

 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 / IC TEST REPORT Report Revision : Rev.B																												
<table><tr><td>Date/s Tested</td><td>: 08-Feb-2022 - 13-Mar-2022</td></tr><tr><td>Manufacturer/Location</td><td>: Motorola Solutions Malaysia SDN BHD</td></tr><tr><td>Manufacturer Address</td><td>: Plot 2A Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia</td></tr><tr><td>Requestor</td><td>: ISMAIL, ABDUL HAKIM</td></tr><tr><td>Product Type</td><td>: Hand-held</td></tr><tr><td>Product Version (PMN)</td><td>: APX N50</td></tr><tr><td>Model Number (HVIN)</td><td>: H25UCF9PW6AN</td></tr><tr><td>Frequency Band</td><td>: 5180-5825 MHz</td></tr><tr><td>Firmware Version (FVIN)</td><td>: S27.50.08</td></tr><tr><td>Applicant Name</td><td>: Motorola Solutions Inc</td></tr><tr><td>Applicant Address</td><td>: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322</td></tr><tr><td>FCC Registrations</td><td>: 461337</td></tr><tr><td>ISED Registrations</td><td>: MY0001</td></tr></table> The equipment was tested accordance to the requirement listed below: <table><tr><td>(5GHz Wi-Fi) FCC 47 CFR Part 15 Subpart E IC RSS 247 Issue 2</td><td>PASS</td></tr></table>		Date/s Tested	: 08-Feb-2022 - 13-Mar-2022	Manufacturer/Location	: Motorola Solutions Malaysia SDN BHD	Manufacturer Address	: Plot 2A Medan Bayan Lepas, Mukim 12 SWD, 11900 Bayan Lepas, Penang, Malaysia	Requestor	: ISMAIL, ABDUL HAKIM	Product Type	: Hand-held	Product Version (PMN)	: APX N50	Model Number (HVIN)	: H25UCF9PW6AN	Frequency Band	: 5180-5825 MHz	Firmware Version (FVIN)	: S27.50.08	Applicant Name	: Motorola Solutions Inc	Applicant Address	: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322	FCC Registrations	: 461337	ISED Registrations	: MY0001	(5GHz Wi-Fi) FCC 47 CFR Part 15 Subpart E IC RSS 247 Issue 2	PASS
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Prepared By:  GAN BOON TEONG Test Personnel	Approved Signatory: VINCENT FOONG CHUEN KIT Responsible Engineer																												

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev. A	Initial Report	15-Mar-2022	Gan Boon Teong
Rev. B	Typo in summary	11-Apr-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: 13.422 dBm (21.99 mW) 802.11n20/ac20: 13.434 dBm (22.05 mW)	657TYB0678	Gan
15.407(a) (1/2/3)	RSS 247 6.2	Maximum Power Spectral Density	Pass	NA	657TYB0678	Gan
15.407 (e)	RSS 247 6.2.4	6dB Bandwidth	Pass	Worst case emission: 802.11a: 17.127MHz (17M1D1D) 802.11n20/ac20: 17.838MHz (17M8D1D)	657TYB0678	Gan
15.407 (g)	RSS Gen 6.11	Frequency Stability	Pass	NA	657TYB0678	Gan
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Band Edge Radiated Spurious Emission Measurement	Pass	Worst case emission: 68.1887dBuV/m (margin: 5.8113dB)	657TYB0771	Nazrin&Qawiman
15.407 (b) (1/2/3/4/6)	RSS 247 6.2	Radiated Spurious Emission Measurement	Pass	Worst case emission: 66.31dBuV/m (margin: 1.89dB, noise floor)	657TYB0771	Nazrin&Qawiman
15.207 15.407 (b)(6)	RSS Gen 8.8	AC Powerline Conducted Emission	Pass	Worst case emission: 58.61dBuV (margin: 7.17dB)	657TYB0771	ALif
15.203	-	Antenna requirement	Pass	Internal antenna is not accessible to the end-user	NA	NA

2.0. Measurement Uncertainty

Measurement	Frequency	Expanded Uncertainty (k=1.96) (±)
AC Power Line Conducted Spurious Emission	150kHz ~ 30MHz	3.48 dB
Radiated Emissions up to 1 GHz (Field Strength)	30MHz ~ 1000MHz	5.88 dB
Radiated Emissions above 1 GHz (Field Strength)	1GHz ~ 18GHz	5.84 dB
	18GHz ~ 40GHz	6.02 dB
Conducted Spurious Emissions	9kHz ~ 12.75GHz	2.82 dB

3.0. Equipment List

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

Description	Model	Serial Number	Calibration Date	Calibration Due Date
ANALYZER SPECTRUM	E4440A	US45303111	14-Jul-21	14-Jul-22
CHAMBER	SH-641	92003820	14-Jul-21	14-Jul-22
POWER SUPPLY	6652A	MY40001436	22-Nov-21	22-Nov-22
PULSE POWER METER	ML2495A	1845014	19-Jan-22	19-Jan-23
N to N RF Cable # 1	SF126/11N/11N	NA	NA	NA

Radiated Emission Station (SW Version: EMC FCC RE v1.6.2)

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
POWER SUPPLY	N7976A	MY53410110	24-May-21	24-May-22
SIGNAL GENERATOR	SMB 100A	182511	4-Jun-21	4-Jun-24
EMI TEST RECEIVER	ESW44	101731	5-Nov-21	5-Nov-22
EMI TEST RECEIVER	ESIB26	827769/009	11-Mar-21	11-Mar-22
5m SEMI-ANECHOIC CHAMBER	S800-HX	J2308	Not Required	Not Required
BILOG ANTENNA	CBL6112D	55546	06-Jun-21	06-Jun-22
BILOG ANTENNA	CBL6112B	2964	4-May-21	4-May-22
HYGRO-THERMOMETER	SDL500	A.016800	18-May-21	18-May-22
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	BBHA9170143	3-Aug-21	3-Aug-22
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

Radiated Emission Station (SW Version: EMC 32 V10.60.10)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
TEMPERATURE & HUMIDITY LOGGER	DSB	16344143	29-May-21	29-May-22
V-NETWORK 2-LINE	ENV216V	101268	19-Aug-21	19-Aug-22
EMI TEST RECEIVER	ESCI	10025	5-Feb-21	5-Apr-22
PROGRAMMABLE AC SOURCE	61604	ABR000000926	14-Jul-21	14-Jul-22

4.0. General Information

General Description of EUT:

Product	Hand-held
Brand	Motorola Solutions
Test Model	APX N50
Power Supply Rating	7.5Vdc (Battery)
Mode of operation	WLAN 5GHz
Modulation Type	QPSK, BPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	OFDM
Transfer Rate	802.11a: 6.0/9.0/12.0/18.0/24.0/36.0/48.0/54.0 Mbps 802.11n: up to MCS15 802.11ac: up to MCS9
Operating Frequency	5.180 ~ 5.240 GHz, 5.260 ~ 5.320 GHz, 5.50 ~ 5.720 GHz, 5.745 ~ 5.825 GHz
Output Power (26 EBW or 99% OBW)	25.1 mW for 5.180 ~ 5.240 GHz 25.1 mW for 5.260 ~ 5.320 GHz 25.1 mW for 5.50 ~ 5.720 GHz 22.4 mW for 5.745 ~ 5.825 GHz
Antenna Type	Inverted-L Monopole with 2.5~4 dBi gain
SW Version	S27.50.08

Note:

The EUT contains following accessory devices and data cable:

Item	Brand	Model or P/N
BATT LIION IMPRES 2 IP68 2850T	MOTOROLA	PMNN4813A
CABLE,PORT PROG,TEST AND ALIGN CABLE PSA	MOTOROLA	PMKN4231A
7/800 Whip Antenna (762-870MHz)	MOTOROLA	AN000411A01

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.

Test configuration of EUT

All relevant configurations involving radio models and accessories (including chargers, batteries, antennas) were assessed. Only worst case configurations will be included in this report.

5.0. Test Mode Applicability and Test Channel Detail

EUT Configure Mode	Applicable to				Description
	RE $\geq$ 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 $\geq$ 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)	52-64	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	23.9°C, 69.7% RH	7.5V DC	Nazrin/Qawiman
RE<1G	23.9°C, 69.7% RH	7.5V DC	Nazrin/Qawiman
PLC	19°C, 65.6% RH	120V AC	Alif
APCM	25°C, 50% RH	7.5V DC	Gan

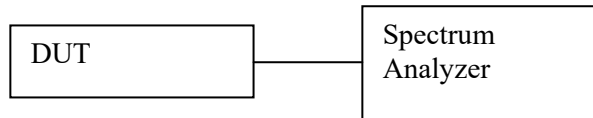
Duty Cycle of Test Signal

802.11a, 802.11n and 802.11ac (HT20, VHT20): 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

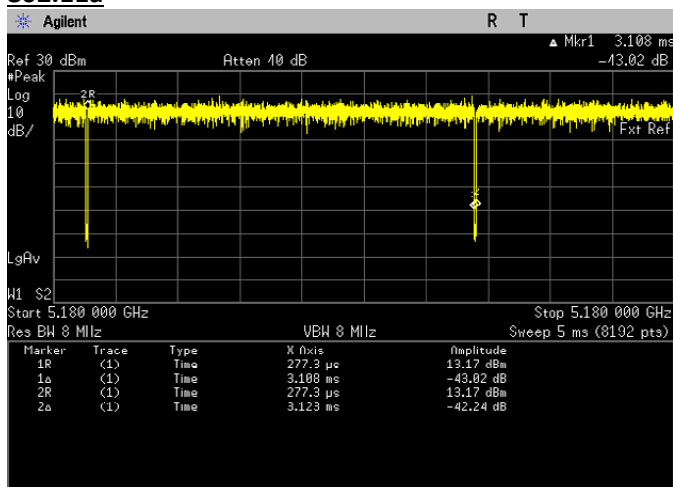
6.0.1. Test Setup



- 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

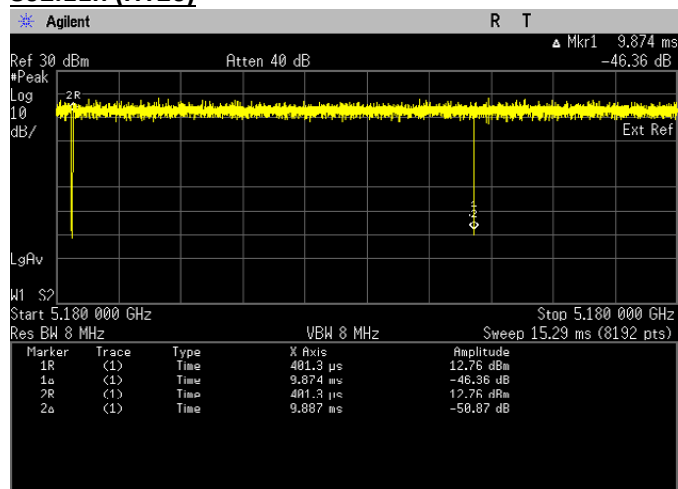


On time	3.108	ms
On + off time	3.123	ms
Duty Cycle	0.9952	
Duty Cycle Factor	0.021	

*Duty cycle = On time/ On +off time

*Duty Cycle factor = 10*log (1/Duty Cycle)

802.11n (HT20)



On time	9.874	ms
On + off time	9.887	ms
Duty Cycle	0.9987	
Duty Cycle Factor	0.006	

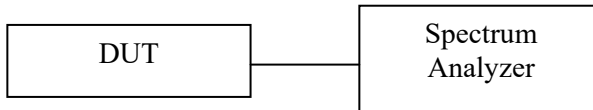
*Duty cycle = On time/ On +off time

*Duty Cycle factor = $10 \cdot \log (1/\text{Duty Cycle})$

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 $\geq 3 \cdot$ 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

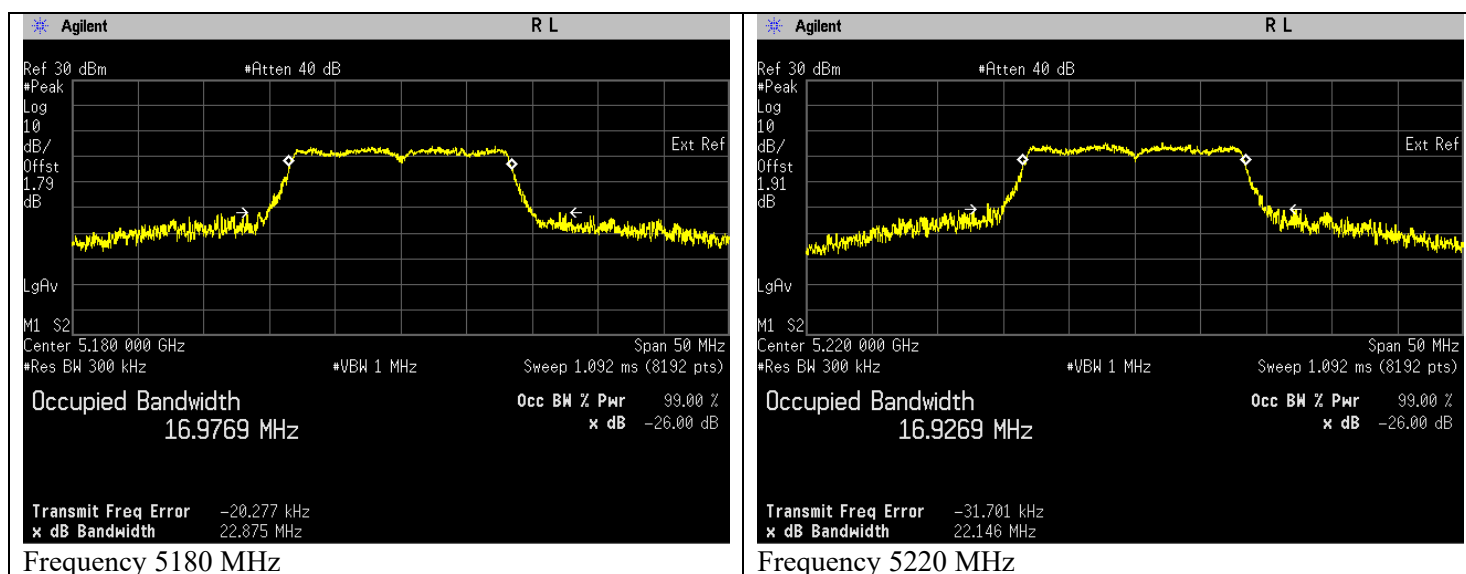
Not applicable.

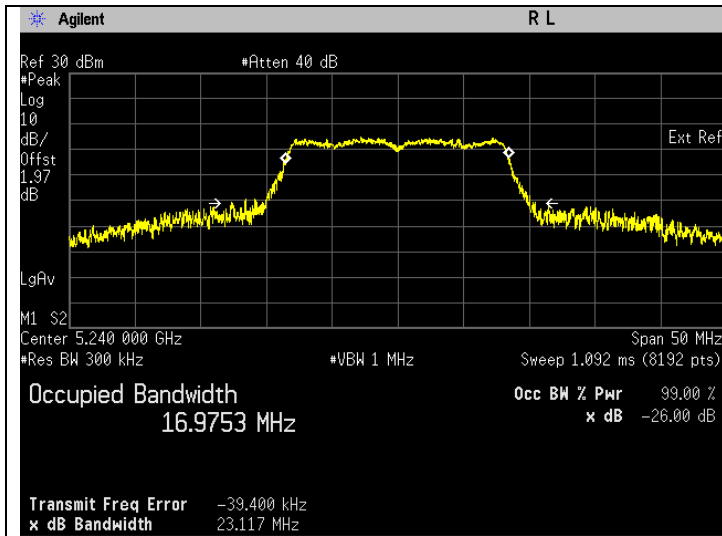
7.1.3. Test Data

802.11a

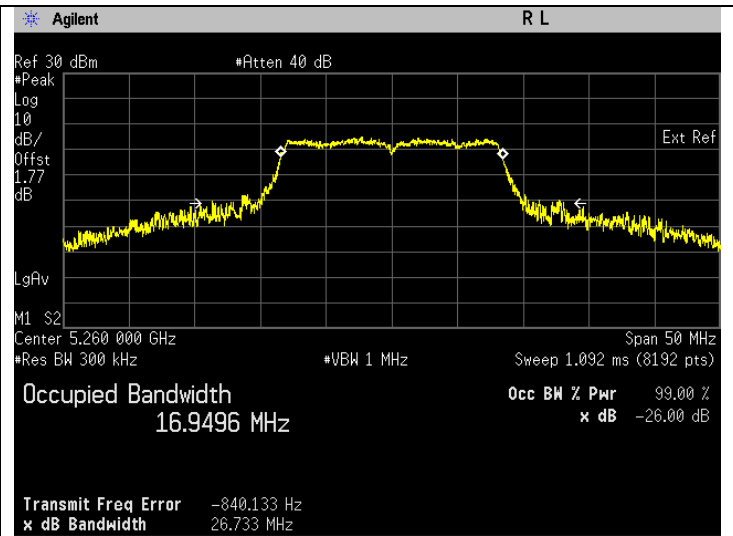
Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	22.875	Pass	16.977	Pass
5220	Mod Type: BPSK, Data Rate: 6	22.146	Pass	16.927	Pass
5240	Mod Type: BPSK, Data Rate: 6	23.116	Pass	16.975	Pass
5260	Mod Type: BPSK, Data Rate: 6	26.733	Pass	16.950	Pass
5300	Mod Type: BPSK, Data Rate: 6	28.090	Pass	17.013	Pass
5320	Mod Type: BPSK, Data Rate: 6	23.769	Pass	16.933	Pass
5500	Mod Type: BPSK, Data Rate: 6	20.242	Pass	16.800	Pass
5580	Mod Type: BPSK, Data Rate: 6	27.357	Pass	17.008	Pass
5700	Mod Type: BPSK, Data Rate: 6	20.061	Pass	16.845	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-2C	19.485	Pass	13.514	Pass
5720	Mod Type: BPSK, Data Rate: 6, UNII-3	9.485	Pass	3.514	Pass
5745	Mod Type: BPSK, Data Rate: 6	28.903	Pass	17.060	Pass
5785	Mod Type: BPSK, Data Rate: 6	29.460	Pass	17.127	Pass
5825	Mod Type: BPSK, Data Rate: 6	28.651	Pass	17.097	Pass

26 dB Bandwidth/ 99% Bandwidth

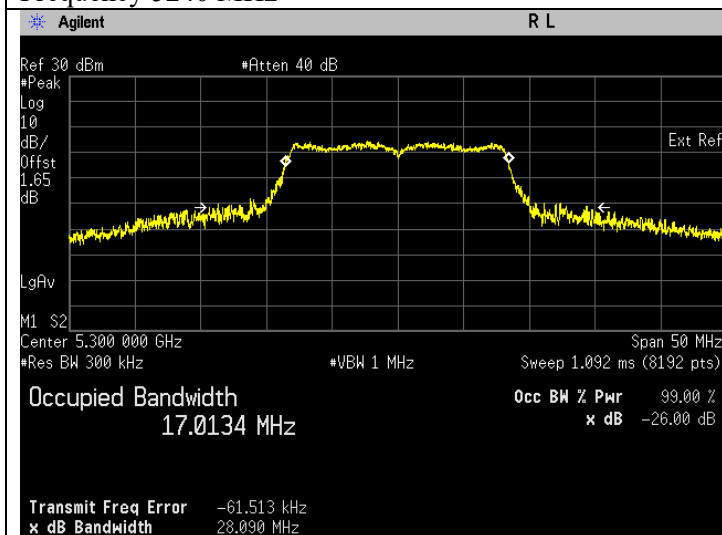




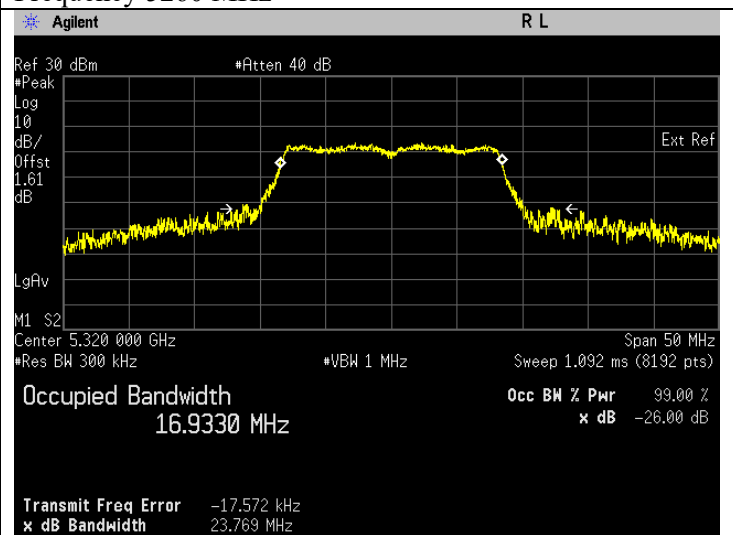
Frequency 5240 MHz



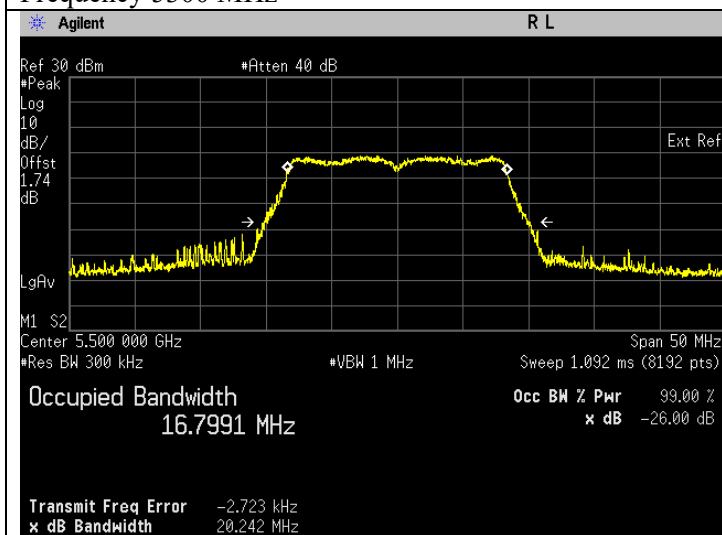
Frequency 5260 MHz



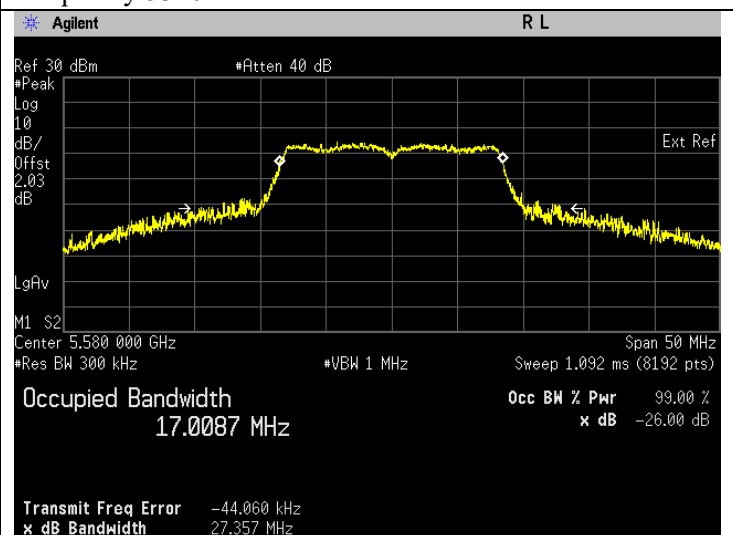
Frequency 5300 MHz



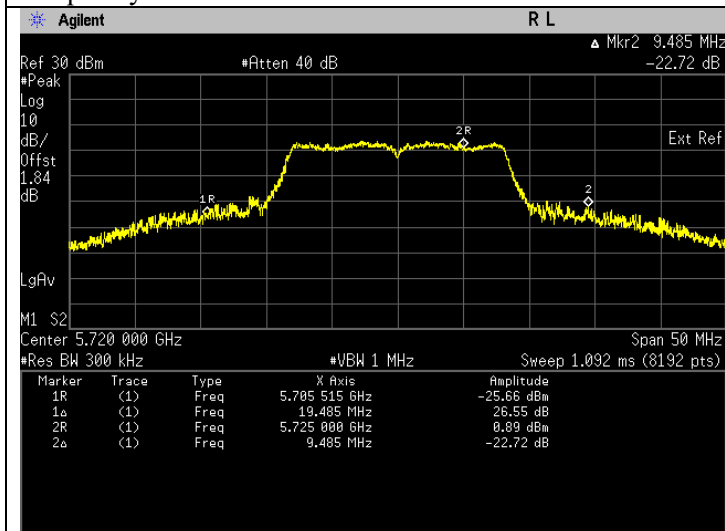
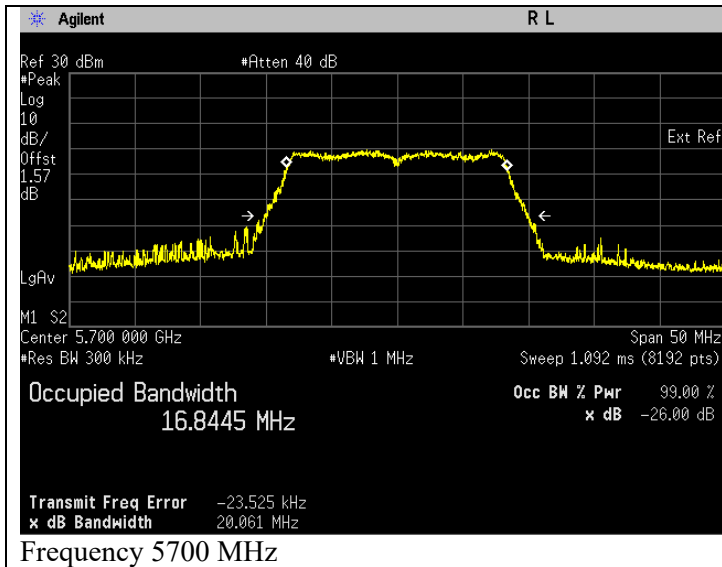
Frequency 5320 MHz



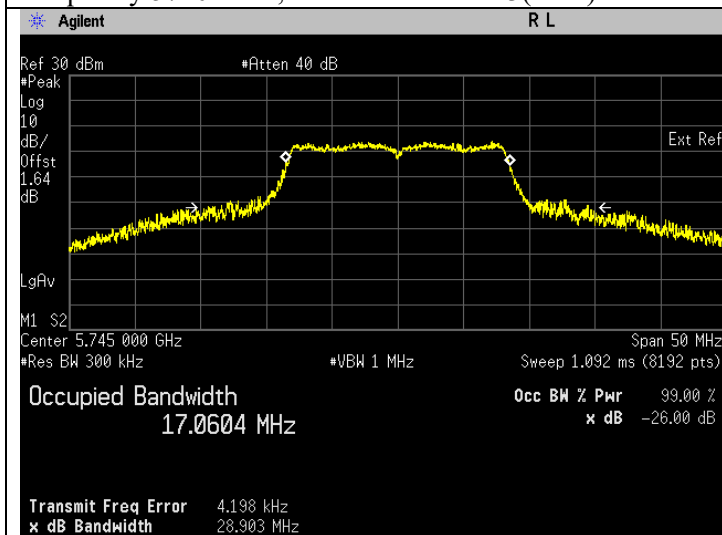
Frequency 5500 MHz



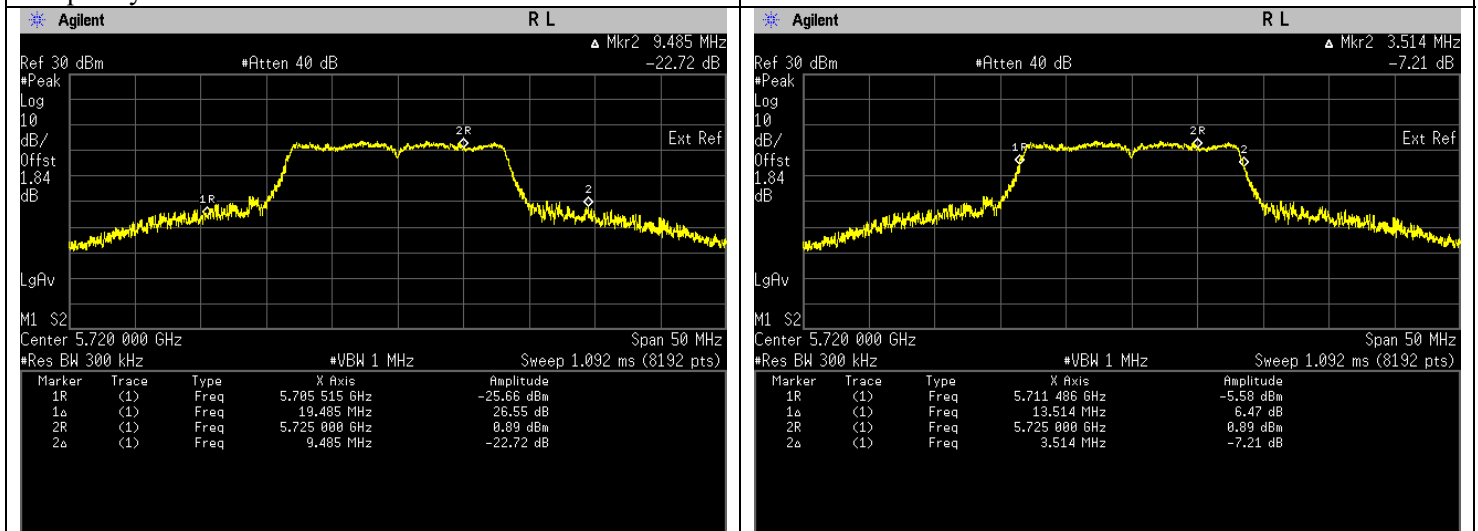
Frequency 5580 MHz



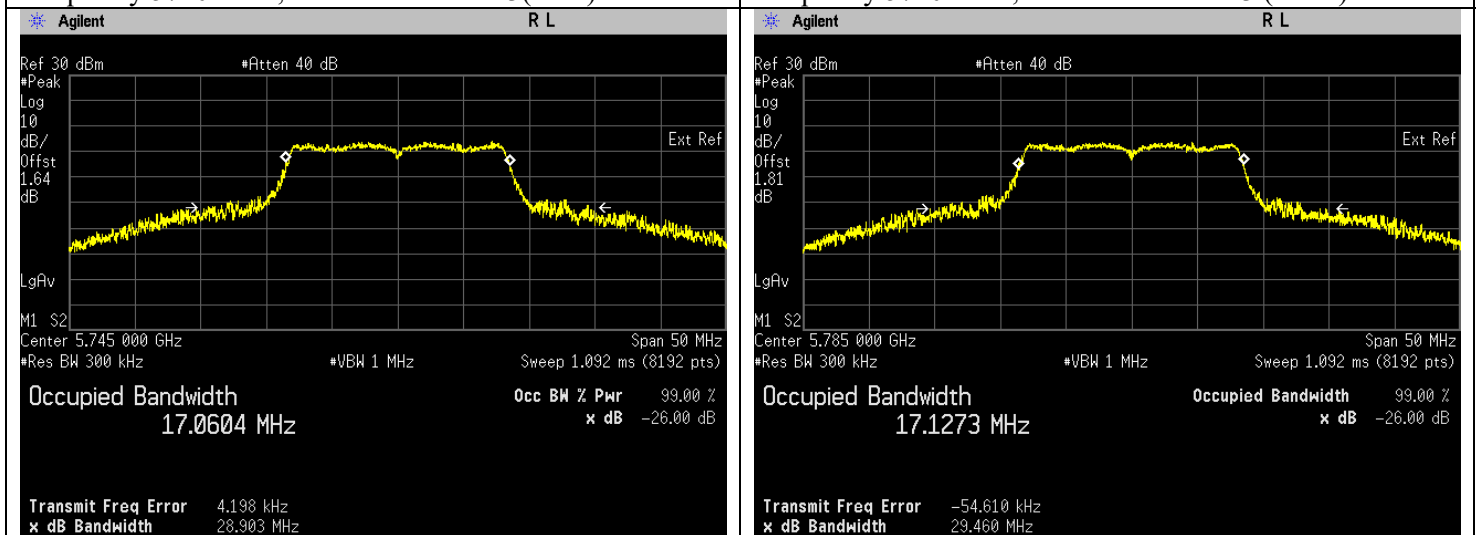
Frequency 5720 MHz, UNII-2C & UNII-3(FCC)



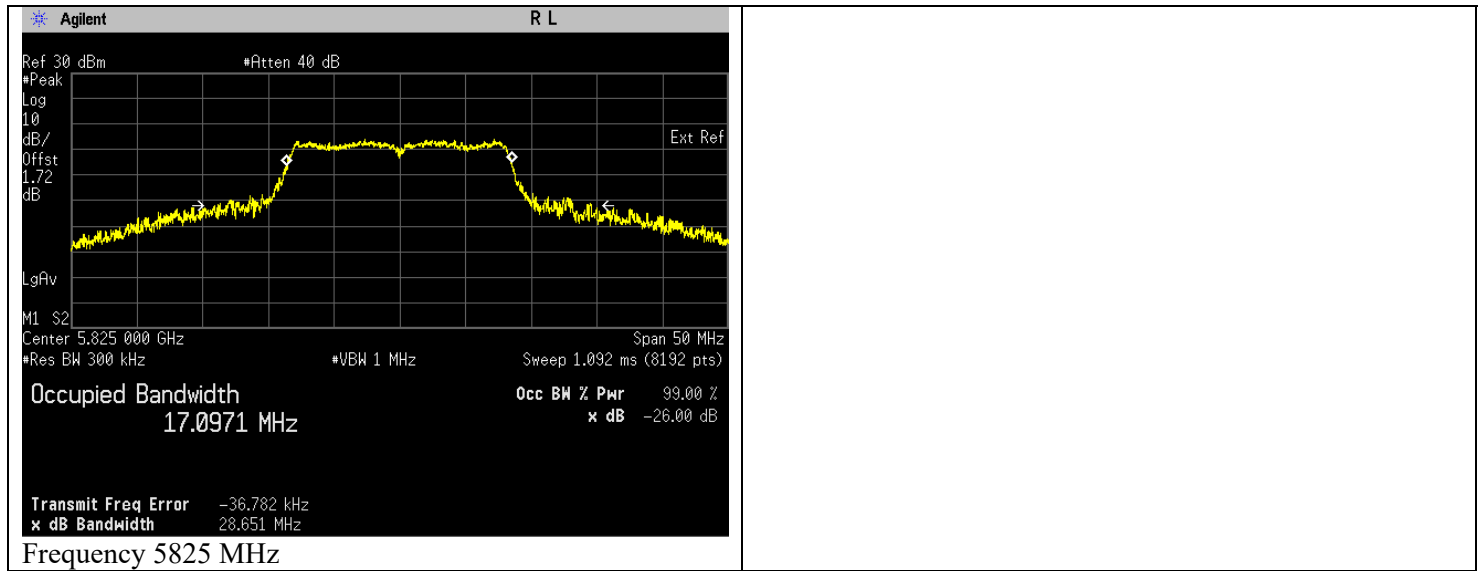
Frequency 5745 MHz



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



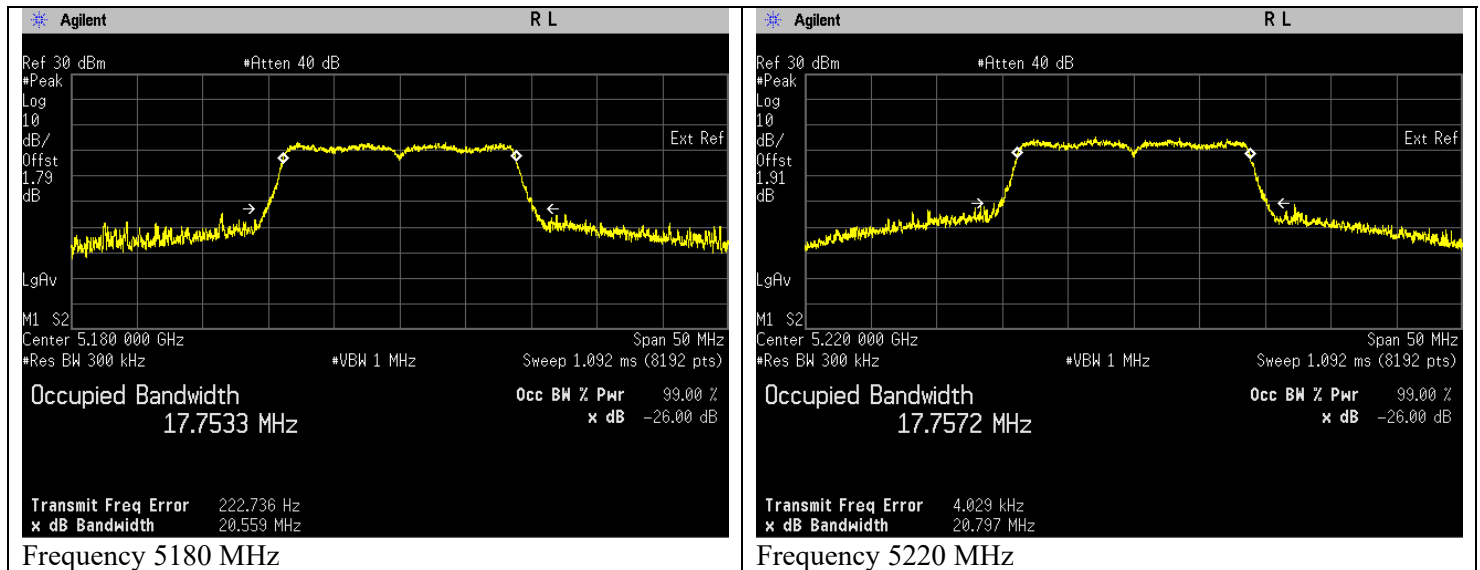
Frequency 5785 MHz

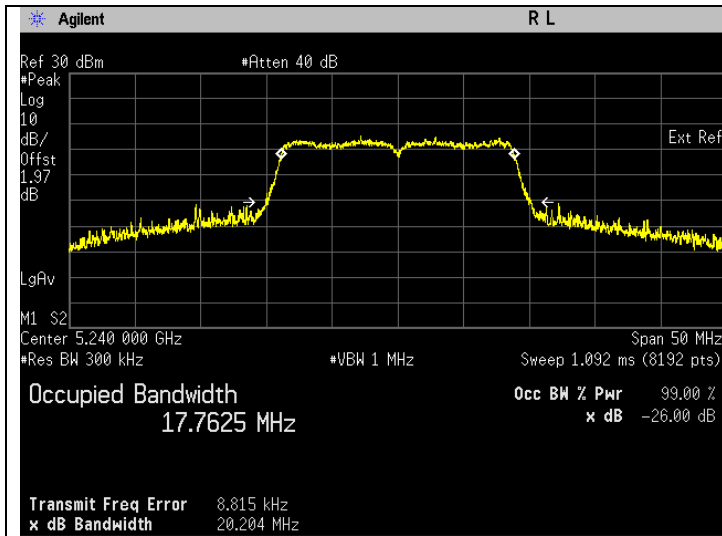


802.11n (HT20)

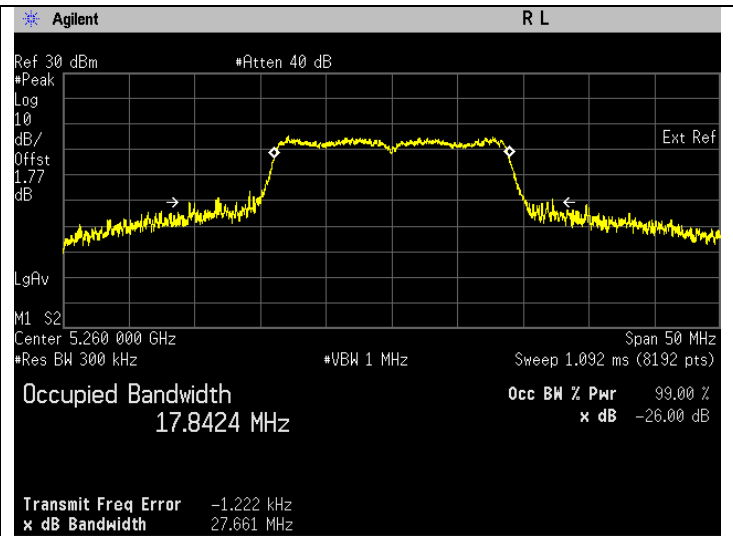
Frequency (MHz)	Test Configuration	Results			
		26 dB Bandwidth(MHz)	Status	99% Bandwidth(MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.559	Pass	17.753	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.797	Pass	17.758	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.204	Pass	17.762	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	27.661	Pass	17.838	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.752	Pass	17.815	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	23.133	Pass	17.776	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.452	Pass	17.713	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	25.588	Pass	17.787	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.145	Pass	17.733	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-2C	19.686	Pass	13.942	Pass
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5), UNII-3	9.686	Pass	3.942	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	25.758	Pass	17.818	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	24.736	Pass	17.823	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	26.272	Pass	17.829	Pass

26 dB Bandwidth/ 99% Bandwidth

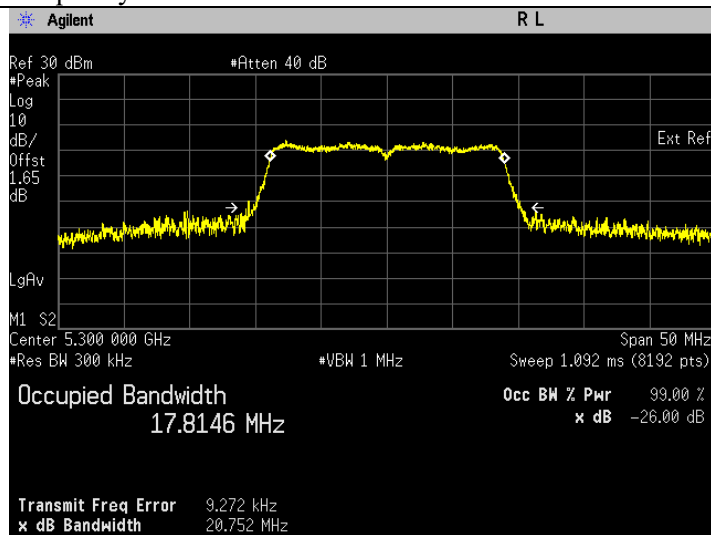




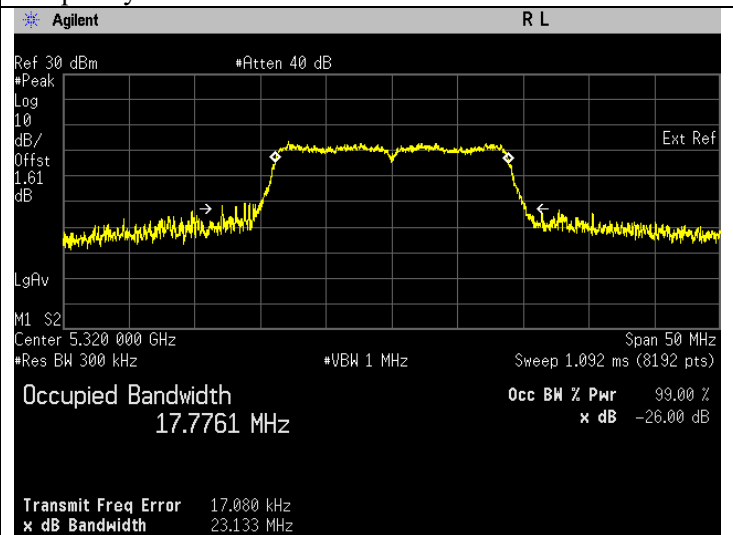
Frequency 5240 MHz



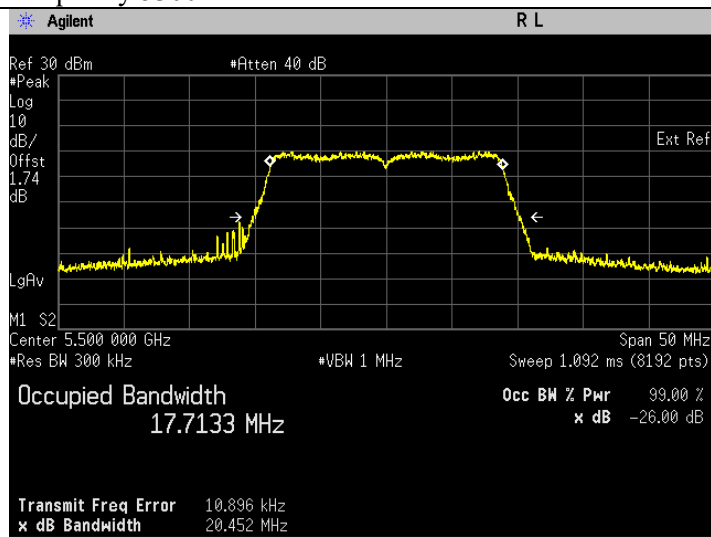
Frequency 5260 MHz



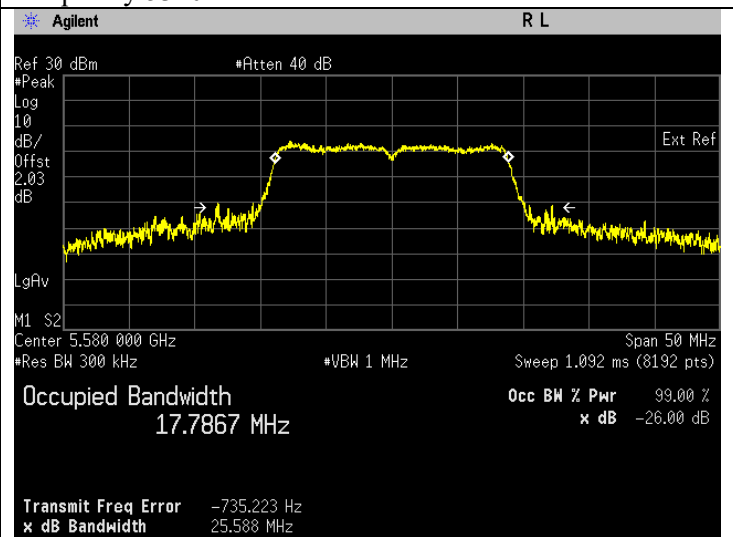
Frequency 5300 MHz



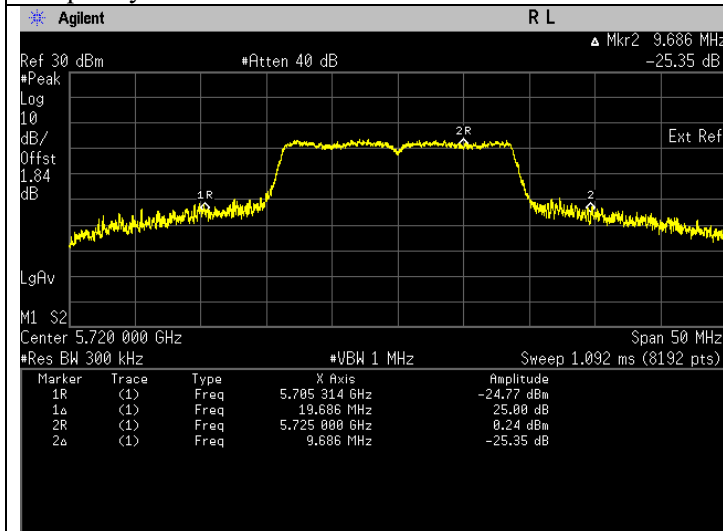
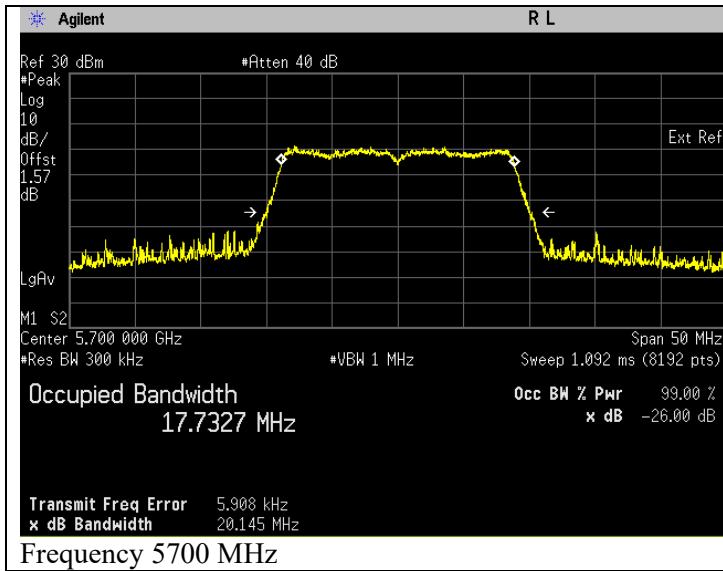
Frequency 5320 MHz



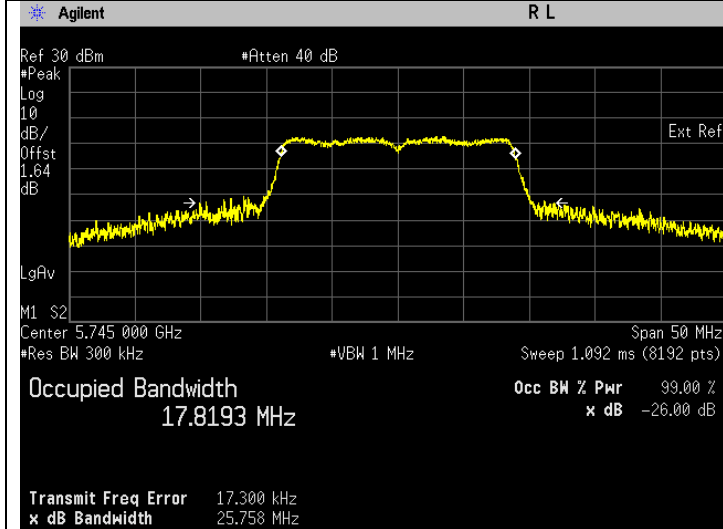
Frequency 5500 MHz



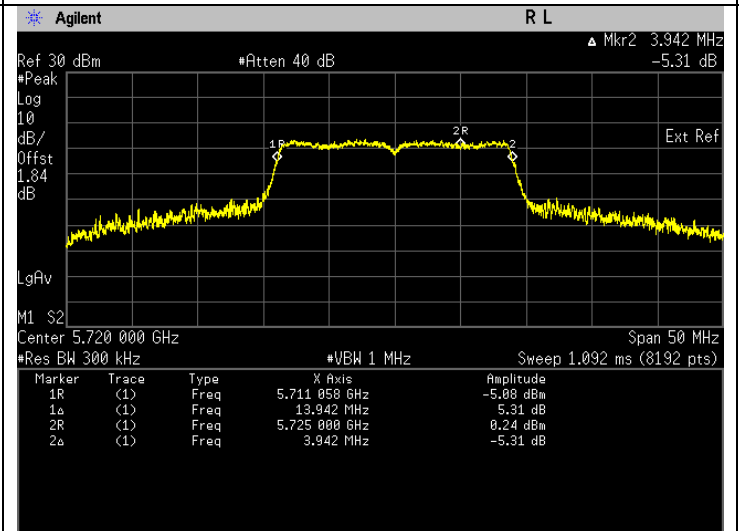
Frequency 5580 MHz



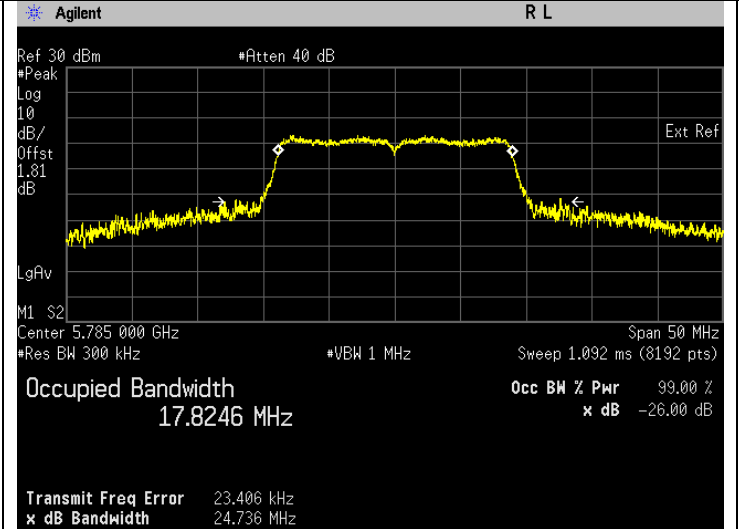
Frequency 5720 MHz, UNII-2C & UNII-3(FCC)



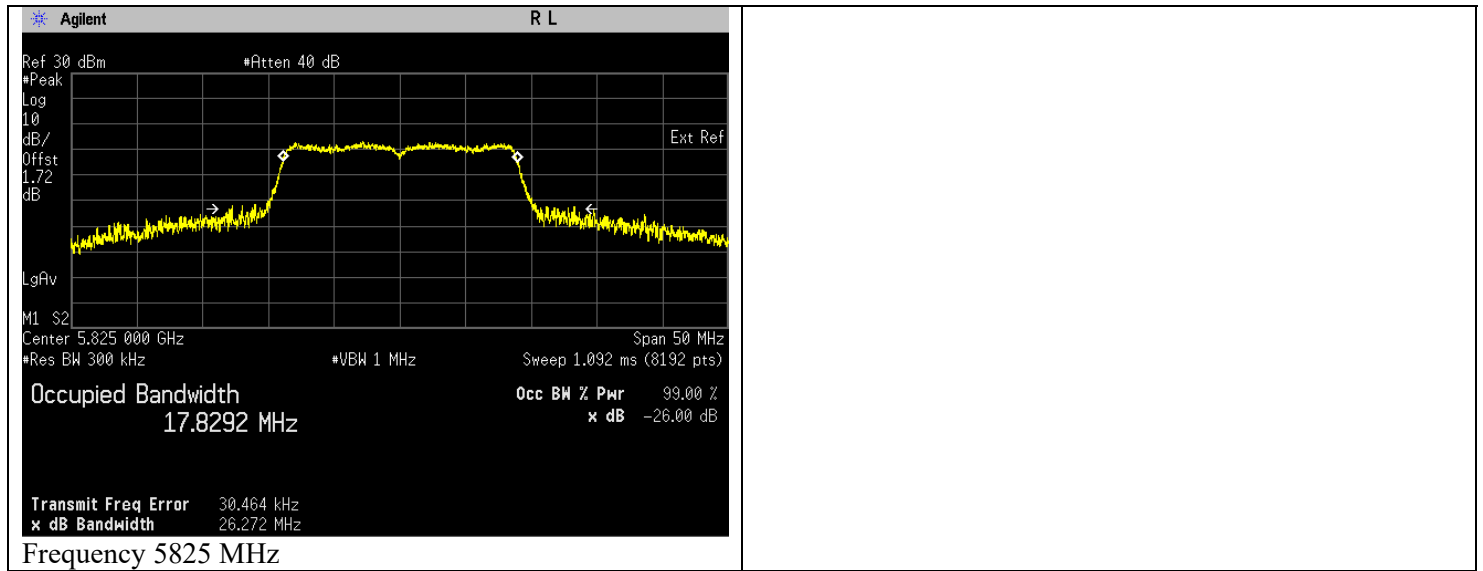
Frequency 5745 MHz



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

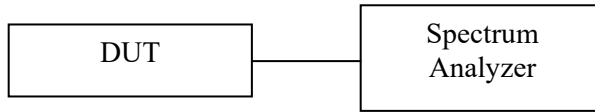


Frequency 5785 MHz



7.2. Maximum Conducted Output Power

7.2.1. Test Setup



- Test setup as per illustrated above.
- Set DUT to transmit at desire transmit frequency.
- Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
- Setting of Spectrum analyzer :
 - Span to encompass the entire 26dB EBW or 99% Occupied Bandwidth.
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = power averaging (RMS)
 - Trace = Max hold
 - Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$
 - 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
- The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause E.2.d) Method SA-2.
- 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	$\leq 1\text{W}$
	Indoor AP	$\leq 1\text{W}$
	Fixed Point to Point AP	$\leq 1\text{W}$
	√ Mobile and Portable client devices	$\leq 250\text{mW}$
5.25-5.35 (UNII-2A)	√	$\leq 250\text{mW}$ or $11\text{dBm} + 10\log_{10} B^*$
5.47-5.525 (UNII-2C)	√	*B is 26dB emission bandwidth in MHz
5.725-5.85 (UNII-3)	√	$\leq 1\text{W}$

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RSS-247 6.2

Range(GHz)	Condition	Output Power Limit
5.15-5.25	indoor only (e.i.r.p.)	$\leq 200\text{mW}$ or $10+10\log_{10}B^*$ *B is 99% emission bandwidth in 1MHz

5.25-5.35	(Conducted & e.i.r.p.)	Conducted: $\leq 250\text{mW}$ or $11+10\log_{10}B^*$ EIRP: $< 1.0\text{W}$ or $17+10\log_{10}B^*$ *B is 99% emission bandwidth in 1MHz
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5.47-5.6 5.65-5.725	(Conducted & e.i.r.p.)	Conducted: $\leq 250\text{mW}$ or $11+10\log_{10}B^*$ EIRP: $< 1.0\text{W}$ or $17+10\log_{10}B^*$ *B is 99% emission bandwidth in 1MHz
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5.725-5.85	(Conducted)	$\leq 1\text{W}$
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7.2.3. Additional Info

Antenna	Gain (dBi)
802.11a, 802.11n	4, 2.5, 2.7
Duty Cycle Correction Factor	
802.11a	0.021
802.11n	0.006

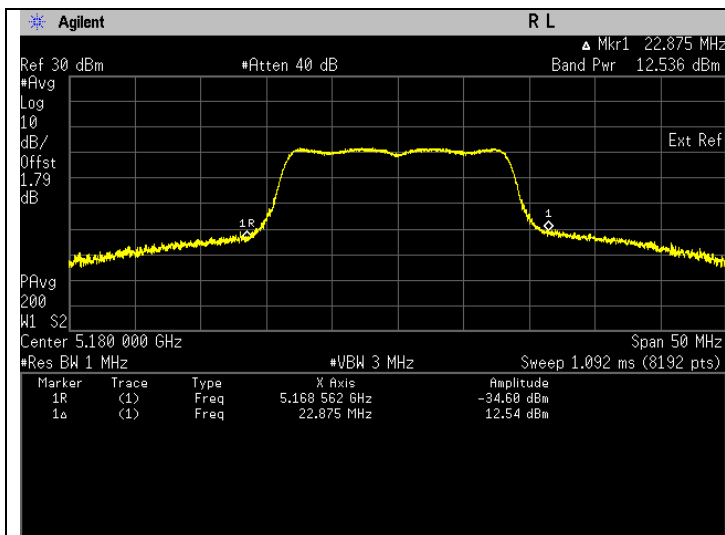
7.2.4. Test Data

Summary table

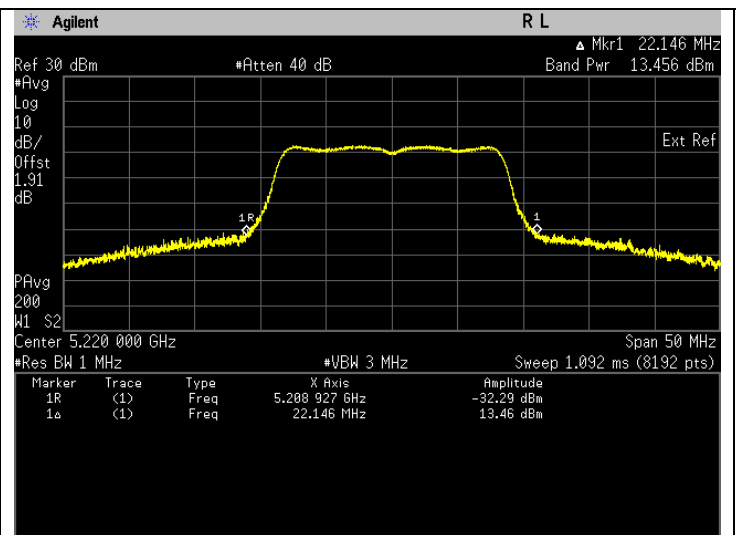
WLAN	Frequency Range (MHz)	Bandwidth (MHz)	RF Power Output		EIRP		Max Emission designator
			Max measured (mW)	Max declared (mW)	Max measured (mW)	Max declared (mW)	
802.11a	5180-5240	20	21.99	28.18	55.23	70.79	17M0D1D
	5260-5300	20	21.09	28.18	52.98	70.79	17M0D1D
	5320	20	15.51	22.39	38.96	56.23	
	5500	20	5.79	7.94	10.29	14.13	
	5520-5680, 5720	20	19.14	28.18	34.03	50.12	17M0D1D
	5700	20	6.62	10	11.77	17.78	
	5745-5825	20	17.57	22.39	32.72	41.69	17M1D1D
802.11n	5180-5240	20	20.98	22.39	52.71	56.23	17M8D1D
	5260-5320	20	22.05	22.39	55.39	56.23	17M8D1D
	5500	20	7.59	11.22	13.51	19.95	17M8D1D
	5520-5680, 5720	20	16.16	22.39	28.73	39.81	
	5700	20	8.83	11.22	15.7	19.95	
	5745-5825	20	14.85	22.39	27.64	41.69	17M8D1D

802.11a (26dB EBW)

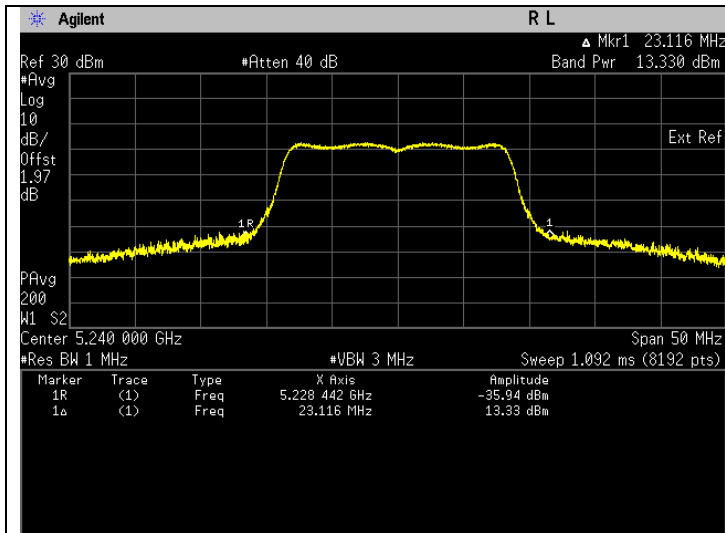
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	18.017	12.557	Pass
5220	Mod Type: BPSK, Data Rate: 6	22.268	13.477	Pass
5240	Mod Type: BPSK, Data Rate: 6	21.632	13.351	Pass
5260	Mod Type: BPSK, Data Rate: 6	21.409	13.306	Pass
5300	Mod Type: BPSK, Data Rate: 6	19.248	12.844	Pass
5320	Mod Type: BPSK, Data Rate: 6	15.765	11.977	Pass
5500	Mod Type: BPSK, Data Rate: 6	5.910	7.716	Pass
5580	Mod Type: BPSK, Data Rate: 6	19.426	12.884	Pass
5700	Mod Type: BPSK, Data Rate: 6	6.733	8.282	Pass
5745	Mod Type: BPSK, Data Rate: 6	17.579	12.450	Pass
5785	Mod Type: BPSK, Data Rate: 6	17.762	12.495	Pass
5825	Mod Type: BPSK, Data Rate: 6	17.434	12.414	Pass



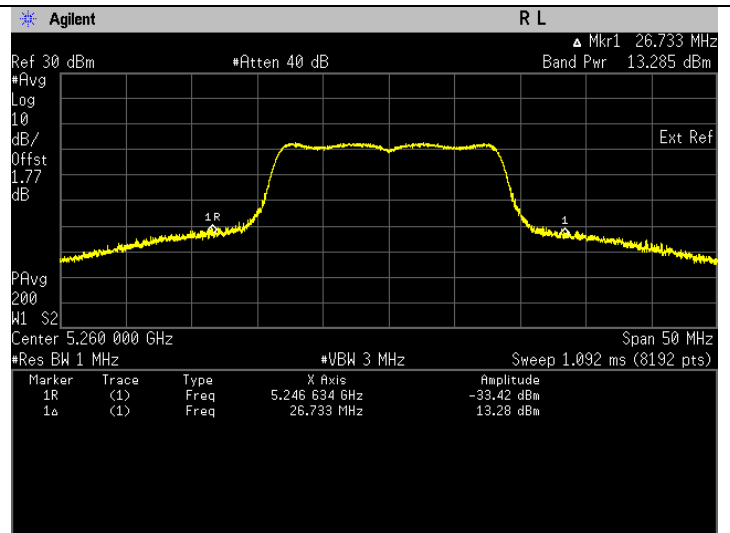
Frequency 5180 MHz, FCC.



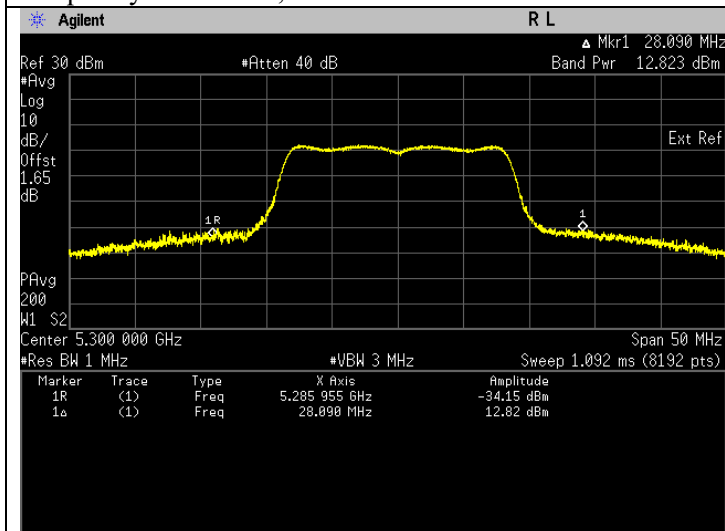
Frequency 5220 MHz, FCC.



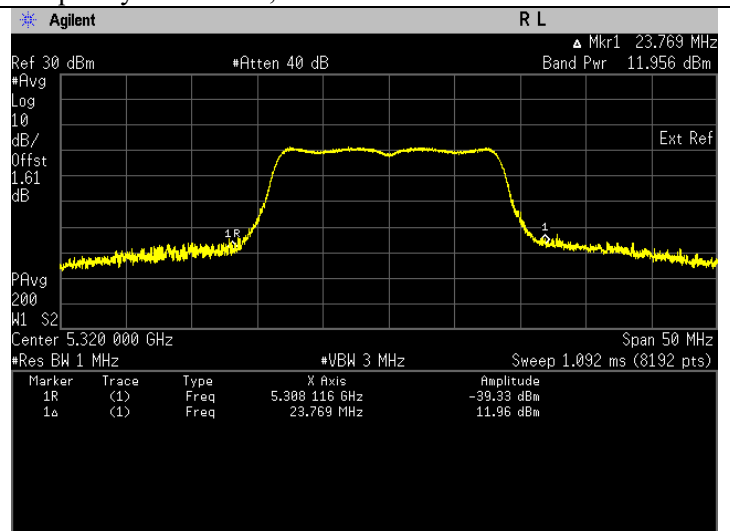
Frequency 5240 MHz, FCC.



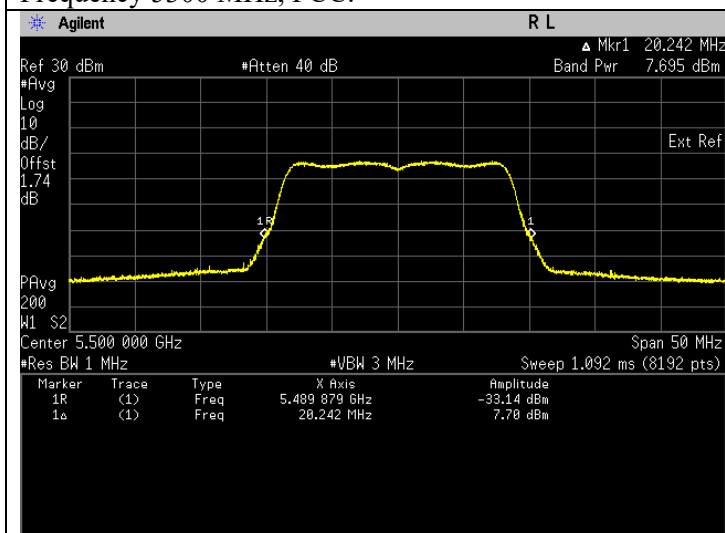
Frequency 5260 MHz, FCC.



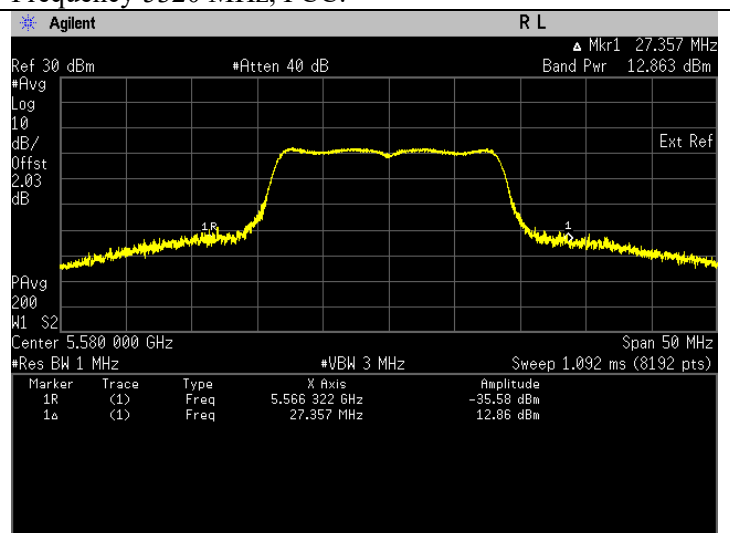
Frequency 5300 MHz, FCC.



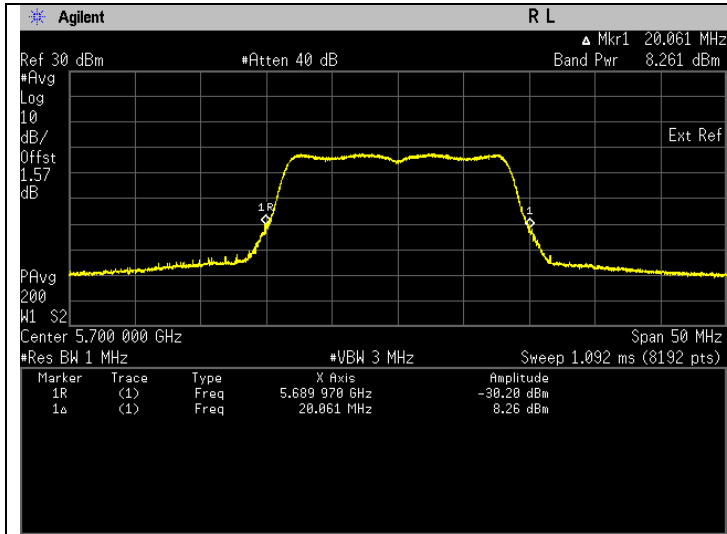
Frequency 5320 MHz, FCC.



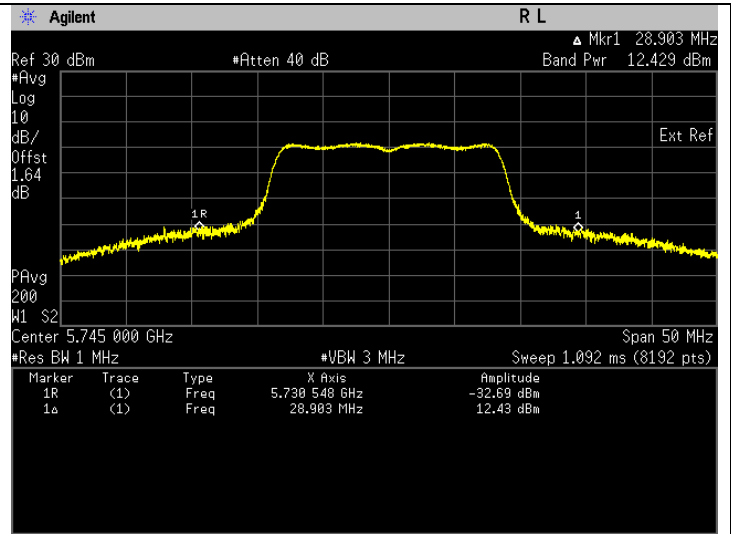
Frequency 5500 MHz, FCC.



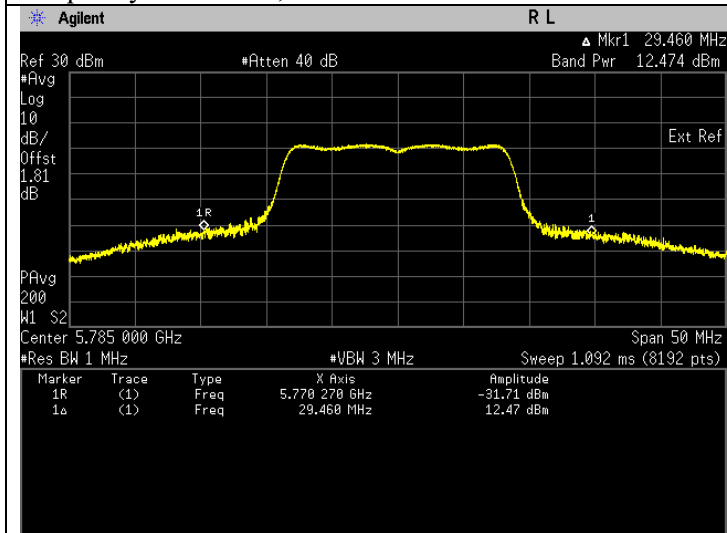
Frequency 5580 MHz, FCC.



