

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
Report No.: RFBDMW-WTW-P24080735-3
FCC ID: PQRFXE5000-US
Product: IEEE802.11ax/ac/n/a/b/g Wireless LAN
Brand: CONTEC
Model No.: FXE5000-US
Received Date: 2024/8/29
Test Date: 2024/11/19 ~ 2024/12/13
Issued Date: 2025/1/9
Applicant: CONTEC CO., LTD.
Address: 3-9-31, HIMESATO, NISHIYODOGAWA-KU, OSAKA 555-0025, JAPAN
Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory
Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / 723255 / TW2022
Designation Number:

Approved by:



, Date:

2025/1/9

Wen Yu / Assistant Manager

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Prepared by : Phoenix Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBDMW-WTW-P24080735-3	Original release.	2025/1/9

1 Certificate

Product: IEEE802.11ax/ac/n/a/b/g Wireless LAN

Brand: CONTEC

Test Model: FXE5000-US

Sample Status: Engineering sample

Applicant: CONTEC CO., LTD.

Test Date: 2024/11/19 ~ 2024/12/13

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

Measurement ANSI C63.10-2013

procedure: KDB 987594 D02 U-NII 6 GHz EMC Measurement v03

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)(8)	Maximum RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(8)	Maximum Power Spectral Density	Pass	Meet the requirement of limit.
15.407(a)(11)	Emission Bandwidth	Pass	Meet the requirement of limit.
---	Occupied Bandwidth	-	Reference only.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -6.53 dB at 0.58750 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -5.9 dB at 48.72 MHz
15.407(b)(6) 15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.7 dB at 5925.00 MHz
15.407(b)(7)	In-Band Emission Mask	Pass	Meet the requirement of limit.
15.407(d)(6)	Contention-based Protocol	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is U.FL not a standard connector.

Notes:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Per TCBC notice, FCC allows 99% BW measurements for Wi-Fi 320MHz BW mode instead of Emission Bandwidth.

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:

Parameter	Specification	Expanded Uncertainty (k=2) (±)
Maximum RF Output Power	-	1.1 dB
Maximum Power Spectral Density	-	1.3 dB
Emission Bandwidth	-	1050.00 Hz
In-Band Emission Mask	9 kHz ~ 40 GHz	2.6 dB
Occupied Bandwidth	-	1050.00 Hz
Contention-based Protocol	-	2.7 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.4 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.0 dB
	18 GHz ~ 40 GHz	5.3 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	IEEE802.11ax/ac/n/a/b/g Wireless LAN
Brand	CONTEC
Test Model	FXE5000-US
Status of EUT	Engineering sample
Power Supply Rating	5 - 30 Vdc
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA in 11ax mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11ax: up to 2401.9 Mbps
Operating Frequency	5.955 GHz ~ 6.415 GHz
Number of Channel	802.11a, 802.11ax (HE20): 24 802.11ax (HE40): 12 802.11ax (HE80): 6 802.11ax (HE160): 3
Output Power	CDD: EIRP: 61.616 mW (17.9 dBm) Beamforming: EIRP: 123.224 mW (20.91 dBm)
Equipment Class	6XD: 15E 6 GHz Low-power Indoor client

Note:

1. There are WLAN (2.4 GHz), WLAN (5 GHz) and WLAN (6 GHz) technology used for the EUT.
2. Simultaneously transmission combination.

Combination	Technology	
1	WLAN (2.4 GHz)	WLAN (5 GHz)
2	WLAN (2.4 GHz)	WLAN (6 GHz)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

3. 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.

Antenna Set	RF Chain NO.	Brand	Model	Antenna Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	Chain 0	Johanson	2450AD18A6050	2	2.4 ~ 2.4835	Chip	U.FL	110
				1.5	5.15 ~ 5.85			
				2.7	5.925 ~ 6.425			
	Chain 1	Johanson	2450AD18A6050	2	2.4 ~ 2.4835	Chip	U.FL	45
				1.5	5.15 ~ 5.85			
				2.7	5.925 ~ 6.425			
2	Chain 0	CIROCOMM	DCAH0S17	3.8	2.4 ~ 2.4835	Chip	U.FL	110
				3.63	5.15 ~ 5.85			
				3.97	5.925 ~ 6.425			
	Chain 1	CIROCOMM	DCAH0S17	3.8	2.4 ~ 2.4835	Chip	U.FL	110
				3.63	5.15 ~ 5.85			
				3.97	5.925 ~ 6.425			

Note: Above antennas, Antenna Set 2 was selected for the final test.

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

2. The EUT incorporates a MIMO function:

6 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX
802.11ax (HE160)	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.

3.3 Channel List

24 channels are provided for 802.11a, 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5955 MHz	5	5975 MHz	9	5995 MHz	13	6015 MHz
17	6035 MHz	21	6055 MHz	25	6075 MHz	29	6095 MHz
33	6115 MHz	37	6135 MHz	41	6155 MHz	45	6175 MHz
49	6195 MHz	53	6215 MHz	57	6235 MHz	61	6255 MHz
65	6275 MHz	69	6295 MHz	73	6315 MHz	77	6335 MHz
81	6355 MHz	85	6375 MHz	89	6395 MHz	93	6415 MHz

12 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	5965 MHz	11	6005 MHz	19	6045 MHz	27	6085 MHz
35	6125 MHz	43	6165 MHz	51	6205 MHz	59	6245 MHz
67	6285 MHz	75	6325 MHz	83	6365 MHz	91	6405 MHz

6 channels are provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
7	5985 MHz	23	6065 MHz	39	6145 MHz	55	6225 MHz
71	6305 MHz	87	6385 MHz				

3 channels are provided for 802.11ax (HE160):

Channel	Frequency	Channel	Frequency	Channel	Frequency
15	6025 MHz	47	6185 MHz	79	6345 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT's antenna can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 2. For Unwanted Emissions and AC Power Conducted Emissions items have multiple power sources: Power connector/ AC Adapter. Pre-scan these modes and find the worst case as a representative test condition. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. EUT's antenna pre-scan X-axis/ Y-axis/ Z-axis worst condition: X-axis 2. For Unwanted Emissions and AC Power Conducted Emissions items worst condition: AC Adapter.

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

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Maximum RF Output Power	802.11a	CDD	1, 45, 93	BPSK	6Mb/s
	802.11ax (HE20)	CDD / Beamforming	1, 45, 93	BPSK	MCS0
	802.11ax (HE40)		3, 43, 91	BPSK	MCS0
	802.11ax (HE80)		7, 39, 87	BPSK	MCS0
	802.11ax (HE160)		15, 47, 79	BPSK	MCS0
Maximum Power Spectral Density	802.11a	CDD	1, 45, 93	BPSK	6Mb/s
	802.11ax (HE20)		1, 45, 93	BPSK	MCS0
	802.11ax (HE40)		3, 43, 91	BPSK	MCS0
	802.11ax (HE80)		7, 39, 87	BPSK	MCS0
	802.11ax (HE160)		15, 47, 79	BPSK	MCS0
Emission Bandwidth	802.11a	CDD	1, 45, 93	BPSK	6Mb/s
	802.11ax (HE20)		1, 45, 93	BPSK	MCS0
	802.11ax (HE40)		3, 43, 91	BPSK	MCS0
	802.11ax (HE80)		7, 39, 87	BPSK	MCS0
	802.11ax (HE160)		15, 47, 79	BPSK	MCS0
In-Band Emission Mask	802.11a	CDD	1, 45, 93	BPSK	6Mb/s
	802.11ax (HE20)		1, 45, 93	BPSK	MCS0
	802.11ax (HE40)		3, 43, 91	BPSK	MCS0
	802.11ax (HE80)		7, 39, 87	BPSK	MCS0
	802.11ax (HE160)		15, 47, 79	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	1, 45, 93	BPSK	6Mb/s
	802.11ax (HE20)		1, 45, 93	BPSK	MCS0
	802.11ax (HE40)		3, 43, 91	BPSK	MCS0
	802.11ax (HE80)		7, 39, 87	BPSK	MCS0
	802.11ax (HE160)		15, 47, 79	BPSK	MCS0
Contention-based Protocol	802.11ax (HE20)	-	33	BPSK	MCS0
	802.11ax (HE160)		47	BPSK	MCS0
AC Power Conducted Emissions	802.11ax (HE160)	CDD	15	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ax (HE160)	CDD	15	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	CDD	1, 45, 93	BPSK	6Mb/s
	802.11ax (HE20)		1, 45, 93	BPSK	MCS0
	802.11ax (HE40)		3, 43, 91	BPSK	MCS0
	802.11ax (HE80)		7, 39, 87	BPSK	MCS0
	802.11ax (HE160)		15, 47, 79	BPSK	MCS0

Note: Partial RU (resource unit) mechanism is not supported.

3.5 Duty Cycle of Test Signal

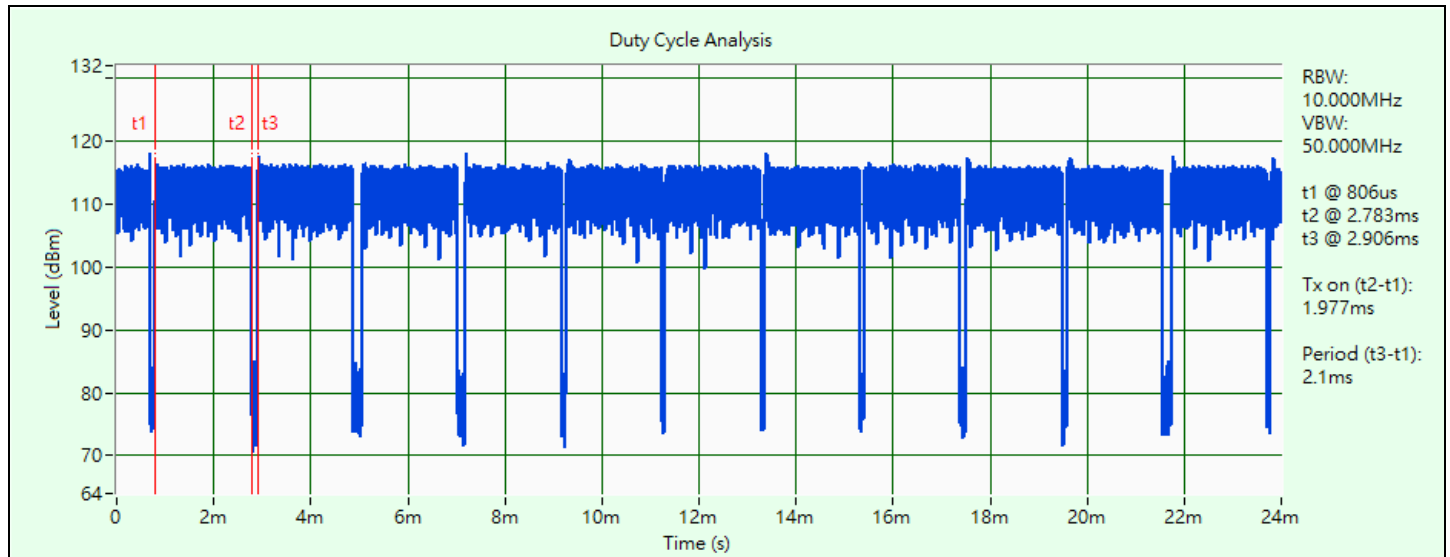
802.11a: Duty cycle = $1.977 \text{ ms} / 2.1 \text{ ms} \times 100\% = 94.1\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 0.26 \text{ dB}$

802.11ax (HE20): Duty cycle = $5.45 \text{ ms} / 6.799 \text{ ms} \times 100\% = 80.2\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 0.96 \text{ dB}$

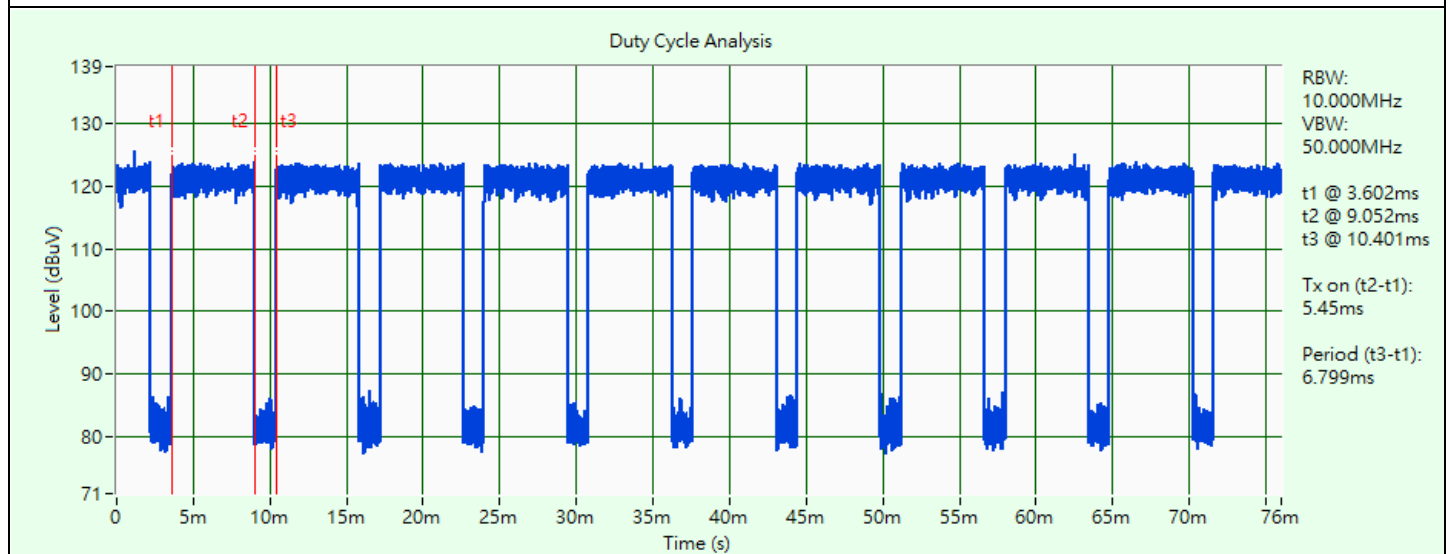
802.11ax (HE40): Duty cycle = $5.447 \text{ ms} / 6.819 \text{ ms} \times 100\% = 79.9\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 0.98 \text{ dB}$

802.11ax (HE80): Duty cycle = $5.445 \text{ ms} / 6.8 \text{ ms} \times 100\% = 80.1\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 0.97 \text{ dB}$

802.11ax (HE160): Duty cycle = $5.445 \text{ ms} / 6.809 \text{ ms} \times 100\% = 80.0\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 0.97 \text{ dB}$

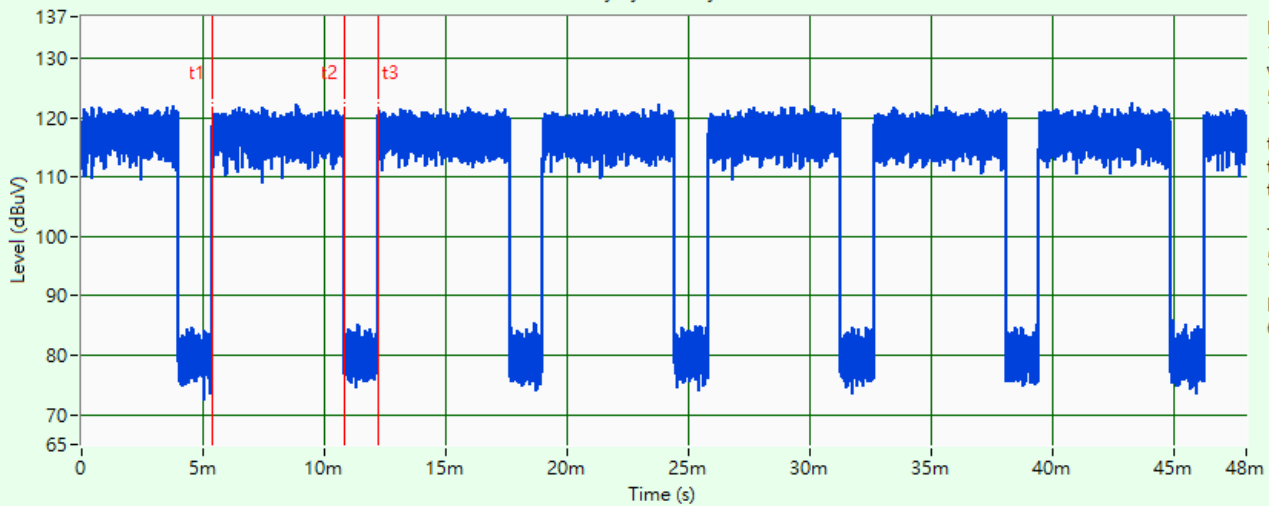


802.11a



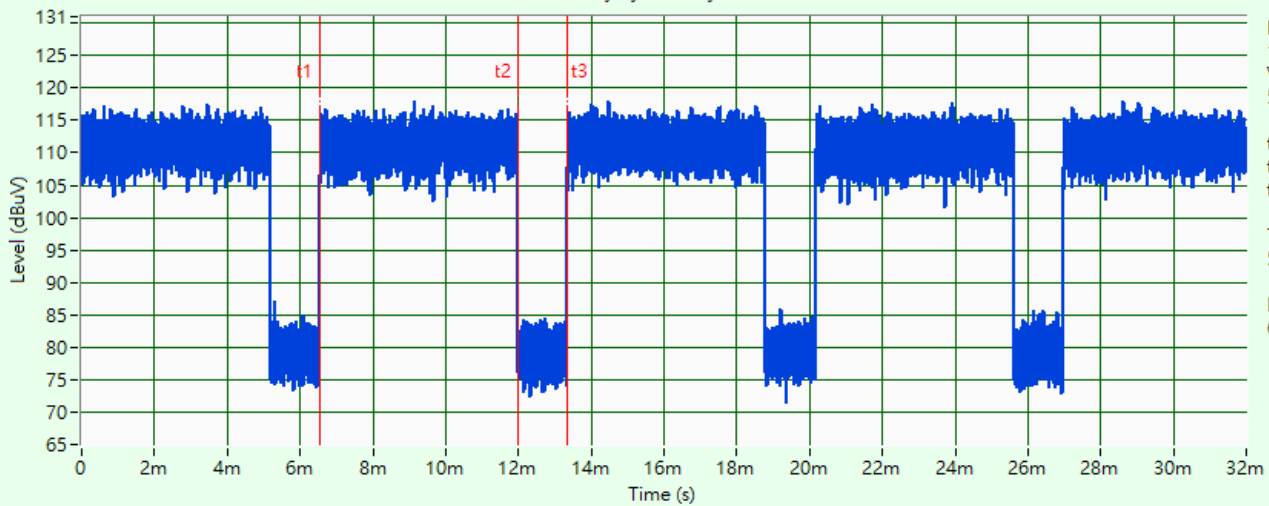
802.11ax (HE20)

Duty Cycle Analysis



802.11ax (HE40)

Duty Cycle Analysis



802.11ax (HE80)

Duty Cycle Analysis



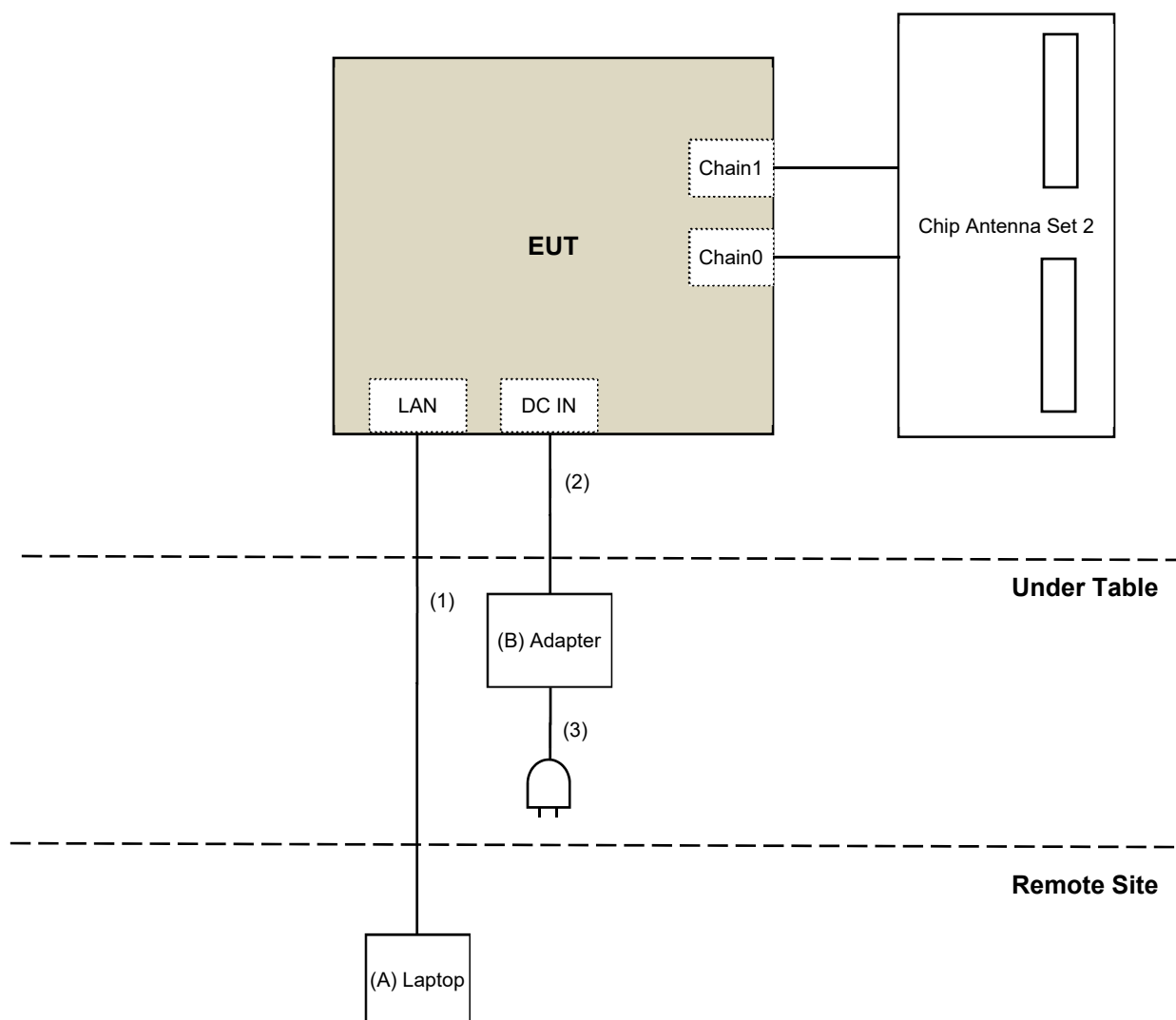
802.11ax (HE160)

3.6 Test Program Used and Operation Descriptions

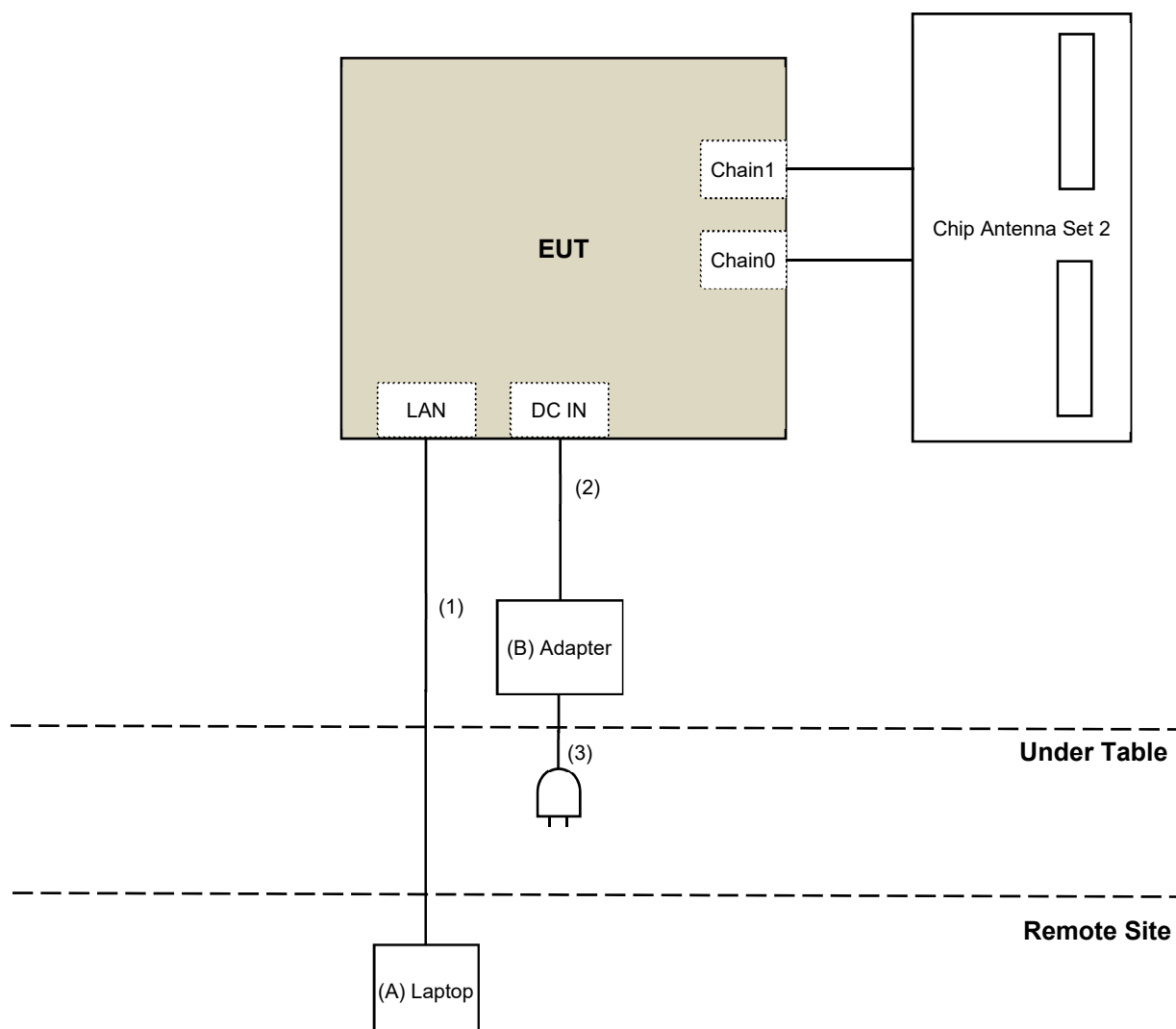
Controlling software (10-YE009-100_MP03.1_PN02.1_RDP404_RevB_20240528.cxtt) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emissions test:



For AC Power Conducted Emission test:



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Lenovo	L440	R90FM90G	N/A	Provided by Lab
B	Adapter	ADAPTER TECH	ATS018T-A050	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	No	0	Provided by Lab
2	DC Cable	1	1.5	No	0	Supplied by applicant
3	AC Cable	1	1.8	No	0	Supplied by applicant

4 Test Instruments

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

4.1 Maximum RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Pulse Power Sensor Anritsu	MA2411B	1726434	2024/6/7	2025/6/6
RF Power Meter Anritsu	ML2495A	1529002	2024/6/7	2025/6/6

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/12/11

4.2 Maximum Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
MXA Signal Analyzer Keysight	N9020B	MY60112408	2024/3/7	2025/3/6
Software	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/12/11

4.3 Emission Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 In-Band Emission Mask

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.6 Contention-based Protocol

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Frequency Extender Keysight	N5182BX07	MY59360198	2024/9/27	2025/9/26
MXG Vector Signal Generator Keysight	N5182B	MY53052647	2024/9/27	2025/9/26
Power Splitter/Combiner Mini-Circuits	ZFRSC-123-S+	F698501347_01	2024/10/30	2025/10/29
		F698501347_02	2024/10/30	2025/10/29
Signal & Spectrum Analyzer R&S	FSW8	101497	2024/5/21	2025/5/20
Signal Analyzer R&S	FSV40	101516	2024/1/29	2025/1/28

Notes:

1. The test was performed in Adaptivity room.
2. Tested Date: 2024/12/13

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2024/11/1	2025/10/31
EMI Test Receiver R&S	ESCS 30	100375	2024/5/20	2025/5/19
Fixed Attenuator STI	STI02-2200-10	005	2024/2/19	2025/2/18
LISN R&S	ESH3-Z5	835239/001	2024/4/3	2025/4/2
		848773/004	2024/10/7	2025/10/6
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2024/2/19	2025/2/18
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2024/11/19

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-361	2024/10/8	2025/10/7
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	2024/2/17	2025/2/16
Loop Antenna TESEQ	HLA 6121	63620	2024/10/17	2025/10/16
MXE EMI Receiver Agilent	N9038A	MY50010156	2024/6/5	2025/6/4
Preamplifier EMCI	EMC330N	980852	2024/2/17	2025/2/16
	EMC001340	980142	2024/2/19	2025/2/18
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2024/2/19	2025/2/18
		LOOPCAB-002	2024/2/19	2025/2/18
RF Coaxial Cable PEWC	8D	001	2024/2/16	2025/2/15
		966-3-2	2024/2/16	2025/2/15
		966-3-3	2024/2/16	2025/2/15
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 3.
2. Tested Date: 2024/12/2

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-406	2024/11/10	2025/11/9
	BBHA 9170	9170-739	2024/11/10	2025/11/9
MXE EMI Receiver Agilent	N9038A	MY50010156	2024/6/5	2025/6/4
Preamplifier EMCI	EMC12630SE	980384	2024/1/29	2025/1/28
	EMC184045SE	980387	2024/8/8	2025/8/7
PXA Signal Analyzer Keysight	N9030B	MY57142938	2024/3/20	2025/3/19
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2024/1/29	2025/1/28
	EMC102-KM-KM-4000	200214	2024/1/29	2025/1/28
	EMC104-SM-SM-1500	180504	2024/1/29	2025/1/28
	EMC104-SM-SM-2000	180601	2024/1/29	2025/1/28
	EMC104-SM-SM-6000	210201	2024/1/29	2025/1/28
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 3.
2. Tested Date: 2024/11/28 ~ 2024/12/4

5 Limits of Test Items

5.1 Maximum RF Output Power

Operation Band	Equipment Class	Limit
		Maximum Average Power
U-NII-5 U-NII-6 U-NII-7 U-NII-8	6XD: 15E 6 GHz Low-power Indoor client	EIRP 24 dBm

Per KDB 662911 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.

