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	:	02-May-2023 - 23-May-2023
Manufacturer/Location	:	Motorola Solutions Malaysia SDN BHD
Manufacturer Address	:	Plot 2A Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia
Requestor	:	TANG, GARY
Product Type	:	Hand-held
Product Version (PMN)	:	APX N50
Model Number (HVIN)	:	H25KDF9PW6AN
Frequency Band	:	5180-5825 MHz
Firmware Version (FVIN)	:	D30.80.88
Applicant Name	:	Motorola Solutions Inc
Applicant Address	:	8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
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:

hidayati

SITI NURHIDAYATI BINTI ABDUL HALIM
Technician

Approved Signatory:

VINCENT FOONG CHUEN KIT
Responsible Engineer

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev. A	Initial Report	**25-May-2023**	**Hidayati**
Rev. B	Update summary table	**18-Jul-2023**	**Vincent**
Rev. C	Update general info table	**31-Jul-2023**	**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: 13.44dBm (22.08mW) 802.11n20/ac20: 12.565dBm (18.049mW)	287TZH0057	Hidayati
15.407(a) (1/2/3)	RSS 247 6.2	Maximum Power Spectral Density	Pass	NA	287TZH0057	Hidayati
15.407 (e)	RSS 247 6.2.4	6dB Bandwidth	Pass	a20: 17.033MHz (17M0D1D) n20/ac20: 17.796MHz (17M8D1D)	287TZH0057	Hidayati
15.407 (g)	RSS Gen 6.11	Frequency Stability	Pass	NA	287TZH0057	Hidayati
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Band Edge Radiated Spurious Emission Measurement	Pass	Worst case emission: 67.1301dBuV/m (margin: 6.8699dBuV/m)	287TZH0154	Nazrin&Qawiman
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Radiated Spurious Emission Measurement	Pass	Worst case emission: 25.6711 dBuV/m (Margin: 14.3289 dB)	287TZH0154	Nazrin&Qawiman
15.207 15.407 (b)(6)	RSS Gen 8.8	AC Powerline Conducted Emission	Pass	NA	287TZH0154	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	3.48
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	5.88
	200MHz ~ 1000MHz	5.88
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.84
	18GHz ~ 40GHz	6.02
Conducted Spurious Emissions	9kHz ~ 12.75GHz	2.82

3.0. Equipment List

Bluetooth ATE # 1 (SW Version: Ate Main_3.1.11)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
CHAMBER	SH-641	92003820	8-Jul-22	8-Jul-23
ANALYZER SPECTRUM (PSA 3Hz-26.5GHz)	E4440A	US45303111	22-Jul-22	22-Jul-23
POWER SUPPLY (0-20V / 0-25A)	6652A	3640A02967	19-Oct-22	19-Oct-23

Radiated Spurious Emission (SW Version: EMC_FCC_RE_v1.6.5)

Description	Model #	Serial Number	Calibration Date	Calibration Due Date
DRG HORN FREQ.	SAS-571	1143	8-Mar-23	8-Mar-25
DRG HORN FREQ.	SAS-571	1027	3-Jun-22	3-Jun-23
DC POWER SUPPLY	N7976A	MY53410110	30-Jun-22	30-Jun-23
SIGNAL GENERATOR	SMB 100A	182511	4-Jun-21	4-Jun-24
EMI TEST RECEIVER	ESW44	101731	5-Oct-22	5-Oct-23
5m SEMI-ANECHOIC CHAMBER	S800-HX	J2308	No Cal. Req'd	No Cal. Req'd
BILOG ANTENNA	CBL6112B	2863	22-Jun-22	22-Jun-23
BILOG ANTENNA	CBL6112D	55546	23-Jun-22	23-Jun-23
DATA LOGGER THERMOHYGROMETER	SDL500	A.016785	23-Jun-22	23-Jun-23
SYSTEM CONTROLLER	SC104V	050806-1	No Cal. Req'd	No Cal. Req'd
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	No Cal. Req'd	No Cal. Req'd
ANTENNA POSITIONING TOWER	TLT2	NA	No Cal. Req'd	No Cal. Req'd
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170143	18-Aug-22	18-Aug-23
PREAMPLIFIER 18-40GHz	Miteq Hi Gain Sucoflex	2	No Cal. Req'd	No Cal. Req'd
PREAMPLIFIER	PAM-0118P	361	11-Sep-20	11-Sep-23
LOOP ANTENNA	6502	208416	12-Oct-22	12-Oct-23

AC Power Line Conducted Spurious Emission (SW Version: Ver. 10.60.10)

Description	Model #	Serial Number	Calibration Date	Calibration Due Date
DATA LOGGER	DSB	16344143	13-Jun-22	13-Jun-23
V-NETWORK 2-LINE	ENV216	101268	15-Aug-22	15-Aug-23
EMI TEST RECEIVER	ESCI	100225	9-Aug-22	9-Aug-23
PROGRAMMABLE AC SOURCE	61604	ABR000000926	30-Jun-22	30-Jun-23

4.0. General Information

General Description of EUT:

Product	Hand-held
Brand	Motorola Solutions
Test Model	APX N50
Power Supply Rating	7.5Vdc (Battery)
Mode of operation	WLAN 5GHz
Modulation Type	QPSK, BPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	OFDM
Transfer Rate	802.11a: 6.0/9.0/12.0/18.0/24.0/36.0/48.0/54.0 Mbps 802.11n: up to MCS15 802.11ac: up to MCS9
Operating Frequency	5.180 ~ 5.240 GHz, 5.260 ~ 5.320 GHz, 5.50 ~ 5.720 GHz, 5.745 ~ 5.825 GHz
Output Power (26 EBW or 99% OBW)	28.2 mW for 5.180 ~ 5.240 GHz 28.2 mW for 5.260 ~ 5.320 GHz 28.2 mW for 5.50 ~ 5.720 GHz 22.4 mW for 5.745 ~ 5.825 GHz
Antenna Type	Inverted-F Monopole with 4.88 dBi gain
SW Version	D30.80.88
HW Version	Rev A

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

Item	Brand	Model or P/N
Cable, Port Prog, Test And Align Cable PSA	MOTOROLA	PMKN4231A
Antenna, Whip, Antenna, Whip, VHF, 18CM 136 - 174 MHz	MOTOROLA	AN000421A01
Batt Liion Impres 2 IP68 2850T	MOTOROLA	PMNN4813A
Chgr desktop single unit impres 2 base only	MOTOROLA	PMPN4819A
Chgr desktop multi unit impres 2 1 displays base only	MOTOROLA	PMPN4593A

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

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

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:

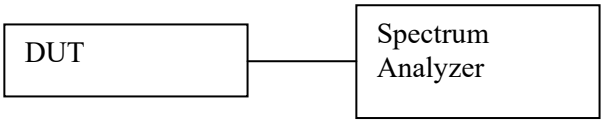
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	25°C, 50% RH	3.7V DC	Nazrin/Qawiman
RE<1G	25°C, 50% RH	3.7V DC	Nazrin/Qawiman
PLC	22.4°C, 68.6% RH	120V AC,240V AC	Madi/Rudy
APCM	25°C, 50% RH	3.7V DC	Jino Lim

Duty Cycle of Test Signal

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

6.0. Duty Cycle of Test Signal

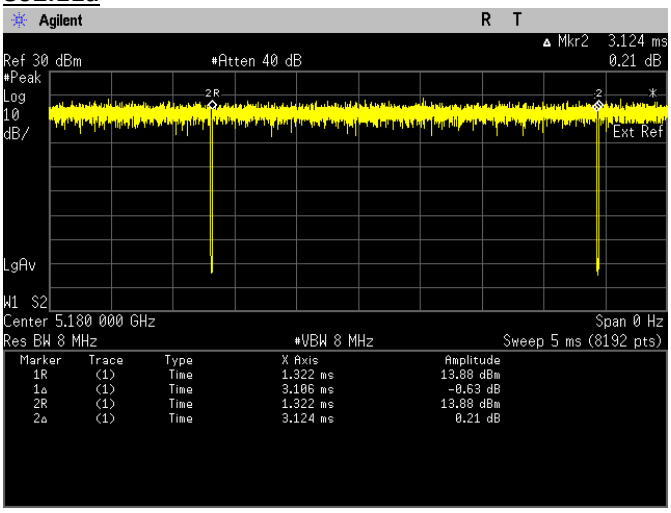
6.0.1. Test Setup



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

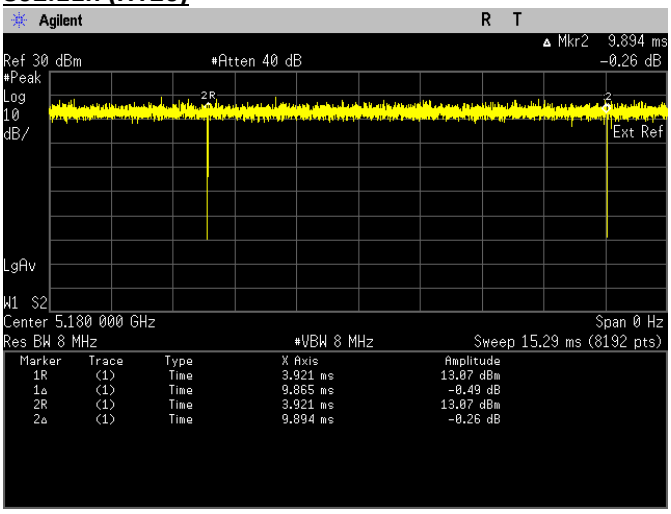
802.11a



On time	3.106	ms
On + off time	3.124	ms
Duty Cycle	0.9942	
Duty Cycle Factor	0.025	

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

802.11n (HT20)



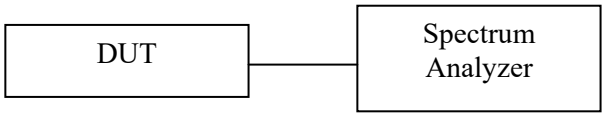
On time	9.865	ms
On + off time	9.894	ms
Duty cycle	0.9971	
Duty Cycle factor	0.013	

*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

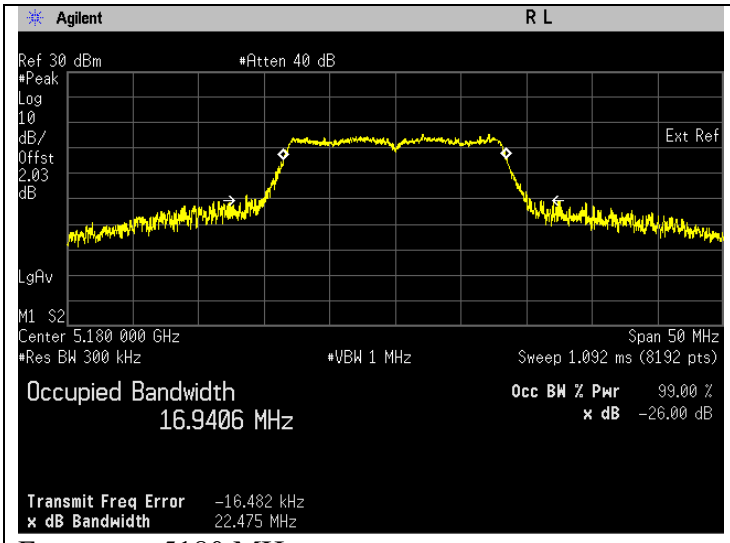
Not applicable.

7.1.3. Test Data

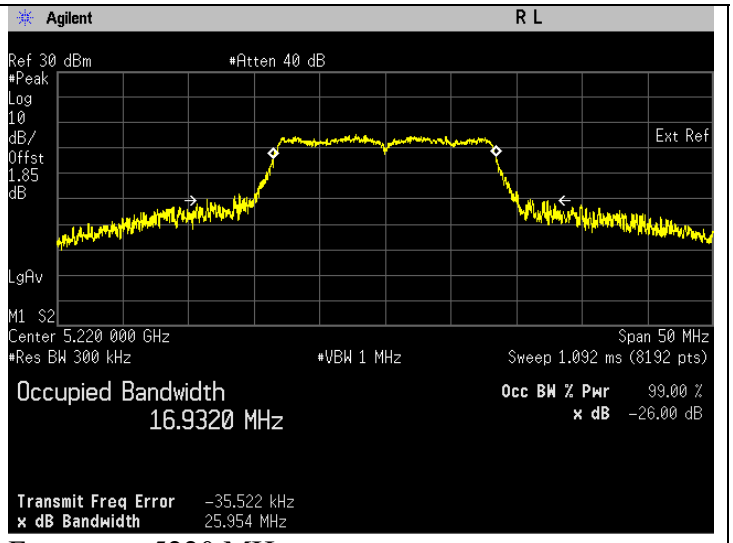
802.11a

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	22.475	Pass	16.941	Pass
5220	Mod Type: BPSK, Data Rate: 6	25.954	Pass	16.932	Pass
5240	Mod Type: BPSK, Data Rate: 6	23.705	Pass	16.922	Pass
5260	Mod Type: BPSK, Data Rate: 6	23.628	Pass	16.954	Pass
5300	Mod Type: BPSK, Data Rate: 6	26.326	Pass	16.918	Pass
5320	Mod Type: BPSK, Data Rate: 6	20.193	Pass	16.833	Pass
5500	Mod Type: BPSK, Data Rate: 6	20.182	Pass	16.819	Pass
5580	Mod Type: BPSK, Data Rate: 6	26.734	Pass	17.033	Pass
5700	Mod Type: BPSK, Data Rate: 6	20.221	Pass	16.852	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-2C	16.320	Pass	13.460	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-3	6.320	Pass	3.460	Pass
5745	Mod Type: BPSK, Data Rate: 6	26.455	Pass	16.959	Pass
5785	Mod Type: BPSK, Data Rate: 6	26.591	Pass	16.944	Pass
5825	Mod Type: BPSK, Data Rate: 6	25.405	Pass	16.964	Pass

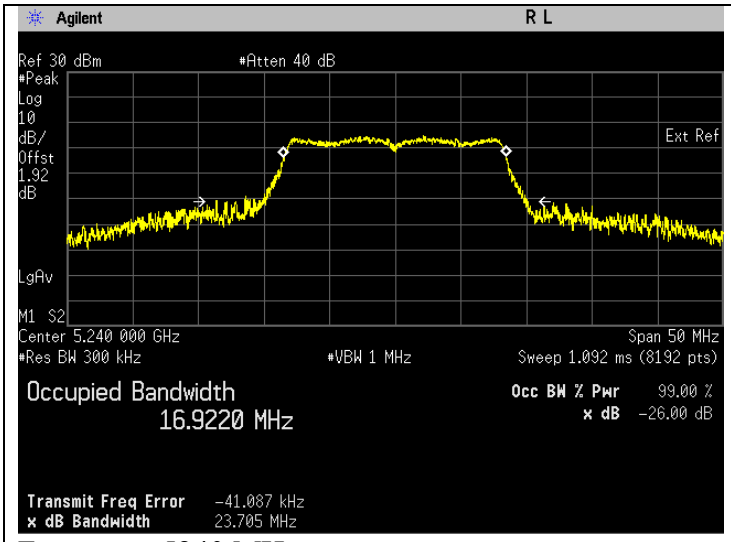
26 dB Bandwidth/ 99% Bandwidth



Frequency 5180 MHz



Frequency 5220 MHz



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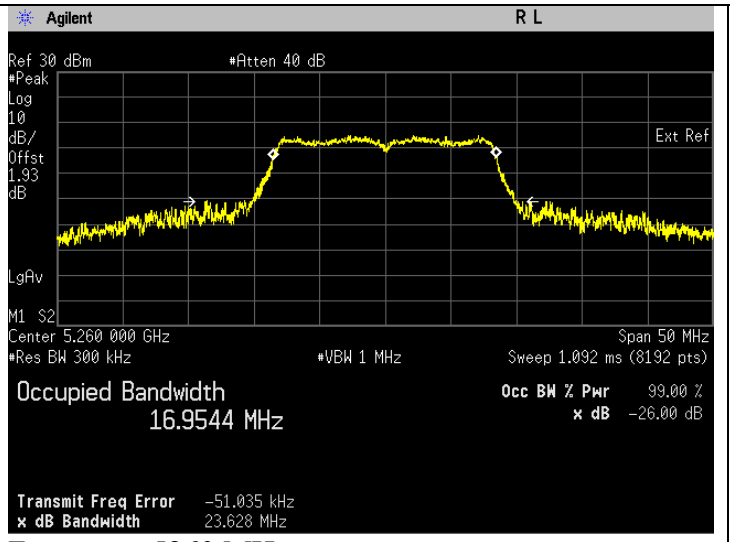
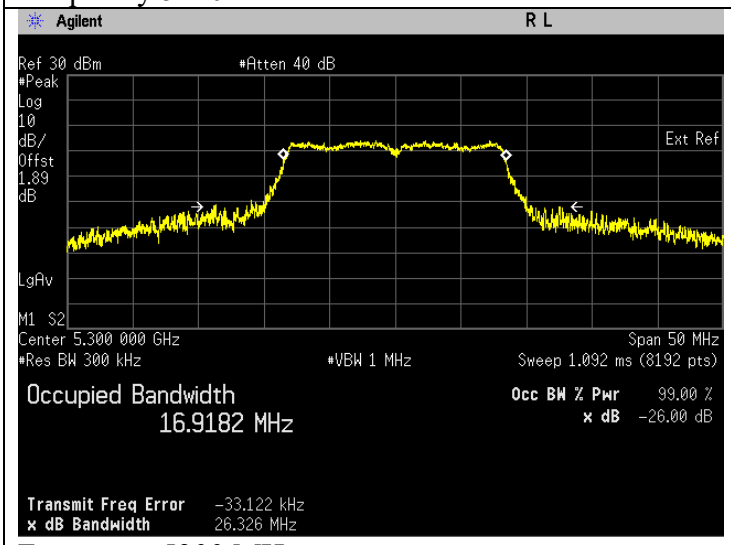
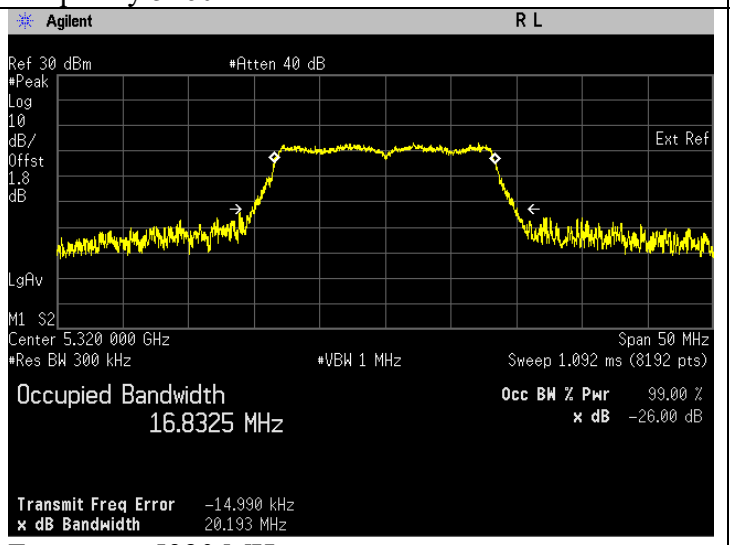


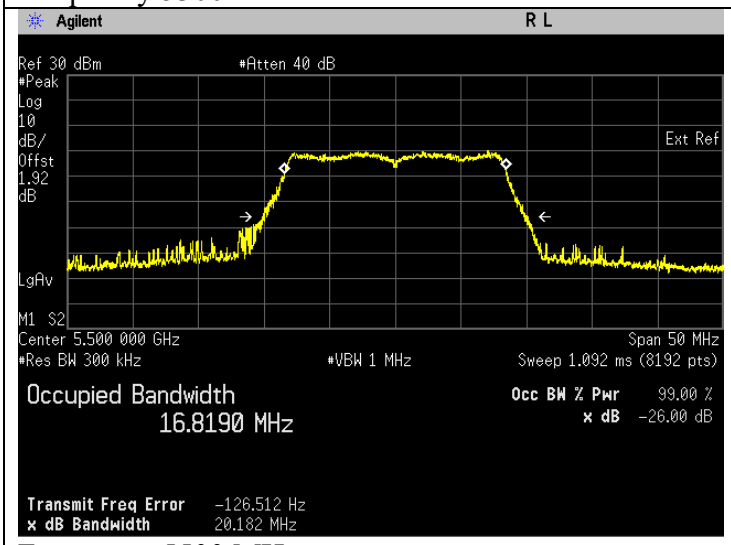
Frequency 5260 MHz



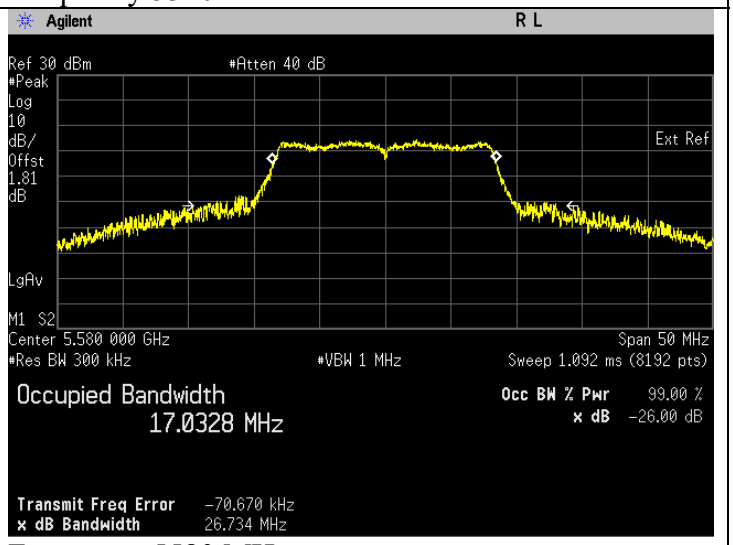
Frequency 5300 MHz



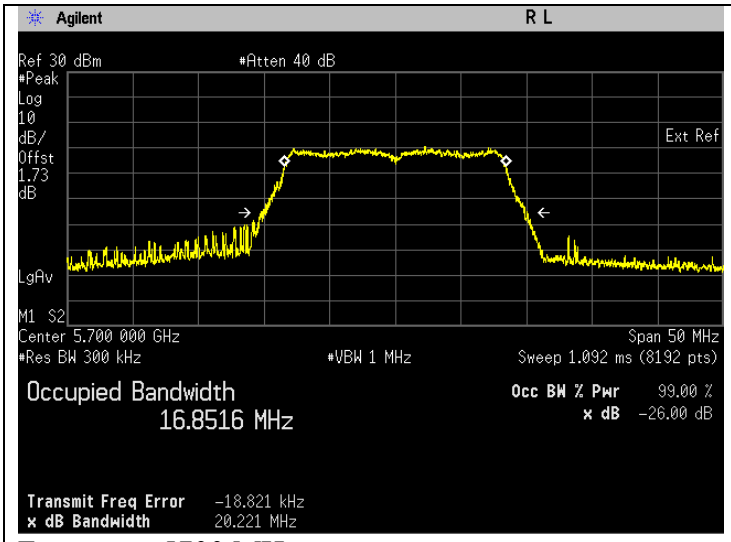
Frequency 5320 MHz



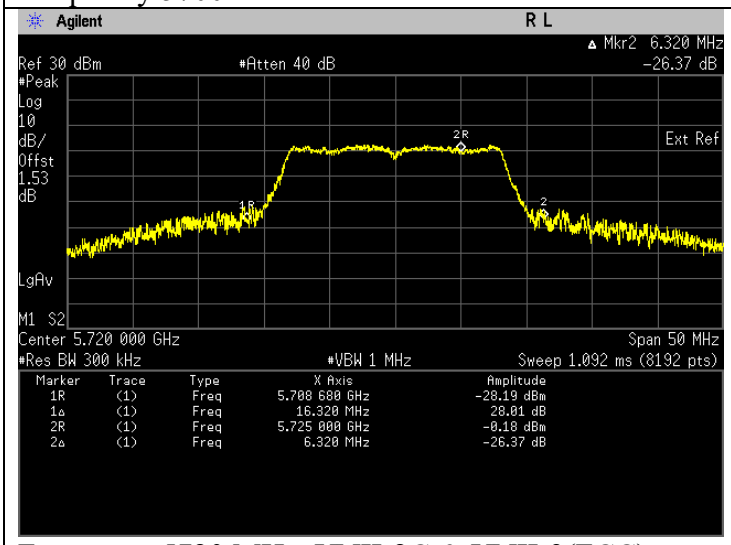
Frequency 5500 MHz



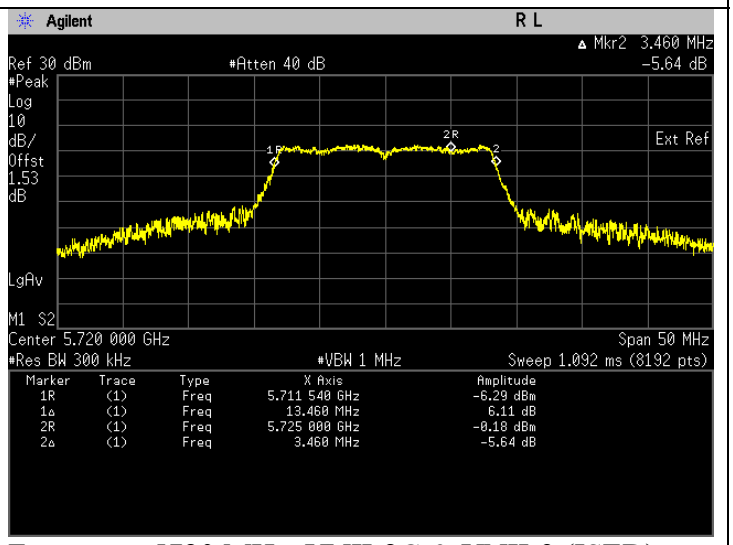
Frequency 5580 MHz



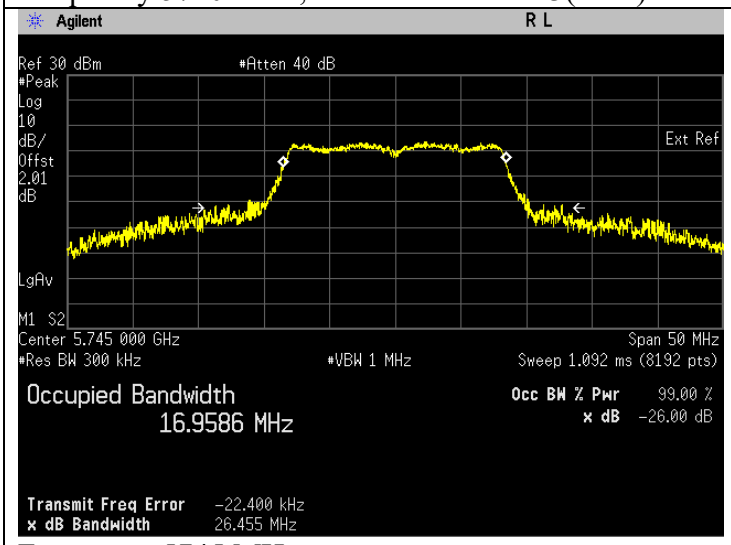
Frequency 5700 MHz



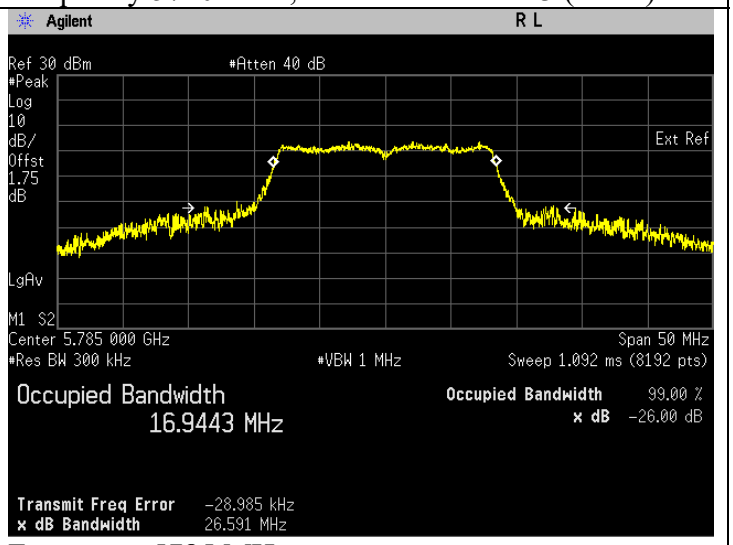
Frequency 5720 MHz, UNII-2C & UNII-3(FCC)



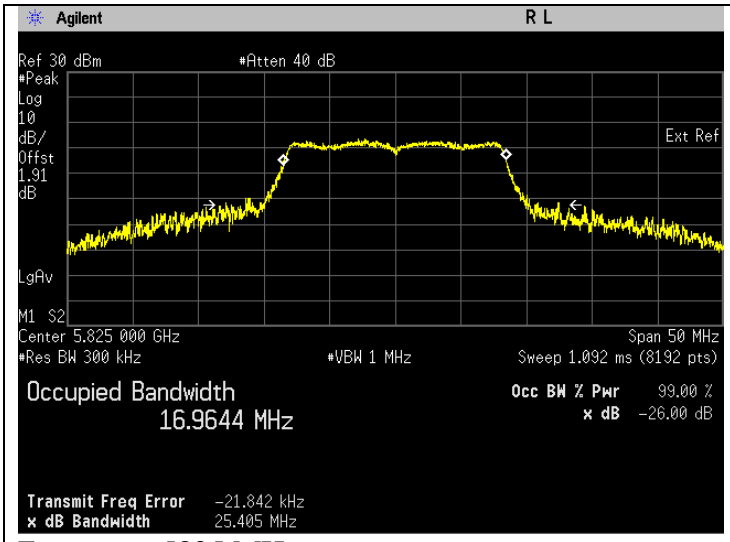
Frequency 5720 MHz, UNII-2C & UNII-3 (ISED)



Frequency 5745 MHz



Frequency 5785 MHz

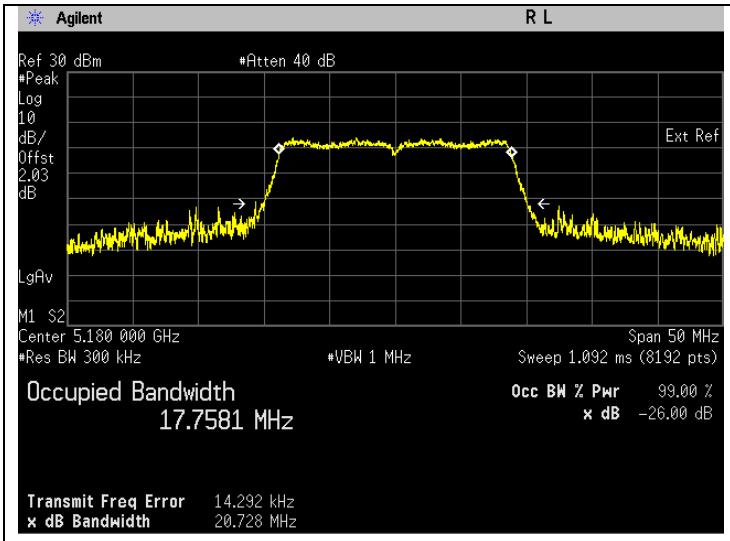


Frequency 5825 MHz

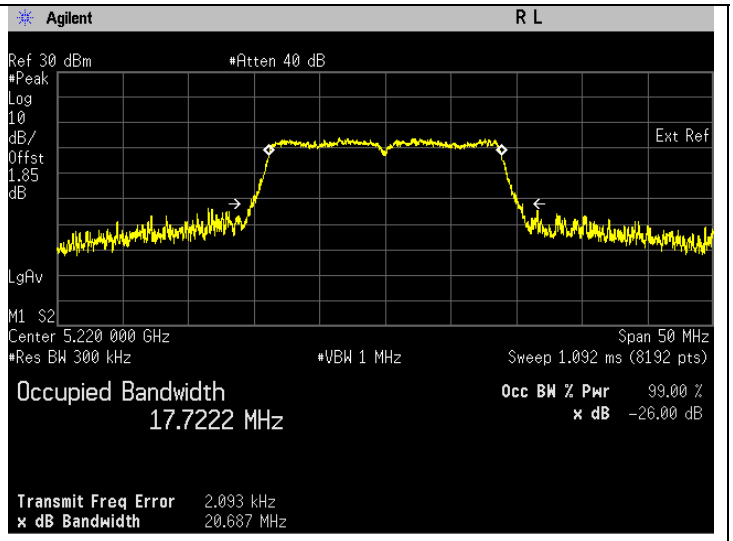
802.11n (HT20)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.728	Pass	17.758	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.687	Pass	17.722	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.288	Pass	17.735	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	21.034	Pass	17.752	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.586	Pass	17.754	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.325	Pass	17.722	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.171	Pass	17.724	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.880	Pass	17.760	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.195	Pass	17.728	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-2C	17.674	Pass	13.887	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-3	7.674	Pass	3.887	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.873	Pass	17.805	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	25.624	Pass	17.780	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	24.214	Pass	17.796	Pass

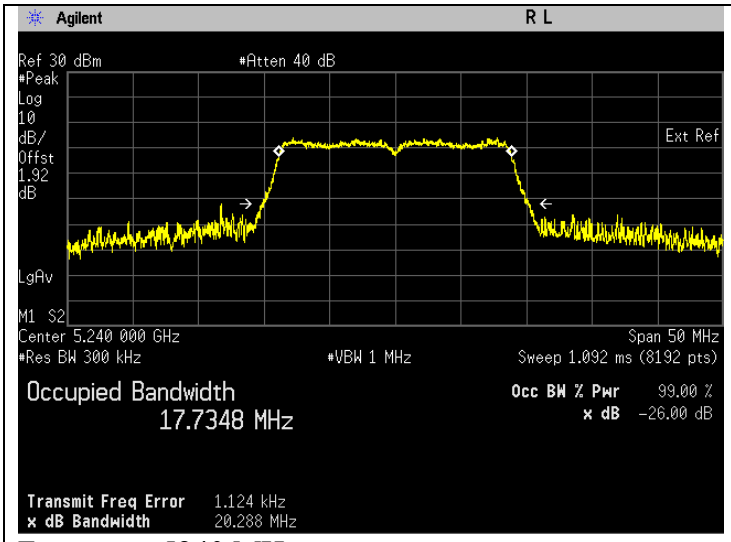
26 dB Bandwidth/ 99% Bandwidth



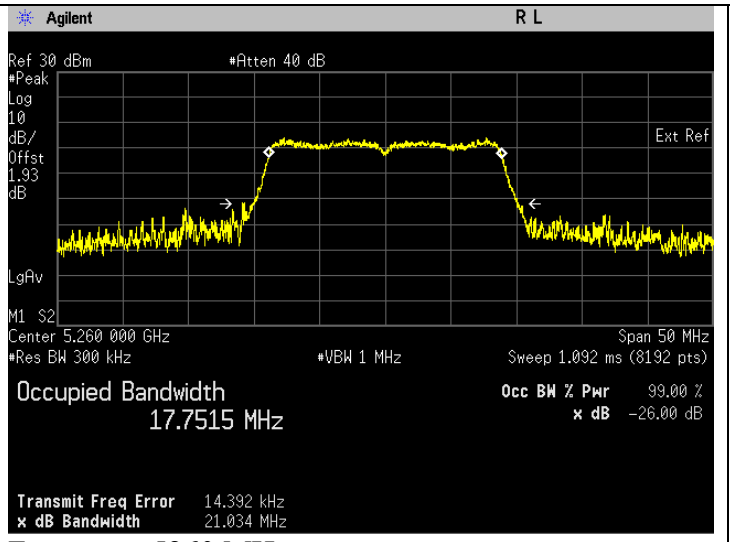
Frequency 5180 MHz



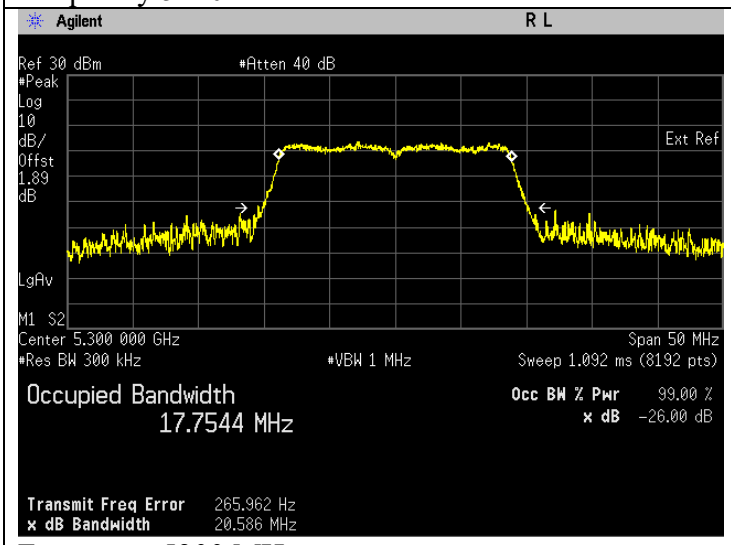
Frequency 5220 MHz



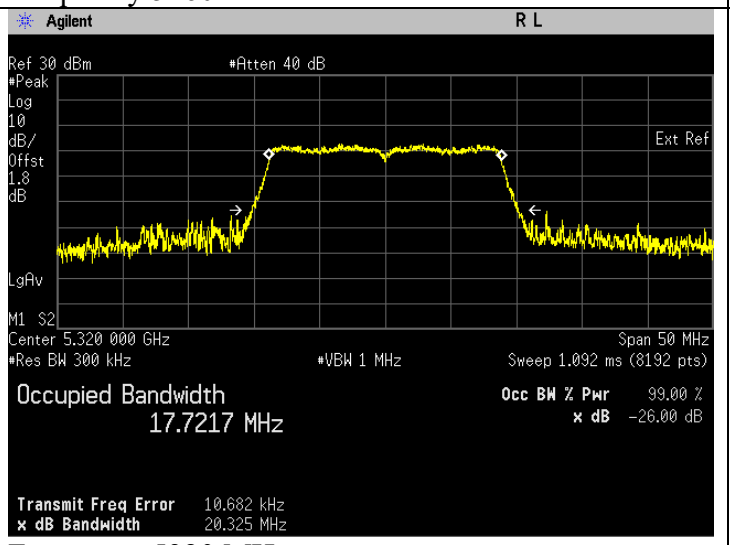
Frequency 5240 MHz



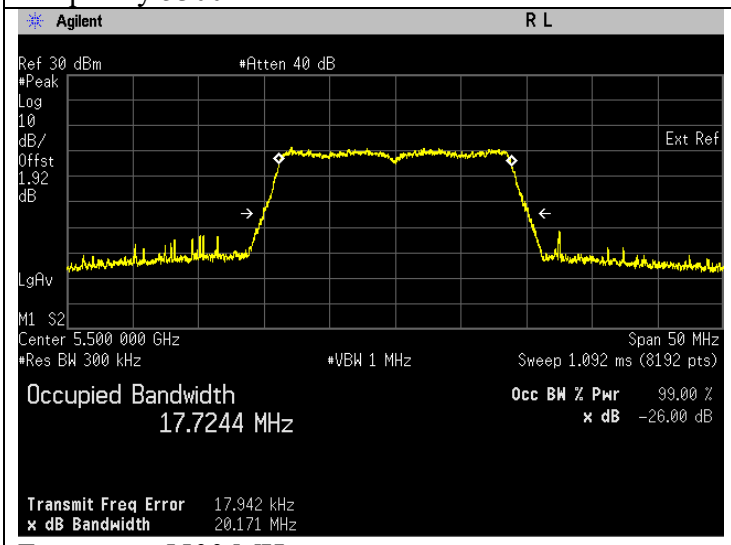
Frequency 5260 MHz



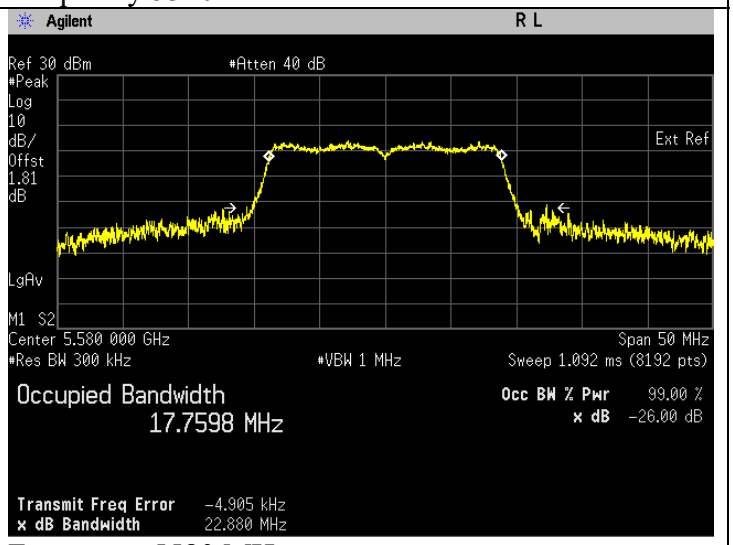
Frequency 5300 MHz



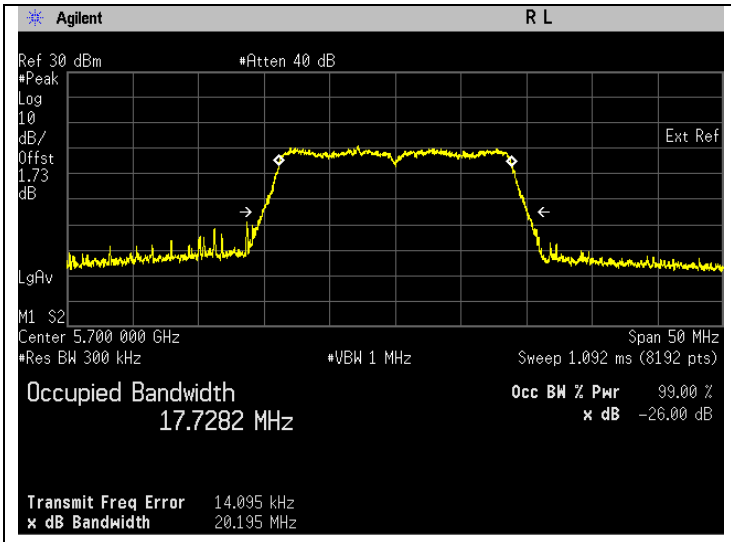
Frequency 5320 MHz



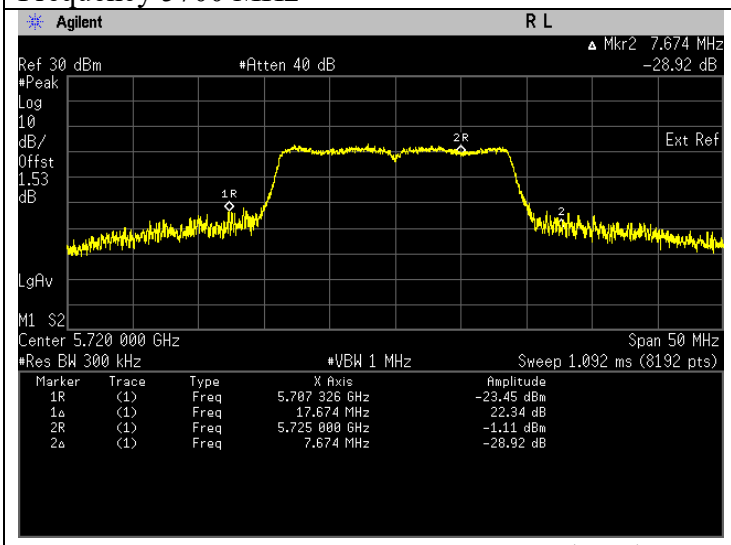
Frequency 5500 MHz



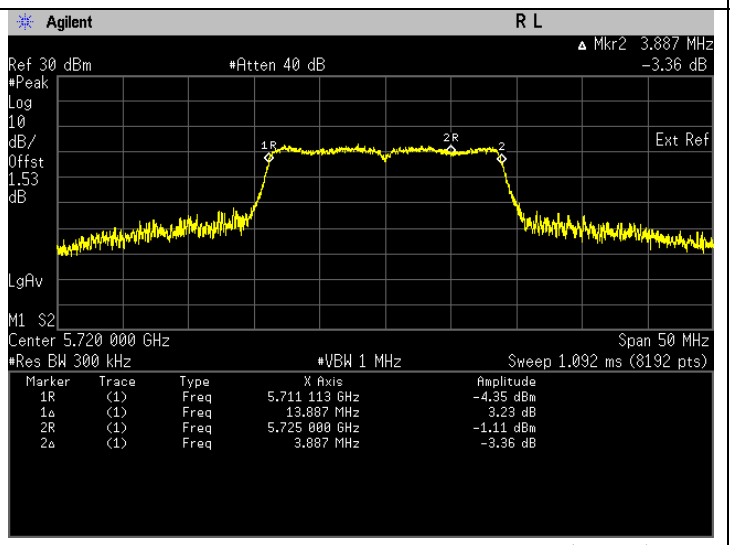
Frequency 5580 MHz



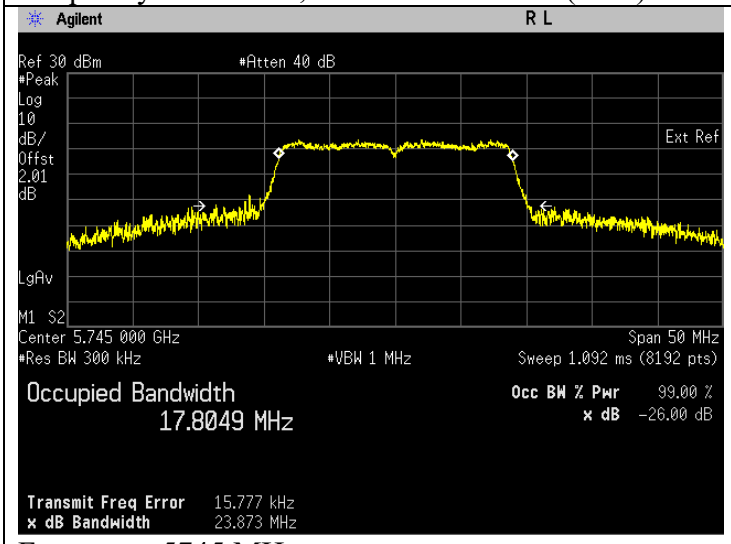
Frequency 5700 MHz



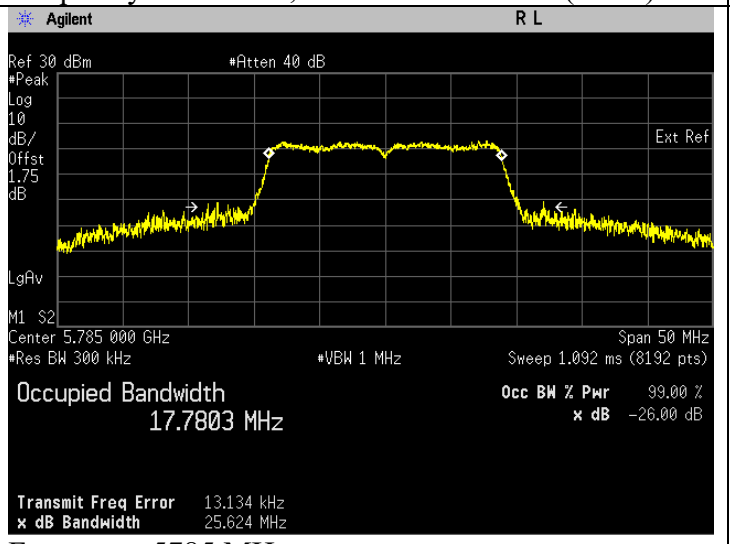
Frequency 5720 MHz, UNII-2C & UNII-3(FCC)



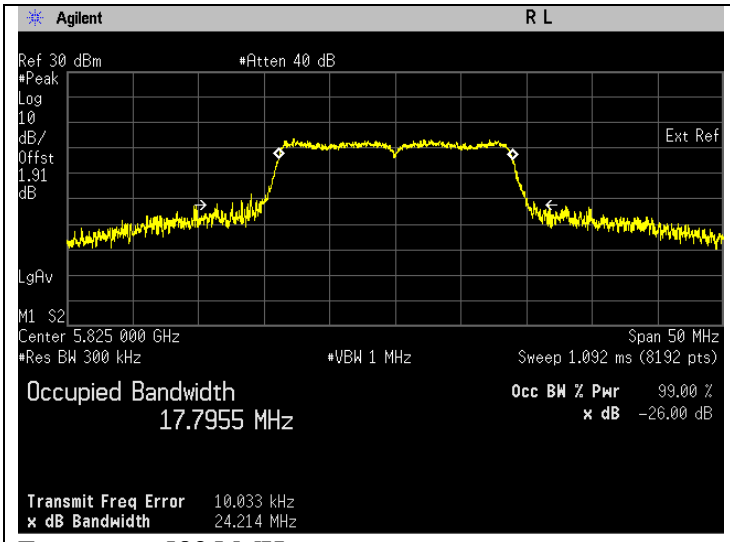
Frequency 5720 MHz, UNII-2C & UNII-3 (ISED)



Frequency 5745 MHz



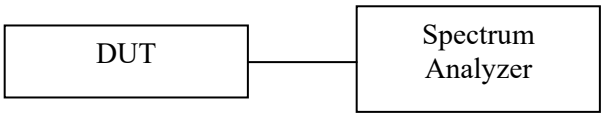
Frequency 5785 MHz



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)
Antenna 1	4.88
Duty Cycle Correction Factor	
802.11a	0.025
802.11n20	0.013

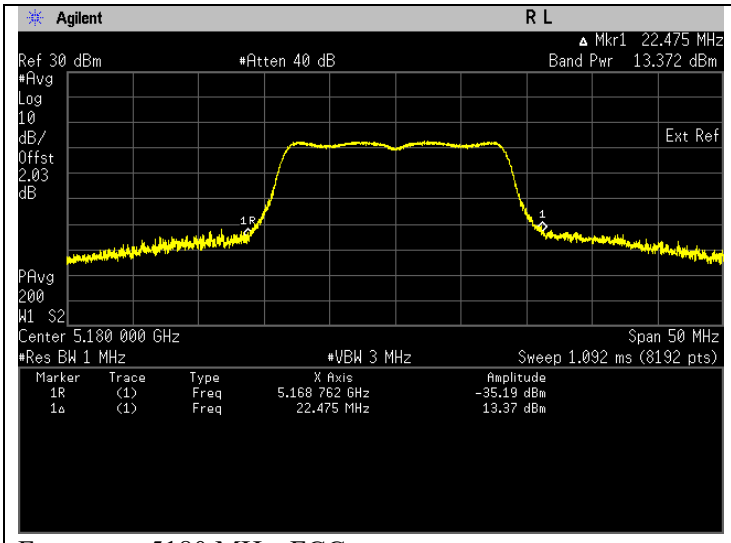
7.2.4 Test Data

Summary table

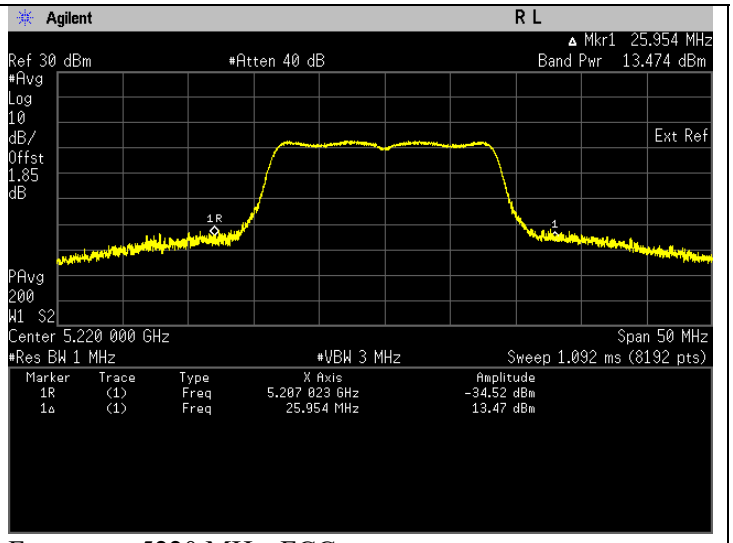
WLAN	Frequency Range (MHz)	Bandwidth (MHz)	RF Power Output		EIRP		Max Emission designator
			Max measured (mW)	Max declared (mW)	Max measured (mW)	Max declared (mW)	
802.11a	5180-5240	20	22.08	28.20	67.92	86.7	16M9D1D
	5260-5300	20	20.93	28.20	68.19	86.7	17M0D1D
	5320	20	16.35	22.40	50.3	68.87	16M9D1D
	5500	20	7.07	7.94	21.74	24.43	16M8D1D
	5520-5580,5660-5680, 5720	20	21.49	28.20	66.1	86.7	17M0D1D
	5700	20	7.33	10	22.54	30.76	16M9D1D
	5745-5825	20	16.34	22.40	50.26	68.87	17M0D1D
802.11n/ac	5180-5240	20	18.05	22.40	55.53	68.87	17M7D1D
	5260-5320	20	16.47	22.40	50.68	68.87	17M8D1D
	5500	20	9.51	11.22	29.26	34.51	17M7D1D
	5520-5580, 5660-5680, 5720	20	16.12	22.40	49.59	68.87	17M8D1D
	5700	20	8.42	11.22	25.9	34.51	17M7D1D
	5745-5825	20	17.06	22.40	52.48	68.87	17M8D1D

802.11a (26dB EBW)

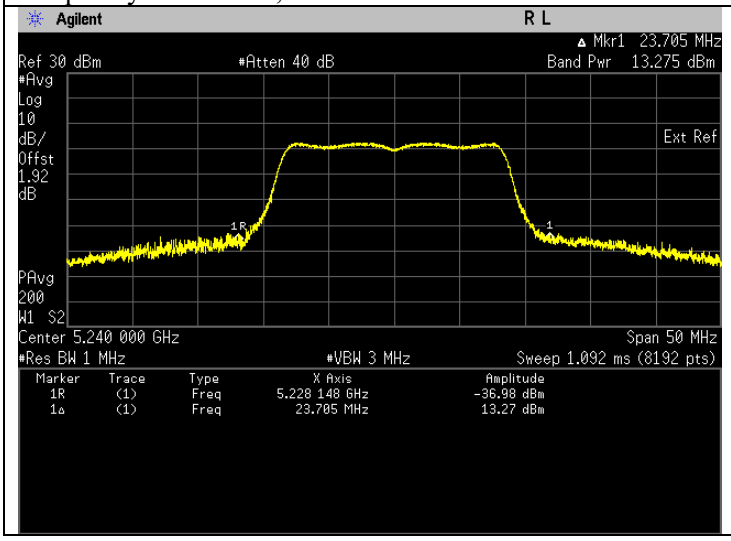
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	21.864	13.397	Pass
5220	Mod Type: BPSK, Data Rate: 6	22.383	13.499	Pass
5240	Mod Type: BPSK, Data Rate: 6	21.381	13.300	Pass
5260	Mod Type: BPSK, Data Rate: 6	21.386	13.301	Pass
5300	Mod Type: BPSK, Data Rate: 6	22.496	13.521	Pass
5320	Mod Type: BPSK, Data Rate: 6	16.630	12.209	Pass
5500	Mod Type: BPSK, Data Rate: 6	7.197	8.571	Pass
5580	Mod Type: BPSK, Data Rate: 6	21.752	13.375	Pass
5700	Mod Type: BPSK, Data Rate: 6	7.456	8.725	Pass
5745	Mod Type: BPSK, Data Rate: 6	16.186	12.091	Pass
5785	Mod Type: BPSK, Data Rate: 6	16.569	12.193	Pass
5825	Mod Type: BPSK, Data Rate: 6	16.531	12.183	Pass

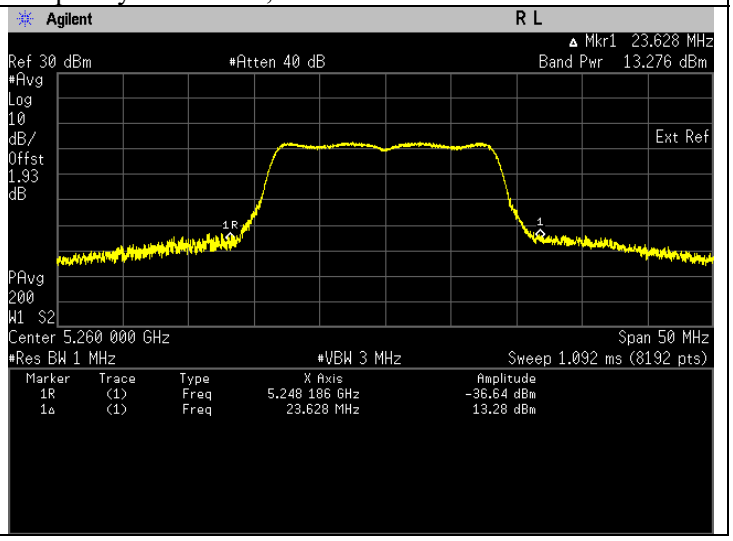


Frequency 5180 MHz, FCC.

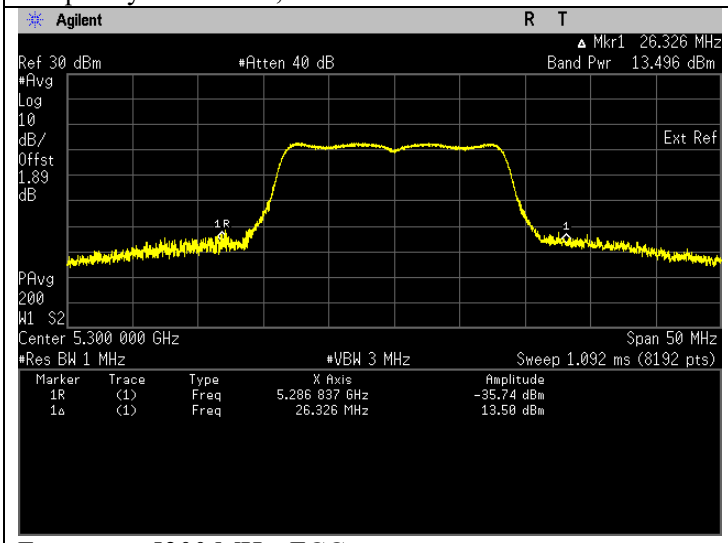


Frequency 5220 MHz, FCC.

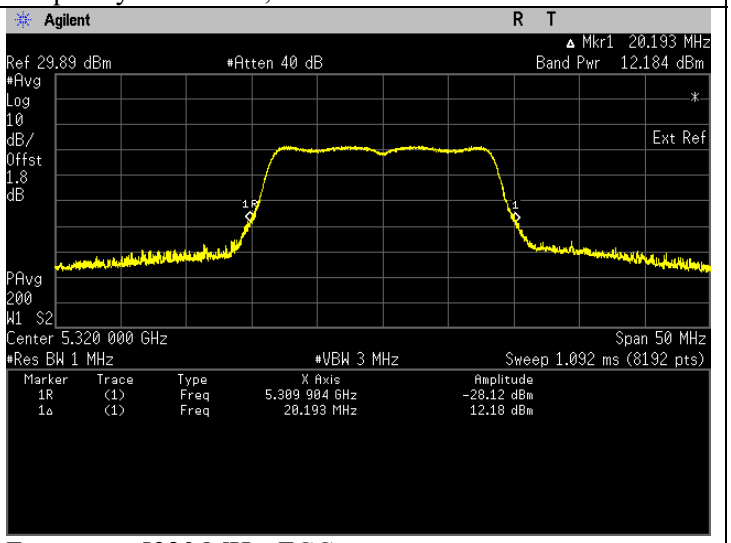




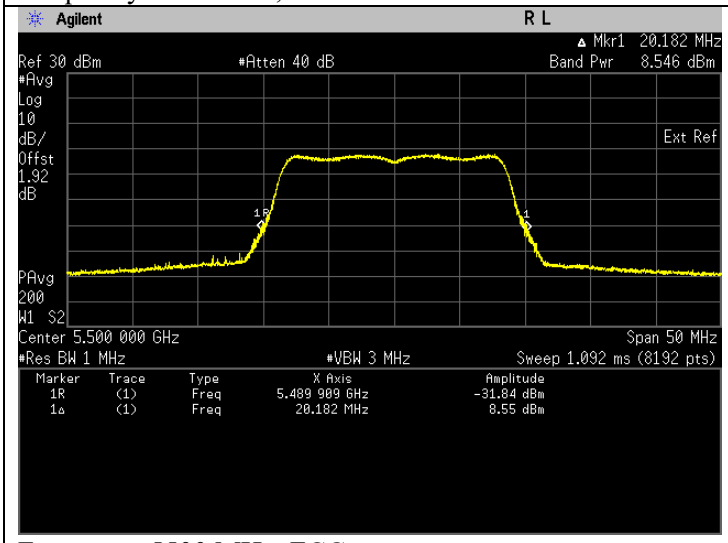
Frequency 5240 MHz, FCC.



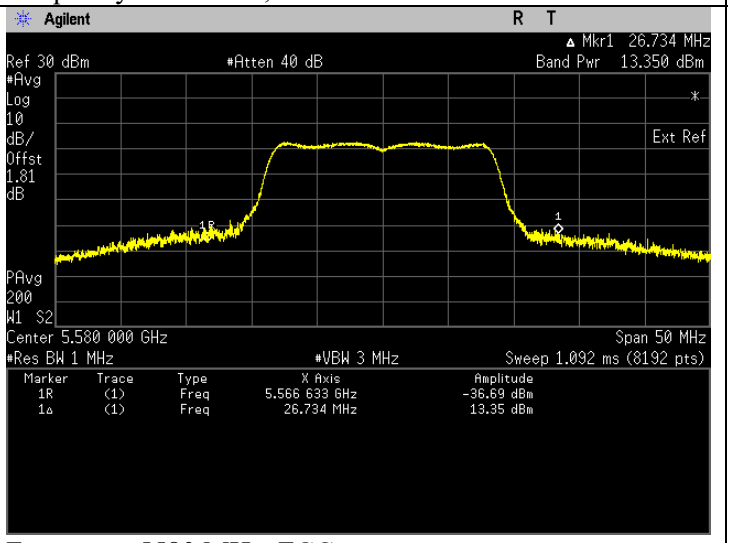
Frequency 5260 MHz, FCC.



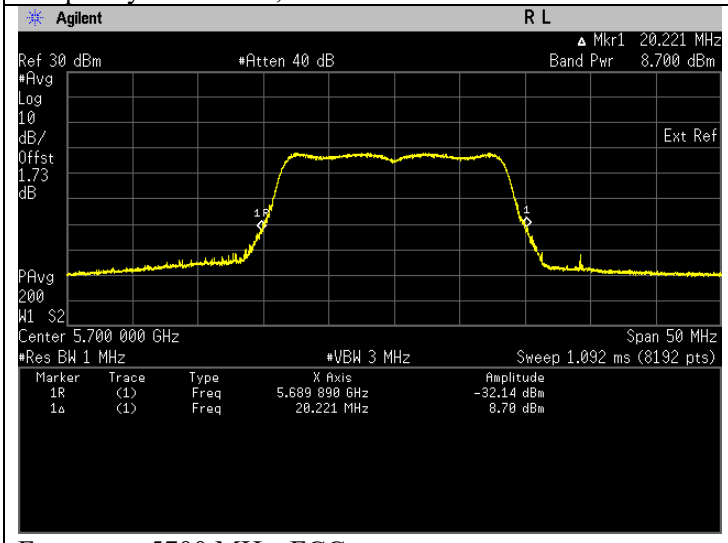
Frequency 5300 MHz, FCC.



Frequency 5320 MHz, FCC.

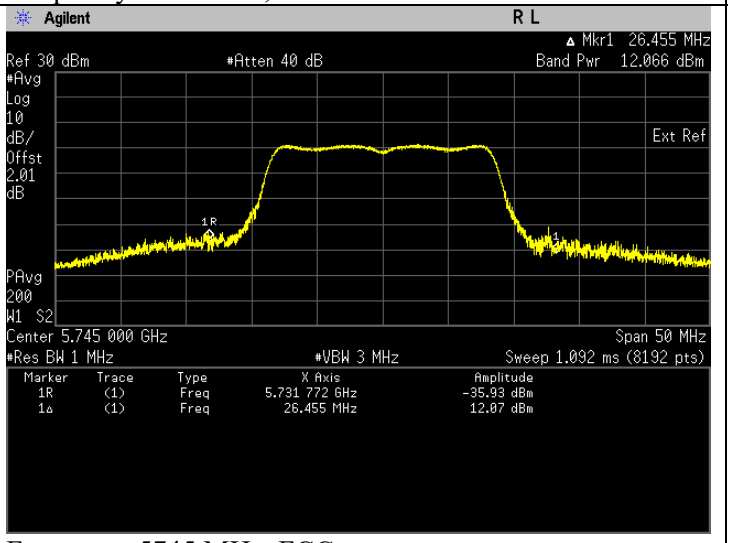


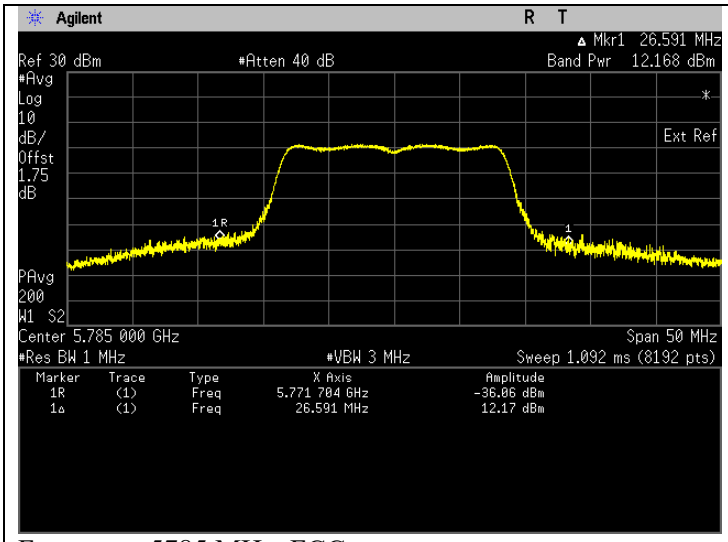
Frequency 5500 MHz, FCC.



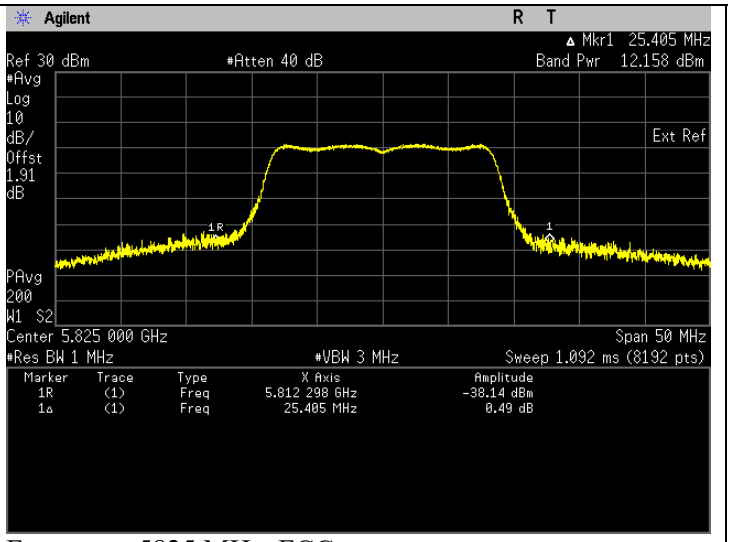
Frequency 5700 MHz, FCC.