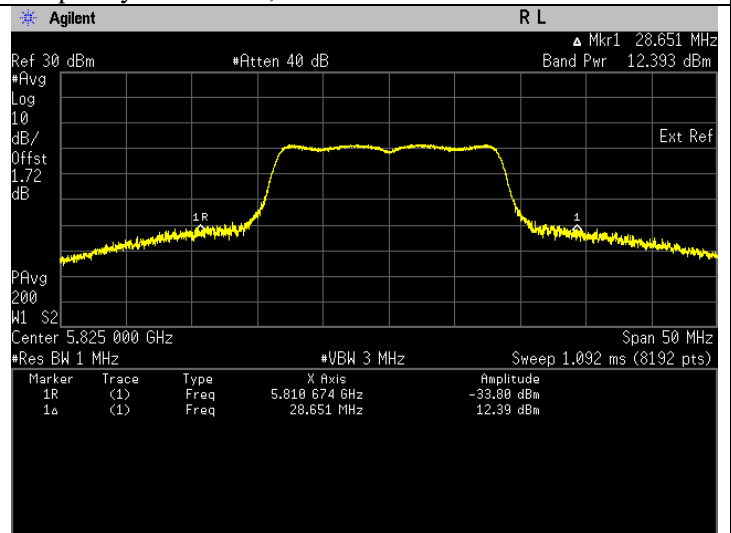
Frequency 5700 MHz, FCC.



Frequency 5745 MHz, FCC.



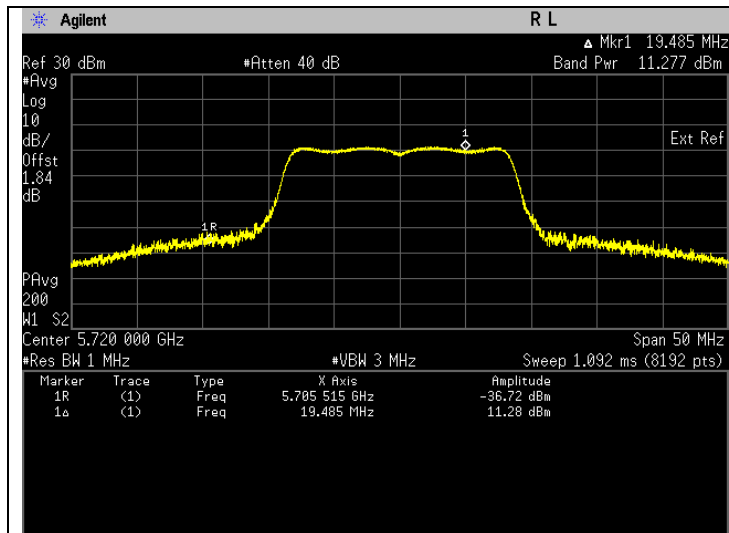
Frequency 5785 MHz, FCC.



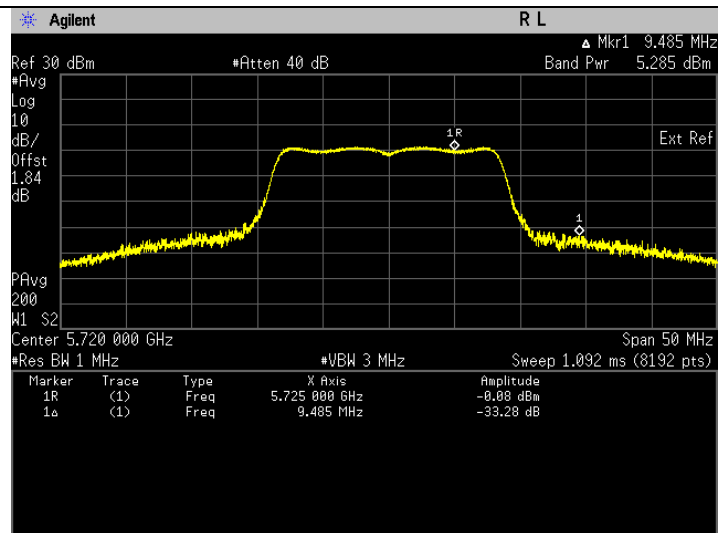
Frequency 5825 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: 6	13.483	11.298	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: 6	3.393	5.306	Pass



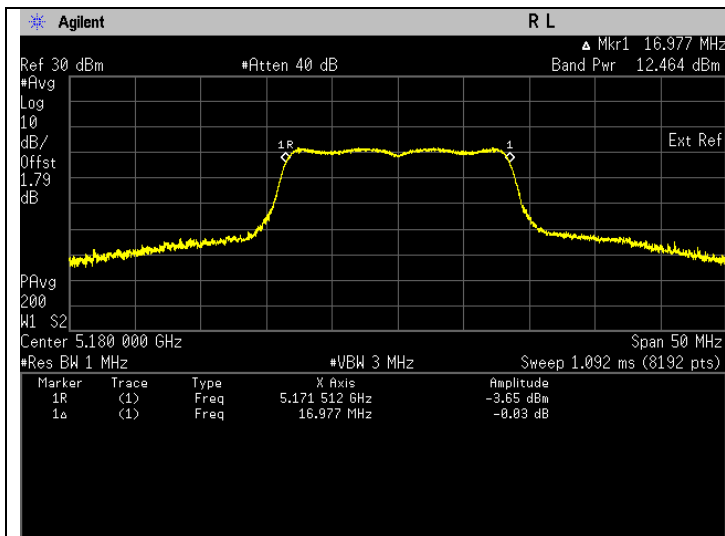
Frequency 5720 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



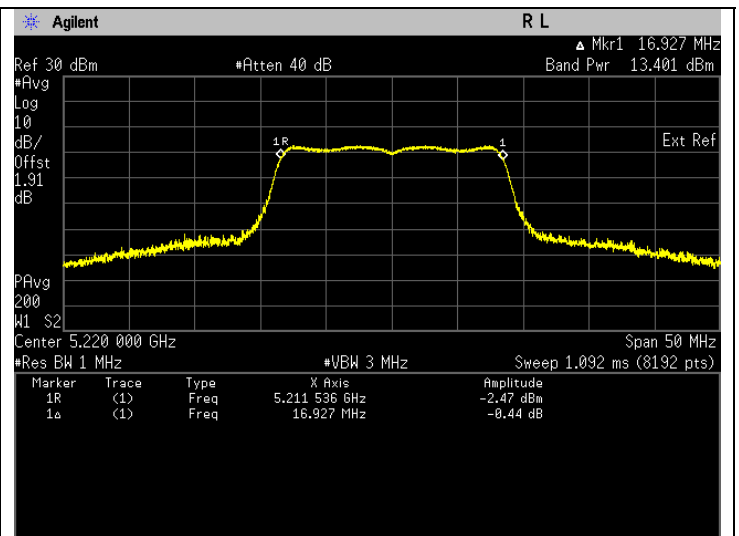
Frequency 5720 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11a (99% EBW)

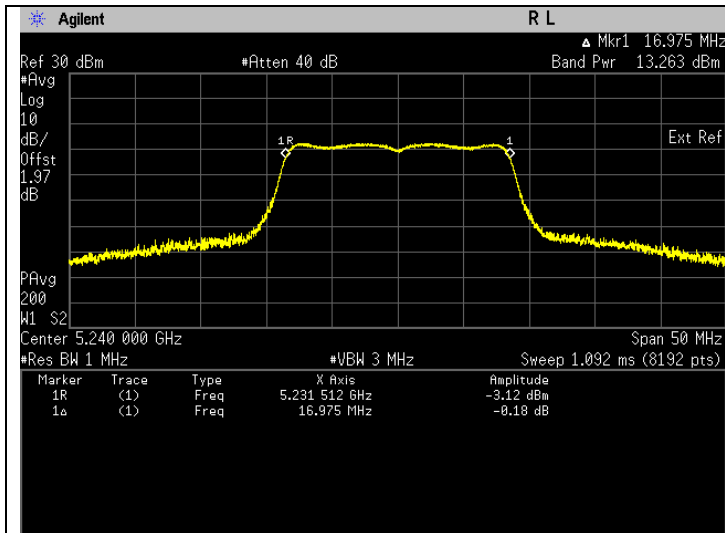
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: 6	17.721	12.485	Pass	16.485	Pass
5220	Mod Type: BPSK, Data Rate: 6	21.988	13.422	Pass	17.422	Pass
5240	Mod Type: BPSK, Data Rate: 6	21.300	13.284	Pass	17.284	Pass
5260	Mod Type: BPSK, Data Rate: 6	21.091	13.241	Pass	17.241	Pass
5300	Mod Type: BPSK, Data Rate: 6	18.958	12.778	Pass	16.778	Pass
5320	Mod Type: BPSK, Data Rate: 6	15.509	11.906	Pass	15.906	Pass
5500	Mod Type: BPSK, Data Rate: 6	5.786	7.624	Pass	10.124	Pass
5580	Mod Type: BPSK, Data Rate: 6	19.138	12.819	Pass	15.319	Pass
5700	Mod Type: BPSK, Data Rate: 6	6.619	8.208	Pass	10.708	Pass
5745	Mod Type: BPSK, Data Rate: 6	17.326	12.387	Pass	15.087	Pass
5785	Mod Type: BPSK, Data Rate: 6	17.571	12.448	Pass	15.148	Pass
5825	Mod Type: BPSK, Data Rate: 6	17.286	12.377	Pass	15.077	Pass



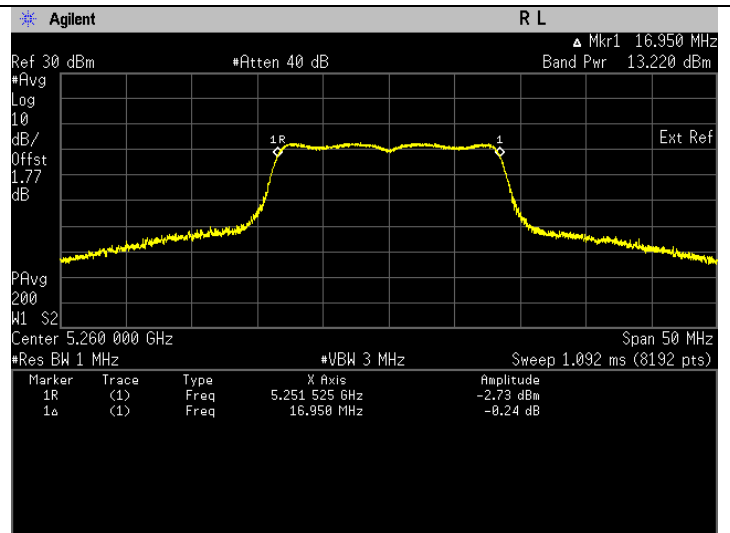
Frequency 5180 MHz, ISED



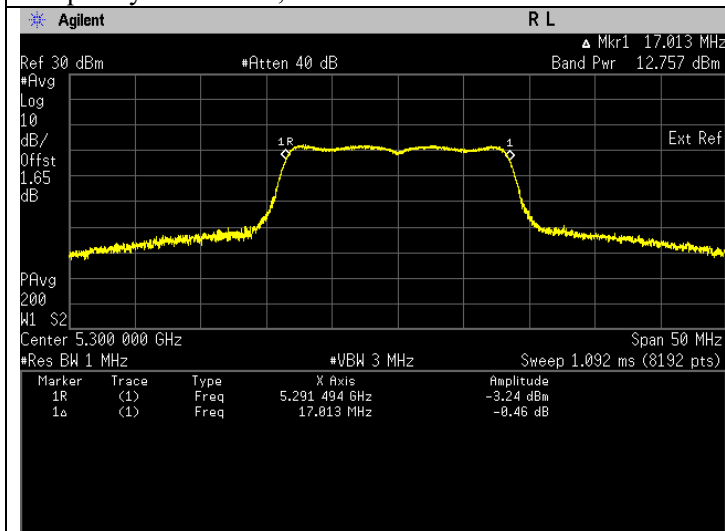
Frequency 5220 MHz, ISED



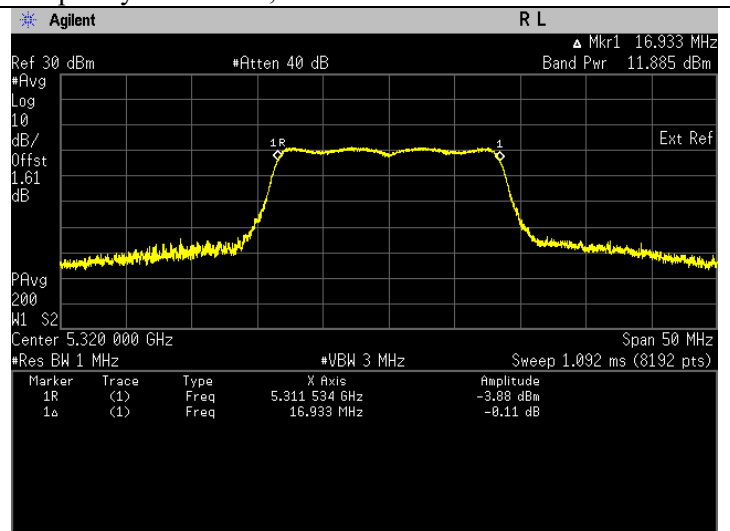
Frequency 5240 MHz, ISED



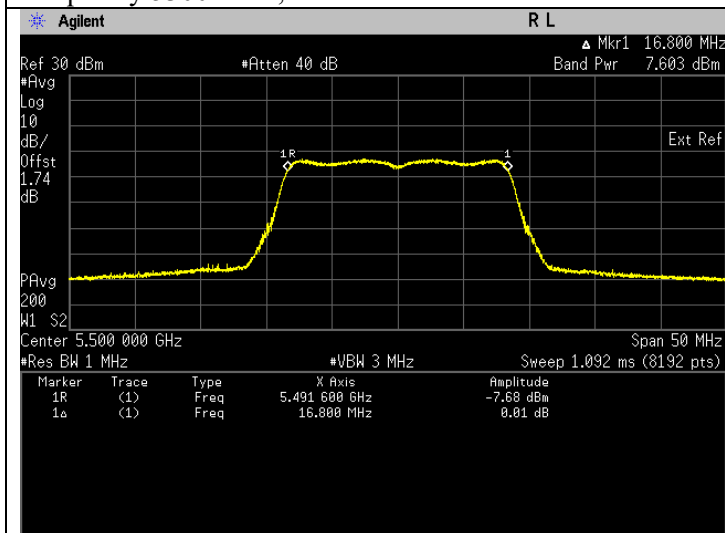
Frequency 5260 MHz, ISED



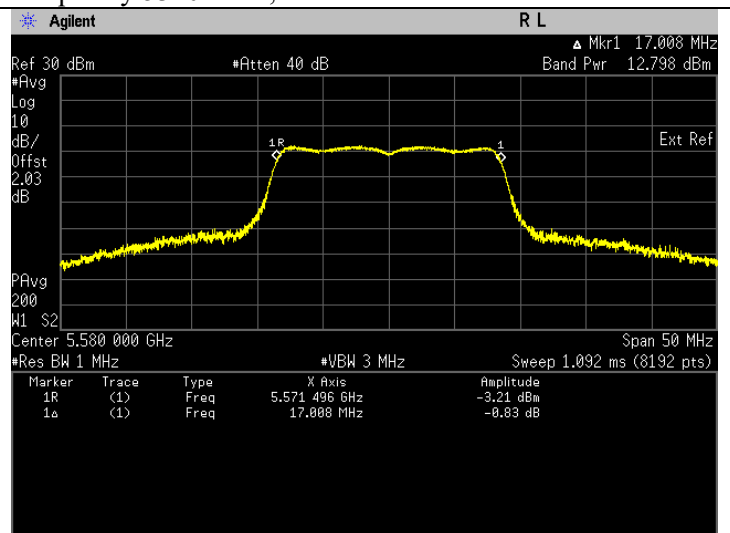
Frequency 5300 MHz, ISED



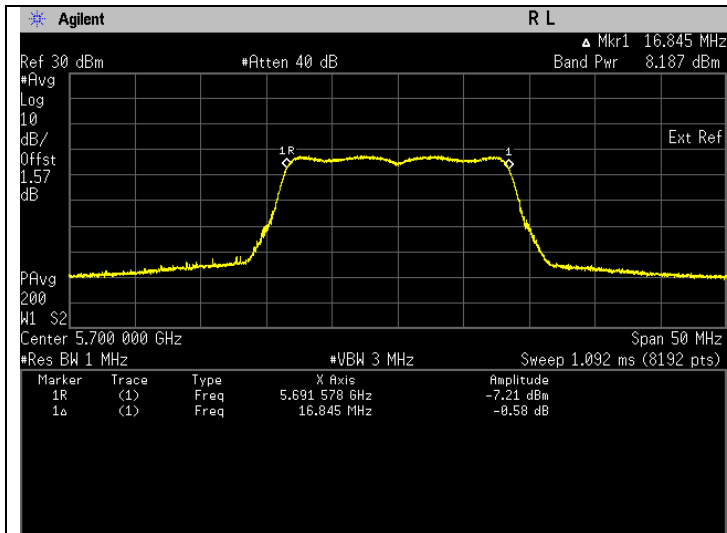
Frequency 5320 MHz, ISED



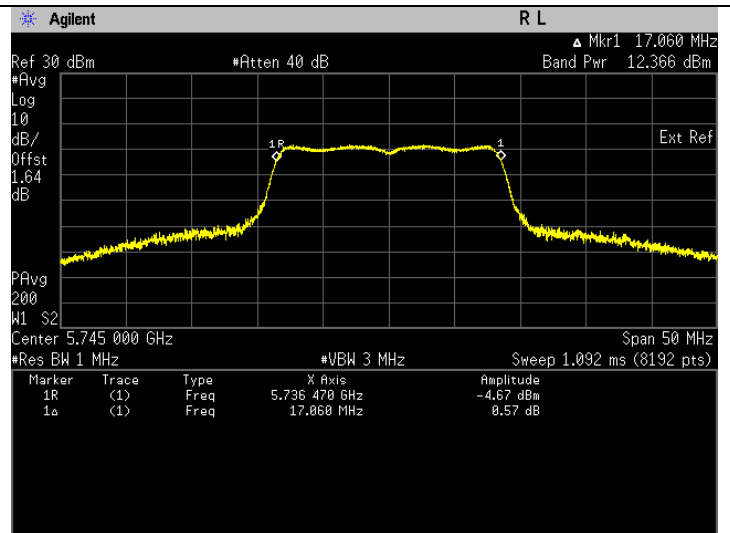
Frequency 5500 MHz, ISED



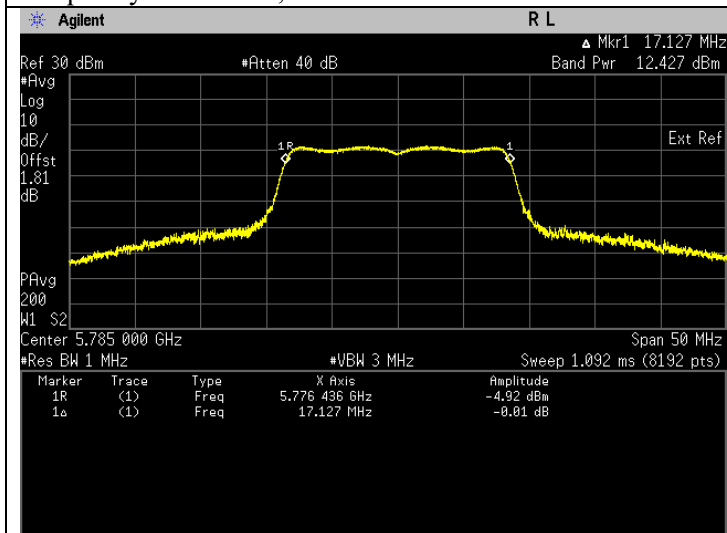
Frequency 5580 MHz, ISED



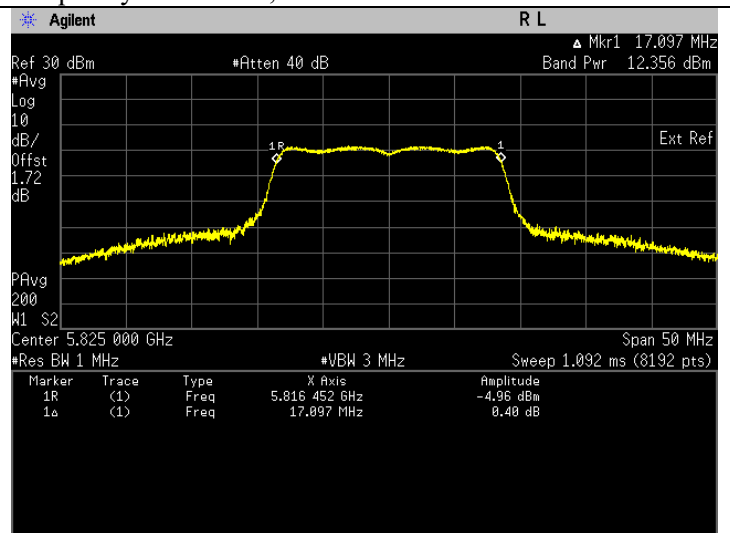
Frequency 5700 MHz, ISED



Frequency 5745 MHz, ISED



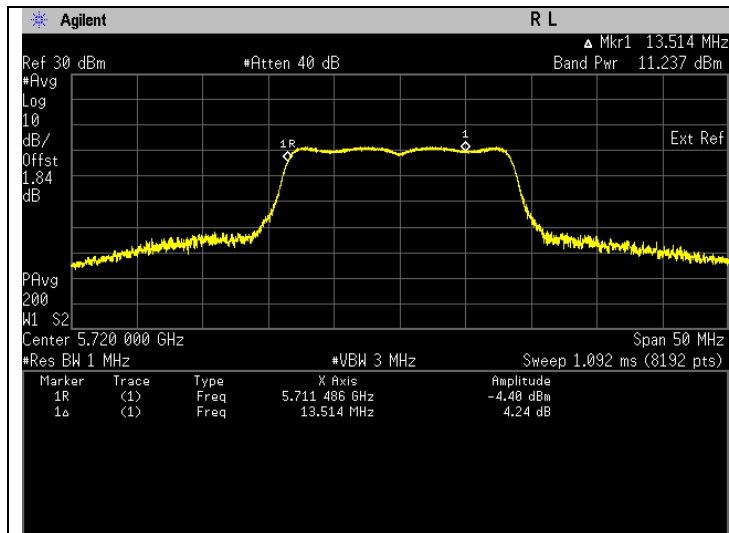
Frequency 5785 MHz, ISED



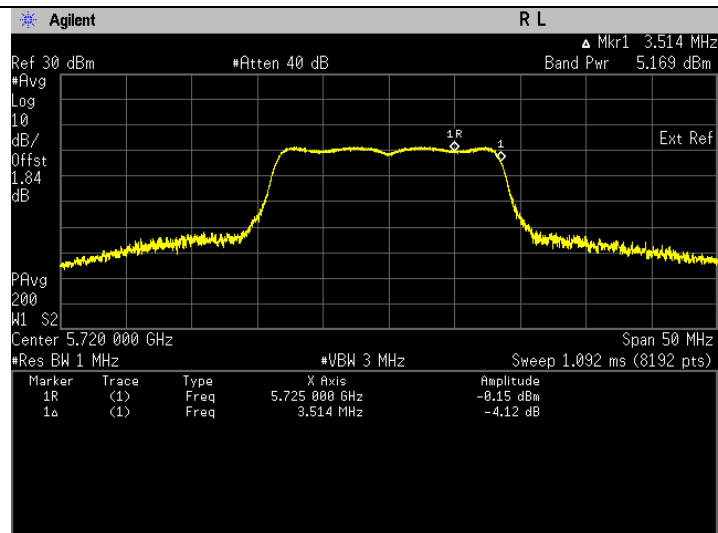
Frequency 5825 MHz, ISED

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	13.359	11.258	Pass	13.758	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: 6	3.304	5.190	Pass	7.690	Pass



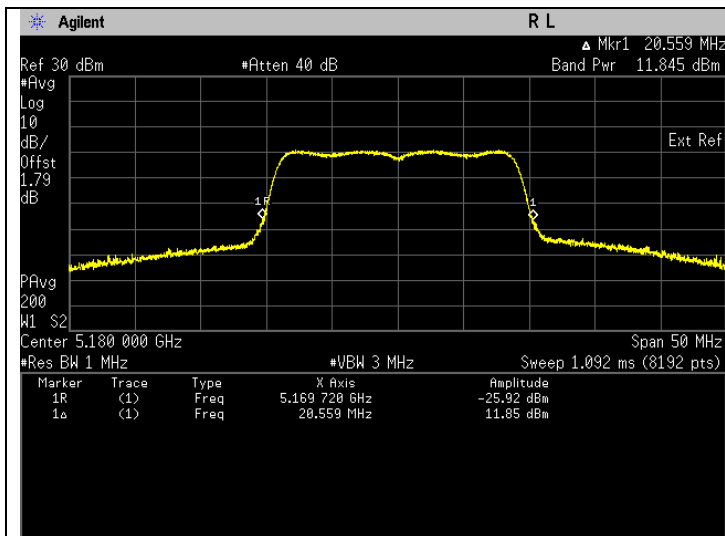
Frequency 5720 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



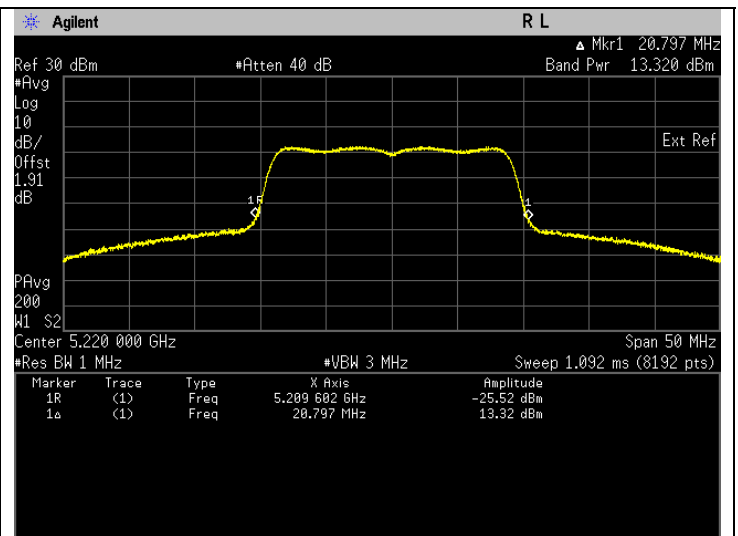
Frequency 5720 MHz, ISED, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(26dB EBW)

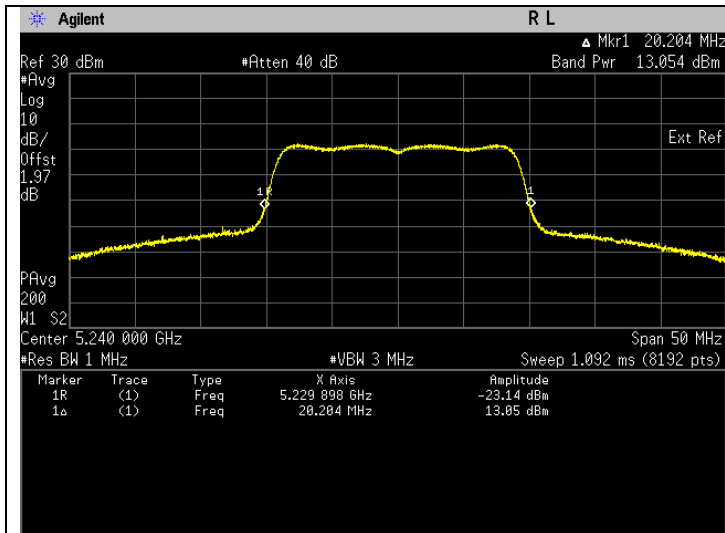
Freq. (MHz)	Test Conditions	Results		
		Power (mW)	Power (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.313	11.851	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	21.506	13.326	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.229	13.060	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.494	13.521	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.139	12.079	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.658	11.661	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.744	8.890	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.476	12.169	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	9.052	9.568	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.889	11.729	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.166	11.809	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.958	11.749	Pass



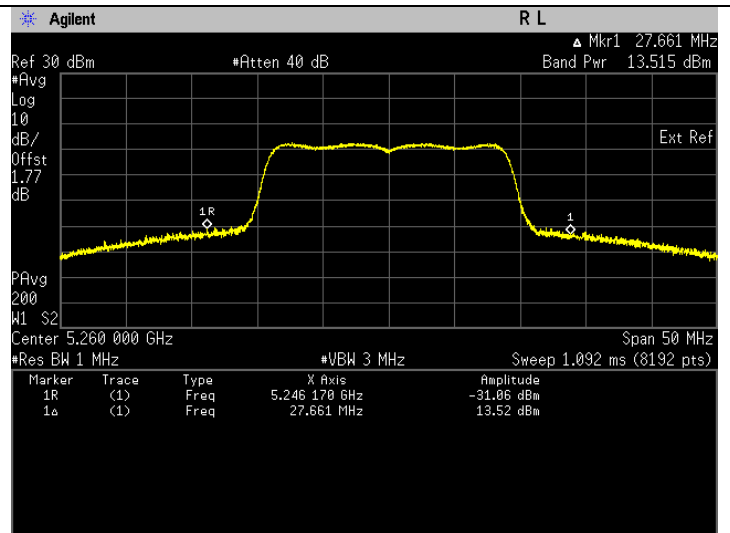
Frequency 5180 MHz, FCC.



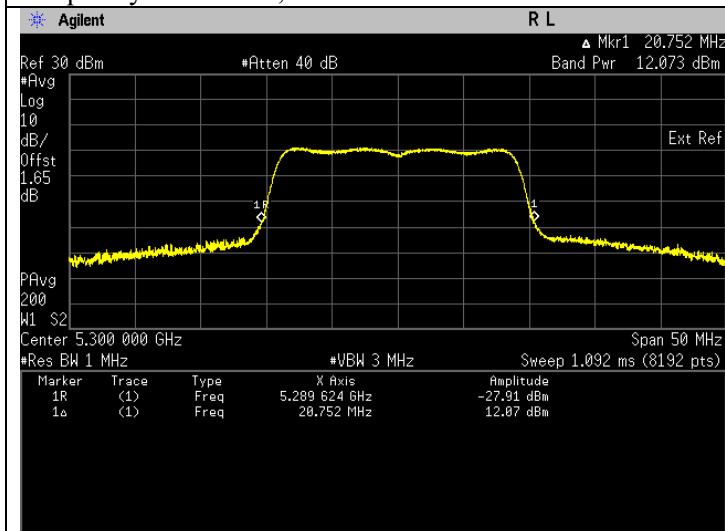
Frequency 5220 MHz, FCC.



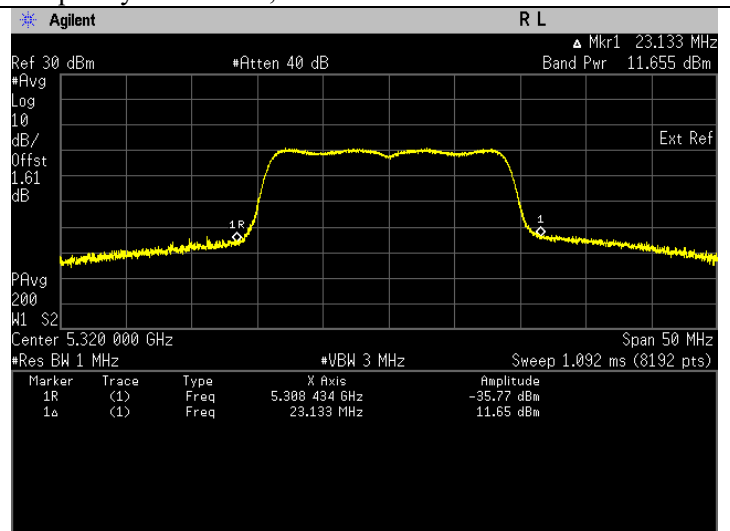
Frequency 5240 MHz, FCC.



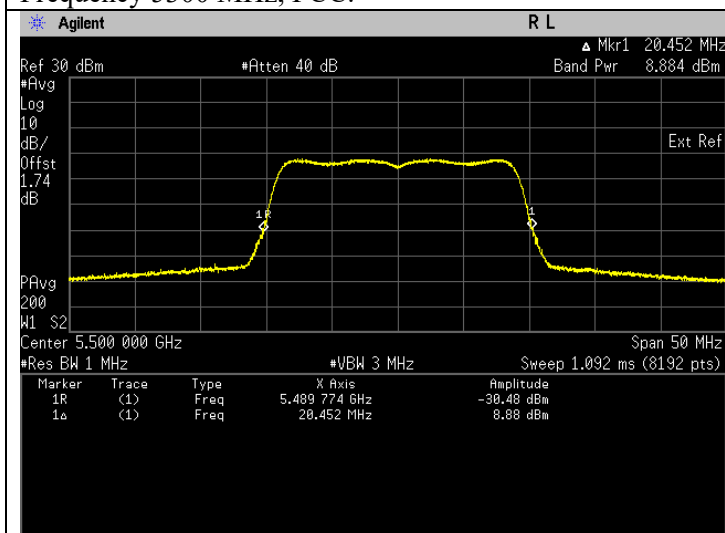
Frequency 5260 MHz, FCC.



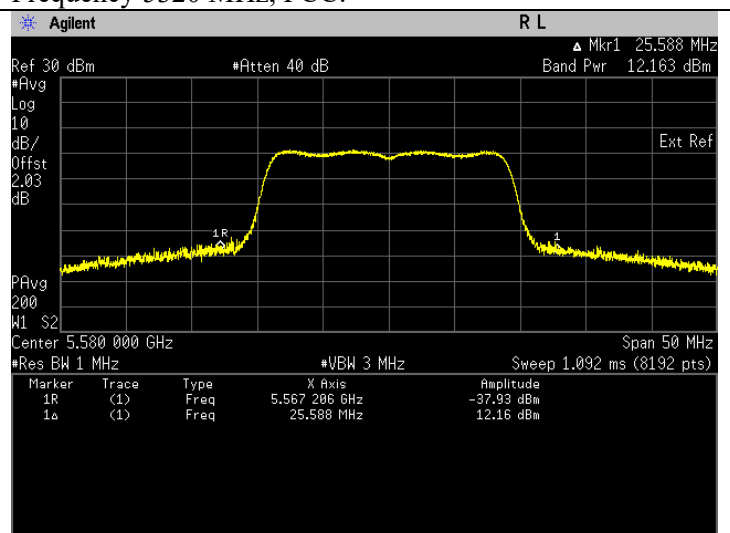
Frequency 5300 MHz, FCC.



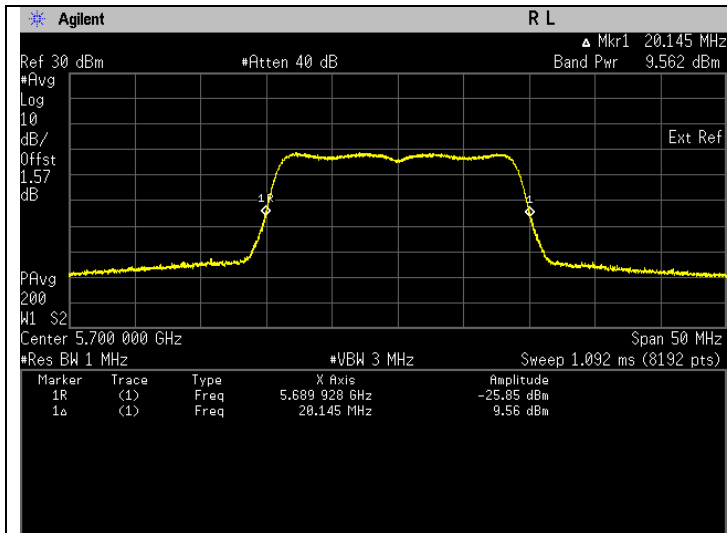
Frequency 5320 MHz, FCC.



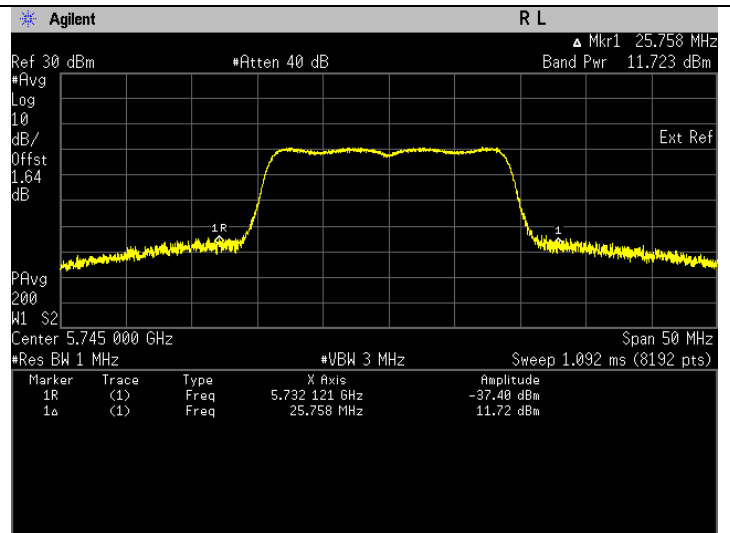
Frequency 5500 MHz, FCC.



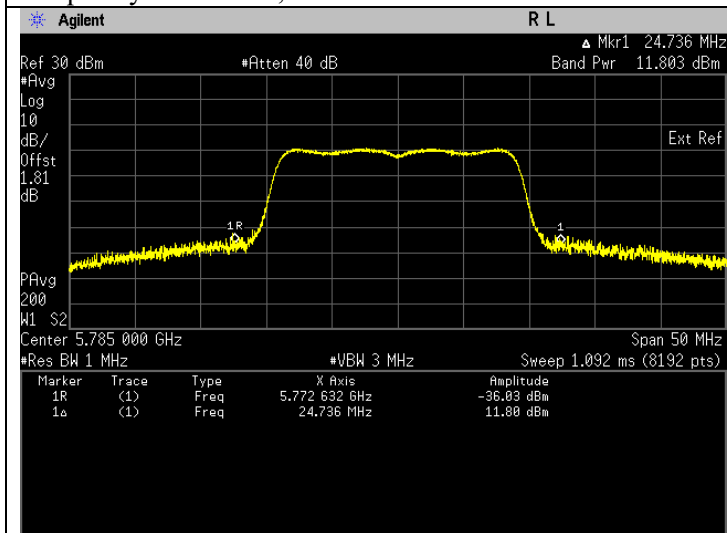
Frequency 5580 MHz, FCC.



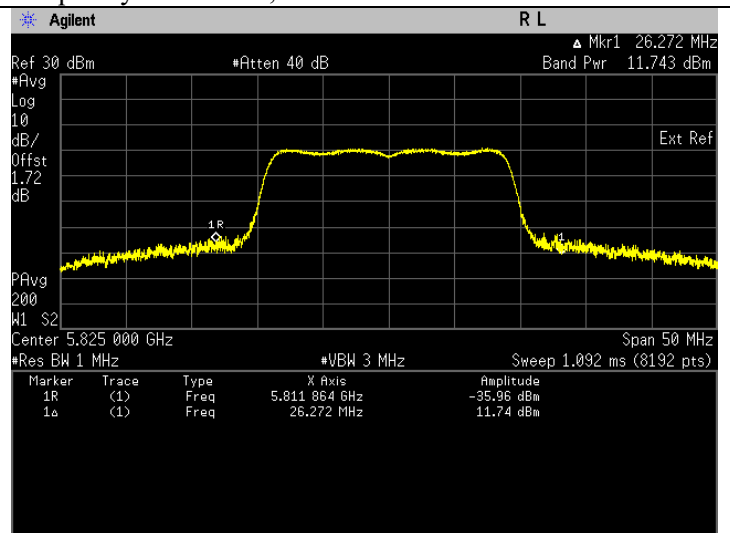
Frequency 5700 MHz, FCC.



Frequency 5745 MHz, FCC.



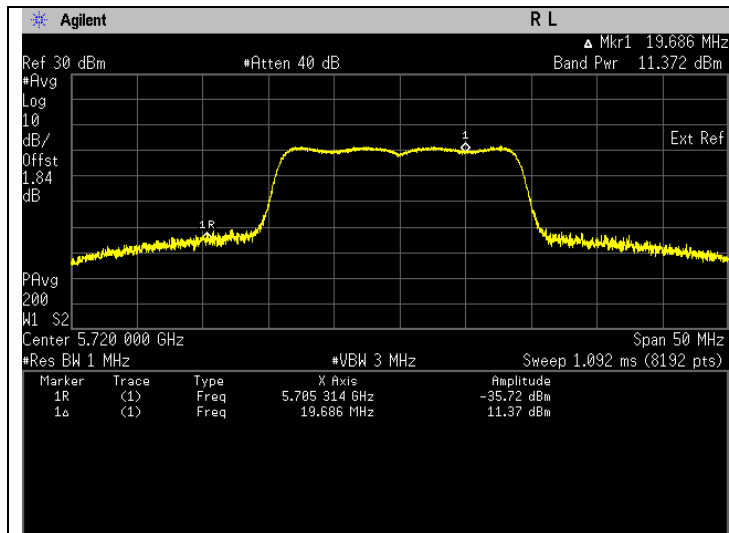
Frequency 5785 MHz, FCC.



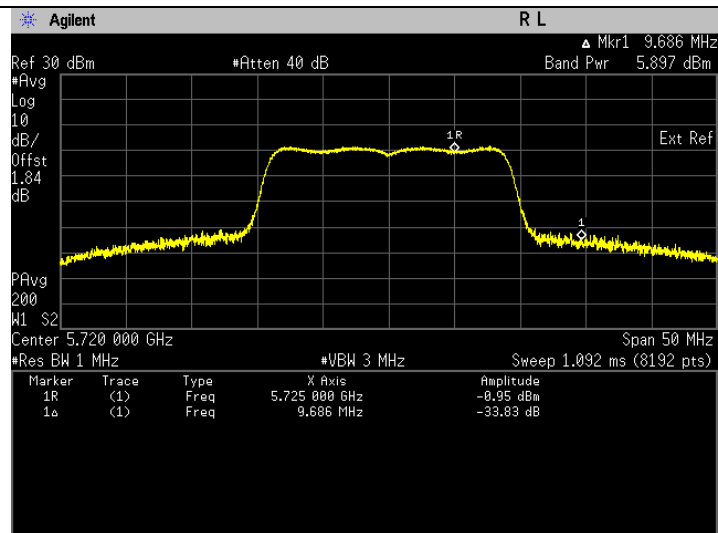
Frequency 5825 MHz, FCC.

Straddle Frequency

Freq. (MHz)	Test Conditions	Results		
		U-NII- 2C		
		Power (mW)	Power (dBm)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	13.733	11.378	Pass
		U-NII-3		
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.893	5.903	Pass



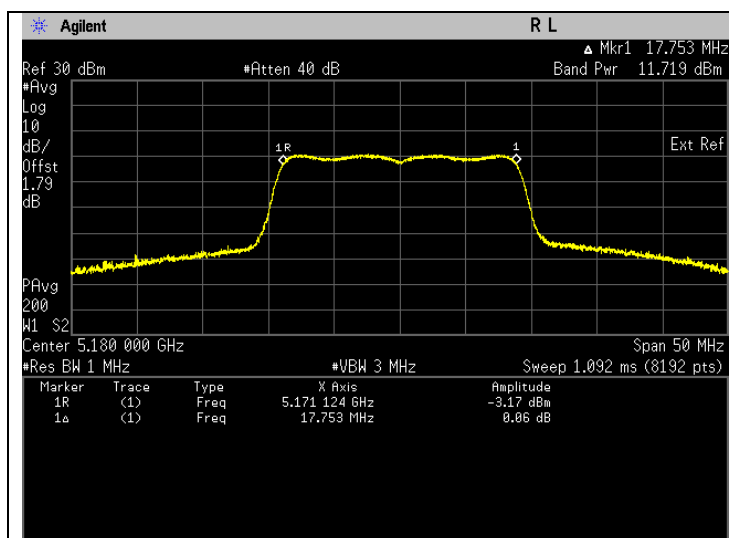
Frequency 5720 MHz, FCC, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



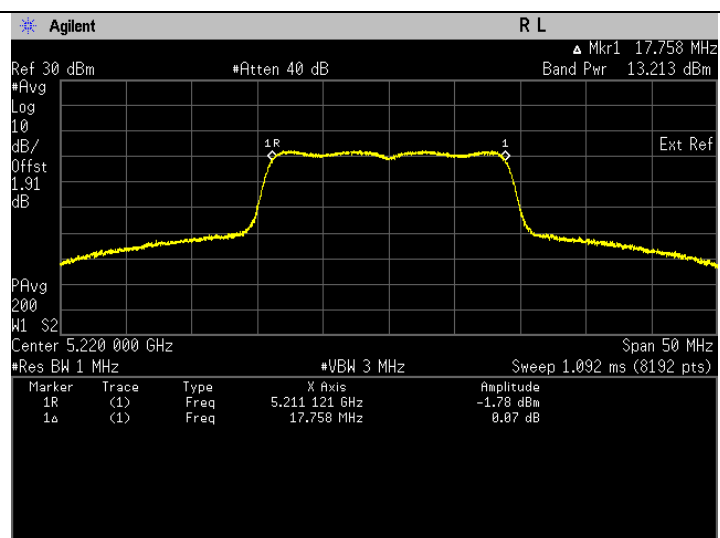
Frequency 5720 MHz, FCC, U-NII-3. *Note: The band power is captured after the 5725 MHz.

802.11n (HT20)(99% EBW)

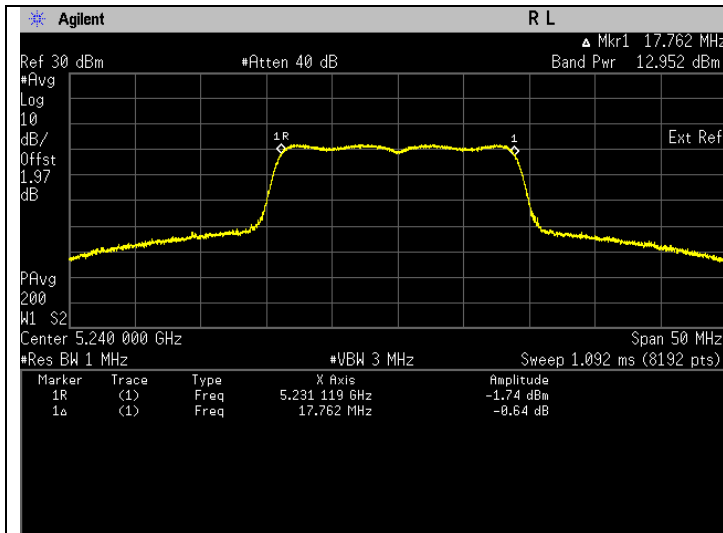
Freq. (MHz)	Test Conditions	Results				
		Power (mW)	Power (dBm)	Status	EIRP (dBm)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.875	11.725	Pass	15.725	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	20.983	13.219	Pass	17.219	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	19.759	12.958	Pass	16.958	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	22.048	13.434	Pass	17.434	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	15.778	11.981	Pass	15.981	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.308	11.556	Pass	15.556	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	7.594	8.805	Pass	11.305	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	16.157	12.084	Pass	14.584	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	8.830	9.460	Pass	11.960	Pass
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.584	11.639	Pass	14.339	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.844	11.716	Pass	14.416	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	14.654	11.660	Pass	14.360	Pass



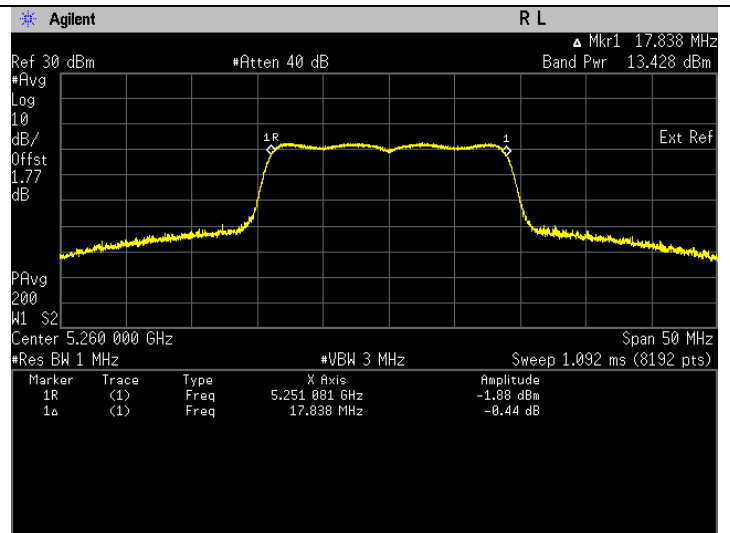
Frequency 5180 MHz, ISED



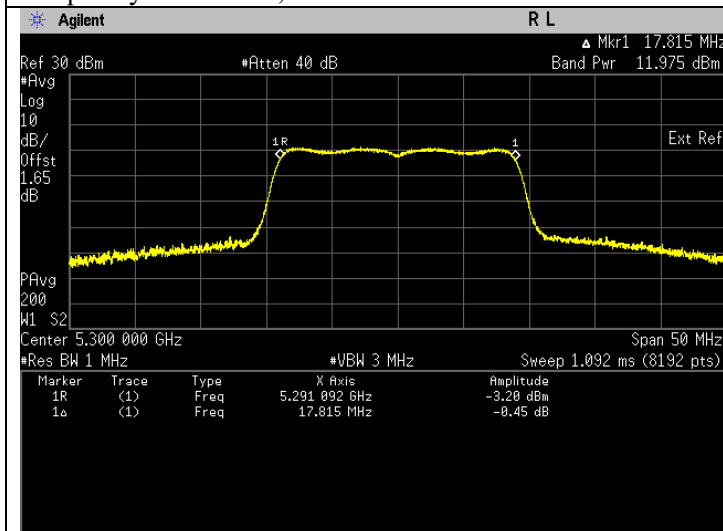
Frequency 5220 MHz, ISED



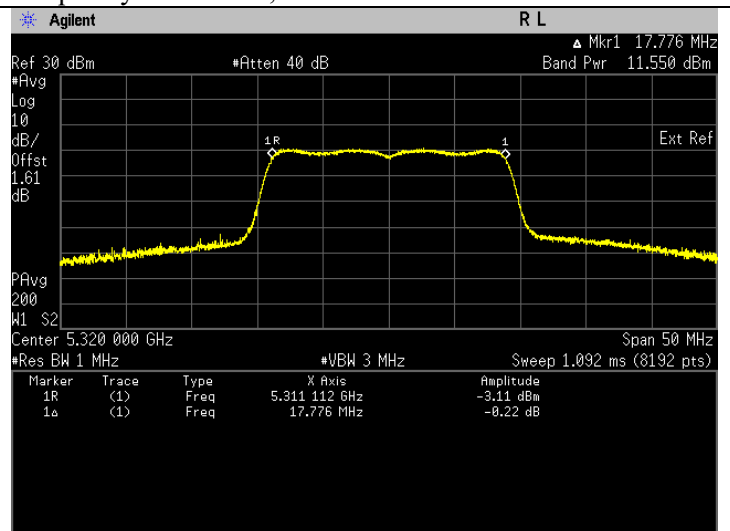
Frequency 5240 MHz, ISED



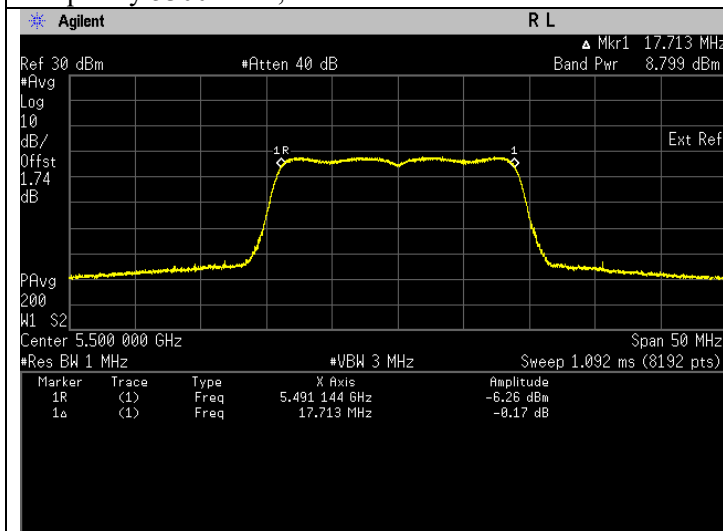
Frequency 5260 MHz, ISED



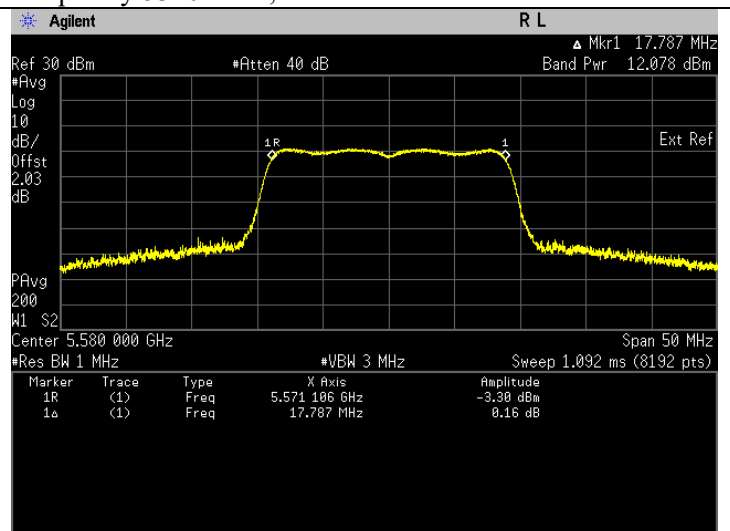
Frequency 5300 MHz, ISED



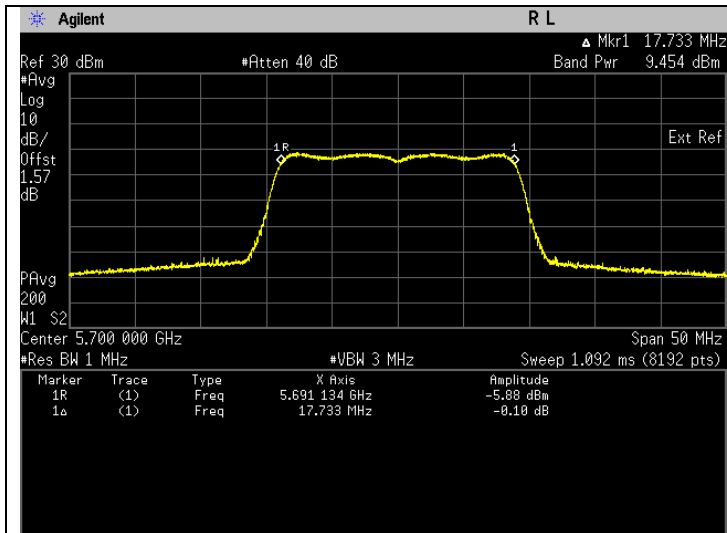
Frequency 5320 MHz, ISED



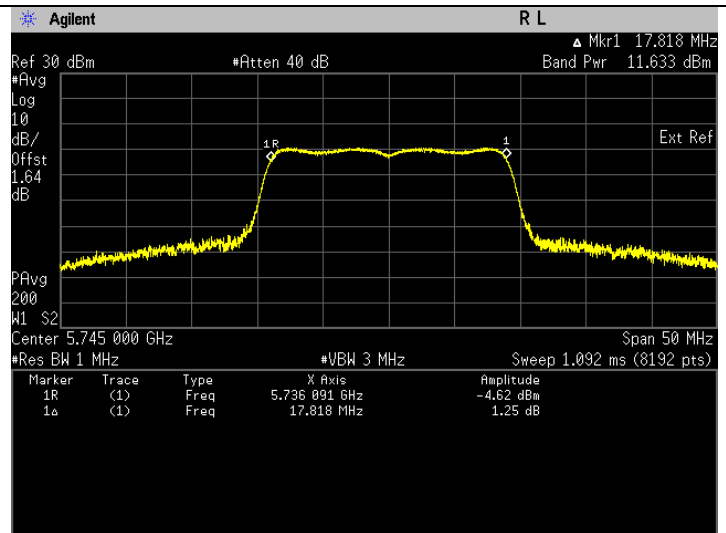
Frequency 5500 MHz, ISED



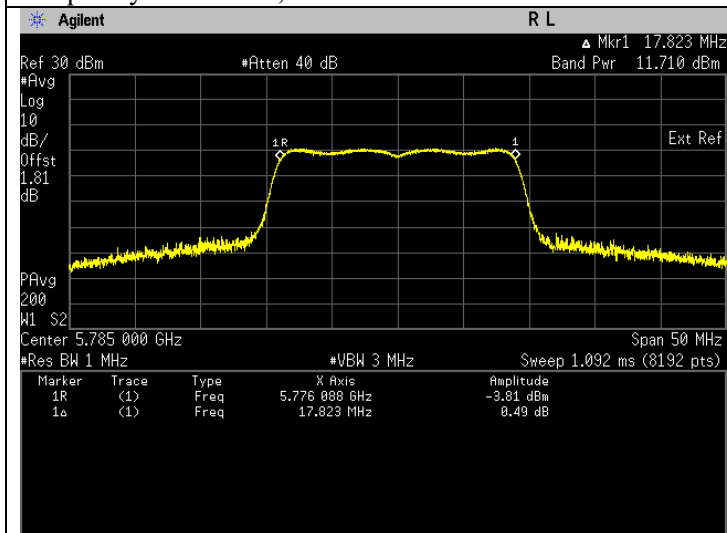
Frequency 5580 MHz, ISED



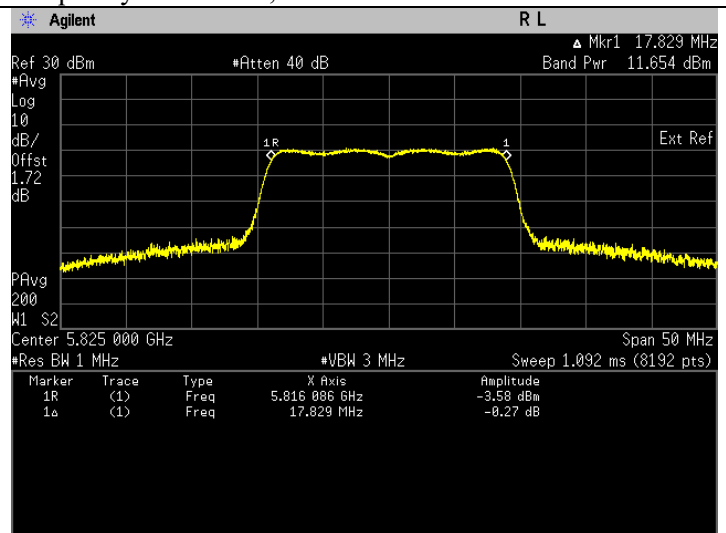
Frequency 5700 MHz, ISED



Frequency 5745 MHz, ISED



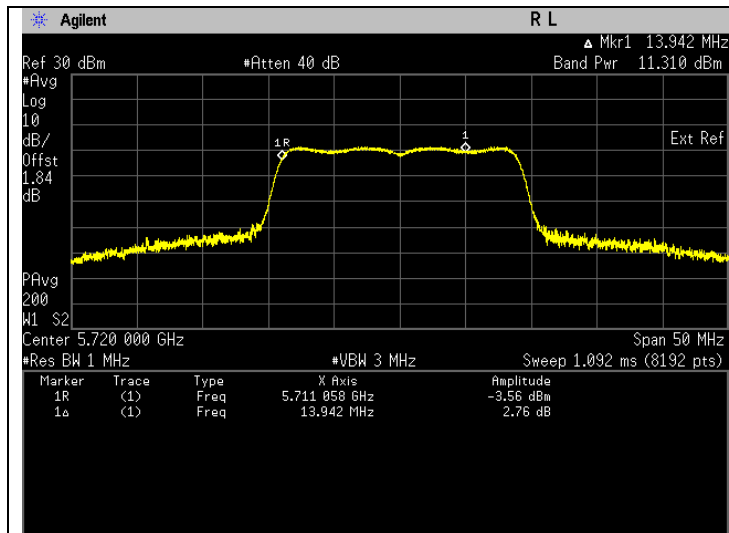
Frequency 5785 MHz, ISED



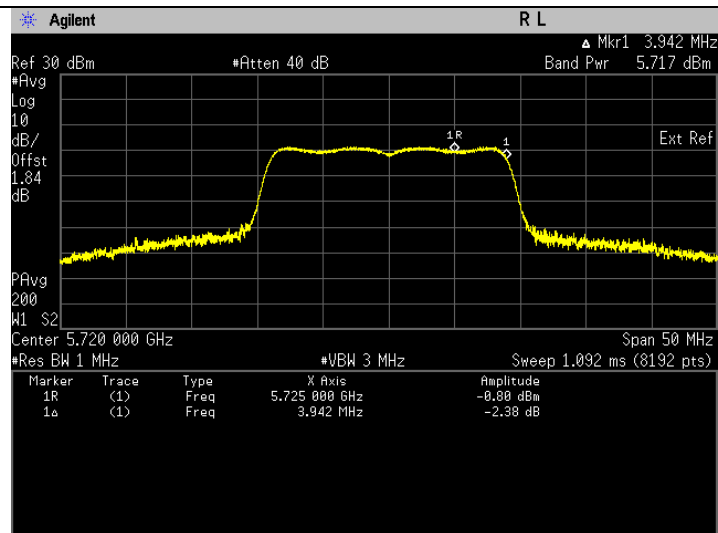
Frequency 5825 MHz, ISED

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)	13.538	11.316	Pass	13.816	Pass
		U-NII-3				
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	3.735	5.723	Pass	8.223	Pass



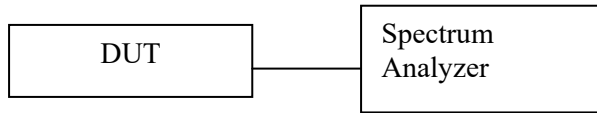
Frequency 5720 MHz, ISED, U-NII-2C. *Note: The band power is captured before the 5725 MHz.



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

7.3. Maximum Power Spectral Density

7.3.1. Test Setup



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

7.3.2. Test Limits

FCC 15.407(a)

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

RSS-247 6.2

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

7.3.3. Additional Info

Antenna	Gain (dBi)
802.11a, 802.11n	4, 2.5, 2.7
Duty Cycle Correction Factor	
802.11a	0.021
802.11n	0.006

7.3.4. Test Data

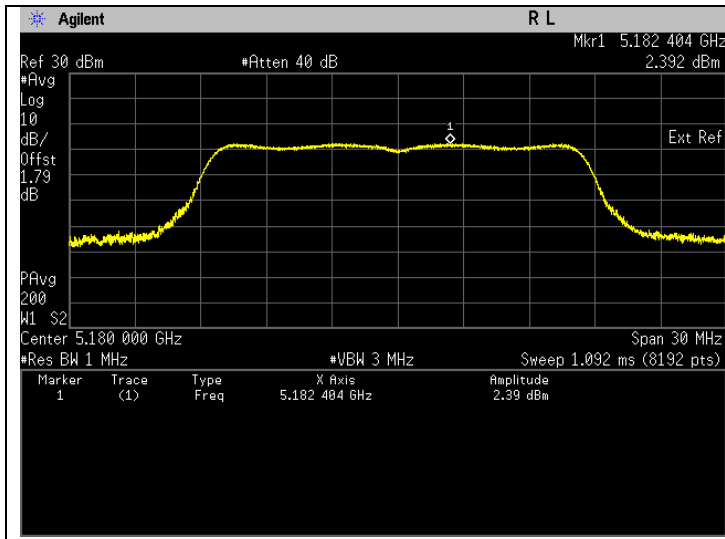
802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	2.413	Pass
5220	Mod Type: BPSK, Data Rate: 6	2.697	Pass
5240	Mod Type: BPSK, Data Rate: 6	2.458	Pass
5260	Mod Type: BPSK, Data Rate: 6	1.923	Pass
5300	Mod Type: BPSK, Data Rate: 6	2.274	Pass
5320	Mod Type: BPSK, Data Rate: 6	1.147	Pass
5500	Mod Type: BPSK, Data Rate: 6	-3.005	Pass
5580	Mod Type: BPSK, Data Rate: 6	2.111	Pass
5700	Mod Type: BPSK, Data Rate: 6	-2.316	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	-1.380	Pass
5785	Mod Type: BPSK, Data Rate: 6	-1.342	Pass
5825	Mod Type: BPSK, Data Rate: 6	-1.407	Pass

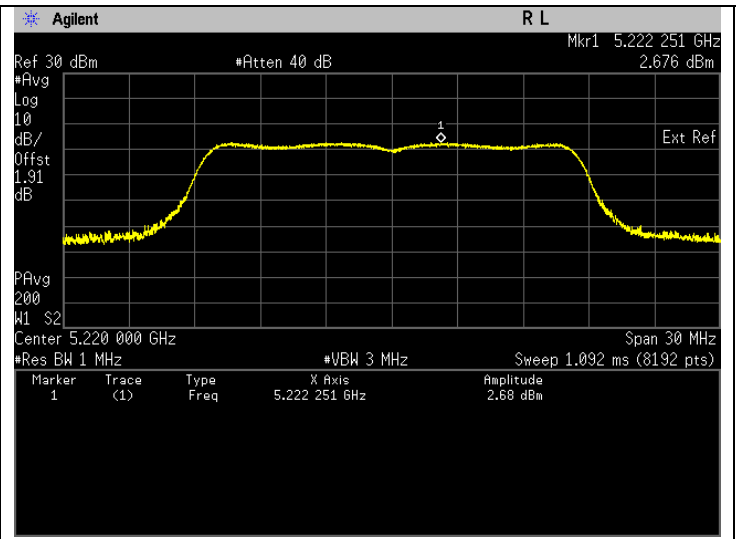
802.11a (99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: 6	2.413	Pass	6.413	Pass
5220	Mod Type: BPSK, Data Rate: 6	2.697	Pass	6.697	Pass
5240	Mod Type: BPSK, Data Rate: 6	2.458	Pass	6.458	Pass
5260	Mod Type: BPSK, Data Rate: 6	1.923	Pass	5.923	Pass
5300	Mod Type: BPSK, Data Rate: 6	2.274	Pass	6.274	Pass
5320	Mod Type: BPSK, Data Rate: 6	1.147	Pass	5.147	Pass
5500	Mod Type: BPSK, Data Rate: 6	-3.005	Pass	-0.505	Pass
5580	Mod Type: BPSK, Data Rate: 6	2.111	Pass	4.611	Pass
5700	Mod Type: BPSK, Data Rate: 6	-2.316	Pass	0.184	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: 6	-1.380	Pass	1.32	Pass
5785	Mod Type: BPSK, Data Rate: 6	-1.342	Pass	1.358	Pass
5825	Mod Type: BPSK, Data Rate: 6	-1.407	Pass	1.293	Pass

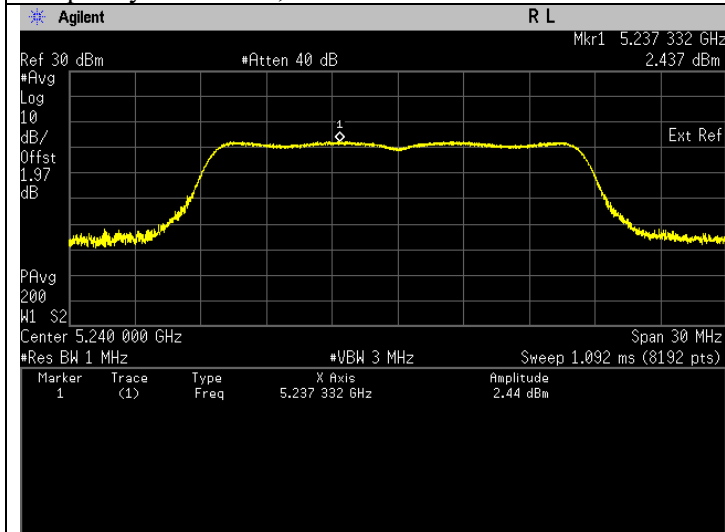
Plots for 802.11a (26dB EBW & 99% EBW)



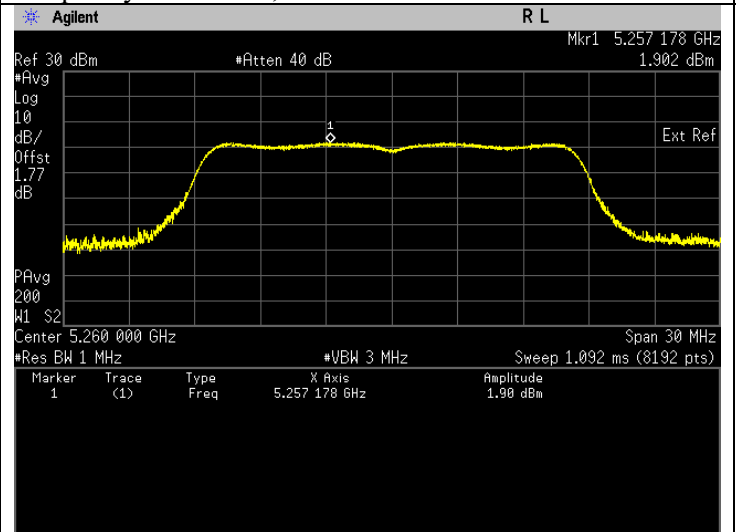
Frequency 5180 MHz, FCC & ISSED.



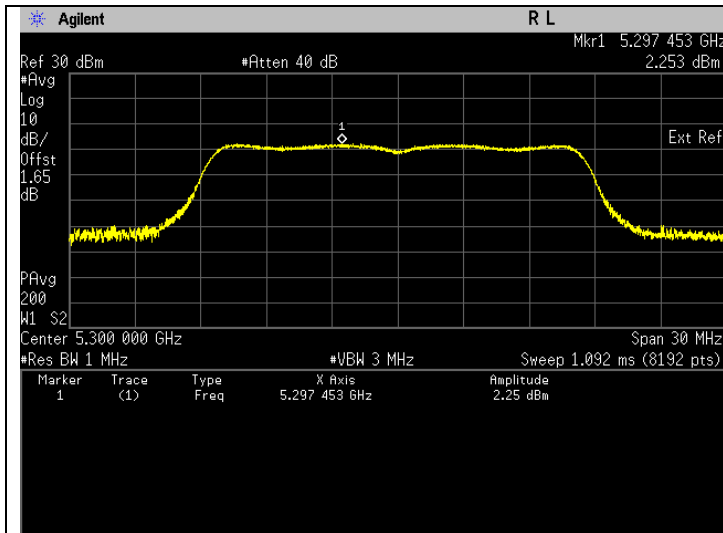
Frequency 5220 MHz, FCC & ISSED.



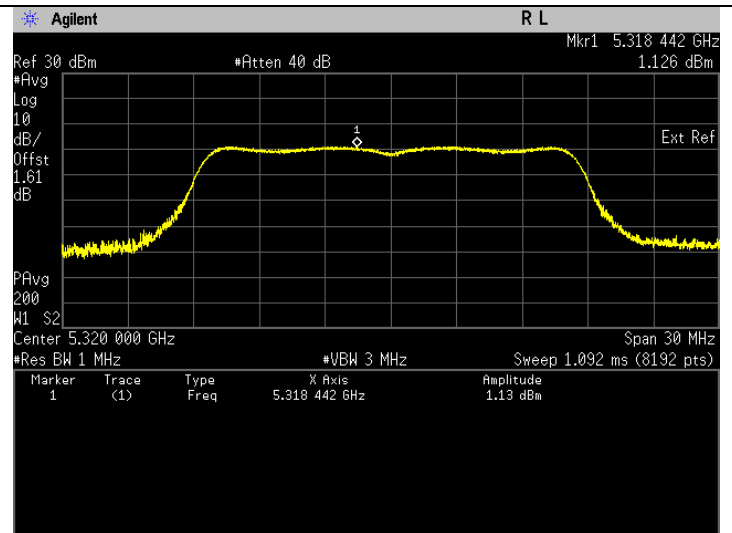
Frequency 5240 MHz, FCC & ISSED.



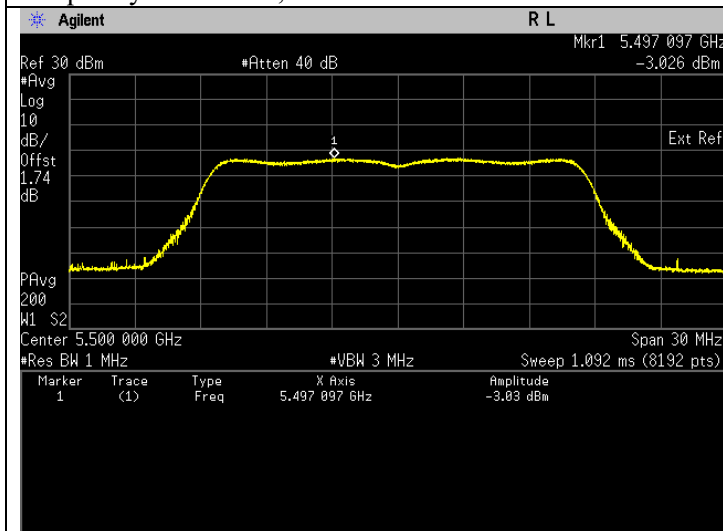
Frequency 5260 MHz, FCC & ISSED.



