MOTOROLA SOLUTIONS

CERTIFICATE 2518.08

MS ISO/IEC 17025
TESTING
SAMM NO. 0825

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 TEST REPORT

Report Revision : Rev.A

Date/s Tested	:	02-Aug-2022 - 31-Aug-2022
Manufacturer/Location	:	Motorola Solutions Malaysia SDN BHD
Manufacturer Address	:	Plot 2A Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia
Requestor	:	CADOGAN SEAN
Product Type	:	Hand-held
Product Version (PMN)	:	APX N70
Model Number (HVIN)	:	H35UCT9PW8AN
Frequency Band	:	5180-5825 MHz
Firmware Version (FVIN)	:	D00.00.45
Applicant Name	:	Motorola Solutions Inc
Applicant Address	:	8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
FCC Registrations	:	461337

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:

GAN BOON TEONG
Technician

Approved Signatory:

VINCENT FOONG CHUEN KIT
Responsible Engineer

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev. A	Initial Report	**31-Aug-2022**	**Gan Boon Teong**

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: 18.627dBm (72.895mW) 802.11n20/ac20: 18.437dBm (69.775mW) 802.11n40/ac40: 18.548dBm (71.581mW) 802.11ac80: 18.173dBm (65.660mW)	022TYP0086	Gan
15.407(a) (1/2/3)	RSS 247 6.2	Maximum Power Spectral Density	Pass	NA	022TYP0086	Gan
15.407 (e)	RSS 247 6.2.4	6dB Bandwidth	Pass	Worst case emission: a20: 16.692MHz (16M7D1D) n20/ac20: 17.881MHz (17M9D1D) n40/ac40: 36.33MHz (36M3D1D) ac80: 75.736MHz (75M7D1D)	022TYP0086	Gan
15.407 (g)	RSS Gen 6.11	Frequency Stability	Pass	NA	022TYP0086	Gan
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Band Edge Radiated Spurious Emission Measurement	Pass	Worst case emission: 64.7722dBuV/m (margin: 3.4278dBuV/m)	022TYP0004	Qawiman&Nazrin
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Radiated Spurious Emission Measurement	Pass	Worst case emission: 27.1237 dBuV/m (margin: 12.8763 dB)	022TYP0004	Qawiman&Nazrin
15.207 15.407 (b)(6)	RSS Gen 8.8	AC Powerline Conducted Emission	Pass	NA	022TYP0018 022TYP0004	Azil
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 ~ 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
SPECTRUM ANALYZER	E440A	MY48250919	30-Sep-21	30-Sep-22
CHAMBER	SH-641	92003820	8-Jul-22	8-Jul-23
POWER SUPPLY	6652A	MY40001436	22-Nov-21	22-Nov-22
PULSE POWER METER	ML2495A	1845014	3-May-22	3-May-23
PULSE SENSOR	MA2411B	1726287	3-May-22	3-May-23
N to N RF Cable # 1	SF126/11N/11N	NA	NA	NA

Radiated Emission Station (SW Version: EMC FCC RE v1.6.4)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
DRG HORN FREQ.	SAS-571	720	06-Apr-21	06-Apr-23
DRG HORN FREQ.	SAS-571	719	13-Sep-21	13-Sep-22
Advanced Power System - Dynamic DC Power Supply, 120V, 16.7A, 2000W	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-Nov-21	5-Nov-22
5m SEMI-ANECHOIC CHAMBER	S800-HX	J2308	Not Required	Not Required
BILOG ANTENNA	CBL6112B	2863	22-Jun-22	22-Jun-23
BILOG ANTENNA	CBL6112D	30991	05-Oct-21	05-Oct-22
DATA LOGGER THERMOHYGROMETER	SDL500	A.016800	13-Jun-21	13-Jun-23
SYSTEM CONTROLLER	SC104V	050806-1	Not Required	Not Required
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	Not Required	Not Required
ANTENNA POSITIONING TOWER	TLT2	NA	Not Required	Not Required
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170255	18-Feb-22	18-Feb-23
PREAMPLIFIER 18-40GHz	BBV9721	9721-007	Not Required	Not Required
PREAMPLIFIER	PAM-0118P	361	11-Sep-20	11-Sep-23
LOOP ANTENNA	6502	00208416	8-Oct-21	8-Oct-22

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

Description	Model	Serial Number	Calibration Date	Calibration Due Date
ETHERNET TEMPERATURE & HUMIDITY SENSOR TRANSMITTER	iTHX-SD	M21280391	20-Nov-21	20-Nov-22
V-NETWORK 2-LINE	ENV216	101135	5-Oct-21	5-Oct-22
EMI TEST RECEIVER	ESCI	10025	5-Feb-21	5-Nov-22
POWER SUPPLY	61604	616040003502	07-Dec-21	07-Dec-22

4.0. General Information

General Description of EUT:

Product	Hand-held
Brand	Motorola Solutions
Test Model	APX N70
Power Supply Rating	7.5Vdc
Mode of operation	WLAN 5GHz
Modulation Type	QPSK, BPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	OFDM
Transfer Rate	802.11a: 6.0/9.0/12.0/18.0/24.0/36.0/48.0/54.0 Mbps 802.11n: up to MCS15 802.11ac: up to MCS9
Operating Frequency	5.180 ~ 5.240 GHz, 5.260 ~ 5.320 GHz, 5.50 ~ 5.720 GHz, 5.745 ~ 5.825 GHz
Output Power (26 EBW or 99% OBW)	79.43 mW for 5.180 ~ 5.240 GHz 79.43 mW for 5.260 ~ 5.320 GHz 79.43 mW for 5.50 ~ 5.720 GHz 79.43 mW for 5.745 ~ 5.825 GHz
Antenna Type	Stamped Metalwith 3.1 to 4.6 dBi gain
SW Version	D00.00.45

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

Item	Brand	Model or P/N
Hi Cap 4400mAH (using RN 2170 Li-Ion cell) Non-UL battery	MOTOROLA	PMNN4817A
GCAI-mini Programming & Test Cable	MOTOROLA	PMKN4231A
7800 Whip 762-870MHz	MOTOROLA	AN000411A01
CHARGER DESKTOP MULTI UNIT IMPRES 2 6 DISPLAYS INT PS US	MOTOROLA	PMPN4591A

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:

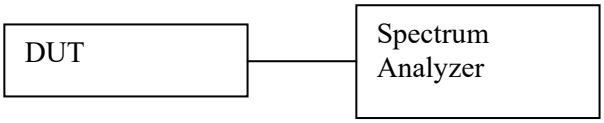
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	23.5°C, 69.9% RH	7.5V DC, 120/240V AC	Nazrin/Qawiman
RE<1G	23.5°C, 69.9% RH	7.5V DC, 120/240V AC	Nazrin/Qawiman
PLC	23°C, 69.3% RH	120/240V AC	Azil
APCM	25°C, 50% RH	7.5V DC	Gan

Duty Cycle of Test Signal

802.11a and 802.11n(HT20) : Duty cycle of test signal is >98%.
802.11n (HT40) and 802.11ac(VHT80): Duty cycle of test signal is <98%.
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

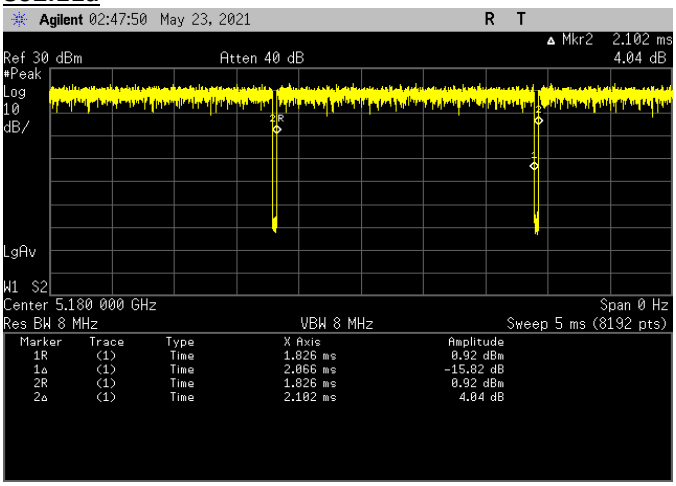
6.0.1. Test Setup



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

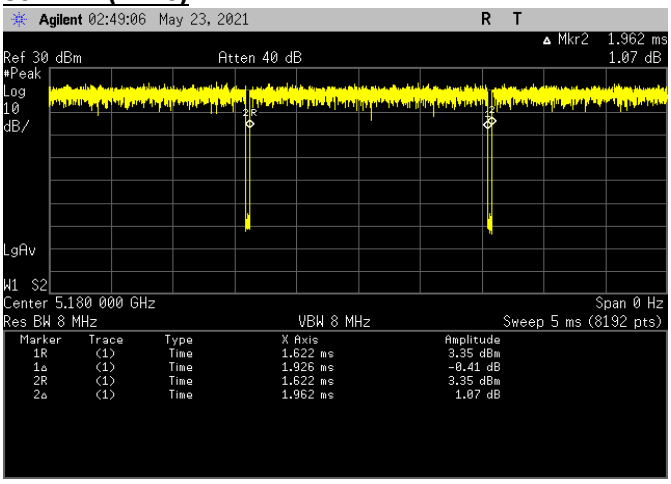
802.11a



On time	2.066	ms
On + off time	2.102	ms
Duty Cycle	0.9829	
Duty Cycle Factor	0.075	

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

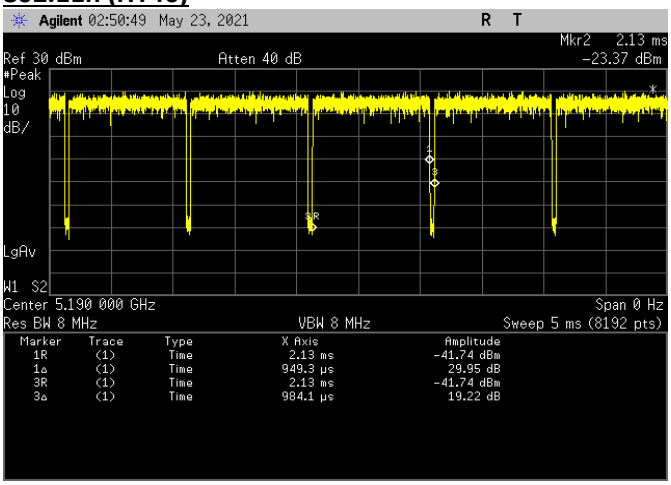
802.11n (HT20)



On time	1.926	ms
On + off time	1.962	ms
Duty Cycle	0.9817	
Duty Cycle Factor	0.080	

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

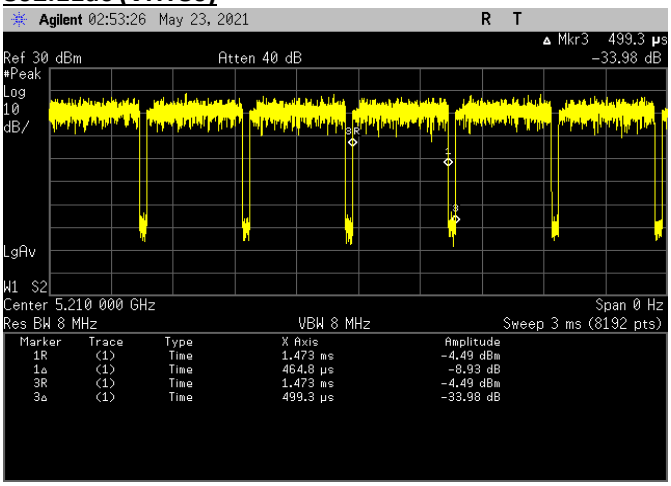
802.11n (HT40)



On time	0.9493	ms
On + off time	0.9841	ms
Duty cycle	0.9646	
Duty Cycle factor	0.156	

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

802.11ac (VHT80)



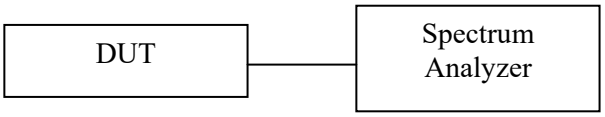
On time	0.4648	ms
On + off time	0.4993	ms
Duty cycle	0.9309	
Duty Cycle factor	0.311	

*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

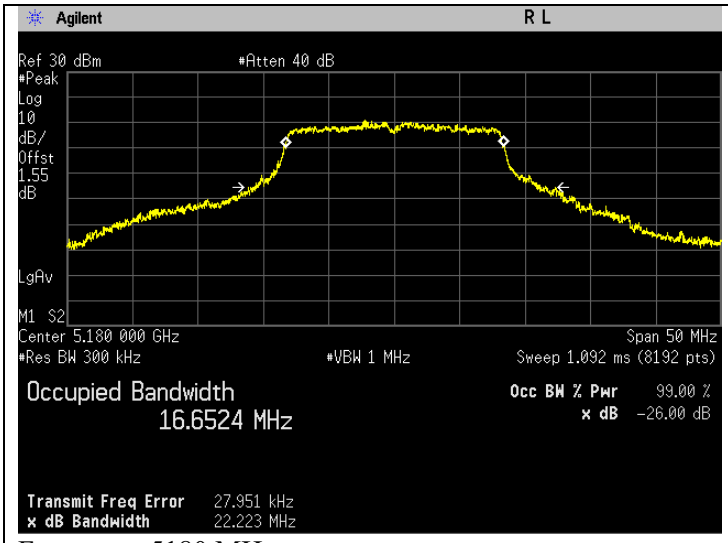
Not applicable.

7.1.3. Test Data

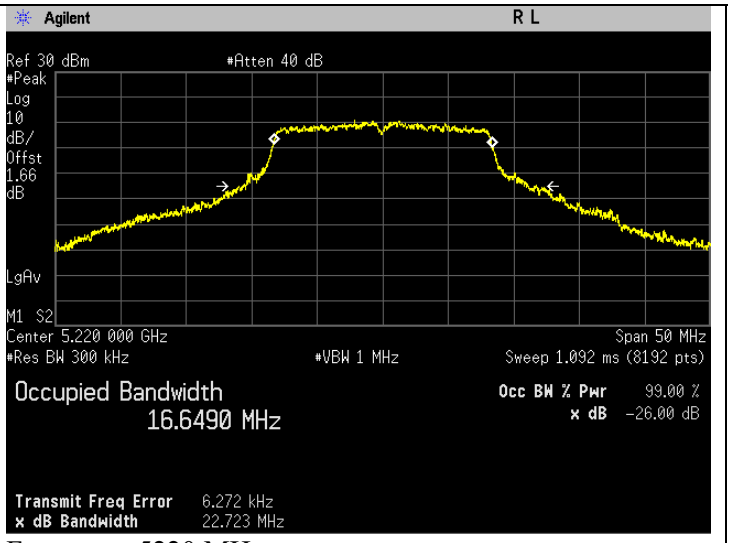
802.11a

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	22.223	Pass	16.648	Pass
5220	Mod Type: BPSK, Data Rate: 6	22.723	Pass	16.649	Pass
5240	Mod Type: BPSK, Data Rate: 6	22.130	Pass	16.649	Pass
5260	Mod Type: BPSK, Data Rate: 6	22.160	Pass	16.644	Pass
5300	Mod Type: BPSK, Data Rate: 6	23.368	Pass	16.680	Pass
5320	Mod Type: BPSK, Data Rate: 6	23.516	Pass	16.692	Pass
5500	Mod Type: BPSK, Data Rate: 6	22.625	Pass	16.611	Pass
5580	Mod Type: BPSK, Data Rate: 6	22.394	Pass	16.636	Pass
5700	Mod Type: BPSK, Data Rate: 6	22.676	Pass	16.617	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-2C	15.798	Pass	13.322	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-3	5.798	Pass	3.322	Pass
5745	Mod Type: BPSK, Data Rate: 6	21.834	Pass	16.630	Pass
5785	Mod Type: BPSK, Data Rate: 6	21.852	Pass	16.629	Pass
5825	Mod Type: BPSK, Data Rate: 6	22.200	Pass	16.614	Pass

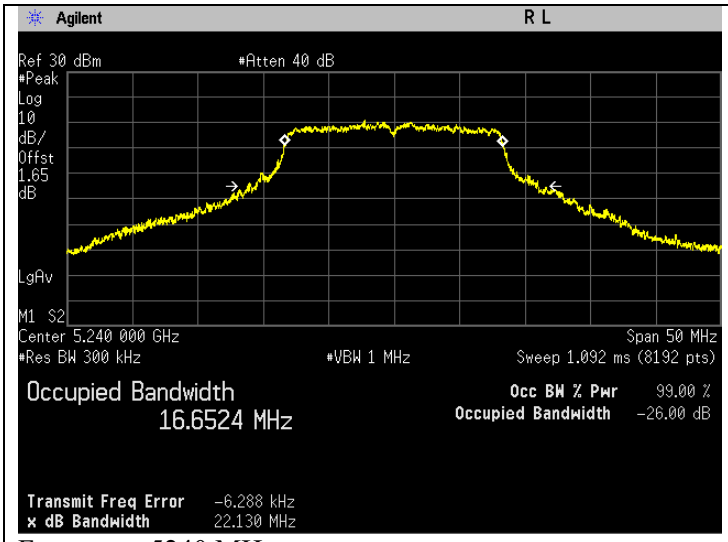
26 dB Bandwidth/ 99% Bandwidth



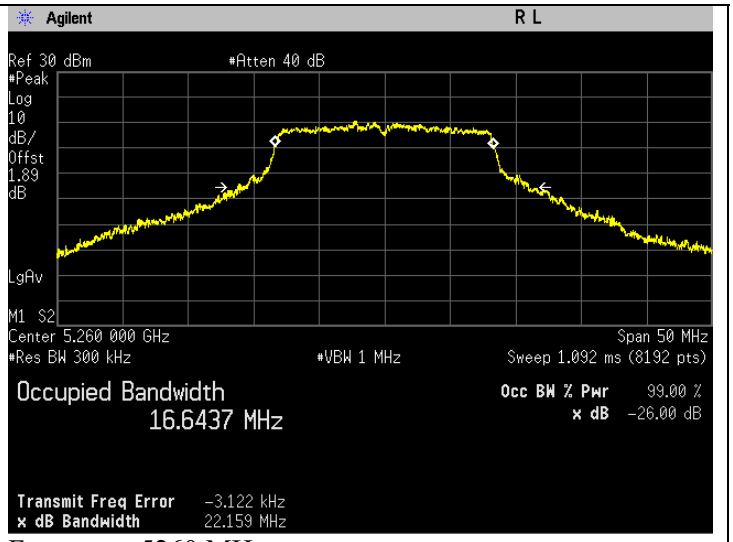
Frequency 5180 MHz



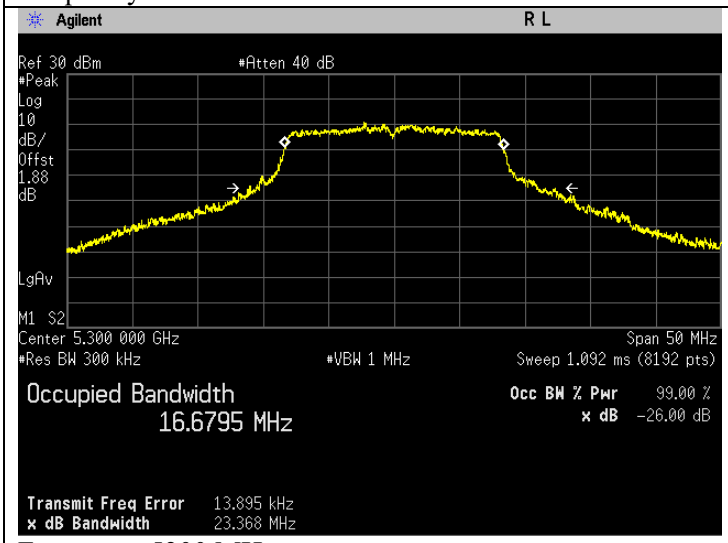
Frequency 5220 MHz



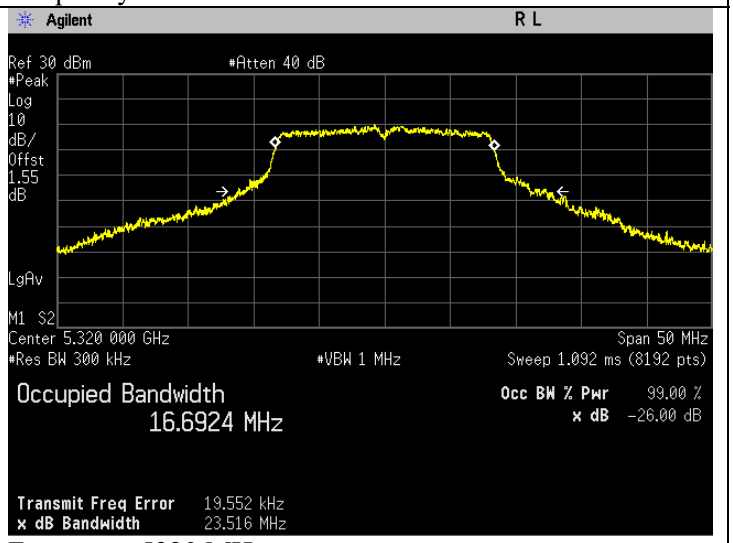
Frequency 5240 MHz



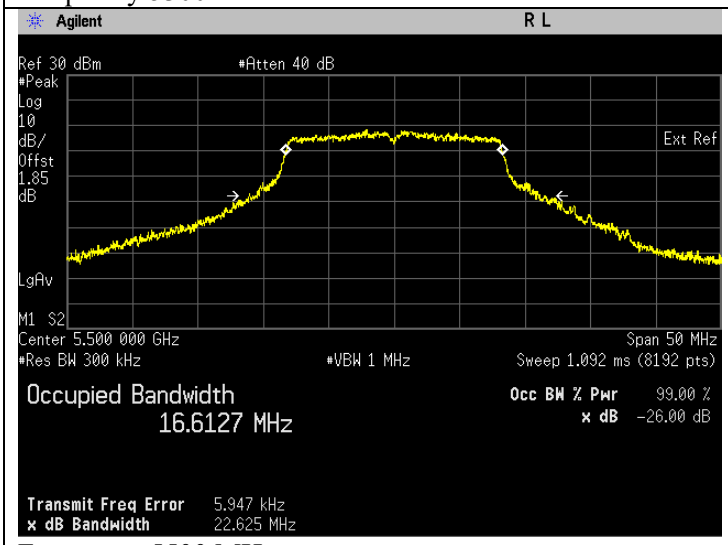
Frequency 5260 MHz



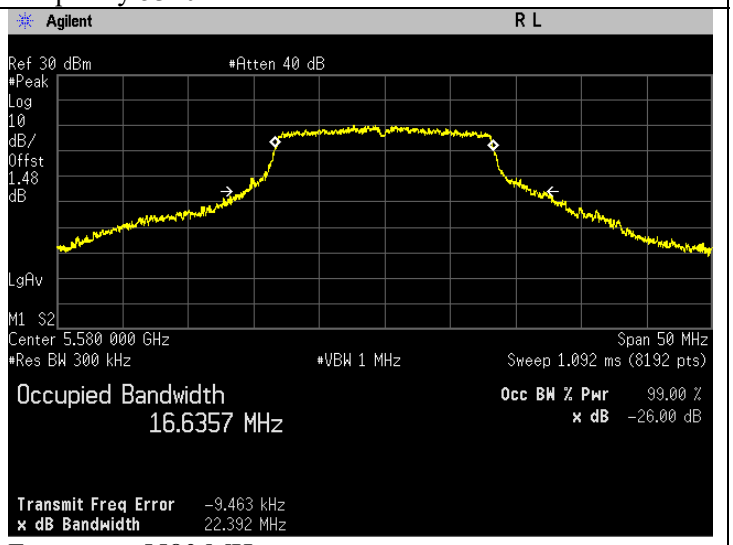
Frequency 5300 MHz



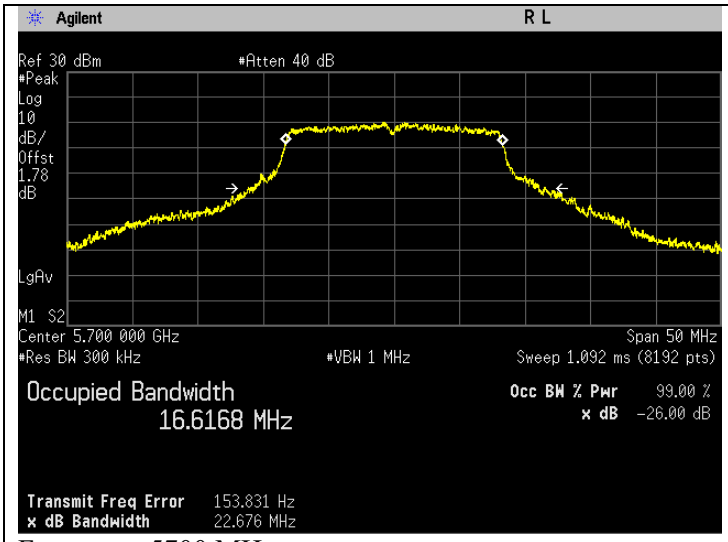
Frequency 5320 MHz



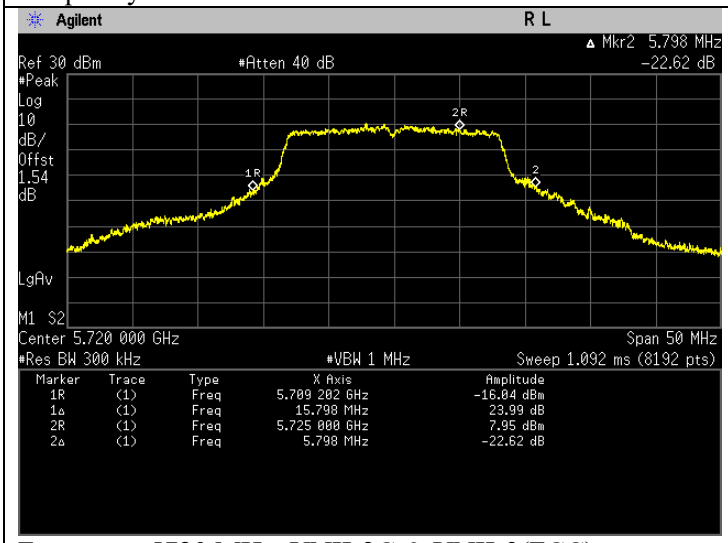
Frequency 5500 MHz



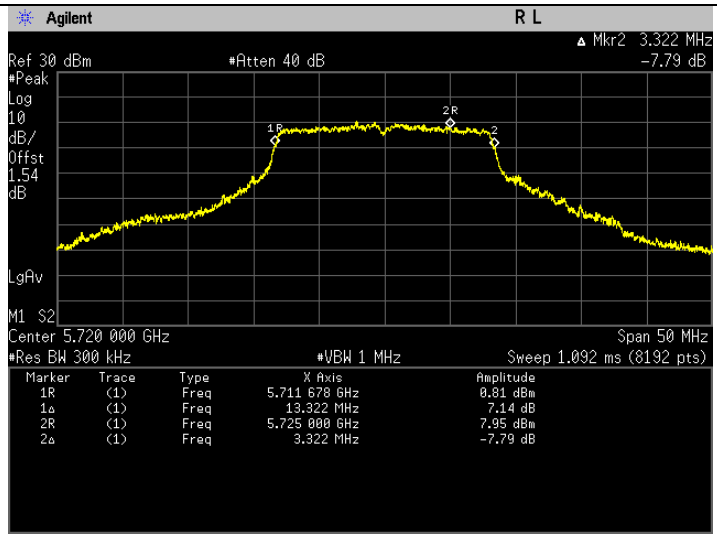
Frequency 5580 MHz



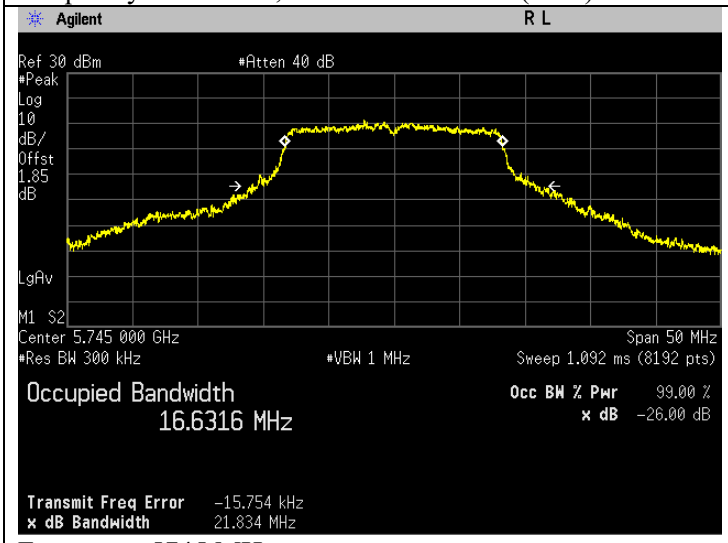
Frequency 5700 MHz



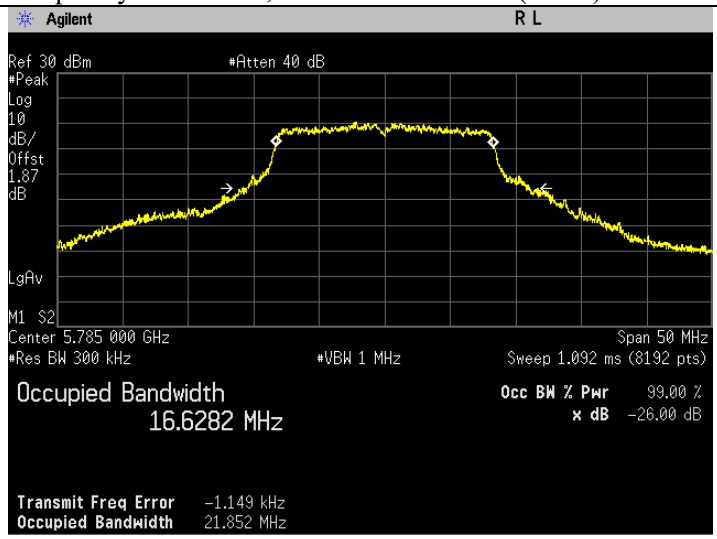
Frequency 5720 MHz, UNII-2C & UNII-3(FCC)



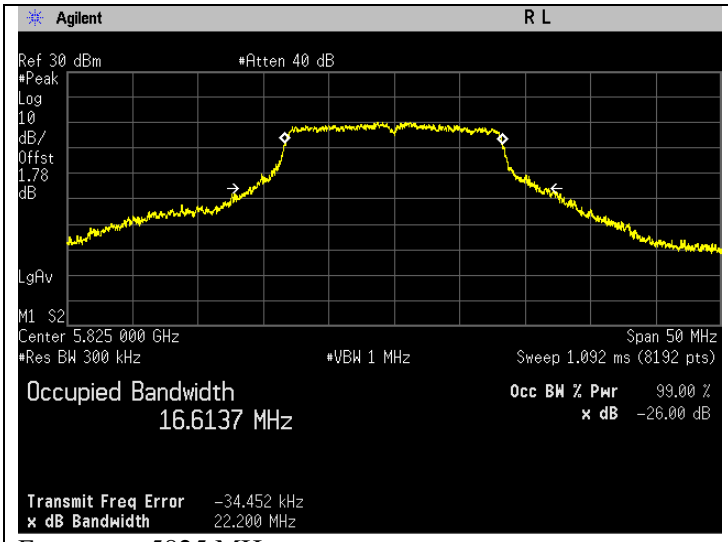
Frequency 5720 MHz, UNII-2C & UNII-3 (ISED)



Frequency 5745 MHz



Frequency 5785 MHz

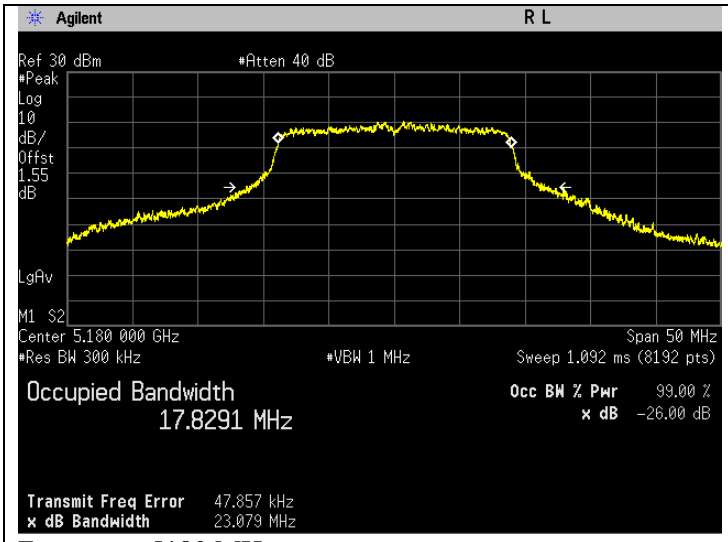


Frequency 5825 MHz

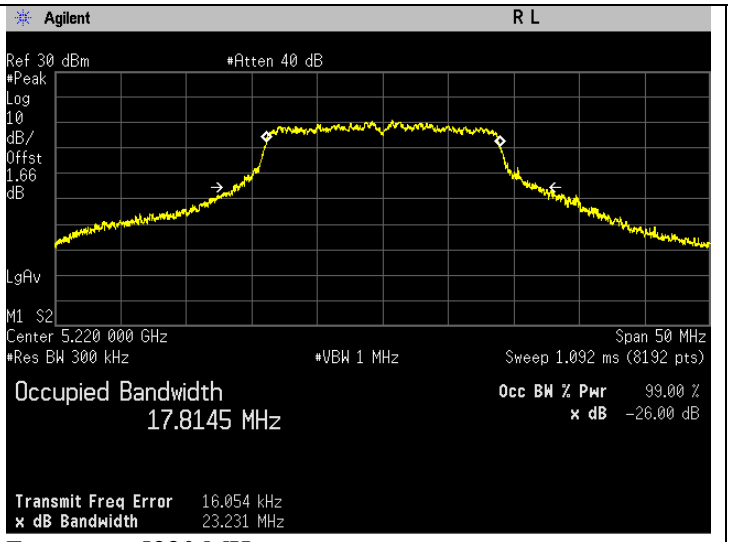
802.11n (HT20)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.079	Pass	17.830	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.231	Pass	17.812	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.415	Pass	17.802	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.638	Pass	17.821	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.534	Pass	17.881	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.364	Pass	17.839	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	24.190	Pass	17.845	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.939	Pass	17.823	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.797	Pass	17.840	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-2C	16.561	Pass	13.903	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-3	6.561	Pass	3.903	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.063	Pass	17.823	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.719	Pass	17.795	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.816	Pass	17.801	Pass

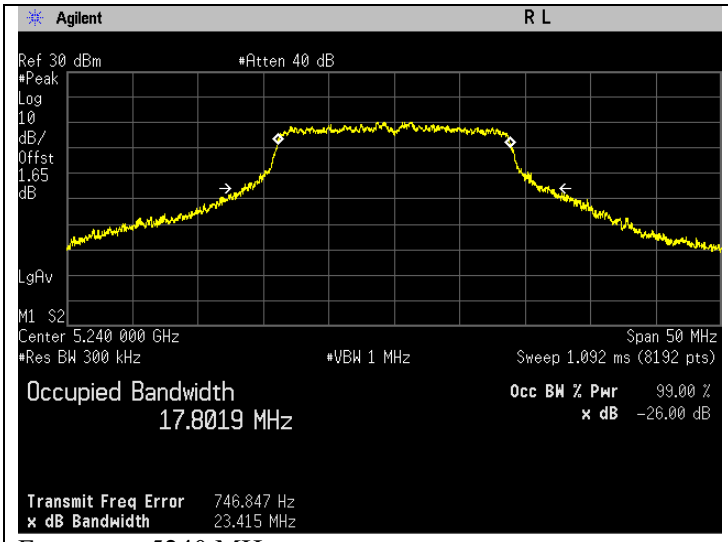
26 dB Bandwidth/ 99% Bandwidth



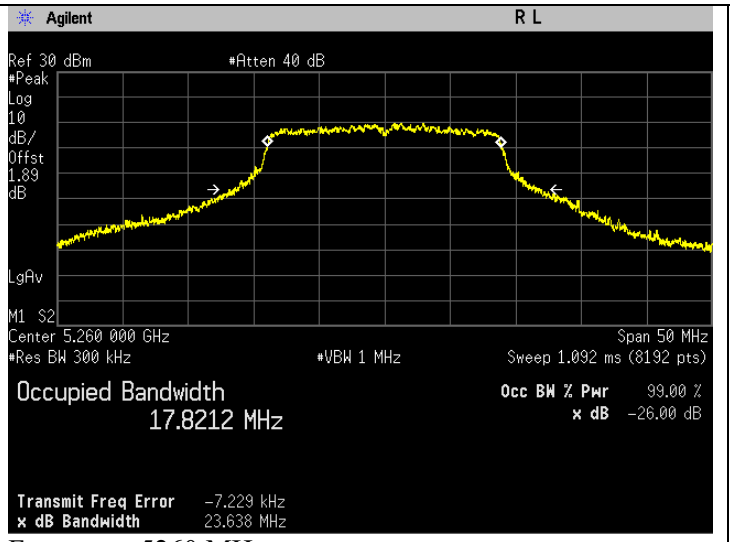
Frequency 5180 MHz



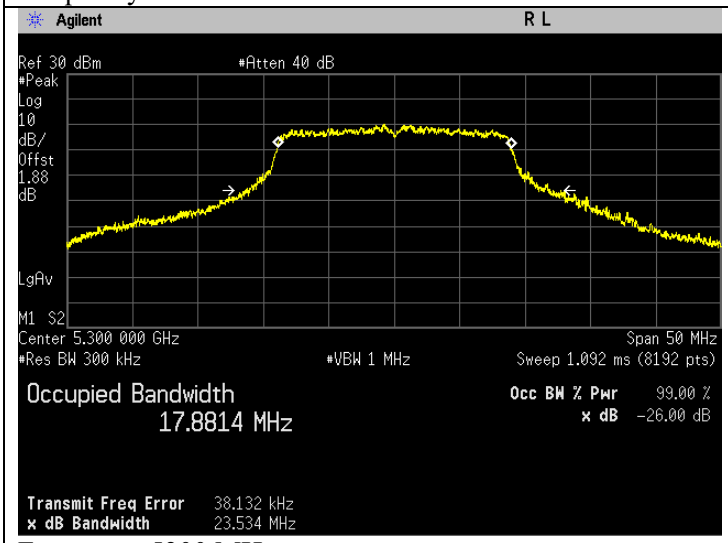
Frequency 5220 MHz



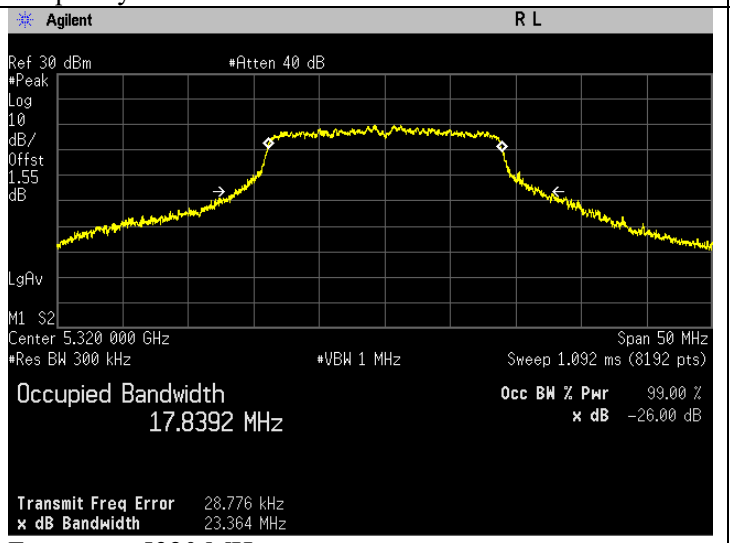
Frequency 5240 MHz



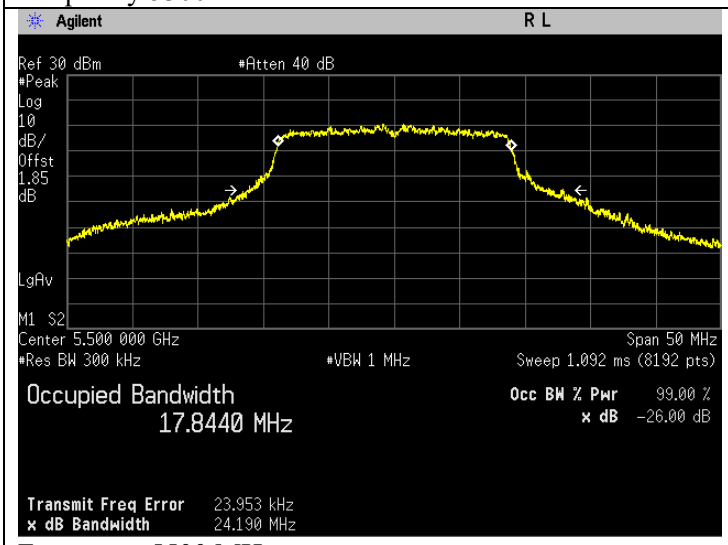
Frequency 5260 MHz



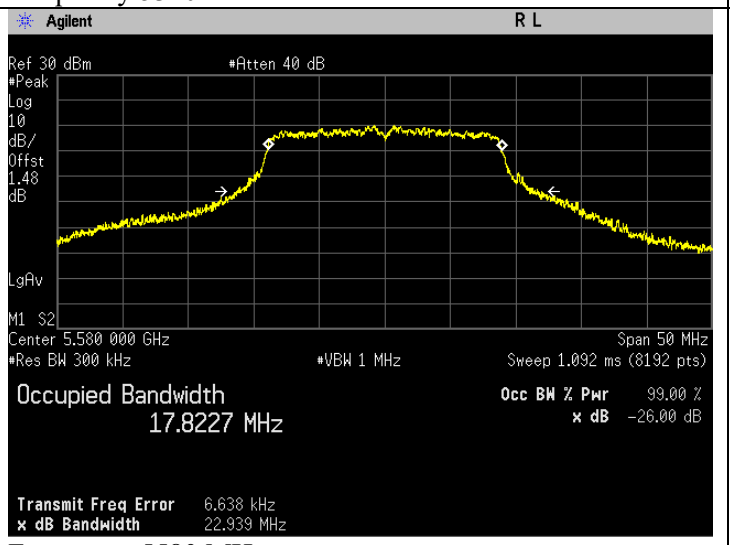
Frequency 5300 MHz



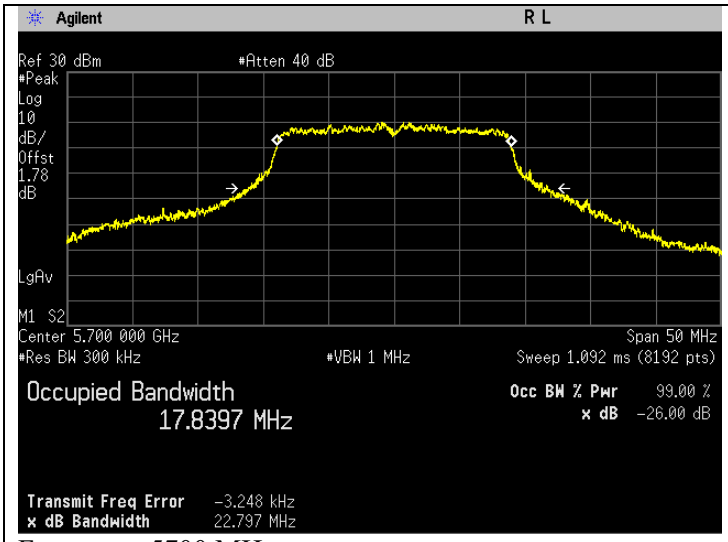
Frequency 5320 MHz



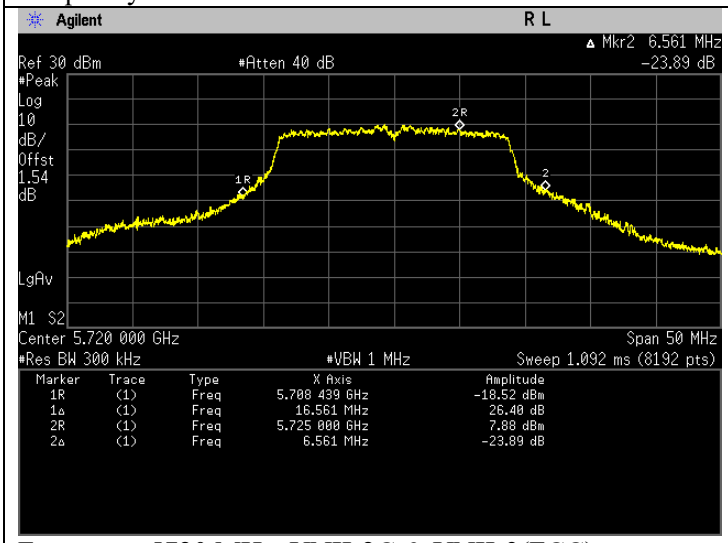
Frequency 5500 MHz



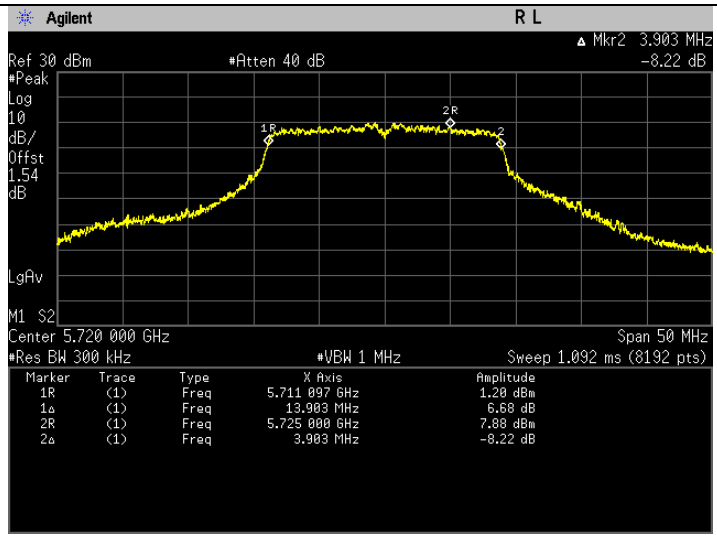
Frequency 5580 MHz



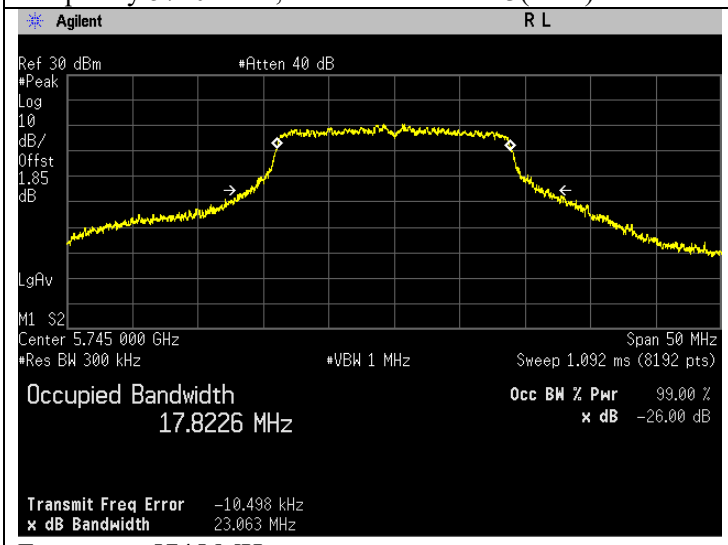
Frequency 5700 MHz



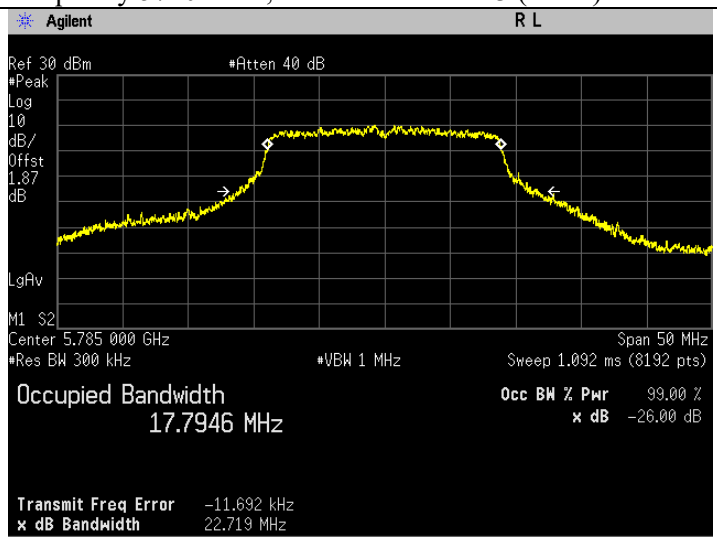
Frequency 5720 MHz, UNII-2C & UNII-3(FCC)



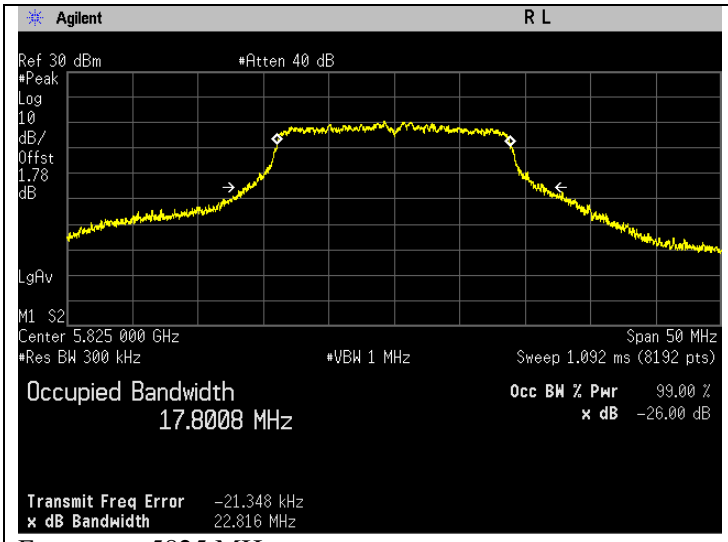
Frequency 5720 MHz, UNII-2C & UNII-3 (ISED)



Frequency 5745 MHz



Frequency 5785 MHz

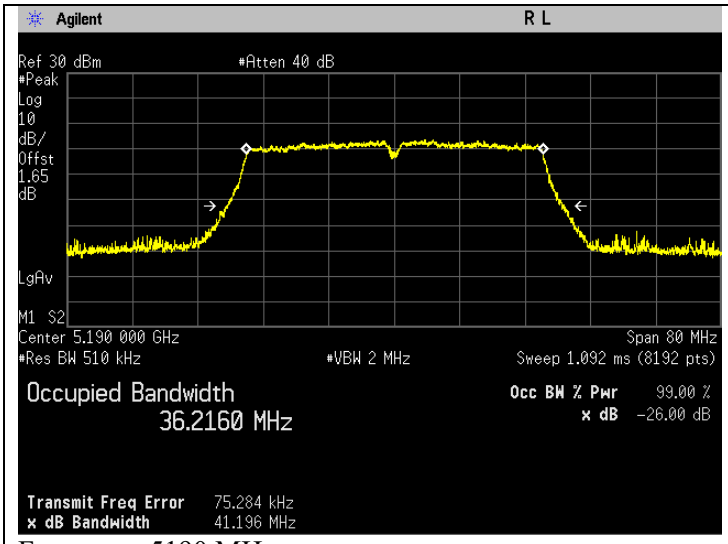


Frequency 5825 MHz

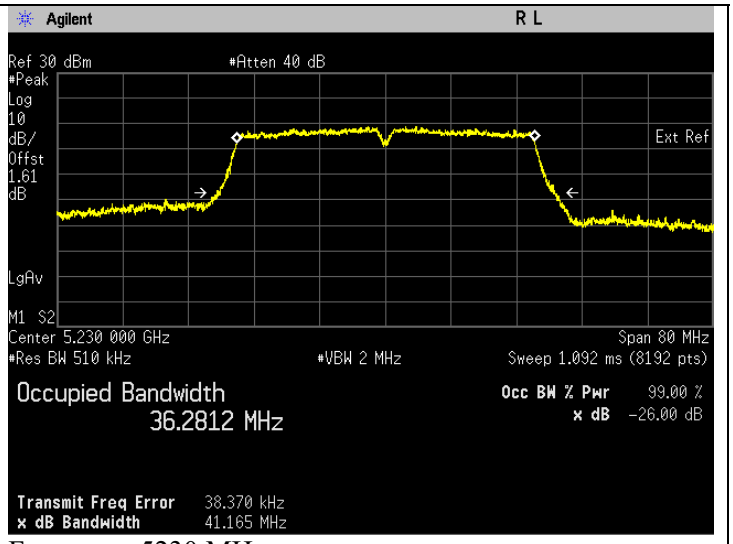
802.11n (HT40)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.196	Pass	36.216	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.165	Pass	36.281	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.318	Pass	36.292	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.457	Pass	36.235	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.404	Pass	36.226	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	47.714	Pass	36.330	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.436	Pass	36.310	Pass
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5), UNII-2C	35.852	Pass	33.141	Pass
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5), UNII-3	5.852	Pass	3.141	Pass
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.744	Pass	36.299	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	41.532	Pass	36.278	Pass

