

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBDYS-WTW-P25020451

FCC ID: A8J-EWS850AP

Product: AX1800 Outdoor Access Point

Brand: EnGenius

Model No.: EWS850AP

Series Model: ECW260

Received Date: 2025/2/18

Test Date: 2025/2/27 ~ 2025/3/2

Issued Date: 2025/3/20

Applicant: EnGenius Technologies

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: Jeremy Lin, **Date:** 2025/3/20
Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist

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Table of Contents

Release Control Record	4
1 Certificate.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Supplementary Information	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Antenna Description of EUT	9
3.3 Channel List.....	10
3.4 Test Mode Applicability and Tested Channel Detail.....	11
3.5 Duty Cycle of Test Signal.....	13
3.6 Test Program Used and Operation Descriptions	15
3.7 Connection Diagram of EUT and Peripheral Devices	15
3.8 Configuration of Peripheral Devices and Cable Connections	15
4 Test Instruments	16
4.1 26 dB Bandwidth	16
4.2 RF Output Power.....	16
4.3 Power Spectral Density	16
4.4 6 dB Bandwidth	16
4.5 Occupied Bandwidth.....	16
4.6 AC Power Conducted Emissions	17
4.7 Unwanted Emissions below 1 GHz	18
4.8 Unwanted Emissions above 1 GHz.....	19
5 Limits of Test Items.....	20
5.1 26 dB Bandwidth	20
5.2 RF Output Power.....	20
5.3 Power Spectral Density	20
5.4 6 dB Bandwidth	20
5.5 Occupied Bandwidth.....	20
5.6 AC Power Conducted Emissions	20
5.7 Unwanted Emissions below 1 GHz	21
5.8 Unwanted Emissions above 1 GHz.....	22
6 Test Arrangements.....	23
6.1 26 dB Bandwidth	23
6.1.1 Test Setup	23
6.1.2 Test Procedure.....	23
6.2 RF Output Power.....	23
6.2.1 Test Setup	23
6.2.2 Test Procedure.....	23
6.3 Power Spectral Density	24
6.3.1 Test Setup	24
6.3.2 Test Procedure.....	24
6.4 6 dB Bandwidth	24
6.4.1 Test Setup	24
6.4.2 Test Procedure.....	24
6.5 Occupied Bandwidth.....	25
6.5.1 Test Setup	25
6.5.2 Test Procedure.....	25
6.6 AC Power Conducted Emissions	25
6.6.1 Test Setup	25
6.6.2 Test Procedure.....	25
6.7 Unwanted Emissions below 1 GHz	26
6.7.1 Test Setup	26
6.7.2 Test Procedure.....	27

6.8	Unwanted Emissions above 1 GHz.....	28
6.8.1	Test Setup	28
6.8.2	Test Procedure	28
7	Test Results of Test Item	29
7.1	26 dB Bandwidth	29
7.2	RF Output Power.....	33
7.3	Power Spectral Density	40
7.4	6 dB Bandwidth	45
7.5	Occupied Bandwidth.....	47
7.6	AC Power Conducted Emissions	49
7.7	Unwanted Emissions below 1 GHz	51
7.8	Unwanted Emissions above 1 GHz.....	53
8	Pictures of Test Arrangements	92
9	Information of the Testing Laboratories	93

Release Control Record

Issue No.	Description	Date Issued
RFBDYS-WTW-P25020451	Original release.	2025/3/20

1 Certificate

Product: AX1800 Outdoor Access Point

Brand: EnGenius

Test Model: EWS850AP

Series Model: ECW260

Sample Status: Engineering sample

Applicant: EnGenius Technologies

Test Date: 2025/2/27 ~ 2025/3/2

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	-	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
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(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -8.84 dB at 0.46938 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -1.1 dB at 48.43 MHz
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 -0.4 dB at 5350.00 and 5470.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is brass not a standard connector.

Notes:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The "Dynamic Frequency Selection measurement" was recorded in DFS test report.

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) (±)
26 dB Bandwidth	-	206.5 Hz
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Occupied Bandwidth	-	72 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.95 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 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	AX1800 Outdoor Access Point
Brand	EnGenius
Test Model	EWS850AP
Series Model	ECW260
Model Difference	Refer to note
Status of EUT	Engineering sample
Power Supply Rating	54 Vdc (POE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps 802.11ax: up to 1200Mbps
Operating Frequency	5.26 GHz ~ 5.32 GHz 5.50 GHz ~ 5.72 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 16 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 8 802.11ac (VHT80), 802.11ax (HE80): 4
Output Power	5.26 GHz ~ 5.32 GHz : 247.365 mW (23.93 dBm) 5.50 GHz ~ 5.72 GHz : 248.312 mW (23.95 dBm)

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the original report (BV CPS report no.: RF200513C01-1) is adding 5.26 GHz to 5.32 GHz and 5.50 GHz to 5.72 GHz by software.
2. All models are listed as below.

Brand	Model	Model difference
EnGenius	EWS850AP	Main test model
	ECW260	Series model for marking purpose

3. The EUT uses following accessories.

POE	Brand	EnGenius
	Model	EPA5006GR
	Input Power	100-240 Vac, 0.8 A, 50-60 Hz
	Output Power	54 Vdc, 0.6 A PIN 4,5: 54 Vdc PIN 7,8 RETURN
	Power Line	0.5 m non-shielded AC power cable without core
Ground Cable	1.75 m non-shielded cable without core	

4. There are four radios for the EUT.

Radio	Function	TX/RX Function
1	WLAN 2.4G	2TX / 2RX
2	WLAN 5G	2TX / 2RX
3	Scanning	1RX only (TX disabled)
4	BT LE	1TX / 1RX

5. 2.4GHz (Radio 1) & 5GHz (Radio 2) & BT LE (Radio 4) technology can transmit at same time.
6. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Ant. Type	Dipole	
Connector	brass	
Frequency (MHz)	5250-5350MHz	5470-5725
Gain (dBi)	5.09	5.09

* 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
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX

Note:

1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz). Therefore, the investigated worst case is the representative mode in test report.

3.3 Channel List

FOR 5260 ~ 5320 MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720 MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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), 802.11ax (HE40):

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), 802.11ax (HE80):

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

3.4 Test Mode Applicability and Tested Channel Detail

Worst Case:	The EUT was tested under Z-axis according to original worse case.
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Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
RF Output Power	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD & Beamforming	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD & Beamforming	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD & Beamforming	58, 106, 122, 138	BPSK	MCS0
Power Spectral Density	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
6 dB Bandwidth	802.11a	CDD	144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	144	BPSK	MCS0
	802.11ax (HE40)	CDD	142	BPSK	MCS0
	802.11ax (HE80)	CDD	138	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
AC Power Conducted Emissions	802.11ax (HE80)	CDD	106	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ax (HE80)	CDD	106	BPSK	MCS0

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Unwanted Emissions above 1 GHz	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0

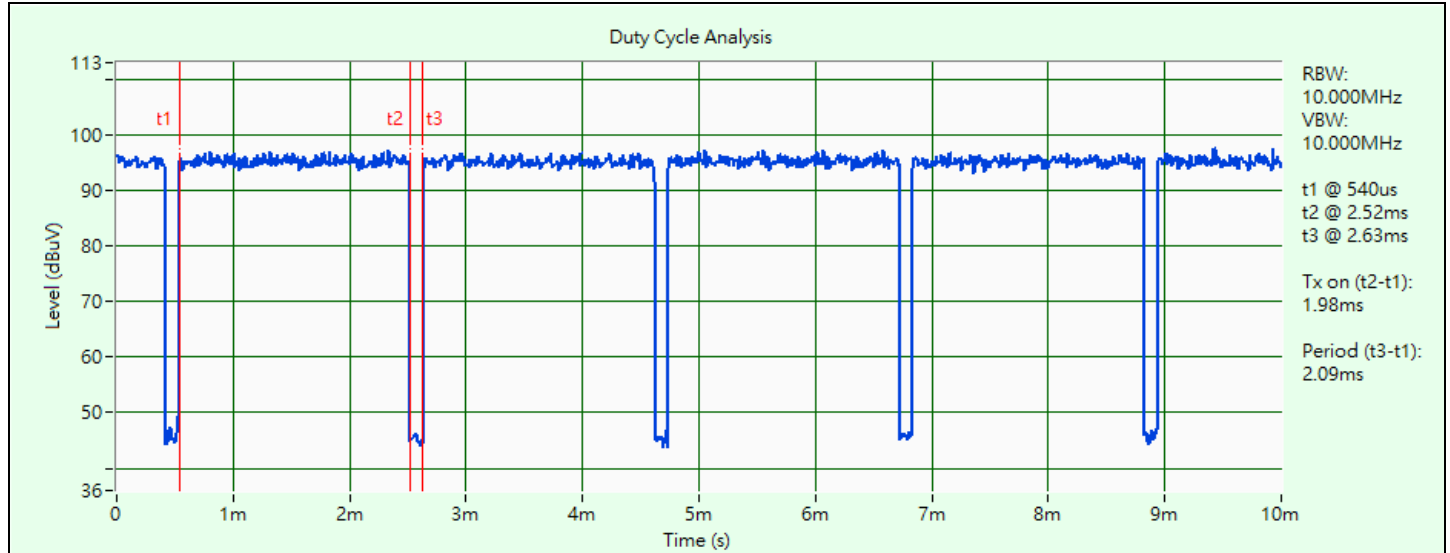
3.5 Duty Cycle of Test Signal

802.11a: Duty cycle = $1.98 \text{ ms} / 2.09 \text{ ms} \times 100\% = 94.7\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.23 \text{ dB}$

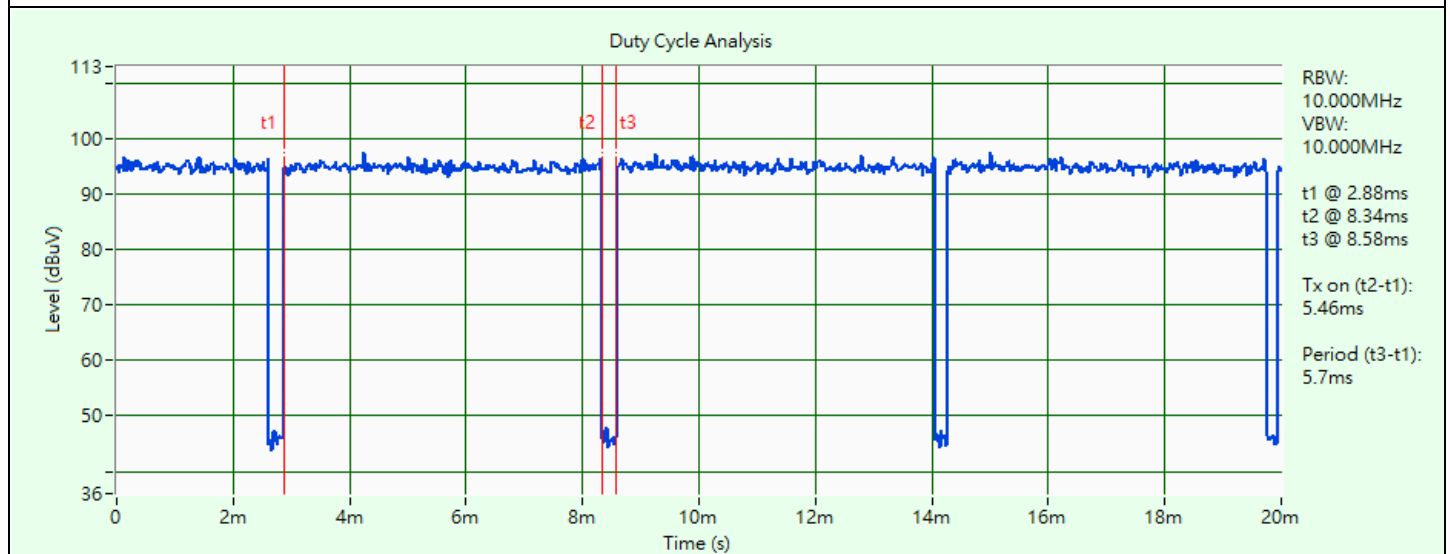
802.11ax (HE20): Duty cycle = $5.46 \text{ ms} / 5.7 \text{ ms} \times 100\% = 95.8\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.19 \text{ dB}$

802.11ax (HE40): Duty cycle = $5.46 \text{ ms} / 5.72 \text{ ms} \times 100\% = 95.5\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.20 \text{ dB}$

802.11ax (HE80): Duty cycle = $5.48 \text{ ms} / 5.72 \text{ ms} \times 100\% = 95.8\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.19 \text{ dB}$

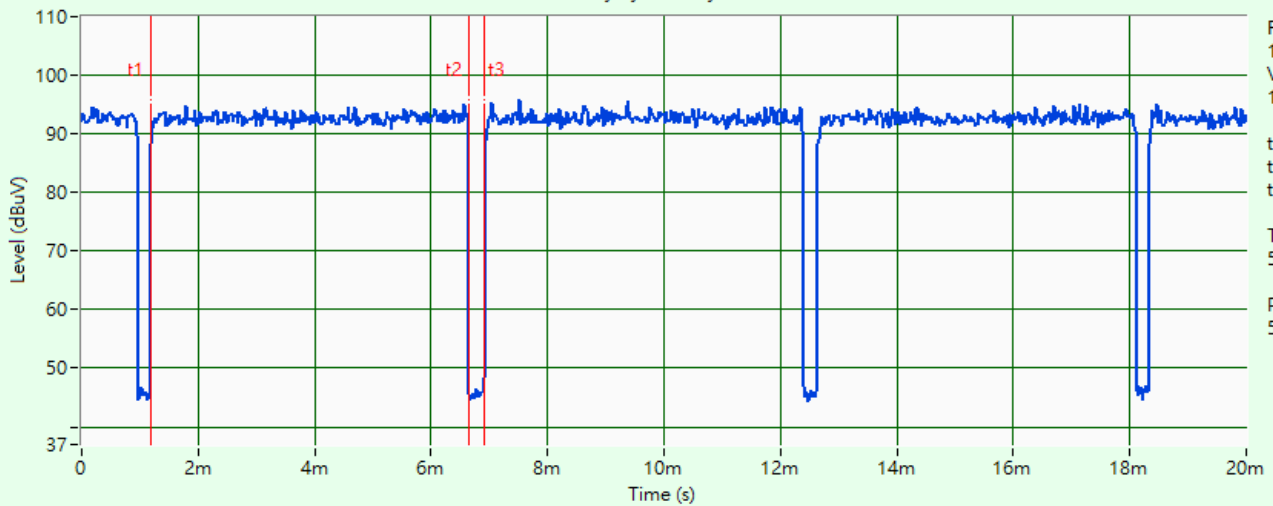


802.11a



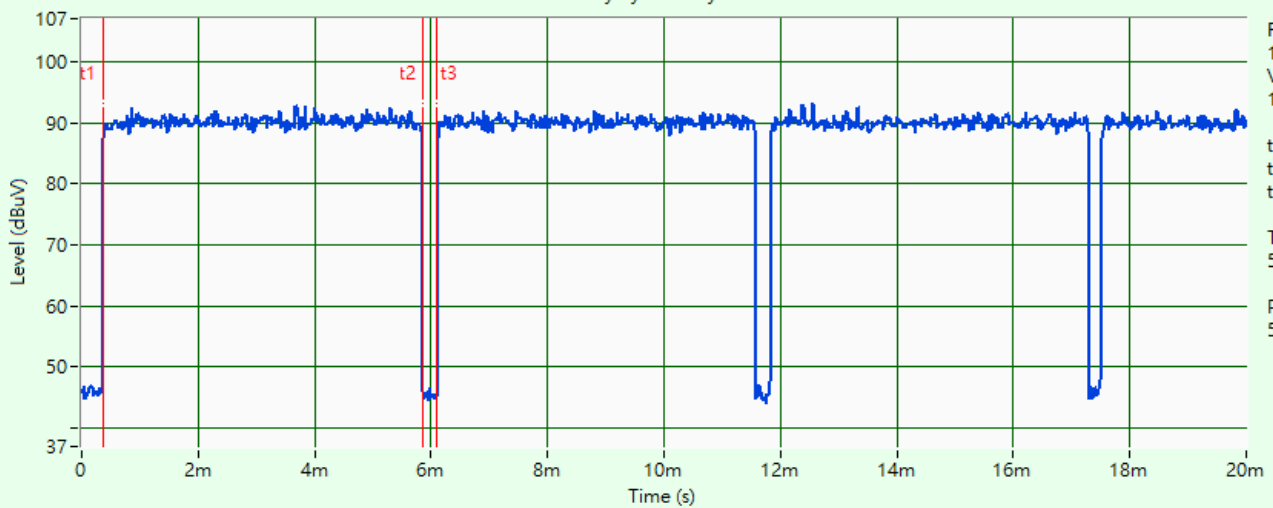
802.11ax (HE20)

Duty Cycle Analysis



802.11ax (HE40)

Duty Cycle Analysis

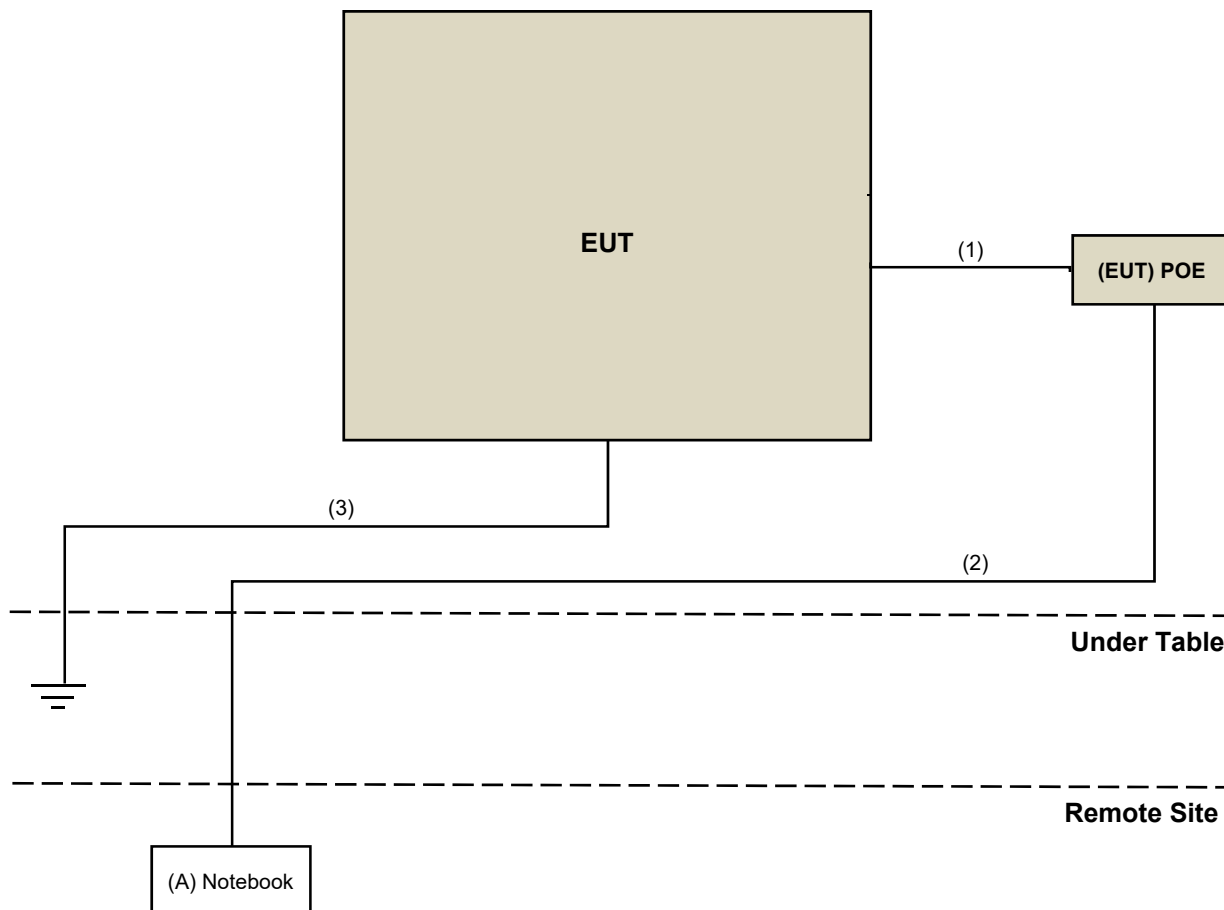


802.11ax (HE80)

3.6 Test Program Used and Operation Descriptions

Controlling software QSPR Version 5.0-00169 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	Notebook	Lenovo	L440	R9-0GFJJK	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ45	1	1.5	N	0	Provided by Lab
2	RJ45	1	10	N	0	Provided by Lab
3	Ground wire	1	1.8	N	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 & Spectrum Analyzer R&S	FSV3044	101105	2025/2/25	2026/2/24
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/3/2

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000538	2024/4/29	2025/4/28
Signal & Spectrum Analyzer R&S	FSV3044	101105	2025/2/25	2026/2/24
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Wideband Power Sensor Keysight	N1923A	MY58200003	2024/6/17	2025/6/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/3/2

4.3 Power Spectral Density

Refer to section 4.1 to get the tested date and information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get the tested date and information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get the tested date and information of the instruments.