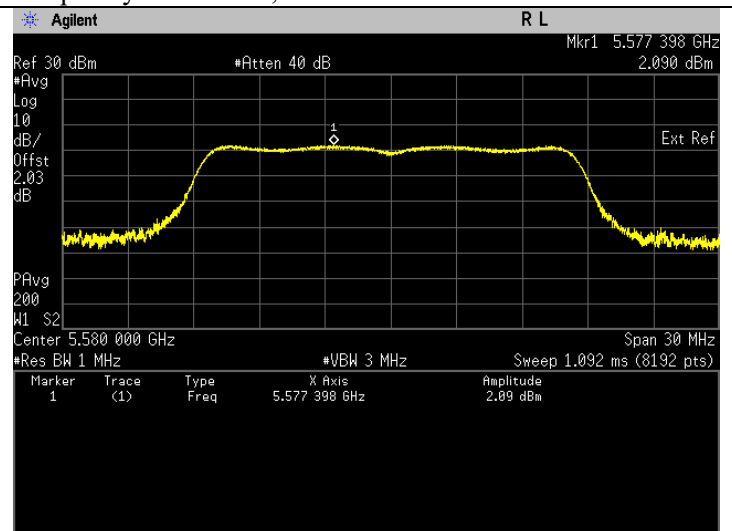
Frequency 5300 MHz, FCC & ISSED.



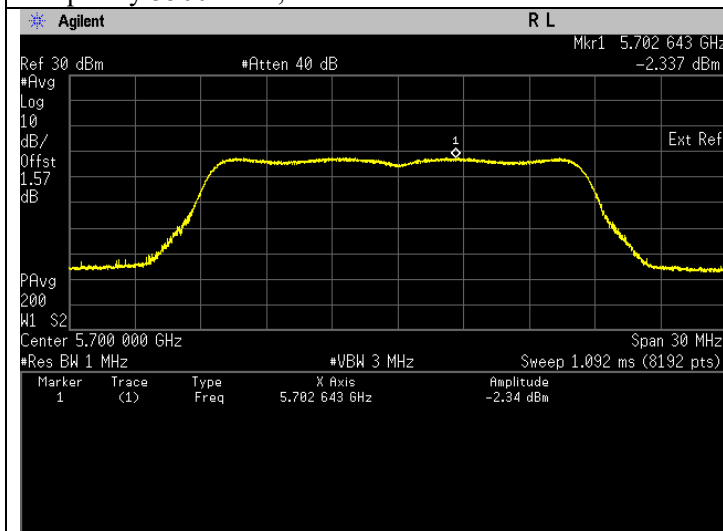
Frequency 5320 MHz, FCC & ISSED.



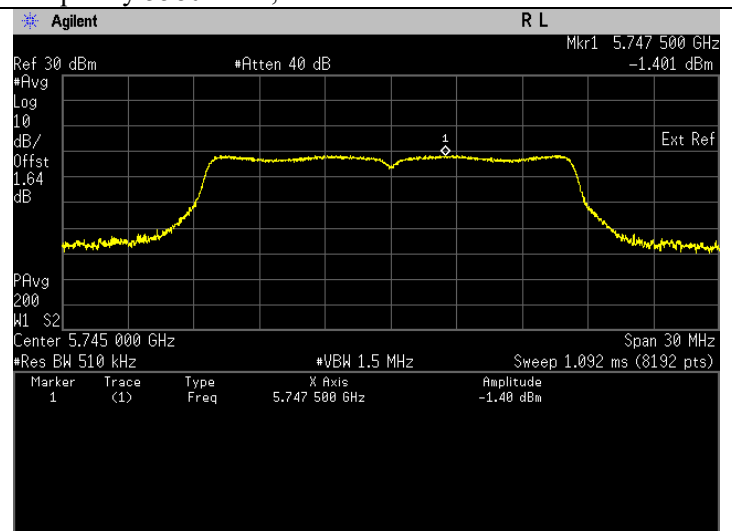
Frequency 5500 MHz, FCC & ISSED.



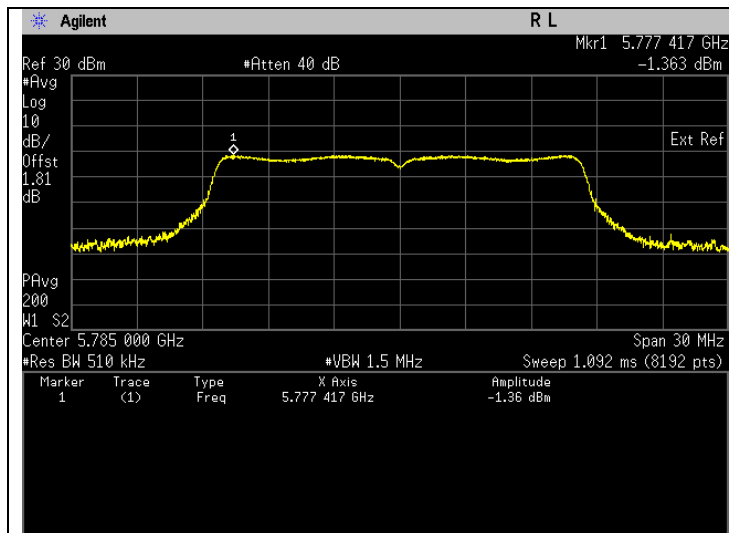
Frequency 5580 MHz, FCC & ISSED.



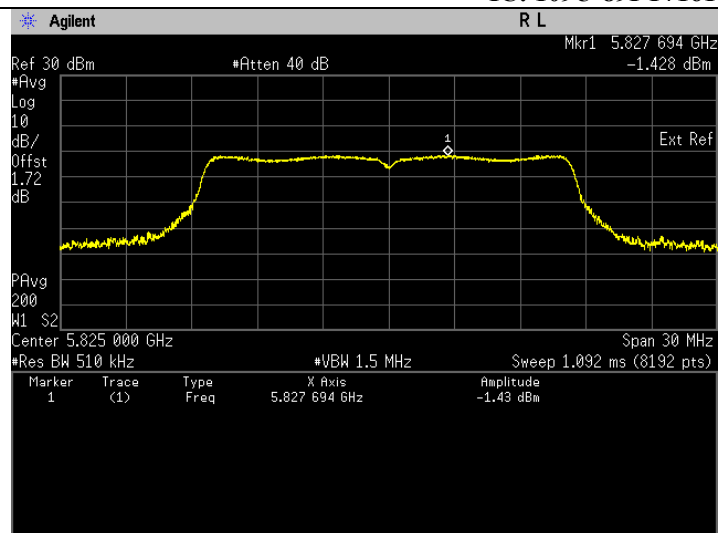
Frequency 5700 MHz, FCC & ISSED.



Frequency 5745 MHz, FCC & ISSED.



Frequency 5785 MHz, FCC & ISSED.



Frequency 5825 MHz, FCC & ISSED.

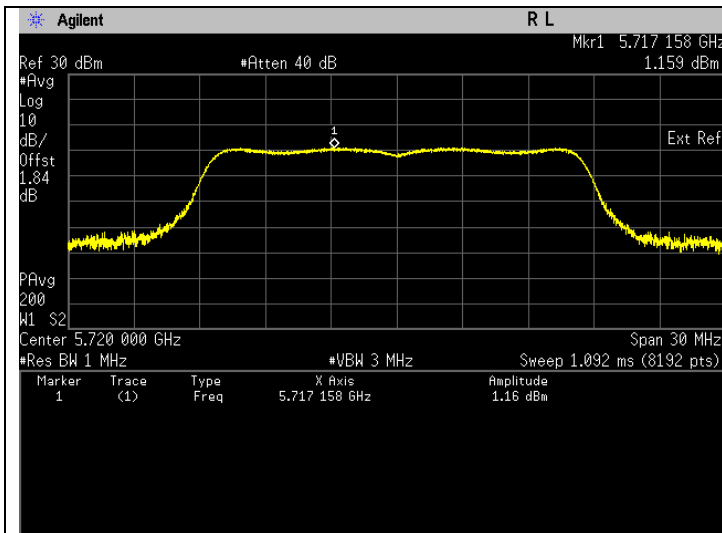
Straddle Frequency for 802.11a (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	1.180	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	0.780	Pass

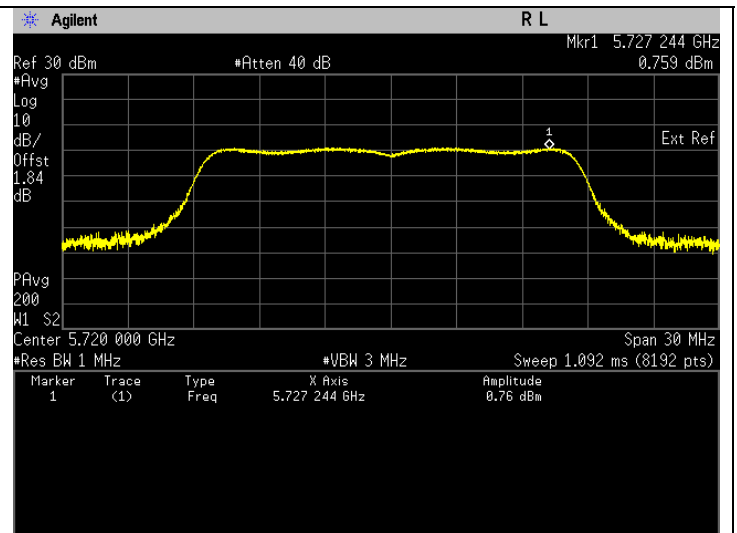
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: 6	1.180	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: 6	0.780	Pass

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



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



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

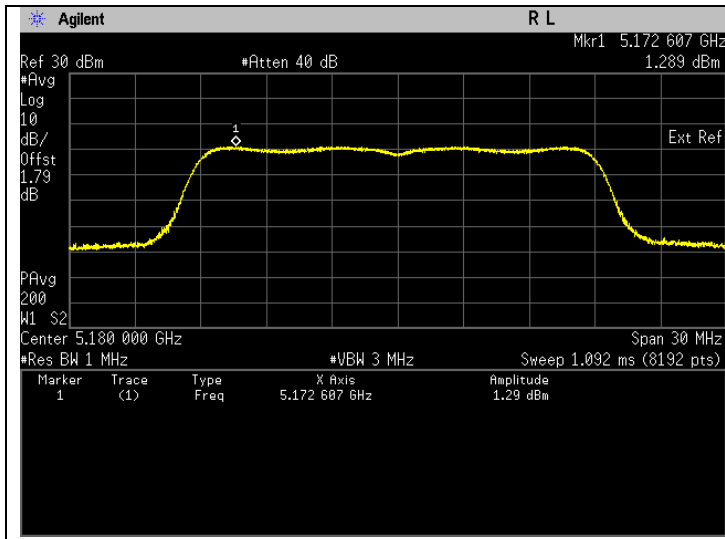
802.11n (HT20)(26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.295	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.808	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.494	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.820	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.600	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.720	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.867	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.057	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.554	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.365	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.364	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.345	Pass

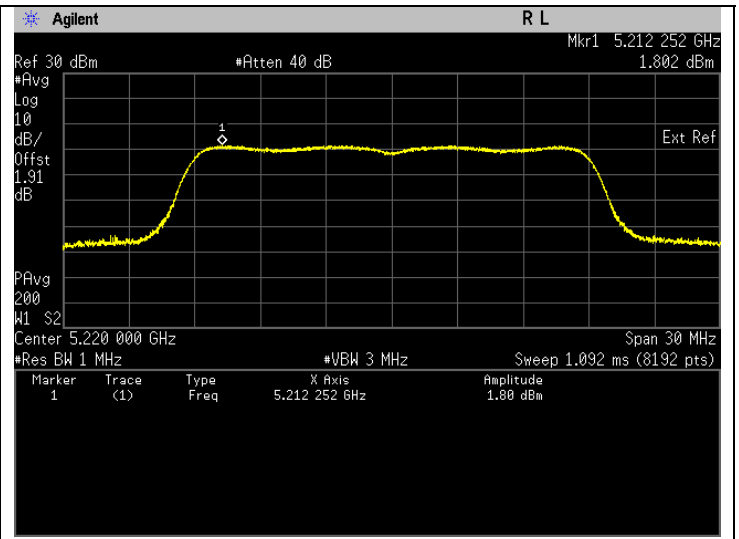
802.11n (HT20)(99% EBW)

Freq. (MHz)	Test Conditions	Results			
		Power/Frequency (dBm/MHz)	Status	EIRP (dBm/MHz)	Status
5180	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.295	Pass	5.295	Pass
5220	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.808	Pass	5.808	Pass
5240	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.494	Pass	5.494	Pass
5260	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.820	Pass	5.82	Pass
5300	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.600	Pass	5.6	Pass
5320	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.720	Pass	4.72	Pass
5500	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.867	Pass	0.633	Pass
5580	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.057	Pass	3.557	Pass
5700	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-1.554	Pass	0.946	Pass
Freq. (MHz)	Test Conditions	Power/Frequency (dBm/500kHz)	Status		
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.365	Pass	0.335	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.364	Pass	0.336	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	-2.345	Pass	0.355	Pass

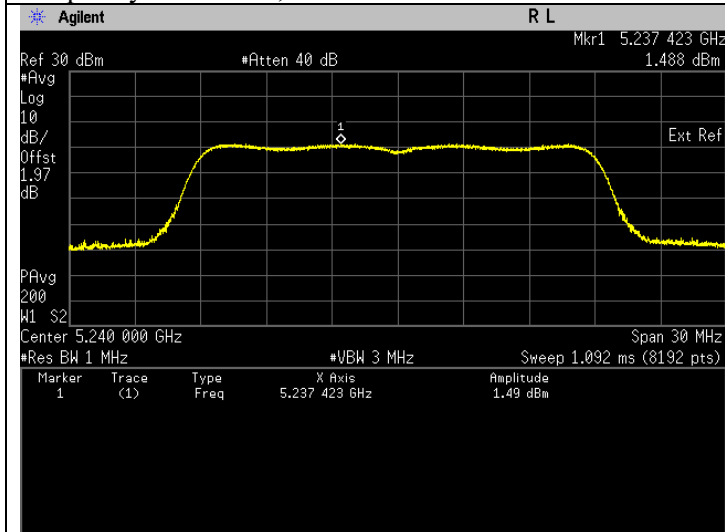
Plots for 802.11n (HT20) (26dB EBW & 99% EBW)



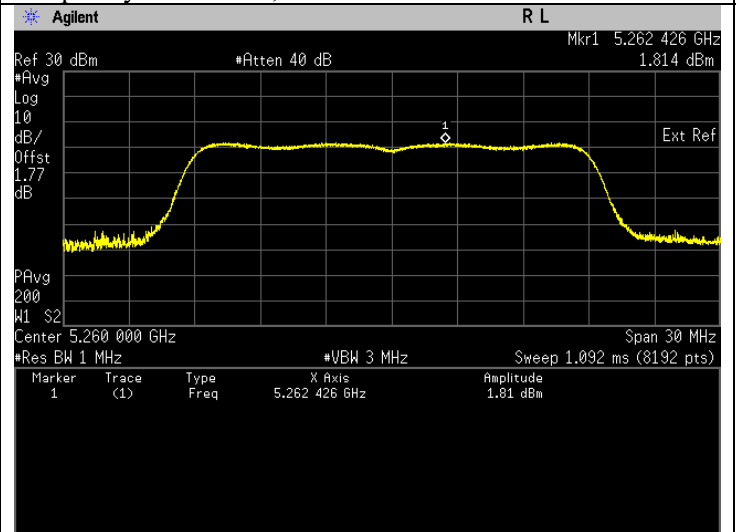
Frequency 5180 MHz, FCC & ISSED.



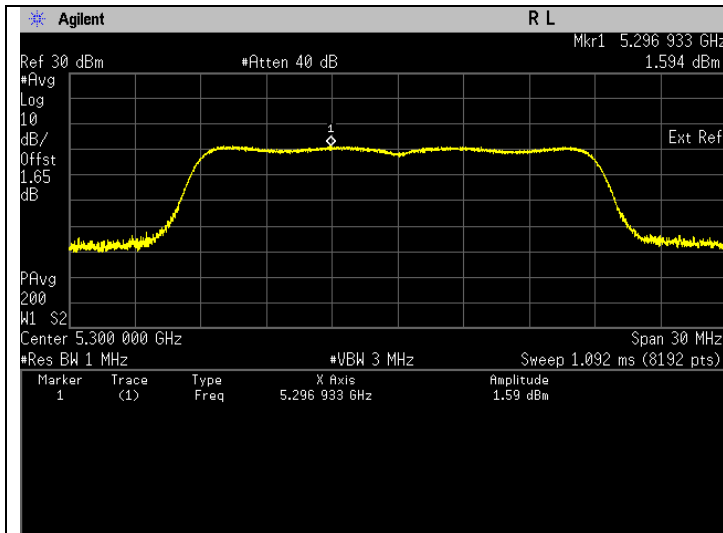
Frequency 5220 MHz, FCC & ISSED.



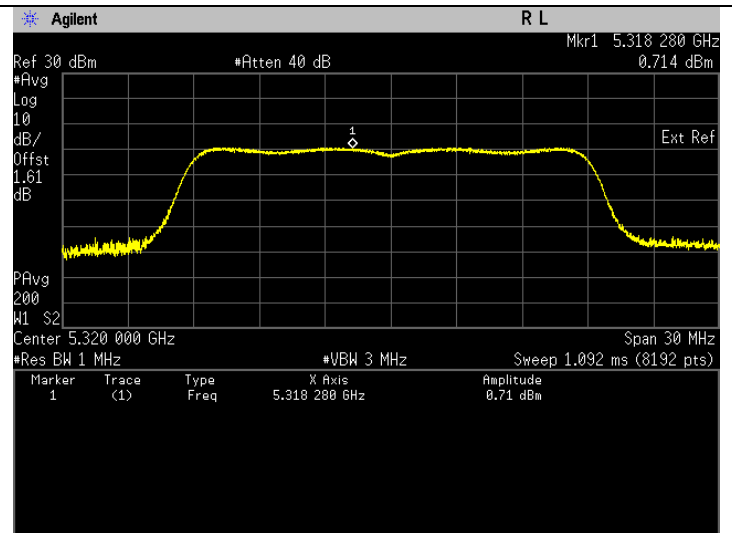
Frequency 5240 MHz, FCC & ISSED.



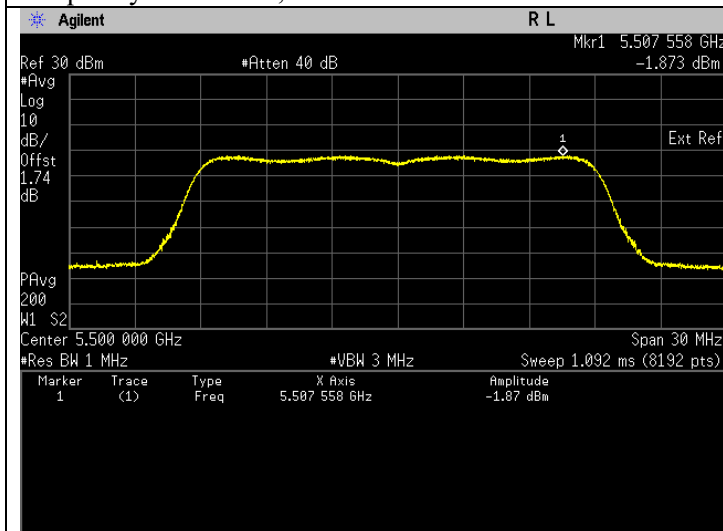
Frequency 5260 MHz, FCC & ISSED.



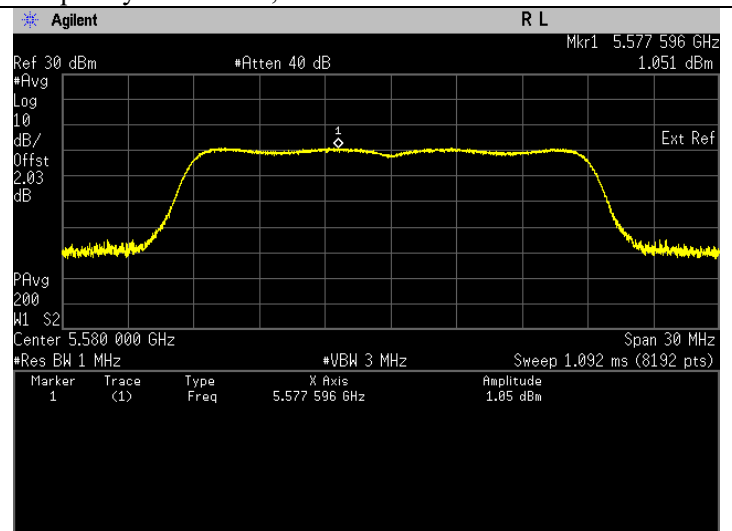
Frequency 5300 MHz, FCC & ISSED.



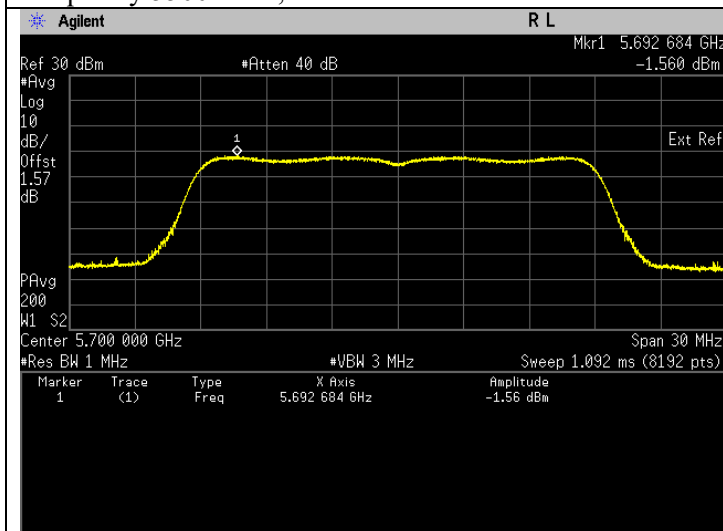
Frequency 5320 MHz, FCC & ISSED.



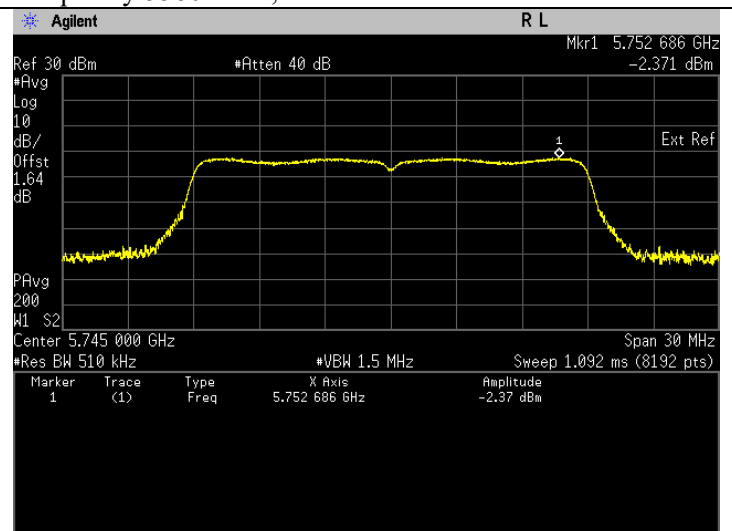
Frequency 5500 MHz, FCC & ISSED.



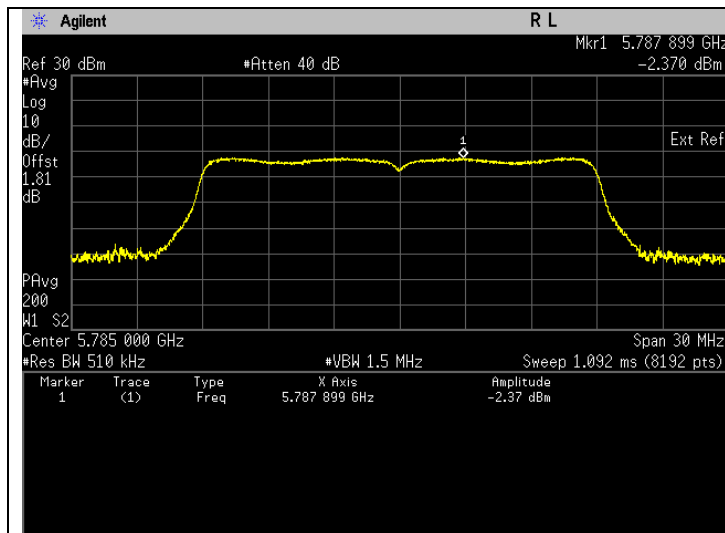
Frequency 5580 MHz, FCC & ISSED.



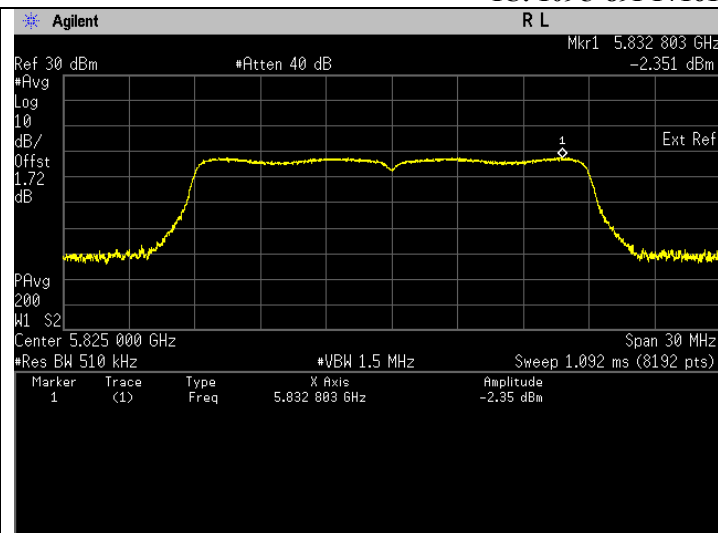
Frequency 5700 MHz, FCC & ISSED.



Frequency 5745 MHz, FCC & ISSED.



Frequency 5785 MHz, FCC & ISED.



Frequency 5825 MHz, FCC & ISED.

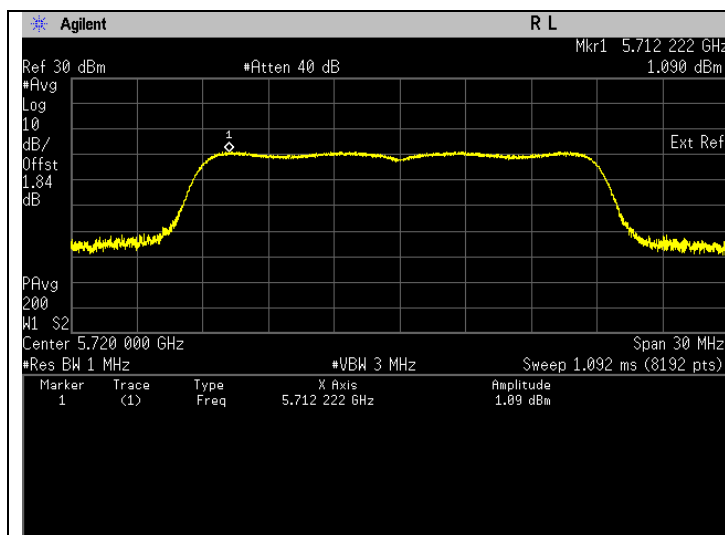
Straddle Frequency for 802.11n (HT20) (26dB EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.096	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.830	Pass

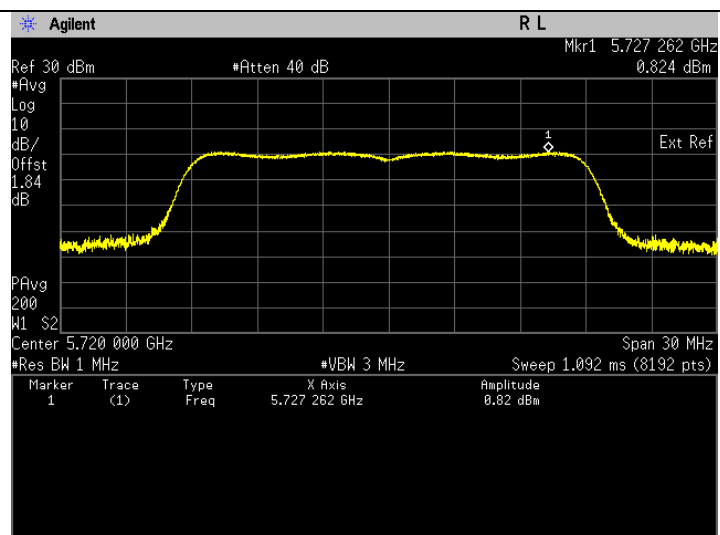
Straddle Frequency for 802.11n (HT20) (99% EBW)

Freq. (MHz)	Test Conditions	Results	
		Power/Frequency (dBm/MHz)	Status
		U-NII- 2C	
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	1.096	Pass
Freq. (MHz)	Test Conditions	U-NII-3	
		Power/Frequency (dBm/500kHz)	Status
5720	Mod Type: BPSK, Data Rate: MCS0 (6.5)	0.830	Pass

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



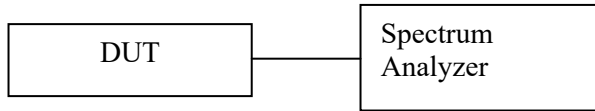
Frequency 5720 MHz, FCC & ISDE,U-NII-2C. *Note: The highest spectral density is captured before the 5725 MHz.



Frequency 5720 MHz, FCC & ISDE, 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 $\geq 3 \cdot$ RBW
 - Detector = Peak
 - Trace = Max Hold
 - Sweep = Auto couple
- f) Allow trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
- h) The measurement method follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04 under clause C.2).

7.4.2. Test Limits

FCC 15.407(e)

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

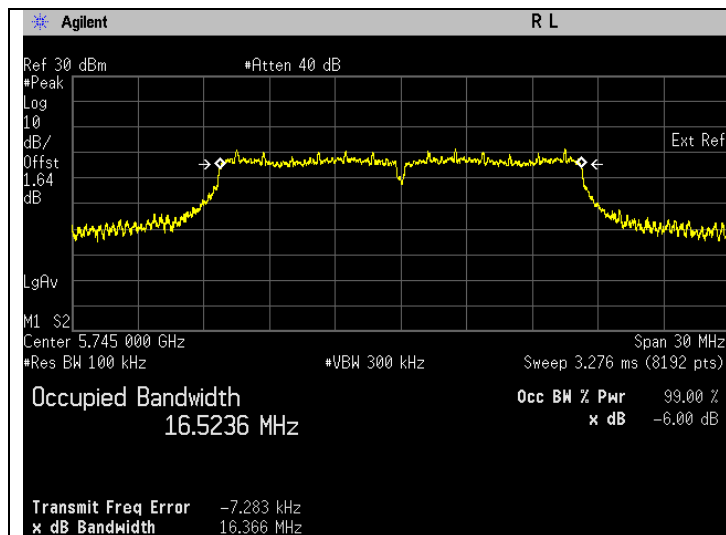
RSS 247 6.2.4

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

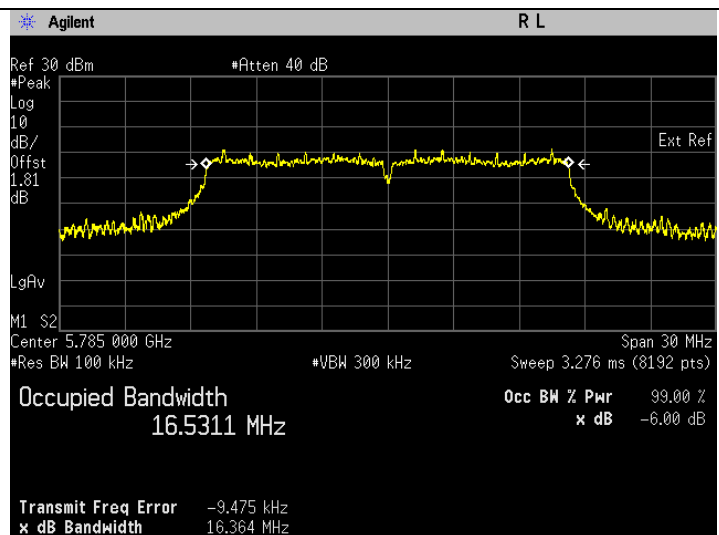
7.4.3. Test Data

802.11a

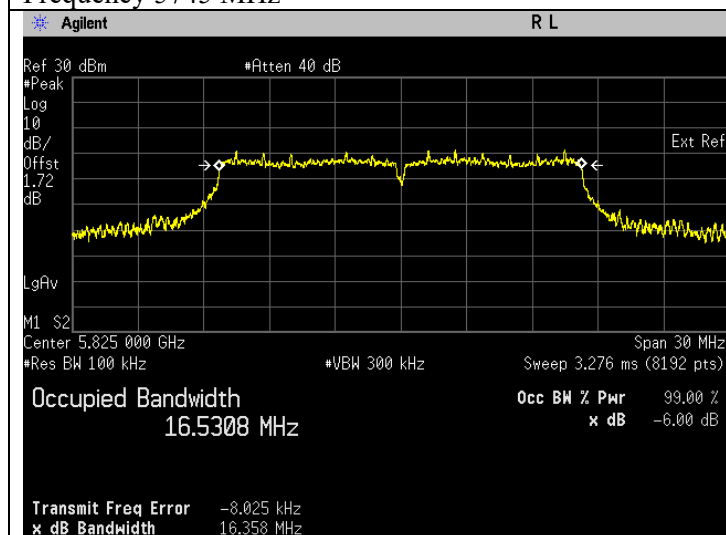
Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: 6	16.366	Pass
5785	Mod Type: BPSK, Data Rate: 6	16.364	Pass
5825	Mod Type: BPSK, Data Rate: 6	16.358	Pass



Frequency 5745 MHz



Frequency 5785 MHz

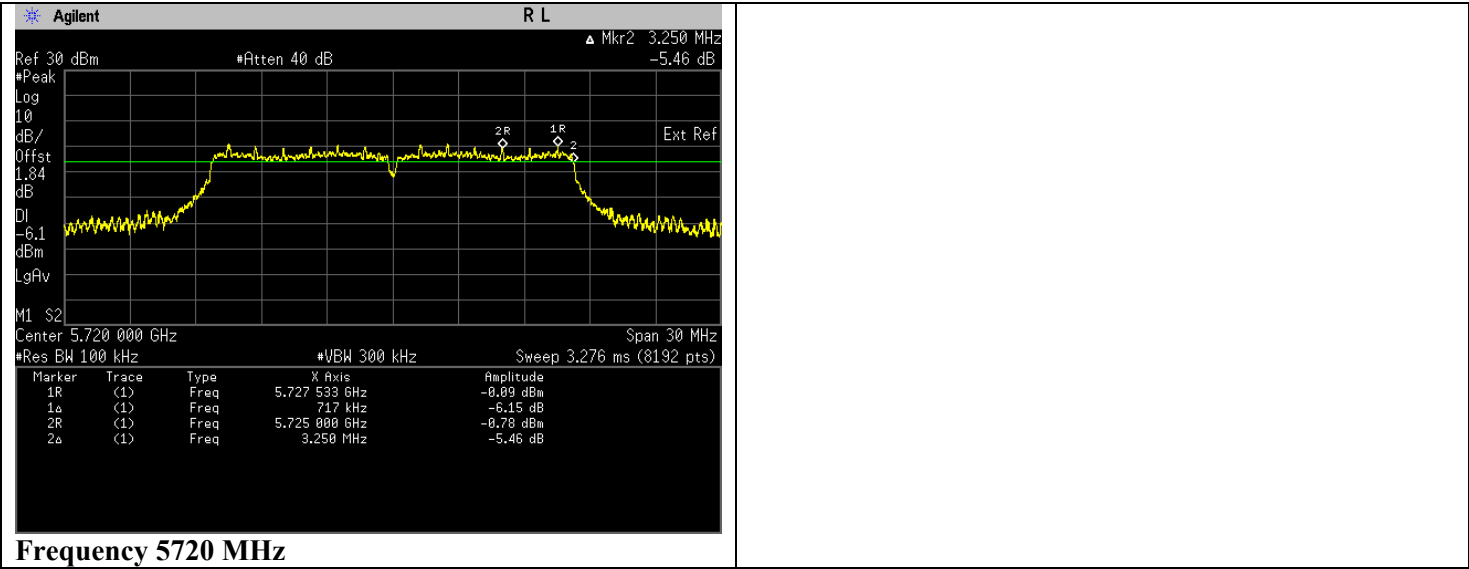


Frequency 5825 MHz

Straddle Frequency for 802.11a

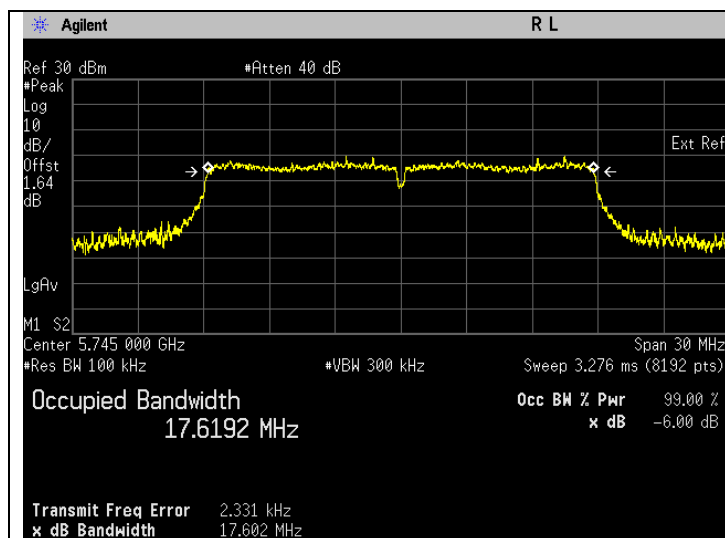
Freq. (MHz)	Test Conditions	Results	
		Power/Freq. (dBm/MHz)	Status
		U-NII- 3	
5720	Mod Type: BPSK, Data Rate: 6	3.250	Pass

Plots for 802.11a Straddle Frequency

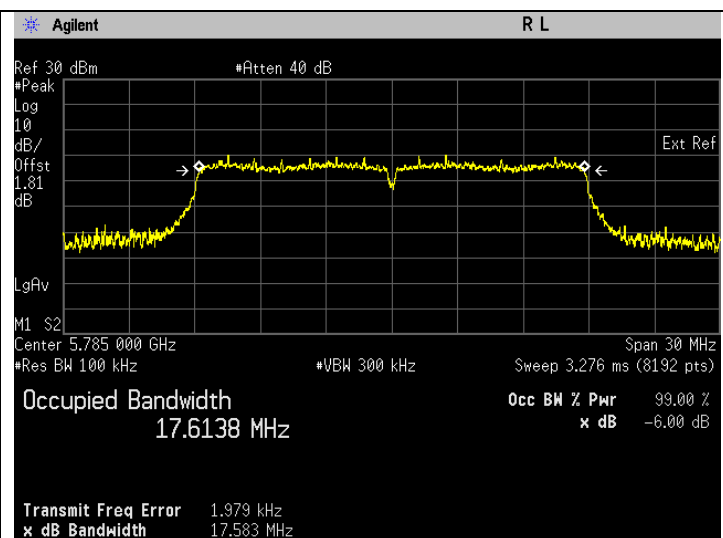


802.11n (HT20)

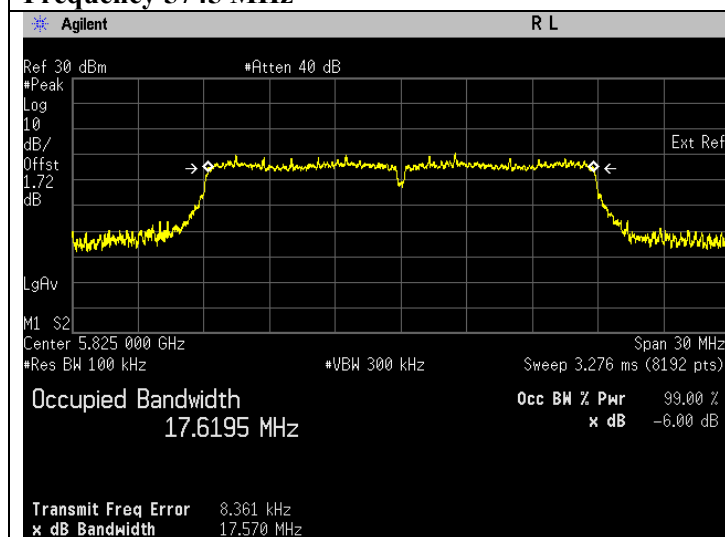
Freq. (MHz)	Test Configuration	Results	
		Bandwidth(MHz)	Status
5745	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.602	Pass
5785	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.583	Pass
5825	Mod Type: BPSK, Data Rate: MCS0 (6.5)	17.570	Pass



Frequency 5745 MHz



Frequency 5785 MHz

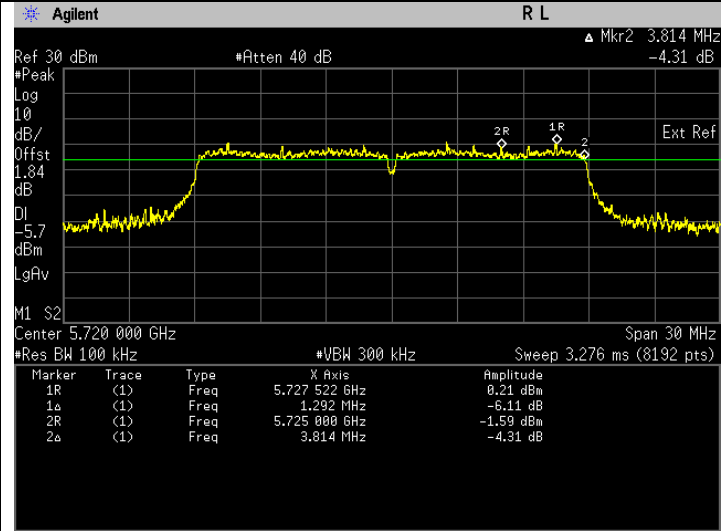


Frequency 5825 MHz

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)	3.814	Pass

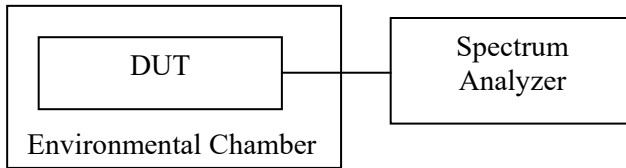
Plots for 802.11n (HT20) Straddle Frequency



Frequency 5720 MHz

7.5. Frequency Stability

7.5.1. Test Setup



- a) Test setup as per illustrated above.
- b) Set DUT to transmit un-modulated signal at desire transmit frequency.
- c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) The DUT was operated at the maximum output power, and spectrum which is set to maximum hold function and peak detector.
- e) The peak value of the power envelope was measured and noted.
- f) Test was conducted from temperature range from -30⁰C to 50⁰C with step size of 10⁰C on manufacturer's rated supply voltage.
- g) At temperature of 20⁰C, +/-15% of manufacturer's rated voltage are to be applied.
- h) The frequency stability is measured and recorded of frequency deviation due to temperature and supply voltage variations as mentioned at condition f) & g) above.

7.5.2. Test Limits

FCC 15.407(g)

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

RSS-GEN 6.11

7.5.3. Test Data

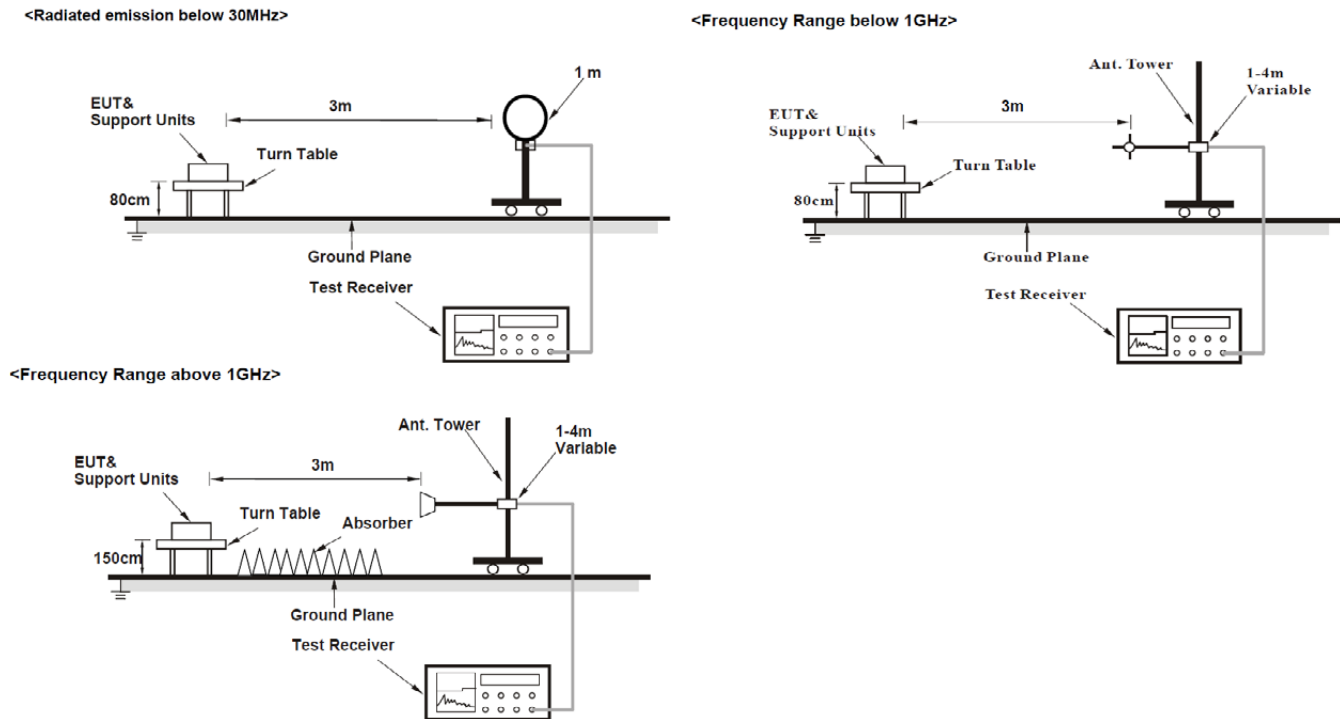
802.11a

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

Temperature(°C)	Voltage	Results			
		Measured Frequency(MHz)	Frequency Error(kHz)	Frequency Error(%)	Status
20	+15%	5179.997958	2.042000	0.000039	Pass
	±0%	5179.998346	1.654000	0.000032	Pass
	-15%	5179.998500	1.500000	0.000029	Pass
-30		5179.998831	1.169000	0.000023	Pass
-20		5179.998938	1.062000	0.000021	Pass
-10		5179.998405	1.595000	0.000031	Pass
0		5179.998534	1.466000	0.000028	Pass
10		5179.998532	1.468000	0.000028	Pass
30		5179.998520	1.480000	0.000029	Pass
40		5179.998511	1.489000	0.000029	Pass
50		5179.998503	1.497000	0.000029	Pass

7.6. Band Edge Radiated Spurious Emission Measurement

7.6.1. Test Setup



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:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection at frequency below 1GHz.
- 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.
- 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 $\geq 98\%$) at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $1/\tau$ Hz, where τ is minimum transmitter on time (Duty cycle $< 98\%$) for Average detection using reduced video bandwidth at frequency above 1GHz.
- 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:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 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.

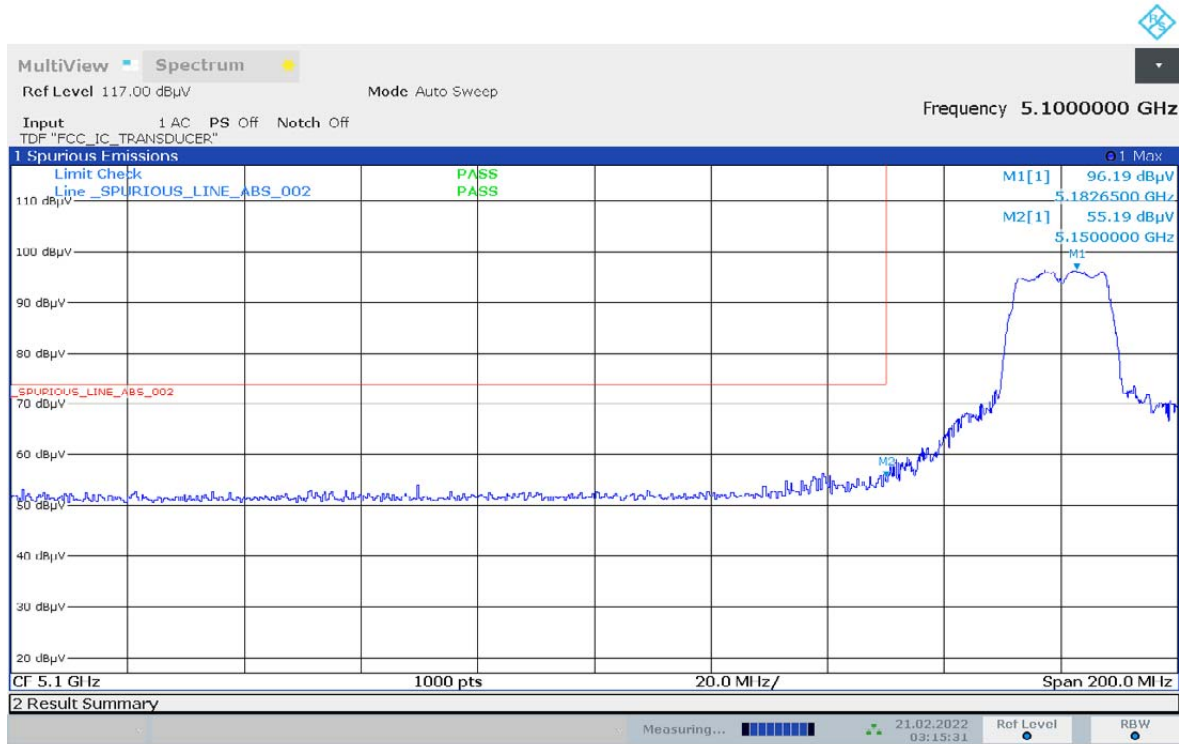
Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v01r03		Field Strength at 3 m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150–5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
5250–5350 MHz	15.407(b)(2)		
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:

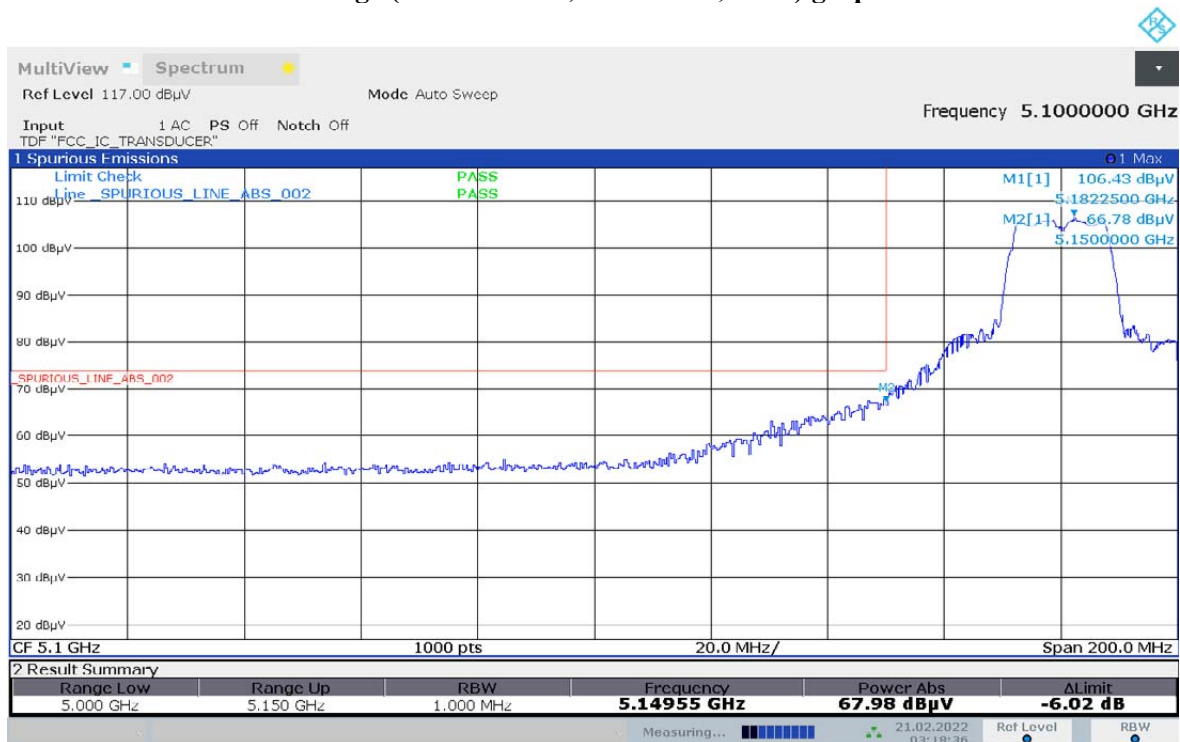
7.6.3. Test Result

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



03:15:32 21.02.2022

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



03:18:37 21.02.2022

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



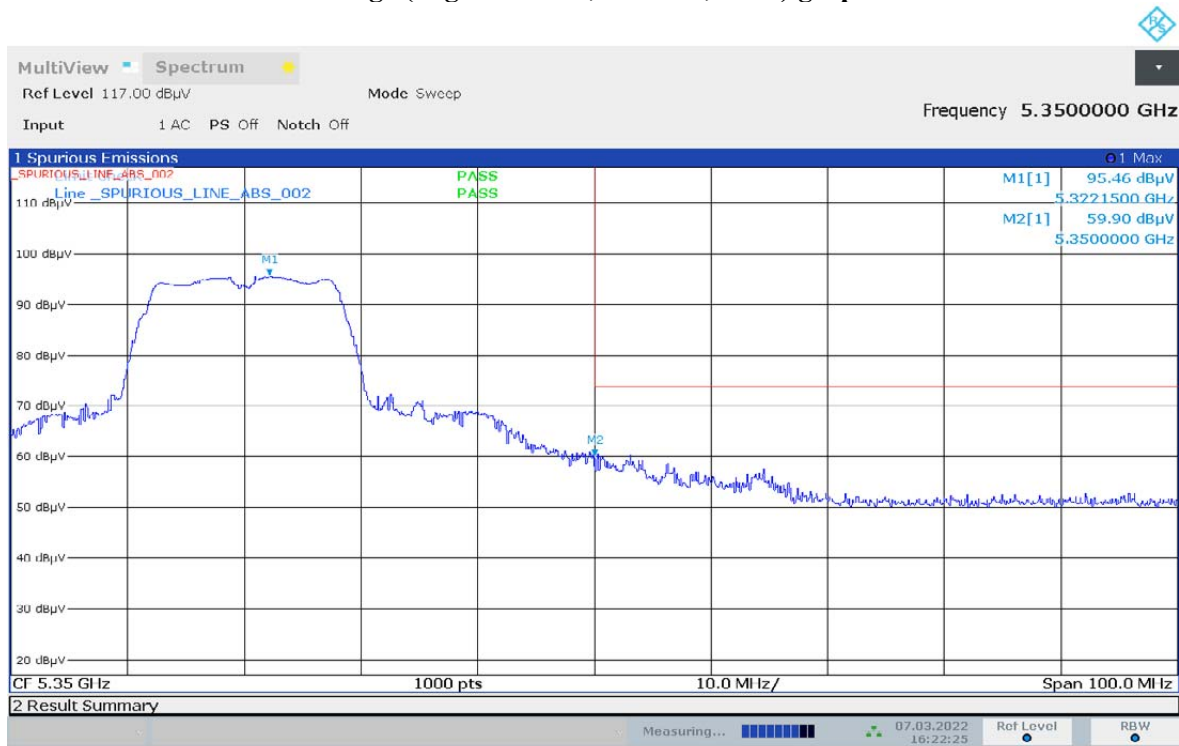
03:58:29 21.02.2022

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



04:14:11 21.02.2022

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



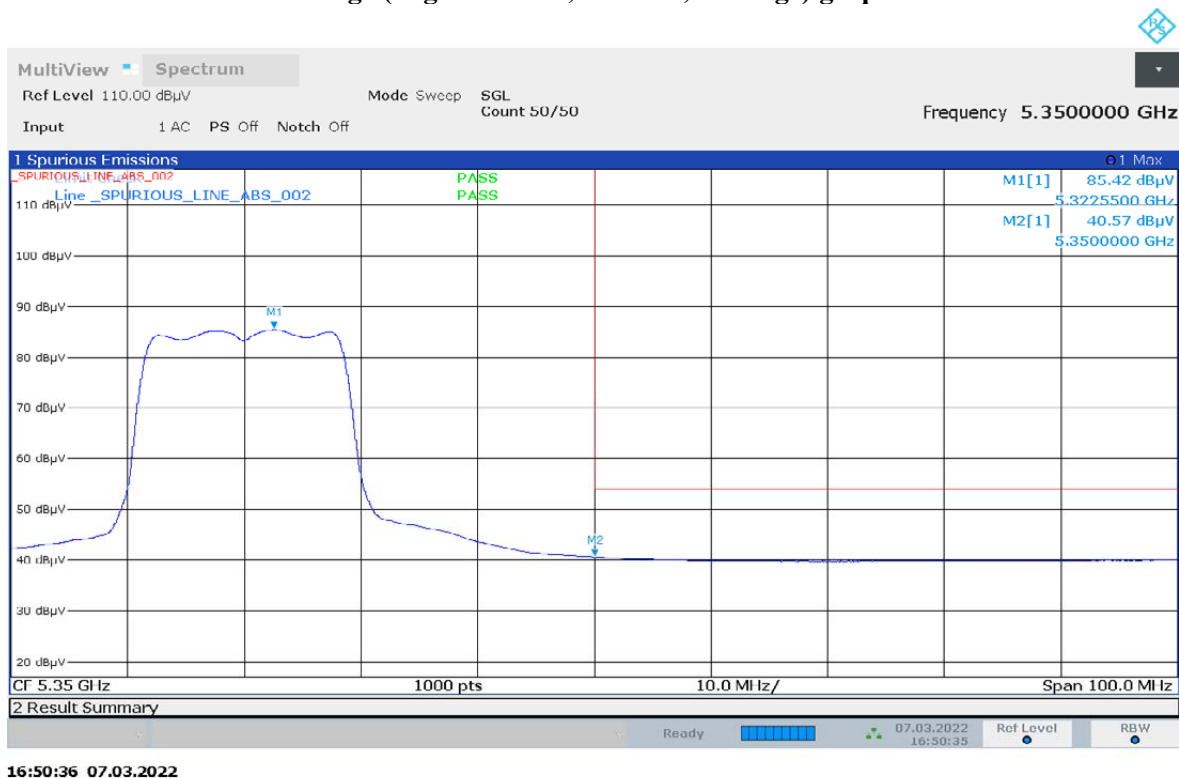
16:22:26 07.03.2022

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

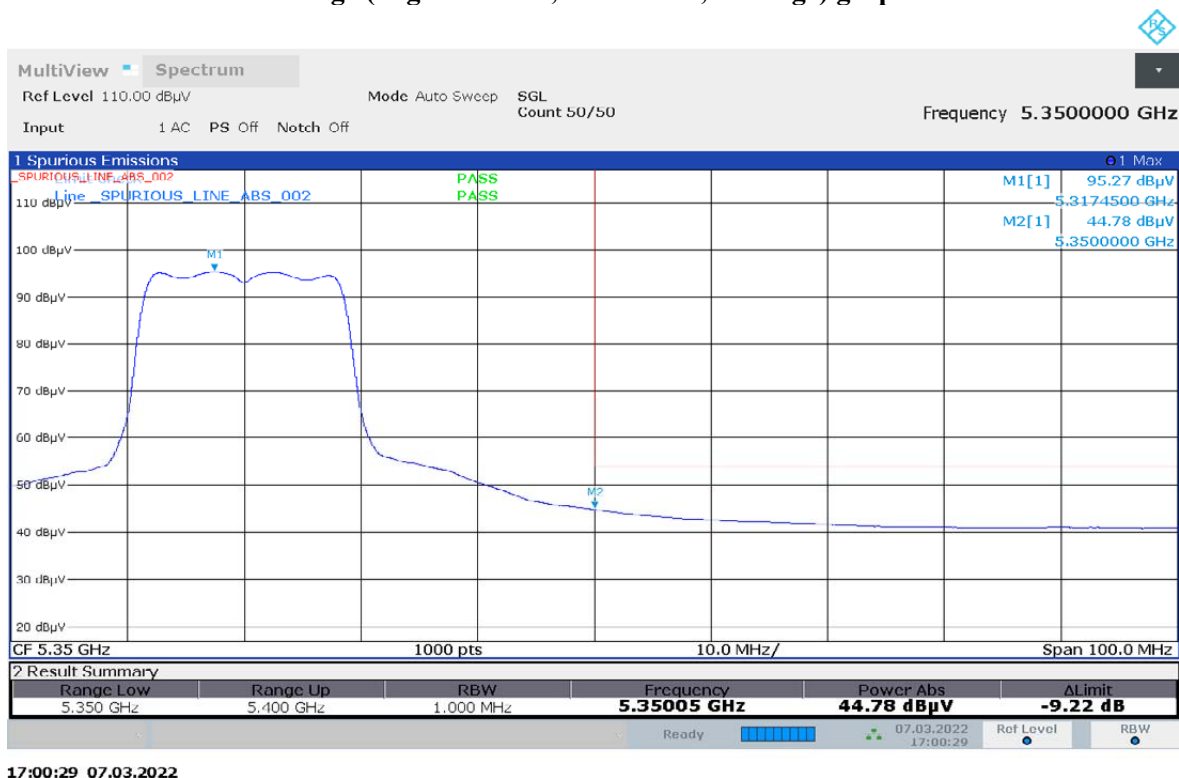


16:26:12 07.03.2022

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



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



Test: WIFI SAC Restricted Band Edge

Model Number: H25UCF9PW6AN S/N: 657TYB0771 EMC SR ID#: 26860-EMC-00191

Battery: PMNN4813A **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

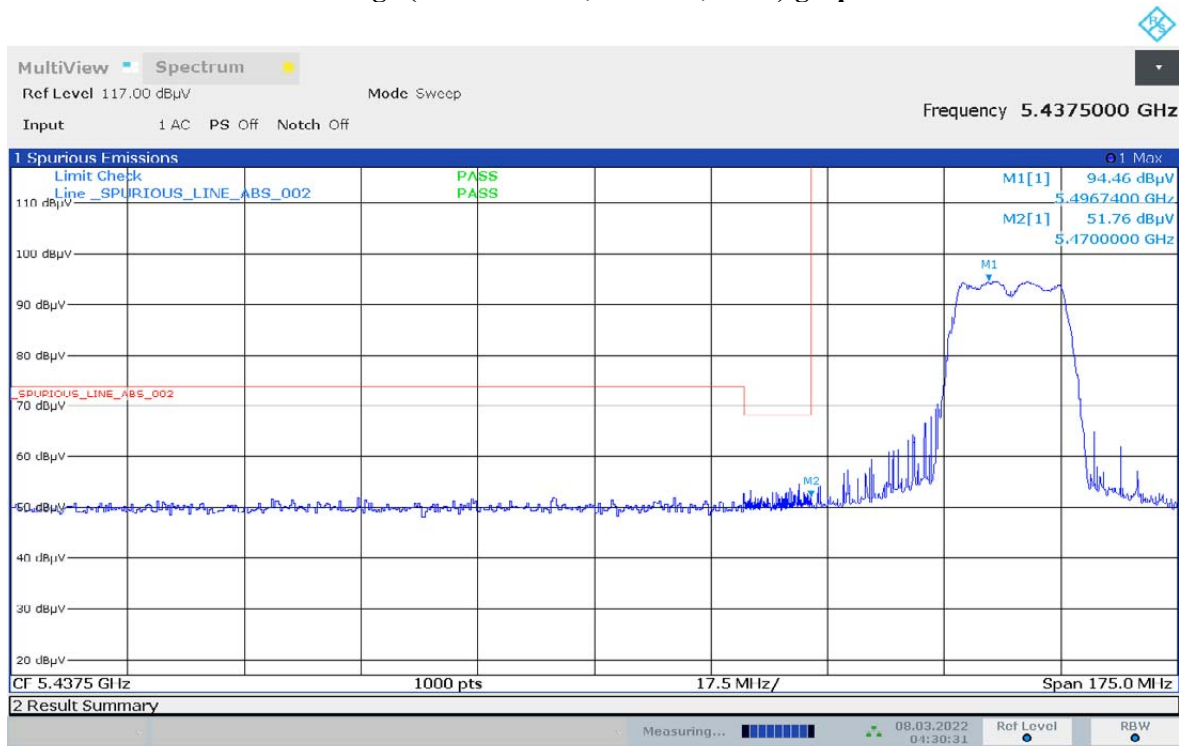
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC):23.7
Test Performed by: Nazrin&Qawiman
System MU: 5.84dB

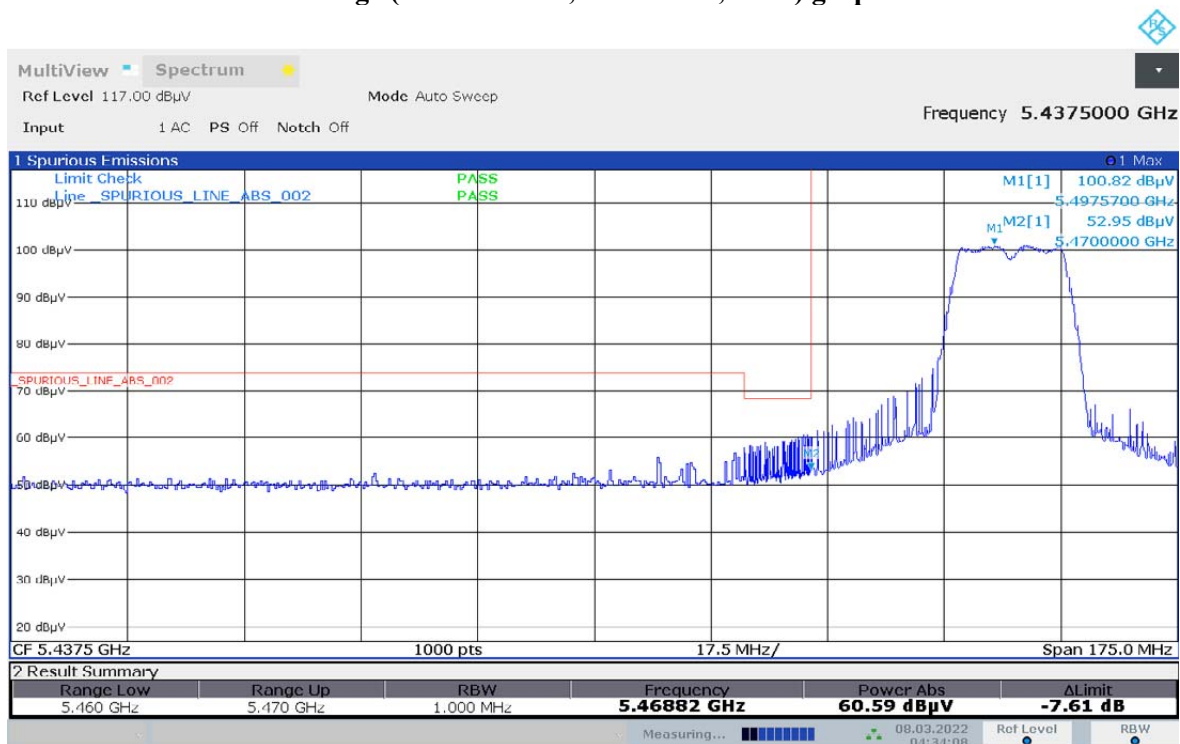
Humidity (%): 68.9
Test Date: Tue, 8 Mar, 2022

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



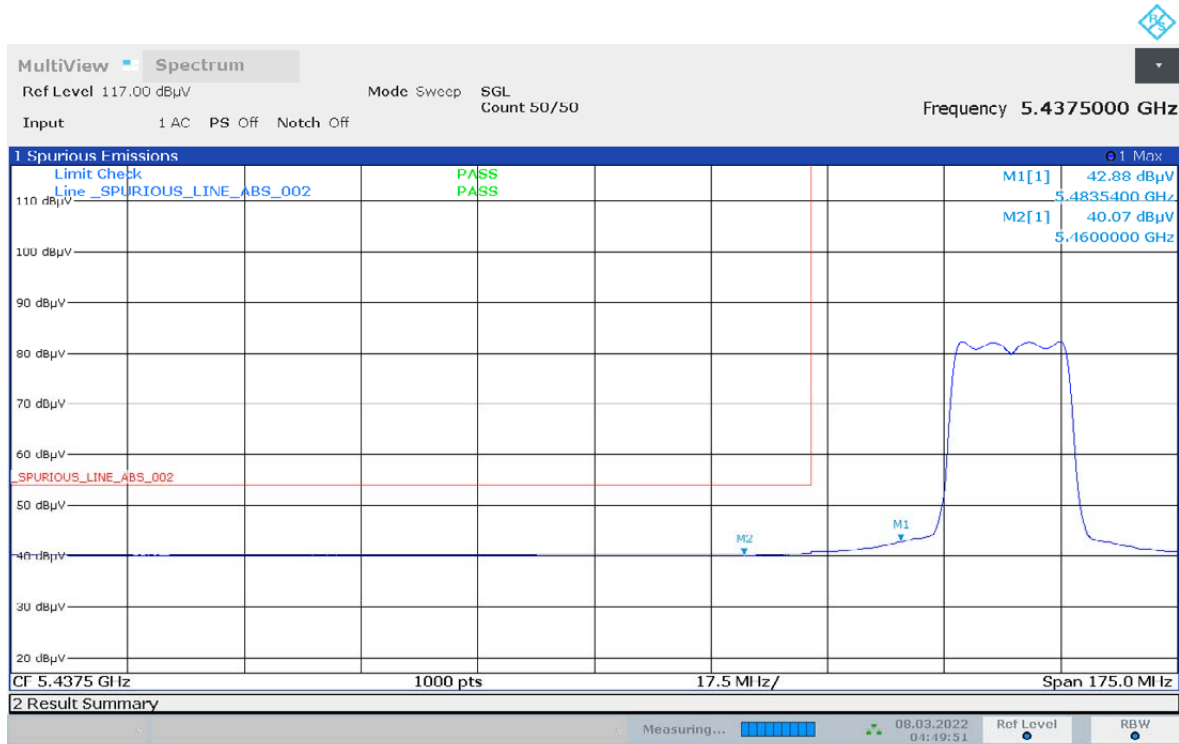
04:30:32 08.03.2022

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



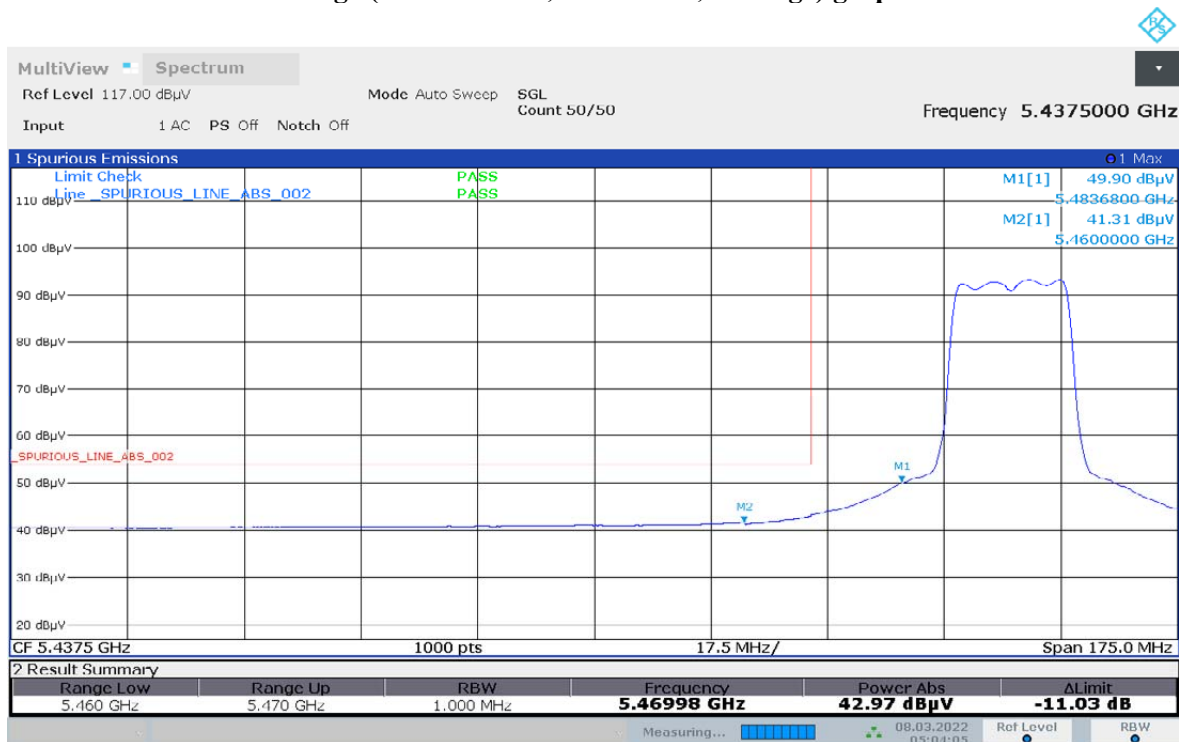
04:34:08 08.03.2022

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



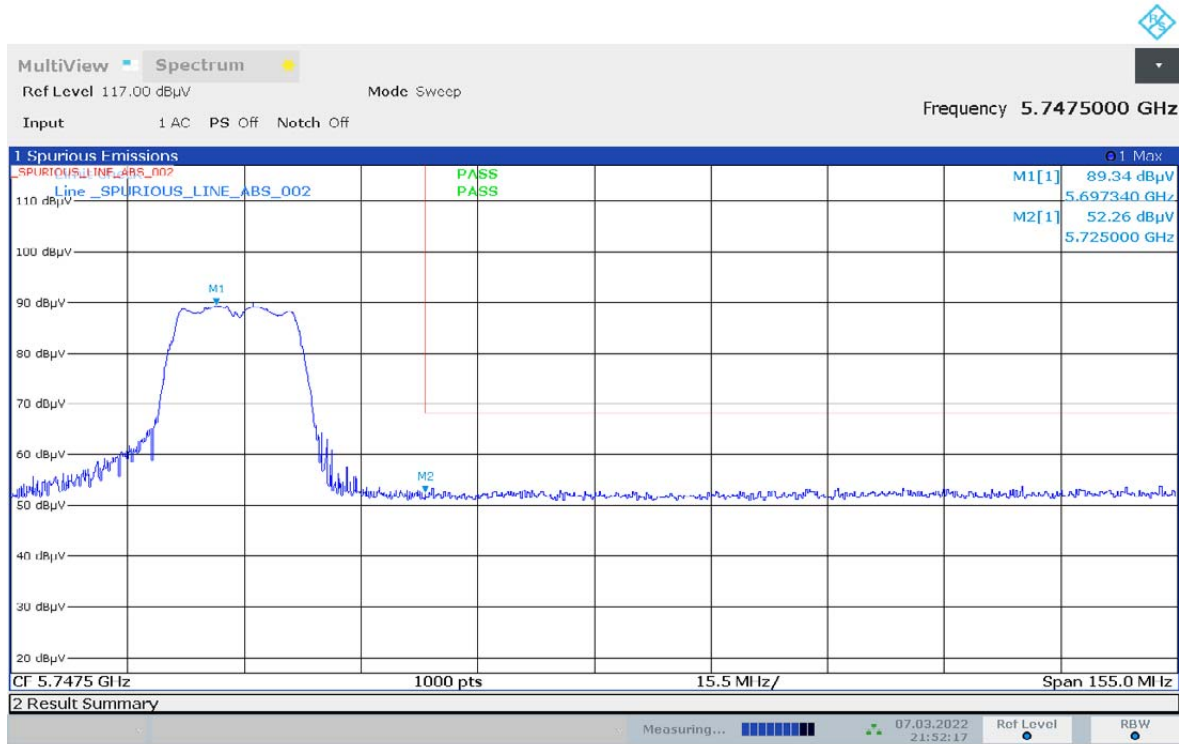
04:49:51 08.03.2022

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



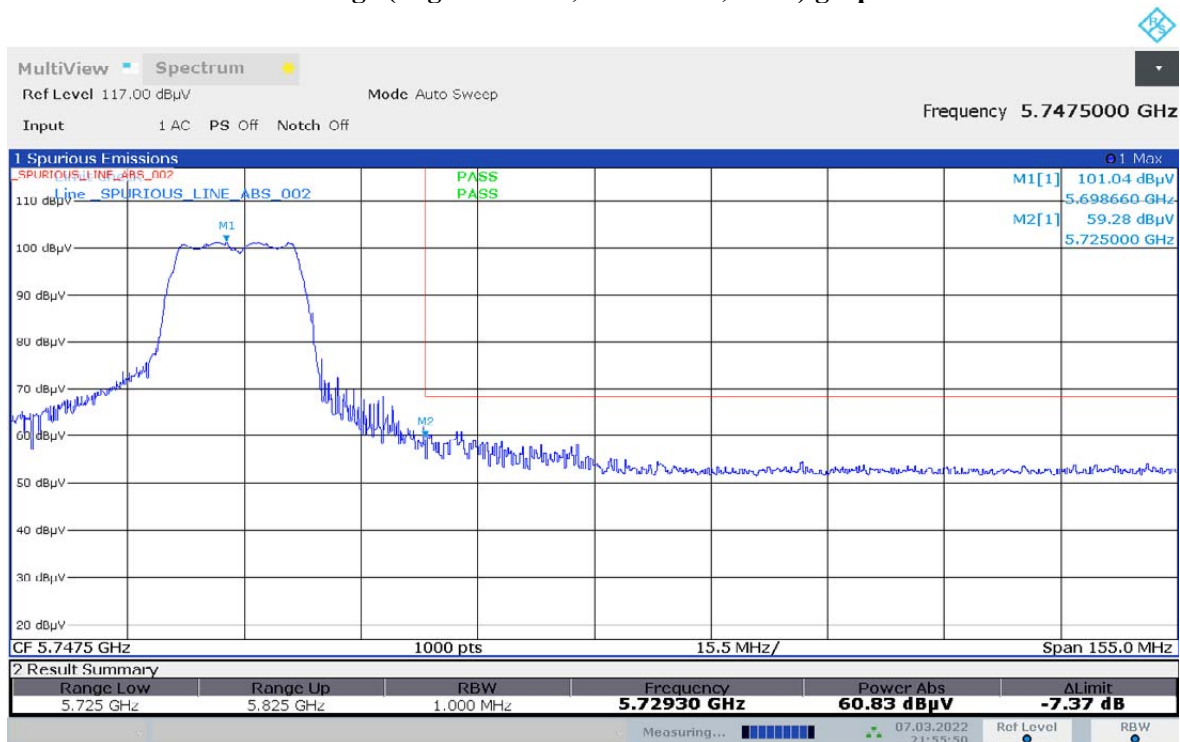
05:04:05 08.03.2022

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



21:52:18 07.03.2022

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



21:55:50 07.03.2022

Test: WIFI SAC Restricted Band Edge

Model Number: H25UCF9PW6AN S/N: 657TYB0771 EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A **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

