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.C

Date/s Tested	:	19-July-2024 - 05-September-2024
Manufacturer/Location	:	Motorola Solutions Malaysia SDN BHD
Manufacturer Address	:	Plot 2A Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia
Requestor	:	DANESHKUMAR A/L R THAYAPARAN
Product Type	:	Portable
Product Marketing Name (PMN)	:	R5
Hardware Version Identification Number (HVIN)	:	AAH07JDH9SA1AN
Frequency Band	:	5180-5825 MHz
Firmware Version Identification Number (FVIN)	:	B02.25.01.0019
Applicant Name	:	Motorola Solutions Inc
Applicant Address	:	Plot 2A Medan Bayan Lepas, Mukim 12 SWD, 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** **IC RSS 247 Issue 2**	**PASS**

Prepared By:

Nur Alieya Binti Mat Yusoff
Technician

Approved Signatory:

Vincent Foong Chuen Kit
Responsible Engineer

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Revision History	Description	Date	Originator
Rev. A	Initial Report	**11-September-2024**	**Alieya**
Rev. B	Updated antenna gain, power and PSD results	**3-October-2024**	**Vincent**
Rev. C	Updated antenna gain for UNII-2A, calculation	**9-October-2024**	**Vincent**

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: 17.624 dBm (57.86mW) 802.11n20/ac20: 17.914 dBm (61.86mW)	651EAK0146	Alieya
15.407(a) (1/2/3)	RSS 247 6.2	Maximum Power Spectral Density	Pass	Meet the requirement limit.	651EAK0146	Alieya
15.407 (e)	RSS 247 6.2.4	6dB Bandwidth	Pass	a20: 16.826MHz (16M8D1D) n20/ac20: 17.836MHz (17M8D1D)	651EAK0146	Alieya
15.407 (g)	RSS Gen 6.11	Frequency Stability	Pass	Meet the requirement limit.	651EAK0146	Alieya
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Band Edge Radiated Spurious Emission Measurement	Pass	Worst case emission: 63.6614dBuV/m (margin: 4.5386dB)	651EAK0048	Nazrin, Rezza, Qawiman
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Radiated Spurious Emission Measurement	Pass	Worst case emission: 47.1205dBuV/m (margin: 6.8795dB)	651EAK0048, 651EAK0033, 651EAK0054	Nazrin, Qawiman, Fuad
15.207 15.407 (b)(6)	RSS Gen 8.8	AC Powerline Conducted Emission	Pass	Meet the requirement limit.	651EAK0048, 651EAK0033, 651EAK0054	Shidee
15.203	-	Antenna requirement	Pass	Internal antenna is not accessible to the end-user	NA	NA

2.0. 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 ~ 25GHz	6.02
Conducted Spurious Emissions	9kHz ~ 12.75GHz	2.82

3.0. Equipment List

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

Description	Model	Serial Number	Calibration Date	Calibration Due Date
CHAMBER	SH-641	92003820	04-Jul-24	04-Jul-25
PULSE SENSOR	MA2411B	1726287	22-Aug-23	22-Aug-24
PULSE POWER METER	ML2495A	1845014	16-Aug-23	16-Aug-24
SPECTRUM ANALYZER	E4440A	MY48250517	08-Nov-23	08-Nov-24
POWER SUPPLY	6652A	3640A02967	15-Oct-23	15-Oct-24

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

Description	Model	Serial Number	Calibration Date	Calibration Due Date
DRG HORN FREQ.	SAS-571	1143	08-Mar-23	08-Mar-25
DRG HORN FREQ.	SAS-571	720	18-Apr-23	18-Apr-25
DC Power Supply	6623A	3302A02585	30-Jul-24	30-Jul-25
SIGNAL GENERATOR	SMB 100A	182511	04-Sep-21	04-Dec-24
EMI TEST RECEIVER	ESW44	101750	08-Aug-24	07-Aug-25
BILOG ANTENNA	CBL6112B	2950	14-Dec-23	14-Dec-24
BILOG ANTENNA	CBL6112B	2964	25-Sep-23	25-Sep-24
DATA LOGGER THERMOHYGROMETER	SDL500	A.016800	26-Jun-24	26-Jun-25
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170255	13-Mar-24	13-Mar-25
PREAMPLIFIER	PAM-0118P	574	19-Mar-24	19-Mar-25
LOOP ANTENNA	6502	00203479	06-Mar-24	06-Mar-25
5m SEMI-ANECHOIC CHAMBER	S800-HX	J2308	Not Required	Not Required
SYSTEM CONTROLLER	SC104V	050806-1	Not Required	Not Required
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	Not Required	Not Required
ANTENNA POSITIONING TOWER	TLT2	NA	Not Required	Not Required
PREAMPLIFIER 18-40GHz	Miteq Hi Gain Sucoflex	002	Not Required	Not Required

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	101039	13-Dec-23	13-Dec-24
EMI TEST RECEIVER	ESCI	100225	08-May-24	08-May-25
PROGRAMMABLE AC SOURCE	61604	616040003502	15-Dec-23	15-Dec-24

4.0. General Information

General Description of EUT:

Product	Portable
Brand	Motorola Solutions
Test Model	R5
Power Supply Rating	7.5Vdc
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)	53.7 mW for 5.180 ~ 5.240 GHz 63.1 mW for 5.260 ~ 5.320 GHz 31.62 mW for 5.50 ~ 5.720 GHz 31.62 mW for 5.745 ~ 5.825 GHz
Antenna Type	PIFA
SW Version	B02.25.01.0019

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

Item	Brand	Model or P/N
BATT IMPRES LIION TIA4950 IP68 3200T	MOTOROLA	PMNN4890A
VHF WHIP ANT ,136-174MHZ	MOTOROLA	PMAD4147A
BATT IMPRES LIION IP68 3200T HICAP	MOTOROLA	PMNN4889A
CHARGER DEKSTOP MULTI UNIT IMPRES 2 1 Display External Power Supply 100–240 VAC– US/NA	MOTOROLA	PMPN4284B
CHARGER DESKTOP MULTI-UNIT IMPRES 2 1 DISPLAY EXT PS 100-240VAC US/NA	MOTOROLA	PMPN4283B

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

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

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

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 2, 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
A pigtail was soldered out of the EUT for RF conducted measurements. The EUT used for EMC testing was not modified

Antenna gain disclaimer
Antenna gain information is provided by customer. The validity of the results is dependent upon this information. The lab will not be held accountable in the event the supplied information affects compliance

5.0. 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:

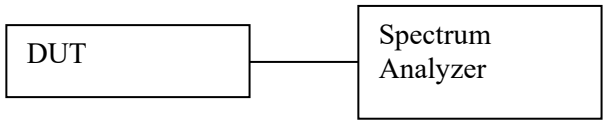
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	23.1°C, 69.7% RH	7.5V DC	Nazrin/Qawiman
RE<1G	23.1°C, 69.7% RH	7.5V DC	Nazrin/Qawiman
PLC	21.8°C, 57.4% RH	120V AC,240V AC	Shidee
APCM	25°C, 50% RH	7.5V DC	Alieya

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)

6.0. Duty Cycle of Test Signal

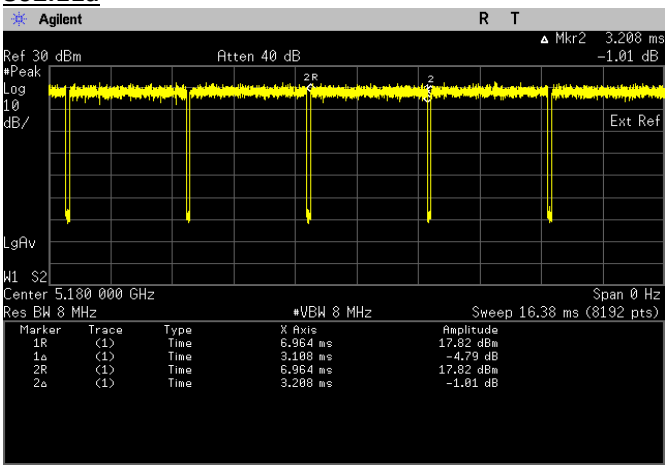
6.0.1. Test Setup



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.

6.0.2. Test Data

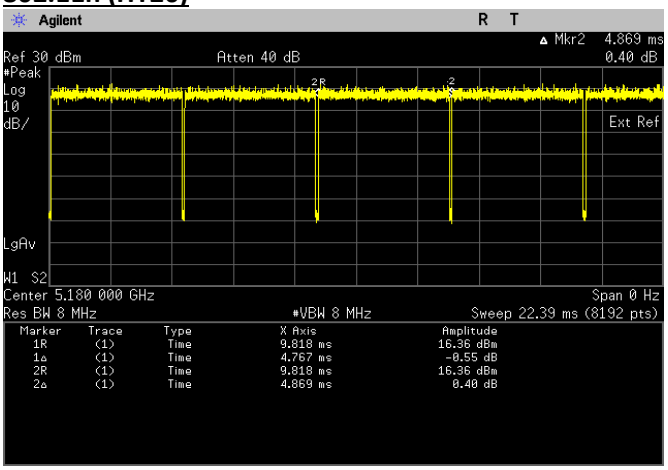
802.11a



On time	3.108	ms
On + off time	3.208	ms
Duty Cycle	0.9688	
Duty Cycle Factor	0.138	

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

802.11n (HT20)



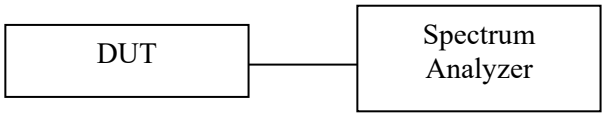
On time	4.767	ms
On + off time	4.869	ms
Duty Cycle	0.9791	
Duty Cycle Factor	0.092	

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

7.0. Transmitter Test Parameters

7.1. Bandwidth measurements

7.1.1. 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).

7.1.2. Test Limits

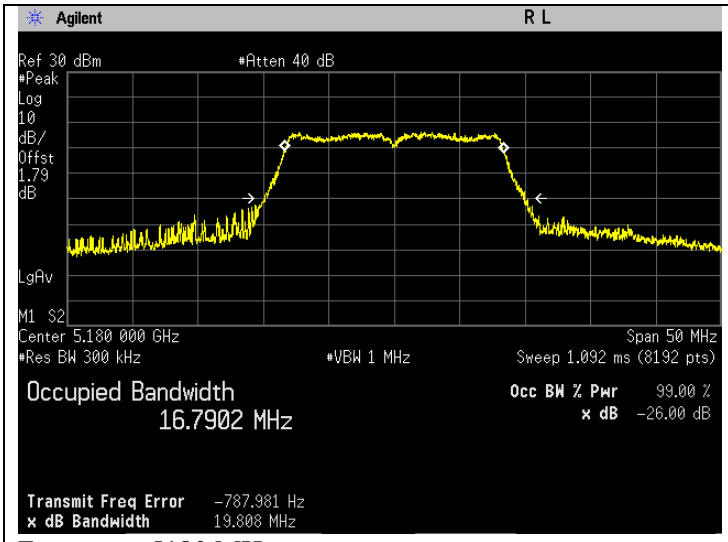
Not applicable.

7.1.3. Test Data

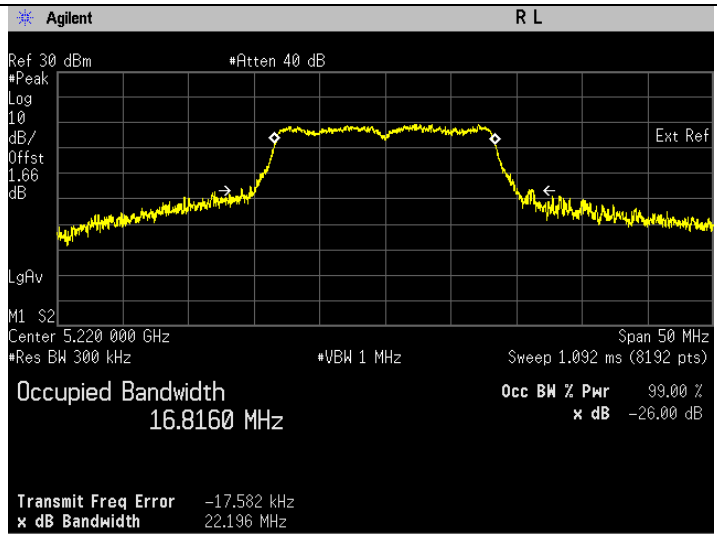
802.11a

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	19.808	Pass	16.790	Pass
5220	Mod Type: BPSK, Data Rate: 6	22.196	Pass	16.816	Pass
5240	Mod Type: BPSK, Data Rate: 6	20.037	Pass	16.824	Pass
5260	Mod Type: BPSK, Data Rate: 6	21.307	Pass	16.825	Pass
5300	Mod Type: BPSK, Data Rate: 6	21.151	Pass	16.822	Pass
5320	Mod Type: BPSK, Data Rate: 6	19.928	Pass	16.765	Pass
5500	Mod Type: BPSK, Data Rate: 6	19.919	Pass	16.778	Pass
5580	Mod Type: BPSK, Data Rate: 6	19.995	Pass	16.817	Pass
5700	Mod Type: BPSK, Data Rate: 6	19.973	Pass	16.767	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-2C	15.169	Pass	13.410	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-3	5.169	Pass	3.410	Pass
5745	Mod Type: BPSK, Data Rate: 6	20.101	Pass	16.822	Pass
5785	Mod Type: BPSK, Data Rate: 6	20.140	Pass	16.816	Pass
5825	Mod Type: BPSK, Data Rate: 6	19.940	Pass	16.822	Pass

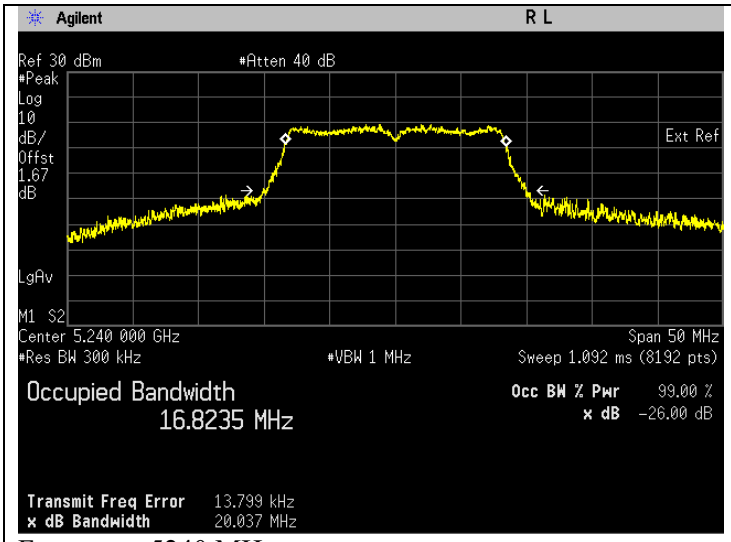
26 dB Bandwidth/ 99% Bandwidth



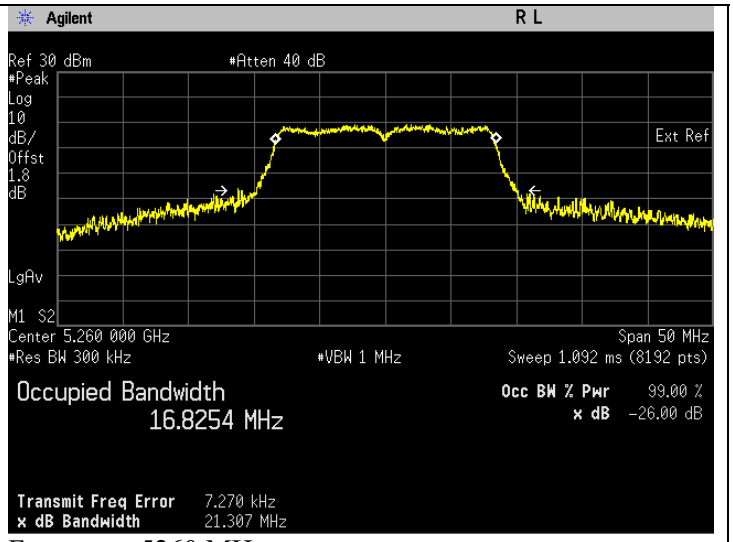
Frequency 5180 MHz



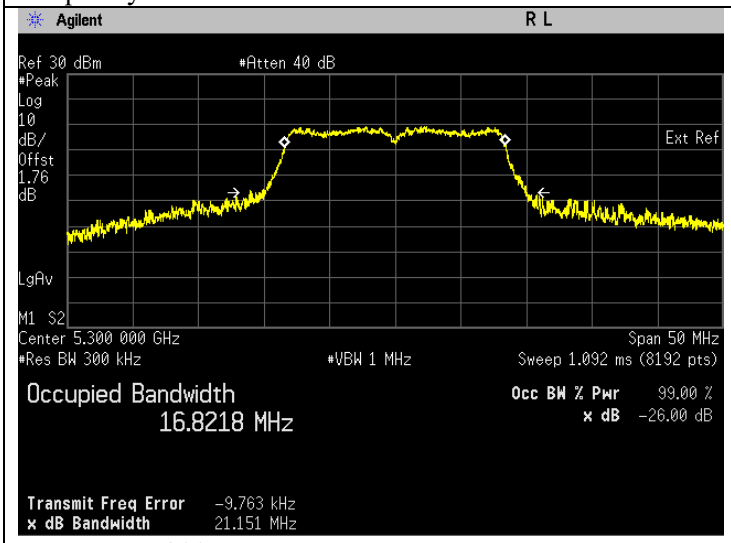
Frequency 5220 MHz



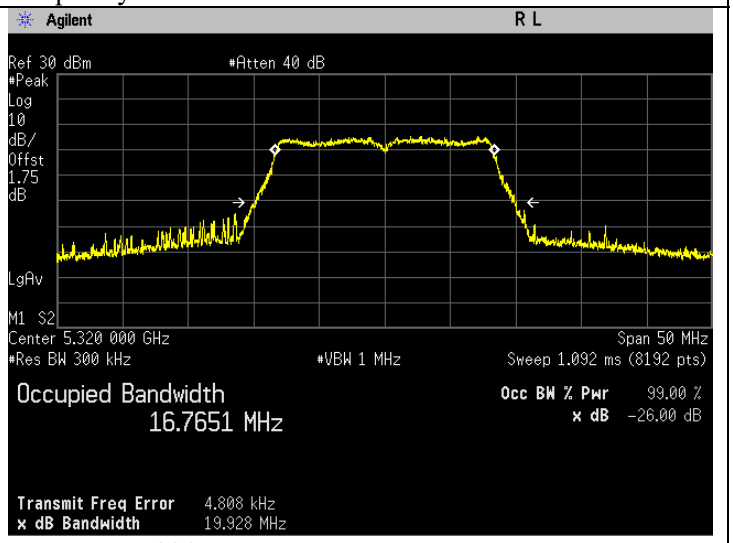
Frequency 5240 MHz



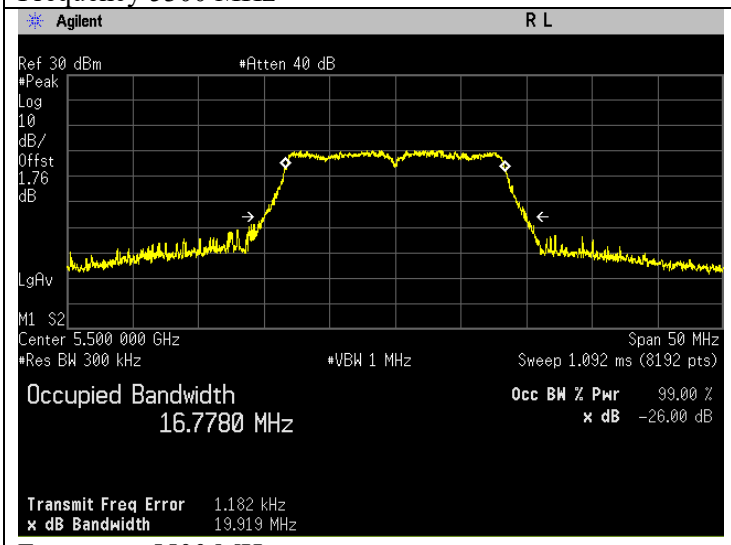
Frequency 5260 MHz



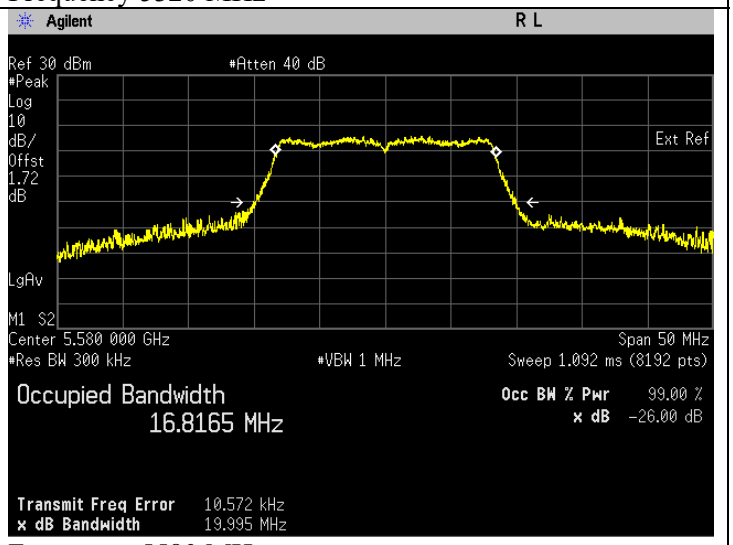
Frequency 5300 MHz



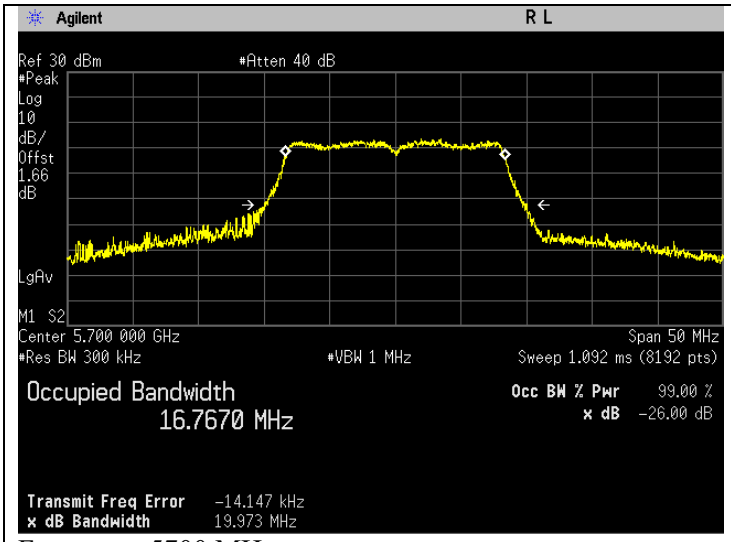
Frequency 5320 MHz



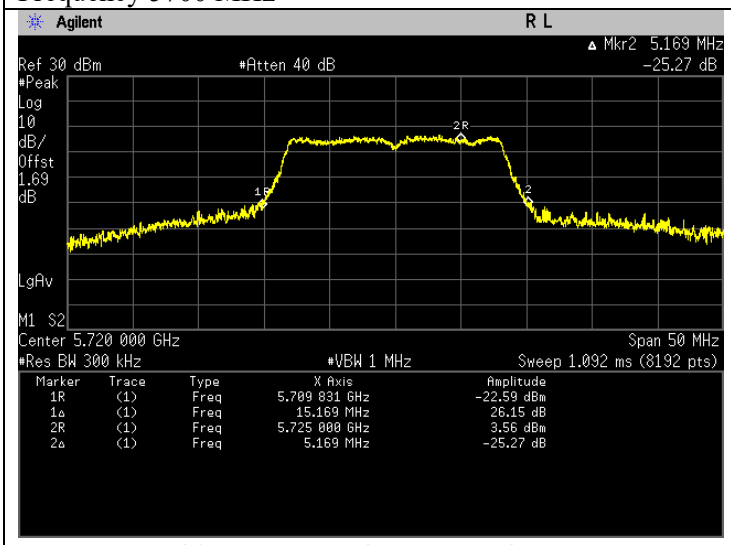
Frequency 5500 MHz



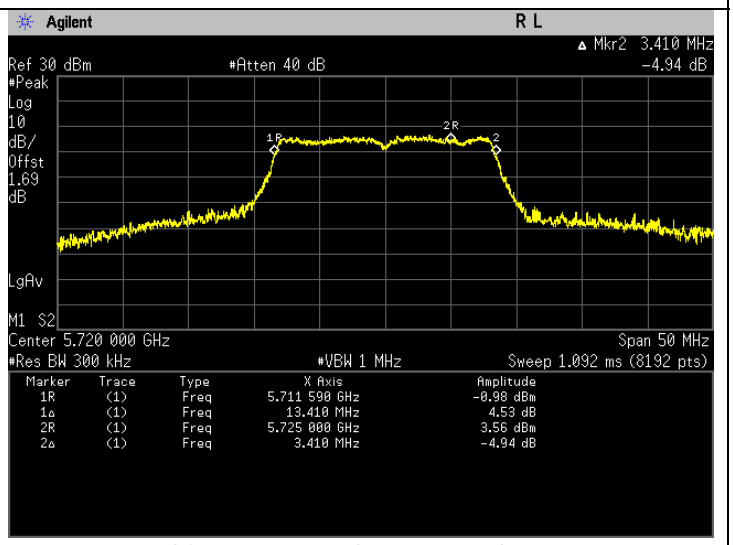
Frequency 5580 MHz



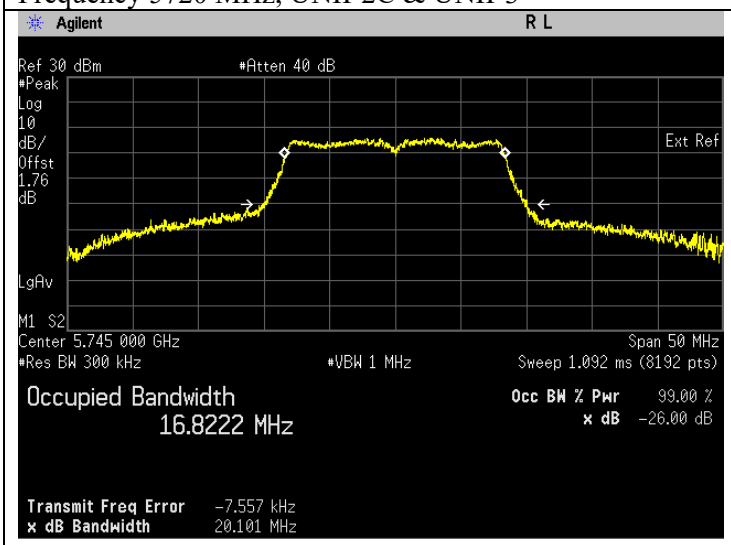
Frequency 5700 MHz



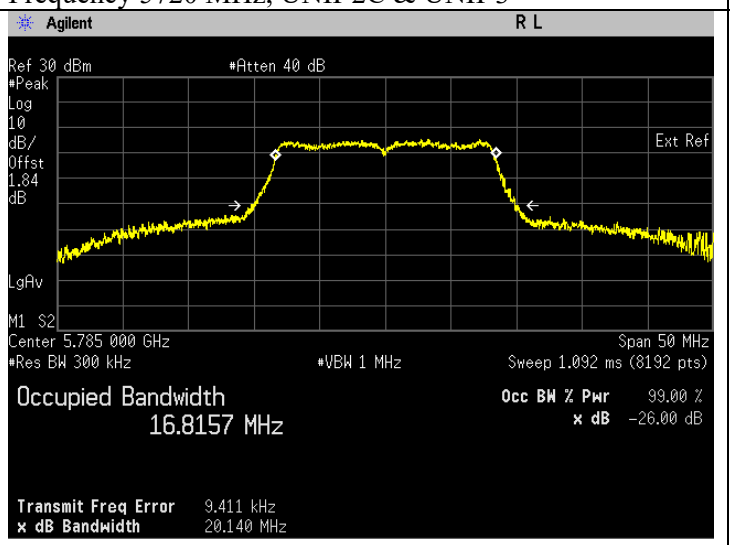
Frequency 5720 MHz, UNII-2C & UNII-3



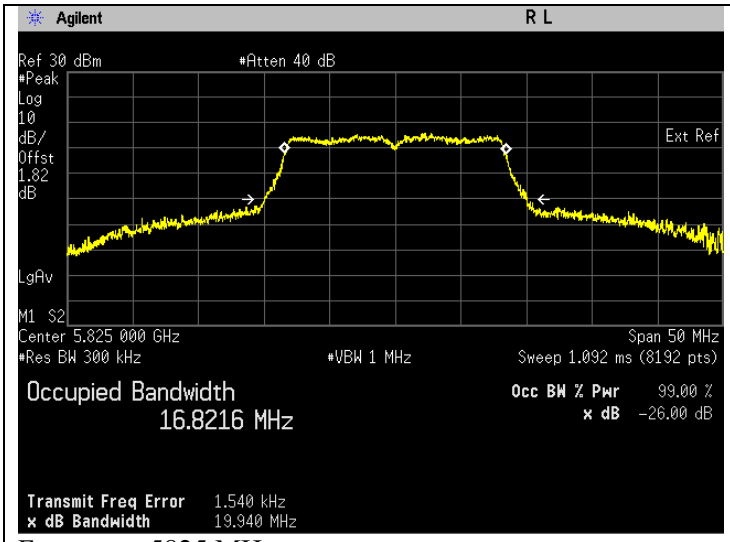
Frequency 5720 MHz, UNII-2C & UNII-3



Frequency 5745 MHz



Frequency 5785 MHz

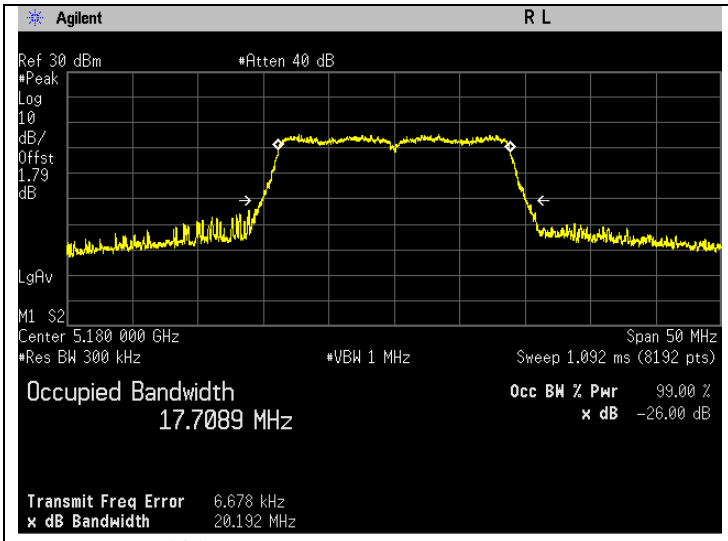


Frequency 5825 MHz

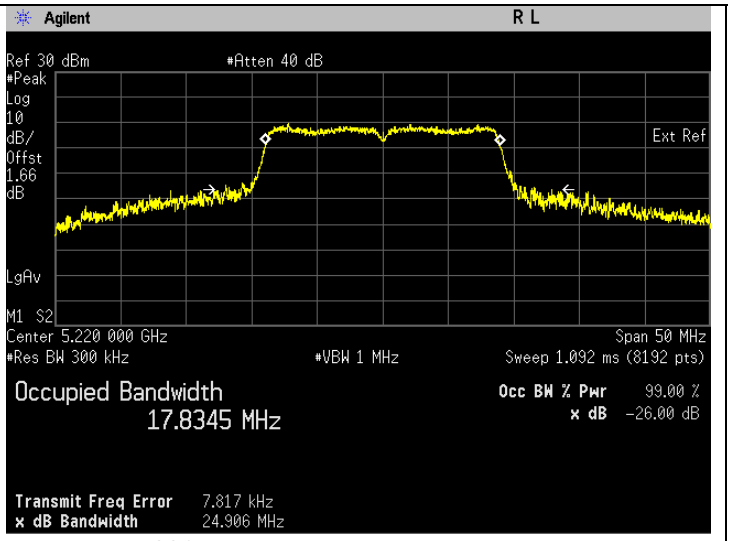
802.11n (HT20)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.192	Pass	17.709	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	24.906	Pass	17.835	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	24.509	Pass	17.835	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.892	Pass	17.836	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	24.018	Pass	17.822	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.206	Pass	17.698	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.276	Pass	17.699	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.308	Pass	17.762	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.134	Pass	17.723	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-2C	15.955	Pass	13.884	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-3	5.955	Pass	3.884	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	21.377	Pass	17.761	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.875	Pass	17.782	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.873	Pass	17.768	Pass

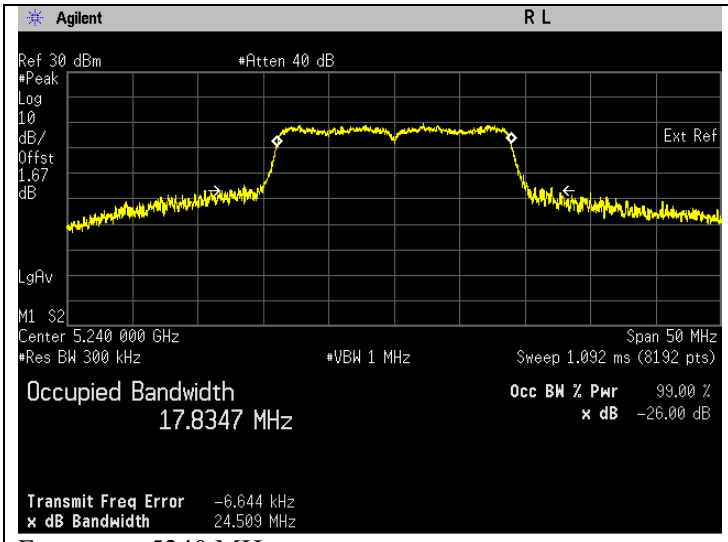
26 dB Bandwidth/ 99% Bandwidth



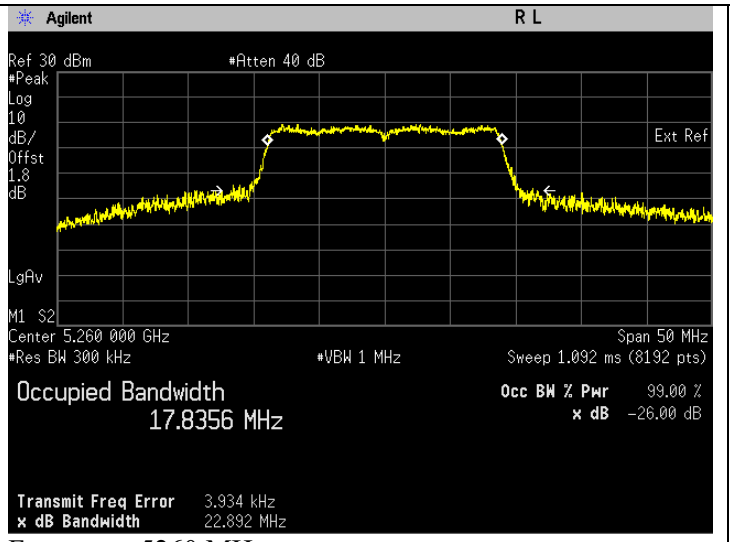
Frequency 5180 MHz



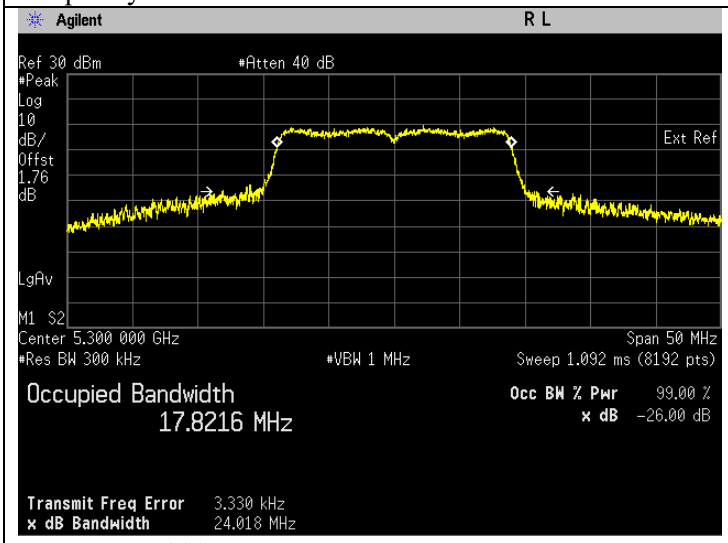
Frequency 5220 MHz



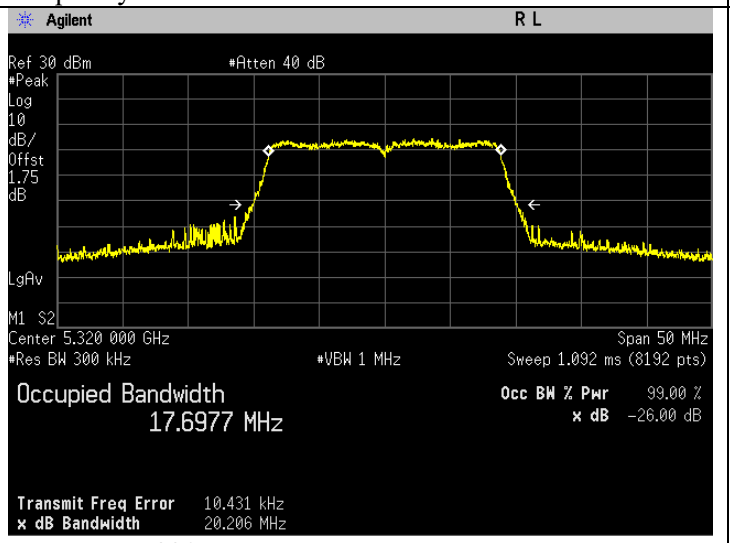
Frequency 5240 MHz



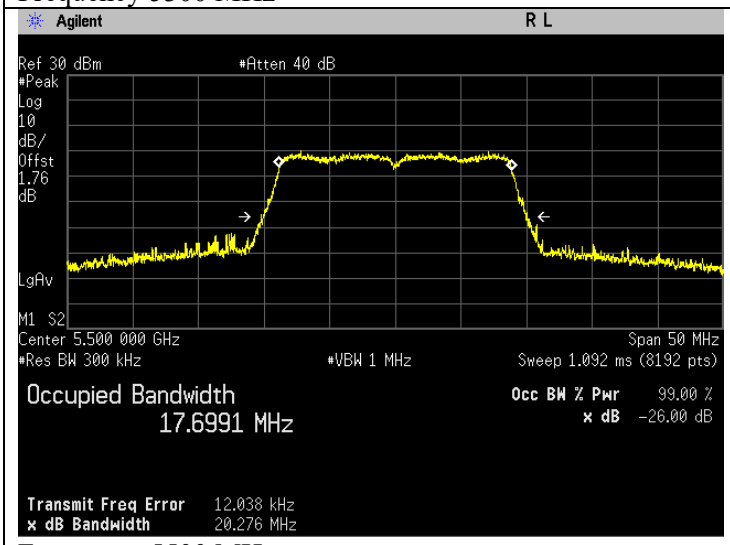
Frequency 5260 MHz



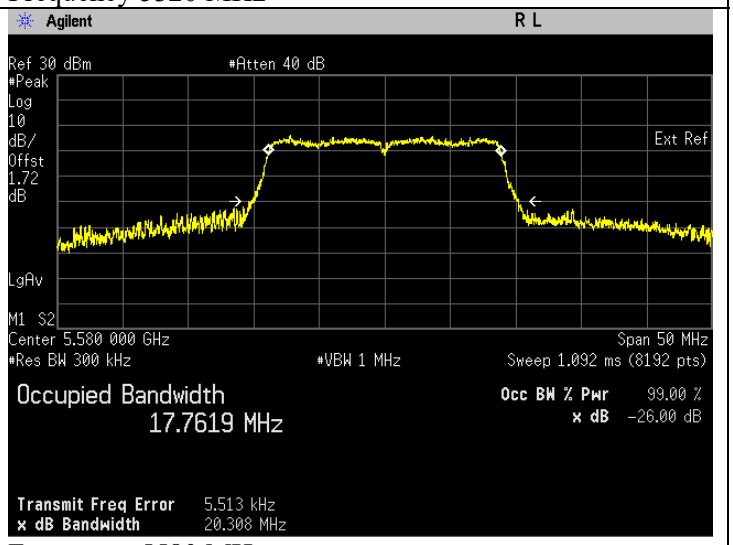
Frequency 5300 MHz



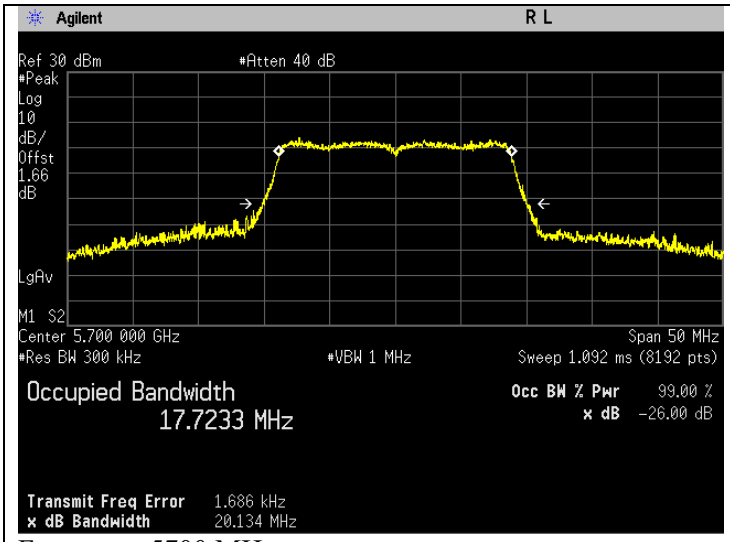
Frequency 5320 MHz



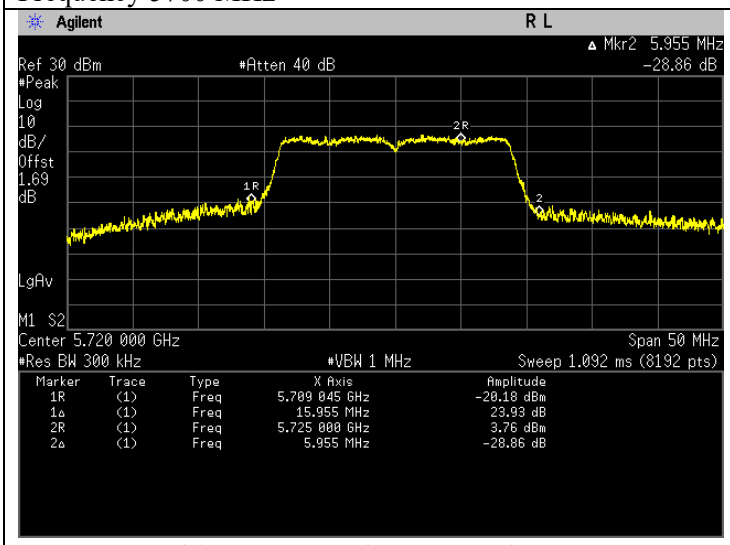
Frequency 5500 MHz



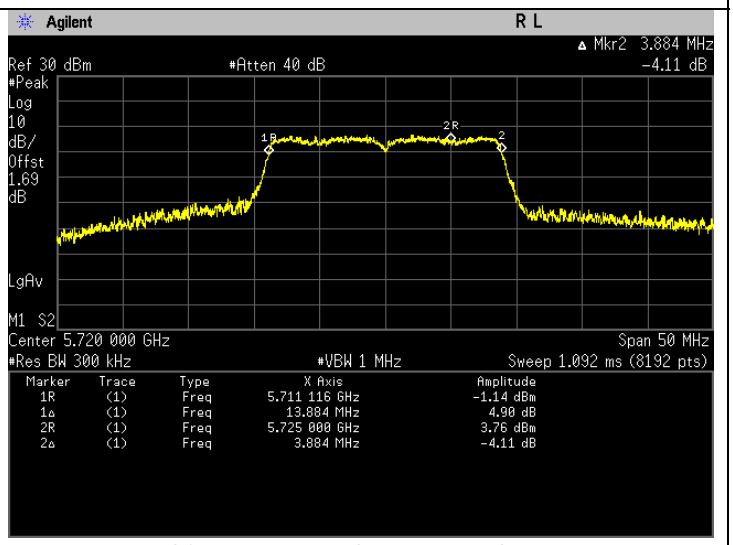
Frequency 5580 MHz



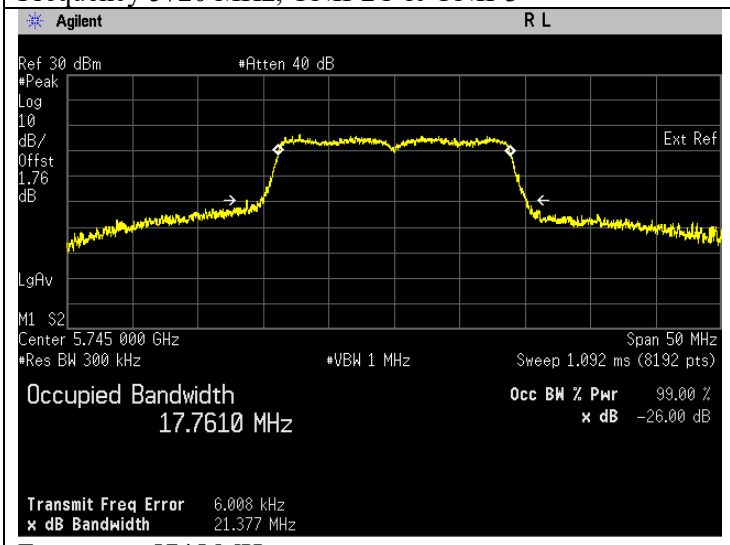
Frequency 5700 MHz



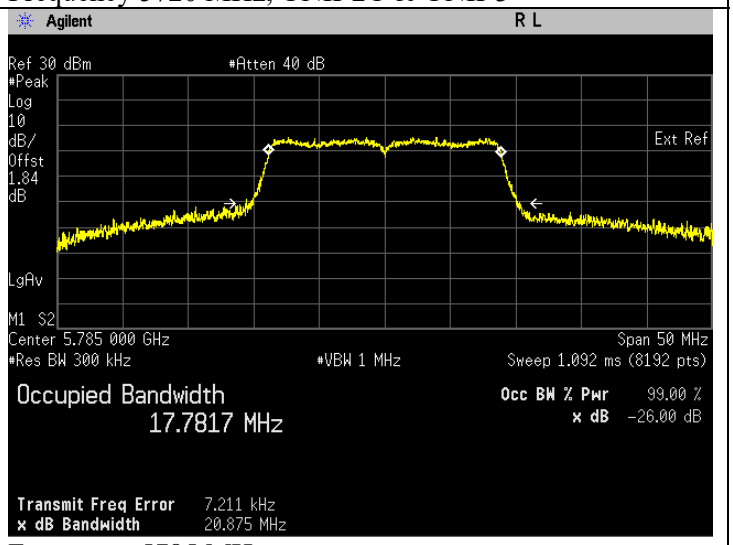
Frequency 5720 MHz, UNII-2C & UNII-3



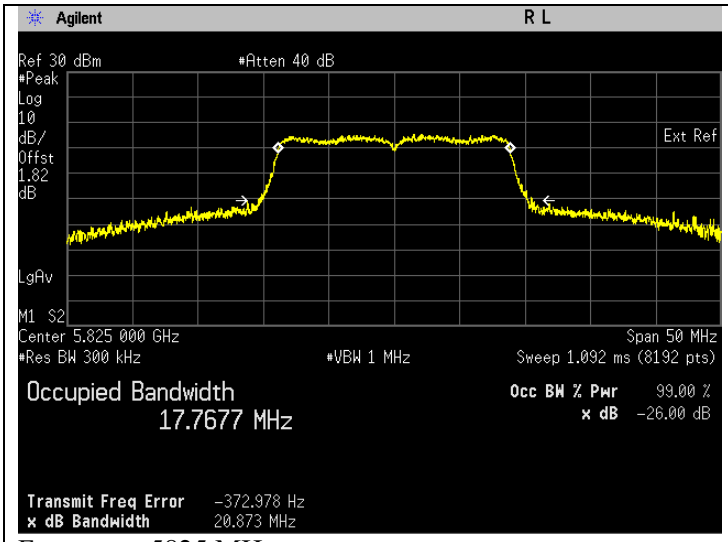
Frequency 5720 MHz, UNII-2C & UNII-3



Frequency 5745 MHz



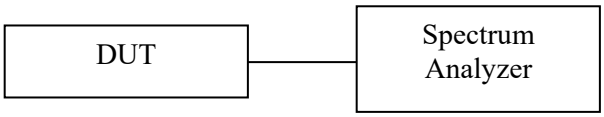
Frequency 5785 MHz



Frequency 5825 MHz

7.2. Maximum Conducted Output Power

7.2.1. 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.

7.2.2. 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

7.2.3. Additional Info

Antenna	Gain (dBi)
UNII-1	3.17
UNII-2A, UNII-2C	6.00
UNII-3	2.58
Duty Cycle Correction Factor	
802.11a	0.138
802.11n20	0.092

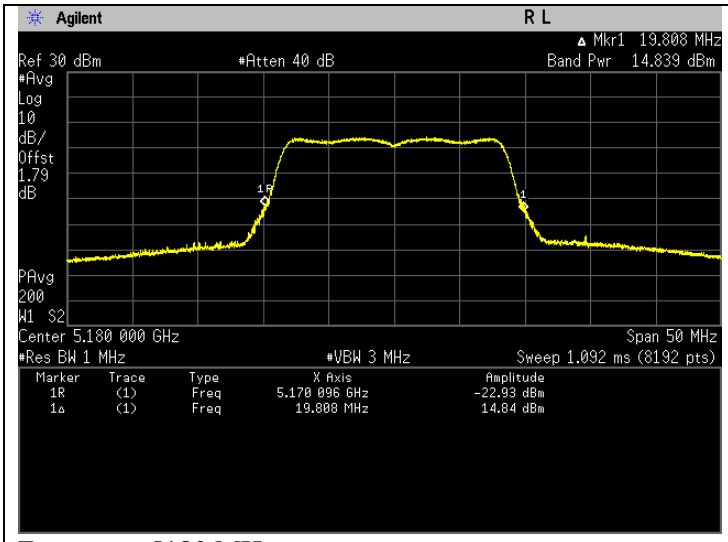
7.2.4. Test Data

Summary table

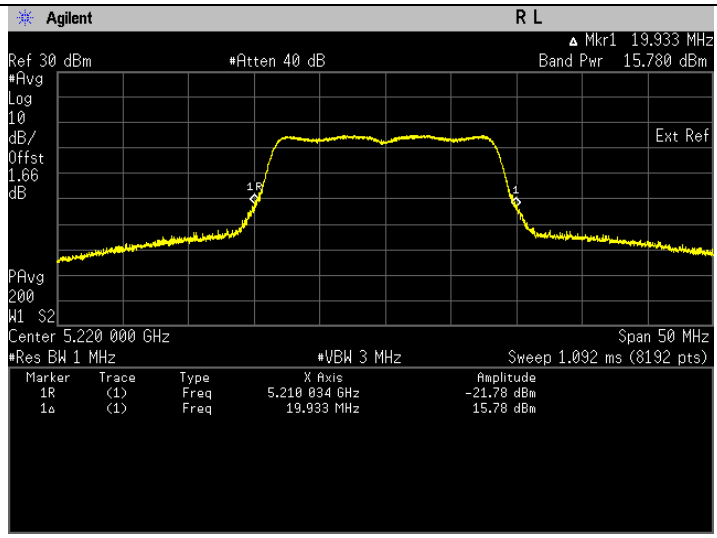
WLAN	Frequency Range (MHz)	Bandwidth (MHz)	RF Power Output		EIRP		Max Emission Designator
			Max measured (mW)	Max declared (mW)	Max measured (mW)	Max declared (mW)	
802.11a	5180-5240	20	38.57	53.70	80.04	111.43	16M8D1D
	5260-5320	20	57.86	63.10	230.36	251.19	16M8D1D
	5500-5580	20	26.07	31.62	103.80	125.89	16M8D1D
	5660-5720	20	25.41	31.62	101.16	125.89	16M8D1D
	5745-5825	20	27.11	31.62	49.10	57.28	16M8D1D
802.11n/ac (HT20)	5180-5240	20	40.25	53.70	83.52	111.43	17M8D1D
	5260-5320	20	61.86	63.10	246.26	251.19	17M8D1D
	5500-5580	20	27.62	31.62	109.98	125.89	17M8D1D
	5660-5720	20	26.27	31.62	104.57	125.89	17M7D1D
	5745-5825	20	28.78	31.62	52.13	57.28	17M8D1D

802.11a (26dB EBW)

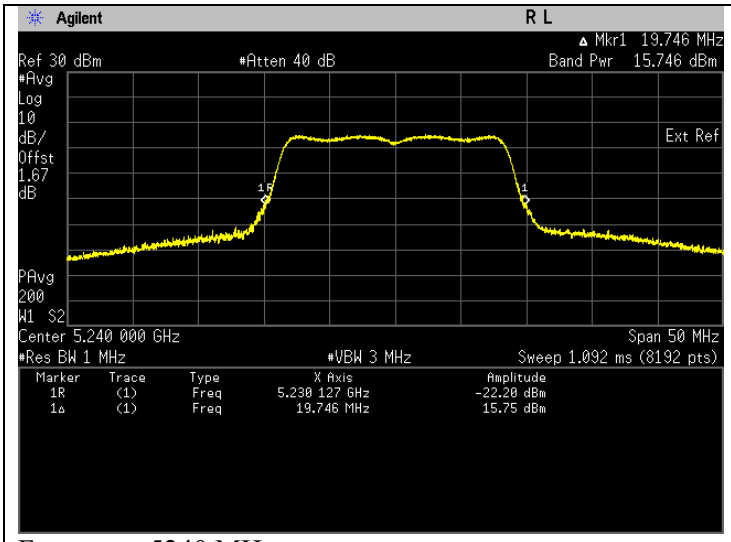
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	31.456	14.977	Pass
5220	Mod Type: BPSK, Data Rate: 6	39.063	15.918	Pass
5240	Mod Type: BPSK, Data Rate: 6	38.758	15.884	Pass
5260	Mod Type: BPSK, Data Rate: 6	59.704	17.760	Pass
5300	Mod Type: BPSK, Data Rate: 6	57.227	17.576	Pass
5320	Mod Type: BPSK, Data Rate: 6	24.261	13.849	Pass
5500	Mod Type: BPSK, Data Rate: 6	7.987	9.024	Pass
5580	Mod Type: BPSK, Data Rate: 6	26.412	14.218	Pass
5700	Mod Type: BPSK, Data Rate: 6	15.424	11.882	Pass
5745	Mod Type: BPSK, Data Rate: 6	27.638	14.415	Pass
5785	Mod Type: BPSK, Data Rate: 6	24.706	13.928	Pass
5825	Mod Type: BPSK, Data Rate: 6	25.369	14.043	Pass



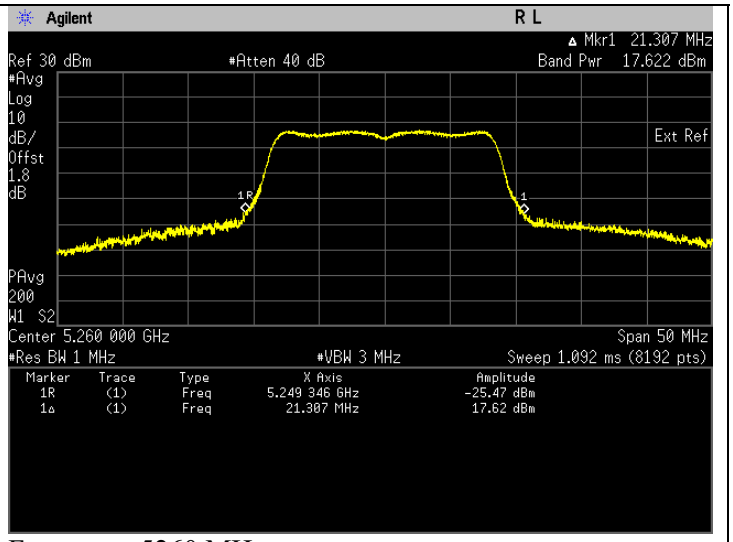
Frequency 5180 MHz



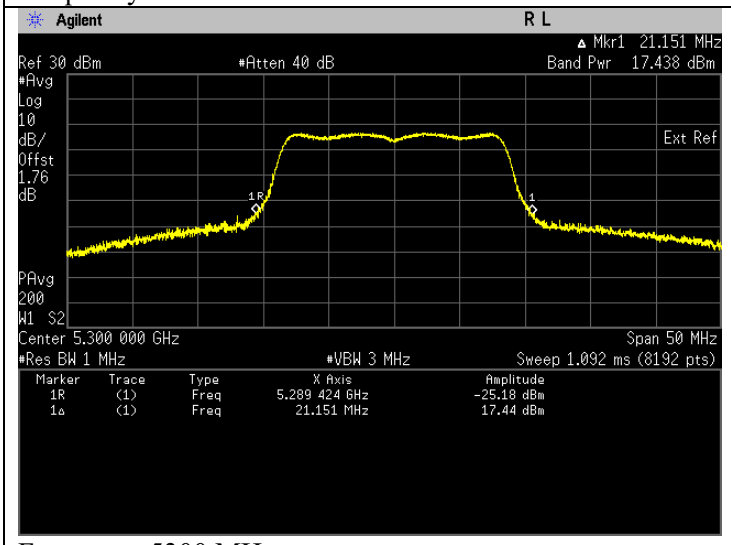
Frequency 5220 MHz



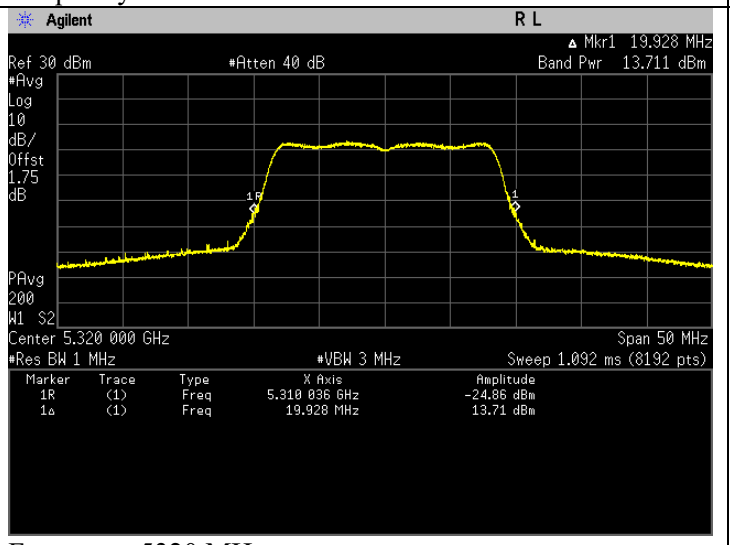
Frequency 5240 MHz



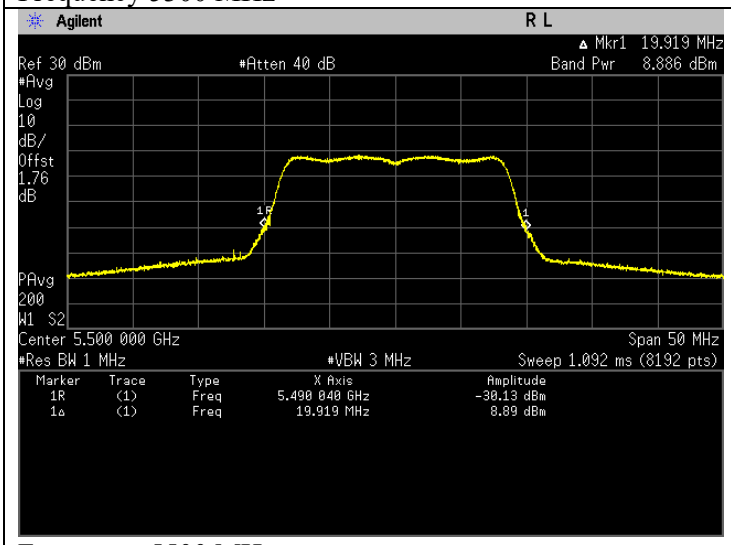
Frequency 5260 MHz



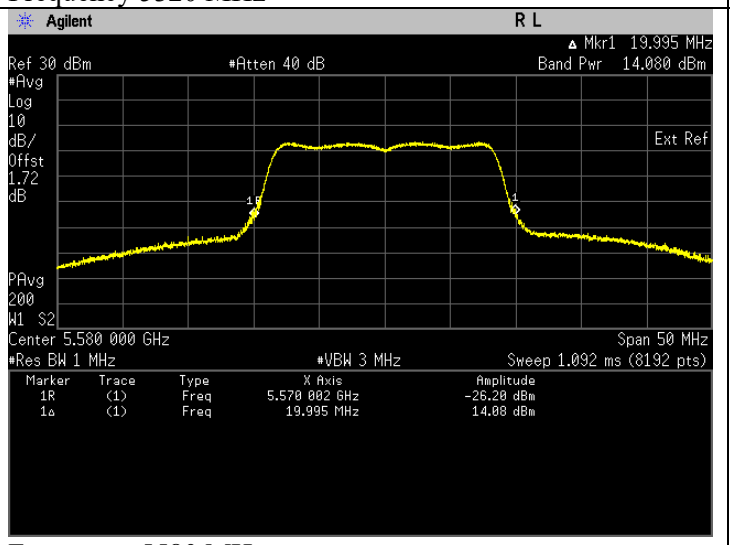
Frequency 5300 MHz



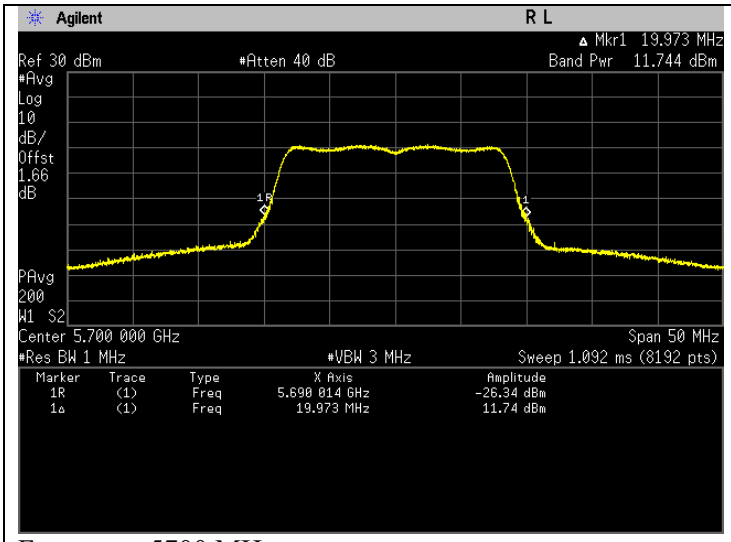
Frequency 5320 MHz



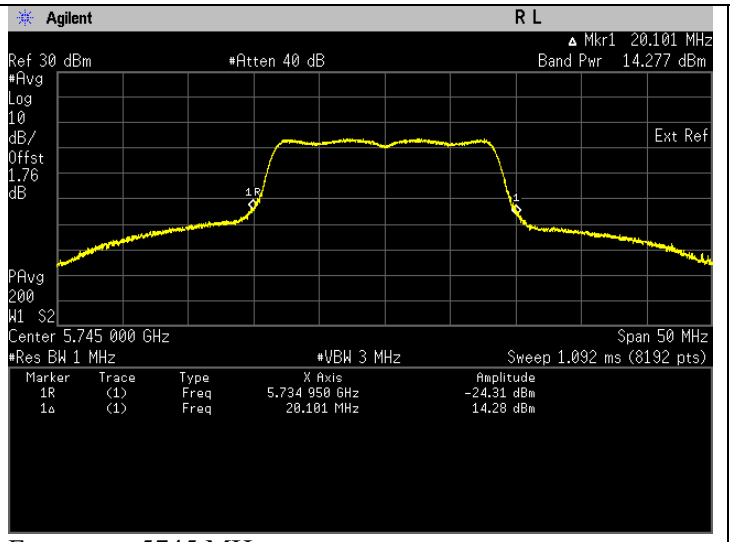
Frequency 5500 MHz



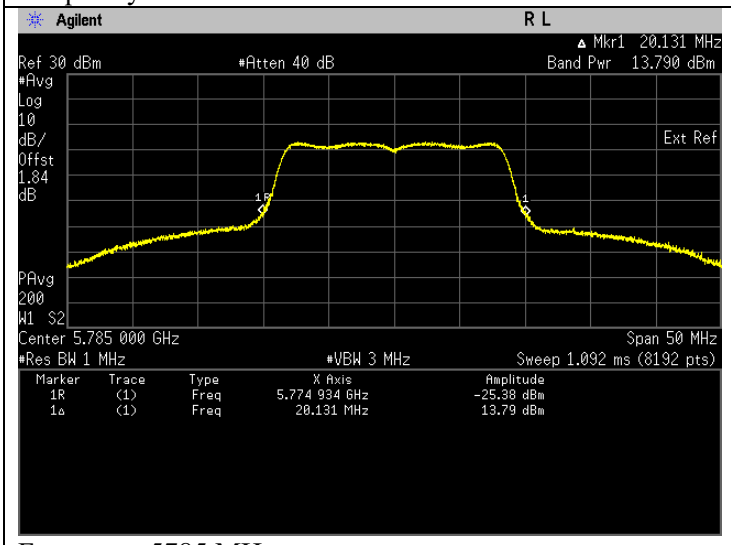
Frequency 5580 MHz



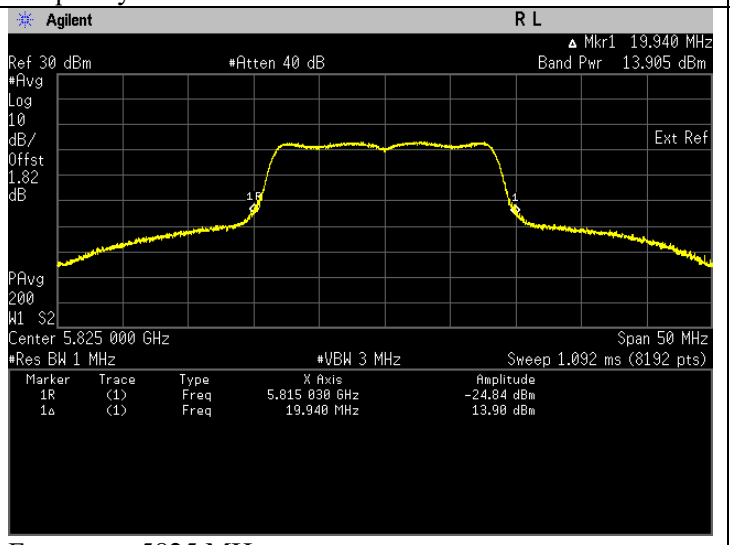
Frequency 5700 MHz



Frequency 5745 MHz



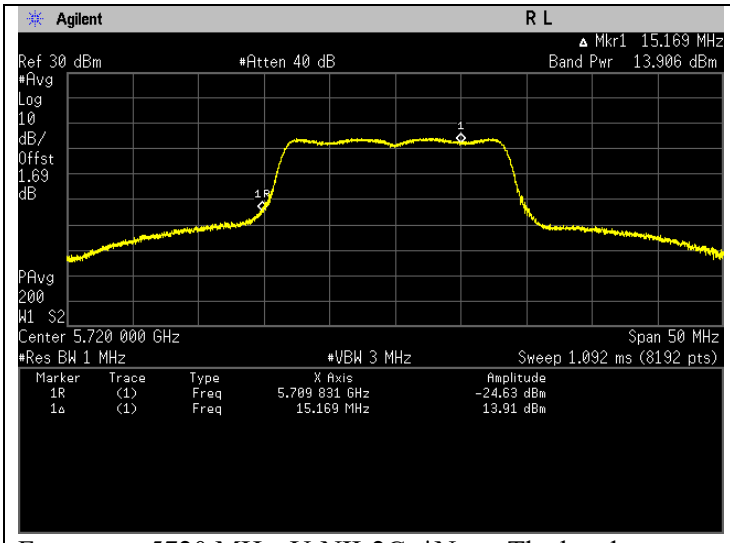
Frequency 5785 MHz



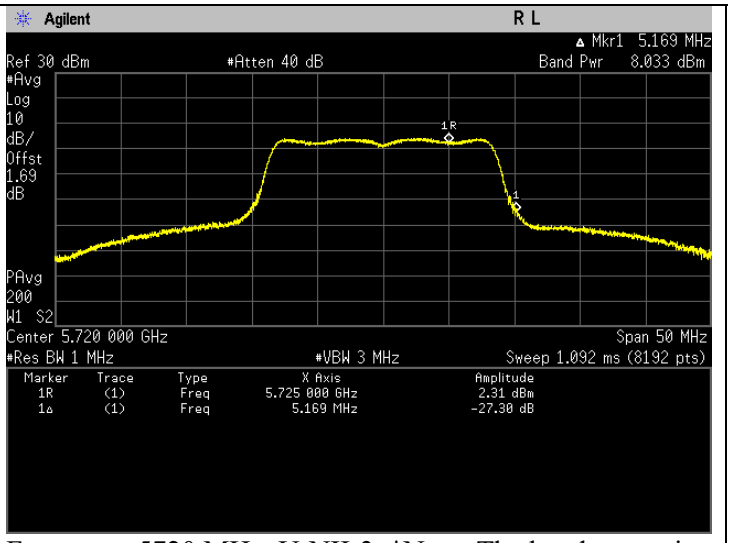
Frequency 5825 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: 6	25.375	14.044	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: 6	6.563	8.171	Pass



