FCC Test Report

Report No.:	RFBCMA-WTW-P22070299A
FCC ID:	RAXWE7224443
Test Model:	CE1000A
Received Date:	Nov. 08, 2021
Test Date:	May 26 ~ Sep. 19, 2022
Issued Date:	Nov. 29, 2022
Applicant:	Arcadyan Technology Corporation
Address:	No.8, Sec.2, Guangfu Rd.,Hsinchu City 30071, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBCMA-WTW-P22070299A	Original release.	Nov. 29, 2022

1 Certificate of Conformity

Product:	Verizon Wi-Fi Extender
Brand:	Verizon
Test Model:	CE1000A
Sample Status:	Engineering sample
Applicant:	Arcadyan Technology Corporation
Test Date:	May 26 ~ Sep. 19, 2022
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10-2013

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.

Prepared by : _____ , **Date:** Nov. 29, 2022

Polly Chien / Specialist

Approved by : _____ , **Date:** Nov. 29, 2022

Jeremy Lin / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(9)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.21dB at 0.39000MHz.
15.407(b)(6)(9)	Radiated Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -6.1dB at 69.77MHz.
15.407(b)(7)	In-Band Emission (Mask)	Pass	Meet the requirement of limit.
15.407(a)(6)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(10)	Emission Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(6)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407 (d)(6)	Contention-based Protocol	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(a)(7)(8)	Dual Client- Proper Power Adjustment	N/A	Device associates with low power indoor AP only.
15.407(d)(5)	Operational restrictions for 6 GHz U-NII devices	Pass	Declaration by applicant
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF).not a standard connector.

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

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.00 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Verizon Wi-Fi Extender
Brand	Verizon
Test Model	CE1000A
Status of EUT	Engineering sample
Power Supply Rating	12Vdc (Adapter)
Modulation Type	1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Modulation Technology	OFDMA
Transfer Rate	802.11ax: up to 4803.9Mbps
Operating Frequency	5.955 ~ 6.415GHz, 6.435 ~ 6.525GHz, 6.525 ~ 6.875GHz, 6.875 ~ 7.115GHz
Number of Channel	802.11ax (HE20): 59 802.11ax (HE40): 29 802.11ax (HE80): 14 802.11ax (HE160): 7
Output Power	CDD Mode: 5.925 ~ 6.425GHz: 126.709 mW (EIRP: 23.83 dBm / 241.546 mW) 5.425 ~ 6.525GHz: 89.200 mW (EIRP: 22.30 dBm / 169.824 mW) 6.525 ~ 6.875GHz: 103.094 mW (EIRP: 22.93 dBm / 196.336 mW) 6.875 ~ 7.125GHz: 99.368 mW (EIRP: 22.77 dBm / 189.234 mW) Beamforming Mode: 5.925 ~ 6.425GHz: 120.318 mW (EIRP: 26.82 dBm / 480.839 mW) 5.425 ~ 6.525GHz: 88.127 mW (EIRP: 27.03 dBm / 504.661 mW) 6.525 ~ 6.875GHz: 97.938 mW (EIRP: 27.49 dBm / 561.048 mW) 6.875 ~ 7.125GHz: 94.413 mW (EIRP: 27.20 dBm / 524.807 mW)
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Refer to Note
Data Cable Supplied	Refer to Note
EUT Category	Indoor Access Point + Subordinate Device

Note:

1. The EUT incorporates a MIMO function:

6GHz Band		
Modulation Mode	TX & RX Configuration	
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
802.11ax (HE160)	4TX	4RX

*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.
*Partial RU (resource unit) and channel puncturing/bandwidth reduction mechanisms are not supported.

2. The EUT uses following accessories.

Adapter 1		
Brand	Model	Specification
DELTA	ADH-60BW B	AC Input : 120V ,1.2A, 60Hz DC Output : 12V ,5A ,60W DC Output Cable : 1.8 M, non-shielded cable Plug : US
Adapter 2		
Brand	Model	Specification
Lucent Trans	1A98-1250-02	AC Input : 100~120V ,1.2A, 50/60Hz DC Output : 12V ,5A ,60W DC Output Cable : 1.8 M, non-shielded cable Plug : US
RJ45 Cable		
Specification		
Signal Line : 3 M, non-shielded cable		

* After the evaluation of the above adapters, adapter 1 was the worst case and chose for final test.

3. The antenna information is listed as below.

Antenna NO.	RF Chain No.	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Loss (dB)
2.4G/5GL DB ANT 1	AJ7 (5G Chain 2) (2.4G Chain 1)	0.9 0.6 0.6 1 1	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	PIFA	ipex(MHF)	0.72 1 1 1.0 1.0
2.4G/5GL DB ANT 2	AJ5 (5G Chain 1) (2.4G Chain 2)	0.5 0.7 0.7 2.2 2.2	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	PIFA	ipex(MHF)	0.88 1.22 1.22 1.26 1.26
2.4G/5GL DB ANT 3	AJ3 (5G Chain 0) (2.4G Chain 3)	1.3 0 0 0.4 0.4	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	PIFA	ipex(MHF)	0.71 0.99 0.99 1.02 1.02
2.4G/5GL DB ANT 4	AJ9 (5G Chain 3) (2.4G Chain 0)	0.3 3.1 3.1 3 3	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	PIFA	ipex(MHF)	0.61 0.86 0.86 0.88 0.88
5GH/6E ANT 1	AJ4 (Chain 3)	1.3 1.3 0.7 0.7 0.7 0.7	5.47~5.725GHz 5.725~5.85GHz 5.925GHz~6.425GHz 6.425GHz~6.525GHz 6.525GHz~6.875Hz 6.875Hz~7.125GHz	PIFA	ipex(MHF)	1.26 1.26 1.4 1.4 1.45 1.56
5GH/6E ANT 2	AJ1 (Chain 0)	3.2 3.2 1.1 1.1 1.1 1.1	5.47~5.725GHz 5.725~5.85GHz 5.925GHz~6.425GHz 6.425GHz~6.525GHz 6.525GHz~6.875Hz 6.875Hz~7.125GHz	PIFA	ipex(MHF)	1.26 1.26 1.4 1.4 1.45 1.56

Antenna NO.	RF Chain No.	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Loss (dB)
5GH/6E ANT 3	AJ2 (Chain 1)	1.9 1.9 2.8 2.8 2.8 2.8	5.47~5.725GHz 5.725~5.85GHz 5.925GHz~6.425GHz 6.425GHz~6.525GHz 6.525GHz~6.875Hz 6.875Hz~7.125GHz	PIFA	ipex(MHF)	0.63 0.63 0.7 0.7 0.73 0.78
5GH/6E ANT 4	AJ3 (Chain 2)	0.2 0.2 0.6 0.6 0.6 0.6	5.47~5.725GHz 5.725~5.85GHz 5.925GHz~6.425GHz 6.425GHz~6.525GHz 6.525GHz~6.875Hz 6.875Hz~7.125GHz	PIFA	ipex(MHF)	0.52 0.52 0.58 0.58 0.6 0.65
5GHz Sensor ANT	AWJ4	0.15 0.15 0.15 0.15	5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	Dipole	ipex(MHF)	1.22 1.22 1.26 1.26

Antenna Gain	Directional Gain (dBi)
5.925 ~ 6.425GHz	6.02
6.425 ~ 6.525GHz	6.04
6.525 ~ 6.875GHz	7.58
6.875 ~ 7.125GHz	7.45

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

4. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3	Radio 4
WLAN(2.4GHz)	WLAN 5GHz (low band) + 5GHz (full band)	WLAN 5GHz (high band)+ WLAN 6GHz	WLAN 5GHz Sensor (RX Only)

5. Simultaneously transmission condition.

Condition	Technology
1	WLAN (2.4 GHz) + WLAN (5 GHz)_Full Band + WLAN (6 GHz)
2	WLAN (2.4 GHz) + WLAN (5 GHz) _Low Band + WLAN (5 GHz)_High Band
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.	

3.2 Description of Test Modes

FOR 5925 ~ 6425MHz (U-NII-5 band)

24 channels are provided for 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 channel is 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

FOR 6425 ~ 6525MHz (U-NII-6 band)

5 channels are provided for 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
97	6435 MHz	101	6455 MHz	105	6475 MHz	109	6495 MHz
113	6515 MHz						

3 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency
99	6445 MHz	107	6485 MHz	*115	6525 MHz

2 channel are provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
103	6465 MHz	*119	6545 MHz

1 channel is provided for 802.11ax (HE160):

Channel	Frequency
*111	6505 MHz

FOR 6525 ~ 6875MHz (U-NII-7 band)

18 channels are provided for 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
117	6535 MHz	121	6555 MHz	125	6575 MHz	129	6595 MHz
133	6615 MHz	137	6635 MHz	141	6655 MHz	145	6675 MHz
149	6695 MHz	153	6715 MHz	157	6735 MHz	161	6755 MHz
165	6775 MHz	169	6795 MHz	173	6815 MHz	177	6835 MHz
181	6855 MHz	*185	6875 MHz				

9 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
123	6565 MHz	131	6605 MHz	139	6645 MHz	147	6685 MHz
155	6725 MHz	163	6765 MHz	171	6805 MHz	179	6845 MHz
*187	6885 MHz						

4 channels are provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
135	6625 MHz	151	6705 MHz	167	6785 MHz	*183	6865 MHz

2 channels are provided for 802.11ax (HE160):

Channel	Frequency	Channel	Frequency
143	6665 MHz	*175	6825 MHz

FOR 6875 ~ 7125MHz (U-NII-8 band):

12 channels are provided for 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
189	6895 MHz	193	6915 MHz	197	6935 MHz	201	6955 MHz
205	6975 MHz	209	6995 MHz	213	7015 MHz	217	7035 MHz
221	7055 MHz	225	7075 MHz	229	7095 MHz	233	7115 MHz

5 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency
195	6925 MHz	203	6965 MHz	211	7005 MHz
219	7045 MHz	227	7085 MHz		

2 channel is provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
199	6945 MHz	215	7025 MHz

1 channel is provided for 802.11ax (HE160):

Channel	Frequency
207	6985 MHz

Note: * mean this's straddle channel.

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To						Description
	RE≥1G	RE<1G	IBE	PLC	CBP	APCM	
-	√	√	√	√	√	√	-

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement
IBE: In-Band Emission (MASK) **CBP:**Contention Based Protocol

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane.**
2. For radiated emission (below 1GHz) and power line conducted emission test items chosen the worst maximum power channel.

Radiated Emission Measurement (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5955-6415	1 to 93	1, 45, 93	OFDMA	BPSK	MCS0
	6435-6525	97 to 113	97, 105, 113	OFDMA	BPSK	MCS0
	6525-6855	117 to 185	117, 149, 181, 185	OFDMA	BPSK	MCS0
	6875-7115	185 to 233	185, 209, 233	OFDMA	BPSK	MCS0
802.11ax (HE40)	5955-6415	3 to 91	3, 43, 91	OFDMA	BPSK	MCS0
	6435-6525	99 to 115	99, 107, 115	OFDMA	BPSK	MCS0
	6525-6855	115 to 187	115, 123, 155, 179, 187	OFDMA	BPSK	MCS0
	6875-7115	187 to 227	211, 227	OFDMA	BPSK	MCS0
802.11ax (HE80)	5955-6415	7 to 87	7, 39, 87	OFDMA	BPSK	MCS0
	6435-6525	103 to 119	103, 119	OFDMA	BPSK	MCS0
	6525-6855	119 to 183	119, 151, 183	OFDMA	BPSK	MCS0
	6875-7115	183 to 215	183, 199, 215	OFDMA	BPSK	MCS0
802.11ax (HE160)	5955-6415	15 to 79	15, 47, 79	OFDMA	BPSK	MCS0
	6435-6525	111	111	OFDMA	BPSK	MCS0
	6525-6855	111 to 175	111, 143, 175	OFDMA	BPSK	MCS0
	6875-7115	207	207	OFDMA	BPSK	MCS0

Radiated Emission Measurement (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE160)	5955-6415 6435-6525 6525-6855 6875-7115	15 to 79 111 143 to 175 207	79	OFDMA	BPSK	MCS0

In-Band Emission (MASK) Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5955-6415	1 to 93	1, 45, 93	OFDMA	BPSK	MCS0
	6435-6525	97 to 113	97, 105, 113	OFDMA	BPSK	MCS0
	6525-6855	117 to 185	117, 149, 181, 185	OFDMA	BPSK	MCS0
	6875-7115	185 to 233	185, 209, 233	OFDMA	BPSK	MCS0
802.11ax (HE40)	5955-6415	3 to 91	3, 43, 91	OFDMA	BPSK	MCS0
	6435-6525	99 to 115	99, 107, 115	OFDMA	BPSK	MCS0
	6525-6855	115 to 187	115, 123, 155, 179, 187	OFDMA	BPSK	MCS0
	6875-7115	187 to 227	211, 227	OFDMA	BPSK	MCS0
802.11ax (HE80)	5955-6415	7 to 87	7, 39, 87	OFDMA	BPSK	MCS0
	6435-6525	103 to 119	103, 119	OFDMA	BPSK	MCS0
	6525-6855	119 to 183	119, 151, 183	OFDMA	BPSK	MCS0
	6875-7115	183 to 215	183, 199, 215	OFDMA	BPSK	MCS0
802.11ax (HE160)	5955-6415	15 to 79	15, 47, 79	OFDMA	BPSK	MCS0
	6435-6525	111	111	OFDMA	BPSK	MCS0
	6525-6855	111 to 175	111, 143, 175	OFDMA	BPSK	MCS0
	6875-7115	207	207	OFDMA	BPSK	MCS0

Power Line Conducted Emission Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE160)	5955-6415 6435-6525 6525-6855 6875-7115	15 to 79 111 143 to 175 207	79	OFDMA	BPSK	MCS0

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5955-6415	1 to 93	1, 45, 93	OFDMA	BPSK	MCS0
	6435-6525	97 to 113	97, 105, 113	OFDMA	BPSK	MCS0
	6525-6855	117 to 185	117, 149, 181, 185	OFDMA	BPSK	MCS0
	6875-7115	185 to 233	185, 209, 233	OFDMA	BPSK	MCS0
802.11ax (HE40)	5955-6415	3 to 91	3, 43, 91	OFDMA	BPSK	MCS0
	6435-6525	99 to 115	99, 107, 115	OFDMA	BPSK	MCS0
	6525-6855	115 to 187	115, 123, 155, 179, 187	OFDMA	BPSK	MCS0
	6875-7115	187 to 227	211, 227	OFDMA	BPSK	MCS0
802.11ax (HE80)	5955-6415	7 to 87	7, 39, 87	OFDMA	BPSK	MCS0
	6435-6525	103 to 119	103, 119	OFDMA	BPSK	MCS0
	6525-6855	119 to 183	119, 151, 183	OFDMA	BPSK	MCS0
	6875-7115	183 to 215	183, 199, 215	OFDMA	BPSK	MCS0
802.11ax (HE160)	5955-6415	15 to 79	15, 47, 79	OFDMA	BPSK	MCS0
	6435-6525	111	111	OFDMA	BPSK	MCS0
	6525-6855	111 to 175	111, 143, 175	OFDMA	BPSK	MCS0
	6875-7115	207	207	OFDMA	BPSK	MCS0

Contention Based Protocol Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5955-6415	1 to 93	5	OFDMA	BPSK	MCS0
	6435-6525	97 to 113	101	OFDMA	BPSK	MCS0
	6525-6855	117 to 185	149	OFDMA	BPSK	MCS0
	6875-7115	185 to 233	213	OFDMA	BPSK	MCS0
802.11ax (HE160)	5955-6415	15 to 79	15	OFDMA	BPSK	MCS0
	6435-6525	111	111	OFDMA	BPSK	MCS0
	6525-6855	111 to 175	143	OFDMA	BPSK	MCS0
	6875-7025	207	207	OFDMA	BPSK	MCS0

Test Condition:

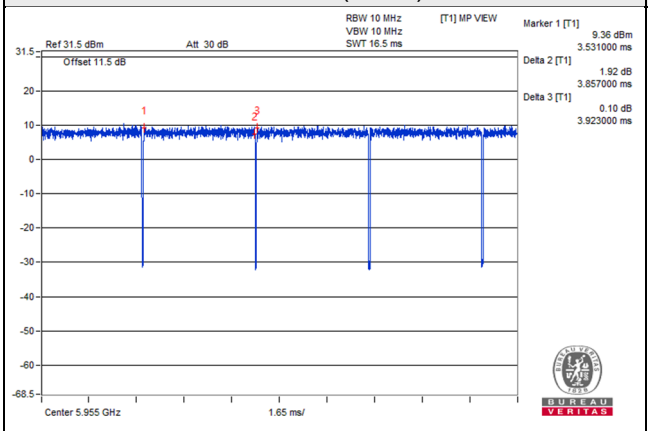
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	18deg. C, 65%RH	120Vac, 60Hz	Rex Wang , Adair Peng
RE<1G	23deg. C, 66%RH	120Vac, 60Hz	Adair Peng
PLC	23deg. C, 72%RH	120Vac, 60Hz	Greg Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Chris Lin
IBE	25deg. C, 60%RH	120Vac, 60Hz	Chris Lin
CBP	25deg. C, 60%RH	120Vac, 60Hz	Tobey Chen

3.3 Duty Cycle of Test Signal

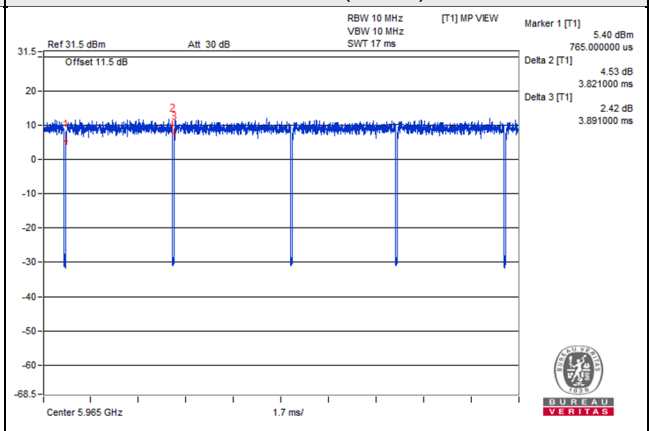
Duty cycle of test signal is ≥ 98%, duty factor is not required.

802.11ax (HE20): Duty cycle = 3.857 ms/3.923 ms= 0.983
802.11ax (HE40): Duty cycle = 3.821 ms/3.891 ms= 0.982
802.11ax (HE80): Duty cycle = 3.627 ms/3.693 ms= 0.982
802.11ax (HE160): Duty cycle = 3.612 ms/3.680 ms= 0.982

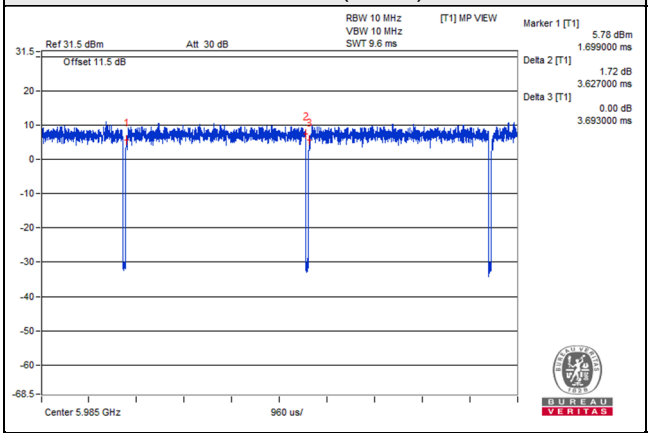
802.11ax (HE20)



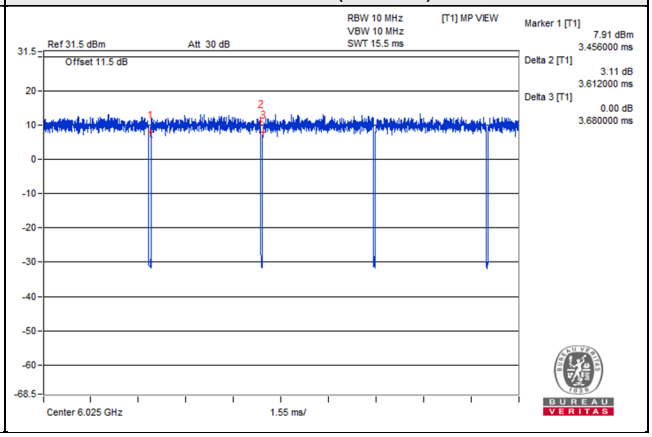
802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)



3.4 Description of Support Units

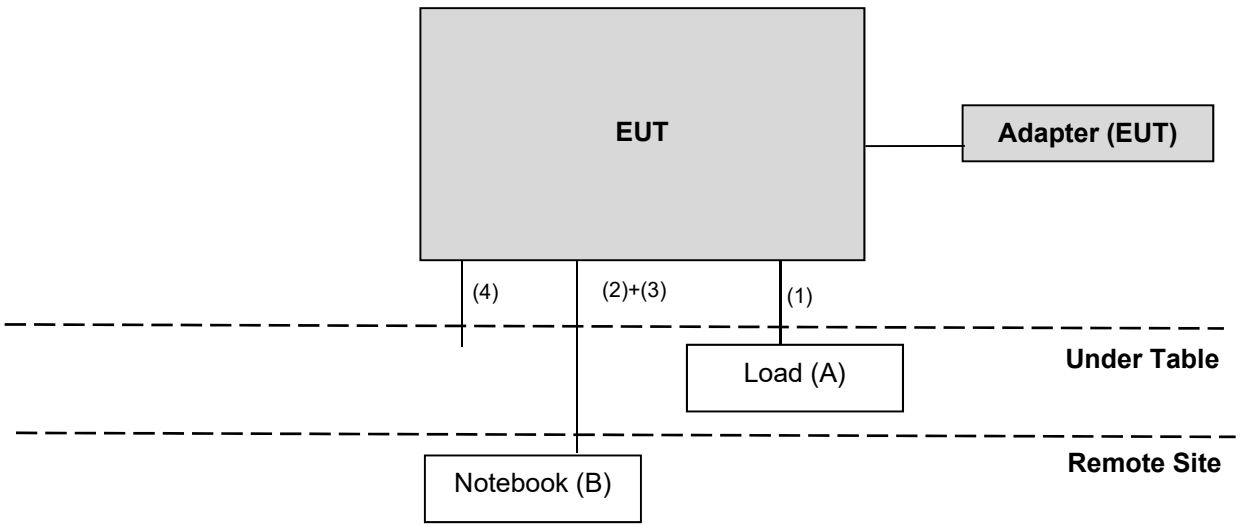
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Load	NA	NA	NA	NA	-
B.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	

Note: All power cords of the above support units are non-shielded (1.8m).

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 Cable	1	1.5	N	0	Provided by Lab
2.	RJ45 Cable	1	3	N	0	Accessory of EUT
3.	RJ45 Cable	1	10	N	0	Provided by Lab
4.	Coaxial Cable	1	1.6	N	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 987594 D02 U-NII 6 GHz EMC Measurement v01v01

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

NOTE:

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 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

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

Note:

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 27, 2022	Apr. 28, 2023
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 15, 2021	Sep. 14, 2022
			Sep. 16, 2022	Sep. 13, 2023
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Oct. 28, 2021	Oct. 27, 2022
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 14, 2021	Nov. 13, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Oct. 26, 2021	Oct. 25, 2022
Loop Antenna TESEQ	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
			Jul. 27, 2022	Jul. 26, 2023
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	May 14, 2022	May 13, 2023
Preamplifier Agilent (Above 1GHz)	8449B	3008A01962	Oct. 05, 2021	Oct. 04, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 15, 2022	Jan. 14, 2023
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9- (250795/4)	Jan. 15, 2022	Jan. 14, 2023
RF signal cable Woken	8D-FB	Cable-CH9-01	May 14, 2022	May 13, 2023
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2021	Sep. 03, 2022
			Sep. 03, 2022	Sep. 02, 2023
Wideband Power Sensor KEYSIGHT	N1923A	MY58020002	Jan. 17, 2022	Jan. 16, 2023
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	Jan. 18, 2022	Jan. 17, 2023
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101582	Apr. 13, 2022	Apr. 12, 2023

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

4.1.3 Test Procedure

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) 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.

f. The test-receiver system was set to peak 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 RMS detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The detection is peak and the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average measurement (AV) at frequency above 1GHz.

   For 802.11ax (HE20) CH233: Integration method

   a) For peak emissions measurements:

   1) Set RBW = 100 kHz

   2) Detection = peat.

   3) Max hold.

   4) Perform band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured.

   b) For average emissions measurements:

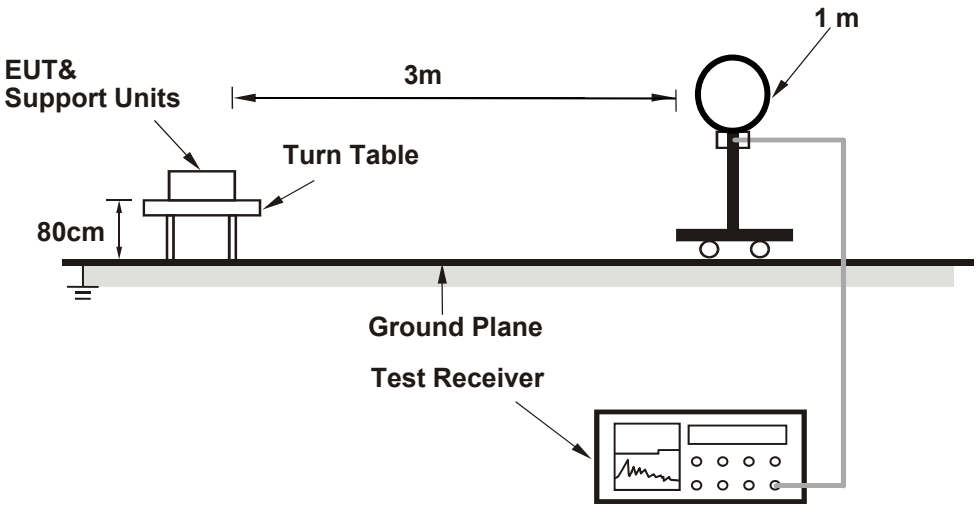
   1) Set RBW = 100 kHz.

   2) Perform band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured.

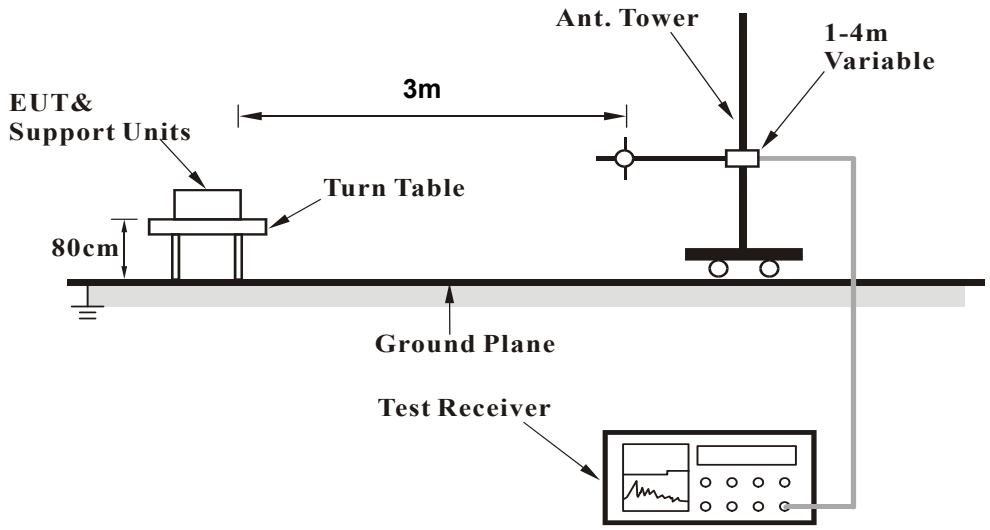
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Test Setup

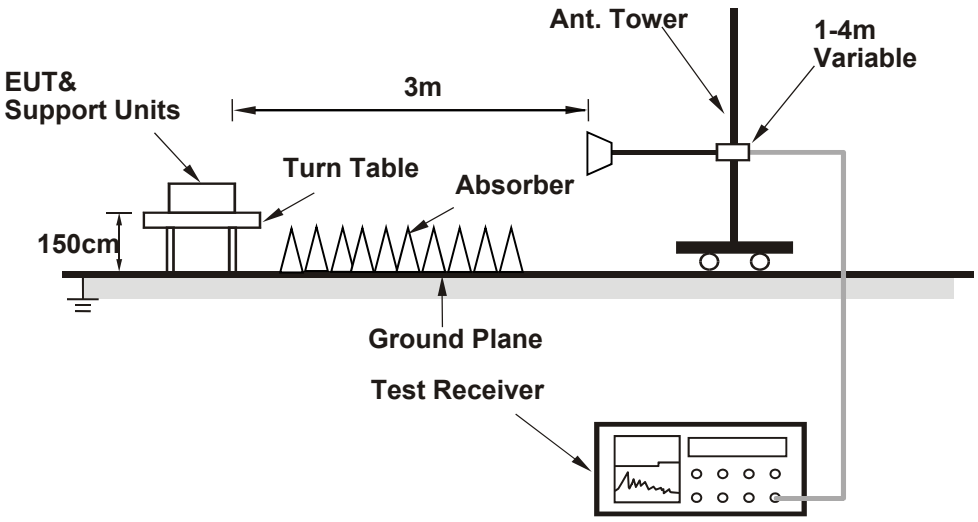
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.5 EUT Operating Condition

a. Set the EUT under transmission condition continuously at specific channel frequency.

4.1.6 Test Results

Above 1GHz Data:

RF Mode	TX 802.11ax (HE20)	Channel	CH 1：5955 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	58.3 PK	88.2	-29.9	2.13 H	23	51.2	7.1
2	#5925.00	45.4 AV	68.2	-22.8	2.13 H	23	38.3	7.1
3	*5955.00	106.5 PK			2.13 H	23	65.4	41.1
4	*5955.00	94.4 AV			2.13 H	23	53.3	41.1
5	11910.00	57.4 PK	74.0	-16.6	1.63 H	82	40.8	16.6
6	11910.00	44.4 AV	54.0	-9.6	1.63 H	82	27.8	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	58.4 PK	88.2	-29.8	1.77 V	59	51.3	7.1
2	#5925.00	44.6 AV	68.2	-23.6	1.77 V	59	37.5	7.1
3	*5955.00	107.4 PK			1.77 V	59	66.3	41.1
4	*5955.00	95.2 AV			1.77 V	59	54.1	41.1
5	11910.00	57.6 PK	74.0	-16.4	1.23 V	28	41.0	16.6
6	11910.00	44.7 AV	54.0	-9.3	1.23 V	28	28.1	16.6

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 45：6175 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	107.5 PK			1.86 H	12	65.5	42.0
2	*6175.00	95.6 AV			1.86 H	12	53.6	42.0
3	12350.00	57.4 PK	74.0	-16.6	1.72 H	69	40.7	16.7
4	12350.00	44.4 AV	54.0	-9.6	1.72 H	69	27.7	16.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6175.00	108.7 PK			1.32 V	33	66.7	42.0
2	*6175.00	96.6 AV			1.32 V	33	54.6	42.0
3	12350.00	57.9 PK	74.0	-16.1	1.66 V	22	41.2	16.7
4	12350.00	45.0 AV	54.0	-9.0	1.66 V	22	28.3	16.7

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 93：6415 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	107.3 PK			1.88 H	29	64.3	43.0
2	*6415.00	95.9 AV			1.88 H	29	52.9	43.0
3	#12830.00	58.6 PK	88.2	-29.6	1.57 H	33	40.9	17.7
4	#12830.00	45.4 AV	68.2	-22.8	1.57 H	33	27.7	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6415.00	108.9 PK			1.82 V	92	65.9	43.0
2	*6415.00	96.7 AV			1.82 V	92	53.7	43.0
3	#12830.00	59.3 PK	88.2	-28.9	1.22 V	43	41.6	17.7
4	#12830.00	46.1 AV	68.2	-22.1	1.22 V	43	28.4	17.7

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 97：6435 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6435.00	105.9 PK			2.01 H	42	62.6	43.3
2	*6435.00	94.6 AV			2.01 H	42	51.3	43.3
3	#12870.00	58.4 PK	88.2	-29.8	1.52 H	78	40.7	17.7
4	#12870.00	44.5 AV	68.2	-23.7	1.52 H	78	26.8	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6435.00	106.9 PK			2.23 V	97	63.6	43.3
2	*6435.00	95.4 AV			2.23 V	97	52.1	43.3
3	#12870.00	58.7 PK	88.2	-29.5	1.28 V	55	41.0	17.7
4	#12870.00	43.9 AV	68.2	-24.3	1.28 V	55	26.2	17.7

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 105：6475 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6475.00	107.6 PK			1.74 H	203	64.3	43.3
2	*6475.00	94.0 AV			1.74 H	203	50.7	43.3
3	#12950.00	58.3 PK	88.2	-29.9	1.63 H	79	40.3	18.0
4	#12950.00	45.4 AV	68.2	-22.8	1.63 H	79	27.4	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6475.00	108.6 PK			1.42 V	71	65.3	43.3
2	*6475.00	96.7 AV			1.72 V	71	53.4	43.3
3	#12950.00	59.3 PK	88.2	-28.9	1.56 V	22	41.3	18.0
4	#12950.00	45.3 AV	68.2	-22.9	1.56 V	22	27.3	18.0

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 113：6515 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6515.00	108.0 PK			1.78 H	199	64.8	43.2
2	*6515.00	94.6 AV			1.78 H	199	51.4	43.2
3	#13030.00	58.7 PK	88.2	-29.5	1.53 H	55	40.6	18.1
4	#13030.00	45.4 AV	68.2	-22.8	1.53 H	55	27.3	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	108.1 PK			1.42 V	97	64.9	43.2
2	*6515.00	96.5 AV			1.42 V	97	53.3	43.2
3	#13030.00	59.0 PK	88.2	-29.2	1.71 V	65	40.9	18.1
4	#13030.00	45.4 AV	68.2	-22.8	1.71 V	65	27.3	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 117：6535 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6535.00	105.2 PK			1.78 H	23	62.1	43.1
2	*6535.00	94.8 AV			1.78 H	23	51.7	43.1
3	#13070.00	59.2 PK	88.2	-29.0	1.66 H	67	41.1	18.1
4	#13070.00	45.4 AV	68.2	-22.8	1.66 H	67	27.3	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6535.00	106.4 PK			1.42 V	100	63.3	43.1
2	*6535.00	95.7 AV			1.42 V	100	52.6	43.1
3	#13070.00	59.4 PK	88.2	-28.8	1.73 V	21	41.3	18.1
4	#13070.00	45.8 AV	68.2	-22.4	1.73 V	21	27.7	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 149：6695 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6695.00	108.5 PK			1.88 H	12	64.7	43.8
2	*6695.00	97.1 AV			1.88 H	12	53.3	43.8
3	13390.00	60.2 PK	74.0	-13.8	1.72 H	92	41.1	19.1
4	13390.00	46.4 AV	54.0	-7.6	1.72 H	92	27.3	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6695.00	110.3 PK			1.42 V	99	66.5	43.8
2	*6695.00	97.9 AV			1.42 V	99	54.1	43.8
3	13390.00	60.2 PK	74.0	-13.8	1.38 V	27	41.1	19.1
4	13390.00	46.5 AV	54.0	-7.5	1.38 V	27	27.4	19.1

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 181：6855 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6855.00	107.4 PK			2.13 H	24	63.1	44.3
2	*6855.00	96.3 AV			2.13 H	24	52.0	44.3
3	#13710.00	60.3 PK	88.2	-27.9	1.74 H	55	40.8	19.5
4	#13710.00	46.7 AV	68.2	-21.5	1.74 H	55	27.2	19.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6855.00	108.4 PK			1.32 V	95	64.1	44.3
2	*6855.00	97.1 AV			1.32 V	95	52.8	44.3
3	#13710.00	60.8 PK	88.2	-27.4	1.63 V	57	41.3	19.5
4	#13710.00	46.8 AV	68.2	-21.4	1.63 V	57	27.3	19.5

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 185：6875 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6875.00	107.0 PK			1.92 H	13	62.9	44.1
2	*6875.00	95.8 AV			1.92 H	13	51.7	44.1
3	#13750.00	60.7 PK	88.2	-27.5	1.63 H	68	41.0	19.7
4	#13750.00	47.0 AV	68.2	-21.2	1.63 H	68	27.3	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6875.00	108.1 PK			1.37 V	112	64.0	44.1
2	*6875.00	96.5 AV			1.37 V	112	52.4	44.1
3	#13750.00	60.7 PK	88.2	-27.5	1.42 V	72	41.0	19.7
4	#13750.00	47.0 AV	68.2	-21.2	1.42 V	72	27.3	19.7

