TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: **47 CFR FCC Part 15, Subpart E (Section 15.407)**

Report No.: RFBDGE-WTW-P22060853-3

FCC ID: 2A39U-REG001

Product: Solo Register

Brand: SumUp

Model No.: R0DT5NB00-CN

Received Date: 2023/4/7

Test Date: 2023/4/21 ~ 2023/5/3

Issued Date: 2023/6/8

Applicant: SumUp Inc

Address: 2000 Central Ave Ste 100, Boulder, CO 80301, USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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FCC Registration / Designation Number: 788550 / TW0003

Approved by: Jeremy Lin , **Date:** 2023/6/8

Jeremy Lin / Project Engineer

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Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBDGE-WTW-P22060853-3	Original Release	2023/6/8

1 Certificate

Product:	Solo Register
Brand:	SumUp
Test Model:	R0DT5NB00-CN
Sample Status:	DV
Applicant:	SumUp Inc
Test Date:	2023/4/21 ~ 2023/5/3
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -2.63 dB at 0.36545 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -6.7 dB at 167.74 MHz
15.407(b) (1/10) 15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.1 dB at 5470.00 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Occupied Bandwidth	-	491.896 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.6 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Solo Register
Brand	SumUp
Test Model	R0DT5NB00-CN
Status of EUT	DV
Power Supply Rating	5.0 Vdc or 9.0 Vdc or 12.0 Vdc or 15.0 Vdc or 20 Vdc (adapter or host equipment)
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 866.7 Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz 5.26 GHz ~ 5.32 GHz 5.5 GHz ~ 5.72 GHz 5.745 GHz ~ 5.825 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	5.18 GHz ~ 5.24 GHz : 71.187 mW (18.52 dBm) 5.26 GHz ~ 5.32 GHz : 69.435 mW (18.42 dBm) 5.5 GHz ~ 5.72 GHz : 70.156 mW (18.46 dBm) 5.745 GHz ~ 5.825 GHz : 72.803 mW (18.62 dBm)
EUT Category	Client device

Note:

1. The EUT contains the following accessories.

Accessories Information		
LCD Panel	**Brand**	GIS
	Model	QC133GFL02
	Part Number	AQ1330001011
Back cover (Shell - Back Cover)	**Brand**	NA
	Model	139.06001.0001
CPU	**Brand**	NA
	Model	MIMX8ML4DVNLZAB
eMMC (=ROM 1)	**Brand**	NA
	Model	KLMBG2JETD-B041
RAM	**Brand**	NA
	Model	K4F6E3S4HM-MGCJ
BT/WLAN Module	**Brand**	Murata
	Model	LBEE5XV1XA-540

Accessories Information		
AC Adapter	Brand	SumUp
	Model	ACC-00015 (for US)
	AC Input	100-240V ~ 50-60Hz 2.0A
	DC Output	+5.0V–3.0A (15.0W) +9.0V–3.0A (27.0W) +12.0V–3.0A (36.0W) +15.0V–3.0A (45.0W) +20.0V–3.25A (65.0W) PPS:3.3-11.0V–5.0A PPS:3.3-21.0V–3.1A
	Plug	UK, EU
	Manufacturer	Eggtronic
USB Cable 1	Brand	SumUp
	Model	150.06003.0001(2100001)
	Signal Line	1.16m shield cable without core
USB Cable 2 (support unit)	Brand	SumUp
	Model	150.06004.0001(2100001)
	Signal Line	1.96m shield cable without core

2. BT & WLAN technology cannot transmit at same time.
3. WLAN 2.4G & WLAN 5G technology cannot transmit at same time.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)				Antenna Type	Connector Type
	5150-5250 MHz	5250-5350 MHz	5470-5725 MHz	5725-5850 MHz		
1 (Mian)	2.18	2.40	1.96	1.51	Monopole	ipex(MHF)
2 (Aux)	3.55	3.12	1.33	2.12	Monopole	ipex(MHF)

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The EUT incorporates a MIMO function:

5 GHz Band		
Modulation Mode	**TX & RX Configuration**	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz) therefore the manufacturer will control the power for 802.11n/ac mode is same as the 802.11n mode or more lower than it and investigated worst case to representative mode in test report.		

3.3 Channel List

FOR 5180 ~ 5320 MHz

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

4 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz

FOR 5500 ~ 5720 MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

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

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	138	5690 MHz
122	5610 MHz		

FOR 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

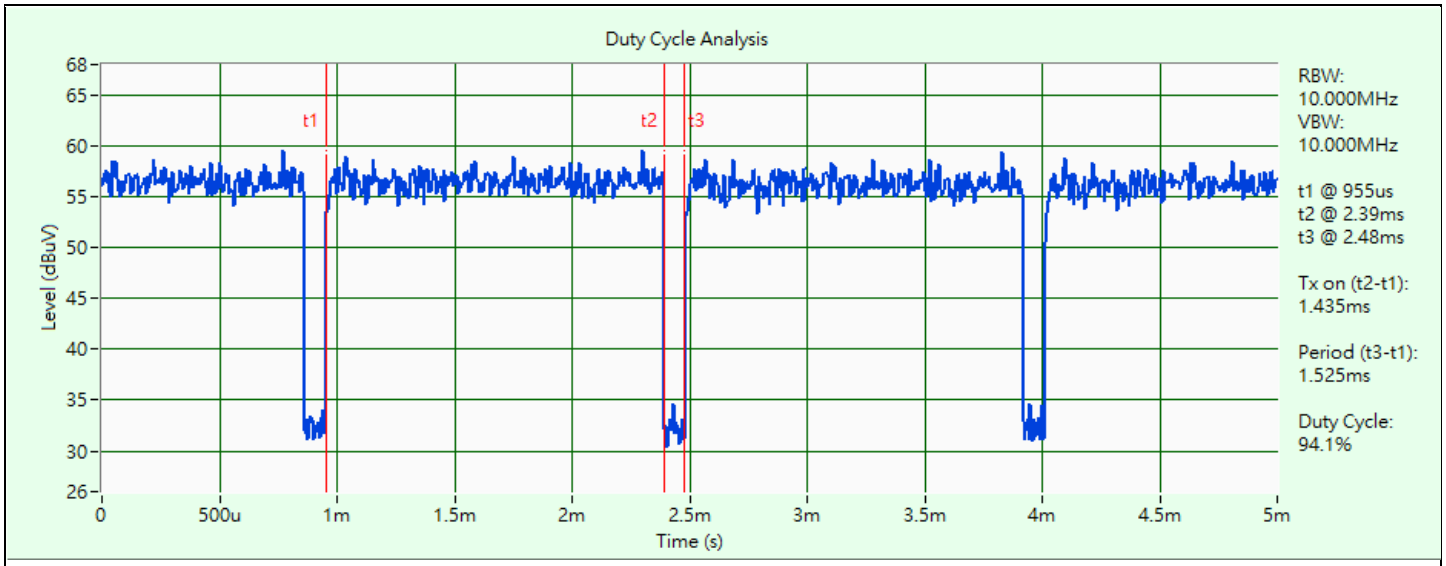
Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	802.11a	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11n (HT20)	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11n (HT40)	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ac (VHT80)	58, 106, 122, 138	BPSK	MCS0
RF Output Power / Power Spectral Density	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 58, 106, 122, 138, 155	BPSK	MCS0
6 dB Bandwidth	802.11a	144, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	144, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	138, 155	BPSK	MCS0

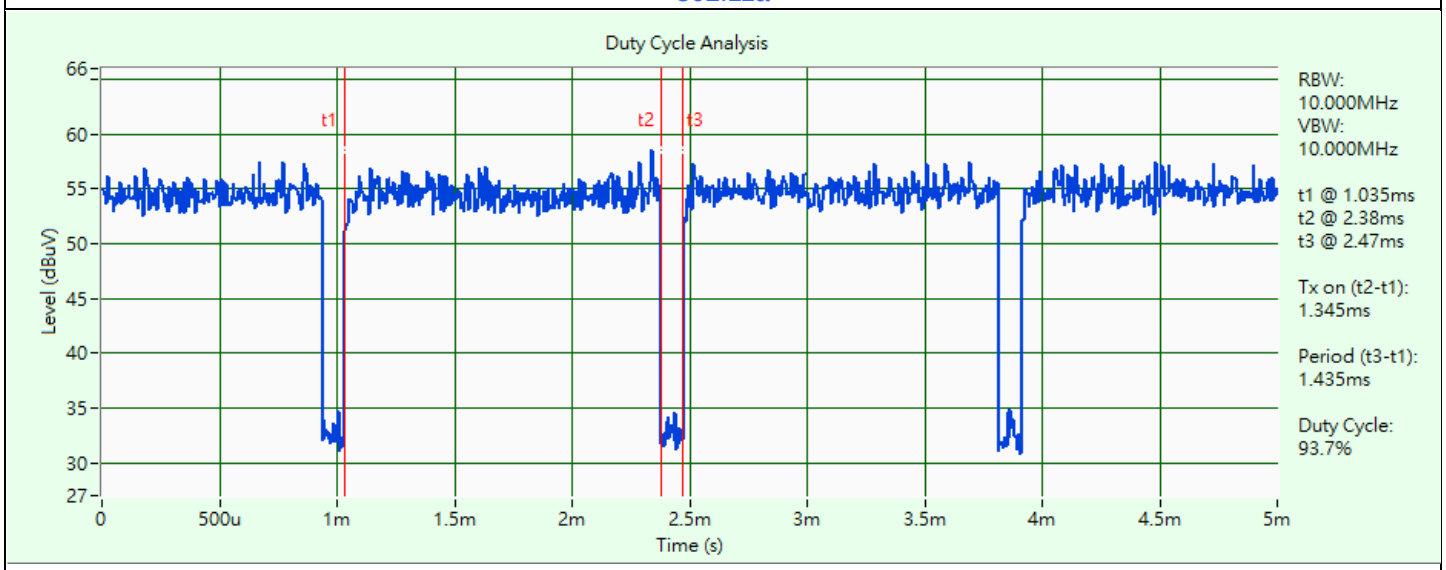
Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
Occupied Bandwidth	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 58, 106, 122, 138, 155	BPSK	MCS0
Frequency Stability	802.11a	36	unmodulated	-
AC Power Conducted Emissions	802.11a	165	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	802.11a	165	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 58, 106, 122, 138, 155	BPSK	MCS0

3.5 Duty Cycle of Test Signal

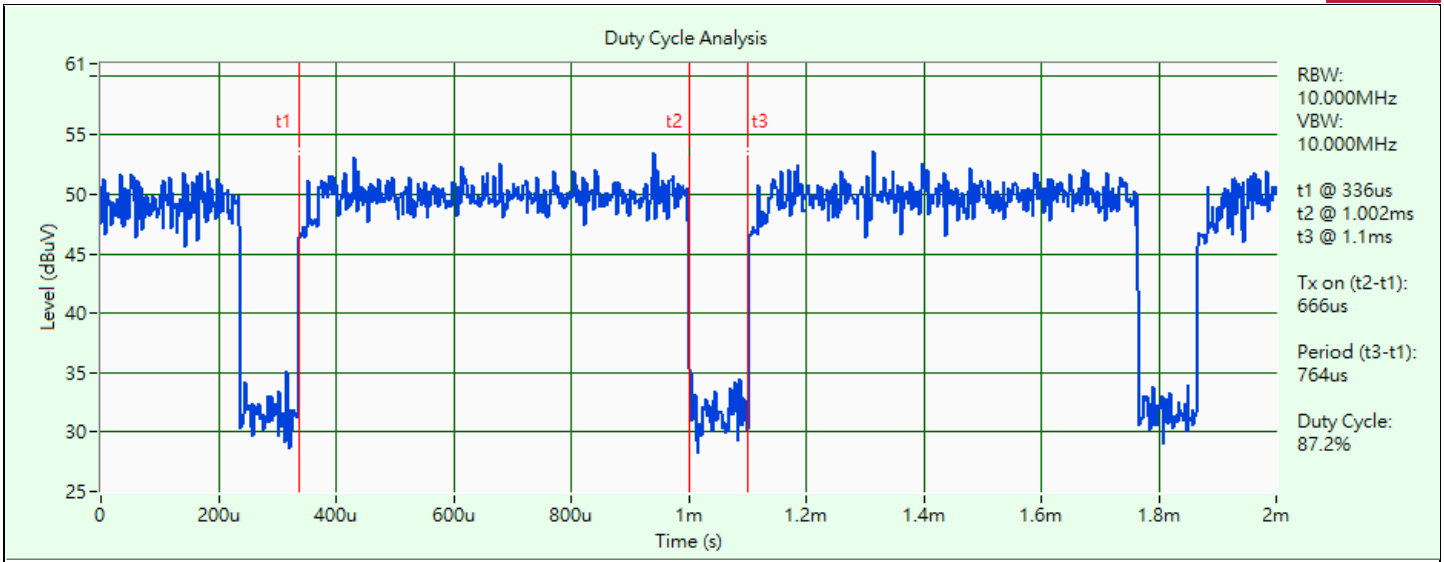
802.11a: Duty cycle = 1.435 ms / 1.525 ms x 100% = 94.1%, duty factor = 10 * log (1/Duty cycle) = 0.26 dB
802.11n (HT20): Duty cycle = 1.345 ms / 1.435 ms x 100% = 93.7%, duty factor = 10 * log (1/Duty cycle) = 0.28 dB
802.11n (HT40): Duty cycle = 0.666 ms / 0.764 ms x 100% = 87.2%, duty factor = 10 * log (1/Duty cycle) = 0.60 dB
802.11ac (VHT80): Duty cycle = 0.333 ms / 0.432 ms x 100% = 77.1%, duty factor = 10 * log (1/Duty cycle) = 1.13 dB



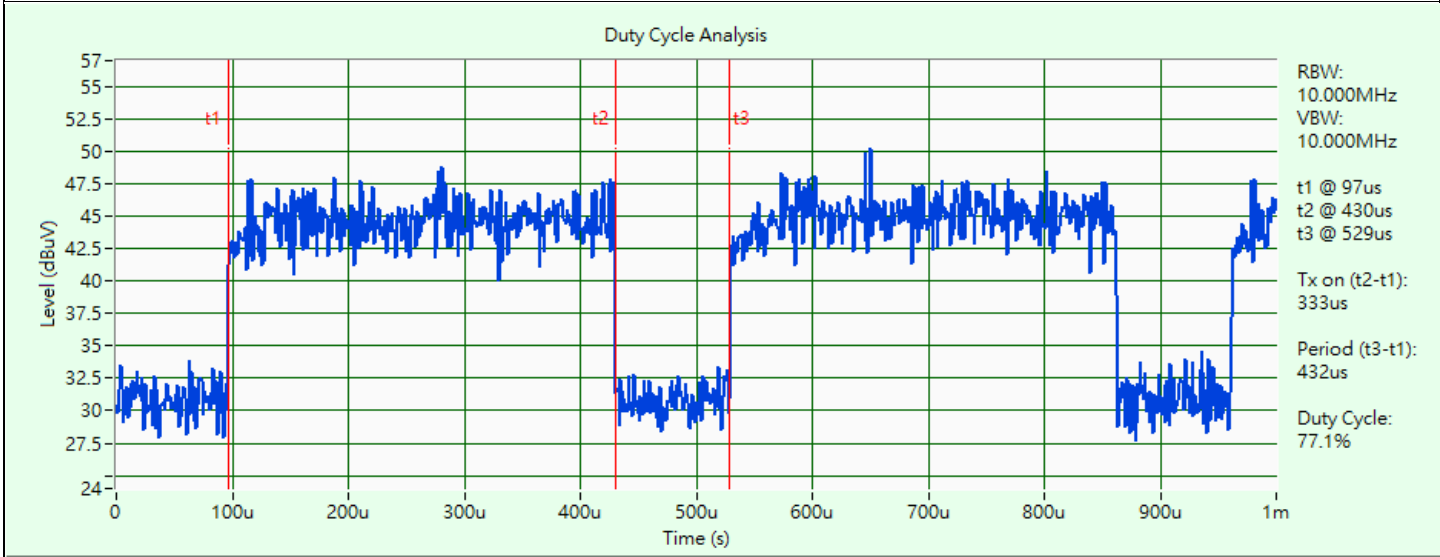
802.11a



802.11n (HT20)



802.11n (HT40)

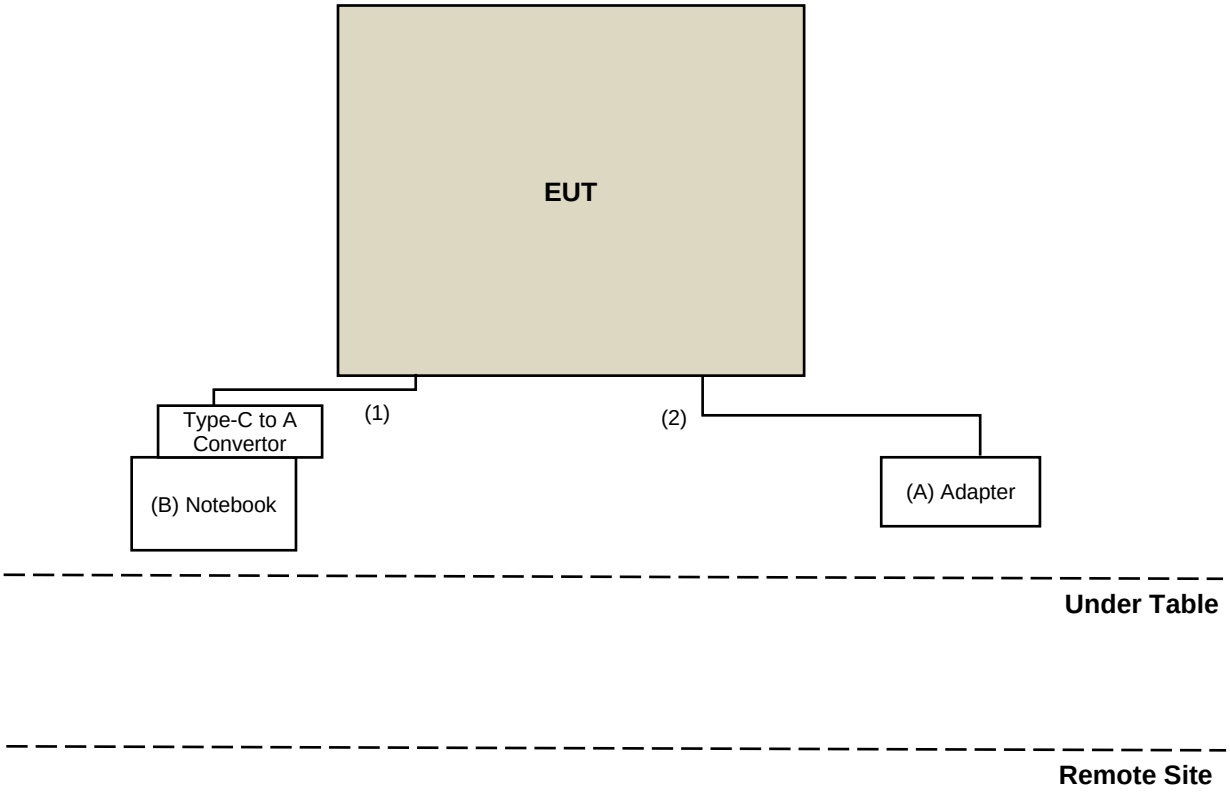


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software adb_4.2.2 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	Sumup	ACC-00015	N/A	N/A	Supplied by applicant
B	Laptop	Lenovo	L470	PF0XEHC5	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Type-C cable	1	1.96	NO	0	Supplied by applicant
2	Type-C cable	1	1.16	NO	0	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 26 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal and spectrum analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/5/3

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal and spectrum analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	2022/7/13	2023/7/12

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/5/3

4.3 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get information of the instruments.

4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC power supply JIN YIH Technology	6905S	1720444	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2022/6/23	2023/6/22
Signal and spectrum analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/12/27	2023/12/26

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/5/3

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2023/3/23	2024/3/22
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2023/1/7	2024/1/6
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
Test Receiver Rohde&Schwarz	ESCI	100613	2022/12/5	2023/12/4
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2023/4/25

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn BV ADT	AT100	AT93021705	N/A	N/A
Bi_Log Antenna Schwarbeck	VULB9168	9168-160	2022/10/20	2023/10/19
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Preamplifier Agilent	8447D	2944A10638	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable WOKEN	8D-FB	Cable-CH9-01	2022/5/14	2023/5/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101867	2022/12/30	2023/12/29
Test Receiver KEYSIGHT	N9038A	MY55420137	2022/4/27	2023/4/26
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2023/4/25

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn BV ADT	AT100	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	9120D	9120D-1169	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
		BBHA9170243	2022/11/13	2023/11/12
Pre-Ammlifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Preamplifier Agilent	8449B	3008A02367	2023/2/15	2024/2/14
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2022/7/9	2023/7/8
	EMC102-KM-KM-3000	150929	2022/7/9	2023/7/8
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2023/1/7	2024/1/6
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2023/1/7	2024/1/6
RF FLITER MICRO-TRONICS	BRM17690	004	2023/1/11	2024/1/10
	BRM50716	060	2023/1/11	2024/1/10
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101867	2022/12/30	2023/12/29
Test Receiver KEYSIGHT	N9038A	MY55420137	2022/4/27	2023/4/26
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2023/4/21 ~ 2023/4/25

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250mW (24 dBm)

Operation Band	Limit
U-NII-2A	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

5.3 Power Spectral Density

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/MHz
	Fixed point-to-point Access Point	
	Indoor Access Point	
	Mobile and Portable client device	11 dBm/MHz

Operation Band	Limit
U-NII-2A	11 dBm/MHz
U-NII-2C	11 dBm/MHz
U-NII-3	30 dBm/500 kHz

5.4 6 dB Bandwidth

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

The frequency of the carrier signal shall be maintained within band of operation.

5.7 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.8 Unwanted Emissions below 1 GHz

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

Frequencies (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

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. 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 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedure New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBµV/m)	AV: 54 (dBµV/m)

For transmitters operating in the 5.15-5.25 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.25-5.35 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.47-5.725 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
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
*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.		

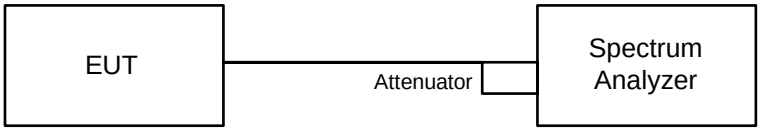
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

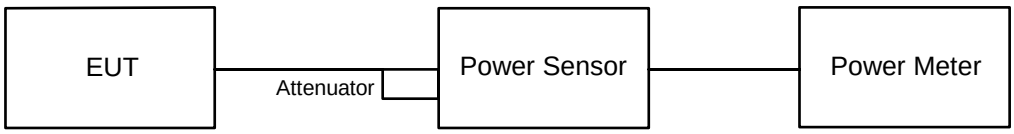


6.1.2 Test Procedure

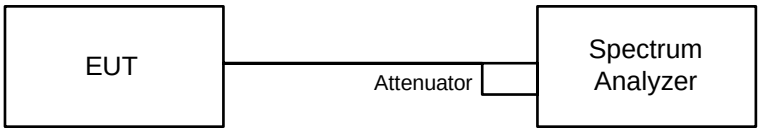
a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6.2 RF Output Power

6.2.1 Test Setup



For channel straddling:



6.2.2 Test Procedure

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to average. Duty factor is not added to measured value.

For channel straddling:

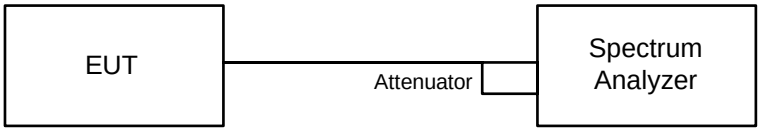
Method SA-2A

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Manually set sweep time ≥ 10 × (number of points in sweep) × (total on/off period of the transmitted signal).
e. Perform a single sweep.
f. Record the max value and add 10 log (1/duty cycle).

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument's band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:

Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
g. Record the max value and add 10 log (1/duty cycle).

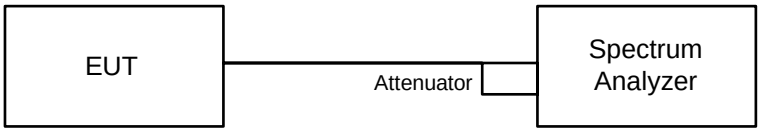
For specified measurement bandwidth 500 kHz:

Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
h. Record the max value and add 10 log (1/duty cycle).

6.4 6 dB Bandwidth

6.4.1 Test Setup

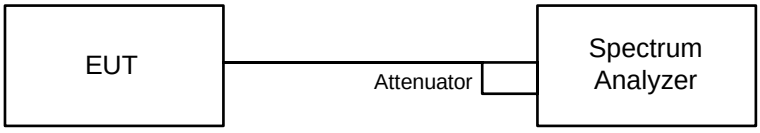


6.4.2 Test Procedure

a. Set resolution bandwidth (RBW) = 100 kHz.
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.5 Occupied Bandwidth

6.5.1 Test Setup

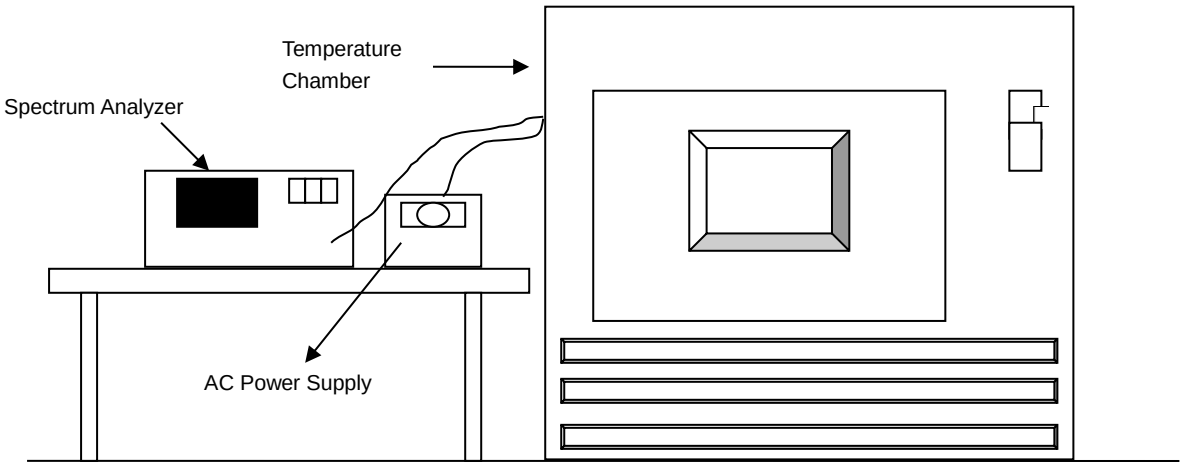


6.5.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

6.6 Frequency Stability

6.6.1 Test Setup

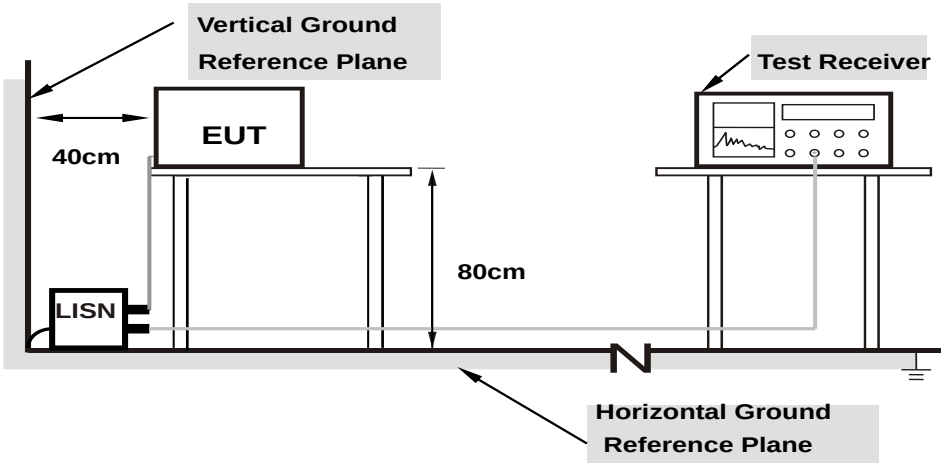


6.6.2 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

6.7 AC Power Conducted Emissions

6.7.1 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.7.2 Test Procedure

a. The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

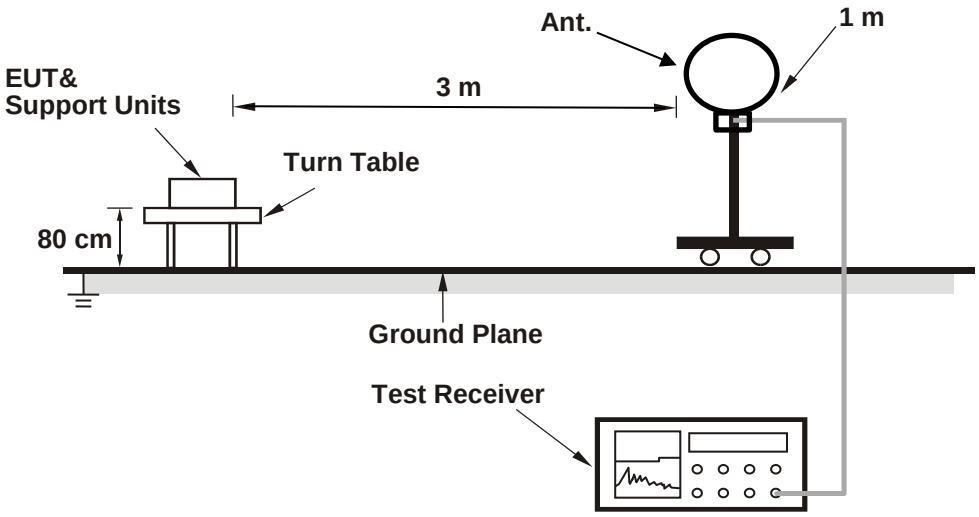
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

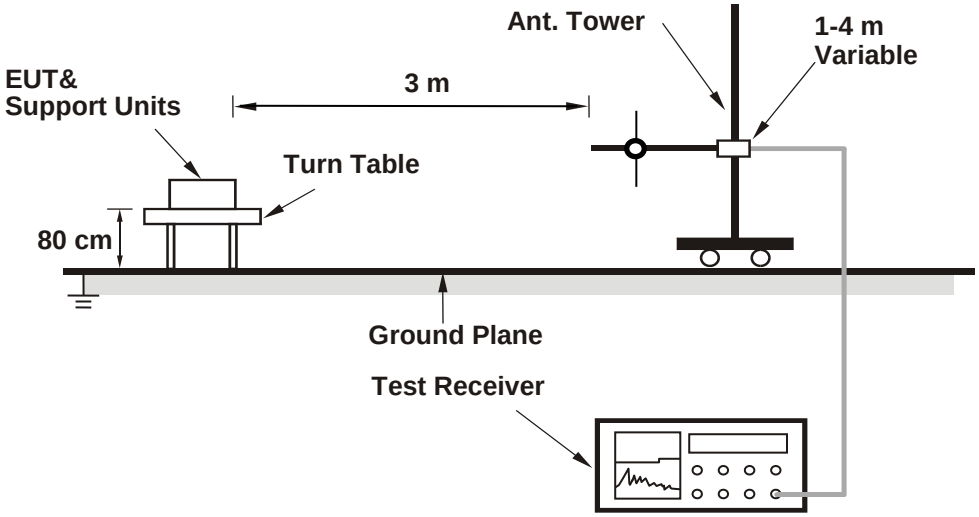
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.8.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