Frequency 5745 MHz, FCC.





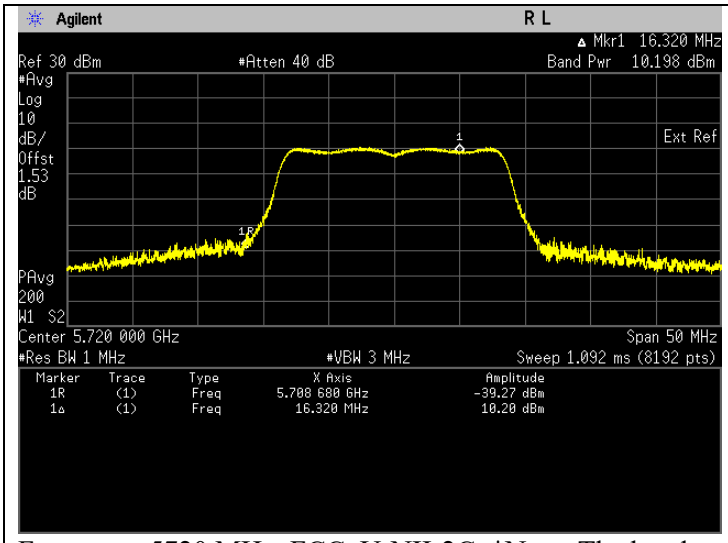
Frequency 5785 MHz, FCC.



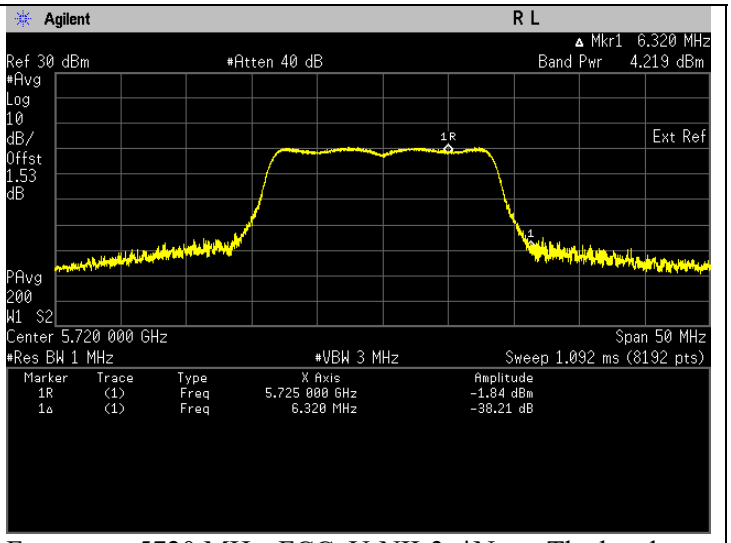
Frequency 5825 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: 6	10.528	10.223	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: 6	2.657	4.244	Pass



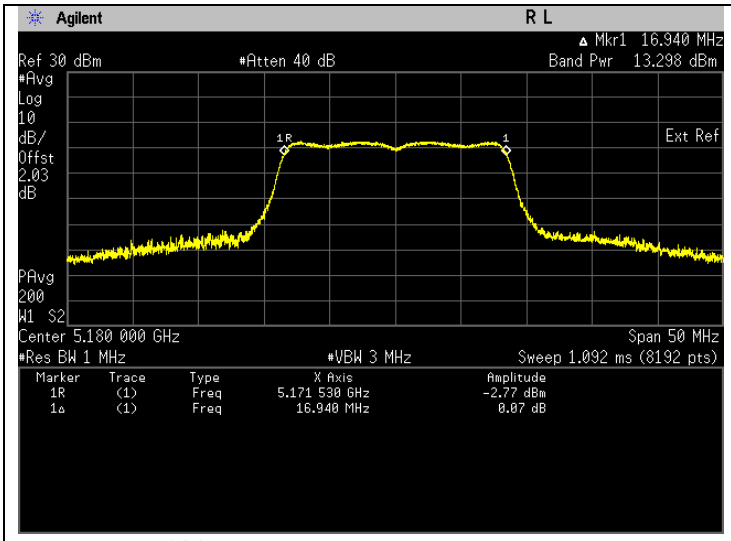
Frequency 5720 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



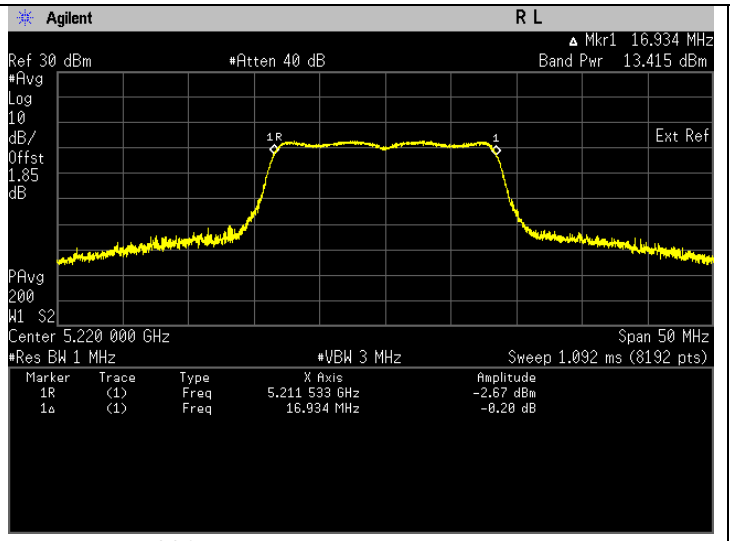
Frequency 5720 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11a (99% EBW)

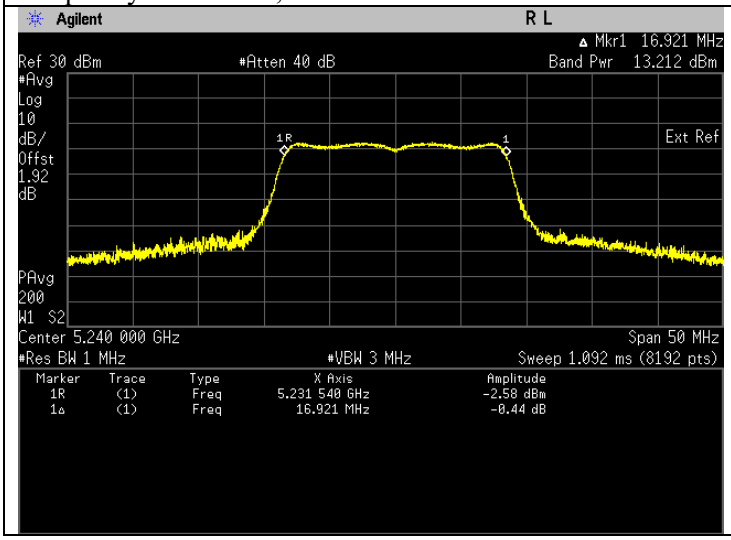
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	21.494	13.323	Pass	17.323	Pass
5220	Mod Type: BPSK, Data Rate: 6	22.081	13.440	Pass	17.440	Pass
5240	Mod Type: BPSK, Data Rate: 6	21.073	13.237	Pass	17.237	Pass
5260	Mod Type: BPSK, Data Rate: 6	20.933	13.208	Pass	17.208	Pass
5300	Mod Type: BPSK, Data Rate: 6	22.167	13.457	Pass	17.457	Pass
5320	Mod Type: BPSK, Data Rate: 6	16.353	12.136	Pass	16.136	Pass
5500	Mod Type: BPSK, Data Rate: 6	7.067	8.492	Pass	12.492	Pass
5580	Mod Type: BPSK, Data Rate: 6	21.488	13.322	Pass	17.322	Pass
5700	Mod Type: BPSK, Data Rate: 6	7.329	8.650	Pass	12.650	Pass
5745	Mod Type: BPSK, Data Rate: 6	15.986	12.037	Pass	16.037	Pass
5785	Mod Type: BPSK, Data Rate: 6	16.338	12.132	Pass	16.132	Pass
5825	Mod Type: BPSK, Data Rate: 6	16.312	12.125	Pass	16.125	Pass

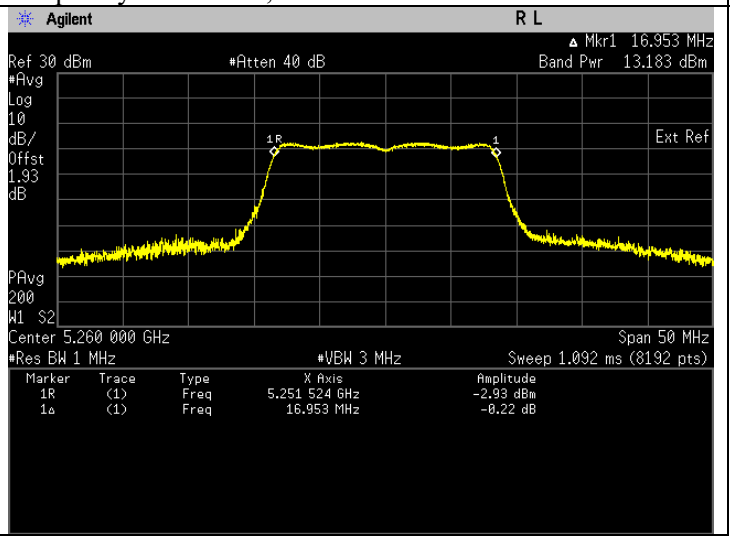


Frequency 5180 MHz, ISED

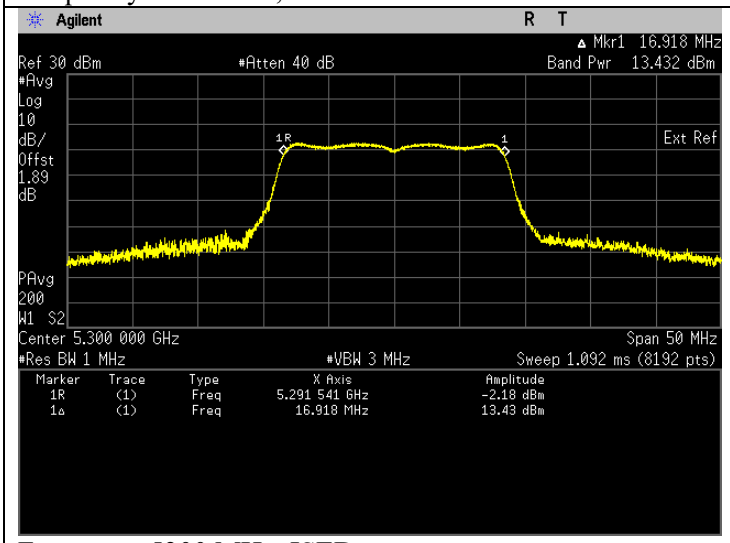


Frequency 5220 MHz, ISED

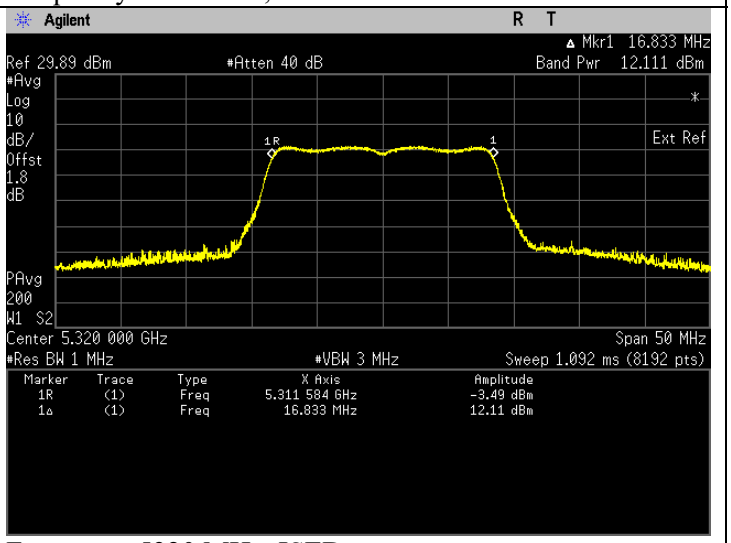




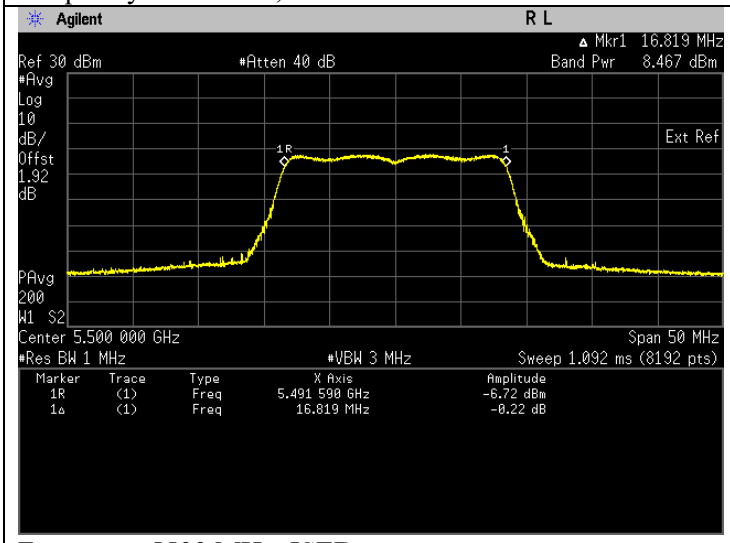
Frequency 5240 MHz, ISED



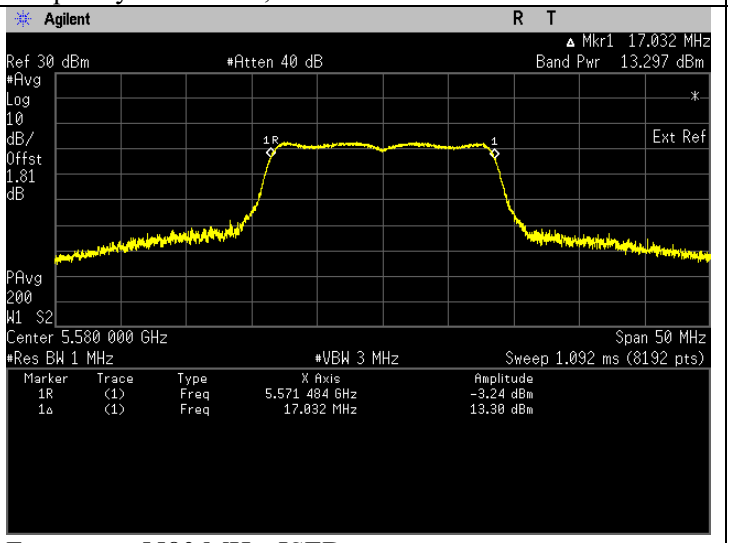
Frequency 5260 MHz, ISED



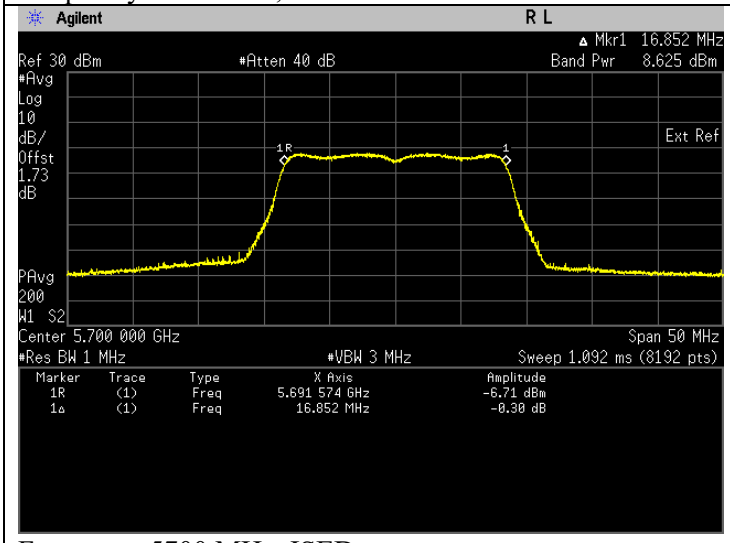
Frequency 5300 MHz, ISED



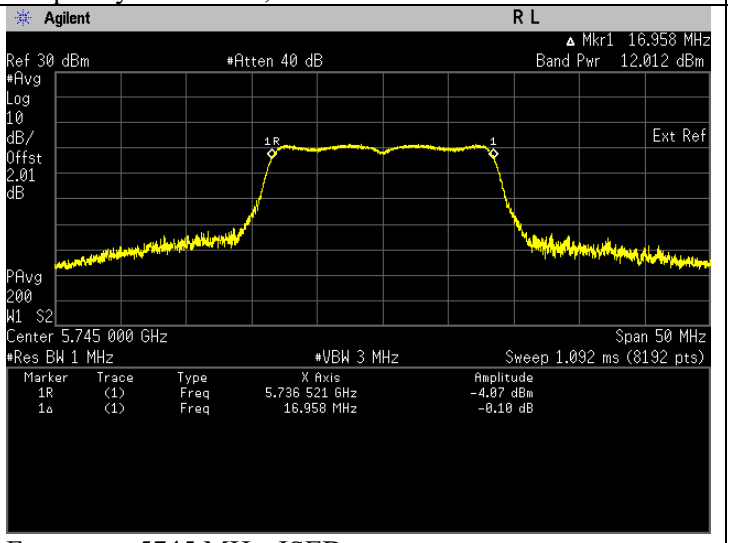
Frequency 5320 MHz, ISED



Frequency 5500 MHz, ISED

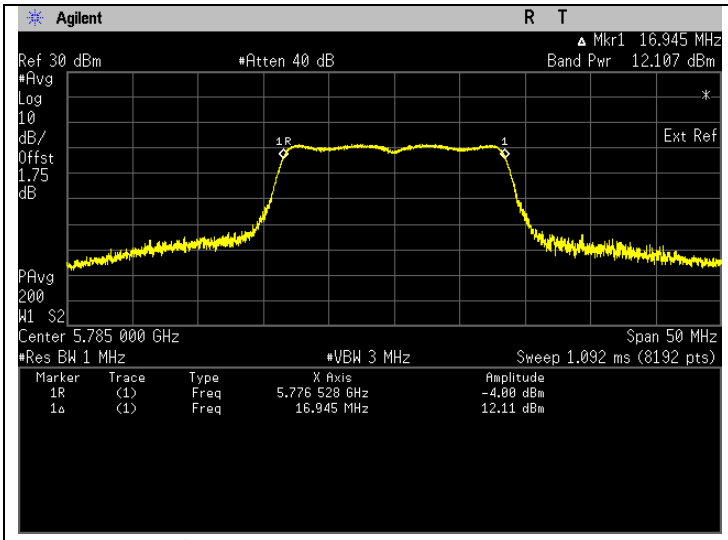


Frequency 5580 MHz, ISED

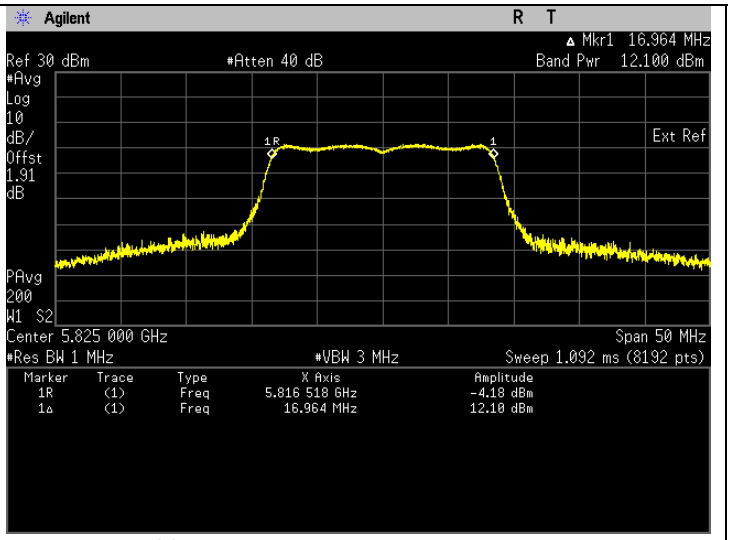


Frequency 5700 MHz, ISED

Frequency 5745 MHz, ISED



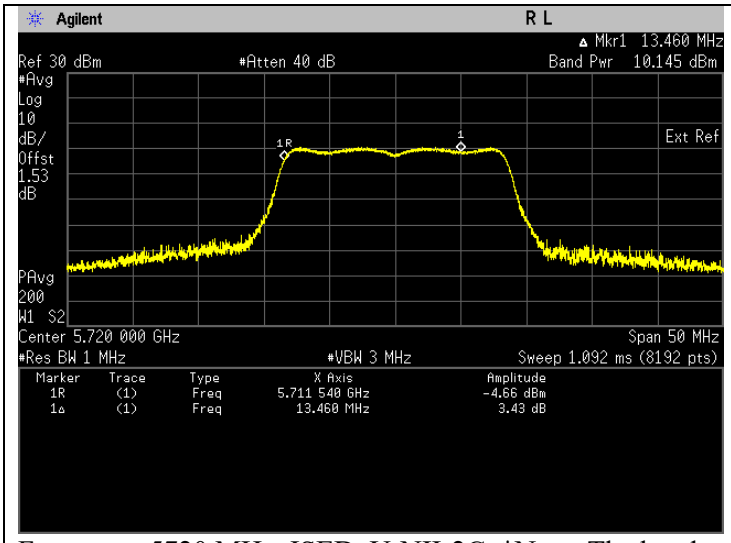
Frequency 5785 MHz, ISED



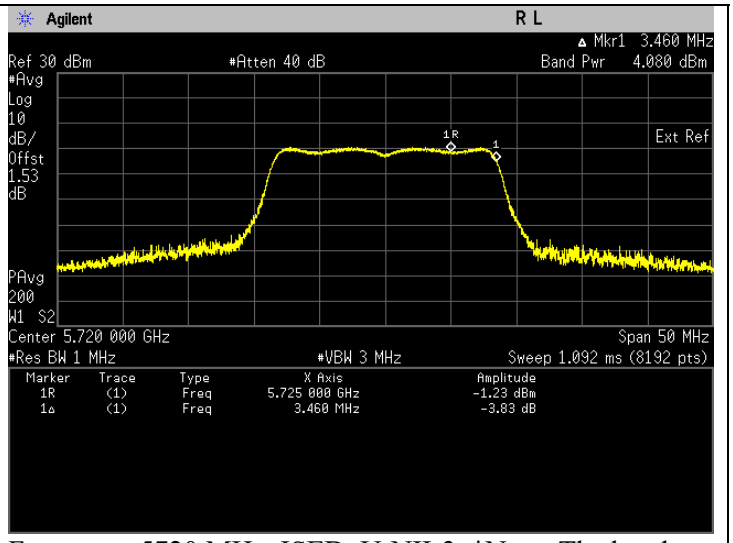
Frequency 5825 MHz, ISED

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	10.400	10.170	Pass	14.170	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: 6	2.574	4.105	Pass	8.105	Pass



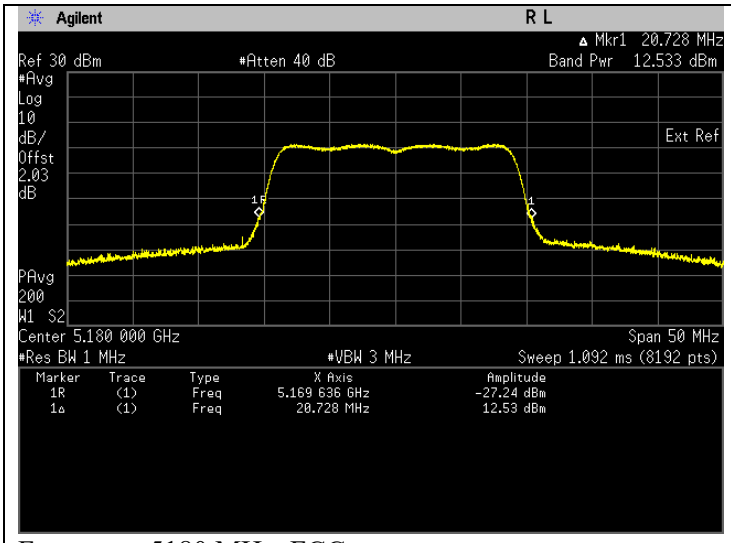
Frequency 5720 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



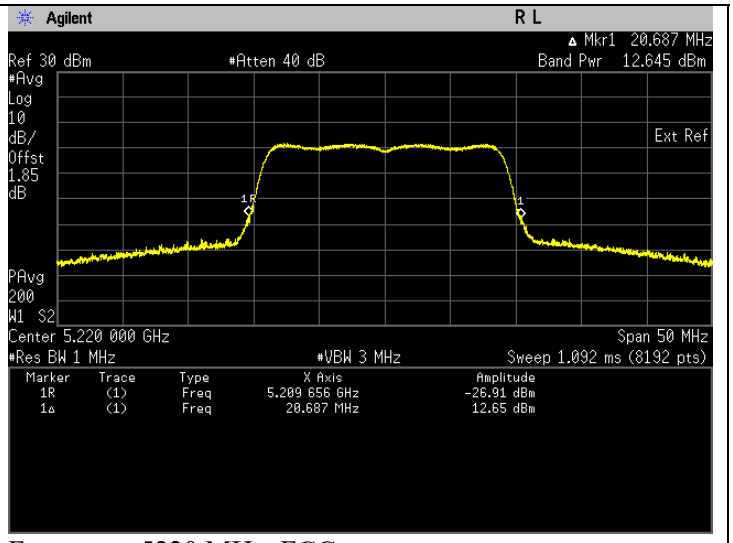
Frequency 5720 MHz, ISED, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(26dB EBW)

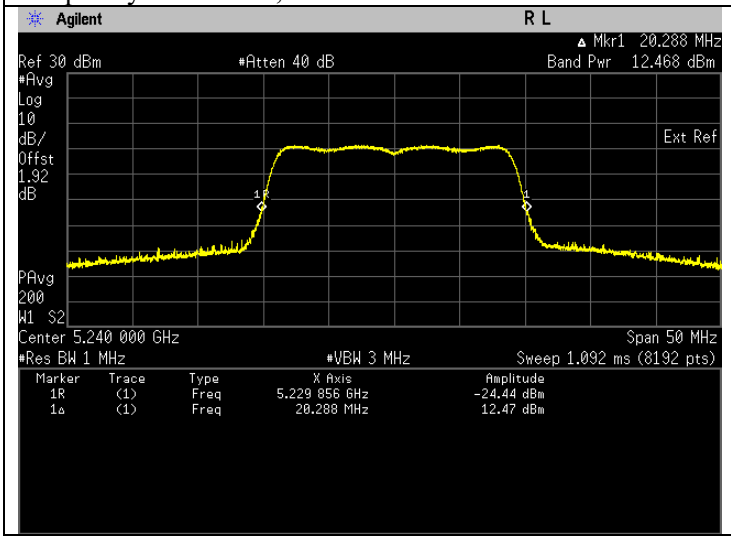
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.971	12.546	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	18.440	12.658	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.704	12.481	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.868	12.271	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.389	12.146	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.738	12.237	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	9.772	9.900	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.545	12.187	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.602	9.346	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.965	12.296	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.893	12.277	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.398	12.405	Pass

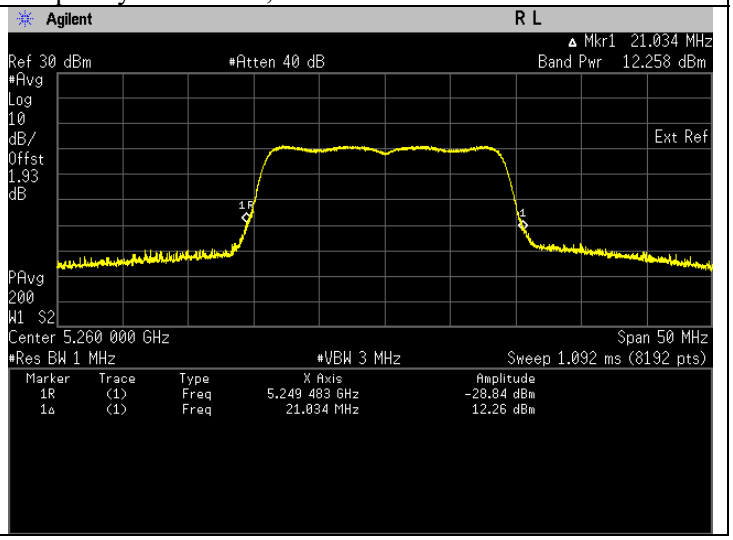


Frequency 5180 MHz, FCC.

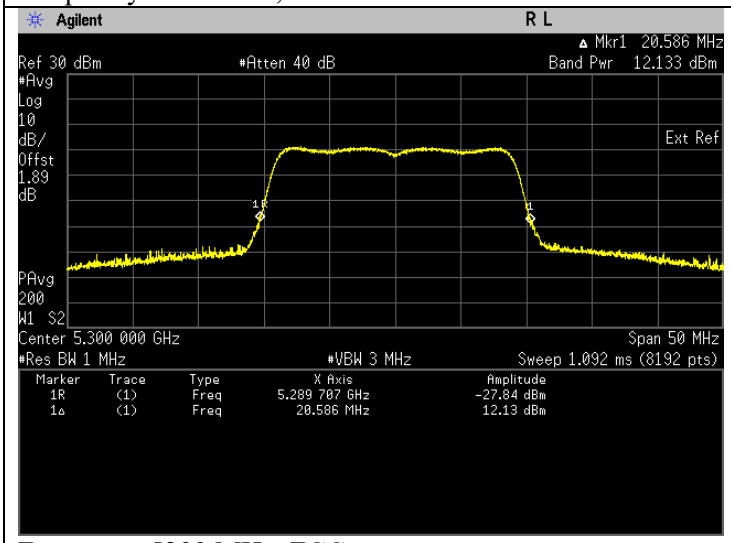


Frequency 5220 MHz, FCC.

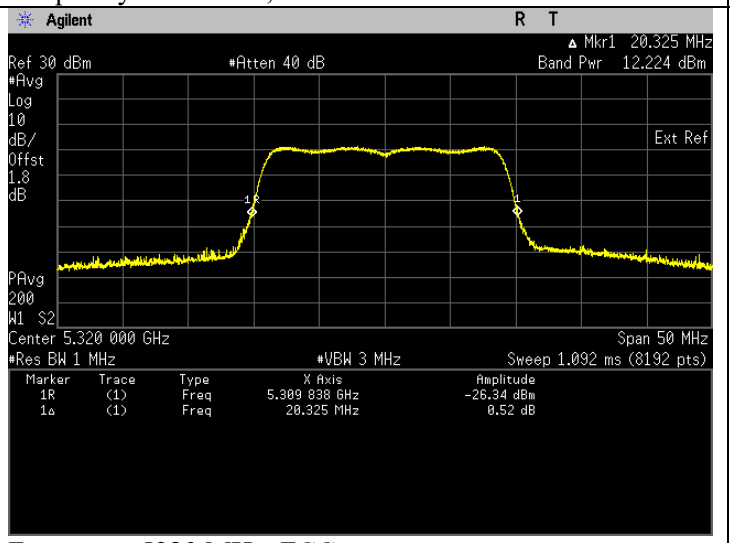




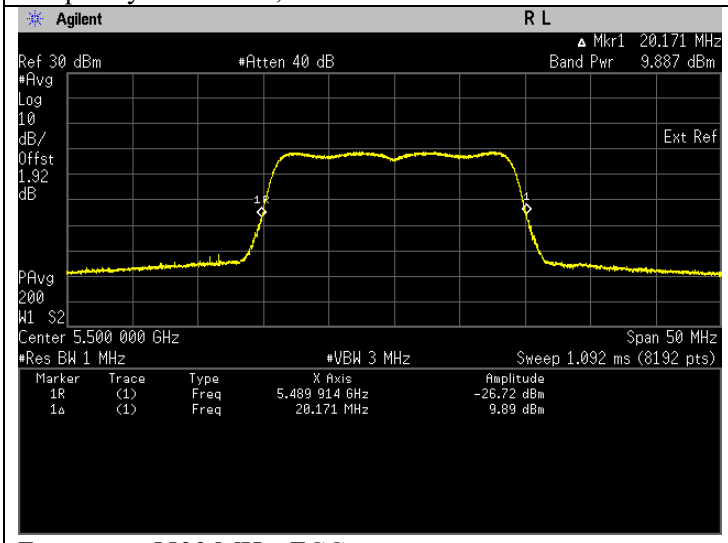
Frequency 5240 MHz, FCC.



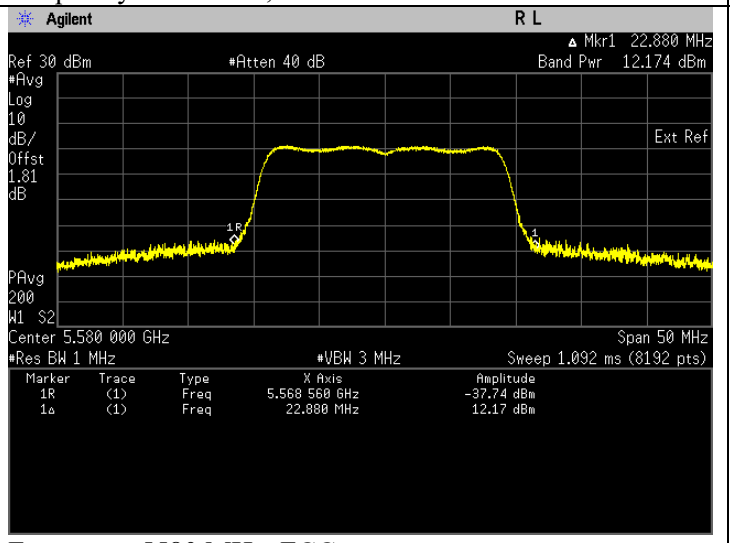
Frequency 5260 MHz, FCC.



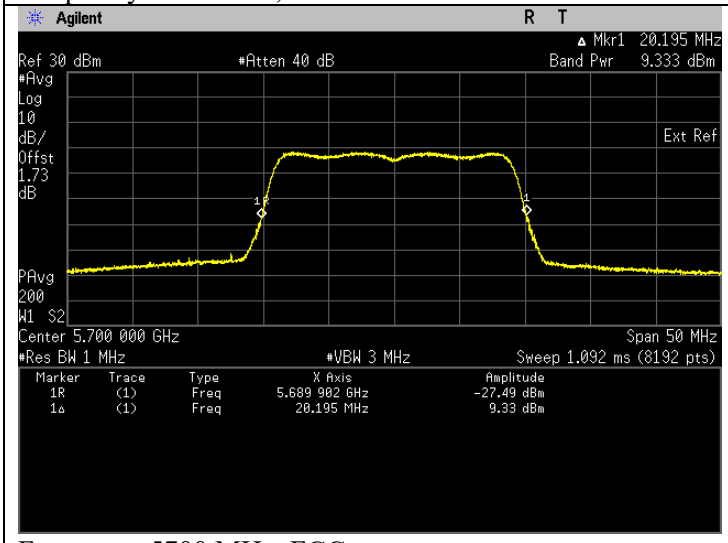
Frequency 5300 MHz, FCC.



Frequency 5320 MHz, FCC.

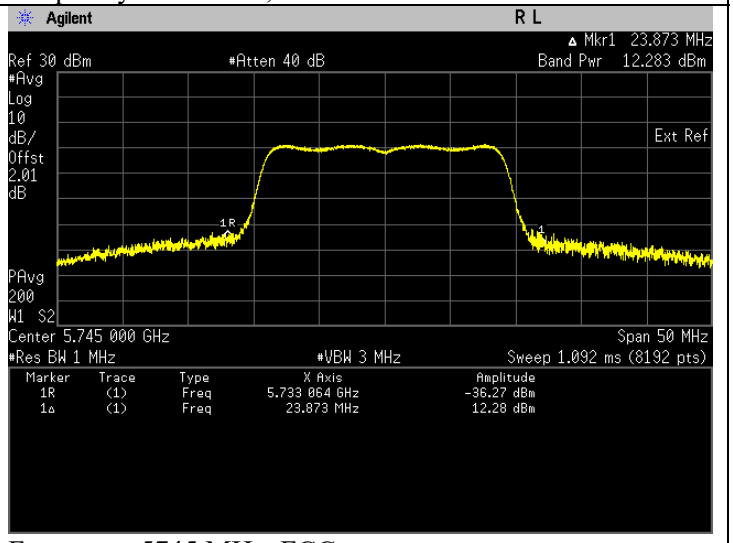


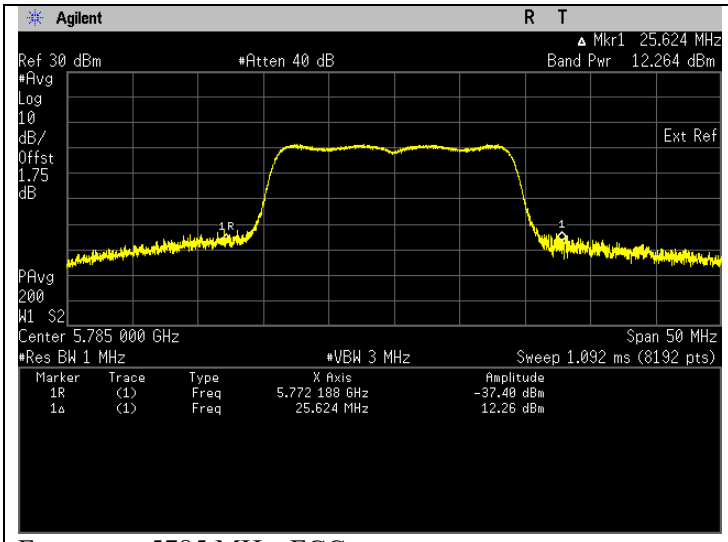
Frequency 5500 MHz, FCC.



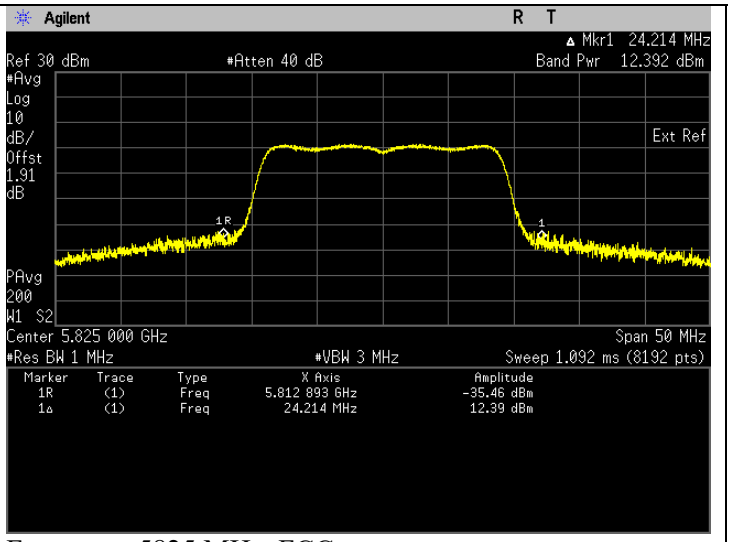
Frequency 5700 MHz, FCC.

Frequency 5745 MHz, FCC.





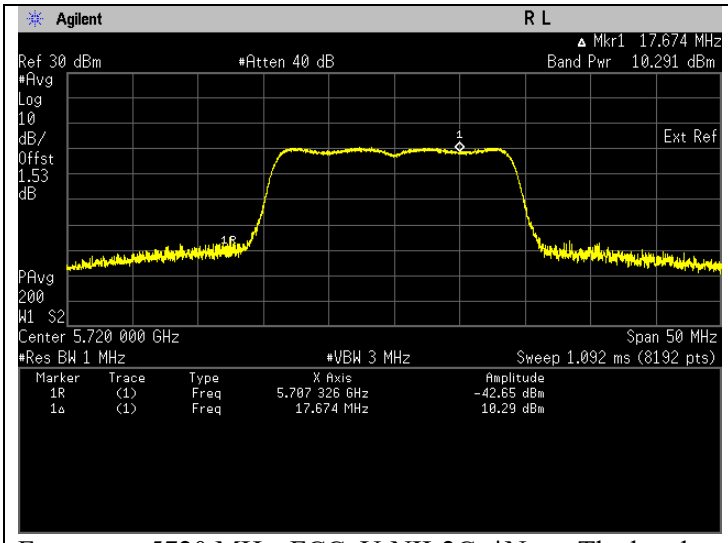
Frequency 5785 MHz, FCC.



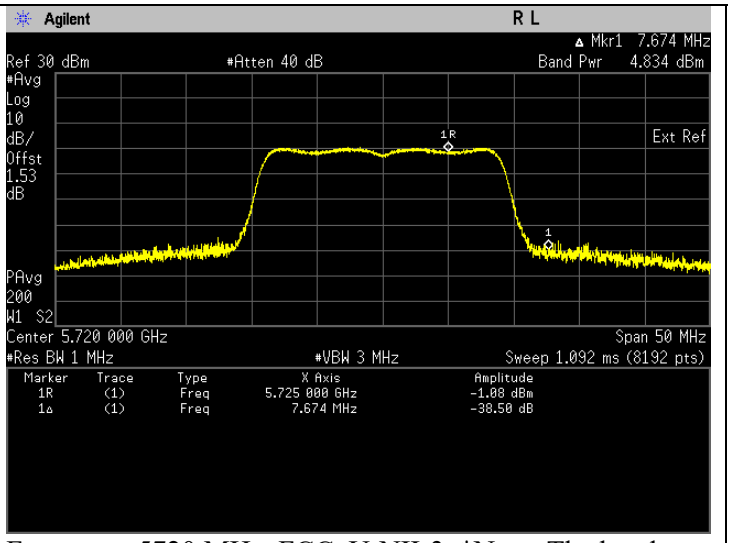
Frequency 5825 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	10.724	10.304	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.053	4.847	Pass



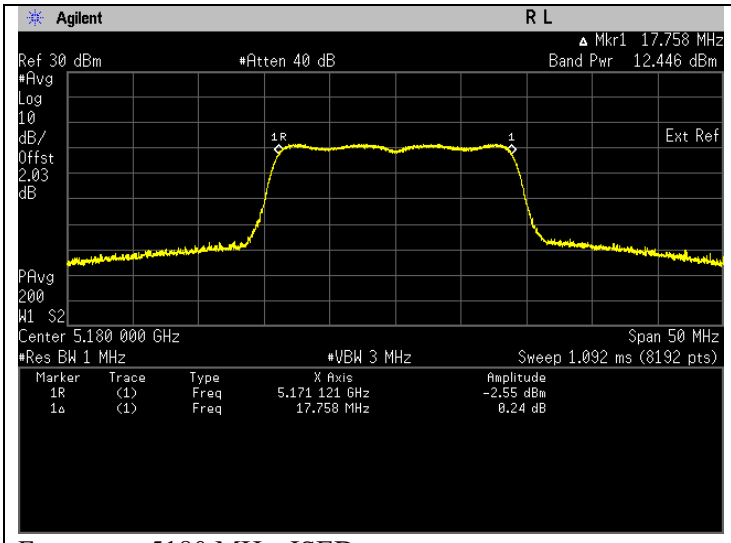
Frequency 5720 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



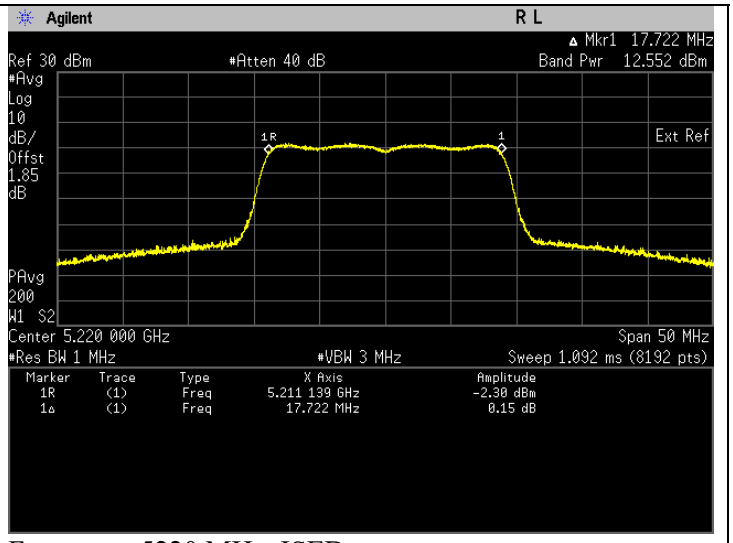
Frequency 5720 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(99% EBW)

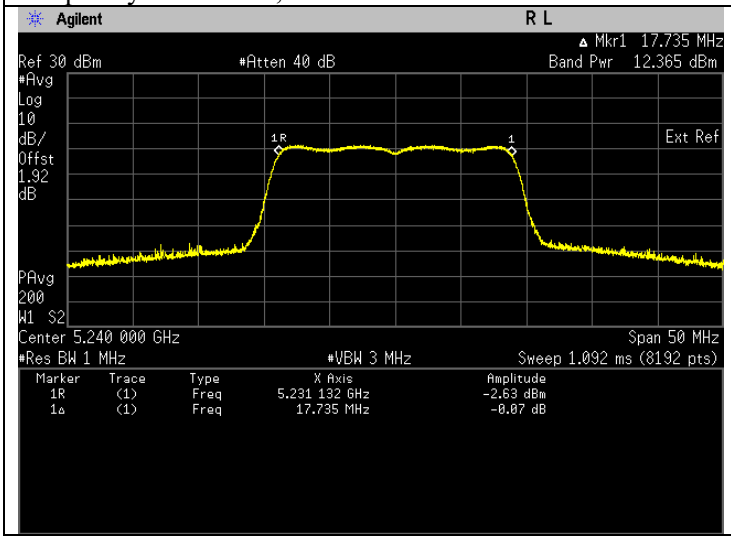
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.614	12.459	Pass	16.459	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	18.049	12.565	Pass	16.565	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.289	12.378	Pass	16.378	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.473	12.168	Pass	16.168	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.924	12.021	Pass	16.021	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.498	12.143	Pass	16.143	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	9.512	9.783	Pass	13.783	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.120	12.074	Pass	16.074	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.420	9.253	Pass	13.253	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.640	12.212	Pass	16.212	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.554	12.189	Pass	16.189	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.061	12.320	Pass	16.320	Pass

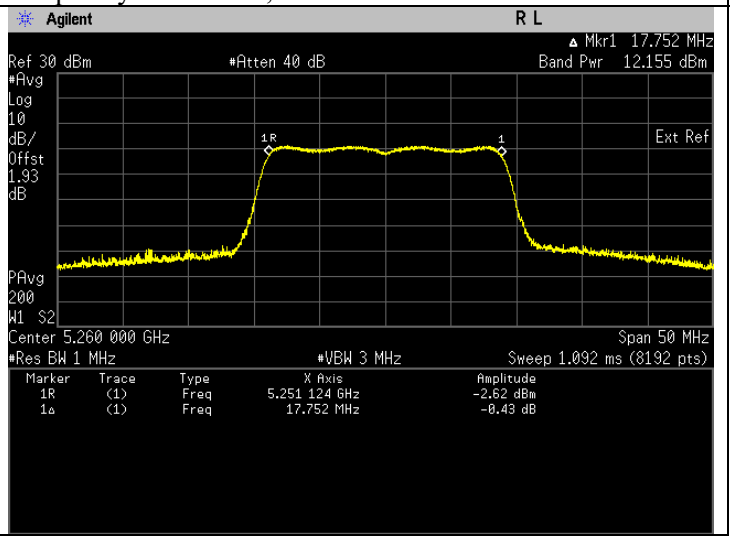


Frequency 5180 MHz, ISED

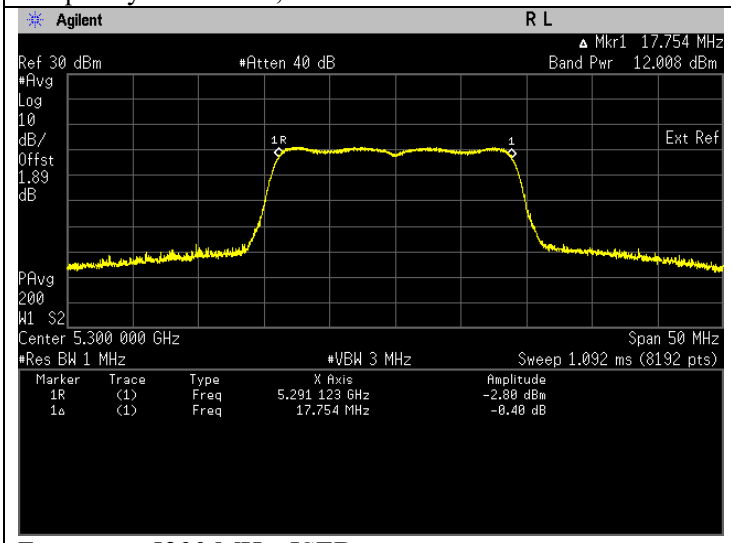


Frequency 5220 MHz, ISED

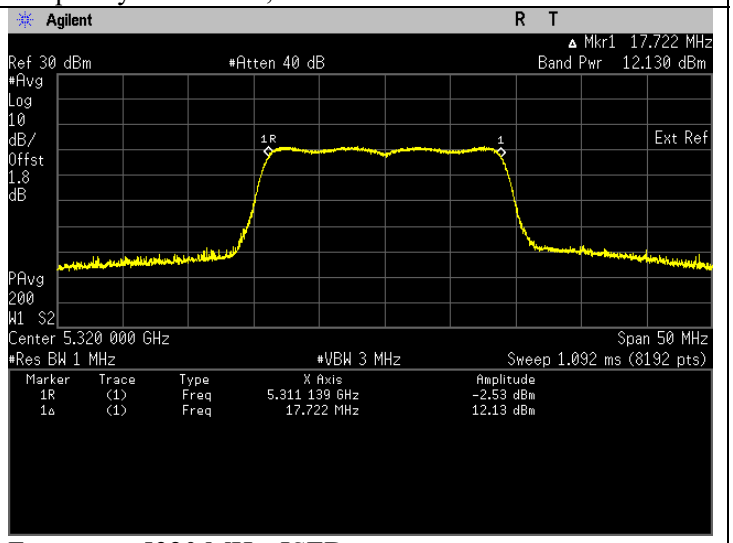




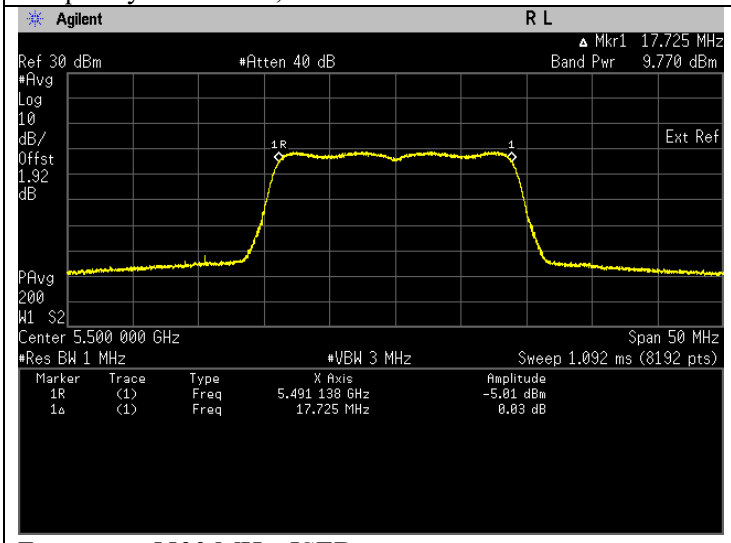
Frequency 5240 MHz, ISED



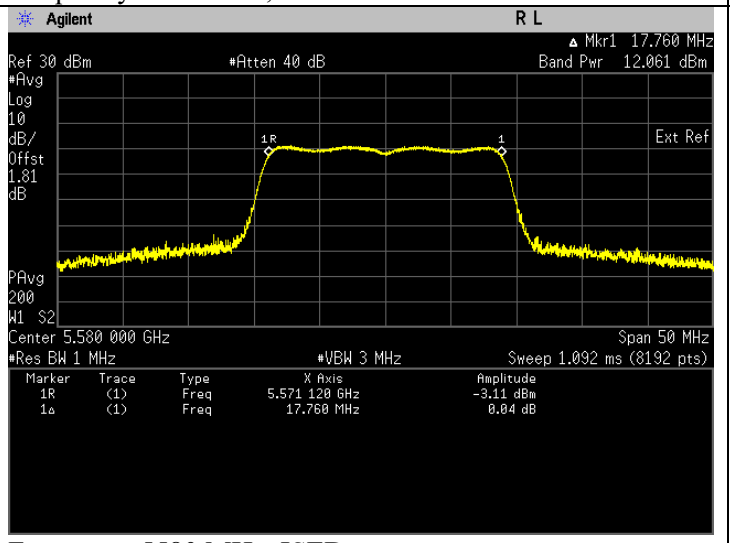
Frequency 5260 MHz, ISED



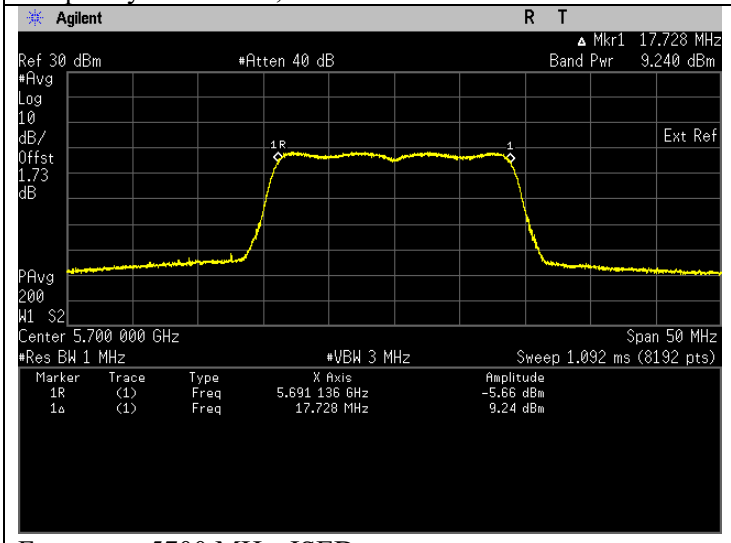
Frequency 5300 MHz, ISED



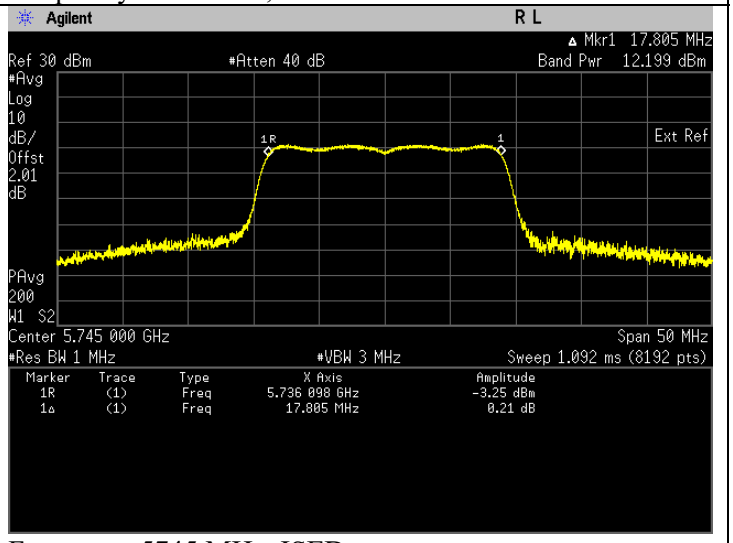
Frequency 5320 MHz, ISED



Frequency 5500 MHz, ISED

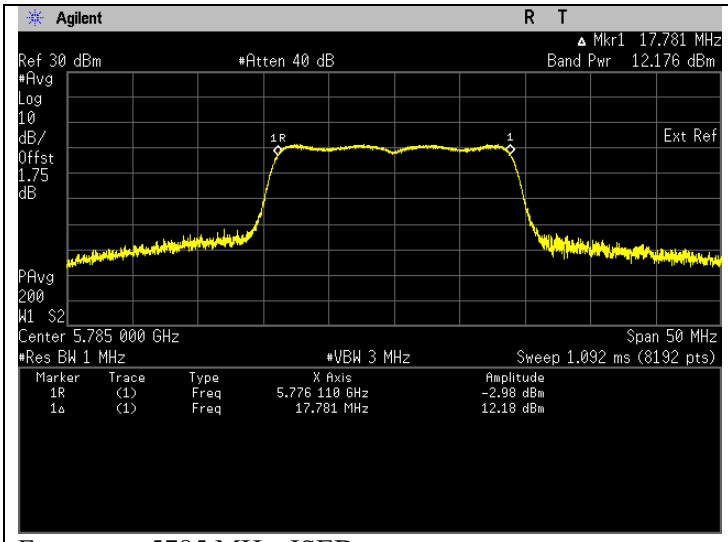


Frequency 5580 MHz, ISED

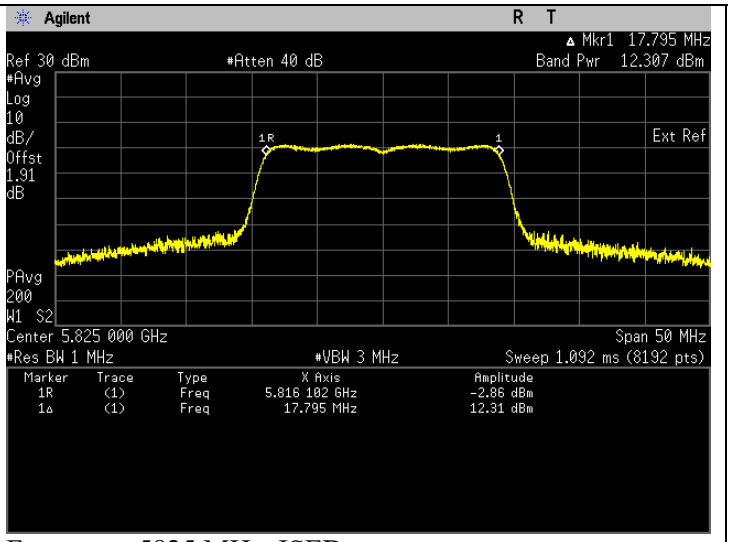


Frequency 5700 MHz, ISED

Frequency 5745 MHz, ISED



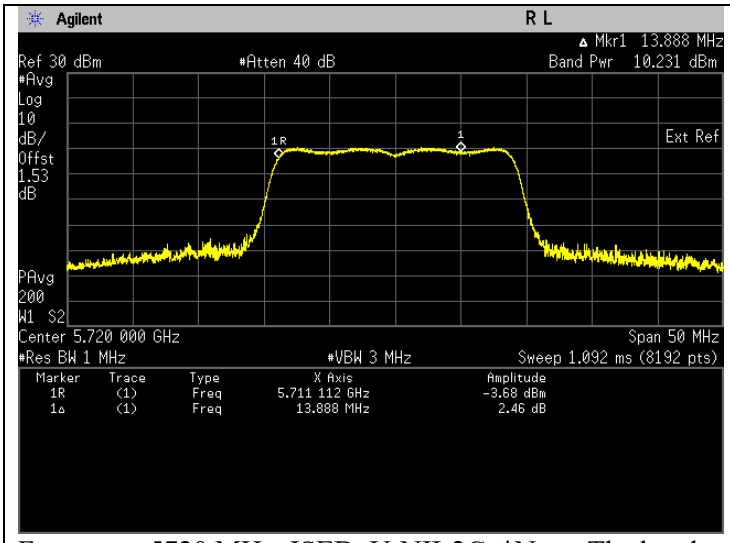
Frequency 5785 MHz, ISED



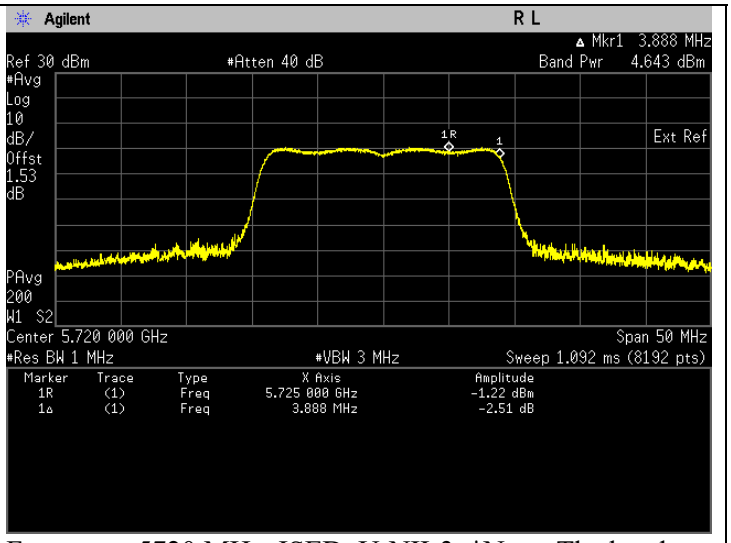
Frequency 5825 MHz, ISED

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)	10.577	10.244	Pass	14.244	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	2.921	4.656	Pass	8.656	Pass



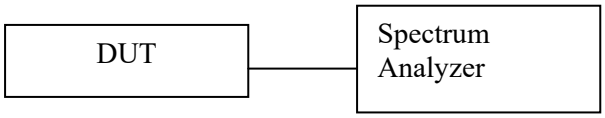
Frequency 5720 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



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

7.3. Maximum Power Spectral Density

7.3.1. Test Setup



a) Test setup as per illustrated above.
b) Set DUT to transmit at desire transmit frequency.
c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
d) Setting of Spectrum analyzer :
- Span to encompass the entire 26dB EBW or 99% occupied bandwidth.
- RBW = 1 MHz (5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz) / 500 kHz (5.725-5.85 GHz)
- VBW ≥ 3·RBW
- Detector = power averaging (RMS)
- Trace = Max hold
- Number of points in sweep ≥ 2 × span / RBW
- Sweep time = auto
- Trace average at least 100 traces in power averaging (rms) mode

e) Use the peak search function on the instrument to find the peak of the spectrum and record its value.
f) Add 10 log (1/x), where x is the duty cycle, to the peak of the spectrum.
g) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause F) Method SA-2.
h) The Maximum power spectral density results are included duty cycle correction factor.

7.3.2. Test Limits

FCC 15.407(a)

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

RSS-247 6.2

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

7.3.3. Additional Info

Antenna Type	Gain (dBi)
Antenna 1	4.88
Duty Cycle Correction Factor	
802.11a	0.025
802.11n20	0.013

7.3.4. Test Data

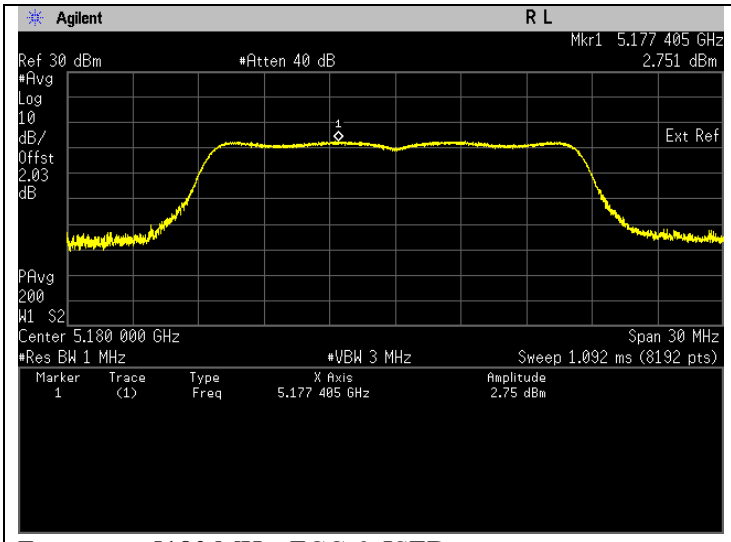
802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	2.776	Pass
5220	Mod Type: BPSK, Data Rate: 6	2.838	Pass
5240	Mod Type: BPSK, Data Rate: 6	2.697	Pass
5260	Mod Type: BPSK, Data Rate: 6	2.621	Pass
5300	Mod Type: BPSK, Data Rate: 6	2.137	Pass
5320	Mod Type: BPSK, Data Rate: 6	0.836	Pass
5500	Mod Type: BPSK, Data Rate: 6	-2.021	Pass
5580	Mod Type: BPSK, Data Rate: 6	2.225	Pass
5700	Mod Type: BPSK, Data Rate: 6	-1.869	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	-1.552	Pass
5785	Mod Type: BPSK, Data Rate: 6	-1.766	Pass
5825	Mod Type: BPSK, Data Rate: 6	-1.572	Pass

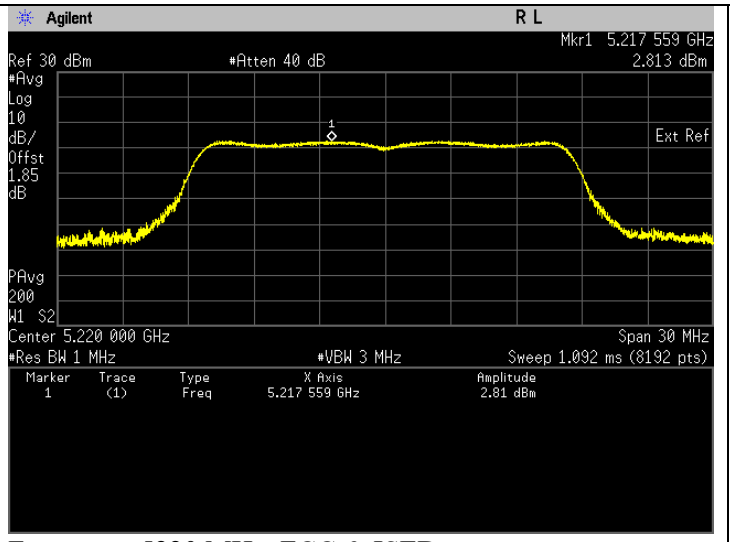
802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	2.776	Pass	7.656	Pass
5220	Mod Type: BPSK, Data Rate: 6	2.838	Pass	7.718	Pass
5240	Mod Type: BPSK, Data Rate: 6	2.697	Pass	7.577	Pass
5260	Mod Type: BPSK, Data Rate: 6	2.621	Pass	7.501	Pass
5300	Mod Type: BPSK, Data Rate: 6	2.137	Pass	7.017	Pass
5320	Mod Type: BPSK, Data Rate: 6	0.836	Pass	5.716	Pass
5500	Mod Type: BPSK, Data Rate: 6	-2.021	Pass	2.859	Pass
5580	Mod Type: BPSK, Data Rate: 6	2.225	Pass	7.105	Pass
5700	Mod Type: BPSK, Data Rate: 6	-1.869	Pass	3.011	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: 6	-1.552	Pass	3.328	Pass
5785	Mod Type: BPSK, Data Rate: 6	-1.766	Pass	3.114	Pass
5825	Mod Type: BPSK, Data Rate: 6	-1.572	Pass	3.308	Pass

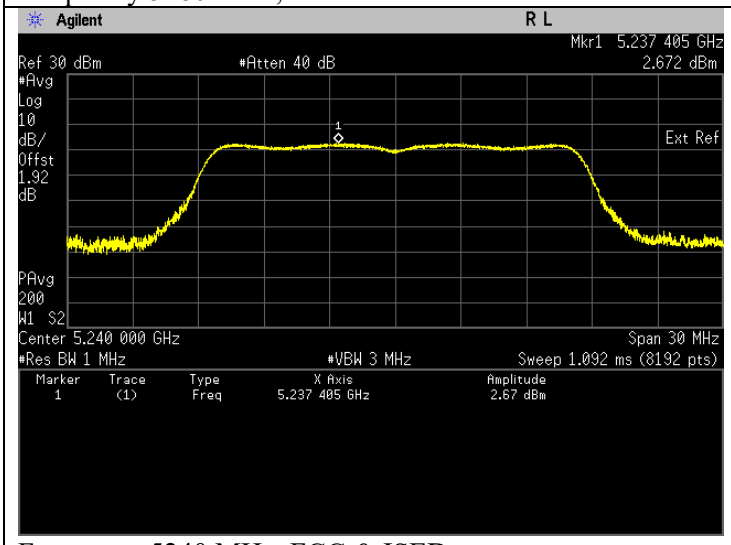
Plots for 802.11a (26dB EBW & 99% EBW)



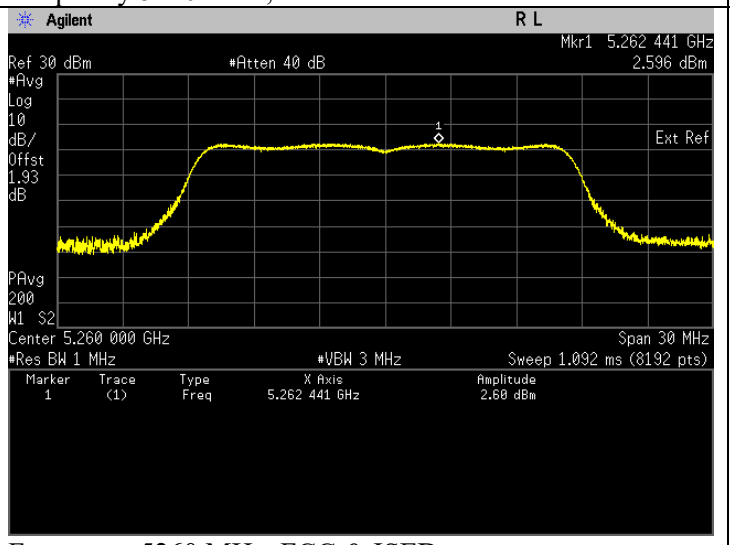
Frequency 5180 MHz, FCC & ISED.