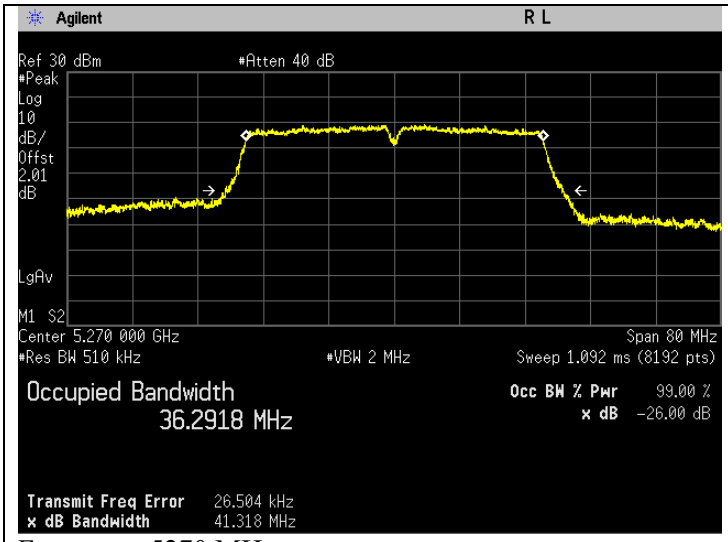
26 dB Bandwidth/ 99% Bandwidth



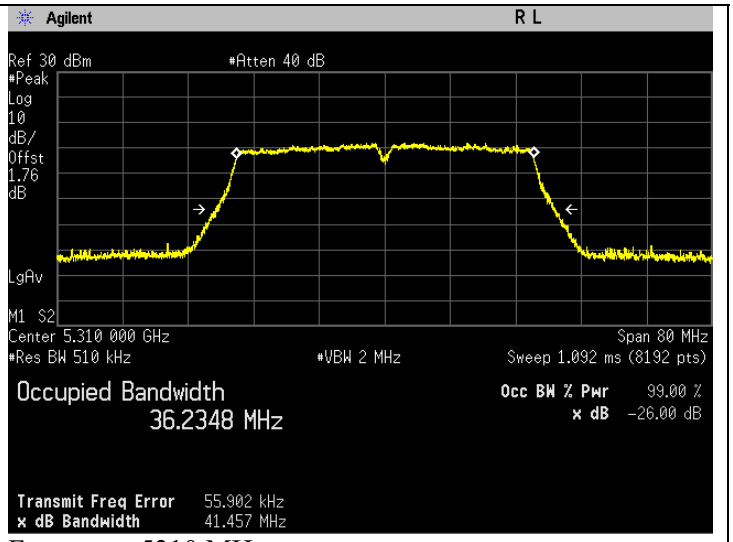
Frequency 5190 MHz



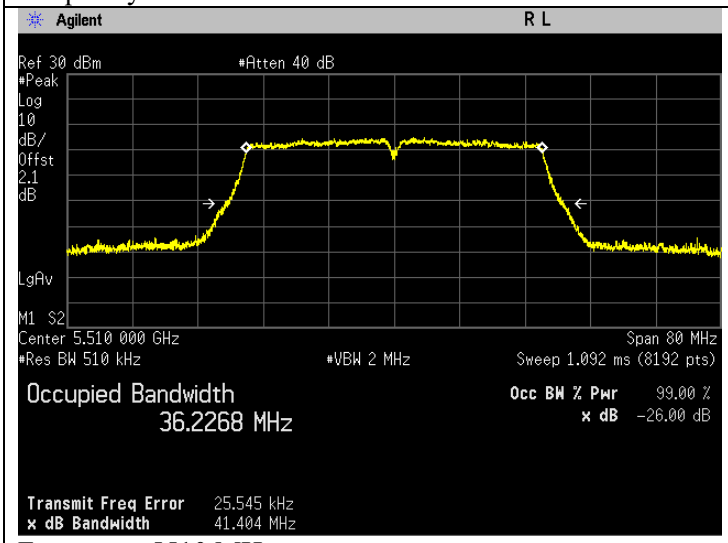
Frequency 5230 MHz



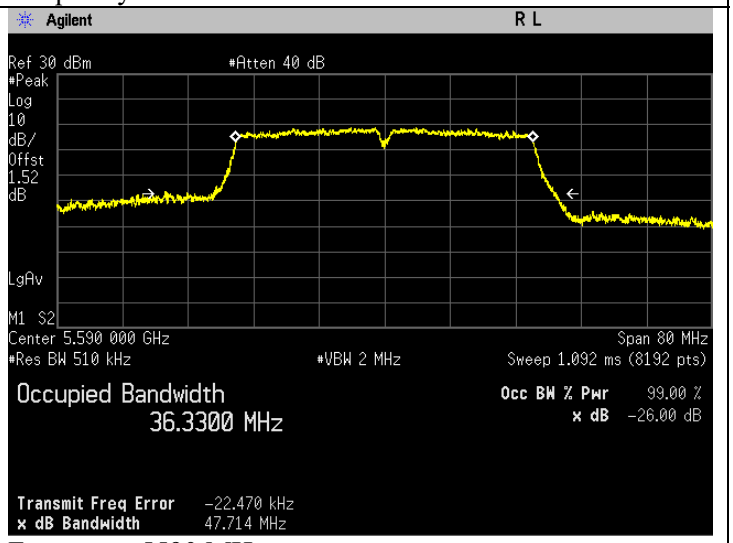
Frequency 5270 MHz



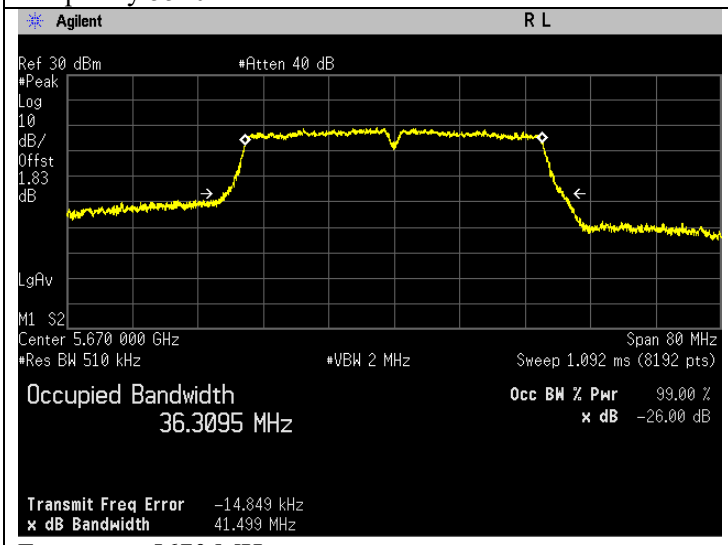
Frequency 5310 MHz



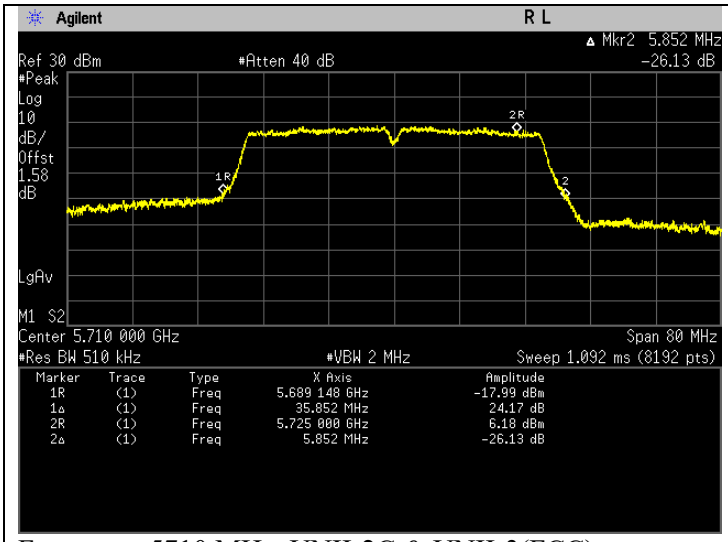
Frequency 5510 MHz



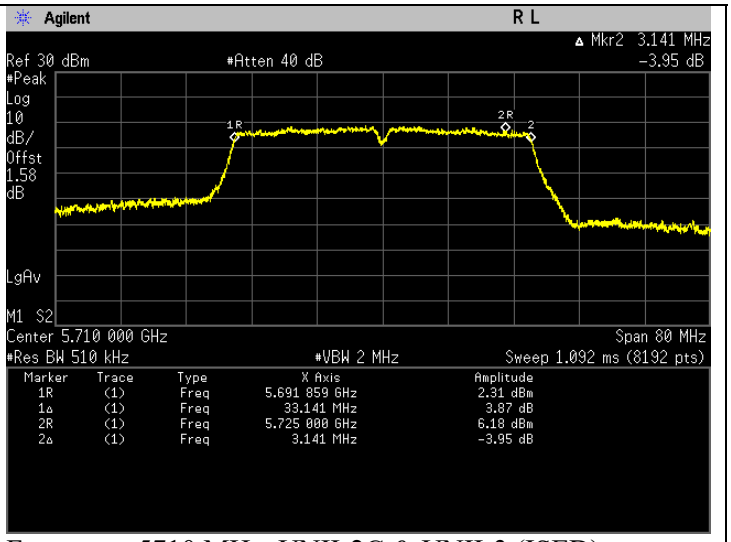
Frequency 5590 MHz



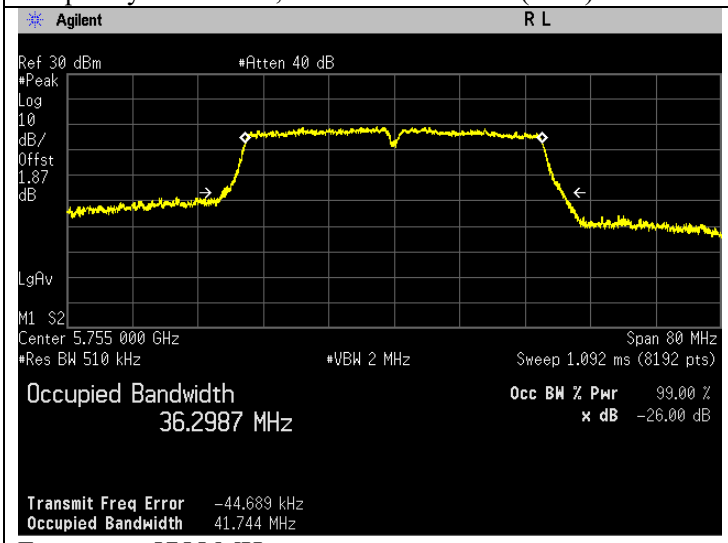
Frequency 5670 MHz



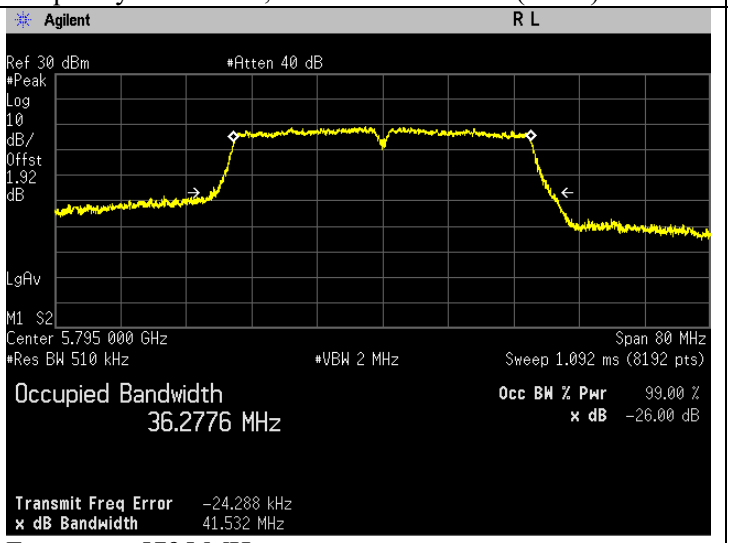
Frequency 5710 MHz, UNII-2C & UNII-3(FCC)



Frequency 5710 MHz, UNII-2C & UNII-3 (ISED)



Frequency 5755 MHz

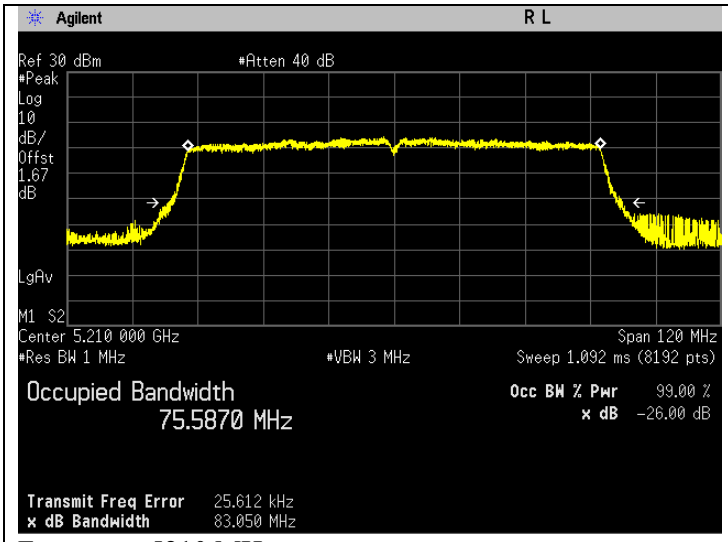


Frequency 5795 MHz

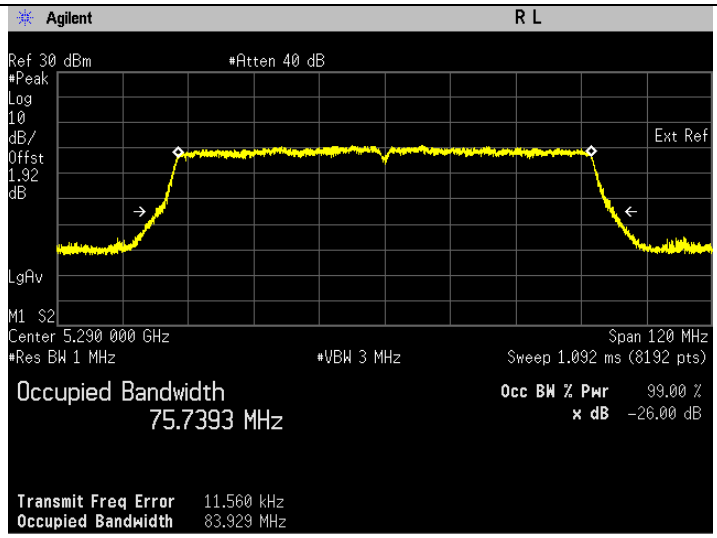
802.11ac (HT80)

Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5210	Mod Type: BPSK, Data Rate: MCS0(29.3)	83.050	Pass	75.588	Pass
5290	Mod Type: BPSK, Data Rate: MCS0(29.3)	83.929	Pass	75.736	Pass
5530	Mod Type: BPSK, Data Rate: MCS0(29.3)	83.350	Pass	75.690	Pass
5610	Mod Type: BPSK, Data Rate: MCS0(29.3)	98.360	Pass	75.730	Pass
5690	Mod Type: BPSK, Data Rate: MCS0(29.3), UNII-2C	76.727	Pass	72.854	Pass
5690	Mod Type: BPSK, Data Rate: MCS0(29.3), UNII-3	6.727	Pass	2.854	Pass
5775	Mod Type: BPSK, Data Rate: MCS0(29.3)	96.504	Pass	75.723	Pass

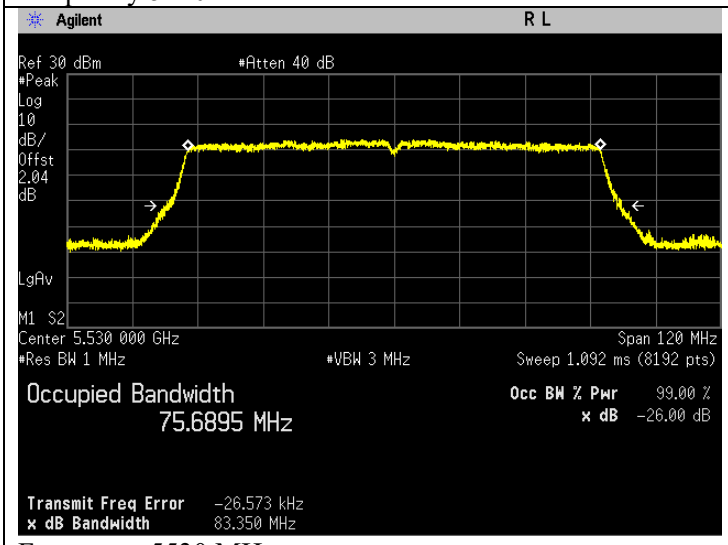
26 dB Bandwidth/ 99% Bandwidth



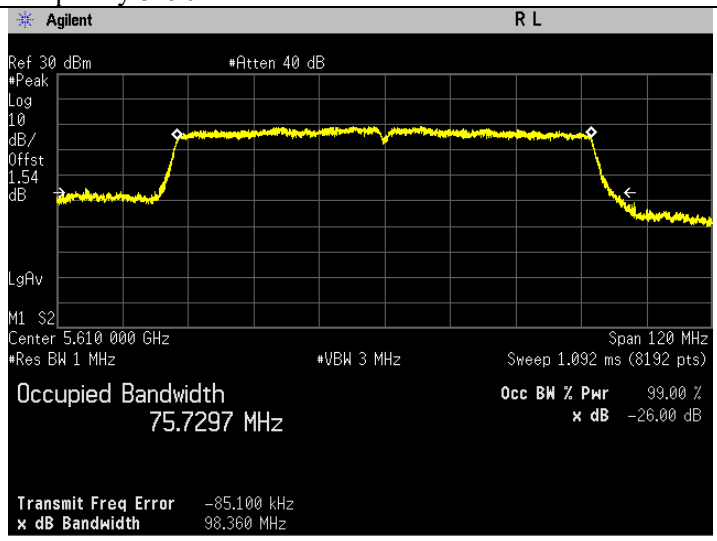
Frequency 5210 MHz



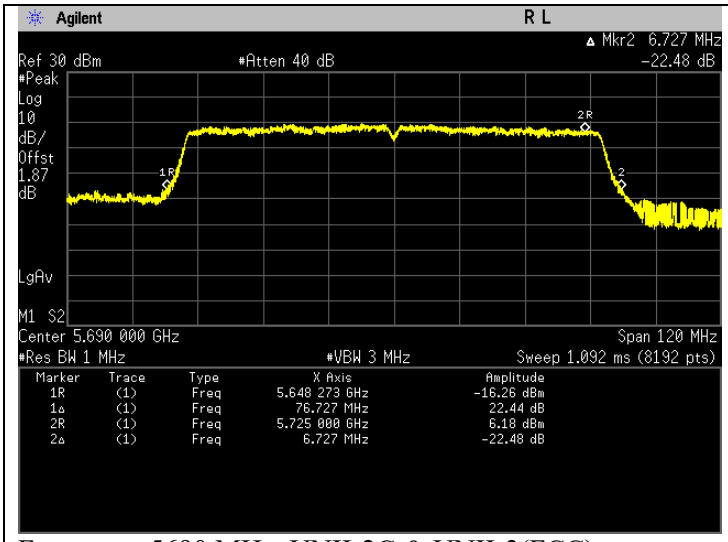
Frequency 5290 MHz



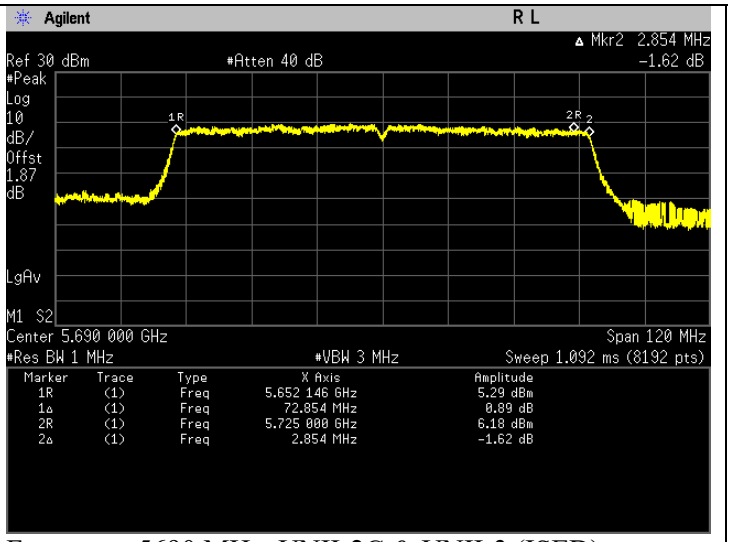
Frequency 5530 MHz



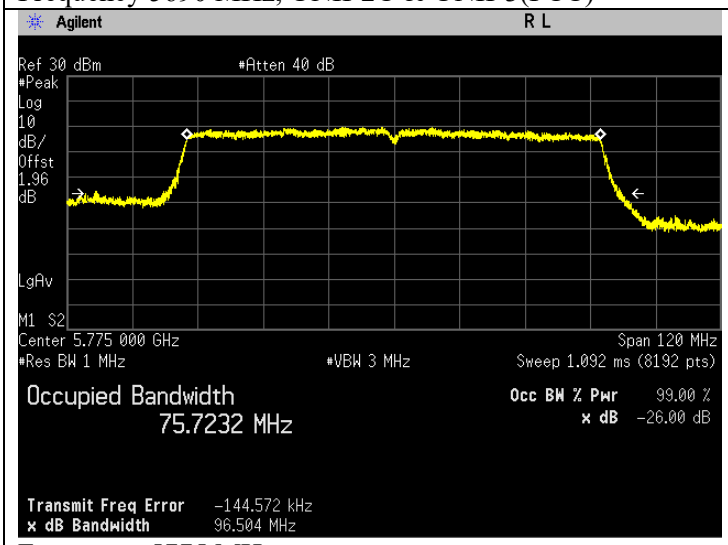
Frequency 5610 MHz



Frequency 5690 MHz, UNII-2C & UNII-3(FCC)



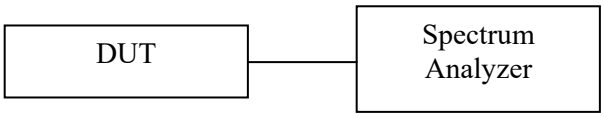
Frequency 5690 MHz, UNII-2C & UNII-3 (ISED)



Frequency 5775 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

7.2.3. Additional Info

Antenna	Gain (dBi)
UNII1, UNII2A	4.6
UNII2C	3.3
UNII3	3.1
Duty Cycle Correction Factor	
802.11a	0.075
802.11n20	0.080
802.11n40	0.156
802.11ac80	0.311

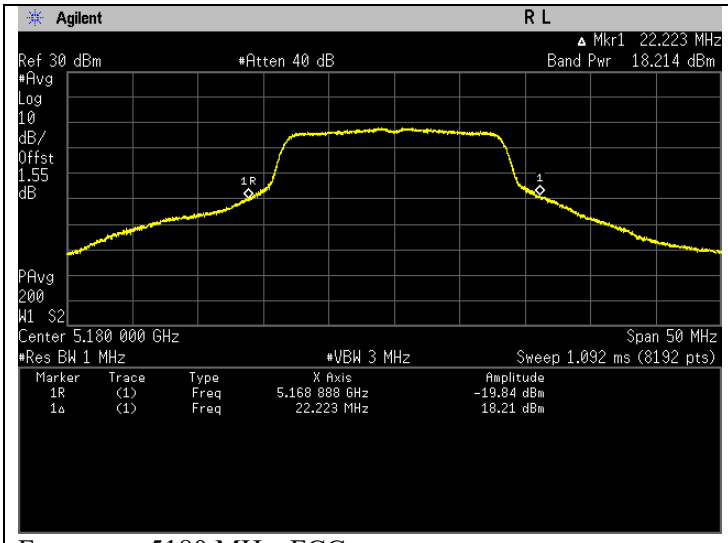
7.2.4. Test Data

Summary table

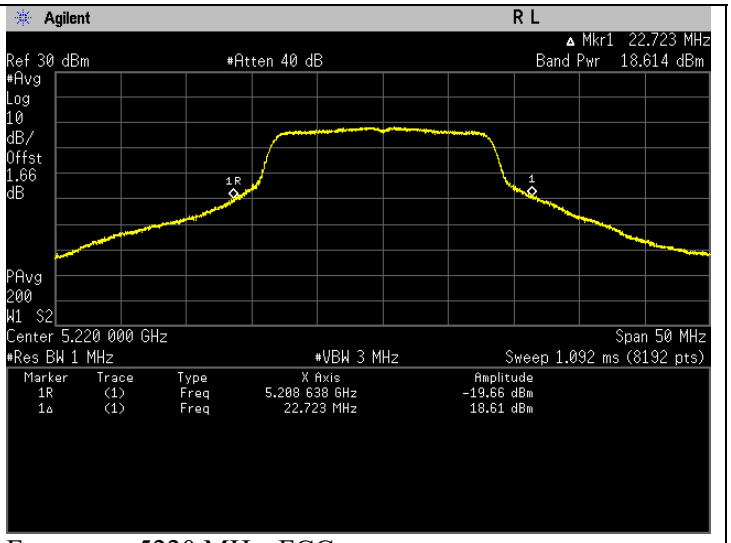
WLAN	Frequency Range (MHz)	Bandwidth (MHz)	RF Power Output		EIRP		Max Emission designator
			Max measured (mW)	Max declared (mW)	Max measured (mW)	Max declared (mW)	
802.11a	5180-5240	20	72.9	79.43	210.23	229.09	16M6D1D
	5260-5320	20	63.61	79.43	183.44	229.09	16M7D1D
	5500-5720	20	65.72	79.43	140.51	169.82	16M6D1D
	5745-5825	20	69.86	79.43	142.63	162.18	16M6D1D
802.11n (HT20)	5180-5240	20	69.78	79.43	201.23	229.09	17M8D1D
	5260-5320	20	61.96	79.43	178.69	229.09	17M9D1D
	5500-5720	20	69.21	79.43	147.98	169.82	17M8D1D
	5745-5825	20	67.81	79.43	138.45	162.18	17M8D1D
802.11n (HT40)	5190	40	19.43	19.95	56.03	57.54	
	5230	40	62.53	79.43	180.34	229.09	36M3D1D
	5270	40	71.58	79.43	206.44	229.09	
	5310	40	13.7	15.85	39.5	45.71	36M3D1D
	5510	40	26.83	31.62	57.37	67.61	
	5550-5710	40	69.31	79.43	148.18	169.82	36M3D1D
	5755-5795	40	71.02	79.43	145.01	162.18	36M3D1D
802.11ac (VHT80)	5210	80	17.49	19.95	50.45	57.54	75M6D1D
	5290	80	9.14	10	26.36	28.84	75M7D1D
	5530	80	19.17	19.95	40.98	42.66	
	5610-5690	80	58.83	79.43	125.78	169.82	75M7D1D
	5775	80	65.66	79.43	134.06	162.18	75M7D1D

802.11a (26dB EBW)

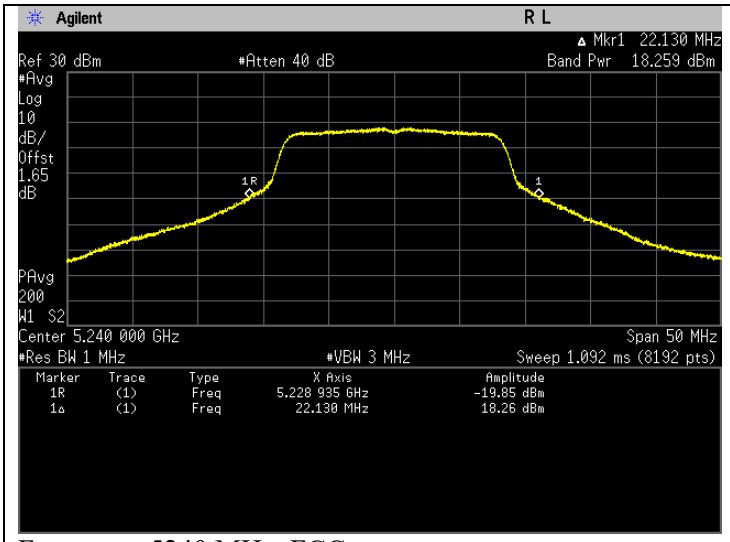
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	67.436	18.289	Pass
5220	Mod Type: BPSK, Data Rate: 6	73.942	18.689	Pass
5240	Mod Type: BPSK, Data Rate: 6	68.138	18.334	Pass
5260	Mod Type: BPSK, Data Rate: 6	63.913	18.056	Pass
5300	Mod Type: BPSK, Data Rate: 6	65.012	18.130	Pass
5320	Mod Type: BPSK, Data Rate: 6	59.620	17.754	Pass
5500	Mod Type: BPSK, Data Rate: 6	40.935	16.121	Pass
5580	Mod Type: BPSK, Data Rate: 6	64.356	18.086	Pass
5700	Mod Type: BPSK, Data Rate: 6	66.649	18.238	Pass
5745	Mod Type: BPSK, Data Rate: 6	70.891	18.506	Pass
5785	Mod Type: BPSK, Data Rate: 6	67.389	18.286	Pass
5825	Mod Type: BPSK, Data Rate: 6	69.693	18.432	Pass



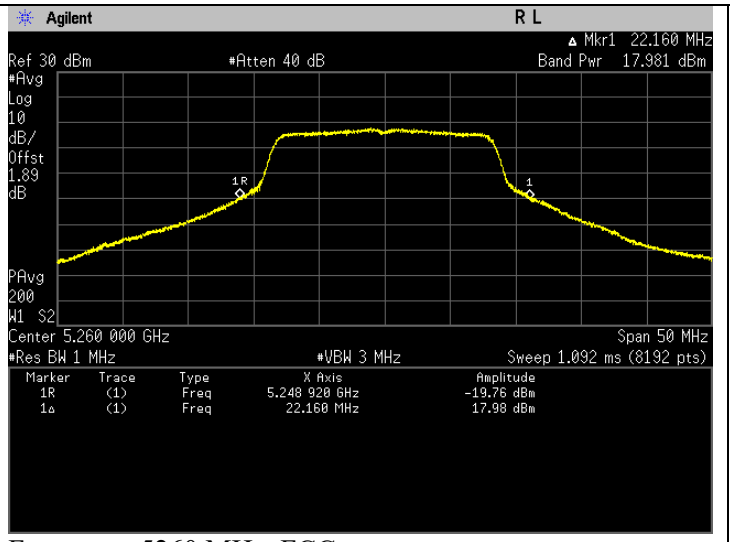
Frequency 5180 MHz, FCC.



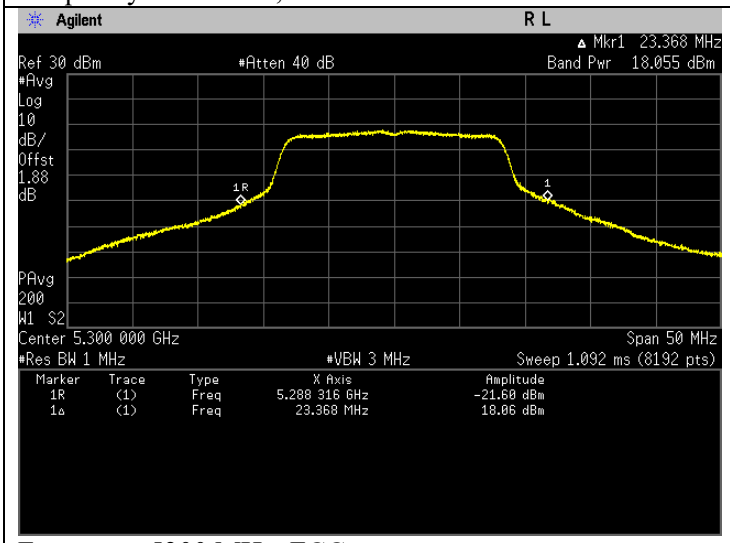
Frequency 5220 MHz, FCC.



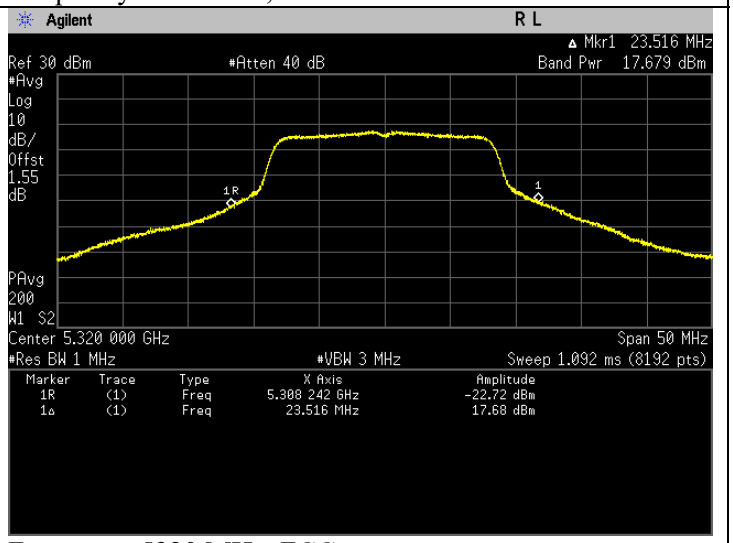
Frequency 5240 MHz, FCC.



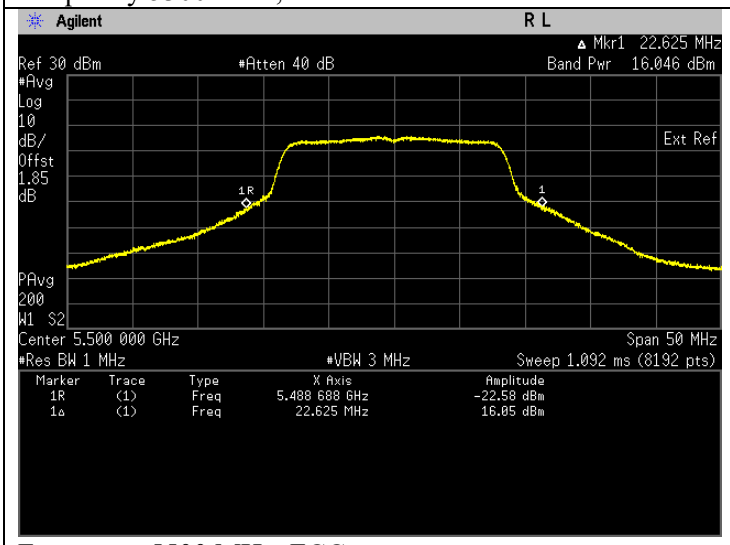
Frequency 5260 MHz, FCC.



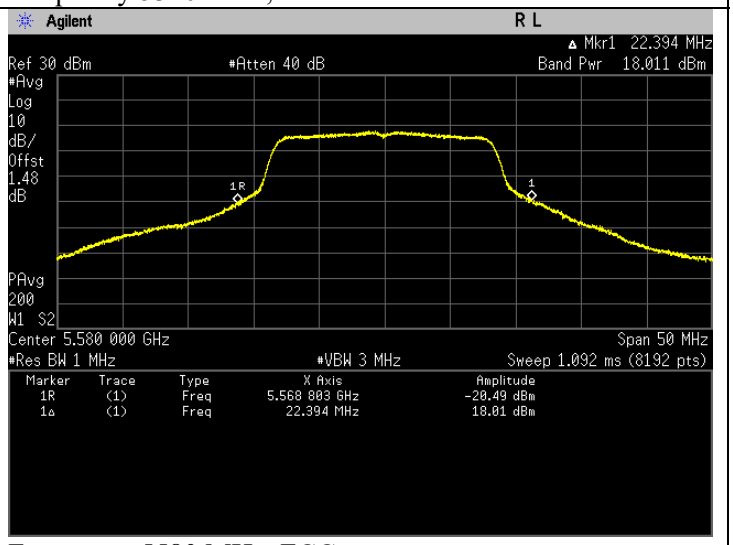
Frequency 5300 MHz, FCC.



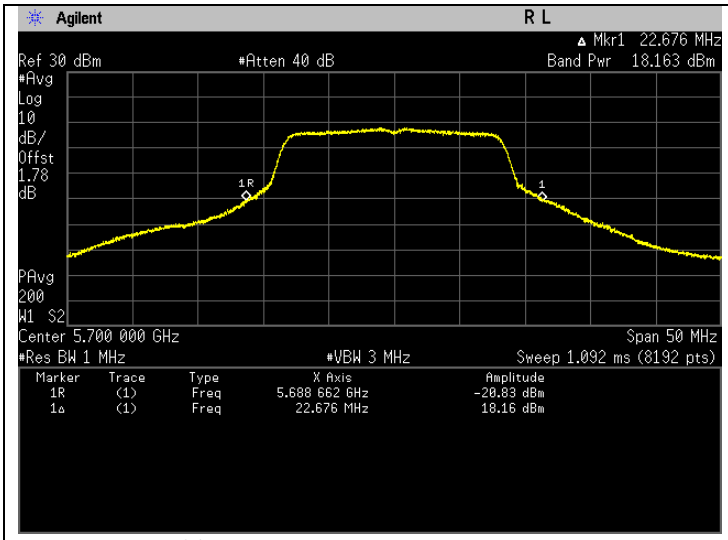
Frequency 5320 MHz, FCC.



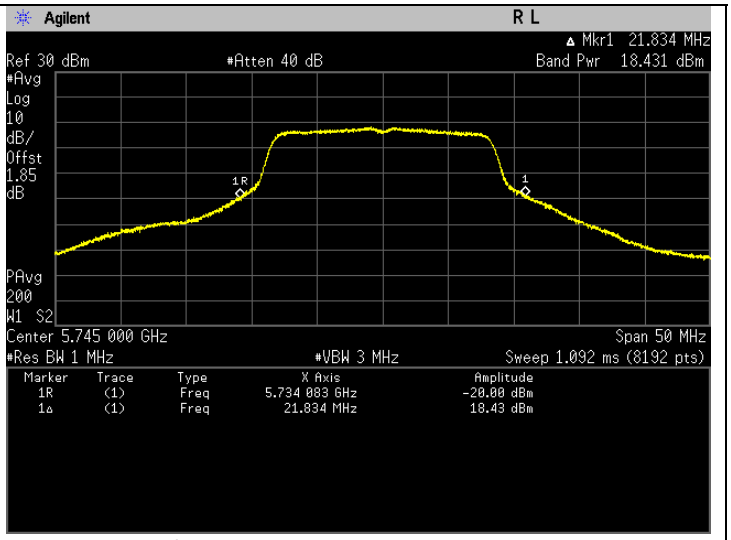
Frequency 5500 MHz, FCC.



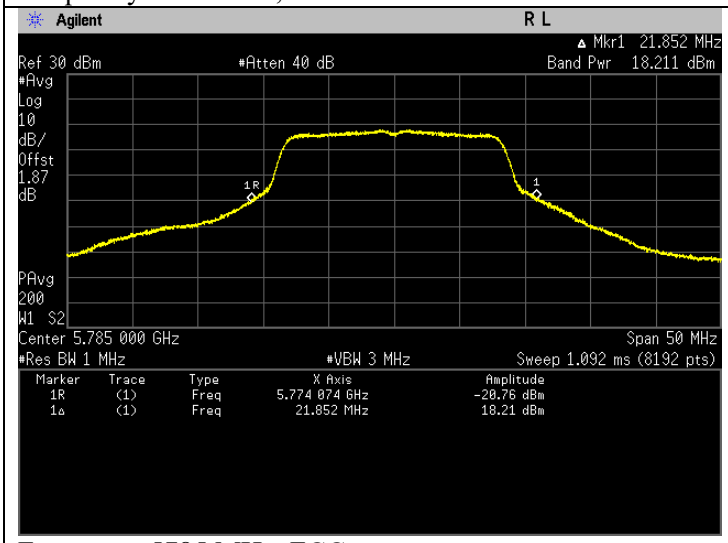
Frequency 5580 MHz, FCC.



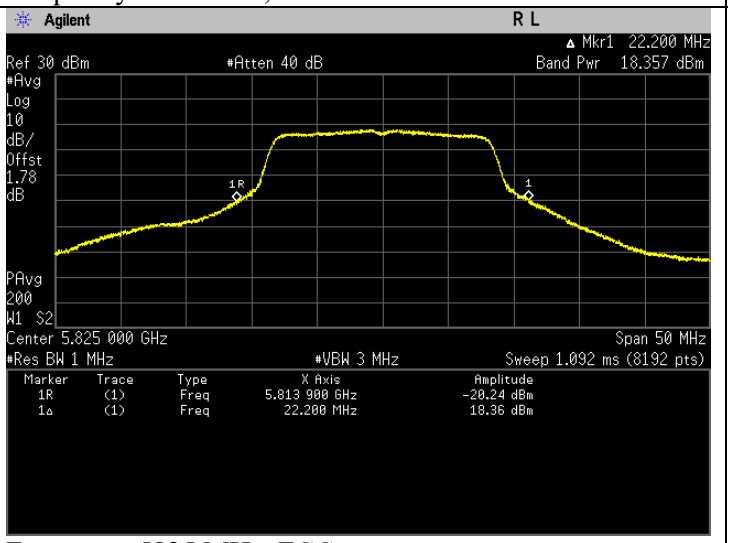
Frequency 5700 MHz, FCC.



Frequency 5745 MHz, FCC.



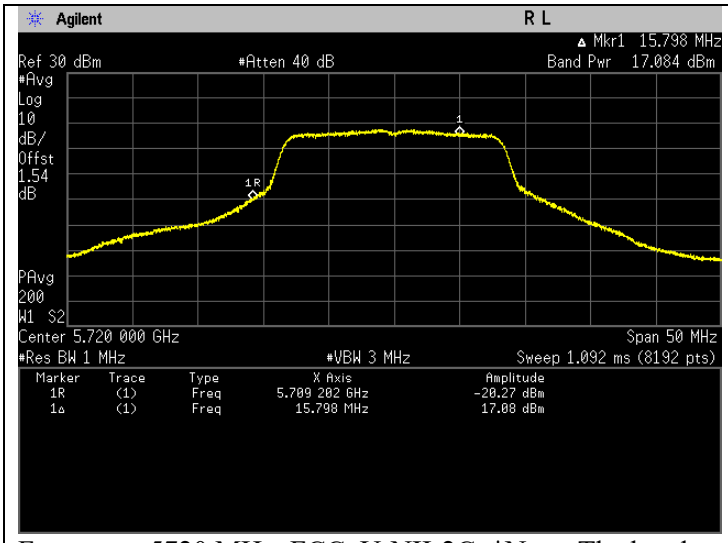
Frequency 5785 MHz, FCC.



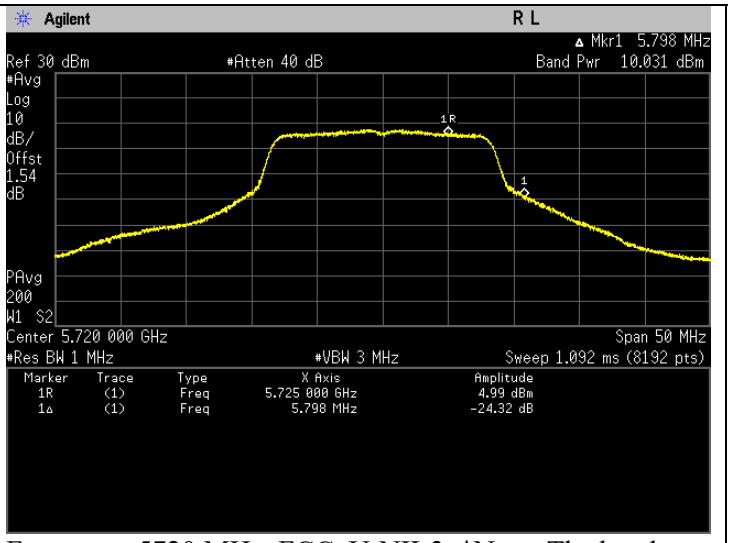
Frequency 5825 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: 6	51.987	17.159	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: 6	10.247	10.106	Pass



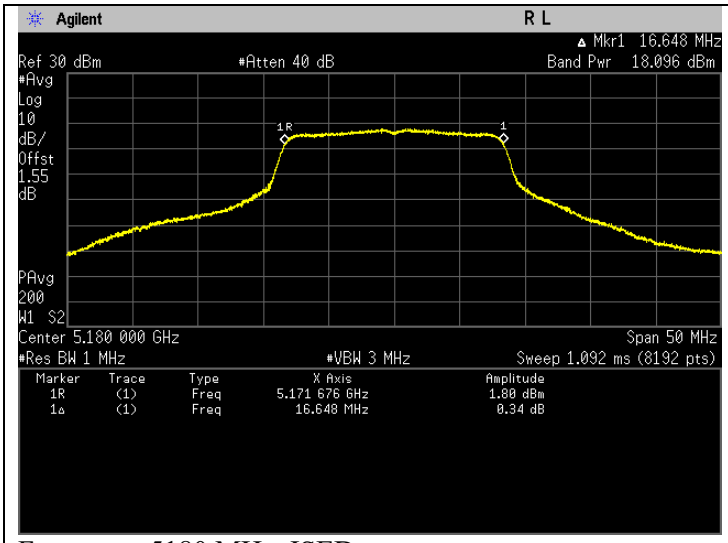
Frequency 5720 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



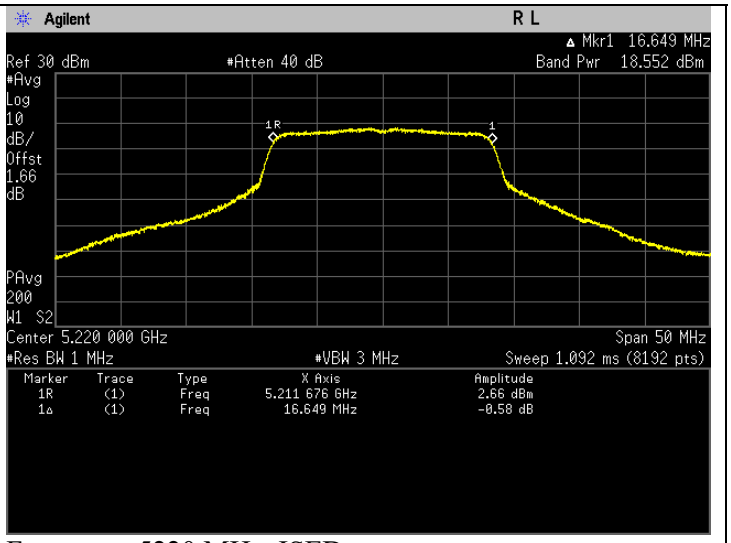
Frequency 5720 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11a (99% EBW)

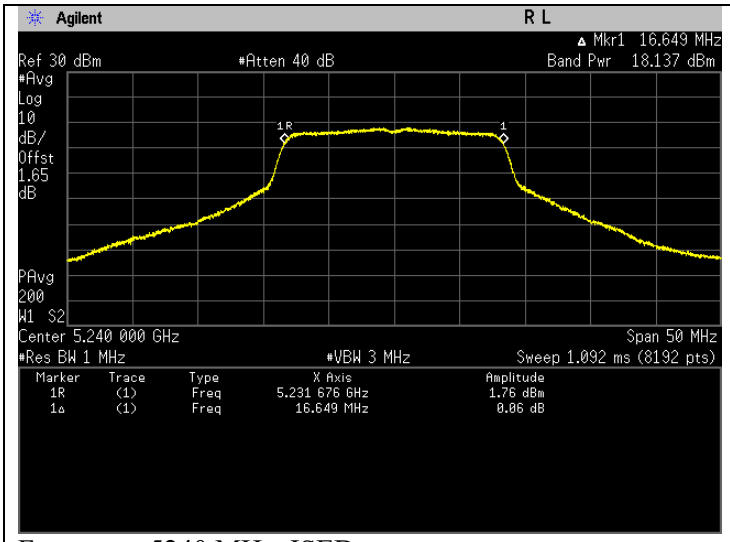
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	65.628	18.171	Pass	22.771	Pass
5220	Mod Type: BPSK, Data Rate: 6	72.894	18.627	Pass	23.227	Pass
5240	Mod Type: BPSK, Data Rate: 6	66.251	18.212	Pass	22.812	Pass
5260	Mod Type: BPSK, Data Rate: 6	62.978	17.992	Pass	22.592	Pass
5300	Mod Type: BPSK, Data Rate: 6	63.605	18.035	Pass	22.635	Pass
5320	Mod Type: BPSK, Data Rate: 6	58.249	17.653	Pass	22.253	Pass
5500	Mod Type: BPSK, Data Rate: 6	40.114	16.033	Pass	19.333	Pass
5580	Mod Type: BPSK, Data Rate: 6	63.386	18.020	Pass	21.320	Pass
5700	Mod Type: BPSK, Data Rate: 6	65.719	18.177	Pass	21.477	Pass
5745	Mod Type: BPSK, Data Rate: 6	69.854	18.442	Pass	21.542	Pass
5785	Mod Type: BPSK, Data Rate: 6	66.022	18.197	Pass	21.297	Pass
5825	Mod Type: BPSK, Data Rate: 6	69.118	18.396	Pass	21.496	Pass