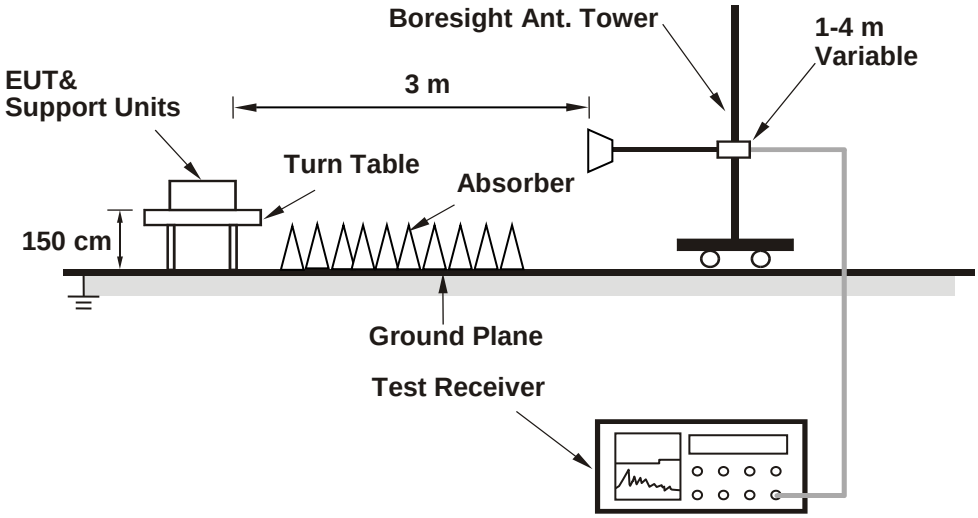
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.9.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10 Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 26 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	23.81	24.95
60	5300	23.65	23.59
64	5320	23.70	23.72
100	5500	21.83	21.88
116	5580	21.91	22.11
140	5700	21.88	23.61
144 (U-NII-2C)	5720	16.00	15.84
144 (U-NII-3)	5720	5.93	5.94

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	23.81	24.76	>	24
60	5300	23.59	24.72	>	24
64	5320	23.70	24.74	>	24
100	5500	21.83	24.39	>	24
116	5580	21.91	24.4	>	24
140	5700	21.88	24.4	>	24
144 (U-NII-2C)	5720	15.84	22.99	<	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11n (HT20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.83	22.09
60	5300	22.19	23.60
64	5320	21.99	21.84
100	5500	21.85	21.93
116	5580	23.51	21.95
140	5700	21.65	21.82
144 (U-NII-2C)	5720	15.93	15.92
144 (U-NII-3)	5720	6.07	5.88

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.83	24.39	>	24
60	5300	22.19	24.46	>	24
64	5320	21.84	24.39	>	24
100	5500	21.85	24.39	>	24
116	5580	21.95	24.41	>	24
140	5700	21.65	24.35	>	24
144 (U-NII-2C)	5720	15.92	23.01	<	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11n (HT40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	40.83	40.68
62	5310	40.96	40.76
102	5510	40.93	43.69
110	5550	40.71	41.02
134	5670	40.92	40.95
142 (U-NII-2C)	5710	35.36	35.55
142 (U-NII-3)	5710	5.50	5.48

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	40.68	27.09	>	24
62	5310	40.76	27.1	>	24
102	5510	40.93	27.12	>	24
110	5550	40.71	27.09	>	24
134	5670	40.92	27.11	>	24
142 (U-NII-2C)	5710	35.36	26.48	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

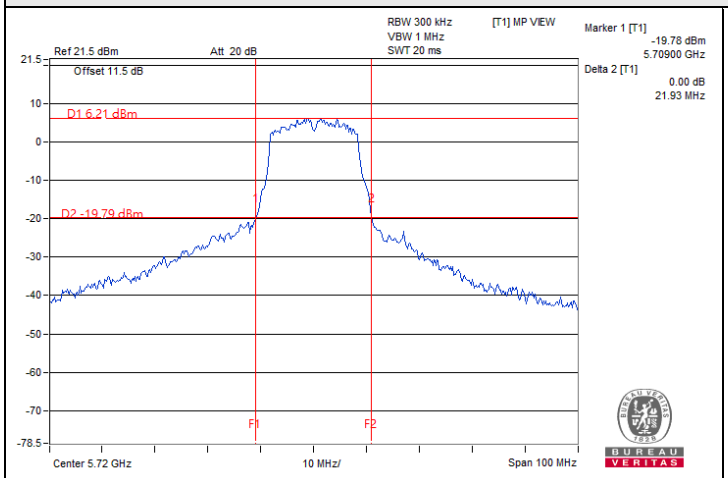
802.11ac (VHT80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.25	82.16
106	5530	82.57	82.52
122	5610	82.01	82.18
138 (U-NII-2C)	5690	77.52	76.33
138 (U-NII-3)	5690	9.26	6.03

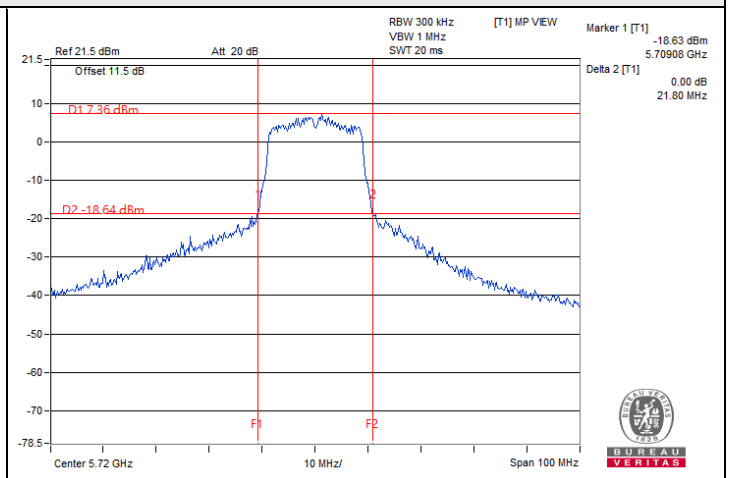
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	82.16	30.14	>	24
106	5530	82.52	30.16	>	24
122	5610	82.01	30.13	>	24
138 (U-NII-2C)	5690	76.33	29.82	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

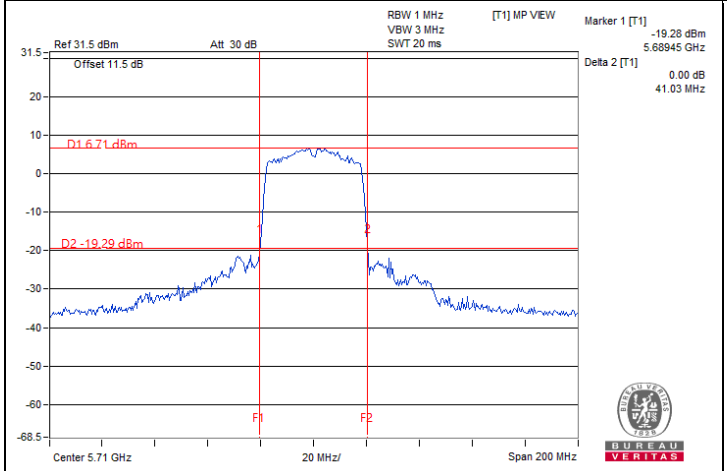
Spectrum Plot of Minimum Value



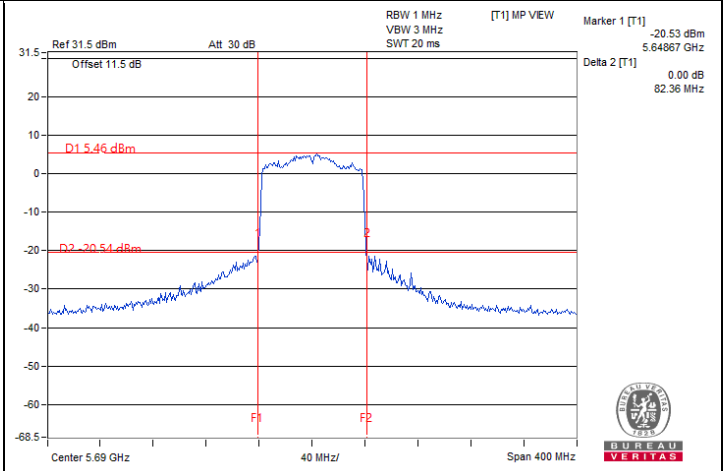
802.11a / Chain 0 : CH 144 (U-NII-3)



802.11n (HT20) / Chain 1 : CH 144 (U-NII-3)



802.11n (HT40) / Chain 1 : CH 142 (U-NII-3)



802.11ac (VHT80) / Chain 1 : CH 138 (U-NII-3)

Notes:

1. For U-NII-2C straddle channel = 5725 MHz - Marker 1
2. For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.2 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	13.85	14.86	54.886	17.39	24	Pass
40	5200	14.88	15.89	69.576	18.42	24	Pass
48	5240	15.23	15.78	**71.187**	**18.52**	24	Pass
52	5260	15.34	15.47	**69.435**	**18.42**	24	Pass
60	5300	15.32	15.41	68.794	18.38	24	Pass
64	5320	14.91	15.42	65.808	18.18	24	Pass
100	5500	13.50	12.43	39.886	16.01	24	Pass
116	5580	15.74	15.14	**70.156**	**18.46**	24	Pass
140	5700	13.53	12.62	40.823	16.11	24	Pass
*144 (U-NII-2C)	5720	12.69	12.48	38.554	15.86	22.99	Pass
*144 (U-NII-3)	5720	5.30	5.11	7.048	8.48	30	Pass
149	5745	15.83	15.12	70.791	18.50	30	Pass
157	5785	15.71	15.14	69.898	18.44	30	Pass
165	5825	15.97	15.22	**72.803**	**18.62**	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 3.55 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 3.12 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the maximum gain is 1.96 dBi < 6 dBi, so the output power limit shall not be reduced.
6. For U-NII-3, the maximum gain is 2.12 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	13.10	14.16	46.479	16.67	24	Pass
40	5200	13.98	14.96	56.336	17.51	24	Pass
48	5240	14.44	14.92	58.843	17.70	24	Pass
52	5260	14.17	14.67	55.431	17.44	24	Pass
60	5300	14.32	14.56	55.615	17.45	24	Pass
64	5320	14.15	14.58	54.709	17.38	24	Pass
100	5500	12.54	12.20	34.543	15.38	24	Pass
116	5580	14.78	13.89	54.551	17.37	24	Pass
140	5700	13.02	12.27	36.91	15.67	24	Pass
*144 (U-NII-2C)	5720	12.40	12.38	36.997	15.68	23.01	Pass
*144 (U-NII-3)	5720	5.59	5.57	7.712	8.87	30	Pass
149	5745	14.76	14.38	57.338	17.58	30	Pass
157	5785	14.89	14.36	58.122	17.64	30	Pass
165	5825	14.98	14.48	59.532	17.75	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 3.55 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 3.12 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the maximum gain is 1.96 dBi < 6 dBi, so the output power limit shall not be reduced.
6. For U-NII-3, the maximum gain is 2.12 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	10.61	11.77	26.539	14.24	24	Pass
46	5230	10.95	11.62	26.966	14.31	24	Pass
54	5270	10.96	11.57	26.829	14.29	24	Pass
62	5310	11.17	11.44	27.023	14.32	24	Pass
102	5510	10.89	10.48	23.443	13.70	24	Pass
110	5550	11.54	11.04	26.962	14.31	24	Pass
134	5670	11.77	10.82	27.11	14.33	24	Pass
*142 (U-NII-2C)	5710	10.73	10.03	25.122	14.00	24	Pass
*142 (U-NII-3)	5710	-1.15	-1.82	1.6347	2.13	30	Pass
151	5755	11.22	10.67	24.912	13.96	30	Pass
159	5795	11.62	10.51	25.767	14.11	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 3.55 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 3.12 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the maximum gain is 1.96 dBi < 6 dBi, so the output power limit shall not be reduced.
6. For U-NII-3, the maximum gain is 2.12 dBi < 6 dBi, so the output power limit shall not be reduced.

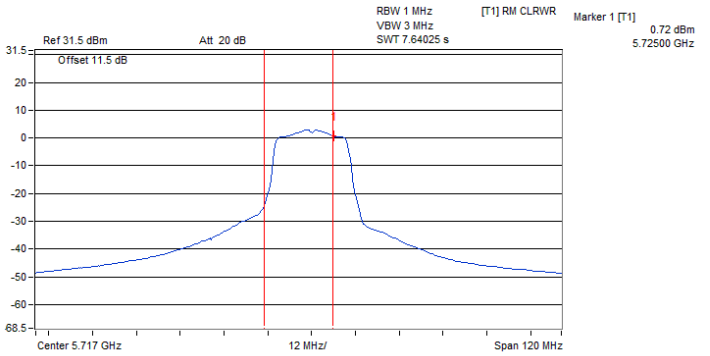
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	10.17	11.41	24.235	13.84	24	Pass
58	5290	10.11	11.24	23.561	13.72	24	Pass
106	5530	11.12	11.30	26.432	14.22	24	Pass
122	5610	11.78	11.52	29.257	14.66	24	Pass
*138 (U-NII-2C)	5690	11.44	11.05	34.595	15.39	24	Pass
*138 (U-NII-3)	5690	-3.75	-4.13	1.0483	0.20	30	Pass
155	5775	11.43	11.23	27.173	14.34	30	Pass

Notes:

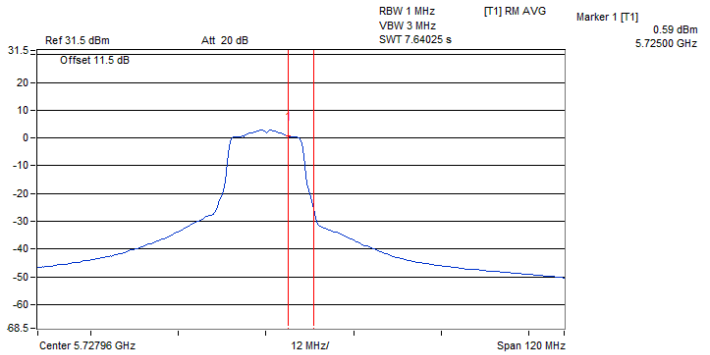
1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 3.55 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 3.12 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the maximum gain is 1.96 dBi < 6 dBi, so the output power limit shall not be reduced.
6. For U-NII-3, the maximum gain is 2.12 dBi < 6 dBi, so the output power limit shall not be reduced.

Spectrum Plot for channel straddling



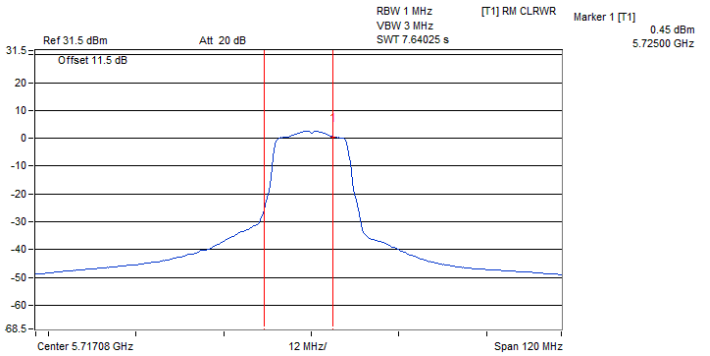
TX Channel Bandwidth 16 MHz Power 12.69 dBm

802.11a / Chain 0 : CH 144 (U-NII-2C)



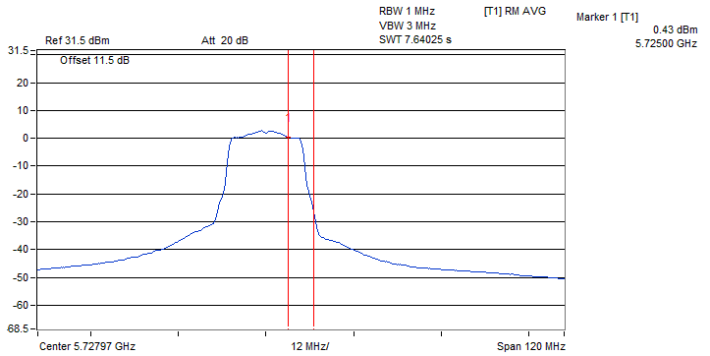
TX Channel Bandwidth 5.93 MHz Power 5.3 dBm

802.11a / Chain 0 : CH 144 (U-NII-3)



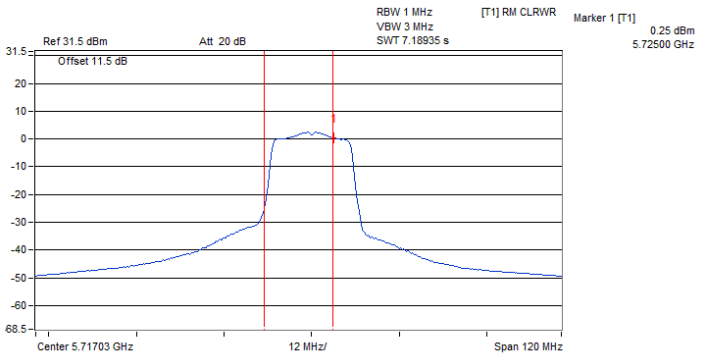
TX Channel Bandwidth 15.84 MHz Power 12.48 dBm

802.11a / Chain 1 : CH 144 (U-NII-2C)



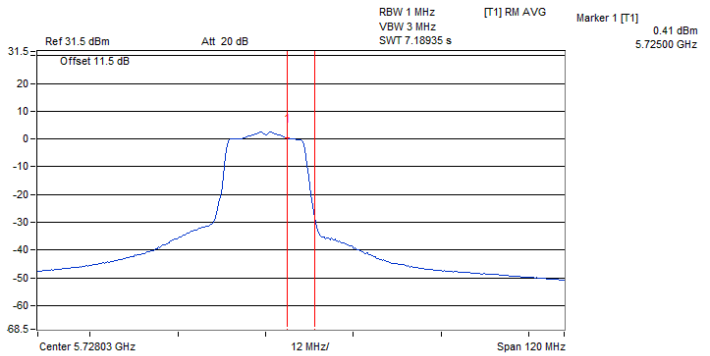
TX Channel Bandwidth 5.94 MHz Power 5.11 dBm

802.11a / Chain 1 : CH 144 (U-NII-3)



TX Channel Bandwidth 15.93 MHz Power 12.4 dBm

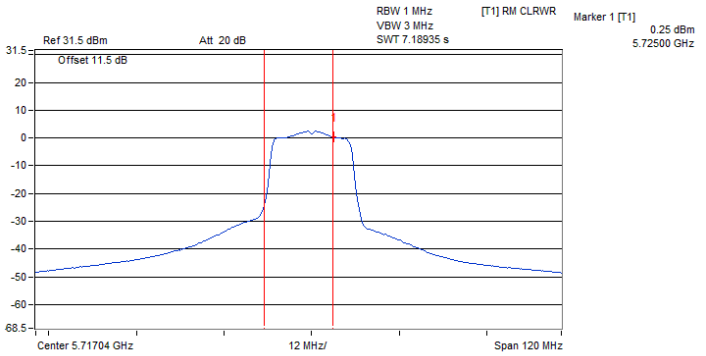
802.11n (HT20) / Chain 0 : CH 144 (U-NII-2C)



TX Channel Bandwidth 6.07 MHz Power 5.59 dBm

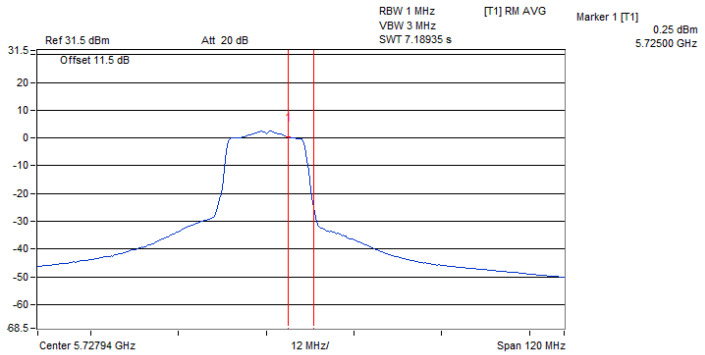
802.11n (HT20) / Chain 0 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



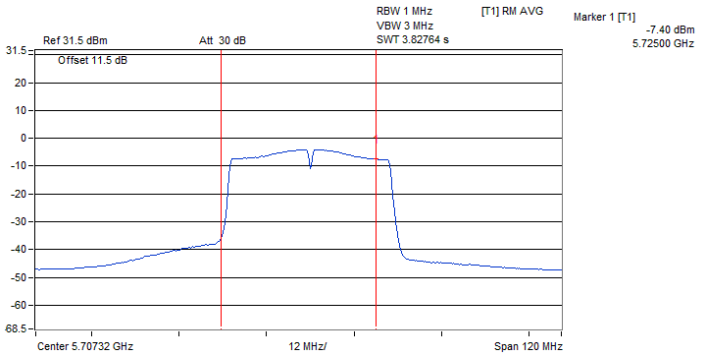
TX Channel Bandwidth 15.92 MHz Power 12.38 dBm

802.11n (HT20) / Chain 1 : CH 144 (U-NII-2C)



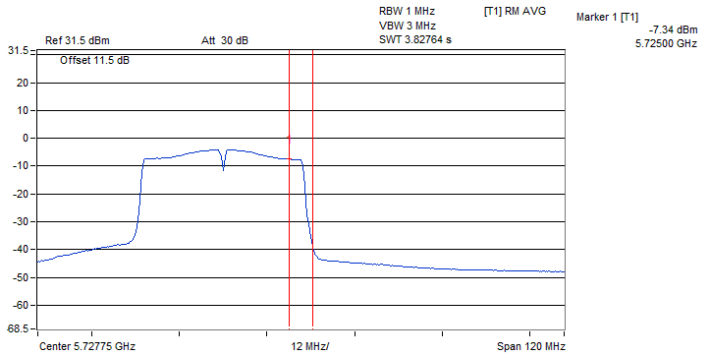
TX Channel Bandwidth 5.88 MHz Power 5.57 dBm

802.11n (HT20) / Chain 1 : CH 144 (U-NII-3)



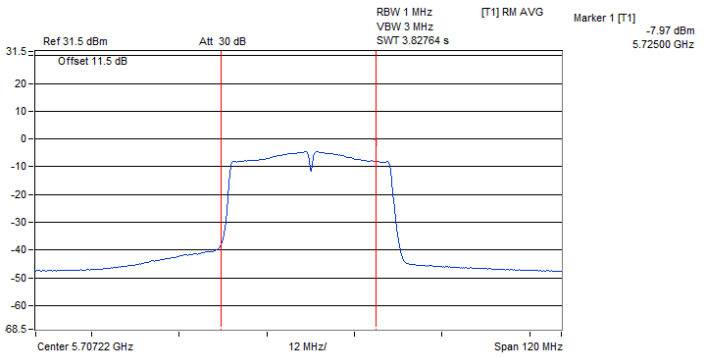
TX Channel Bandwidth 35.36 MHz Power 10.73 dBm

802.11n (HT40) / Chain 0 : CH 142 (U-NII-2C)



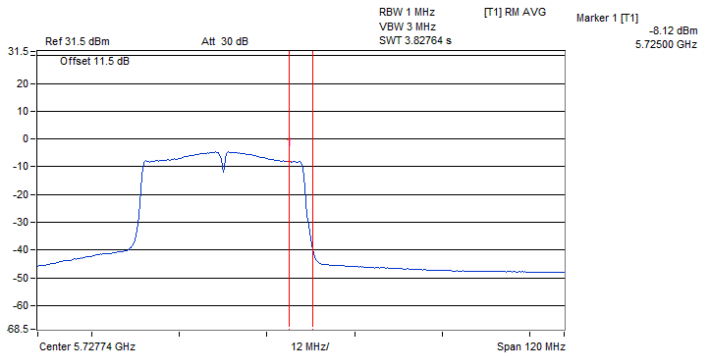
TX Channel Bandwidth 5.5 MHz Power -1.15 dBm

802.11n (HT40) / Chain 0 : CH 142 (U-NII-3)



TX Channel Bandwidth 35.55 MHz Power 10.03 dBm

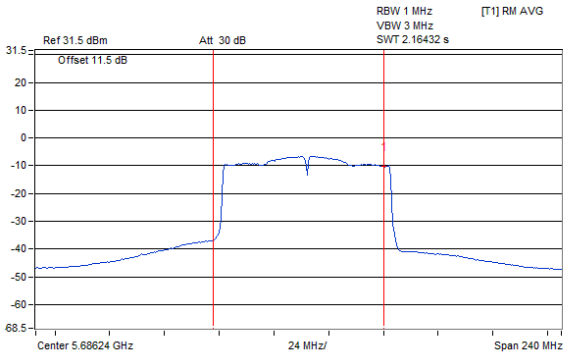
802.11n (HT40) / Chain 1 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.48 MHz Power -1.82 dBm

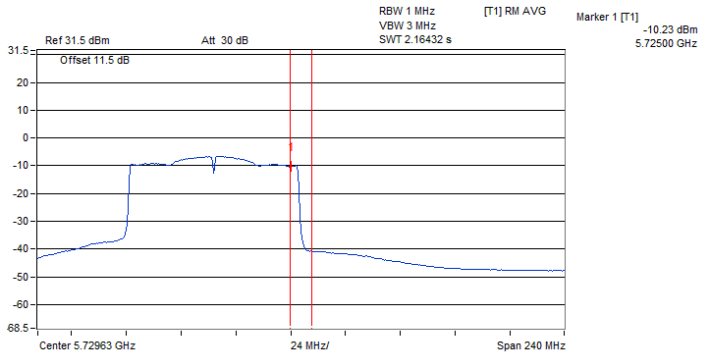
802.11n (HT40) / Chain 1 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



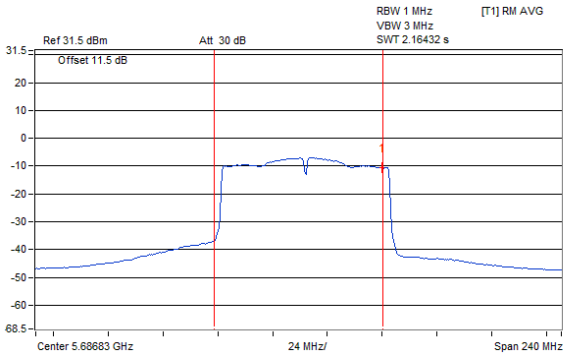
TX Channel Bandwidth 77.52 MHz Power 11.44 dBm

802.11ac (VHT80) / Chain 0 : CH 138 (U-NII-2C)



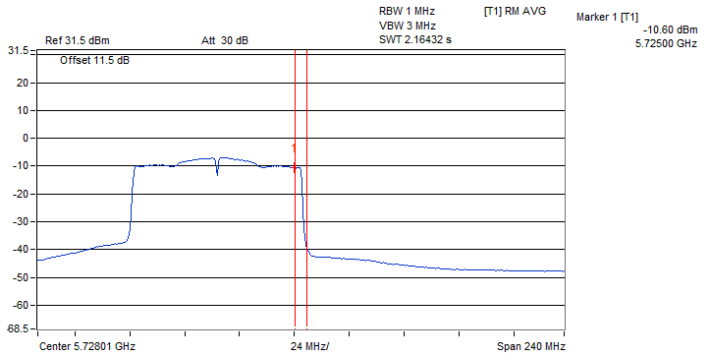
TX Channel Bandwidth 9.26 MHz Power -3.75 dBm

802.11ac (VHT80) / Chain 0 : CH 138 (U-NII-3)



TX Channel Bandwidth 76.33 MHz Power 11.05 dBm

802.11ac (VHT80) / Chain 1 : CH 138 (U-NII-2C)



TX Channel Bandwidth 6.03 MHz Power -4.13 dBm

802.11ac (VHT80) / Chain 1 : CH 138 (U-NII-3)

7.3 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
36	5180	0.64	1.82	0.26	4.54	11	Pass
40	5200	1.76	2.86	0.26	5.62	11	Pass
48	5240	2.21	2.71	0.26	5.74	11	Pass
52	5260	2.42	2.42	0.26	5.69	11	Pass
60	5300	2.27	2.47	0.26	5.64	11	Pass
64	5320	1.80	2.40	0.26	5.38	11	Pass
100	5500	0.67	-0.51	0.26	3.39	11	Pass
116	5580	2.58	2.15	0.26	5.64	11	Pass
140	5700	0.36	-0.36	0.26	3.29	11	Pass
144 (U-NII-2C)	5720	2.82	1.84	0.26	5.63	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 5.9 dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 5.78 dBi < 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 4.66 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
36	5180	-0.04	1.11	0.28	3.86	11	Pass
40	5200	0.84	1.86	0.28	4.67	11	Pass
48	5240	1.41	1.94	0.28	4.97	11	Pass
52	5260	1.01	1.59	0.28	4.60	11	Pass
60	5300	1.26	1.58	0.28	4.71	11	Pass
64	5320	1.15	1.57	0.28	4.66	11	Pass
100	5500	-0.48	-0.75	0.28	2.68	11	Pass
116	5580	1.57	0.85	0.28	4.52	11	Pass
140	5700	-0.16	-0.68	0.28	2.88	11	Pass
144 (U-NII-2C)	5720	1.51	0.81	0.28	4.46	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 5.9 dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 5.78 dBi < 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 4.66 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
38	5190	-5.47	-4.56	0.60	-1.38	11	Pass
46	5230	-5.11	-4.45	0.60	-1.16	11	Pass
54	5270	-5.01	-4.40	0.60	-1.08	11	Pass
62	5310	-4.77	-4.59	0.60	-1.07	11	Pass
102	5510	-5.14	-5.60	0.60	-1.75	11	Pass
110	5550	-4.67	-4.81	0.60	-1.13	11	Pass
134	5670	-4.41	-5.27	0.60	-1.21	11	Pass
142 (U-NII-2C)	5710	-4.34	-5.26	0.60	-1.17	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 5.9 dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 5.78 dBi < 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 4.66 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
42	5210	-8.82	-7.64	1.13	-4.05	11	Pass
58	5290	-8.96	-7.78	1.13	-4.19	11	Pass
106	5530	-7.94	-7.72	1.13	-3.69	11	Pass
122	5610	-7.44	-7.37	1.13	-3.26	11	Pass
138 (U-NII-2C)	5690	-7.13	-7.41	1.13	-3.13	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 5.9 dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 5.78 dBi < 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 4.66 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
144 (U-NII-3)	5720	-9.08	-9.12	-6.09	0.26	-3.61	30	Pass
149	5745	-5.56	-5.38	-2.46	0.26	0.02	30	Pass
157	5785	-5.73	-5.64	-2.67	0.26	-0.19	30	Pass
165	5825	-6.01	-6.20	-3.09	0.26	-0.61	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-3, the directional gain is 4.83 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
144 (U-NII-3)	5720	-9.51	-9.02	-6.25	0.28	-3.75	30	Pass
149	5745	-6.06	-7.00	-3.49	0.28	-0.99	30	Pass
157	5785	-6.91	-7.16	-4.02	0.28	-1.52	30	Pass
165	5825	-6.98	-7.19	-4.07	0.28	-1.57	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-3, the directional gain is 4.83 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
142 (U-NII-3)	5710	-16.11	-16.95	-13.5	0.6	-10.68	30	Pass
151	5755	-14.49	-14.43	-11.45	0.6	-8.63	30	Pass
159	5795	-14.80	-15.09	-11.93	0.6	-9.11	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-3, the directional gain is 4.83 dBi < 6 dBi, so the power density limit shall not be reduced.