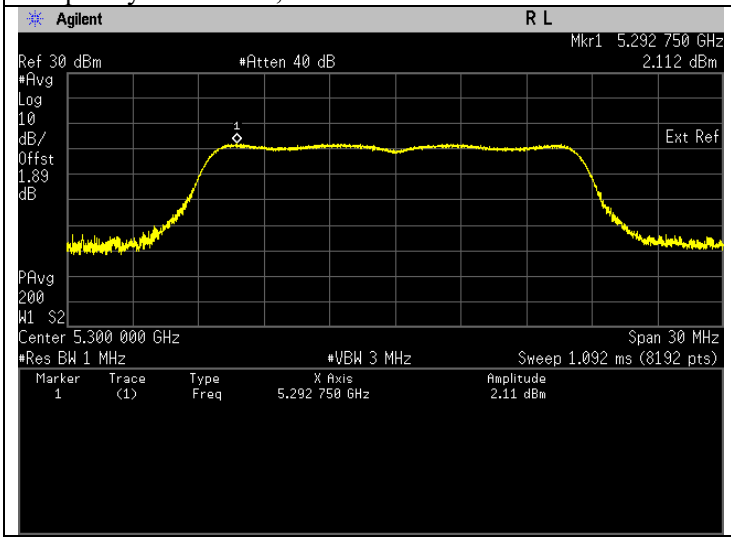
Frequency 5220 MHz, FCC & ISED.

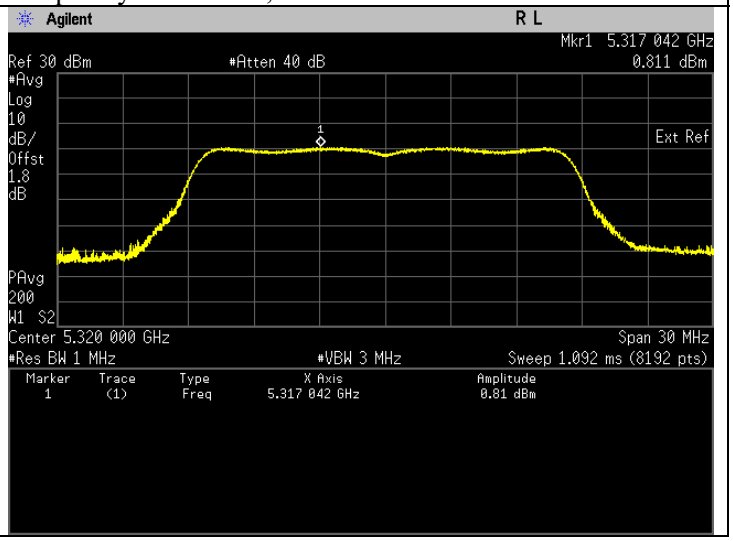


Frequency 5240 MHz, FCC & ISED.

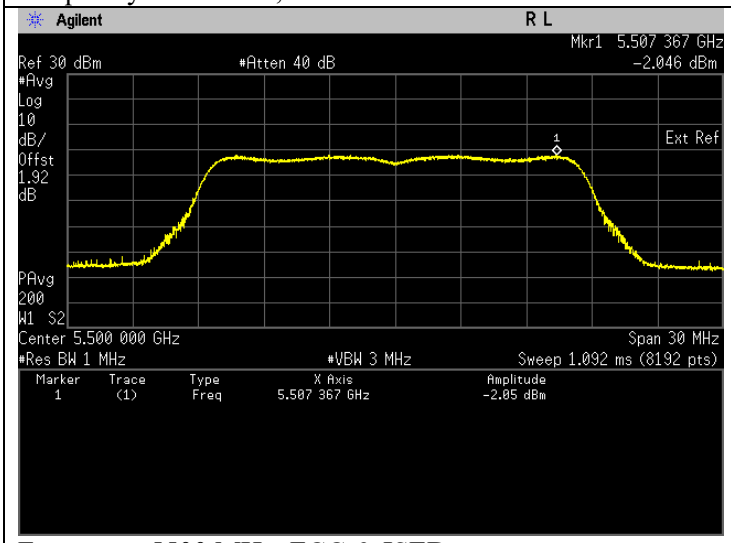


Frequency 5260 MHz, FCC & ISED.

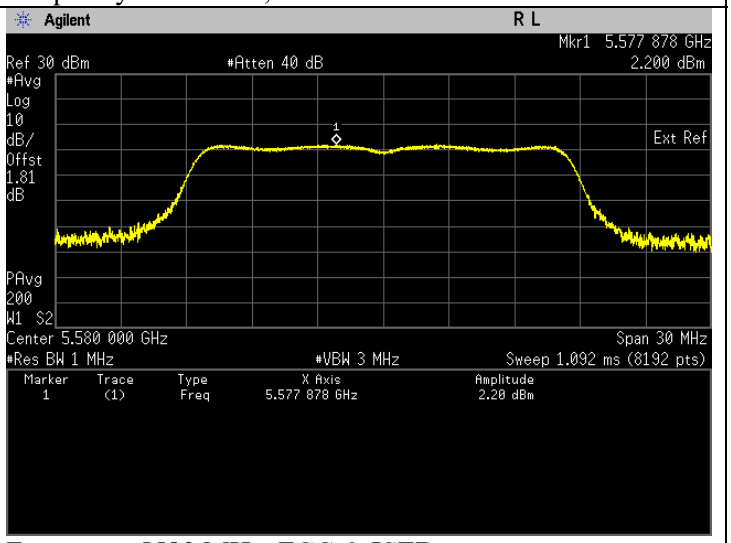




Frequency 5300 MHz, FCC & ISED.

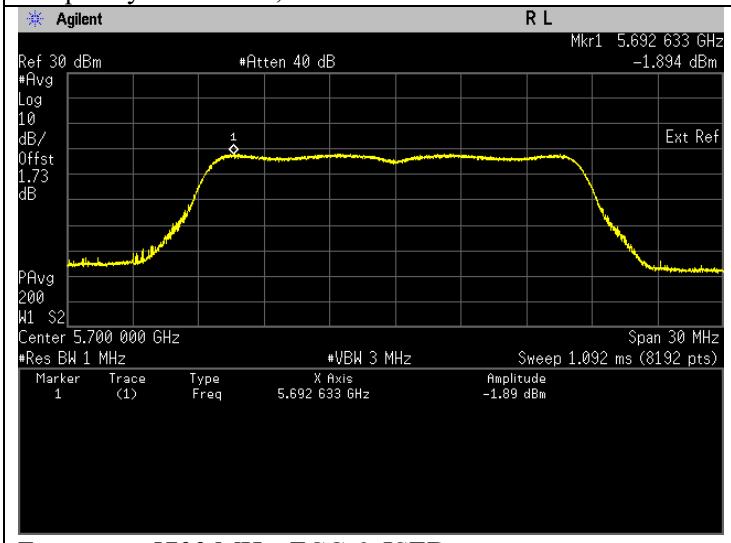


Frequency 5320 MHz, FCC & ISED.

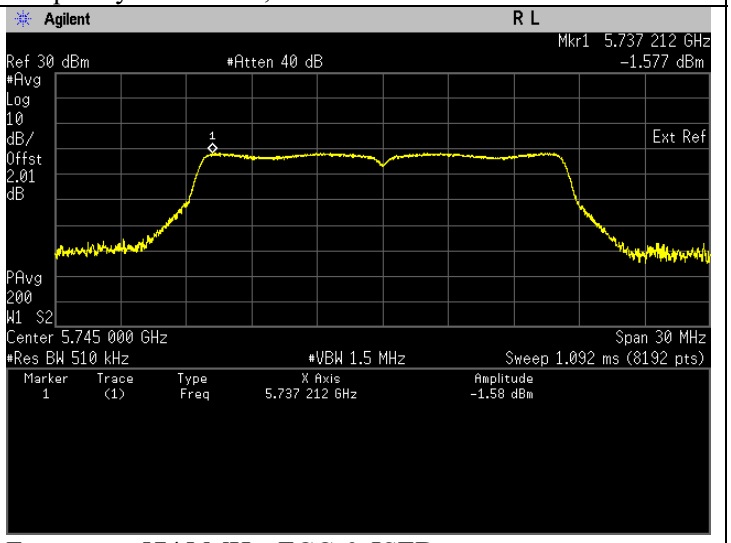


Frequency 5500 MHz, FCC & ISED.

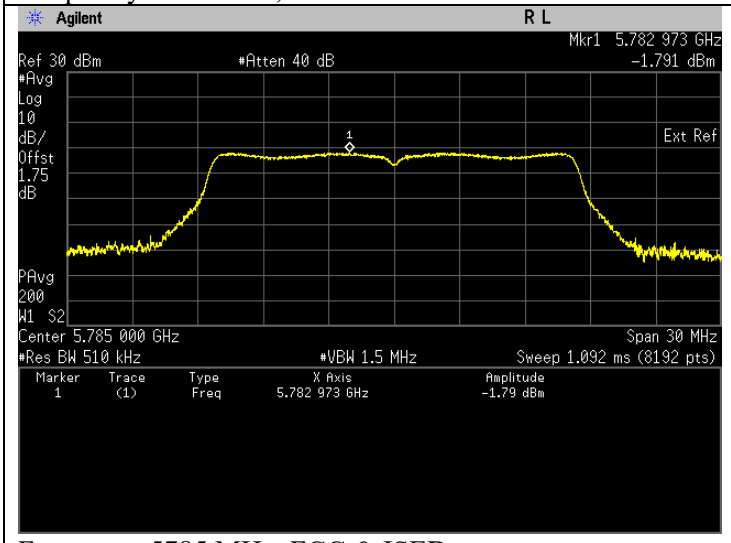
Frequency 5580 MHz, FCC & ISED.



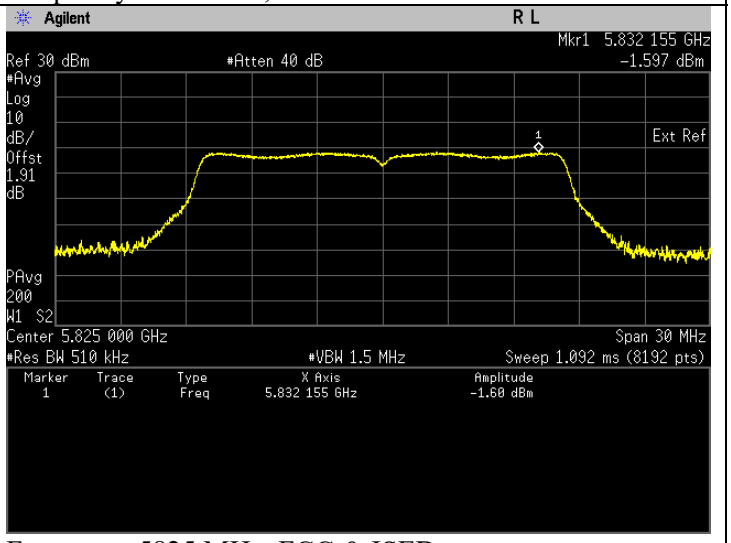
Frequency 5700 MHz, FCC & ISED.



Frequency 5745 MHz, FCC & ISED.



Frequency 5785 MHz, FCC & ISED.



Frequency 5825 MHz, FCC & ISED.

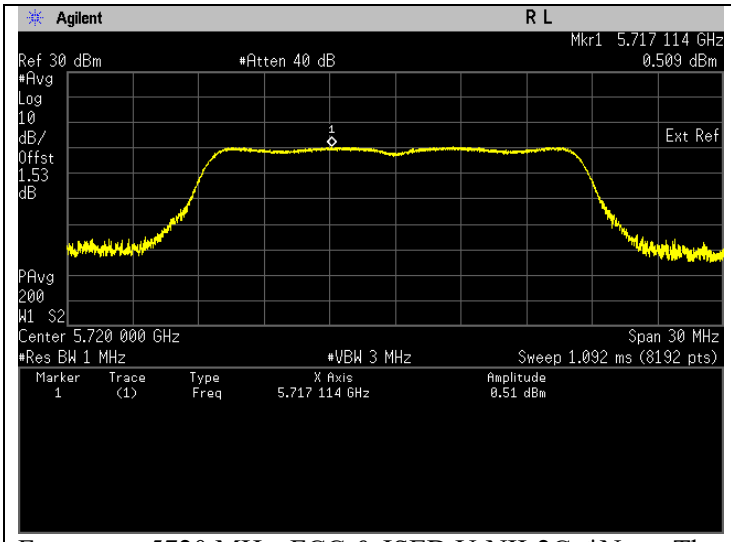
Straddle Frequency 802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	0.534	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	0.177	Pass

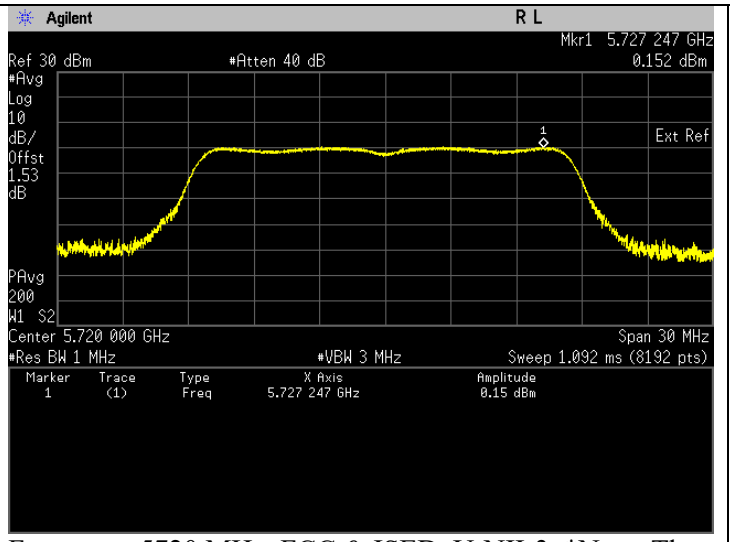
Straddle Frequency 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	0.534	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	0.177	Pass

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



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



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

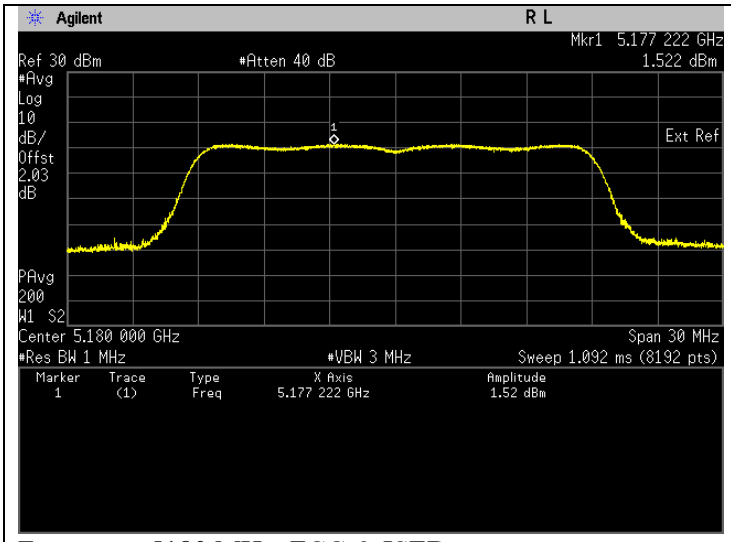
802.11n (HT20)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.535	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.718	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.518	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.427	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.310	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.607	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.016	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.607	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.125	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.349	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.812	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.802	Pass

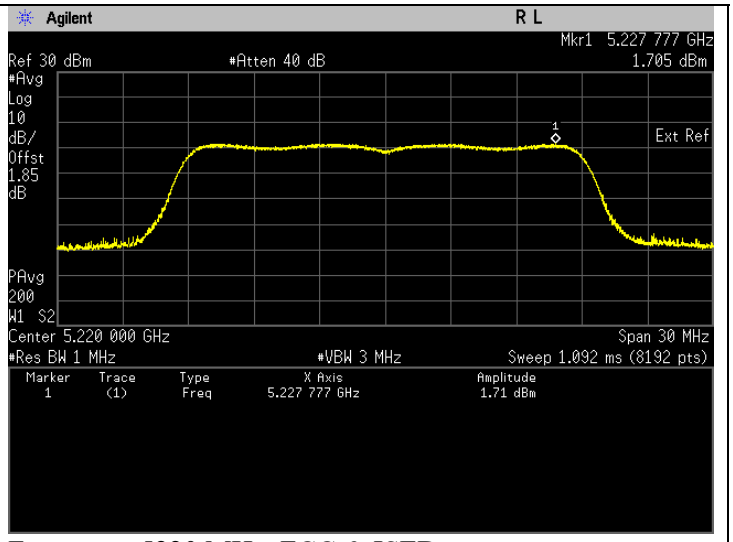
802.11n (HT20)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.535	Pass	6.415	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.718	Pass	6.598	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.518	Pass	6.398	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.427	Pass	6.307	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.310	Pass	6.19	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.607	Pass	5.487	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.016	Pass	3.864	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.607	Pass	6.487	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.125	Pass	2.755	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.349	Pass	3.531	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.812	Pass	3.068	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.802	Pass	3.078	Pass

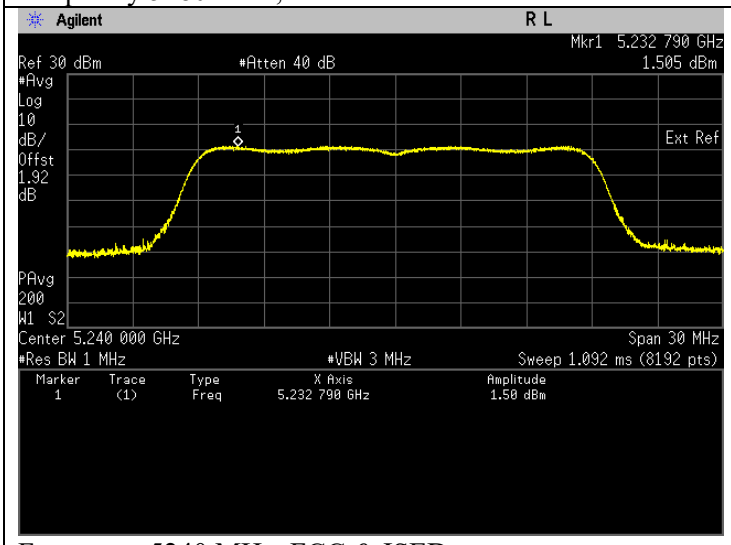
Plots for 802.11n (HT20) (26dB EBW & 99% EBW)



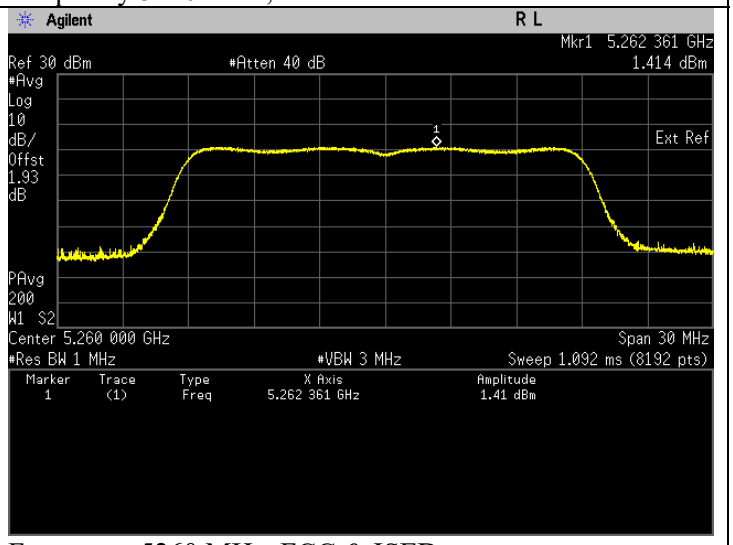
Frequency 5180 MHz, FCC & ISED.



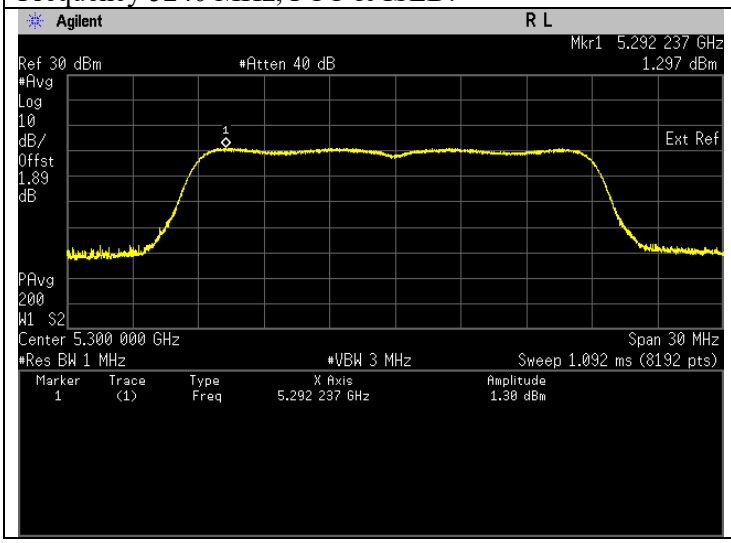
Frequency 5220 MHz, FCC & ISED.

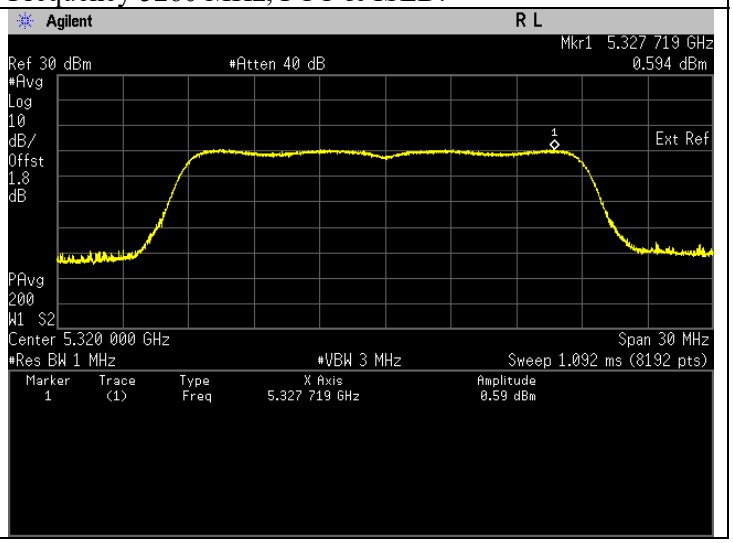


Frequency 5240 MHz, FCC & ISED.

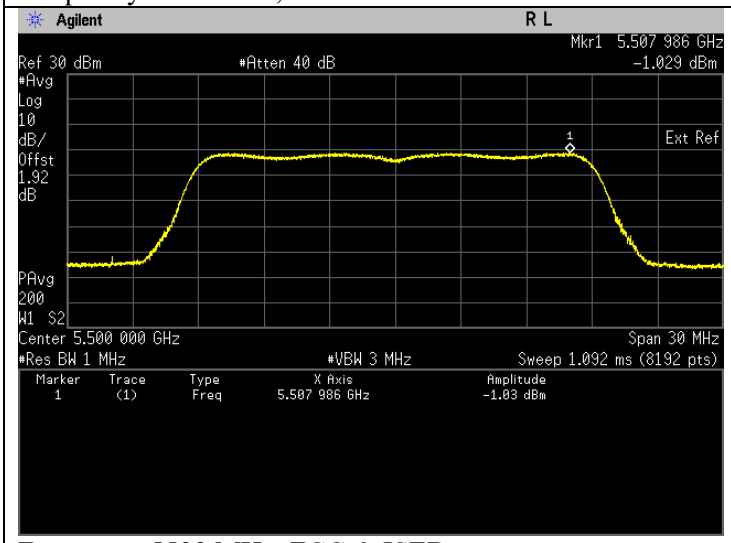


Frequency 5260 MHz, FCC & ISED.

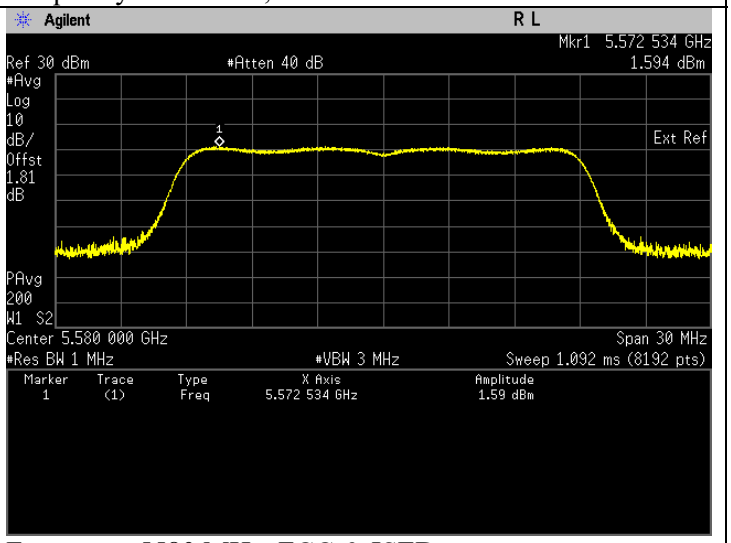




Frequency 5300 MHz, FCC & ISED.

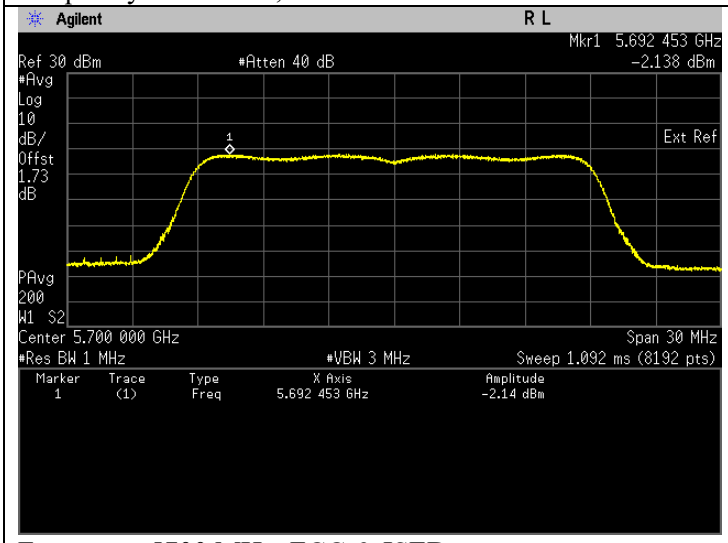


Frequency 5320 MHz, FCC & ISED.

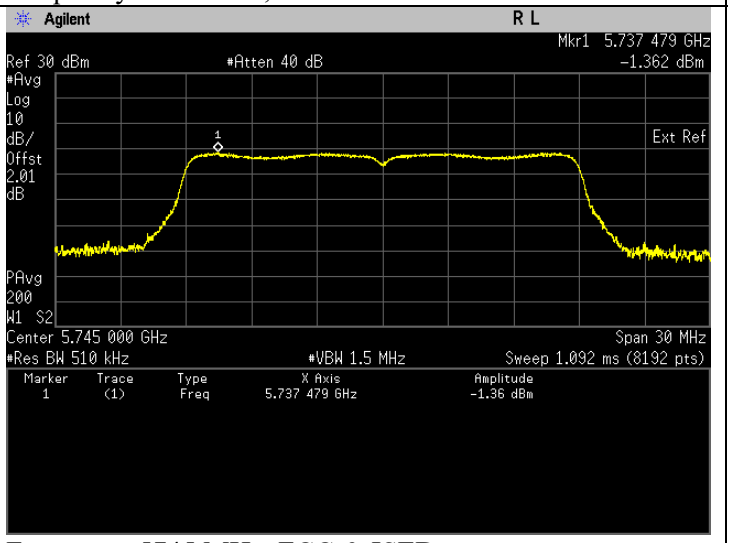


Frequency 5500 MHz, FCC & ISED.

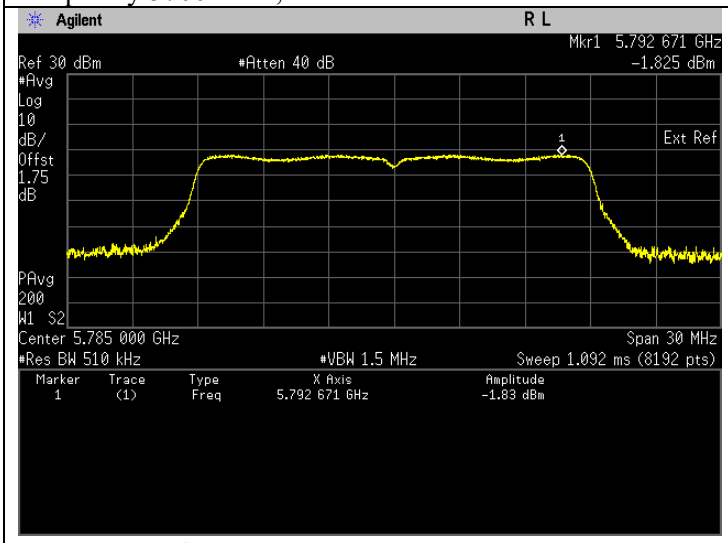
Frequency 5580 MHz, FCC & ISED.



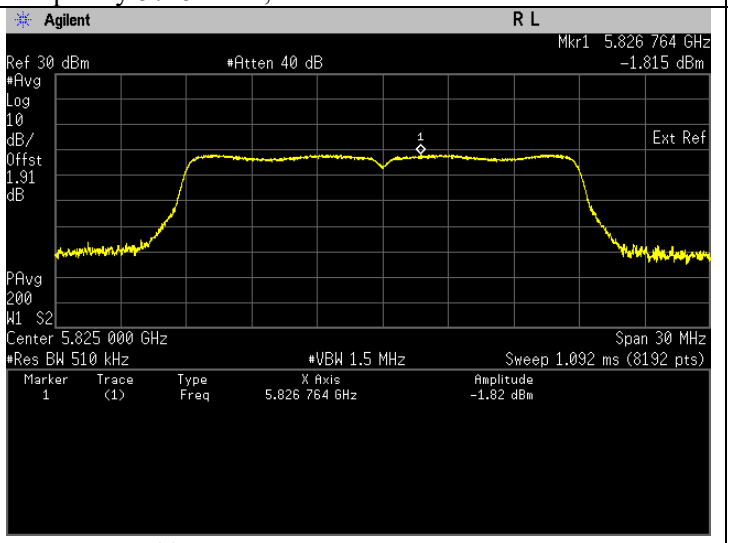
Frequency 5700 MHz, FCC & ISED.



Frequency 5745 MHz, FCC & ISED.



Frequency 5785 MHz, FCC & ISED.



Frequency 5825 MHz, FCC & ISED.

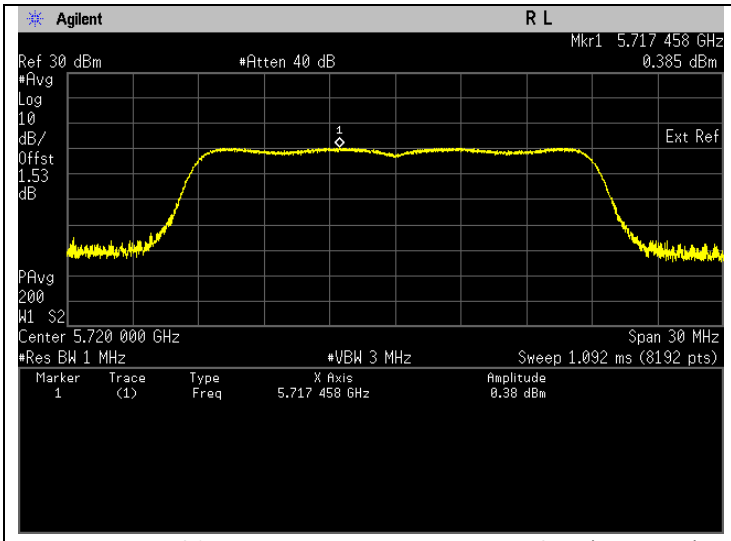
Straddle Frequency for 802.11n (HT20) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.398	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.146	Pass

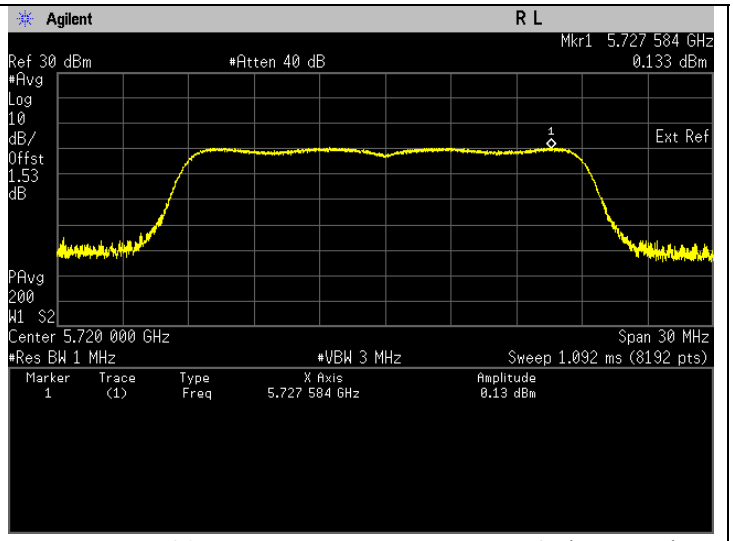
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.398	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.146	Pass

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



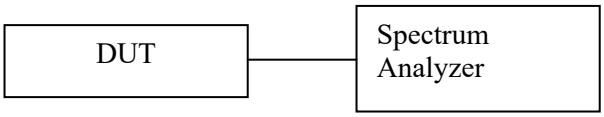
Frequency 5720 MHz, FCC & ISED,U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



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

7.4. 6dB Bandwidth

7.4.1. Test Setup



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

f) Allow trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
h) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause C.2).

7.4.2. Test Limits

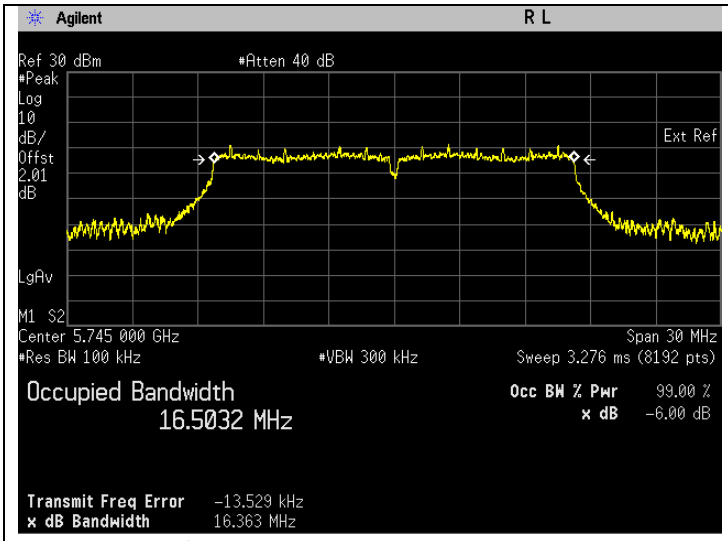
FCC 15.407(e)
Within the 5.725-5.85GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

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

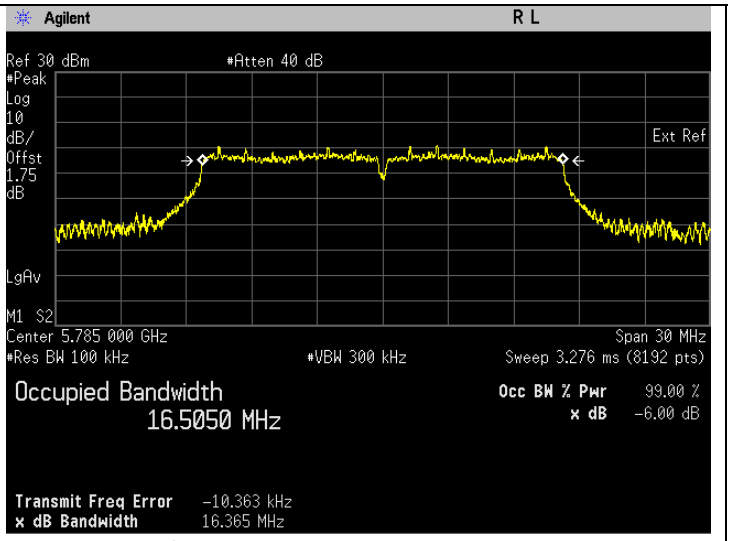
7.4.3. Test Data

802.11a

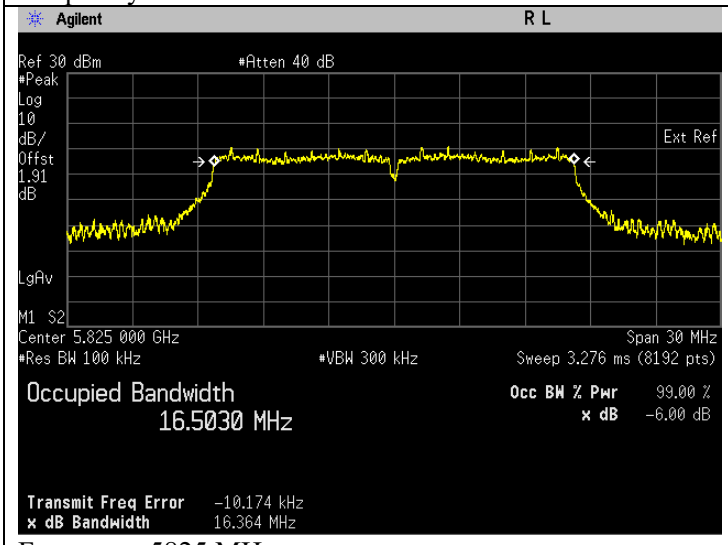
Frequency (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	16.363	Pass
5785	Mod Type: BPSK, Data Rate: 6	16.365	Pass
5825	Mod Type: BPSK, Data Rate: 6	16.364	Pass



Frequency 5745 MHz



Frequency 5785 MHz

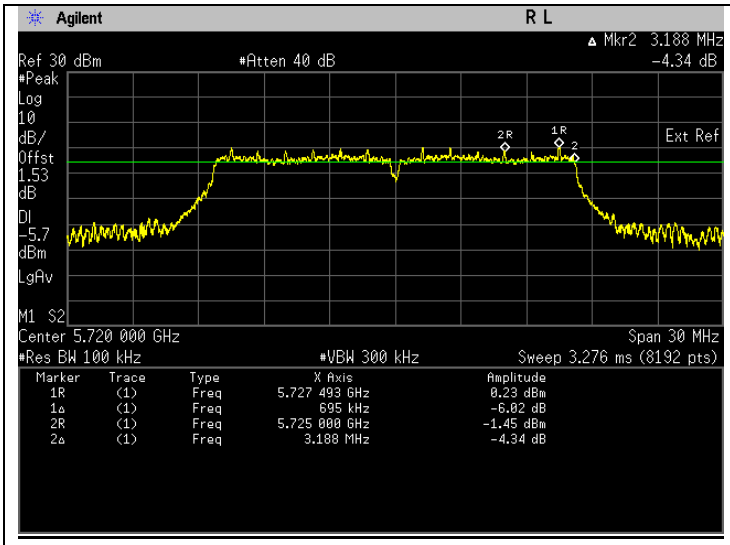


Frequency 5825 MHz

Straddle Frequency for 802.11a

Freq. (MHz)	Test Conditions	Results	
		Power/Freq. (dBm/MHz)	Status
		U-NII- 3	
5720	Mod Type: BPSK, Data Rate: 6	3.188	Pass

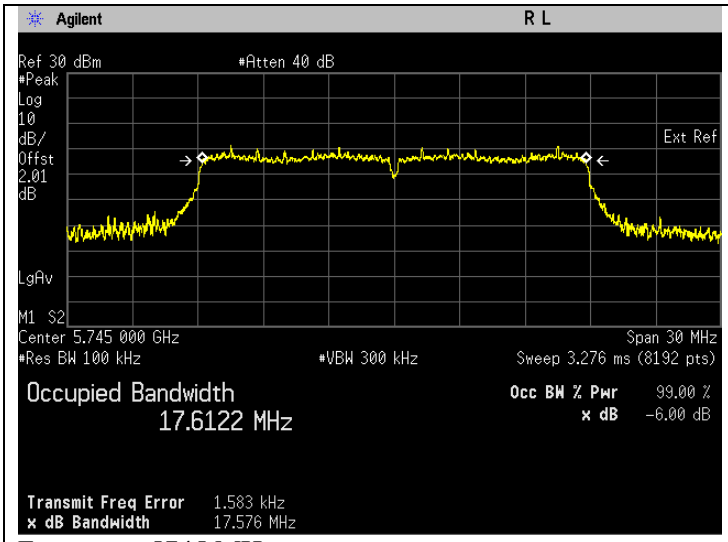
Plots for 802.11a Straddle Frequency



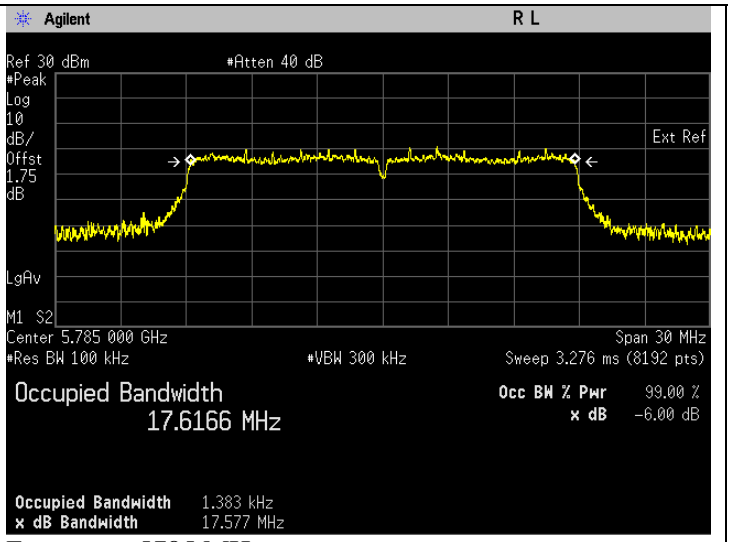
Frequency 5720 MHz

802.11n (HT20)

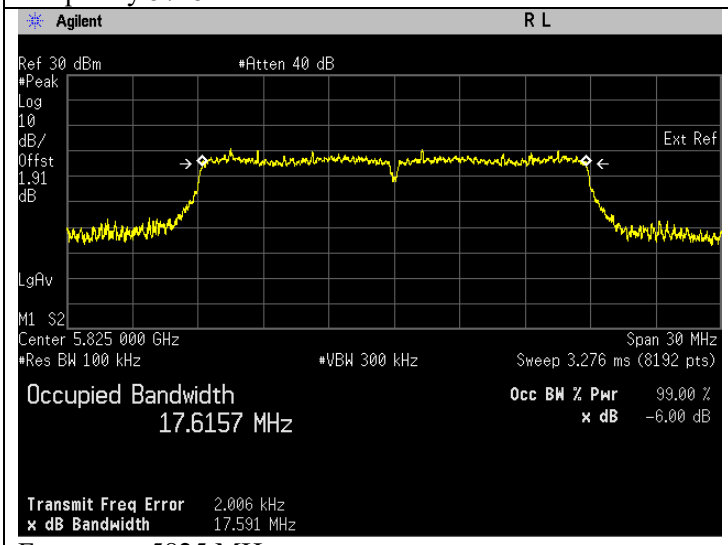
Frequency (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.576	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.577	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.591	Pass



Frequency 5745 MHz



Frequency 5785 MHz

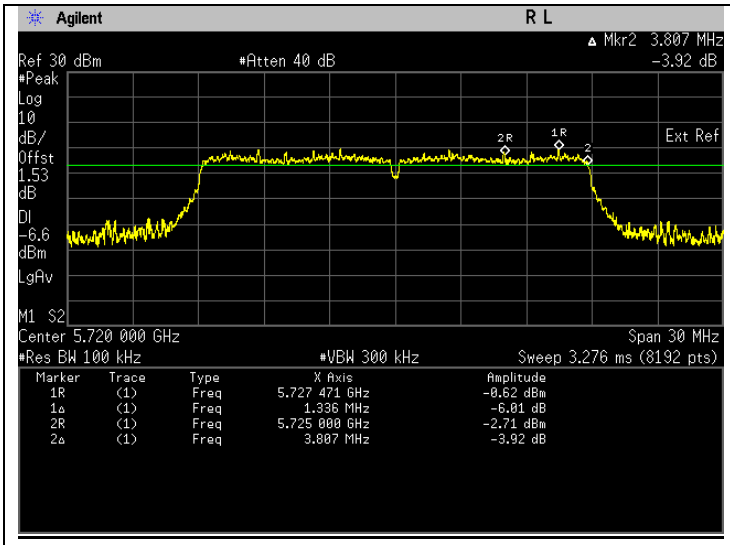


Frequency 5825 MHz

Straddle Frequency for 802.11n (HT20)

Freq. (MHz)	Test Conditions	Results	
		Power/Freq. (dBm/MHz)	Status
		U-NII- 3	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.807	Pass

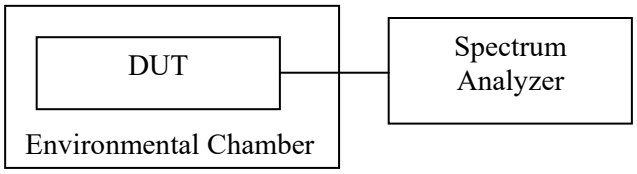
Plots for 802.11n (HT20) Straddle Frequency



Frequency 5720 MHz

7.5. Frequency Stability

7.5.1. Test Setup



a) Test setup as per illustrated above.
b) Set DUT to transmit un-modulated signal at desire transmit frequency.
c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
d) The DUT was operated at the maximum output power, and spectrum which is set to maximum hold function and peak detector.
e) The peak value of the power envelope was measured and noted.
f) Test was conducted from temperature range from -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.

7.5.2. Test Limits

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

RSS-GEN 6.11

7.5.3. Test Data

802.11a

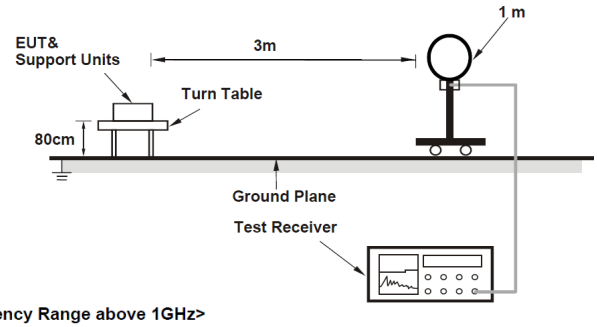
Test Configuration	Test Frequency Tx (MHz)
Mod Type: BPSK, Data Rate: 6	5180

		Results			
Temperature(°C)	Voltage	Measured Frequency(MHz)	Frequency Error(kHz)	Frequency Error(%)	Status
20	+15%	5179.996406	3.594000	0.000069	Pass
	±0%	5179.997433	2.567000	0.000050	Pass
	-15%	5179.998349	1.651000	0.000032	Pass
-30		5179.998791	1.209000	0.000023	Pass
-20		5179.998543	1.457000	0.000028	Pass
-10		5179.997773	2.227000	0.000043	Pass
0		5179.997429	2.571000	0.000050	Pass
10		5179.997367	2.633000	0.000051	Pass
30		5179.997444	2.556000	0.000049	Pass
40		5179.997438	2.562000	0.000049	Pass
50		5179.997437	2.563000	0.000049	Pass

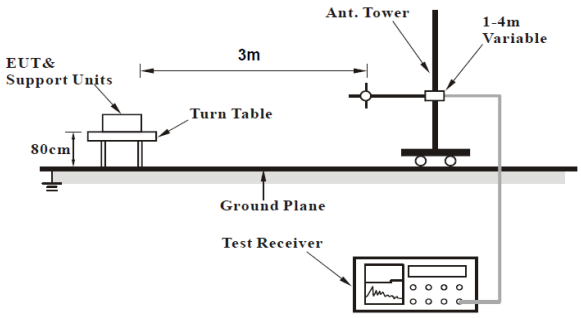
7.6. Band Edge Radiated Spurious Emission Measurement

7.6.1. Test Setup

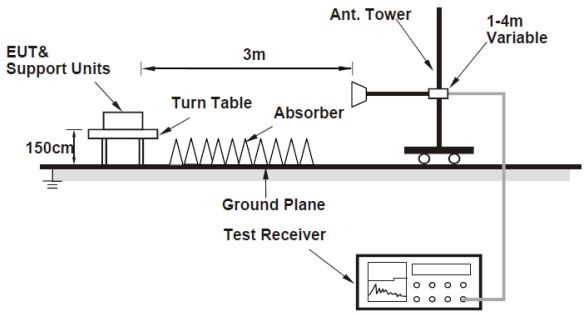
<Radiated emission below 30MHz>



<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:

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:

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

7.6.3. Test Result

802.11a

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

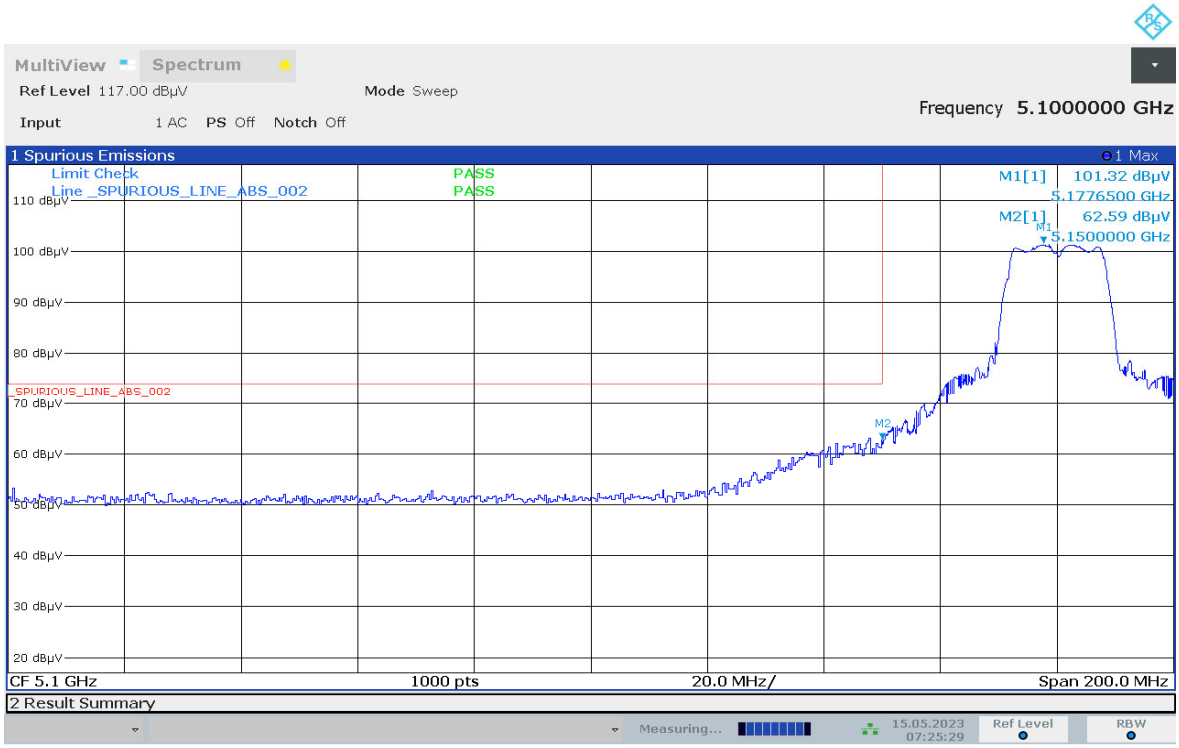
Restricted Band Edge (Low Channel) tabular data

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	-	62.5857	43.7370	-	74.0000	54.0000	-	11.4143	10.2630	-
Horizontal Radiated Emission Result										
5150.0000	-	66.6876	47.0216	-	74.0000	54.0000	-	7.3124	6.9784	-

Remarks: Pass Result	Marginal Result	Fail Result

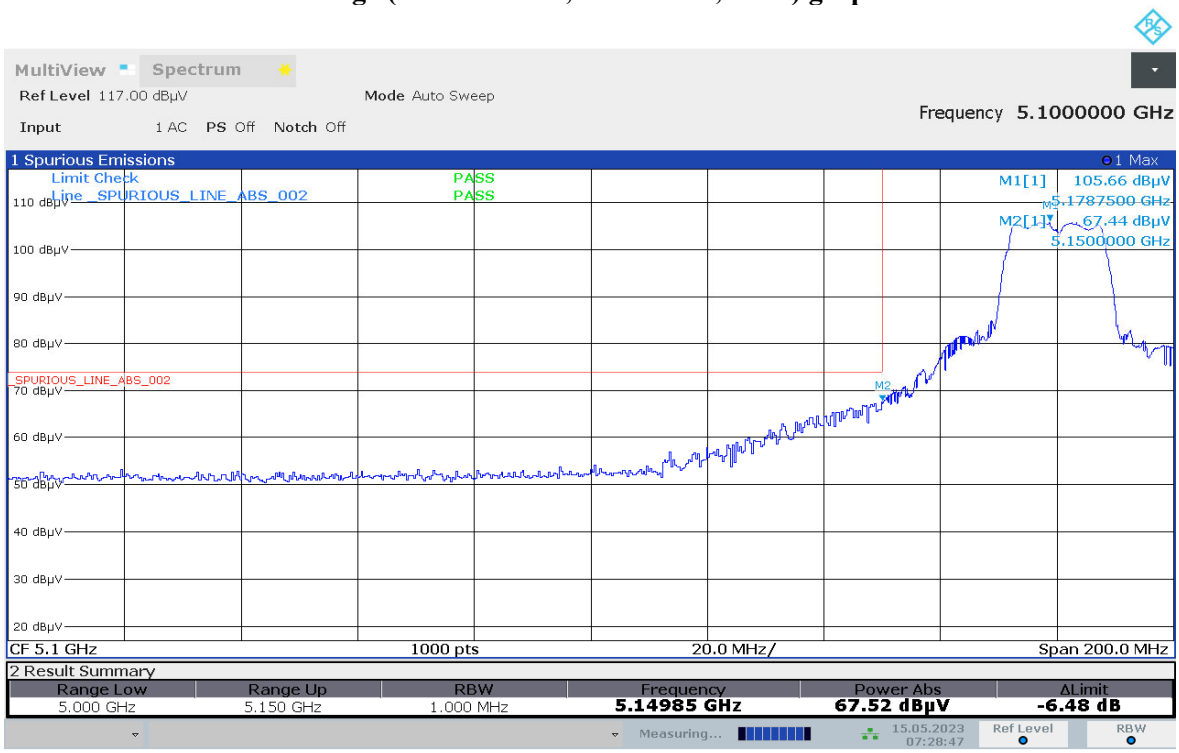
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



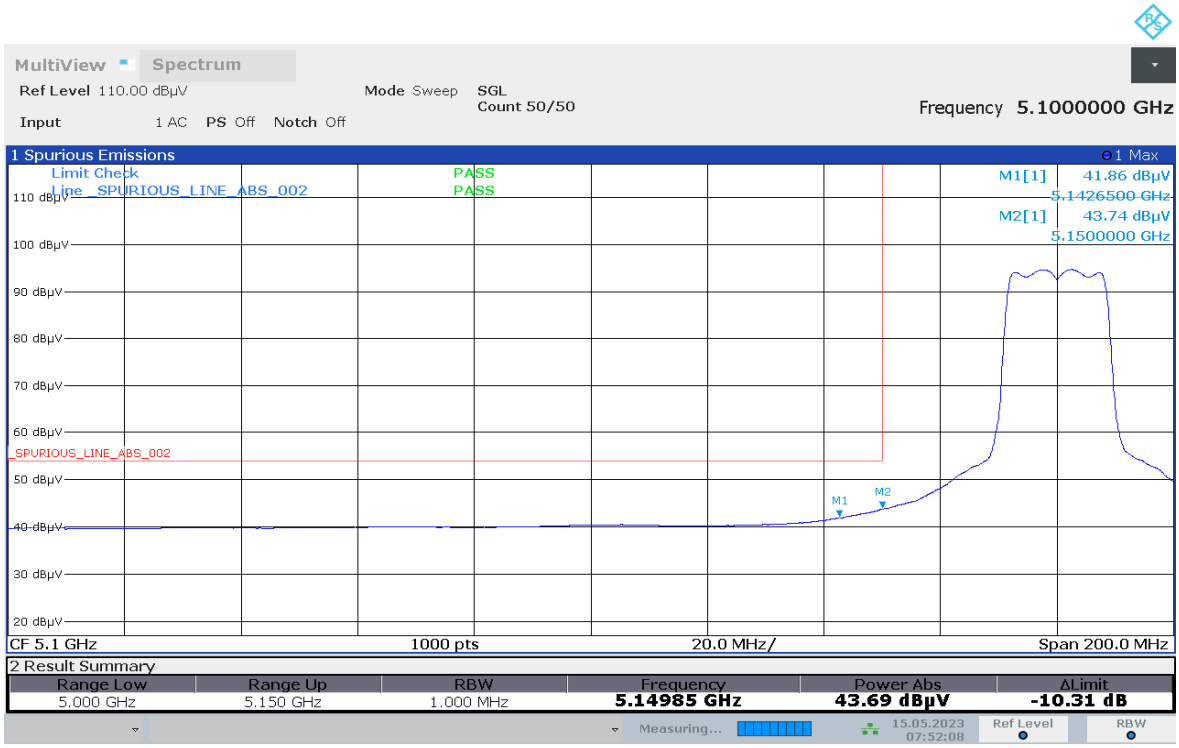
07:25:29 15.05.2023

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



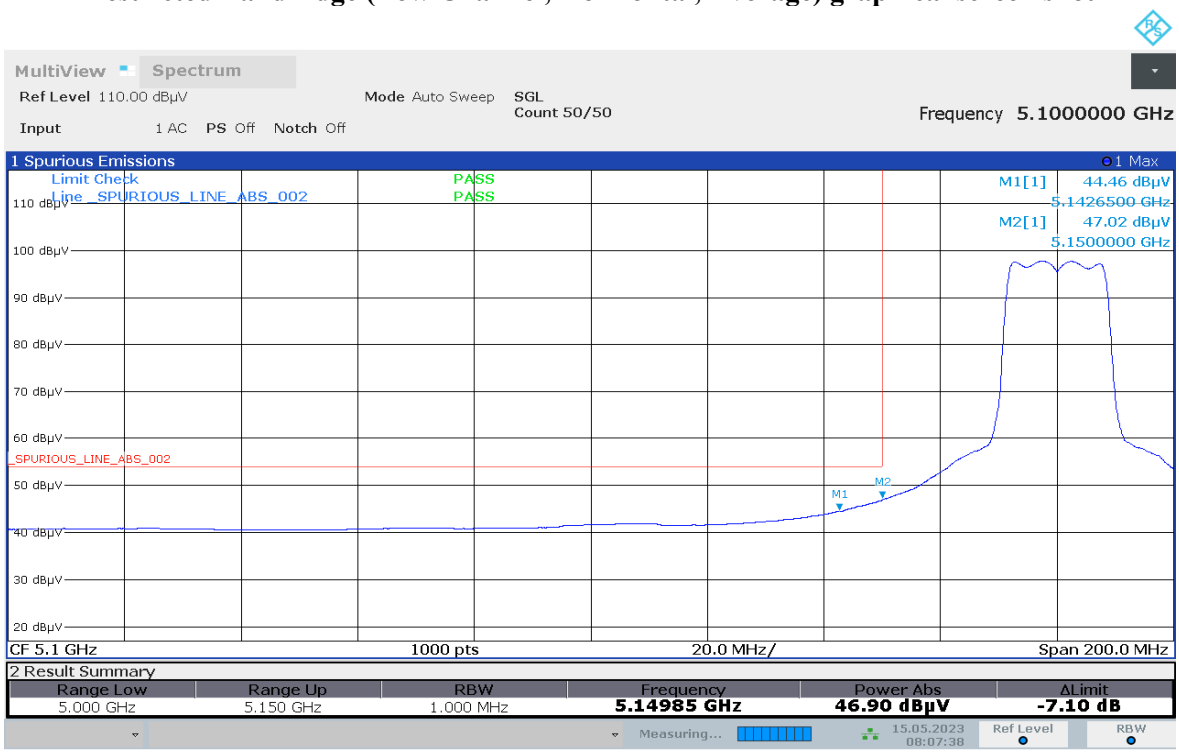
07:28:47 15.05.2023

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



07:52:09 15.05.2023

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



08:07:39 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

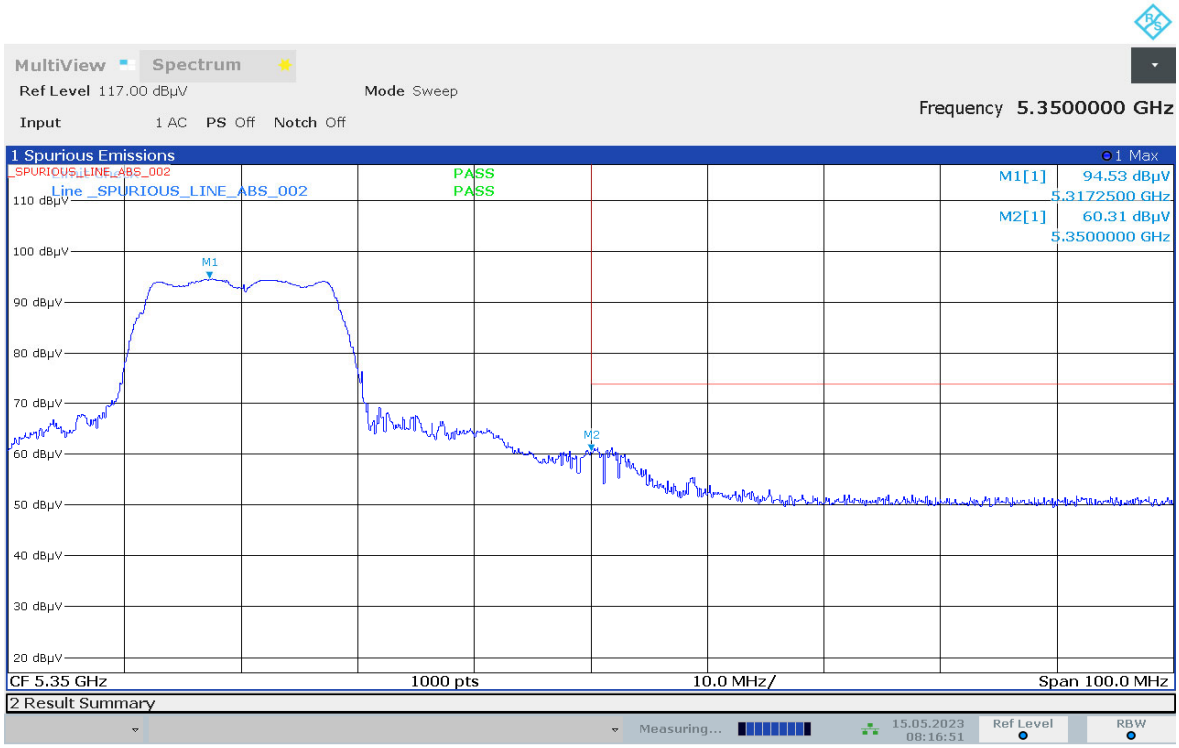
Restricted Band Edge (High Channel) tabular data

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	-	60.3051	39.7746	-	74.0000	54.0000	-	13.6949	14.2254	-
Horizontal Radiated Emission Result										
5350.0000	-	67.1301	43.5949	-	74.0000	54.0000	-	6.8699	10.4051	-