5.2 Maximum Power Spectral Density

Operation Band	Equipment Class	Limit
		Maximum Power Density
U-NII-5 U-NII-6 U-NII-7 U-NII-8	6XD: 15E 6 GHz Low-power Indoor client	EIRP -1 dBm/MHz

5.3 Emission Bandwidth

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 MHz.

5.4 In-Band Emission Mask

Test Item	Frequencies (MHz)	(X) dB ^{*1}
Emission Mask	At 1 MHz outside of channel edge	20
	At one channel bandwidth from the channel center ^{*2}	28
	At one- and one-half times the channel bandwidth away from channel center ^{*3}	40
	More than one- and one-half times the channel bandwidth	40

^{*1} : The power spectral density must be suppressed by "x" dB

^{*2} : At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression,

^{*3} : At frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression.

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Contention-based Protocol

Unlicensed indoor low-power devices must detect co-channel radio frequency power that is at least -62 dBm (The threshold is referenced to a 0 dBi antenna gain.) or lower. Additionally, indoor low-power devices must detect co-channel energy with 90% or greater certainty.

5.7 AC Power Conducted Emissions

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

Notes:

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

5.8 Unwanted Emissions below 1 GHz

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

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

Frequencies (MHz)	EIRP Limit	Equivalent Field Strength at 3 m
5925 MHz > F > 7125 MHz	Peak: -7 (dBm/MHz)	88.2 (dBuV/m)
	Average: -27 (dBm/MHz)	68.2 (dBuV/m)

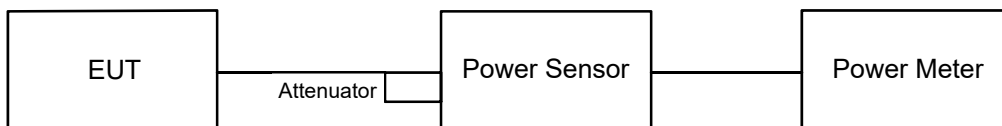
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 Maximum RF Output Power

6.1.1 Test Setup

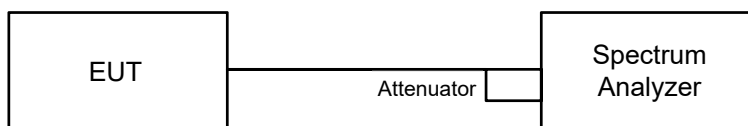


6.1.2 Test Procedure

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.

6.2 Maximum Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

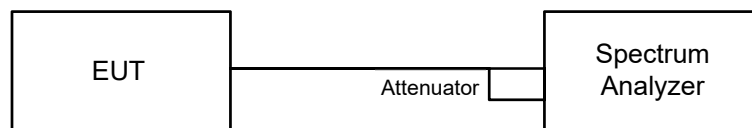
For specified measurement bandwidth 1 MHz:

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 $\leq$ 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 $10 \log (1/\text{duty cycle})$.

6.3 Emission Bandwidth

6.3.1 Test Setup

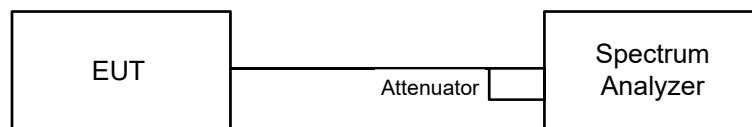


6.3.2 Test Procedure

- 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%.

6.4 In-Band Emission Mask

6.4.1 Test Setup

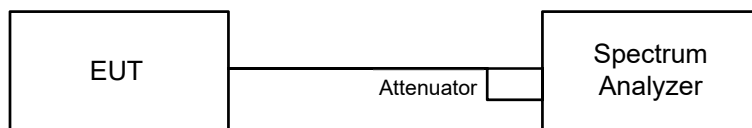


6.4.2 Test Procedure

- Connect output of the antenna port to a spectrum analyzer and adjust appropriate attenuation.
- Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (Determine the channel edge.)
- Measure the power spectral density (for emissions mask reference) using the following procedure:
 - Set the span to encompass the entire 26 dB EBW of the signal.
 - Set RBW = same RBW used for 26 dB EBW measurement.
 - Set VBW $\geq [3 \times \text{RBW}]$.
 - Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - Sweep time = auto.
 - Detector = RMS (i.e., power averaging).
 - Trace average at least 100 traces in power averaging (rms) mode.
 - Use the peak search function on the instrument to find the peak of the spectrum.
- Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
 - Suppressed by 28 dB at one channel bandwidth from the channel center.
 - Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
- Adjust the span to encompass the entire mask as necessary and clear trace.
- Trace average at least 100 traces in power averaging (rms) mode.
- Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

6.5 Occupied Bandwidth

6.5.1 Test Setup

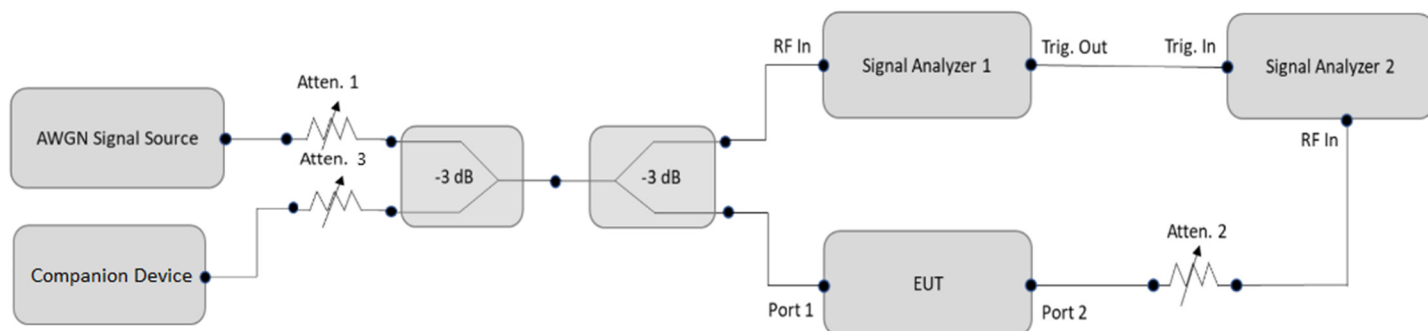


6.5.2 Test Procedure

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 Contention-based Protocol

6.6.1 Test Setup



6.6.2 Test Procedure

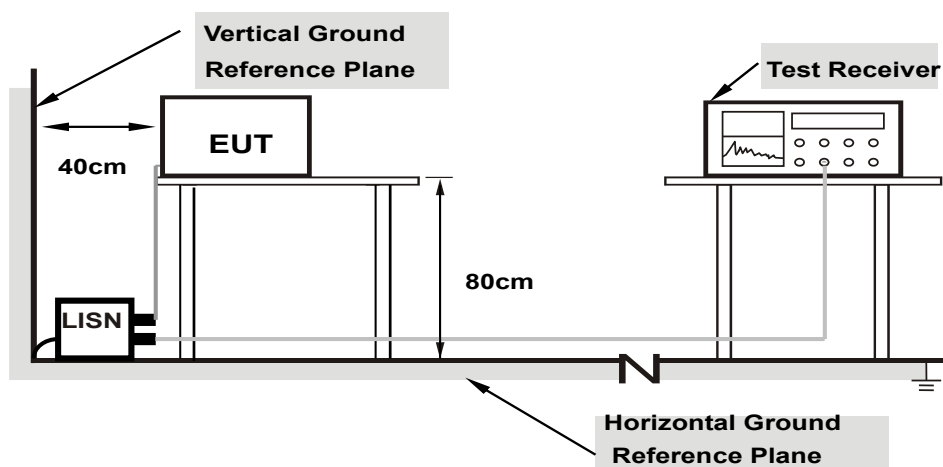
- Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
- Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters (set as following section 4.7.5 EUT operating condition).
- Determine number of times detection threshold test as following table,

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Same as EUT transmission
$BW_{Inc} < BW_{EUT} \leq 2 \times BW_{Inc}$	Once	Contained within BW_{EUT}
$2 \times BW_{Inc} < BW_{EUT} \leq 4 \times BW_{Inc}$	Twice. (Incumbent transmission is contained within BW_{EUT})	Closely to the lower edge and upper edge of the EUT Channel
$BW_{EUT} > 4 \times BW_{Inc}$	Three times	Closely to the lower edge ,in the middle and upper edge of the EUT Channel

- Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use step c table to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
- Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT.
- Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
- Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
- (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
- Refer to step c table to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step d, choose a different center frequency for the AWGN signal and repeat the process.

6.7 AC Power Conducted Emissions

6.7.1 Test Setup



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

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

6.7.2 Test Procedure

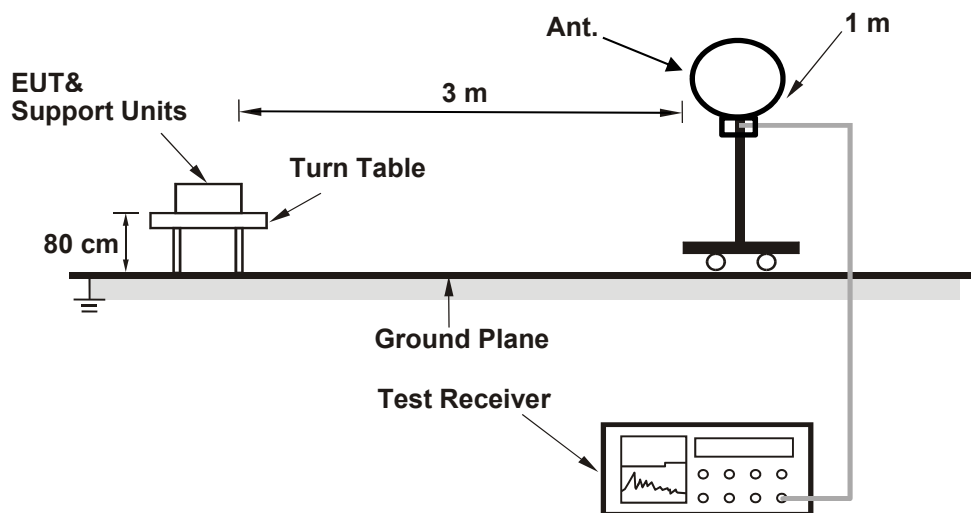
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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.

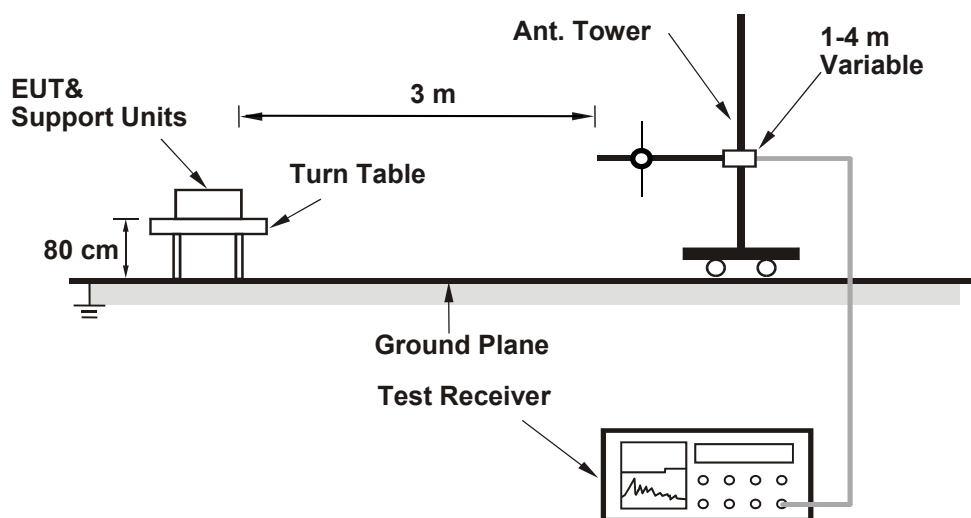
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

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

For Radiated emission above 30 MHz

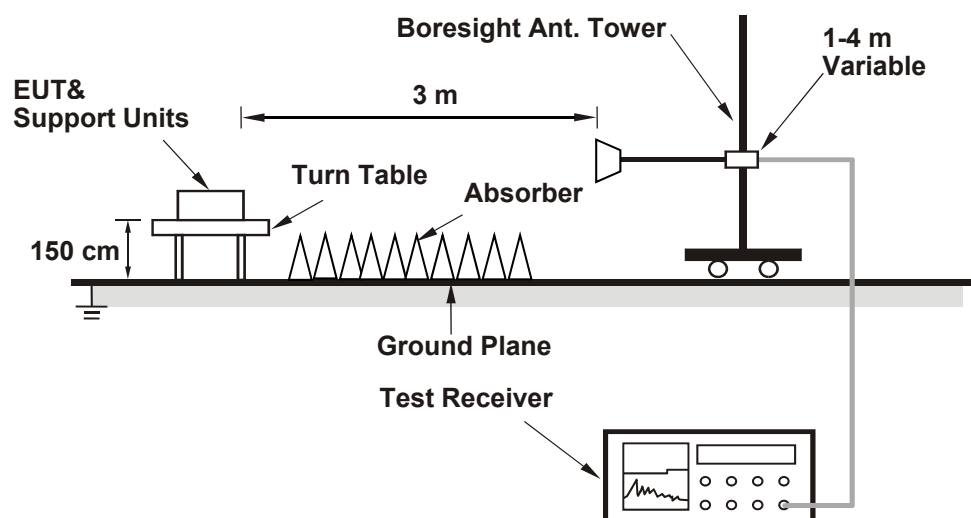
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 Test Procedure

- 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 Maximum RF Output Power

Input Power:	120 Vac, 60 Hz (System)	Environmental Conditions:	26°C, 62% RH	Tested By:	Katina Lu
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802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
1	5955	1.77	2.10	3.125	4.95	3.97	7.796	8.92	24	Pass
45	6175	2.07	2.31	3.313	5.20	3.97	8.265	9.17	24	Pass
93	6415	2.17	2.35	3.366	5.27	3.97	8.397	9.24	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-5, The maximum gain is 3.97 dBi.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
1	5955	2.22	2.60	3.487	5.42	3.97	8.699	9.39	24	Pass
45	6175	2.24	2.54	3.47	5.40	3.97	8.656	9.37	24	Pass
93	6415	2.25	2.65	3.52	5.47	3.97	8.781	9.44	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-5, The maximum gain is 3.97 dBi.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
3	5965	5.23	5.53	6.907	8.39	3.97	17.23	12.36	24	Pass
43	6165	5.15	5.54	6.854	8.36	3.97	17.098	12.33	24	Pass
91	6405	5.00	5.31	6.559	8.17	3.97	16.362	12.14	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-5, The maximum gain is 3.97 dBi.

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
7	5985	8.32	8.12	13.278	11.23	3.97	33.123	15.2	24	Pass
39	6145	7.94	8.50	13.302	11.24	3.97	33.183	15.21	24	Pass
87	6385	8.15	8.31	13.308	11.24	3.97	33.198	15.21	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-5, The maximum gain is 3.97 dBi.

802.11ax (HE160) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
15	6025	10.67	11.15	24.7	13.93	3.97	61.616	17.9	24	Pass
47	6185	10.44	10.64	22.654	13.55	3.97	56.513	17.52	24	Pass
79	6345	10.58	11.06	24.193	13.84	3.97	60.352	17.81	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-5, The maximum gain is 3.97 dBi.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
1	5955	2.22	2.60	3.487	5.42	6.98	17.396	12.4	24	Pass
45	6175	2.24	2.54	3.47	5.40	6.98	17.311	12.38	24	Pass
93	6415	2.25	2.65	3.52	5.47	6.98	17.561	12.45	24	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-5, The directional gain is 6.98 dBi.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
3	5965	5.23	5.53	6.907	8.39	6.98	34.458	15.37	24	Pass
43	6165	5.15	5.54	6.854	8.36	6.98	34.194	15.34	24	Pass
91	6405	5.00	5.31	6.559	8.17	6.98	32.722	15.15	24	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-5, The directional gain is 6.98 dBi.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
7	5985	8.32	8.12	13.278	11.23	6.98	66.242	18.21	24	Pass
39	6145	7.94	8.50	13.302	11.24	6.98	66.362	18.22	24	Pass
87	6385	8.15	8.31	13.308	11.24	6.98	66.392	18.22	24	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-5, The directional gain is 6.98 dBi.

802.11ax (HE160) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
15	6025	10.67	11.15	24.7	13.93	6.98	123.224	20.91	24	Pass
47	6185	10.44	10.64	22.654	13.55	6.98	113.017	20.53	24	Pass
79	6345	10.58	11.06	24.193	13.84	6.98	120.695	20.82	24	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-5, The directional gain is 6.98 dBi.

7.2 Maximum Power Spectral Density

Input Power:	120 Vac, 60 Hz (System)	Environmental Conditions:	26°C, 62% RH	Tested By:	Katina Lu
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802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
1	5955	-11.73	-11.23	0.26	-8.20	6.98	-1.22	-1	Pass
45	6175	-11.71	-11.00	0.26	-8.07	6.98	-1.09	-1	Pass
93	6415	-11.33	-11.23	0.26	-8.01	6.98	-1.03	-1	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-5, The directional gain is 6.98 dBi.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
1	5955	-12.34	-12.18	0.96	-8.29	6.98	-1.31	-1	Pass
45	6175	-12.11	-12.03	0.96	-8.10	6.98	-1.12	-1	Pass
93	6415	-11.88	-12.22	0.96	-8.08	6.98	-1.1	-1	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-5, The directional gain is 6.98 dBi.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
3	5965	-12.26	-12.01	0.98	-8.14	6.98	-1.16	-1	Pass
43	6165	-12.54	-11.66	0.98	-8.09	6.98	-1.11	-1	Pass
91	6405	-12.37	-12.08	0.98	-8.23	6.98	-1.25	-1	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-5, The directional gain is 6.98 dBi.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
7	5985	-12.32	-11.73	0.97	-8.03	6.98	-1.05	-1	Pass
39	6145	-12.22	-11.95	0.97	-8.10	6.98	-1.12	-1	Pass
87	6385	-12.67	-12.08	0.97	-8.38	6.98	-1.4	-1	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-5, The directional gain is 6.98 dBi.

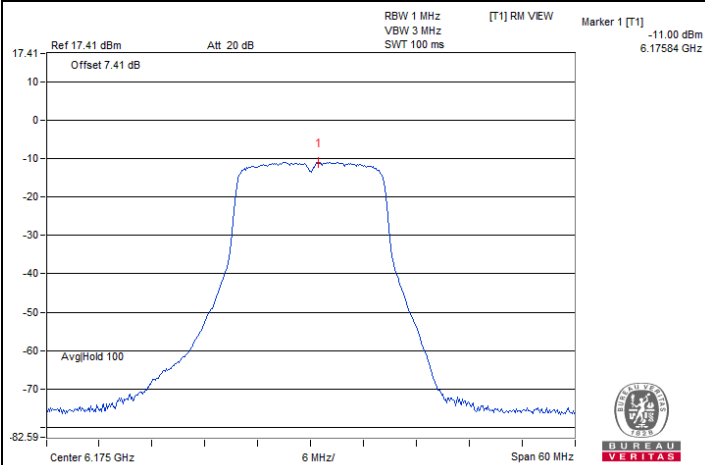
802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
15	6025	-11.96	-12.28	0.97	-8.14	6.98	-1.16	-1	Pass
47	6185	-11.59	-12.81	0.97	-8.18	6.98	-1.2	-1	Pass
79	6345	-13.49	-11.19	0.97	-8.21	6.98	-1.23	-1	Pass

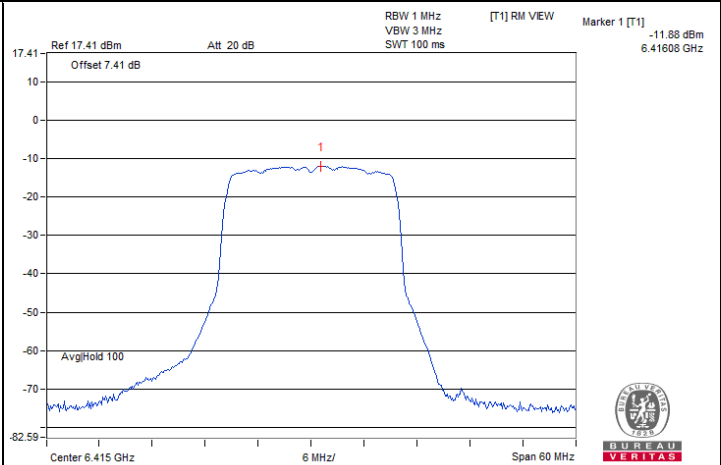
Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-5, The directional gain is 6.98 dBi.