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 209：6995 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6995.00	108.0 PK			1.72 H	13	63.4	44.6
2	*6995.00	96.6 AV			1.72 H	13	52.0	44.6
3	#13990.00	61.5 PK	88.2	-26.7	1.63 H	87	40.8	20.7
4	#13990.00	47.8 AV	68.2	-20.4	1.63 H	87	27.1	20.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6995.00	108.9 PK			1.32 V	92	64.3	44.6
2	*6995.00	97.3 AV			1.32 V	92	52.7	44.6
3	#13990.00	62.0 PK	88.2	-26.2	1.42 V	36	41.3	20.7
4	#13990.00	48.1 AV	68.2	-20.1	1.42 V	36	27.4	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 233：7115 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*7115.00	104.8 PK			1.54 H	254	61.3	43.5
2	*7115.00	94.1 AV			1.54 H	254	50.6	43.5
3	#7125.00	64.2 PK	88.2	-24.0	1.54 H	254	73.6	-9.4
4	#7125.00	58.8 AV	68.2	-9.4	1.54 H	254	68.2	-9.4
5	#14230.00	58.4 PK	88.2	-29.8	3.78 H	154	57.2	1.2
6	#14230.00	48.6 AV	68.2	-19.6	3.78 H	154	47.4	1.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7115.00	107.1 PK			1.52 V	71	63.6	43.5
2	*7115.00	95.9 AV			1.52 V	71	52.4	43.5
3	#7125.00	60.7 PK	88.2	-27.5	1.52 V	71	70.1	-9.4
4	#7125.00	55.5 AV	68.2	-12.7	1.52 V	71	64.9	-9.4
5	#14230.00	59.4 PK	88.2	-28.8	2.32 V	297	58.2	1.2
6	#14230.00	49.3 AV	68.2	-18.9	2.32 V	297	48.1	1.2

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 3：5965 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	58.1 PK	88.2	-30.1	2.55 H	10	51.0	7.1
2	#5925.00	44.7 AV	68.2	-23.5	2.55 H	10	37.6	7.1
3	*5965.00	107.2 PK			2.55 H	10	66.0	41.2
4	*5965.00	95.0 AV			2.55 H	10	53.8	41.2
5	11930.00	57.6 PK	74.0	-16.4	1.62 H	68	40.9	16.7
6	11930.00	44.3 AV	54.0	-9.7	1.62 H	68	27.6	16.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	58.8 PK	88.2	-29.4	1.52 V	31	51.7	7.1
2	#5925.00	45.0 AV	68.2	-23.2	1.52 V	31	37.9	7.1
3	*5965.00	107.4 PK			1.52 V	31	66.2	41.2
4	*5965.00	96.3 AV			1.52 V	31	55.1	41.2
5	11930.00	57.7 PK	74.0	-16.3	1.86 V	33	41.0	16.7
6	11930.00	46.6 AV	54.0	-7.4	1.86 V	33	29.9	16.7

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 43：6165 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	106.9 PK			1.68 H	19	64.9	42.0
2	*6165.00	94.9 AV			1.68 H	19	52.9	42.0
3	12330.00	57.3 PK	74.0	-16.7	1.52 H	66	40.6	16.7
4	12330.00	43.6 AV	54.0	-10.4	1.52 H	66	26.9	16.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6165.00	107.9 PK			1.38 V	66	65.9	42.0
2	*6165.00	95.4 AV			1.38 V	66	53.4	42.0
3	12330.00	57.6 PK	74.0	-16.4	1.77 V	63	40.9	16.7
4	12330.00	43.7 AV	54.0	-10.3	1.77 V	63	27.0	16.7

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 91：6405 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	107.2 PK			1.82 H	11	64.2	43.0
2	*6405.00	95.6 AV			1.82 H	11	52.6	43.0
3	#12810.00	58.0 PK	88.2	-30.2	1.69 H	32	40.3	17.7
4	#12810.00	44.3 AV	68.2	-23.9	1.69 H	32	26.6	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6405.00	108.6 PK			1.22 V	88	65.6	43.0
2	*6405.00	96.7 AV			1.22 V	88	53.7	43.0
3	#12810.00	58.1 PK	88.2	-30.1	1.52 V	75	40.4	17.7
4	#12810.00	44.5 AV	68.2	-23.7	1.52 V	75	26.8	17.7

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 99：6445 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6445.00	106.5 PK			1.52 H	81	63.2	43.3
2	*6445.00	93.6 AV			1.52 H	81	50.3	43.3
3	#12890.00	58.1 PK	88.2	-30.1	1.77 H	75	40.3	17.8
4	#12890.00	44.6 AV	68.2	-23.6	1.77 H	75	26.8	17.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6445.00	107.7 PK			1.42 V	69	64.4	43.3
2	*6445.00	96.2 AV			1.42 V	69	52.9	43.3
3	#12890.00	58.3 PK	88.2	-29.9	1.71 V	83	40.5	17.8
4	#12890.00	44.7 AV	68.2	-23.5	1.71 V	83	26.9	17.8

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 107：6485 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6485.00	108.3 PK			1.72 H	10	65.0	43.3
2	*6485.00	96.2 AV			1.72 H	10	52.9	43.3
3	#12970.00	58.5 PK	88.2	-29.7	1.38 H	55	40.5	18.0
4	#12970.00	45.0 AV	68.2	-23.2	1.38 H	55	27.0	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6485.00	109.3 PK			1.62 V	77	66.0	43.3
2	*6485.00	97.2 AV			1.62 V	77	53.9	43.3
3	#12970.00	58.8 PK	88.2	-29.4	1.88 V	99	40.8	18.0
4	#12970.00	45.5 AV	68.2	-22.7	1.88 V	99	27.5	18.0

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 115：6525 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6525.00	108.7 PK			2.13 H	33	65.5	43.2
2	*6525.00	96.5 AV			2.13 H	33	53.3	43.2
3	#13050.00	58.4 PK	88.2	-29.8	1.82 H	43	40.4	18.0
4	#13050.00	45.4 AV	68.2	-22.8	1.82 H	43	27.4	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6525.00	109.6 PK			1.62 V	77	66.4	43.2
2	*6525.00	97.3 AV			1.62 V	77	54.1	43.2
3	#13050.00	58.7 PK	88.2	-29.5	1.56 V	99	40.7	18.0
4	#13050.00	45.7 AV	68.2	-22.5	1.56 V	99	27.7	18.0

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 123：6565 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6565.00	108.0 PK			1.39 H	15	64.8	43.2
2	*6565.00	96.1 AV			1.39 H	15	52.9	43.2
3	#13130.00	58.6 PK	88.2	-29.6	1.82 H	66	40.5	18.1
4	#13130.00	44.9 AV	68.2	-23.3	1.82 H	66	26.8	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6565.00	109.4 PK			1.46 V	52	66.2	43.2
2	*6565.00	97.2 AV			1.46 V	52	54.0	43.2
3	#13130.00	58.7 PK	88.2	-29.5	1.88 V	57	40.6	18.1
4	#13130.00	45.1 AV	68.2	-23.1	1.88 V	57	27.0	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 155：6725 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6725.00	108.7 PK			1.62 H	18	65.0	43.7
2	*6725.00	96.5 AV			1.62 H	18	52.8	43.7
3	#13450.00	59.6 PK	88.2	-28.6	1.76 H	66	40.3	19.3
4	#13450.00	46.0 AV	68.2	-22.2	1.76 H	66	26.7	19.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6725.00	110.2 PK			1.52 V	101	66.5	43.7
2	*6725.00	97.8 AV			1.52 V	101	54.1	43.7
3	#13450.00	59.8 PK	88.2	-28.4	1.78 V	79	40.5	19.3
4	#13450.00	46.2 AV	68.2	-22.0	1.78 V	79	26.9	19.3

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 179：6845 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6845.00	108.3 PK			1.63 H	13	64.0	44.3
2	*6845.00	96.8 AV			1.63 H	13	52.5	44.3
3	#13690.00	60.0 PK	88.2	-28.2	1.78 H	86	40.5	19.5
4	#13690.00	46.3 AV	68.2	-21.9	1.78 H	86	26.8	19.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6845.00	110.2 PK			1.27 V	97	65.9	44.3
2	*6845.00	98.3 AV			1.27 V	97	54.0	44.3
3	#13690.00	60.2 PK	88.2	-28.0	1.86 V	79	40.7	19.5
4	#13690.00	46.5 AV	68.2	-21.7	1.86 V	79	27.0	19.5

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 187：6885 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6885.00	108.2 PK			1.87 H	55	64.2	44.0
2	*6885.00	97.0 AV			1.87 H	55	53.0	44.0
3	#13770.00	60.3 PK	88.2	-27.9	1.77 H	50	40.5	19.8
4	#13770.00	46.5 AV	68.2	-21.7	1.77 H	50	26.7	19.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6885.00	110.8 PK			1.23 V	83	66.8	44.0
2	*6885.00	98.1 AV			1.23 V	83	54.1	44.0
3	#13770.00	60.3 PK	88.2	-27.9	1.72 V	52	40.5	19.8
4	#13770.00	46.6 AV	68.2	-21.6	1.72 V	52	26.8	19.8

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 211：7005 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*7005.00	108.5 PK			1.75 H	23	63.8	44.7
2	*7005.00	97.0 AV			1.75 H	23	52.3	44.7
3	#14010.00	61.0 PK	88.2	-27.2	1.58 H	83	40.2	20.8
4	#14010.00	47.3 AV	68.2	-20.9	1.58 H	83	26.5	20.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7005.00	111.5 PK			1.52 V	79	66.8	44.7
2	*7005.00	98.3 AV			1.52 V	79	53.6	44.7
3	#14010.00	61.2 PK	88.2	-27.0	1.65 V	33	40.4	20.8
4	#14010.00	47.4 AV	68.2	-20.8	1.65 V	33	26.6	20.8

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 227：7085 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*7085.00	108.8 PK			1.65 H	13	63.0	45.8
2	*7085.00	97.6 AV			1.65 H	13	51.8	45.8
3	#7125.00	61.9 PK	88.2	-26.3	1.65 H	13	51.0	10.9
4	#7125.00	49.0 AV	68.2	-19.2	1.65 H	13	38.1	10.9
5	#14170.00	61.5 PK	88.2	-26.7	1.75 H	77	40.2	21.3
6	#14170.00	47.8 AV	68.2	-20.4	1.75 H	77	26.5	21.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7085.00	111.8 PK			1.05 V	88	66.0	45.8
2	*7085.00	99.1 AV			1.05 V	88	53.3	45.8
3	#7125.00	62.8 PK	88.2	-25.4	1.05 V	88	51.9	10.9
4	#7125.00	49.6 AV	68.2	-18.6	1.05 V	88	38.7	10.9
5	#14170.00	62.0 PK	88.2	-26.2	1.87 V	65	40.7	21.3
6	#14170.00	48.8 AV	68.2	-19.4	1.87 V	65	27.5	21.3

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 7：5985 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	71.0 PK	88.2	-17.2	2.13 H	23	63.9	7.1
2	#5925.00	52.9 AV	68.2	-15.3	2.13 H	23	45.8	7.1
3	*5985.00	106.6 PK			2.13 H	23	65.4	41.2
4	*5985.00	94.7 AV			2.13 H	23	53.5	41.2
5	11850.00	56.9 PK	74.0	-17.1	1.68 H	66	40.3	16.6
6	11850.00	43.1 AV	54.0	-10.9	1.68 H	66	26.5	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	69.1 PK	88.2	-19.1	1.78 V	72	62.0	7.1
2	#5925.00	47.2 AV	68.2	-21.0	1.78 V	72	40.1	7.1
3	*5985.00	108.9 PK			1.78 V	72	67.7	41.2
4	*5985.00	95.8 AV			1.78 V	72	54.6	41.2
5	11850.00	57.1 PK	74.0	-16.9	1.68 V	55	40.5	16.6
6	11850.00	43.3 AV	54.0	-10.7	1.68 V	55	26.7	16.6

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 39：6145 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	107.1 PK			1.65 H	9	65.2	41.9
2	*6145.00	95.4 AV			1.65 H	9	53.5	41.9
3	12290.00	57.1 PK	74.0	-16.9	1.97 H	103	40.2	16.9
4	12290.00	43.4 AV	54.0	-10.6	1.97 H	103	26.5	16.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6145.00	108.9 PK			1.43 V	99	67.0	41.9
2	*6145.00	96.7 AV			1.43 V	99	54.8	41.9
3	12290.00	57.3 PK	74.0	-16.7	1.53 V	116	40.4	16.9
4	12290.00	43.6 AV	54.0	-10.4	1.53 V	116	26.7	16.9

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.

RF Mode	TX 802.11ax (HE80)	Channel	CH 87：6385 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	107.2 PK			1.53 H	17	64.4	42.8
2	*6385.00	96.2 AV			1.53 H	17	53.4	42.8
3	#12770.00	58.0 PK	88.2	-30.2	1.77 H	61	40.5	17.5
4	#12770.00	44.2 AV	68.2	-24.0	1.77 H	61	26.7	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6385.00	108.6 PK			1.52 V	115	65.8	42.8
2	*6385.00	97.1 AV			1.52 V	115	54.3	42.8
3	#12770.00	58.1 PK	88.2	-30.1	1.19 V	88	40.6	17.5
4	#12770.00	44.3 AV	68.2	-23.9	1.19 V	88	26.8	17.5

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 103：6465 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6465.00	107.4 PK			1.72 H	6	64.0	43.4
2	*6465.00	96.7 AV			1.72 H	6	53.3	43.4
3	#12930.00	58.0 PK	88.2	-30.2	1.82 H	77	40.1	17.9
4	#12930.00	45.1 AV	68.2	-23.1	1.82 H	77	27.2	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6465.00	108.8 PK			1.52 V	115	65.4	43.4
2	*6465.00	97.8 AV			1.52 V	115	54.4	43.4
3	#12930.00	58.2 PK	88.2	-30.0	1.69 V	83	40.3	17.9
4	#12930.00	45.4 AV	68.2	-22.8	1.69 V	83	27.5	17.9

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 119：6545 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6545.00	107.3 PK			1.63 H	22	64.2	43.1
2	*6545.00	96.3 AV			1.63 H	22	53.2	43.1
3	#13090.00	58.6 PK	88.2	-29.6	1.97 H	43	40.5	18.1
4	#13090.00	45.5 AV	68.2	-22.7	1.97 H	43	27.4	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6545.00	108.7 PK			1.32 V	95	65.6	43.1
2	*6545.00	97.4 AV			1.32 V	95	54.3	43.1
3	#13090.00	58.7 PK	88.2	-29.5	1.77 V	105	40.6	18.1
4	#13090.00	45.8 AV	68.2	-22.4	1.77 V	105	27.7	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 151：6705 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6705.00	108.5 PK			1.61 H	16	64.7	43.8
2	*6705.00	96.8 AV			1.61 H	16	53.0	43.8
3	#13410.00	59.7 PK	88.2	-28.5	1.89 H	58	40.4	19.3
4	#13410.00	46.0 AV	68.2	-22.2	1.89 H	58	26.7	19.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6705.00	109.6 PK			1.32 V	119	65.8	43.8
2	*6705.00	98.0 AV			1.32 V	119	54.2	43.8
3	#13410.00	59.8 PK	88.2	-28.4	1.74 V	111	40.5	19.3
4	#13410.00	46.1 AV	68.2	-22.1	1.74 V	111	26.8	19.3

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 183：6865 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6865.00	109.4 PK			1.72 H	16	65.2	44.2
2	*6865.00	97.3 AV			1.72 H	16	53.1	44.2
3	#13730.00	59.9 PK	88.2	-28.3	1.96 H	77	40.4	19.5
4	#13730.00	46.6 AV	68.2	-21.6	1.96 H	77	27.1	19.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6865.00	111.0 PK			1.32 V	124	66.8	44.2
2	*6865.00	98.8 AV			1.32 V	124	54.6	44.2
3	#13730.00	60.1 PK	88.2	-28.1	1.58 V	72	40.6	19.5
4	#13730.00	46.8 AV	68.2	-21.4	1.58 V	72	27.3	19.5

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 199：6945 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6945.00	108.6 PK			1.63 H	19	64.7	43.9
2	*6945.00	96.3 AV			1.63 H	19	52.4	43.9
3	#13890.00	60.9 PK	88.2	-27.3	1.71 H	54	40.5	20.4
4	#13890.00	47.5 AV	68.2	-20.7	1.71 H	54	27.1	20.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6945.00	110.0 PK			1.35 V	112	66.1	43.9
2	*6945.00	97.6 AV			1.35 V	112	53.7	43.9
3	#13890.00	61.1 PK	88.2	-27.1	1.74 V	69	40.7	20.4
4	#13890.00	47.8 AV	68.2	-20.4	1.74 V	69	27.4	20.4

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 215：7025 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*7025.00	110.3 PK			1.72 H	15	65.2	45.1
2	*7025.00	98.5 AV			1.72 H	15	53.4	45.1
3	#7125.00	62.5 PK	88.2	-25.7	1.72 H	15	51.6	10.9
4	#7125.00	49.6 AV	68.2	-18.6	1.72 H	15	38.7	10.9
5	#14050.00	61.4 PK	88.2	-26.8	2.02 H	61	40.5	20.9
6	#14050.00	48.1 AV	68.2	-20.1	2.02 H	61	27.2	20.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7025.00	110.9 PK			1.42 V	75	65.8	45.1
2	*7025.00	99.6 AV			1.42 V	75	54.5	45.1
3	#7125.00	63.5 PK	88.2	-24.7	1.42 V	75	52.6	10.9
4	#7125.00	49.9 AV	68.2	-18.3	1.42 V	75	39.0	10.9
5	#14050.00	61.5 PK	88.2	-26.7	1.77 V	86	40.6	20.9
6	#14050.00	48.3 AV	68.2	-19.9	1.77 V	86	27.4	20.9

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

RF Mode	TX 802.11ax (HE160)	Channel	CH 15：6025 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	77.6 PK	88.2	-10.6	1.63 H	17	70.5	7.1
2	#5925.00	61.8 AV	68.2	-6.4	1.63 H	17	54.7	7.1
3	*6025.00	106.9 PK			1.63 H	17	65.5	41.4
4	*6025.00	94.1 AV			1.63 H	17	52.7	41.4
5	12050.00	57.2 PK	74.0	-16.8	1.96 H	74	40.4	16.8
6	12050.00	43.4 AV	54.0	-10.6	1.96 H	74	26.6	16.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	77.4 PK	88.2	-10.8	1.53 V	82	70.3	7.1
2	#5925.00	58.8 AV	68.2	-9.4	1.53 V	82	51.7	7.1
3	*6025.00	108.6 PK			1.53 V	82	67.2	41.4
4	*6025.00	95.6 AV			1.53 V	82	54.2	41.4
5	12050.00	57.6 PK	74.0	-16.4	2.22 V	99	40.8	16.8
6	12050.00	43.7 AV	54.0	-10.3	2.22 V	99	26.9	16.8

Remarks:

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

RF Mode	TX 802.11ax (HE160)	Channel	CH 47：6185 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	108.3 PK			1.93 H	23	66.3	42.0
2	*6185.00	95.2 AV			1.93 H	23	53.2	42.0
3	12360.00	56.9 PK	74.0	-17.1	1.66 H	111	40.3	16.6
4	12360.00	43.4 AV	54.0	-10.6	1.66 H	111	26.8	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6185.00	109.2 PK			1.42 V	95	67.2	42.0
2	*6185.00	96.2 AV			1.42 V	95	54.2	42.0
3	12360.00	57.2 PK	74.0	-16.8	2.20 V	116	40.6	16.6
4	12360.00	43.6 AV	54.0	-10.4	2.20 V	116	27.0	16.6

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.

RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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			1.54 H	13	66.4	42.3
2	*6345.00	95.7 AV			1.54 H	13	53.4	42.3
3	12690.00	57.0 PK	74.0	-17.0	1.87 H	69	39.9	17.1
4	12690.00	43.2 AV	54.0	-10.8	1.87 H	69	26.1	17.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6345.00	109.6 PK			1.42 V	77	67.3	42.3
2	*6345.00	96.6 AV			1.42 V	77	54.3	42.3
3	12690.00	57.4 PK	74.0	-16.6	2.04 V	115	40.3	17.1
4	12690.00	43.8 AV	54.0	-10.2	2.04 V	115	26.7	17.1

Remarks:

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

RF Mode	TX 802.11ax (HE160)	Channel	CH 111：6505 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6505.00	108.4 PK			1.52 H	14	65.1	43.3
2	*6505.00	95.1 AV			1.52 H	14	51.8	43.3
3	#13010.00	57.3 PK	88.2	-30.9	1.96 H	66	39.2	18.1
4	#13010.00	43.4 AV	68.2	-24.8	1.96 H	66	25.3	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6505.00	109.4 PK			1.67 V	54	66.1	43.3
2	*6505.00	96.3 AV			1.67 V	54	53.0	43.3
3	#13010.00	57.6 PK	88.2	-30.6	2.03 V	118	39.5	18.1
4	#13010.00	43.9 AV	68.2	-24.3	2.03 V	118	25.8	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE160)	Channel	CH 143：6665 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6665.00	108.4 PK			1.63 H	23	64.6	43.8
2	*6665.00	95.3 AV			1.63 H	23	51.5	43.8
3	13330.00	58.4 PK	74.0	-15.6	1.92 H	77	39.6	18.8
4	13330.00	44.7 AV	54.0	-9.3	1.92 H	77	25.9	18.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6665.00	109.3 PK			1.62 V	91	65.5	43.8
2	*6665.00	96.2 AV			1.62 V	91	52.4	43.8
3	13330.00	59.2 PK	74.0	-14.8	1.89 V	150	40.4	18.8
4	13330.00	45.1 AV	54.0	-8.9	1.89 V	150	26.3	18.8

Remarks:

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

RF Mode	TX 802.11ax (HE160)	Channel	CH 175：6825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6825.00	108.1 PK			1.65 H	17	64.0	44.1
2	*6825.00	95.0 AV			1.65 H	17	50.9	44.1
3	#13650.00	58.6 PK	88.2	-29.6	1.73 H	98	38.9	19.7
4	#13650.00	44.8 AV	68.2	-23.4	1.73 H	98	25.1	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6825.00	108.9 PK			1.53 V	72	64.8	44.1
2	*6825.00	94.8 AV			1.53 V	72	50.7	44.1
3	#13650.00	59.1 PK	88.2	-29.1	1.89 V	117	39.4	19.7
4	#13650.00	45.3 AV	68.2	-22.9	1.89 V	117	25.6	19.7

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

RF Mode	TX 802.11ax (HE160)	Channel	CH 207：6985 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*6985.00	109.8 PK			1.53 H	16	65.4	44.4
2	*6985.00	97.0 AV			1.53 H	16	52.6	44.4
3	#7125.00	70.8 PK	88.2	-17.4	1.53 H	16	59.9	10.9
4	#7125.00	51.0 AV	68.2	-17.2	1.53 H	16	40.1	10.9
5	#13970.00	60.3 PK	88.2	-27.9	2.03 H	116	39.7	20.6
6	#13970.00	46.6 AV	68.2	-21.6	2.03 H	116	26.0	20.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6985.00	110.7 PK			1.43 V	88	66.3	44.4
2	*6985.00	97.0 AV			1.43 V	88	52.6	44.4
3	#7125.00	74.6 PK	88.2	-13.6	1.43 V	88	63.7	10.9
4	#7125.00	53.6 AV	68.2	-14.6	1.43 V	88	42.7	10.9
5	#13970.00	60.6 PK	88.2	-27.6	2.16 V	102	40.0	20.6
6	#13970.00	46.7 AV	68.2	-21.5	2.16 V	102	26.1	20.6

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

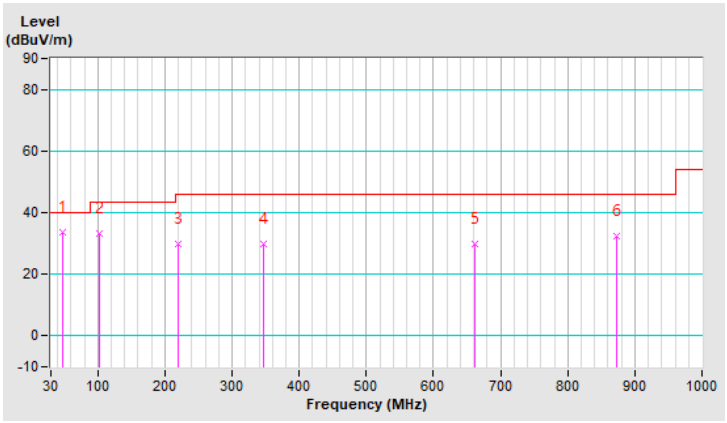
Below 1GHz Data:

RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	47.46	33.5 QP	40.0	-6.5	2.00 H	92	42.5	-9.0
2	102.75	33.3 QP	43.5	-10.2	2.00 H	256	46.5	-13.2
3	219.15	29.7 QP	46.0	-16.3	1.01 H	352	40.7	-11.0
4	346.22	29.7 QP	46.0	-16.3	1.51 H	186	35.8	-6.1
5	662.44	29.8 QP	46.0	-16.2	1.51 H	80	29.5	0.3
6	871.96	32.4 QP	46.0	-13.6	1.01 H	10	27.9	4.5

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 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

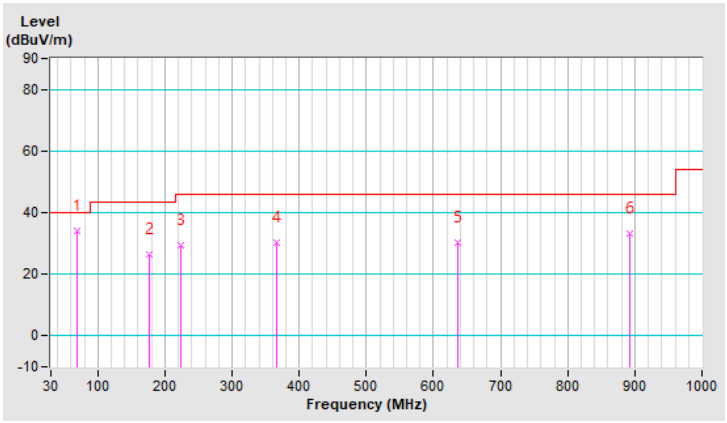


RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	**69.77**	**33.9 QP**	**40.0**	**-6.1**	**1.99 V**	**164**	**44.9**	**-11.0**
2	176.47	26.5 QP	43.5	-17.0	1.00 V	166	36.2	-9.7
3	223.03	29.5 QP	46.0	-16.5	1.00 V	4	40.7	-11.2
4	366.59	30.1 QP	46.0	-15.9	1.50 V	196	35.8	-5.7
5	636.25	30.1 QP	46.0	-15.9	1.00 V	117	30.0	0.1
6	892.33	33.1 QP	46.0	-12.9	1.99 V	19	28.2	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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 In-Band Emission (Mask) Measurement

4.2.1 Limits of In-Band Emission (Mask) Measurement

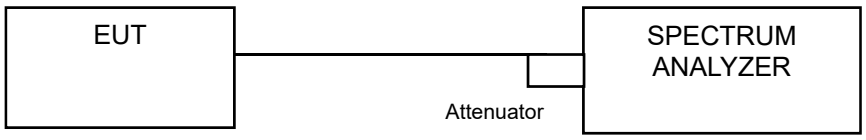
Test Item	Frequencies (MHz)	(X) dBc*1
Emission Mask	At 1 MHz outside of channel edge	20
	At one channel bandwidth from the channel center*2	28
	At one- and one-half times the channel bandwidth away from channel center*3	40
	More than one- and one-half times the channel bandwidth	40

*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.

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

a. Connect output of the antenna port to a spectrum analyzer and adjust appropriate attenuation.

b. Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (Determine the channel edge.)

c. Measure the power spectral density (for emissions mask reference) using the following procedure:

a) Set the span to encompass the entire 26 dB EBW of the signal.

b) Set RBW = same RBW used for 26 dB EBW measurement.

c) Set VBW ≥ 3 X RBW

d) Number of points in sweep ≥ [2 X span / RBW].

e) Sweep time = auto.

f) Detector = RMS (i.e., power averaging)

g) Trace average at least 100 traces in power averaging (rms) mode.

h) Use the peak search function on the instrument to find the peak of the spectrum.

d. 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:

a) 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.)

b) Suppressed by 28 dB at one channel bandwidth from the channel center.

c) Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.

e. Adjust the span to encompass the entire mask as necessary and clear trace.

f. Trace average at least 100 traces in power averaging (rms) mode.

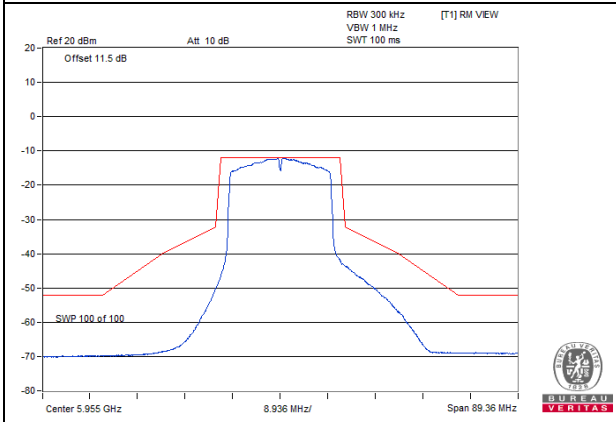
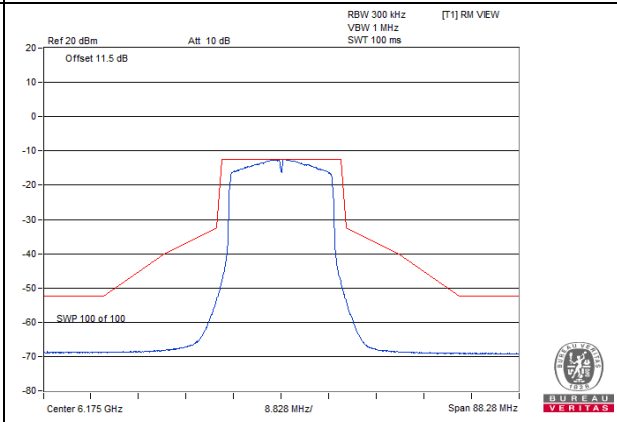
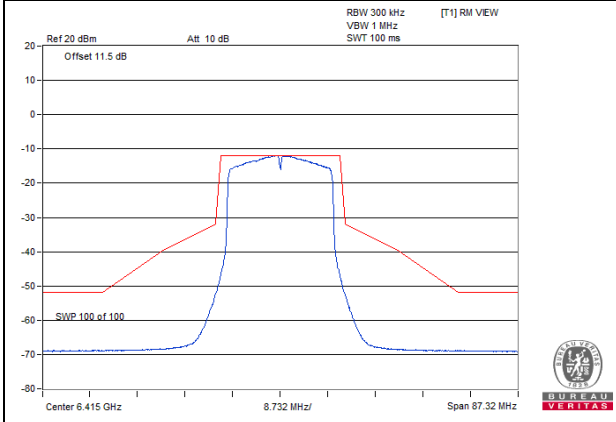
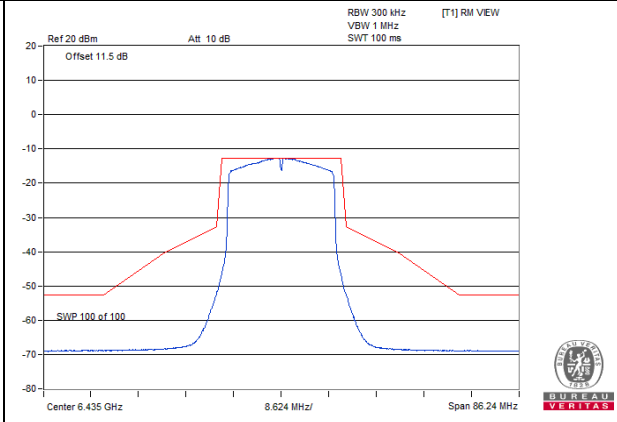
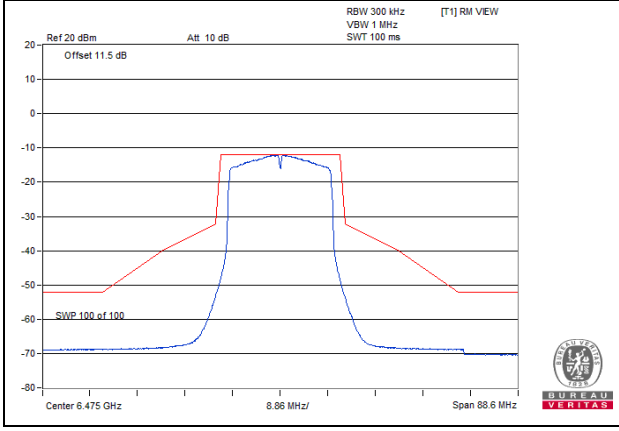
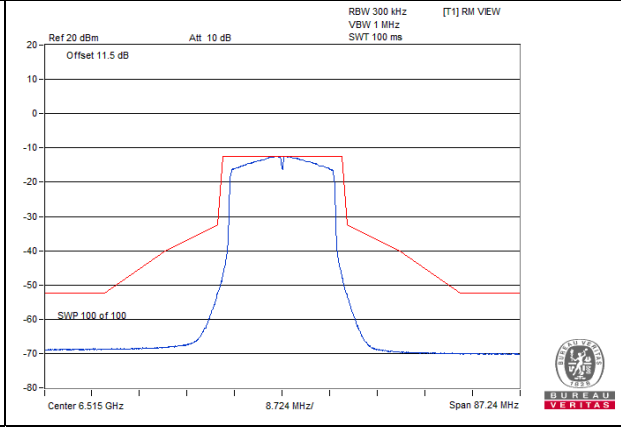
g. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

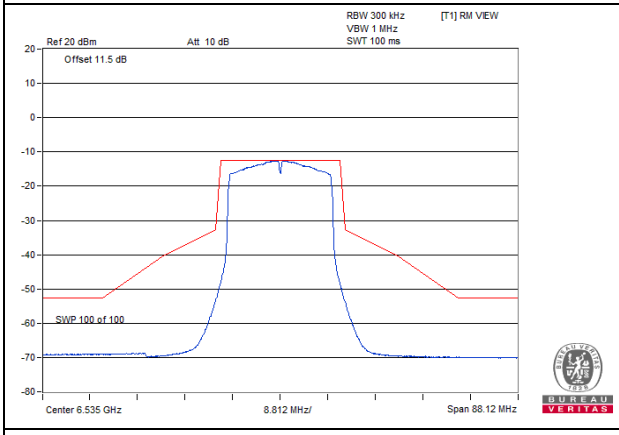
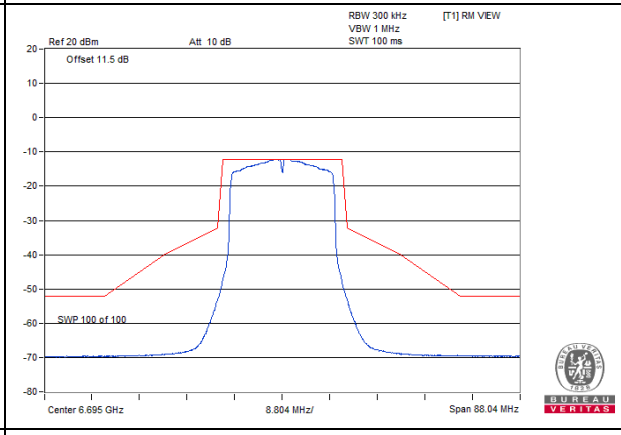
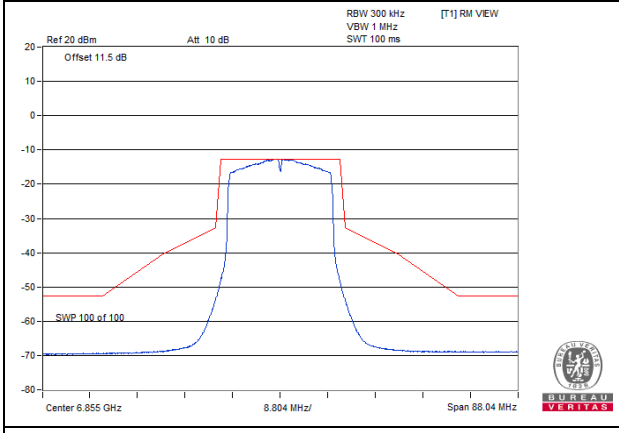
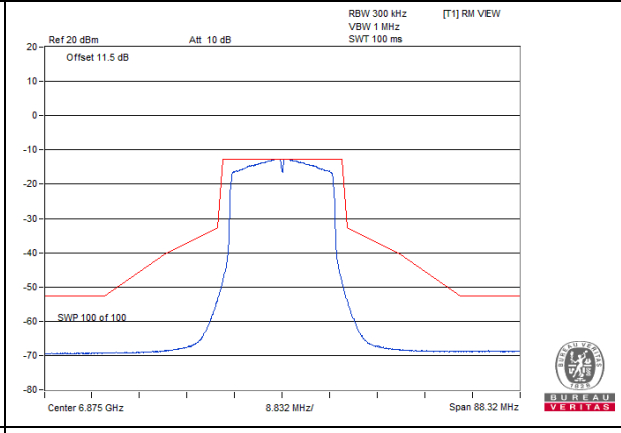
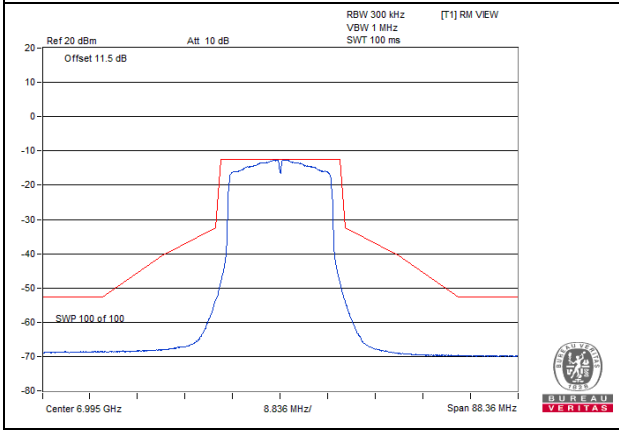
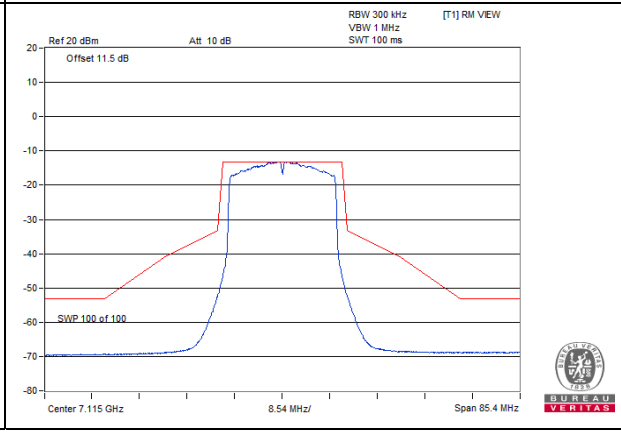
4.2.5 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

