20:36:49

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5310.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (11)

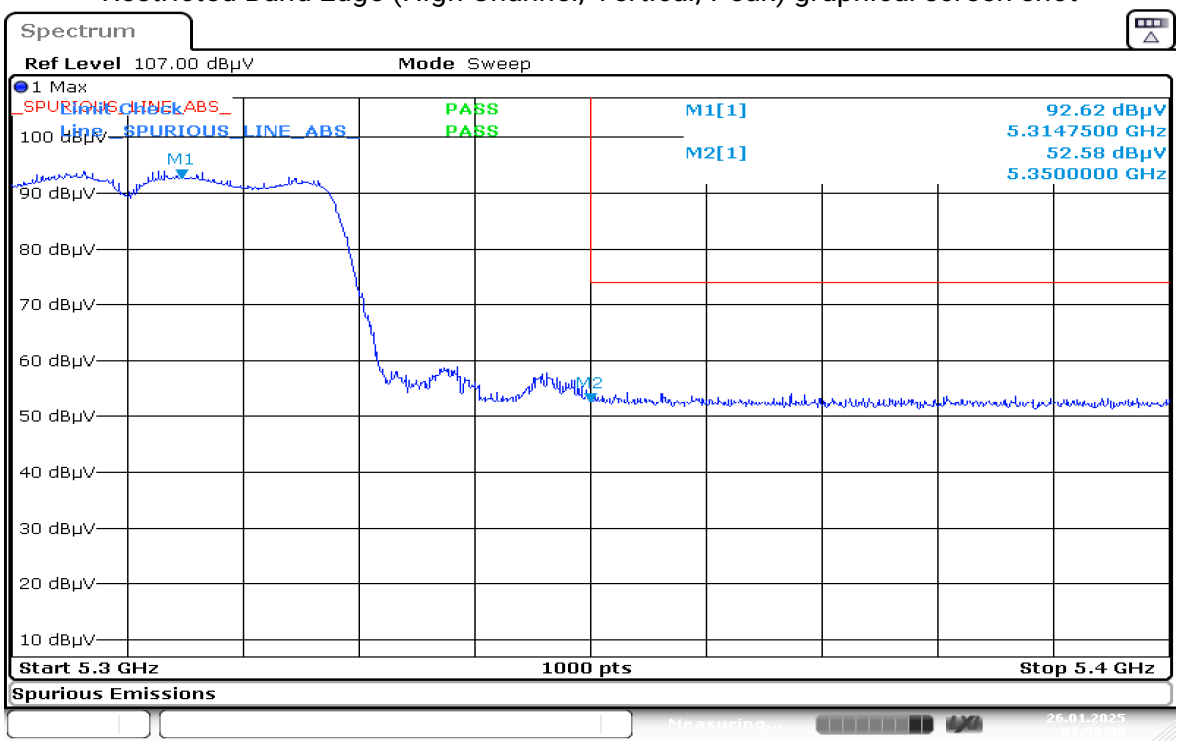
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5350.0000	-	52.4595	44.3228	-	74.0000	54.0000	-	21.5405	9.6772	-
Horizontal Radiated Emission Result										
5350.0000	-	54.7008	43.2232	-	74.0000	54.0000	-	19.2992	10.7768	-

Remarks: Pass Result	Marginal Result	Fail Result

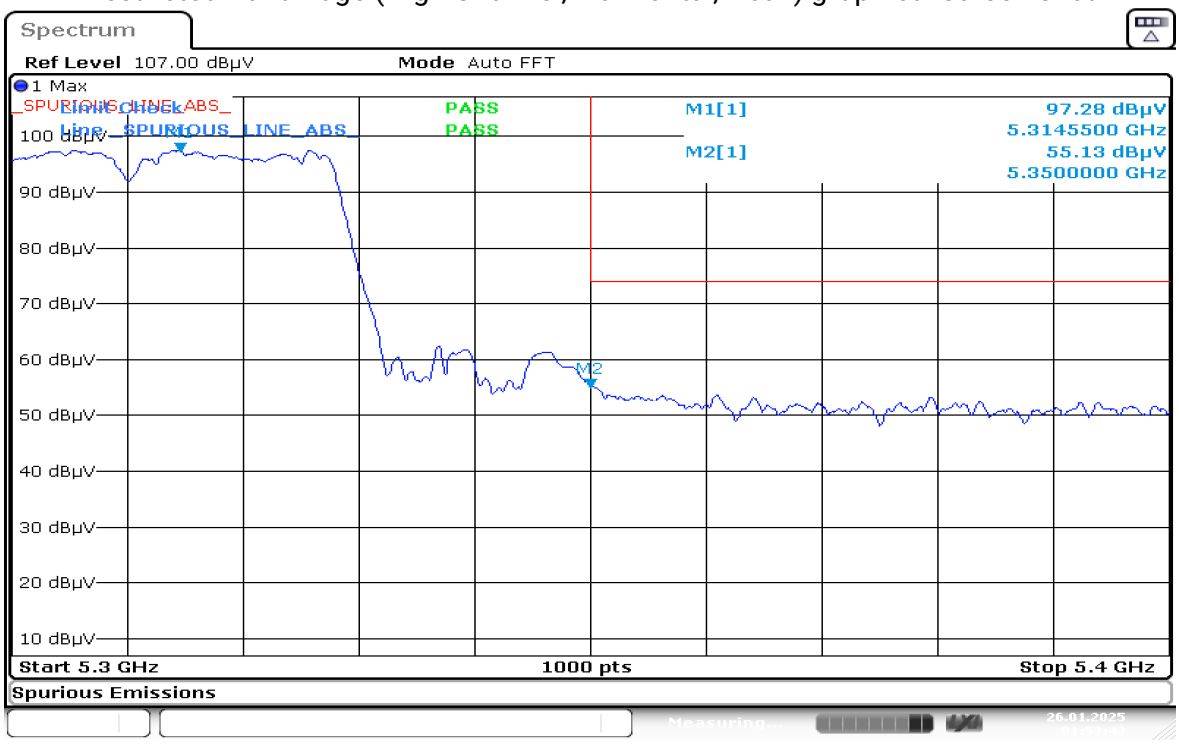
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Sun, 26 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



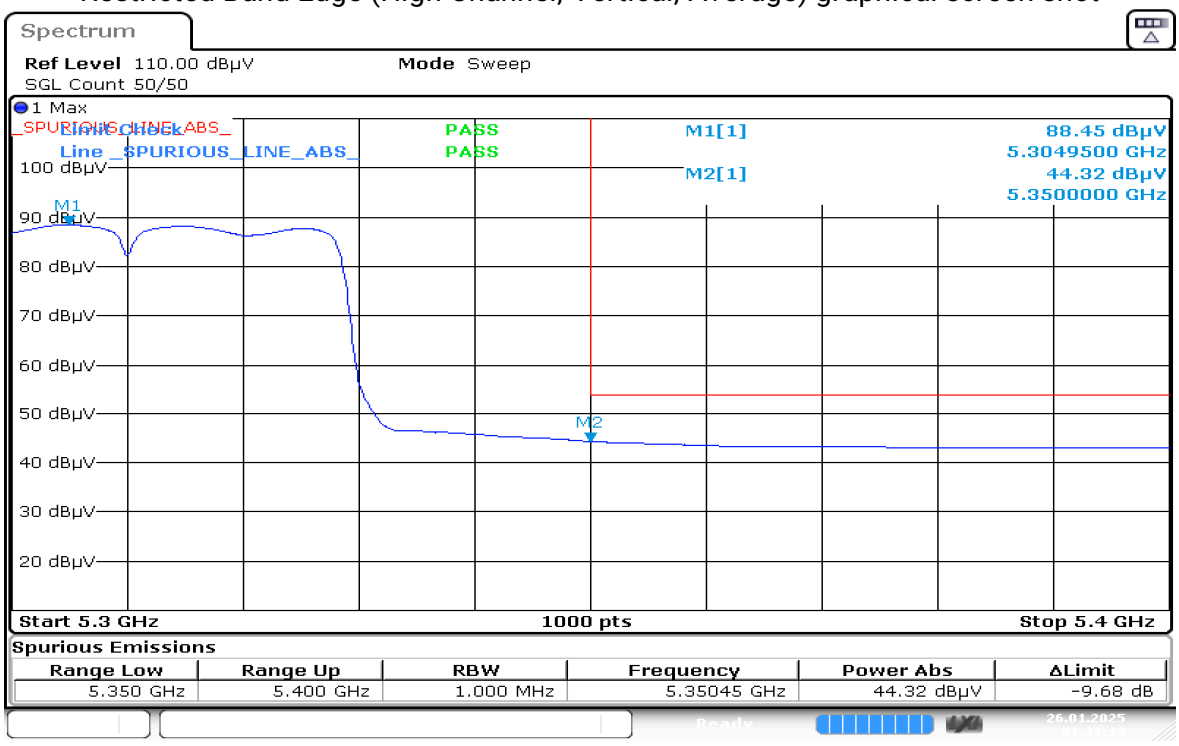
Date: 26.JAN.2025 01:50:01

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



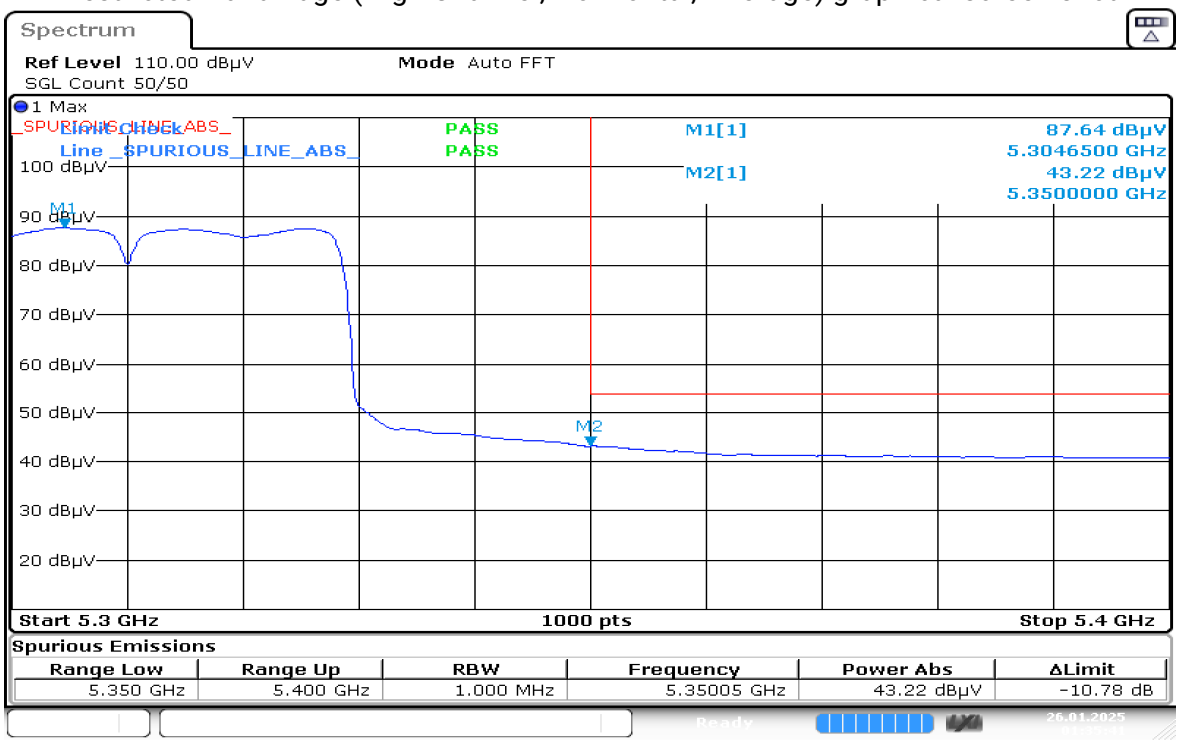
Date: 26.JAN.2025 01:53:44

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



Date: 26.JAN.2025 01:31:14

Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



Date: 26.JAN.2025 01:35:42

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5510.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (10)

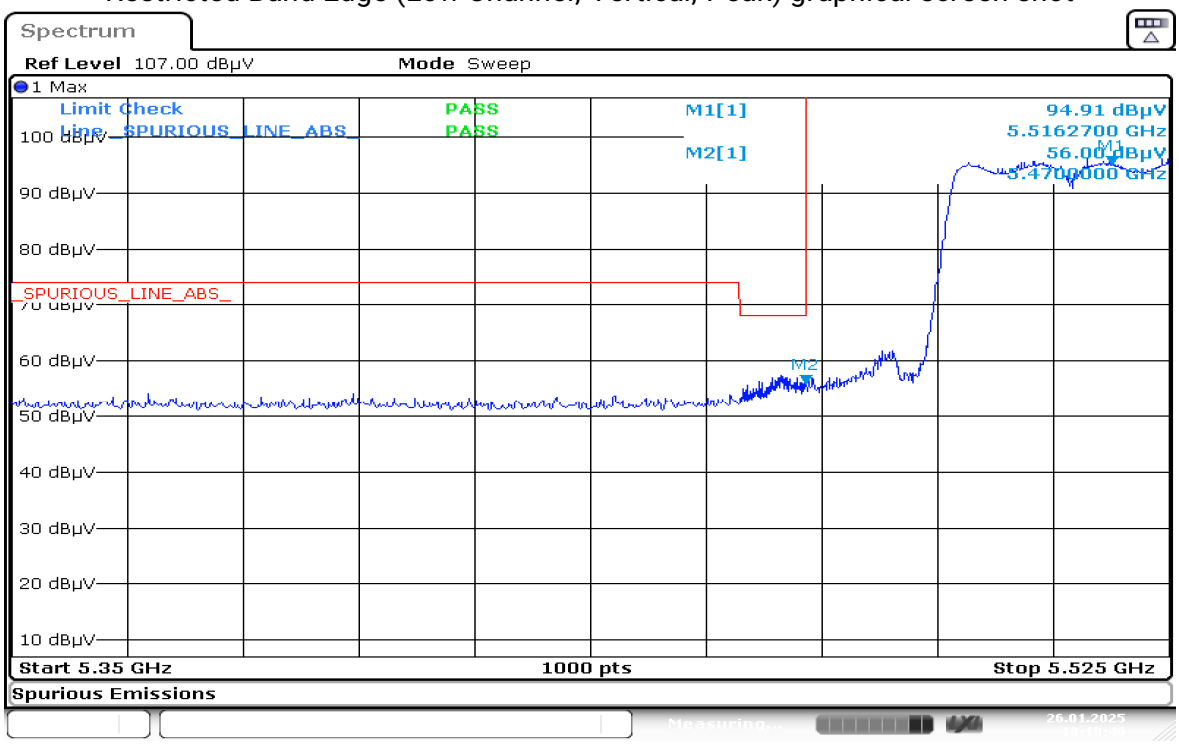
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5460.0000	-	-	44.2567	-	-	54.0000	-	-	9.7433	-
5470.0000	-	55.9972	-	-	68.2000	-	-	12.2028	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	43.1472	-	-	54.0000	-	-	10.8528	-
5470.0000	-	54.4216	-	-	68.2000	-	-	13.7784	-	-

Remarks: Pass Result	Marginal Result	Fail Result

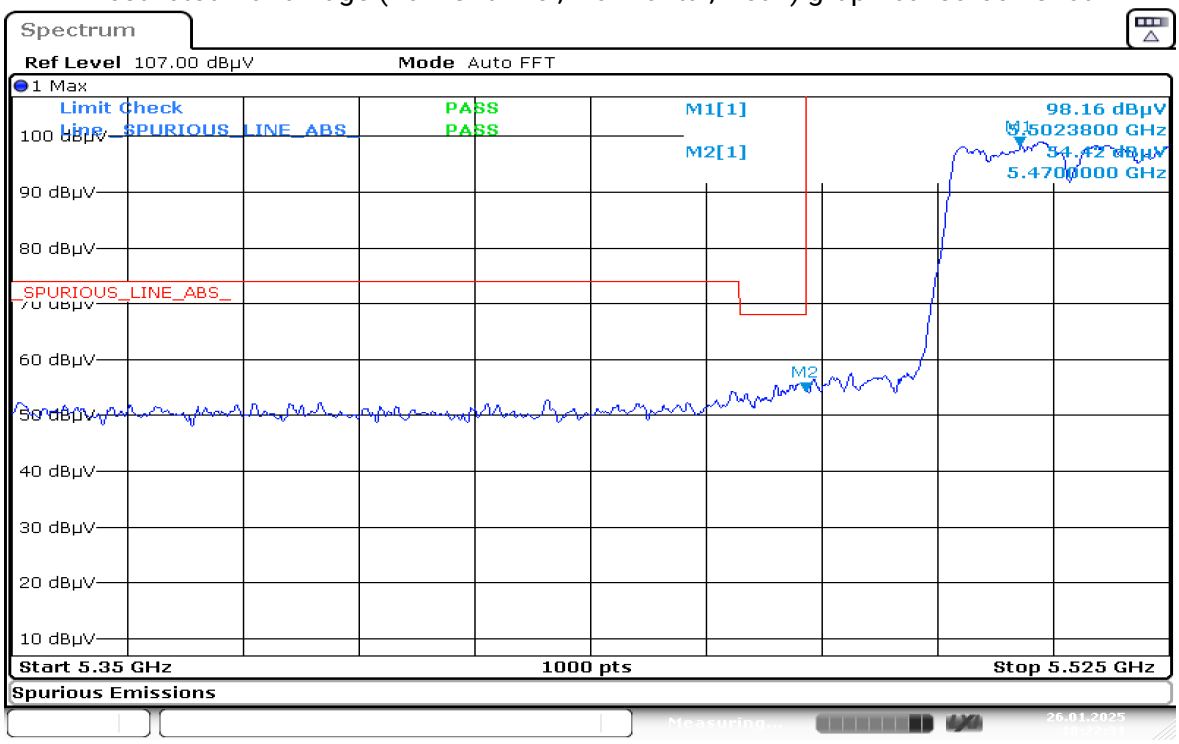
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



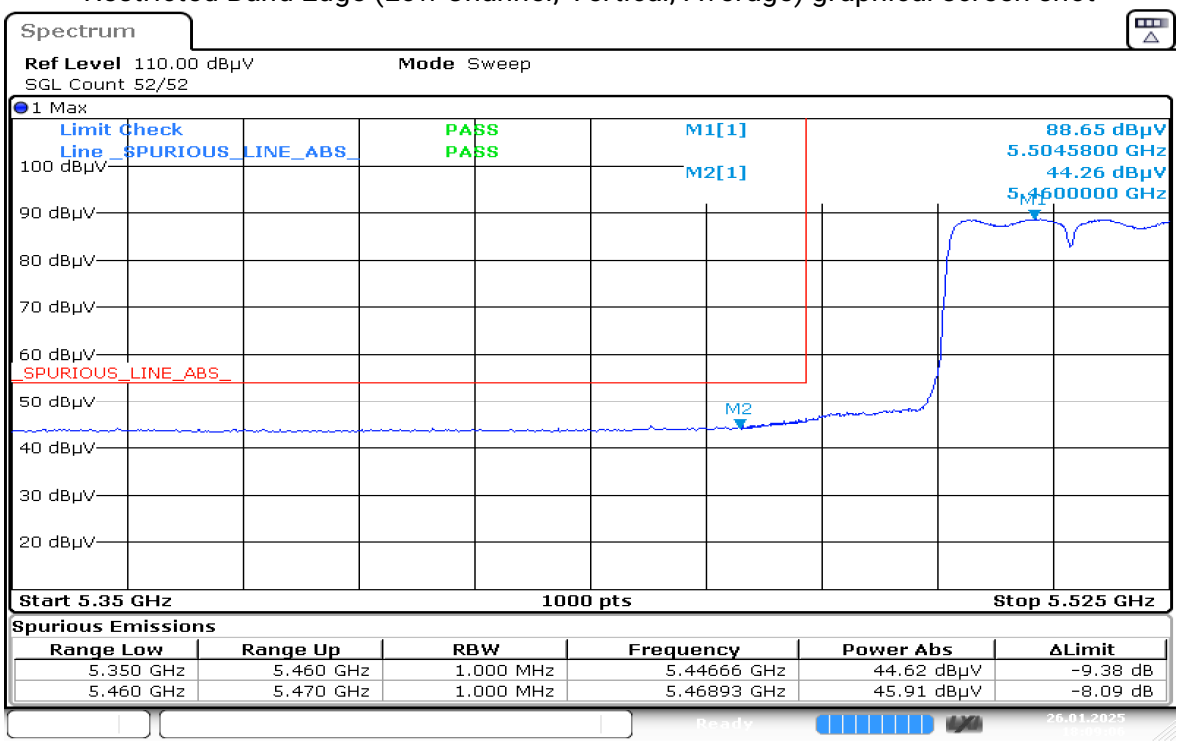
Date: 26.JAN.2025 18:18:41

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



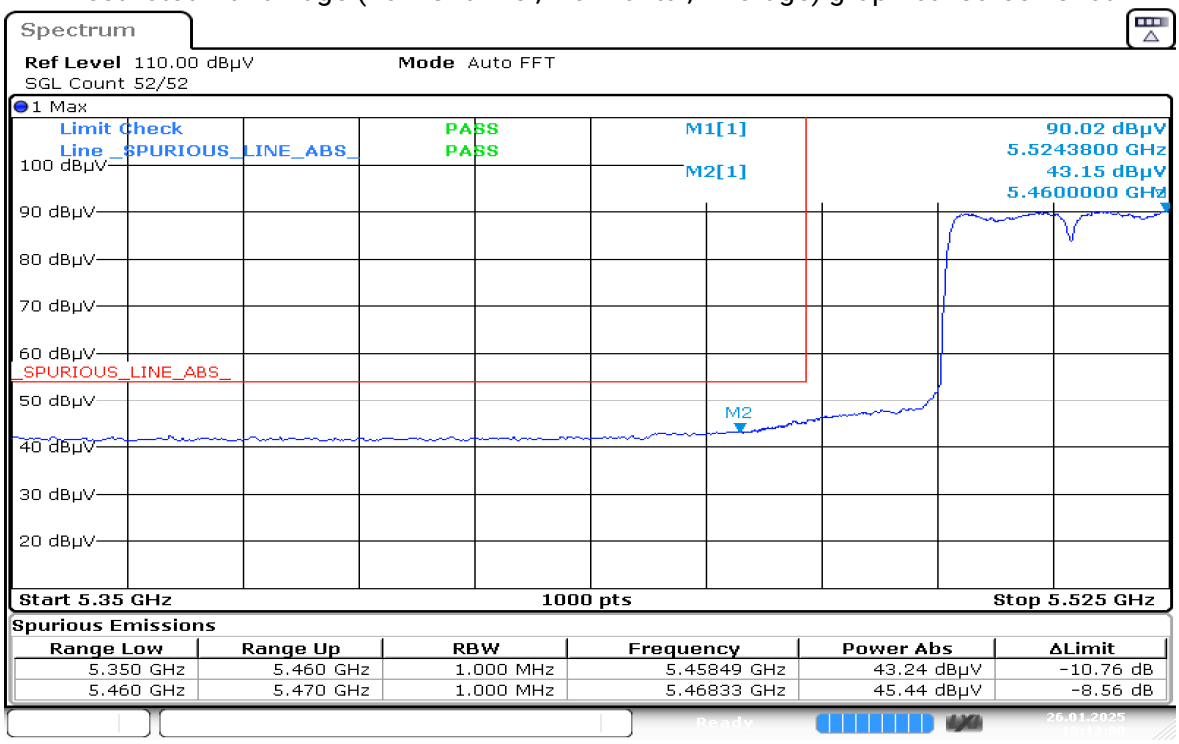
Date: 26.JAN.2025 18:22:31

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 26.JAN.2025 18:09:06

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 26.JAN.2025 18:13:00

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5670.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (11)

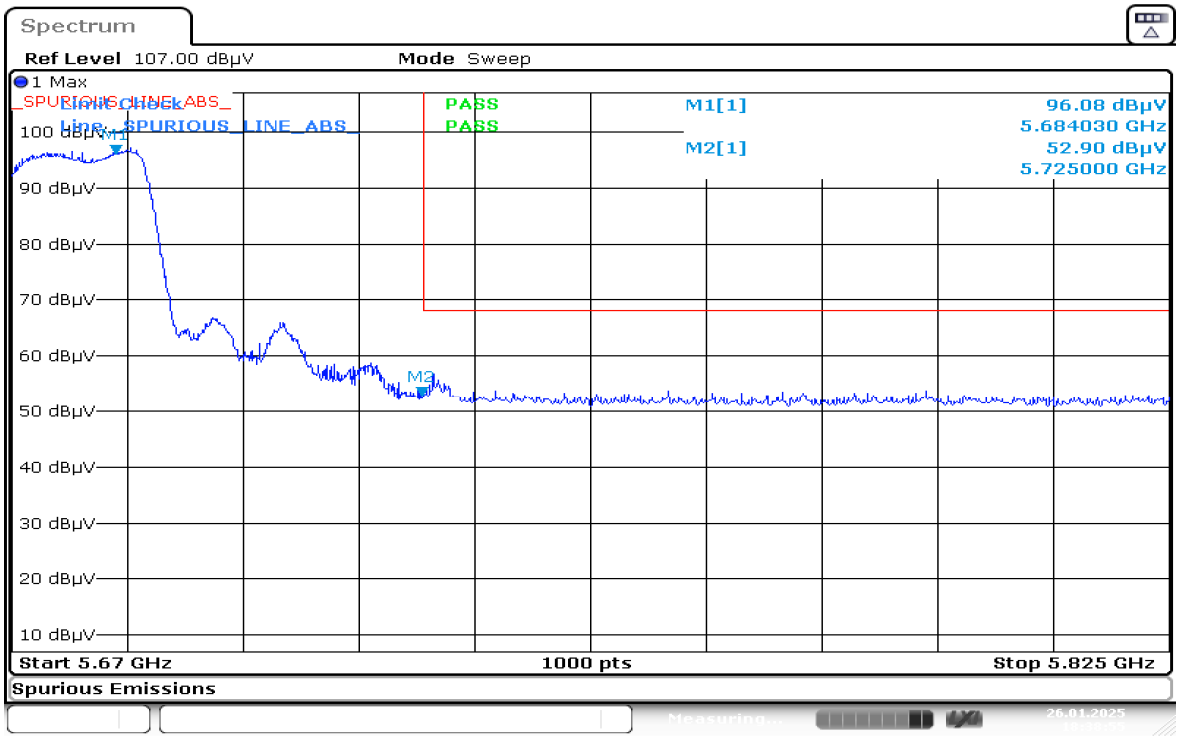
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	52.0657	-	-	68.2000	-	-	16.1343	-	-
Horizontal Radiated Emission Result										
5725.0000	-	51.2114	-	-	68.2000	-	-	16.9886	-	-

Remarks: Pass Result	Marginal Result	Fail Result

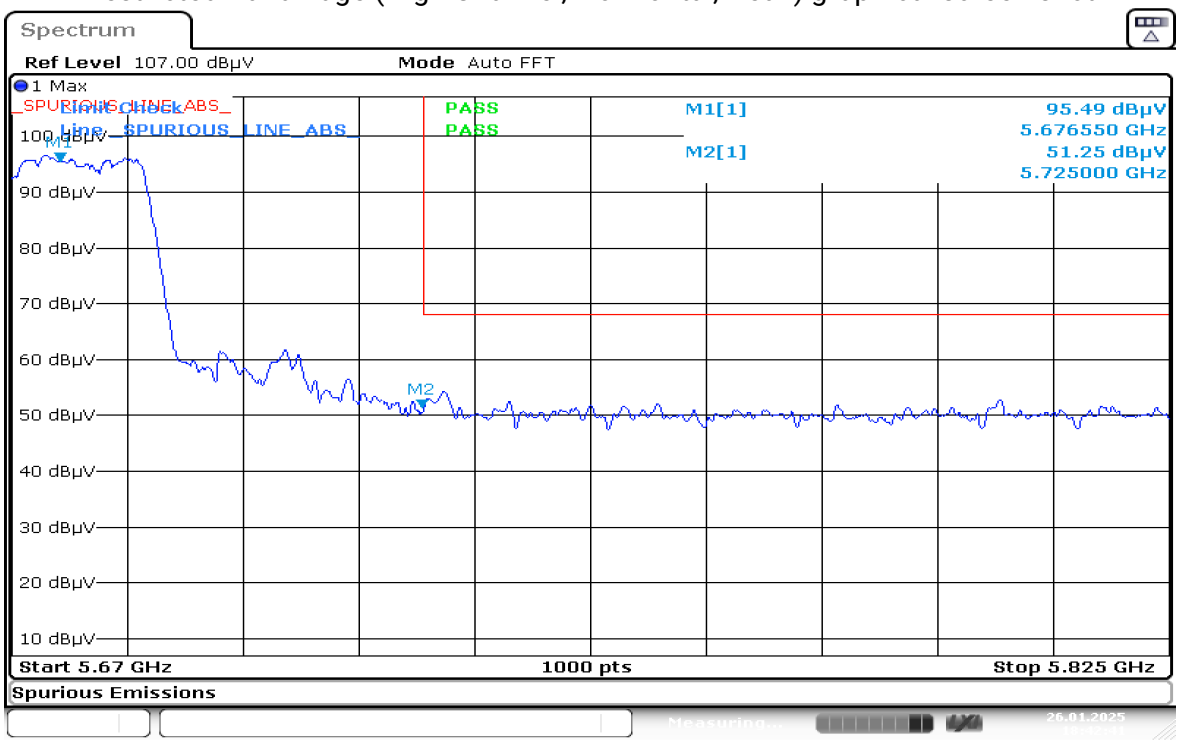
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 18:38:56

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 18:42:42

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5710.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (14)

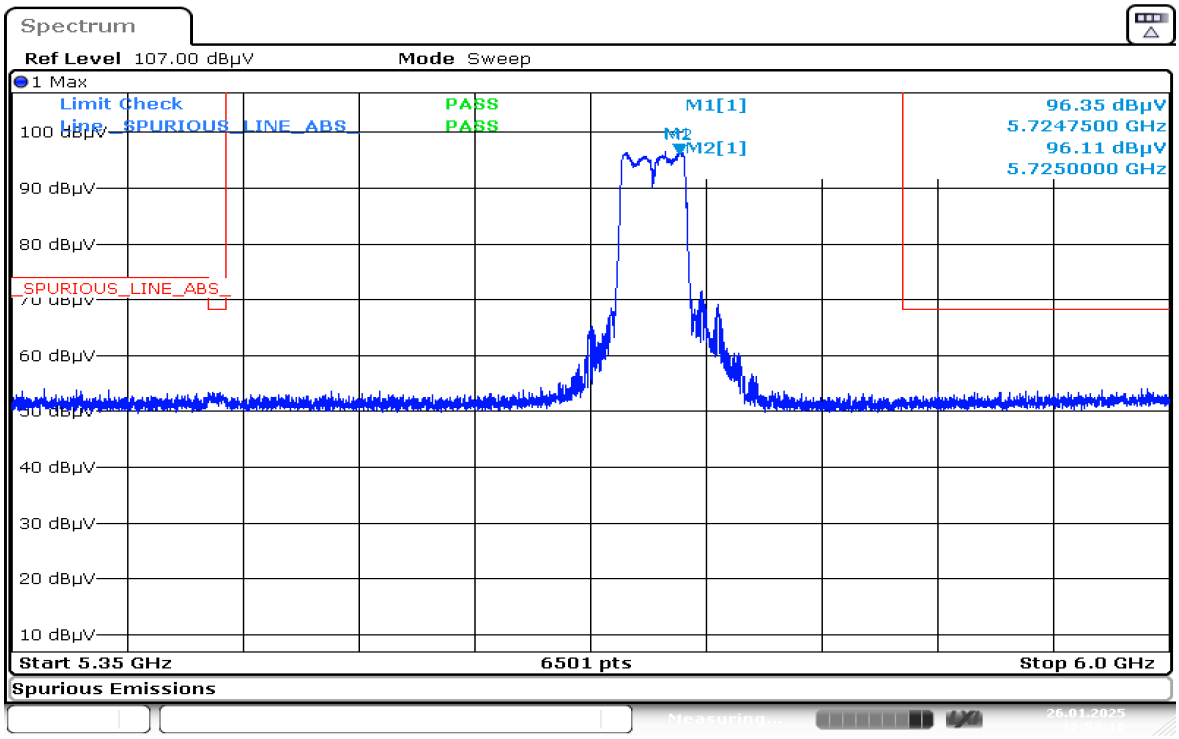
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
Horizontal Radiated Emission Result										

Remarks: Pass Result	Marginal Result	Fail Result

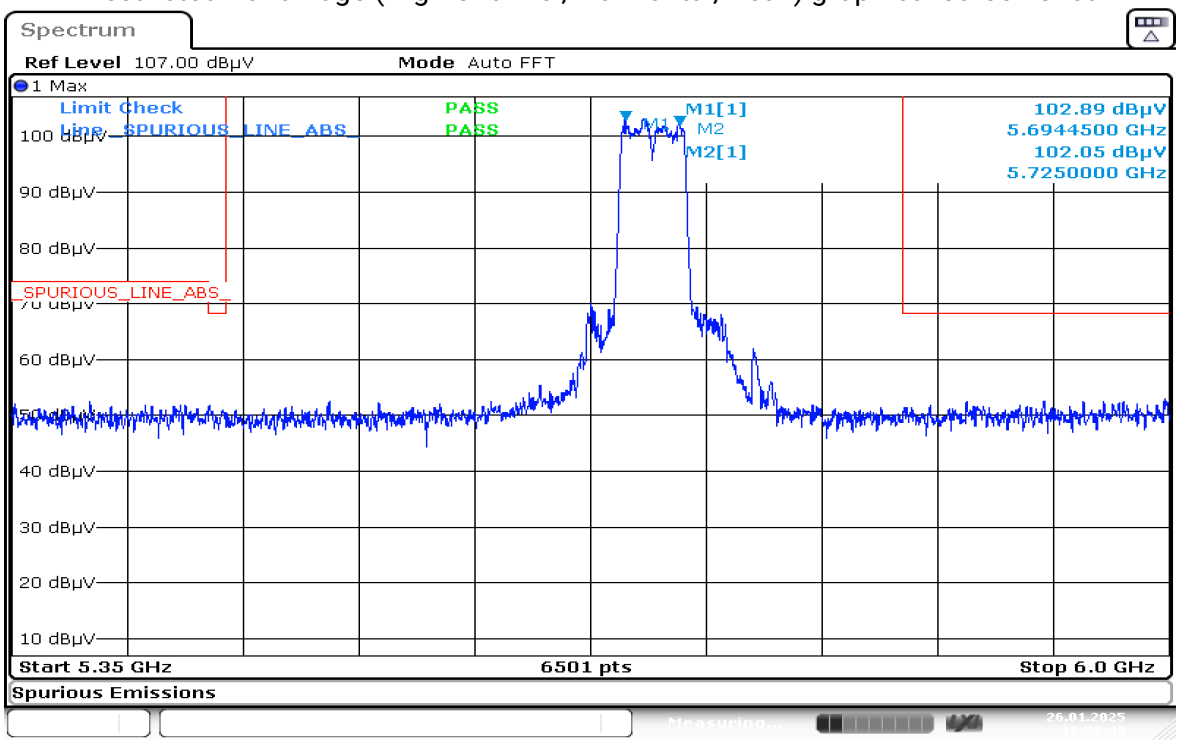
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 18:53:18

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 18:57:40

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5755.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (13)

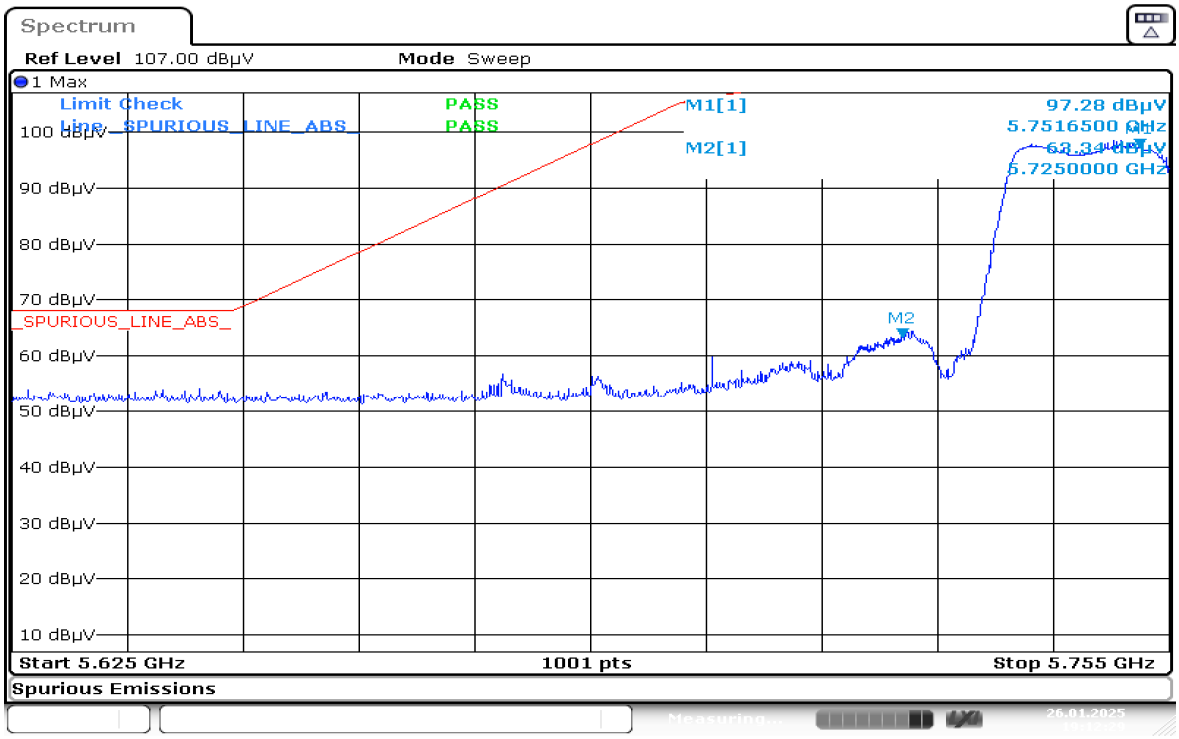
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	-	63.3415	-	-	122.2000	-	-	58.8585	-
Horizontal Radiated Emission Result										
5725.0000	-	-	66.6993	-	-	122.2000	-	-	55.5007	-

Remarks: Pass Result	Marginal Result	Fail Result

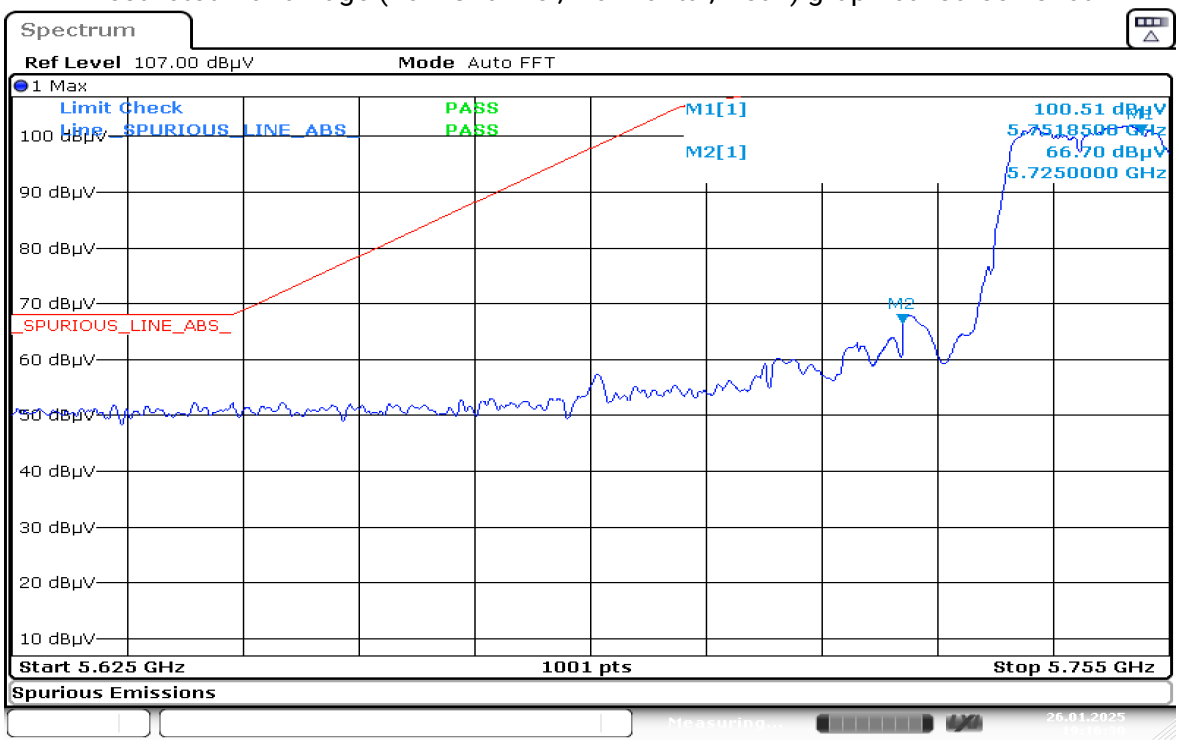
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 19:12:29

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 19:16:31

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5795.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (10)

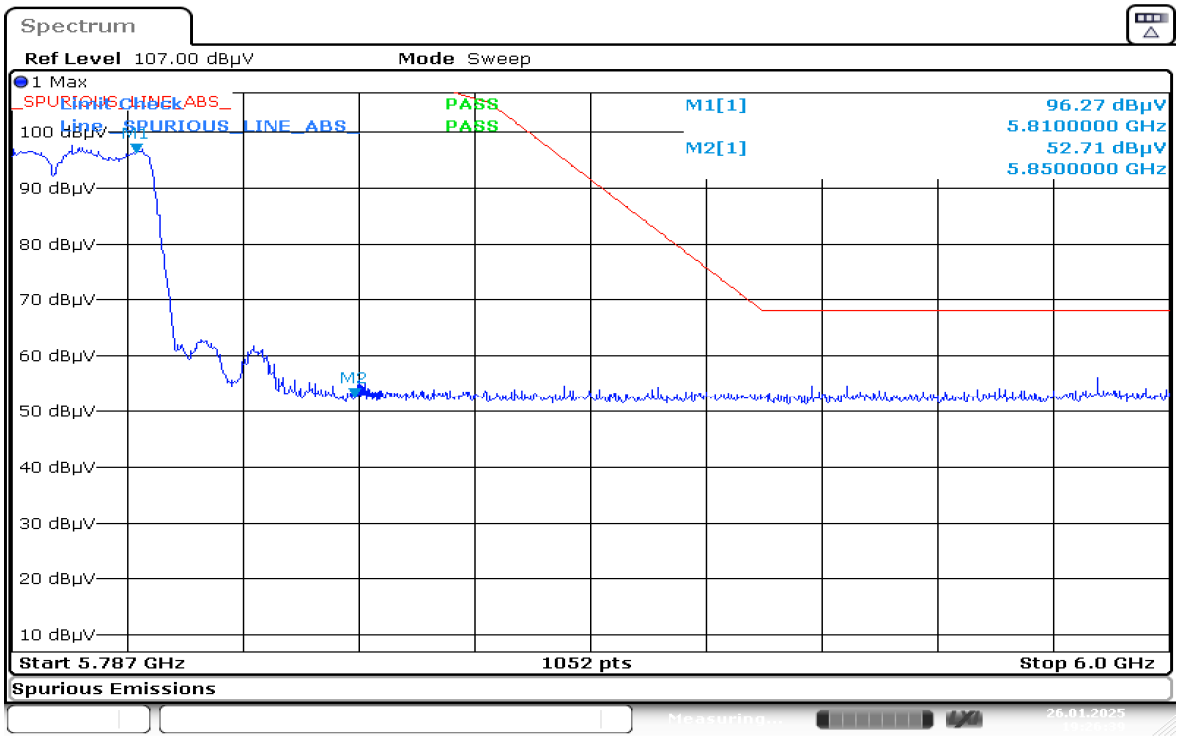
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5850.0000	-	-	52.7059	-	-	122.2000	-	-	69.4941	-
Horizontal Radiated Emission Result										
5850.0000	-	-	49.6070	-	-	122.2000	-	-	72.5930	-

Remarks: Pass Result	Marginal Result	Fail Result

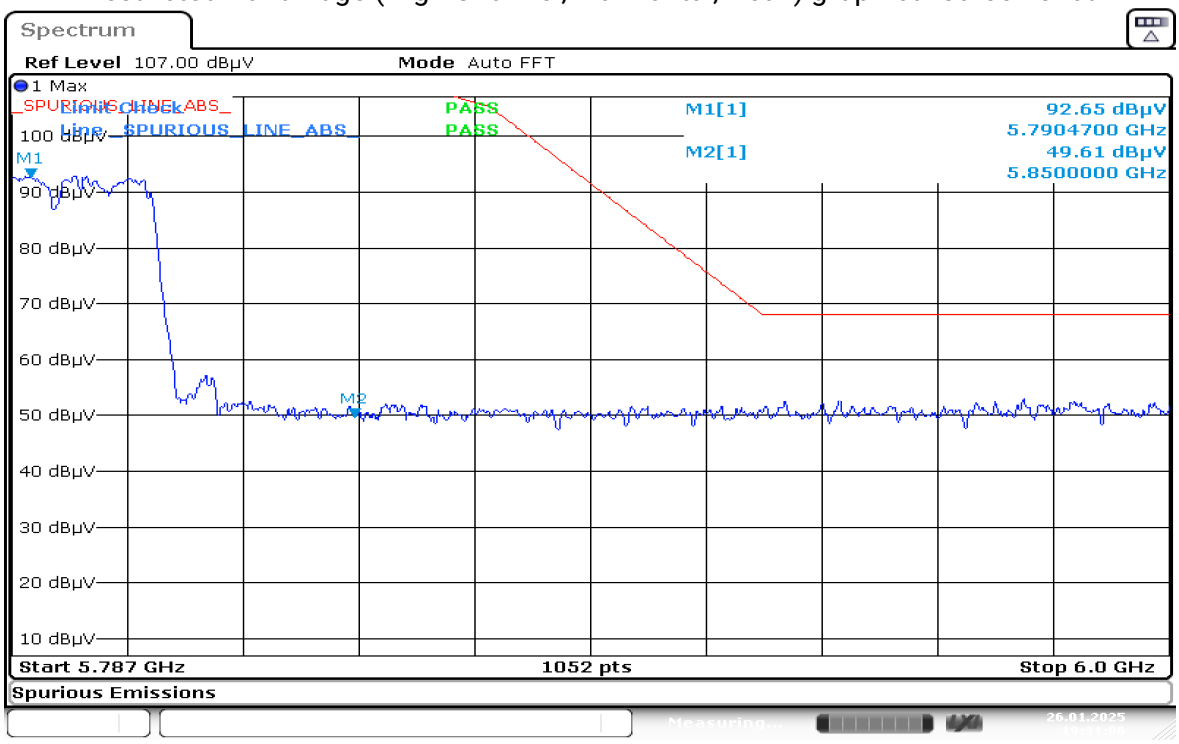
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 19:26:39

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 19:31:07

802.11ac (VHT80)

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5210.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (10)

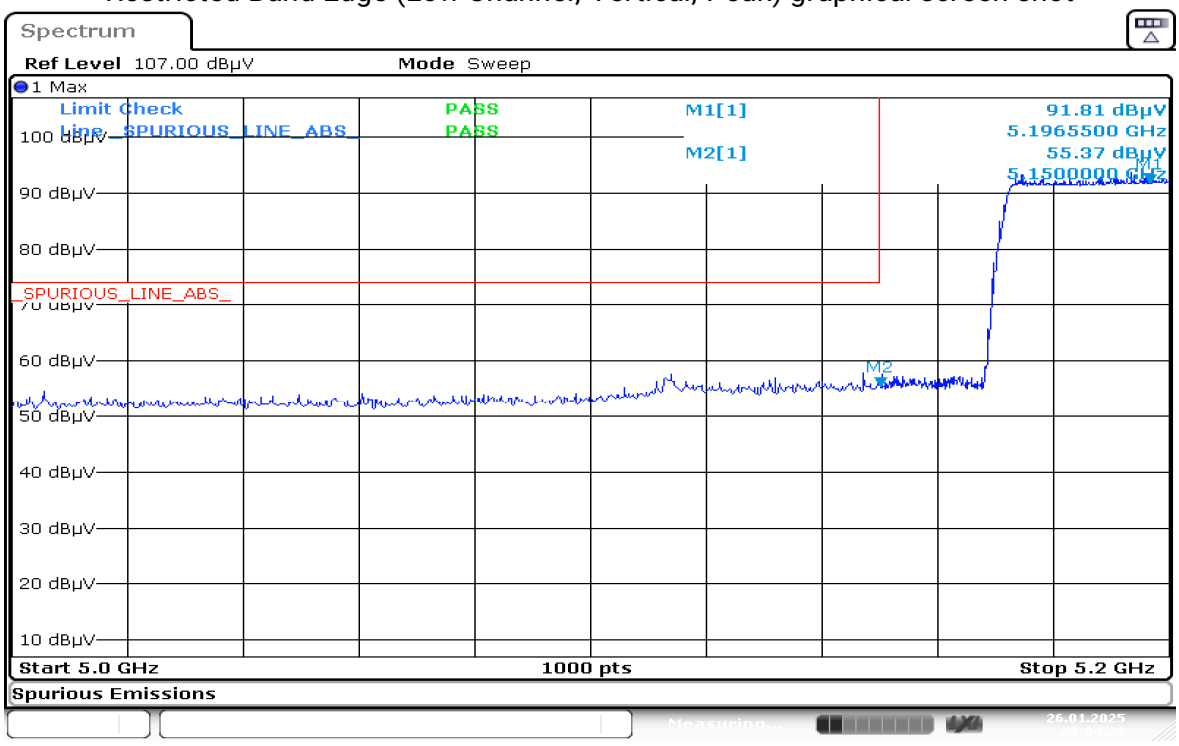
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5148.0500	-	-	47.8895	-	-	54.0000	-	-	6.1105	-
5150.0000	-	55.3650	47.5273	-	74.0000	54.0000	-	18.6350	6.4727	-
Horizontal Radiated Emission Result										
5150.0000	-	54.8470	46.3066	-	74.0000	54.0000	-	19.1530	7.6934	-

Remarks: Pass Result	Marginal Result	Fail Result

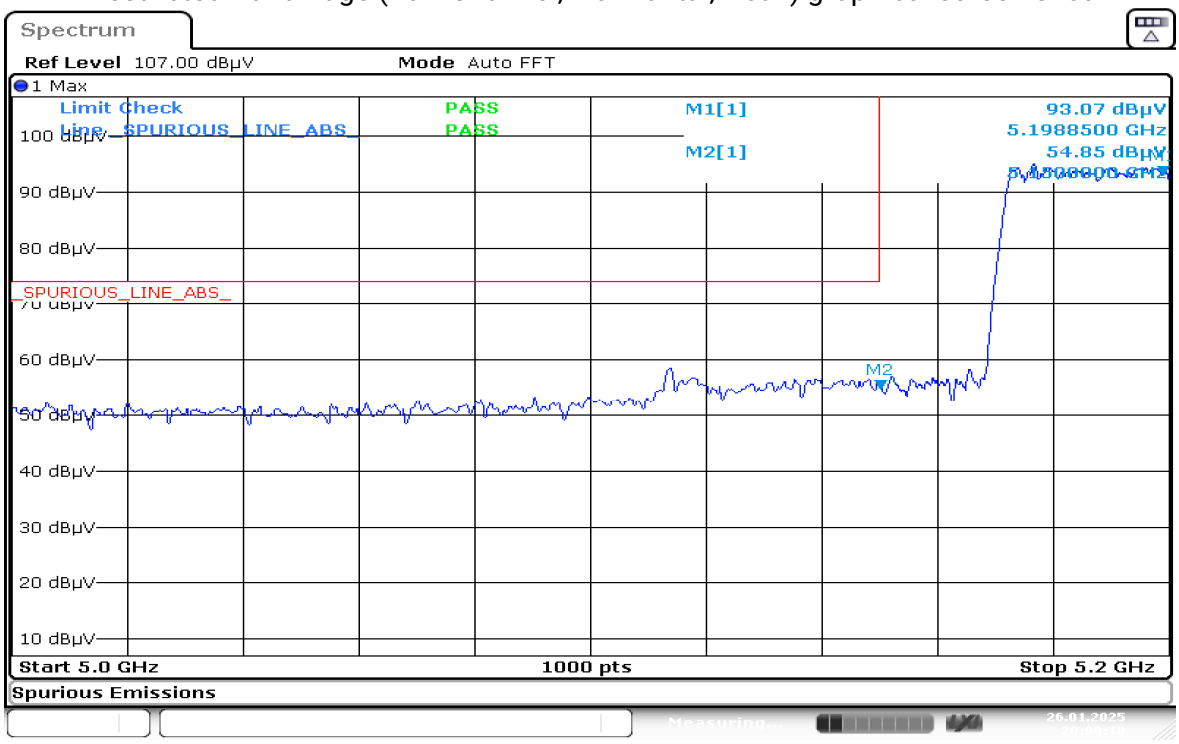
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



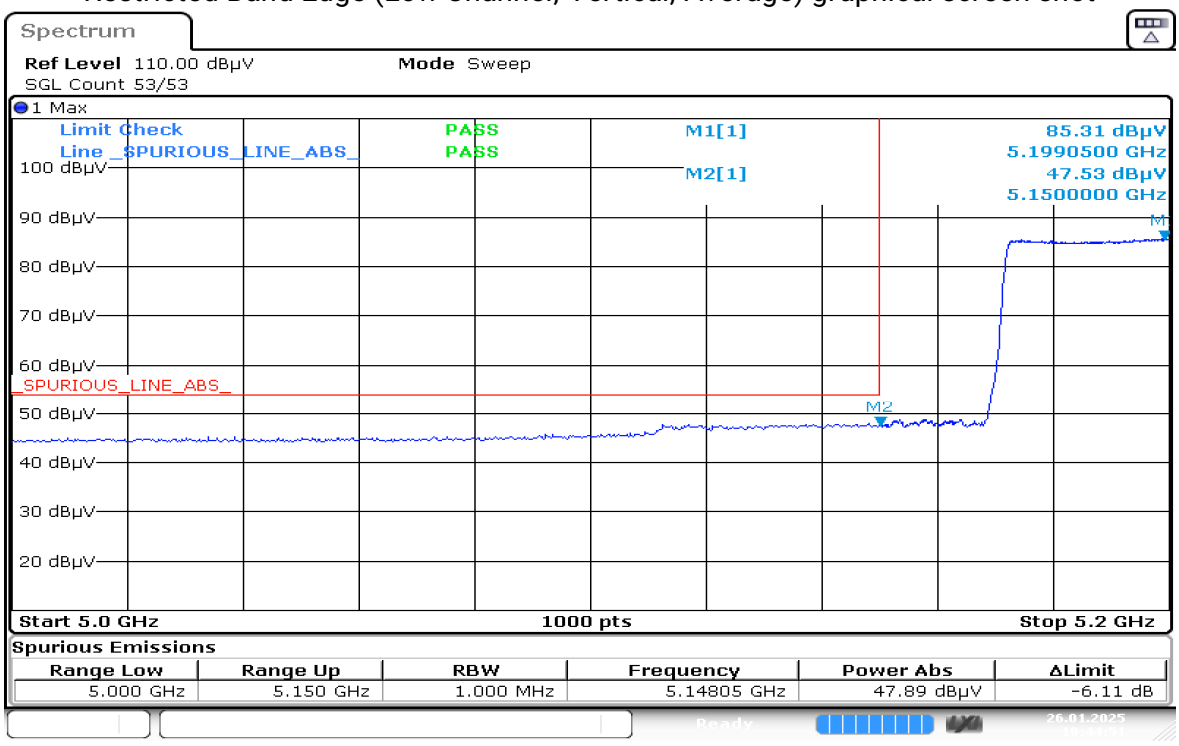
Date: 26.JAN.2025 20:04:33

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



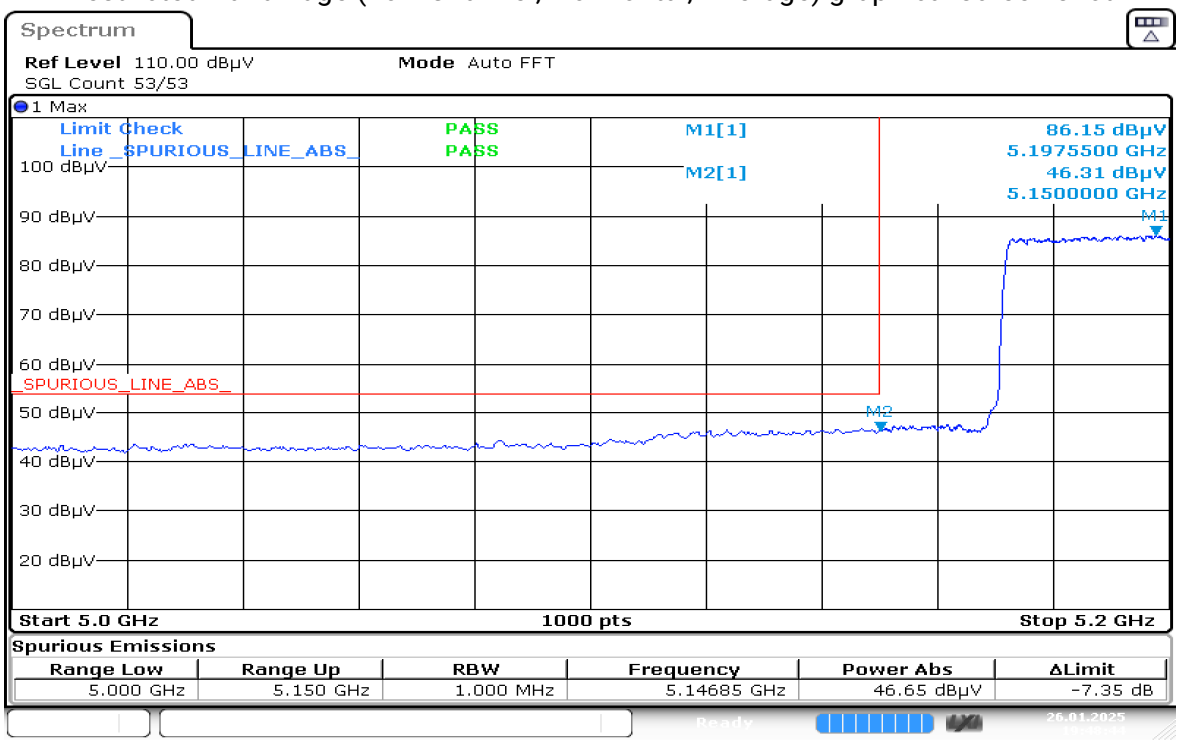
Date: 26.JAN.2025 20:08:18

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



Date: 26.JAN.2025 19:44:51

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Date: 26.JAN.2025 19:48:44

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5290.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (9)