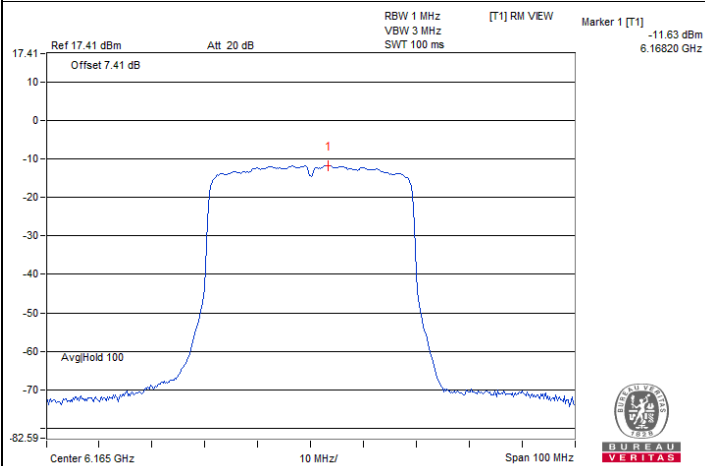
Spectrum Plot of Maximum Value



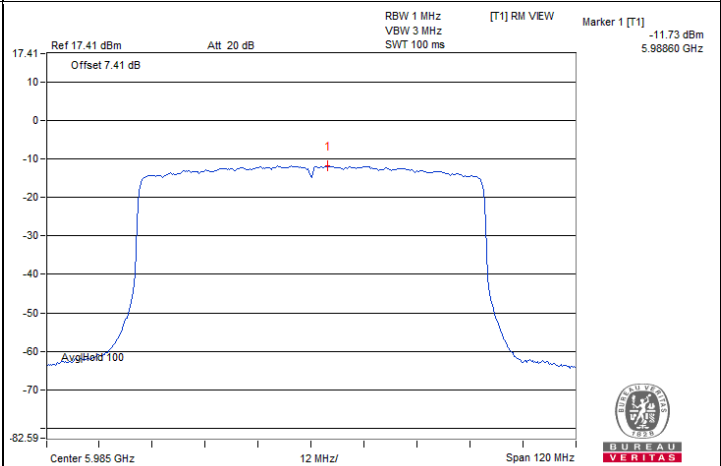
802.11a / Chain 1 : CH 45



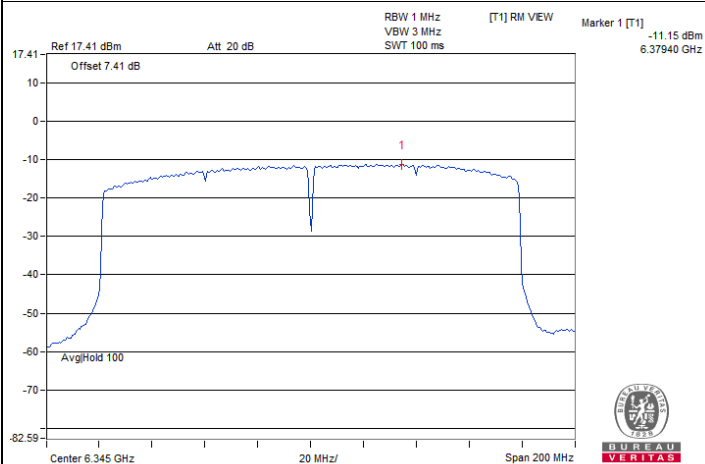
802.11ax (HE20) / Chain 0 : CH 93



802.11ax (HE40) / Chain 1 : CH 43



802.11ax (HE80) / Chain 1 : CH 7



802.11ax (HE160) / Chain 1 : CH 79

7.3 Emission Bandwidth

Input Power:	120 Vac, 60 Hz (System)	Environmental Conditions:	26°C, 62% RH	Tested By:	Katina Lu
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802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	5955	18.64	18.61	320	Pass
45	6175	18.71	18.72	320	Pass
93	6415	18.76	18.65	320	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	5955	20.42	20.73	320	Pass
45	6175	20.62	20.67	320	Pass
93	6415	20.26	21.00	320	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	5965	40.40	40.23	320	Pass
43	6165	40.08	40.49	320	Pass
91	6405	40.07	40.07	320	Pass

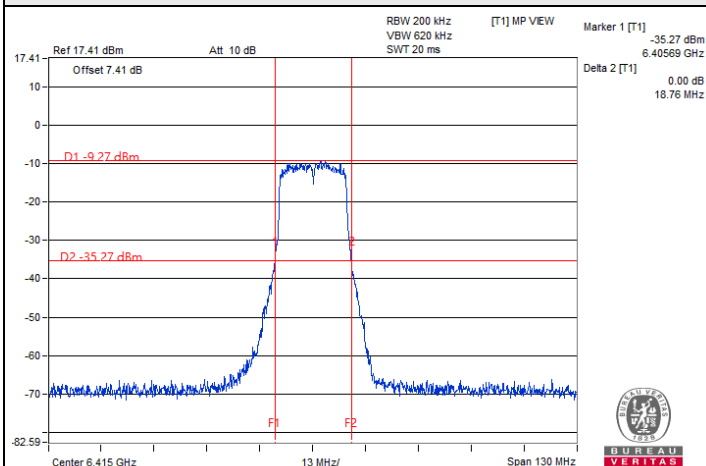
802.11ax (HE80)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
7	5985	81.30	81.85	320	Pass
39	6145	81.80	81.43	320	Pass
87	6385	81.38	81.86	320	Pass

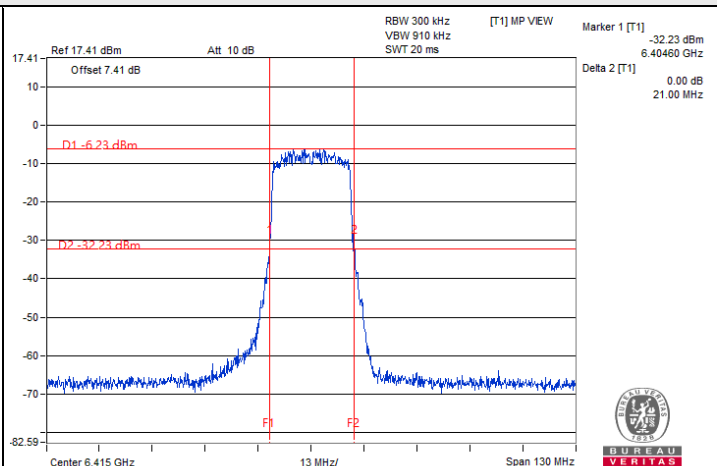
802.11ax (HE160)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
15	6025	163.92	165.23	320	Pass
47	6185	164.17	164.17	320	Pass
79	6345	164.38	164.43	320	Pass

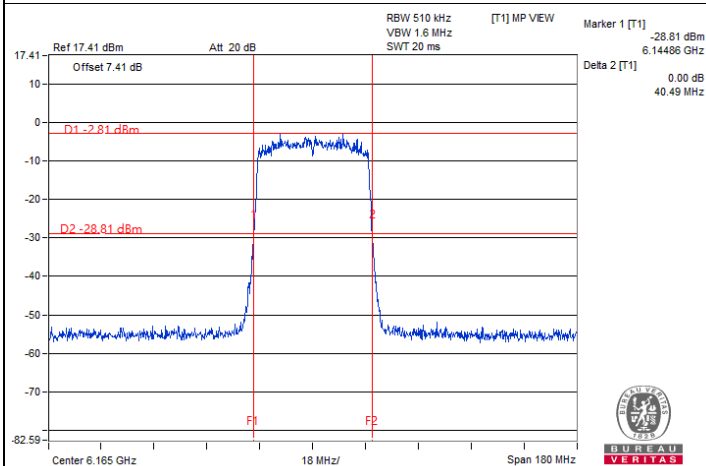
Spectrum Plot of Maximum Value



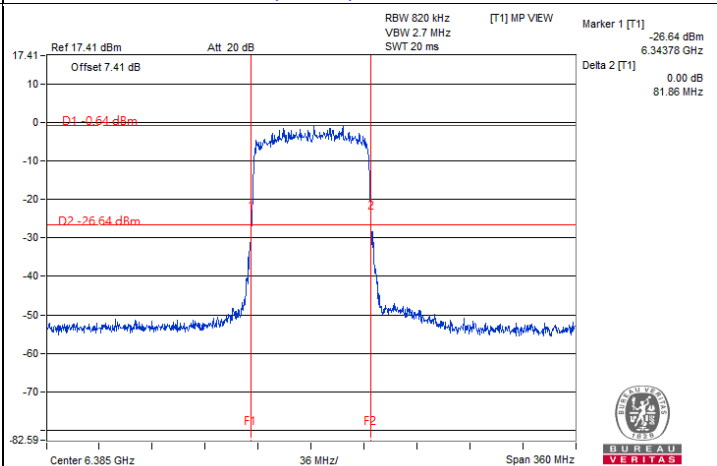
802.11a / Chain 0 : CH 93



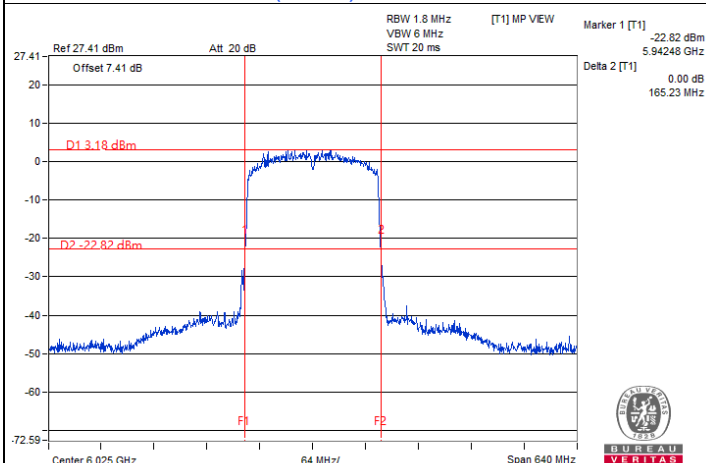
802.11ax (HE20) / Chain 1 : CH 93



802.11ax (HE40) / Chain 1 : CH 43



802.11ax (HE80) / Chain 1 : CH 87

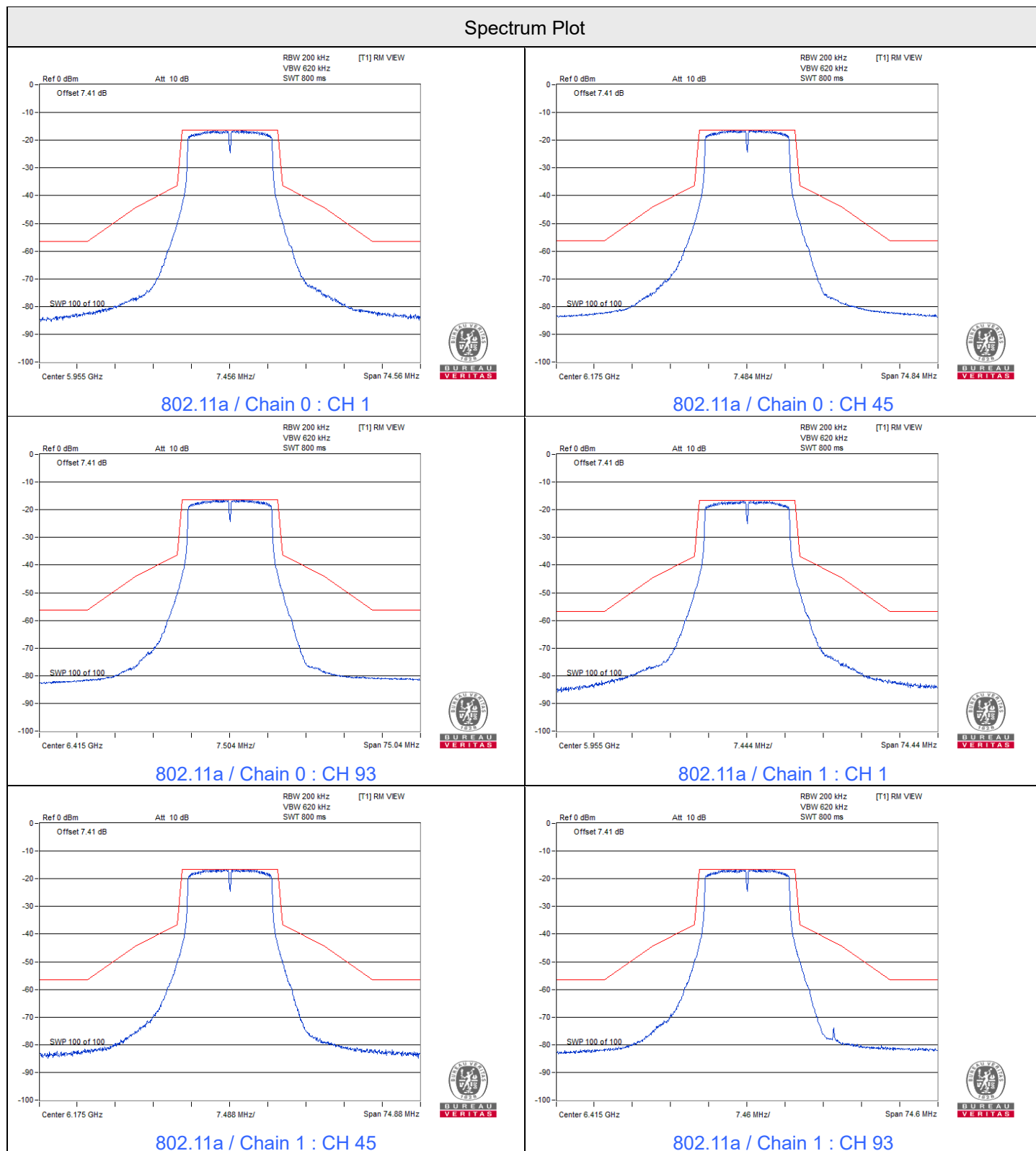


802.11ax (HE160) / Chain 1 : CH 15

7.4 In-Band Emission Mask

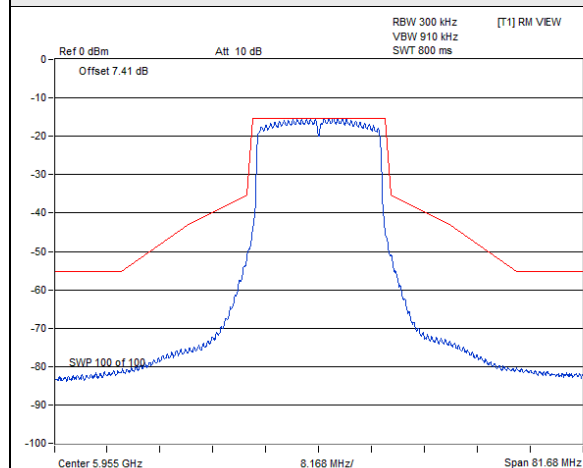
Input Power:	120 Vac, 60 Hz (System)	Environmental Conditions:	26°C, 62% RH	Tested By:	Katina Lu
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802.11a

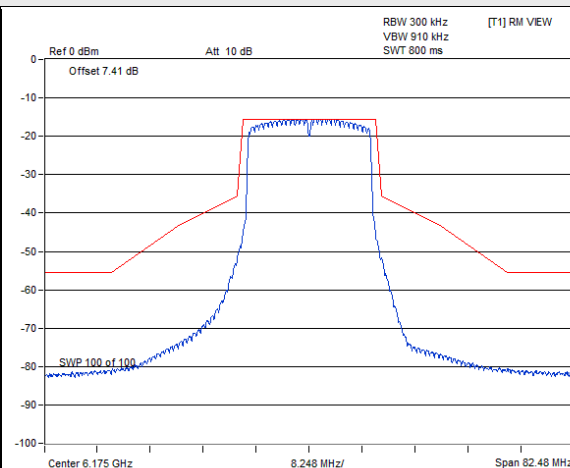


802.11ax (HE20)

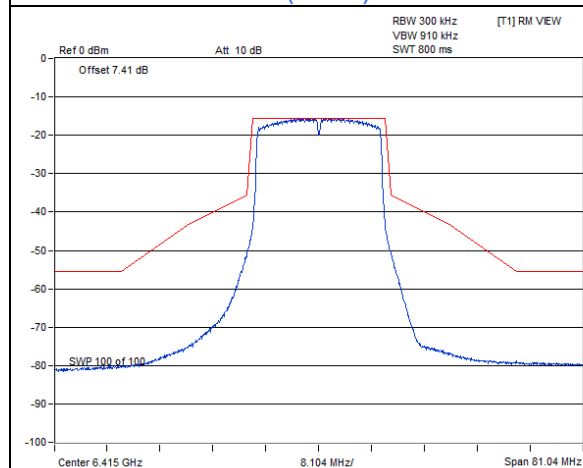
Spectrum Plot



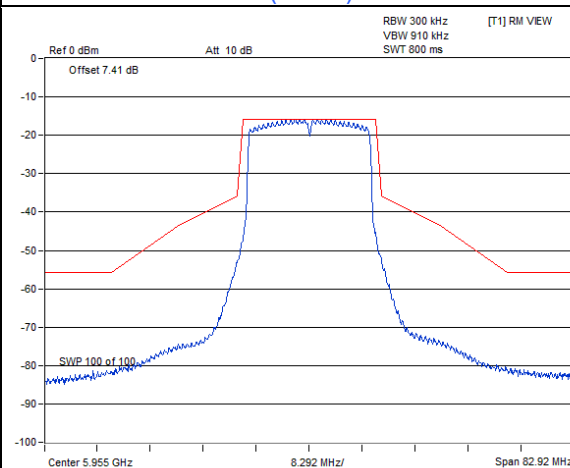
802.11ax (HE20) / Chain 0 : CH 1



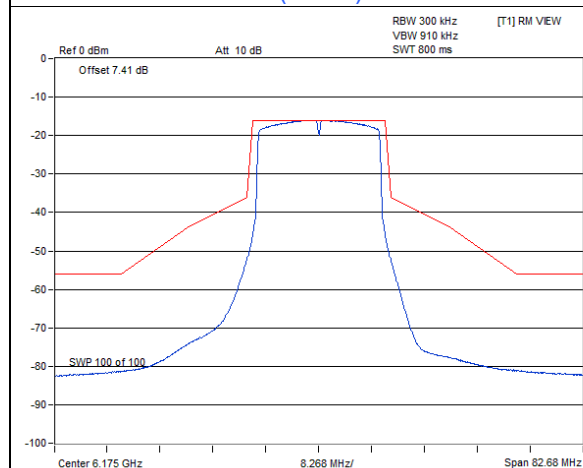
802.11ax (HE20) / Chain 0 : CH 45



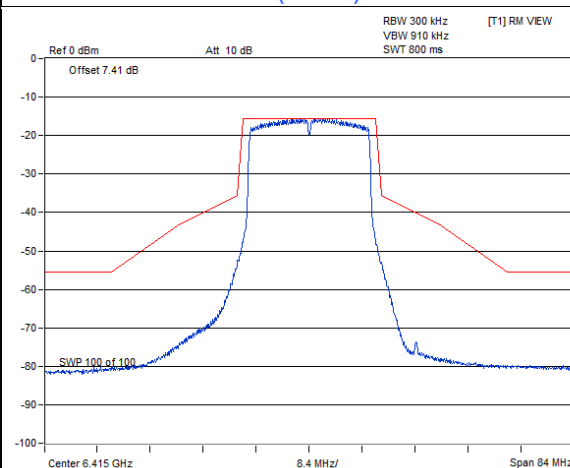
802.11ax (HE20) / Chain 0 : CH 93



802.11ax (HE20) / Chain 1 : CH 1



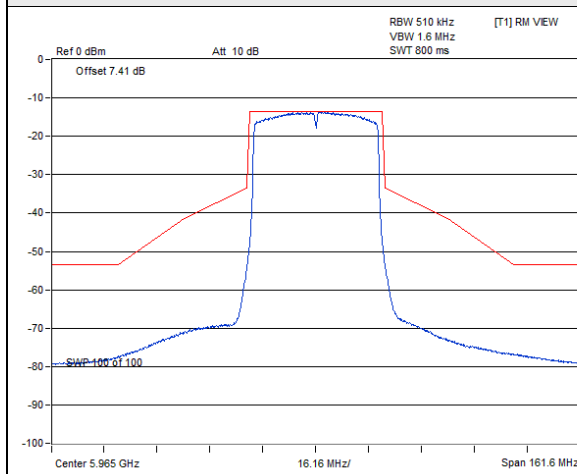
802.11ax (HE20) / Chain 1 : CH 45



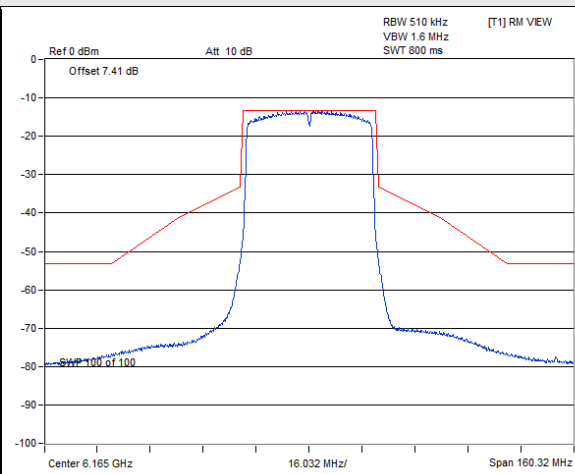
802.11ax (HE20) / Chain 1 : CH 93

802.11ax (HE40)

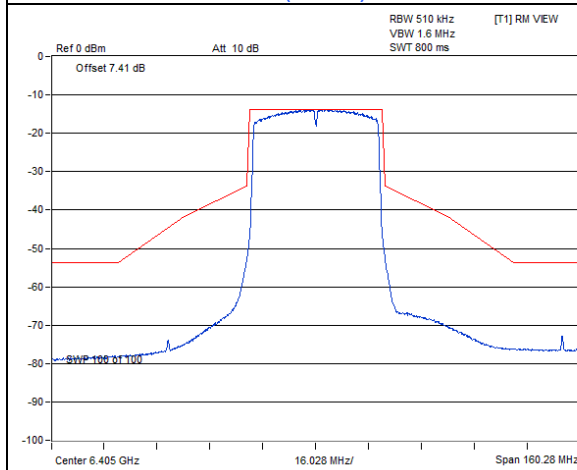
Spectrum Plot



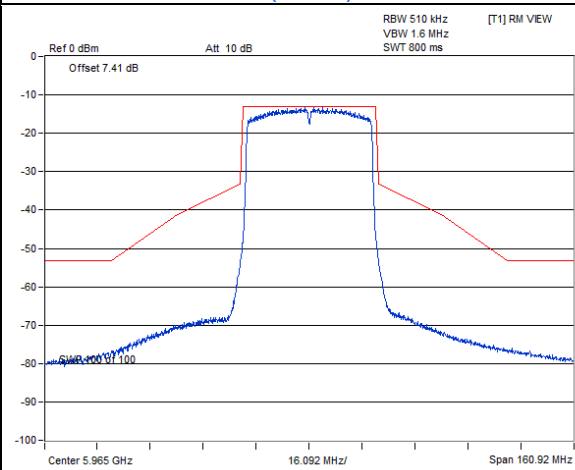
802.11ax (HE40) / Chain 0 : CH 3



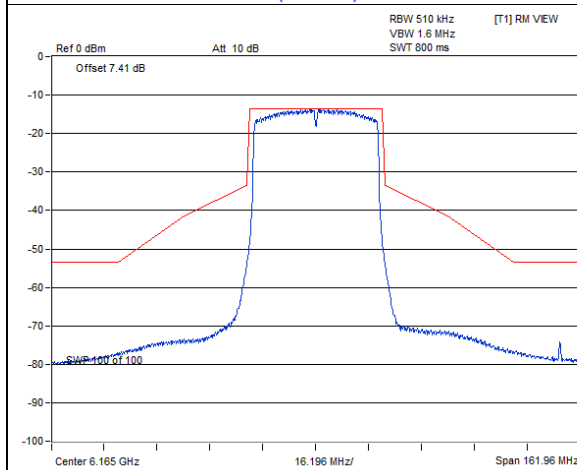
802.11ax (HE40) / Chain 0 : CH 3



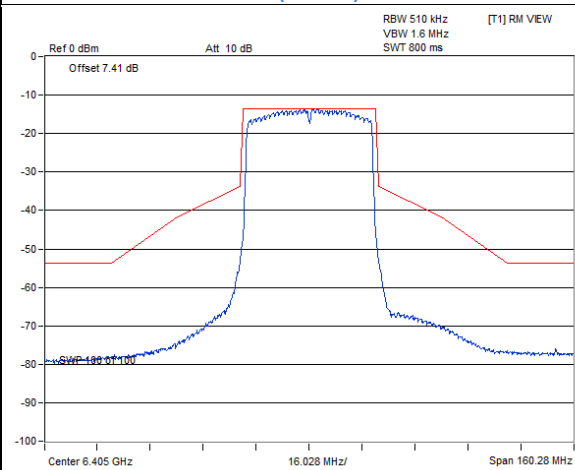
802.11ax (HE40) / Chain 0 : CH 91



802.11ax (HE40) / Chain 1 : CH 3



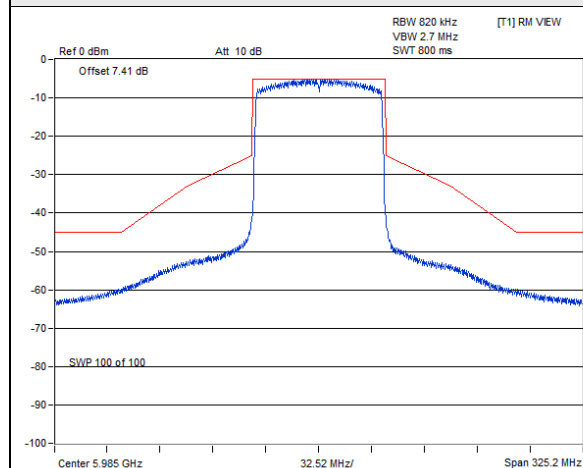
802.11ax (HE40) / Chain 1 : CH 43



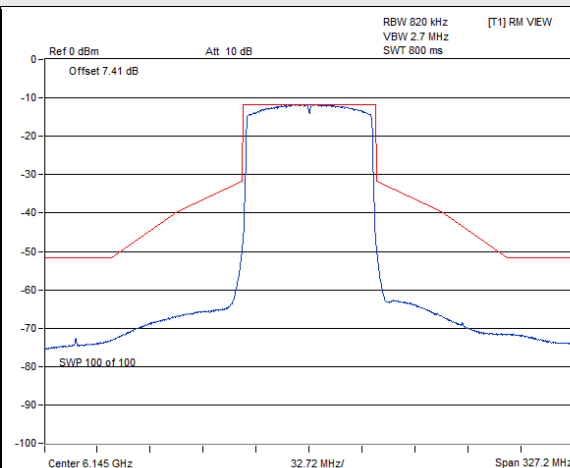
802.11ax (HE40) / Chain 1 : CH 91

802.11ax (HE80)