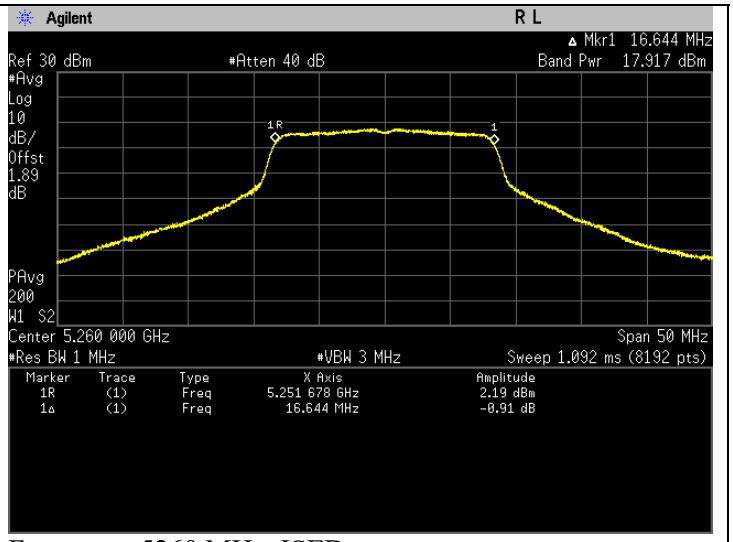
Frequency 5180 MHz, ISED



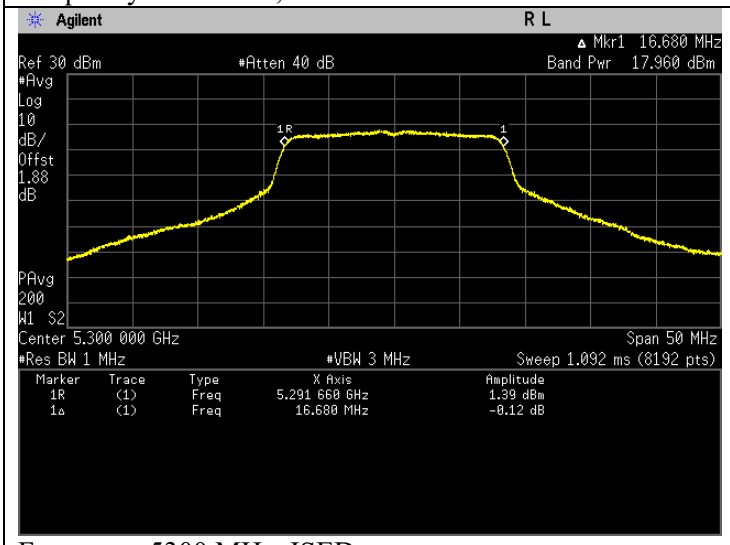
Frequency 5220 MHz, ISED



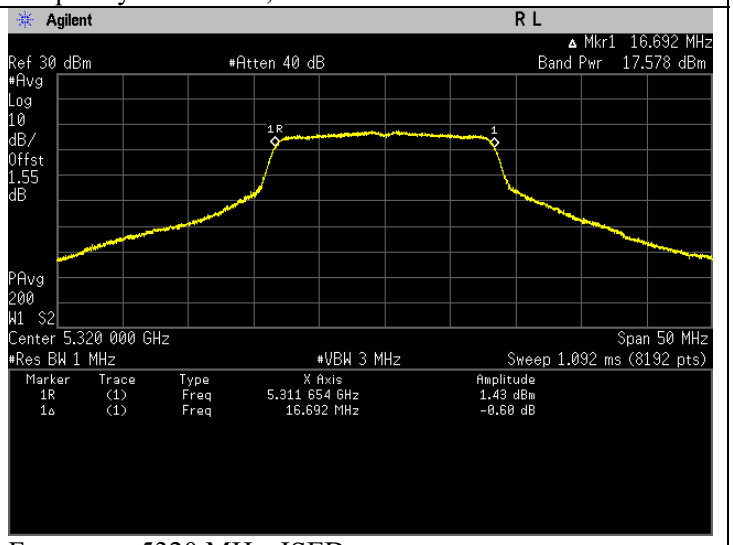
Frequency 5240 MHz, ISED



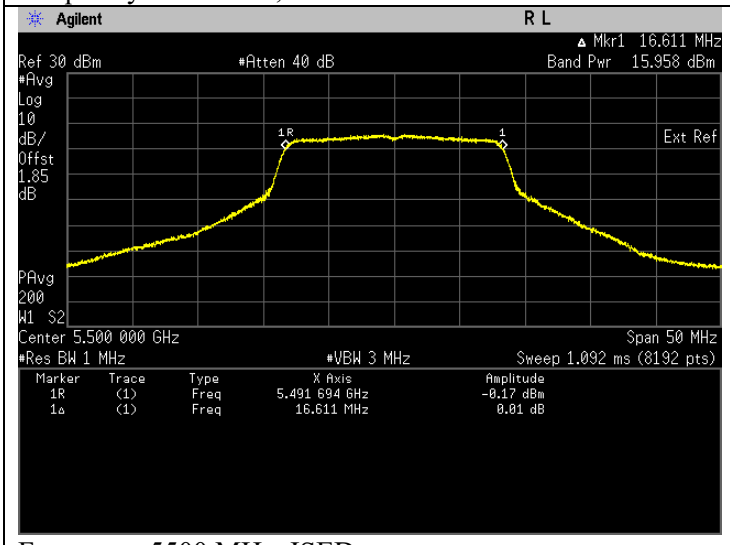
Frequency 5260 MHz, ISED



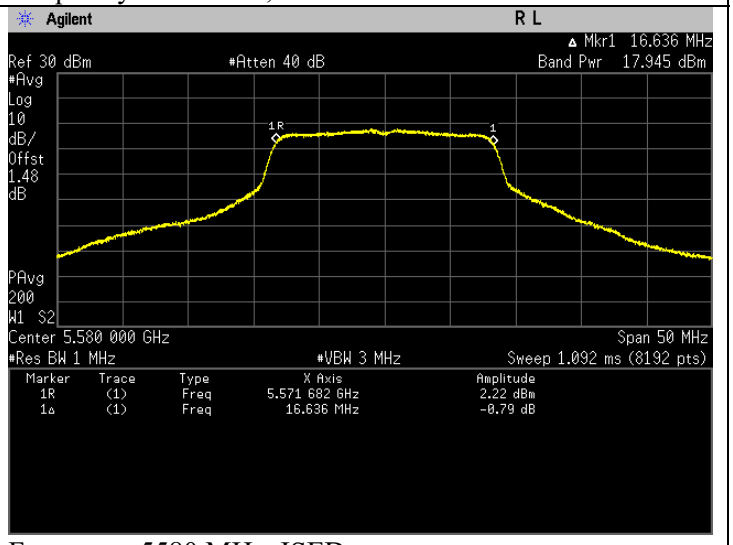
Frequency 5300 MHz, ISED



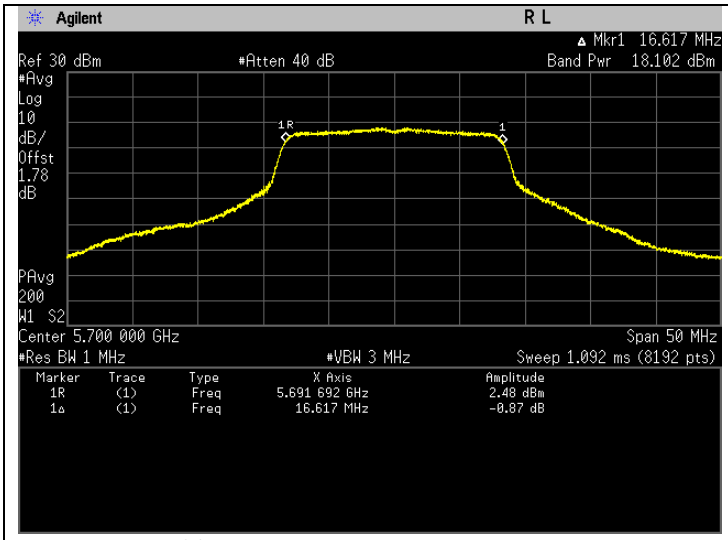
Frequency 5320 MHz, ISED



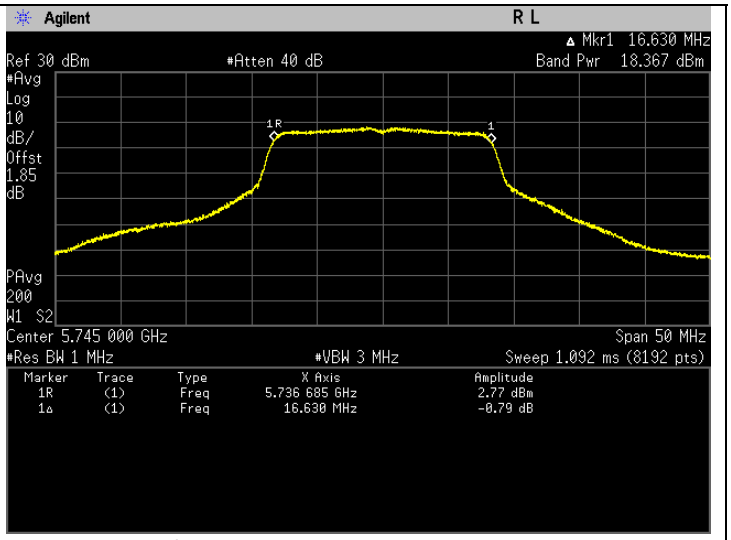
Frequency 5500 MHz, ISED



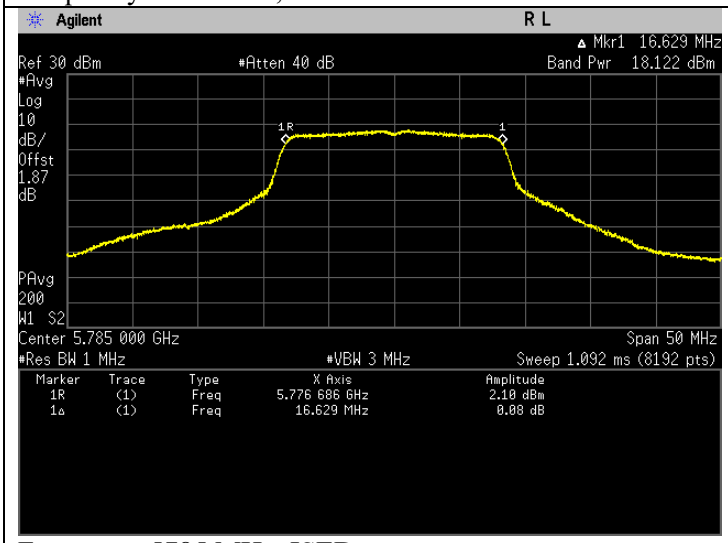
Frequency 5580 MHz, ISED



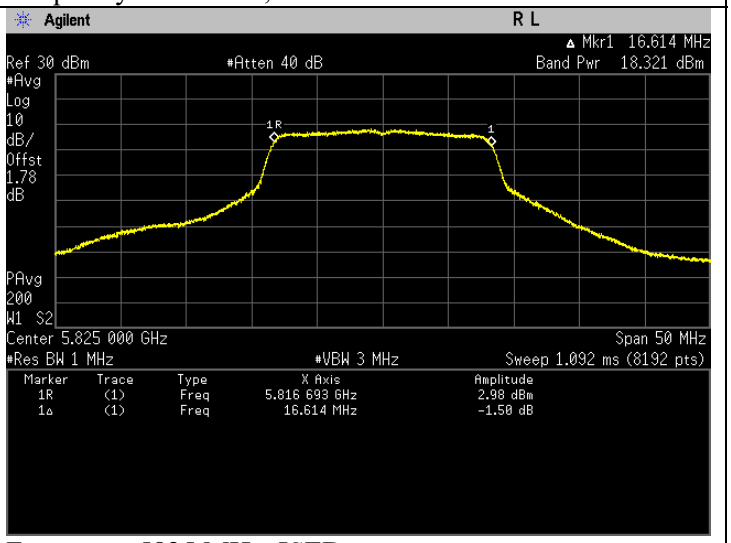
Frequency 5700 MHz, ISED



Frequency 5745 MHz, ISED



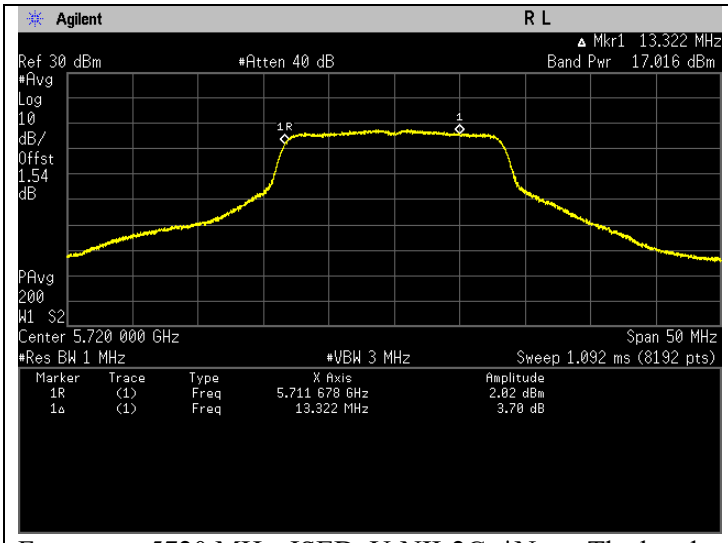
Frequency 5785 MHz, ISED



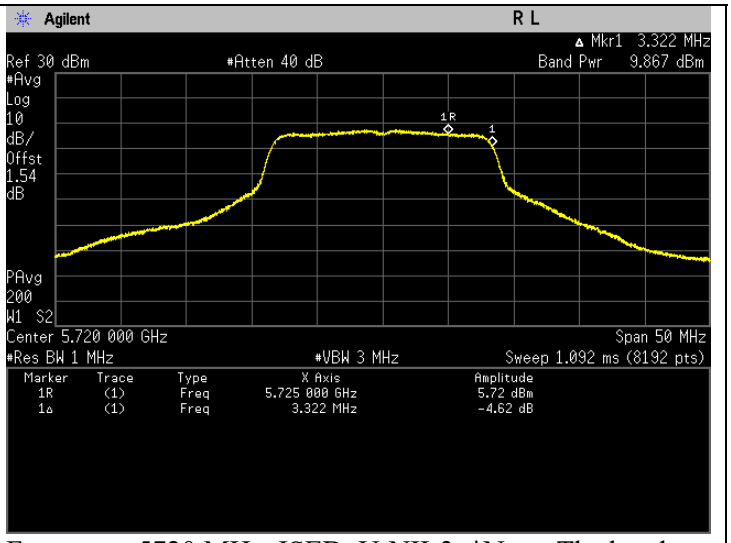
Frequency 5825 MHz, ISED

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	51.179	17.091	Pass	20.391	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: 6	9.867	9.942	Pass	13.242	Pass



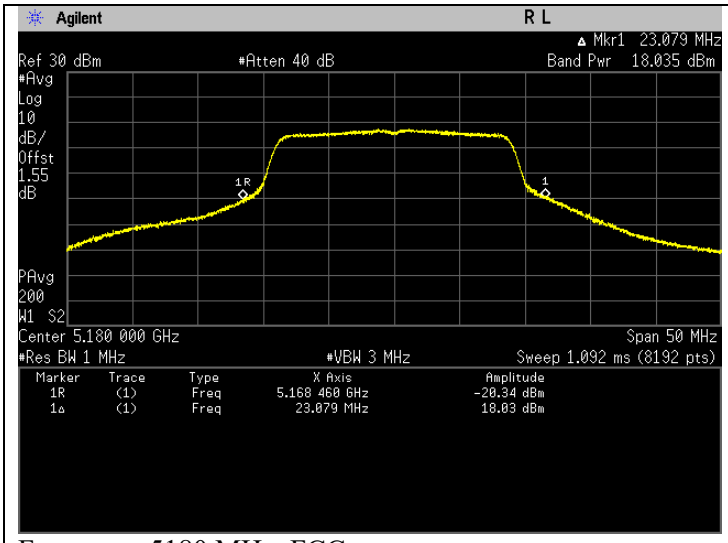
Frequency 5720 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



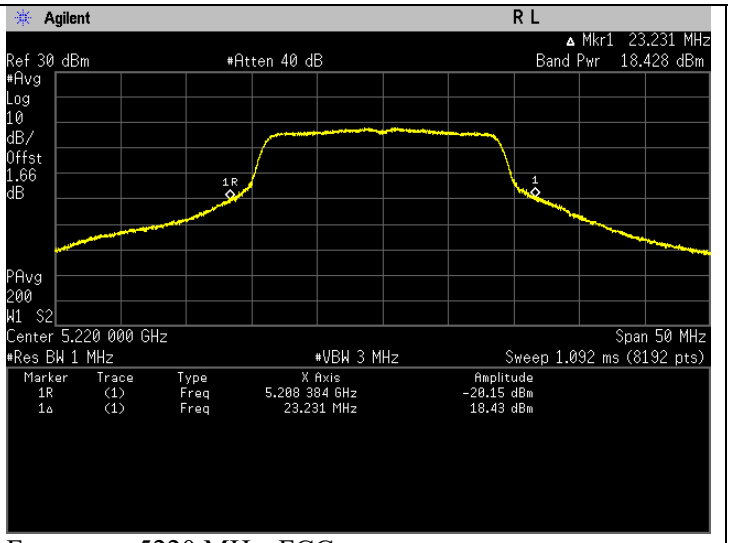
Frequency 5720 MHz, ISED, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(26dB EBW)

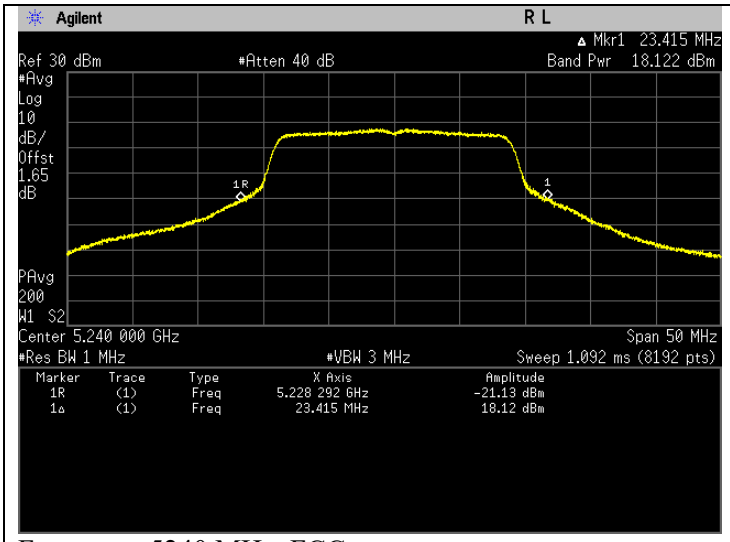
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	64.792	18.115	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	70.929	18.508	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	66.103	18.202	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	61.705	17.903	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	63.595	18.034	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	58.833	17.696	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	70.847	18.503	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	62.852	17.983	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	64.643	18.105	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	68.932	18.384	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	65.391	18.155	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	67.425	18.288	Pass



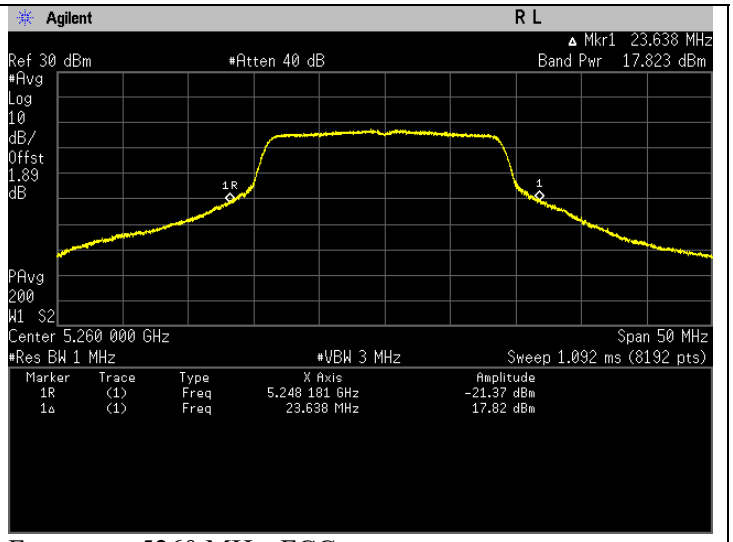
Frequency 5180 MHz, FCC.



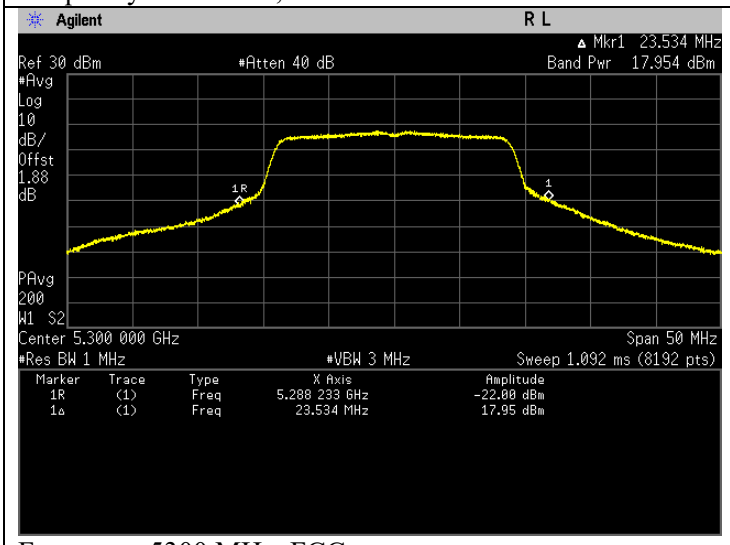
Frequency 5220 MHz, FCC.



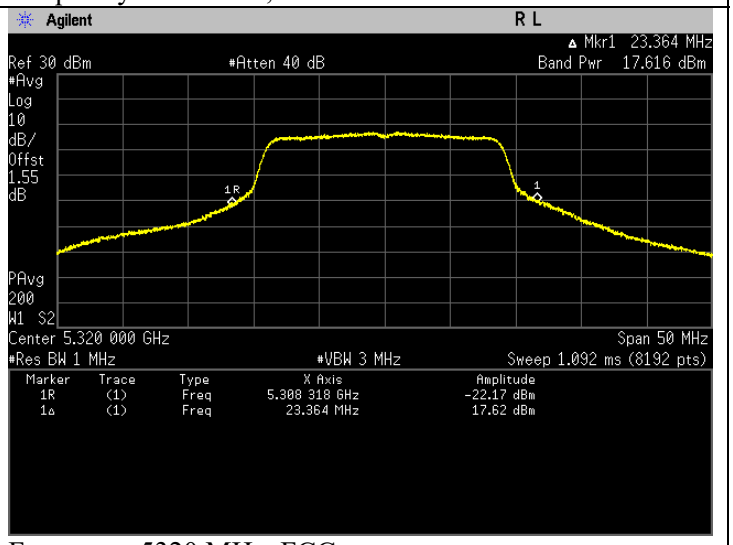
Frequency 5240 MHz, FCC.



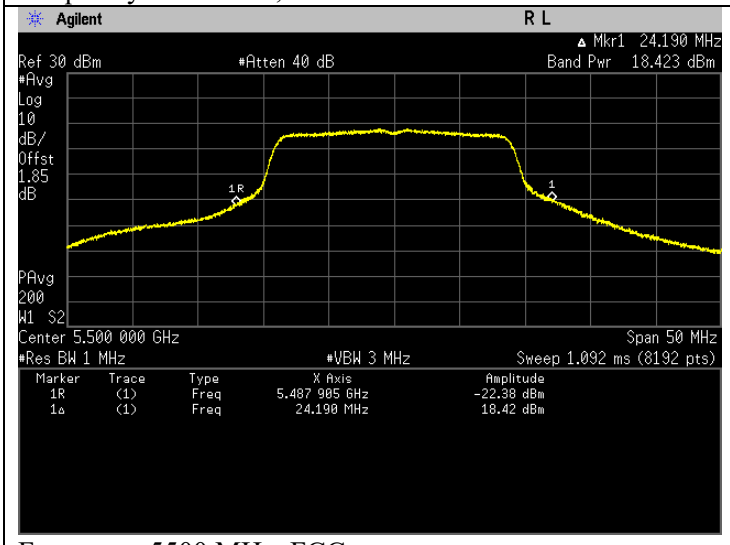
Frequency 5260 MHz, FCC.



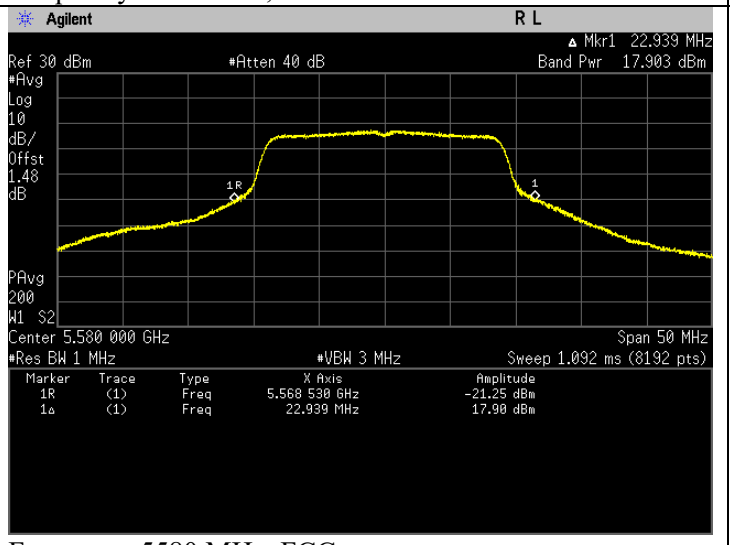
Frequency 5300 MHz, FCC.



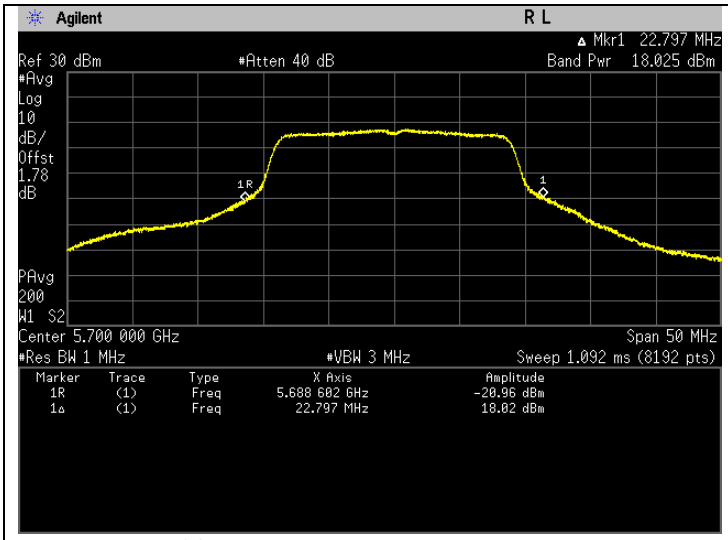
Frequency 5320 MHz, FCC.



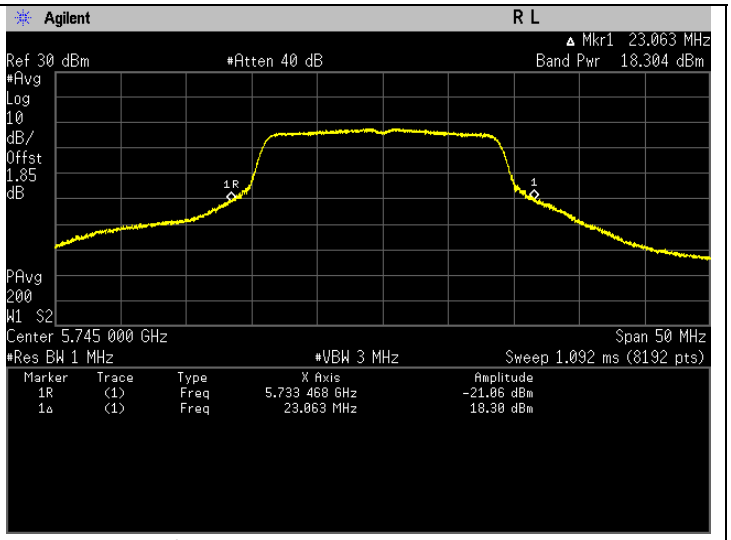
Frequency 5500 MHz, FCC.



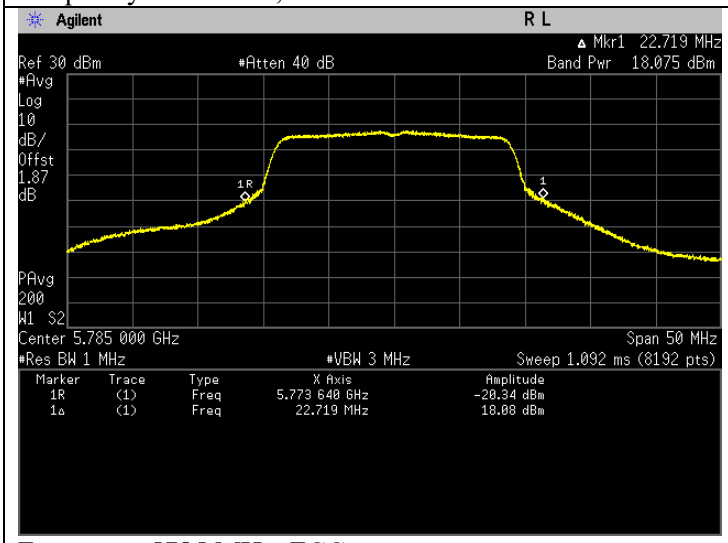
Frequency 5580 MHz, FCC.



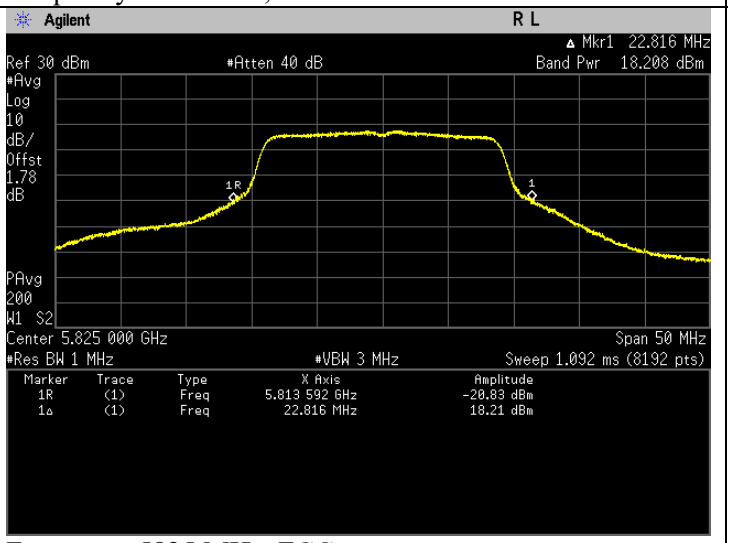
Frequency 5700 MHz, FCC.



Frequency 5745 MHz, FCC.



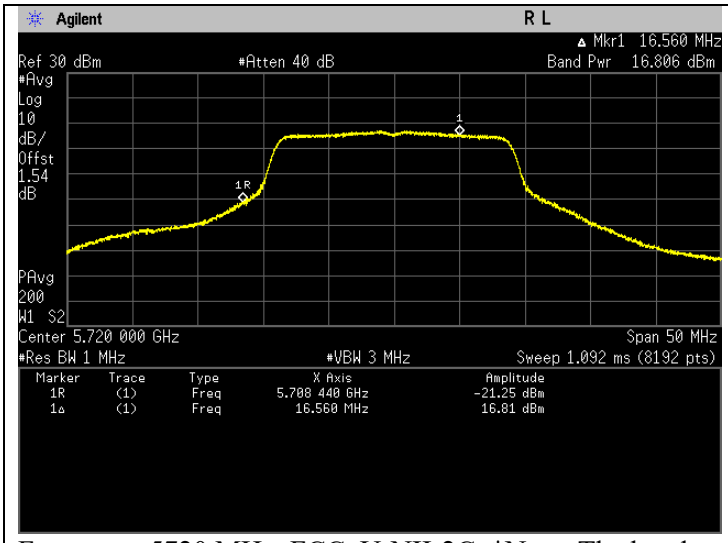
Frequency 5785 MHz, FCC.



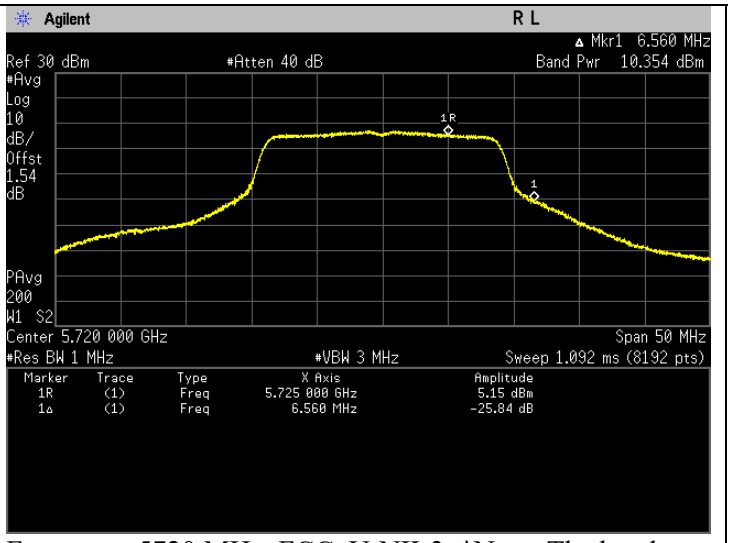
Frequency 5825 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	48.823	16.886	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	11.051	10.434	Pass



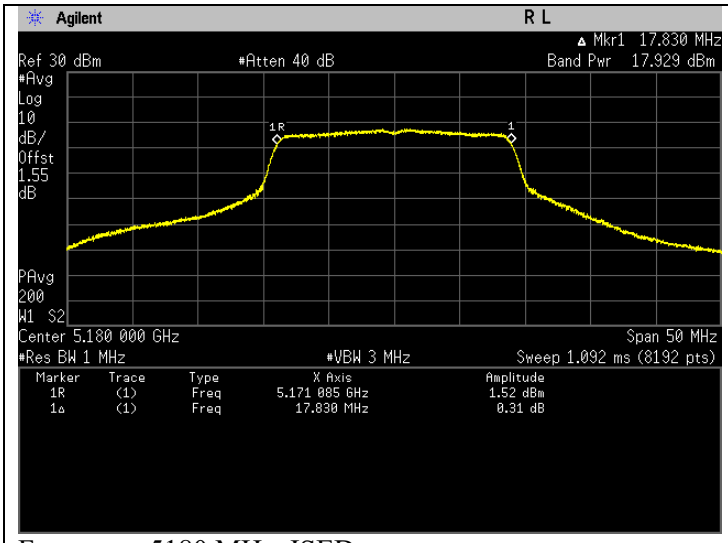
Frequency 5720 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



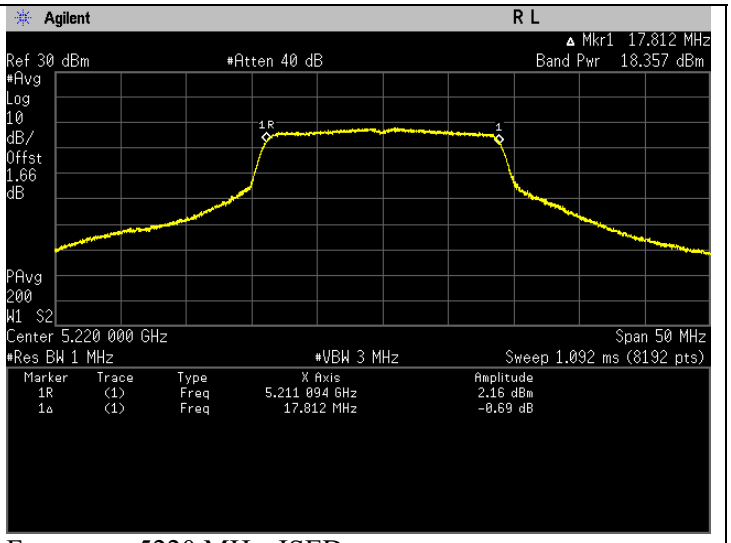
Frequency 5720 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(99% EBW)

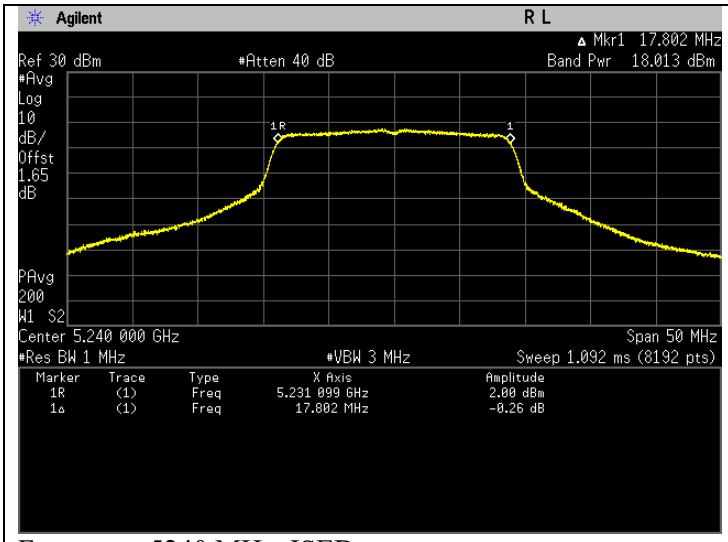
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	63.230	18.009	Pass	22.609	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	69.778	18.437	Pass	23.037	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	64.465	18.093	Pass	22.693	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	61.196	17.867	Pass	22.467	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	61.961	17.921	Pass	22.521	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	57.164	17.571	Pass	22.171	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	69.218	18.402	Pass	21.702	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	61.224	17.869	Pass	21.169	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	63.507	18.028	Pass	21.328	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	67.814	18.313	Pass	21.413	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	65.181	18.141	Pass	21.241	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	66.500	18.228	Pass	21.328	Pass



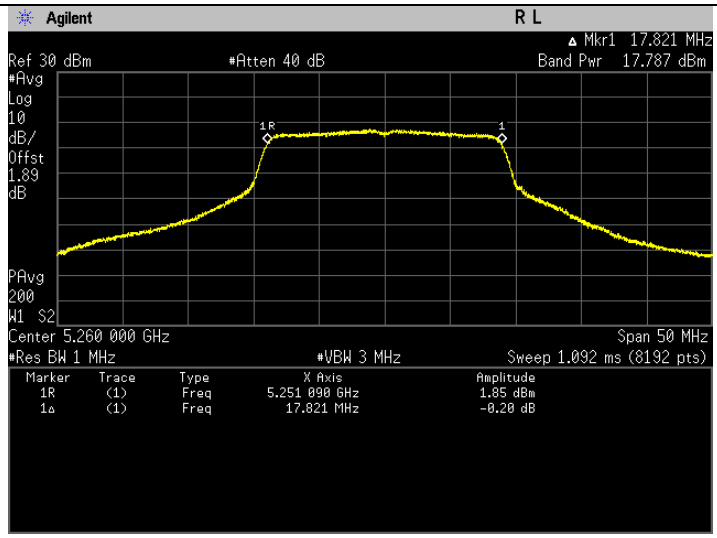
Frequency 5180 MHz, ISED



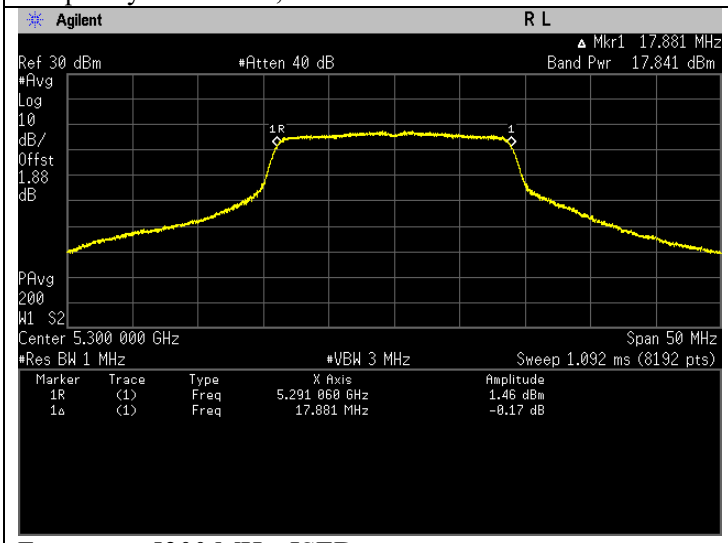
Frequency 5220 MHz, ISED



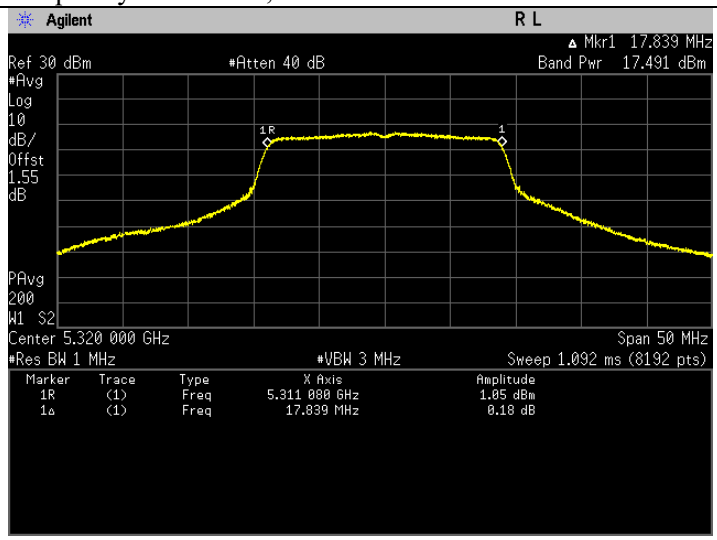
Frequency 5240 MHz, ISED



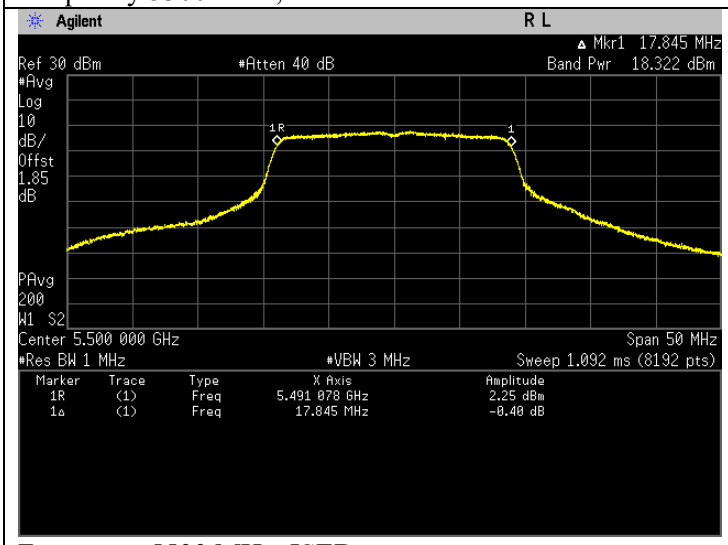
Frequency 5260 MHz, ISED



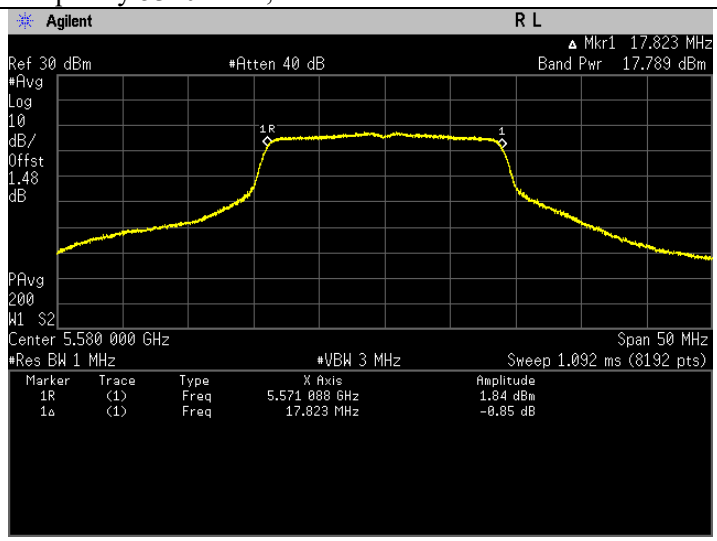
Frequency 5300 MHz, ISED



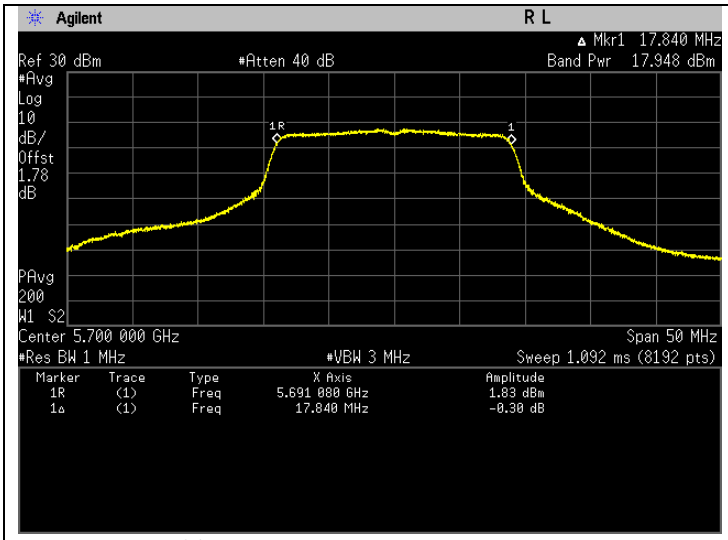
Frequency 5320 MHz, ISED



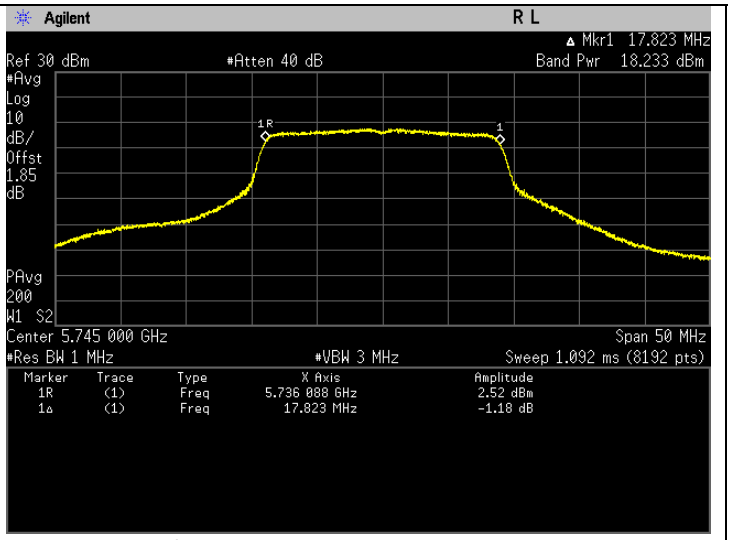
Frequency 5500 MHz, ISED



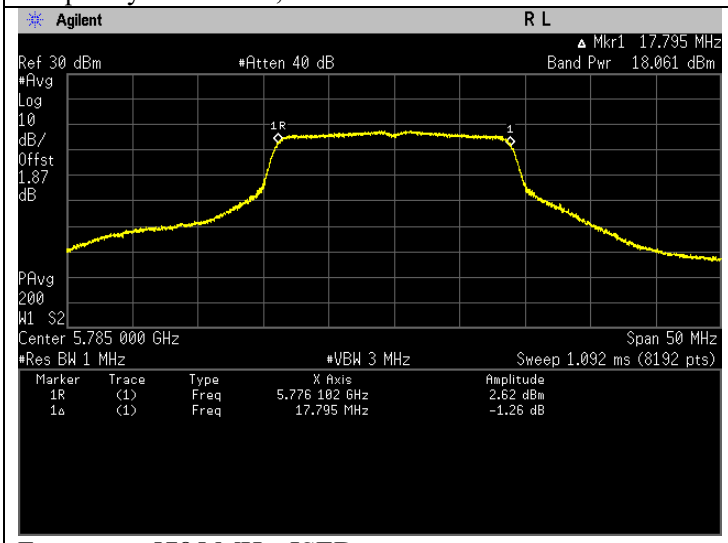
Frequency 5580 MHz, ISED



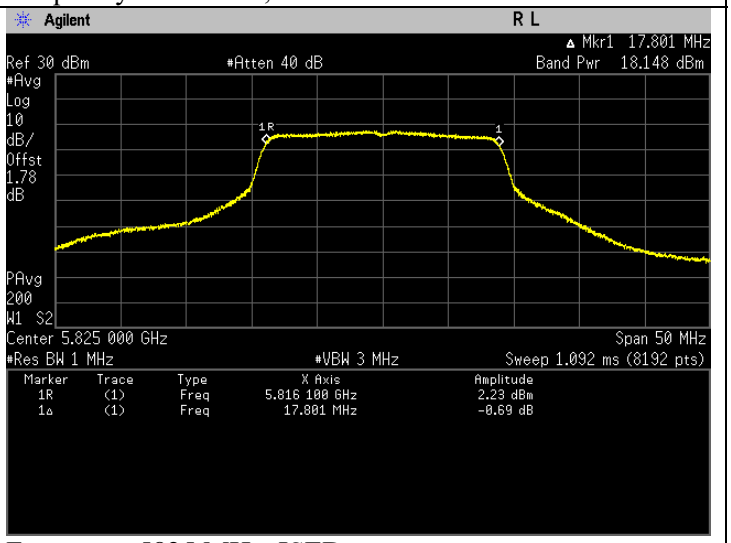
Frequency 5700 MHz, ISED



Frequency 5745 MHz, ISED



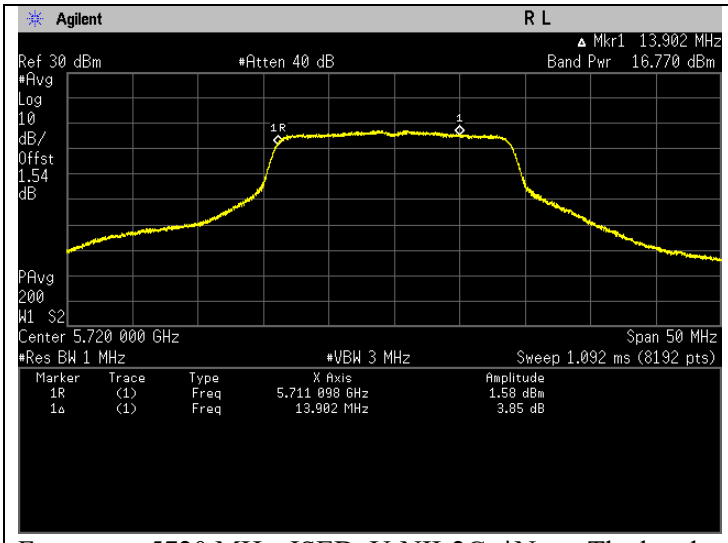
Frequency 5785 MHz, ISED



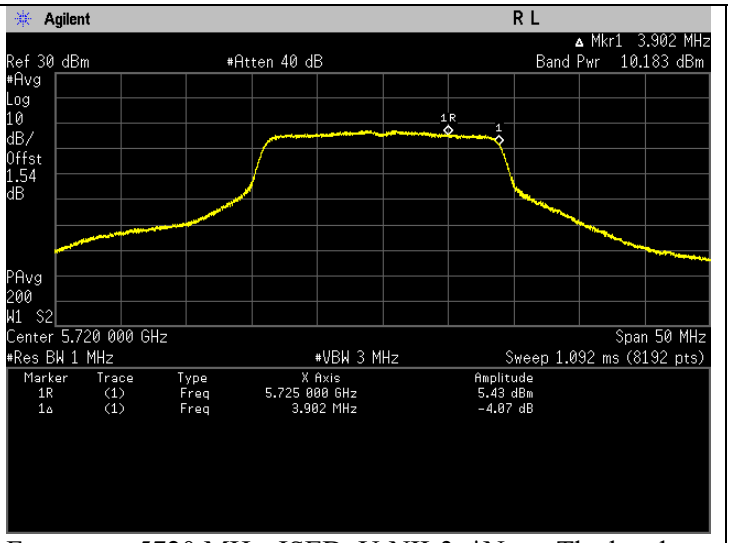
Frequency 5825 MHz, ISED

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)	48.420	16.850	Pass	20.150	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	10.625	10.263	Pass	13.563	Pass



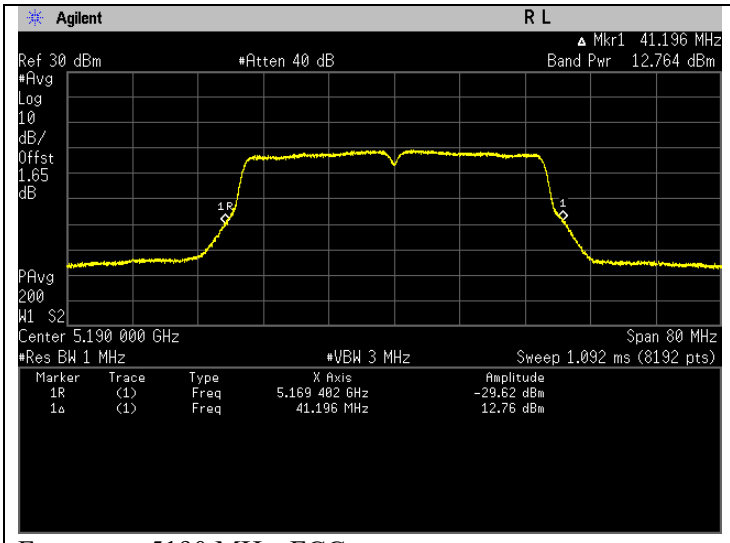
Frequency 5720 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



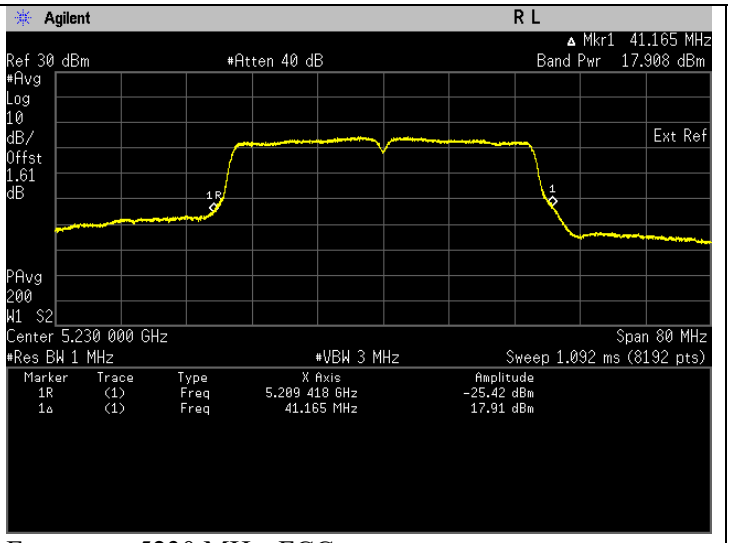
Frequency 5720 MHz, ISED, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT40)(26dB EBW)

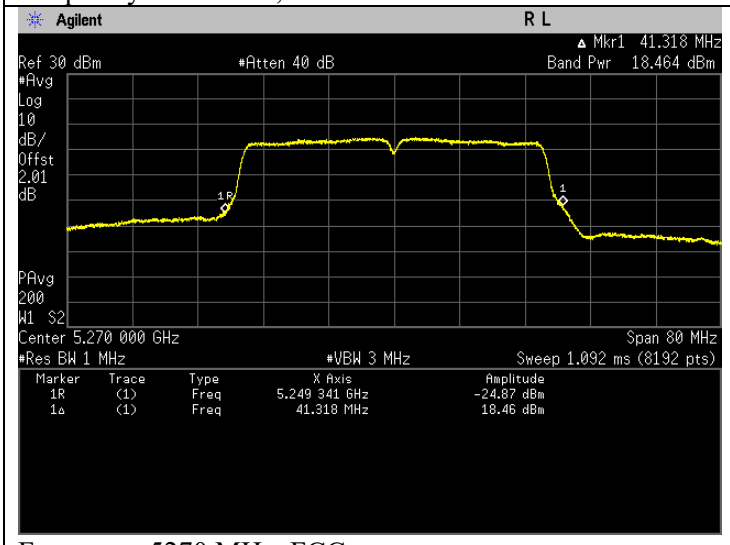
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	19.591	12.920	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	64.040	18.064	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	72.787	18.620	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	13.927	11.438	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	26.999	14.313	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	68.937	18.384	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	69.751	18.435	Pass
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	70.787	18.499	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	71.970	18.571	Pass



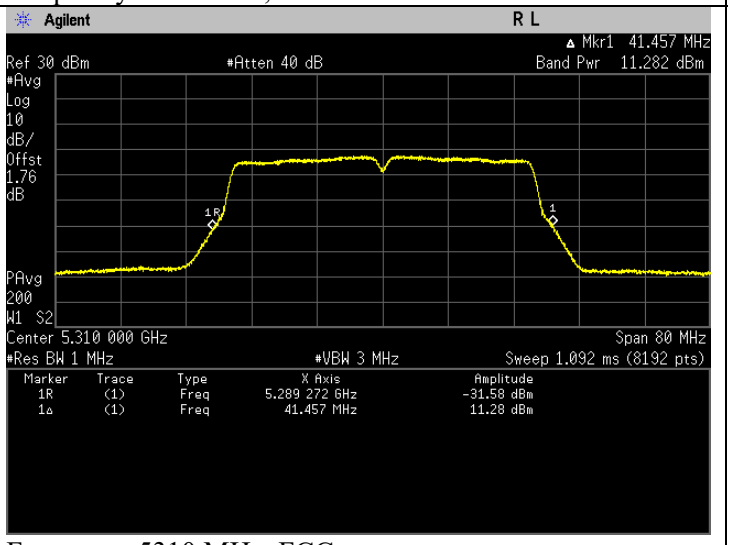
Frequency 5190 MHz, FCC.