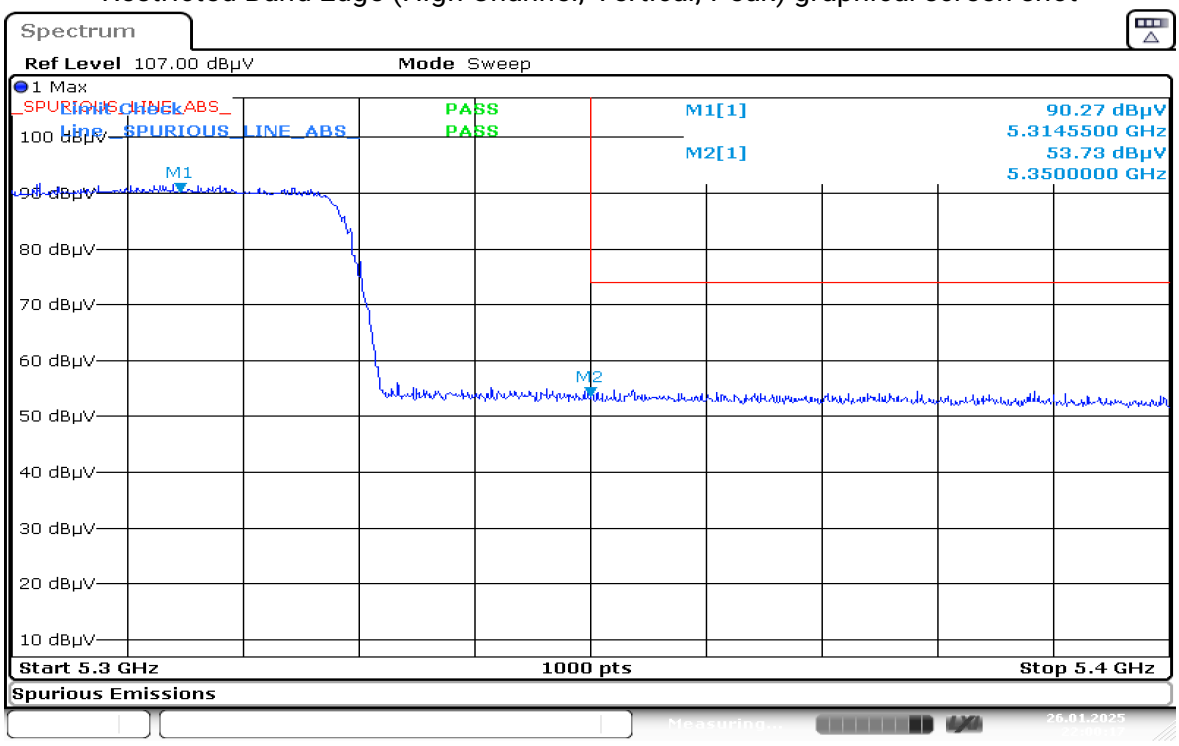
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5350.0000	-	53.7319	44.9305	-	74.0000	54.0000	-	20.2681	9.0695	-
Horizontal Radiated Emission Result										
5350.0000	-	52.2419	43.6299	-	74.0000	54.0000	-	21.7581	10.3701	-

Remarks: Pass Result	Marginal Result	Fail Result

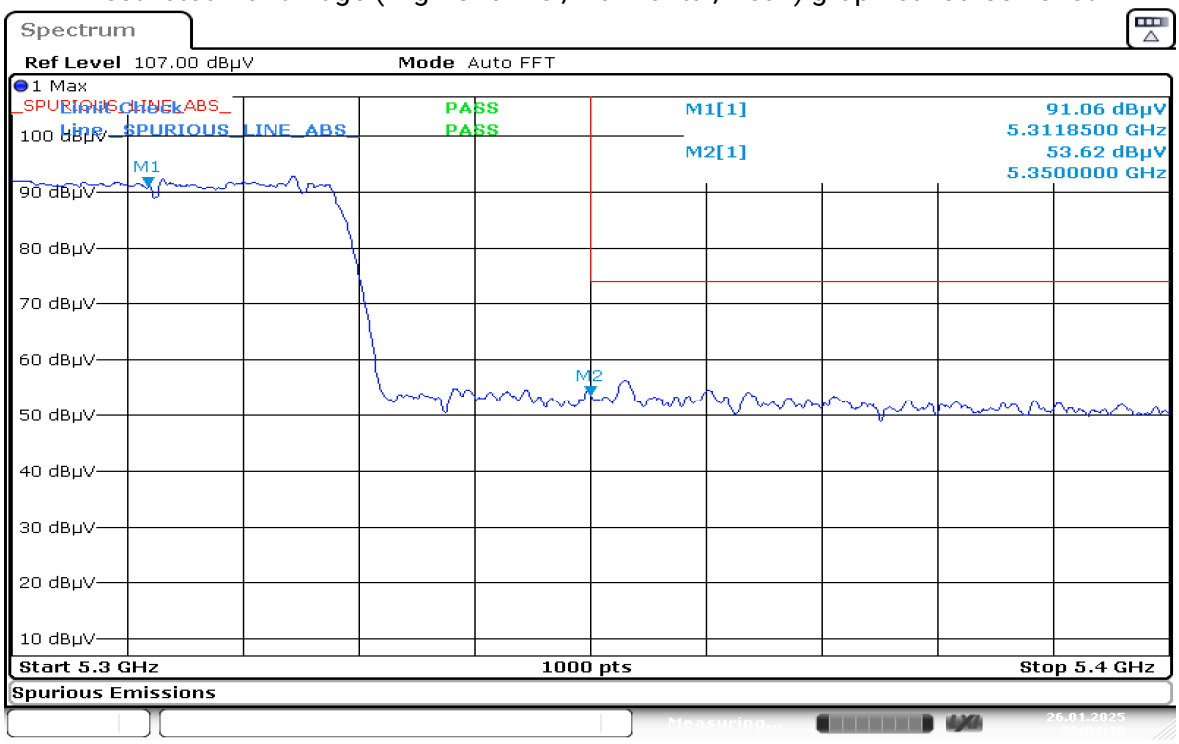
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



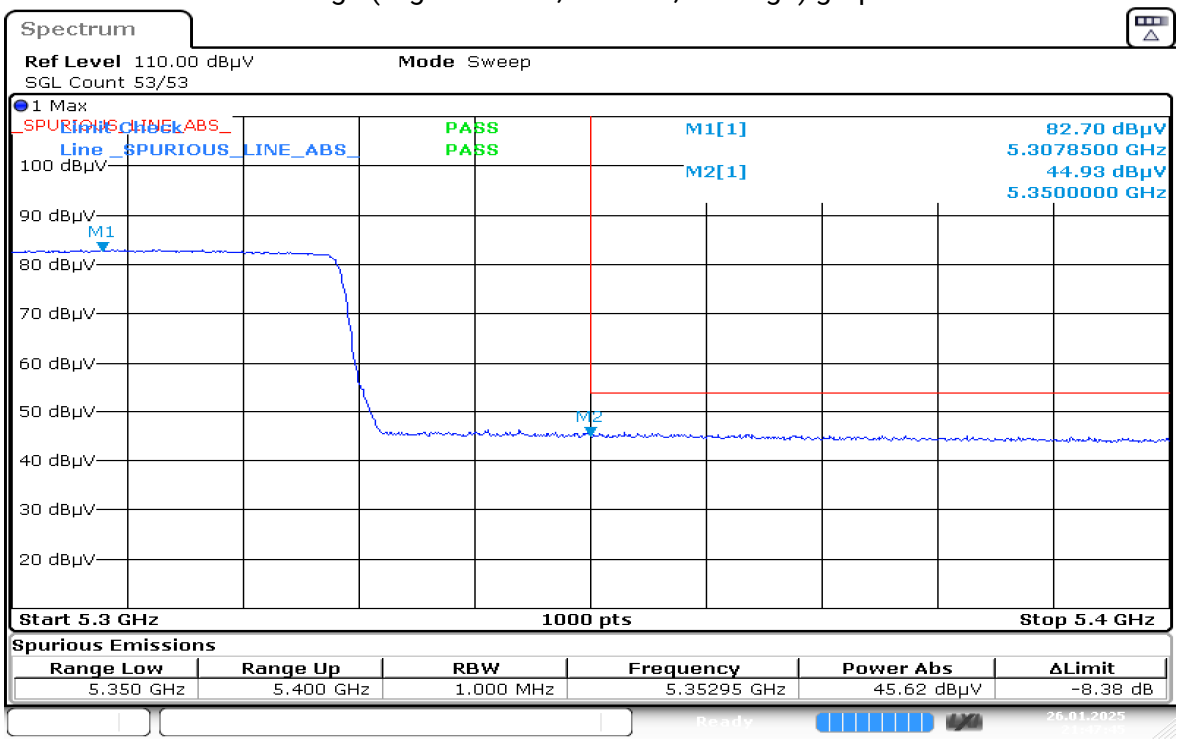
Date: 26.JAN.2025 22:00:18

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



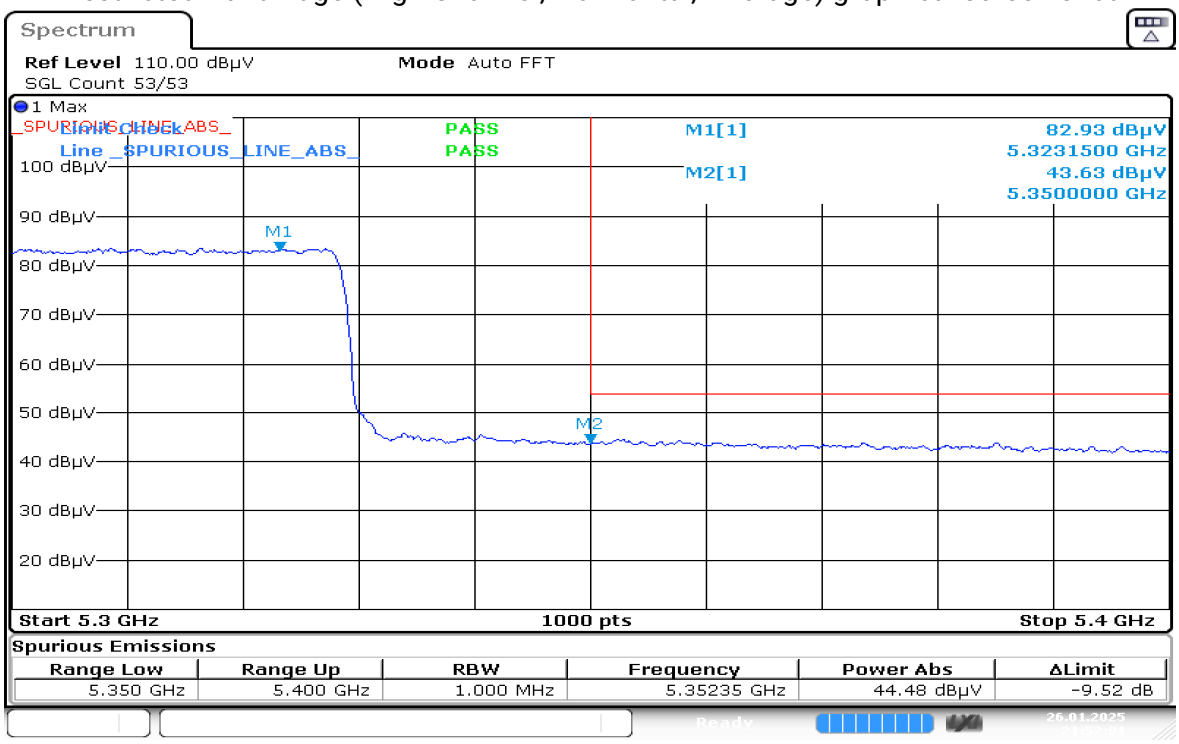
Date: 26.JAN.2025 22:04:19

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



Date: 26.JAN.2025 21:47:45

Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



Date: 26.JAN.2025 21:52:02

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5530.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (9)

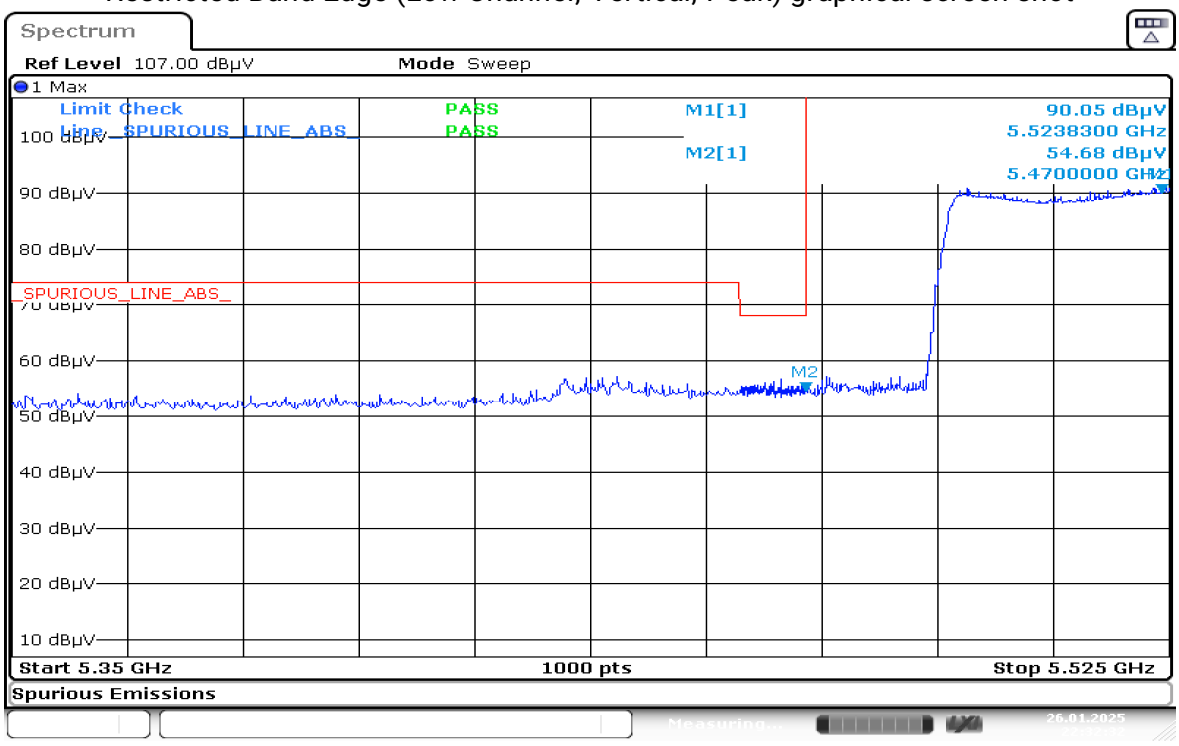
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5460.0000	-	-	45.8828	-	-	54.0000	-	-	8.1172	-
5470.0000	-	54.6818	-	-	68.2000	-	-	13.5182	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	45.2192	-	-	54.0000	-	-	8.7808	-
5470.0000	-	54.9425	-	-	68.2000	-	-	13.2575	-	-

Remarks: Pass Result	Marginal Result	Fail Result

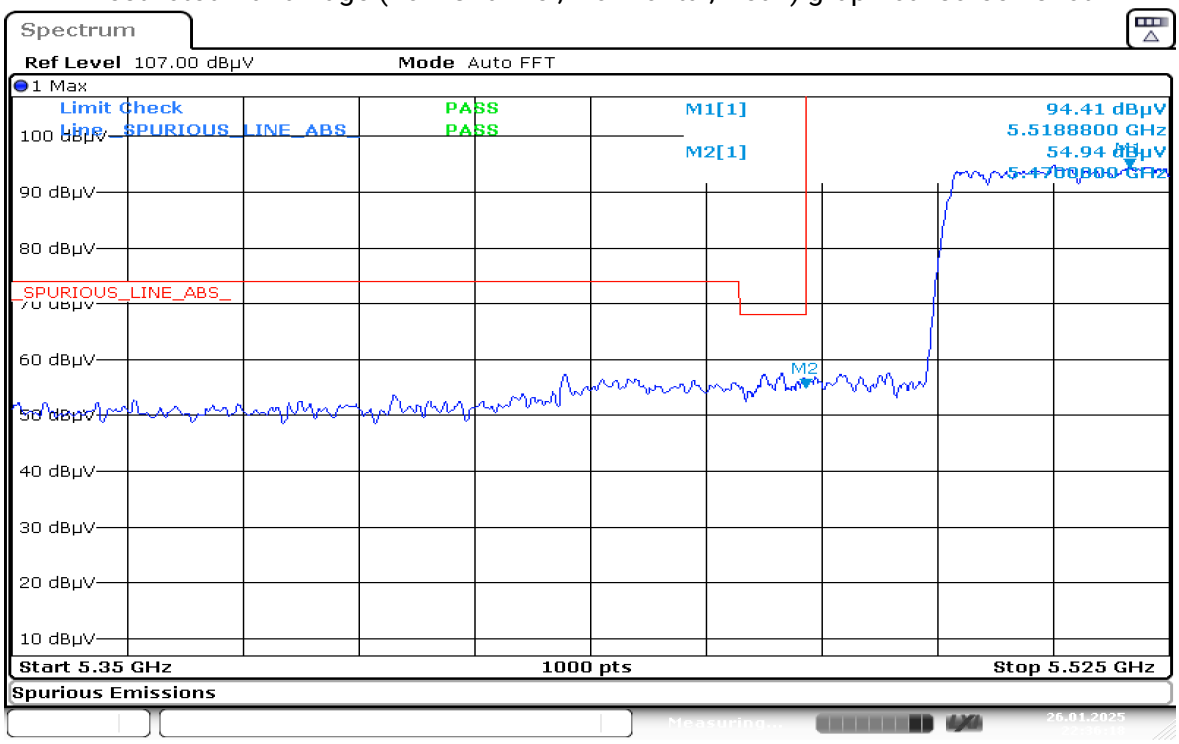
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



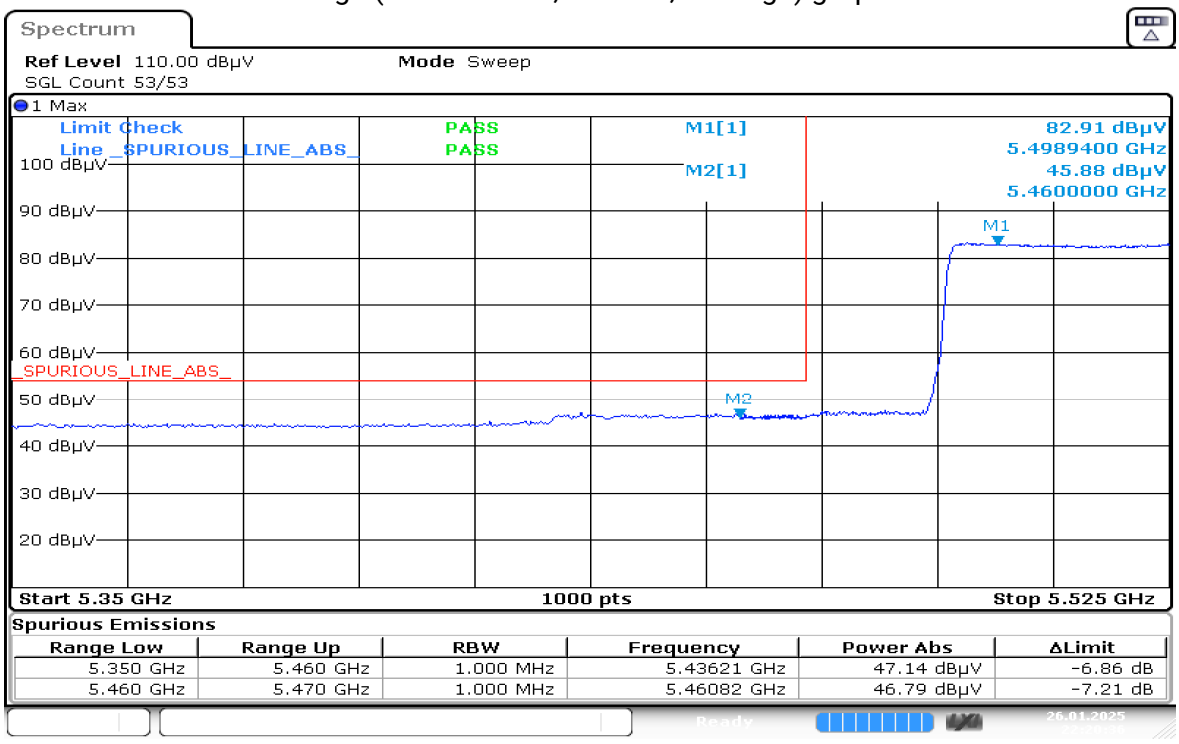
Date: 26.JAN.2025 22:32:32

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 22:36:18

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot

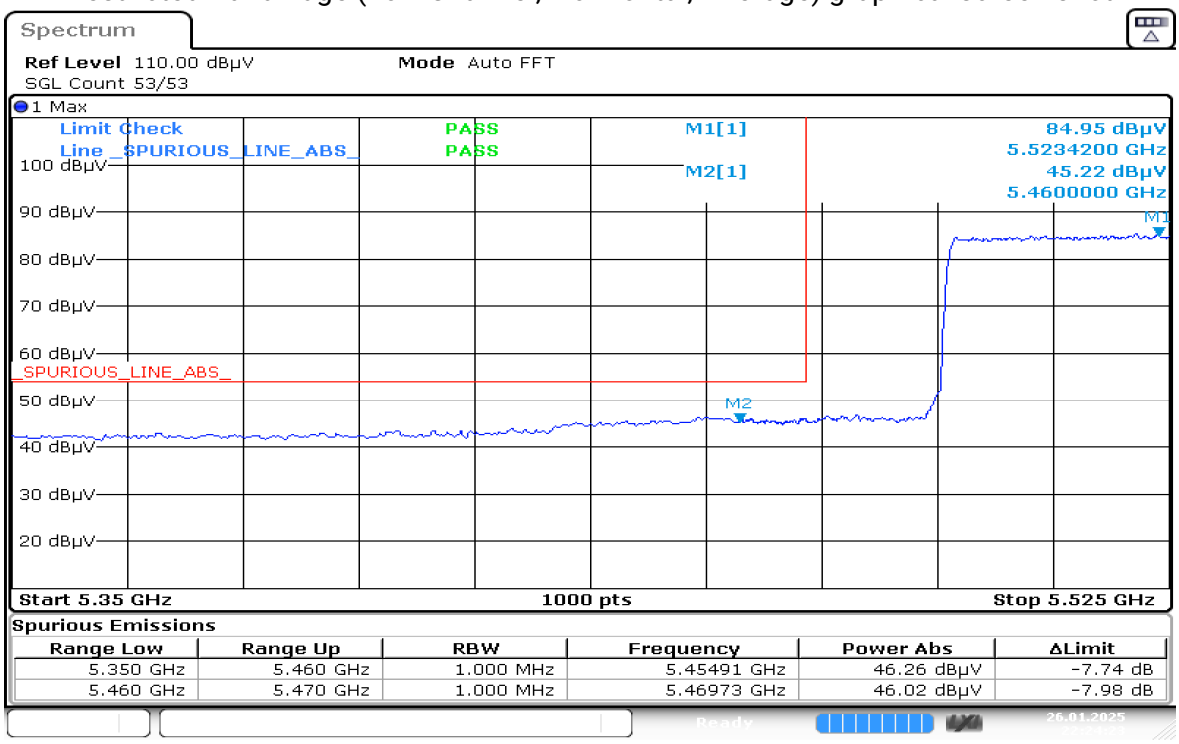


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.350 GHz	5.460 GHz	1.000 MHz	5.43621 GHz	47.14 dBµV	-6.86 dB
5.460 GHz	5.470 GHz	1.000 MHz	5.46082 GHz	46.79 dBµV	-7.21 dB

Date: 26.JAN.2025 22:20:36

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.350 GHz	5.460 GHz	1.000 MHz	5.45491 GHz	46.26 dBµV	-7.74 dB
5.460 GHz	5.470 GHz	1.000 MHz	5.46973 GHz	46.02 dBµV	-7.98 dB

Date: 26.JAN.2025 22:24:23

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5610.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (8)

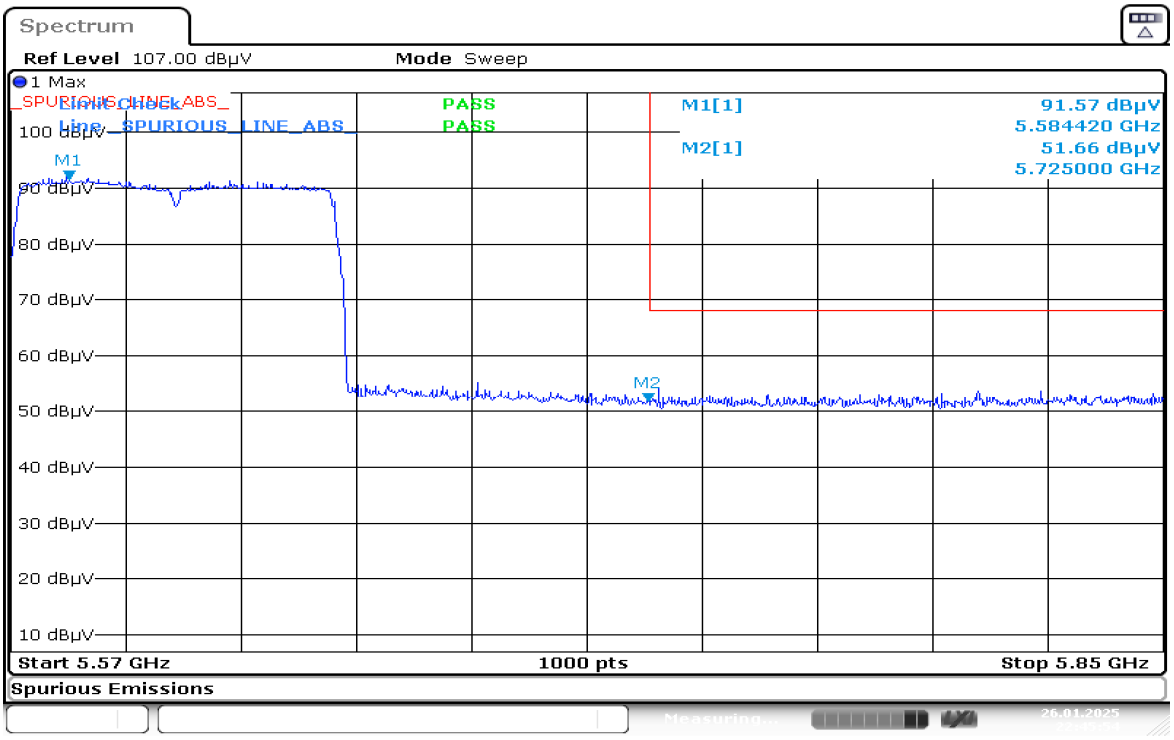
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	50.9394	-	-	68.2000	-	-	17.2606	-	-
Horizontal Radiated Emission Result										
5725.0000	-	51.1182	-	-	68.2000	-	-	17.0818	-	-

Remarks: Pass Result	Marginal Result	Fail Result

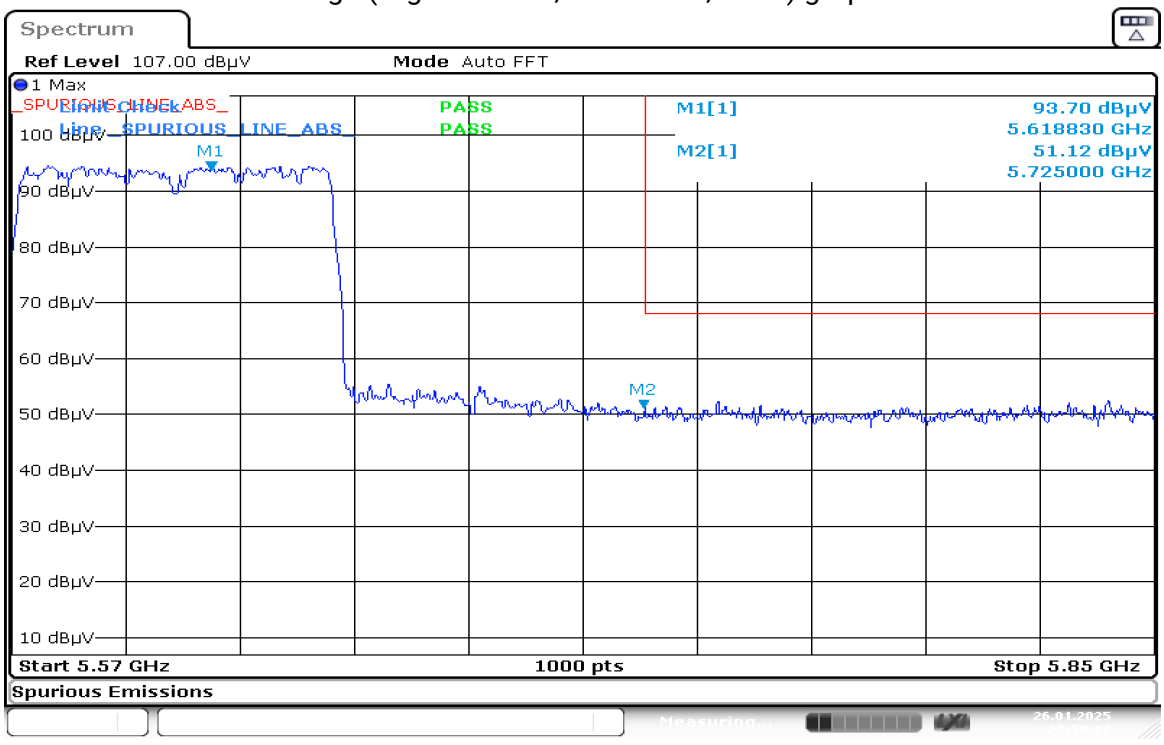
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 22:45:54

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 22:50:08

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5690.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (10)

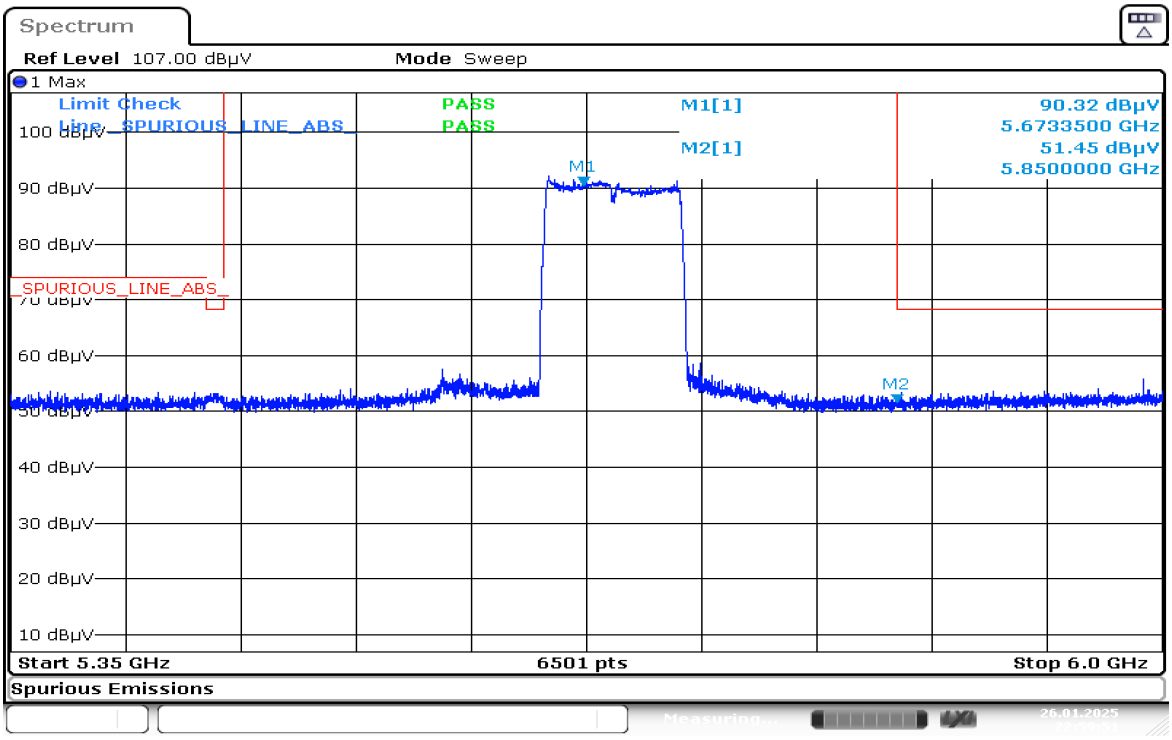
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
Horizontal Radiated Emission Result										

Remarks: Pass Result	Marginal Result	Fail Result

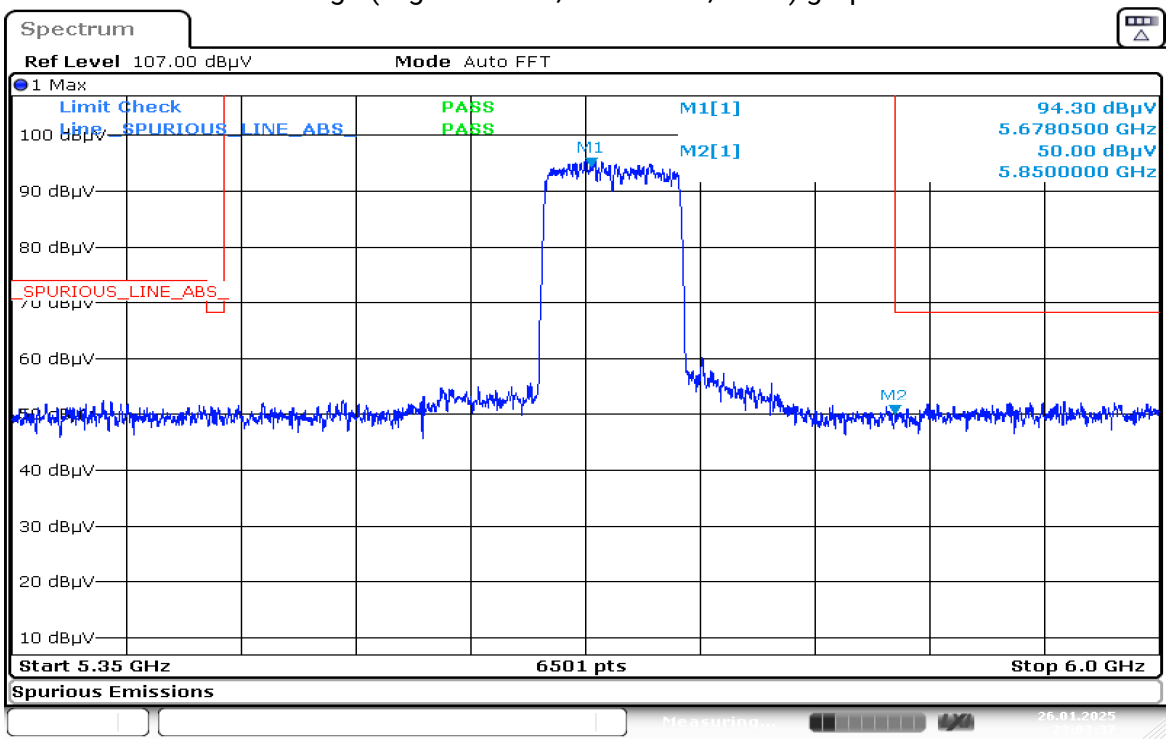
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 22:59:52

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 23:03:37

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5775.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (8)

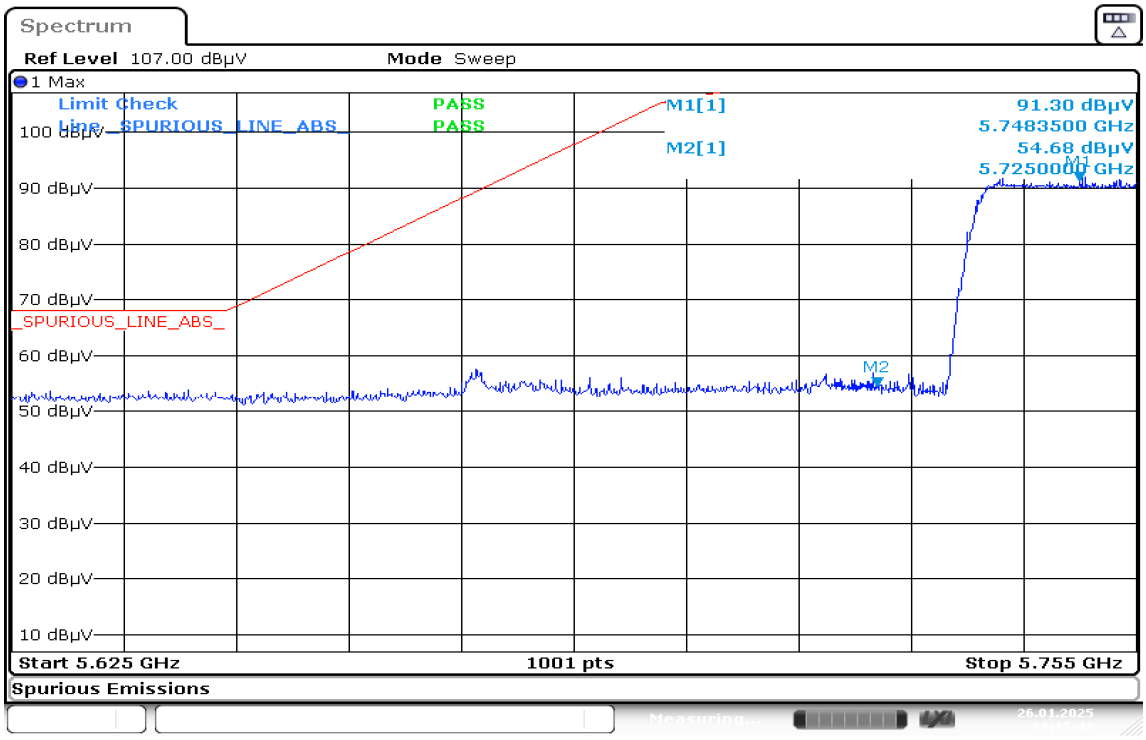
Restricted Band Edge (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5725.0000	-	-	54.6841	-	-	122.2000	-	-	67.5159	-
Horizontal Radiated Emission Result										
5725.0000	-	-	54.7240	-	-	122.2000	-	-	67.4760	-

Remarks: Pass Result	Marginal Result	Fail Result

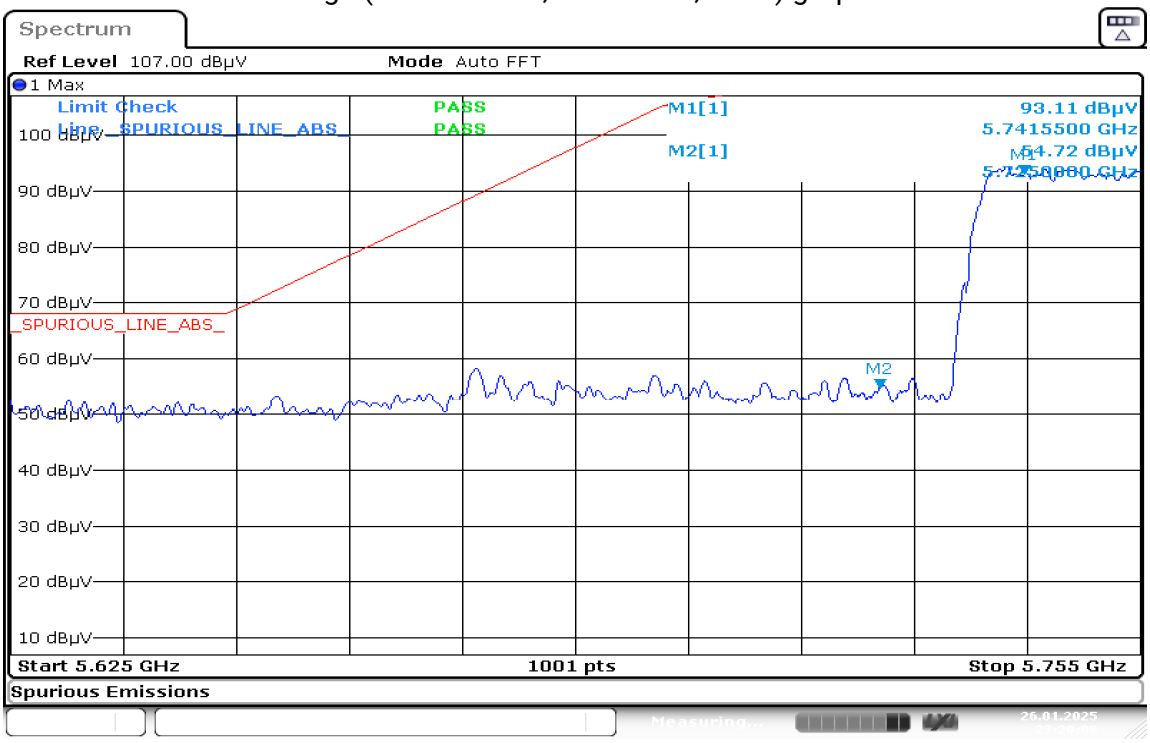
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 23:15:42

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



Date: 26.JAN.2025 23:20:09

Test: WIFI SAC Restricted Band Edge	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5775.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (8)

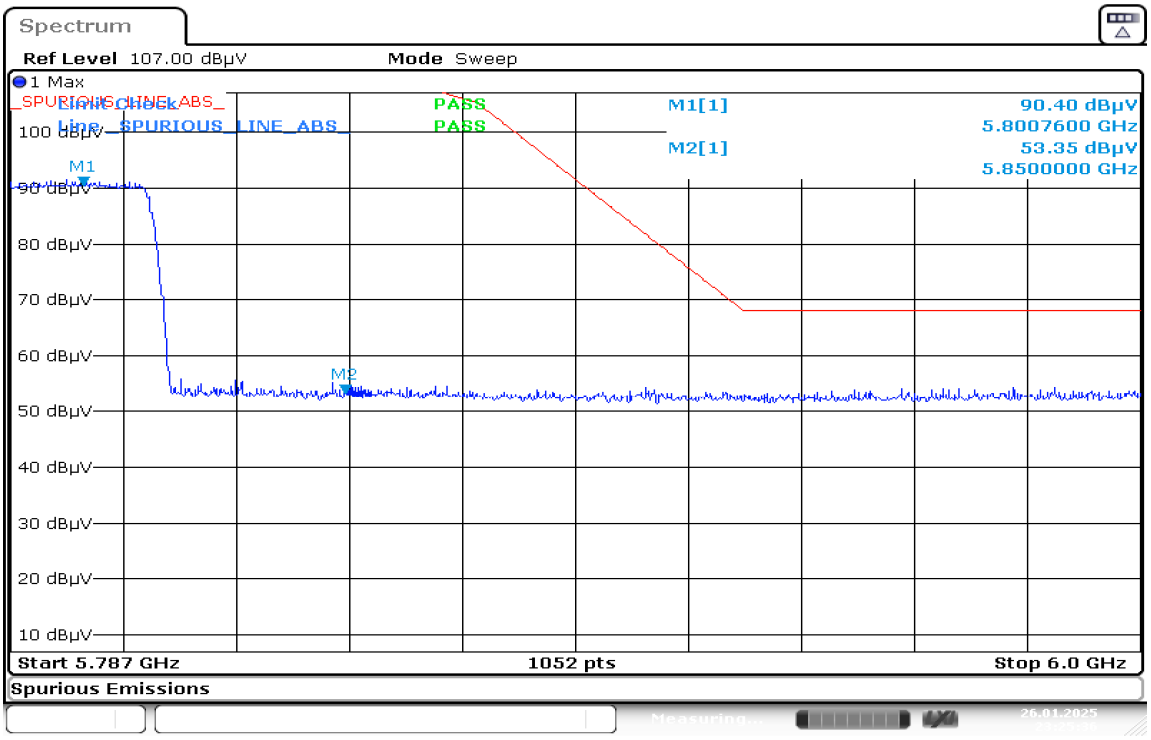
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
5850.0000	-	-	53.3527	-	-	122.2000	-	-	68.8473	-
Horizontal Radiated Emission Result										
5850.0000	-	-	52.7521	-	-	122.2000	-	-	69.4479	-

Remarks: Pass Result	Marginal Result	Fail Result

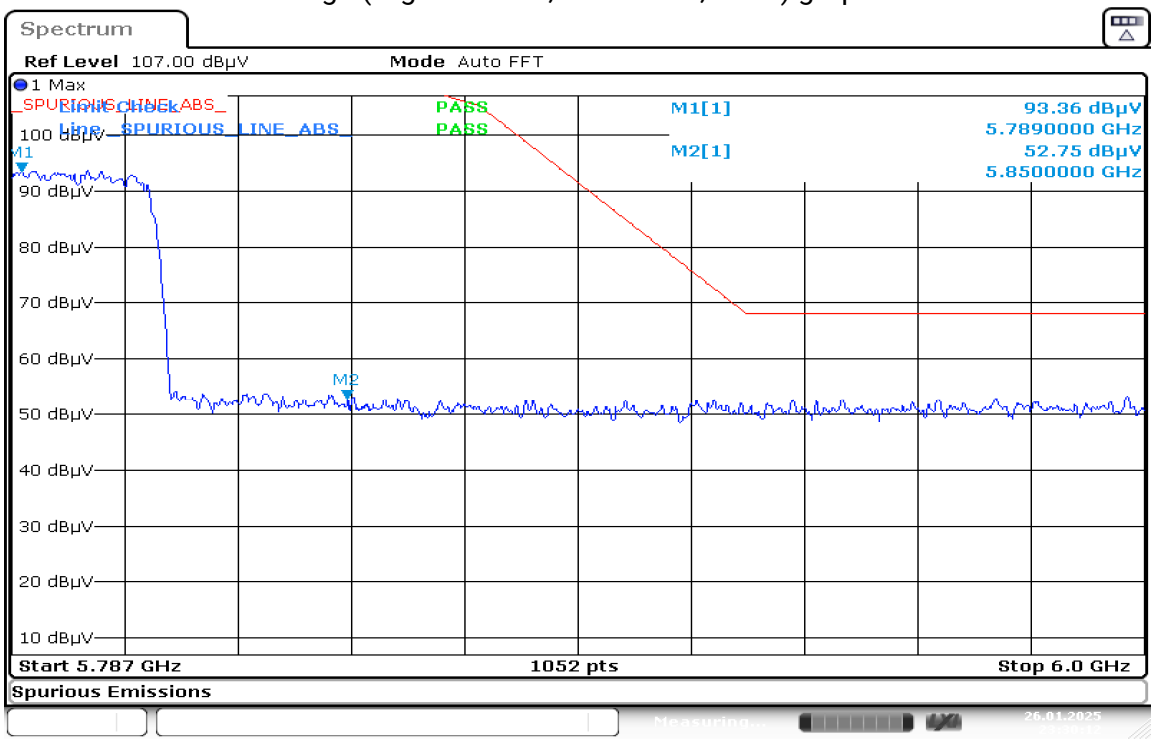
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Mon, 27 Jan, 2025
System MU: 5.84dB	

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



Date: 26.JAN.2025 23:25:37

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot

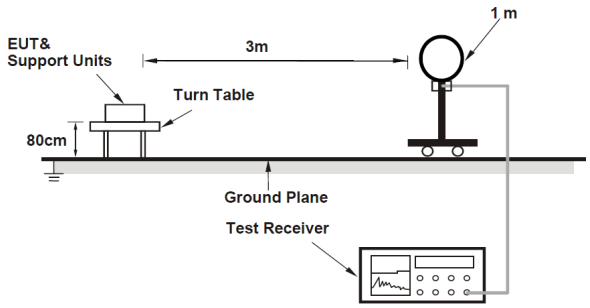


Date: 26.JAN.2025 23:30:12

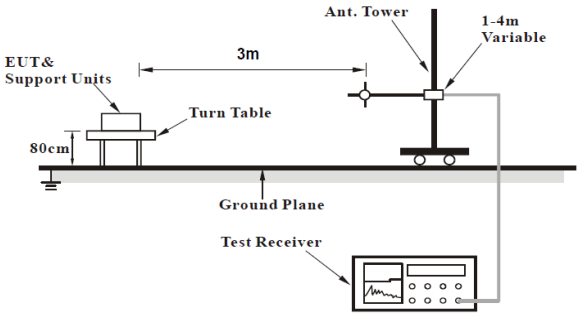
6.7. Radiated Spurious Emission Measurement

6.7.1. Test Setup

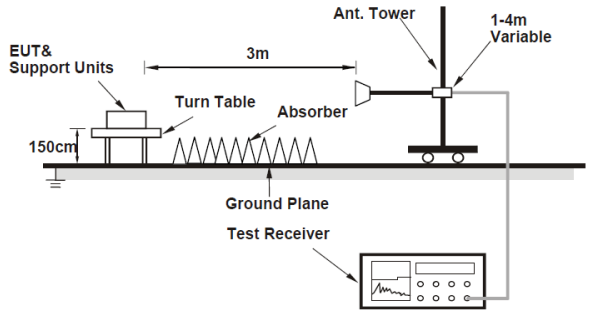
<Radiated emission below 30MHz>



<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



1. The EUT is placed on the top of a rotating table 0.8m/1.5m above the ground at a 3m semi-anechoic chamber. The table is rotated 360 degrees to determine the position of the highest radiation.
2. The EUT is set 3m away from the interference-receiving antenna, which is mounted on the top of a variable-height antenna tower.
3. The antenna is Bilog/Horn antenna depend on which frequency range uses, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT is arranged to its worst case and then the antenna is tuned to heights from 1m to 4m and the rotatable table is turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system is set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode is fall within the range of 10dB from the limit specified, the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Otherwise, the testing could be stopped and the peak values of the EUT would be reported.

NOTE:

a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection at frequency below 1GHz.
b. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1 GHz.
c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection using reduced video bandwidth (Duty cycle ≥98%) at frequency above 1GHz.
d. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1/τ Hz, where τ is minimum transmitter on time (Duty cycle <98%) for Average detection using reduced video bandwidth at frequency above 1GHz.
e. All modes of operation were investigated and the worst-case emissions are reported.

6.7.2. Test Limits

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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

NOTE:

d. The lower limit shall apply at the transition frequencies.
e. Emission level (dBuV/m) = 20 log Emission level (uV/m).
f. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

For Radiated emissions which fall out of the restricted bands must comply with the radiated emission limits specified as below table.