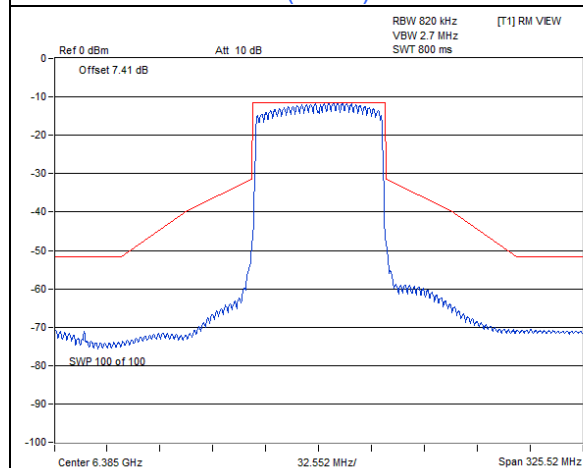
Spectrum Plot



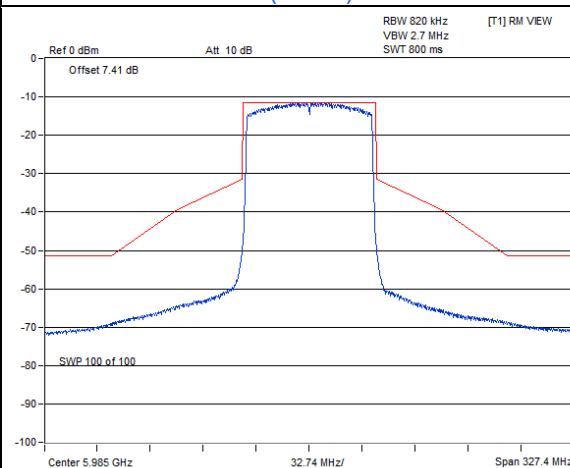
802.11ax (HE80) / Chain 0 : CH 7



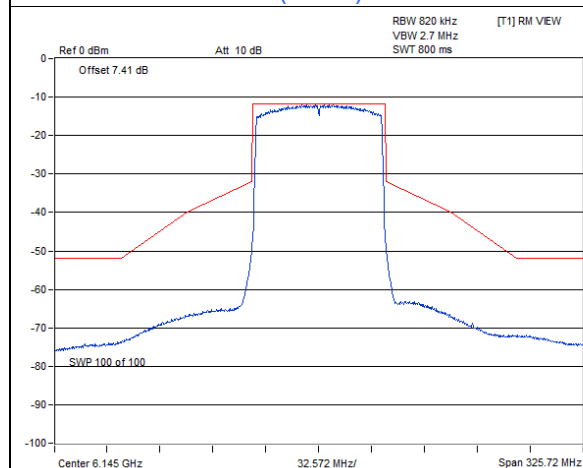
802.11ax (HE80) / Chain 0 : CH 39



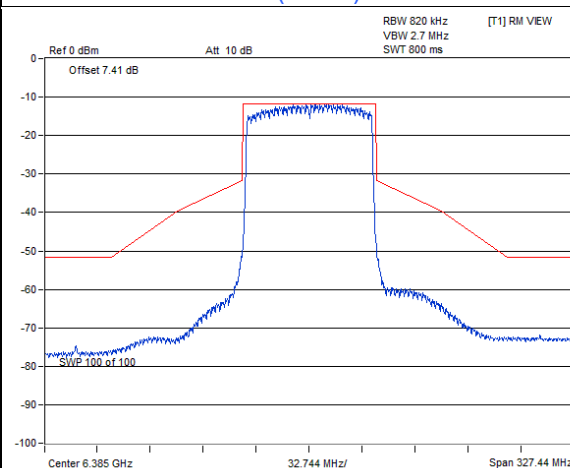
802.11ax (HE80) / Chain 0 : CH 87



802.11ax (HE80) / Chain 1 : CH 7



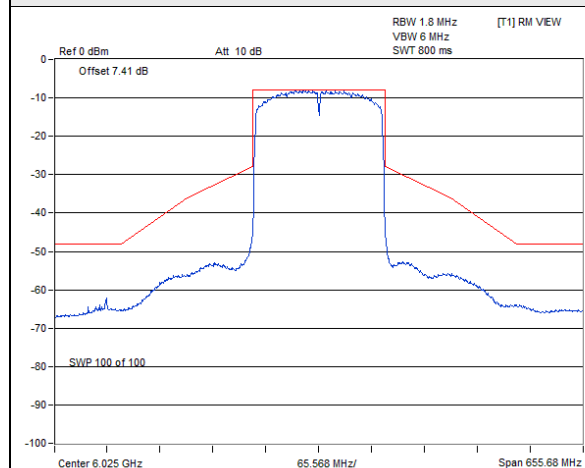
802.11ax (HE80) / Chain 1 : CH 39



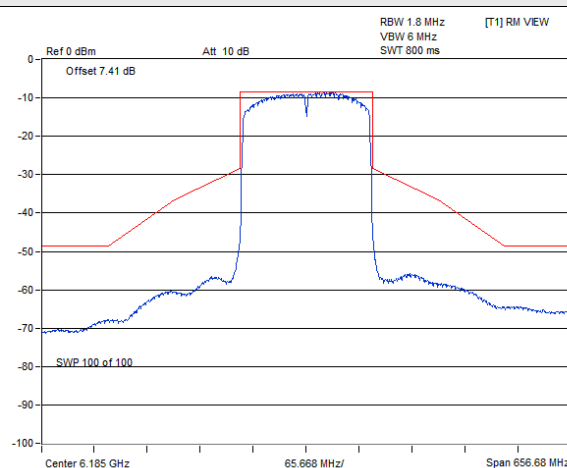
802.11ax (HE80) / Chain 1 : CH 87

802.11ax (HE160)

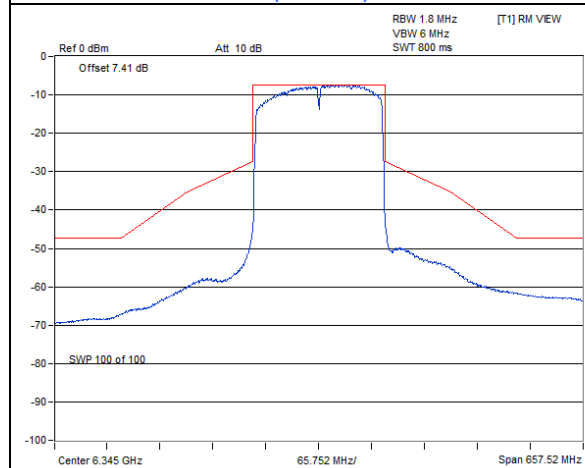
Spectrum Plot



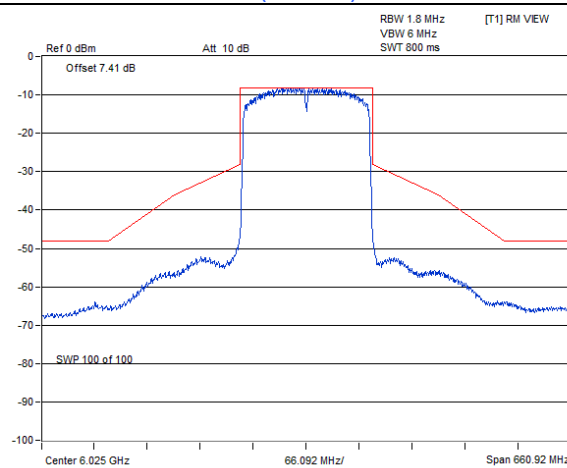
802.11ax (HE160) / Chain 0 : CH 15



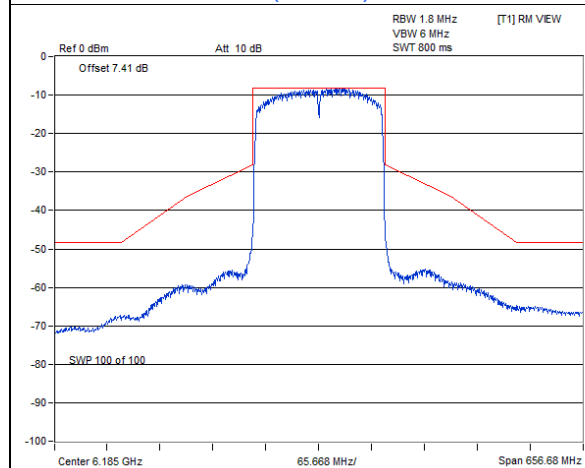
802.11ax (HE160) / Chain 0 : CH 47



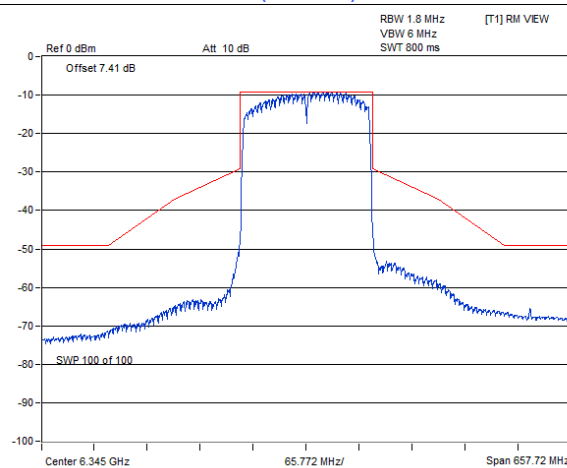
802.11ax (HE160) / Chain 0 : CH 79



802.11ax (HE160) / Chain 1 : CH 15



802.11ax (HE160) / Chain 1 : CH 47



802.11ax (HE160) / Chain 1 : CH 79

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz (System)	Environmental Conditions:	26°C, 62% RH	Tested By:	Katina Lu
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802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
1	5955	16.32	16.38
45	6175	16.38	16.38
93	6415	16.38	16.38

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
1	5955	18.84	18.84
45	6175	18.90	18.84
93	6415	18.84	18.90

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
3	5965	37.92	37.80
43	6165	37.80	37.68
91	6405	37.68	37.80

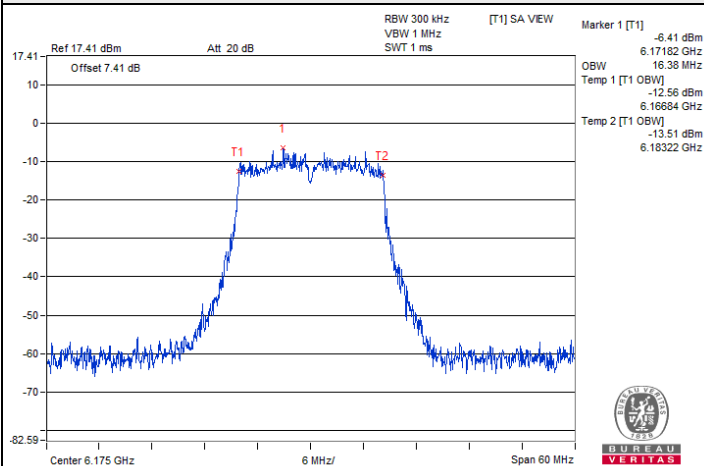
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
7	5985	76.80	77.04
39	6145	76.80	77.04
87	6385	76.80	77.04

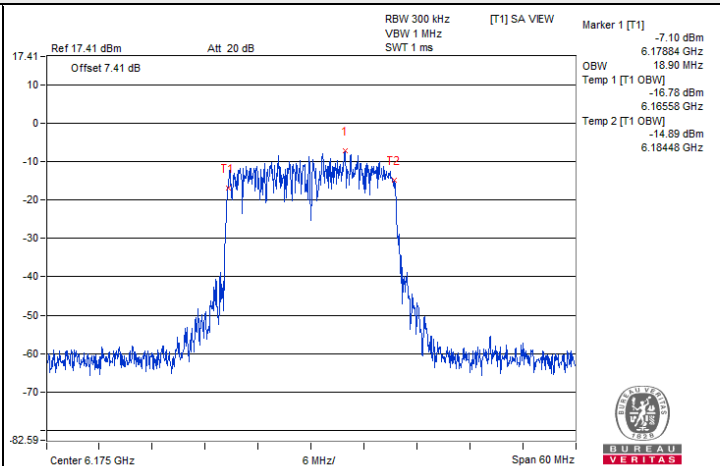
802.11ax (HE160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
15	6025	155.04	154.56
47	6185	154.56	154.56
79	6345	154.08	154.08

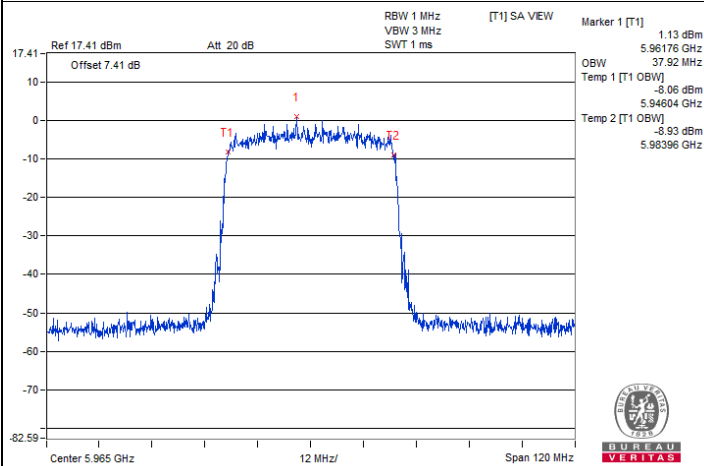
Spectrum Plot of Maximum Value



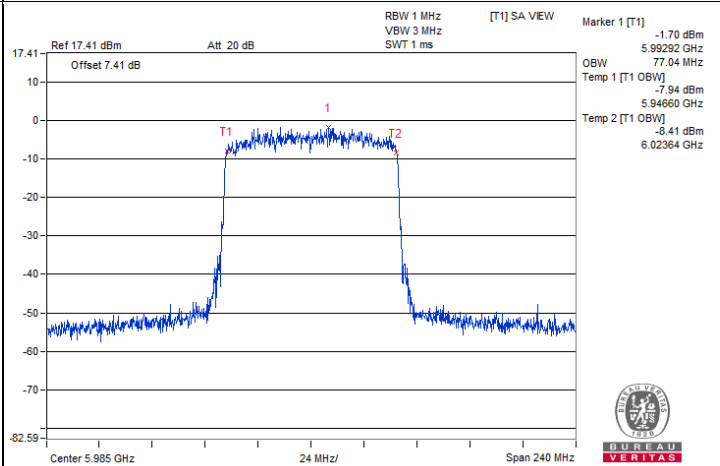
802.11a / Chain 0 : CH 45



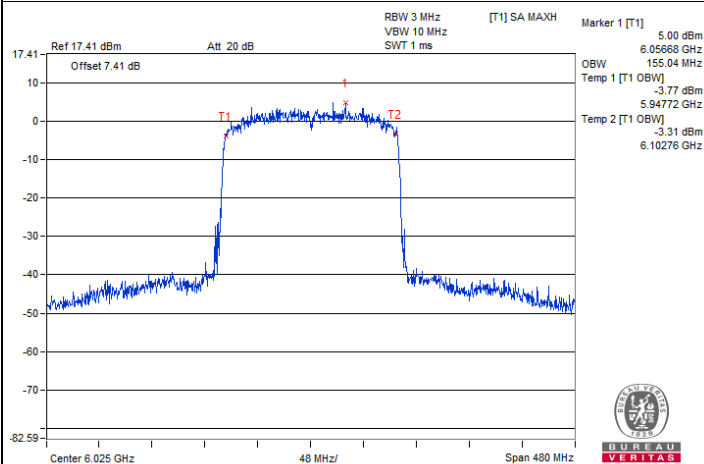
802.11ax (HE20) / Chain 0 : CH 45



802.11ax (HE40) / Chain 0 : CH 3



802.11ax (HE80) / Chain 1 : CH 7



802.11ax (HE160) / Chain 0 : CH 15

7.6 Contention-based Protocol

Input Power:	120 Vac, 60 Hz (System)	Environmental Conditions:	25°C, 60% RH	Tested By:	Cherry Chuo
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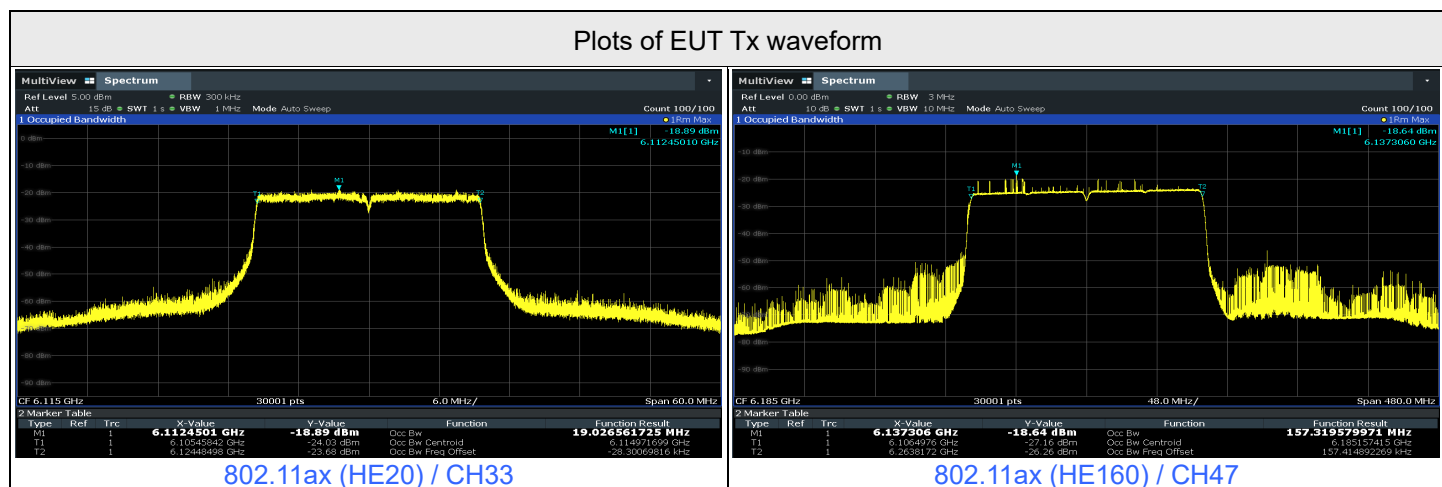
EUT Information		
Product	Model No.	Software/Firmware Version
IEEE802.11ax/ac/n/a/b/g Wireless LAN	FXE5000-US	1.03.08

Companion Device Information			
Product	Brand	Model No.	Software/Firmware Version
IEEE802.11ax/ac/n/a/b/g Wireless LAN	CONTEC	FXE5000-US	1.03.08

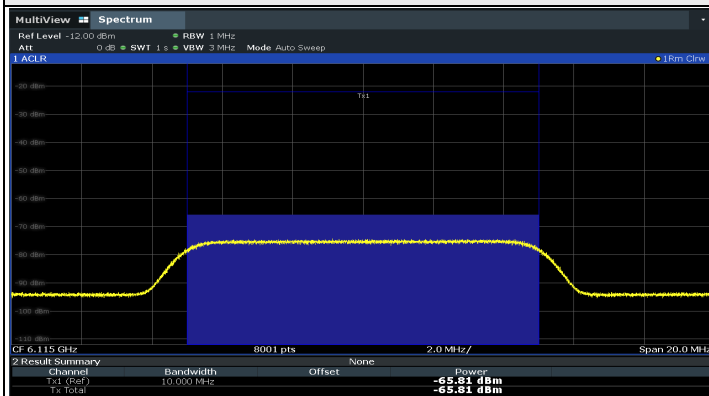
For U-NII-5

Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	33	6115	6115	-65.81	1.72	0	-67.53	-62	OFF
					-66.31	1.72	0	-68.03	-62	Minimal
					-80.28	1.72	0	-82	-62	ON
	160	47	6110	6110	-60.84	1.72	0	-62.56	-62	OFF
					-61.34	1.72	0	-63.06	-62	Minimal
					-80.28	1.72	0	-82	-62	ON
			6185	6185	-60.5	1.72	0	-62.22	-62	OFF
					-61	1.72	0	-62.72	-62	Minimal
					-80.28	1.72	0	-82	-62	ON
			6260	6260	-60.88	1.72	0	-62.6	-62	OFF
					-61.38	1.72	0	-63.1	-62	Minimal
					-80.28	1.72	0	-82	-62	ON

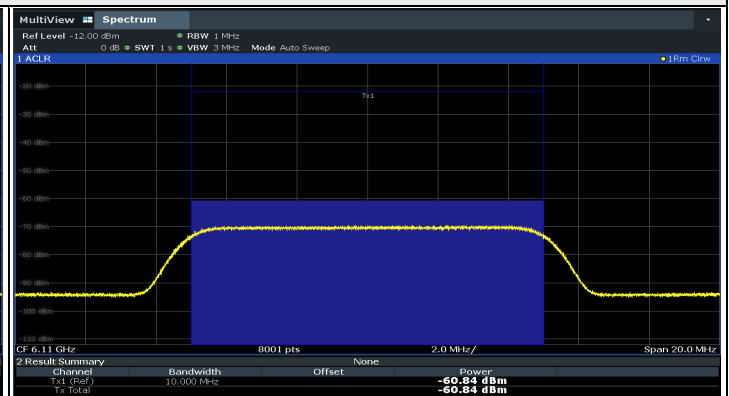
Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11ax	20	6115	v	v	v	v	v	v	x	v	v	v	90%	90%	Pass
	160	6110	v	x	v	v	v	v	v	v	v	v	90%	90%	Pass
		6185	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6260	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass



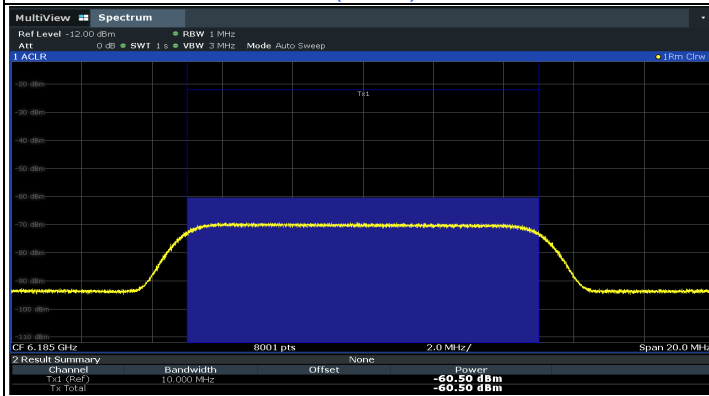
Plots of Injected signal (AWGN) level



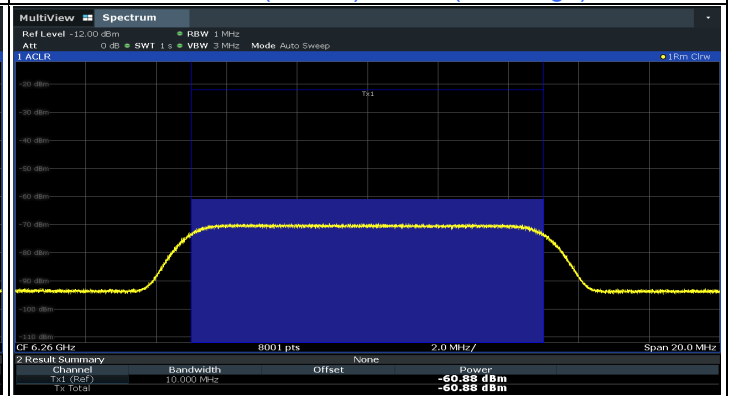
802.11ax (HE20) / CH33



802.11ax (HE160) / CH47(Low Edge)



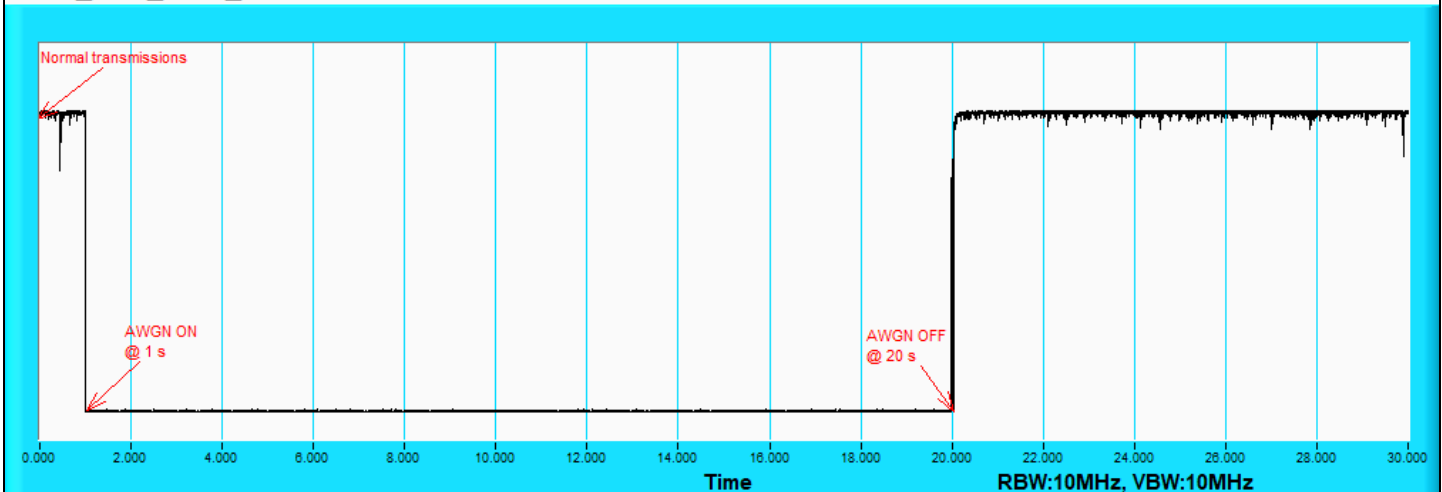
802.11ax (HE160) / CH47(Middle)



802.11ax (HE160) / CH47(High Edge)