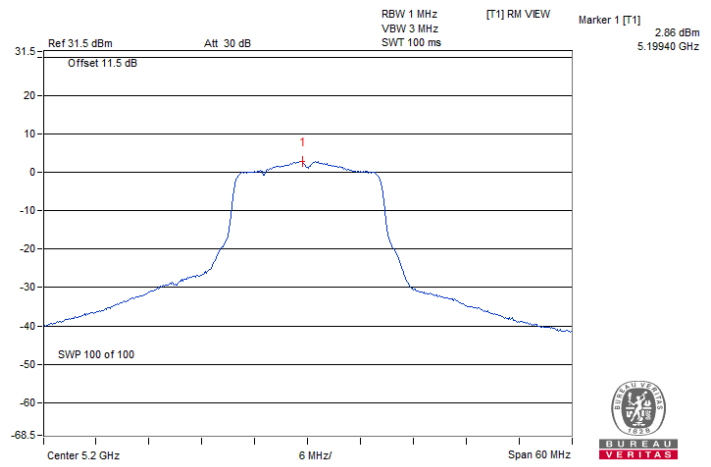
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
138 (U-NII-3)	5690	-18.79	-19.24	-16	1.13	-12.65	30	Pass
155	5775	-14.03	-15.37	-11.64	1.13	-8.29	30	Pass

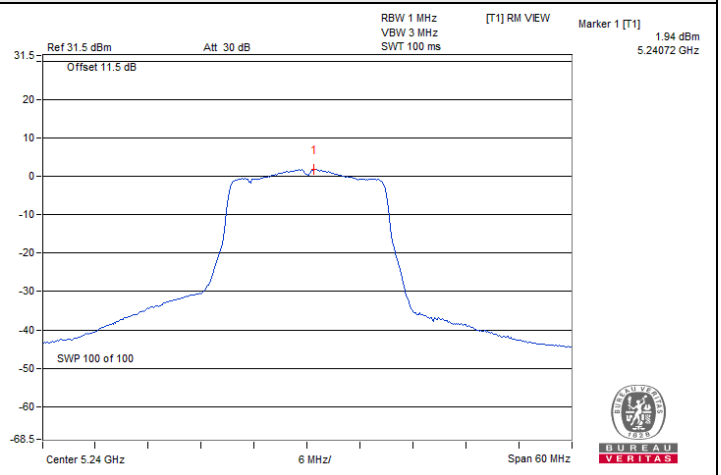
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-3, the directional gain is 4.83 dBi < 6 dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value

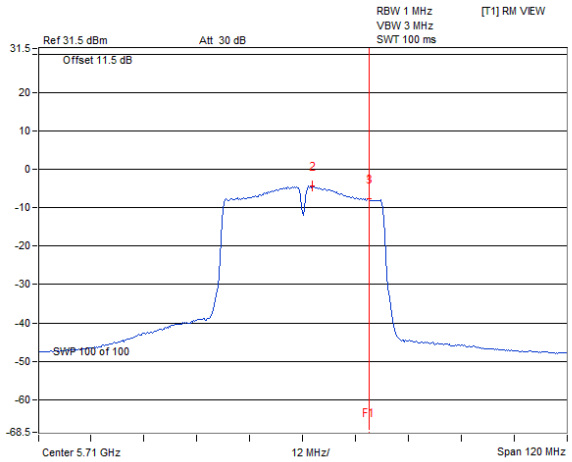


802.11a / Chain 1 : CH 40

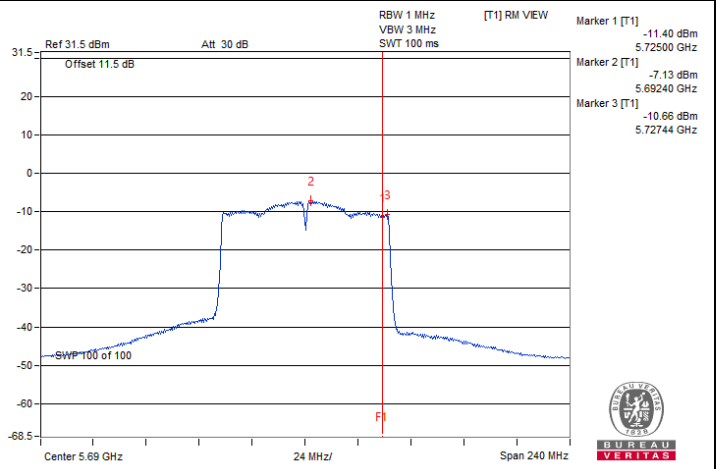


802.11n (HT20) / Chain 1 : CH 48

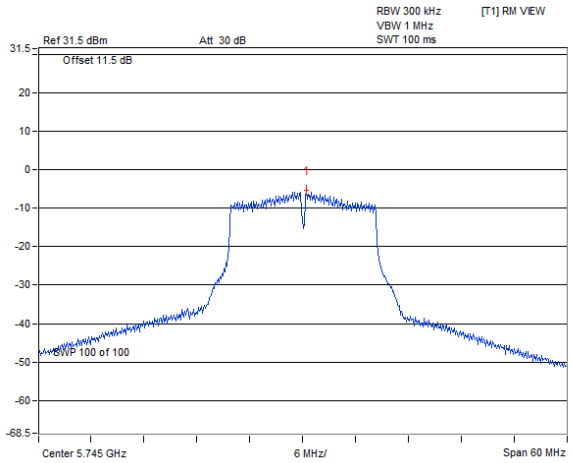
Spectrum Plot of Maximum Value



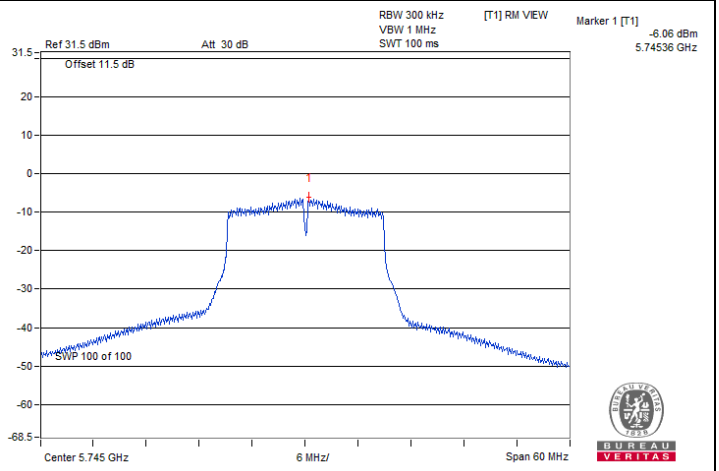
802.11n (HT40) / Chain 0 : CH 142 (U-NII-2C)



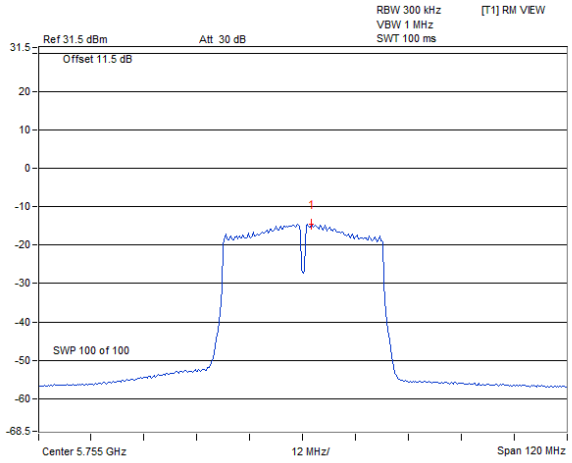
802.11ac (VHT80) / Chain 0 : CH 138 (U-NII-2C)



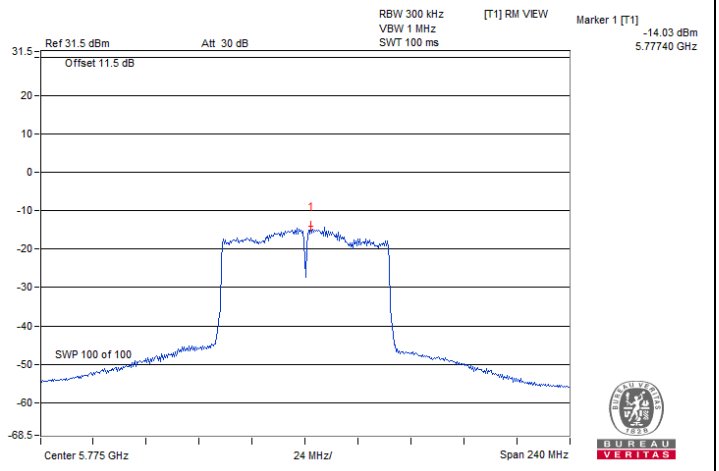
802.11a / Chain 1 : CH 149



802.11n (HT20) / Chain 0 : CH 149



802.11n (HT40) / Chain 1 : CH 151



802.11ac (VHT80) / Chain 0 : CH 155

7.4 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	3.23	3.22	0.5	Pass
149	5745	16.37	16.38	0.5	Pass
157	5785	16.38	16.37	0.5	Pass
165	5825	16.37	16.37	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	3.85	3.85	0.5	Pass
149	5745	17.61	17.61	0.5	Pass
157	5785	17.61	17.61	0.5	Pass
165	5825	17.61	17.62	0.5	Pass

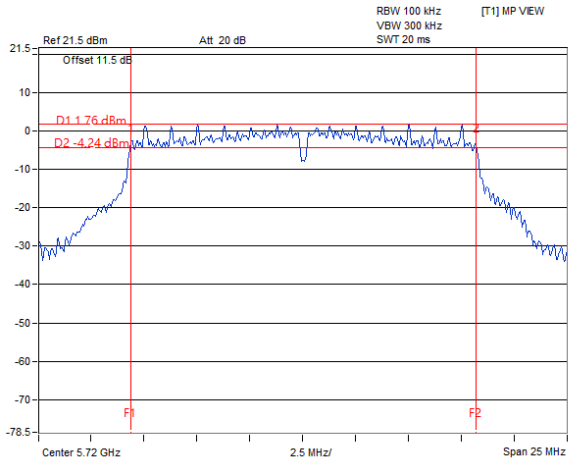
802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
142 (U-NII-3)	5710	3.00	3.20	0.5	Pass
151	5755	35.79	35.79	0.5	Pass
159	5795	35.46	35.47	0.5	Pass

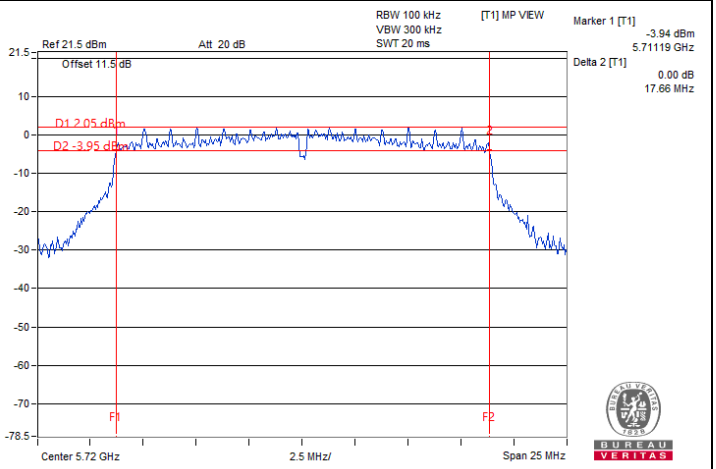
802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
138 (U-NII-3)	5690	2.79	2.79	0.5	Pass
155	5775	75.94	75.91	0.5	Pass

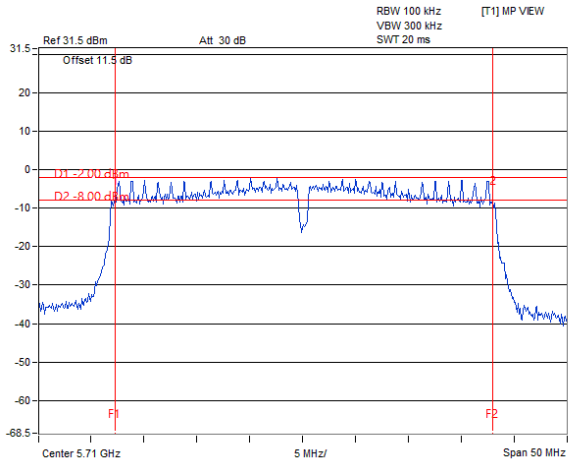
Spectrum Plot of Minimum Value



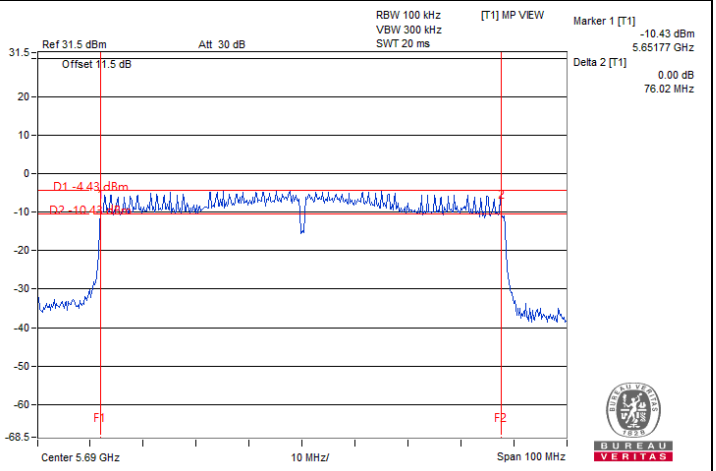
802.11a / Chain 1 : CH 144 (U-NII-3)



802.11n (HT20) / Chain 0 : CH 144 (U-NII-3)



802.11n (HT40) / Chain 0 : CH 142 (U-NII-3)



802.11ac (VHT80) / Chain 0 : CH 138 (U-NII-3)

Note: For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.04	17.04
40	5200	17.28	17.28
48	5240	17.04	17.04
52	5260	17.28	17.28
60	5300	16.92	17.16
64	5320	17.16	17.28
100	5500	16.92	16.92
116	5580	17.16	17.16
140	5700	16.92	17.16
144 (U-NII-2C)	5720	13.52	13.40
144 (U-NII-3)	5720	3.64	3.52
149	5745	17.22	17.28
157	5785	17.16	17.10
165	5825	17.28	17.22

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.12	18.00
40	5200	18.00	18.00
48	5240	17.88	17.88
52	5260	17.88	18.00
60	5300	17.88	17.88
64	5320	18.12	17.88
100	5500	17.88	17.88
116	5580	18.00	18.12
140	5700	18.00	17.88
144 (U-NII-2C)	5720	14.00	14.00
144 (U-NII-3)	5720	4.00	4.00
149	5745	18.12	18.00
157	5785	18.00	17.94
165	5825	18.00	18.00

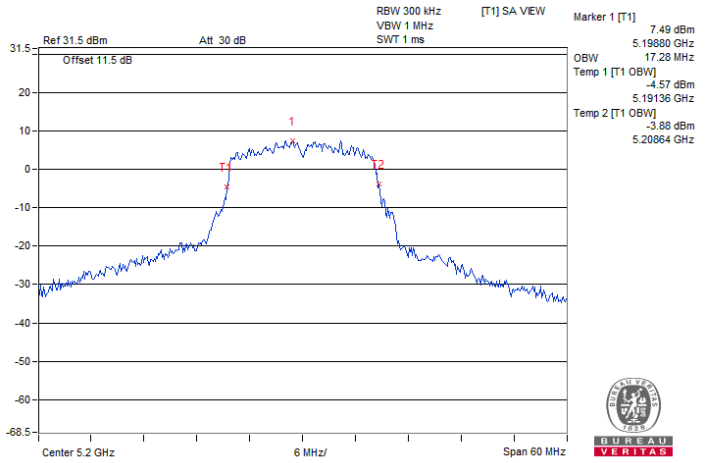
802.11n (HT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.24	36.48
46	5230	36.48	36.24
54	5270	36.48	36.48
62	5310	36.48	36.48
102	5510	36.24	36.48
110	5550	36.36	36.36
134	5670	36.48	36.48
142 (U-NII-2C)	5710	33.48	33.24
142 (U-NII-3)	5710	3.24	3.24
151	5755	36.36	36.36
159	5795	36.48	36.36

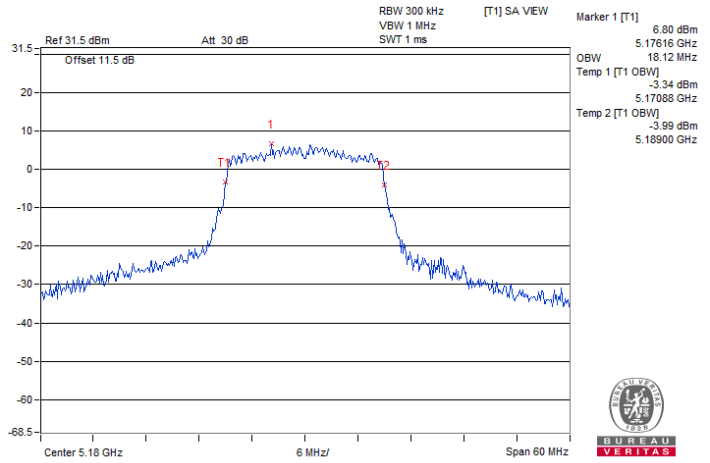
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.36	75.84
58	5290	75.36	75.36
106	5530	75.60	75.60
122	5610	75.84	75.36
138 (U-NII-2C)	5690	72.92	72.92
138 (U-NII-3)	5690	2.92	2.44
155	5775	75.60	75.60

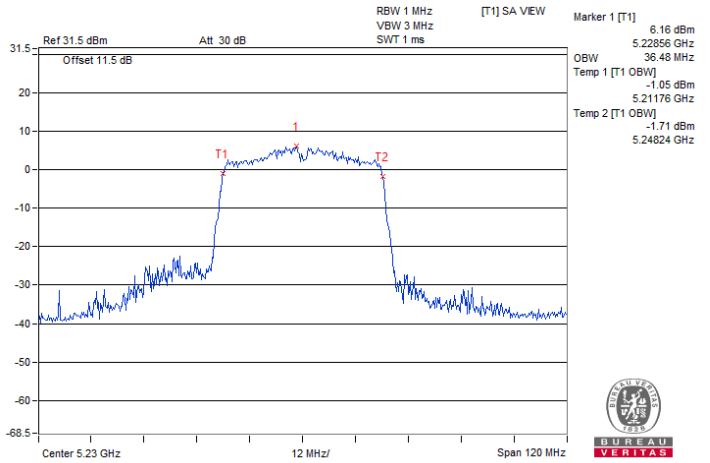
Spectrum Plot of Maximum Value



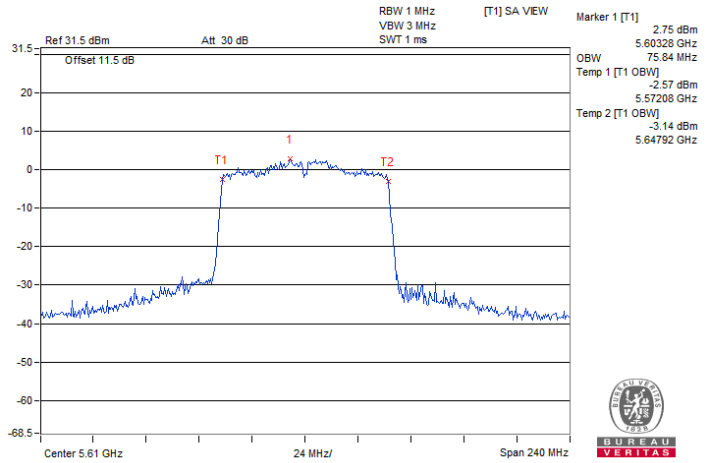
802.11a / Chain 0 : CH 40



802.11n (HT20) / Chain 0 : CH 36

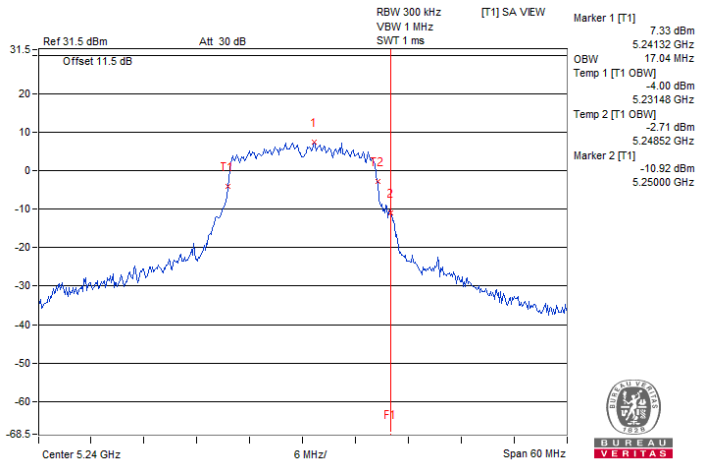


802.11n (HT40) / Chain 0 : CH 46

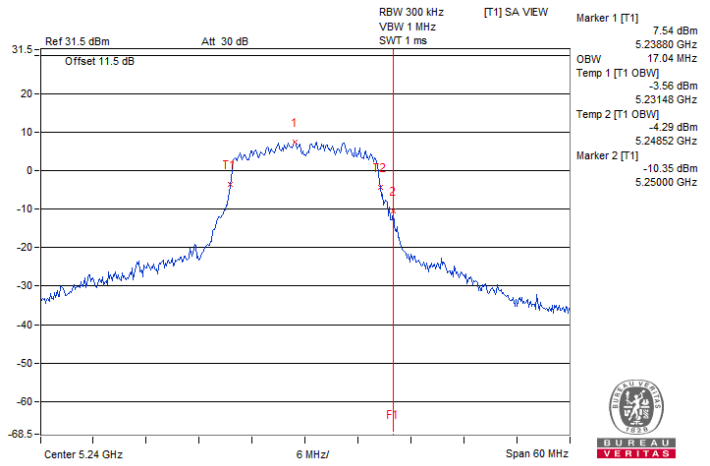


802.11ac (VHT80) / Chain 0 : CH 122

Spectrum Plot for nearby DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A)



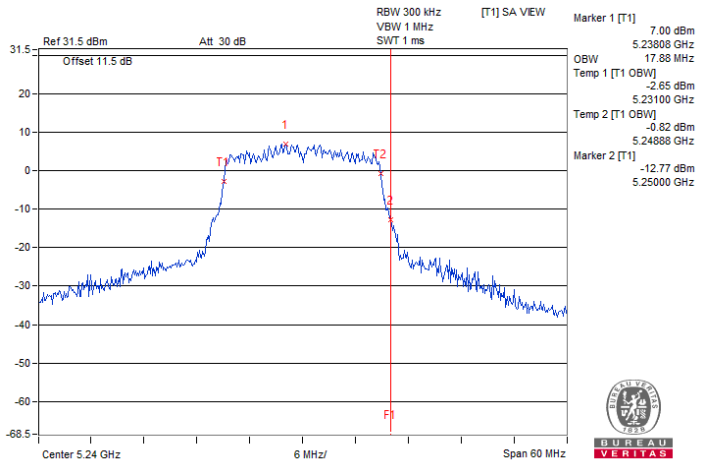
802.11a / Chain 0 : CH 48



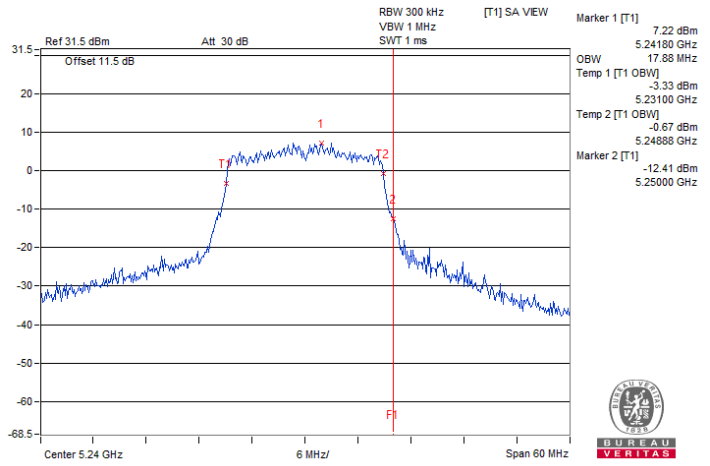
802.11a / Chain 1 : CH 48

Spectrum Plot for nearby DFS band

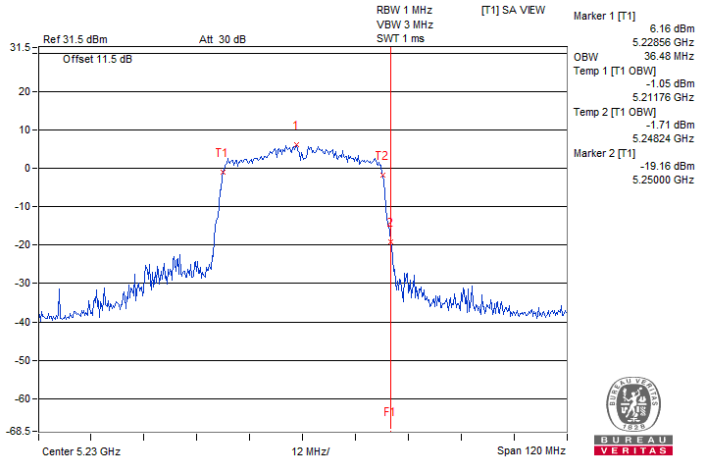
(DFS is required, if 99% OCP straddle into U-NII-2A)



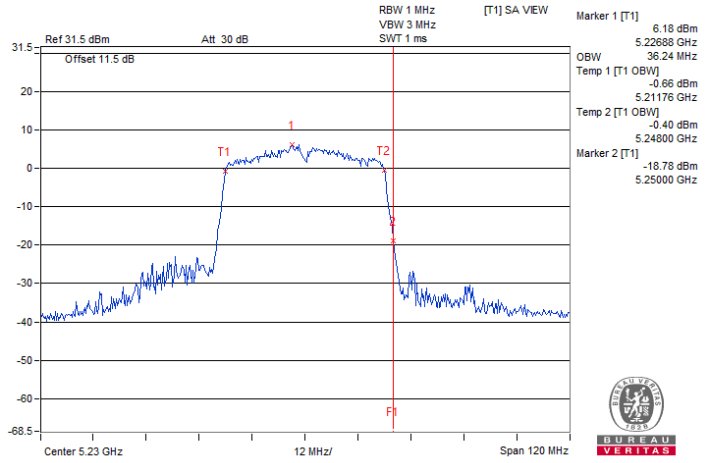
802.11n (HT20) / Chain 0 : CH 48



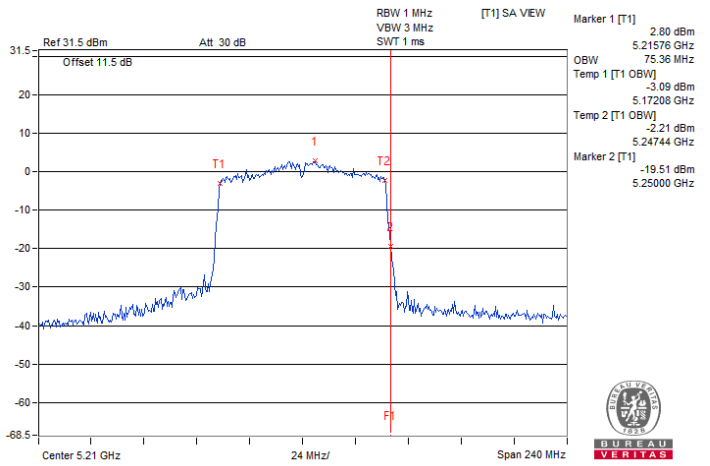
802.11n (HT20) / Chain 1 : CH 48



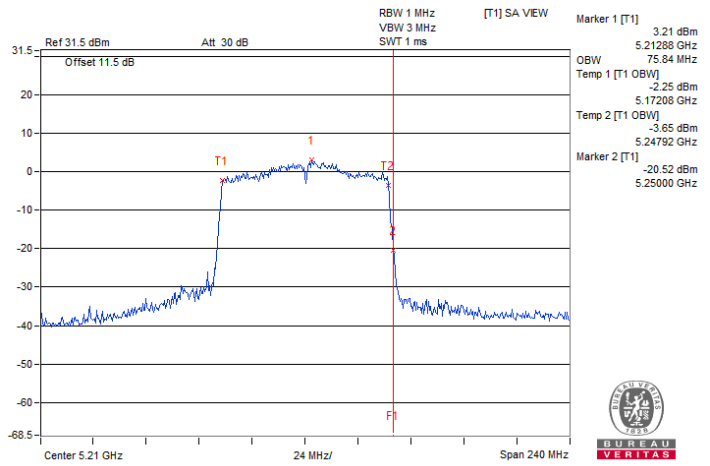
802.11n (HT40) / Chain 0 : CH 46



802.11n (HT40) / Chain 1 : CH 46



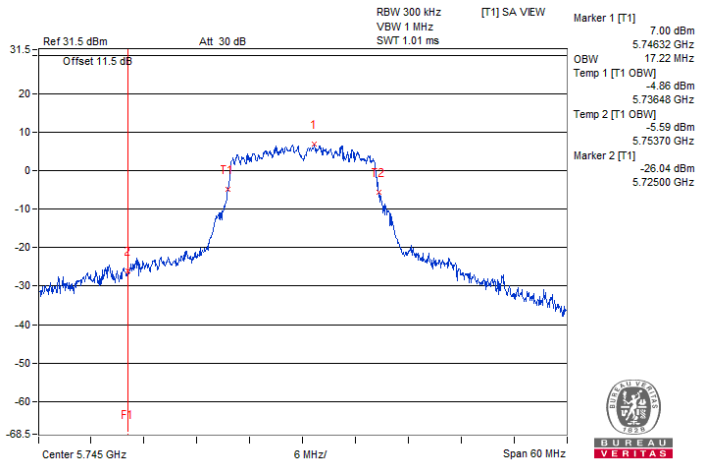
802.11ac (VHT80) / Chain 0 : CH 42



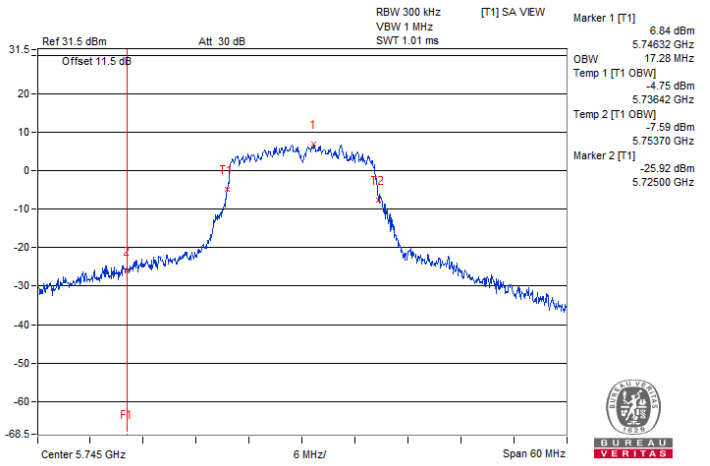
802.11ac (VHT80) / Chain 1 : CH 42

Spectrum Plot for nearby DFS band

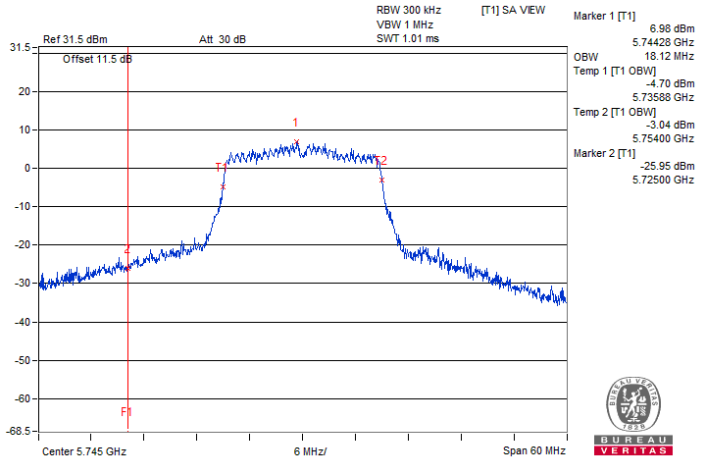
(DFS is required, if 99% OCP straddle into U-NII-2C)