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2024/11/28	2025/11/27
	E1-011280	05	2024/11/28	2025/11/27
	E1-011311	09	2024/11/28	2025/11/27
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESR3	102783	2024/12/17	2025/12/16
Fixed Attenuator STI	BNC5W10dB	PAD-COND2-01	2024/8/25	2025/8/24
LISN R&S	ESH2-Z5	100100	2024/3/6	2025/3/5
	ESH3-Z5	100312	2024/9/9	2025/9/8
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2024/8/25	2025/8/24
Software BVADT	BVADT_Conc_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2025/2/27

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-472	2024/10/14	2025/10/13
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Keysight	N9038A	MY55420137	2024/5/8	2025/5/7
Preamplifier EMCI	EMC 330H	980112	2024/9/24	2025/9/23
	EMC001340	980201	2024/9/24	2025/9/23
RF Coaxial Cable Woken	8D-FB	Cable-Ch10-01	2024/9/24	2025/9/23
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2025/2/27

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	7	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2024/11/10	2025/11/9
	BBHA 9170	148	2024/11/10	2025/11/9
MXE EMI Receiver Keysight	N9038A	MY55420137	2024/5/8	2025/5/7
Preamplifier EMCI	EMC 012645	980115	2024/9/24	2025/9/23
	EMC 184045	980116	2024/9/24	2025/9/23
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
	EMC104-SM-SM- 8000+3000	171005	2024/9/24	2025/9/23
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	2024/9/24	2025/9/23
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2025/2/27

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

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	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 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.

5.7 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).

5.8 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 5.25-5.35 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.

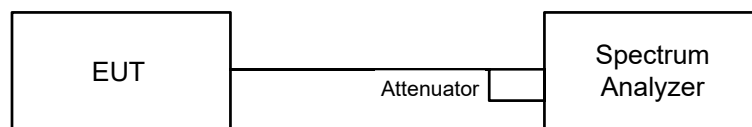
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

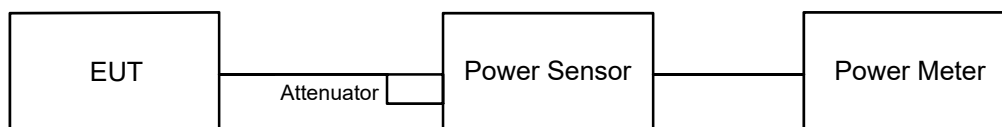


6.1.2 Test Procedure

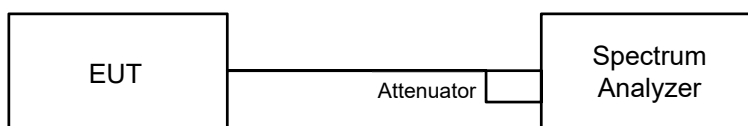
- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement 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:

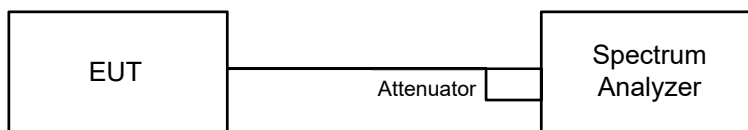
Method SA-2A

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

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

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW $\geq$ 3 MHz, Detector = RMS
- Sweep points $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Record the max value and add 10 log (1/duty cycle).

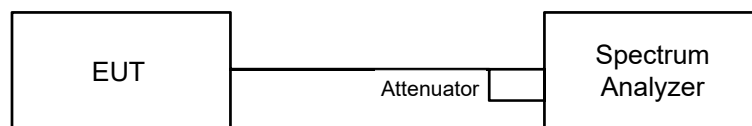
For specified measurement bandwidth 500 kHz:

Method SA-2

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- 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 $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- Sweep points $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Record the max value and add 10 log (1/duty cycle).

6.4 6 dB Bandwidth

6.4.1 Test Setup

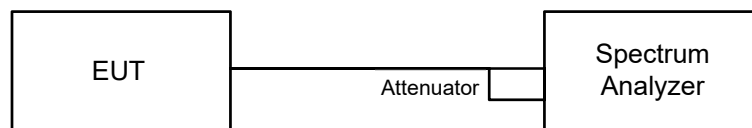


6.4.2 Test Procedure

- Set resolution bandwidth (RBW) = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- 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

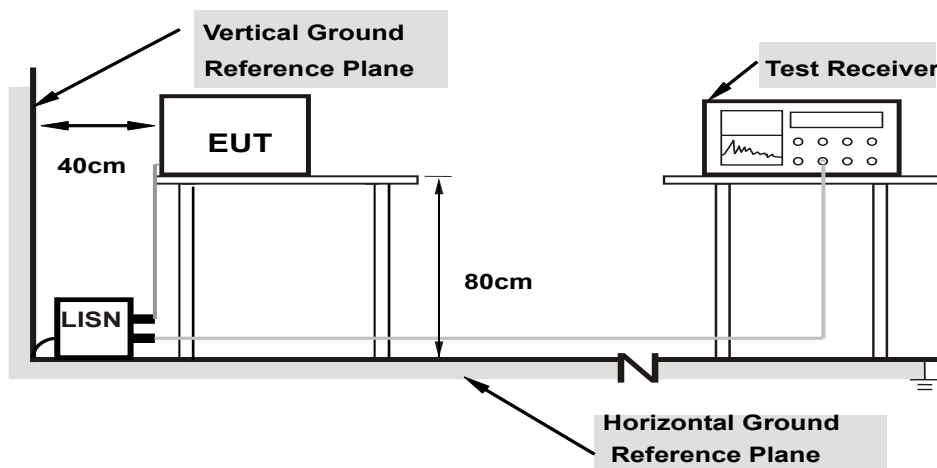


6.5.2 Test Procedure

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 AC Power Conducted Emissions

6.6.1 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).

6.6.2 Test Procedure

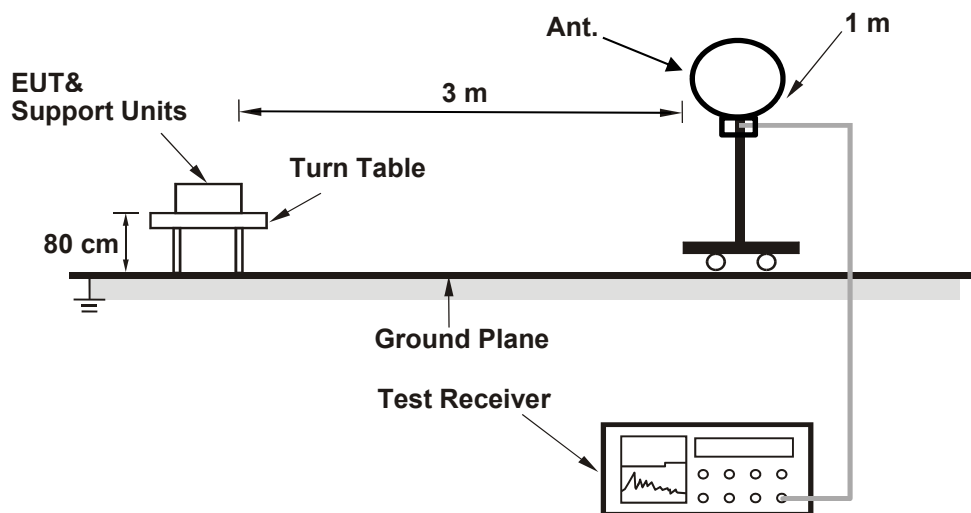
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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.

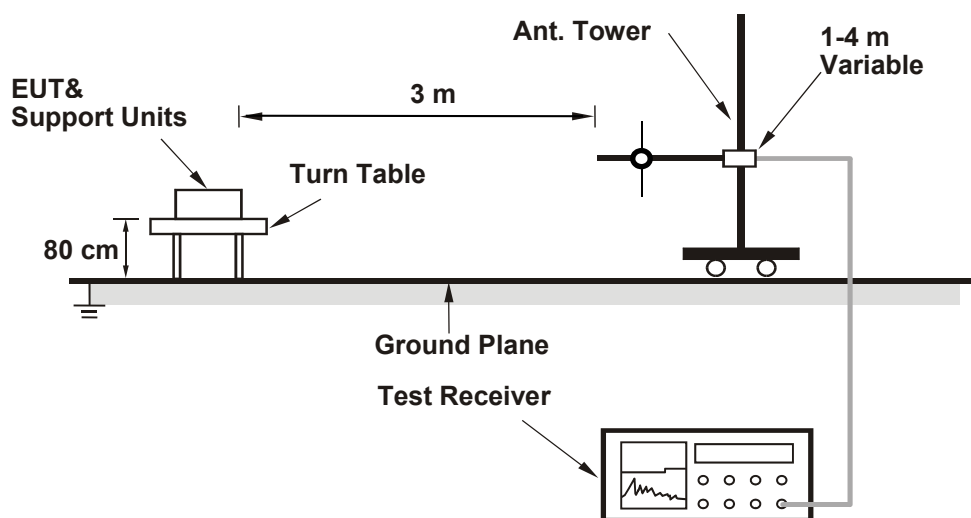
6.7 Unwanted Emissions below 1 GHz

6.7.1 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).

6.7.2 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

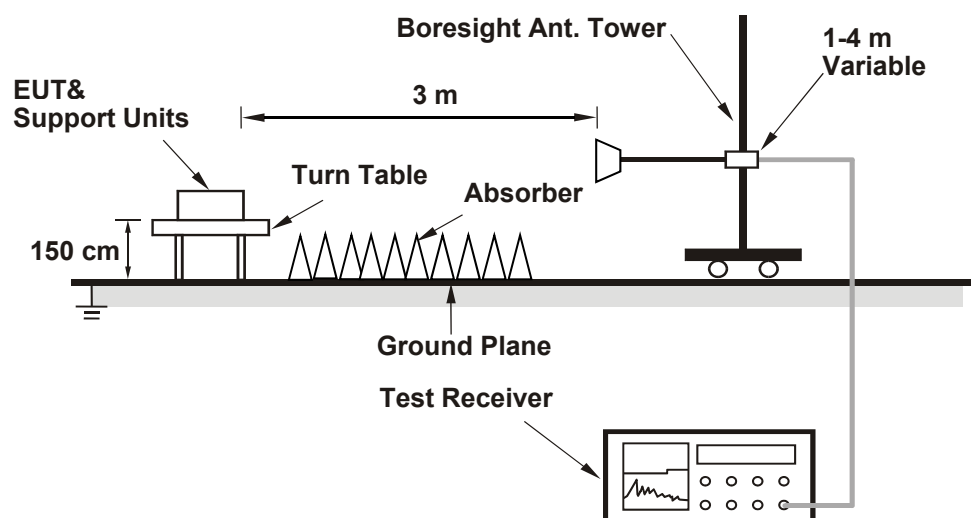
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



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

6.8.2 Test Procedure

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

- 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.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
- 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:	Chris Lin
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802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.52	20.02
60	5300	20.04	20.02
64	5320	20.50	19.93
100	5500	20.30	20.20
116	5580	19.95	20.42
140	5700	20.55	20.10
144 (U-NII-2C)	5720	15.35	15.42
144 (U-NII-3)	5720	5.01	5.21

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	20.02	24.01	>	24
60	5300	20.02	24.01	>	24
64	5320	19.93	23.99	<	24
100	5500	20.20	24.05	>	24
116	5580	19.95	23.99	<	24
140	5700	20.10	24.03	>	24
144 (U-NII-2C)	5720	15.35	22.86	<	24

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

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.95	21.93
60	5300	21.96	21.80
64	5320	22.10	21.59
100	5500	21.41	21.79
116	5580	21.86	21.36
140	5700	22.02	21.79
144 (U-NII-2C)	5720	15.75	15.92
144 (U-NII-3)	5720	5.57	5.75

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.93	24.41 > 24
60	5300	21.80	24.38 > 24
64	5320	21.59	24.34 > 24
100	5500	21.41	24.30 > 24
116	5580	21.36	24.29 > 24
140	5700	21.79	24.38 > 24
144 (U-NII-2C)	5720	15.75	22.97 < 24

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

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.92	41.35
62	5310	41.29	41.54
102	5510	41.68	41.42
110	5550	41.42	41.46
134	5670	41.63	41.49
142 (U-NII-2C)	5710	35.84	35.75
142 (U-NII-3)	5710	5.61	5.60

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	41.35	27.16 > 24
62	5310	41.29	27.15 > 24
102	5510	41.42	27.17 > 24
110	5550	41.42	27.17 > 24
134	5670	41.49	27.17 > 24
142 (U-NII-2C)	5710	35.75	26.53 > 24

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

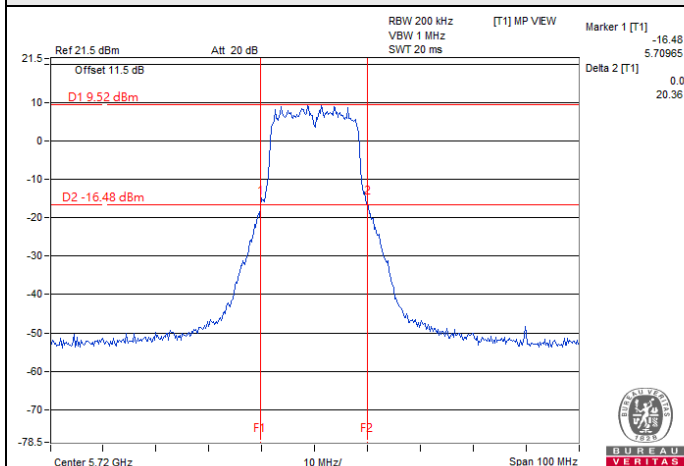
802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.35	83.39
106	5530	83.42	83.86
122	5610	83.51	83.35
138 (U-NII-2C)	5690	76.82	76.71
138 (U-NII-3)	5690	6.61	6.58

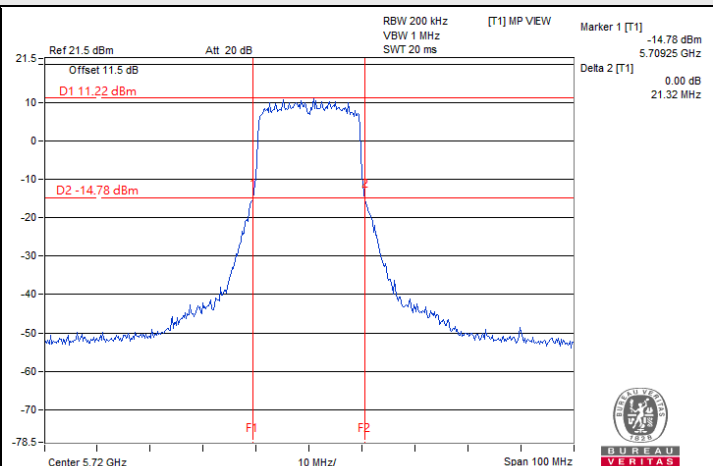
Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	83.35	30.20 > 24
106	5530	83.42	30.21 > 24
122	5610	83.35	30.20 > 24
138 (U-NII-2C)	5690	76.71	29.84 > 24

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

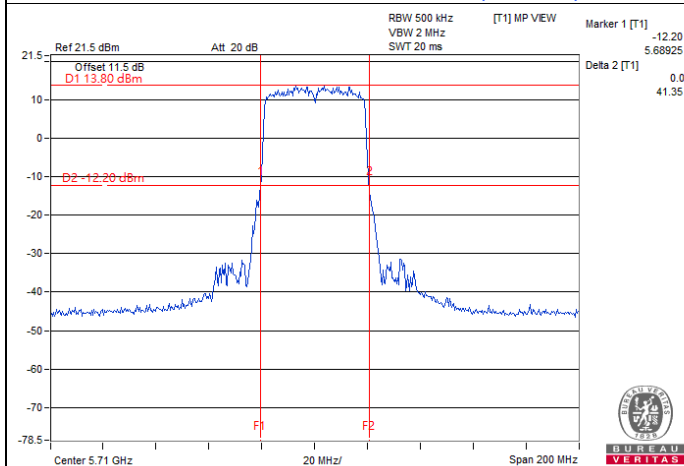
Spectrum Plot of Minimum Value



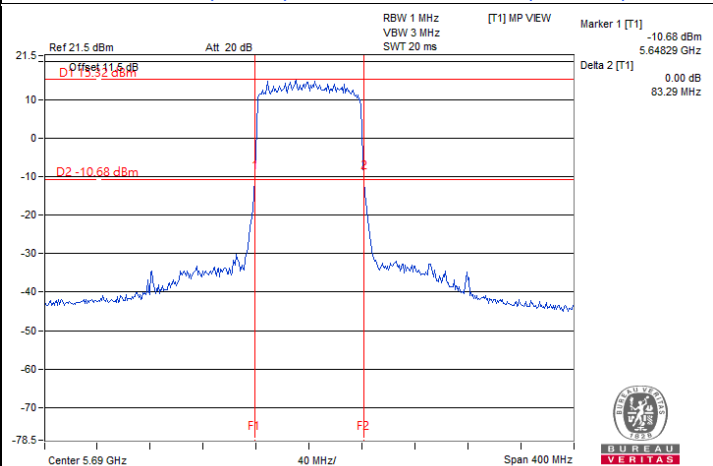
802.11a / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)



802.11ax (HE80) / 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:	Chris Lin
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802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	19.11	19.49	170.391	22.31	24	Pass
60	5300	19.07	19.36	167.021	22.23	24	Pass
64	5320	19.26	19.52	173.870	22.40	23.99	Pass
100	5500	18.88	19.17	159.872	22.04	24	Pass
116	5580	18.78	19.11	156.980	21.96	23.99	Pass
140	5700	18.99	19.26	163.584	22.14	24	Pass
*144 (U-NII-2C)	5720	17.00	17.03	106.173	20.26	22.86	Pass
*144 (U-NII-3)	5720	10.44	10.52	23.579	13.73	30	Pass

Notes:

- * : 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.
- Directional gain is the maximum gain of antennas.
- For U-NII-2A, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	19.70	20.50	205.527	23.13	24	Pass
60	5300	19.95	20.42	209.009	23.20	24	Pass
64	5320	19.85	20.16	200.358	23.02	24	Pass
100	5500	19.41	20.05	188.455	22.75	24	Pass
116	5580	18.75	19.35	161.089	22.07	24	Pass
140	5700	19.30	19.95	183.969	22.65	24	Pass
*144 (U-NII-2C)	5720	17.82	17.75	125.379	20.98	22.97	Pass
*144 (U-NII-3)	5720	12.22	12.16	34.572	15.39	30	Pass

Notes:

- * : 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.
- Directional gain is the maximum gain of antennas.
- For U-NII-2A, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	21.18	20.65	247.365	23.93	24	Pass
62	5310	21.16	20.48	242.303	23.84	24	Pass
102	5510	20.82	20.34	228.925	23.60	24	Pass
110	5550	20.86	20.42	232.053	23.66	24	Pass
134	5670	20.99	20.54	238.843	23.78	24	Pass
*142 (U-NII-2C)	5710	19.87	19.82	202.181	23.06	24	Pass
*142 (U-NII-3)	5710	9.64	9.60	19.197	12.83	30	Pass

Notes:

- * : 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.
- Directional gain is the maximum gain of antennas.
- For U-NII-2A, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	21.01	20.34	234.326	23.70	24	Pass
106	5530	21.22	20.64	248.312	23.95	24	Pass
122	5610	21.07	20.48	239.624	23.80	24	Pass
*138 (U-NII-2C)	5690	20.62	20.59	239.965	23.80	24	Pass
*138 (U-NII-3)	5690	6.51	6.46	9.293	9.68	30	Pass

Notes:

- * : 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.
- Directional gain is the maximum gain of antennas.
- For U-NII-2A, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	16.67	17.47	102.299	20.10	21.9	Pass
60	5300	16.92	17.38	103.906	20.17	21.9	Pass
64	5320	16.81	17.11	99.378	19.97	21.9	Pass
100	5500	16.32	17.01	93.089	19.69	21.9	Pass
116	5580	15.71	16.32	80.094	19.04	21.9	Pass
140	5700	16.27	16.92	91.568	19.62	21.9	Pass
*144 (U-NII-2C)	5720	14.79	14.72	62.406	17.95	20.87	Pass
*144 (U-NII-3)	5720	9.19	9.13	17.208	12.36	27.82	Pass

Notes:

- * : 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.1-6)].
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.1-6)].
- For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	18.15	17.61	122.990	20.90	21.9	Pass
62	5310	18.13	17.44	120.476	20.81	21.9	Pass
102	5510	17.79	17.30	113.821	20.56	21.9	Pass
110	5550	17.83	17.38	115.375	20.62	21.9	Pass
134	5670	17.96	17.50	118.751	20.75	21.9	Pass
*142 (U-NII-2C)	5710	16.85	16.80	100.865	20.04	21.9	Pass
*142 (U-NII-3)	5710	6.62	6.58	9.577	9.81	27.82	Pass

Notes:

- * : 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.1-6)].
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.1-6)].
- For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