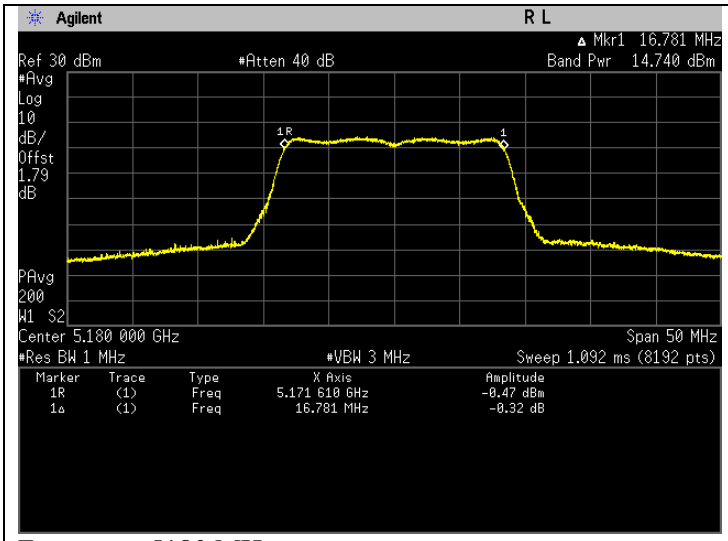
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



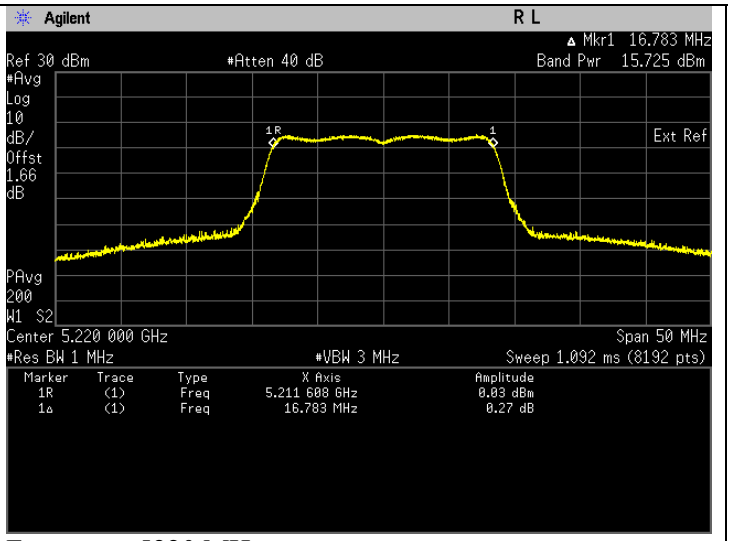
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11a (99% EBW)

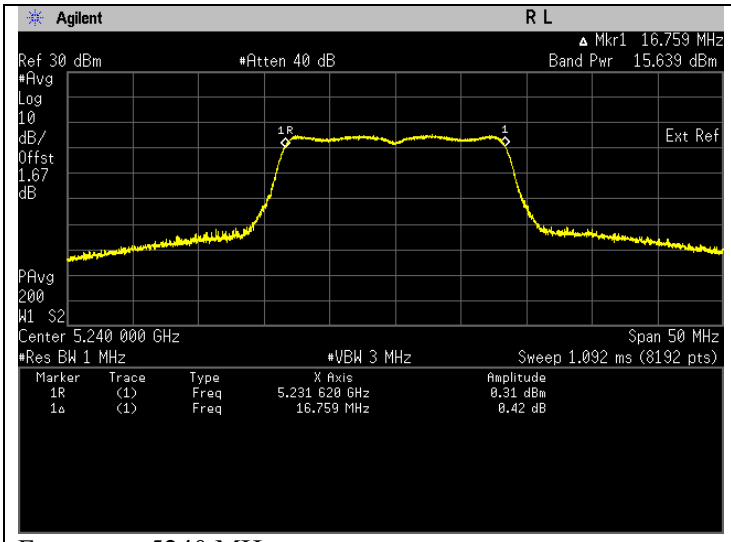
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	30.747	14.878	Pass	18.048	Pass
5220	Mod Type: BPSK, Data Rate: 6	38.571	15.863	Pass	19.033	Pass
5240	Mod Type: BPSK, Data Rate: 6	37.815	15.777	Pass	18.947	Pass
5260	Mod Type: BPSK, Data Rate: 6	57.863	17.624	Pass	20.794	Pass
5300	Mod Type: BPSK, Data Rate: 6	56.351	17.509	Pass	20.679	Pass
5320	Mod Type: BPSK, Data Rate: 6	24.294	13.855	Pass	17.025	Pass
5500	Mod Type: BPSK, Data Rate: 6	7.809	8.926	Pass	14.926	Pass
5580	Mod Type: BPSK, Data Rate: 6	26.074	14.162	Pass	20.162	Pass
5700	Mod Type: BPSK, Data Rate: 6	15.143	11.802	Pass	17.802	Pass
5745	Mod Type: BPSK, Data Rate: 6	27.108	14.331	Pass	16.911	Pass
5785	Mod Type: BPSK, Data Rate: 6	24.077	13.816	Pass	16.396	Pass
5825	Mod Type: BPSK, Data Rate: 6	25.270	14.026	Pass	16.606	Pass



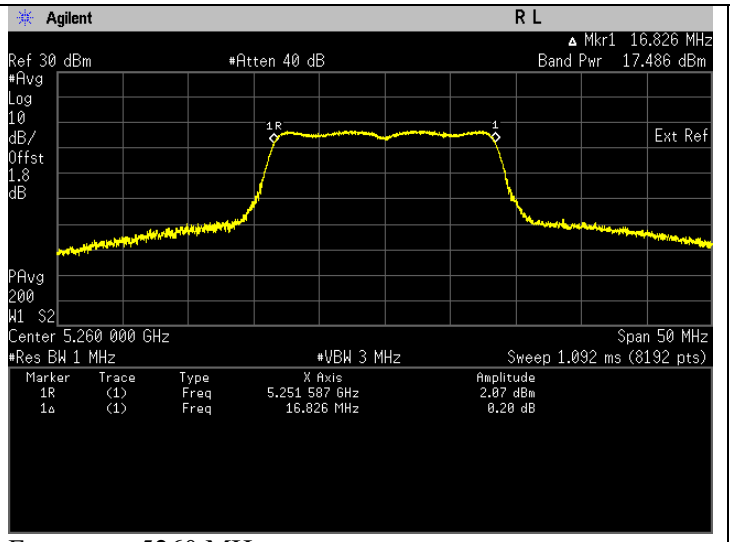
Frequency 5180 MHz



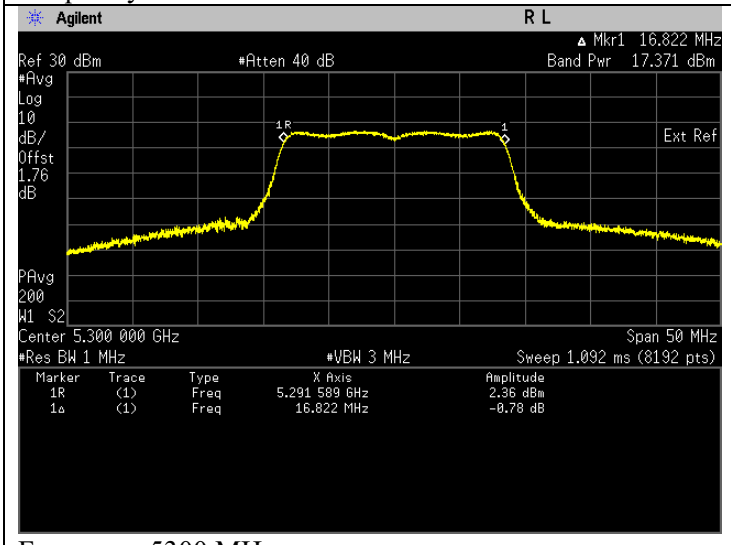
Frequency 5220 MHz



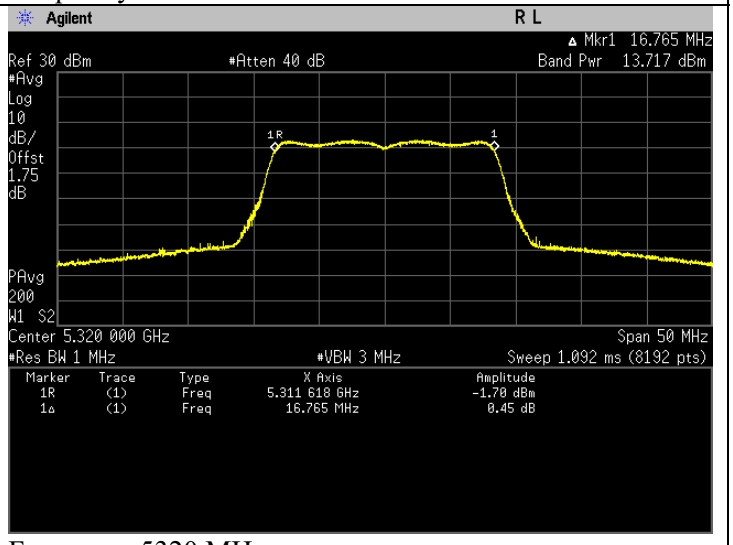
Frequency 5240 MHz



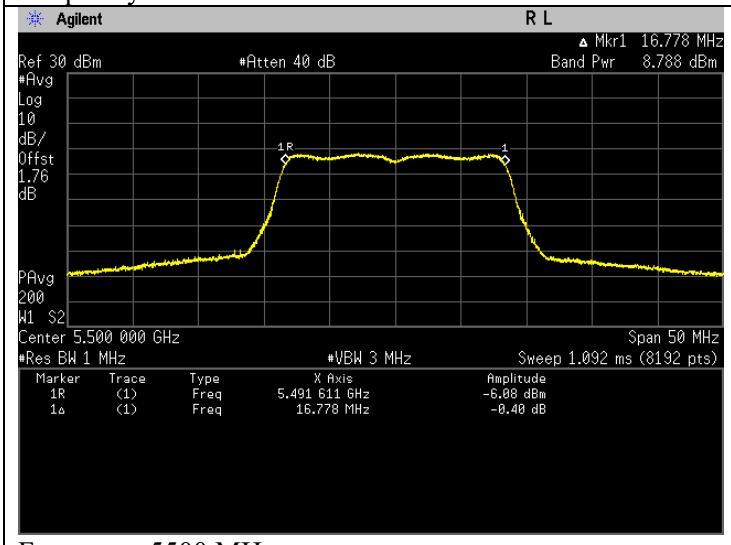
Frequency 5260 MHz



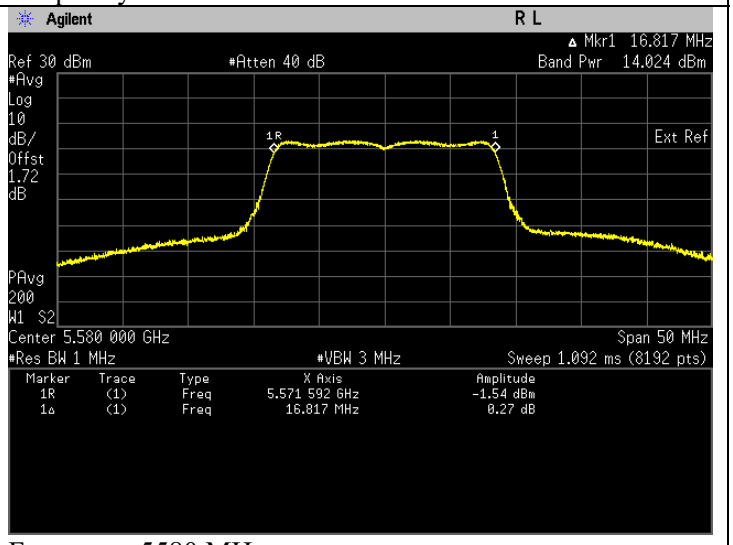
Frequency 5300 MHz



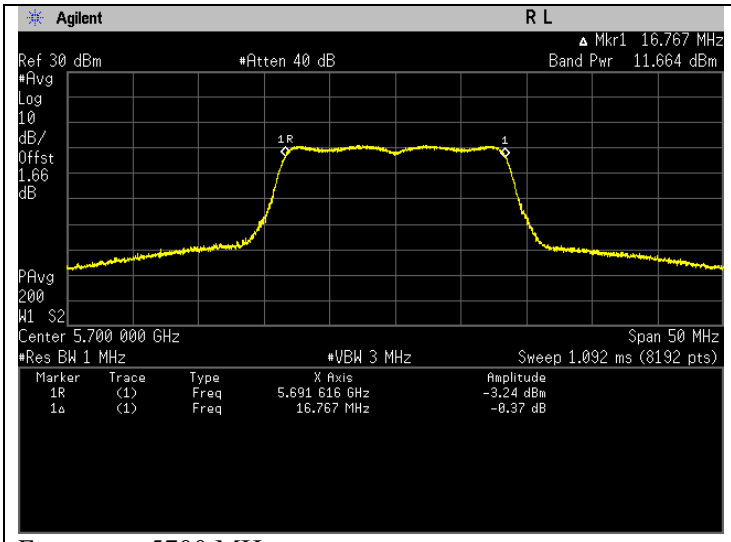
Frequency 5320 MHz



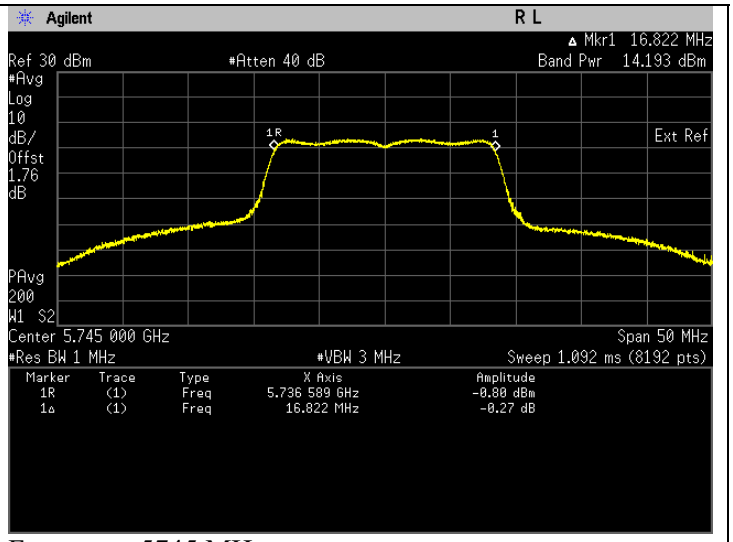
Frequency 5500 MHz



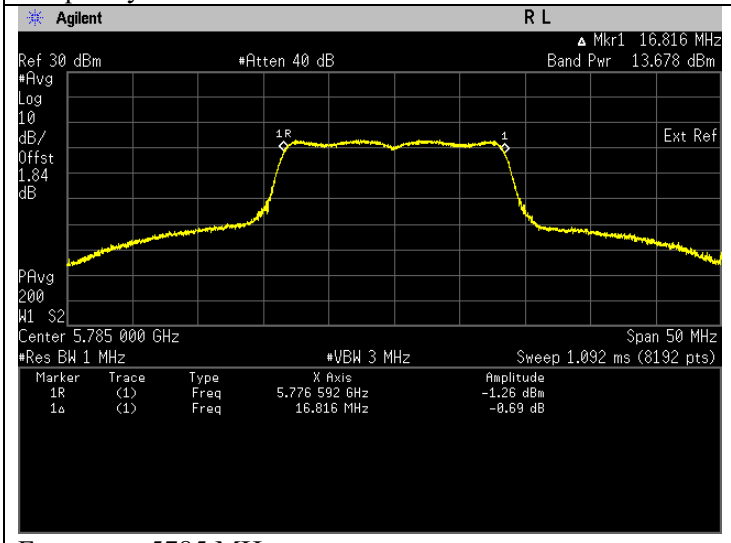
Frequency 5580 MHz



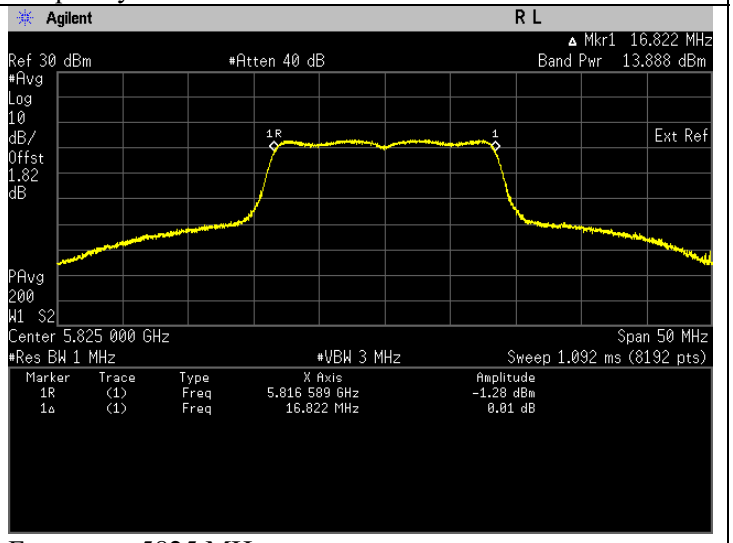
Frequency 5700 MHz



Frequency 5745 MHz



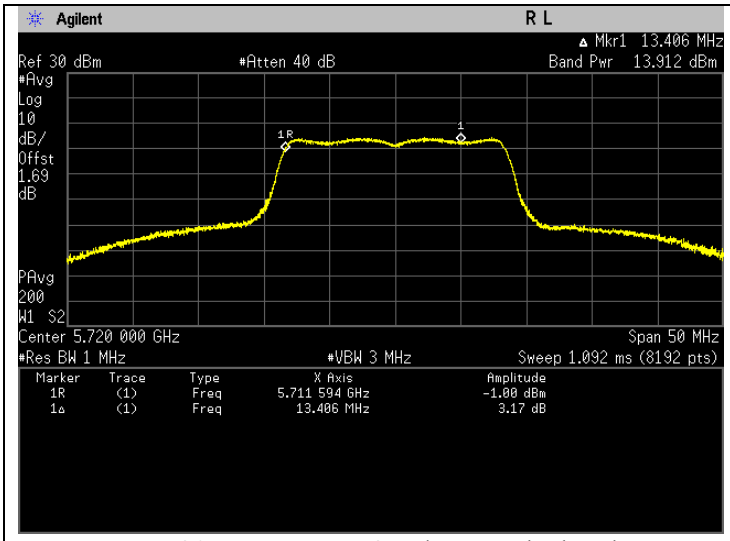
Frequency 5785 MHz



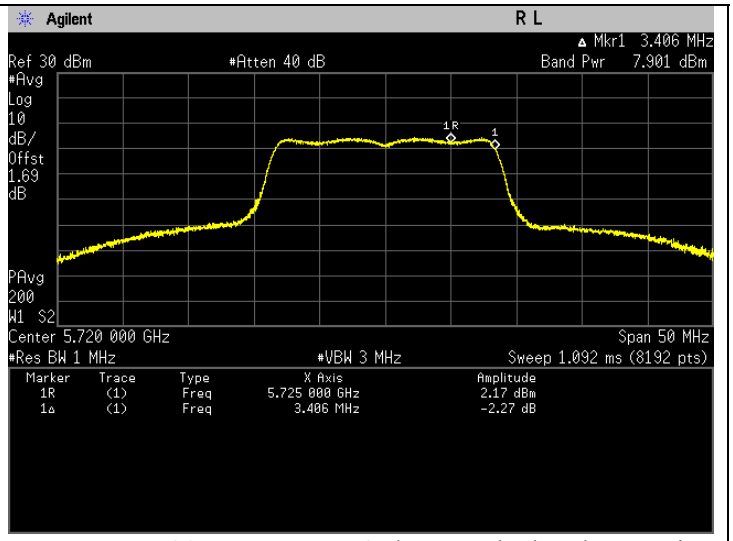
Frequency 5825 MHz

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	25.410	14.05	Pass	20.05	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: 6	6.366	8.039	Pass	10.619	Pass



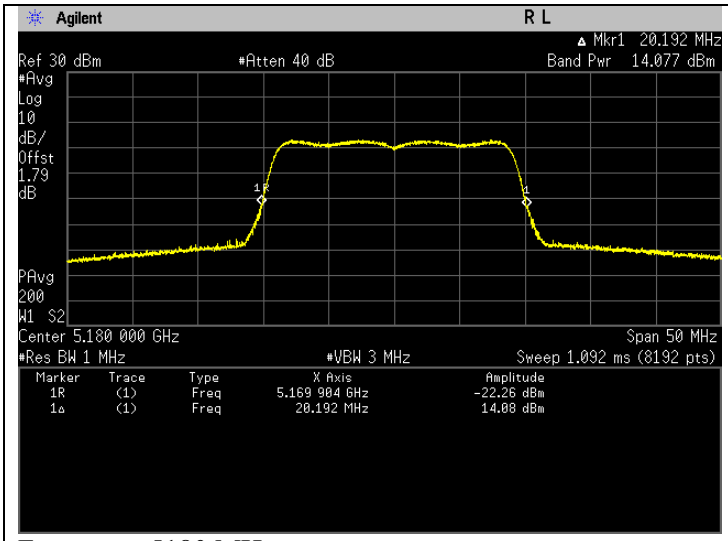
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



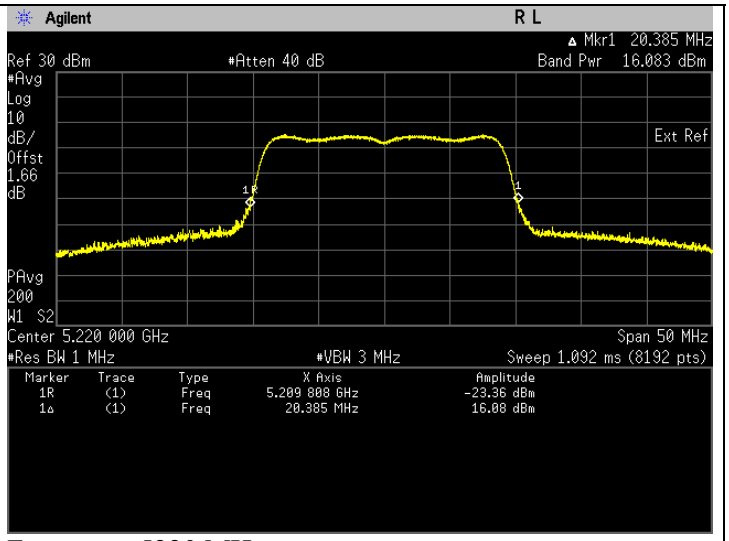
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(26dB EBW)

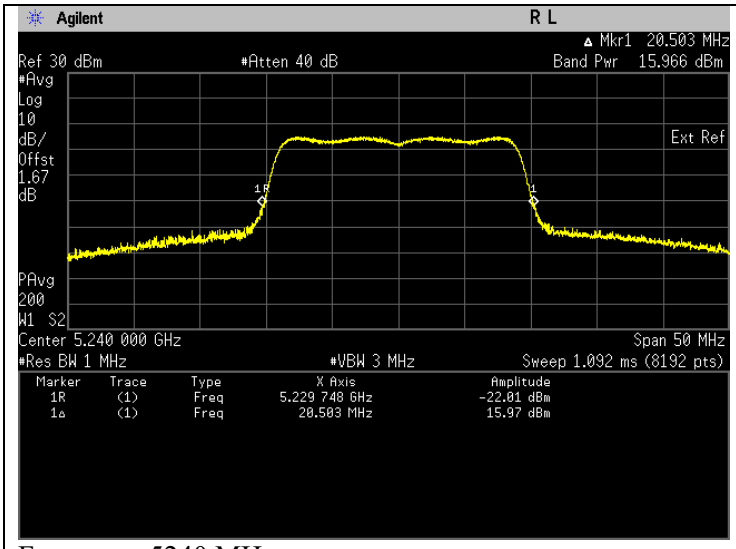
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	26.116	14.169	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	41.445	16.175	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	40.343	16.058	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	62.806	17.980	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	61.716	17.904	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.706	13.161	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	6.805	8.328	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	28.210	14.504	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.297	12.121	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	29.087	14.637	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	25.840	14.123	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	26.853	14.290	Pass



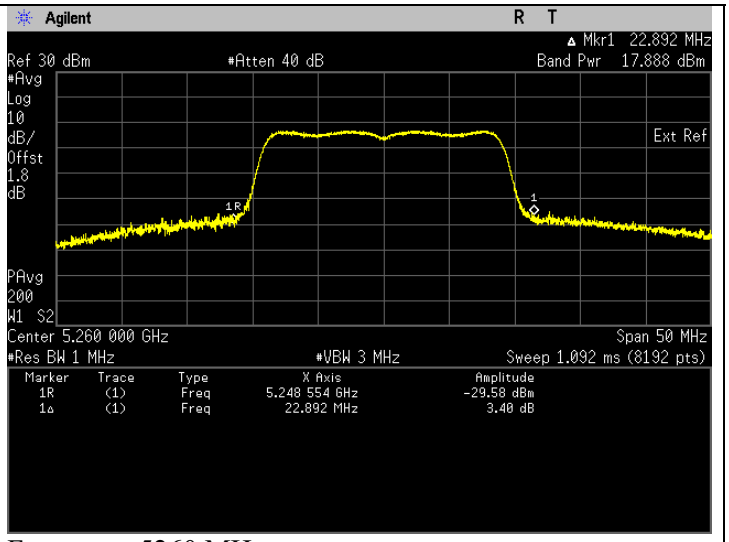
Frequency 5180 MHz



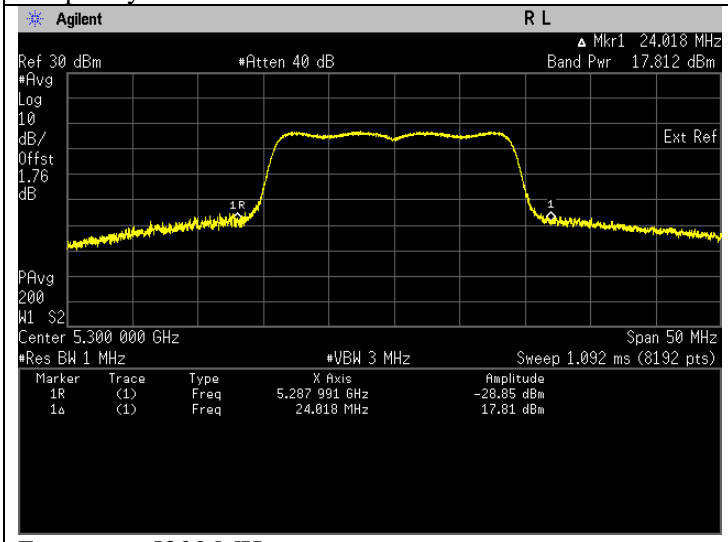
Frequency 5220 MHz



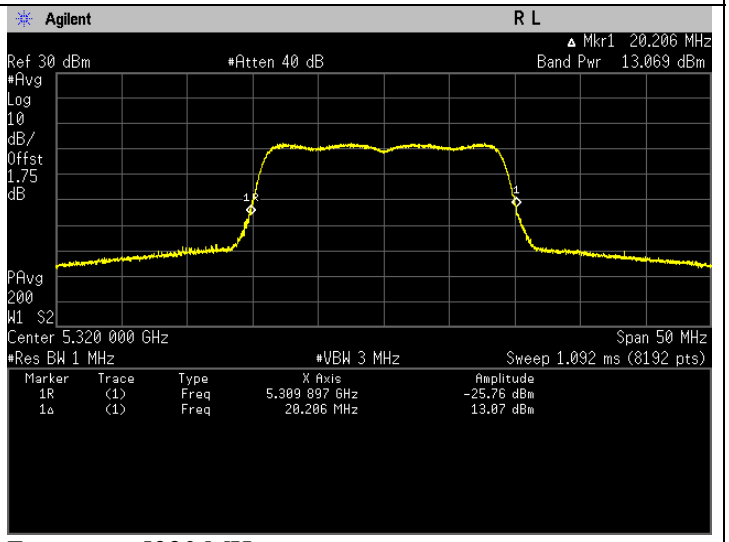
Frequency 5240 MHz



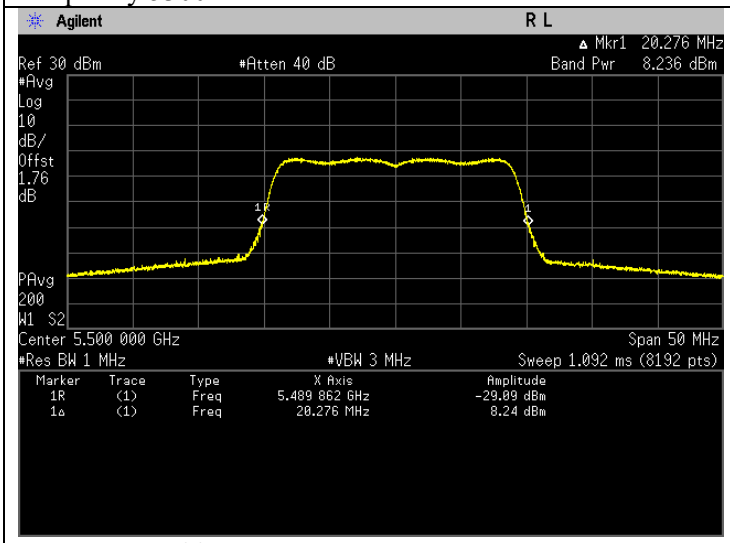
Frequency 5260 MHz



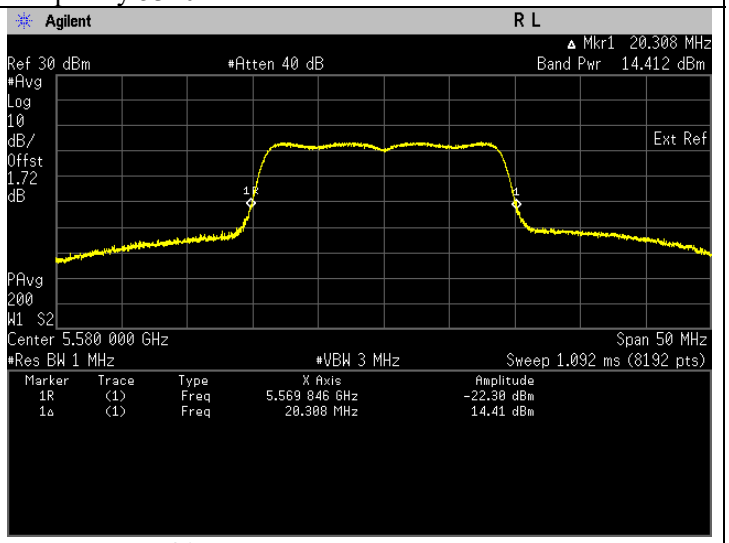
Frequency 5300 MHz



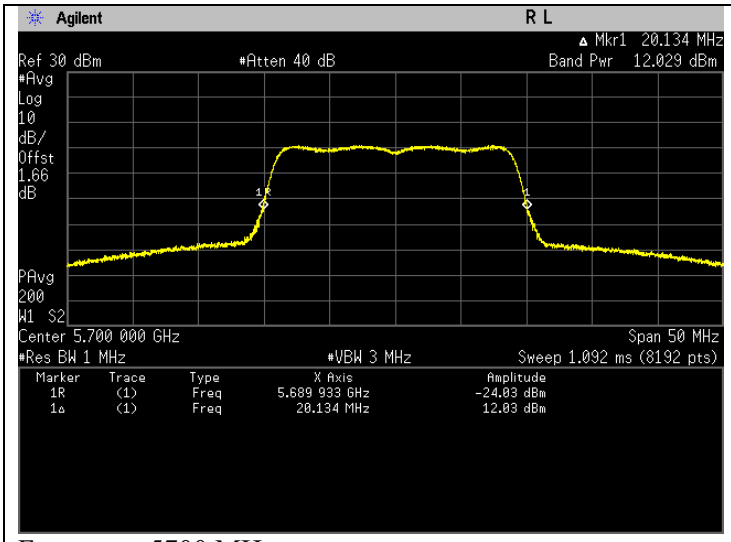
Frequency 5320 MHz



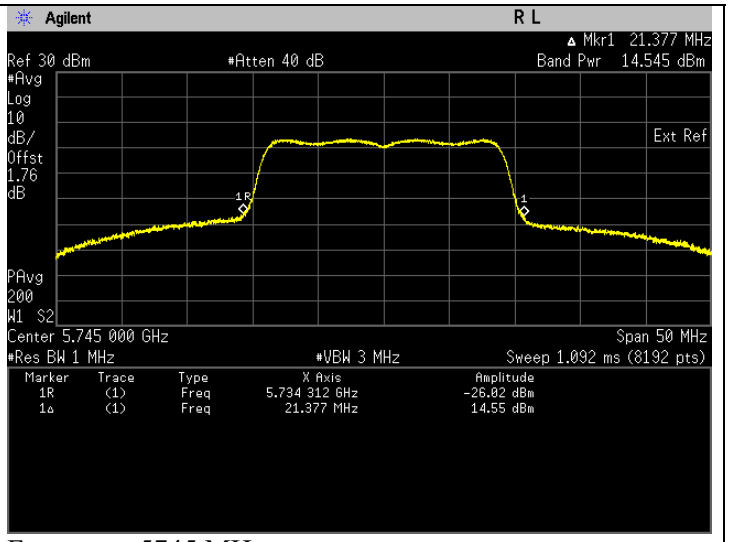
Frequency 5500 MHz



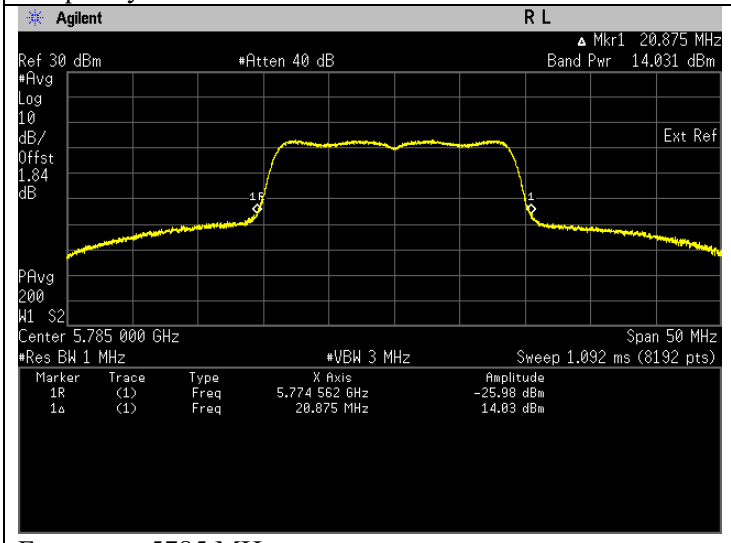
Frequency 5580 MHz



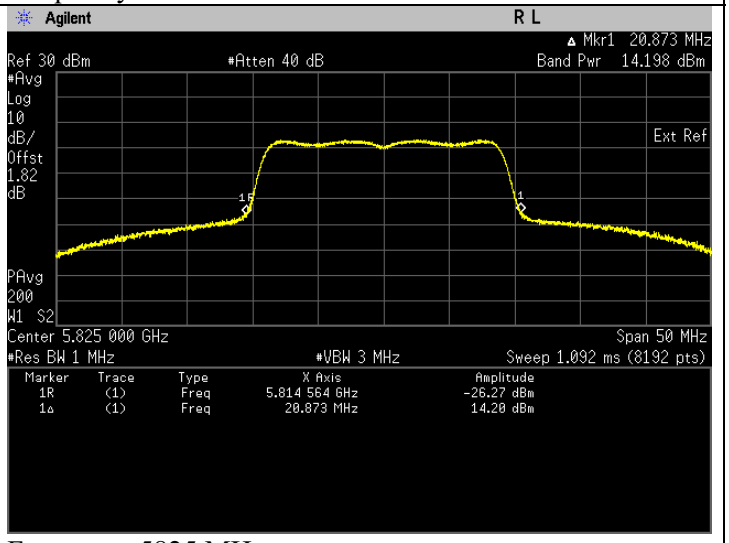
Frequency 5700 MHz



Frequency 5745 MHz



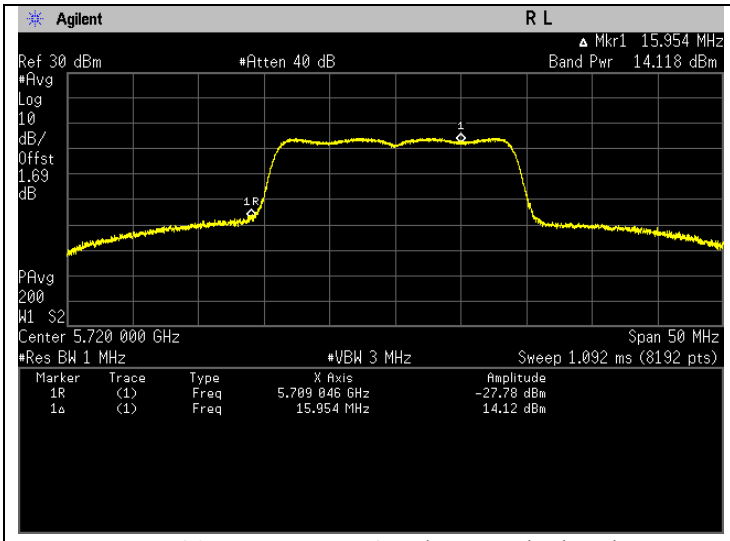
Frequency 5785 MHz



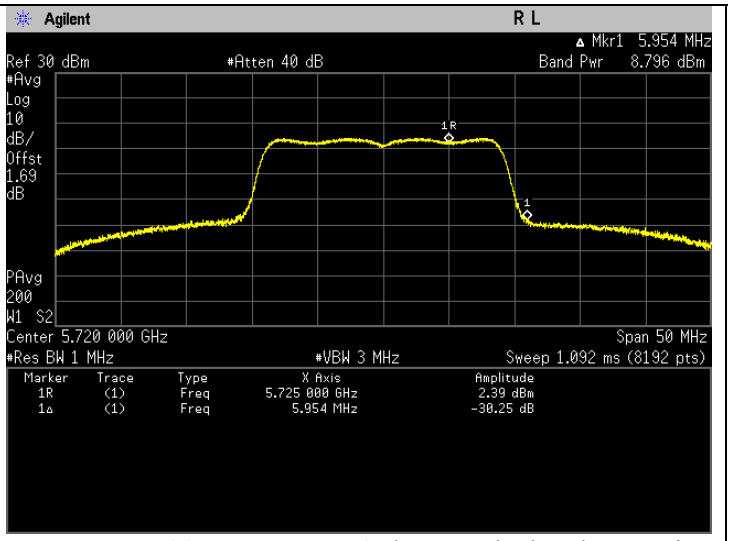
Frequency 5825 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	26.363	14.21	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.741	8.888	Pass



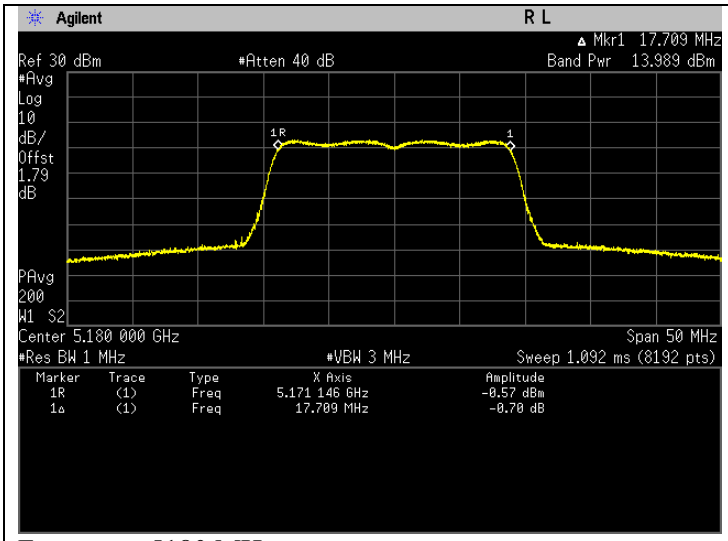
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



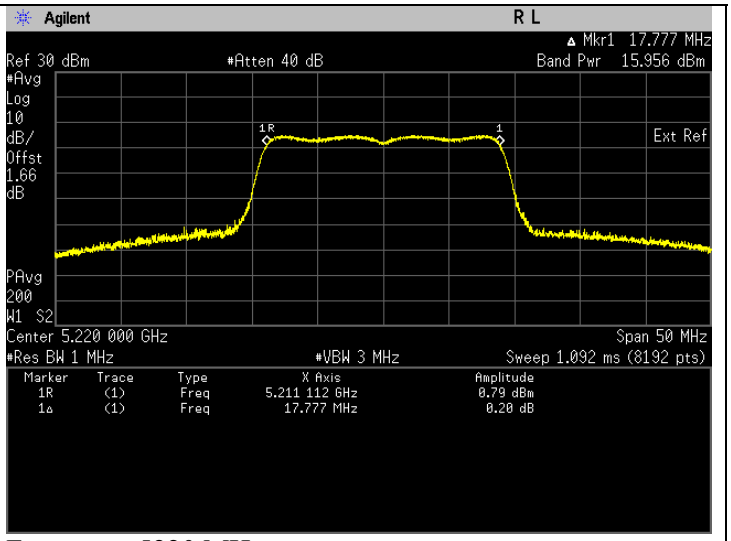
Frequency 5720 MHz, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(99% EBW)

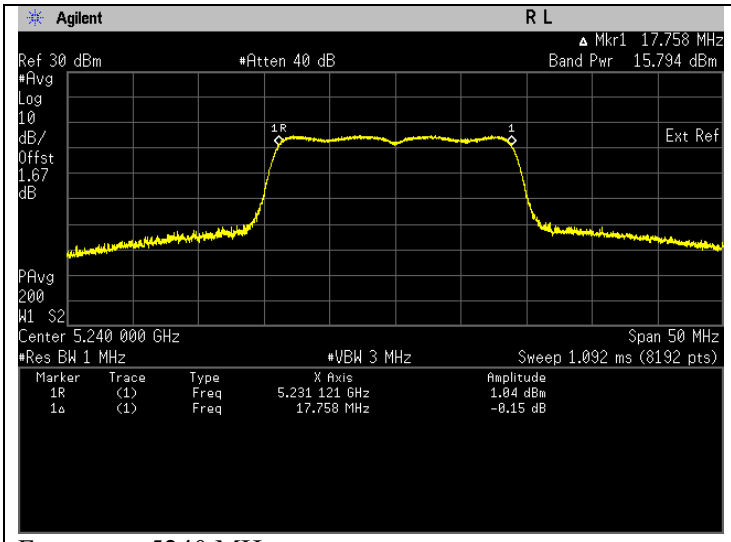
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	25.592	14.081	Pass	17.251	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	40.251	16.048	Pass	19.218	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	38.777	15.886	Pass	19.056	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	61.859	17.914	Pass	21.084	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	60.242	17.799	Pass	20.969	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	19.962	13.002	Pass	16.172	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	6.665	8.238	Pass	14.238	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	27.625	14.413	Pass	20.413	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.084	12.064	Pass	18.064	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	28.781	14.591	Pass	17.171	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	25.421	14.052	Pass	16.632	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	26.182	14.180	Pass	16.76	Pass



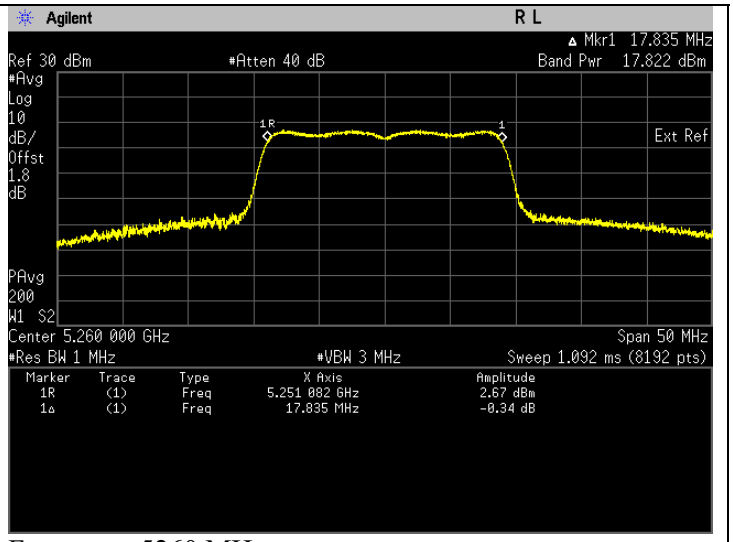
Frequency 5180 MHz



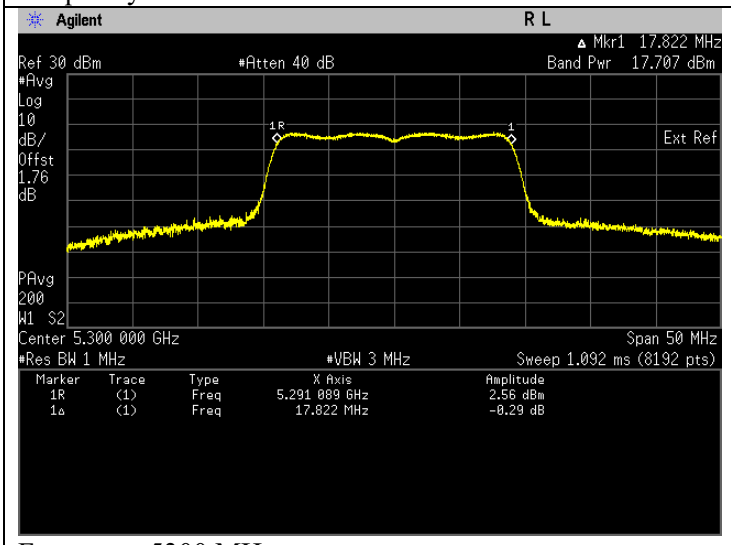
Frequency 5220 MHz



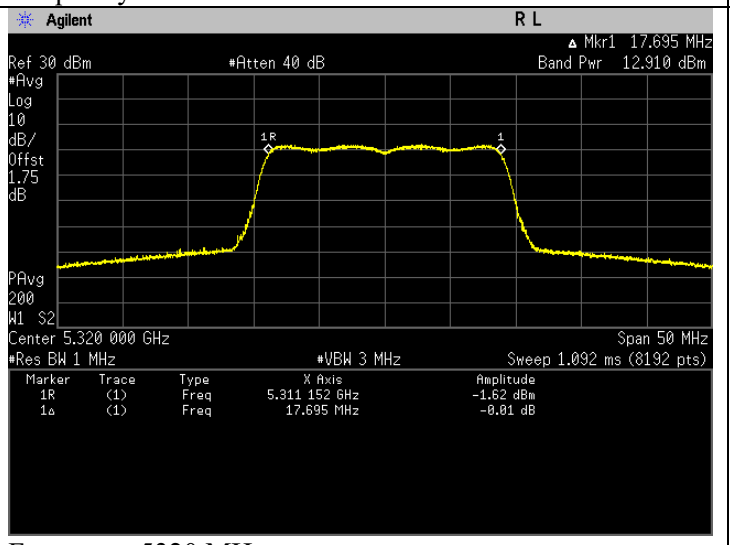
Frequency 5240 MHz



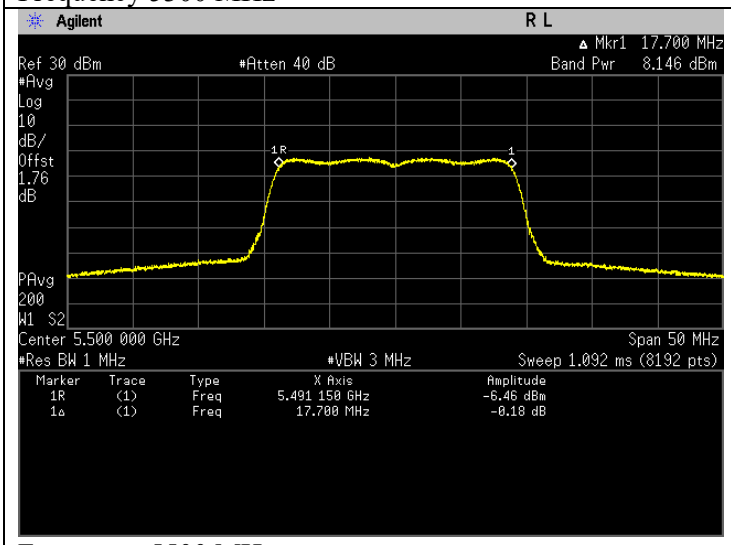
Frequency 5260 MHz



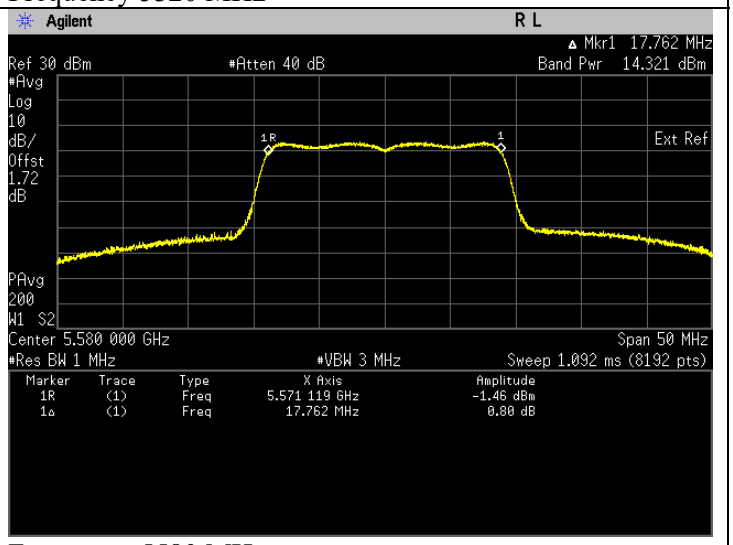
Frequency 5300 MHz



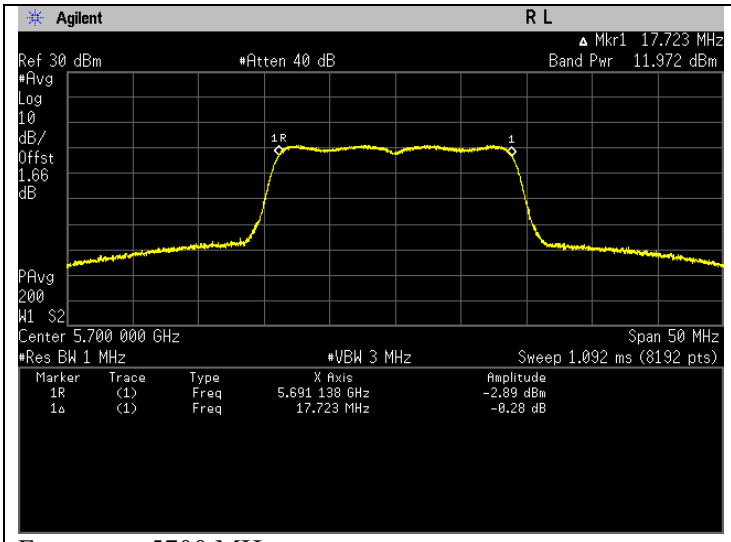
Frequency 5320 MHz



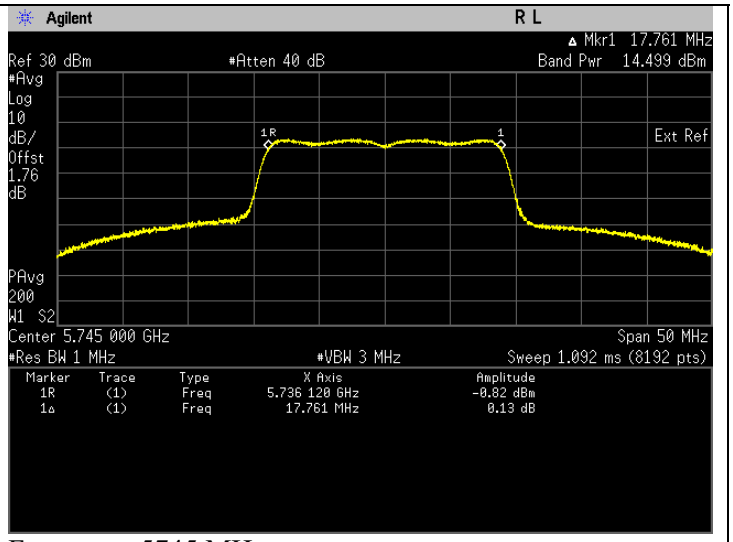
Frequency 5500 MHz



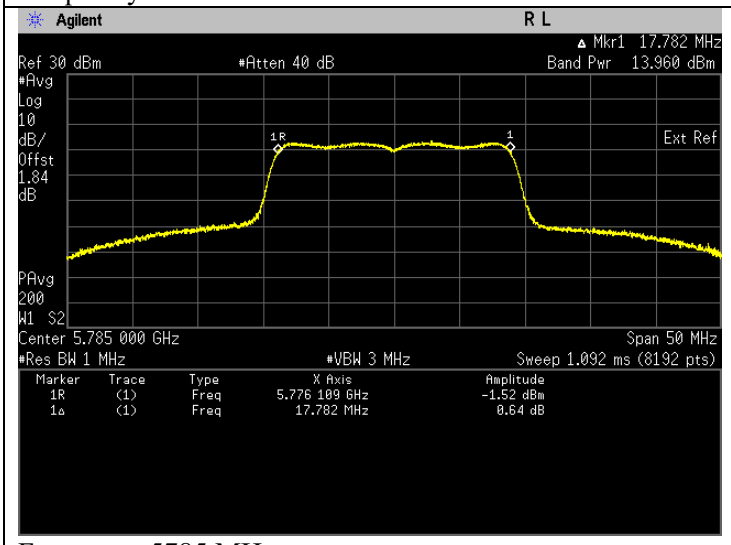
Frequency 5580 MH



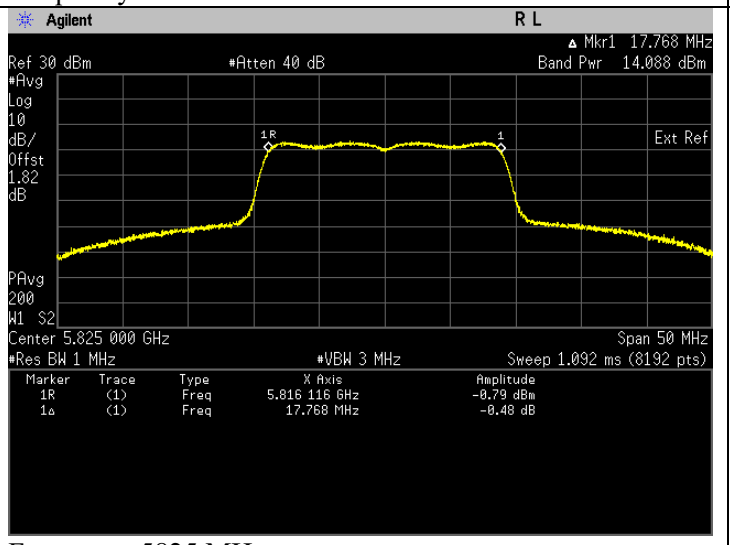
Frequency 5700 MHz



Frequency 5745 MHz



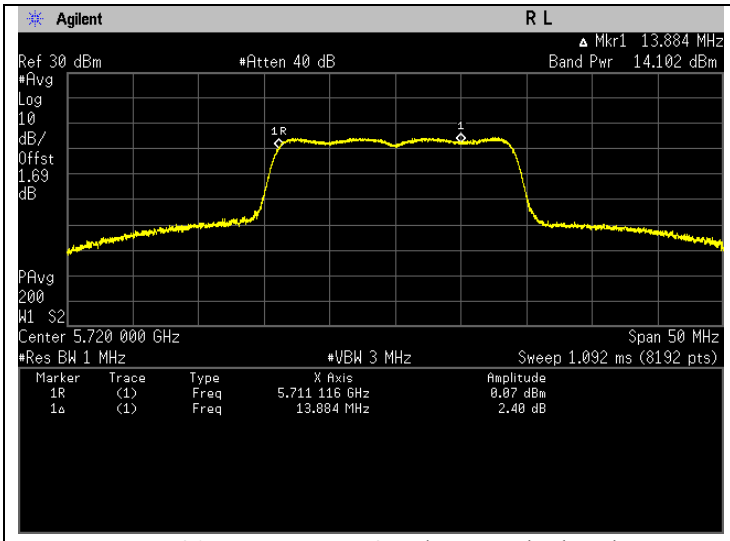
Frequency 5785 MHz



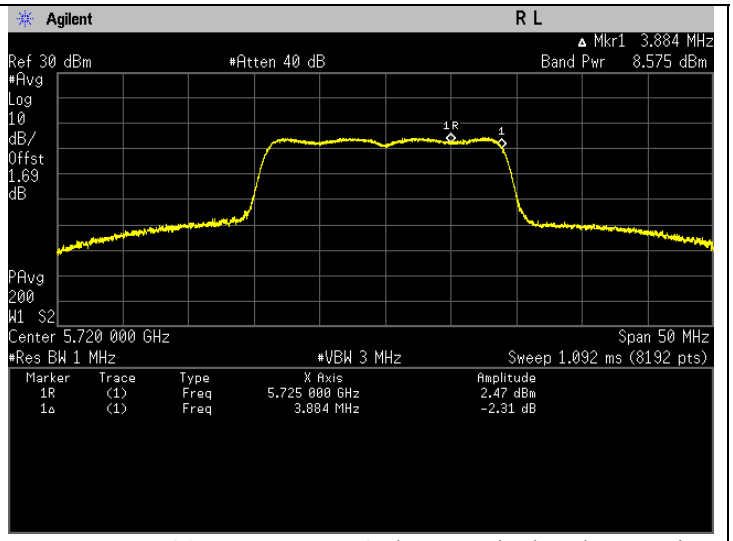
Frequency 5825 MHz

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	26.266	14.194	Pass	20.194	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.357	8.667	Pass	11.247	Pass



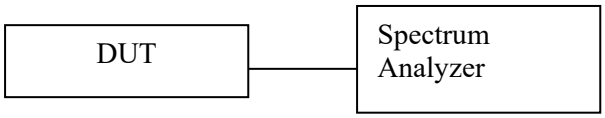
Frequency 5720 MHz, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



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

Maximum Power Spectral Density

7.2.5. 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.