<table>
<tr><th colspan="2">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="2" rowspan="2">789033 D02 General UNII Test Procedures New Rules v01r03</td><td colspan="2">Field Strength at 3 m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><th>Frequency Band</th><th>Applicable To</th><th>EIRP Limit</th><th>Equivalent Field Strength at 3 m</th></tr>
<tr><td>5150~5250 MHz</td><td>15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2 (dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td>15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td>15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBµV/m) *1
PK:105.2 (dBµV/m) *2
PK: 110.8 (dBµV/m) *3
PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="4">*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

NOTE:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$E = ((1000000\sqrt{} (30P)) / 3)$ μV/m, where P is the eirp (Watts)

6.7.3. Test Data

802.11a

Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5180.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (14)

Radiated Emission (Low Channel) tabular data

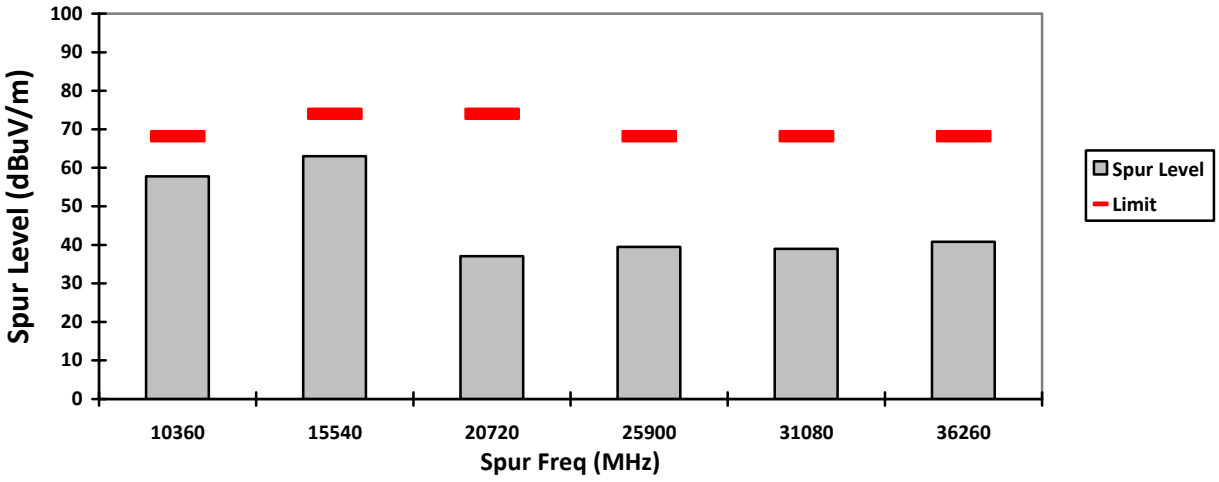
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10360.000	-	57.8086**	-	-	68.2000	-	-	10.3914	-	-
15540.000	-	63.0494**	48.8570**	-	74.0000	54.0000	-	10.9506	5.1430	-
20720.000	-	37.0745**	-	-	74.0000	-	-	36.9255	-	-
25900.000	-	39.4550**	-	-	68.2000	-	-	28.7450	-	-
31080.000	-	38.9791**	-	-	68.2000	-	-	29.2209	-	-
36260.000	-	40.7765**	-	-	68.2000	-	-	27.4235	-	-
Horizontal Radiated Emission Result										
10360.000	-	58.4176**	-	-	68.2000	-	-	9.7824	-	-
15540.000	-	63.3916**	48.8550**	-	74.0000	54.0000	-	10.6084	5.1450	-
20720.000	-	37.7153**	-	-	74.0000	-	-	36.2847	-	-
25900.000	-	37.0546**	-	-	68.2000	-	-	31.1454	-	-
31080.000	-	38.9109**	-	-	68.2000	-	-	29.2891	-	-
36260.000	-	41.6107**	-	-	68.2000	-	-	26.5893	-	-

Remarks: Pass Result	Marginal Result	Fail Result

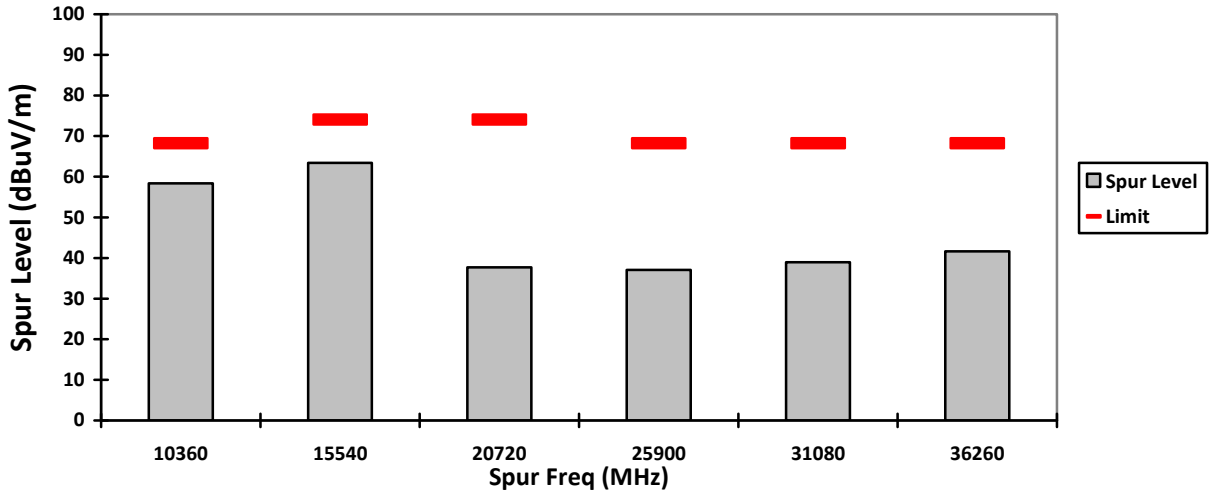
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

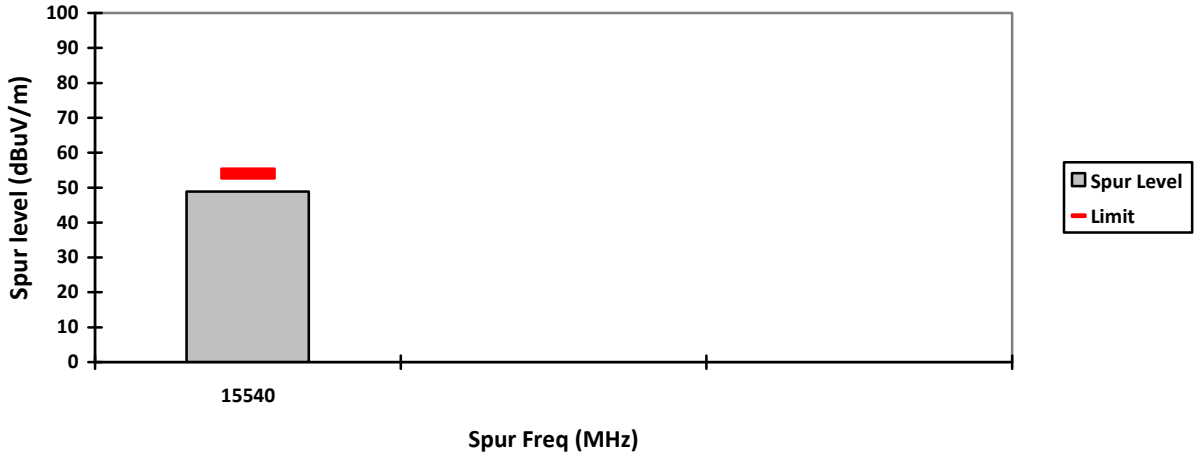
VERTICAL, PK



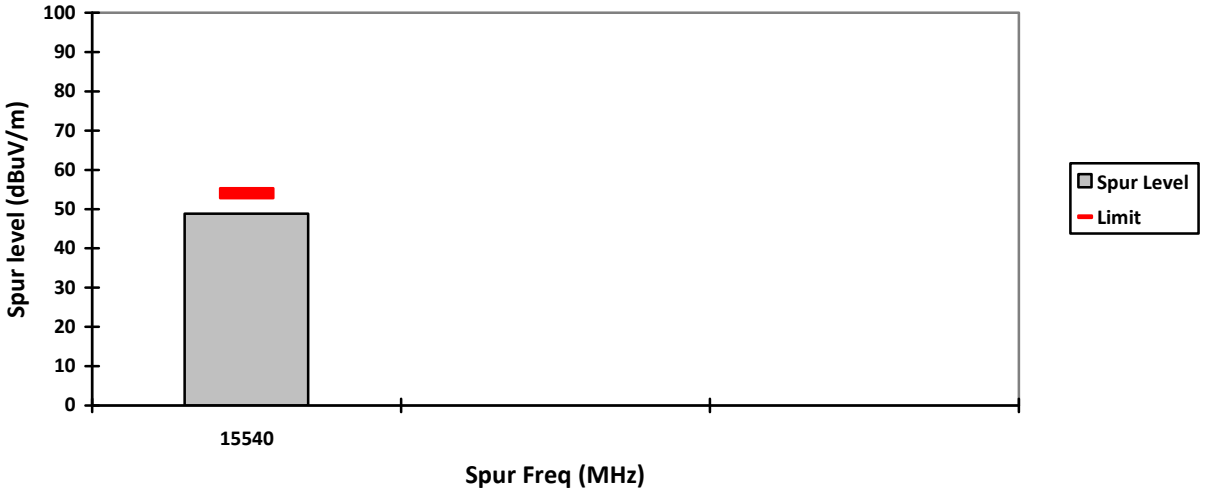
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5220.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (16)

Radiated Emission (Mid Channel) tabular data

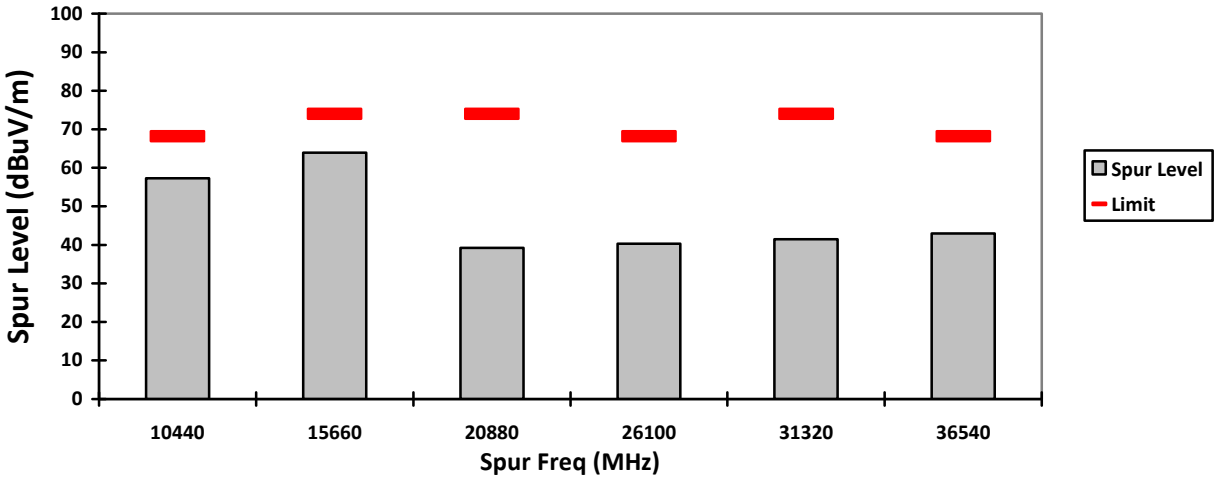
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10440.000	-	57.3243**	-	-	68.2000	-	-	10.8757	-	-
15660.000	-	63.9416**	51.7600**	-	74.0000	54.0000	-	10.0584	2.24	-
20880.000	-	39.2410**	-	-	74.0000	-	-	34.7590	-	-
26100.000	-	40.2892**	-	-	68.2000	-	-	27.9108	-	-
31320.000	-	41.4387**	-	-	74.0000	-	-	32.5613	-	-
36540.000	-	42.9406**	-	-	68.2000	-	-	25.2594	-	-
Horizontal Radiated Emission Result										
10440.000	-	58.8922**	-	-	68.2000	-	-	9.3078	-	-
15660.000	-	63.8678**	52.0212**	-	74.0000	54.0000	-	10.1322	1.9788	-
20880.000	-	38.2693**	-	-	74.0000	-	-	35.7307	-	-
26100.000	-	38.8164**	-	-	68.2000	-	-	29.3836	-	-
31320.000	-	40.8878**	-	-	74.0000	-	-	33.1122	-	-
36540.000	-	41.0441**	-	-	68.2000	-	-	27.1559	-	-

Remarks: Pass Result	Marginal Result	Fail Result

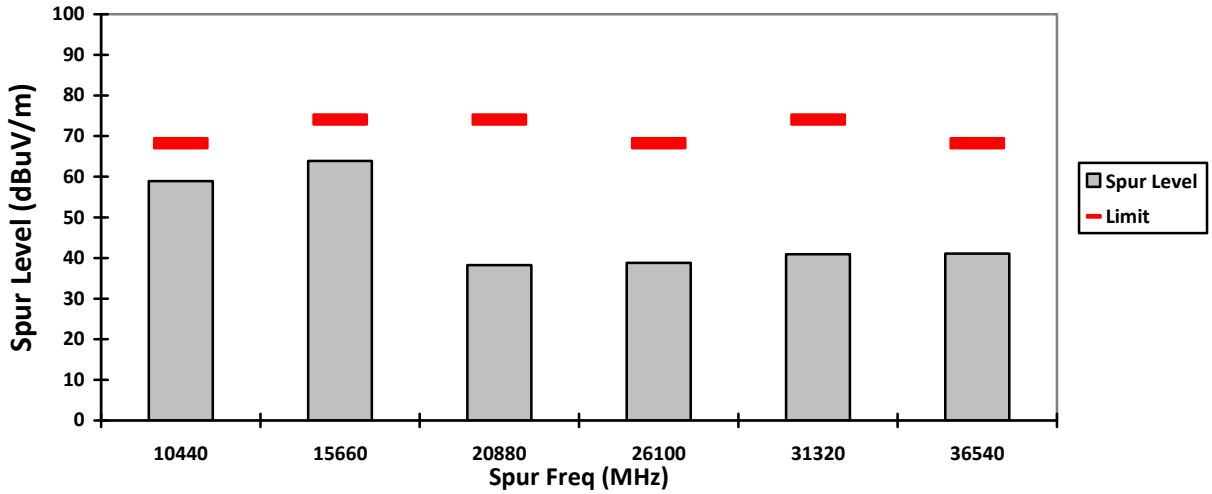
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

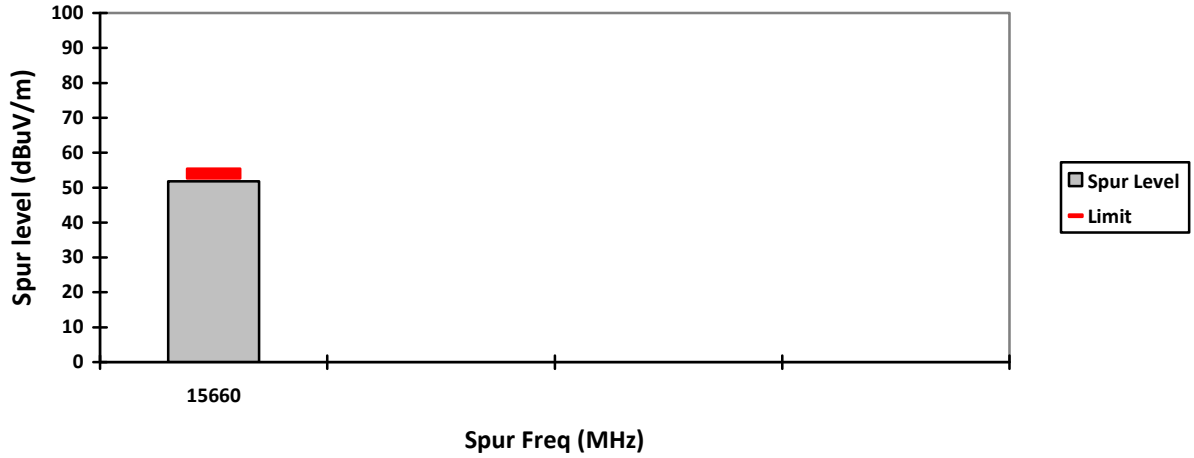
VERTICAL, PK



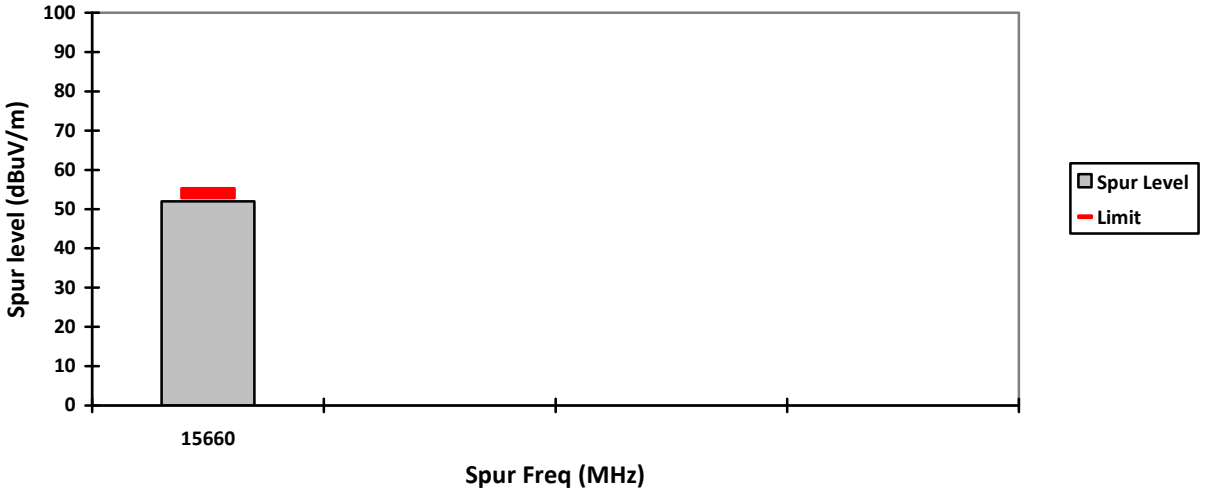
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5240.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (16)

Radiated Emission (High Channel) tabular data

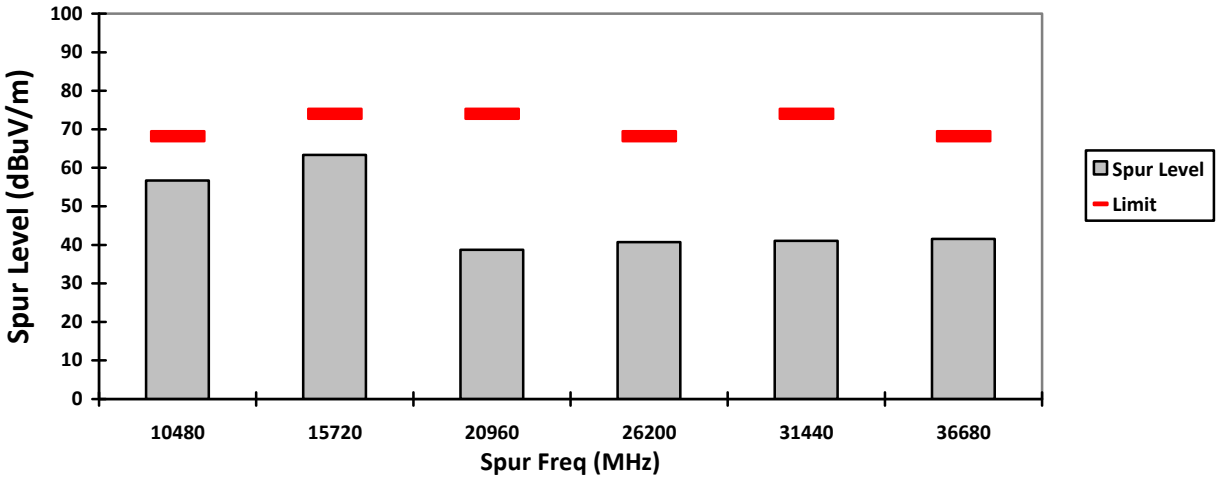
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10480.000	-	56.6811**	-	-	68.2000	-	-	11.5189	-	-
15720.000	-	63.3469**	51.9108**	-	74.0000	54.0000	-	10.6531	2.0892	-
20960.000	-	38.7438**	-	-	74.0000	-	-	35.2562	-	-
26200.000	-	40.6754**	-	-	68.2000	-	-	27.5246	-	-
31440.000	-	41.0259**	-	-	74.0000	-	-	32.9741	-	-
36680.000	-	41.5235**	-	-	68.2000	-	-	26.6765	-	-
Horizontal Radiated Emission Result										
10480.000	-	56.7738**	-	-	68.2000	-	-	11.4262	-	-
15720.000	-	63.1928**	52.0455**	-	74.0000	54.0000	-	10.8072	1.9545	-
20960.000	-	37.6564**	-	-	74.0000	-	-	36.3436	-	-
26200.000	-	38.6088**	-	-	68.2000	-	-	29.5912	-	-
31440.000	-	40.4904**	-	-	74.0000	-	-	33.5096	-	-
36680.000	-	42.4687**	-	-	68.2000	-	-	25.7313	-	-

Remarks: Pass Result	Marginal Result	Fail Result

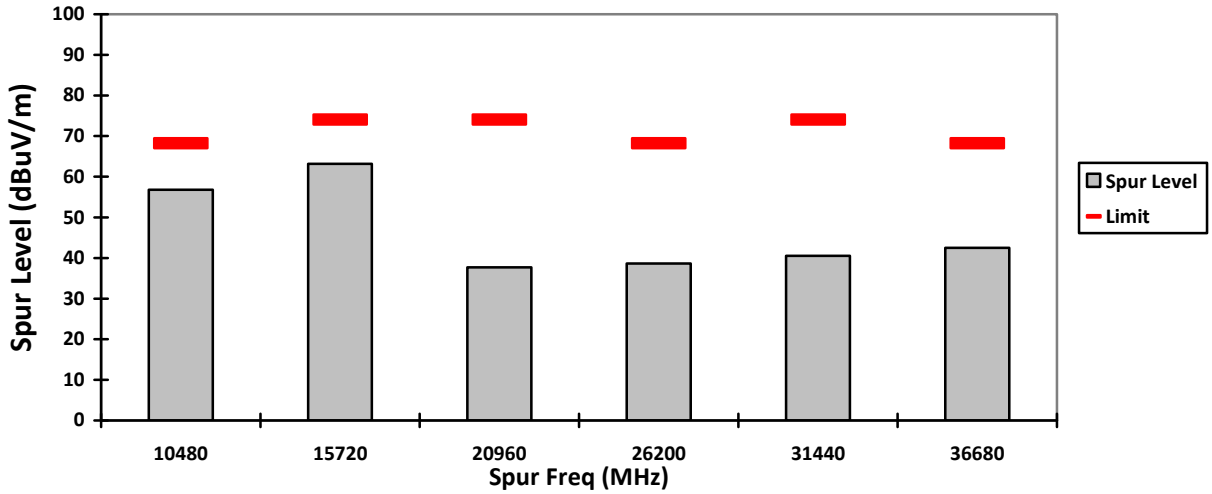
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

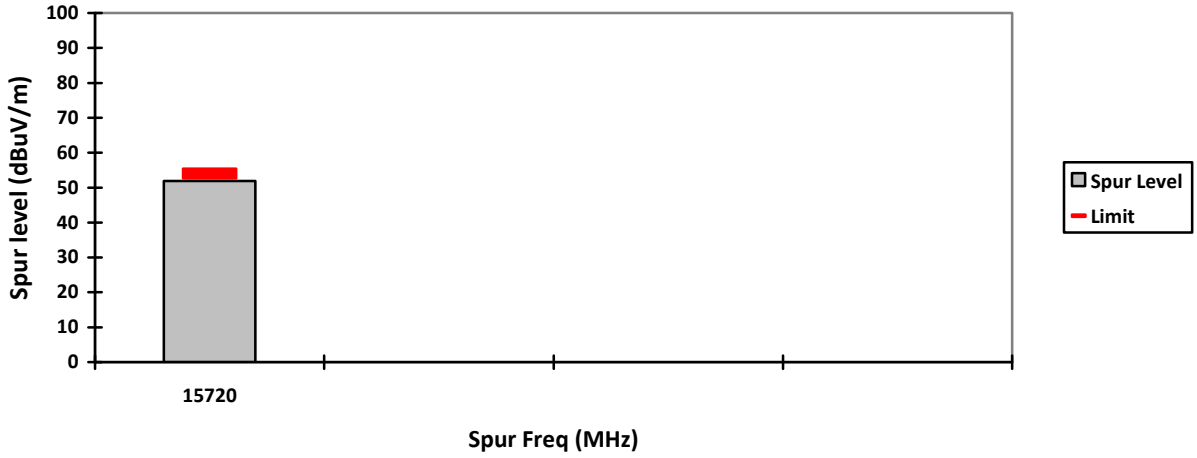
VERTICAL, PK



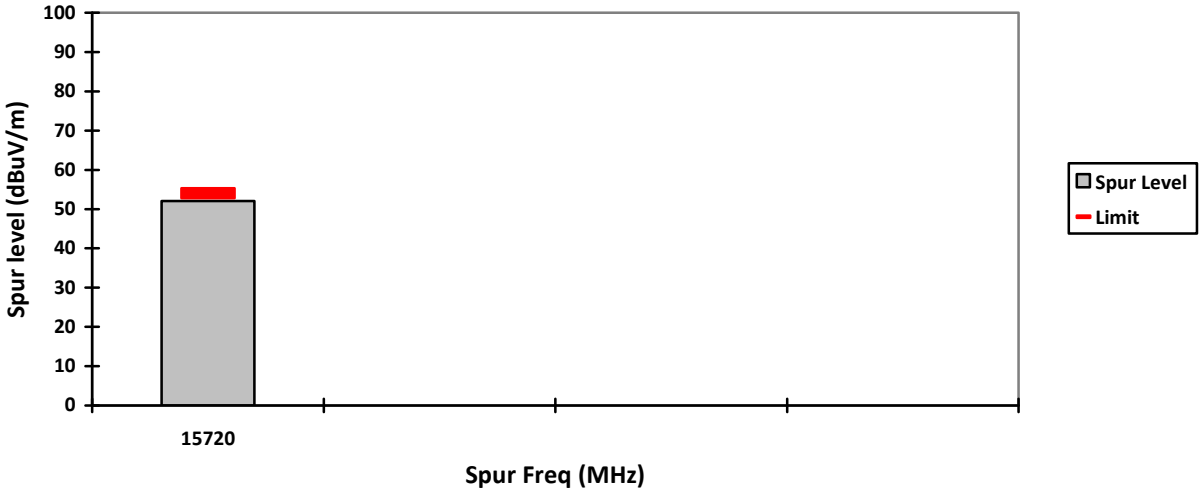
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5260.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (15)

Radiated Emission (Low Channel) tabular data

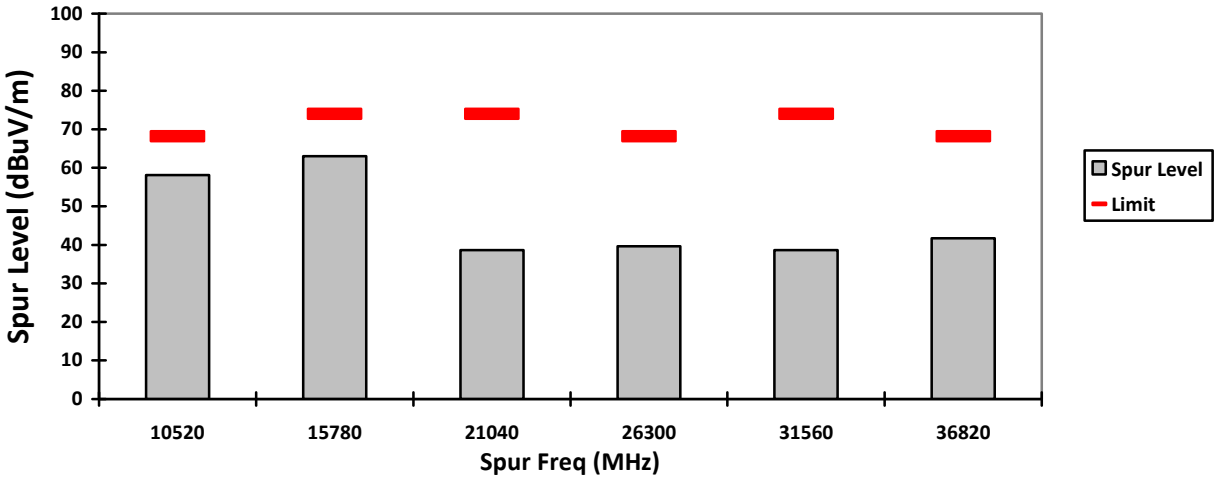
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10520	-	58.1418**	-	-	68.2000	-	-	10.0582	-	-
15780	-	63.0331**	51.6392**	-	74.0000	54.0000	-	10.9669	2.3608	-
21040	-	38.6507**	-	-	74.0000	-	-	35.3493	-	-
26300	-	39.6287**	-	-	68.2000	-	-	28.5713	-	-
31560	-	38.6694**	-	-	74.0000	-	-	35.3306	-	-
36820	-	41.7365**	-	-	68.2000	-	-	26.4635	-	-
Horizontal Radiated Emission Result										
10520	-	58.8125**	-	-	68.2000	-	-	9.3875	-	-
15780	-	62.8657**	51.1909**	-	74.0000	54.0000	-	11.1343	2.8091	-
21040	-	38.2612**	-	-	74.0000	-	-	35.7388	-	-
26300	-	38.9822**	-	-	68.2000	-	-	29.2178	-	-
31560	-	38.6392**	-	-	74.0000	-	-	35.3608	-	-
36820	-	42.0201**	-	-	68.2000	-	-	26.1799	-	-

Remarks: Pass Result	Marginal Result	Fail Result

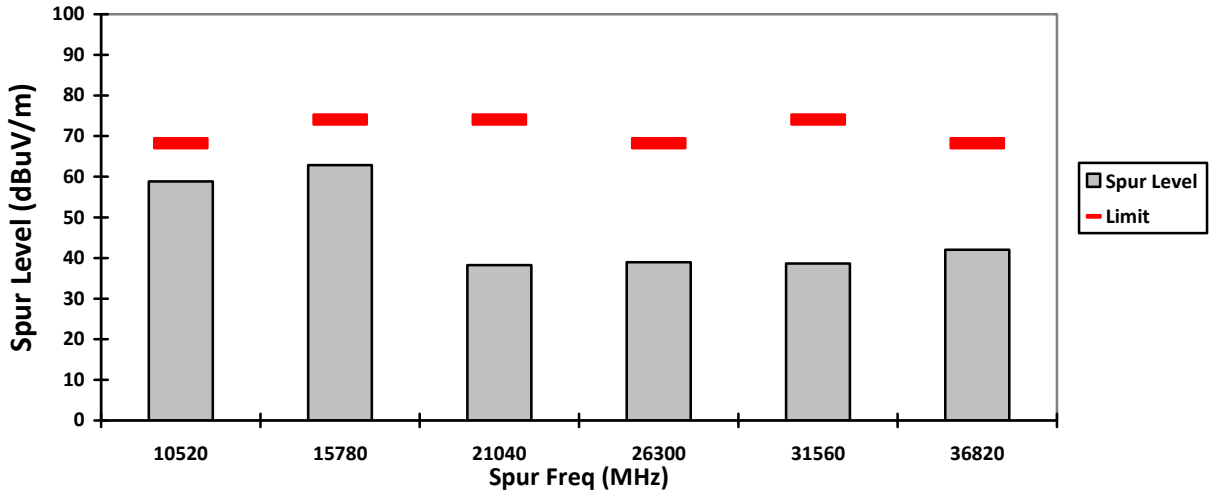
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

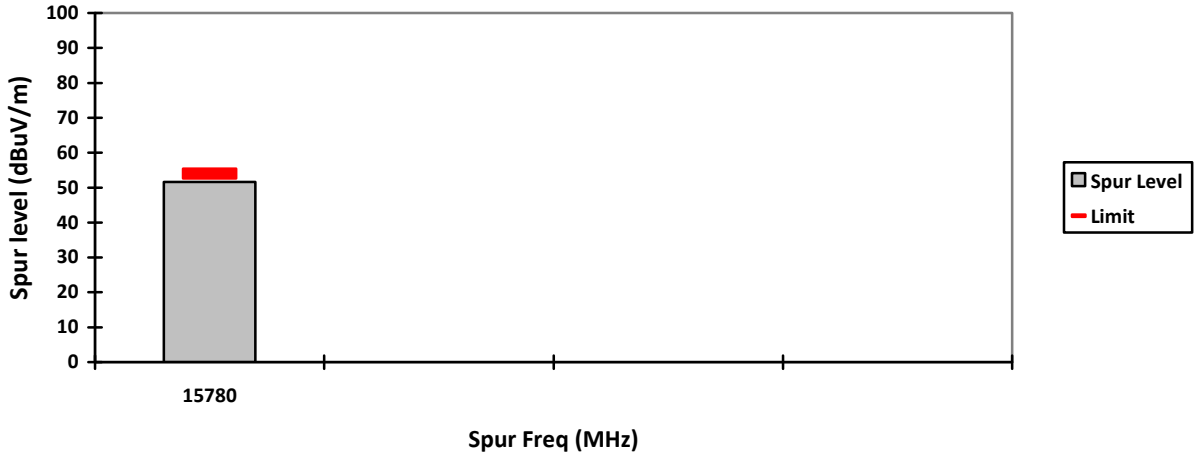
VERTICAL, PK



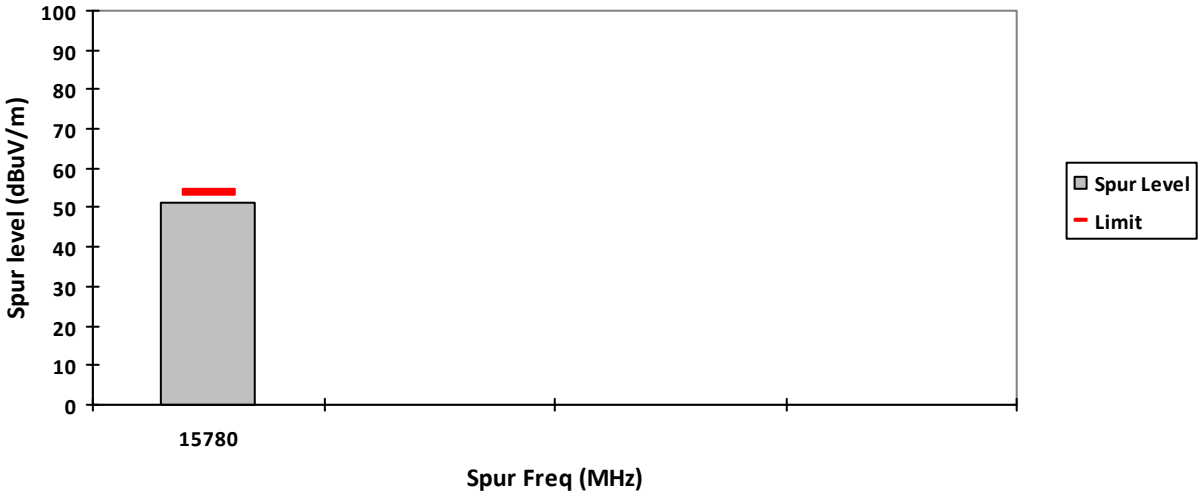
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5300.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (14)

Radiated Emission (Mid Channel) tabular data

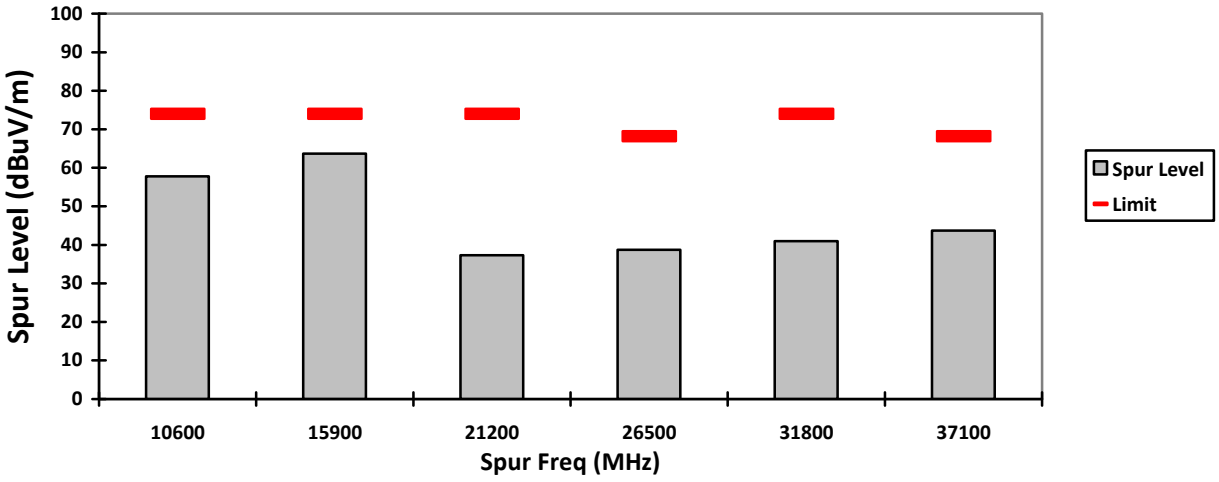
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10600	-	57.8312**	52.0853**	-	74.0000	54.0000	-	16.1688	1.9147	-
15900	-	63.6449**	52.4836**	-	74.0000	54.0000	-	10.3551	1.5164	-
21200	-	37.2968**	-	-	74.0000	-	-	36.7032	-	-
26500	-	38.6969**	-	-	68.2000	-	-	29.5031	-	-
31800	-	40.9493**	-	-	74.0000	-	-	33.0507	-	-
37100	-	43.7017**	-	-	68.2000	-	-	24.4983	-	-
Horizontal Radiated Emission Result										
10600	-	58.2224**	51.5109**	-	74.0000	54.0000	-	15.7776	2.4891	-
15900	-	63.8386**	52.6461**	-	74.0000	54.0000	-	10.1614	1.3539	-
21200	-	37.0780**	-	-	74.0000	-	-	36.9220	-	-
26500	-	39.6796**	-	-	68.2000	-	-	28.5204	-	-
31800	-	40.4267**	-	-	74.0000	-	-	33.5733	-	-
37100	-	43.8655**	-	-	68.2000	-	-	24.3345	-	-

Remarks: Pass Result	Marginal Result	Fail Result

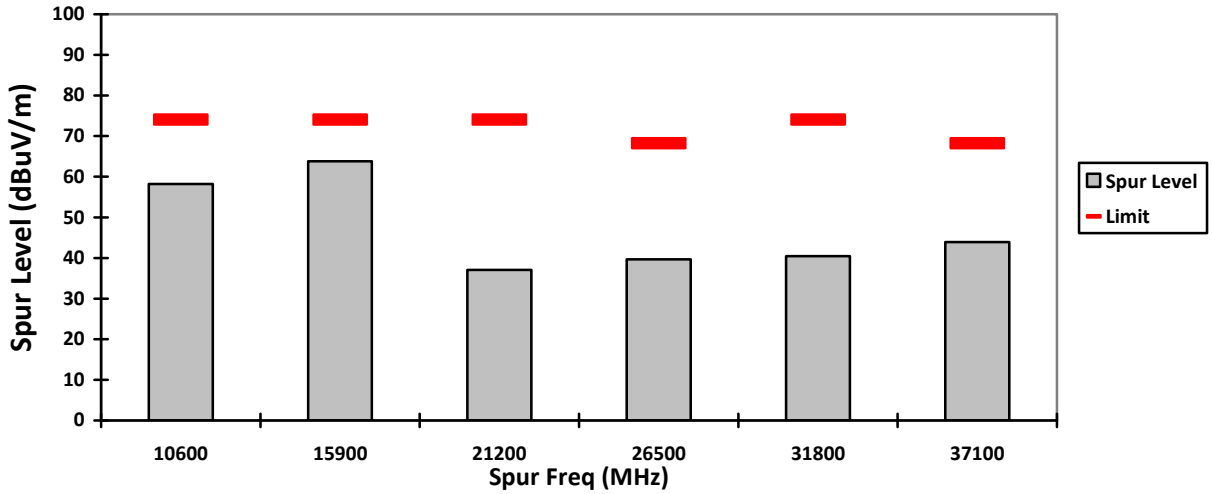
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

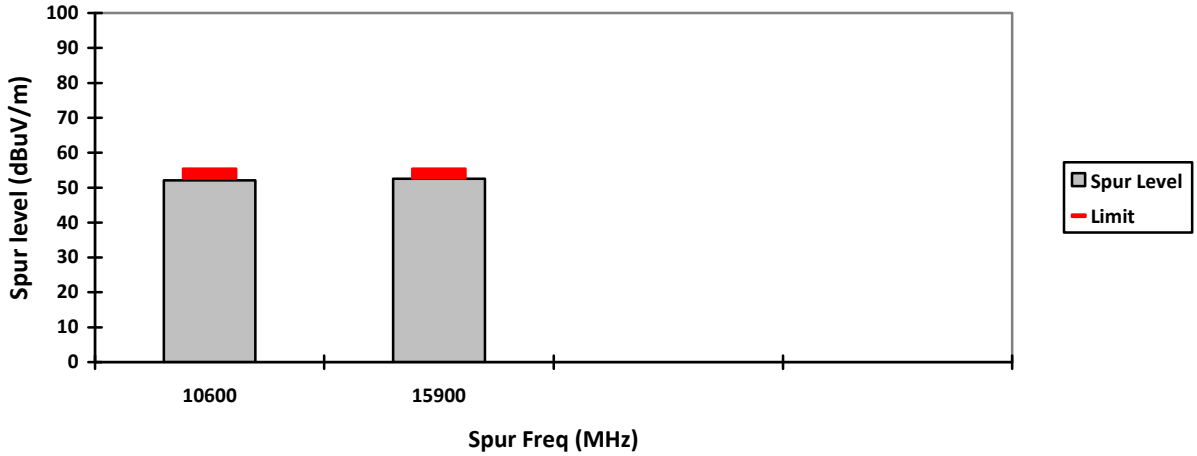
VERTICAL, PK



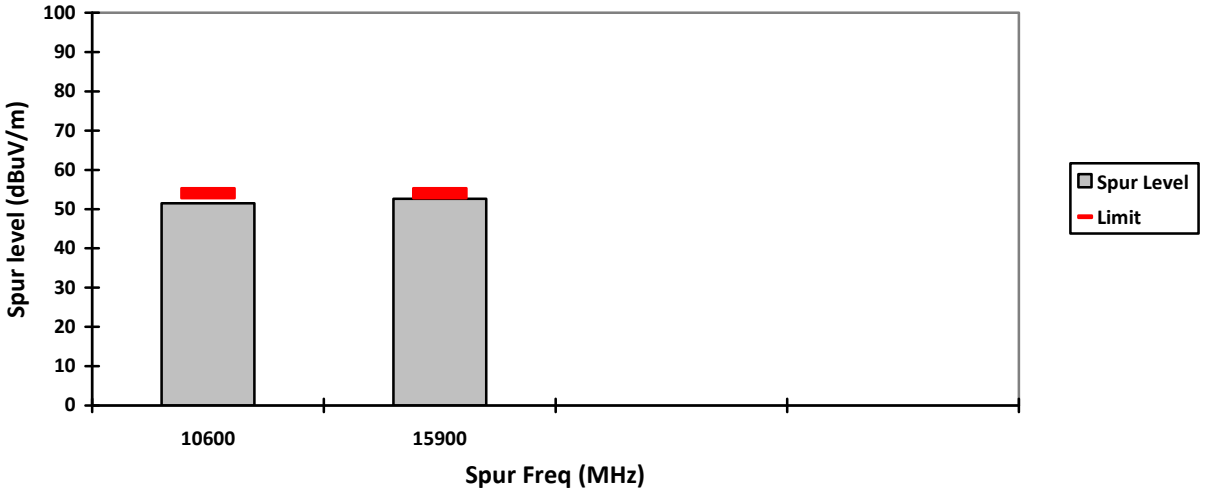
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5320.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (14)

Radiated Emission (High Channel) tabular data

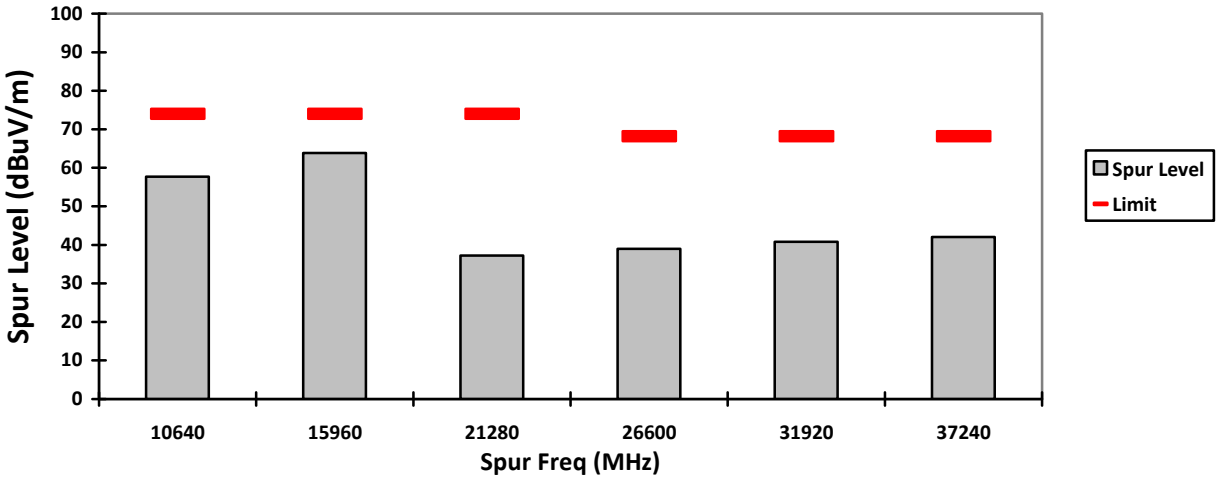
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10640	-	57.7245**	51.9485**	-	74.0000	54.0000	-	16.2755	2.0515	-
15960	-	63.8549**	52.8658**	-	74.0000	54.0000	-	10.1451	1.1342	-
21280	-	37.1926**	-	-	74.0000	-	-	36.8074	-	-
26600	-	38.9336**	-	-	68.2000	-	-	29.2664	-	-
31920	-	40.7760**	-	-	68.2000	-	-	27.4240	-	-
37240	-	42.0436**	-	-	68.2000	-	-	26.1564	-	-
Horizontal Radiated Emission Result										
10640	-	57.7939**	51.8993**	-	74.0000	54.0000	-	16.2061	2.1007	-
15960	-	63.4847**	52.8250**	-	74.0000	54.0000	-	10.5153	1.1750	-
21280	-	37.6198**	-	-	74.0000	-	-	36.3802	-	-
26600	-	39.1285**	-	-	68.2000	-	-	29.0715	-	-
31920	-	39.8589**	-	-	68.2000	-	-	28.3411	-	-
37240	-	41.8917**	-	-	68.2000	-	-	26.3083	-	-

Remarks: Pass Result	Marginal Result	Fail Result

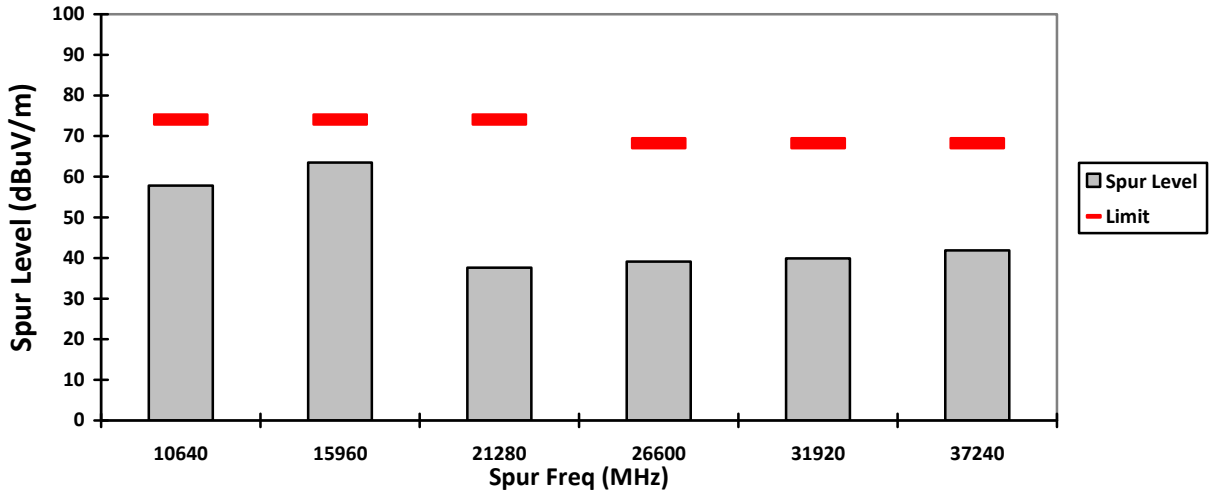
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

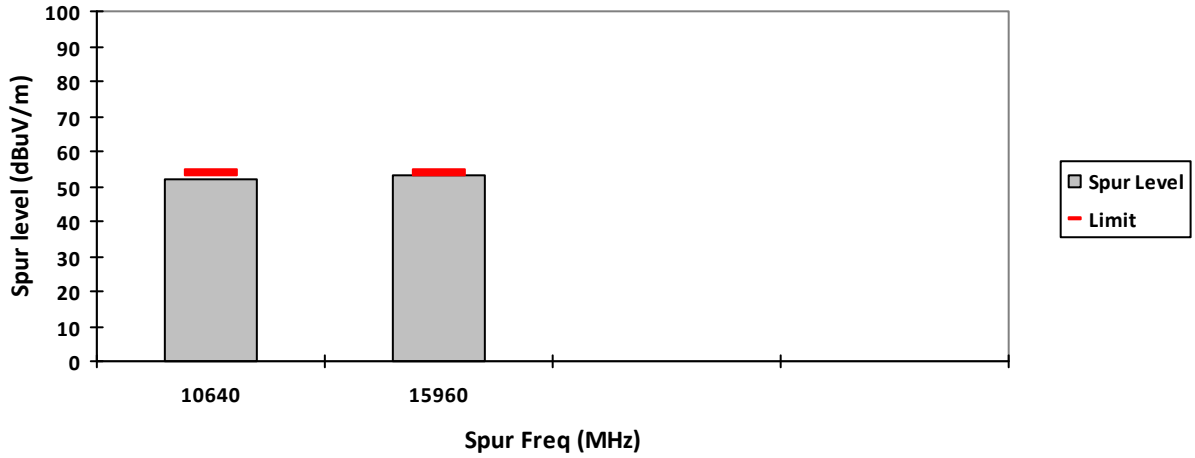
VERTICAL, PK



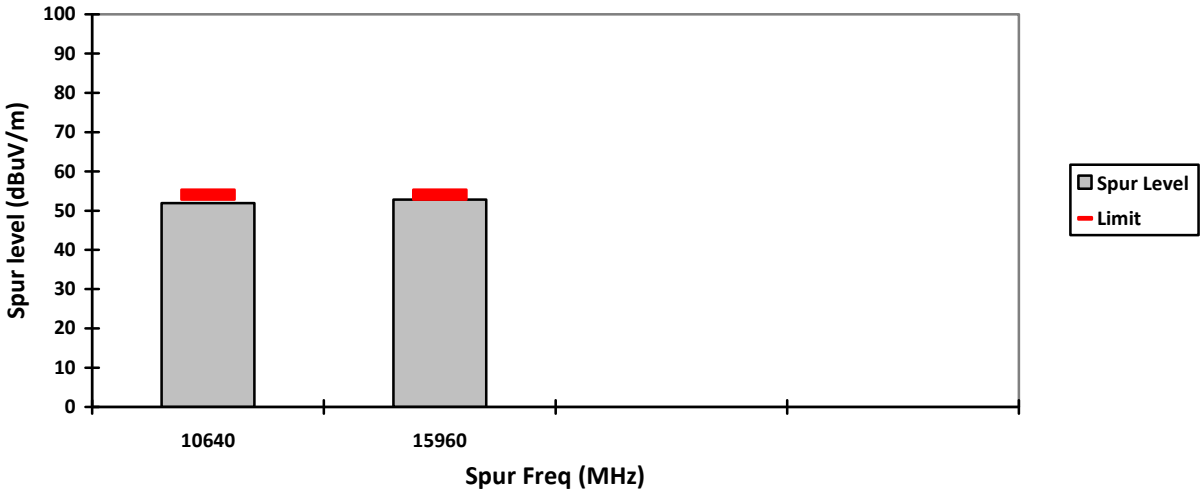
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5500.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (13)

Radiated Emission (Low Channel) tabular data

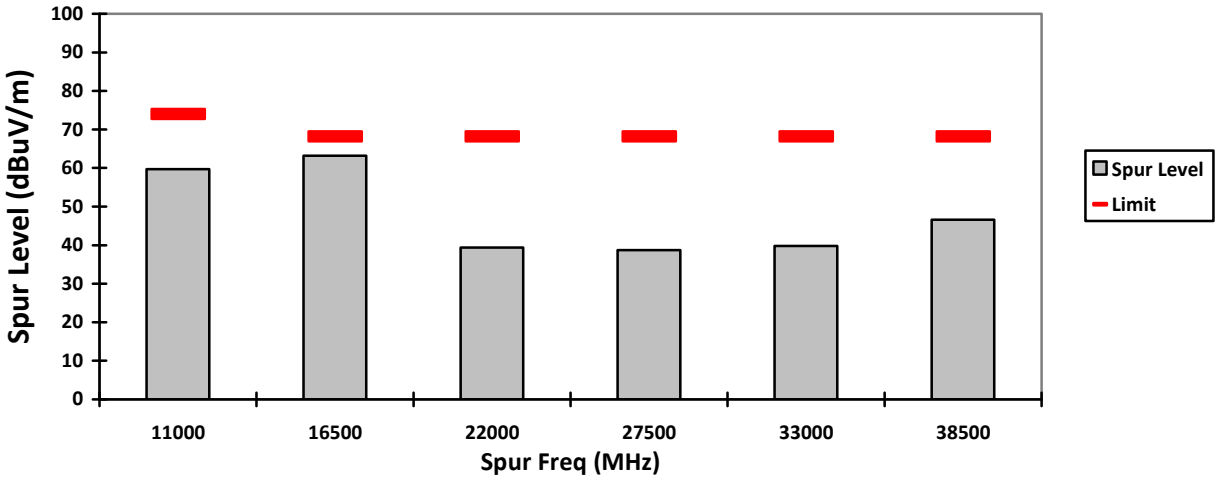
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11000	-	59.7043**	53.0509**	-	74.0000	54.0000	-	14.2957	0.9491	-
16500	-	63.1686**	-	-	68.2000	-	-	5.0314	-	-
22000	-	39.4270**	-	-	68.2000	-	-	28.7730	-	-
27500	-	38.6890**	-	-	68.2000	-	-	29.5110	-	-
33000	-	39.7679**	-	-	68.2000	-	-	28.4321	-	-
38500	-	46.6041**	-	-	68.2000	-	-	21.5959	-	-
Horizontal Radiated Emission Result										
11000	-	59.7936**	53.4310**	-	74.0000	54.0000	-	14.2064	0.5690	-
16500	-	63.1181**	-	-	68.2000	54.0000	-	5.0819	-	-
22000	-	39.9693**	-	-	68.2000	54.0000	-	28.2307	-	-
27500	-	39.2528**	-	-	68.2000	54.0000	-	28.9472	-	-
33000	-	40.4759**	-	-	68.2000	54.0000	-	27.7241	-	-
38500	-	46.6303**	-	-	68.2000	54.0000	-	21.5697	-	-

Remarks: Pass Result	Marginal Result	Fail Result

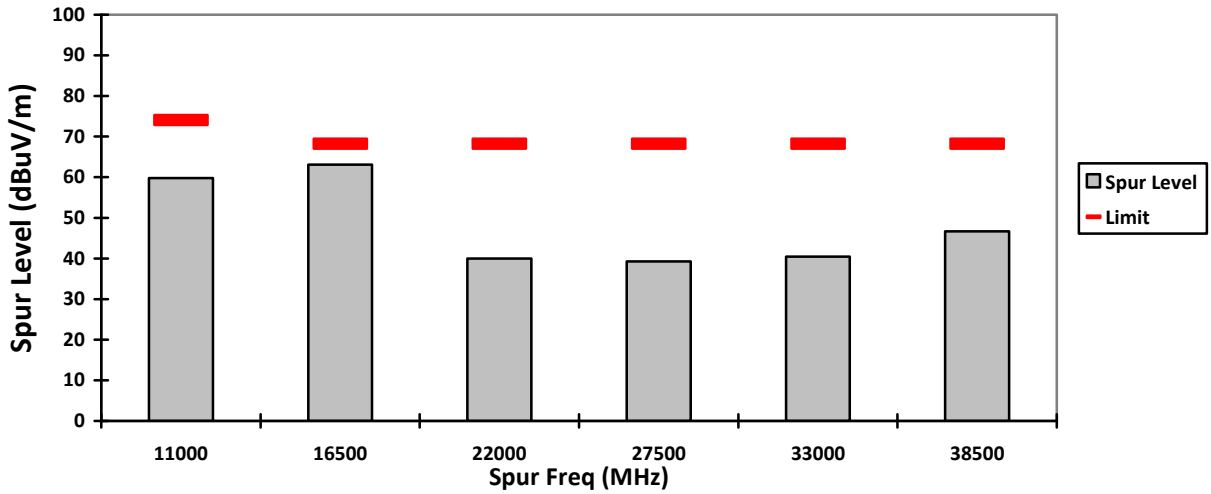
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

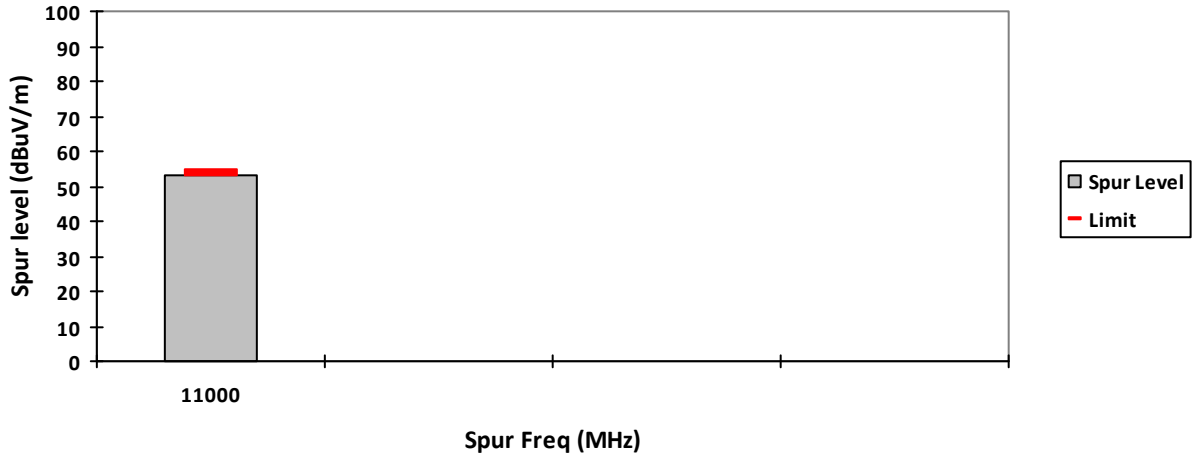
VERTICAL, PK



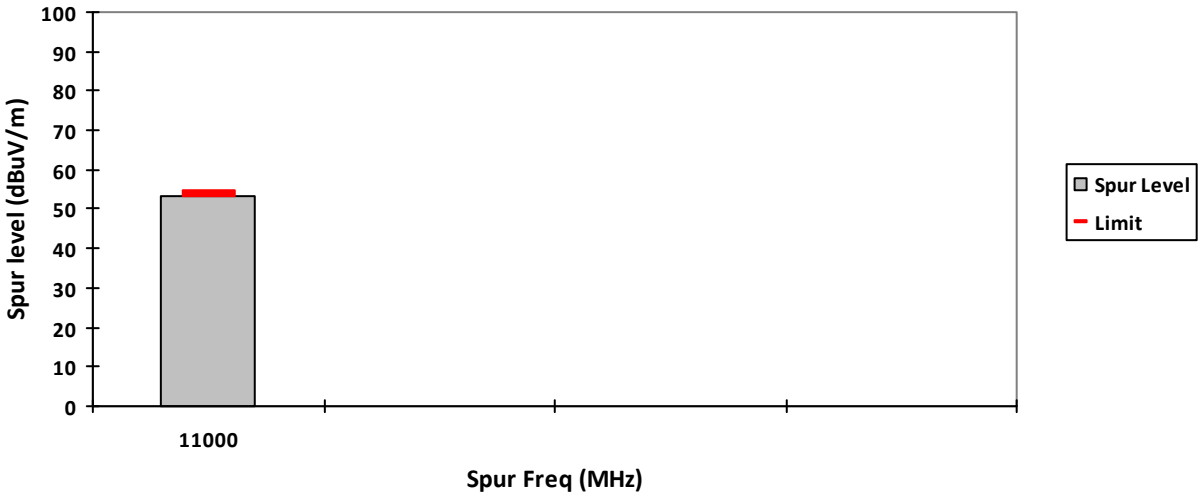
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5580.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (15)

Radiated Emission (Mid Channel) tabular data

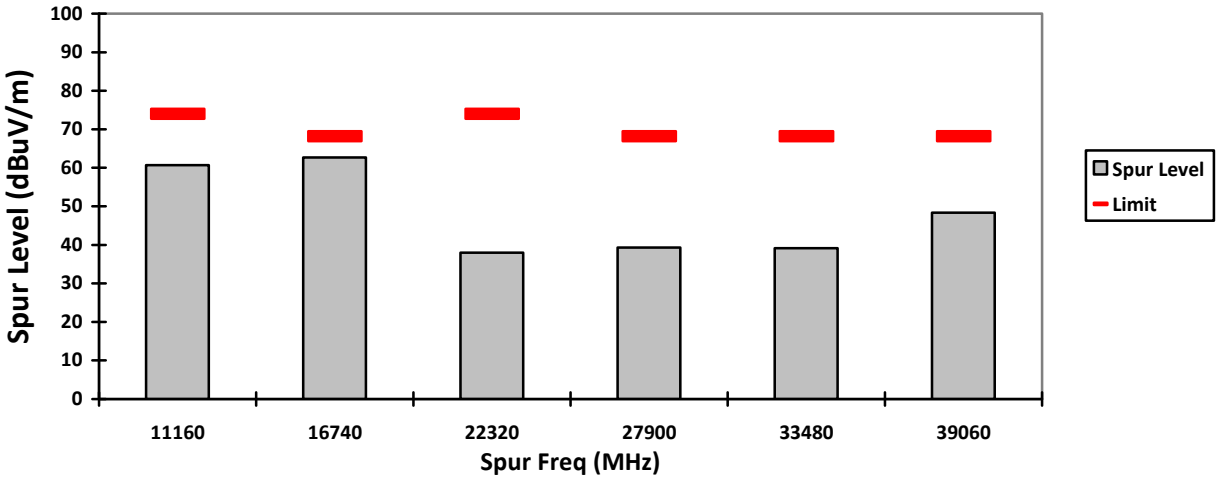
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11160	-	60.6675**	52.7922**	-	74.0000	54.0000	-	13.3325	1.2078	-
16740	-	62.6773**	-	-	68.2000	-	-	5.5227	-	-
22320	-	38.0165**	-	-	74.0000	-	-	35.9835	-	-
27900	-	39.2737**	-	-	68.2000	-	-	28.9263	-	-
33480	-	39.1749**	-	-	68.2000	-	-	29.0251	-	-
39060	-	48.3323**	-	-	68.2000	-	-	19.8677	-	-
Horizontal Radiated Emission Result										
11160	-	60.7439**	53.1213**	-	74.0000	54.0000	-	13.2561	0.8787	-
16740	-	63.1254**	-	-	68.2000	-	-	5.0746	-	-
22320	-	38.9719**	-	-	74.0000	-	-	35.0281	-	-
27900	-	40.1356**	-	-	68.2000	-	-	28.0644	-	-
33480	-	40.1290**	-	-	68.2000	-	-	28.0710	-	-
39060	-	46.5652**	-	-	68.2000	-	-	21.6348	-	-

Remarks: Pass Result	Marginal Result	Fail Result

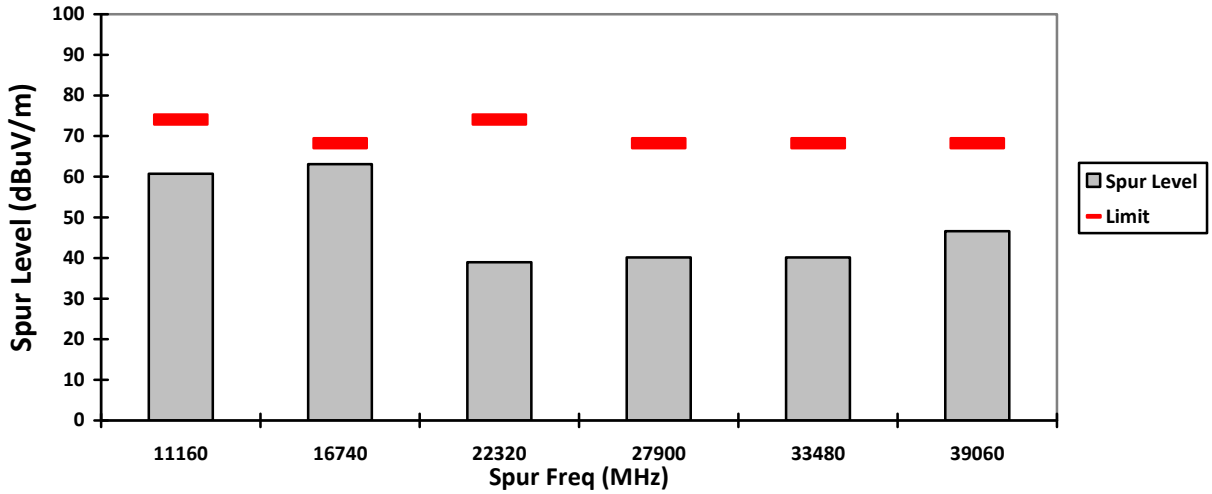
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