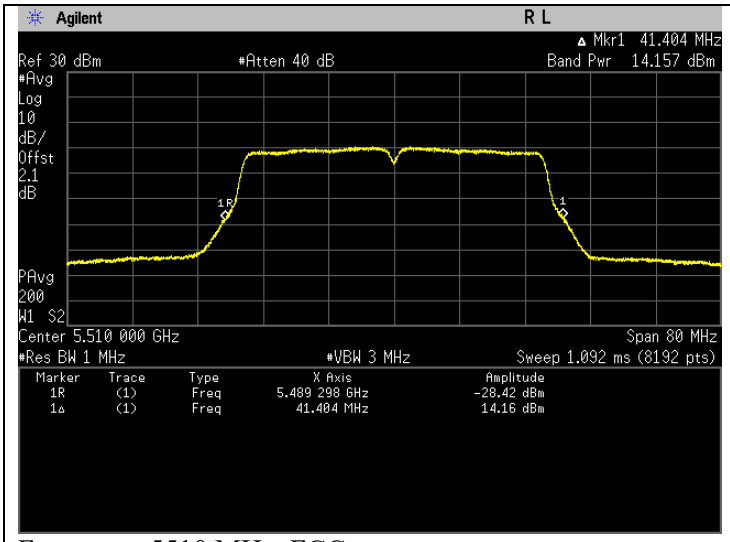
Frequency 5230 MHz, FCC.



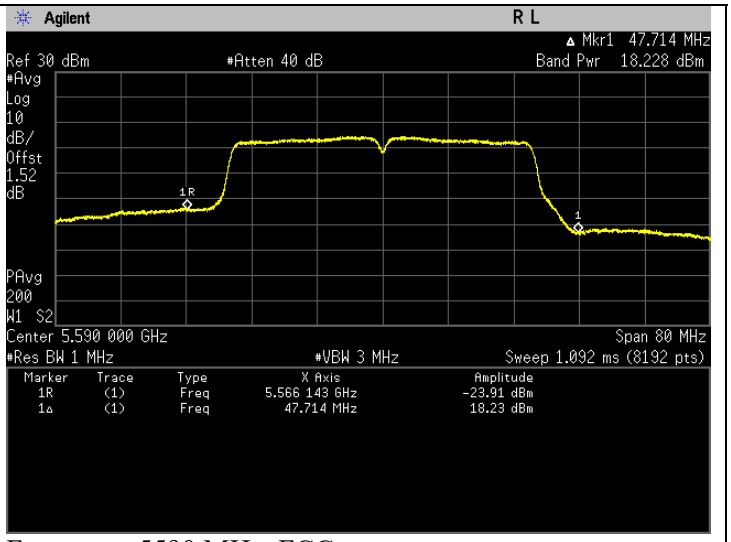
Frequency 5270 MHz, FCC.



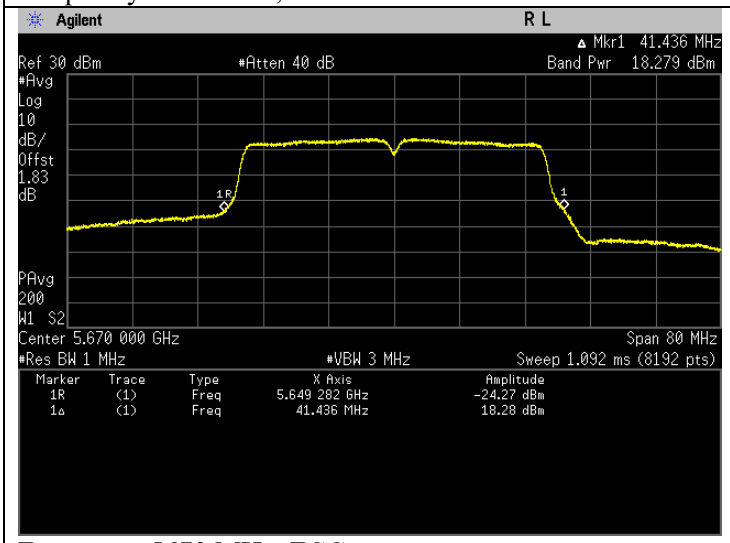
Frequency 5310 MHz, FCC.



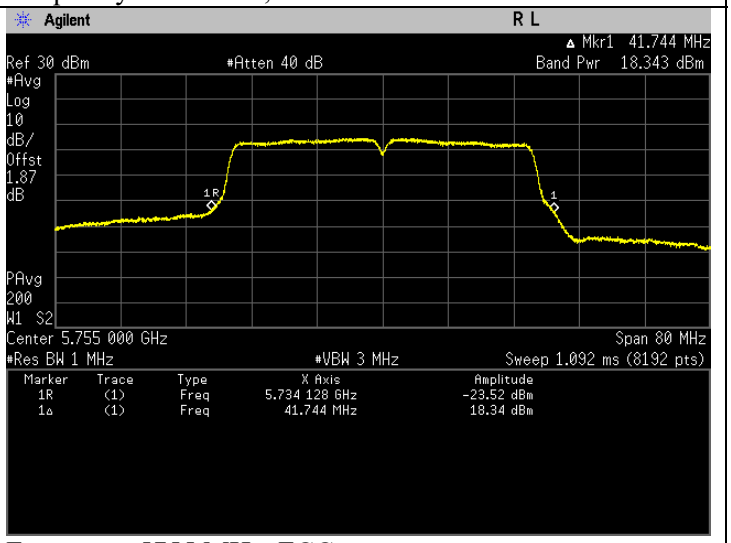
Frequency 5510 MHz, FCC.



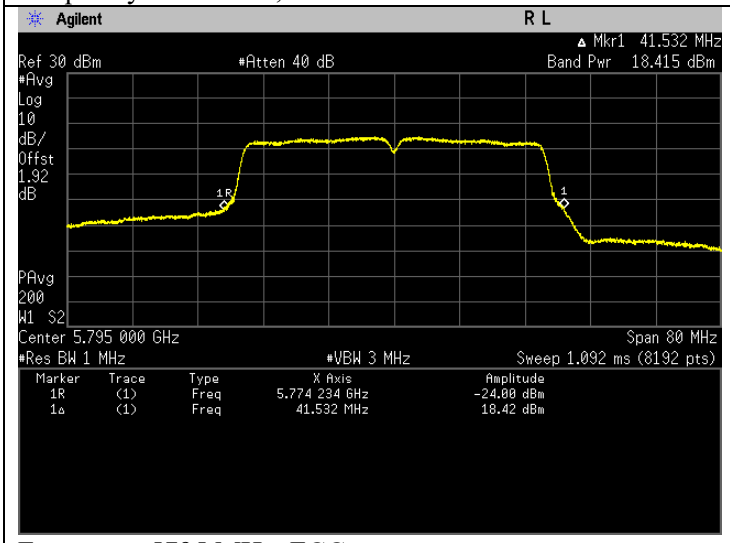
Frequency 5590 MHz, FCC.



Frequency 5670 MHz, FCC.



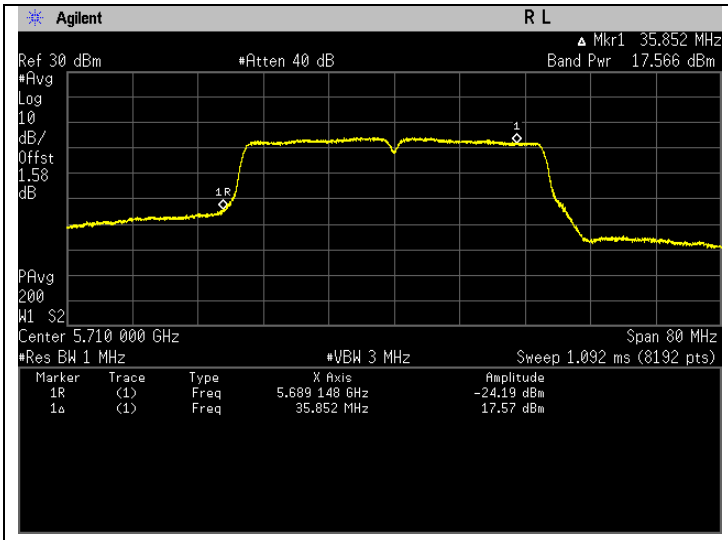
Frequency 5755 MHz, FCC.



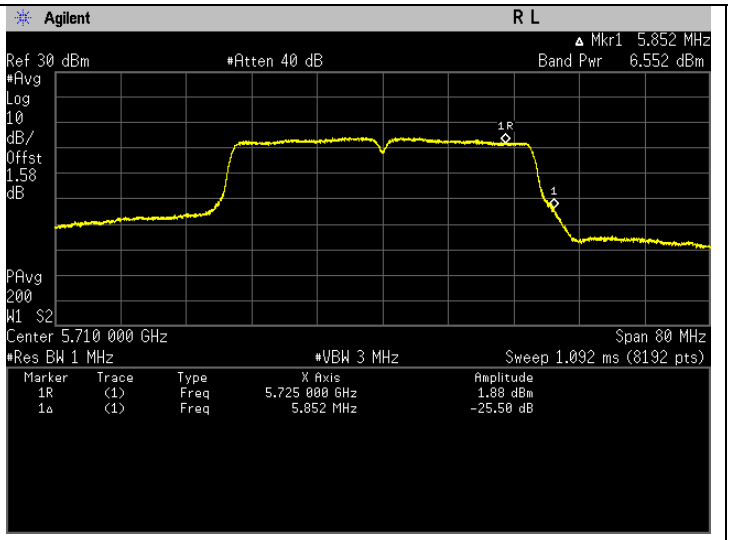
Frequency 5795 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	59.191	17.722	Pass
		U-NII-3		
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.687	6.708	Pass



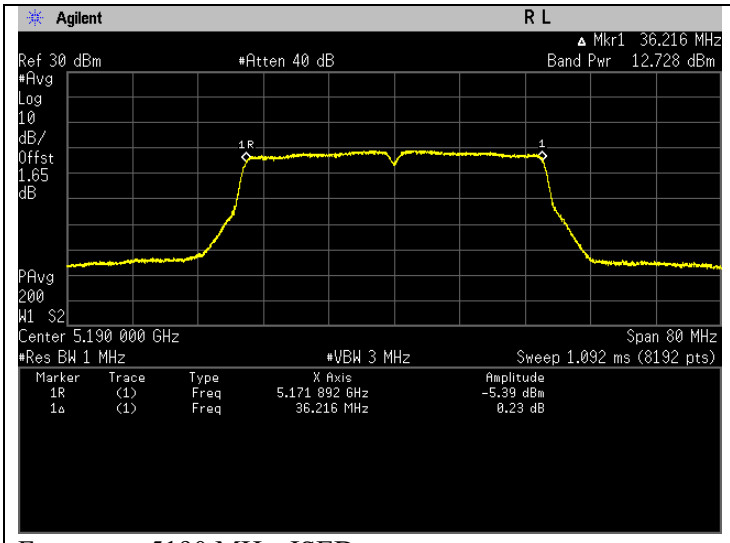
Frequency 5710 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



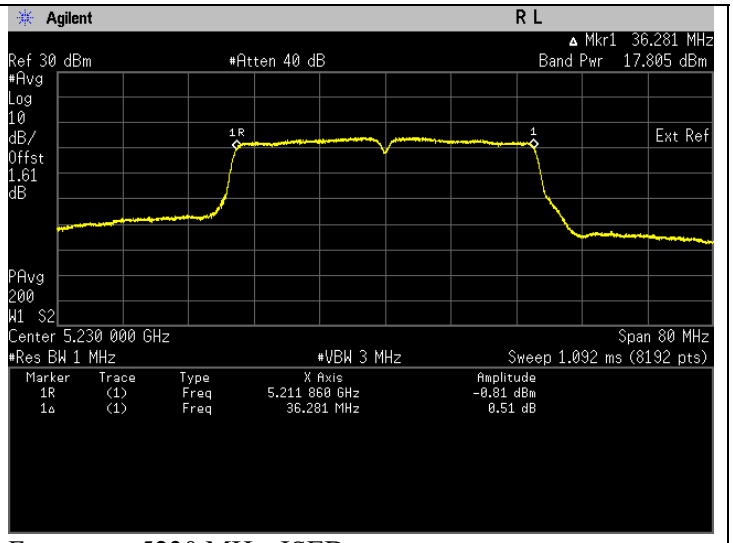
Frequency 5710 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT40)(99% EBW)

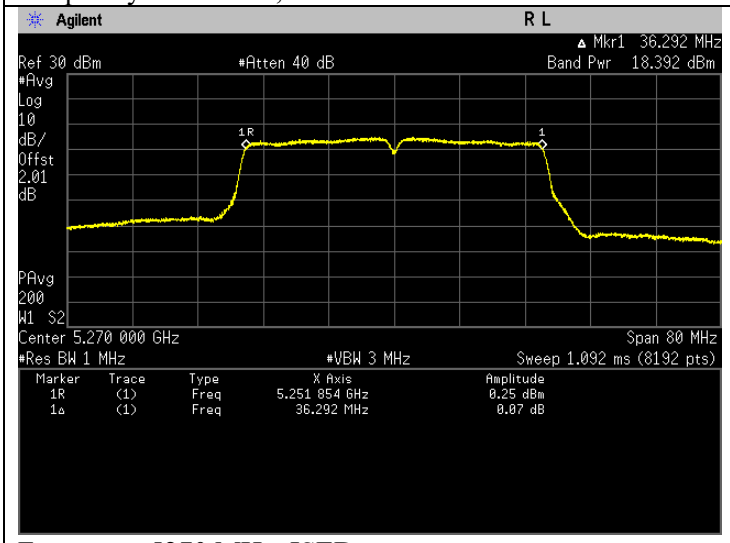
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	19.429	12.884	Pass	17.484	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	62.539	17.961	Pass	22.561	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	71.590	18.548	Pass	23.148	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	13.698	11.366	Pass	15.966	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	26.838	14.287	Pass	17.587	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	68.258	18.341	Pass	21.641	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	69.319	18.408	Pass	21.708	Pass
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	69.767	18.436	Pass	21.536	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	71.032	18.514	Pass	21.614	Pass



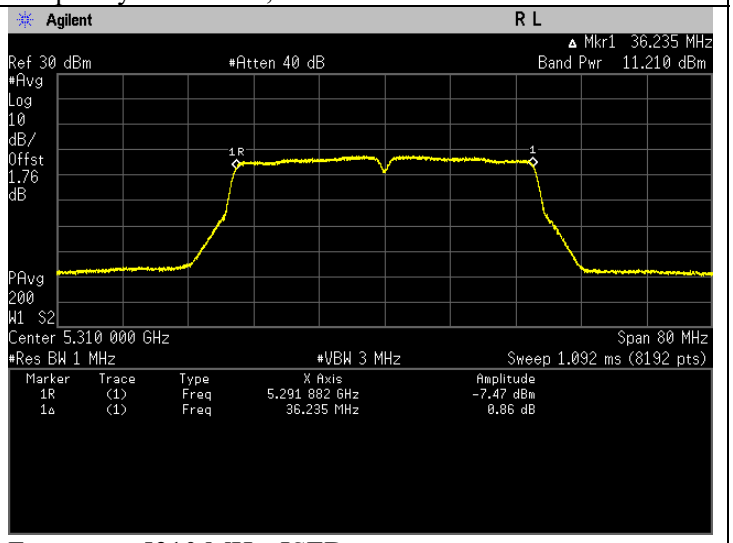
Frequency 5190 MHz, ISED



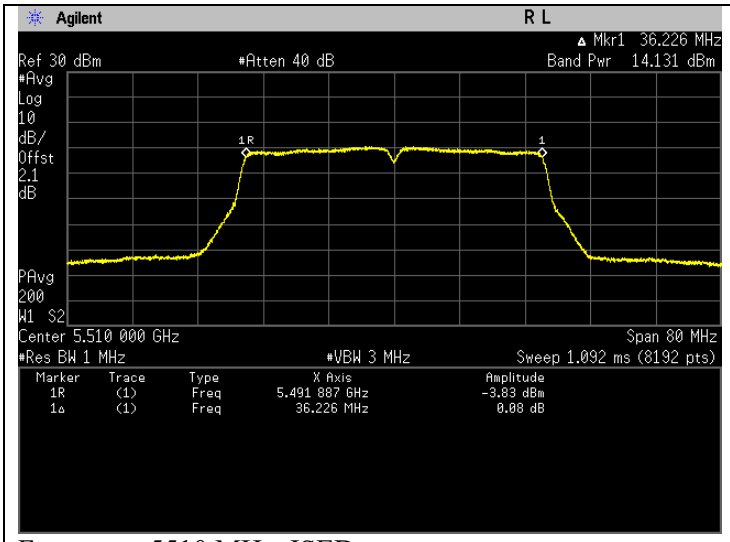
Frequency 5230 MHz, ISED



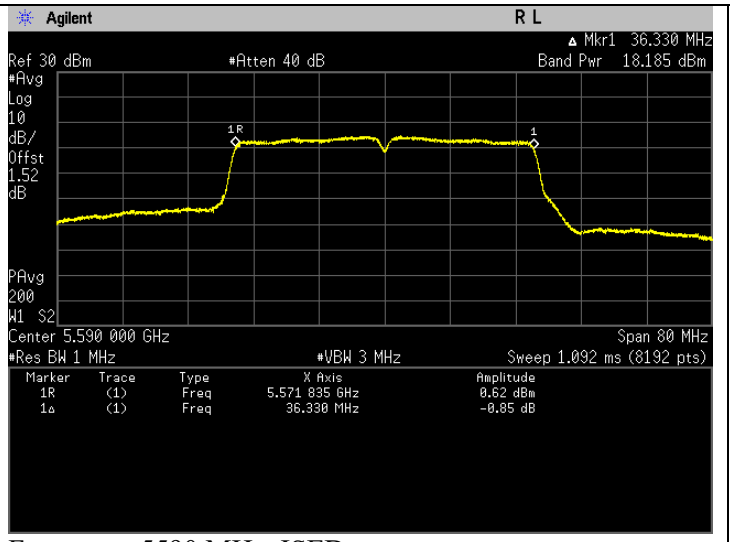
Frequency 5270 MHz, ISED



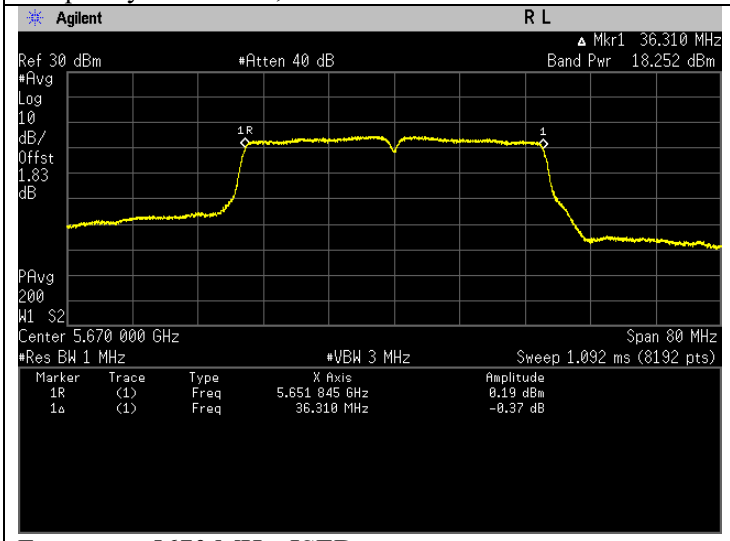
Frequency 5310 MHz, ISED



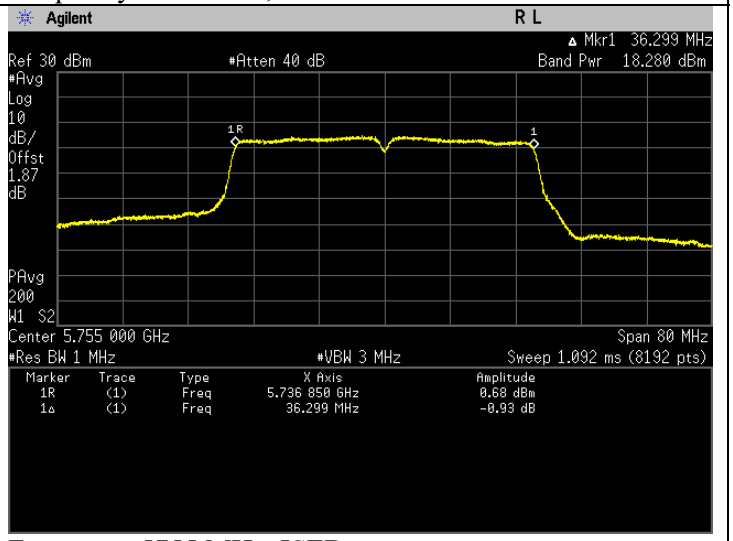
Frequency 5510 MHz, ISED



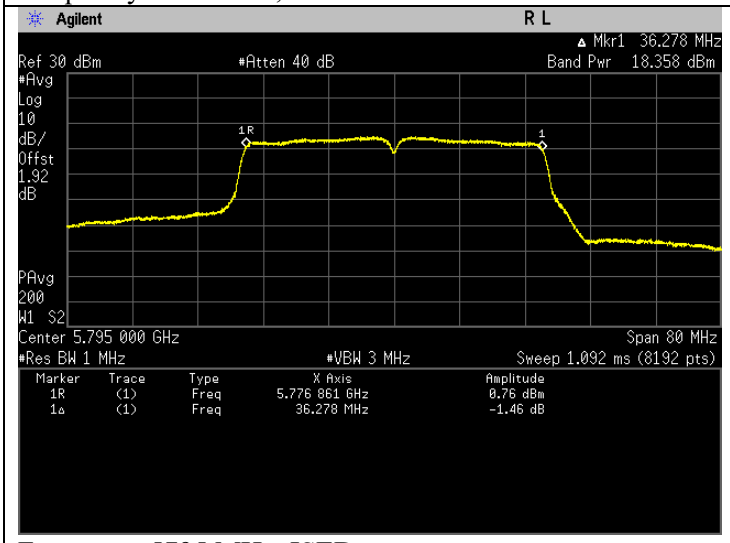
Frequency 5590 MHz, ISED



Frequency 5670 MHz, ISED



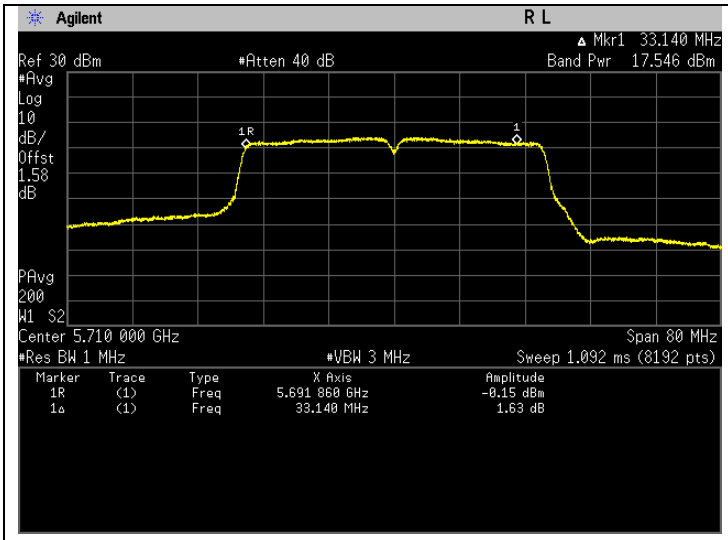
Frequency 5755 MHz, ISED



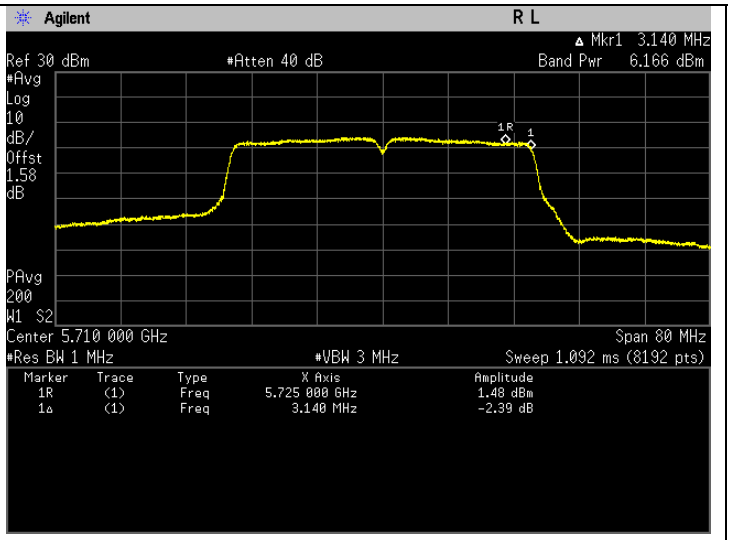
Frequency 5795 MHz, ISED

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	58.919	17.702	Pass	21.002	Pass
		U-NII-3				
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.288	6.322	Pass	9.622	Pass



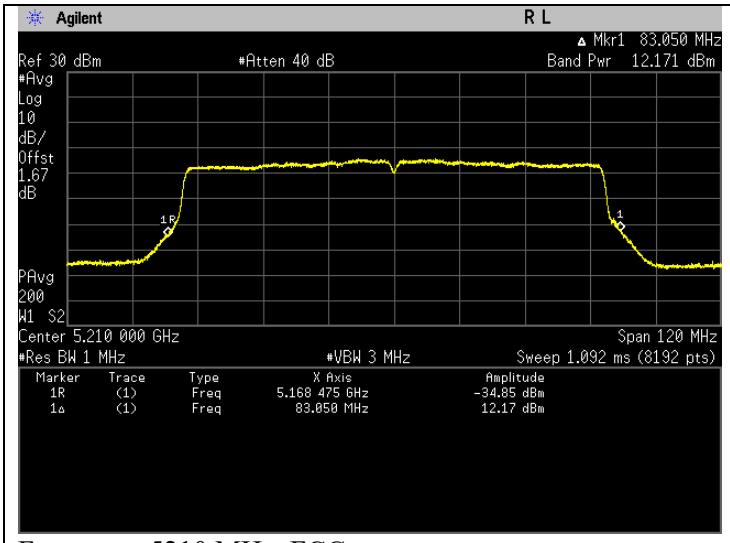
Frequency 5710 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



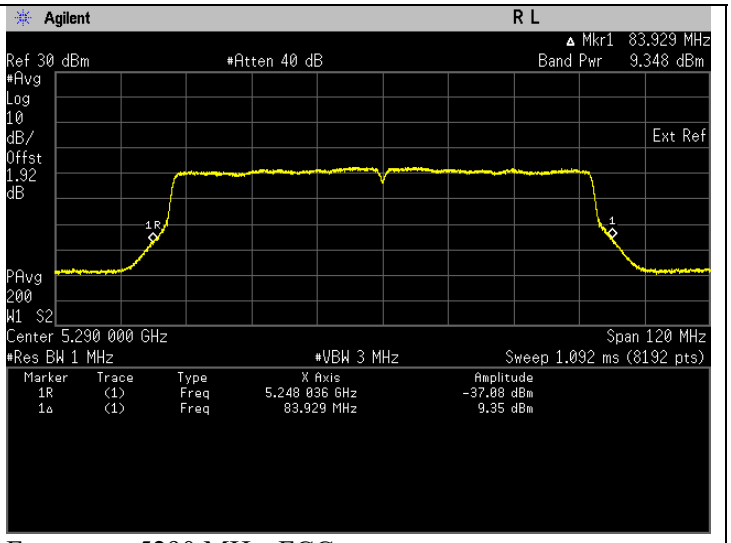
Frequency 5710 MHz, ISED, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11ac (HT80)(26dB EBW)

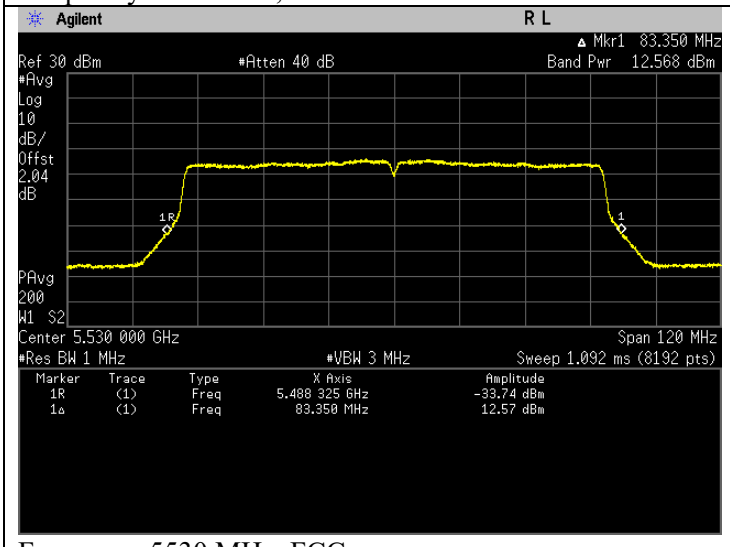
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5210	Mod Type: BPSK, Data Rate: MCS0(29.3)	17.709	12.482	Pass
5290	Mod Type: BPSK, Data Rate: MCS0(29.3)	9.245	9.659	Pass
5530	Mod Type: BPSK, Data Rate: MCS0(29.3)	19.404	12.879	Pass
5610	Mod Type: BPSK, Data Rate: MCS0(29.3)	59.758	17.764	Pass
5775	Mod Type: BPSK, Data Rate: MCS0(29.3)	66.389	18.221	Pass



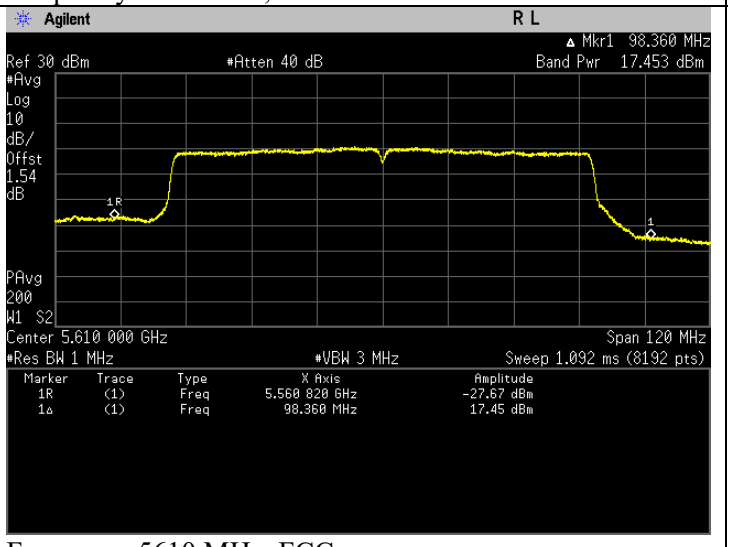
Frequency 5210 MHz, FCC.



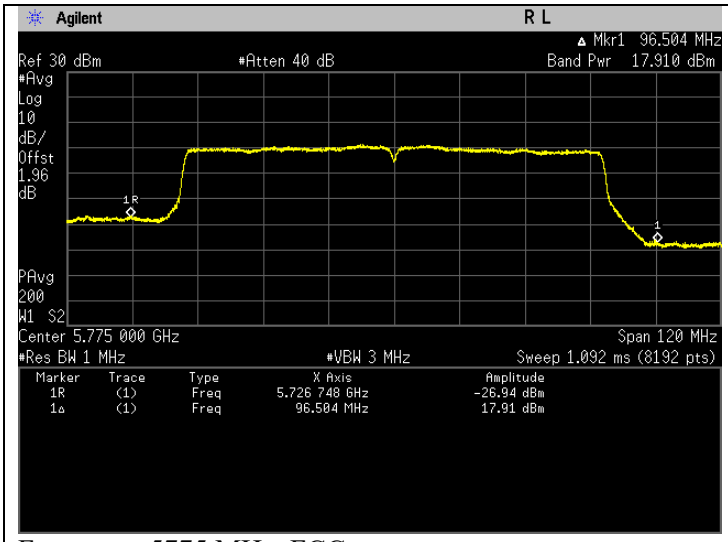
Frequency 5290 MHz, FCC.



Frequency 5530 MHz, FCC.



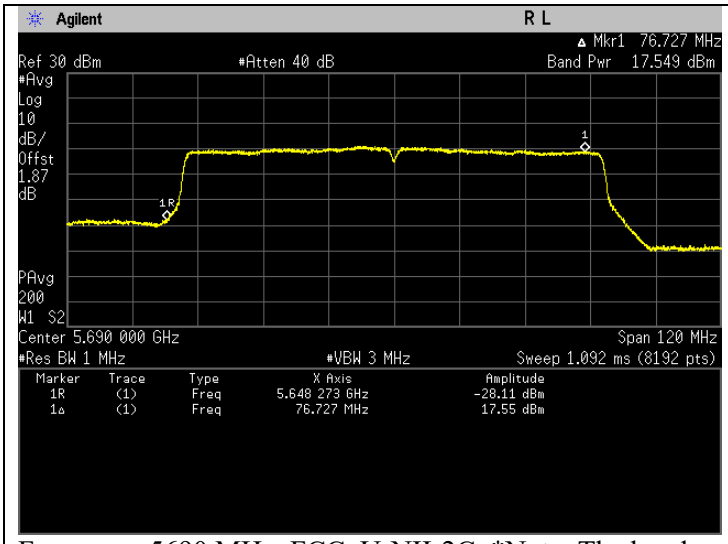
Frequency 5610 MHz, FCC.



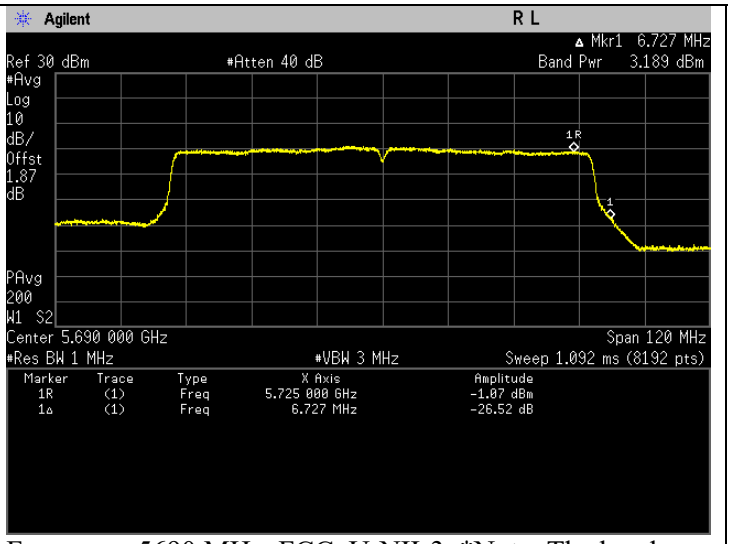
Frequency 5775 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	61.094	17.860	Pass
		U-NII-3		
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	2.239	3.500	Pass



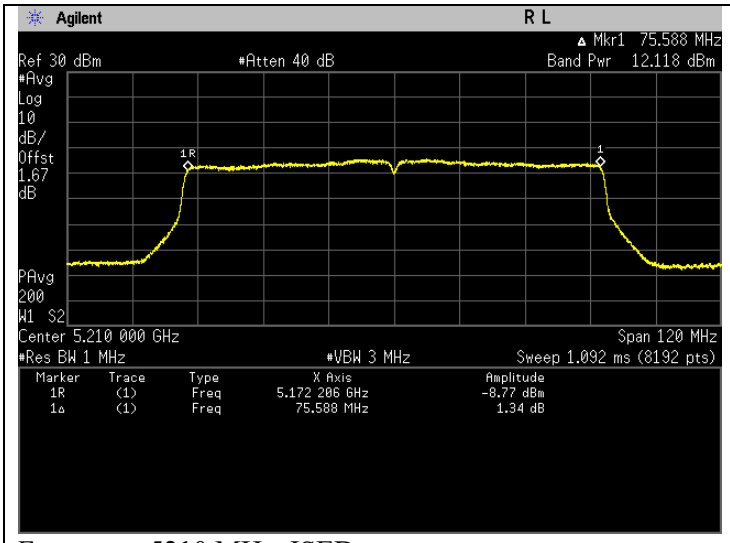
Frequency 5690 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



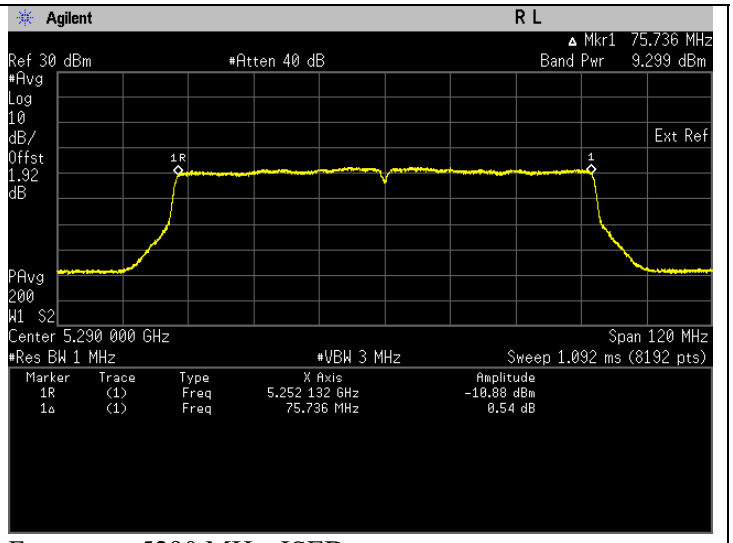
Frequency 5690 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11ac (HT80)(99% EBW)

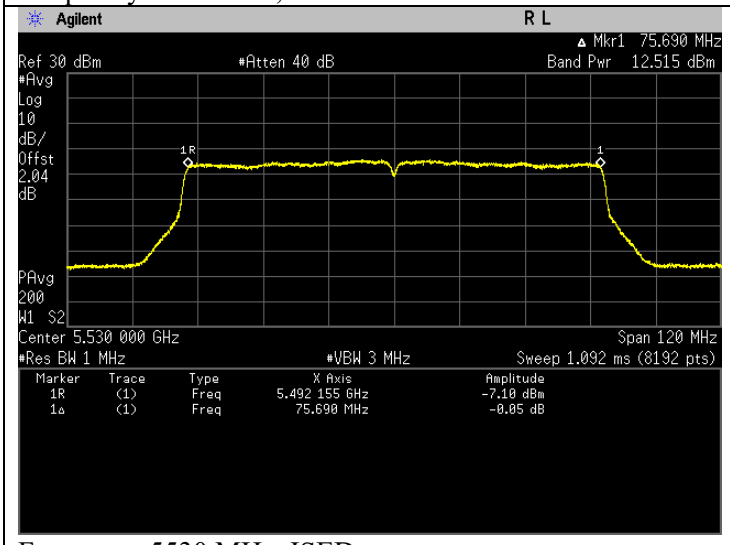
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5210	Mod Type: BPSK, Data Rate: MCS0(29.3)	17.494	12.429	Pass	17.029	Pass
5290	Mod Type: BPSK, Data Rate: MCS0(29.3)	9.141	9.610	Pass	14.210	Pass
5530	Mod Type: BPSK, Data Rate: MCS0(29.3)	19.169	12.826	Pass	16.126	Pass
5610	Mod Type: BPSK, Data Rate: MCS0(29.3)	58.830	17.696	Pass	20.996	Pass
5775	Mod Type: BPSK, Data Rate: MCS0(29.3)	65.659	18.173	Pass	21.273	Pass



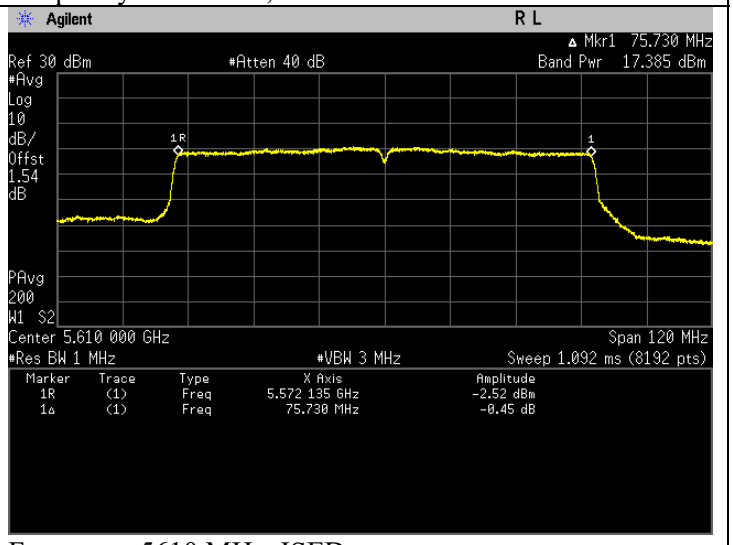
Frequency 5210 MHz, ISED



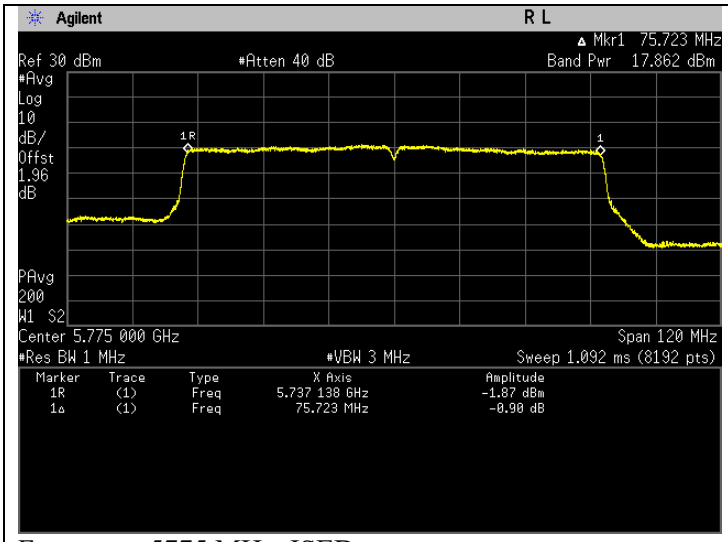
Frequency 5290 MHz, ISED



Frequency 5530 MHz, ISED



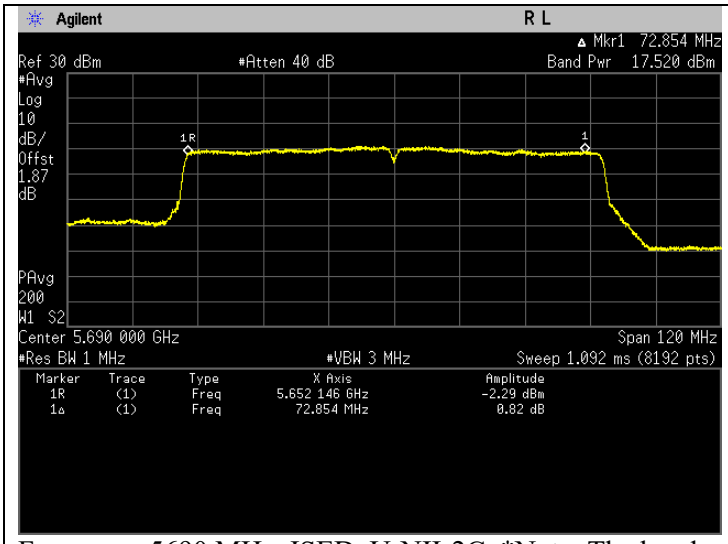
Frequency 5610 MHz, ISED



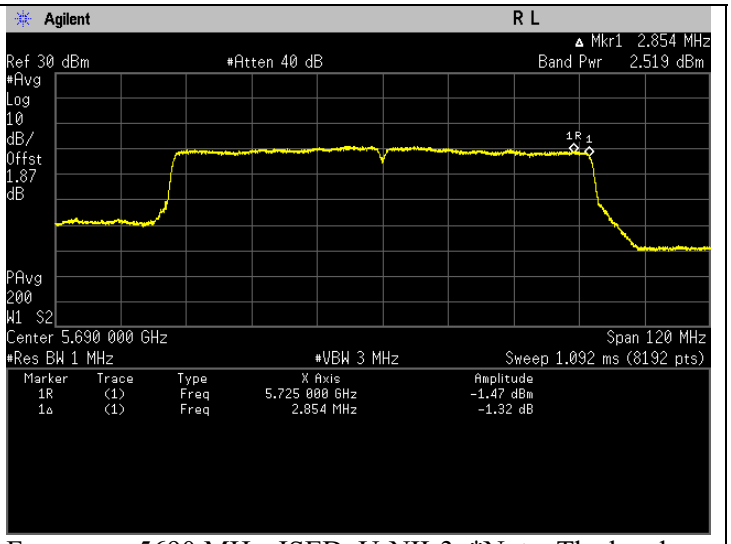
Frequency 5775 MHz, ISED

Straddle Frequency

Freq. (MHz)	Test Conditions	Results				
		U-NII- 2C				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	60.687	17.831	Pass	21.131	Pass
		U-NII-3				
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	1.919	2.830	Pass	6.130	Pass



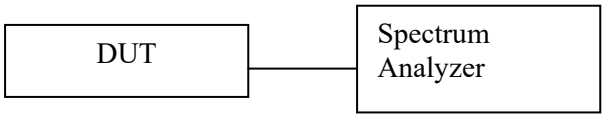
Frequency 5690 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



Frequency 5690 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

7.3.3. Additional Info

Antenna	**Gain (dBi)**
UNII1, UNII2A	4.6
UNII2C	3.3
UNII3	3.1
Duty Cycle Correction Factor	
802.11a	0.075
802.11n20	0.080
802.11n40	0.156
802.11AC80	0.311

7.3.4. Test Data

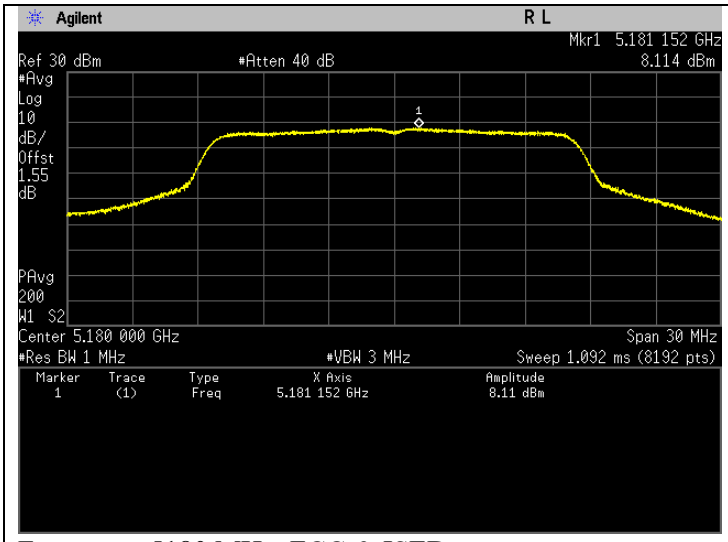
802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	8.189	Pass
5220	Mod Type: BPSK, Data Rate: 6	8.473	Pass
5240	Mod Type: BPSK, Data Rate: 6	7.937	Pass
5260	Mod Type: BPSK, Data Rate: 6	7.915	Pass
5300	Mod Type: BPSK, Data Rate: 6	7.826	Pass
5320	Mod Type: BPSK, Data Rate: 6	7.721	Pass
5500	Mod Type: BPSK, Data Rate: 6	5.868	Pass
5580	Mod Type: BPSK, Data Rate: 6	7.873	Pass
5700	Mod Type: BPSK, Data Rate: 6	8.129	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	5.607	Pass
5785	Mod Type: BPSK, Data Rate: 6	5.868	Pass
5825	Mod Type: BPSK, Data Rate: 6	5.594	Pass

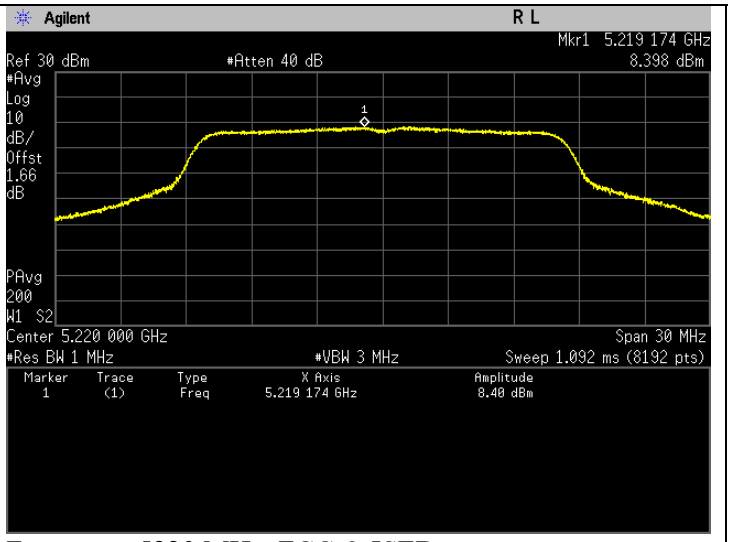
802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	8.189	Pass	12.789	Pass
5220	Mod Type: BPSK, Data Rate: 6	8.473	Pass	13.073	Pass
5240	Mod Type: BPSK, Data Rate: 6	7.937	Pass	12.537	Pass
5260	Mod Type: BPSK, Data Rate: 6	7.915	Pass	12.515	Pass
5300	Mod Type: BPSK, Data Rate: 6	7.826	Pass	12.426	Pass
5320	Mod Type: BPSK, Data Rate: 6	7.721	Pass	12.321	Pass
5500	Mod Type: BPSK, Data Rate: 6	5.868	Pass	9.168	Pass
5580	Mod Type: BPSK, Data Rate: 6	7.873	Pass	11.173	Pass
5700	Mod Type: BPSK, Data Rate: 6	8.129	Pass	11.429	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status	EIRP (dBm/MHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	5.607	Pass	8.707	Pass
5785	Mod Type: BPSK, Data Rate: 6	5.868	Pass	8.968	Pass
5825	Mod Type: BPSK, Data Rate: 6	5.594	Pass	8.694	Pass

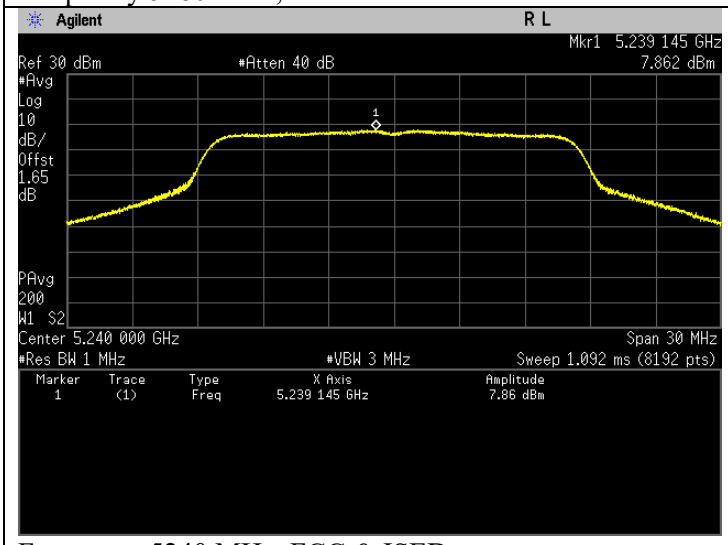
Plots for 802.11a (26dB EBW & 99% EBW)



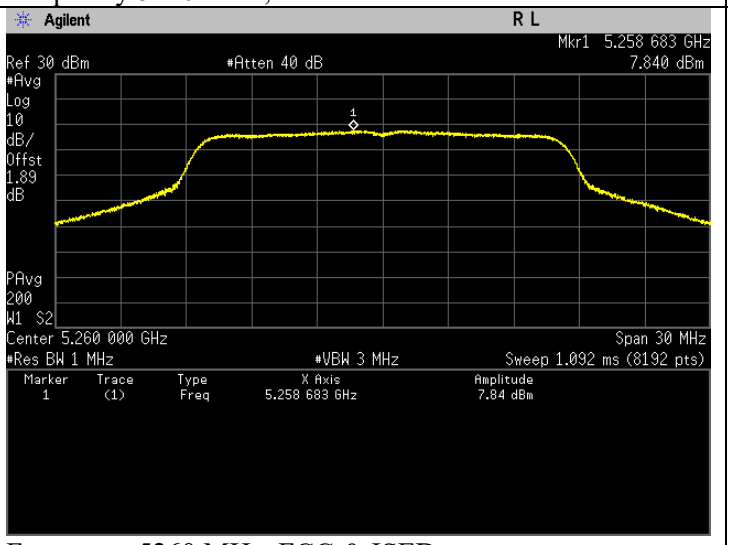
Frequency 5180 MHz, FCC & ISED.