7.2.6. 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

7.2.7. Additional Info

Antenna	**Gain (dBi)**
UNII-1	3.17
UNII-2A, UNII-2C	6.00
UNII-3	2.58
Duty Cycle Correction Factor	
802.11a	0.138
802.11n20	0.092

7.2.8. Test Data

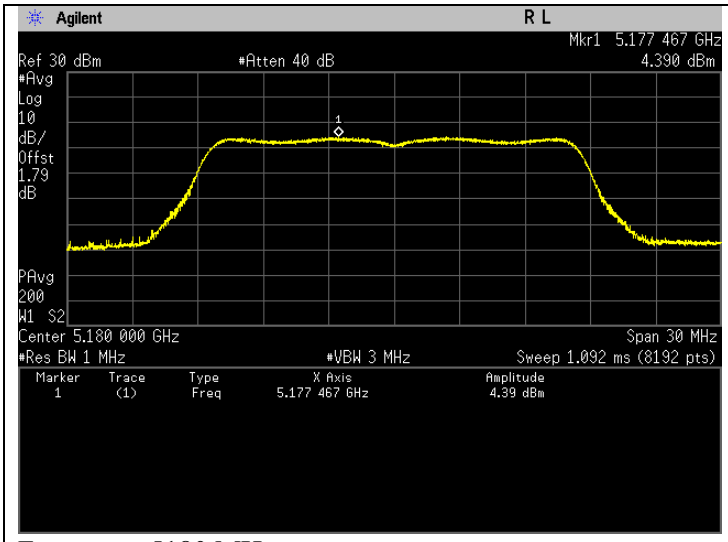
802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	4.528	Pass
5220	Mod Type: BPSK, Data Rate: 6	5.413	Pass
5240	Mod Type: BPSK, Data Rate: 6	5.265	Pass
5260	Mod Type: BPSK, Data Rate: 6	7.157	Pass
5300	Mod Type: BPSK, Data Rate: 6	7.241	Pass
5320	Mod Type: BPSK, Data Rate: 6	3.381	Pass
5500	Mod Type: BPSK, Data Rate: 6	-1.477	Pass
5580	Mod Type: BPSK, Data Rate: 6	3.779	Pass
5700	Mod Type: BPSK, Data Rate: 6	-0.844	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	0.963	Pass
5785	Mod Type: BPSK, Data Rate: 6	0.390	Pass
5825	Mod Type: BPSK, Data Rate: 6	0.702	Pass

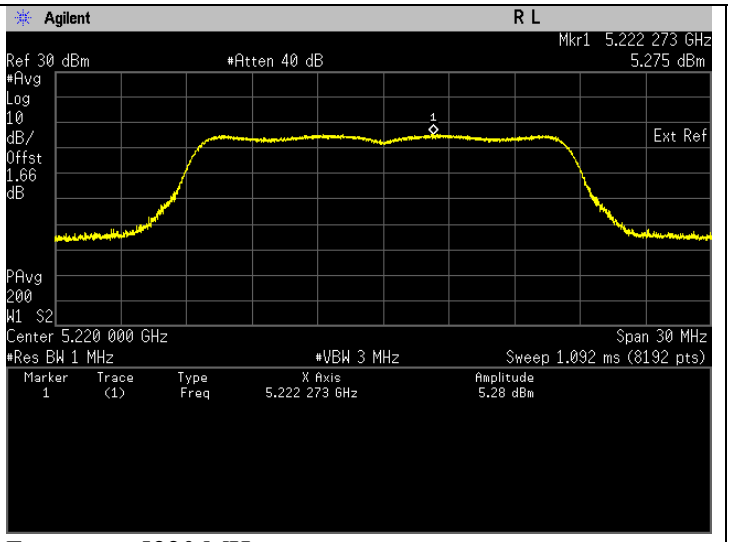
802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	4.528	Pass	7.698	Pass
5220	Mod Type: BPSK, Data Rate: 6	5.413	Pass	8.583	Pass
5240	Mod Type: BPSK, Data Rate: 6	5.265	Pass	8.435	Pass
5260	Mod Type: BPSK, Data Rate: 6	7.157	Pass	13.157	Pass
5300	Mod Type: BPSK, Data Rate: 6	7.241	Pass	13.241	Pass
5320	Mod Type: BPSK, Data Rate: 6	3.381	Pass	9.381	Pass
5500	Mod Type: BPSK, Data Rate: 6	-1.477	Pass	4.523	Pass
5580	Mod Type: BPSK, Data Rate: 6	3.779	Pass	9.779	Pass
5700	Mod Type: BPSK, Data Rate: 6	-0.844	Pass	5.156	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: 6	0.963	Pass	3.543	Pass
5785	Mod Type: BPSK, Data Rate: 6	0.390	Pass	2.97	Pass
5825	Mod Type: BPSK, Data Rate: 6	0.702	Pass	3.282	Pass

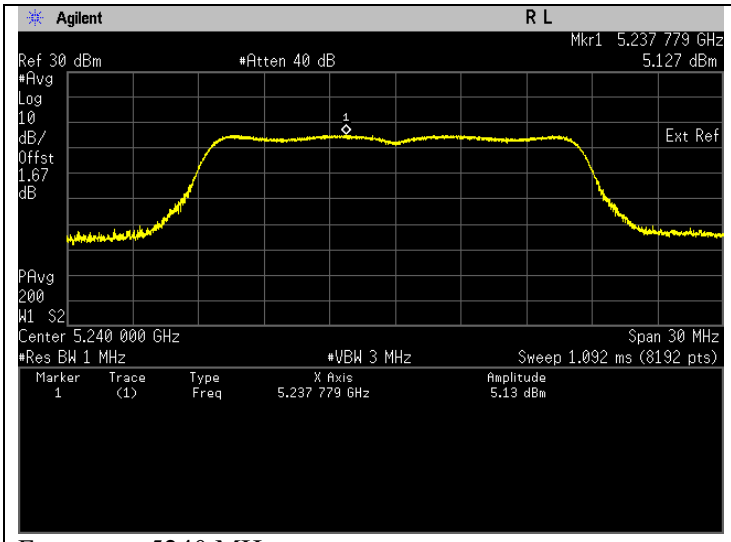
Plots for 802.11a (26dB EBW & 99% EBW)



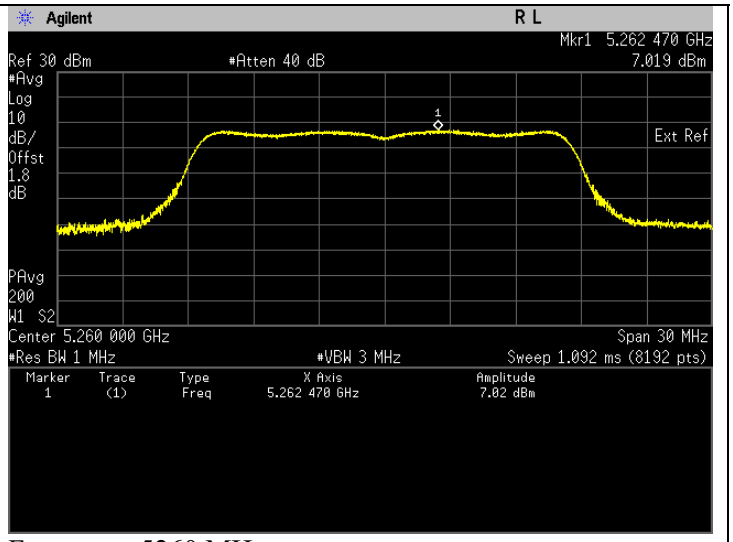
Frequency 5180 MHz



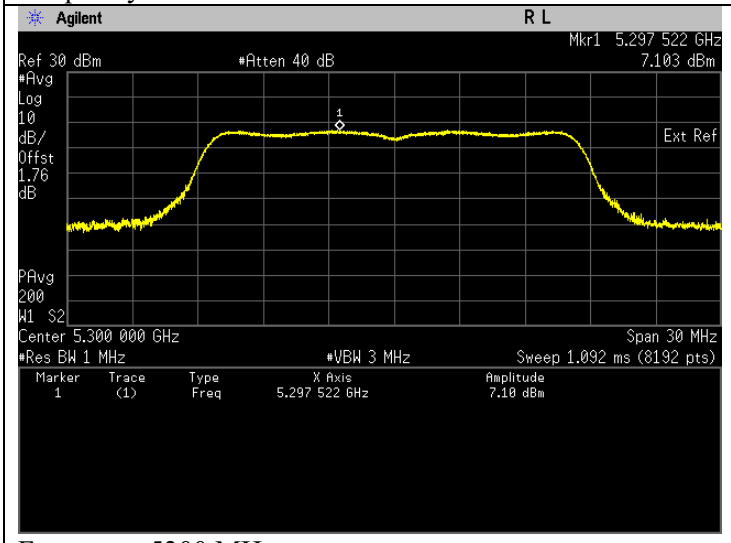
Frequency 5220 MHz



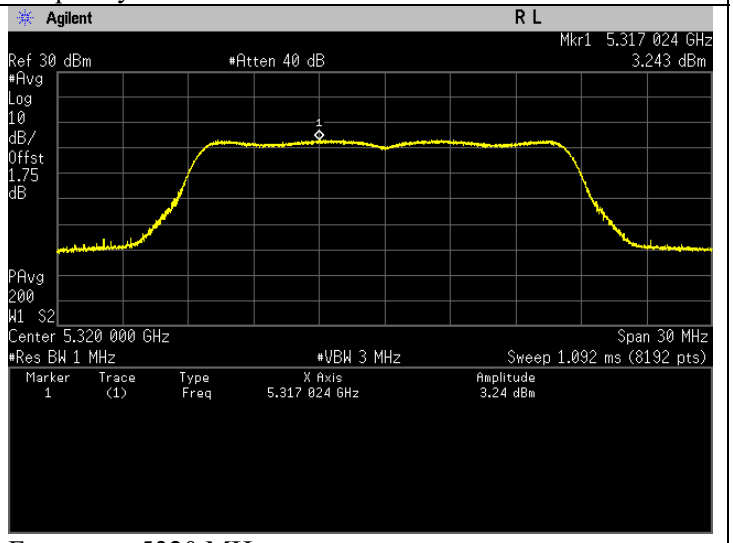
Frequency 5240 MHz



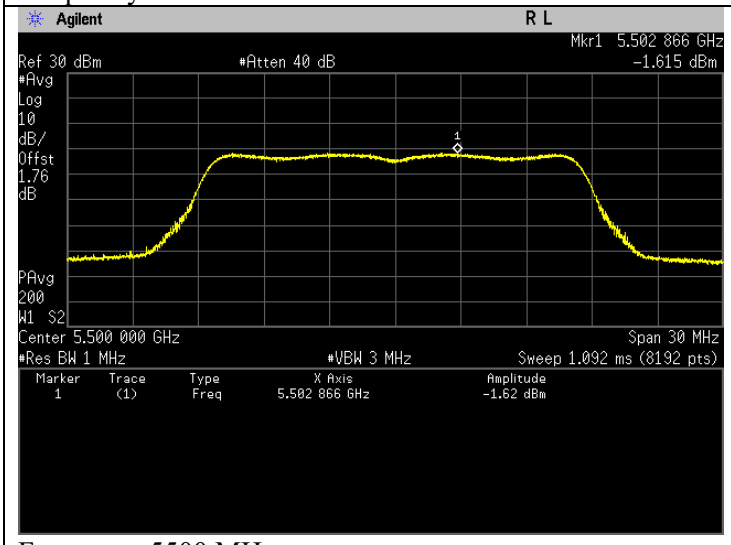
Frequency 5260 MHz



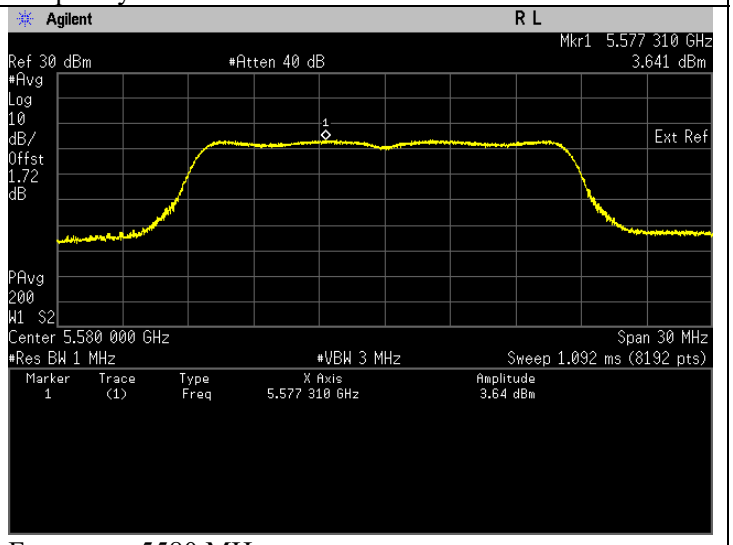
Frequency 5300 MHz



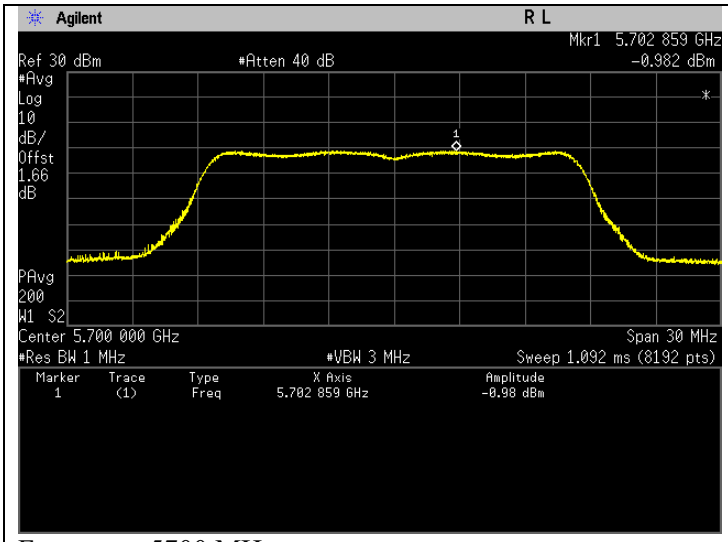
Frequency 5320 MHz



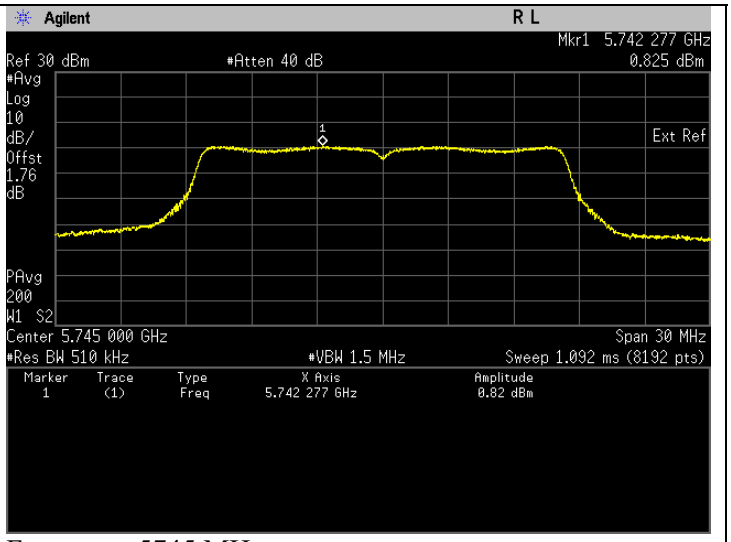
Frequency 5500 MHz



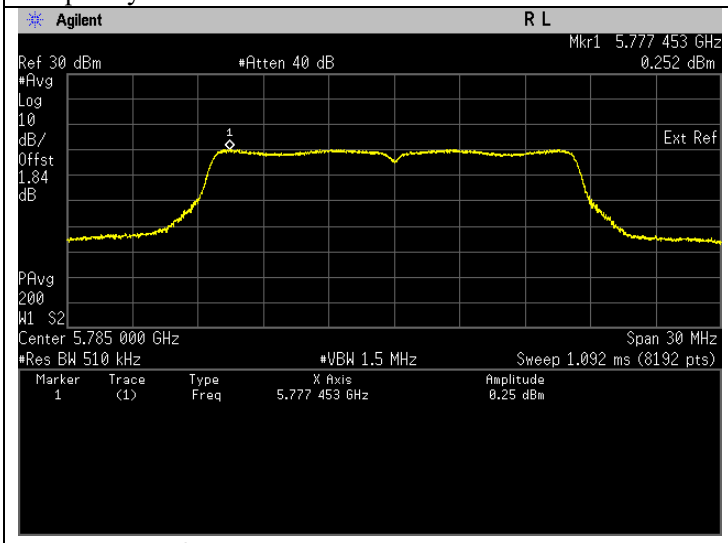
Frequency 5580 MHz



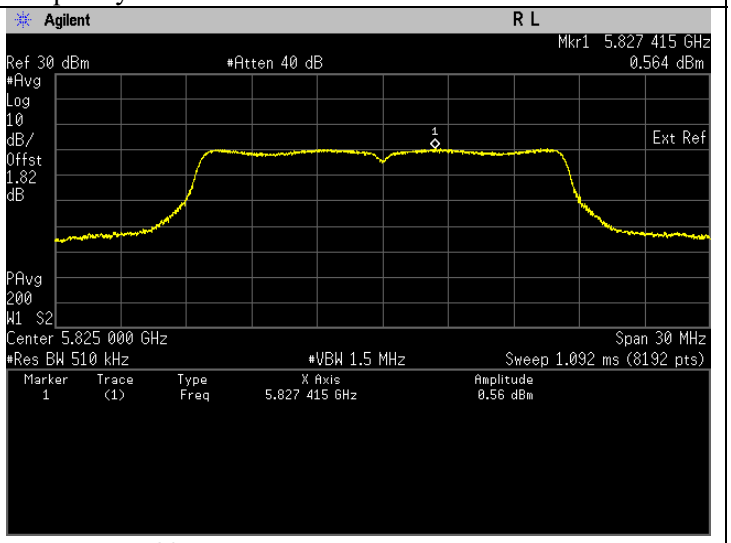
Frequency 5700 MHz



Frequency 5745 MHz



Frequency 5785 MHz



Frequency 5825 MHz

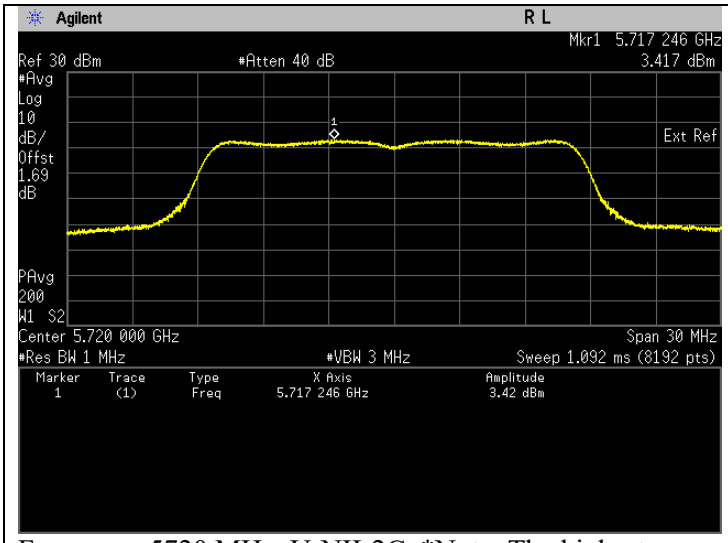
Straddle Frequency for 802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	3.555	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	3.093	Pass

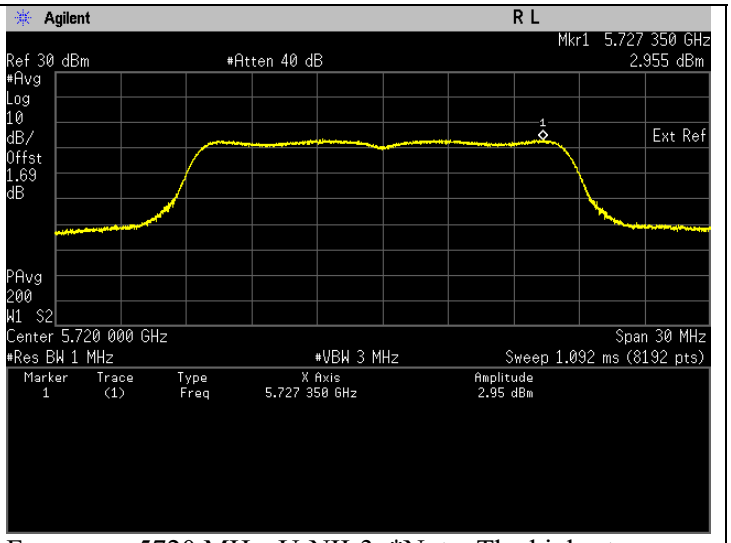
Straddle Frequency for 802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	3.555	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	3.093	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.

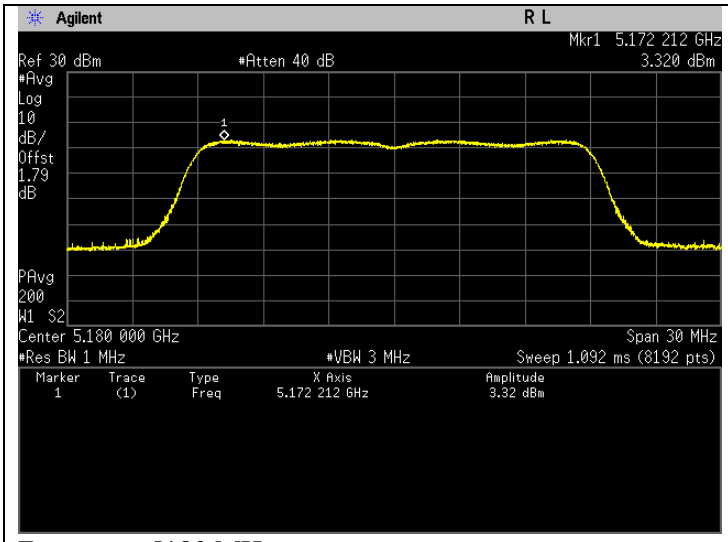
802.11n (HT20)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.412	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.345	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.041	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.085	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	6.942	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.393	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.535	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.643	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-0.015	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.842	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.275	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.531	Pass

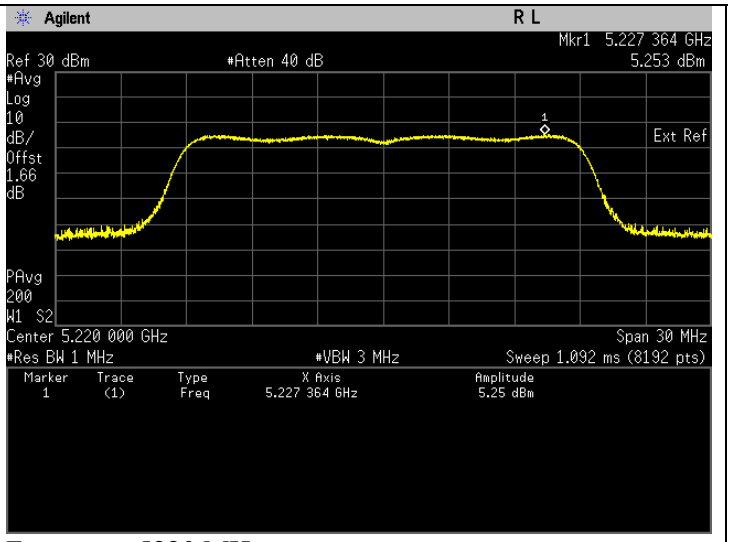
802.11n (HT20)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.412	Pass	6.582	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.345	Pass	8.515	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.041	Pass	8.211	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.085	Pass	13.085	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	6.942	Pass	12.942	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.393	Pass	8.393	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.535	Pass	3.465	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.643	Pass	9.643	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-0.015	Pass	5.985	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.842	Pass	3.422	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.275	Pass	2.855	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.531	Pass	3.111	Pass

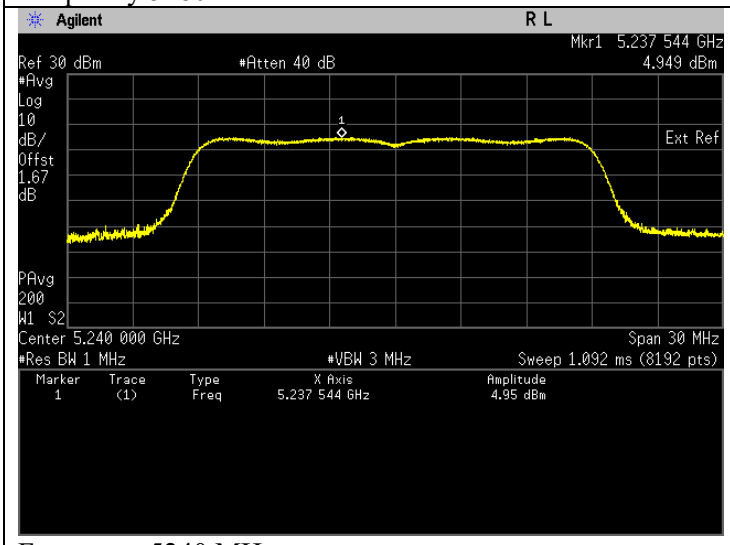
Plots for 802.11n (HT20) (26dB EBW & 99% EBW)



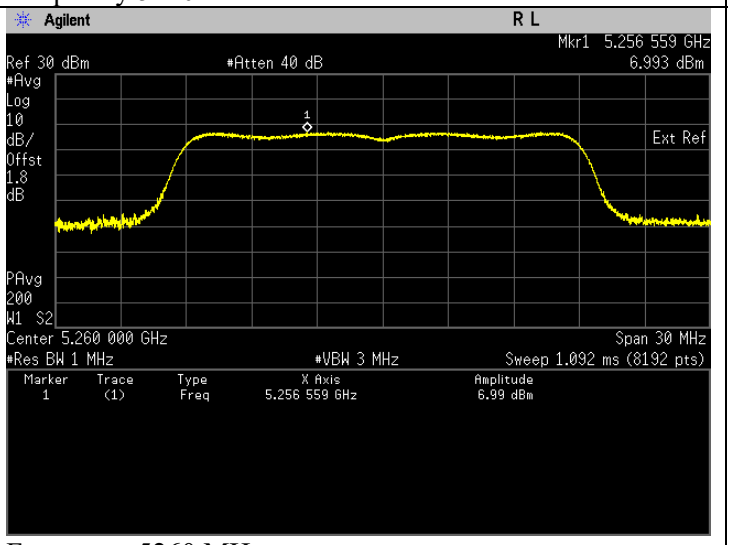
Frequency 5180 MHz



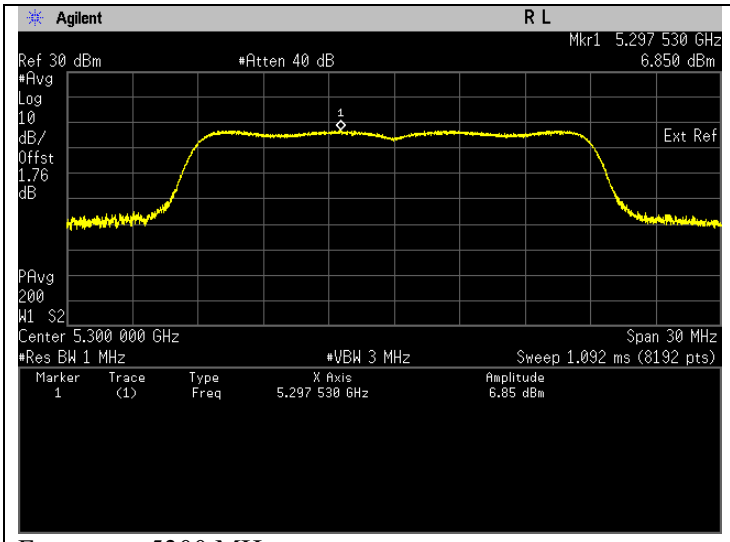
Frequency 5220 MHz



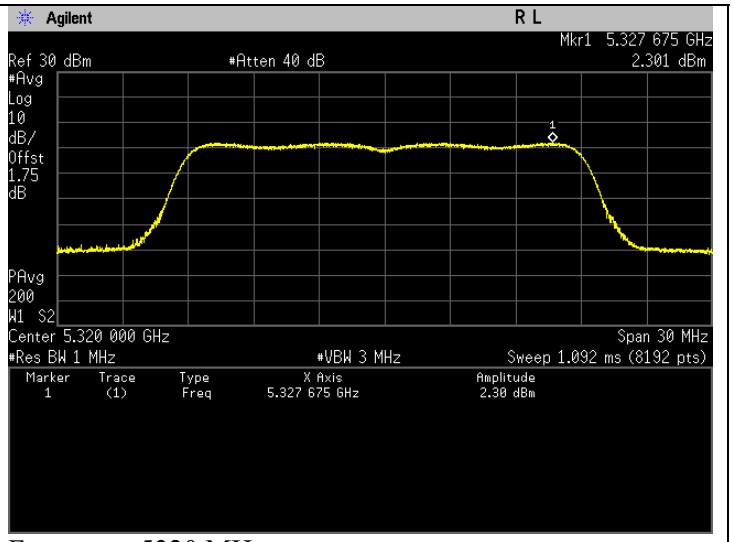
Frequency 5240 MHz



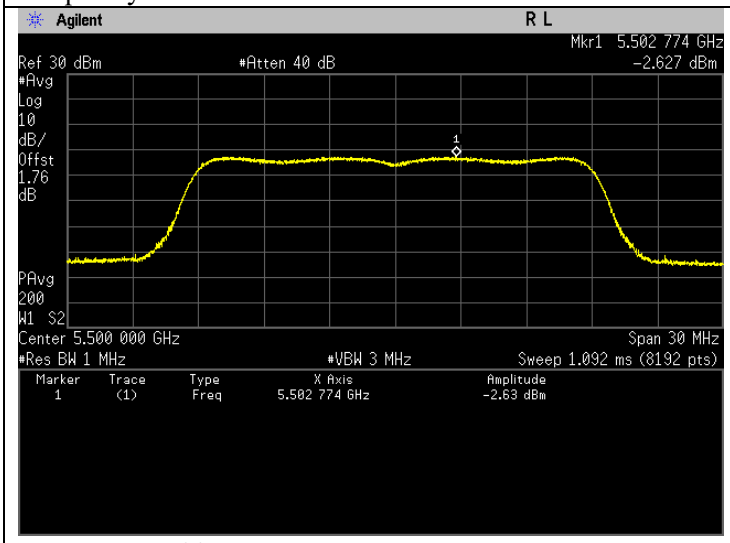
Frequency 5260 MHz



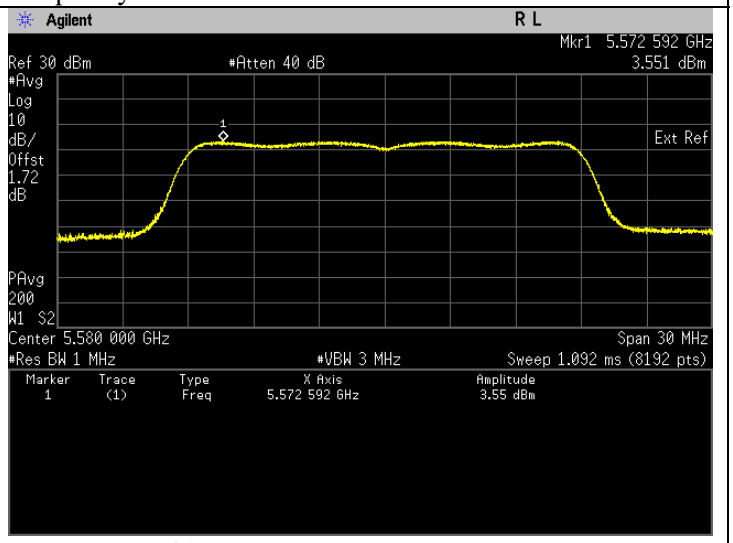
Frequency 5300 MHz



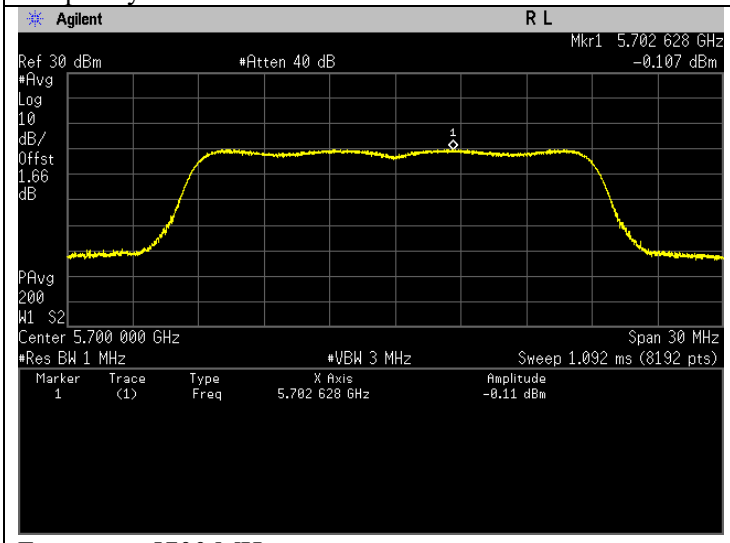
Frequency 5320 MHz



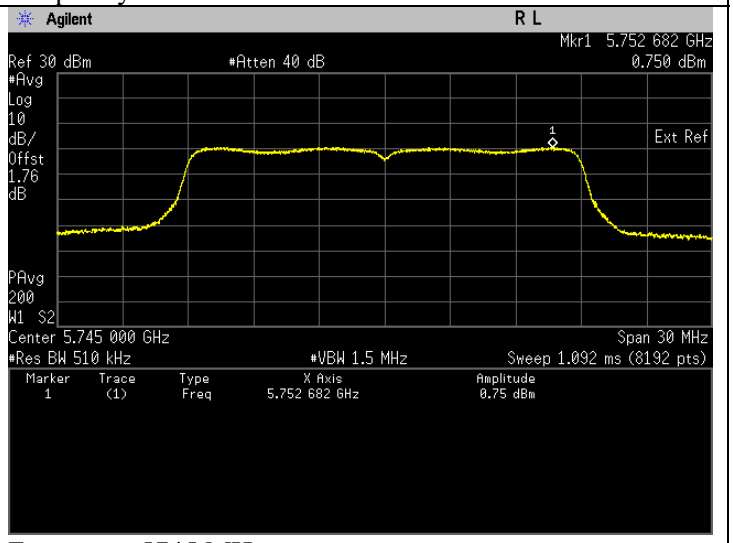
Frequency 5500 MHz



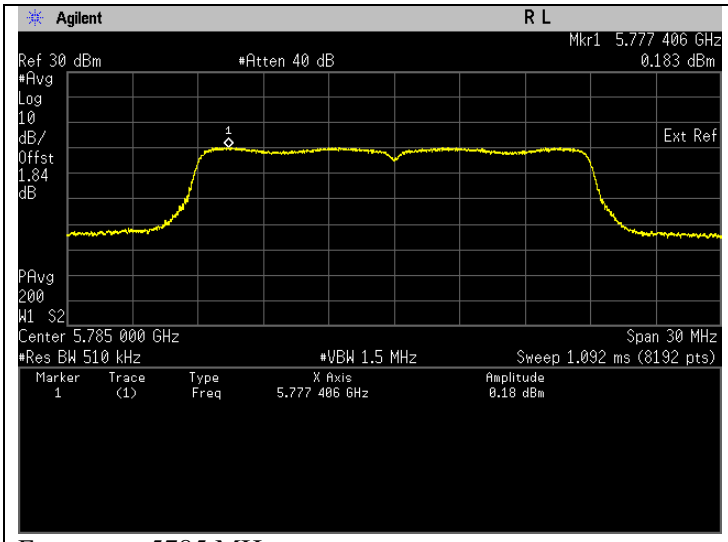
Frequency 5580 MHz



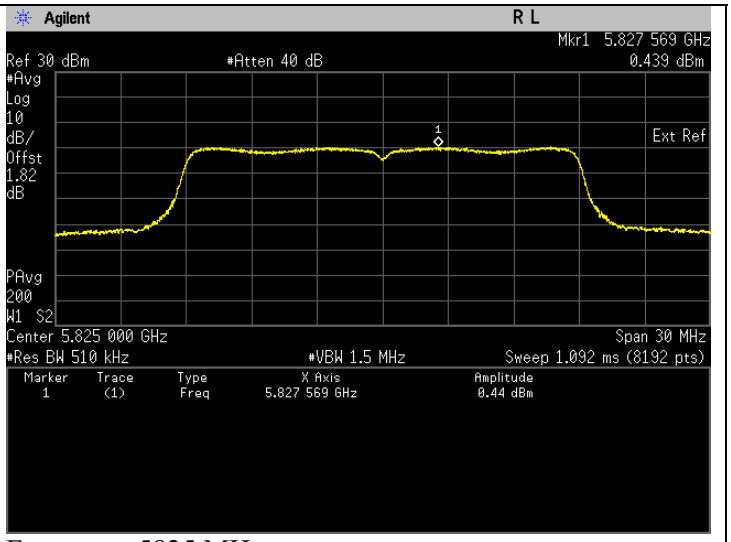
Frequency 5700 MHz



Frequency 5745 MHz



Frequency 5785 MHz



Frequency 5825 MHz

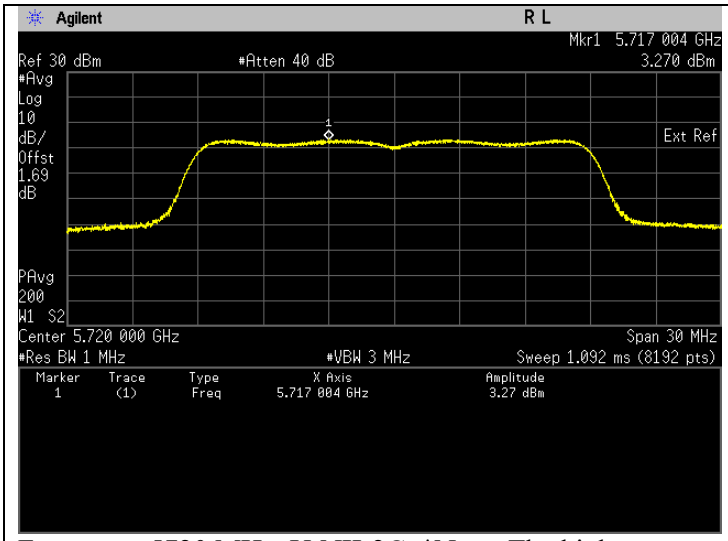
Straddle Frequency for 802.11n (HT20) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.362	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.277	Pass

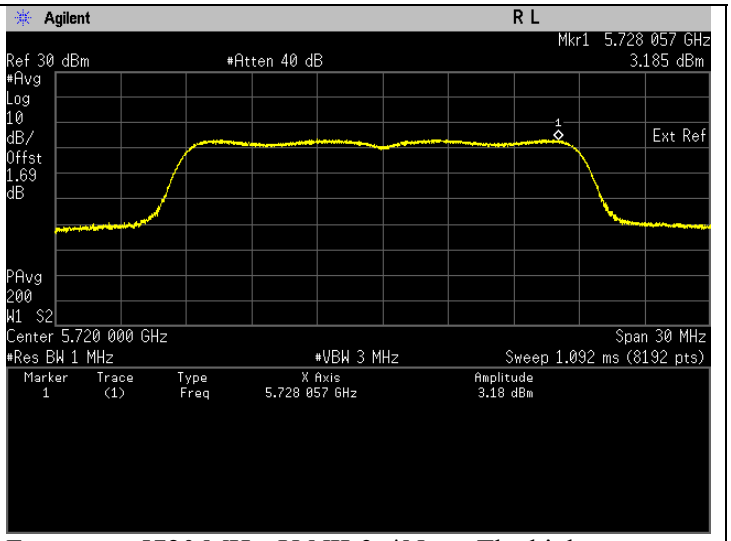
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.362	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.277	Pass

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



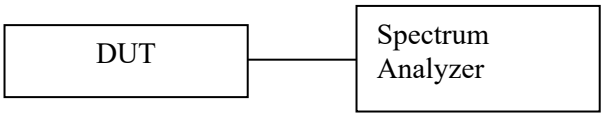
Frequency 5720 MHz, U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



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

7.3. 6dB Bandwidth

7.3.1. 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).

7.3.2. Test Limits

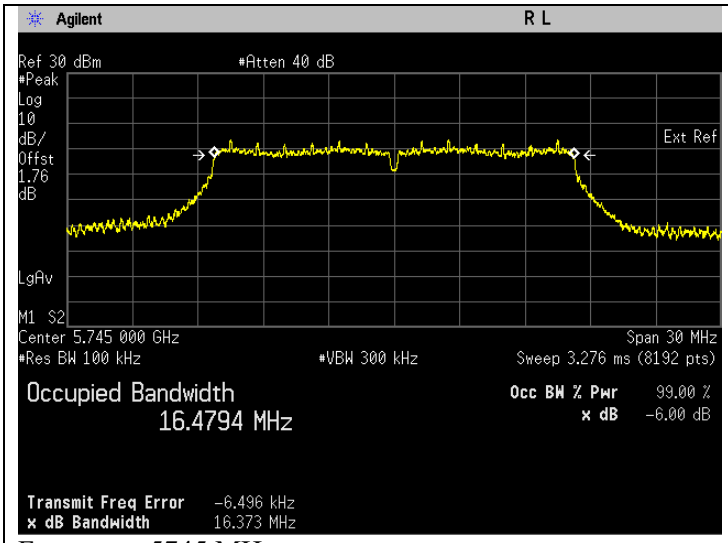
FCC 15.407(e)
Within the 5.725-5.85GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

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.

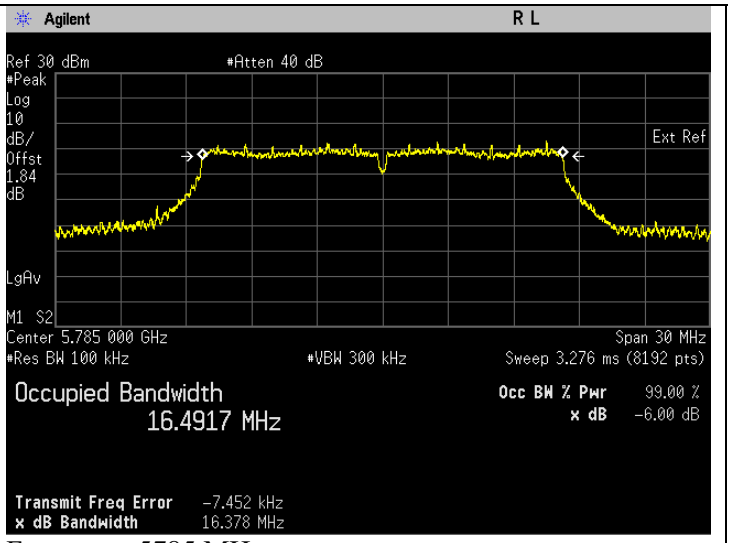
7.3.3. Test Data

802.11a

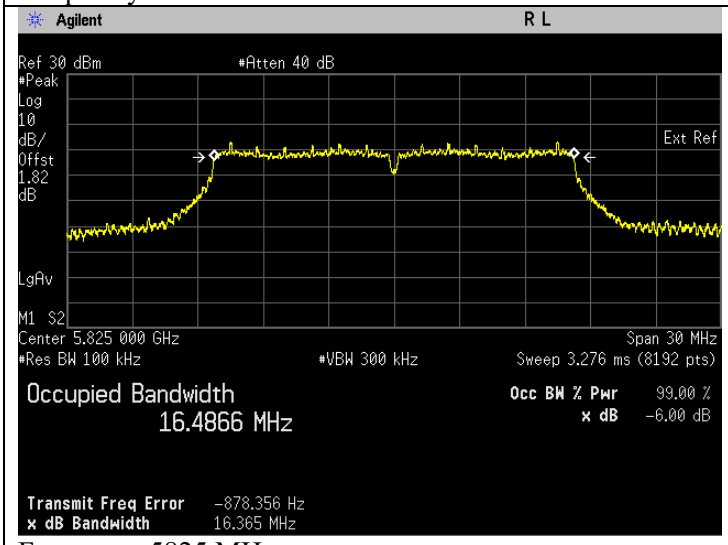
Frequency (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	16.373	Pass
5785	Mod Type: BPSK, Data Rate: 6	16.378	Pass
5825	Mod Type: BPSK, Data Rate: 6	16.365	Pass



Frequency 5745 MHz



Frequency 5785 MHz

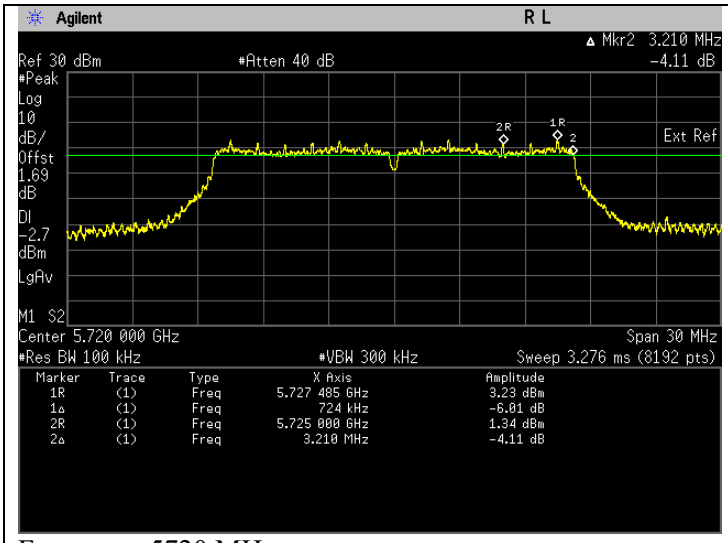


Frequency 5825 MHz

Straddle Frequency for 802.11a

Freq. (MHz)	Test Conditions	Results	
		Bandwidth (MHz)	Status
		U-NII- 3	
5720	Mod Type: BPSK, Data Rate: 6	3.210	Pass

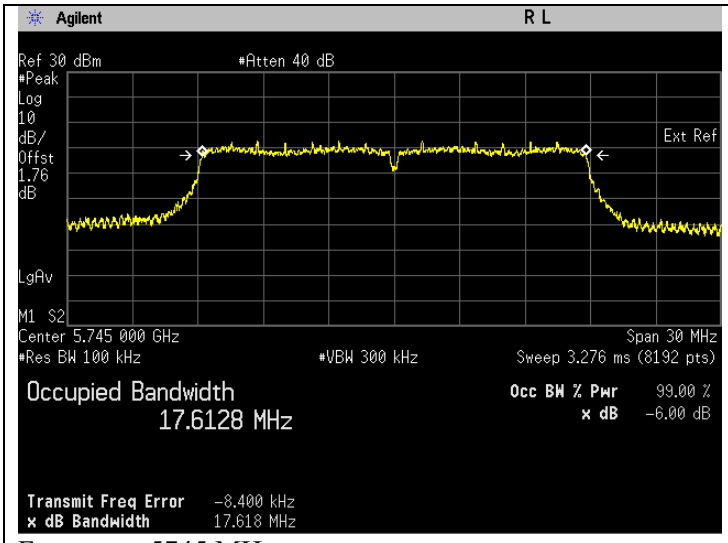
Plots for 802.11a Straddle Frequency



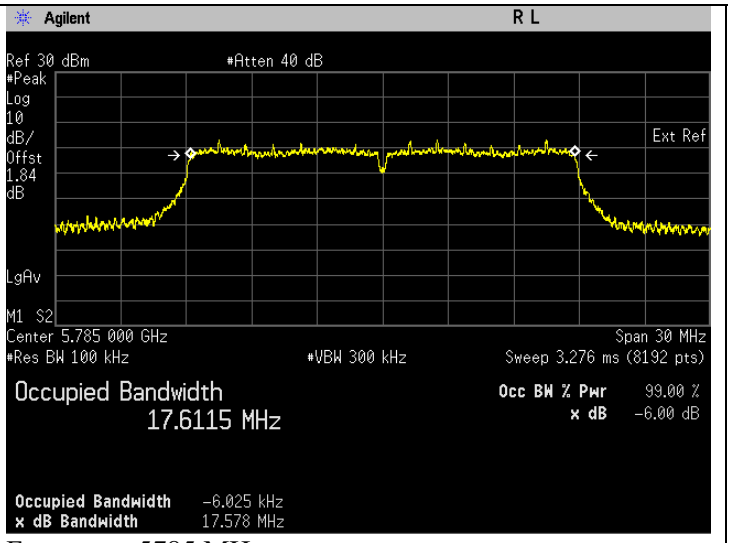
Frequency 5720 MHz

802.11n (HT20)

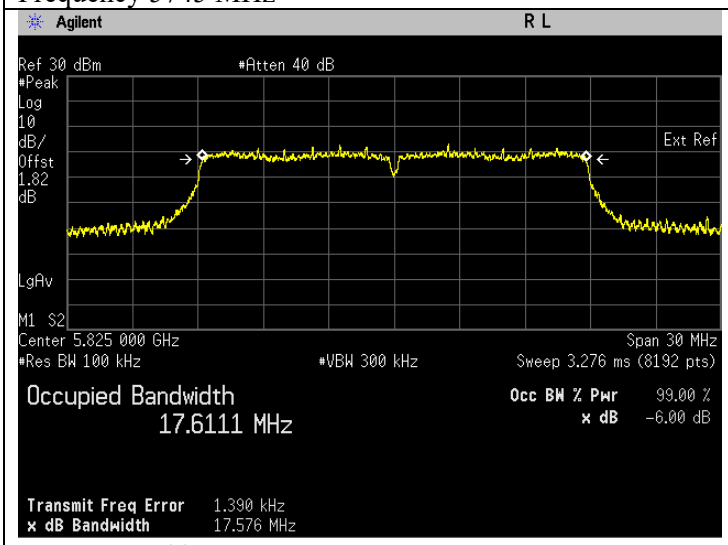
Frequency (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.618	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.578	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.576	Pass



Frequency 5745 MHz



Frequency 5785 MHz

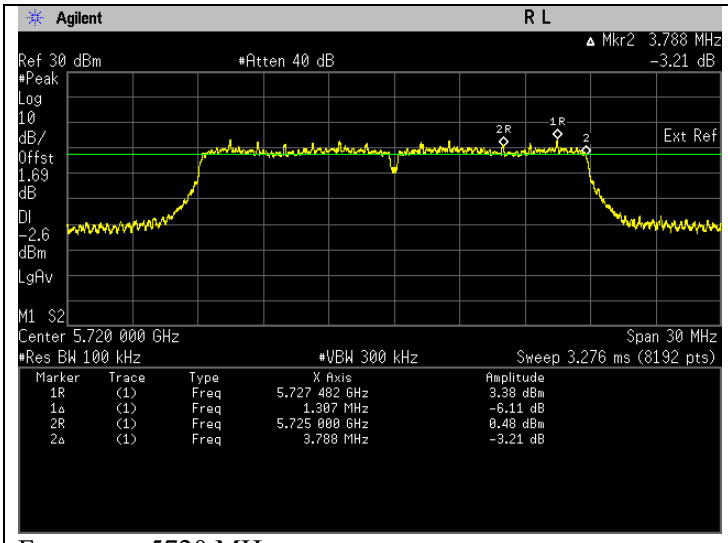


Frequency 5825 MHz

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)	3.788	Pass

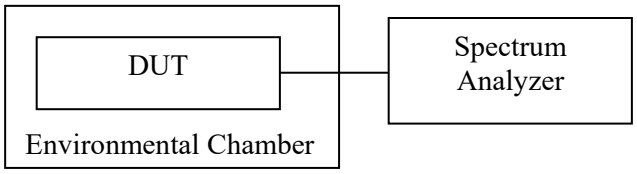
Plots for 802.11n (HT20) Straddle Frequency



Frequency 5720 MHz

7.4. Frequency Stability

7.4.1. 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 -30^{0}C to 50^{0}C with step size of 10^{0}C on manufacturer's rated supply voltage.
g) At temperature of 20^{0}C, +/-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.

7.4.2. 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

7.4.3. Test Data

802.11a

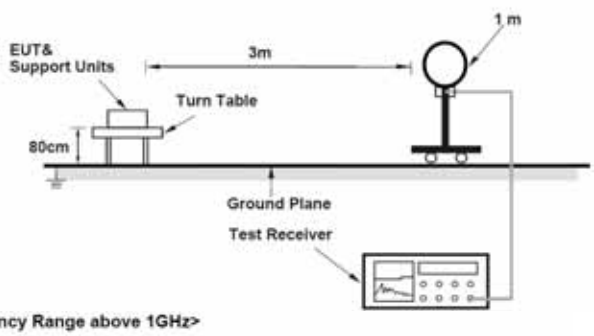
Test Configuration	Test Frequency Tx (MHz)
Mod Type: BPSK, Data Rate: 6	5180

		Results			
Temperature(°C)	Voltage	Measured Frequency(MHz)	Frequency Error(kHz)	Frequency Error(%)	Status
20	+15%	5179.995448	4.552000	0.000088	Pass
	±0%	5179.996007	3.993000	0.000077	Pass
	-15%	5179.996716	3.284000	0.000063	Pass
-30		5179.996773	3.227000	0.000062	Pass
-20		5179.996462	3.538000	0.000068	Pass
-10		5179.994536	5.464000	0.000105	Pass
0		5179.993547	6.453000	0.000125	Pass
10		5179.992565	7.435000	0.000144	Pass
30		5179.994263	5.737000	0.000111	Pass
40		5179.994265	5.735000	0.000111	Pass
50		5179.994269	5.731000	0.000111	Pass

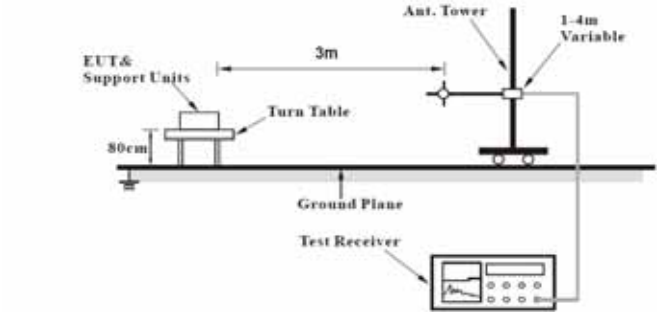
7.5. Band Edge Radiated Spurious Emission Measurement

7.5.1. Test Setup

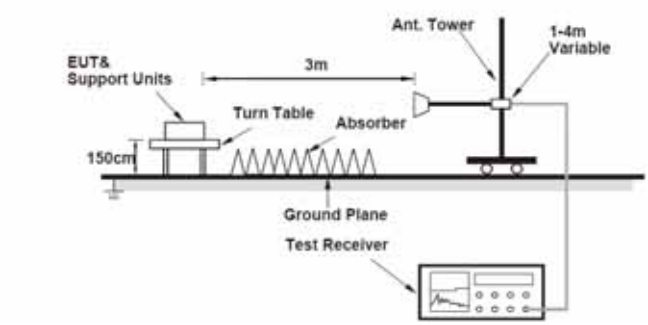
<Radiated emission below 30MHz>



<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.

7.5.2. 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)

7.5.3. Test Result

802.11a

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (14dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

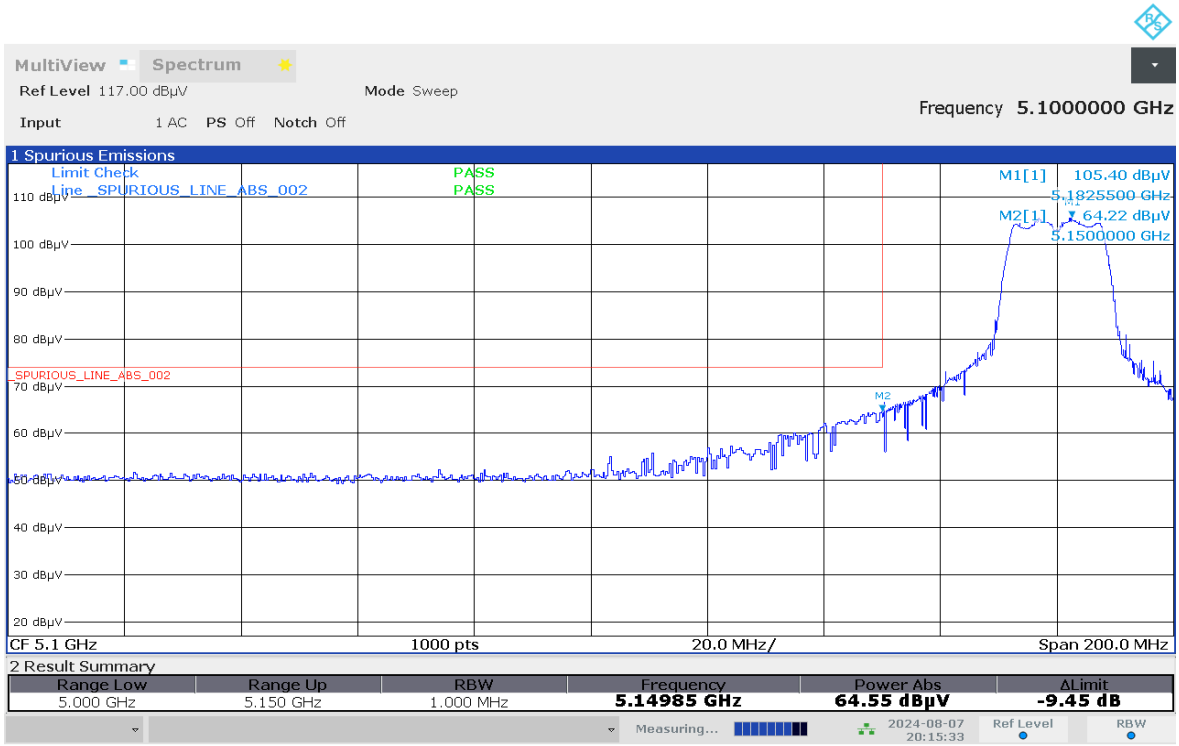
Restricted Band Edge (Low Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5150.0000	-	64.2168	44.5846	-	74.0000	54.0000	-	9.7832	9.4154	-
Horizontal Radiated Emission Result										
5150.0000	-	62.2587	47.0959	-	74.0000	54.0000	-	11.7413	6.9041	-

Remarks: Pass Result	Marginal Result	Fail Result

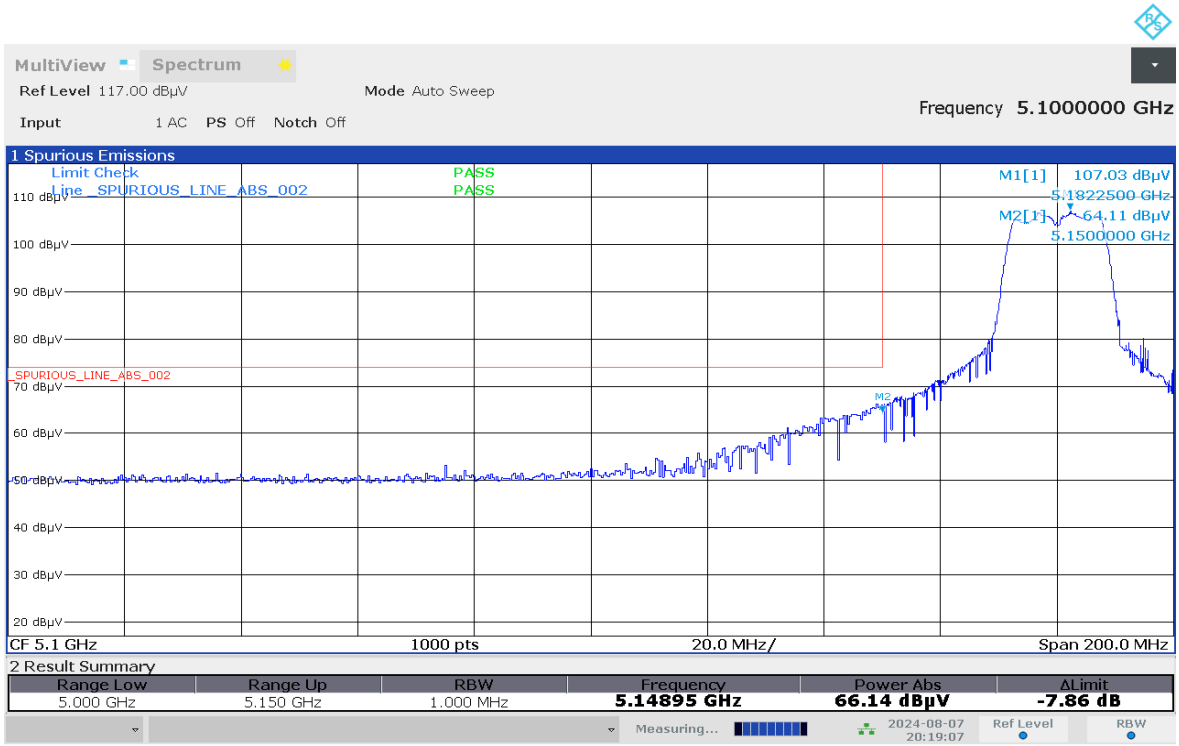
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin & Rezza **Test Date: Thu, 8 Aug, 2024**
System MU: 5.84dB

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



08:15:34 PM 08/07/2024

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

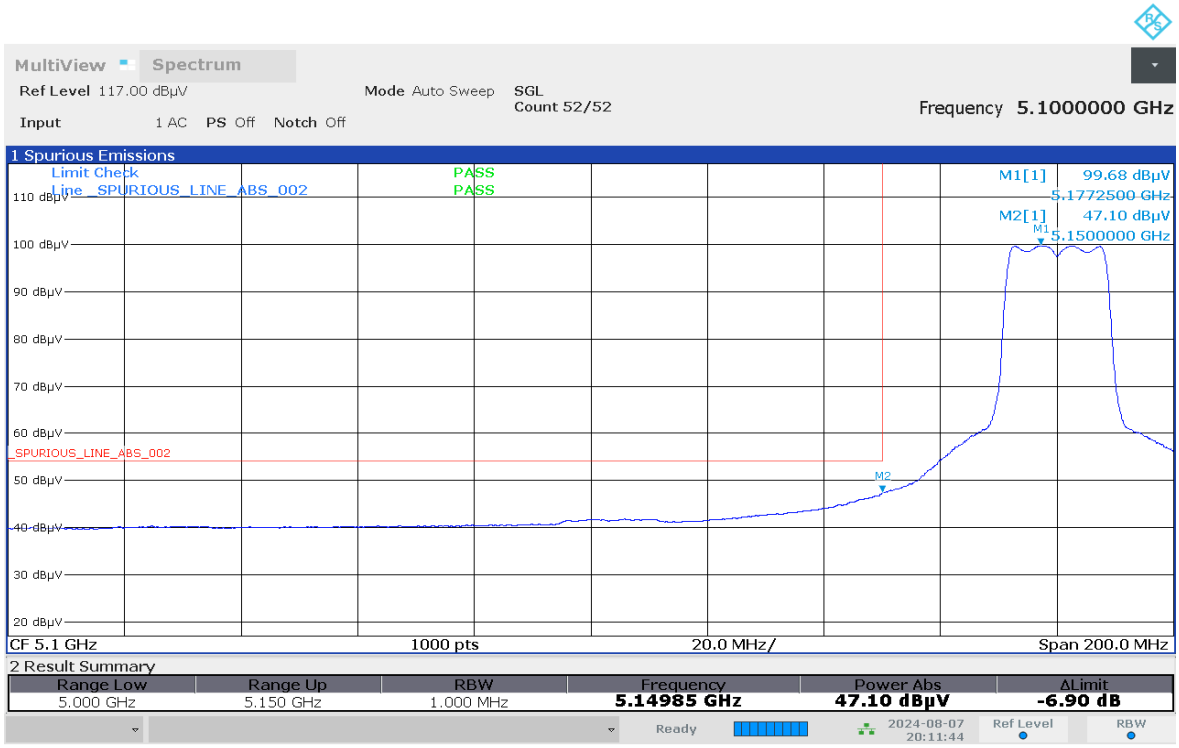


08:19:07 PM 08/07/2024

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

08:07:48 PM 08/07/2024

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



08:11:44 PM 08/07/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (13dBm) Accessory: PMAD4147A
Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

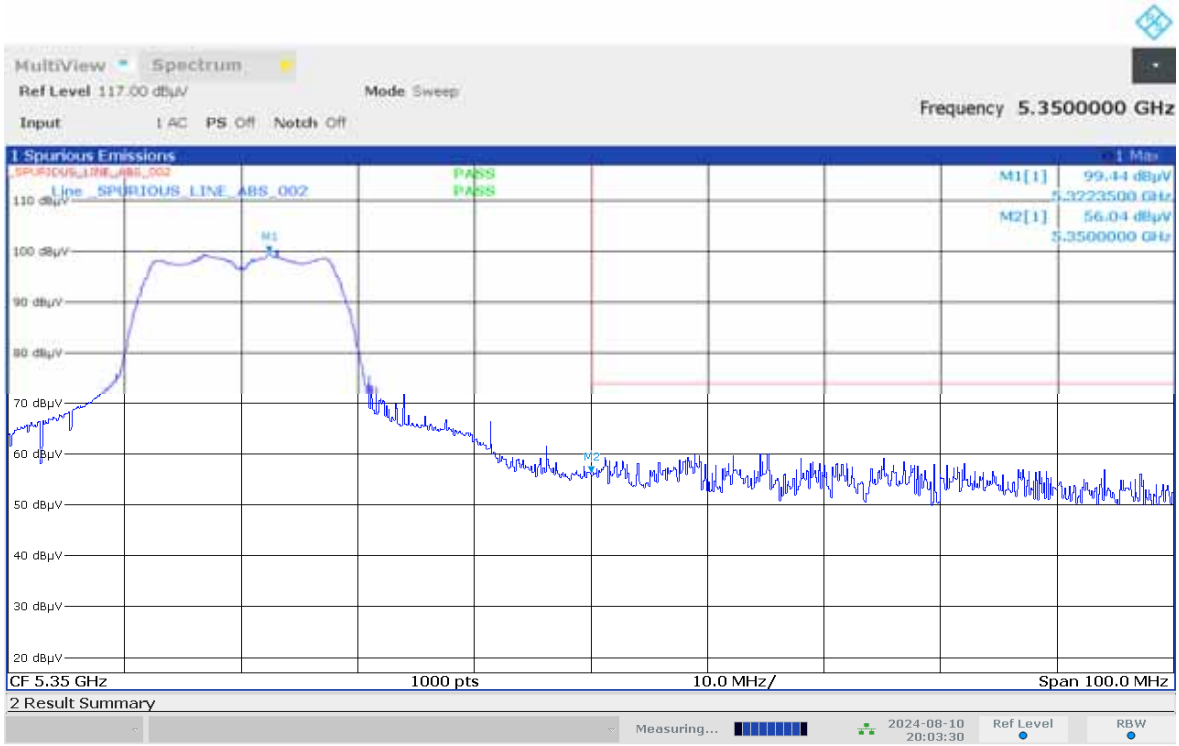
Restricted Band Edge (High Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5350.0000	-	56.0370	42.0300	-	74.0000	54.0000	-	17.9630	11.9700	-
Horizontal Radiated Emission Result										
5350.0000	-	60.4971	47.4633	-	74.0000	54.0000	-	13.5029	6.5367	-

Remarks: Pass Result	Marginal Result	Fail Result

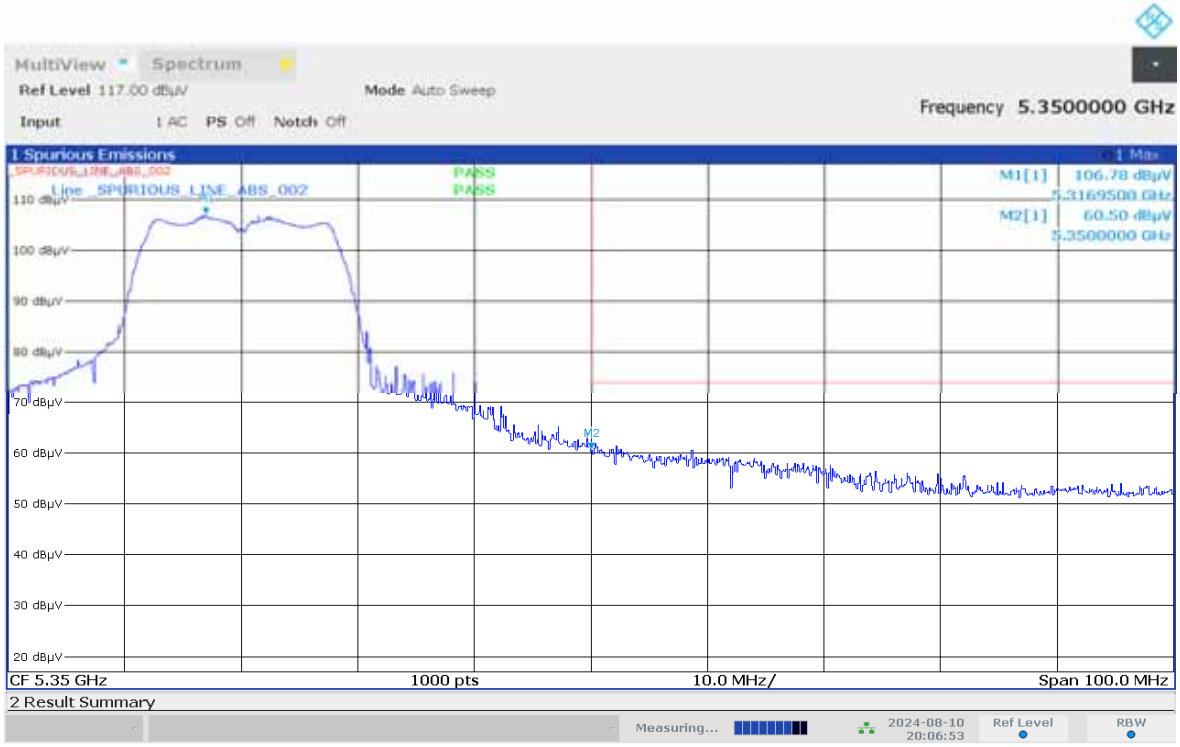
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Sun, 11 Aug, 2024**
System MU: 5.84dB