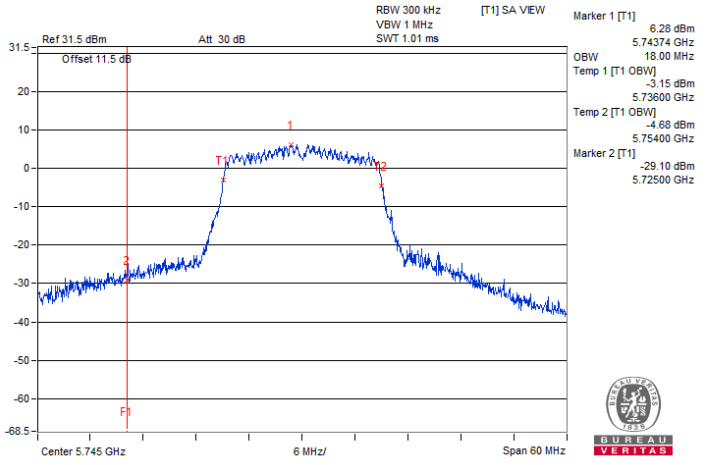
802.11a / Chain 0 : CH 149



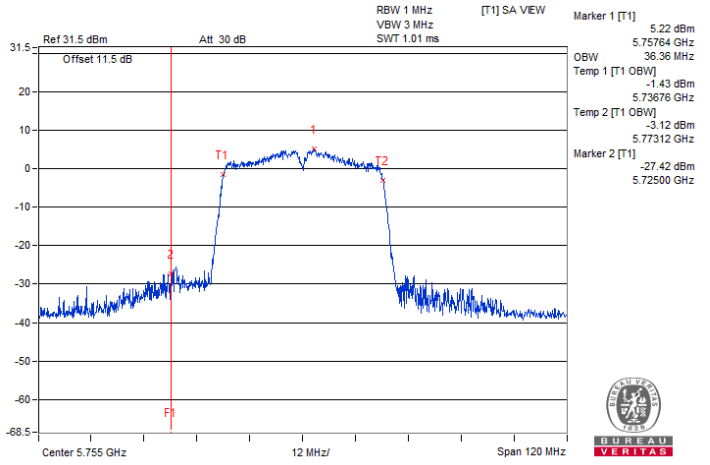
802.11a / Chain 1 : CH 149



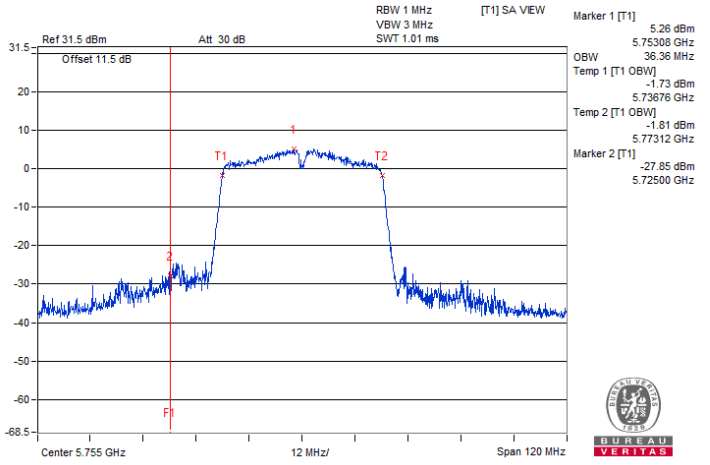
802.11n (HT20) / Chain 0 : CH 149



802.11n (HT20) / Chain 1 : CH 149



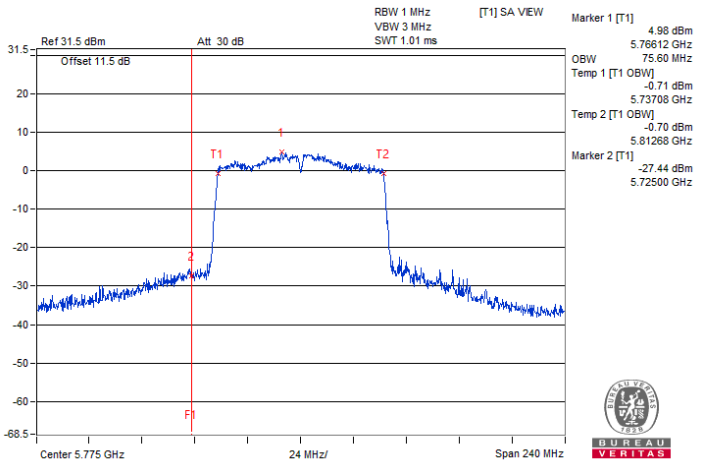
802.11n (HT40) / Chain 0 : CH 151



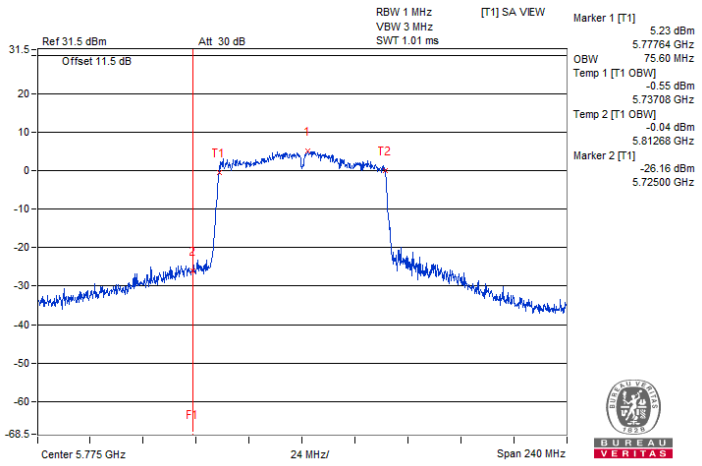
802.11n (HT40) / Chain 1 : CH 151

Spectrum Plot for nearby DFS band

(DFS is required, if 99% OCP straddle into U-NII-2C)



802.11ac (VHT80) / Chain 0 : CH 155



802.11ac (VHT80) / Chain 1 : CH 155

7.6 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	5179.9894	Pass	5179.9883	Pass	5179.9904	Pass	5179.9894	Pass
30	120	5179.9758	Pass	5179.9768	Pass	5179.9751	Pass	5179.975	Pass
20	120	5180.0233	Pass	5180.0208	Pass	5180.023	Pass	5180.0243	Pass
10	120	5179.9829	Pass	5179.9794	Pass	5179.9832	Pass	5179.9836	Pass
0	120	5179.9945	Pass	5179.9943	Pass	5179.9937	Pass	5179.9955	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5180.0211	Pass	5180.0181	Pass	5180.0205	Pass	5180.0211	Pass
	120	5180.0233	Pass	5180.0208	Pass	5180.023	Pass	5180.0243	Pass
	102	5180.0295	Pass	5180.0298	Pass	5180.0271	Pass	5180.0293	Pass

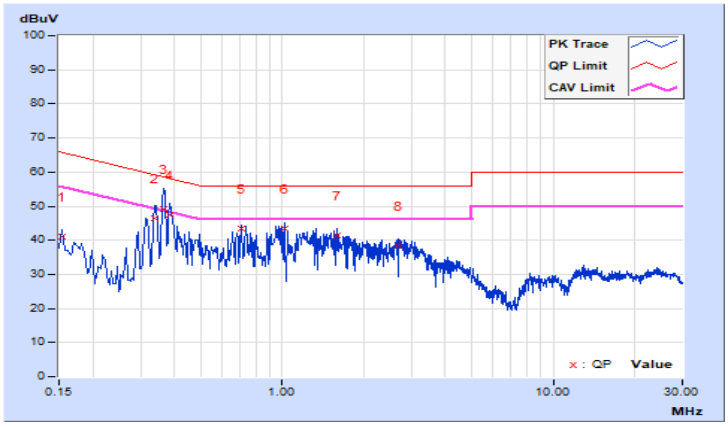
7.7 AC Power Conducted Emissions

RF Mode	802.11a	**Channel**	CH 165：5825 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15400	9.66	31.45	22.18	41.11	31.84	65.78	55.78	-24.67	-23.94
2	0.33856	9.76	36.70	31.48	46.46	41.24	59.24	49.24	-12.78	-8.00
3	0.36600	9.77	39.54	34.22	49.31	43.99	58.59	48.59	-9.28	-4.60
4	0.38522	9.78	37.79	32.44	47.57	42.22	58.17	48.17	-10.60	-5.95
5	0.70600	9.82	33.60	31.09	43.42	40.91	56.00	46.00	-12.58	-5.09
6	1.01800	9.85	33.57	27.08	43.42	36.93	56.00	46.00	-12.58	-9.07
7	1.58600	9.89	31.39	20.75	41.28	30.64	56.00	46.00	-14.72	-15.36
8	2.69800	9.92	28.44	20.01	38.36	29.93	56.00	46.00	-17.64	-16.07

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

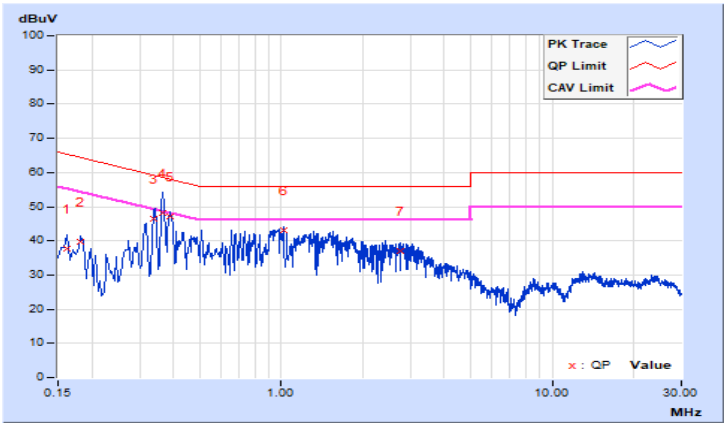


RF Mode	802.11a	**Channel**	CH 165：5825 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.16190	9.67	28.03	20.29	37.70	29.96	65.37	55.37	-27.67	-25.41
2	0.18200	9.69	29.97	21.67	39.66	31.36	64.39	54.39	-24.73	-23.03
3	0.33946	9.75	36.61	32.47	46.36	42.22	59.22	49.22	-12.86	-7.00
4	**0.36545**	**9.76**	**38.54**	**36.21**	**48.30**	**45.97**	**58.60**	**48.60**	**-10.30**	**-2.63**
5	0.39000	9.77	37.28	33.94	47.05	43.71	58.06	48.06	-11.01	-4.35
6	1.01800	9.84	33.28	26.87	43.12	36.71	56.00	46.00	-12.88	-9.29
7	2.75400	9.92	27.18	16.24	37.10	26.16	56.00	46.00	-18.90	-19.84

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



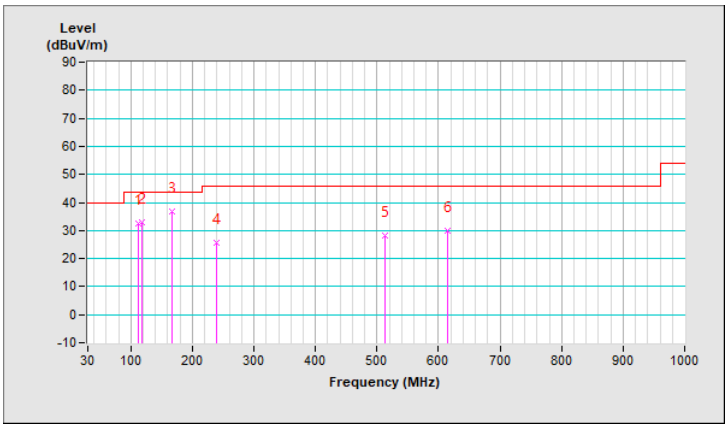
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11a	**Channel**	CH 165：5825 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	18.8°C, 74.3% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	111.48	32.6 QP	43.5	-10.9	1.00 H	274	44.5	-11.9
2	117.30	33.1 QP	43.5	-10.4	1.50 H	264	44.5	-11.4
3	**167.74**	**36.8 QP**	**43.5**	**-6.7**	**2.00 H**	**337**	**45.7**	**-8.9**
4	238.55	25.7 QP	46.0	-20.3	2.00 H	191	35.1	-9.4
5	512.09	28.4 QP	46.0	-17.6	1.00 H	105	30.5	-2.1
6	614.91	30.0 QP	46.0	-16.0	1.50 H	227	30.1	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

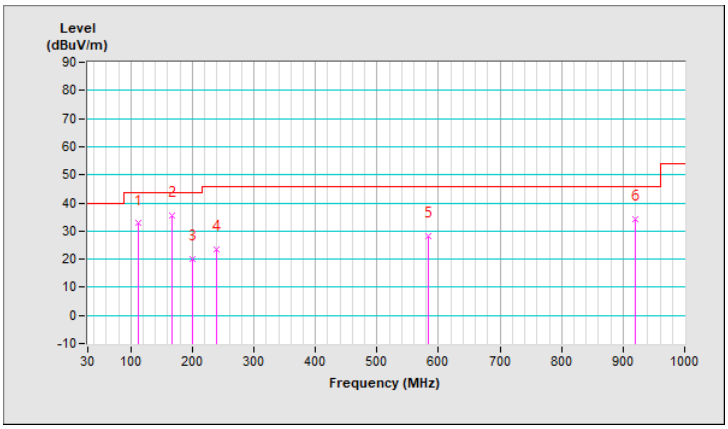


RF Mode	802.11a	**Channel**	CH 165：5825 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	18.8°C, 74.3% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	111.48	32.7 QP	43.5	-10.8	1.00 V	283	44.6	-11.9
2	167.74	35.5 QP	43.5	-8.0	1.00 V	255	44.4	-8.9
3	199.75	20.1 QP	43.5	-23.4	1.50 V	259	31.6	-11.5
4	238.55	23.4 QP	46.0	-22.6	1.50 V	14	32.8	-9.4
5	583.87	28.2 QP	46.0	-17.8	1.00 V	327	28.9	-0.7
6	919.49	34.1 QP	46.0	-11.9	1.50 V	167	28.1	6.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