Remarks: Pass Result	Marginal Result	Fail Result

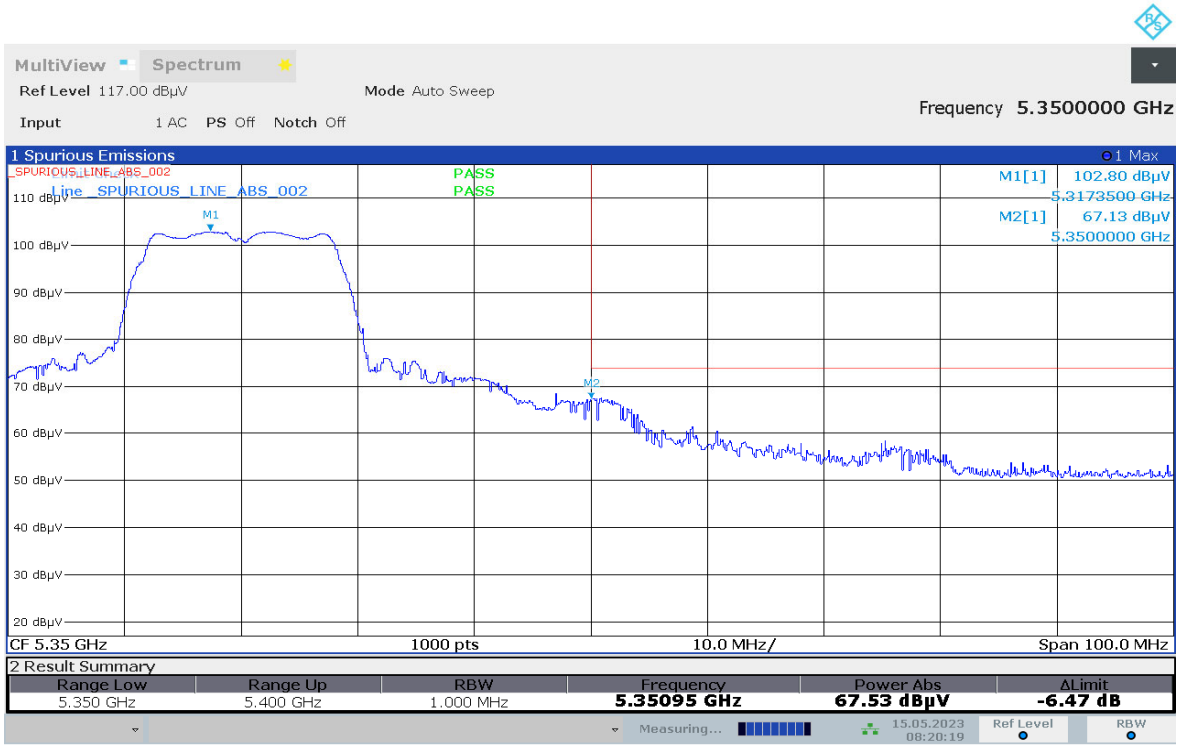
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



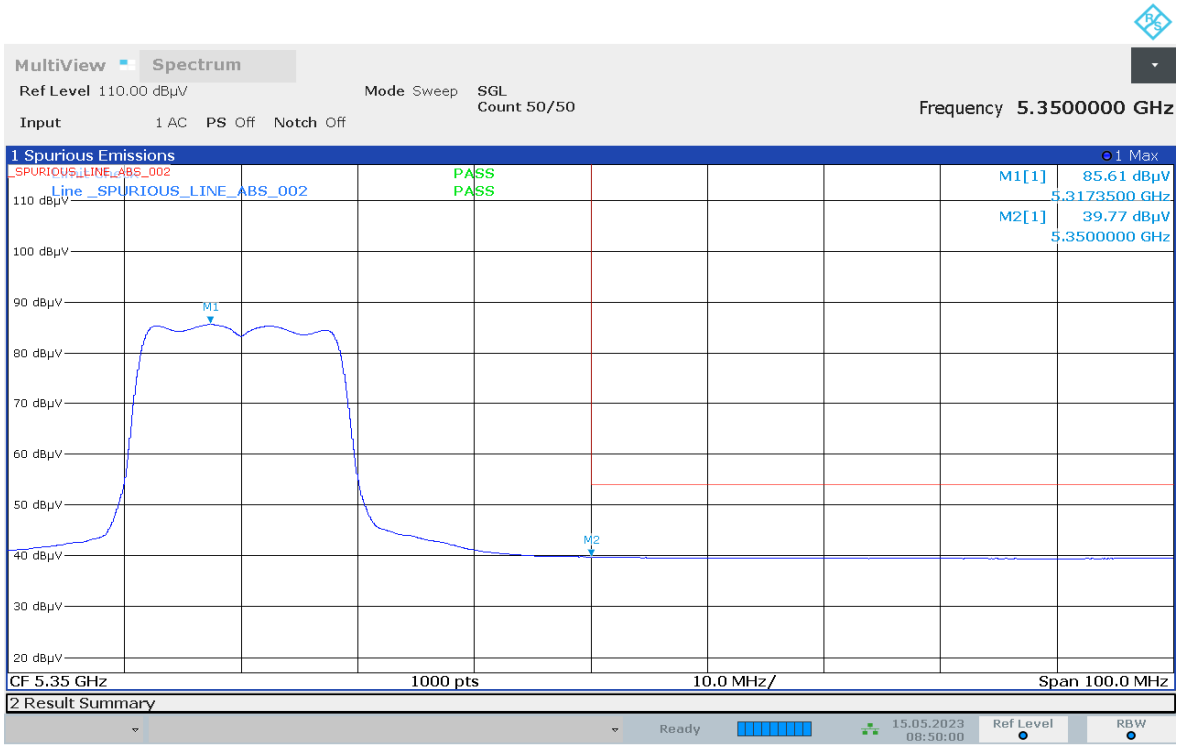
08:16:51 15.05.2023

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



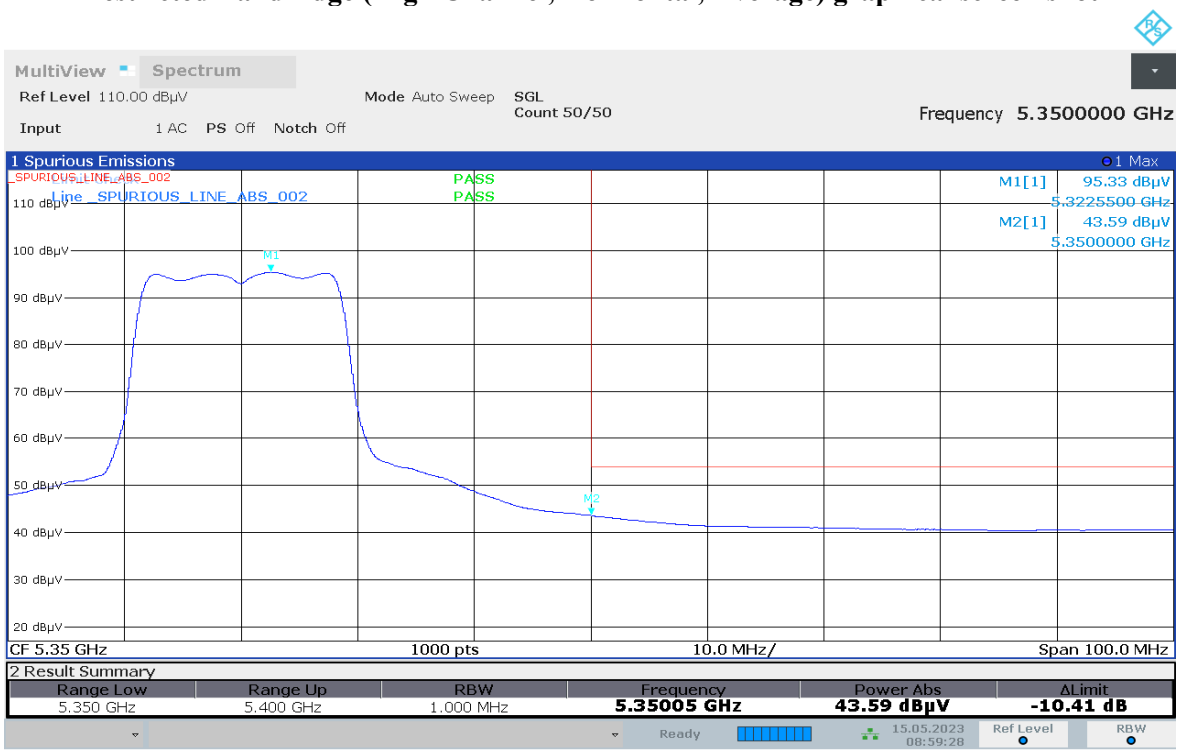
08:20:19 15.05.2023

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



08:50:01 15.05.2023

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



08:59:28 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

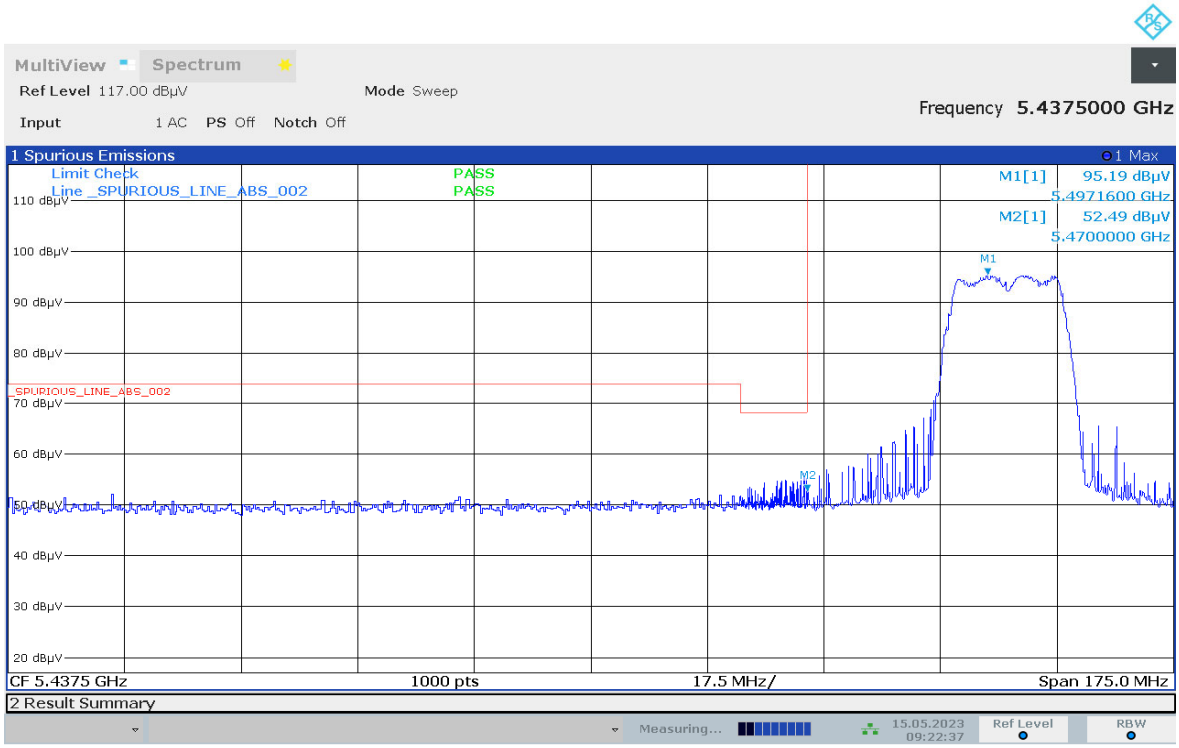
Restricted Band Edge (Low Channel) tabular data

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	-	-	39.6081	-	-	54.0000	-	-	14.3919	-
5470.0000	-	52.4866	-	-	68.2000	-	-	15.7134	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	40.3741	-	-	54.0000	-	-	13.6259	-
5464.6750	-	58.6958	-	-	68.2000	-	-	9.5042	-	-
5469.7750	-	59.8020	-	-	68.2000	-	-	8.3980	-	-
5470.0000	-	49.8887	-	-	68.2000	-	-	18.3113	-	-

Remarks: Pass Result	Marginal Result	Fail Result

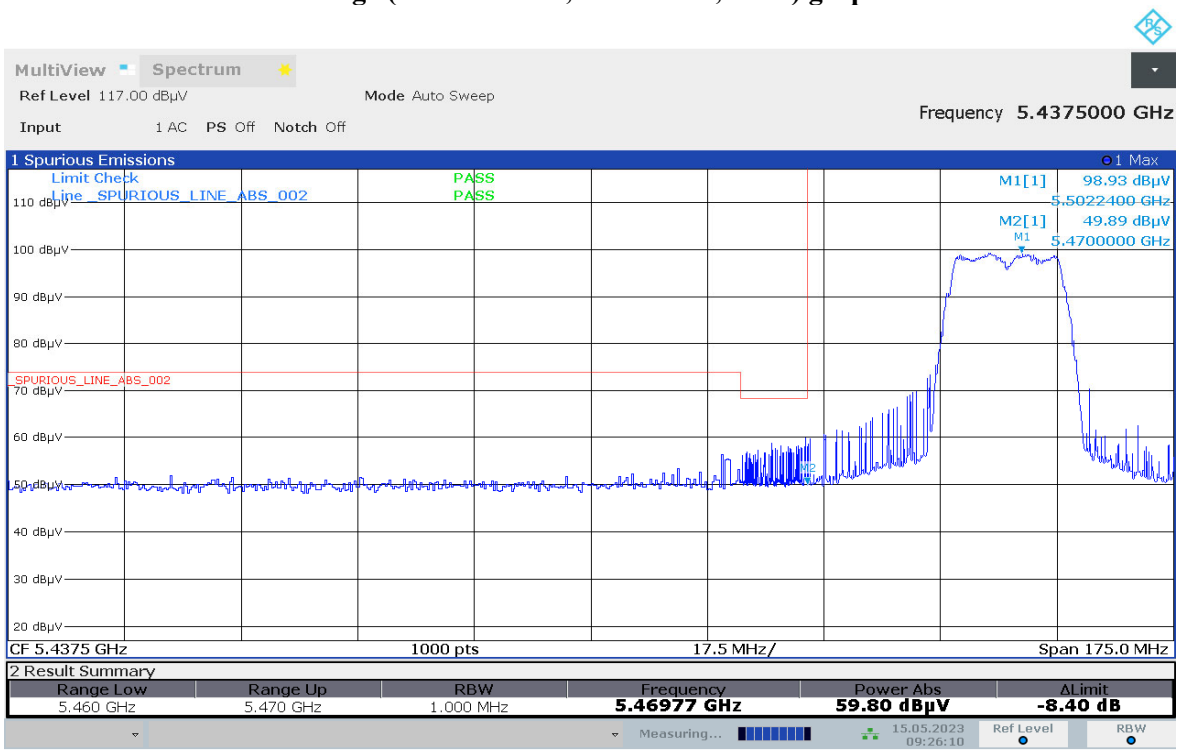
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



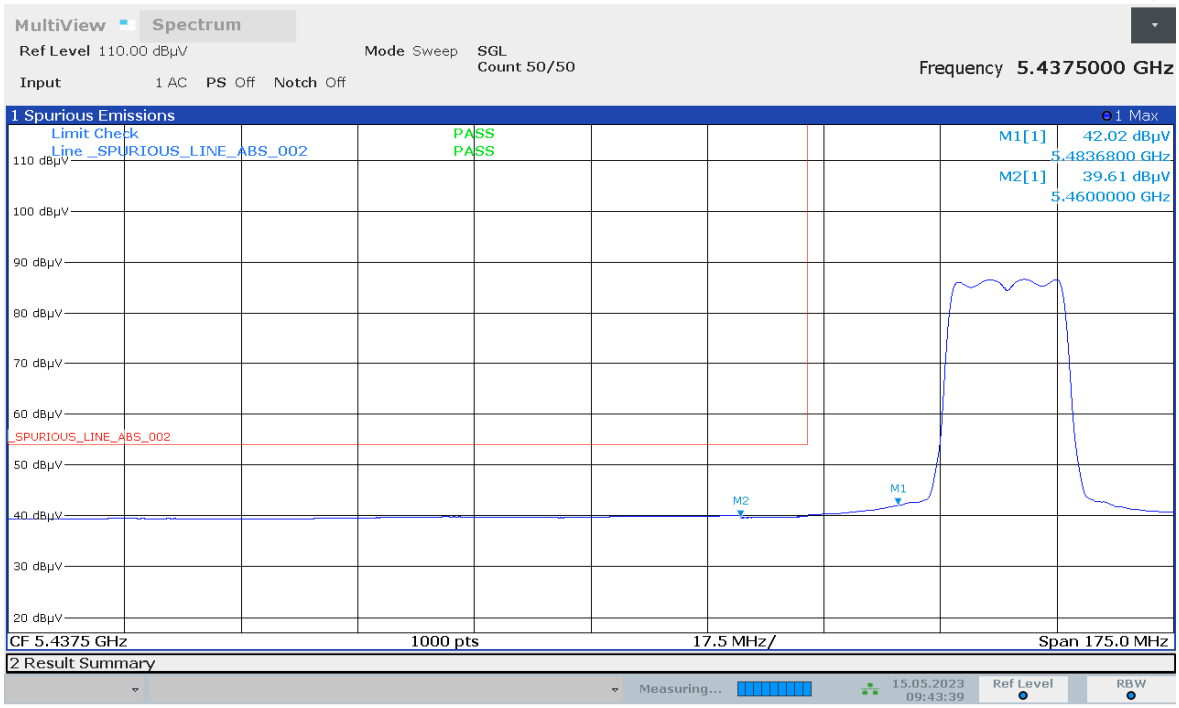
09:22:37 15.05.2023

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



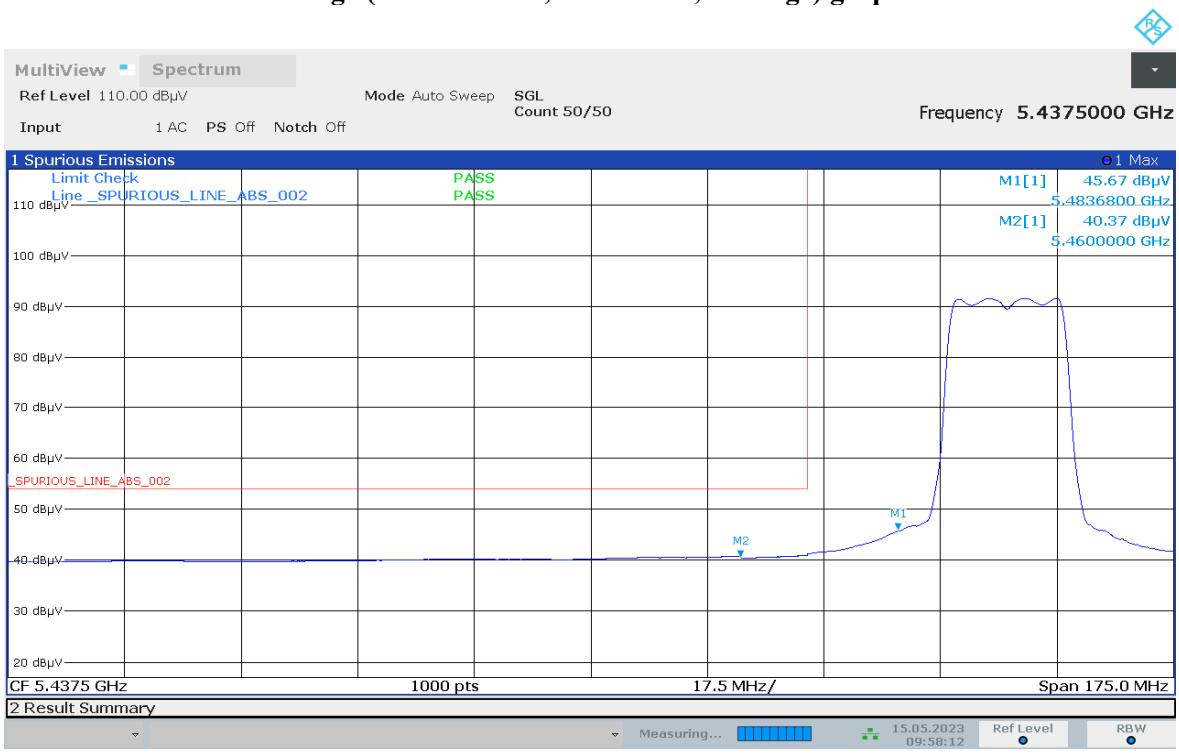
09:26:11 15.05.2023

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



09:43:39 15.05.2023

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



09:58:12 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5700.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

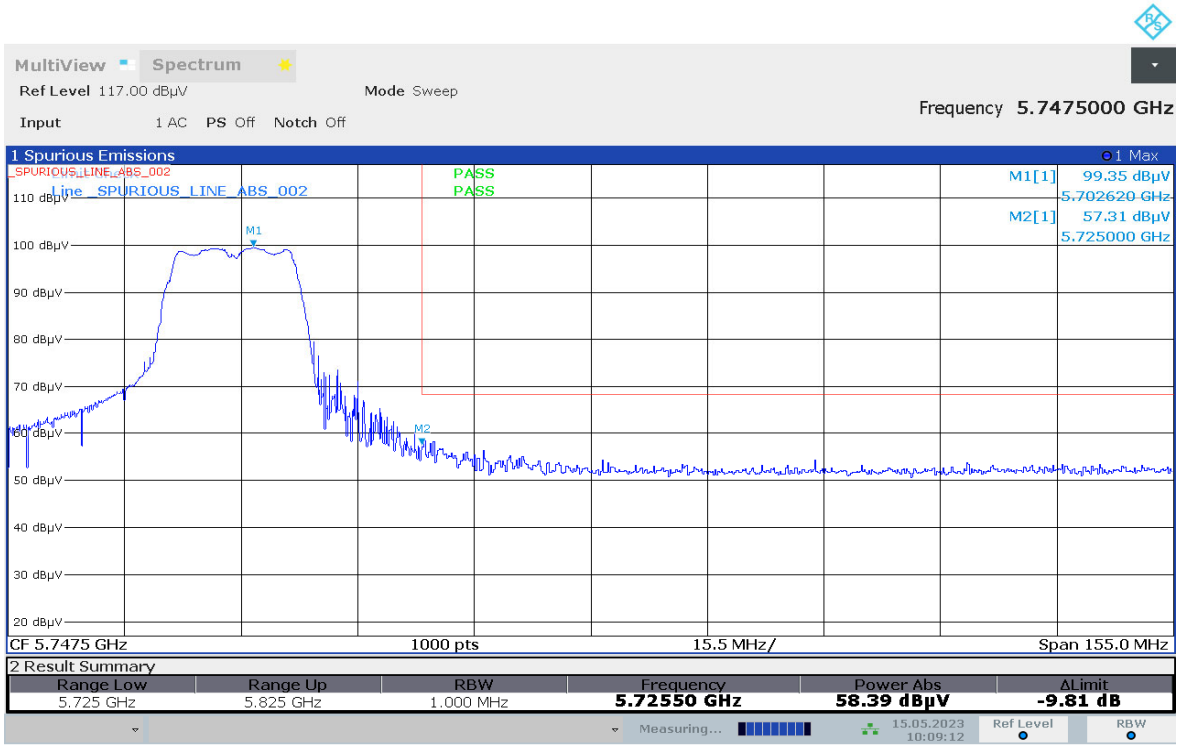
Restricted Band Edge (High Channel) tabular data

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	-	57.3149	-	-	68.2000	-	-	10.8851	-	-
Horizontal Radiated Emission Result										
5725.0000	-	52.4308	-	-	68.2000	-	-	15.7692	-	-

Remarks: Pass Result	Marginal Result	Fail Result

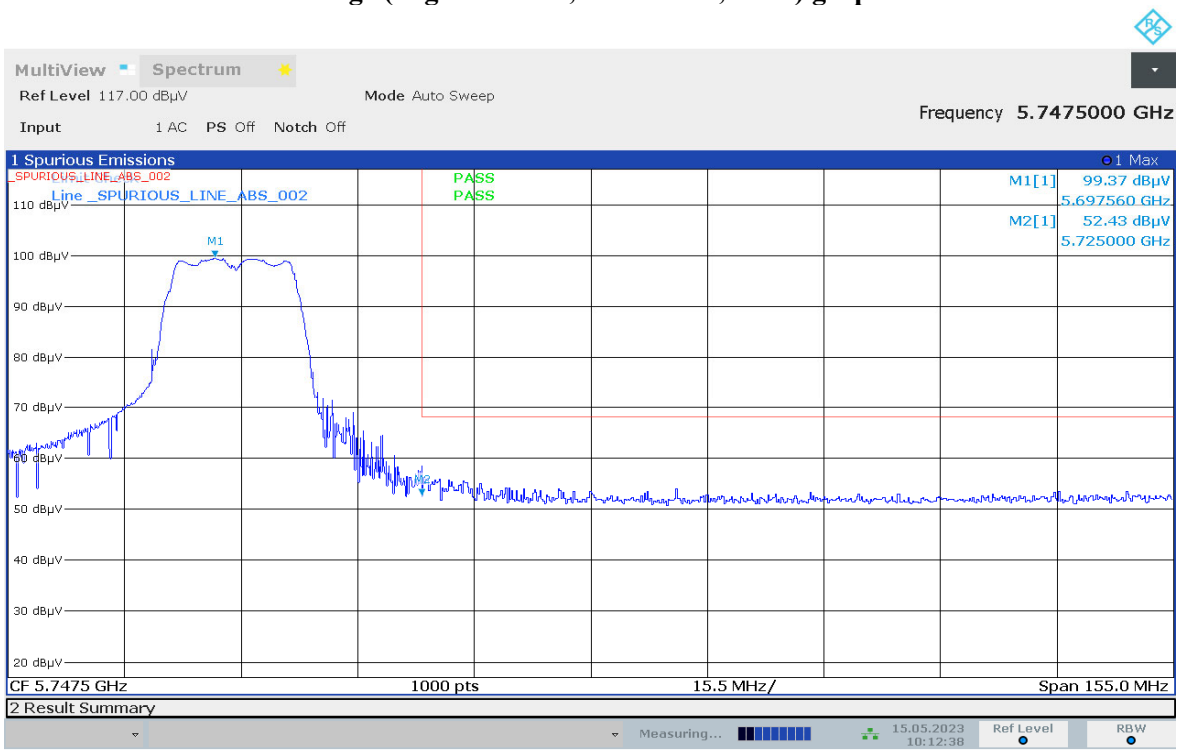
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



10:09:12 15.05.2023

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



10:12:39 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

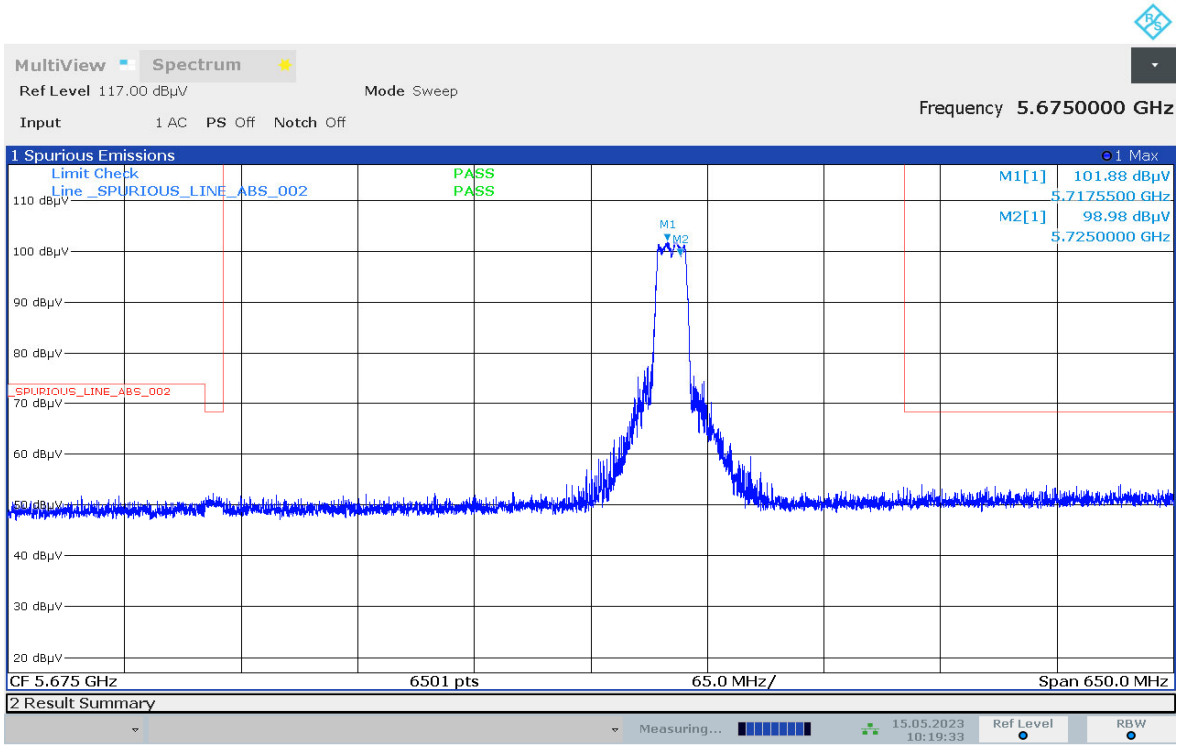
Restricted Band Edge (Straddle Channel) tabular data

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

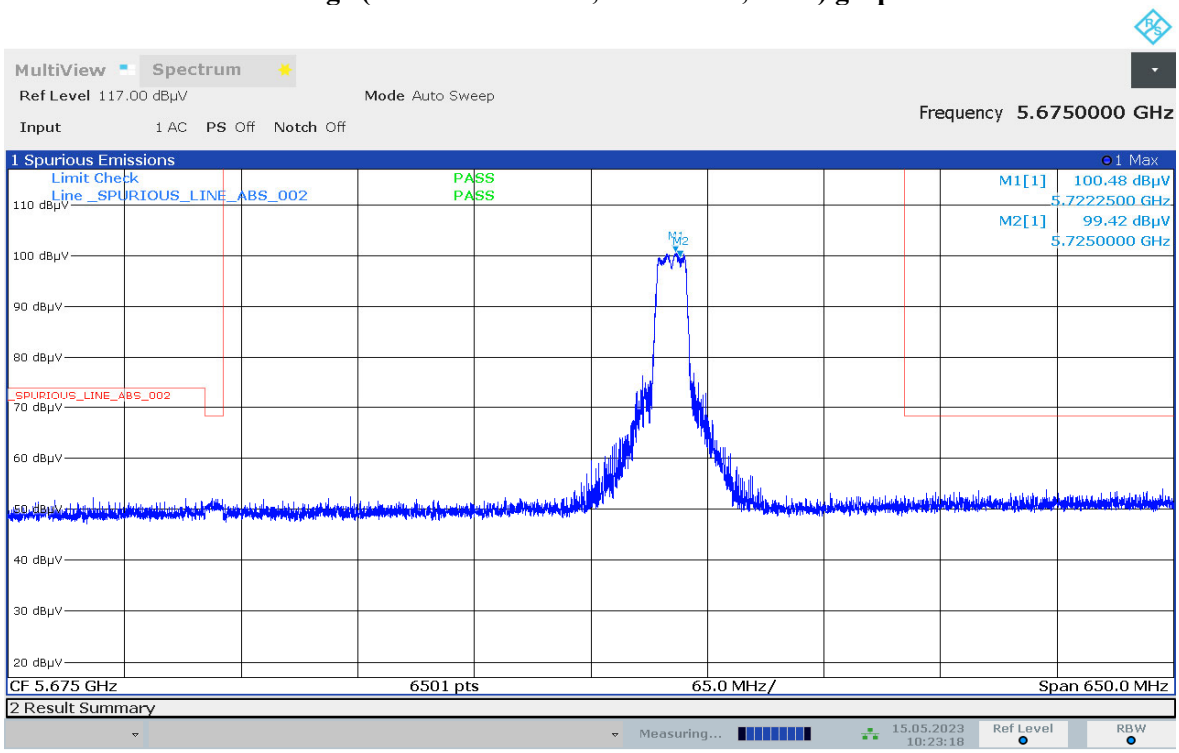
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



10:19:34 15.05.2023

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



10:23:18 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

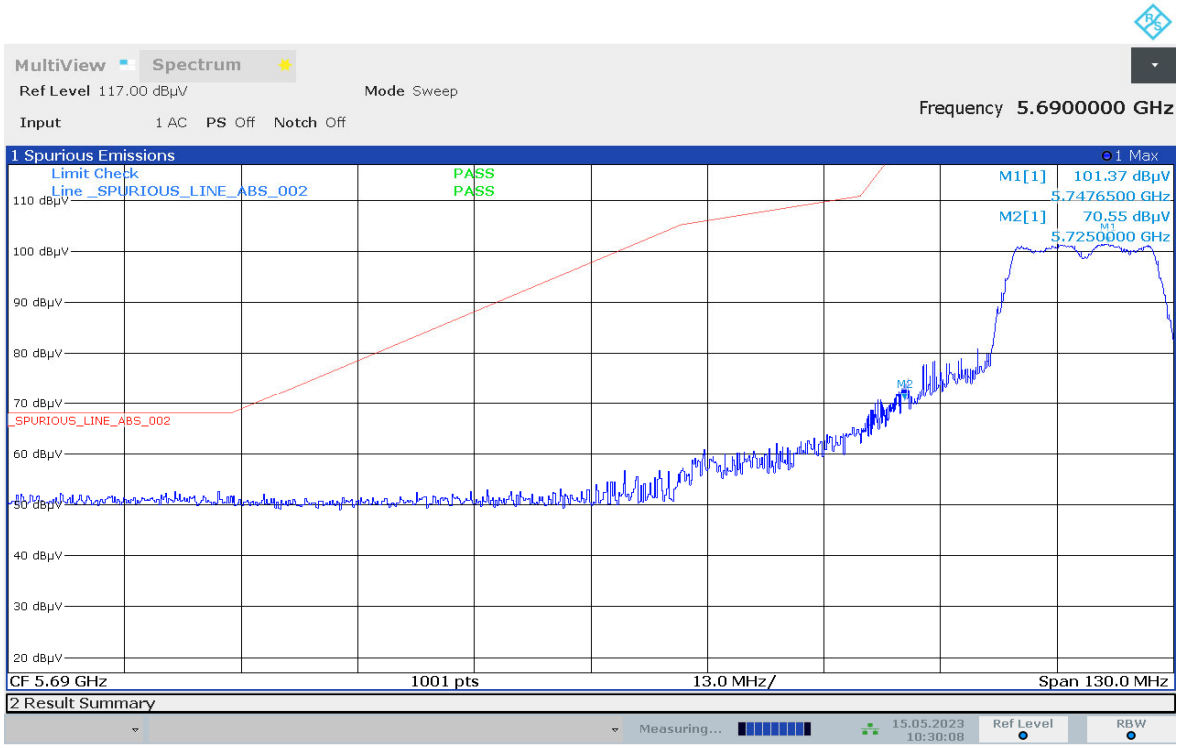
Restricted Band Edge (Low Channel) tabular data

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	-	70.5529	-	-	122.2000	-	-	51.6471	-	-
Horizontal Radiated Emission Result										
5725.0000	-	69.0443	-	-	122.2000	-	-	53.1557	-	-

Remarks: Pass Result	Marginal Result	Fail Result

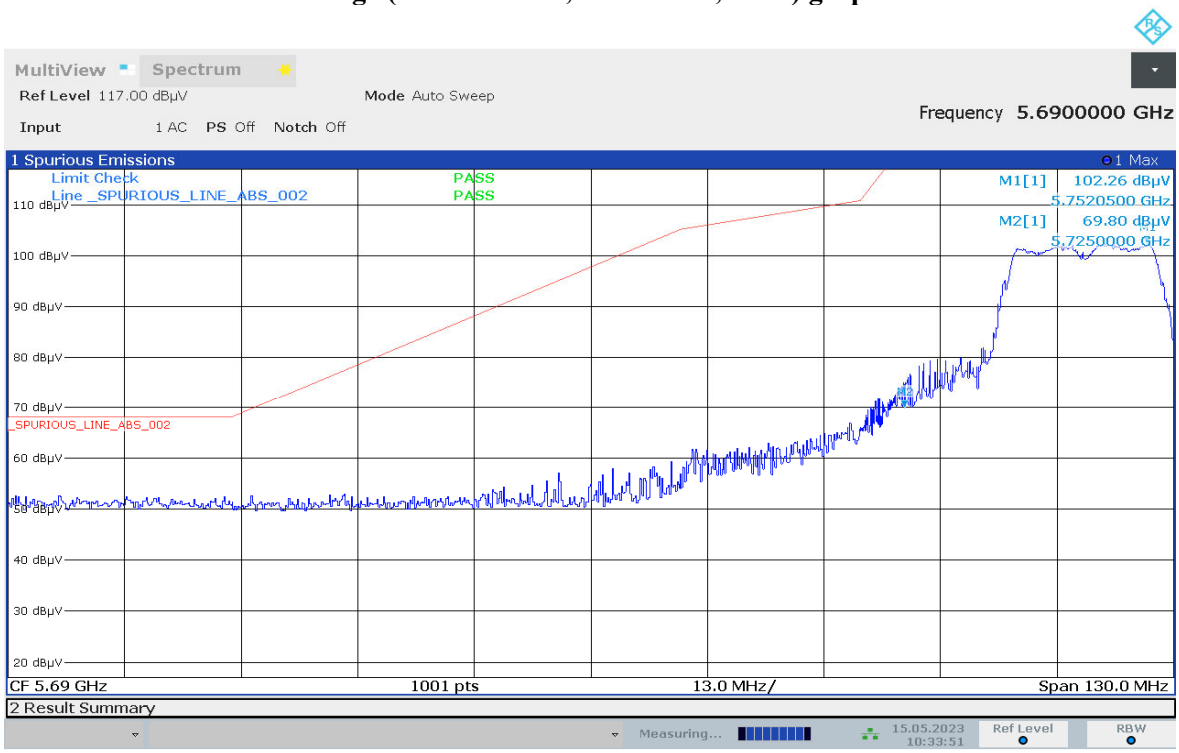
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



10:30:08 15.05.2023

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



10:33:52 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

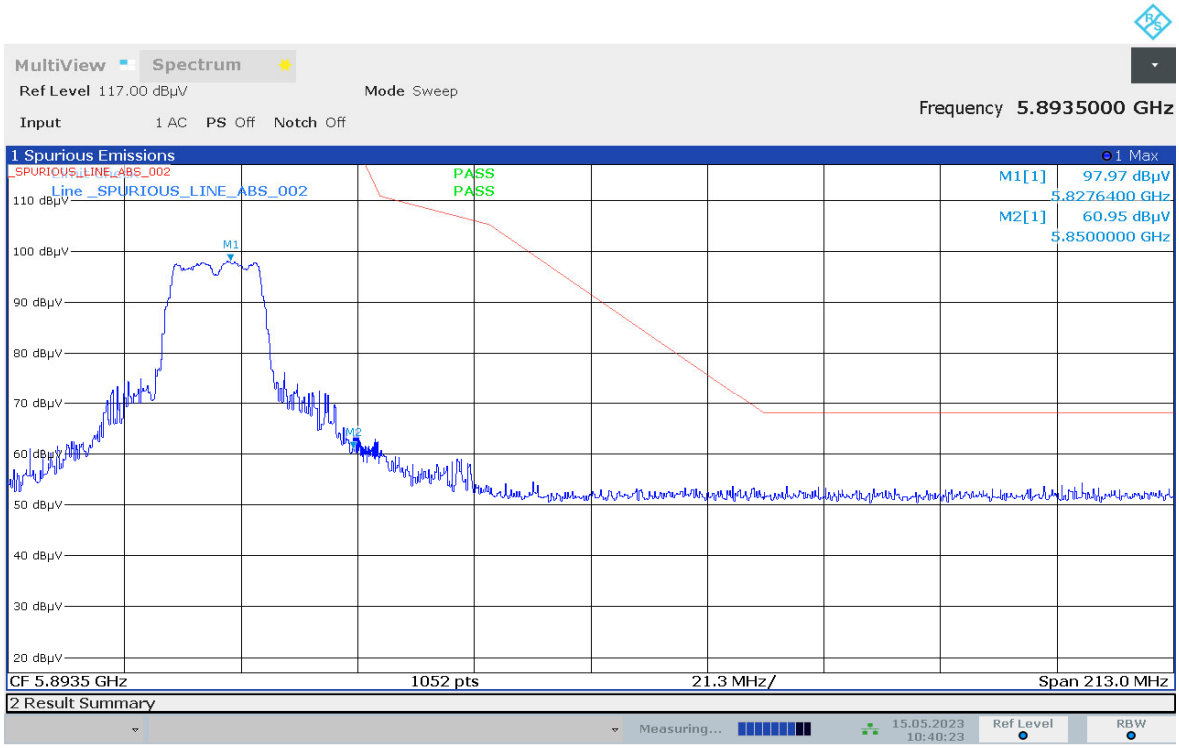
Restricted Band Edge (High Channel) tabular data

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	-	60.9530	-	-	122.2000	-	-	61.2470	-	-
Horizontal Radiated Emission Result										
5850.0000	-	63.4105	-	-	122.2000	-	-	58.7895	-	-

Remarks: Pass Result	Marginal Result	Fail Result

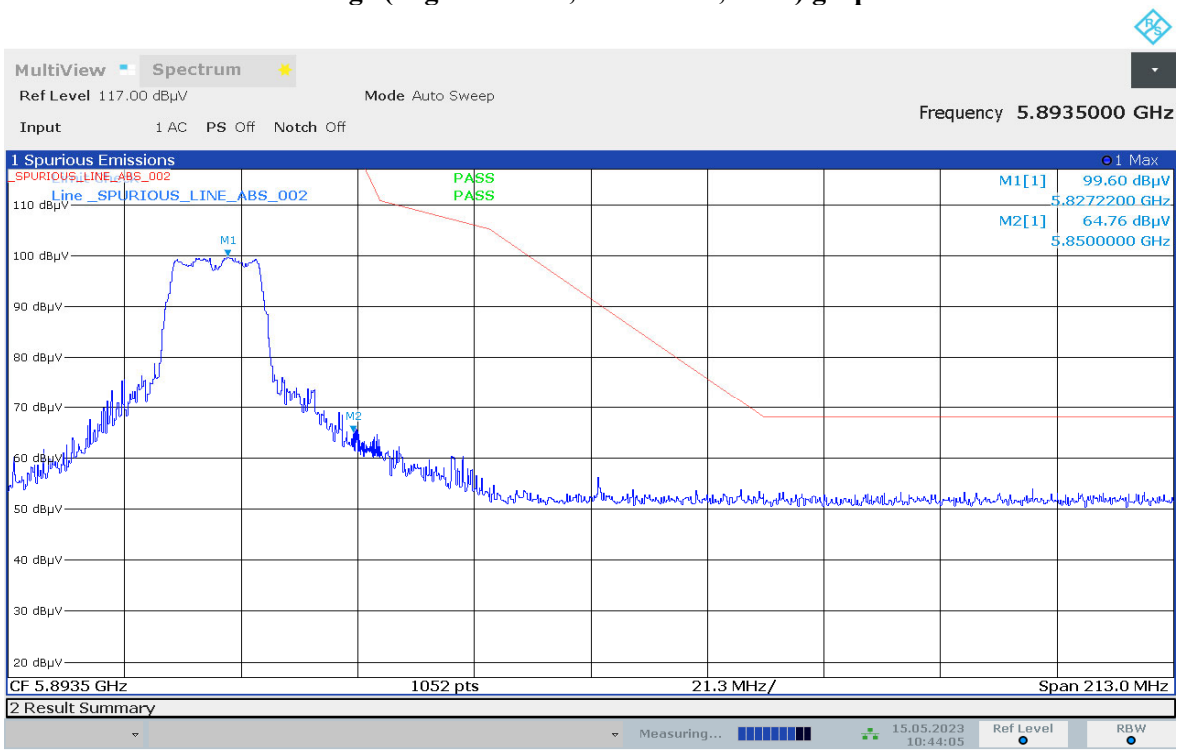
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



10:40:24 15.05.2023

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



10:44:05 15.05.2023

802.11n (HT20)

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

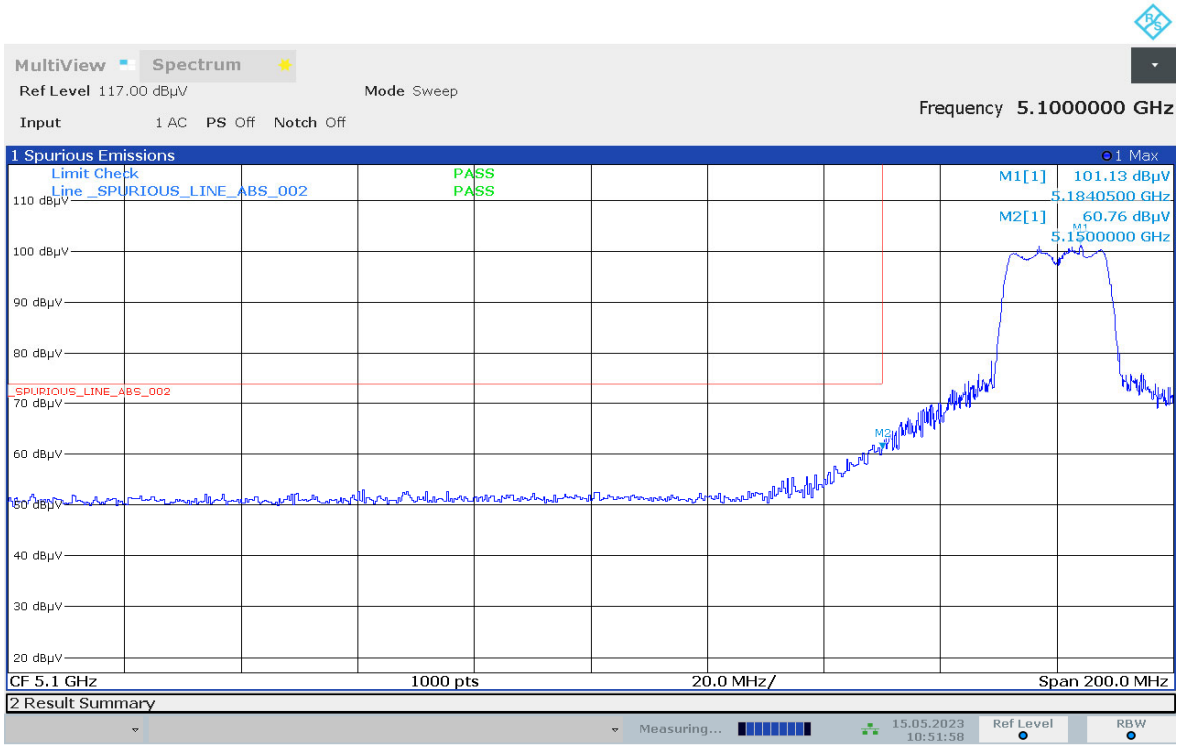
Restricted Band Edge (Low Channel) tabular data

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	-	60.7584	42.8607	-	74.0000	54.0000	-	13.2416	11.1393	-
Horizontal Radiated Emission Result										
5150.0000	-	67.0678	45.2987	-	74.0000	54.0000	-	6.9322	8.7013	-

Remarks: Pass Result	Marginal Result	Fail Result

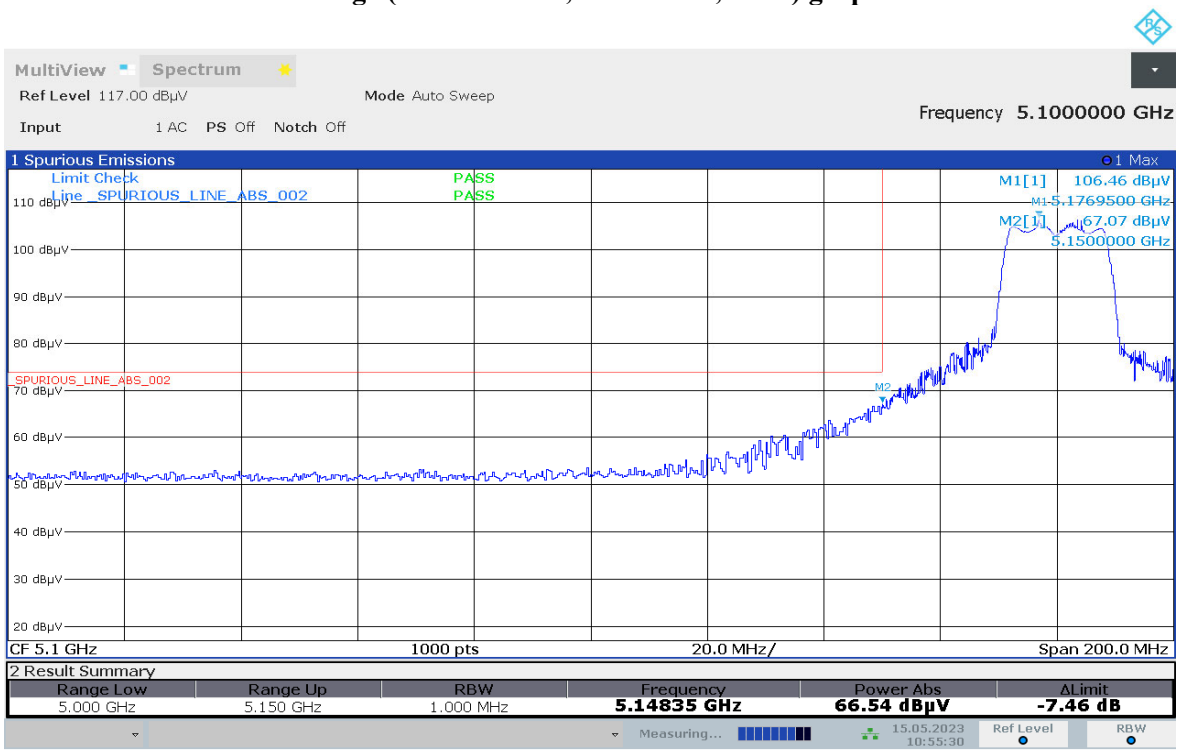
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



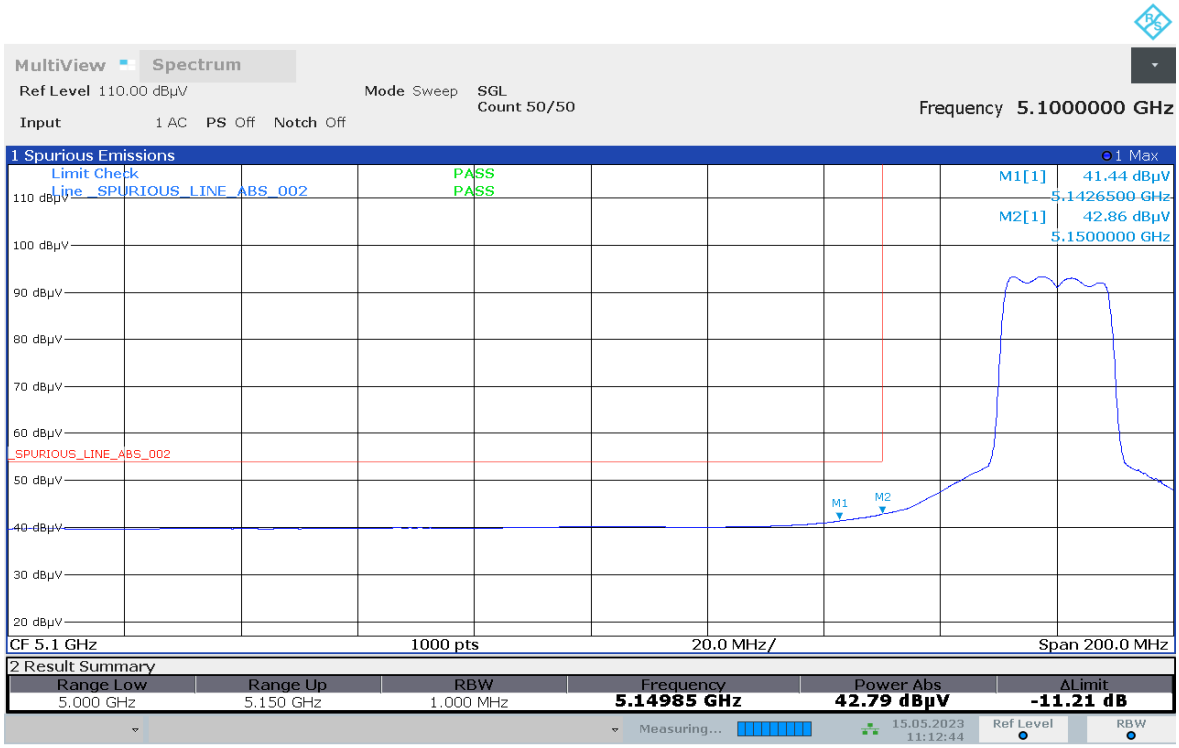
10:51:59 15.05.2023

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



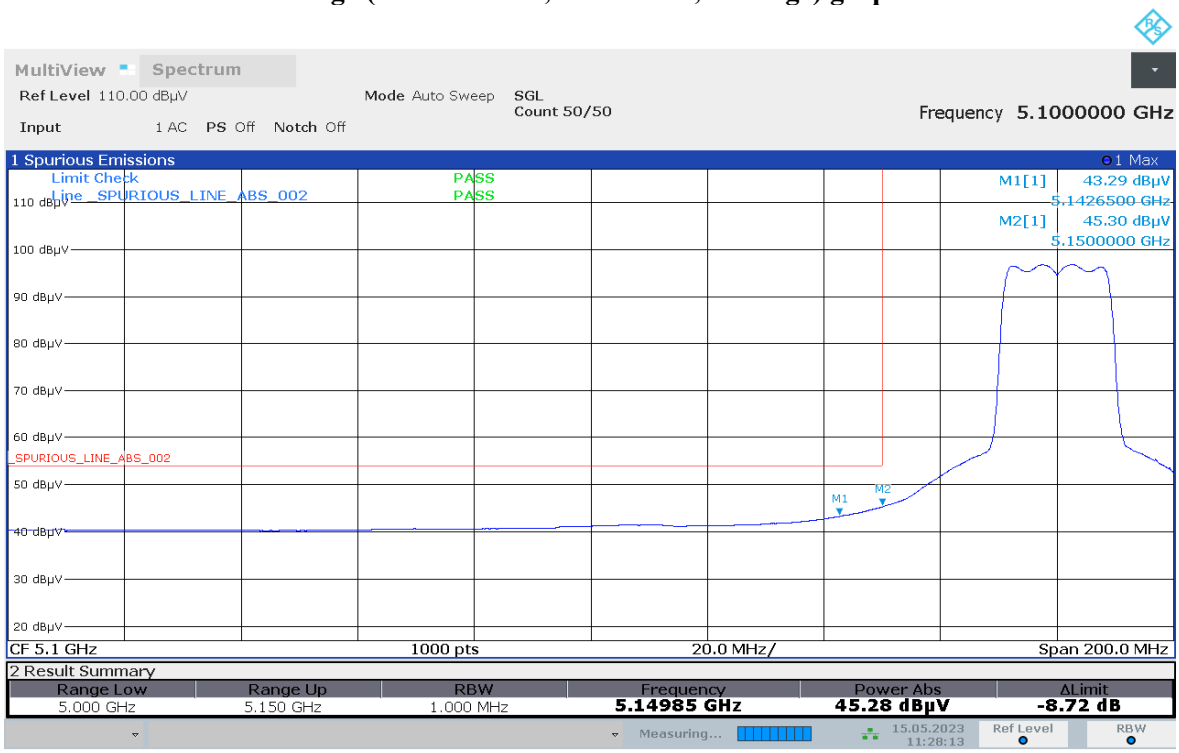
10:55:30 15.05.2023

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



11:12:44 15.05.2023

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



11:28:14 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

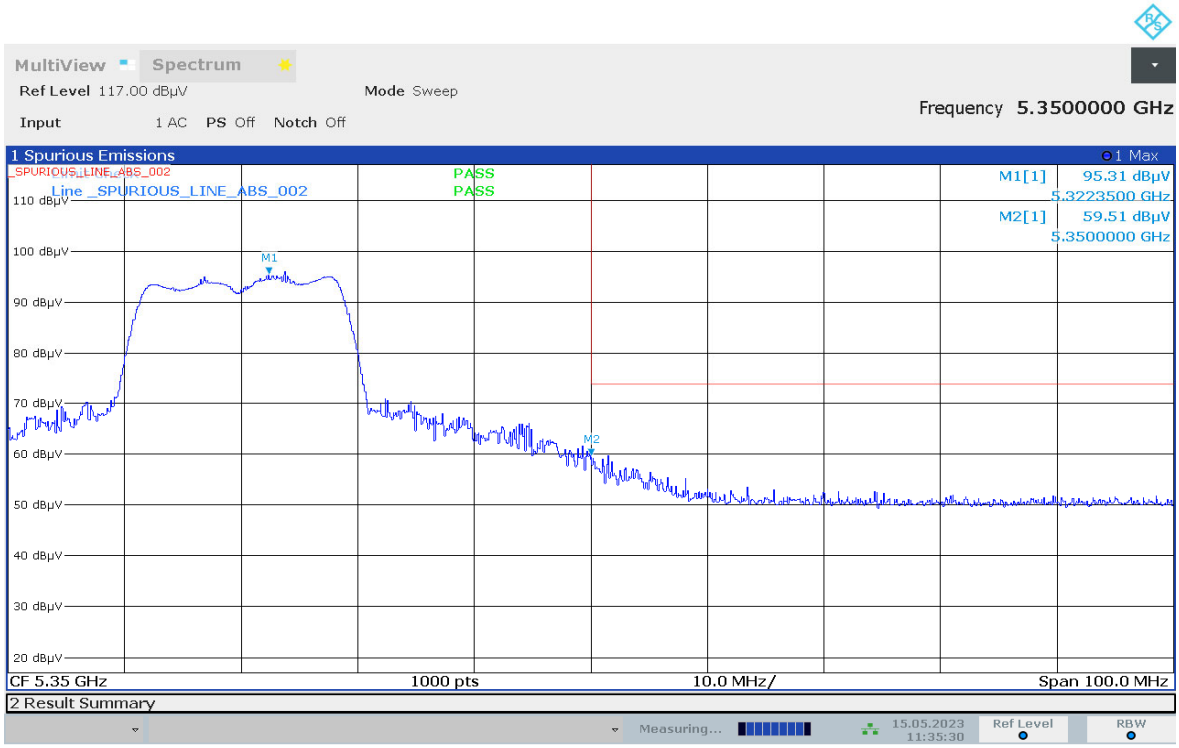
Restricted Band Edge (High Channel) tabular data

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	-	59.5125	39.8952	-	74.0000	54.0000	-	14.4875	14.1048	-
Horizontal Radiated Emission Result										
5350.0000	-	63.4120	43.7115	-	74.0000	54.0000	-	10.5880	10.2885	-

Remarks: Pass Result	Marginal Result	Fail Result

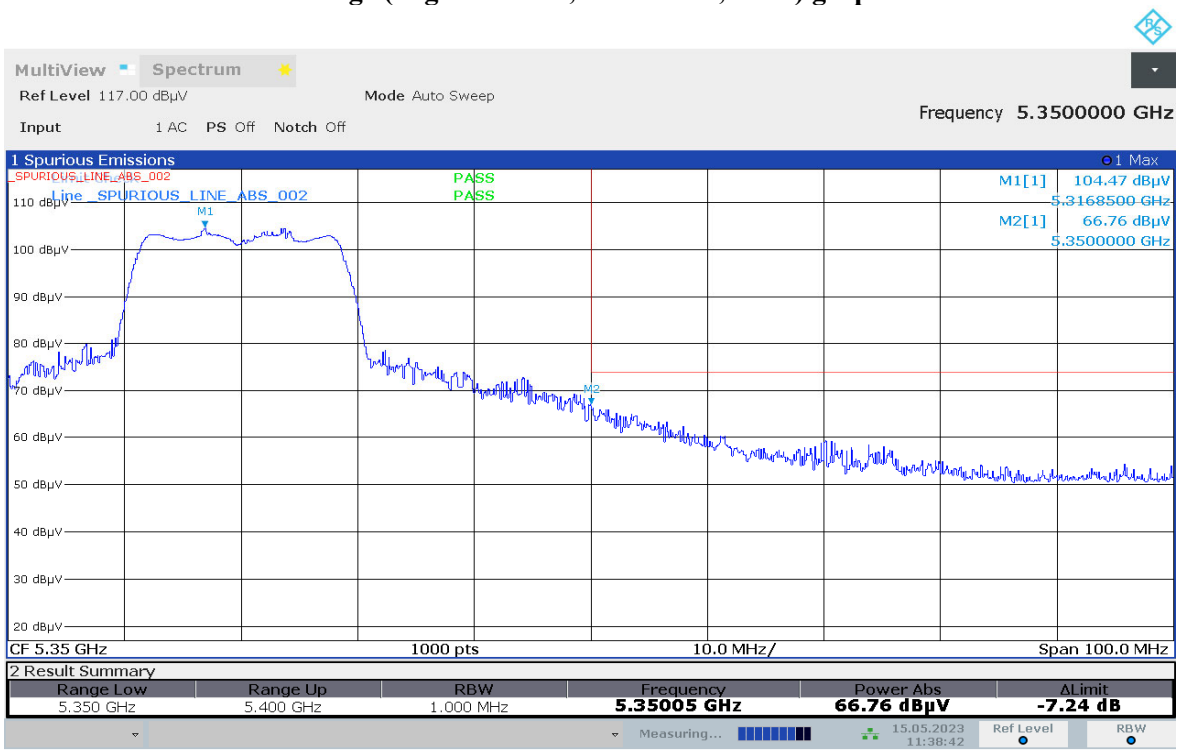
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



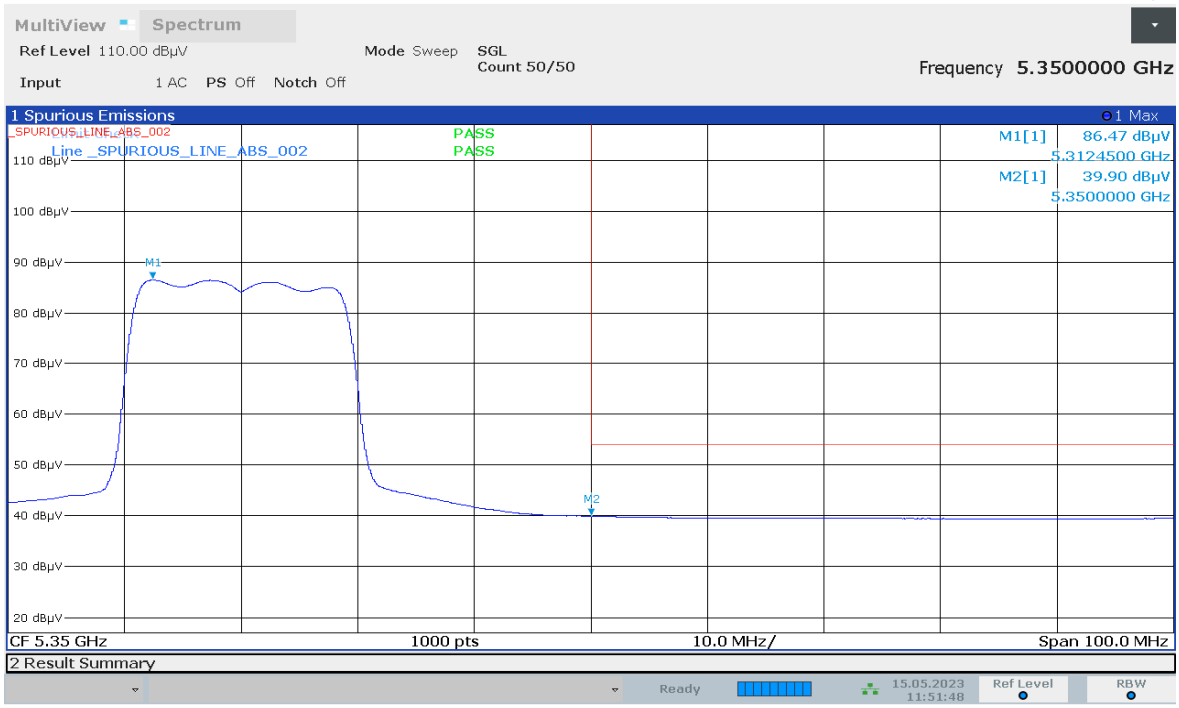
11:35:31 15.05.2023

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



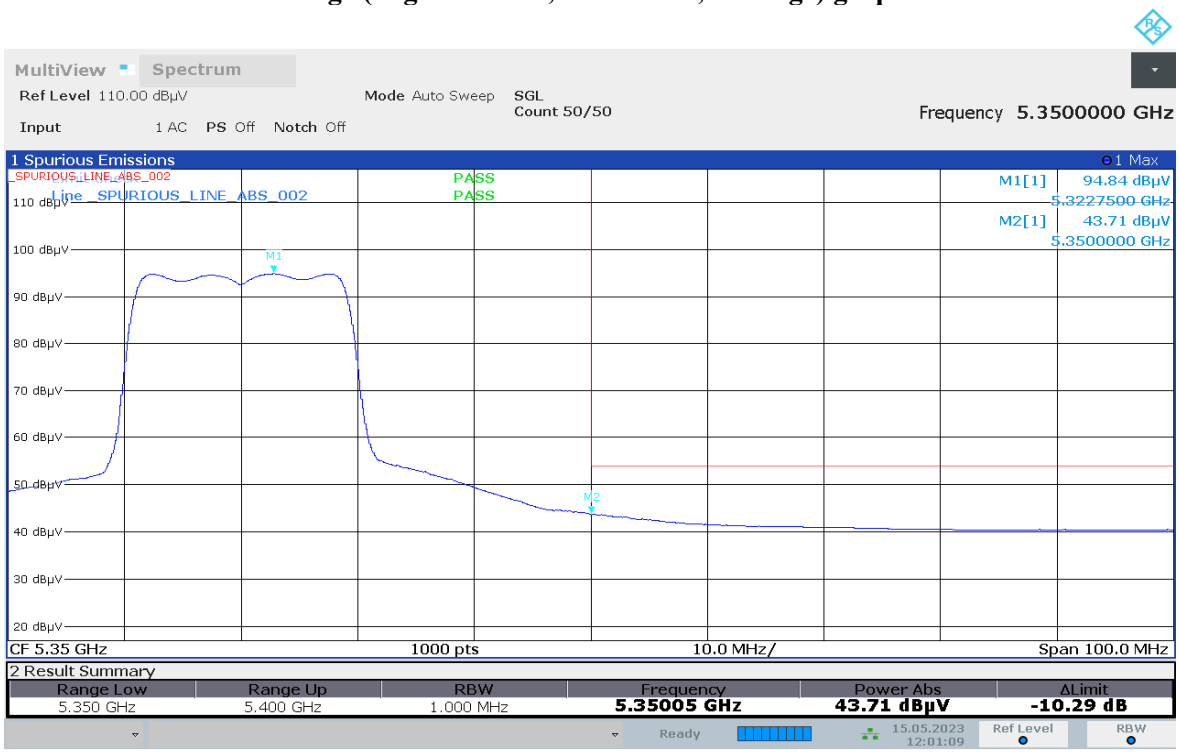
11:38:43 15.05.2023

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



11:51:48 15.05.2023

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



12:01:09 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

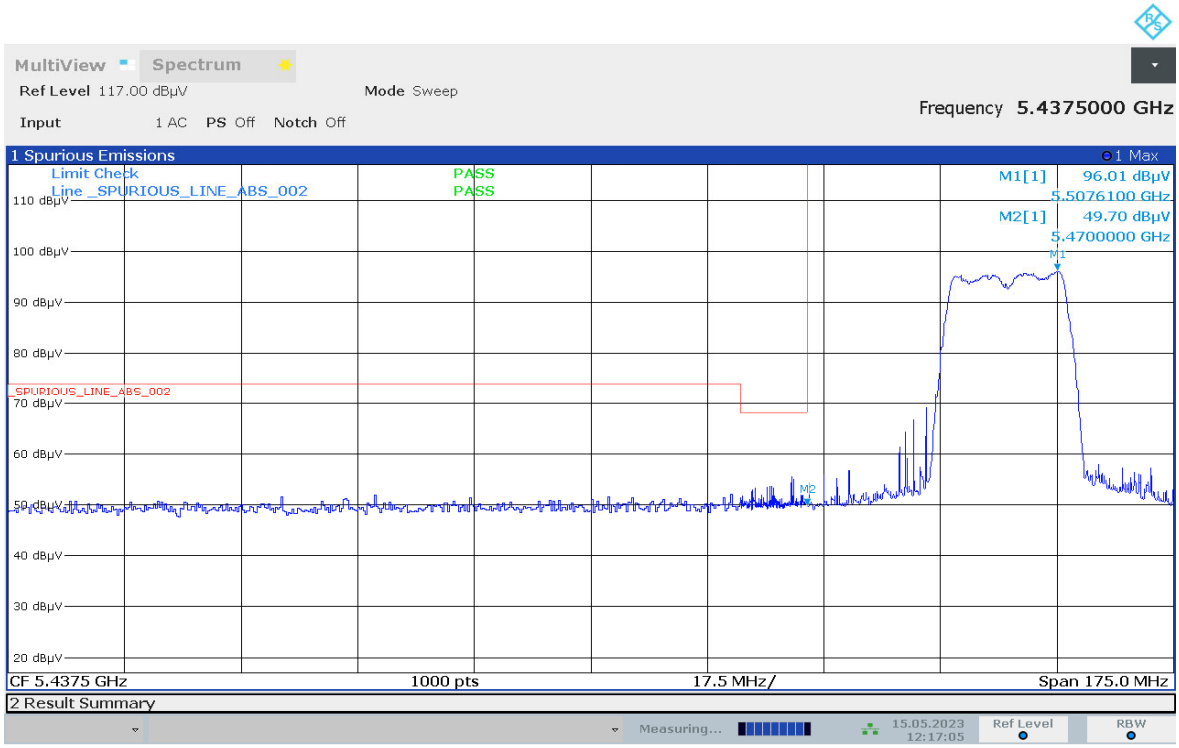
Restricted Band Edge (Low Channel) tabular data