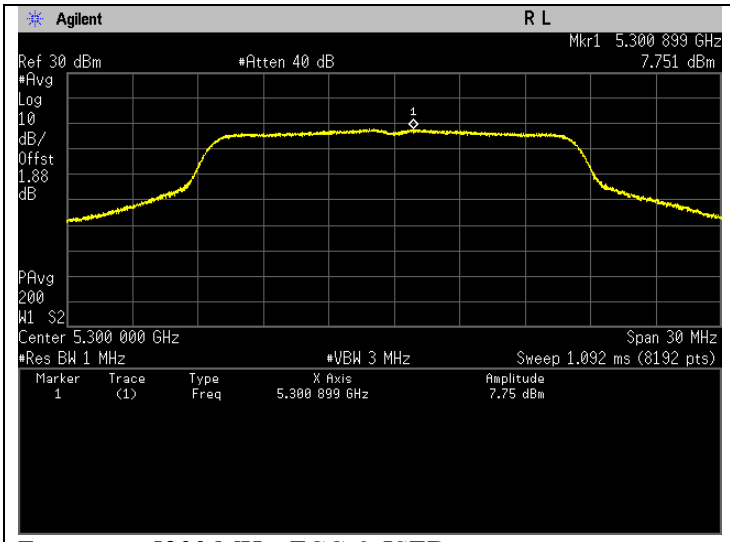
Frequency 5220 MHz, FCC & ISED.



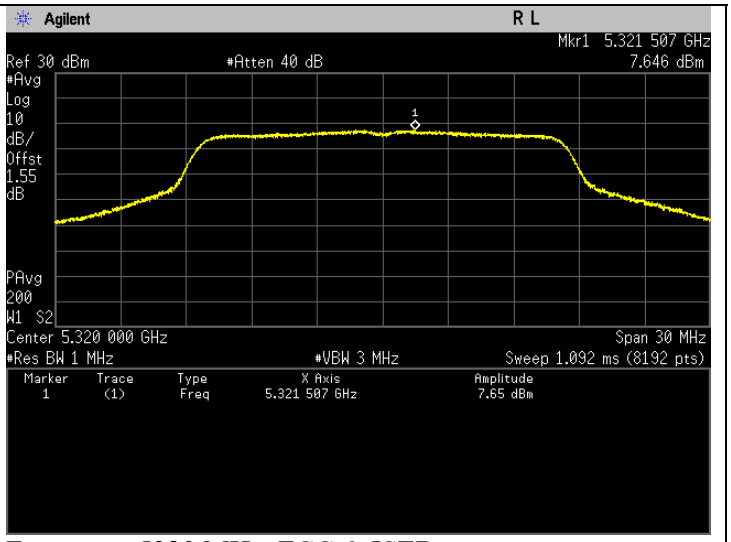
Frequency 5240 MHz, FCC & ISED.



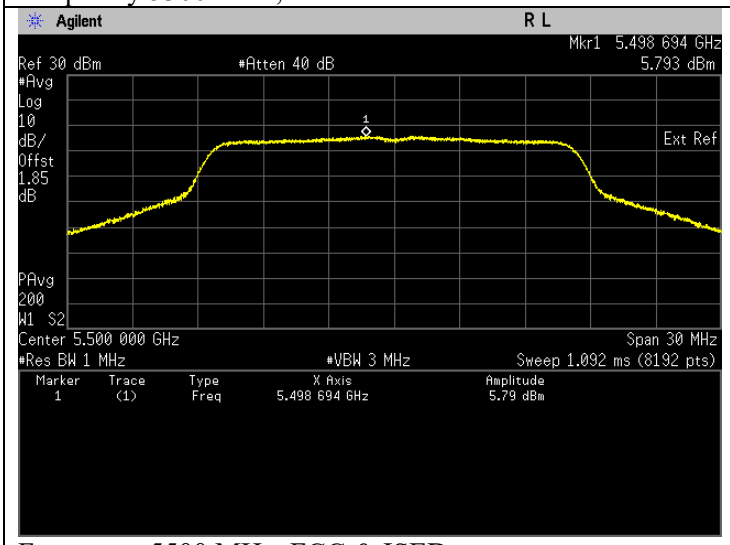
Frequency 5260 MHz, FCC & ISED.



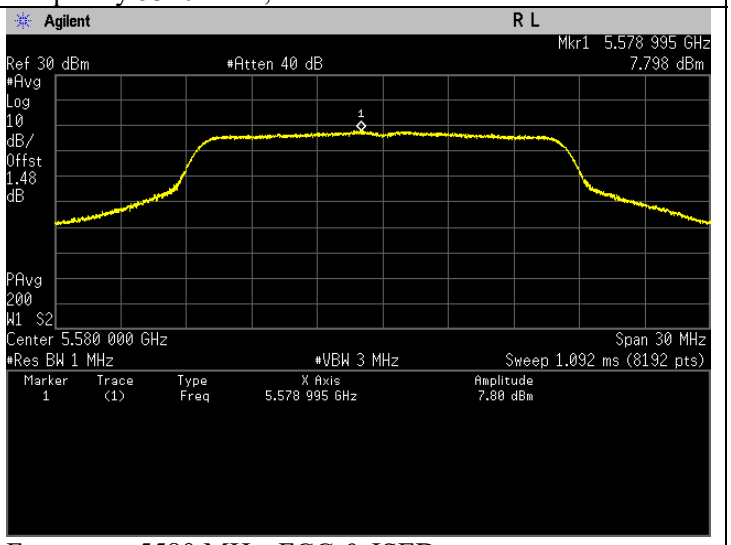
Frequency 5300 MHz, FCC & ISED.



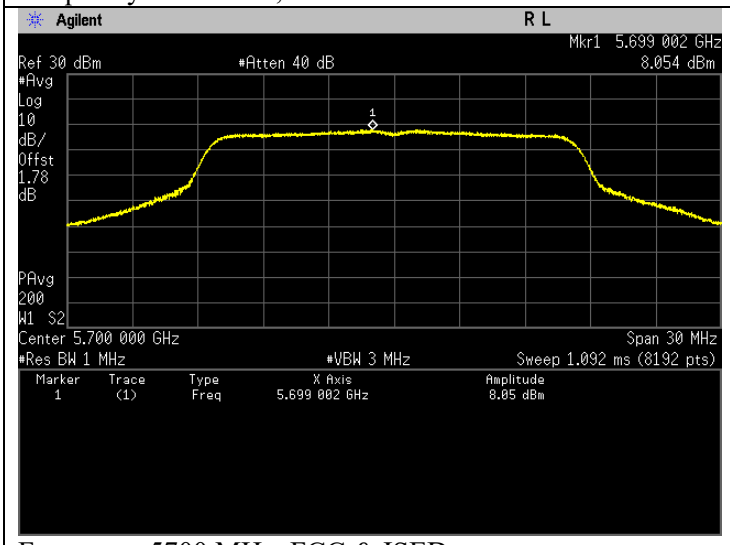
Frequency 5320 MHz, FCC & ISED.



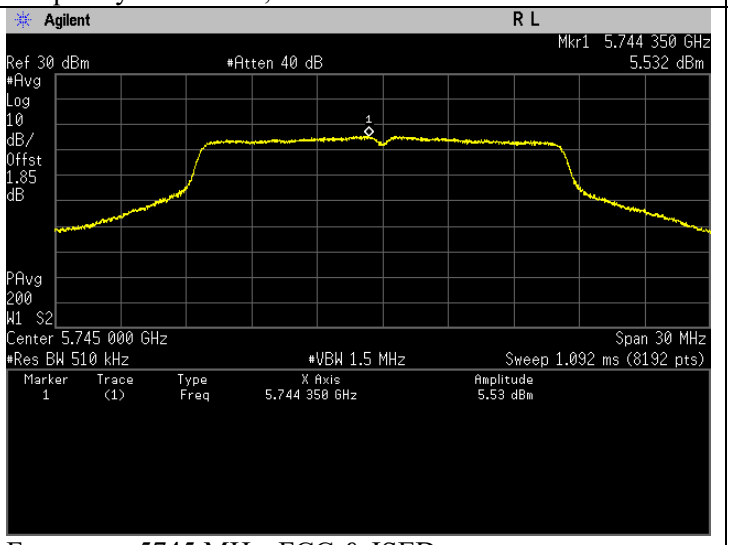
Frequency 5500 MHz, FCC & ISED.



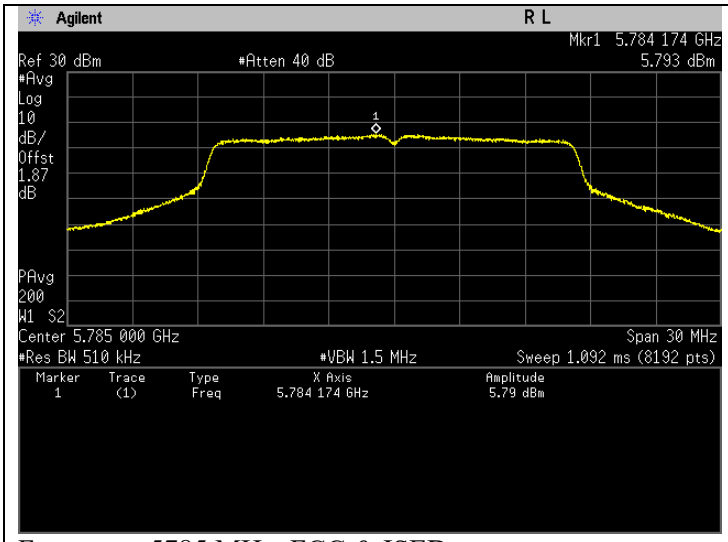
Frequency 5580 MHz, FCC & ISED.



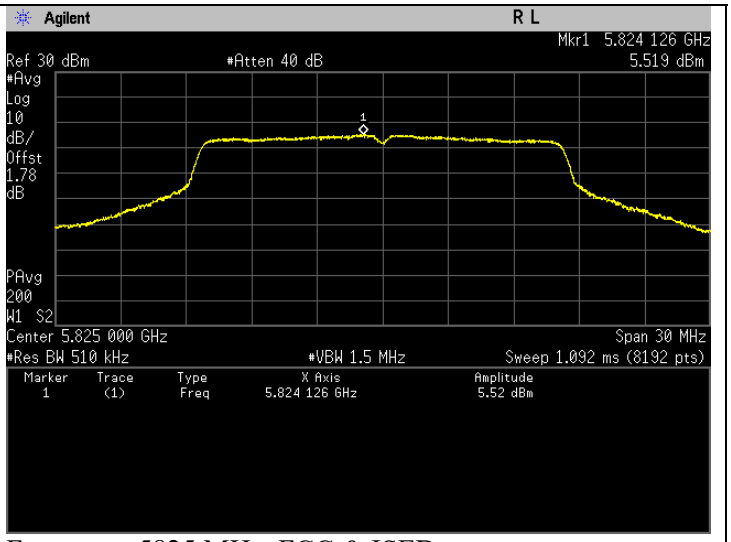
Frequency 5700 MHz, FCC & ISED.



Frequency 5745 MHz, FCC & ISED.



Frequency 5785 MHz, FCC & ISED.



Frequency 5825 MHz, FCC & ISED.

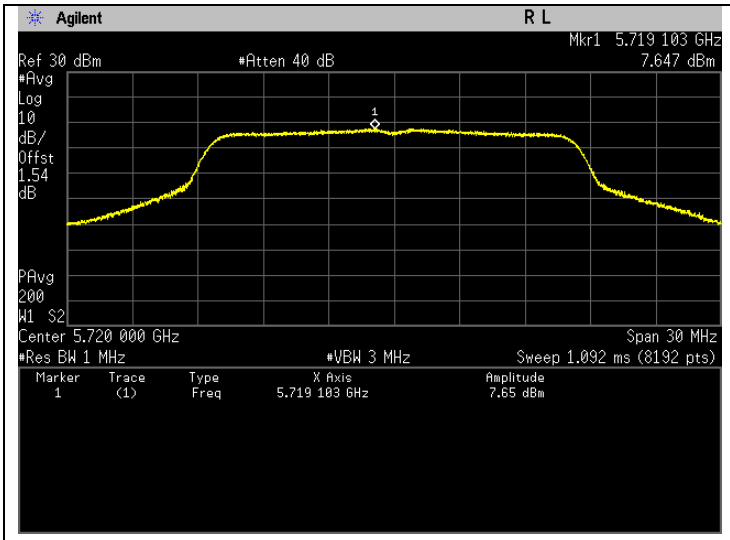
Straddle Frequency for 802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	7.722	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	6.035	Pass

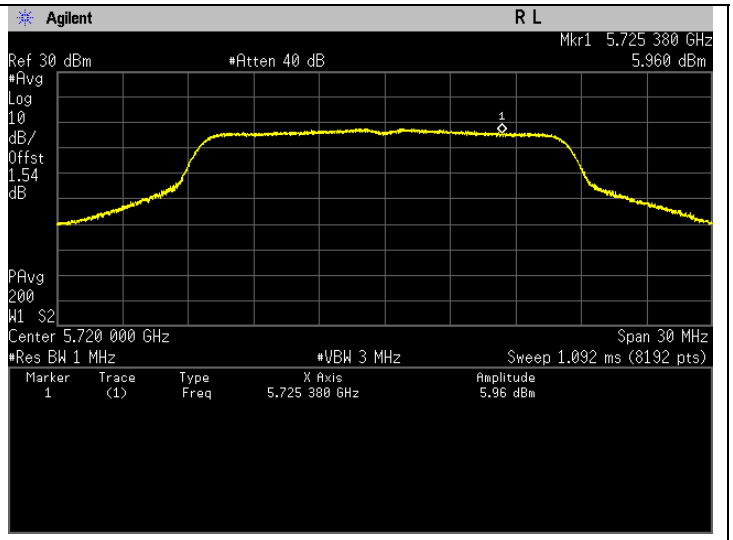
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	7.722	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	6.035	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.

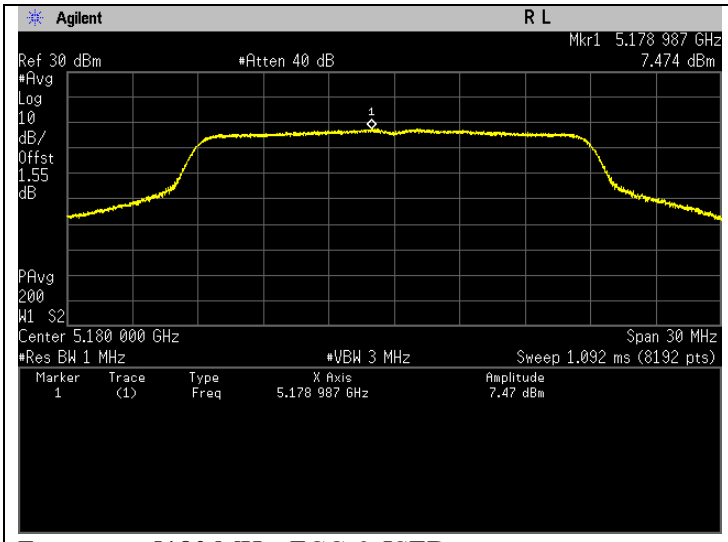
802.11n (HT20)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.554	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.028	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.938	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.329	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.494	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.213	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.095	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.448	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.618	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.646	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.001	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.911	Pass

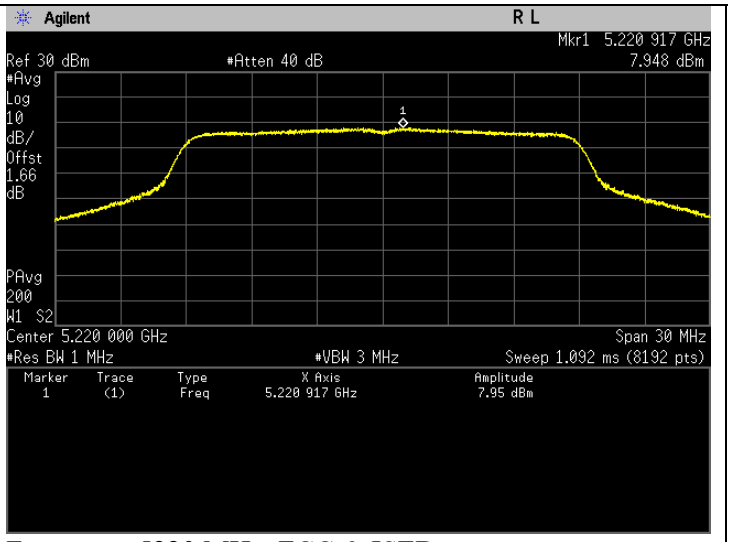
802.11n (HT20)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.554	Pass	12.154	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.028	Pass	12.628	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.938	Pass	12.538	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.329	Pass	11.929	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.494	Pass	12.094	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.213	Pass	11.813	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.095	Pass	11.395	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.448	Pass	10.748	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.618	Pass	10.918	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status	EIRP (dBm/MHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.646	Pass	8.746	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.001	Pass	8.101	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	4.911	Pass	8.011	Pass

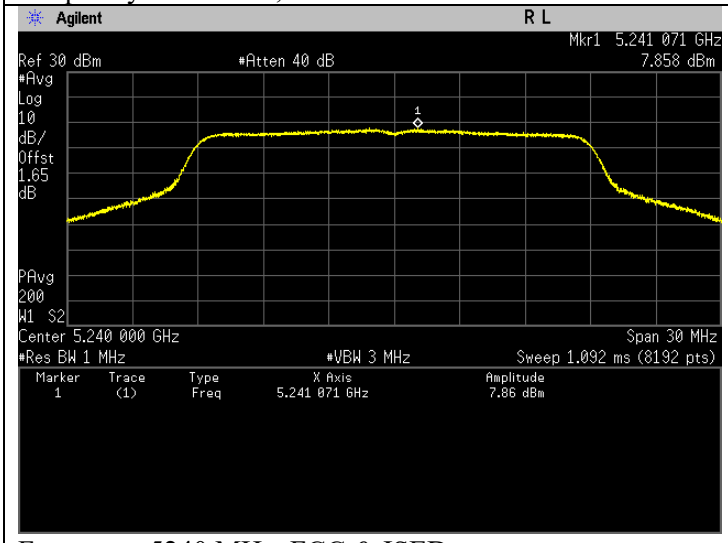
Plots for 802.11n (HT20) (26dB EBW & 99% EBW)



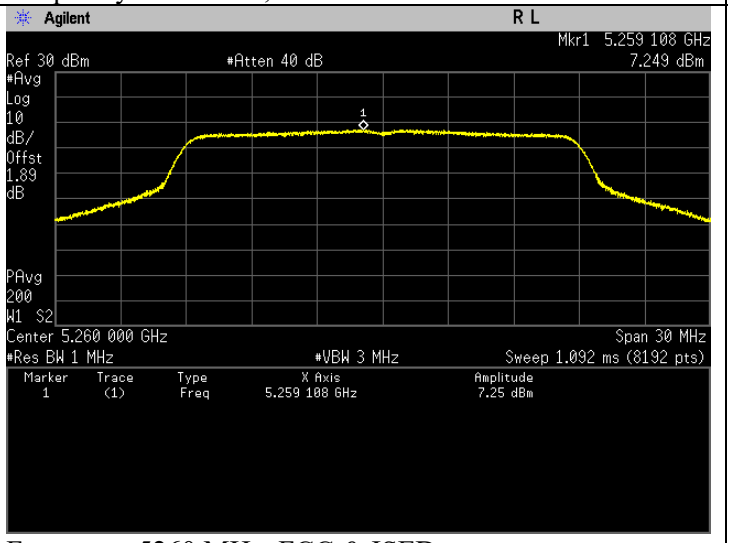
Frequency 5180 MHz, FCC & ISED.



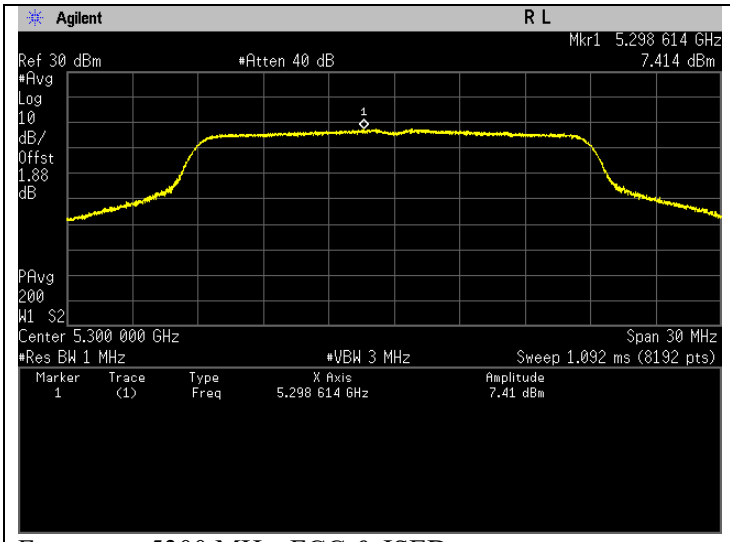
Frequency 5220 MHz, FCC & ISED.



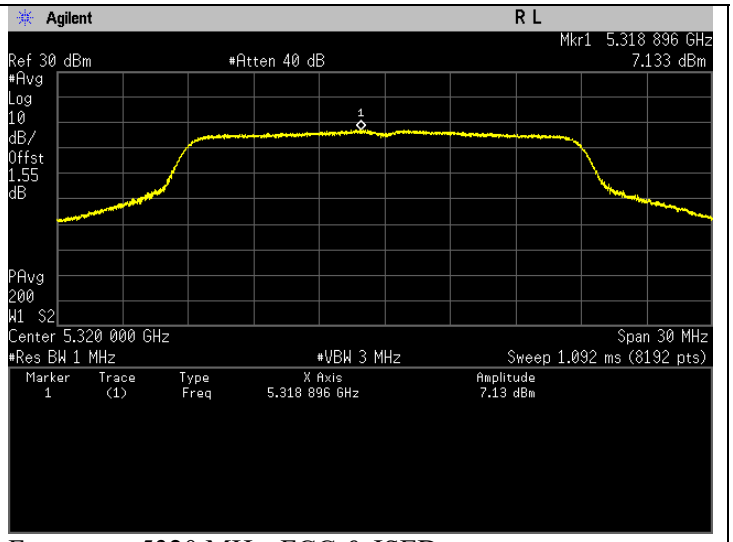
Frequency 5240 MHz, FCC & ISED.



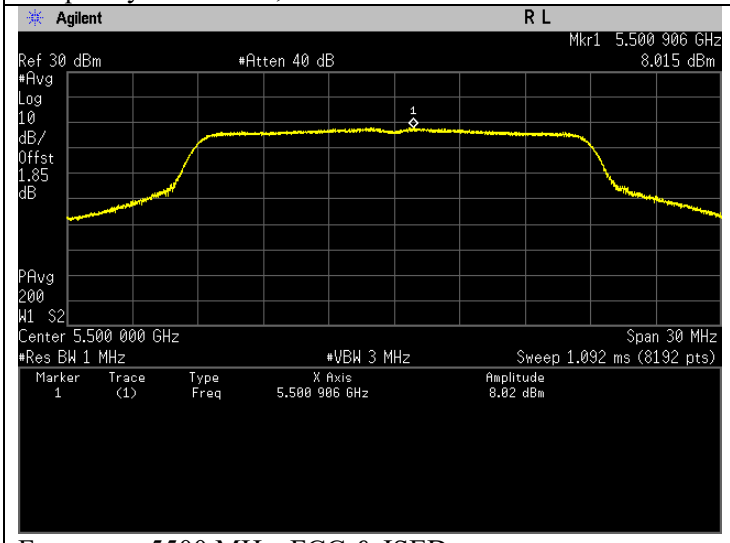
Frequency 5260 MHz, FCC & ISED.



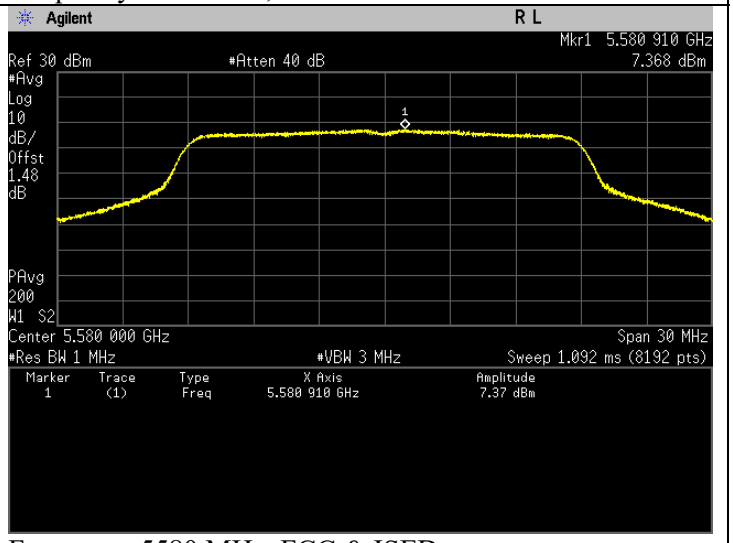
Frequency 5300 MHz, FCC & ISED.



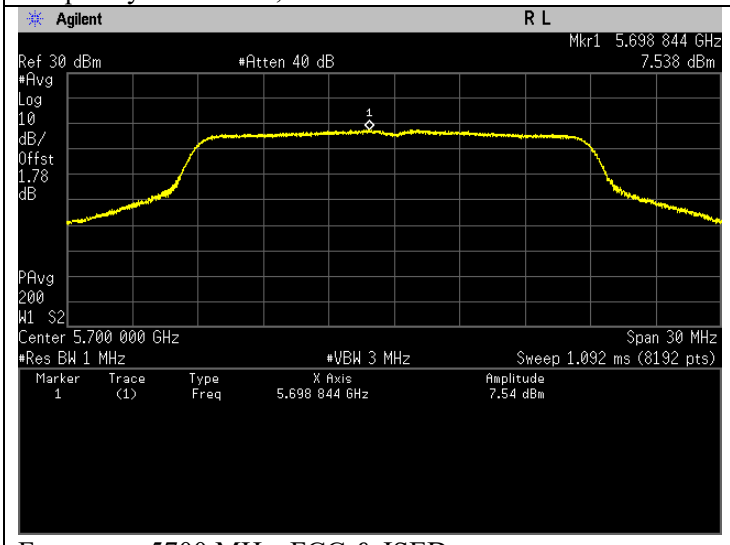
Frequency 5320 MHz, FCC & ISED.



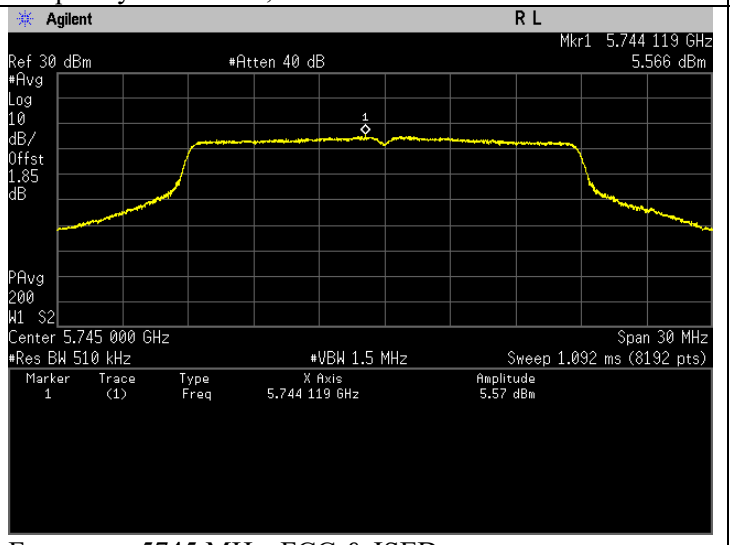
Frequency 5500 MHz, FCC & ISED.



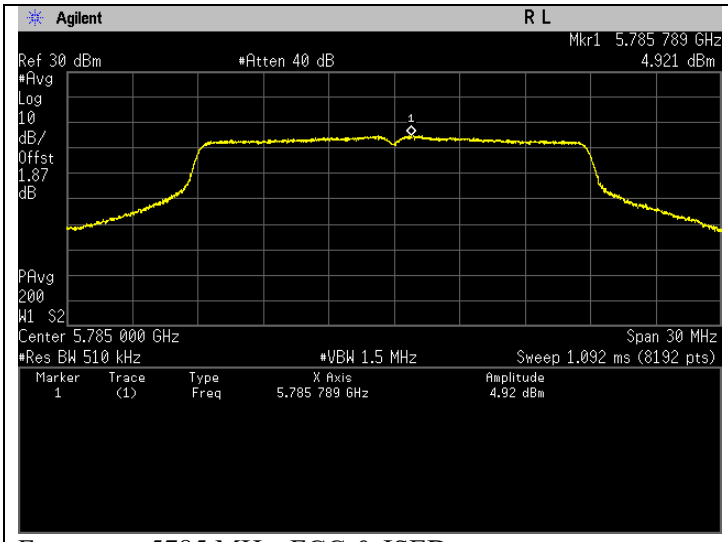
Frequency 5580 MHz, FCC & ISED.



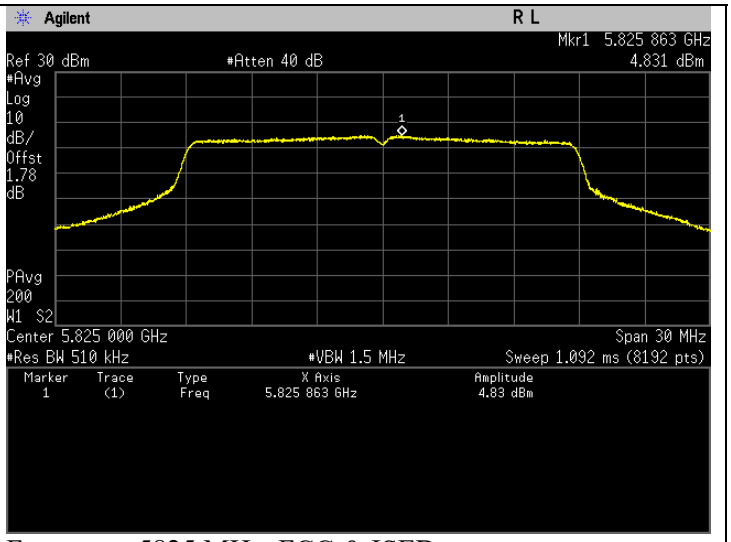
Frequency 5700 MHz, FCC & ISED.



Frequency 5745 MHz, FCC & ISED.



Frequency 5785 MHz, FCC & ISED.



Frequency 5825 MHz, FCC & ISED.

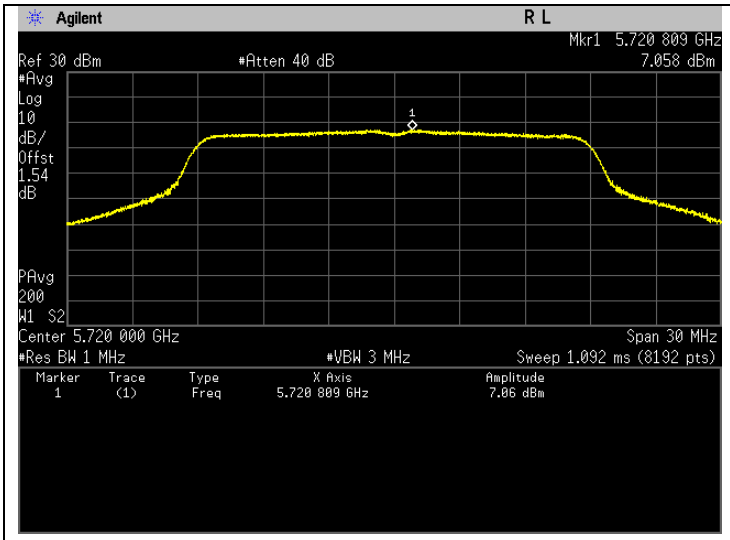
Straddle Frequency for 802.11n (HT20) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.138	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.781	Pass

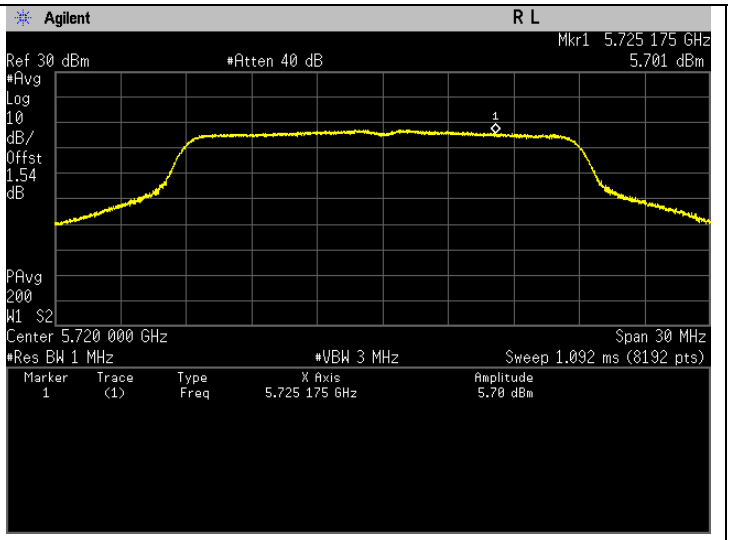
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.138	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	5.781	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.

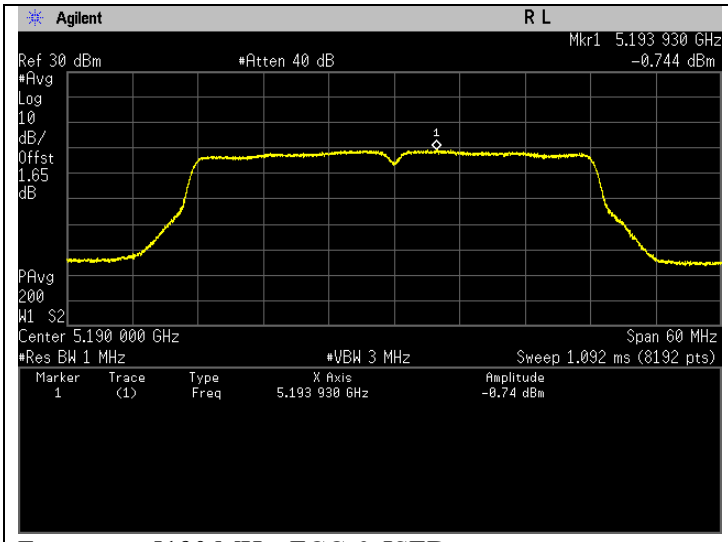
802.11n (HT40) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-0.588	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.636	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.977	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-2.172	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.571	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.749	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.745	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.954	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.233	Pass

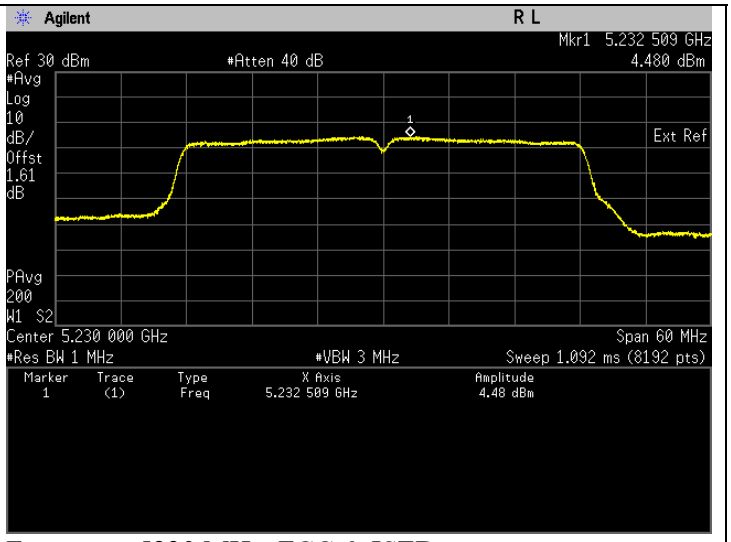
802.11n (HT40)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5190	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-0.588	Pass	4.012	Pass
5230	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.636	Pass	9.236	Pass
5270	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.977	Pass	9.577	Pass
5310	Mod Type: BPSK, Data Rate: MCS0 (13.5)	-2.172	Pass	2.428	Pass
5510	Mod Type: BPSK, Data Rate: MCS0 (13.5)	0.571	Pass	3.871	Pass
5590	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.749	Pass	7.849	Pass
5670	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.745	Pass	7.845	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status	EIRP (dBm/MHz)	Status
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	1.954	Pass	5.254	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.233	Pass	5.533	Pass

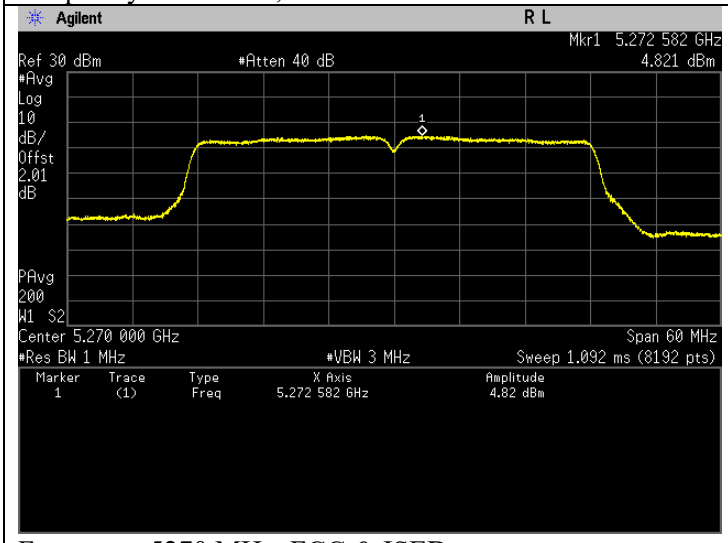
Plots for 802.11n (HT40) (26dB EBW & 99% EBW)



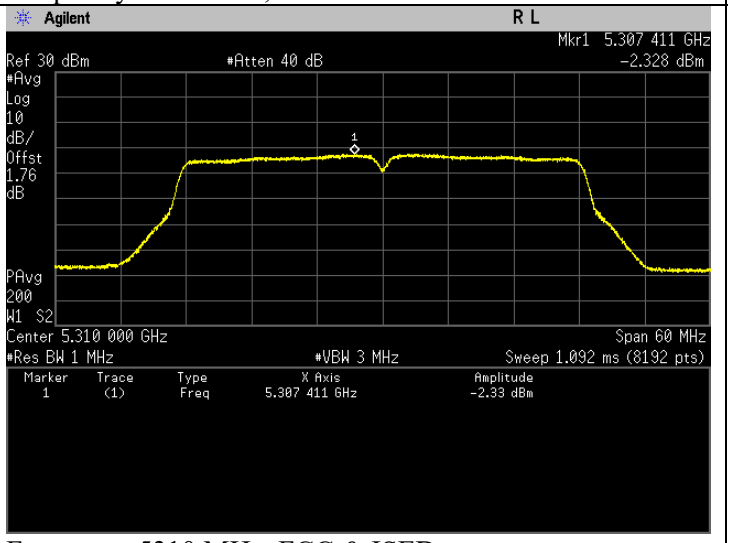
Frequency 5190 MHz, FCC & ISED.



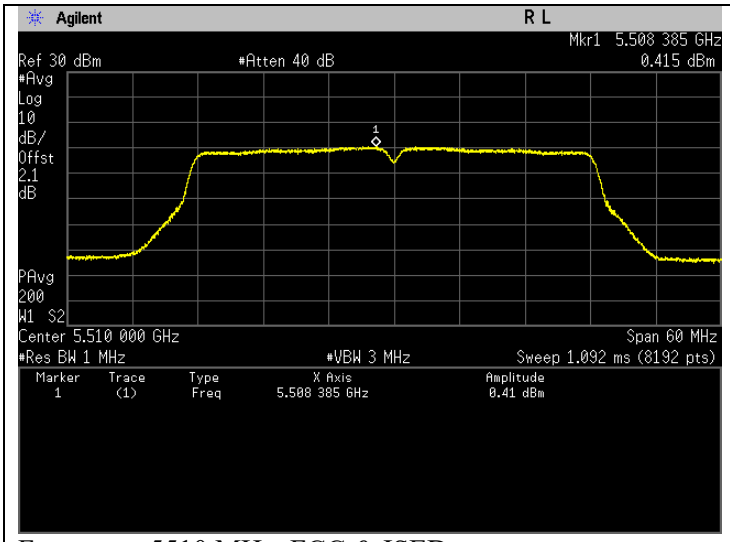
Frequency 5230 MHz, FCC & ISED.



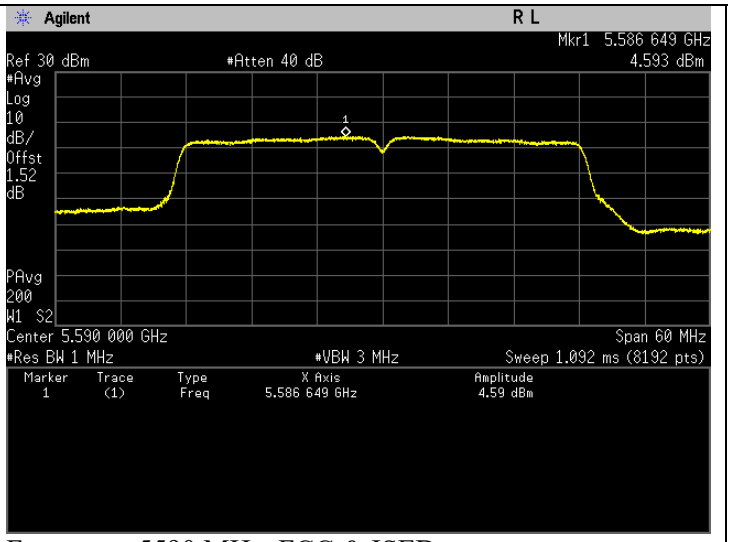
Frequency 5270 MHz, FCC & ISED.



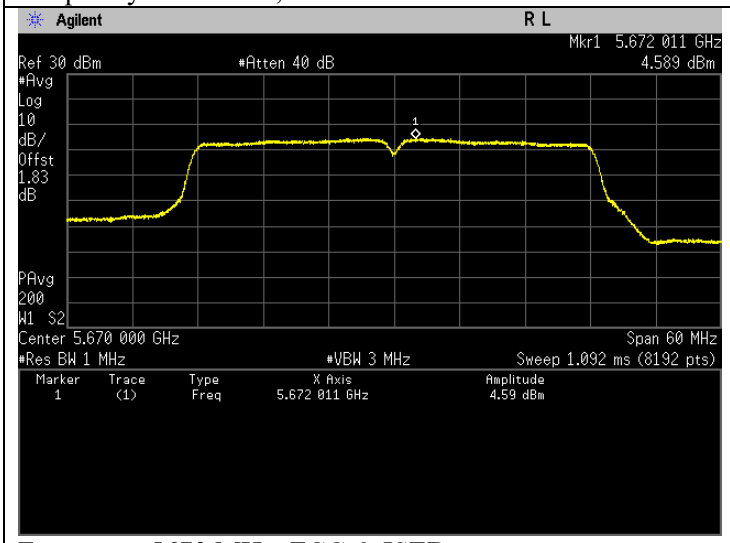
Frequency 5310 MHz, FCC & ISED.



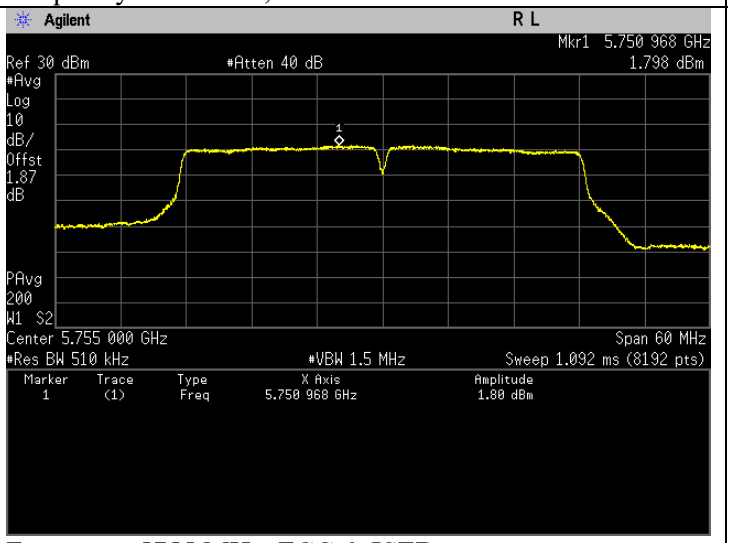
Frequency 5510 MHz, FCC & ISED.



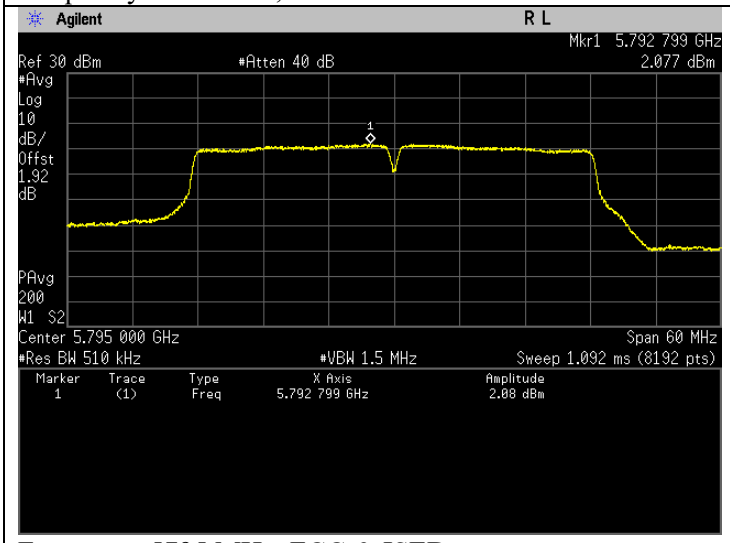
Frequency 5590 MHz, FCC & ISED.



Frequency 5670 MHz, FCC & ISED.



Frequency 5755 MHz, FCC & ISED.



Frequency 5795 MHz, FCC & ISED.