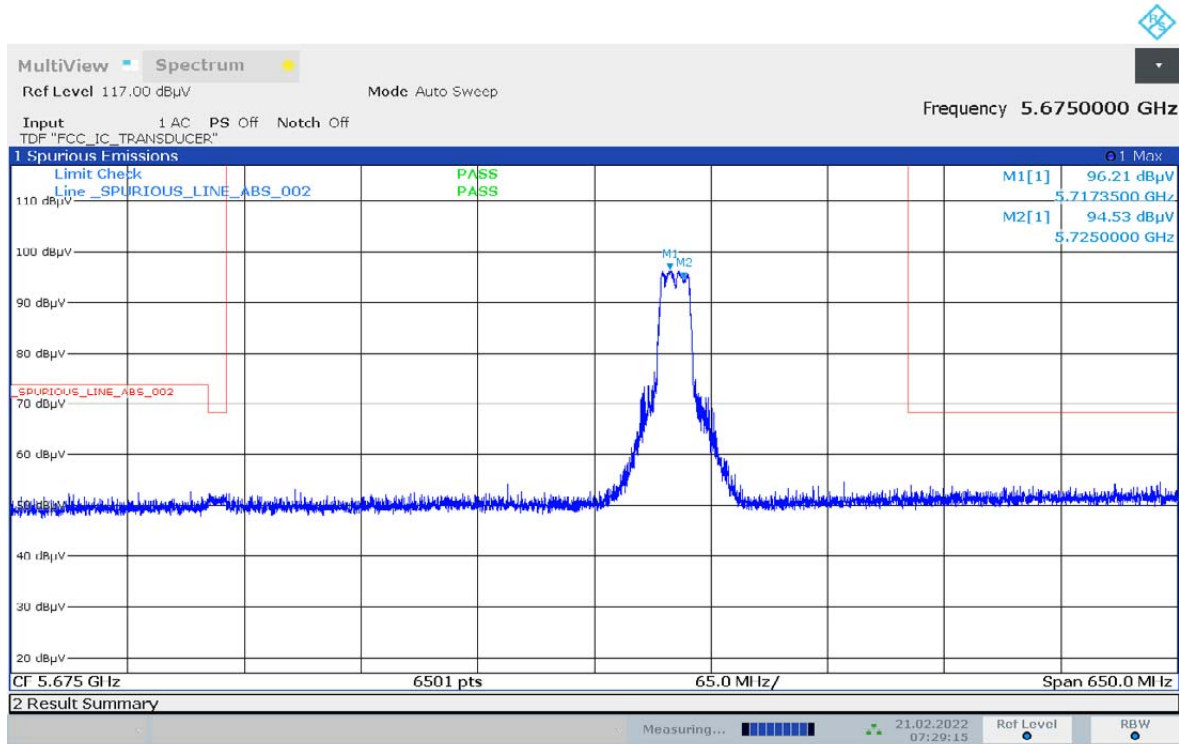
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
-------------------------	-----------------	-------------

Temperature (degC): 23.9
Test Performed by: Nazrin&Qawiman
System MU: 5.84dB

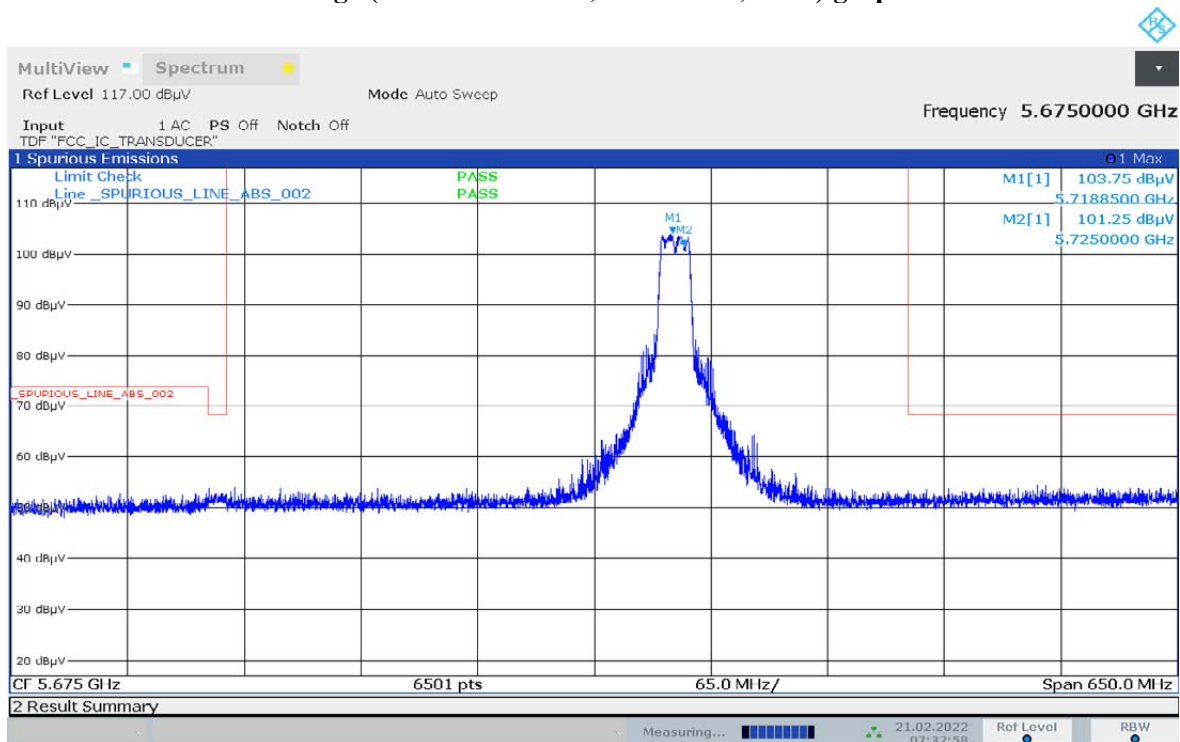
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



07:29:16 21.02.2022

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



07:32:58 21.02.2022

Test: WIFI SAC Restricted Band Edge

Model Number: H25UCF9PW6AN S/N: 657TYB0771 EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A **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

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9
Test Performed by: Nazrin&Qawiman
System MU: 5.84dB

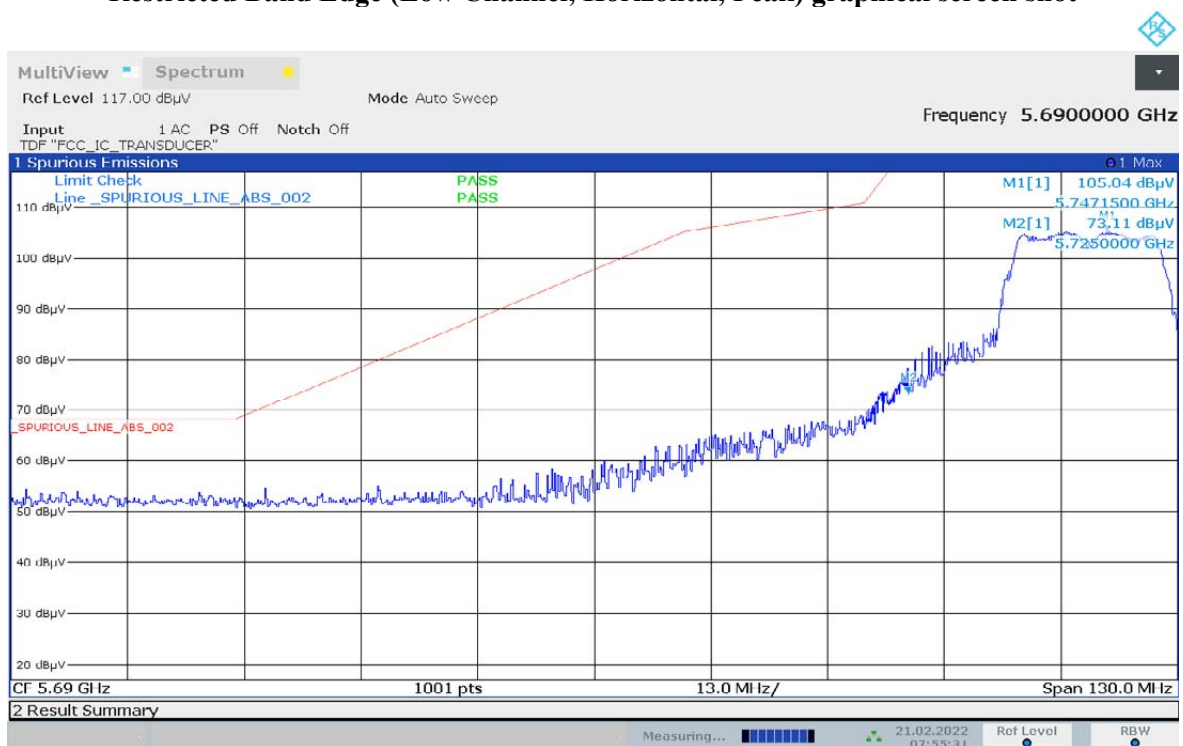
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



07:51:32 21.02.2022

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



07:55:31 21.02.2022

Test: WIFI SAC Restricted Band Edge

Model Number: H25UCF9PW6AN S/N: 657TYB0771 EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A **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

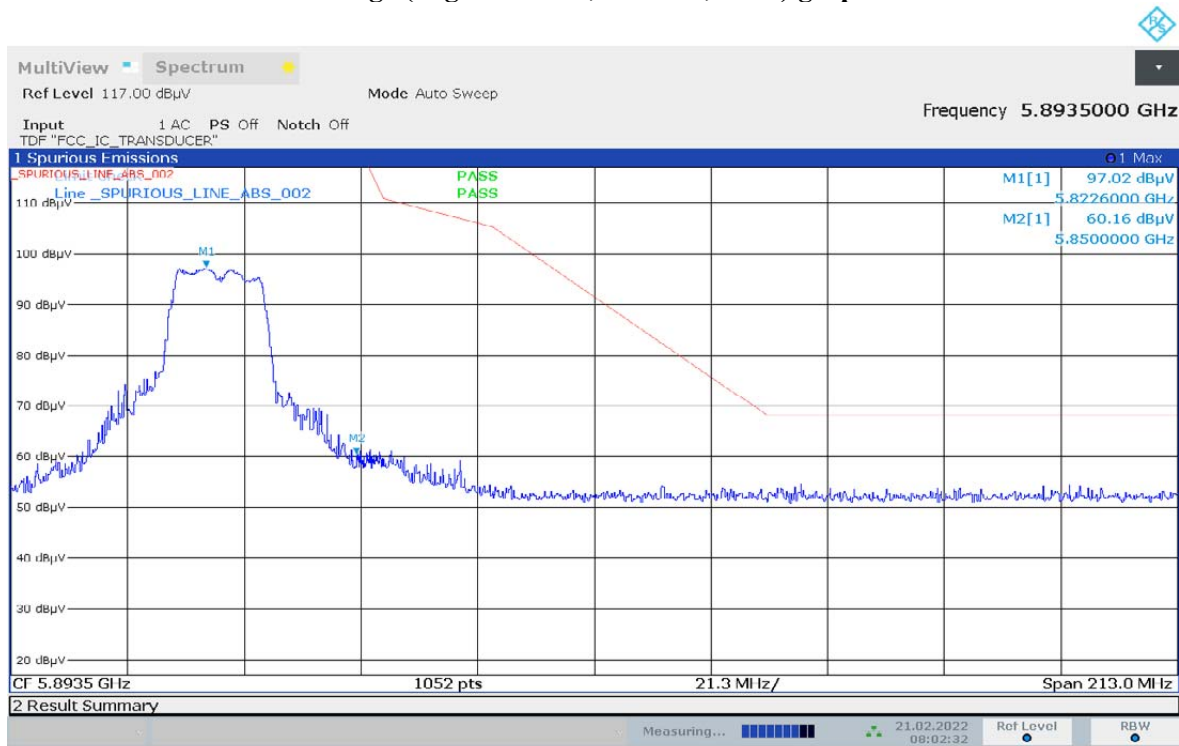
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9
Test Performed by: Nazrin&Qawiman
System MU: 5.84dB

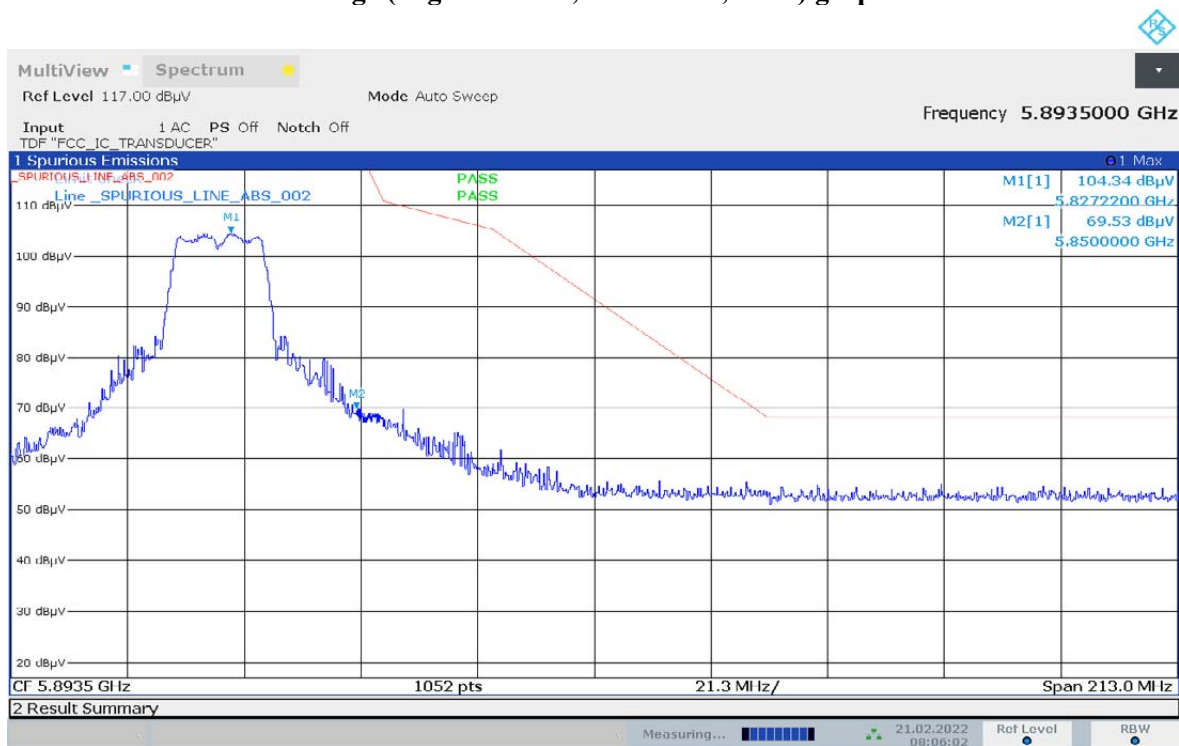
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



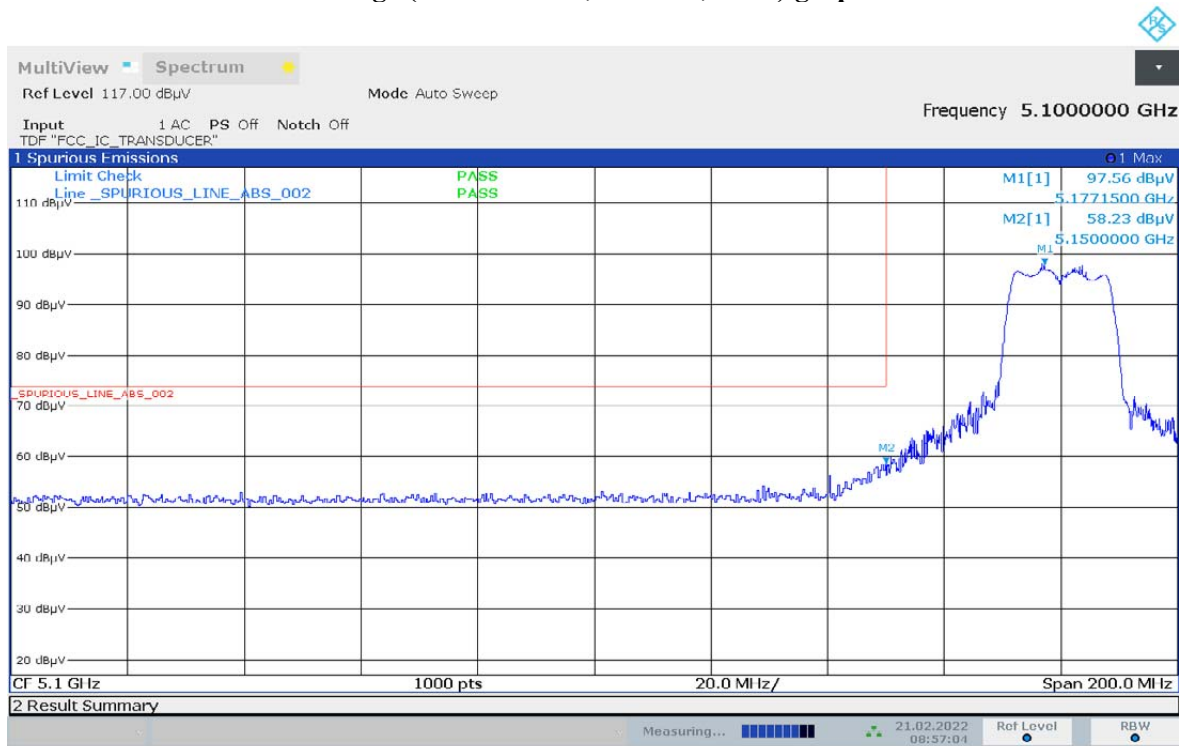
08:02:33 21.02.2022

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



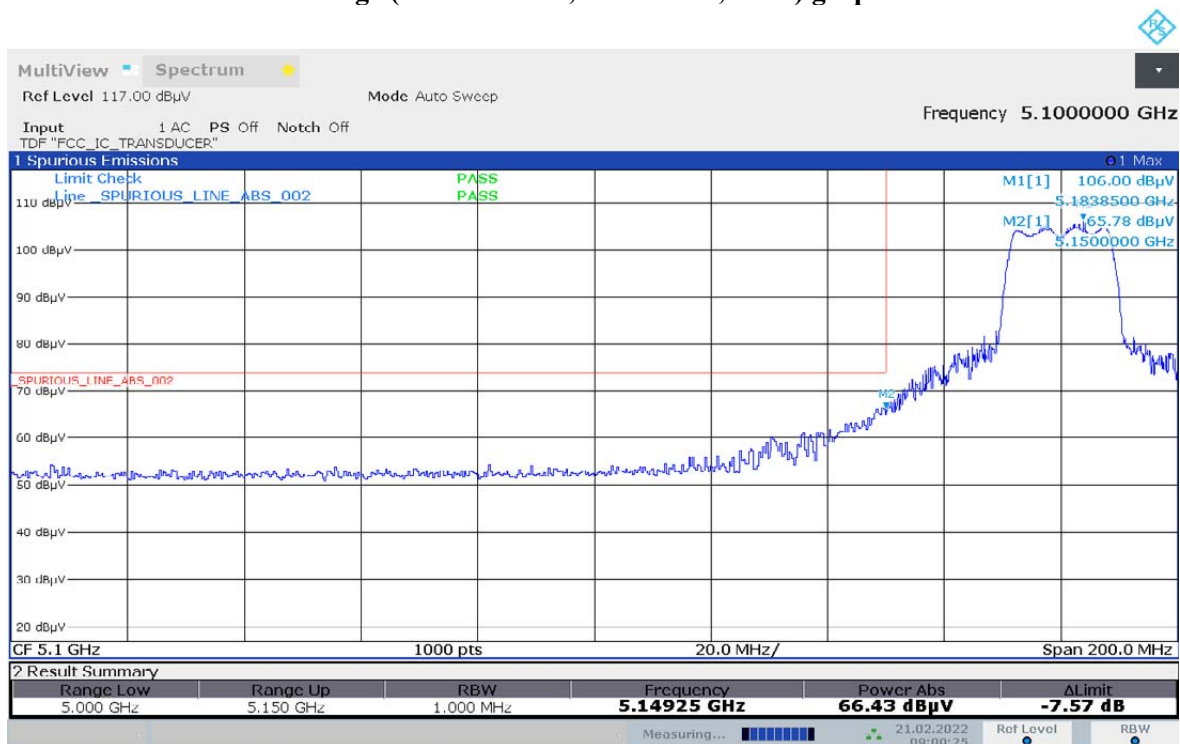
08:06:03 21.02.2022

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



08:57:05 21.02.2022

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



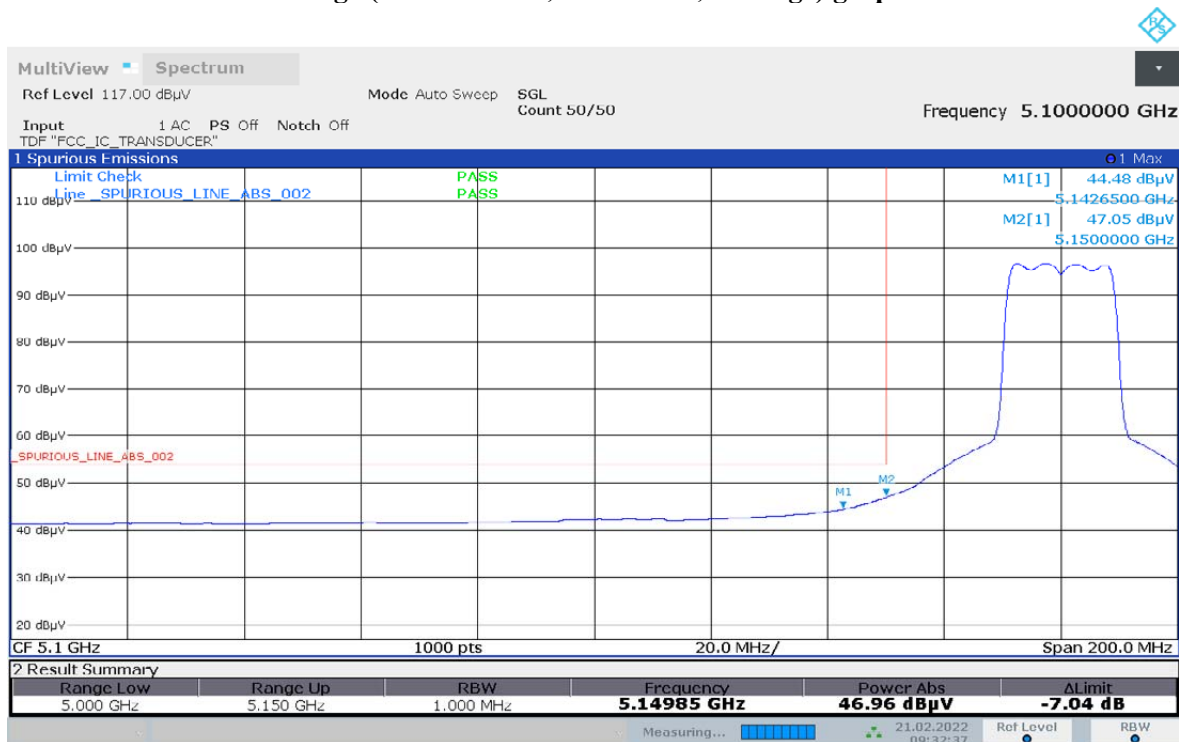
09:00:25 21.02.2022

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



09:17:34 21.02.2022

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



09:32:38 21.02.2022

Test: WIFI SAC Restricted Band Edge

Model Number: H25UCF9PW6AN S/N: 657TYB0771 EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A **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

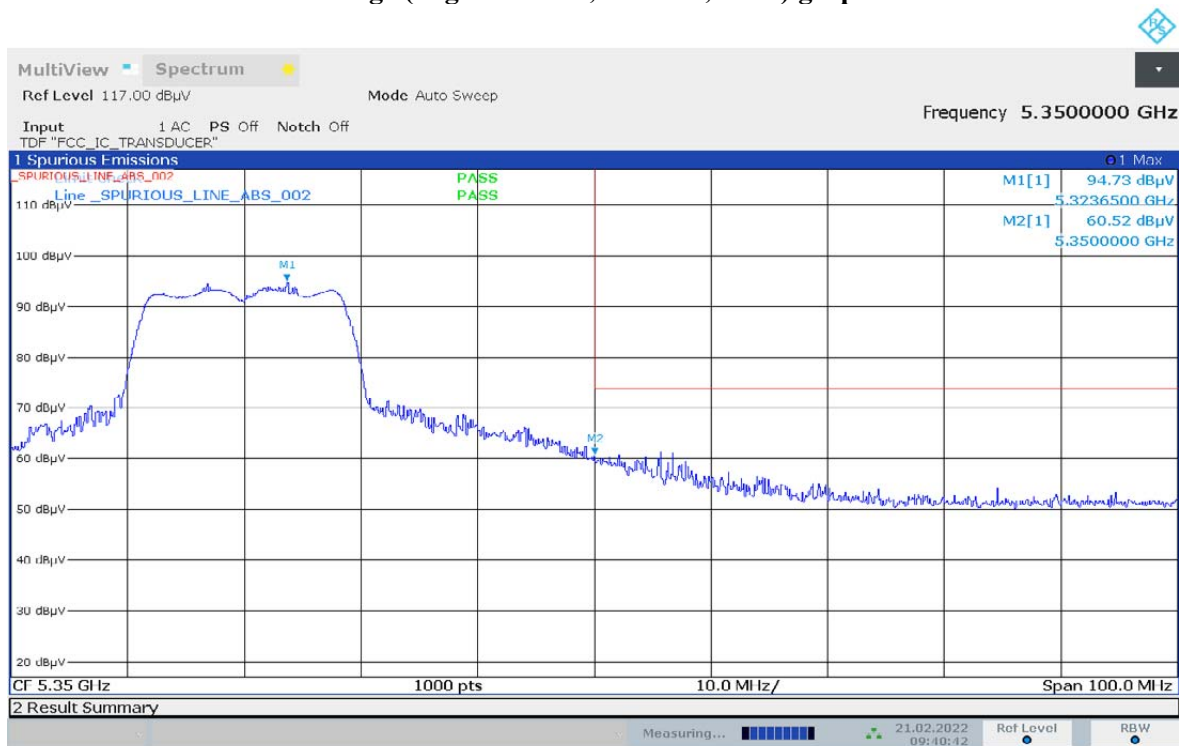
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9
Test Performed by: Nazrin&Qawiman
System MU: 5.84dB

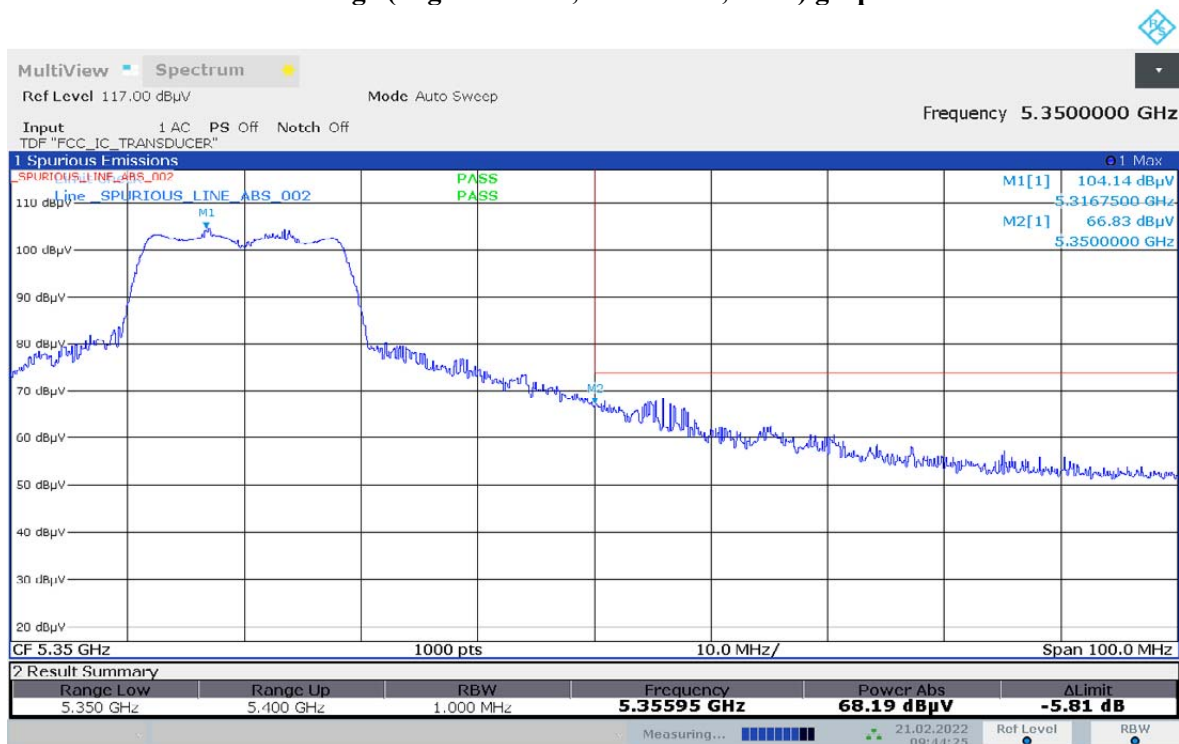
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



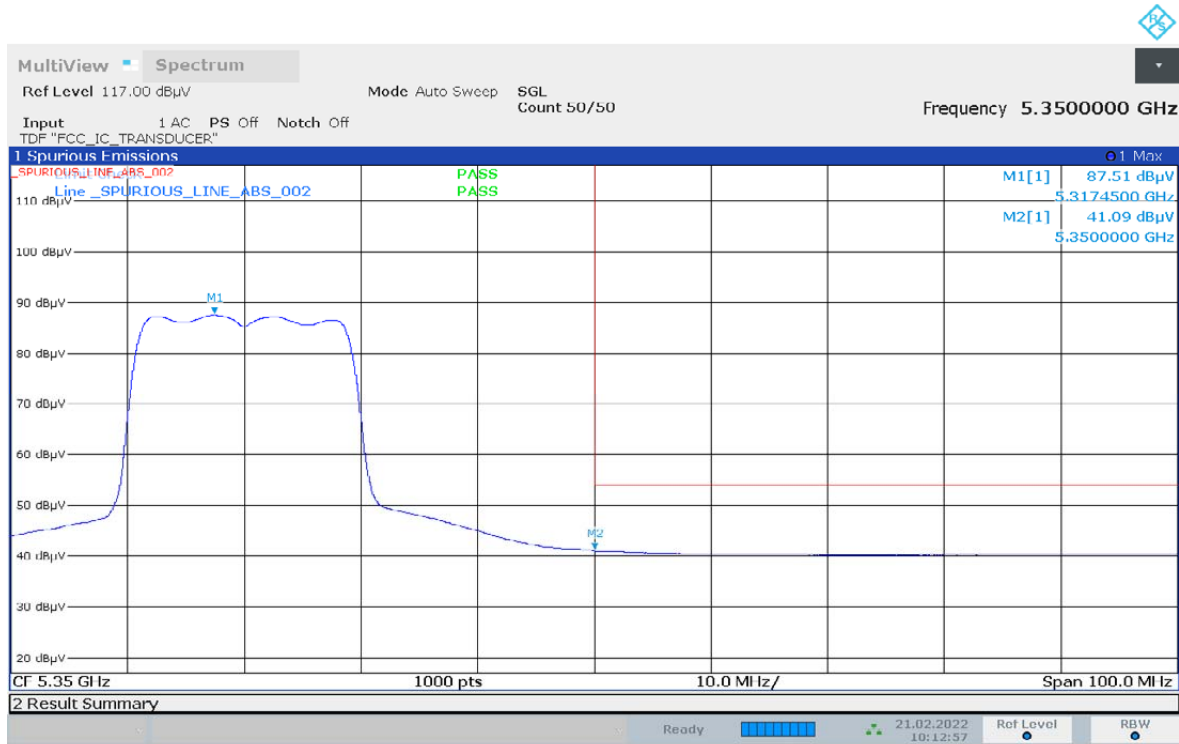
09:40:42 21.02.2022

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



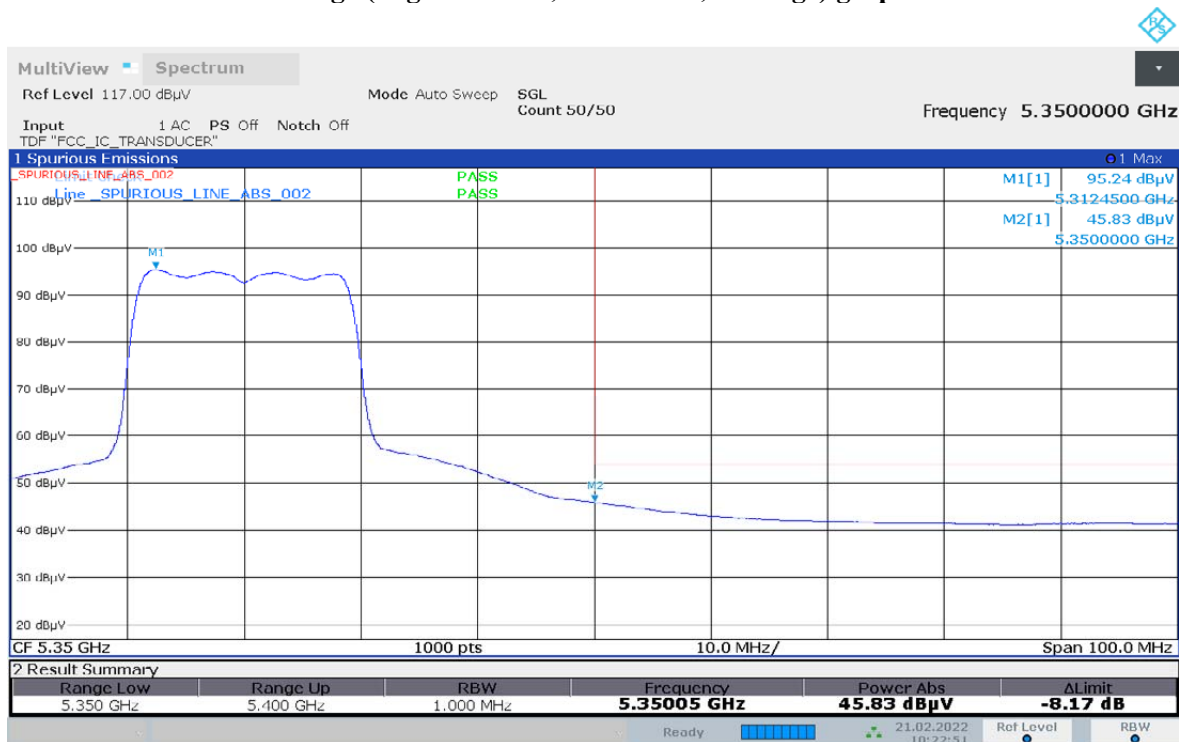
09:44:25 21.02.2022

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



10:12:57 21.02.2022

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



10:22:51 21.02.2022

Test: WIFI SAC Restricted Band Edge

Model Number: H25UCF9PW6AN S/N: 657TYB0771 EMC SR ID#: 26860-EMC-00191

Battery: PMNN4813A **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

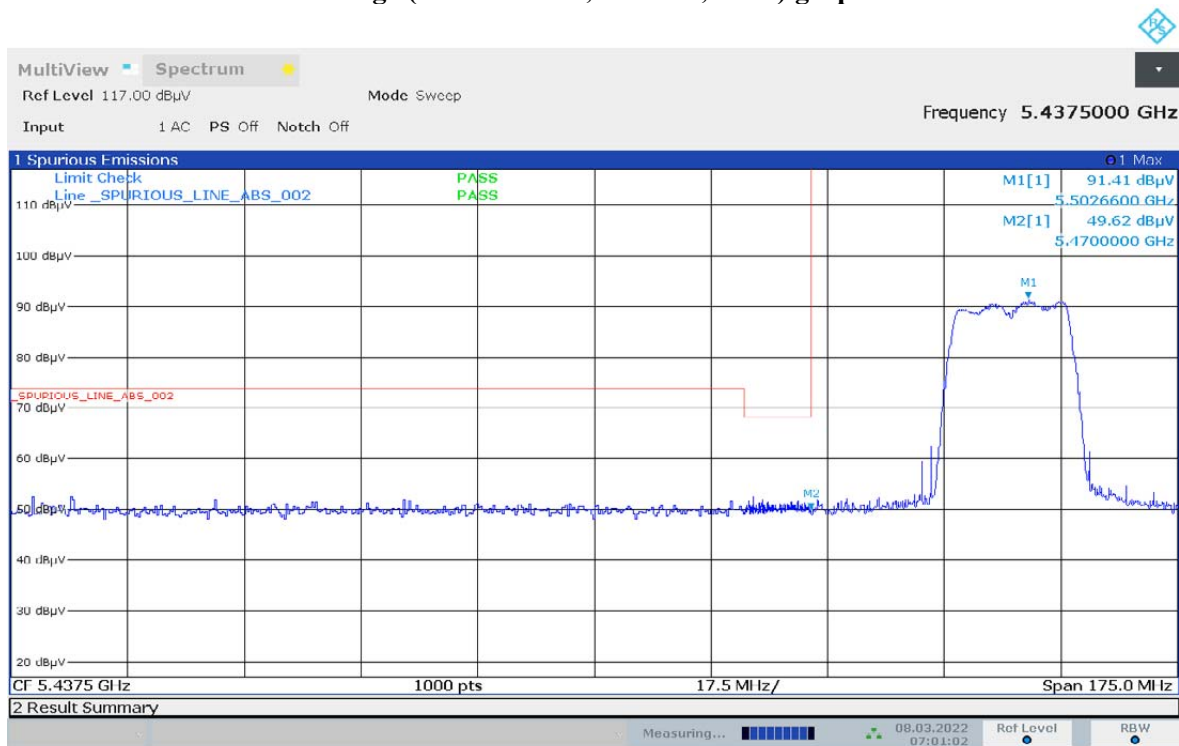
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC):23.7
Test Performed by: Nazrin&Qawiman
System MU: 5.84dB

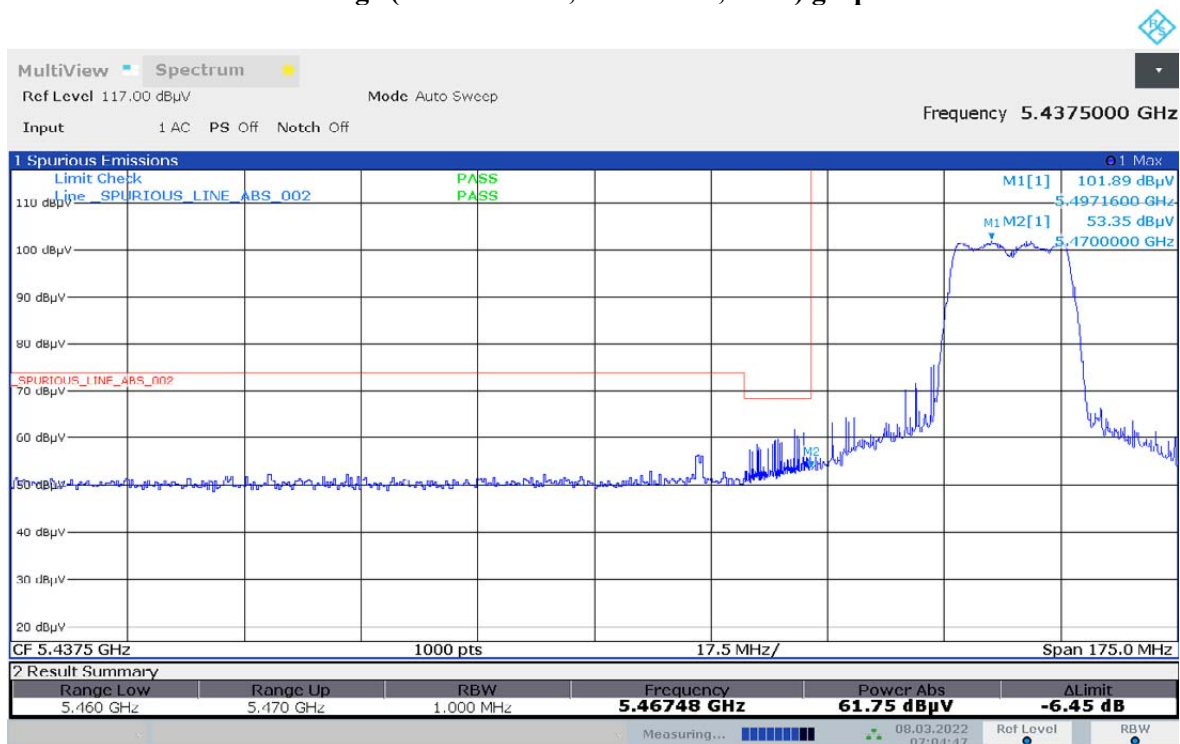
Humidity (%): 68.9
Test Date: Tue, 8 Mar, 2022

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



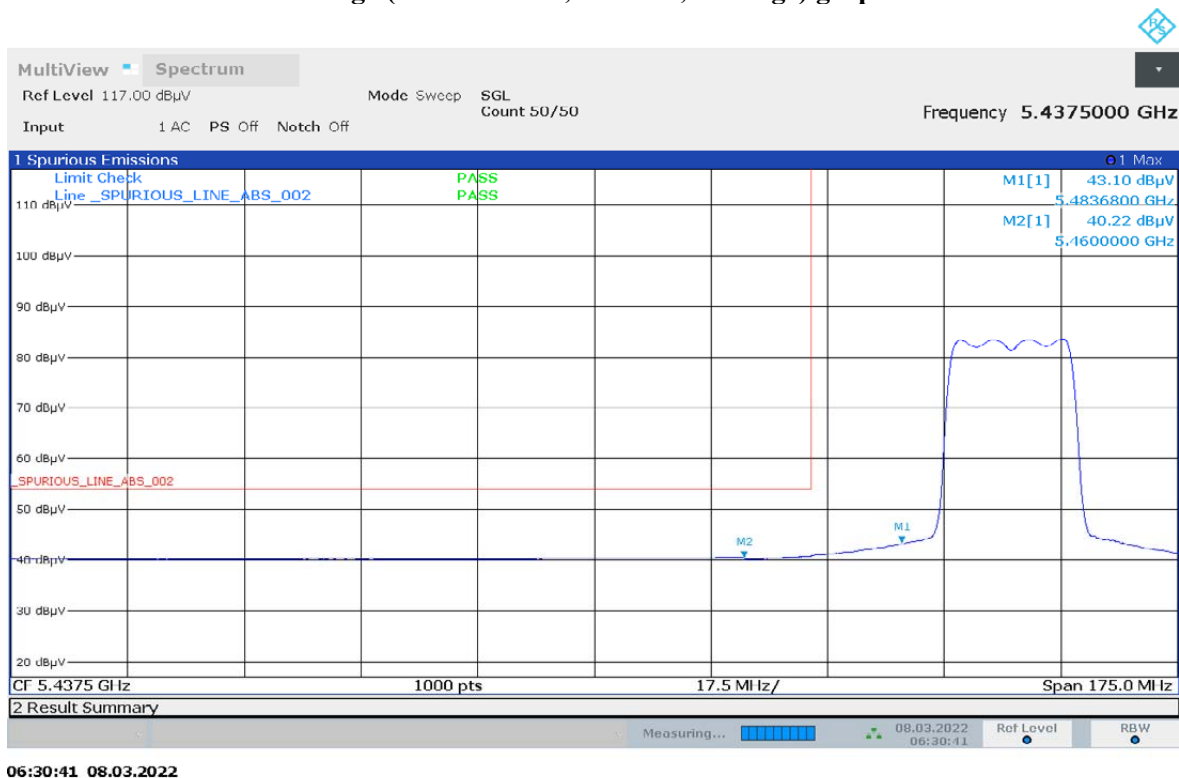
07:01:03 08.03.2022

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

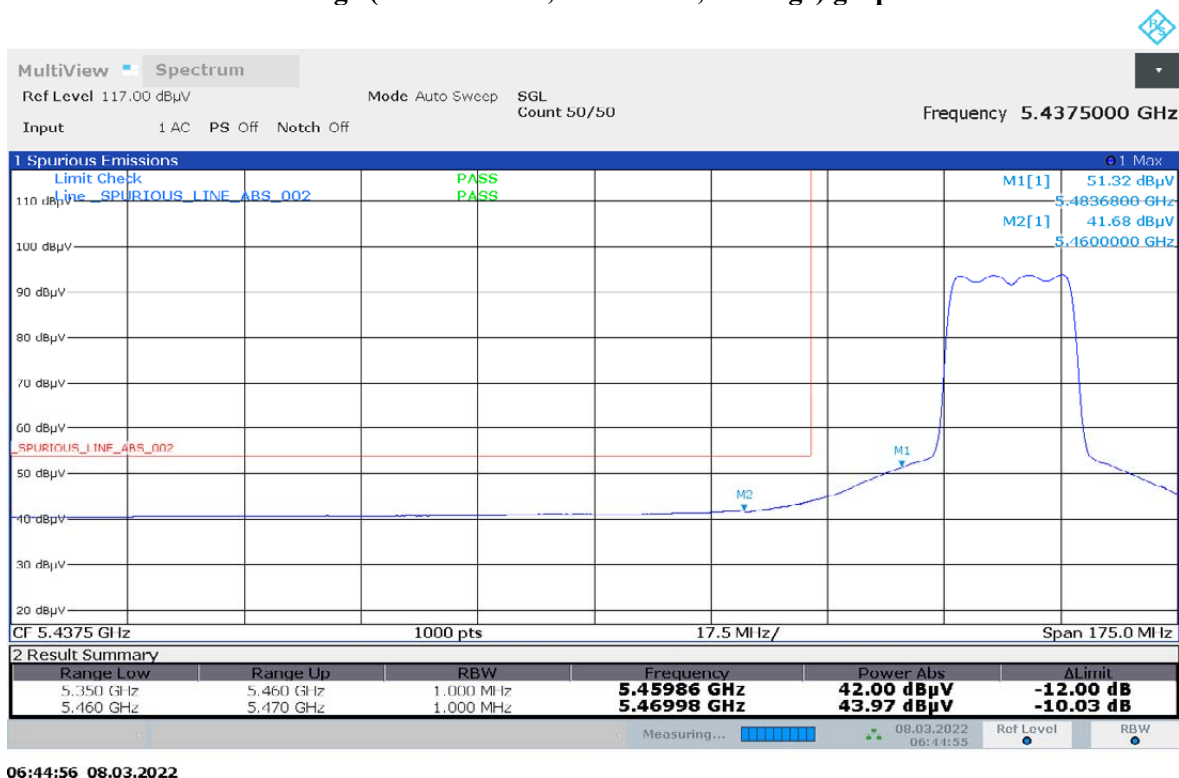


07:04:48 08.03.2022

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



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

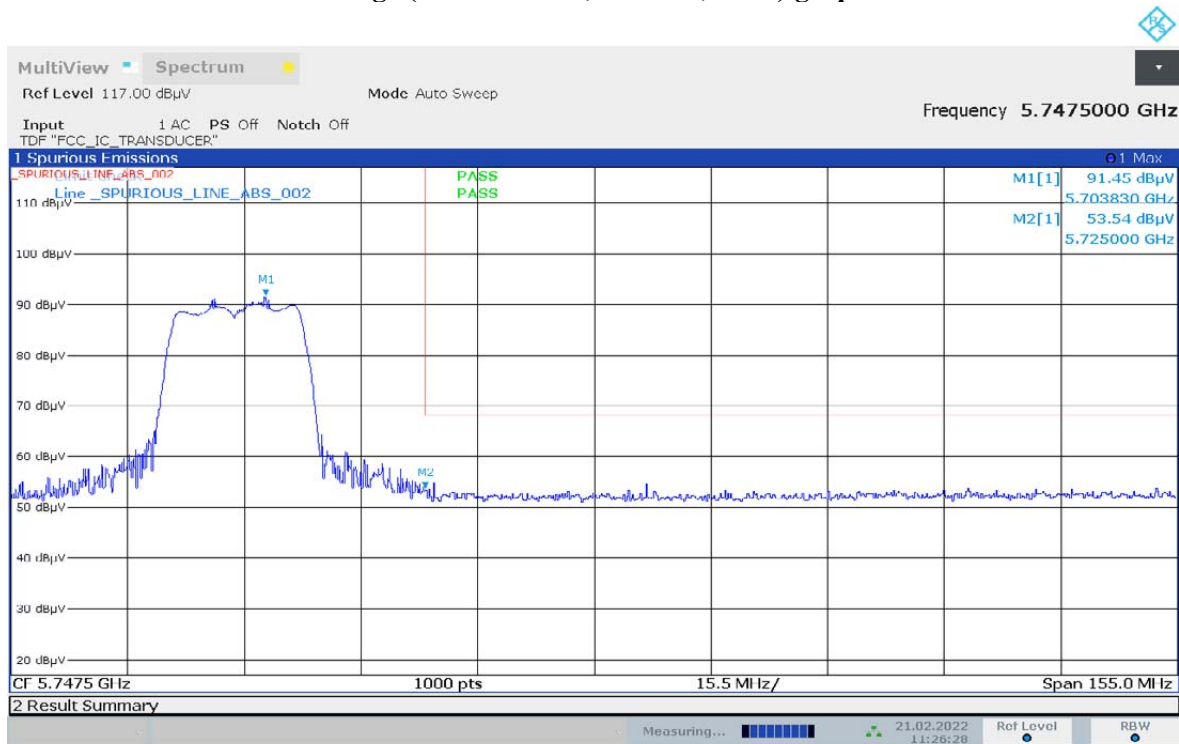


Restricted Band Edge (High Channel) tabular data

Remarks: Pass Result	Marginal Result	Fail Result
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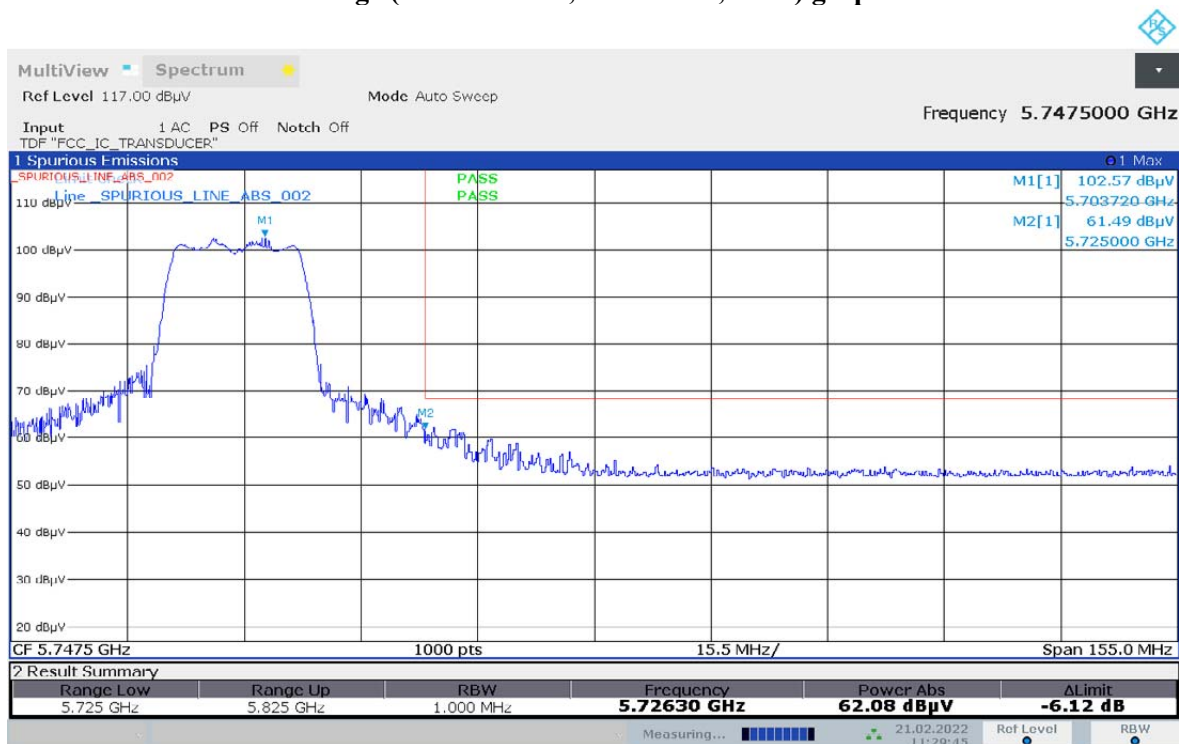
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



11:26:28 21.02.2022

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



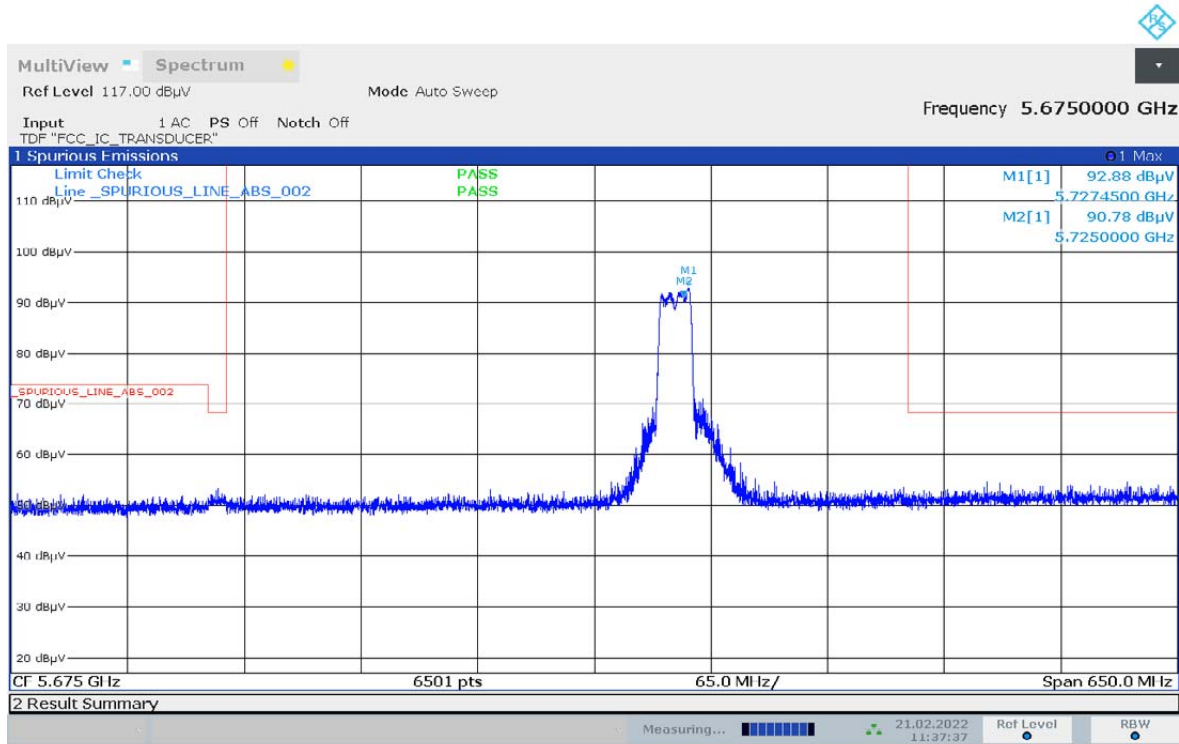
11:29:46 21.02.2022

Restricted Band Edge (Straddle Channel) tabular data

Remarks: Pass Result	Marginal Result	Fail Result
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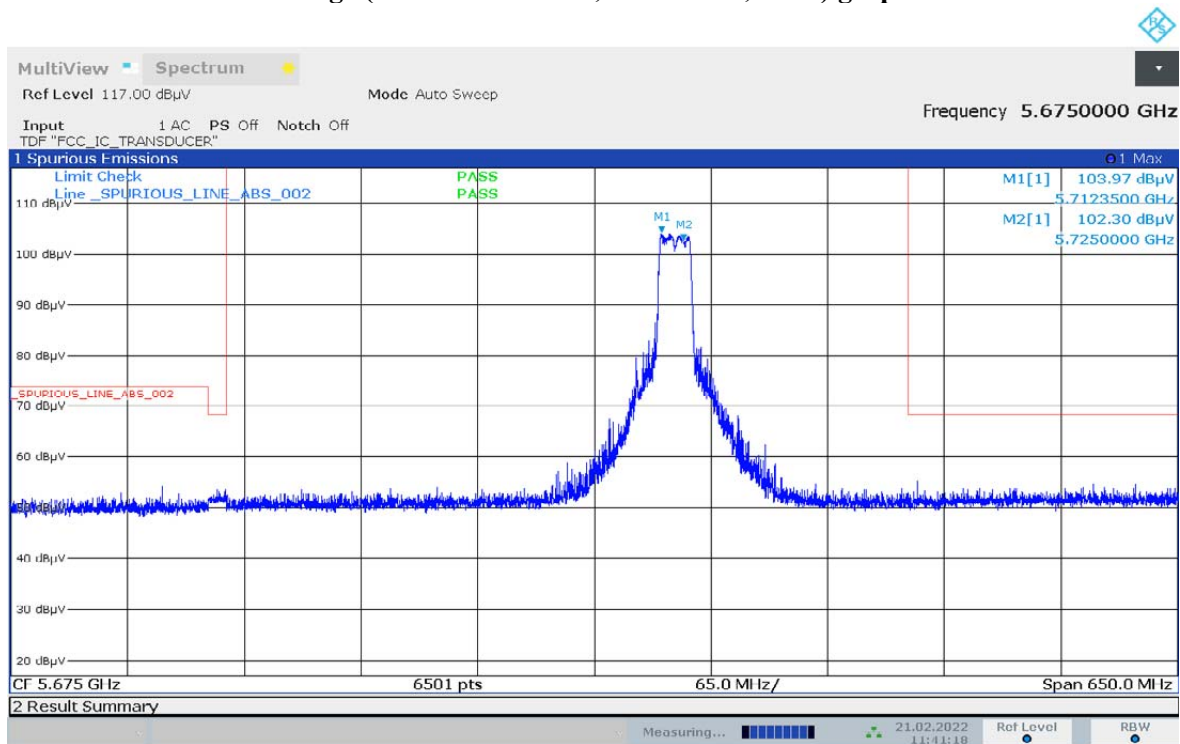
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



11:37:37 21.02.2022

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



11:41:19 21.02.2022

Restricted Band Edge (Low Channel) tabular data

Remarks: Pass Result	Marginal Result	Fail Result
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Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



08:17:00 21.02.2022

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



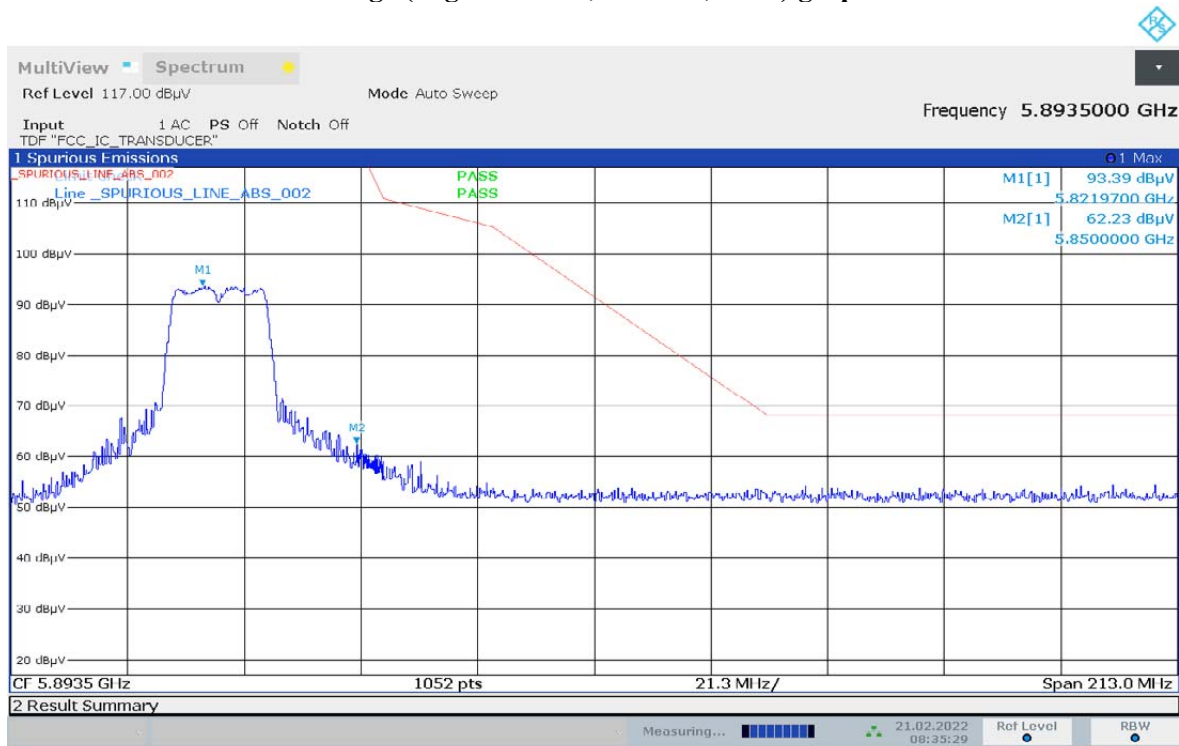
08:20:46 21.02.2022

Restricted Band Edge (High Channel) tabular data

Remarks: Pass Result	Marginal Result	Fail Result
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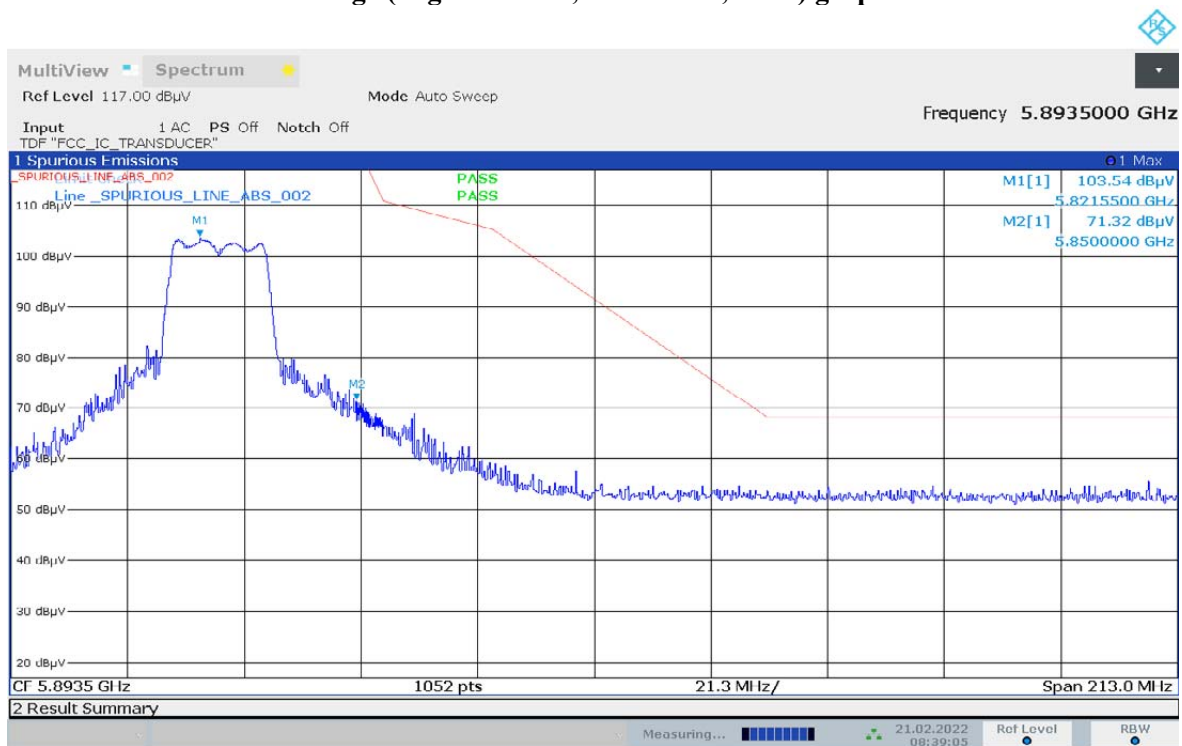
Humidity (%): 69.7
Test Date: Mon, 21 Feb, 2022

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



08:35:29 21.02.2022

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

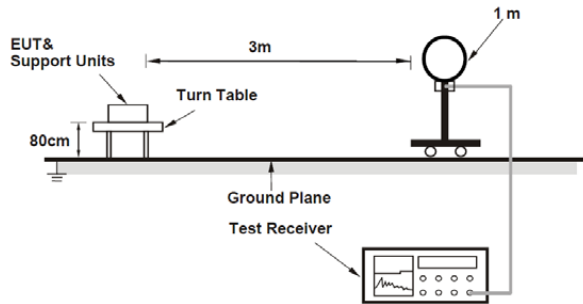


08:39:05 21.02.2022

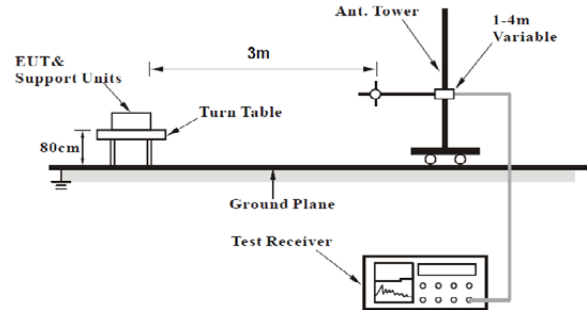
7.7. Radiated Spurious Emission Measurement

7.7.1. Test Setup

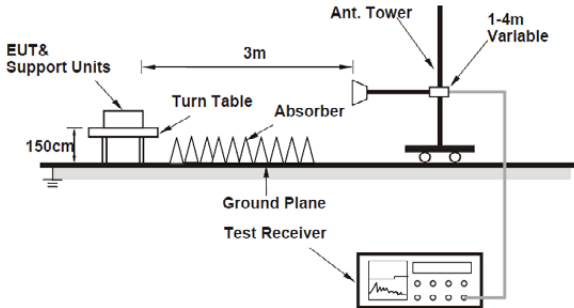
<Radiated emission below 30MHz>



<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

NOTE:

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

7.7.2. Test Limits

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

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

NOTE:

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

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

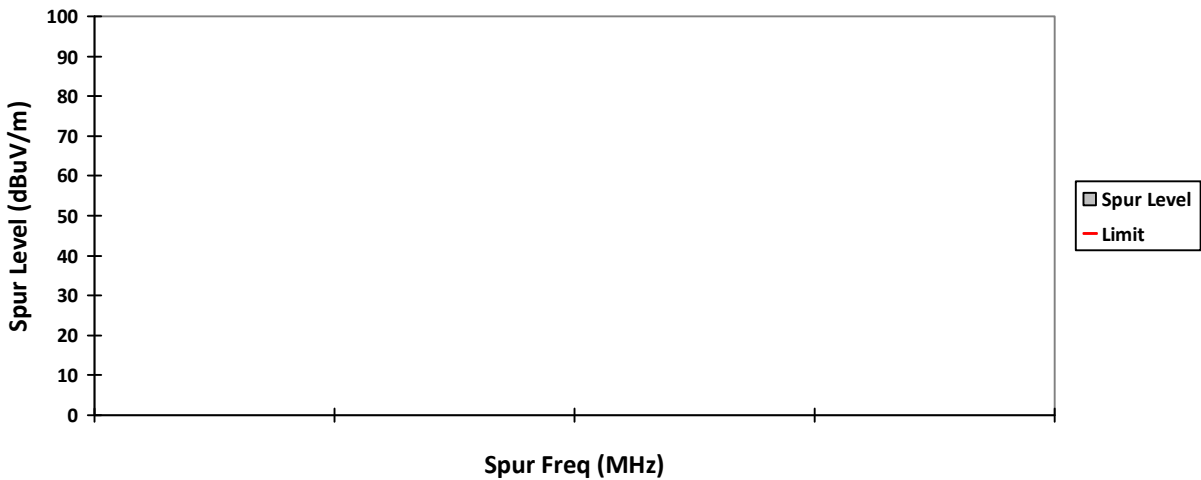
Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v01r03		Field Strength at 3 m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150–5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
5250–5350 MHz	15.407(b)(2)	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

NOTE:

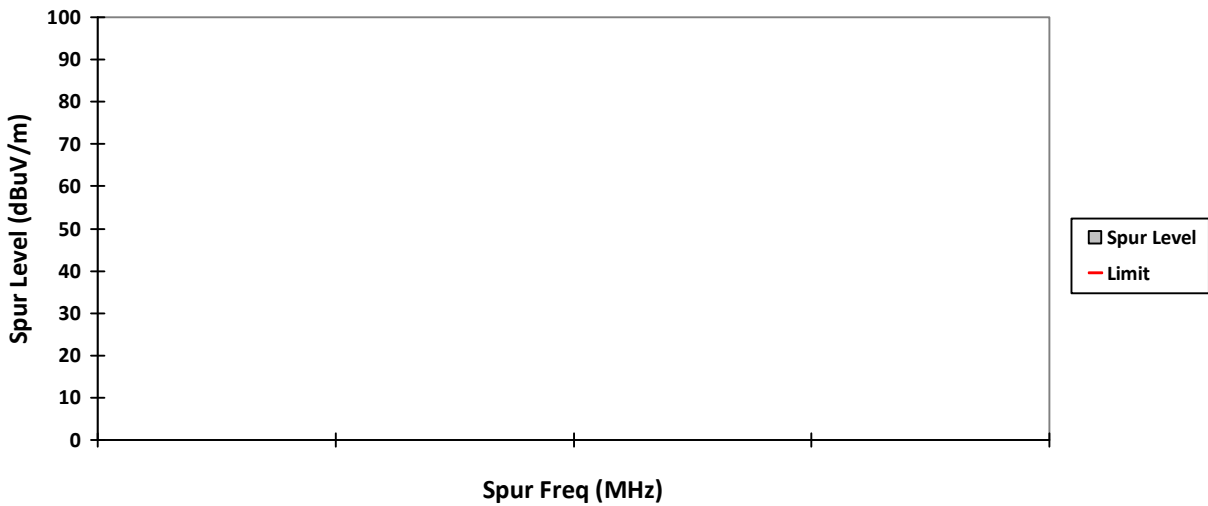
The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

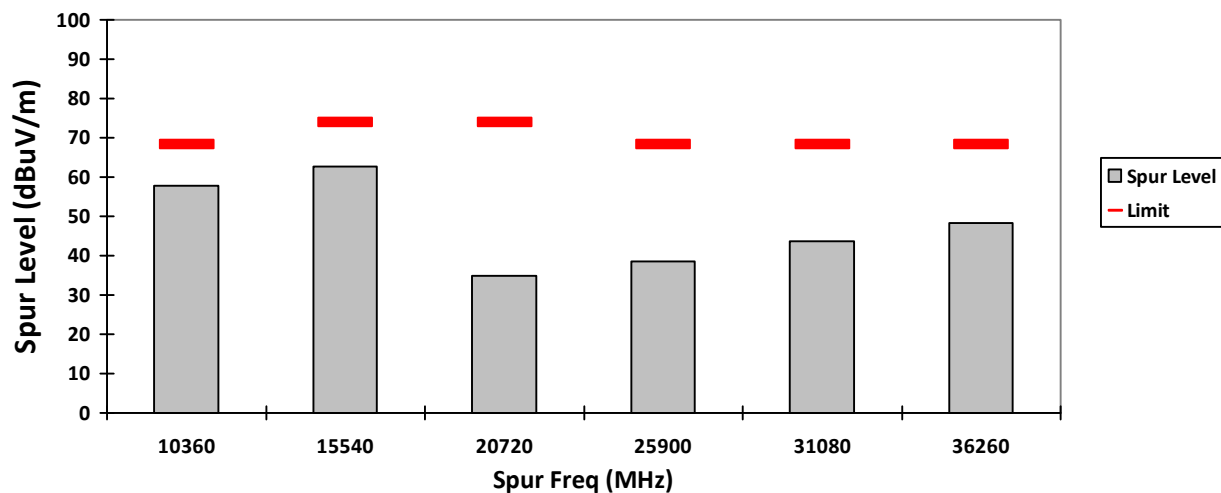
VERTICAL, QPK



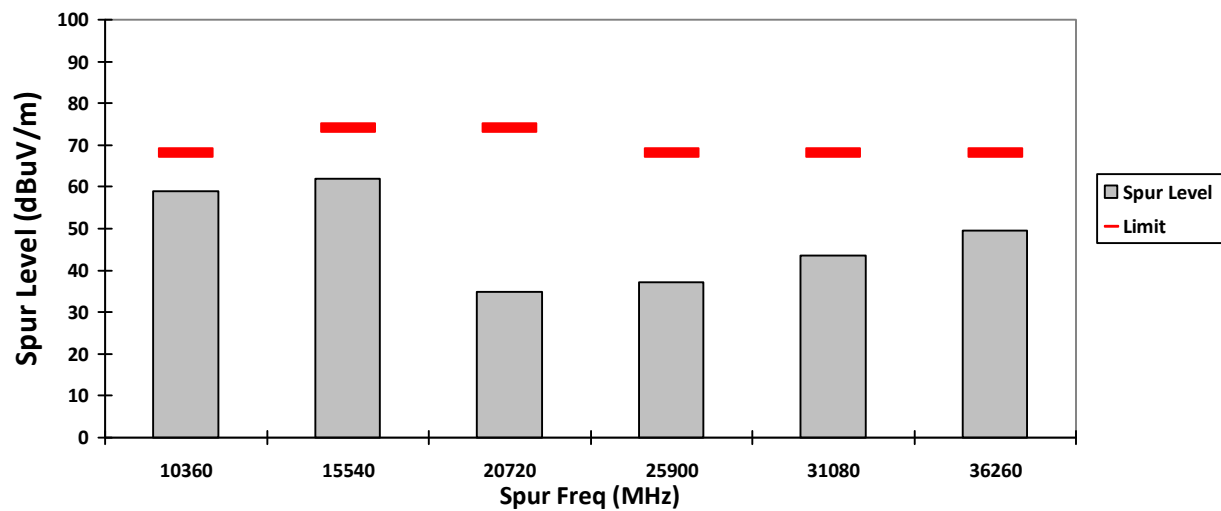
HORIZONTAL, QPK



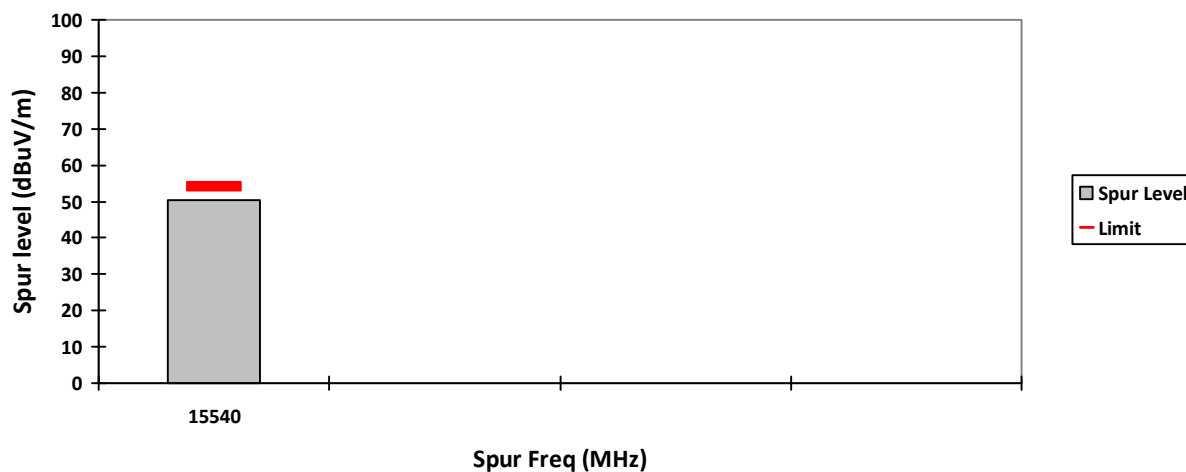
VERTICAL, PK



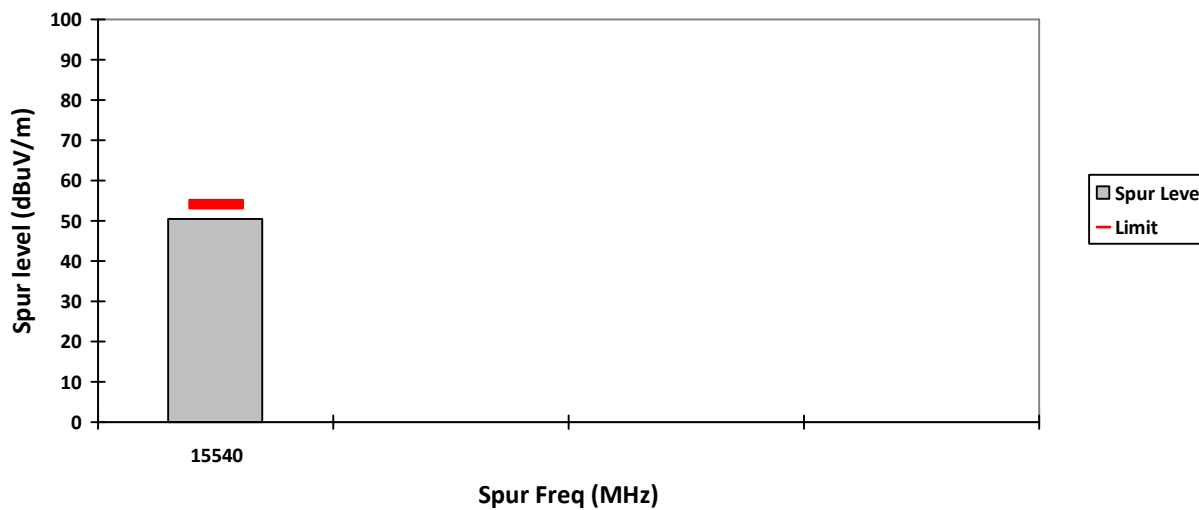
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: Mid

Test Frequency: 5220.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11a 20MHz)

Radiated Emission (Mid Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

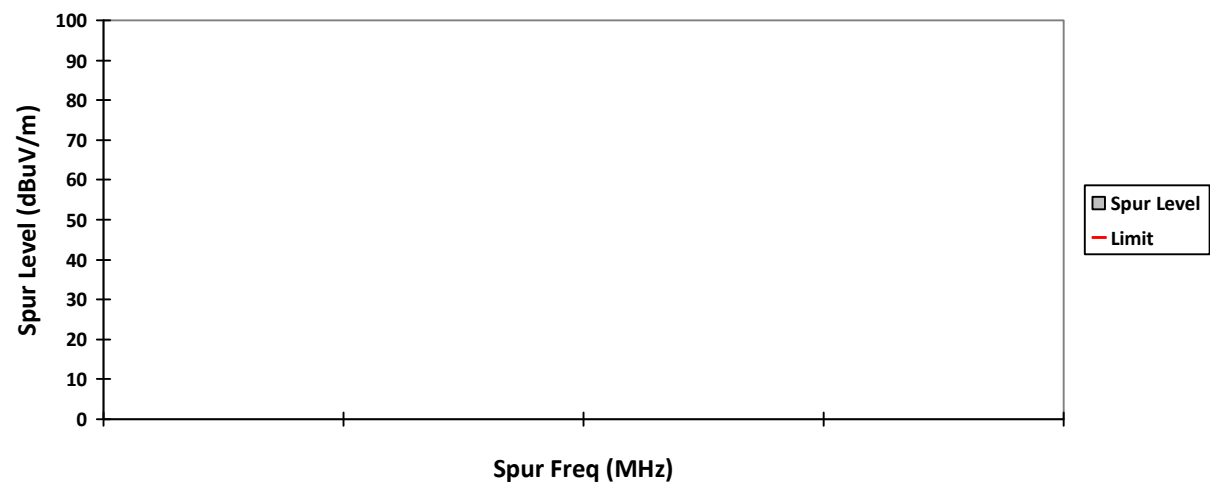
Test Date: Tue, 22 Feb, 2022

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

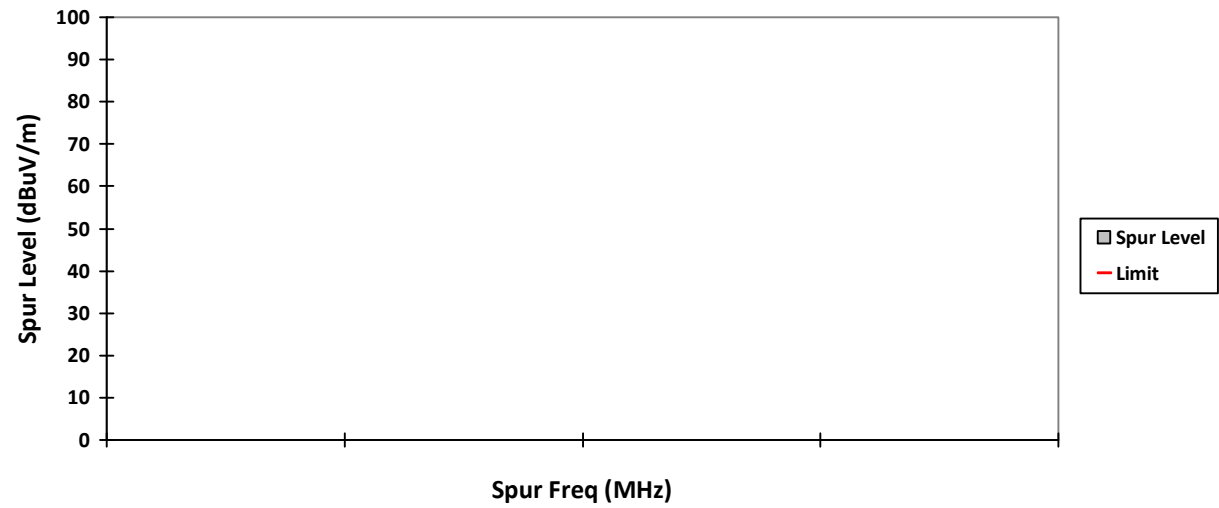
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

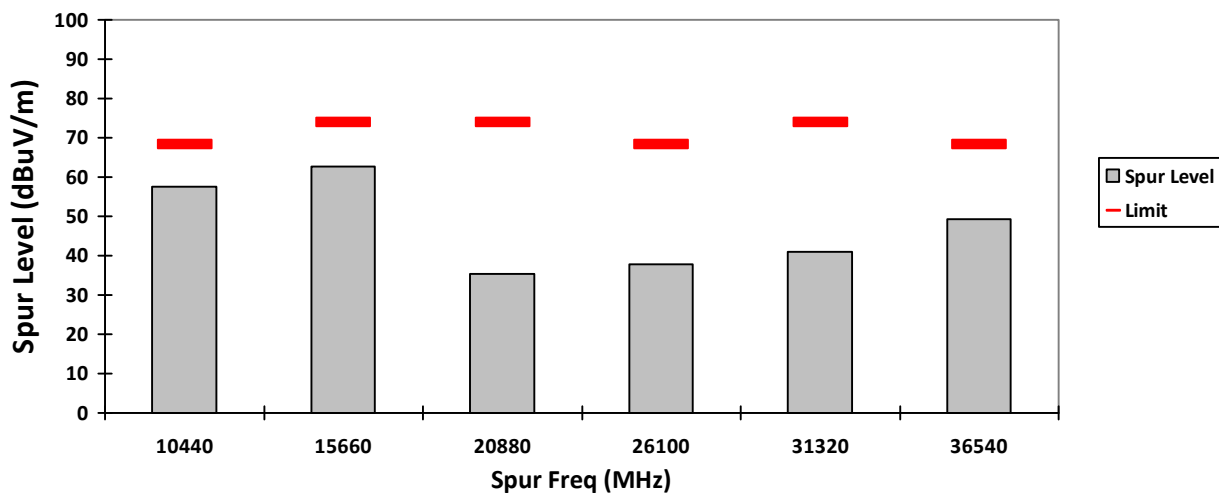
VERTICAL, QPK



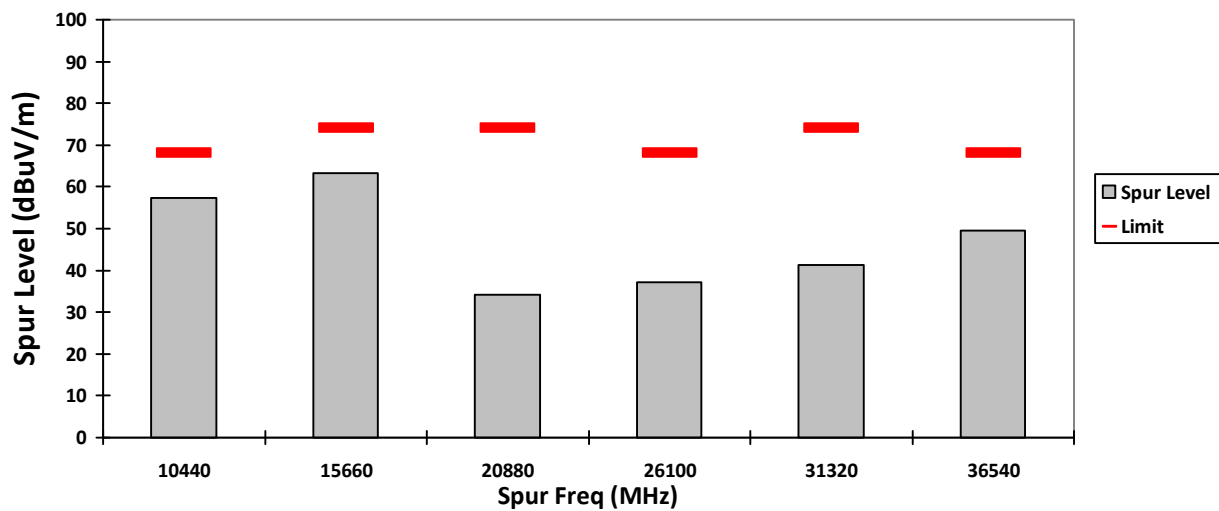
HORIZONTAL, QPK



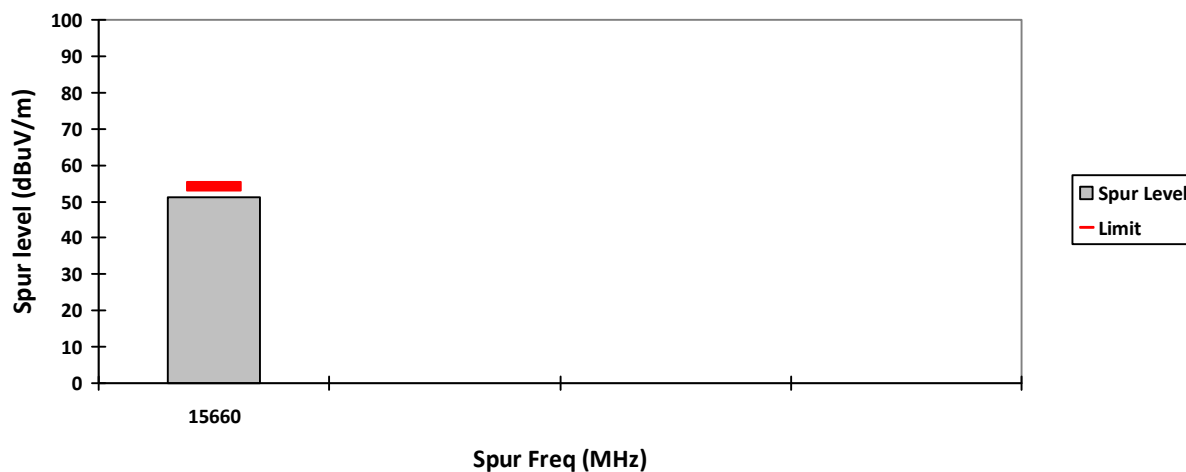
VERTICAL, PK



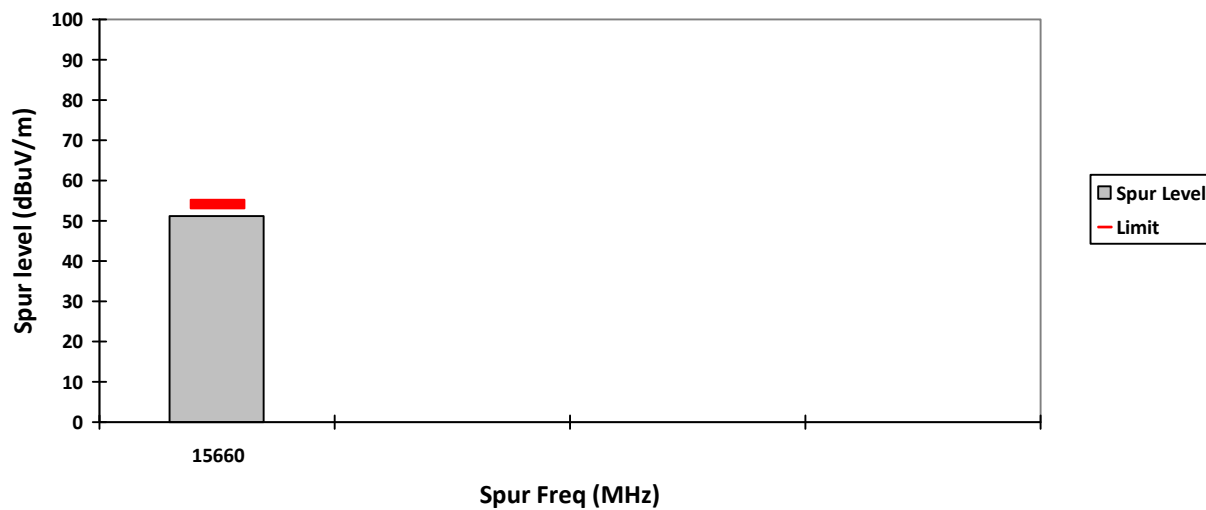
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: High

Test Frequency: 5240.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11a 20MHz)

Radiated Emission (High Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

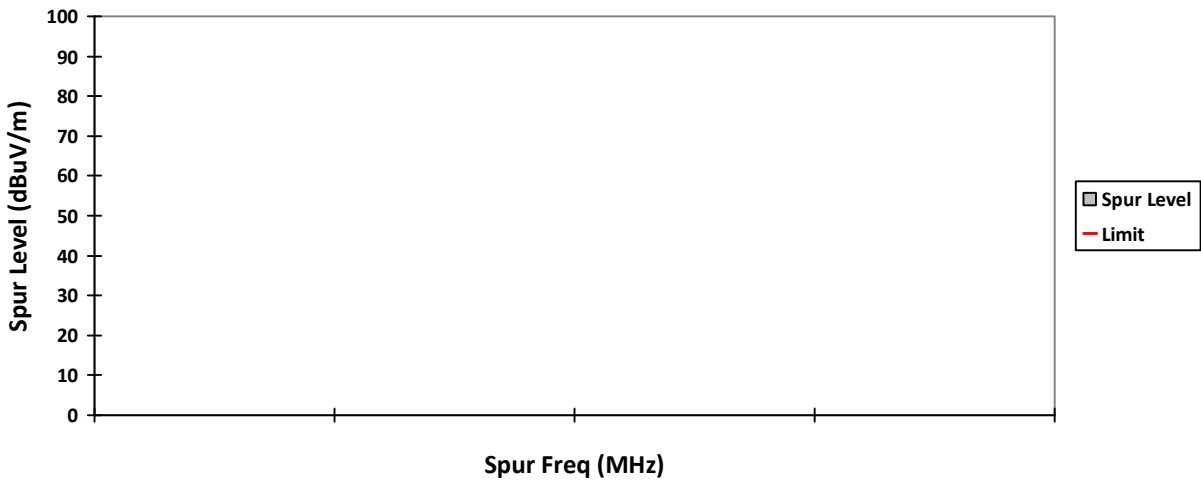
Test Date: Tue, 22 Feb, 2022

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

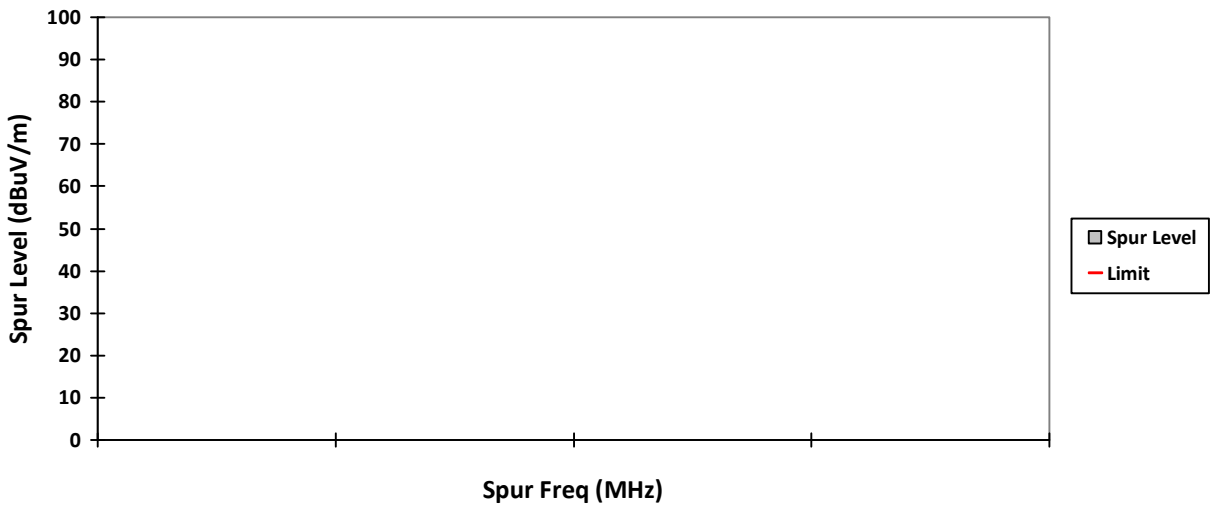
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

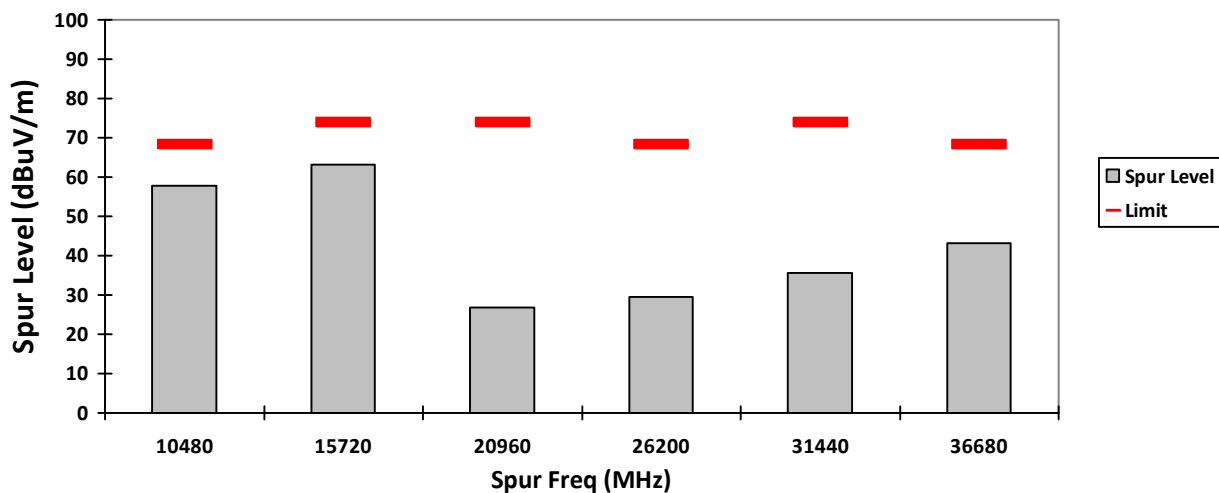
VERTICAL, QPK



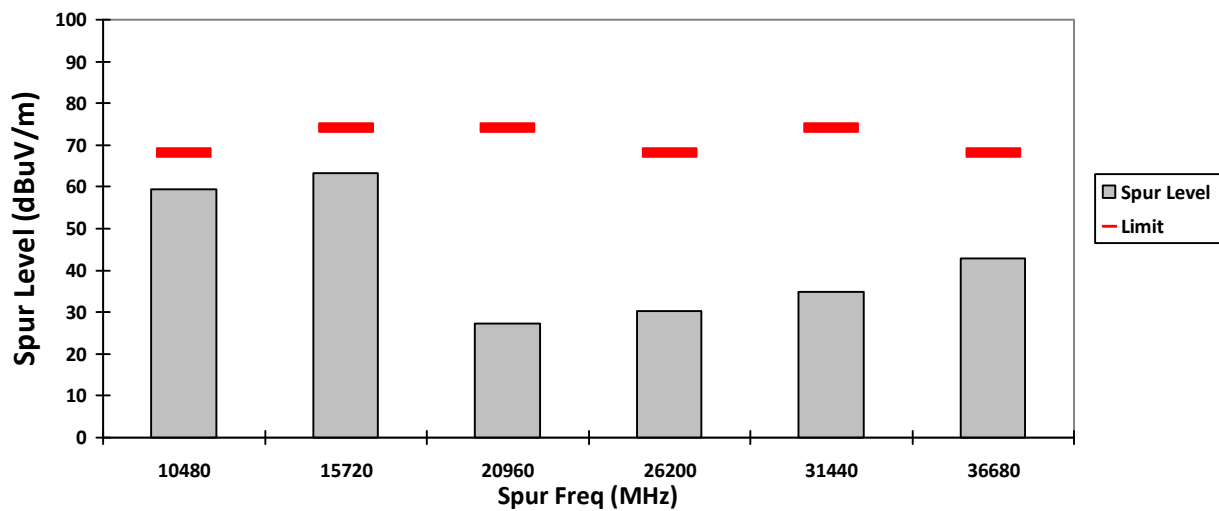
HORIZONTAL, QPK



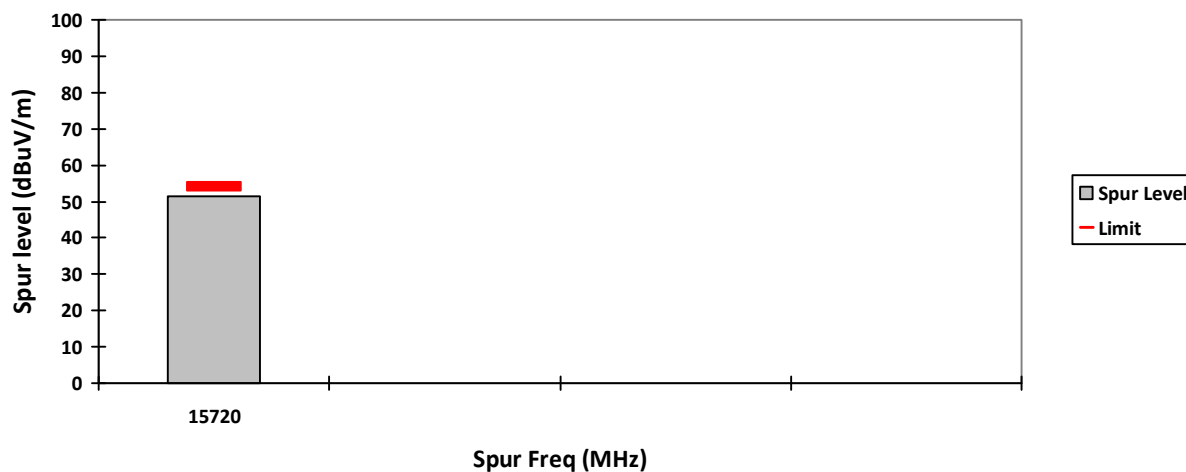
VERTICAL, PK



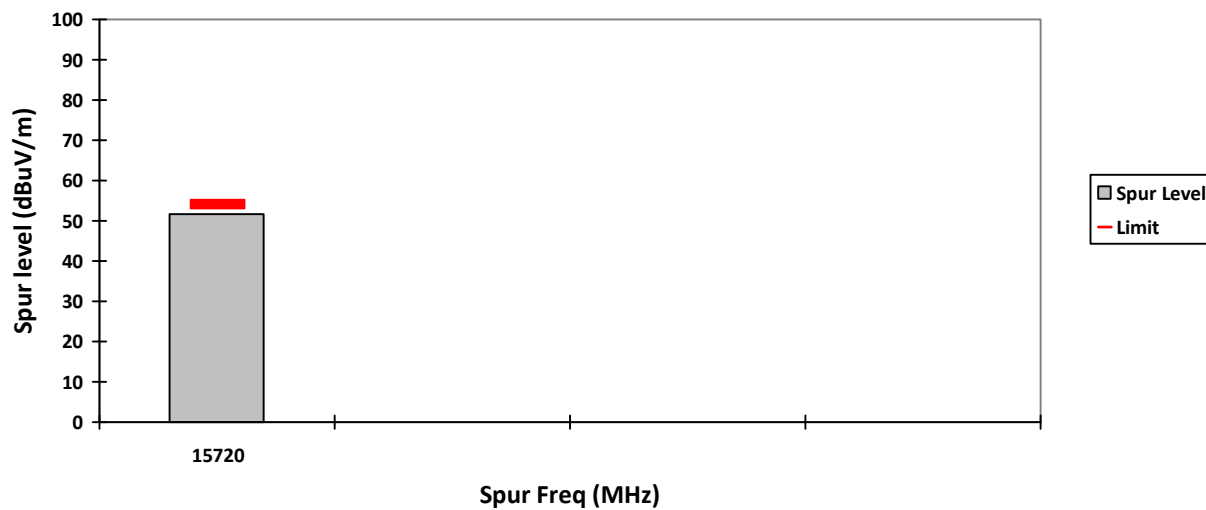
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



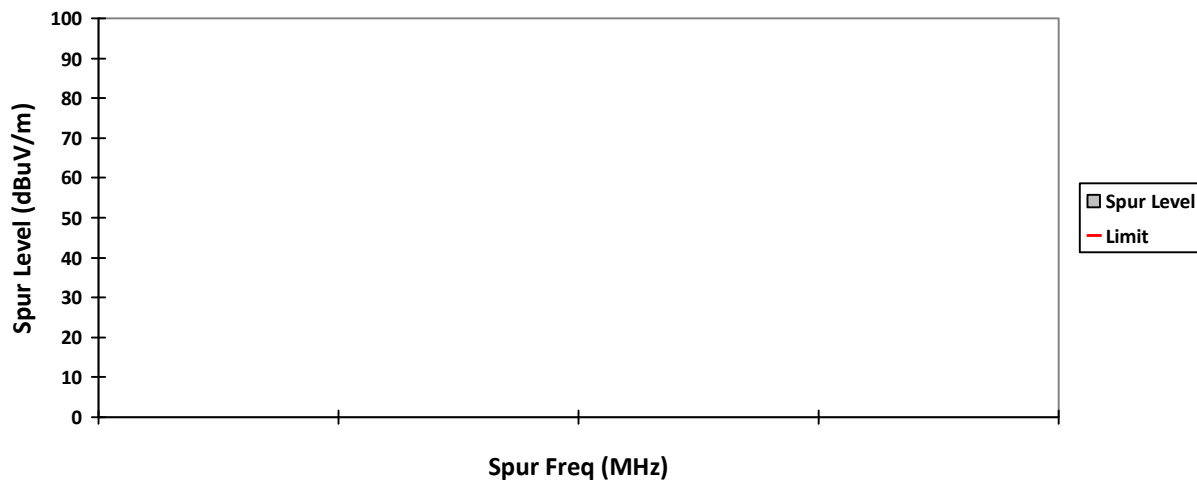
Test Channel: Low Test Frequency: 5260.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11a 20MHz)

[illegible]

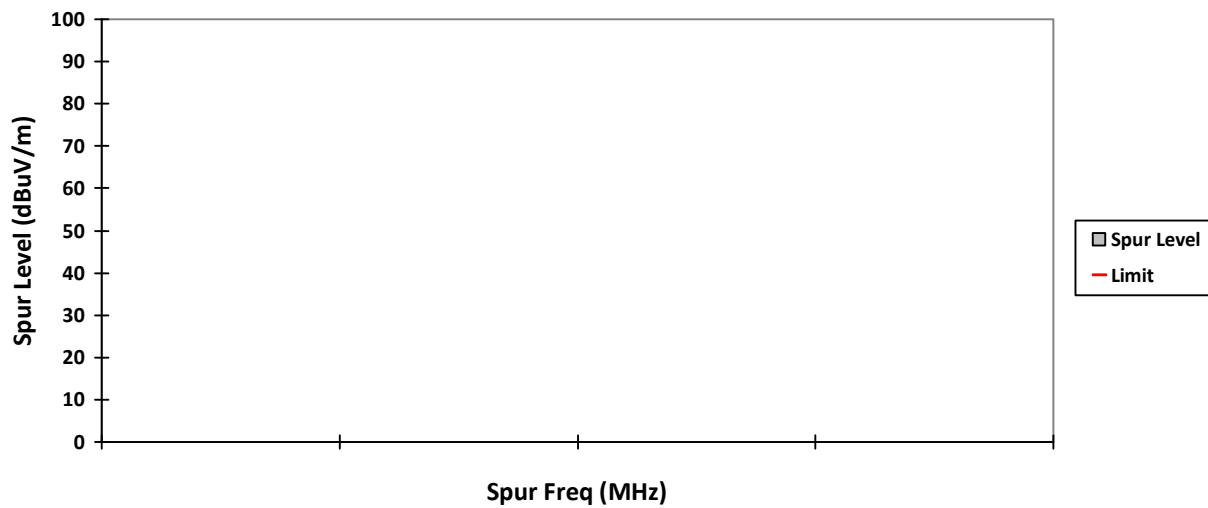
Remarks: Pass Result	Marginal Result	Fail Result
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*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

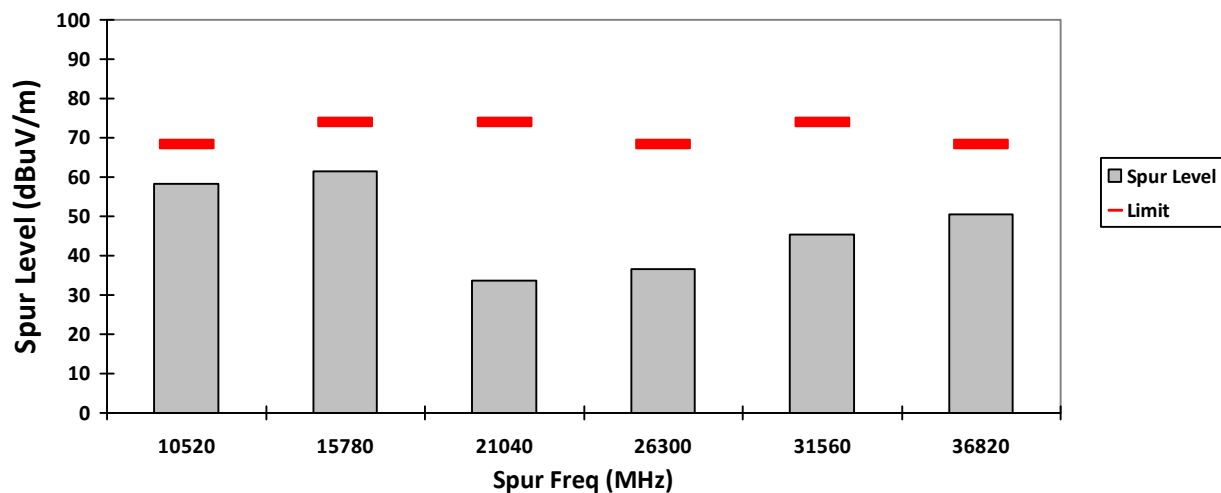
VERTICAL, QPK



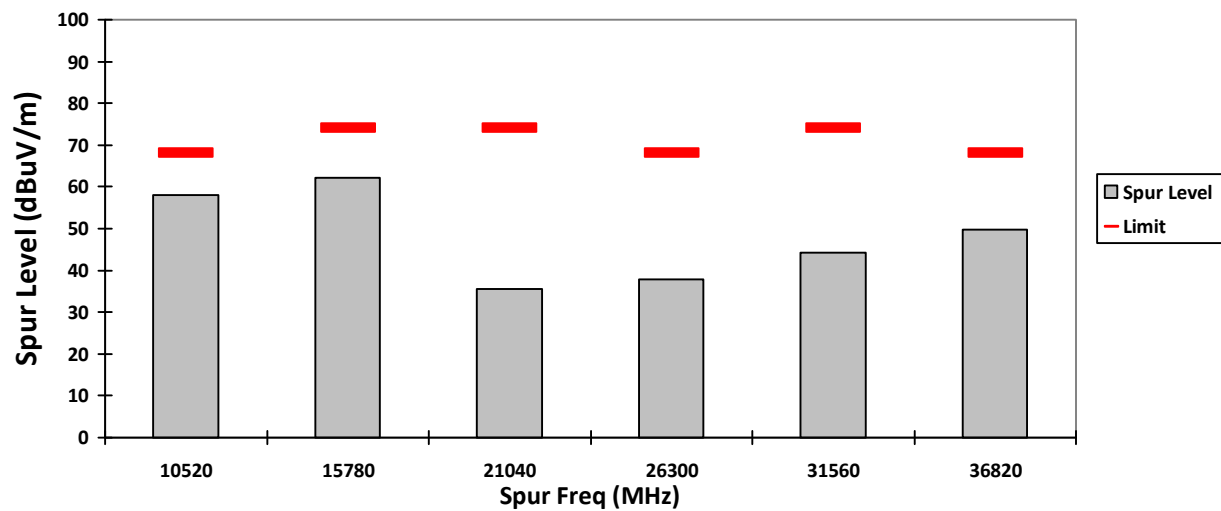
HORIZONTAL, QPK



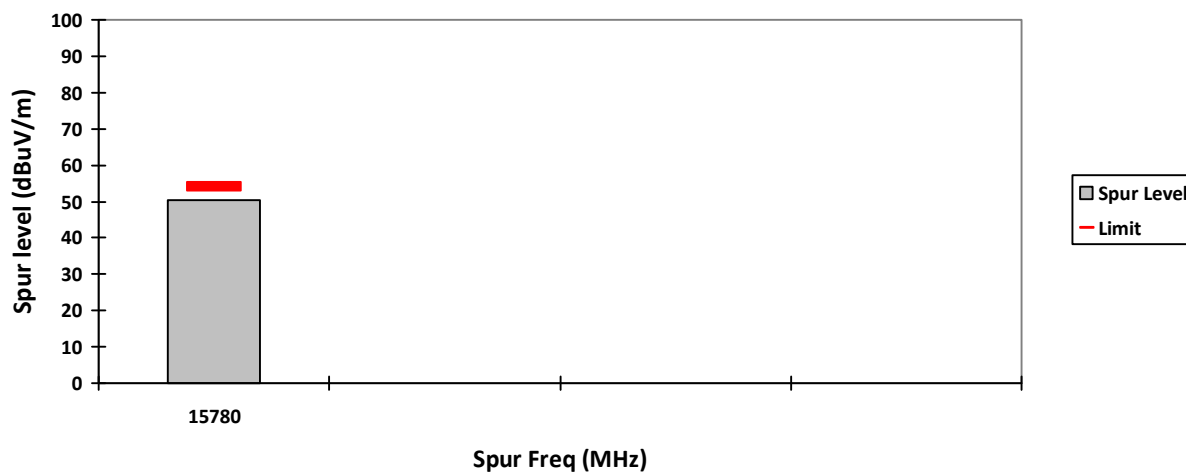
VERTICAL, PK



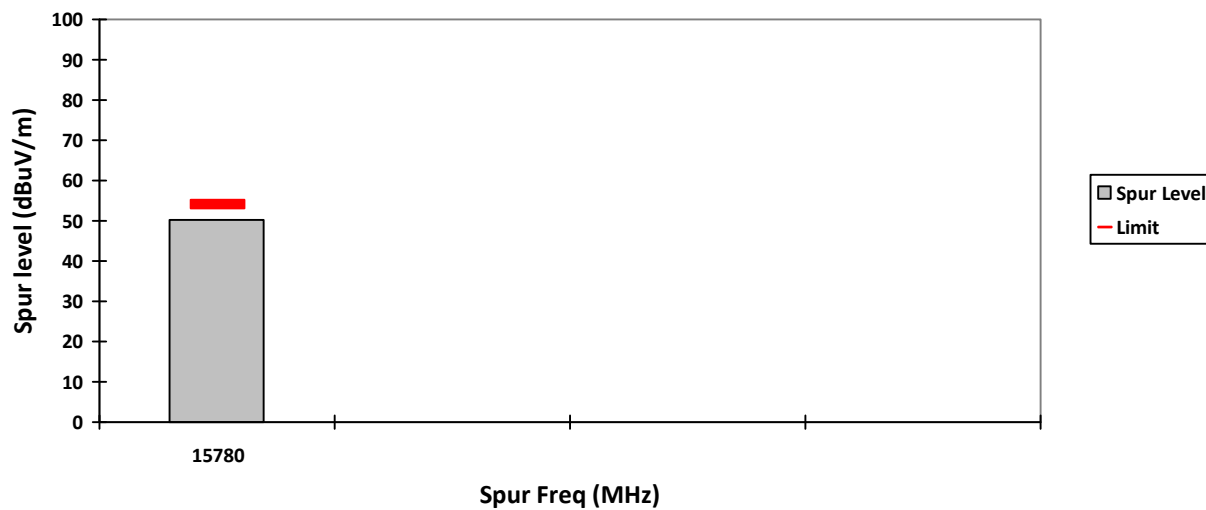
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: Mid

Test Frequency: 5300.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11a 20MHz)

Radiated Emission (Mid Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

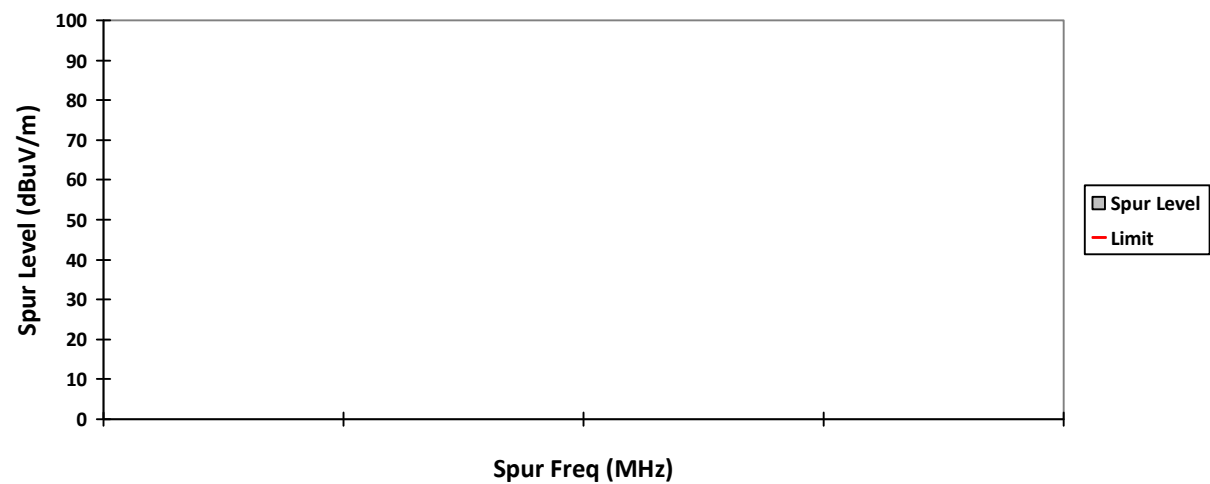
Test Date: Tue, 22 Feb, 2022

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

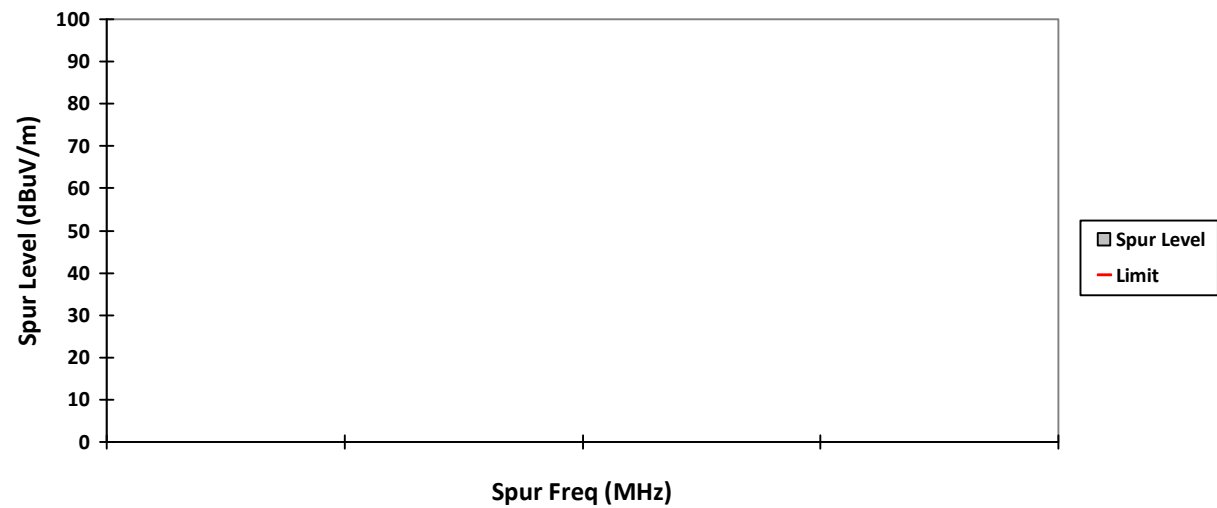
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

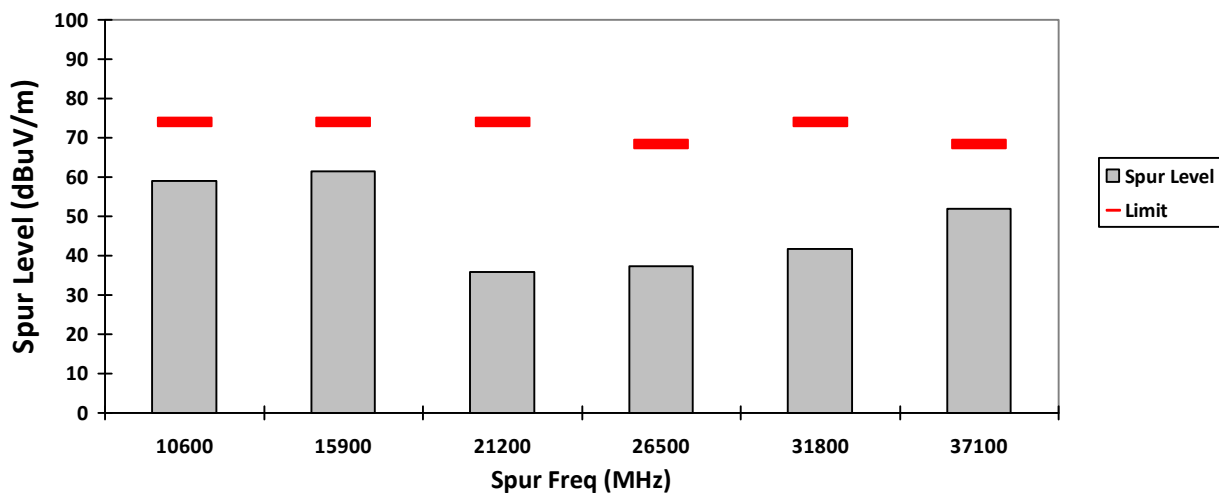
VERTICAL, QPK



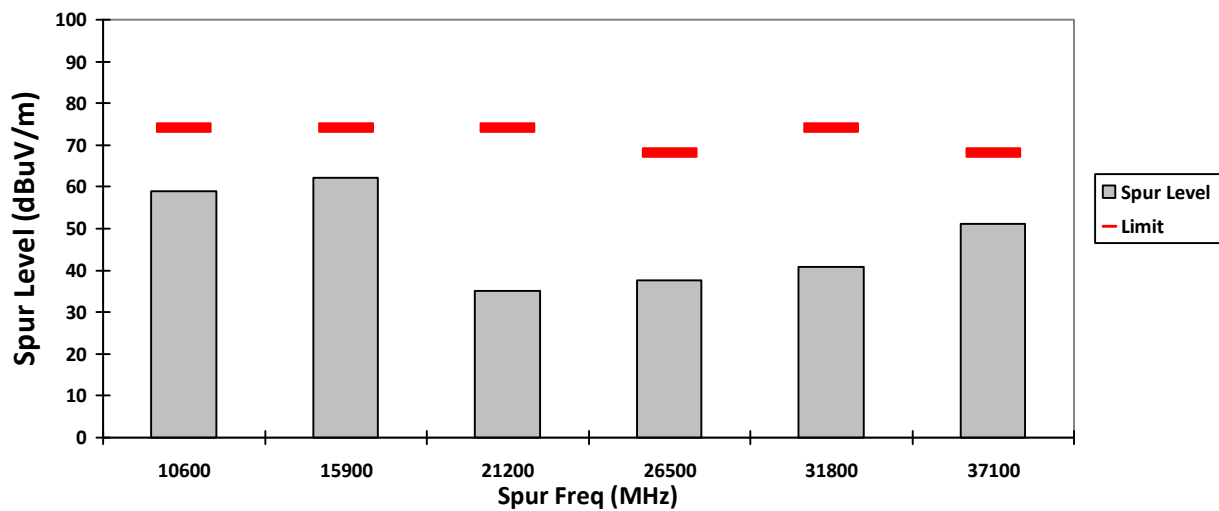
HORIZONTAL, QPK



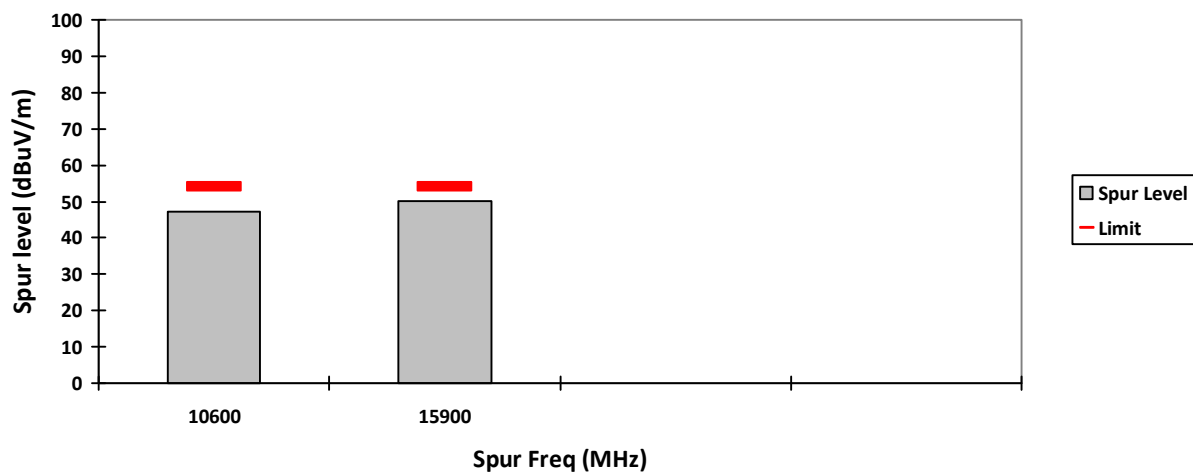
VERTICAL, PK



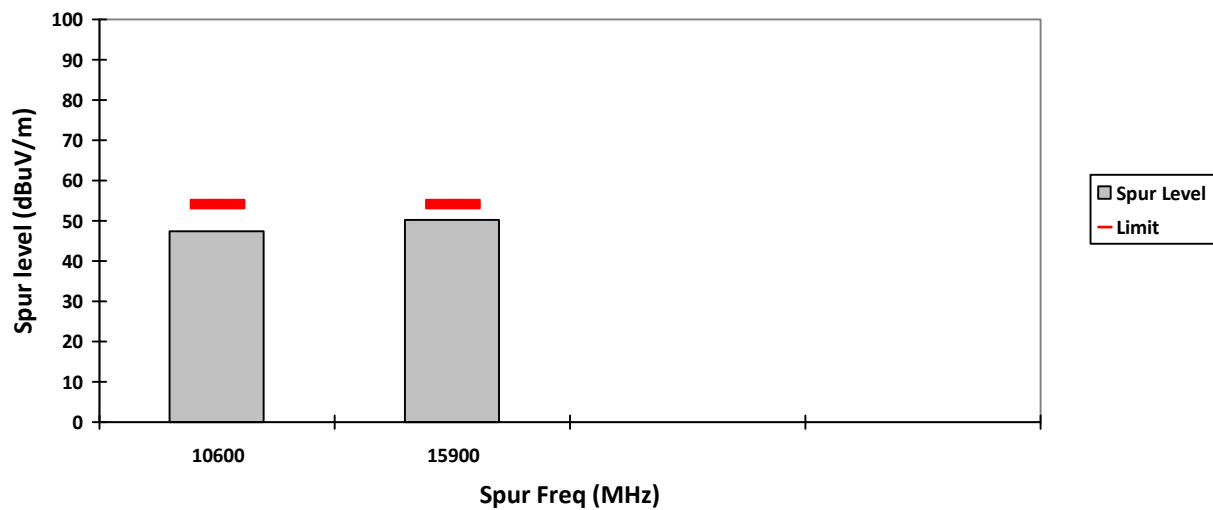
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: High

Test Frequency: 5320.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11a 20MHz)

Radiated Emission (High Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

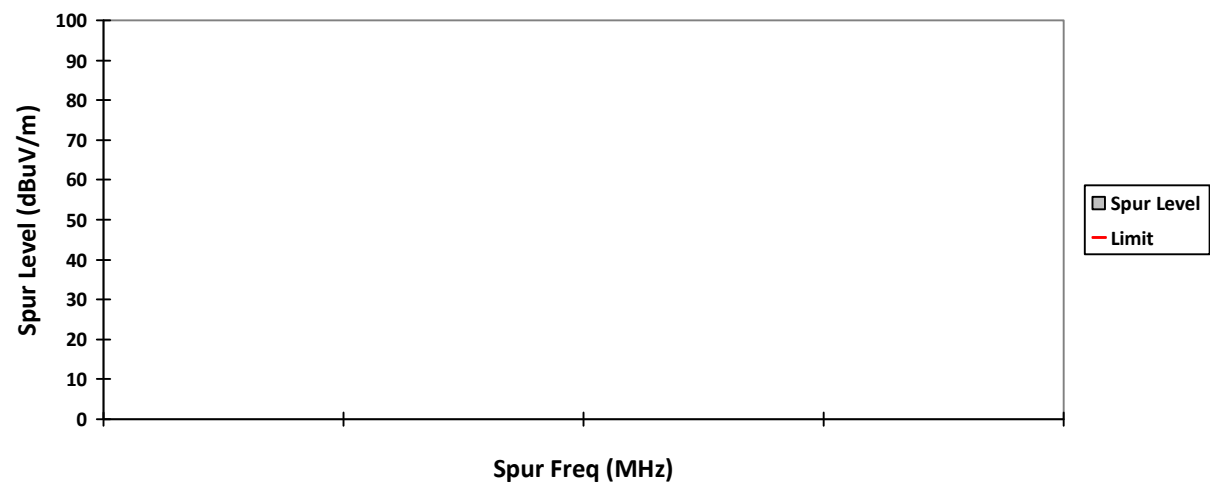
Test Date: Tue, 22 Feb, 2022

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

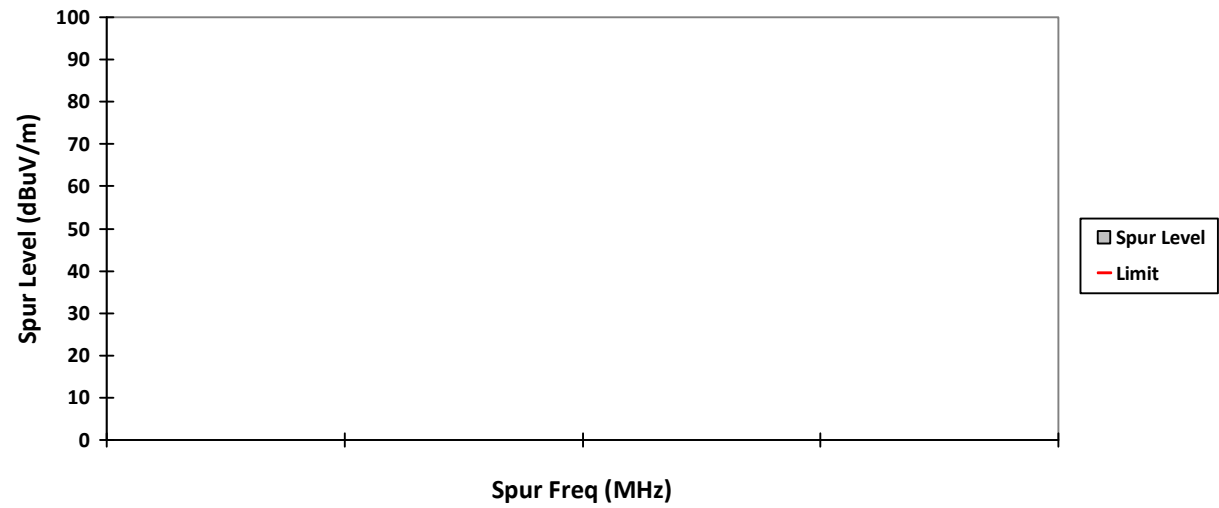
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

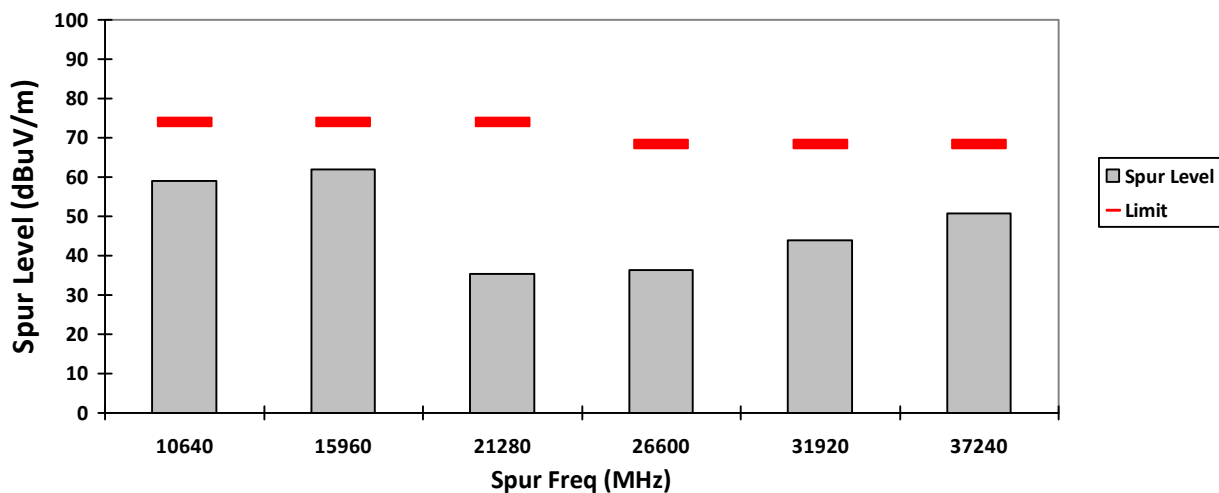
VERTICAL, QPK



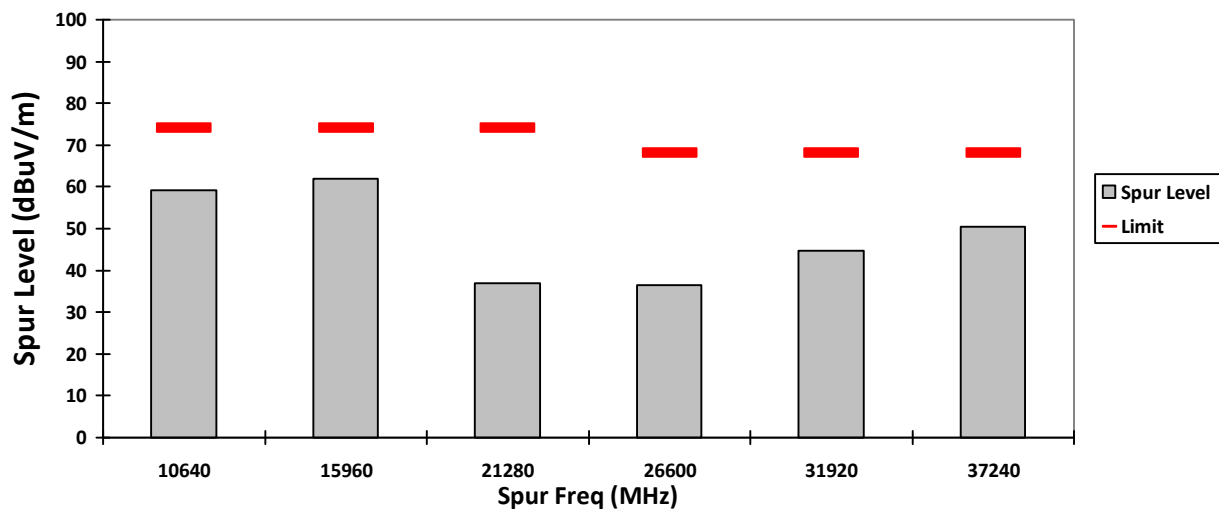
HORIZONTAL, QPK



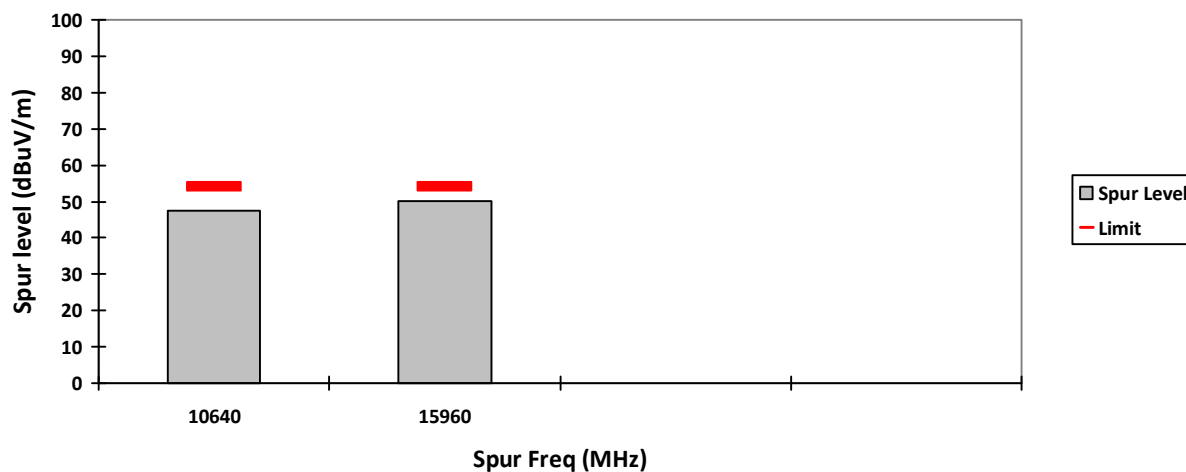
VERTICAL, PK



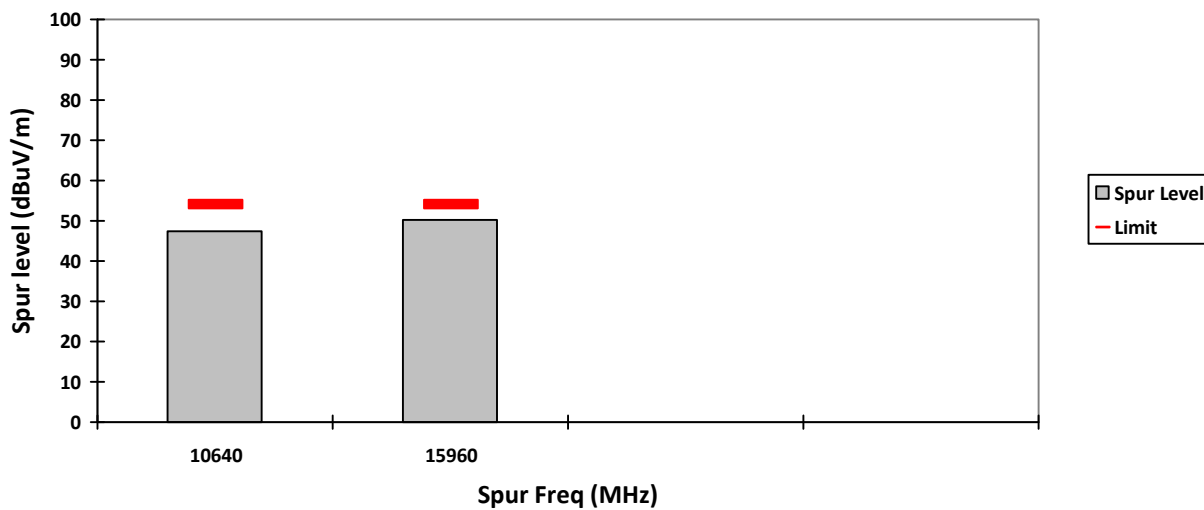
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test Channel: Low Test Frequency: 5500.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11a 20MHz)

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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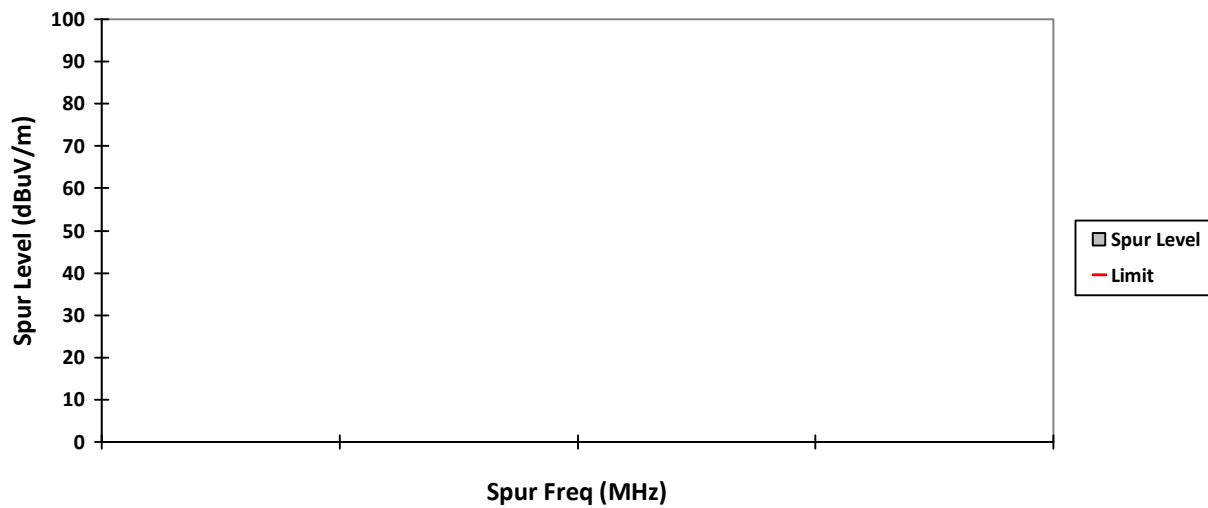
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