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	-	-	39.7304	-	-	54.0000	-	-	14.2696	-
5470.0000	-	49.7040	-	-	68.2000	-	-	18.4960	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	40.5968	-	-	54.0000	-	-	13.4032	-
5470.0000	-	50.7795	-	-	68.2000	-	-	17.4205	-	-

Remarks: Pass Result	Marginal Result	Fail Result

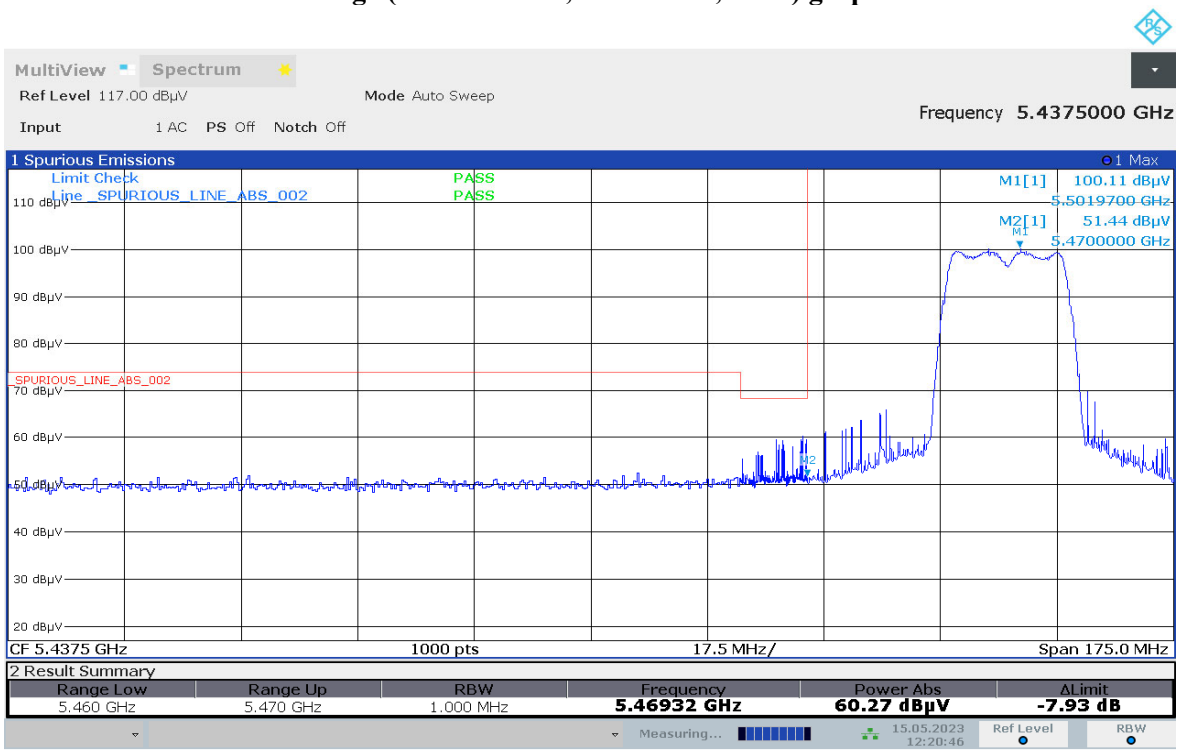
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



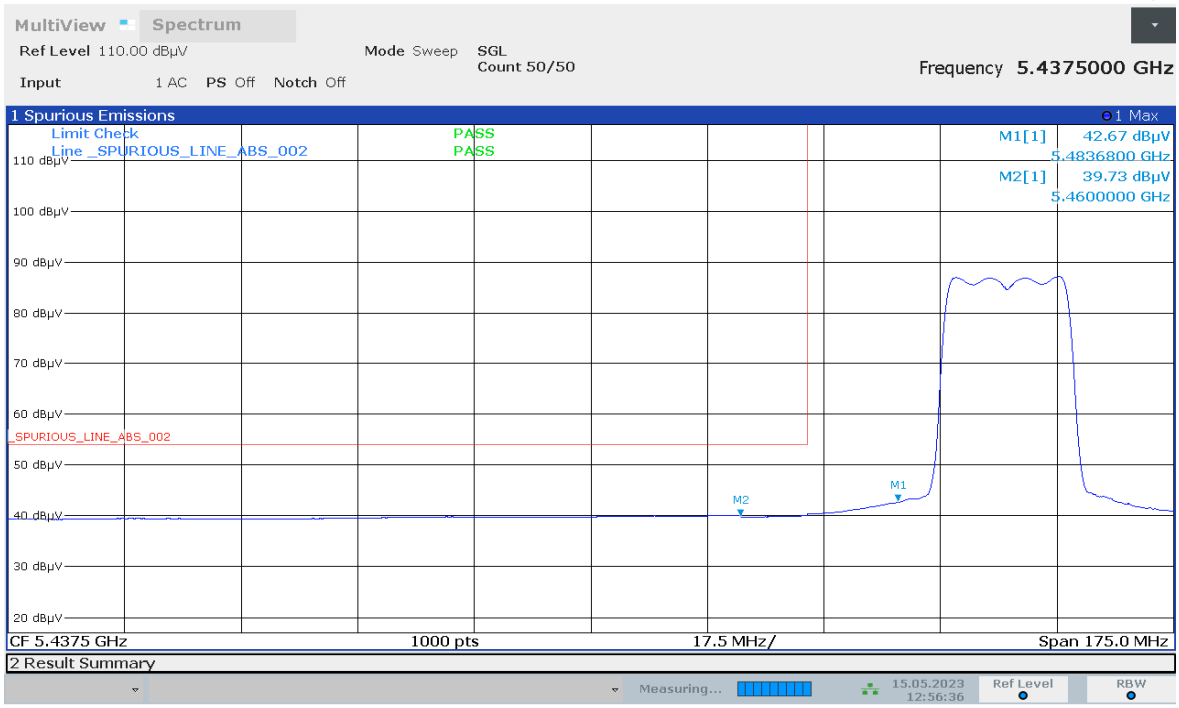
12:17:05 15.05.2023

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



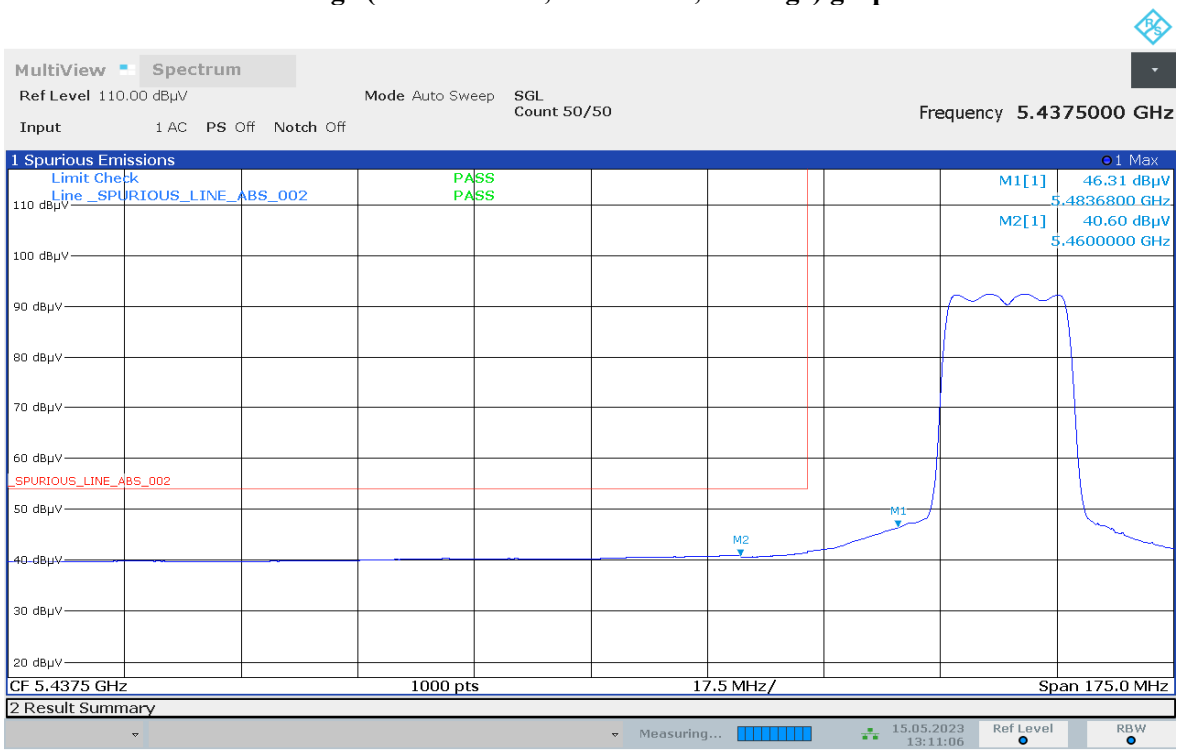
12:20:47 15.05.2023

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



12:56:36 15.05.2023

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



13:11:06 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5700.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

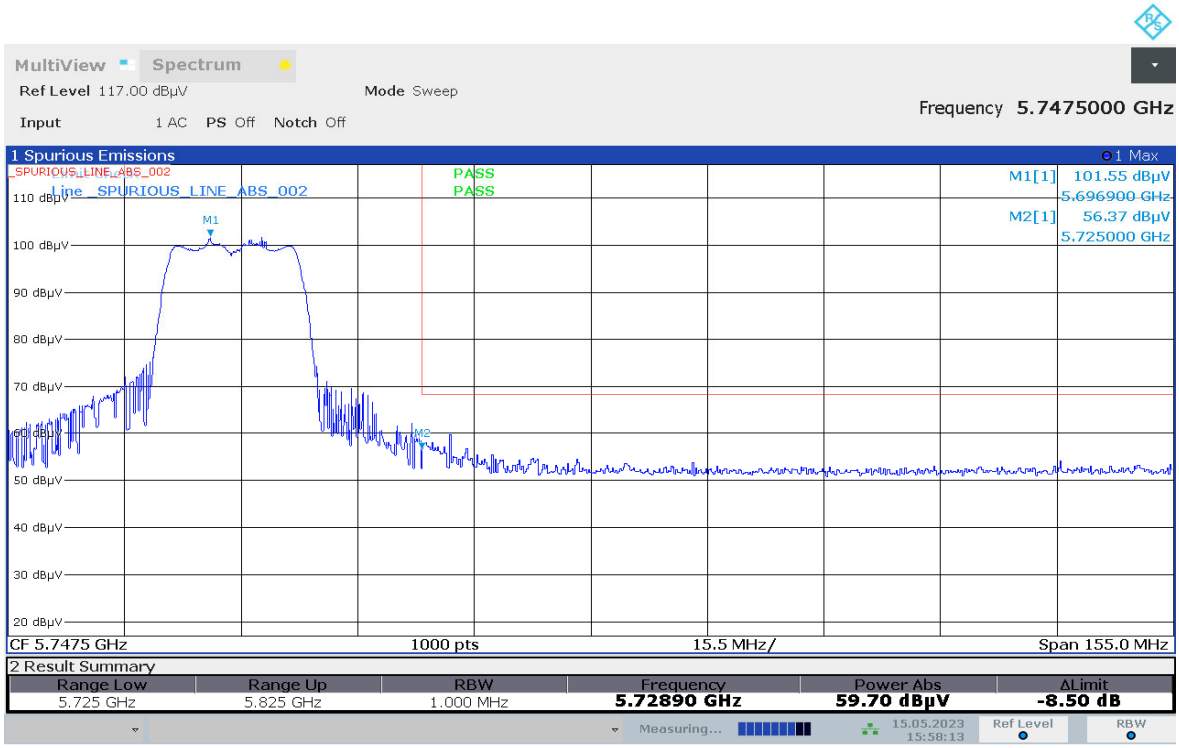
Restricted Band Edge (High Channel) tabular data

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	-	56.3699	-	-	68.2000	-	-	11.8301	-	-
5728.9000	-	59.6991	-	-	68.2000	-	-	8.5009	-	-
Horizontal Radiated Emission Result										
5725.0000	-	57.9354	-	-	68.2000	-	-	10.2646	-	-
5726.1000	-	59.5173	-	-	68.2000	-	-	8.6827	-	-

Remarks: Pass Result	Marginal Result	Fail Result

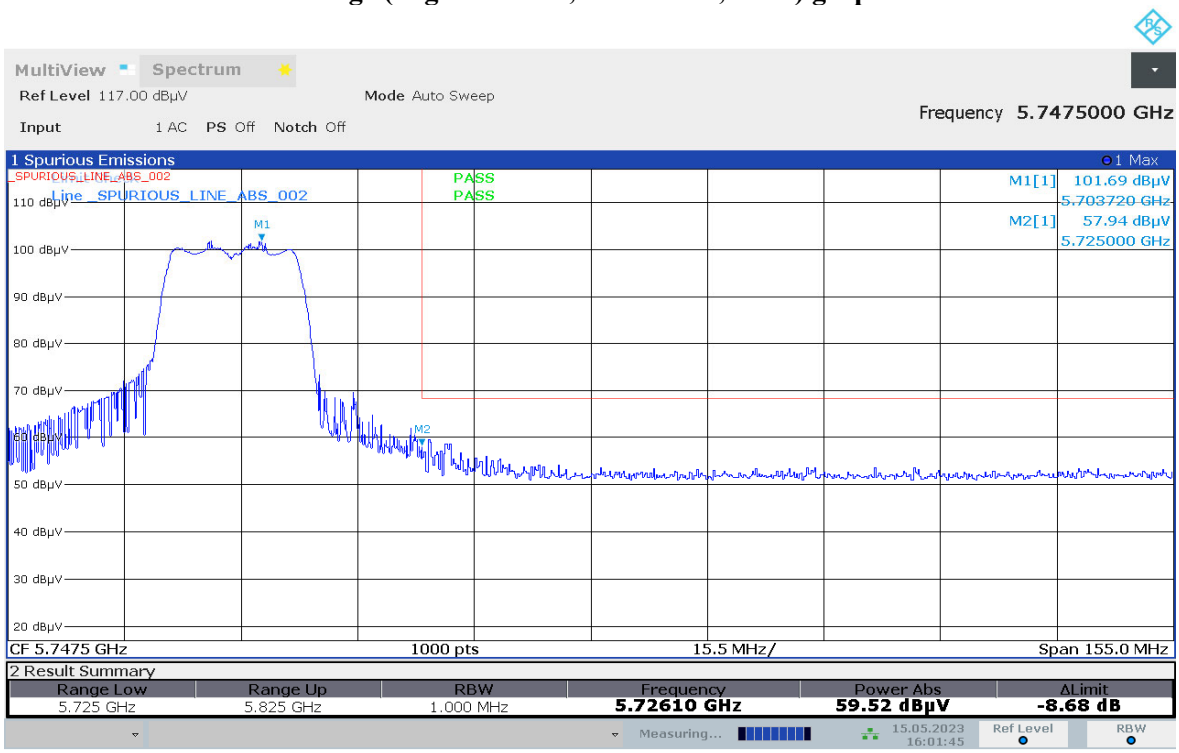
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



15:58:13 15.05.2023

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



16:01:46 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

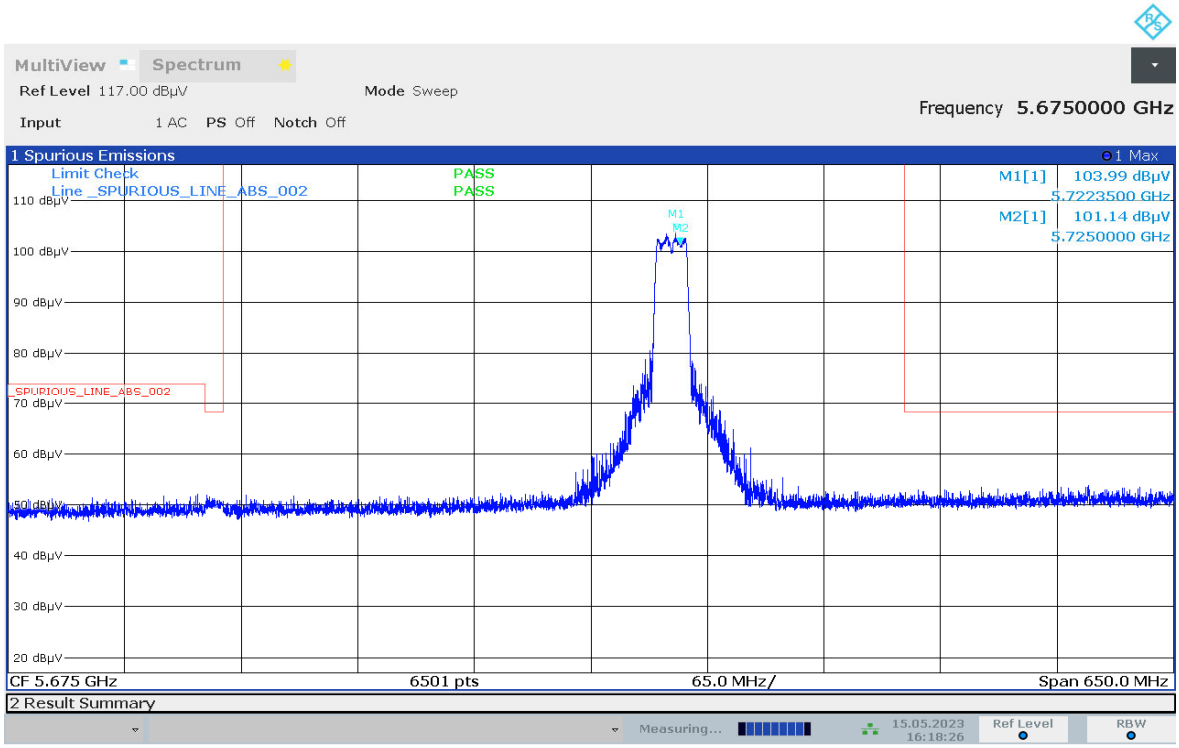
Restricted Band Edge (Straddle Channel) tabular data

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

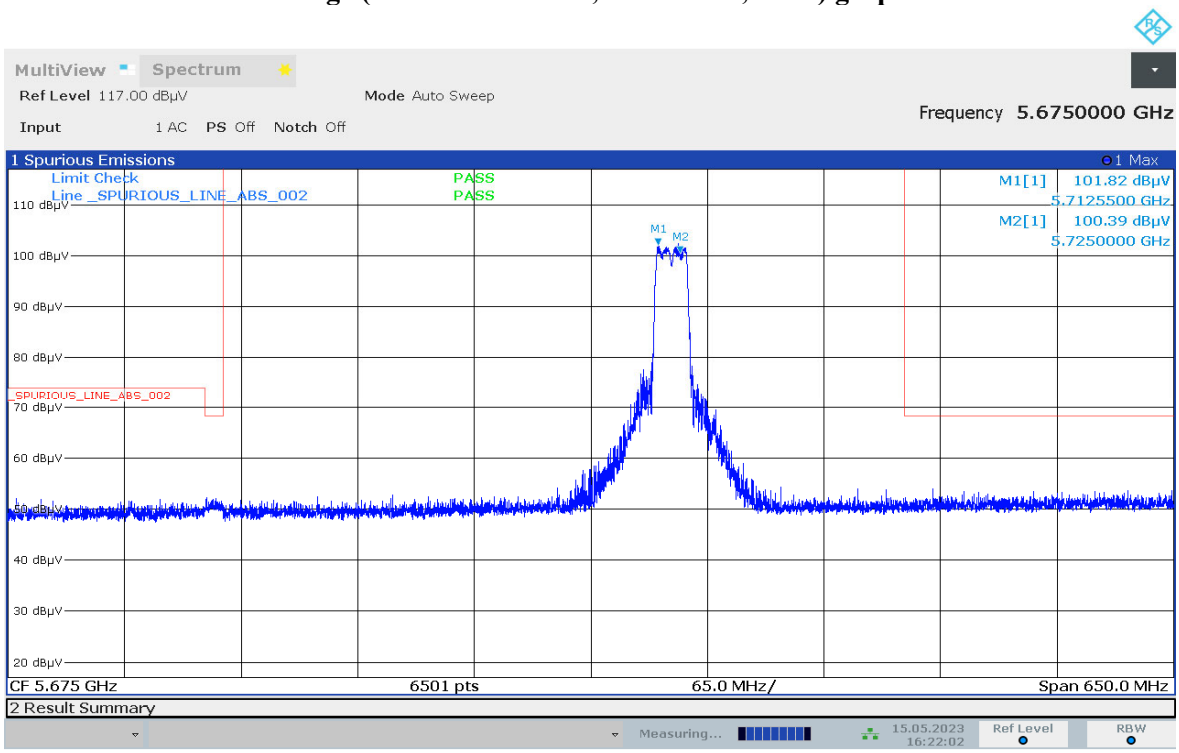
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



16:18:27 15.05.2023

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



16:22:03 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

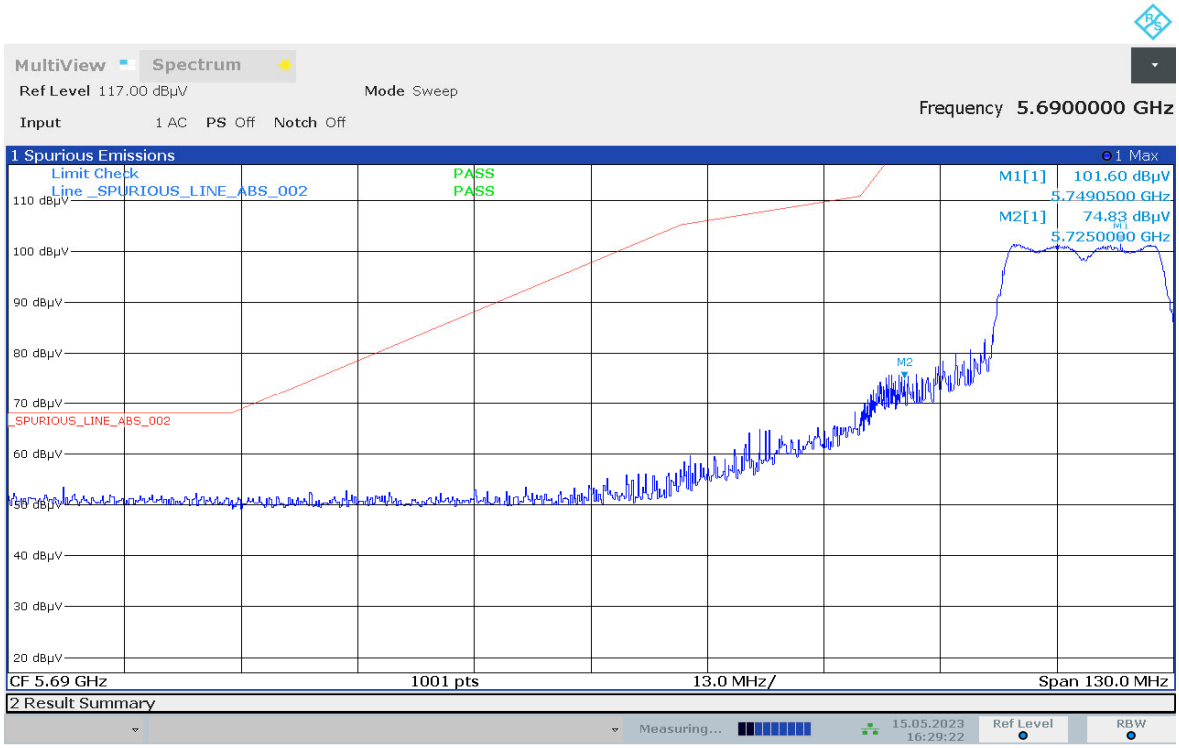
Restricted Band Edge (Low Channel) tabular data

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	-	74.8253	-	-	122.2000	-	-	47.3747	-	-
Horizontal Radiated Emission Result										
5725.0000	-	72.3862	-	-	122.2000	-	-	49.8138	-	-

Remarks: Pass Result	Marginal Result	Fail Result

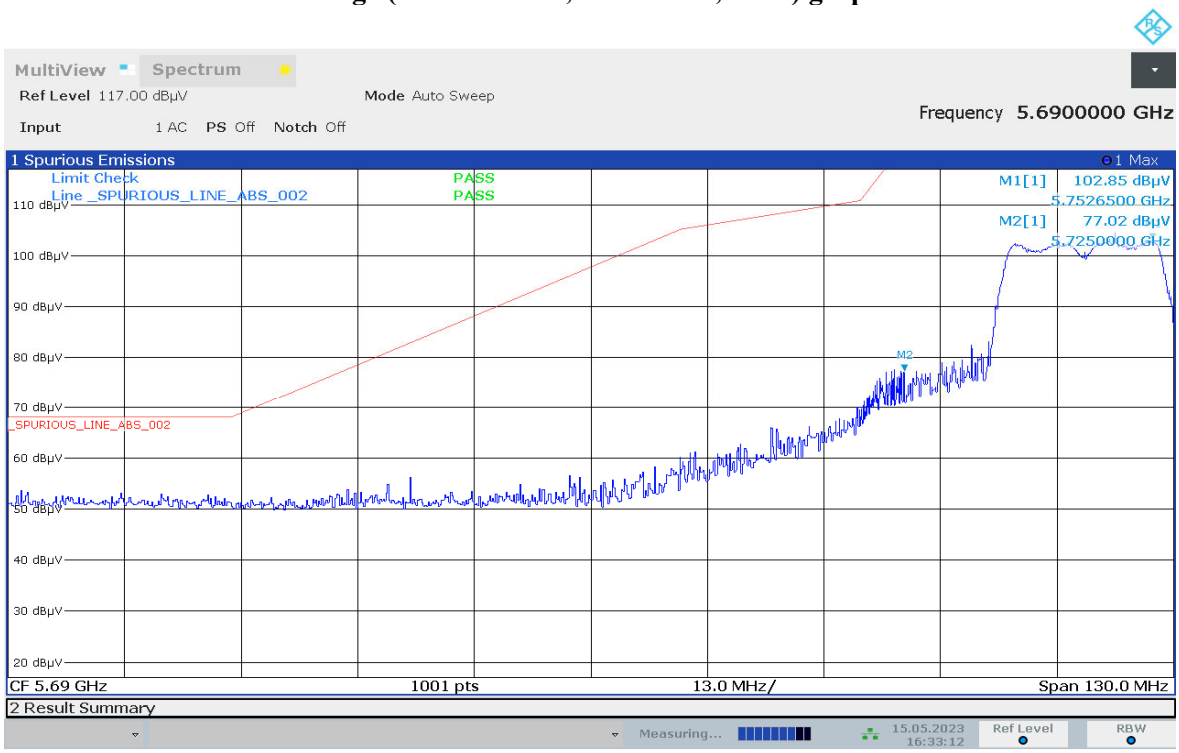
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



16:29:22 15.05.2023

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



16:33:12 15.05.2023

Test: WIFI SAC Restricted Band Edge
Model Number: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

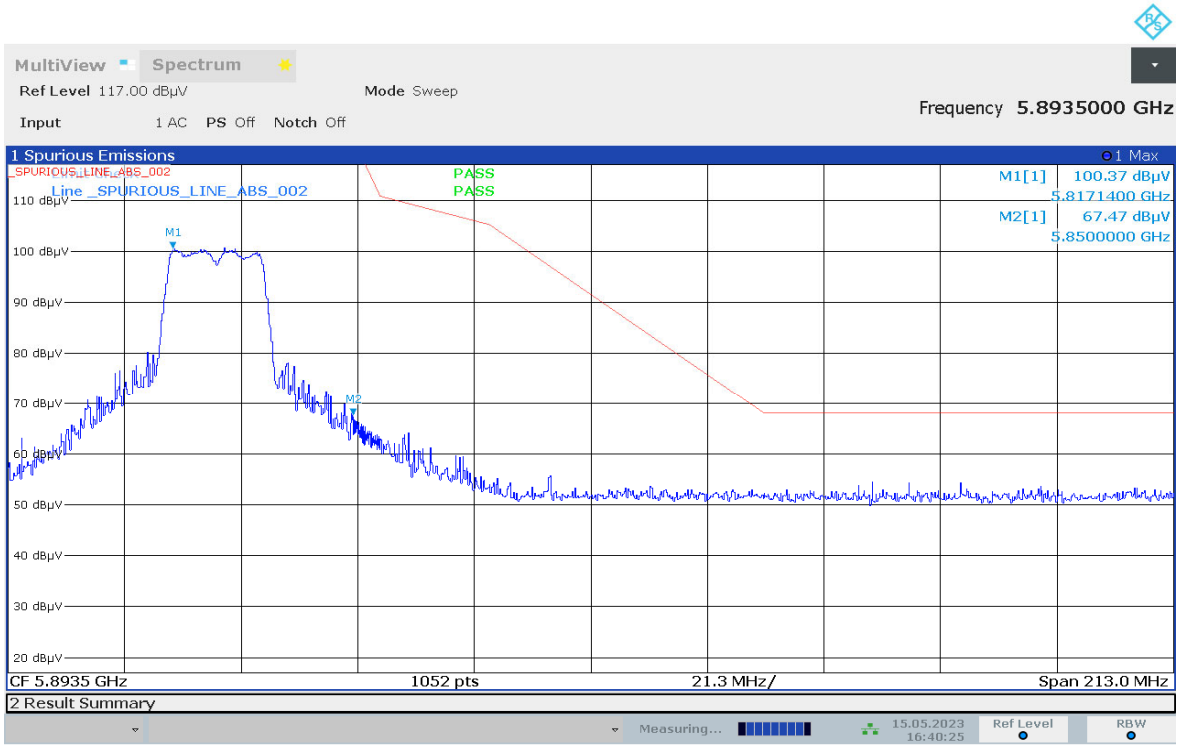
Restricted Band Edge (High Channel) tabular data

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	-	67.4675	-	-	122.2000	-	-	54.7325	-	-
Horizontal Radiated Emission Result										
5850.0000	-	67.8736	-	-	122.2000	-	-	54.3264	-	-

Remarks: Pass Result	Marginal Result	Fail Result

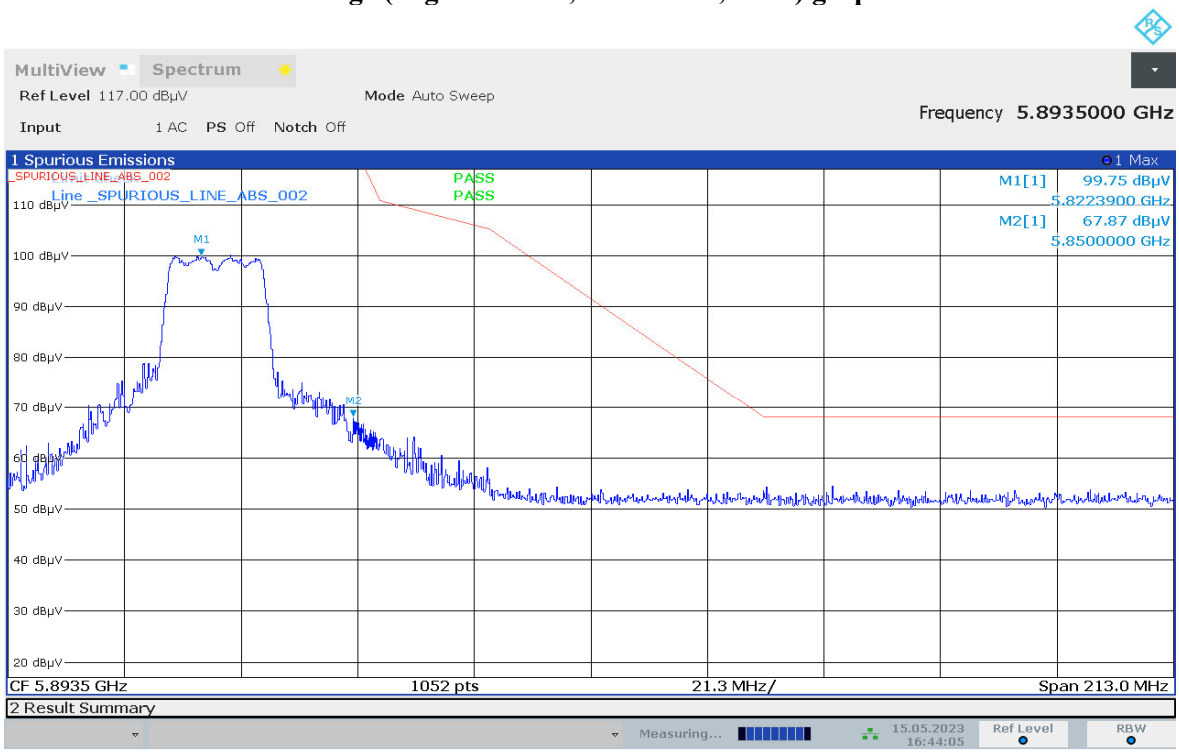
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Mon, 15 May, 2023**
System MU: 5.84dB

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



16:40:26 15.05.2023

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

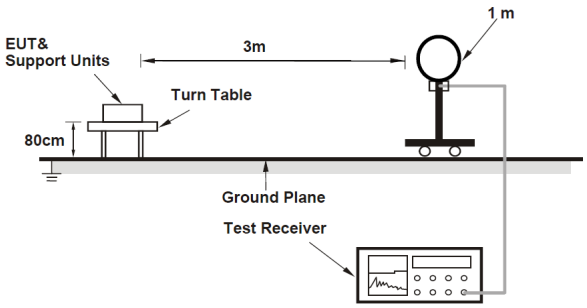


16:44:06 15.05.2023

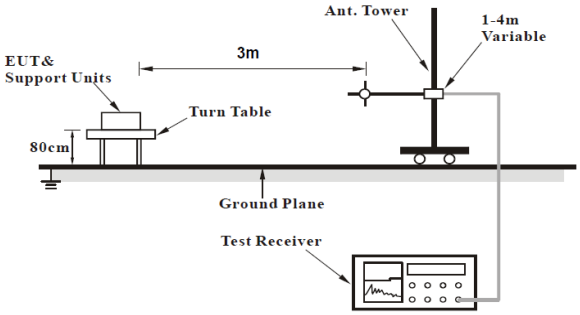
7.7. Radiated Spurious Emission Measurement

7.7.1. Test Setup

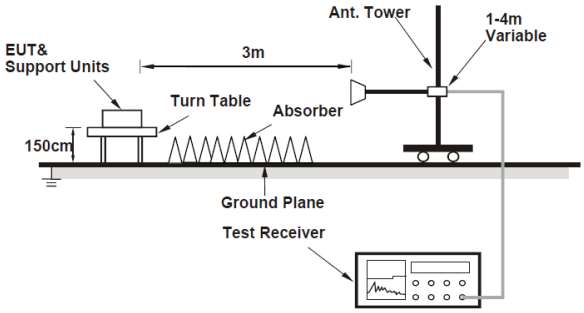
<Radiated emission below 30MHz>



<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

NOTE:

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

7.7.2. Test Limits

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

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

NOTE:

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

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

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

NOTE:

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

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

7.7.3. Test Data

802.11a

Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

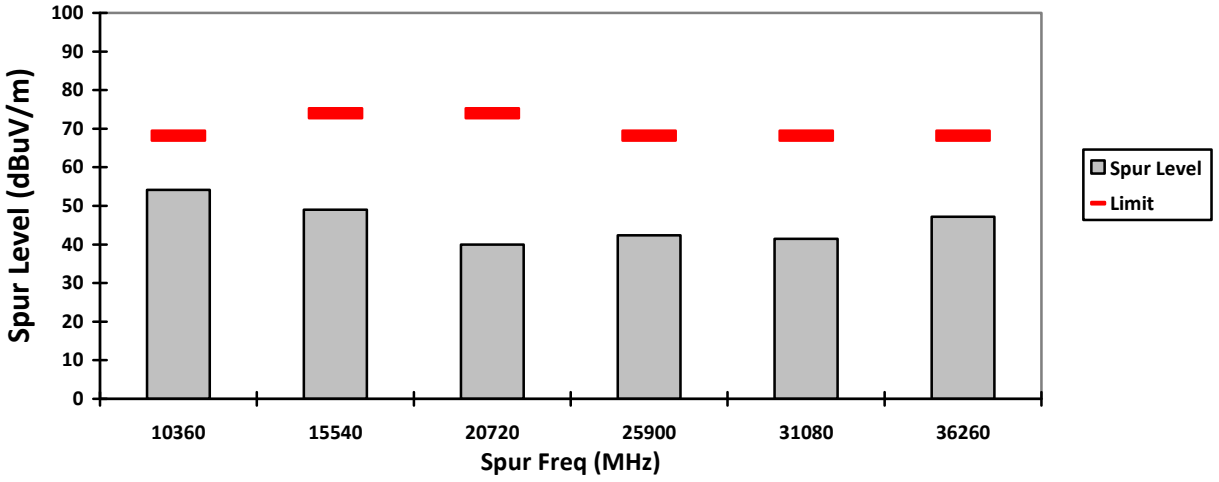
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10360	-	54.1642**	-	-	68.2000	-	-	14.0358	-	-
15540	-	63.1505**	49.0011**	-	74.0000	54.0000	-	10.8495	4.9989	-
20720	-	39.9595**	-	-	74.0000	-	-	34.0405	-	-
25900	-	42.3694**	-	-	68.2000	-	-	25.8306	-	-
31080	-	41.4707**	-	-	68.2000	-	-	26.7293	-	-
36260	-	47.2082**	-	-	68.2000	-	-	20.9918	-	-
Horizontal Radiated Emission Result										
10360	-	53.5633**	-	-	68.2000	-	-	14.6367	-	-
15540	-	63.2277**	49.0023**	-	74.0000	54.0000	-	10.7723	4.9977	-
20720	-	40.3506**	-	-	74.0000	-	-	33.6494	-	-
25900	-	42.0088**	-	-	68.2000	-	-	26.1912	-	-
31080	-	42.8014**	-	-	68.2000	-	-	25.3986	-	-
36260	-	45.7962**	-	-	68.2000	-	-	22.4038	-	-

Remarks: Pass Result	Marginal Result	Fail Result

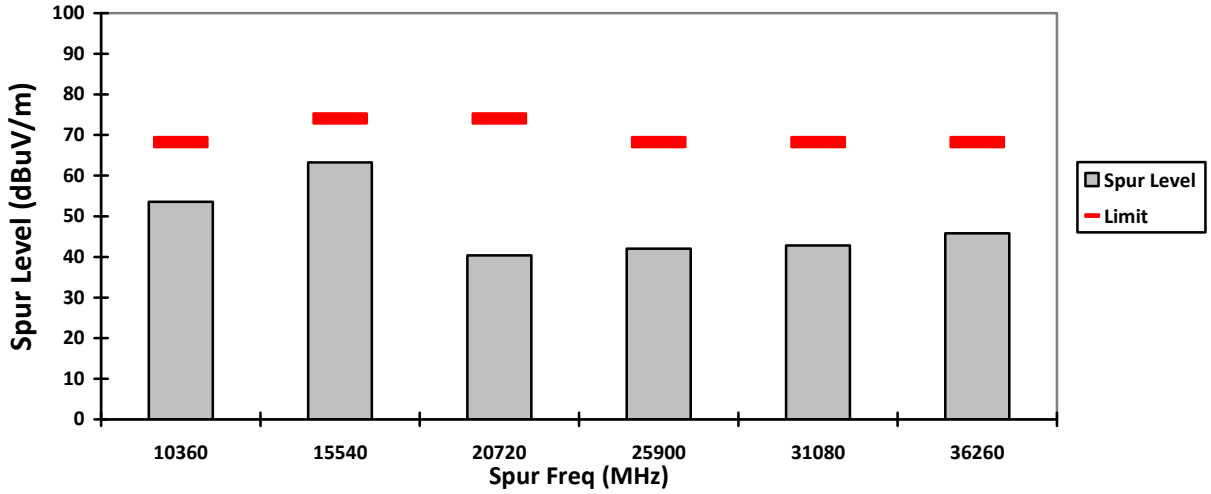
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

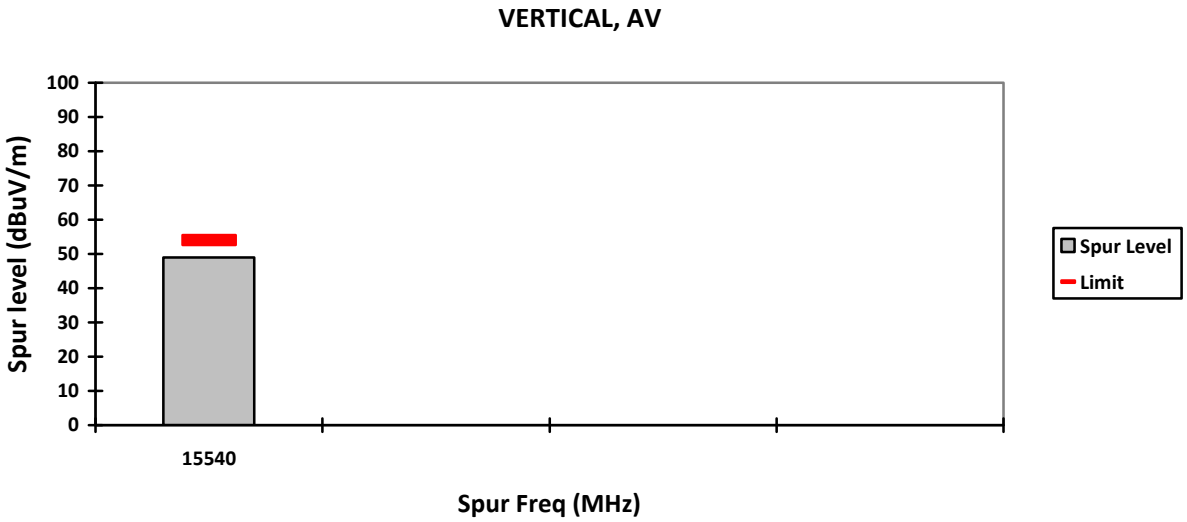
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

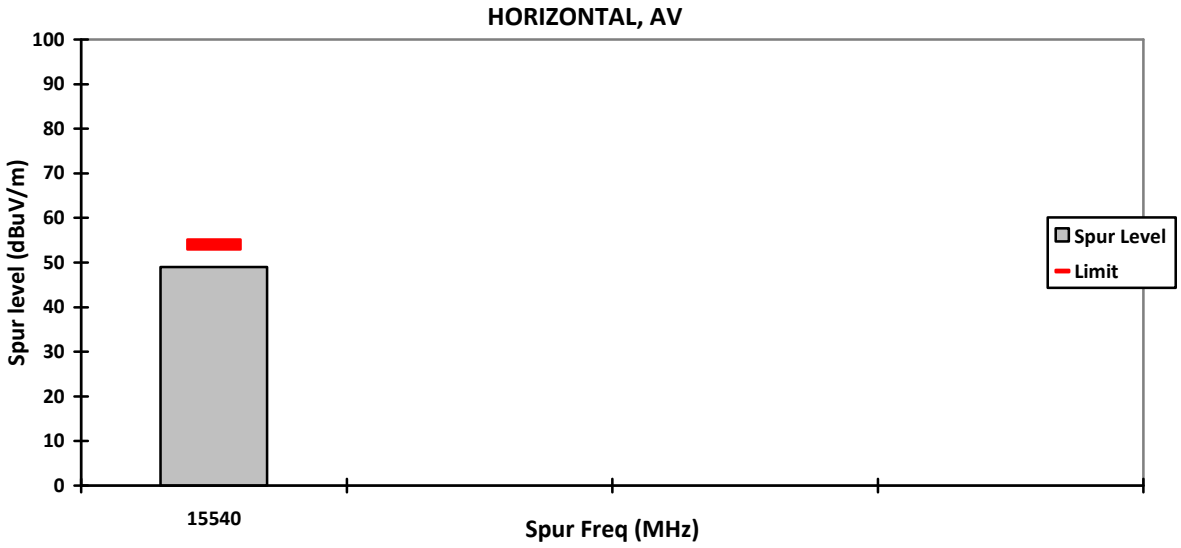
VERTICAL, PK



HORIZONTAL, PK




VERTICAL, AV
Spur level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
15540
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, AV
Spur level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
15540
Spur Freq (MHz)
Spur Level
Limit

Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

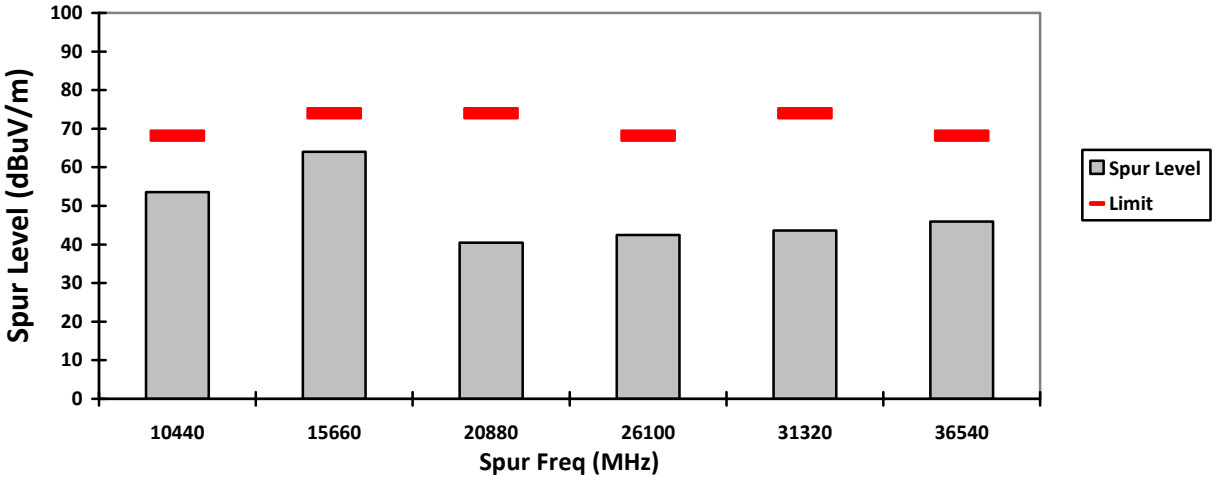
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10440	-	53.5557**	-	-	68.2000	-	-	14.6443	-	-
15660	-	63.9870**	50.2072**	-	74.0000	54.0000	-	10.0130	3.7928	-
20880	-	40.4913**	-	-	74.0000	-	-	33.5087	-	-
26100	-	42.4687**	-	-	68.2000	-	-	25.7313	-	-
31320	-	43.6559**	-	-	74.0000	-	-	30.3441	-	-
36540	-	45.9090**	-	-	68.2000	-	-	22.2910	-	-
Horizontal Radiated Emission Result										
10440	-	53.9293**	-	-	68.2000	-	-	14.2707	-	-
15660	-	64.0908**	50.2051**	-	74.0000	54.0000	-	9.9092	3.7949	-
20880	-	41.2027**	-	-	74.0000	-	-	32.7973	-	-
26100	-	42.9104**	-	-	68.2000	-	-	25.2896	-	-
31320	-	43.7080**	-	-	74.0000	-	-	30.2920	-	-
36540	-	46.1067**	-	-	68.2000	-	-	22.0933	-	-

Remarks: Pass Result	Marginal Result	Fail Result

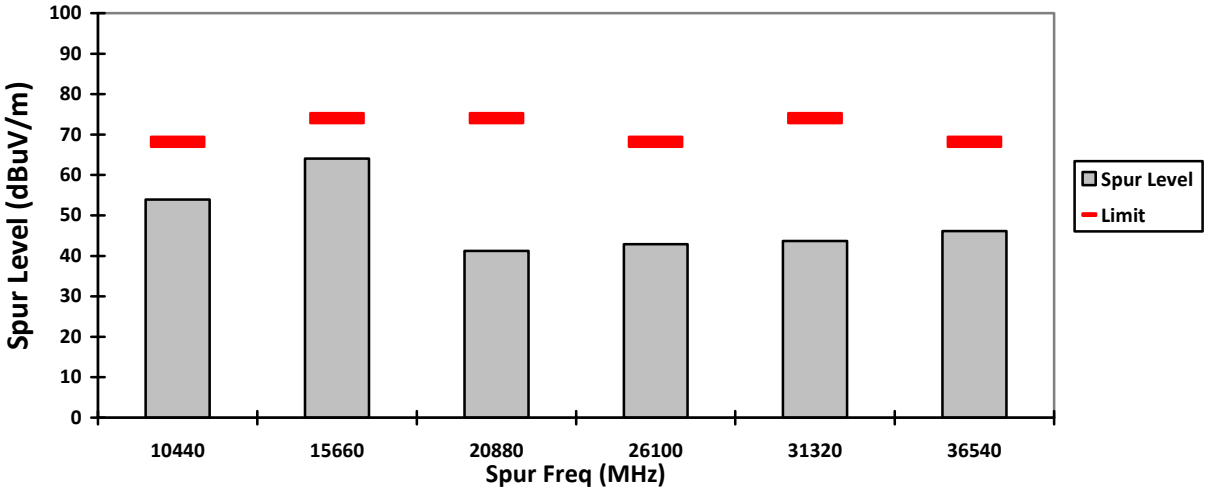
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

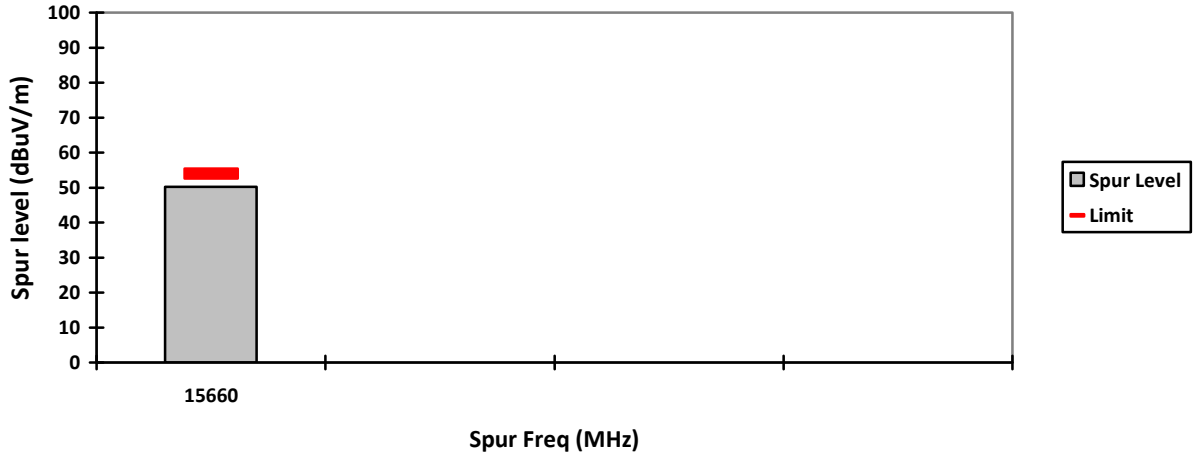
VERTICAL, PK



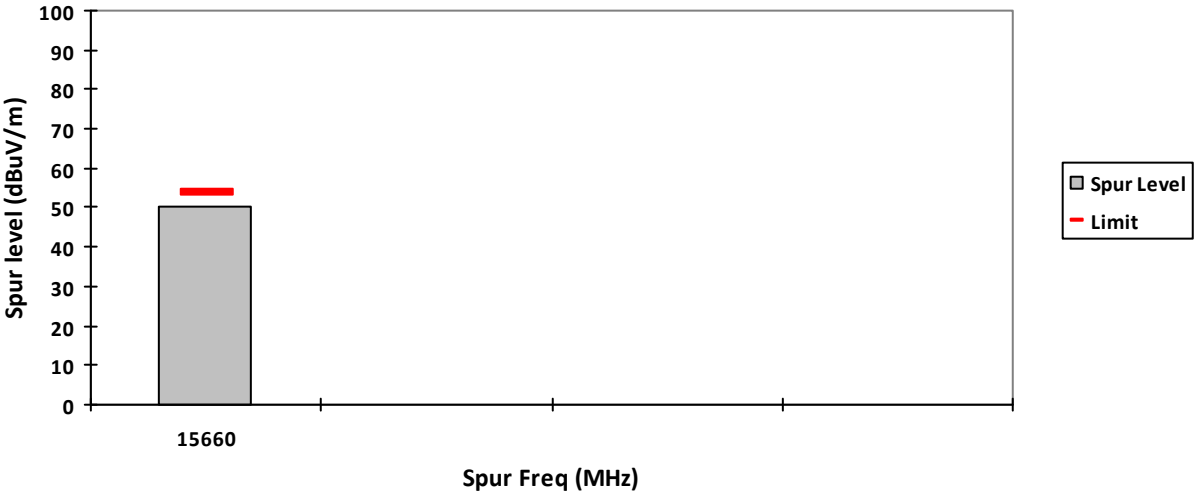
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

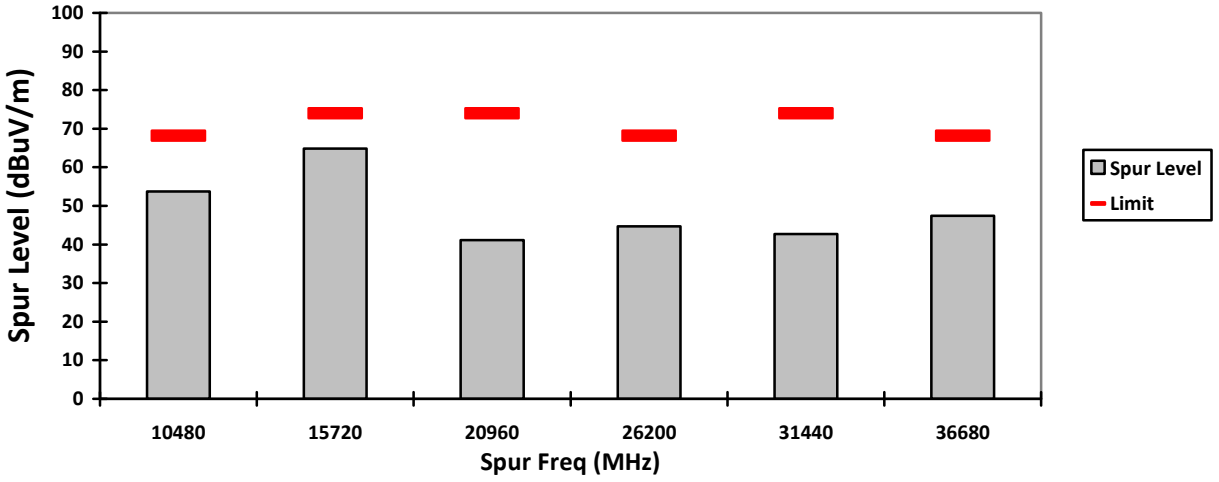
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10480	-	53.7389**	-	-	68.2000	-	-	14.4611	-	-
15720	-	64.8810**	50.8200**	-	74.0000	54.0000	-	9.1190	3.1800	-
20960	-	41.1077**	-	-	74.0000	-	-	32.8923	-	-
26200	-	44.7137**	-	-	68.2000	-	-	23.4863	-	-
31440	-	42.6822**	-	-	74.0000	-	-	31.3178	-	-
36680	-	47.4542**	-	-	68.2000	-	-	20.7458	-	-
Horizontal Radiated Emission Result										
10480	-	53.7945**	-	-	68.2000	-	-	14.4055	-	-
15720	-	64.7098**	50.8203**	-	74.0000	54.0000	-	9.2902	3.1797	-
20960	-	40.8829**	-	-	74.0000	-	-	33.1171	-	-
26200	-	43.7113**	-	-	68.2000	-	-	24.4887	-	-
31440	-	42.4974**	-	-	74.0000	-	-	31.5026	-	-
36680	-	45.8068**	-	-	68.2000	-	-	22.3932	-	-

Remarks: Pass Result	Marginal Result	Fail Result

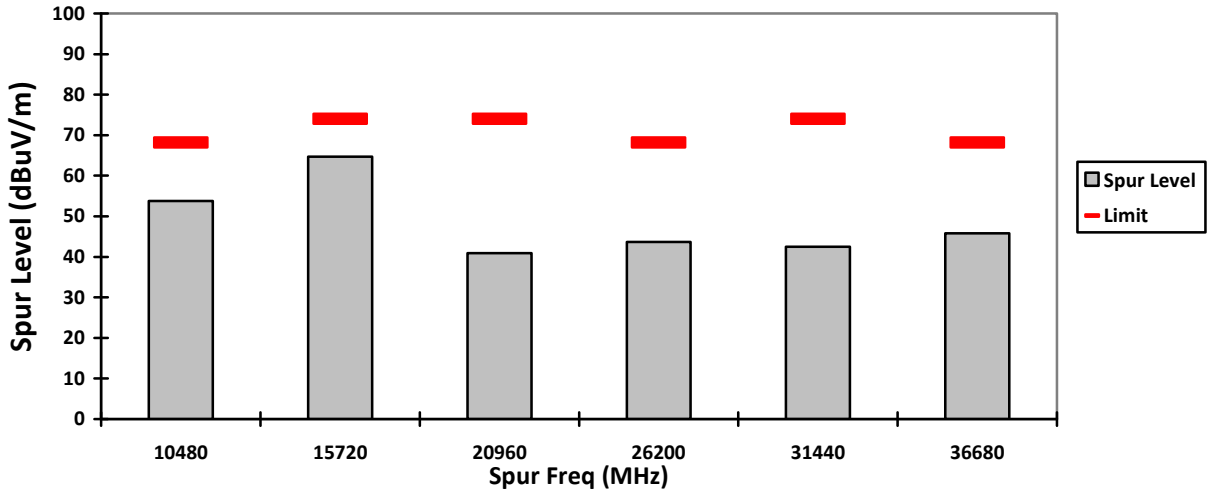
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

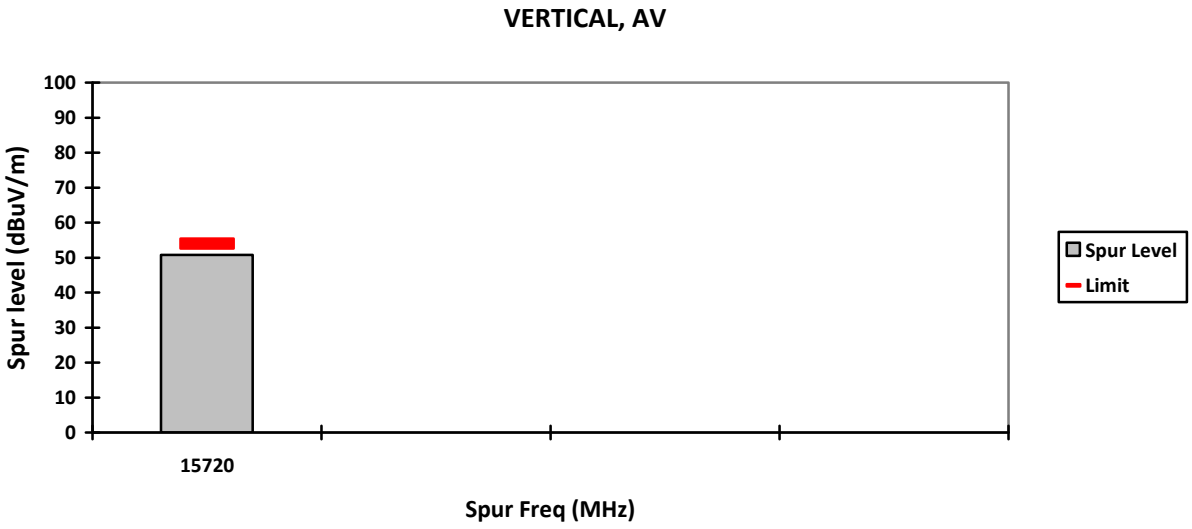
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

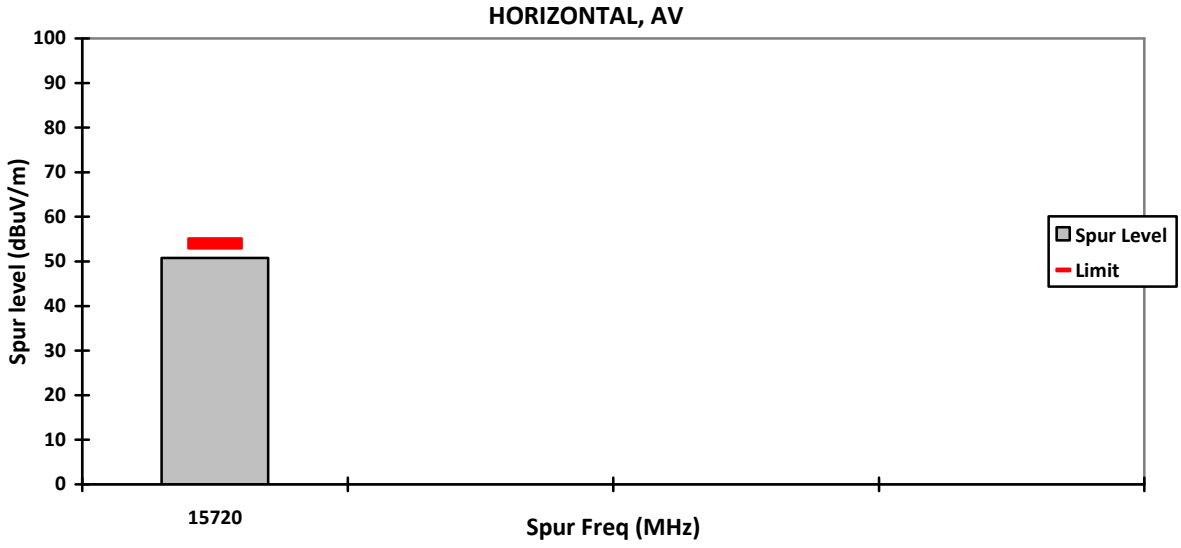
VERTICAL, PK



HORIZONTAL, PK




VERTICAL, AV
Spur level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
15720
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, AV
Spur level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
15720
Spur Freq (MHz)
Spur Level
Limit

Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

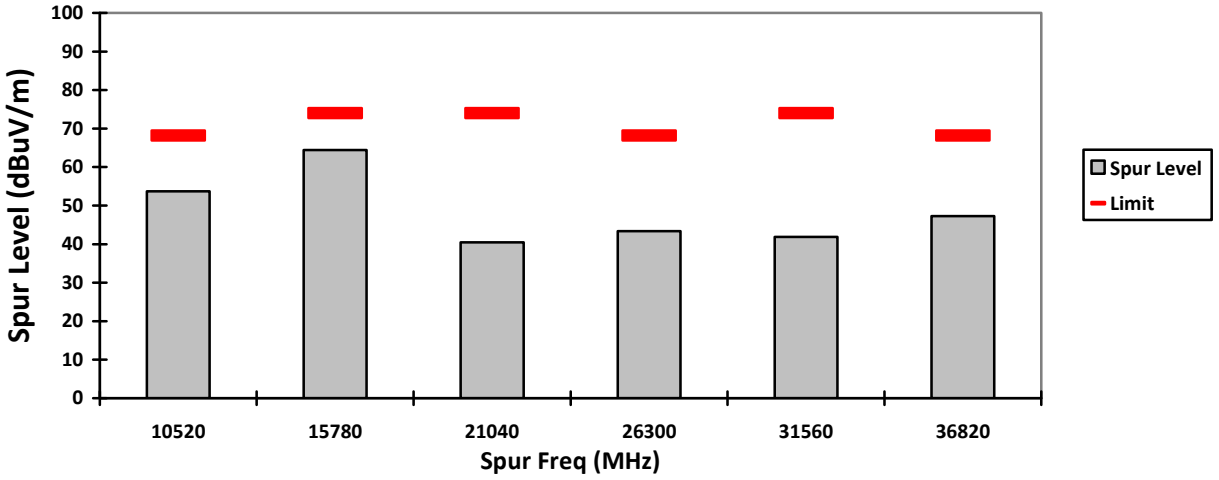
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10520	-	53.7330**	-	-	68.2000	-	-	14.4670	-	-
15780	-	64.4651**	50.3467**	-	74.0000	54.0000	-	9.5349	3.6533	-
21040	-	40.4823**	-	-	74.0000	-	-	33.5177	-	-
26300	-	43.3283**	-	-	68.2000	-	-	24.8717	-	-
31560	-	41.8598**	-	-	74.0000	-	-	32.1402	-	-
36820	-	47.2718**	-	-	68.2000	-	-	20.9282	-	-
Horizontal Radiated Emission Result										
10520	-	54.6961**	-	-	68.2000	-	-	13.5039	-	-
15780	-	64.3233**	50.3412**	-	74.0000	54.0000	-	9.6767	3.6588	-
21040	-	40.7414**	-	-	74.0000	-	-	33.2586	-	-
26300	-	44.3885**	-	-	68.2000	-	-	23.8115	-	-
31560	-	42.6025**	-	-	74.0000	-	-	31.3975	-	-
36820	-	46.5304**	-	-	68.2000	-	-	21.6696	-	-