7.9 Unwanted Emissions above 1 GHz

RF Mode	802.11a	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	67.3 PK	74.0	-6.7	3.98 H	293	46.3	21.0
2	5150.00	48.8 AV	54.0	-5.2	3.98 H	293	27.8	21.0
3	*5180.00	106.9 PK			3.98 H	293	65.7	41.2
4	*5180.00	96.8 AV			3.98 H	293	55.6	41.2
5	#10360.00	60.5 PK	68.2	-7.7	2.98 H	346	36.1	24.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	71.8 PK	74.0	-2.2	3.61 V	185	50.8	21.0
2	5150.00	52.7 AV	54.0	-1.3	3.61 V	185	31.7	21.0
3	*5180.00	108.7 PK			3.61 V	185	67.5	41.2
4	*5180.00	99.4 AV			3.61 V	185	58.2	41.2
5	#10360.00	60.7 PK	68.2	-7.5	2.55 V	191	36.3	24.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	109.8 PK			3.93 H	290	68.7	41.1
2	*5200.00	98.6 AV			3.93 H	290	57.5	41.1
3	#10400.00	61.0 PK	68.2	-7.2	2.91 H	350	36.4	24.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	111.9 PK			3.63 V	201	70.8	41.1
2	*5200.00	101.1 AV			3.63 V	201	60.0	41.1
3	#10400.00	61.4 PK	68.2	-6.8	2.58 V	211	36.8	24.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5240.00	107.1 PK			3.89 H	295	66.2	40.9
2	*5240.00	97.4 AV			3.89 H	295	56.5	40.9
3	5350.00	60.9 PK	74.0	-13.1	3.89 H	295	39.9	21.0
4	5350.00	47.6 AV	54.0	-6.4	3.89 H	295	26.6	21.0
5	#10480.00	61.3 PK	68.2	-6.9	2.93 H	341	36.4	24.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5240.00	109.8 PK			3.64 V	205	68.9	40.9
2	*5240.00	100.0 AV			3.64 V	205	59.1	40.9
3	5350.00	61.1 PK	74.0	-12.9	3.64 V	205	40.1	21.0
4	5350.00	47.8 AV	54.0	-6.2	3.64 V	205	26.8	21.0
5	#10480.00	61.5 PK	68.2	-6.7	2.61 V	199	36.6	24.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	61.4 PK	74.0	-12.6	3.88 H	294	40.4	21.0
2	5150.00	47.8 AV	54.0	-6.2	3.88 H	294	26.8	21.0
3	*5260.00	107.3 PK			3.88 H	294	66.5	40.8
4	*5260.00	96.6 AV			3.88 H	294	55.8	40.8
5	#10520.00	61.6 PK	68.2	-6.6	2.88 H	345	36.6	25.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	61.6 PK	74.0	-12.4	3.68 V	203	40.6	21.0
2	5150.00	48.0 AV	54.0	-6.0	3.68 V	203	27.0	21.0
3	*5260.00	109.8 PK			3.68 V	203	69.0	40.8
4	*5260.00	99.4 AV			3.68 V	203	58.6	40.8
5	#10520.00	61.9 PK	68.2	-6.3	2.60 V	197	36.9	25.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5300.00	107.5 PK			3.97 H	289	66.7	40.8
2	*5300.00	97.8 AV			3.97 H	289	57.0	40.8
3	10600.00	61.8 PK	74.0	-12.2	3.00 H	350	36.8	25.0
4	10600.00	49.0 AV	54.0	-5.0	3.00 H	350	24.0	25.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5300.00	109.8 PK			3.83 V	168	69.0	40.8
2	*5300.00	100.4 AV			3.83 V	168	59.6	40.8
3	10600.00	62.0 PK	74.0	-12.0	2.52 V	195	37.0	25.0
4	10600.00	49.1 AV	54.0	-4.9	2.52 V	195	24.1	25.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11a	**Channel**	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5320.00	107.9 PK			3.97 H	286	67.0	40.9
2	*5320.00	98.2 AV			3.97 H	286	57.3	40.9
3	5350.00	66.4 PK	74.0	-7.6	3.97 H	286	45.4	21.0
4	5350.00	51.1 AV	54.0	-2.9	3.97 H	286	30.1	21.0
5	10640.00	62.5 PK	74.0	-11.5	2.88 H	350	36.8	25.7
6	10640.00	49.6 AV	54.0	-4.4	2.88 H	350	23.9	25.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5320.00	110.3 PK			3.80 V	161	69.4	40.9
2	*5320.00	101.1 AV			3.80 V	161	60.2	40.9
3	5350.00	67.5 PK	74.0	-6.5	3.80 V	161	46.5	21.0
4	5350.00	52.5 AV	54.0	-1.5	3.80 V	161	31.5	21.0
5	10640.00	62.7 PK	74.0	-11.3	2.61 V	197	37.0	25.7
6	10640.00	49.9 AV	54.0	-4.1	2.61 V	197	24.2	25.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11a	**Channel**	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	62.1 PK	74.0	-11.9	3.96 H	290	40.7	21.4
2	5460.00	48.8 AV	54.0	-5.2	3.96 H	290	27.4	21.4
3	#5470.00	65.9 PK	68.2	-2.3	3.96 H	290	44.5	21.4
4	*5500.00	103.7 PK			3.96 H	290	62.2	41.5
5	*5500.00	94.4 AV			3.96 H	290	52.9	41.5
6	11000.00	62.9 PK	74.0	-11.1	2.99 H	350	36.2	26.7
7	11000.00	49.8 AV	54.0	-4.2	2.99 H	350	23.1	26.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	64.0 PK	74.0	-10.0	3.81 V	164	42.6	21.4
2	5460.00	49.1 AV	54.0	-4.9	3.81 V	164	27.7	21.4
3	#5470.00	66.7 PK	68.2	-1.5	3.81 V	164	45.3	21.4
4	*5500.00	106.3 PK			3.81 V	164	64.8	41.5
5	*5500.00	97.2 AV			3.81 V	164	55.7	41.5
6	11000.00	63.1 PK	74.0	-10.9	2.63 V	193	36.4	26.7
7	11000.00	50.0 AV	54.0	-4.0	2.63 V	193	23.3	26.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5580.00	107.2 PK			3.97 H	293	65.6	41.6
2	*5580.00	98.1 AV			3.97 H	293	56.5	41.6
3	11160.00	62.6 PK	74.0	-11.4	2.88 H	344	36.8	25.8
4	11160.00	49.5 AV	54.0	-4.5	2.88 H	344	23.7	25.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5580.00	109.7 PK			3.90 V	172	68.1	41.6
2	*5580.00	100.7 AV			3.90 V	172	59.1	41.6
3	11160.00	62.7 PK	74.0	-11.3	2.57 V	199	36.9	25.8
4	11160.00	49.7 AV	54.0	-4.3	2.57 V	199	23.9	25.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11a	**Channel**	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5700.00	105.7 PK			3.96 H	297	64.0	41.7
2	*5700.00	96.4 AV			3.96 H	297	54.7	41.7
3	#5725.00	65.1 PK	68.2	-3.1	3.96 H	297	42.9	22.2
4	11400.00	63.9 PK	74.0	-10.1	2.86 H	346	36.9	27.0
5	11400.00	50.8 AV	54.0	-3.2	2.86 H	346	23.8	27.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5700.00	108.1 PK			2.72 V	167	66.4	41.7
2	*5700.00	99.1 AV			2.72 V	167	57.4	41.7
3	#5725.00	66.9 PK	68.2	-1.3	2.72 V	167	44.7	22.2
4	11400.00	64.1 PK	74.0	-9.9	2.64 V	192	37.1	27.0
5	11400.00	51.0 AV	54.0	-3.0	2.64 V	192	24.0	27.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.1 PK	68.2	-7.1	3.89 H	287	39.7	21.4
2	*5720.00	108.2 PK			3.89 H	287	66.3	41.9
3	*5720.00	98.8 AV			3.89 H	287	56.9	41.9
4	#5850.00	62.4 PK	68.2	-5.8	3.89 H	287	39.9	22.5
5	11440.00	64.1 PK	74.0	-9.9	2.93 H	352	37.0	27.1
6	11440.00	50.8 AV	54.0	-3.2	2.93 H	352	23.7	27.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.2 PK	68.2	-7.0	2.79 V	173	39.8	21.4
2	*5720.00	110.8 PK			2.79 V	173	68.9	41.9
3	*5720.00	101.6 AV			2.79 V	173	59.7	41.9
4	#5850.00	62.6 PK	68.2	-5.6	2.79 V	173	40.1	22.5
5	11440.00	64.3 PK	74.0	-9.7	2.58 V	197	37.2	27.1
6	11440.00	51.0 AV	54.0	-3.0	2.58 V	197	23.9	27.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5602.80	61.0 PK	68.2	-7.2	3.70 H	245	39.3	21.7
2	*5745.00	106.6 PK			3.70 H	245	64.6	42.0
3	*5745.00	97.3 AV			3.70 H	245	55.3	42.0
4	#5944.80	62.5 PK	68.2	-5.7	3.70 H	245	40.0	22.5
5	11490.00	63.4 PK	74.0	-10.6	2.92 H	351	36.2	27.2
6	11490.00	50.2 AV	54.0	-3.8	2.92 H	351	23.0	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5618.80	60.6 PK	68.2	-7.6	2.75 V	26	38.8	21.8
2	*5745.00	111.1 PK			2.75 V	26	69.1	42.0
3	*5745.00	102.0 AV			2.75 V	26	60.0	42.0
4	#5946.40	61.8 PK	68.2	-6.4	2.75 V	26	39.3	22.5
5	11490.00	63.5 PK	74.0	-10.5	2.68 V	199	36.3	27.2
6	11490.00	50.3 AV	54.0	-3.7	2.68 V	199	23.1	27.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11a	**Channel**	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5636.40	61.1 PK	68.2	-7.1	3.40 H	243	39.3	21.8
2	*5785.00	105.7 PK			3.40 H	243	63.5	42.2
3	*5785.00	96.5 AV			3.40 H	243	54.3	42.2
4	#5995.20	61.9 PK	68.2	-6.3	3.40 H	243	39.3	22.6
5	11570.00	63.3 PK	74.0	-10.7	2.96 H	354	36.1	27.2
6	11570.00	50.2 AV	54.0	-3.8	2.96 H	354	23.0	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5636.00	60.8 PK	68.2	-7.4	2.74 V	40	39.0	21.8
2	*5785.00	110.1 PK			2.74 V	40	67.9	42.2
3	*5785.00	101.2 AV			2.74 V	40	59.0	42.2
4	#5939.20	61.3 PK	68.2	-6.9	2.74 V	40	38.8	22.5
5	11570.00	63.5 PK	74.0	-10.5	2.82 V	194	36.3	27.2
6	11570.00	50.3 AV	54.0	-3.7	2.82 V	194	23.1	27.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5608.00	61.2 PK	68.2	-7.0	3.91 H	288	39.5	21.7
2	*5825.00	108.7 PK			3.91 H	288	66.3	42.4
3	*5825.00	99.1 AV			3.91 H	288	56.7	42.4
4	#5974.80	61.1 PK	68.2	-7.1	3.91 H	288	38.5	22.6
5	11650.00	62.8 PK	74.0	-11.2	3.01 H	348	36.3	26.5
6	11650.00	49.8 AV	54.0	-4.2	3.01 H	348	23.3	26.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5644.00	60.6 PK	68.2	-7.6	3.72 V	159	38.8	21.8
2	*5825.00	110.8 PK			3.72 V	159	68.4	42.4
3	*5825.00	101.9 AV			3.72 V	159	59.5	42.4
4	#5932.00	61.3 PK	68.2	-6.9	3.72 V	159	38.8	22.5
5	11650.00	63.0 PK	74.0	-11.0	2.68 V	195	36.5	26.5
6	11650.00	49.9 AV	54.0	-4.1	2.68 V	195	23.4	26.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	71.5 PK	74.0	-2.5	3.91 H	290	50.5	21.0
2	5150.00	52.0 AV	54.0	-2.0	3.91 H	290	31.0	21.0
3	*5180.00	105.2 PK			3.91 H	290	64.0	41.2
4	*5180.00	95.5 AV			3.91 H	290	54.3	41.2
5	#10360.00	60.6 PK	68.2	-7.6	2.86 H	349	36.2	24.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	72.0 PK	74.0	-2.0	3.65 V	192	51.0	21.0
2	5150.00	52.2 AV	54.0	-1.8	3.65 V	192	31.2	21.0
3	*5180.00	108.5 PK			3.65 V	192	67.3	41.2
4	*5180.00	98.1 AV			3.65 V	192	56.9	41.2
5	#10360.00	60.8 PK	68.2	-7.4	2.58 V	197	36.4	24.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	107.8 PK			3.97 H	294	66.7	41.1
2	*5200.00	97.2 AV			3.97 H	294	56.1	41.1
3	#10400.00	61.0 PK	68.2	-7.2	2.88 H	344	36.4	24.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	110.3 PK			3.62 V	206	69.2	41.1
2	*5200.00	99.9 AV			3.62 V	206	58.8	41.1
3	#10400.00	61.1 PK	68.2	-7.1	2.54 V	197	36.5	24.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5240.00	106.3 PK			3.89 H	297	65.4	40.9
2	*5240.00	96.5 AV			3.89 H	297	55.6	40.9
3	5350.00	60.7 PK	74.0	-13.3	3.89 H	297	39.7	21.0
4	5350.00	47.7 AV	54.0	-6.3	3.89 H	297	26.7	21.0
5	#10480.00	61.3 PK	68.2	-6.9	2.81 H	340	36.4	24.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5240.00	110.2 PK			3.91 V	206	69.3	40.9
2	*5240.00	98.9 AV			3.91 V	206	58.0	40.9
3	5350.00	60.8 PK	74.0	-13.2	3.91 V	206	39.8	21.0
4	5350.00	47.8 AV	54.0	-6.2	3.91 V	206	26.8	21.0
5	#10480.00	61.4 PK	68.2	-6.8	2.54 V	197	36.5	24.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	61.4 PK	74.0	-12.6	3.95 H	290	40.4	21.0
2	5150.00	47.8 AV	54.0	-6.2	3.95 H	290	26.8	21.0
3	*5260.00	105.7 PK			3.95 H	290	64.9	40.8
4	*5260.00	95.6 AV			3.95 H	290	54.8	40.8
5	#10520.00	61.6 PK	68.2	-6.6	2.66 H	201	36.6	25.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	61.5 PK	74.0	-12.5	3.71 V	206	40.5	21.0
2	5150.00	48.0 AV	54.0	-6.0	3.71 V	206	27.0	21.0
3	*5260.00	108.9 PK			3.71 V	206	68.1	40.8
4	*5260.00	98.3 AV			3.71 V	206	57.5	40.8
5	#10520.00	61.8 PK	68.2	-6.4	2.52 V	195	36.8	25.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5300.00	106.6 PK			3.99 H	297	65.8	40.8
2	*5300.00	97.1 AV			3.99 H	297	56.3	40.8
3	10600.00	61.7 PK	74.0	-12.3	2.92 H	341	36.7	25.0
4	10600.00	48.9 AV	54.0	-5.1	2.92 H	341	23.9	25.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5300.00	109.2 PK			3.83 V	167	68.4	40.8
2	*5300.00	99.6 AV			3.83 V	167	58.8	40.8
3	10600.00	61.9 PK	74.0	-12.1	2.65 V	200	36.9	25.0
4	10600.00	49.1 AV	54.0	-4.9	2.65 V	200	24.1	25.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT20)	**Channel**	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5320.00	105.8 PK			3.96 H	289	64.9	40.9
2	*5320.00	96.8 AV			3.96 H	289	55.9	40.9
3	5350.00	66.4 PK	74.0	-7.6	3.96 H	289	45.4	21.0
4	5350.00	50.9 AV	54.0	-3.1	3.96 H	289	29.9	21.0
5	10640.00	62.3 PK	74.0	-11.7	2.84 H	348	36.6	25.7
6	10640.00	49.5 AV	54.0	-4.5	2.84 H	348	23.8	25.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5320.00	108.6 PK			3.84 V	159	67.7	40.9
2	*5320.00	99.5 AV			3.84 V	159	58.6	40.9
3	5350.00	67.0 PK	74.0	-7.0	3.84 V	159	46.0	21.0
4	5350.00	51.0 AV	54.0	-3.0	3.84 V	159	30.0	21.0
5	10640.00	62.5 PK	74.0	-11.5	2.56 V	195	36.8	25.7
6	10640.00	49.6 AV	54.0	-4.4	2.56 V	195	23.9	25.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT20)	**Channel**	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	61.8 PK	74.0	-12.2	3.86 H	287	40.4	21.4
2	5460.00	48.3 AV	54.0	-5.7	3.86 H	287	26.9	21.4
3	#5470.00	66.5 PK	68.2	-1.7	3.86 H	287	45.1	21.4
4	*5500.00	102.5 PK			3.86 H	287	61.0	41.5
5	*5500.00	93.1 AV			3.86 H	287	51.6	41.5
6	11000.00	62.9 PK	74.0	-11.1	2.91 H	342	36.2	26.7
7	11000.00	49.7 AV	54.0	-4.3	2.91 H	342	23.0	26.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	62.5 PK	74.0	-11.5	3.56 V	156	41.1	21.4
2	5460.00	48.6 AV	54.0	-5.4	3.56 V	156	27.2	21.4
3	**#5470.00**	**67.1 PK**	**68.2**	**-1.1**	**3.56 V**	**156**	**45.7**	**21.4**
4	*5500.00	105.0 PK			3.56 V	156	63.5	41.5
5	*5500.00	95.9 AV			3.56 V	156	54.4	41.5
6	11000.00	63.0 PK	74.0	-11.0	2.69 V	190	36.3	26.7
7	11000.00	49.9 AV	54.0	-4.1	2.69 V	190	23.2	26.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5580.00	105.6 PK			3.90 H	295	64.0	41.6
2	*5580.00	96.5 AV			3.90 H	295	54.9	41.6
3	11160.00	62.5 PK	74.0	-11.5	2.85 H	346	36.7	25.8
4	11160.00	49.7 AV	54.0	-4.3	2.85 H	346	23.9	25.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5580.00	108.2 PK			4.00 V	28	66.6	41.6
2	*5580.00	99.1 AV			4.00 V	28	57.5	41.6
3	11160.00	62.8 PK	74.0	-11.2	2.69 V	203	37.0	25.8
4	11160.00	49.8 AV	54.0	-4.2	2.69 V	203	24.0	25.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT20)	**Channel**	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5700.00	105.0 PK			3.88 H	294	63.3	41.7
2	*5700.00	96.1 AV			3.88 H	294	54.4	41.7
3	#5725.00	66.5 PK	68.2	-1.7	3.88 H	294	44.3	22.2
4	11400.00	63.7 PK	74.0	-10.3	2.93 H	348	36.7	27.0
5	11400.00	50.7 AV	54.0	-3.3	2.93 H	348	23.7	27.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5700.00	108.1 PK			2.78 V	28	66.4	41.7
2	*5700.00	98.4 AV			2.78 V	28	56.7	41.7
3	#5725.00	66.8 PK	68.2	-1.4	2.78 V	28	44.6	22.2
4	11400.00	63.8 PK	74.0	-10.2	2.59 V	195	36.8	27.0
5	11400.00	50.8 AV	54.0	-3.2	2.59 V	195	23.8	27.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.2 PK	68.2	-7.0	3.82 H	286	39.8	21.4
2	*5720.00	106.3 PK			3.82 H	286	64.4	41.9
3	*5720.00	96.8 AV			3.82 H	286	54.9	41.9
4	#5850.00	62.0 PK	68.2	-6.2	3.82 H	286	39.5	22.5
5	11440.00	63.8 PK	74.0	-10.2	2.87 H	348	36.7	27.1
6	11440.00	50.7 AV	54.0	-3.3	2.87 H	348	23.6	27.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.3 PK	68.2	-6.9	2.76 V	172	39.9	21.4
2	*5720.00	108.7 PK			2.76 V	172	66.8	41.9
3	*5720.00	99.4 AV			2.76 V	172	57.5	41.9
4	#5850.00	62.2 PK	68.2	-6.0	2.76 V	172	39.7	22.5
5	11440.00	64.1 PK	74.0	-9.9	2.57 V	195	37.0	27.1
6	11440.00	50.9 AV	54.0	-3.1	2.57 V	195	23.8	27.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5641.20	59.5 PK	68.2	-8.7	3.73 H	244	37.7	21.8
2	*5745.00	104.9 PK			3.73 H	244	62.9	42.0
3	*5745.00	96.0 AV			3.73 H	244	54.0	42.0
4	#5942.40	60.1 PK	68.2	-8.1	3.77 H	244	37.6	22.5
5	11490.00	63.4 PK	74.0	-10.6	2.93 H	351	36.2	27.2
6	11490.00	50.3 AV	54.0	-3.7	2.93 H	351	23.1	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5603.60	59.5 PK	68.2	-8.7	2.74 V	29	37.8	21.7
2	*5745.00	109.0 PK			2.74 V	29	67.0	42.0
3	*5745.00	99.9 AV			2.74 V	29	57.9	42.0
4	#5997.20	60.5 PK	68.2	-7.7	2.74 V	29	37.9	22.6
5	11490.00	63.5 PK	74.0	-10.5	2.64 V	192	36.3	27.2
6	11490.00	50.4 AV	54.0	-3.6	2.64 V	192	23.2	27.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT20)	**Channel**	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5622.00	60.0 PK	68.2	-8.2	3.36 H	243	38.2	21.8
2	*5785.00	104.1 PK			3.36 H	243	61.9	42.2
3	*5785.00	95.3 AV			3.36 H	243	53.1	42.2
4	#5970.00	60.5 PK	68.2	-7.7	3.36 H	243	37.9	22.6
5	11570.00	63.6 PK	74.0	-10.4	2.90 H	348	36.4	27.2
6	11570.00	50.3 AV	54.0	-3.7	2.90 H	348	23.1	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5614.00	60.5 PK	68.2	-7.7	2.81 V	29	38.8	21.7
2	*5785.00	109.6 PK			2.81 V	29	67.4	42.2
3	*5785.00	100.3 AV			2.81 V	29	58.1	42.2
4	#5957.20	61.2 PK	68.2	-7.0	2.81 V	29	38.6	22.6
5	11570.00	63.8 PK	74.0	-10.2	2.68 V	184	36.6	27.2
6	11570.00	50.5 AV	54.0	-3.5	2.68 V	184	23.3	27.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	**Channel**	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5630.40	61.4 PK	68.2	-6.8	3.90 H	291	39.6	21.8
2	*5825.00	106.6 PK			3.90 H	291	64.2	42.4
3	*5825.00	97.1 AV			3.90 H	291	54.7	42.4
4	#5965.20	60.8 PK	68.2	-7.4	3.90 H	291	38.2	22.6
5	11650.00	62.7 PK	74.0	-11.3	3.01 H	341	36.2	26.5
6	11650.00	49.6 AV	54.0	-4.4	3.01 H	341	23.1	26.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5604.40	60.6 PK	68.2	-7.6	3.83 V	161	38.9	21.7
2	*5825.00	109.2 PK			3.83 V	161	66.8	42.4
3	*5825.00	99.9 AV			3.83 V	161	57.5	42.4
4	#5929.20	61.3 PK	68.2	-6.9	3.83 V	161	38.8	22.5
5	11650.00	62.9 PK	74.0	-11.1	2.61 V	189	36.4	26.5
6	11650.00	49.7 AV	54.0	-4.3	2.61 V	189	23.2	26.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	62.6 PK	74.0	-11.4	3.96 H	295	41.6	21.0
2	5150.00	48.8 AV	54.0	-5.2	3.96 H	295	27.8	21.0
3	*5190.00	101.5 PK			3.96 H	295	60.4	41.1
4	*5190.00	90.6 AV			3.96 H	295	49.5	41.1
5	#10380.00	60.6 PK	68.2	-7.6	2.93 H	352	36.1	24.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	66.0 PK	74.0	-8.0	3.78 V	193	45.0	21.0
2	5150.00	49.8 AV	54.0	-4.2	3.78 V	193	28.8	21.0
3	*5190.00	103.8 PK			3.78 V	193	62.7	41.1
4	*5190.00	93.4 AV			3.78 V	193	52.3	41.1
5	#10380.00	60.8 PK	68.2	-7.4	2.58 V	193	36.3	24.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5230.00	100.6 PK			3.97 H	296	59.7	40.9
2	*5230.00	91.2 AV			3.97 H	296	50.3	40.9
3	5350.00	61.5 PK	74.0	-12.5	3.97 H	296	40.5	21.0
4	5350.00	48.2 AV	54.0	-5.8	3.97 H	296	27.2	21.0
5	#10460.00	61.2 PK	68.2	-7.0	2.96 H	353	36.3	24.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5230.00	104.7 PK			3.93 V	208	63.8	40.9
2	*5230.00	93.9 AV			3.93 V	208	53.0	40.9
3	5350.00	61.6 PK	74.0	-12.4	3.93 V	208	40.6	21.0
4	5350.00	48.3 AV	54.0	-5.7	3.93 V	208	27.3	21.0
5	#10460.00	61.3 PK	68.2	-6.9	2.60 V	199	36.4	24.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	61.5 PK	74.0	-12.5	3.89 H	191	40.5	21.0
2	5150.00	48.2 AV	54.0	-5.8	3.89 H	191	27.2	21.0
3	*5270.00	101.3 PK			3.89 H	191	60.5	40.8
4	*5270.00	91.7 AV			3.89 H	191	50.9	40.8
5	#10540.00	61.7 PK	68.2	-6.5	2.68 H	190	36.6	25.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	61.6 PK	74.0	-12.4	3.60 V	42	40.6	21.0
2	5150.00	48.3 AV	54.0	-5.7	3.60 V	42	27.3	21.0
3	*5270.00	103.5 PK			3.60 V	42	62.7	40.8
4	*5270.00	94.4 AV			3.60 V	42	53.6	40.8
5	#10540.00	61.9 PK	68.2	-6.3	2.63 V	200	36.8	25.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5310.00	100.4 PK			3.86 H	293	59.6	40.8
2	*5310.00	91.2 AV			3.86 H	293	50.4	40.8
3	5350.00	63.4 PK	74.0	-10.6	3.86 H	293	42.4	21.0
4	5350.00	48.6 AV	54.0	-5.4	3.86 H	293	27.6	21.0
5	10620.00	62.3 PK	74.0	-11.7	2.92 H	355	37.0	25.3
6	10620.00	49.3 AV	54.0	-4.7	2.92 H	355	24.0	25.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5310.00	103.1 PK			3.64 V	40	62.3	40.8
2	*5310.00	93.6 AV			3.64 V	40	52.8	40.8
3	5350.00	64.1 PK	74.0	-9.9	3.64 V	40	43.1	21.0
4	5350.00	49.7 AV	54.0	-4.3	3.64 V	40	28.7	21.0
5	10620.00	62.5 PK	74.0	-11.5	2.57 V	195	37.2	25.3
6	10620.00	49.5 AV	54.0	-4.5	2.57 V	195	24.2	25.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT40)	**Channel**	CH 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 MHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	61.4 PK	74.0	-12.6	3.91 H	290	40.0	21.4
2	5460.00	48.6 AV	54.0	-5.4	3.91 H	290	27.2	21.4
3	#5470.00	65.2 PK	68.2	-3.0	3.91 H	290	43.8	21.4
4	*5510.00	102.1 PK			3.91 H	290	55.5	46.6
5	*5510.00	92.8 AV			3.91 H	290	46.2	46.6
6	11020.00	62.9 PK	74.0	-11.1	2.87 H	350	36.2	26.7
7	11020.00	49.8 AV	54.0	-4.2	2.87 H	350	23.1	26.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	63.2 PK	74.0	-10.8	3.78 V	156	41.8	21.4
2	5460.00	48.9 AV	54.0	-5.1	3.78 V	156	27.5	21.4
3	#5470.00	66.5 PK	68.2	-1.7	3.78 V	156	45.1	21.4
4	*5510.00	104.3 PK			3.75 V	156	62.8	41.5
5	*5510.00	95.2 AV			3.75 V	156	53.7	41.5
6	11020.00	63.1 PK	74.0	-10.9	2.65 V	199	36.4	26.7
7	11020.00	50.0 AV	54.0	-4.0	2.61 V	199	23.3	26.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 110：5550 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5550.00	101.6 PK			3.96 H	295	60.1	41.5
2	*5550.00	92.4 AV			3.96 H	295	50.9	41.5
3	11100.00	62.9 PK	74.0	-11.1	2.95 H	356	36.7	26.2
4	11100.00	49.6 AV	54.0	-4.4	2.95 H	356	23.4	26.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5550.00	104.3 PK			2.76 V	40	62.8	41.5
2	*5550.00	95.1 AV			2.76 V	40	53.6	41.5
3	11100.00	63.0 PK	74.0	-11.0	2.68 V	191	36.8	26.2
4	11100.00	49.7 AV	54.0	-4.3	2.68 V	191	23.5	26.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT40)	**Channel**	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5670.00	100.8 PK			3.87 H	290	59.1	41.7
2	*5670.00	91.1 AV			3.87 H	290	49.4	41.7
3	#5725.00	62.0 PK	68.2	-6.2	3.87 H	290	39.8	22.2
4	11340.00	62.9 PK	74.0	-11.1	2.97 H	350	36.5	26.4
5	11340.00	49.7 AV	54.0	-4.3	2.97 H	350	23.3	26.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5670.00	103.8 PK			2.86 V	46	62.1	41.7
2	*5670.00	93.8 AV			2.86 V	46	52.1	41.7
3	#5725.00	62.6 PK	68.2	-5.6	2.86 V	46	40.4	22.2
4	11340.00	63.1 PK	74.0	-10.9	2.56 V	197	36.7	26.4
5	11340.00	49.8 AV	54.0	-4.2	2.56 V	197	23.4	26.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 142：5710 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.0 PK	68.2	-7.2	3.90 H	295	39.6	21.4
2	*5710.00	100.5 PK			3.90 H	295	58.7	41.8
3	*5710.00	91.2 AV			3.90 H	295	49.4	41.8
4	#5850.00	61.7 PK	68.2	-6.5	3.90 H	295	39.2	22.5
5	11420.00	63.9 PK	74.0	-10.1	2.89 H	340	36.8	27.1
6	11420.00	50.6 AV	54.0	-3.4	2.89 H	340	23.5	27.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.1 PK	68.2	-7.1	2.87 V	25	39.7	21.4
2	*5710.00	103.4 PK			2.87 V	25	61.6	41.8
3	*5710.00	94.0 AV			2.87 V	25	52.2	41.8
4	#5850.00	61.9 PK	68.2	-6.3	2.87 V	25	39.4	22.5
5	11420.00	64.0 PK	74.0	-10.0	2.67 V	194	36.9	27.1
6	11420.00	50.8 AV	54.0	-3.2	2.67 V	194	23.7	27.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT40)	**Channel**	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5614.80	59.2 PK	68.2	-9.0	3.90 H	241	37.4	21.8
2	*5755.00	99.1 PK			3.90 H	241	57.0	42.1
3	*5755.00	89.7 AV			3.90 H	241	47.6	42.1
4	#5937.60	60.6 PK	68.2	-7.6	3.90 H	241	38.1	22.5
5	11510.00	63.5 PK	74.0	-10.5	2.90 H	355	36.2	27.3
6	11510.00	50.2 AV	54.0	-3.8	2.90 H	355	22.9	27.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5606.00	61.5 PK	68.2	-6.7	2.77 V	35	39.8	21.7
2	*5755.00	103.3 PK			2.77 V	35	61.2	42.1
3	*5755.00	93.7 AV			2.77 V	35	51.6	42.1
4	#5988.00	61.2 PK	68.2	-7.0	2.77 V	35	38.6	22.6
5	11510.00	63.7 PK	74.0	-10.3	2.64 V	192	36.4	27.3
6	11510.00	50.4 AV	54.0	-3.6	2.64 V	192	23.1	27.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT40)	**Channel**	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5628.80	60.4 PK	68.2	-7.8	3.90 H	289	38.6	21.8
2	*5795.00	100.8 PK			3.90 H	289	58.6	42.2
3	*5795.00	91.6 AV			3.90 H	289	49.4	42.2
4	#5937.60	61.7 PK	68.2	-6.5	3.90 H	289	39.2	22.5
5	11590.00	63.3 PK	74.0	-10.7	2.90 H	341	36.2	27.1
6	11590.00	49.9 AV	54.0	-4.1	2.90 H	341	22.8	27.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5636.80	61.2 PK	68.2	-7.0	3.88 V	165	39.4	21.8
2	*5795.00	102.8 PK			3.88 V	165	60.6	42.2
3	*5795.00	94.2 AV			3.88 V	165	52.0	42.2
4	#5942.80	61.6 PK	68.2	-6.6	3.88 V	165	39.1	22.5
5	11590.00	63.6 PK	74.0	-10.4	2.52 V	191	36.5	27.1
6	11590.00	50.1 AV	54.0	-3.9	2.52 V	191	23.0	27.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT80)	**Channel**	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	63.5 PK	74.0	-10.5	3.93 H	294	42.5	21.0
2	5150.00	50.6 AV	54.0	-3.4	3.93 H	294	29.6	21.0
3	*5210.00	97.0 PK			3.93 H	294	56.0	41.0
4	*5210.00	88.3 AV			3.93 H	294	47.3	41.0
5	#10420.00	60.5 PK	68.2	-7.7	2.81 H	350	35.9	24.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	64.0 PK	74.0	-10.0	3.77 V	200	43.0	21.0
2	5150.00	50.8 AV	54.0	-3.2	3.77 V	200	29.8	21.0
3	*5210.00	100.8 PK			3.77 V	200	59.8	41.0
4	*5210.00	90.9 AV			3.77 V	200	49.9	41.0
5	#10420.00	60.7 PK	68.2	-7.5	2.63 V	199	36.1	24.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT80)	**Channel**	CH 58：5290 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5290.00	97.5 PK			3.93 H	293	56.7	40.8
2	*5290.00	88.7 AV			3.93 H	293	47.9	40.8
3	5350.00	61.9 PK	74.0	-12.1	3.93 H	293	40.9	21.0
4	5350.00	49.8 AV	54.0	-4.2	3.93 H	293	28.8	21.0
5	#10580.00	62.0 PK	68.2	-6.2	2.87 H	340	37.0	25.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5290.00	100.3 PK			3.66 V	42	59.5	40.8
2	*5290.00	91.5 AV			3.66 V	42	50.7	40.8
3	5350.00	64.9 PK	74.0	-9.1	3.66 V	42	43.9	21.0
4	5350.00	50.6 AV	54.0	-3.4	3.66 V	42	29.6	21.0
5	#10580.00	62.4 PK	68.2	-5.8	2.64 V	192	37.4	25.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT80)	**Channel**	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	61.1 PK	74.0	-12.9	3.90 H	287	39.7	21.4
2	5460.00	50.1 AV	54.0	-3.9	3.90 H	287	28.7	21.4
3	#5470.00	63.7 PK	68.2	-4.5	3.90 H	287	42.3	21.4
4	*5530.00	98.9 PK			3.90 H	287	57.4	41.5
5	*5530.00	89.9 AV			3.90 H	287	48.4	41.5
6	11060.00	62.6 PK	74.0	-11.4	2.91 H	352	36.2	26.4
7	11060.00	49.4 AV	54.0	-4.6	2.91 H	352	23.0	26.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	64.0 PK	74.0	-10.0	2.79 V	42	42.6	21.4
2	5460.00	51.8 AV	54.0	-2.2	2.79 V	42	30.4	21.4
3	#5470.00	66.9 PK	68.2	-1.3	2.79 V	42	45.5	21.4
4	*5530.00	101.4 PK			2.79 V	42	59.9	41.5
5	*5530.00	92.5 AV			2.79 V	42	51.0	41.5
6	11060.00	62.7 PK	74.0	-11.3	2.54 V	193	36.3	26.4
7	11060.00	49.6 AV	54.0	-4.4	2.54 V	193	23.2	26.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT80)	**Channel**	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5610.00	95.4 PK			3.54 H	244	53.8	41.6
2	*5610.00	86.4 AV			3.54 H	244	44.8	41.6
3	#5725.00	62.5 PK	68.2	-5.7	3.54 H	244	40.3	22.2
4	11220.00	62.1 PK	74.0	-11.9	2.91 H	356	36.3	25.8
5	11220.00	48.9 AV	54.0	-5.1	2.91 H	356	23.1	25.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5610.00	101.5 PK			2.95 V	43	59.9	41.6
2	*5610.00	92.5 AV			2.95 V	43	50.9	41.6
3	#5725.00	62.8 PK	68.2	-5.4	2.95 V	43	40.6	22.2
4	11220.00	62.3 PK	74.0	-11.7	2.55 V	196	36.5	25.8
5	11220.00	49.1 AV	54.0	-4.9	2.55 V	196	23.3	25.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT80)	**Channel**	CH 138：5690 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.0 PK	68.2	-7.2	3.54 H	241	39.6	21.4
2	*5690.00	95.9 PK			3.54 H	241	54.2	41.7
3	*5690.00	87.1 AV			3.54 H	241	45.4	41.7
4	#5850.00	63.0 PK	68.2	-5.2	3.54 H	241	40.5	22.5
5	11380.00	63.1 PK	74.0	-10.9	2.88 H	352	36.3	26.8
6	11380.00	49.8 AV	54.0	-4.2	2.88 H	352	23.0	26.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5470.00	61.7 PK	68.2	-6.5	4.00 V	33	40.3	21.4
2	*5690.00	101.0 PK			4.00 V	33	59.3	41.7
3	*5690.00	92.2 AV			4.00 V	33	50.5	41.7
4	#5850.00	63.3 PK	68.2	-4.9	4.00 V	33	40.8	22.5
5	11380.00	63.4 PK	74.0	-10.6	2.54 V	198	36.6	26.8
6	11380.00	50.0 AV	54.0	-4.0	2.54 V	198	23.2	26.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

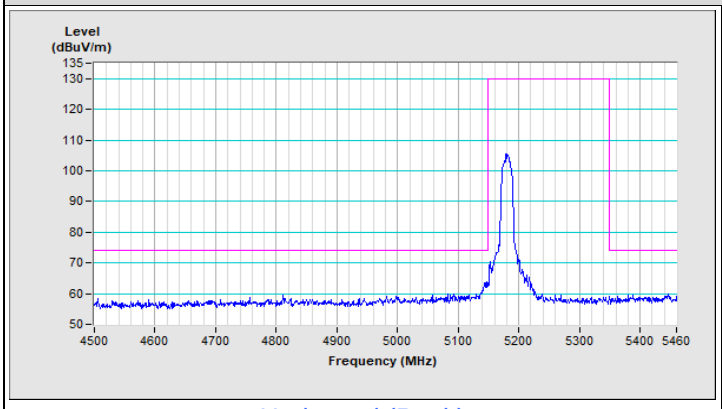
RF Mode	802.11ac (VHT80)	**Channel**	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng/Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5637.20	61.1 PK	68.2	-7.1	3.87 H	289	39.3	21.8
2	*5775.00	98.9 PK			3.87 H	289	56.8	42.1
3	*5775.00	89.6 AV			3.87 H	289	47.5	42.1
4	#5971.60	61.4 PK	68.2	-6.8	3.87 H	289	38.8	22.6
5	11550.00	63.5 PK	74.0	-10.5	2.90 H	350	36.2	27.3
6	11550.00	50.1 AV	54.0	-3.9	2.90 H	350	22.8	27.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5645.60	61.9 PK	68.2	-6.3	3.89 V	159	40.0	21.9
2	*5775.00	101.3 PK			3.89 V	159	59.2	42.1
3	*5775.00	92.3 AV			3.89 V	159	50.2	42.1
4	#5976.80	62.9 PK	68.2	-5.3	3.89 V	159	40.3	22.6
5	11550.00	63.7 PK	74.0	-10.3	2.66 V	197	36.4	27.3
6	11550.00	50.3 AV	54.0	-3.7	2.66 V	197	23.0	27.3

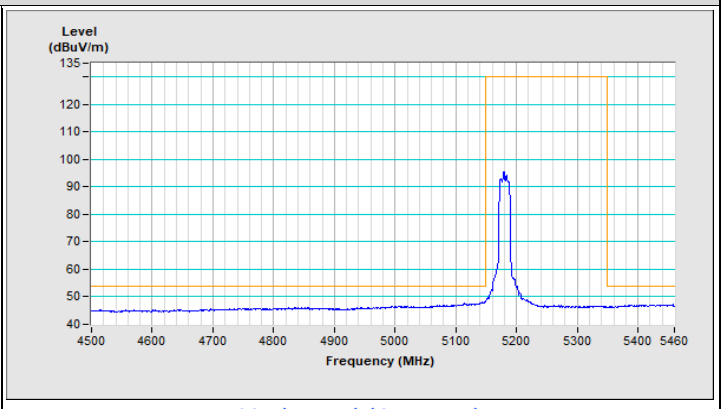
Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

802.11a Channel 36



Horizontal (Peak)



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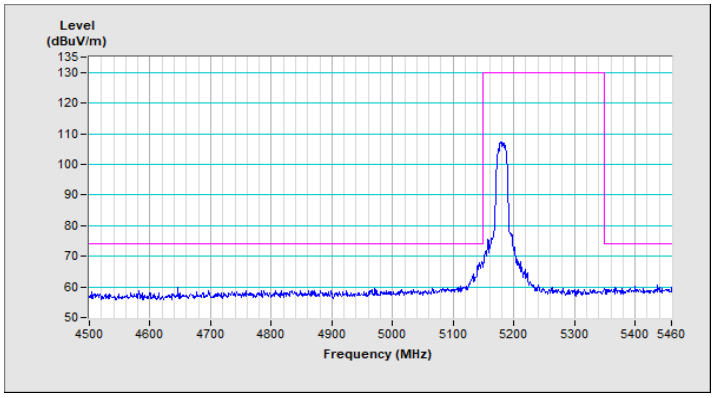

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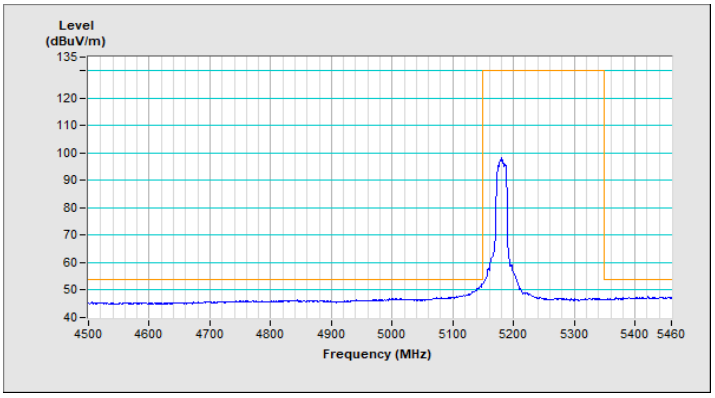
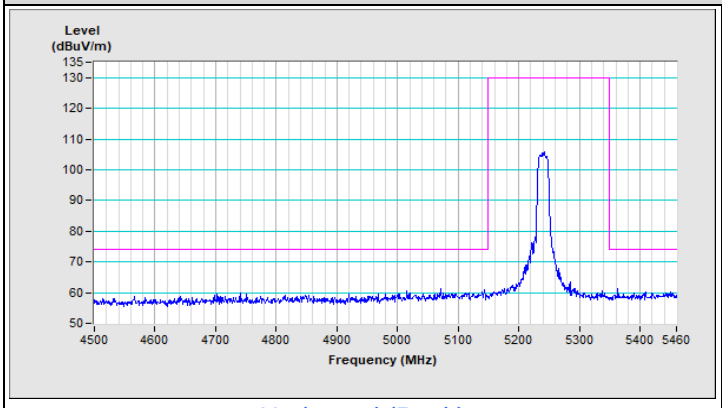


Vertical (Average)

802.11a Channel 48



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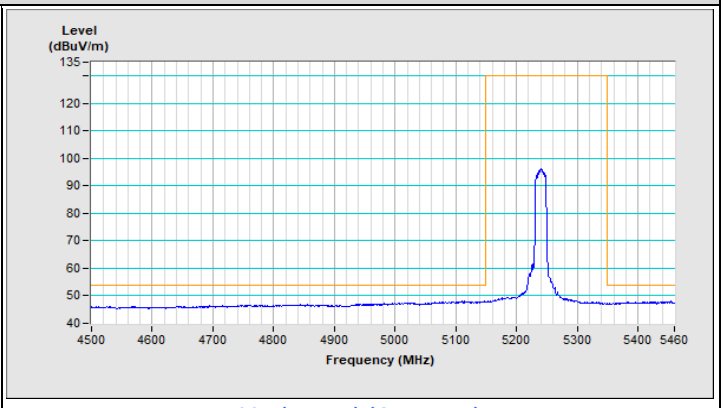

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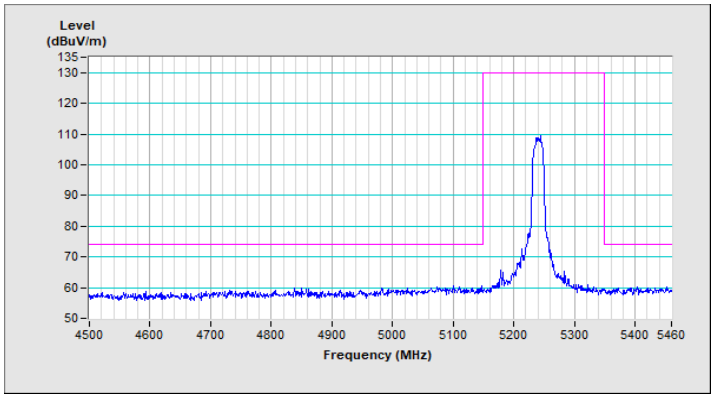

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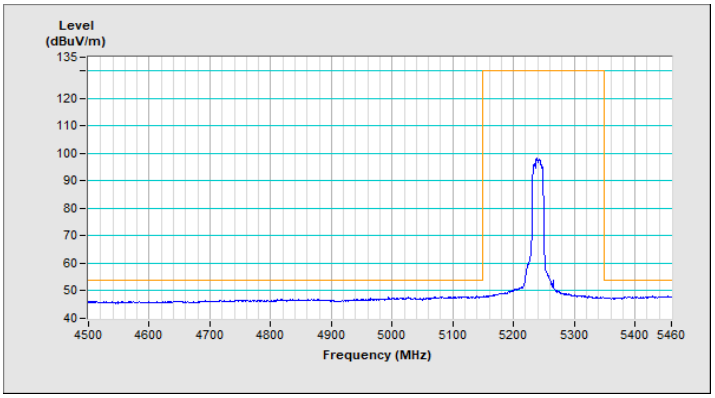
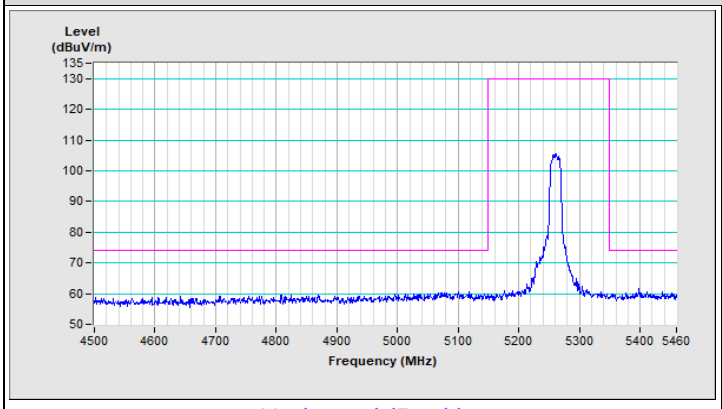
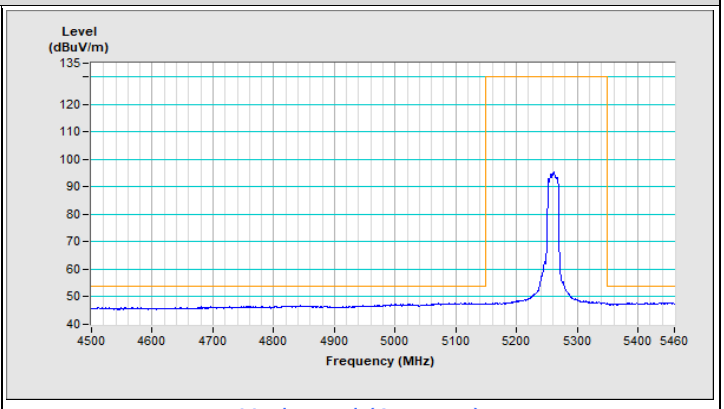