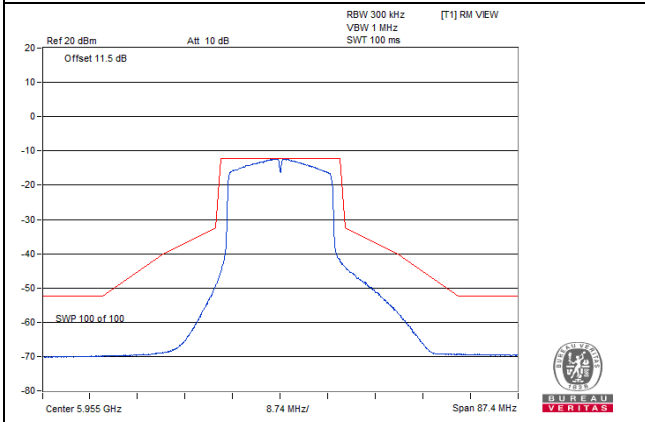
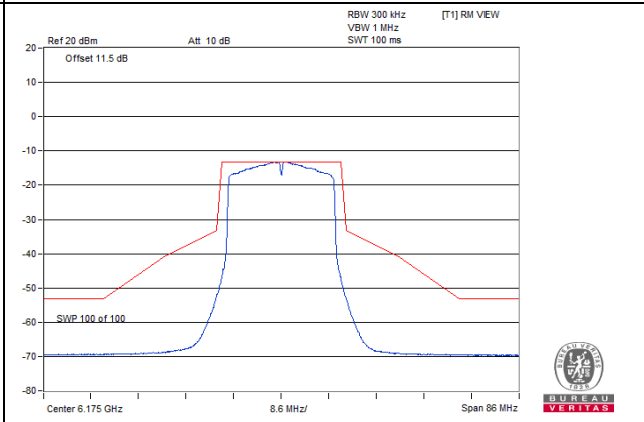
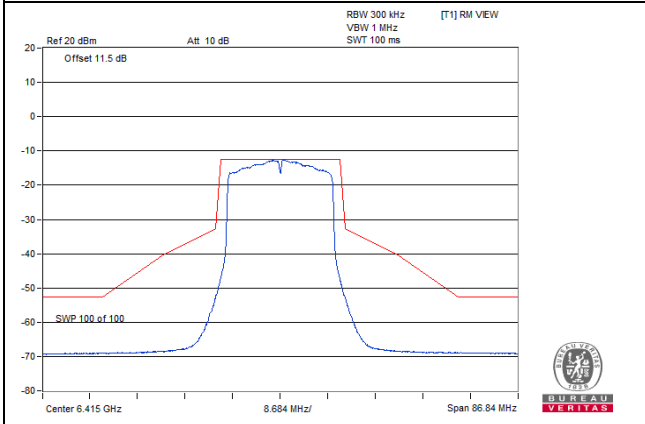
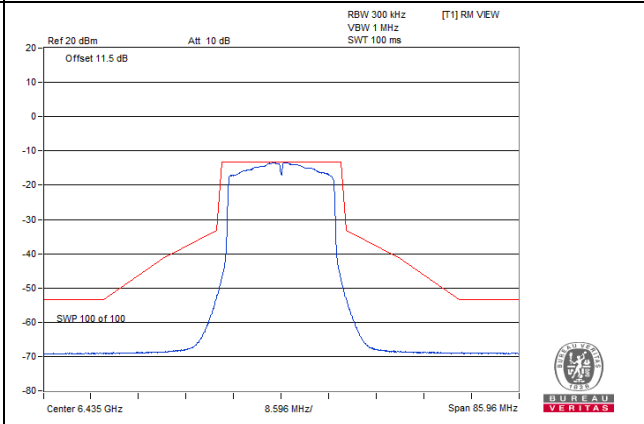
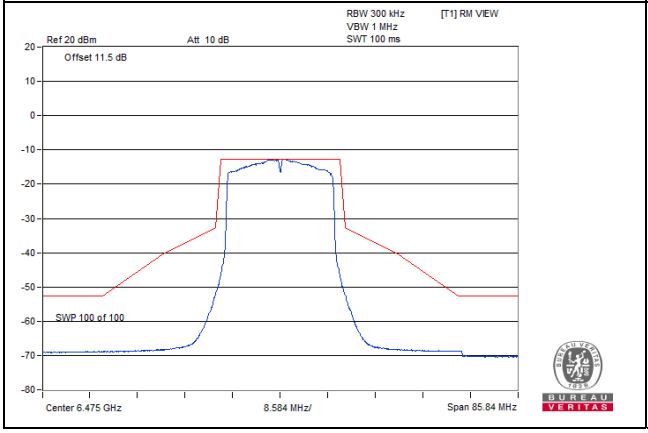
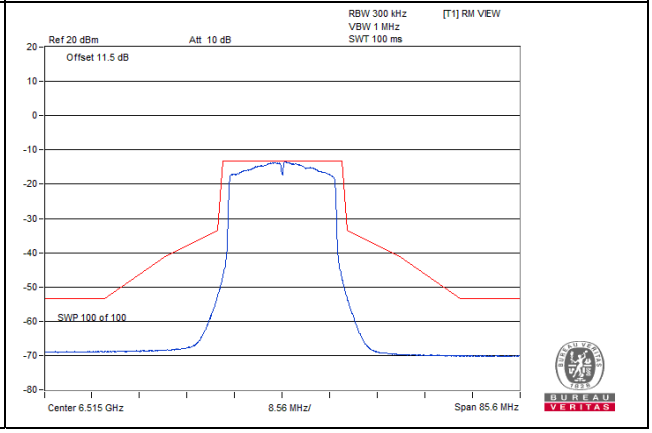
4.2.6 Test Results

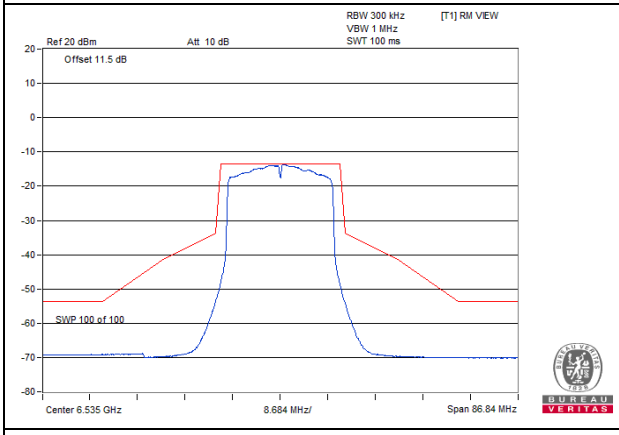
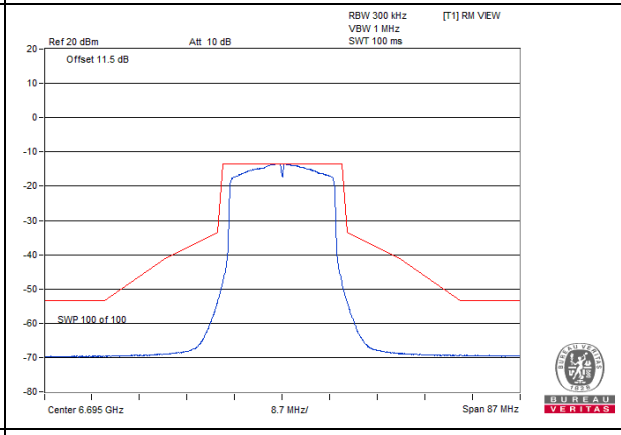
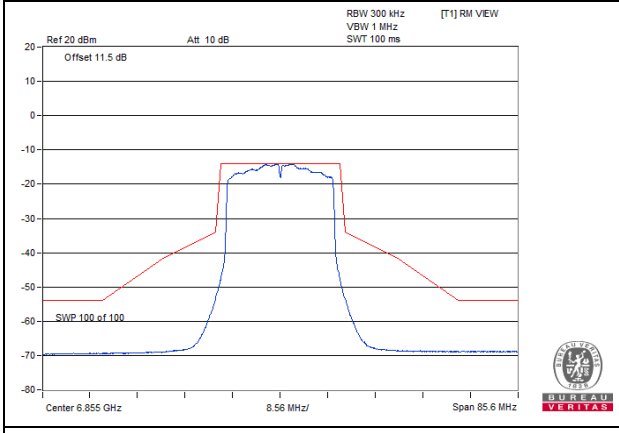
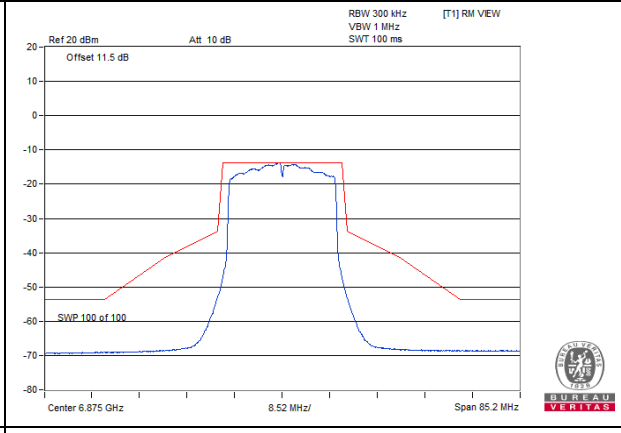
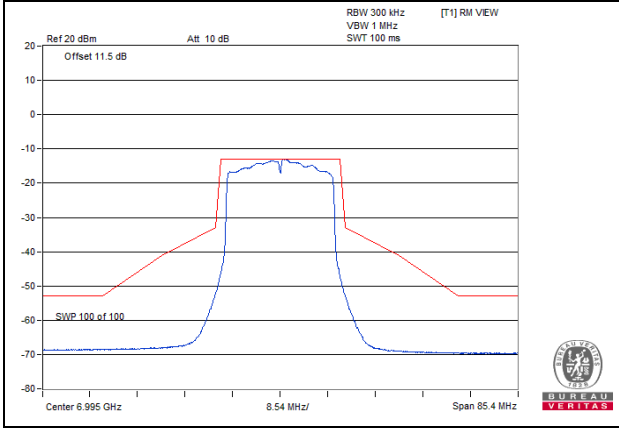
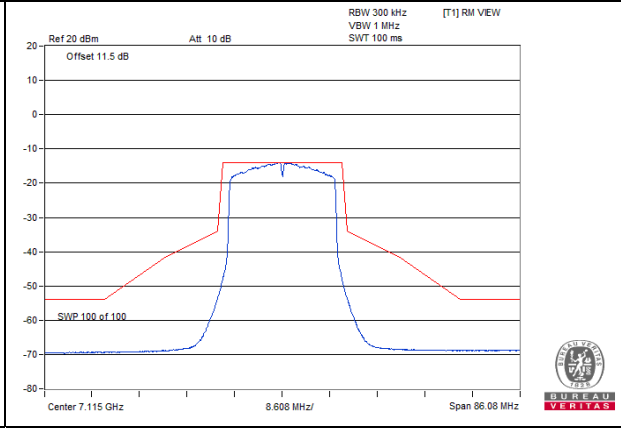
802.11ax (HE20)_Chain 0

Spectrum Plot	
CH 1	CH 45
	
CH 93	CH 97
	
CH 105	CH 113
	

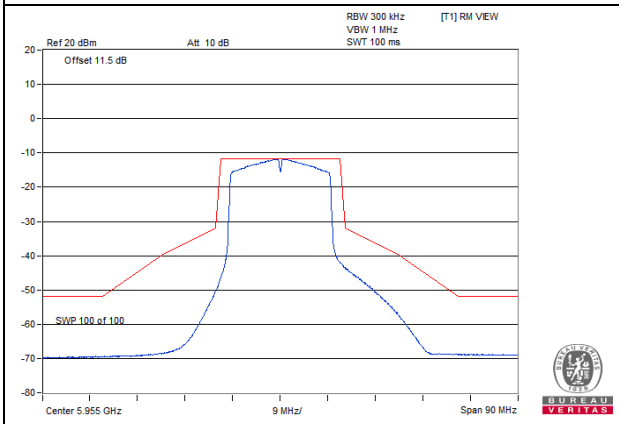
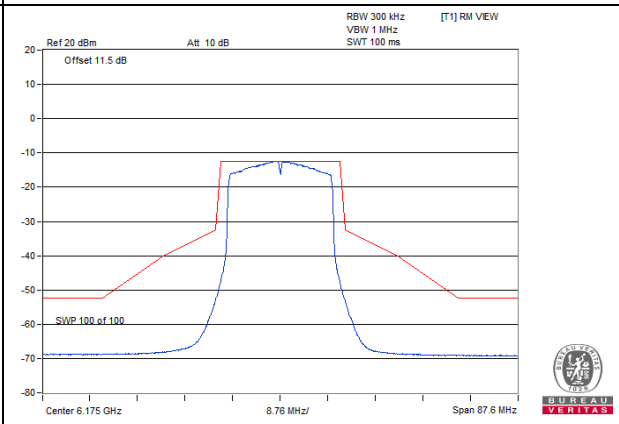
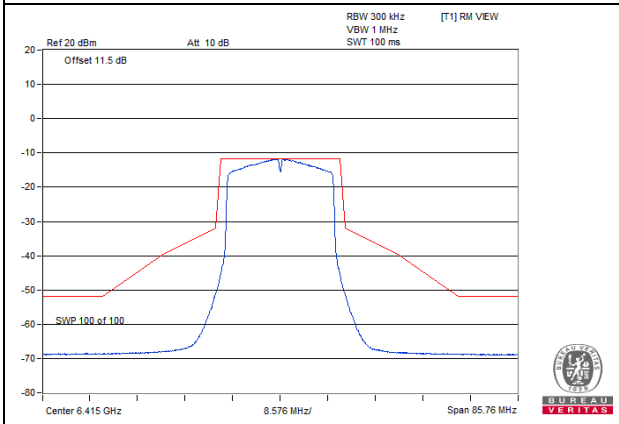
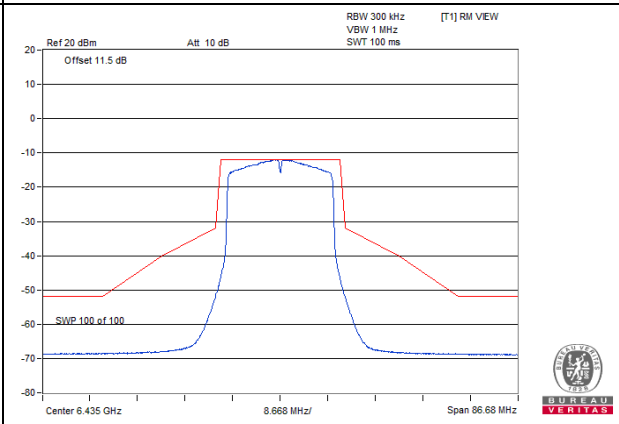
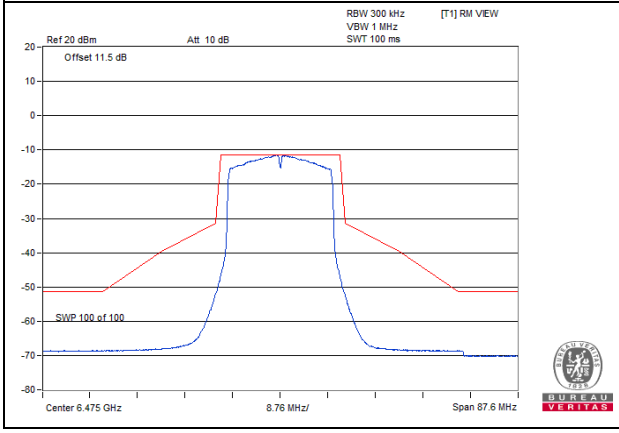
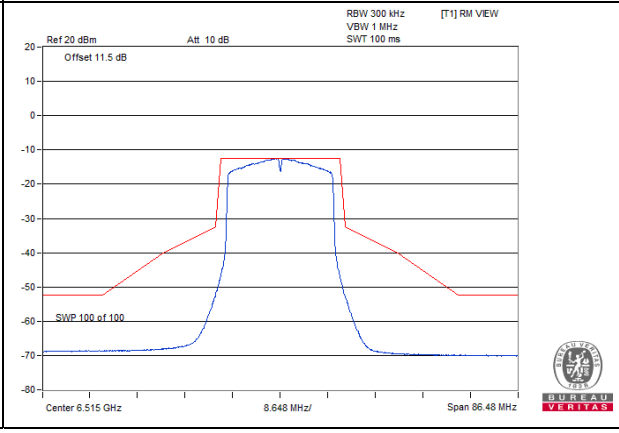
Spectrum Plot	
CH 117	CH 149
	
CH 181	CH 185
	
CH 209	CH 233
	

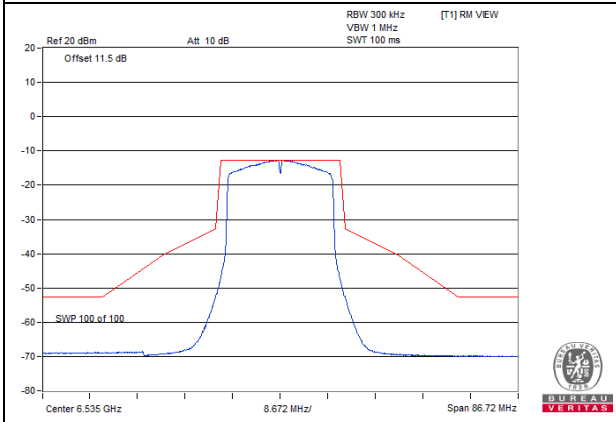
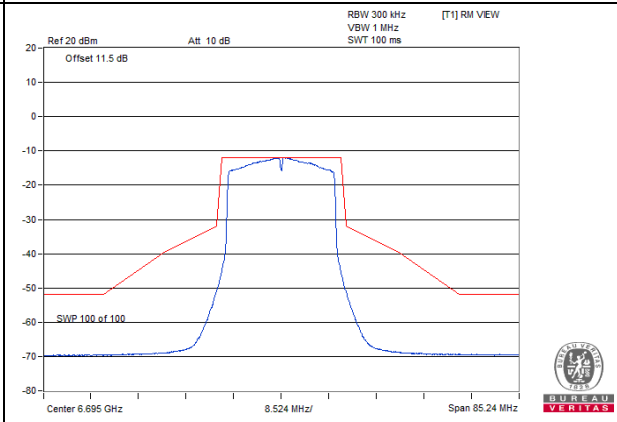
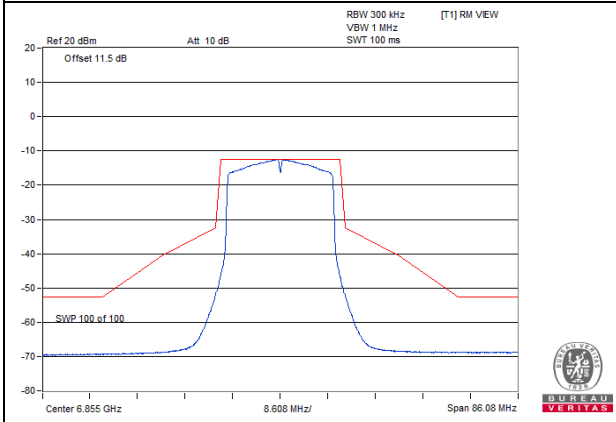
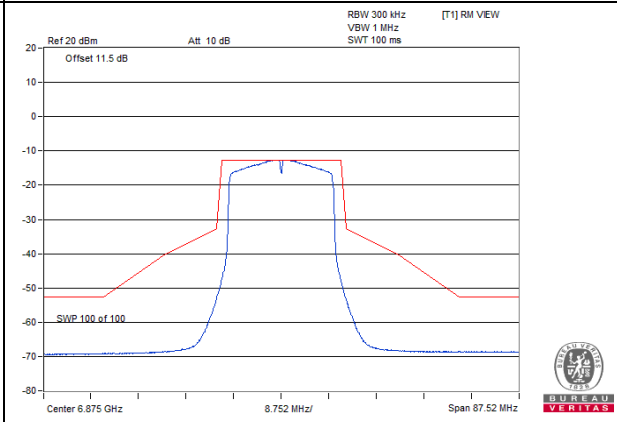
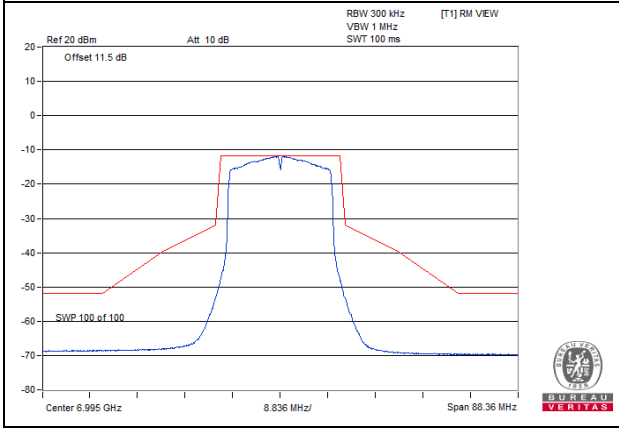
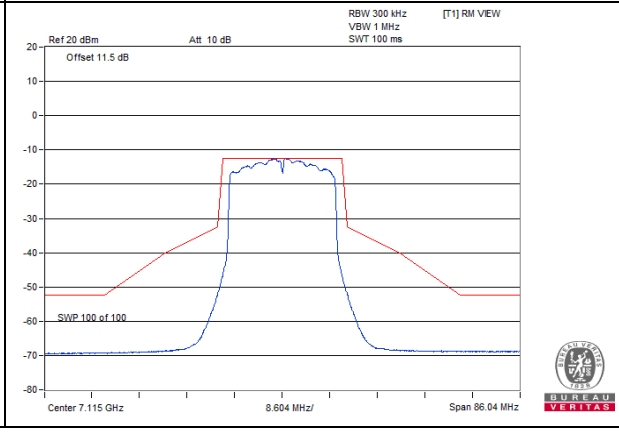
802.11ax (HE20)_Chain 1

Spectrum Plot	
CH 1	CH 45
	
CH 93	CH 97
	
CH 105	CH 113
	

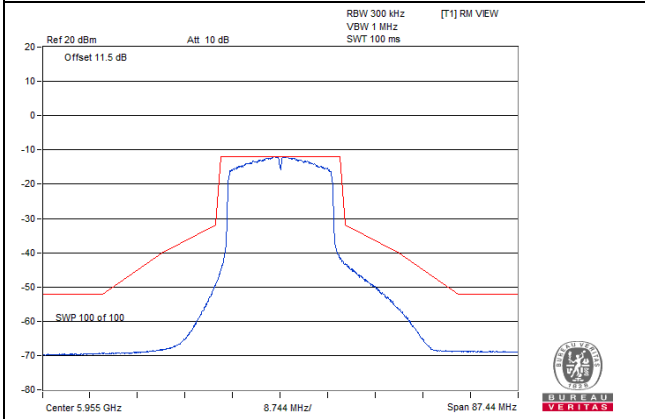
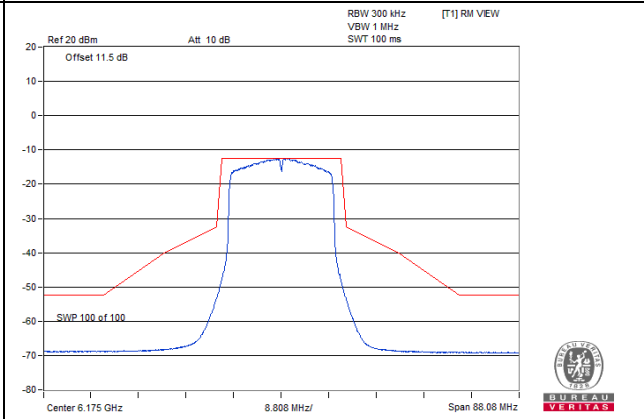
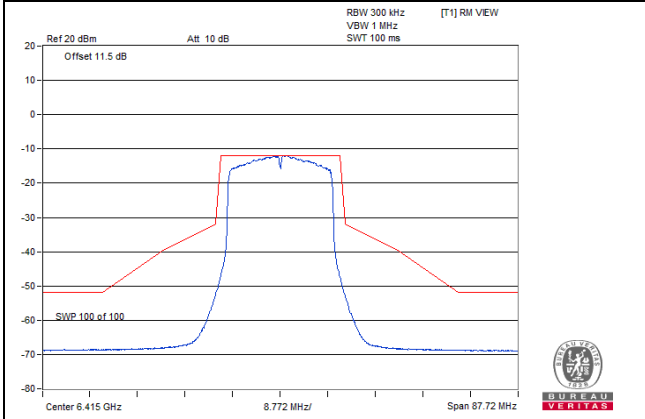
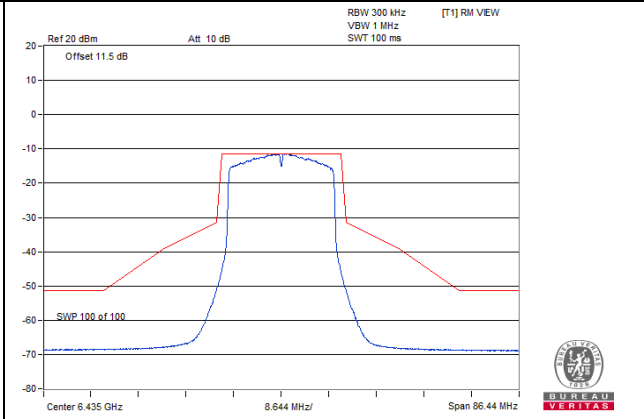
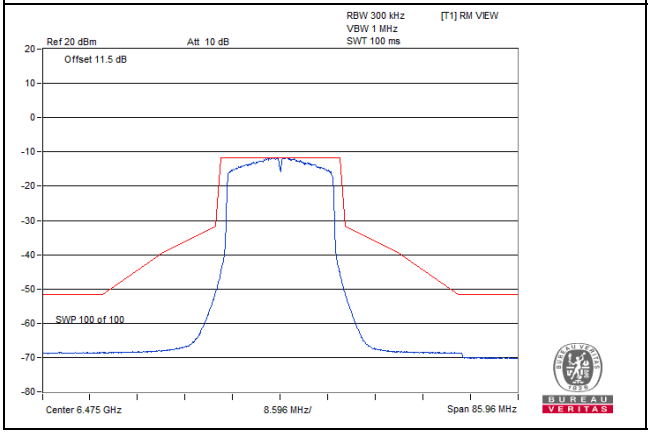
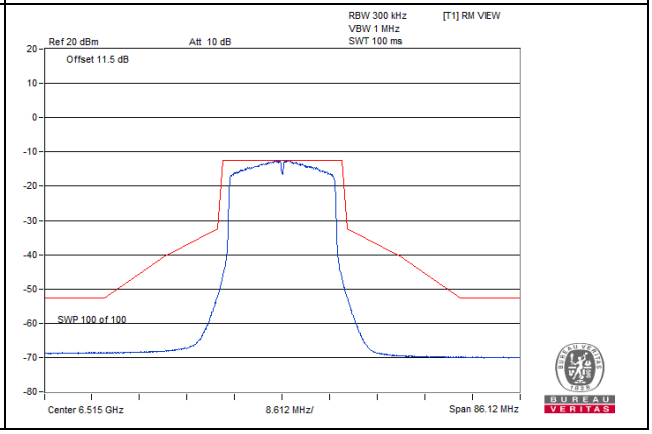
Spectrum Plot	
CH 117	CH 149
	
CH 181	CH 185
	
CH 209	CH 233
	

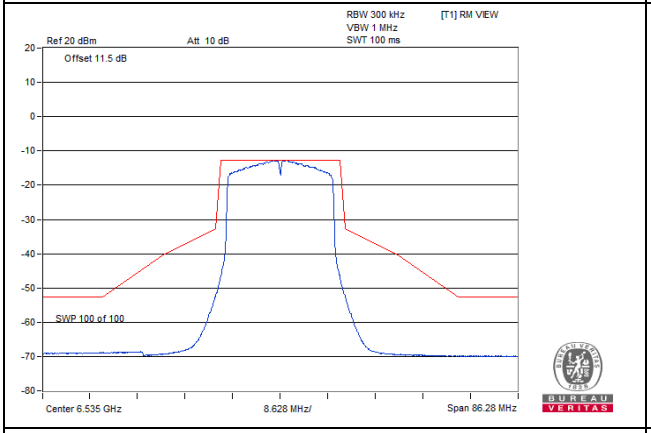
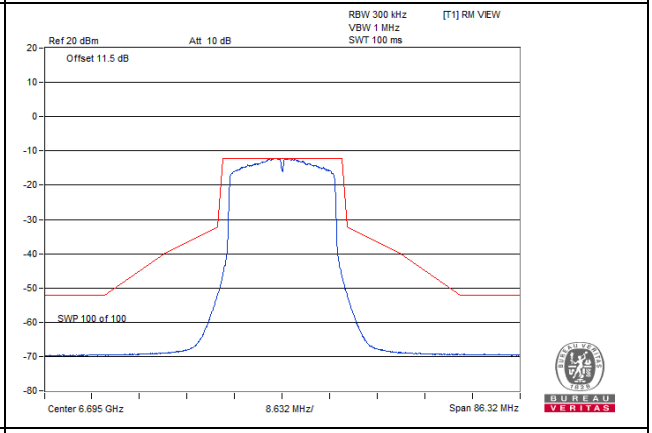
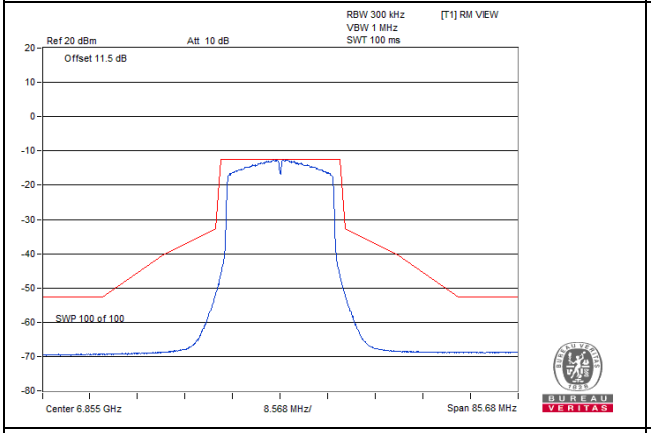
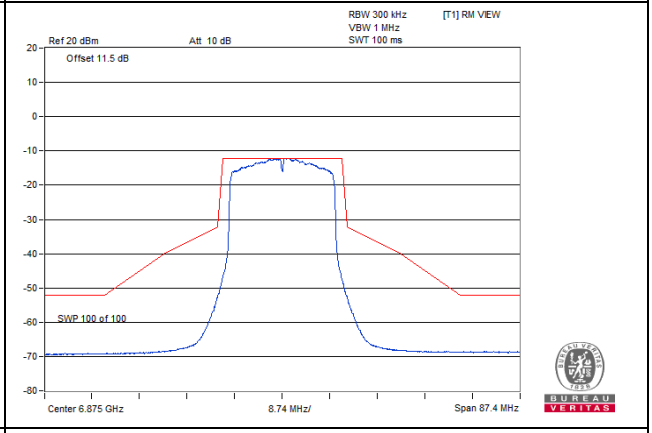
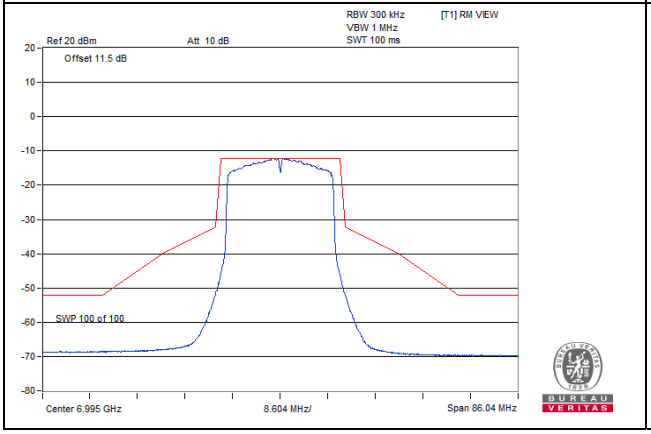
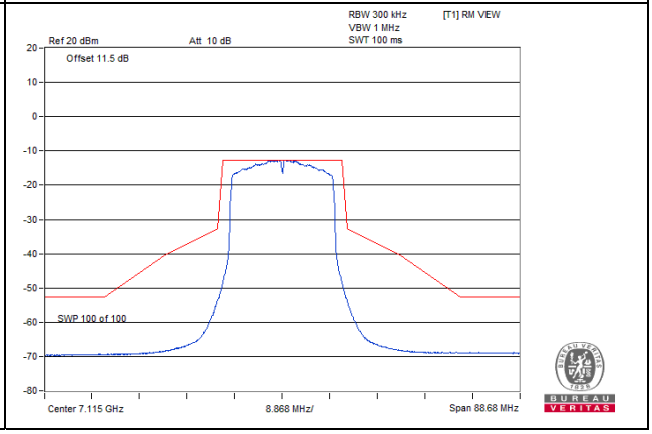
802.11ax (HE20)_Chain 2

Spectrum Plot	
CH 1	CH 45
	
CH 93	CH 97
	
CH 105	CH 113
	

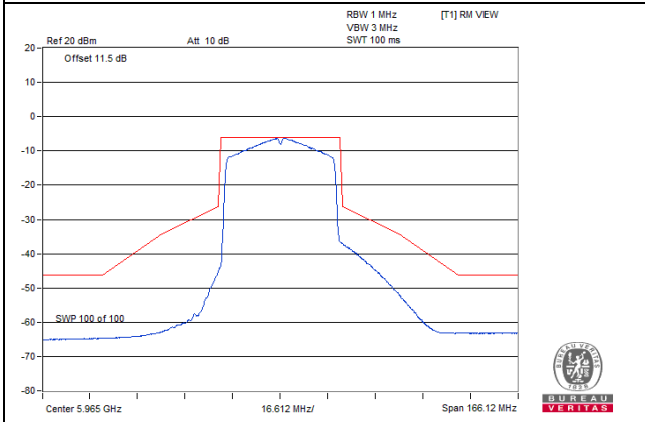
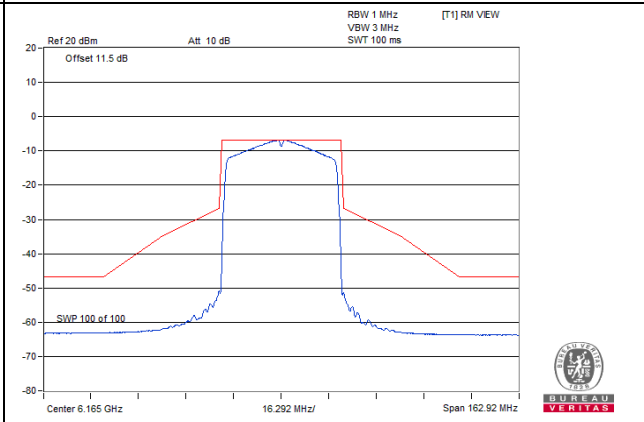
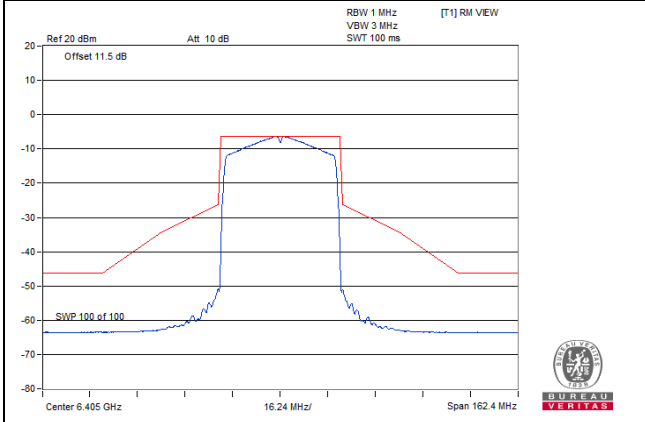
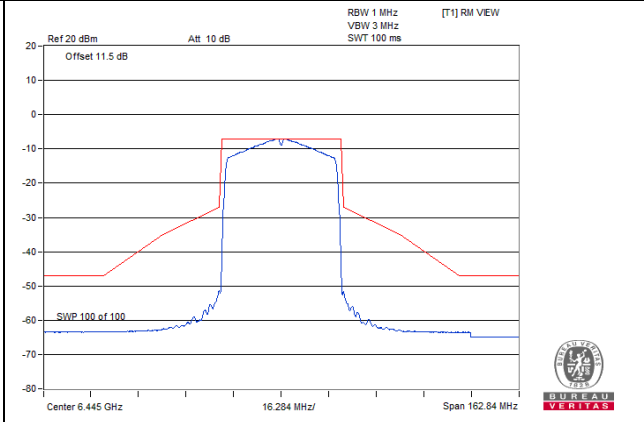
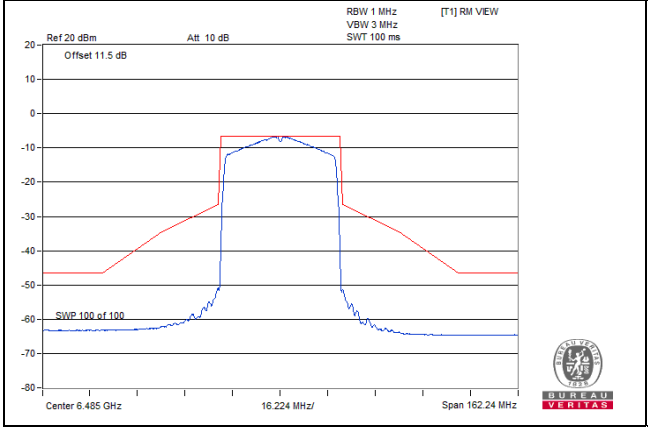
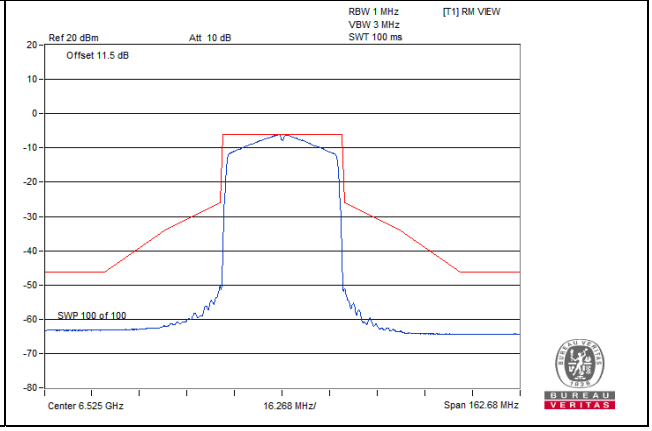
Spectrum Plot	
CH 117	CH 149
	