Remarks: Pass Result	Marginal Result	Fail Result

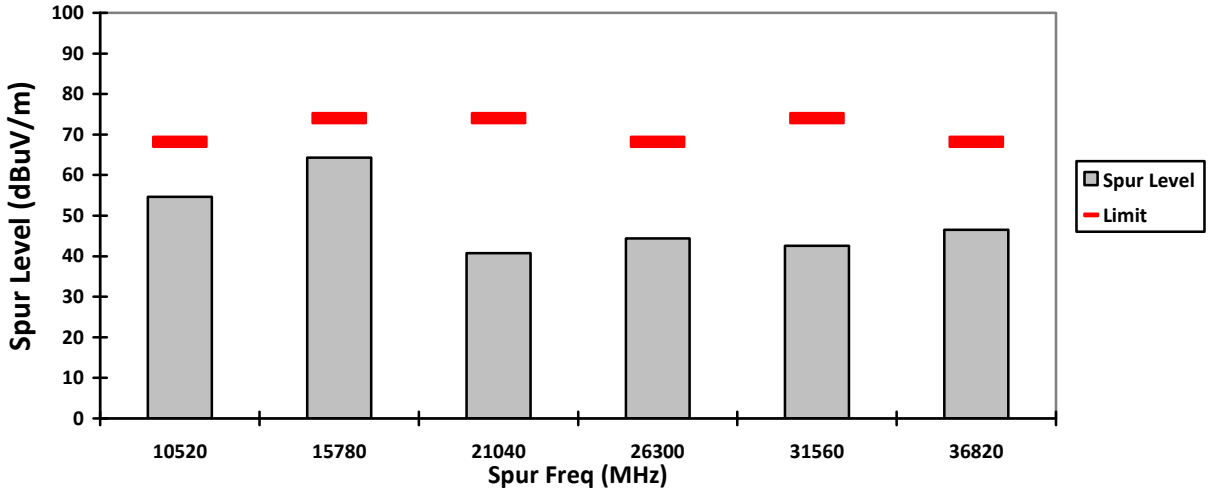
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

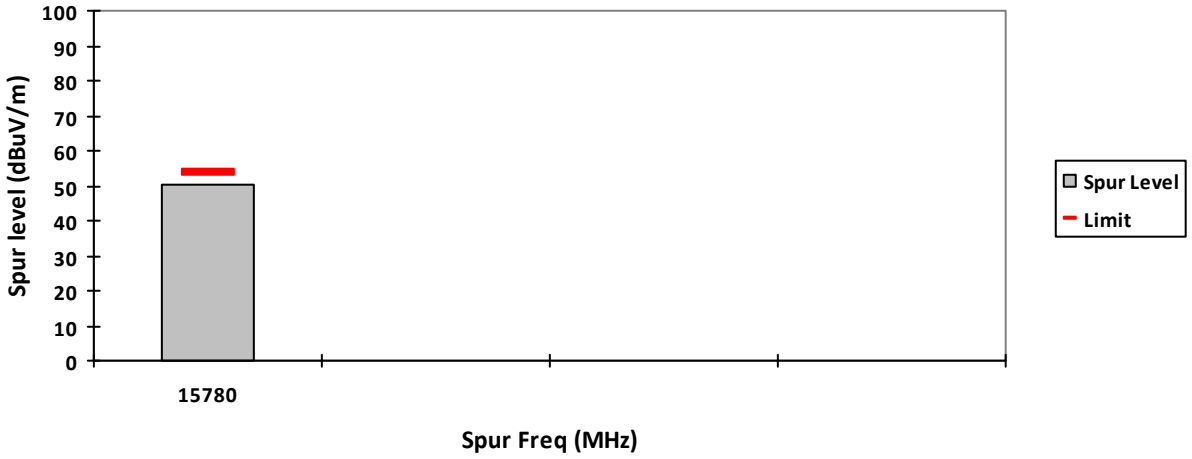
VERTICAL, PK



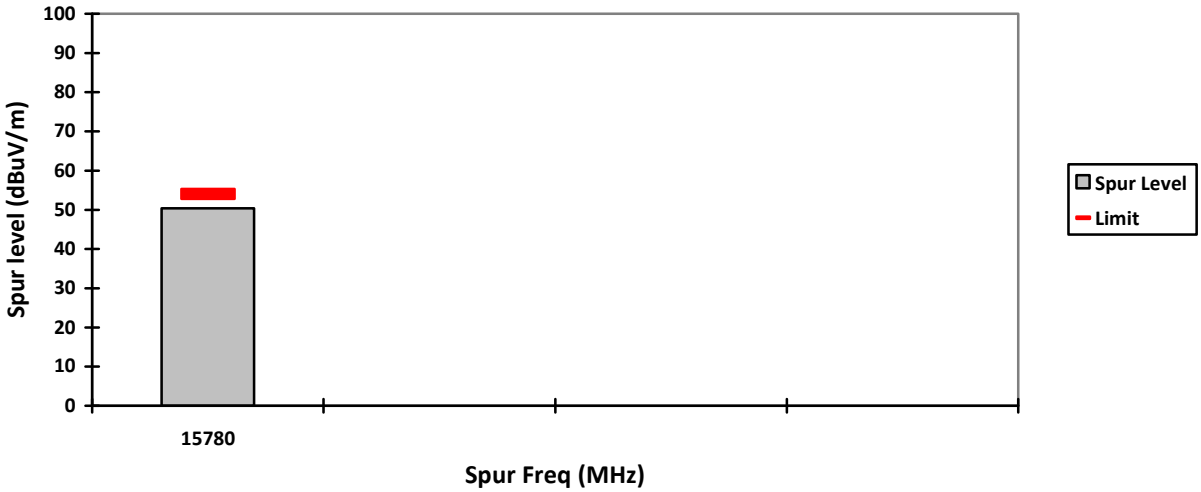
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Mid Test Frequency: 5300.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

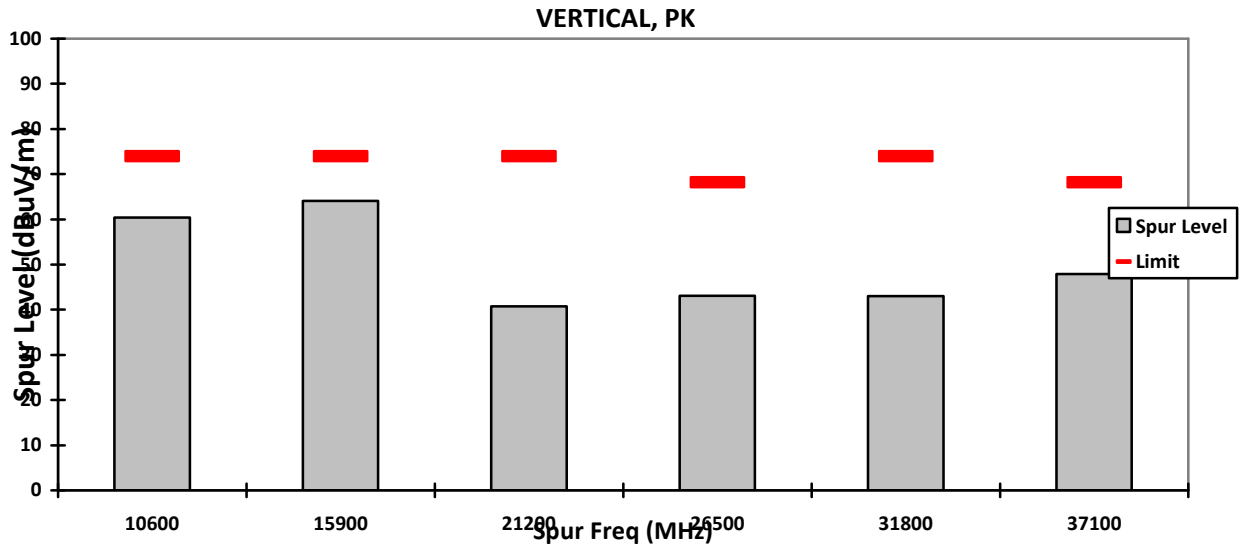
Radiated Emission (Mid Channel) tabular data

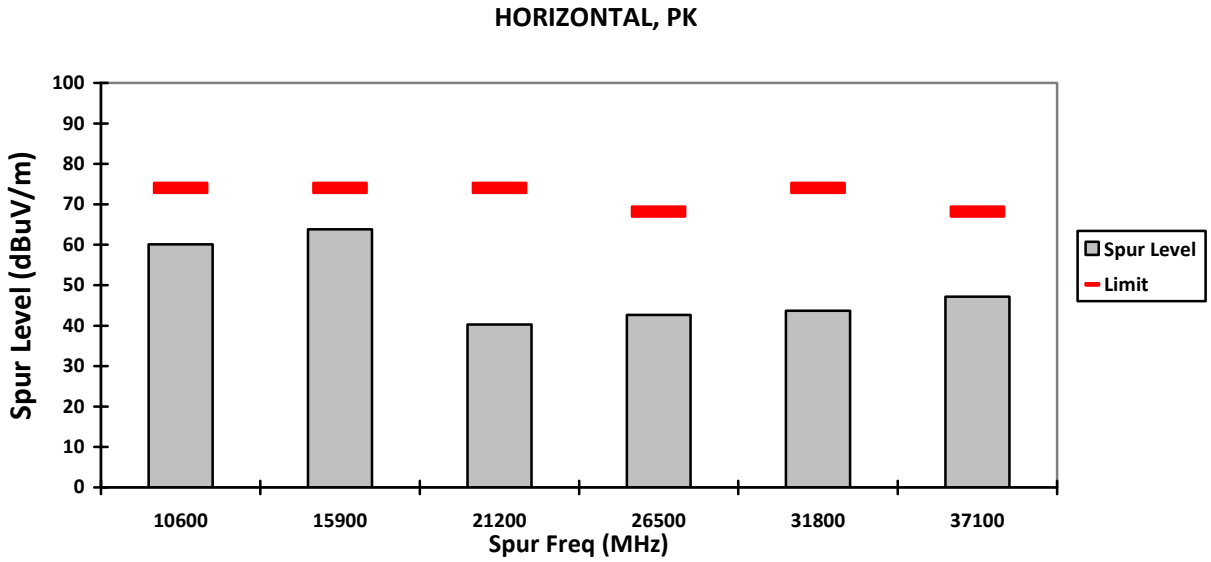
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10600	-	60.3654**	34.1337**	-	74.0000	54.0000	-	13.6346	19.8663	-
15900	-	64.0514**	50.0685**	-	74.0000	54.0000	-	9.9486	3.9315	-
21200	-	40.7674**	-	-	74.0000	-	-	33.2326	-	-
26500	-	43.0722**	-	-	68.2000	-	-	25.1278	-	-
31800	-	43.0182**	-	-	74.0000	-	-	30.9818	-	-
37100	-	47.8989**	-	-	68.2000	-	-	20.3011	-	-
Horizontal Radiated Emission Result										
10600	-	60.1477**	34.1329**	-	74.0000	54.0000	-	13.8523	19.8671	-
15900	-	63.8572**	50.0683**	-	74.0000	54.0000	-	10.1428	3.9317	-
21200	-	40.3160**	-	-	74.0000	-	-	33.6840	-	-
26500	-	42.6613**	-	-	68.2000	-	-	25.5387	-	-
31800	-	43.7097**	-	-	74.0000	-	-	30.2903	-	-
37100	-	47.1762**	-	-	68.2000	-	-	21.0238	-	-

Remarks: Pass Result	Marginal Result	Fail Result

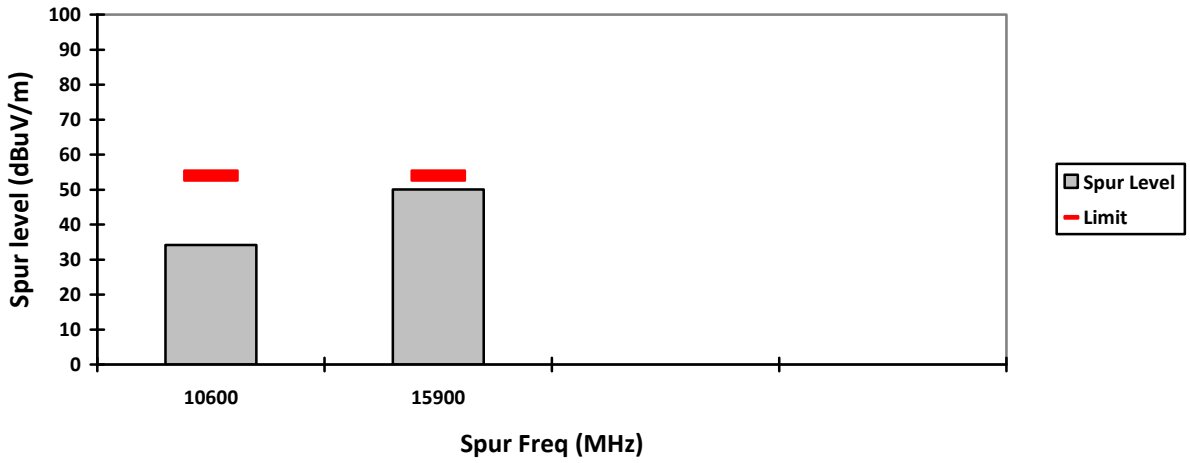
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

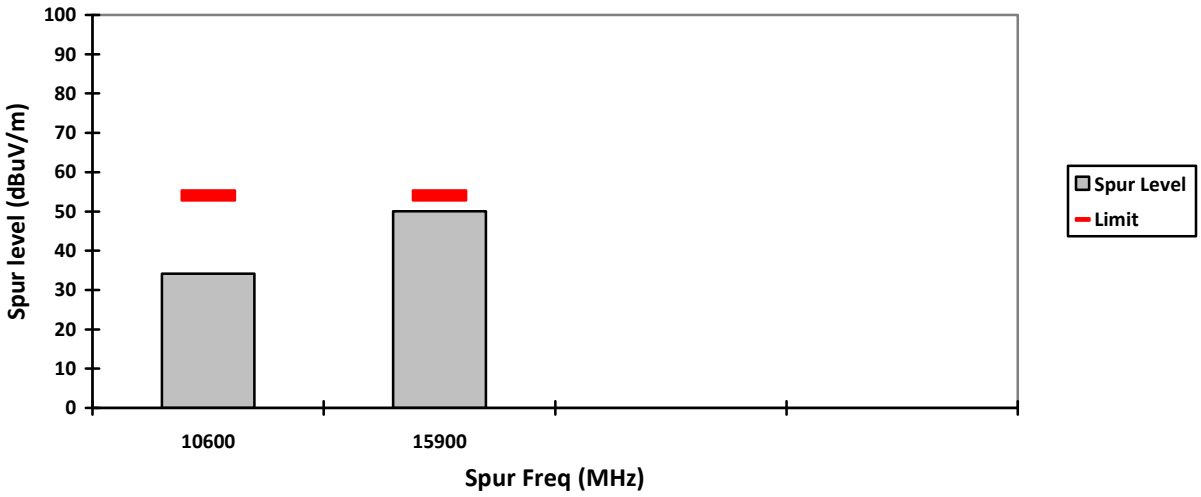

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
10600
15900
21200
26500
31800
37100
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
10600
15900
21200
26500
31800
37100
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

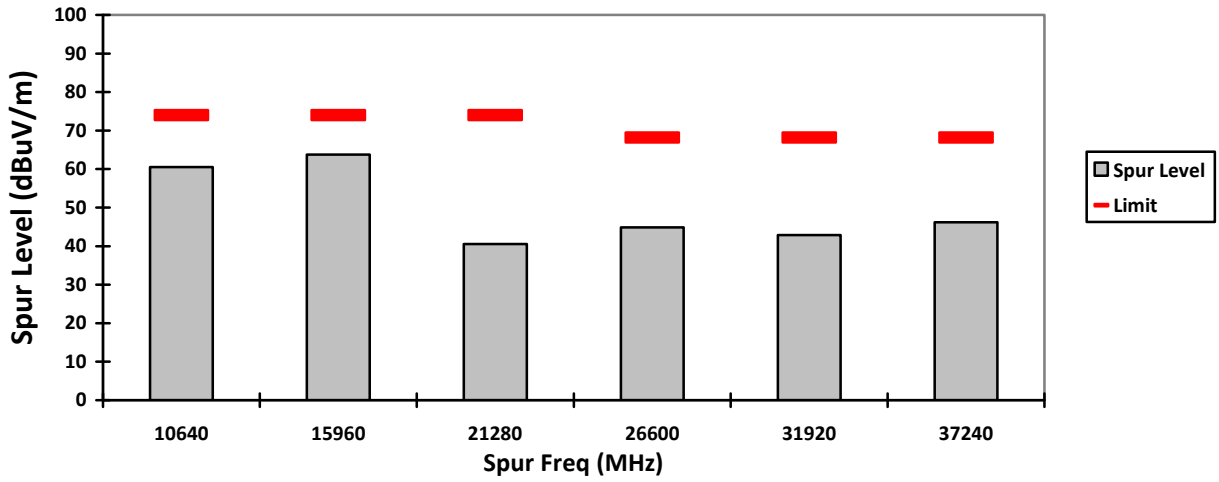
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10640	-	60.5090**	46.6847**	-	74.0000	54.0000	-	13.4910	7.3153	-
15960	-	63.7351**	49.7633**	-	74.0000	54.0000	-	10.2649	4.2367	-
21280	-	40.5721**	-	-	74.0000	-	-	33.4279	-	-
26600	-	44.8797**	-	-	68.2000	-	-	23.3203	-	-
31920	-	42.8939**	-	-	68.2000	-	-	25.3061	-	-
37240	-	46.2167**	-	-	68.2000	-	-	21.9833	-	-
Horizontal Radiated Emission Result										
10640	-	60.3586**	46.6836**	-	74.0000	54.0000	-	13.6414	7.3164	-
15960	-	64.0472**	49.7620**	-	74.0000	54.0000	-	9.9528	4.2380	-
21280	-	39.3535**	-	-	74.0000	-	-	34.6465	-	-
26600	-	42.5140**	-	-	68.2000	-	-	25.6860	-	-
31920	-	42.7422**	-	-	68.2000	-	-	25.4578	-	-
37240	-	45.9688**	-	-	68.2000	-	-	22.2312	-	-

Remarks: Pass Result	Marginal Result	Fail Result

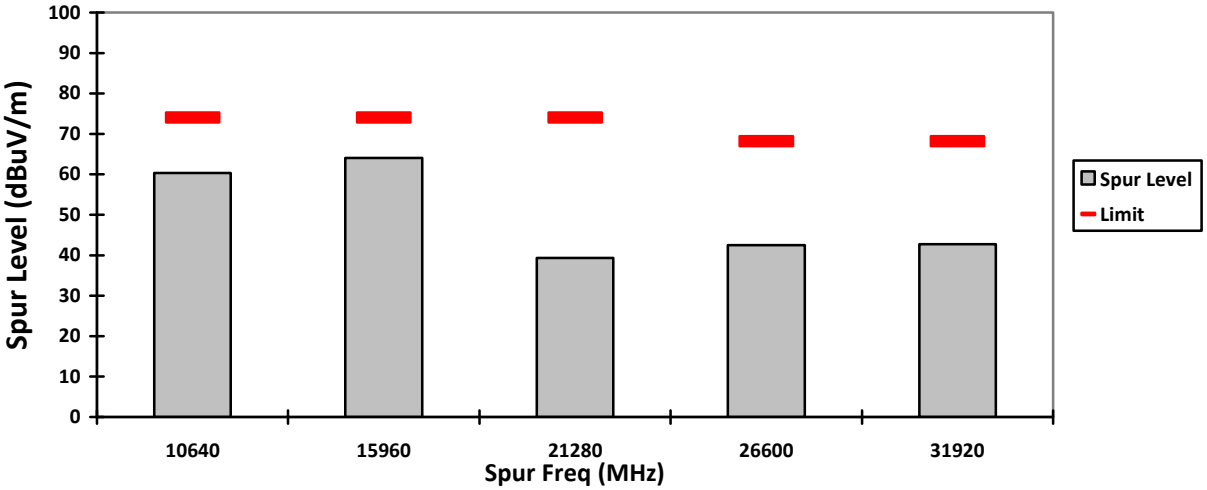
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

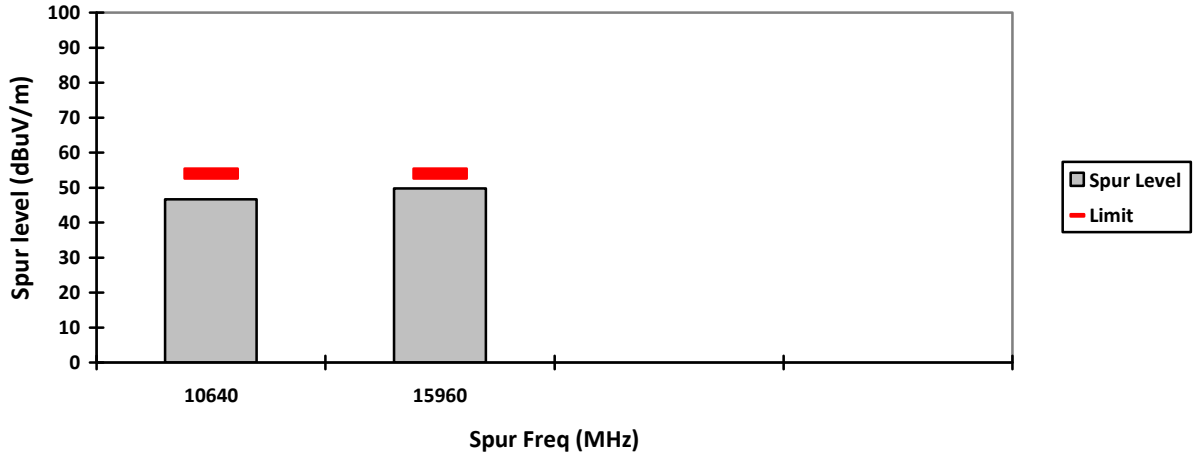
VERTICAL, PK



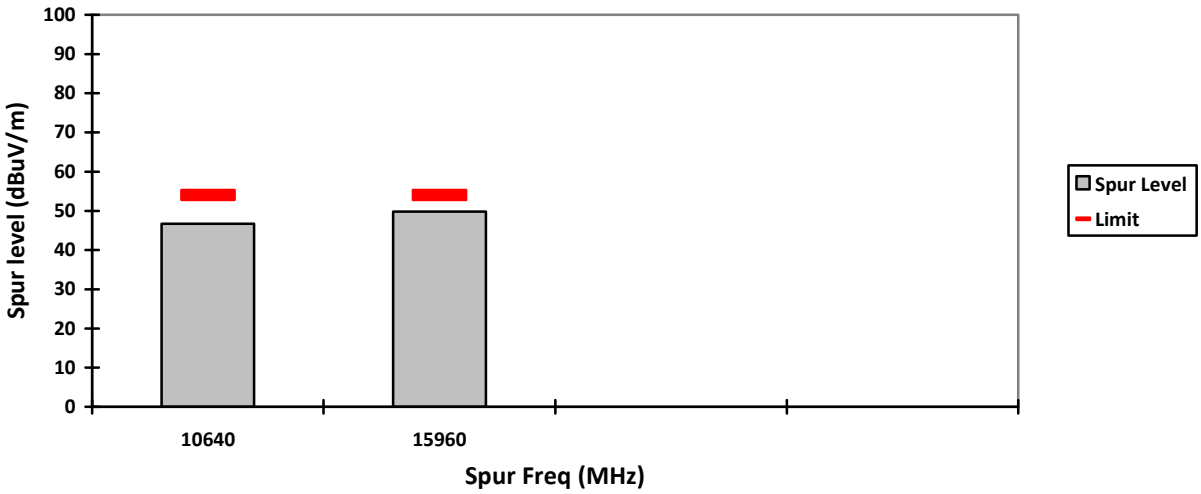
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

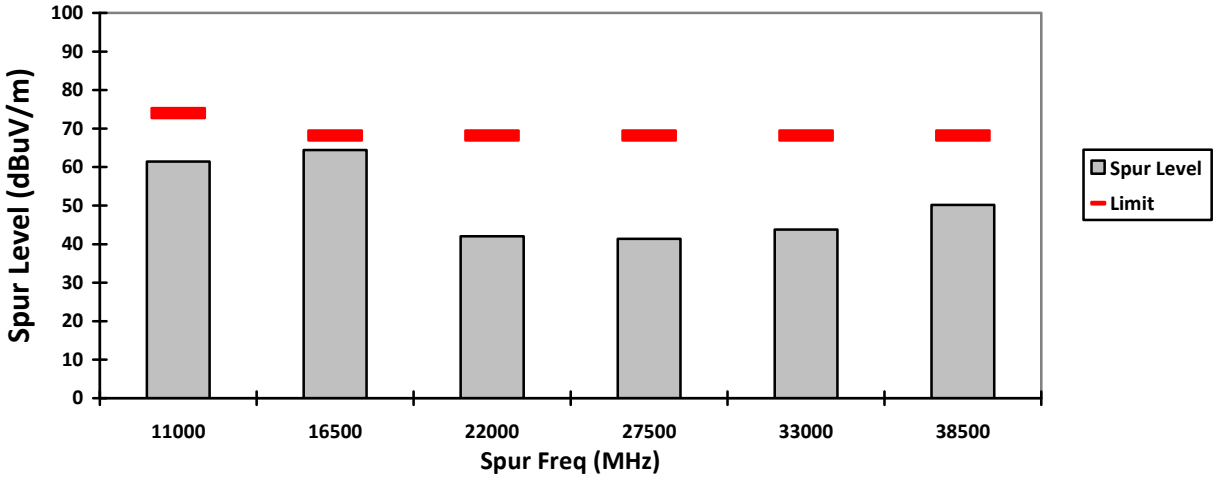
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11000	-	61.4514**	47.3516**	-	74.0000	54.0000	-	12.5486	6.6484	-
16500	-	64.3955**	-	-	68.2000	-	-	3.8045	-	-
22000	-	42.0621**	-	-	68.2000	-	-	26.1379	-	-
27500	-	41.4126**	-	-	68.2000	-	-	26.7874	-	-
33000	-	43.7453**	-	-	68.2000	-	-	24.4547	-	-
38500	-	50.1889**	-	-	68.2000	-	-	18.0111	-	-
Horizontal Radiated Emission Result										
11000	-	60.9208**	47.1430**	-	74.0000	54.0000	-	13.0792	6.8570	-
16500	-	64.3217**	-	-	68.2000	-	-	3.8783	-	-
22000	-	42.4292**	-	-	68.2000	-	-	25.7708	-	-
27500	-	40.9717**	-	-	68.2000	-	-	27.2283	-	-
33000	-	42.8832**	-	-	68.2000	-	-	25.3168	-	-
38500	-	50.4646**	-	-	68.2000	-	-	17.7354	-	-

Remarks: Pass Result	Marginal Result	Fail Result

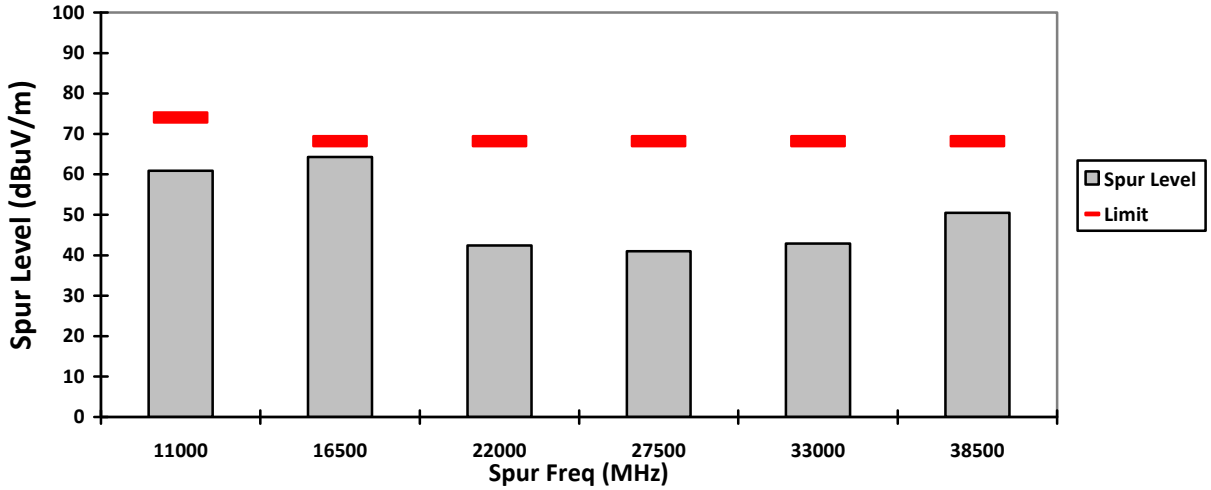
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023 System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

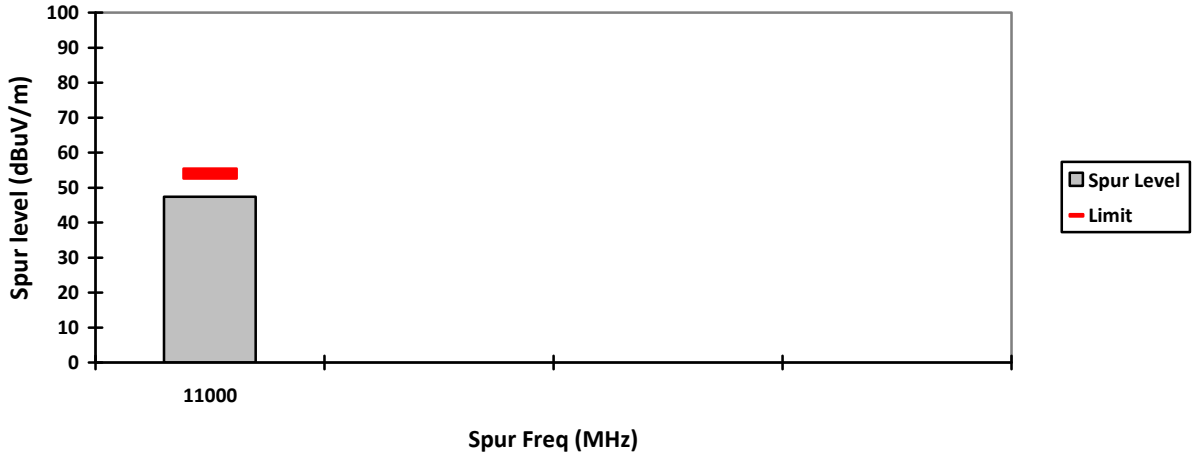
VERTICAL, PK



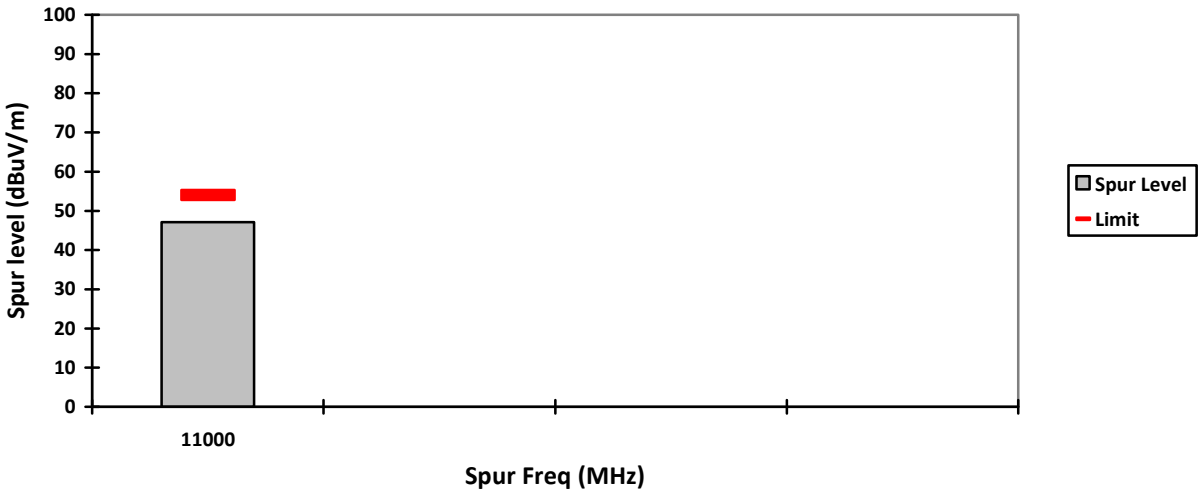
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

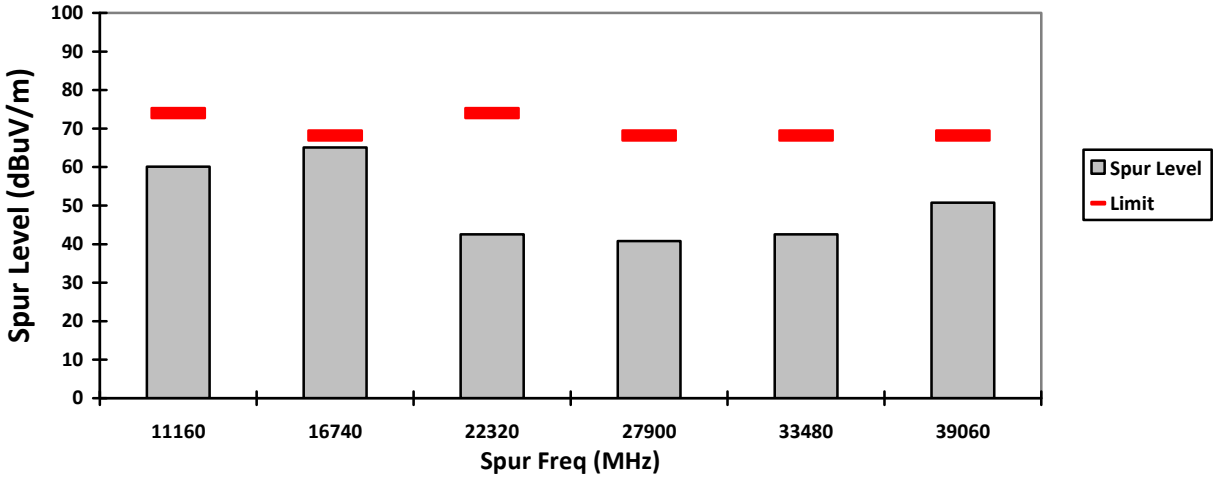
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11160	-	60.0787**	46.0891**	-	74.0000	54.0000	-	13.9213	7.9109	-
16740	-	65.1281**	-	-	68.2000	-	-	3.0719	-	-
22320	-	42.5474**	-	-	74.0000	-	-	31.4526	-	-
27900	-	40.8273**	-	-	68.2000	-	-	27.3727	-	-
33480	-	42.5552**	-	-	68.2000	-	-	25.6448	-	-
39060	-	50.7058**	-	-	68.2000	-	-	17.4942	-	-
Horizontal Radiated Emission Result										
11160	-	60.3359**	46.0894**	-	74.0000	54.0000	-	13.6641	7.9106	-
16740	-	65.8823**	-	-	68.2000	-	-	2.3177	-	-
22320	-	41.1322**	-	-	74.0000	-	-	32.8678	-	-
27900	-	41.0547**	-	-	68.2000	-	-	27.1453	-	-
33480	-	43.5414**	-	-	68.2000	-	-	24.6586	-	-
39060	-	49.9322**	-	-	68.2000	-	-	18.2678	-	-

Remarks: Pass Result	Marginal Result	Fail Result

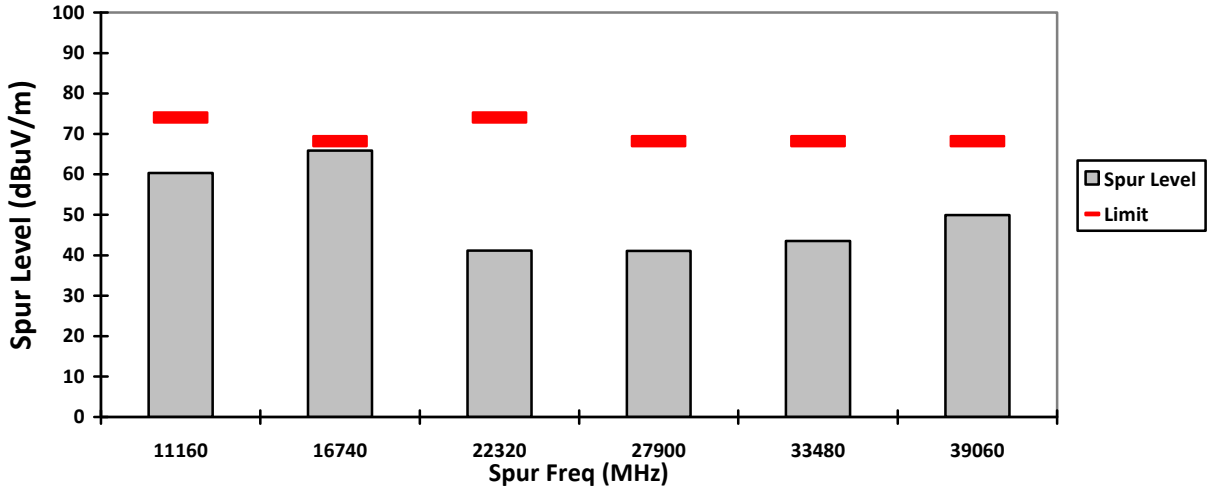
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

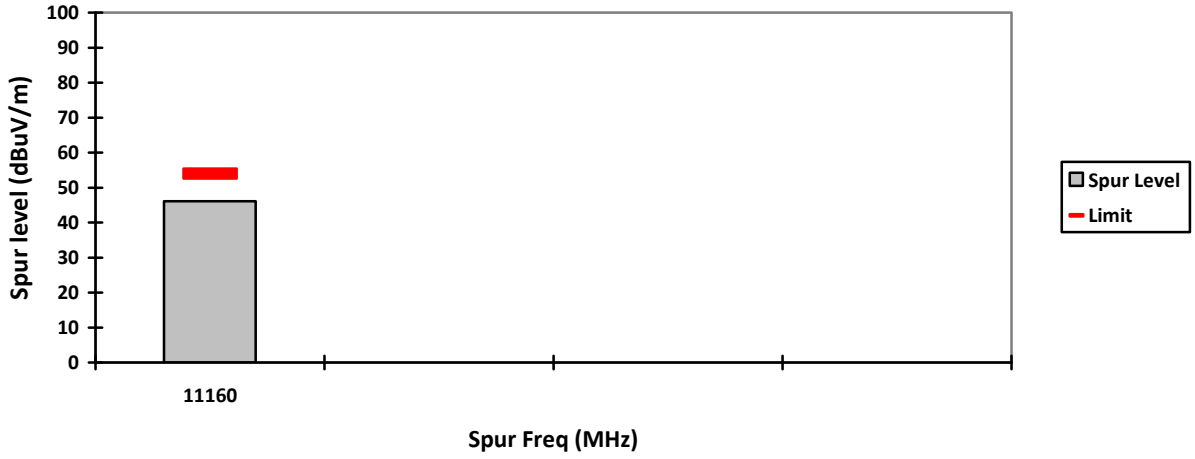
VERTICAL, PK



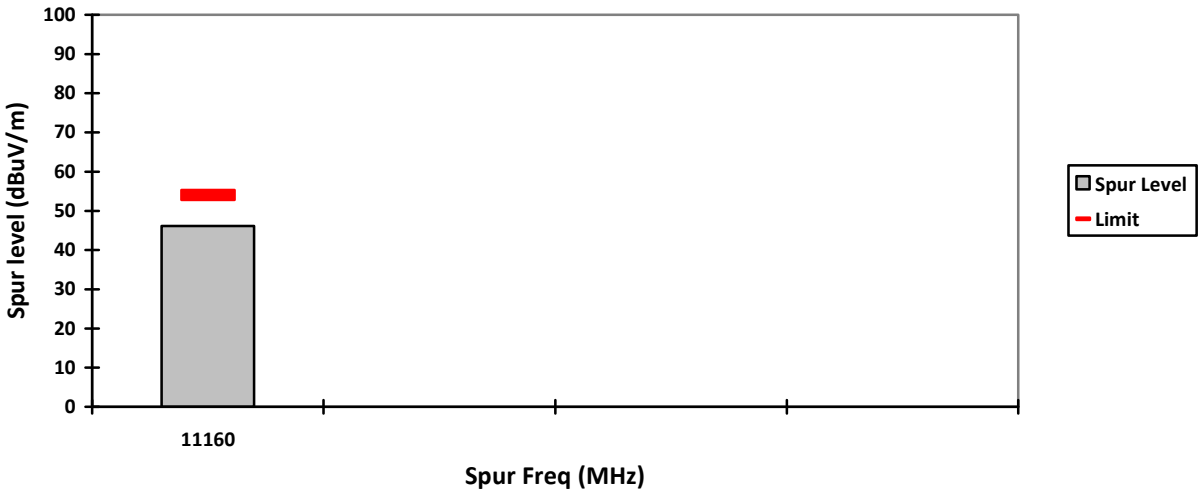
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

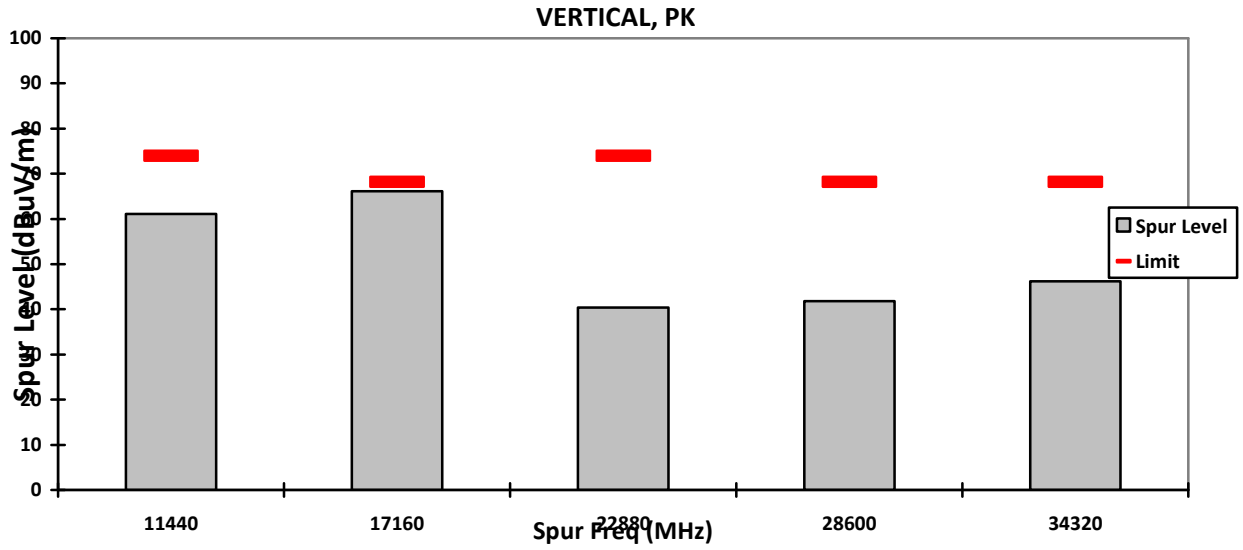
Radiated Emission (Straddle Channel) tabular data

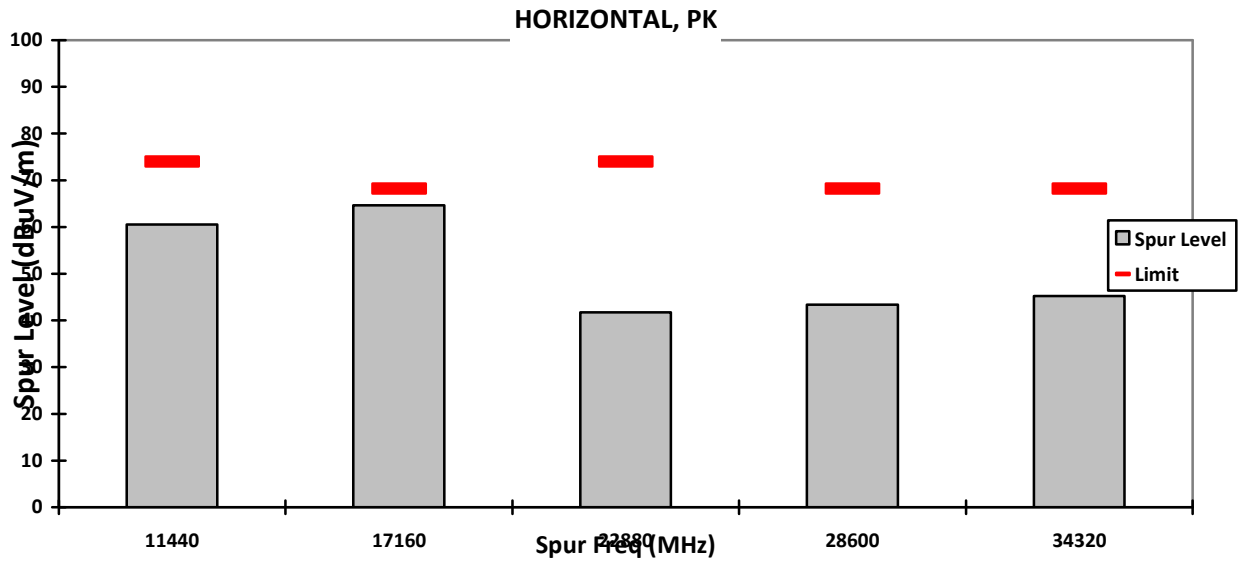
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11440	-	61.1250**	46.7779**	-	74.0000	54.0000	-	12.8750	7.2221	-
17160	-	66.1069**	-	-	68.2000	-	-	2.0931	-	-
22880	-	40.4069**	-	-	74.0000	-	-	33.5931	-	-
28600	-	41.7809**	-	-	68.2000	-	-	26.4191	-	-
34320	-	46.1621**	-	-	68.2000	-	-	22.0379	-	-
Horizontal Radiated Emission Result										
11440	-	60.5015**	46.5218**	-	74.0000	54.0000	-	13.4985	7.4782	-
17160	-	64.6701**	-	-	68.2000	-	-	3.5299	-	-
22880	-	41.7153**	-	-	74.0000	-	-	32.2847	-	-
28600	-	43.3466**	-	-	68.2000	-	-	24.8534	-	-
34320	-	45.1786**	-	-	68.2000	-	-	23.0214	-	-

Remarks: Pass Result	Marginal Result	Fail Result

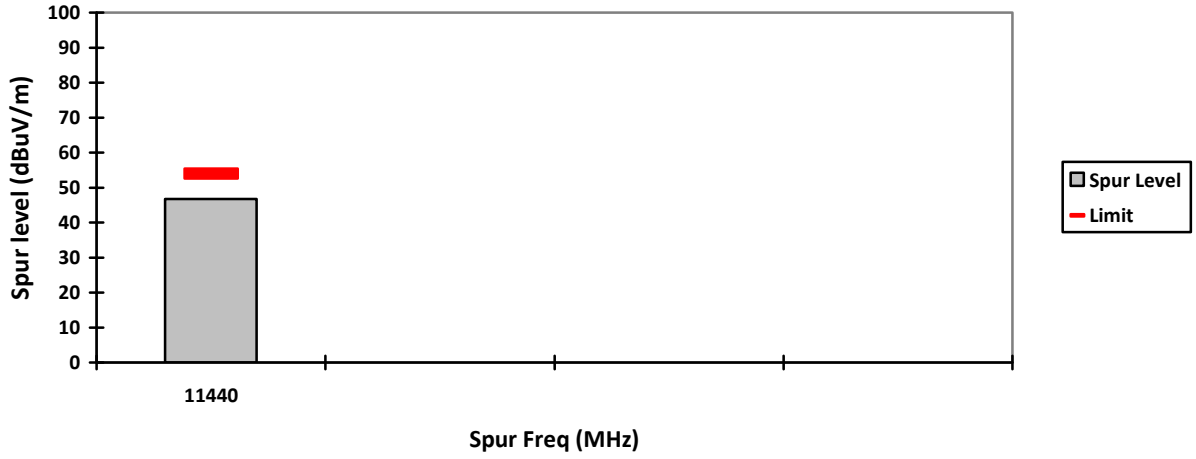
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

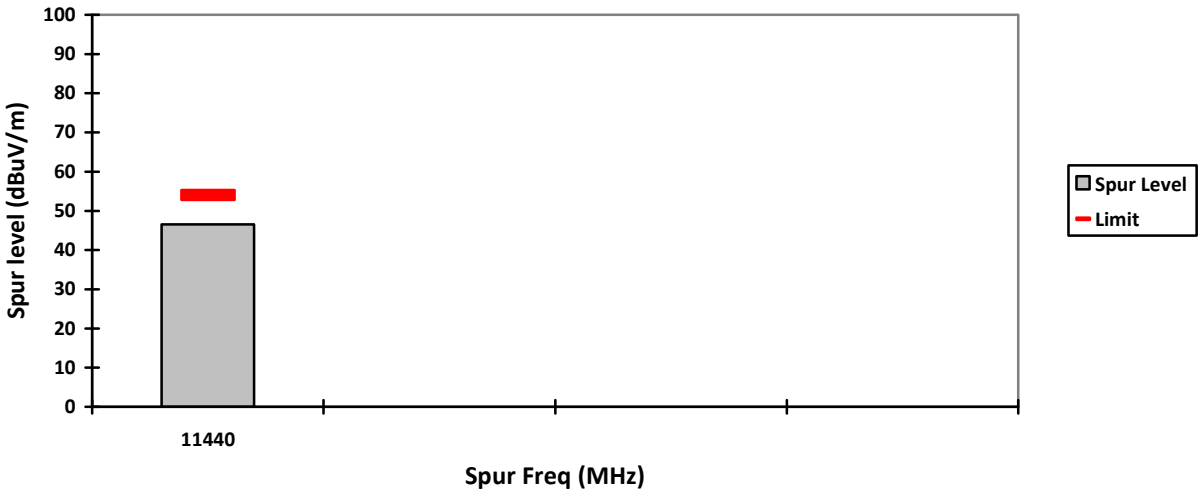

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11440
17160
22880
28600
34320
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11440
17160
22880
28600
34320
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

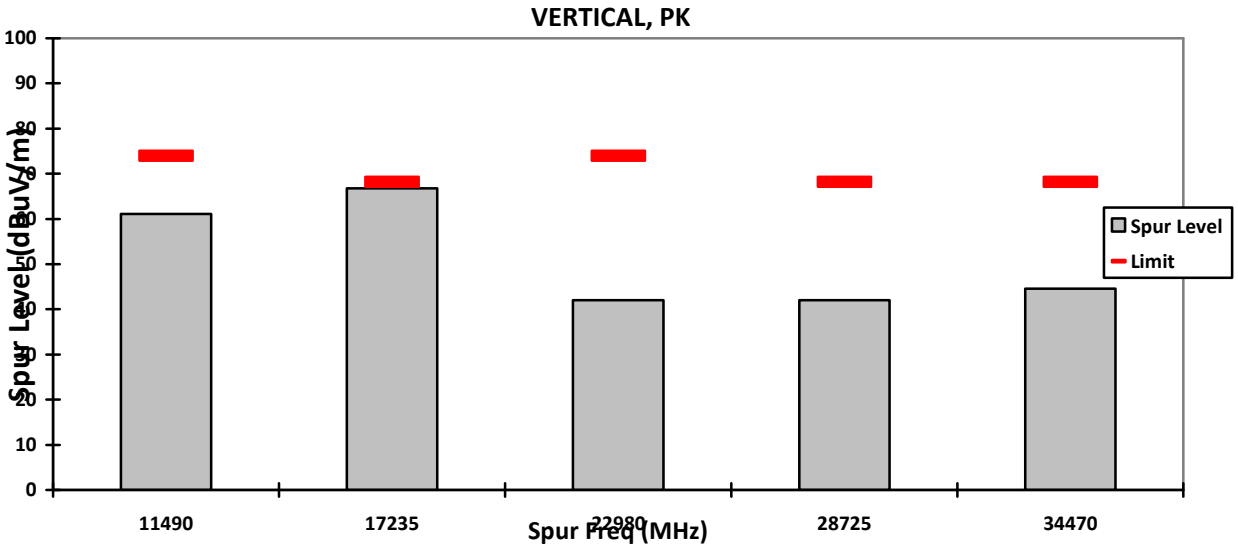
Radiated Emission (Low Channel) tabular data

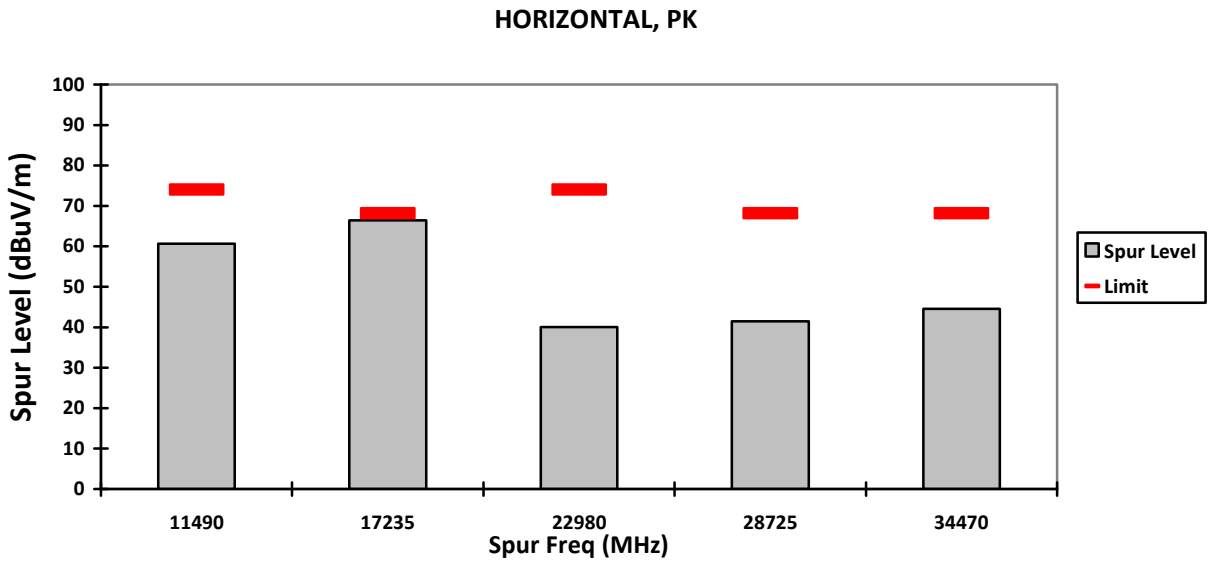
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11490	-	61.0936**	46.9201**	-	74.0000	54.0000	-	12.9064	7.0799	-
17235	-	66.7491**	-	-	68.2000	-	-	1.4509	-	-
22980	-	41.9924**	-	-	74.0000	-	-	32.0076	-	-
28725	-	41.9868**	-	-	68.2000	-	-	26.2132	-	-
34470	-	44.5887**	-	-	68.2000	-	-	23.6113	-	-
Horizontal Radiated Emission Result										
11490	-	60.6252**	46.9230**	-	74.0000	54.0000	-	13.3748	7.0770	-
17235	-	66.4033**	-	-	68.2000	-	-	1.7967	-	-
22980	-	40.0274**	-	-	74.0000	-	-	33.9726	-	-
28725	-	41.4720**	-	-	68.2000	-	-	26.7280	-	-
34470	-	44.5620**	-	-	68.2000	-	-	23.6380	-	-

Remarks: Pass Result	Marginal Result	Fail Result

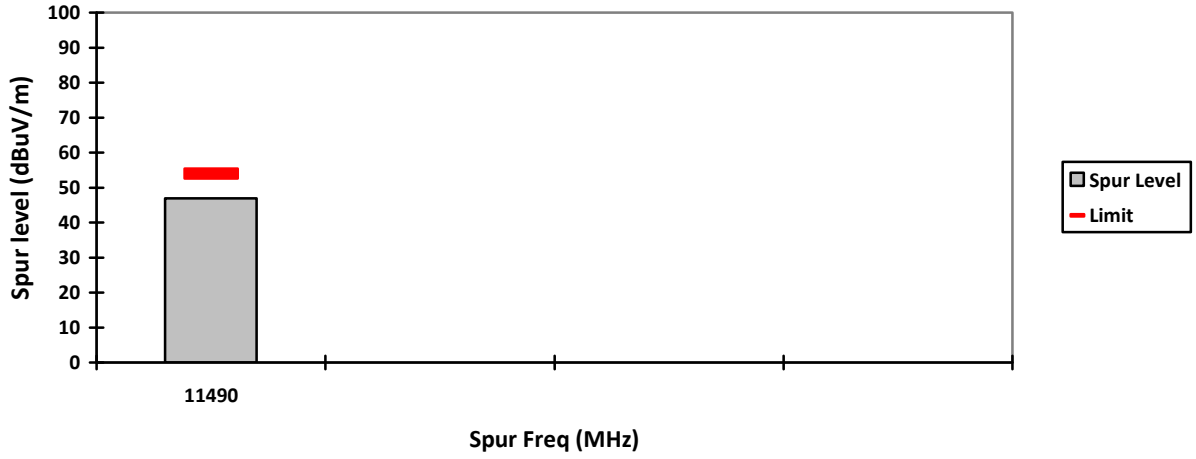
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

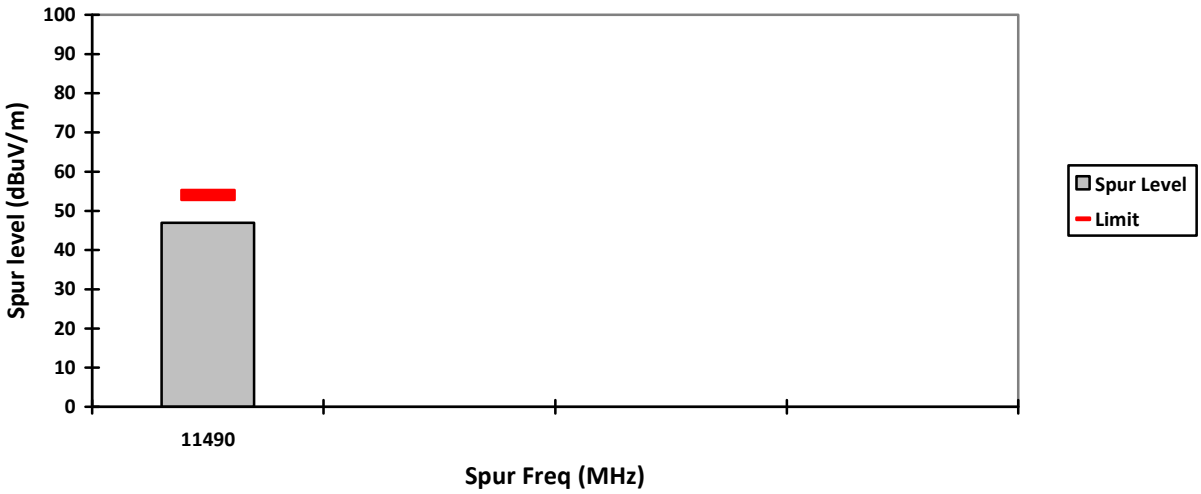

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11490
17235
22980
28725
34470
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11490
17235
22980
28725
34470
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Mid Test Frequency: 5785.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

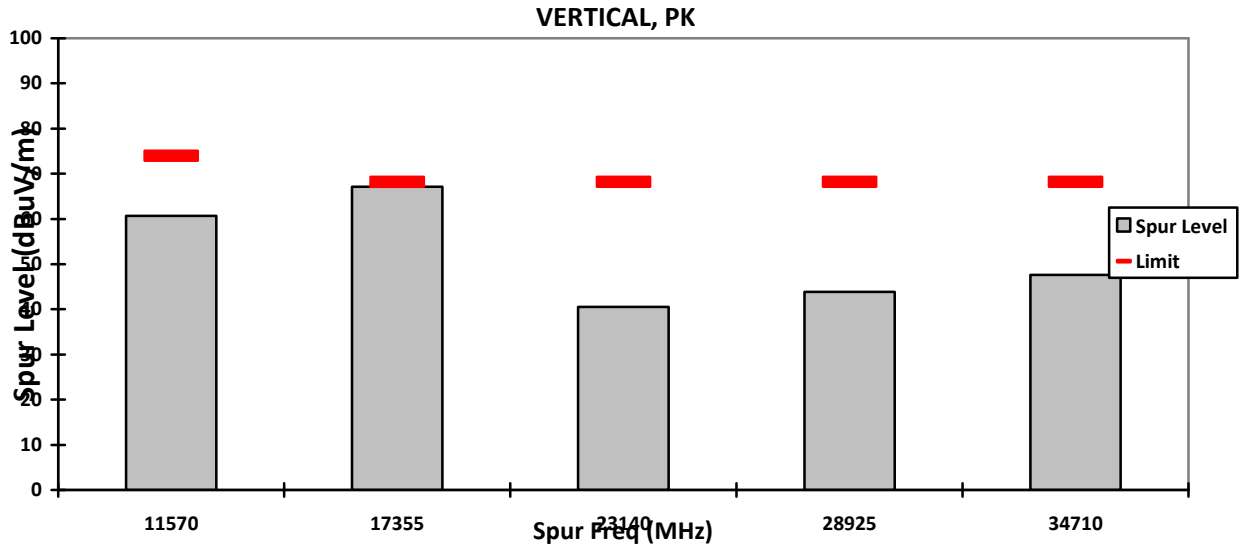
Radiated Emission (Mid Channel) tabular data

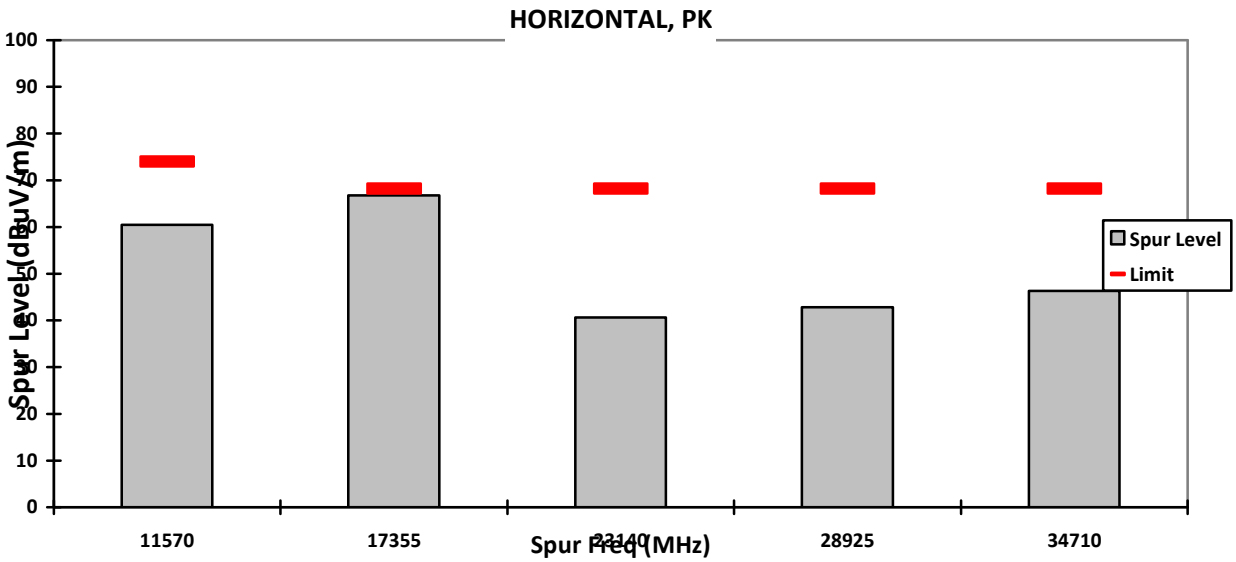
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11570	-	60.6690**	46.7690**	-	74.0000	54.0000	-	13.3310	7.2310	-
17355	-	67.1149**	-	-	68.2000	-	-	1.0851	-	-
23140	-	40.5472**	-	-	68.2000	-	-	27.6528	-	-
28925	-	43.8481**	-	-	68.2000	-	-	24.3519	-	-
34710	-	47.5799**	-	-	68.2000	-	-	20.6201	-	-
Horizontal Radiated Emission Result										
11570	-	60.4888**	46.7690**	-	74.0000	54.0000	-	13.5112	7.2310	-
17355	-	66.7724**	-	-	68.2000	-	-	1.4276	-	-
23140	-	40.6089**	-	-	68.2000	-	-	27.5911	-	-
28925	-	42.7849**	-	-	68.2000	-	-	25.4151	-	-
34710	-	46.3388**	-	-	68.2000	-	-	21.8612	-	-

Remarks: Pass Result	Marginal Result	Fail Result

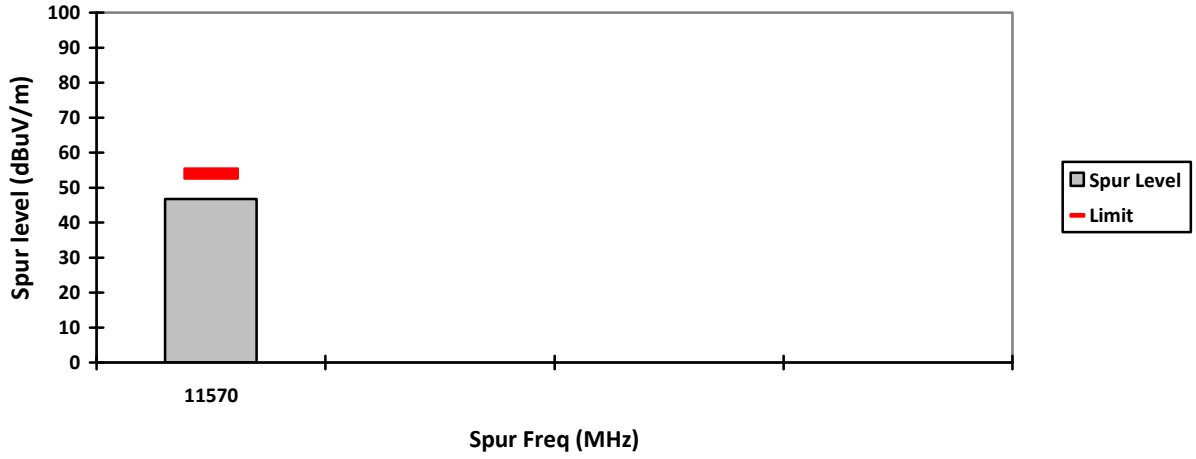
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