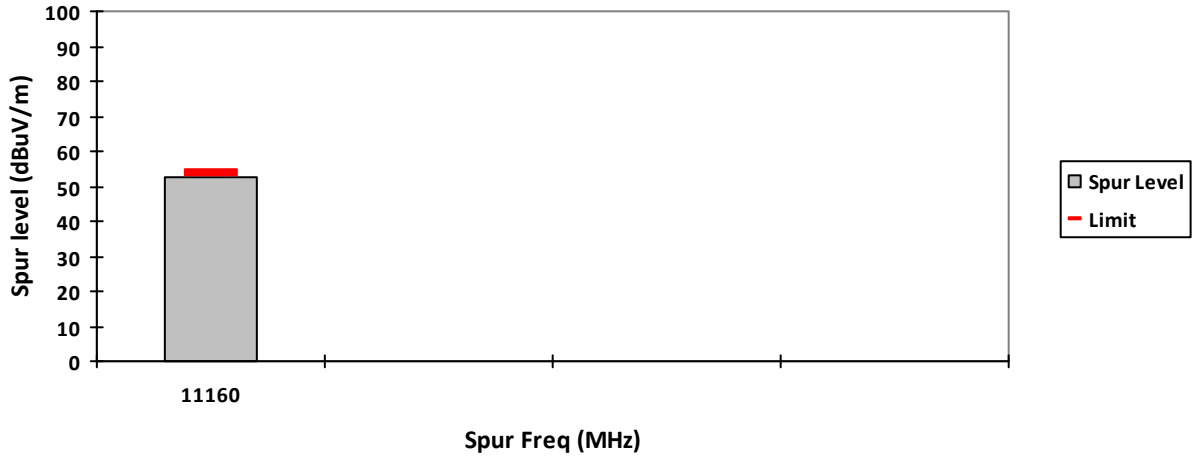
VERTICAL, PK



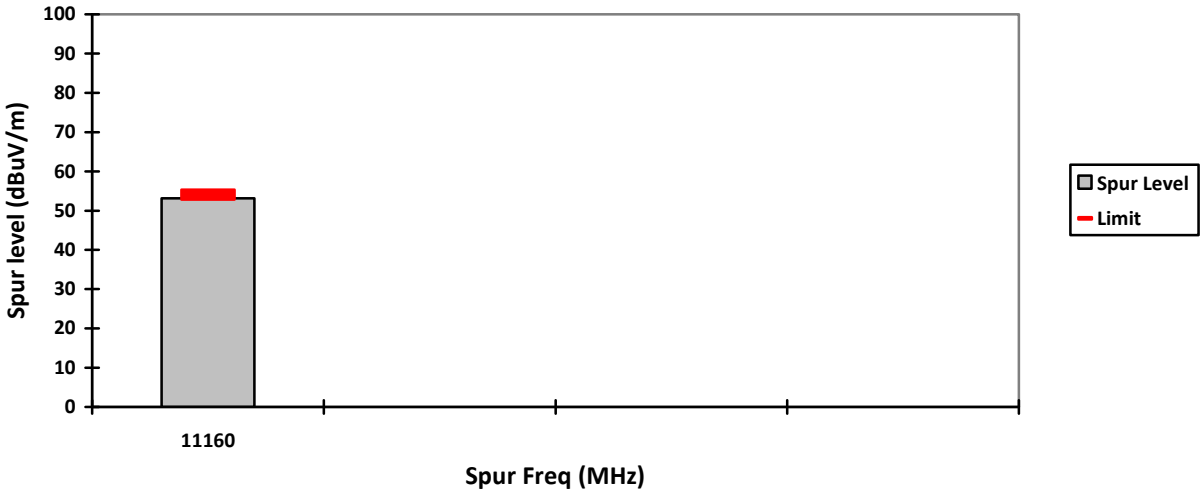
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Straddle	Test Frequency: 5720.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (16)

Radiated Emission (Straddle Channel) tabular data

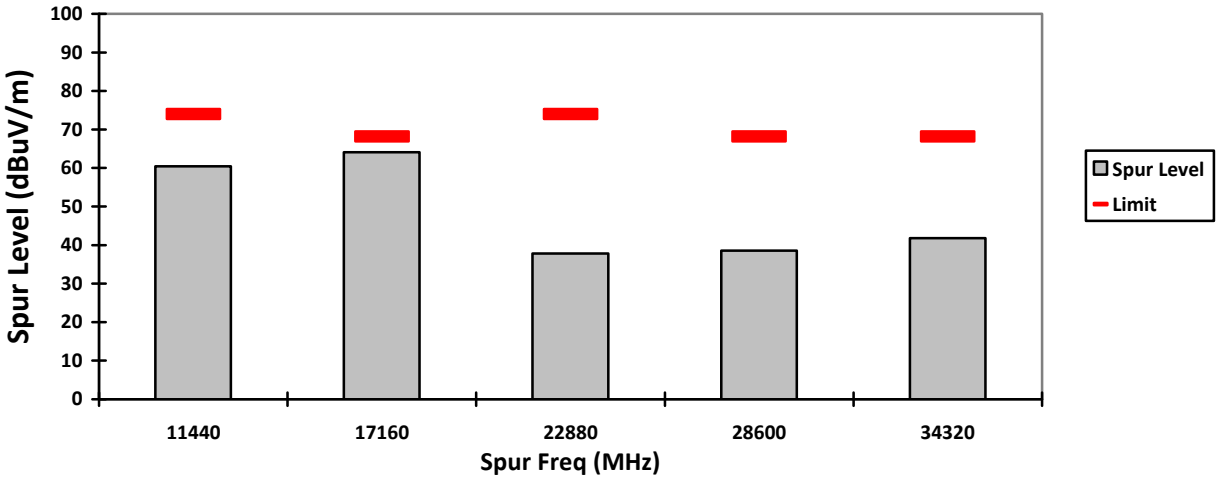
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11440	-	60.4530**	53.2702**	-	74.0000	54.0000	-	13.5470	0.7298	-
17160	-	64.1212**	-	-	68.2000	-	-	4.0788	-	-
22880	-	37.8029**	-	-	74.0000	-	-	36.1971	-	-
28600	-	38.5985**	-	-	68.2000	-	-	29.6015	-	-
34320	-	41.7979**	-	-	68.2000	-	-	26.4021	-	-
Horizontal Radiated Emission Result										
11440	-	60.5745**	52.9734**	-	74.0000	54.0000	-	13.4255	1.0266	-
17160	-	65.2543**	-	-	68.2000	-	-	2.9457	-	-
22880	-	39.4761**	-	-	74.0000	-	-	34.5239	-	-
28600	-	39.1177**	-	-	68.2000	-	-	29.0823	-	-
34320	-	42.5827**	-	-	68.2000	-	-	25.6173	-	-

Remarks: Pass Result	Marginal Result	Fail Result

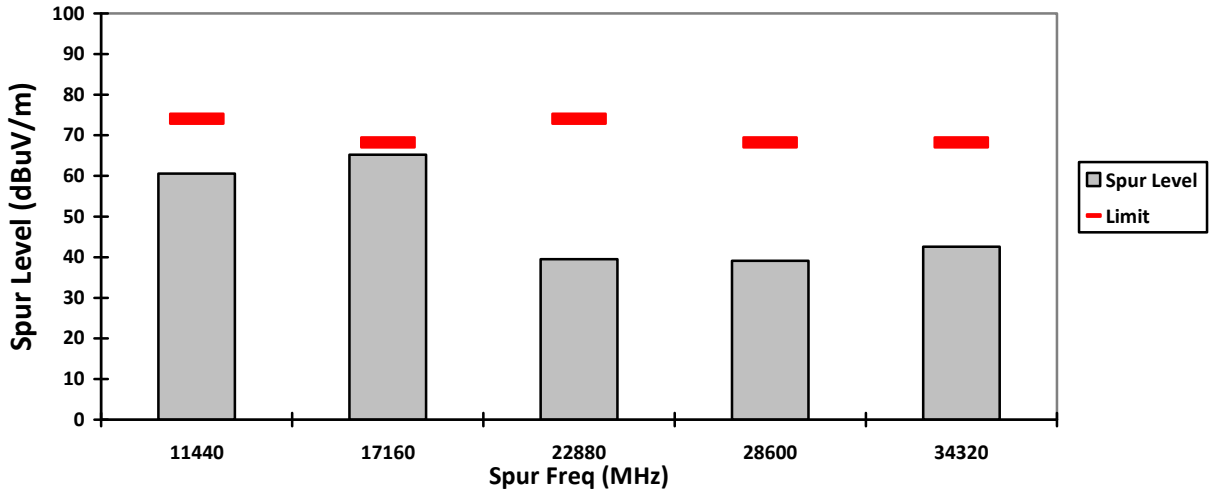
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

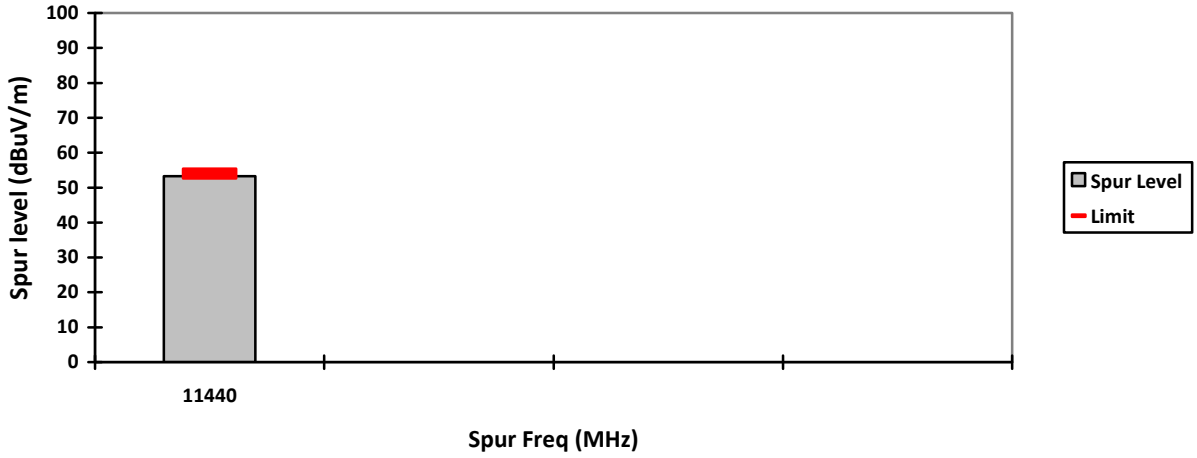
VERTICAL, PK



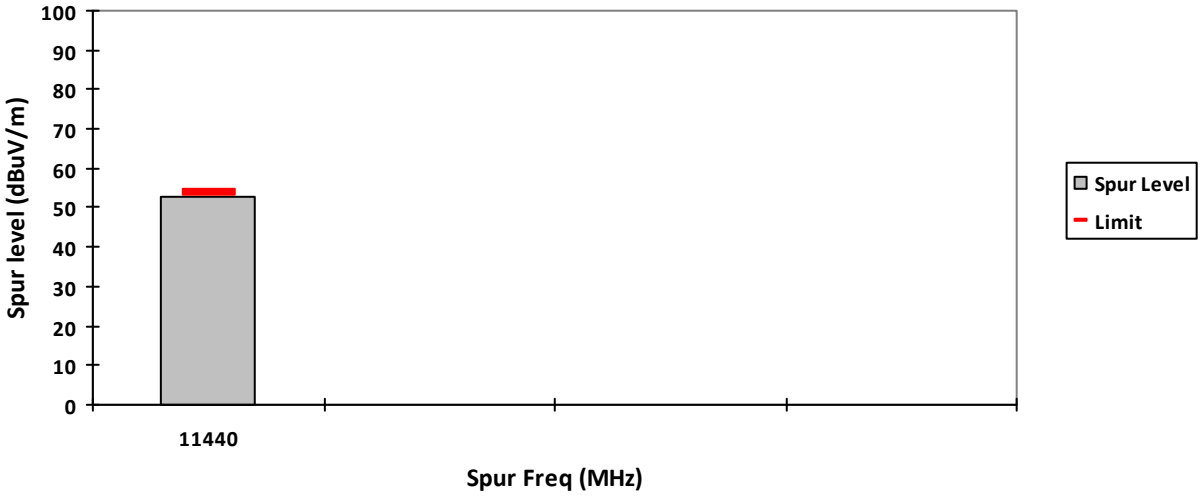
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5745.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (15)

Radiated Emission (Low Channel) tabular data

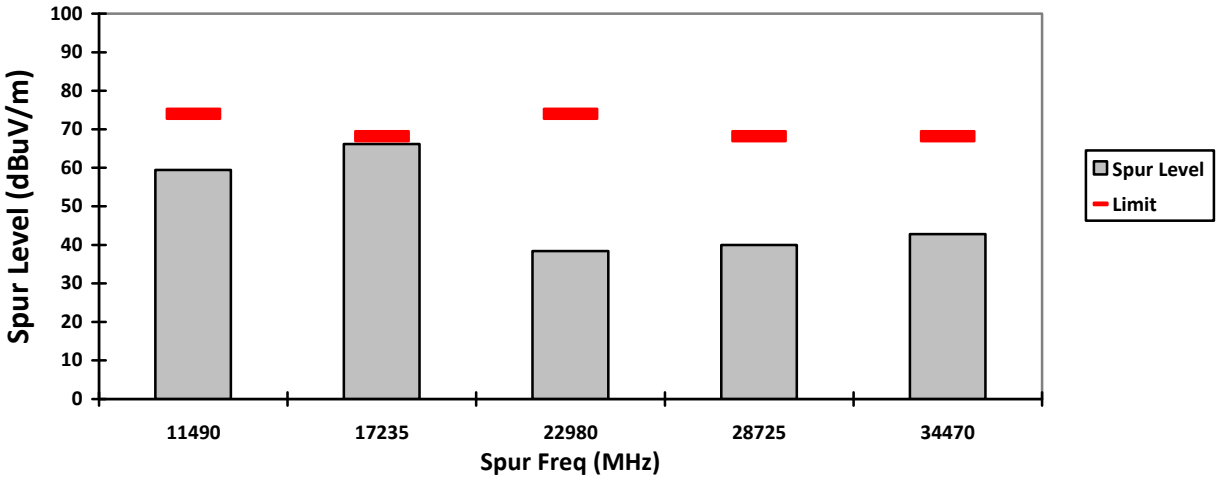
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11490	-	59.4756**	52.2817**	-	74.0000	54.0000	-	14.5244	1.7183	-
17235	-	66.1694**	-	-	68.2000	-	-	2.0306	-	-
22980	-	38.4293**	-	-	74.0000	-	-	35.5707	-	-
28725	-	40.0048**	-	-	68.2000	-	-	28.1952	-	-
34470	-	42.8184**	-	-	68.2000	-	-	25.3816	-	-
Horizontal Radiated Emission Result										
11490	-	59.4224**	52.2338**	-	74.0000	54.0000	-	14.5776	1.7662	-
17235	-	65.8762**	-	-	68.2000	-	-	2.3238	-	-
22980	-	37.5556**	-	-	74.0000	-	-	36.4444	-	-
28725	-	40.0211**	-	-	68.2000	-	-	28.1789	-	-
34470	-	43.2108**	-	-	68.2000	-	-	24.9892	-	-

Remarks: Pass Result	Marginal Result	Fail Result

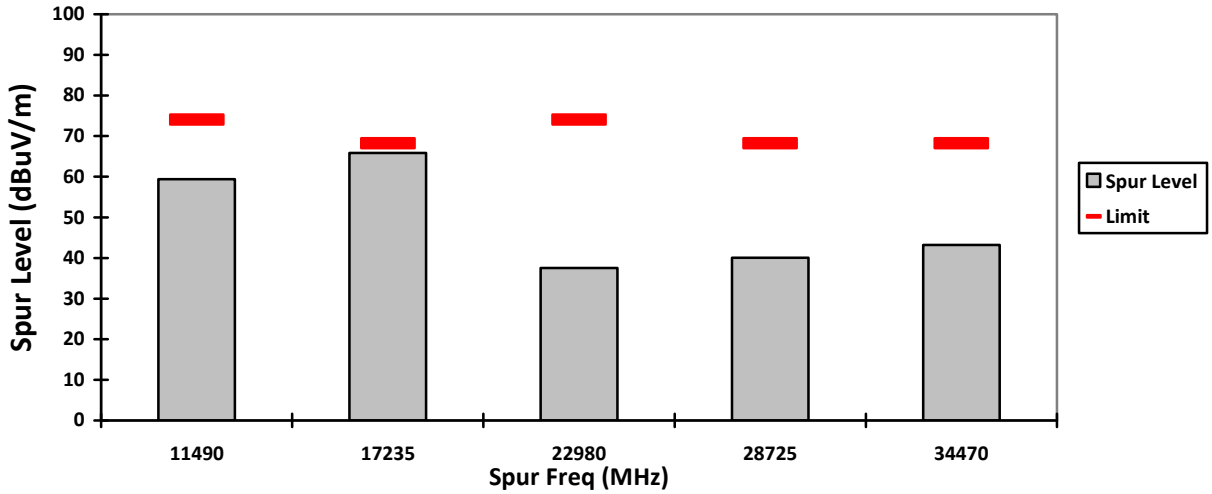
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

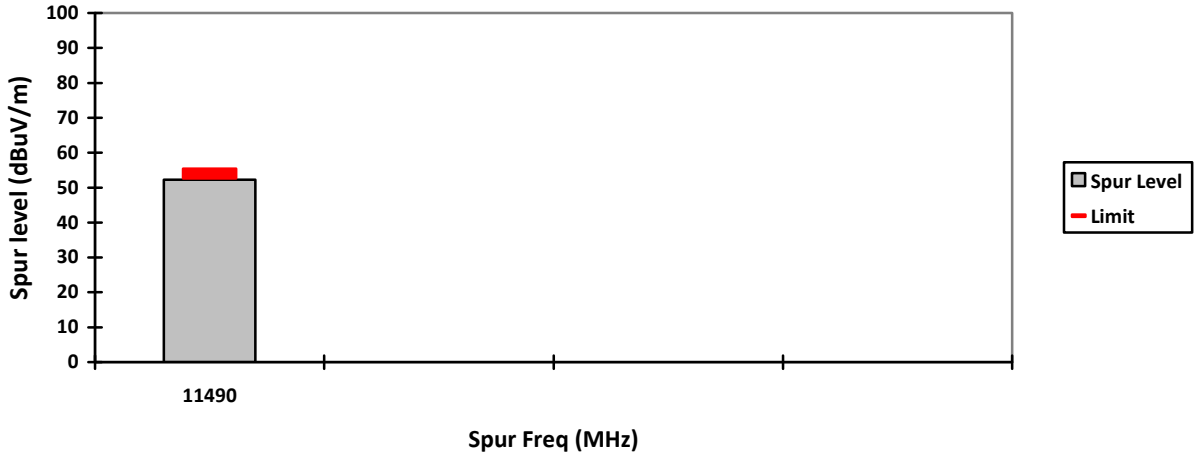
VERTICAL, PK



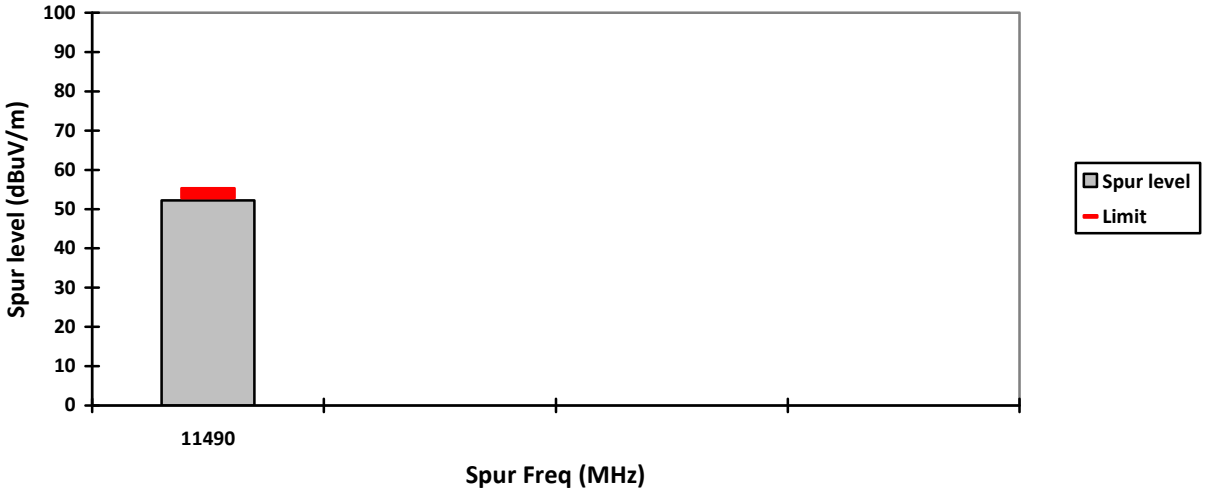
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5785.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (15)

Radiated Emission (Mid Channel) tabular data

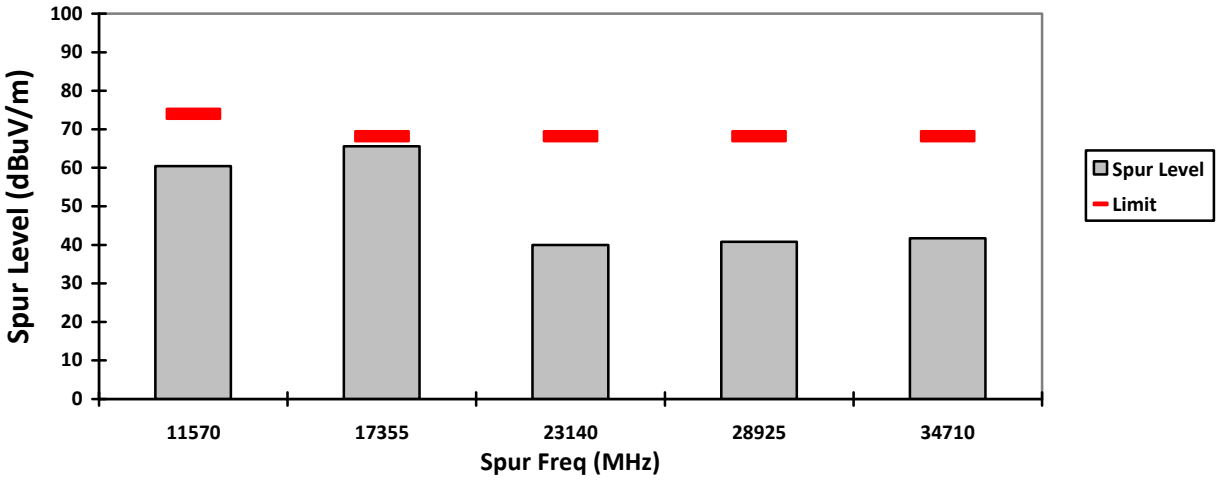
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11570	-	60.4419**	52.9574**	-	74.0000	54.0000	-	13.5581	1.0426	-
17355	-	65.5731**	-	-	68.2000	-	-	2.6269	-	-
23140	-	39.9277**	-	-	68.2000	-	-	28.2723	-	-
28925	-	40.7587**	-	-	68.2000	-	-	27.4413	-	-
34710	-	41.7066**	-	-	68.2000	-	-	26.4934	-	-
Horizontal Radiated Emission Result										
11570	-	60.0715**	53.3432**	-	74.0000	54.0000	-	13.9285	0.6568	-
17355	-	64.8872**	-	-	68.2000	-	-	3.3128	-	-
23140	-	38.8459**	-	-	68.2000	-	-	29.3541	-	-
28925	-	40.0856**	-	-	68.2000	-	-	28.1144	-	-
34710	-	41.2317**	-	-	68.2000	-	-	26.9683	-	-

Remarks: Pass Result	Marginal Result	Fail Result

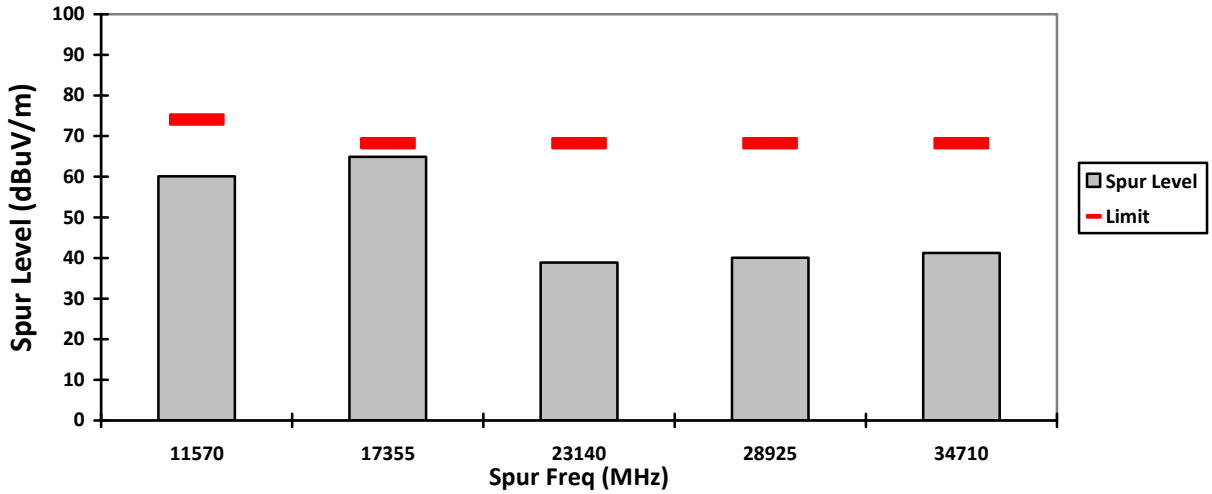
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

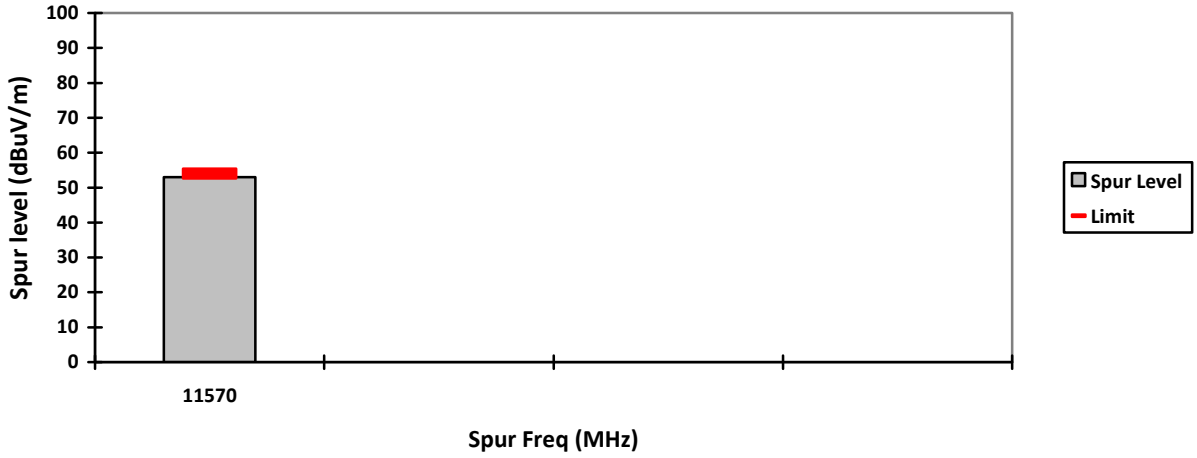
VERTICAL, PK



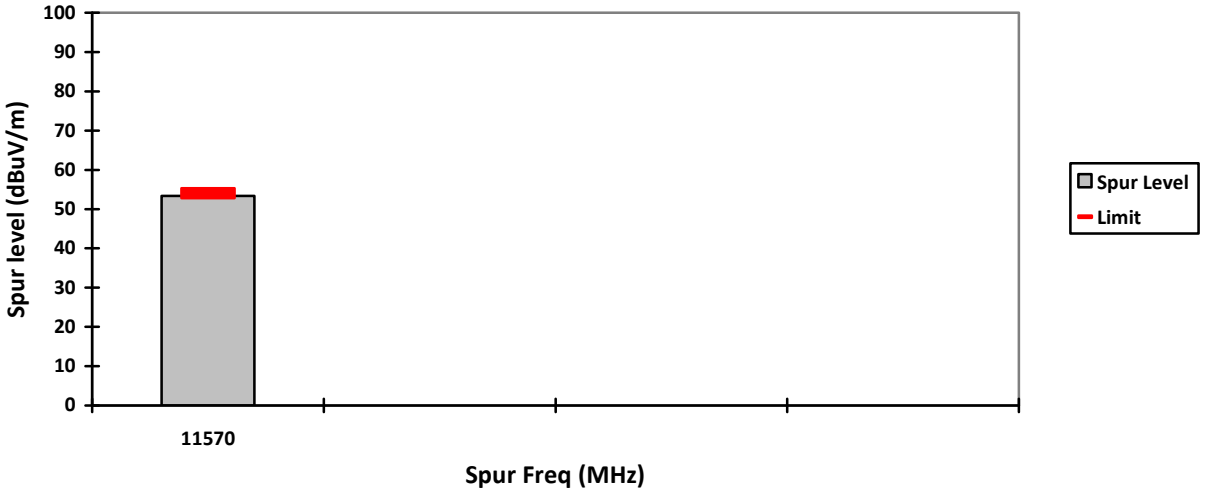
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5825.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11a20	Softpot power (12)

Radiated Emission (High Channel) tabular data

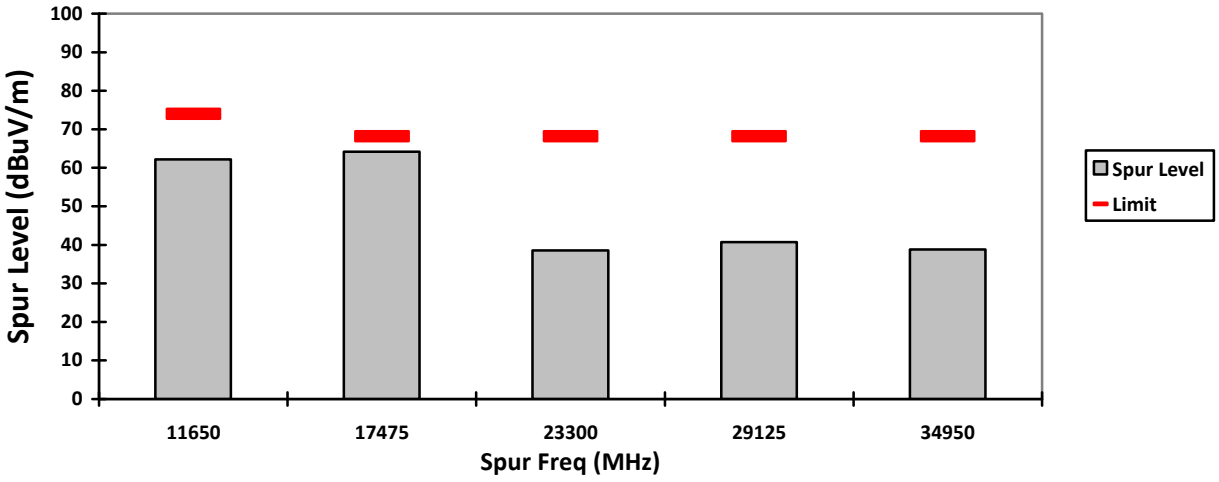
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11650	-	62.1904**	53.3672**	-	74.0000	54.0000	-	11.8096	0.6328	-
17475	-	64.1640**	-	-	68.2000	-	-	4.0360	-	-
23300	-	38.5447**	-	-	68.2000	-	-	29.6553	-	-
29125	-	40.6723**	-	-	68.2000	-	-	27.5277	-	-
34950	-	38.7688**	-	-	68.2000	-	-	29.4312	-	-
Horizontal Radiated Emission Result										
11650	-	62.4998**	53.2335**	-	74.0000	54.0000	-	11.5002	0.7665	-
17475	-	64.8406**	-	-	68.2000	-	-	3.3594	-	-
23300	-	37.9180**	-	-	68.2000	-	-	30.2820	-	-
29125	-	39.2018**	-	-	68.2000	-	-	28.9982	-	-
34950	-	39.2839**	-	-	68.2000	-	-	28.9161	-	-

Remarks: Pass Result	Marginal Result	Fail Result

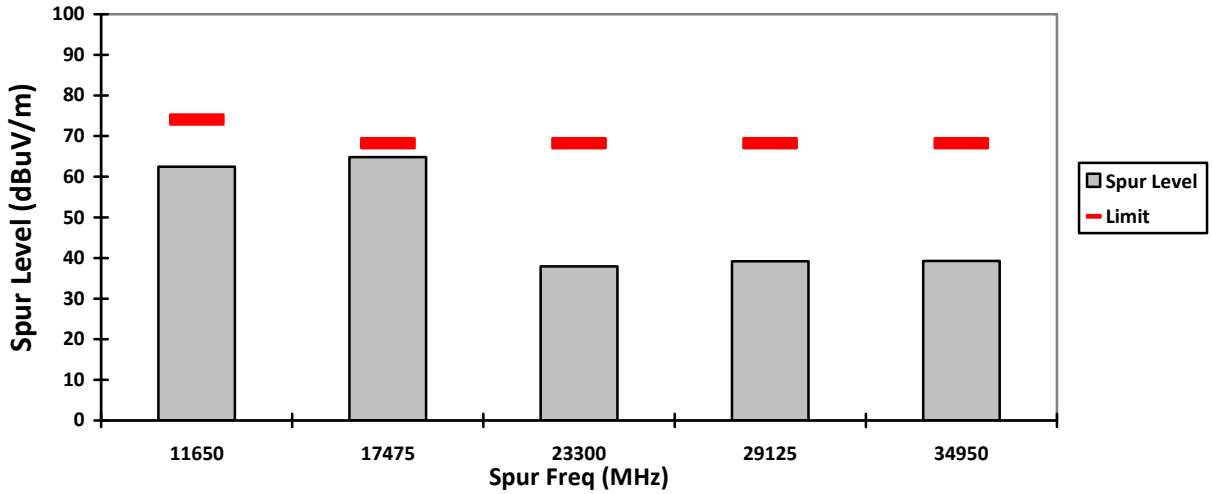
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

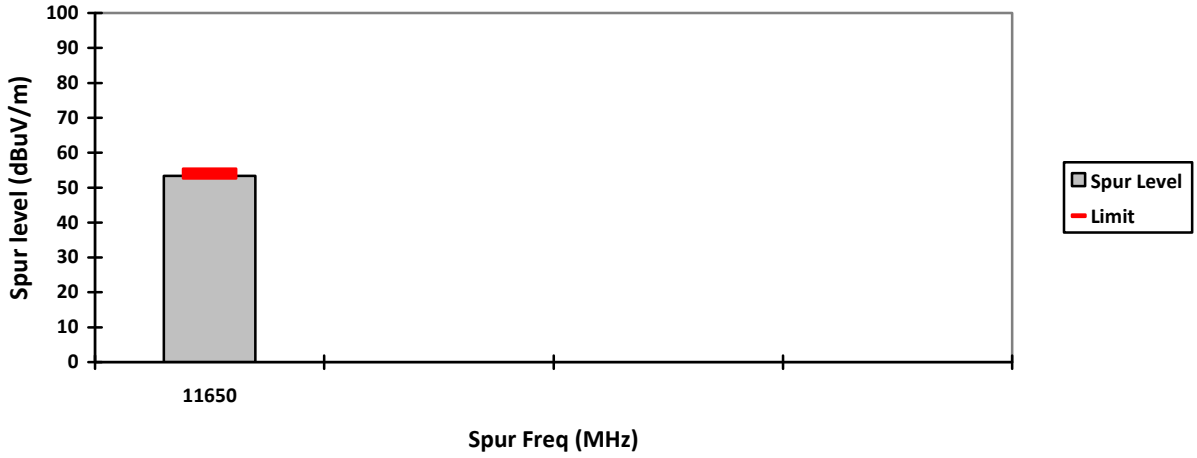
VERTICAL, PK



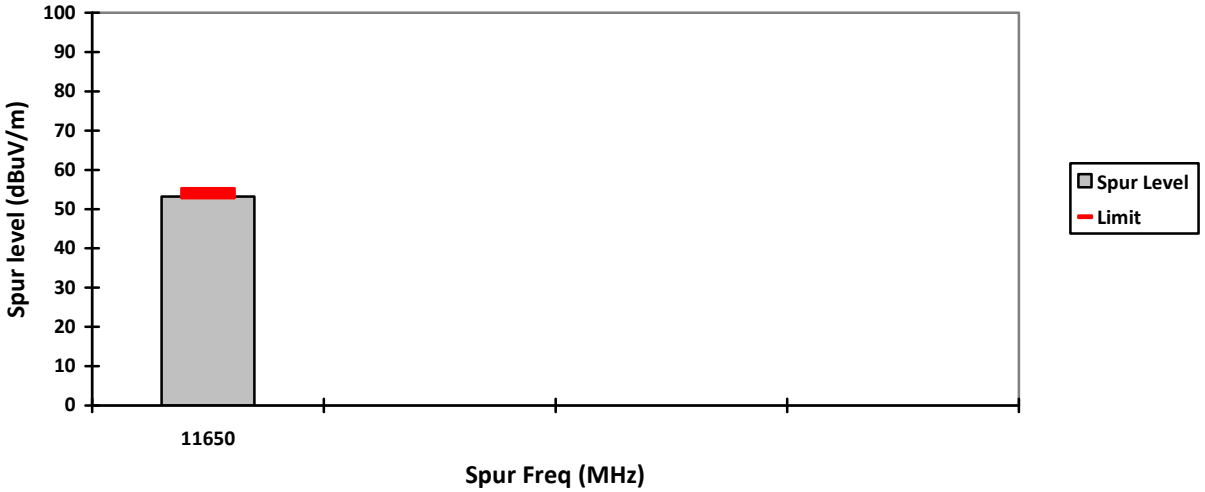
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



802.11n (HT20)

Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5180.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

Radiated Emission (Low Channel) tabular data

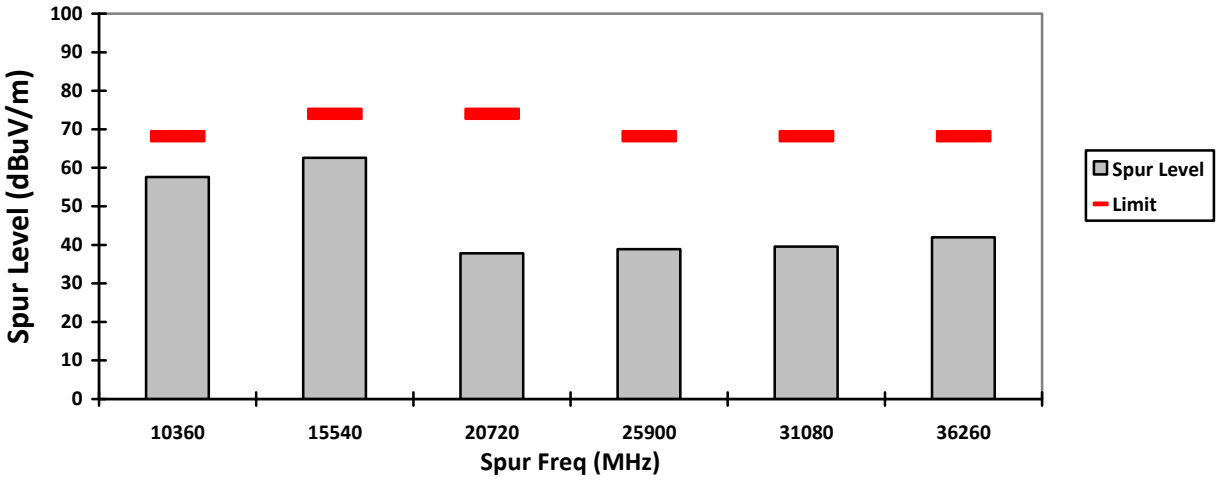
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10360	-	57.6449**	-	-	68.2000	-	-	10.5551	-	-
15540	-	62.5971**	52.4110**	-	74.0000	54.0000	-	11.4029	1.5890	-
20720	-	37.8455**	-	-	74.0000	-	-	36.1545	-	-
25900	-	38.8549**	-	-	68.2000	-	-	29.3451	-	-
31080	-	39.5818**	-	-	68.2000	-	-	28.6182	-	-
36260	-	41.9856**	-	-	68.2000	-	-	26.2144	-	-
Horizontal Radiated Emission Result										
10360	-	57.8674**	-	-	68.2000	-	-	10.3326	-	-
15540	-	62.7025**	51.9731**	-	74.0000	54.0000	-	11.2975	2.0269	-
20720	-	37.2353**	-	-	74.0000	-	-	36.7647	-	-
25900	-	38.3460**	-	-	68.2000	-	-	29.8540	-	-
31080	-	39.8084**	-	-	68.2000	-	-	28.3916	-	-
36260	-	42.5950**	-	-	68.2000	-	-	25.6050	-	-

Remarks: Pass Result	Marginal Result	Fail Result

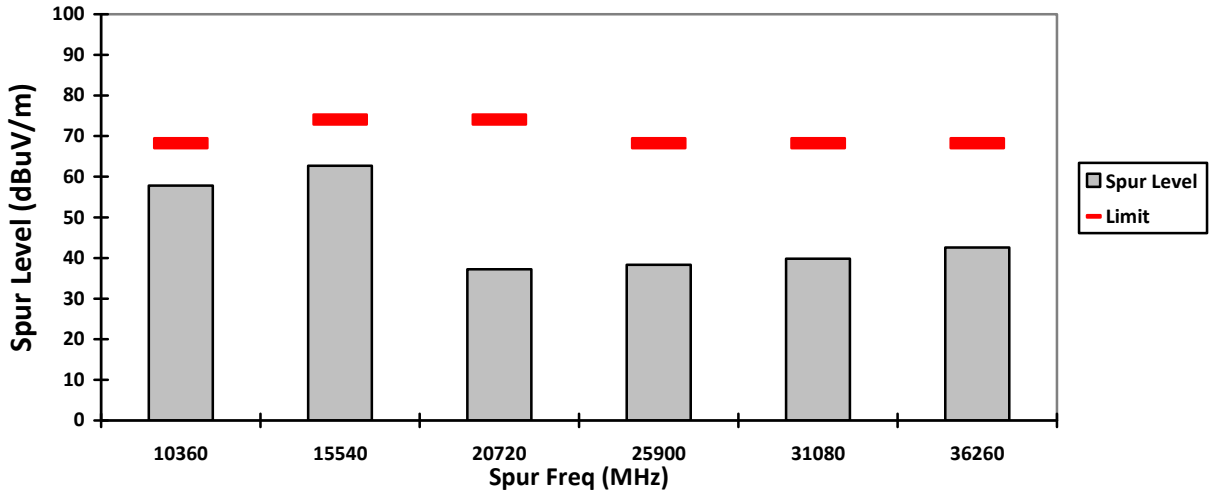
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

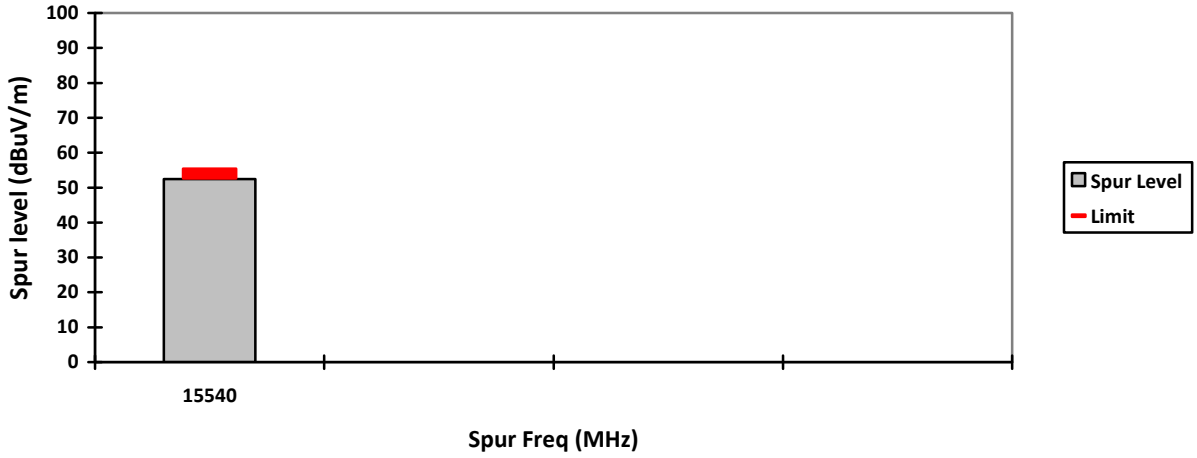
VERTICAL, PK



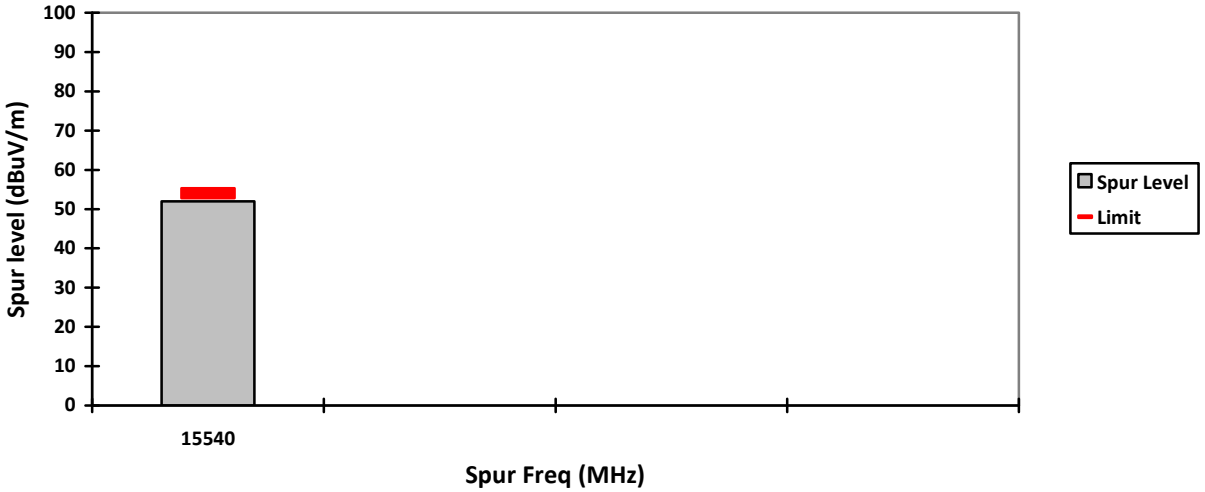
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5220.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (14)

Radiated Emission (Mid Channel) tabular data

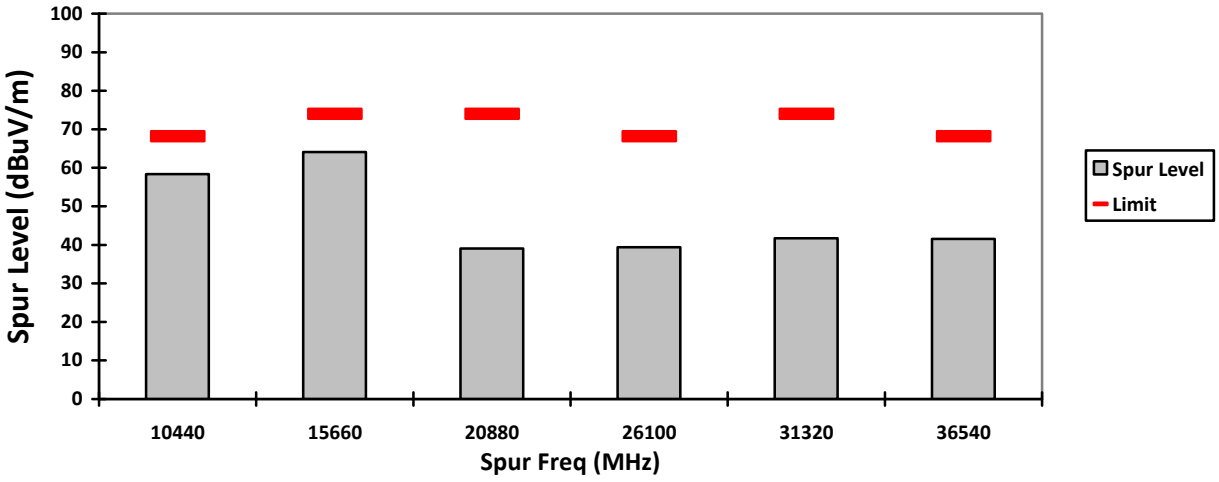
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10440	-	58.3429**	-	-	68.2000	-	-	9.8571	-	-
15660	-	64.1307**	52.7584**	-	74.0000	54.0000	-	9.8693	1.2416	-
20880	-	39.0564**	-	-	74.0000	-	-	34.9436	-	-
26100	-	39.3499**	-	-	68.2000	-	-	28.8501	-	-
31320	-	41.6889**	-	-	74.0000	-	-	32.3111	-	-
36540	-	41.5492**	-	-	68.2000	-	-	26.6508	-	-
Horizontal Radiated Emission Result										
10440	-	57.4151**	-	-	68.2000	-	-	10.7849	-	-
15660	-	64.2989**	53.1001**	-	74.0000	54.0000	-	9.7011	0.8999	-
20880	-	39.3093**	-	-	74.0000	-	-	34.6907	-	-
26100	-	38.8787**	-	-	68.2000	-	-	29.3213	-	-
31320	-	40.8298**	-	-	74.0000	-	-	33.1702	-	-
36540	-	41.8689**	-	-	68.2000	-	-	26.3311	-	-

Remarks: Pass Result	Marginal Result	Fail Result

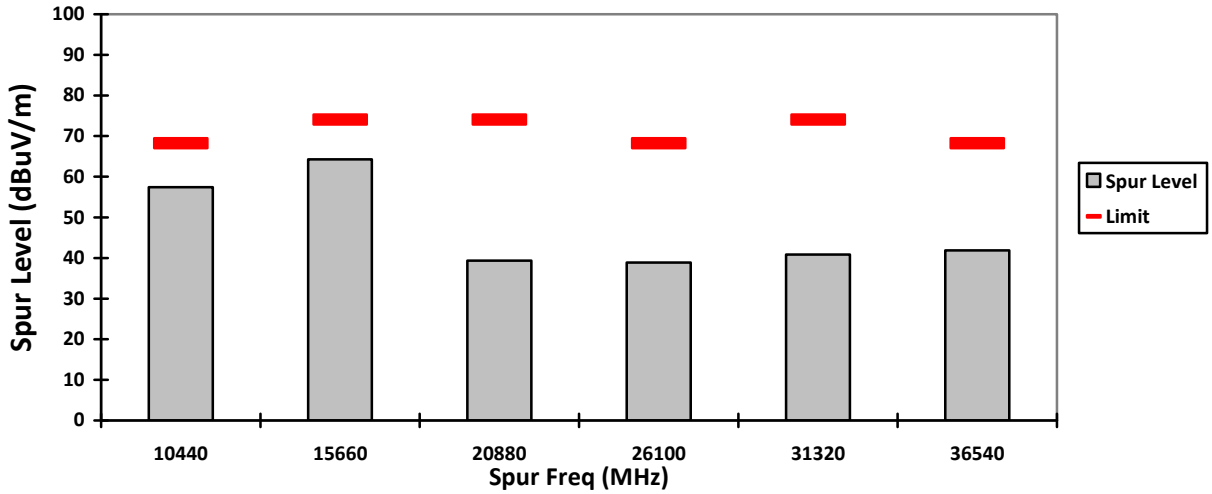
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

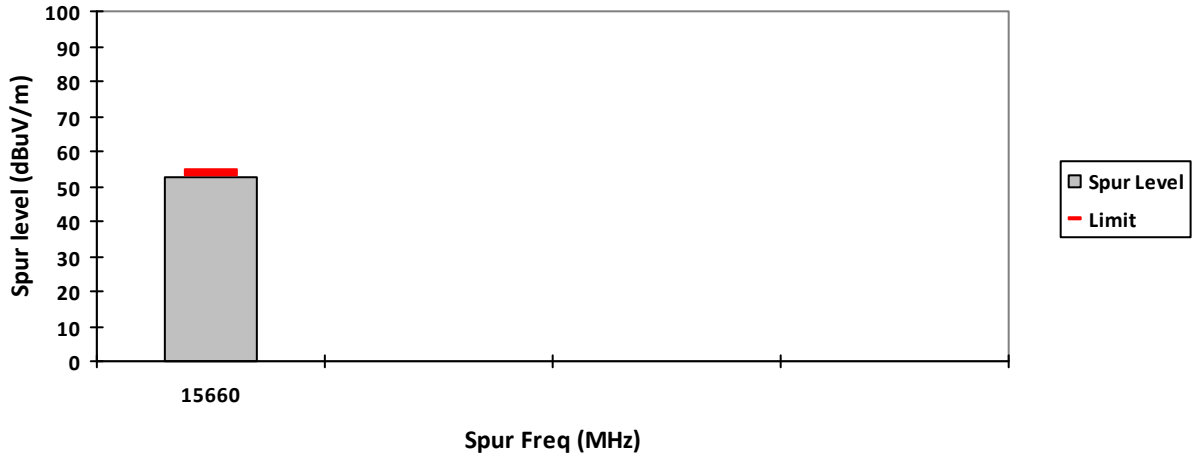
VERTICAL, PK



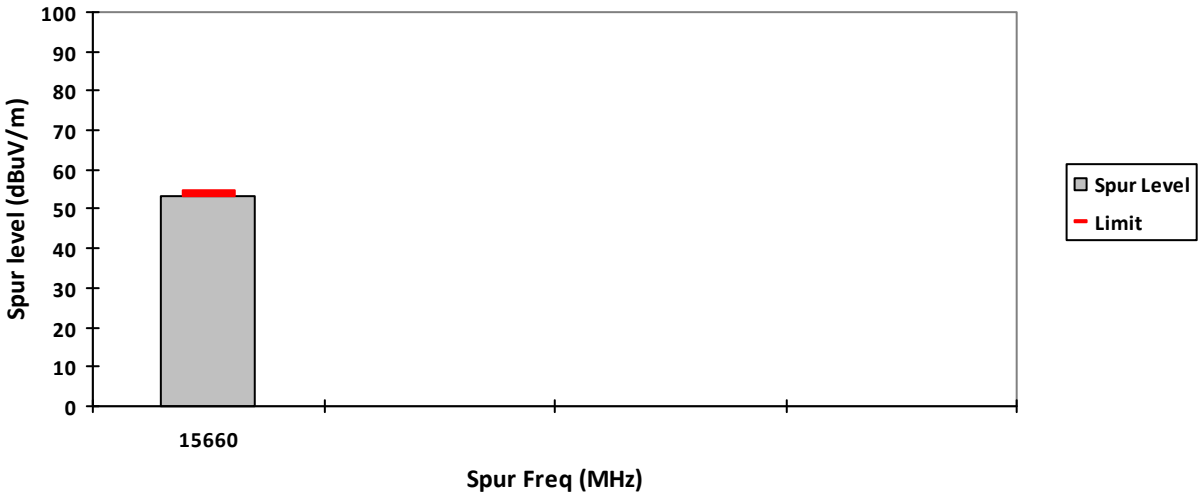
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5240.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (13)

Radiated Emission (High Channel) tabular data

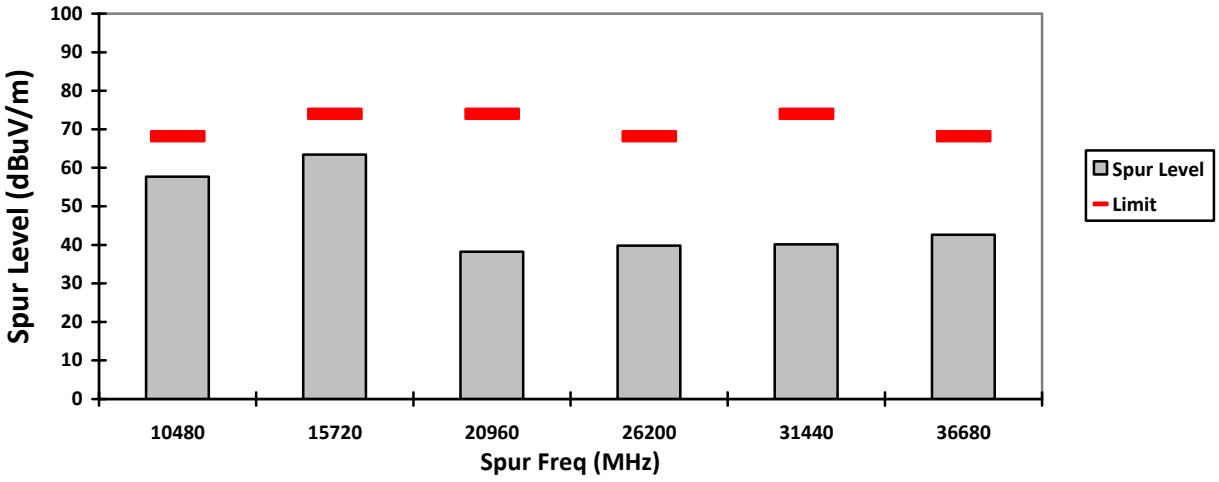
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10480	-	57.6961**	-	-	68.2000	-	-	10.5039	-	-
15720	-	63.3950**	52.8719**	-	74.0000	54.0000	-	10.6050	1.1281	-
20960	-	38.2430**	-	-	74.0000	-	-	35.7570	-	-
26200	-	39.8402**	-	-	68.2000	-	-	28.3598	-	-
31440	-	40.1437**	-	-	74.0000	-	-	33.8563	-	-
36680	-	42.5793**	-	-	68.2000	-	-	25.6207	-	-
Horizontal Radiated Emission Result										
10480	-	57.4457**	-	-	68.2000	-	-	10.7543	-	-
15720	-	63.3790**	52.1359**	-	74.0000	54.0000	-	10.6210	1.8641	-
20960	-	39.0241**	-	-	74.0000	-	-	34.9759	-	-
26200	-	40.9643**	-	-	68.2000	-	-	27.2357	-	-
31440	-	40.4457**	-	-	74.0000	-	-	33.5543	-	-
36680	-	41.8664**	-	-	68.2000	-	-	26.3336	-	-

Remarks: Pass Result	Marginal Result	Fail Result

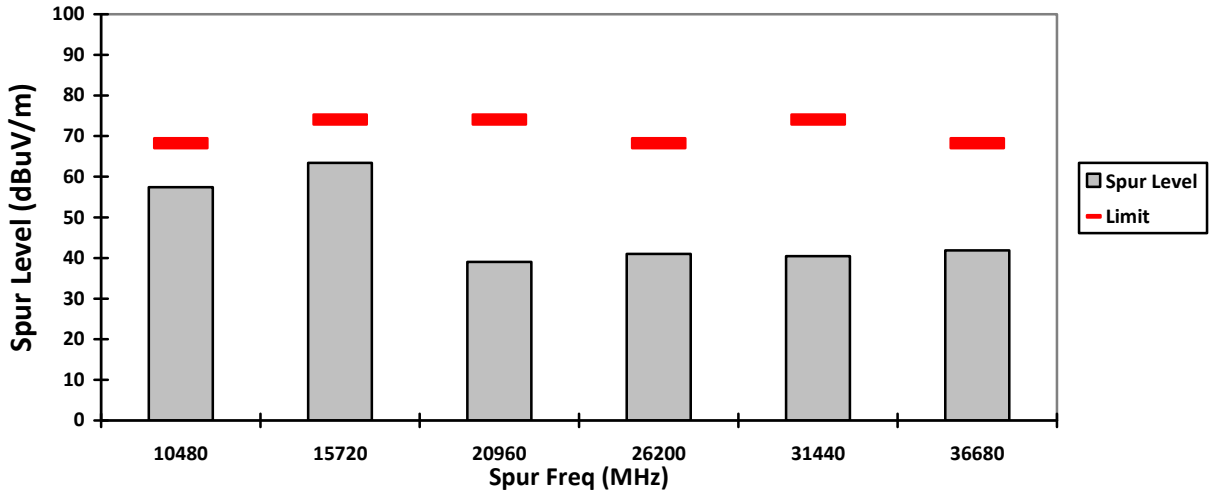
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