Plots of EUT ceased transmission in the time domain

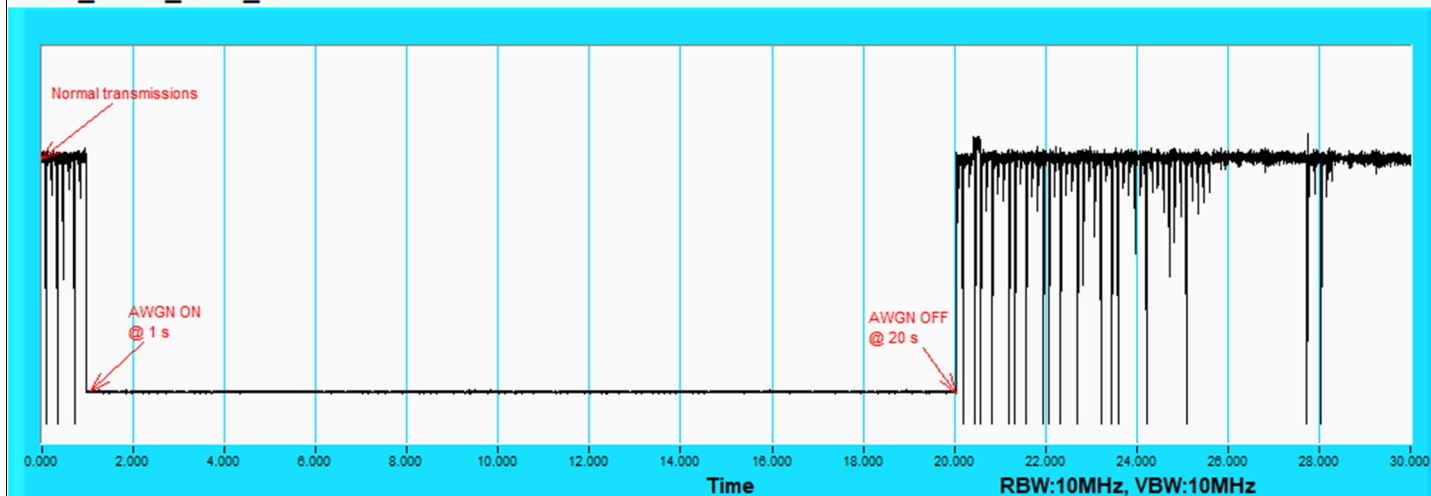
UNII5_20M_6115_Test Result



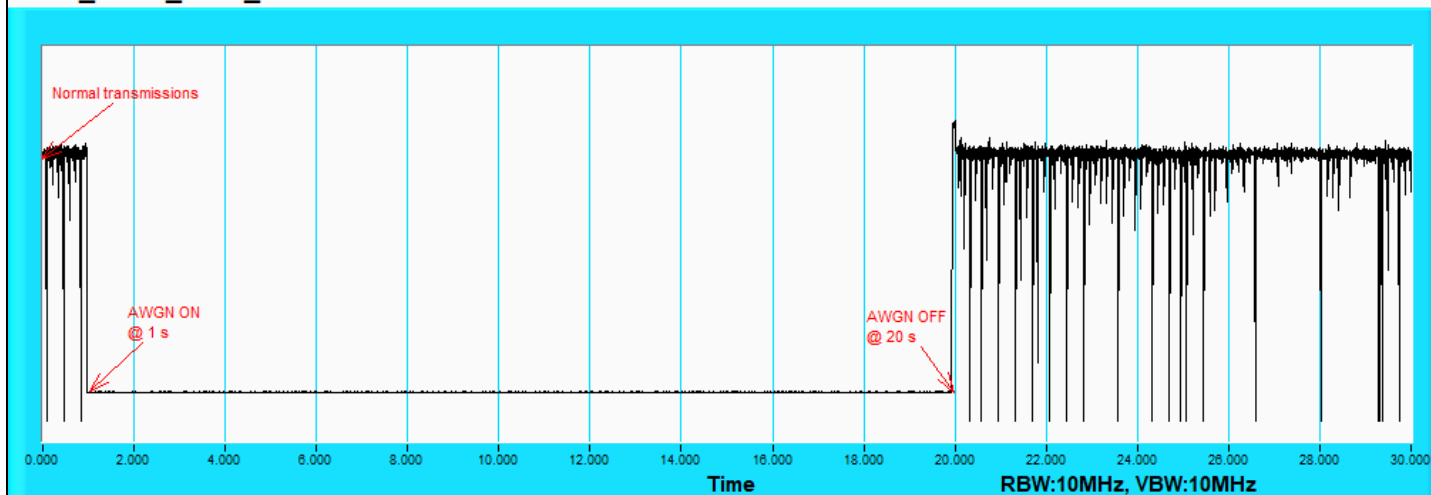
802.11ax (HE20) / CH33

Plots of EUT ceased transmission in the time domain

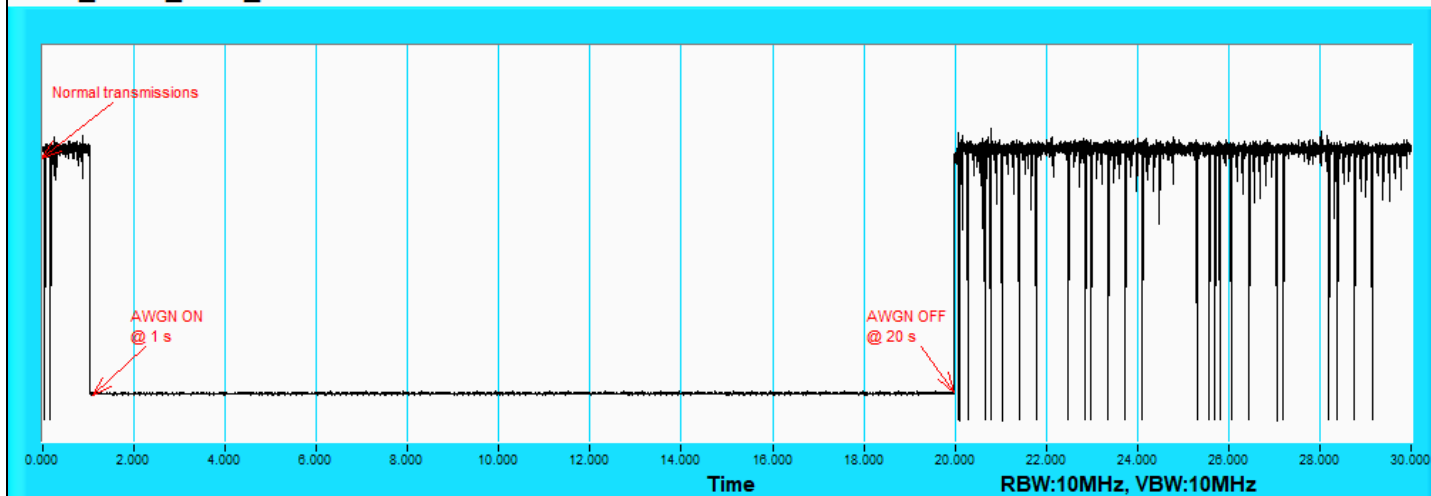
UNI5_160M_6110_Test Result



UNI5_160M_6185_Test Result



UNI5_160M_6260_Test Result



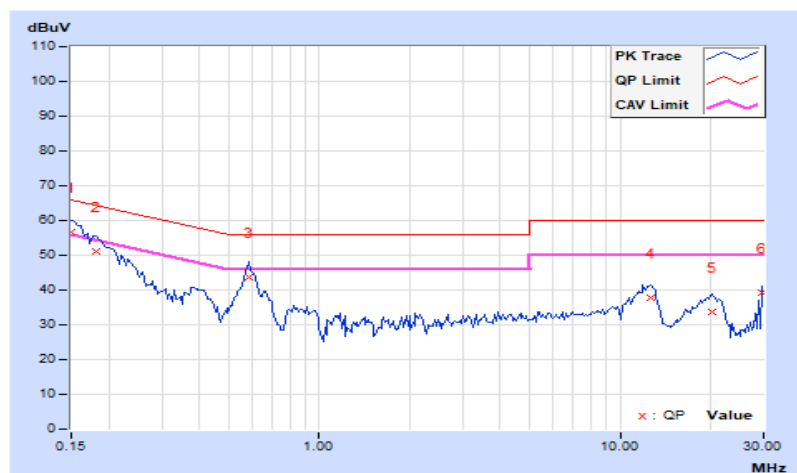
7.7 AC Power Conducted Emissions

RF Mode	802.11ax (HE160)	Channel	CH 15 : 6025 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	0.15000	10.01	46.51	33.06	56.52	43.07	66.00	56.00	-9.48	-12.93
2	0.18125	10.02	41.16	28.33	51.18	38.35	64.43	54.43	-13.25	-16.08
3	0.58750	10.03	33.63	28.77	43.66	38.80	56.00	46.00	-12.34	-7.20
4	12.64844	10.66	26.95	22.78	37.61	33.44	60.00	50.00	-22.39	-16.56
5	20.26563	11.06	22.50	18.29	33.56	29.35	60.00	50.00	-26.44	-20.65
6	29.78906	11.59	27.78	24.75	39.37	36.34	60.00	50.00	-20.63	-13.66

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

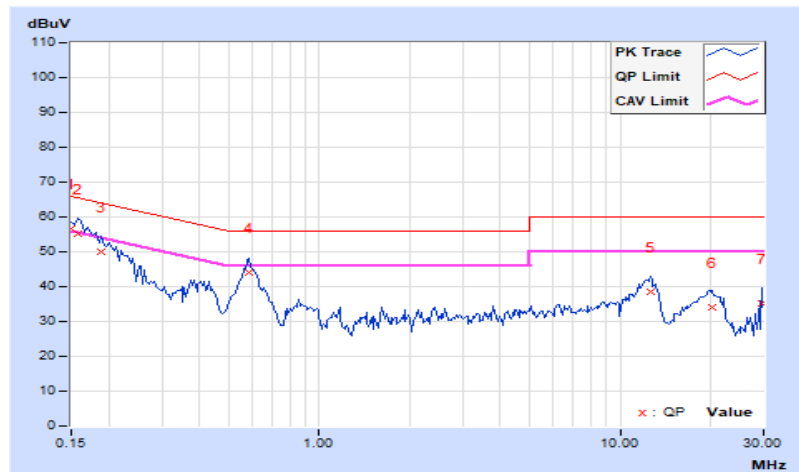


RF Mode	802.11ax (HE160)	Channel	CH 15 : 6025 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	10.00	46.59	33.16	56.59	43.16	66.00	56.00	-9.41	-12.84
2	0.15781	10.01	45.05	31.40	55.06	41.41	65.58	55.58	-10.52	-14.17
3	0.18906	10.01	40.12	27.53	50.13	37.54	64.08	54.08	-13.95	-16.54
4	0.58750	10.02	34.09	29.45	44.11	39.47	56.00	46.00	-11.89	-6.53
5	12.63672	10.51	27.83	23.44	38.34	33.95	60.00	50.00	-21.66	-16.05
6	20.31250	10.78	23.27	18.89	34.05	29.67	60.00	50.00	-25.95	-20.33
7	29.79688	11.12	24.12	20.04	35.24	31.16	60.00	50.00	-24.76	-18.84

Remarks:

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



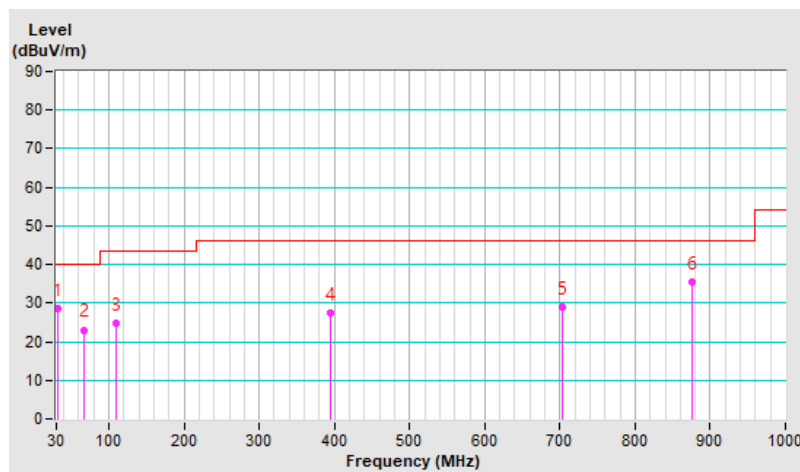
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE160)	Channel	CH 15 : 6025 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	24 °C, 72 % RH
Tested By	Andy Ho		

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	30.99	28.6 QP	40.0	-11.4	1.00 H	67	42.5	-13.9
2	66.67	23.1 QP	40.0	-16.9	2.00 H	44	37.5	-14.4
3	108.57	24.9 QP	43.5	-18.6	3.00 H	228	40.4	-15.5
4	394.79	27.5 QP	46.0	-18.5	1.00 H	300	37.1	-9.6
5	703.40	28.9 QP	46.0	-17.1	3.00 H	2	31.7	-2.8
6	874.99	35.4 QP	46.0	-10.6	1.00 H	241	35.9	-0.5

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 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.

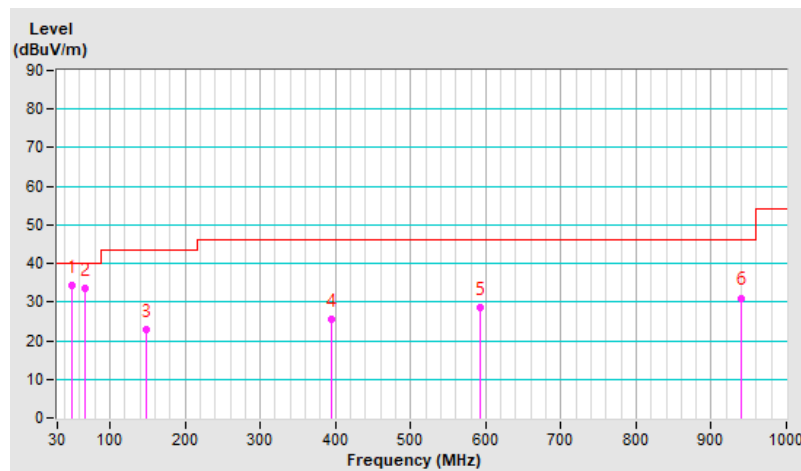


RF Mode	802.11ax (HE160)	Channel	CH 15 : 6025 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	24 °C, 72 % RH
Tested By	Andy Ho		

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	48.72	34.1 QP	40.0	-5.9	1.00 V	360	46.8	-12.7
2	66.62	33.5 QP	40.0	-6.5	1.00 V	27	47.9	-14.4
3	148.36	22.9 QP	43.5	-20.6	1.00 V	43	35.4	-12.5
4	394.19	25.5 QP	46.0	-20.5	2.00 V	2	35.1	-9.6
5	592.50	28.6 QP	46.0	-17.4	3.00 V	360	33.6	-5.0
6	939.86	31.1 QP	46.0	-14.9	4.00 V	2	30.6	0.5

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 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.



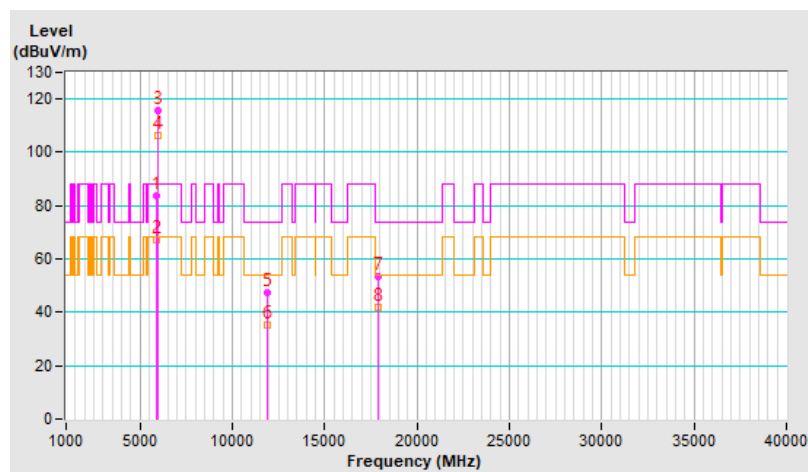
7.9 Unwanted Emissions above 1 GHz

RF Mode	802.11a	Channel	CH 1 : 5955 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	83.6 PK	88.2	-4.6	1.20 H	26	80.1	3.5
2	#5925.00	67.4 AV	68.2	-0.8	1.20 H	26	63.9	3.5
3	*5955.00	115.6 PK			1.20 H	26	112.2	3.4
4	*5955.00	106.4 AV			1.20 H	26	103.0	3.4
5	11910.00	47.6 PK	74.0	-26.4	1.55 H	249	36.6	11.0
6	11910.00	35.2 AV	54.0	-18.8	1.55 H	249	24.2	11.0
7	17865.00	53.6 PK	74.0	-20.4	1.49 H	231	33.4	20.2
8	17865.00	41.8 AV	54.0	-12.2	1.49 H	231	21.6	20.2

Remarks:

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

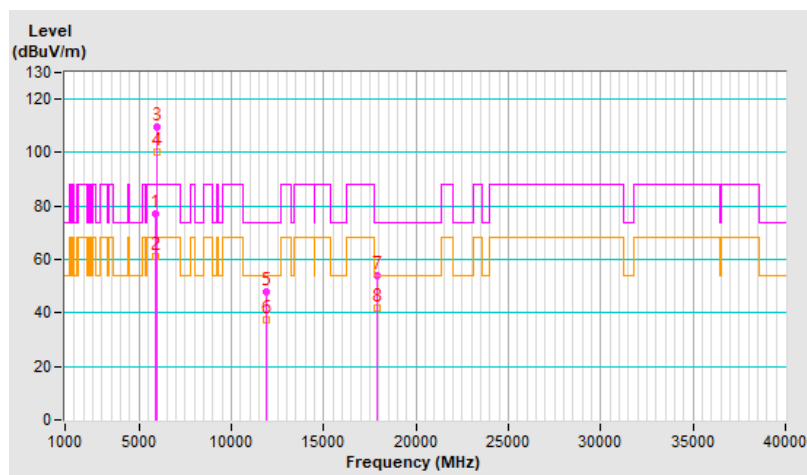


RF Mode	802.11a	Channel	CH 1 : 5955 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	77.1 PK	88.2	-11.1	3.72 V	88	73.6	3.5
2	#5925.00	61.0 AV	68.2	-7.2	3.72 V	88	57.5	3.5
3	*5955.00	109.8 PK			3.72 V	88	106.4	3.4
4	*5955.00	100.4 AV			3.72 V	88	97.0	3.4
5	11910.00	48.0 PK	74.0	-26.0	1.08 V	202	37.0	11.0
6	11910.00	37.5 AV	54.0	-16.5	1.08 V	202	26.5	11.0
7	17865.00	54.1 PK	74.0	-19.9	1.49 V	118	33.9	20.2
8	17865.00	42.0 AV	54.0	-12.0	1.49 V	118	21.8	20.2

Remarks:

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

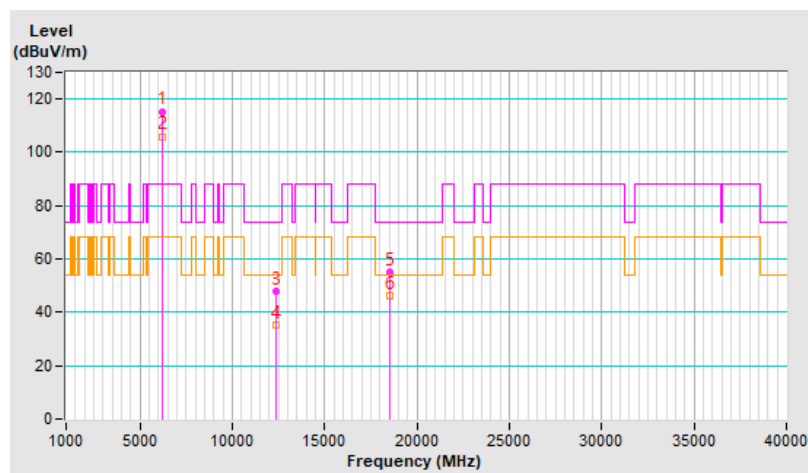


RF Mode	802.11a	Channel	CH 45 : 6175 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6175.00	115.4 PK			1.38 H	71	111.6	3.8
2	*6175.00	106.0 AV			1.38 H	71	102.2	3.8
3	12350.00	47.9 PK	74.0	-26.1	1.60 H	246	36.6	11.3
4	12350.00	35.3 AV	54.0	-18.7	1.60 H	246	24.0	11.3
5	18525.00	55.0 PK	74.0	-19.0	1.34 H	38	60.5	-5.5
6	18525.00	46.4 AV	54.0	-7.6	1.34 H	38	51.9	-5.5

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.

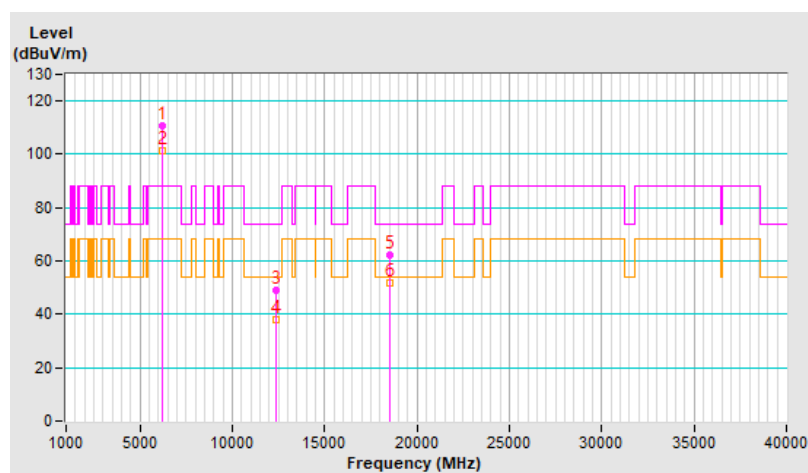


RF Mode	802.11a	Channel	CH 45 : 6175 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6175.00	110.9 PK			3.73 V	93	107.1	3.8
2	*6175.00	101.2 AV			3.73 V	93	97.4	3.8
3	12350.00	48.8 PK	74.0	-25.2	1.21 V	210	37.5	11.3
4	12350.00	37.8 AV	54.0	-16.2	1.21 V	210	26.5	11.3
5	18525.00	62.0 PK	74.0	-12.0	1.31 V	90	67.5	-5.5
6	18525.00	51.8 AV	54.0	-2.2	1.31 V	90	57.3	-5.5

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.

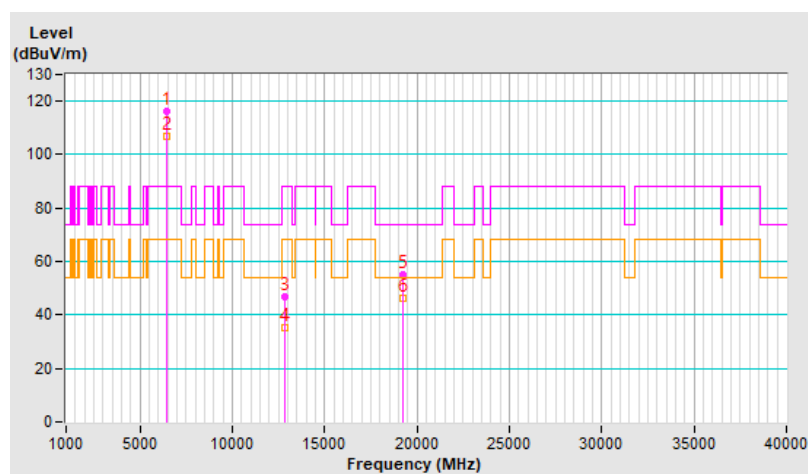


RF Mode	802.11a	Channel	CH 93 : 6415 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6415.00	116.1 PK			1.00 H	354	111.2	4.9
2	*6415.00	106.7 AV			1.00 H	354	101.8	4.9
3	#12830.00	46.8 PK	88.2	-41.4	1.49 H	264	34.6	12.2
4	#12830.00	35.2 AV	68.2	-33.0	1.49 H	264	23.0	12.2
5	19245.00	55.2 PK	74.0	-18.8	1.34 H	42	59.8	-4.6
6	19245.00	46.2 AV	54.0	-7.8	1.34 H	42	50.8	-4.6

Remarks:

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

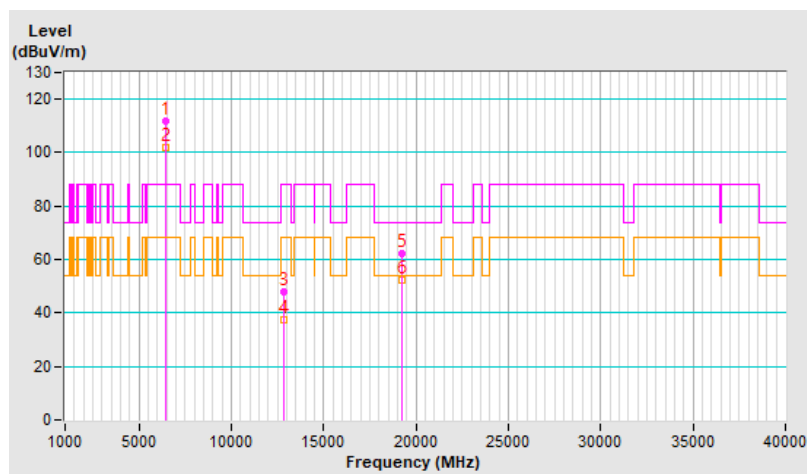


RF Mode	802.11a	Channel	CH 93 : 6415 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6415.00	111.8 PK			3.86 V	101	106.9	4.9
2	*6415.00	101.7 AV			3.86 V	101	96.8	4.9
3	#12830.00	48.1 PK	88.2	-40.1	1.21 V	212	35.9	12.2
4	#12830.00	37.3 AV	68.2	-30.9	1.21 V	212	25.1	12.2
5	19245.00	62.1 PK	74.0	-11.9	1.33 V	92	66.7	-4.6
6	19245.00	52.4 AV	54.0	-1.6	1.33 V	92	57.0	-4.6

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.

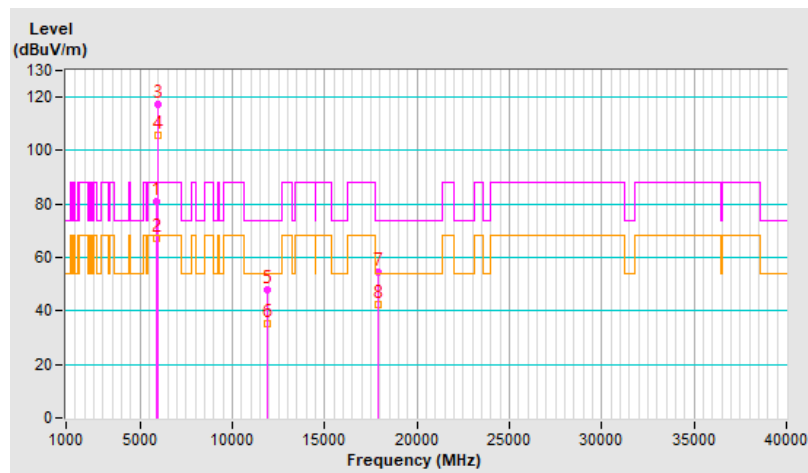


RF Mode	802.11ax (HE20)	Channel	CH 1 : 5955 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	80.9 PK	88.2	-7.3	1.21 H	28	77.4	3.5
2	#5925.00	67.4 AV	68.2	-0.8	1.21 H	28	63.9	3.5
3	*5955.00	117.4 PK			1.21 H	28	114.0	3.4
4	*5955.00	105.6 AV			1.21 H	28	102.2	3.4
5	11910.00	47.7 PK	74.0	-26.3	1.59 H	255	36.7	11.0
6	11910.00	35.1 AV	54.0	-18.9	1.59 H	255	24.1	11.0
7	17865.00	54.4 PK	74.0	-19.6	1.52 H	235	34.2	20.2
8	17865.00	42.3 AV	54.0	-11.7	1.52 H	235	22.1	20.2

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.