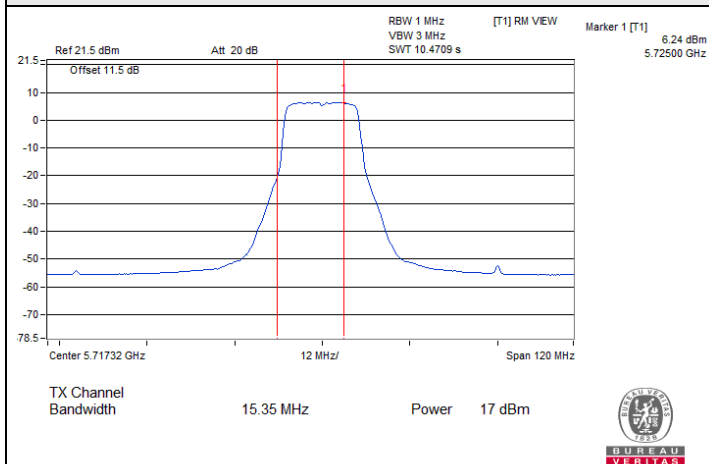
802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	17.98	17.30	116.509	20.66	21.9	Pass
106	5530	18.19	17.60	123.461	20.92	21.9	Pass
122	5610	18.04	17.44	119.142	20.76	21.9	Pass
*138 (U-NII-2C)	5690	17.59	17.56	119.440	20.77	21.9	Pass
*138 (U-NII-3)	5690	3.48	3.43	4.625	6.65	27.82	Pass

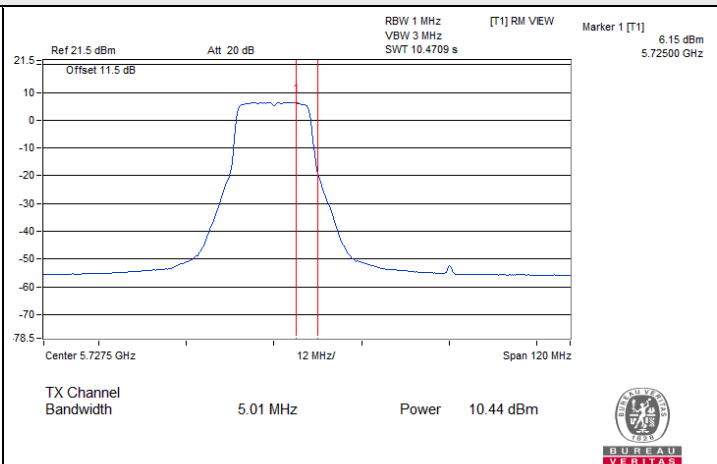
Notes:

- * : 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.1-6)].
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.1-6)].
- For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

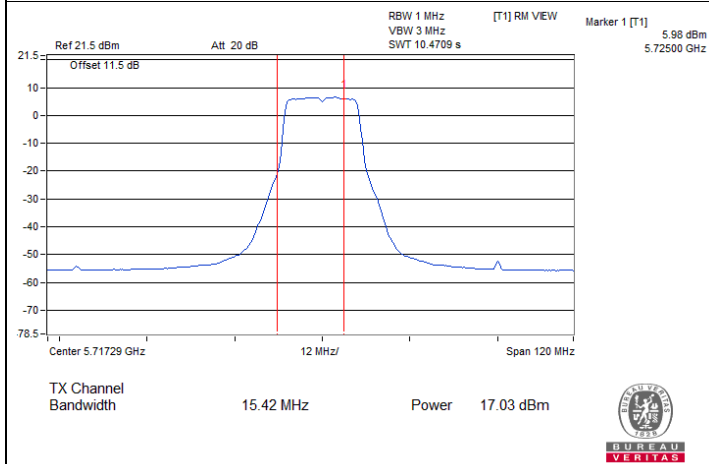
Spectrum Plot for channel straddling



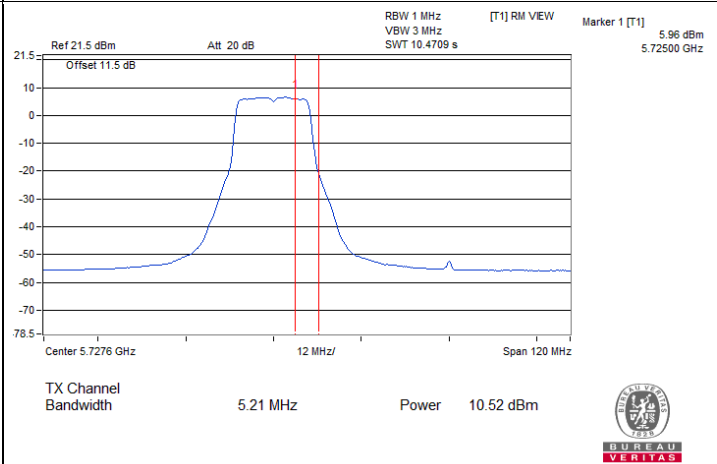
802.11a / Chain 0 : CH 144 (U-NII-2C)



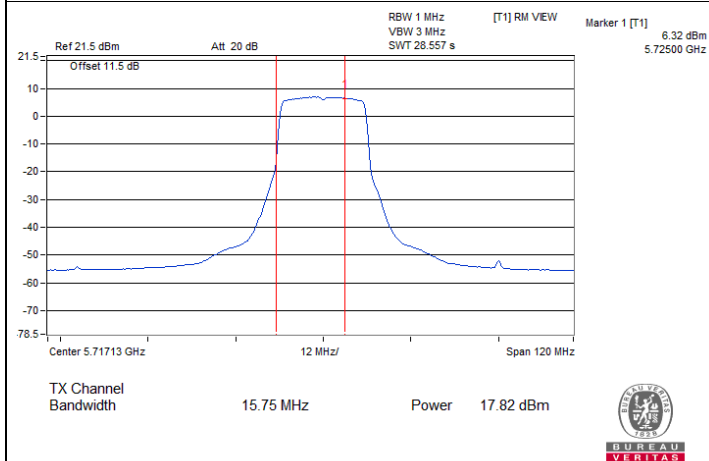
802.11a / Chain 0 : CH 144 (U-NII-3)



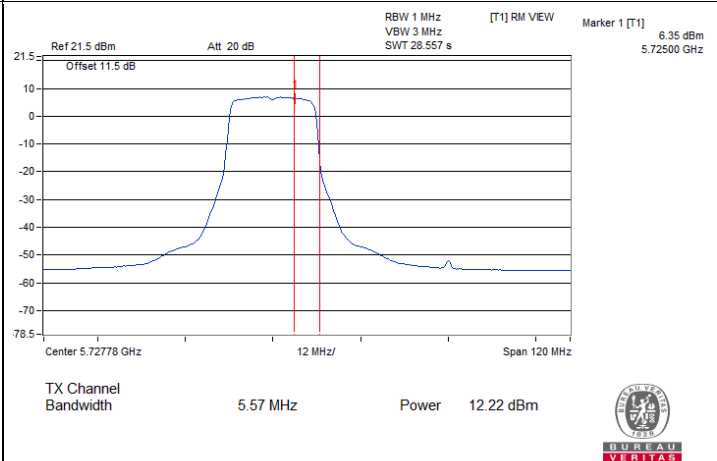
802.11a / Chain 1 : CH 144 (U-NII-2C)



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

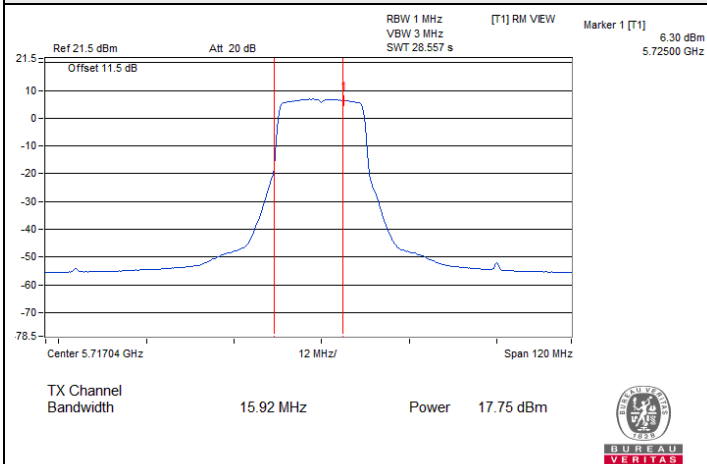


802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)

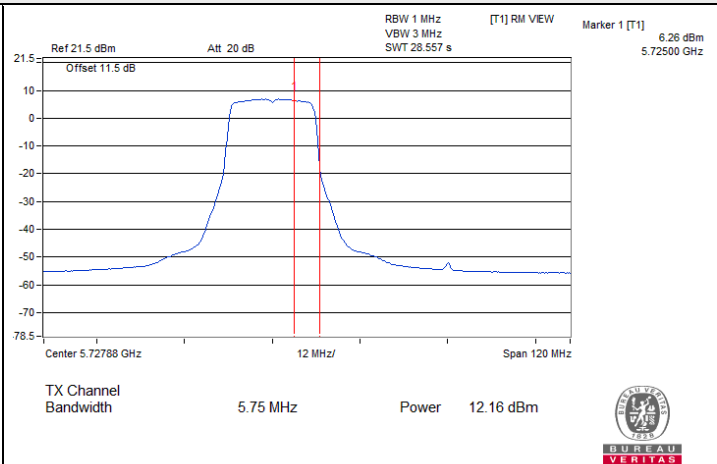


802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)

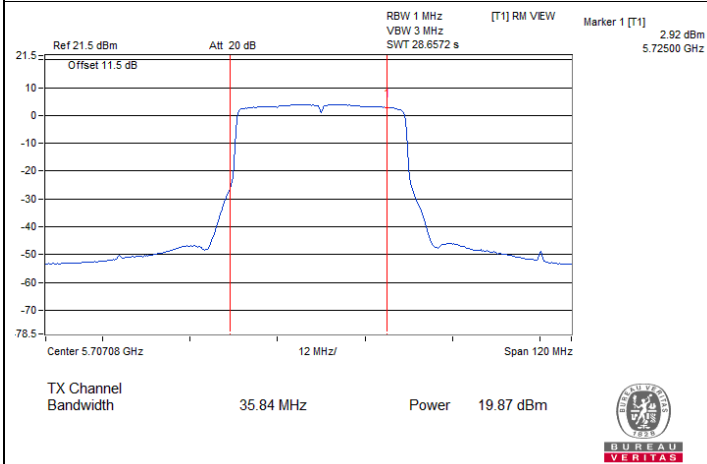
Spectrum Plot for channel straddling



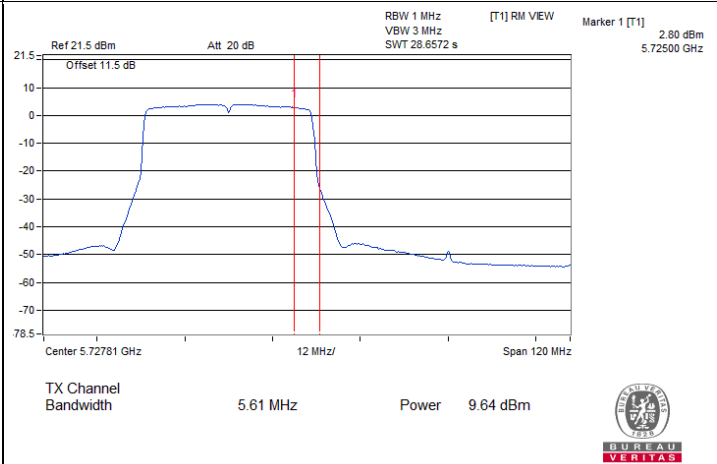
802.11ax (HE20) / Chain 1 : CH 144 (U-NII-2C)



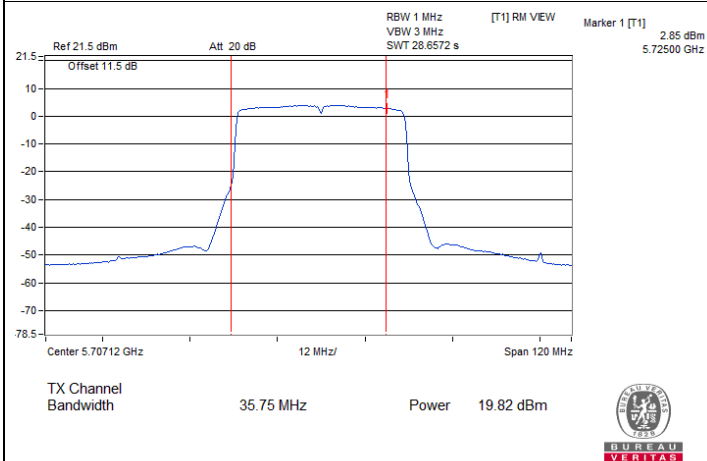
802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)



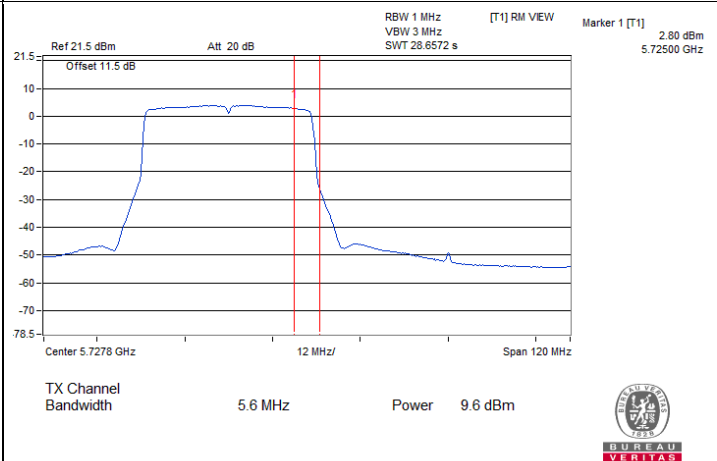
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-2C)



802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)

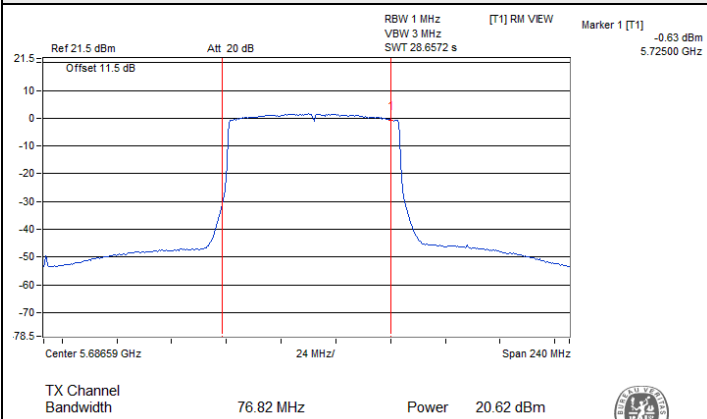


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)

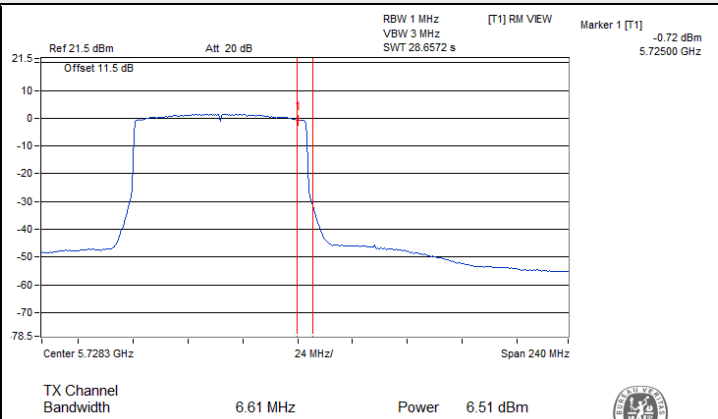


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)

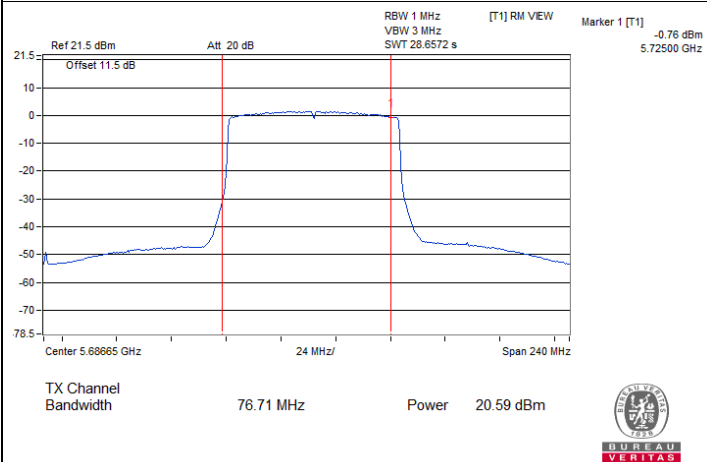
Spectrum Plot for channel straddling



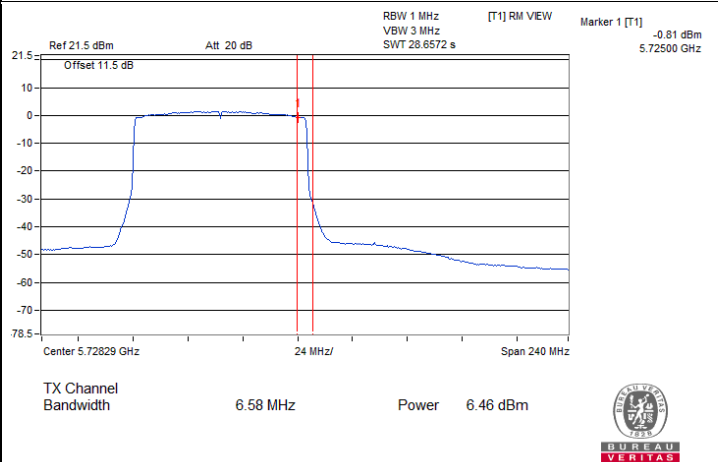
802.11ax (HE80) / Chain 0 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)



802.11ax (HE80) / Chain 1 : CH 138 (U-NII-2C)



802.11ax (HE80) / 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:	Chris Lin
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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				
52	5260	5.37	5.30	0.23	8.58	8.9	Pass
60	5300	5.03	5.12	0.23	8.32	8.9	Pass
64	5320	5.41	5.14	0.23	8.52	8.9	Pass
100	5500	5.51	5.34	0.23	8.67	8.9	Pass
116	5580	5.30	5.33	0.23	8.56	8.9	Pass
140	5700	5.35	5.22	0.23	8.53	8.9	Pass
144 (U-NII-2C)	5720	4.90	5.24	0.23	8.31	8.9	Pass

Notes:

- 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to $11-(8.1-6) = 8.9$ dBm/MHz.
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to $11-(8.1-6) = 8.9$ dBm/MHz.

802.11ax (HE20)

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				
52	5260	5.26	5.27	0.19	8.47	8.9	Pass
60	5300	5.10	4.81	0.19	8.16	8.9	Pass
64	5320	5.05	4.88	0.19	8.17	8.9	Pass
100	5500	5.21	5.21	0.19	8.41	8.9	Pass
116	5580	5.09	5.14	0.19	8.32	8.9	Pass
140	5700	5.27	5.19	0.19	8.43	8.9	Pass
144 (U-NII-2C)	5720	5.15	5.16	0.19	8.36	8.9	Pass

Notes:

- 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to $11-(8.1-6) = 8.9$ dBm/MHz.
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to $11-(8.1-6) = 8.9$ dBm/MHz.

802.11ax (HE40)

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				
54	5270	3.33	3.44	0.20	6.60	8.9	Pass
62	5310	3.32	3.43	0.20	6.59	8.9	Pass
102	5510	4.58	4.75	0.20	7.88	8.9	Pass
110	5550	4.53	4.45	0.20	7.70	8.9	Pass
134	5670	5.11	4.94	0.20	8.24	8.9	Pass
142 (U-NII-2C)	5710	3.92	3.62	0.20	6.98	8.9	Pass

Notes:

- 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.1-6) = 8.9 dBm/MHz.
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.1-6) = 8.9 dBm/MHz.

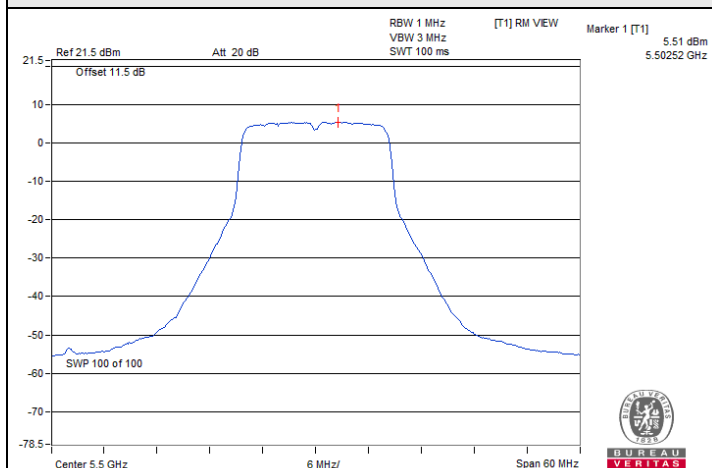
802.11ax (HE80)

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				
58	5290	0.15	0.23	0.19	3.39	8.9	Pass
106	5530	1.76	1.64	0.19	4.90	8.9	Pass
122	5610	2.05	1.75	0.19	5.10	8.9	Pass
138 (U-NII-2C)	5690	0.87	1.33	0.19	4.31	8.9	Pass

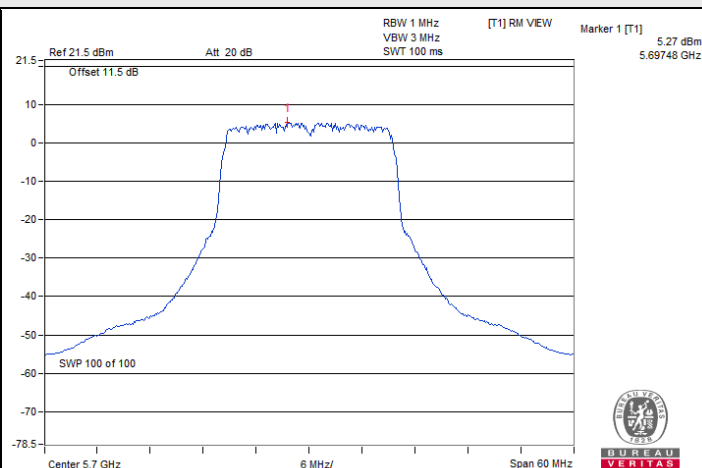
Notes:

- 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.
- Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
- For U-NII-2A, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.1-6) = 8.9 dBm/MHz.
- For U-NII-2C, the directional gain is 8.1 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.1-6) = 8.9 dBm/MHz.