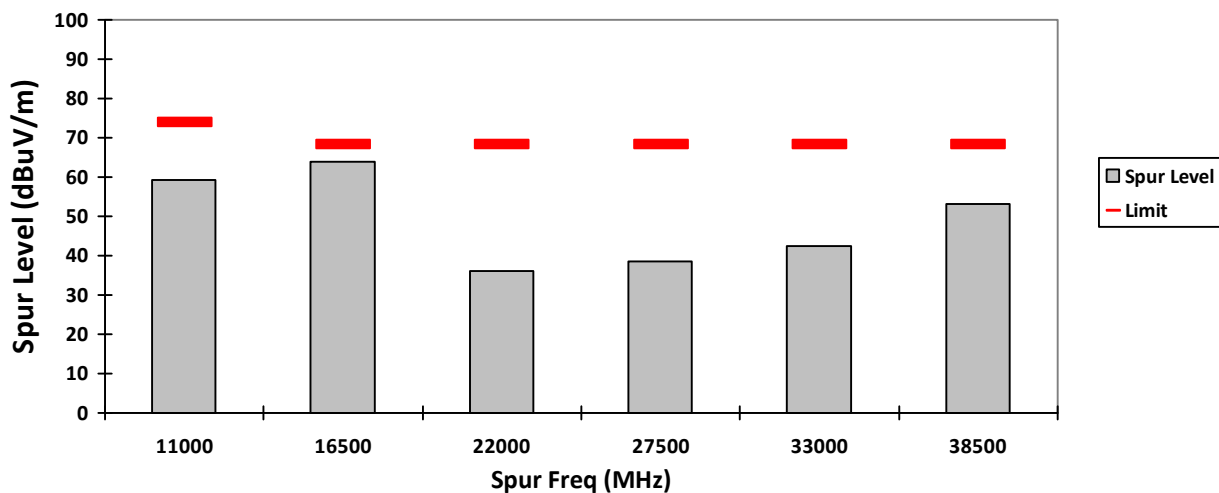
VERTICAL, QPK



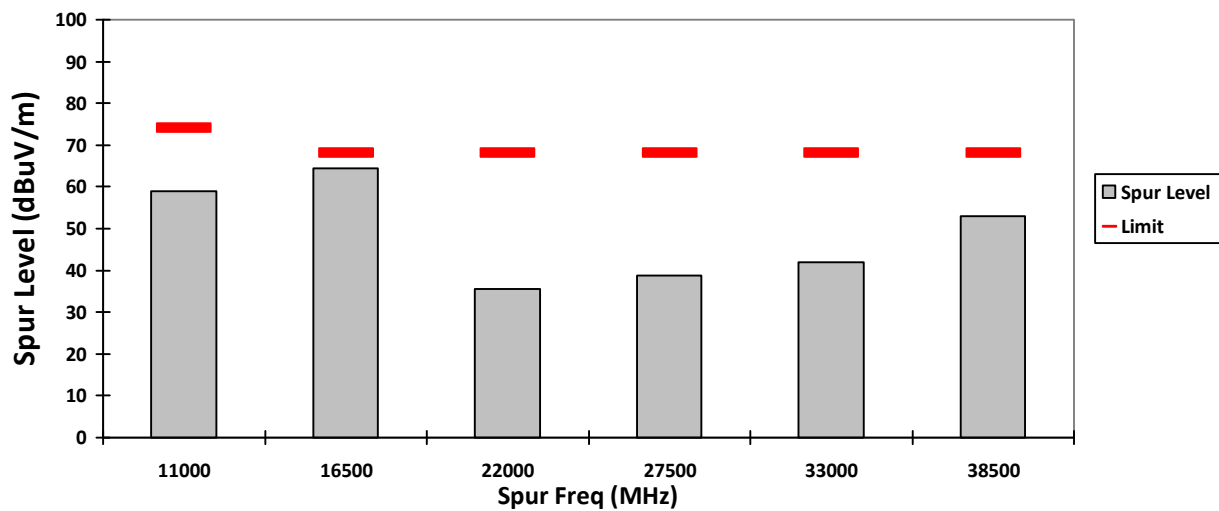
HORIZONTAL, QPK



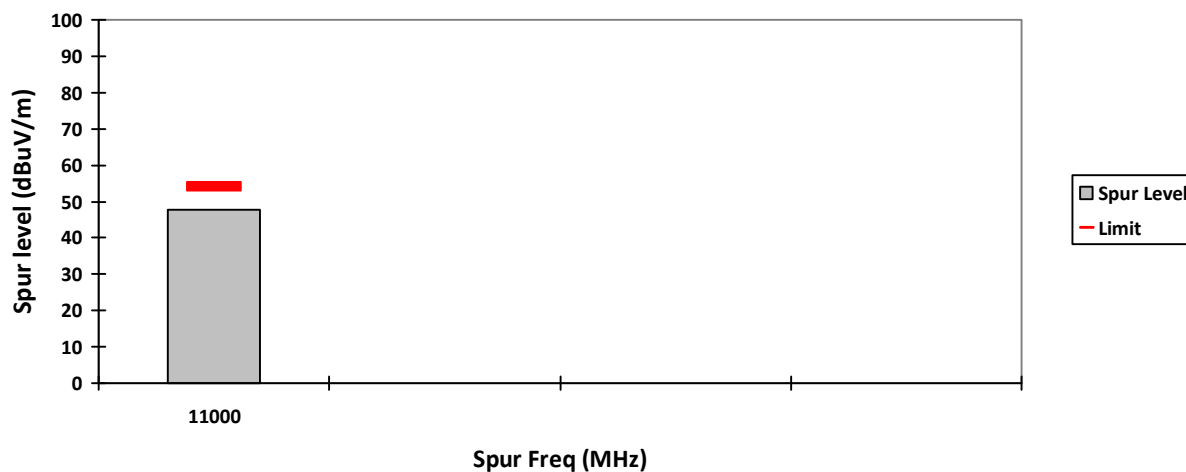
VERTICAL, PK



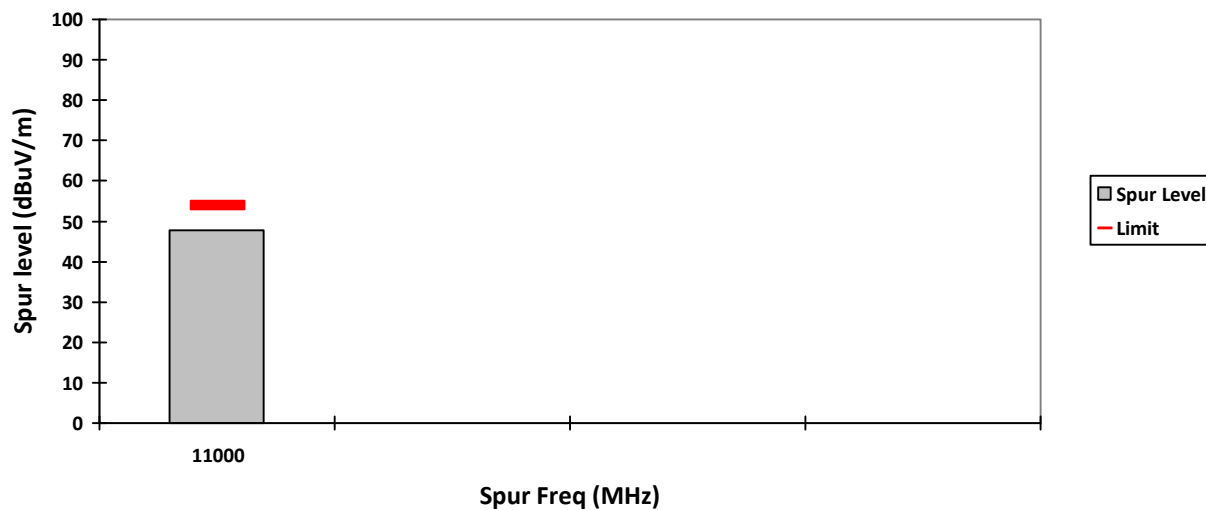
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: Mid

Test Frequency: 5580.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11a 20MHz)

Radiated Emission (Mid Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

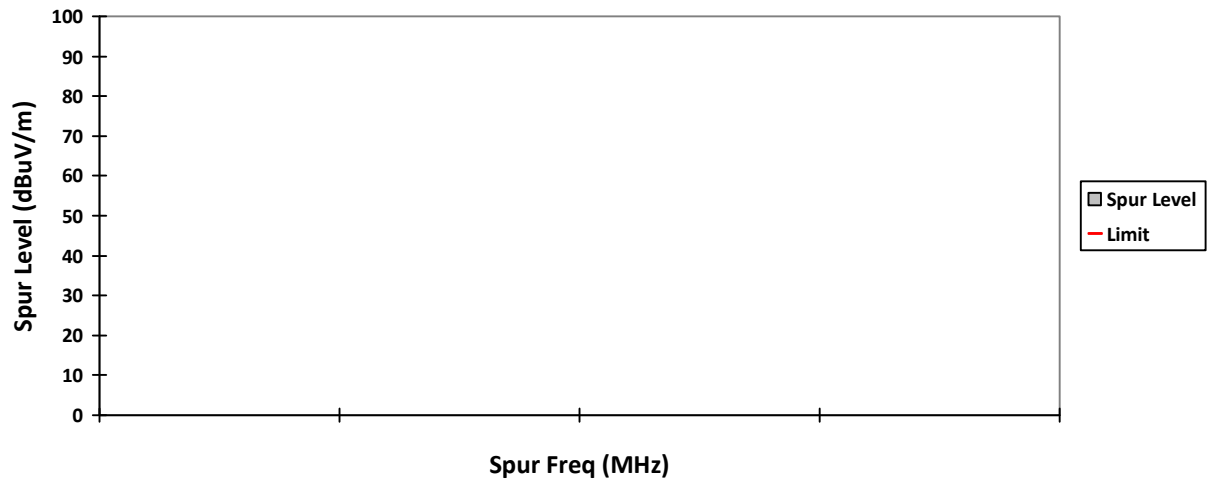
Test Date: Tue, 22 Feb, 2022

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

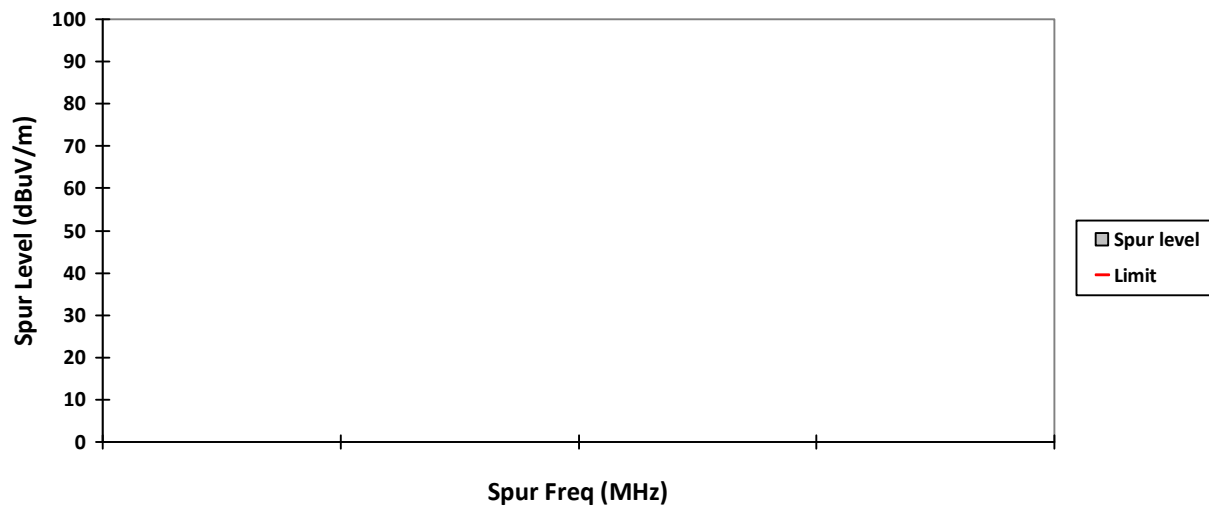
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

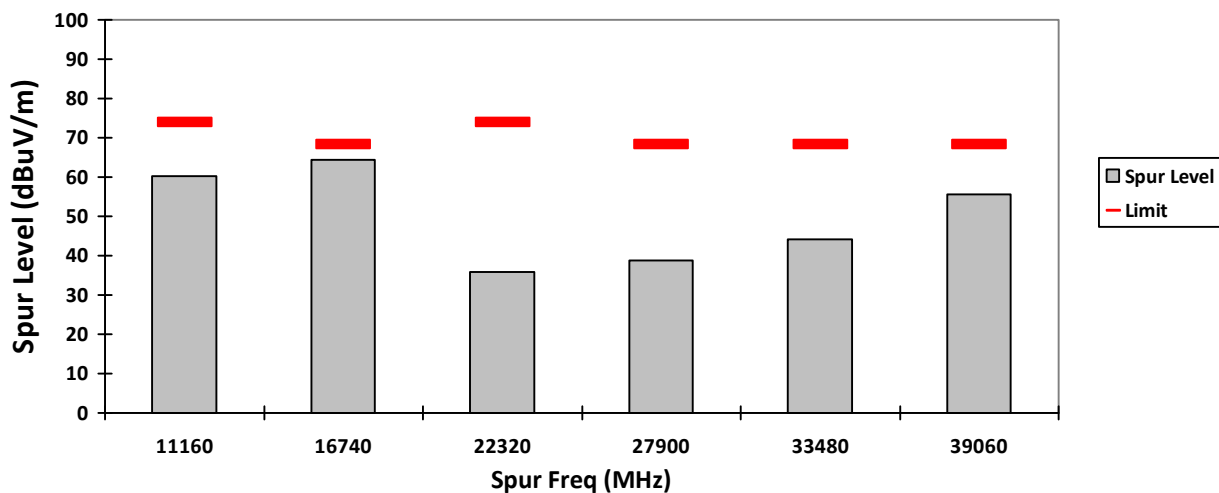
VERTICAL, QPK



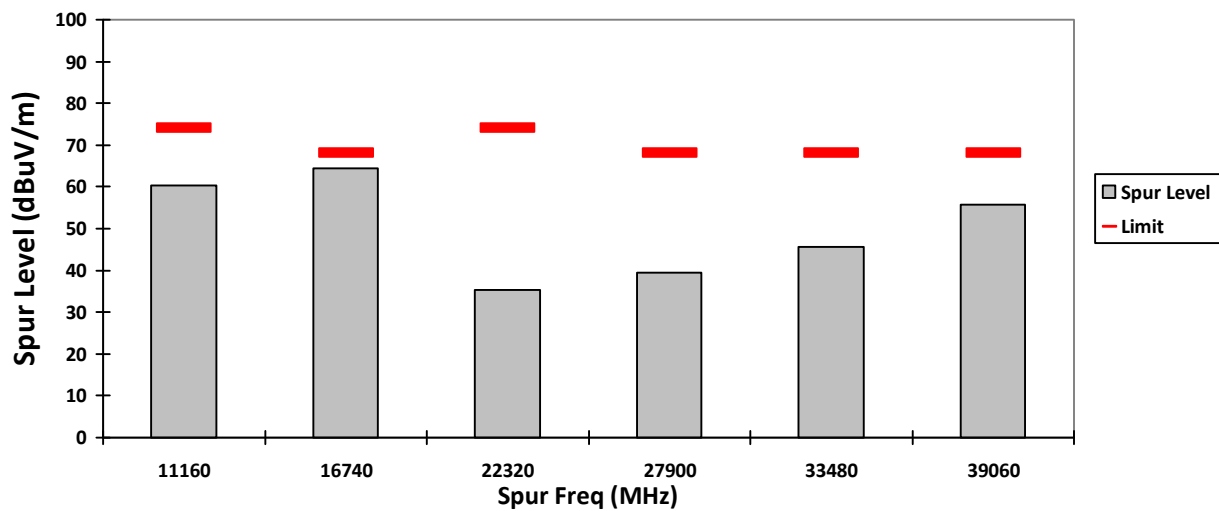
HORIZONTAL, QPK



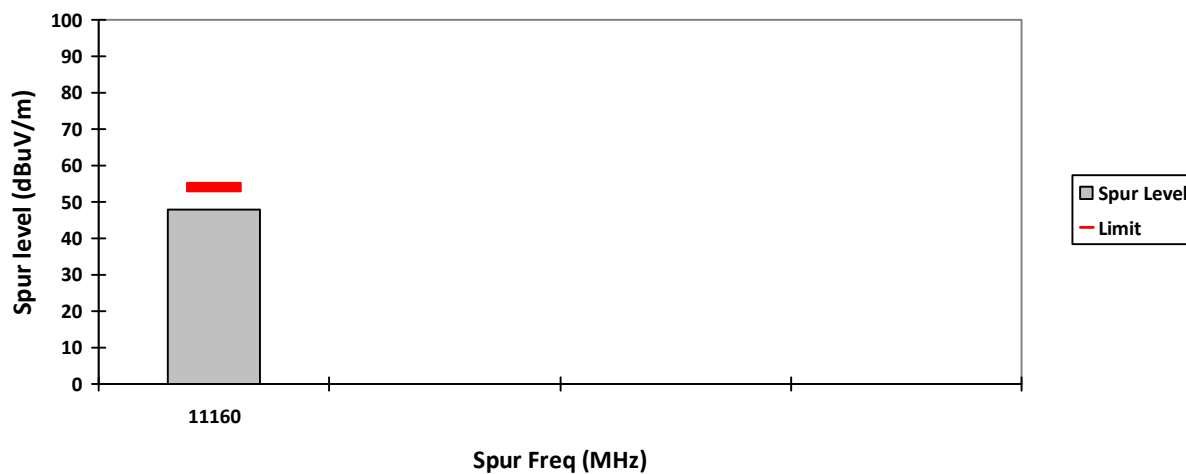
VERTICAL, PK



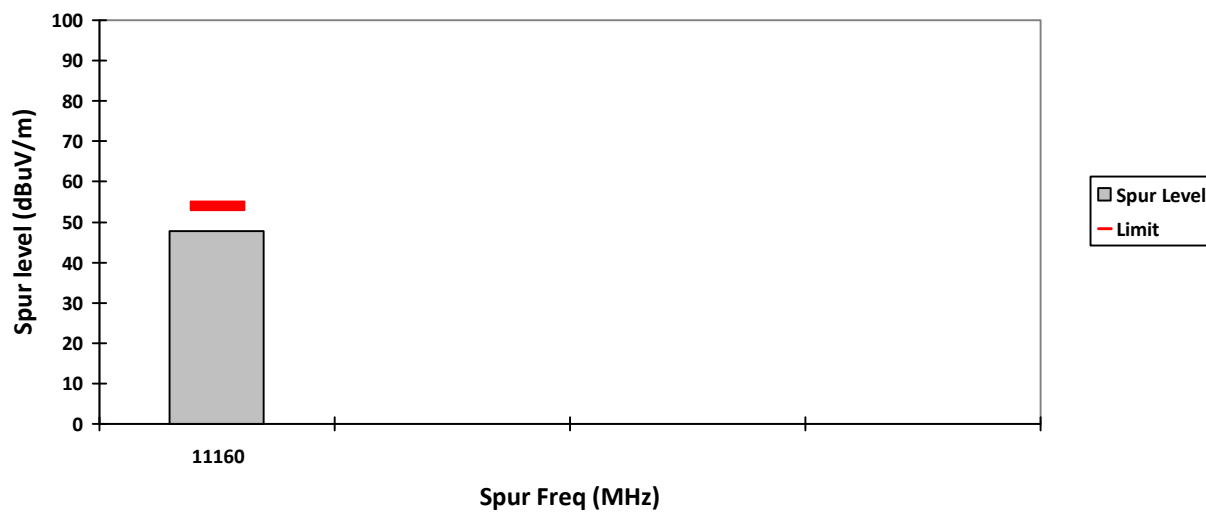
HORIZONTAL, PK



VERTICAL, AV

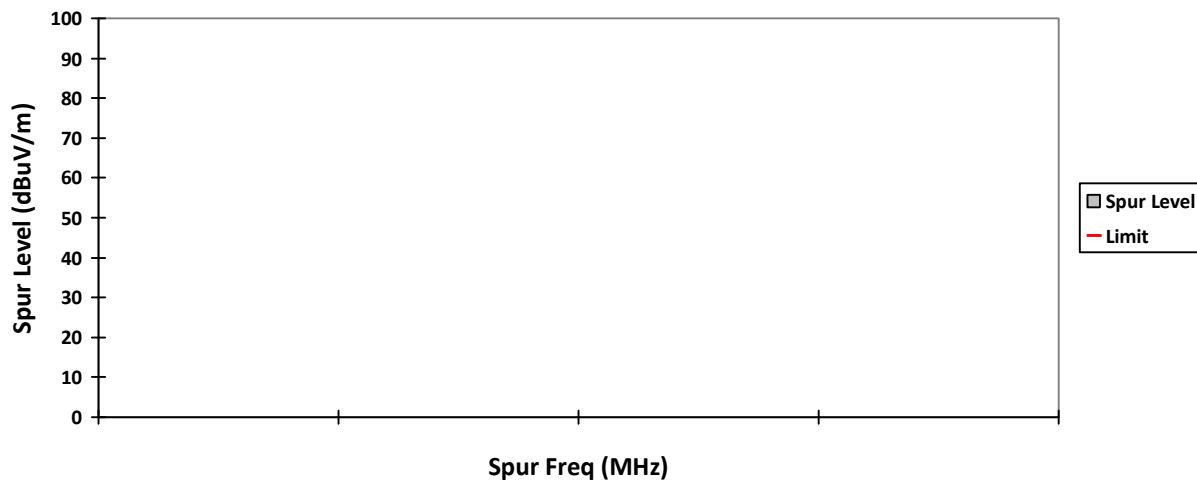


HORIZONTAL, AV

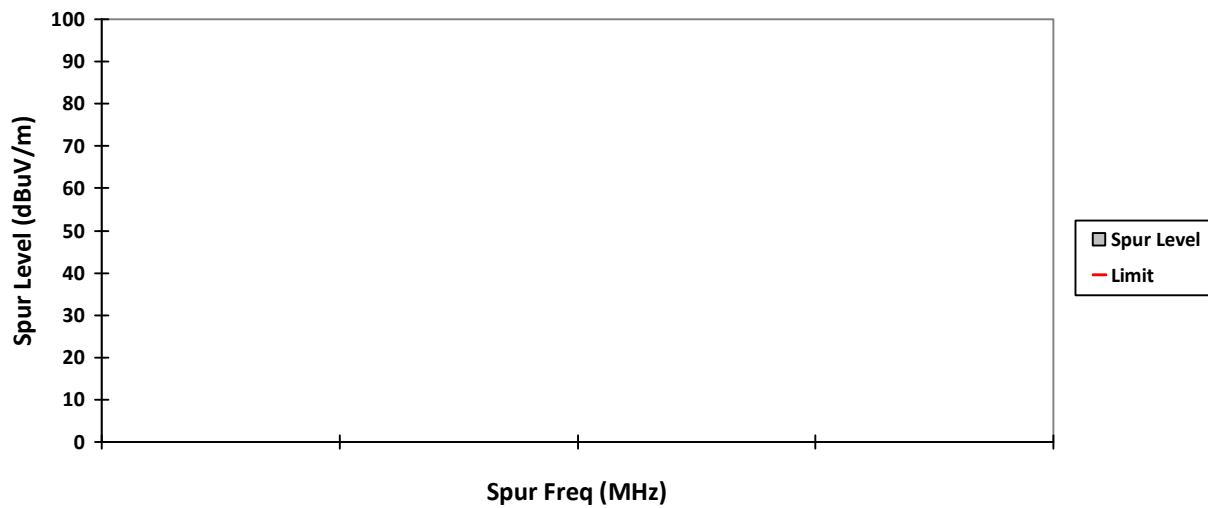


Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-20MHz)

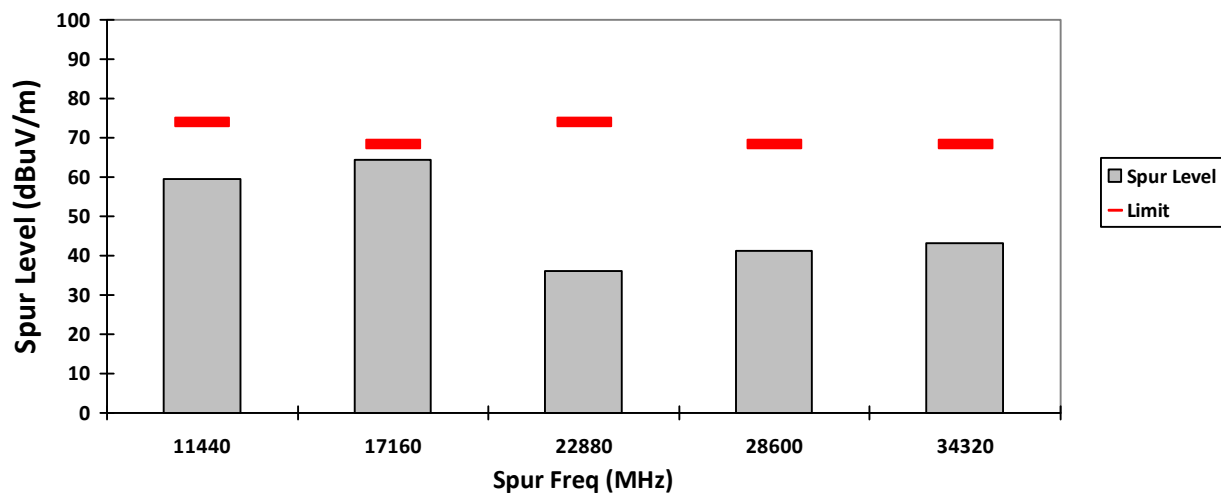
VERTICAL, QPK



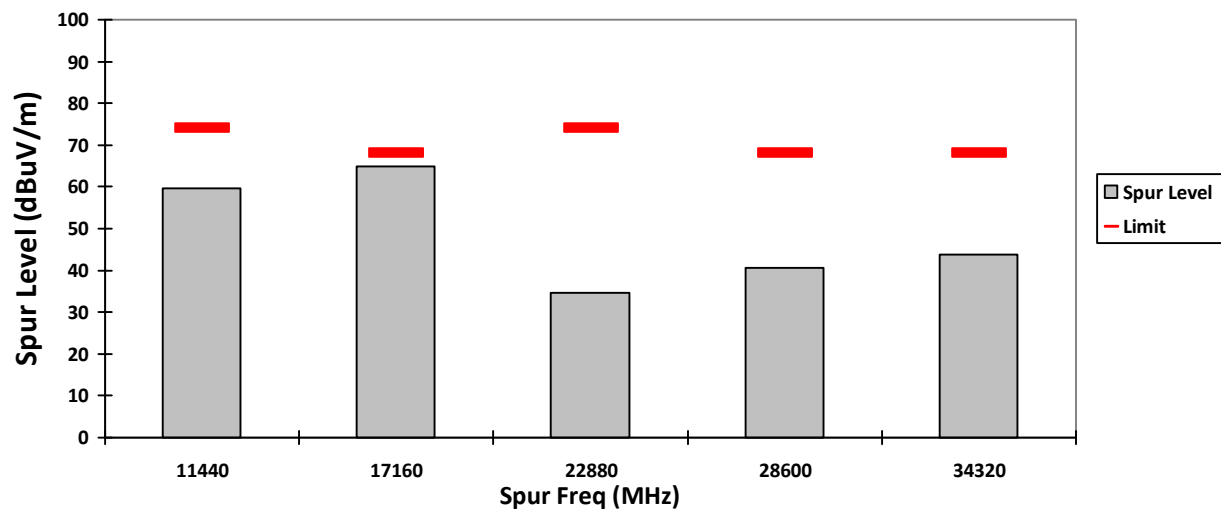
HORIZONTAL, QPK



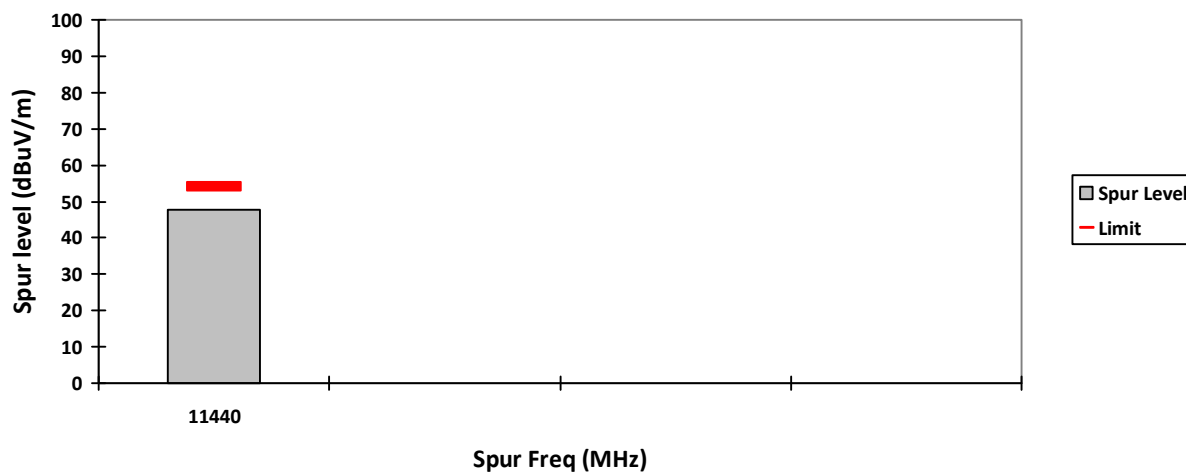
VERTICAL, PK



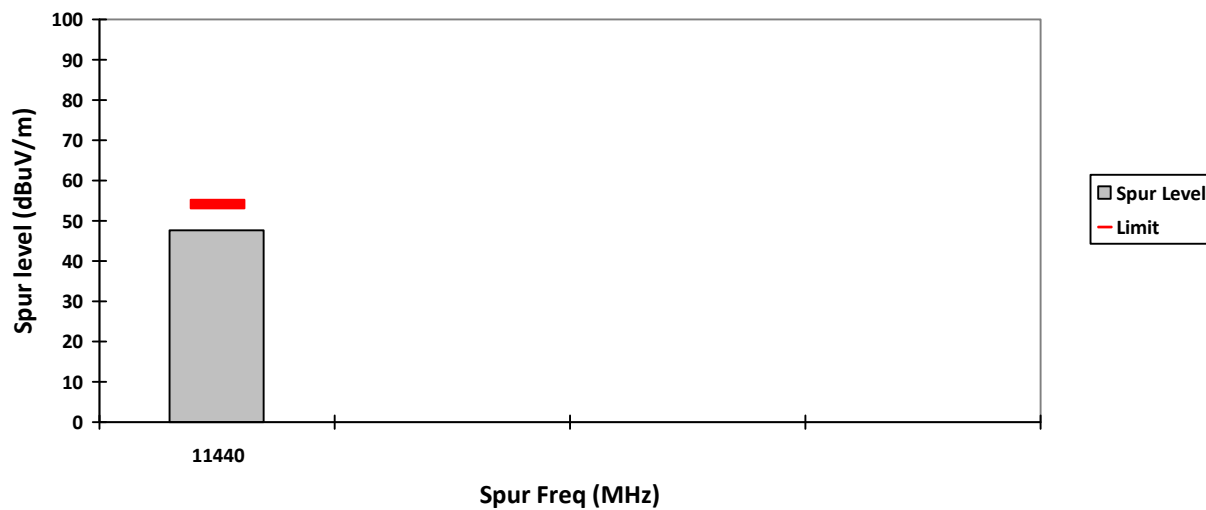
HORIZONTAL, PK



VERTICAL, AV

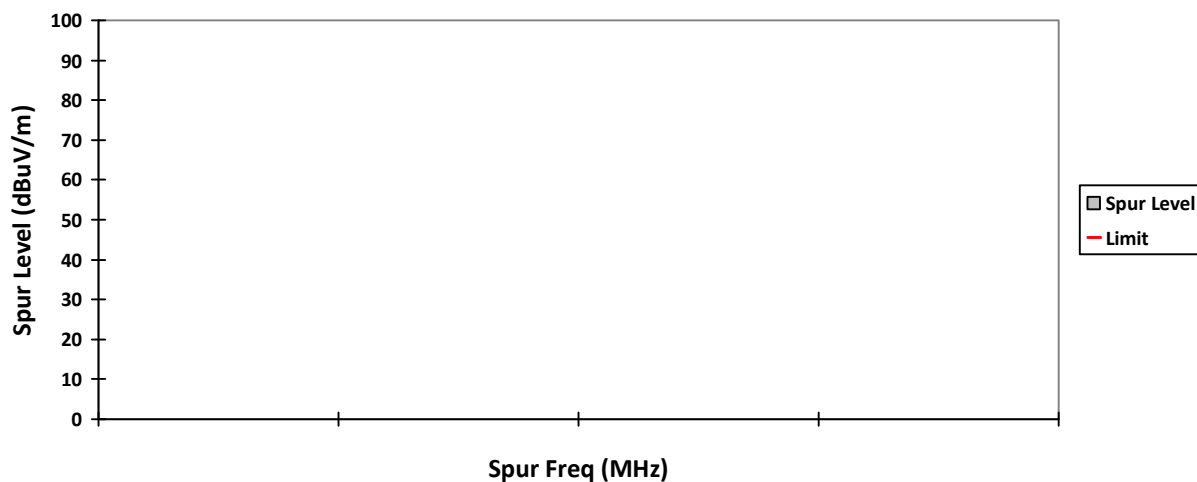


HORIZONTAL, AV

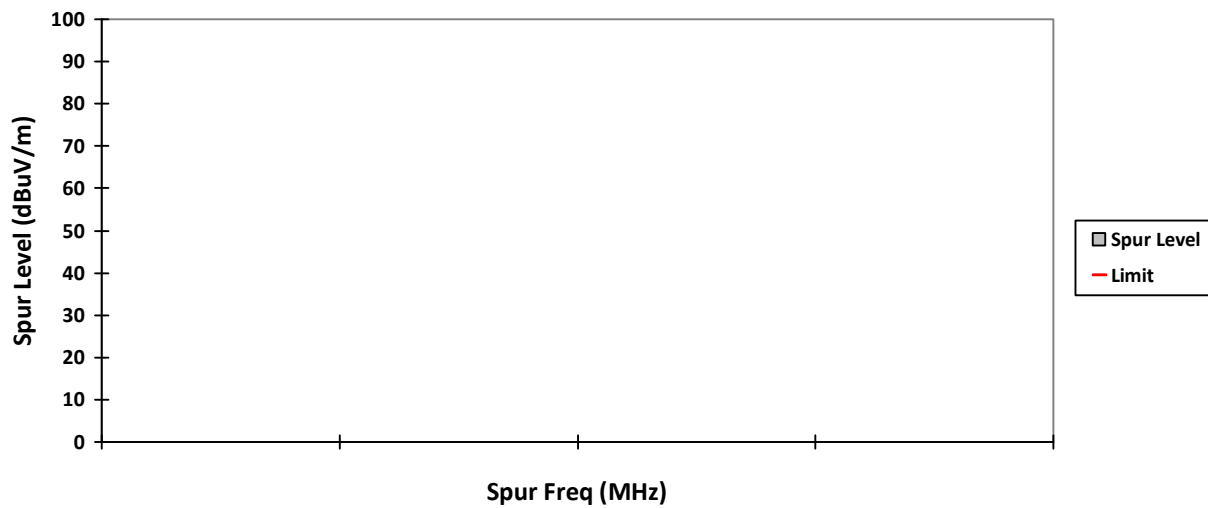


Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-20MHz)

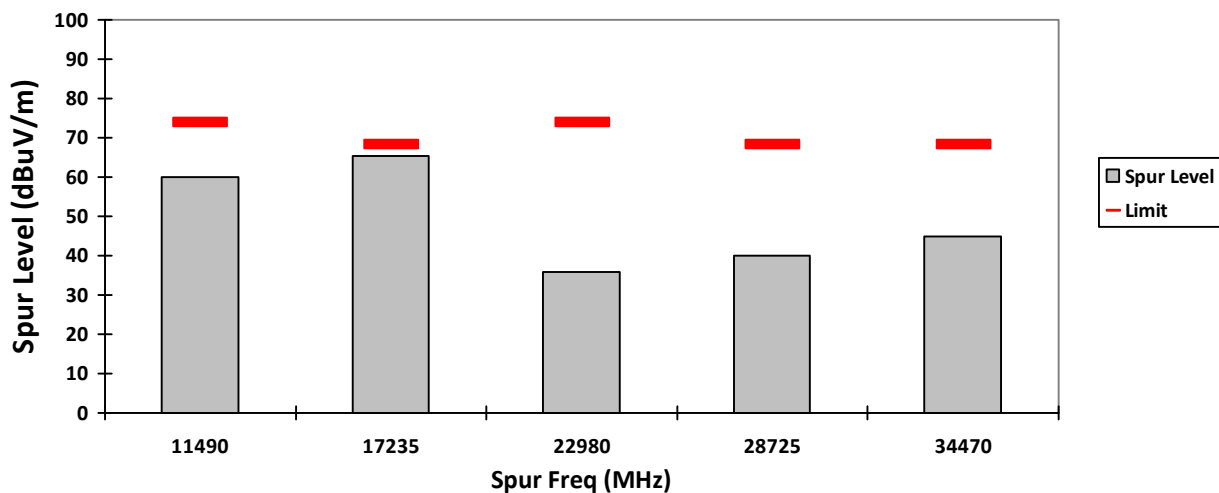
VERTICAL, QPK



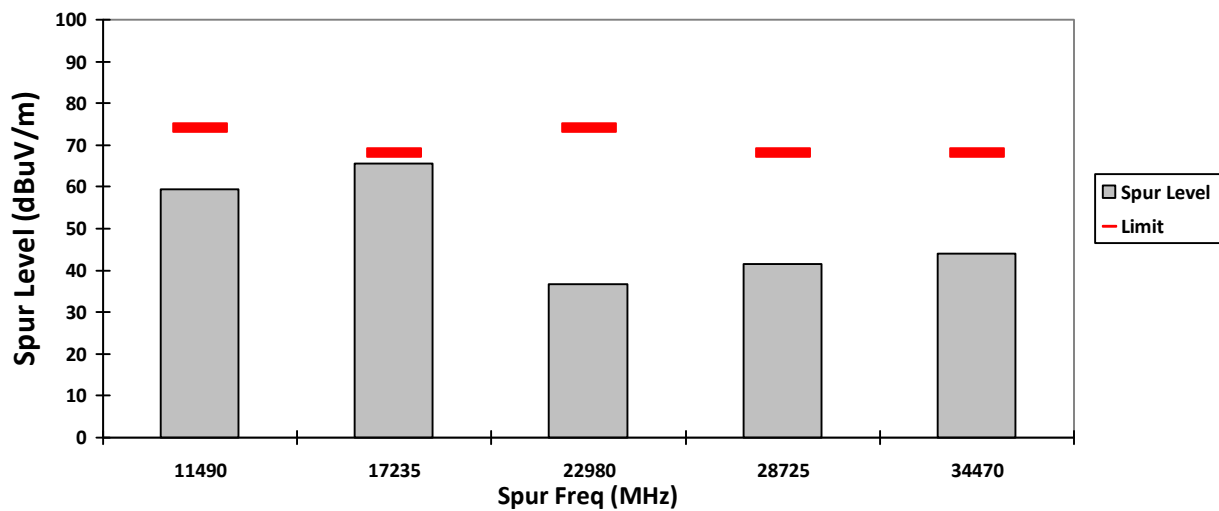
HORIZONTAL, QPK



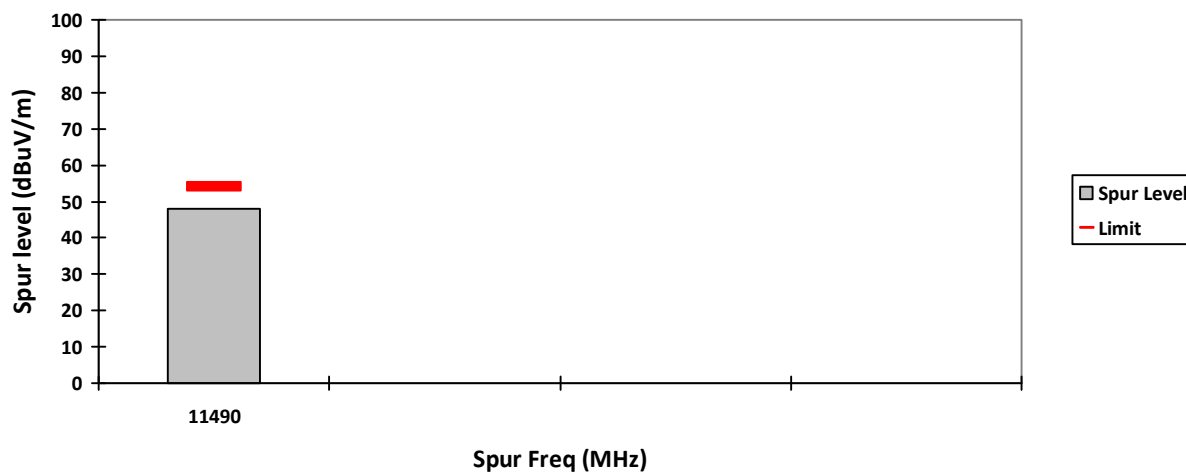
VERTICAL, PK



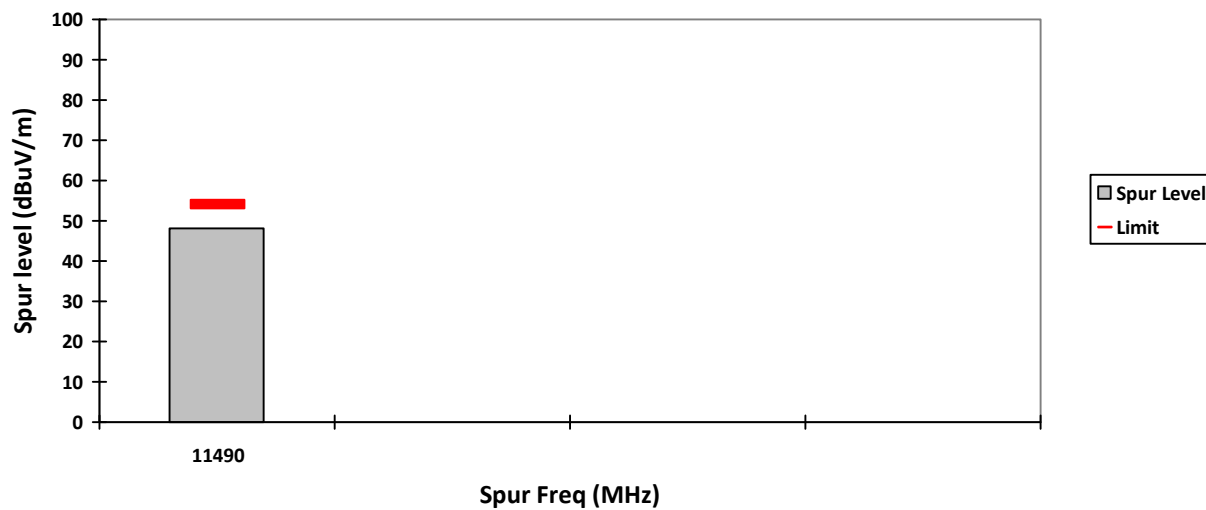
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test Channel: Mid Test Frequency: 5785.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11a 20MHz)

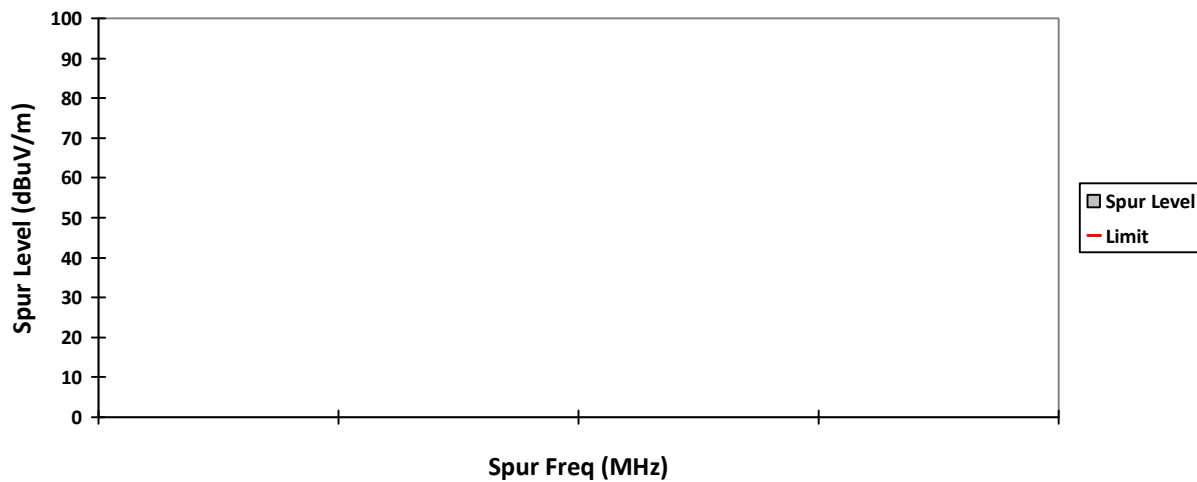
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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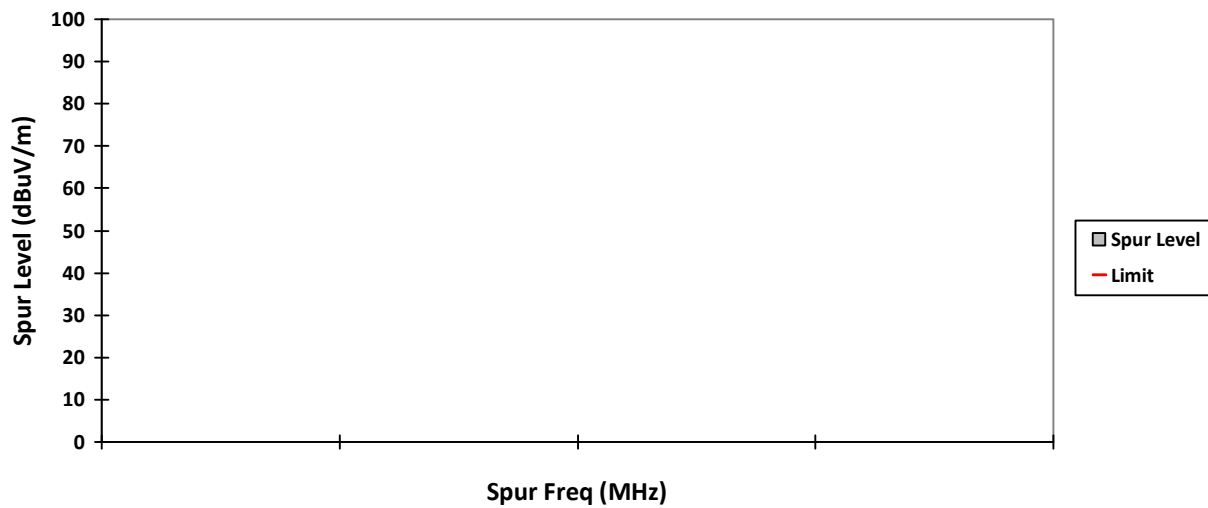
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

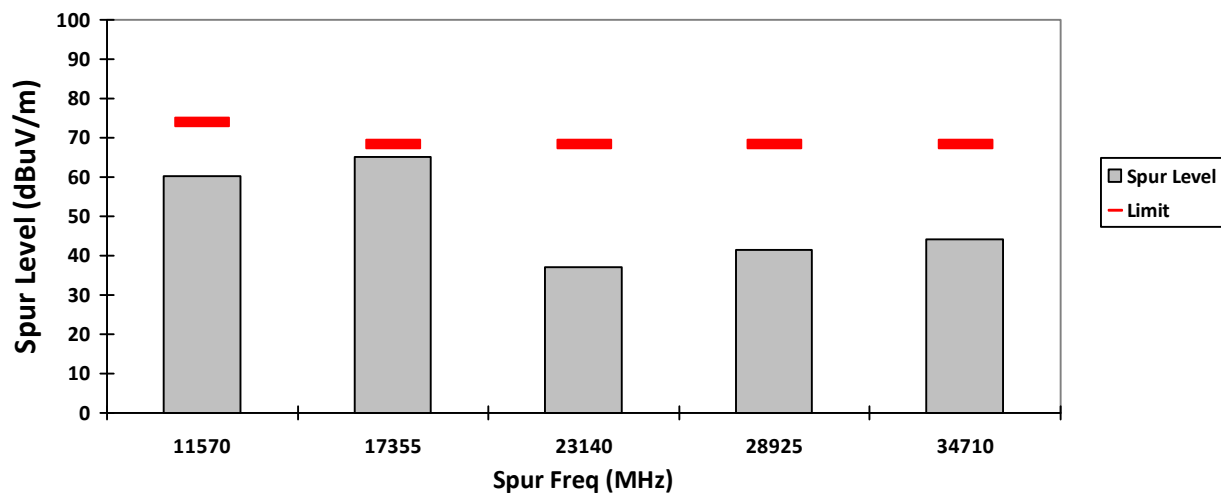
VERTICAL, QPK



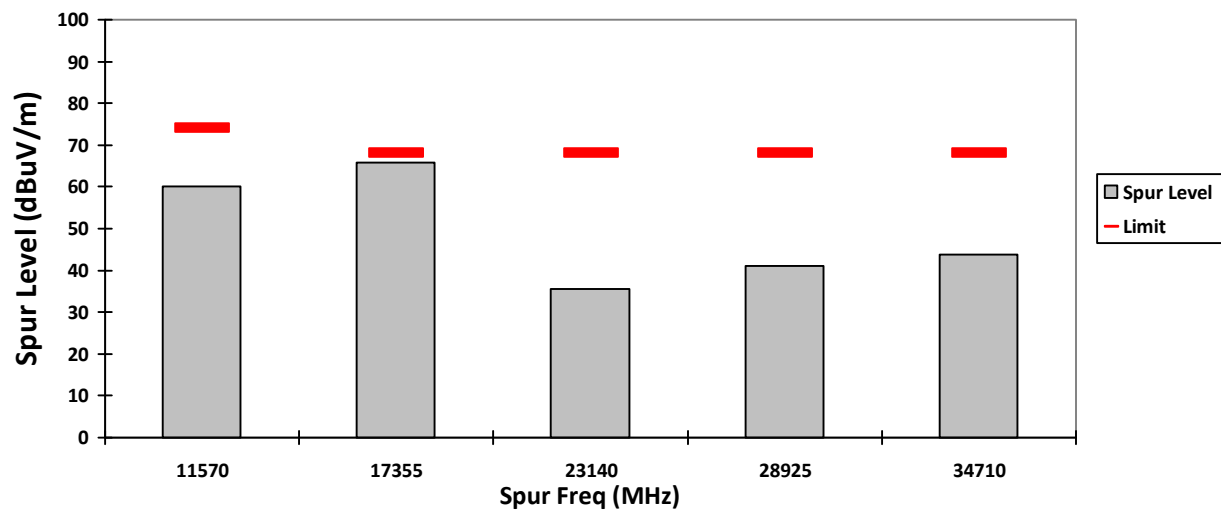
HORIZONTAL, QPK



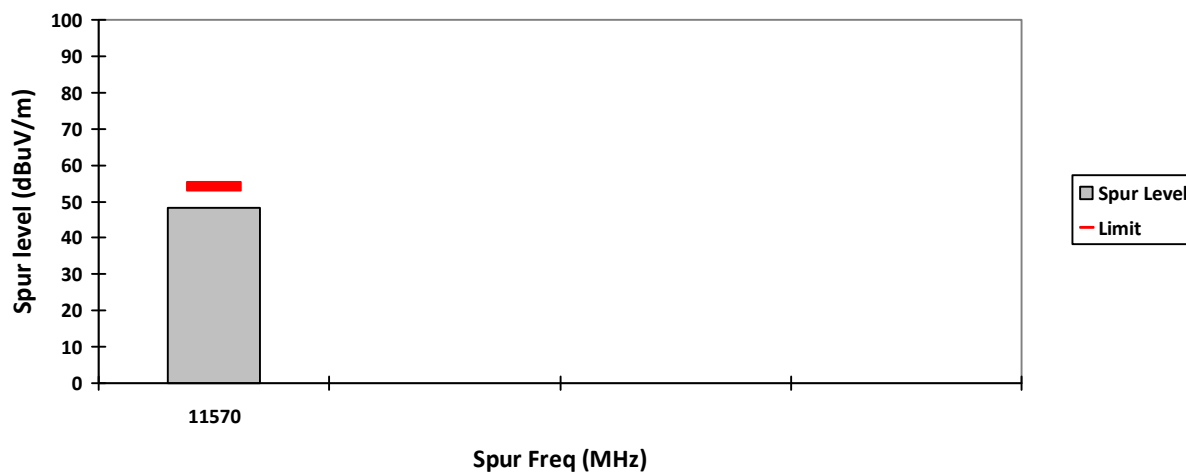
VERTICAL, PK



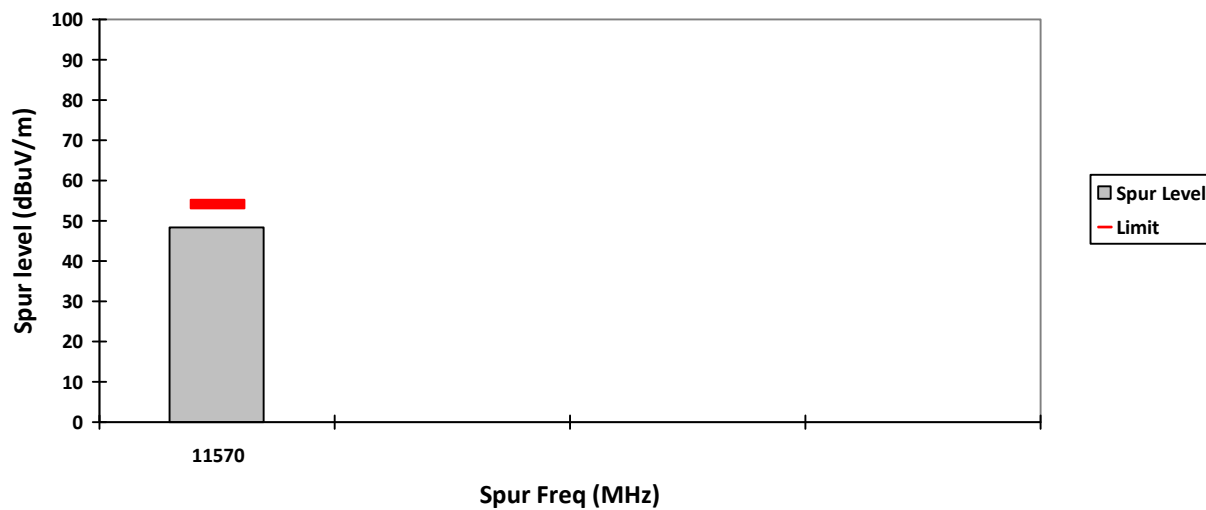
HORIZONTAL, PK



VERTICAL, AV

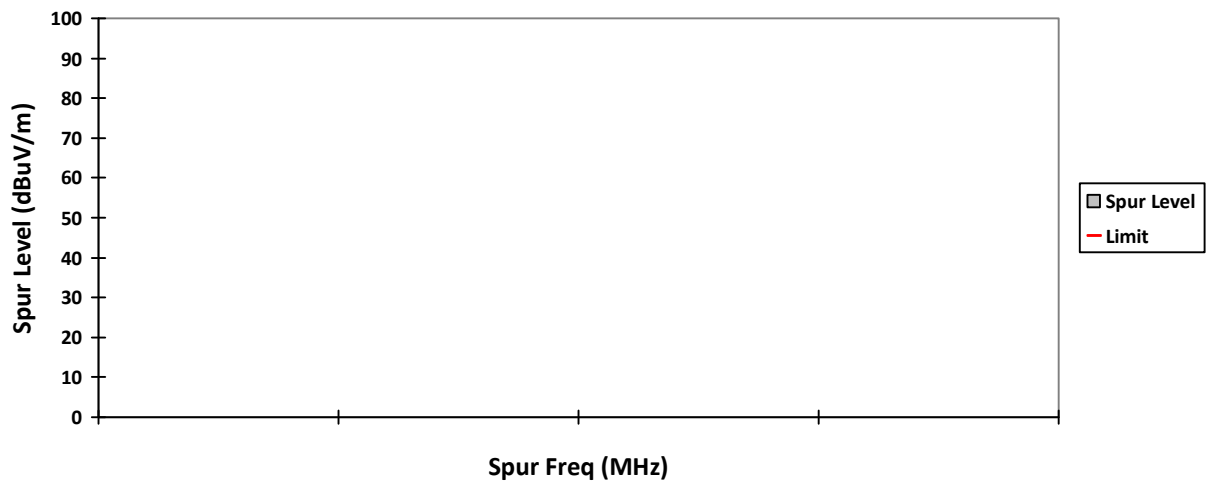


HORIZONTAL, AV

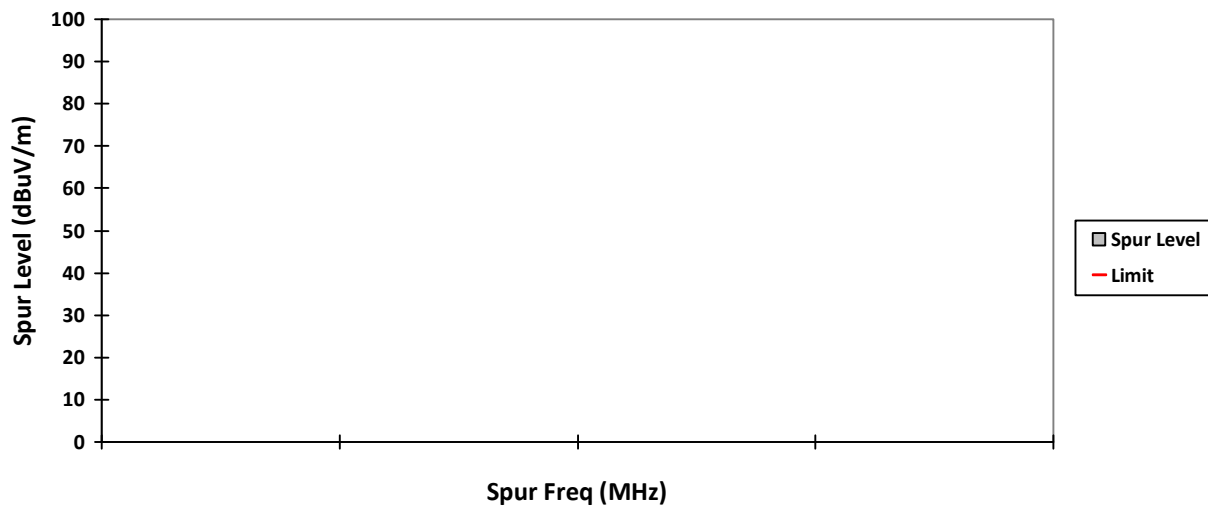


Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-20MHz)

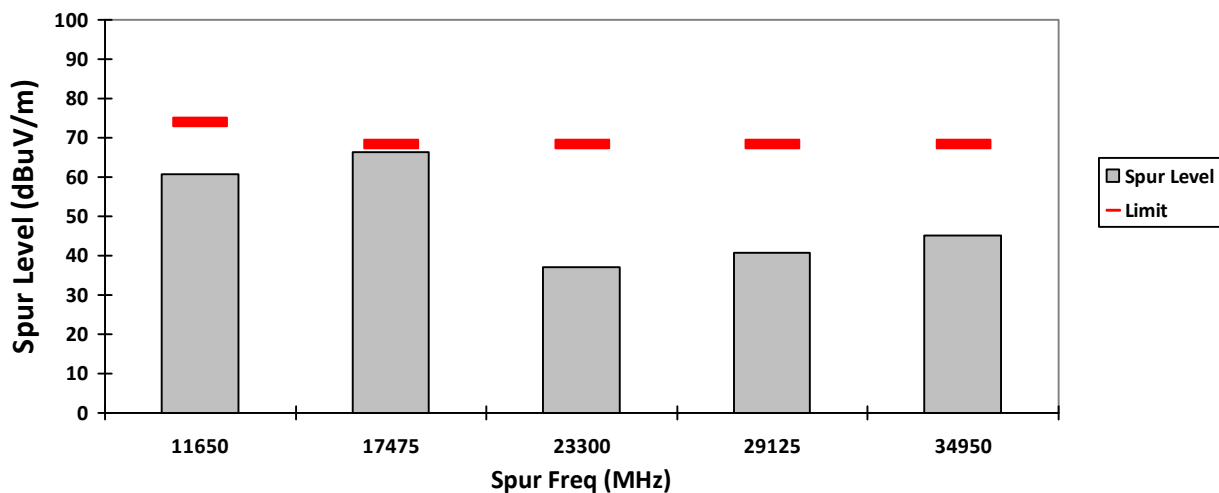
VERTICAL, QPK



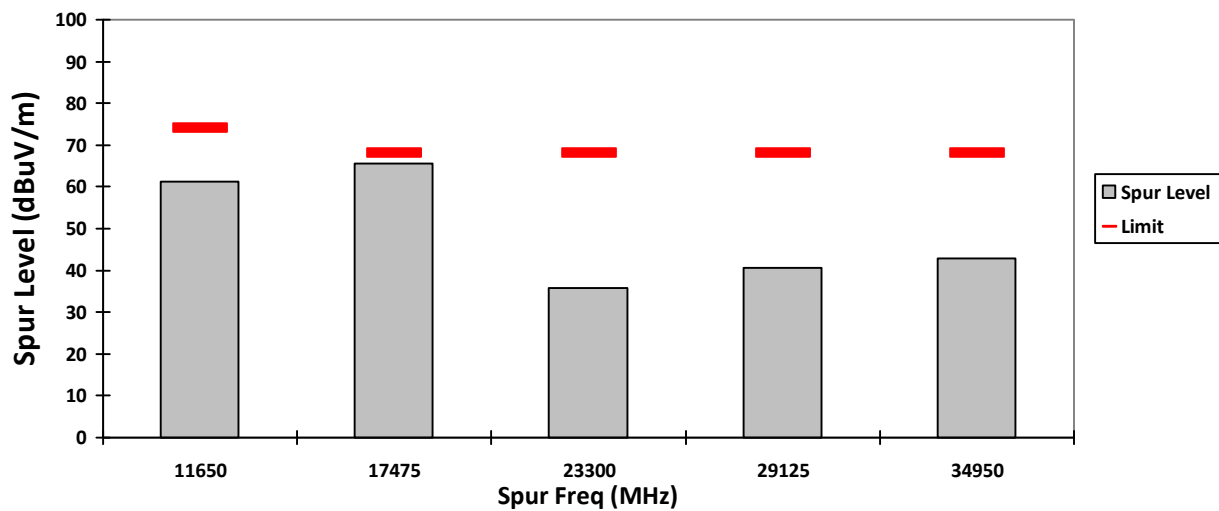
HORIZONTAL, QPK



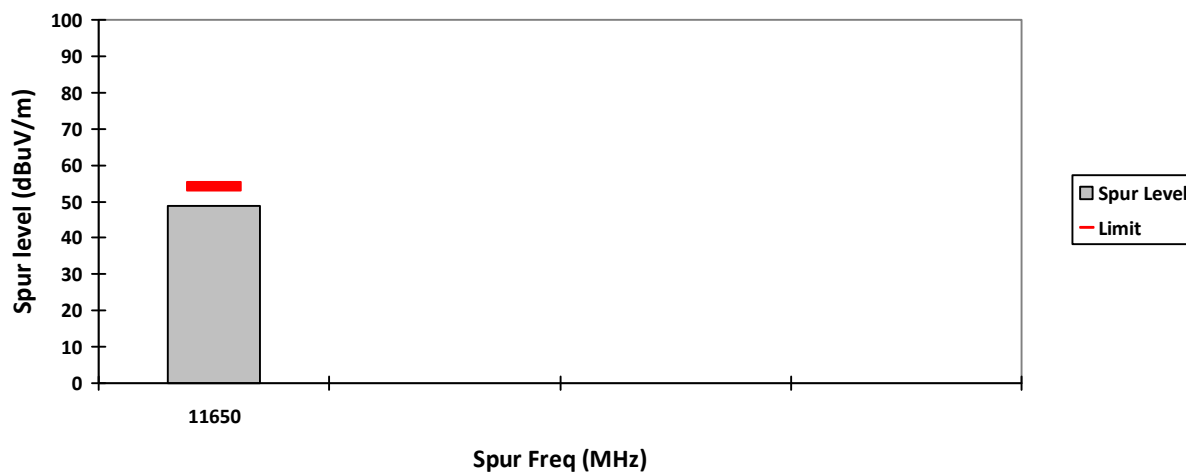
VERTICAL, PK



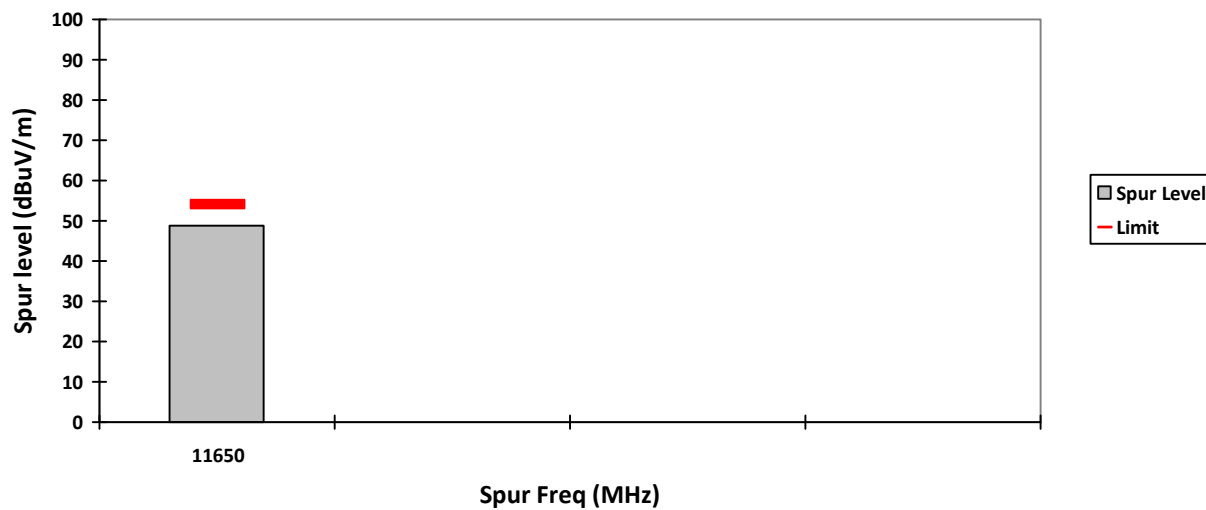
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



802.11n (HT20)

Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: Low

Test Frequency: 5180.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11n 20MHz)

Radiated Emission (Low Channel) tabular data

Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBμV/m)	Spur level PK (dBμV/m)	Spur level AV (dBμV/m)	Limit QPK (dBμV/m)	Limit PK (dBμV/m)	Limit AV (dBμV/m)	Margin QPK (dBμV/m)	Margin PK (dBμV/m)	Margin AV (dBμV/m)	Carrier PK Power (dBμV/m)
10360	-	56.6725**	-	-	68.2	-	-	11.5275	-	99.3451
15540	-	62.1462**	50.4580**	-	74.0	54.0	-	11.8538	3.5420	99.3451
20720	-	34.2928**	-	-	74.0	-	-	39.7072	-	99.3451
25900	-	36.7038**	-	-	68.2	-	-	31.4962	-	99.3451
31080	-	44.0888**	-	-	68.2	-	-	24.1112	-	99.3451
36260	-	49.8216**	-	-	68.2	-	-	18.3784	-	99.3451
Horizontal Radiated Emission Result										
10360	-	56.6537**	-	-	68.2	-	-	11.5463	-	99.3451
15540	-	62.4222**	50.4586**	-	74.0	54.0	-	11.5778	3.5414	99.3451
20720	-	34.5069**	-	-	74.0	-	-	39.4931	-	99.3451
25900	-	37.9011**	-	-	68.2	-	-	30.2989	-	99.3451
31080	-	43.3430**	-	-	68.2	-	-	24.8570	-	99.3451
36260	-	49.2484**	-	-	68.2	-	-	18.9516	-	99.3451

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

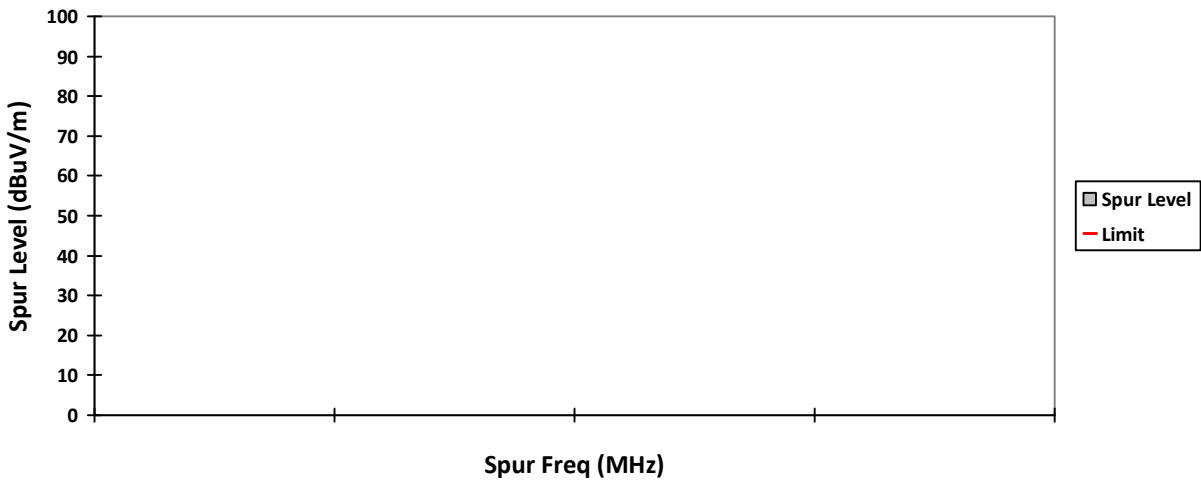
Test Date: Tue, 22 Feb, 2022

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

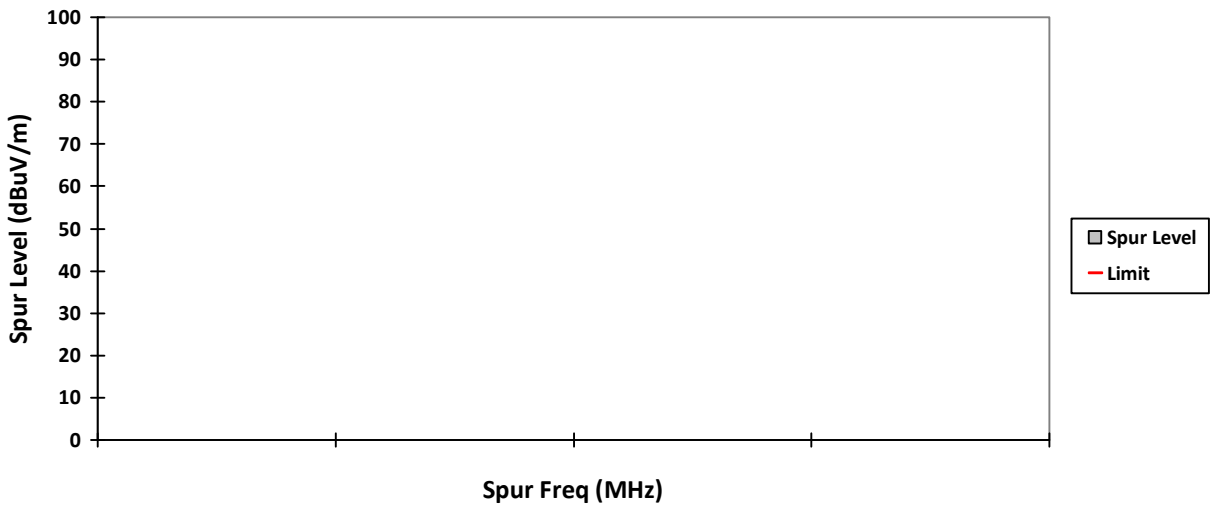
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

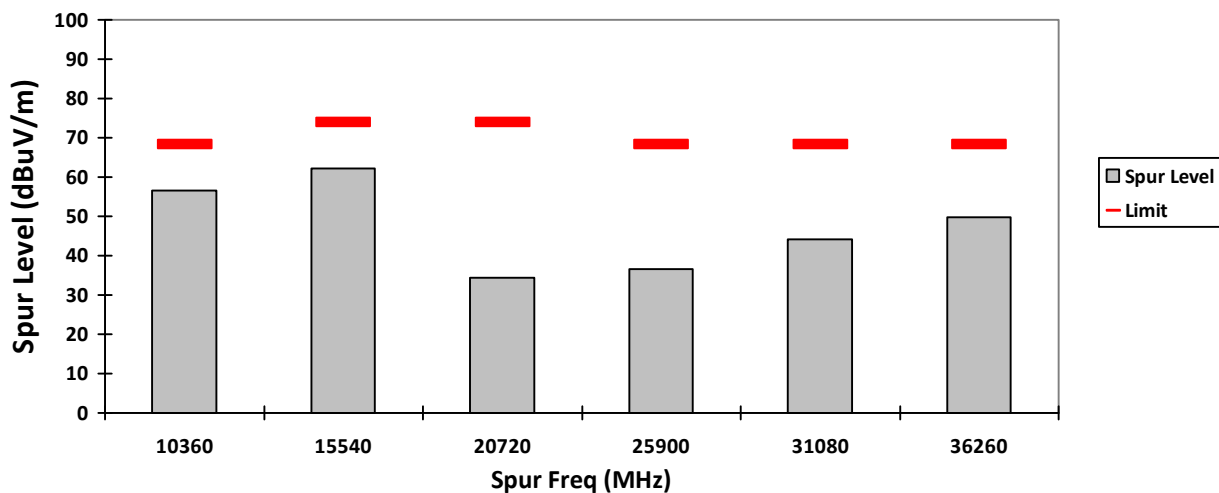
VERTICAL, QPK



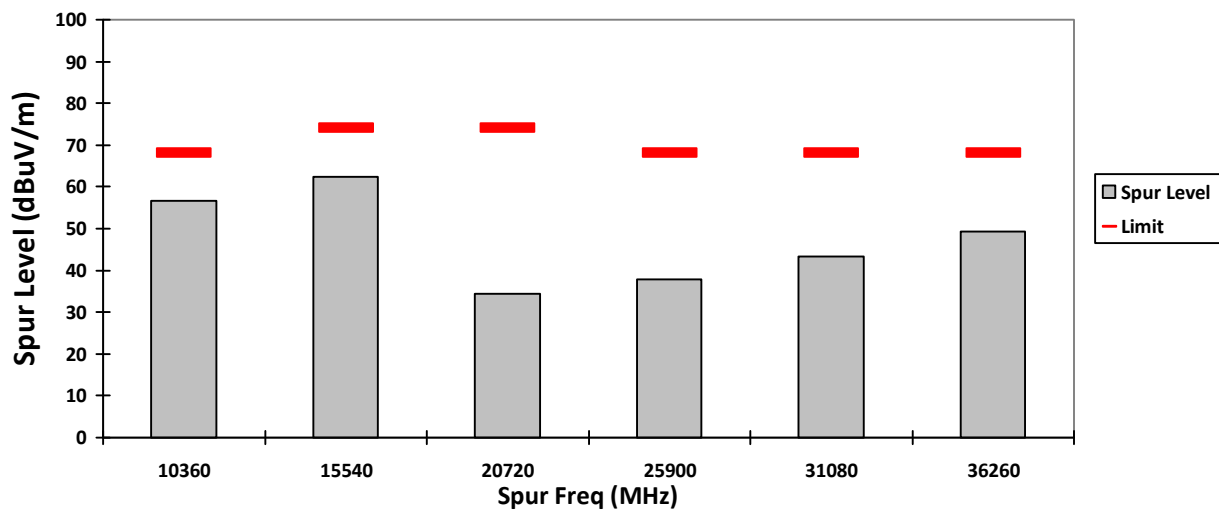
HORIZONTAL, QPK



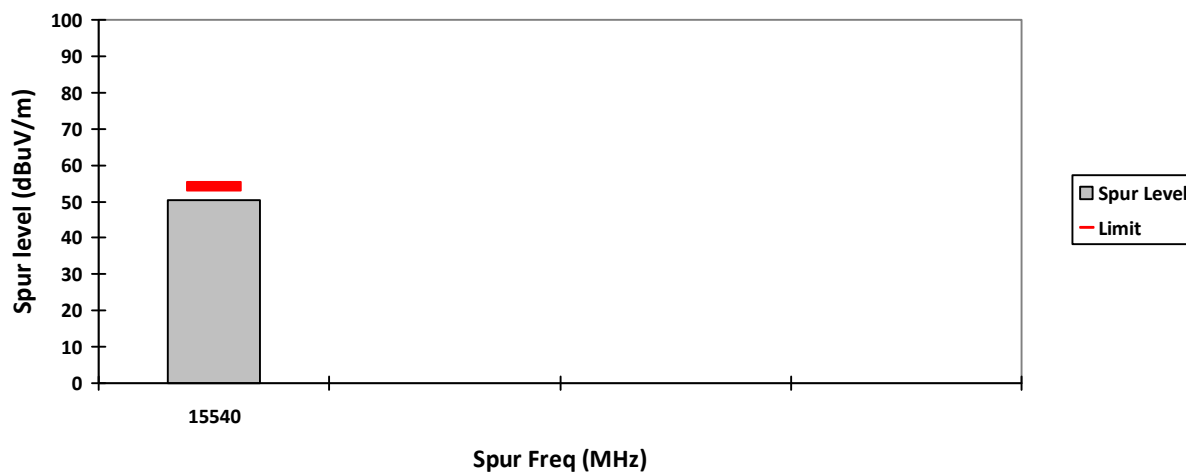
VERTICAL, PK



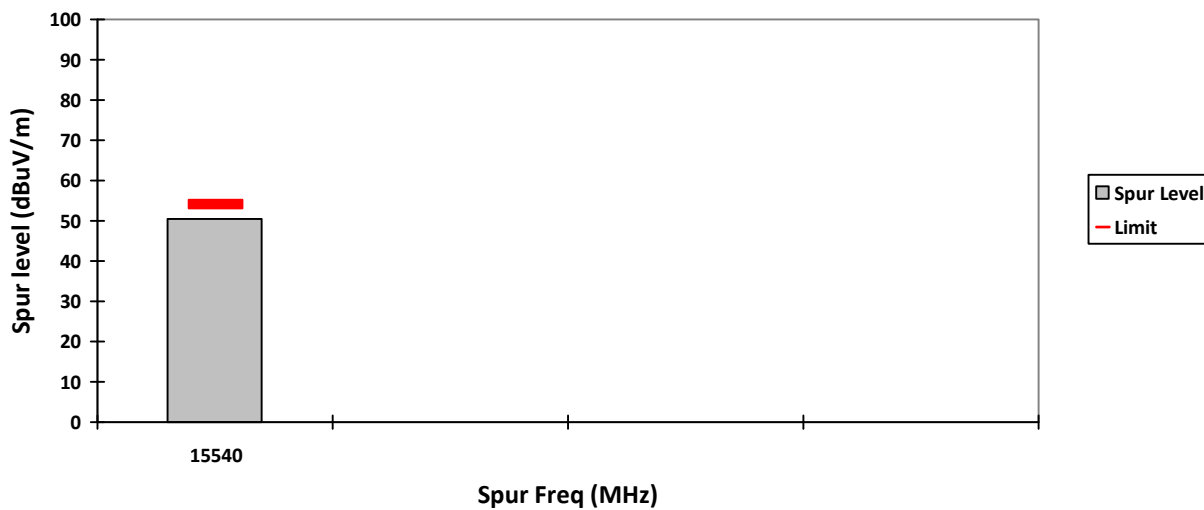
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test Channel: Mid Test Frequency: 5220.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11n 20MHz)