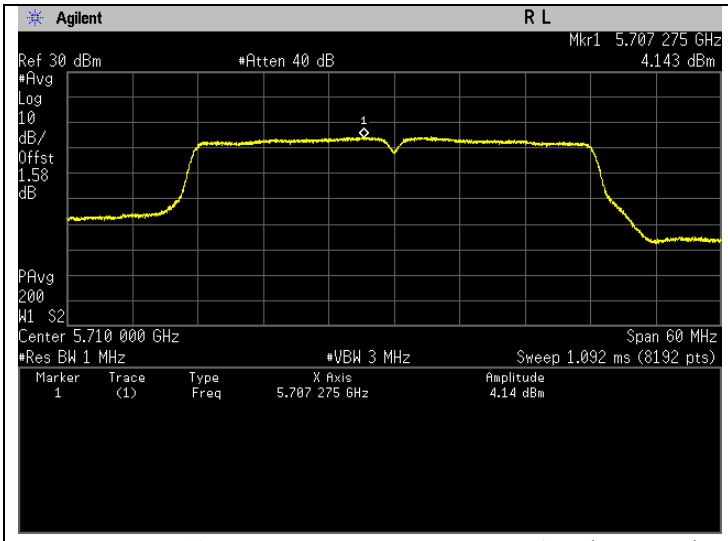
Straddle Frequency 802.11n (HT40) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.309	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.410	Pass

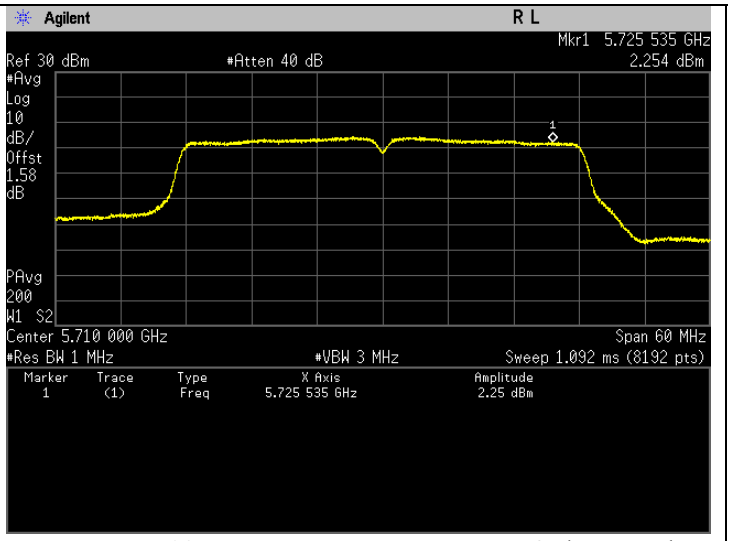
Straddle Frequency 802.11n (HT40) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	4.299	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	2.410	Pass

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



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



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

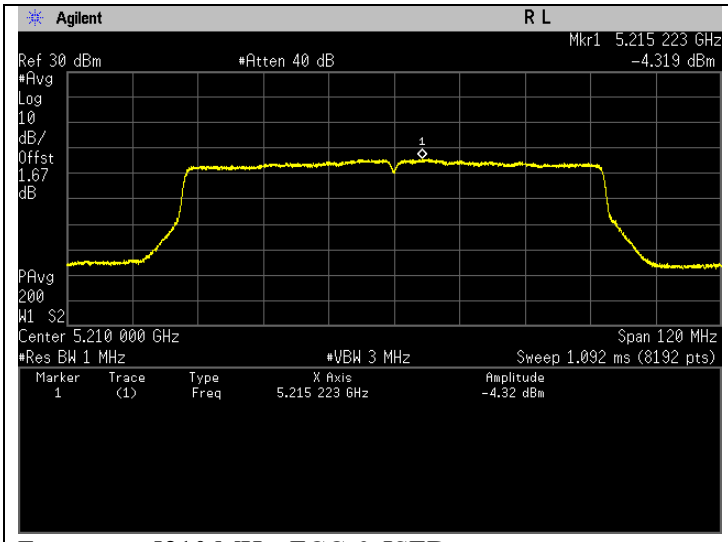
802.11ac (HT80)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5210	Mod Type: BPSK, Data Rate: MCS0(29.3)	-4.008	Pass
5290	Mod Type: BPSK, Data Rate: MCS0(29.3)	-7.046	Pass
5530	Mod Type: BPSK, Data Rate: MCS0(29.3)	-3.750	Pass
5610	Mod Type: BPSK, Data Rate: MCS0(29.3)	1.110	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5775	Mod Type: BPSK, Data Rate: MCS0(29.3)	-1.099	Pass

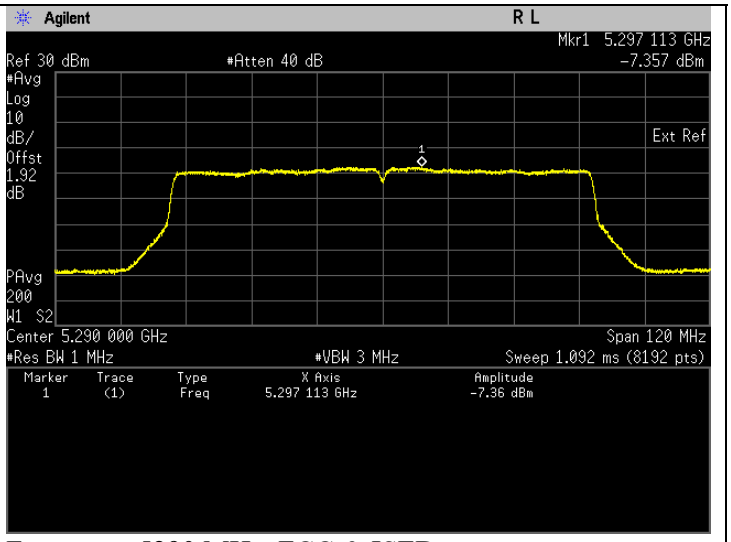
802.11ac (HT80)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5210	Mod Type: BPSK, Data Rate: MCS0(29.3)	-4.008	Pass	0.592	Pass
5290	Mod Type: BPSK, Data Rate: MCS0(29.3)	-7.046	Pass	-2.446	Pass
5530	Mod Type: BPSK, Data Rate: MCS0(29.3)	-3.750	Pass	-0.45	Pass
5610	Mod Type: BPSK, Data Rate: MCS0(29.3)	1.110	Pass	4.210	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status	EIRP (dBm/MHz)	Status
5775	Mod Type: BPSK, Data Rate: MCS0(29.3)	-1.099	Pass	2.201	Pass

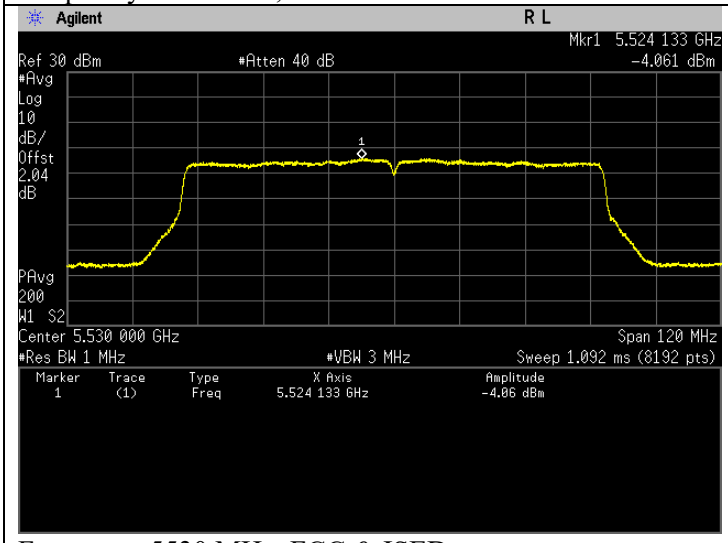
Plots for 802.11ac (HT80) (26dB EBW & 99% EBW)



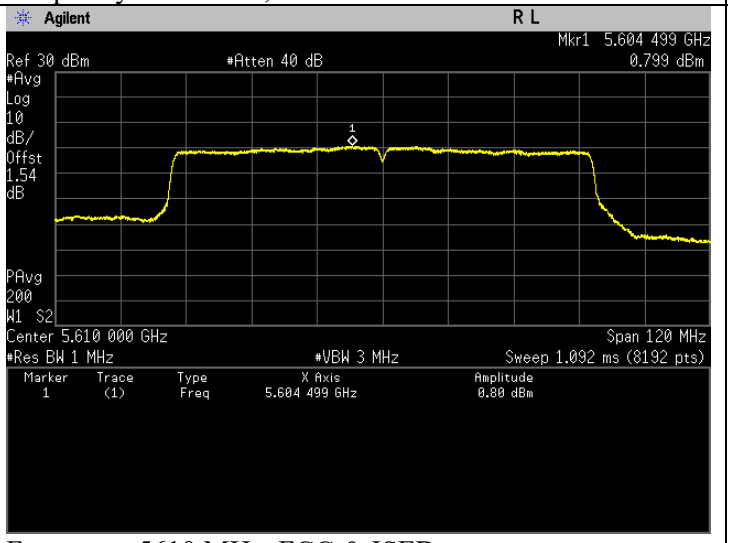
Frequency 5210 MHz, FCC & ISED.



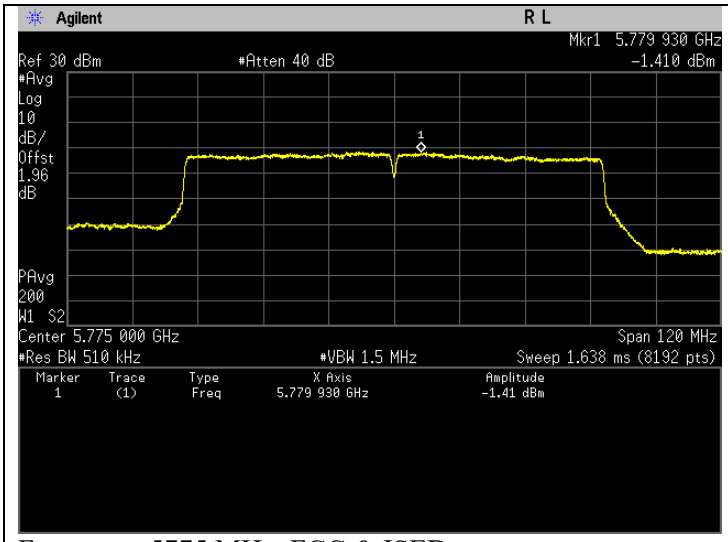
Frequency 5290 MHz, FCC & ISED.



Frequency 5530 MHz, FCC & ISED.



Frequency 5610 MHz, FCC & ISED.



Frequency 5775 MHz, FCC & ISED.

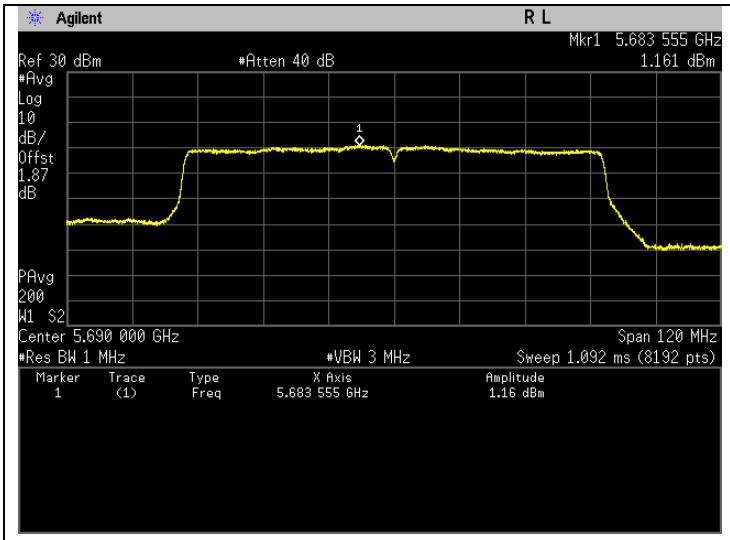
Straddle Frequency 802.11ac (HT80) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	1.472	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	-0.800	Pass

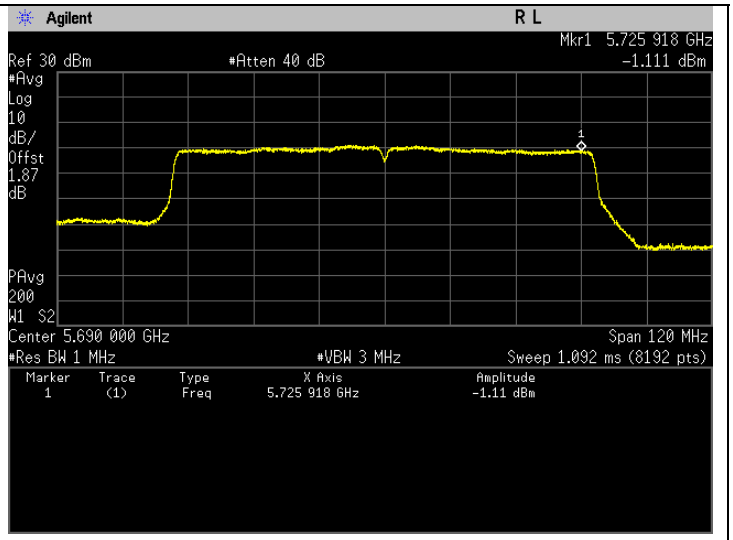
Straddle Frequency 802.11ac (HT80) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		U-NII- 2C	
		Power/Frequency (dBm/MHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	1.472	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	-0.800	Pass

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



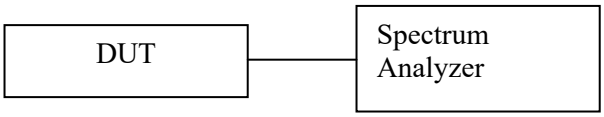
Frequency 5690 MHz, FCC & ISED,U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



Frequency 5690 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).

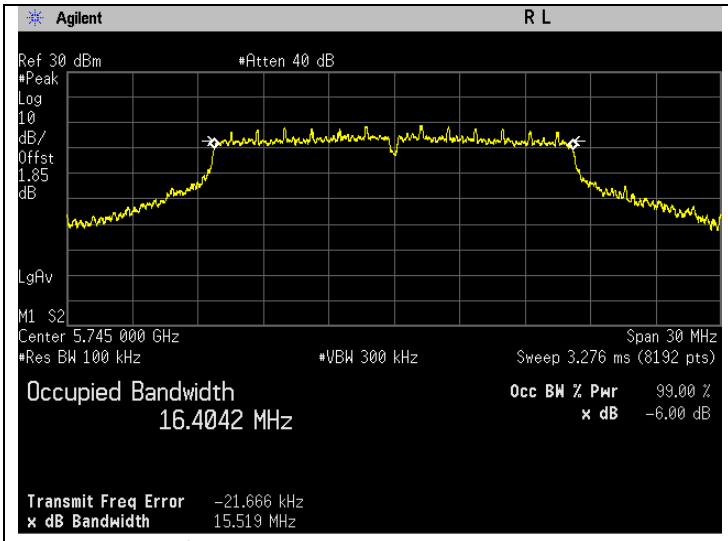
7.4.2. Test Limits

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.

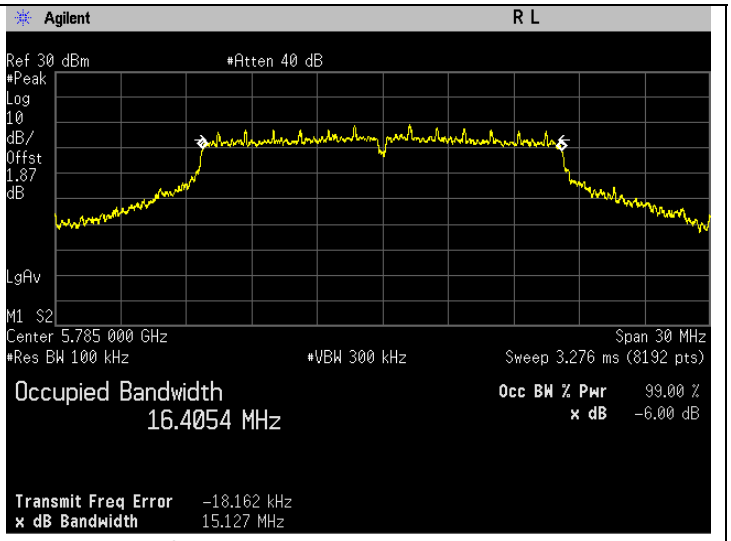
7.4.3. Test Data

802.11a

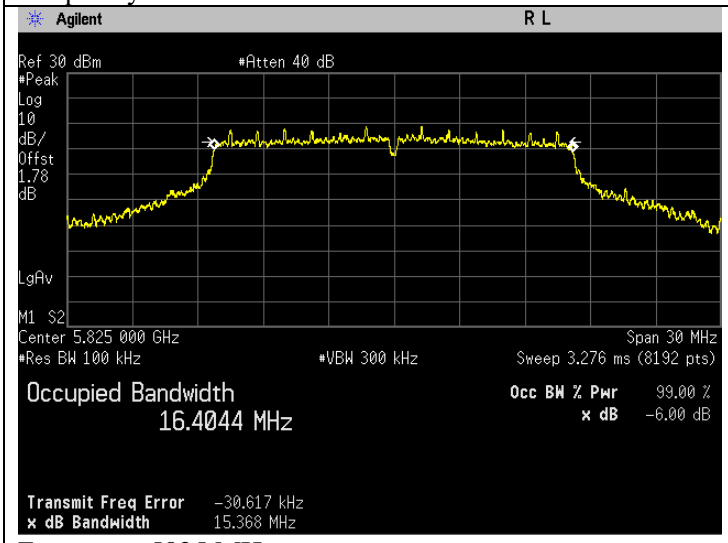
Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	15.519	Pass
5785	Mod Type: BPSK, Data Rate: 6	15.127	Pass
5825	Mod Type: BPSK, Data Rate: 6	15.368	Pass



Frequency 5745 MHz



Frequency 5785 MHz

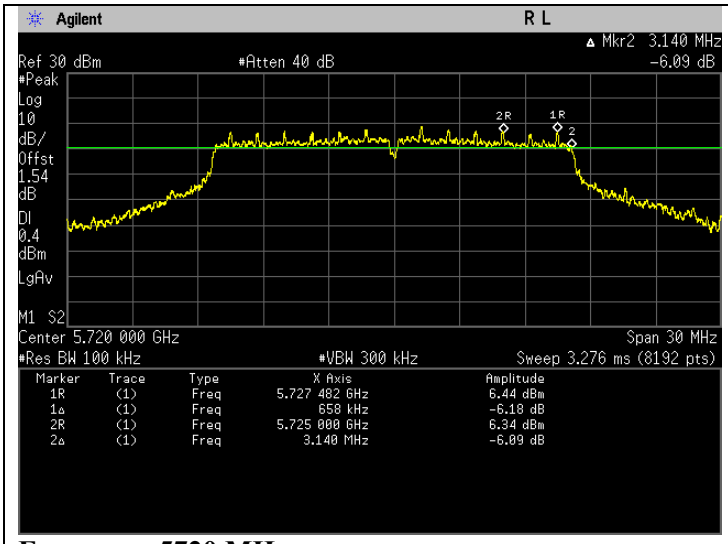


Frequency 5825 MHz

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	3.140	Pass

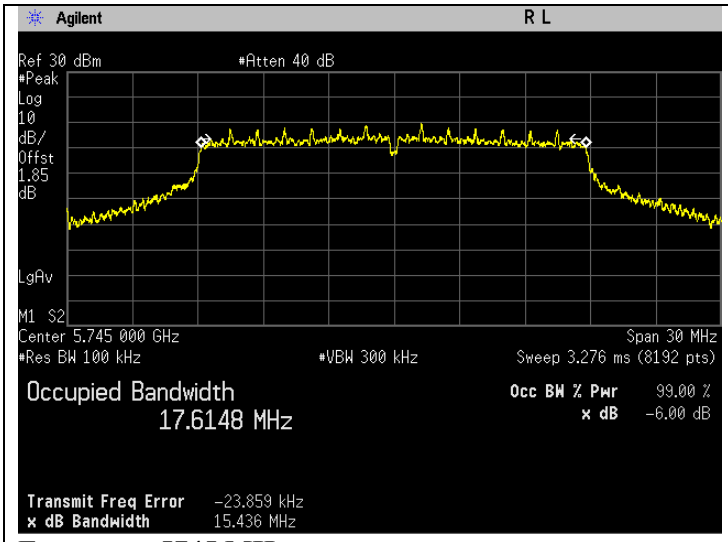
Plots for 802.11a Straddle Frequency



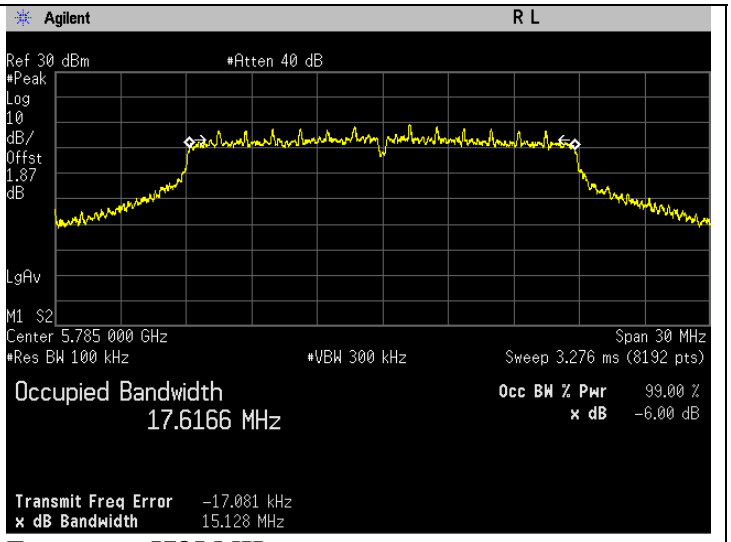
Frequency 5720 MHz

802.11n (HT20)

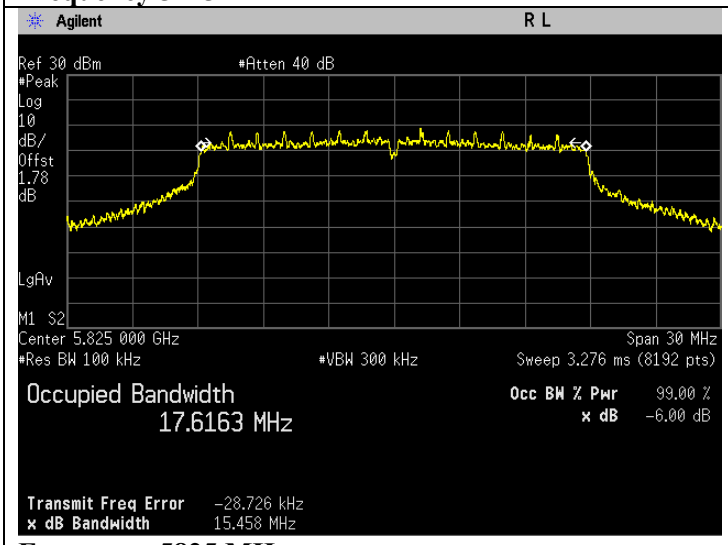
Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.436	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.128	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.458	Pass



Frequency 5745 MHz



Frequency 5785 MHz

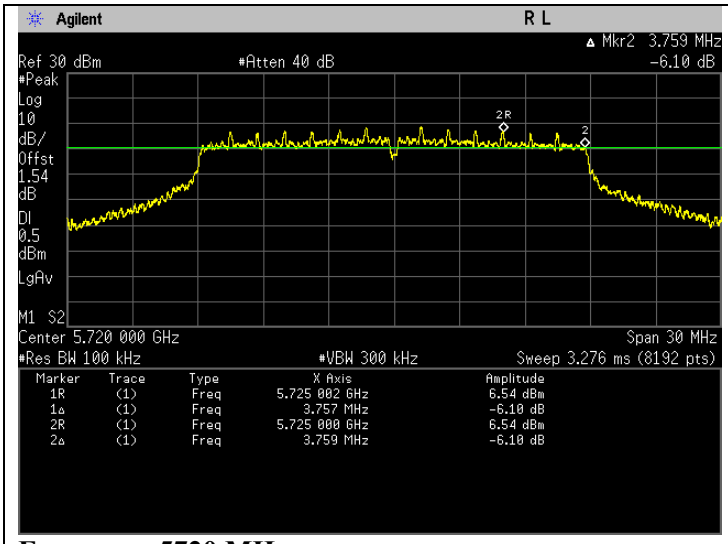


Frequency 5825 MHz

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)	3.759	Pass

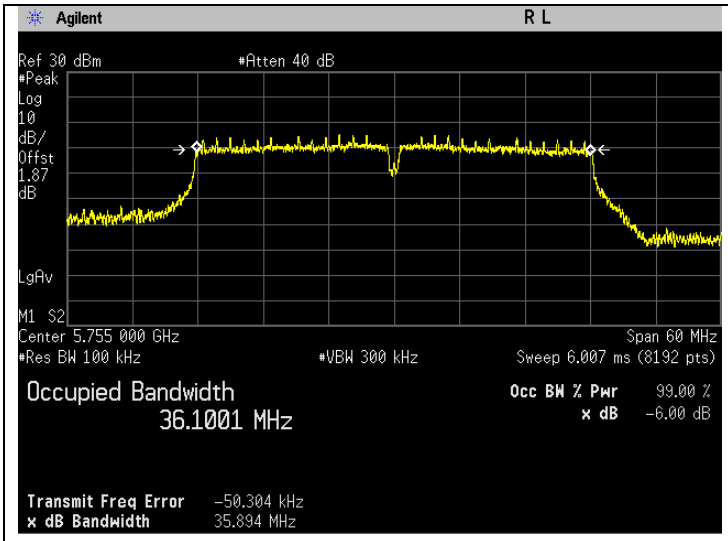
Plots for 802.11n (HT20) Straddle Frequency



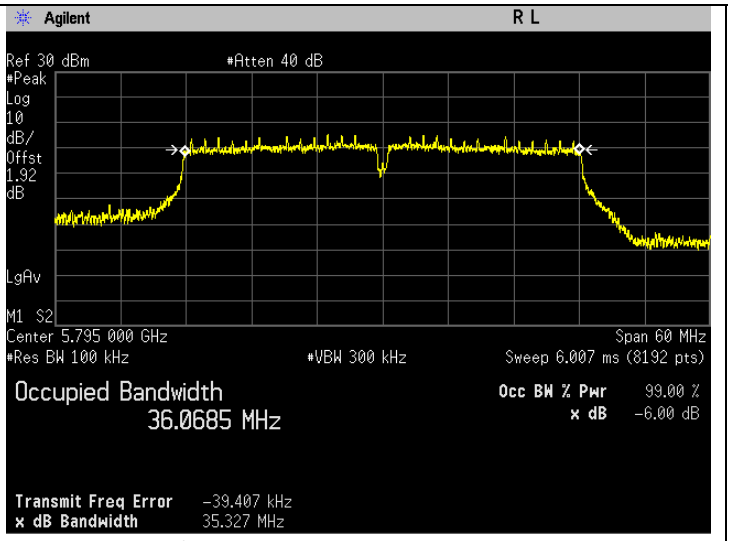
Frequency 5720 MHz

802.11n (HT40)

Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5755	Mod Type: BPSK, Data Rate: MCS0 (13.5)	35.894	Pass
5795	Mod Type: BPSK, Data Rate: MCS0 (13.5)	35.327	Pass



Frequency 5755 MHz

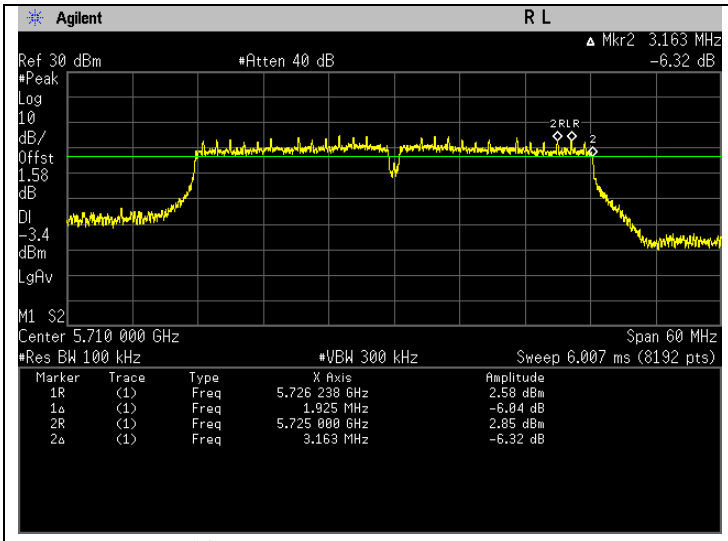


Frequency 5795 MHz

Straddle Frequency for 802.11n (HT40)

Freq. (MHz)	Test Conditions	Results	
		Power/Freq. (dBm/MHz)	Status
		U-NII- 3	
5710	Mod Type: BPSK, Data Rate: MCS0 (13.5)	3.163	Pass

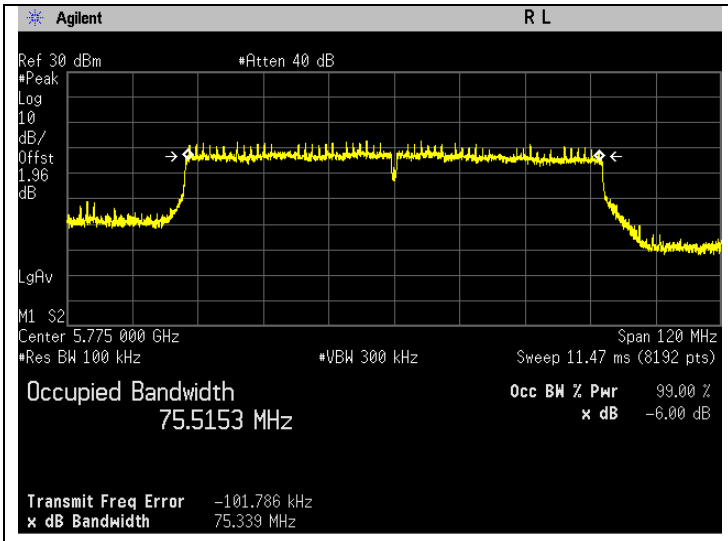
Plots for 802.11n (HT40) Straddle Frequency



Frequency 5710 MHz

802.11ac (HT80)

Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5775	Mod Type: BPSK, Data Rate: MCS0(29.3)	75.339	Pass

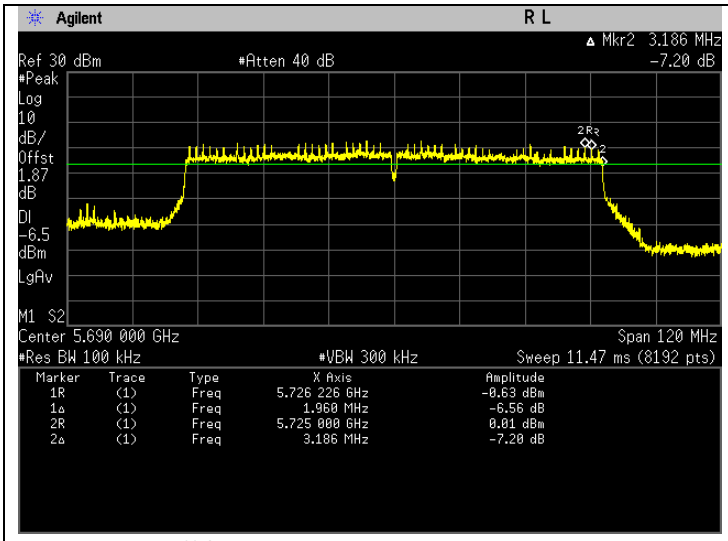


Frequency 5775 MHz

Straddle Frequency for 802.11ac (HT80)

Freq. (MHz)	Test Conditions	Results	
		Power/Freq. (dBm/MHz)	Status
		U-NII- 3	
5690	Mod Type: BPSK, Data Rate: MCS0(29.3)	3.186	Pass

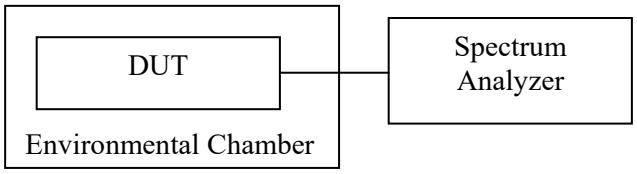
Plots for 802.11ac (HT80) Straddle Frequency



Frequency 5690 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.

7.5.3. Test Data

802.11a

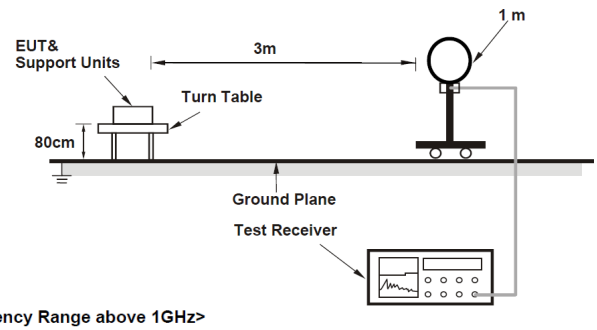
Test Configuration	Test Frequency Tx (MHz)
Mod Type: BPSK, Data Rate: 6	5180

		Results			
Temperature(°C)	Voltage	Measured Frequency(MHz)	Frequency Error(kHz)	Frequency Error(%)	Status
20	+15%	5180.023601	23.601000	0.000456	Pass
	±0%	5180.024107	24.107000	0.000465	Pass
	-15%	5180.025731	25.731000	0.000497	Pass
-30		5180.023056	23.056000	0.000445	Pass
-20		5180.015635	15.635000	0.000302	Pass
-10		5179.997696	2.304000	0.000044	Pass
0		5179.984161	15.839000	0.000306	Pass
10		5179.977231	22.769000	0.000440	Pass
30		5179.990363	9.637000	0.000186	Pass
40		5179.990622	9.378000	0.000181	Pass
50		5179.990919	9.081000	0.000175	Pass

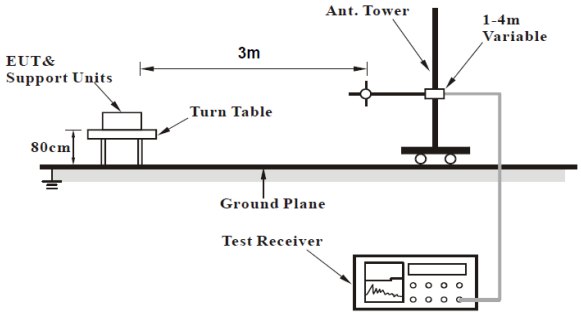
7.6. Band Edge Radiated Spurious Emission Measurement

7.6.1. Test Setup

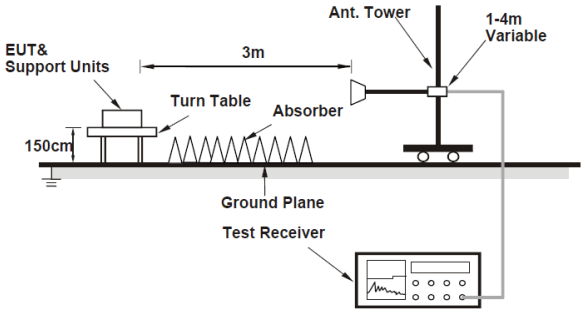
<Radiated emission below 30MHz>



<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: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

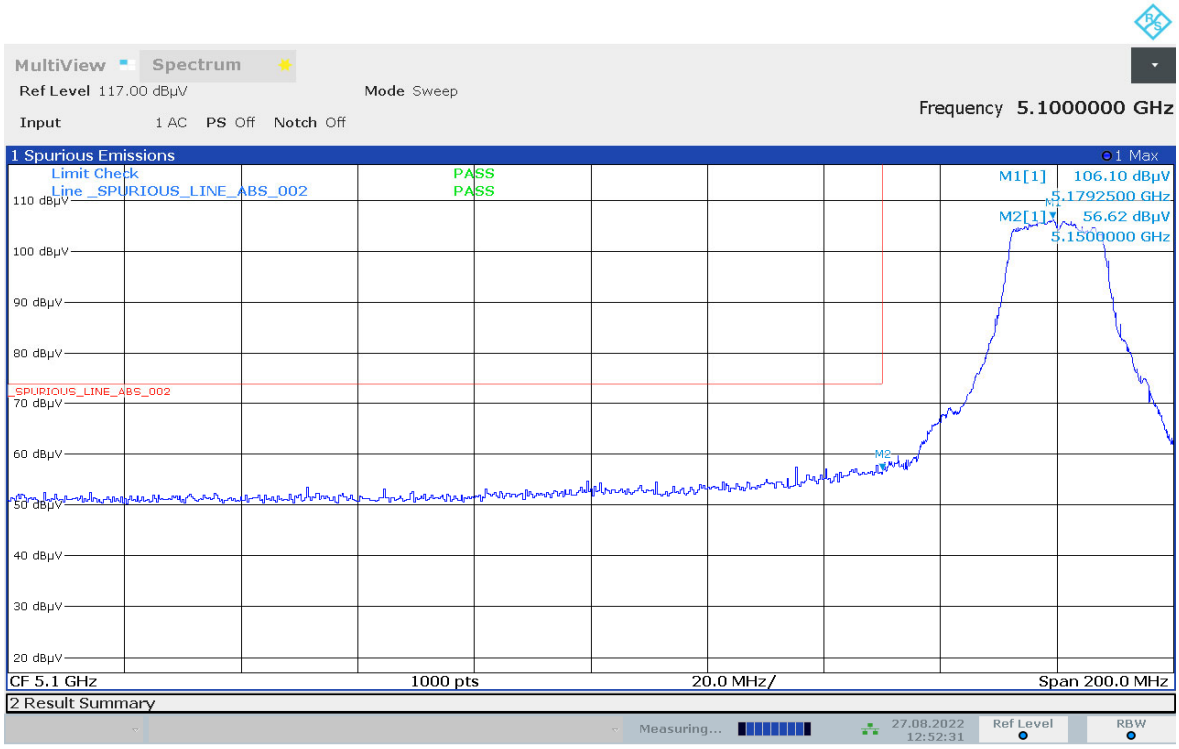
Restricted Band Edge (Low Channel) tabular data

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)
5149.8500	-	-	46.9676	-	-	54.0000	-	-	-7.0324	-
5150.0000	-	56.6192	46.9645	-	74.0000	54.0000	-	-17.3808	-7.0355	-
Horizontal Radiated Emission Result										
5149.8500	-	-	49.0693	-	-	54.0000	-	-	-4.9307	-
5150.0000	-	60.1725	49.0855	-	74.0000	54.0000	-	-13.8275	-4.9145	-

Remarks: Pass Result	Marginal Result	Fail Result

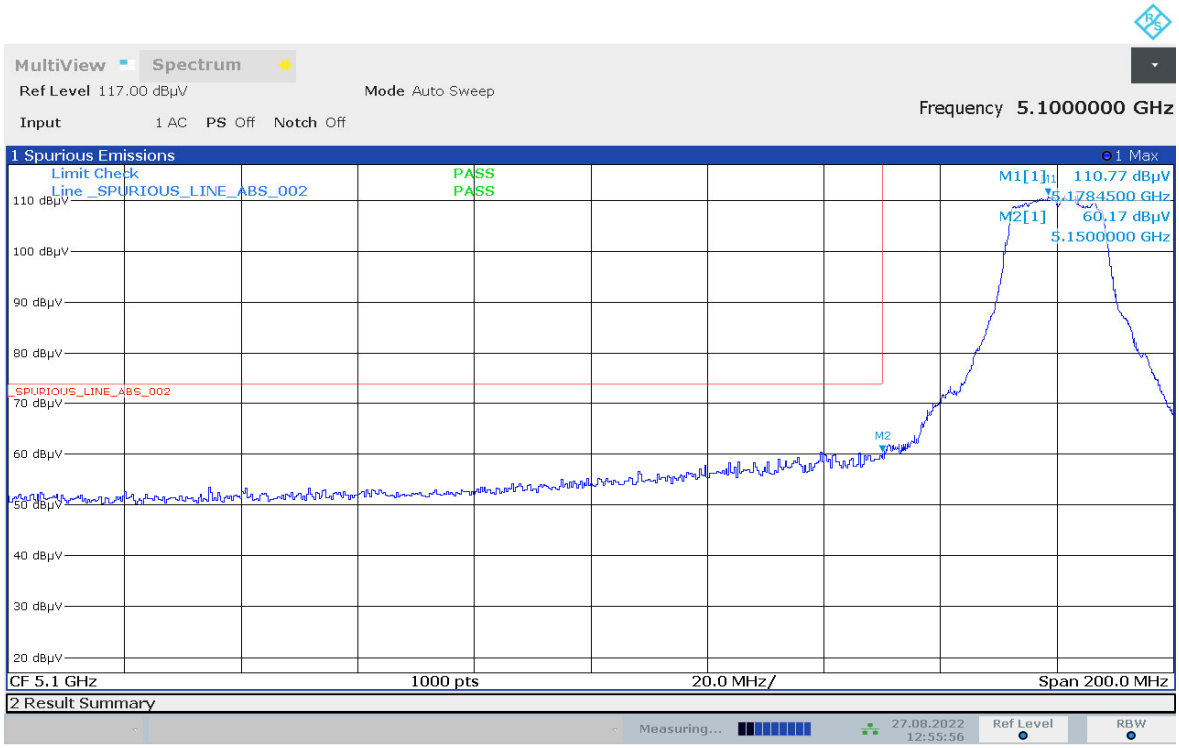
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



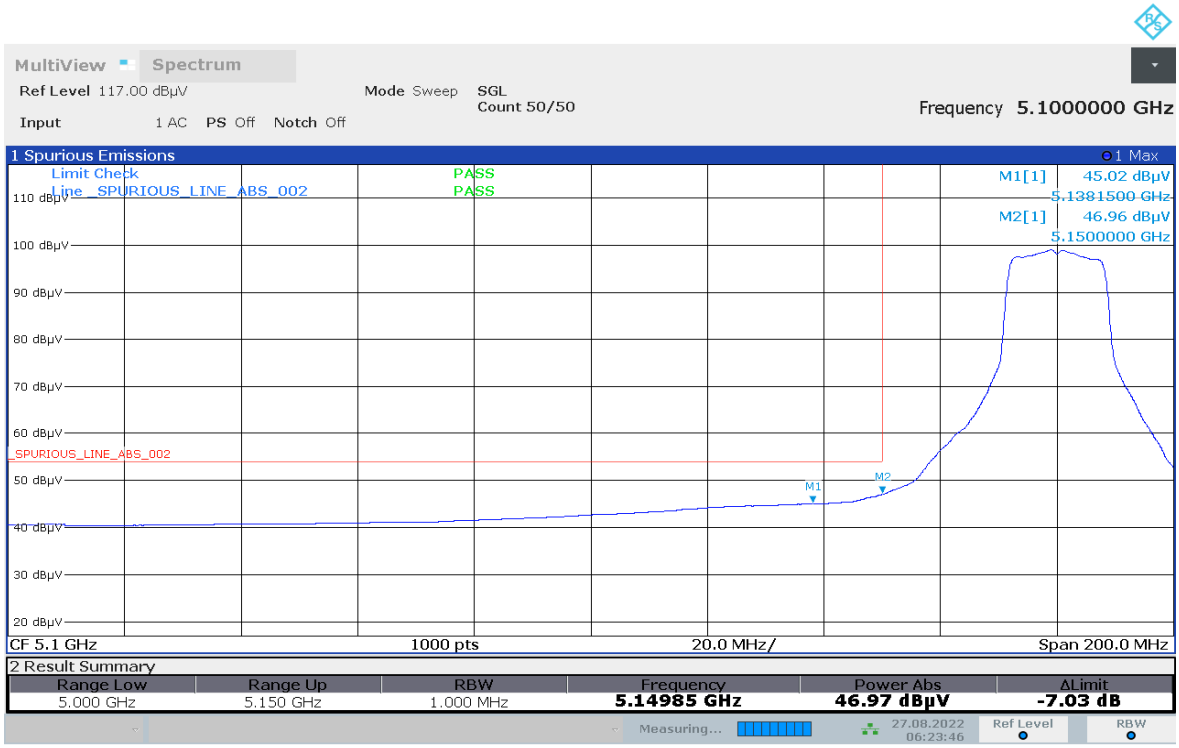
12:52:32 27.08.2022

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



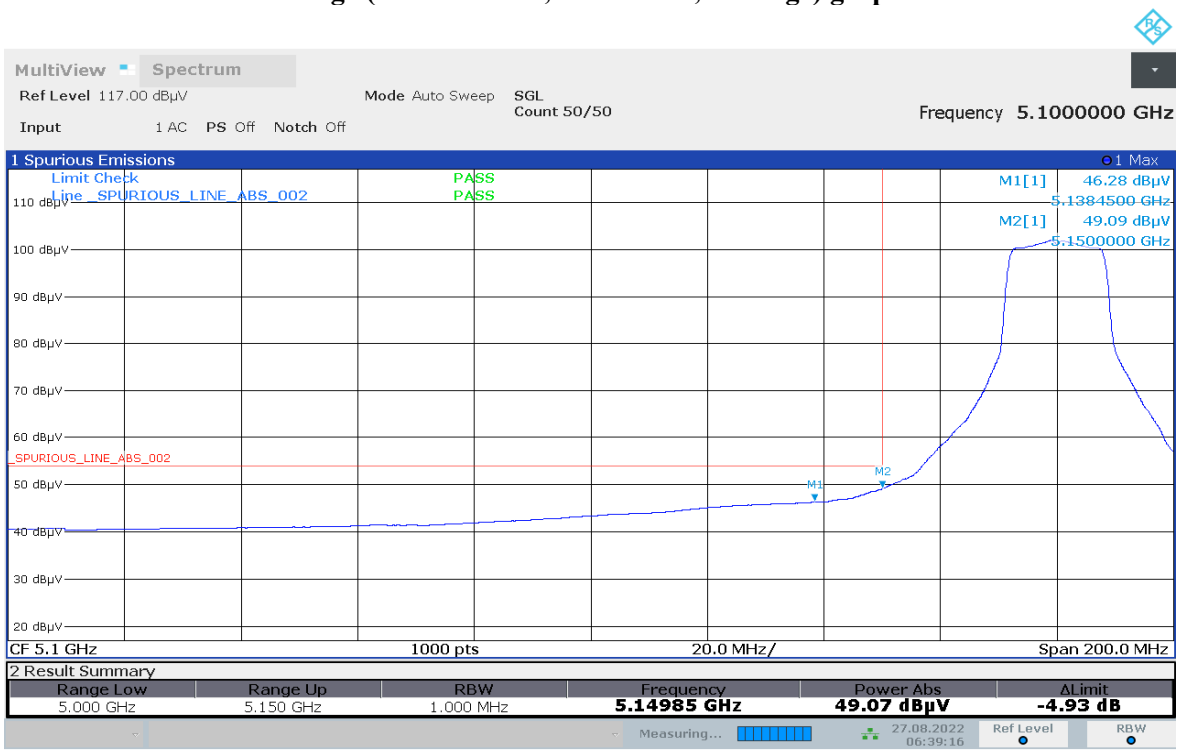
12:55:57 27.08.2022

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



06:23:47 27.08.2022

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



06:39:17 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

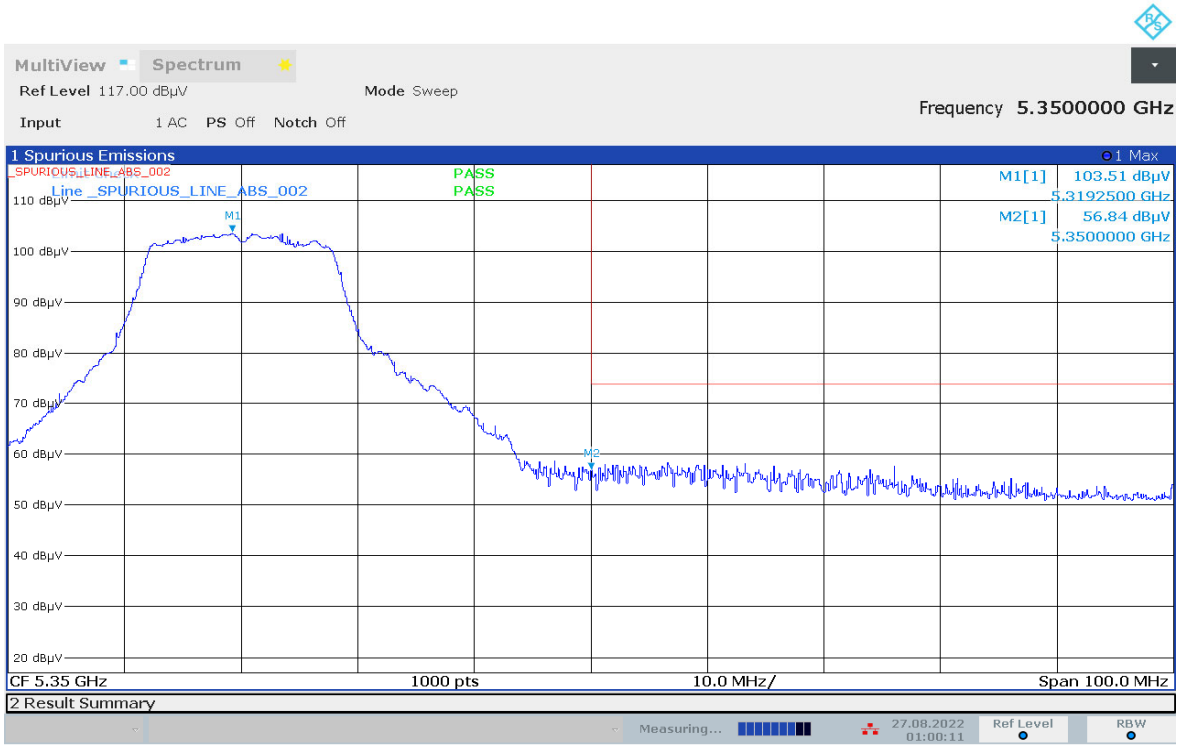
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5350.0000	-	56.6436	41.9102	-	74.0000	54.0000	-	-17.3564	-12.0898	-
Horizontal Radiated Emission Result										
5350.0000	-	61.4532	43.8907	-	74.0000	54.0000	-	-12.5468	-10.1093	-

Remarks: Pass Result	Marginal Result	Fail Result

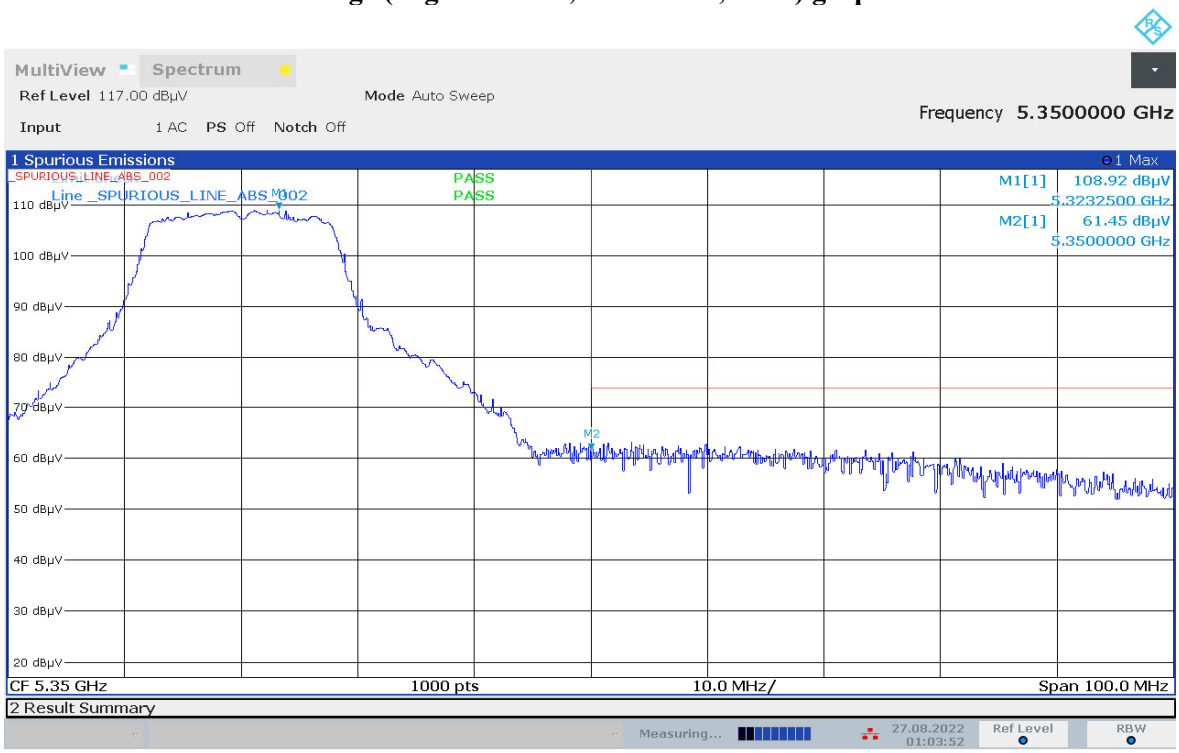
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