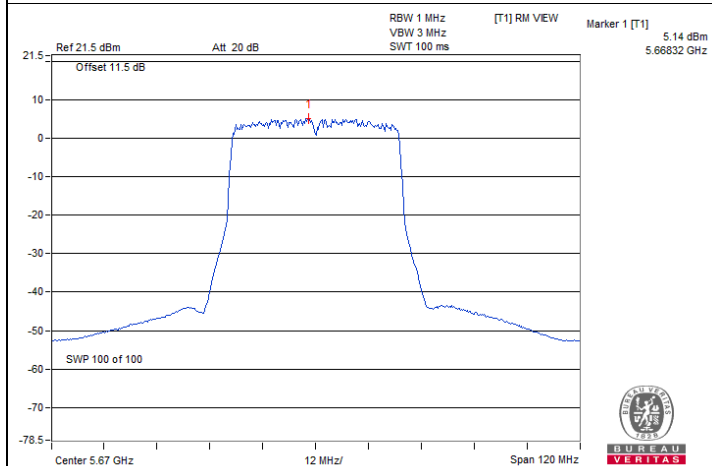
Spectrum Plot of Maximum Value



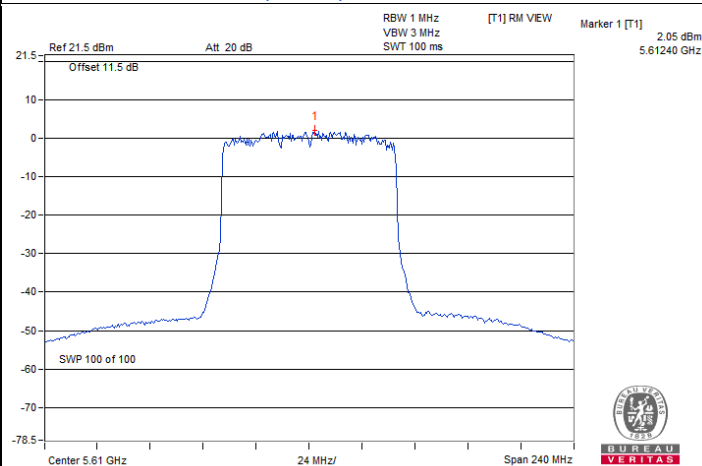
802.11a / Chain 0 : CH 100



802.11ax (HE20) / Chain 0 : CH 140



802.11ax (HE40) / Chain 0 : CH 134



802.11ax (HE80) / Chain 0 : CH 122

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	-3.53	-3.85	-0.68	0.23	1.77	27.82	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.18-6) = 27.82$ dBm/500kHz.

802.11ax (HE20)

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	-4.30	-4.37	-1.32	0.19	1.09	27.82	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.18-6) = 27.82$ dBm/500kHz.

802.11ax (HE40)

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	-6.33	-6.69	-3.5	0.2	-1.08	27.82	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.18-6) = 27.82$ dBm/500kHz.

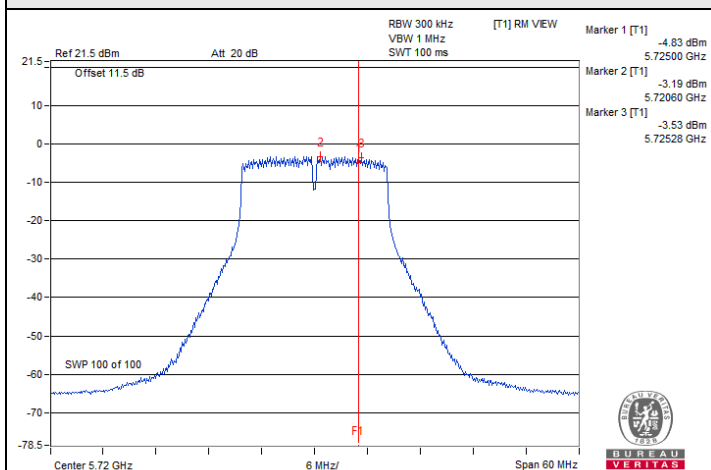
802.11ax (HE80)

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	-10.09	-10.67	-7.36	0.19	-4.95	27.82	Pass

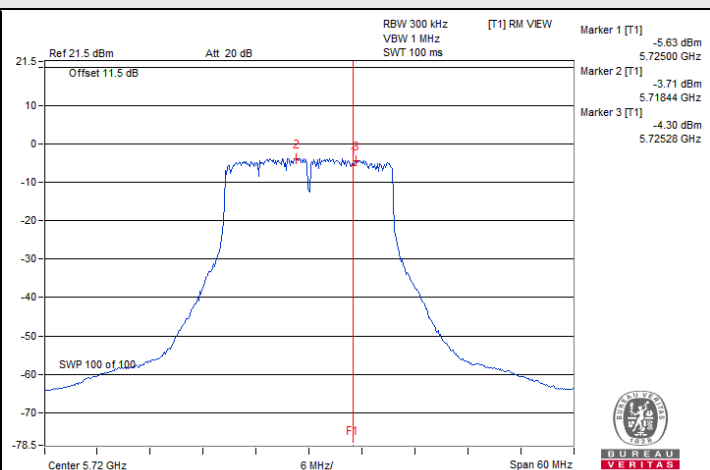
Notes:

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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.18-6) = 27.82$ dBm/500kHz.

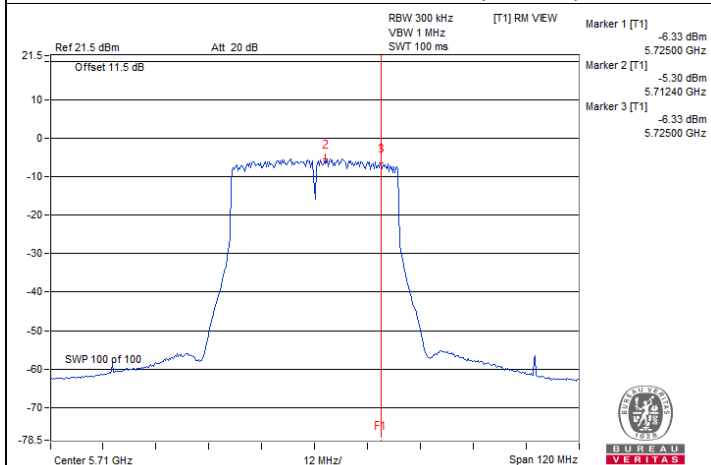
Spectrum Plot of Maximum Value



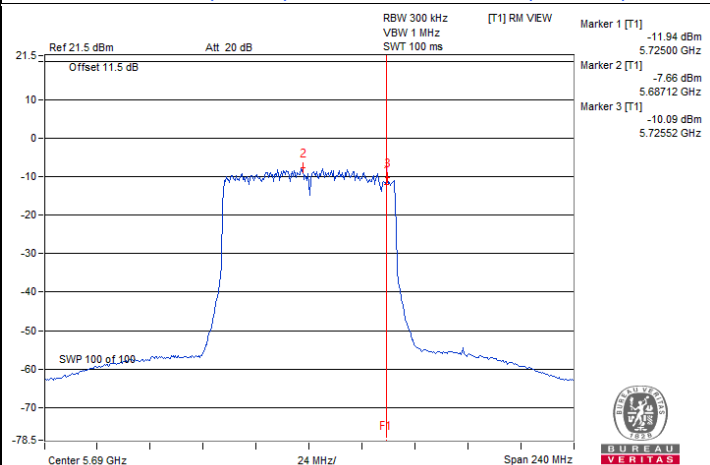
802.11a / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)

7.4 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin
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802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	2.54	2.72	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	3.30	4.10	0.5	Pass

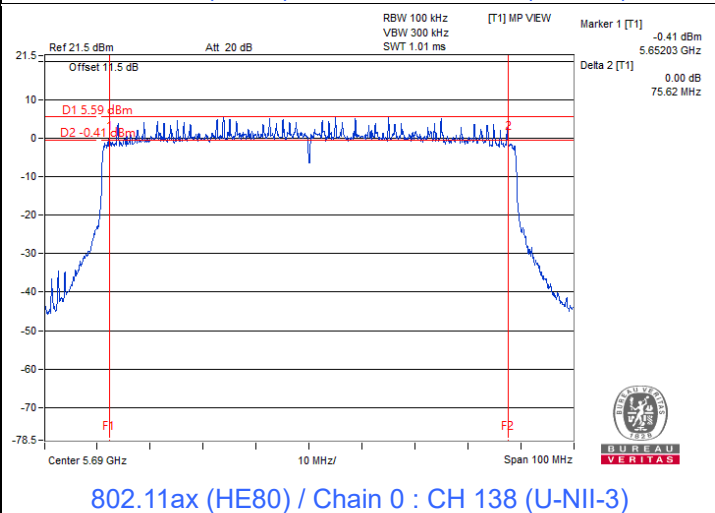
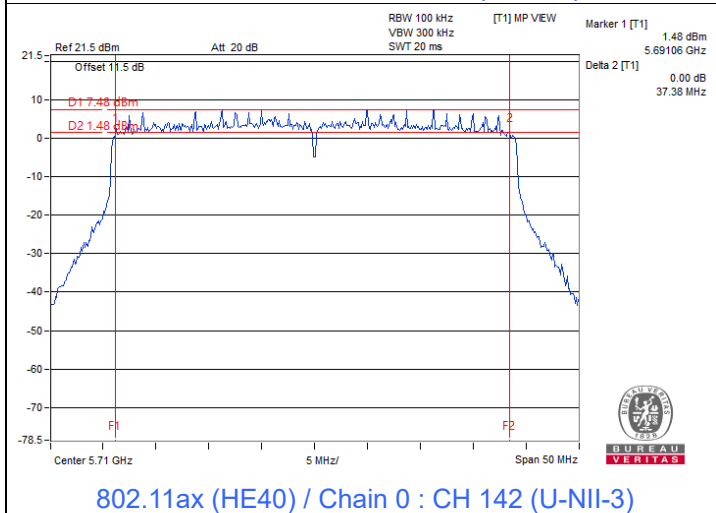
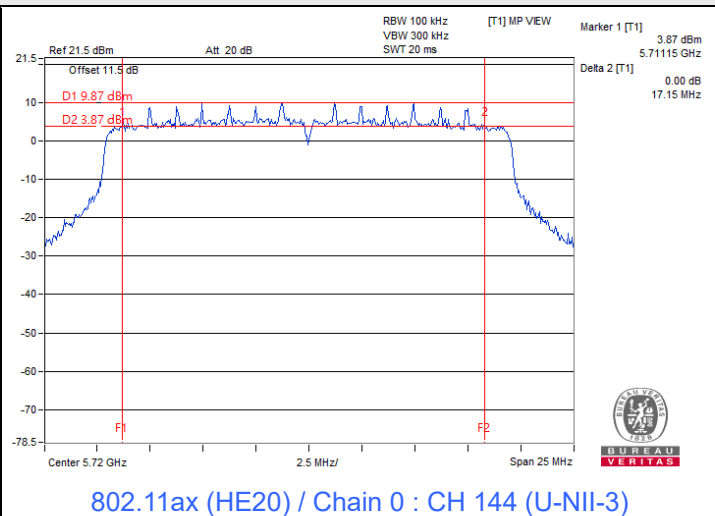
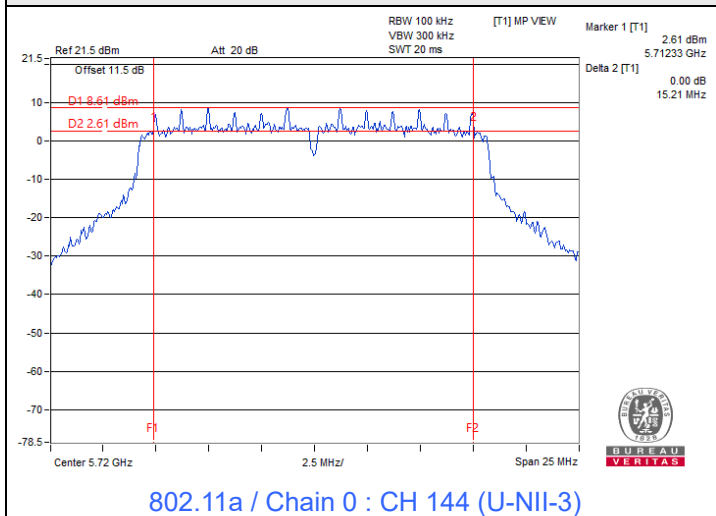
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
142 (U-NII-3)	5710	3.44	3.46	0.5	Pass

802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
138 (U-NII-3)	5690	2.65	2.76	0.5	Pass

Spectrum Plot of Minimum Value



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:	Chris Lin
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802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.44	16.44
60	5300	16.44	16.44
64	5320	16.44	16.44
100	5500	16.44	16.44
116	5580	16.44	16.44
140	5700	16.44	16.44
144 (U-NII-2C)	5720	13.28	13.28
144 (U-NII-3)	5720	3.16	3.16

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.96	18.96
60	5300	18.96	18.96
64	5320	18.96	18.96
100	5500	18.96	18.96
116	5580	18.96	18.96
140	5700	18.96	18.96
144 (U-NII-2C)	5720	14.60	14.60
144 (U-NII-3)	5720	4.36	4.36

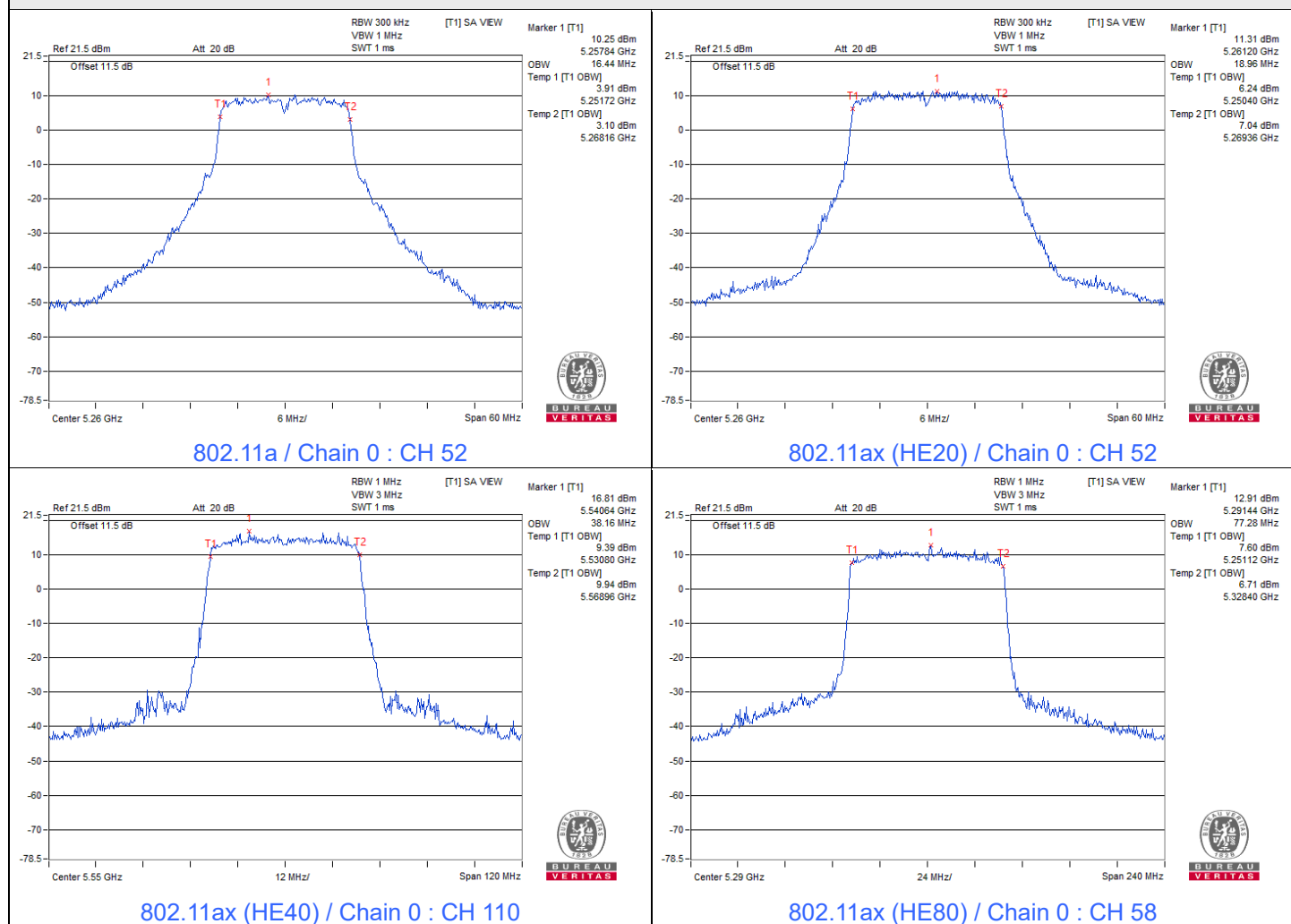
802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	37.92	37.92
62	5310	37.92	37.92
102	5510	37.92	38.16
110	5550	38.16	37.92
134	5670	38.16	37.92
142 (U-NII-2C)	5710	34.20	34.20
142 (U-NII-3)	5710	3.96	3.72

802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	77.28	77.28
106	5530	77.28	77.28
122	5610	77.28	77.28
138 (U-NII-2C)	5690	73.88	73.88
138 (U-NII-3)	5690	3.40	3.40

Spectrum Plot of Maximum Value



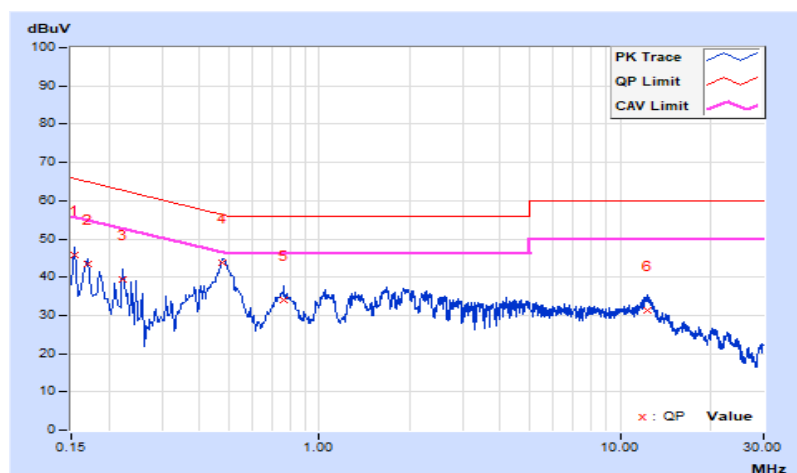
7.6 AC Power Conducted Emissions

RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	150 kHz ~ 30 MHz	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	10.10	35.66	24.53	45.76	34.63	65.78	55.78	-20.02	-21.15
2	0.16977	10.10	33.21	19.99	43.31	30.09	64.97	54.97	-21.66	-24.88
3	0.22200	10.11	29.16	13.37	39.27	23.48	62.74	52.74	-23.47	-29.26
4	0.47938	10.11	33.69	27.09	43.80	37.20	56.35	46.35	-12.55	-9.15
5	0.76200	10.13	23.87	19.25	34.00	29.38	56.00	46.00	-22.00	-16.62
6	12.29800	10.36	21.09	15.37	31.45	25.73	60.00	50.00	-28.55	-24.27