Radiated Emission (Mid Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Humidity (%): 69.7

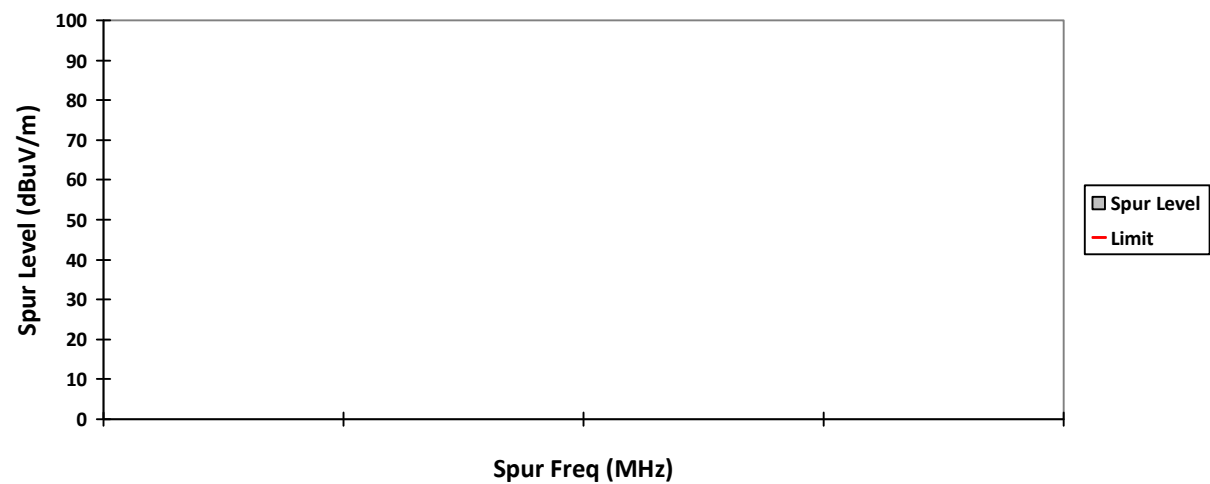
Test Date: Tue, 22 Feb, 2022

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

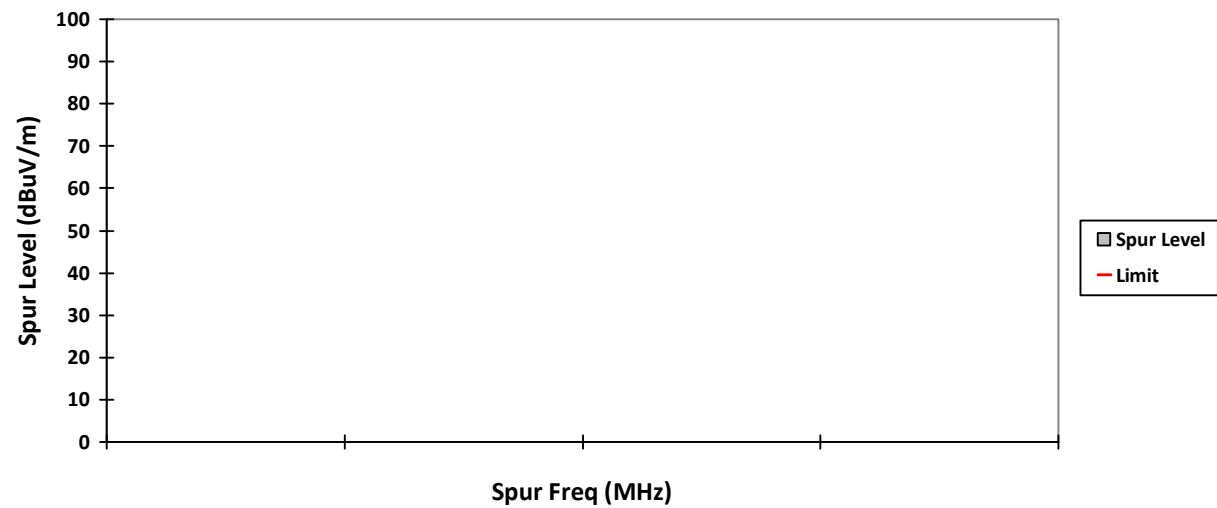
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

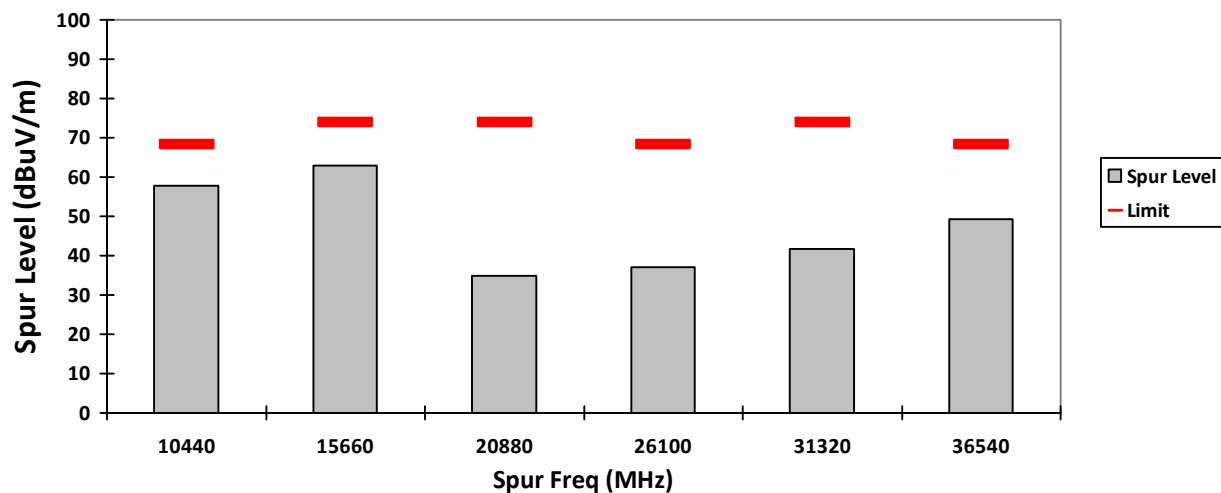
VERTICAL, QPK



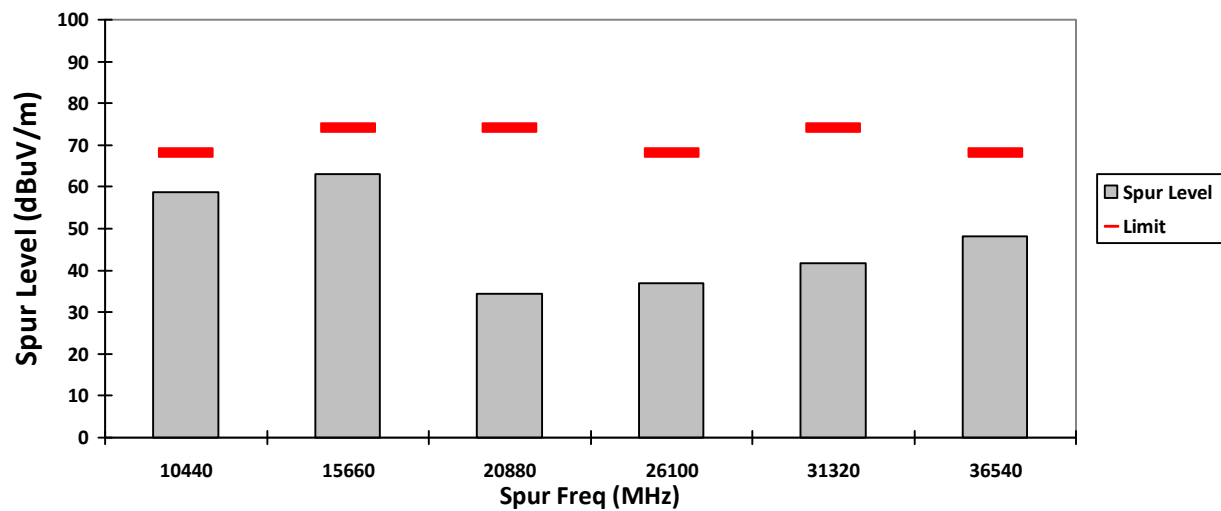
HORIZONTAL, QPK



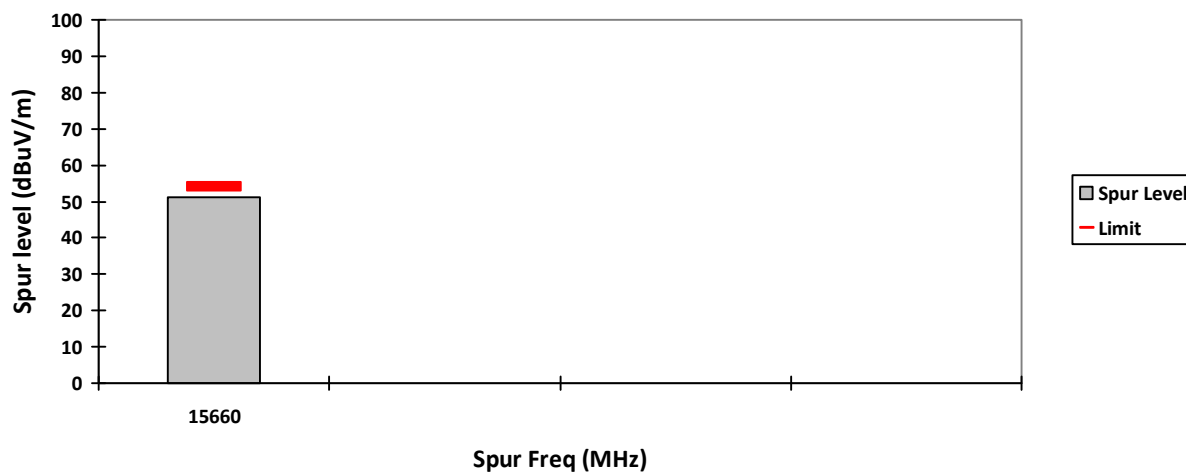
VERTICAL, PK



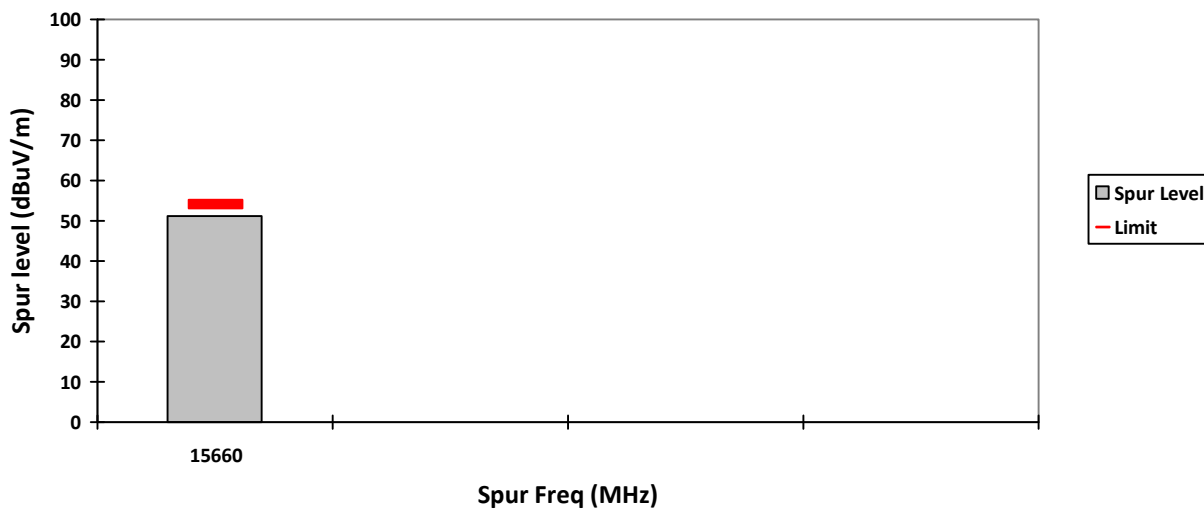
HORIZONTAL, PK



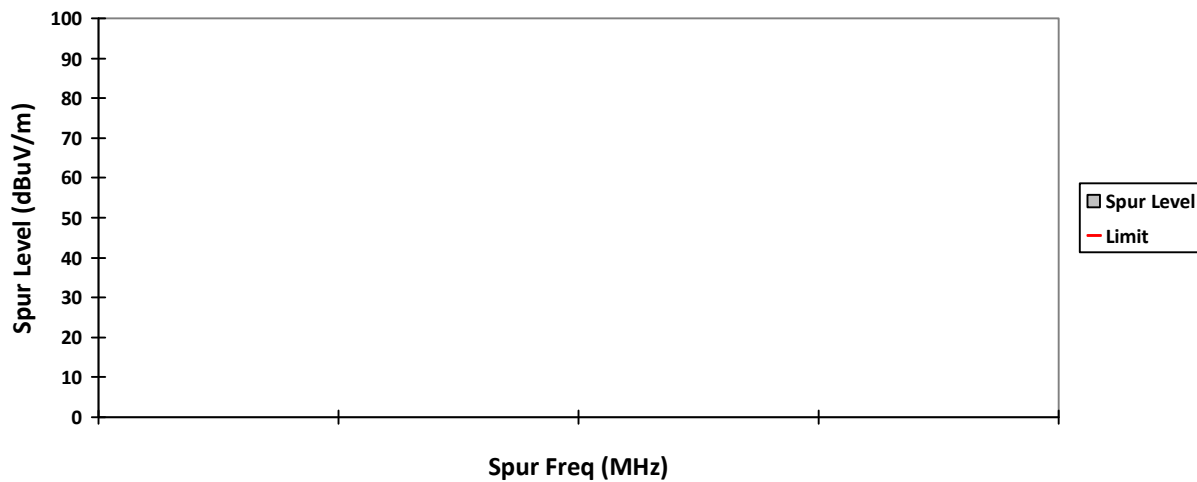
VERTICAL, AV



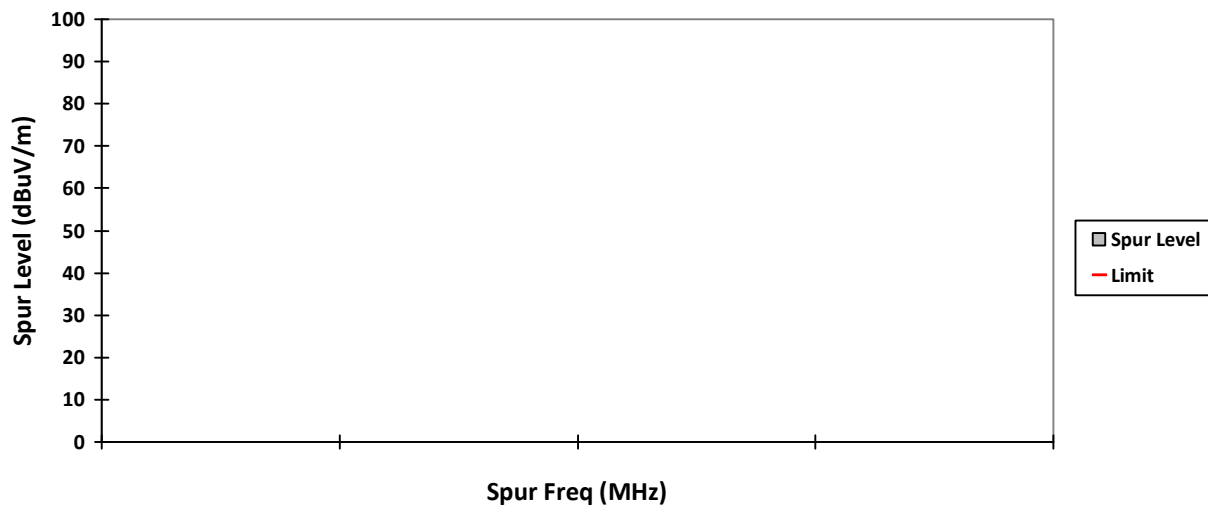
HORIZONTAL, AV



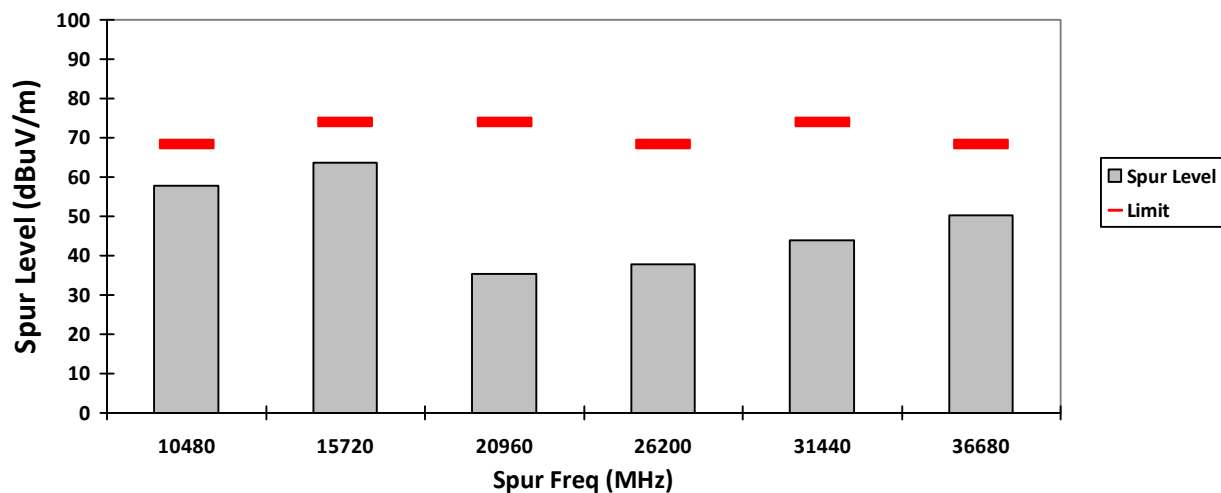
VERTICAL, QPK



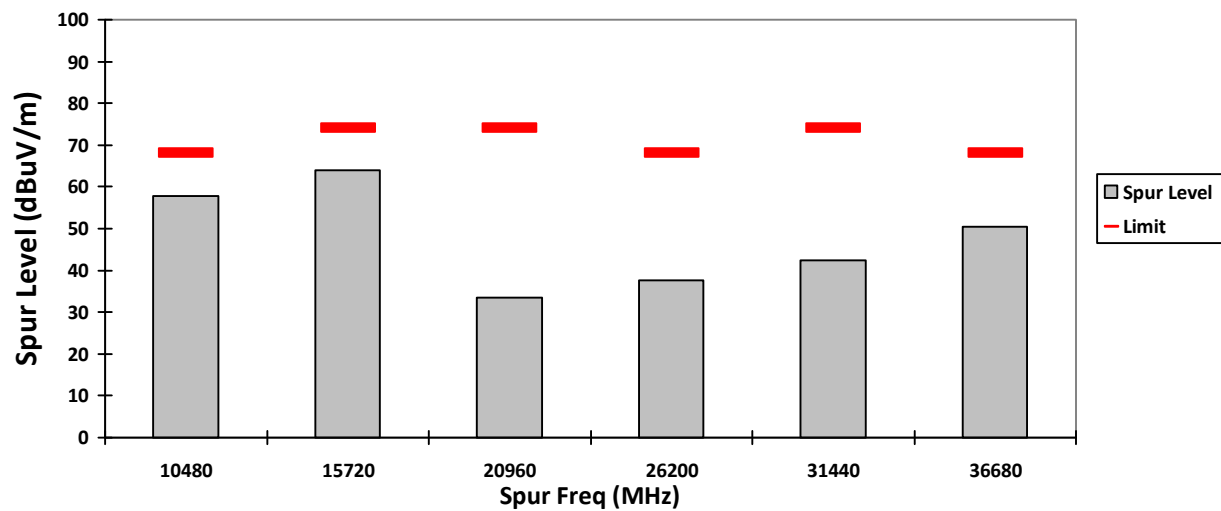
HORIZONTAL, QPK



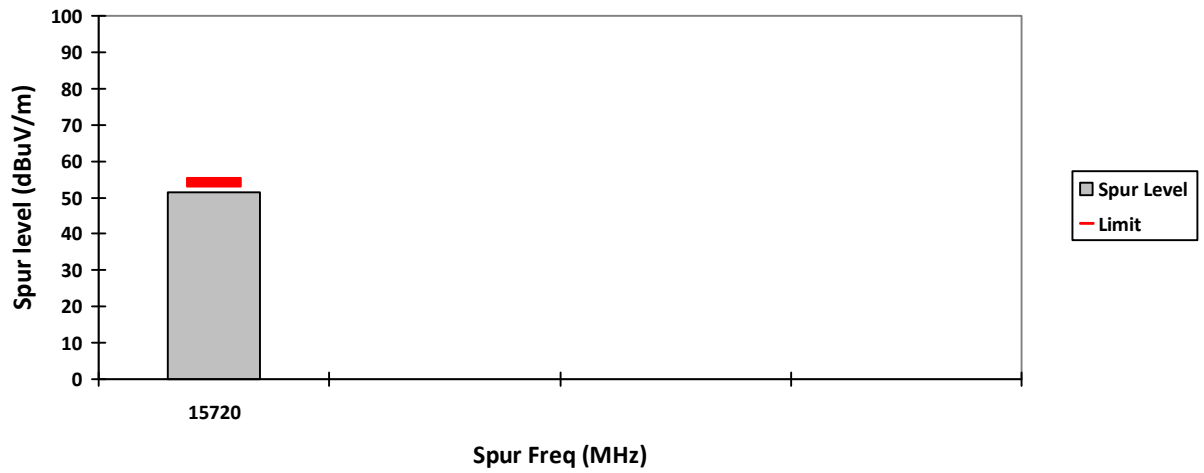
VERTICAL, PK



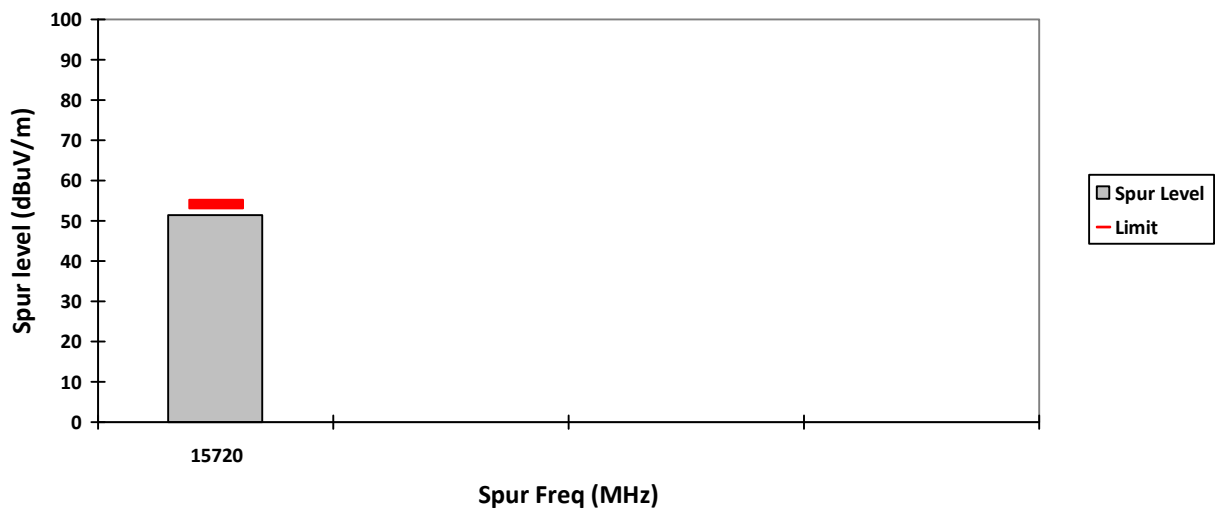
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test Channel: Low Test Frequency: 5260.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11n 20MHz)

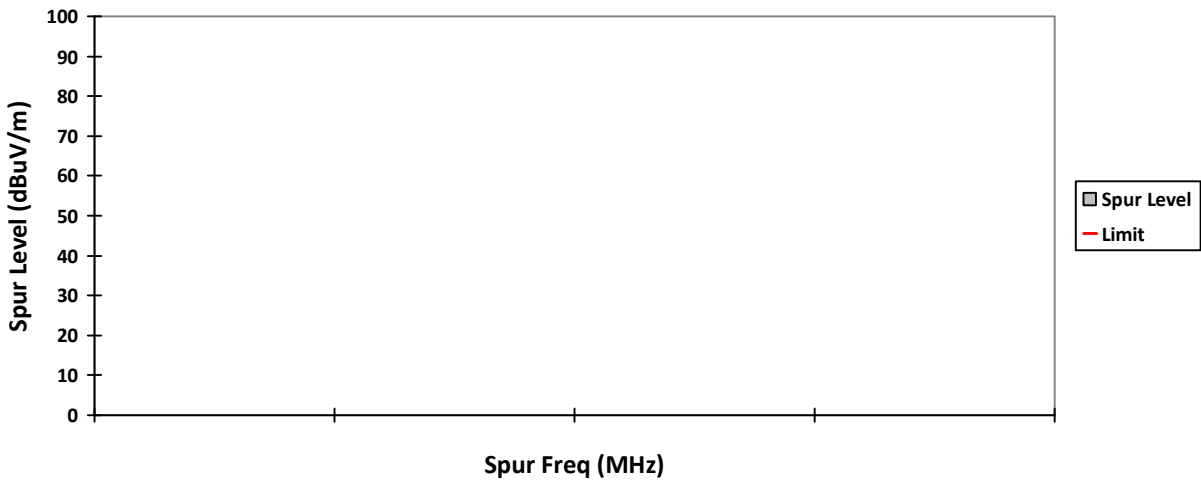
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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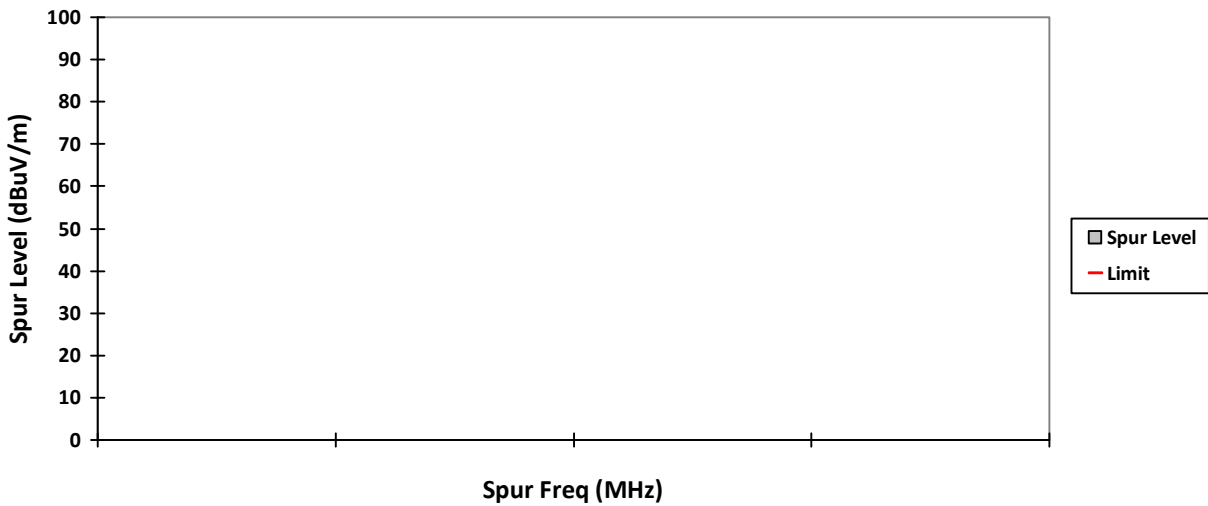
System MU: 5.88 dB (30-1000MHz), 5.84 dB (1000-18000MHz), 6.02 dB (18000MHz-40000MHz)

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

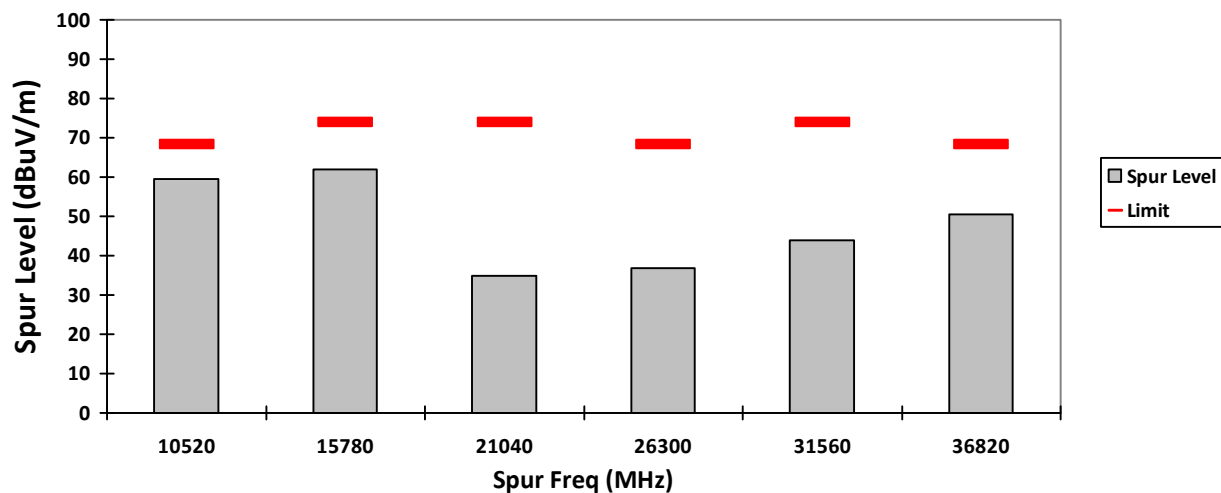
VERTICAL, QPK



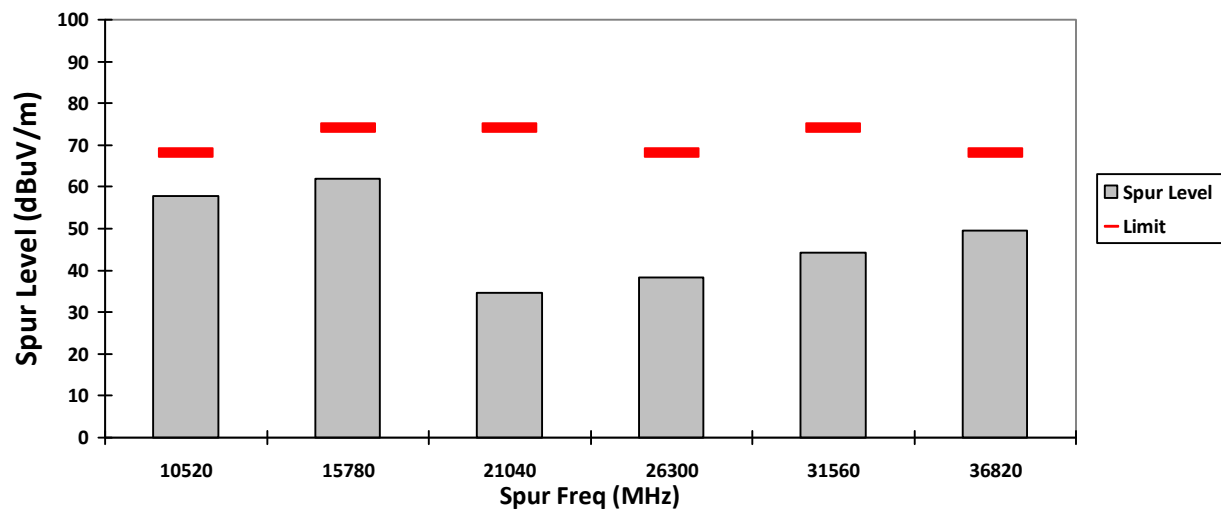
HORIZONTAL, QPK



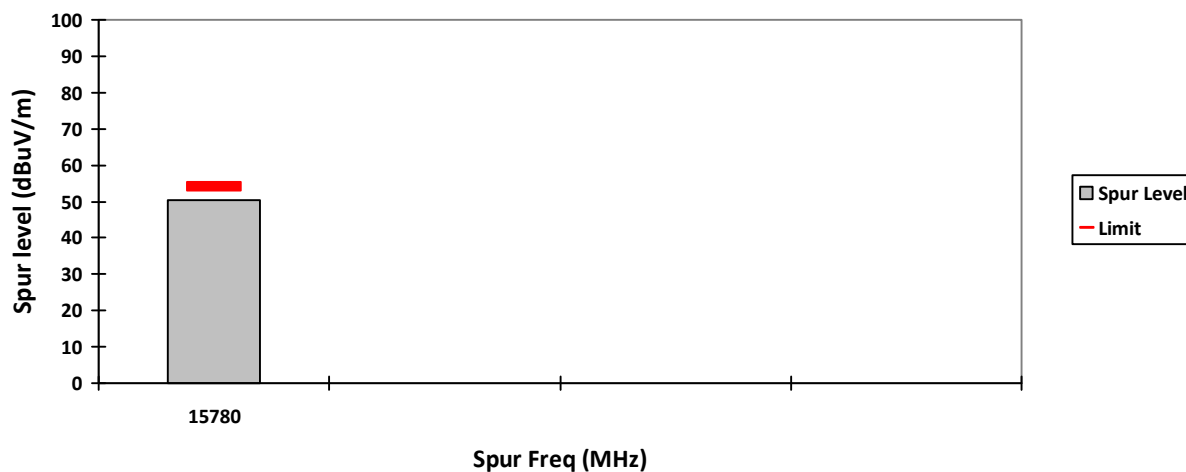
VERTICAL, PK



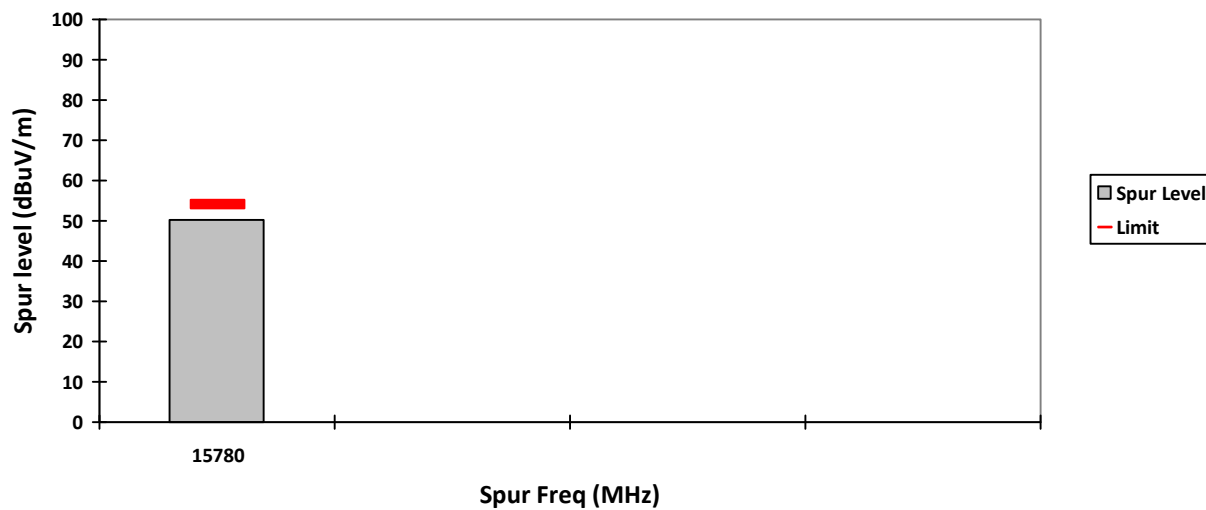
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test Channel: Mid Test Frequency: 5300.0000 MHz Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-Plane (802.11n 20MHz)

Radiated Emission (Mid Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Humidity (%): 69.7

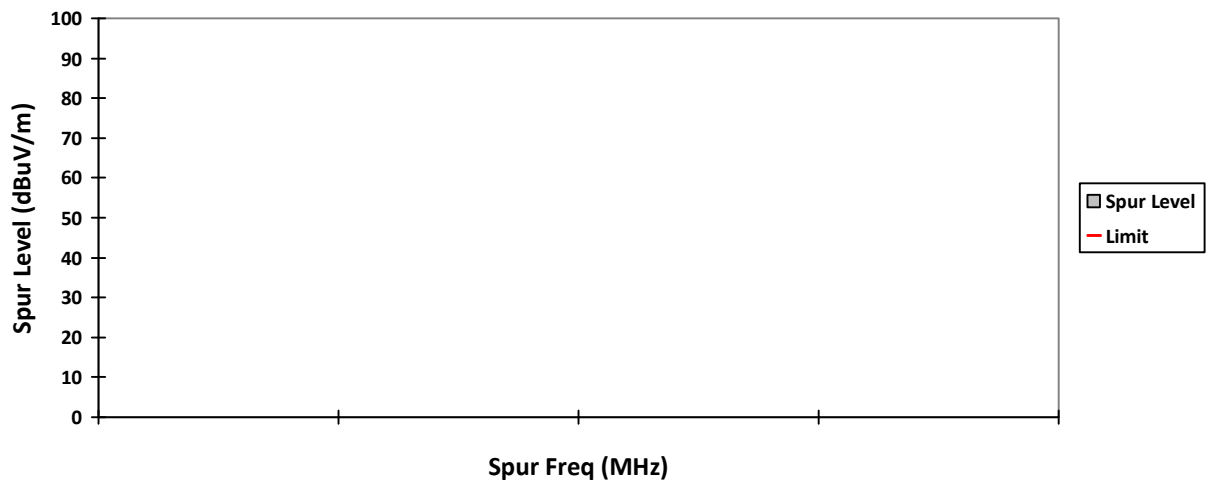
Test Date: Tue, 22 Feb, 2022

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

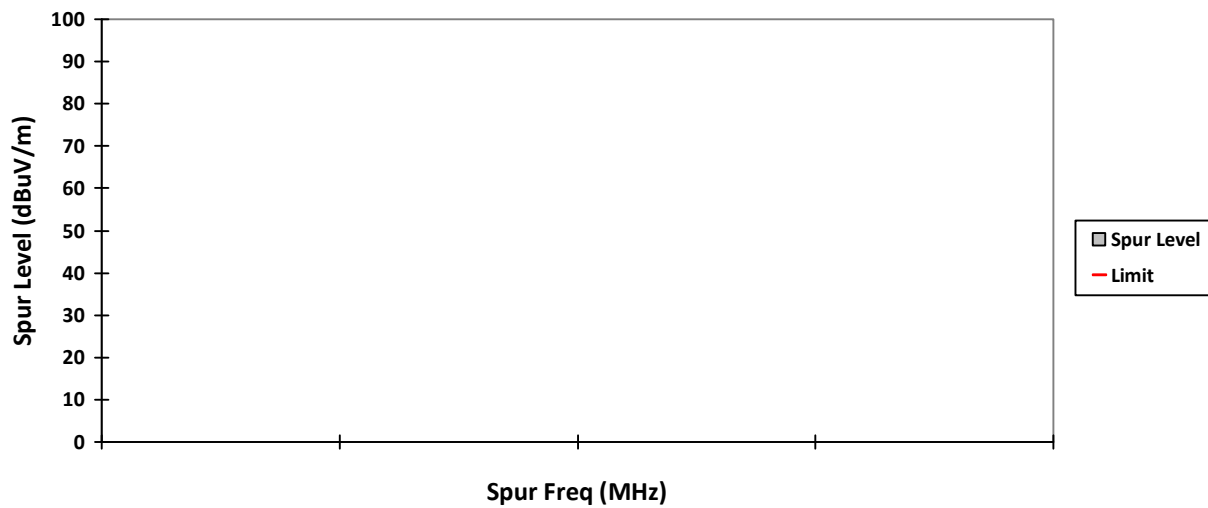
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

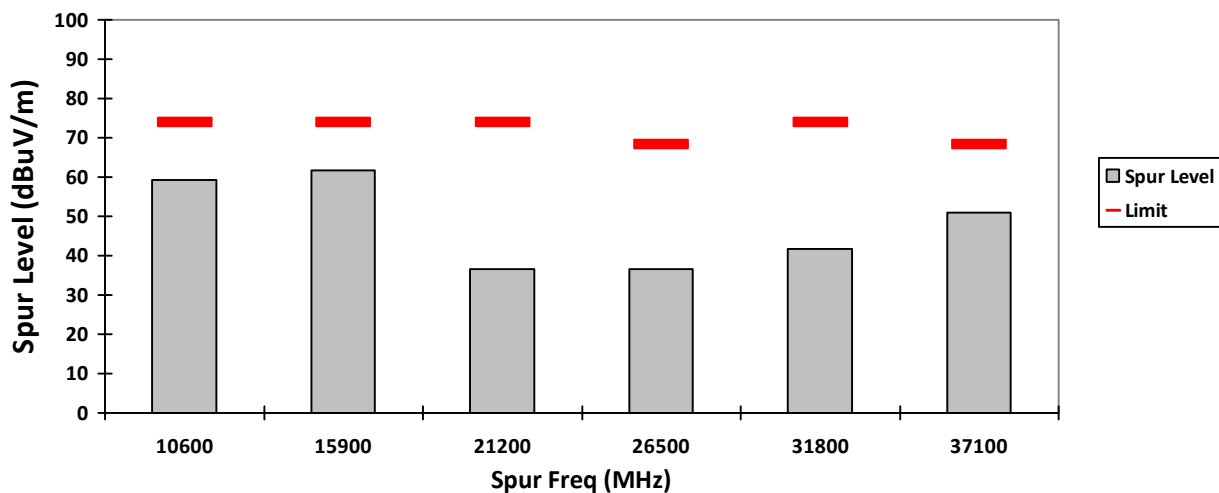
VERTICAL, QPK



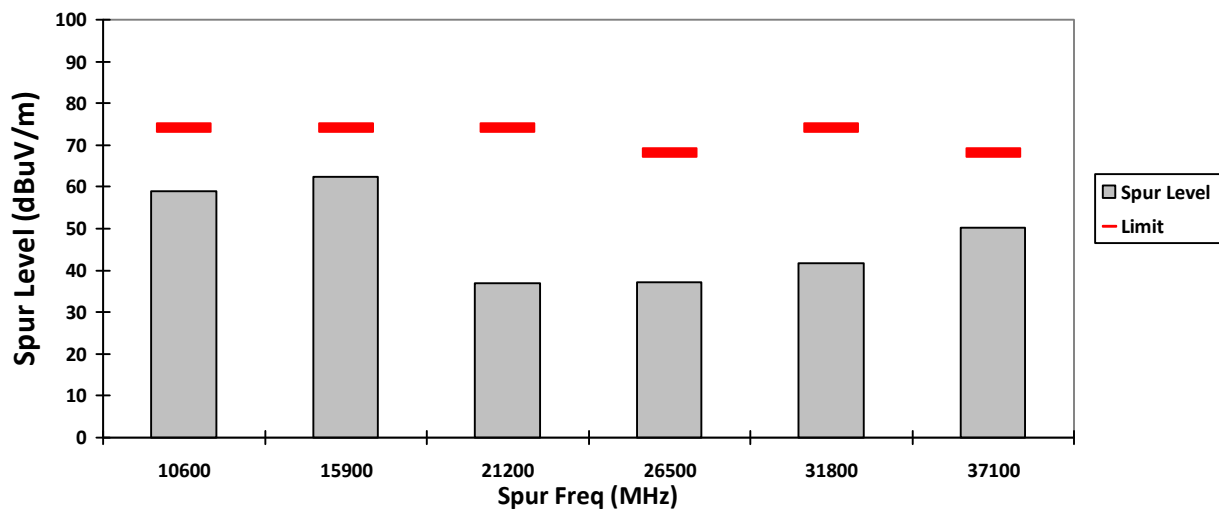
HORIZONTAL, QPK



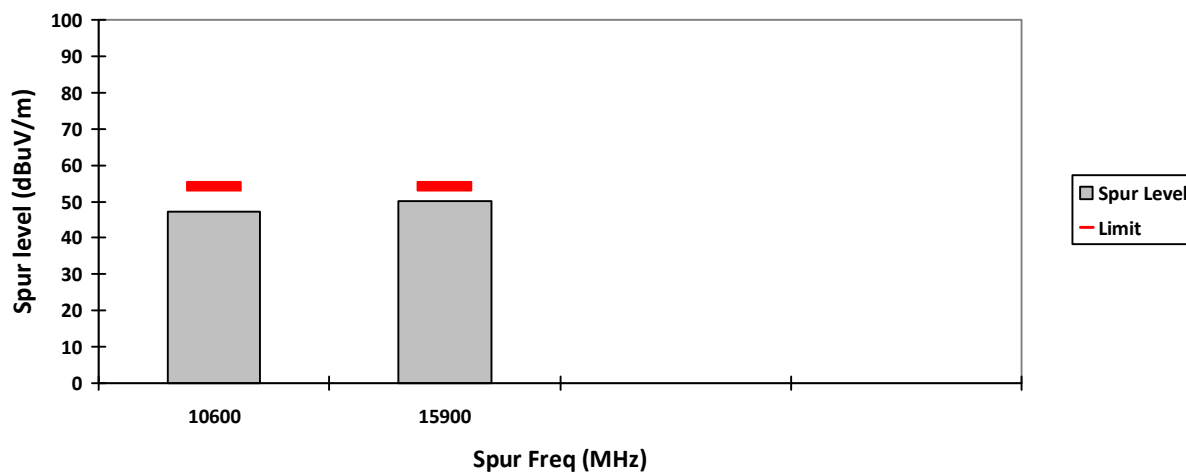
VERTICAL, PK



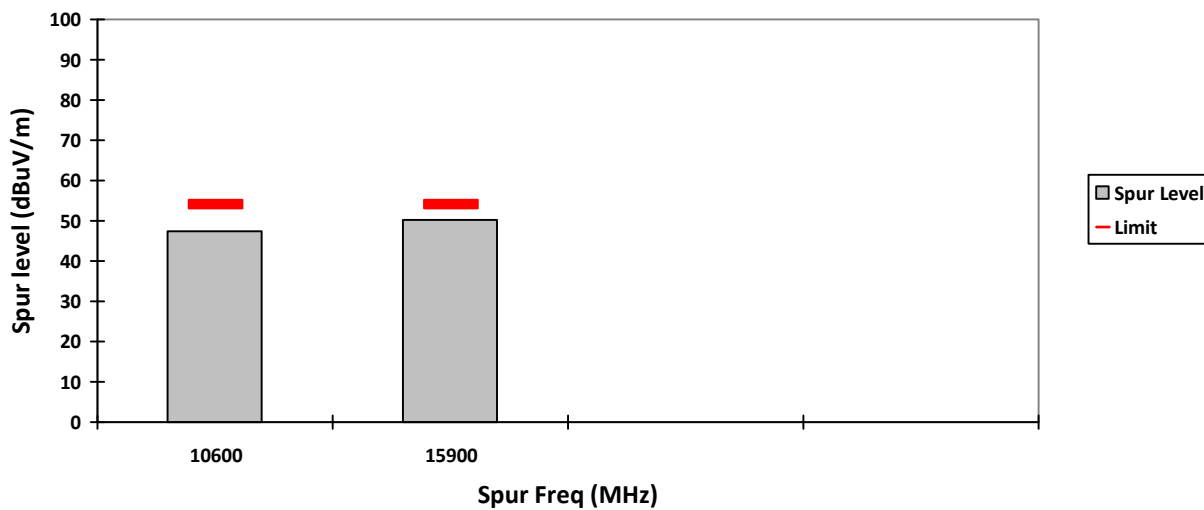
HORIZONTAL, PK



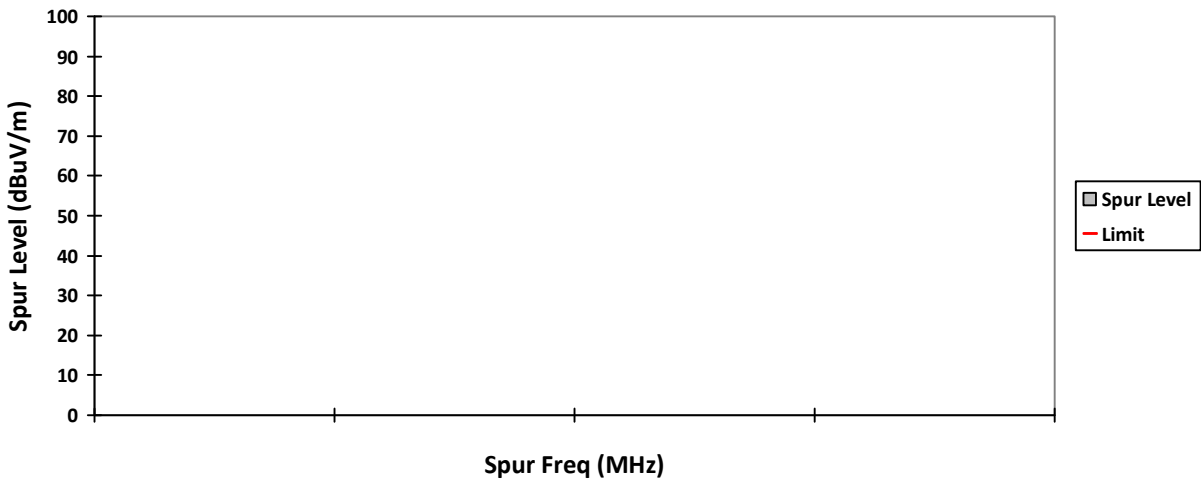
VERTICAL, AV



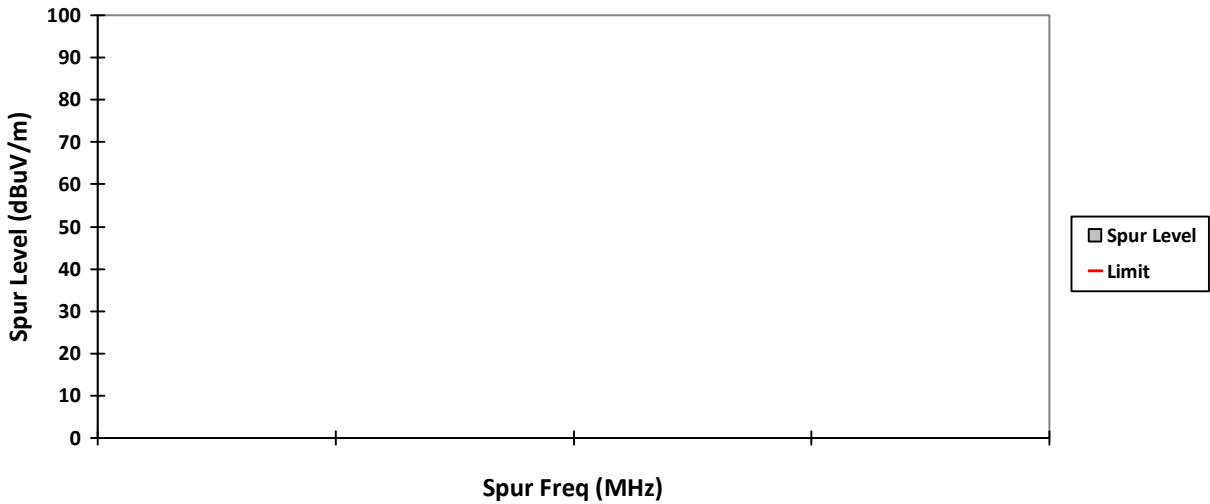
HORIZONTAL, AV



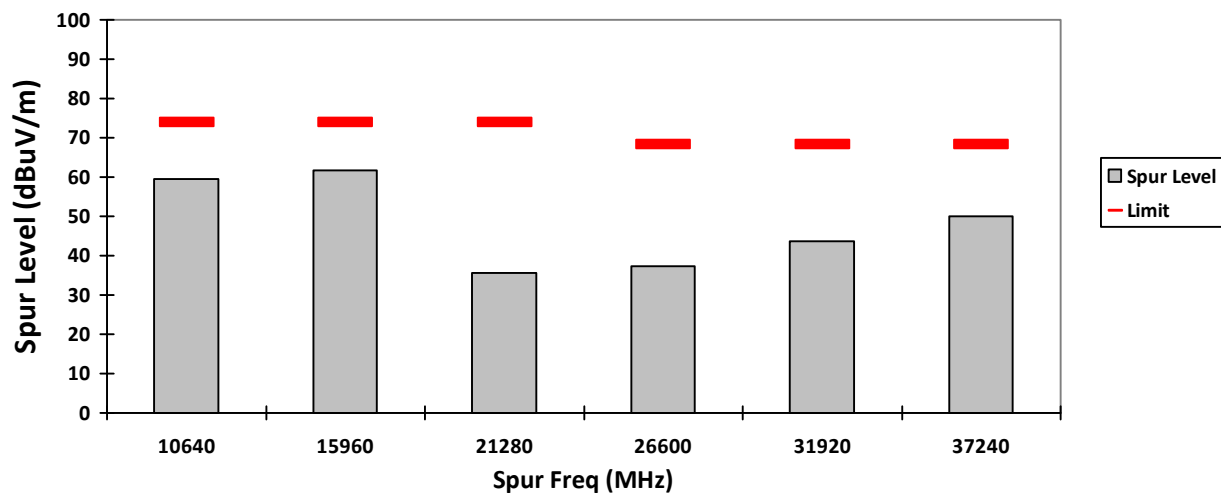
VERTICAL, QPK



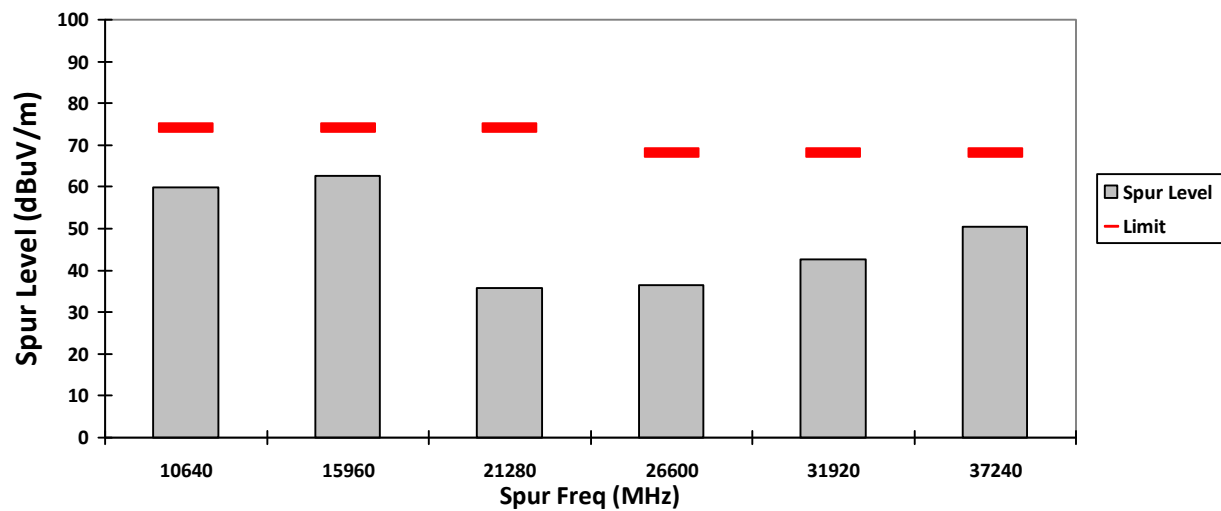
HORIZONTAL, QPK



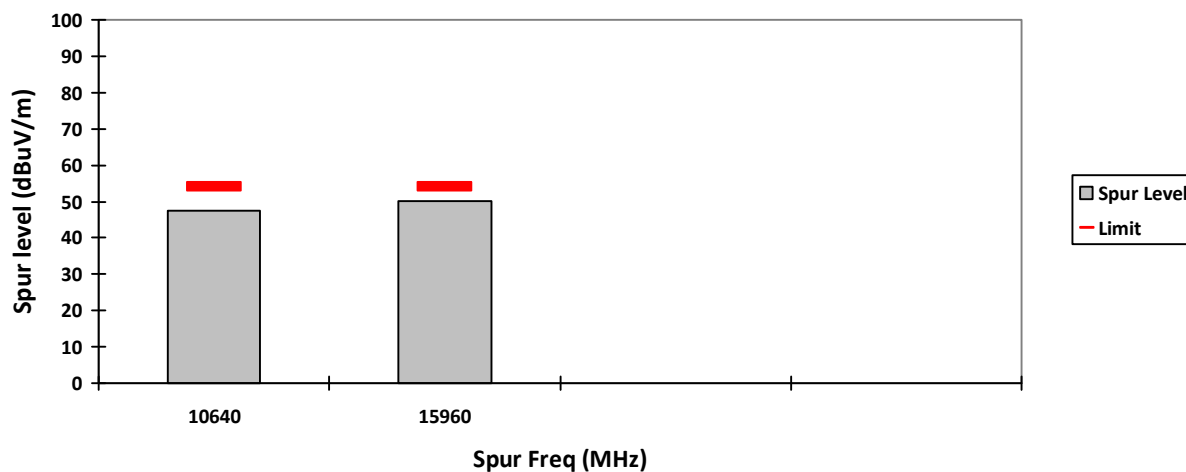
VERTICAL, PK



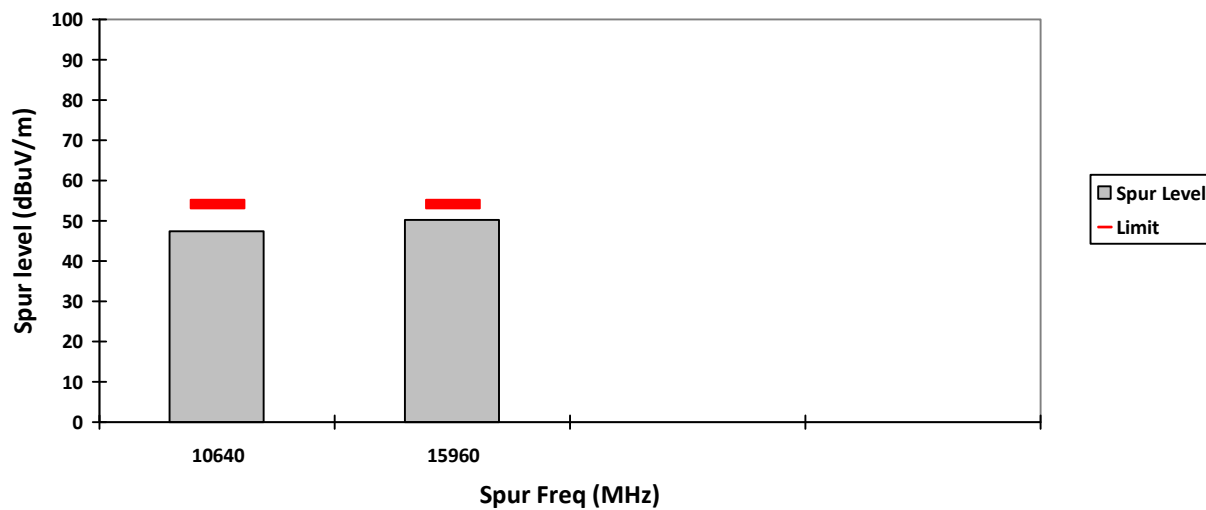
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: Low

Test Frequency: 5500.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11n 20MHz)

Radiated Emission (Low Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

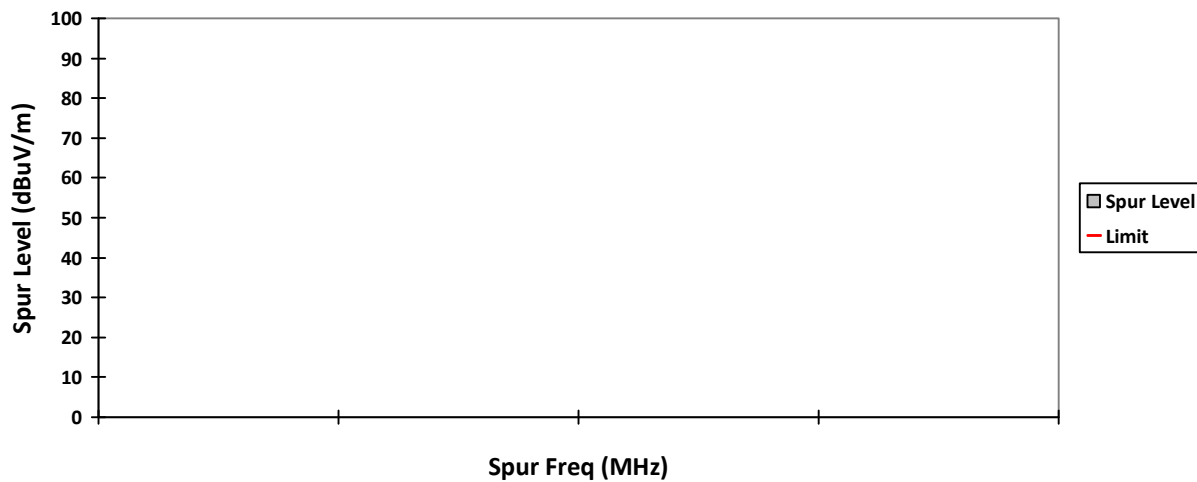
Test Date: Tue, 22 Feb, 2022

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

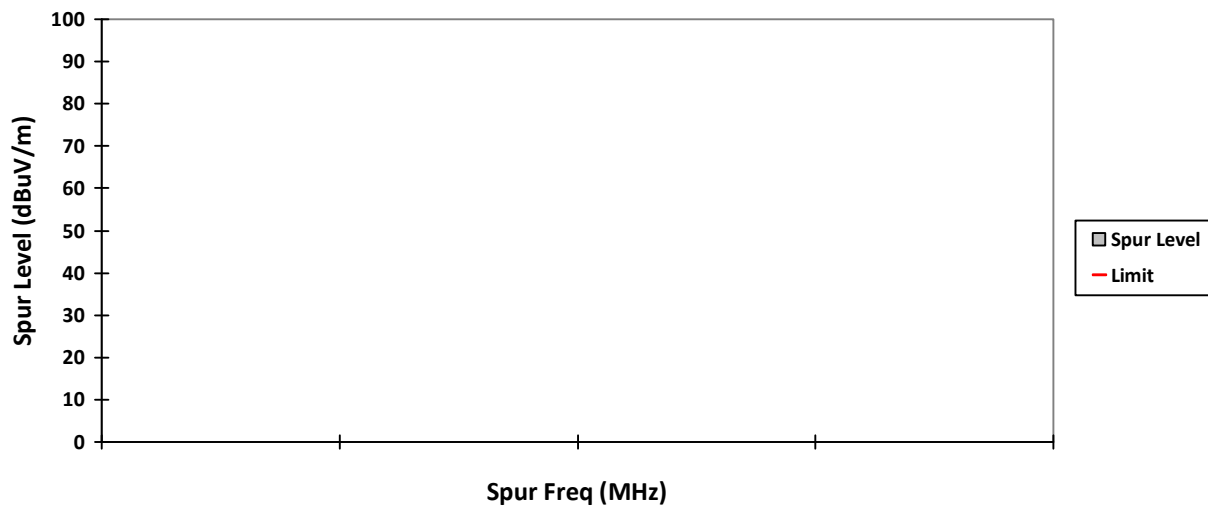
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

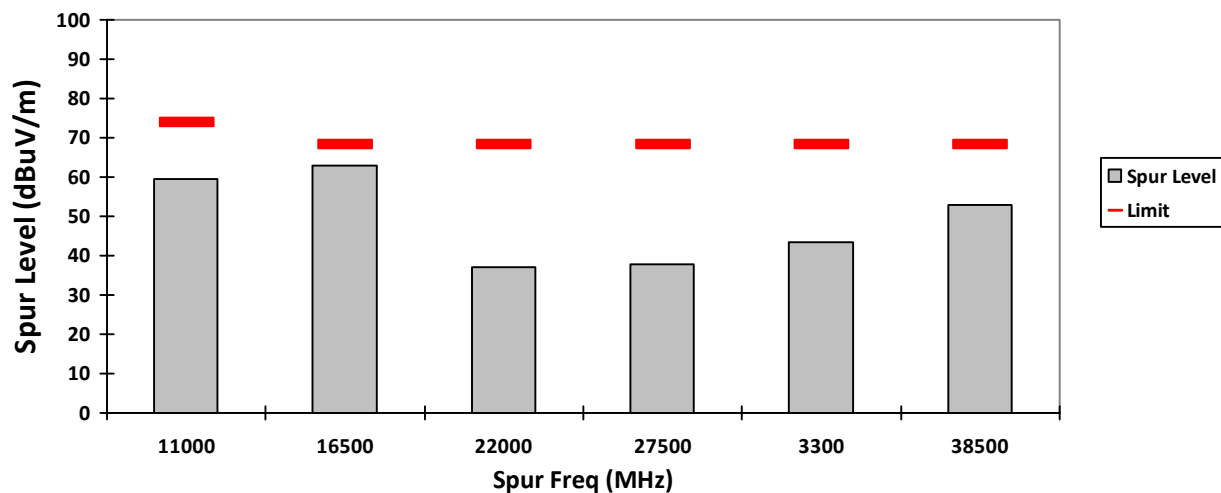
VERTICAL, QPK



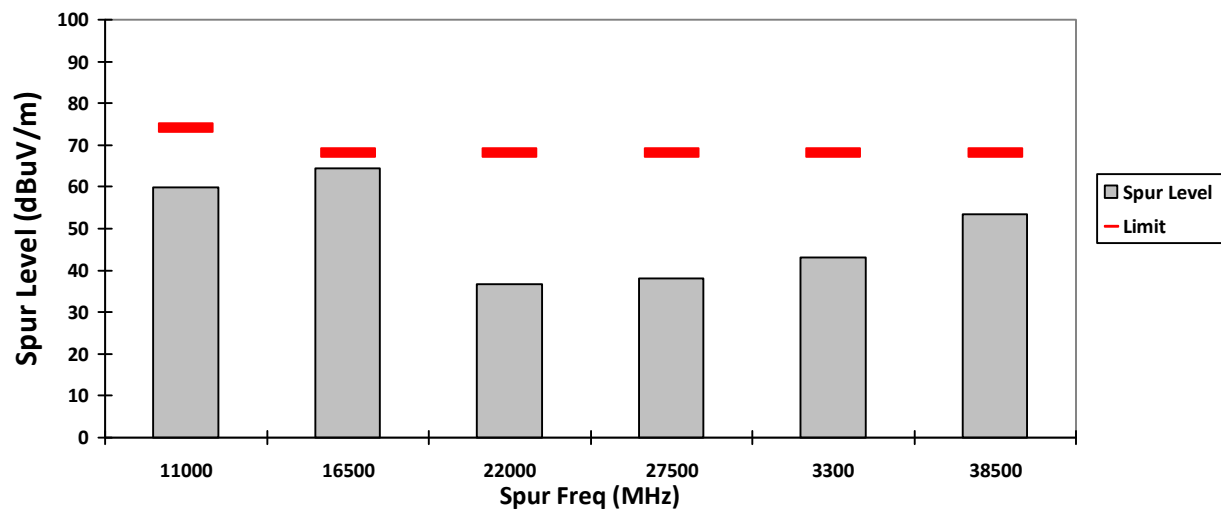
HORIZONTAL, QPK



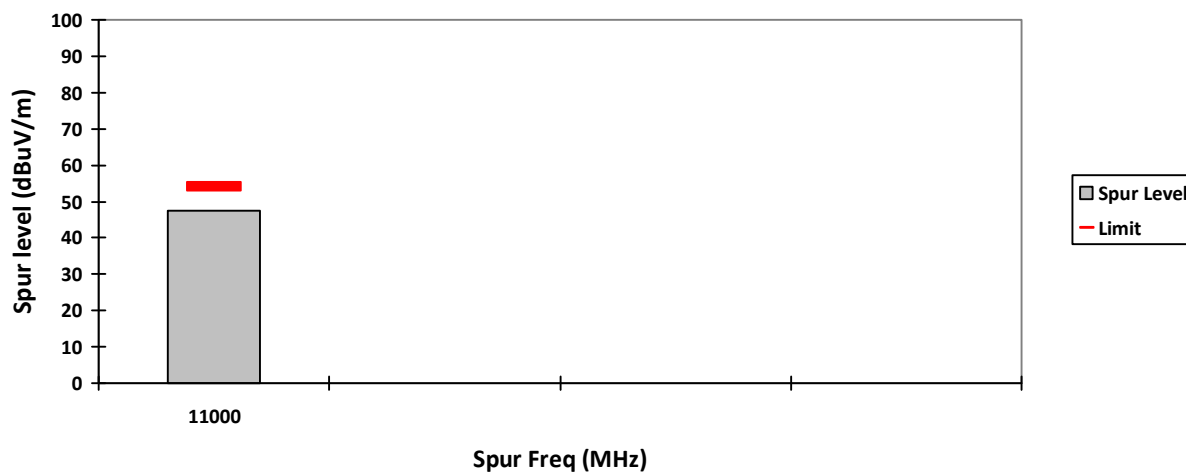
VERTICAL, PK



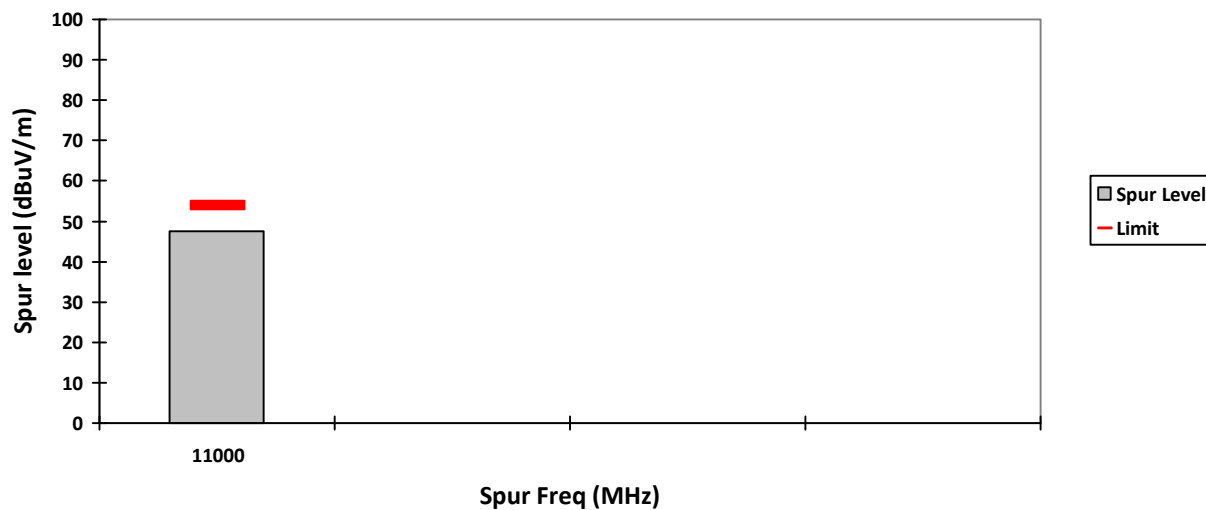
HORIZONTAL, PK



VERTICAL, AV

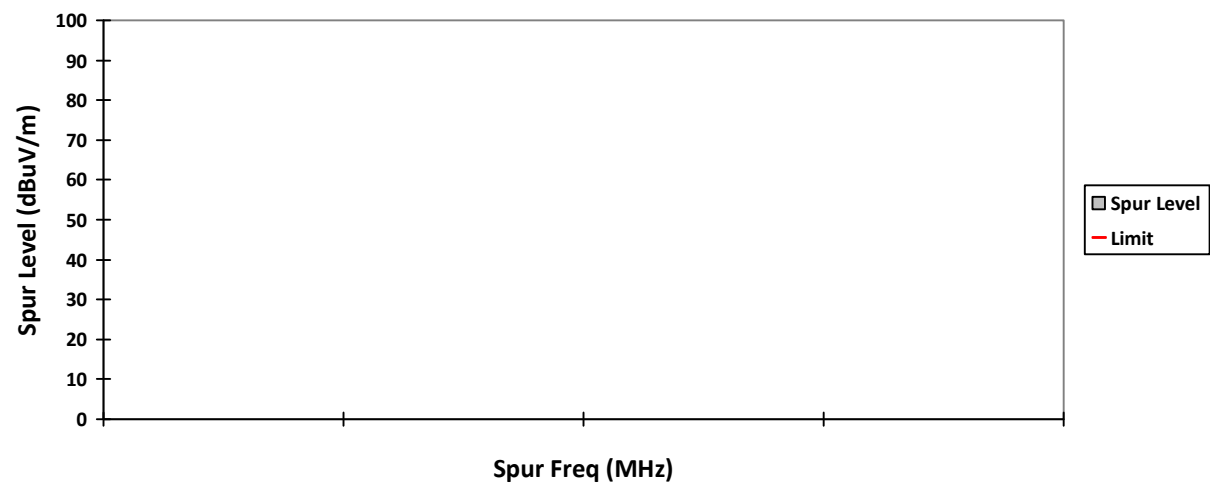


HORIZONTAL, AV

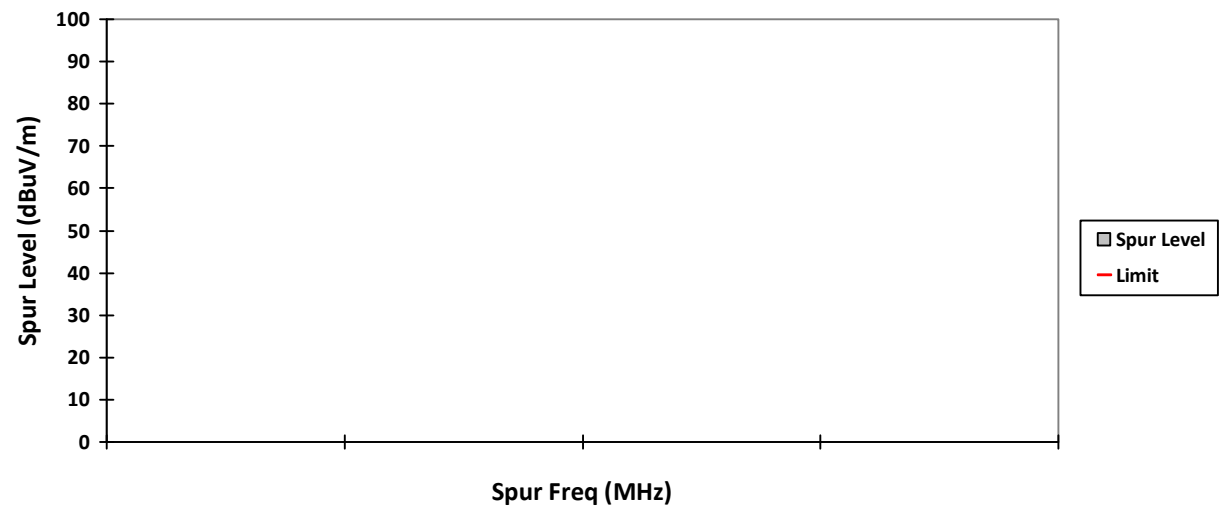


Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-20MHz)