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



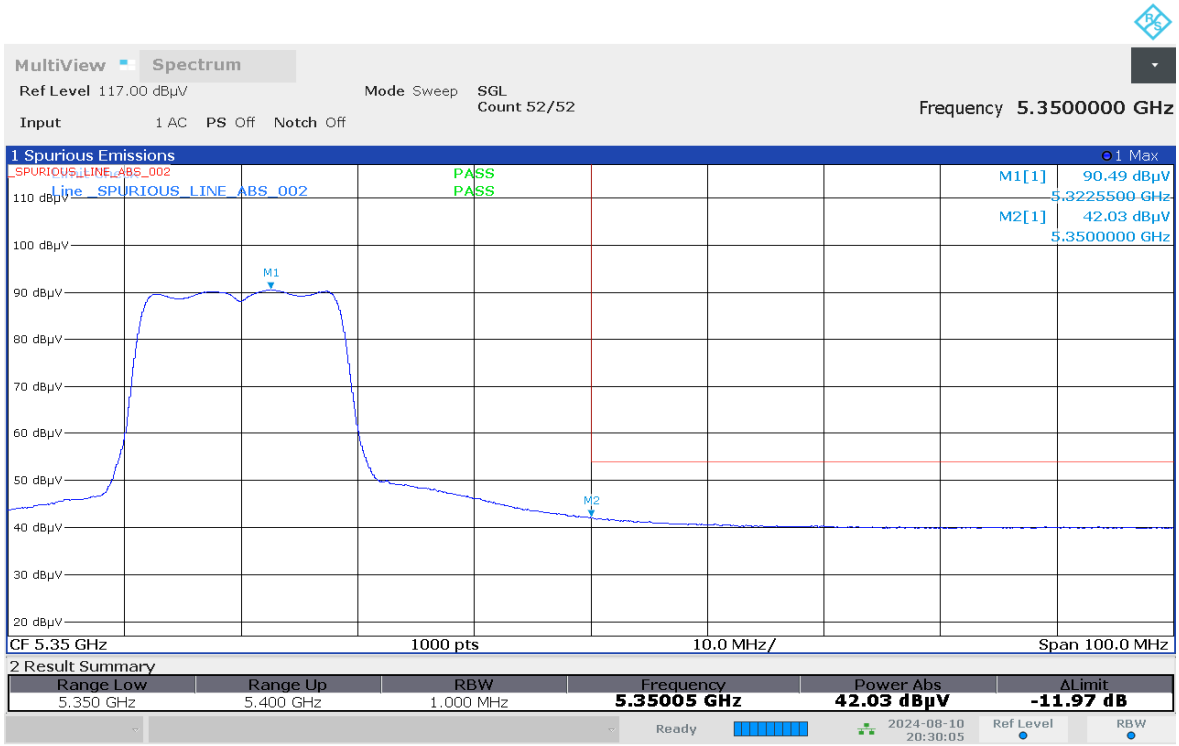
08:03:30 PM 08/10/2024

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



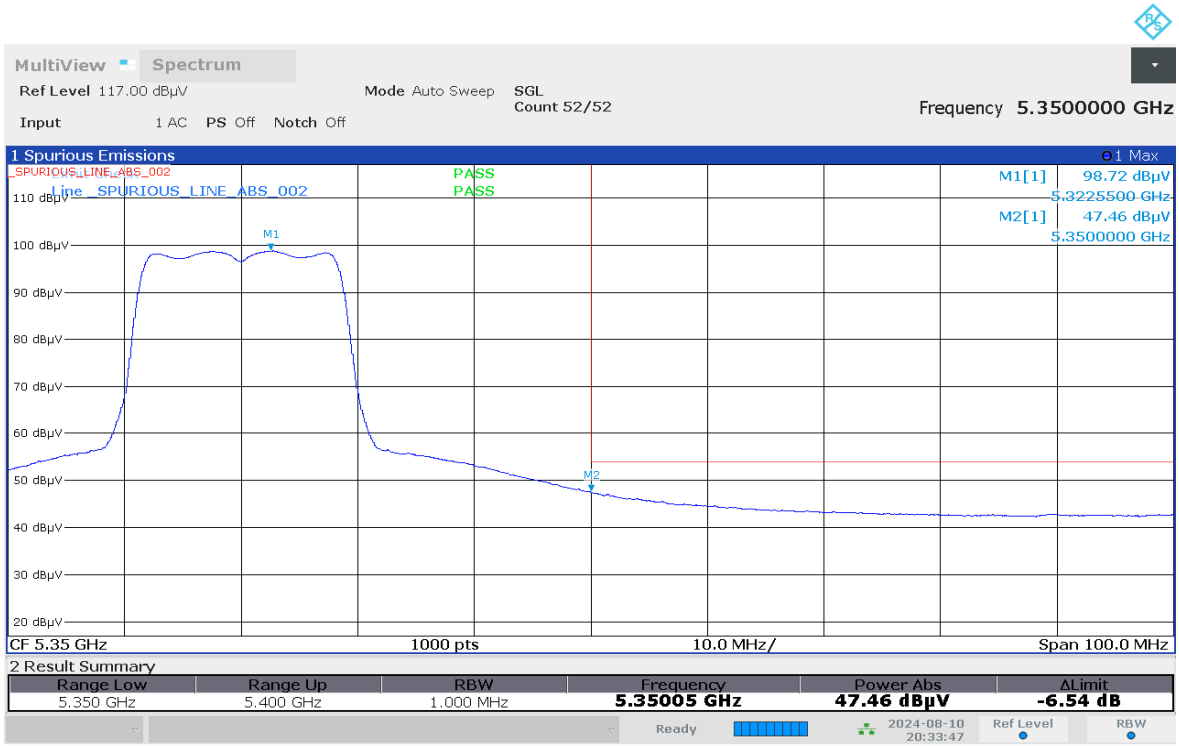
08:06:54 PM 08/10/2024

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



08:30:05 PM 08/10/2024

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



08:33:47 PM 08/10/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (9dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

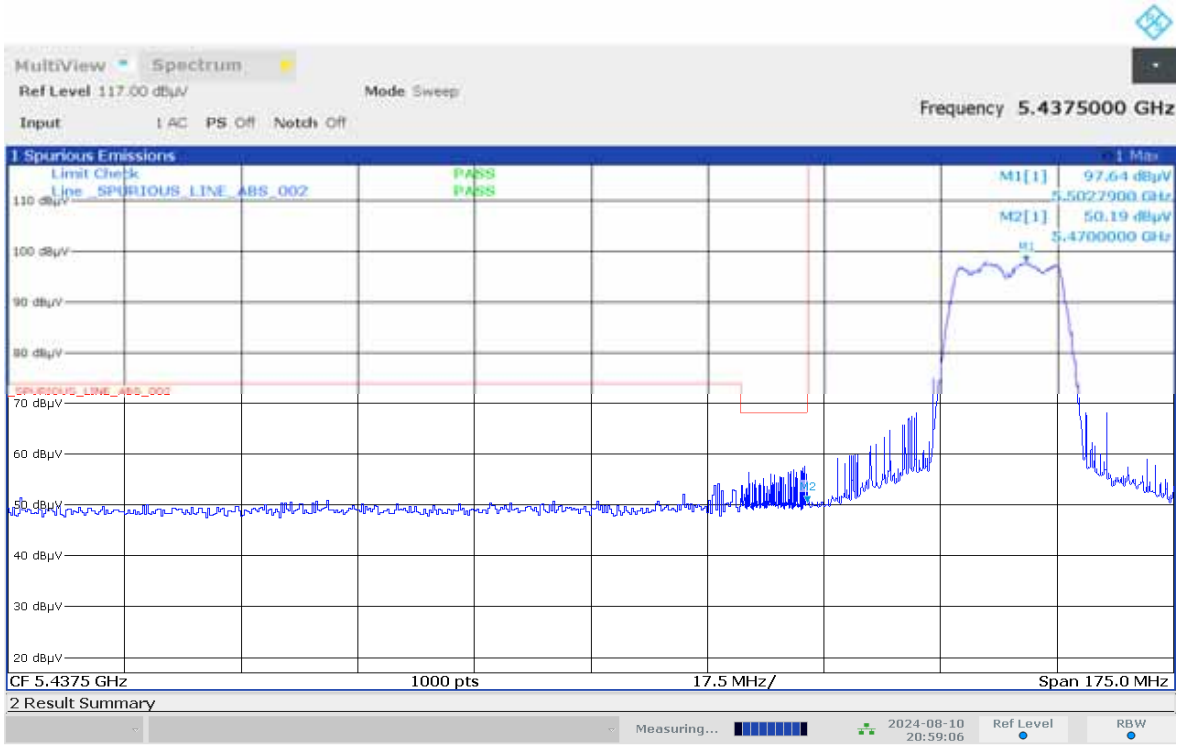
Restricted Band Edge (Low Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5460.0000	-	-	39.9678	-	-	54.0000	-	-	14.0322	-
5470.0000	-	50.1853	-	-	68.2000	-	-	18.0147	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	42.0076	-	-	54.0000	-	-	11.9924	-
5468.2750	-	63.4978	-	-	68.2000	-	-	4.7022	-	-
5468.6750	-	63.3117	-	-	68.2000	-	-	4.8883	-	-
5469.3750	-	63.6614	-	-	68.2000	-	-	4.5386	-	-
5469.8250	-	-	43.4803	-	-	54.0000	-	-	10.5197	-
5470.0000	-	54.2933	-	-	68.2000	-	-	13.9067	-	-

Remarks: Pass Result	Marginal Result	Fail Result

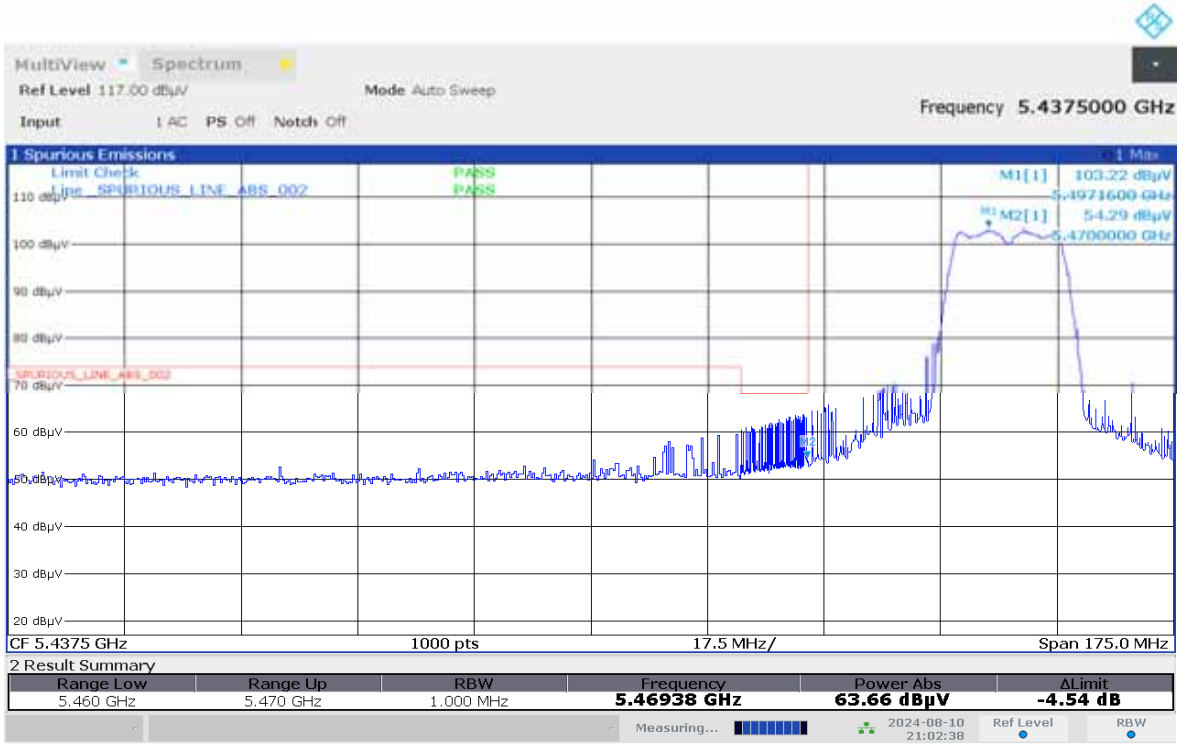
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 12 Aug, 2024**
System MU: 5.84dB

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



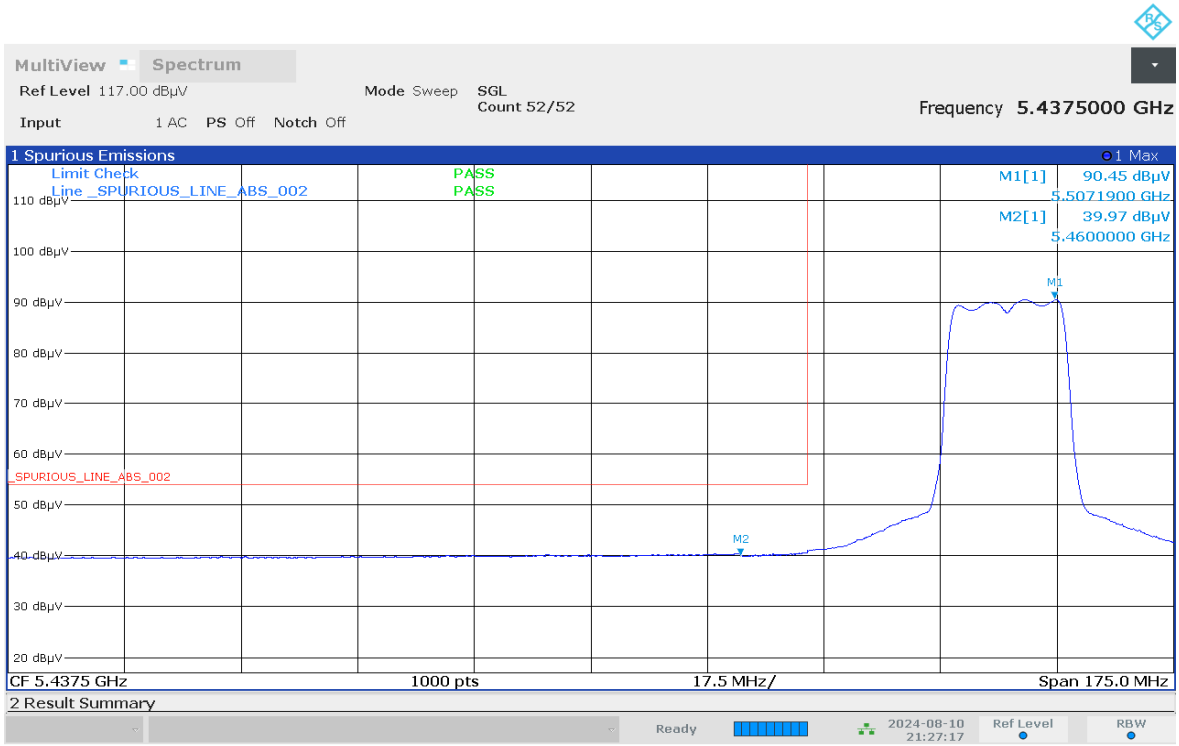
08:59:06 PM 08/10/2024

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



09:02:38 PM 08/10/2024

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



09:27:18 PM 08/10/2024

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

09:31:13 PM 08/10/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (13dBm) Accessory: PMAD4147A
Test Channel: High Test Frequency: 5700.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

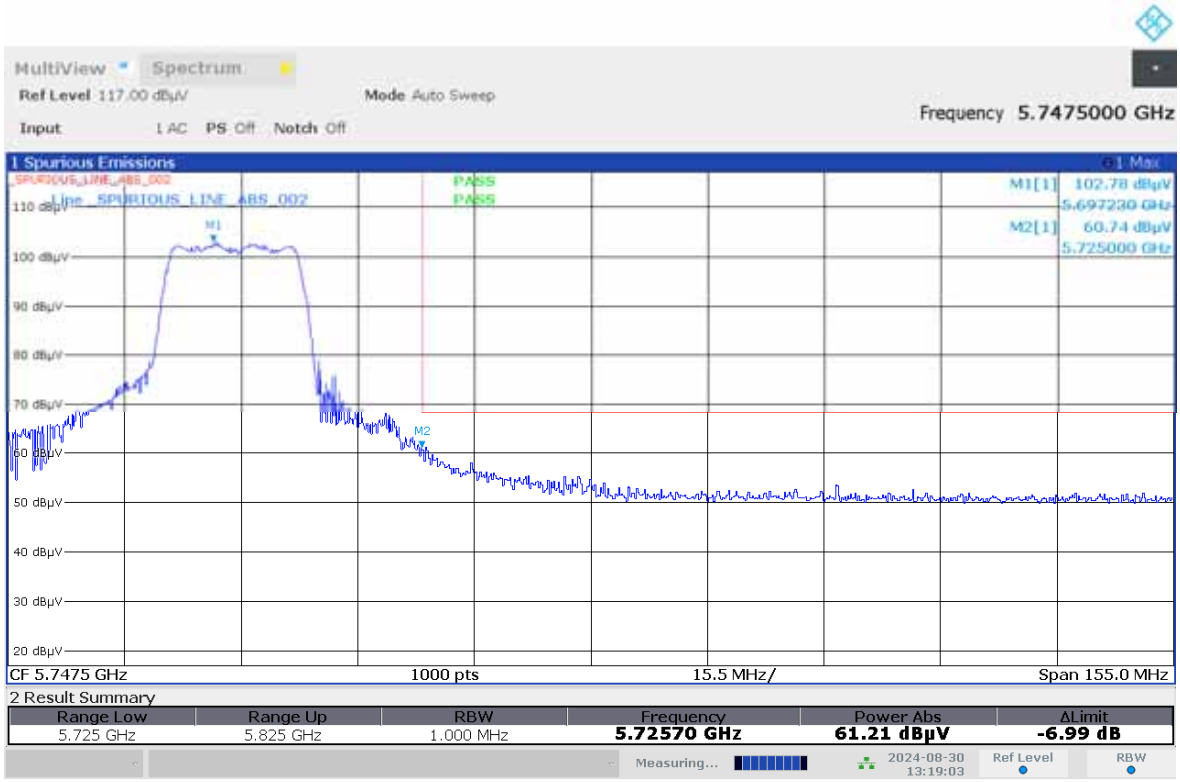
Restricted Band Edge (High Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5725.0000	-	61.0630	-	-	68.2000	-	-	7.1370	-	-
5725.7000	-	62.8489	-	-	68.2000	-	-	5.3511	-	-
Horizontal Radiated Emission Result										
5725.0000	-	60.5641	-	-	68.2000	-	-	7.6359	-	-

Remarks: Pass Result	Marginal Result	Fail Result

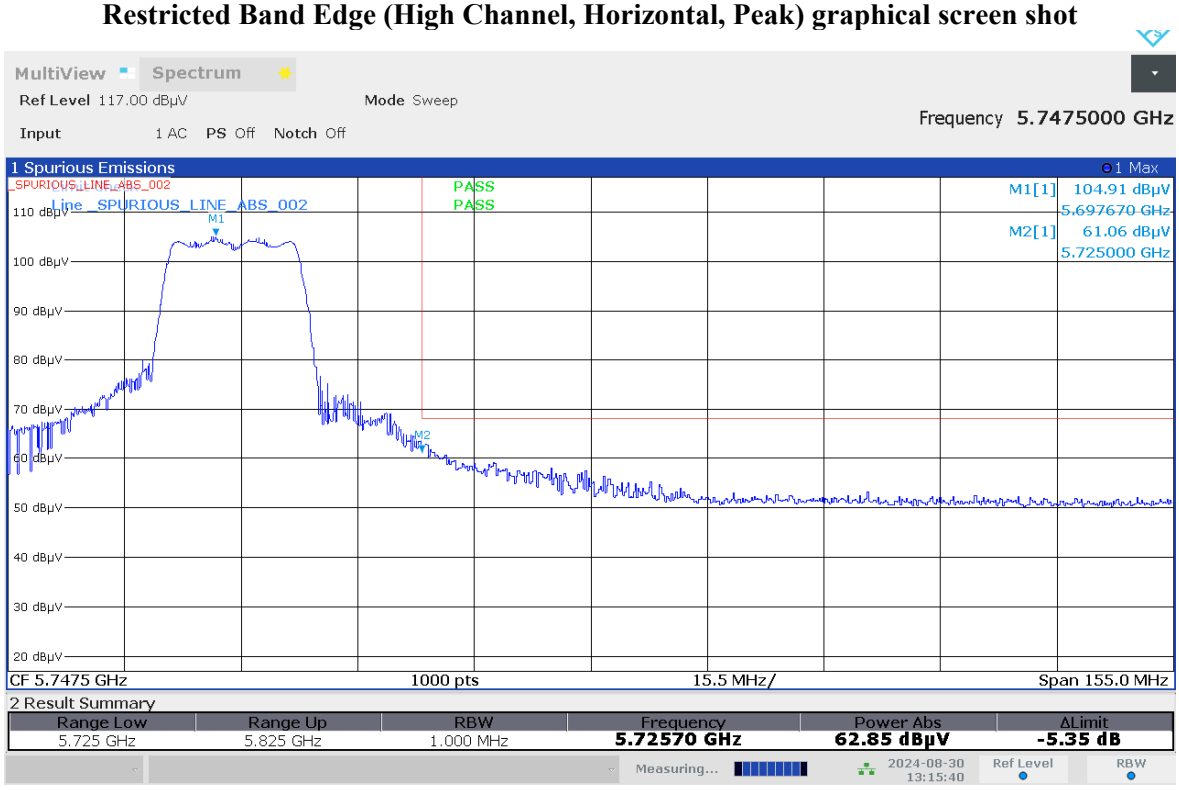
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Fri, 30 Aug, 2024**
System MU: 5.84dB

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



01:19:03 PM 08/30/2024

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



01:15:40 PM 08/30/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (15dBm) Accessory: PMAD4147A
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

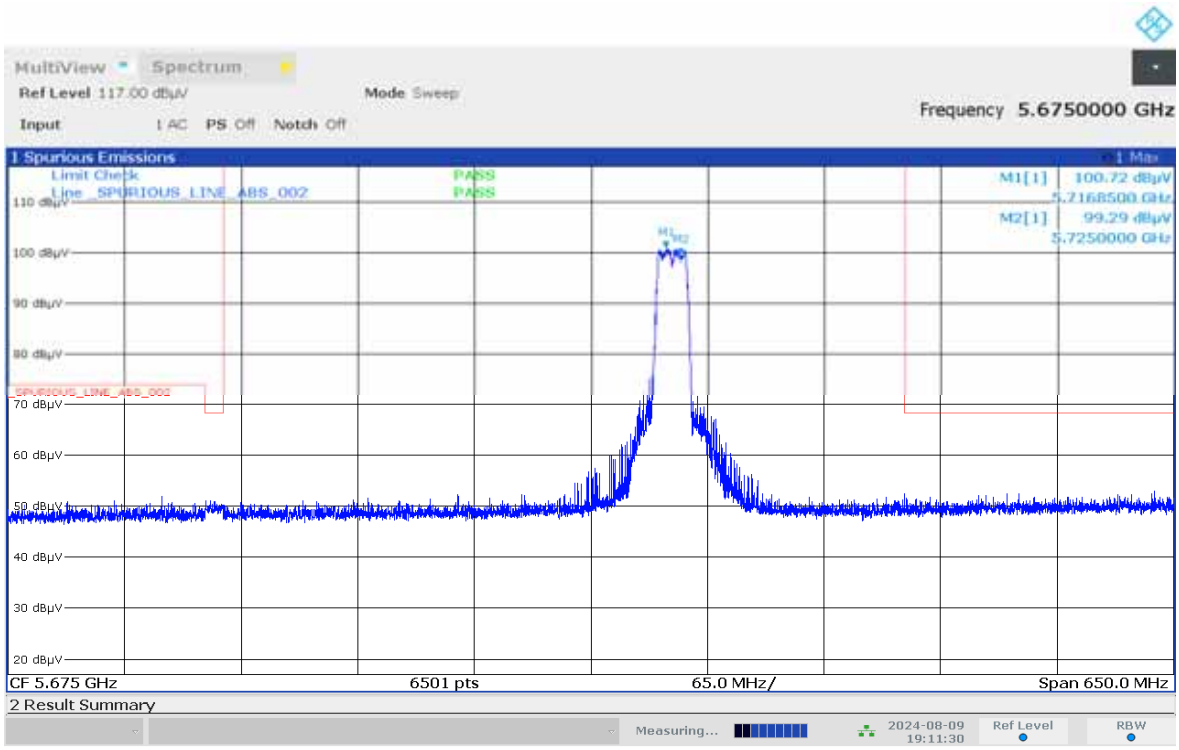
Restricted Band Edge (Straddle Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
Horizontal Radiated Emission Result										

Remarks: Pass Result	Marginal Result	Fail Result

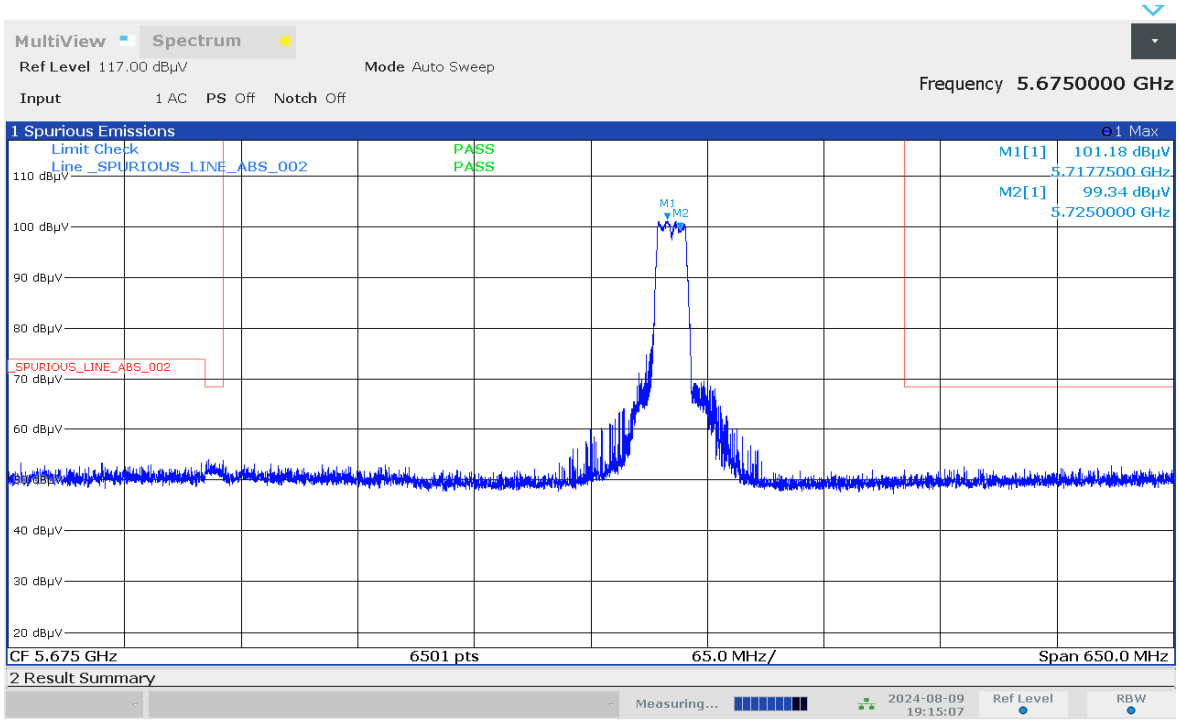
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Fri, 9 Aug, 2024**
System MU: 5.84dB

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



07:11:30 PM 08/09/2024

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



07:15:07 PM 08/09/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (14 dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

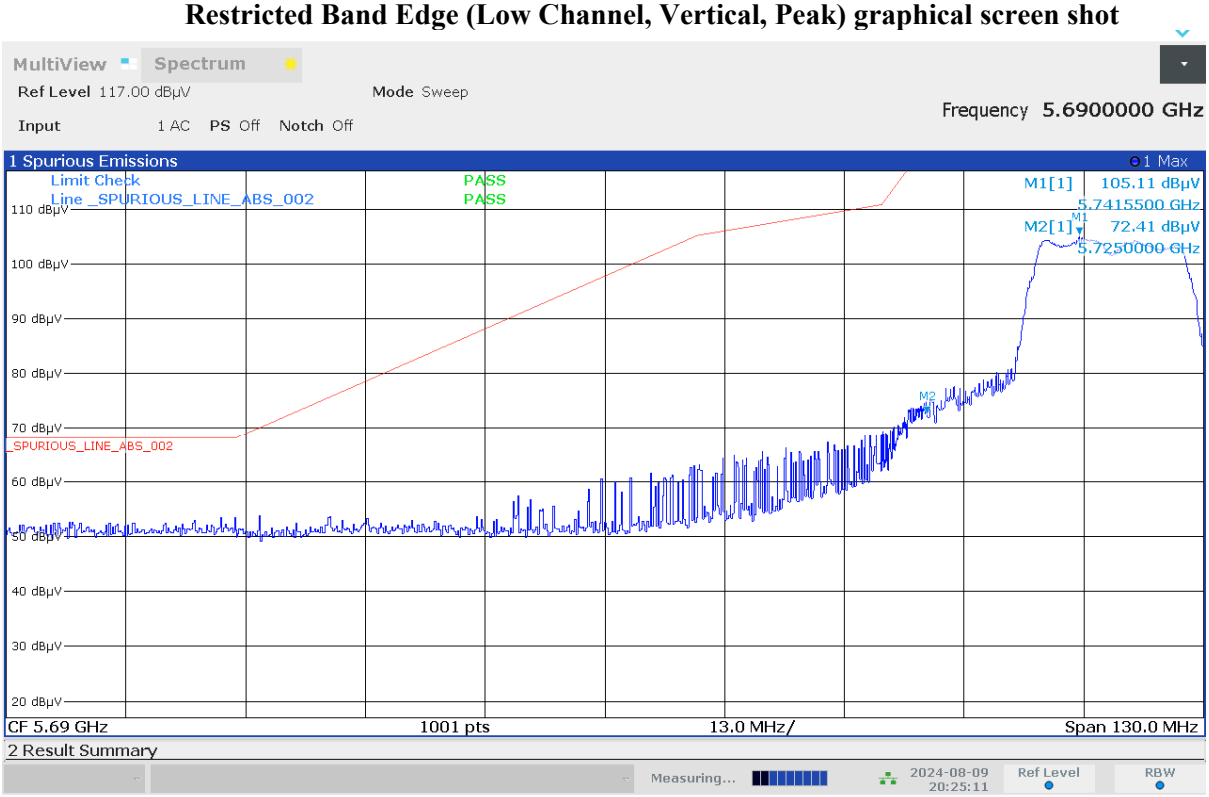
Restricted Band Edge (Low Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5725.0000	-	72.4096	-	-	122.2000	-	-	49.7904	-	-
Horizontal Radiated Emission Result										
5725.0000	-	68.0114	-	-	122.2000	-	-	54.1886	-	-

Remarks: Pass Result	Marginal Result	Fail Result

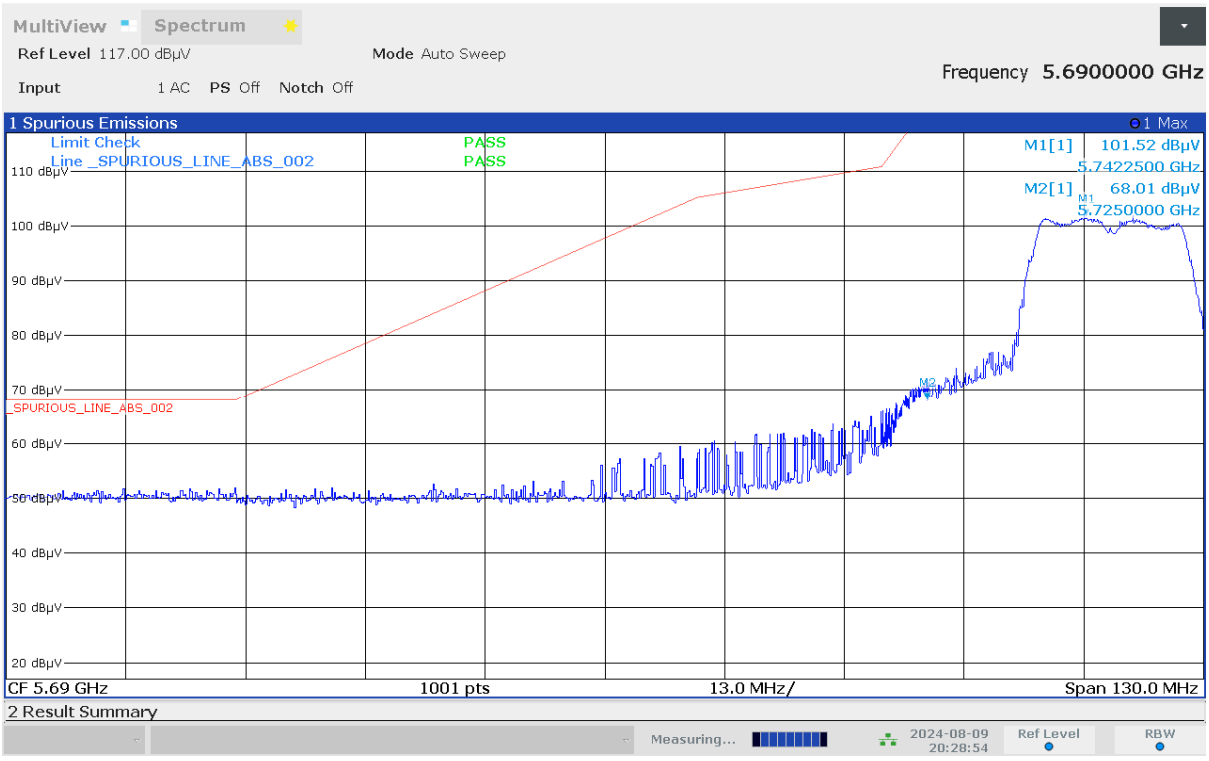
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Sat, 10 Aug, 2024**
System MU: 5.84dB

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



08:25:12 PM 08/09/2024

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



08:28:55 PM 08/09/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (14dBm) Accessory: PMAD4147A
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

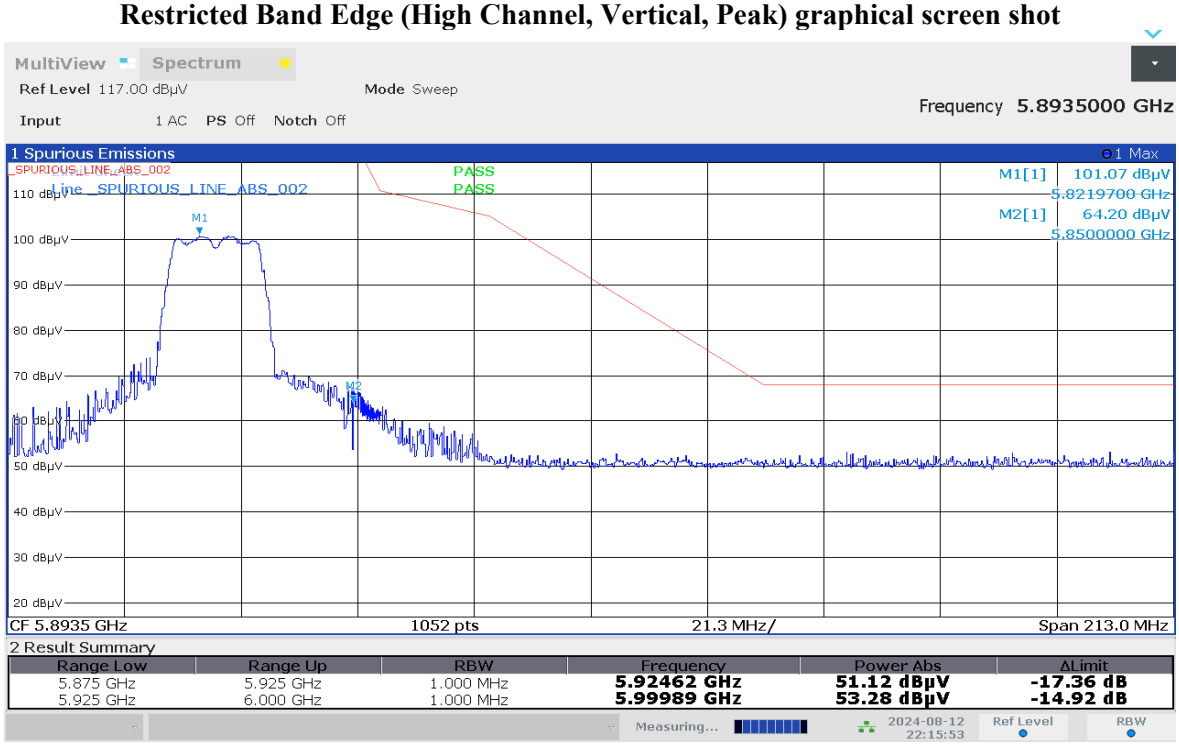
Restricted Band Edge (High Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5850.0000	-	61.8601	-	-	122.2000	-	-	60.3399	-	-
Horizontal Radiated Emission Result										
5850.0000	-	63.8023	-	-	122.2000	-	-	58.3977	-	-

Remarks: Pass Result	Marginal Result	Fail Result

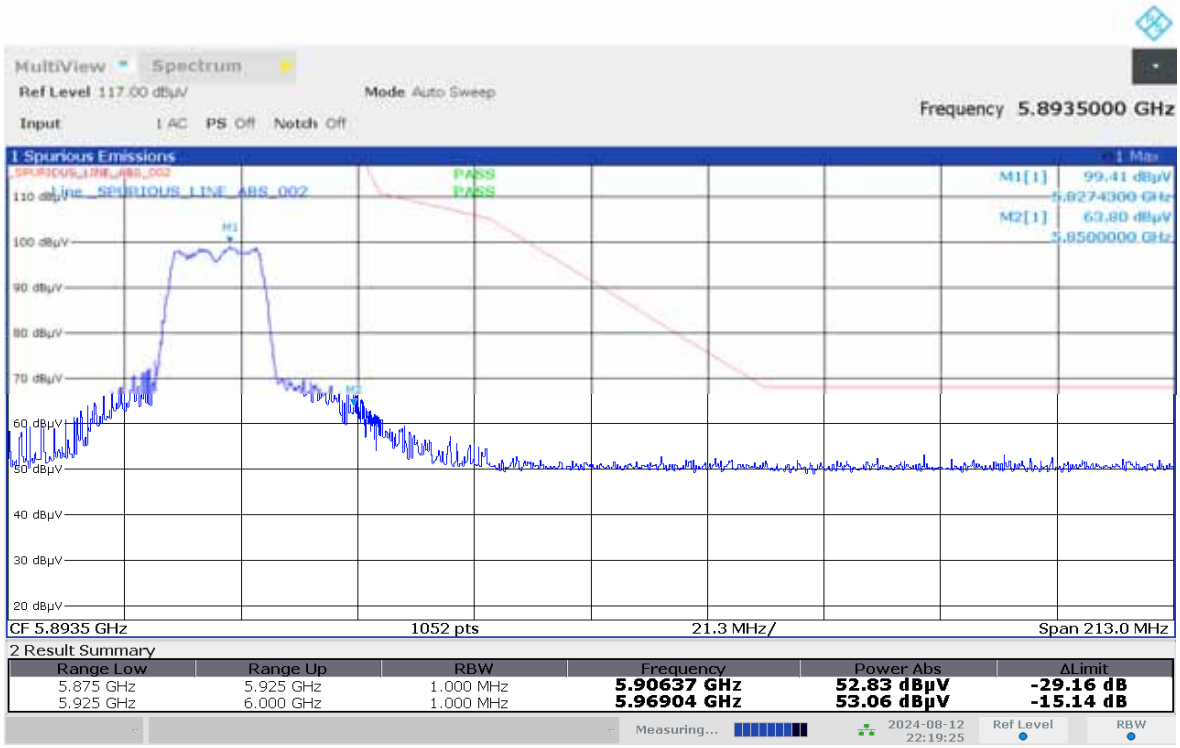
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Tue, 13 Aug, 2024**
System MU: 5.84dB

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



10:15:53 PM 08/12/2024

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



10:19:26 PM 08/12/2024

802.11n (HT20)

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (13dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

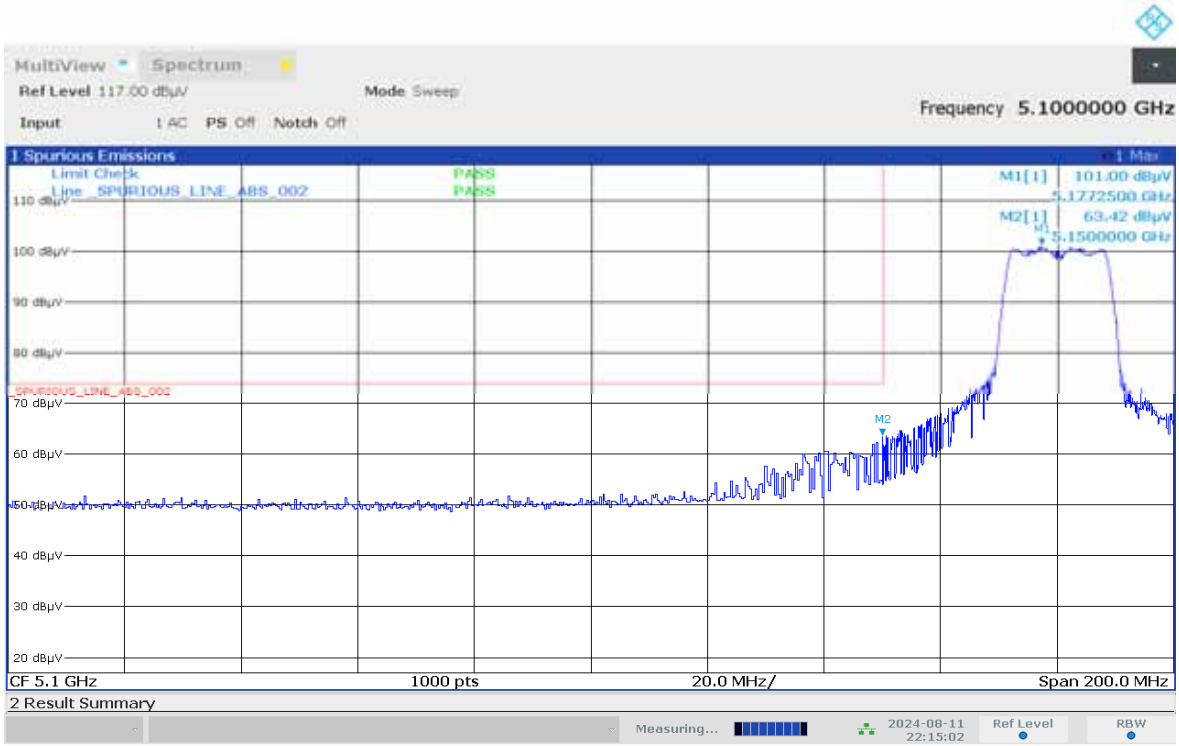
Restricted Band Edge (Low Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5150.0000	-	59.5234	42.6880	-	74.0000	54.0000	-	14.4766	11.3120	-
Horizontal Radiated Emission Result										
5150.0000	-	63.6650	47.9217	-	74.0000	54.0000	-	10.3350	6.0783	-

Remarks: Pass Result	Marginal Result	Fail Result

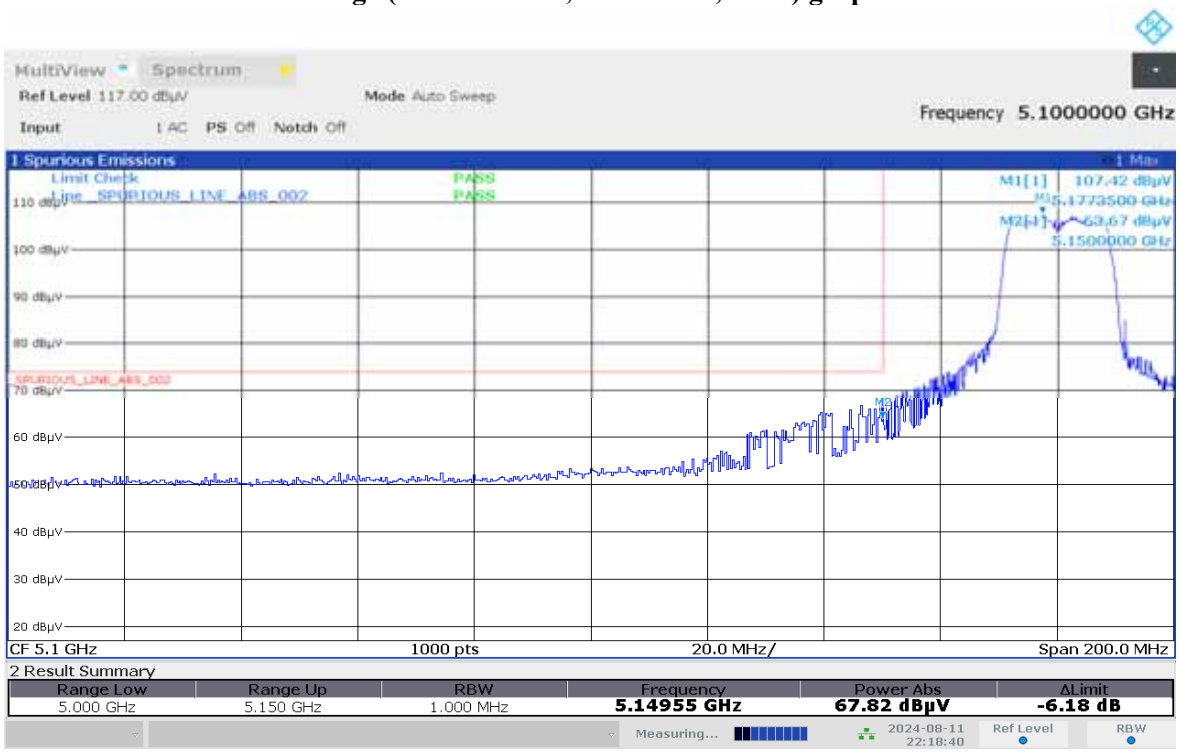
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 12 Aug, 2024**
System MU: 5.84dB

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



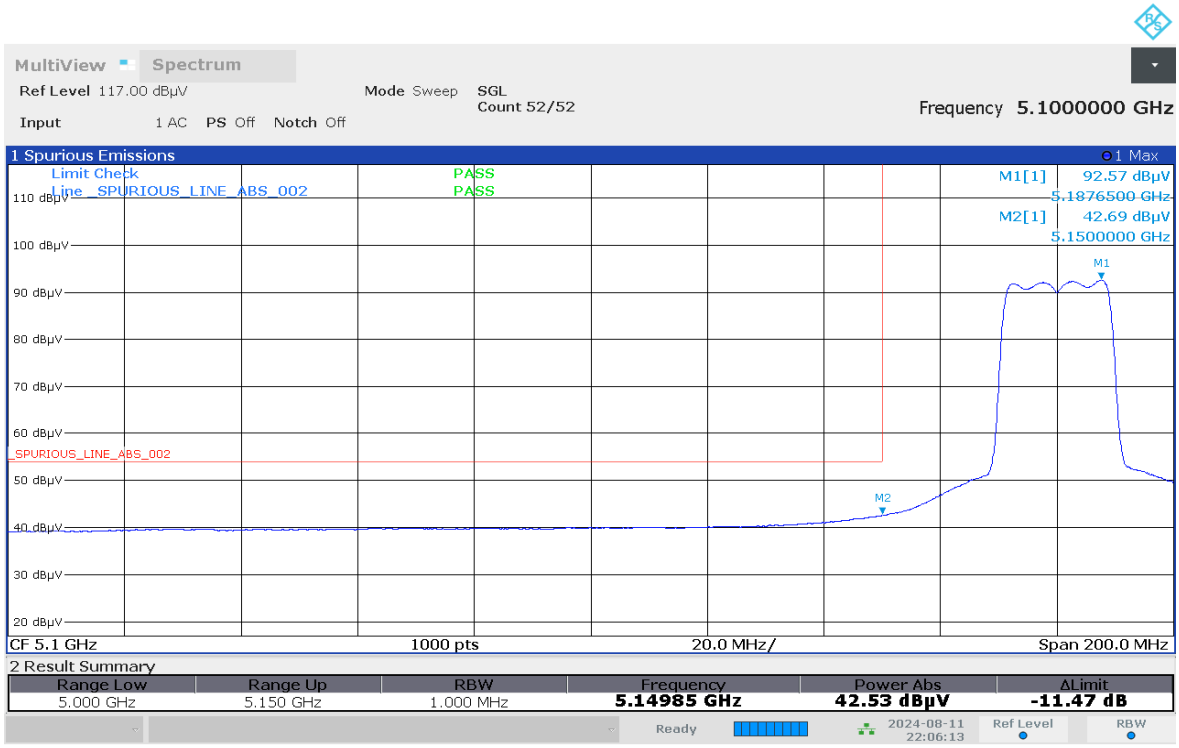
10:15:02 PM 08/11/2024

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



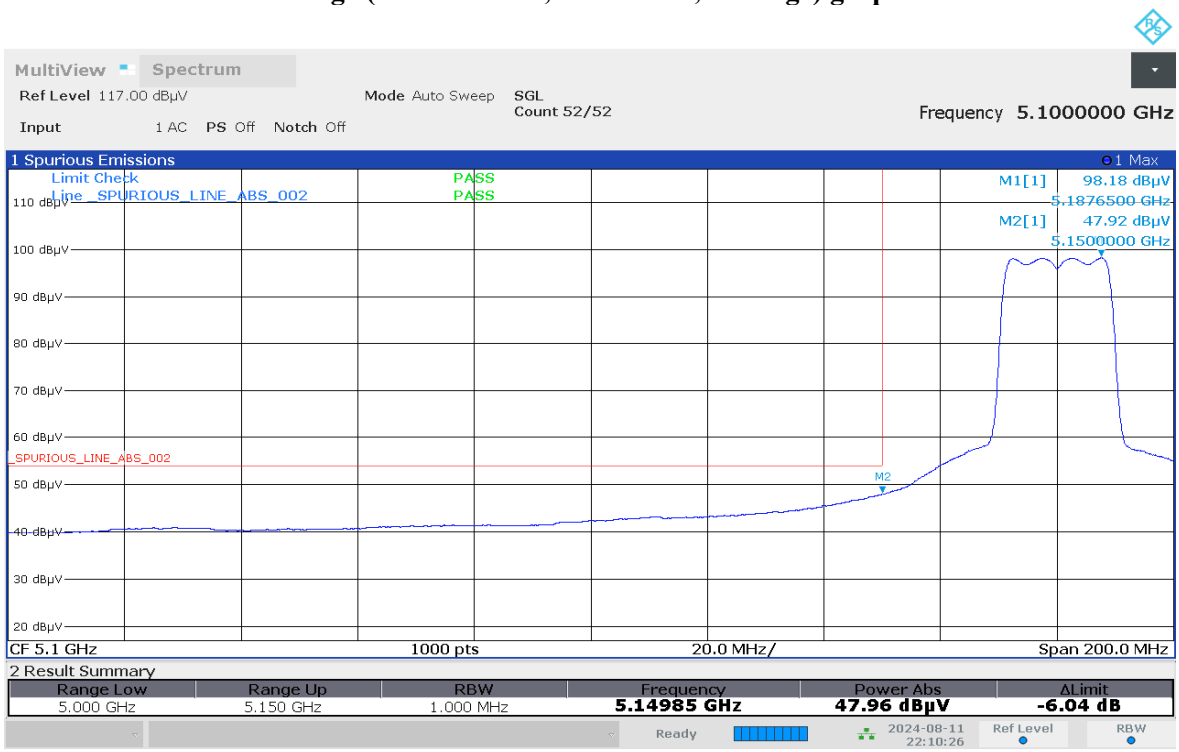
10:18:40 PM 08/11/2024

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



10:06:14 PM 08/11/2024

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



10:10:27 PM 08/11/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (12dBm) Accessory: PMAD4147A
Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

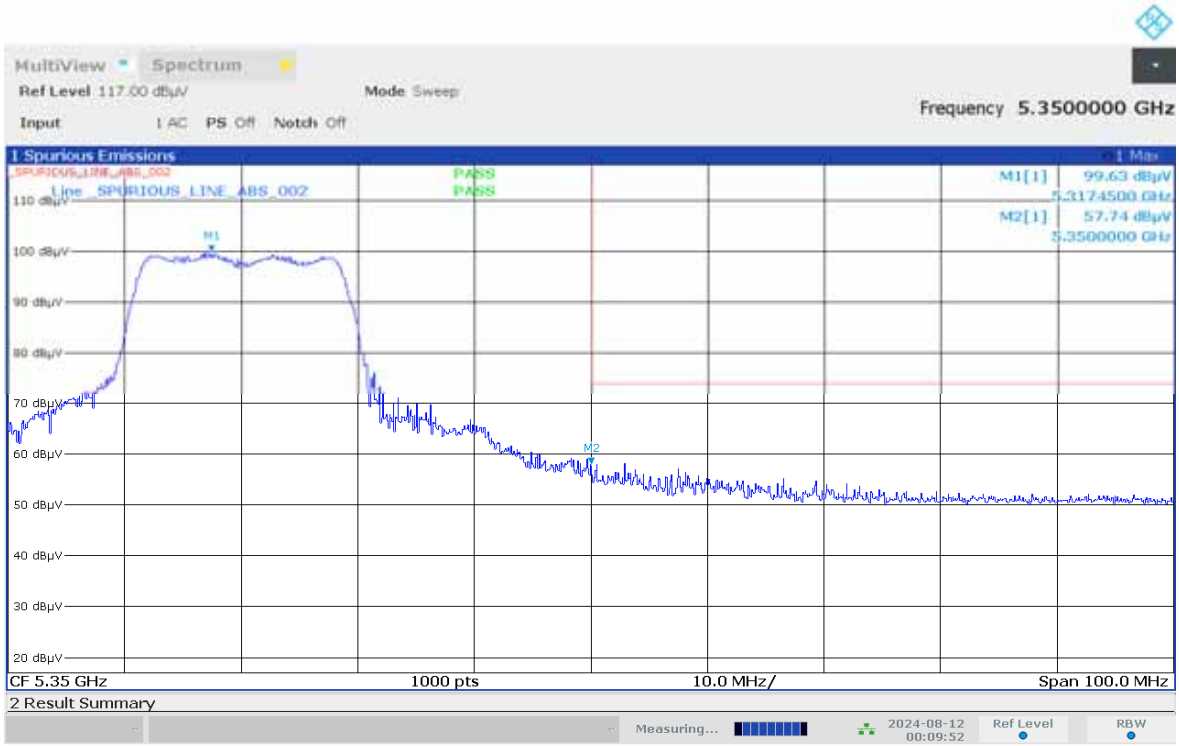
Restricted Band Edge (High Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5350.0000	-	57.7445	42.4295	-	74.0000	54.0000	-	16.2555	11.5705	-
Horizontal Radiated Emission Result										
5350.0000	-	58.0309	48.0461	-	74.0000	54.0000	-	15.9691	5.9539	-

Remarks: Pass Result	Marginal Result	Fail Result

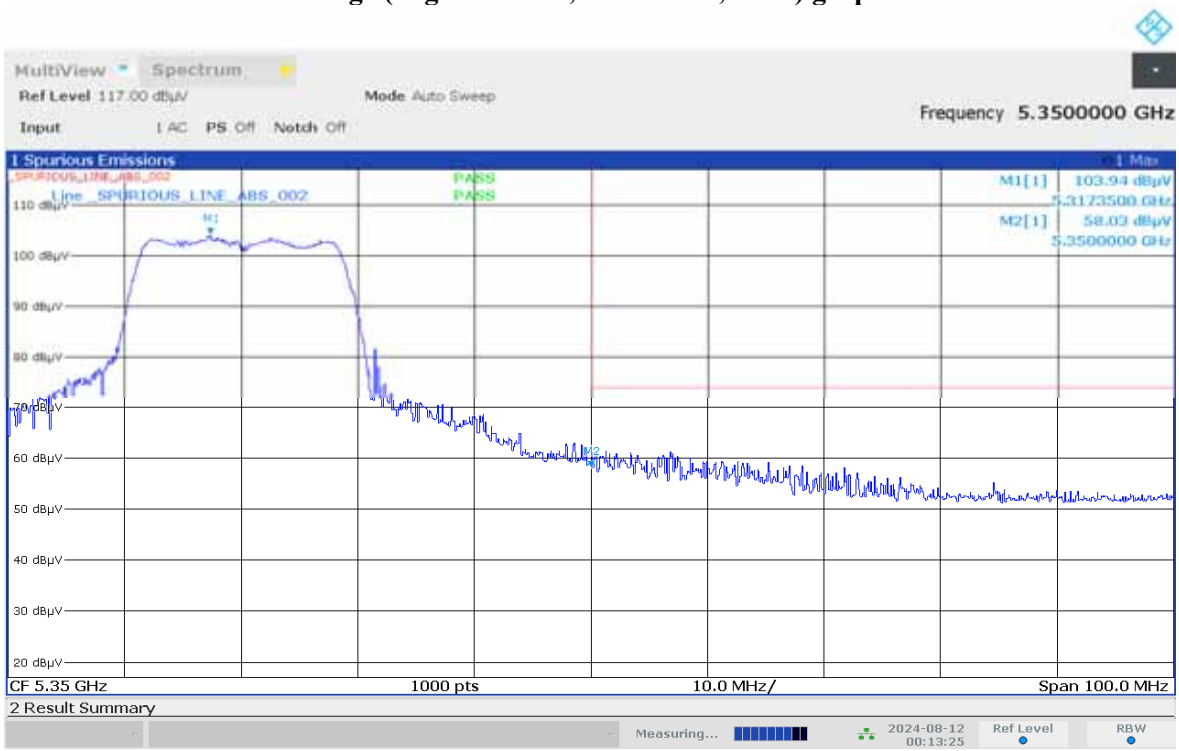
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 12 Aug, 2024**
System MU: 5.84dB

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



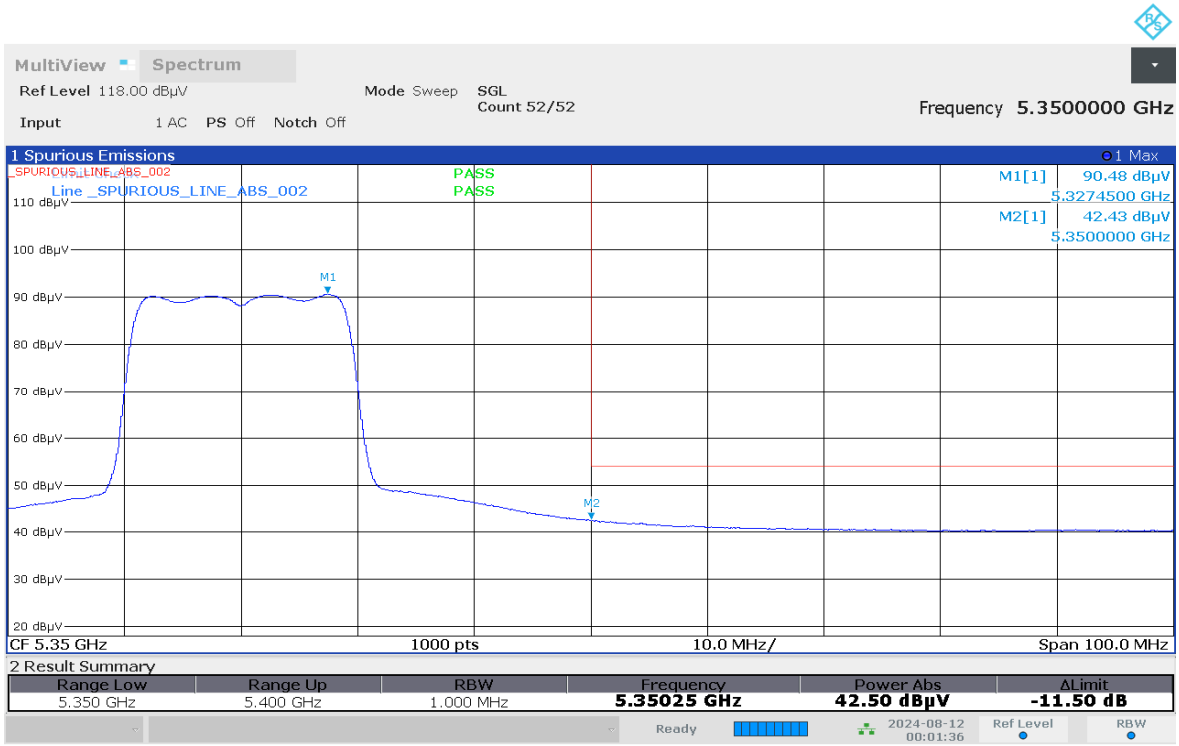
12:09:53 AM 08/12/2024

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



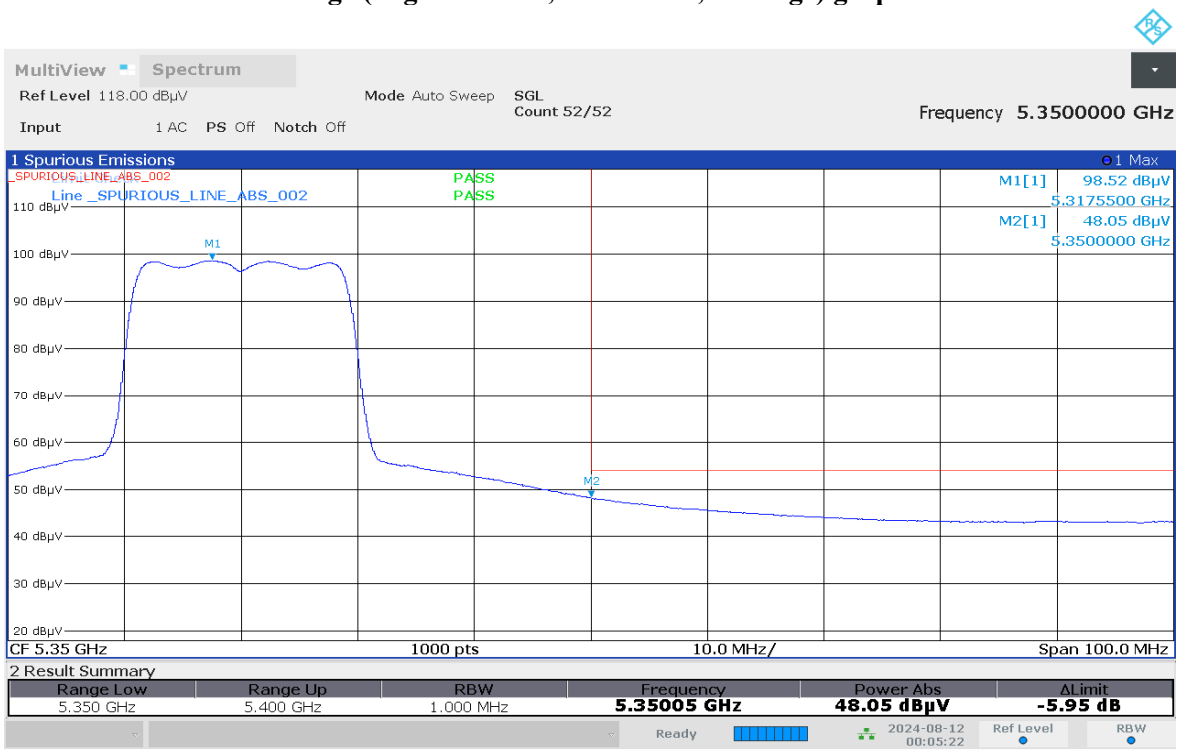
12:13:25 AM 08/12/2024

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



12:01:37 AM 08/12/2024

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



12:05:22 AM 08/12/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (8dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

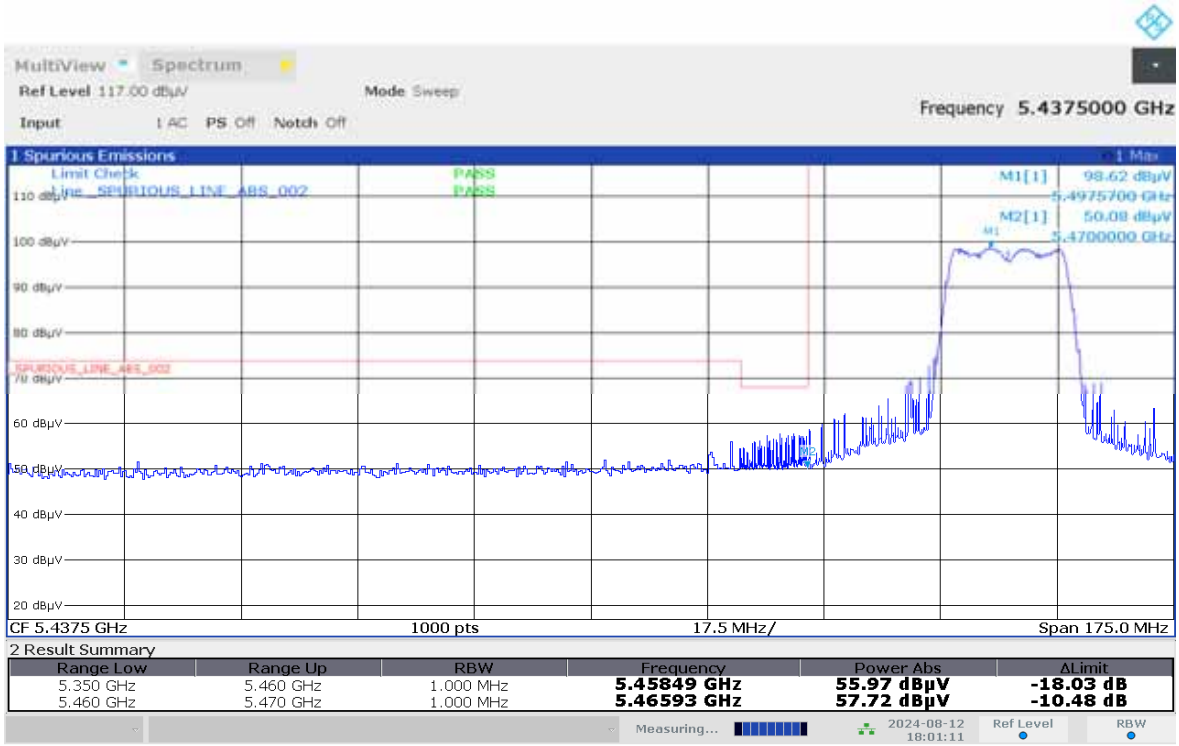
Restricted Band Edge (Low Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5460.0000	-	-	40.6841	-	-	54.0000	-	-	13.3159	-
5467.9750	-	57.6904	-	-	68.2000	-	-	10.5096	-	-
5470.0000	-	50.0847	-	-	68.2000	-	-	18.1153	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	42.2045	-	-	54.0000	-	-	11.7955	-
5468.5250	-	62.0604	-	-	68.2000	-	-	6.1396	-	-
5468.7250	-	-	43.3243	-	-	54.0000	-	-	10.6757	-
5469.6750	-	62.6220	-	-	68.2000	-	-	5.5780	-	-
5470.0000	-	53.6351	-	-	68.2000	-	-	14.5649	-	-