Vertical (Average)

802.11a Channel 52



Horizontal (Peak)



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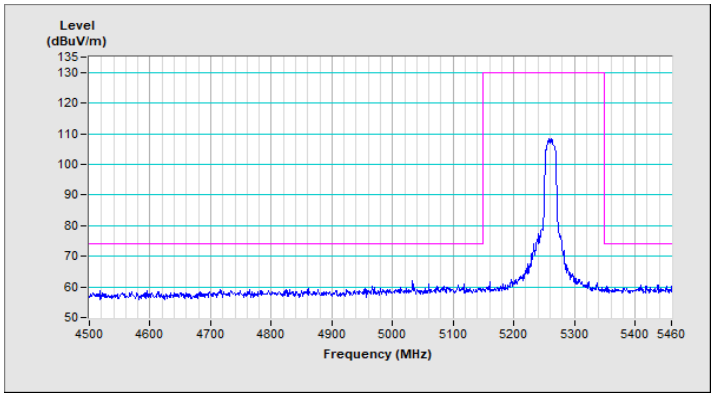
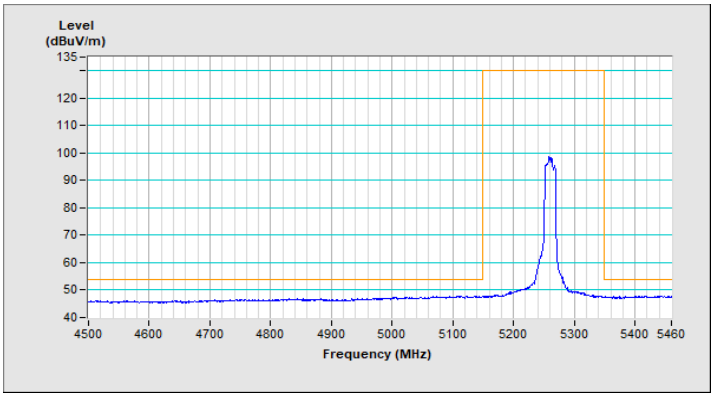
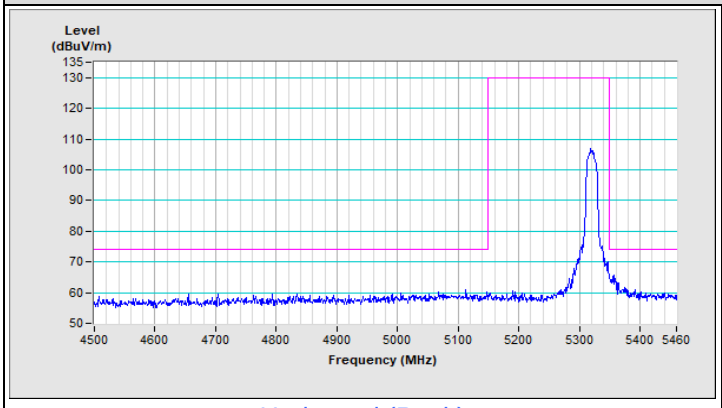


Vertical (Peak)



Vertical (Average)

802.11a Channel 64



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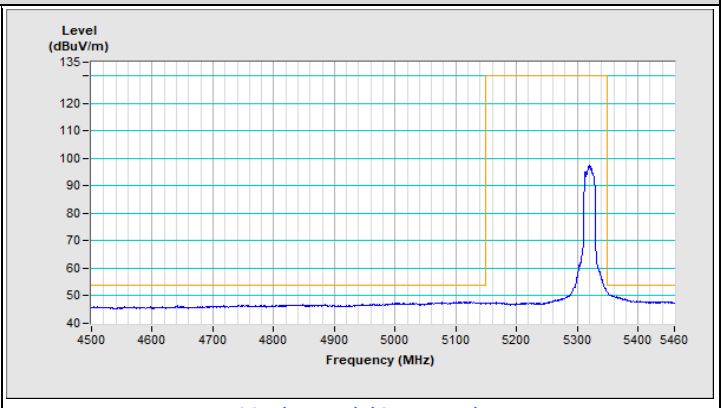
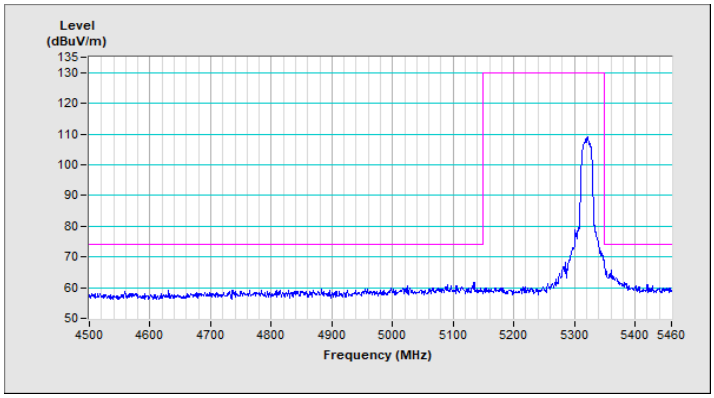
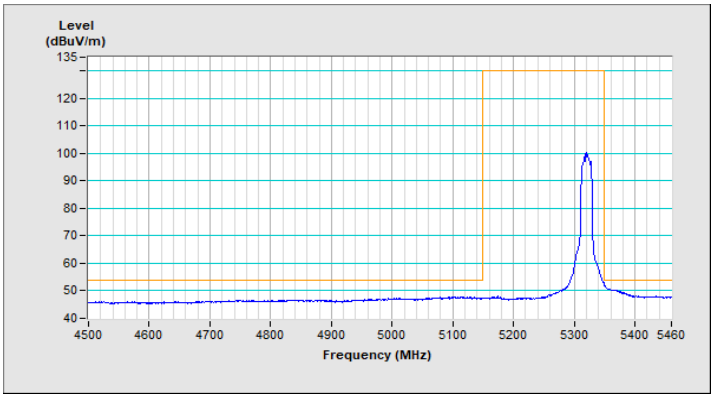


Horizontal (Average)

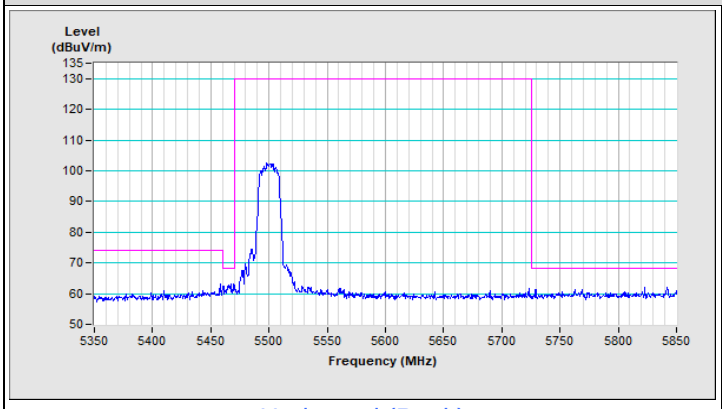


Vertical (Peak)

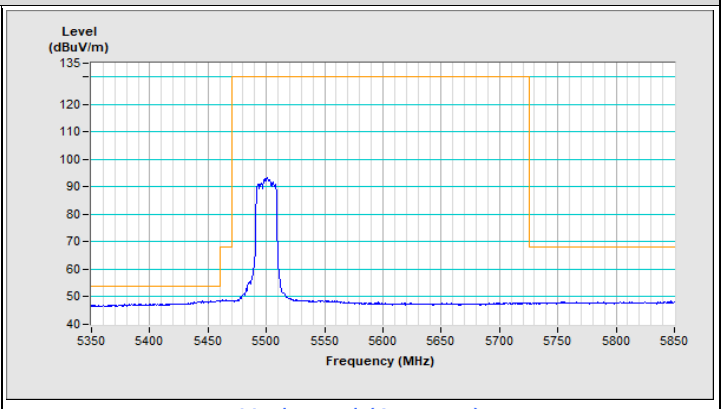


Vertical (Average)

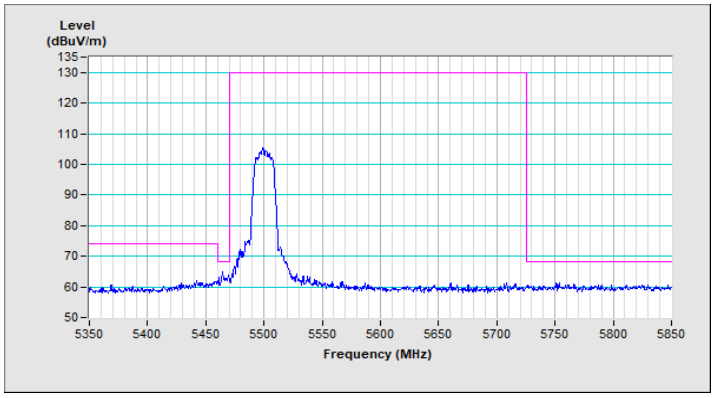
802.11a Channel 100



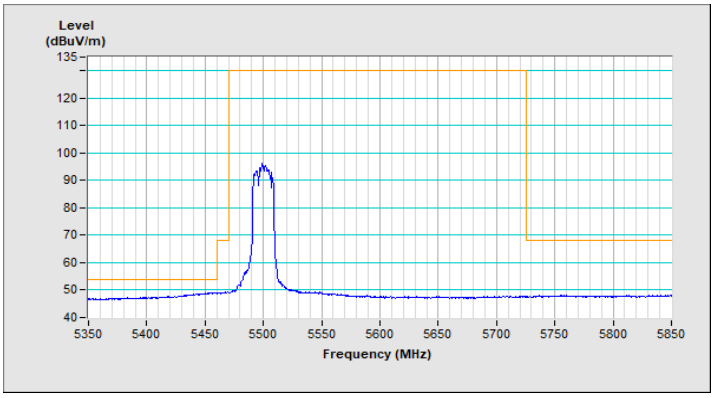
Horizontal (Peak)



Horizontal (Average)

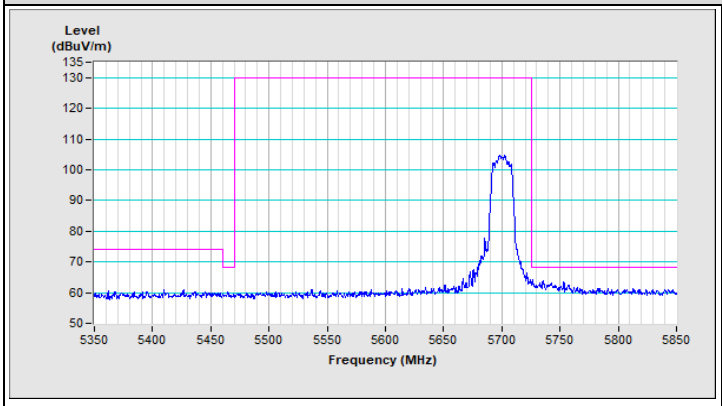


Vertical (Peak)

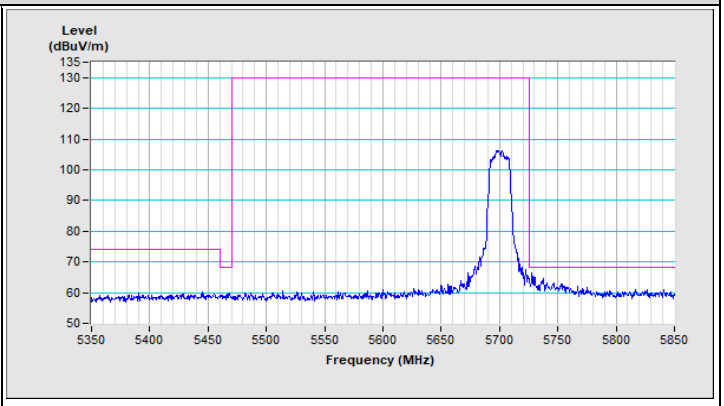


Vertical (Average)

802.11a Channel 140

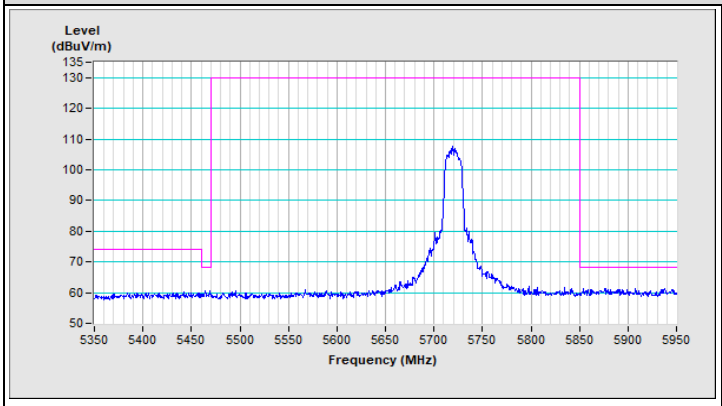


Horizontal (Peak)

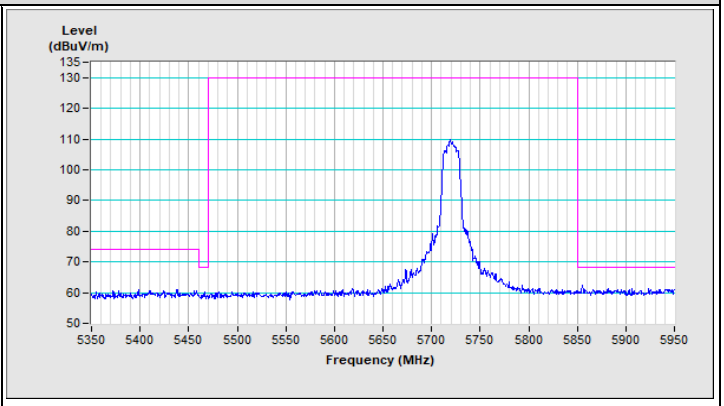


Vertical (Peak)

802.11a Channel 144

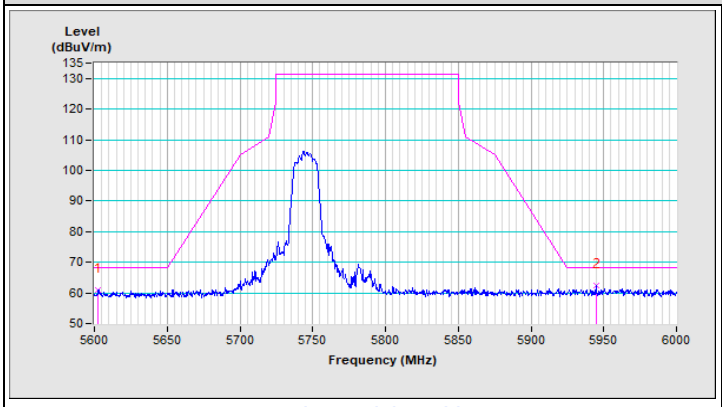


Horizontal (Peak)

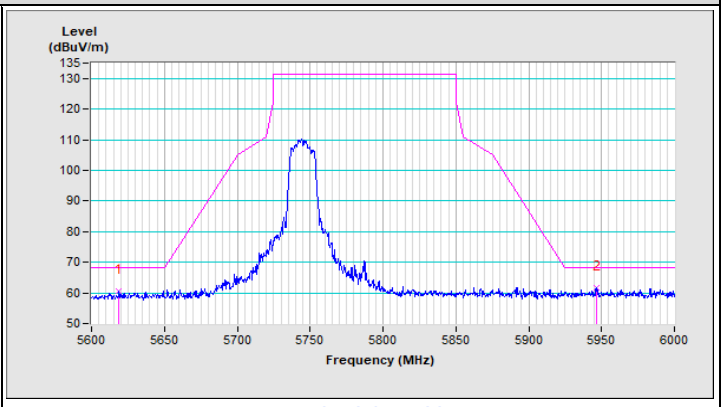


Vertical (Peak)

802.11a Channel 149

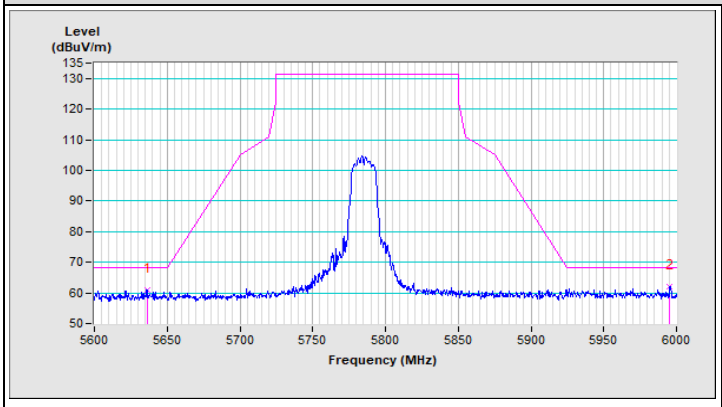


Horizontal (Peak)

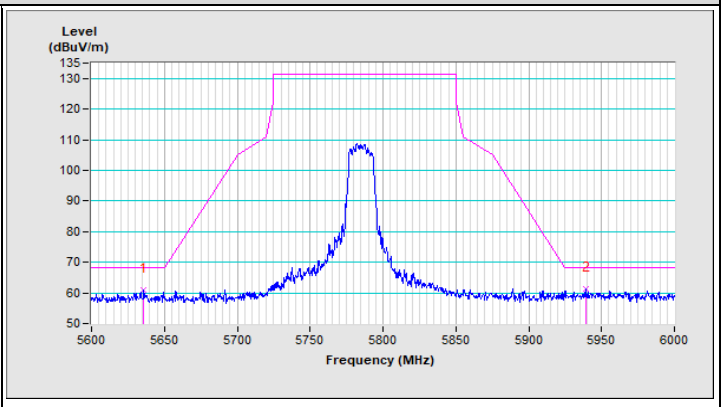


Vertical (Peak)

802.11a Channel 157

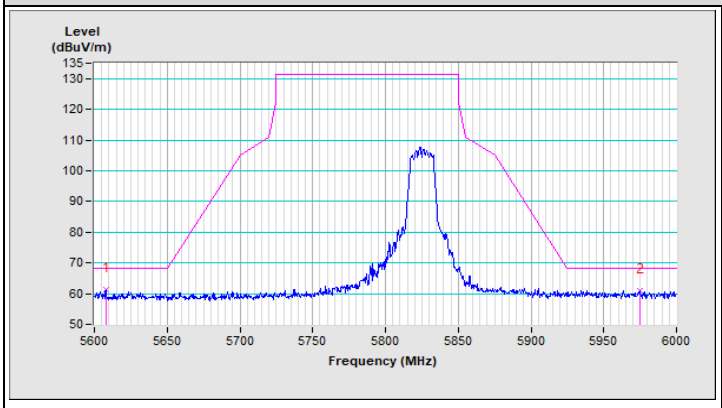


Horizontal (Peak)

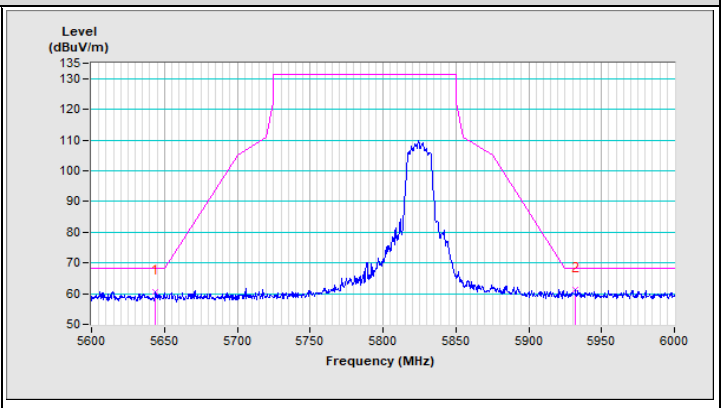


Vertical (Peak)

802.11a Channel 165

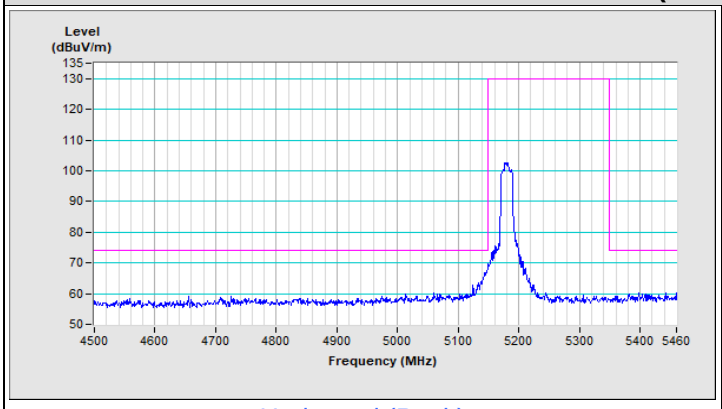


Horizontal (Peak)

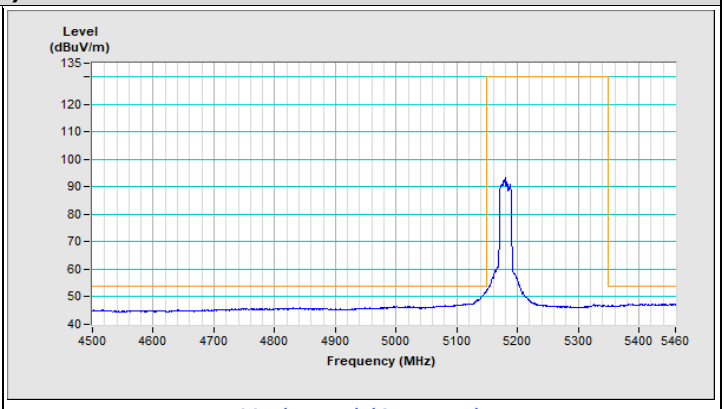


Vertical (Peak)

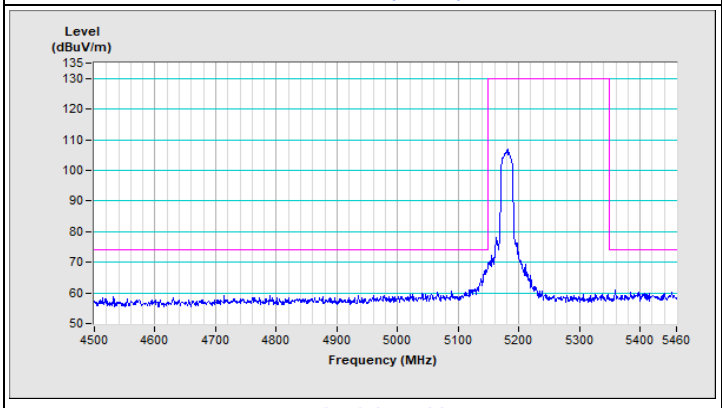
802.11n (HT20) Channel 36



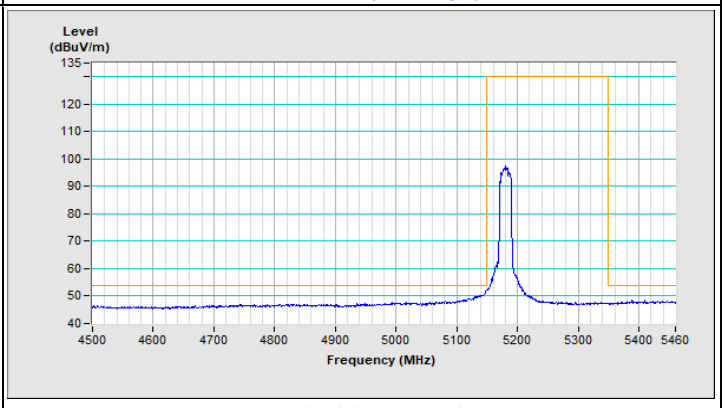
Horizontal (Peak)



Horizontal (Average)

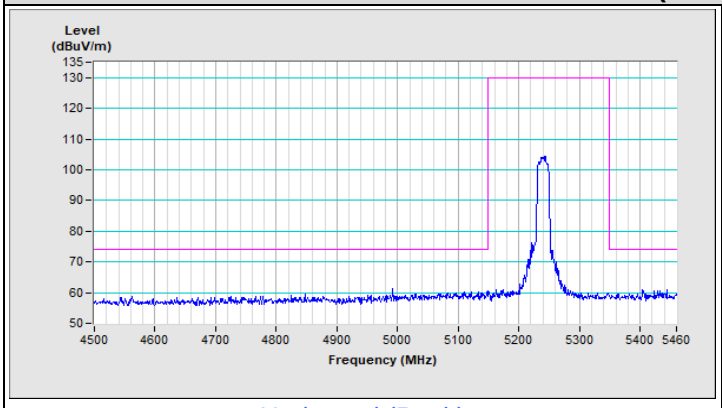


Vertical (Peak)

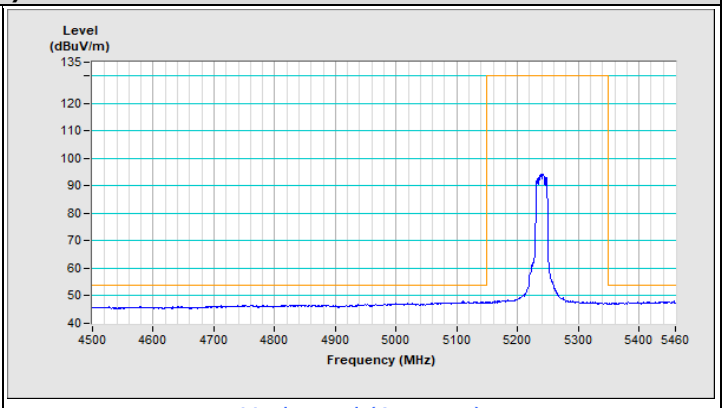


Vertical (Average)

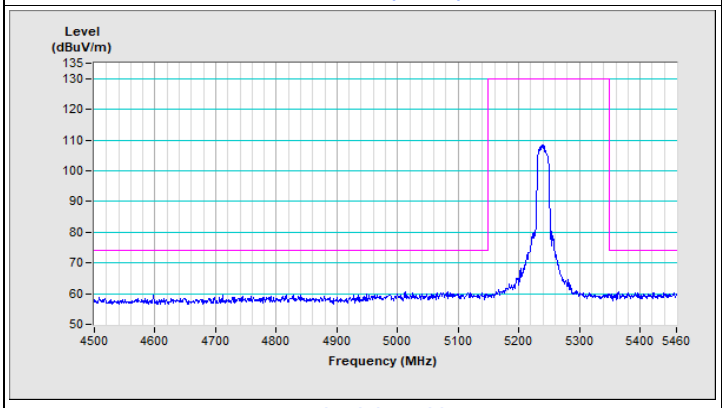
802.11n (HT20) Channel 48



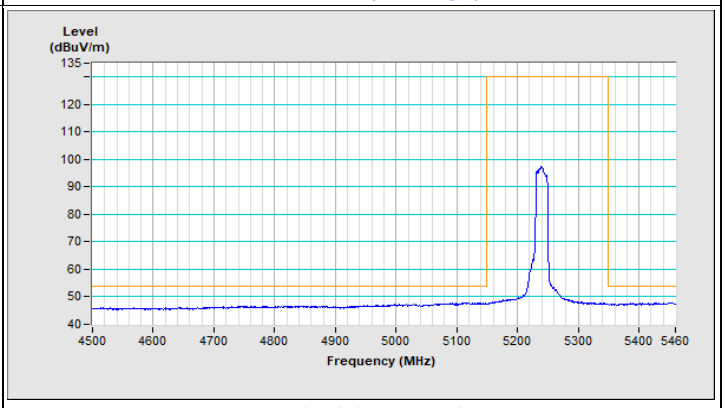
Horizontal (Peak)



Horizontal (Average)

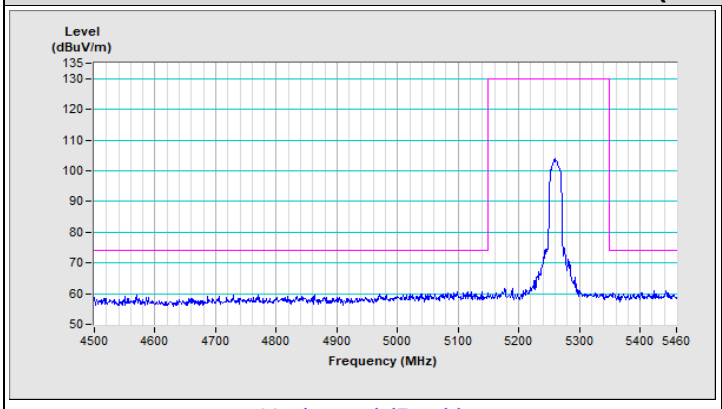


Vertical (Peak)

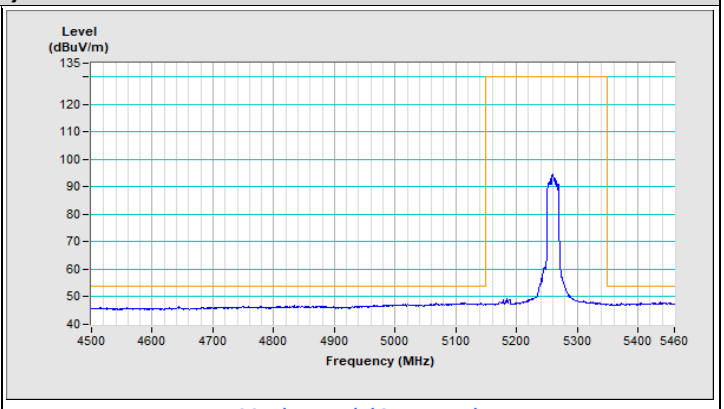


Vertical (Average)

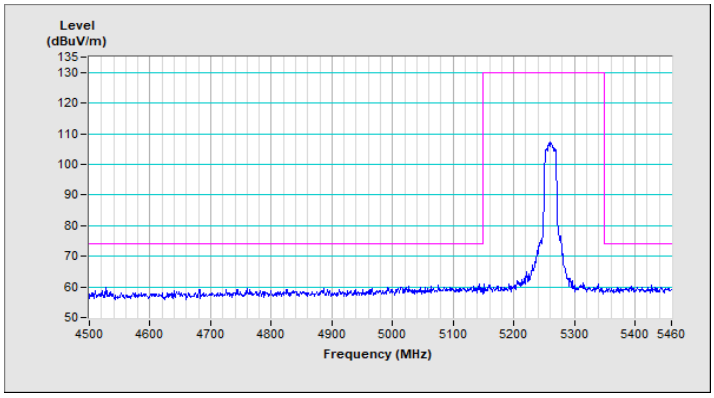
802.11n (HT20) Channel 52



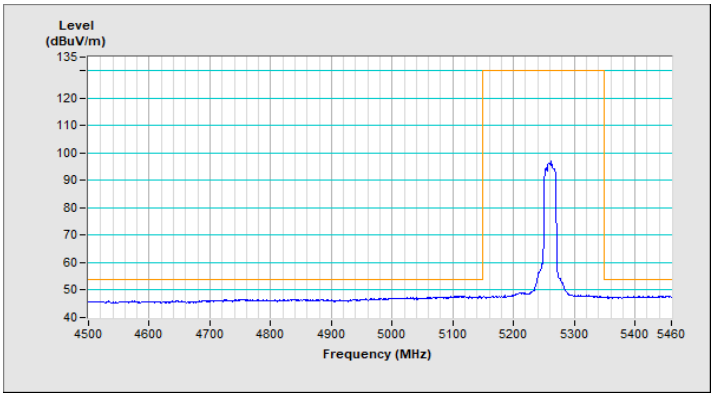
Horizontal (Peak)



Horizontal (Average)