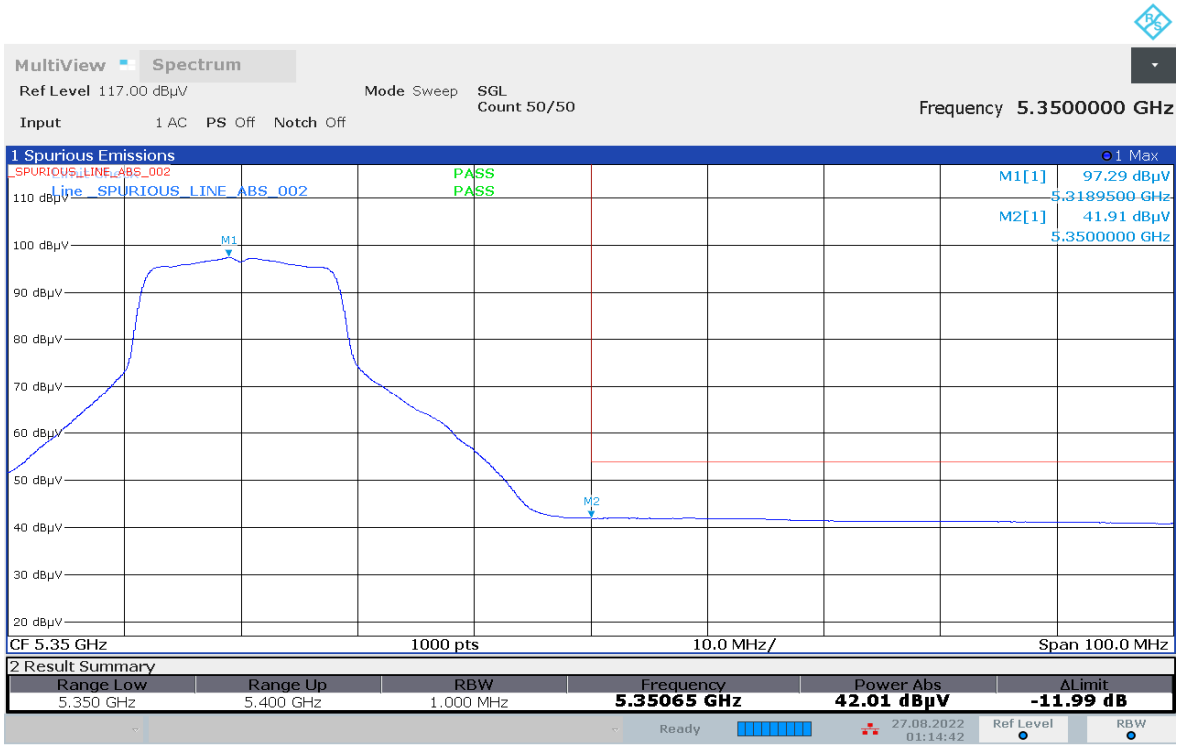
01:00:12 27.08.2022

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



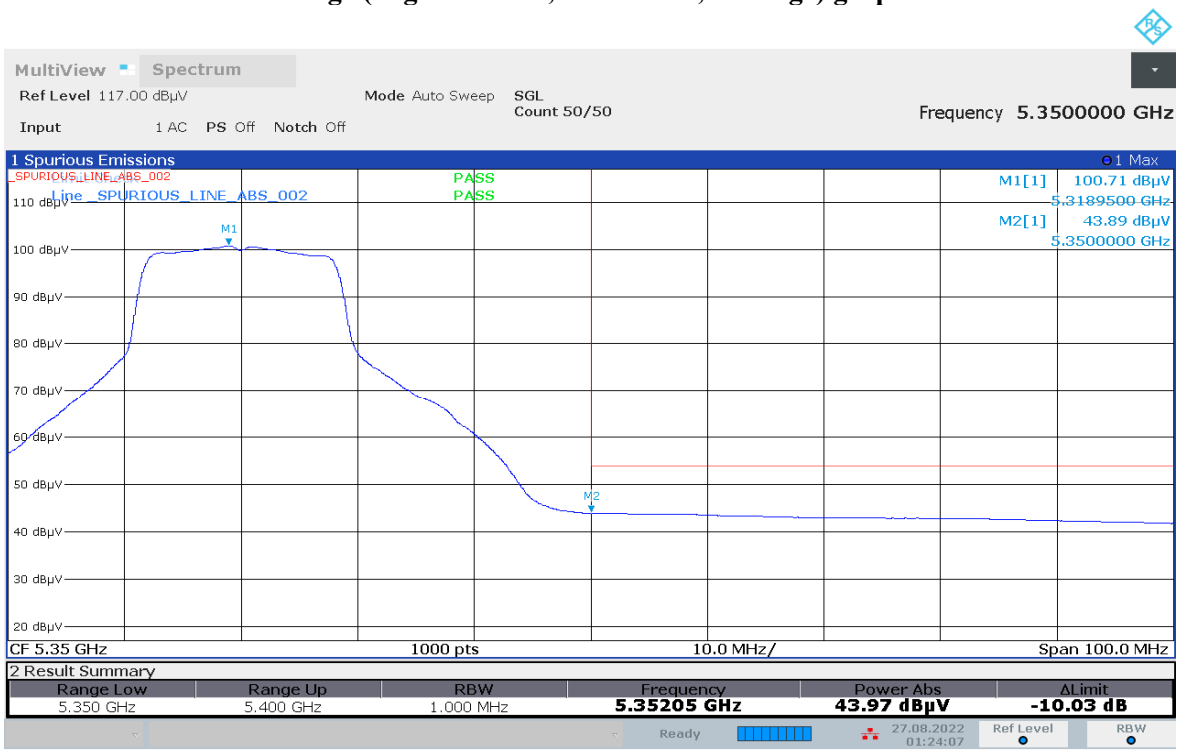
01:03:52 27.08.2022

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



01:14:43 27.08.2022

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



01:24:08 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

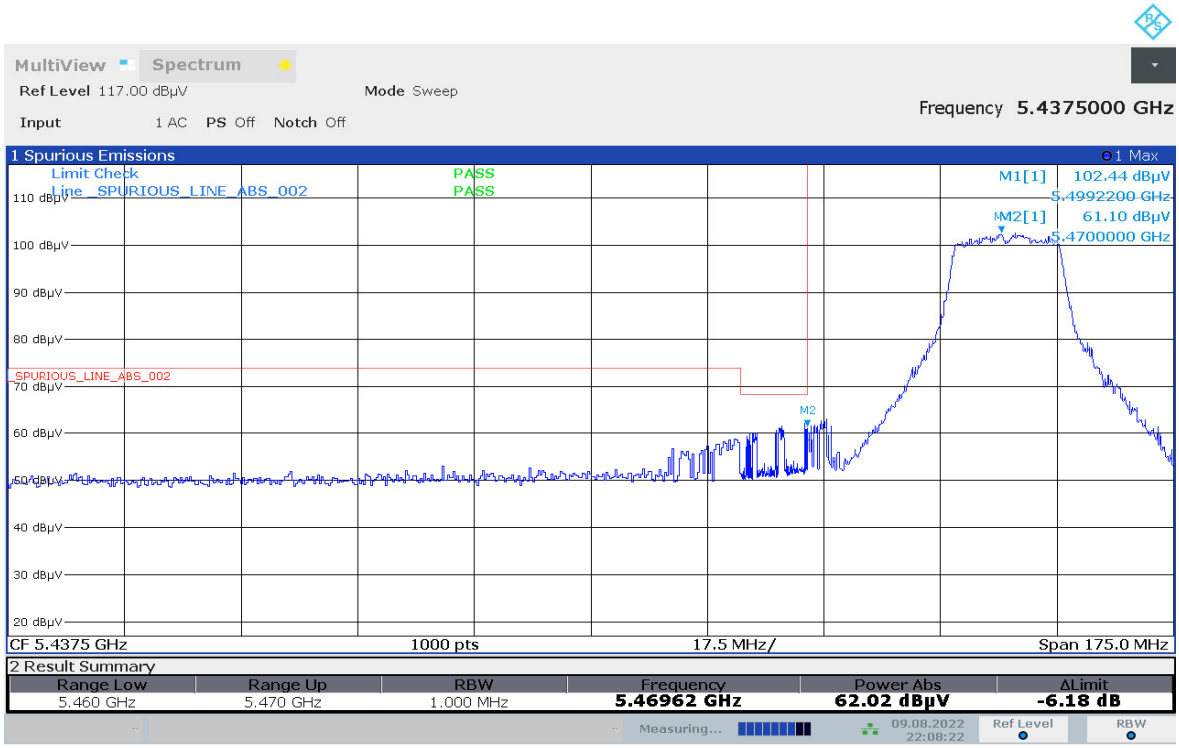
Restricted Band Edge (Low Channel) tabular data

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	-	-	41.6085	-	-	54.0000	-	-	-12.3915	-
5470.0000	-	61.1025	-	-	68.2000	-	-	-7.0975	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	42.7683	-	-	54.0000	-	-	-11.2317	-
5462.5250	-	63.2435	-	-	68.2000	-	-	-4.9565	-	-
5462.6750	-	63.3648	-	-	68.2000	-	-	-4.8352	-	-
5462.9750	-	62.7200	-	-	68.2000	-	-	-5.4800	-	-
5463.2250	-	64.0076	-	-	68.2000	-	-	-4.1924	-	-
5463.7250	-	64.5856	-	-	68.2000	-	-	-3.6144	-	-
5463.9750	-	62.3766	-	-	68.2000	-	-	-5.8234	-	-
5466.1250	-	63.5978	-	-	68.2000	-	-	-4.6022	-	-
5466.9250	-	62.7616	-	-	68.2000	-	-	-5.4384	-	-
5467.0250	-	63.2332	-	-	68.2000	-	-	-4.9668	-	-
5467.3250	-	64.7722	-	-	68.2000	-	-	-3.4278	-	-
5470.0000	-	53.2889	-	-	68.2000	-	-	-14.9111	-	-

Remarks: Pass Result	Marginal Result	Fail Result

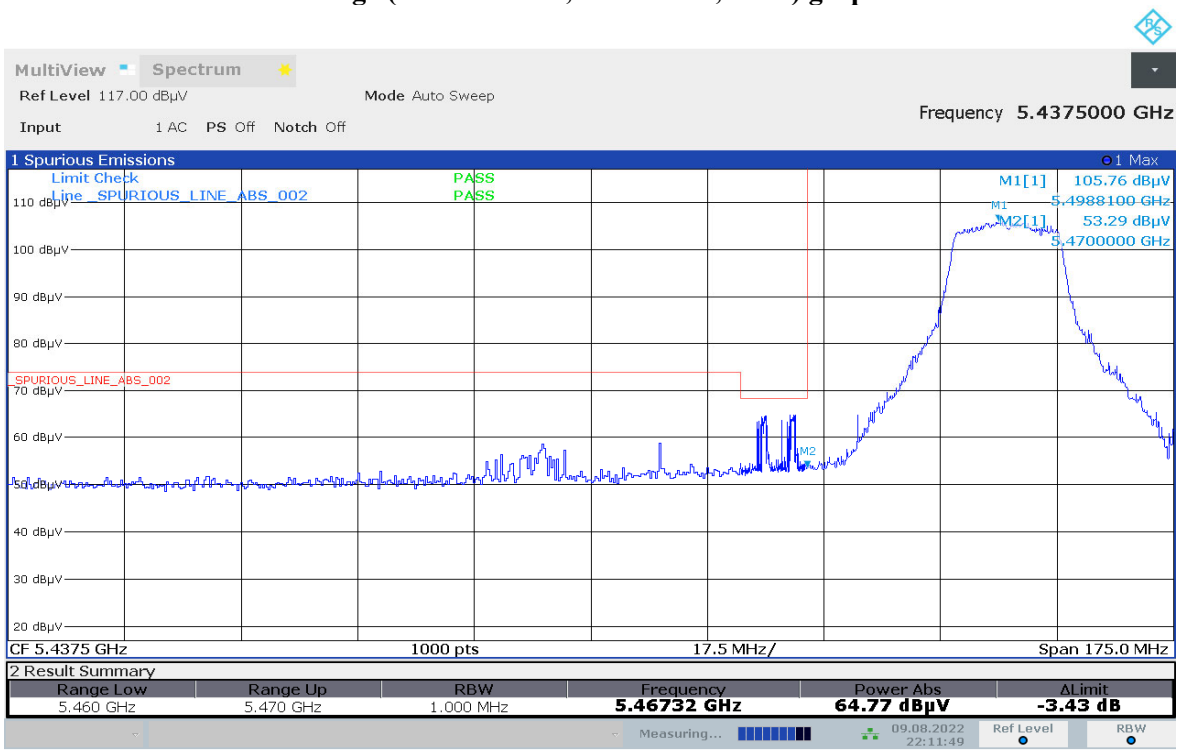
Temperature (degC): 23.5 **Humidity (%): 69.9**
Test Performed by: Qawiman&Nazrin **Test Date: Wed, 10 Aug, 2022**
System MU: 5.84dB

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



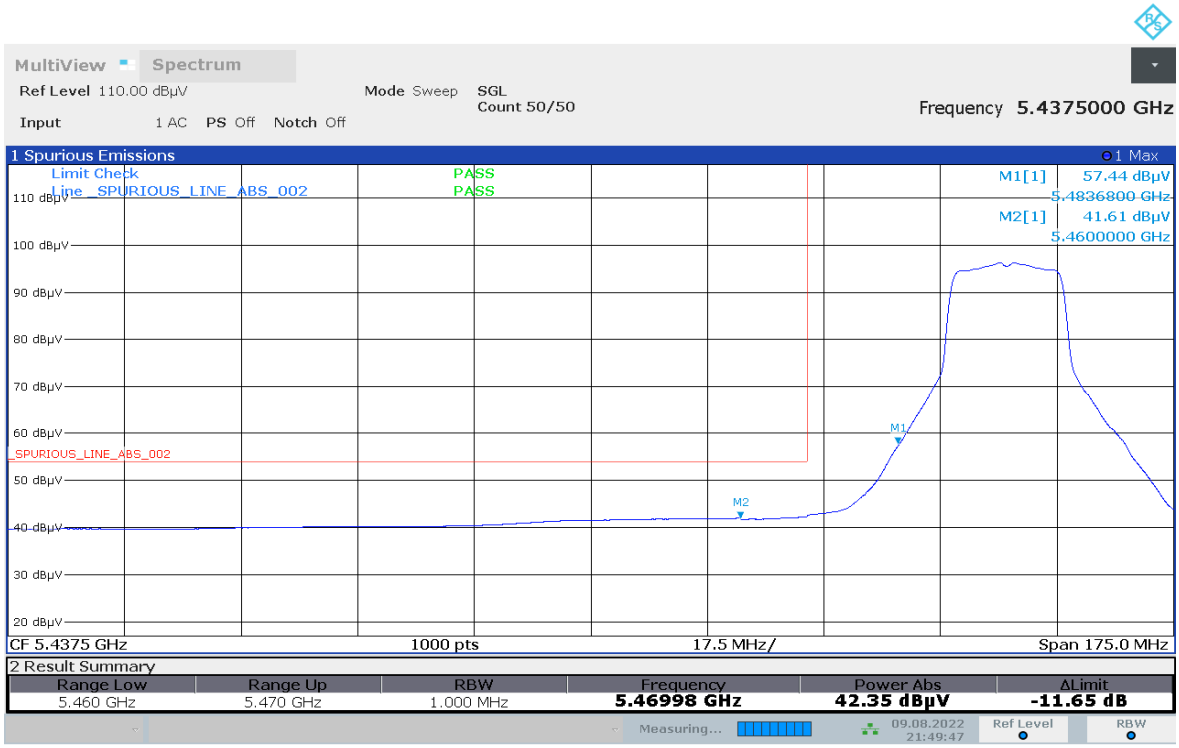
22:08:22 09.08.2022

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



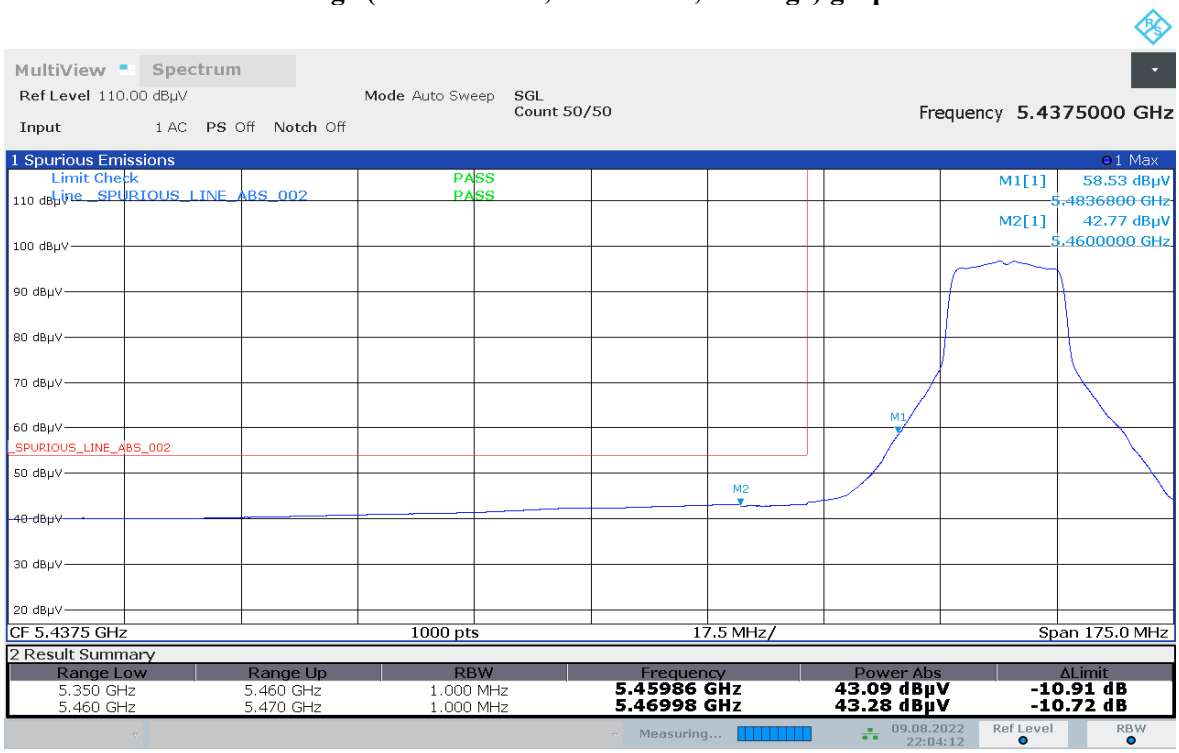
22:11:50 09.08.2022

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



21:49:47 09.08.2022

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



22:04:13 09.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: High Test Frequency: 5700.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

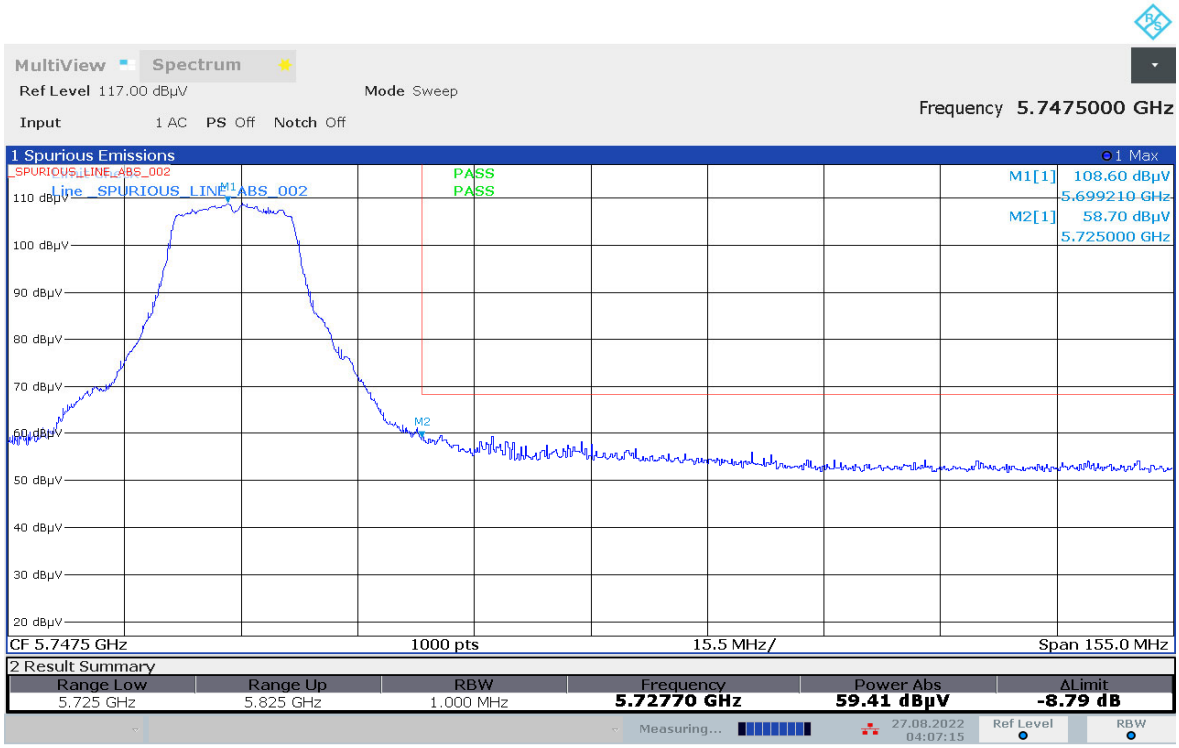
Restricted Band Edge (High Channel) tabular data

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	-	58.7028	-	-	68.2000	-	-	-9.4972	-	-
5727.7000	-	59.4092	-	-	68.2000	-	-	-8.7908	-	-
Horizontal Radiated Emission Result										
5725.0000	-	56.3123	-	-	68.2000	-	-	-11.8877	-	-

Remarks: Pass Result	Marginal Result	Fail Result

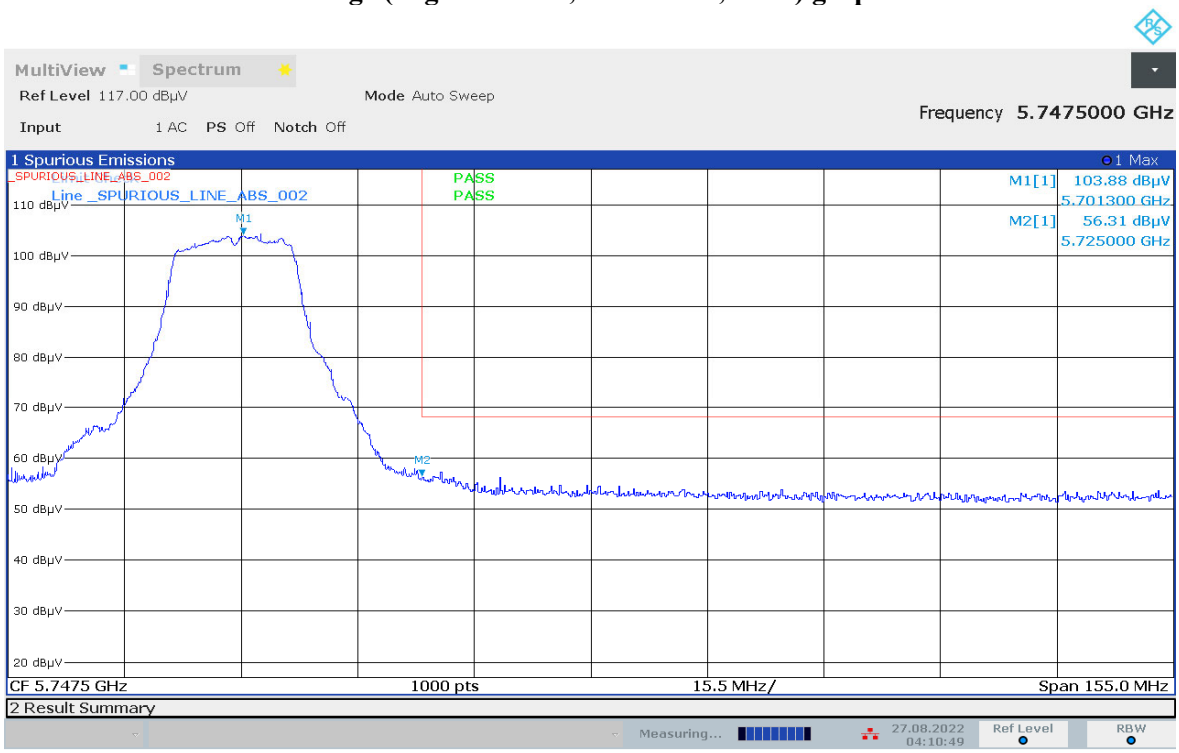
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



04:07:15 27.08.2022

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



04:10:49 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

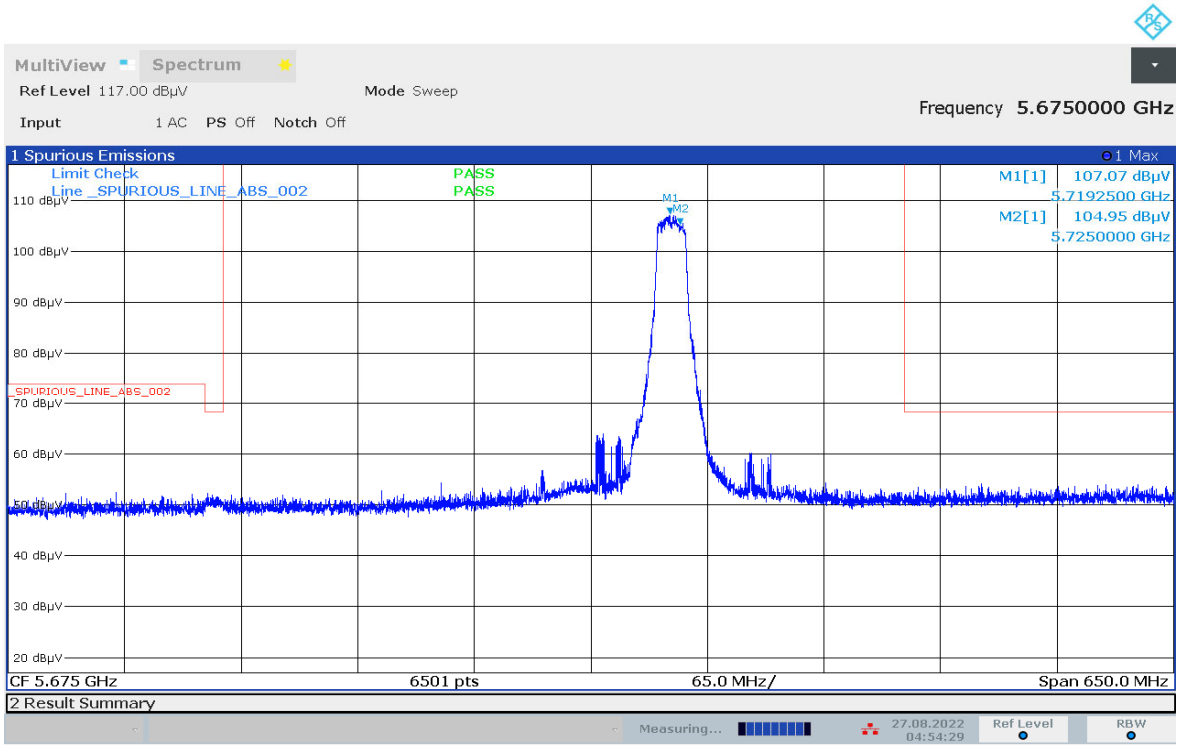
Restricted Band Edge (Straddle Channel) tabular data

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

Remarks: Pass Result	Marginal Result	Fail Result

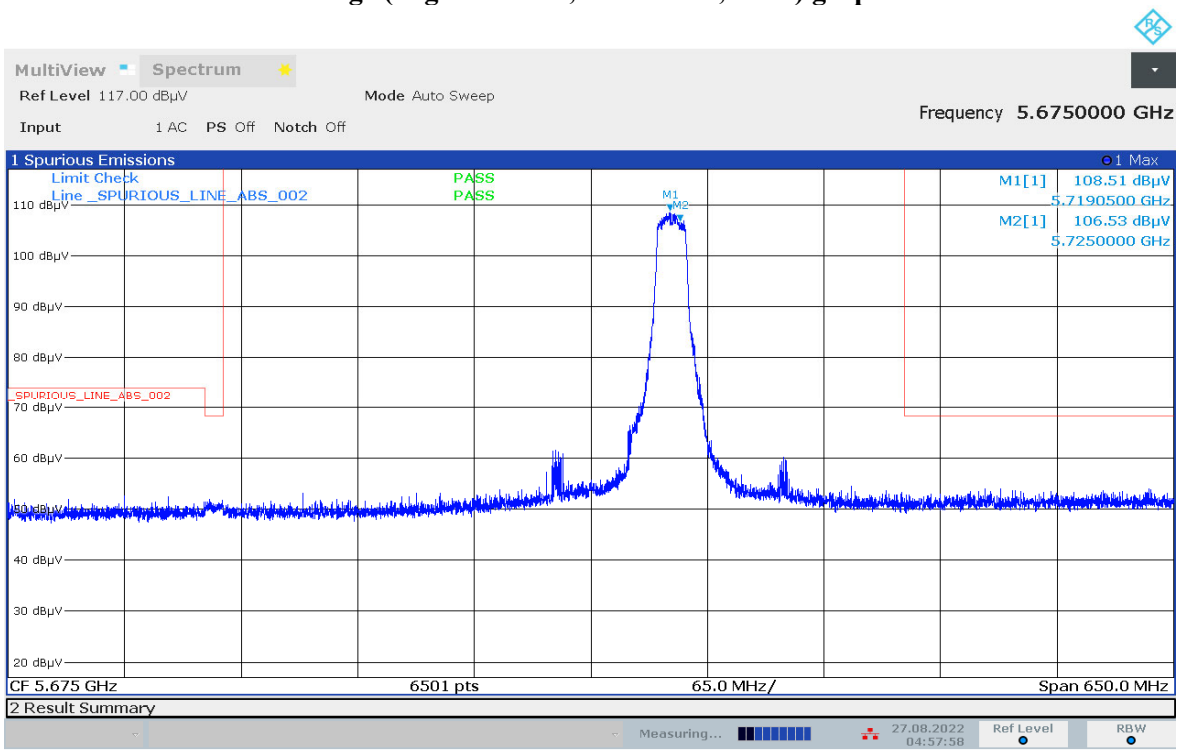
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



04:54:30 27.08.2022

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



04:57:59 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

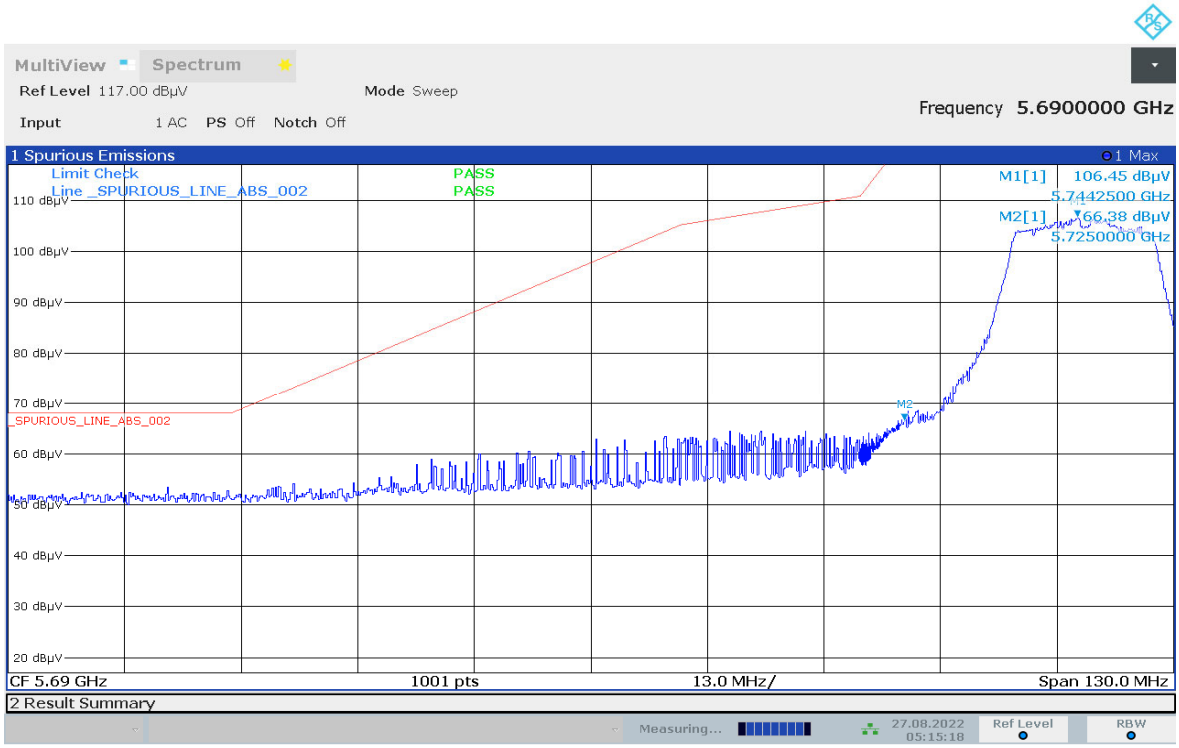
Restricted Band Edge (Low Channel) tabular data

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	-	-	66.3751	-	-	122.2000	-	-	-55.8249	-
Horizontal Radiated Emission Result										
5725.0000	-	-	69.1240	-	-	122.2000	-	-	-53.0760	-

Remarks: Pass Result	Marginal Result	Fail Result

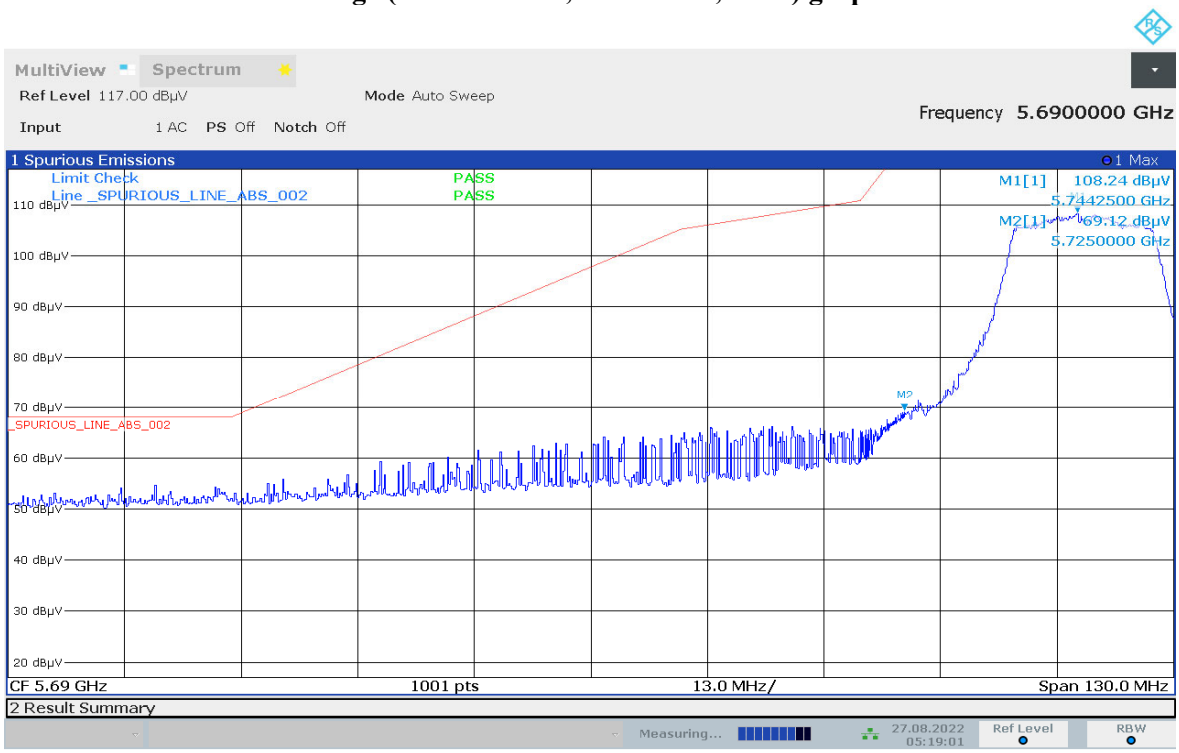
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



05:15:19 27.08.2022

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



05:19:02 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11a 20MHz)

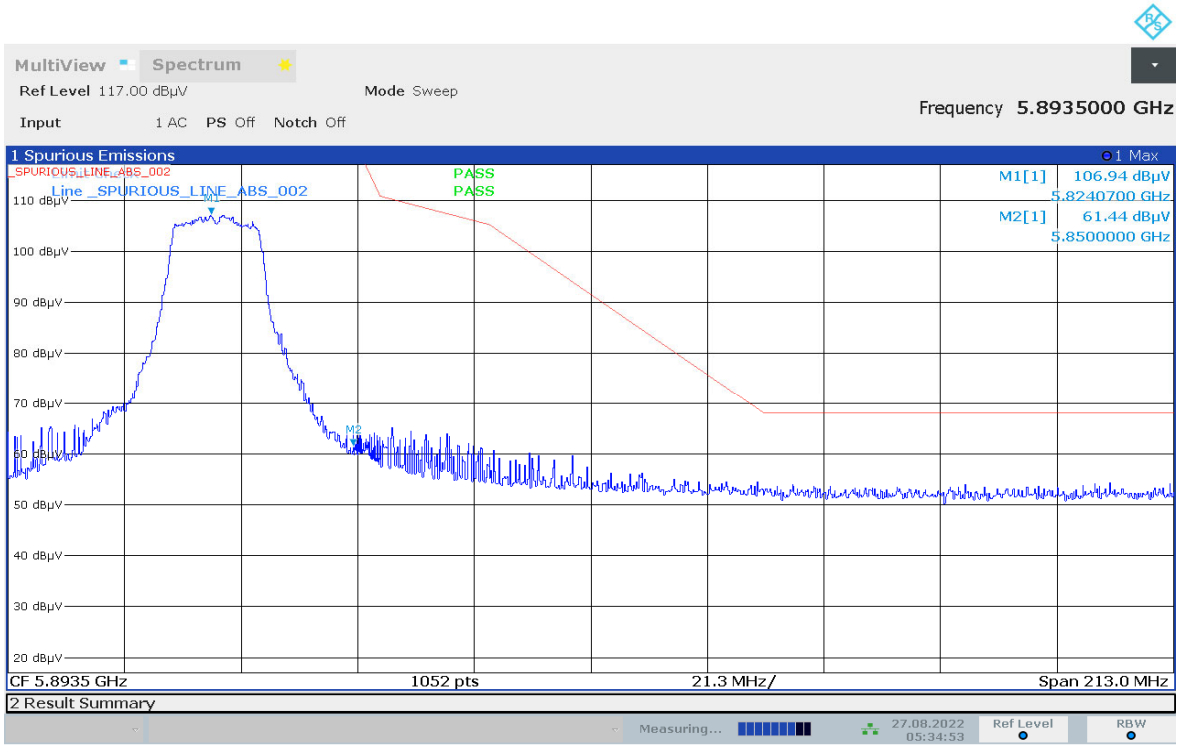
Restricted Band Edge (High Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBµV/m)	Spur level PK (dBµV/m)	Spur level AV (dBµV/m)	Limit QPK (dBµV/m)	Limit PK (dBµV/m)	Limit AV (dBµV/m)	Margin QPK (dBµV/m)	Margin PK (dBµV/m)	Margin AV (dBµV/m)	Carrier PK Power (dBµV/m)
5850.0000	-	-	61.4430	-	-	122.2000	-	-	-60.7570	-
Horizontal Radiated Emission Result										
5850.0000	-	-	61.7186	-	-	122.2000	-	-	-60.4814	-

Remarks: Pass Result	Marginal Result	Fail Result

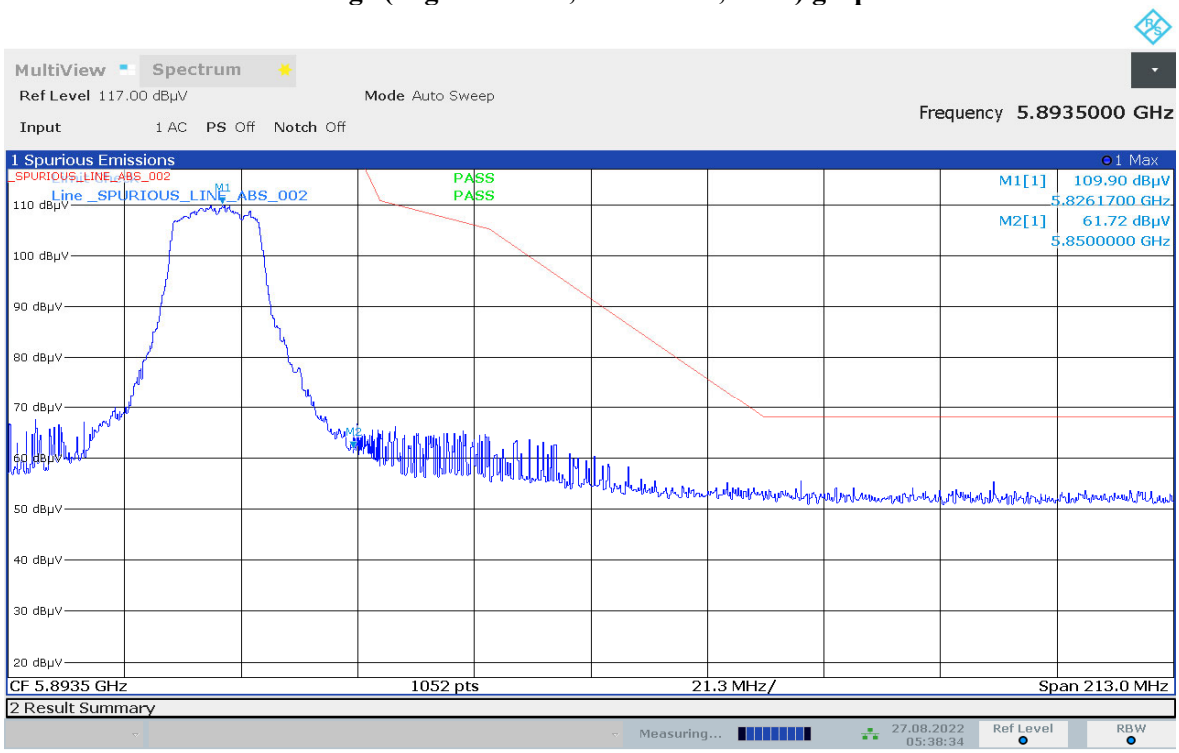
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



05:34:53 27.08.2022

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



05:38:34 27.08.2022

802.11n (HT20)

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5180.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

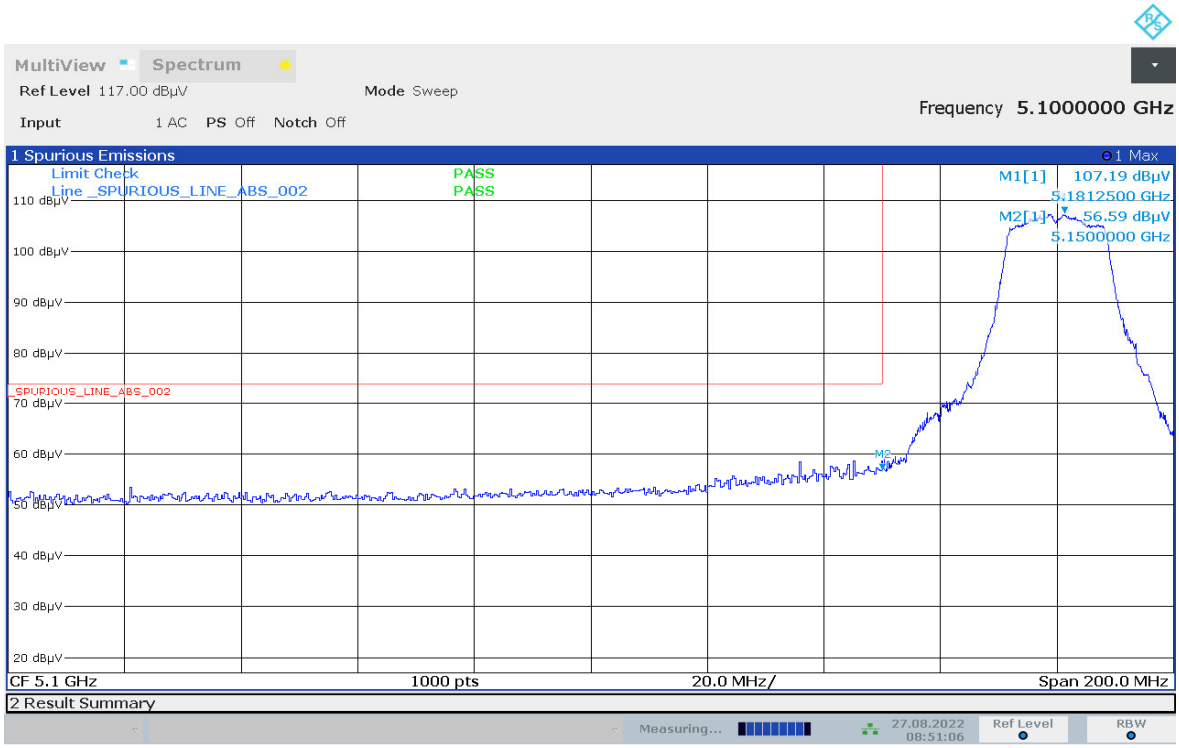
Restricted Band Edge (Low Channel) tabular data

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	-	56.5886	44.4862	-	74.0000	54.0000	-	-17.4114	-9.5138	-
Horizontal Radiated Emission Result										
5149.8500	-	-	49.5148	-	-	54.0000	-	-	-4.4852	-
5150.0000	-	62.0354	49.5552	-	74.0000	54.0000	-	-11.9646	-4.4448	-

Remarks: Pass Result	Marginal Result	Fail Result

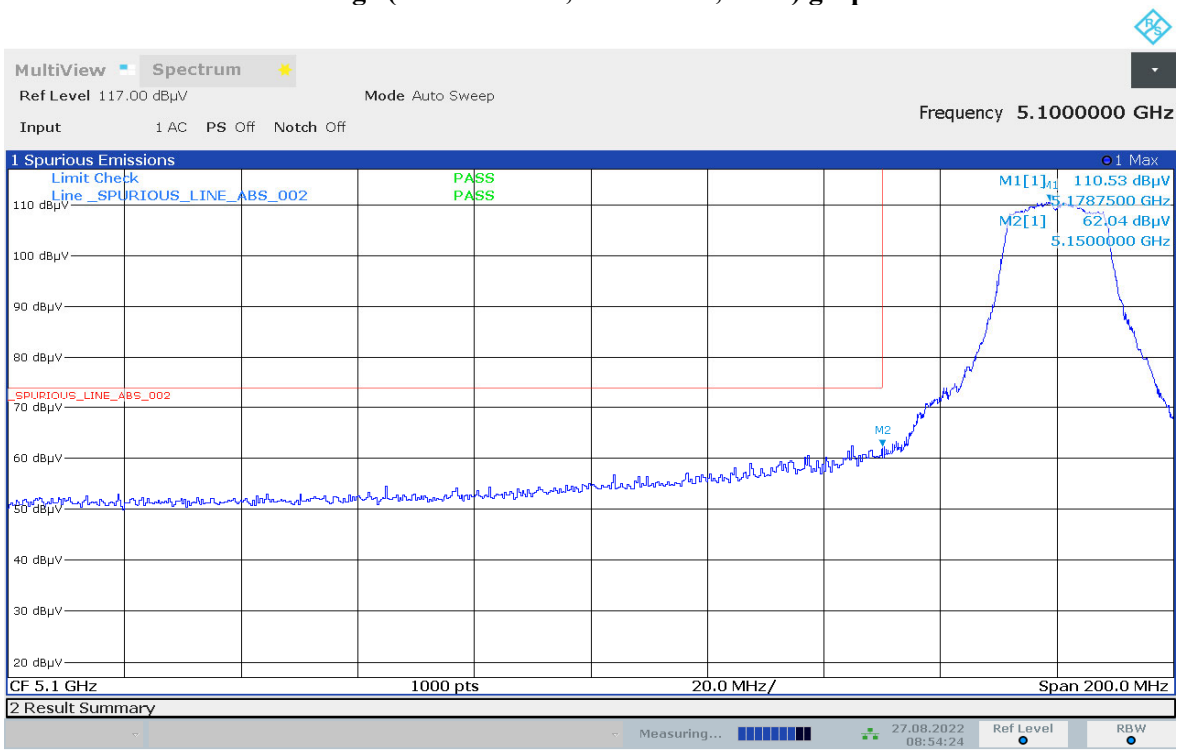
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