Remarks: Pass Result	Marginal Result	Fail Result

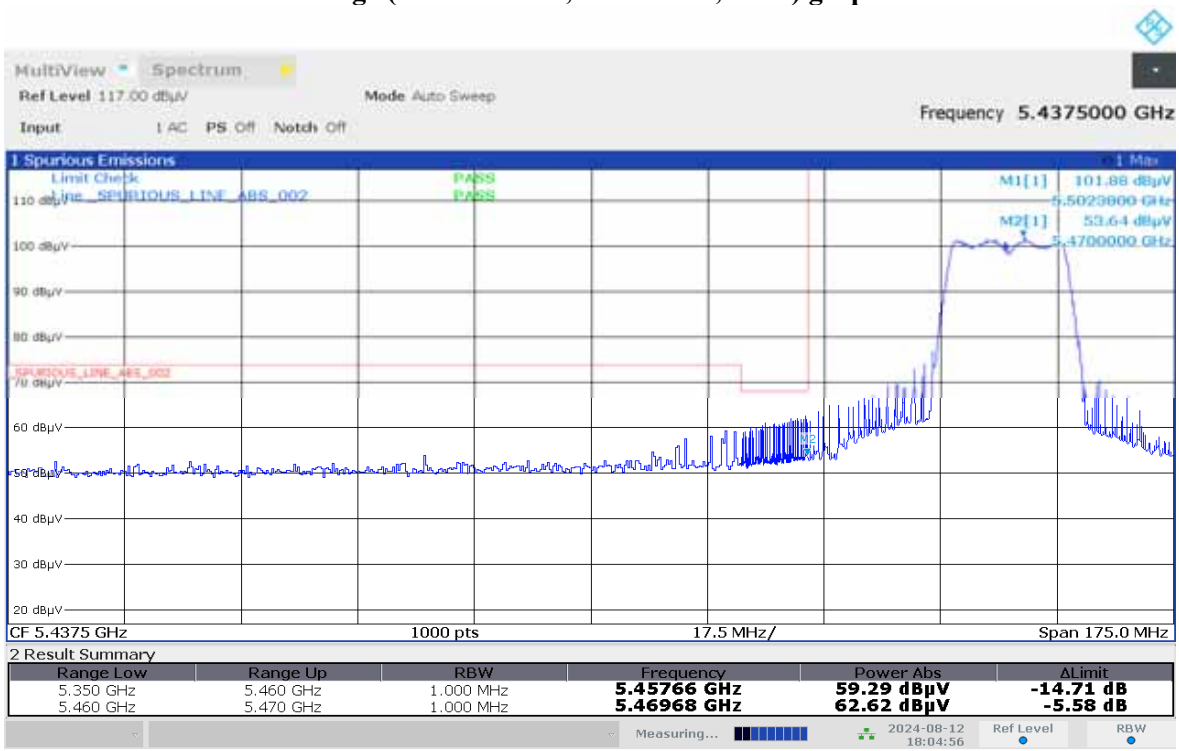
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 12 Aug, 2024**
System MU: 5.84dB

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



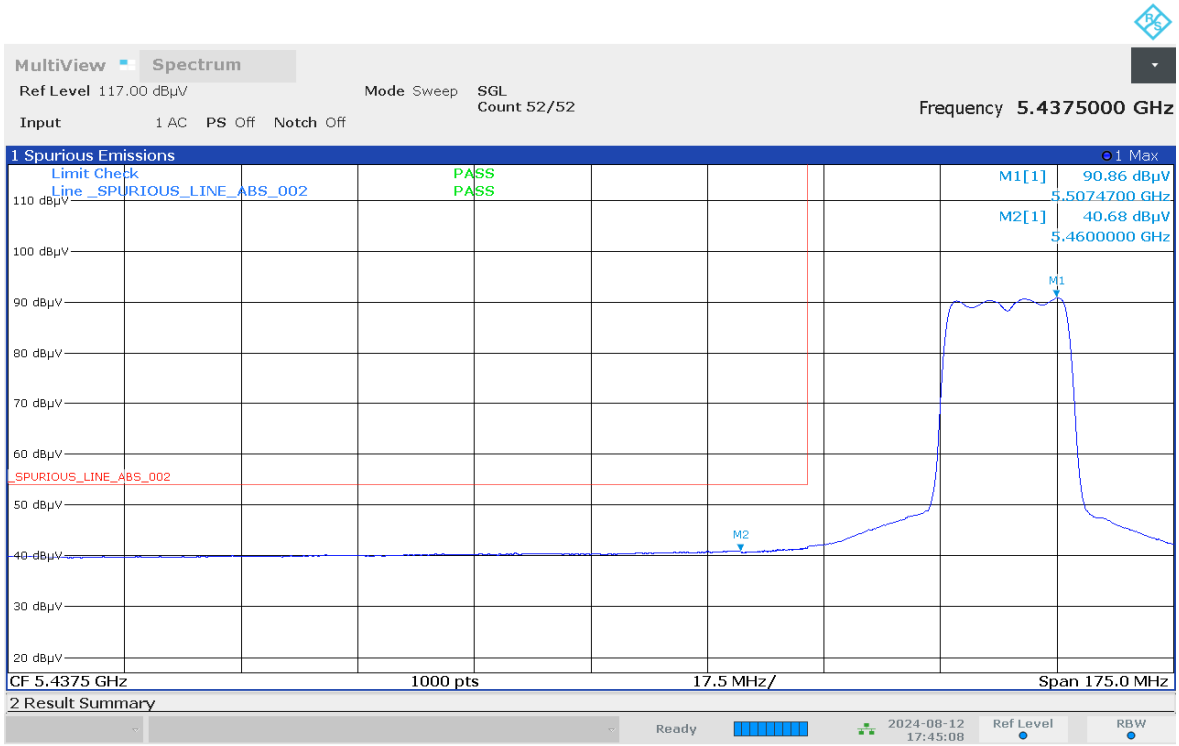
06:01:12 PM 08/12/2024

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



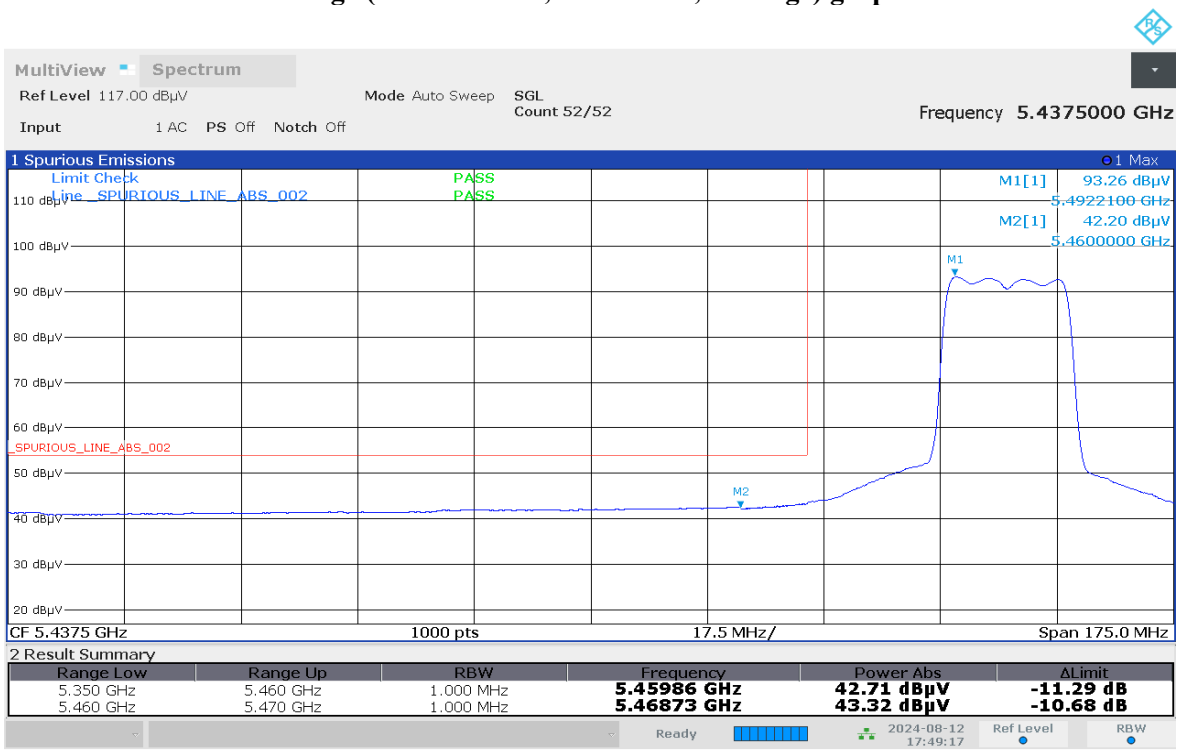
06:04:56 PM 08/12/2024

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



05:45:09 PM 08/12/2024

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



05:49:17 PM 08/12/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (13dBm) Accessory: PMAD4147A
Test Channel: High Test Frequency: 5700.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

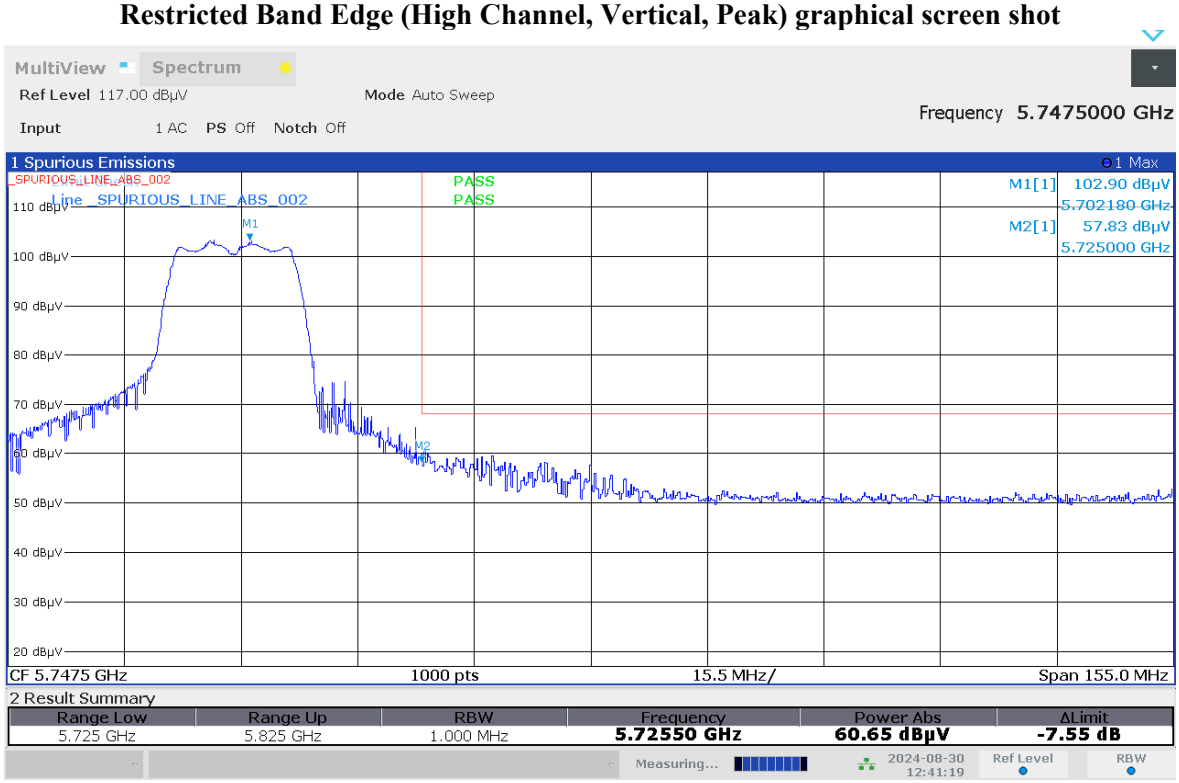
Restricted Band Edge (High Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5725.0000	-	58.0942	-	-	68.2000	-	-	10.1058	-	-
5729.9000	-	59.8586	-	-	68.2000	-	-	8.3414	-	-
Horizontal Radiated Emission Result										
5725.0000	-	57.8261	-	-	68.2000	-	-	10.3739	-	-
5725.9000	-	60.0125	-	-	68.2000	-	-	8.1875	-	-

Remarks: Pass Result	Marginal Result	Fail Result

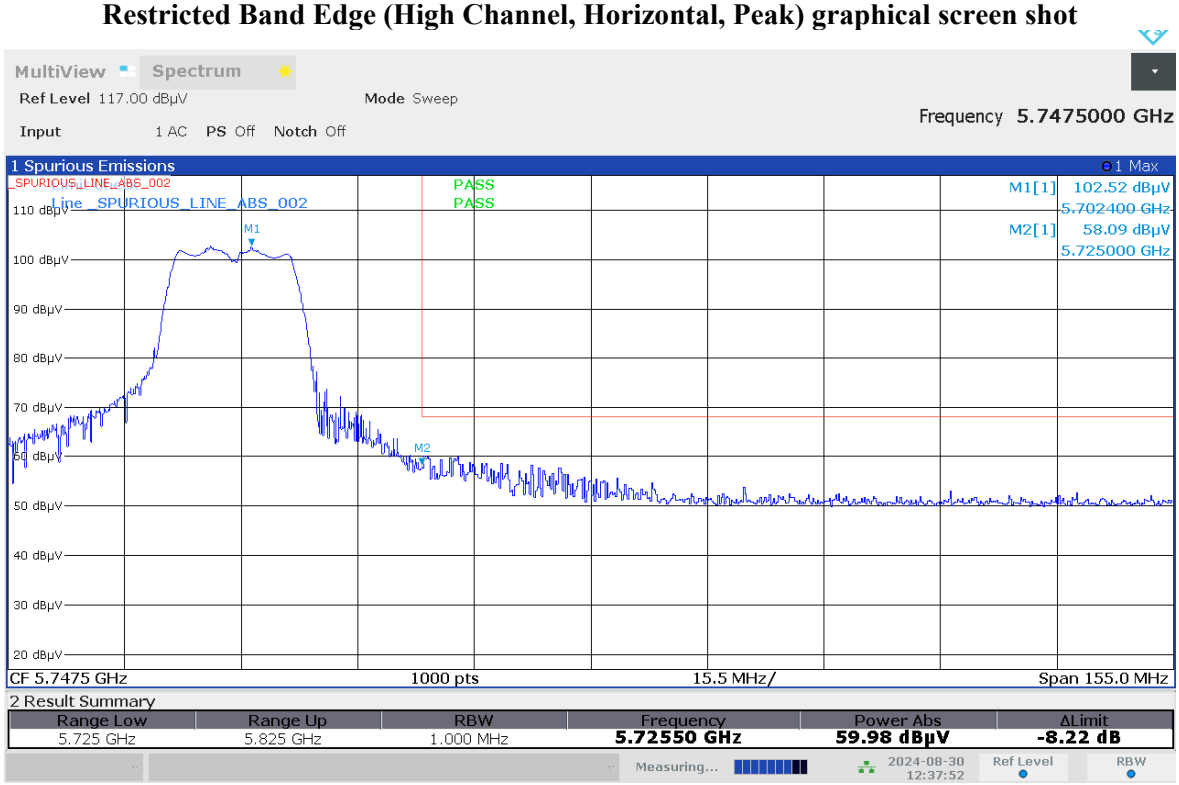
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Fri, 30 Aug, 2024**
System MU: 5.84dB

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



12:41:20 PM 08/30/2024

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



12:37:52 PM 08/30/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (15dBm) Accessory: PMAD4147A
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

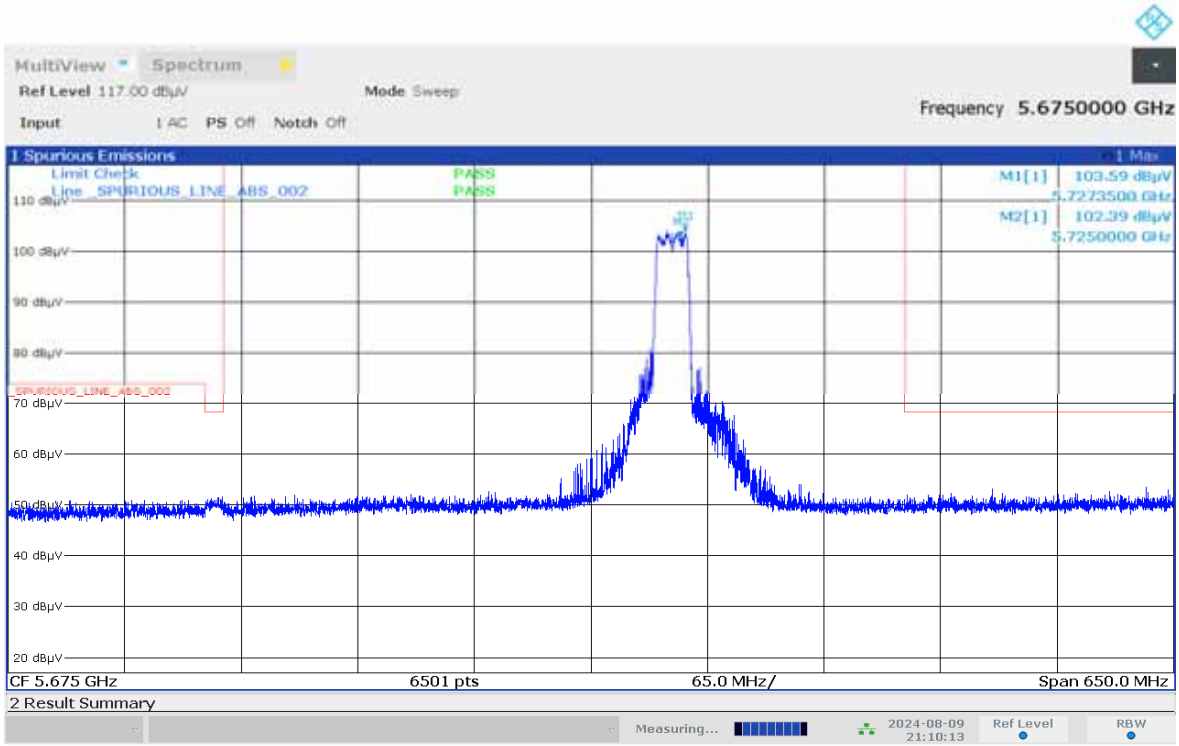
Restricted Band Edge (Straddle Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
Horizontal Radiated Emission Result										

Remarks: Pass Result	Marginal Result	Fail Result

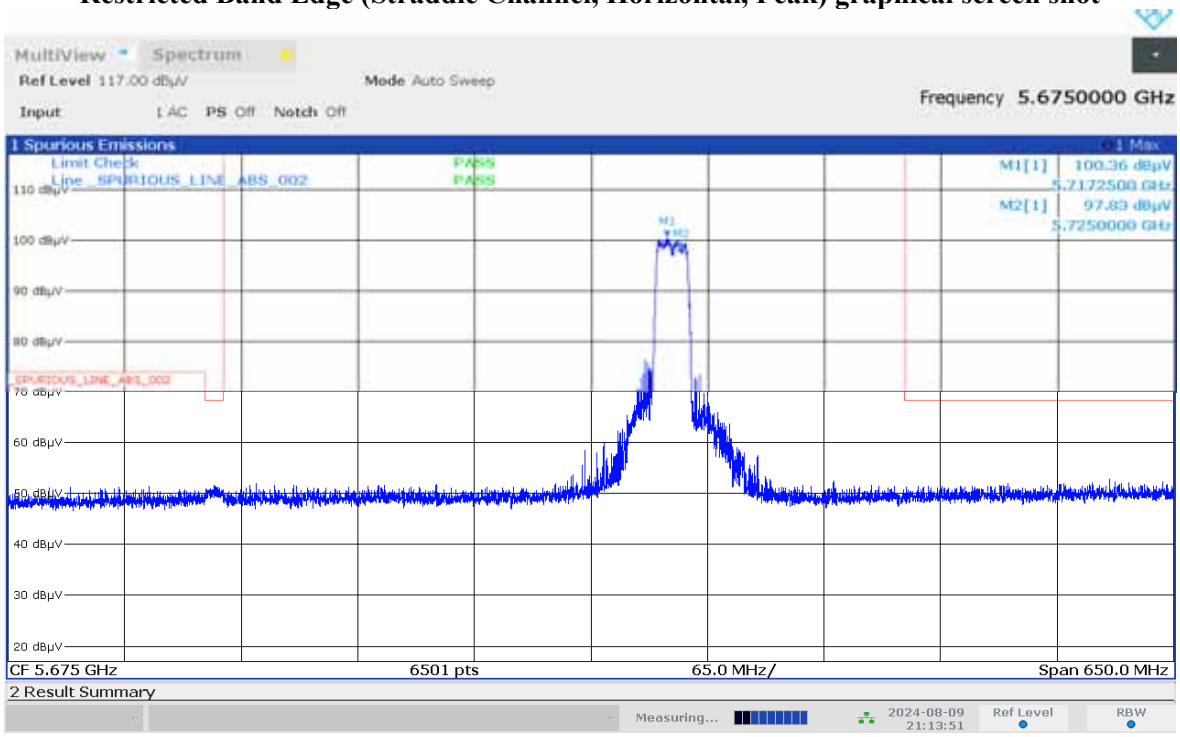
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Sat, 10 Aug, 2024**
System MU: 5.84dB

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



09:10:14 PM 08/09/2024

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



09:13:52 PM 08/09/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (14dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

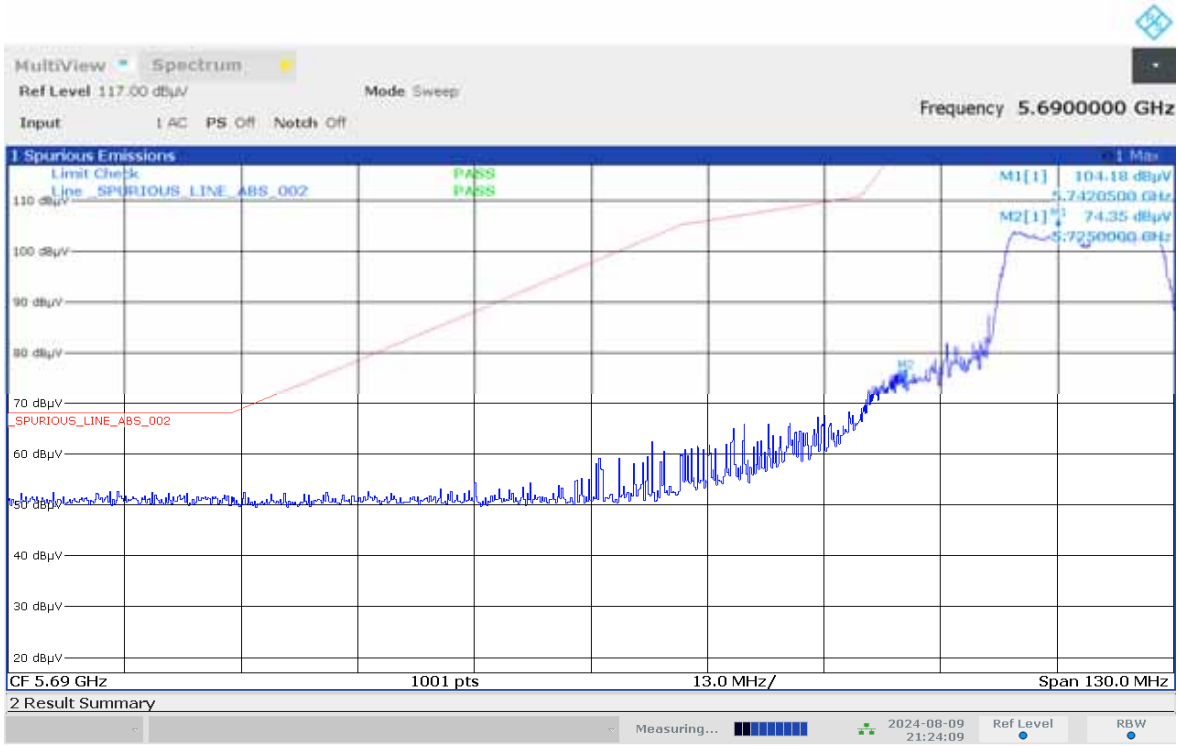
Restricted Band Edge (Low Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5725.0000	-	74.3493	-	-	122.2000	-	-	47.8507	-	-
Horizontal Radiated Emission Result										
5725.0000	-	72.4637	-	-	122.2000	-	-	49.7363	-	-

Remarks: Pass Result	Marginal Result	Fail Result

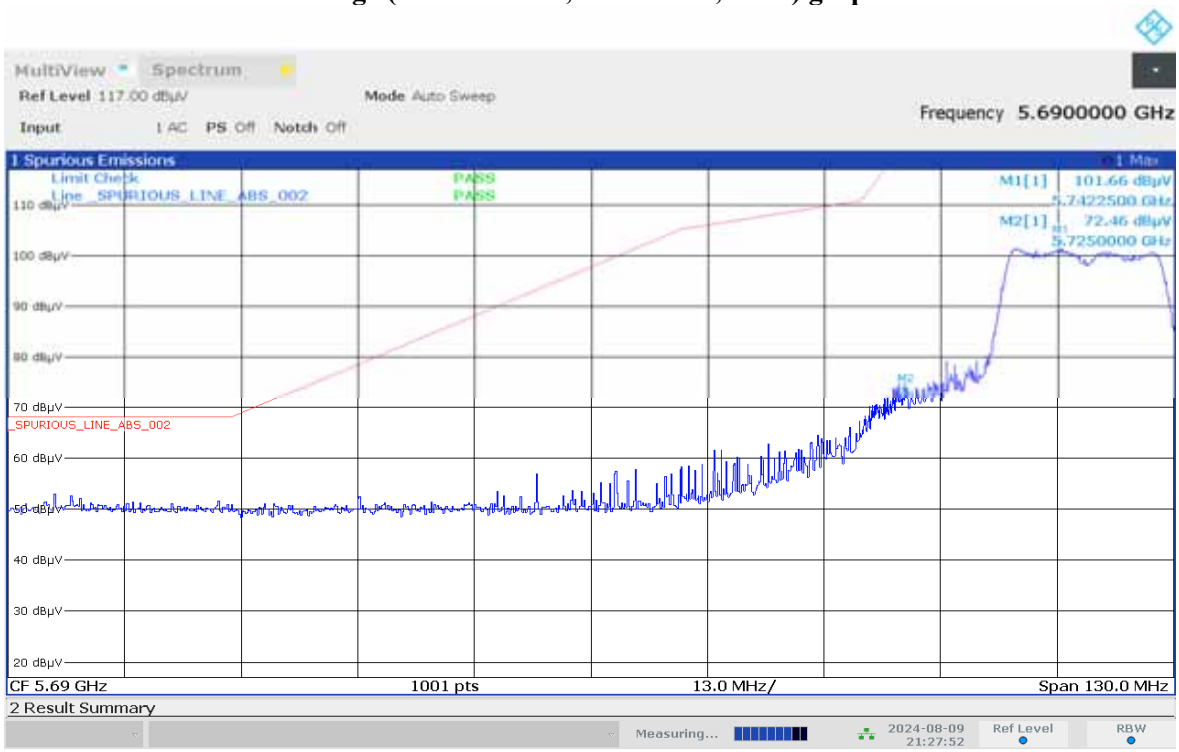
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Sat, 10 Aug, 2024**
System MU: 5.84dB

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



09:24:09 PM 08/09/2024

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



09:27:53 PM 08/09/2024

Test: WIFI SAC Restricted Band Edge
Model Number: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot Power: (14dBm) Accessory: PMAD4147A
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

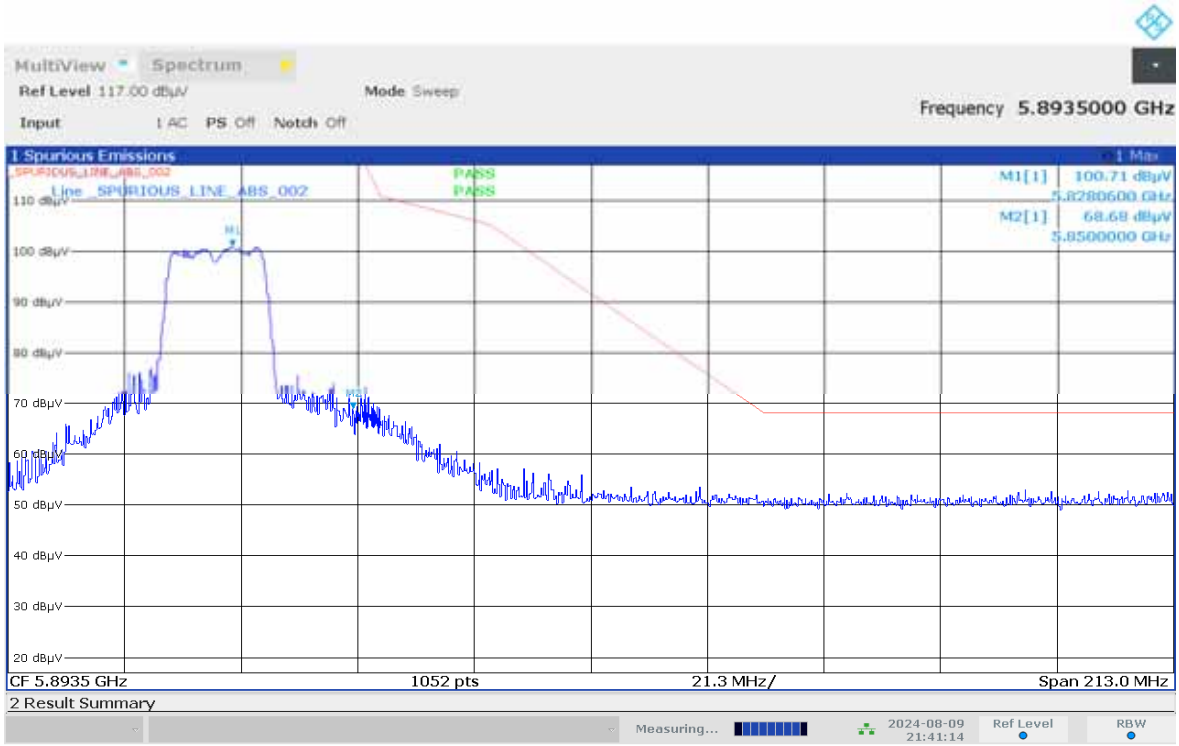
Restricted Band Edge (High Channel) tabular data

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5850.0000	-	67.7689		-	122.2000	-	-	54.4311	-	-
Horizontal Radiated Emission Result										
5850.0000	-	65.1407		-	122.2000	-	-	57.0593	-	-

Remarks: Pass Result	Marginal Result	Fail Result

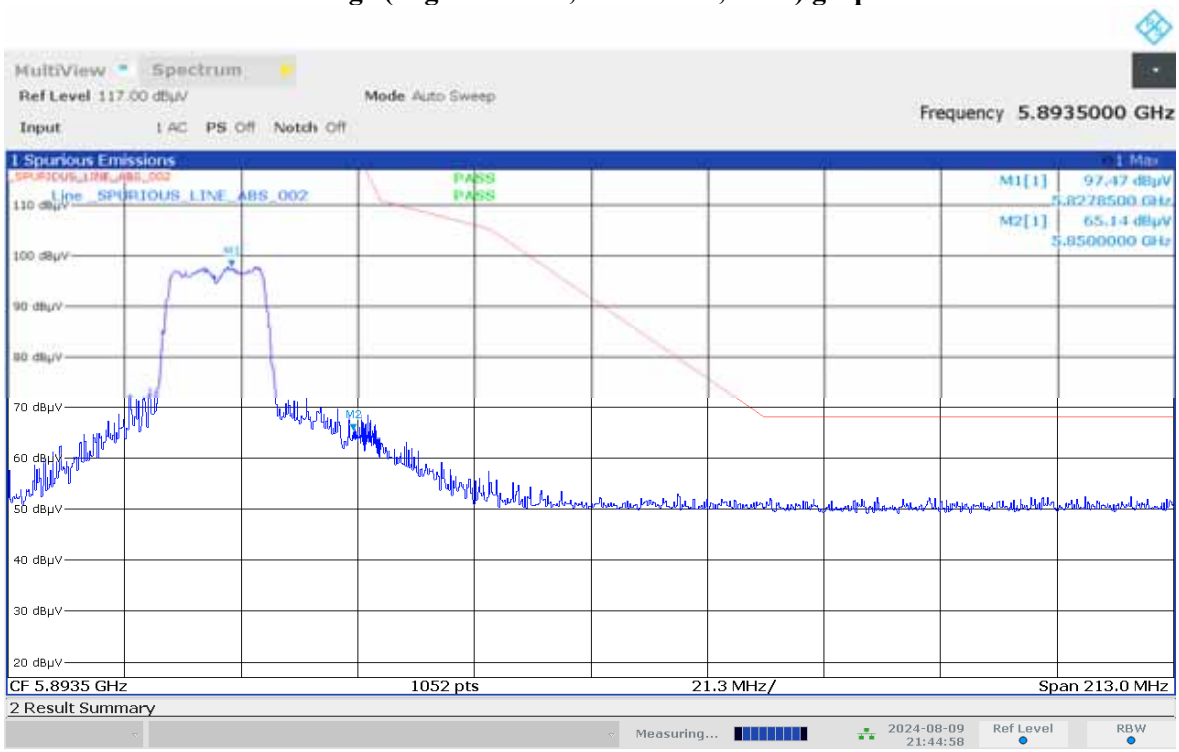
Temperature (degC): 23.1 **Humidity (%): 69.7**
Test Performed by: Nazrin&Qawiman **Test Date: Sat, 10 Aug, 2024**
System MU: 5.84dB

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



09:41:15 PM 08/09/2024

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

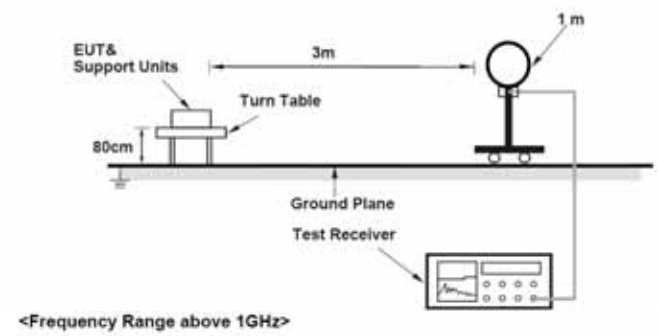


09:44:59 PM 08/09/2024

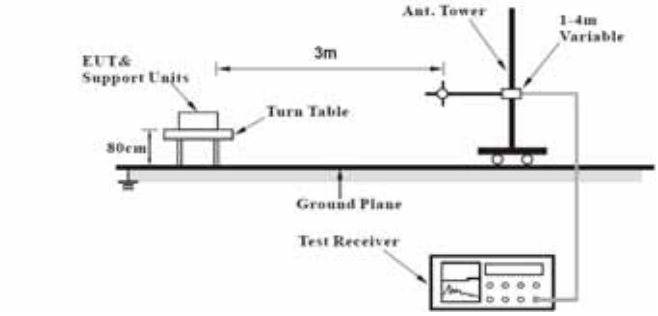
7.6. Radiated Spurious Emission Measurement

7.6.1. Test Setup

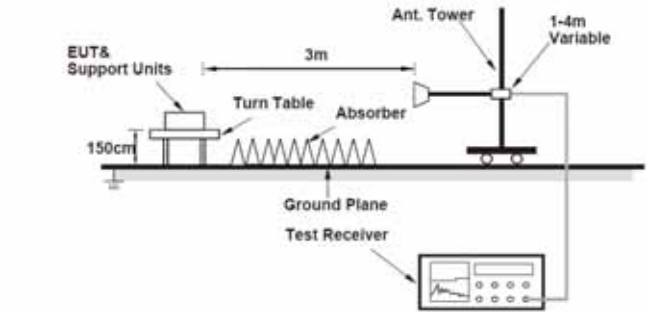
<Radiated emission below 30MHz>



<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.

7.6.2. 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:

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)

7.6.3. Test Data

802.11a

Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (16dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

Radiated Emission (Low Channel) tabular data

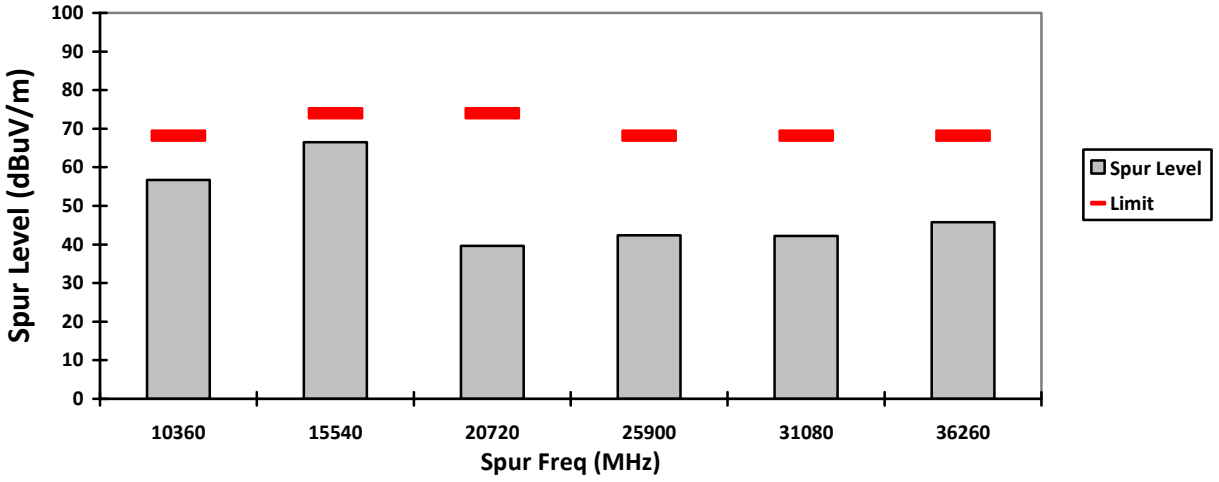
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10360	-	56.6972**	-	-	68.2000	-	-	11.5028	-	-
15540	-	66.4704**	53.1088**	-	74.0000	54.0000	-	7.5296	0.8912	-
20720	-	39.6596**	-	-	74.0000	-	-	34.3404	-	-
25900	-	42.3506**	-	-	68.2000	-	-	25.8494	-	-
31080	-	42.2390**	-	-	68.2000	-	-	25.9610	-	-
36260	-	45.7591**	-	-	68.2000	-	-	22.4409	-	-
Horizontal Radiated Emission Result										
10360	-	56.4036**	-	-	68.2000	-	-	11.7964	-	-
15540	-	66.6528**	53.1012**	-	74.0000	54.0000	-	7.3472	0.8988	-
20720	-	39.4524**	-	-	74.0000	-	-	34.5476	-	-
25900	-	43.0956**	-	-	68.2000	-	-	25.1044	-	-
31080	-	40.6702**	-	-	68.2000	-	-	27.5298	-	-
36260	-	45.8609**	-	-	68.2000	-	-	22.3391	-	-

Remarks: Pass Result	Marginal Result	Fail Result

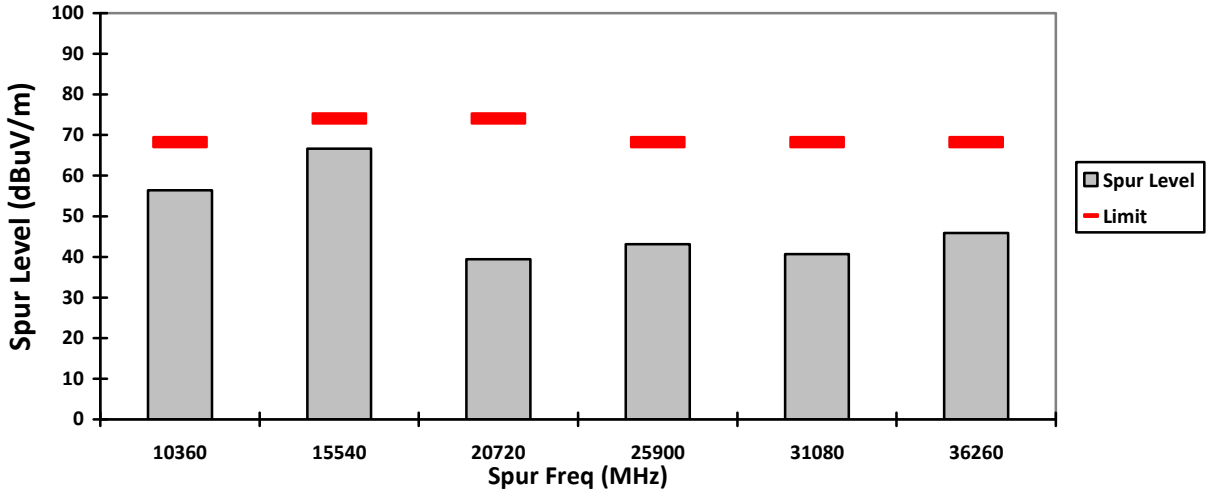
Temperature (degC): 23.1 Humidity (%): 69.7
Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz

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.**

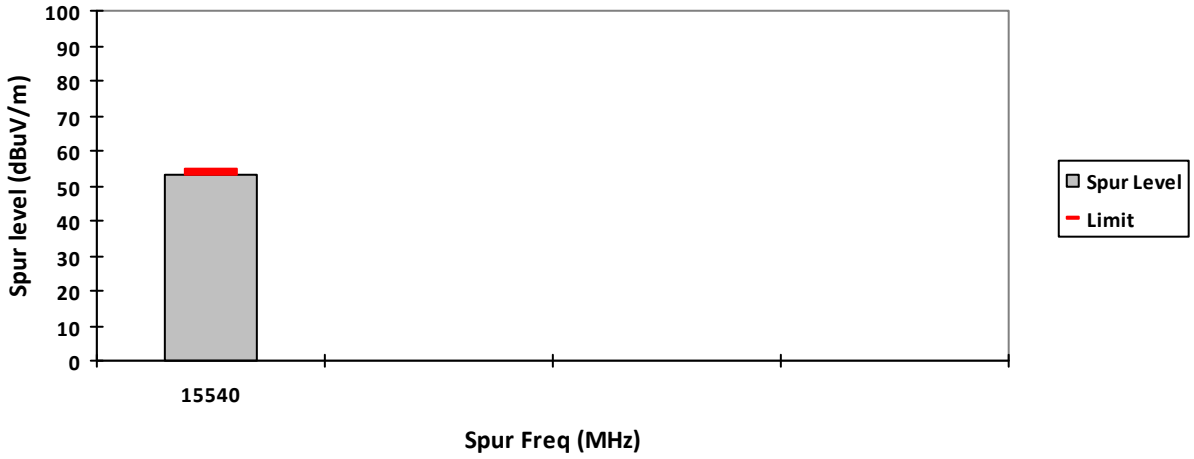
VERTICAL, PK



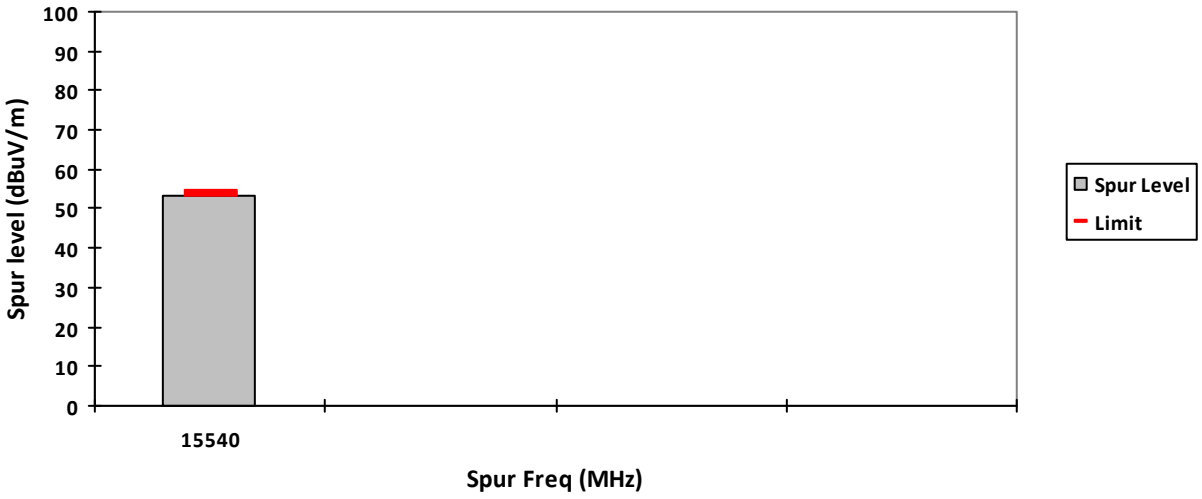
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5220.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10440	-	56.9782**	-	-	68.2000	-	-	11.2218	-	-
15660	-	66.7979**	53.1032**	-	74.0000	54.0000	-	7.2021	0.8968	-
20880	-	41.0166**	-	-	74.0000	-	-	32.9834	-	-
26100	-	43.2169**	-	-	68.2000	-	-	24.9831	-	-
31320	-	42.9323**	-	-	74.0000	-	-	31.0677	-	-
36540	-	48.1420**	-	-	68.2000	-	-	20.0580	-	-
Horizontal Radiated Emission Result										
10440	-	56.8276**	-	-	68.2000	-	-	11.3724	-	-
15660	-	66.5555**	53.1032**	-	74.0000	54.0000	-	7.4445	0.8968	-
20880	-	40.9650**	-	-	74.0000	-	-	33.0350	-	-
26100	-	42.8345**	-	-	68.2000	-	-	25.3655	-	-
31320	-	42.5176**	-	-	74.0000	-	-	31.4824	-	-
36540	-	46.6866**	-	-	68.2000	-	-	21.5134	-	-

Remarks: Pass Result	Marginal Result	Fail Result

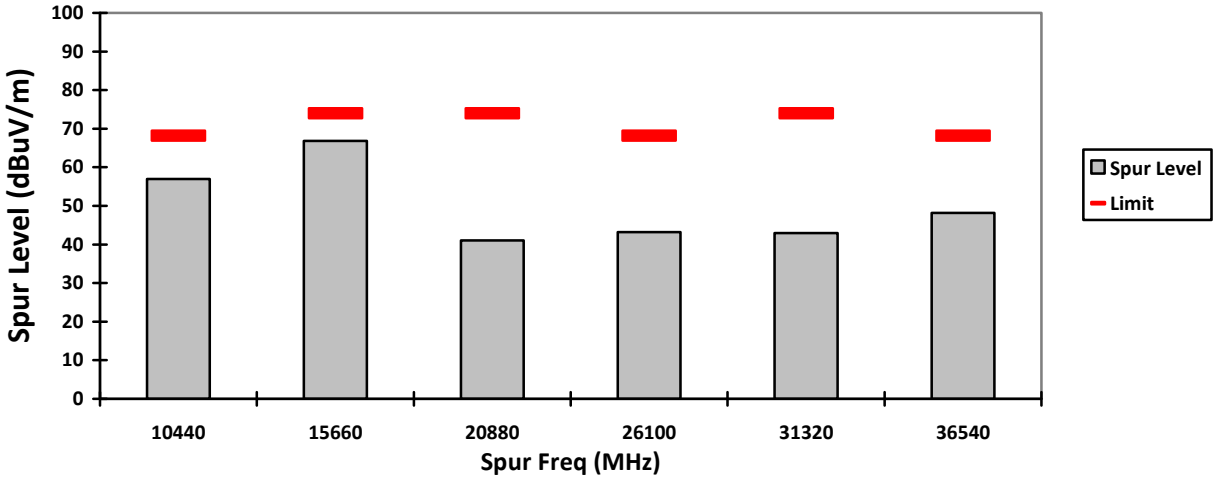
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

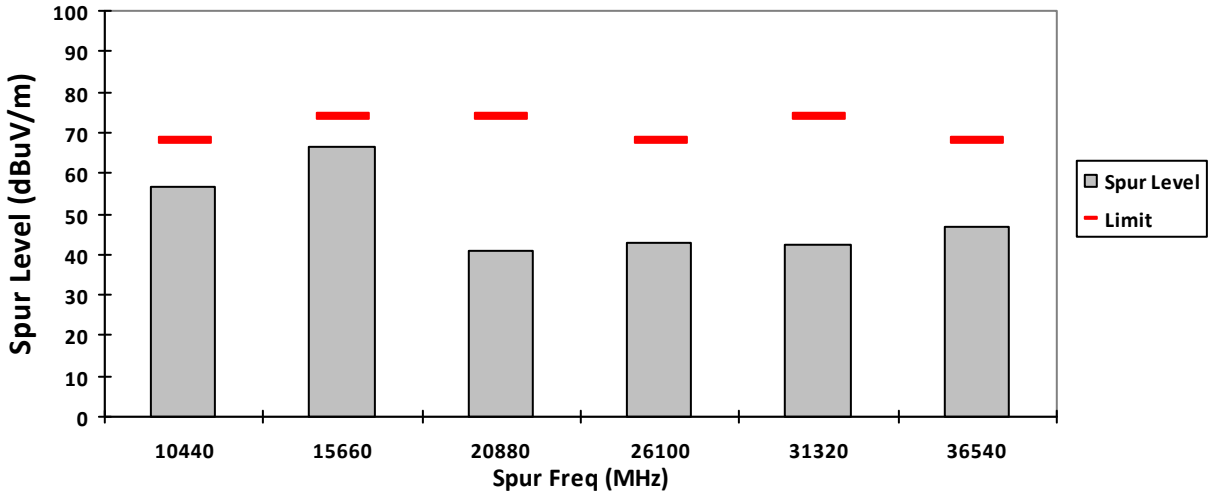
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

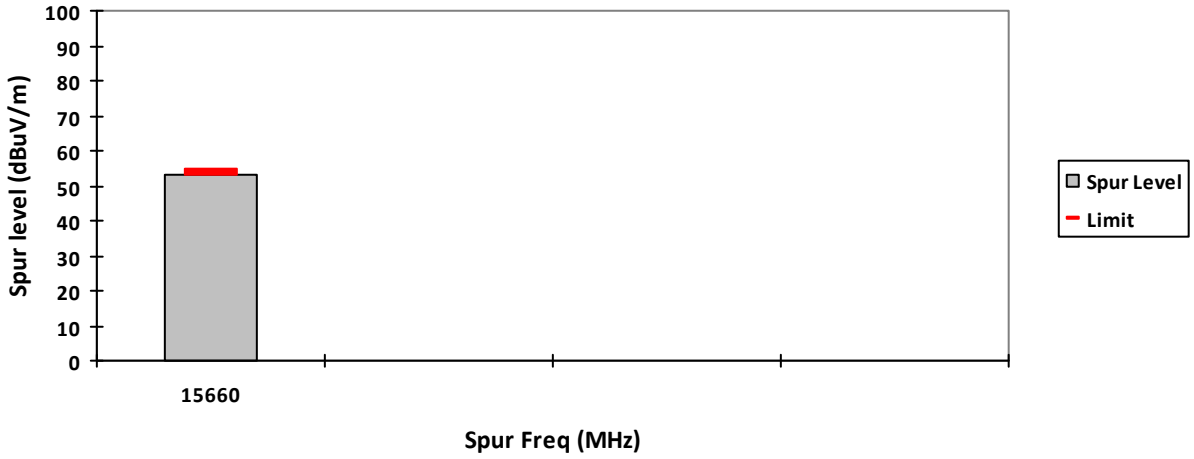
VERTICAL, PK



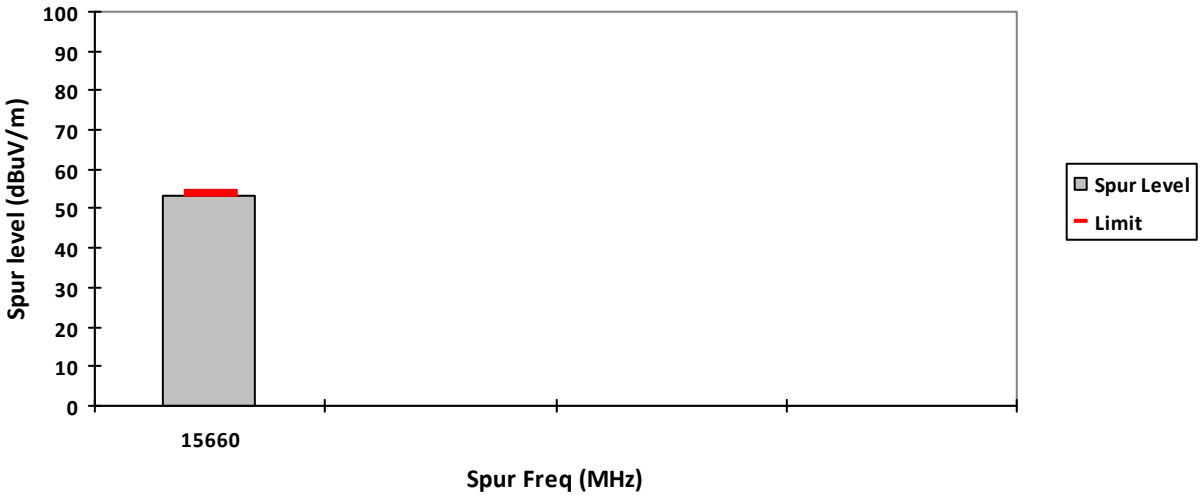
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: High Test Frequency: 5240.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10480	-	57.1856**	-	-	68.2000	-	-	11.0144	-	-
15720	-	66.6248**	52.8404**	-	74.0000	54.0000	-	7.3752	1.1596	-
20960	-	41.0608**	-	-	74.0000	-	-	32.9392	-	-
26200	-	43.1688**	-	-	68.2000	-	-	25.0312	-	-
31440	-	43.4574**	-	-	74.0000	-	-	30.5426	-	-
36680	-	46.2332**	-	-	68.2000	-	-	21.9668	-	-
Horizontal Radiated Emission Result										
10480	-	56.7525**	-	-	68.2000	-	-	11.4475	-	-
15720	-	66.7206**	52.8392**	-	74.0000	54.0000	-	7.2794	1.1608	-
20960	-	42.1154**	-	-	74.0000	-	-	31.8846	-	-
26200	-	42.9554**	-	-	68.2000	-	-	25.2446	-	-
31440	-	45.5255**	-	-	74.0000	-	-	28.4745	-	-
36680	-	45.5097**	-	-	68.2000	-	-	22.6903	-	-

Remarks: Pass Result	Marginal Result	Fail Result

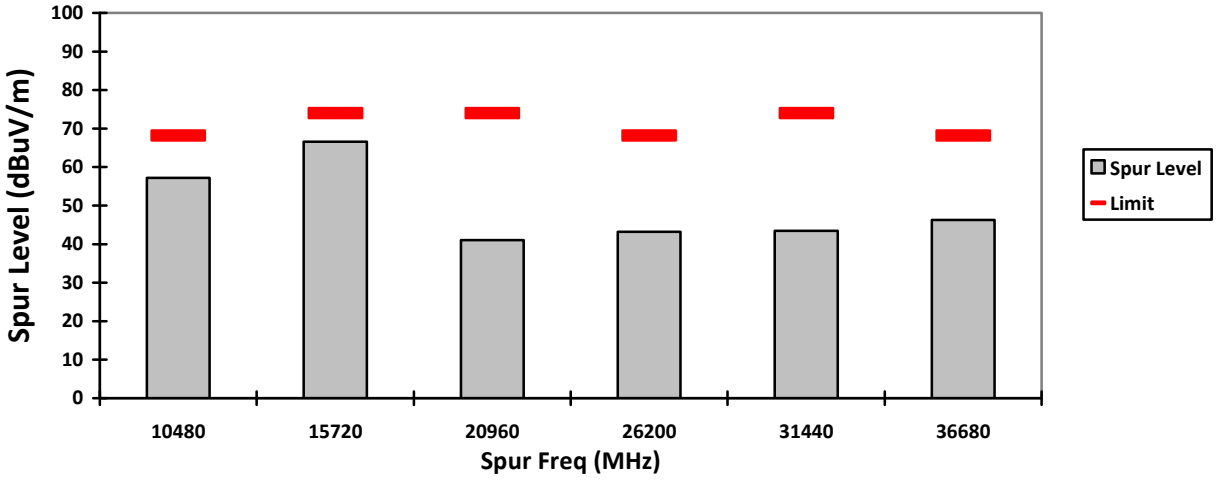
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

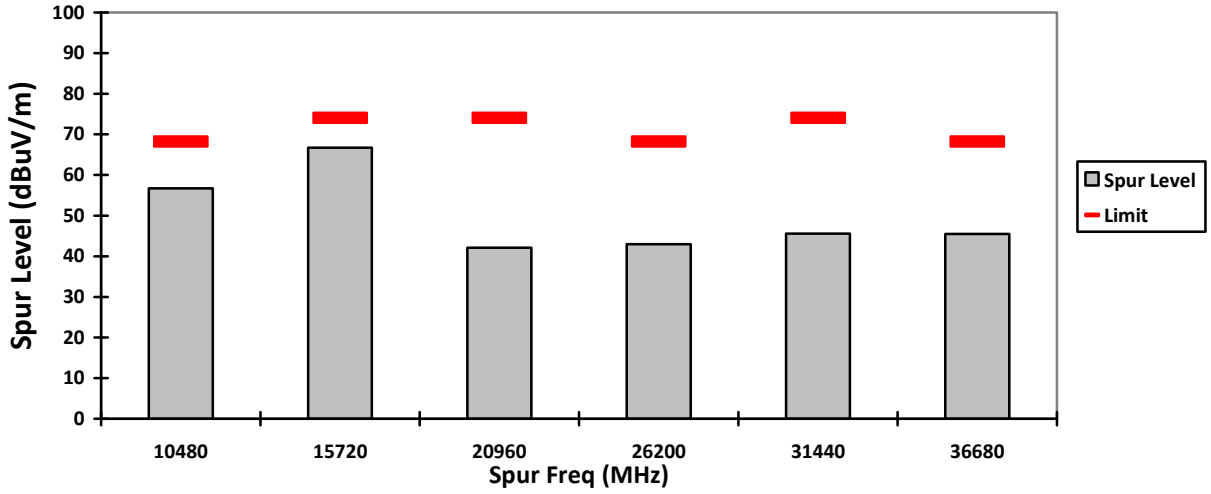
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

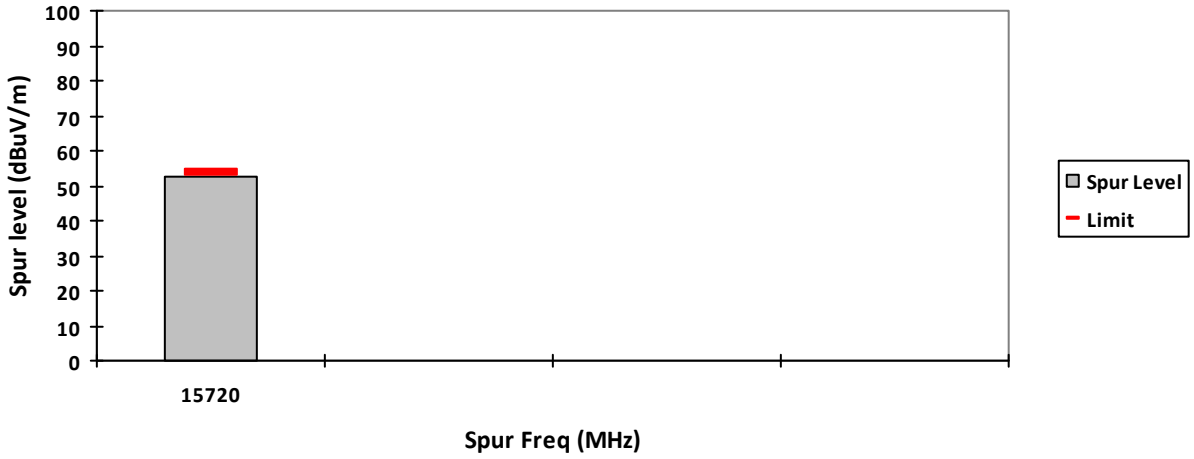
VERTICAL, PK



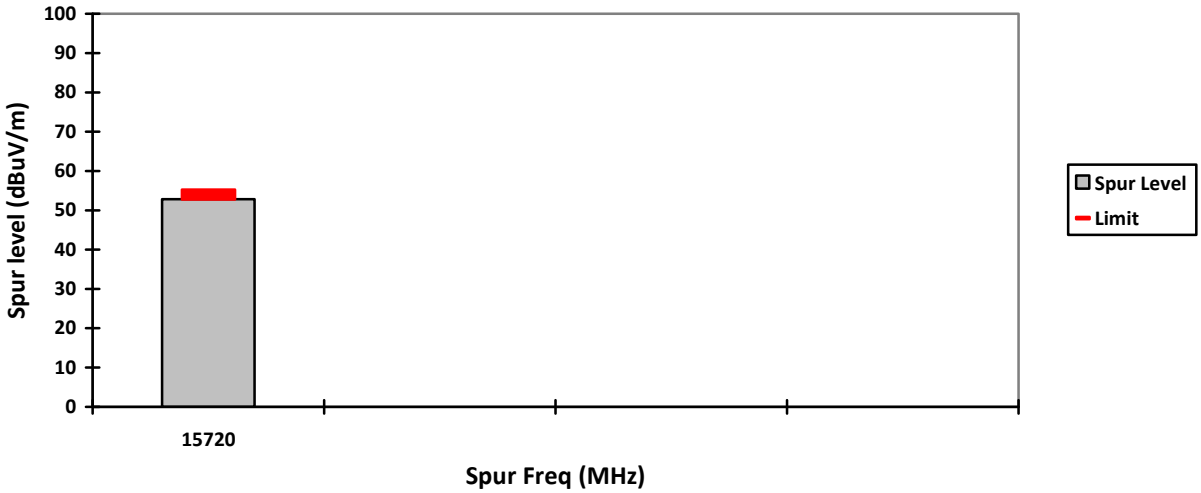
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: Low Test Frequency: 5260.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10520	-	55.6179**	-	-	68.2000	-	-	12.5821	-	-
15780	-	66.7903**	53.3927**	-	74.0000	54.0000	-	7.2097	0.6073	-
21040	-	42.7574**	-	-	74.0000	-	-	31.2426	-	-
26300	-	44.2740**	-	-	68.2000	-	-	23.9260	-	-
31560	-	43.0350**	-	-	74.0000	-	-	30.9650	-	-
36820	-	45.6518**	-	-	68.2000	-	-	22.5482	-	-
Horizontal Radiated Emission Result										
10520	-	57.2006**	-	-	68.2000	-	-	10.9994	-	-
15780	-	66.9013**	53.2525**	-	74.0000	54.0000	-	7.0987	0.7475	-
21040	-	40.6121**	-	-	74.0000	-	-	33.3879	-	-
26300	-	43.9522**	-	-	68.2000	-	-	24.2478	-	-
31560	-	41.9890**	-	-	74.0000	-	-	32.0110	-	-
36820	-	46.4923**	-	-	68.2000	-	-	21.7077	-	-

Remarks: Pass Result	Marginal Result	Fail Result

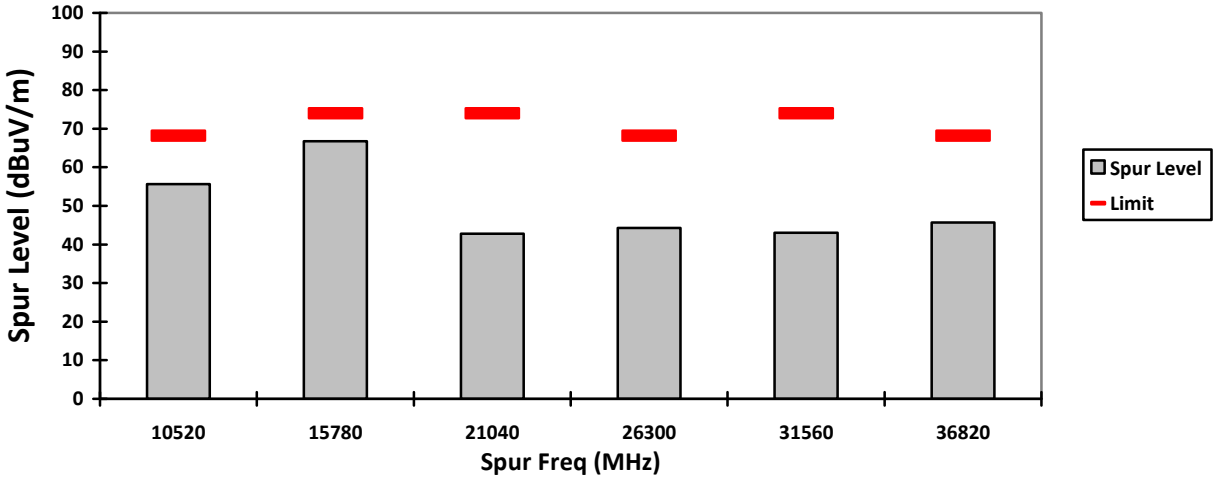
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