CH 181	CH 185
	
CH 209	CH 233
	

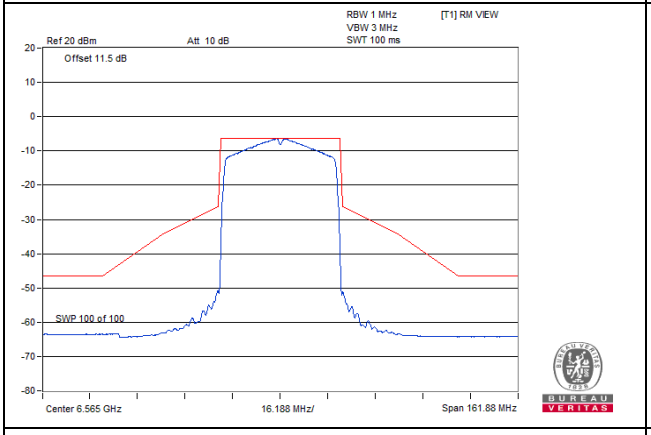
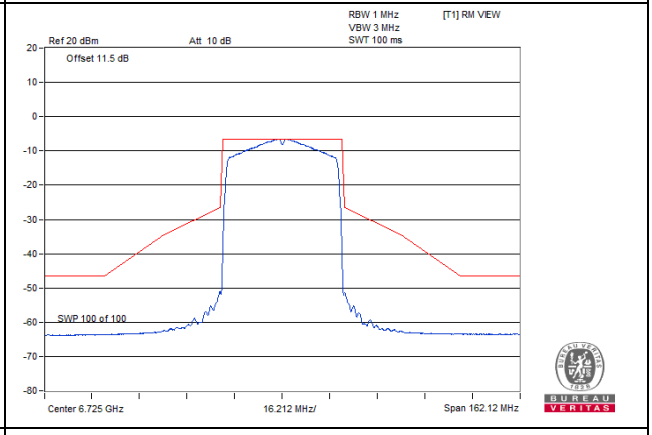
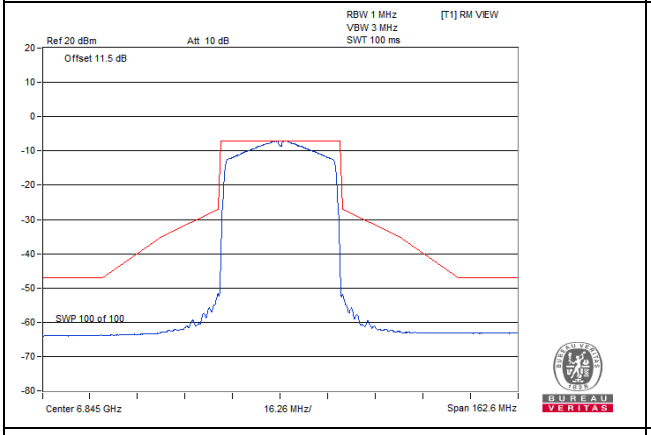
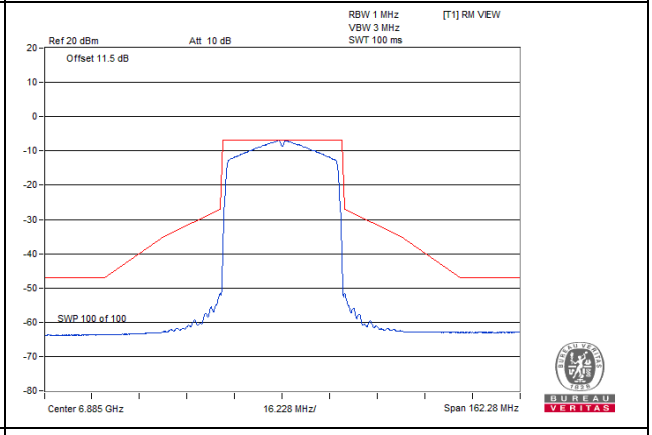
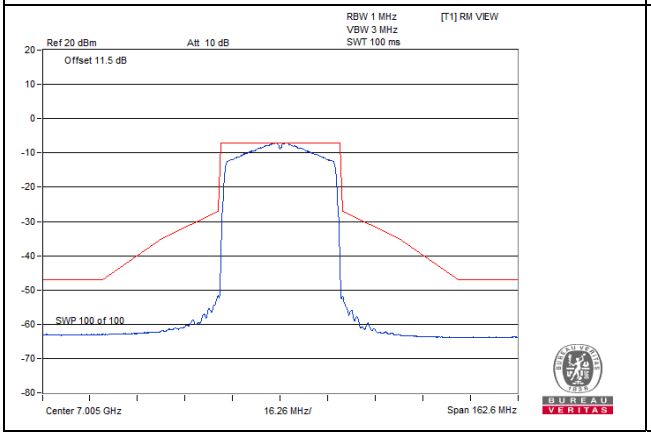
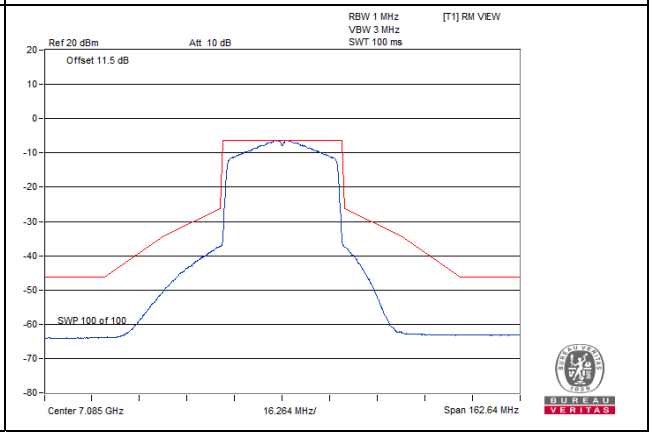
802.11ax (HE20)_Chain 3

Spectrum Plot	
CH 1	CH 45
	
CH 93	CH 97
	
CH 105	CH 113
	

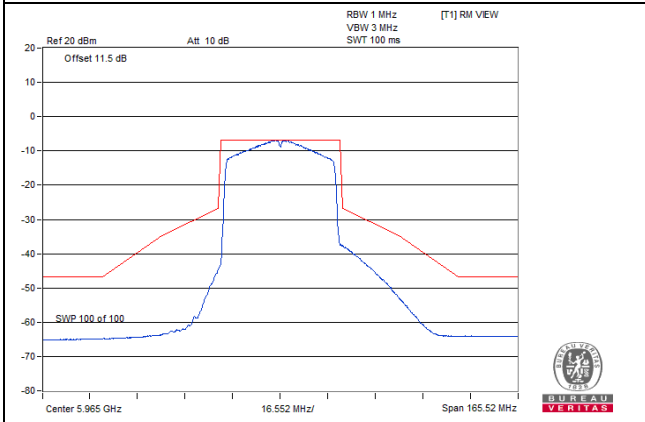
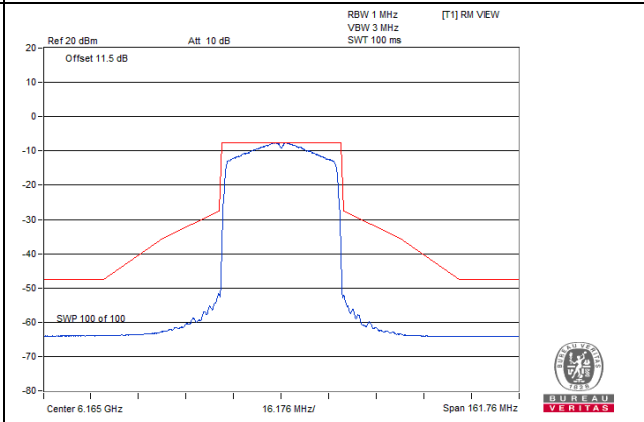
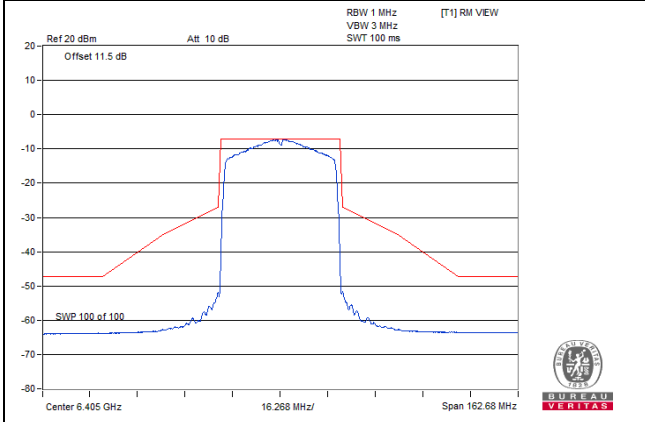
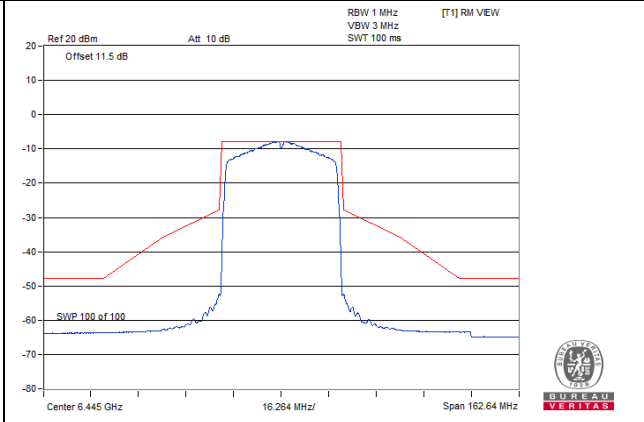
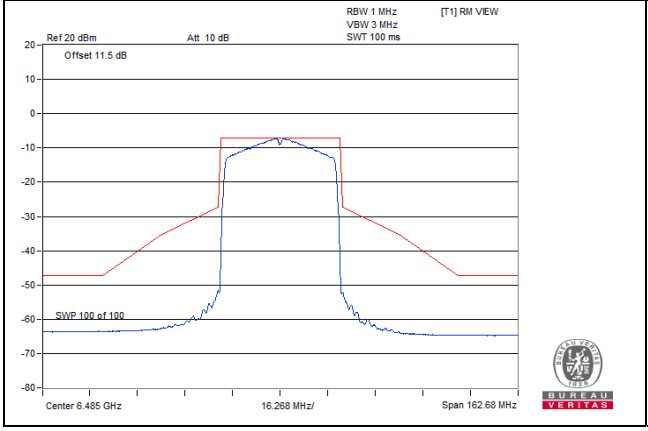
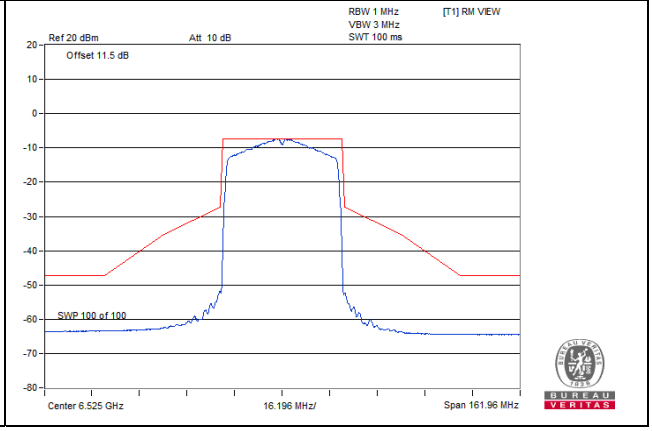
Spectrum Plot	
CH 117	CH 149
	
CH 181	CH 185
	
CH 209	CH 233
	

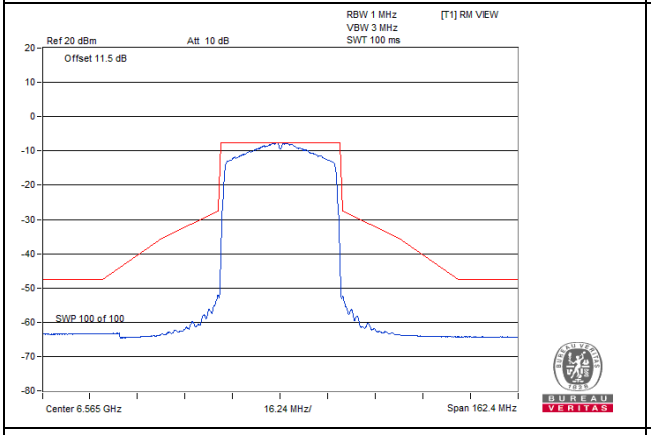
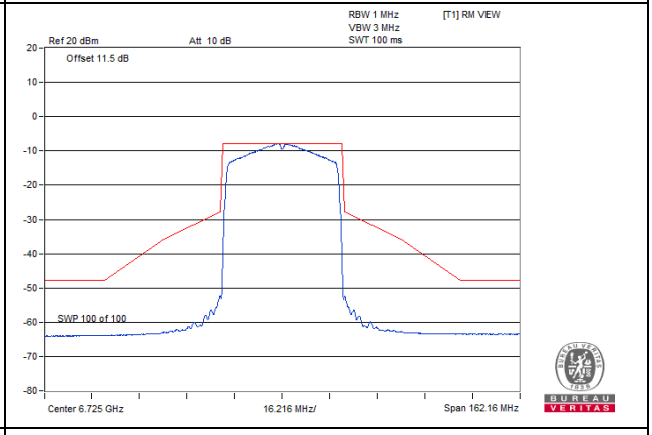
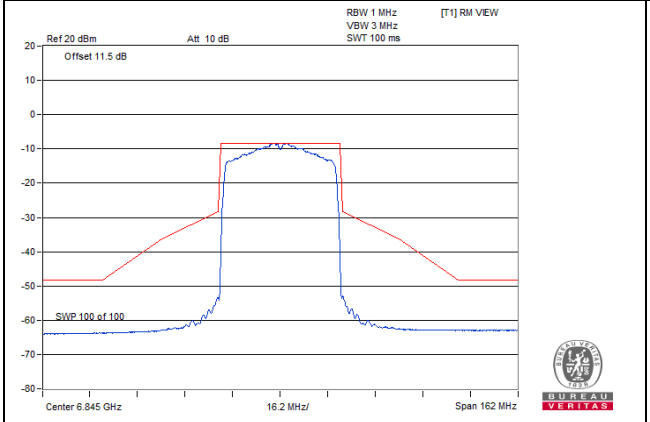
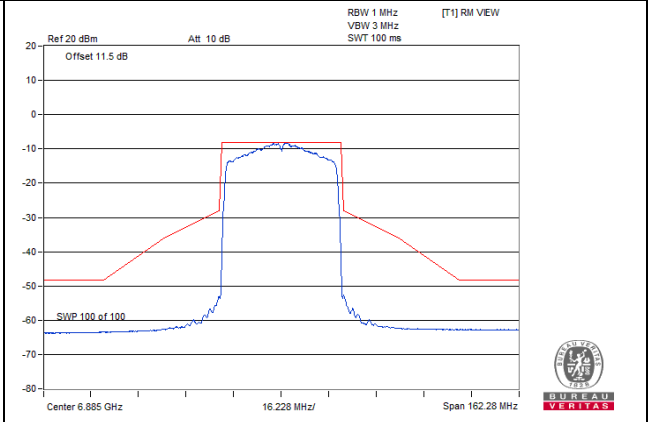
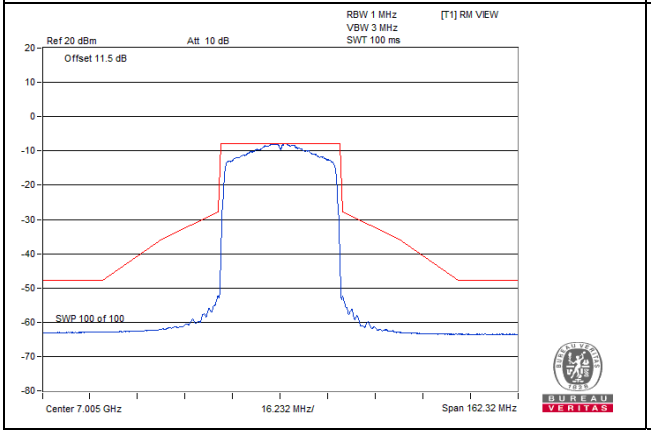
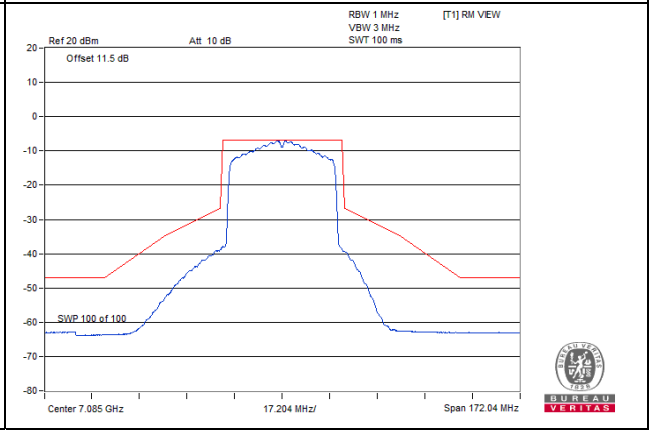
802.11ax (HE40)_Chain 0

Spectrum Plot	
CH 3	CH 43
	
CH 91	CH 99
	
CH 107	CH 115
	

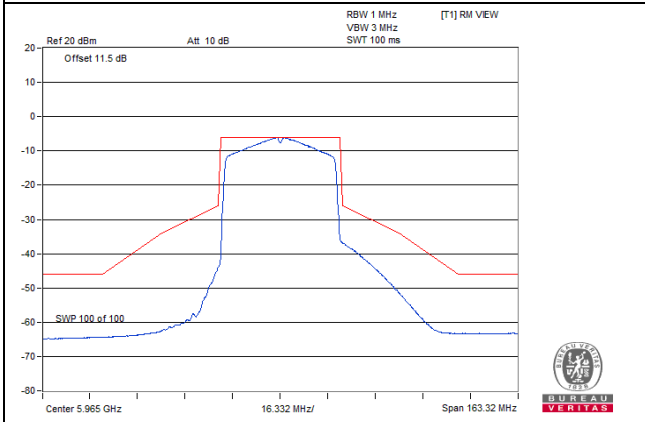
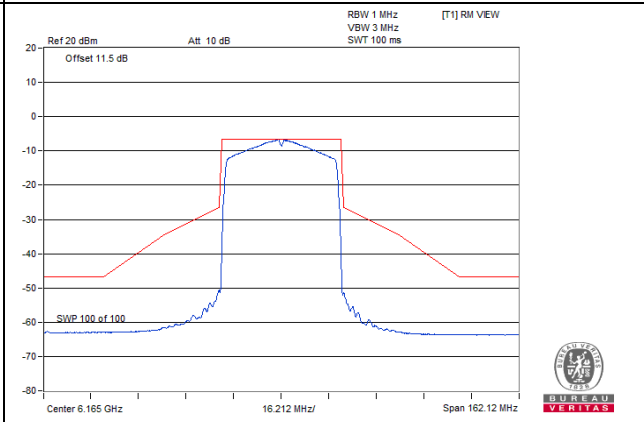
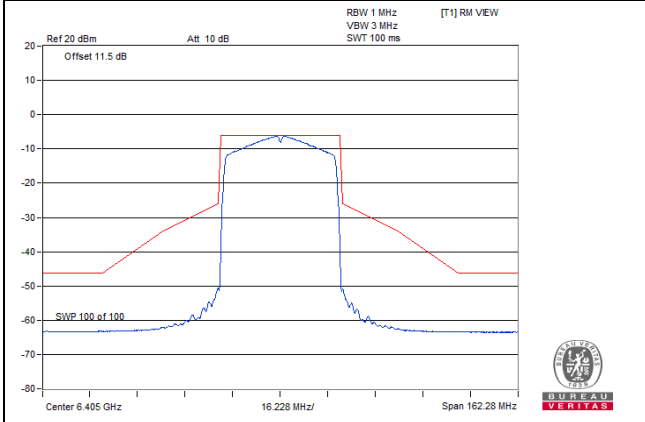
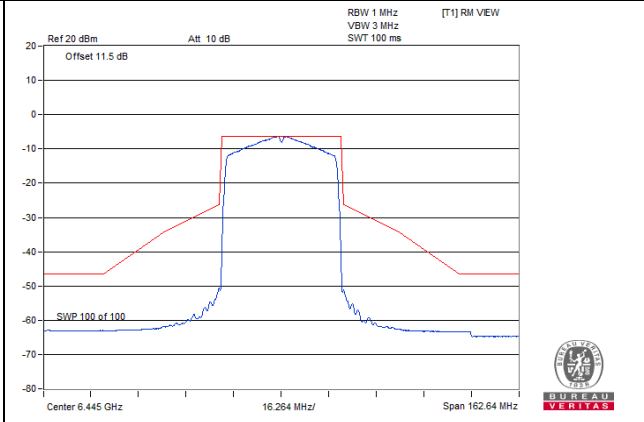
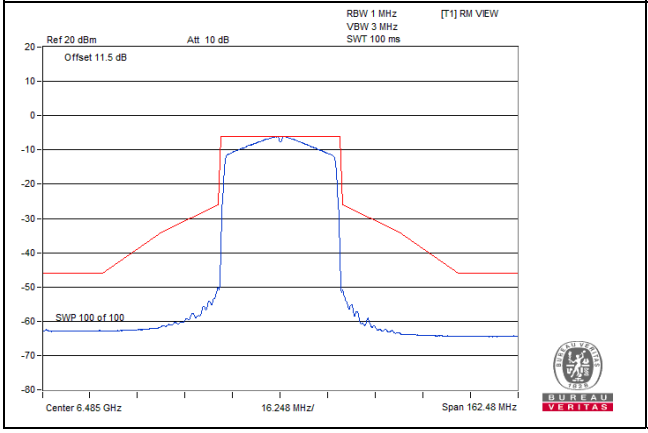
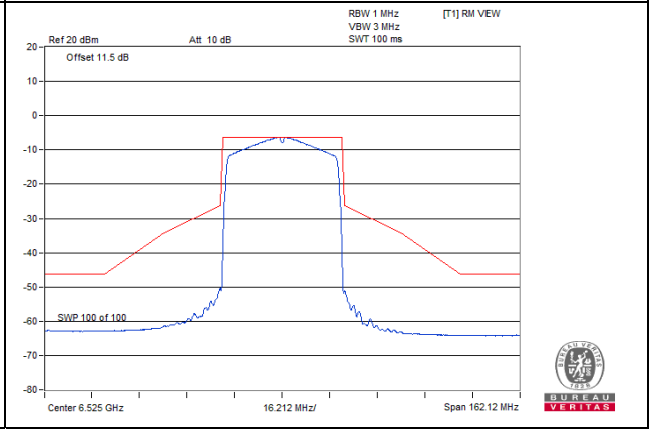
Spectrum Plot	
CH 123	CH 155
	
CH 179	CH 187
	
CH 211	CH 227
	

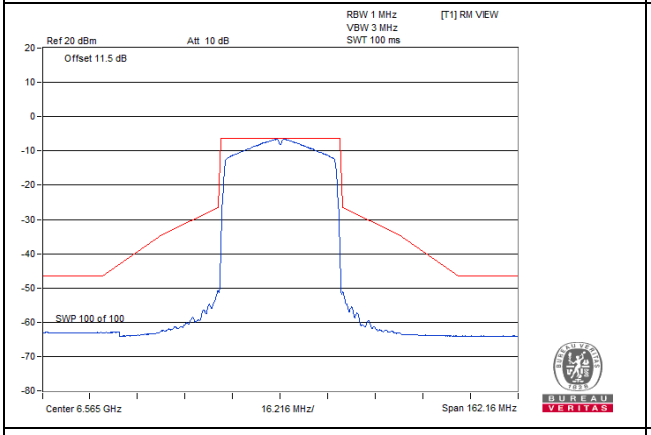
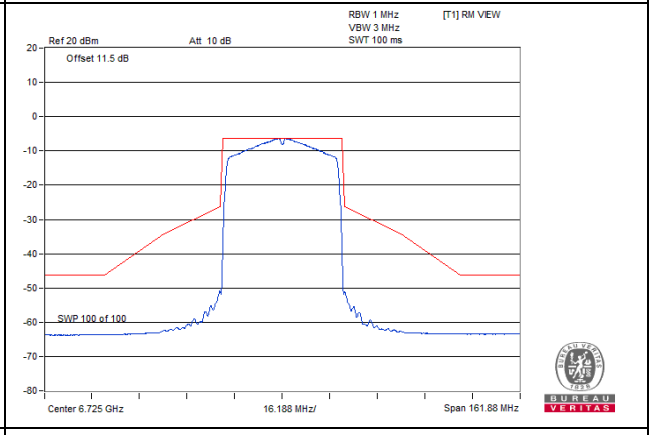
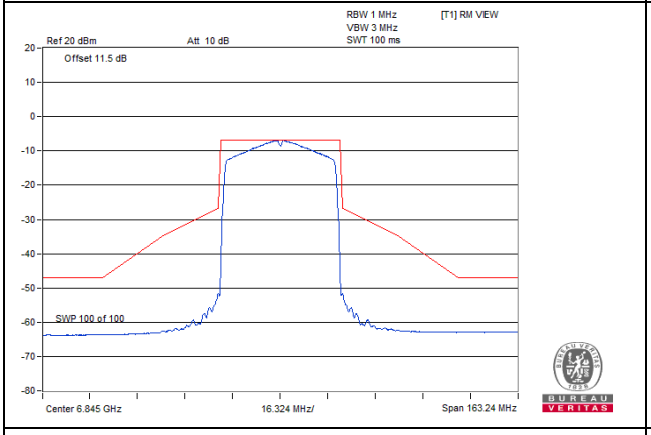
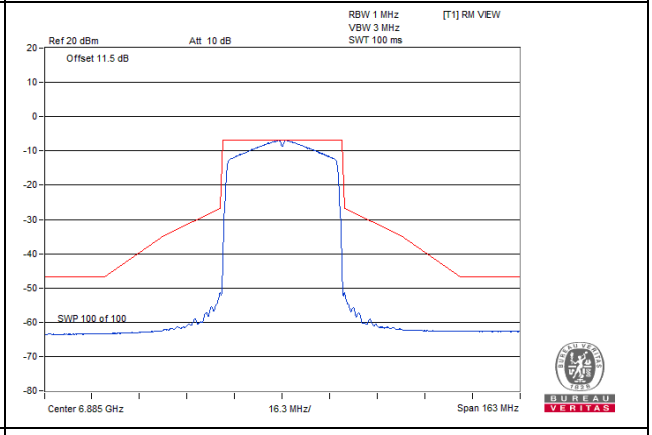
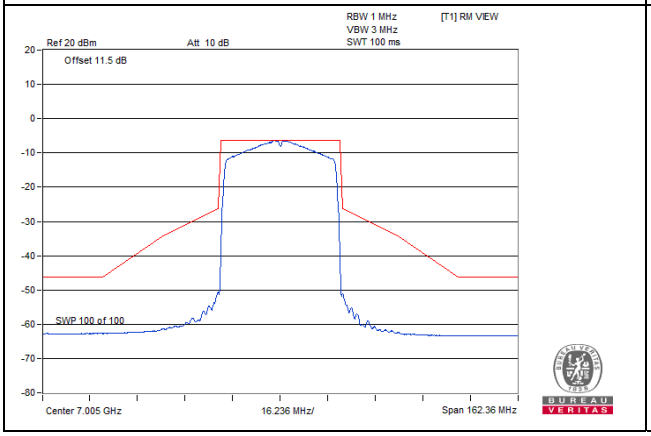
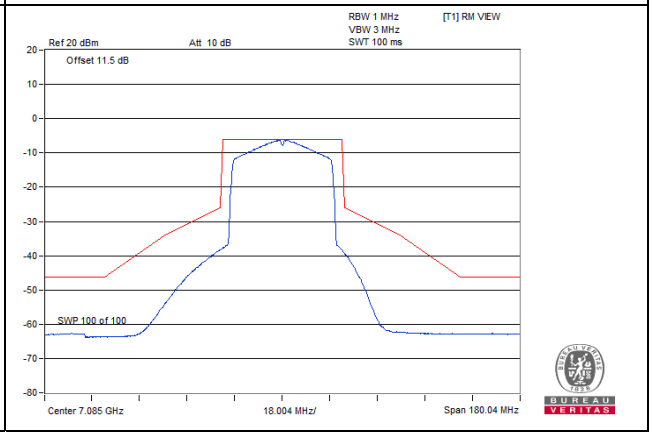
802.11ax (HE40)_Chain 1

Spectrum Plot	
CH 3	CH 43
	
CH 91	CH 99
	
CH 107	CH 115
	

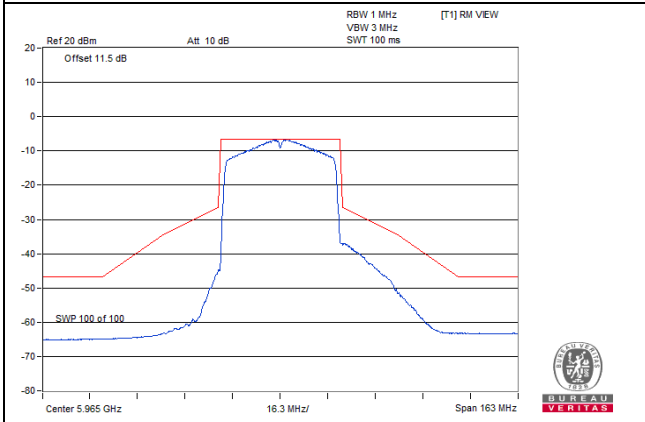
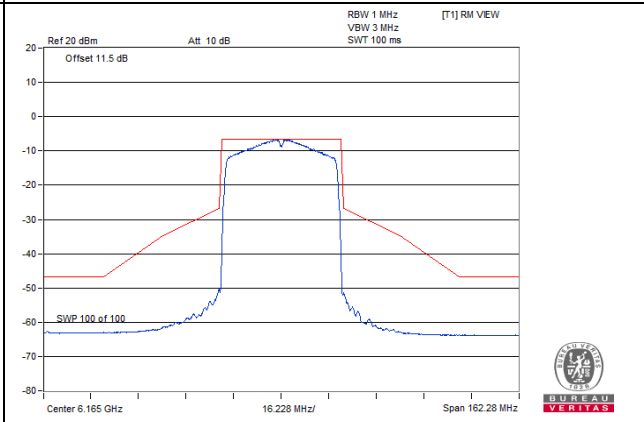
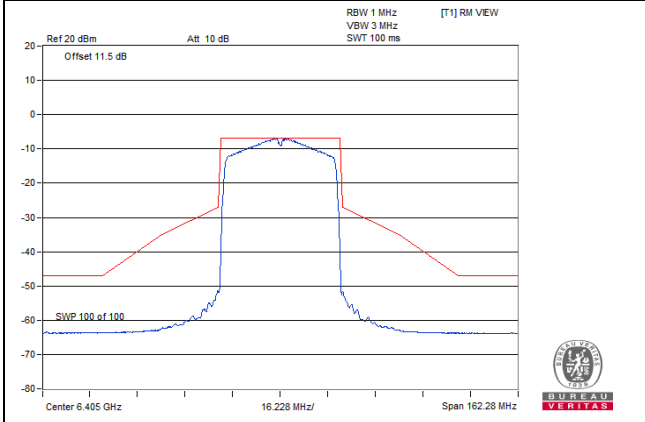
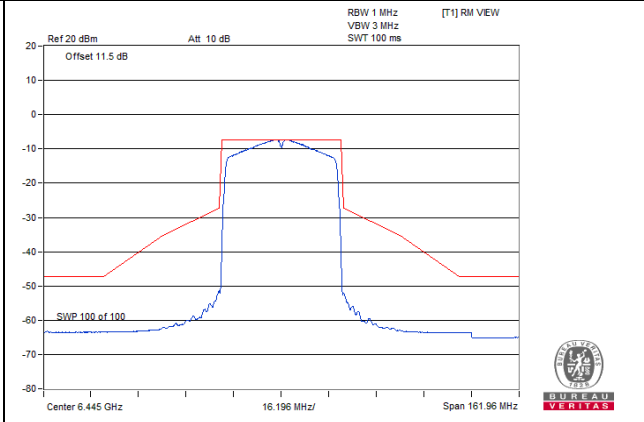
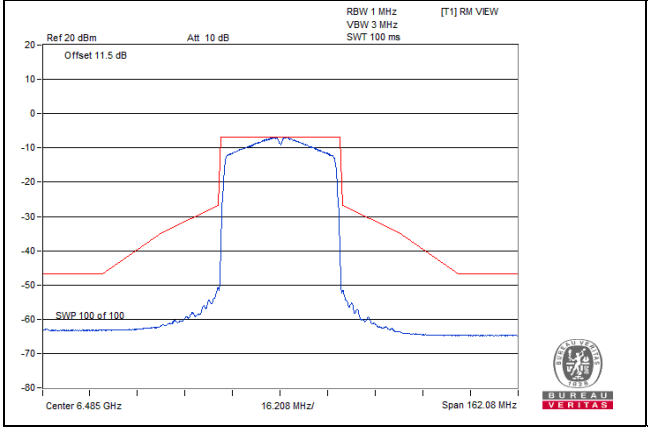
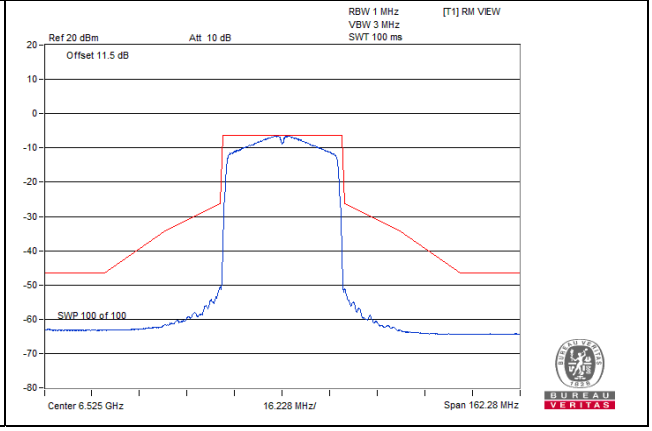
Spectrum Plot	
CH 123	CH 155
	