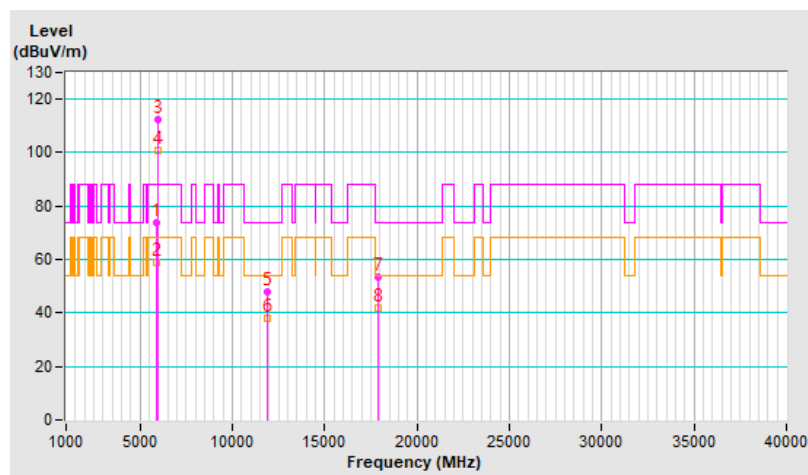


RF Mode	802.11ax (HE20)	Channel	CH 1 : 5955 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	73.7 PK	88.2	-14.5	3.94 V	84	70.2	3.5
2	#5925.00	58.7 AV	68.2	-9.5	3.94 V	84	55.2	3.5
3	*5955.00	112.6 PK			3.94 V	84	109.2	3.4
4	*5955.00	100.8 AV			3.94 V	84	97.4	3.4
5	11910.00	48.0 PK	74.0	-26.0	1.05 V	214	37.0	11.0
6	11910.00	37.8 AV	54.0	-16.2	1.05 V	214	26.8	11.0
7	17865.00	53.6 PK	74.0	-20.4	1.45 V	129	33.4	20.2
8	17865.00	41.6 AV	54.0	-12.4	1.45 V	129	21.4	20.2

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.

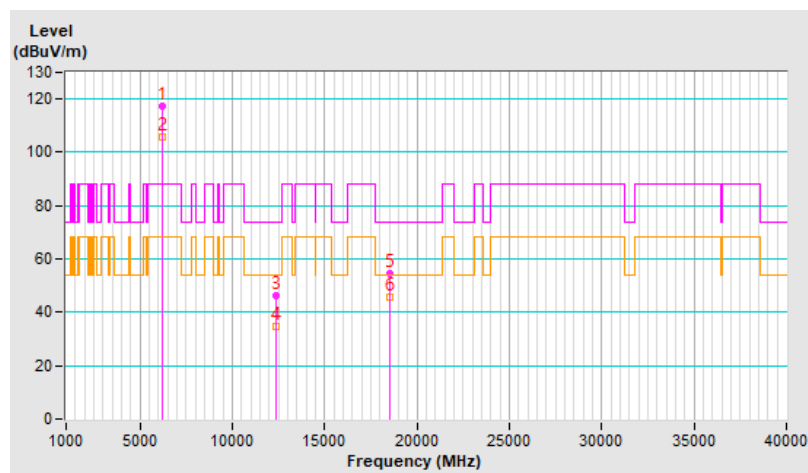


RF Mode	802.11ax (HE20)	Channel	CH 45 : 6175 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6175.00	117.4 PK			1.37 H	73	113.6	3.8
2	*6175.00	105.9 AV			1.37 H	73	102.1	3.8
3	12350.00	46.1 PK	74.0	-27.9	1.54 H	267	34.8	11.3
4	12350.00	34.8 AV	54.0	-19.2	1.54 H	267	23.5	11.3
5	18525.00	54.6 PK	74.0	-19.4	1.31 H	38	60.1	-5.5
6	18525.00	45.9 AV	54.0	-8.1	1.31 H	38	51.4	-5.5

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.

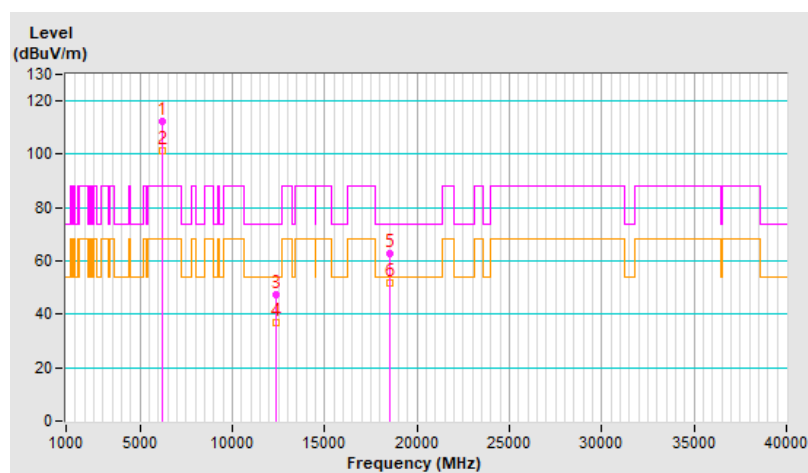


RF Mode	802.11ax (HE20)	Channel	CH 45 : 6175 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6175.00	112.6 PK			3.65 V	95	108.8	3.8
2	*6175.00	101.3 AV			3.65 V	95	97.5	3.8
3	12350.00	47.4 PK	74.0	-26.6	1.21 V	208	36.1	11.3
4	12350.00	36.9 AV	54.0	-17.1	1.21 V	208	25.6	11.3
5	18525.00	62.9 PK	74.0	-11.1	1.33 V	107	68.4	-5.5
6	18525.00	51.8 AV	54.0	-2.2	1.33 V	107	57.3	-5.5

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.

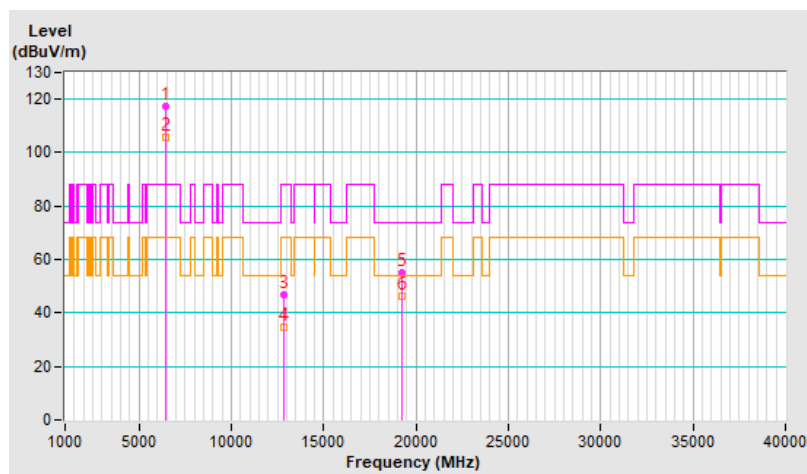


RF Mode	802.11ax (HE20)	Channel	CH 93 : 6415 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6415.00	117.4 PK			1.00 H	349	112.5	4.9
2	*6415.00	105.7 AV			1.00 H	349	100.8	4.9
3	#12830.00	46.6 PK	88.2	-41.6	1.47 H	251	34.4	12.2
4	#12830.00	34.8 AV	68.2	-33.4	1.47 H	251	22.6	12.2
5	19245.00	54.9 PK	74.0	-19.1	1.38 H	39	59.5	-4.6
6	19245.00	46.0 AV	54.0	-8.0	1.38 H	39	50.6	-4.6

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.

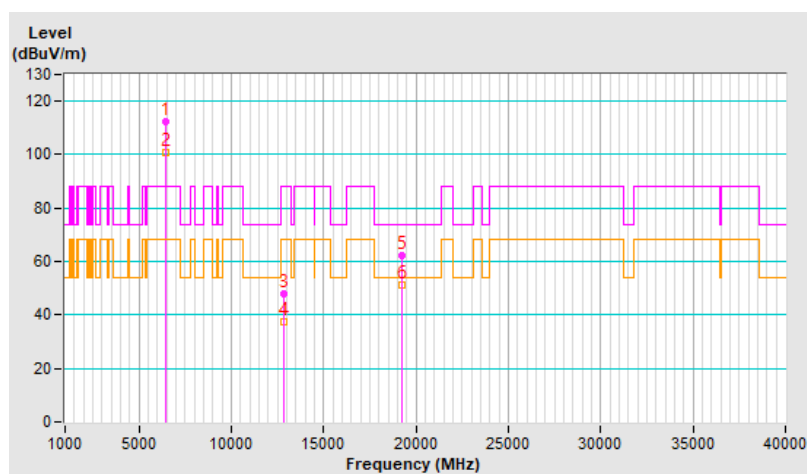


RF Mode	802.11ax (HE20)	Channel	CH 93 : 6415 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6415.00	112.4 PK			3.70 V	96	107.5	4.9
2	*6415.00	101.0 AV			3.70 V	96	96.1	4.9
3	#12830.00	48.0 PK	88.2	-40.2	1.16 V	198	35.8	12.2
4	#12830.00	37.2 AV	68.2	-31.0	1.16 V	198	25.0	12.2
5	19245.00	62.2 PK	74.0	-11.8	1.34 V	105	66.8	-4.6
6	19245.00	51.4 AV	54.0	-2.6	1.34 V	105	56.0	-4.6

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.

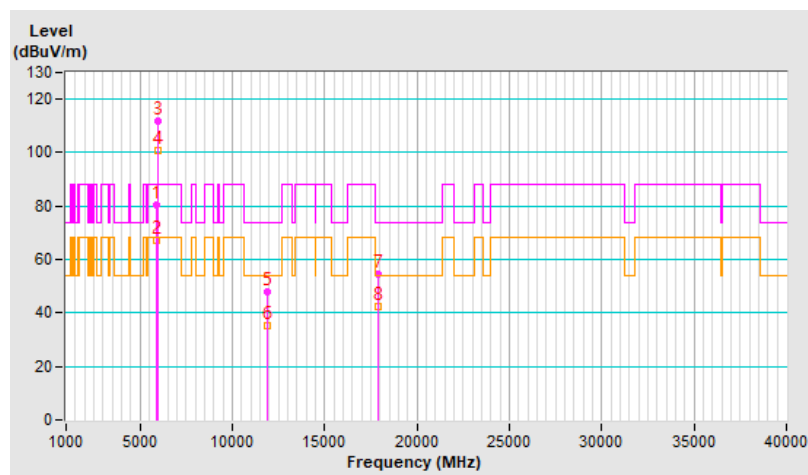


RF Mode	802.11ax (HE40)	Channel	CH 3 : 5965 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	80.3 PK	88.2	-7.9	1.20 H	22	76.8	3.5
2	#5925.00	67.4 AV	68.2	-0.8	1.20 H	22	63.9	3.5
3	*5965.00	111.6 PK			1.20 H	22	108.2	3.4
4	*5965.00	100.6 AV			1.20 H	22	97.2	3.4
5	11930.00	48.1 PK	74.0	-25.9	1.61 H	241	37.1	11.0
6	11930.00	35.4 AV	54.0	-18.6	1.61 H	241	24.4	11.0
7	17895.00	54.5 PK	74.0	-19.5	1.50 H	236	33.8	20.7
8	17895.00	42.4 AV	54.0	-11.6	1.50 H	236	21.7	20.7

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.

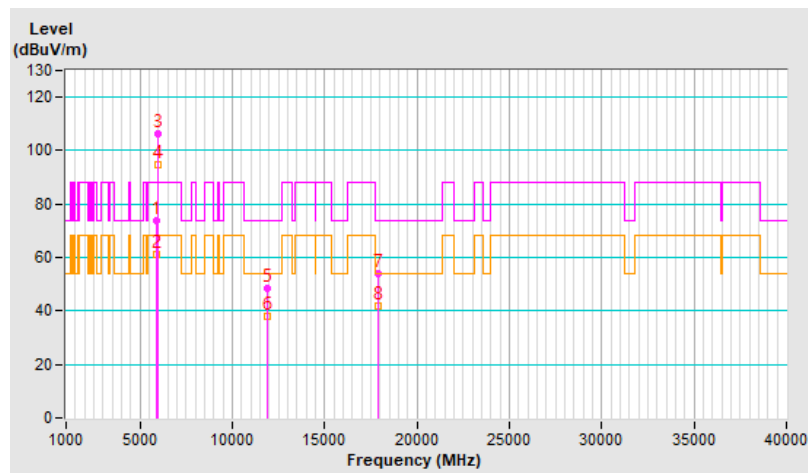


RF Mode	802.11ax (HE40)	Channel	CH 3 : 5965 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	74.0 PK	88.2	-14.2	4.00 V	78	70.5	3.5
2	#5925.00	61.2 AV	68.2	-7.0	4.00 V	78	57.7	3.5
3	*5965.00	106.1 PK			4.00 V	78	102.7	3.4
4	*5965.00	94.9 AV			4.00 V	78	91.5	3.4
5	11930.00	48.2 PK	74.0	-25.8	1.01 V	223	37.2	11.0
6	11930.00	38.1 AV	54.0	-15.9	1.01 V	223	27.1	11.0
7	17895.00	53.9 PK	74.0	-20.1	1.49 V	143	33.2	20.7
8	17895.00	41.9 AV	54.0	-12.1	1.49 V	143	21.2	20.7

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.

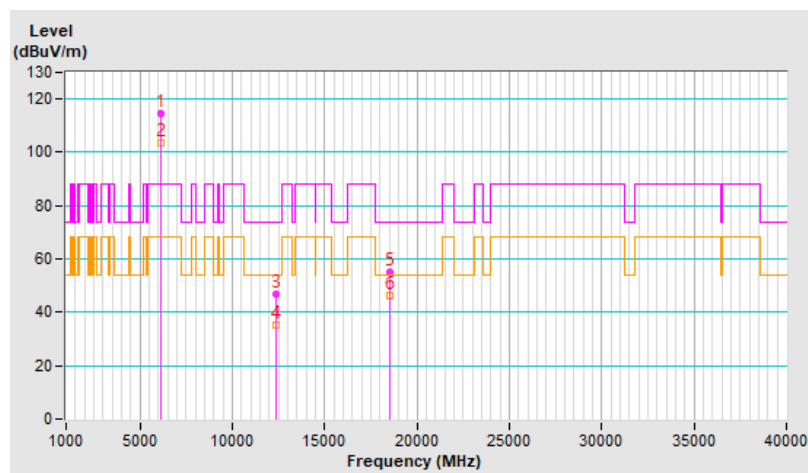


RF Mode	802.11ax (HE40)	Channel	CH 43 : 6165 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6165.00	114.5 PK			1.11 H	59	110.8	3.7
2	*6165.00	103.7 AV			1.11 H	59	100.0	3.7
3	12330.00	46.7 PK	74.0	-27.3	1.48 H	253	35.4	11.3
4	12330.00	35.3 AV	54.0	-18.7	1.48 H	253	24.0	11.3
5	18495.00	55.1 PK	74.0	-18.9	1.36 H	49	60.5	-5.4
6	18495.00	46.4 AV	54.0	-7.6	1.36 H	49	51.8	-5.4

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.

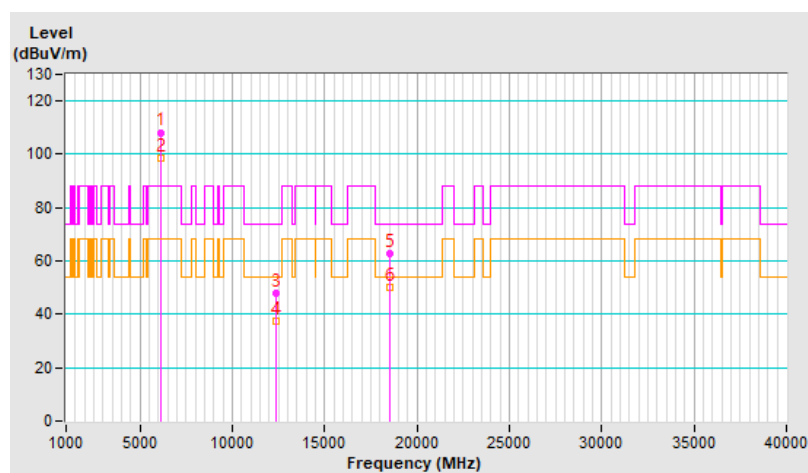


RF Mode	802.11ax (HE40)	Channel	CH 43 : 6165 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6165.00	108.2 PK			3.64 V	98	104.5	3.7
2	*6165.00	98.4 AV			3.64 V	98	94.7	3.7
3	12330.00	48.0 PK	74.0	-26.0	1.17 V	207	36.7	11.3
4	12330.00	37.2 AV	54.0	-16.8	1.17 V	207	25.9	11.3
5	18495.00	62.8 PK	74.0	-11.2	1.34 V	103	68.2	-5.4
6	18495.00	50.3 AV	54.0	-3.7	1.34 V	103	55.7	-5.4

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.

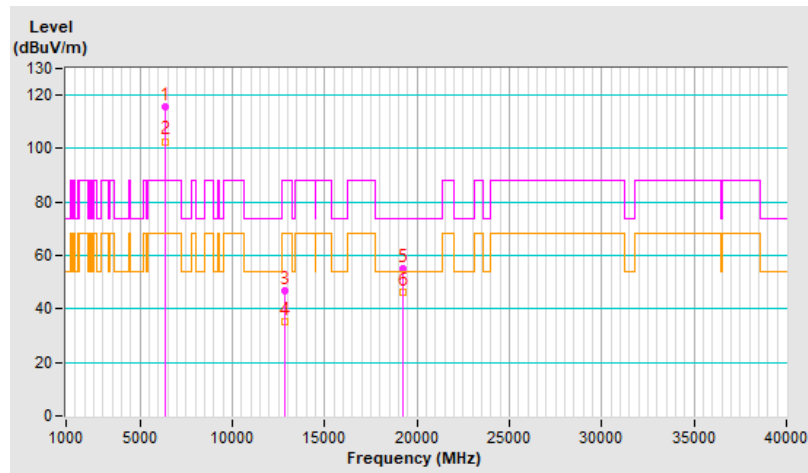


RF Mode	802.11ax (HE40)	Channel	CH 91 : 6405 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6405.00	115.5 PK			1.07 H	344	110.7	4.8
2	*6405.00	102.7 AV			1.07 H	344	97.9	4.8
3	#12810.00	46.8 PK	88.2	-41.4	1.42 H	258	34.6	12.2
4	#12810.00	35.1 AV	68.2	-33.1	1.42 H	258	22.9	12.2
5	19215.00	55.1 PK	74.0	-18.9	1.38 H	30	59.8	-4.7
6	19215.00	46.1 AV	54.0	-7.9	1.38 H	30	50.8	-4.7

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.

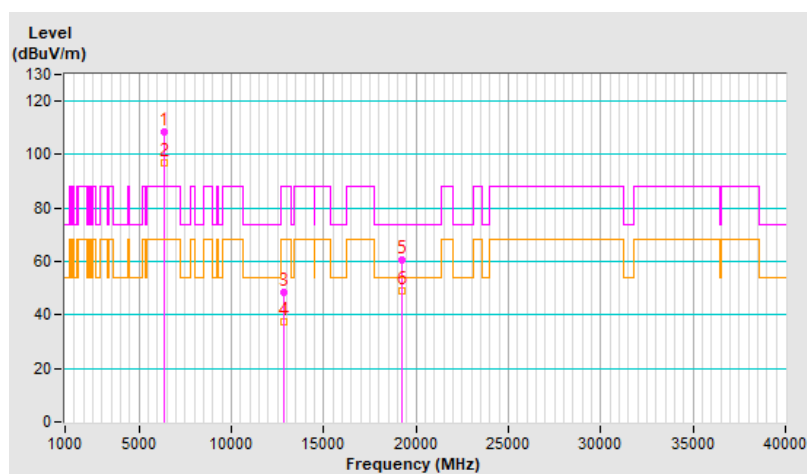


RF Mode	802.11ax (HE40)	Channel	CH 91 : 6405 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6405.00	108.3 PK			3.68 V	92	103.5	4.8
2	*6405.00	97.1 AV			3.68 V	92	92.3	4.8
3	#12810.00	48.4 PK	88.2	-39.8	1.18 V	205	36.2	12.2
4	#12810.00	37.3 AV	68.2	-30.9	1.18 V	205	25.1	12.2
5	19215.00	60.5 PK	74.0	-13.5	1.38 V	110	65.2	-4.7
6	19215.00	49.2 AV	54.0	-4.8	1.38 V	110	53.9	-4.7

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.

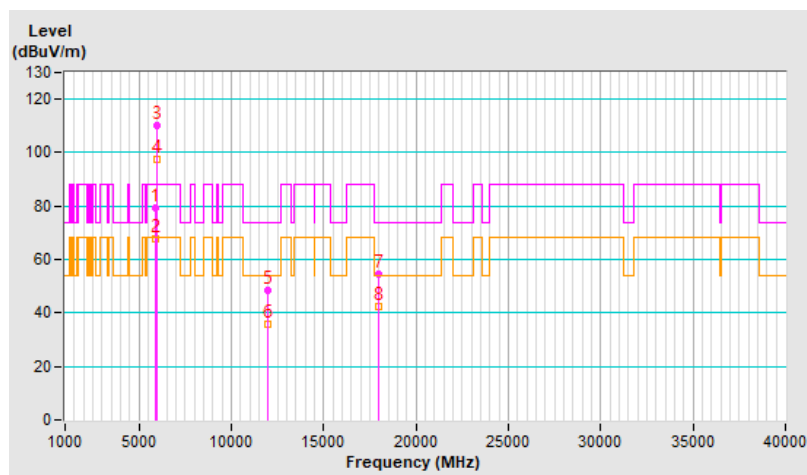


RF Mode	802.11ax (HE80)	Channel	CH 7 : 5985 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	79.3 PK	88.2	-8.9	1.00 H	24	75.8	3.5
2	#5925.00	67.5 AV	68.2	-0.7	1.00 H	24	64.0	3.5
3	*5985.00	110.3 PK			1.00 H	24	106.9	3.4
4	*5985.00	97.3 AV			1.00 H	24	93.9	3.4
5	11970.00	48.3 PK	74.0	-25.7	1.65 H	253	37.3	11.0
6	11970.00	35.8 AV	54.0	-18.2	1.65 H	253	24.8	11.0
7	17955.00	54.6 PK	74.0	-19.4	1.53 H	221	32.6	22.0
8	17955.00	42.4 AV	54.0	-11.6	1.53 H	221	20.4	22.0

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.

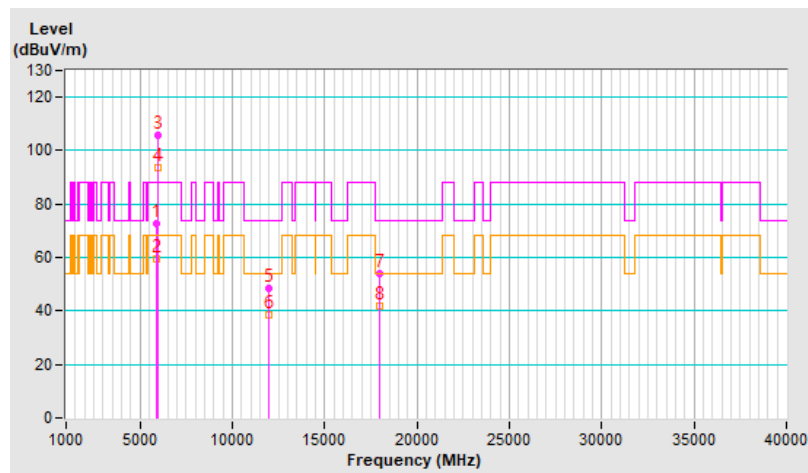


RF Mode	802.11ax (HE80)	Channel	CH 7 : 5985 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	72.7 PK	88.2	-15.5	3.91 V	106	69.2	3.5
2	#5925.00	59.6 AV	68.2	-8.6	3.91 V	106	56.1	3.5
3	*5985.00	105.5 PK			3.91 V	106	102.1	3.4
4	*5985.00	93.7 AV			3.91 V	106	90.3	3.4
5	11970.00	48.2 PK	74.0	-25.8	1.00 V	225	37.2	11.0
6	11970.00	38.3 AV	54.0	-15.7	1.00 V	225	27.3	11.0
7	17955.00	54.1 PK	74.0	-19.9	1.53 V	133	32.1	22.0
8	17955.00	41.8 AV	54.0	-12.2	1.53 V	133	19.8	22.0

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.

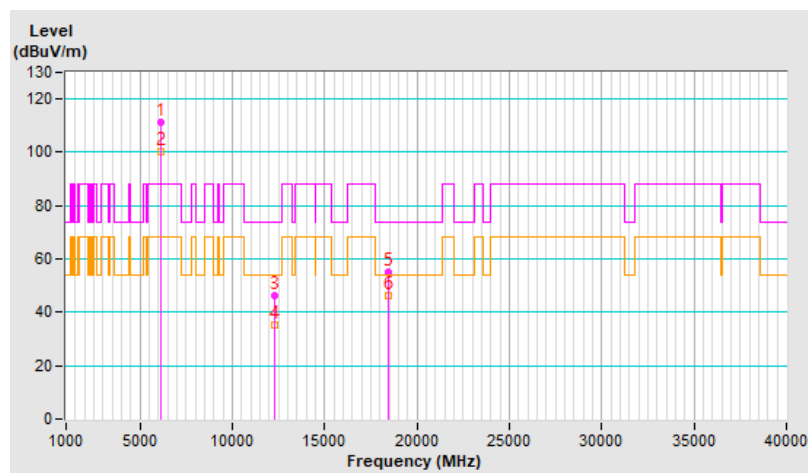


RF Mode	802.11ax (HE80)	Channel	CH 39 : 6145 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6145.00	111.2 PK			1.00 H	57	107.6	3.6
2	*6145.00	100.2 AV			1.00 H	57	96.6	3.6
3	12290.00	46.5 PK	74.0	-27.5	1.51 H	255	35.0	11.5
4	12290.00	35.0 AV	54.0	-19.0	1.51 H	255	23.5	11.5
5	18435.00	55.0 PK	74.0	-19.0	1.39 H	37	60.4	-5.4
6	18435.00	46.2 AV	54.0	-7.8	1.39 H	37	51.6	-5.4

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.

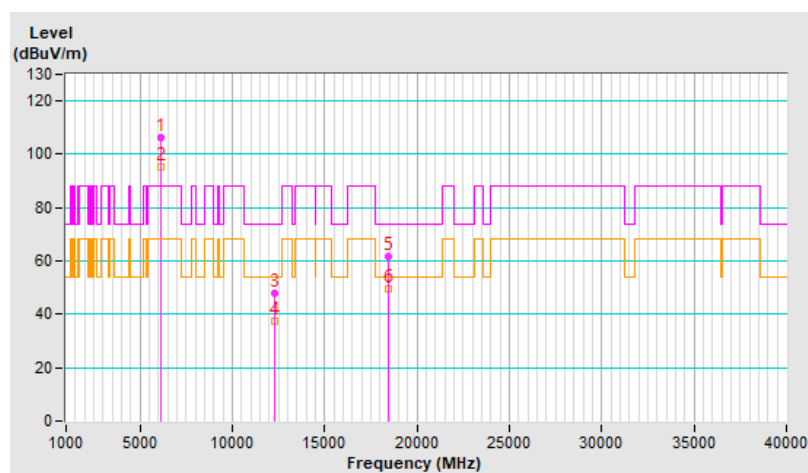


RF Mode	802.11ax (HE80)	Channel	CH 39 : 6145 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6145.00	106.3 PK			3.96 V	278	102.7	3.6
2	*6145.00	95.1 AV			3.96 V	278	91.5	3.6
3	12290.00	48.1 PK	74.0	-25.9	1.15 V	222	36.6	11.5
4	12290.00	37.2 AV	54.0	-16.8	1.15 V	222	25.7	11.5
5	18435.00	61.6 PK	74.0	-12.4	1.32 V	93	67.0	-5.4
6	18435.00	49.4 AV	54.0	-4.6	1.32 V	93	54.8	-5.4

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.