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

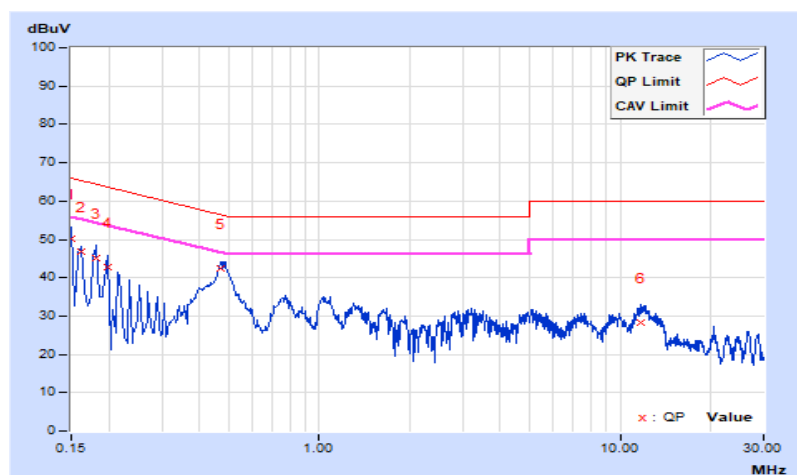


RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	0.15000	10.13	39.96	22.49	50.09	32.62	66.00	56.00	-15.91	-23.38
2	0.16200	10.13	36.55	21.75	46.68	31.88	65.36	55.36	-18.68	-23.48
3	0.18200	10.14	35.12	19.30	45.26	29.44	64.39	54.39	-19.13	-24.95
4	0.19800	10.14	32.60	17.30	42.74	27.44	63.69	53.69	-20.95	-26.25
5	0.46938	10.14	32.43	27.54	42.57	37.68	56.52	46.52	-13.95	-8.84
6	11.72200	10.42	18.00	12.00	28.42	22.42	60.00	50.00	-31.58	-27.58

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



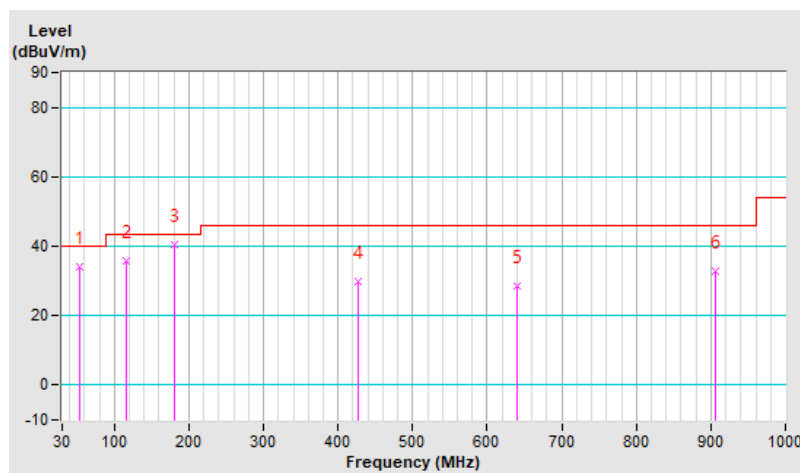
7.7 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	54.25	34.2 QP	40.0	-5.8	2.00 H	83	46.7	-12.5
2	116.33	35.6 QP	43.5	-7.9	1.00 H	252	50.0	-14.4
3	181.32	40.3 QP	43.5	-3.2	1.50 H	59	54.3	-14.0
4	426.73	29.8 QP	46.0	-16.2	2.00 H	158	38.1	-8.3
5	641.10	28.6 QP	46.0	-17.4	1.00 H	12	32.3	-3.7
6	905.91	32.8 QP	46.0	-13.2	1.50 H	261	33.0	-0.2

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

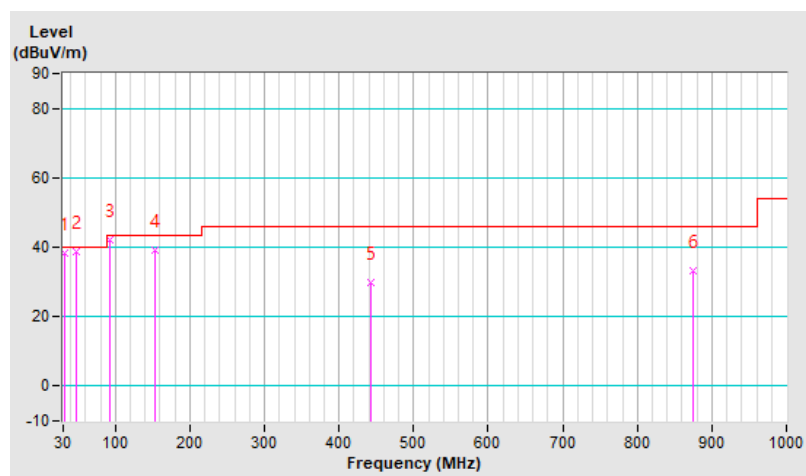


RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	32.91	38.2 QP	40.0	-1.8	1.00 V	72	51.2	-13.0
2	48.43	38.9 QP	40.0	-1.1	1.50 V	25	51.1	-12.2
3	92.08	42.2 QP	43.5	-1.3	1.00 V	22	60.0	-17.8
4	154.16	39.1 QP	43.5	-4.4	2.00 V	194	51.2	-12.1
5	443.22	29.7 QP	46.0	-16.3	1.00 V	168	37.5	-7.8
6	874.87	33.1 QP	46.0	-12.9	1.50 V	197	33.5	-0.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.8 Unwanted Emissions above 1 GHz

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, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	58.8 PK	74.0	-15.2	1.46 H	332	53.2	5.6
2	5150.00	45.0 AV	54.0	-9.0	1.46 H	332	39.4	5.6
3	*5260.00	111.6 PK			1.46 H	332	70.5	41.1
4	*5260.00	101.7 AV			1.46 H	332	60.6	41.1
5	#10520.00	60.6 PK	68.2	-7.6	1.85 H	220	47.1	13.5
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	59.2 PK	74.0	-14.8	1.50 V	340	53.6	5.6
2	5150.00	45.9 AV	54.0	-8.1	1.50 V	340	40.3	5.6
3	*5260.00	121.5 PK			1.50 V	340	80.4	41.1
4	*5260.00	111.2 AV			1.50 V	340	70.1	41.1
5	#10520.00	60.9 PK	68.2	-7.3	2.37 V	146	47.4	13.5

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	802.11a	Channel	CH 60 : 5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	111.8 PK			1.47 H	330	70.9	40.9
2	*5300.00	101.6 AV			1.47 H	330	60.7	40.9
3	10600.00	60.9 PK	74.0	-13.1	2.64 H	183	47.7	13.2
4	10600.00	48.3 AV	54.0	-5.7	2.64 H	183	35.1	13.2
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	*5300.00	120.8 PK			1.46 V	334	79.9	40.9
2	*5300.00	110.3 AV			1.46 V	334	69.4	40.9
3	10600.00	61.1 PK	74.0	-12.9	1.87 V	32	47.9	13.2
4	10600.00	48.6 AV	54.0	-5.4	1.87 V	32	35.4	13.2

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 64 : 5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	112.6 PK			1.47 H	334	71.7	40.9
2	*5320.00	102.1 AV			1.47 H	334	61.2	40.9
3	5350.00	58.6 PK	74.0	-15.4	1.47 H	334	53.6	5.0
4	5350.00	45.3 AV	54.0	-8.7	1.47 H	334	40.3	5.0
5	10640.00	62.1 PK	74.0	-11.9	2.71 H	153	48.7	13.4
6	10640.00	48.2 AV	54.0	-5.8	2.71 H	153	34.8	13.4
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	*5320.00	121.0 PK			1.45 V	336	80.1	40.9
2	*5320.00	110.6 AV			1.45 V	336	69.7	40.9
3	5350.00	61.2 PK	74.0	-12.8	1.45 V	336	56.2	5.0
4	5350.00	48.2 AV	54.0	-5.8	1.45 V	336	43.2	5.0
5	10640.00	62.7 PK	74.0	-11.3	2.04 V	173	49.3	13.4
6	10640.00	48.6 AV	54.0	-5.4	2.04 V	173	35.2	13.4

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.

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, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	58.6 PK	74.0	-15.4	1.47 H	331	53.2	5.4
2	5460.00	45.8 AV	54.0	-8.2	1.47 H	331	40.4	5.4
3	#5470.00	58.9 PK	68.2	-9.3	1.47 H	331	53.5	5.4
4	*5500.00	110.7 PK			1.47 H	331	69.2	41.5
5	*5500.00	100.4 AV			1.47 H	331	58.9	41.5
6	11000.00	61.1 PK	74.0	-12.9	2.38 H	128	48.3	12.8
7	11000.00	47.9 AV	54.0	-6.1	2.38 H	128	35.1	12.8
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	5460.00	60.1 PK	74.0	-13.9	1.49 V	325	54.7	5.4
2	5460.00	47.9 AV	54.0	-6.1	1.49 V	325	42.5	5.4
3	#5470.00	63.0 PK	68.2	-5.2	1.49 V	325	57.6	5.4
4	*5500.00	121.4 PK			1.49 V	325	79.9	41.5
5	*5500.00	110.9 AV			1.49 V	325	69.4	41.5
6	11000.00	61.5 PK	74.0	-12.5	2.58 V	123	48.7	12.8
7	11000.00	48.2 AV	54.0	-5.8	2.58 V	123	35.4	12.8

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	802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	110.2 PK			1.51 H	335	68.4	41.8
2	*5580.00	99.9 AV			1.51 H	335	58.1	41.8
3	11160.00	60.8 PK	74.0	-13.2	2.17 H	158	48.2	12.6
4	11160.00	47.6 AV	54.0	-6.4	2.17 H	158	35.0	12.6
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	*5580.00	122.3 PK			1.60 V	325	80.5	41.8
2	*5580.00	111.6 AV			1.60 V	325	69.8	41.8
3	11160.00	61.1 PK	74.0	-12.9	2.76 V	141	48.5	12.6
4	11160.00	47.9 AV	54.0	-6.1	2.76 V	141	35.3	12.6

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.

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, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	107.2 PK			1.44 H	343	65.5	41.7
2	*5700.00	97.2 AV			1.44 H	343	55.5	41.7
3	#5725.00	59.0 PK	68.2	-9.2	1.44 H	343	53.3	5.7
4	11400.00	61.1 PK	74.0	-12.9	1.83 H	225	48.0	13.1
5	11400.00	47.8 AV	54.0	-6.2	1.83 H	225	34.7	13.1
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	*5700.00	120.7 PK			1.63 V	323	79.0	41.7
2	*5700.00	110.4 AV			1.63 V	323	68.7	41.7
3	#5725.00	62.6 PK	68.2	-5.6	1.63 V	323	56.9	5.7
4	11400.00	61.4 PK	74.0	-12.6	2.73 V	289	48.3	13.1
5	11400.00	48.3 AV	54.0	-5.7	2.73 V	289	35.2	13.1

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 144 : 5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	*5720.00	108.1 PK			1.54 H	338	66.4	41.7
2	*5720.00	97.9 AV			1.54 H	338	56.2	41.7
3	#5850.00	59.6 PK	68.2	-8.6	1.54 H	338	53.2	6.4
4	11440.00	60.8 PK	74.0	-13.2	1.73 H	218	47.8	13.0
5	11440.00	47.6 AV	54.0	-6.4	1.73 H	218	34.6	13.0
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	*5720.00	121.4 PK			1.61 V	323	79.7	41.7
2	*5720.00	110.8 AV			1.61 V	323	69.1	41.7
3	#5850.00	60.7 PK	68.2	-7.5	1.61 V	323	54.3	6.4
4	11440.00	61.0 PK	74.0	-13.0	2.38 V	178	48.0	13.0
5	11440.00	47.9 AV	54.0	-6.1	2.38 V	178	34.9	13.0

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	802.11ax (HE20)	Channel	CH 52 : 5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	58.8 PK	74.0	-15.2	1.50 H	332	53.2	5.6
2	5150.00	45.4 AV	54.0	-8.6	1.50 H	332	39.8	5.6
3	*5260.00	115.0 PK			1.50 H	332	73.9	41.1
4	*5260.00	100.9 AV			1.50 H	332	59.8	41.1
5	#10520.00	61.6 PK	68.2	-6.6	1.73 H	130	48.1	13.5
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	58.9 PK	74.0	-15.1	1.49 V	338	53.3	5.6
2	5150.00	45.6 AV	54.0	-8.4	1.49 V	338	40.0	5.6
3	*5260.00	123.1 PK			1.49 V	338	82.0	41.1
4	*5260.00	109.9 AV			1.49 V	338	68.8	41.1
5	#10520.00	61.9 PK	68.2	-6.3	1.86 V	225	48.4	13.5

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	802.11ax (HE20)	Channel	CH 60 : 5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	113.7 PK			1.43 H	330	72.8	40.9
2	*5300.00	100.5 AV			1.43 H	330	59.6	40.9
3	10600.00	61.5 PK	74.0	-12.5	2.97 H	143	48.3	13.2
4	10600.00	47.7 AV	54.0	-6.3	2.97 H	143	34.5	13.2
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	*5300.00	122.8 PK			1.44 V	323	81.9	40.9
2	*5300.00	109.0 AV			1.44 V	323	68.1	40.9
3	10600.00	61.8 PK	74.0	-12.2	2.73 V	172	48.6	13.2
4	10600.00	47.9 AV	54.0	-6.1	2.73 V	172	34.7	13.2

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	802.11ax (HE20)	Channel	CH 64 : 5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	114.5 PK			1.53 H	329	73.6	40.9
2	*5320.00	100.9 AV			1.53 H	329	60.0	40.9
3	5350.00	58.2 PK	74.0	-15.8	1.53 H	329	53.2	5.0
4	5350.00	45.2 AV	54.0	-8.8	1.53 H	329	40.2	5.0
5	10640.00	61.5 PK	74.0	-12.5	2.27 H	149	48.1	13.4
6	10640.00	47.4 AV	54.0	-6.6	2.27 H	149	34.0	13.4
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	*5320.00	123.2 PK			1.54 V	331	82.3	40.9
2	*5320.00	109.6 AV			1.54 V	331	68.7	40.9
3	5350.00	60.9 PK	74.0	-13.1	1.54 V	331	55.9	5.0
4	5350.00	48.3 AV	54.0	-5.7	1.54 V	331	43.3	5.0
5	10640.00	61.8 PK	74.0	-12.2	2.14 V	226	48.4	13.4
6	10640.00	47.8 AV	54.0	-6.2	2.14 V	226	34.4	13.4

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.

RF Mode	802.11ax (HE20)	Channel	CH 100 : 5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	59.7 PK	74.0	-14.3	1.49 H	331	54.3	5.4
2	5460.00	46.2 AV	54.0	-7.8	1.49 H	331	40.8	5.4
3	#5470.00	59.2 PK	68.2	-9.0	1.49 H	331	53.8	5.4
4	*5500.00	113.9 PK			1.49 H	331	72.4	41.5
5	*5500.00	100.5 AV			1.49 H	331	59.0	41.5
6	11000.00	61.2 PK	74.0	-12.8	2.04 H	176	48.4	12.8
7	11000.00	47.0 AV	54.0	-7.0	2.04 H	176	34.2	12.8
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	5460.00	60.8 PK	74.0	-13.2	1.52 V	328	55.4	5.4
2	5460.00	48.5 AV	54.0	-5.5	1.52 V	328	43.1	5.4
3	#5470.00	62.3 PK	68.2	-5.9	1.52 V	328	56.9	5.4
4	*5500.00	124.1 PK			1.52 V	328	82.6	41.5
5	*5500.00	110.5 AV			1.52 V	328	69.0	41.5
6	11000.00	61.5 PK	74.0	-12.5	1.96 V	232	48.7	12.8
7	11000.00	47.2 AV	54.0	-6.8	1.96 V	232	34.4	12.8

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	802.11ax (HE20)	Channel	CH 116 : 5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	112.3 PK			1.49 H	320	70.5	41.8
2	*5580.00	99.2 AV			1.49 H	320	57.4	41.8
3	11160.00	60.1 PK	74.0	-13.9	2.74 H	169	47.5	12.6
4	11160.00	46.9 AV	54.0	-7.1	2.74 H	169	34.3	12.6
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	*5580.00	124.2 PK			1.50 V	323	82.4	41.8
2	*5580.00	110.5 AV			1.50 V	323	68.7	41.8
3	11160.00	59.8 PK	74.0	-14.2	1.87 V	111	47.2	12.6
4	11160.00	46.7 AV	54.0	-7.3	1.87 V	111	34.1	12.6

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.

RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	111.0 PK			1.50 H	344	69.3	41.7
2	*5700.00	97.4 AV			1.50 H	344	55.7	41.7
3	#5725.00	59.0 PK	68.2	-9.2	1.50 H	344	53.3	5.7
4	11400.00	60.6 PK	74.0	-13.4	2.64 H	183	47.5	13.1
5	11400.00	47.3 AV	54.0	-6.7	2.64 H	183	34.2	13.1
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	*5700.00	124.1 PK			1.94 V	320	82.4	41.7
2	*5700.00	110.0 AV			1.94 V	320	68.3	41.7
3	#5725.00	64.0 PK	68.2	-4.2	1.94 V	320	58.3	5.7
4	11400.00	61.0 PK	74.0	-13.0	2.21 V	156	47.9	13.1
5	11400.00	47.7 AV	54.0	-6.3	2.21 V	156	34.6	13.1

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	802.11ax (HE20)	Channel	CH 144 : 5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	*5720.00	111.6 PK			1.59 H	345	69.9	41.7
2	*5720.00	97.3 AV			1.59 H	345	55.6	41.7
3	#5850.00	59.7 PK	68.2	-8.5	1.59 H	345	53.3	6.4
4	11440.00	60.4 PK	74.0	-13.6	1.23 H	249	47.4	13.0
5	11440.00	47.2 AV	54.0	-6.8	1.23 H	249	34.2	13.0
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	*5720.00	123.8 PK			1.60 V	320	82.1	41.7
2	*5720.00	110.3 AV			1.60 V	320	68.6	41.7
3	#5850.00	60.6 PK	68.2	-7.6	1.60 V	320	54.2	6.4
4	11440.00	60.6 PK	74.0	-13.4	2.89 V	117	47.6	13.0
5	11440.00	47.5 AV	54.0	-6.5	2.89 V	117	34.5	13.0

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	802.11ax (HE40)	Channel	CH 54 : 5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	58.9 PK	74.0	-15.1	1.46 H	331	53.3	5.6
2	5150.00	45.0 AV	54.0	-9.0	1.46 H	331	39.4	5.6
3	*5270.00	111.4 PK			1.46 H	331	70.3	41.1
4	*5270.00	98.2 AV			1.46 H	331	57.1	41.1
5	#10540.00	60.7 PK	68.2	-7.5	2.73 H	118	47.3	13.4
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	59.7 PK	74.0	-14.3	1.43 V	326	54.1	5.6
2	5150.00	45.9 AV	54.0	-8.1	1.43 V	326	40.3	5.6
3	*5270.00	119.9 PK			1.43 V	326	78.8	41.1
4	*5270.00	106.5 AV			1.43 V	326	65.4	41.1
5	#10540.00	61.0 PK	68.2	-7.2	2.39 V	145	47.6	13.4

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	802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	111.6 PK			1.44 H	327	70.7	40.9
2	*5310.00	98.6 AV			1.44 H	327	57.7	40.9
3	5350.00	60.0 PK	74.0	-14.0	1.44 H	327	55.0	5.0
4	5350.00	46.7 AV	54.0	-7.3	1.44 H	327	41.7	5.0
5	10620.00	60.3 PK	74.0	-13.7	2.27 H	127	47.1	13.2
6	10620.00	47.2 AV	54.0	-6.8	2.27 H	127	34.0	13.2
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	*5310.00	119.7 PK			1.51 V	330	78.8	40.9
2	*5310.00	107.1 AV			1.51 V	330	66.2	40.9
3	5350.00	66.8 PK	74.0	-7.2	1.51 V	330	61.8	5.0
4	5350.00	51.4 AV	54.0	-2.6	1.51 V	330	46.4	5.0
5	10620.00	60.5 PK	74.0	-13.5	2.75 V	332	47.3	13.2
6	10620.00	47.4 AV	54.0	-6.6	2.75 V	332	34.2	13.2

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	802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	58.4 PK	74.0	-15.6	1.51 H	323	53.0	5.4
2	5460.00	45.6 AV	54.0	-8.4	1.51 H	323	40.2	5.4
3	#5470.00	59.4 PK	68.2	-8.8	1.51 H	323	54.0	5.4
4	*5510.00	109.4 PK			1.51 H	323	67.8	41.6
5	*5510.00	96.2 AV			1.51 H	323	54.6	41.6
6	11020.00	59.9 PK	74.0	-14.1	1.65 H	120	47.2	12.7
7	11020.00	46.8 AV	54.0	-7.2	1.65 H	120	34.1	12.7
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	1.60 V	327	57.1	5.4
2	5460.00	49.9 AV	54.0	-4.1	1.60 V	327	44.5	5.4
3	#5470.00	67.3 PK	68.2	-0.9	1.60 V	327	61.9	5.4
4	*5510.00	120.5 PK			1.60 V	327	78.9	41.6
5	*5510.00	107.0 AV			1.60 V	327	65.4	41.6
6	11020.00	60.2 PK	74.0	-13.8	2.31 V	173	47.5	12.7
7	11020.00	47.0 AV	54.0	-7.0	2.31 V	173	34.3	12.7

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	802.11ax (HE40)	Channel	CH 110 : 5550 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	109.6 PK			1.44 H	330	67.9	41.7
2	*5550.00	96.4 AV			1.44 H	330	54.7	41.7
3	11100.00	59.7 PK	74.0	-14.3	1.73 H	232	47.3	12.4
4	11100.00	46.6 AV	54.0	-7.4	1.73 H	232	34.2	12.4
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	*5550.00	121.4 PK			1.69 V	322	79.7	41.7
2	*5550.00	107.4 AV			1.69 V	322	65.7	41.7
3	11100.00	59.9 PK	74.0	-14.1	2.74 V	108	47.5	12.4
4	11100.00	46.7 AV	54.0	-7.3	2.74 V	108	34.3	12.4

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.