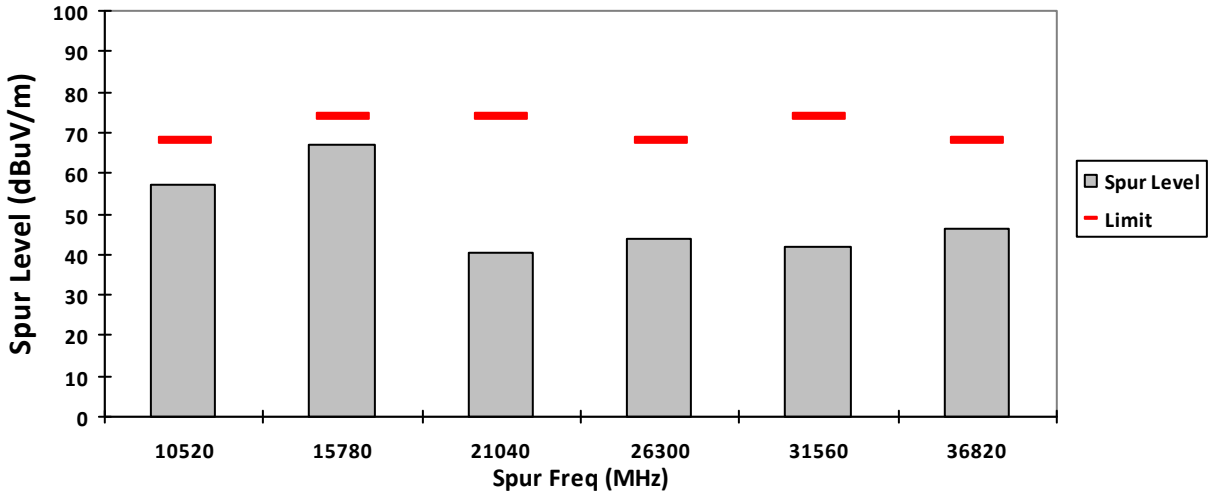
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

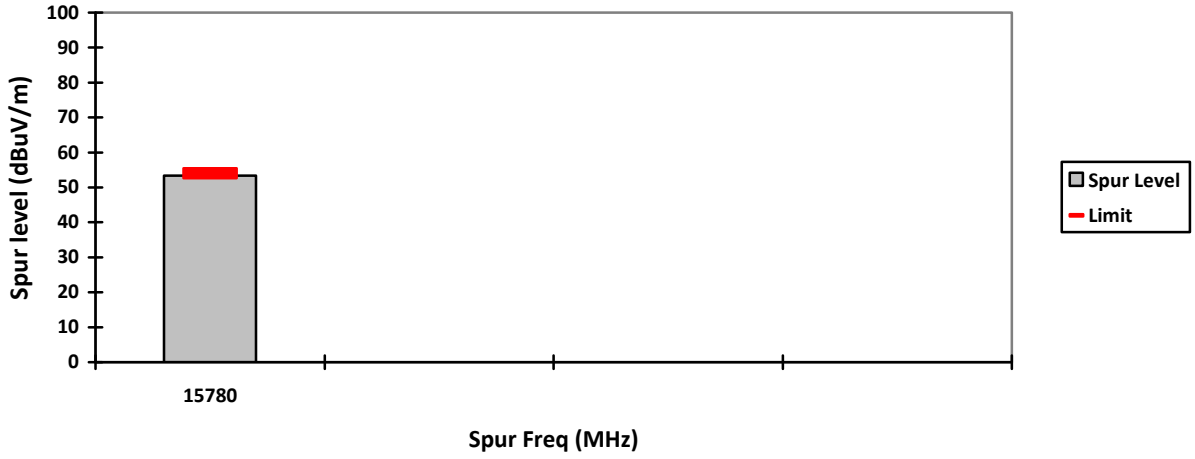
VERTICAL, PK



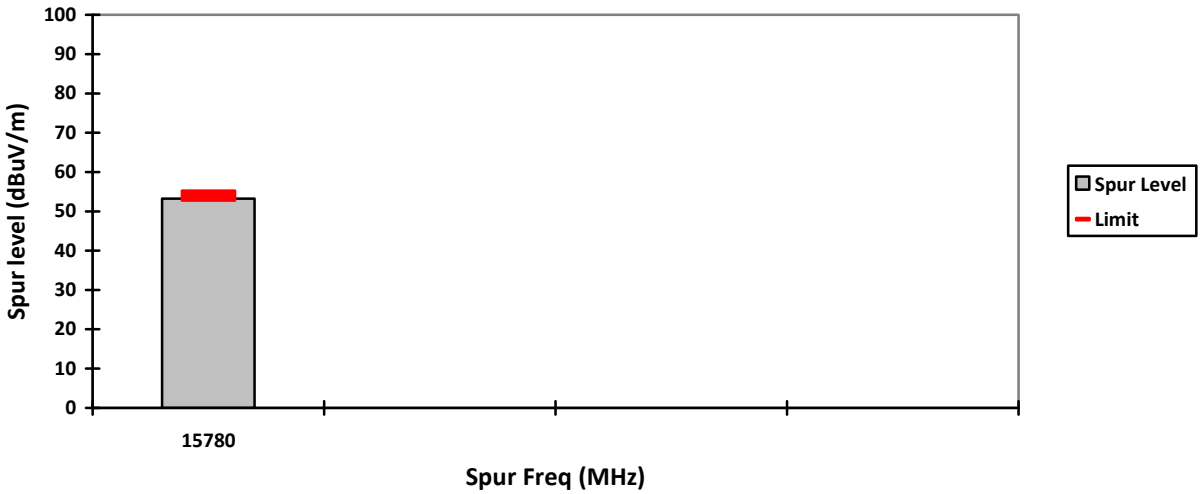
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5300.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
3976.6959	-	50.9881 *	36.9614	-	74.0000	54.0000	-	23.0119	17.0386	-
Horizontal Radiated Emission Result										
3976.5641	-	54.7441	41.1616	-	74.0000	54.0000	-	19.2559	12.8384	-

Remarks: Pass Result	Marginal Result	Fail Result

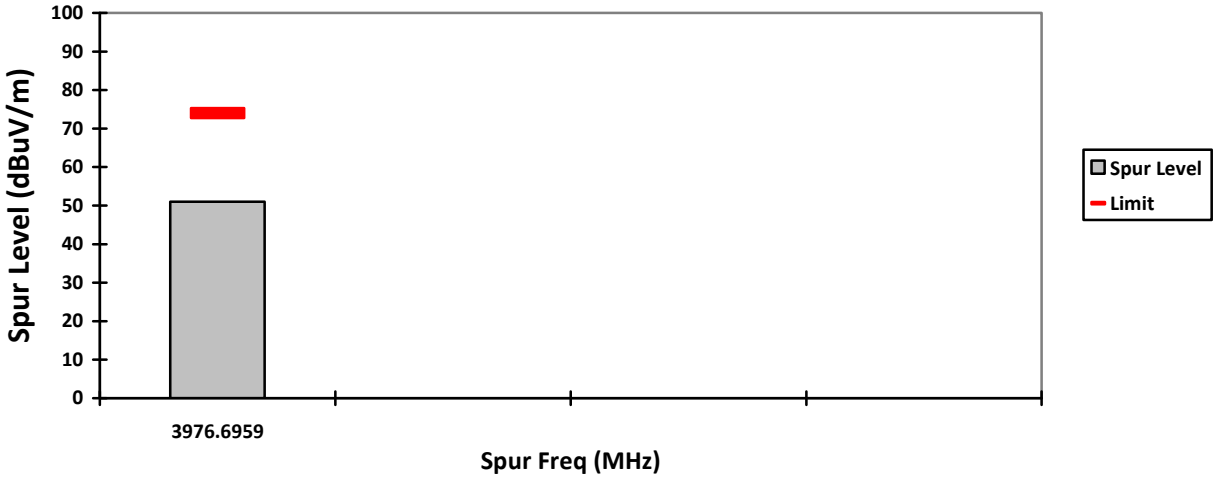
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

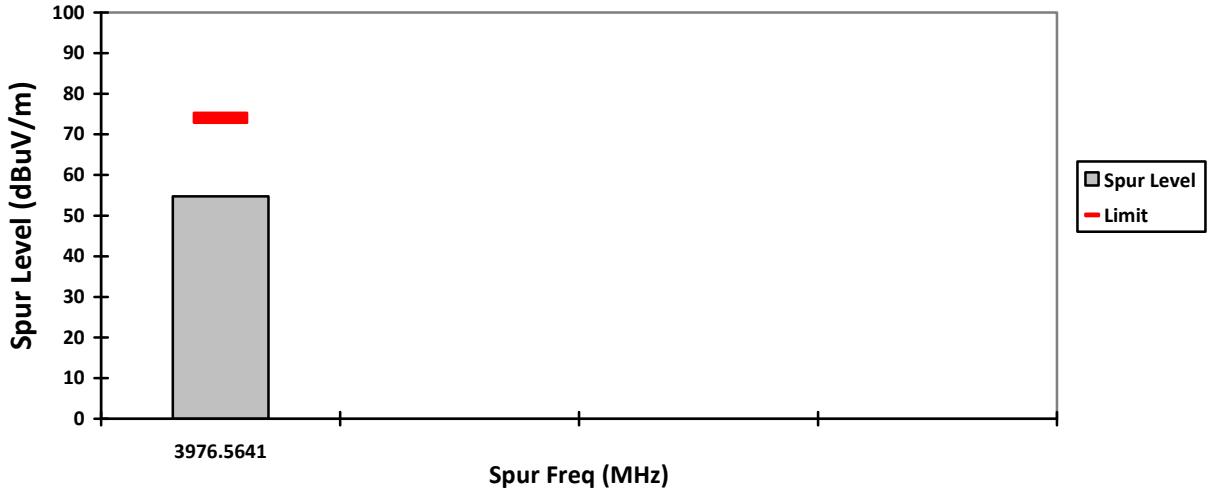
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

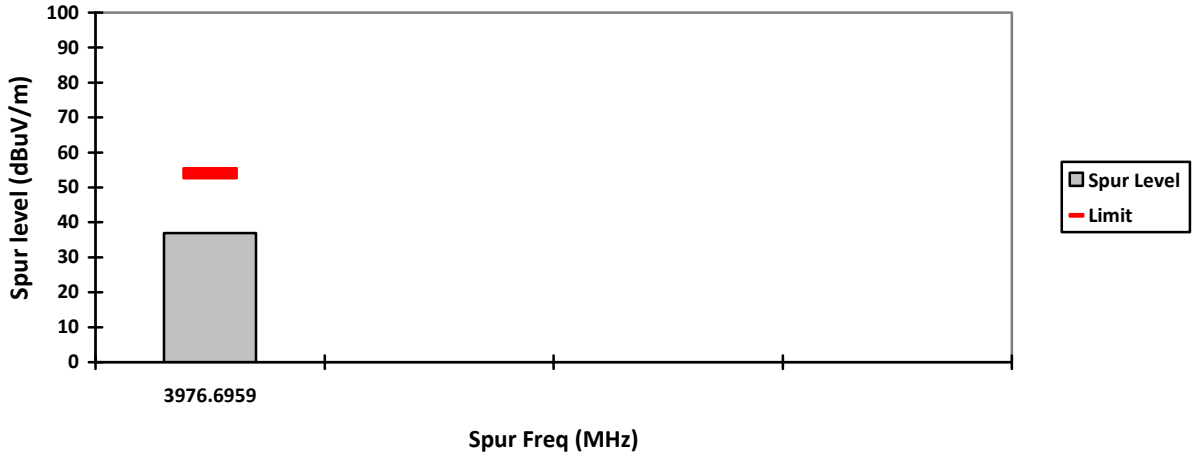
VERTICAL, PK



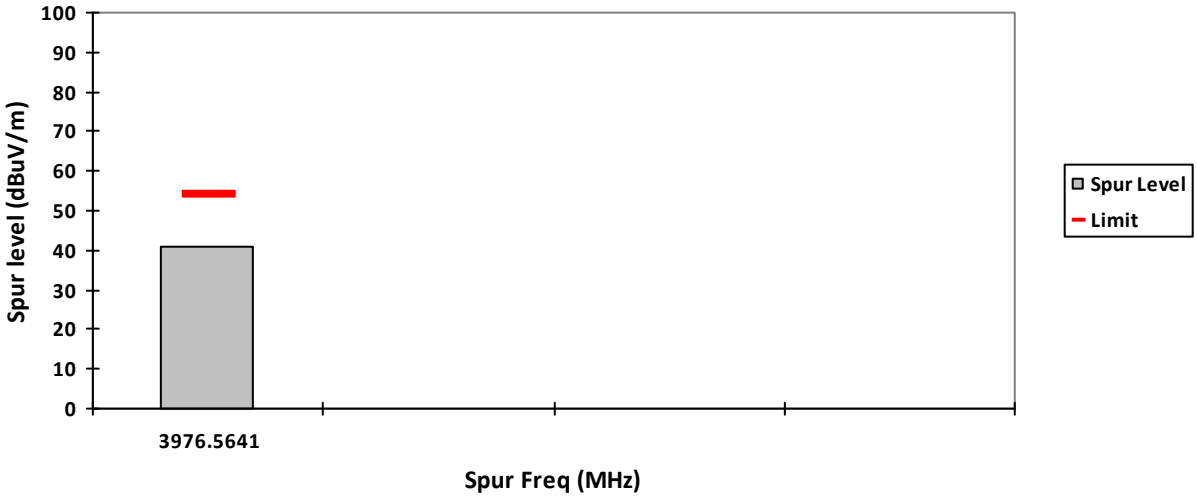
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (16dBm) Accessory: PMAD4147A

Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10640	-	60.9893**	47.2730**	-	74.0000	54.0000	-	13.0107	6.7270	-
15960	-	67.1389**	53.4851**	-	74.0000	54.0000	-	6.8611	0.5149	-
21280	-	39.6121**	-	-	74.0000	-	-	34.3879	-	-
26600	-	43.7886**	-	-	68.2000	-	-	24.4114	-	-
31920	-	43.5547**	-	-	68.2000	-	-	24.6453	-	-
37240	-	46.2661**	-	-	68.2000	-	-	21.9339	-	-
Horizontal Radiated Emission Result										
10640	-	61.4390**	47.2725**	-	74.0000	54.0000	-	12.5610	6.7275	-
15960	-	66.9706**	53.4857**	-	74.0000	54.0000	-	7.0294	0.5143	-
21280	-	40.8074**	-	-	74.0000	-	-	33.1926	-	-
26600	-	43.1725**	-	-	68.2000	-	-	25.0275	-	-
31920	-	43.4007**	-	-	68.2000	-	-	24.7993	-	-
37240	-	46.2856**	-	-	68.2000	-	-	21.9144	-	-

Remarks: Pass Result	Marginal Result	Fail Result

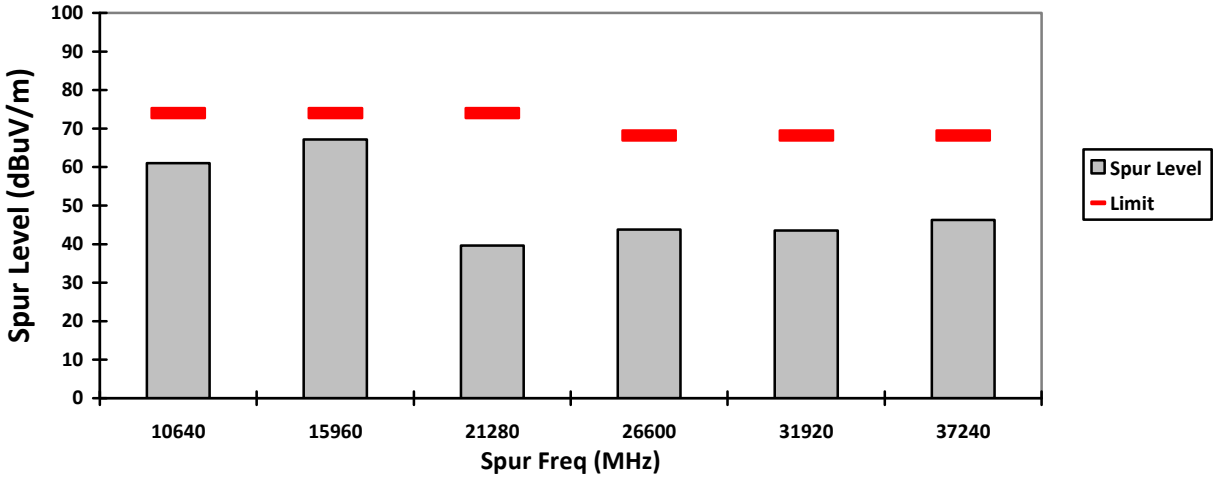
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

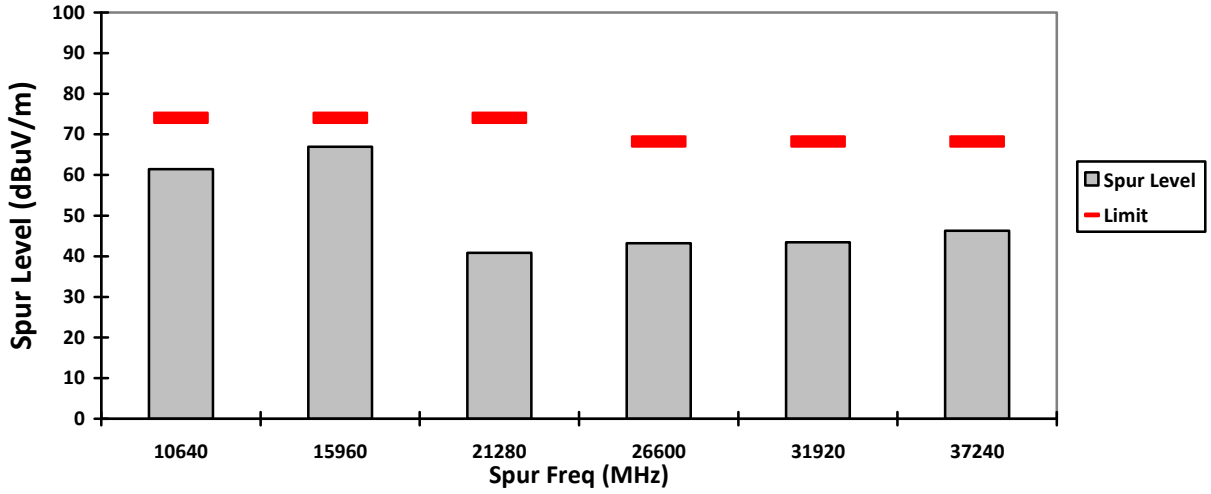
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

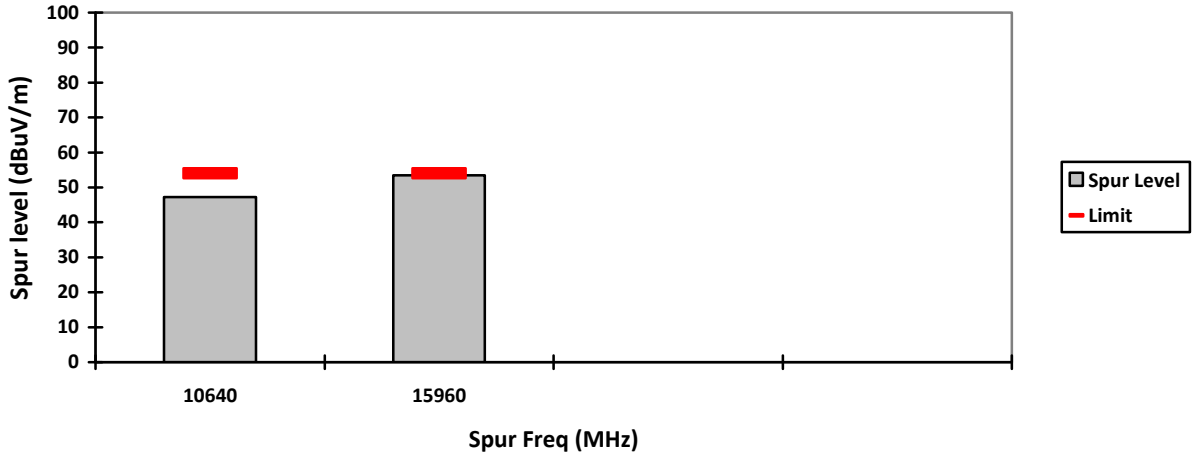
VERTICAL, PK



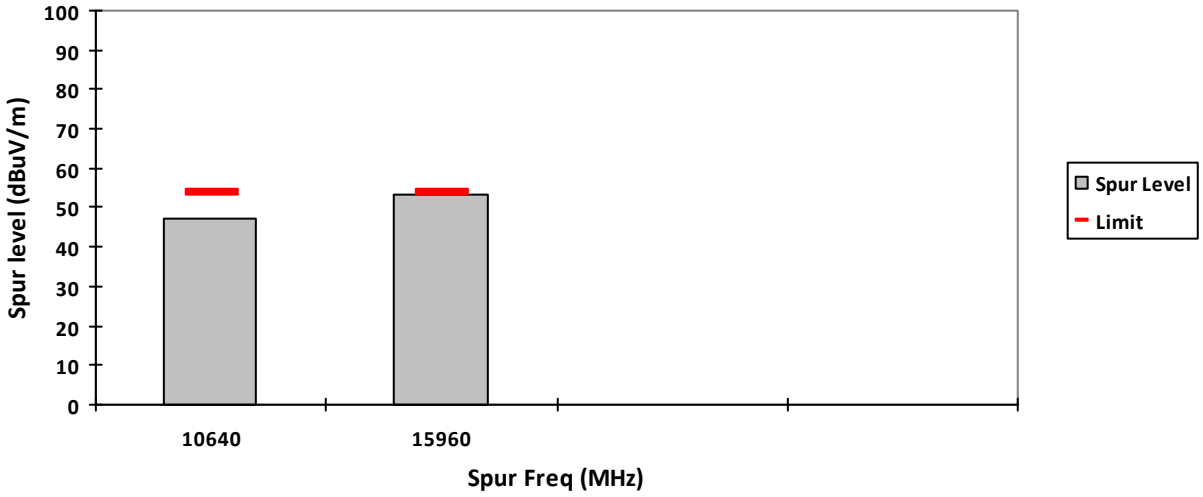
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (12dBm) Accessory: PMAD4147A

Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11000	-	61.7174**	47.8023**	-	74.0000	54.0000	-	12.2826	6.1977	-
16500	-	66.9705**	-	-	68.2000	-	-	1.2295	-	-
22000	-	42.3420**	-	-	68.2000	-	-	25.8580	-	-
27500	-	43.2747**	-	-	68.2000	-	-	24.9253	-	-
33000	-	44.3058**	-	-	68.2000	-	-	23.8942	-	-
38500	-	50.2066**	-	-	68.2000	-	-	17.9934	-	-
Horizontal Radiated Emission Result										
11000	-	61.3235**	47.8025**	-	74.0000	54.0000	-	12.6765	6.1975	-
16500	-	66.1653**	-	-	68.2000	-	-	2.0347	-	-
22000	-	41.7962**	-	-	68.2000	-	-	26.4038	-	-
27500	-	42.9076**	-	-	68.2000	-	-	25.2924	-	-
33000	-	43.7734**	-	-	68.2000	-	-	24.4266	-	-
38500	-	49.8764**	-	-	68.2000	-	-	18.3236	-	-

Remarks: Pass Result	Marginal Result	Fail Result

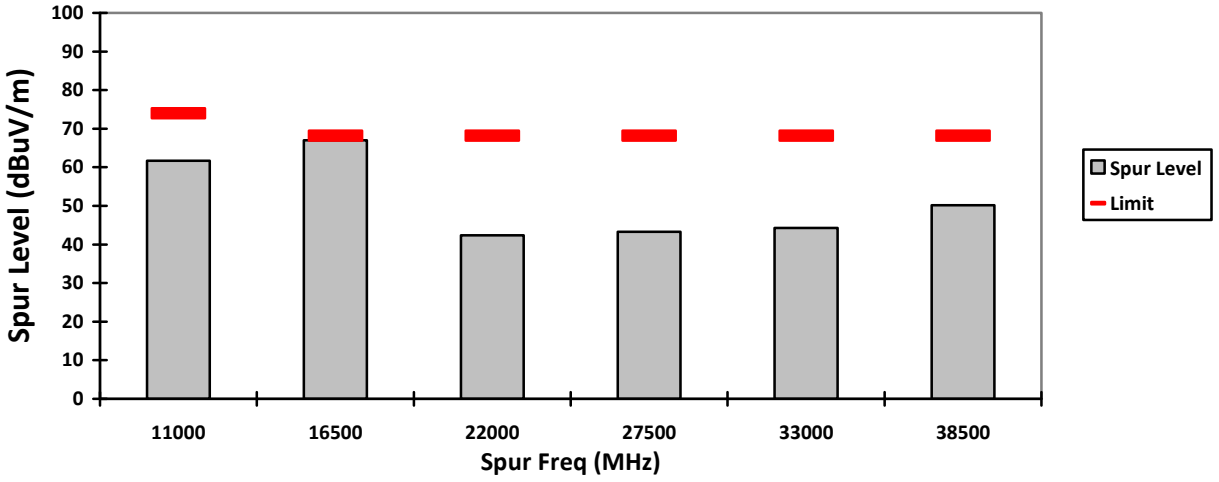
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

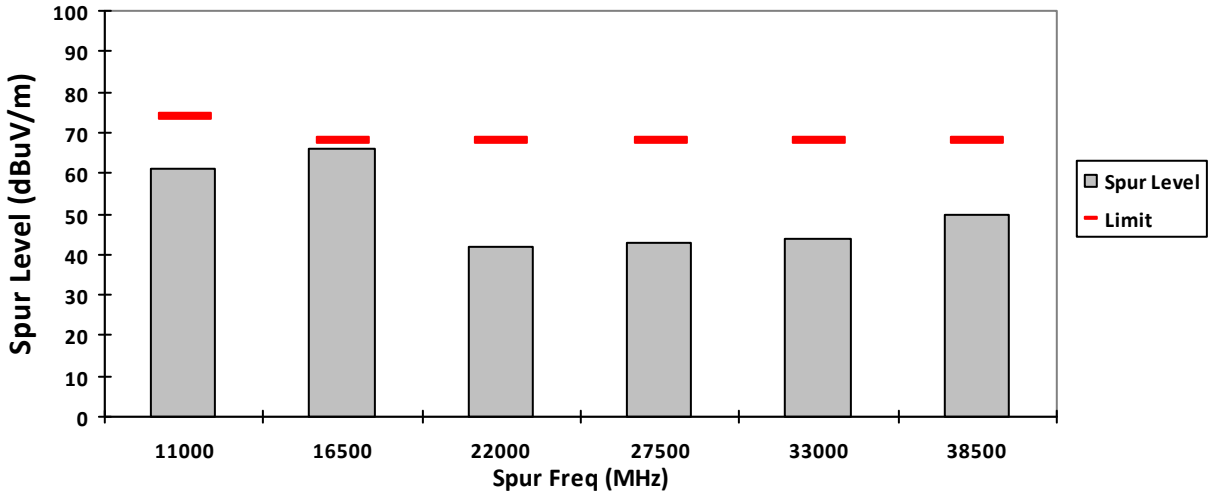
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

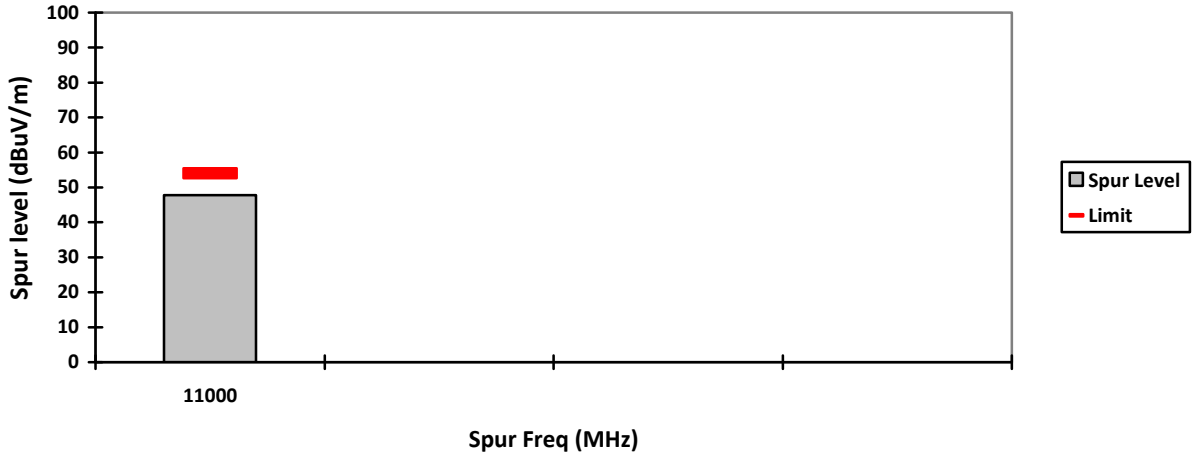
VERTICAL, PK



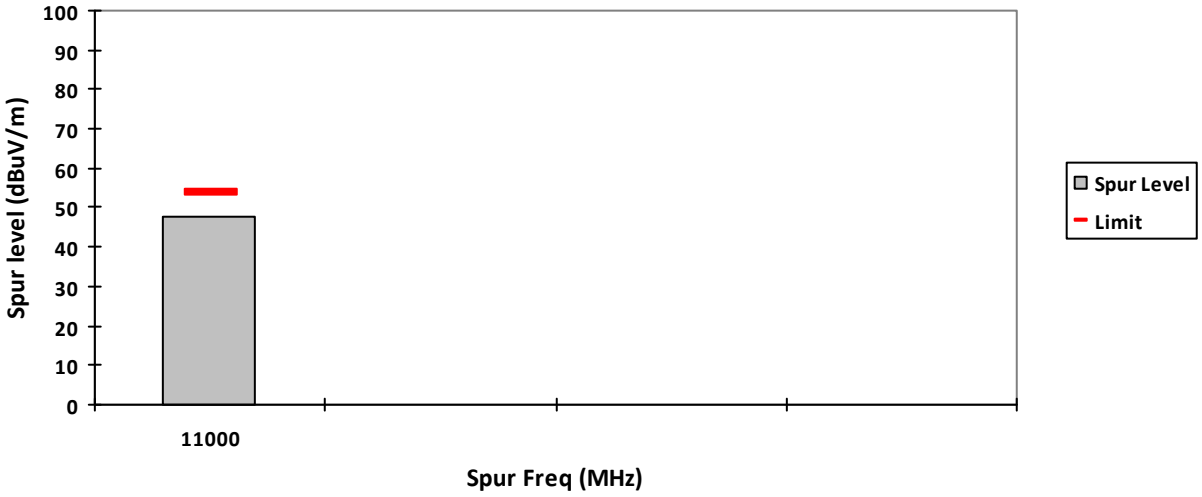
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (15dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5580.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
2788.5226	-	50.2256 *	35.6810	-	74.0000	54.0000	-	23.7744	18.3190	-
Horizontal Radiated Emission Result										
2788.1469	-	49.1344 *	35.5599	-	74.0000	54.0000	-	24.8656	18.4401	-

Remarks: Pass Result	Marginal Result	Fail Result

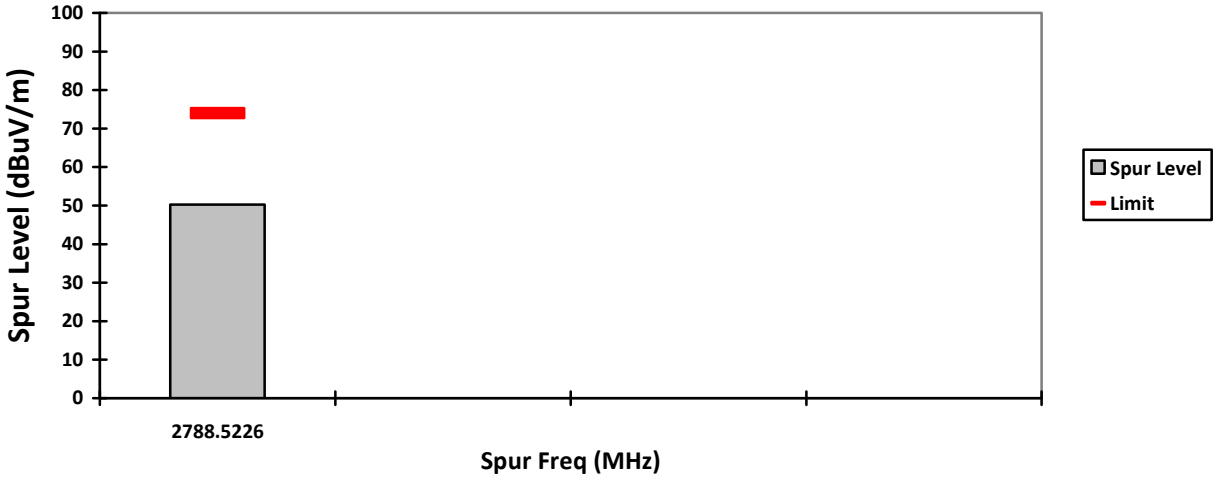
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

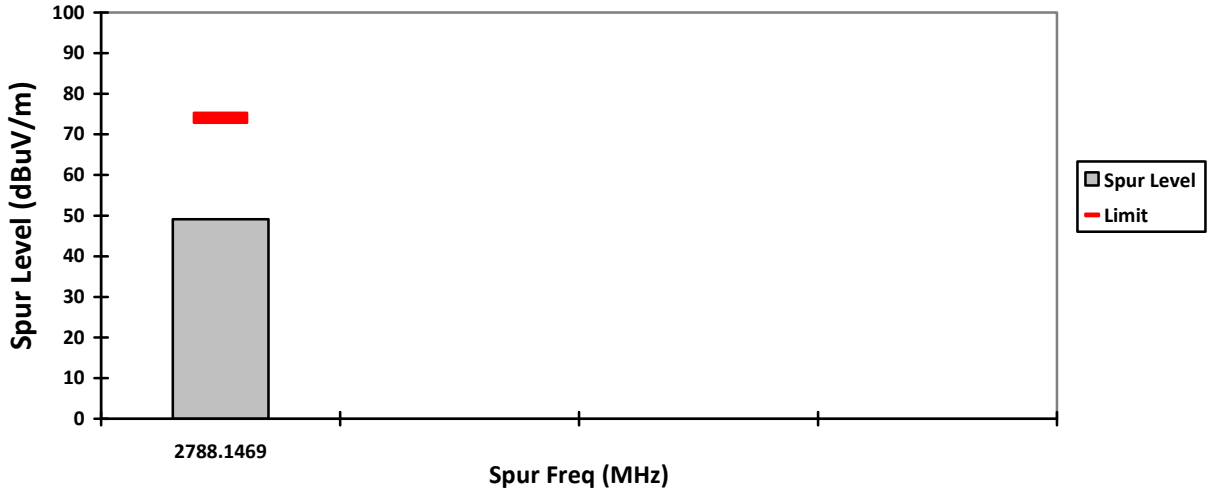
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

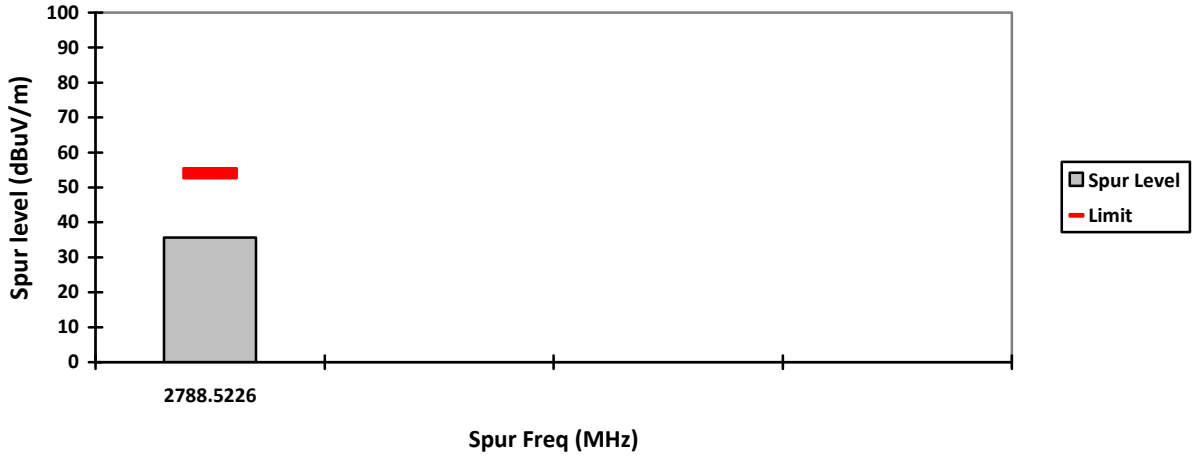
VERTICAL, PK



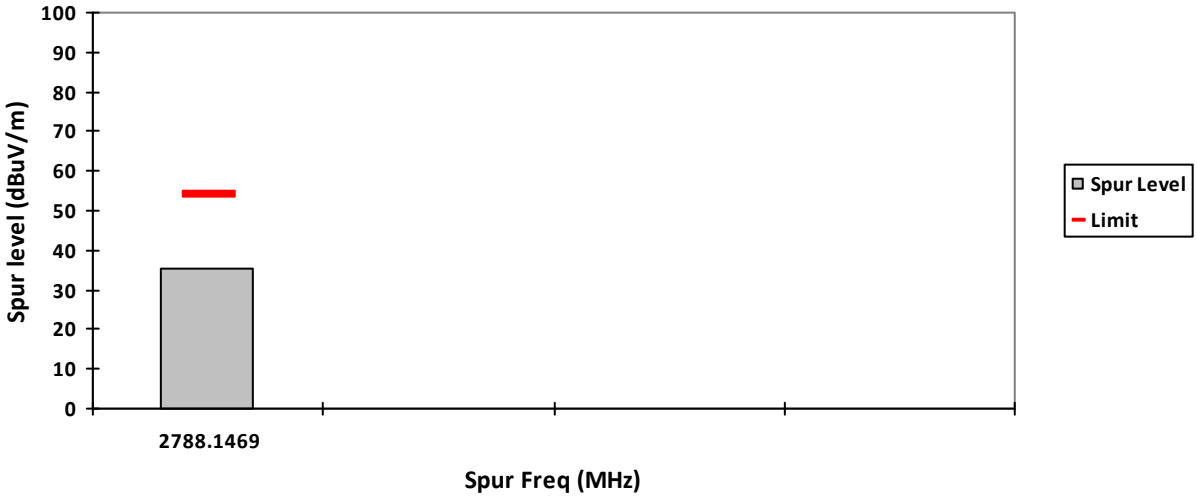
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (15dBm) Accessory: PMAD4147A

Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11440	-	61.9739**	48.3203**	-	74.0000	54.0000	-	12.0261	5.6797	-
17160	-	67.1537**	-	-	68.2000	-	-	1.0463	-	-
22880	-	40.9082**	-	-	74.0000	-	-	33.0918	-	-
28600	-	43.5447**	-	-	68.2000	-	-	24.6553	-	-
34320	-	45.7368**	-	-	68.2000	-	-	22.4632	-	-
Horizontal Radiated Emission Result										
11440	-	61.9436**	48.3126**	-	74.0000	54.0000	-	12.0564	5.6874	-
17160	-	67.5671**	-	-	68.2000	-	-	0.6329	-	-
22880	-	41.2734**	-	-	74.0000	-	-	32.7266	-	-
28600	-	42.9445**	-	-	68.2000	-	-	25.2555	-	-
34320	-	45.7744**	-	-	68.2000	-	-	22.4256	-	-

Remarks: Pass Result	Marginal Result	Fail Result

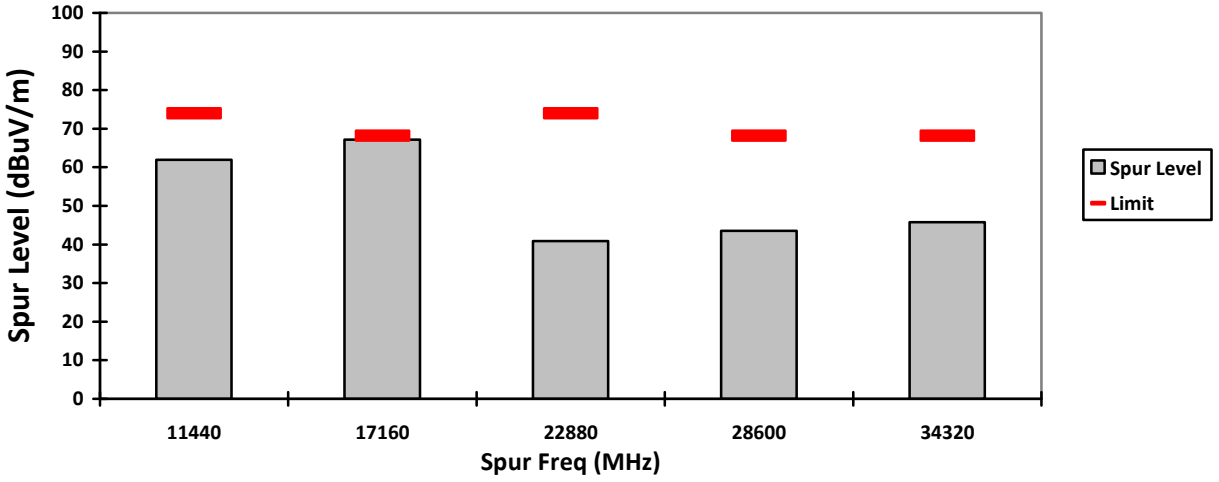
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

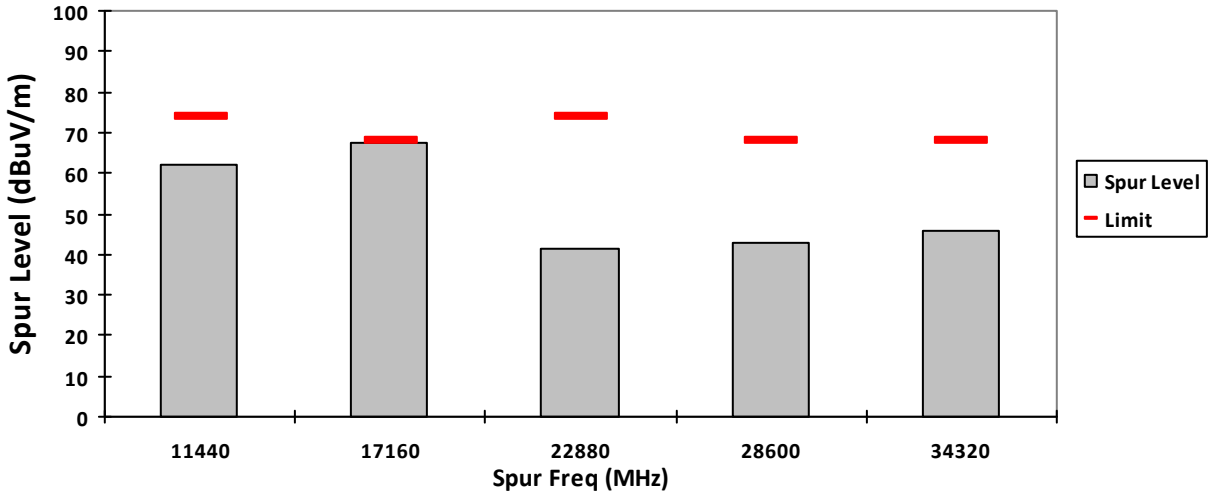
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

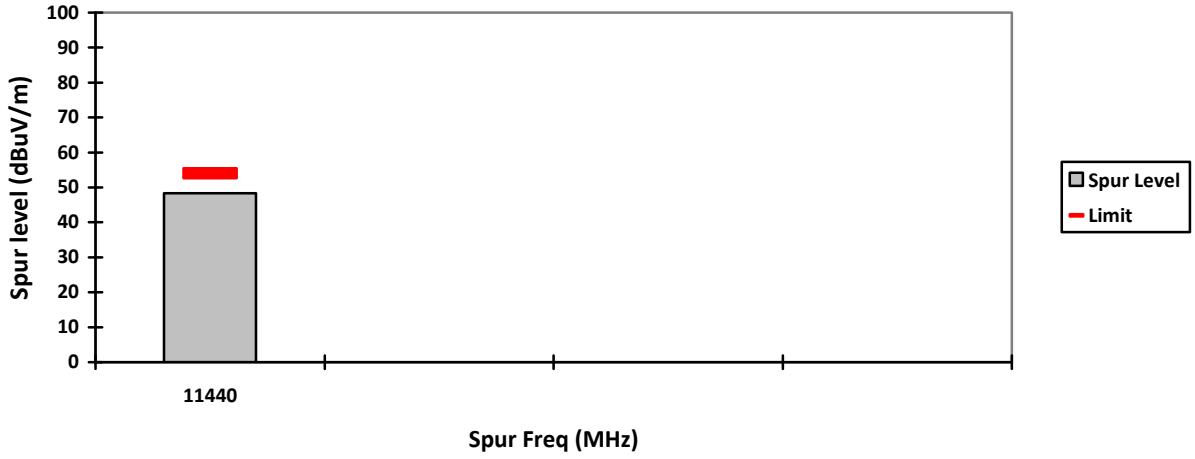
VERTICAL, PK



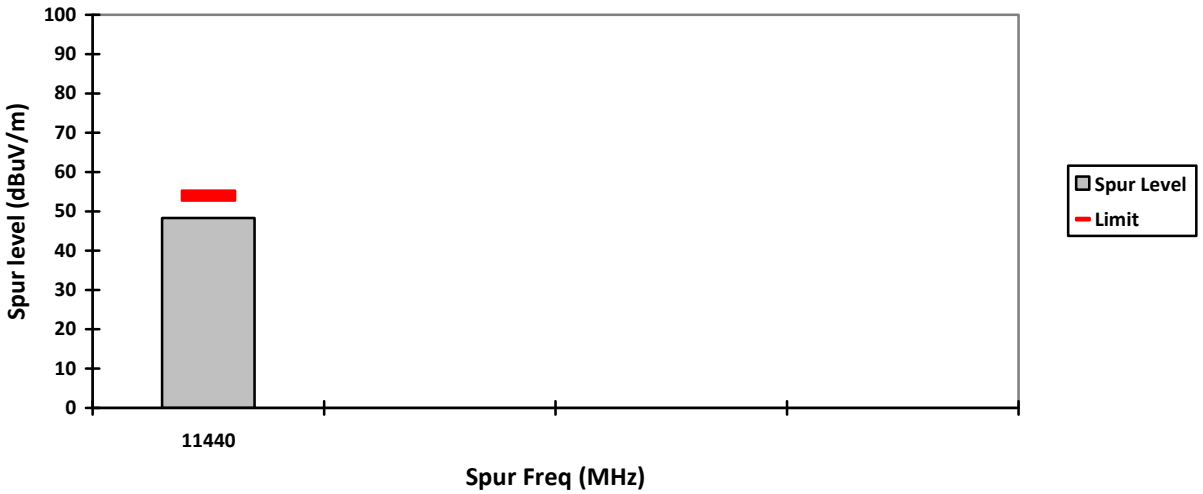
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (14dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

Radiated Emission (Low Channel) tabular data

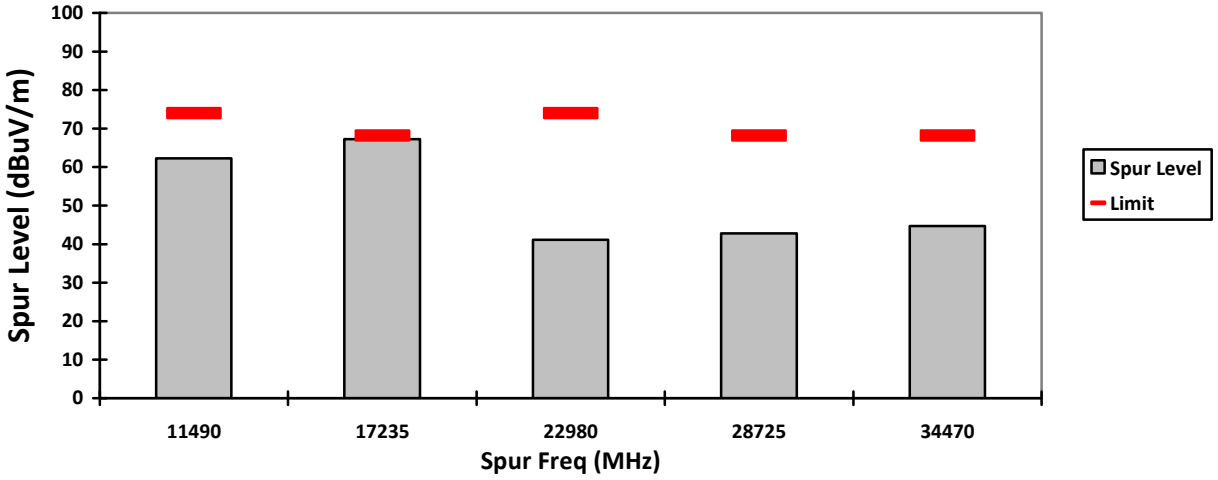
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11490	-	62.2776**	48.6843**	-	74.0000	54.0000	-	11.7224	5.3157	-
17235	-	67.2089**	-	-	68.2000	-	-	0.9911	-	-
22980	-	41.1604**	-	-	74.0000	-	-	32.8396	-	-
28725	-	42.7671**	-	-	68.2000	-	-	25.4329	-	-
34470	-	44.7303**	-	-	68.2000	-	-	23.4697	-	-
Horizontal Radiated Emission Result										
11490	-	62.2385**	48.6841**	-	74.0000	54.0000	-	11.7615	5.3159	-
17235	-	67.3382**	-	-	68.2000	-	-	0.8618	-	-
22980	-	41.4068**	-	-	74.0000	-	-	32.5932	-	-
28725	-	42.8392**	-	-	68.2000	-	-	25.3608	-	-
34470	-	43.6326**	-	-	68.2000	-	-	24.5674	-	-

Remarks: Pass Result	Marginal Result	Fail Result

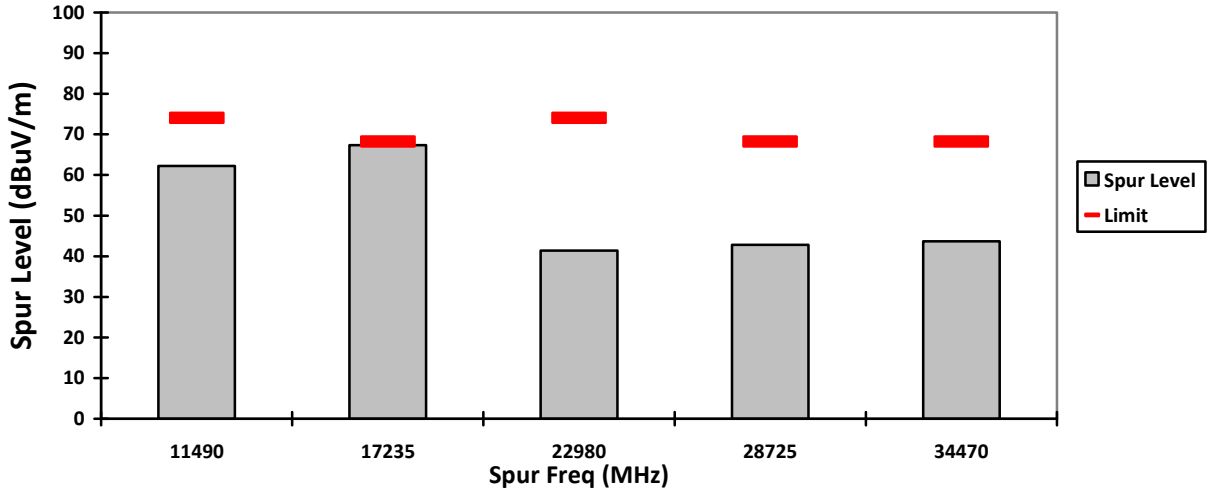
Temperature (degC): 23.1 Humidity (%): 69.7
Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

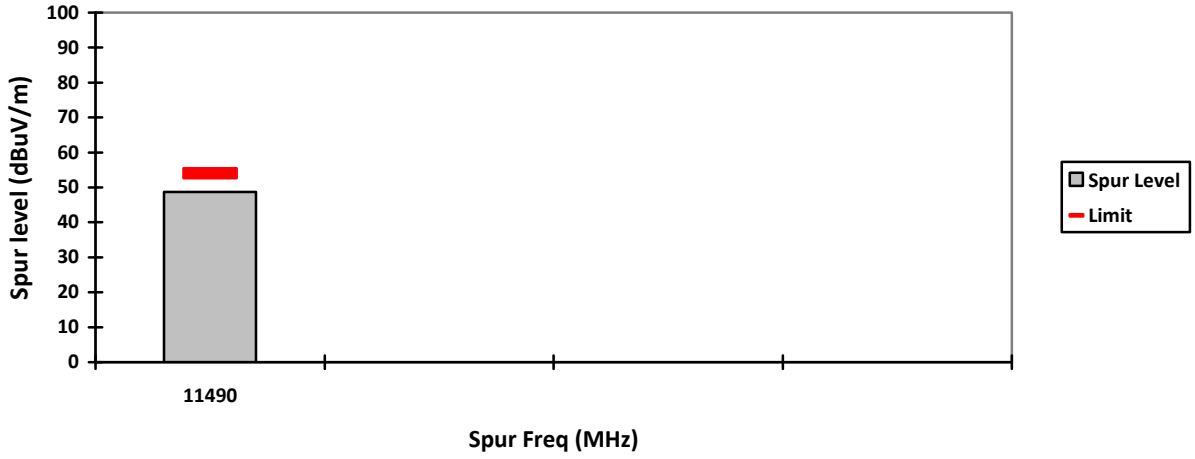
VERTICAL, PK



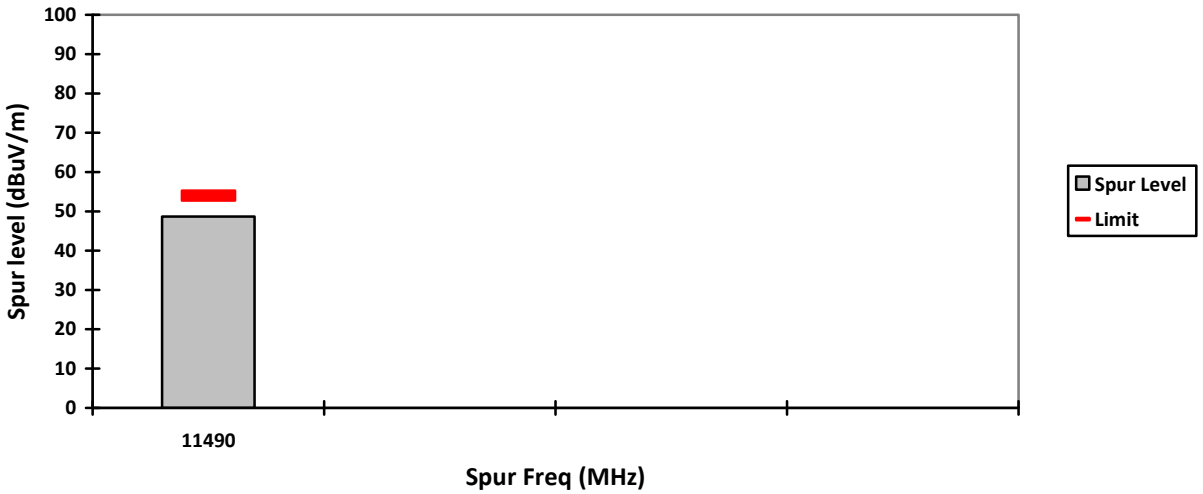
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (14dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5785.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11570	-	62.9875**	48.9414**	-	74.0000	54.0000	-	11.0125	5.0586	-
17355	-	67.5564**	-	-	68.2000	-	-	0.6436	-	-
23140	-	41.5332**	-	-	68.2000	-	-	26.6668	-	-
28925	-	43.5740**	-	-	68.2000	-	-	24.6260	-	-
34710	-	47.6365**	-	-	68.2000	-	-	20.5635	-	-
Horizontal Radiated Emission Result										
11570	-	62.8620**	49.0857**	-	74.0000	54.0000	-	11.1380	4.9143	-
17355	-	67.1913**	-	-	68.2000	-	-	1.0087	-	-
23140	-	41.3477**	-	-	68.2000	-	-	26.8523	-	-
28925	-	43.4083**	-	-	68.2000	-	-	24.7917	-	-
34710	-	46.5917**	-	-	68.2000	-	-	21.6083	-	-

Remarks: Pass Result	Marginal Result	Fail Result

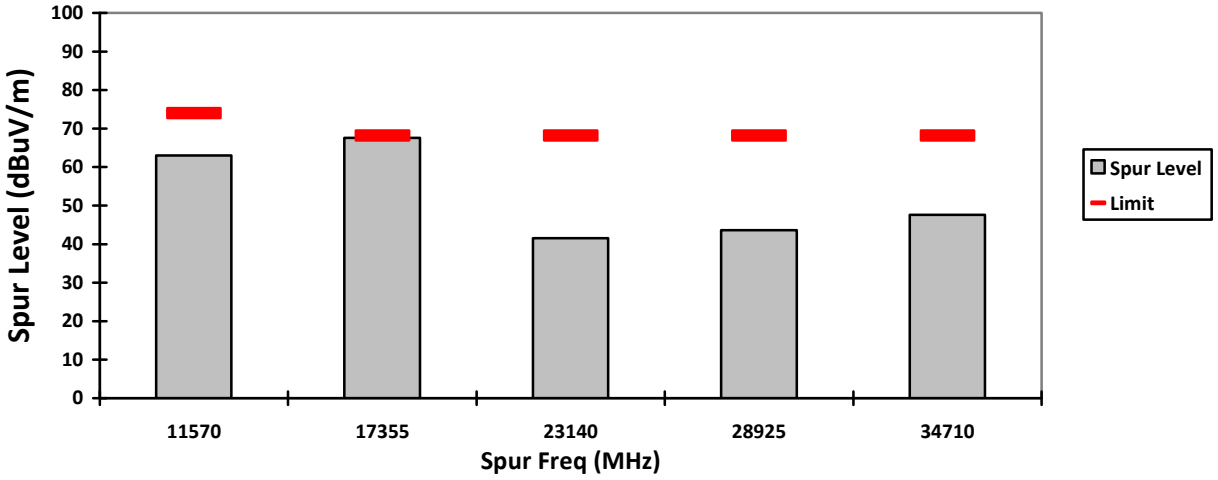
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

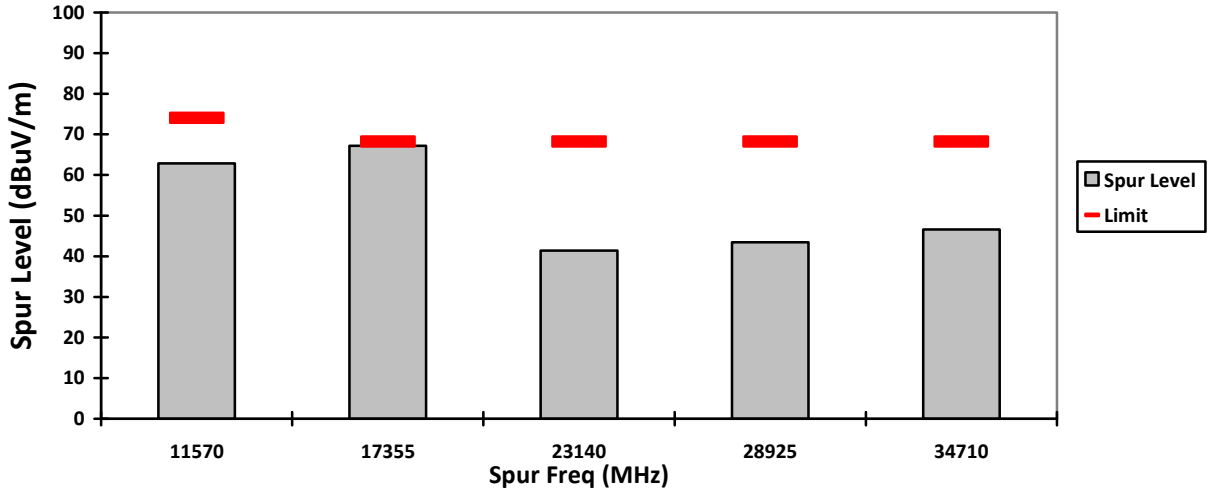
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

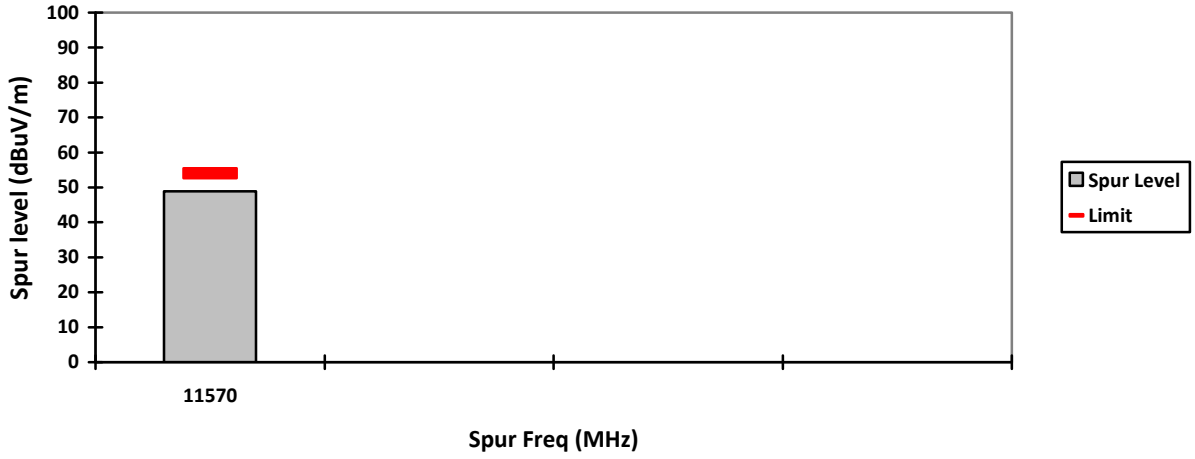
VERTICAL, PK



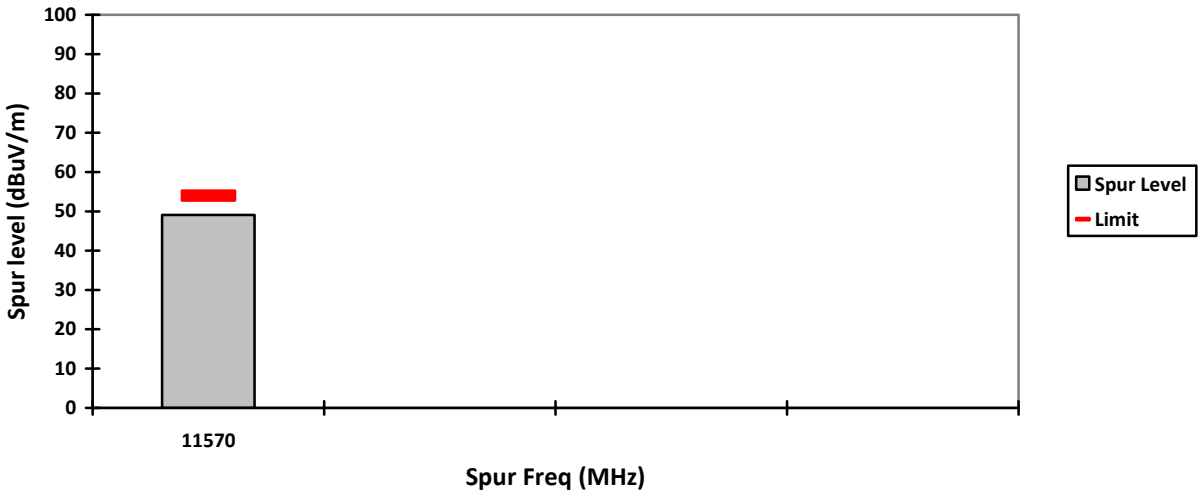
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN **S/N: 651EAK0048** **EMC SR ID#: 0680N01-EMC-00011**

Battery: PMNN4890A **Softpot power (14dBm)** **Accessory: PMAD4147A**

Test Channel: High **Test Frequency: 5825.0000 MHz** **Test Standard: ANSI C63.10-2013**

Worst Case Plane: Z-Plane (802.11a 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
3883.3156	-	51.0592 *	40.9536	-	74.0000	54.0000	-	22.9408	13.0464	-
Horizontal Radiated Emission Result										
3883.2806	-	54.8409 *	47.1205	-	74.0000	54.0000	-	19.1591	6.8795	-

Remarks: Pass Result	Marginal Result	Fail Result

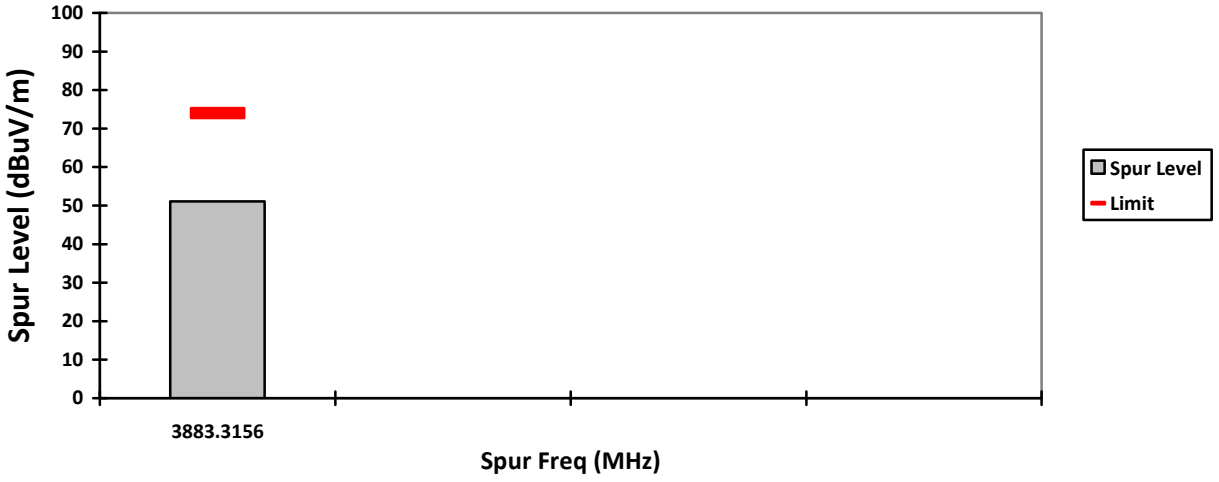
Temperature (degC): 23.1 **Humidity (%): 69.7**