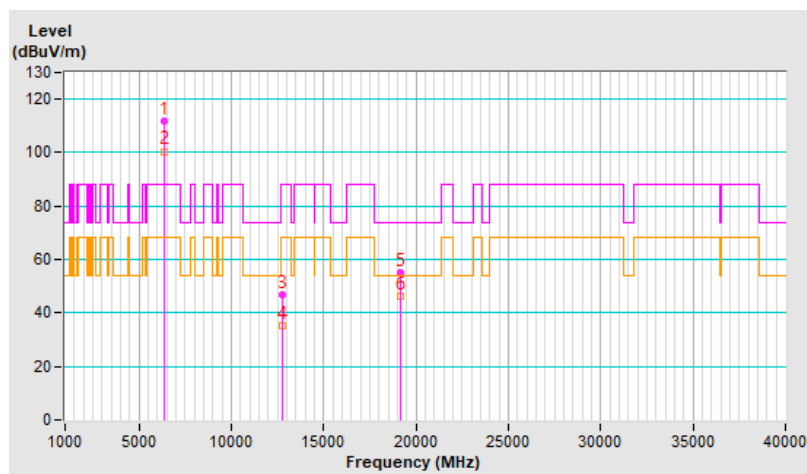


RF Mode	802.11ax (HE80)	Channel	CH 87 : 6385 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6385.00	111.7 PK			1.50 H	349	107.0	4.7
2	*6385.00	100.5 AV			1.50 H	349	95.8	4.7
3	#12770.00	46.6 PK	88.2	-41.6	1.38 H	249	34.5	12.1
4	#12770.00	35.2 AV	68.2	-33.0	1.38 H	249	23.1	12.1
5	19155.00	55.1 PK	74.0	-18.9	1.34 H	24	59.8	-4.7
6	19155.00	46.1 AV	54.0	-7.9	1.34 H	24	50.8	-4.7

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.

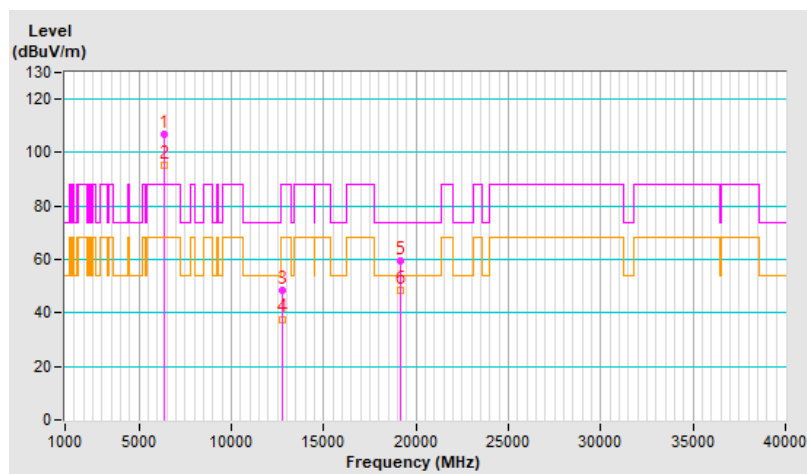


RF Mode	802.11ax (HE80)	Channel	CH 87 : 6385 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6385.00	106.6 PK			3.91 V	266	101.9	4.7
2	*6385.00	95.3 AV			3.91 V	266	90.6	4.7
3	#12770.00	48.5 PK	88.2	-39.7	1.19 V	212	36.4	12.1
4	#12770.00	37.7 AV	68.2	-30.5	1.19 V	212	25.6	12.1
5	19155.00	59.6 PK	74.0	-14.4	1.40 V	116	64.3	-4.7
6	19155.00	48.3 AV	54.0	-5.7	1.40 V	116	53.0	-4.7

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.

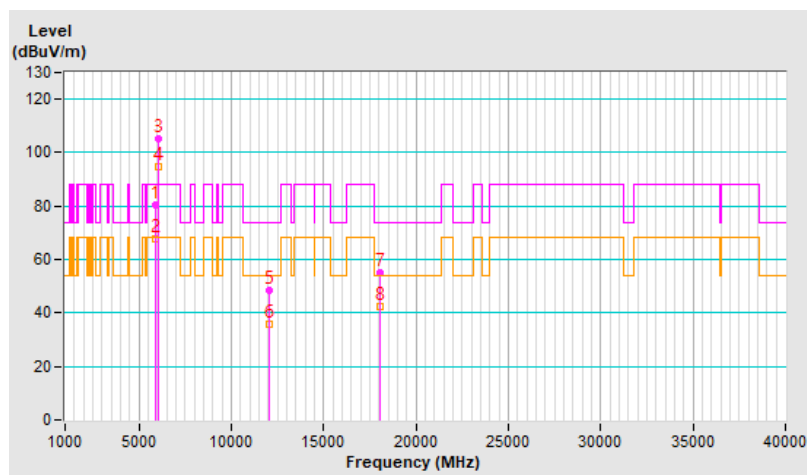


RF Mode	802.11ax (HE160)	Channel	CH 15 : 6025 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	80.2 PK	88.2	-8.0	1.00 H	34	76.7	3.5
2	#5925.00	67.5 AV	68.2	-0.7	1.00 H	34	64.0	3.5
3	*6025.00	105.0 PK			1.00 H	34	101.6	3.4
4	*6025.00	94.5 AV			1.00 H	34	91.1	3.4
5	12050.00	48.6 PK	74.0	-25.4	1.59 H	237	37.4	11.2
6	12050.00	36.0 AV	54.0	-18.0	1.59 H	237	24.8	11.2
7	18075.00	54.9 PK	74.0	-19.1	1.59 H	206	60.2	-5.3
8	18075.00	42.5 AV	54.0	-11.5	1.59 H	206	47.8	-5.3

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.

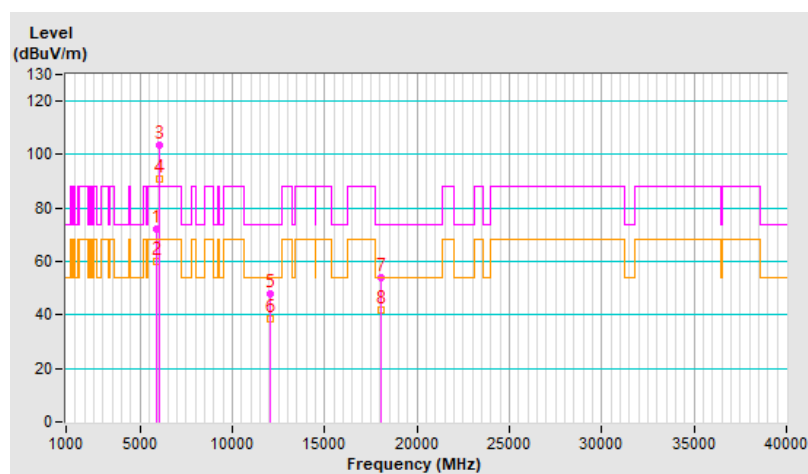


RF Mode	802.11ax (HE160)	Channel	CH 15 : 6025 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	#5925.00	72.1 PK	88.2	-16.1	3.87 V	107	68.6	3.5
2	#5925.00	59.8 AV	68.2	-8.4	3.87 V	107	56.3	3.5
3	*6025.00	103.5 PK			3.87 V	107	100.1	3.4
4	*6025.00	90.9 AV			3.87 V	107	87.5	3.4
5	12050.00	48.0 PK	74.0	-26.0	1.00 V	235	36.8	11.2
6	12050.00	38.3 AV	54.0	-15.7	1.00 V	235	27.1	11.2
7	18075.00	53.8 PK	74.0	-20.2	1.54 V	138	59.1	-5.3
8	18075.00	41.6 AV	54.0	-12.4	1.54 V	138	46.9	-5.3

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.

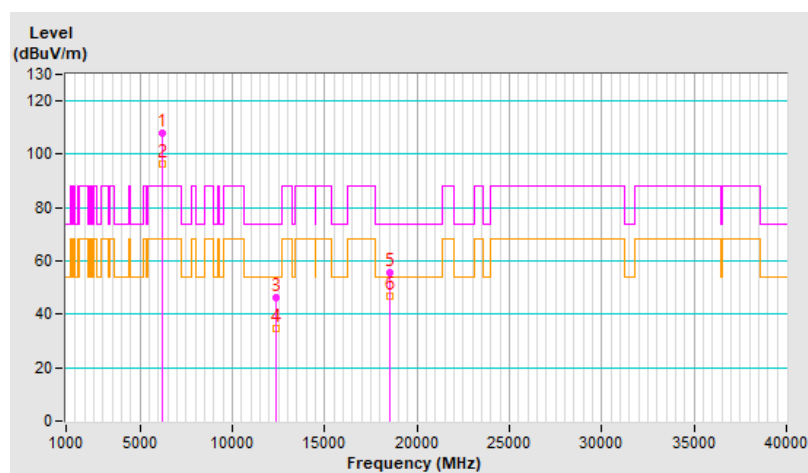


RF Mode	802.11ax (HE160)	Channel	CH 47 : 6185 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6185.00	108.0 PK			1.37 H	70	104.2	3.8
2	*6185.00	96.6 AV			1.37 H	70	92.8	3.8
3	12370.00	46.0 PK	74.0	-28.0	1.51 H	251	34.8	11.2
4	12370.00	34.7 AV	54.0	-19.3	1.51 H	251	23.5	11.2
5	18555.00	55.7 PK	74.0	-18.3	1.40 H	22	61.1	-5.4
6	18555.00	46.7 AV	54.0	-7.3	1.40 H	22	52.1	-5.4

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.

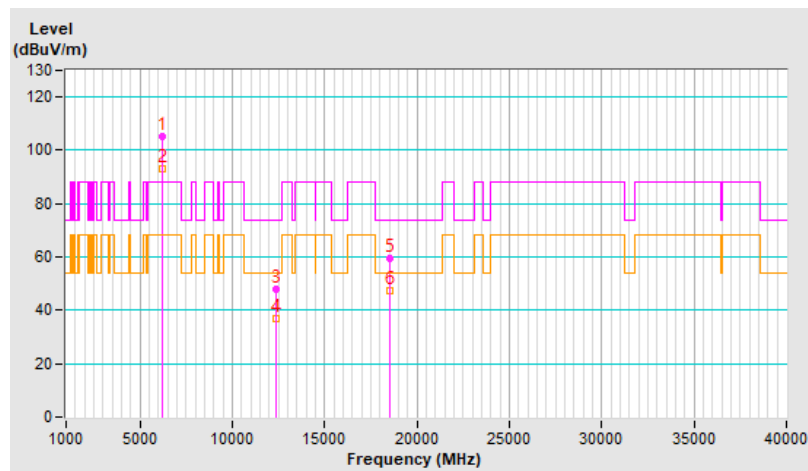


RF Mode	802.11ax (HE160)	Channel	CH 47 : 6185 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6185.00	105.3 PK			3.98 V	271	101.5	3.8
2	*6185.00	93.1 AV			3.98 V	271	89.3	3.8
3	12370.00	47.8 PK	74.0	-26.2	1.21 V	216	36.6	11.2
4	12370.00	36.8 AV	54.0	-17.2	1.21 V	216	25.6	11.2
5	18555.00	59.6 PK	74.0	-14.4	1.27 V	95	65.0	-5.4
6	18555.00	47.3 AV	54.0	-6.7	1.27 V	95	52.7	-5.4

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.

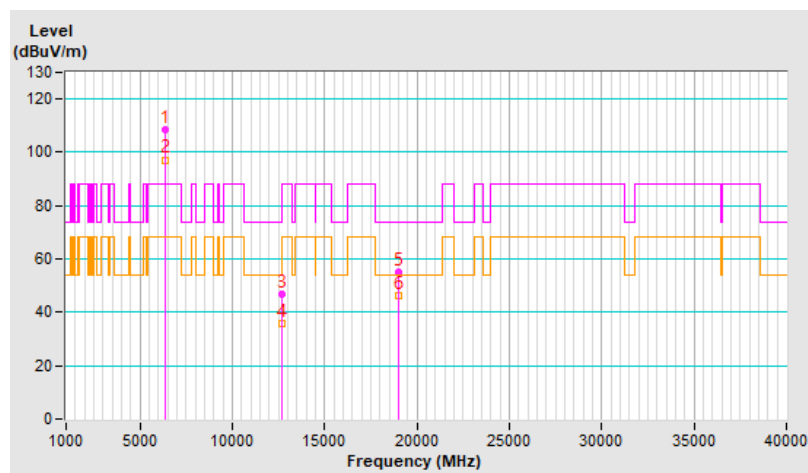


RF Mode	802.11ax (HE160)	Channel	CH 79 : 6345 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6345.00	108.7 PK			1.00 H	347	104.3	4.4
2	*6345.00	97.2 AV			1.00 H	347	92.8	4.4
3	12690.00	46.9 PK	74.0	-27.1	1.42 H	252	35.2	11.7
4	12690.00	35.7 AV	54.0	-18.3	1.42 H	252	24.0	11.7
5	19035.00	55.2 PK	74.0	-18.8	1.33 H	14	60.1	-4.9
6	19035.00	46.3 AV	54.0	-7.7	1.33 H	14	51.2	-4.9

Remarks:

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

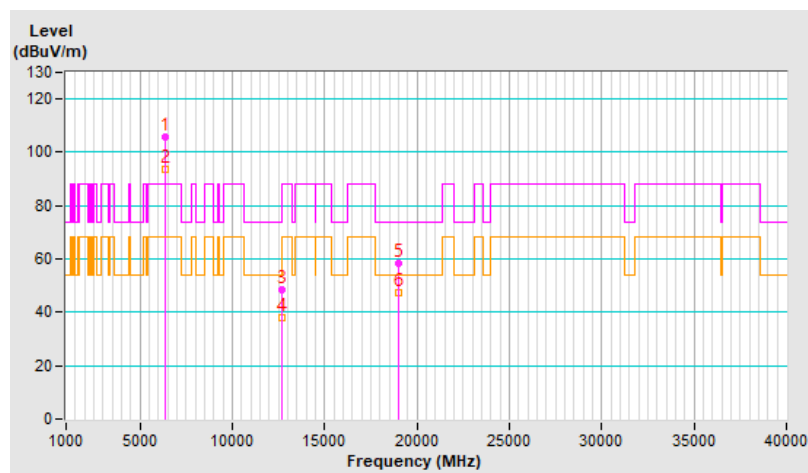


RF Mode	802.11ax (HE160)	Channel	CH 79 : 6345 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76 % RH
Tested By	Andy Ho		

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	*6345.00	105.6 PK			3.98 V	256	101.2	4.4
2	*6345.00	93.7 AV			3.98 V	256	89.3	4.4
3	12690.00	48.6 PK	74.0	-25.4	1.22 V	210	36.9	11.7
4	12690.00	37.8 AV	54.0	-16.2	1.22 V	210	26.1	11.7
5	19035.00	58.4 PK	74.0	-15.6	1.45 V	118	63.3	-4.9
6	19035.00	47.2 AV	54.0	-6.8	1.45 V	118	52.1	-4.9

Remarks:

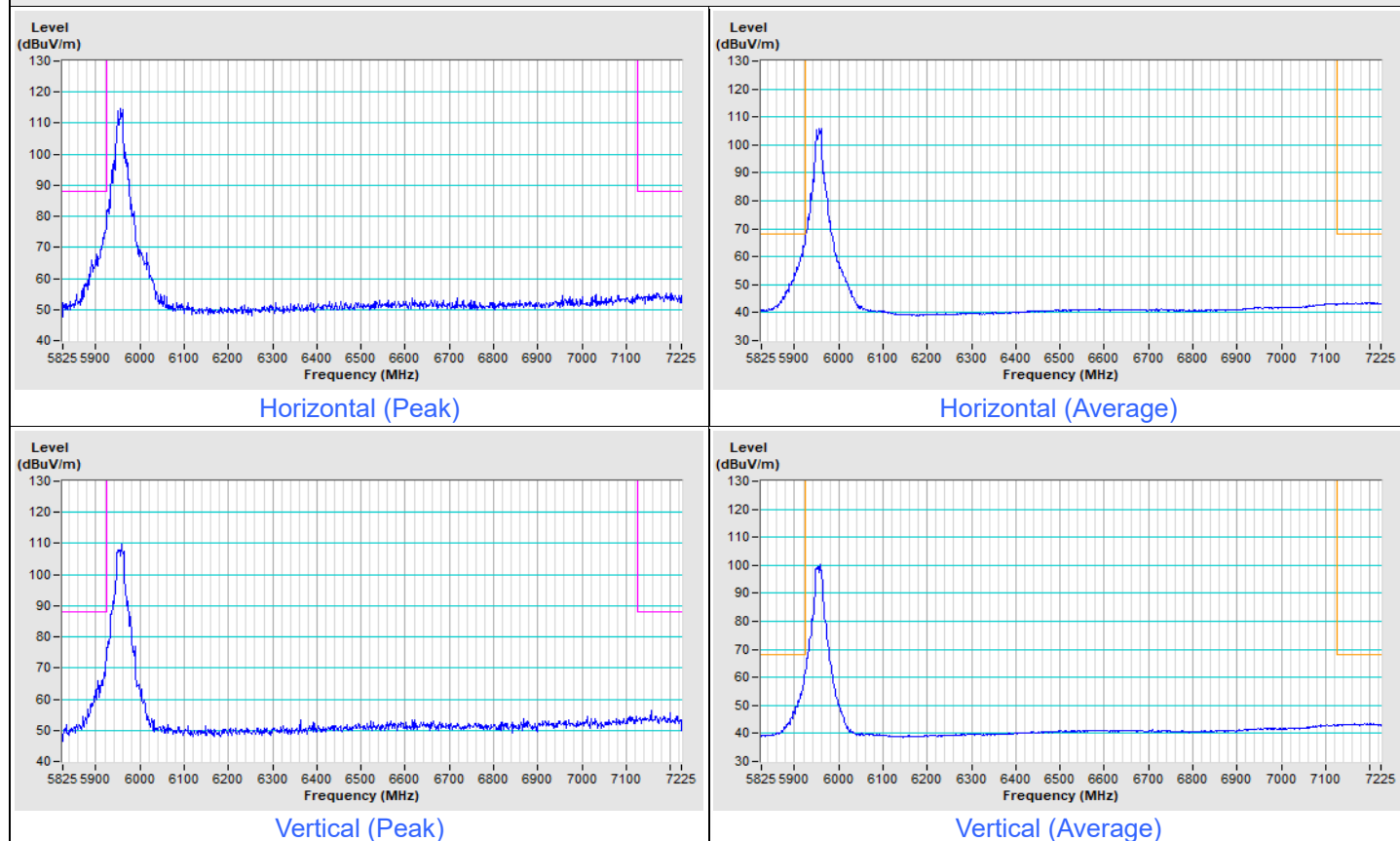
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

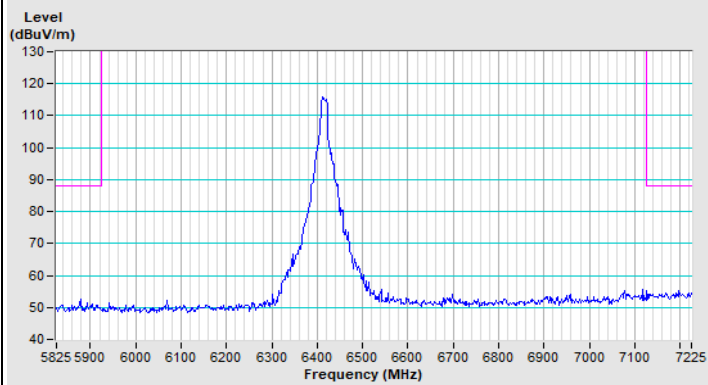


Plot of Band Edge

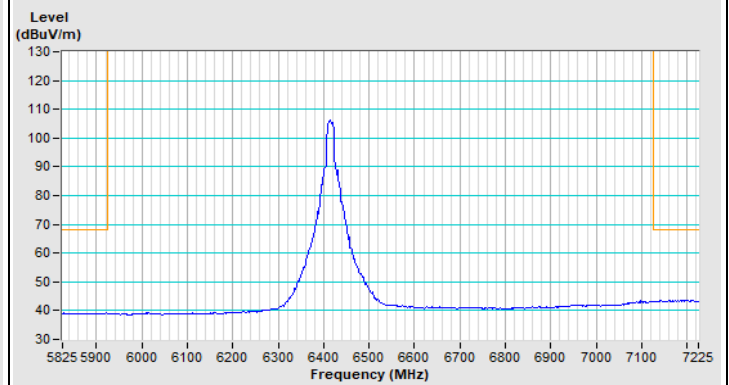
Frequency Range	5.825 GHz ~ 7.225 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=510 Hz, DET=Peak
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802.11a Channel 1

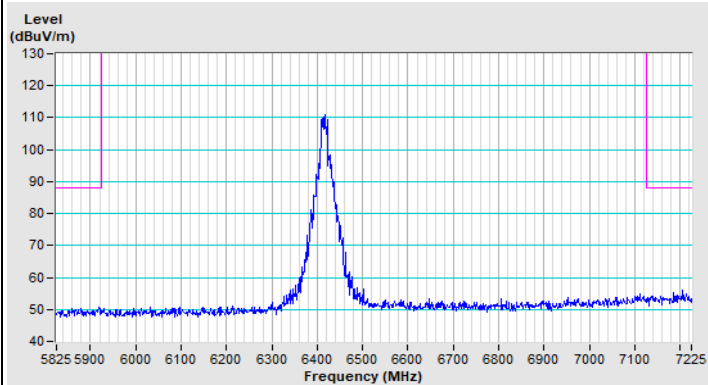


802.11a Channel 93

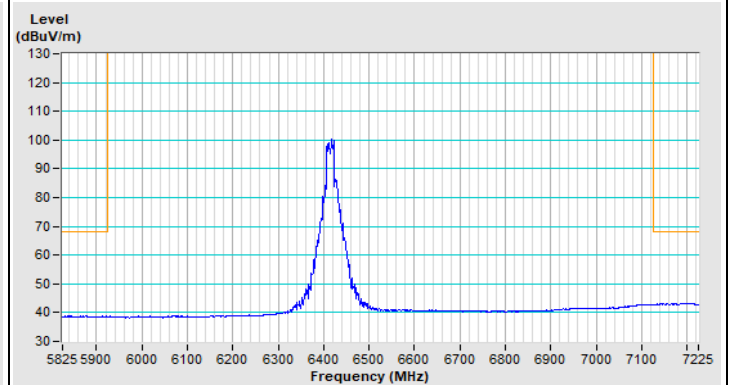
Horizontal (Peak)



Horizontal (Average)



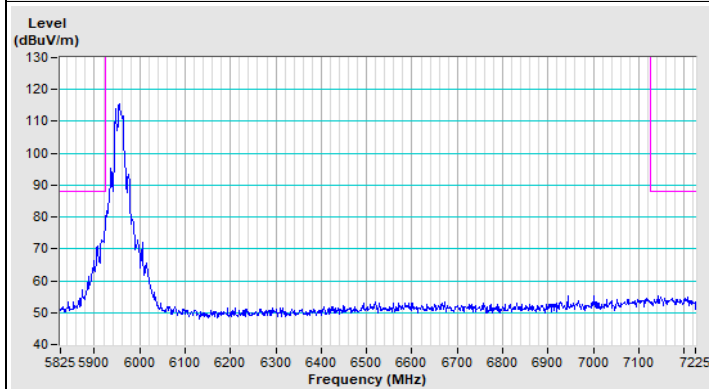
Vertical (Peak)



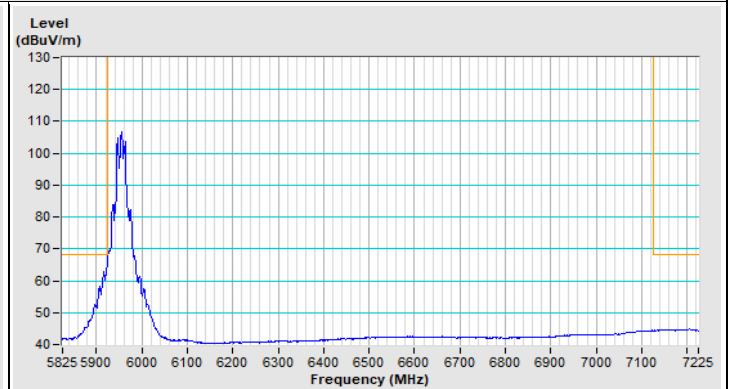
Vertical (Average)

Frequency Range	5.825 GHz ~ 7.225 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
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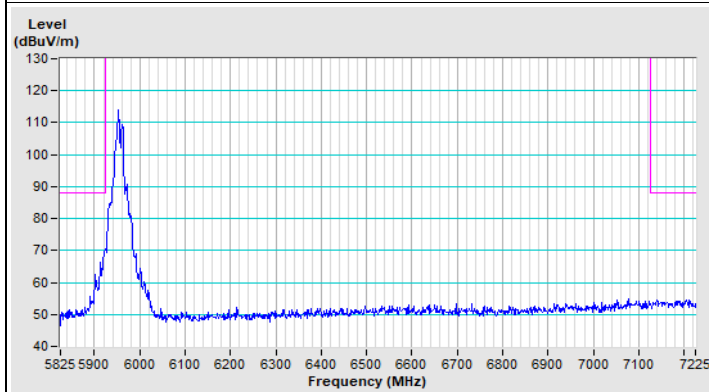
802.11ax (HE20) Channel 1



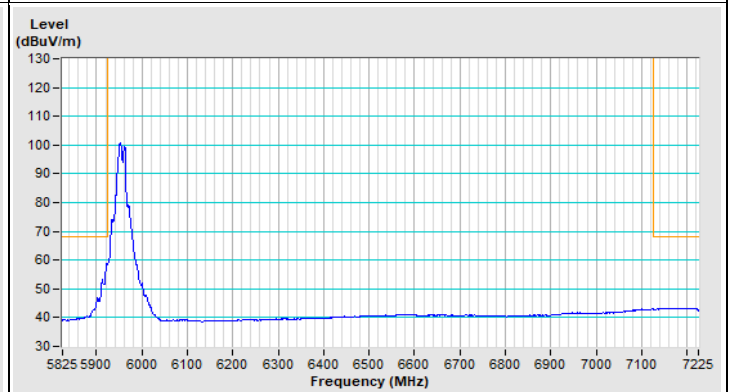
Horizontal (Peak)