CH 179	CH 187
	
CH 211	CH 227
	

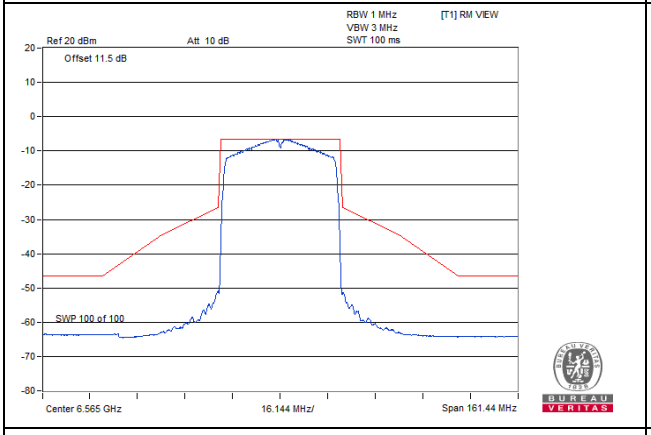
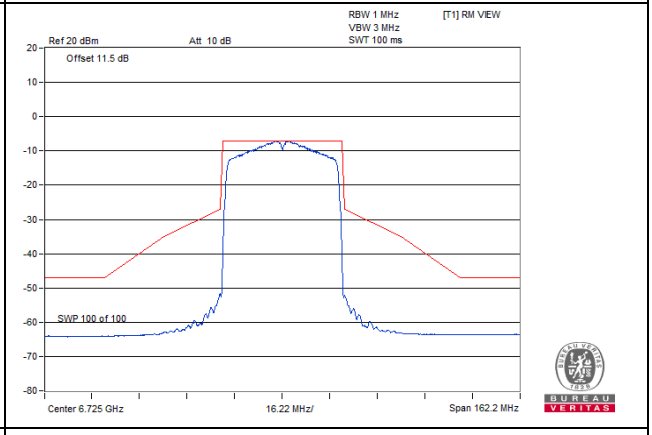
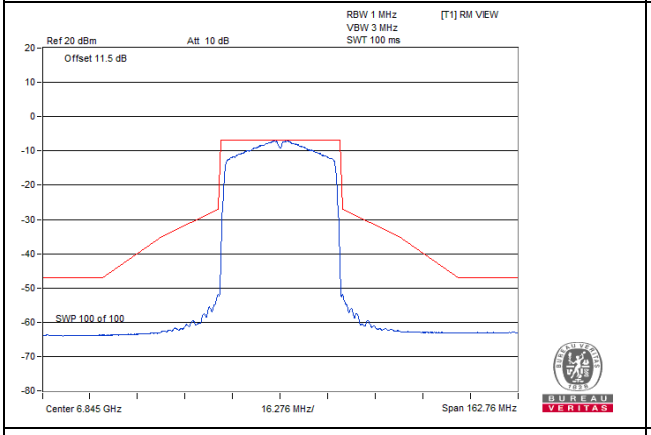
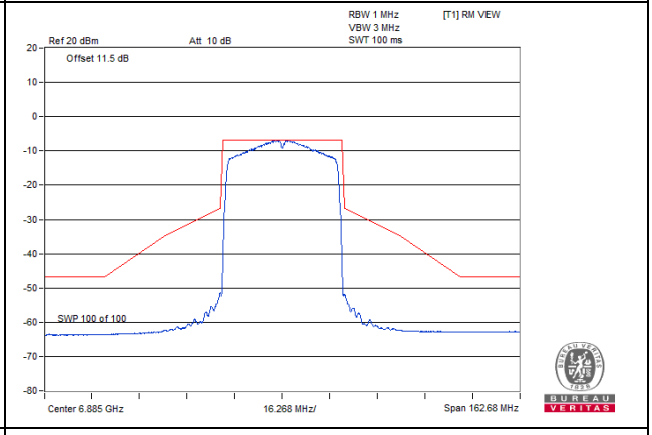
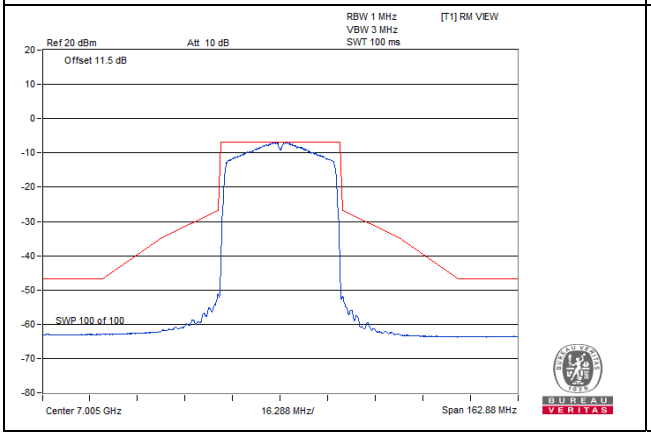
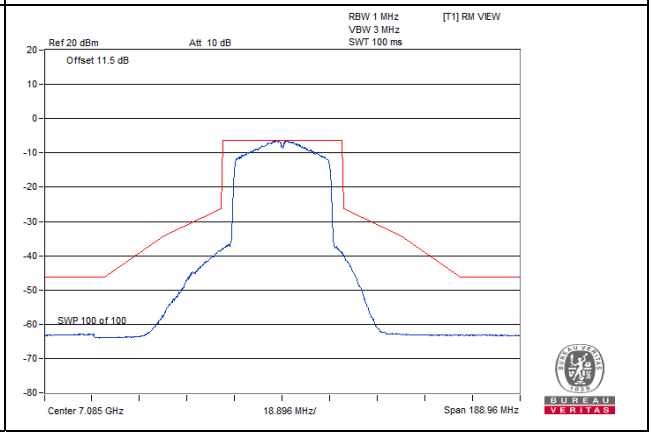
802.11ax (HE40)_Chain 2

Spectrum Plot	
CH 3	CH 43
	
CH 91	CH 99
	
CH 107	CH 115
	

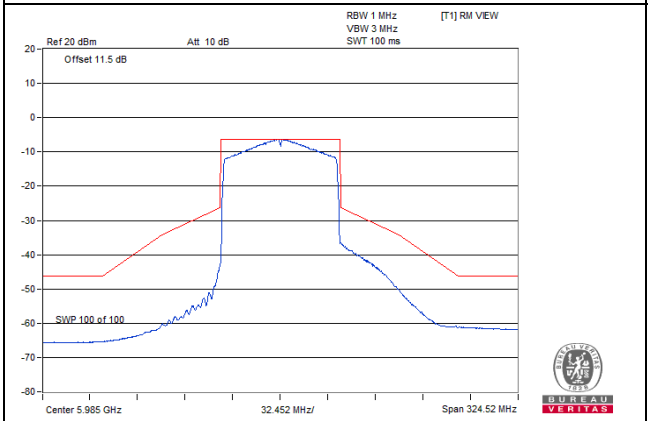
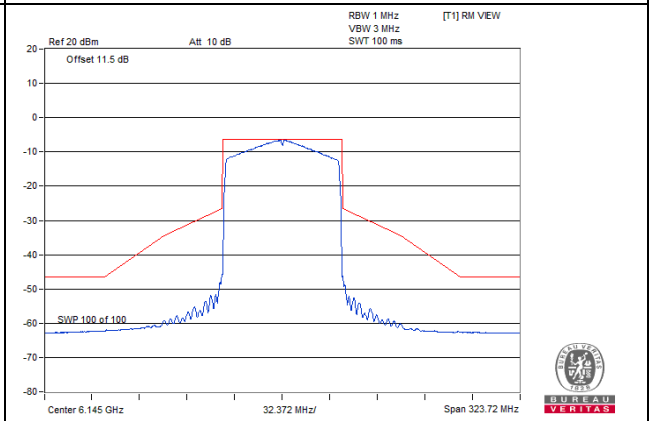
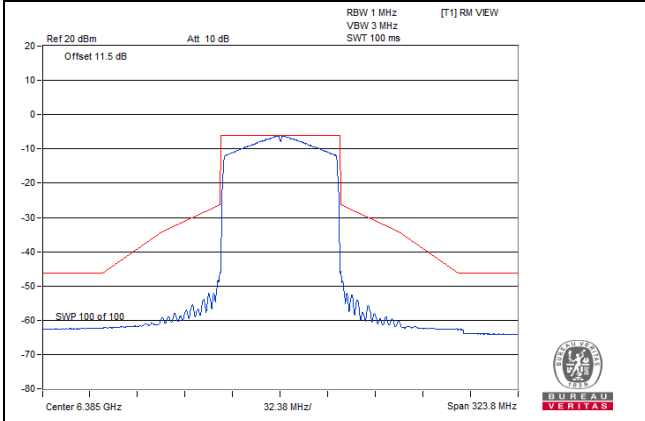
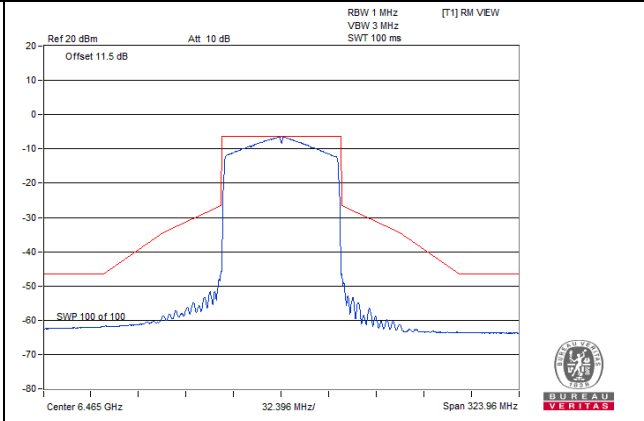
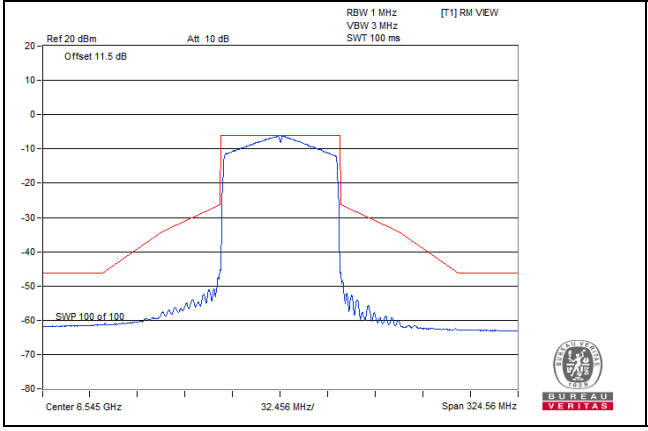
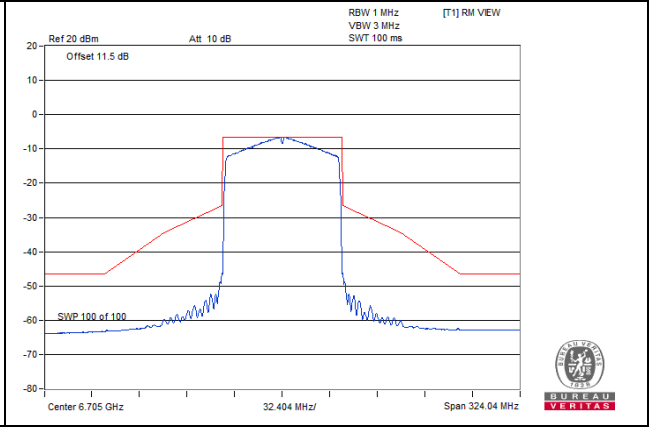
Spectrum Plot	
CH 123	CH 155
	
CH 179	CH 187
	
CH 211	CH 227
	

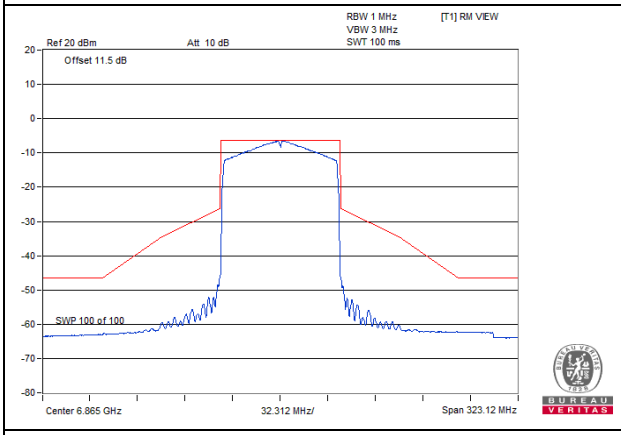
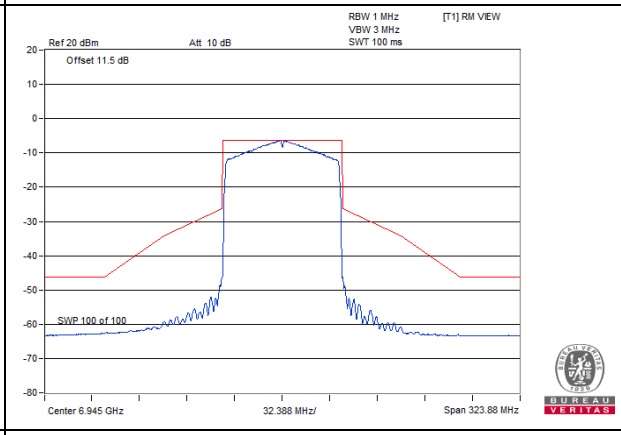
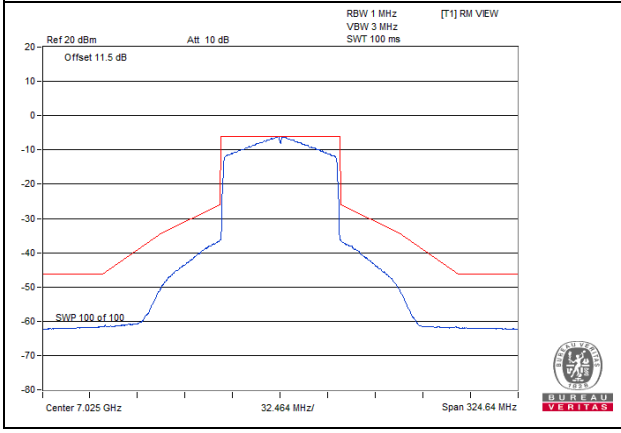
802.11ax (HE40)_Chain 3

Spectrum Plot	
CH 3	CH 43
	
CH 91	CH 99
	
CH 107	CH 115
	

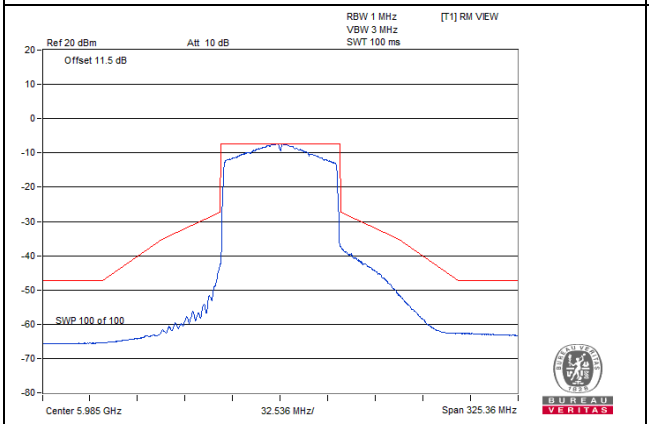
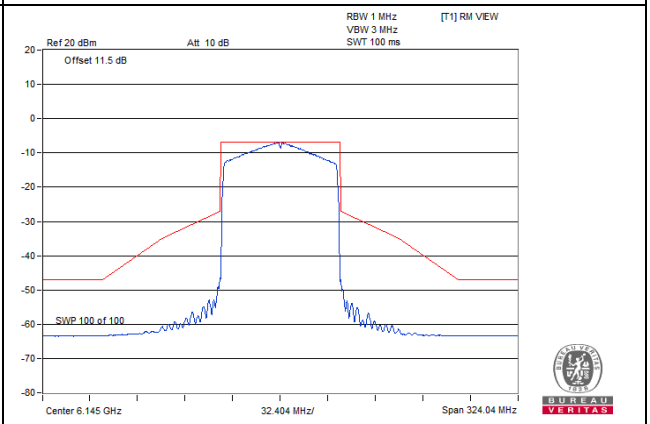
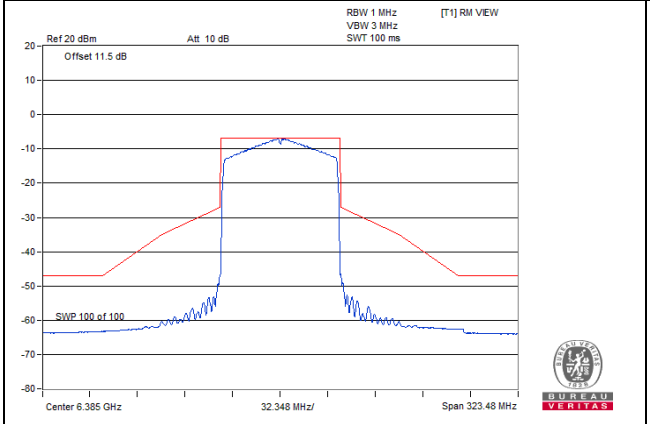
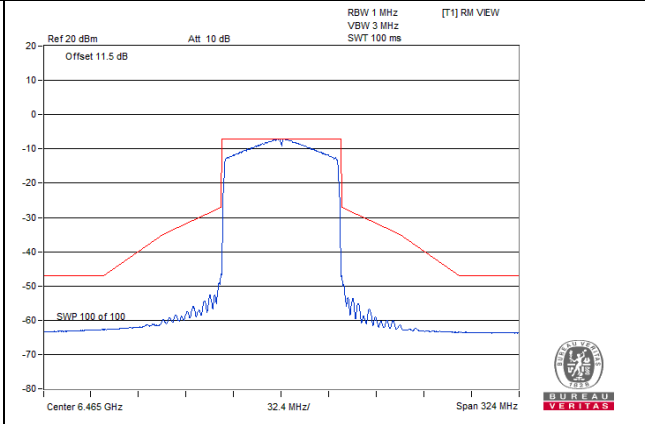
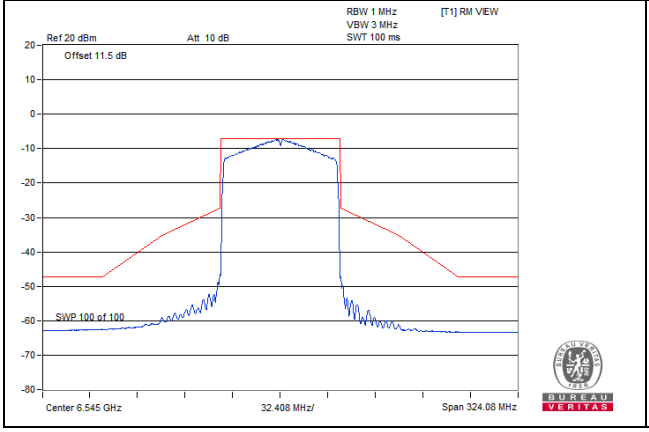
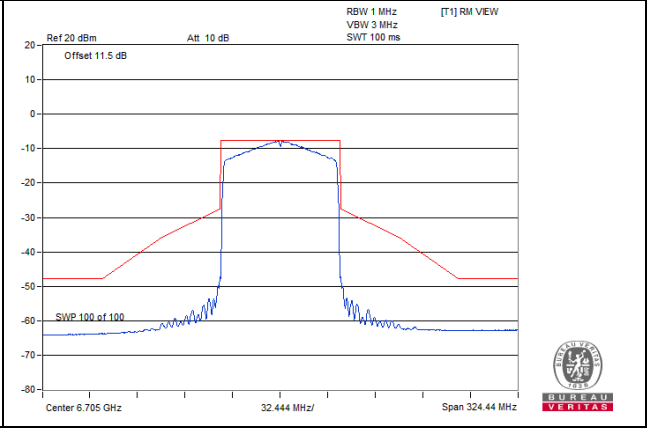
Spectrum Plot	
CH 123	CH 155
	
CH 179	CH 187
	
CH 211	CH 227
	

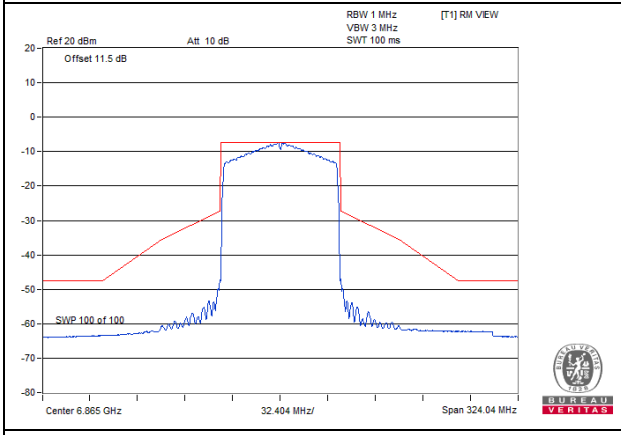
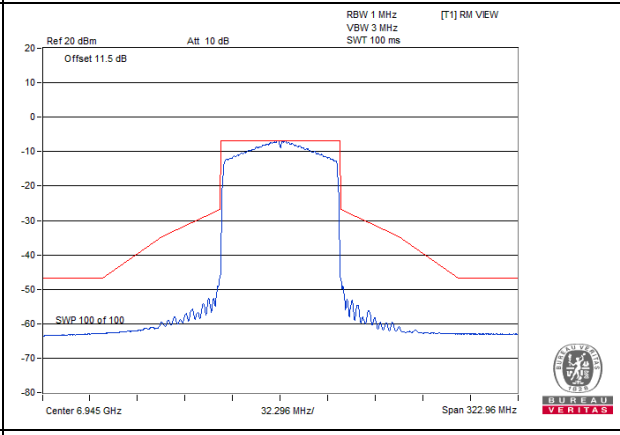
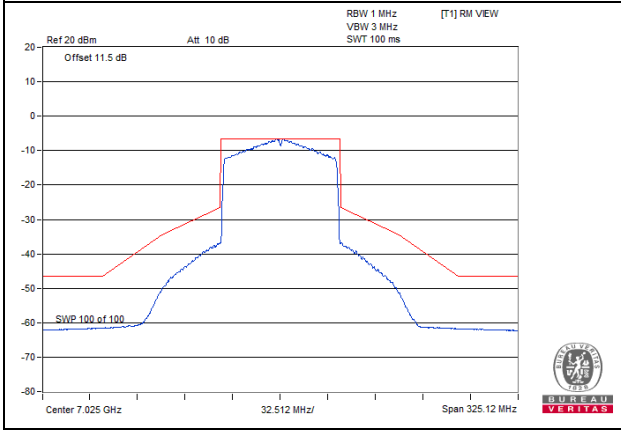
802.11ax (HE80)_Chain 0

Spectrum Plot	
CH 7	CH 39
	
CH 87	CH 103
	
CH 119	CH 151
	

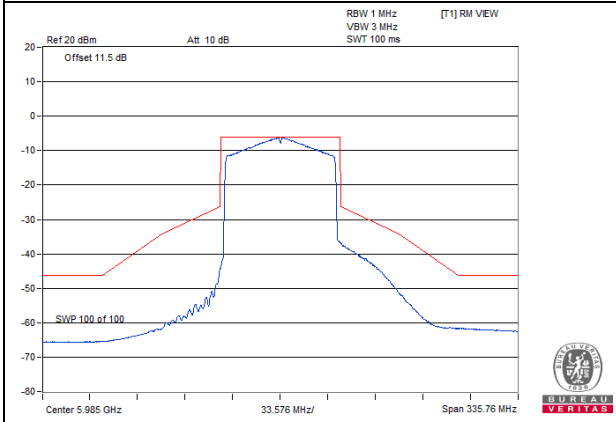
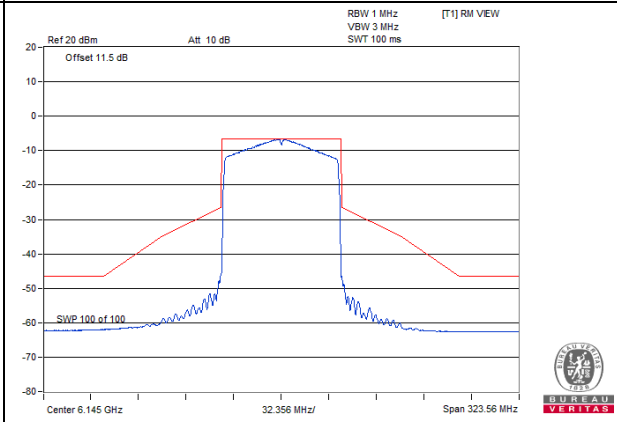
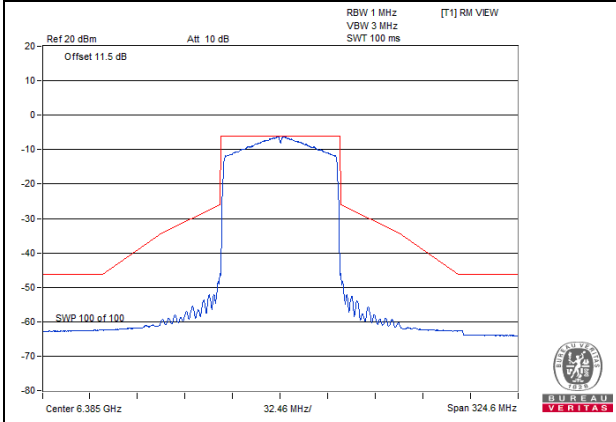
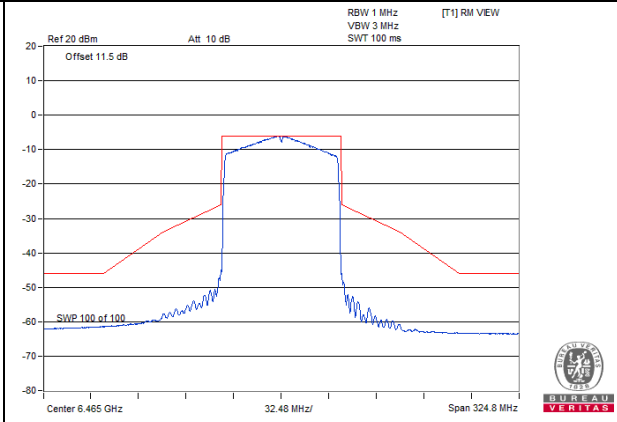
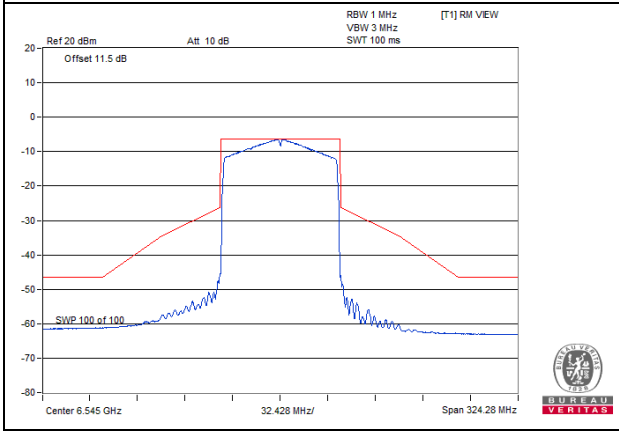
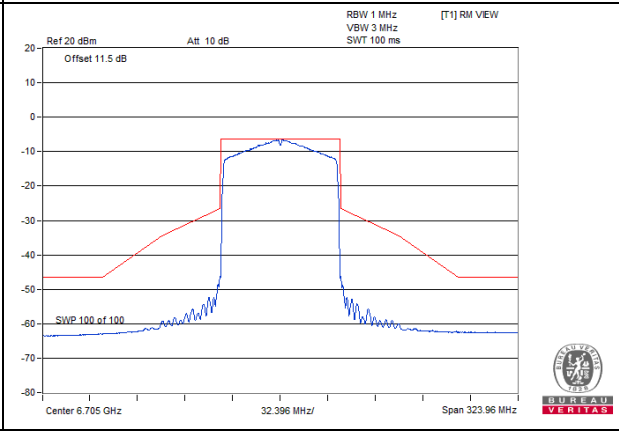
Spectrum Plot	
CH 183	CH 199
	
CH 215	
	

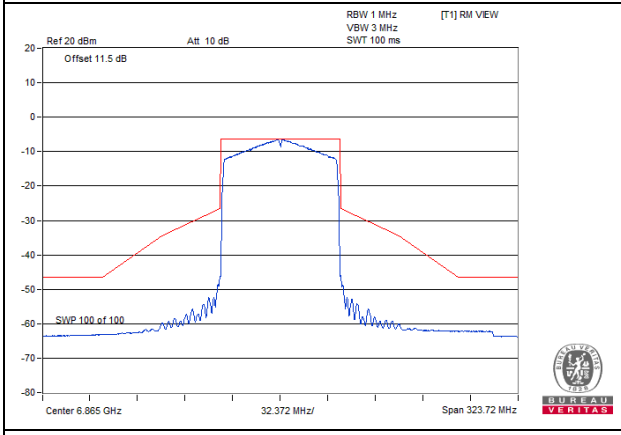
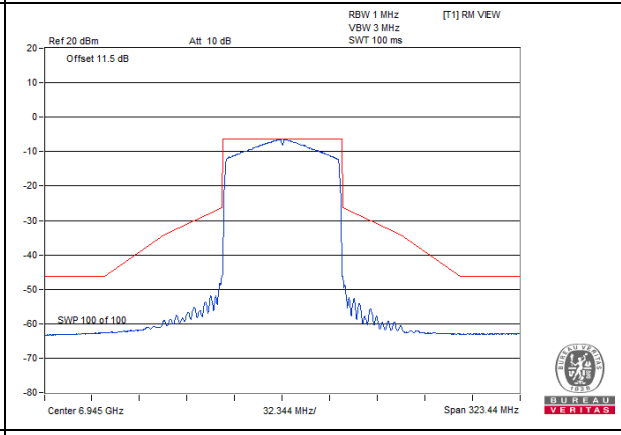
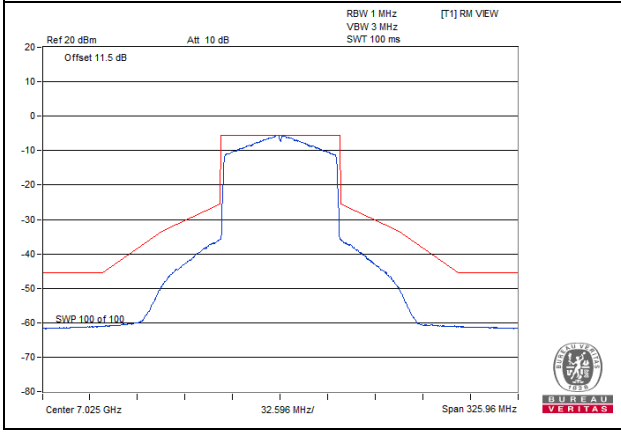
802.11ax (HE80)_Chain 1

Spectrum Plot	
CH 7	CH 39
	
CH 87	CH 103
	
CH 119	CH 151
	

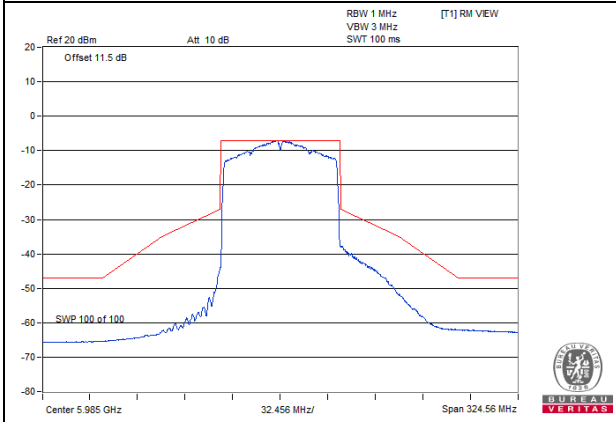
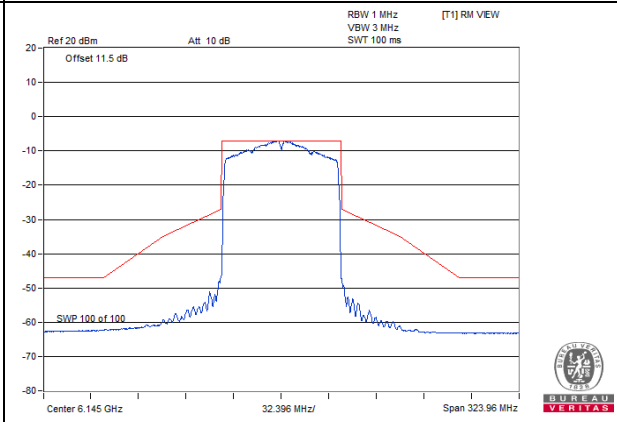
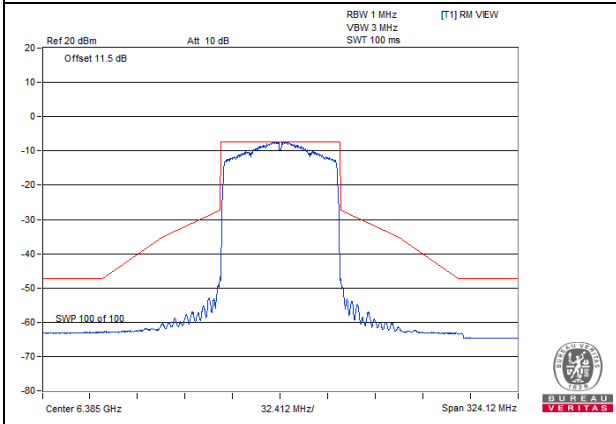
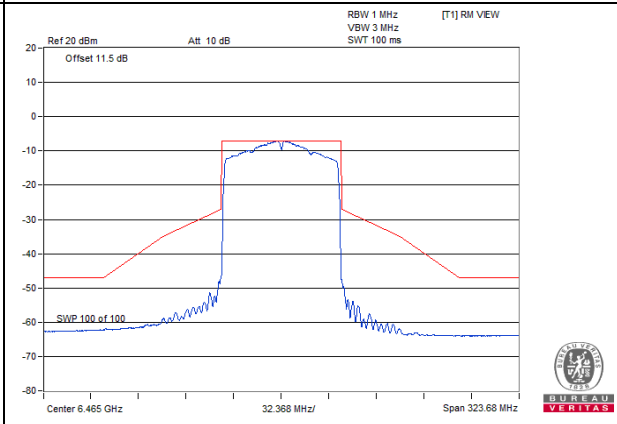
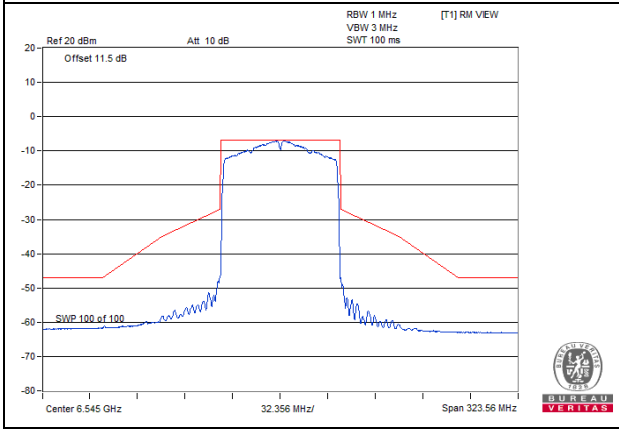
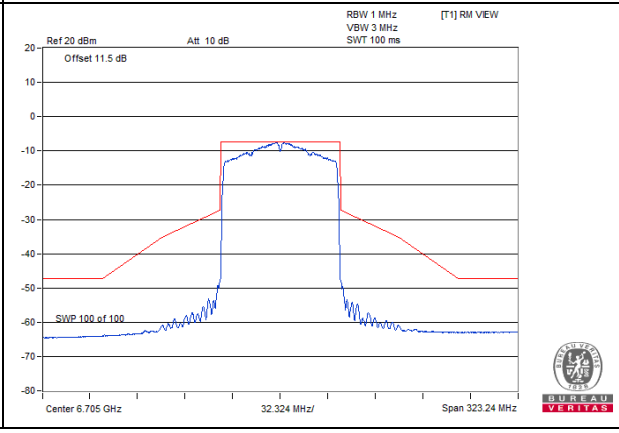
Spectrum Plot	
CH 183	CH 199
	
CH 215	
	

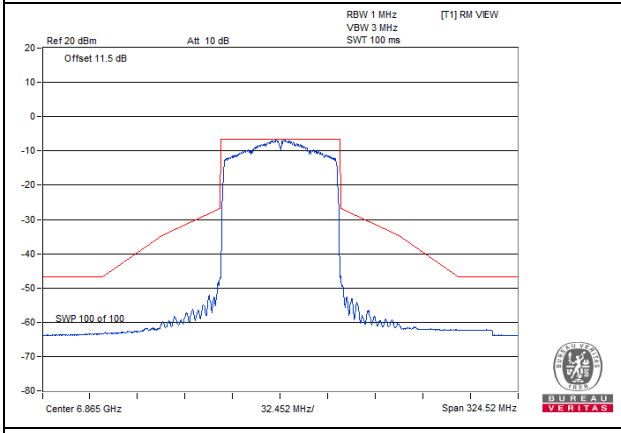
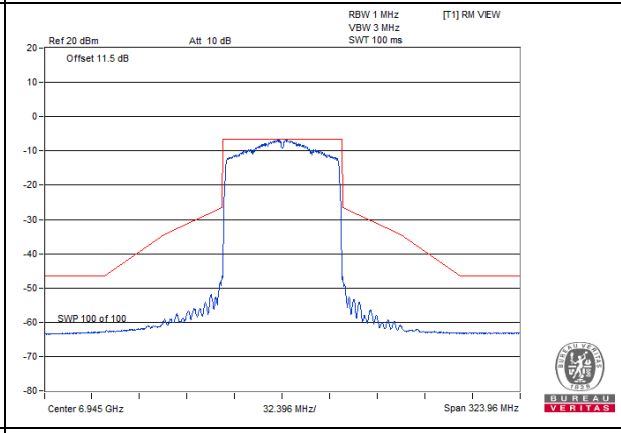
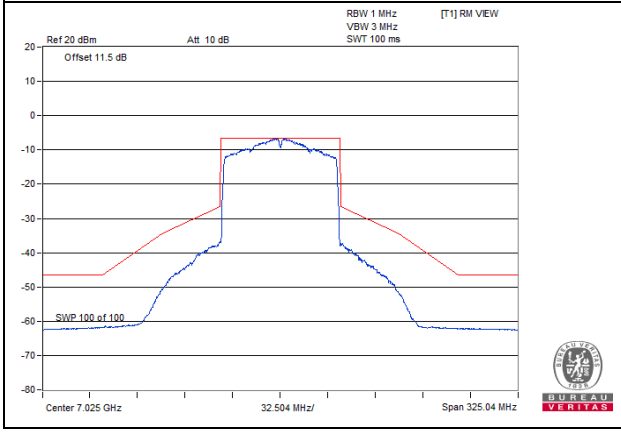
802.11ax (HE80)_Chain 2