RF Mode	802.11ax (HE40)	Channel	CH 134 : 5670 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	107.9 PK			1.45 H	343	66.1	41.8
2	*5670.00	94.7 AV			1.45 H	343	52.9	41.8
3	#5725.00	58.9 PK	68.2	-9.3	1.45 H	343	53.2	5.7
4	11340.00	60.2 PK	74.0	-13.8	1.93 H	222	47.4	12.8
5	11340.00	47.1 AV	54.0	-6.9	1.93 H	222	34.3	12.8
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	*5670.00	121.5 PK			1.65 V	325	79.7	41.8
2	*5670.00	108.3 AV			1.65 V	325	66.5	41.8
3	#5725.00	66.9 PK	68.2	-1.3	1.65 V	325	61.2	5.7
4	11340.00	60.6 PK	74.0	-13.4	2.21 V	185	47.8	12.8
5	11340.00	47.4 AV	54.0	-6.6	2.21 V	185	34.6	12.8

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	802.11ax (HE40)	Channel	CH 142 : 5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	*5710.00	108.0 PK			1.46 H	345	66.3	41.7
2	*5710.00	94.9 AV			1.46 H	345	53.2	41.7
3	#5850.00	59.3 PK	68.2	-8.9	1.46 H	345	52.9	6.4
4	11420.00	60.7 PK	74.0	-13.3	2.20 H	138	47.5	13.2
5	11420.00	47.4 AV	54.0	-6.6	2.20 H	138	34.2	13.2
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	*5710.00	121.6 PK			1.63 V	324	79.9	41.7
2	*5710.00	107.9 AV			1.63 V	324	66.2	41.7
3	#5850.00	60.5 PK	68.2	-7.7	1.63 V	324	54.1	6.4
4	11420.00	60.9 PK	74.0	-13.1	2.93 V	34	47.7	13.2
5	11420.00	47.6 AV	54.0	-6.4	2.93 V	34	34.4	13.2

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	802.11ax (HE80)	Channel	CH 58 : 5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	108.1 PK			1.47 H	331	67.2	40.9
2	*5290.00	95.2 AV			1.47 H	331	54.3	40.9
3	5350.00	61.9 PK	74.0	-12.1	1.47 H	331	56.9	5.0
4	5350.00	46.7 AV	54.0	-7.3	1.47 H	331	41.7	5.0
5	#10580.00	60.4 PK	68.2	-7.8	2.78 H	196	47.1	13.3
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	*5290.00	116.1 PK			1.51 V	325	75.2	40.9
2	*5290.00	103.8 AV			1.51 V	325	62.9	40.9
3	5350.00	72.3 PK	74.0	-1.7	1.51 V	325	67.3	5.0
4	5350.00	53.6 AV	54.0	-0.4	1.51 V	325	48.6	5.0
5	#10580.00	60.7 PK	68.2	-7.5	2.37 V	119	47.4	13.3

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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	62.3 PK	74.0	-11.7	1.48 H	333	56.9	5.4
2	5460.00	48.7 AV	54.0	-5.3	1.48 H	333	43.3	5.4
3	#5470.00	62.9 PK	68.2	-5.3	1.48 H	333	57.5	5.4
4	*5530.00	106.3 PK			1.48 H	333	64.6	41.7
5	*5530.00	93.9 AV			1.48 H	333	52.2	41.7
6	11060.00	60.0 PK	74.0	-14.0	2.74 H	128	47.4	12.6
7	11060.00	46.8 AV	54.0	-7.2	2.74 H	128	34.2	12.6
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	5460.00	67.3 PK	74.0	-6.7	1.62 V	325	61.9	5.4
2	5460.00	53.1 AV	54.0	-0.9	1.62 V	325	47.7	5.4
3	#5470.00	67.8 PK	68.2	-0.4	1.62 V	325	62.4	5.4
4	*5530.00	117.4 PK			1.62 V	325	75.7	41.7
5	*5530.00	103.5 AV			1.62 V	325	61.8	41.7
6	11060.00	60.1 PK	74.0	-13.9	2.28 V	194	47.5	12.6
7	11060.00	47.0 AV	54.0	-7.0	2.28 V	194	34.4	12.6

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	802.11ax (HE80)	Channel	CH 122 : 5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	105.5 PK			1.54 H	330	63.6	41.9
2	*5610.00	92.6 AV			1.54 H	330	50.7	41.9
3	#5725.00	60.4 PK	68.2	-7.8	1.54 H	330	54.7	5.7
4	11220.00	59.7 PK	74.0	-14.3	2.37 H	196	47.1	12.6
5	11220.00	46.4 AV	54.0	-7.6	2.37 H	196	33.8	12.6
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	*5610.00	119.3 PK			1.57 V	325	77.4	41.9
2	*5610.00	106.0 AV			1.57 V	325	64.1	41.9
3	#5725.00	63.6 PK	68.2	-4.6	1.57 V	325	57.9	5.7
4	11220.00	59.9 PK	74.0	-14.1	2.49 V	282	47.3	12.6
5	11220.00	46.7 AV	54.0	-7.3	2.49 V	282	34.1	12.6

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	802.11ax (HE80)	Channel	CH 138 : 5690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	19 °C, 65 % RH
Tested By	vincent chen		

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	*5690.00	104.8 PK			1.51 H	348	63.1	41.7
2	*5690.00	91.1 AV			1.51 H	348	49.4	41.7
3	#5850.00	59.6 PK	68.2	-8.6	1.51 H	348	53.2	6.4
4	11380.00	60.2 PK	74.0	-13.8	2.21 H	173	47.2	13.0
5	11380.00	46.8 AV	54.0	-7.2	2.21 H	173	33.8	13.0
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	*5690.00	117.4 PK			1.69 V	323	75.7	41.7
2	*5690.00	104.8 AV			1.69 V	323	63.1	41.7
3	#5850.00	60.2 PK	68.2	-8.0	1.69 V	323	53.8	6.4
4	11380.00	60.4 PK	74.0	-13.6	2.97 V	180	47.4	13.0
5	11380.00	47.0 AV	54.0	-7.0	2.97 V	180	34.0	13.0

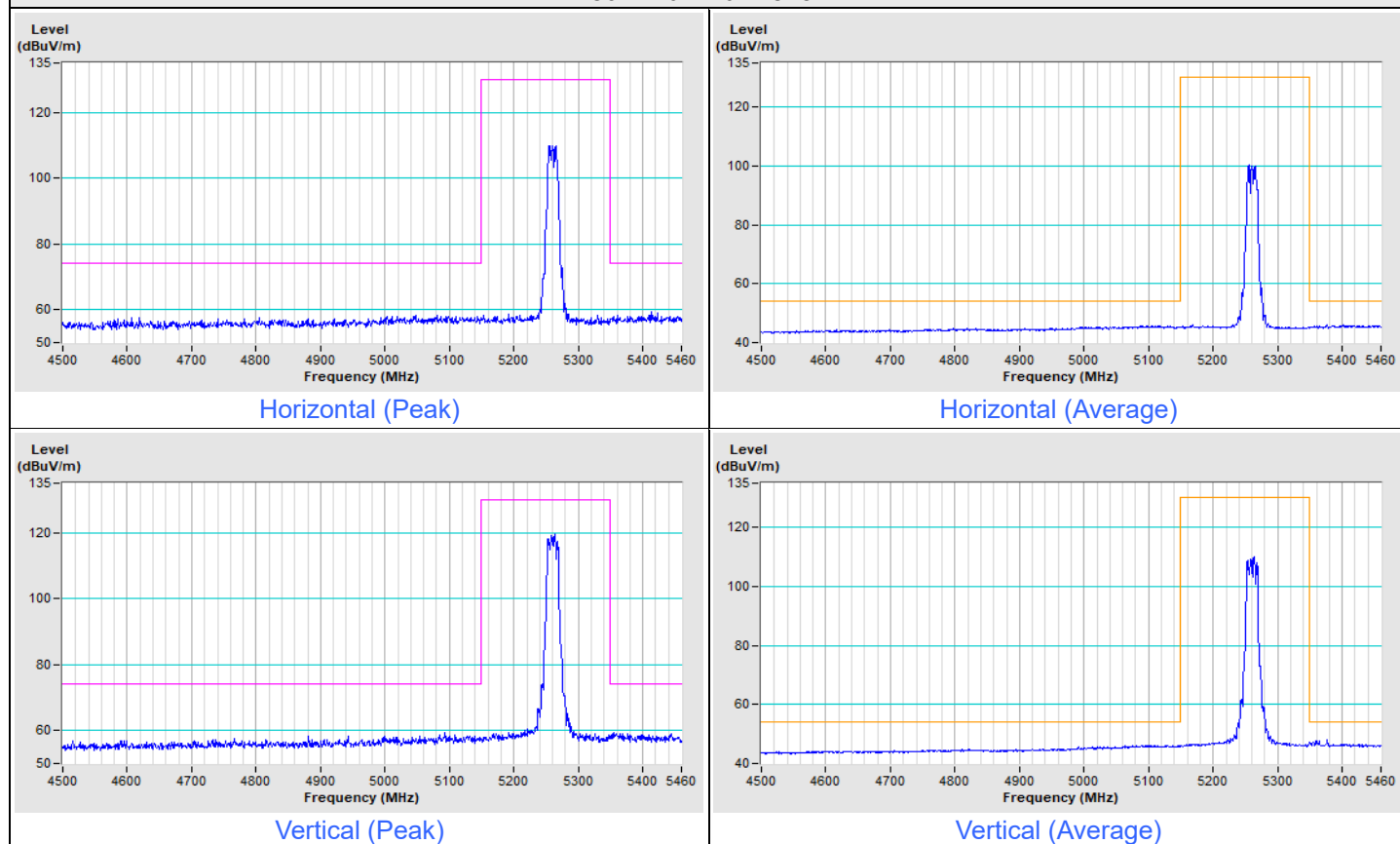
Remarks:

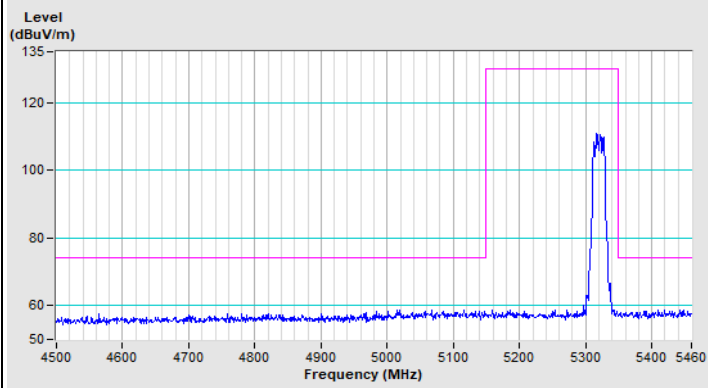
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

Plot of Band Edge

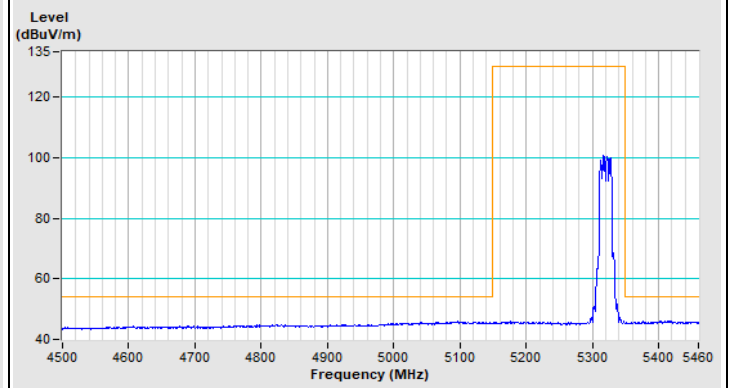
Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11a Channel 52

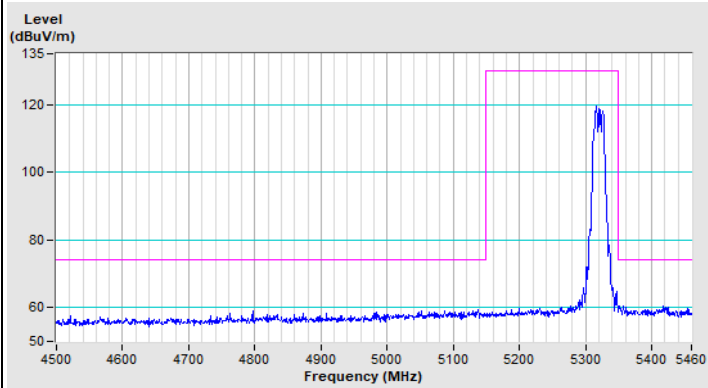


802.11a Channel 64

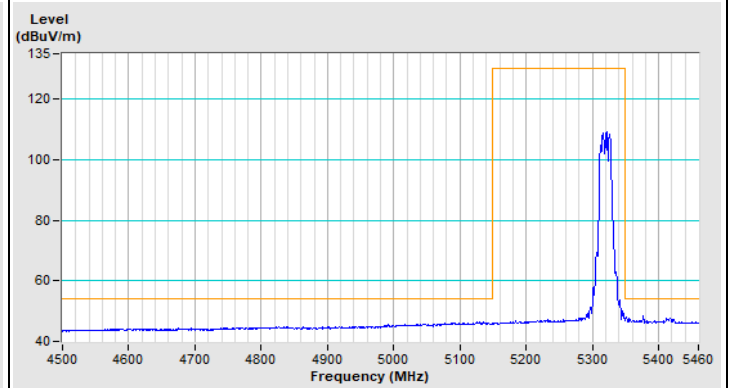
Horizontal (Peak)



Horizontal (Average)



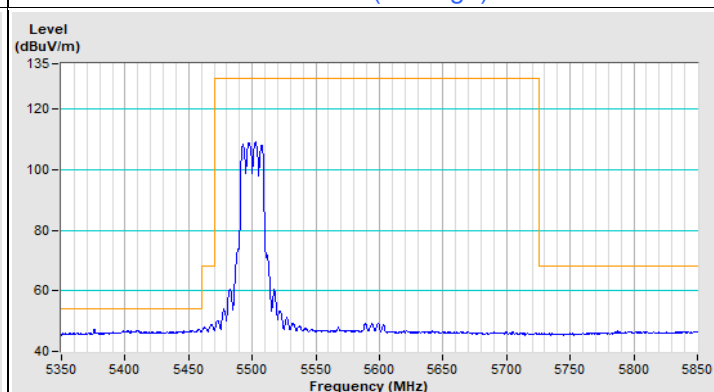
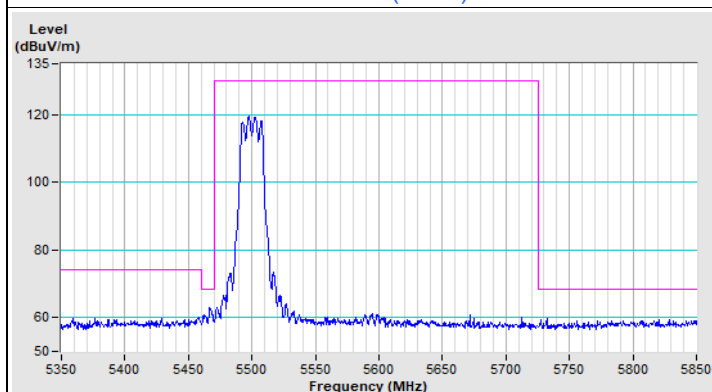
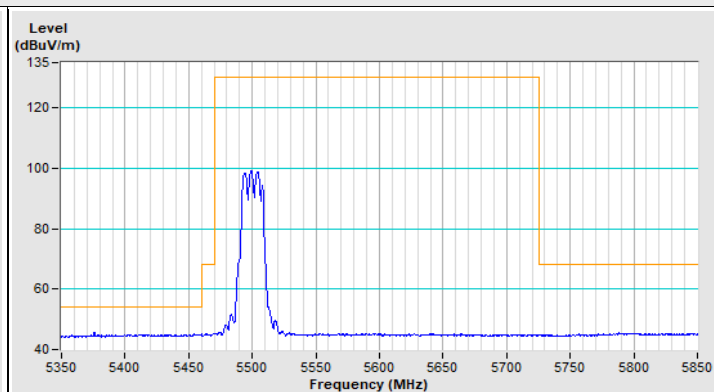
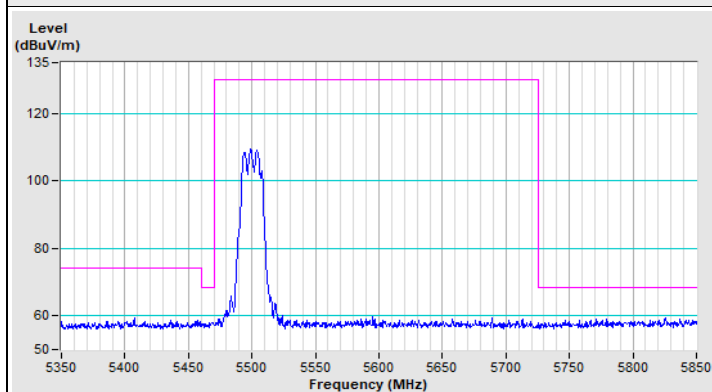
Vertical (Peak)



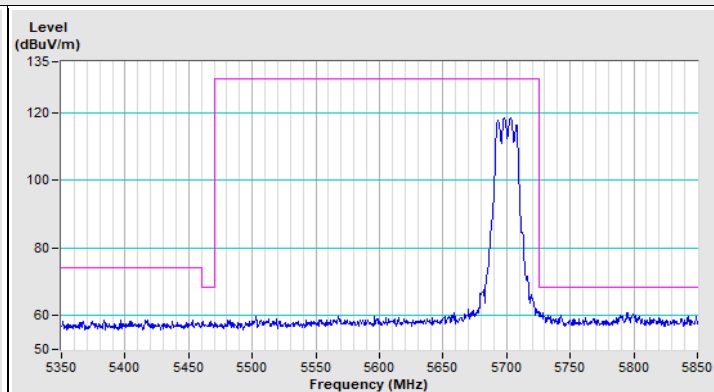
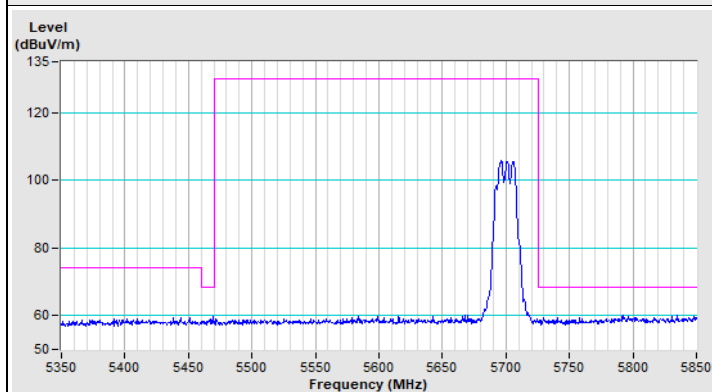
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11a Channel 100

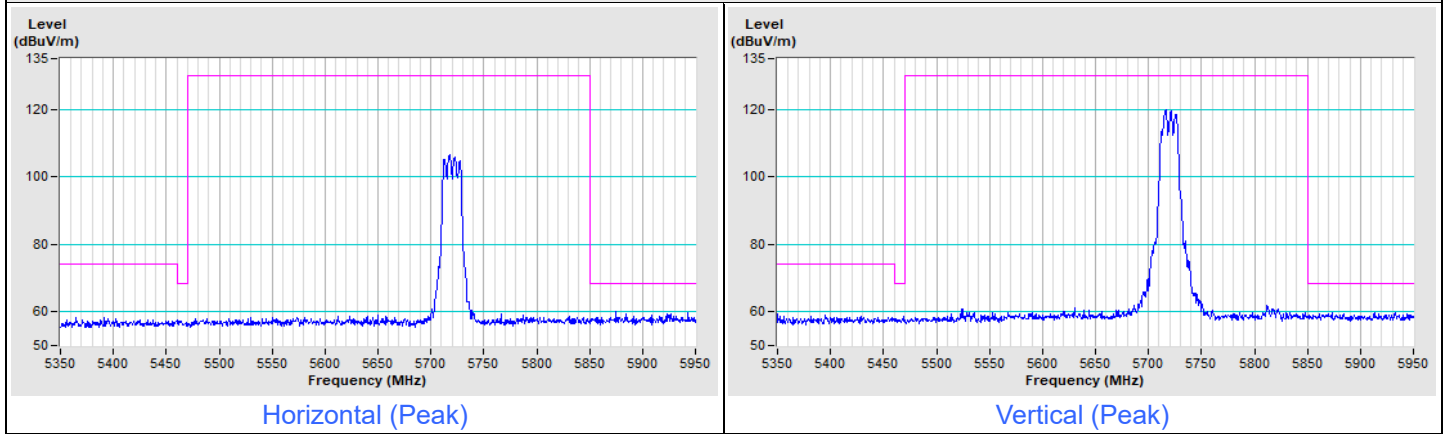


802.11a Channel 140



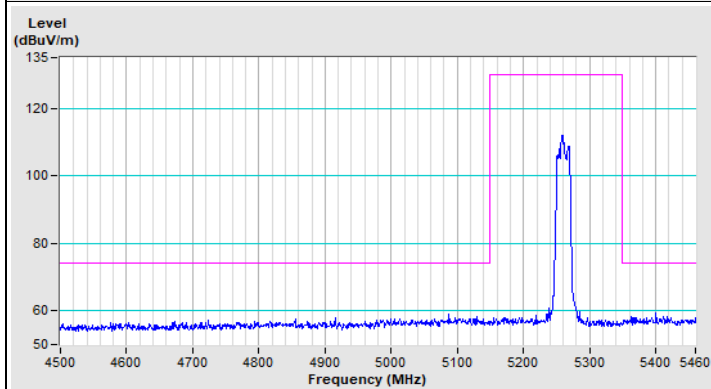
Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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802.11a Channel 144