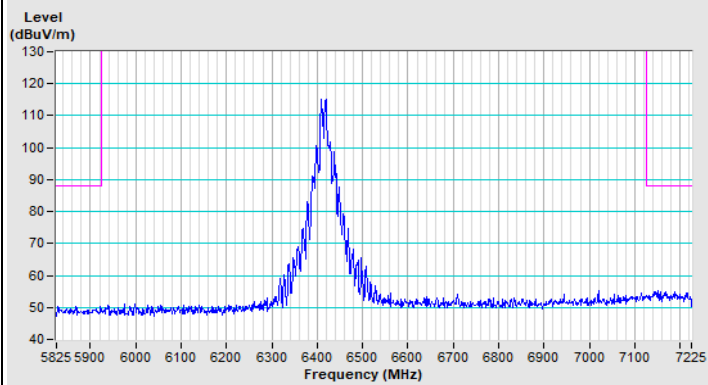
Horizontal (Average)



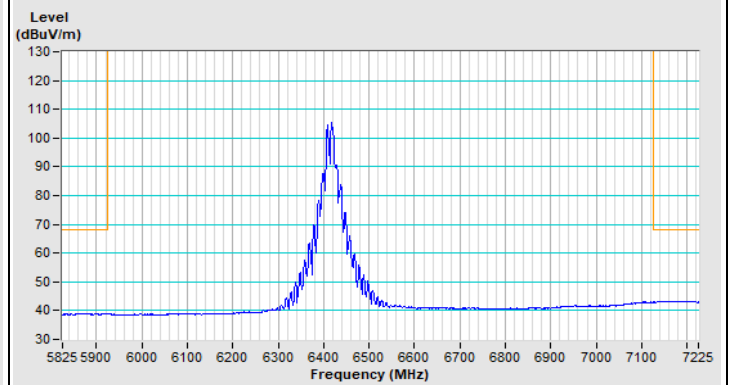
Vertical (Peak)



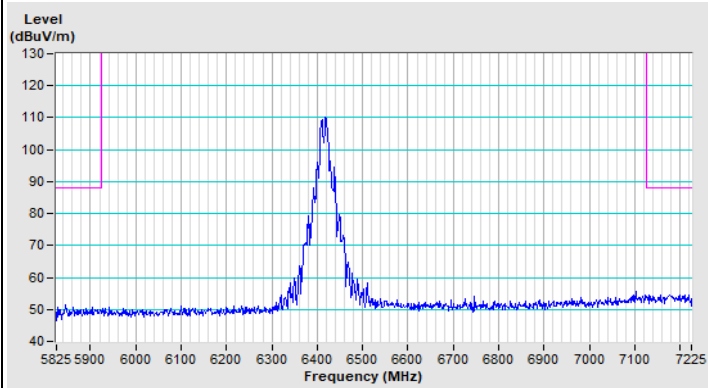
Vertical (Average)

802.11ax (HE20) Channel 93

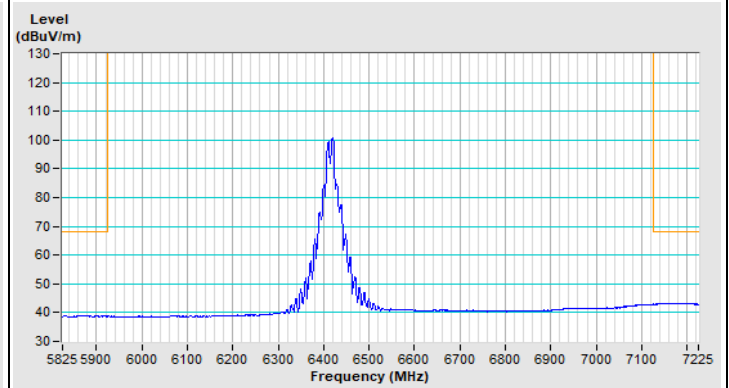
Horizontal (Peak)



Horizontal (Average)



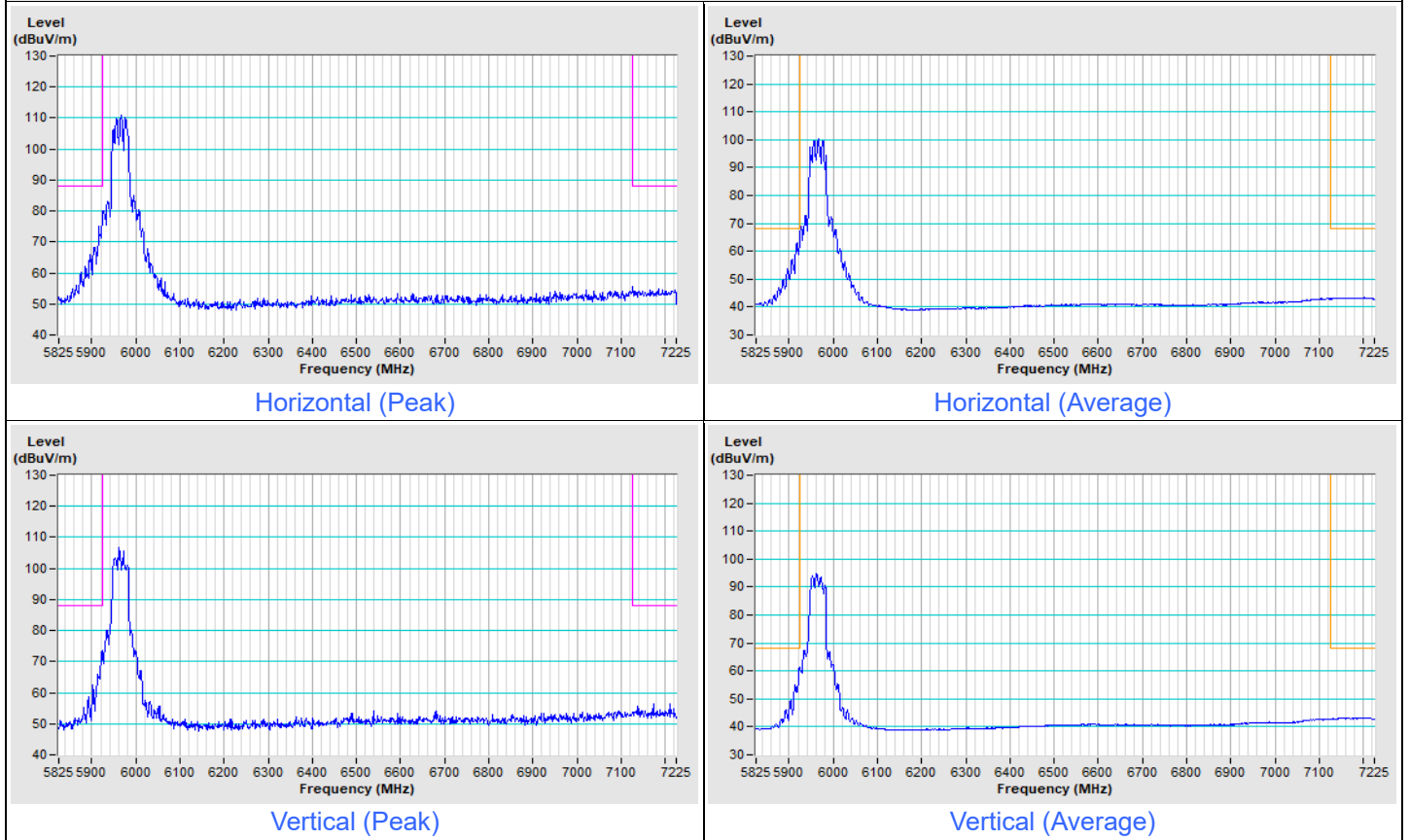
Vertical (Peak)

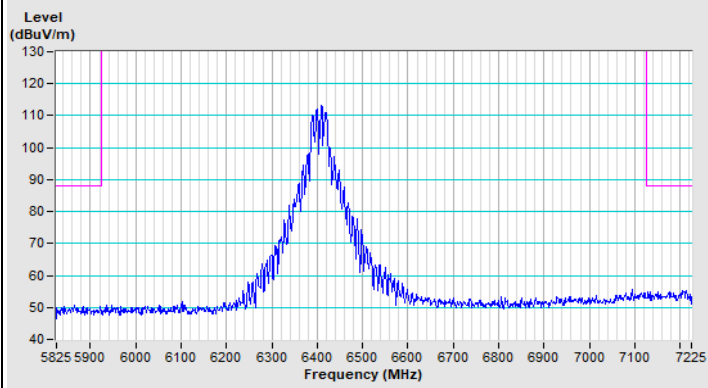


Vertical (Average)

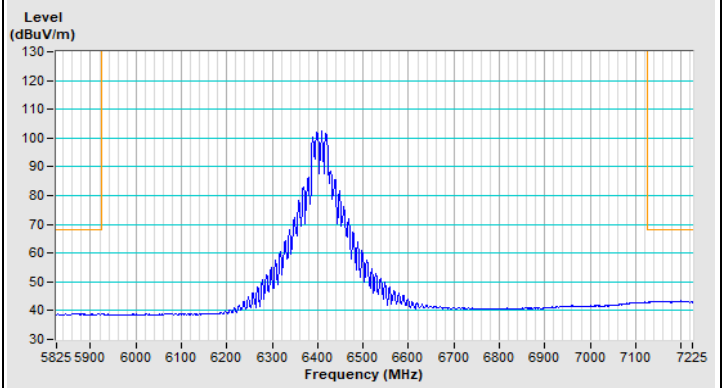
Frequency Range	5.825 GHz ~ 7.225 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
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802.11ax (HE40) Channel 3

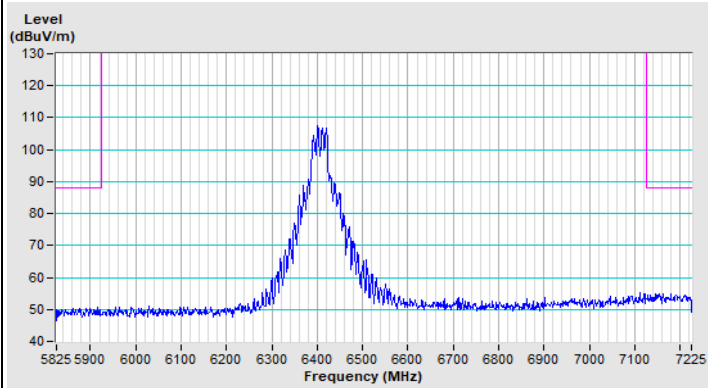


802.11ax (HE40) Channel 91

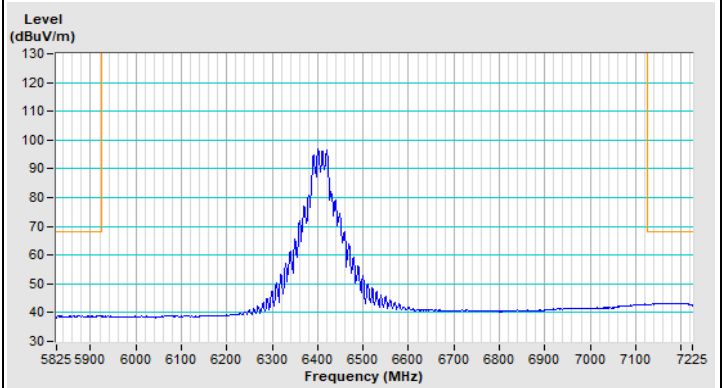
Horizontal (Peak)



Horizontal (Average)



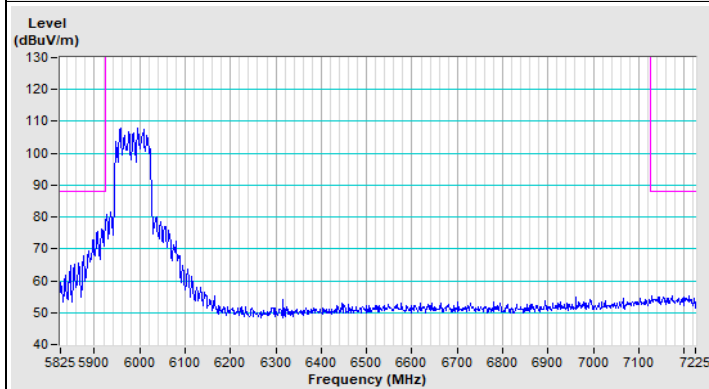
Vertical (Peak)



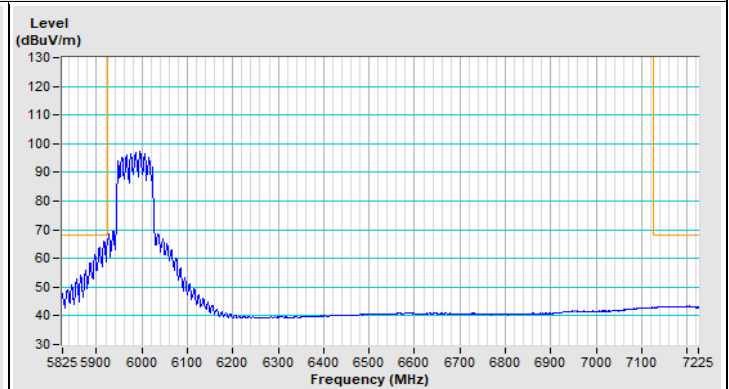
Vertical (Average)

Frequency Range	5.825 GHz ~ 7.225 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
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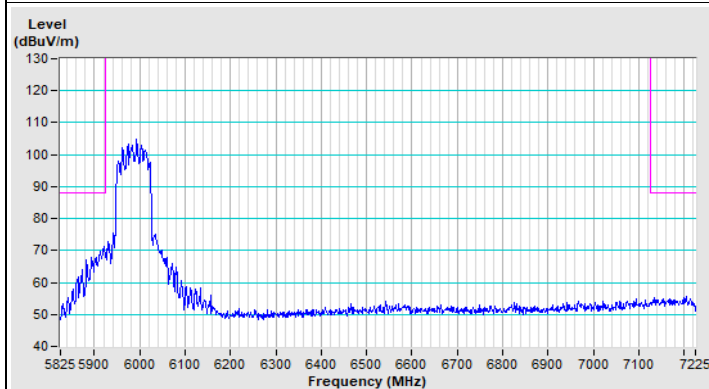
802.11ax (HE80) Channel 7



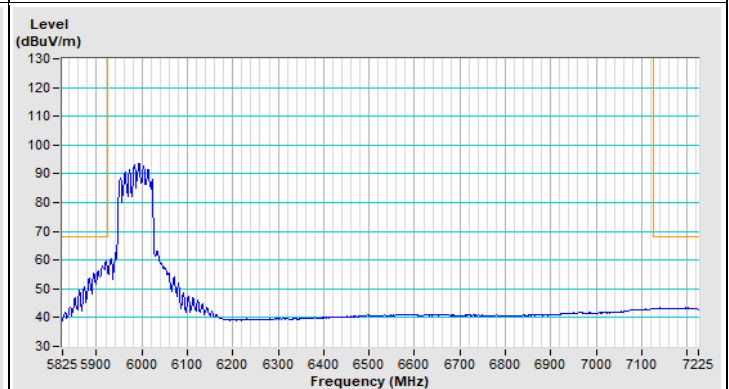
Horizontal (Peak)



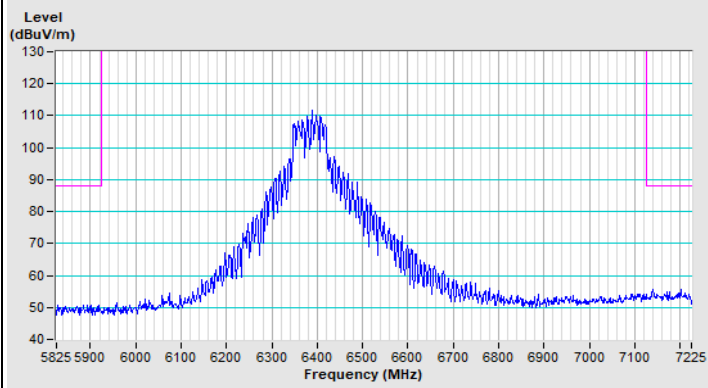
Horizontal (Average)



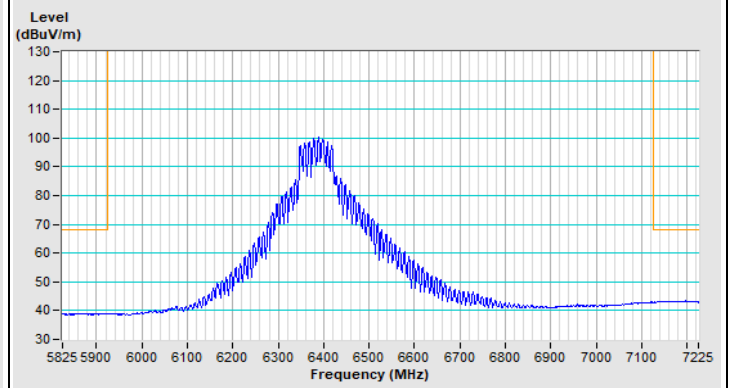
Vertical (Peak)



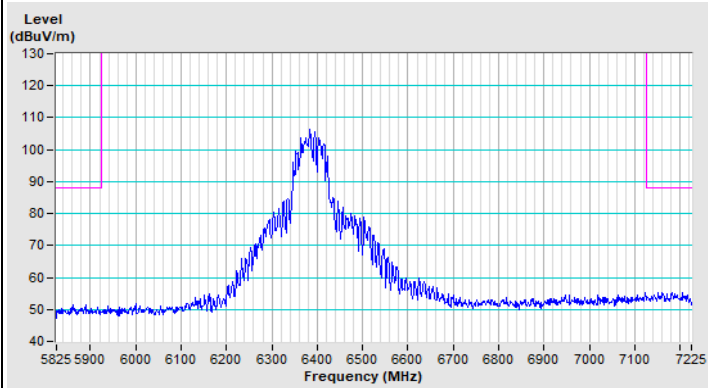
Vertical (Average)

802.11ax (HE80) Channel 87

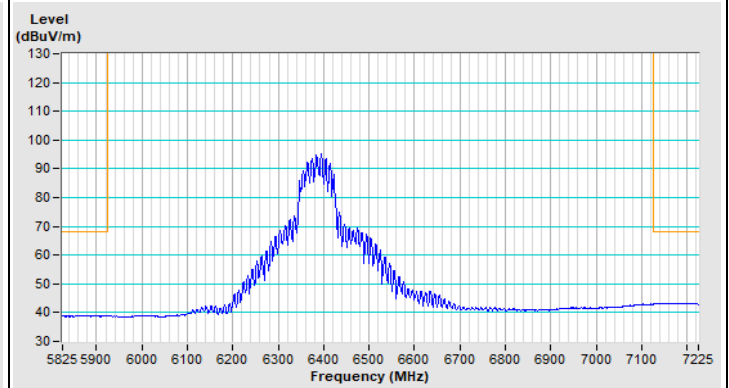
Horizontal (Peak)



Horizontal (Average)



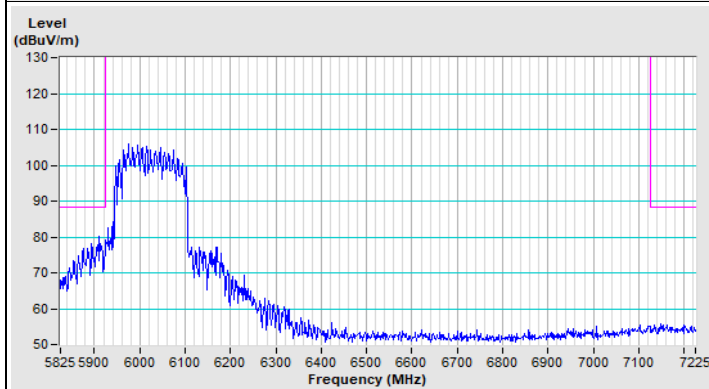
Vertical (Peak)



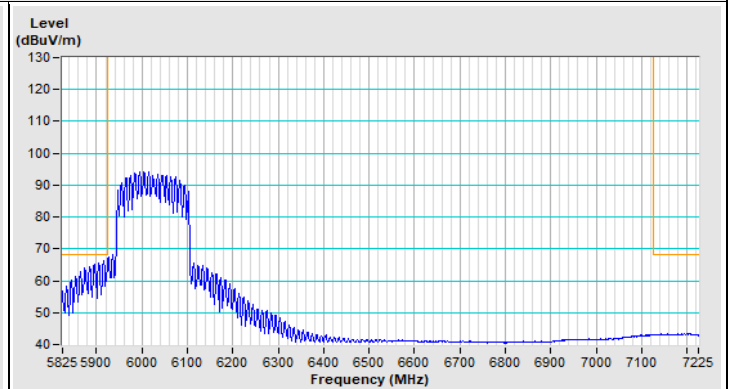
Vertical (Average)

Frequency Range	5.825 GHz ~ 7.225 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
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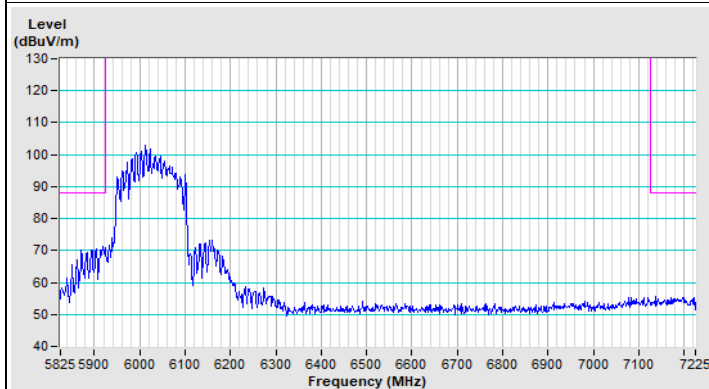
802.11ax (HE160) Channel 15



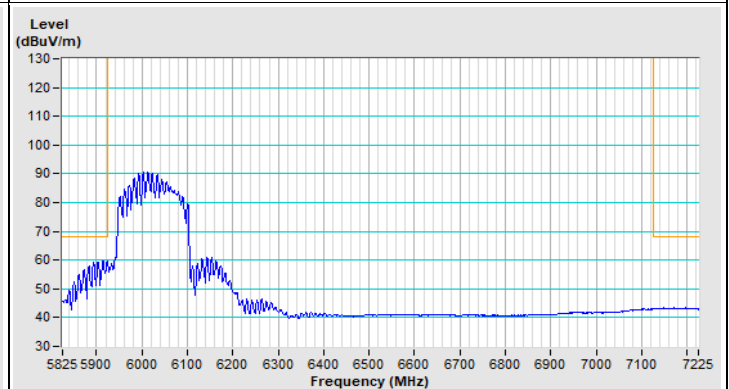
Horizontal (Peak)



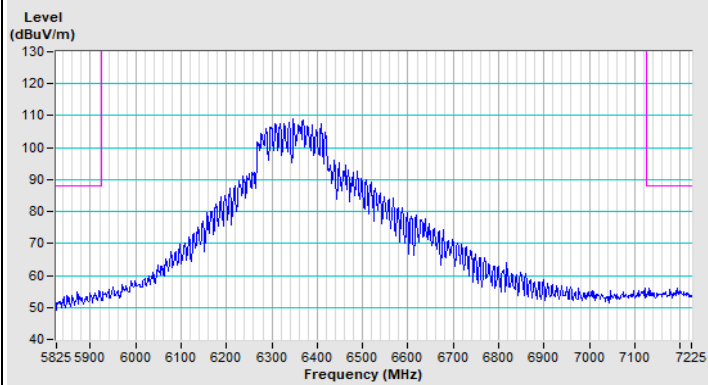
Horizontal (Average)



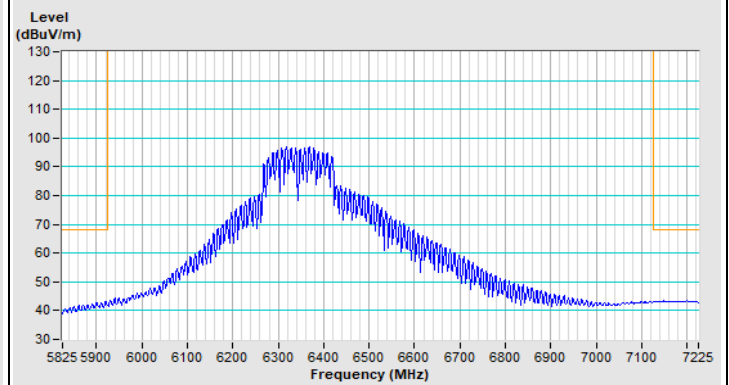
Vertical (Peak)



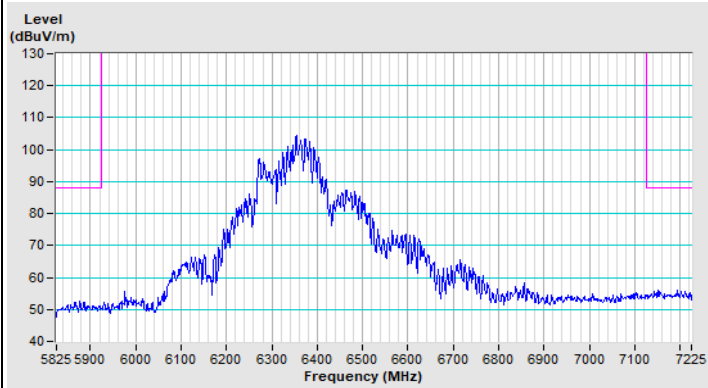
Vertical (Average)

802.11ax (HE160) Channel 79

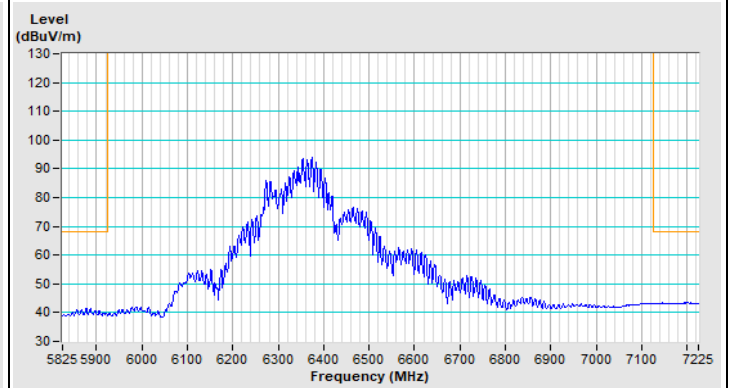
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

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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