Test Performed by: Nazrin&Qawiman **Test Date: Sat, 10 Aug, 2024**

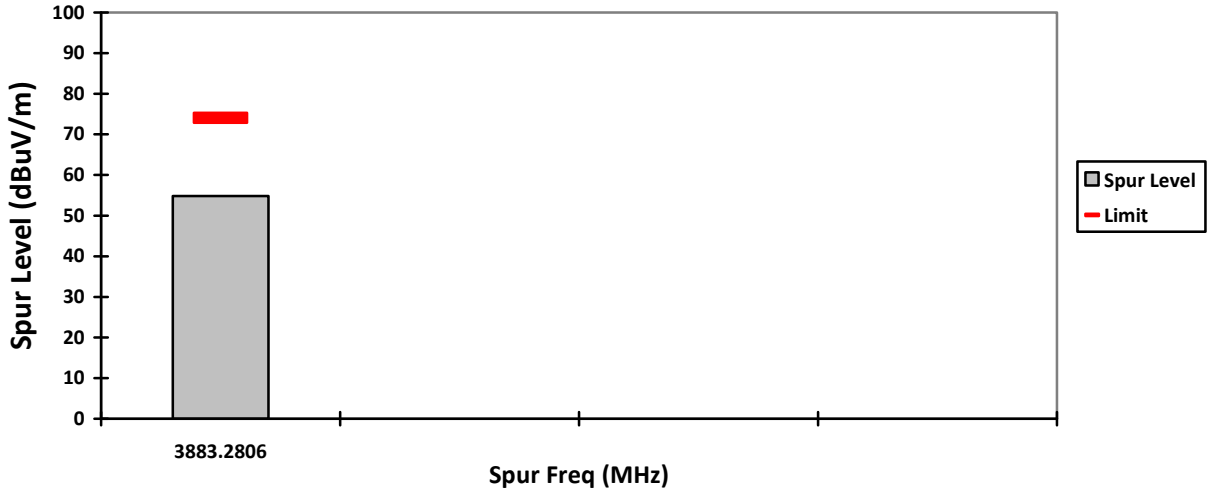
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

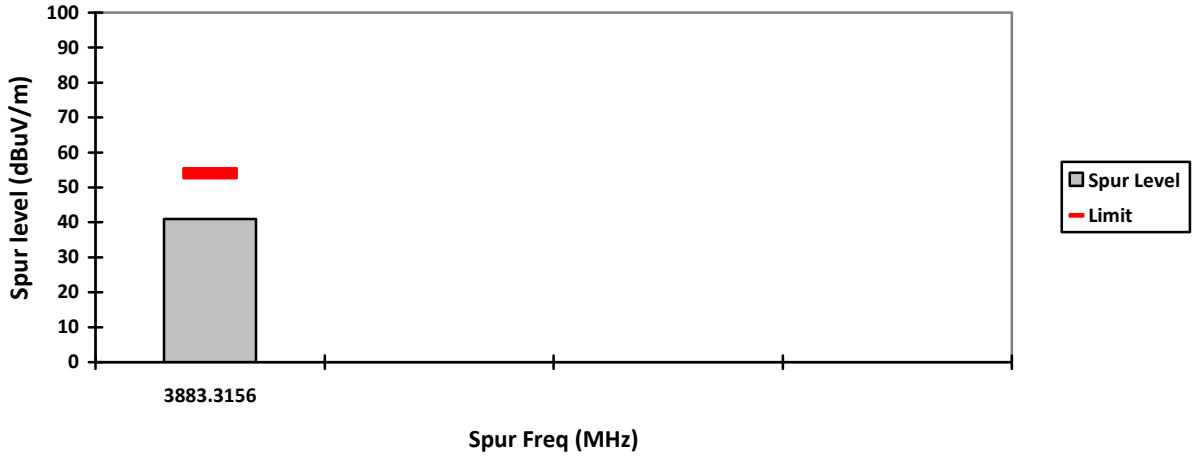
VERTICAL, PK



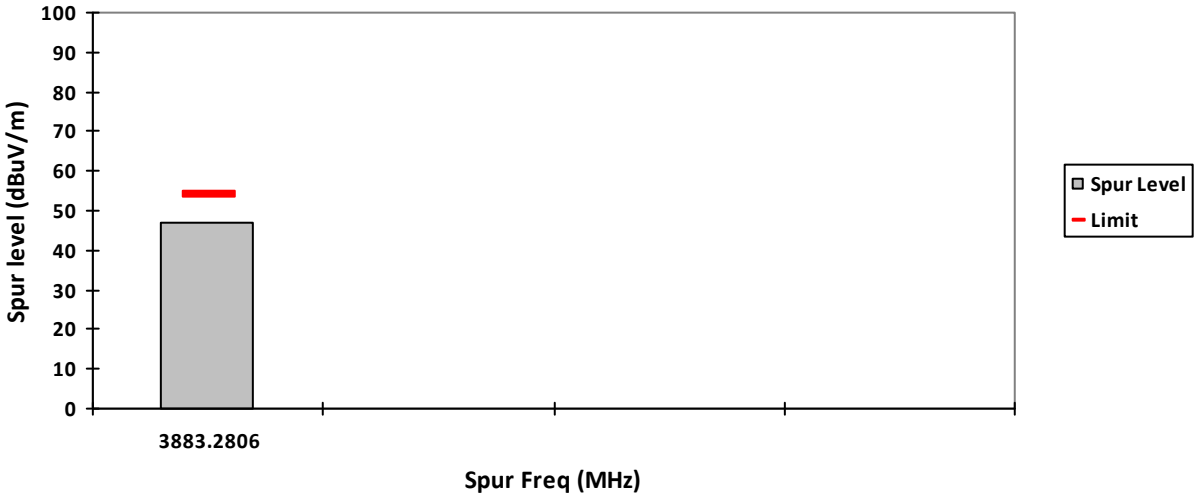
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



802.11n (HT20)

Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (15dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

Radiated Emission (Low Channel) tabular data

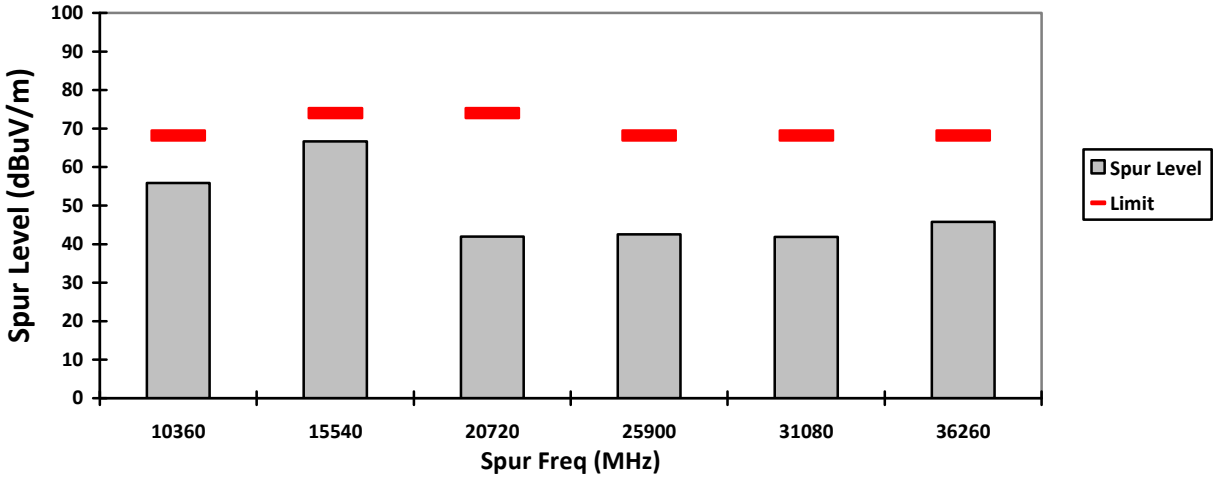
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10360	-	55.8786**	-	-	68.2000	-	-	12.3214	-	-
15540	-	66.6435**	53.1077**	-	74.0000	54.0000	-	7.3565	0.8923	-
20720	-	41.9404**	-	-	74.0000	-	-	32.0596	-	-
25900	-	42.5232**	-	-	68.2000	-	-	25.6768	-	-
31080	-	41.8508**	-	-	68.2000	-	-	26.3492	-	-
36260	-	45.7466**	-	-	68.2000	-	-	22.4534	-	-
Horizontal Radiated Emission Result										
10360	-	57.3991**	-	-	68.2000	-	-	10.8009	-	-
15540	-	66.8399**	53.1080**	-	74.0000	54.0000	-	7.1601	0.8920	-
20720	-	41.9637**	-	-	74.0000	-	-	32.0363	-	-
25900	-	42.3578**	-	-	68.2000	-	-	25.8422	-	-
31080	-	41.8445**	-	-	68.2000	-	-	26.3555	-	-
36260	-	46.7255**	-	-	68.2000	-	-	21.4745	-	-

Remarks: Pass Result	Marginal Result	Fail Result

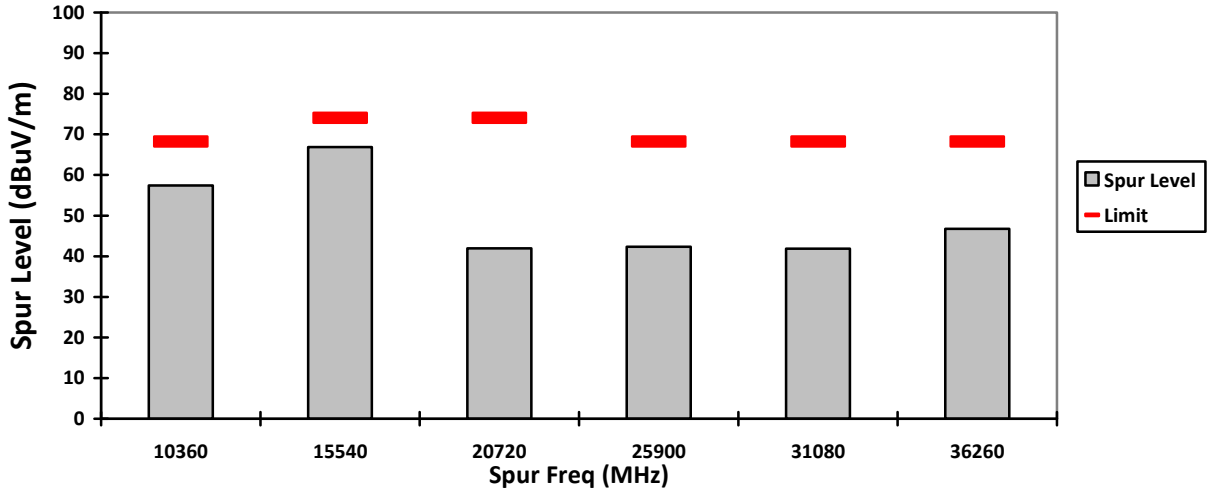
Temperature (degC): 23.1 Humidity (%): 69.7
Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

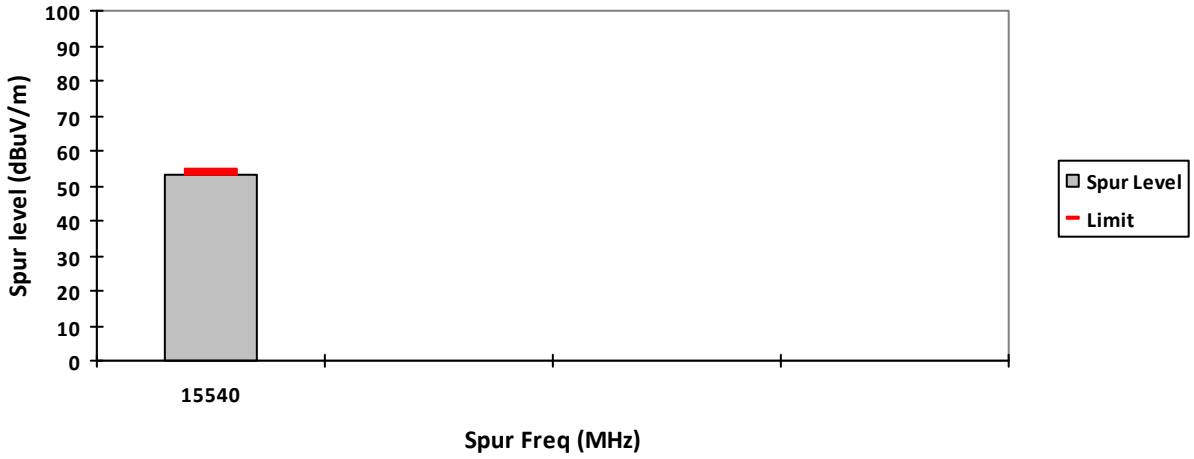
VERTICAL, PK



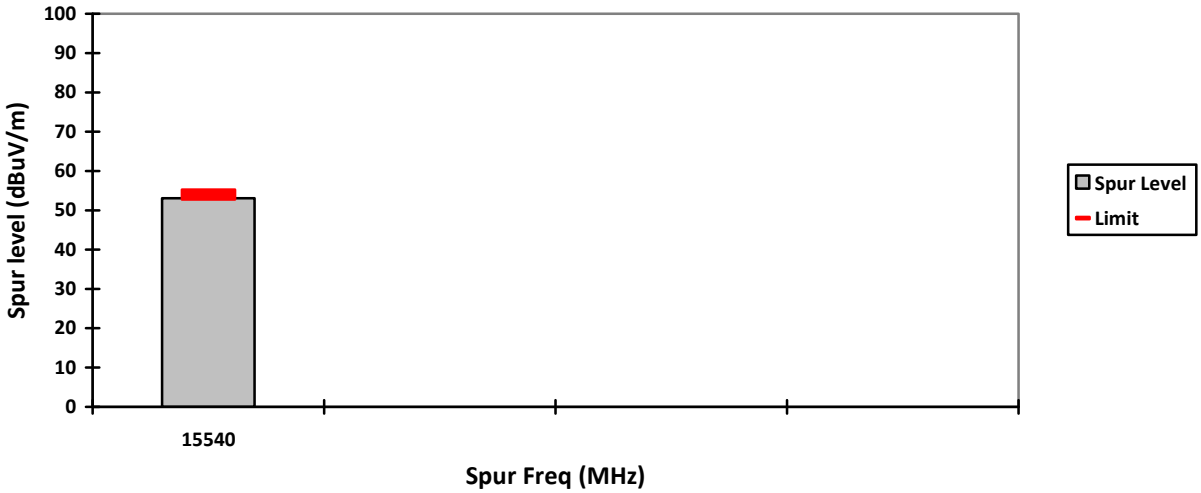
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5220.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10440	-	56.7559**	-	-	68.2000	-	-	11.4441	-	-
15660	-	67.4380**	53.1035**	-	74.0000	54.0000	-	6.5620	0.8965	-
20880	-	41.5519**	-	-	74.0000	-	-	32.4481	-	-
26100	-	42.8825**	-	-	68.2000	-	-	25.3175	-	-
31320	-	44.1165**	-	-	74.0000	-	-	29.8835	-	-
36540	-	45.7794**	-	-	68.2000	-	-	22.4206	-	-
Horizontal Radiated Emission Result										
10440	-	57.3338**	-	-	68.2000	-	-	10.8662	-	-
15660	-	66.4637**	53.1018**	-	74.0000	54.0000	-	7.5363	0.8982	-
20880	-	40.8491**	-	-	74.0000	-	-	33.1509	-	-
26100	-	42.2391**	-	-	68.2000	-	-	25.9609	-	-
31320	-	42.3792**	-	-	74.0000	-	-	31.6208	-	-
36540	-	45.4122**	-	-	68.2000	-	-	22.7878	-	-

Remarks: Pass Result	Marginal Result	Fail Result

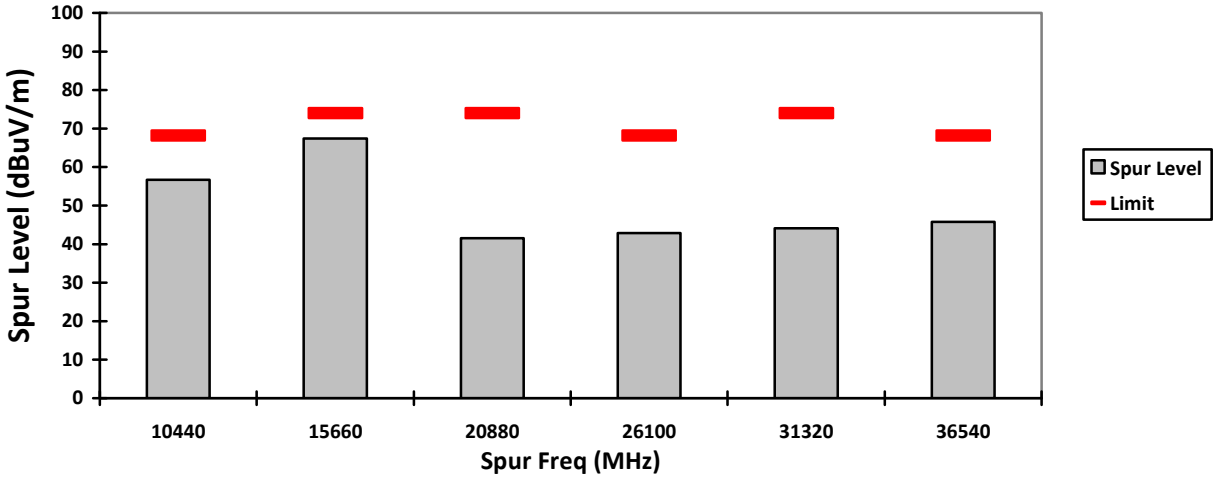
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

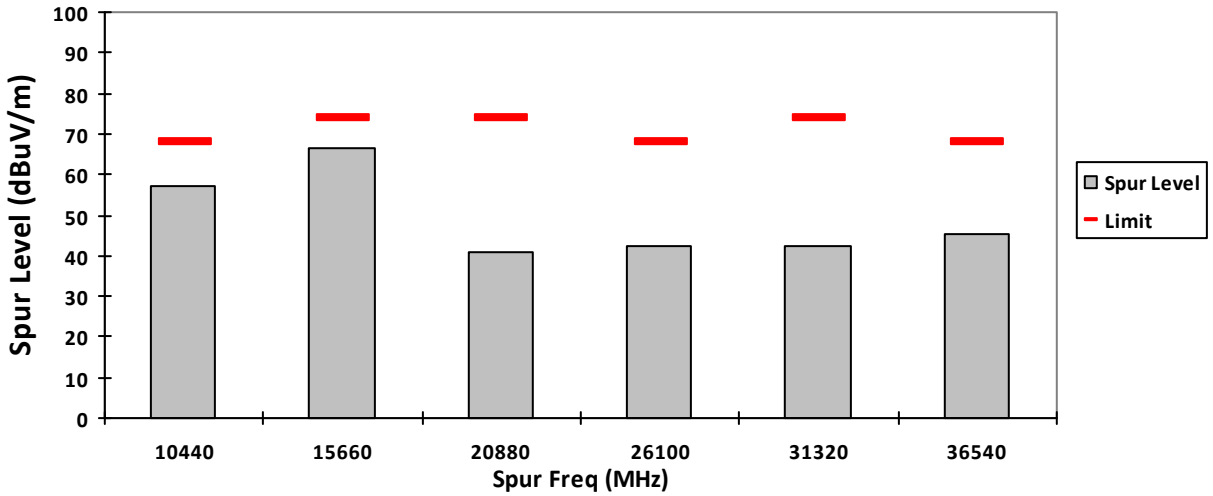
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

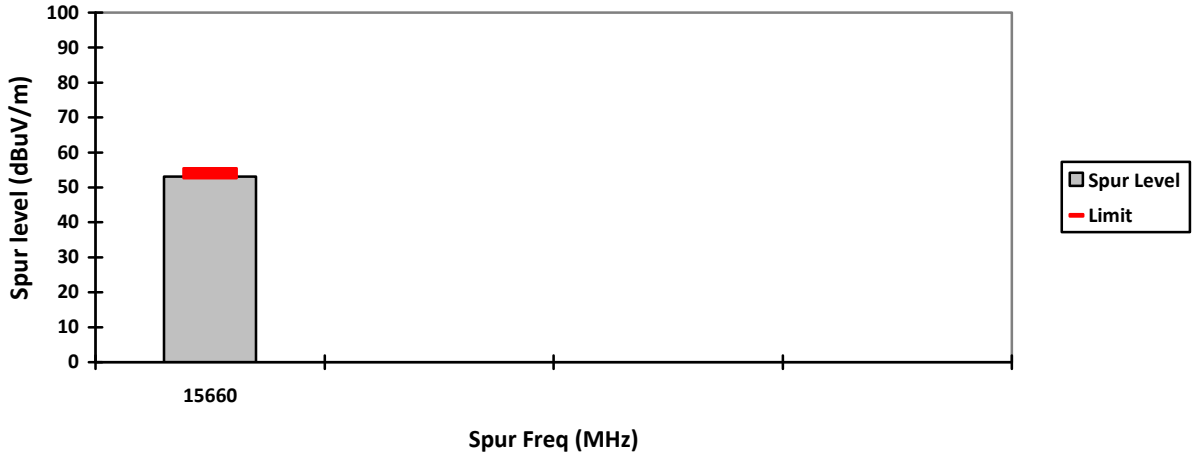
VERTICAL, PK



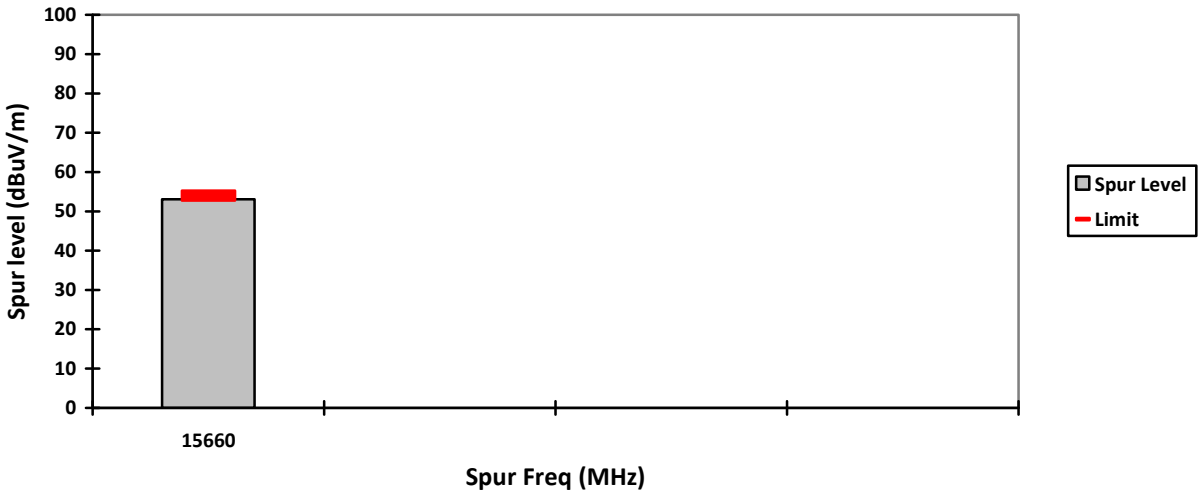
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: High Test Frequency: 5240.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10480	-	58.1289**	-	-	68.2000	-	-	10.0711	-	-
15720	-	66.6094**	52.6860**	-	74.0000	54.0000	-	7.3906	1.3140	-
20960	-	42.9926**	-	-	74.0000	-	-	31.0074	-	-
26200	-	43.7315**	-	-	68.2000	-	-	24.4685	-	-
31440	-	43.2936**	-	-	74.0000	-	-	30.7064	-	-
36680	-	47.0069**	-	-	68.2000	-	-	21.1931	-	-
Horizontal Radiated Emission Result										
10480	-	57.2761**	-	-	68.2000	-	-	10.9239	-	-
15720	-	66.3721**	52.6885**	-	74.0000	54.0000	-	7.6279	1.3115	-
20960	-	42.3685**	-	-	74.0000	-	-	31.6315	-	-
26200	-	43.7571**	-	-	68.2000	-	-	24.4429	-	-
31440	-	42.7140**	-	-	74.0000	-	-	31.286	-	-
36680	-	46.2691**	-	-	68.2000	-	-	21.9309	-	-

Remarks: Pass Result	Marginal Result	Fail Result

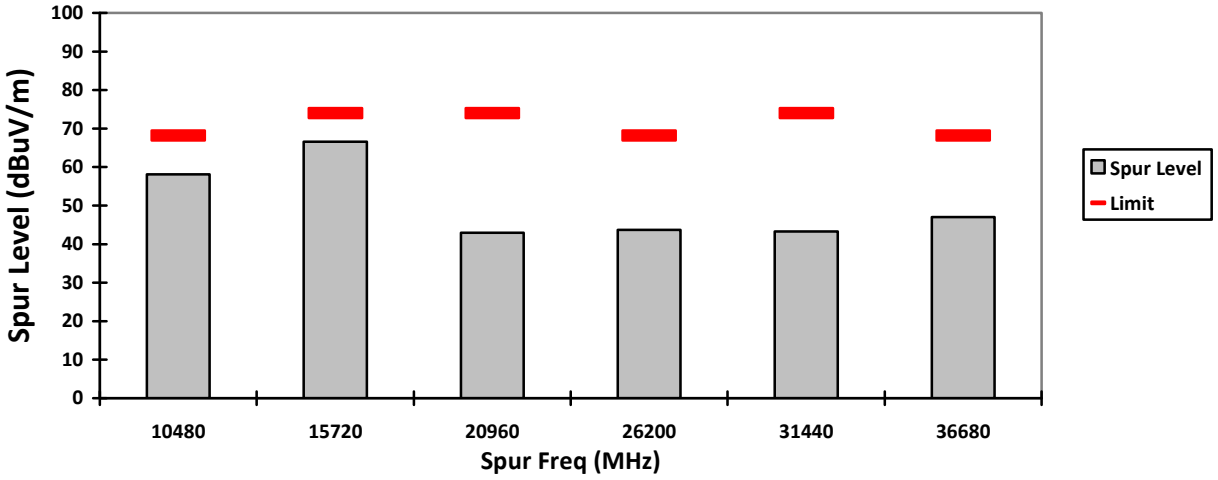
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

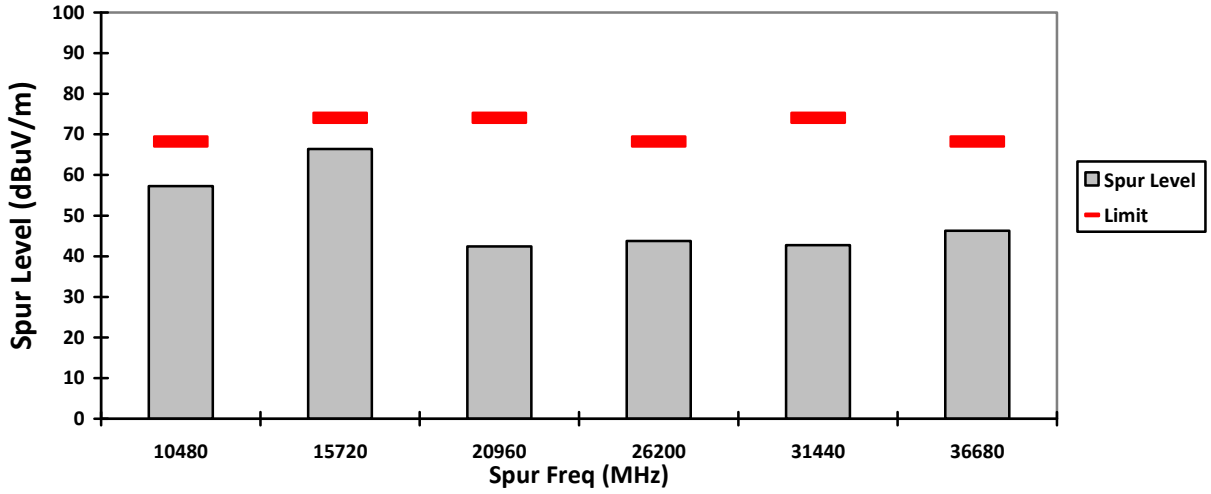
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

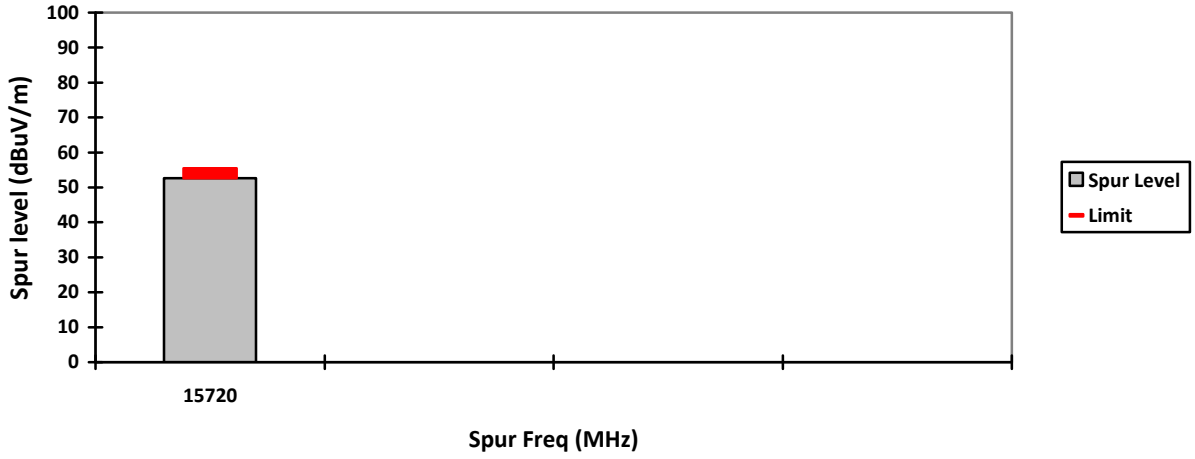
VERTICAL, PK



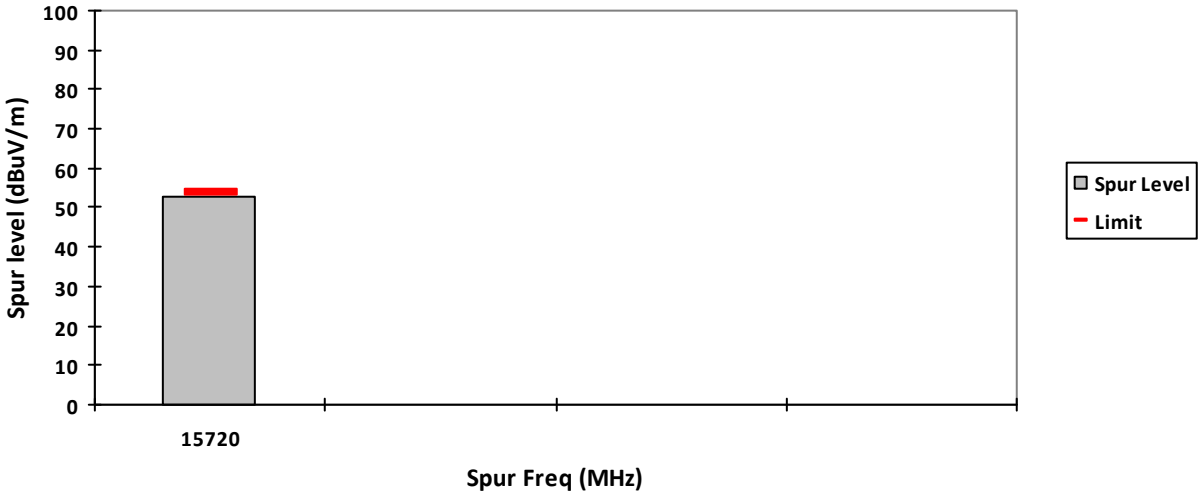
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A

Test Channel: Low Test Frequency: 5260.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10520	-	57.0335**	-	-	68.2000	-	-	11.1665	-	-
15780	-	66.8110**	53.2490**	-	74.0000	54.0000	-	7.1890	0.7510	-
21040	-	41.1870**	-	-	74.0000	-	-	32.8130	-	-
26300	-	44.4311**	-	-	68.2000	-	-	23.7689	-	-
31560	-	43.0433**	-	-	74.0000	-	-	30.9567	-	-
36820	-	46.5311**	-	-	68.2000	-	-	21.6689	-	-
Horizontal Radiated Emission Result										
10520	-	55.9071**	-	-	68.2000	-	-	12.2929	-	-
15780	-	66.8442**	53.2465**	-	74.0000	54.0000	-	7.1558	0.7535	-
21040	-	42.2352**	-	-	74.0000	-	-	31.7648	-	-
26300	-	45.6239**	-	-	68.2000	-	-	22.5761	-	-
31560	-	42.9852**	-	-	74.0000	-	-	31.0148	-	-
36820	-	46.8325**	-	-	68.2000	-	-	21.3675	-	-

Remarks: Pass Result	Marginal Result	Fail Result

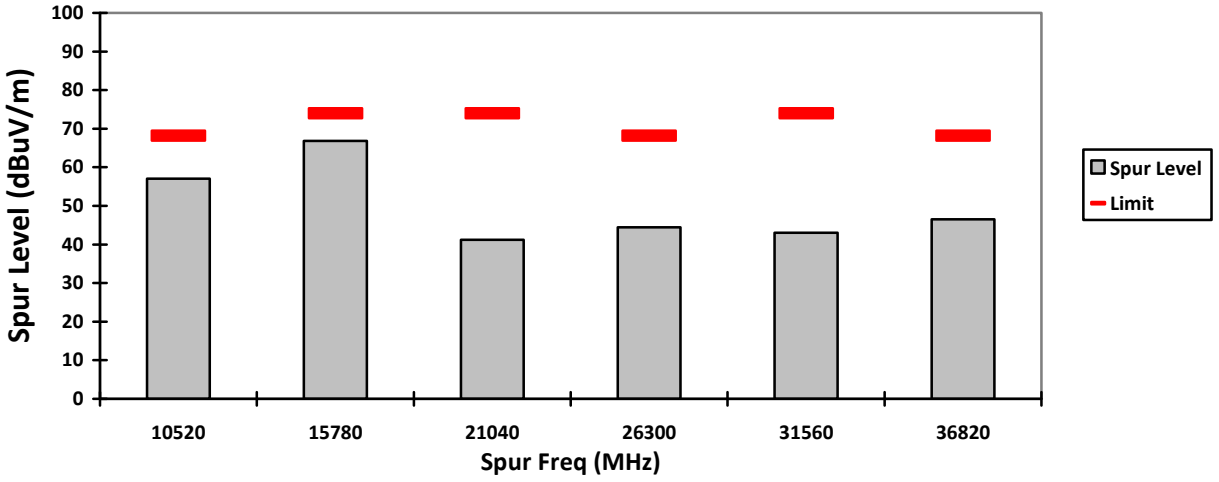
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

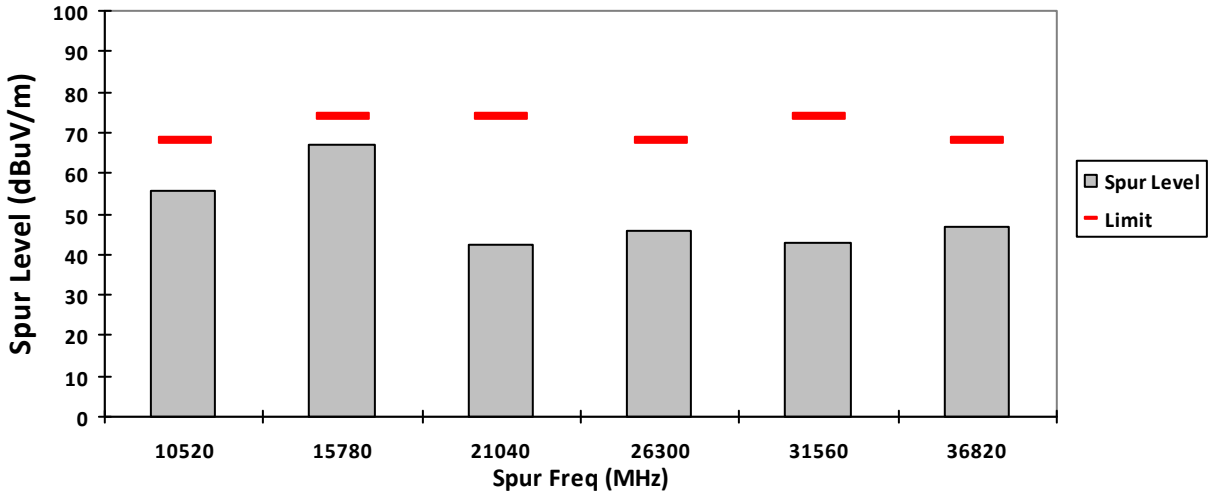
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

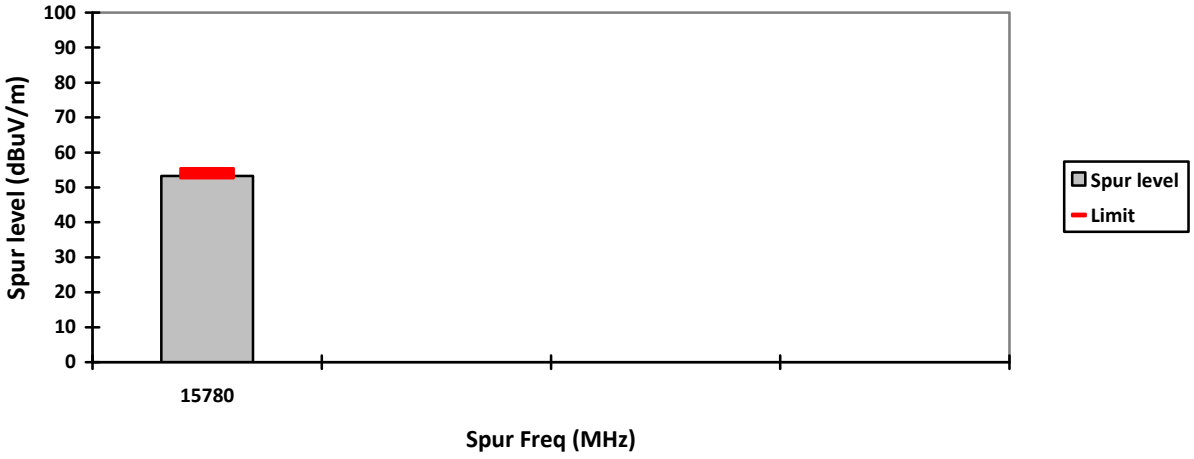
VERTICAL, PK



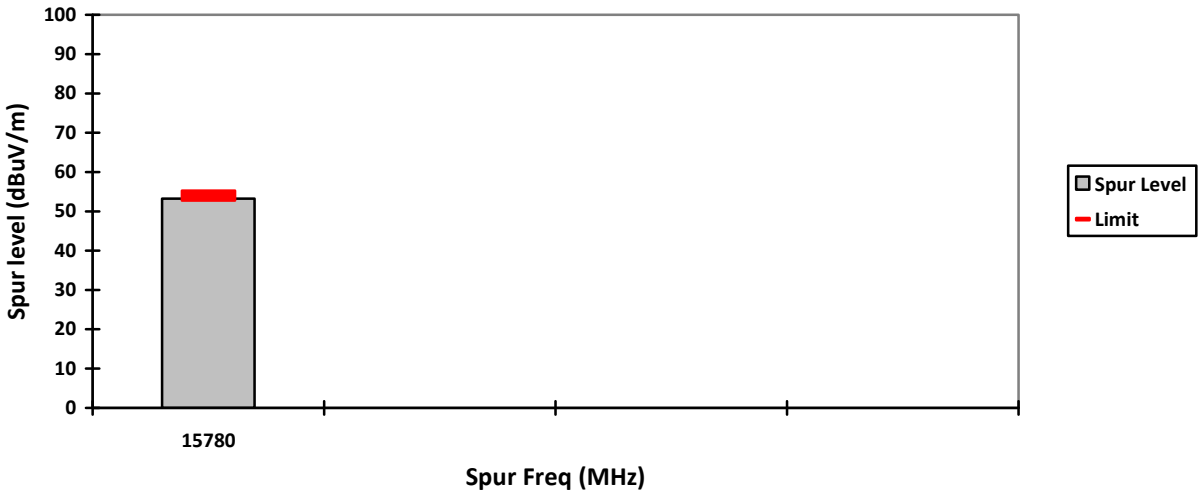
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (17dBm) Accessory: PMAD4147A
Test Channel: Mid Test Frequency: 5300.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

Radiated Emission (Mid Channel) tabular data

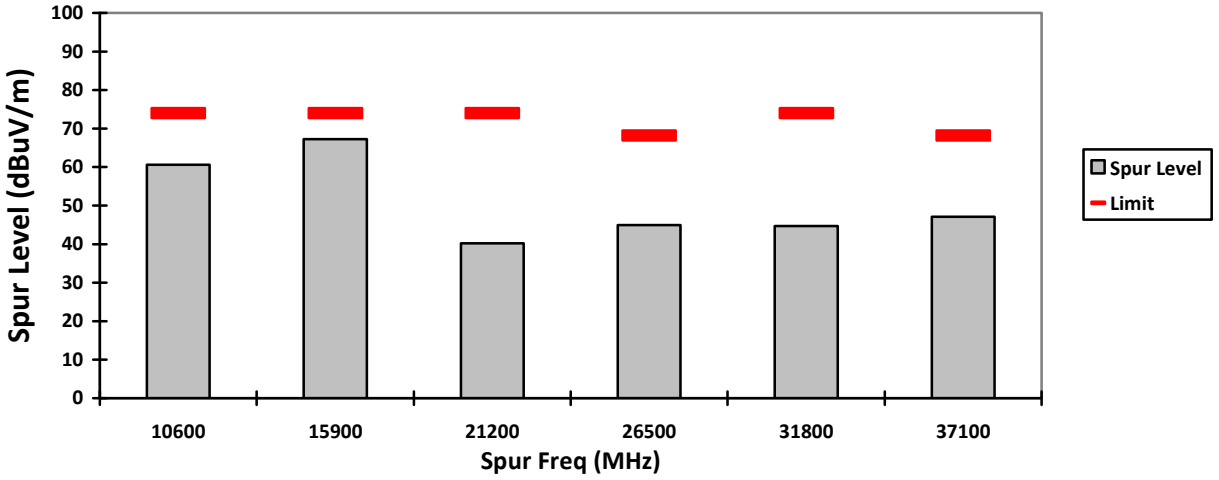
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10600	-	60.6545**	47.0342**	-	74.0000	54.0000	-	13.3455	6.9658	-
15900	-	67.2315**	53.5887**	-	74.0000	54.0000	-	6.7685	0.4113	-
21200	-	40.1984**	-	-	74.0000	-	-	33.8016	-	-
26500	-	44.9741**	-	-	68.2000	-	-	23.2259	-	-
31800	-	44.7258**	-	-	74.0000	-	-	29.2742	-	-
37100	-	47.1260**	-	-	68.2000	-	-	21.0740	-	-
Horizontal Radiated Emission Result										
10600	-	60.5920**	47.0290**	-	74.0000	54.0000	-	13.4080	6.9710	-
15900	-	66.9653**	53.6005**	-	74.0000	54.0000	-	7.0347	0.3995	-
21200	-	39.8700**	-	-	74.0000	-	-	34.1300	-	-
26500	-	43.1968**	-	-	68.2000	-	-	25.0032	-	-
31800	-	43.5948**	-	-	74.0000	-	-	30.4052	-	-
37100	-	46.7101**	-	-	68.2000	-	-	21.4899	-	-

Remarks: Pass Result	Marginal Result	Fail Result

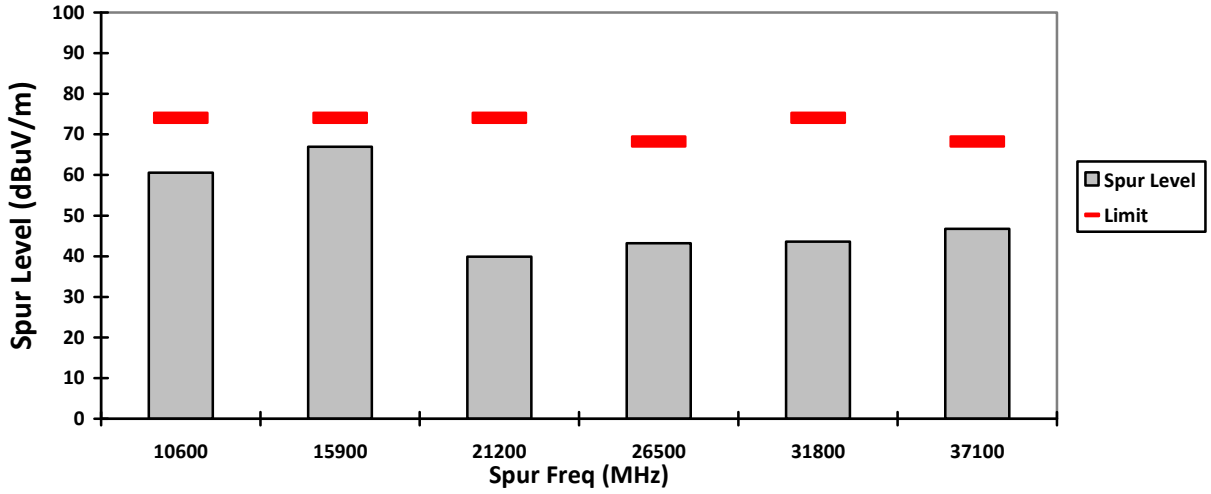
Temperature (degC): 23.1 Humidity (%): 69.7
Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

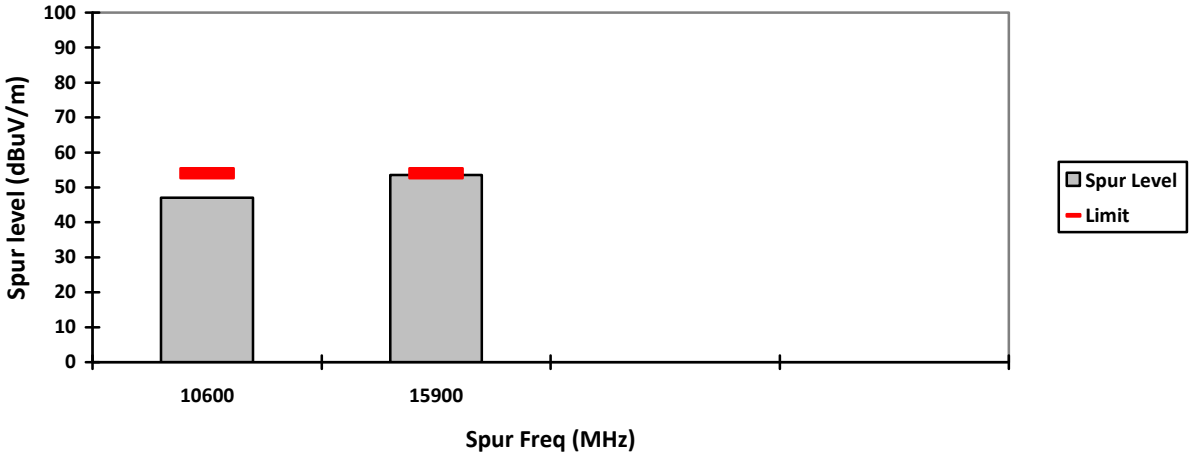
VERTICAL, PK



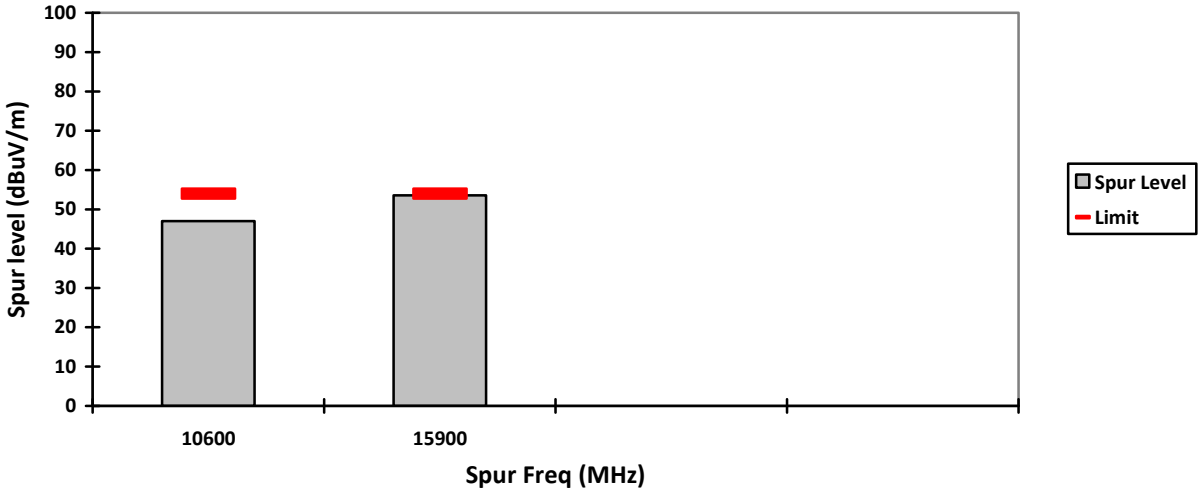
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (15dBm) Accessory: PMAD4147A

Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10640	-	60.9179**	47.1218**	-	74.0000	54.0000	-	13.0821	6.8782	-
15960	-	66.8026**	53.0166**	-	74.0000	54.0000	-	7.1974	0.9834	-
21280	-	42.4351**	-	-	74.0000	-	-	31.5649	-	-
26600	-	43.4255**	-	-	68.2000	-	-	24.7745	-	-
31920	-	43.1713**	-	-	68.2000	-	-	25.0287	-	-
37240	-	47.2866**	-	-	68.2000	-	-	20.9134	-	-
Horizontal Radiated Emission Result										
10640	-	60.7589**	47.1216**	-	74.0000	54.0000	-	13.2411	6.8784	-
15960	-	66.6347**	53.0164**	-	74.0000	54.0000	-	7.3653	0.9836	-
21280	-	40.1178**	-	-	74.0000	-	-	33.8822	-	-
26600	-	44.5086**	-	-	68.2000	-	-	23.6914	-	-
31920	-	43.3765**	-	-	68.2000	-	-	24.8235	-	-
37240	-	46.1445**	-	-	68.2000	-	-	22.0555	-	-

Remarks: Pass Result	Marginal Result	Fail Result

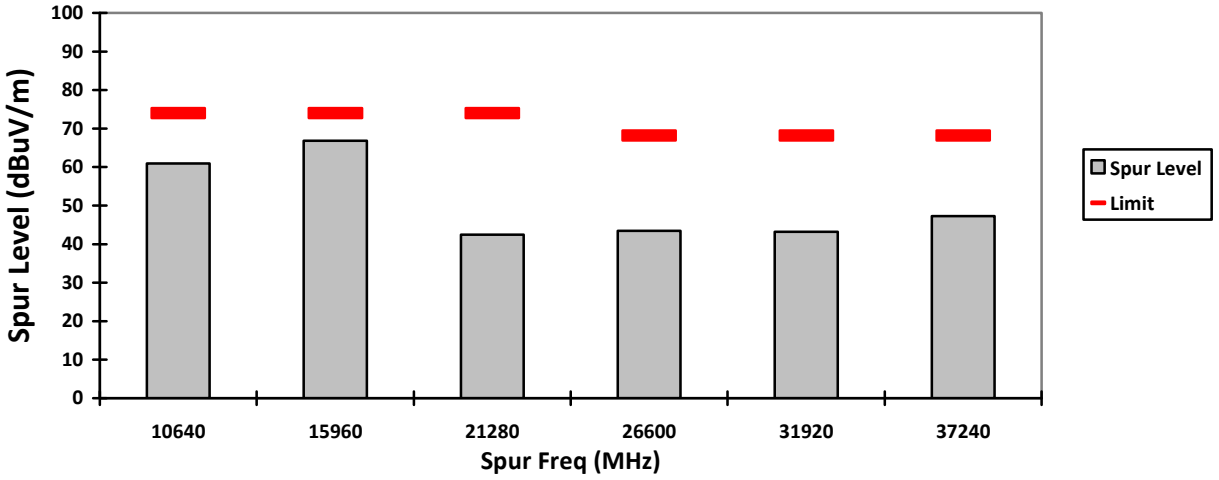
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

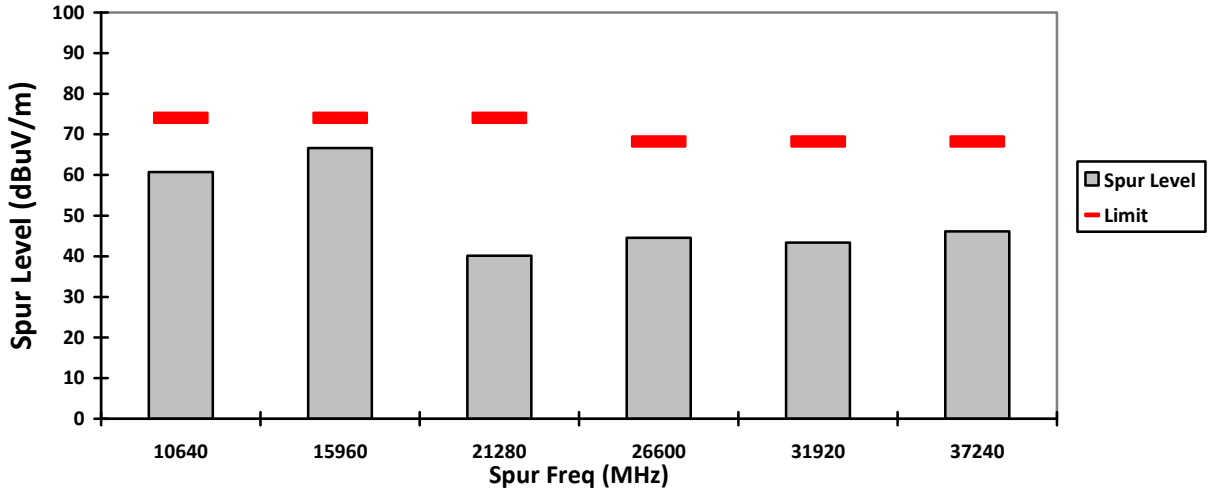
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

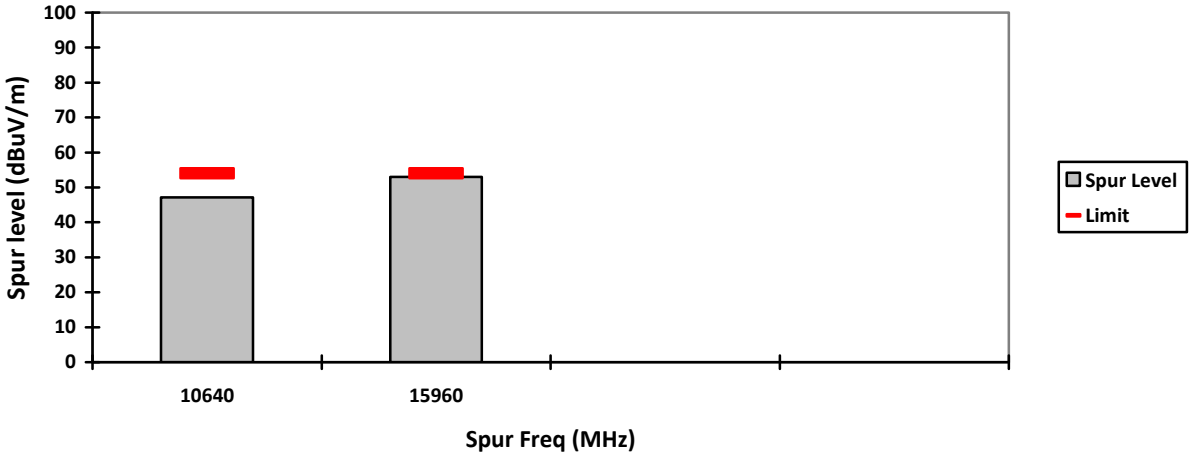
VERTICAL, PK



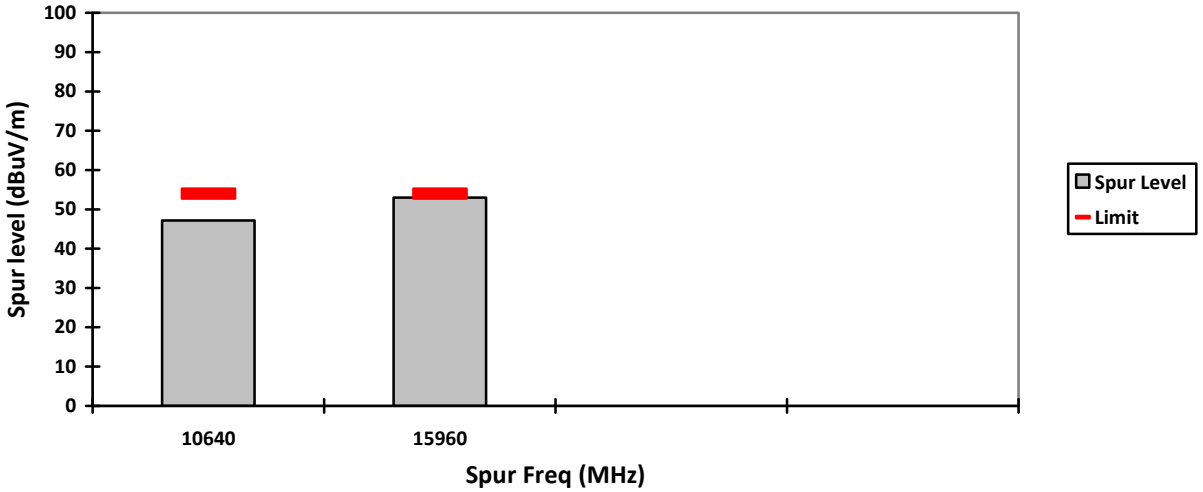
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (13dBm) Accessory: PMAD4147A
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11000	-	61.7257**	47.5074**	-	74.0000	54.0000	-	12.2743	6.4926	-
16500	-	66.0742**	-	-	68.2000	-	-	2.1258	-	-
22000	-	40.7741**	-	-	68.2000	-	-	27.4259	-	-
27500	-	42.8244**	-	-	68.2000	-	-	25.3756	-	-
33000	-	44.0265**	-	-	68.2000	-	-	24.1735	-	-
38500	-	50.0826**	-	-	68.2000	-	-	18.1174	-	-
Horizontal Radiated Emission Result										
11000	-	61.2845**	47.5085**	-	74.0000	54.0000	-	12.7155	6.4915	-
16500	-	66.2122**	-	-	68.2000	-	-	1.9878	-	-
22000	-	42.1710**	-	-	68.2000	-	-	26.0290	-	-
27500	-	42.6419**	-	-	68.2000	-	-	25.5581	-	-
33000	-	44.2151**	-	-	68.2000	-	-	23.9849	-	-
38500	-	50.1810**	-	-	68.2000	-	-	18.0190	-	-

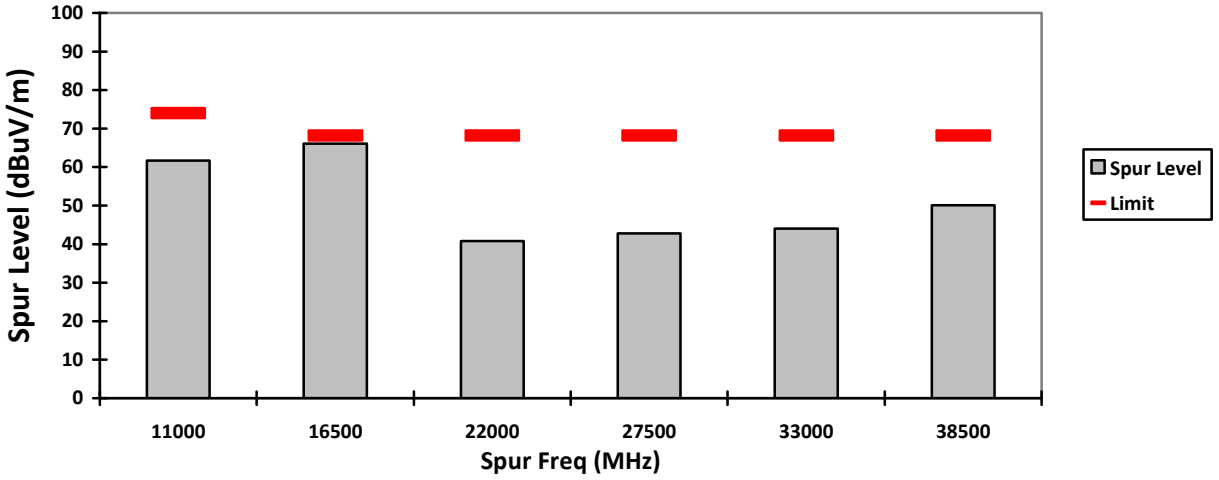
Remarks: Pass Result	Marginal Result	Fail Result

Temperature (degC): 23.1 **Humidity (%): 69.7**

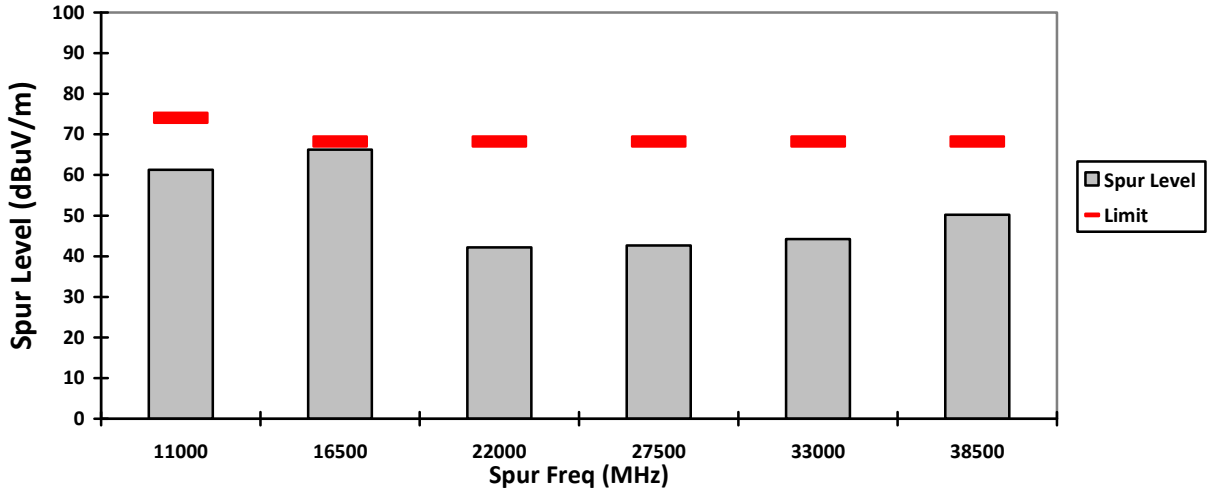
Test Performed by: Nazrin&Qawiman **Test Date: Sat, 10 Aug, 2024**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

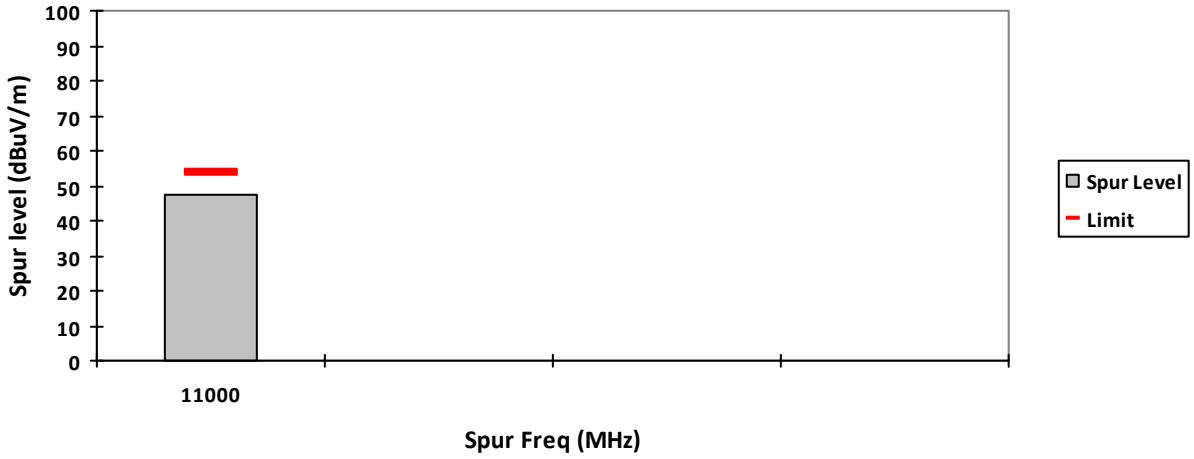
VERTICAL, PK



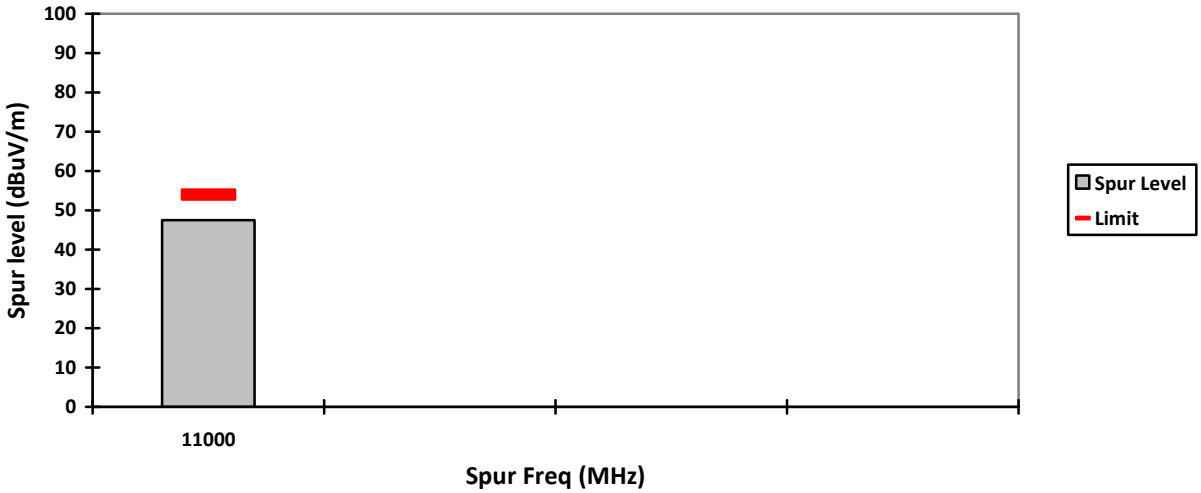
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (15dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5580.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11160	-	61.6524**	47.6632**	-	74.0000	54.0000	-	12.3476	6.3368	-
16740	-	66.0968**	-	-	68.2000	-	-	2.1032	-	-
22320	-	41.6726**	-	-	74.0000	-	-	32.3274	-	-
27900	-	43.4190**	-	-	68.2000	-	-	24.7810	-	-
33480	-	44.5180**	-	-	68.2000	-	-	23.6820	-	-
39060	-	50.5732**	-	-	68.2000	-	-	17.6268	-	-
Horizontal Radiated Emission Result										
11160	-	60.9106**	47.6657**	-	74.0000	54.0000	-	13.0894	6.3343	-
16740	-	66.3528**	-	-	68.2000	-	-	1.8472	-	-
22320	-	42.1530**	-	-	74.0000	-	-	31.8470	-	-
27900	-	42.5835**	-	-	68.2000	-	-	25.6165	-	-
33480	-	44.1555**	-	-	68.2000	-	-	24.0445	-	-
39060	-	50.8028**	-	-	68.2000	-	-	17.3972	-	-