Spectrum Plot	
CH 7	CH 39
	
CH 87	CH 103
	
CH 119	CH 151
	

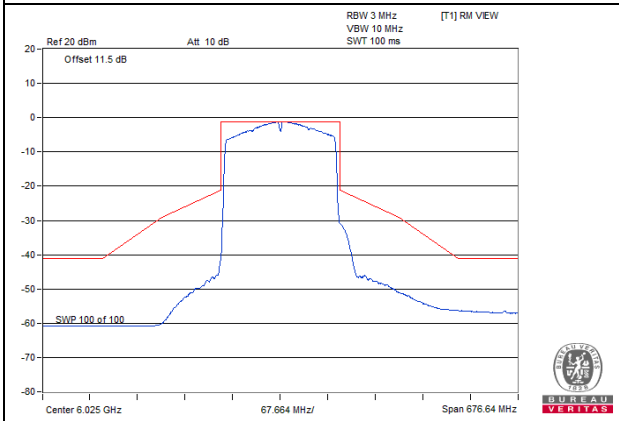
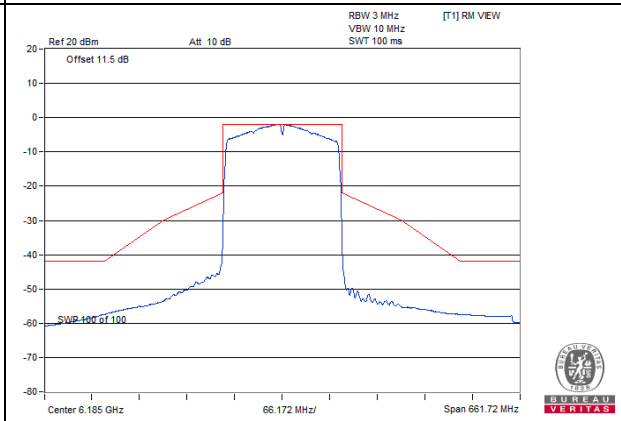
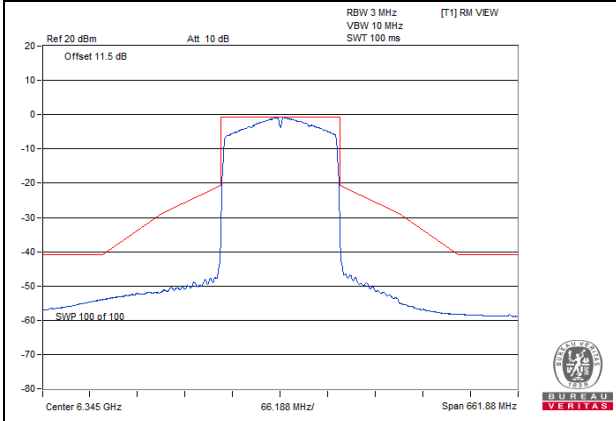
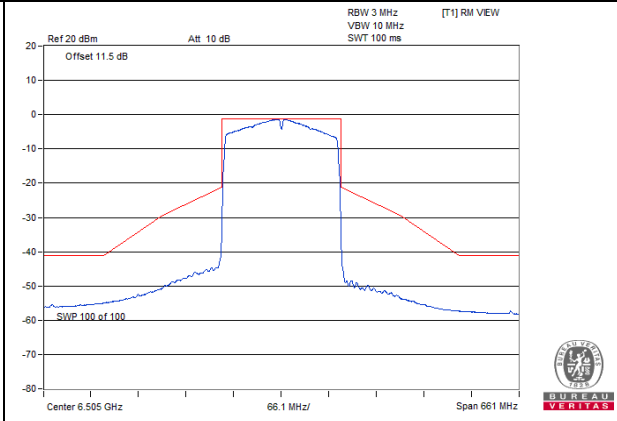
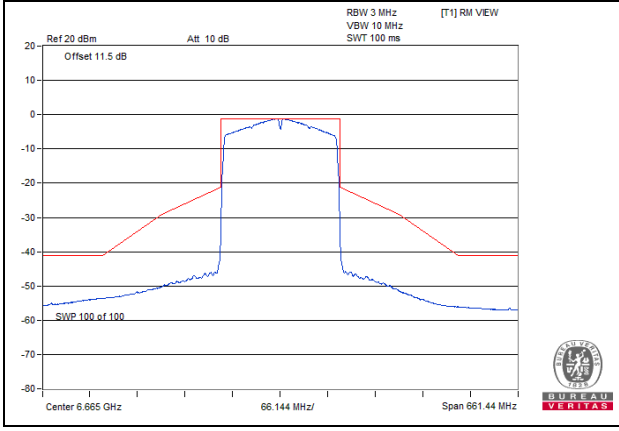
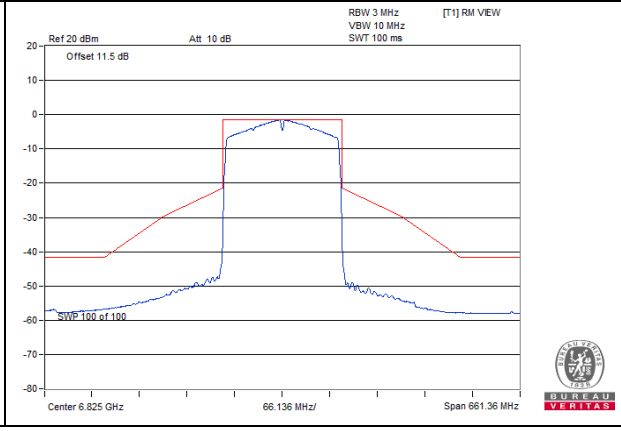
Spectrum Plot	
CH 183	CH 199
	
CH 215	
	

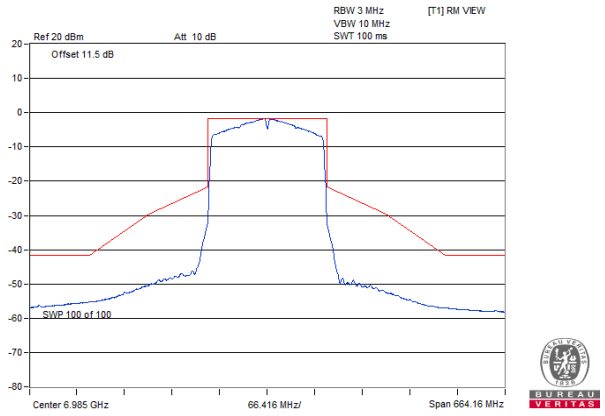
802.11ax (HE80)_Chain 3

Spectrum Plot	
CH 7	CH 39
	
CH 87	CH 103
	
CH 119	CH 151
	

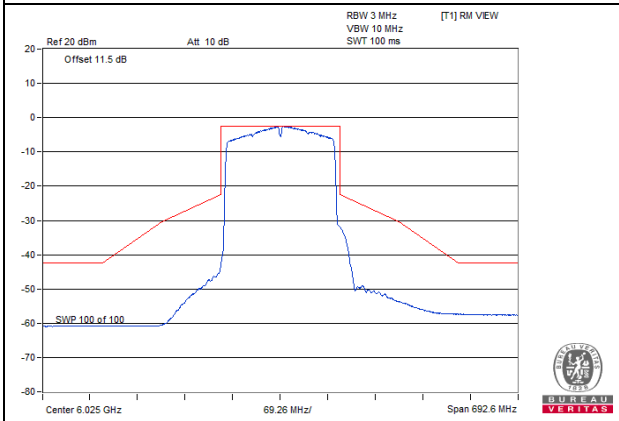
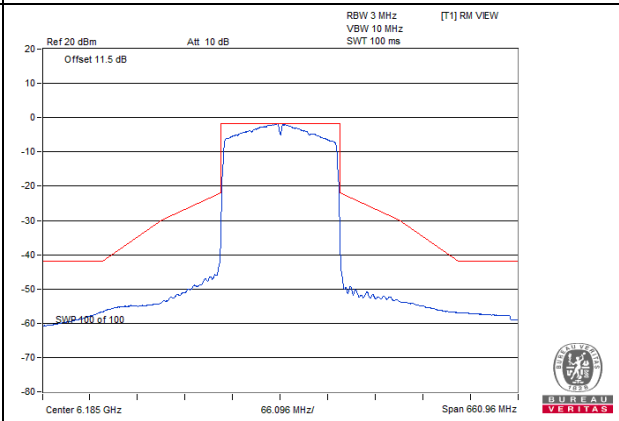
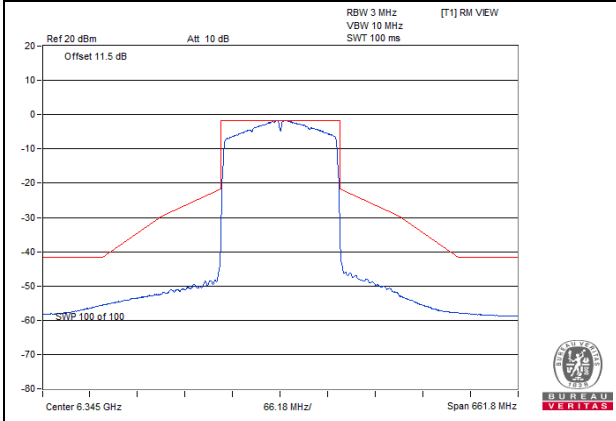
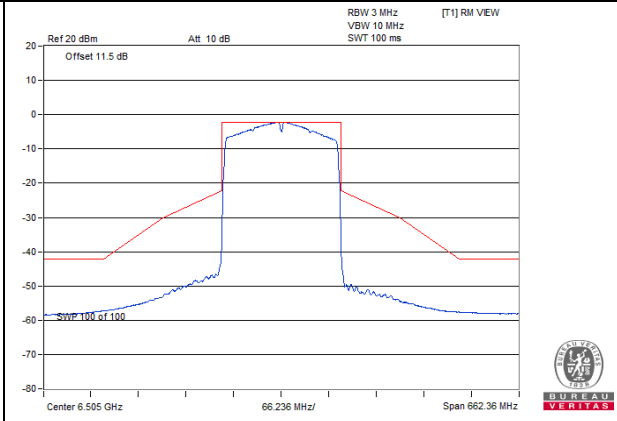
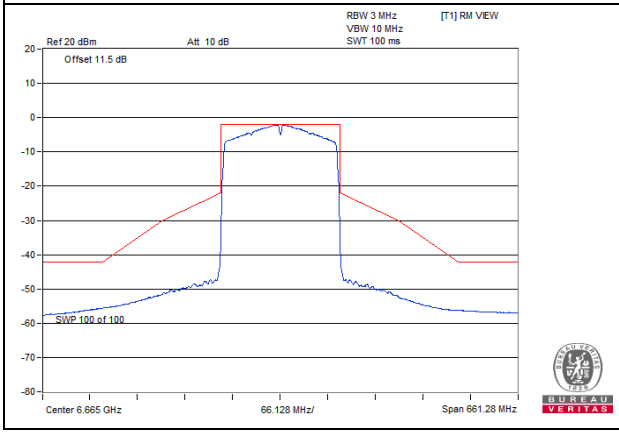
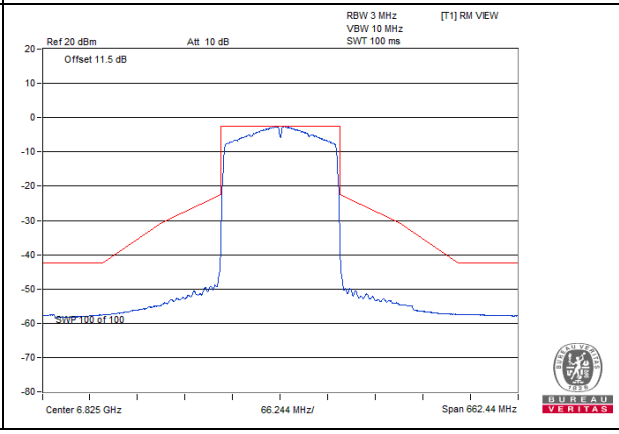
Spectrum Plot	
CH 183	CH 199
	
CH 215	
	

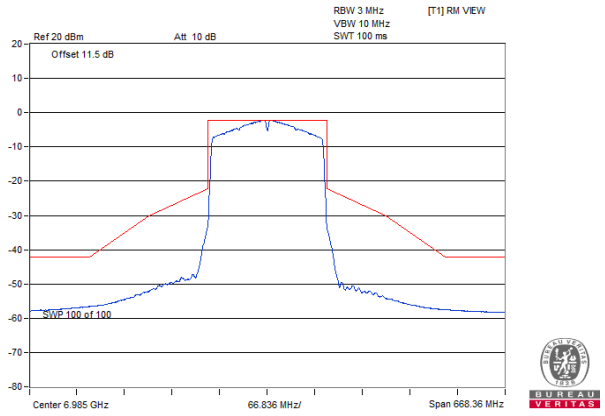
802.11ax (HE160)_Chain 0

Spectrum Plot	
CH 15	CH 47
	
CH 79	CH 111
	
CH 143	CH 175
	

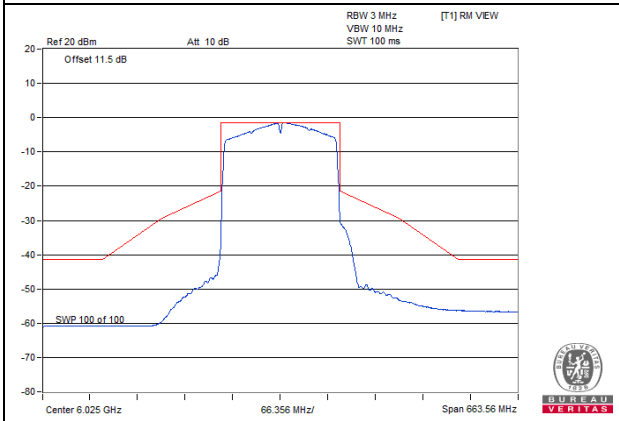
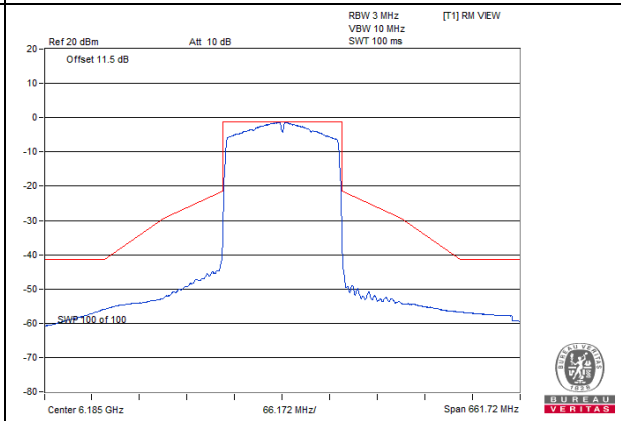
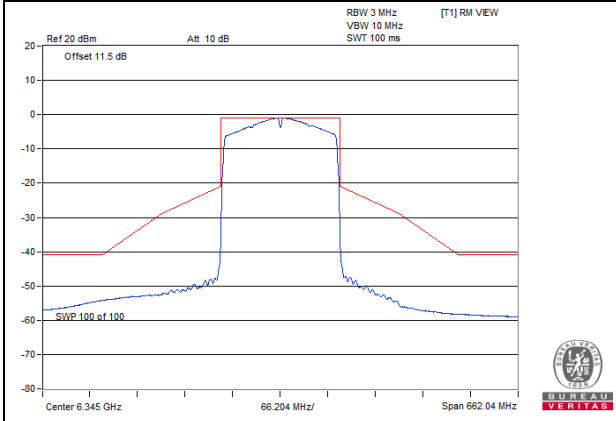
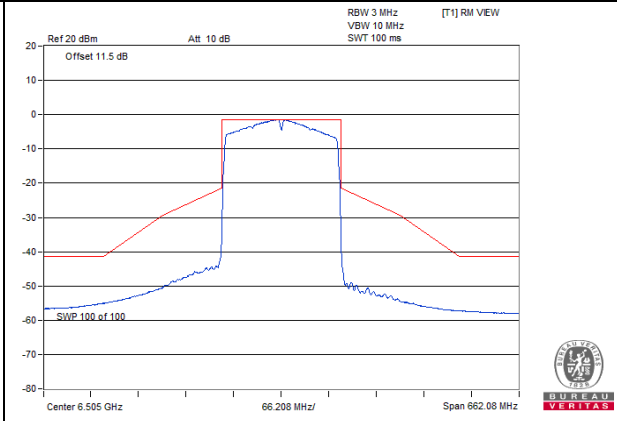
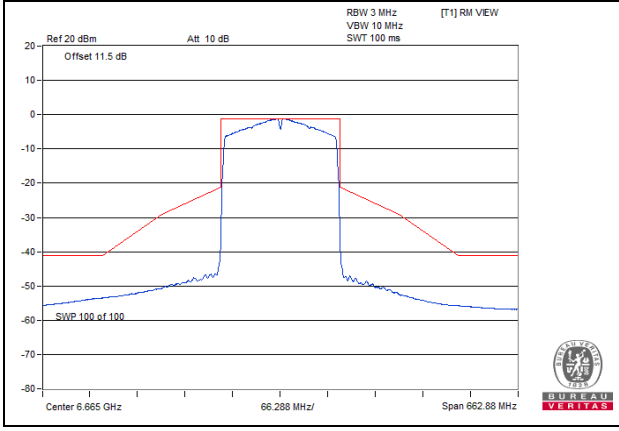
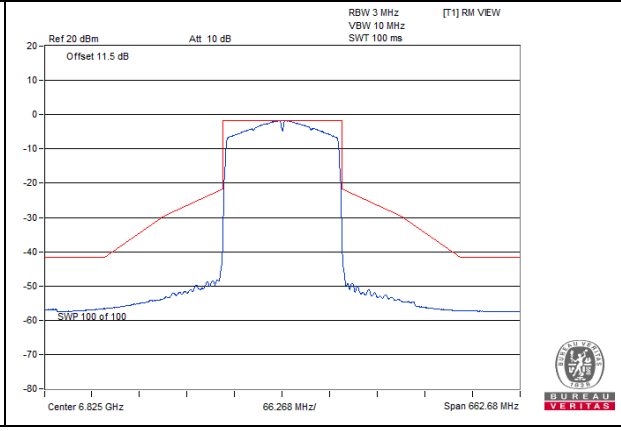
Spectrum Plot	
CH 207	
	

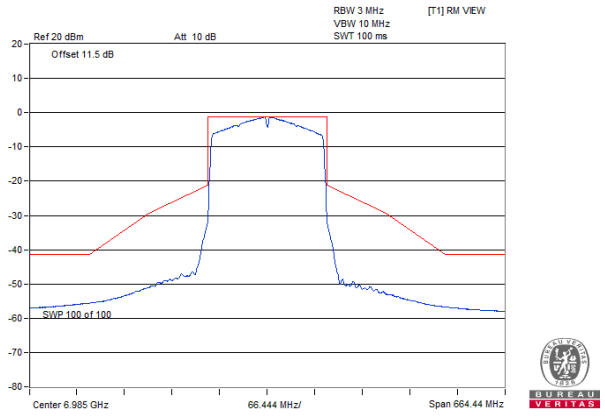
802.11ax (HE160)_Chain 1

Spectrum Plot	
CH 15	CH 47
	
CH 79	CH 111
	
CH 143	CH 175
	

Spectrum Plot	
CH 207	
	

802.11ax (HE160)_Chain 2

Spectrum Plot	
CH 15	CH 47
	
CH 79	CH 111
	
CH 143	CH 175
	

Spectrum Plot	
CH 207	
	

802.11ax (HE160)_Chain 3

Spectrum Plot	
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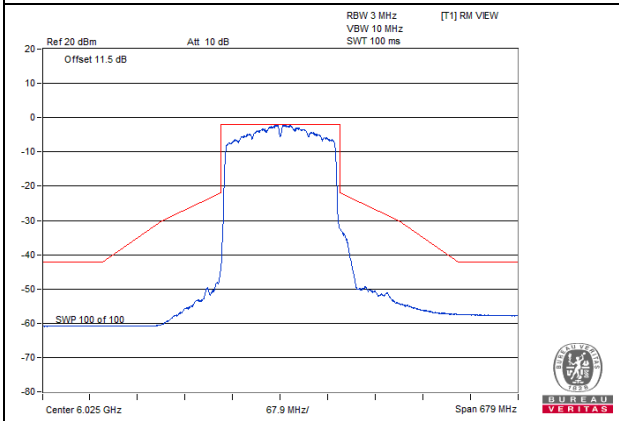
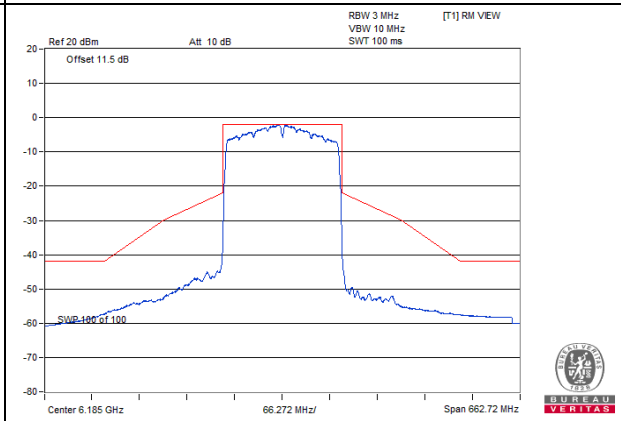
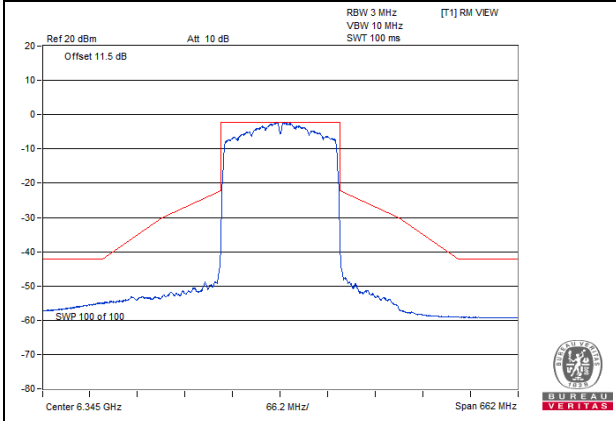
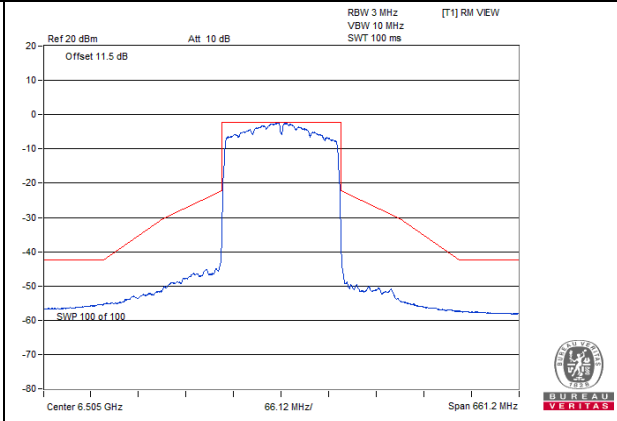
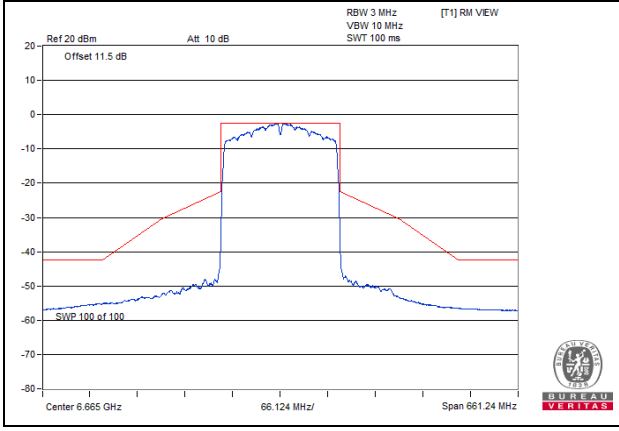
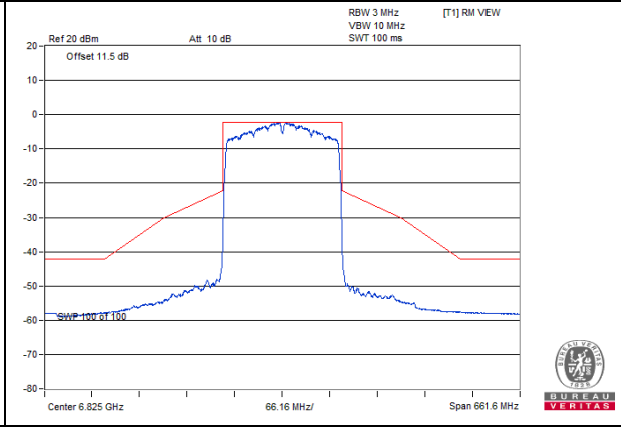
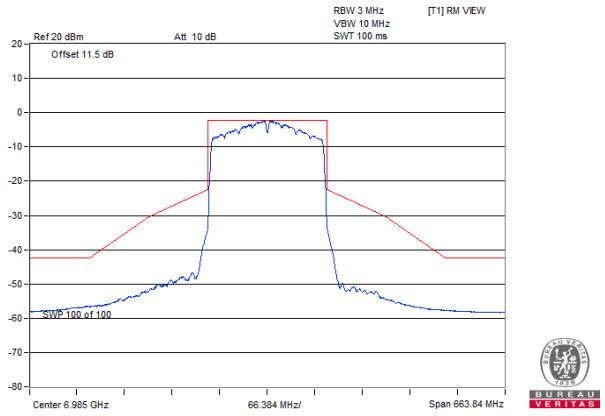
	
CH 79	CH 111
	
CH 143	CH 175
	

Spectrum Plot	
CH 207	
	

4.3 Conducted Emission Measurement

4.3.1 Limits of Conducted Emission Measurement

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

Note: 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 0.50MHz.

4.3.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 03, 2021	Dec. 02, 2022
RF signal cable Woken	5D-FB	Cable-cond1-01	Jan. 15, 2022	Jan. 14, 2023
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Mar. 14, 2022	Mar. 13, 2023
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Sep. 07, 2021	Sep. 06, 2022
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1(Conduction 1).
3. The VCCI Site Registration No. is C-12040.
4. Tested date: Jul. 30, 2022

4.3.3 Test Procedure

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

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

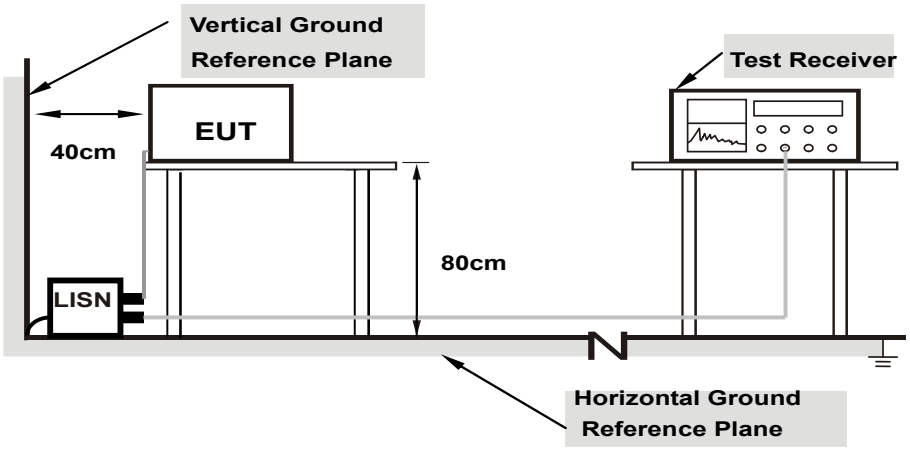
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.3.4 Deviation from Test Standard

No deviation.

4.3.5 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).

4.3.6 EUT Operating Condition

Same as 4.1.6.

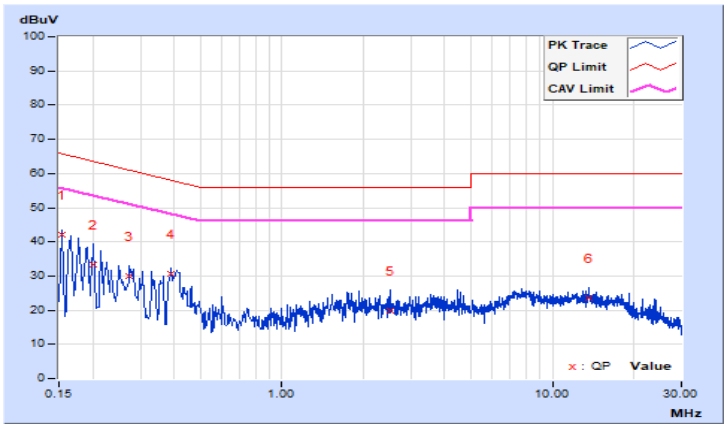
4.3.7 Test Results

RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	9.68	32.56	16.51	42.24	26.19	65.78	55.78	-23.54	-29.59
2	0.20200	9.72	23.65	7.78	33.37	17.50	63.53	53.53	-30.16	-36.03
3	0.27400	9.75	20.33	11.38	30.08	21.13	61.00	51.00	-30.92	-29.87
4	**0.39000**	**9.80**	**20.86**	**18.05**	**30.66**	**27.85**	**58.06**	**48.06**	**-27.40**	**-20.21**
5	2.50600	9.91	9.84	1.65	19.75	11.56	56.00	46.00	-36.25	-34.44
6	13.65800	10.10	13.35	4.54	23.45	14.64	60.00	50.00	-36.55	-35.36

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

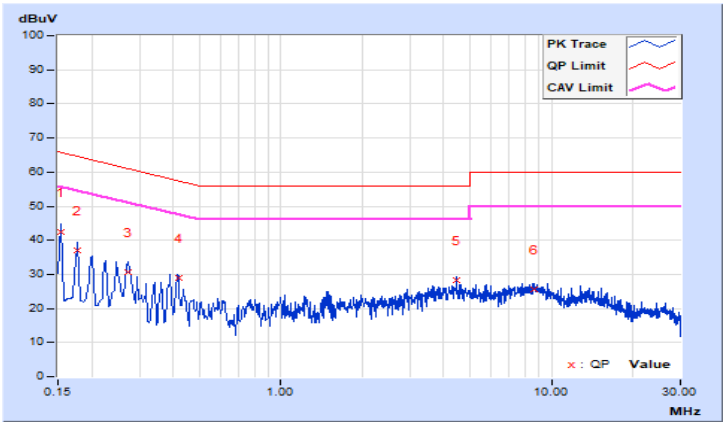


RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

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	0.15400	9.68	32.81	16.62	42.49	26.30	65.78	55.78	-23.29	-29.48
2	0.17800	9.70	27.39	12.53	37.09	22.23	64.58	54.58	-27.49	-32.35
3	0.27350	9.75	20.95	10.31	30.70	20.06	61.01	51.01	-30.31	-30.95
4	0.41800	9.81	18.98	13.77	28.79	23.58	57.49	47.49	-28.70	-23.91
5	4.47000	9.98	18.23	6.53	28.21	16.51	56.00	46.00	-27.79	-29.49
6	8.62600	10.04	15.40	6.76	25.44	16.80	60.00	50.00	-34.56	-33.20

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



4.4 Transmit Power Measurement

4.4.1 Limits of Transmit Power Measurement

Operation Band	EUT Category	Limit
		Max Average Power
U-NII-5 U-NII-6 U-NII-7 U-NII-8	Indoor AP / Subordinate Device	EIRP 30 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.

4.4.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedure

FOR POWER OUTPUT MEASUREMENT

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. Duty factor is not added to measured value.

4.4.5 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.4.6 Test Result

Power Output:

CDD mode

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
1	5955	6.31	6.34	6.32	6.54	17.375	12.40	2.80	33.113	15.20	30	Pass
45	6175	7.07	6.13	6.28	6.48	17.888	12.53	2.80	34.119	15.33	30	Pass
93	6415	6.35	6.47	6.72	6.25	17.667	12.47	2.80	33.651	15.27	30	Pass
97	6435	6.14	6.98	6.33	6.17	17.536	12.44	2.80	33.42	15.24	30	Pass
105	6475	6.62	6.28	6.74	6.63	18.161	12.59	2.80	34.594	15.39	30	Pass
113	6515	6.34	6.66	6.72	6.47	18.075	12.57	2.80	34.435	15.37	30	Pass
117	6535	4.81	4.25	4.69	4.73	11.604	10.65	2.80	22.131	13.45	30	Pass
149	6695	4.72	4.44	4.82	4.63	11.682	10.68	2.80	22.284	13.48	30	Pass
181	6855	4.68	4.05	4.68	5.09	11.645	10.66	2.80	22.182	13.46	30	Pass
185	6875	4.63	4.11	4.95	5.21	11.925	10.76	2.80	22.699	13.56	30	Pass
209	6995	4.56	4.47	5.21	4.98	12.123	10.84	2.80	23.121	13.64	30	Pass
233	7115	4.41	4.39	5.01	4.98	11.826	10.73	2.80	22.542	13.53	30	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
3	5965	8.38	8.73	9.48	8.93	31.039	14.92	2.80	59.156	17.72	30	Pass
43	6165	9.26	8.85	8.63	8.90	31.164	14.94	2.80	59.429	17.74	30	Pass
91	6405	8.73	8.56	8.92	9.33	31.011	14.92	2.80	59.156	17.72	30	Pass
99	6445	9.41	9.01	8.73	9.42	32.906	15.17	2.80	62.661	17.97	30	Pass
107	6485	8.67	9.03	9.02	8.78	30.891	14.90	2.80	58.884	17.70	30	Pass
115	6525	7.83	6.75	8.20	8.16	23.952	13.79	2.80	45.604	16.59	30	Pass
123	6565	7.81	6.53	7.71	8.07	22.851	13.59	2.80	43.551	16.39	30	Pass
155	6725	7.35	7.21	7.48	7.26	21.611	13.35	2.80	41.21	16.15	30	Pass
179	6845	6.96	6.85	7.06	7.57	20.604	13.14	2.80	39.264	15.94	30	Pass
187	6885	7.16	6.82	7.26	7.80	21.355	13.29	2.80	40.644	16.09	30	Pass
211	7005	7.02	7.16	7.75	7.61	21.959	13.42	2.80	41.879	16.22	30	Pass
227	7085	7.87	7.41	7.90	8.13	24.299	13.86	2.80	46.345	16.66	30	Pass

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
7	5985	11.91	12.08	12.52	11.92	65.092	18.14	2.80	124.165	20.94	30	Pass
39	6145	11.85	12.34	12.19	12.38	66.306	18.22	2.80	126.474	21.02	30	Pass
87	6385	11.84	12.41	12.53	12.16	67.044	18.26	2.80	127.644	21.06	30	Pass
103	6465	12.28	12.36	11.54	12.39	65.717	18.18	2.80	125.314	20.98	30	Pass
119	6545	11.06	10.31	11.13	11.14	49.478	16.94	2.80	94.189	19.74	30	Pass
151	6705	10.37	10.54	10.26	10.58	44.259	16.46	2.80	84.333	19.26	30	Pass
183	6865	10.66	10.37	10.65	11.16	47.207	16.74	2.80	89.950	19.54	30	Pass
199	6945	10.92	10.45	10.73	11.11	48.194	16.83	2.80	91.833	19.63	30	Pass
215	7025	11.11	10.73	11.64	11.13	52.303	17.19	2.80	99.77	19.99	30	Pass

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
15	6025	14.96	15.45	14.95	14.63	126.709	21.03	2.80	**241.546**	23.83	30	Pass
47	6185	15.26	14.93	14.73	14.75	124.261	20.94	2.80	236.592	23.74	30	Pass
79	6345	15.16	14.52	14.96	15.17	125.341	20.98	2.80	238.781	23.78	30	Pass
111	6505	13.95	13.69	13.05	13.18	89.200	19.50	2.80	**169.824**	22.30	30	Pass
143	6665	14.43	13.63	14.36	13.98	103.094	20.13	2.80	**196.336**	22.93	30	Pass
175	6825	14.16	13.32	14.21	14.23	100.388	20.02	2.80	191.426	22.82	30	Pass
207	6985	14.19	13.18	14.04	14.31	99.368	19.97	2.80	**189.234**	22.77	30	Pass

Beamforming Mode

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
1	5955	6.10	6.12	6.10	6.32	16.526	12.18	6.02	66.069	18.20	30	Pass
45	6175	6.85	5.91	6.06	6.26	17.004	12.31	6.02	68.077	18.33	30	Pass
93	6415	6.14	6.25	6.50	6.03	16.804	12.25	6.02	67.143	18.27	30	Pass
97	6435	5.92	6.76	6.11	5.95	16.670	12.22	6.04	66.988	18.26	30	Pass
105	6475	6.41	6.06	6.52	6.41	17.274	12.37	6.04	69.343	18.41	30	Pass
113	6515	6.13	6.44	6.50	6.25	17.191	12.35	6.04	69.024	18.39	30	Pass
117	6535	4.58	4.03	4.47	4.51	11.024	10.42	7.58	63.096	18.00	30	Pass
149	6695	4.51	4.23	4.60	4.42	11.124	10.46	7.58	63.680	18.04	30	Pass
181	6855	4.43	3.83	4.46	4.87	11.050	10.43	7.58	63.241	18.01	30	Pass
185	6875	4.42	3.88	4.73	4.98	11.330	10.54	7.58	64.863	18.12	30	Pass
209	6995	4.34	4.25	4.98	4.76	11.517	10.61	7.45	63.973	18.06	30	Pass
233	7115	4.18	4.17	4.78	4.77	11.236	10.51	7.45	62.517	17.96	30	Pass

Note:

1. U-NII-5: Directional gain = 6.02dBi
2. U-NII-6: Directional gain = 6.04dBi
3. U-NII-7: Directional gain = 7.58dBi
4. U-NII-8: Directional gain = 7.45dBi

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
3	5965	8.16	8.51	9.25	8.71	29.486	14.70	6.02	118.032	20.72	30	Pass
43	6165	9.03	8.63	8.41	8.68	29.606	14.71	6.02	118.304	20.73	30	Pass
91	6405	8.51	8.34	8.70	9.12	29.498	14.70	6.02	118.032	20.72	30	Pass
99	6445	9.18	8.78	8.52	9.18	31.222	14.94	6.04	125.314	20.98	30	Pass
107	6485	8.45	8.81	8.81	8.56	29.383	14.68	6.04	118.032	20.72	30	Pass
115	6525	7.61	6.53	7.98	7.93	22.755	13.57	7.58	130.317	21.15	30	Pass
123	6565	7.58	6.31	7.47	7.85	21.684	13.36	7.58	124.165	20.94	30	Pass
155	6725	7.13	6.98	7.26	7.03	20.521	13.12	7.58	117.490	20.70	30	Pass
179	6845	6.73	6.63	6.83	7.35	19.564	12.91	7.58	111.944	20.49	30	Pass
187	6885	6.94	6.61	7.03	7.57	20.286	13.07	7.58	116.145	20.65	30	Pass
211	7005	6.80	6.94	7.52	7.38	20.849	13.19	7.45	115.878	20.64	30	Pass
227	7085	7.65	7.18	7.68	7.91	23.087	13.63	7.45	128.233	21.08	30	Pass

Note:

1. U-NII-5: Directional gain = 6.02dBi
2. U-NII-6: Directional gain = 6.04dBi
3. U-NII-7: Directional gain = 7.58dBi
4. U-NII-8: Directional gain = 7.45dBi

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
7	5985	11.68	11.85	12.30	11.69	61.774	17.91	6.02	247.172	23.93	30	Pass
39	6145	11.63	12.12	11.97	12.16	63.031	18.00	6.02	252.348	24.02	30	Pass
87	6385	11.62	12.18	12.31	11.93	63.658	18.04	6.02	254.683	24.06	30	Pass
103	6465	12.06	12.13	11.32	12.17	62.433	17.95	6.04	250.611	23.99	30	Pass
119	6545	10.83	10.08	10.91	10.92	46.982	16.72	7.58	269.153	24.30	30	Pass
151	6705	10.14	10.32	10.03	10.35	42.001	16.23	7.58	240.436	23.81	30	Pass
183	6865	10.44	10.15	10.43	10.93	44.846	16.52	7.58	257.040	24.10	30	Pass
199	6945	10.71	10.23	10.51	10.89	45.840	16.61	7.45	254.683	24.06	30	Pass
215	7025	10.89	10.51	11.42	10.91	49.719	16.97	7.45	276.694	24.42	30	Pass

Note:

1. U-NII-5: Directional gain = 6.02dBi
2. U-NII-6: Directional gain = 6.04dBi
3. U-NII-7: Directional gain = 7.58dBi
4. U-NII-8: Directional gain = 7.45dBi

802.11ax (HE160)

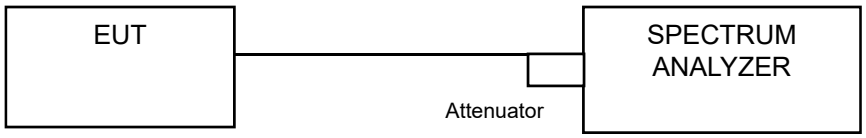
Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
15	6025	14.73	15.23	14.73	14.40	120.318	20.80	6.02	**480.839**	26.82	30	Pass
47	6185	15.04	14.73	14.51	14.53	118.260	20.73	6.02	473.151	26.75	30	Pass
79	6345	14.93	14.31	14.73	14.95	119.072	20.76	6.02	476.431	26.78	30	Pass
111	6505	13.91	13.62	13.02	13.11	88.127	19.45	7.58	**504.661**	27.03	30	Pass
143	6665	14.21	13.42	14.13	13.75	97.938	19.91	7.58	**561.048**	27.49	30	Pass
175	6825	13.94	13.10	14.00	14.02	95.545	19.80	7.58	547.016	27.38	30	Pass
207	6985	13.98	12.95	13.82	14.08	94.413	19.75	7.45	**524.807**	27.20	30	Pass

Note:

1. U-NII-5: Directional gain = 6.02dBi
2. U-NII-6: Directional gain = 6.04dBi
3. U-NII-7: Directional gain = 7.58dBi
4. U-NII-8: Directional gain = 7.45dBi

4.5 Emission Bandwidth Measurement

4.5.1 Test Setup



4.5.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.3 Test Procedure

FOR 99% OCCUPIED BANDWIDTH

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 SAMPLE. 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.