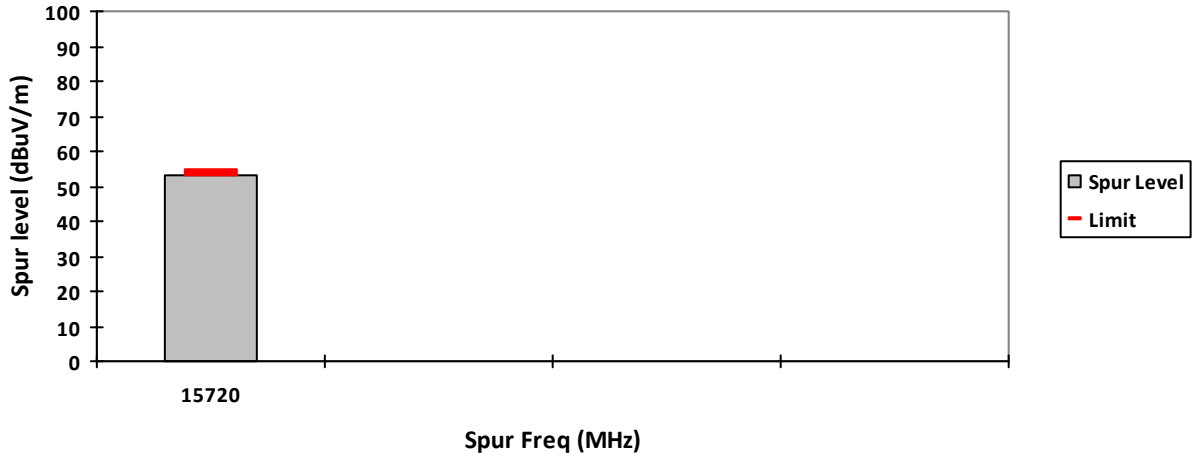
VERTICAL, PK



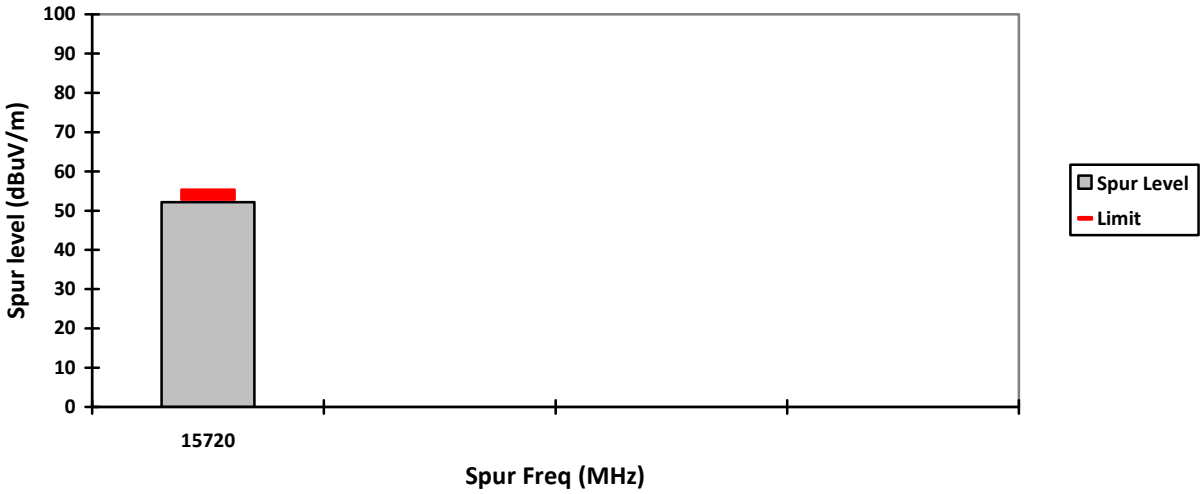
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5260.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (13)

Radiated Emission (Low Channel) tabular data

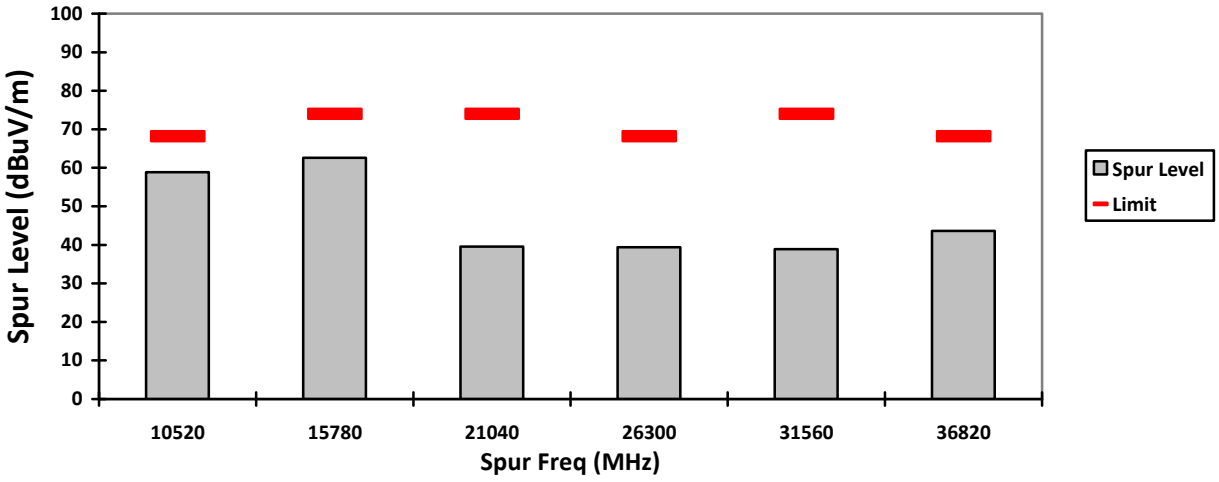
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10520	-	58.9021**	-	-	68.2000	-	-	9.2979	-	-
15780	-	62.6111**	52.3677**	-	74.0000	54.0000	-	11.3889	1.6323	-
21040	-	39.5616**	-	-	74.0000	-	-	34.4384	-	-
26300	-	39.4176**	-	-	68.2000	-	-	28.7824	-	-
31560	-	38.8604**	-	-	74.0000	-	-	35.1396	-	-
36820	-	43.5824**	-	-	68.2000	-	-	24.6176	-	-
Horizontal Radiated Emission Result										
10520	-	58.5605**	-	-	68.2000	-	-	9.6395	-	-
15780	-	63.4495**	52.8119**	-	74.0000	54.0000	-	10.5505	1.1881	-
21040	-	38.8934**	-	-	74.0000	-	-	35.1066	-	-
26300	-	39.6068**	-	-	68.2000	-	-	28.5932	-	-
31560	-	39.2070**	-	-	74.0000	-	-	34.7930	-	-
36820	-	42.0676**	-	-	68.2000	-	-	26.1324	-	-

Remarks: Pass Result	Marginal Result	Fail Result

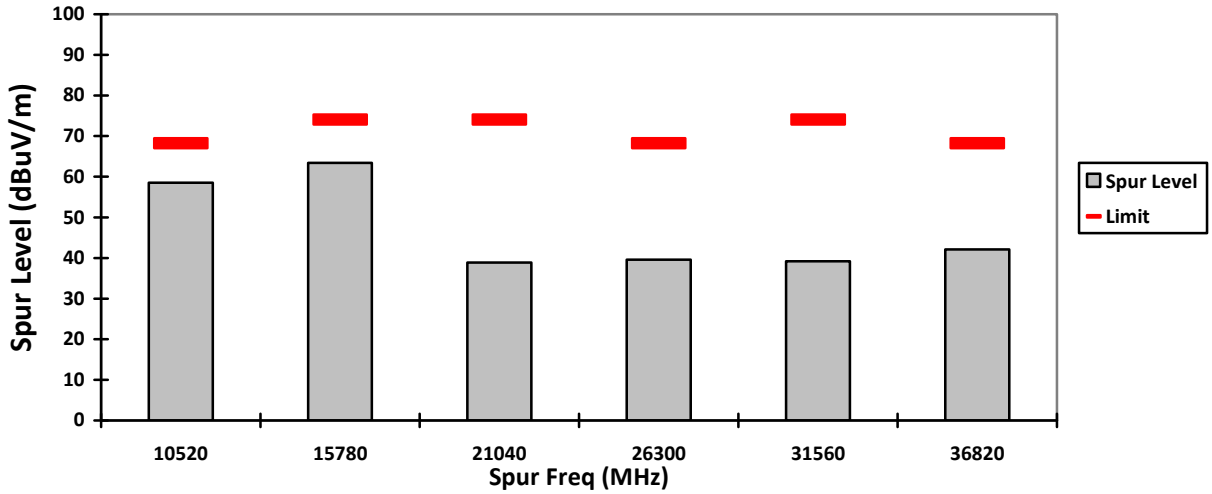
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

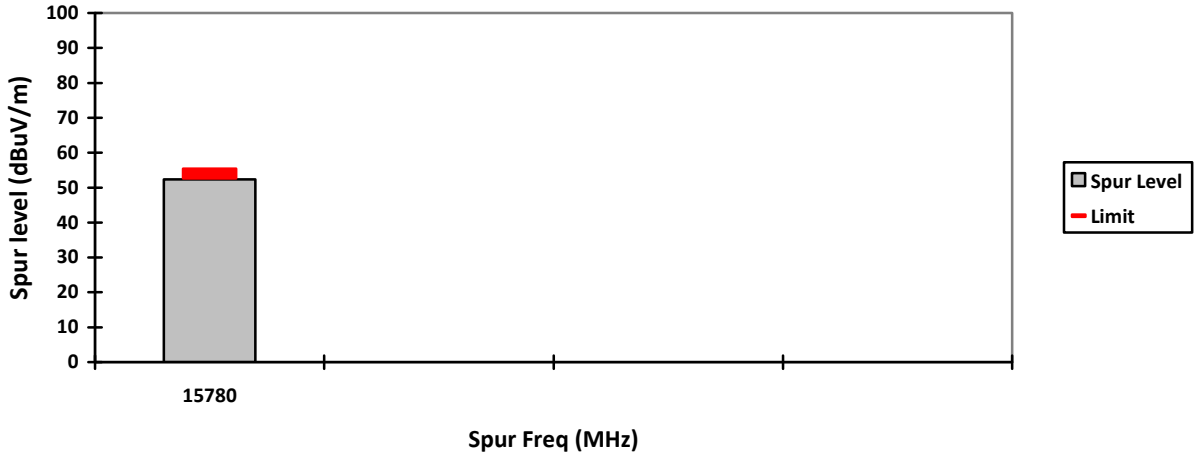
VERTICAL, PK



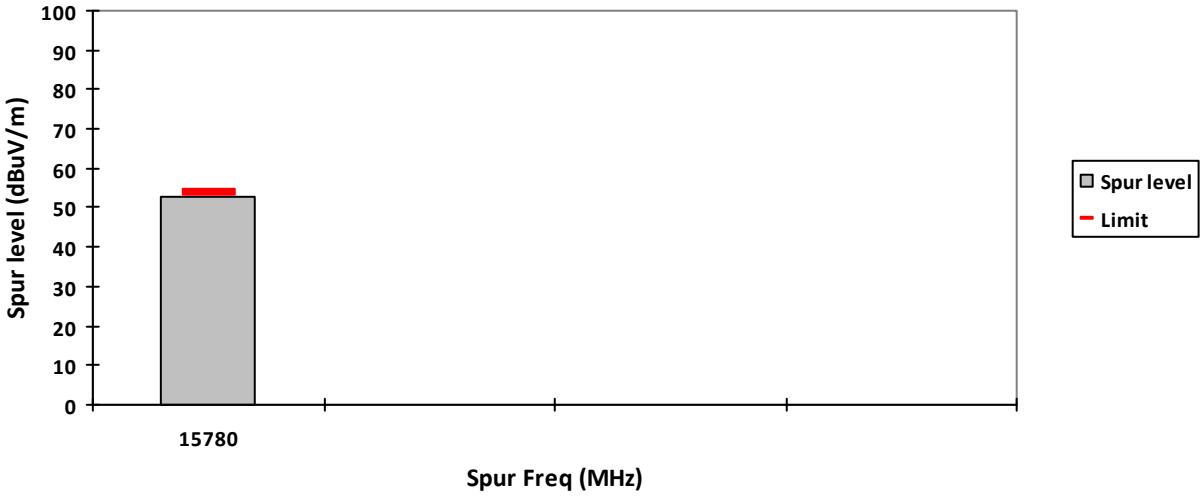
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5300.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

Radiated Emission (Mid Channel) tabular data

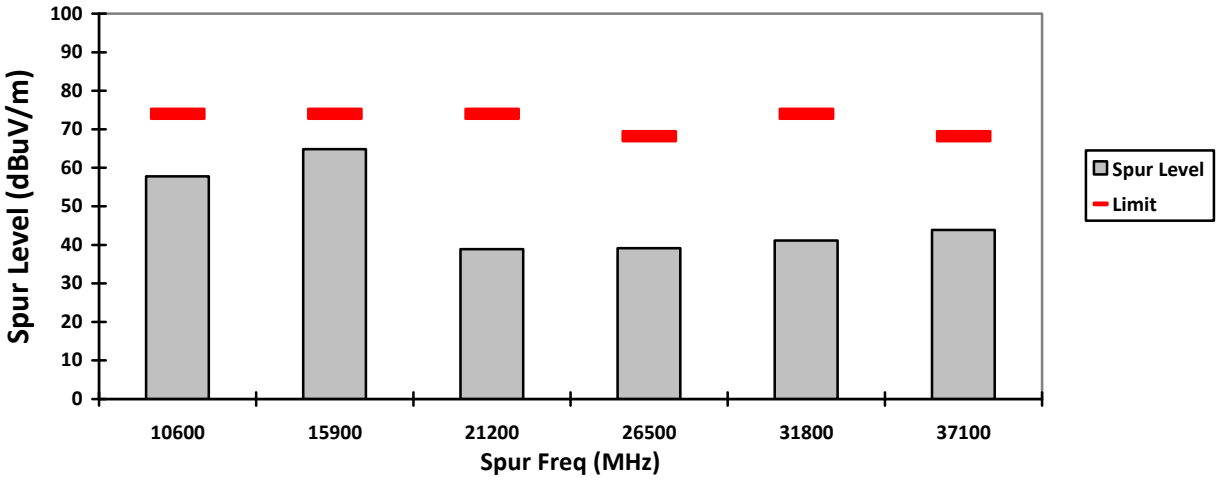
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10600	-	57.8135**	51.4268**	-	68.2000	54.0000	-	10.3865	2.5732	-
15900	-	64.8633**	53.6353**	-	74.0000	54.0000	-	9.1367	0.3647	-
21200	-	38.8859**	-	-	74.0000	-	-	35.1141	-	-
26500	-	39.1304**	-	-	68.2000	-	-	29.0696	-	-
31800	-	41.1295**	-	-	74.0000	-	-	32.8705	-	-
37100	-	43.8248**	-	-	68.2000	-	-	24.3752	-	-
Horizontal Radiated Emission Result										
10600	-	57.0382**	51.1339**	-	74.0000	54.0000	-	16.9618	2.8661	-
15900	-	64.3513**	53.0990**	-	74.0000	54.0000	-	9.6487	0.9010	-
21200	-	37.6749**	-	-	74.0000	-	-	36.3251	-	-
26500	-	38.8708**	-	-	68.2000	-	-	29.3292	-	-
31800	-	41.2621**	-	-	74.0000	-	-	32.7379	-	-
37100	-	44.5102**	-	-	68.2000	-	-	23.6898	-	-

Remarks: Pass Result	Marginal Result	Fail Result

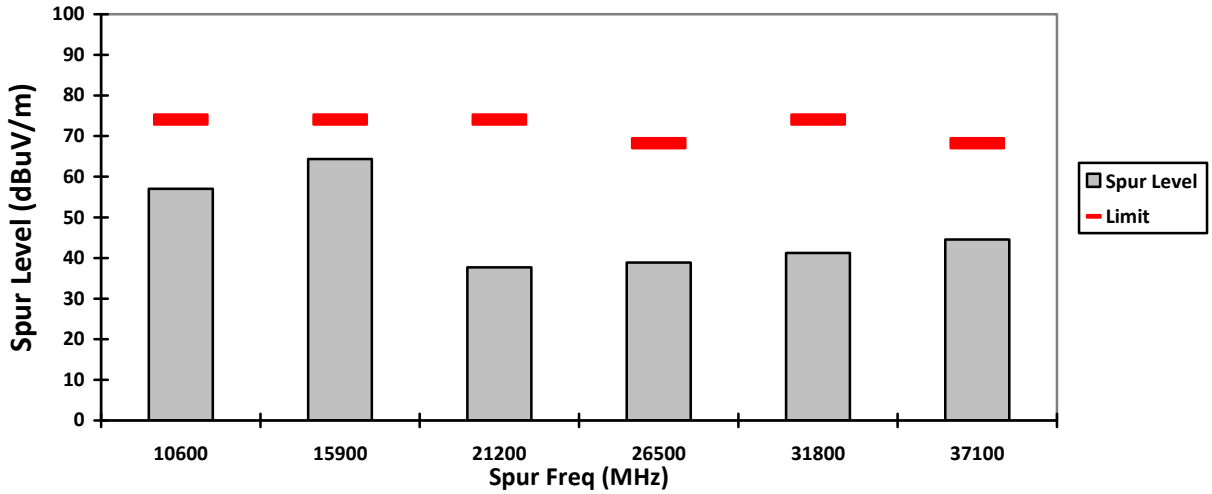
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

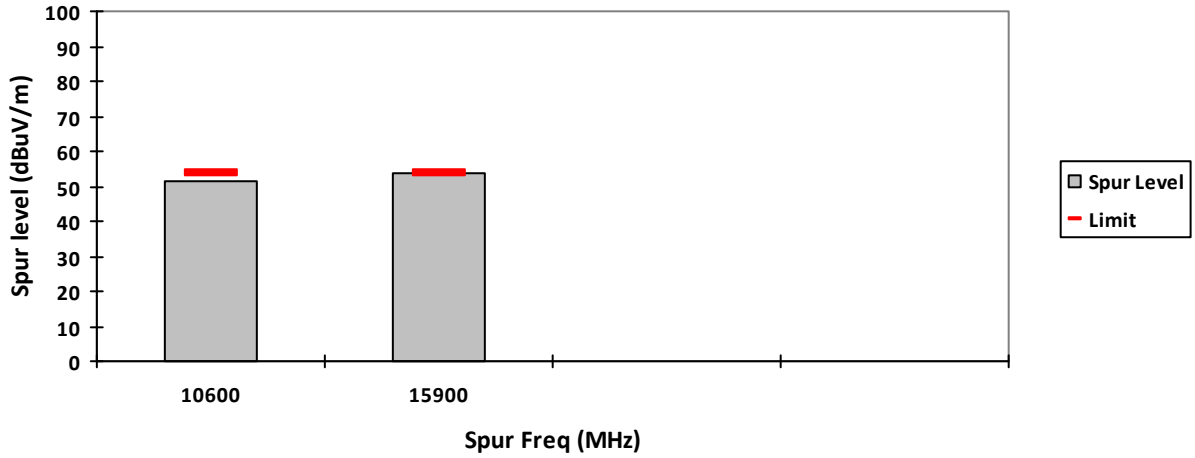
VERTICAL, PK



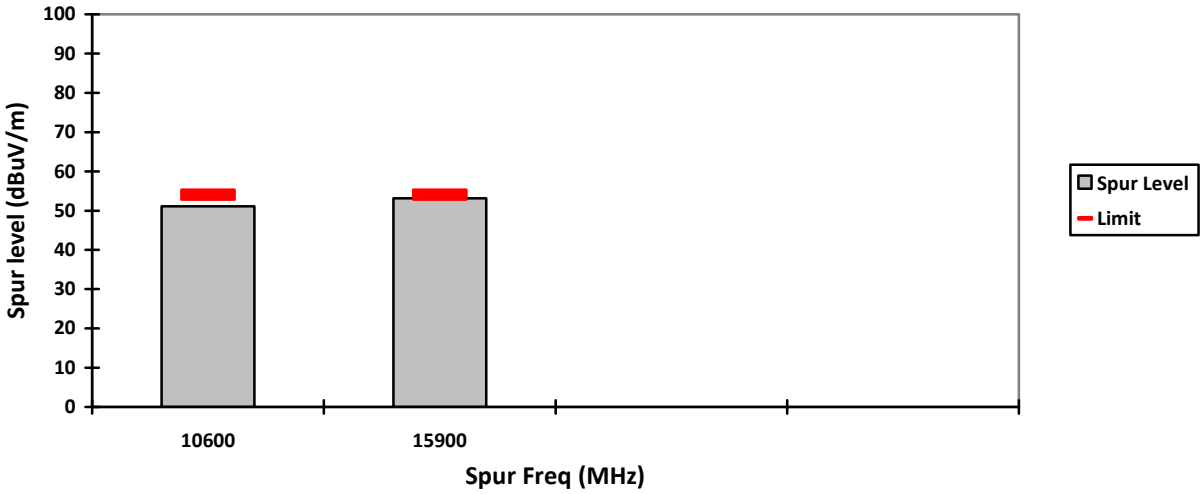
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5320.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

Radiated Emission (High Channel) tabular data

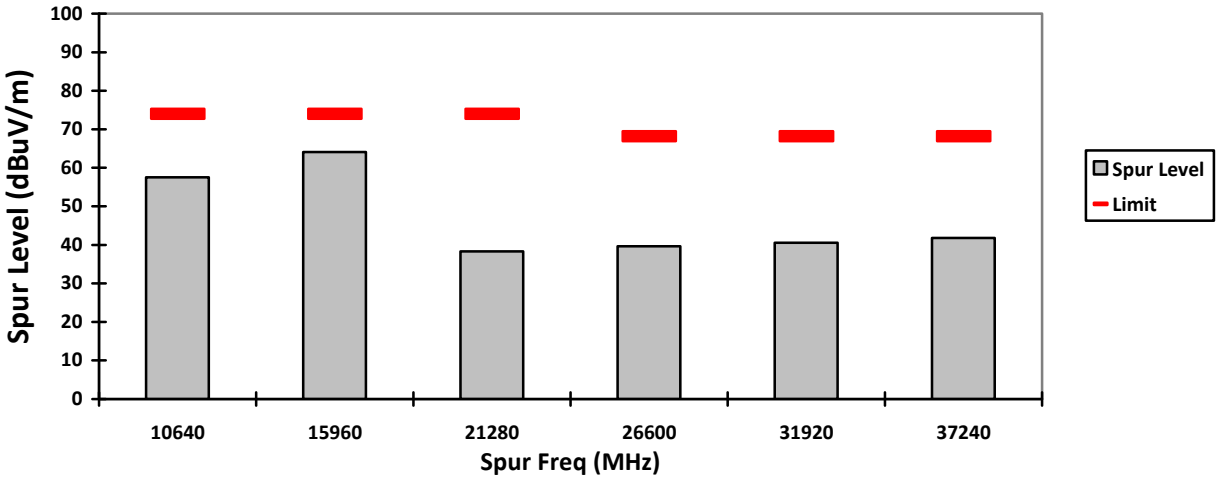
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10640	-	57.5478**	51.5613**	-	74.0000	54.0000	-	16.4522	2.4387	-
15960	-	64.0998**	52.9125**	-	74.0000	54.0000	-	9.9002	1.0875	-
21280	-	38.3484**	-	-	74.0000	-	-	35.6516	-	-
26600	-	39.6085**	-	-	68.2000	-	-	28.5915	-	-
31920	-	40.5128**	-	-	68.2000	-	-	27.6872	-	-
37240	-	41.8203**	-	-	68.2000	-	-	26.3797	-	-
Horizontal Radiated Emission Result										
10640	-	57.7974**	51.7031**	-	74.0000	54.0000	-	16.2026	2.2969	-
15960	-	63.7054**	53.1110**	-	74.0000	54.0000	-	10.2946	0.8890	-
21280	-	37.7627**	-	-	74.0000	-	-	36.2373	-	-
26600	-	39.4702**	-	-	68.2000	-	-	28.7298	-	-
31920	-	40.2445**	-	-	68.2000	-	-	27.9555	-	-
37240	-	41.9062**	-	-	68.2000	-	-	26.2938	-	-

Remarks: Pass Result	Marginal Result	Fail Result

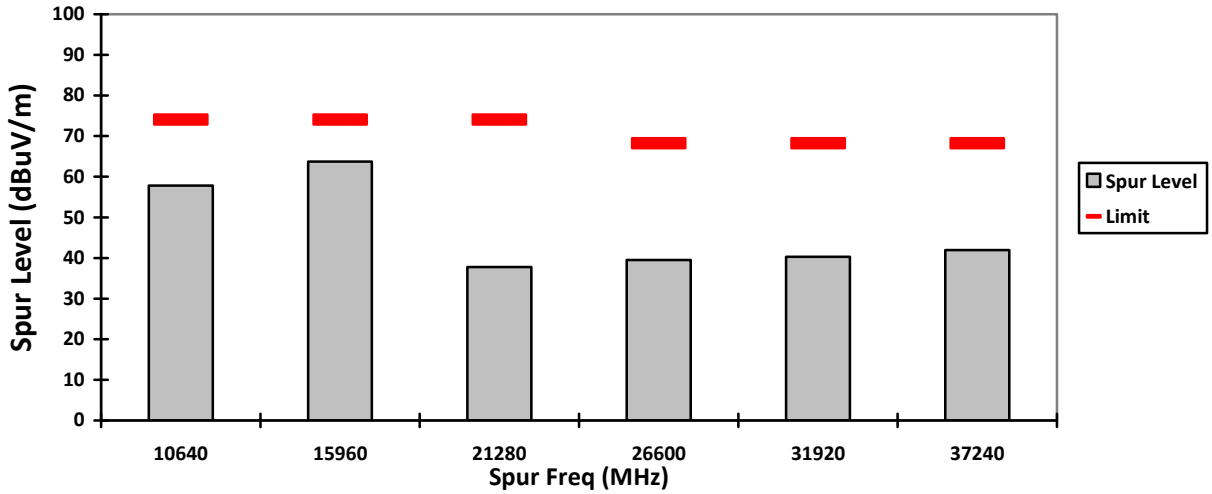
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

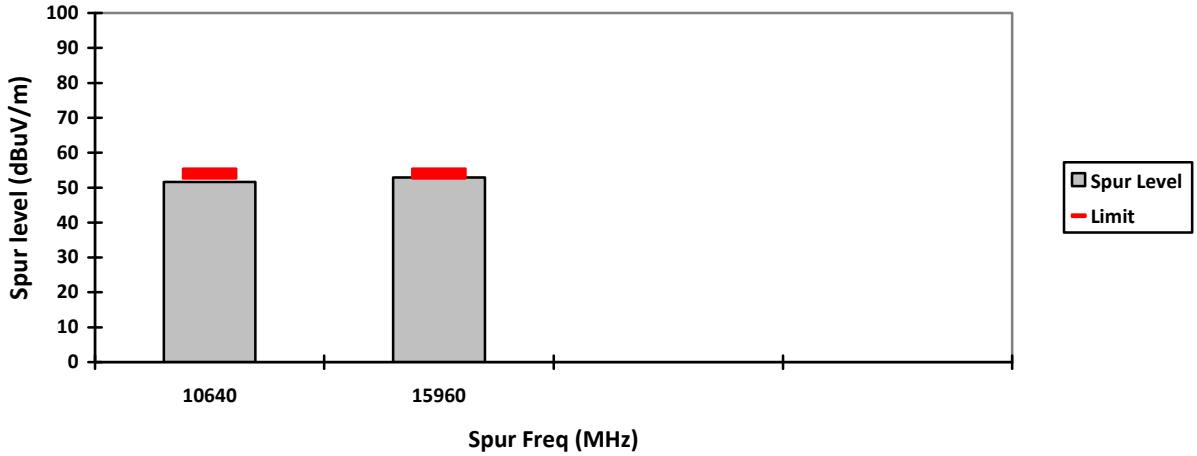
VERTICAL, PK



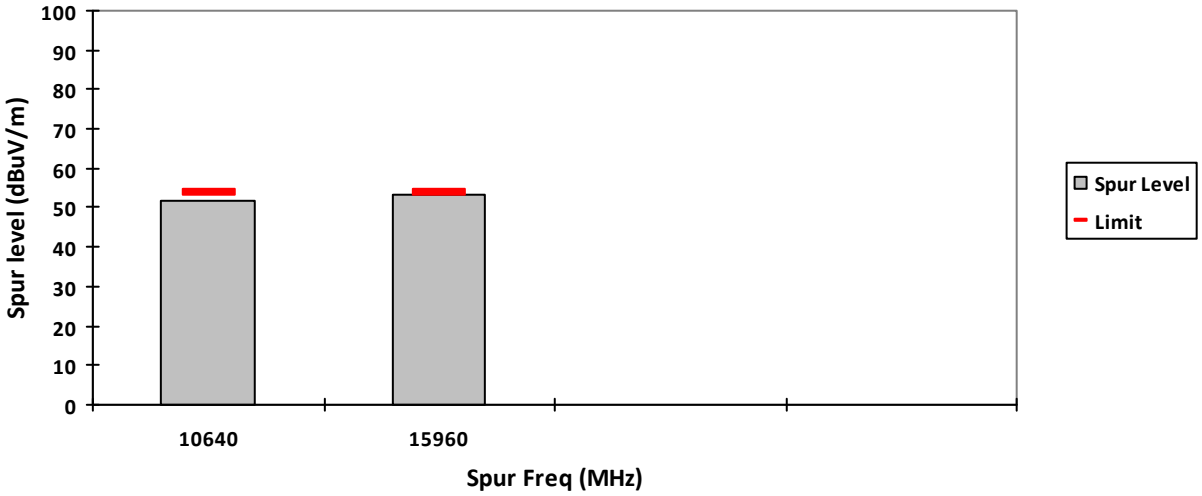
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5500.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (11)

Radiated Emission (Low Channel) tabular data

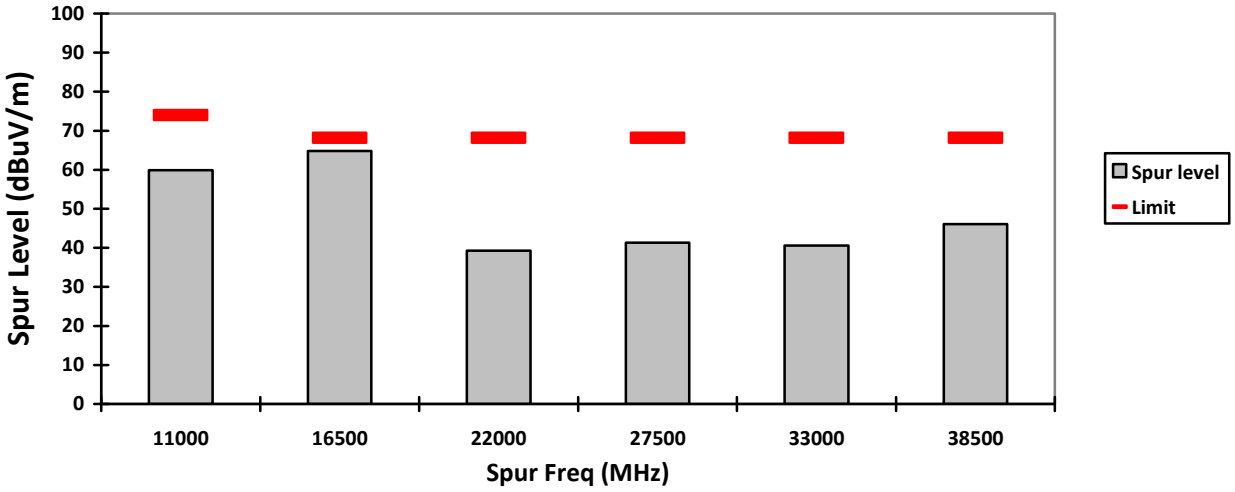
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11000	-	59.8915**	53.0018**	-	74.0000	54.0000	-	14.1085	0.9982	-
16500	-	64.8317**	-	-	68.2000	-	-	3.3683	-	-
22000	-	39.2921**	-	-	68.2000	-	-	28.9079	-	-
27500	-	41.3637**	-	-	68.2000	-	-	26.8363	-	-
33000	-	40.5595**	-	-	68.2000	-	-	27.6405	-	-
38500	-	46.1007**	-	-	68.2000	-	-	22.0993	-	-
Horizontal Radiated Emission Result										
11000	-	59.7184**	53.3431**	-	74.0000	54.0000	-	14.2816	0.6569	-
16500	-	63.6457**	-	-	68.2000	-	-	4.5543	-	-
22000	-	38.9335**	-	-	68.2000	-	-	29.2665	-	-
27500	-	39.9630**	-	-	68.2000	-	-	28.2370	-	-
33000	-	39.5137**	-	-	68.2000	-	-	28.6863	-	-
38500	-	47.0412**	-	-	68.2000	-	-	21.1588	-	-

Remarks: Pass Result	Marginal Result	Fail Result

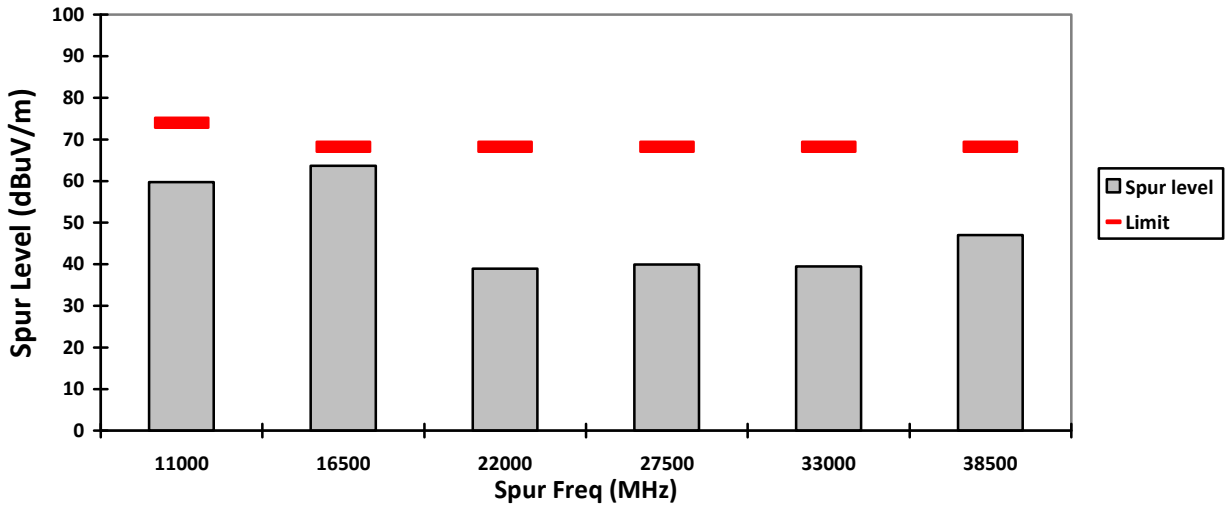
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

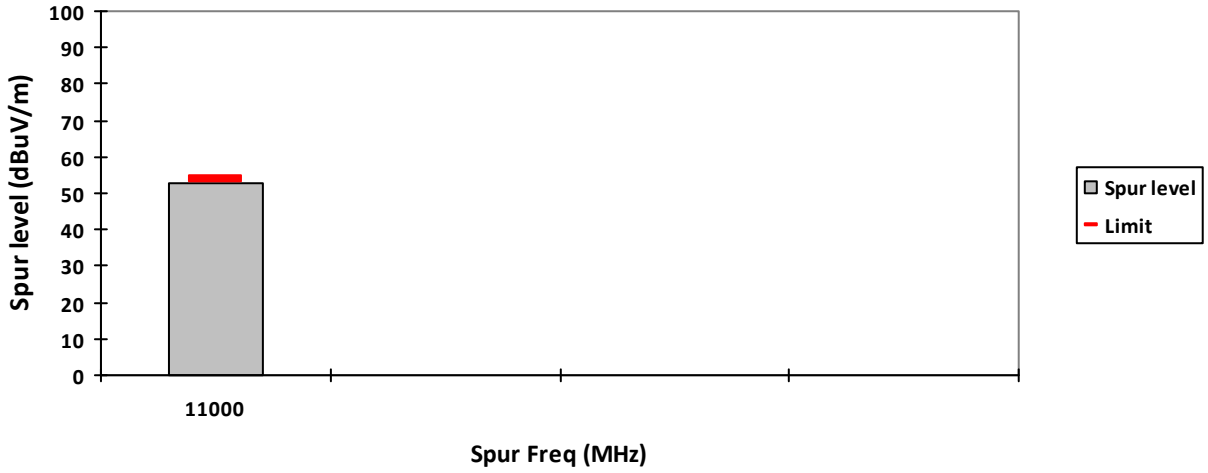
VERTICAL, PK



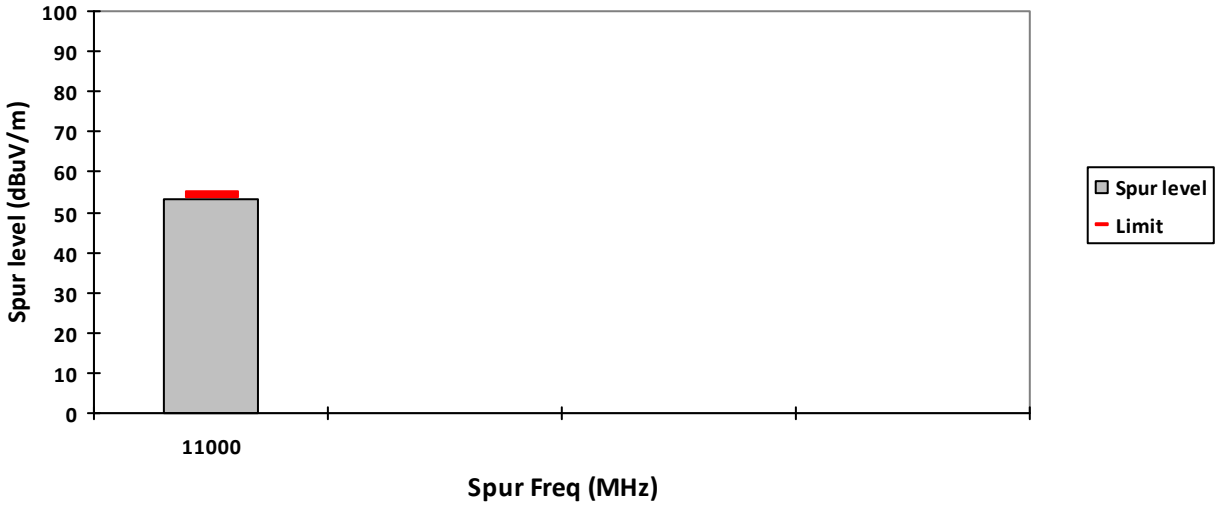
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5580.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (12)

Radiated Emission (Mid Channel) tabular data

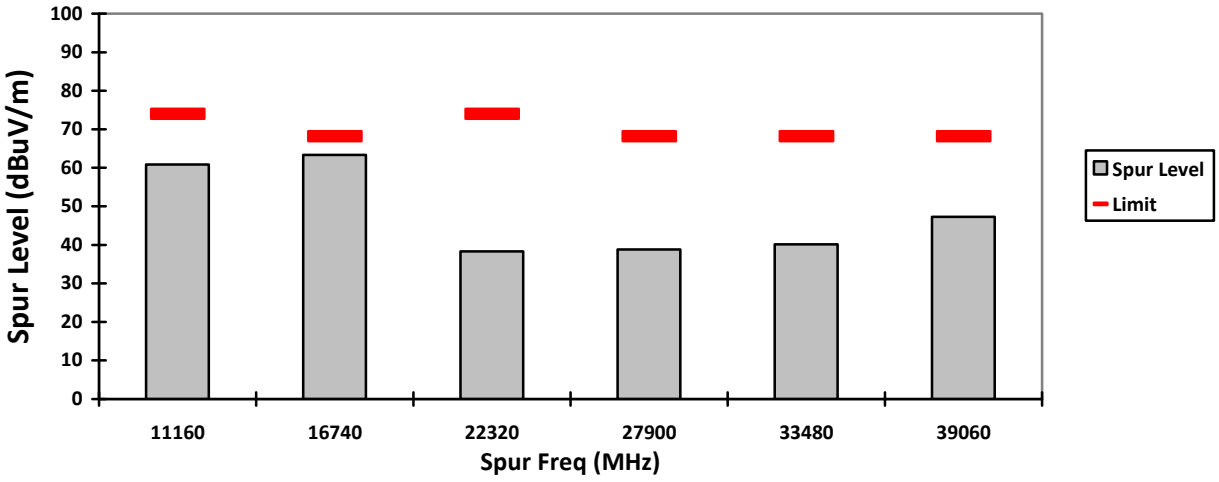
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11160	-	60.8944**	53.1692**	-	74.0000	54.0000	-	13.1056	0.8308	-
16740	-	63.3433**	-	-	68.2000	-	-	4.8567	-	-
22320	-	38.3134**	-	-	74.0000	-	-	35.6866	-	-
27900	-	38.7704**	-	-	68.2000	-	-	29.4296	-	-
33480	-	40.1279**	-	-	68.2000	-	-	28.0721	-	-
39060	-	47.2560**	-	-	68.2000	-	-	20.9440	-	-
Horizontal Radiated Emission Result										
11160	-	60.5942**	52.9375**	-	74.0000	54.0000	-	13.4058	1.0625	-
16740	-	62.6259**	-	-	68.2000	-	-	5.5741	-	-
22320	-	39.1659**	-	-	74.0000	-	-	34.8341	-	-
27900	-	39.7781**	-	-	68.2000	-	-	28.4219	-	-
33480	-	40.8486**	-	-	68.2000	-	-	27.3514	-	-
39060	-	47.4239**	-	-	68.2000	-	-	20.7761	-	-

Remarks: Pass Result	Marginal Result	Fail Result

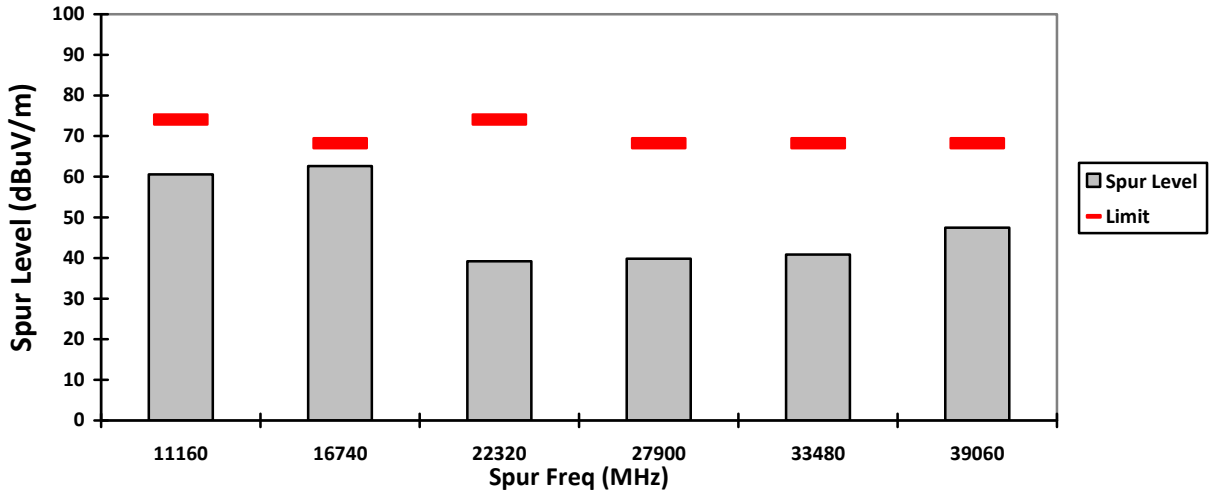
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

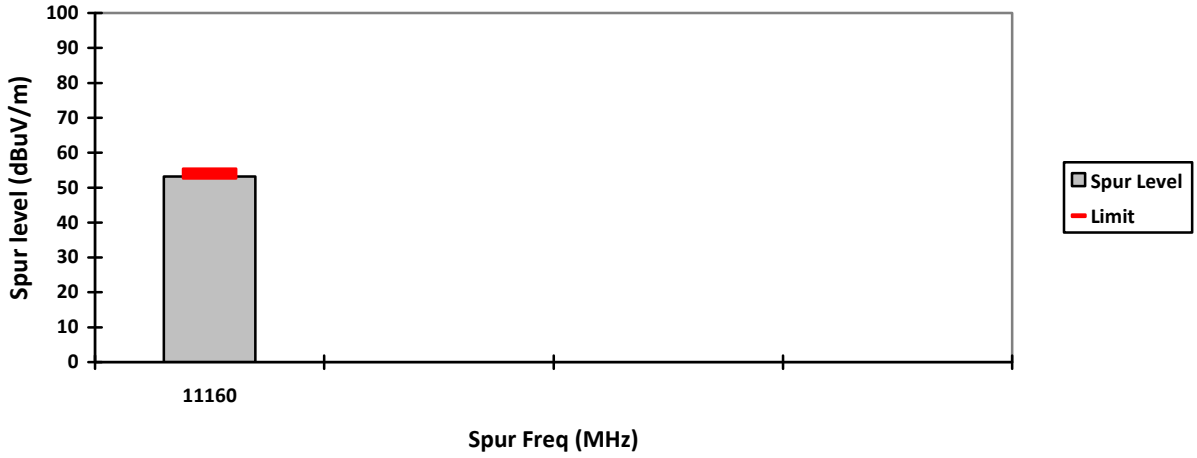
VERTICAL, PK



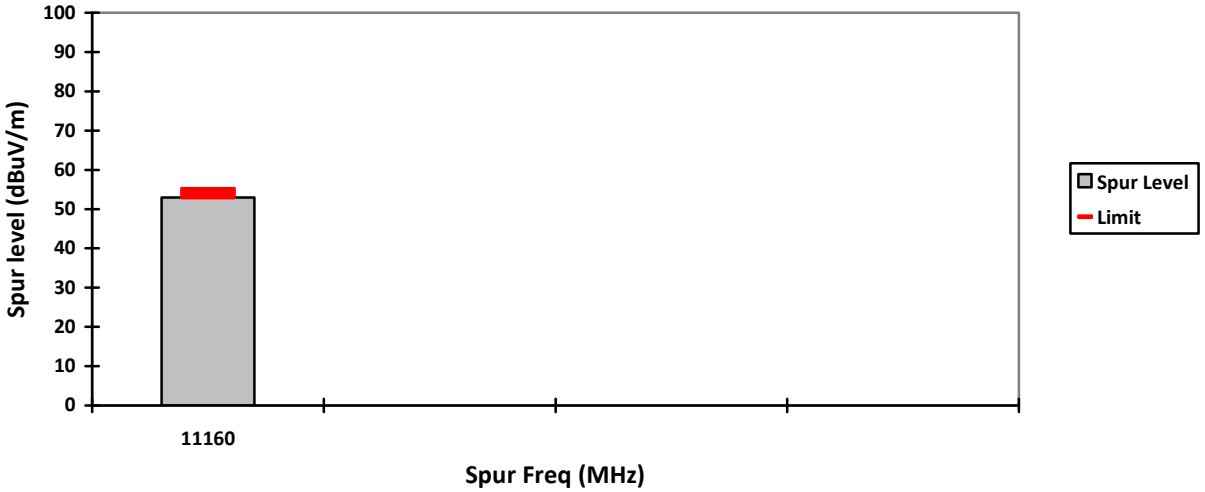
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Straddle	Test Frequency: 5720.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (14)

Radiated Emission (Straddle Channel) tabular data

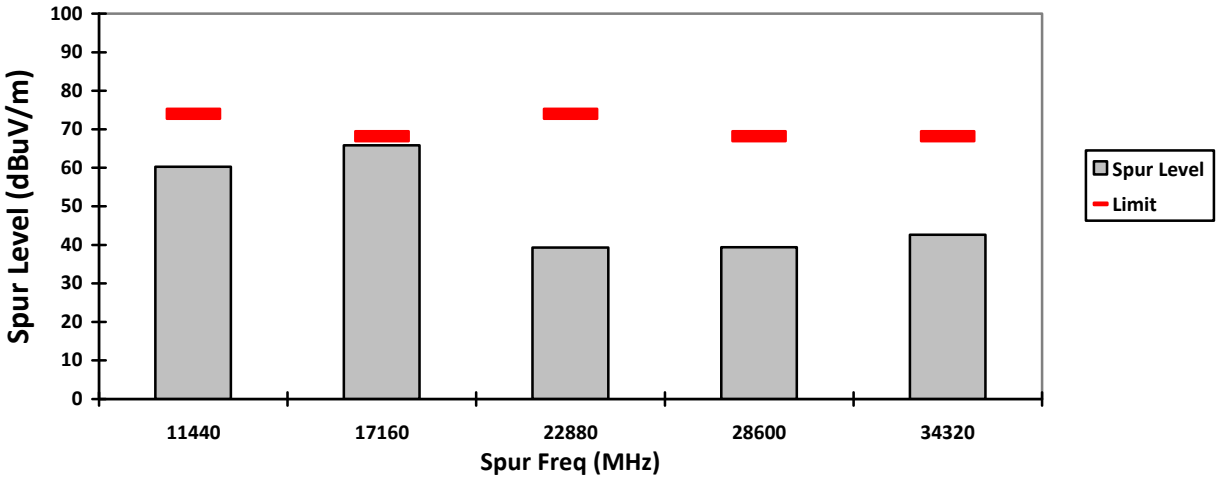
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11440	-	60.2746**	53.6581**	-	74.0000	54.0000	-	13.7254	0.3419	-
17160	-	65.8062**	-	-	68.2000	-	-	2.3938	-	-
22880	-	39.2837**	-	-	74.0000	-	-	34.7163	-	-
28600	-	39.4161**	-	-	68.2000	-	-	28.7839	-	-
34320	-	42.5918**	-	-	68.2000	-	-	25.6082	-	-
Horizontal Radiated Emission Result										
11440	-	60.9891**	53.3649**	-	74.0000	54.0000	-	13.0109	0.6351	-
17160	-	65.8086**	-	-	68.2000	-	-	2.3914	-	-
22880	-	38.5538**	-	-	74.0000	-	-	35.4462	-	-
28600	-	39.7527**	-	-	68.2000	-	-	28.4473	-	-
34320	-	42.5260**	-	-	68.2000	-	-	25.6740	-	-

Remarks: Pass Result	Marginal Result	Fail Result

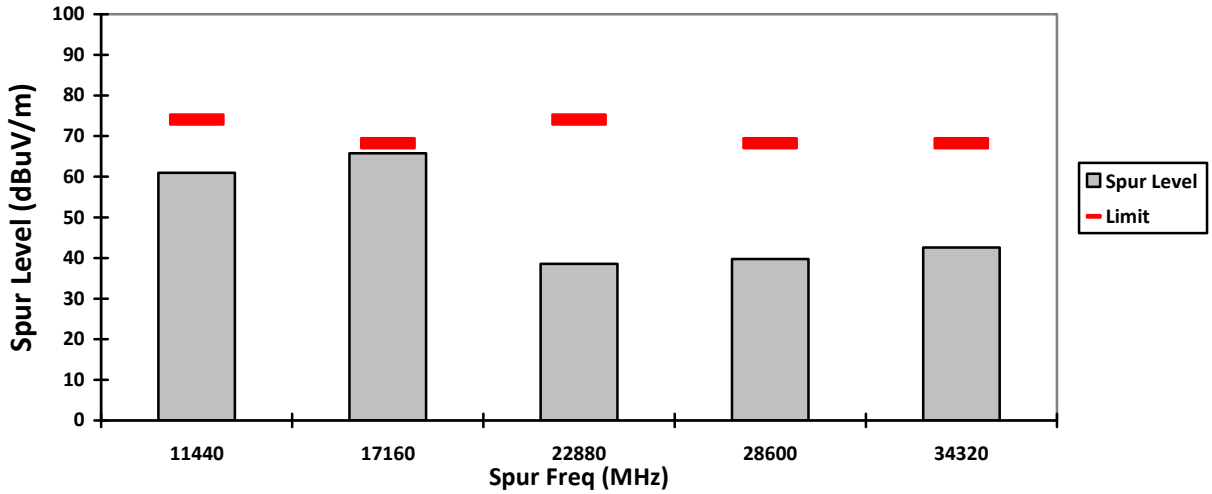
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

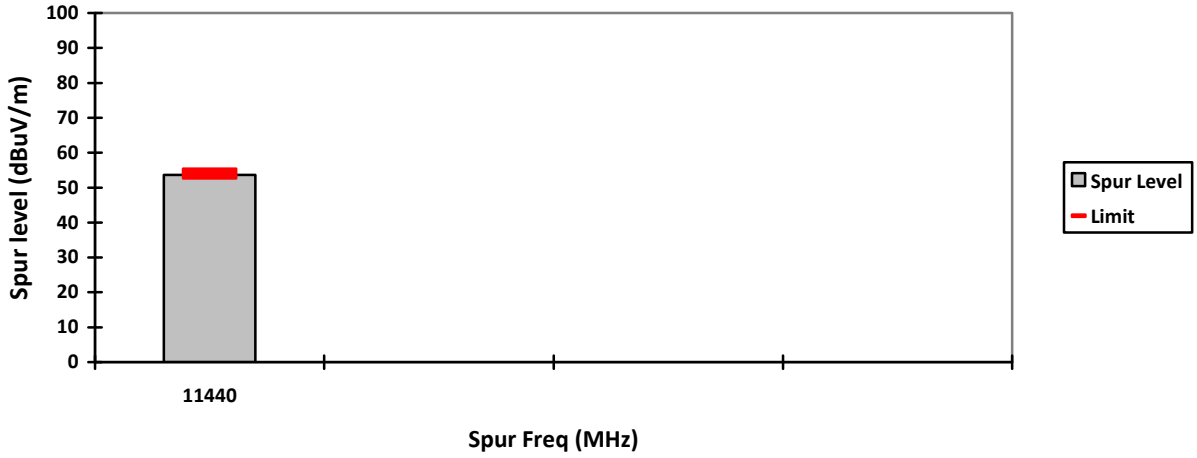
VERTICAL, PK



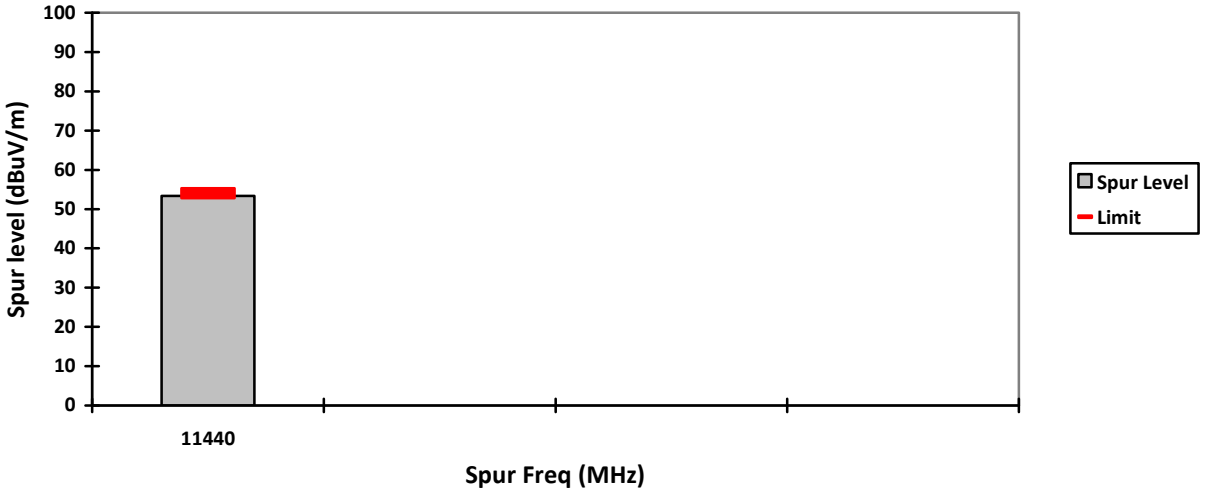
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5745.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (12)

Radiated Emission (Low Channel) tabular data

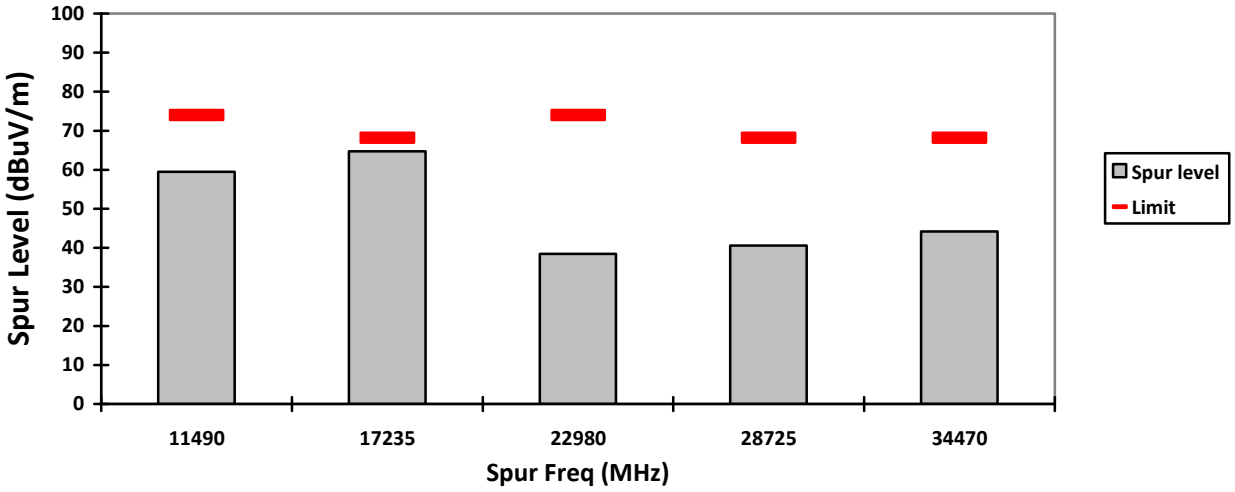
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11490	-	59.4672**	52.5841**	-	74.0000	54.0000	-	14.5328	1.4159	-
17235	-	64.7374**	-	-	68.2000	-	-	3.4626	-	-
22980	-	38.4973**	-	-	74.0000	-	-	35.5027	-	-
28725	-	40.5661**	-	-	68.2000	-	-	27.6339	-	-
34470	-	44.2222**	-	-	68.2000	-	-	23.9778	-	-
Horizontal Radiated Emission Result										
11490	-	59.4422**	52.3353**	-	74.0000	54.0000	-	14.5578	1.6647	-
17235	-	66.0629**	-	-	68.2000	-	-	2.1371	-	-
22980	-	38.8811**	-	-	74.0000	-	-	35.1189	-	-
28725	-	40.5676**	-	-	68.2000	-	-	27.6324	-	-
34470	-	43.8650**	-	-	68.2000	-	-	24.3350	-	-