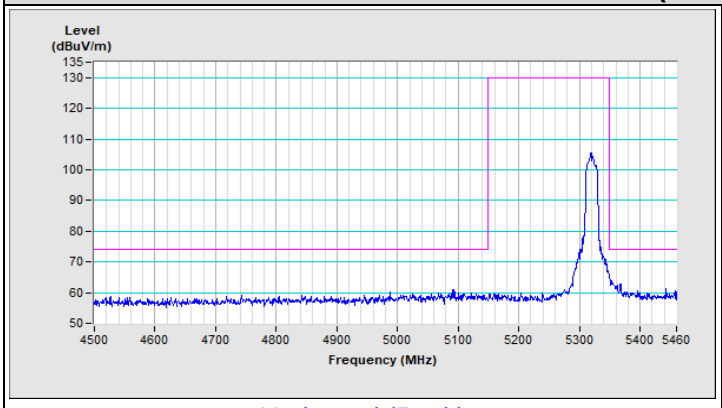


Vertical (Peak)

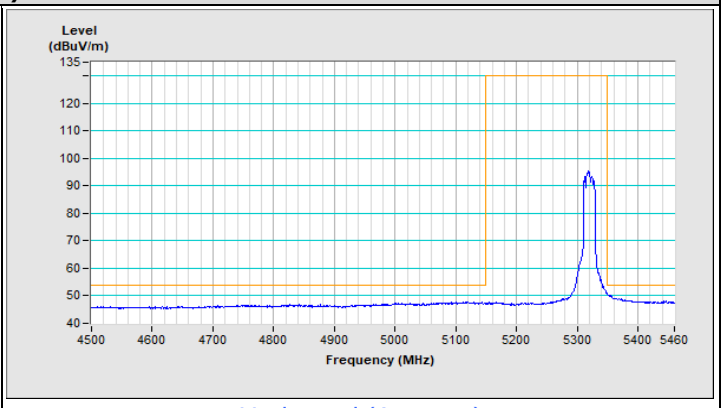


Vertical (Average)

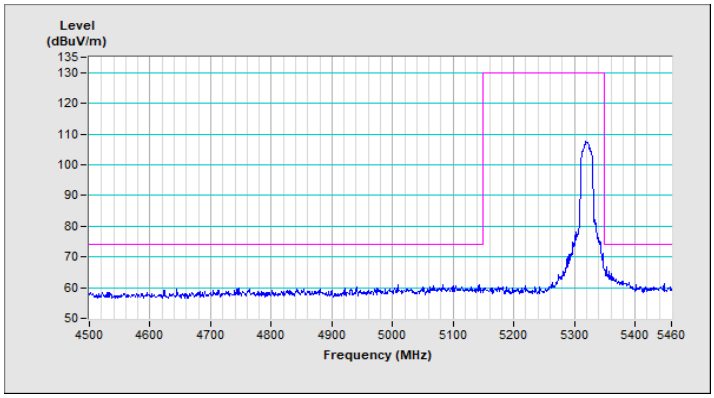
802.11n (HT20) Channel 64



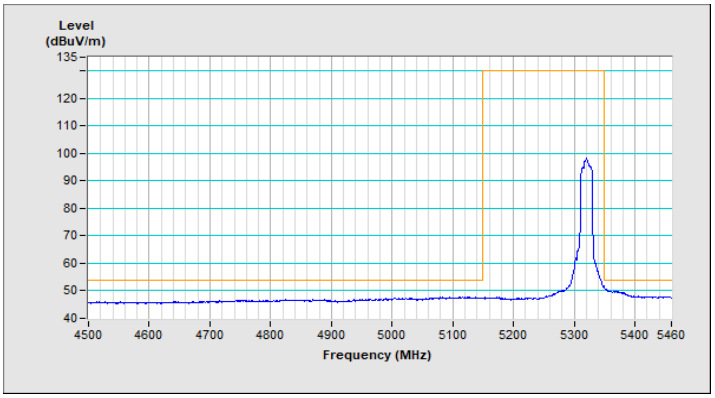
Horizontal (Peak)



Horizontal (Average)

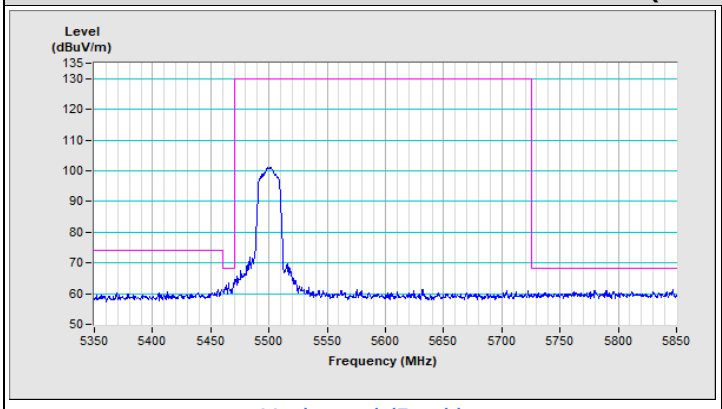


Vertical (Peak)

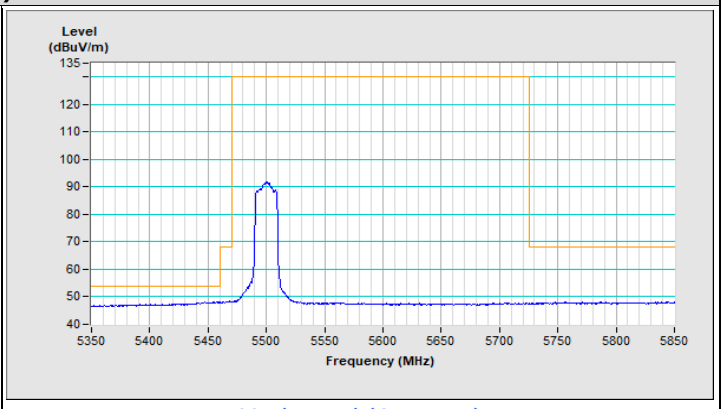


Vertical (Average)

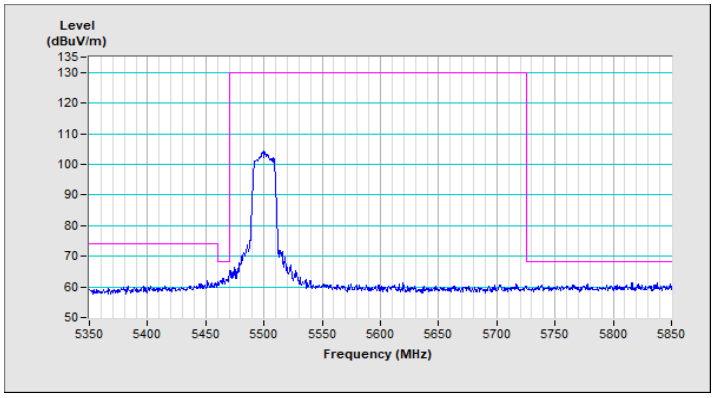
802.11n (HT20) Channel 100



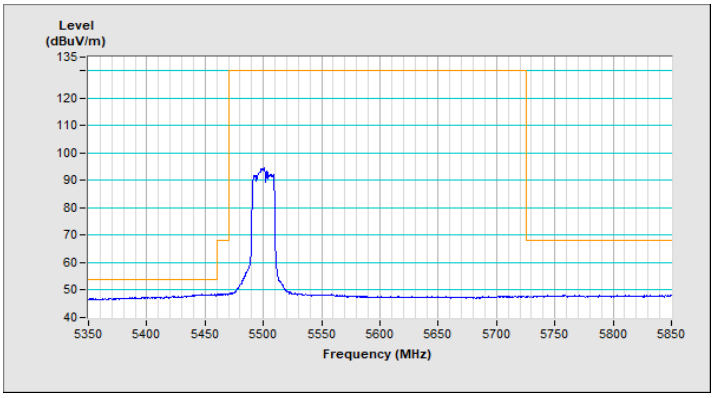
Horizontal (Peak)



Horizontal (Average)

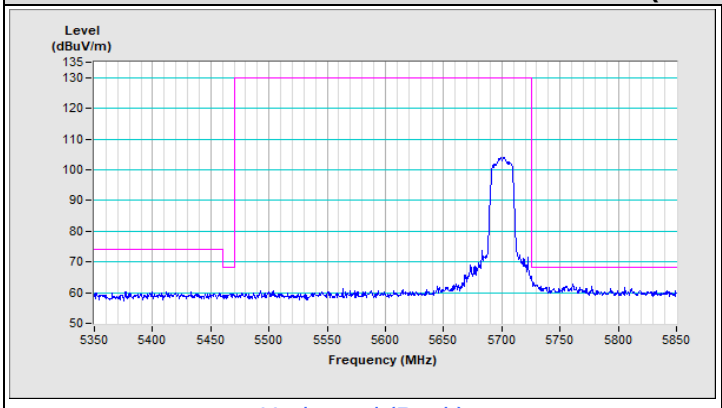


Vertical (Peak)

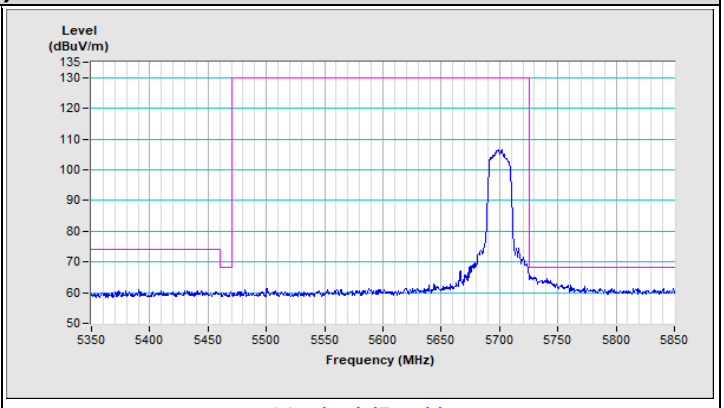


Vertical (Average)

802.11n (HT20) Channel 140

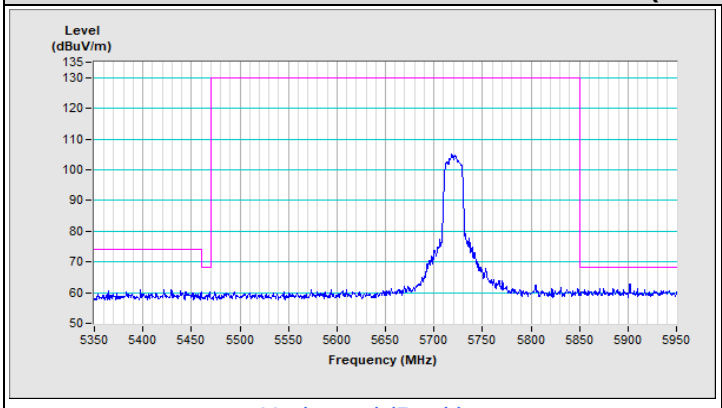


Horizontal (Peak)

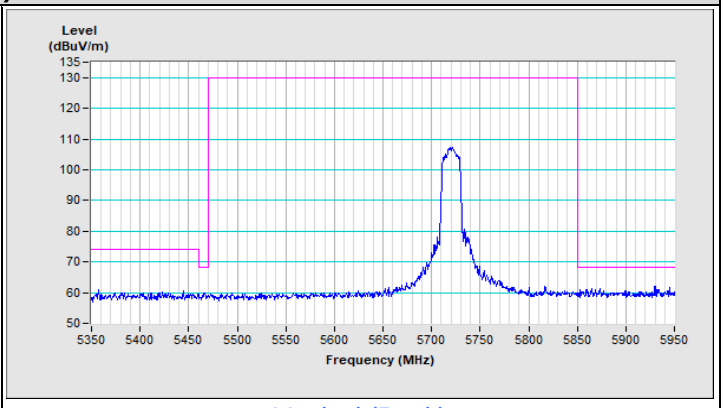


Vertical (Peak)

802.11n (HT20) Channel 144

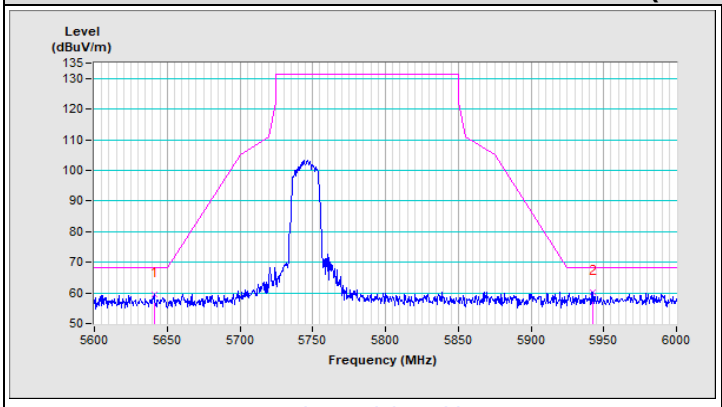


Horizontal (Peak)

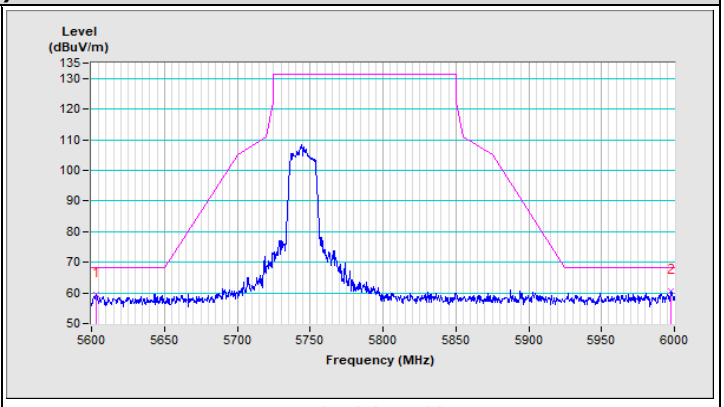


Vertical (Peak)

802.11n (HT20) Channel 149

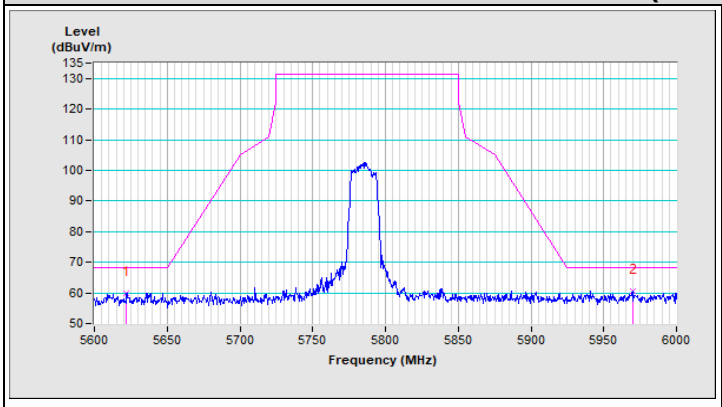


Horizontal (Peak)

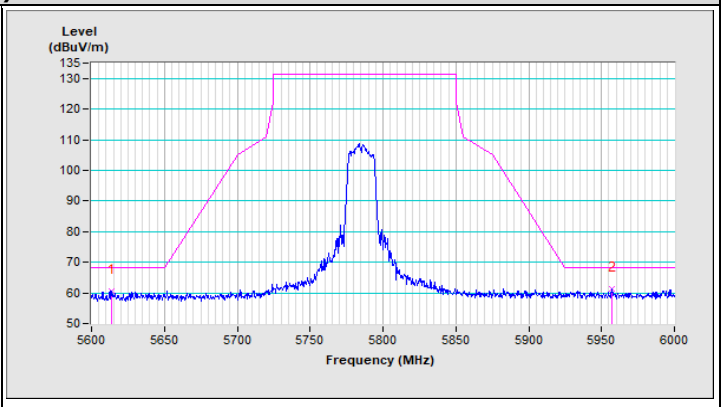


Vertical (Peak)

802.11n (HT20) Channel 157

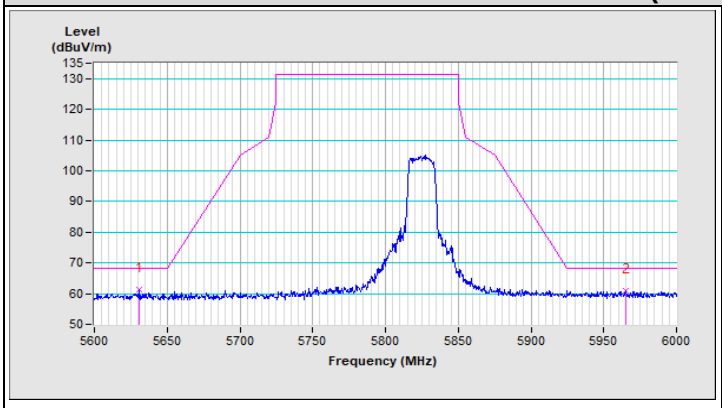


Horizontal (Peak)

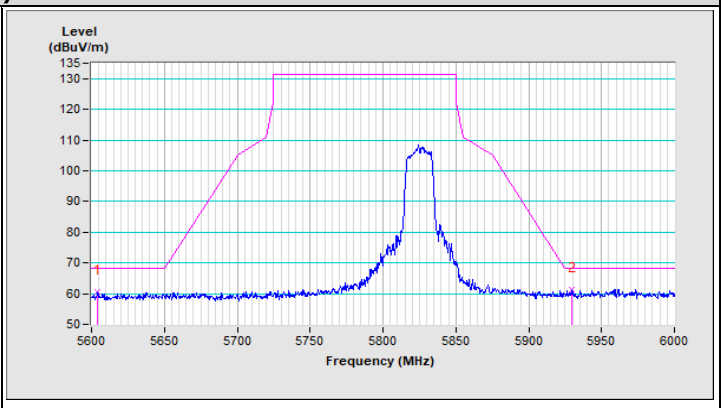


Vertical (Peak)

802.11n (HT20) Channel 165

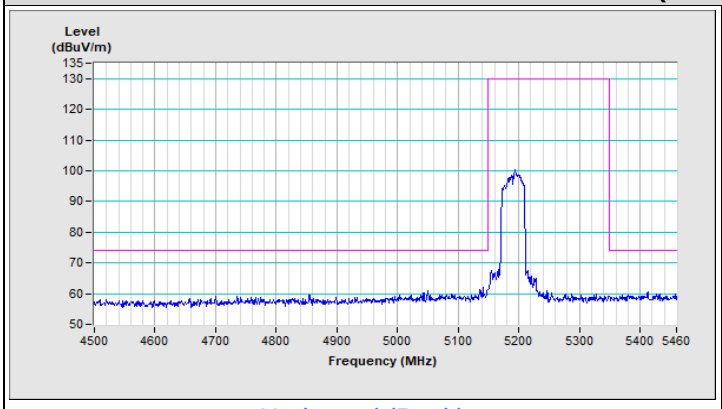


Horizontal (Peak)

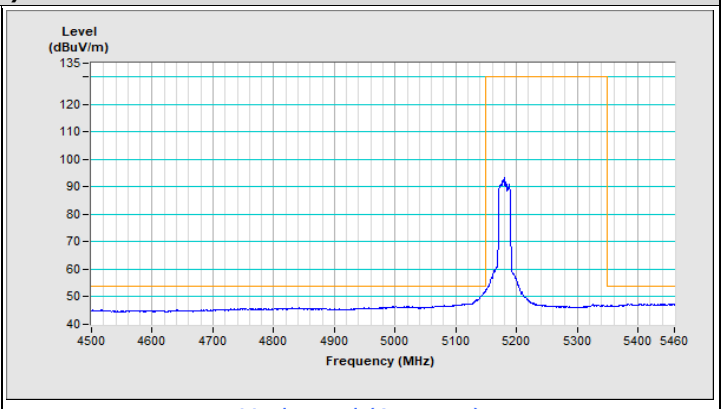


Vertical (Peak)

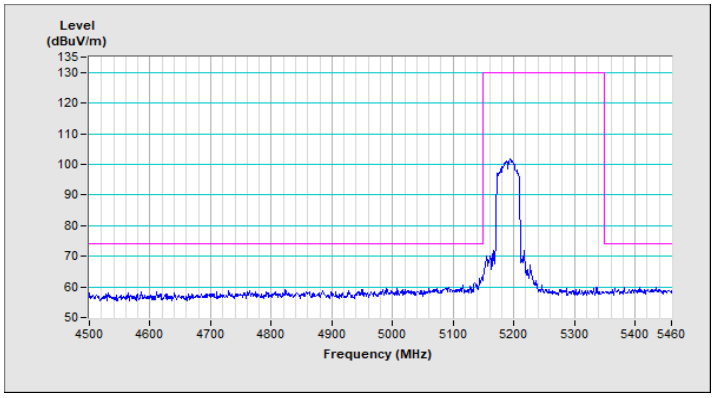
802.11n (HT40) Channel 38



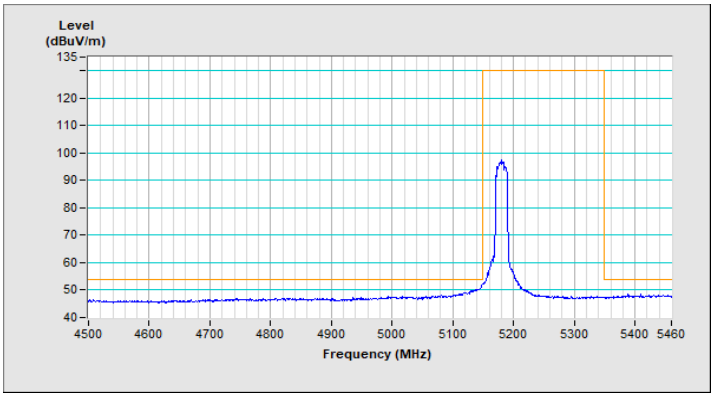
Horizontal (Peak)



Horizontal (Average)

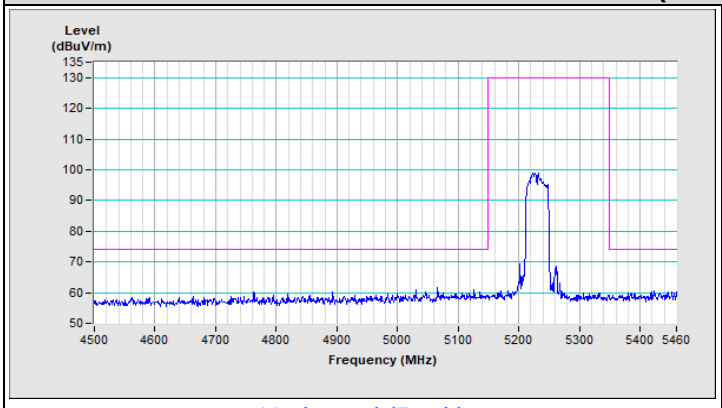


Vertical (Peak)

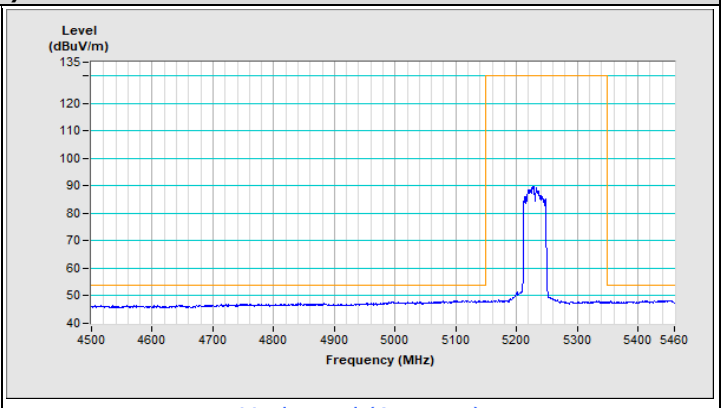


Vertical (Average)

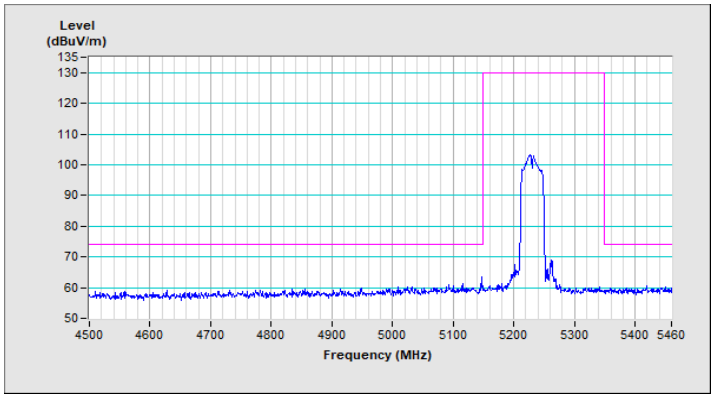
802.11n (HT40) Channel 46



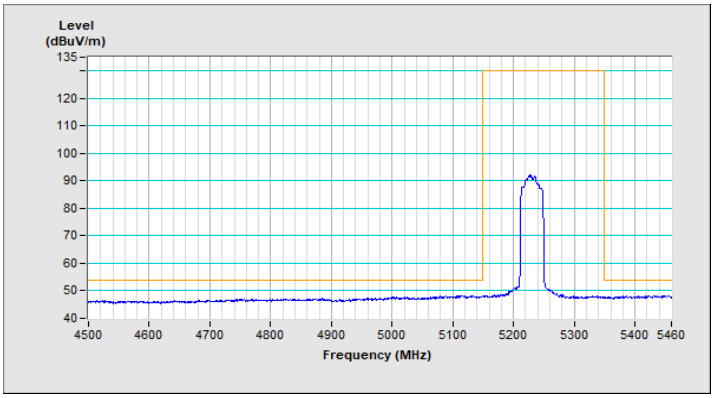
Horizontal (Peak)



Horizontal (Average)

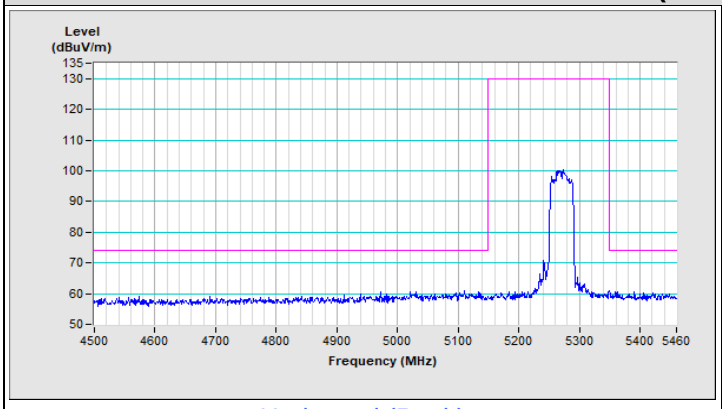


Vertical (Peak)

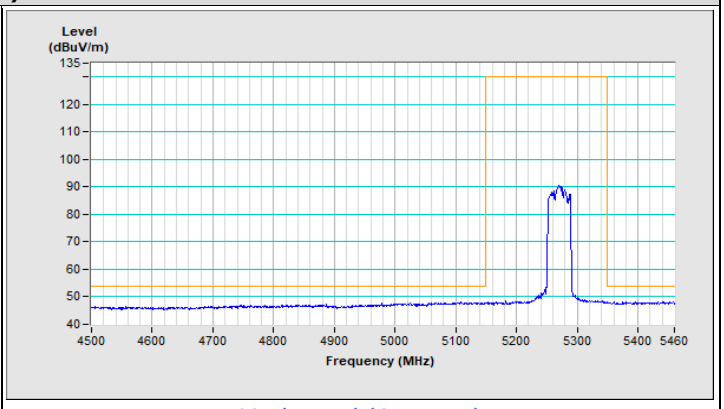


Vertical (Average)

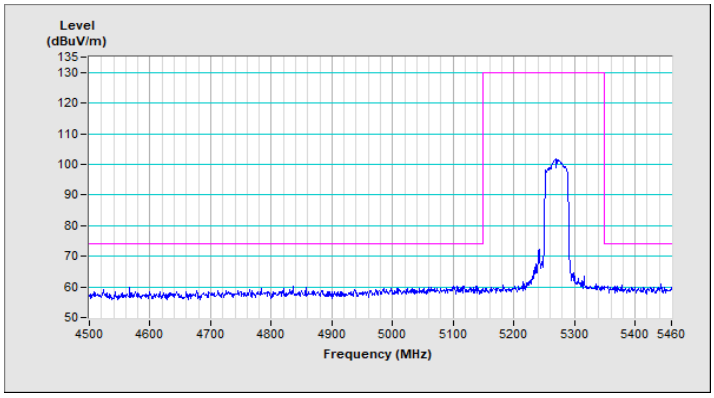
802.11n (HT40) Channel 54



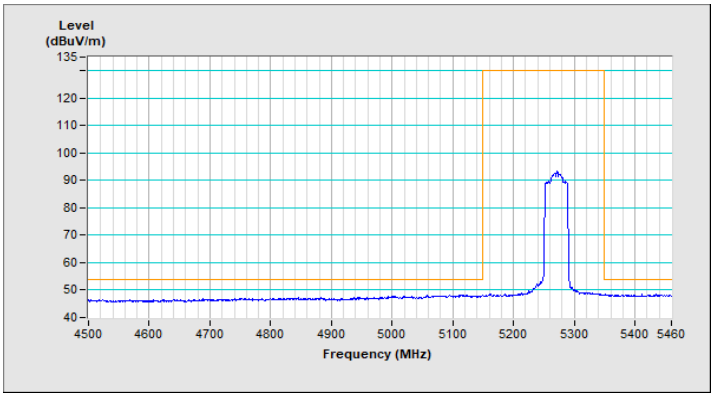
Horizontal (Peak)



Horizontal (Average)

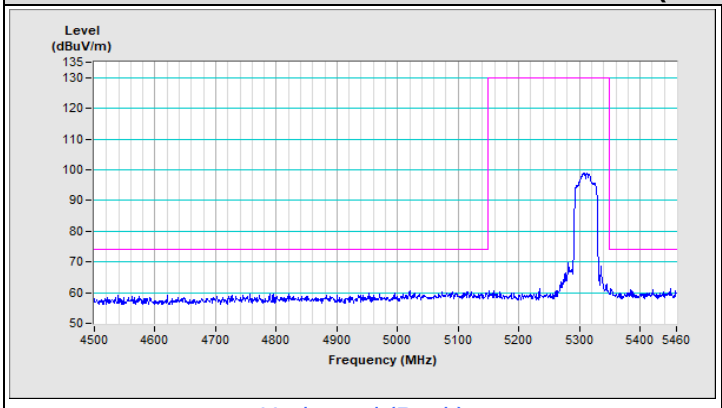


Vertical (Peak)

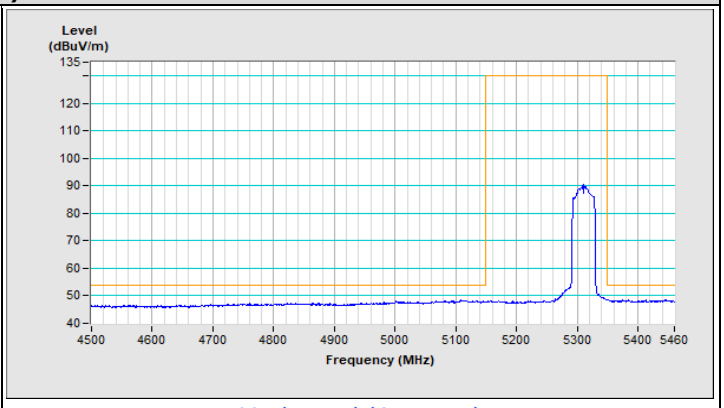


Vertical (Average)