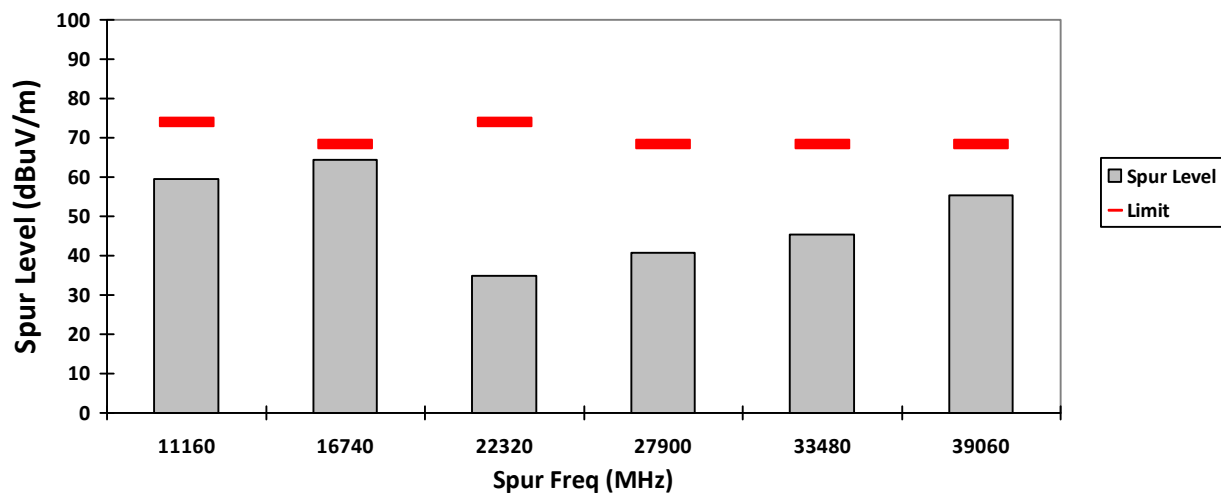
VERTICAL, QPK



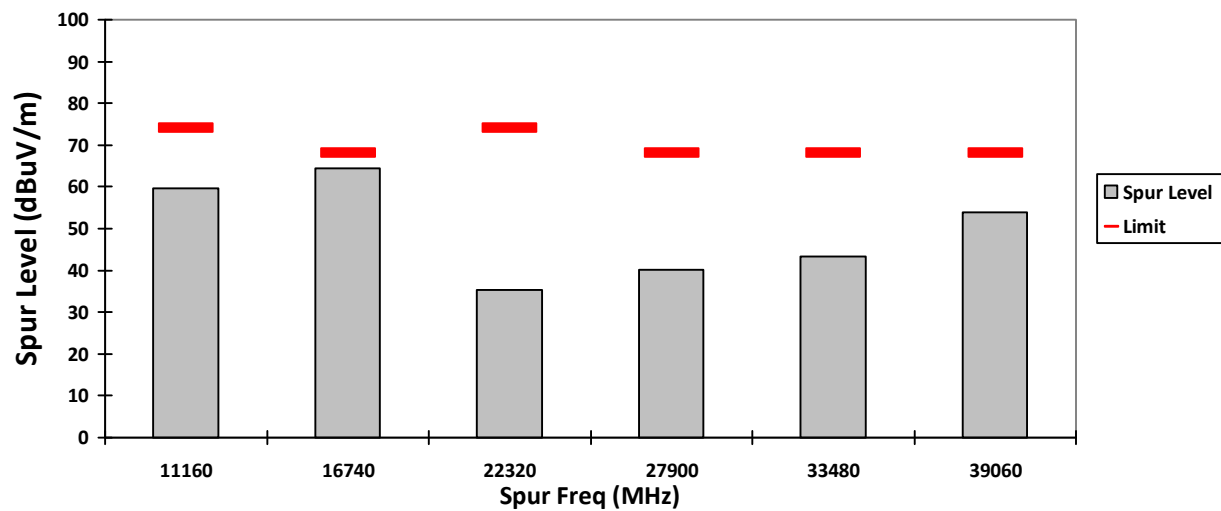
HORIZONTAL, QPK



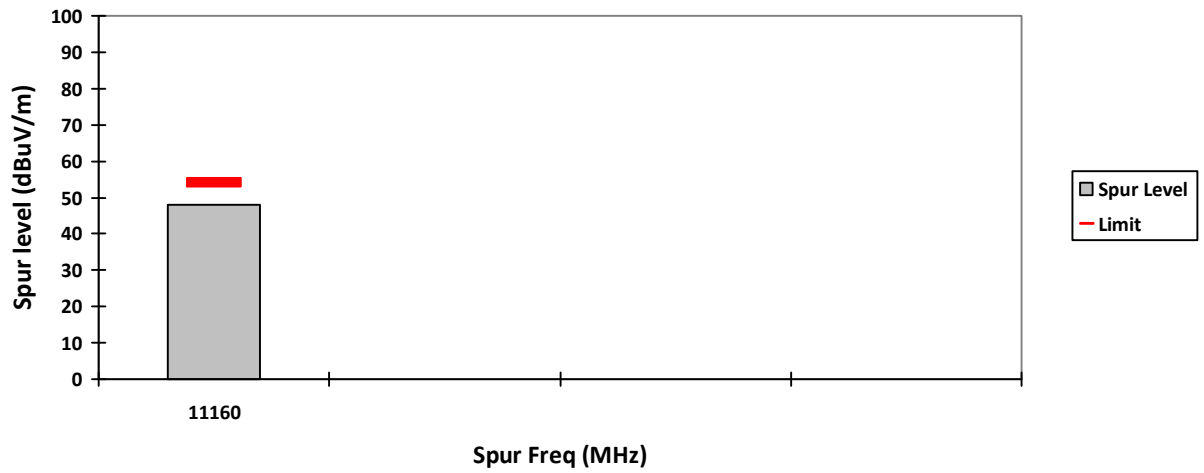
VERTICAL, PK



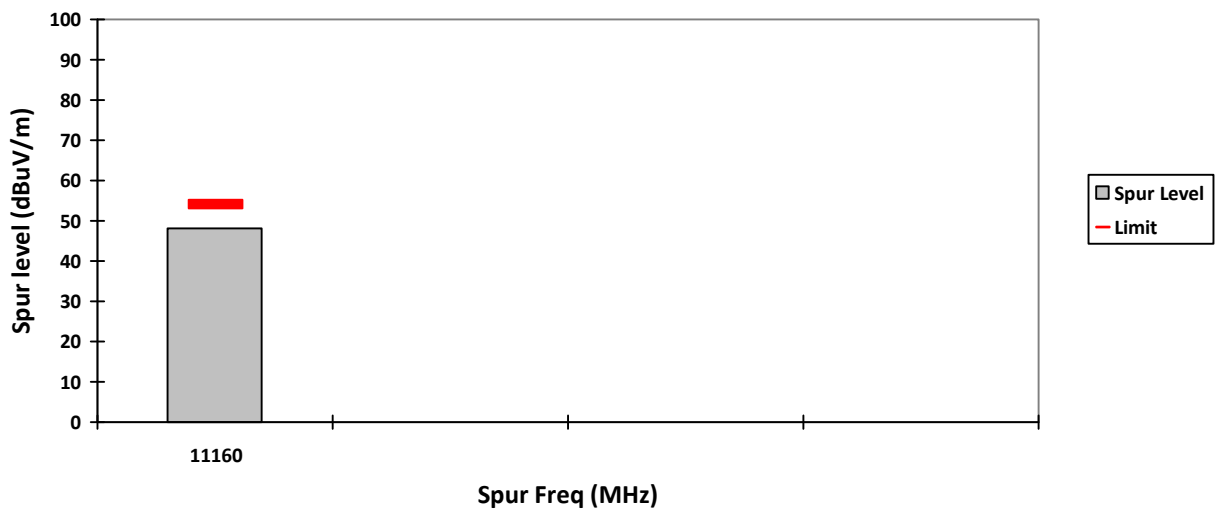
HORIZONTAL, PK



VERTICAL, AV

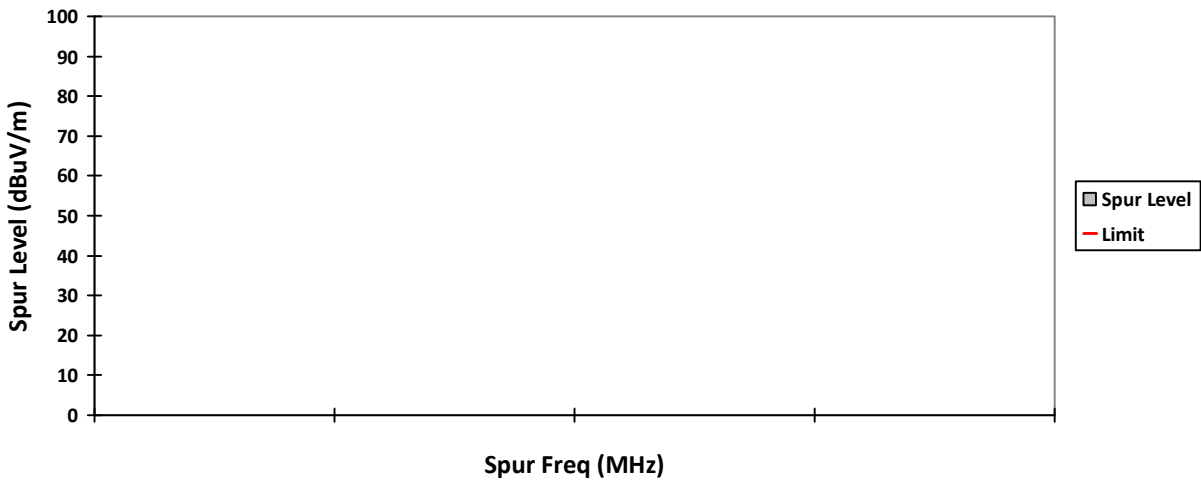


HORIZONTAL, AV

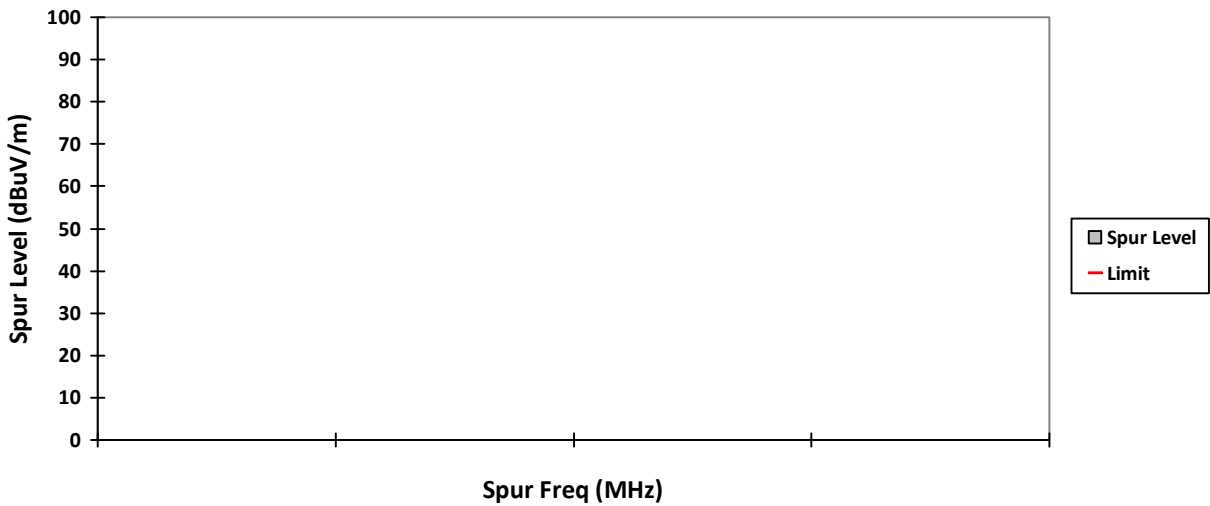


Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-20MHz)

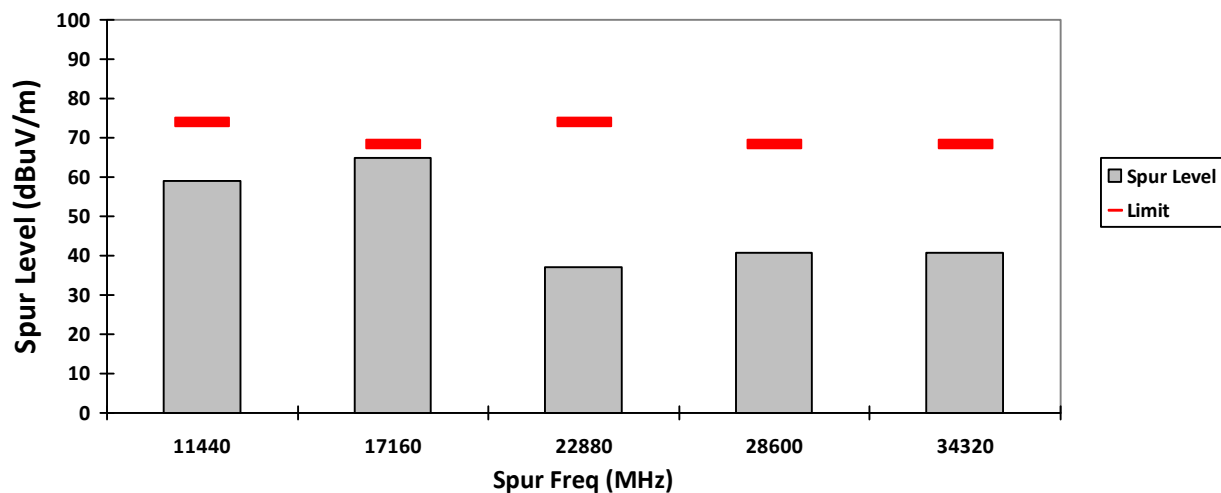
VERTICAL, QPK



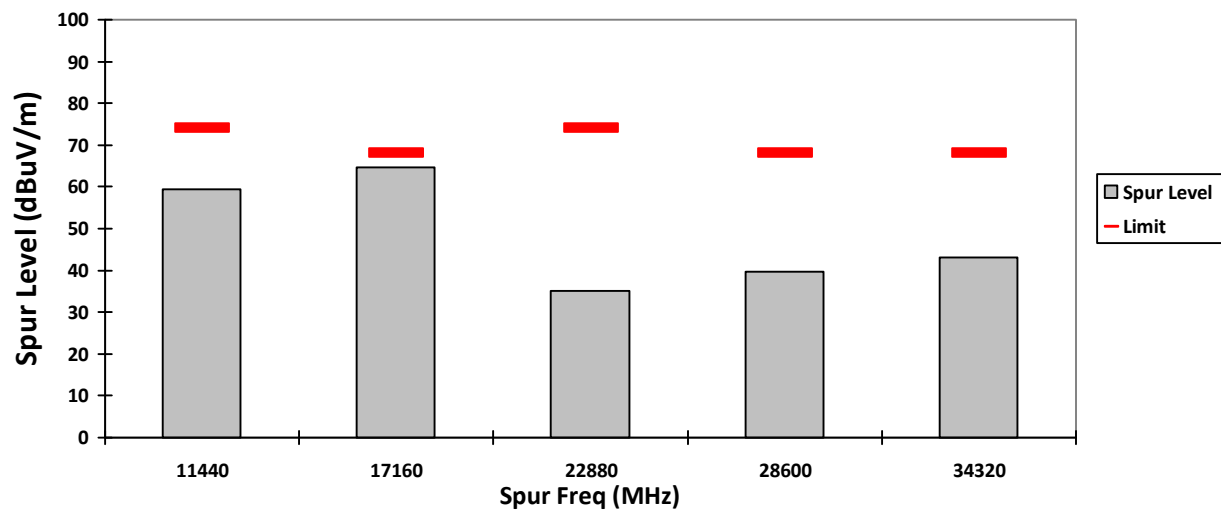
HORIZONTAL, QPK



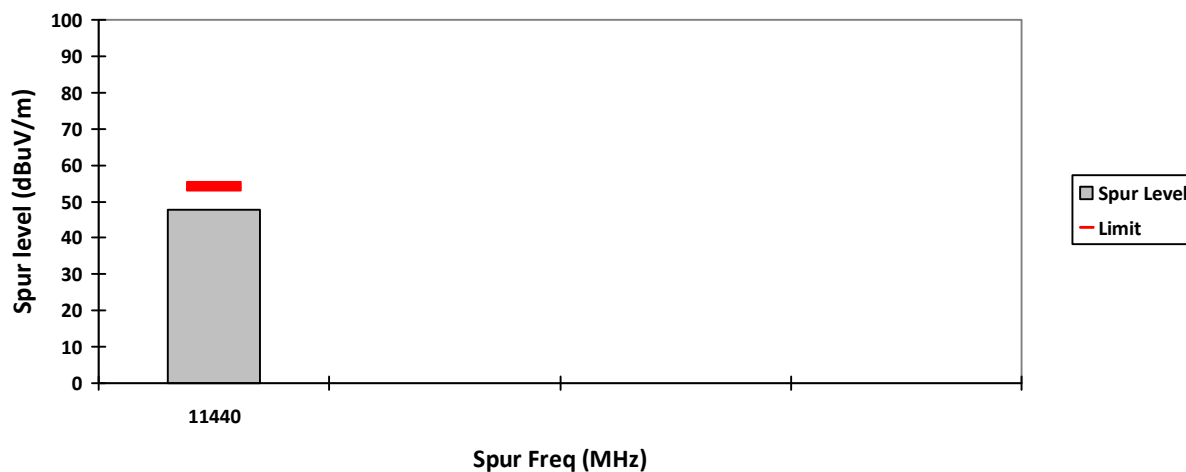
VERTICAL, PK



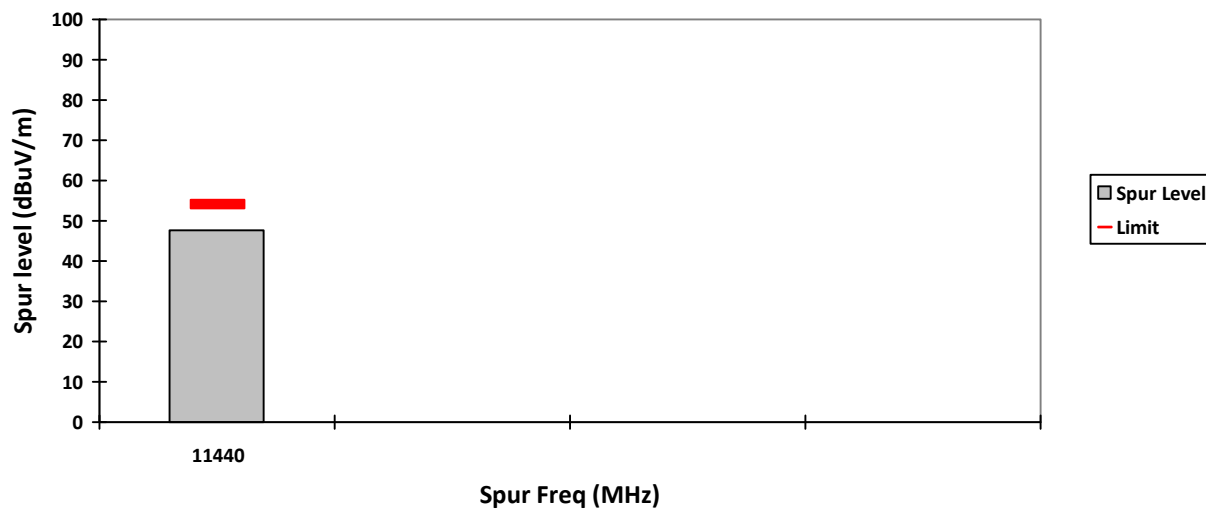
HORIZONTAL, PK



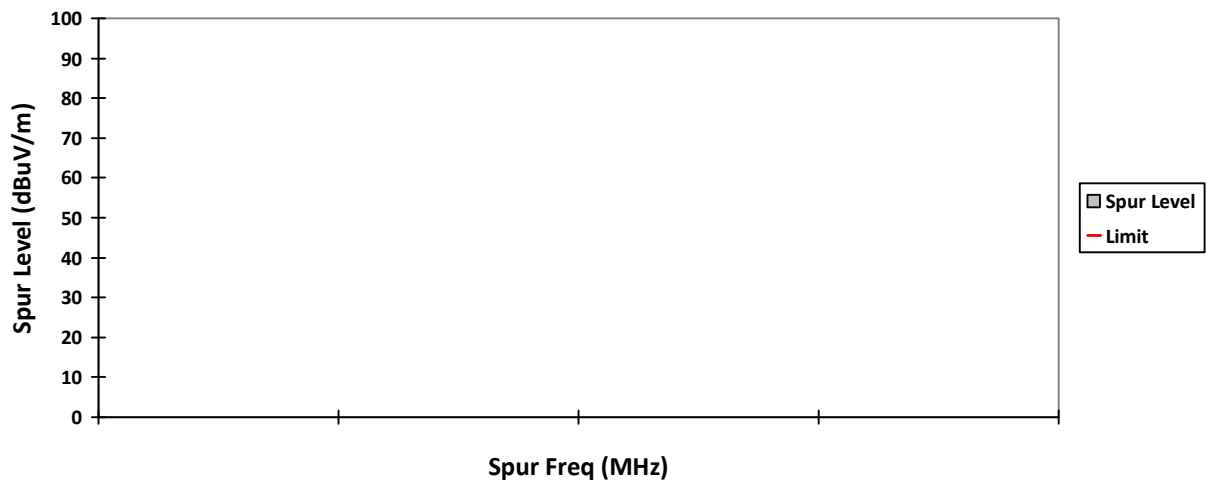
VERTICAL, AV



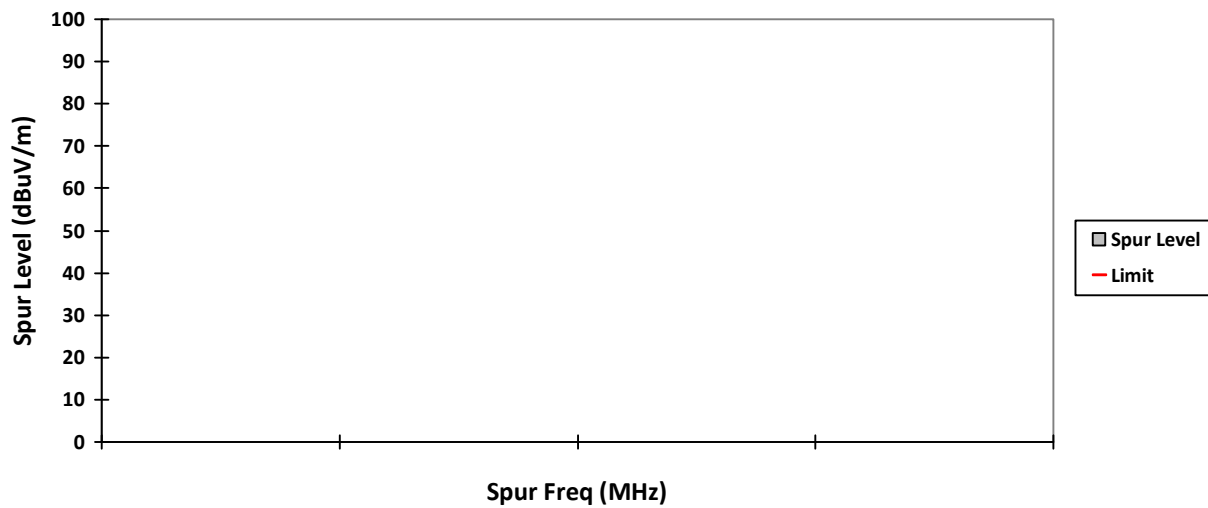
HORIZONTAL, AV



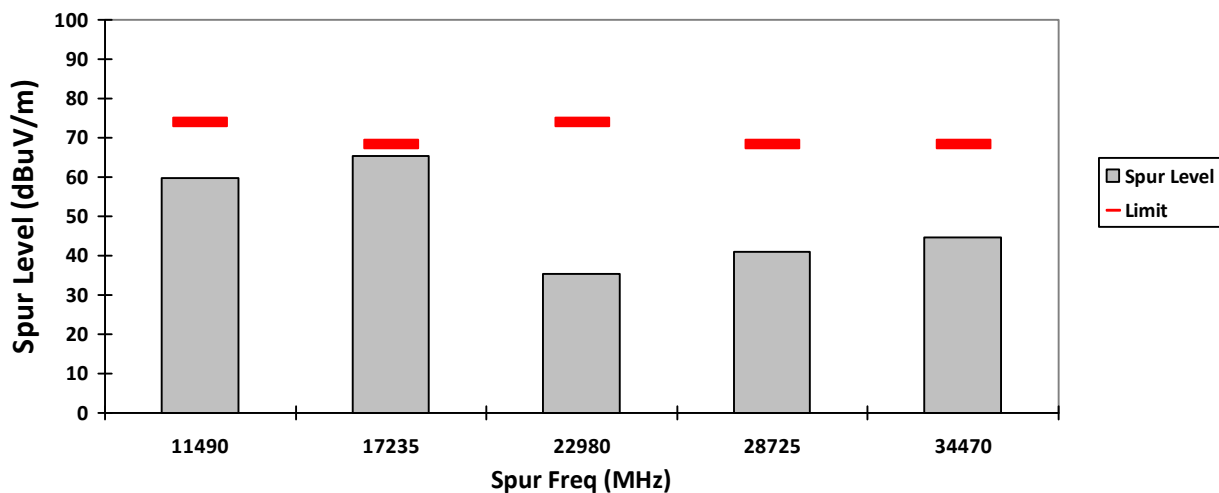
VERTICAL, QPK



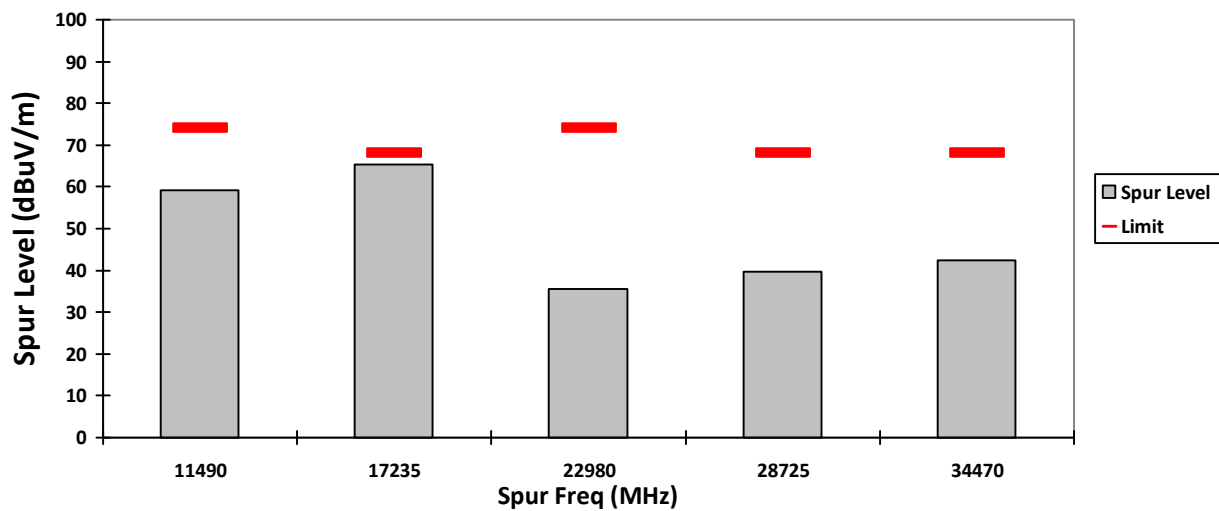
HORIZONTAL, QPK



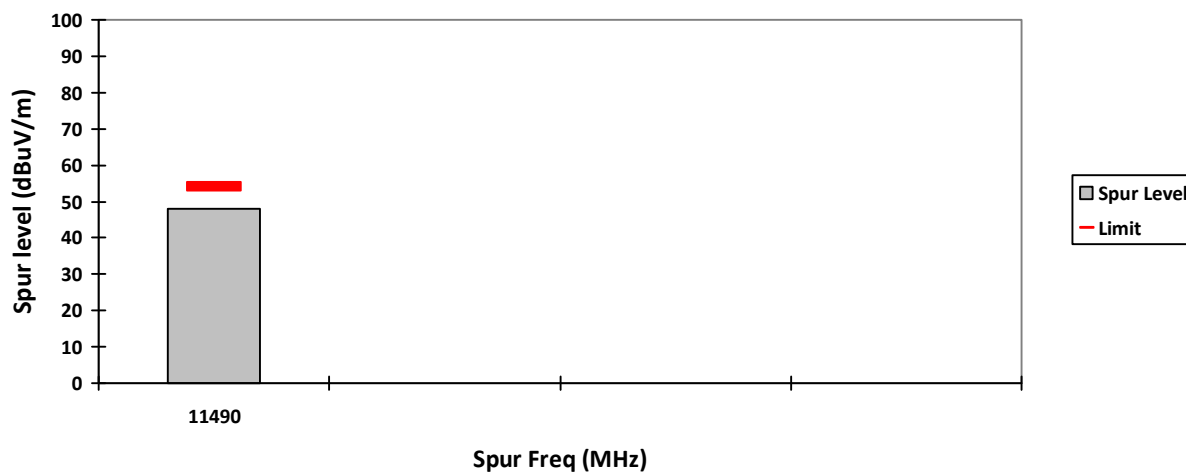
VERTICAL, PK



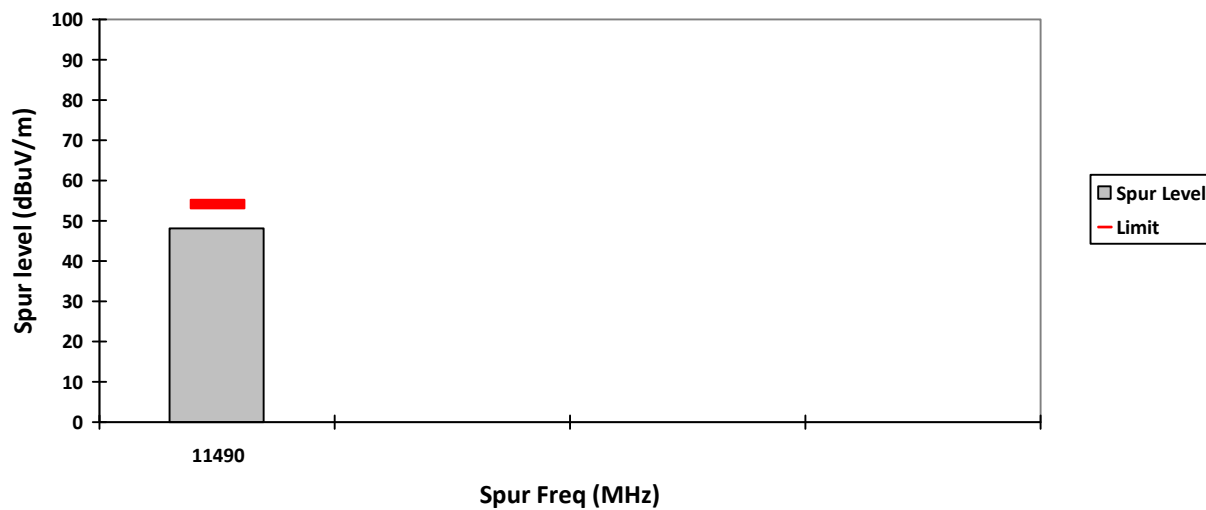
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: Mid

Test Frequency: 5785.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11n 20MHz)

Radiated Emission (Mid Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

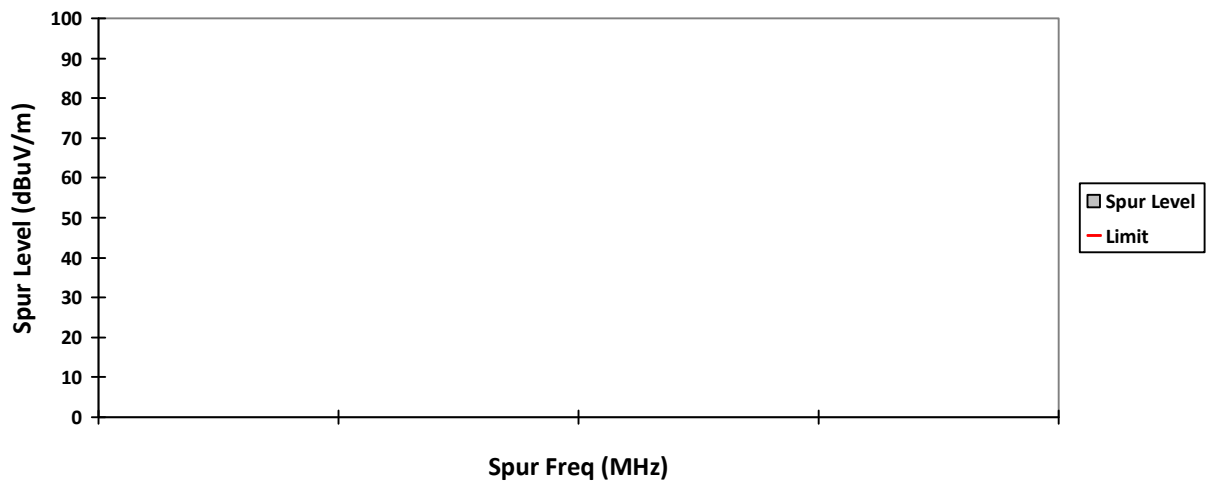
Test Date: Tue, 22 Feb, 2022

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

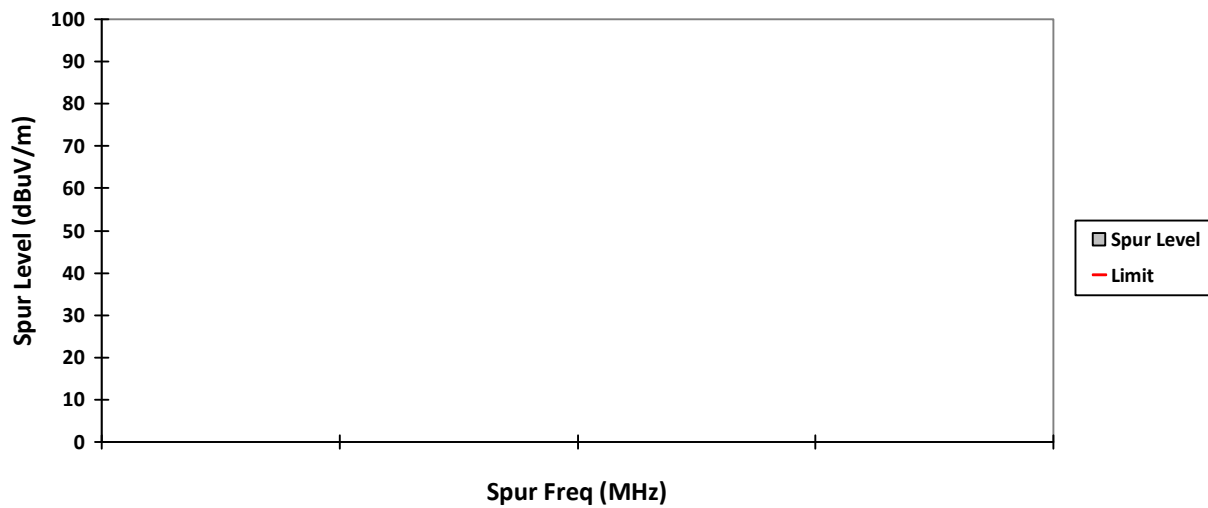
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

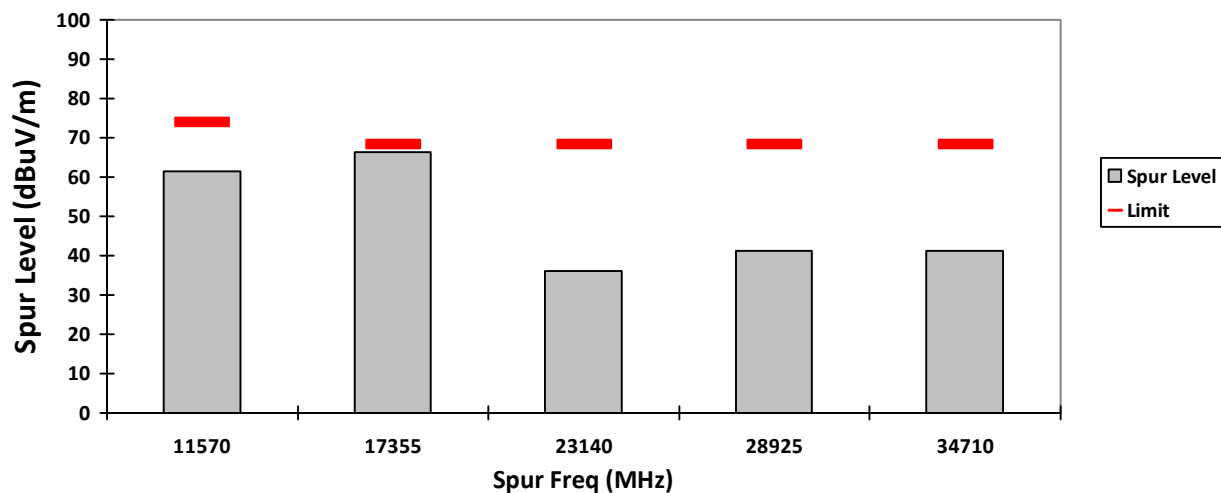
VERTICAL, QPK



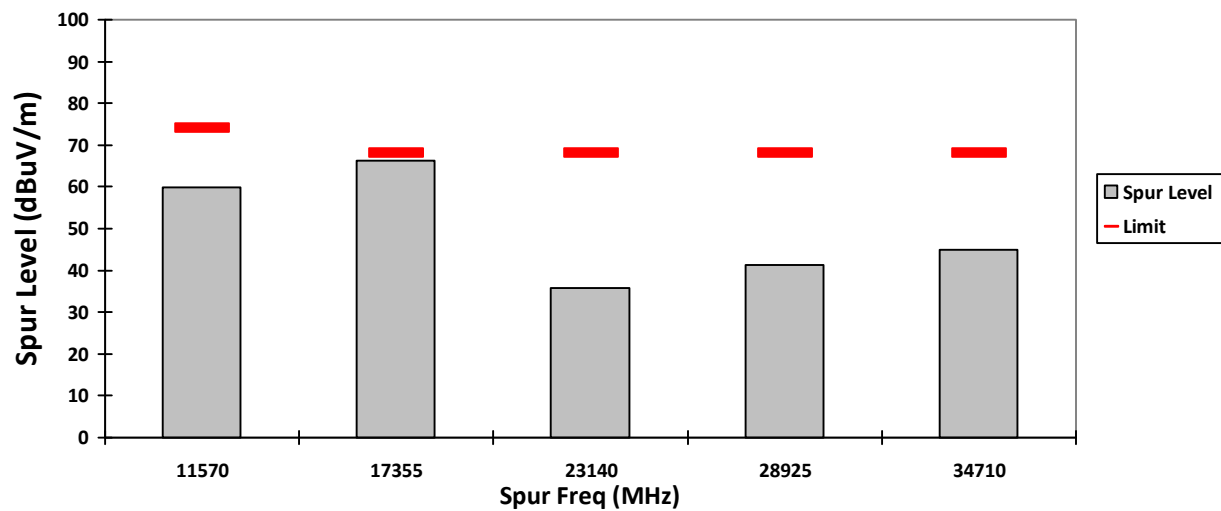
HORIZONTAL, QPK



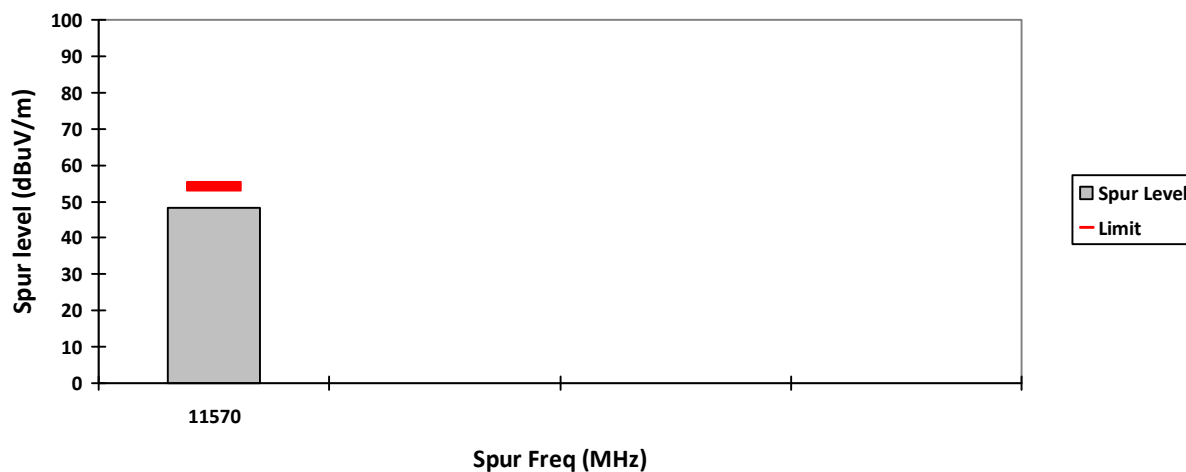
VERTICAL, PK



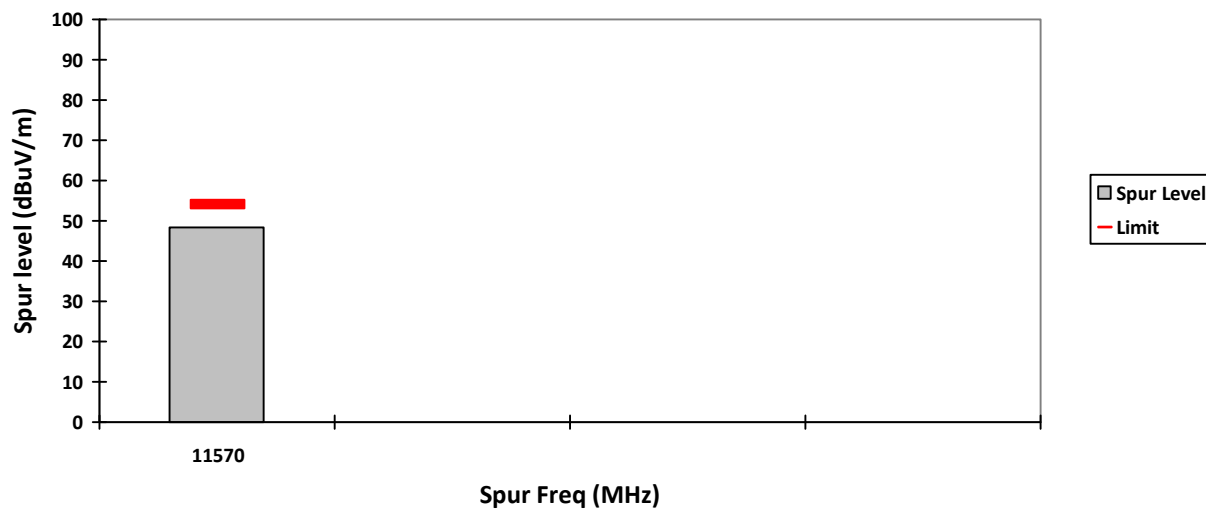
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: WIFI SAC Transmitter Radiated Emission

Model#: H25UCF9PW6AN

S/N: 657TYB0771

EMC SR ID#: 26860-EMC-00078

Battery: PMNN4813A

Accessory: AN000411A01

Test Channel: High

Test Frequency: 5825.0000 MHz

Test Standard: ANSI C63.10-2013 Worst Case Plane: Z-

Plane (802.11n 20MHz)

Radiated Emission (High Channel) tabular data

[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.9

Humidity (%): 69.7

Test Performed by: Nazrin&Qawiman

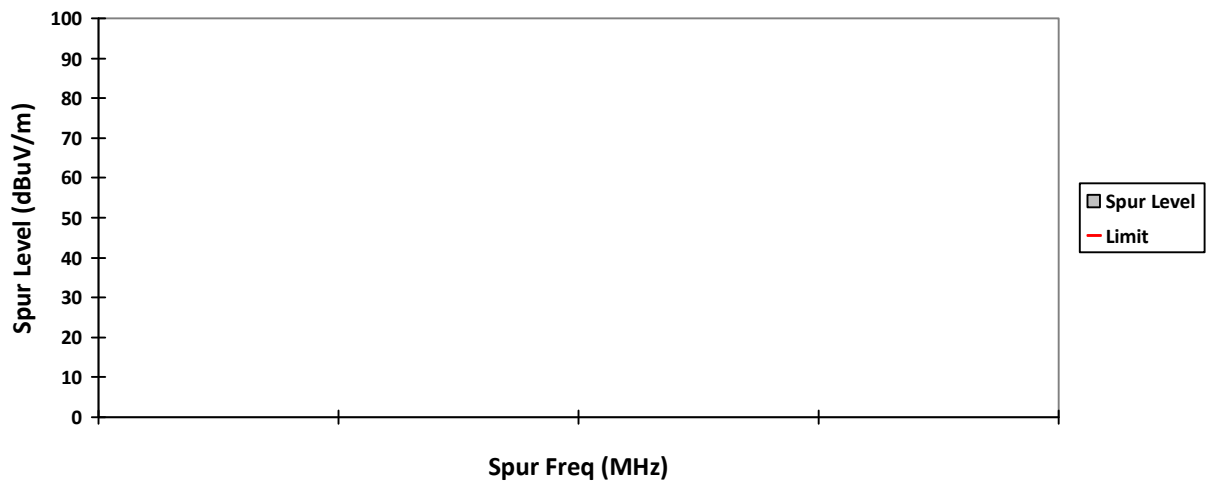
Test Date: Tue, 22 Feb, 2022

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

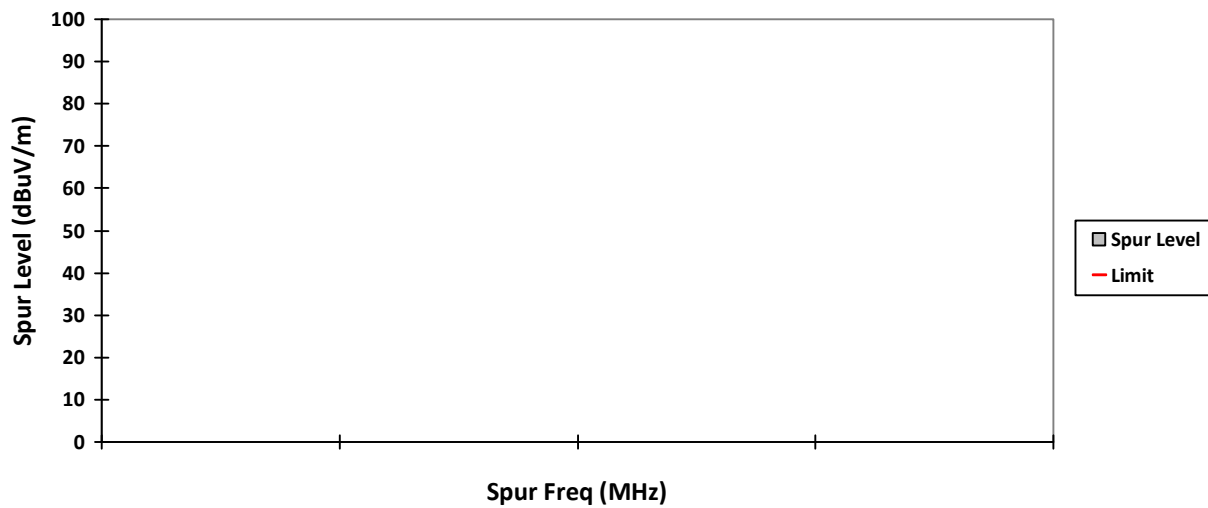
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.**

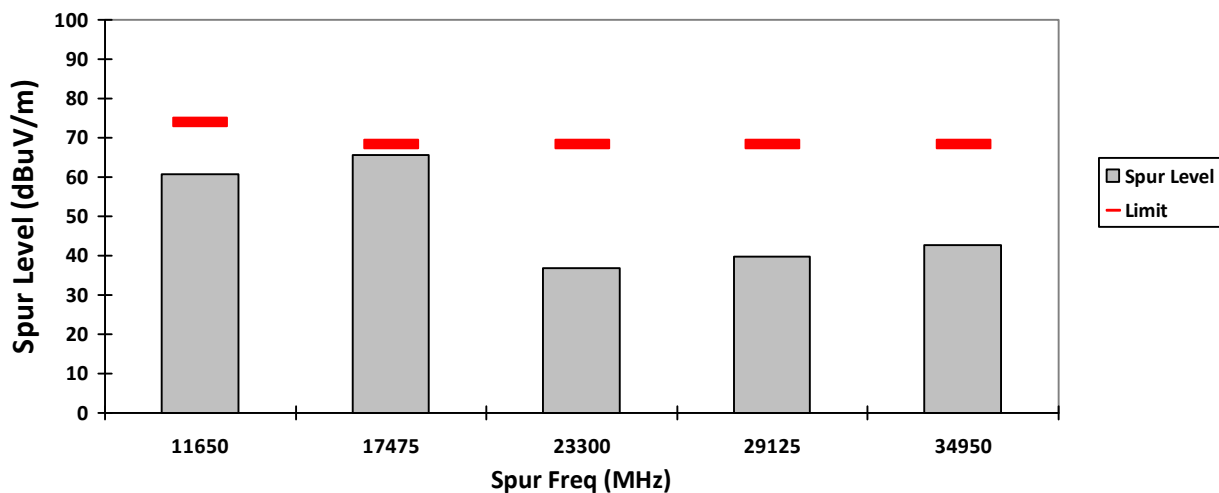
VERTICAL, QPK



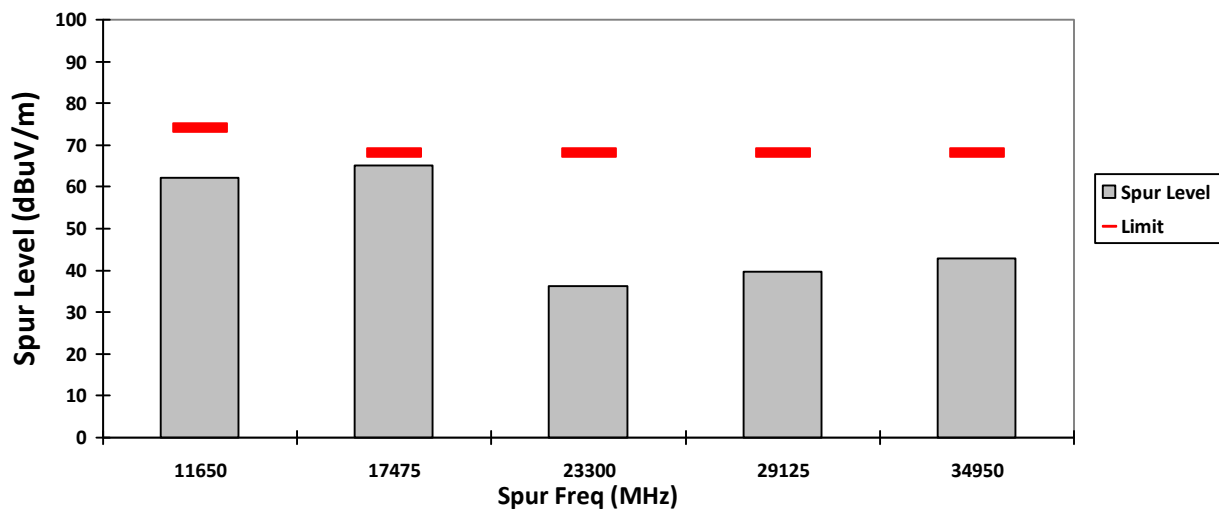
HORIZONTAL, QPK



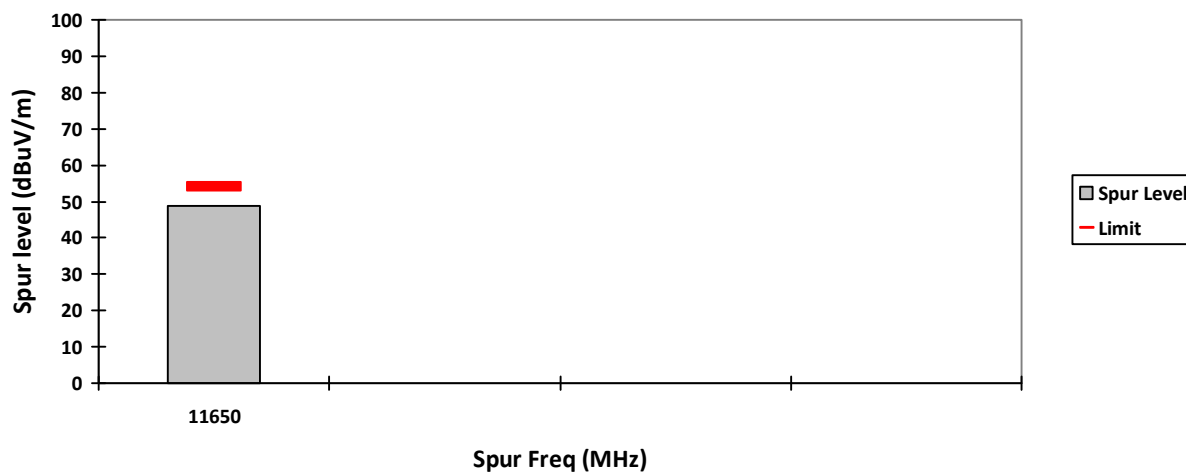
VERTICAL, PK



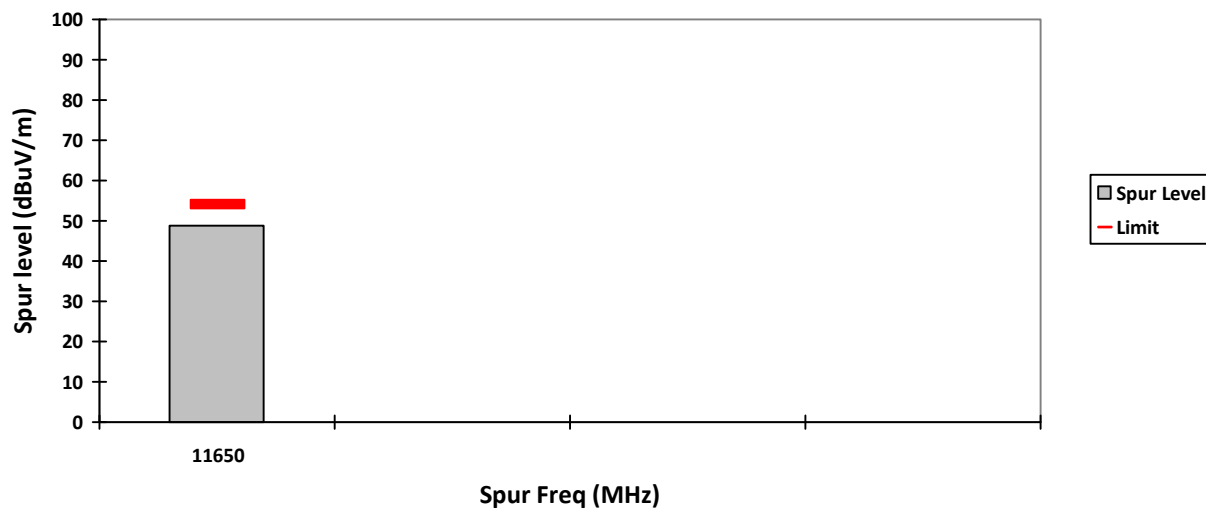
HORIZONTAL, PK



VERTICAL, AV

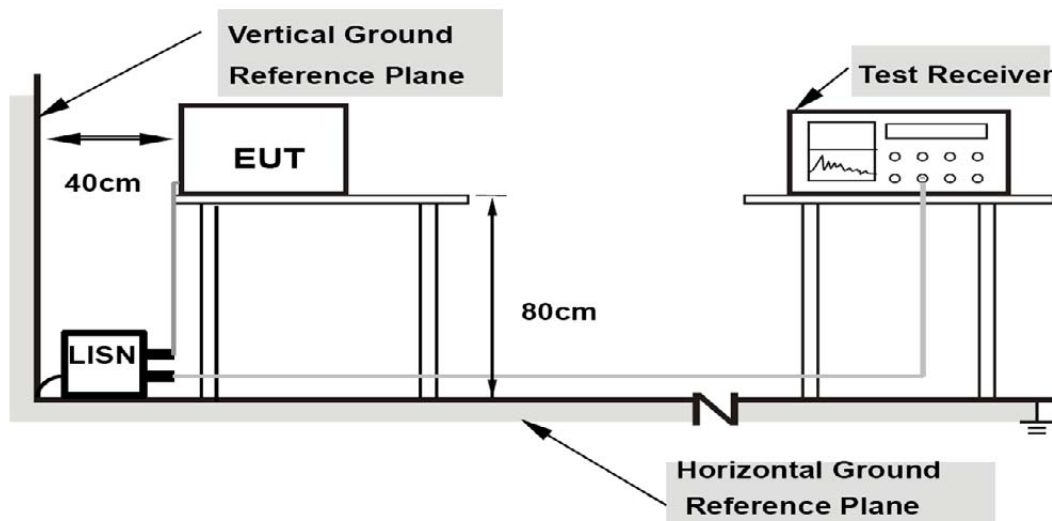


HORIZONTAL, AV



7.8. AC Powerline Conducted Emission

7.8.1. Test Setup



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

7.8.2. Test Limits

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

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

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

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

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

Frequency range MHz	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

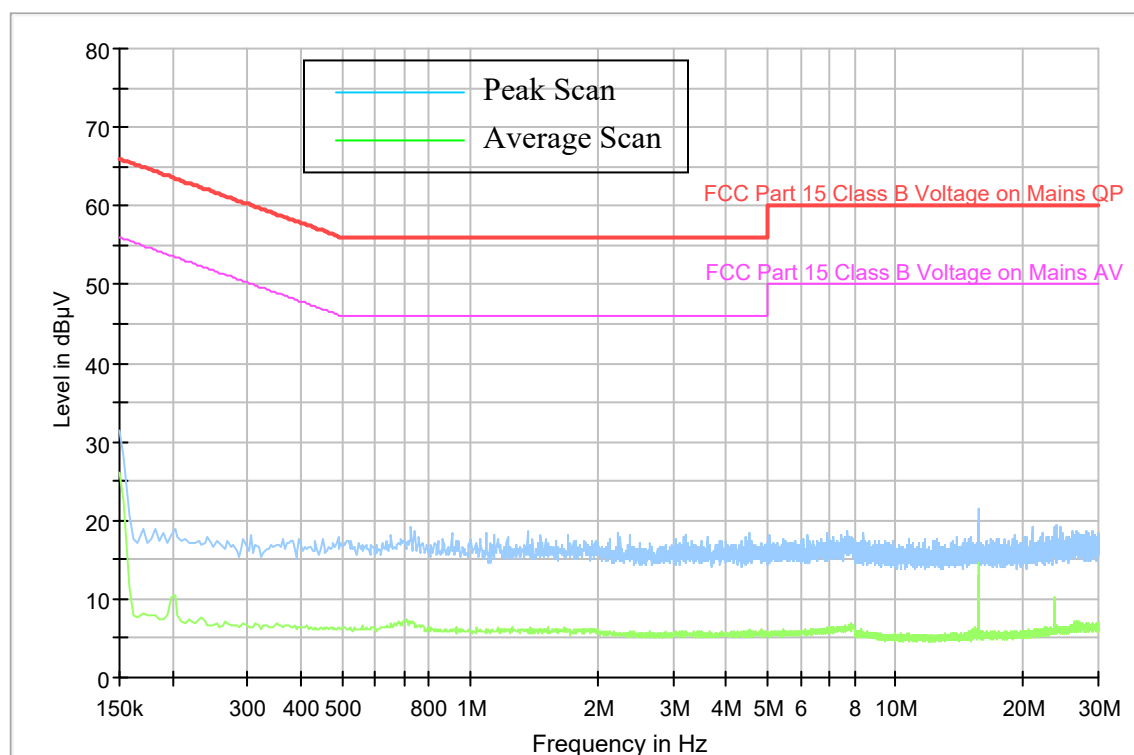
NOTE 1 The lower limit shall apply at the transition frequencies.
 NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.

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

7.8.3. Test Data

1) Ambient

Full Spectrum

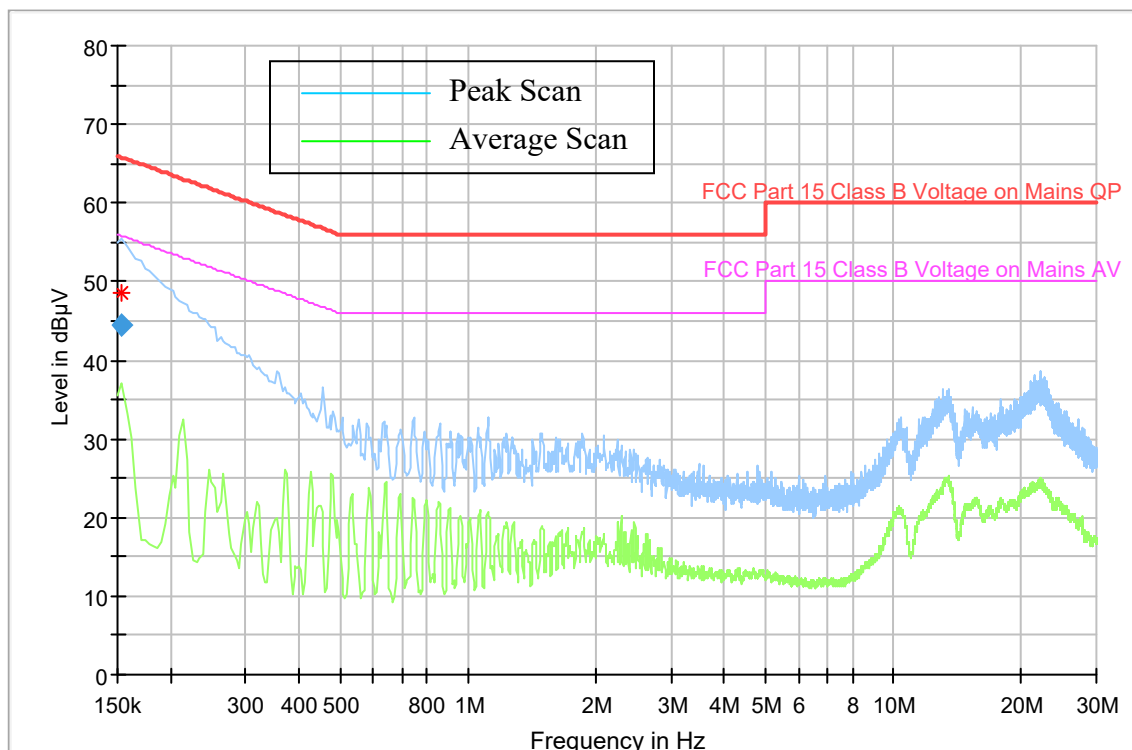


120VAC , 60Hz

MUC

2) Charger + Radio in WIFI 5GHz (Tx)

Full Spectrum



Quasipeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)	Comment
0.154000	44.41	---	65.78	21.37	1000.0	9.000	L1	ON	10.5	PASS

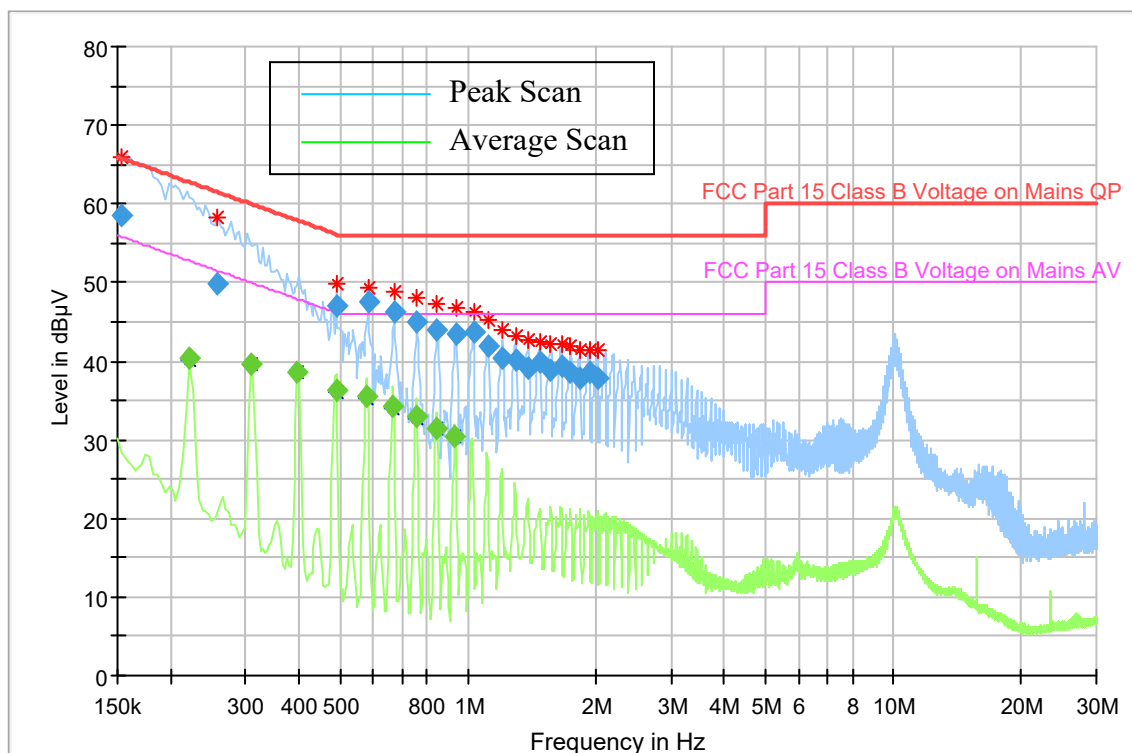
* Expanded Uncertainty (U) = +/- 3.48dB

120VAC , 60Hz

SUC

3) Charger + Radio in WIFI 5GHz (Tx)

Full Spectrum



Quasipeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)	Comment
0.154000	58.61	---	65.78	7.17	1000.0	9.000	N	ON	10.5	PASS
0.222000	---	40.34	52.74	12.41	1000.0	9.000	N	ON	10.4	PASS
0.258000	49.75	---	61.50	11.74	1000.0	9.000	N	ON	10.3	PASS
0.310000	---	39.72	49.97	10.25	1000.0	9.000	N	ON	10.4	PASS
0.398000	---	38.65	47.90	9.24	1000.0	9.000	N	ON	10.4	PASS
0.490000	47.07	---	56.17	9.10	1000.0	9.000	N	ON	10.5	PASS
0.490000	---	36.28	46.17	9.89	1000.0	9.000	N	ON	10.5	PASS
0.578000	---	35.42	46.00	10.58	1000.0	9.000	N	ON	10.5	PASS
0.582000	47.53	---	56.00	8.47	1000.0	9.000	N	ON	10.5	PASS
0.666000	---	34.21	46.00	11.79	1000.0	9.000	N	ON	10.4	PASS
0.670000	46.23	---	56.00	9.77	1000.0	9.000	N	ON	10.4	PASS
0.754000	---	32.86	46.00	13.14	1000.0	9.000	N	ON	10.4	PASS
0.758000	44.98	---	56.00	11.02	1000.0	9.000	N	ON	10.4	PASS
0.842000	---	31.56	46.00	14.44	1000.0	9.000	N	ON	10.3	PASS
0.846000	44.08	---	56.00	11.92	1000.0	9.000	N	ON	10.3	PASS
0.934000	---	30.43	46.00	15.57	1000.0	9.000	N	ON	10.3	PASS
0.938000	43.55	---	56.00	12.45	1000.0	9.000	N	ON	10.3	PASS
1.030000	43.79	---	56.00	12.21	1000.0	9.000	N	ON	10.3	PASS
1.118000	41.90	---	56.00	14.10	1000.0	9.000	N	ON	10.3	PASS
1.206000	40.36	---	56.00	15.64	1000.0	9.000	N	ON	10.3	PASS
1.298000	40.12	---	56.00	15.88	1000.0	9.000	N	ON	10.3	PASS
1.386000	39.09	---	56.00	16.91	1000.0	9.000	L1	ON	10.3	PASS
1.478000	39.76	---	56.00	16.24	1000.0	9.000	L1	ON	10.3	PASS
1.566000	38.77	---	56.00	17.23	1000.0	9.000	L1	ON	10.3	PASS
1.658000	39.42	---	56.00	16.58	1000.0	9.000	L1	ON	10.3	PASS
1.746000	38.59	---	56.00	17.41	1000.0	9.000	L1	ON	10.3	PASS
1.834000	37.78	---	56.00	18.22	1000.0	9.000	L1	ON	10.3	PASS
1.926000	38.54	---	56.00	17.46	1000.0	9.000	L1	ON	10.3	PASS
2.014000	37.80	---	56.00	18.20	1000.0	9.000	L1	ON	10.2	PASS

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

END OF TEST REPORT