Remarks: Pass Result	Marginal Result	Fail Result

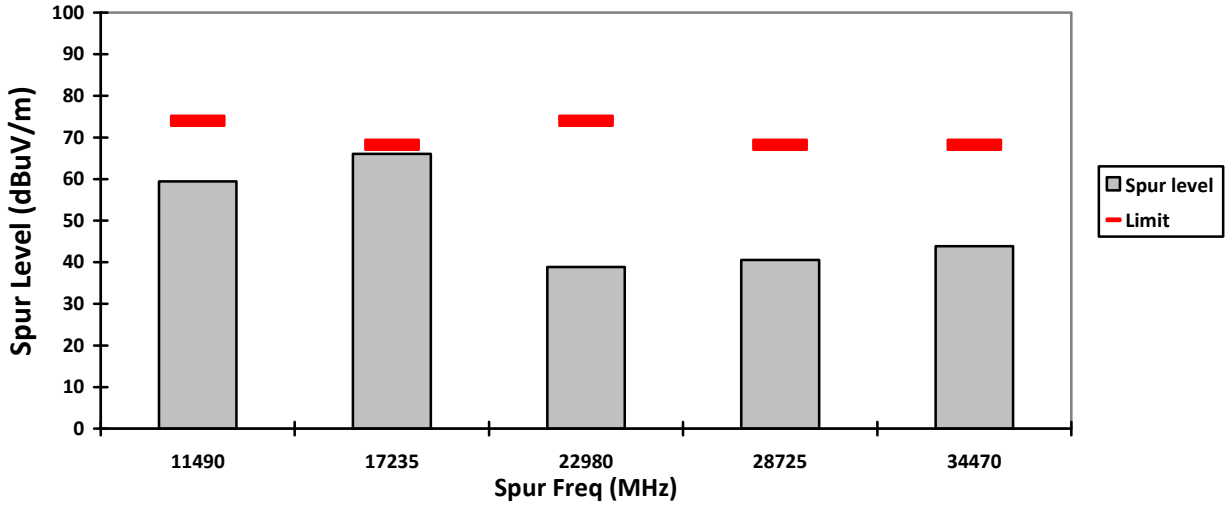
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

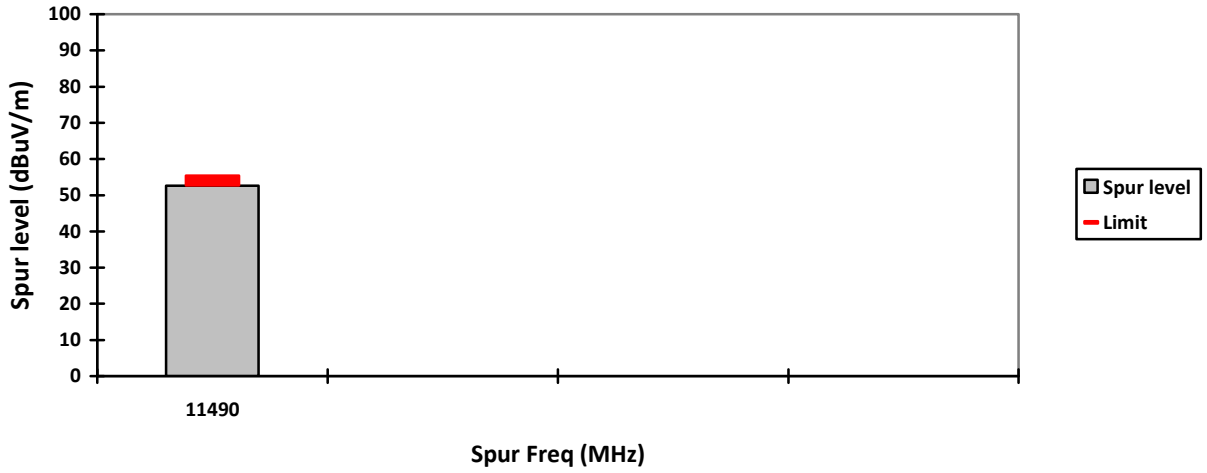
VERTICAL, PK



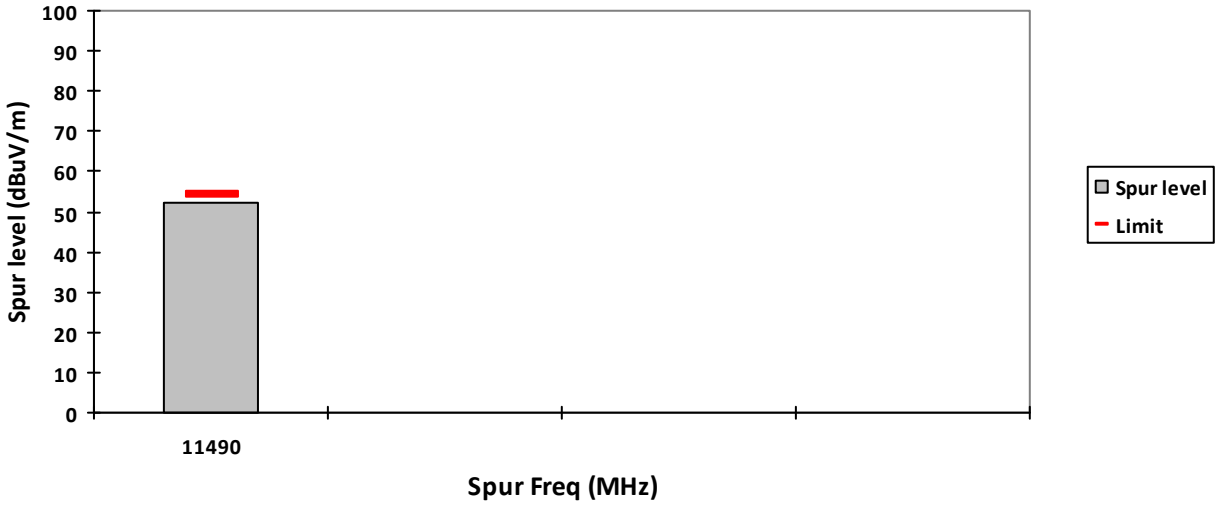
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5785.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (13)

Radiated Emission (Mid Channel) tabular data

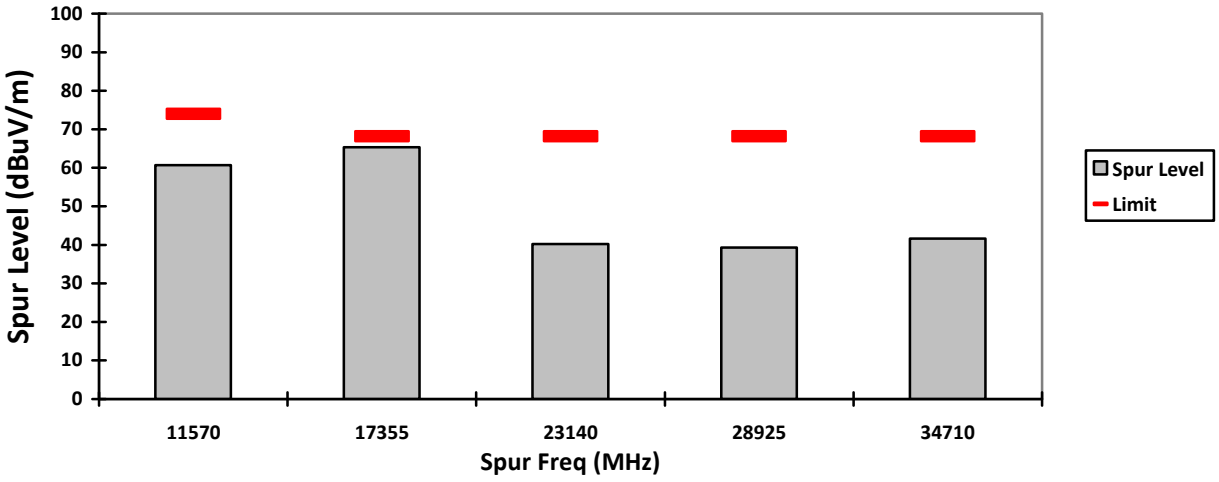
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11570	-	60.6626**	53.1557**	-	74.0000	54.0000	-	13.3374	0.8443	-
17355	-	65.3348**	-	-	68.2000	-	-	2.8652	-	-
23140	-	40.2106**	-	-	68.2000	-	-	27.9894	-	-
28925	-	39.2774**	-	-	68.2000	-	-	28.9226	-	-
34710	-	41.6372**	-	-	68.2000	-	-	26.5628	-	-
Horizontal Radiated Emission Result										
11570	-	60.7233**	53.7122**	-	74.0000	54.0000	-	13.2767	0.2878	-
17355	-	65.5729**	-	-	68.2000	-	-	2.6271	-	-
23140	-	39.1858**	-	-	68.2000	-	-	29.0142	-	-
28925	-	40.8949**	-	-	68.2000	-	-	27.3051	-	-
34710	-	41.3965**	-	-	68.2000	-	-	26.8035	-	-

Remarks: Pass Result	Marginal Result	Fail Result

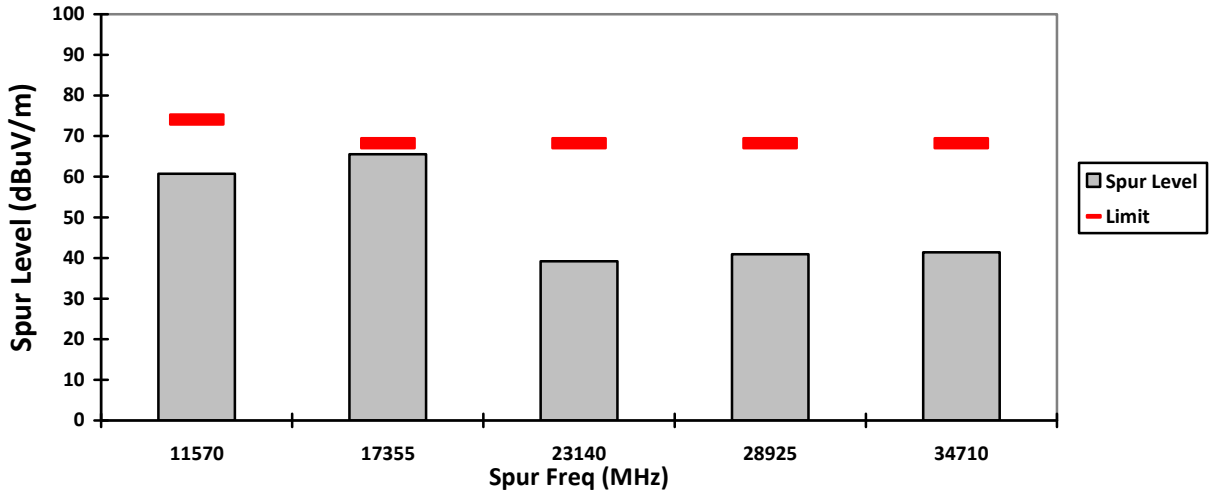
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

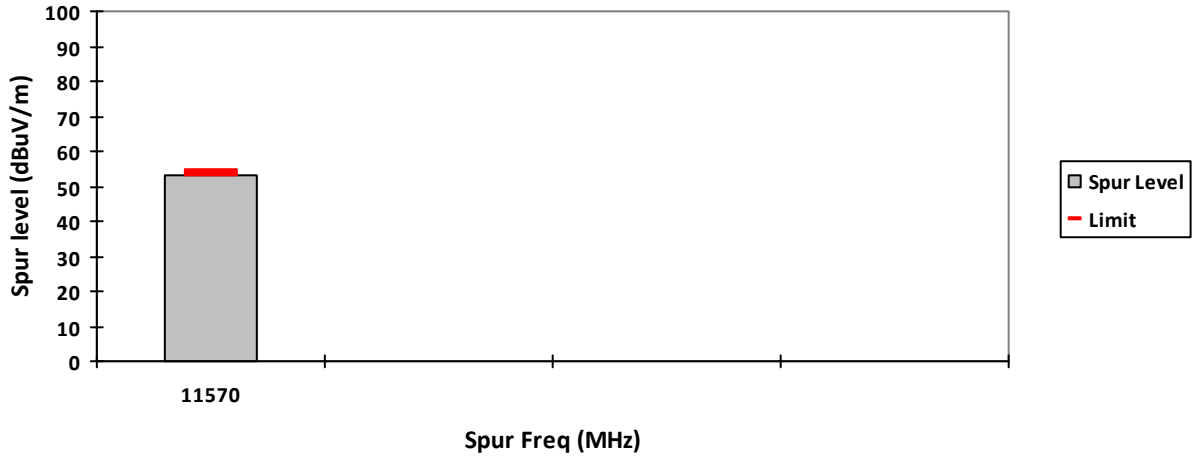
VERTICAL, PK



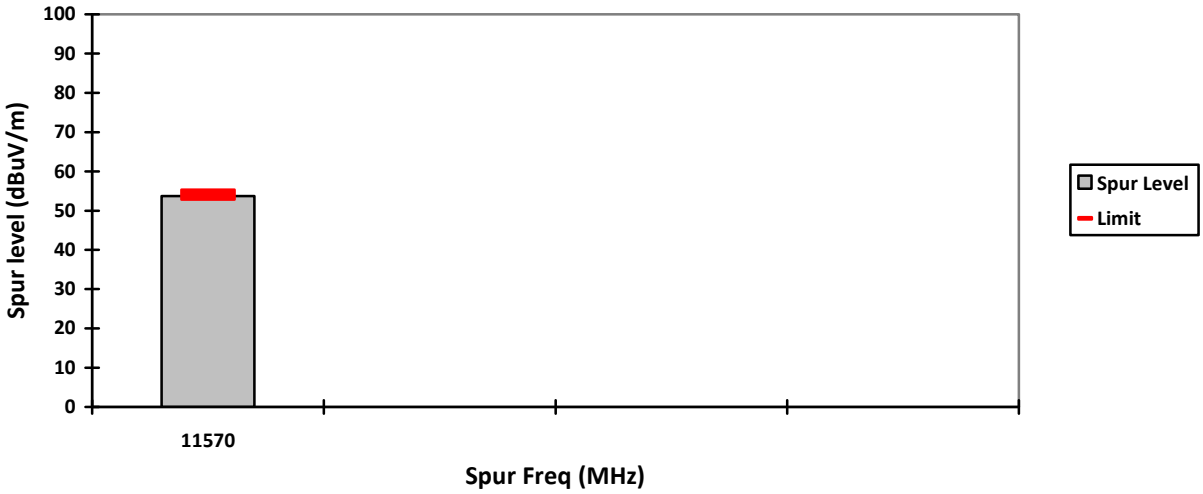
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5825.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n20	Softpot power (9)

Radiated Emission (High Channel) tabular data

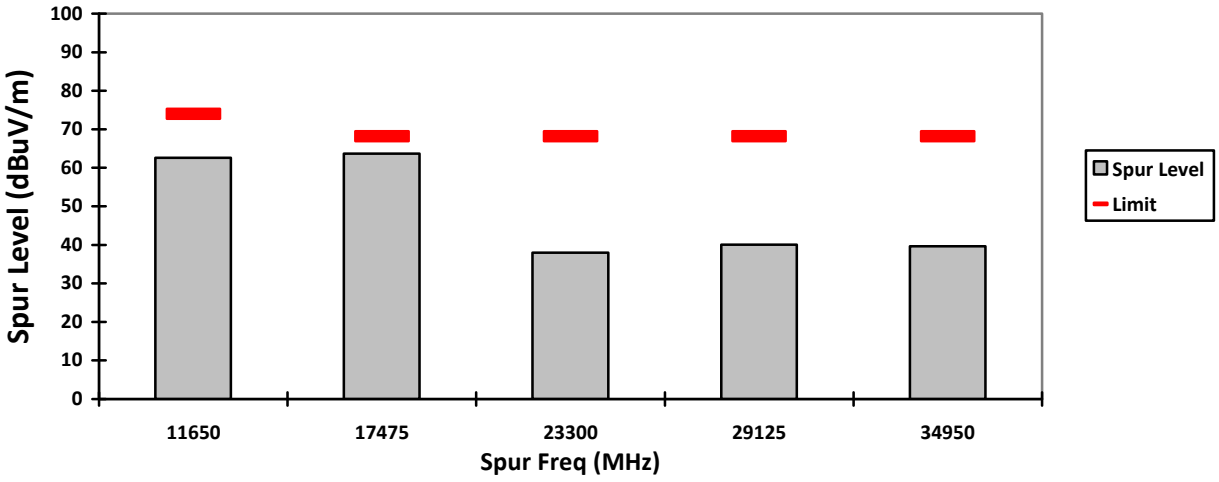
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11650	-	62.6057**	52.7194**	-	74.0000	54.0000	-	11.3943	1.2806	-
17475	-	63.6797**	-	-	68.2000	-	-	4.5203	-	-
23300	-	37.9877**	-	-	68.2000	-	-	30.2123	-	-
29125	-	40.0815**	-	-	68.2000	-	-	28.1185	-	-
34950	-	39.6012**	-	-	68.2000	-	-	28.5988	-	-
Horizontal Radiated Emission Result										
11650	-	62.3423**	53.0493**	-	74.0000	54.0000	-	11.6577	0.9507	-
17475	-	65.4115**	-	-	68.2000	-	-	2.7885	-	-
23300	-	38.1479**	-	-	68.2000	-	-	30.0521	-	-
29125	-	40.1296**	-	-	68.2000	-	-	28.0704	-	-
34950	-	41.1003**	-	-	68.2000	-	-	27.0997	-	-

Remarks: Pass Result	Marginal Result	Fail Result

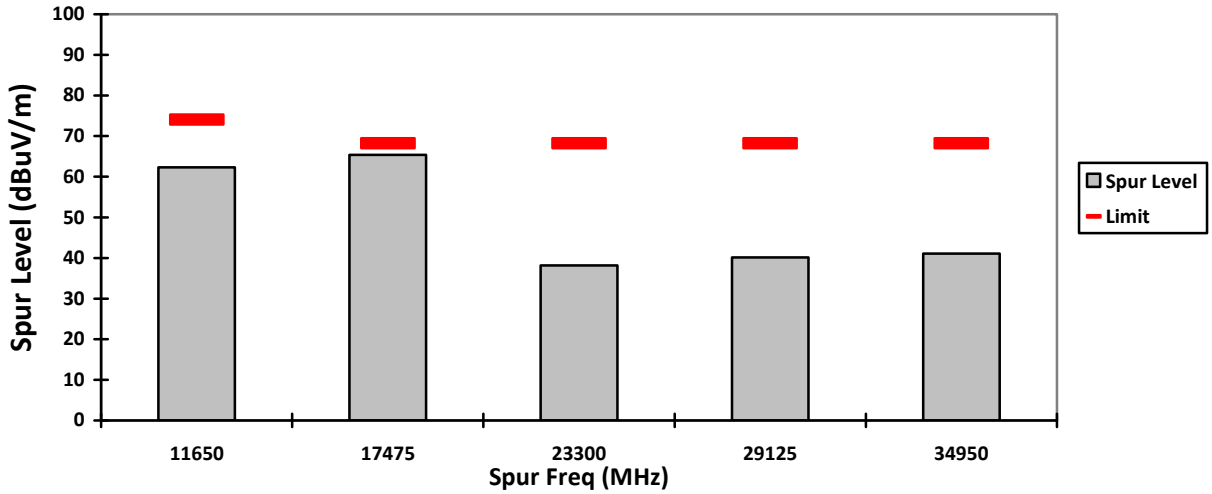
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

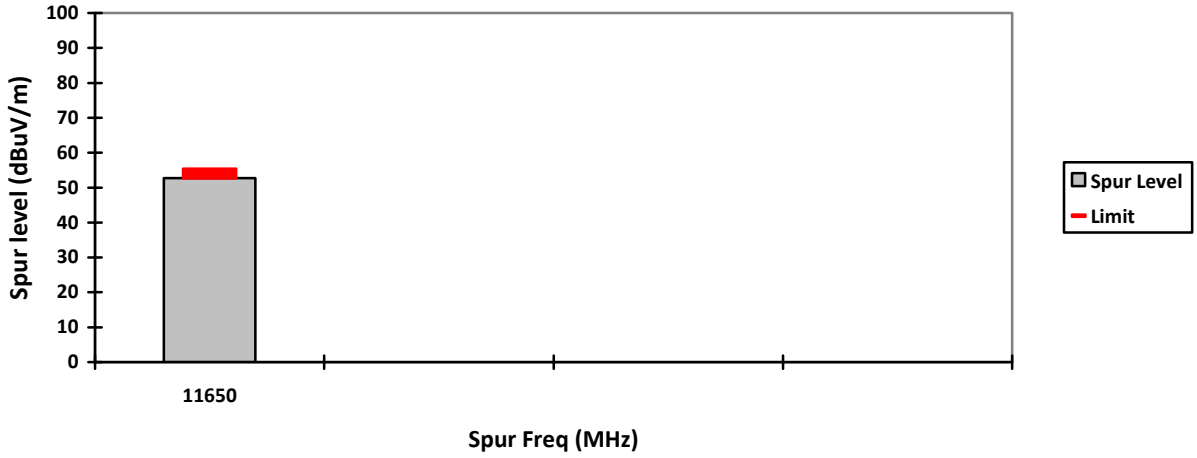
VERTICAL, PK



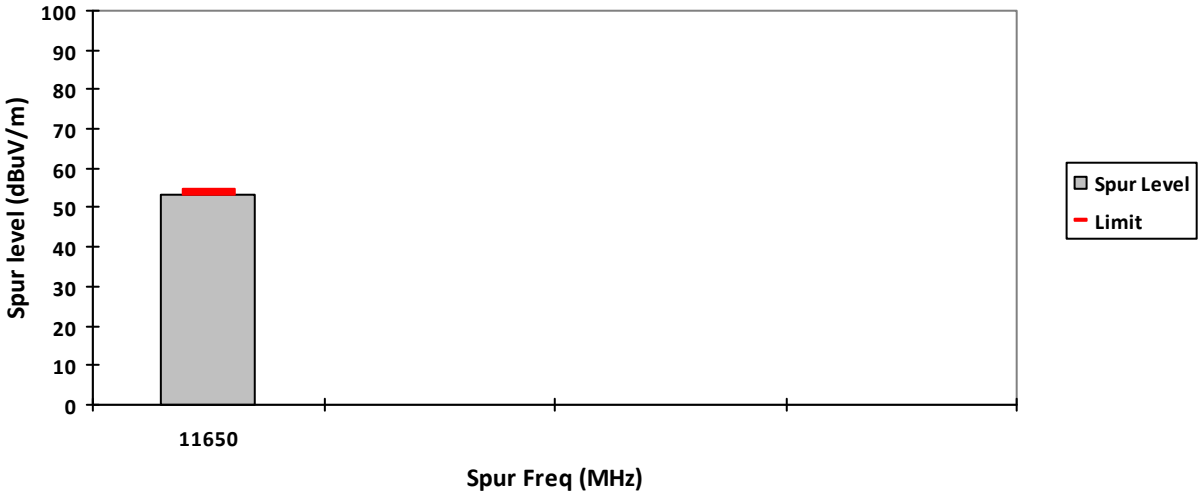
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



802.11n (HT40)

Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5190.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (10)

Radiated Emission (Low Channel) tabular data

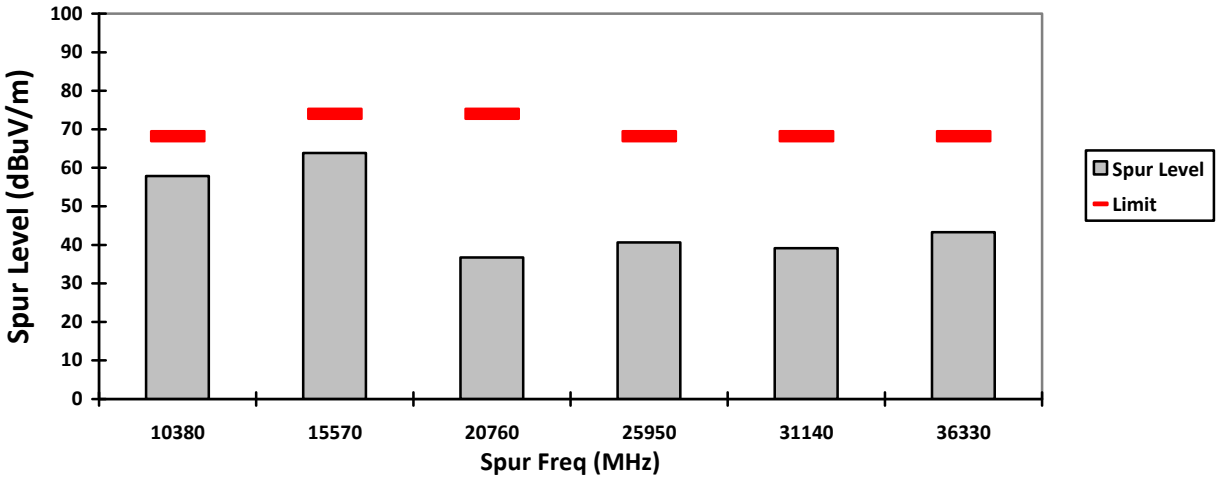
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10380	-	57.8461**	-	-	68.2000	-	-	10.3539	-	-
15570	-	63.8310**	52.6176**	-	74.0000	54.0000	-	10.1690	1.3824	-
20760	-	36.7517**	-	-	74.0000	-	-	37.2483	-	-
25950	-	40.6351**	-	-	68.2000	-	-	27.5649	-	-
31140	-	39.1135**	-	-	68.2000	-	-	29.0865	-	-
36330	-	43.2818**	-	-	68.2000	-	-	24.9182	-	-
Horizontal Radiated Emission Result										
10380	-	57.0299**	-	-	68.2000	-	-	11.1701	-	-
15570	-	64.1576**	52.8480**	-	74.0000	54.0000	-	9.8424	1.1520	-
20760	-	37.2558**	-	-	74.0000	-	-	36.7442	-	-
25950	-	38.9921**	-	-	68.2000	-	-	29.2079	-	-
31140	-	40.9635**	-	-	68.2000	-	-	27.2365	-	-
36330	-	42.5088**	-	-	68.2000	-	-	25.6912	-	-

Remarks: Pass Result	Marginal Result	Fail Result

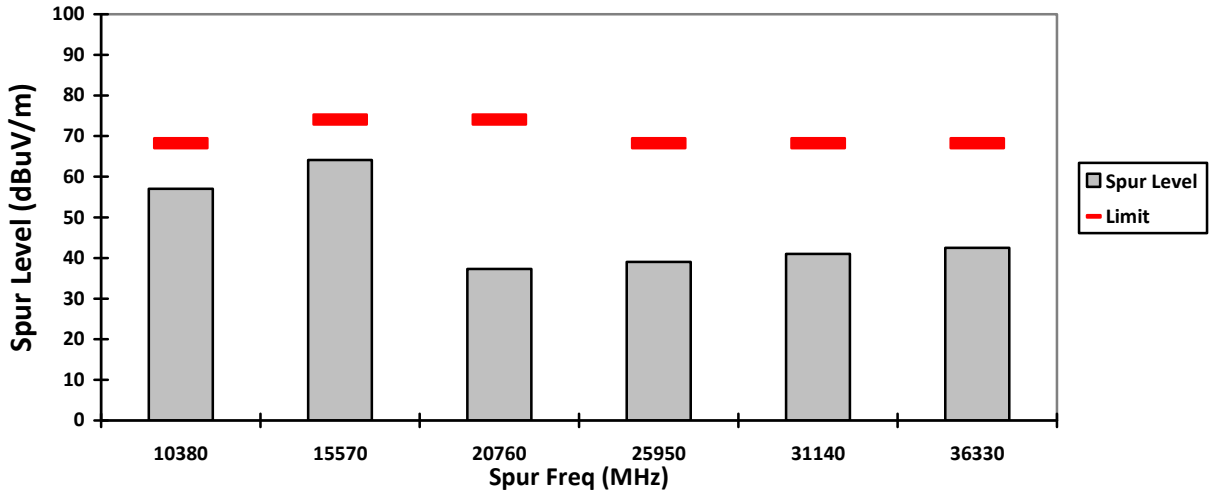
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

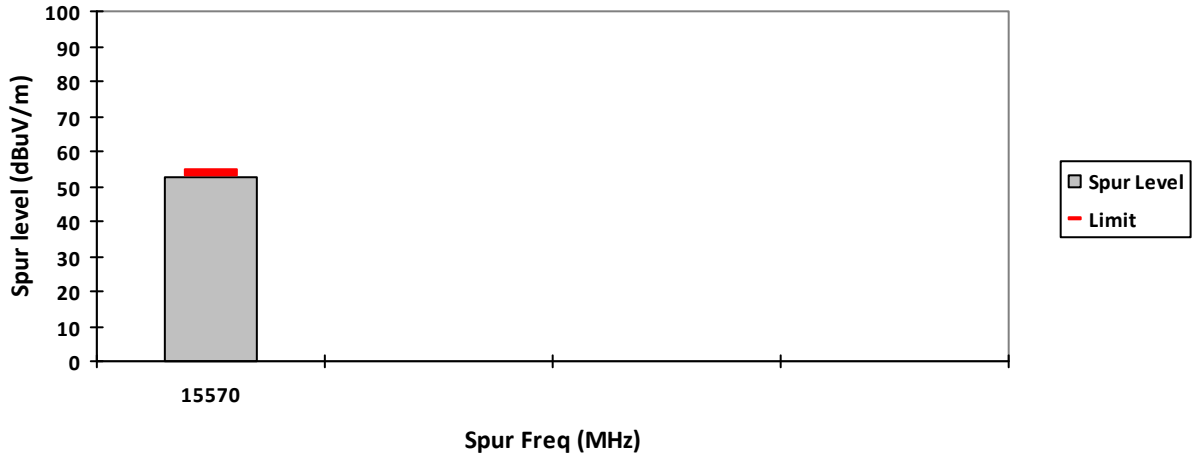
VERTICAL, PK



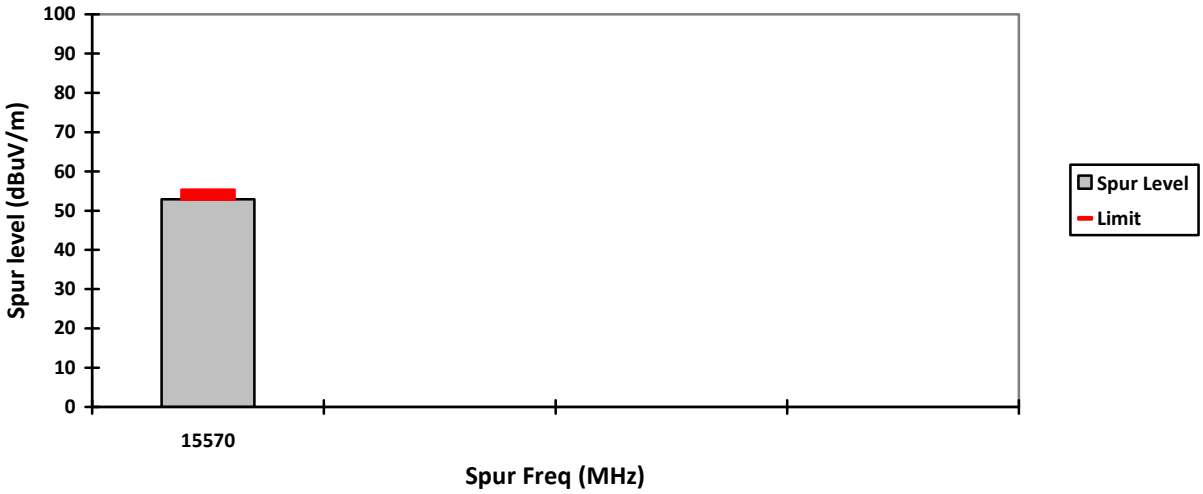
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5230.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (13)

Radiated Emission (High Channel) tabular data

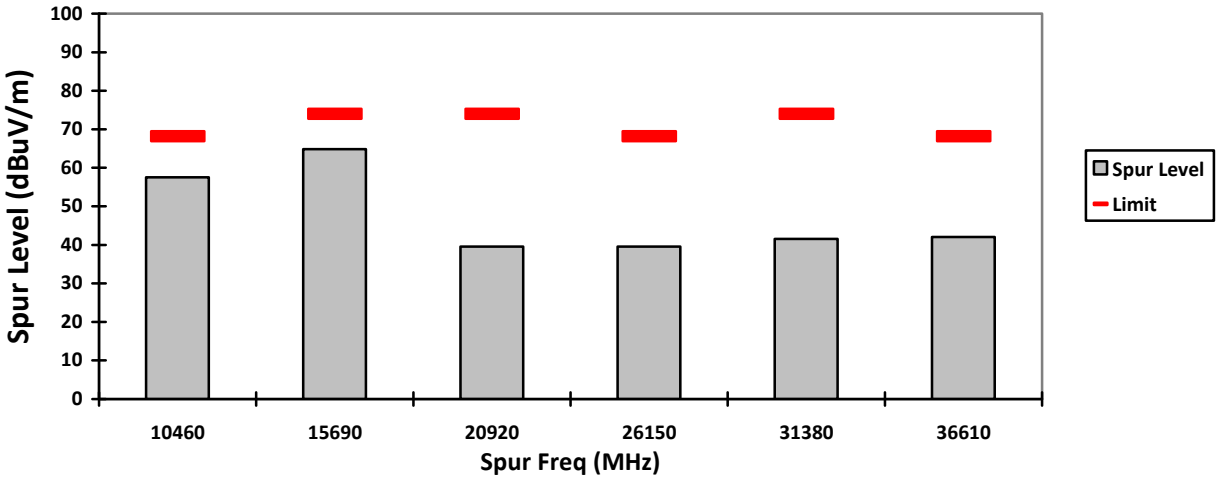
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10460	-	57.5677**	-	-	68.2000	-	-	10.6323	-	-
15690	-	64.8473**	52.7081**	-	74.0000	54.0000	-	9.1527	1.2919	-
20920	-	39.5883**	-	-	74.0000	-	-	34.4117	-	-
26150	-	39.5510**	-	-	68.2000	-	-	28.6490	-	-
31380	-	41.5713**	-	-	74.0000	-	-	32.4287	-	-
36610	-	42.0317**	-	-	68.2000	-	-	26.1683	-	-
Horizontal Radiated Emission Result										
10460	-	57.2982**	-	-	68.2000	-	-	10.9018	-	-
15690	-	64.0294**	52.1007**	-	74.0000	54.0000	-	9.9706	1.8993	-
20920	-	38.9279**	-	-	74.0000	-	-	35.0721	-	-
26150	-	39.8344**	-	-	68.2000	-	-	28.3656	-	-
31380	-	41.4870**	-	-	74.0000	-	-	32.5130	-	-
36610	-	41.4760**	-	-	68.2000	-	-	26.7240	-	-

Remarks: Pass Result	Marginal Result	Fail Result

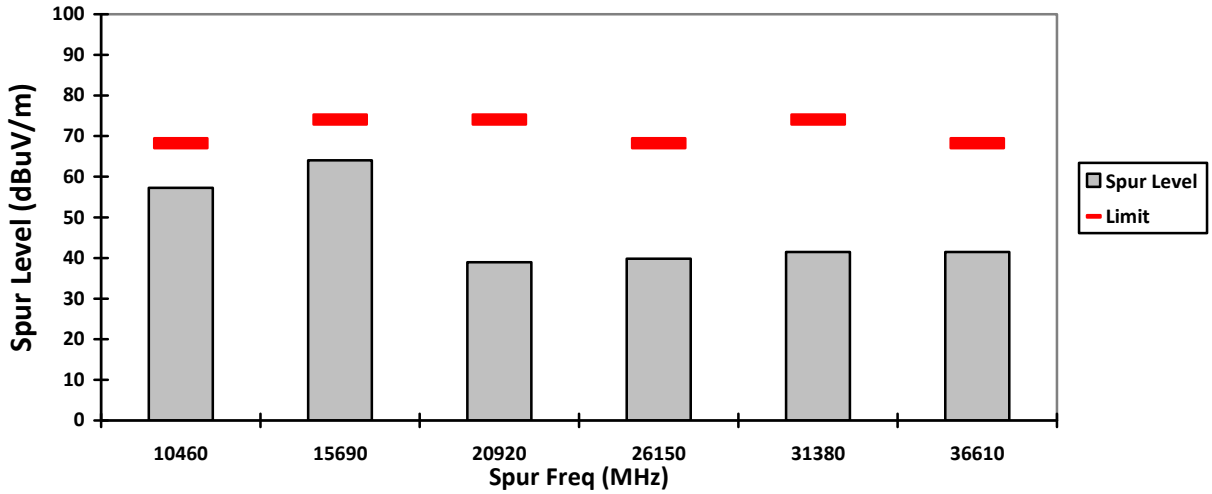
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

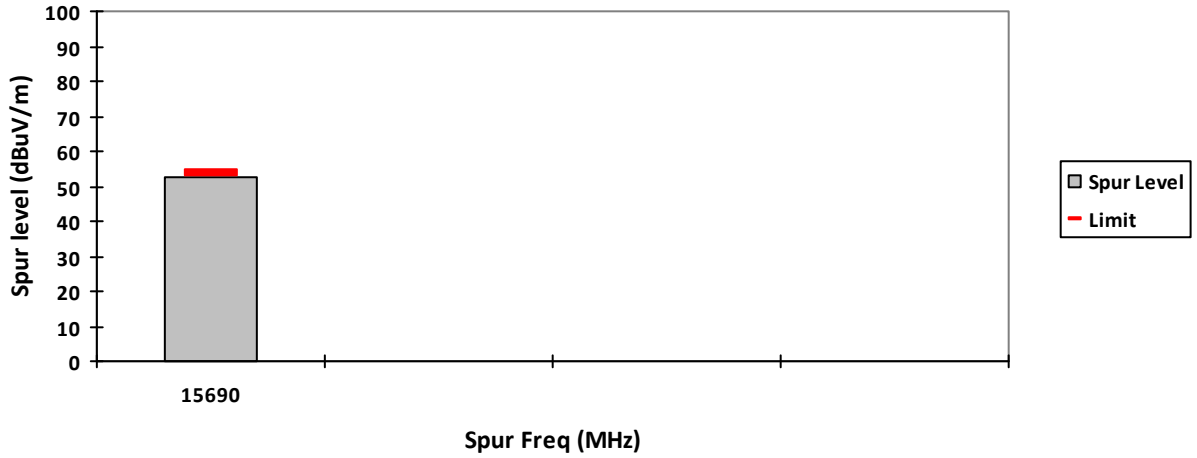
VERTICAL, PK



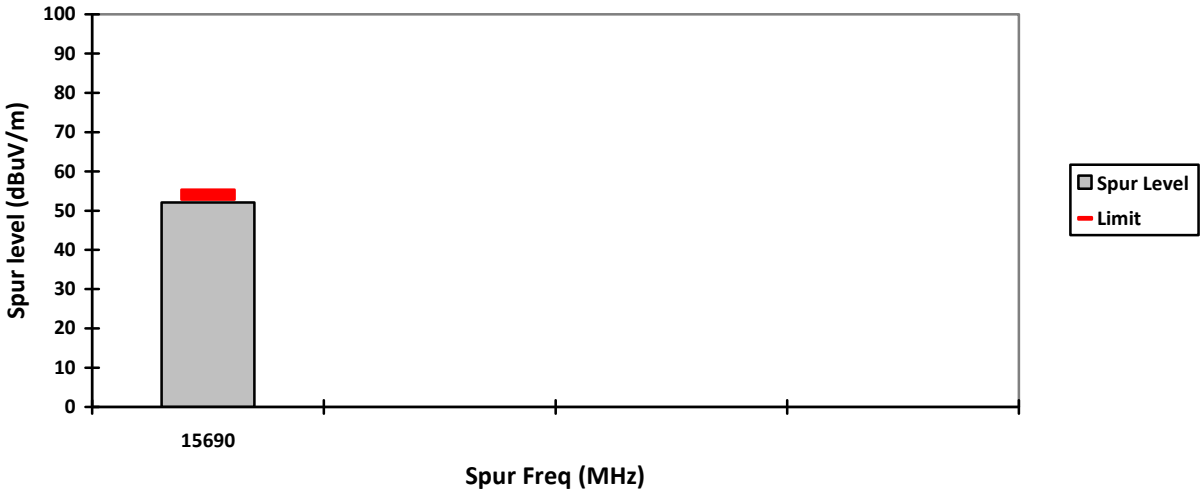
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5270.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (13)

Radiated Emission (Low Channel) tabular data

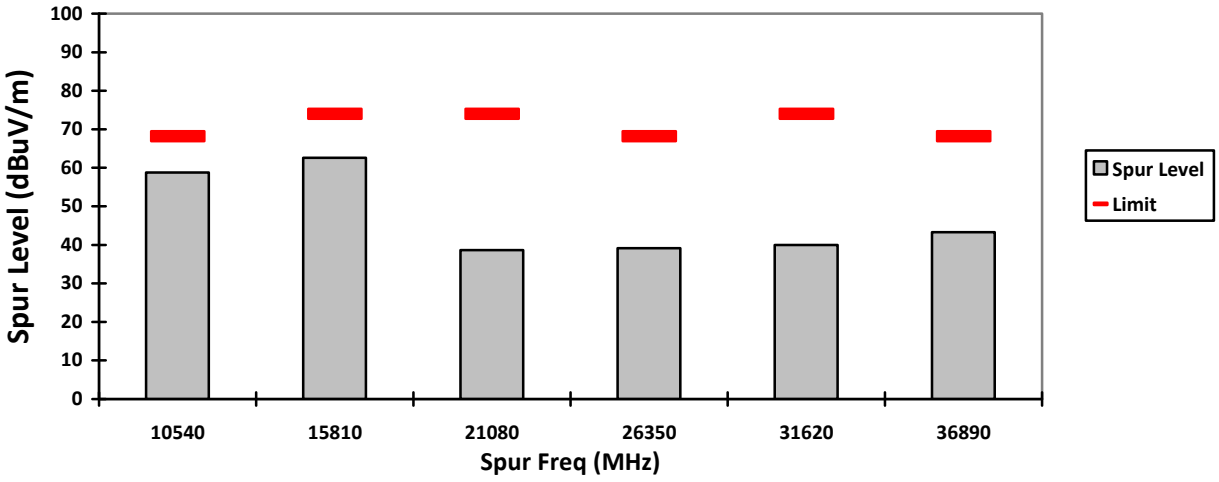
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10540	-	58.8205**	-	-	68.2000	-	-	9.3795	-	-
15810	-	62.5975**	52.3300**	-	74.0000	54.0000	-	11.4025	1.6700	-
21080	-	38.6637**	-	-	74.0000	-	-	35.3363	-	-
26350	-	39.1675**	-	-	68.2000	-	-	29.0325	-	-
31620	-	39.9421**	-	-	74.0000	-	-	34.0579	-	-
36890	-	43.2980**	-	-	68.2000	-	-	24.9020	-	-
Horizontal Radiated Emission Result										
10540	-	57.4691**	-	-	68.2000	-	-	10.7309	-	-
15810	-	62.8803**	52.3736**	-	74.0000	54.0000	-	11.1197	1.6264	-
21080	-	38.7514**	-	-	74.0000	-	-	35.2486	-	-
26350	-	39.7335**	-	-	68.2000	-	-	28.4665	-	-
31620	-	38.9224**	-	-	74.0000	-	-	35.0776	-	-
36890	-	43.1447**	-	-	68.2000	-	-	25.0553	-	-

Remarks: Pass Result	Marginal Result	Fail Result

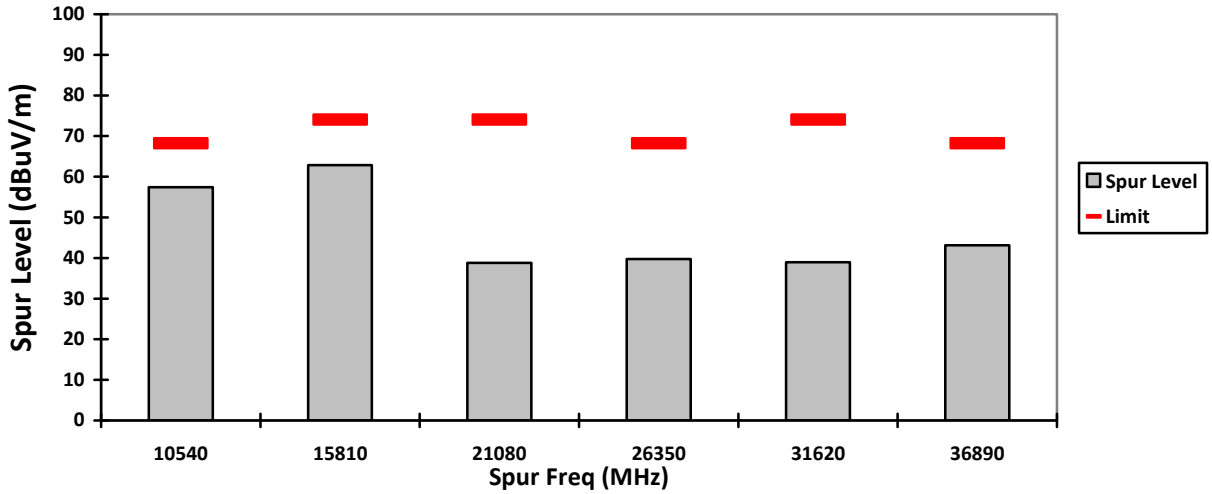
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

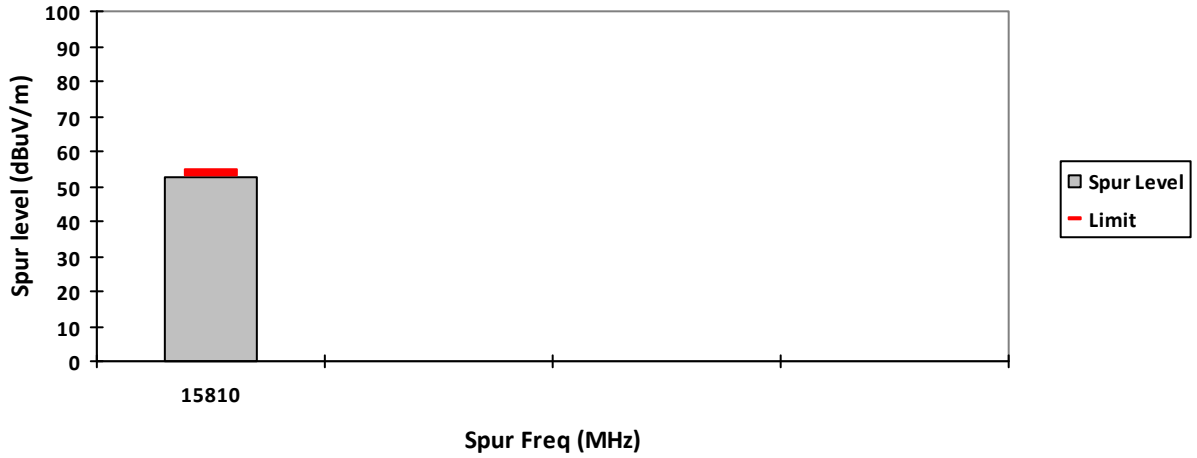
VERTICAL, PK



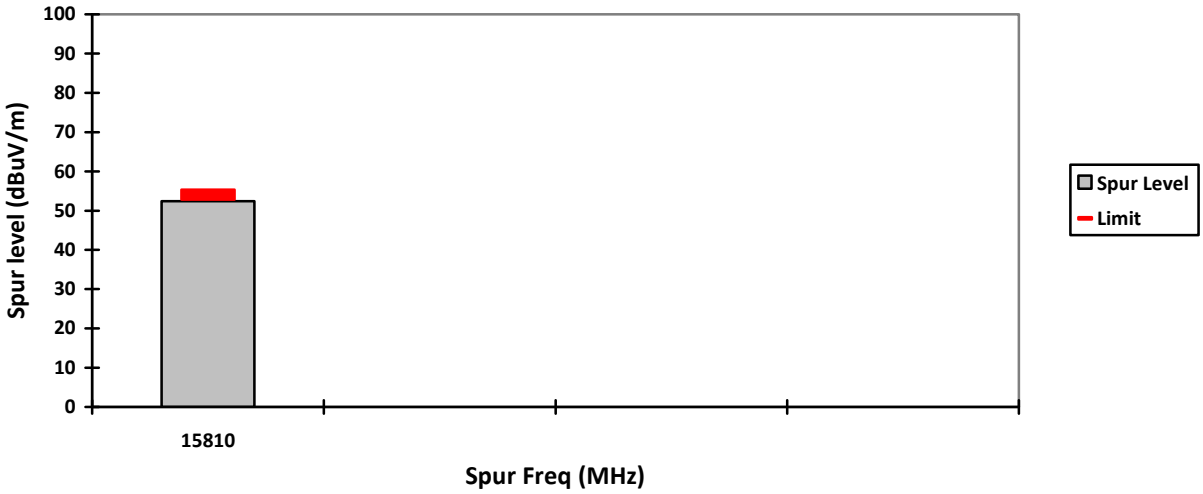
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5310.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (11)

Radiated Emission (High Channel) tabular data

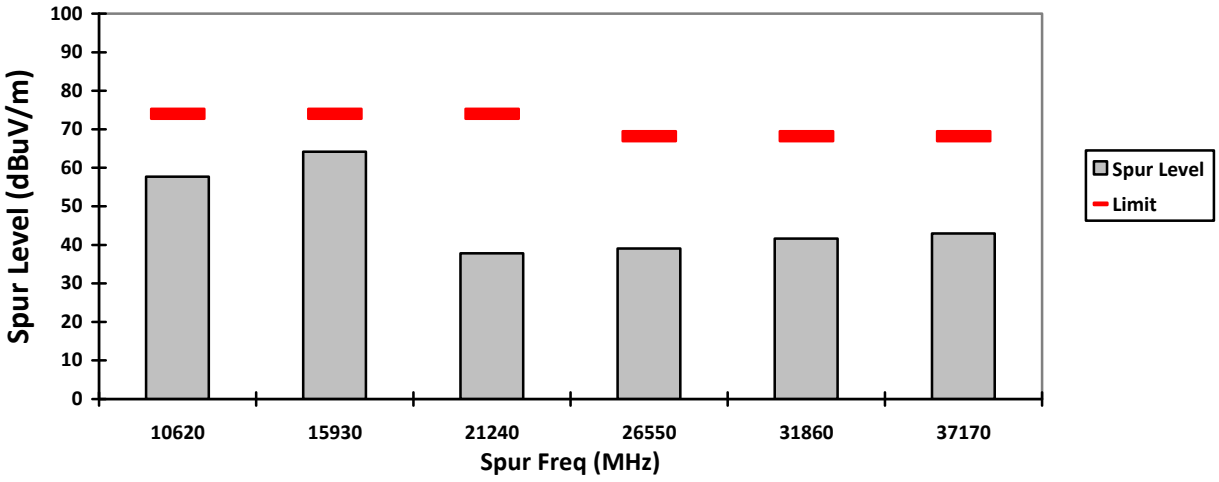
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10620	-	57.6934**	51.7329**	-	74.0000	54.0000	-	16.3066	2.2671	-
15930	-	64.2202**	52.1845**	-	74.0000	54.0000	-	9.7798	1.8155	-
21240	-	37.8064**	-	-	74.0000	-	-	36.1936	-	-
26550	-	39.0833**	-	-	68.2000	-	-	29.1167	-	-
31860	-	41.5874**	-	-	68.2000	-	-	26.6126	-	-
37170	-	42.9411**	-	-	68.2000	-	-	25.2589	-	-
Horizontal Radiated Emission Result										
10620	-	57.5328**	51.8342**	-	74.0000	54.0000	-	16.4672	2.1658	-
15930	-	63.9640**	52.4042**	-	74.0000	54.0000	-	10.0360	1.5958	-
21240	-	37.3159**	-	-	74.0000	-	-	36.6841	-	-
26550	-	40.0890**	-	-	68.2000	-	-	28.1110	-	-
31860	-	41.4075**	-	-	68.2000	-	-	26.7925	-	-
37170	-	42.9890**	-	-	68.2000	-	-	25.2110	-	-

Remarks: Pass Result	Marginal Result	Fail Result

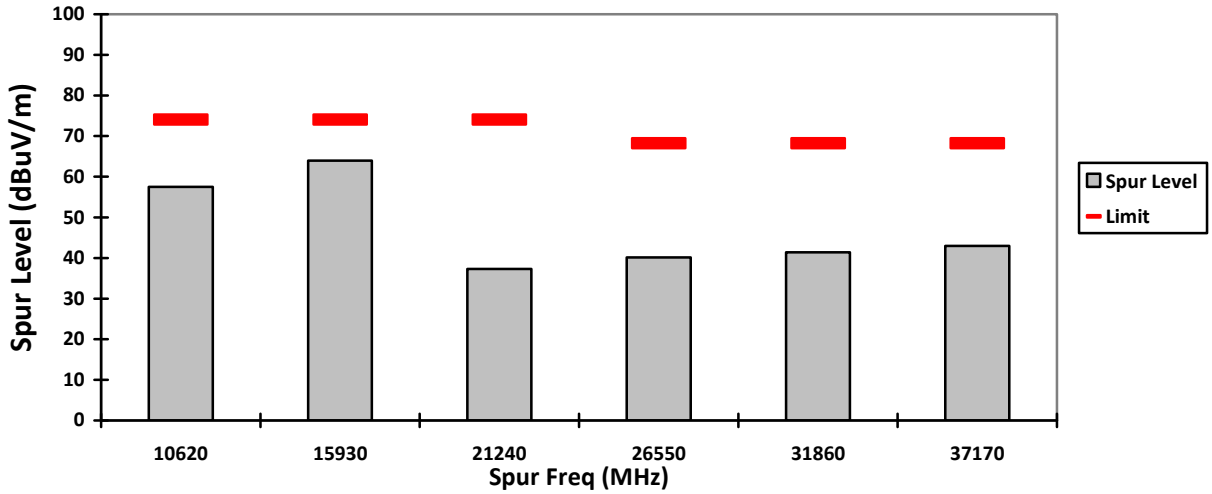
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

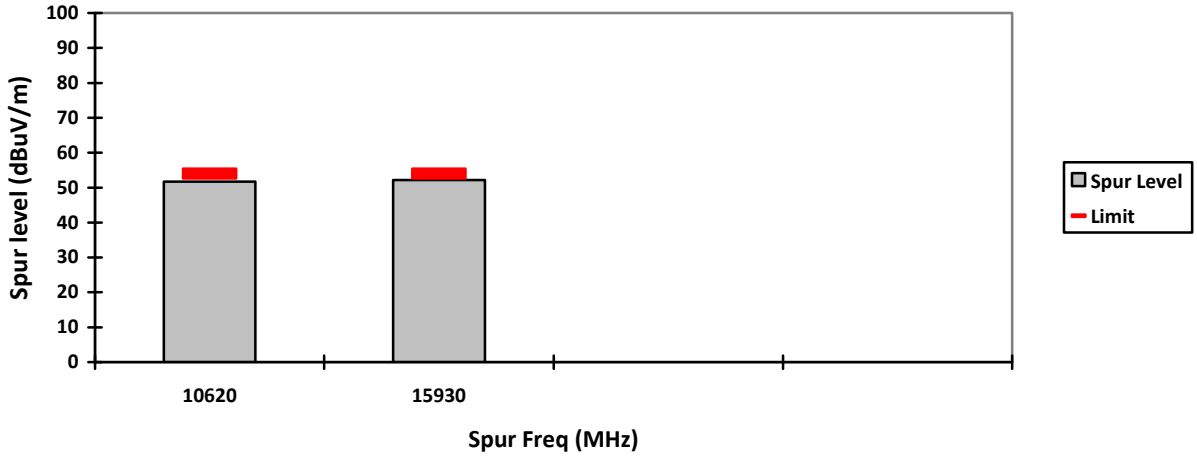
VERTICAL, PK



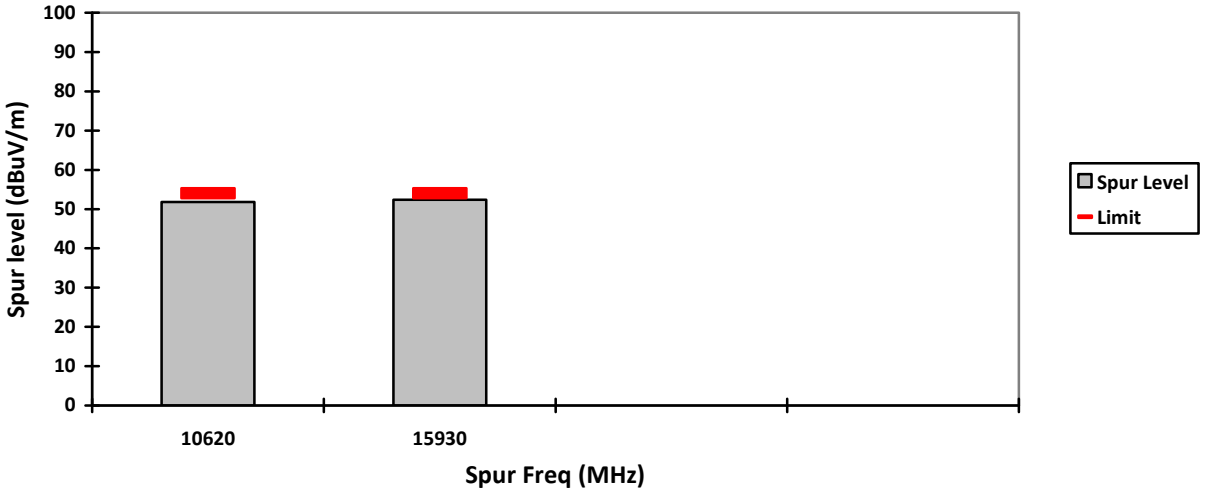
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5510.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (10)