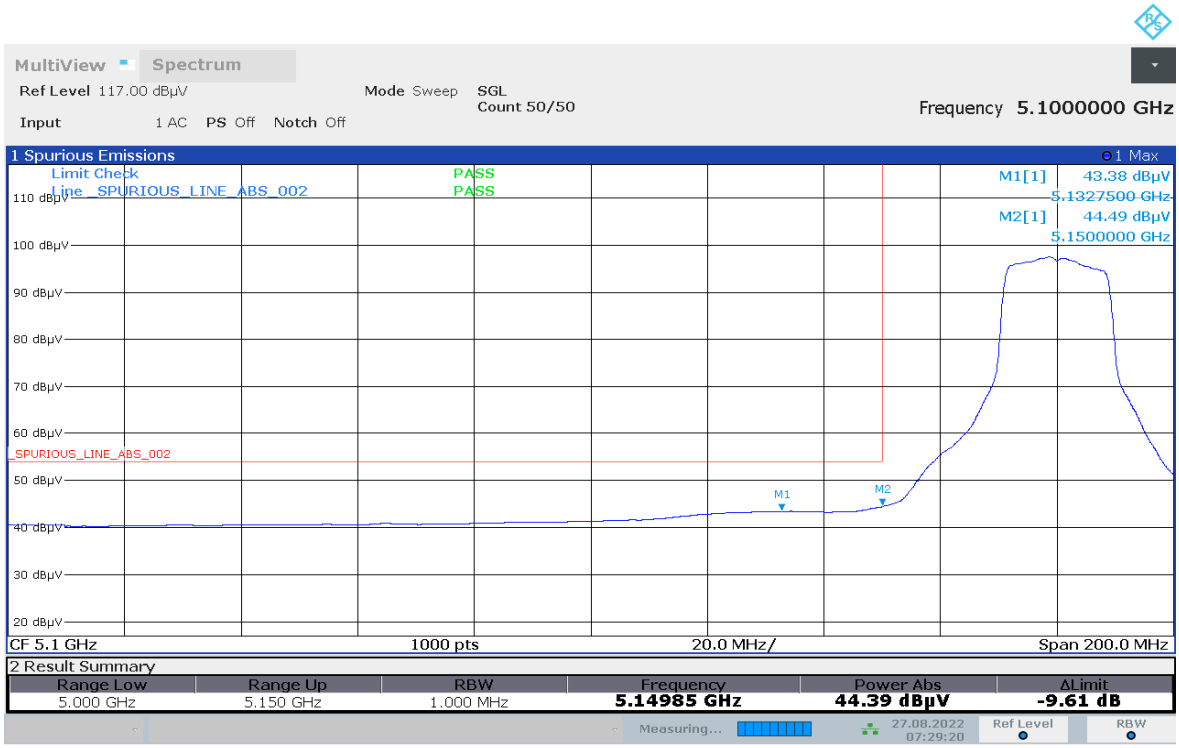
08:51:07 27.08.2022

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



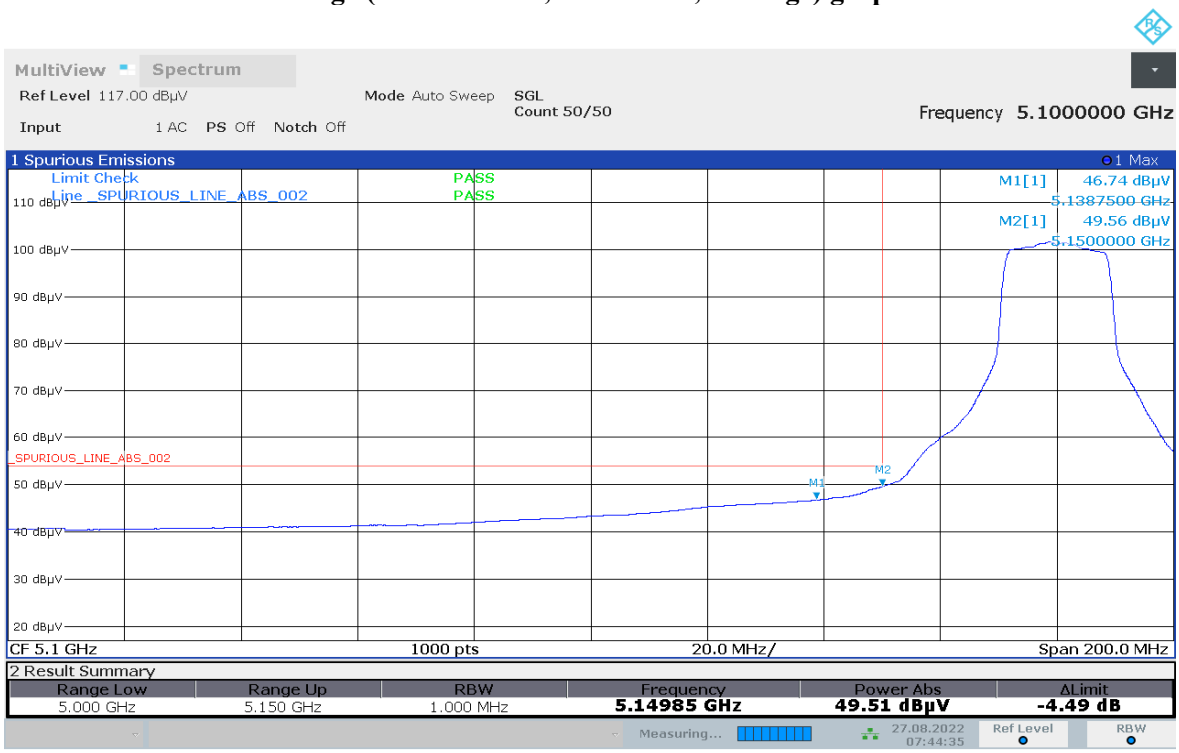
08:54:25 27.08.2022

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



07:29:21 27.08.2022

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



07:44:36 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: High Test Frequency: 5320.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

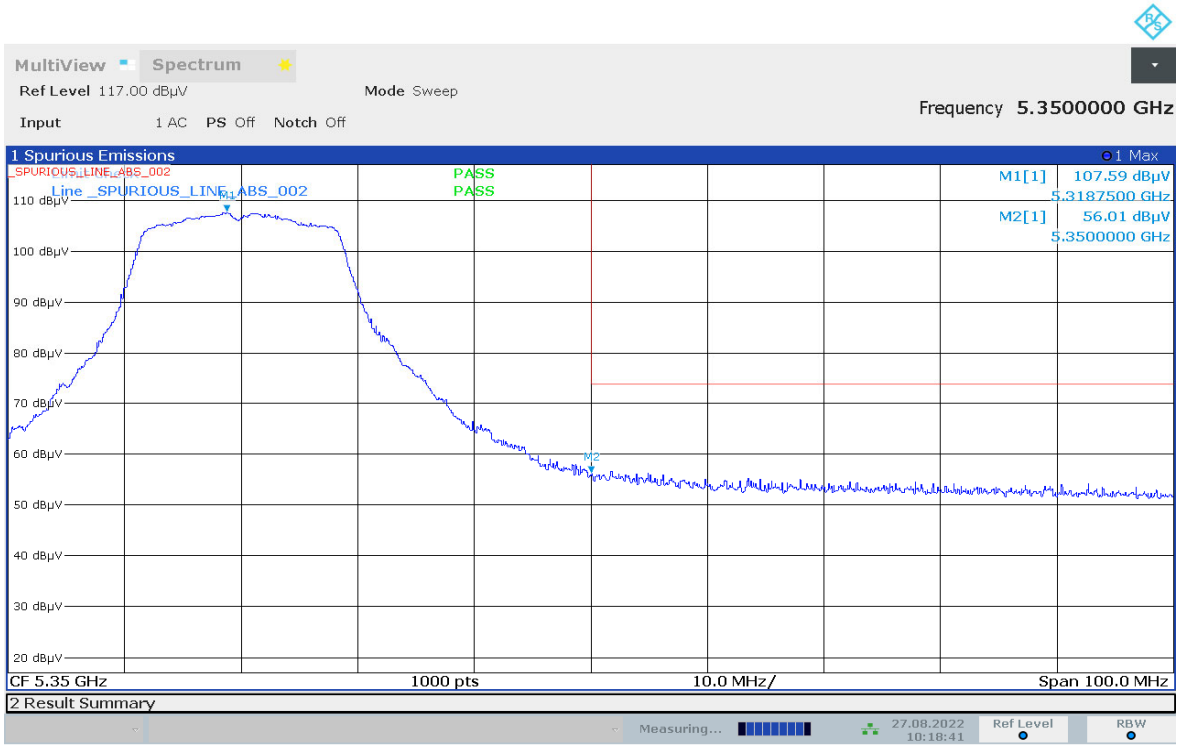
Restricted Band Edge (High Channel) tabular data

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	-	56.0116	44.9231	-	74.0000	54.0000	-	-17.9884	-9.0769	-
Horizontal Radiated Emission Result										
5350.0000	-	59.9317	46.3047	-	74.0000	54.0000	-	-14.0683	-7.6953	-

Remarks: Pass Result	Marginal Result	Fail Result

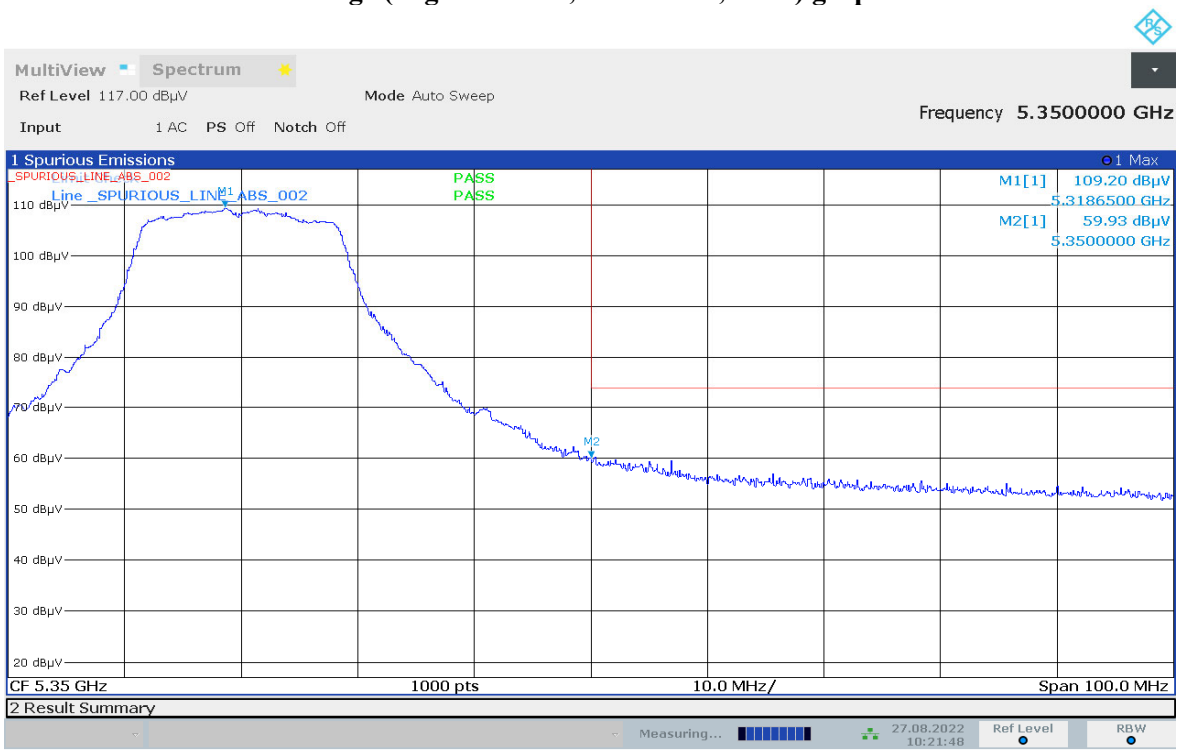
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



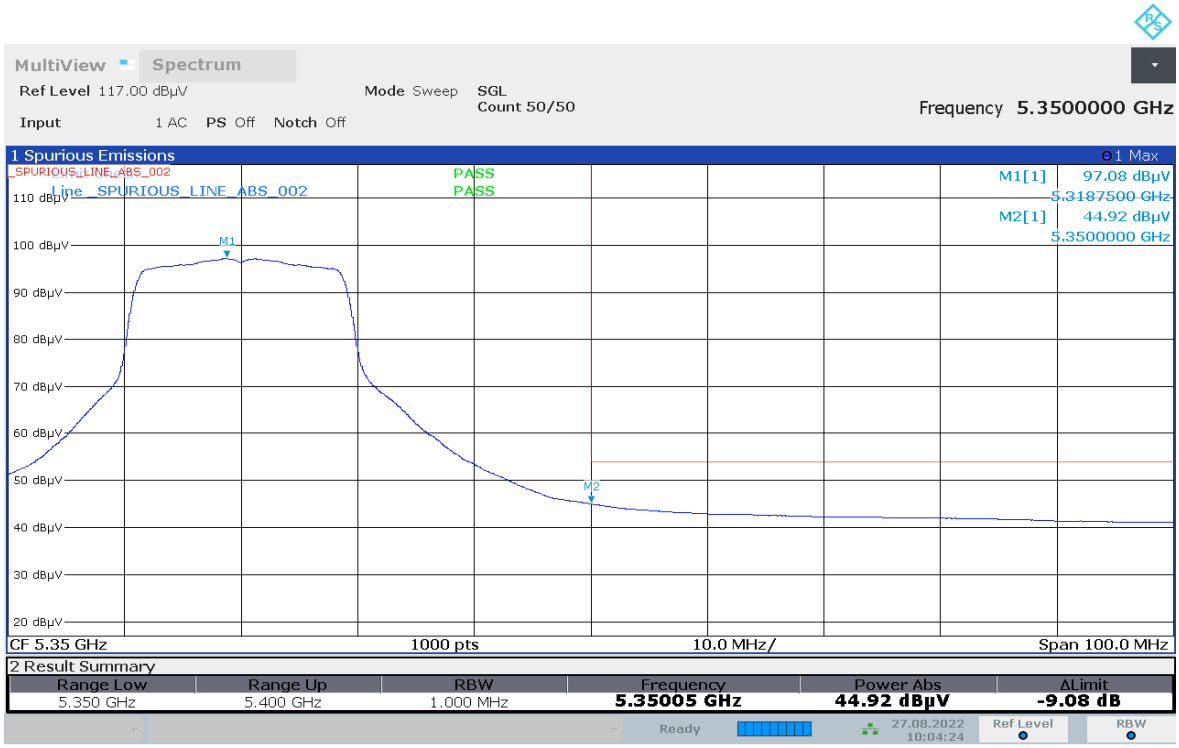
10:18:41 27.08.2022

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



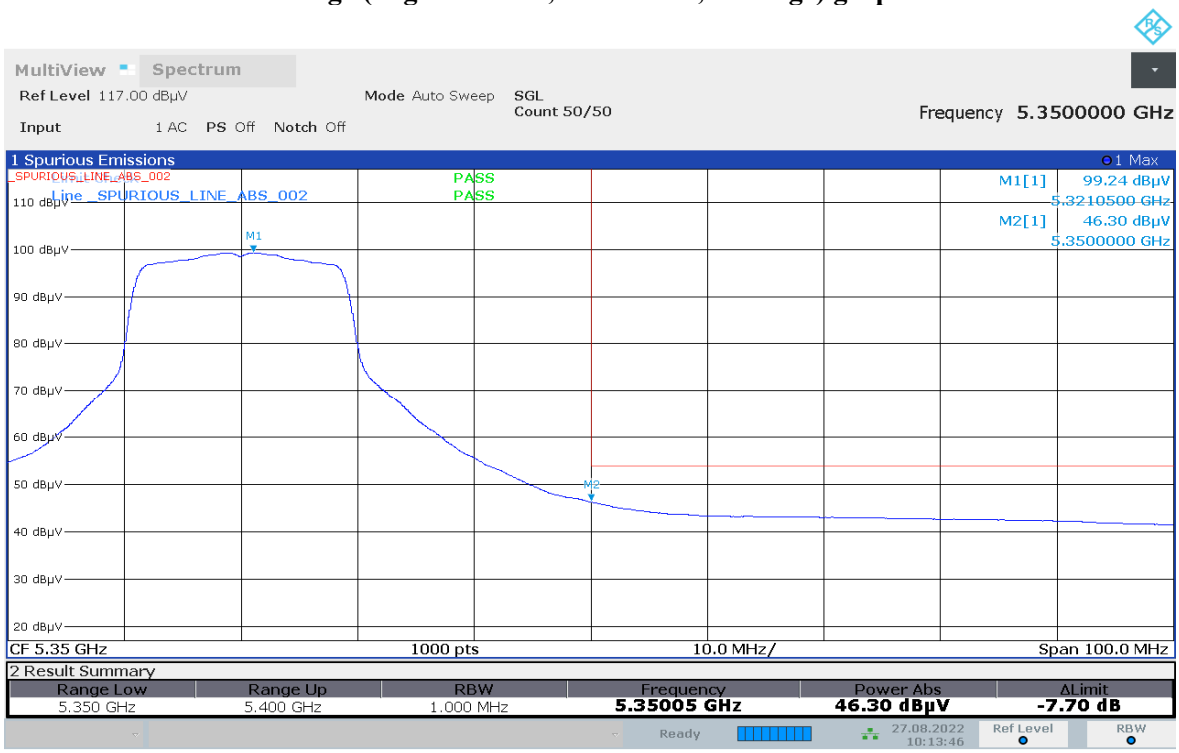
10:21:49 27.08.2022

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



10:04:25 27.08.2022

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



10:13:46 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

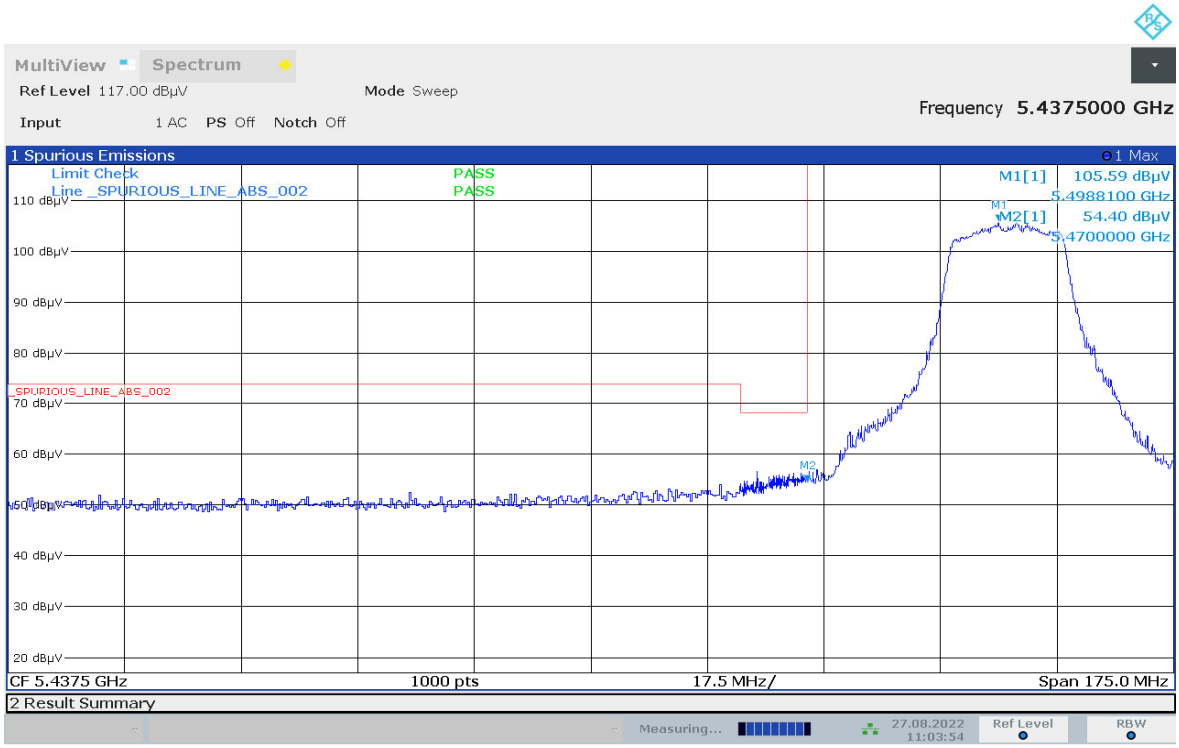
Restricted Band Edge (Low Channel) tabular data

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	-	-	41.7291	-	-	54.0000	-	-	-12.2709	-
5469.9750	-	-	43.6832	-	-	54.0000	-	-	-10.3168	-
5470.0000	-	54.3995	-	-	68.2000	-	-	-13.8005	-	-
Horizontal Radiated Emission Result										
5460.0000	-	-	43.4919	-	-	54.0000	-	-	-10.5081	-
5469.9750	-	-	46.3540	-	-	54.0000	-	-	-7.6460	-
5470.0000	-	54.7300	-	-	68.2000	-	-	-13.4700	-	-

Remarks: Pass Result	Marginal Result	Fail Result

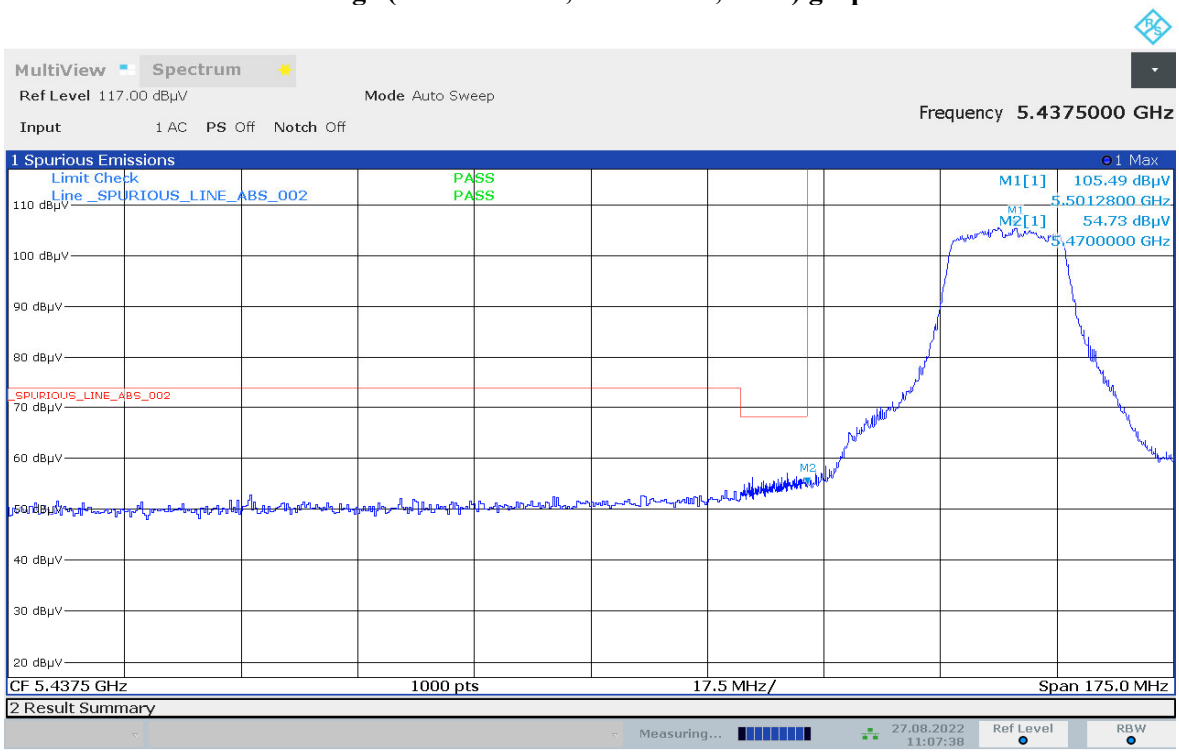
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



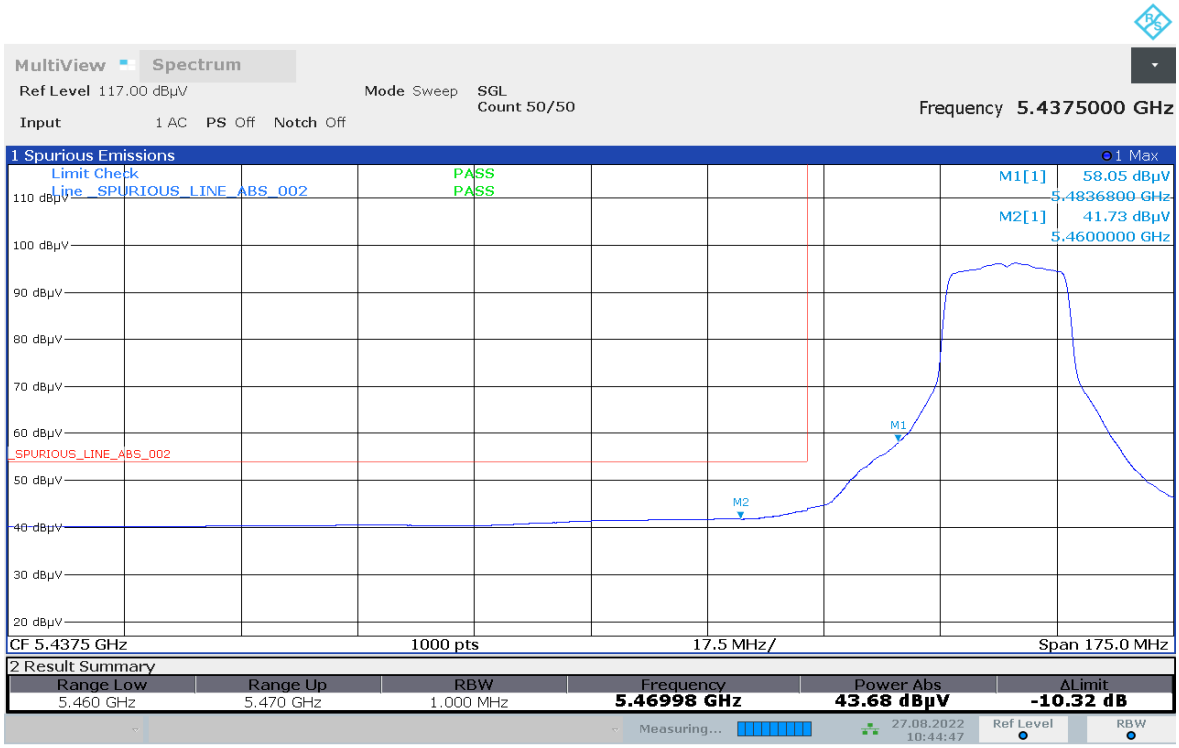
11:03:54 27.08.2022

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



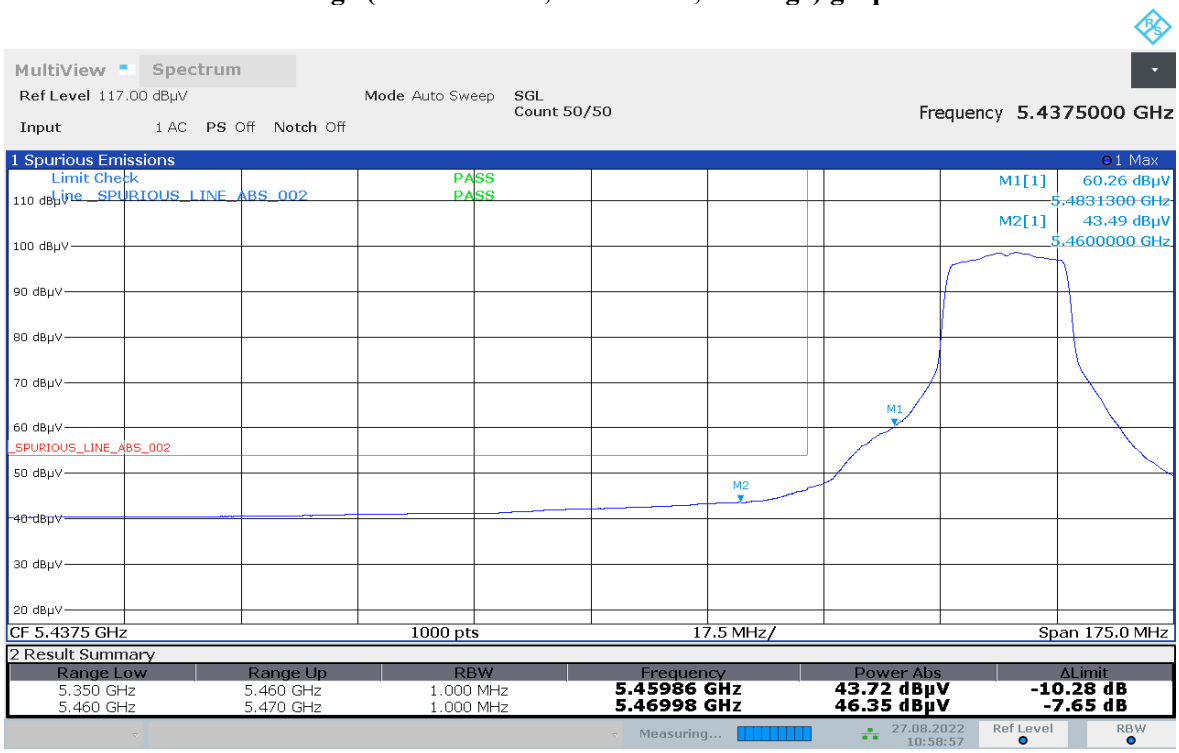
11:07:39 27.08.2022

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



10:44:48 27.08.2022

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



10:58:58 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: High Test Frequency: 5700.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

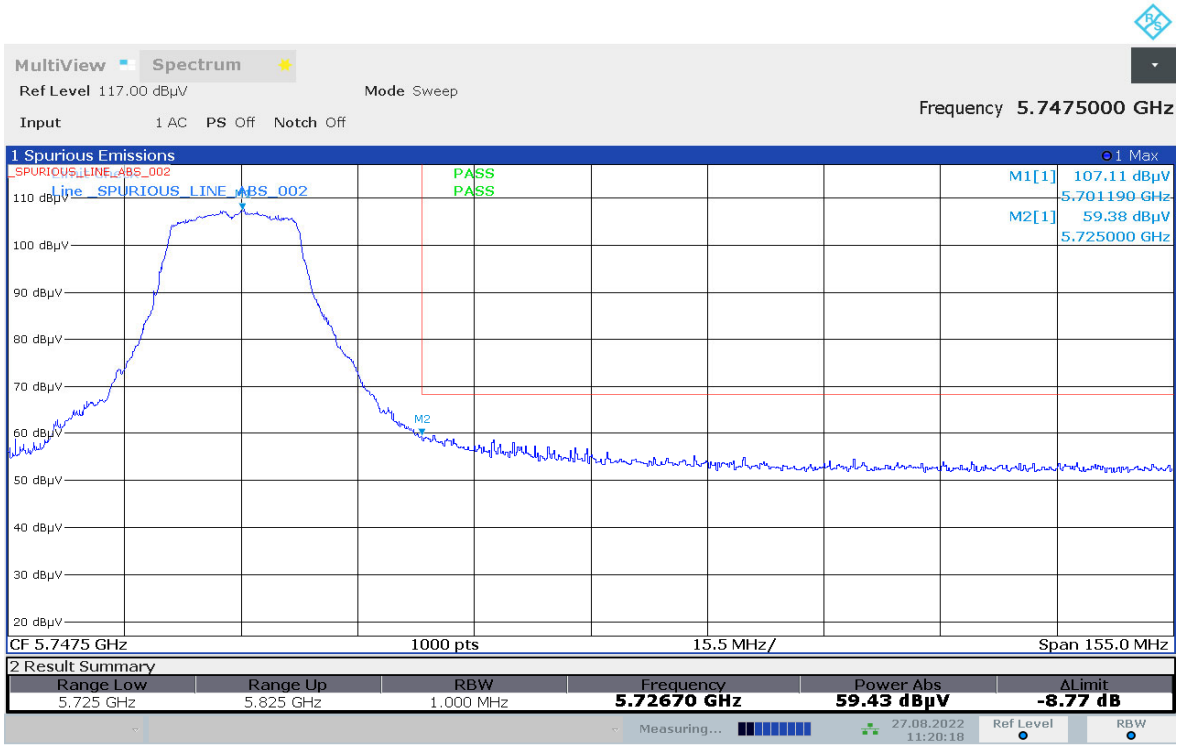
Restricted Band Edge (High Channel) tabular data

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	-	59.3813	-	-	68.2000	-	-	-8.8187	-	-
Horizontal Radiated Emission Result										
5725.0000	-	61.0158	-	-	68.2000	-	-	-7.1842	-	-

Remarks: Pass Result	Marginal Result	Fail Result

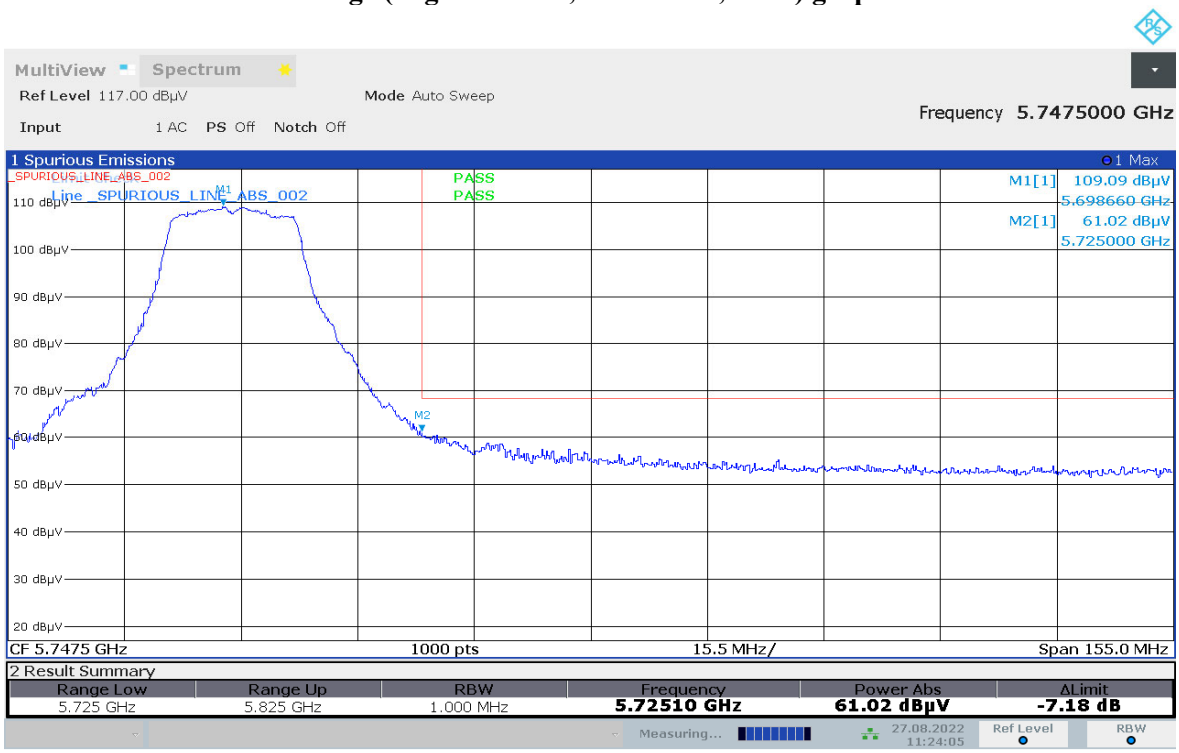
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



11:20:19 27.08.2022

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



11:24:05 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Straddle Test Frequency: 5720.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

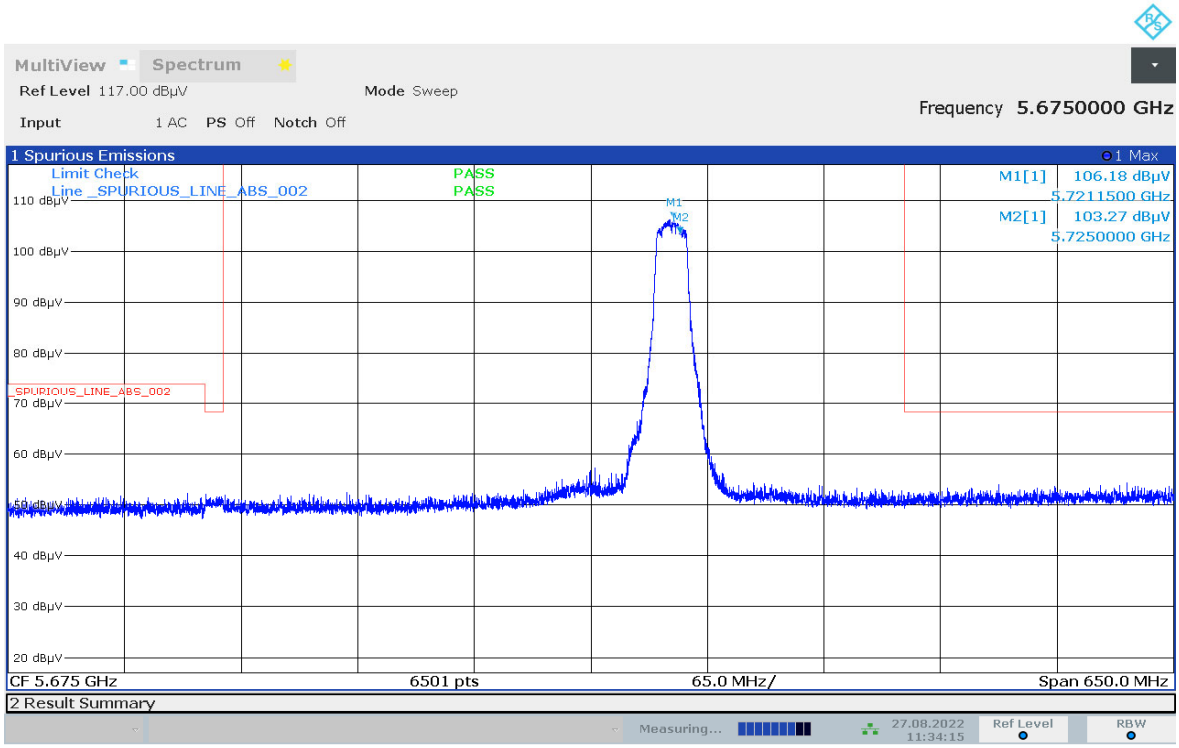
Restricted Band Edge (Straddle Channel) tabular data

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

Remarks: Pass Result	Marginal Result	Fail Result

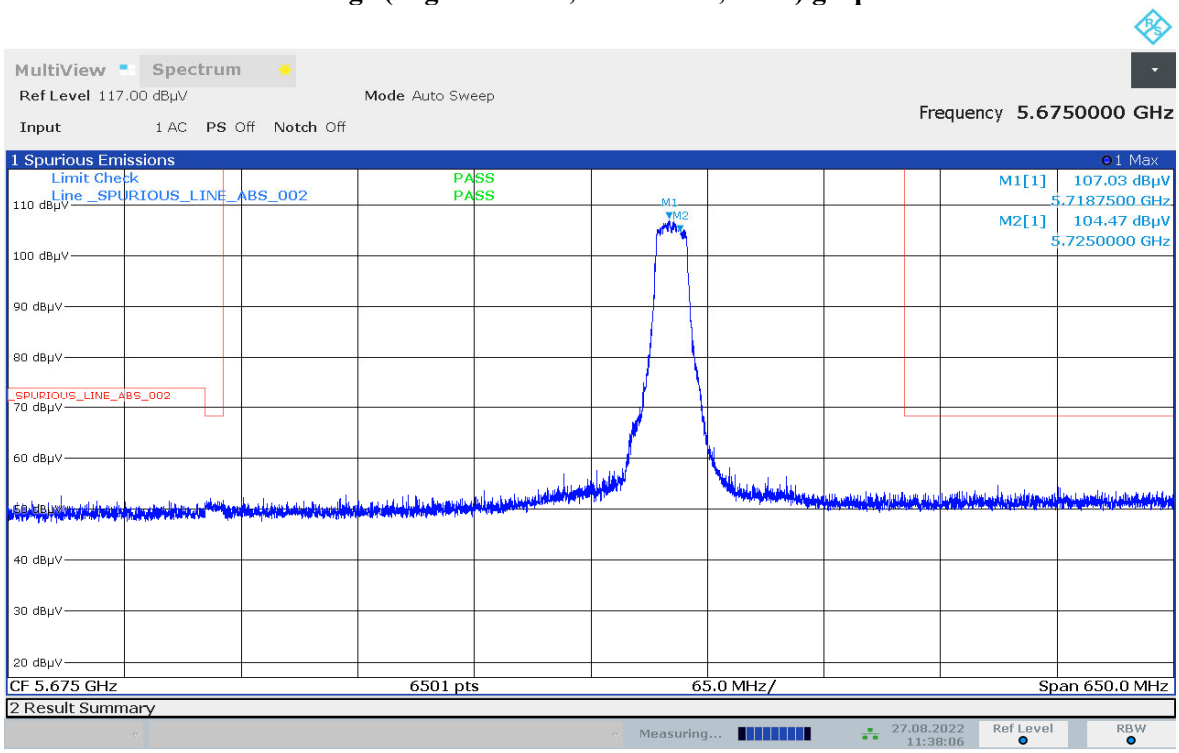
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 4.03dB

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



11:34:16 27.08.2022

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



11:38:06 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5745.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

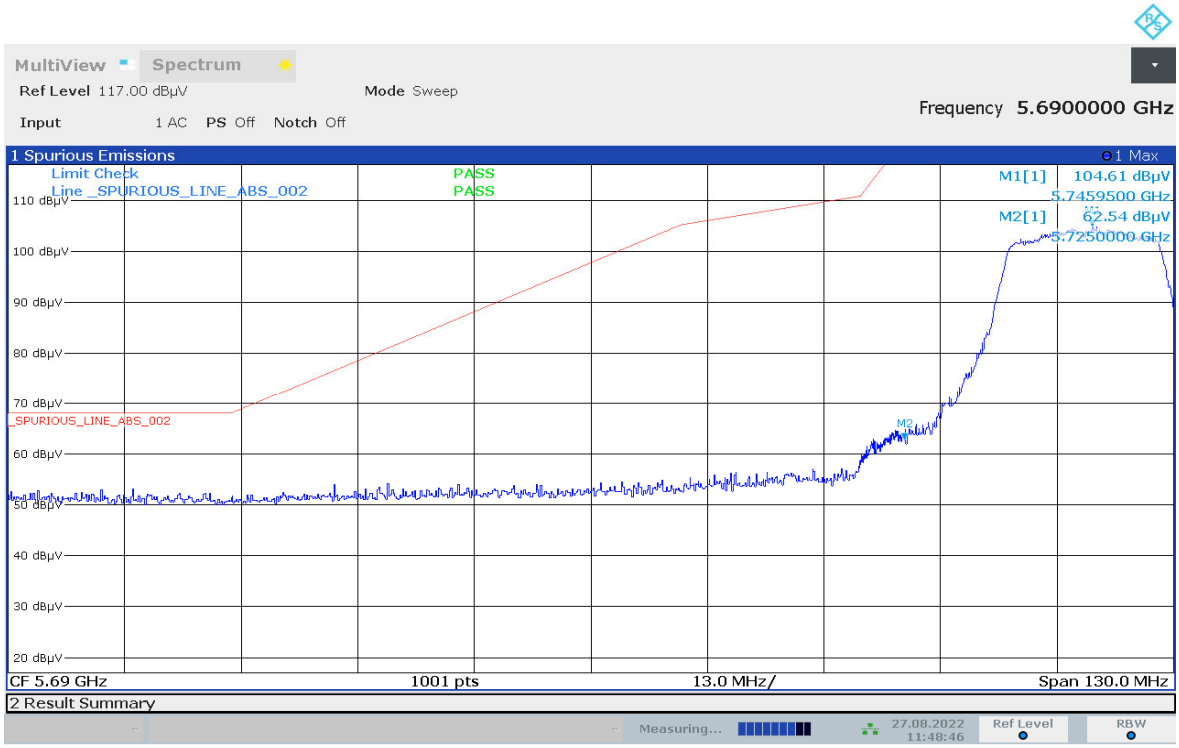
Restricted Band Edge (Low Channel) tabular data

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	-	-	62.5437	-	-	122.2000	-	-	-59.6563	-
Horizontal Radiated Emission Result										
5725.0000	-	-	65.4354	-	-	122.2000	-	-	-56.7646	-

Remarks: Pass Result	Marginal Result	Fail Result

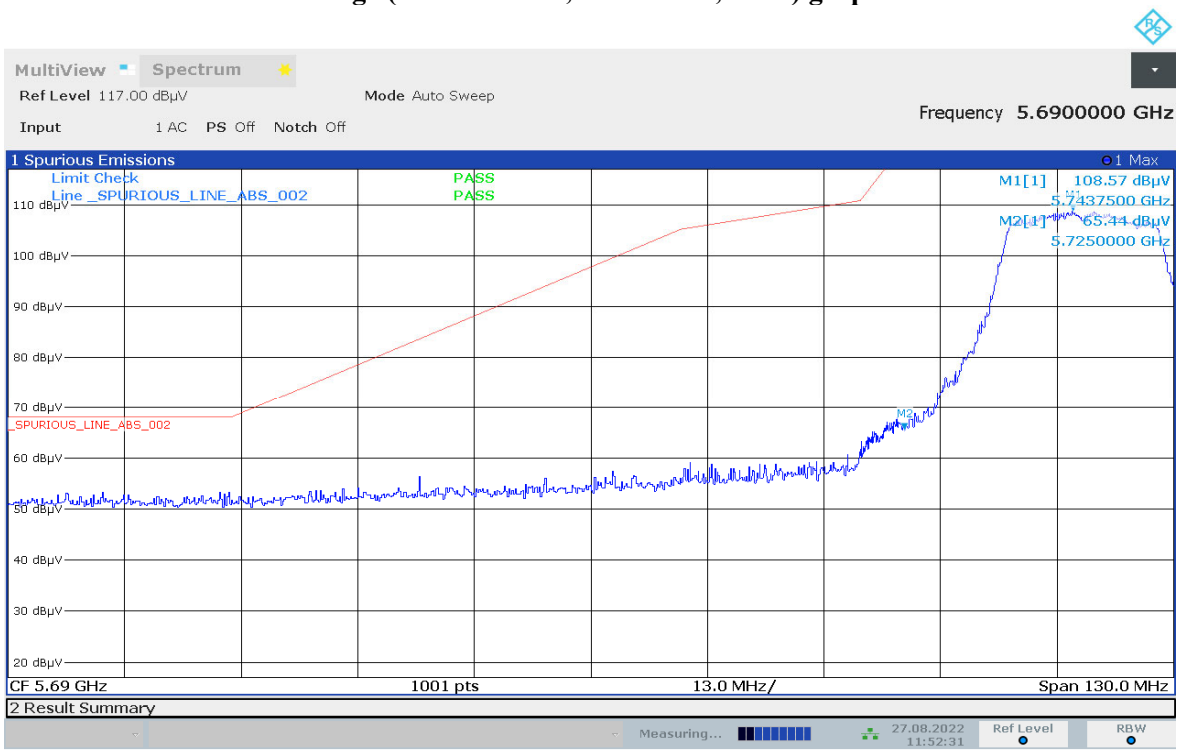
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 4.03dB

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



11:48:47 27.08.2022

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



11:52:31 27.08.2022

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: High Test Frequency: 5825.0000 MHz Test Standard: ANSI C63.10-2013
Worst Case Plane: Z-Plane (802.11n 20MHz)

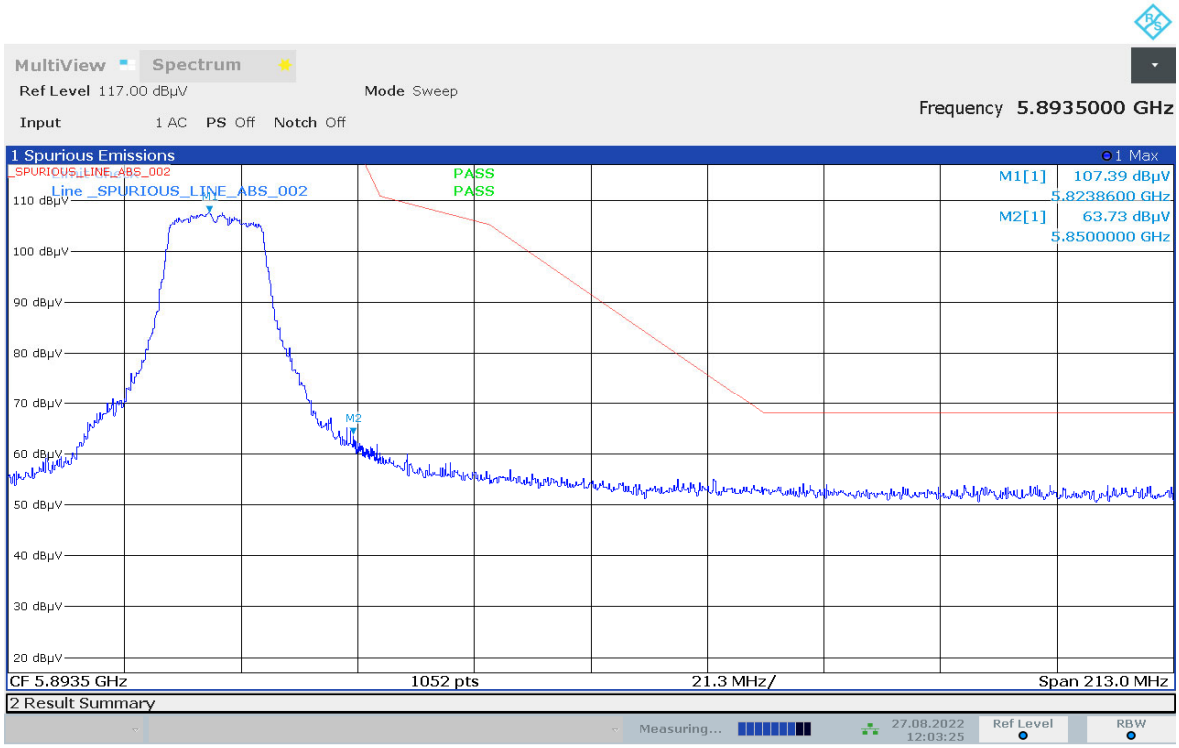
Restricted Band Edge (High Channel) tabular data

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	-	-	63.7261	-	-	122.2000	-	-	-58.4739	-
Horizontal Radiated Emission Result										
5850.0000	-	-	61.6881	-	-	122.2000	-	-	-60.5119	-

Remarks: Pass Result	Marginal Result	Fail Result

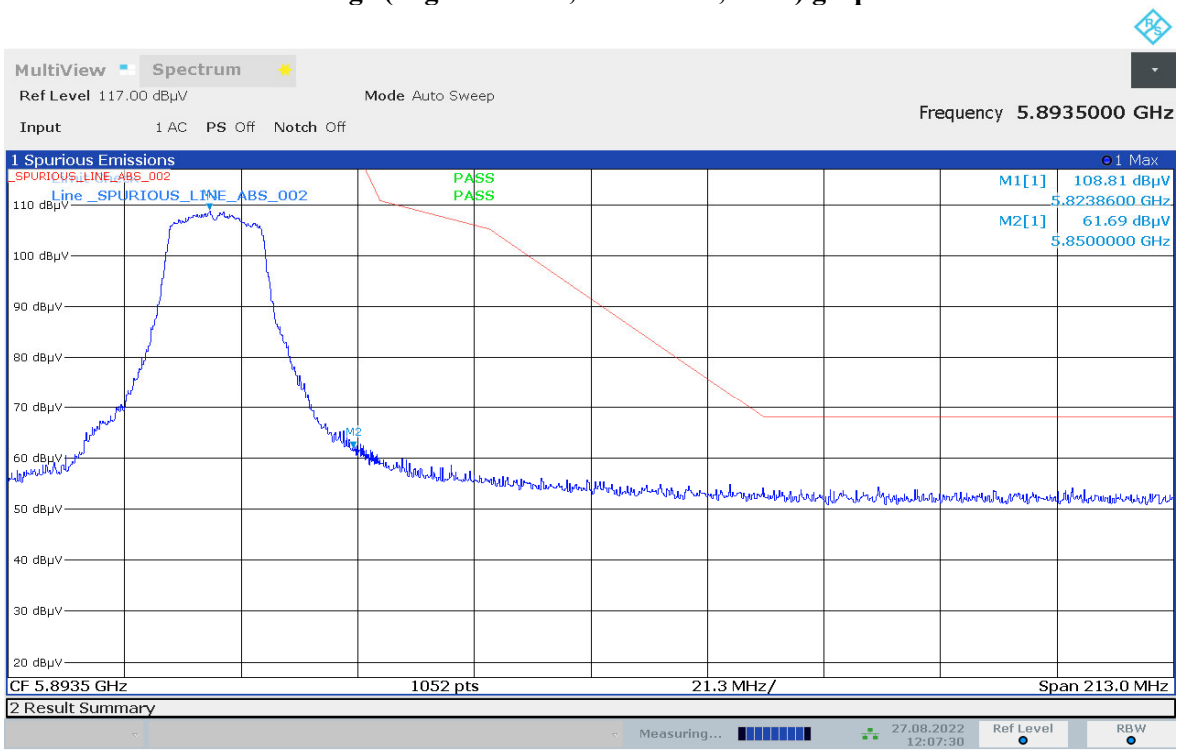
Temperature (degC): 23.9 **Humidity (%): 69.8**
Test Performed by: Qawiman&Nazrin **Test Date: Sat, 27 Aug, 2022**
System MU: 5.84dB

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



12:03:25 27.08.2022

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



12:07:31 27.08.2022

802.11n (HT40)

Test: WIFI SAC Restricted Band Edge
Model Number: H35UCT9PW8AN S/N: 022TYP0004 EMC SR ID#: 26977-EMC-00106
Battery: PMNN4817A Accessory: AN000411A01
Test Channel: Low Test Frequency: 5190.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11n 40MHz)

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	-	54.0011	44.0719	-	74.0000	54.0000	-	-19.9989	-9.9281	-
Horizontal Radiated Emission Result										
5149.8500	-	-	46.9838	-	-	54.0000	-	-	-7.0162	-
5150.0000	-	56.0041	46.5818	-	74.0000	54.0000	-	-17.9959	-7.4182	-

Remarks: Pass Result	Marginal Result	Fail Result

Temperature (degC): 23.5 **Humidity (%): 69.9**
Test Performed by: Qawiman&Nazrin **Test Date: Wed, 10 Aug, 2022**
System MU: 5.84dB