FOR 26dB BANDWIDTH

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

4.5.4 Test Results

99% Occupied Bandwidth:

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
1	5955	19.08	18.84	18.84	18.84	320
45	6175	18.84	18.84	18.96	18.84	320
93	6415	18.84	18.84	18.84	18.84	320
97	6435	18.96	18.84	18.84	18.84	320
105	6475	18.84	18.96	18.84	18.96	320
113	6515	18.84	18.96	18.84	18.84	320
117	6535	18.84	18.96	18.84	18.84	320
149	6695	18.84	18.84	18.96	18.84	320
181	6855	18.96	18.84	18.84	18.84	320
185	6875	18.84	18.84	18.84	18.84	320
209	6995	18.84	18.84	18.84	18.84	320
233	7115	18.96	18.84	18.84	18.84	320

802.11ax (HE40)

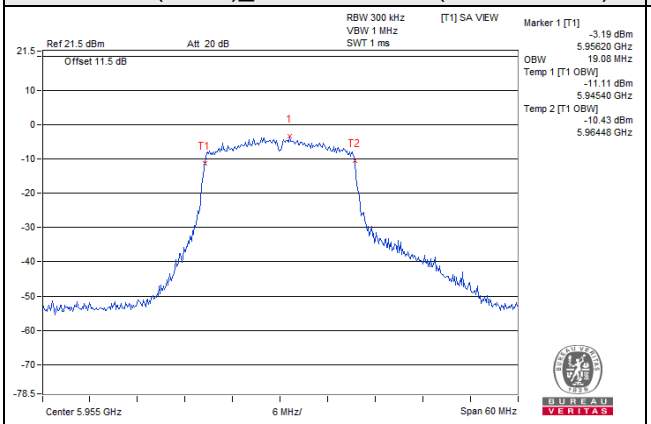
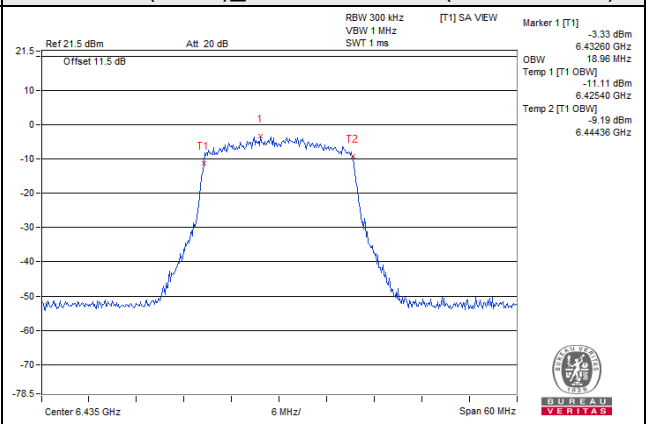
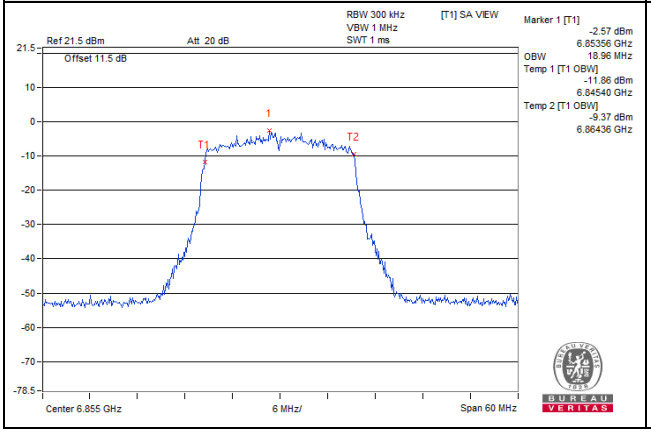
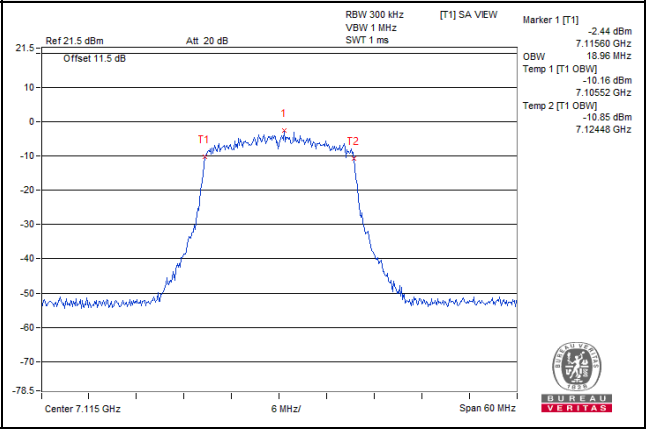
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
3	5965	37.68	37.56	37.56	37.56	320
43	6165	37.44	37.44	37.44	37.44	320
91	6405	37.56	37.44	37.44	37.44	320
99	6445	37.56	37.56	37.56	37.44	320
107	6485	37.44	37.56	37.44	37.44	320
115	6525	37.44	37.44	37.44	37.50	320
123	6565	37.44	37.56	37.56	37.44	320
155	6725	37.56	37.44	37.44	37.56	320
179	6845	37.56	37.56	37.56	37.44	320
187	6885	37.44	37.44	37.50	37.56	320
211	7005	37.44	37.56	37.44	37.44	320
227	7085	37.56	37.68	37.68	37.80	320

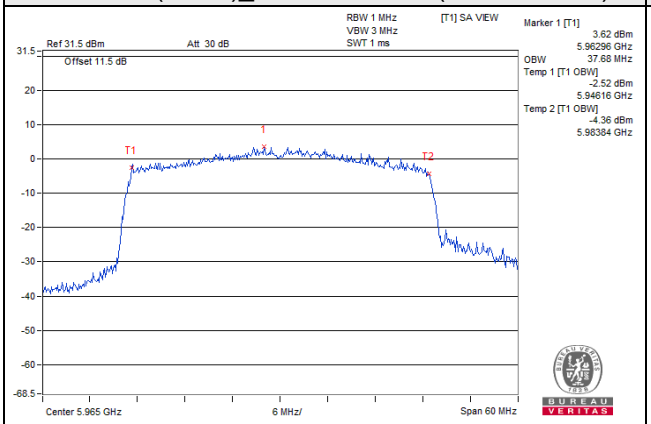
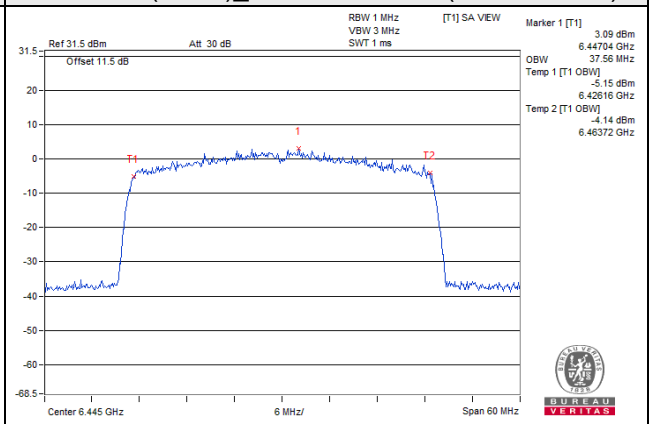
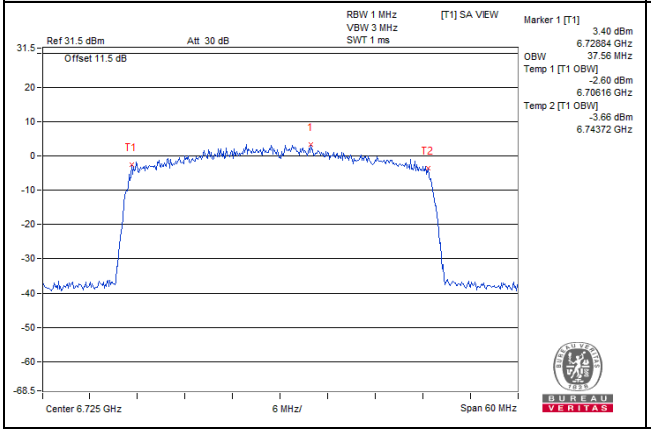
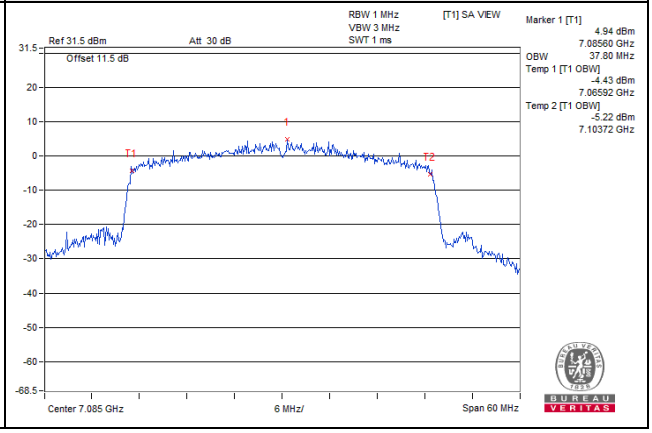
802.11ax (HE80)

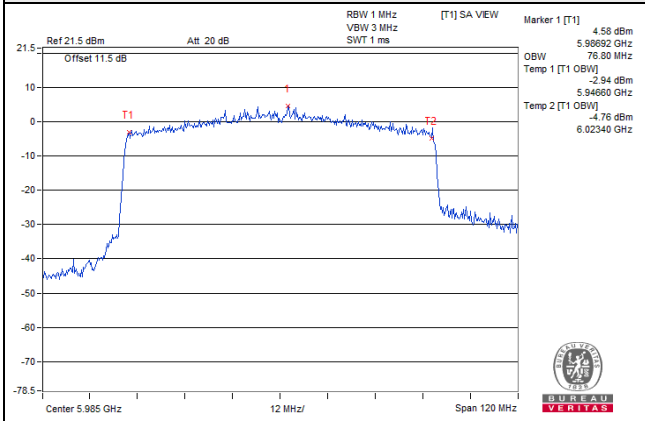
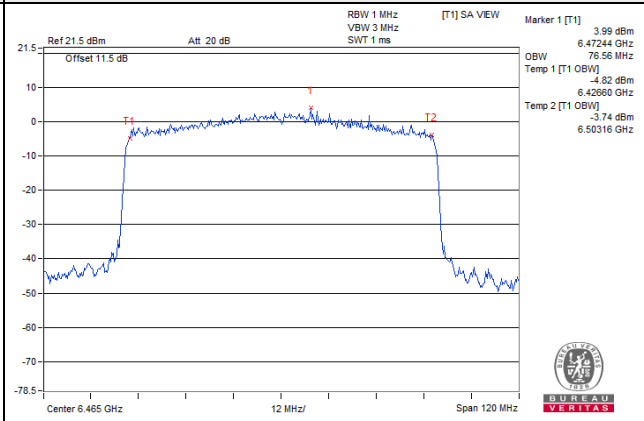
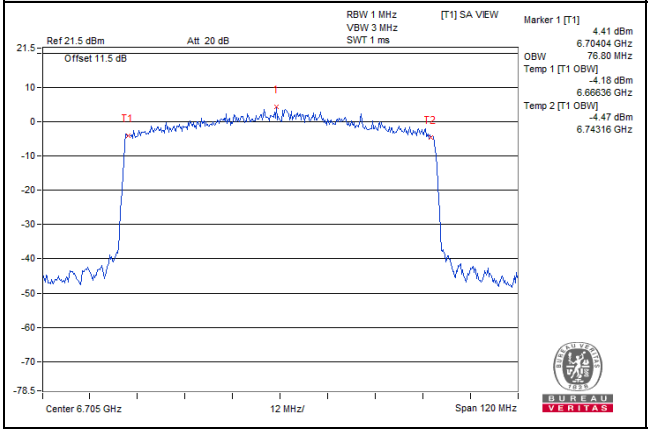
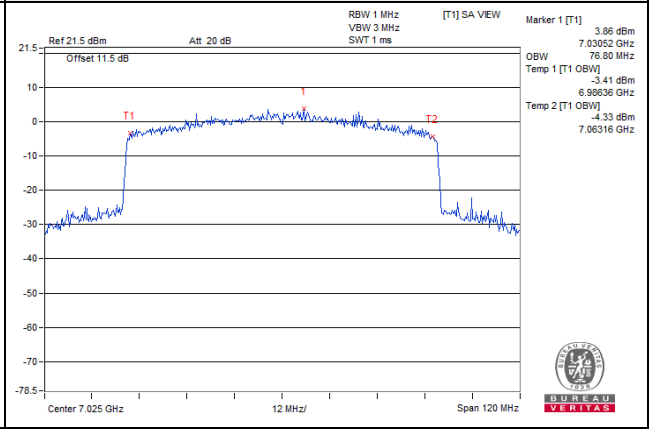
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
7	5985	76.80	76.56	76.56	76.80	320
39	6145	76.32	76.56	76.32	76.56	320
87	6385	76.56	76.56	76.56	76.56	320
103	6465	76.56	76.56	76.56	76.56	320
119	6545	76.56	76.44	76.44	76.32	320
151	6705	76.56	76.56	76.80	76.56	320
183	6865	76.44	76.32	76.32	76.44	320
199	6945	76.32	76.56	76.56	76.56	320
215	7025	76.80	76.80	76.56	76.56	320

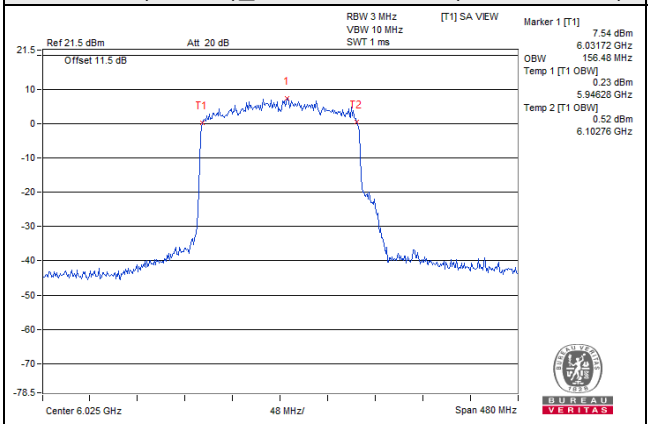
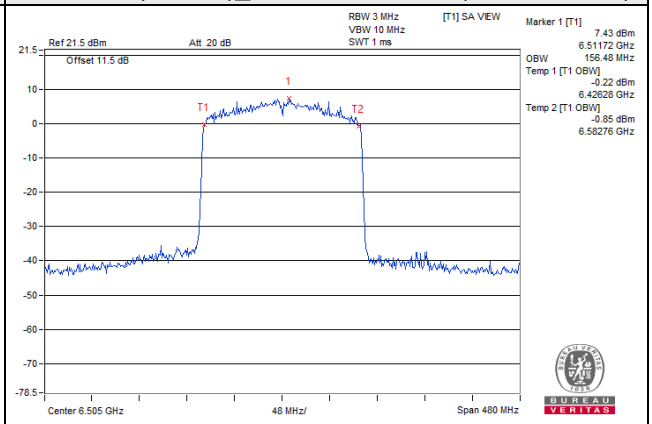
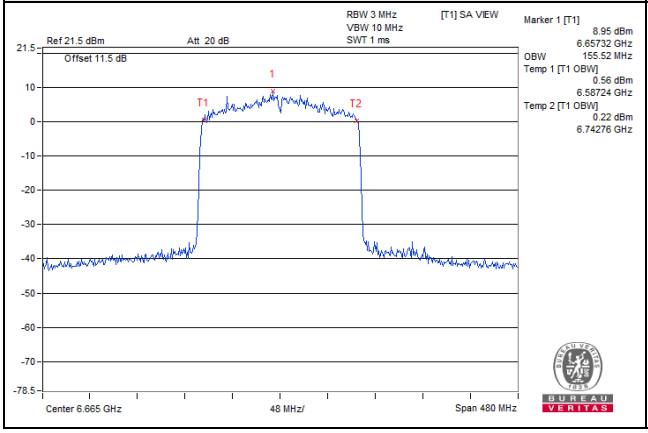
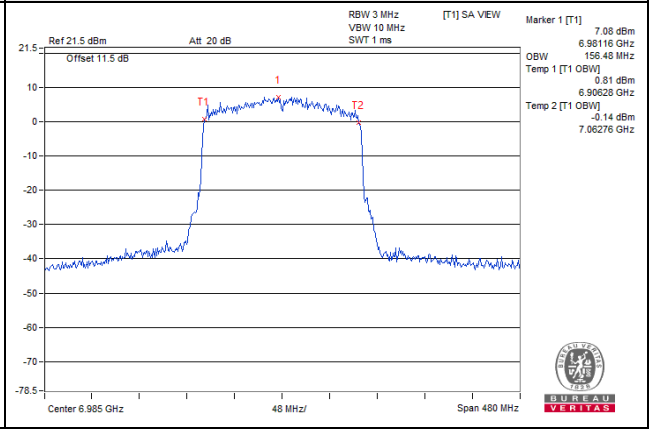
802.11ax (HE160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
15	6025	155.52	156.48	155.52	155.52	320
47	6185	155.52	155.52	154.56	155.52	320
79	6345	154.56	155.52	155.52	154.56	320
111	6505	154.56	156.48	154.56	155.52	320
143	6665	155.52	155.52	154.56	155.52	320
175	6825	155.52	155.52	155.52	155.52	320
207	6985	156.48	154.56	155.52	154.56	320

Spectrum Plot of Max. Value	
802.11ax (HE20)_Chain 0 / CH 1 (U-NII-5 Band)	802.11ax (HE20)_Chain 0 / CH 97 (U-NII-6 Band)
	
802.11ax (HE20)_Chain 0 / CH 181 (U-NII-7 Band)	802.11ax (HE20)_Chain 0 / CH 233 (U-NII-8 Band)
	

Spectrum Plot of Max. Value	
802.11ax (HE40)_Chain 0 / CH 3 (U-NII-5 Band)	802.11ax (HE40)_Chain 0 / CH 99 (U-NII-6 Band)
	
802.11ax (HE40)_Chain 0 / CH 155 (U-NII-7 Band)	802.11ax (HE40)_Chain 3 / CH 227 (U-NII-8 Band)
	

Spectrum Plot of Max. Value	
802.11ax (HE80)_Chain 0 / CH 7 (U-NII-5 Band)	802.11ax (HE80)_Chain 0 / CH 103 (U-NII-6 Band)
	
802.11ax (HE80)_Chain 2 / CH 151 (U-NII-7 Band)	802.11ax (HE80)_Chain 0 / CH 215 (U-NII-8 Band)
	

Spectrum Plot of Max. Value	
802.11ax (HE160)_Chain 1 / CH 15 (U-NII-5 Band)	802.11ax (HE160)_Chain 1 / CH 111 (U-NII-6 Band)
	
802.11ax (HE160)_Chain 1 / CH 143 (U-NII-7 Band)	802.11ax (HE160)_Chain 0 / CH 207 (U-NII-8 Band)
	

26dB Bandwidth:

802.11ax (HE20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
1	5955	22.34	21.85	22.50	21.86	320
45	6175	22.07	21.50	21.90	22.02	320
93	6415	21.83	21.71	21.44	21.93	320
97	6435	21.56	21.49	21.67	21.61	320
105	6475	22.15	21.46	21.90	21.49	320
113	6515	21.81	21.40	21.62	21.53	320
117	6535	22.03	21.71	21.68	21.57	320
149	6695	22.01	21.75	21.31	21.58	320
181	6855	22.01	21.40	21.52	21.42	320
185	6875	21.61	21.30	21.88	21.85	320
209	6995	22.09	21.35	22.09	21.51	320
233	7115	21.35	21.52	21.51	22.17	320

802.11ax (HE40)

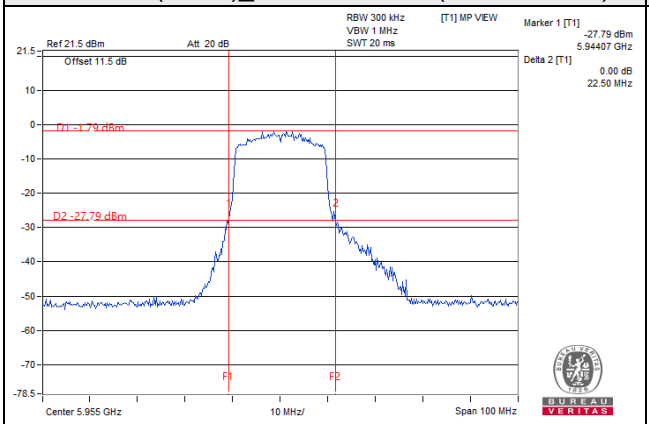
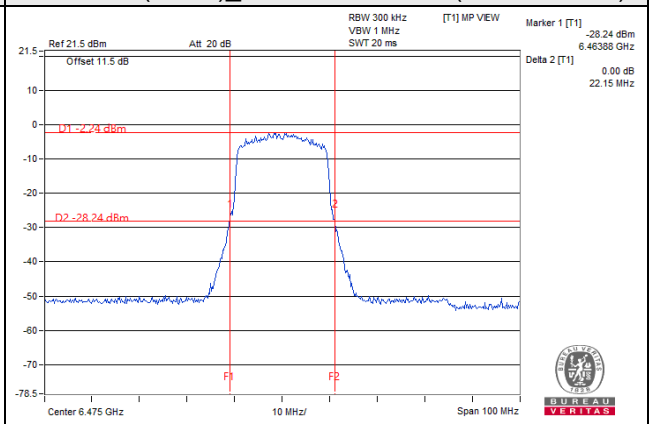
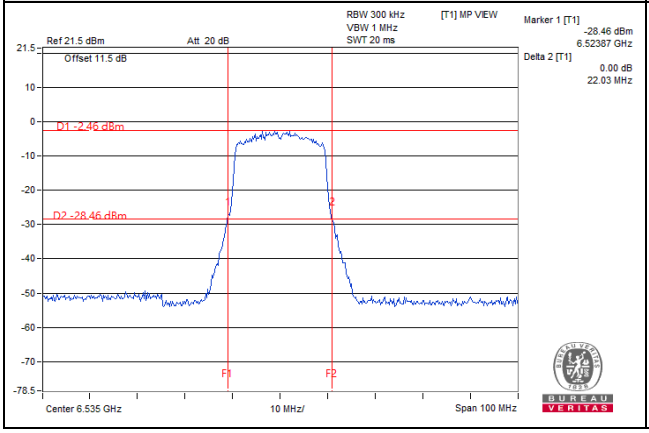
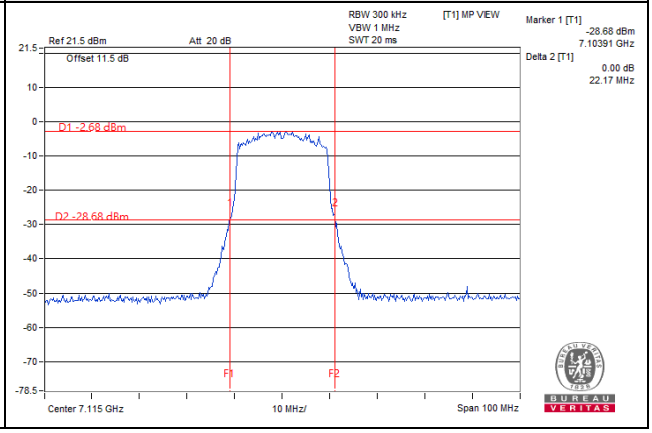
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
3	5965	41.53	41.38	40.83	40.75	320
43	6165	40.73	40.44	40.53	40.57	320
91	6405	40.60	40.67	40.57	40.57	320
99	6445	40.71	40.66	40.66	40.49	320
107	6485	40.56	40.67	40.62	40.52	320
115	6525	40.29	40.49	40.53	40.57	320
123	6565	40.47	40.60	40.54	40.36	320
155	6725	40.53	40.54	40.47	40.55	320
179	6845	40.65	40.50	40.81	40.69	320
187	6885	40.42	40.57	40.43	40.67	320
211	7005	40.65	40.58	40.59	40.72	320
227	7085	40.66	43.01	45.01	47.24	320

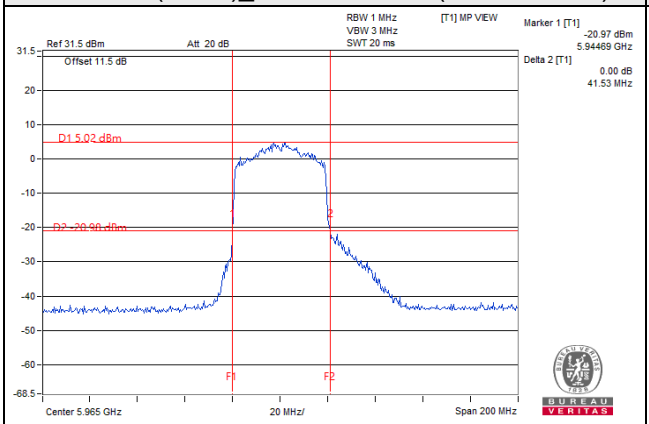
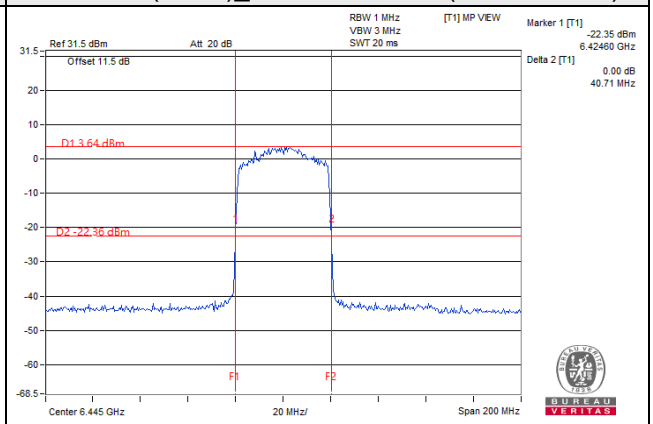
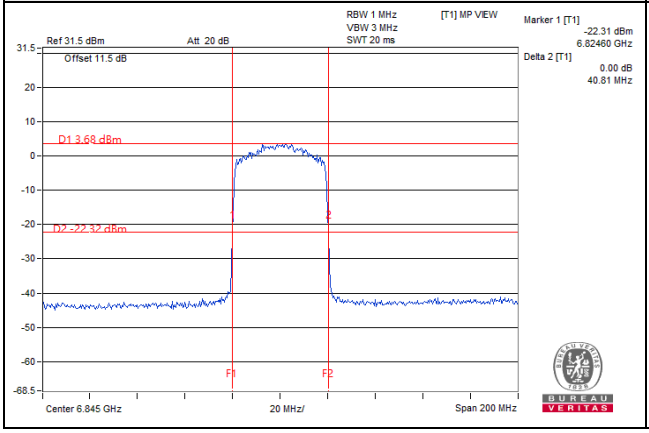
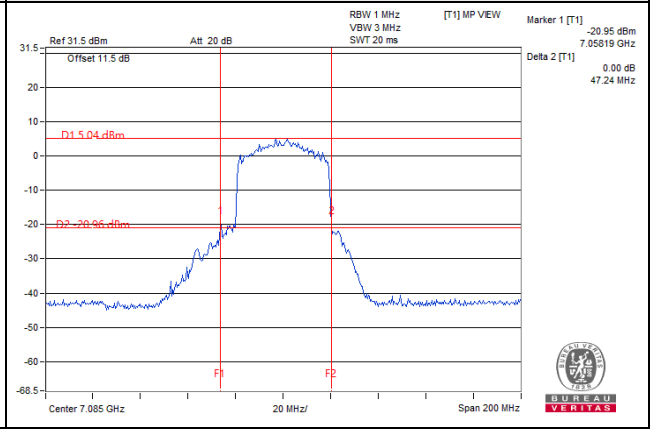
802.11ax (HE80)

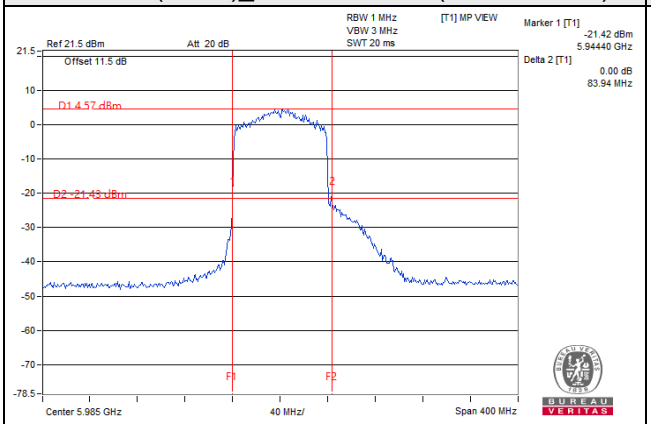
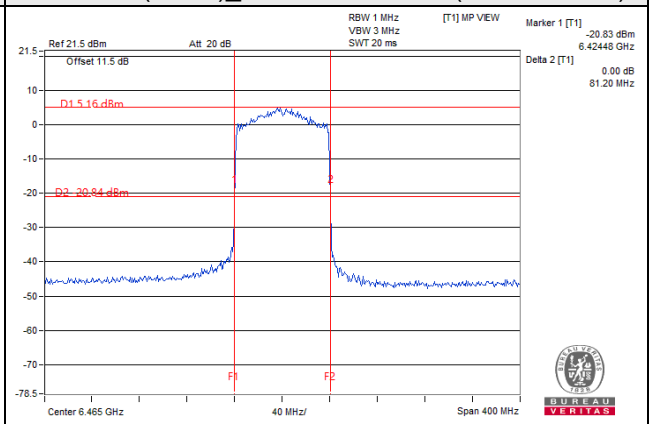
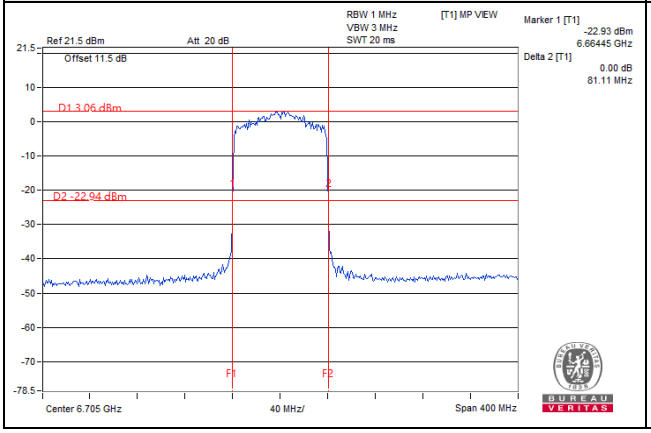
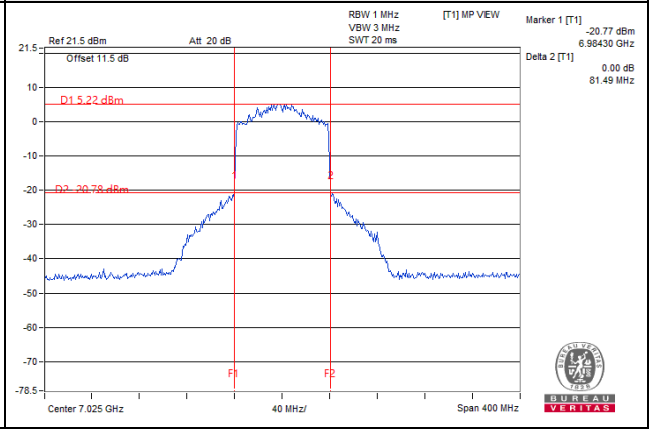
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
7	5985	81.13	81.34	83.94	81.14	320
39	6145	80.93	81.01	80.89	80.99	320
87	6385	80.95	80.87	81.15	81.03	320
103	6465	80.99	81.00	81.20	80.92	320
119	6545	80.53	81.02	80.53	80.89	320
151	6705	81.01	81.11	80.99	80.81	320
183	6865	80.78	81.01	80.93	80.67	320
199	6945	80.97	80.74	80.86	80.99	320
215	7025	81.16	81.28	81.49	81.26	320

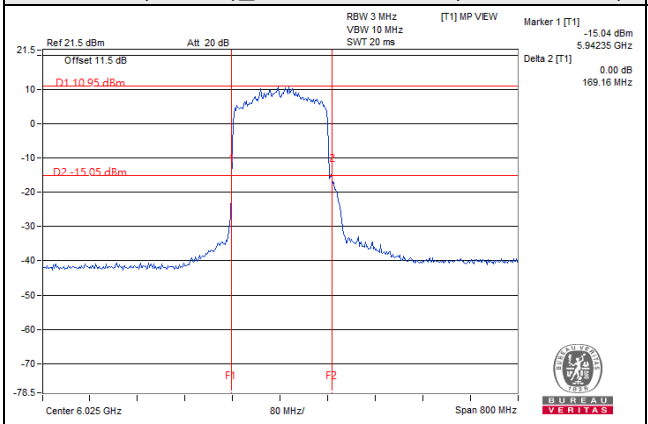
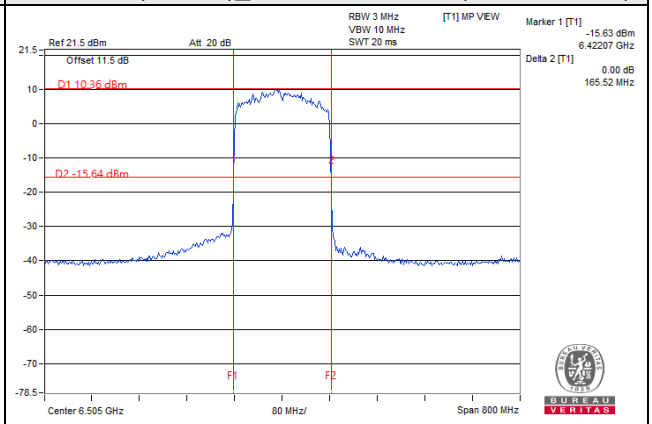
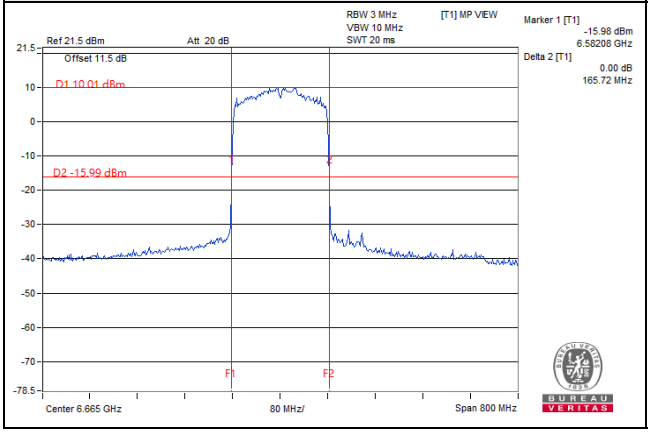
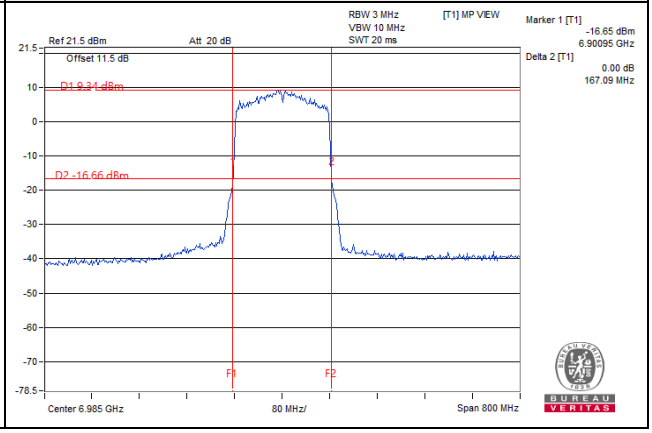
802.11ax (HE160)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		Chain 0	Chain 1	Chain 2	Chain 3	Limit (MHz)
15	6025	169.16	173.15	165.89	169.75	320
47	6185	165.43	165.24	165.43	165.68	320
79	6345	165.47	165.45	165.51	165.50	320
111	6505	165.25	165.42	165.52	165.30	320
143	6665	165.36	165.32	165.72	165.31	320
175	6825	165.34	165.61	164.43	165.40	320
207	6985	166.04	167.09	166.11	165.96	320

Spectrum Plot of Max. Value	
802.11ax (HE20)_Chain 2 / CH 1 (U-NII-5 Band)	802.11ax (HE20)_Chain 0 / CH 105 (U-NII-6 Band)
	
802.11ax (HE20)_Chain 0 / CH 117 (U-NII-7 Band)	802.11ax (HE20)_Chain 3 / CH 233 (U-NII-8 Band)
	

Spectrum Plot of Max. Value	
802.11ax (HE40)_Chain 0 / CH 3 (U-NII-5 Band)	802.11ax (HE40)_Chain 0 / CH 99 (U-NII-6 Band)
	
802.11ax (HE40)_Chain 2 / CH 179 (U-NII-7 Band)	802.11ax (HE40)_Chain 3 / CH 227 (U-NII-8 Band)
	

Spectrum Plot of Max. Value	
802.11ax (HE80)_Chain 2 / CH 7 (U-NII-5 Band)	802.11ax (HE80)_Chain 2 / CH 103 (U-NII-6 Band)
	
802.11ax (HE80)_Chain 1 / CH 151 (U-NII-7 Band)	802.11ax (HE80)_Chain 2 / CH 215 (U-NII-8 Band)
	

Spectrum Plot of Max. Value	
802.11ax (HE160)_Chain 1 / CH 15 (U-NII-5 Band)	802.11ax (HE160)_Chain 2 / CH 111 (U-NII-6 Band)
	
802.11ax (HE160)_Chain 2 / CH 143 (U-NII-7 Band)	802.11ax (HE160)_Chain 1 / CH 207 (U-NII-8 Band)
	

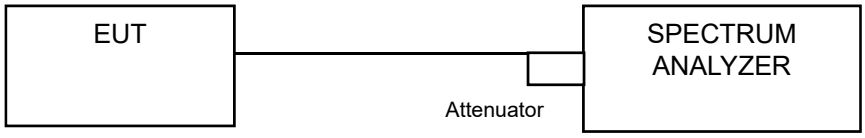
4.6 Peak Power Spectral Density Measurement

4.6.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category	Limit
		Peak Power Density (EIRP)
U-NII-5 U-NII-6 U-NII-7 U-NII-8	Indoor AP / Subordinate Device	5 dBm/MHz

4.6.2 Test Setup

For Conducted Method



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

Using method SA-1

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz
c. Number of points in sweep ≥ [2 x span / RBW]
d. Sweep time = auto, trigger set to “free run”.
e. Detector = RMS
f. Trace average at least 100 traces in power averaging mode.
g. Record the max value

4.6.5 EUT Operating Condition

Same as Item 4.3.6.