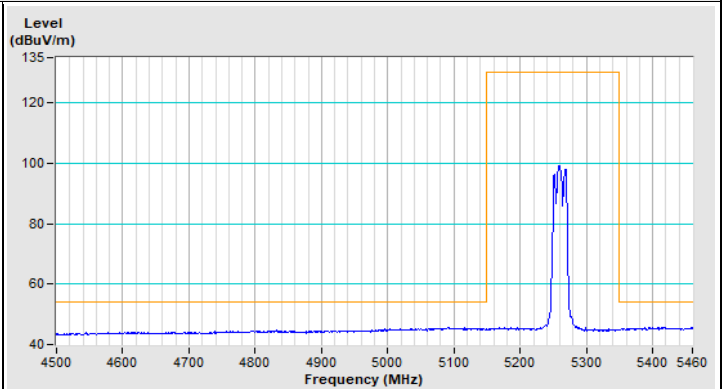


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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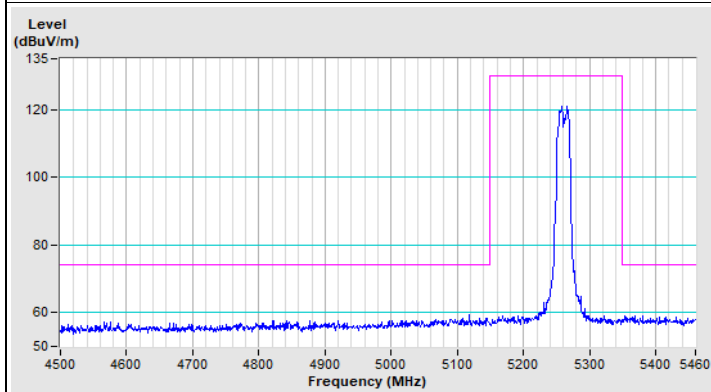
802.11ax (HE20) Channel 52



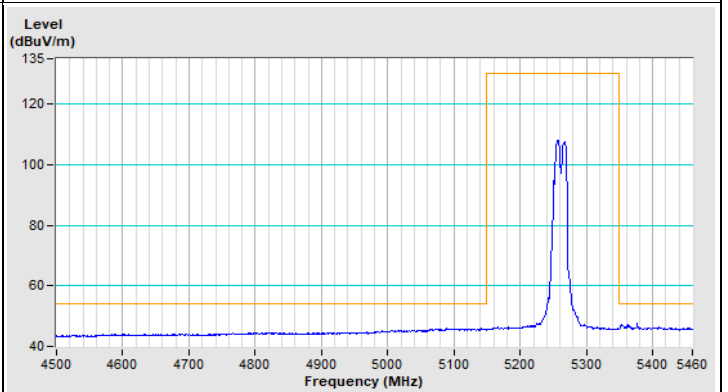
Horizontal (Peak)



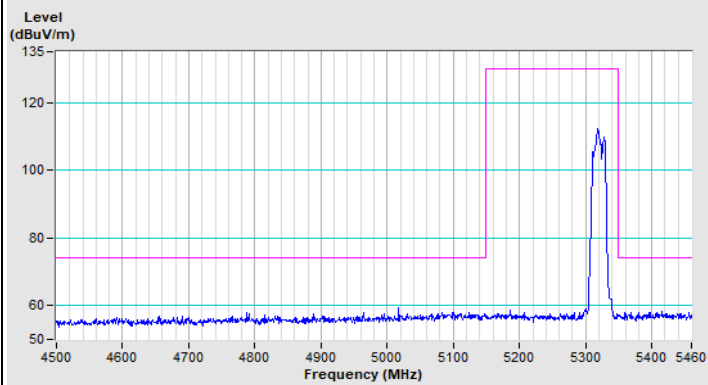
Horizontal (Average)



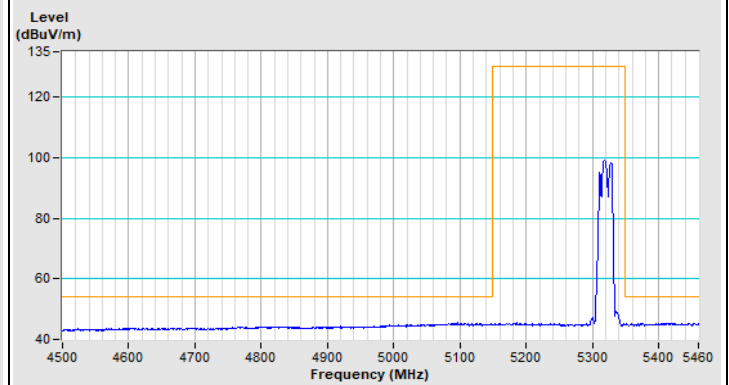
Vertical (Peak)



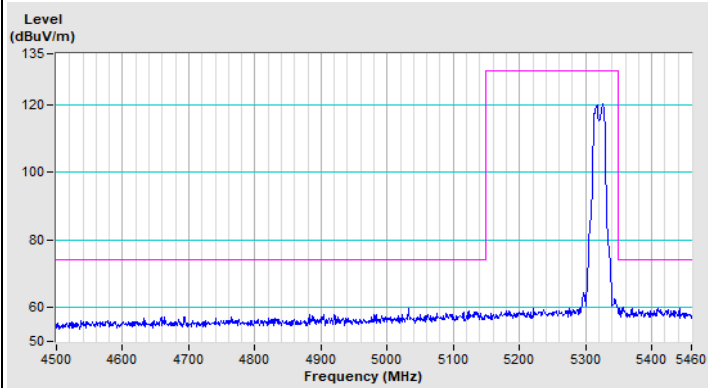
Vertical (Average)

802.11ax (HE20) Channel 64

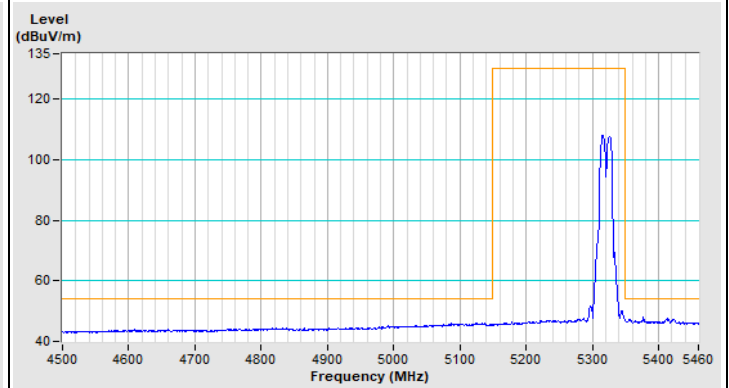
Horizontal (Peak)



Horizontal (Average)



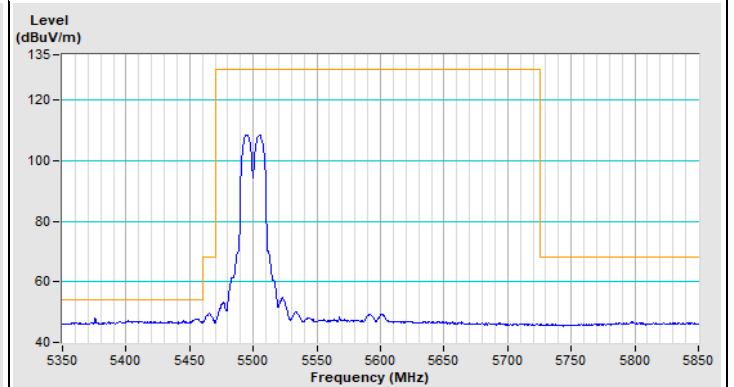
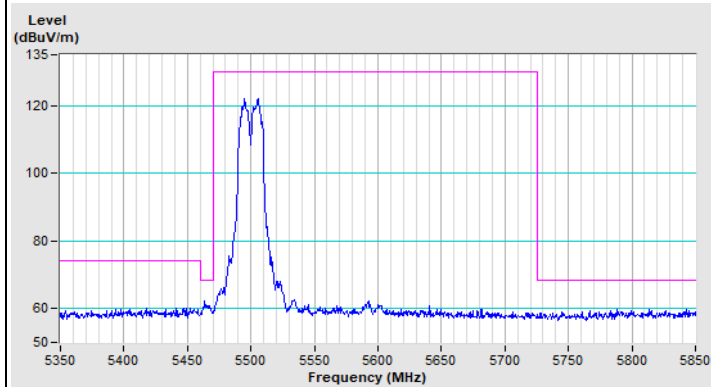
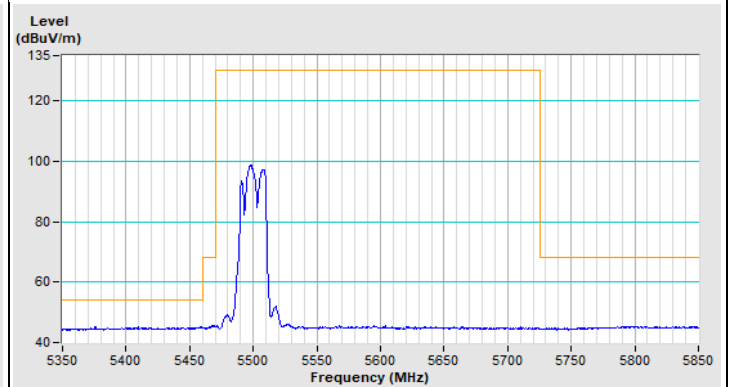
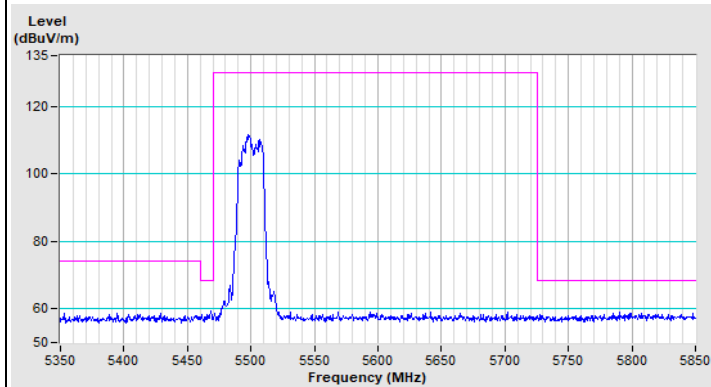
Vertical (Peak)



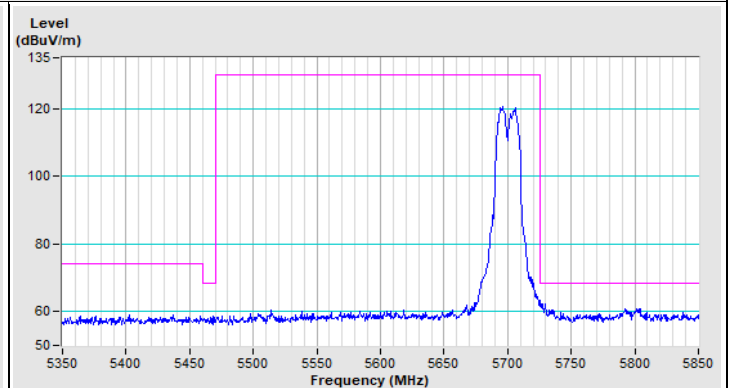
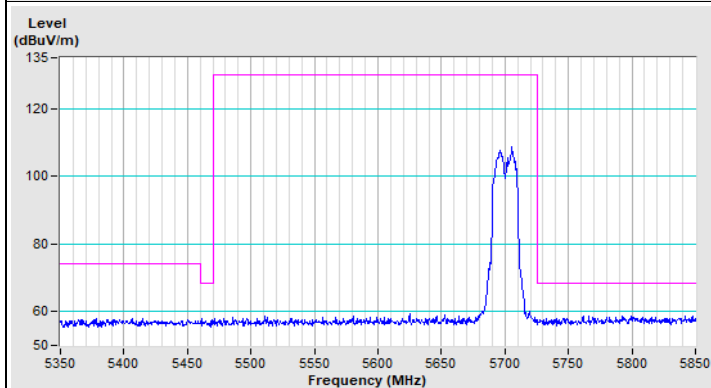
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE20) Channel 100

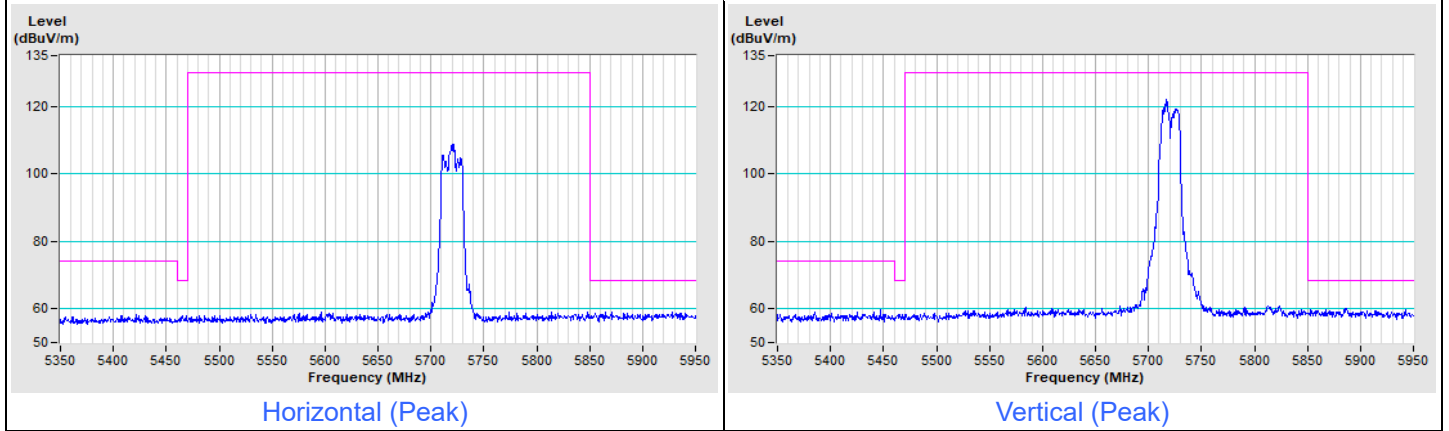


802.11ax (HE20) Channel 140



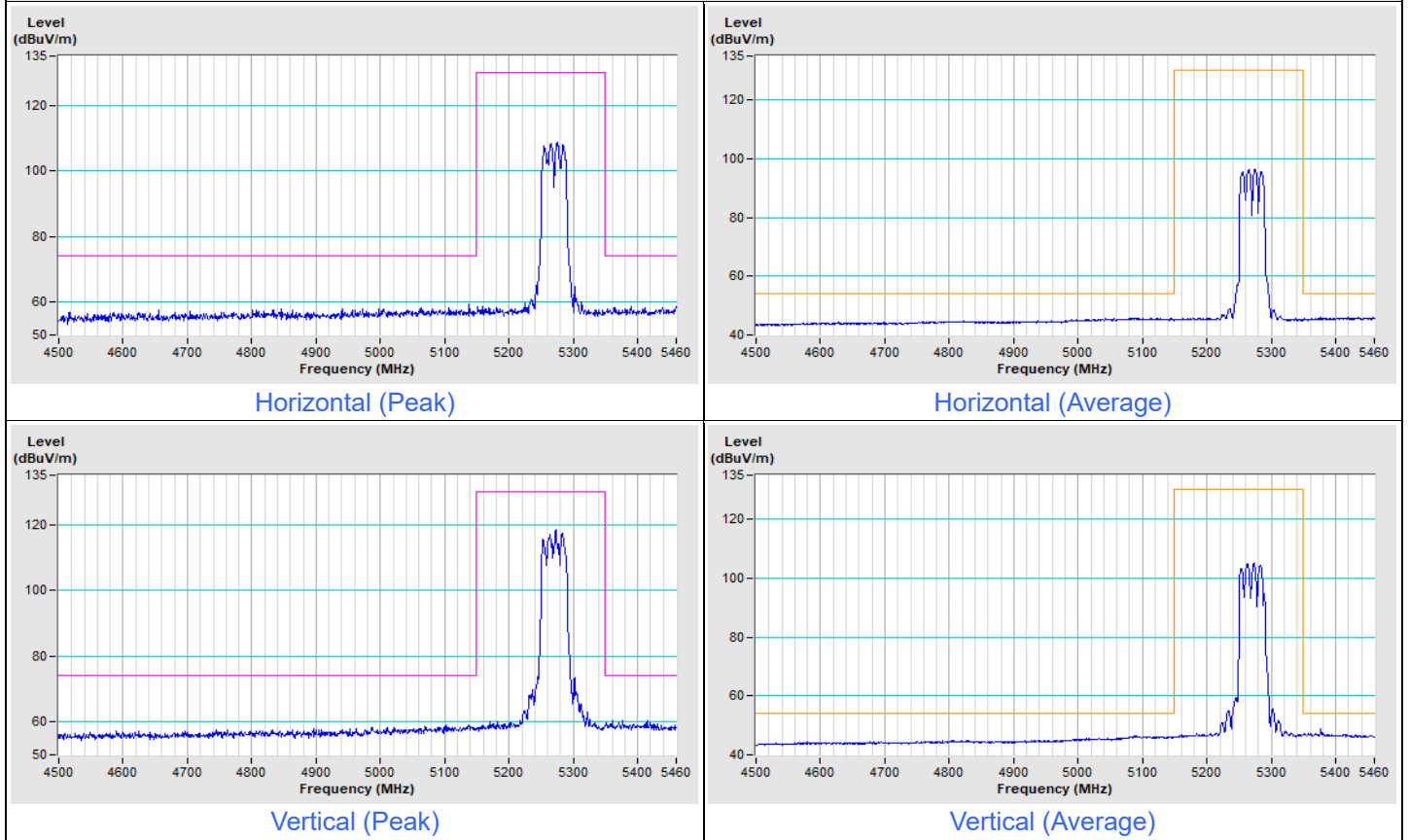
Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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802.11ax (HE20) Channel 144

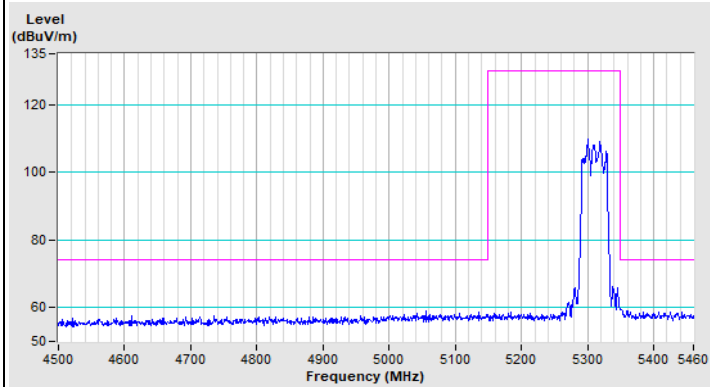


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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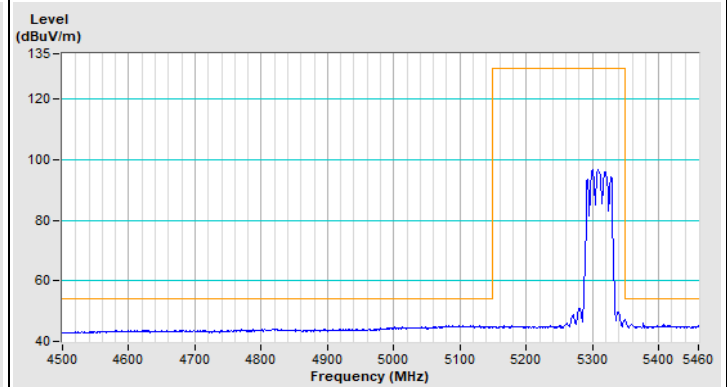
802.11ax (HE40) Channel 54