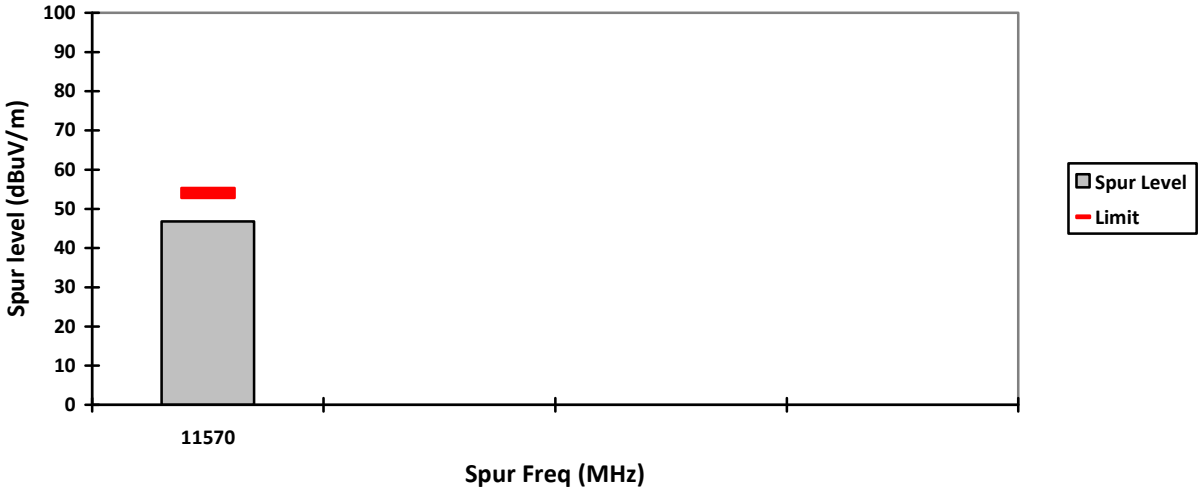

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11570
17355
23140
28925
34710
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11570
17355
23140
28925
34710
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

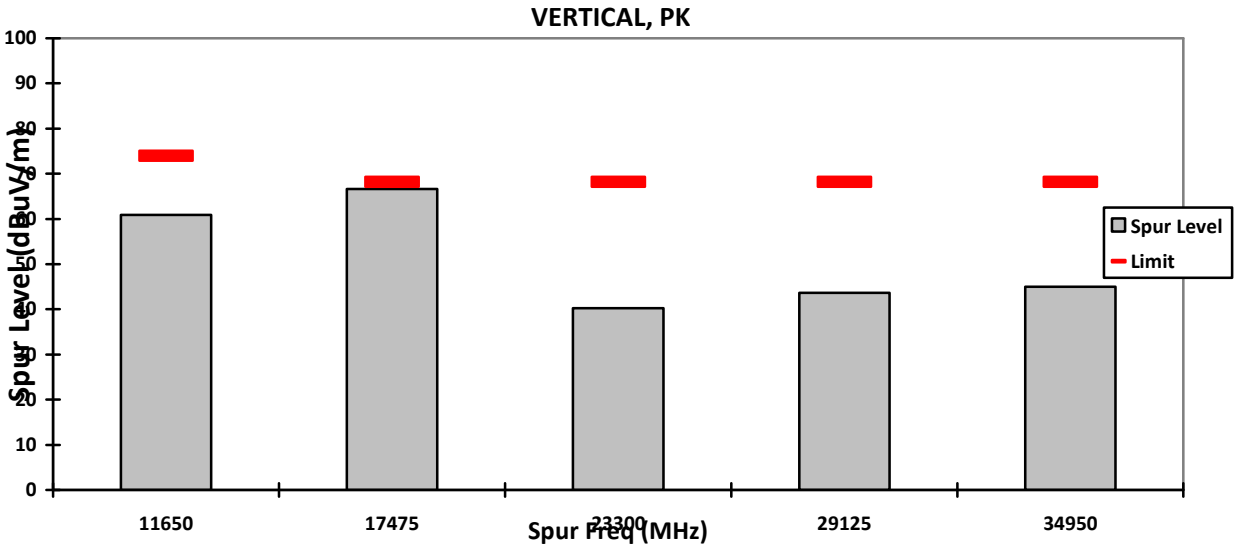
Radiated Emission (High Channel) tabular data

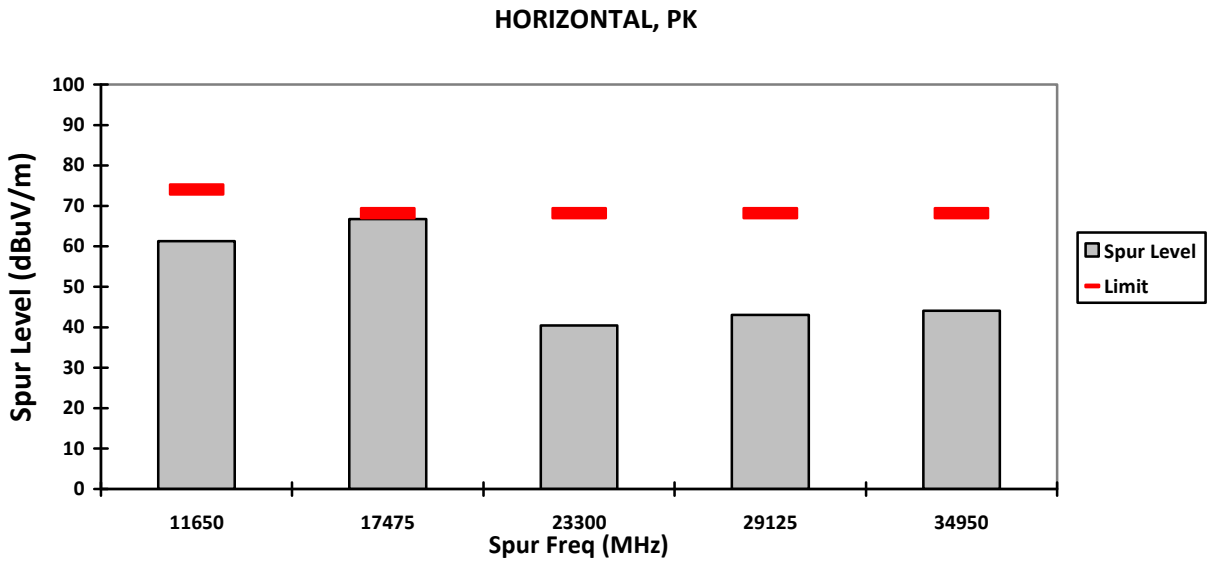
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11650	-	60.8653**	46.6740**	-	74.0000	54.0000	-	13.1347	7.3260	-
17475	-	66.5936**	-	-	68.2000	-	-	1.6064	-	-
23300	-	40.2443**	-	-	68.2000	-	-	27.9557	-	-
29125	-	43.6376**	-	-	68.2000	-	-	24.5624	-	-
34950	-	44.9745**	-	-	68.2000	-	-	23.2255	-	-
Horizontal Radiated Emission Result										
11650	-	61.3273**	46.9232**	-	74.0000	54.0000	-	12.6727	7.0768	-
17475	-	66.7142**	-	-	68.2000	-	-	1.4858	-	-
23300	-	40.4268**	-	-	68.2000	-	-	27.7732	-	-
29125	-	43.0858**	-	-	68.2000	-	-	25.1142	-	-
34950	-	44.0789**	-	-	68.2000	-	-	24.1211	-	-

Remarks: Pass Result	Marginal Result	Fail Result

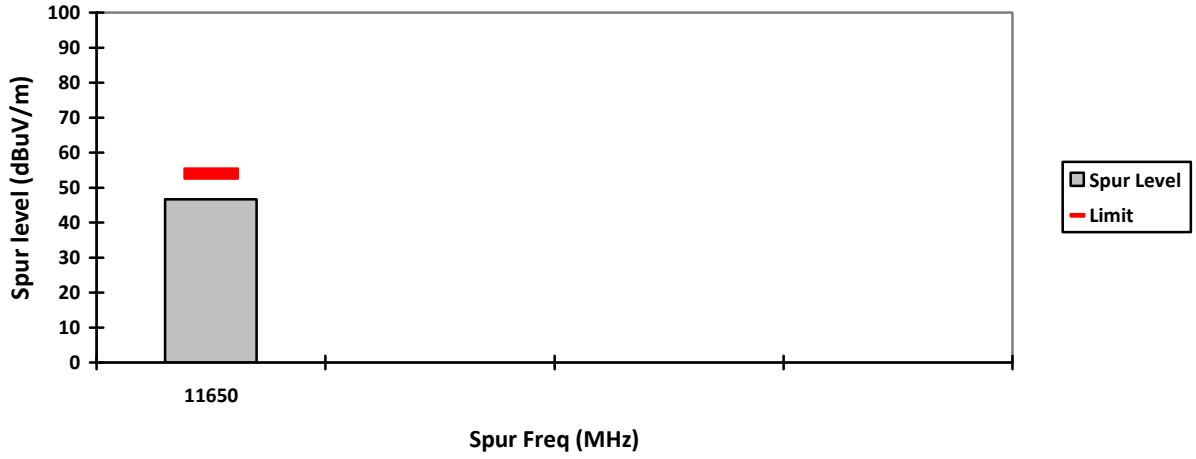
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

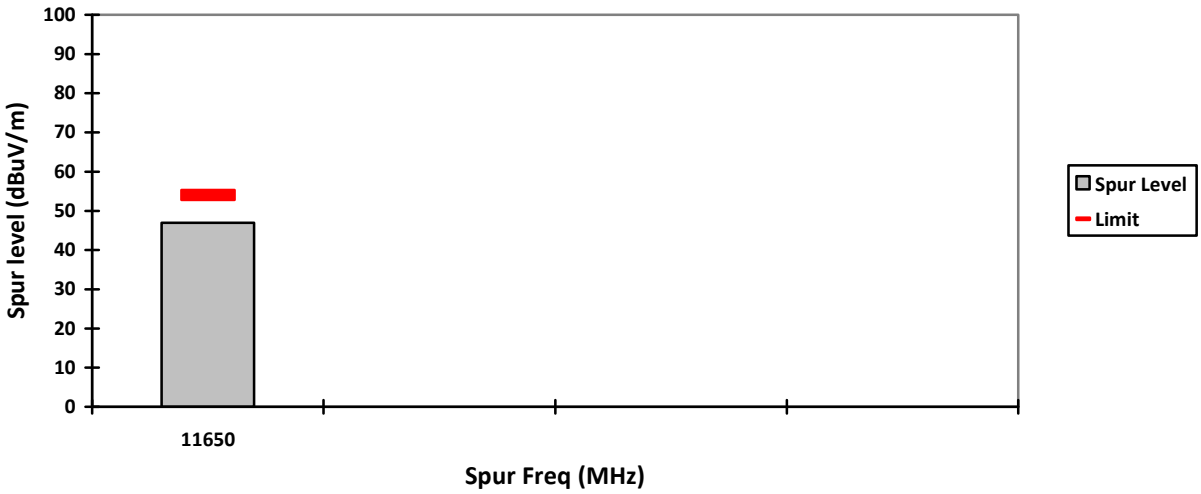

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11650
17475
23300
29125
34950
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11650
17475
23300
29125
34950
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



802.11n (HT20)

Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

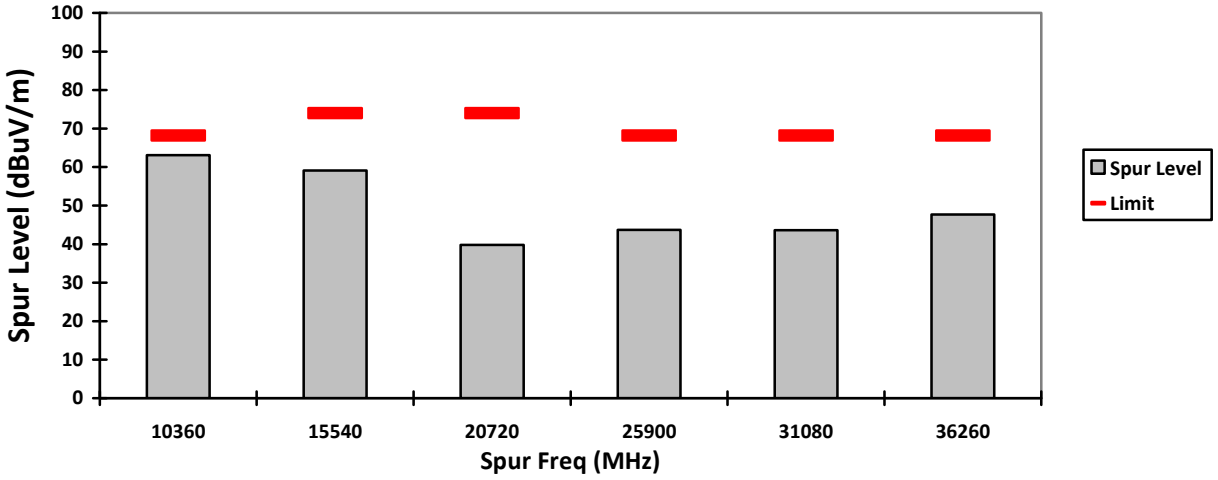
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10360	-	53.8117**	-	-	68.2000	-	-	14.3883	-	-
15540	-	63.0978**	49.0015**	-	74.0000	54.0000	-	10.9022	4.9985	-
20720	-	39.8356**	-	-	74.0000	-	-	34.1644	-	-
25900	-	43.7299**	-	-	68.2000	-	-	24.4701	-	-
31080	-	43.5966**	-	-	68.2000	-	-	24.6034	-	-
36260	-	47.6415**	-	-	68.2000	-	-	20.5585	-	-
Horizontal Radiated Emission Result										
10360	-	54.5664**	-	-	68.2000	-	-	13.6336	-	-
15540	-	63.4085**	49.0062**	-	74.0000	54.0000	-	10.5915	4.9938	-
20720	-	41.1591**	-	-	74.0000	-	-	32.8409	-	-
25900	-	42.9200**	-	-	68.2000	-	-	25.2800	-	-
31080	-	42.8213**	-	-	68.2000	-	-	25.3787	-	-
36260	-	45.5464**	-	-	68.2000	-	-	22.6536	-	-

Remarks: Pass Result	Marginal Result	Fail Result

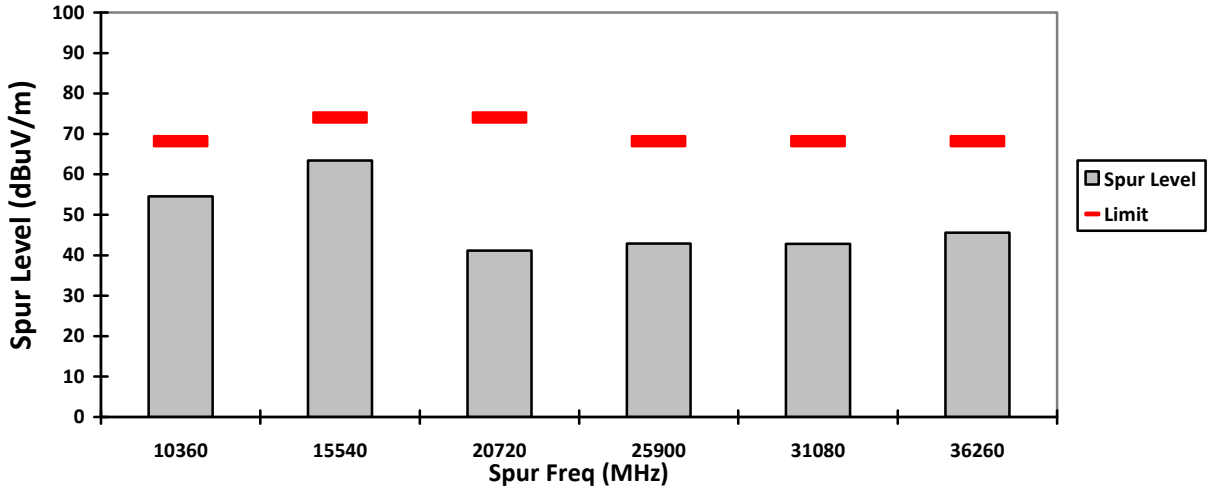
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

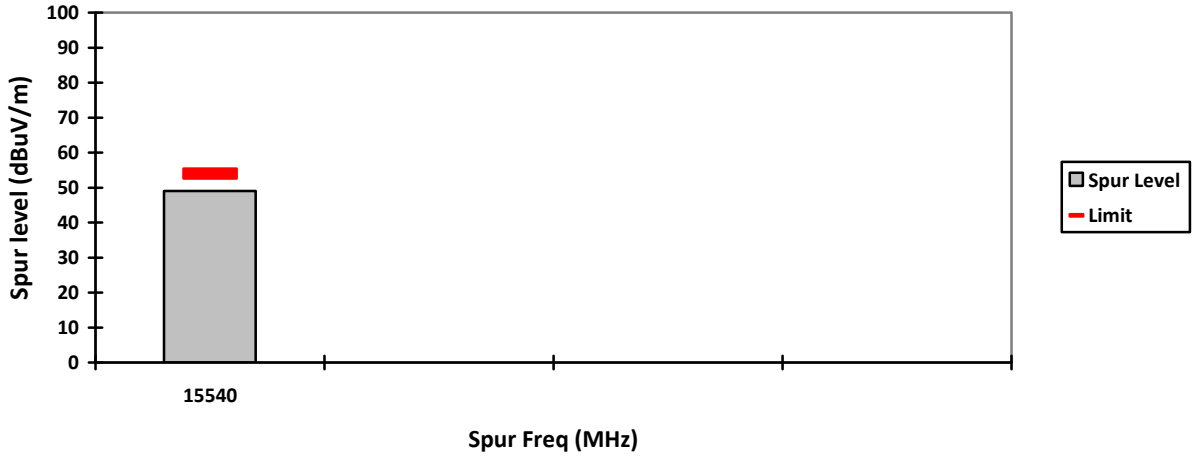
VERTICAL, PK



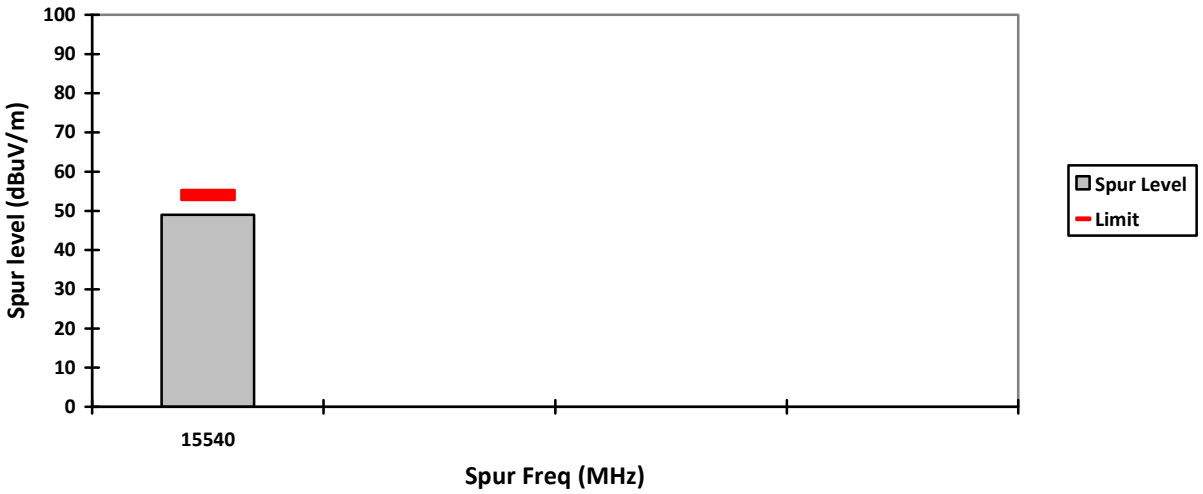
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

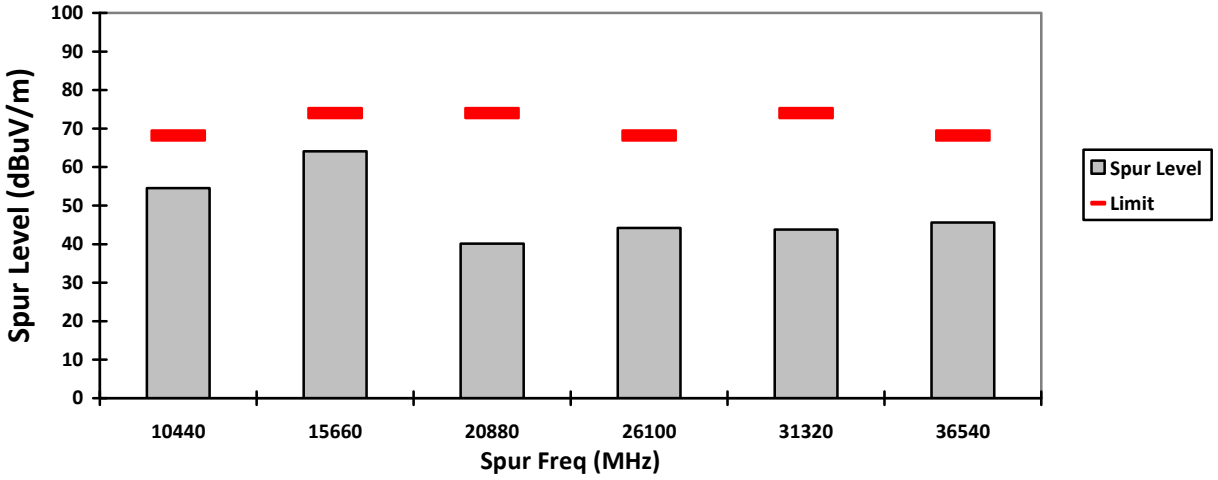
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10440	-	54.5668**	-	-	68.2000	-	-	13.6332	-	-
15660	-	64.0698**	49.7363**	-	74.0000	54.0000	-	9.9302	4.2637	-
20880	-	40.1265**	-	-	74.0000	-	-	33.8735	-	-
26100	-	44.1595**	-	-	68.2000	-	-	24.0405	-	-
31320	-	43.7748**	-	-	74.0000	-	-	30.2252	-	-
36540	-	45.5945**	-	-	68.2000	-	-	22.6055	-	-
Horizontal Radiated Emission Result										
10440	-	54.4484**	-	-	68.2000	-	-	13.7516	-	-
15660	-	63.7481**	49.7327**	-	74.0000	54.0000	-	10.2519	4.2673	-
20880	-	40.6576**	-	-	74.0000	-	-	33.3424	-	-
26100	-	42.4060**	-	-	68.2000	-	-	25.7940	-	-
31320	-	42.5024**	-	-	74.0000	-	-	31.4976	-	-
36540	-	47.3439**	-	-	68.2000	-	-	20.8561	-	-

Remarks: Pass Result	Marginal Result	Fail Result

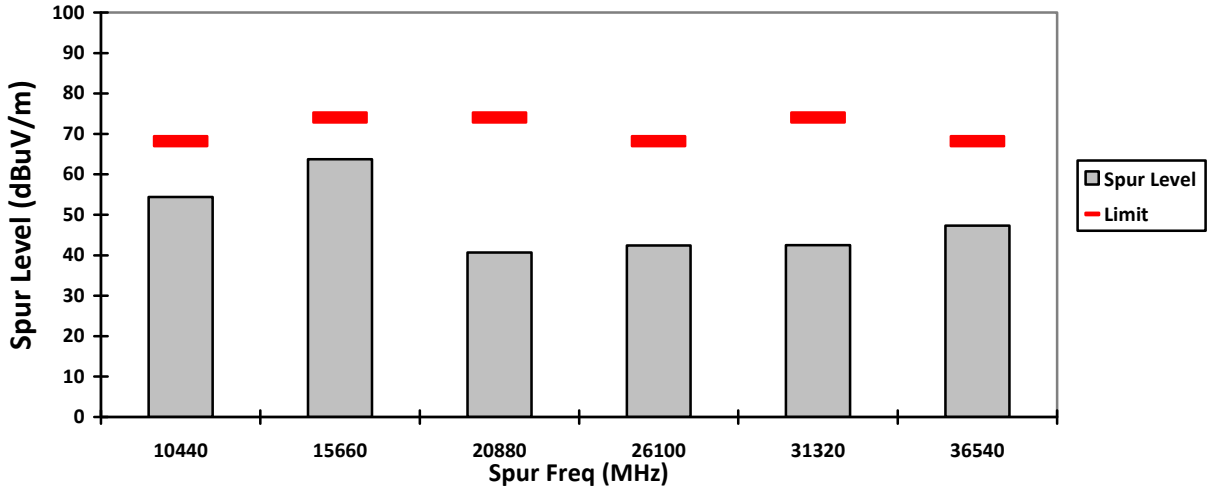
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

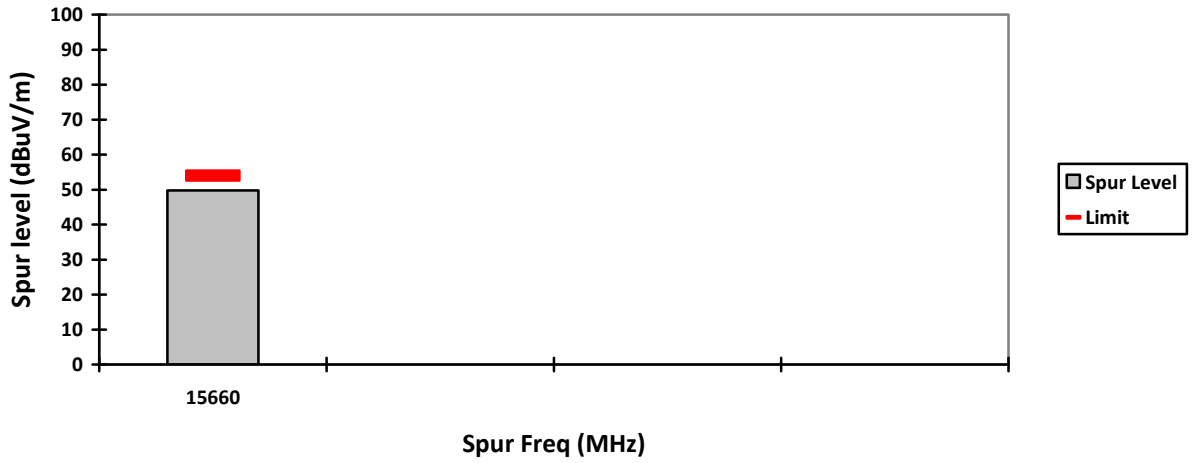
VERTICAL, PK



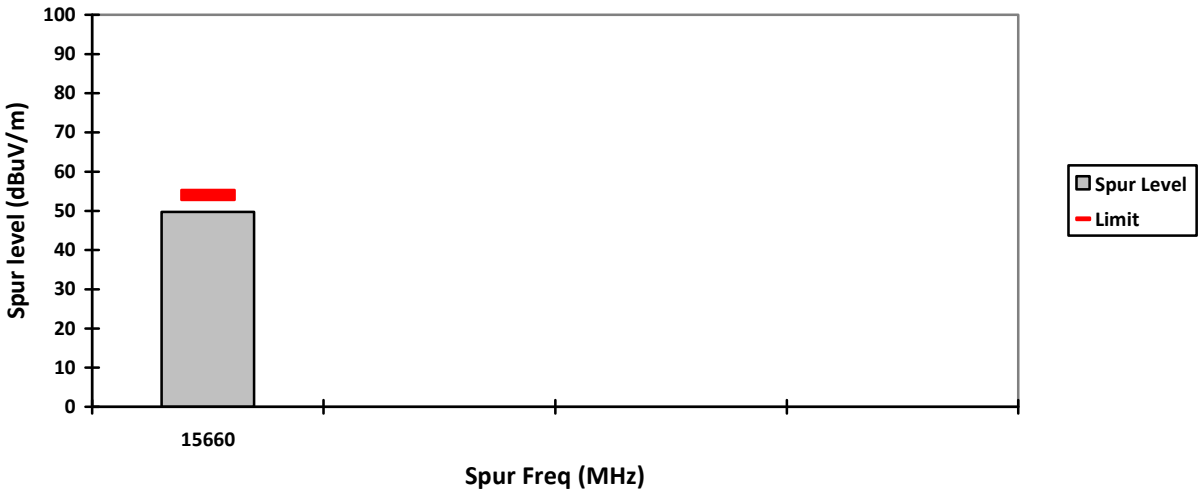
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

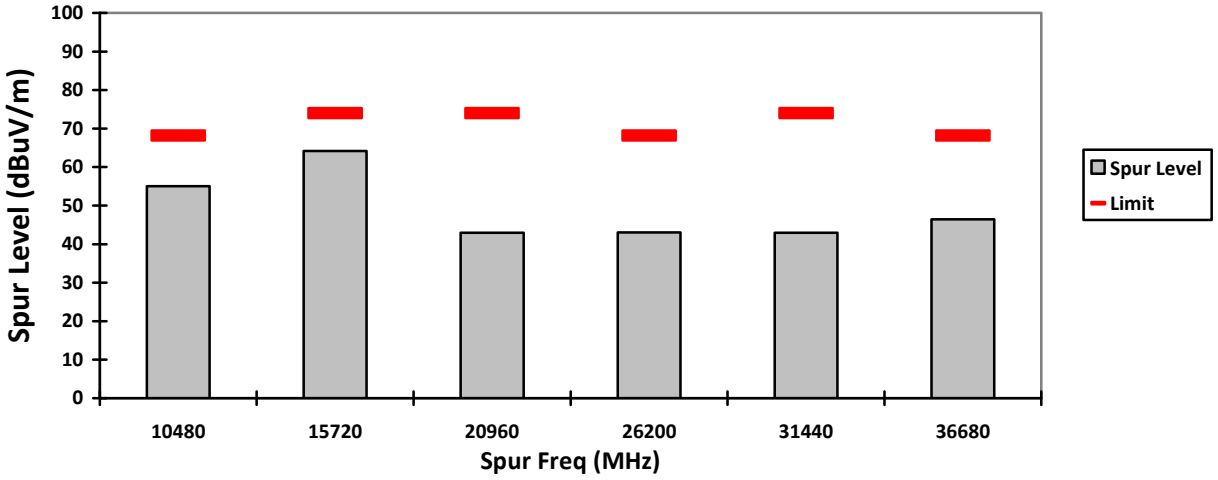
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10480	-	55.0940**	-	-	68.2000	-	-	13.1060	-	-
15720	-	64.1719**	50.0857**	-	74.0000	54.0000	-	9.8281	3.9143	-
20960	-	42.9429**	-	-	74.0000	-	-	31.0571	-	-
26200	-	43.0652**	-	-	68.2000	-	-	25.1348	-	-
31440	-	42.9389**	-	-	74.0000	-	-	31.0611	-	-
36680	-	46.4511**	-	-	68.2000	-	-	21.7489	-	-
Horizontal Radiated Emission Result										
10480	-	54.8673**	-	-	68.2000	-	-	13.3327	-	-
15720	-	64.3178**	50.0862**	-	74.0000	54.0000	-	9.6822	3.9138	-
20960	-	41.2009**	-	-	74.0000	-	-	32.7991	-	-
26200	-	42.8707**	-	-	68.2000	-	-	25.3293	-	-
31440	-	43.4516**	-	-	74.0000	-	-	30.5484	-	-
36680	-	46.2630**	-	-	68.2000	-	-	21.9370	-	-

Remarks: Pass Result	Marginal Result	Fail Result

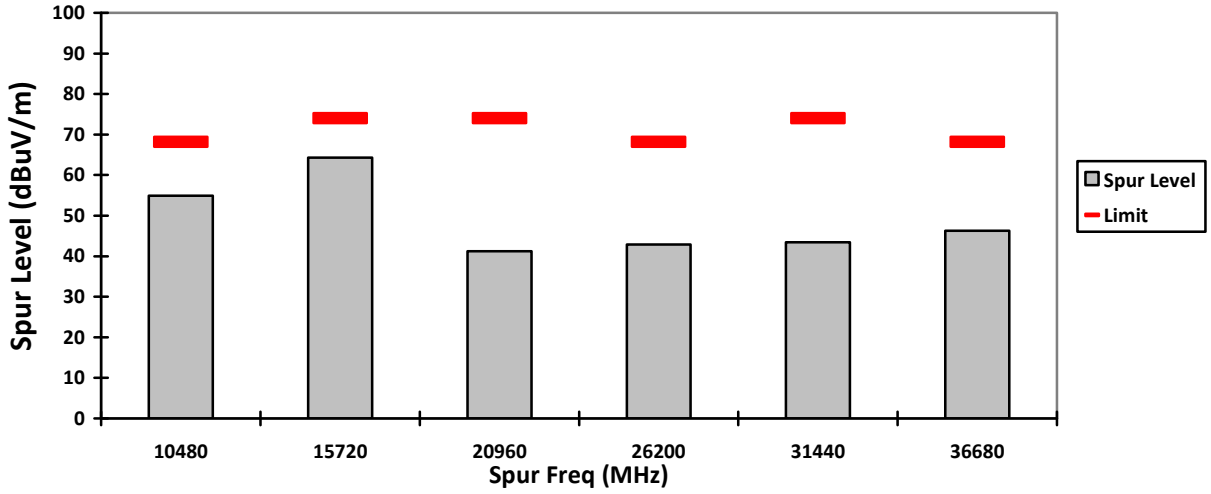
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

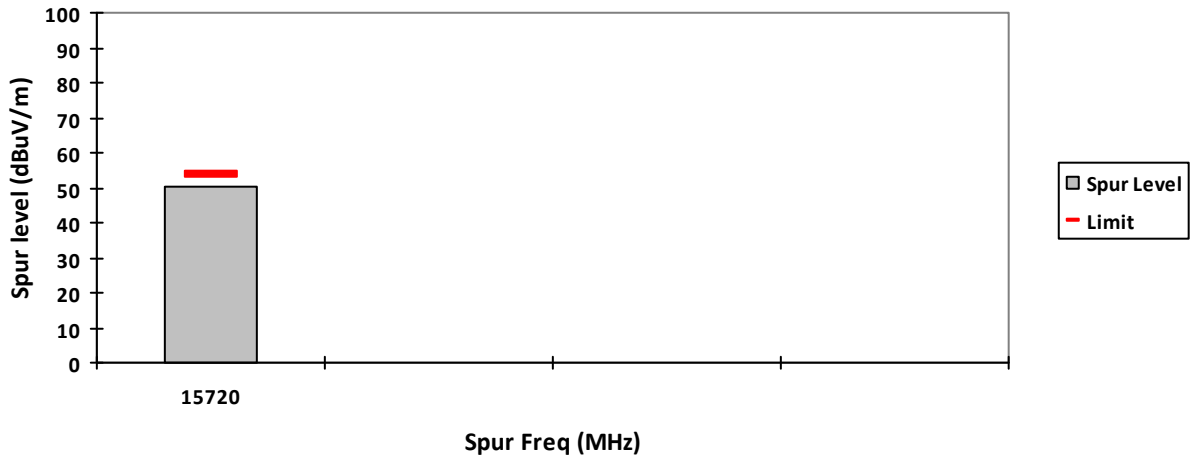
VERTICAL, PK



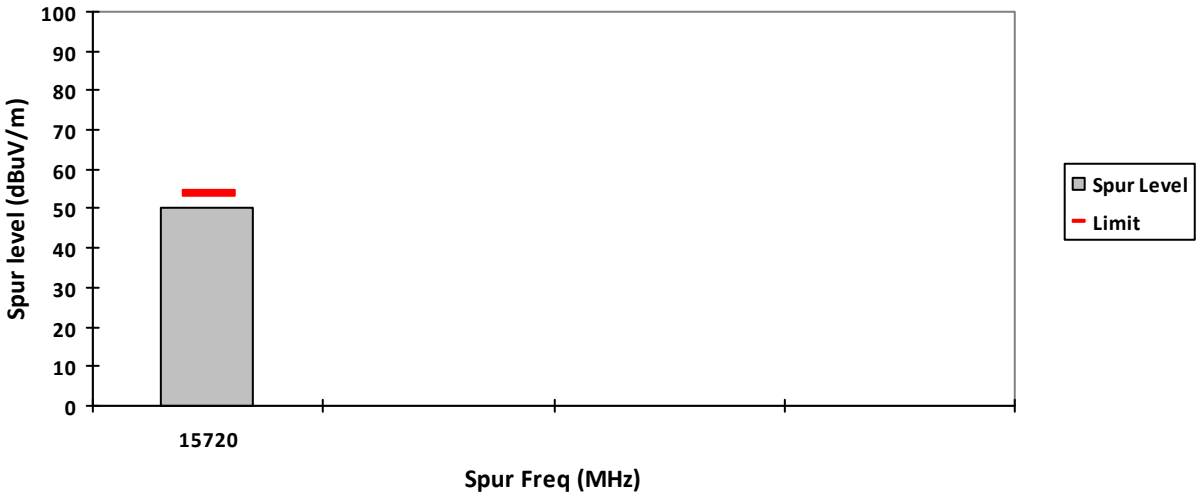
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

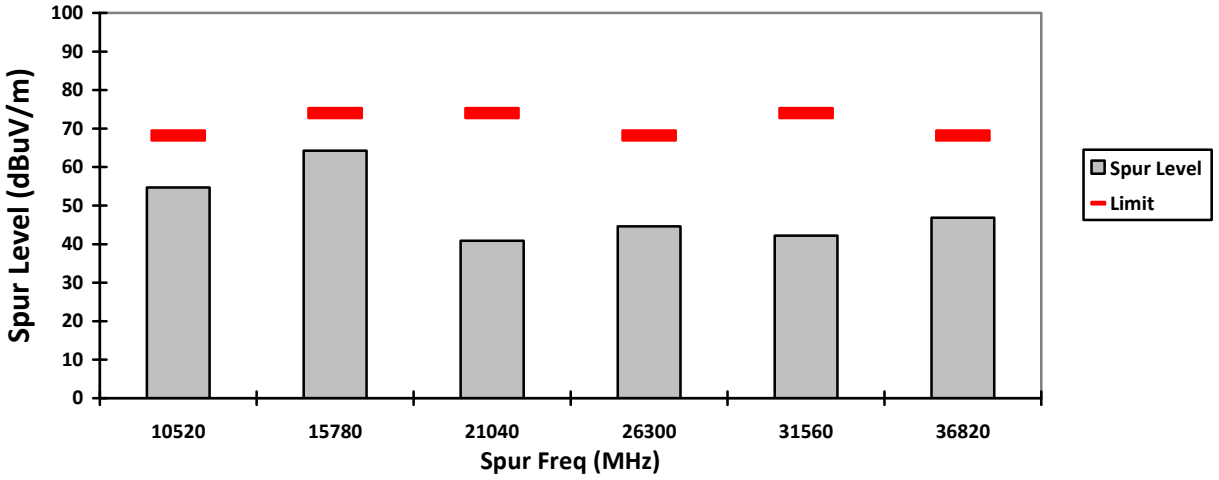
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10520	-	54.7418**	-	-	68.2000	-	-	13.4582	-	-
15780	-	64.2518**	50.3444**	-	74.0000	54.0000	-	9.7482	3.6556	-
21040	-	40.8423**	-	-	74.0000	-	-	33.1577	-	-
26300	-	44.6281**	-	-	68.2000	-	-	23.5719	-	-
31560	-	42.2390**	-	-	74.0000	-	-	31.7610	-	-
36820	-	46.8443**	-	-	68.2000	-	-	21.3557	-	-
Horizontal Radiated Emission Result										
10520	-	54.9849**	-	-	68.2000	-	-	13.2151	-	-
15780	-	64.3210**	50.3431**	-	74.0000	54.0000	-	9.6790	3.6569	-
21040	-	41.5615**	-	-	74.0000	-	-	32.4385	-	-
26300	-	42.5988**	-	-	68.2000	-	-	25.6012	-	-
31560	-	42.6555**	-	-	74.0000	-	-	31.3445	-	-
36820	-	48.1397**	-	-	68.2000	-	-	20.0603	-	-

Remarks: Pass Result	Marginal Result	Fail Result

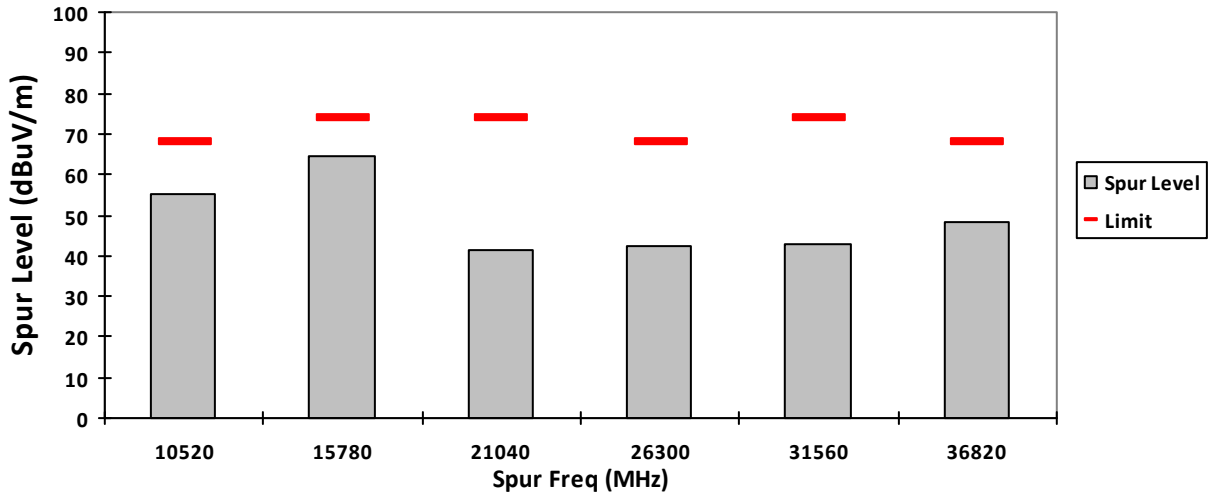
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

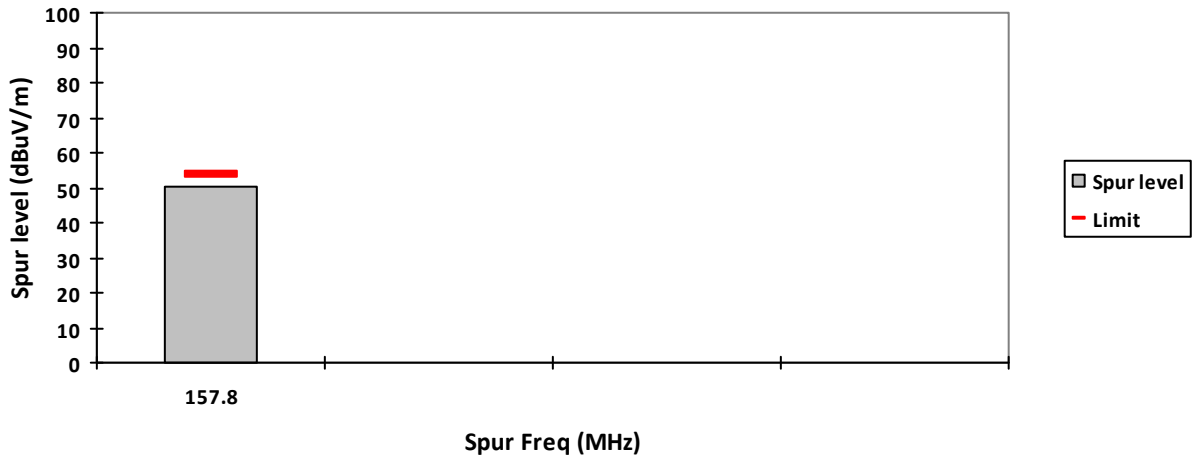
VERTICAL, PK



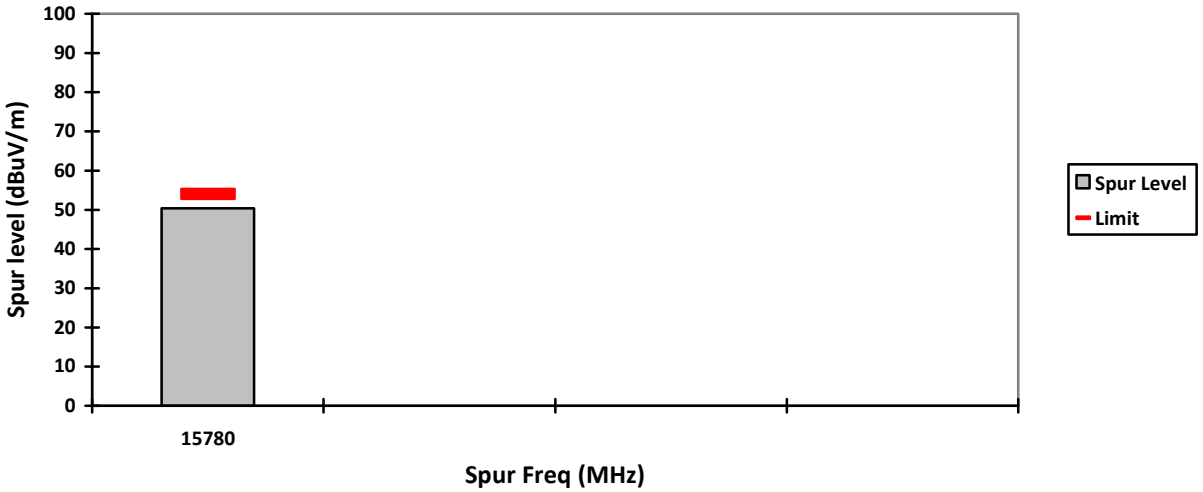
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

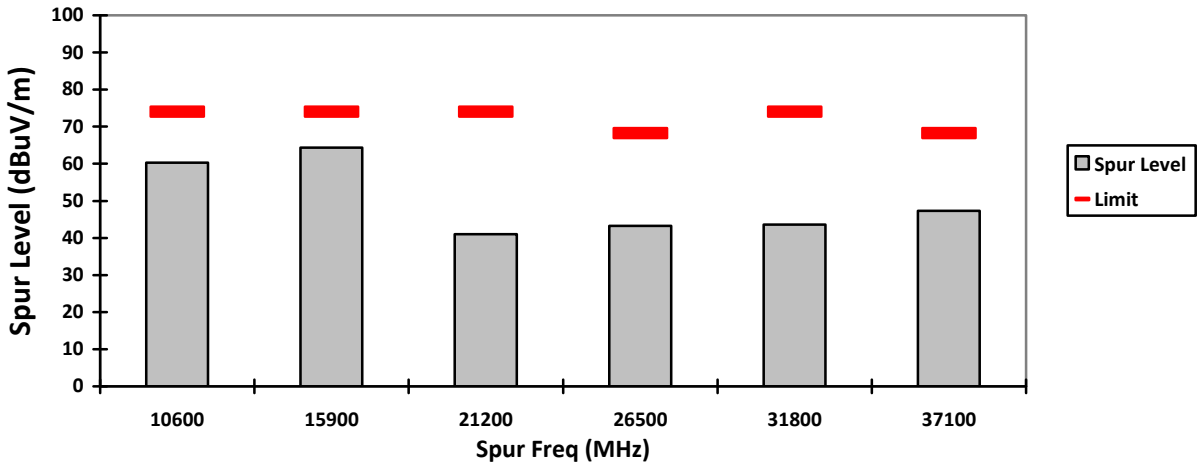
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10600	-	60.2545**	34.1313**	-	74.0000	54.0000	-	13.7455	19.8687	-
15900	-	64.3299**	50.3062**	-	74.0000	54.0000	-	9.6701	3.6938	-
21200	-	40.9567**	-	-	74.0000	-	-	33.0433	-	-
26500	-	43.2273**	-	-	68.2000	-	-	24.9727	-	-
31800	-	43.6155**	-	-	74.0000	-	-	30.3845	-	-
37100	-	47.2729**	-	-	68.2000	-	-	20.9271	-	-
Horizontal Radiated Emission Result										
10600	-	60.1556**	33.8959**	-	74.0000	54.0000	-	13.8444	20.1041	-
15900	-	64.5093**	50.3065**	-	74.0000	54.0000	-	9.4907	3.6935	-
21200	-	40.1326**	-	-	74.0000	-	-	33.8674	-	-
26500	-	42.9357**	-	-	68.2000	-	-	25.2643	-	-
31800	-	42.7868**	-	-	74.0000	-	-	31.2132	-	-
37100	-	47.5098**	-	-	68.2000	-	-	20.6902	-	-

Remarks: Pass Result	Marginal Result	Fail Result

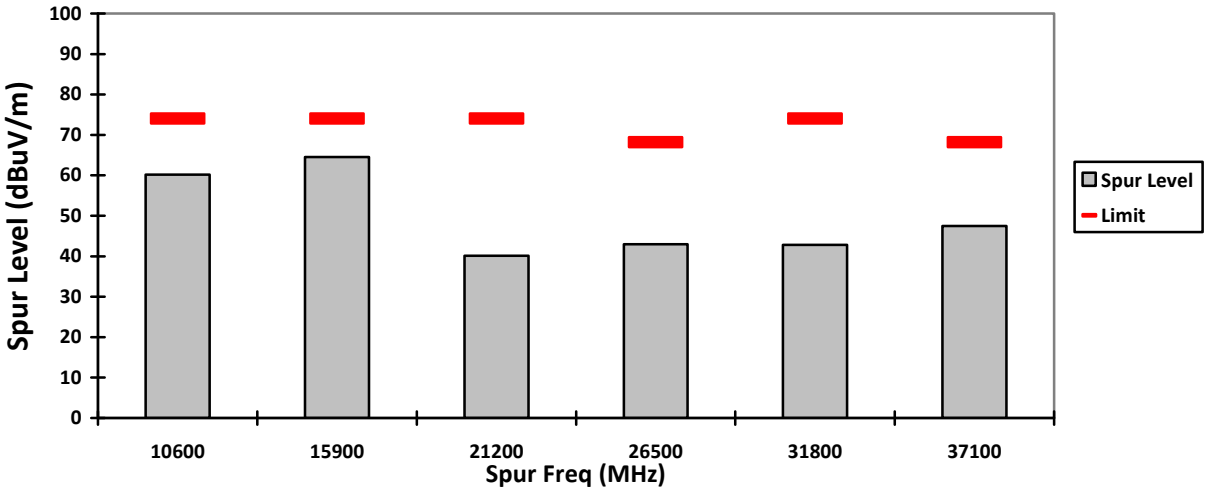
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

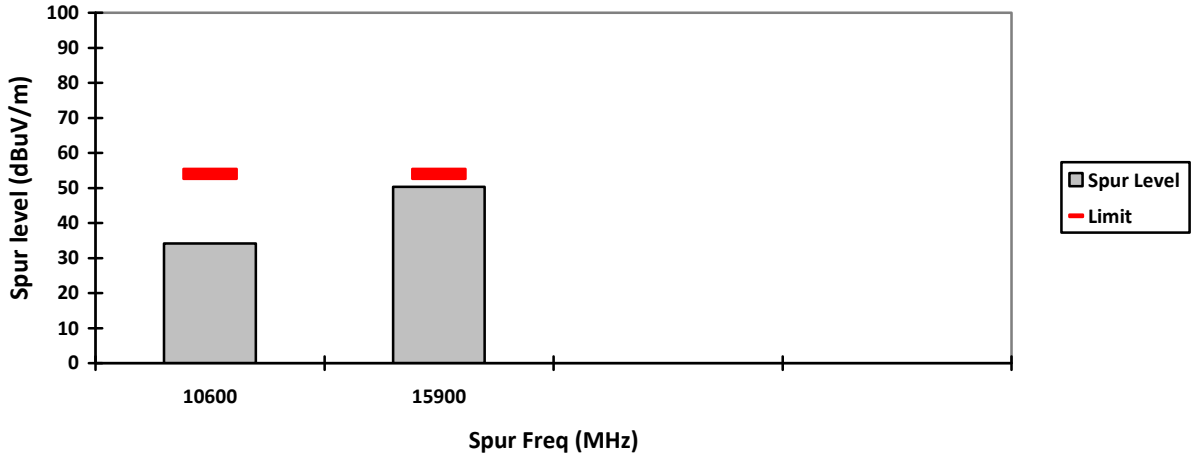
VERTICAL, PK



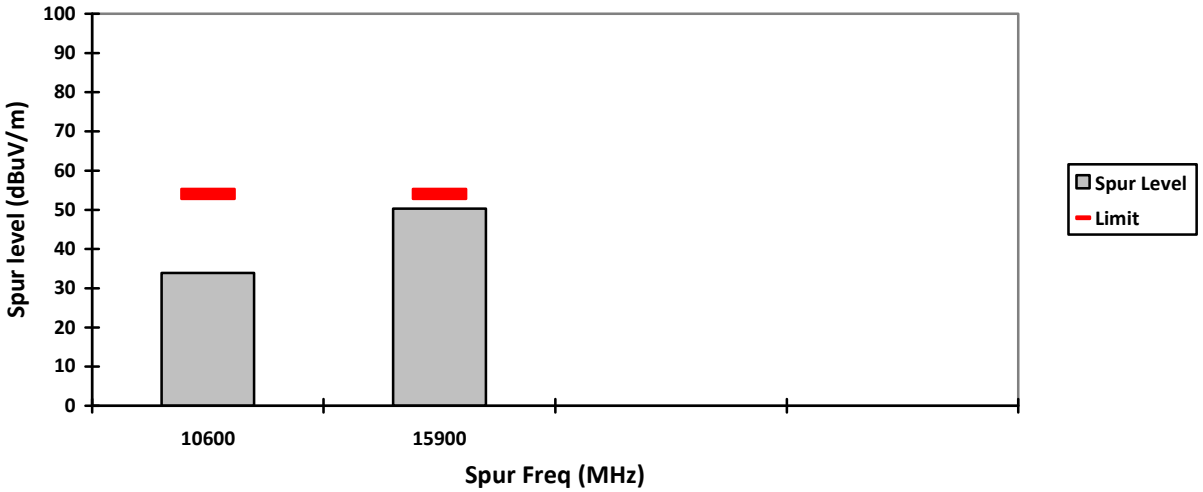
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

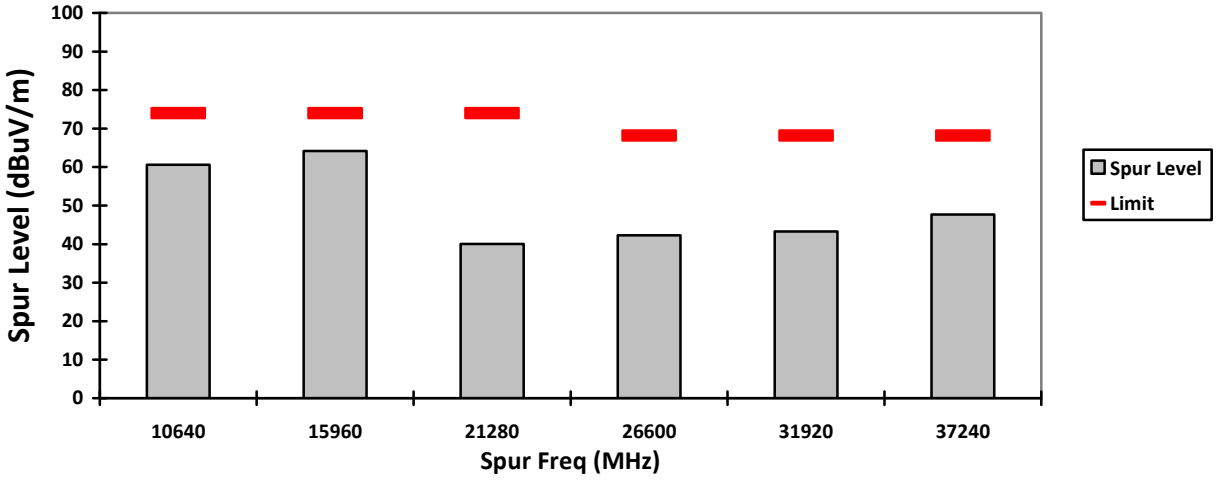
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
10640	-	60.6530**	46.4537**	-	74.0000	54.0000	-	13.3470	7.5463	-
15960	-	64.1826**	50.0137**	-	74.0000	54.0000	-	9.8174	3.9863	-
21280	-	40.0380**	-	-	74.0000	-	-	33.9620	-	-
26600	-	42.3040**	-	-	68.2000	-	-	25.8960	-	-
31920	-	43.2429**	-	-	68.2000	-	-	24.9571	-	-
37240	-	47.6588**	-	-	68.2000	-	-	20.5412	-	-
Horizontal Radiated Emission Result										
10640	-	60.2782**	46.4527**	-	74.0000	54.0000	-	13.7218	7.5473	-
15960	-	64.0296**	50.0157**	-	74.0000	54.0000	-	9.9704	3.9843	-
21280	-	40.6529**	-	-	74.0000	-	-	33.3471	-	-
26600	-	42.9530**	-	-	68.2000	-	-	25.2470	-	-
31920	-	42.8978**	-	-	68.2000	-	-	25.3022	-	-
37240	-	46.4958**	-	-	68.2000	-	-	21.7042	-	-

Remarks: Pass Result	Marginal Result	Fail Result

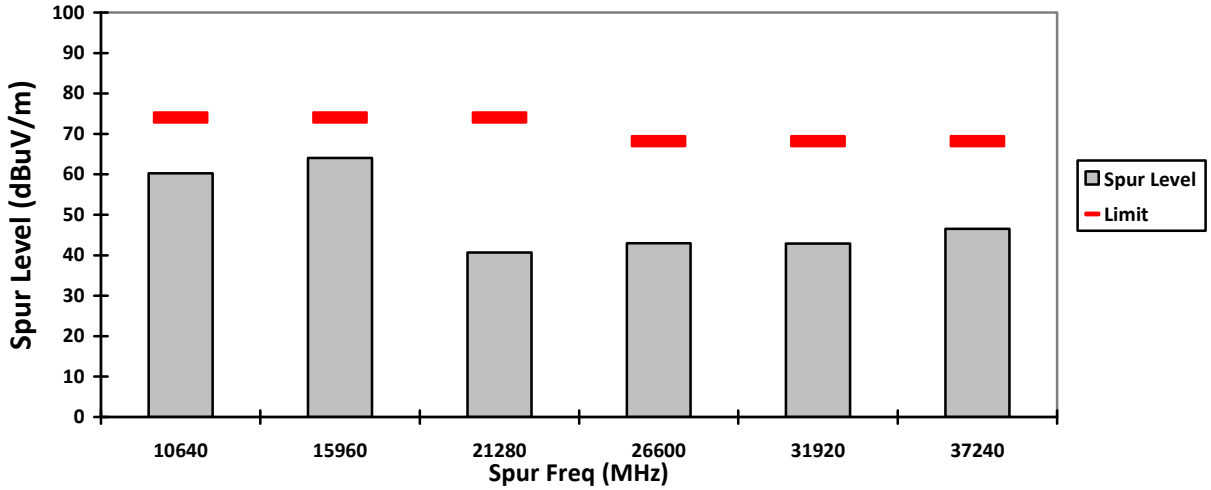
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

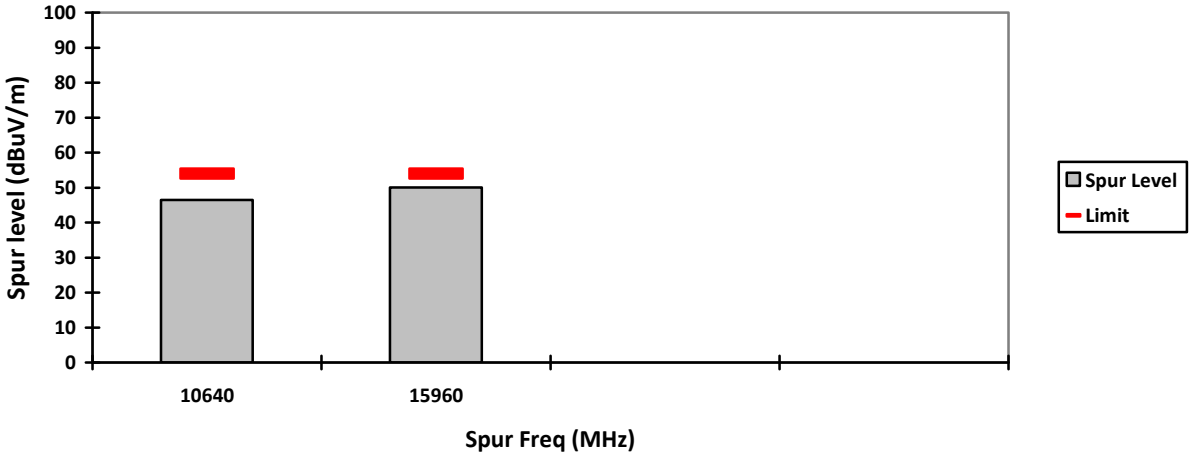
VERTICAL, PK



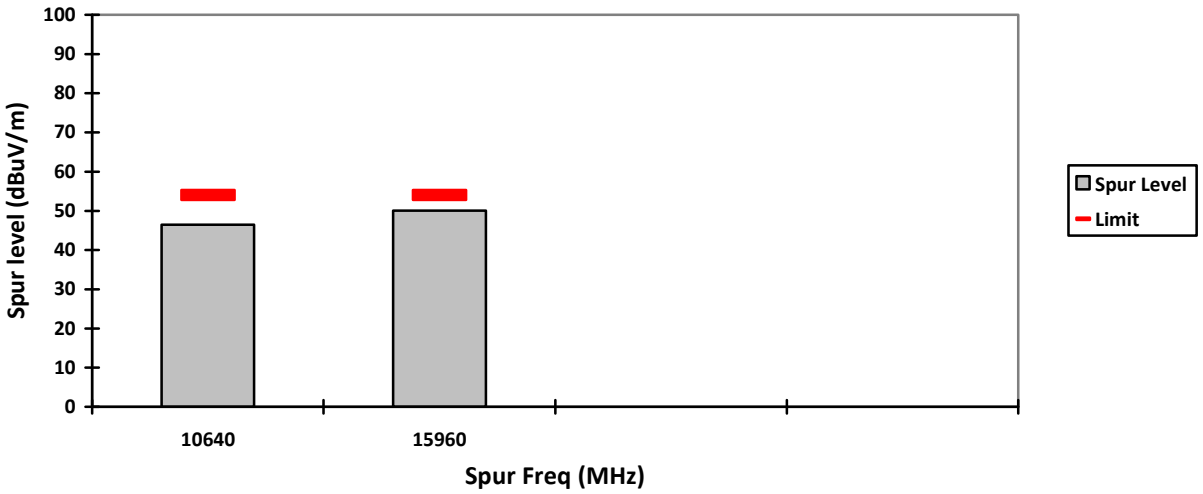
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

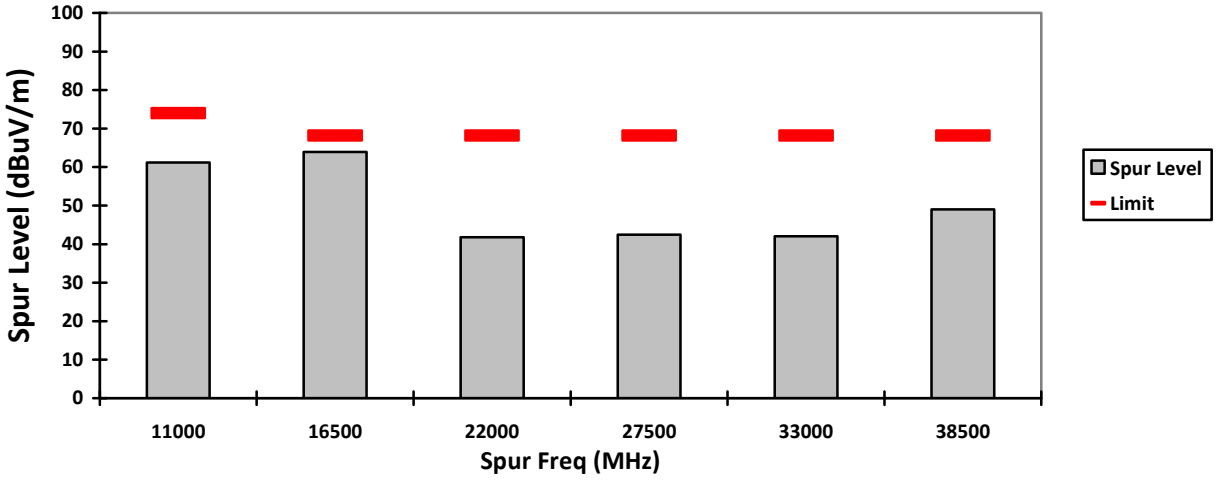
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11000	-	61.1550**	47.1423**	-	74.0000	54.0000	-	12.8450	6.8577	-
16500	-	63.9686**	-	-	68.2000	-	-	4.2314	-	-
22000	-	41.7681**	-	-	68.2000	-	-	26.4319	-	-
27500	-	42.4349**	-	-	68.2000	-	-	25.7651	-	-
33000	-	42.0721**	-	-	68.2000	-	-	26.1279	-	-
38500	-	49.0240**	-	-	68.2000	-	-	19.1760	-	-
Horizontal Radiated Emission Result										
11000	-	61.0456**	46.9284**	-	74.0000	54.0000	-	12.9544	7.0716	-
16500	-	63.0920**	-	-	68.2000	-	-	5.1080	-	-
22000	-	42.2157**	-	-	68.2000	-	-	25.9843	-	-
27500	-	40.6049**	-	-	68.2000	-	-	27.5951	-	-
33000	-	44.2021**	-	-	68.2000	-	-	23.9979	-	-
38500	-	49.0113**	-	-	68.2000	-	-	19.1887	-	-

Remarks: Pass Result	Marginal Result	Fail Result

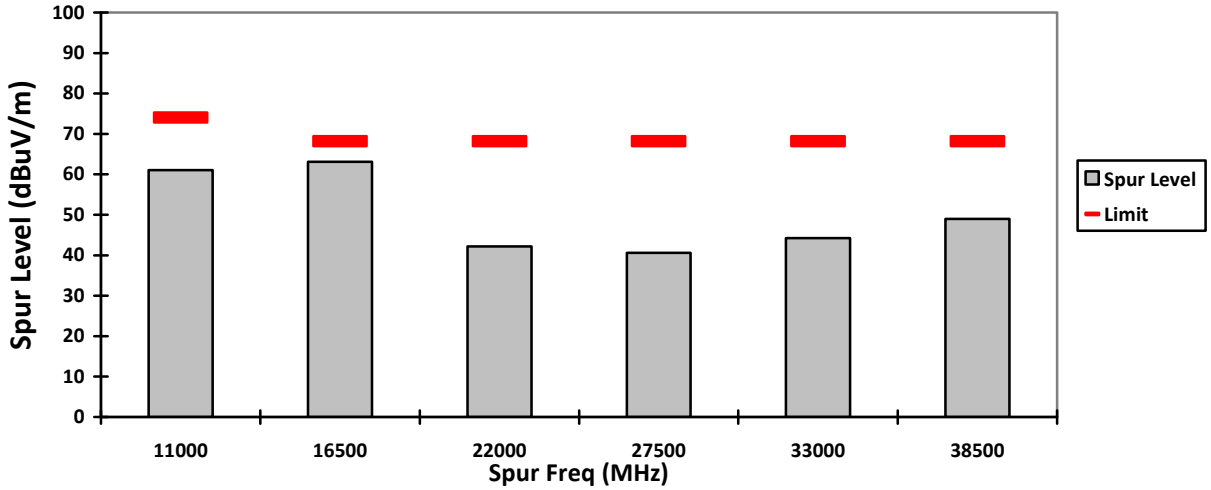
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