Radiated Emission (Low Channel) tabular data

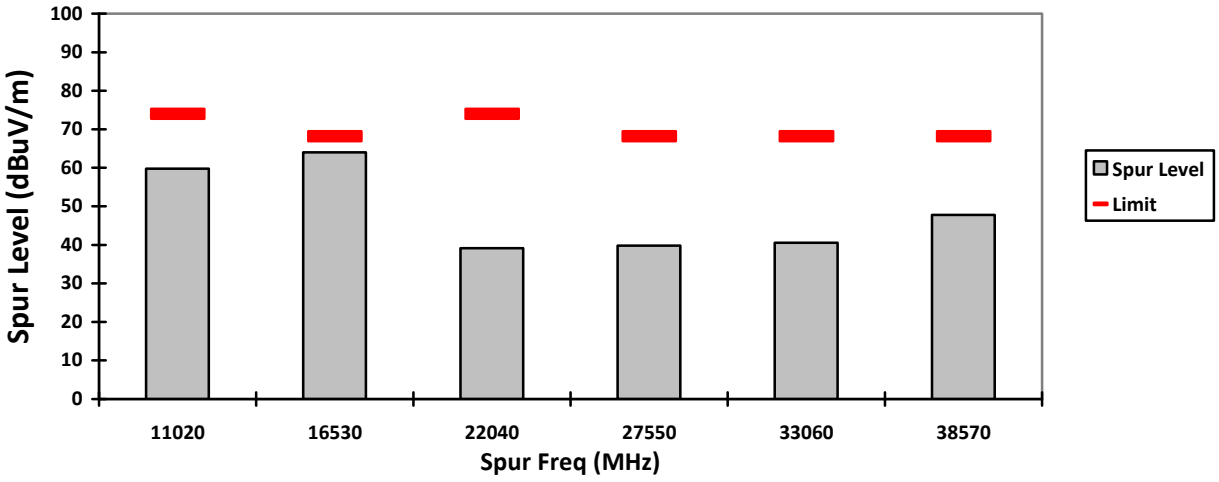
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11020	-	59.7944**	52.8346**	-	74.0000	54.0000	-	14.2056	1.1654	-
16530	-	63.9816**	-	-	68.2000	-	-	4.2184	-	-
22040	-	39.1596**	-	-	74.0000	-	-	34.8404	-	-
27550	-	39.8308**	-	-	68.2000	-	-	28.3692	-	-
33060	-	40.5292**	-	-	68.2000	-	-	27.6708	-	-
38570	-	47.7236**	-	-	68.2000	-	-	20.4764	-	-
Horizontal Radiated Emission Result										
11020	-	59.9863**	53.1777**	-	74.0000	54.0000	-	14.0137	0.8223	-
16530	-	64.8905**	-	-	68.2000	-	-	3.3095	-	-
22040	-	39.6971**	-	-	74.0000	-	-	34.3029	-	-
27550	-	40.0376**	-	-	68.2000	-	-	28.1624	-	-
33060	-	40.8447**	-	-	68.2000	-	-	27.3553	-	-
38570	-	48.1719**	-	-	68.2000	-	-	20.0281	-	-

Remarks: Pass Result	Marginal Result	Fail Result

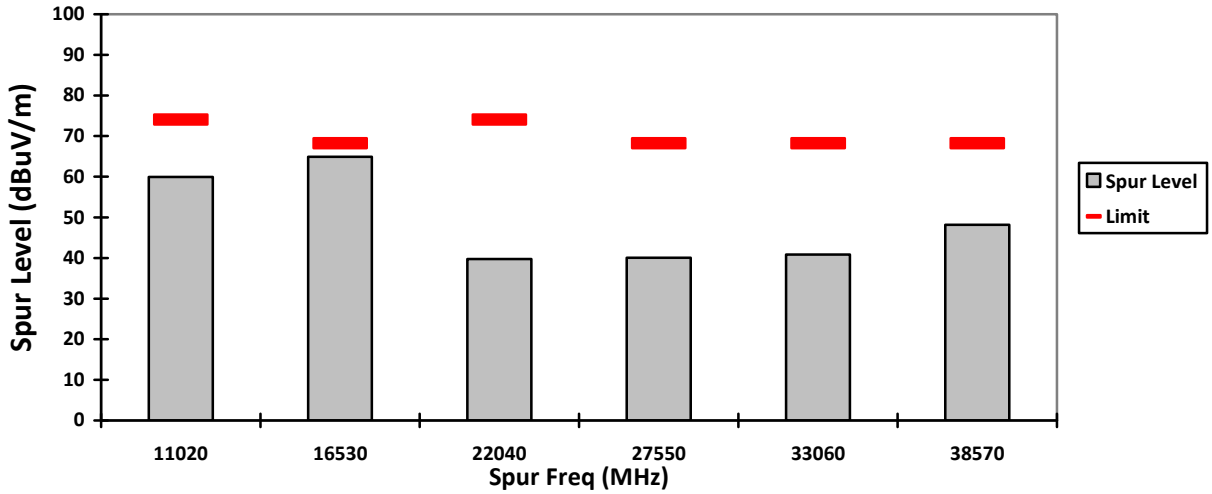
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

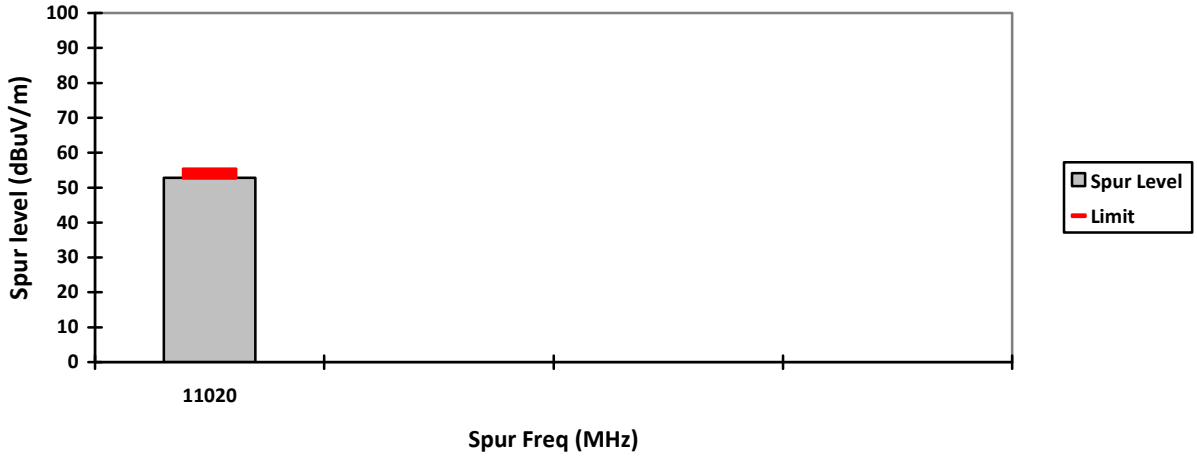
VERTICAL, PK



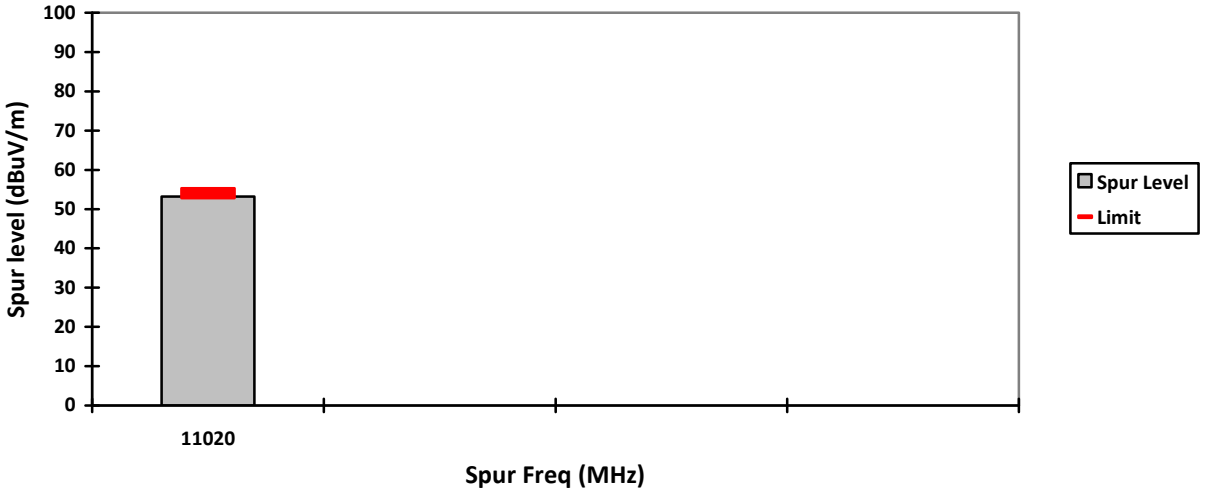
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5550.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (14)

Radiated Emission (Mid Channel) tabular data

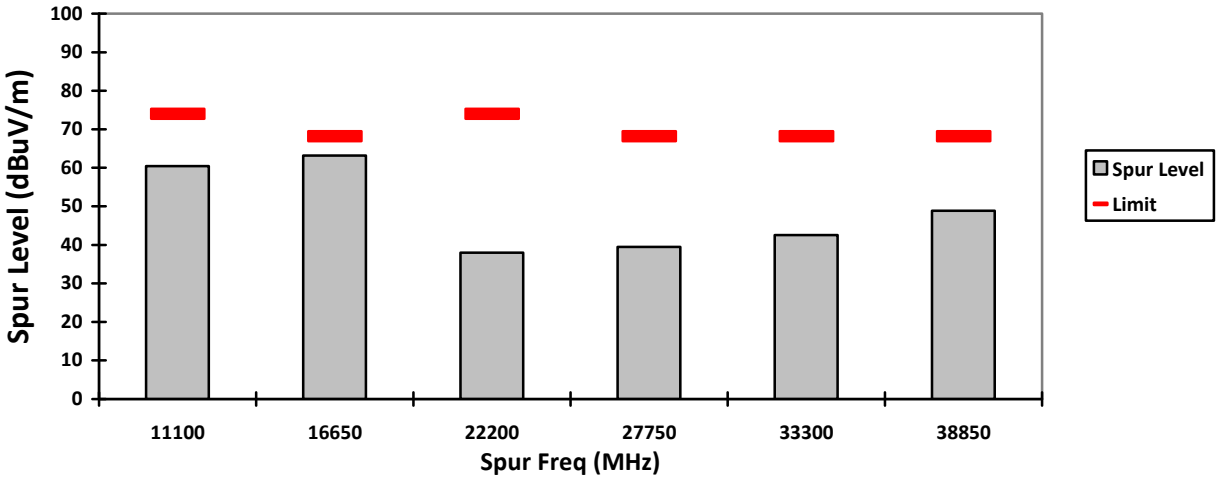
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11100	-	60.4819**	52.7500**	-	74.0000	54.0000	-	13.5181	1.2500	-
16650	-	63.2213**	-	-	68.2000	-	-	4.9787	-	-
22200	-	37.9929**	-	-	74.0000	-	-	36.0071	-	-
27750	-	39.4641**	-	-	68.2000	-	-	28.7359	-	-
33300	-	42.5219**	-	-	68.2000	-	-	25.6781	-	-
38850	-	48.8233**	-	-	68.2000	-	-	19.3767	-	-
Horizontal Radiated Emission Result										
11100	-	60.7314**	52.8897**	-	74.0000	54.0000	-	13.2686	1.1103	-
16650	-	62.0018**	-	-	68.2000	-	-	6.1982	-	-
22200	-	37.8399**	-	-	74.0000	-	-	36.1601	-	-
27750	-	40.4586**	-	-	68.2000	-	-	27.7414	-	-
33300	-	41.8484**	-	-	68.2000	-	-	26.3516	-	-
38850	-	47.8579**	-	-	68.2000	-	-	20.3421	-	-

Remarks: Pass Result	Marginal Result	Fail Result

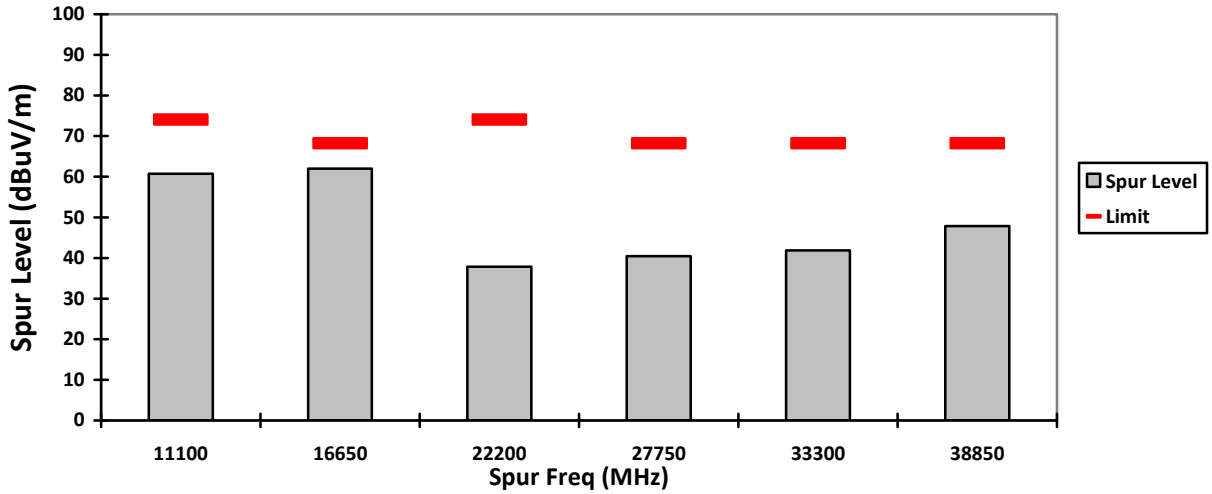
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

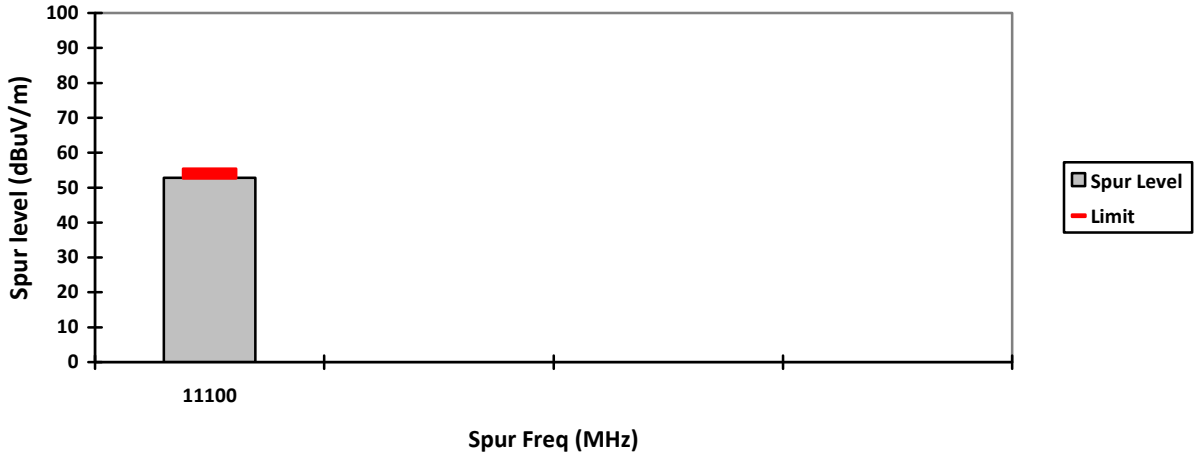
VERTICAL, PK



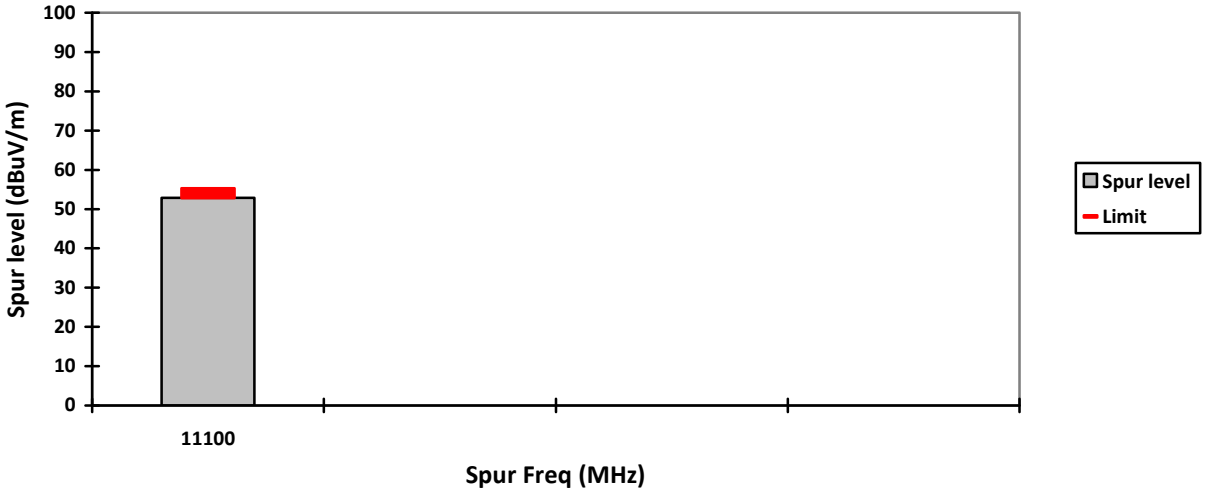
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Straddle	Test Frequency: 5710.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (14)

Radiated Emission (Straddle Channel) tabular data

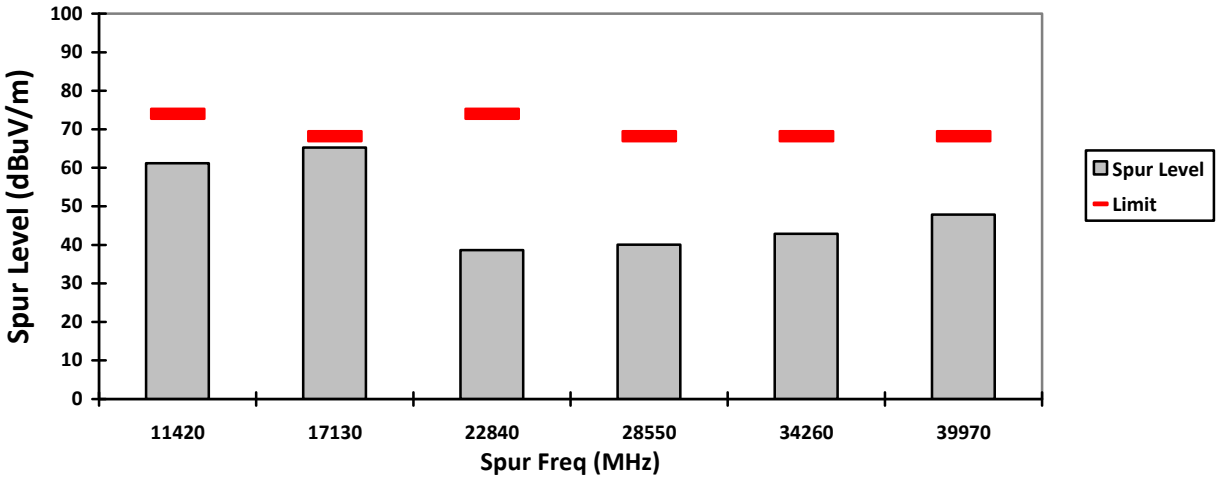
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11420	-	61.2333**	52.9082**	-	74.0000	54.0000	-	12.7667	1.0918	-
17130	-	65.2289**	-	-	68.2000	-	-	2.9711	-	-
22840	-	38.6639**	-	-	74.0000	-	-	35.3361	-	-
28550	-	40.0428**	-	-	68.2000	-	-	28.1572	-	-
34260	-	42.9025**	-	-	68.2000	-	-	25.2975	-	-
39970	-	47.8337**	-	-	68.2000	-	-	20.3663	-	-
Horizontal Radiated Emission Result										
11420	-	60.2394**	53.2614**	-	74.0000	54.0000	-	13.7606	0.7386	-
17130	-	64.9387**	-	-	68.2000	-	-	3.2613	-	-
22840	-	39.5336**	-	-	74.0000	-	-	34.4664	-	-
28550	-	38.9476**	-	-	68.2000	-	-	29.2524	-	-
34260	-	43.7515**	-	-	68.2000	-	-	24.4485	-	-
39970	-	49.1406**	-	-	68.2000	-	-	19.0594	-	-

Remarks: Pass Result	Marginal Result	Fail Result

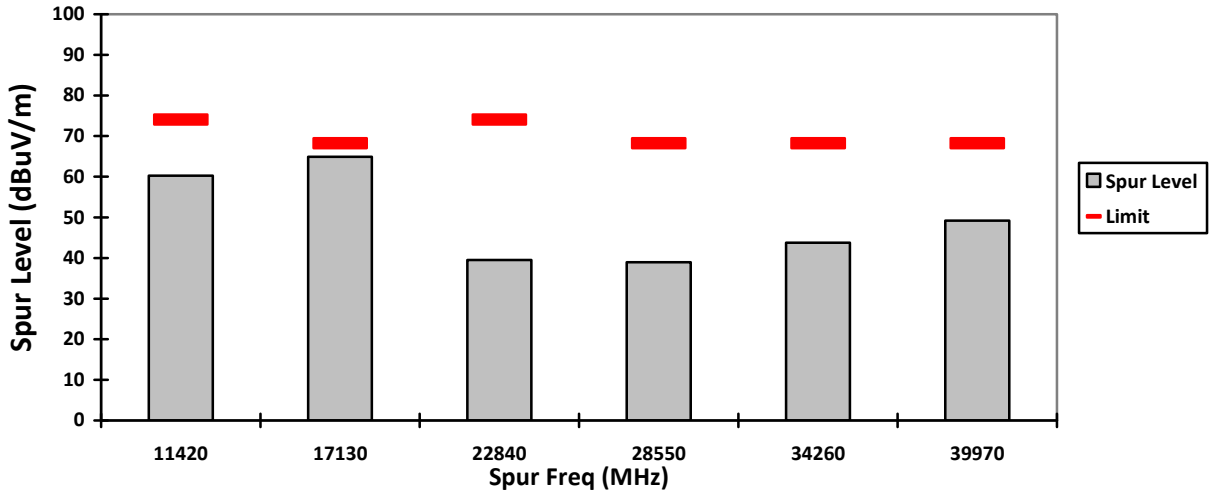
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

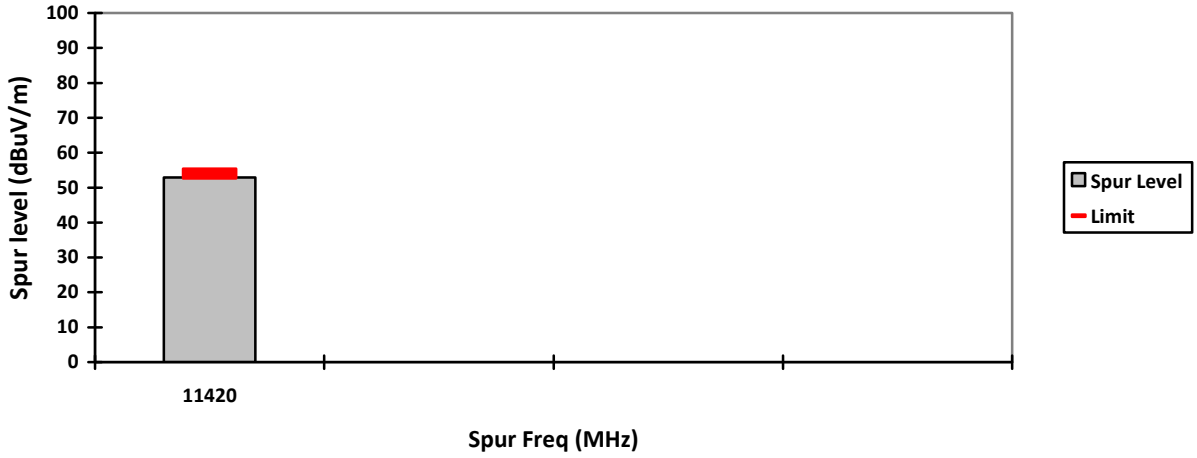
VERTICAL, PK



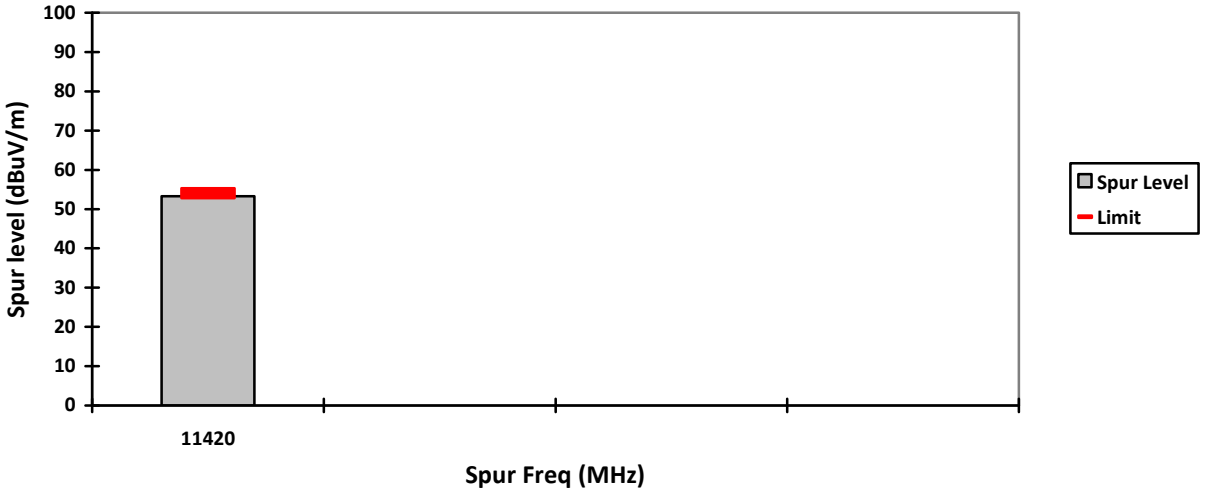
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5755.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (13)

Radiated Emission (Low Channel) tabular data

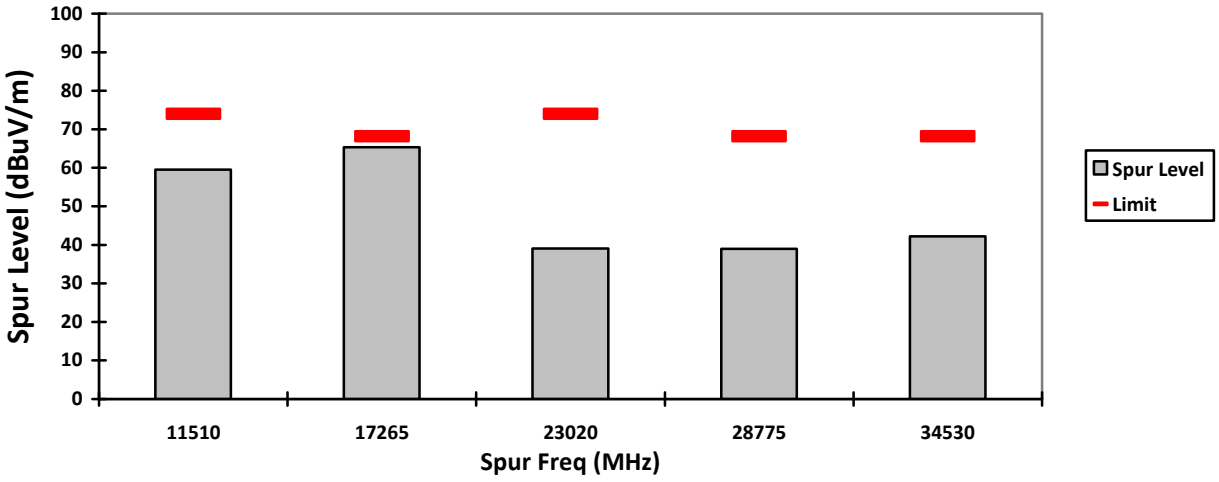
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11510	-	59.5224**	52.8805**	-	74.0000	54.0000	-	14.4776	1.1195	-
17265	-	65.3696**	-	-	68.2000	-	-	2.8304	-	-
23020	-	39.0274**	-	-	74.0000	-	-	34.9726	-	-
28775	-	38.9462**	-	-	68.2000	-	-	29.2538	-	-
34530	-	42.2296**	-	-	68.2000	-	-	25.9704	-	-
Horizontal Radiated Emission Result										
11510	-	59.2903**	53.2487**	-	74.0000	54.0000	-	14.7097	0.7513	-
17265	-	65.5733**	-	-	68.2000	54.0000	-	2.6267	-	-
23020	-	38.0467**	-	-	74.0000	54.0000	-	35.9533	-	-
28775	-	40.1910**	-	-	68.2000	54.0000	-	28.0090	-	-
34530	-	42.7456**	-	-	68.2000	54.0000	-	25.4544	-	-

Remarks: Pass Result	Marginal Result	Fail Result

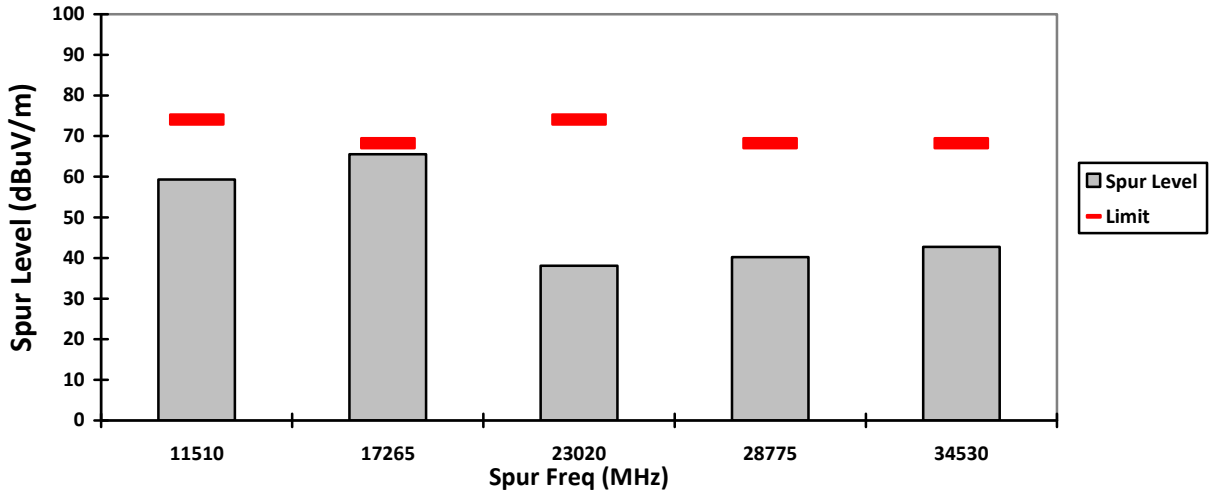
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

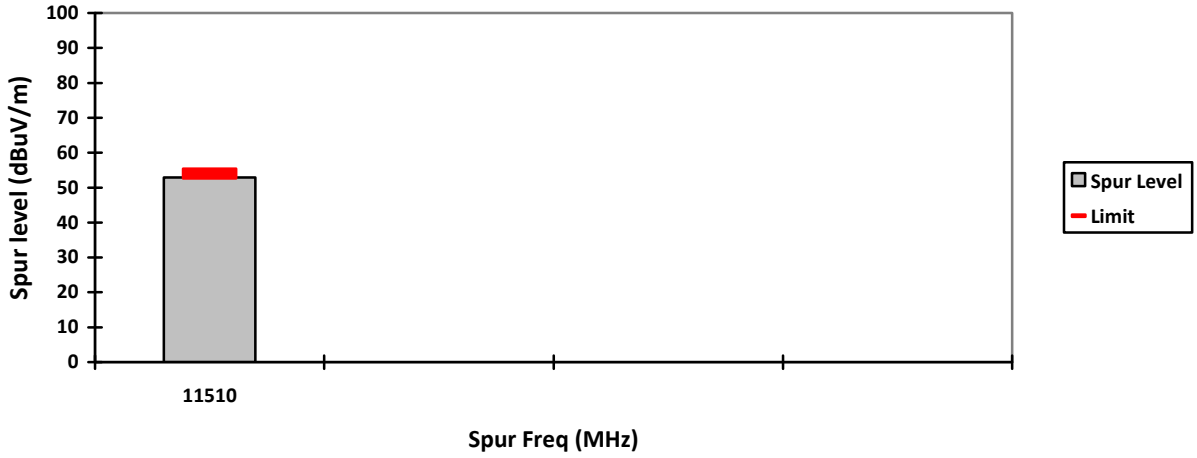
VERTICAL, PK



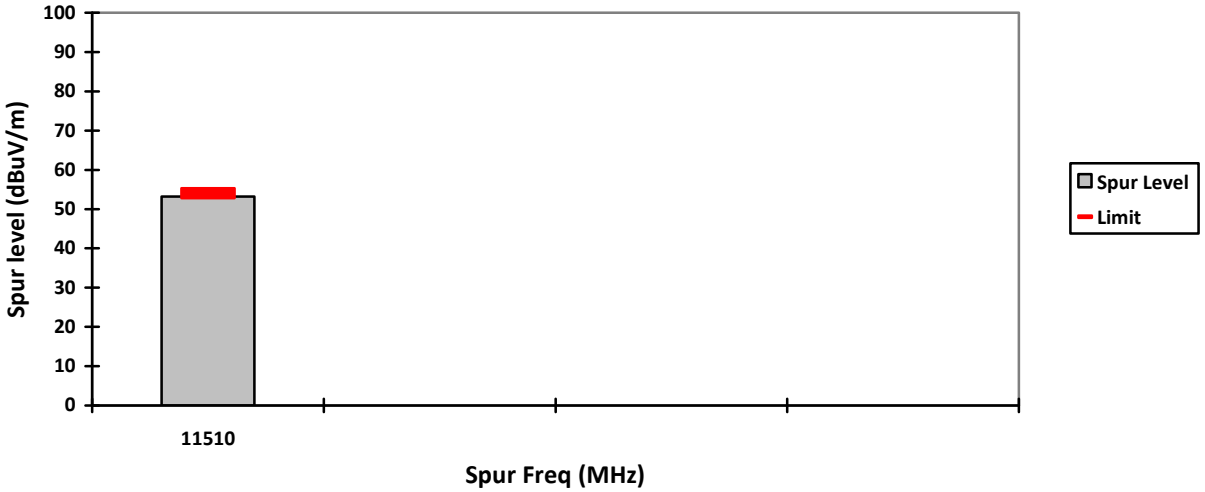
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5795.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	Softpot power (10)

Radiated Emission (High Channel) tabular data

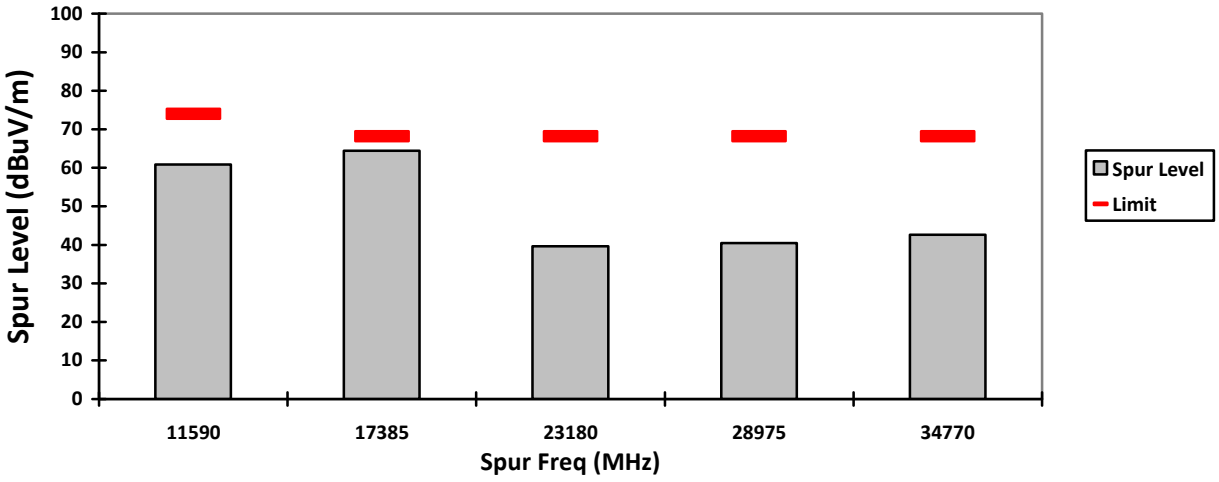
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11590	-	60.8664**	53.7318**	-	74.0000	54.0000	-	13.1336	0.2682	-
17385	-	64.4417**	-	-	68.2000	-	-	3.7583	-	-
23180	-	39.6685**	-	-	68.2000	-	-	28.5315	-	-
28975	-	40.4267**	-	-	68.2000	-	-	27.7733	-	-
34770	-	42.5917**	-	-	68.2000	-	-	25.6083	-	-
Horizontal Radiated Emission Result										
11590	-	60.5924**	53.3601**	-	74.0000	54.0000	-	13.4076	0.6399	-
17385	-	63.6738**	-	-	68.2000	-	-	4.5262	-	-
23180	-	41.3003**	-	-	68.2000	-	-	26.8997	-	-
28975	-	40.3403**	-	-	68.2000	-	-	27.8597	-	-
34770	-	42.0127**	-	-	68.2000	-	-	26.1873	-	-

Remarks: Pass Result	Marginal Result	Fail Result

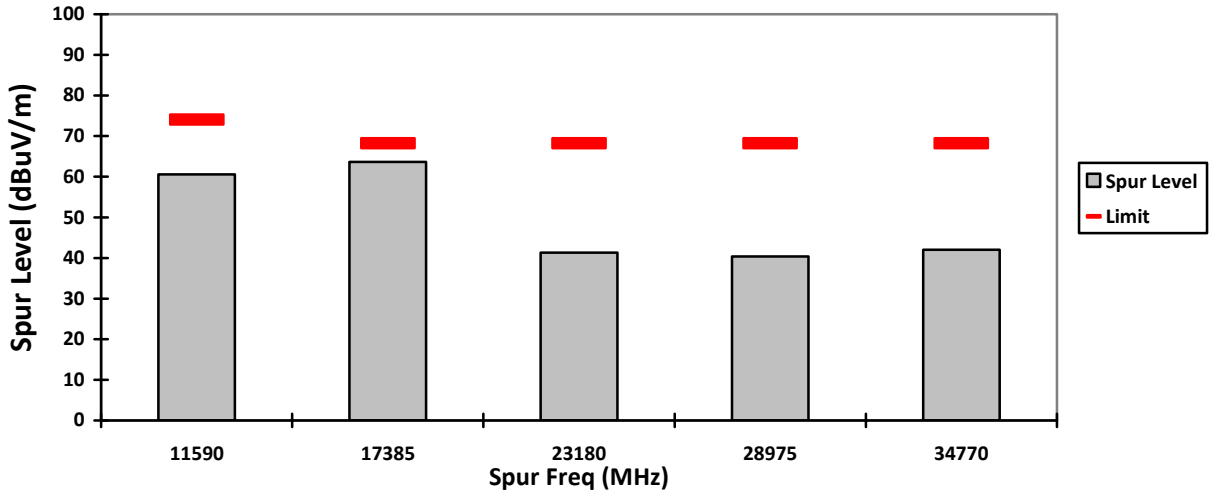
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

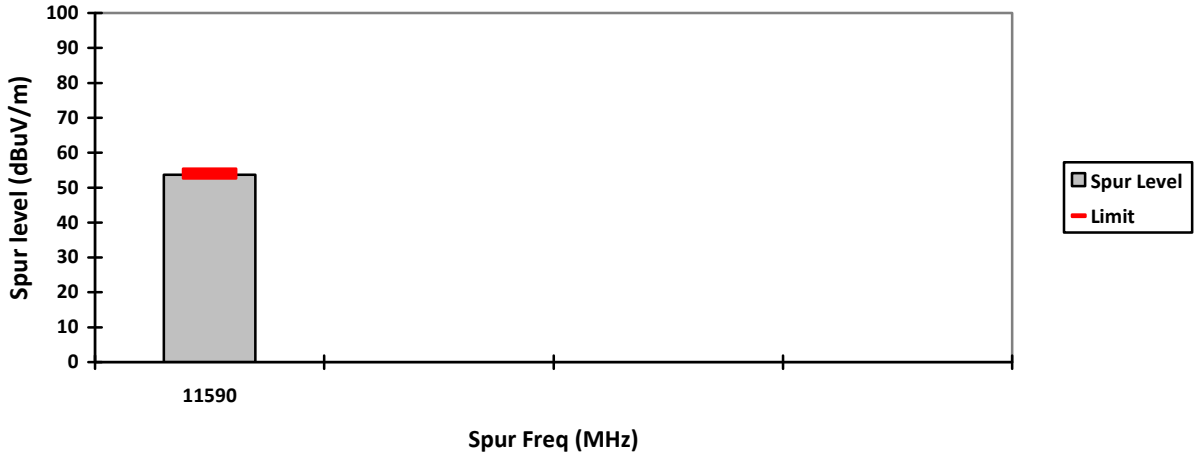
VERTICAL, PK



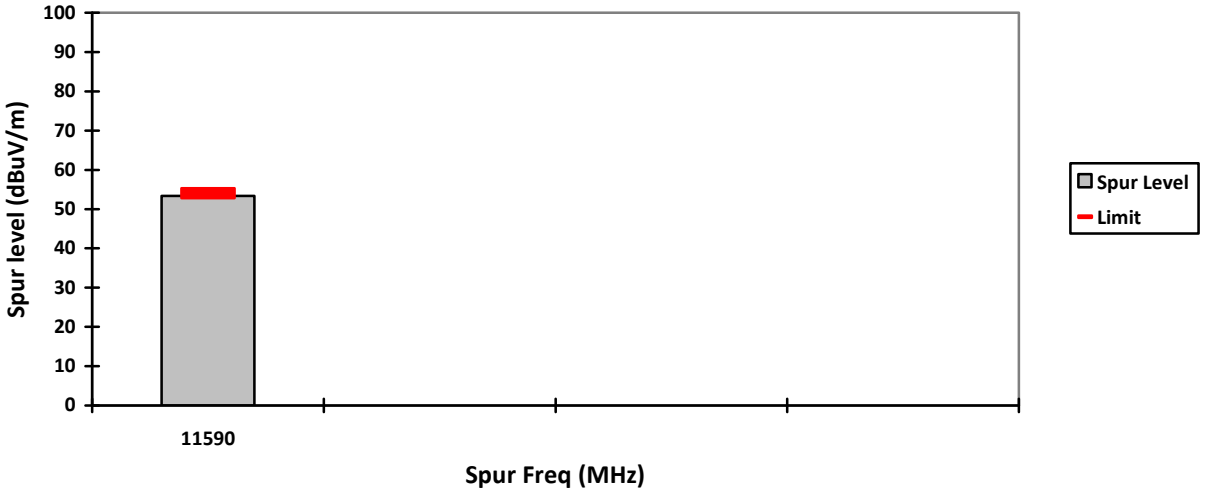
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



802.11ac (VHT80)

Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5210.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (10)

Radiated Emission (Mid Channel) tabular data

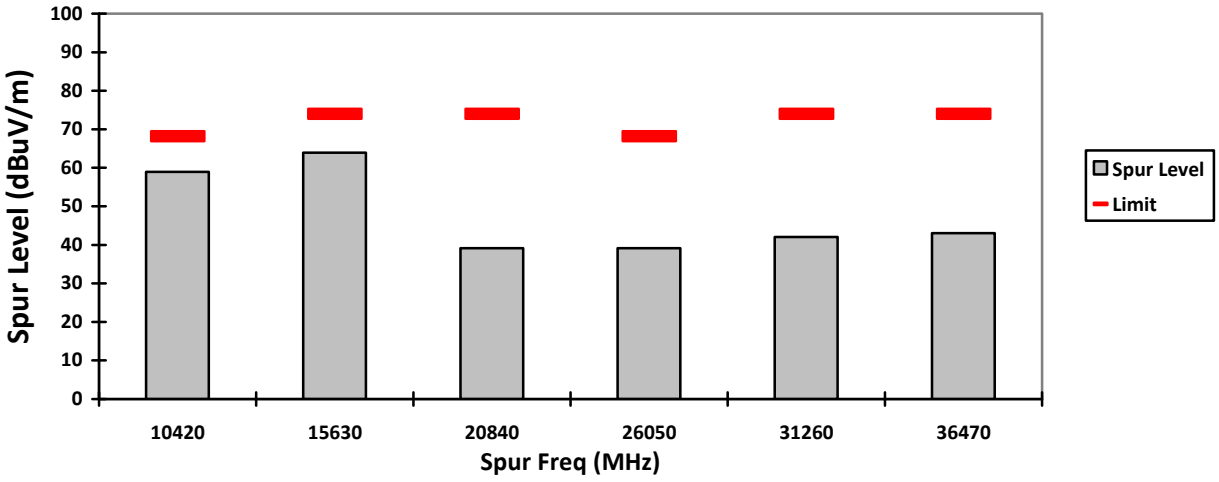
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10420	-	58.9169**	-	-	68.2000	-	-	9.2831	-	-
15630	-	63.9064**	51.7256**	-	74.0000	54.0000	-	10.0936	2.2744	-
20840	-	39.1285**	-	-	74.0000	-	-	34.8715	-	-
26050	-	39.1079**	-	-	68.2000	-	-	29.0921	-	-
31260	-	42.0579**	-	-	74.0000	-	-	31.9421	-	-
36470	-	43.0091**	-	-	74.0000	-	-	30.9909	-	-
Horizontal Radiated Emission Result										
10420	-	57.9747**	-	-	68.2000	-	-	10.2253	-	-
15630	-	63.5637**	51.2612**	-	74.0000	54.0000	-	10.4363	2.7388	-
20840	-	38.6297**	-	-	74.0000	-	-	35.3703	-	-
26050	-	38.8605**	-	-	68.2000	-	-	29.3395	-	-
31260	-	41.3332**	-	-	74.0000	-	-	32.6668	-	-
36470	-	43.7040**	-	-	74.0000	-	-	30.2960	-	-

Remarks: Pass Result	Marginal Result	Fail Result

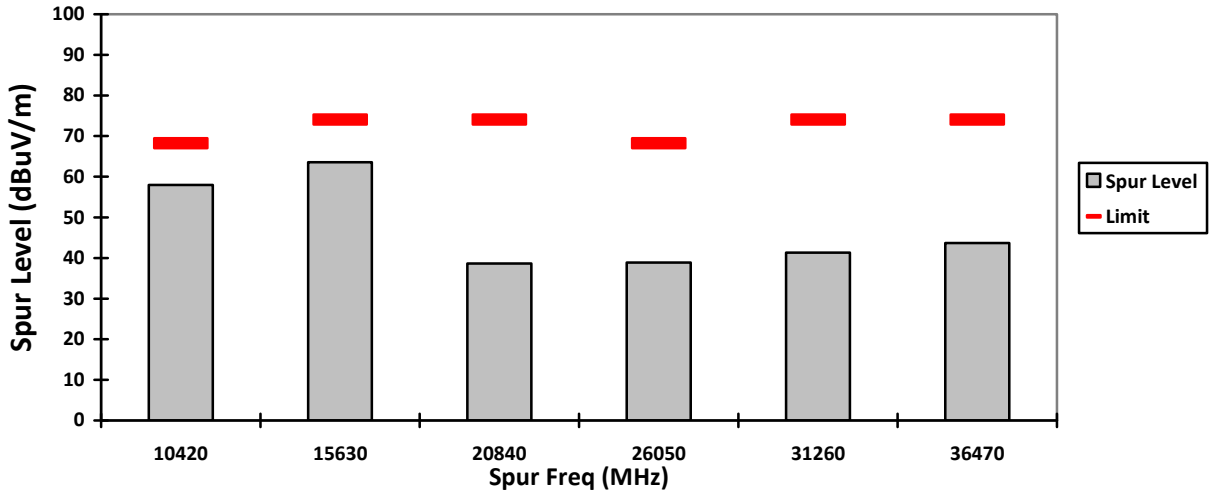
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

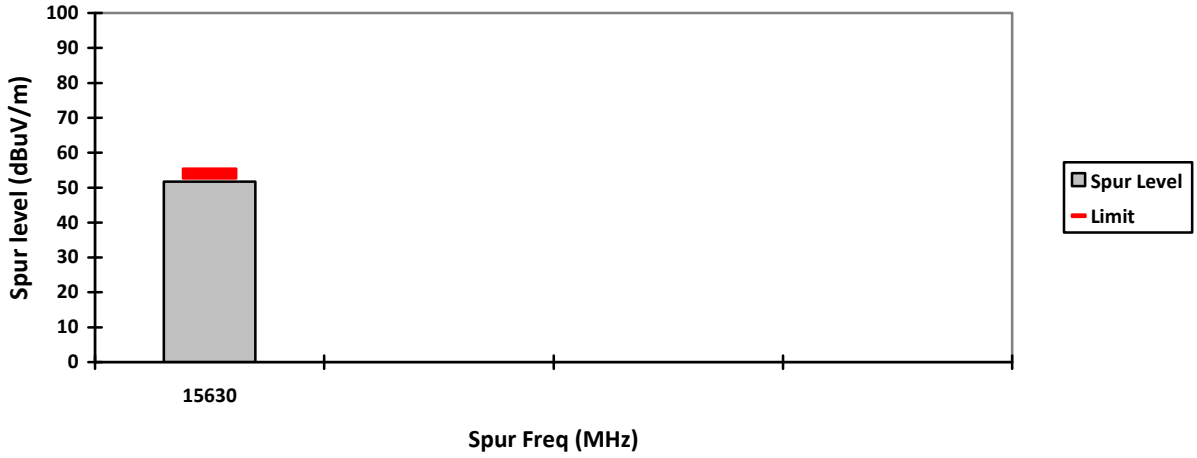
VERTICAL, PK



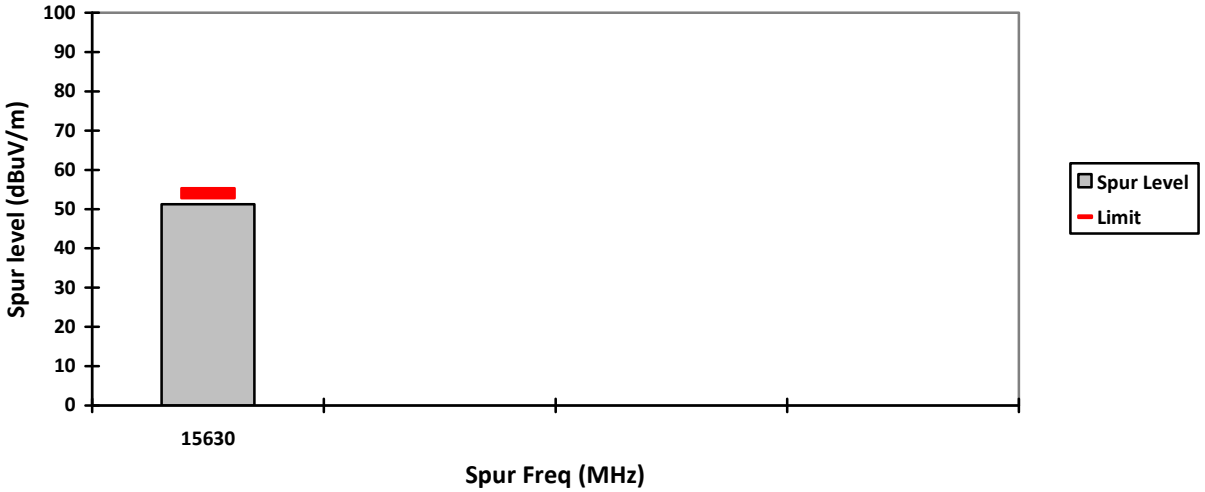
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5290.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (9)

Radiated Emission (Mid Channel) tabular data

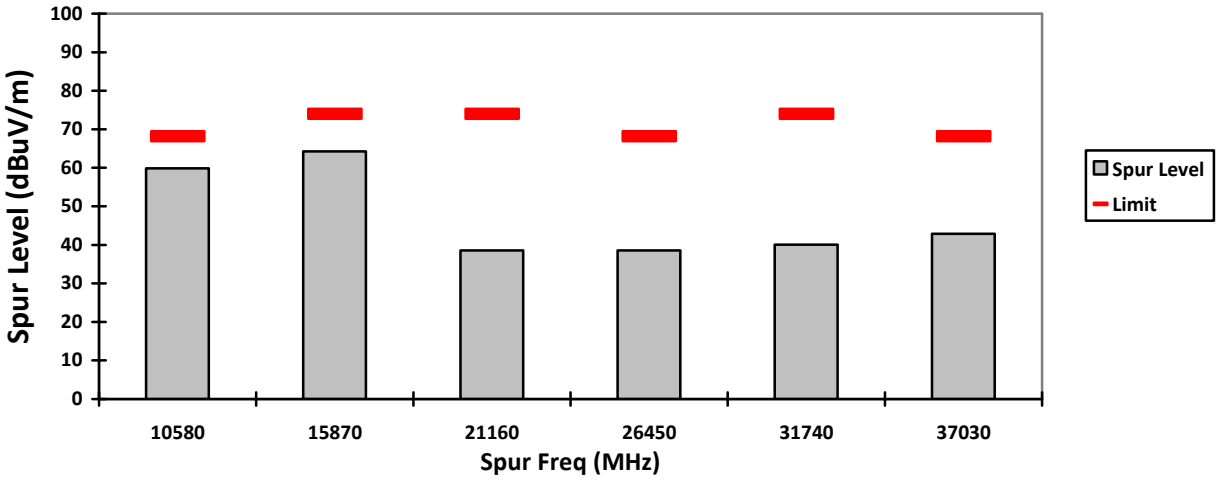
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
10580	-	59.8378**	-	-	68.2000	-	-	8.3622	-	-
15870	-	64.2830**	52.8137**	-	74.0000	54.0000	-	9.7170	1.1863	-
21160	-	38.5451**	-	-	74.0000	-	-	35.4549	-	-
26450	-	38.5405**	-	-	68.2000	-	-	29.6595	-	-
31740	-	40.0525**	-	-	74.0000	-	-	33.9475	-	-
37030	-	42.8918**	-	-	68.2000	-	-	25.3082	-	-
Horizontal Radiated Emission Result										
10580	-	58.0792**	-	-	68.2000	-	-	10.1208	-	-
15870	-	63.9816**	52.7852**	-	74.0000	54.0000	-	10.0184	1.2148	-
21160	-	38.2839**	-	-	74.0000	-	-	35.7161	-	-
26450	-	40.0009**	-	-	68.2000	-	-	28.1991	-	-
31740	-	40.1672**	-	-	74.0000	-	-	33.8328	-	-
37030	-	42.6332**	-	-	68.2000	-	-	25.5668	-	-

Remarks: Pass Result	Marginal Result	Fail Result

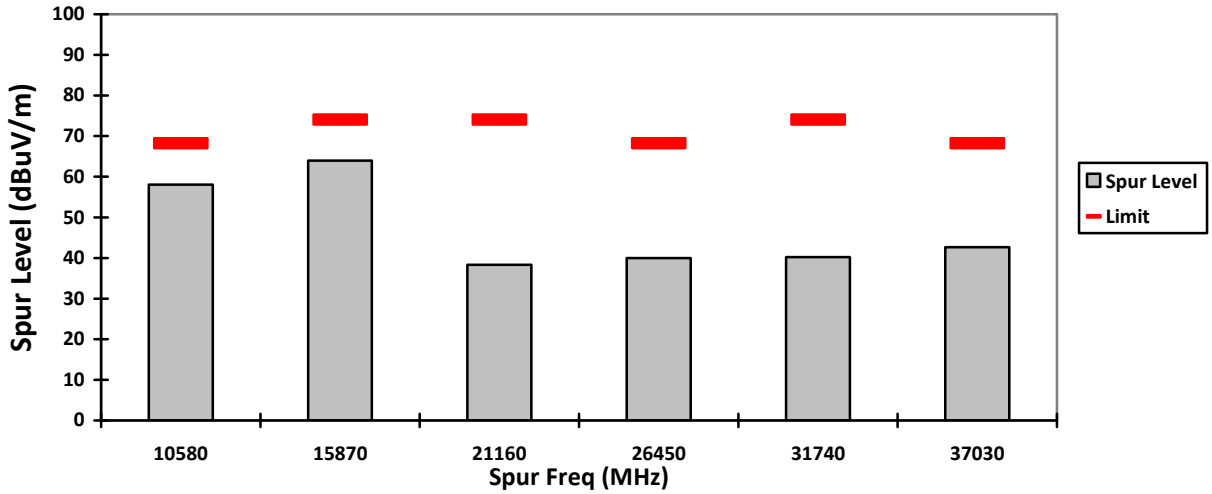
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

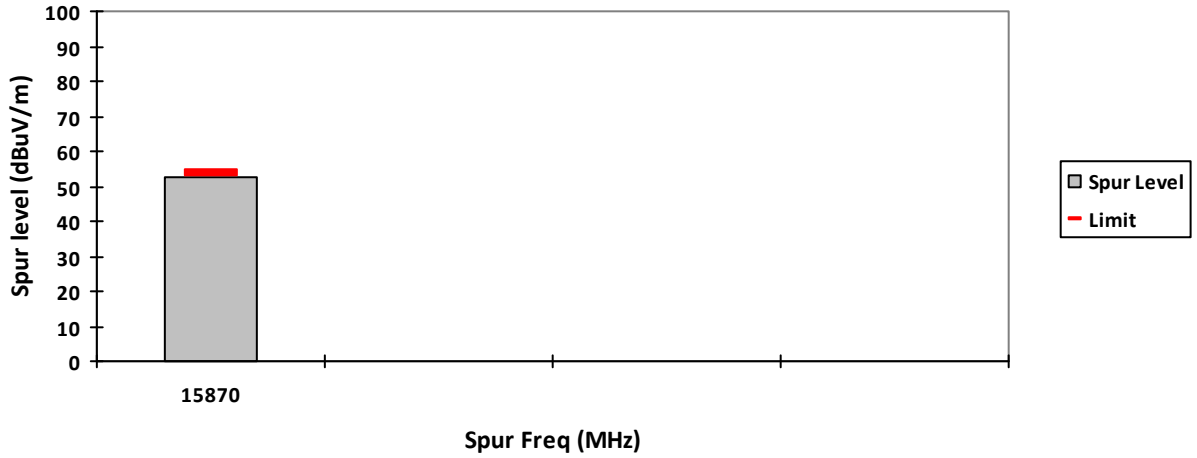
VERTICAL, PK



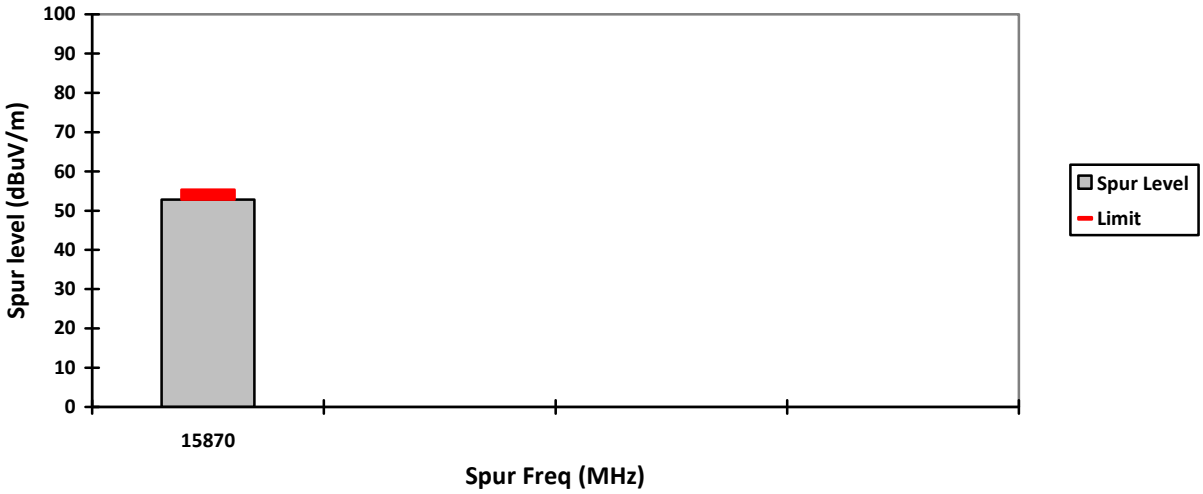
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Low	Test Frequency: 5530.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (9)