Remarks: Pass Result	Marginal Result	Fail Result

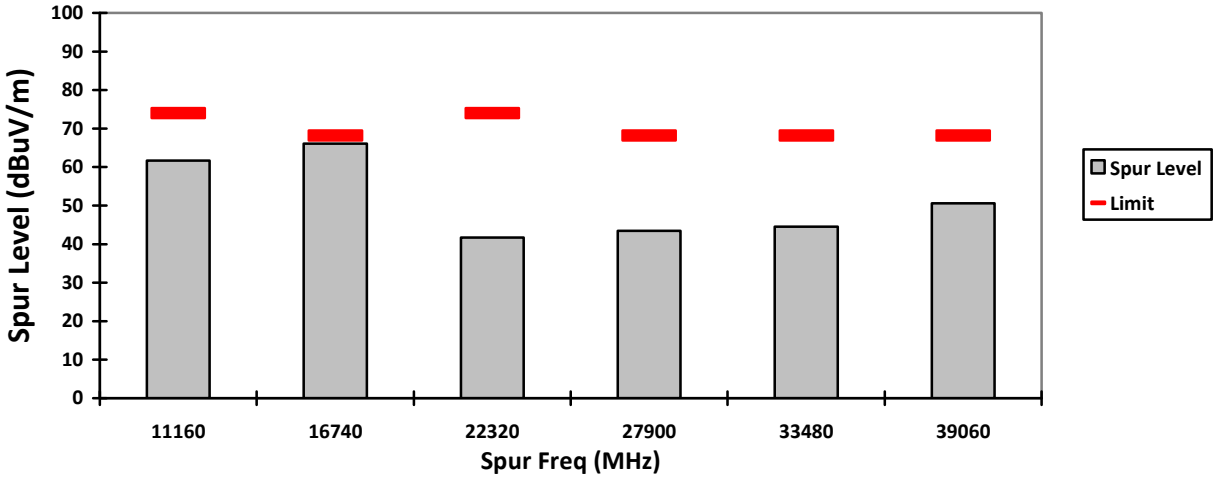
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

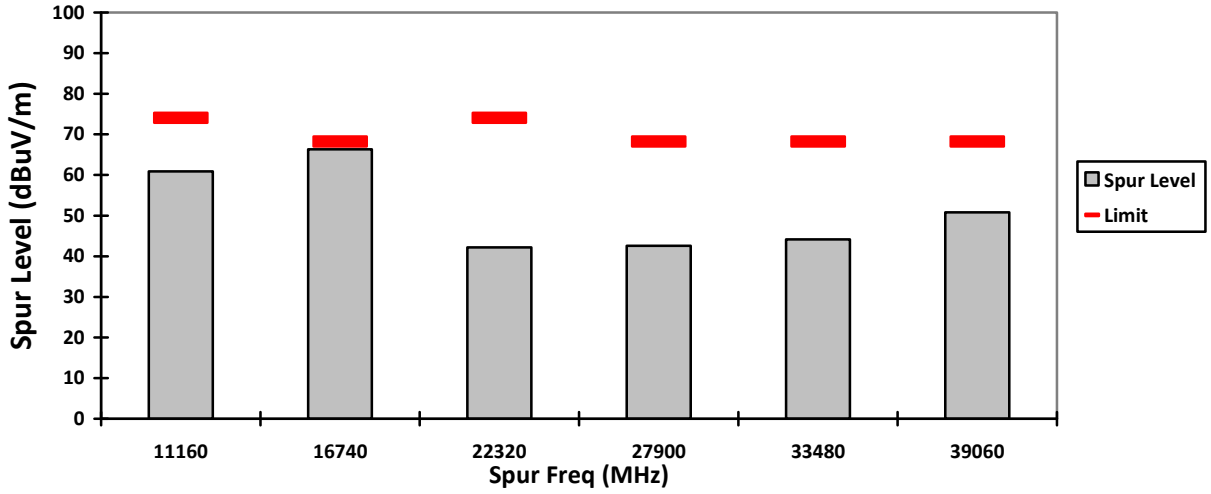
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

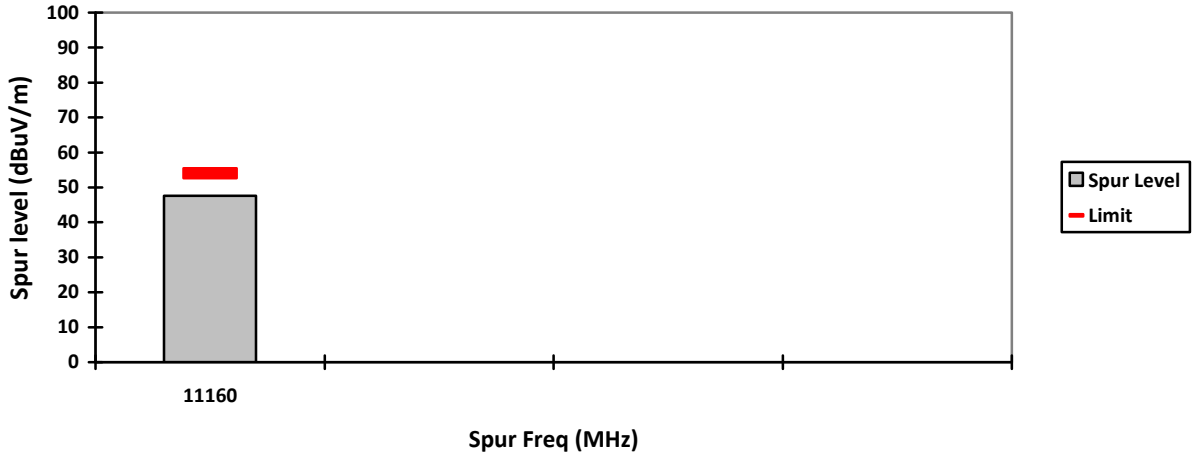
VERTICAL, PK



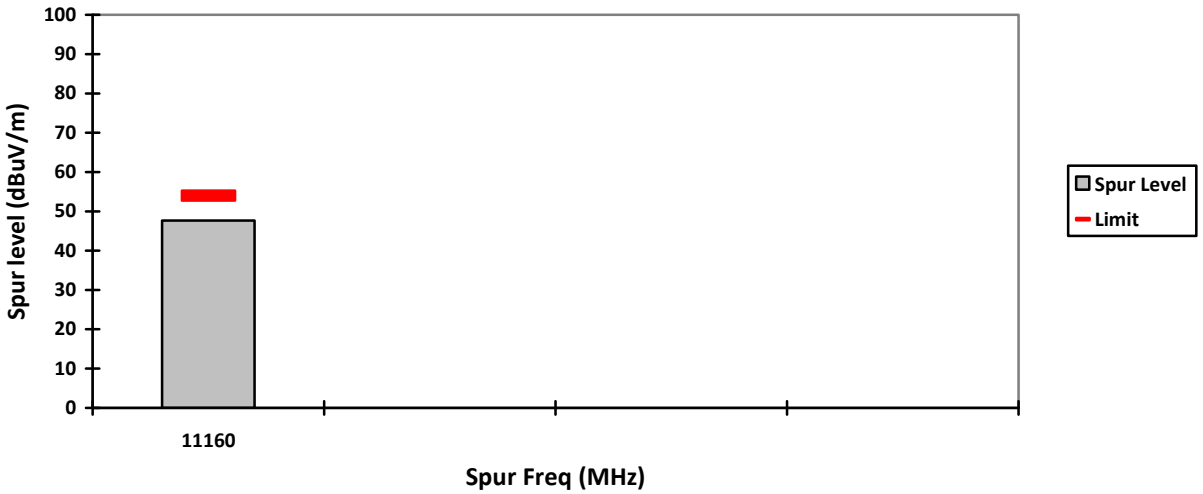
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011
Battery: PMNN4890A Softpot power (15dBm) Accessory: PMAD4147A
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

Radiated Emission (Straddle Channel) tabular data

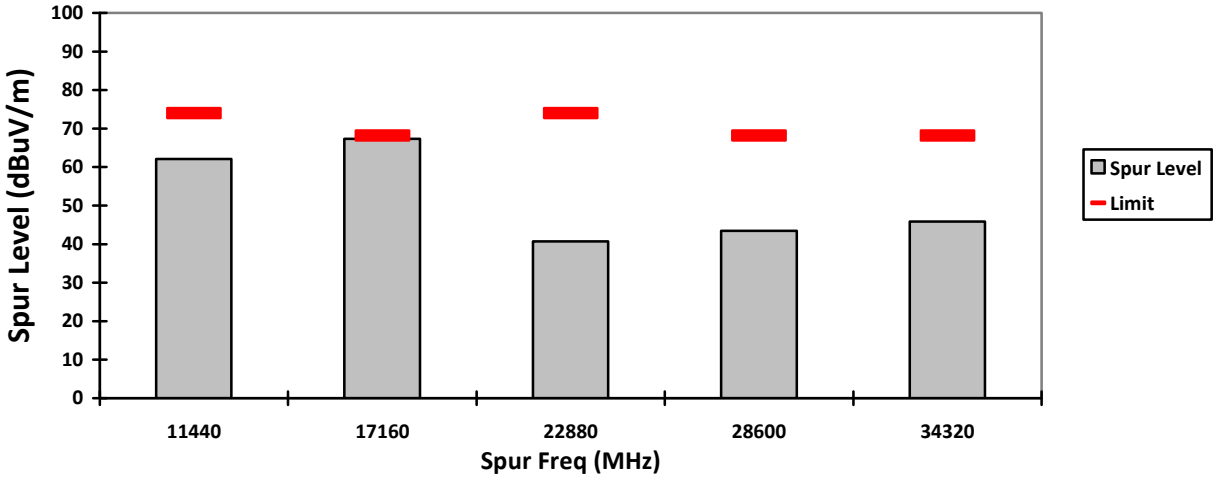
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11440	-	62.0919**	48.3182**	-	74.0000	54.0000	-	11.9081	5.6818	-
17160	-	67.3451**	-	-	68.2000	-	-	0.8549	-	-
22880	-	40.7499**	-	-	74.0000	-	-	33.2501	-	-
28600	-	43.4904**	-	-	68.2000	-	-	24.7096	-	-
34320	-	45.8532**	-	-	68.2000	-	-	22.3468	-	-
Horizontal Radiated Emission Result										
11440	-	61.9175**	48.3143**	-	74.0000	54.0000	-	12.0825	5.6857	-
17160	-	67.0515**	-	-	68.2000	-	-	1.1485	-	-
22880	-	40.9862**	-	-	74.0000	-	-	33.0138	-	-
28600	-	42.2644**	-	-	68.2000	-	-	25.9356	-	-
34320	-	46.1330**	-	-	68.2000	-	-	22.0670	-	-

Remarks: Pass Result	Marginal Result	Fail Result

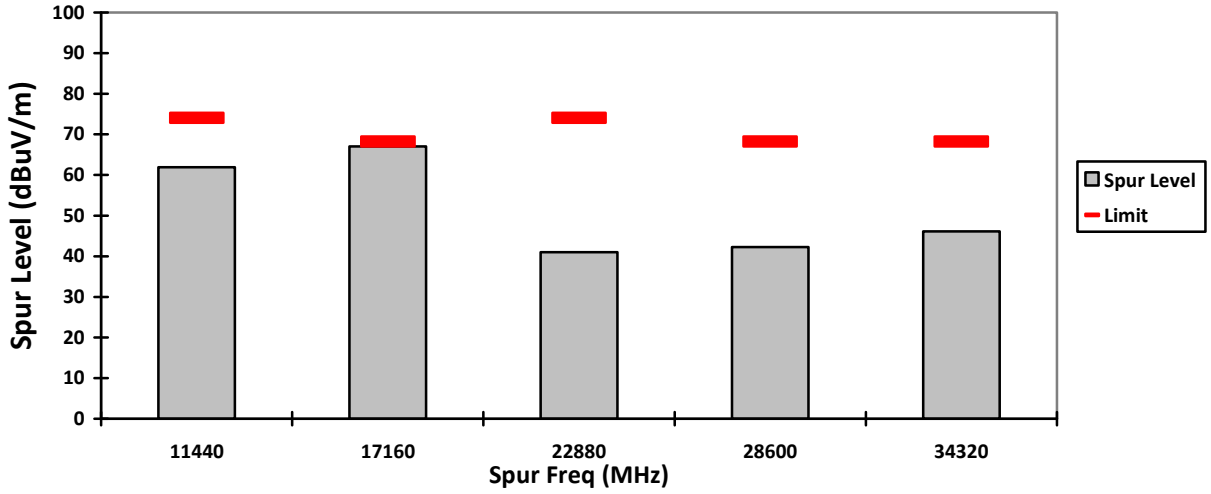
Temperature (degC): 23.1 Humidity (%): 69.7
Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

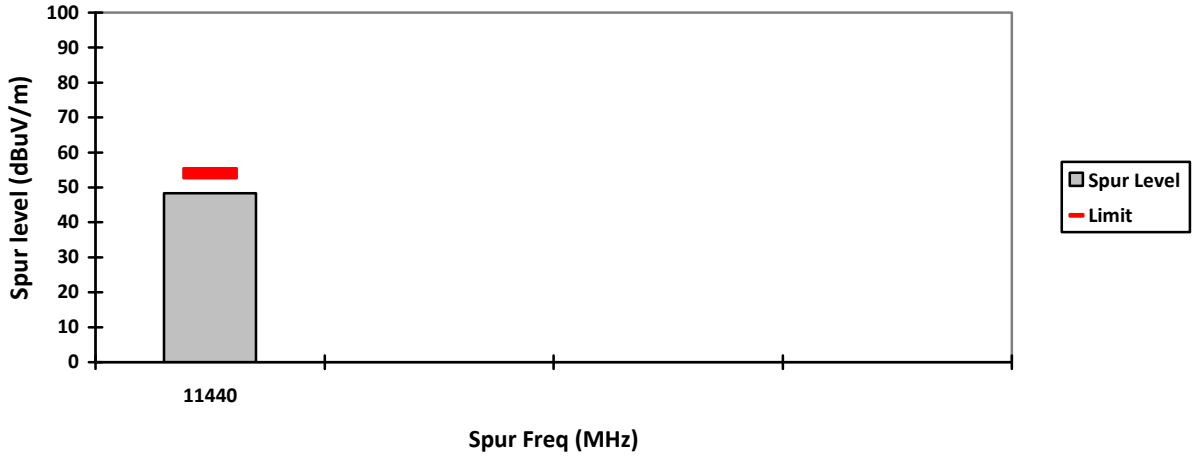
VERTICAL, PK



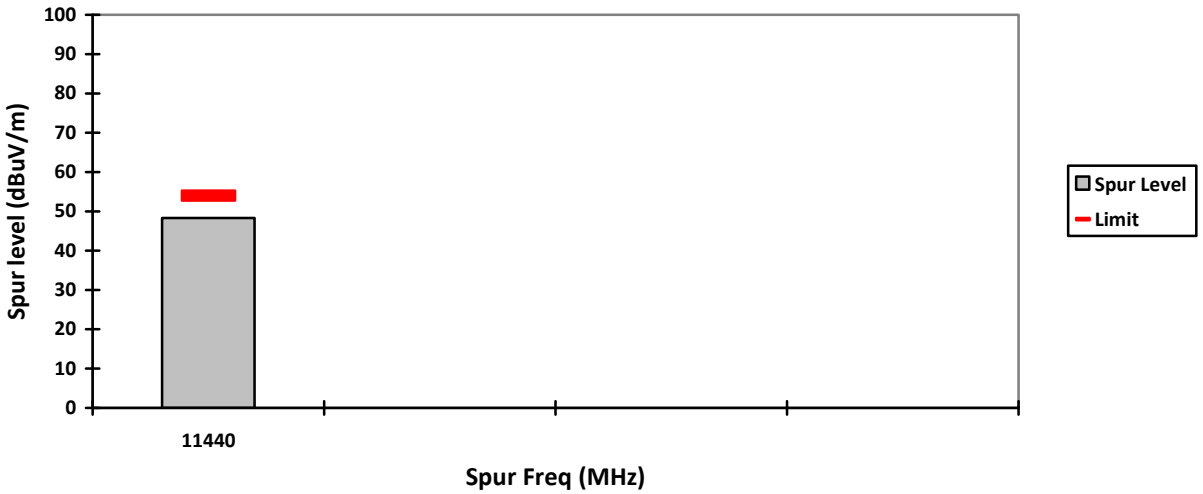
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (14dBm) Accessory: PMAD4147A

Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11490	-	62.1673**	48.3973**	-	74.0000	54.0000	-	11.8327	5.6027	-
17235	-	67.6774**	-	-	68.2000	-	-	0.5226	-	-
22980	-	40.7512**	-	-	74.0000	-	-	33.2488	-	-
28725	-	42.7463**	-	-	68.2000	-	-	25.4537	-	-
34470	-	45.3038**	-	-	68.2000	-	-	22.8962	-	-
Horizontal Radiated Emission Result										
11490	-	62.5840**	48.4044**	-	74.0000	54.0000	-	11.4160	5.5956	-
17235	-	67.1423**	-	-	68.2000	-	-	1.0577	-	-
22980	-	40.8932**	-	-	74.0000	-	-	33.1068	-	-
28725	-	42.6665**	-	-	68.2000	-	-	25.5335	-	-
34470	-	44.4686**	-	-	68.2000	-	-	23.7314	-	-

Remarks: Pass Result	Marginal Result	Fail Result

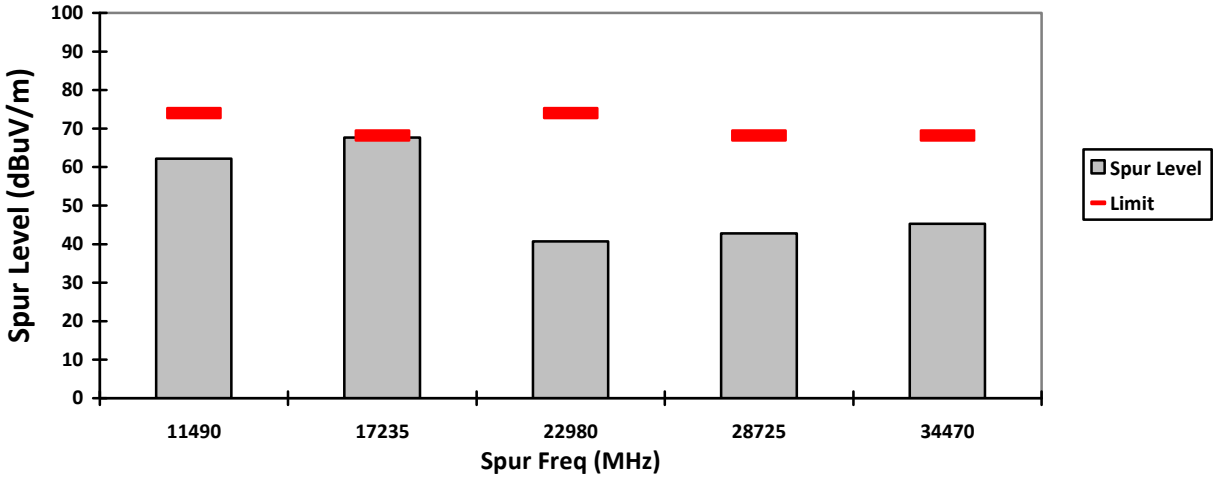
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

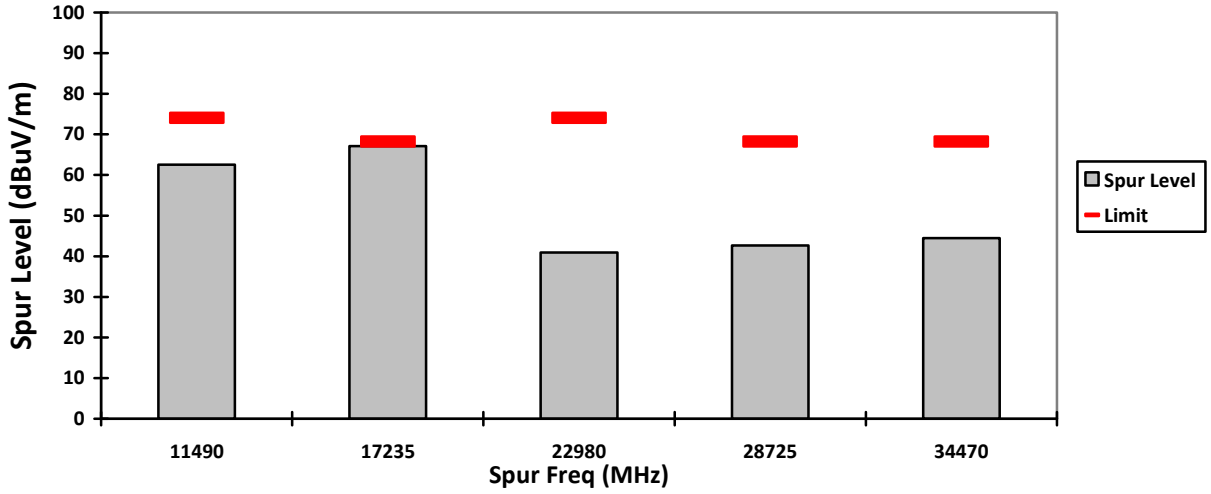
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

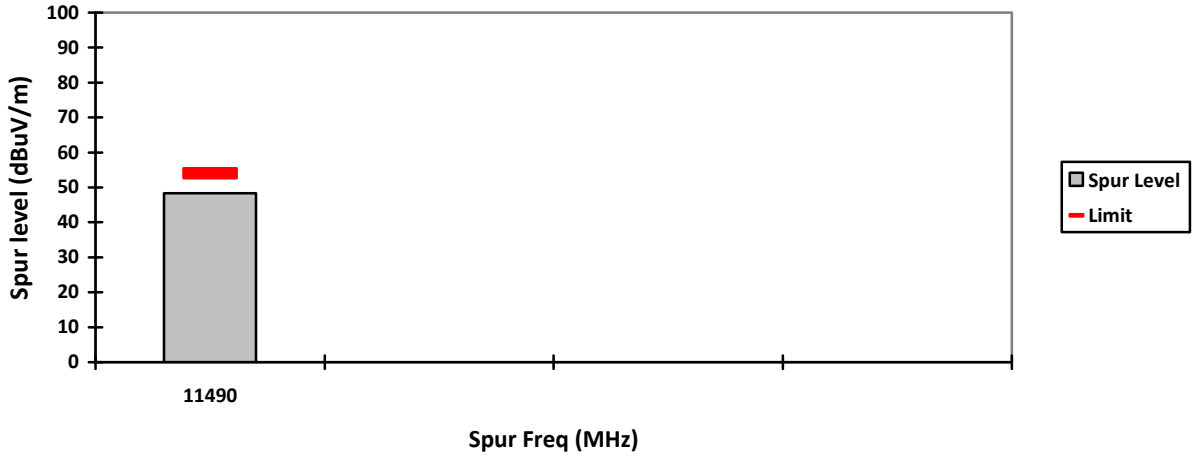
VERTICAL, PK



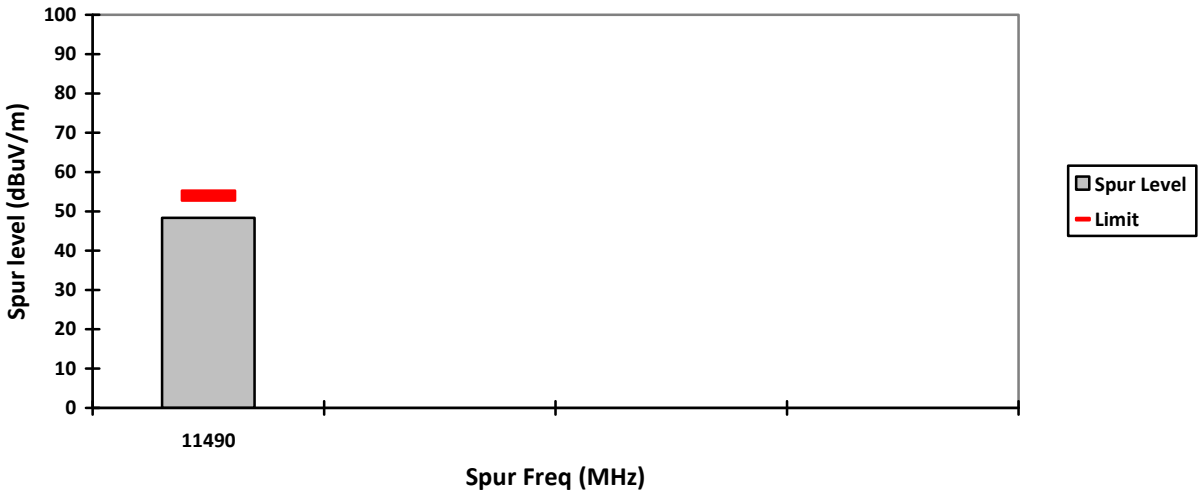
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (14dBm) Accessory: PMAD4147A

Test Channel: Mid Test Frequency: 5785.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11570	-	62.5645**	48.7960**	-	74.0000	54.0000	-	11.4355	5.2040	-
17355	-	67.0299**	-	-	68.2000	-	-	1.1701	-	-
23140	-	41.3975**	-	-	68.2000	-	-	26.8025	-	-
28925	-	43.7446**	-	-	68.2000	-	-	24.4554	-	-
34710	-	46.8221**	-	-	68.2000	-	-	21.3779	-	-
Horizontal Radiated Emission Result										
11570	-	62.2753**	48.7965**	-	74.0000	54.0000	-	11.7247	5.2035	-
17355	-	67.3633**	-	-	68.2000	-	-	0.8367	-	-
23140	-	41.7728**	-	-	68.2000	-	-	26.4272	-	-
28925	-	43.3011**	-	-	68.2000	-	-	24.8989	-	-
34710	-	46.5732**	-	-	68.2000	-	-	21.6268	-	-

Remarks: Pass Result	Marginal Result	Fail Result

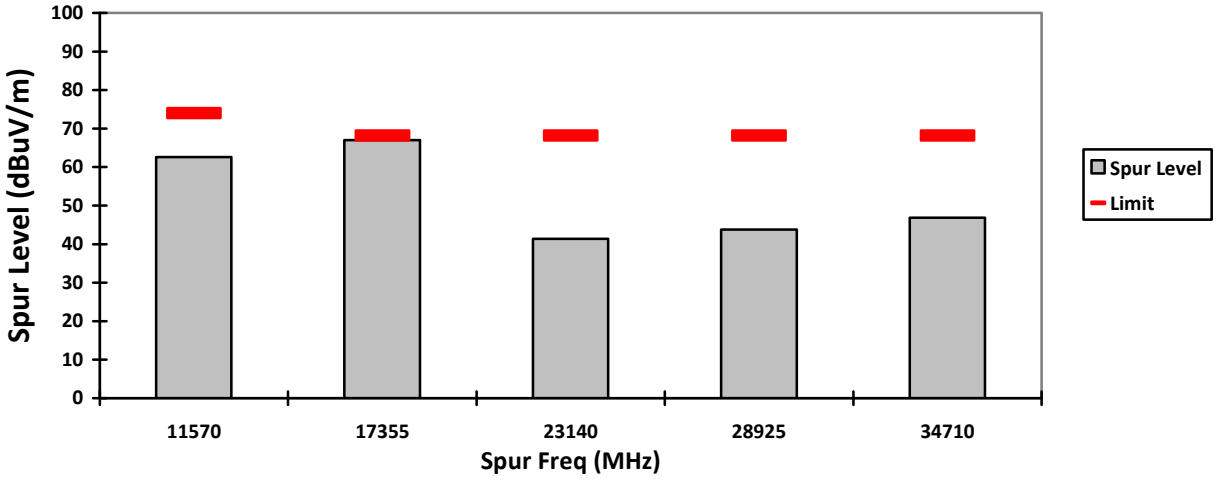
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

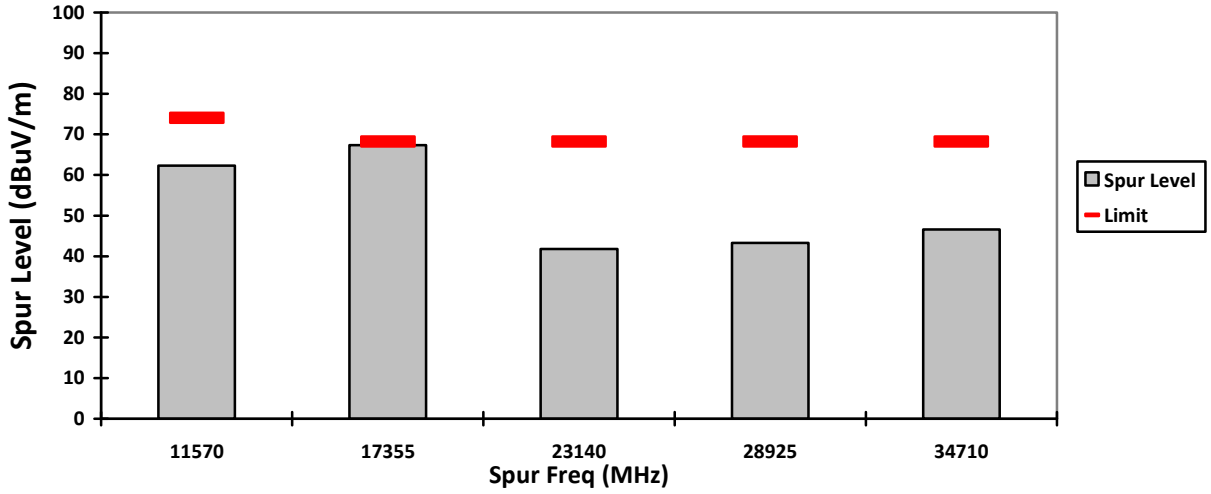
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

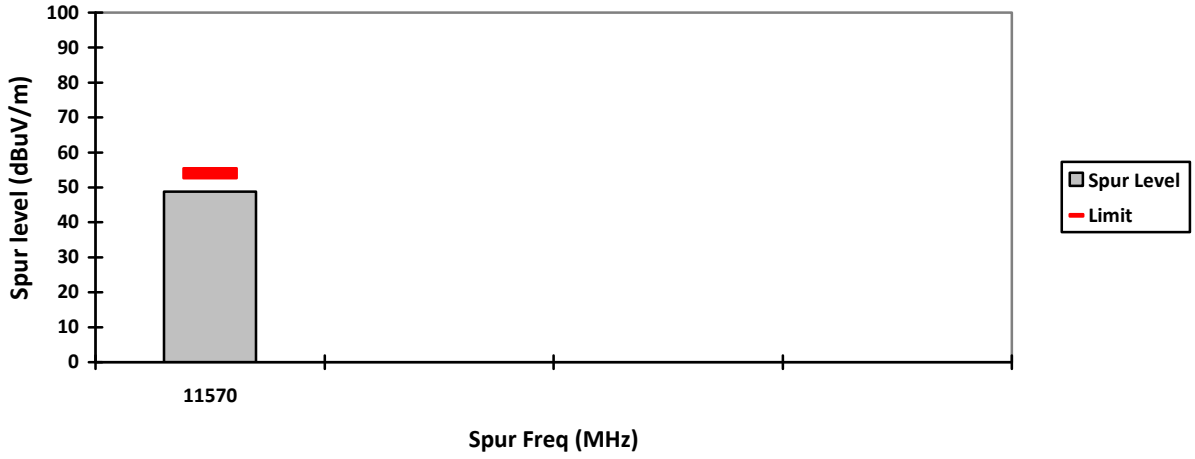
VERTICAL, PK



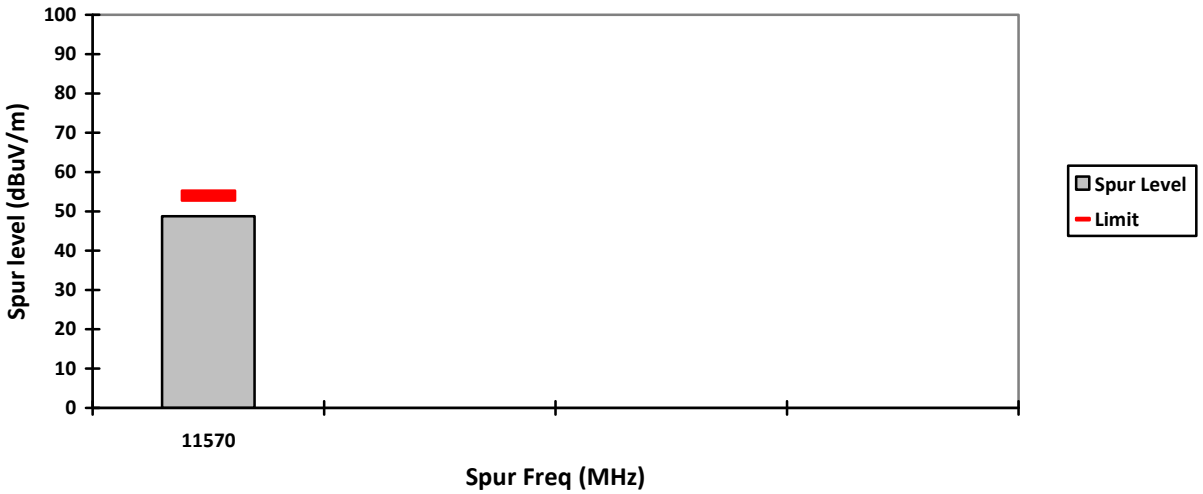
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: AAH07JDH9SA1AN S/N: 651EAK0048 EMC SR ID#: 0680N01-EMC-00011

Battery: PMNN4890A Softpot power (14dBm) Accessory: PMAD4147A

Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013

Worst Case Plane: Z-Plane (802.11n 20MHz)

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 (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11650	-	62.9906**	48.9982**	-	74.0000	54.0000	-	11.0094	5.0018	-
17475	-	67.3605**	-	-	68.2000	-	-	0.8395	-	-
23300	-	41.6820**	-	-	68.2000	-	-	26.5180	-	-
29125	-	43.2121**	-	-	68.2000	-	-	24.9879	-	-
34950	-	46.0260**	-	-	68.2000	-	-	22.1740	-	-
Horizontal Radiated Emission Result										
11650	-	62.4262**	49.0055**	-	74.0000	54.0000	-	11.5738	4.9945	-
17475	-	67.1855**	-	-	68.2000	-	-	1.0145	-	-
23300	-	40.4137**	-	-	68.2000	-	-	27.7863	-	-
29125	-	43.4047**	-	-	68.2000	-	-	24.7953	-	-
34950	-	45.0956**	-	-	68.2000	-	-	23.1044	-	-

Remarks: Pass Result	Marginal Result	Fail Result

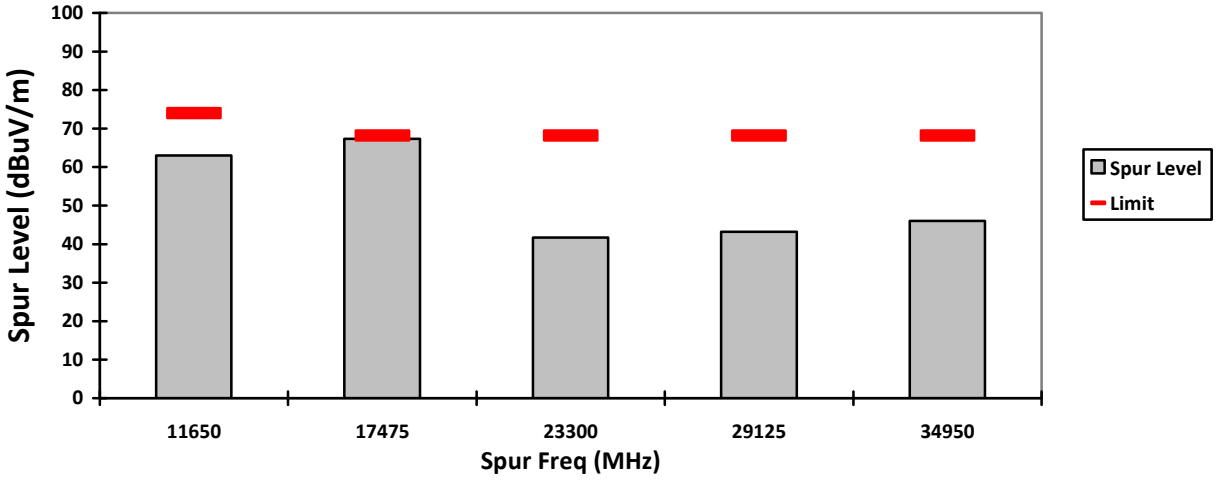
Temperature (degC): 23.1 Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman Test Date: Sat, 10 Aug, 2024

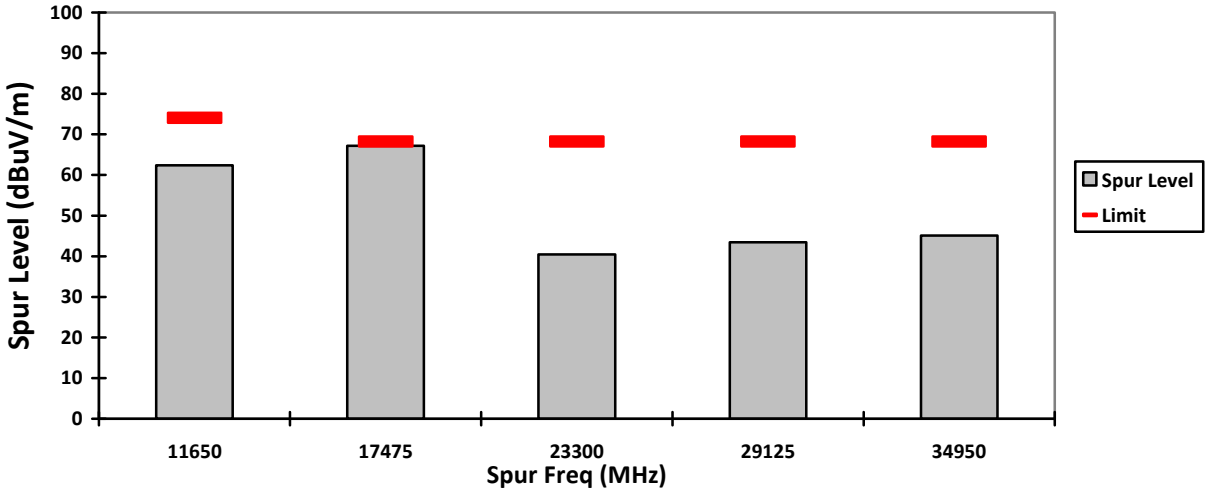
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

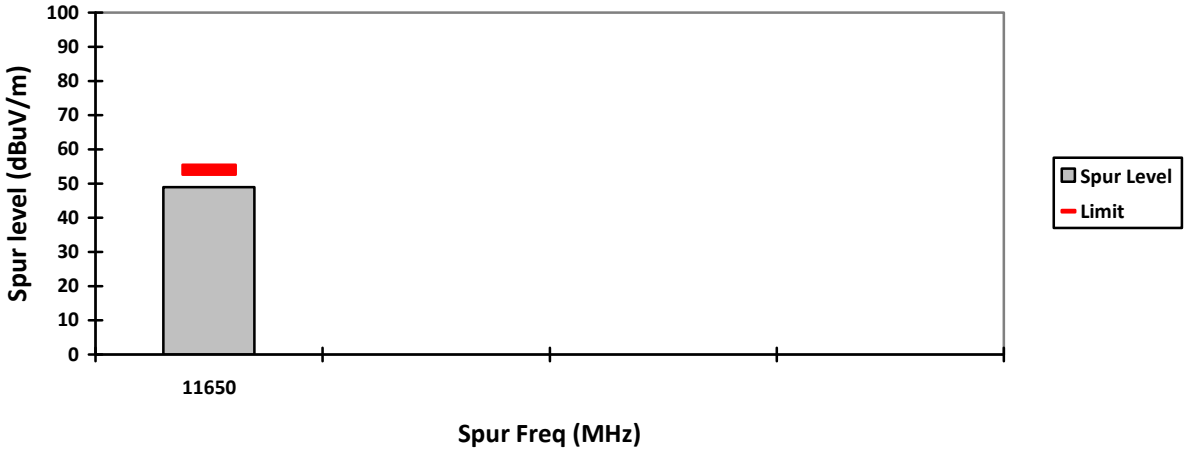
VERTICAL, PK



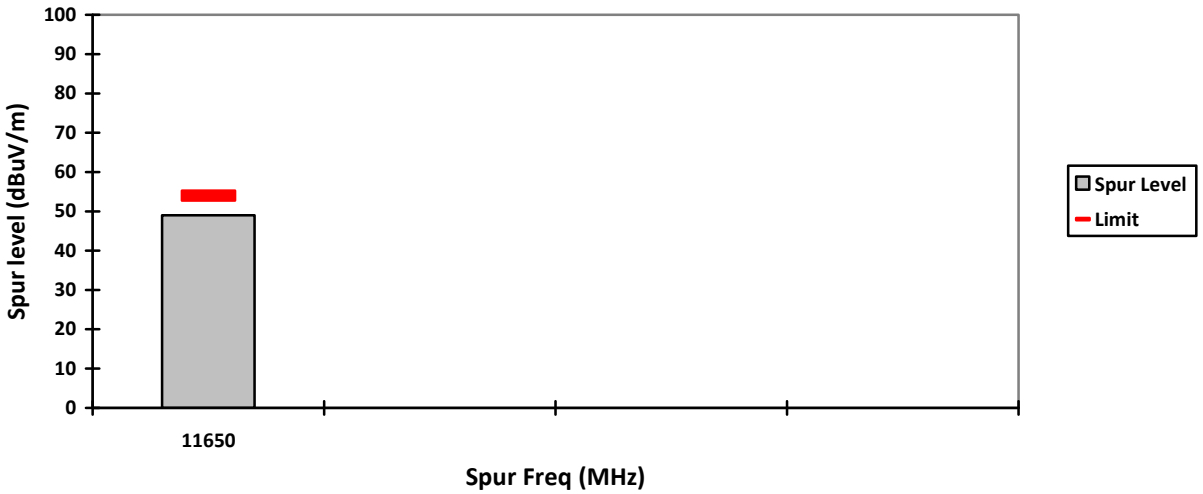
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: AAH07JDH9SA1AN S/N: 651EAK0033, 651EAK0054, 651EAK0048
EMC SR ID#: 0680N01-EMC-00026
Battery: PMNN4889A Accessory: PMAD4147A, PMPN4283B-C10, PS000242A01, 3087791G01
Test Channel: Mid Test Frequency: 5300.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Y-Plane (802.11n 20MHz)

Radiated Emission (Mid Channel) tabular data

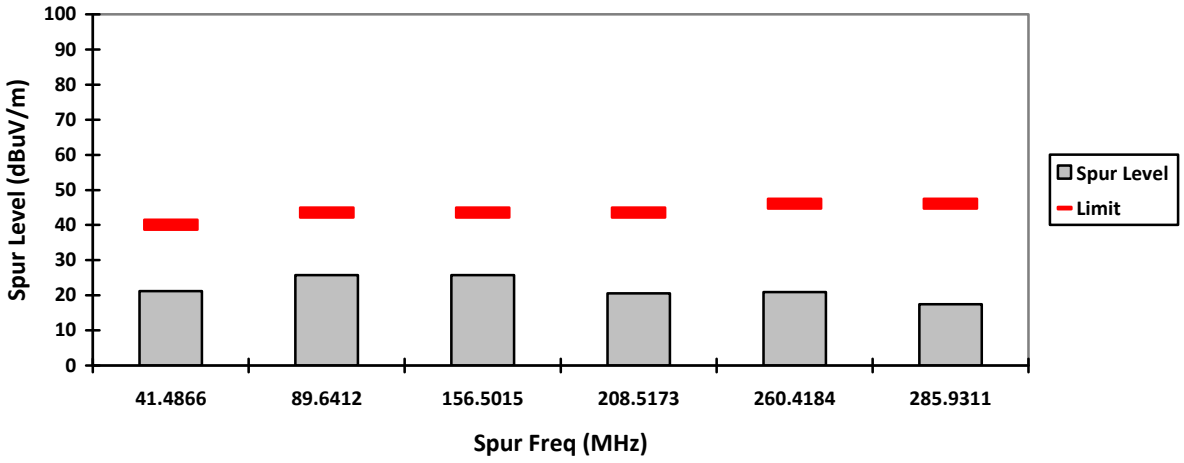
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
41.4866	21.2406	-	-	40.0000	-	-	18.7594	-	-	-
89.6412	25.7621	-	-	43.5000	-	-	17.7379	-	-	-
156.5015	25.7927	-	-	43.5000	-	-	17.7073	-	-	-
208.5173	20.5252 *	-	-	43.5000	-	-	22.9748	-	-	-
260.4184	20.8906 *	-	-	46.0000	-	-	25.1094	-	-	-
285.9311	17.5138 *	-	-	46.0000	-	-	28.4862	-	-	-
Horizontal Radiated Emission Result										
40.8102	16.8448 *	-	-	40.0000	-	-	23.1552	-	-	-
89.3545	20.2619 *	-	-	43.5000	-	-	23.2381	-	-	-
156.3976	33.0202	-	-	43.5000	-	-	10.4798	-	-	-
208.5623	27.7585	-	-	43.5000	-	-	15.7415	-	-	-
261.2686	27.5475	-	-	46.0000	-	-	18.4525	-	-	-
285.7692	25.0077 *	-	-	46.0000	-	-	20.9923	-	-	-

Remarks: Pass Result	Marginal Result	Fail Result

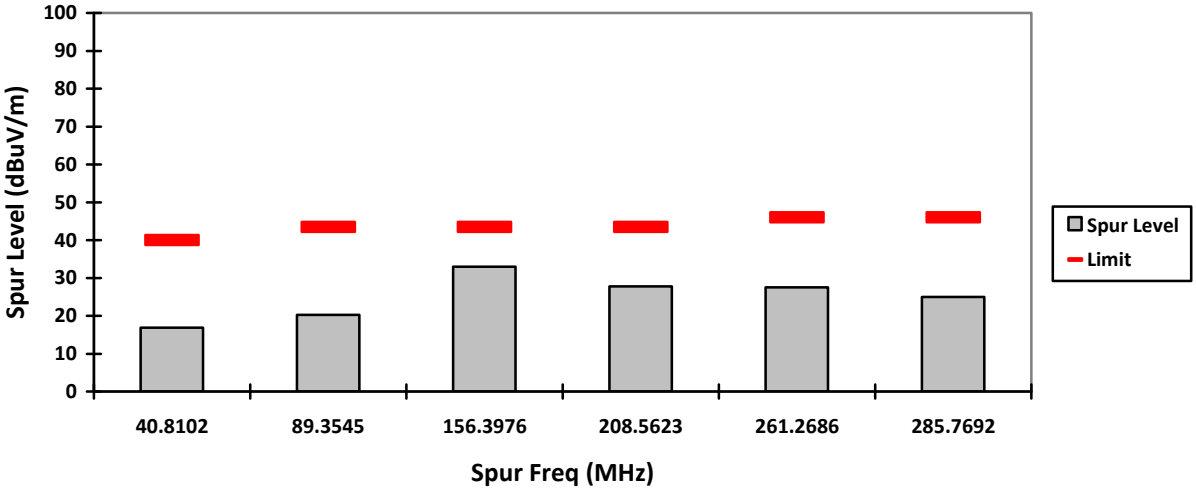
Temperature (degC): 22.6 Humidity (%): 68.2
Test Performed by: Nazrin & Fuad Test Date: Mon, 2 Sep, 2024
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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

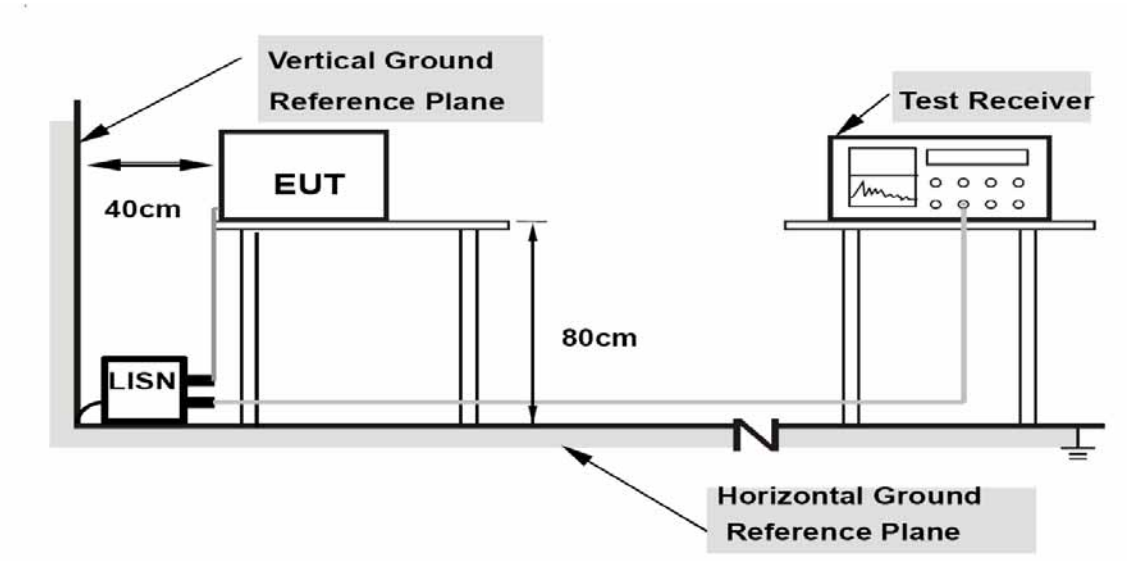


HORIZONTAL, QPK



7.7. AC Powerline Conducted Emission

7.7.1. 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.

7.7.2. 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

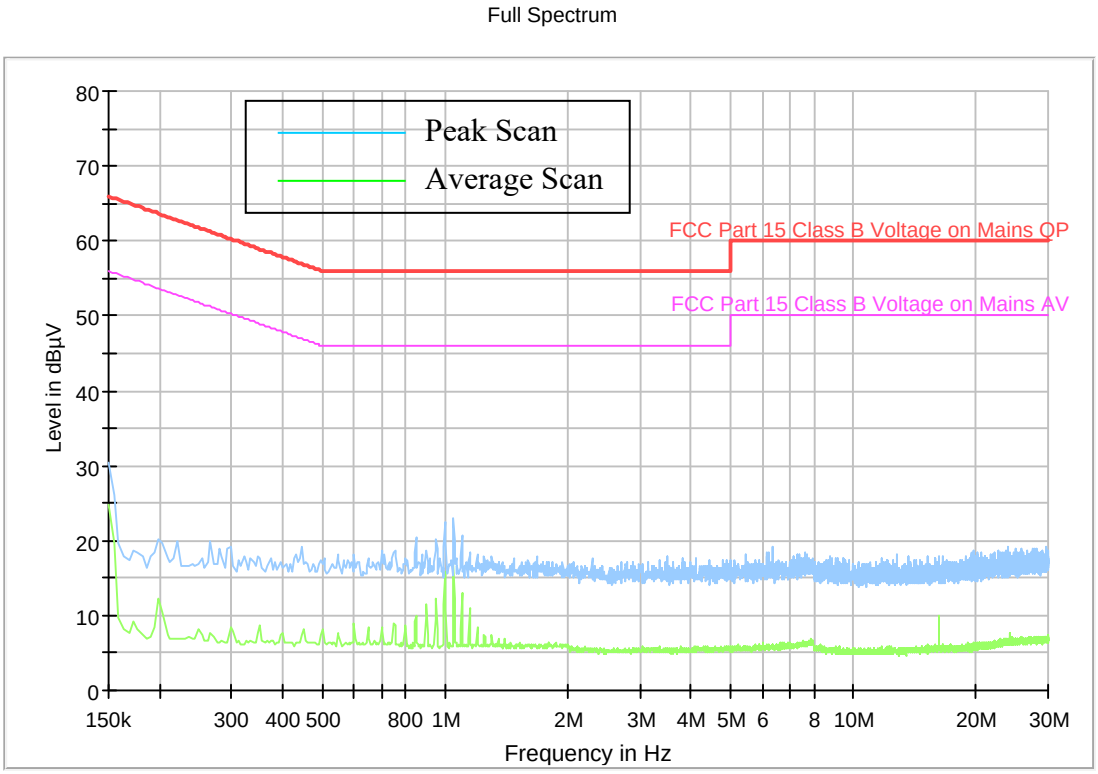
Frequency range MHz	Limits dB(µV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50
NOTE 1 The lower limit shall apply at the transition frequencies. NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

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

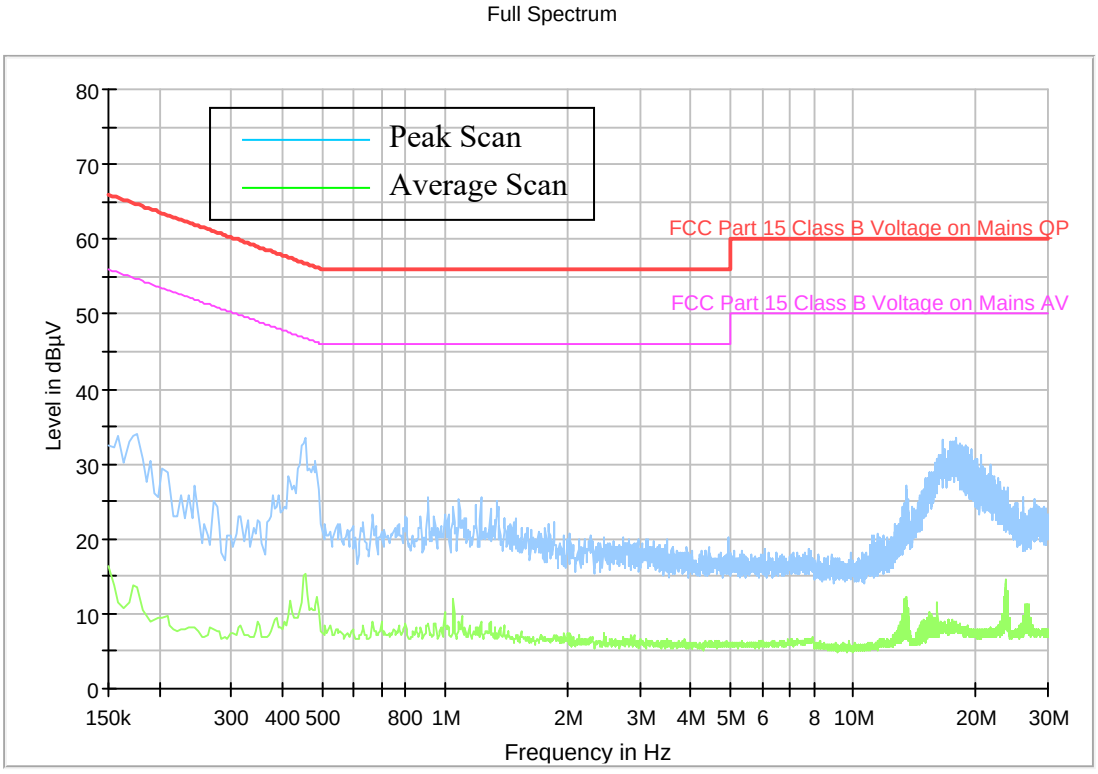
7.7.3. Test Data

120 VAC, 60Hz

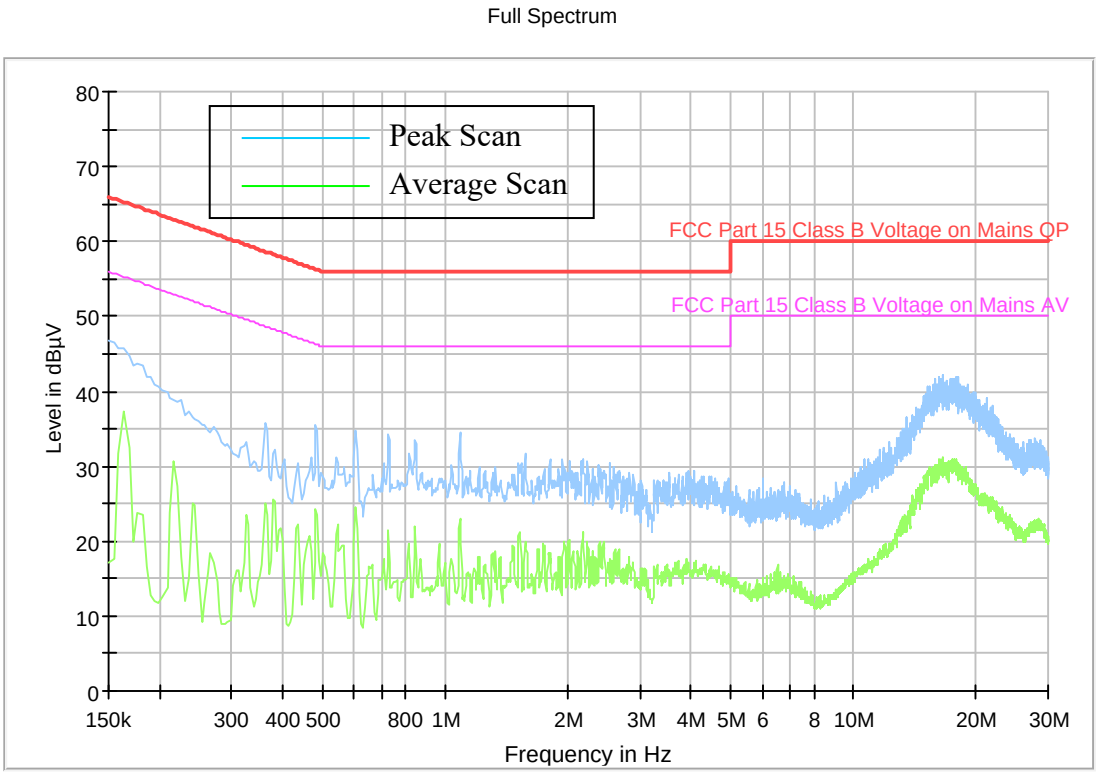
1) Ambient



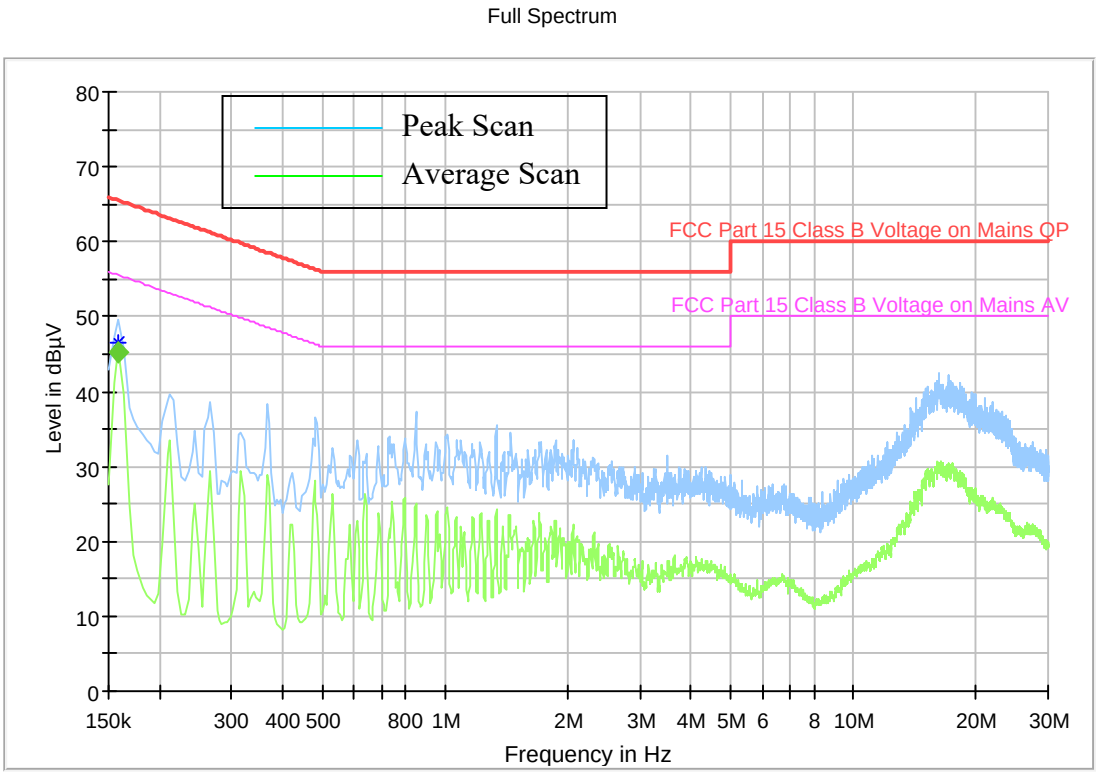
2) Charger Alone



3) Charger + Radio Off



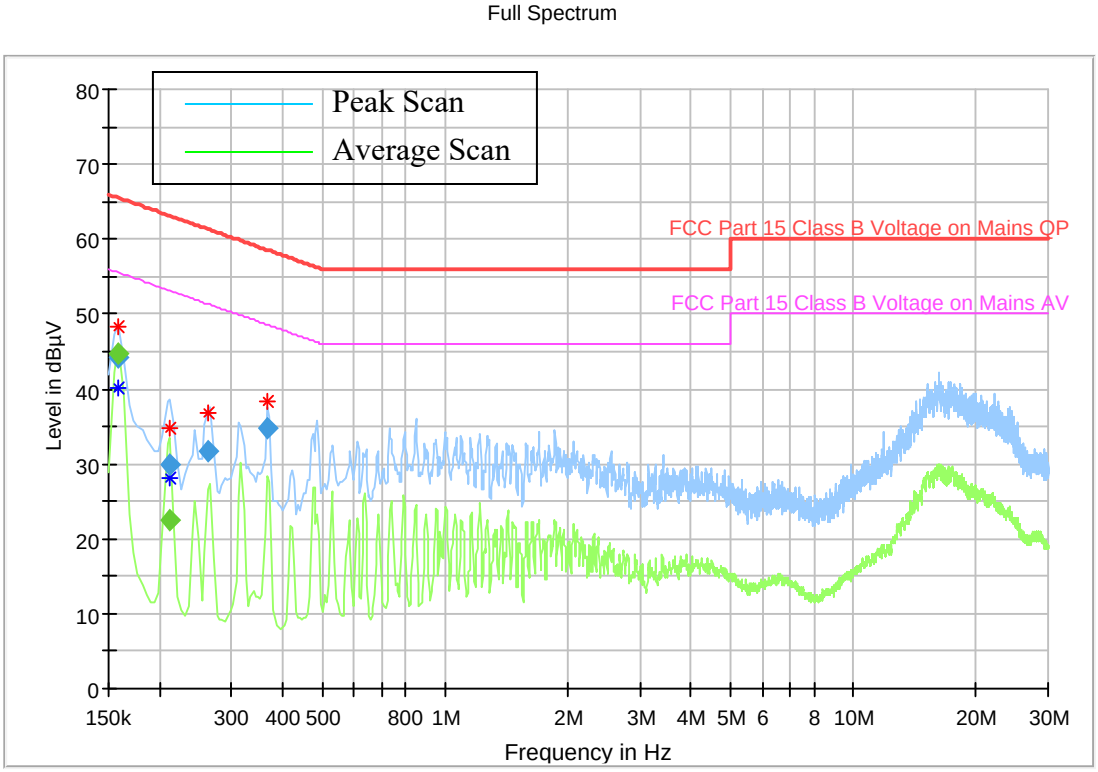
4) Charger + Radio Standby



Quasipeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	45.15	55.52	10.37	L1	ON	10.6

5) Charger + Radio TX WiFi 5GHz 802.11n20



Quasipeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	44.32	---	65.52	21.20	N	ON	10.6
0.159000	---	44.76	55.52	10.75	L1	ON	10.6
0.213000	---	22.56	53.09	30.52	L1	ON	10.5
0.213000	30.00	---	63.09	33.09	N	ON	10.5
0.262500	31.63	---	61.35	29.72	N	ON	10.4
0.366000	34.65	---	58.59	23.94	L1	ON	10.7

END OF TEST REPORT