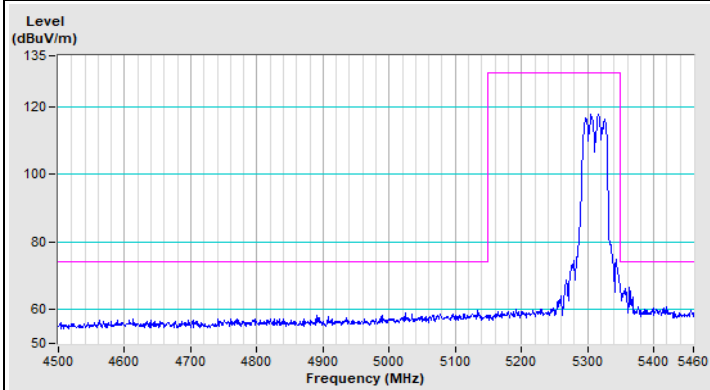
802.11ax (HE40) Channel 62



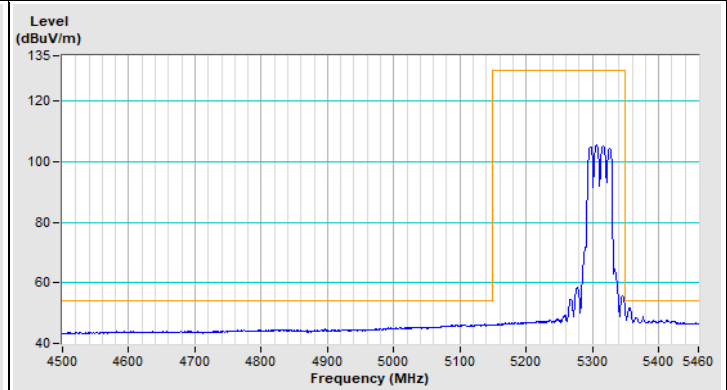
Horizontal (Peak)



Horizontal (Average)



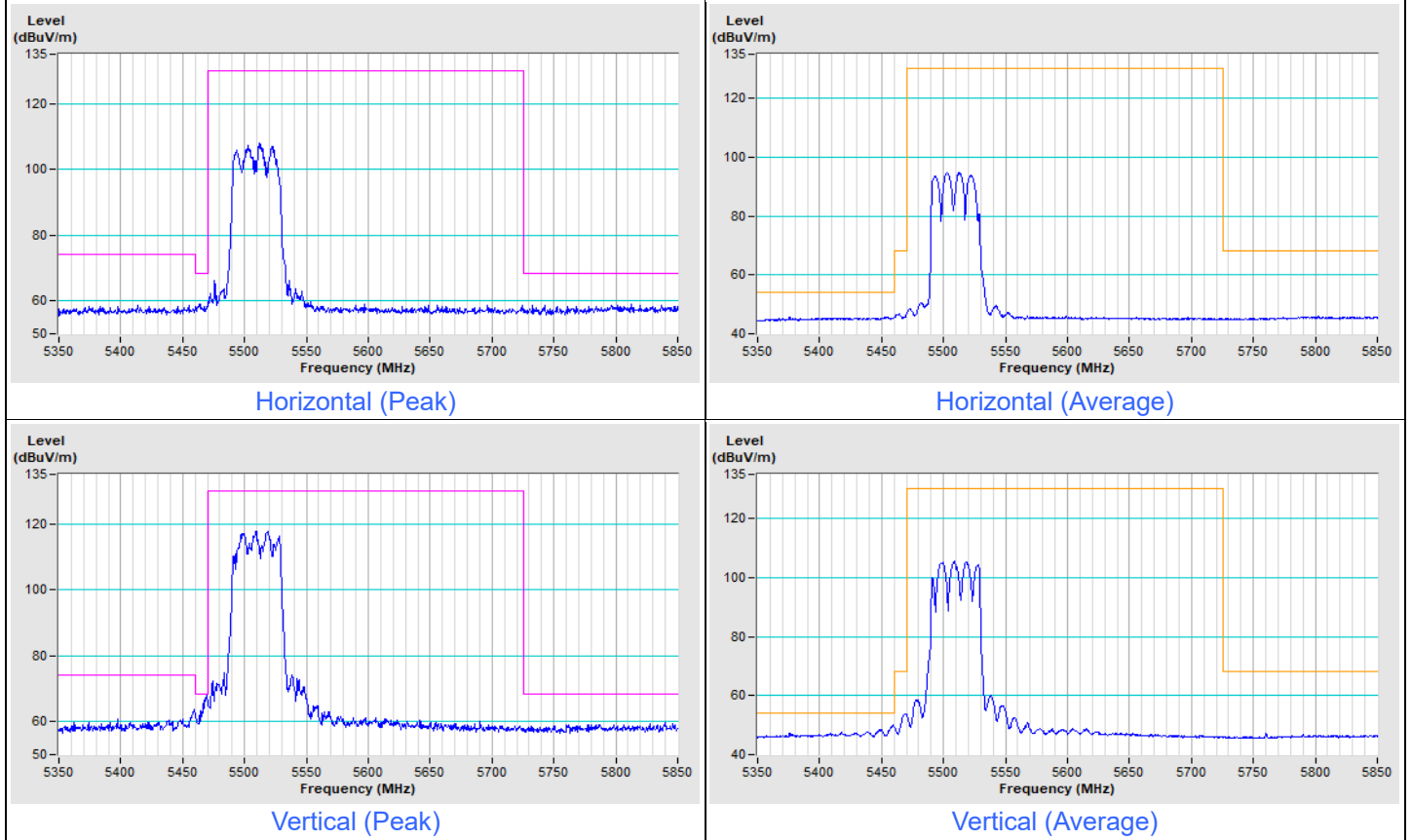
Vertical (Peak)



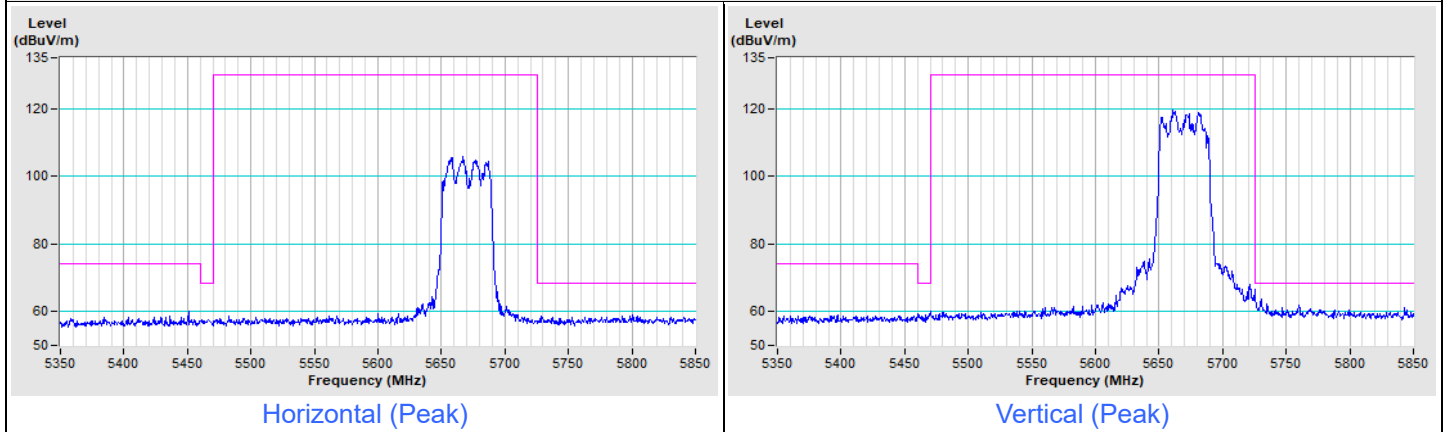
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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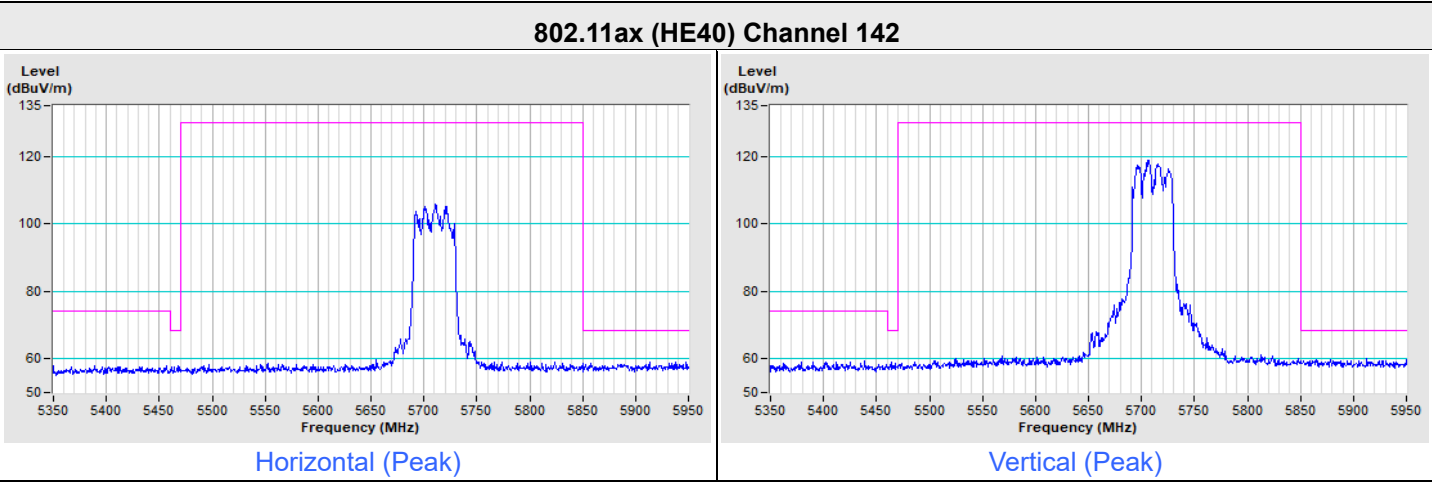
802.11ax (HE40) Channel 102



802.11ax (HE40) Channel 134

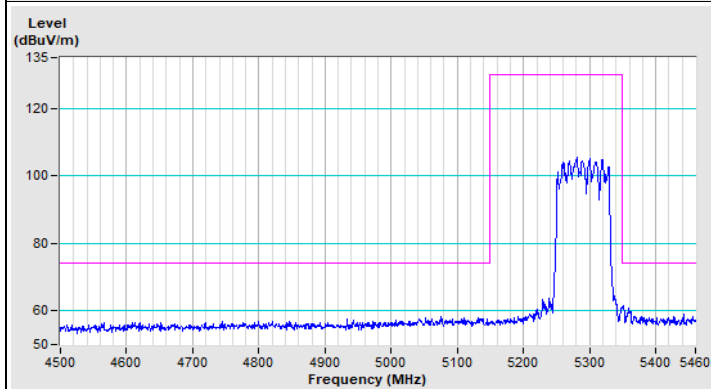


Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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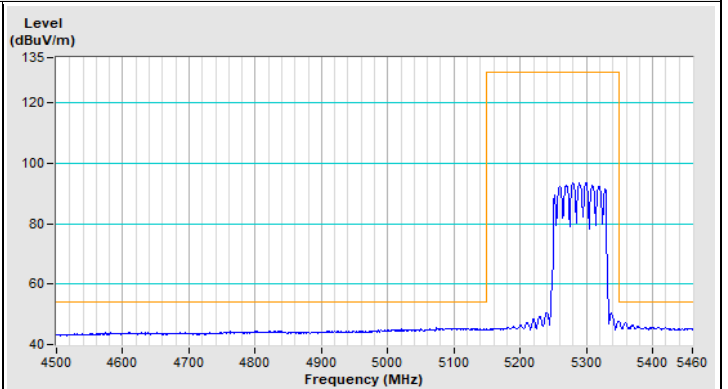


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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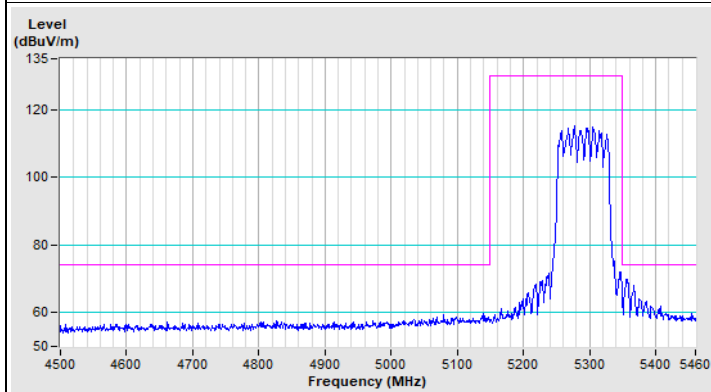
802.11ax (HE80) Channel 58



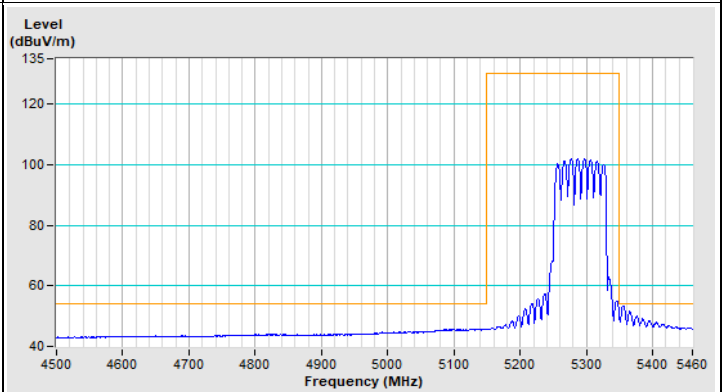
Horizontal (Peak)



Horizontal (Average)



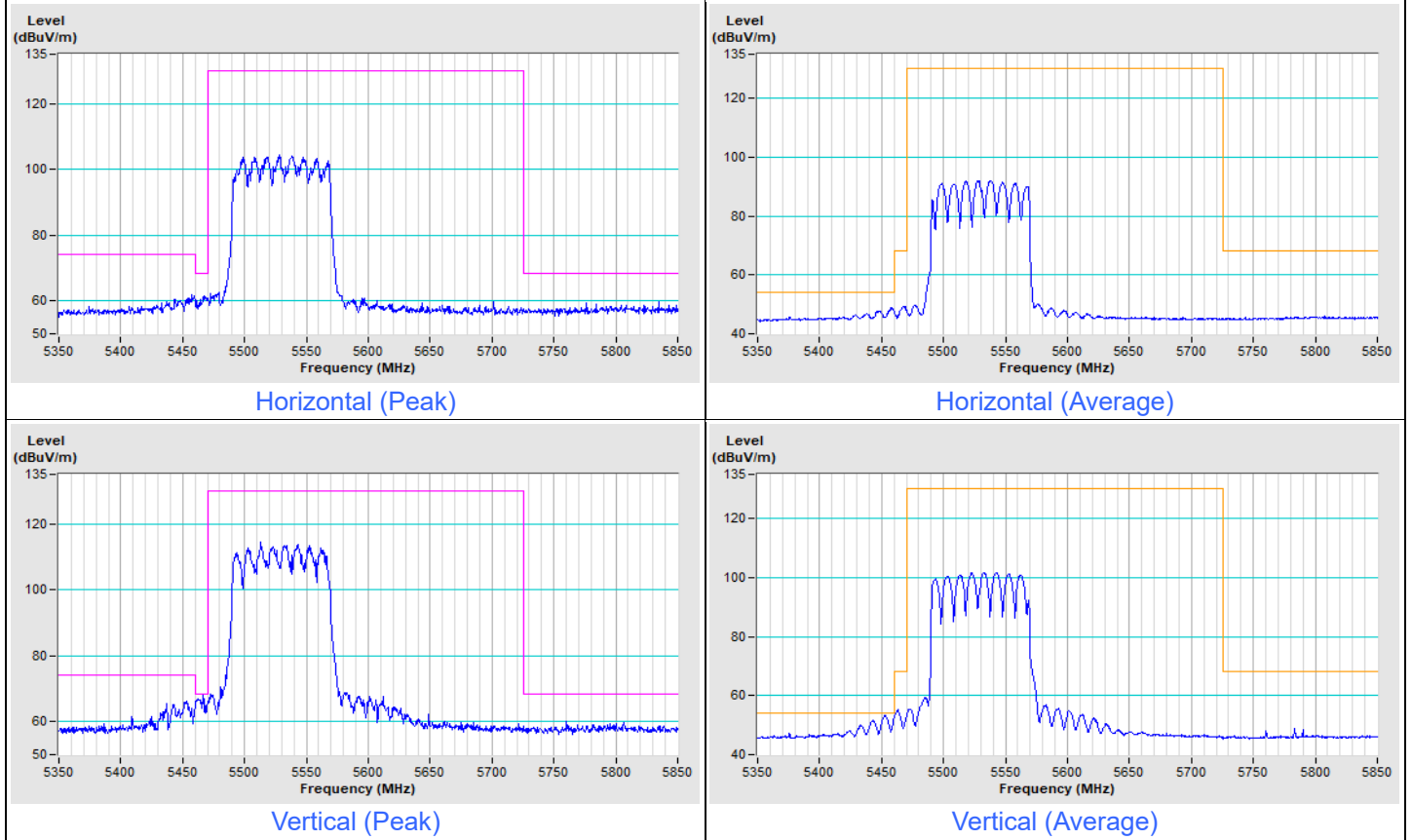
Vertical (Peak)



Vertical (Average)

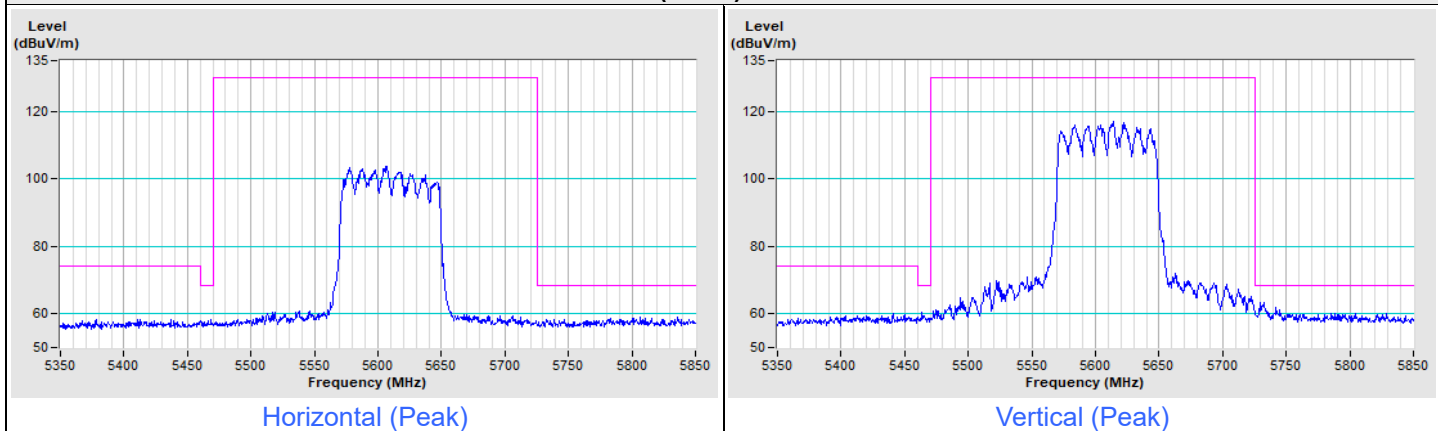
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE80) Channel 106

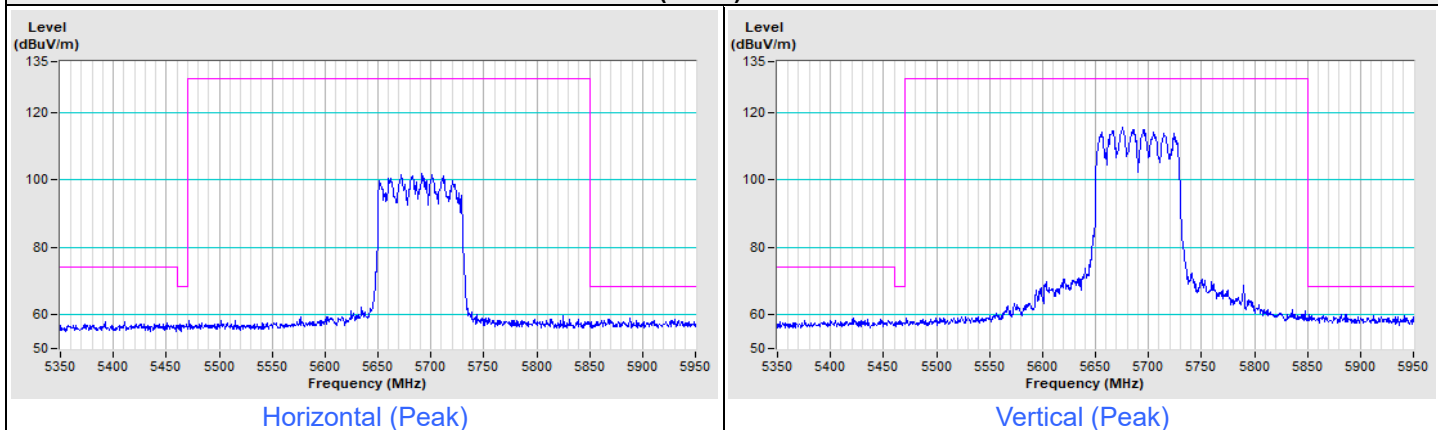


Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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802.11ax (HE80) Channel 122



802.11ax (HE80) Channel 138



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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