Radiated Emission (Low Channel) tabular data

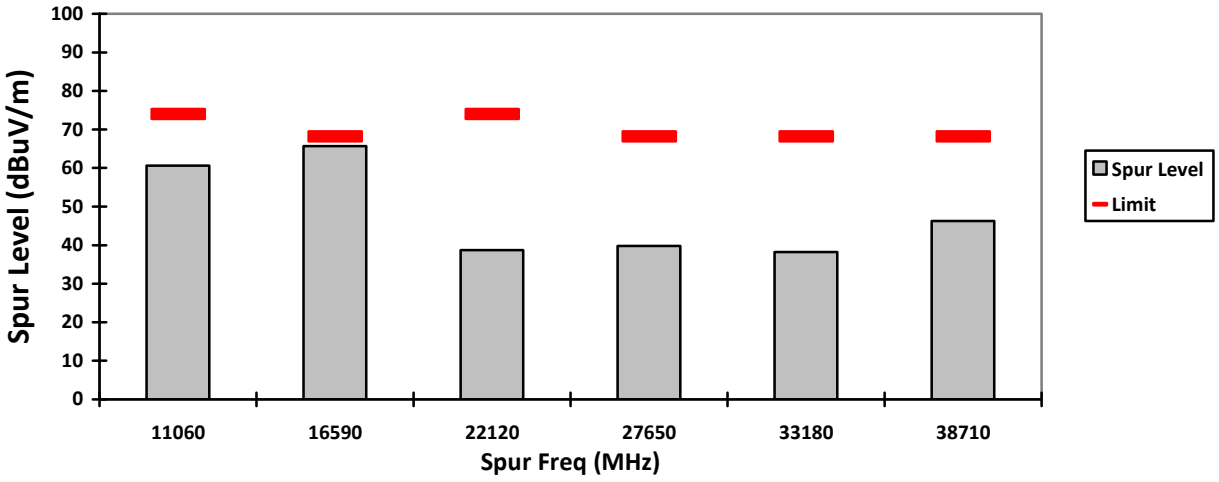
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11060	-	60.6509**	52.7216**	-	74.0000	54.0000	-	13.3491	1.2784	-
16590	-	65.6470**	-	-	68.2000	-	-	2.5530	-	-
22120	-	38.7252**	-	-	74.0000	-	-	35.2748	-	-
27650	-	39.8253**	-	-	68.2000	-	-	28.3747	-	-
33180	-	38.2296**	-	-	68.2000	-	-	29.9704	-	-
38710	-	46.2361**	-	-	68.2000	-	-	21.9639	-	-
Horizontal Radiated Emission Result										
11060	-	60.1469**	52.2211**	-	74.0000	54.0000	-	13.8531	1.7789	-
16590	-	64.1901**	-	-	68.2000	-	-	4.0099	-	-
22120	-	39.6230**	-	-	74.0000	-	-	34.3770	-	-
27650	-	39.8548**	-	-	68.2000	-	-	28.3452	-	-
33180	-	39.4977**	-	-	68.2000	-	-	28.7023	-	-
38710	-	46.4784**	-	-	68.2000	-	-	21.7216	-	-

Remarks: Pass Result	Marginal Result	Fail Result

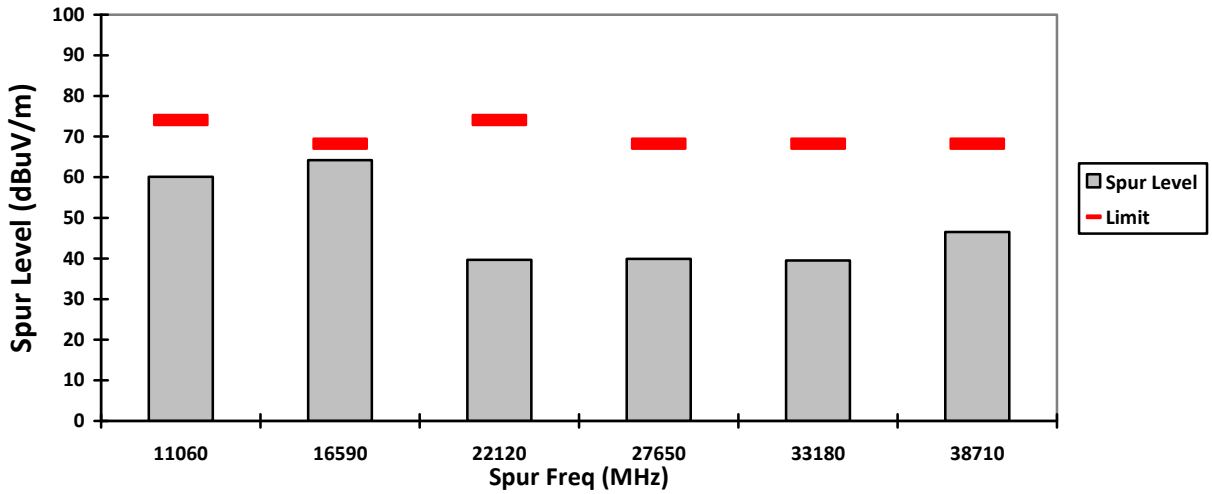
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

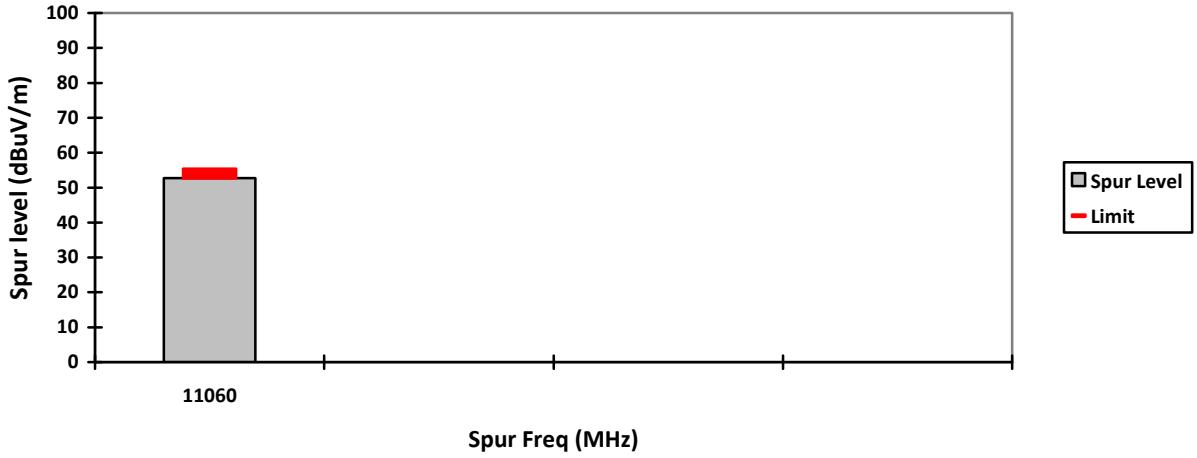
VERTICAL, PK



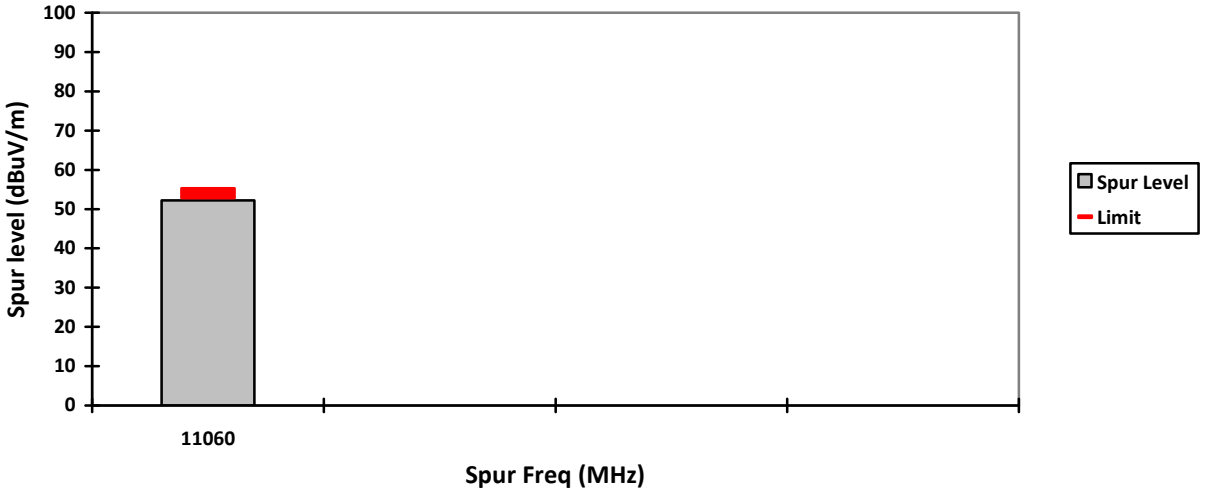
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5610.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (8)

Radiated Emission (Mid Channel) tabular data

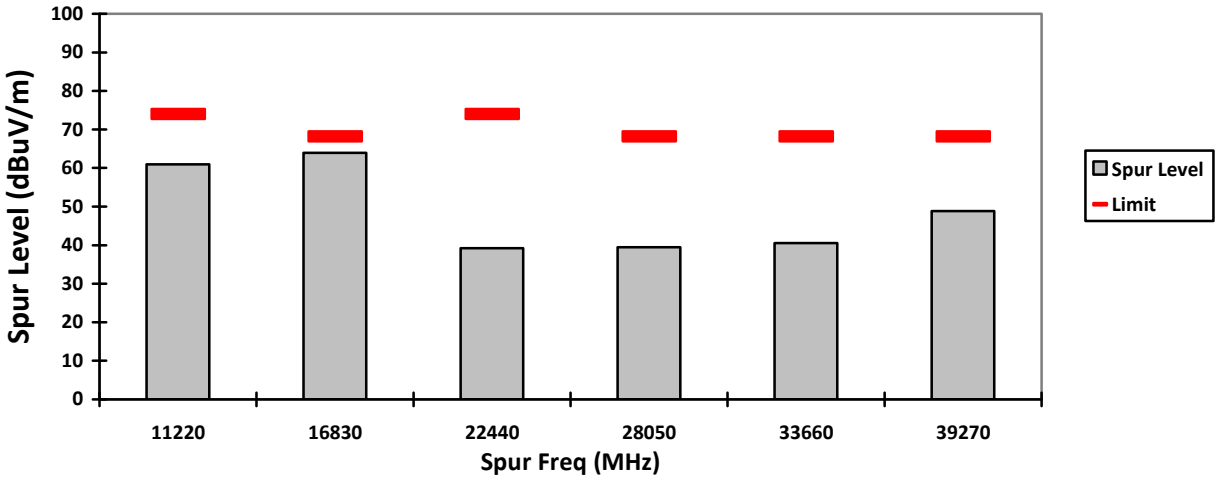
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11220	-	60.9683**	52.6863**	-	74.0000	54.0000	-	13.0317	1.3137	-
16830	-	63.9122**	-	-	68.2000	-	-	4.2878	-	-
22440	-	39.2221**	-	-	74.0000	-	-	34.7779	-	-
28050	-	39.4349**	-	-	68.2000	-	-	28.7651	-	-
33660	-	40.5833**	-	-	68.2000	-	-	27.6167	-	-
39270	-	48.8783**	-	-	68.2000	-	-	19.3217	-	-
Horizontal Radiated Emission Result										
11220	-	60.6600**	52.7147**	-	74.0000	54.0000	-	13.3400	1.2853	-
16830	-	62.9419**	-	-	68.2000	-	-	5.2581	-	-
22440	-	39.1916**	-	-	74.0000	-	-	34.8084	-	-
28050	-	38.9786**	-	-	68.2000	-	-	29.2214	-	-
33660	-	40.3037**	-	-	68.2000	-	-	27.8963	-	-
39270	-	48.5024**	-	-	68.2000	-	-	19.6976	-	-

Remarks: Pass Result	Marginal Result	Fail Result

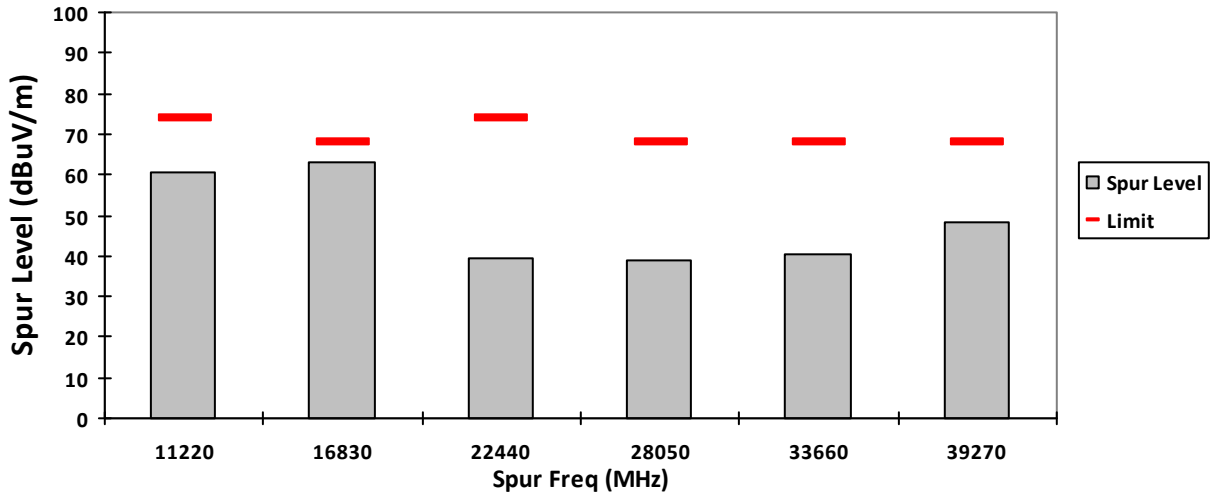
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

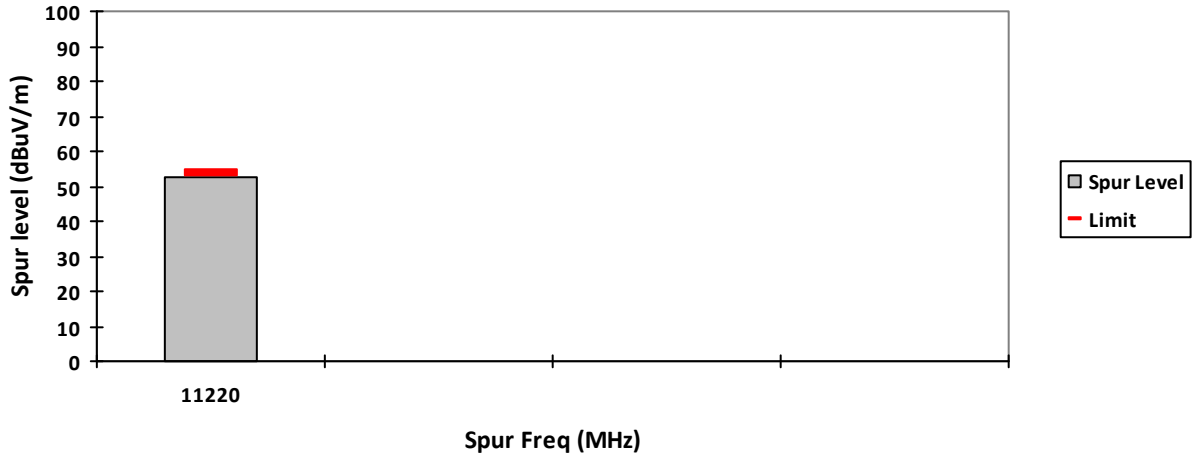
VERTICAL, PK



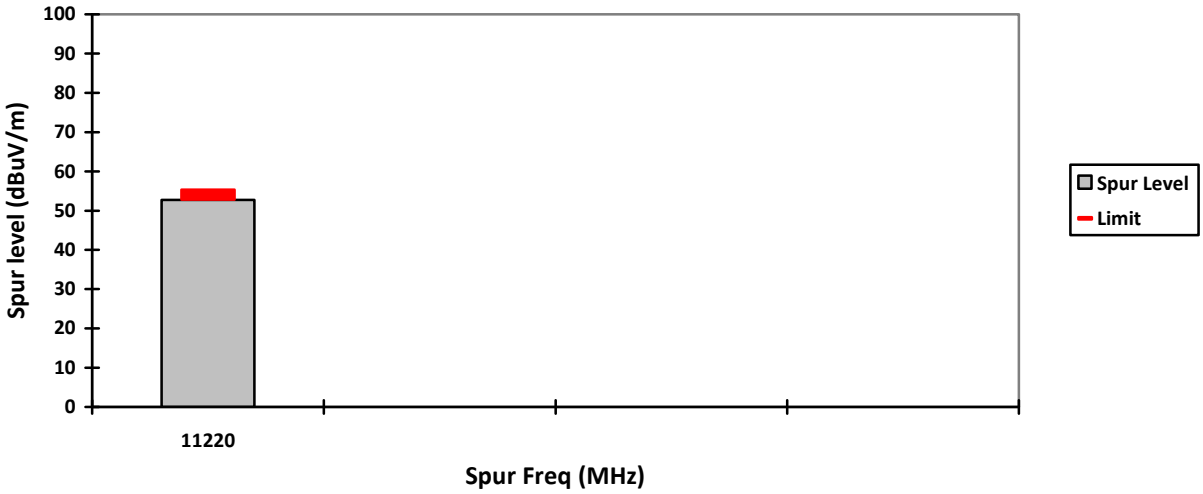
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: High	Test Frequency: 5690.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (10)

Radiated Emission (High Channel) tabular data

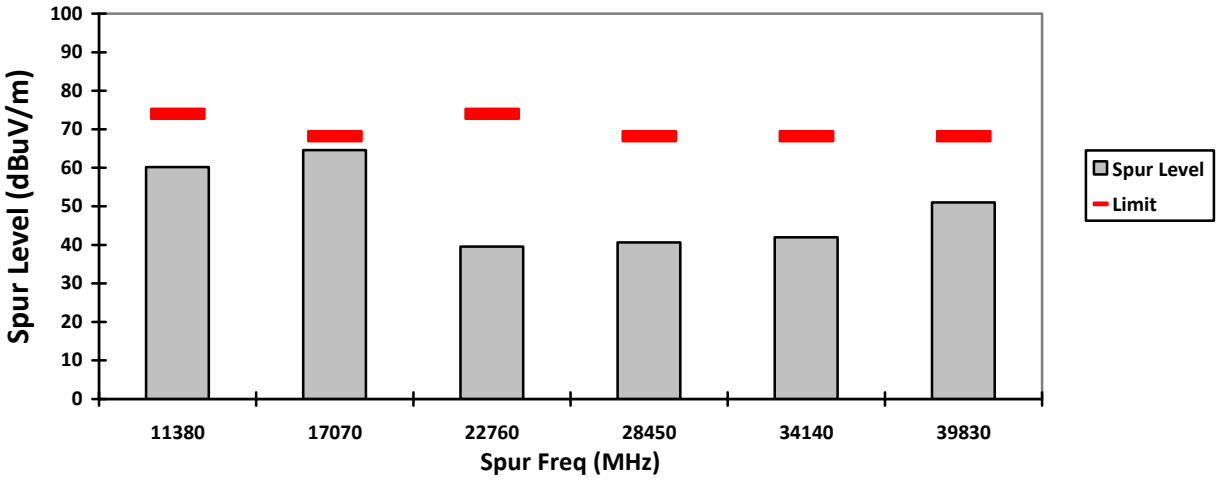
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11380	-	60.2357**	52.5156**	-	74.0000	54.0000	-	13.7643	1.4844	-
17070	-	64.6019**	-	-	68.2000	-	-	3.5981	-	-
22760	-	39.5377**	-	-	74.0000	-	-	34.4623	-	-
28450	-	40.6503**	-	-	68.2000	-	-	27.5497	-	-
34140	-	41.9504**	-	-	68.2000	-	-	26.2496	-	-
39830	-	51.0165**	-	-	68.2000	-	-	17.1835	-	-
Horizontal Radiated Emission Result										
11380	-	59.9721**	51.9739**	-	74.0000	54.0000	-	14.0279	2.0261	-
17070	-	63.9585**	-	-	68.2000	-	-	4.2415	-	-
22760	-	38.4204**	-	-	74.0000	-	-	35.5796	-	-
28450	-	38.9084**	-	-	68.2000	-	-	29.2916	-	-
34140	-	42.1417**	-	-	68.2000	-	-	26.0583	-	-
39830	-	50.2604**	-	-	68.2000	-	-	17.9396	-	-

Remarks: Pass Result	Marginal Result	Fail Result

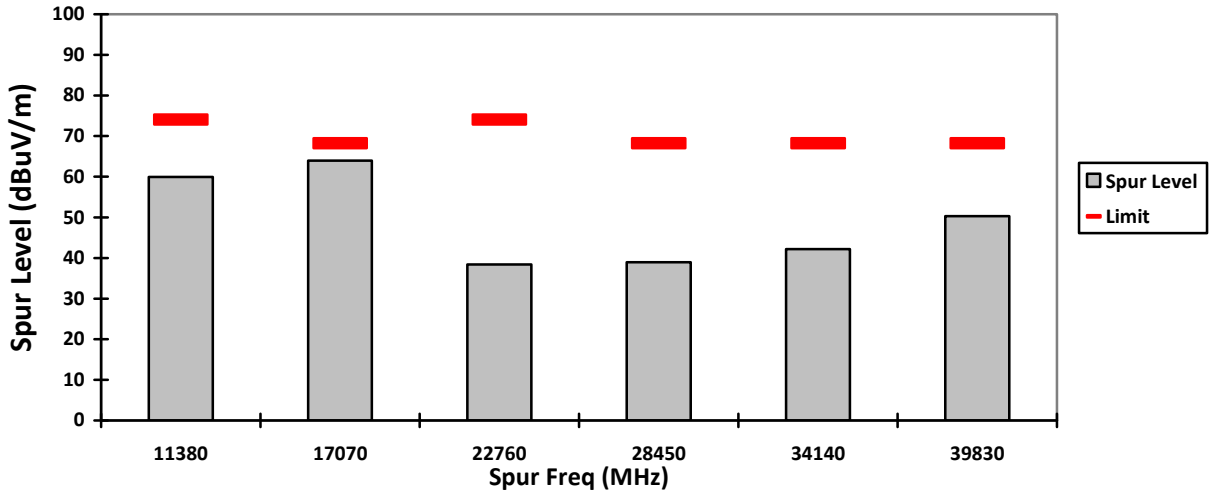
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

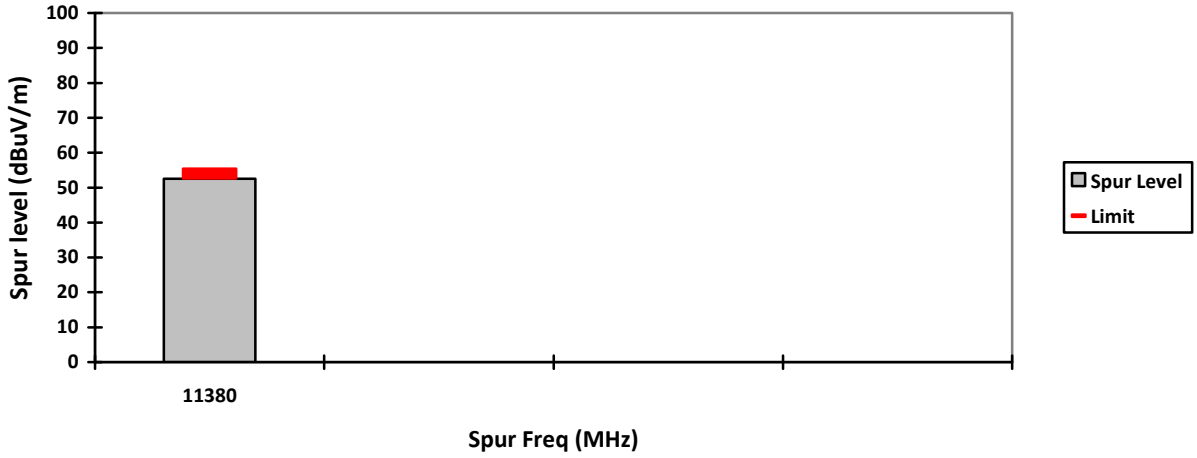
VERTICAL, PK



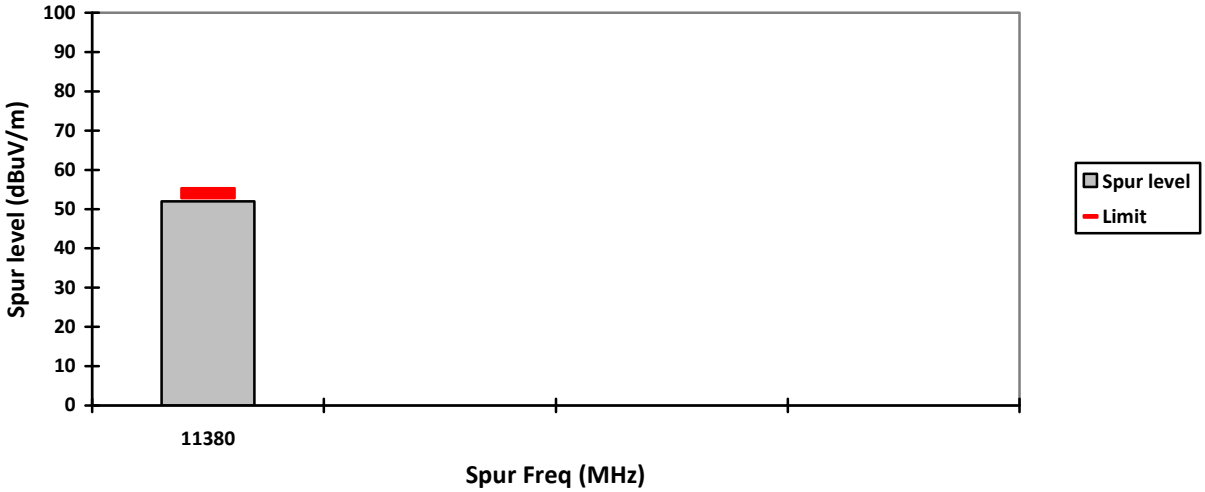
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00027
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: NA	
Test Channel: Mid	Test Frequency: 5775.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11ac80	Softpot power (8)

Radiated Emission (Mid Channel) tabular data

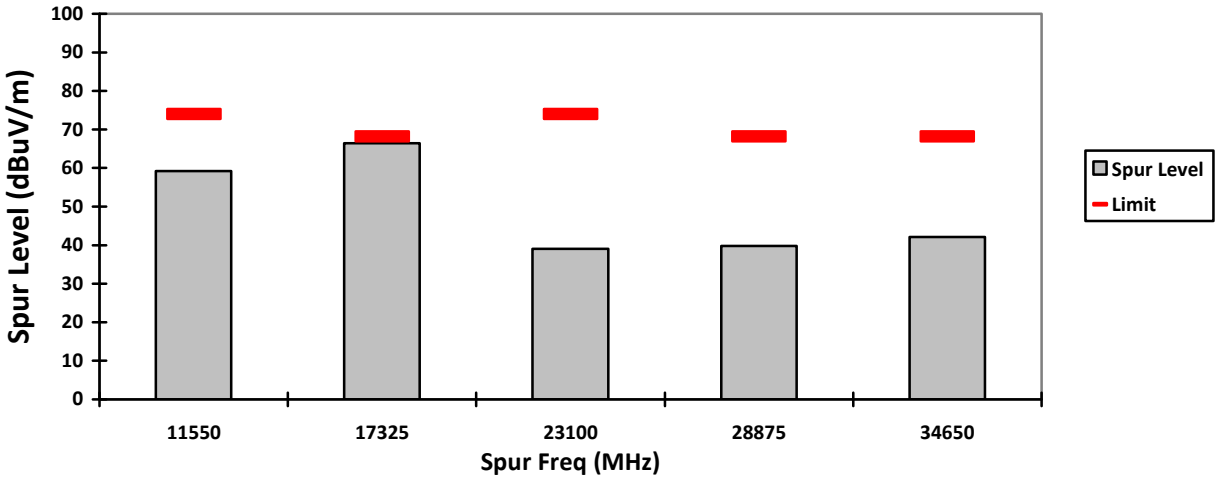
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
11550	-	59.2271**	53.0538**	-	74.0000	54.0000	-	14.7729	0.9462	-
17325	-	66.3958**	-	-	68.2000	-	-	1.8042	-	-
23100	-	39.0514**	-	-	74.0000	-	-	34.9486	-	-
28875	-	39.8344**	-	-	68.2000	-	-	28.3656	-	-
34650	-	42.0935**	-	-	68.2000	-	-	26.1065	-	-
Horizontal Radiated Emission Result										
11550	-	59.2792**	52.9489**	-	74.0000	54.0000	-	14.7208	1.0511	-
17325	-	66.2200**	-	-	68.2000	-	-	1.9800	-	-
23100	-	39.3416**	-	-	74.0000	-	-	34.6584	-	-
28875	-	39.8156**	-	-	68.2000	-	-	28.3844	-	-
34650	-	41.2260**	-	-	68.2000	-	-	26.9740	-	-

Remarks: Pass Result	Marginal Result	Fail Result

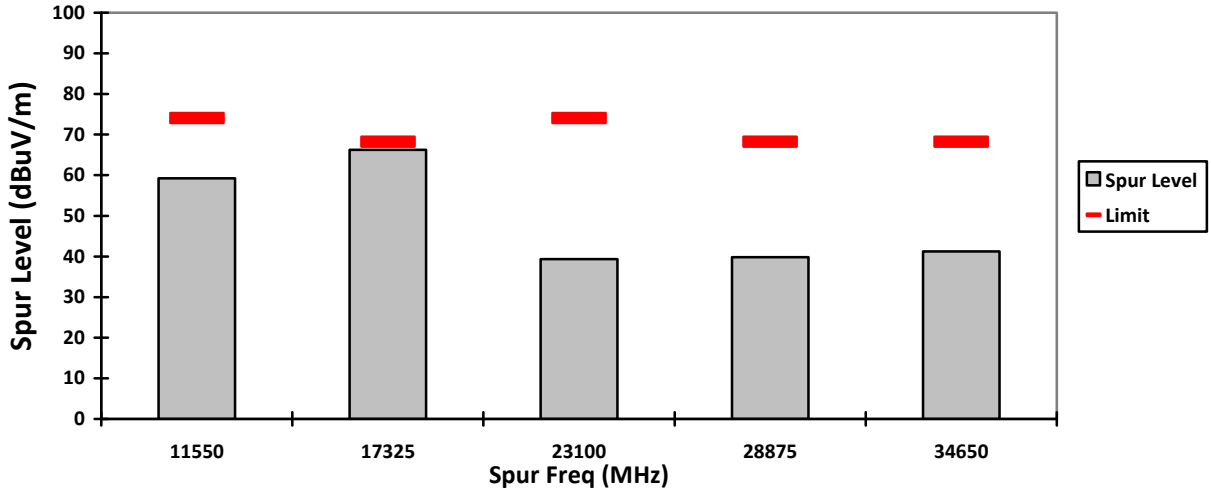
Temperature (degC): 22.5	Humidity (%): 63.1
Test Performed by: Aiman	Test Date: Tue, 28 Jan, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

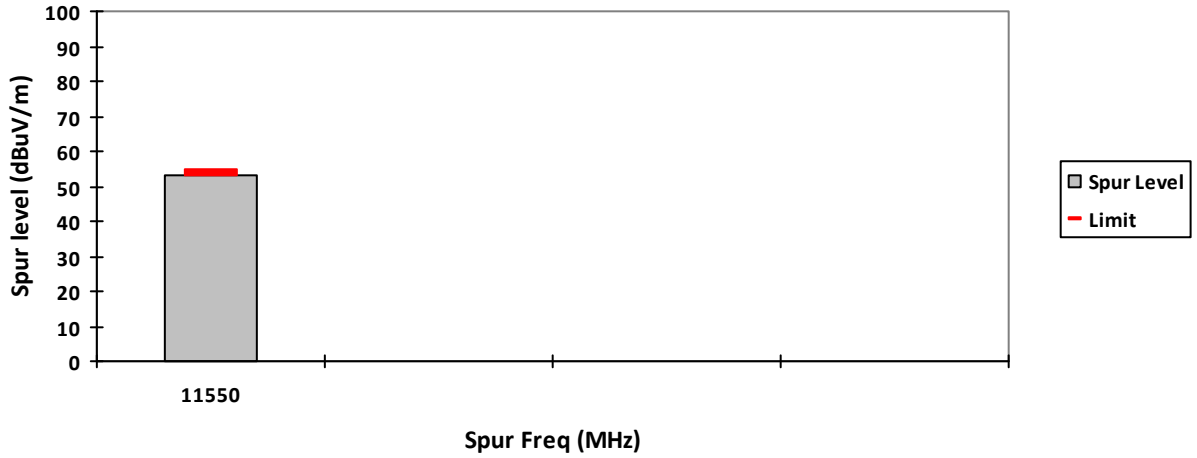
VERTICAL, PK



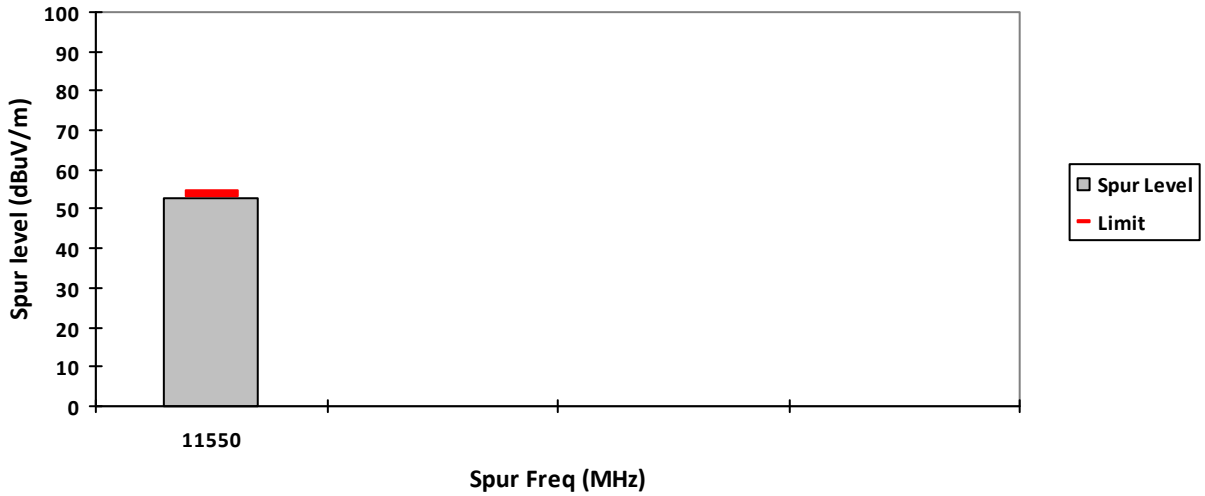
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



802.11n (VHT40)

Test: WIFI SAC Transmitter Radiated Emission	EMC SR ID#: 1057N00-EMC-00031
Model Number: VX650	S/N: 9903EBA0048
Battery: PMNN4893A	
Accessory: USB C + Laptop(AH422508)	
Test Channel: High	Test Frequency: 5795.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Z-Plane
Modulation: 802.11n40	

Radiated Emission (High Channel) tabular data

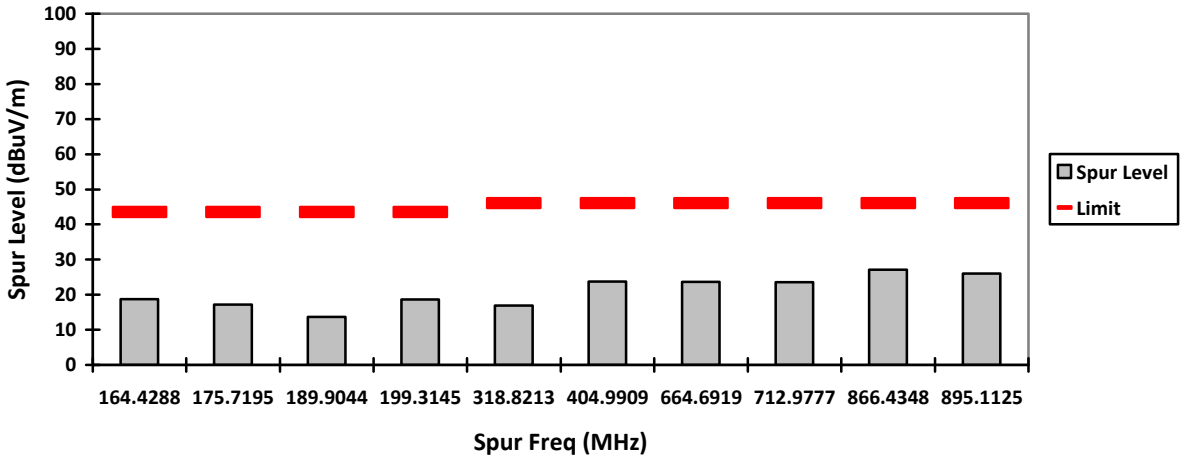
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBµV/m)
164.4288	18.7647*	-	-	43.5000	-	-	24.7353	-	-	-
175.7195	17.2190*	-	-	43.5000	-	-	26.2810	-	-	-
189.9044	13.6802*	-	-	43.5000	-	-	29.8198	-	-	-
199.3145	18.6484*	-	-	43.5000	-	-	24.8516	-	-	-
318.8213	16.9120*	-	-	46.0000	-	-	29.0880	-	-	-
404.9909	23.7401*	-	-	46.0000	-	-	22.2599	-	-	-
664.6919	23.6739*	-	-	46.0000	-	-	22.3261	-	-	-
712.9777	23.5904*	-	-	46.0000	-	-	22.4096	-	-	-
866.4348	27.1313	-	-	46.0000	-	-	18.8687	-	-	-
895.1125	26.0305	-	-	46.0000	-	-	19.9695	-	-	-
Horizontal Radiated Emission Result										
164.0360	13.0287*	-	-	43.5000	-	-	30.4713	-	-	-
175.6033	15.8250*	-	-	43.5000	-	-	27.6750	-	-	-
190.2912	16.7432*	-	-	43.5000	-	-	26.7568	-	-	-
199.8656	21.7086*	-	-	43.5000	-	-	21.7914	-	-	-
319.0217	20.1144*	-	-	46.0000	-	-	25.8856	-	-	-
404.9668	21.4773*	-	-	46.0000	-	-	24.5227	-	-	-
664.6398	24.5660*	-	-	46.0000	-	-	21.4340	-	-	-
713.1140	23.5411*	-	-	46.0000	-	-	22.4589	-	-	-
866.5170	25.8596*	-	-	46.0000	-	-	20.1404	-	-	-
895.1706	25.9160*	-	-	46.0000	-	-	20.0840	-	-	-

Remarks: Pass Result	Marginal Result	Fail Result

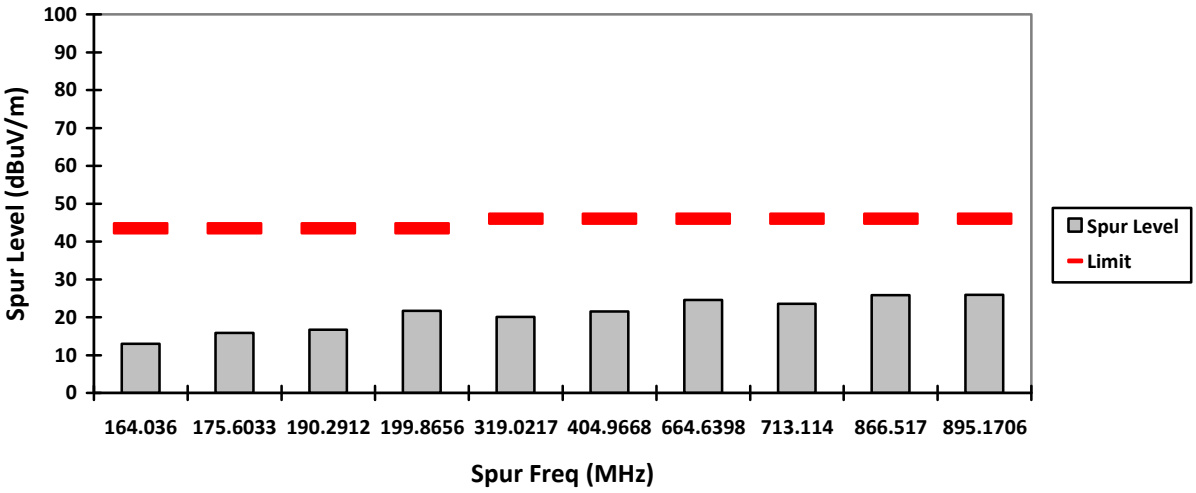
Temperature (degC): 22.5	Humidity (%): 63.2
Test Performed by: Aiman	Test Date: Wed, 5 Feb, 2025
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)	

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

VERTICAL, QPK

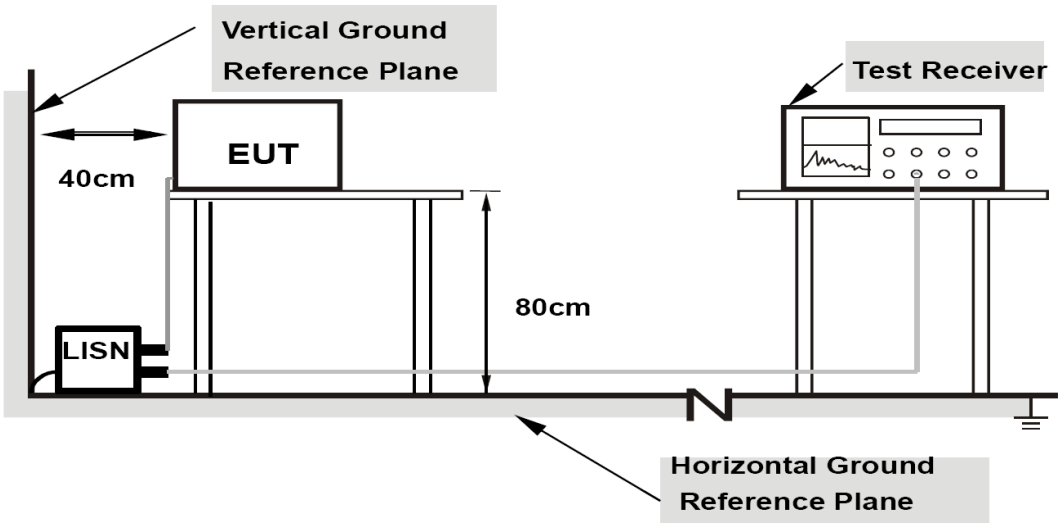


HORIZONTAL, QPK



6.8. AC Powerline Conducted Emission

6.8.1. Test Setup



1) Tests were conducted for both Receive and Transmit Mode of the EUT.
2) The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50uH of coupling impedance for the measuring instrument.
3) Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
4) The frequency range from 150 kHz to 30MHz was measured.

6.8.2. Test Limits

For AC Power Line Conducted Test Limit can be Class A or B depends on product classification.

Limits for conducted disturbance at the mains ports of class A ITE

Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60
NOTE The lower limit shall apply at the transition frequency.		

Table 1: Limits for Conducted Disturbance at the Mains Ports of Class A ITE.

Limits for conducted disturbance at the mains ports of class B ITE

Frequency range MHz	Limits dB(µV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50
NOTE 1 The lower limit shall apply at the transition frequencies. NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

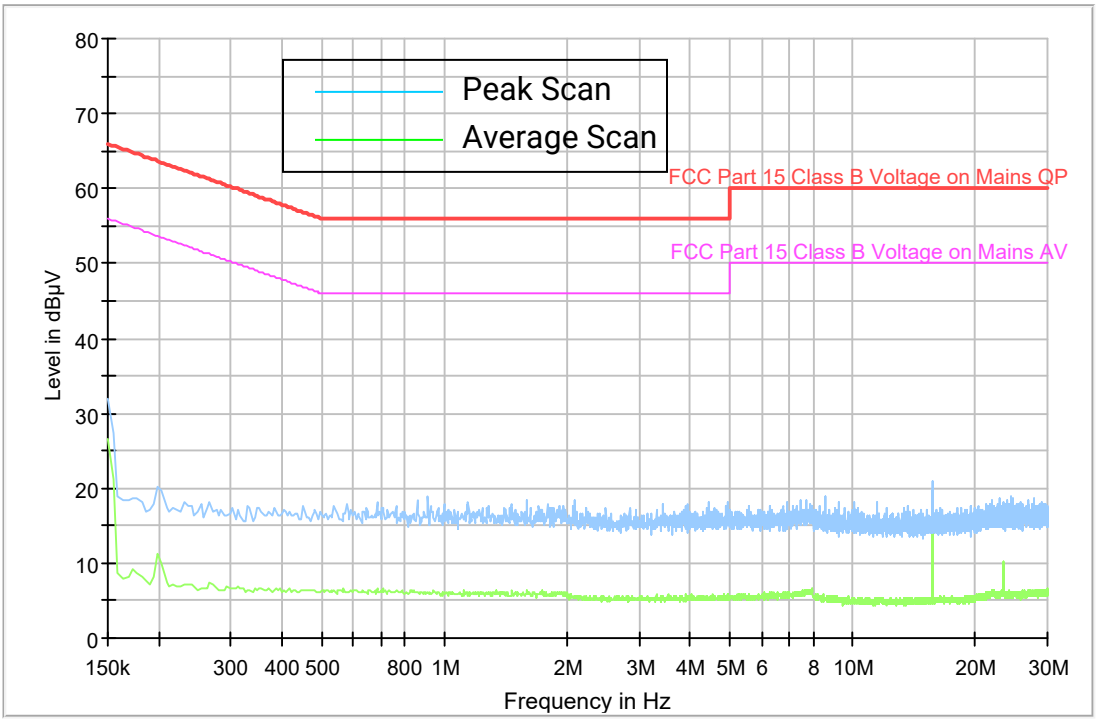
Table 2: Limits for Conducted Disturbance at the Mains Ports of Class B ITE

6.8.3. Test Data

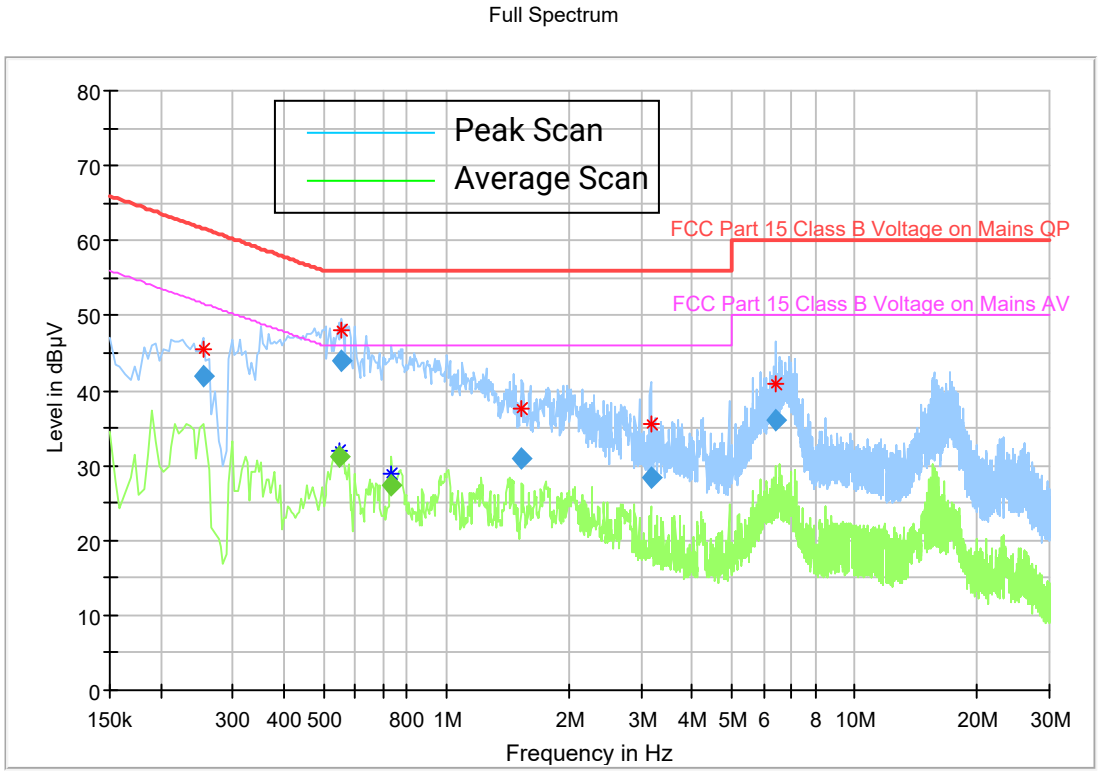
120 VAC, 60Hz

1) Ambient

Full Spectrum



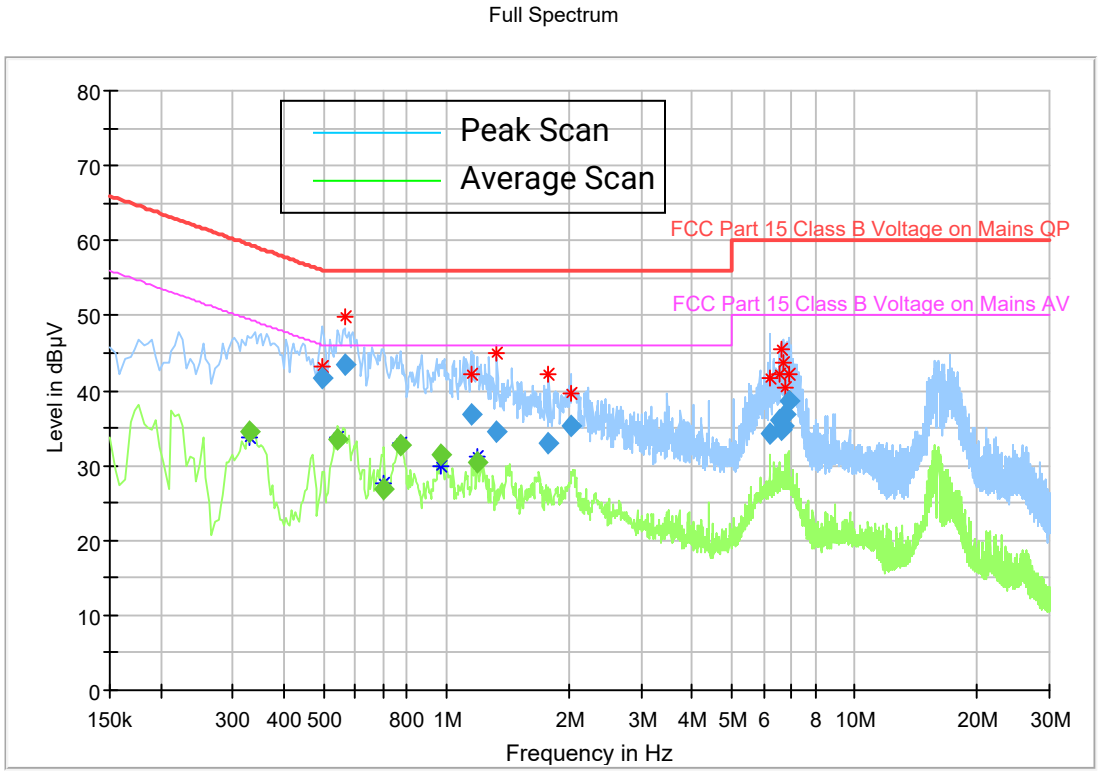
2) Ambient Laptop



QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.253500	42.01	---	61.64	19.63	N	ON	10.2
0.550500	---	31.27	46.00	14.73	N	ON	10.6
0.555000	44.04	---	56.00	11.96	N	ON	10.6
0.735000	---	27.45	46.00	18.55	N	ON	10.5
1.531500	30.99	---	56.00	25.01	L1	ON	10.3
3.165000	28.30	---	56.00	27.70	L1	ON	10.3
6.418500	35.99	---	60.00	24.01	N	ON	10.4

3) Laptop + VRSM Standby

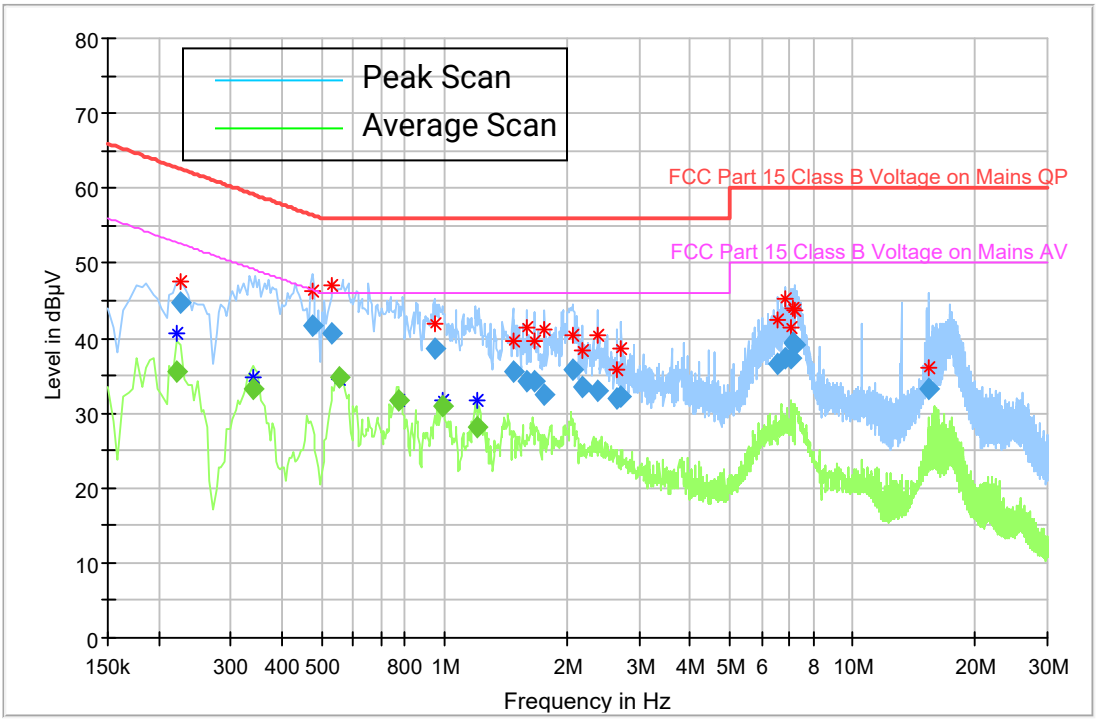


QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.330000	---	34.44	49.45	15.01	N	ON	10.5
0.496500	41.59	---	56.06	14.46	N	ON	10.6
0.541500	---	33.55	46.00	12.45	L1	ON	10.6
0.564000	43.49	---	56.00	12.51	N	ON	10.6
0.703500	---	26.73	46.00	19.27	L1	ON	10.5
0.771000	---	32.80	46.00	13.20	N	ON	10.5
0.973500	---	31.47	46.00	14.53	N	ON	10.4
1.149000	36.86	---	56.00	19.14	N	ON	10.4
1.194000	---	30.31	46.00	15.69	L1	ON	10.4
1.333500	34.61	---	56.00	21.39	N	ON	10.3
1.783500	33.00	---	56.00	23.00	L1	ON	10.3
2.017500	35.15	---	56.00	20.85	L1	ON	10.3
6.180000	34.30	---	60.00	25.70	N	ON	10.4
6.571500	36.13	---	60.00	23.87	L1	ON	10.4
6.616500	34.87	---	60.00	25.13	N	ON	10.4
6.706500	35.31	---	60.00	24.69	N	ON	10.4
6.778500	36.85	---	60.00	23.15	L1	ON	10.4
6.882000	38.58	---	60.00	21.42	L1	ON	10.4

4) Laptop + VRSM TX WiFi 5GHz 802.11a

Full Spectrum



QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.222000	---	35.56	52.74	17.18	L1	ON	10.4
0.226500	44.71	---	62.58	17.86	L1	ON	10.3
0.339000	---	33.24	49.23	15.99	N	ON	10.5
0.474000	41.68	---	56.44	14.77	N	ON	10.6
0.532500	40.53	---	56.00	15.47	L1	ON	10.6
0.555000	---	34.84	46.00	11.16	N	ON	10.6
0.771000	---	31.61	46.00	14.39	L1	ON	10.5
0.946500	38.63	---	56.00	17.37	N	ON	10.4
0.991500	---	30.87	46.00	15.13	N	ON	10.4
1.198500	---	28.05	46.00	17.95	N	ON	10.3
1.473000	35.62	---	56.00	20.38	L1	ON	10.3
1.590000	34.31	---	56.00	21.69	L1	ON	10.3
1.666500	34.32	---	56.00	21.68	L1	ON	10.3
1.765500	32.41	---	56.00	23.59	L1	ON	10.3
2.067000	35.76	---	56.00	20.24	L1	ON	10.3
2.175000	33.58	---	56.00	22.42	N	ON	10.3
2.382000	32.96	---	56.00	23.04	L1	ON	10.3
2.643000	31.91	---	56.00	24.09	N	ON	10.3
2.710500	32.10	---	56.00	23.90	N	ON	10.3
6.585000	36.47	---	60.00	23.53	N	ON	10.4
6.828000	37.36	---	60.00	22.64	N	ON	10.4
7.066500	37.28	---	60.00	22.72	N	ON	10.4
7.152000	39.43	---	60.00	20.57	L1	ON	10.4
7.233000	39.10	---	60.00	20.90	L1	ON	10.4
15.333000	33.18	---	60.00	26.82	N	ON	10.4

END OF TEST REPORT