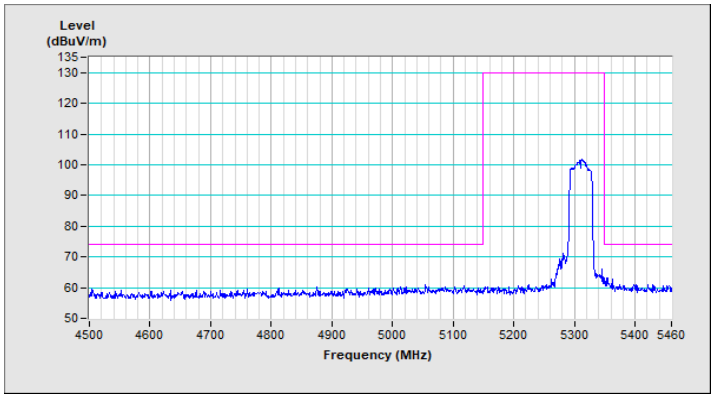
802.11n (HT40) Channel 62



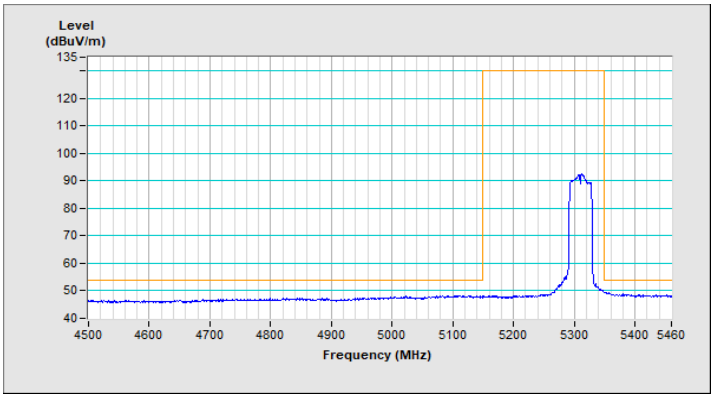
Horizontal (Peak)



Horizontal (Average)

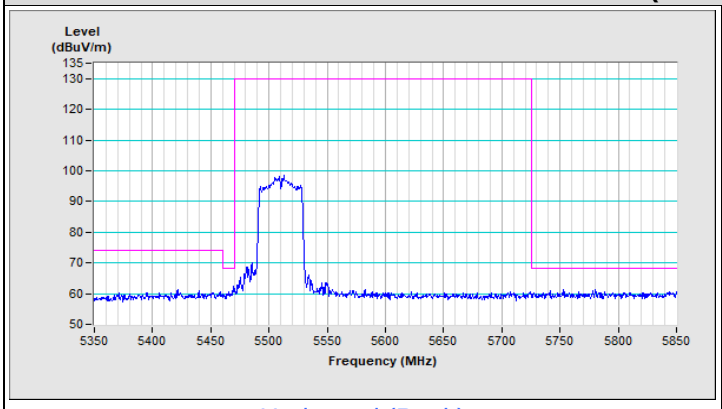


Vertical (Peak)

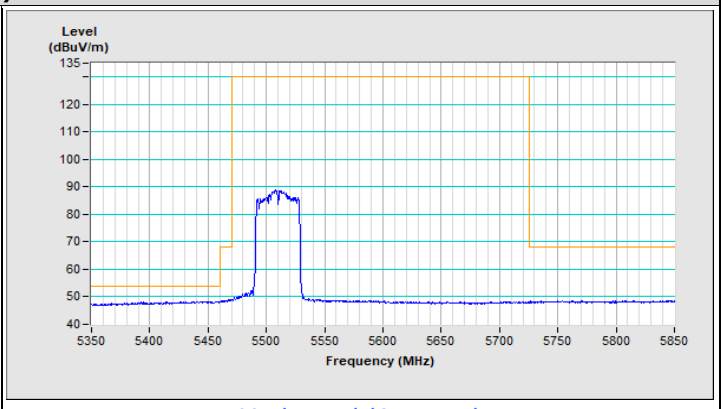


Vertical (Average)

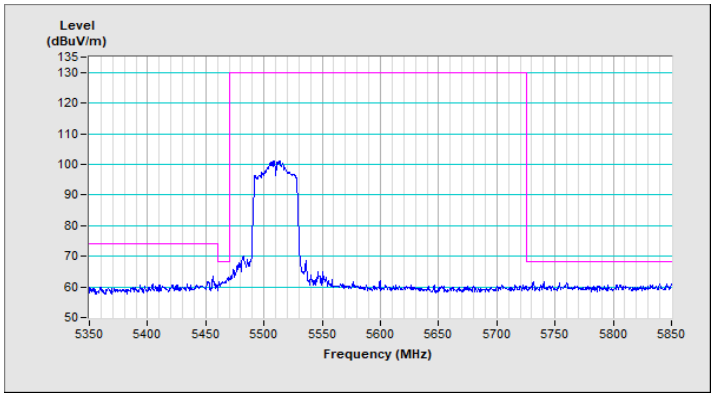
802.11n (HT40) Channel 102



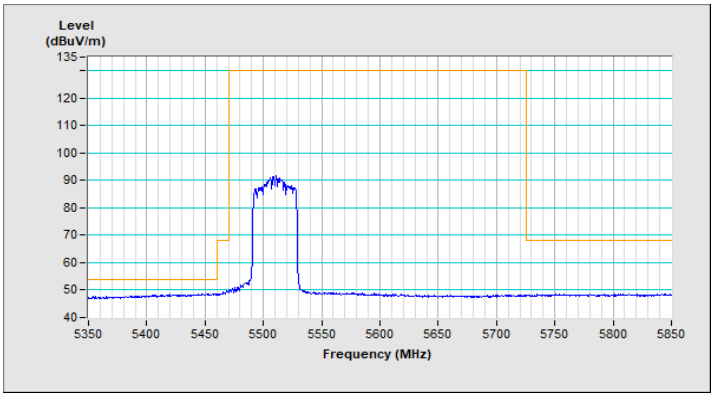
Horizontal (Peak)



Horizontal (Average)

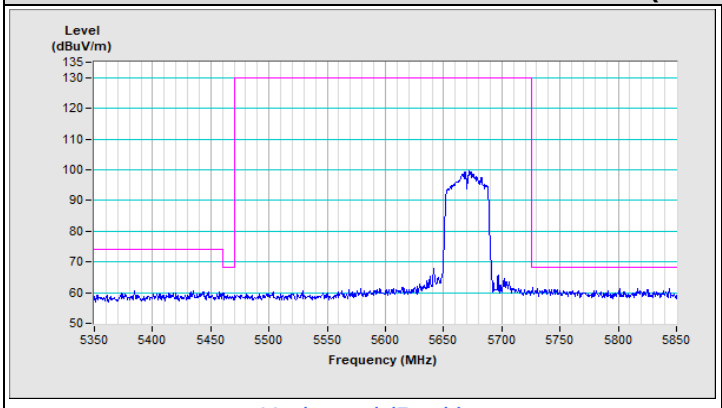


Vertical (Peak)

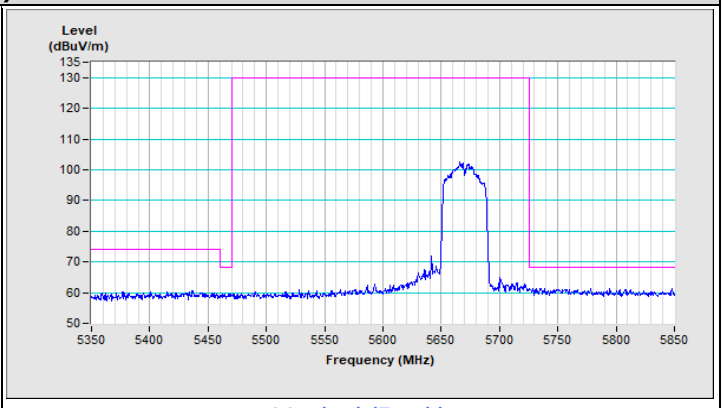


Vertical (Average)

802.11n (HT40) Channel 134

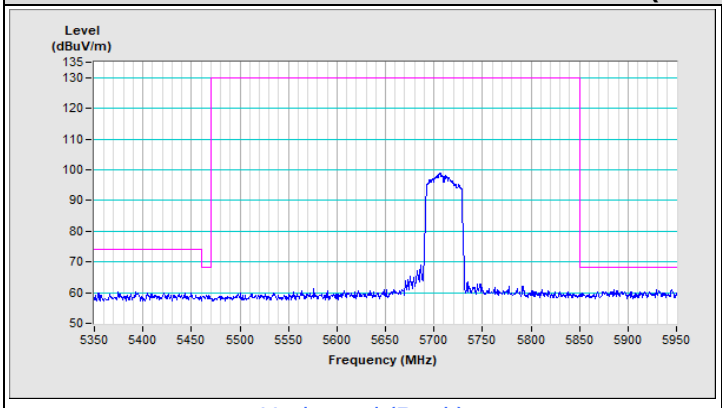


Horizontal (Peak)

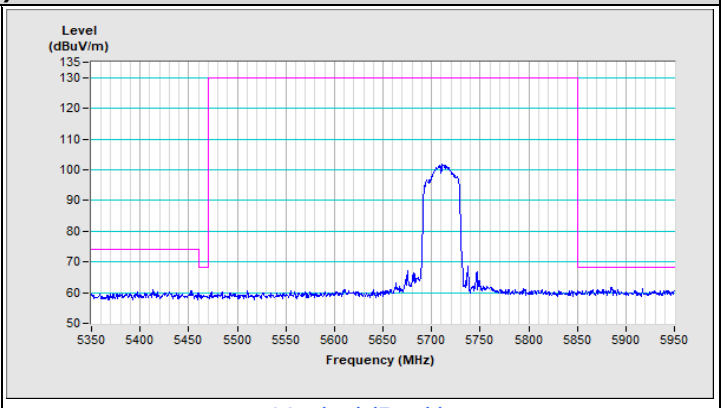


Vertical (Peak)

802.11n (HT40) Channel 142

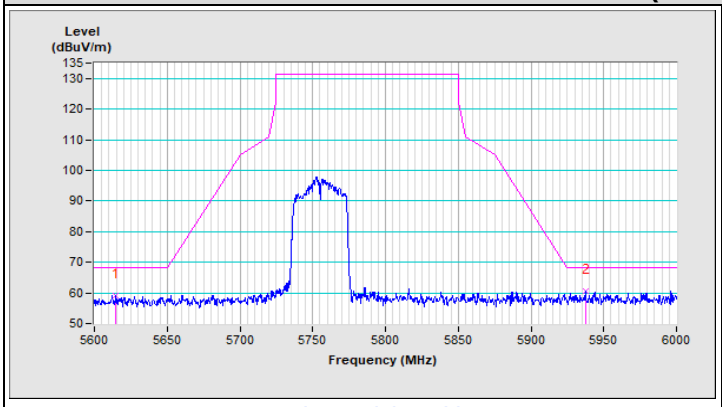


Horizontal (Peak)

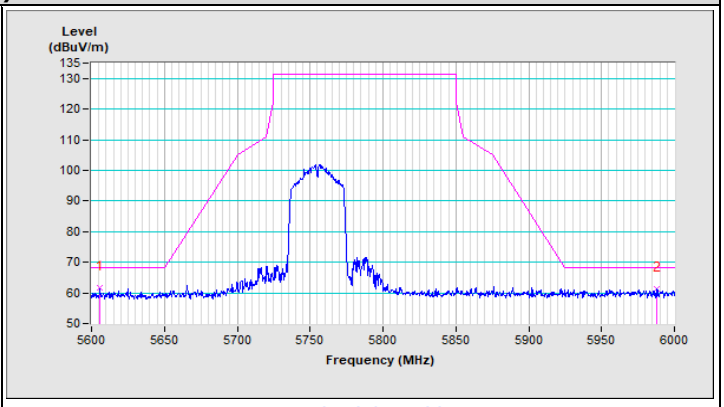


Vertical (Peak)

802.11n (HT40) Channel 151

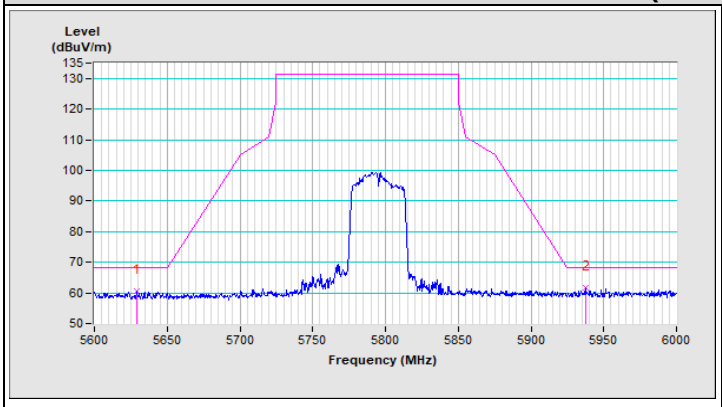


Horizontal (Peak)

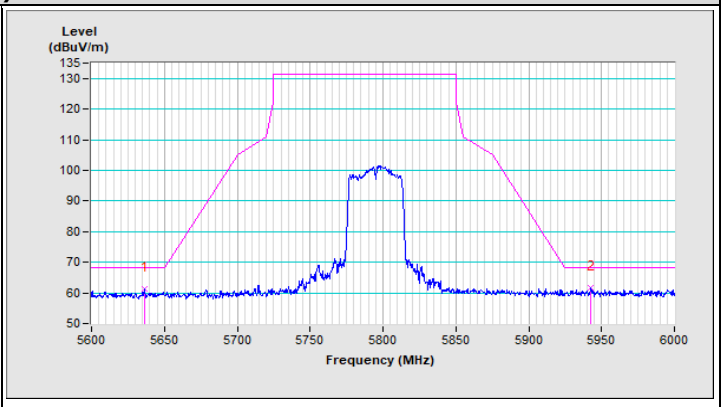


Vertical (Peak)

802.11n (HT40) Channel 159

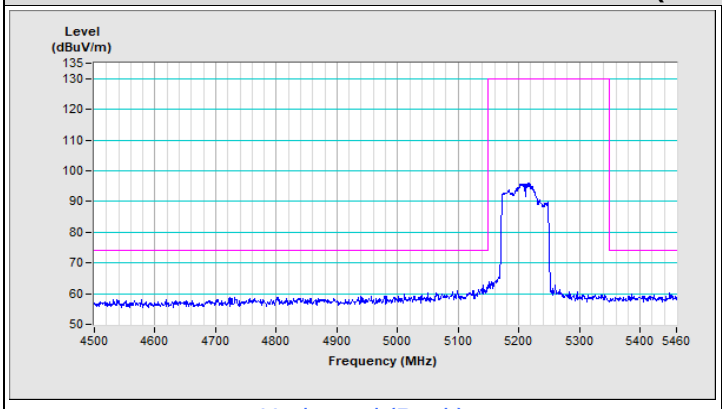


Horizontal (Peak)

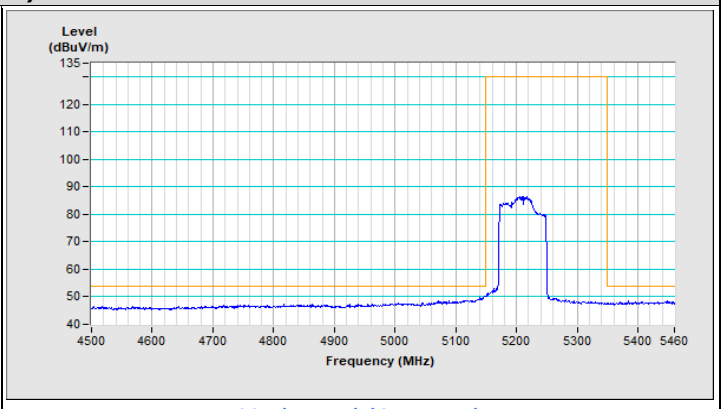


Vertical (Peak)

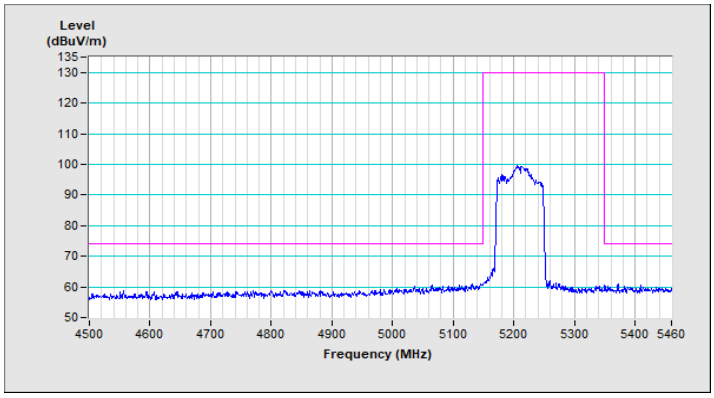
802.11ac (VHT80) Channel 42



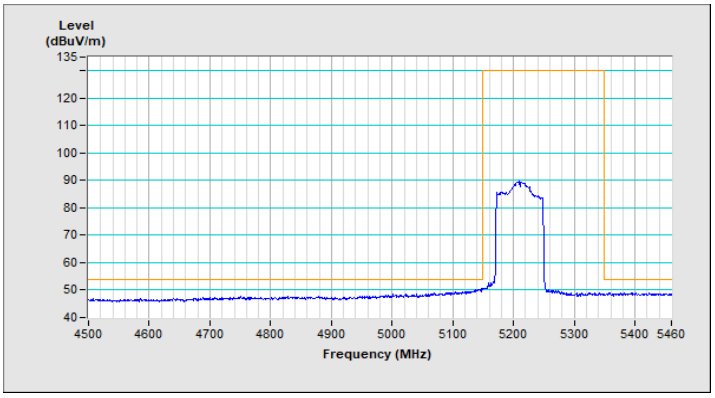
Horizontal (Peak)



Horizontal (Average)

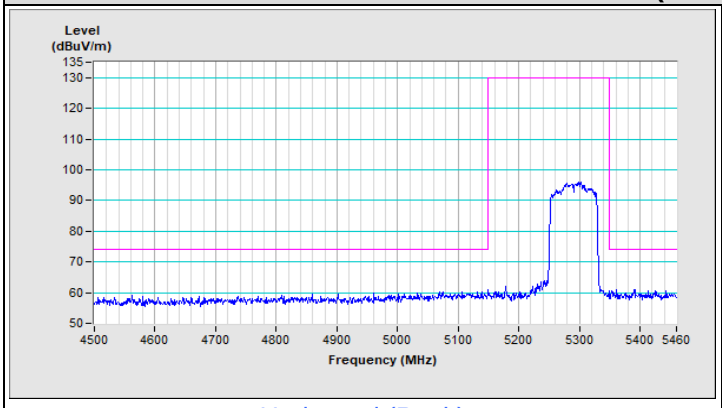


Vertical (Peak)

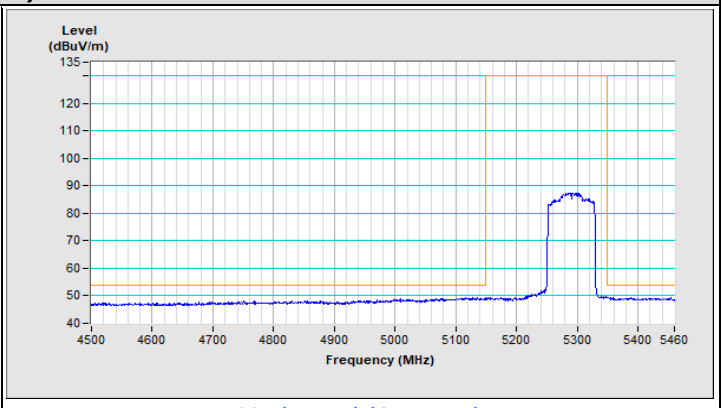


Vertical (Average)

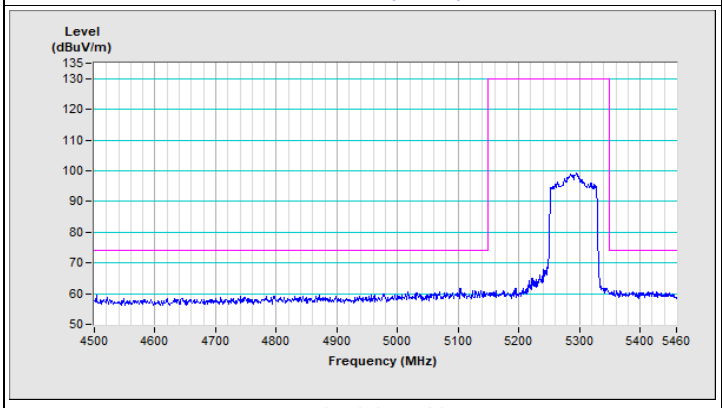
802.11ac (VHT80) Channel 58



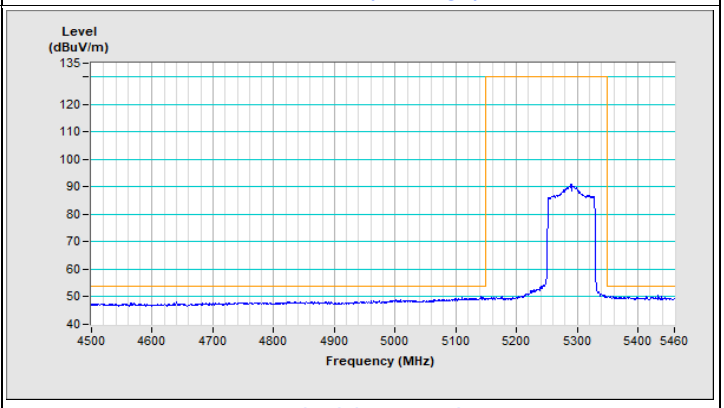
Horizontal (Peak)



Horizontal (Average)

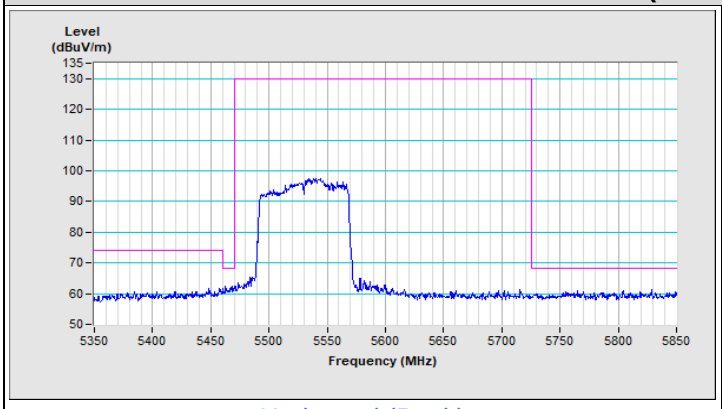


Vertical (Peak)

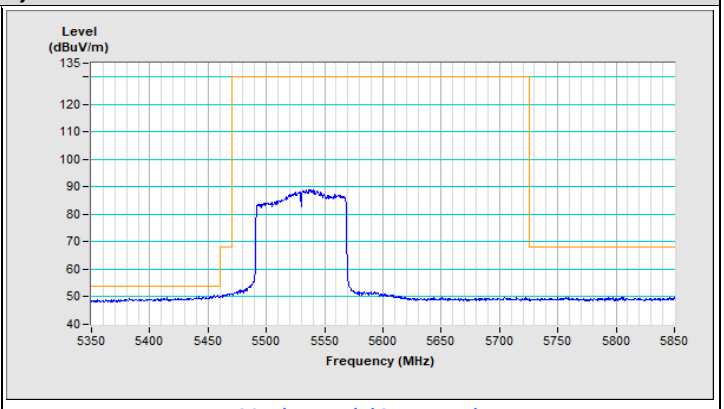


Vertical (Average)

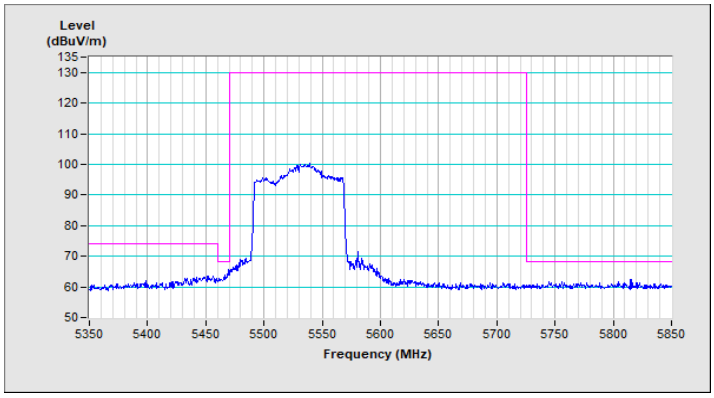
802.11ac (VHT80) Channel 106



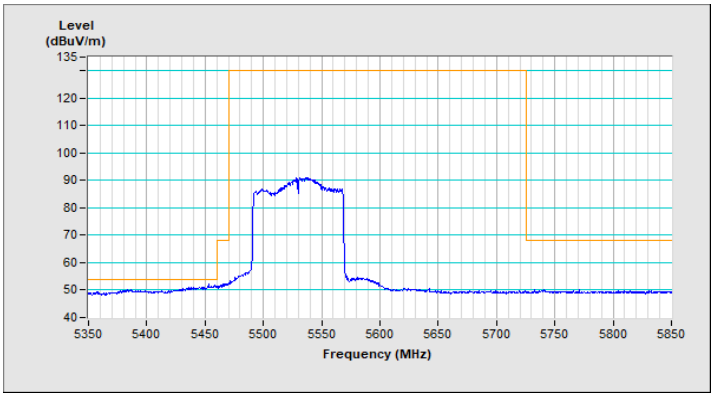
Horizontal (Peak)



Horizontal (Average)

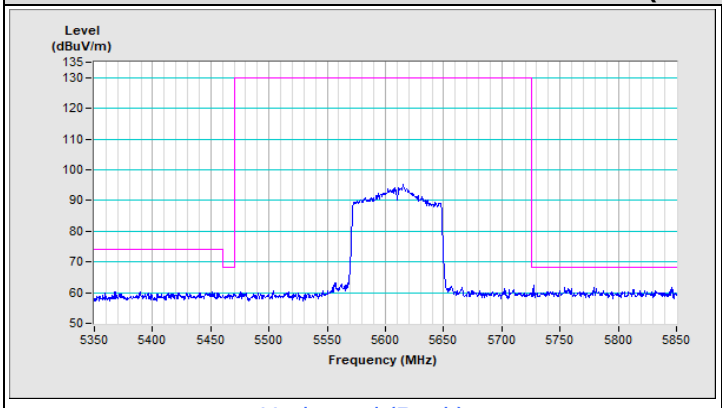


Vertical (Peak)

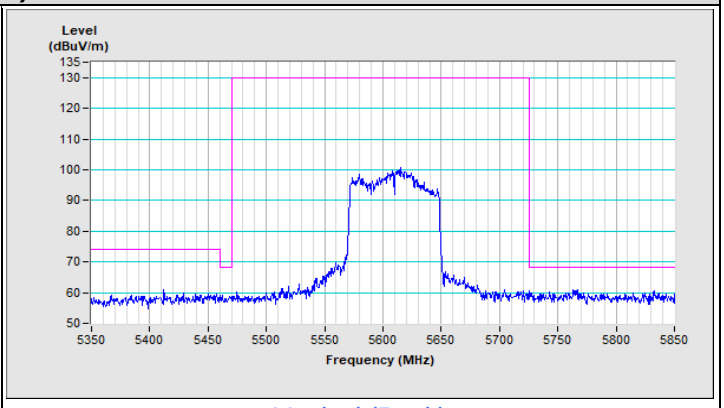


Vertical (Average)

802.11ac (VHT80) Channel 122

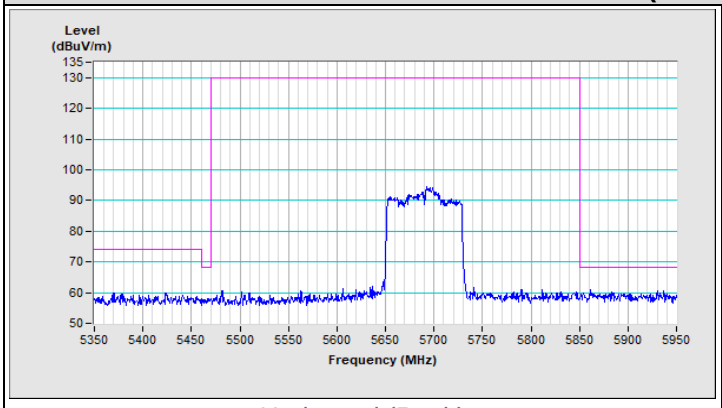


Horizontal (Peak)

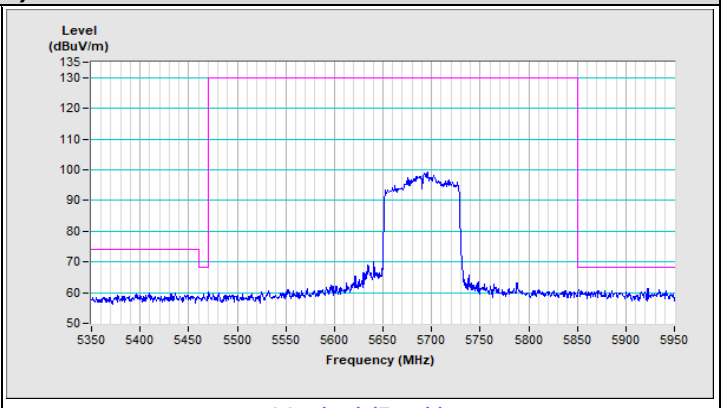


Vertical (Peak)

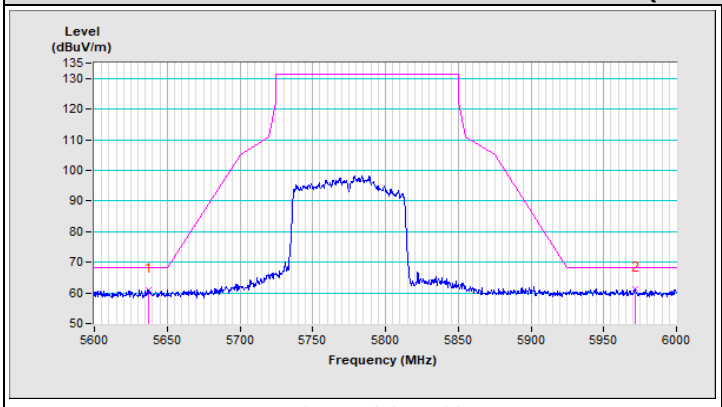
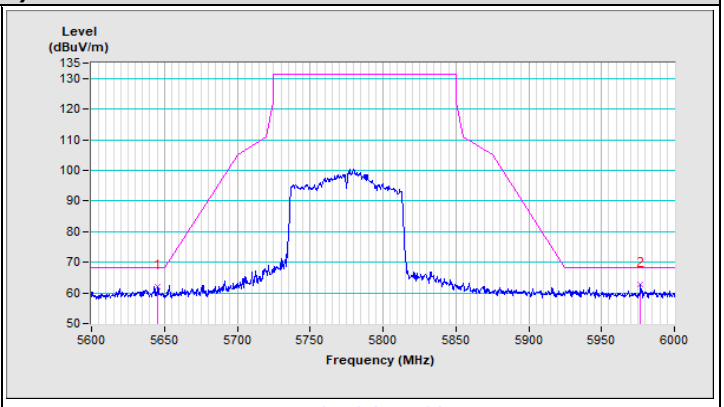
802.11ac (VHT80) Channel 138



Horizontal (Peak)



Vertical (Peak)

802.11ac (VHT80) Channel 155	
	
Horizontal (Peak)	Vertical (Peak)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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