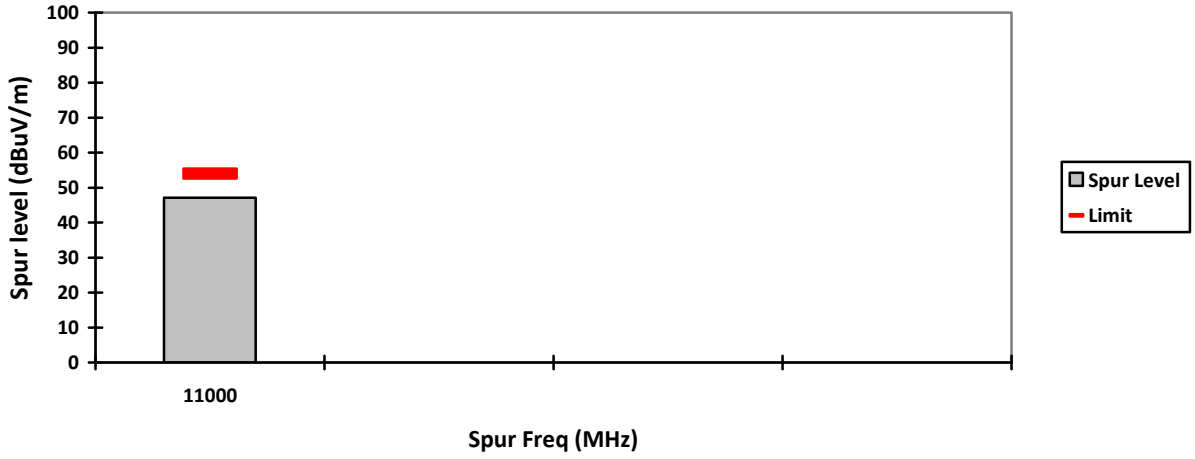
VERTICAL, PK



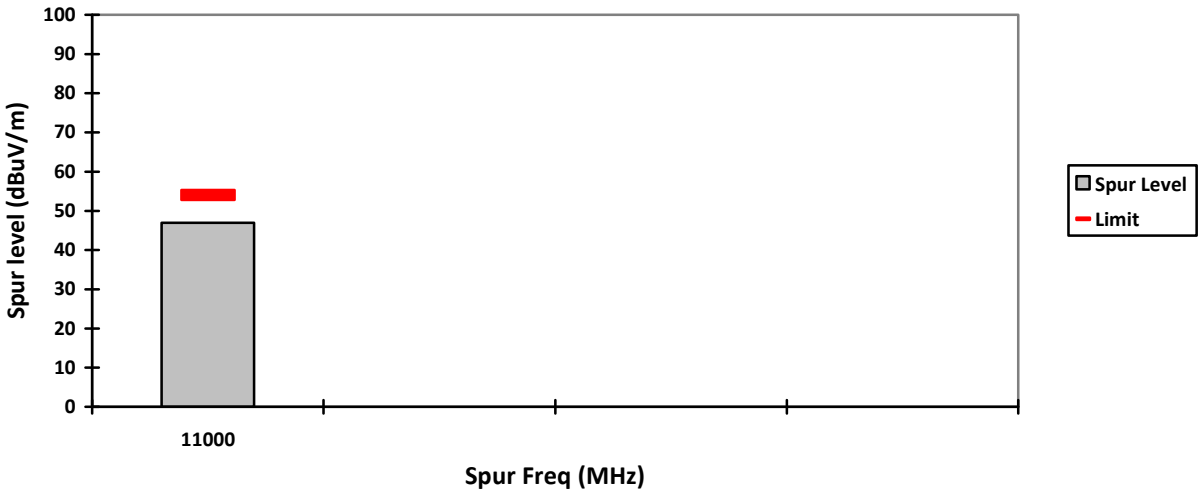
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

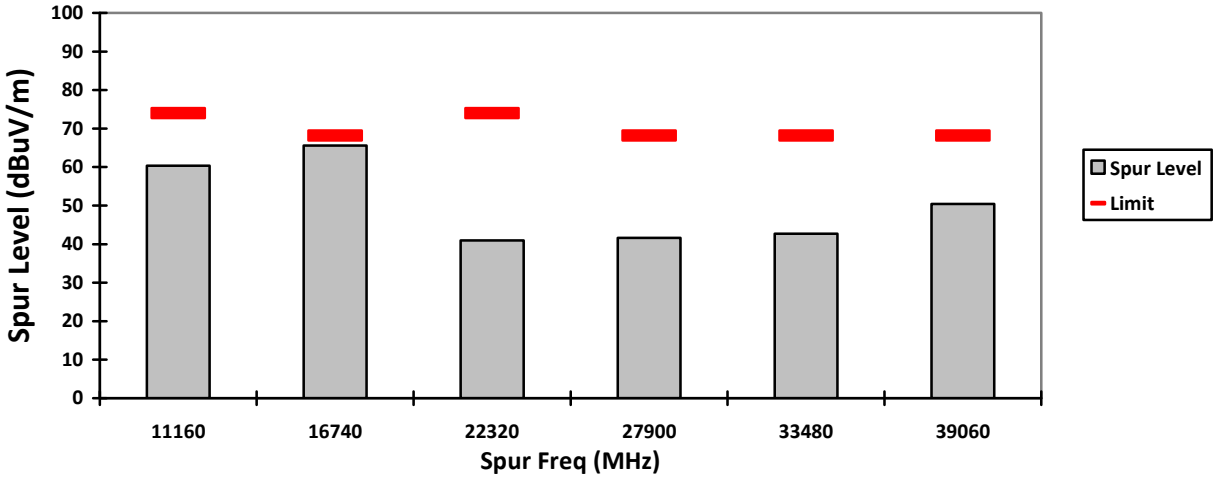
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11160	-	60.3608**	46.3147**	-	74.0000	54.0000	-	13.6392	7.6853	-
16740	-	65.6190**	-	-	68.2000	-	-	2.5810	-	-
22320	-	40.9899**	-	-	74.0000	-	-	33.0101	-	-
27900	-	41.6370**	-	-	68.2000	-	-	26.5630	-	-
33480	-	42.6672**	-	-	68.2000	-	-	25.5328	-	-
39060	-	50.4305**	-	-	68.2000	-	-	17.7695	-	-
Horizontal Radiated Emission Result										
11160	-	60.0322**	46.5338**	-	74.0000	54.0000	-	13.9678	7.4662	-
16740	-	67.0422**	-	-	68.2000	-	-	1.1578	-	-
22320	-	41.0151**	-	-	74.0000	-	-	32.9849	-	-
27900	-	41.7021**	-	-	68.2000	-	-	26.4979	-	-
33480	-	43.3375**	-	-	68.2000	-	-	24.8625	-	-
39060	-	50.9401**	-	-	68.2000	-	-	17.2599	-	-

Remarks: Pass Result	Marginal Result	Fail Result

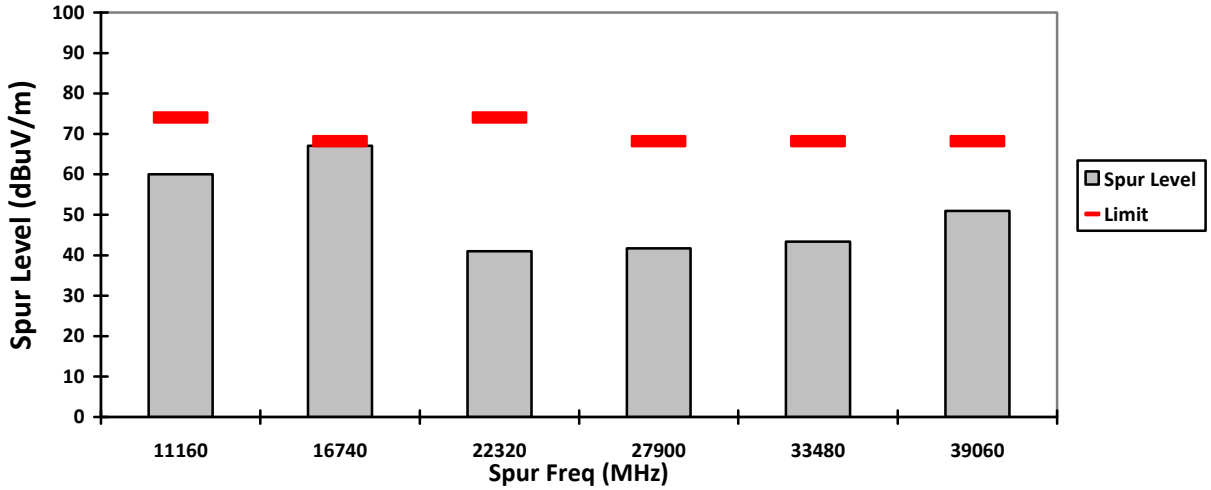
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

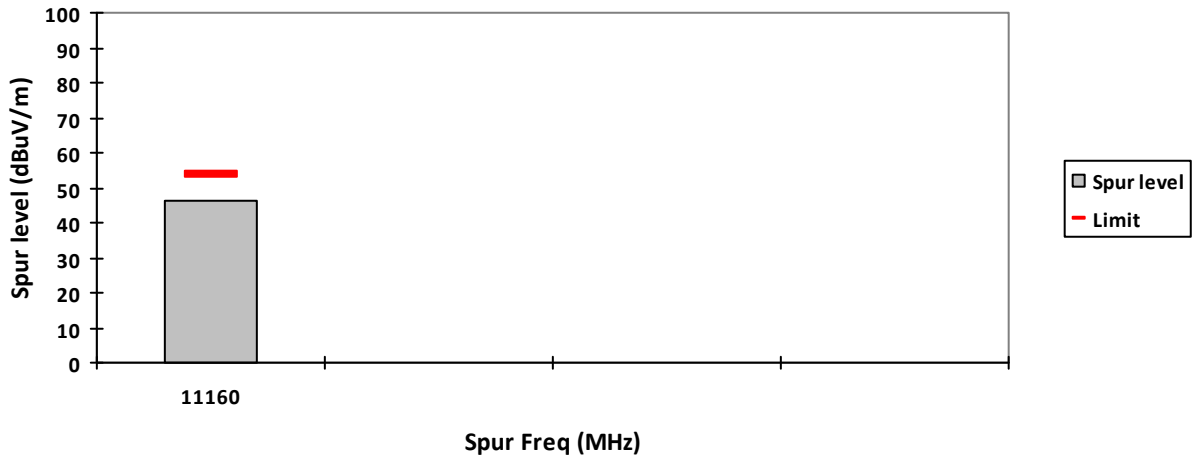
VERTICAL, PK



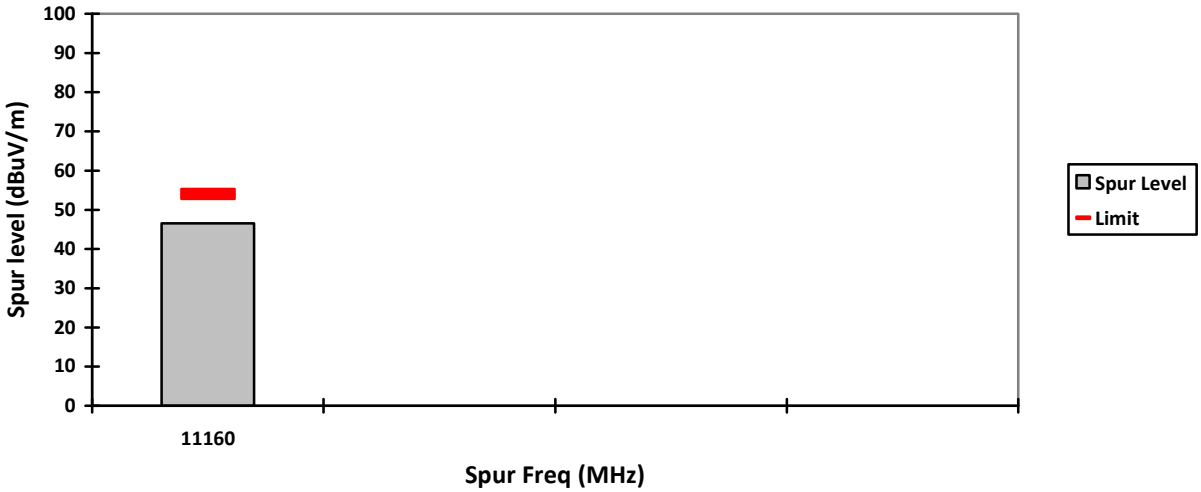
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

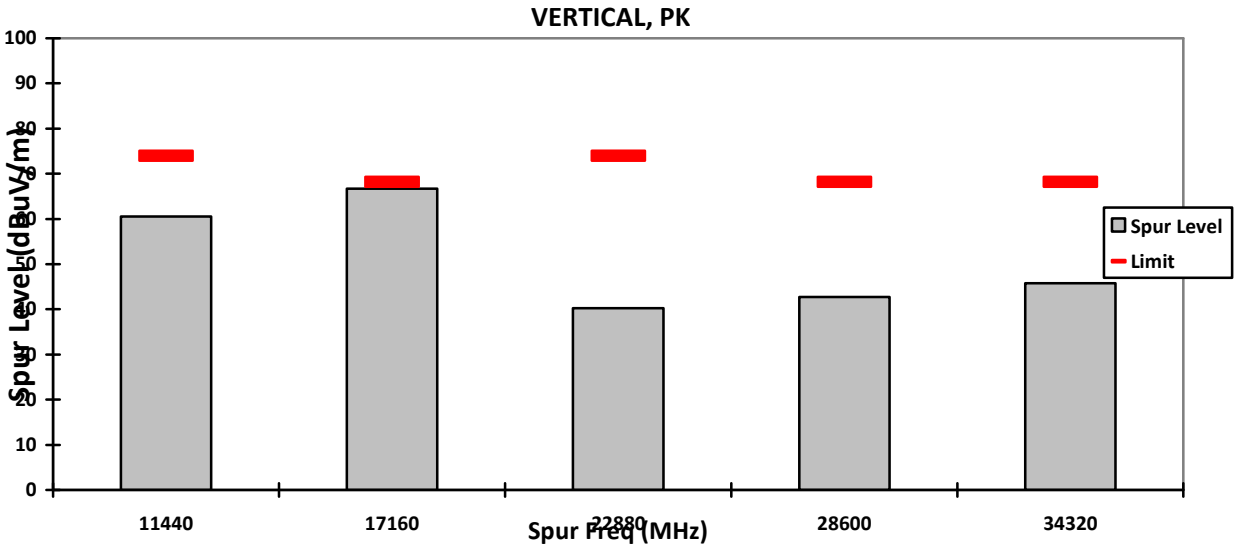
Radiated Emission (Straddle Channel) tabular data

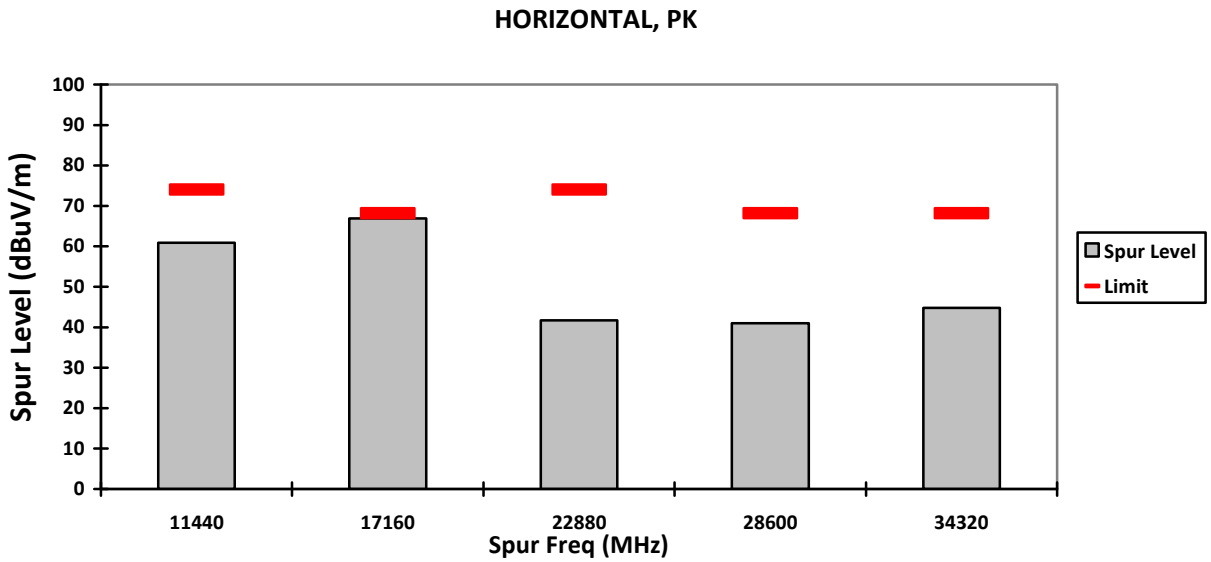
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11440	-	60.5153**	46.7778**	-	74.0000	54.0000	-	13.4847	7.2222	-
17160	-	66.7028**	-	-	68.2000	-	-	1.4972	-	-
22880	-	40.2729**	-	-	74.0000	-	-	33.7271	-	-
28600	-	42.6978**	-	-	68.2000	-	-	25.5022	-	-
34320	-	45.7614**	-	-	68.2000	-	-	22.4386	-	-
Horizontal Radiated Emission Result										
11440	-	60.8819**	46.5182**	-	74.0000	54.0000	-	13.1181	7.4818	-
17160	-	66.9419**	-	-	68.2000	-	-	1.2581	-	-
22880	-	41.7394**	-	-	74.0000	-	-	32.2606	-	-
28600	-	40.9619**	-	-	68.2000	-	-	27.2381	-	-
34320	-	44.8045**	-	-	68.2000	-	-	23.3955	-	-

Remarks: Pass Result	Marginal Result	Fail Result

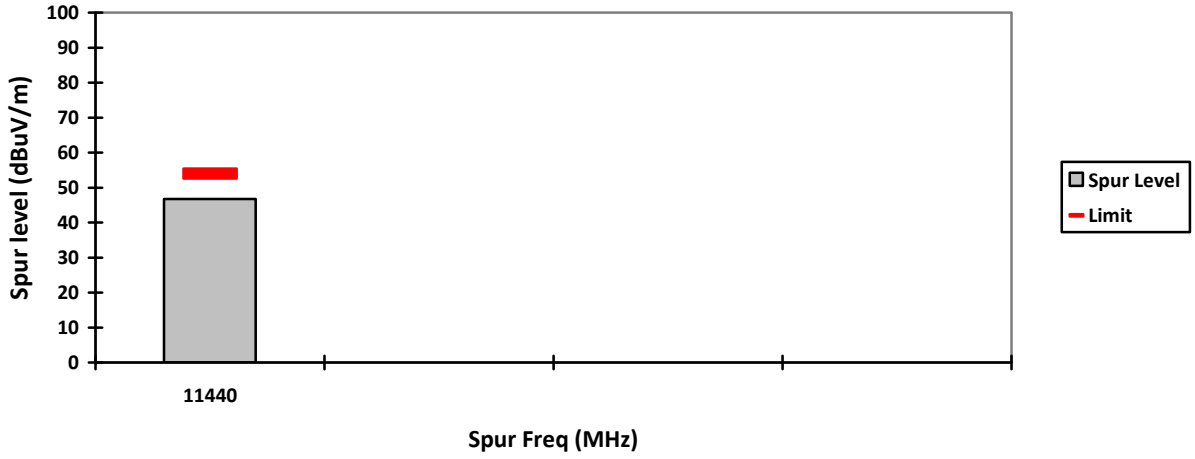
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

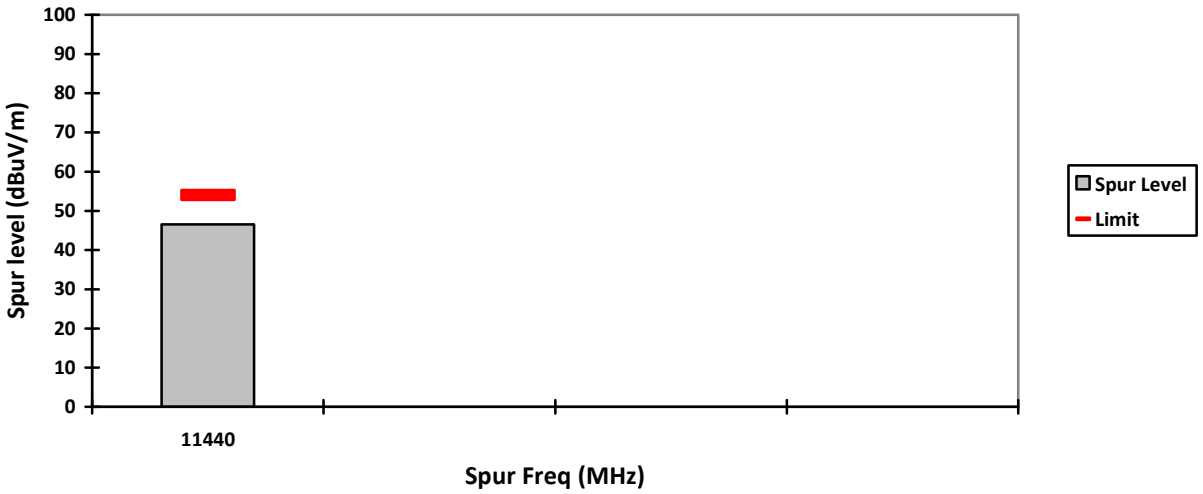

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11440
17160
22880
28600
34320
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11440
17160
22880
28600
34320
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

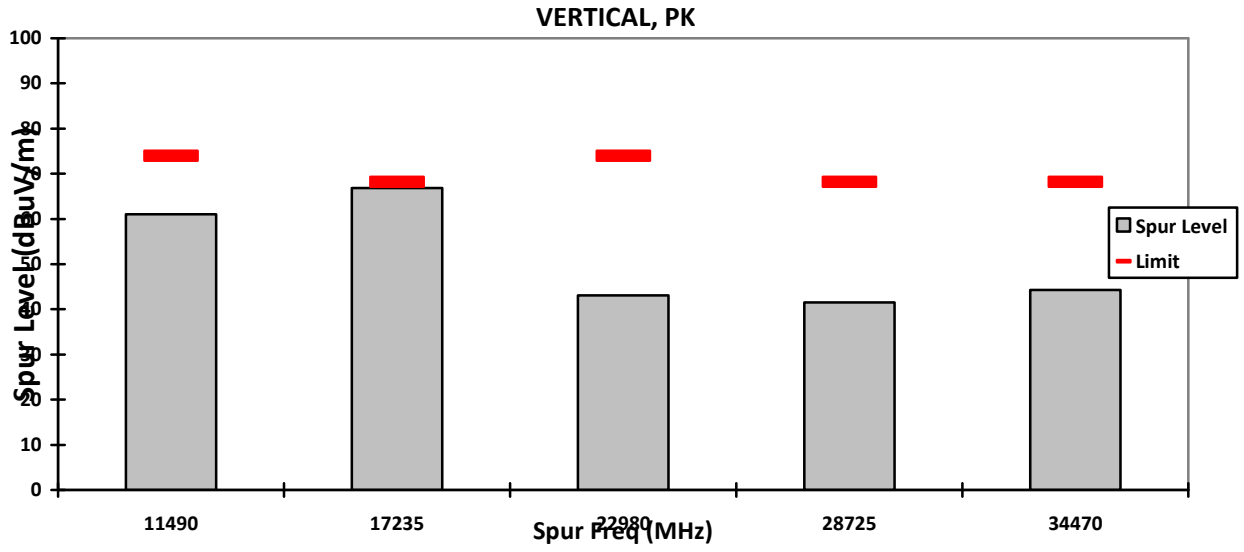
Radiated Emission (Low Channel) tabular data

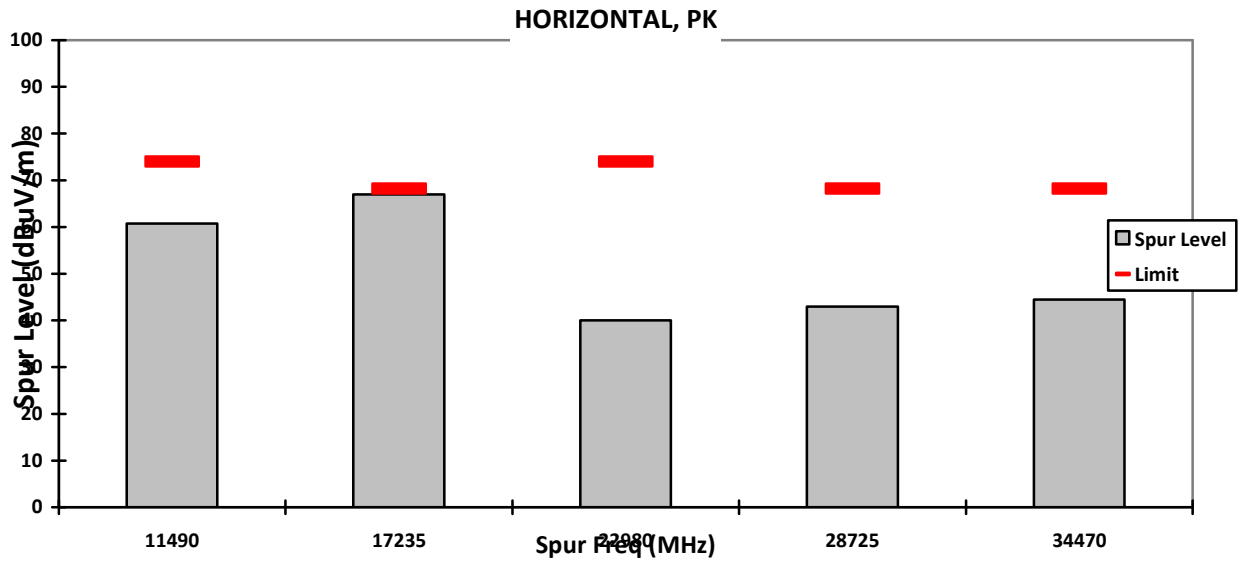
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11490	-	61.0674**	46.9223**	-	74.0000	54.0000	-	12.9326	7.0777	-
17235	-	66.8579**	-	-	68.2000	-	-	1.3421	-	-
22980	-	43.0580**	-	-	74.0000	-	-	30.9420	-	-
28725	-	41.4887**	-	-	68.2000	-	-	26.7113	-	-
34470	-	44.2476**	-	-	68.2000	-	-	23.9524	-	-
Horizontal Radiated Emission Result										
11490	-	60.7574**	46.9211**	-	74.0000	54.0000	-	13.2426	7.0789	-
17235	-	66.9471**	-	-	68.2000	-	-	1.2529	-	-
22980	-	40.0477**	-	-	74.0000	-	-	33.9523	-	-
28725	-	42.9495**	-	-	68.2000	-	-	25.2505	-	-
34470	-	44.4702**	-	-	68.2000	-	-	23.7298	-	-

Remarks: Pass Result	Marginal Result	Fail Result

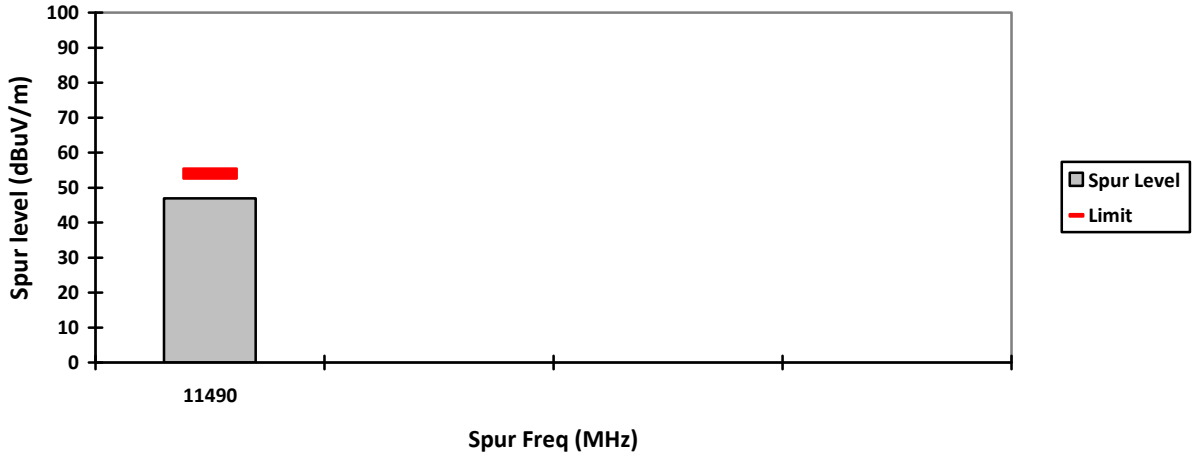
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

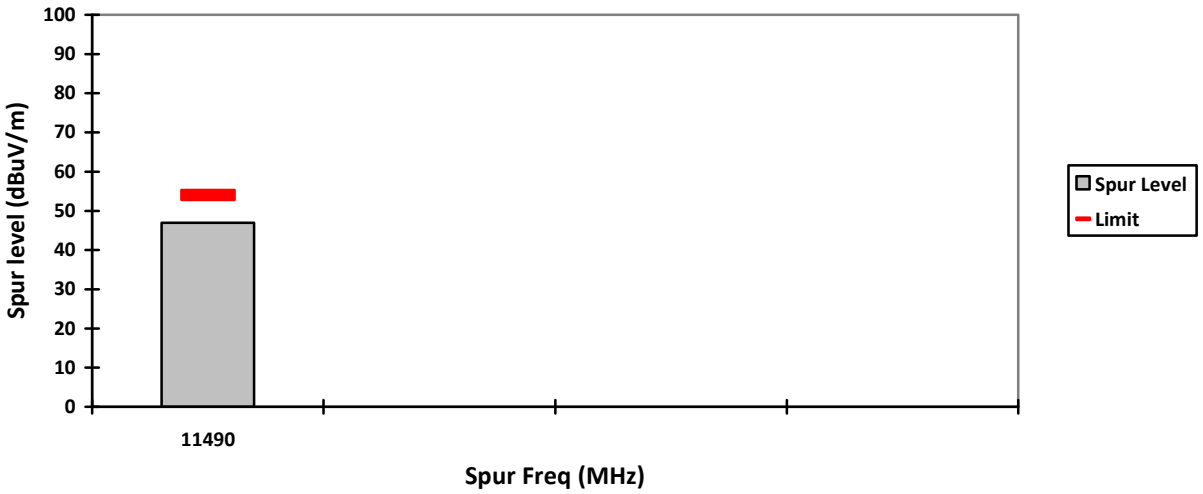

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11490
17235
22980
28725
34470
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11490
17235
22980
28725
34470
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
Test Channel: Mid Test Frequency: 5785.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

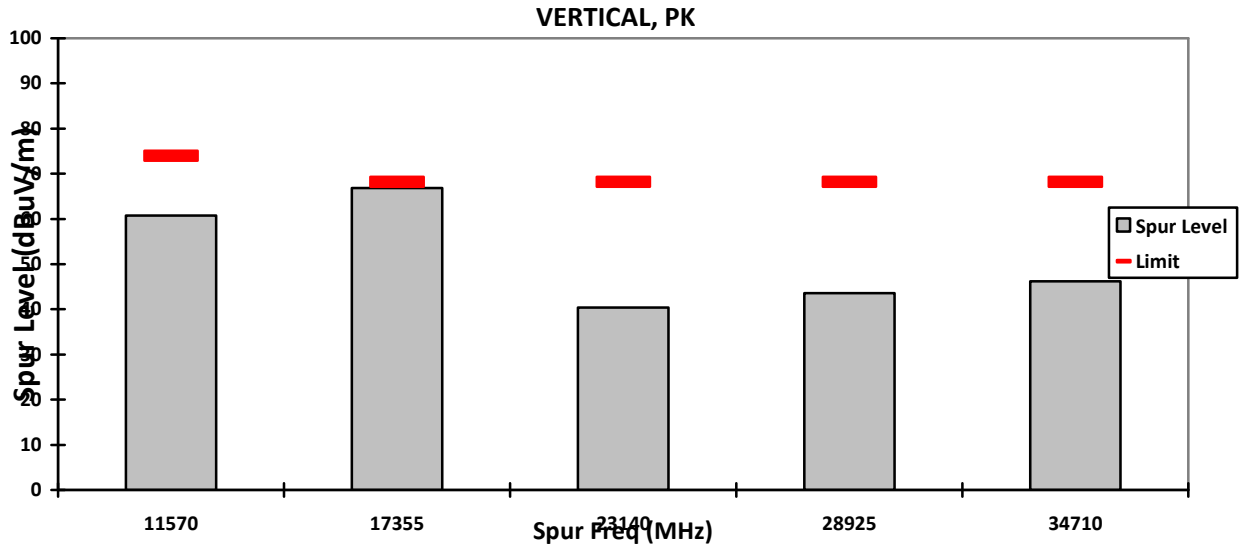
Radiated Emission (Mid Channel) tabular data

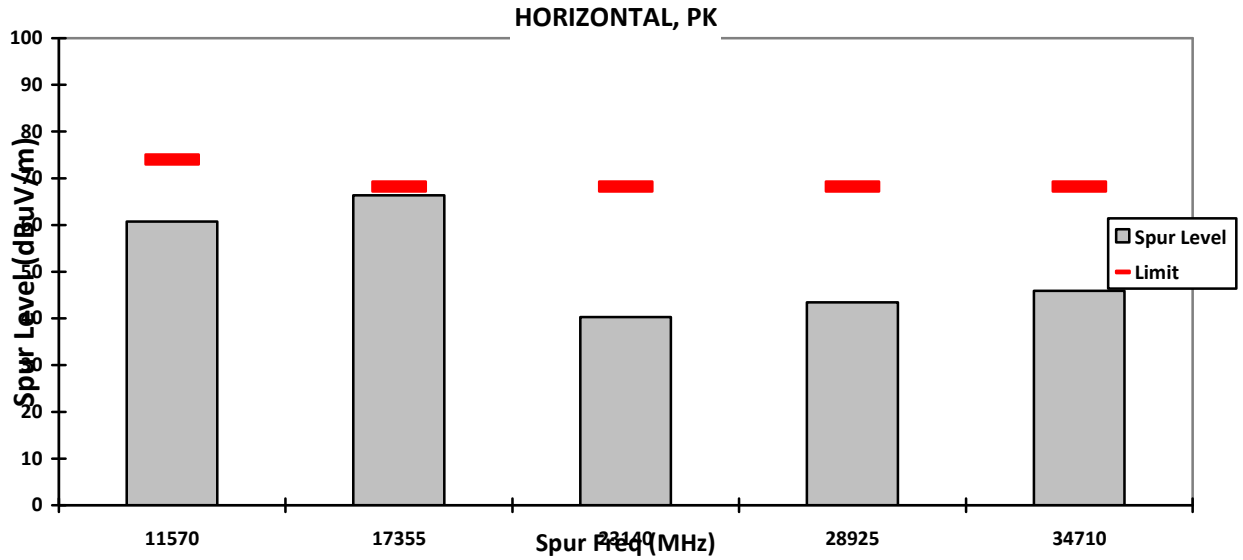
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11570	-	60.7181**	46.7691**	-	74.0000	54.0000	-	13.2819	7.2309	-
17355	-	66.8285**	-	-	68.2000	-	-	1.3715	-	-
23140	-	40.3578**	-	-	68.2000	-	-	27.8422	-	-
28925	-	43.5936**	-	-	68.2000	-	-	24.6064	-	-
34710	-	46.1820**	-	-	68.2000	-	-	22.0180	-	-
Horizontal Radiated Emission Result										
11570	-	60.7208**	46.7690**	-	74.0000	54.0000	-	13.2792	7.2310	-
17355	-	66.3763**	-	-	68.2000	-	-	1.8237	-	-
23140	-	40.2982**	-	-	68.2000	-	-	27.9018	-	-
28925	-	43.4565**	-	-	68.2000	-	-	24.7435	-	-
34710	-	45.9007**	-	-	68.2000	-	-	22.2993	-	-

Remarks: Pass Result	Marginal Result	Fail Result

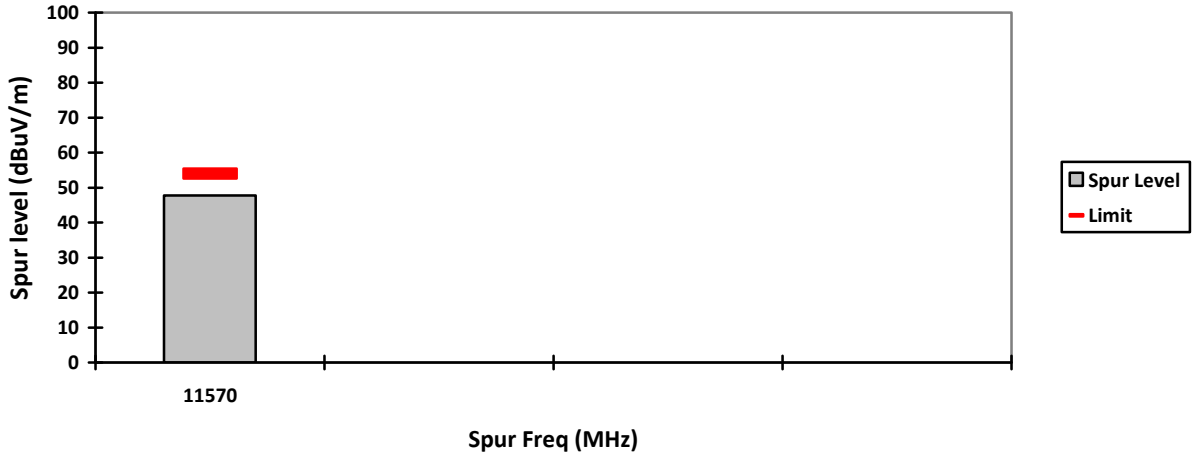
Temperature (degC): 24.1 Humidity (%): 70.3
Test Performed by: Nazrin&Qawiman Test Date: Thu, 18 May, 2023
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

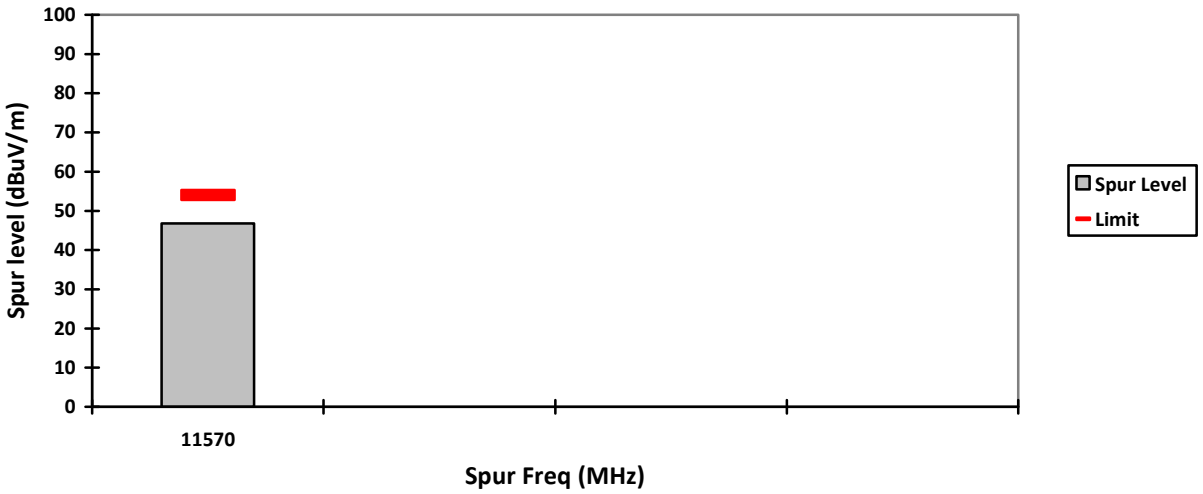

VERTICAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11570
17355
23140
28925
34710
Spur Freq (MHz)
Spur Level
Limit


HORIZONTAL, PK
Spur Level (dBuV/m)
100
90
80
70
60
50
40
30
20
10
0
11570
17355
23140
28925
34710
Spur Freq (MHz)
Spur Level
Limit

VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission
Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00028
Battery: PMNN4813A Accessory: AN000421A01
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

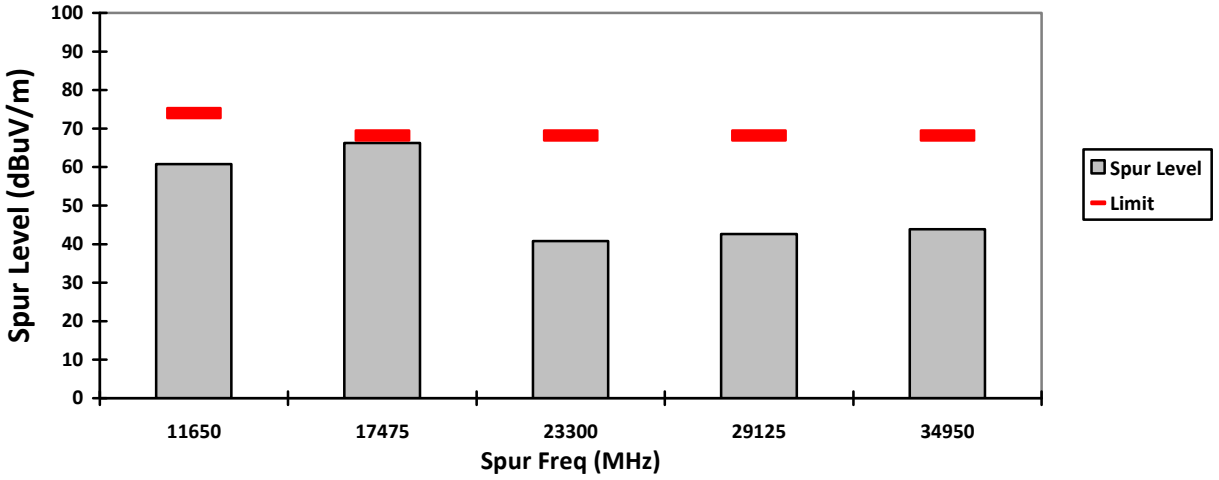
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
11650	-	60.8123**	46.6726**	-	74.0000	54.0000	-	13.1877	7.3274	-
17475	-	66.2555**	-	-	68.2000	-	-	1.9445	-	-
23300	-	40.8204**	-	-	68.2000	-	-	27.3796	-	-
29125	-	42.6455**	-	-	68.2000	-	-	25.5545	-	-
34950	-	43.9027**	-	-	68.2000	-	-	24.2973	-	-
Horizontal Radiated Emission Result										
11650	-	60.7376**	46.6728**	-	74.0000	54.0000	-	13.2624	7.3272	-
17475	-	66.8673**	-	-	68.2000	-	-	1.3327	-	-
23300	-	41.1104**	-	-	68.2000	-	-	27.0896	-	-
29125	-	44.1539**	-	-	68.2000	-	-	24.0461	-	-
34950	-	45.5226**	-	-	68.2000	-	-	22.6774	-	-

Remarks: Pass Result	Marginal Result	Fail Result

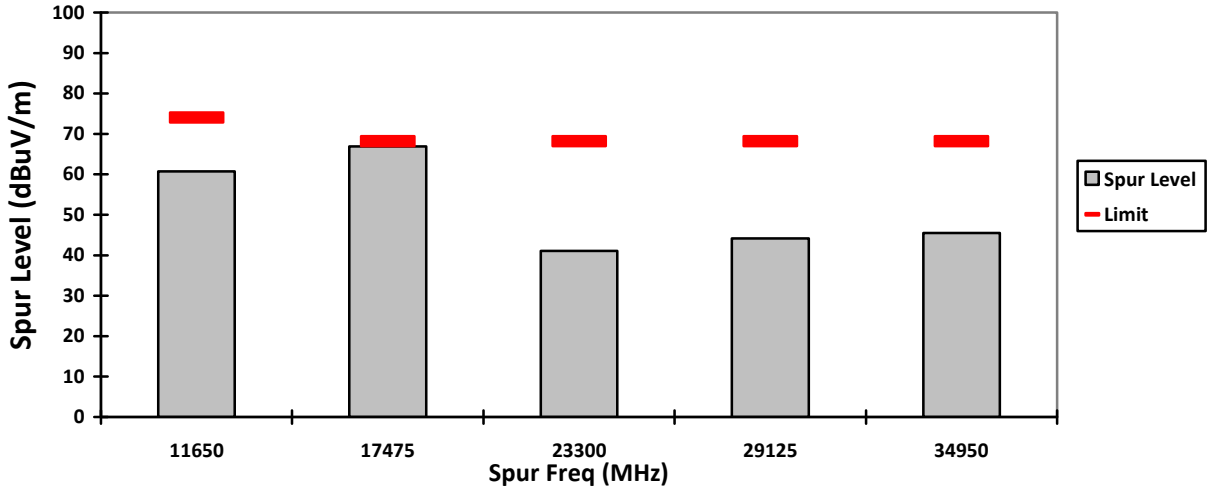
Temperature (degC): 24.1 **Humidity (%): 70.3**
Test Performed by: Nazrin&Qawiman **Test Date: Thu, 18 May, 2023**
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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.**

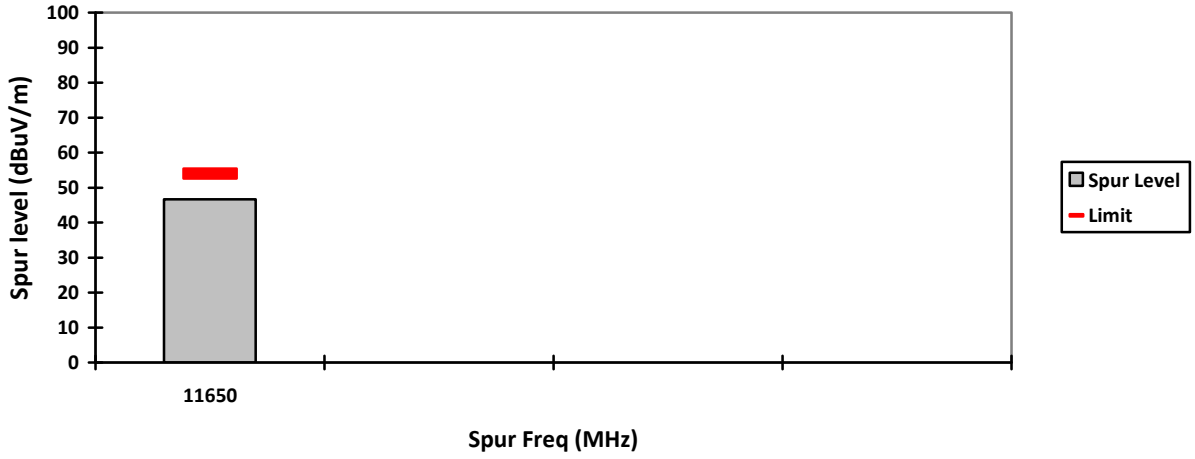
VERTICAL, PK



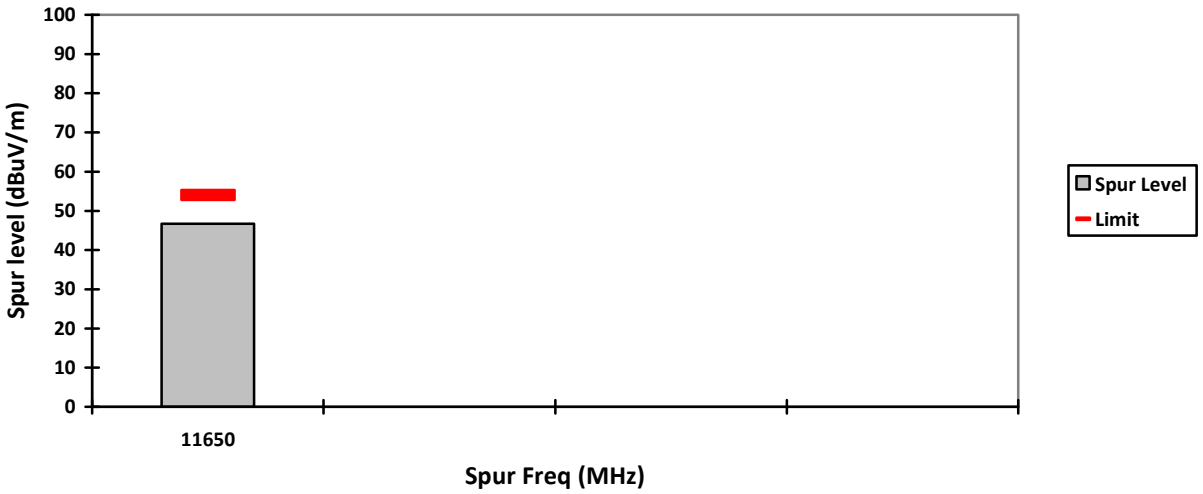
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25KDF9PW6AN S/N: 287TZH0154 EMC SR ID#: 29844-EMC-00029

Battery: PMNN4813A Accessory: Radio (287TZH0149, 287TZH0056), AN000421A01, PMPN4593A-C10, 3087791G01, PS000242A01

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

Worst Case Plane: Y-Plane (802.11a)

Radiated Emission 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)
31.1408	21.1029	-	-	40.0000	-	-	18.8971	-	-	-
41.5080	19.7961 *	-	-	40.0000	-	-	20.2039	-	-	-
54.7305	13.9737 *	-	-	40.0000	-	-	26.0263	-	-	-
71.4605	25.6711	-	-	40.0000	-	-	14.3289	-	-	-
104.1889	21.4136 *	-	-	43.5000	-	-	22.0864	-	-	-
129.3863	19.1391 *	-	-	43.5000	-	-	24.3609	-	-	-
165.5006	15.1354 *	-	-	43.5000	-	-	28.3646	-	-	-
259.8166	17.1485 *	-	-	46.0000	-	-	28.8515	-	-	-
Horizontal Radiated Emission Result										
30.6903	21.0300	-	-	40.0000	-	-	18.9700	-	-	-
41.4820	15.8195 *	-	-	40.0000	-	-	24.1805	-	-	-
53.8364	8.4267 *	-	-	40.0000	-	-	31.5733	-	-	-
70.7113	15.5373 *	-	-	40.0000	-	-	24.4627	-	-	-
104.4326	20.9679 *	-	-	43.5000	-	-	22.5321	-	-	-
130.0896	14.6756 *	-	-	43.5000	-	-	28.8244	-	-	-
165.3048	18.5893 *	-	-	43.5000	-	-	24.9107	-	-	-
259.0453	19.8333 *	-	-	46.0000	-	-	26.1667	-	-	-

Remarks: Pass Result	Marginal Result	Fail Result

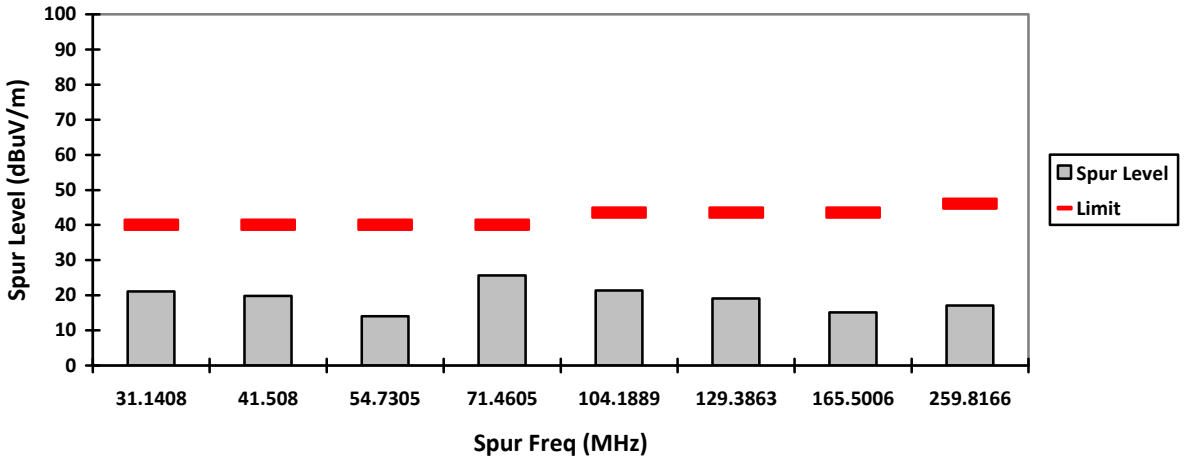
Temperature (degC): 24.0 Humidity (%): 70.4

Test Performed by: Nazrin&Qawiman Test Date: Tue, 23 May, 2023

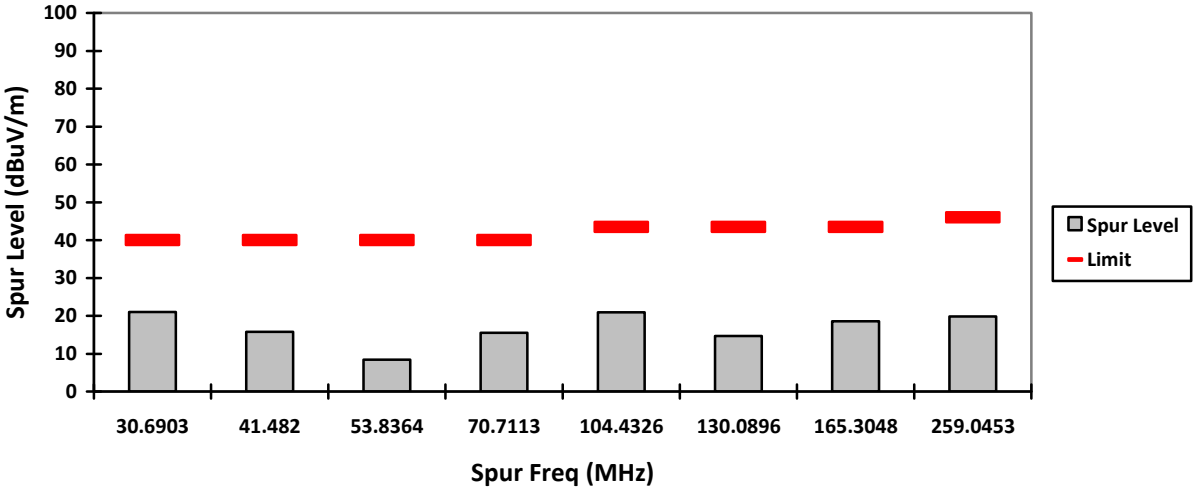
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

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

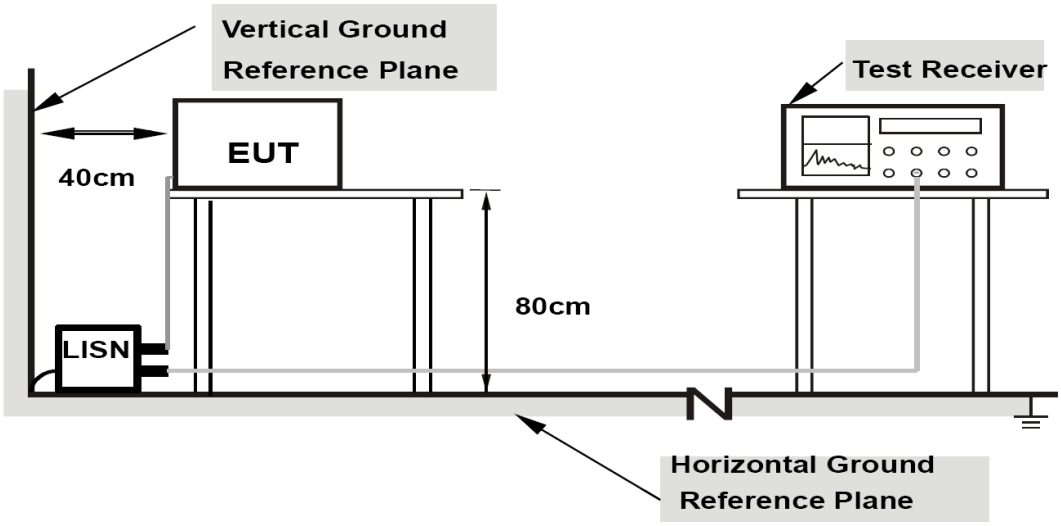


HORIZONTAL, QPK



7.8. AC Powerline Conducted Emission

7.8.1. Test Setup



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

7.8.2. Test Limits

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

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

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

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

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

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

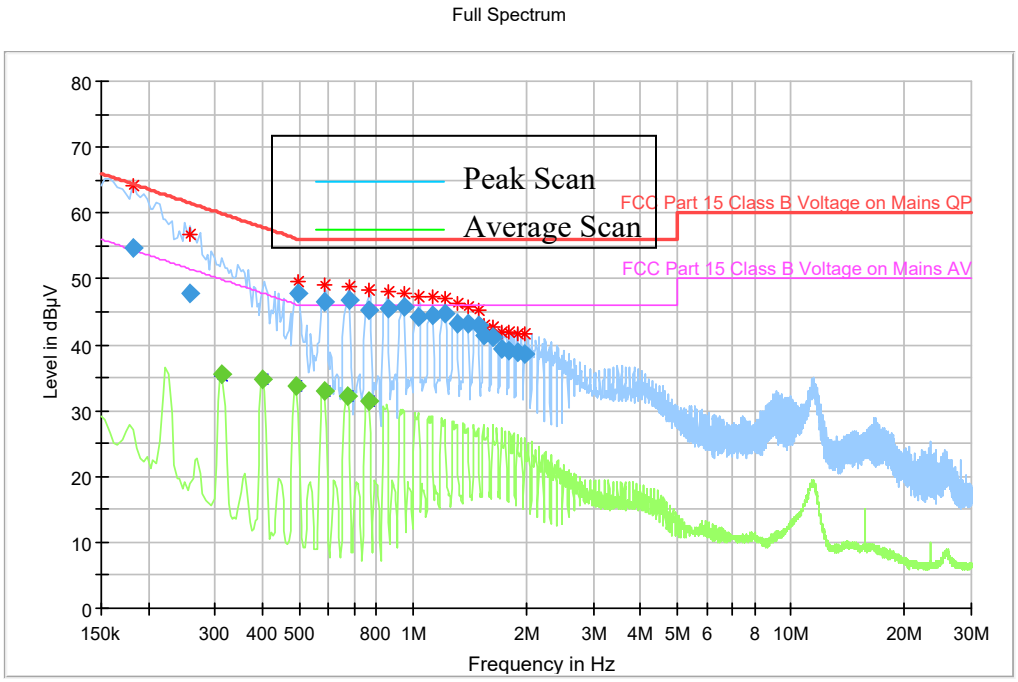
Table 2: Limits for Conducted Disturbance at the Mains Ports of Class B ITE

7.8.3. Test Data

Report ID.:	:	29844-EMC-00028
Ambient Temperature:	:	19.4 °C
Humidity:	:	57.4 %RH
Tester:	:	Shidee
Date of test:	:	18 May 2023

120Vac SUC

1) Charger + Radio Tx with WiFi 5GHz



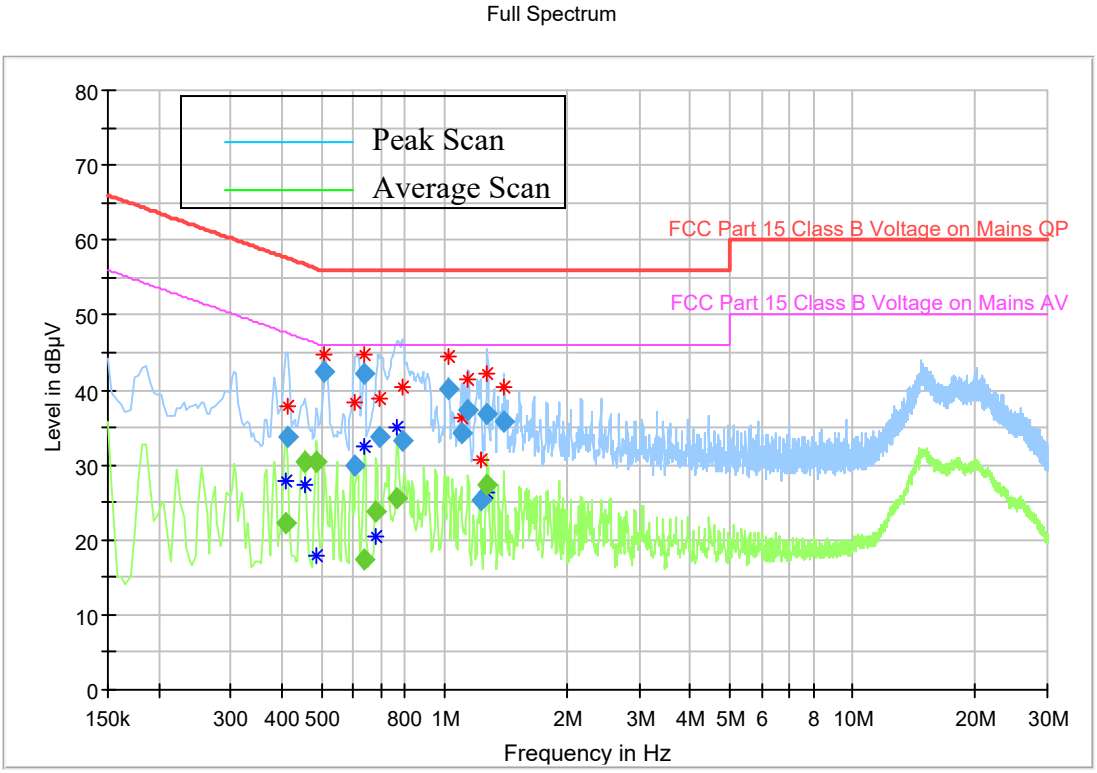
Quasipeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)	Comment
0.182000	54.66	---	64.39	9.73	1000.0	9.000	N	ON	10.5	Pass
0.258000	47.84	---	61.50	13.66	1000.0	9.000	N	ON	10.2	Pass
0.314000	---	35.43	49.86	14.44	1000.0	9.000	L1	ON	10.3	Pass
0.402000	---	34.77	47.81	13.04	1000.0	9.000	L1	ON	10.3	Pass
0.490000	---	33.85	46.17	12.32	1000.0	9.000	L1	ON	10.3	Pass
0.498000	47.71	---	56.03	8.33	1000.0	9.000	N	ON	10.3	Pass
0.582000	---	33.02	46.00	12.98	1000.0	9.000	L1	ON	10.3	Pass
0.586000	46.41	---	56.00	9.59	1000.0	9.000	N	ON	10.3	Pass
0.674000	---	32.26	46.00	13.74	1000.0	9.000	L1	ON	10.3	Pass
0.678000	46.77	---	56.00	9.23	1000.0	9.000	N	ON	10.3	Pass
0.762000	---	31.55	46.00	14.45	1000.0	9.000	L1	ON	10.3	Pass
0.766000	45.22	---	56.00	10.78	1000.0	9.000	N	ON	10.3	Pass
0.858000	45.37	---	56.00	10.63	1000.0	9.000	N	ON	10.3	Pass
0.950000	45.73	---	56.00	10.27	1000.0	9.000	N	ON	10.3	Pass
1.038000	44.22	---	56.00	11.78	1000.0	9.000	N	ON	10.2	Pass
1.130000	44.60	---	56.00	11.40	1000.0	9.000	N	ON	10.2	Pass
1.222000	44.78	---	56.00	11.22	1000.0	9.000	N	ON	10.2	Pass
1.310000	43.14	---	56.00	12.86	1000.0	9.000	N	ON	10.2	Pass
1.402000	43.17	---	56.00	12.83	1000.0	9.000	N	ON	10.2	Pass
1.494000	43.00	---	56.00	13.00	1000.0	9.000	N	ON	10.2	Pass
1.538000	41.48	---	56.00	14.52	1000.0	9.000	L1	ON	10.2	Pass
1.626000	41.25	---	56.00	14.75	1000.0	9.000	L1	ON	10.2	Pass
1.710000	39.27	---	56.00	16.73	1000.0	9.000	L1	ON	10.2	Pass
1.798000	39.16	---	56.00	16.84	1000.0	9.000	L1	ON	10.2	Pass
1.886000	38.89	---	56.00	17.11	1000.0	9.000	L1	ON	10.2	Pass
1.974000	38.64	---	56.00	17.36	1000.0	9.000	L1	ON	10.2	Pass

*** Expanded Uncertainty (U) = +/- 3.48dB**

120Vac MUC

2) Charger + Radio Tx with WiFi 5GHz



Quasipeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)	Comment
0.410000	---	22.24	47.65	25.40	1000.0	9.000	N	ON	10.3	Pass
0.414000	33.77	---	57.57	23.79	1000.0	9.000	L1	ON	10.3	Pass
0.454000	---	30.52	46.80	16.28	1000.0	9.000	N	ON	10.3	Pass
0.486000	---	30.49	46.24	15.75	1000.0	9.000	N	ON	10.3	Pass
0.510000	42.41	---	56.00	13.59	1000.0	9.000	N	ON	10.3	Pass
0.606000	29.91	---	56.00	26.09	1000.0	9.000	L1	ON	10.3	Pass
0.638000	42.15	---	56.00	13.85	1000.0	9.000	N	ON	10.3	Pass
0.638000	---	17.26	46.00	28.74	1000.0	9.000	N	ON	10.3	Pass
0.682000	---	23.85	46.00	22.15	1000.0	9.000	N	ON	10.3	Pass
0.694000	33.72	---	56.00	22.28	1000.0	9.000	L1	ON	10.3	Pass
0.766000	---	25.60	46.00	20.40	1000.0	9.000	N	ON	10.3	Pass
0.790000	33.31	---	56.00	22.69	1000.0	9.000	N	ON	10.3	Pass
1.022000	40.06	---	56.00	15.94	1000.0	9.000	L1	ON	10.2	Pass
1.102000	34.16	---	56.00	21.84	1000.0	9.000	N	ON	10.2	Pass
1.146000	37.23	---	56.00	18.77	1000.0	9.000	L1	ON	10.2	Pass
1.230000	25.27	---	56.00	30.73	1000.0	9.000	N	ON	10.2	Pass
1.274000	---	27.30	46.00	18.70	1000.0	9.000	L1	ON	10.2	Pass
1.274000	36.72	---	56.00	19.28	1000.0	9.000	L1	ON	10.2	Pass
1.402000	35.69	---	56.00	20.31	1000.0	9.000	L1	ON	10.2	Pass

*** Expanded Uncertainty (U) = +/- 3.48dB**

END OF TEST REPORT