4.6.6 Test Results

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
1	5955	-7.27	-7.29	-7.28	-7.28	-1.26	6.02	4.76	5.00	Pass
45	6175	-7.28	-7.28	-7.07	-7.31	-1.21	6.02	4.81	5.00	Pass
93	6415	-7.08	-7.52	-7.11	-7.15	-1.19	6.02	4.83	5.00	Pass
97	6435	-7.66	-7.17	-7.20	-7.24	-1.29	6.04	4.75	5.00	Pass
105	6475	-6.73	-7.50	-7.40	-7.13	-1.16	6.04	4.88	5.00	Pass
113	6515	-7.32	-7.30	-7.08	-7.26	-1.22	6.04	4.82	5.00	Pass
117	6535	-8.45	-8.61	-9.17	-8.97	-2.77	7.58	4.81	5.00	Pass
149	6695	-8.83	-8.62	-8.58	-8.93	-2.72	7.58	4.86	5.00	Pass
181	6855	-9.43	-8.42	-8.86	-8.28	-2.70	7.58	4.88	5.00	Pass
185	6875	-8.96	-8.61	-8.87	-8.70	-2.76	7.58	4.82	5.00	Pass
209	6995	-8.99	-8.34	-8.59	-8.99	-2.70	7.45	4.75	5.00	Pass
233	7115	-8.85	-9.10	-8.47	-8.62	-2.73	7.45	4.72	5.00	Pass

Note: 1. Method 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. U-NII-5: Directional gain = 6.02dBi
3. U-NII-6: Directional gain = 6.04dBi
4. U-NII-7: Directional gain = 7.58dBi
5. U-NII-8: Directional gain = 7.45dBi

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
3	5965	-8.26	-7.56	-6.69	-7.15	-1.36	6.02	4.66	5.00	Pass
43	6165	-7.01	-7.25	-7.35	-7.31	-1.21	6.02	4.81	5.00	Pass
91	6405	-7.42	-7.58	-7.62	-7.45	-1.50	6.02	4.52	5.00	Pass
99	6445	-6.96	-7.07	-7.65	-7.13	-1.17	6.04	4.87	5.00	Pass
107	6485	-7.13	-7.27	-7.11	-7.36	-1.20	6.04	4.84	5.00	Pass
115	6525	-8.93	-8.46	-8.78	-8.64	-2.68	7.58	4.9	5.00	Pass
123	6565	-8.60	-8.68	-8.87	-8.73	-2.70	7.58	4.88	5.00	Pass
155	6725	-8.50	-8.59	-9.15	-9.36	-2.86	7.58	4.72	5.00	Pass
179	6845	-8.51	-8.16	-9.06	-9.39	-2.73	7.58	4.85	5.00	Pass
187	6885	-9.34	-8.33	-9.16	-8.62	-2.82	7.58	4.76	5.00	Pass
211	7005	-9.51	-8.39	-8.86	-8.66	-2.82	7.45	4.63	5.00	Pass
227	7085	-8.48	-8.96	-8.84	-8.39	-2.64	7.45	4.81	5.00	Pass

Note: 1. Method 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. U-NII-5: Directional gain = 6.02dBi
3. U-NII-6: Directional gain = 6.04dBi
4. U-NII-7: Directional gain = 7.58dBi
5. U-NII-8: Directional gain = 7.45dBi

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
7	5985	-7.09	-7.27	-6.95	-7.84	-1.25	6.02	4.77	5.00	Pass
39	6145	-7.30	-6.90	-7.59	-7.32	-1.25	6.02	4.77	5.00	Pass
87	6385	-7.42	-6.90	-7.09	-7.55	-1.21	6.02	4.81	5.00	Pass
103	6465	-7.37	-7.44	-7.25	-7.38	-1.34	6.04	4.70	5.00	Pass
119	6545	-8.70	-10.10	-8.42	-8.39	-2.83	7.58	4.75	5.00	Pass
151	6705	-9.36	-8.50	-9.22	-8.41	-2.83	7.58	4.75	5.00	Pass
183	6865	-8.97	-8.24	-9.73	-9.25	-2.99	7.58	4.59	5.00	Pass
199	6945	-8.83	-8.23	-9.27	-8.54	-2.68	7.45	4.77	5.00	Pass
215	7025	-8.47	-9.54	-7.91	-8.33	-2.50	7.45	4.95	5.00	Pass

Note: 1. Method 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.

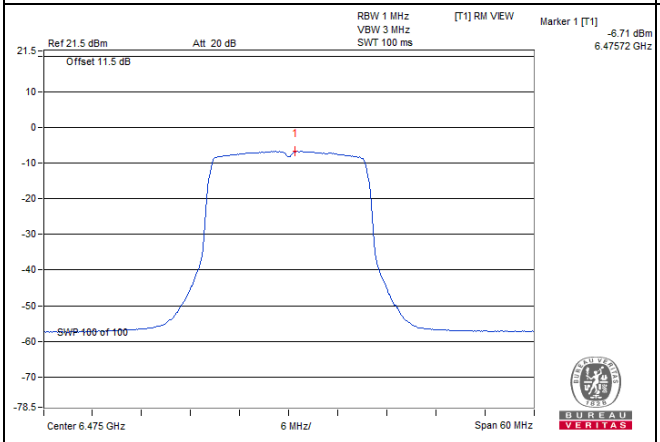
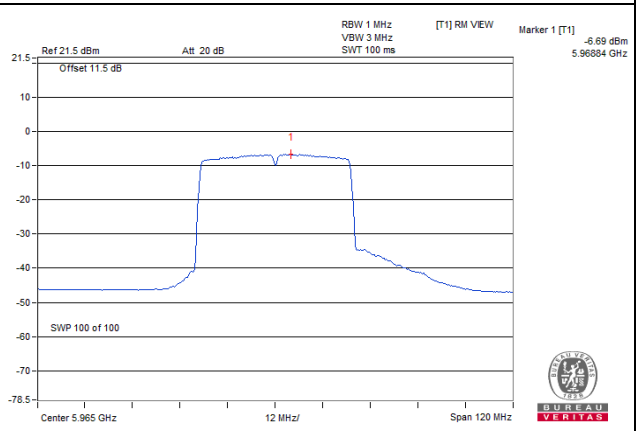
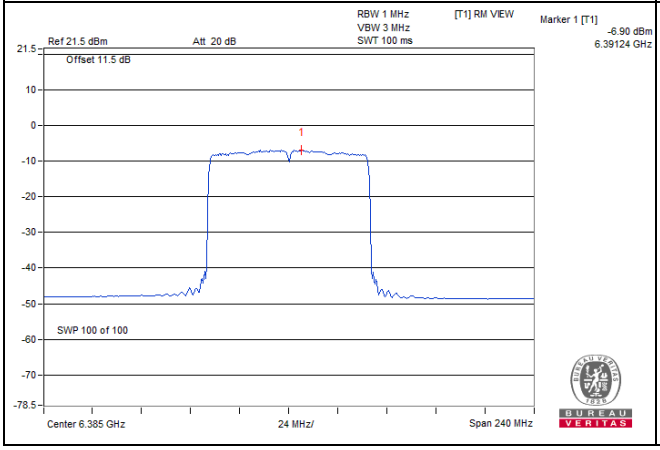
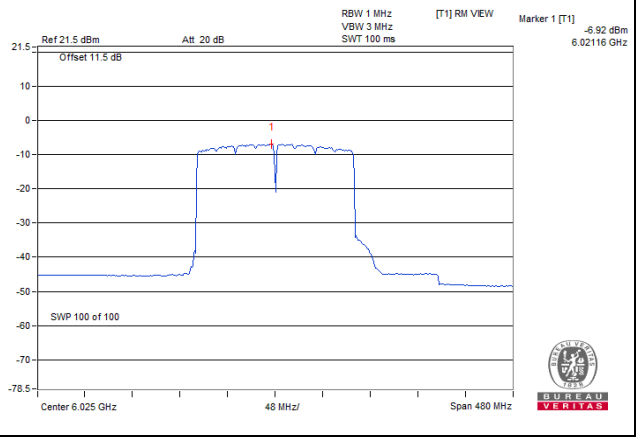
2. U-NII-5: Directional gain = 6.02dBi
3. U-NII-6: Directional gain = 6.04dBi
4. U-NII-7: Directional gain = 7.58dBi
5. U-NII-8: Directional gain = 7.45dBi

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
15	6025	-7.26	-6.92	-7.17	-7.38	-1.16	6.02	4.86	5.00	Pass
47	6185	-7.54	-7.85	-7.13	-7.47	-1.47	6.02	4.55	5.00	Pass
79	6345	-7.23	-7.50	-7.40	-7.24	-1.32	6.02	4.70	5.00	Pass
111	6505	-8.77	-9.02	-8.85	-9.03	-2.90	7.58	4.68	5.00	Pass
143	6665	-8.62	-8.70	-9.05	-8.57	-2.71	7.58	4.87	5.00	Pass
175	6825	-8.82	-9.22	-8.51	-8.62	-2.76	7.58	4.82	5.00	Pass
207	6985	-8.30	-10.24	-8.51	-8.51	-2.80	7.45	4.65	5.00	Pass

Note: 1. Method 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. U-NII-5: Directional gain = 6.02dBi
3. U-NII-6: Directional gain = 6.04dBi
4. U-NII-7: Directional gain = 7.58dBi
5. U-NII-8: Directional gain = 7.45dBi

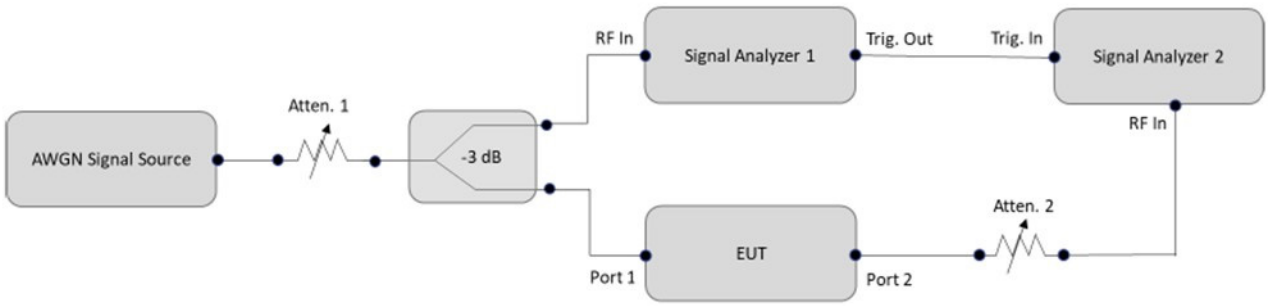
Spectrum Plot of Worst Value	
802.11ax (HE20)_Chain 0 / CH 105	**802.11ax (HE40)_Chain 2 / CH 3**
	
802.11ax (HE80)_Chain 1 / CH 87	**802.11ax (HE160)_Chain 1 / CH 15**
	

4.7 Contention Based Protocol Measurement

4.7.1 Limits of Contention Based Protocol Measurement

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.

4.7.2 Test Setup



4.7.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer R&S	FSW	102023	Nov. 10, 2021	Nov. 09, 2022
Spectrum Analyzer R&S	FSV40	101516	Mar. 07, 2022	Mar. 06, 2023
MXG X-Series RF Vector Signal Generator Agilent	N5182B	MY59100182	Apr. 26, 2022	Apr. 25, 2023
N5182BU KEYSIGHT	N5182BX07	MY59360203	Apr. 26, 2022	Apr. 25, 2023
Power Splitter/combiner Mini-Circuits	ZFRSC-123-S+	F698501347_01	Jan. 26, 2022	Jan. 25, 2023

Note: 1. The test was performed in Femtocell room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested date: Aug. 02, 2022

4.7.4 Test Procedure

a. 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.
b. 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).
c. Determine number of times detection threshold test as following table,

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

d. 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.
e. 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.
f. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
g. 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.
h. (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.
i. 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.

4.7.5 EUT Operating Condition

Set the EUT to transmit with a constant duty cycle and relative operating parameters which including power level, operating frequency, modulation and bandwidth.

4.7.6 Test Results

UNII Band 5:

Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB)	Adjusted Power (dBi)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	5	5975	5975	-69.33	0.6	0.58	-69.35	-62	OFF
					-69.83	0.6	0.58	-69.85	-62	Minimal
					-82.00	0.6	0.58	-82.02	-62	ON
	160	15	6025	5950	-71.13	0.6	0.58	-71.15	-62	OFF
					-71.63	0.6	0.58	-71.65	-62	Minimal
					-82.00	0.6	0.58	-82.02	-62	ON
				6025	-66.09	0.6	0.58	-66.11	-62	OFF
					-66.59	0.6	0.58	-66.61	-62	Minimal
					-82.00	0.6	0.58	-82.02	-62	ON
				6100	-70.30	0.6	0.58	-70.32	-62	OFF
					-70.80	0.6	0.58	-70.82	-62	Minimal
					-82.00	0.6	0.58	-82.02	-62	ON

Note:
1. Adjusted Power = Injected Signal (AWGN) Power - Antenna Gain + Path Loss
2. After evaluation, only the Chain2 was chosen for test and presented in the test report.

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	5975	v	v	v	v	v	v	v	v	v	x	90%	90%	Pass
	160	5950	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6025	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass
		6100	v	x	v	v	v	v	v	v	v	v	90%	90%	Pass

UNII Band 6:

Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB)	Adjusted Power (dBi)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	101	6455	6455	-69.04	0.6	0.58	-69.06	-69.04	OFF
					-69.54	0.6	0.58	-69.56	-69.54	Minimal
					-82.00	0.6	0.58	-82.02	-82.00	ON
	160	111	6505	6430	-71.12	0.6	0.58	-71.14	-71.12	OFF
					-71.62	0.6	0.58	-71.64	-71.62	Minimal
					-82.00	0.6	0.58	-82.02	-82.00	ON
				6505	-67.12	0.6	0.58	-67.14	-67.12	OFF
					-67.62	0.6	0.58	-67.64	-67.62	Minimal
					-82.00	0.6	0.58	-82.02	-82.00	ON
				6580	-70.15	0.6	0.58	-70.17	-70.15	OFF
					-70.65	0.6	0.58	-70.67	-70.65	Minimal
					-82.00	0.6	0.58	-82.02	-82.00	ON

Note:
1. Adjusted Power = Injected Signal (AWGN) Power - Antenna Gain + Path Loss
3. After evaluation, only the Chain2 was chosen for test and presented in the test report.

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	6455	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6430	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6505	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6580	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

UNII Band 7:

Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB)	Adjusted Power (dBi)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	149	6695	6695	-68.26	0.6	0.6	-68.26	-62	OFF
					-68.76	0.6	0.6	-68.76	-62	Minimal
					-82.00	0.6	0.6	-82.00	-62	ON
	160	143	6665	6590	-69.35	0.6	0.6	-69.35	-62	OFF
					-69.85	0.6	0.6	-69.85	-62	Minimal
					-82.00	0.6	0.6	-82.00	-62	ON
				6665	-66.26	0.6	0.6	-66.26	-62	OFF
					-66.76	0.6	0.6	-66.76	-62	Minimal
					-82.00	0.6	0.6	-82.00	-62	ON
				6740	-71.31	0.6	0.6	-71.31	-62	OFF
					-71.81	0.6	0.6	-71.81	-62	Minimal
					-82.00	0.6	0.6	-82.00	-62	ON

Note:
1. Adjusted Power = Injected Signal (AWGN) Power - Antenna Gain + Path Loss
2. After evaluation, only the Chain2 was chosen for test and presented in the test report.

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	6695	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6590	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6665	v	v	v	v	v	v	v	x	v	v	90%	90%	Pass
		6740	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

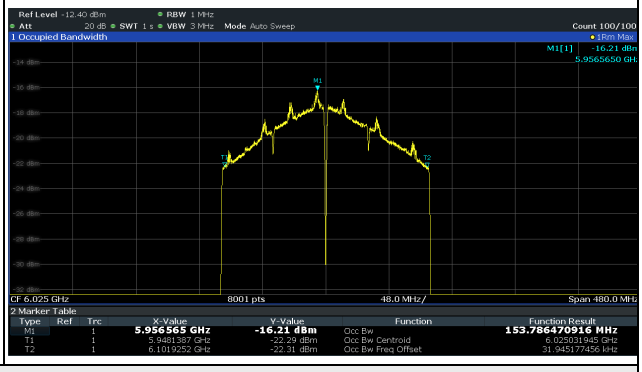
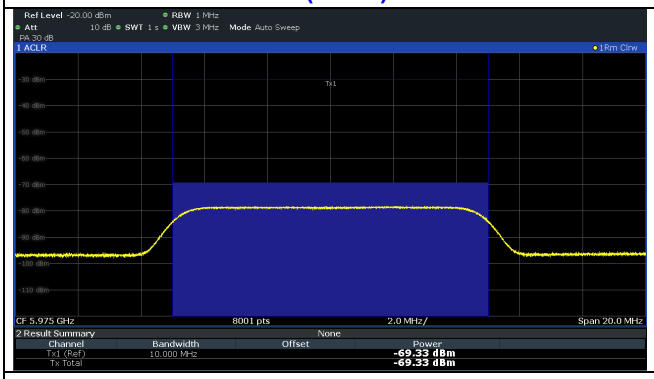
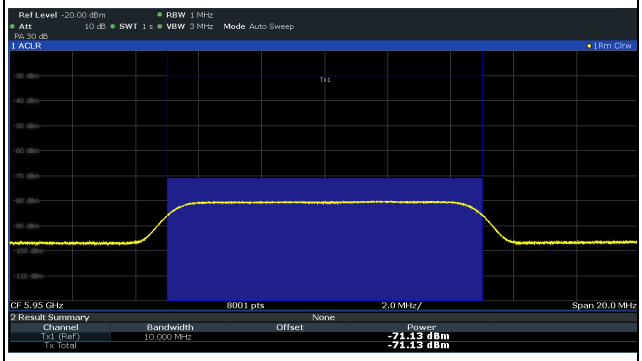
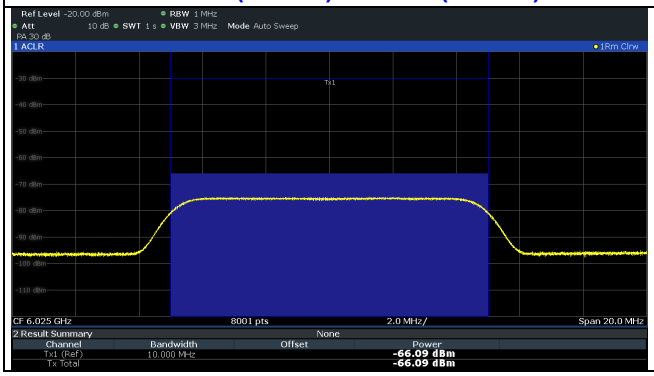
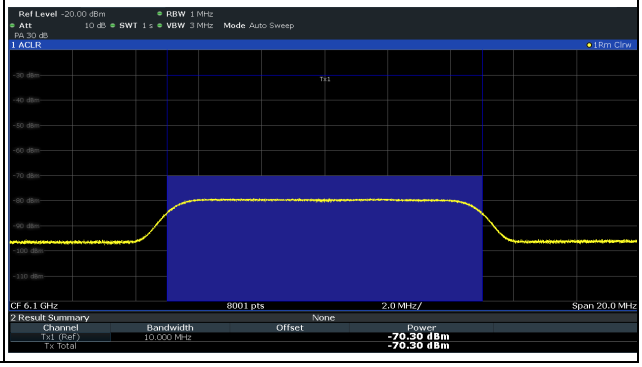
UNII Band 8:

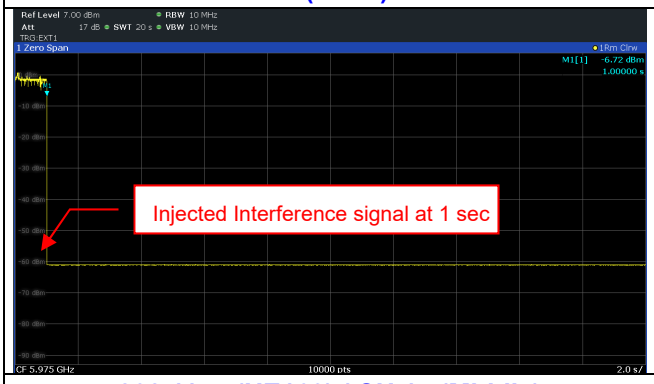
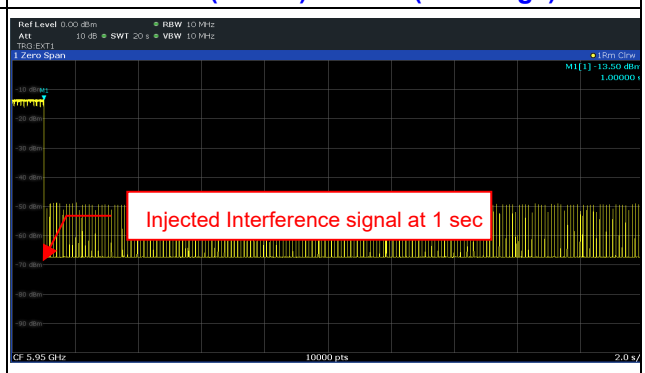
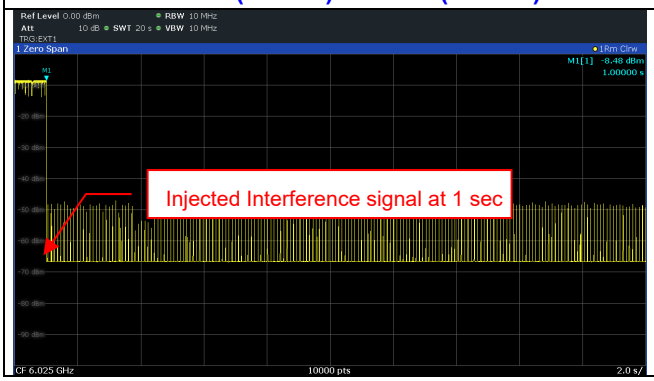
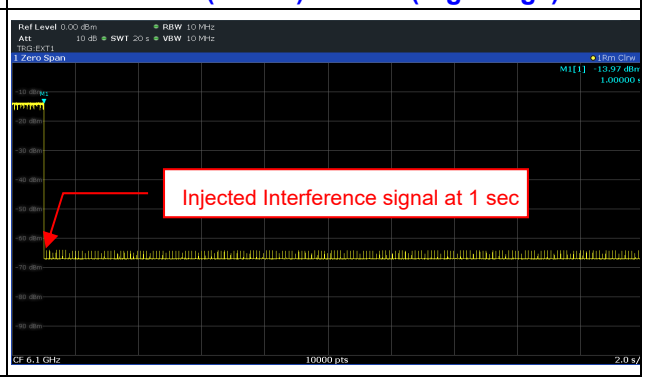
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB)	Adjusted Power (dBi)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	213	7015	7015	-67.26	0.6	0.65	-67.21	-62	OFF
					-67.56	0.6	0.65	-67.51	-62	Minimal
					-82.05	0.6	0.65	-82.00	-62	ON
	160	207	6985	6910	-68.19	0.6	0.65	-68.14	-62	OFF
					-68.69	0.6	0.65	-68.64	-62	Minimal
					-82.05	0.6	0.65	-82.00	-62	ON
				6985	-67.00	0.6	0.65	-66.95	-62	OFF
					-67.50	0.6	0.65	-67.45	-62	Minimal
					-82.05	0.6	0.65	-82.00	-62	ON
				7060	-70.20	0.6	0.65	-70.15	-62	OFF
					-70.70	0.6	0.65	-70.65	-62	Minimal
					-82.05	0.6	0.65	-82.00	-62	ON

Note:
1. Adjusted Power = Injected Signal (AWGN) Power - Antenna Gain + Path Loss
2. After evaluation, only the Chain2 was chosen for test and presented in the test report.

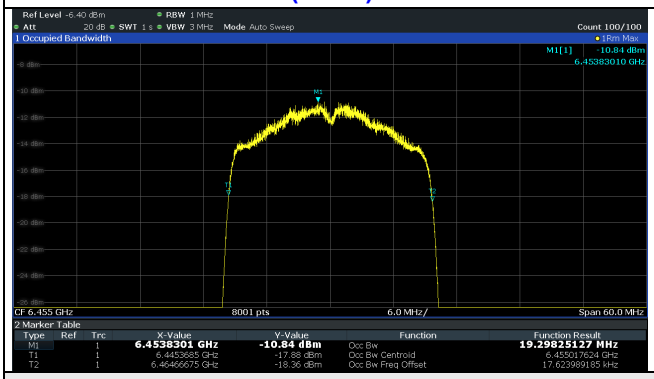
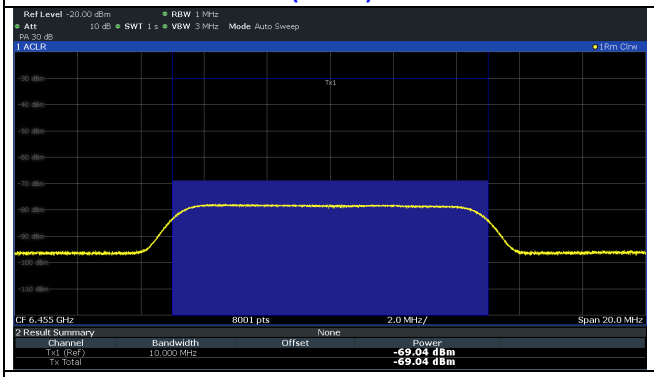
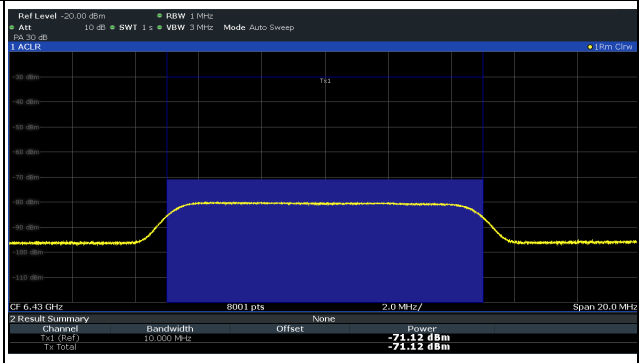
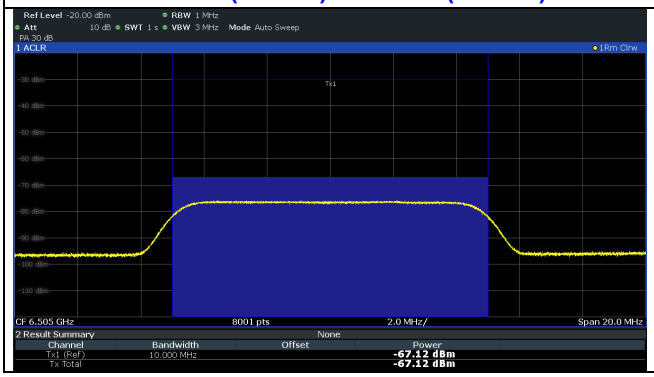
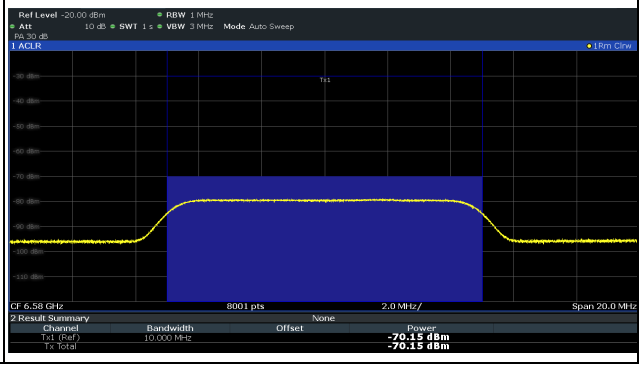
Contention Based Protocol Detection Probability														
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11ax	20	7015	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6910	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6985	v	v	v	v	x	v	v	v	v	v	90%	90%	Pass
		7060	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

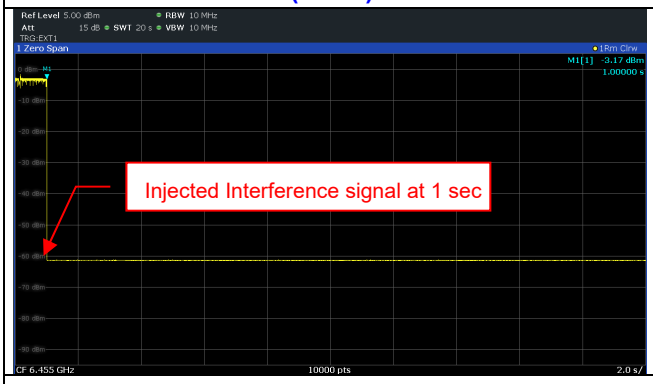
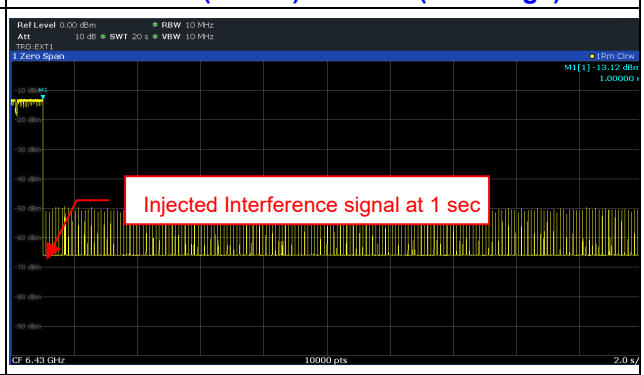
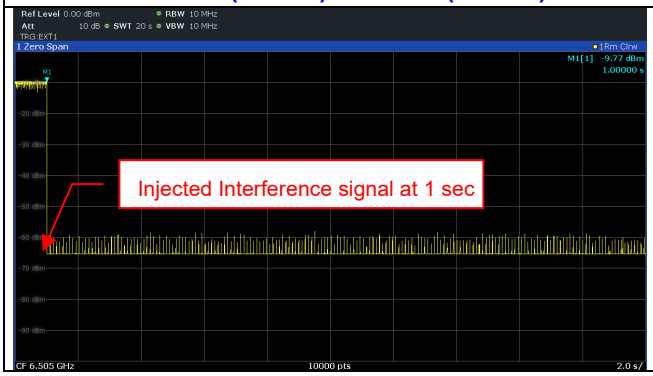
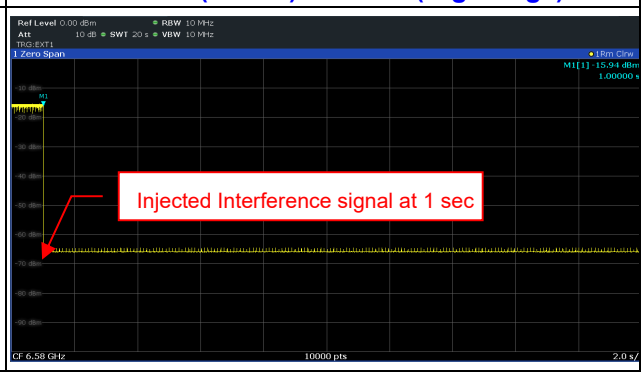
For U-NII-5 band

Plots of EUT Tx waveform	
802.11ax (HE20) / CH 5	**802.11ax (HE160) / CH 15**
	
Plots of Incumbent signal (AWGN) Level	
802.11ax (HE20) / CH 5	**802.11ax (HE160) / CH 15 (Low Edge)**
	
802.11ax (HE160) / CH 15 (Middle)	**802.11ax (HE160) / CH 15 (High Edge)**
	

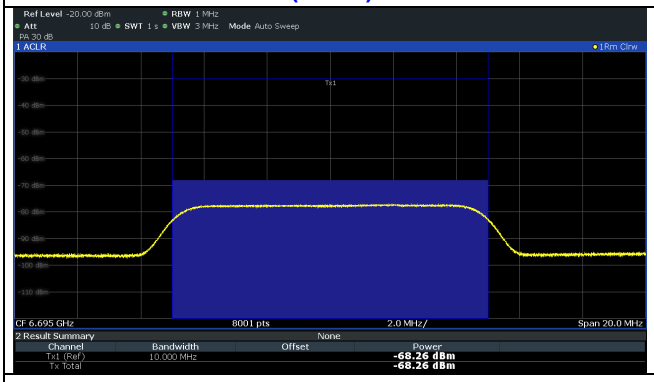
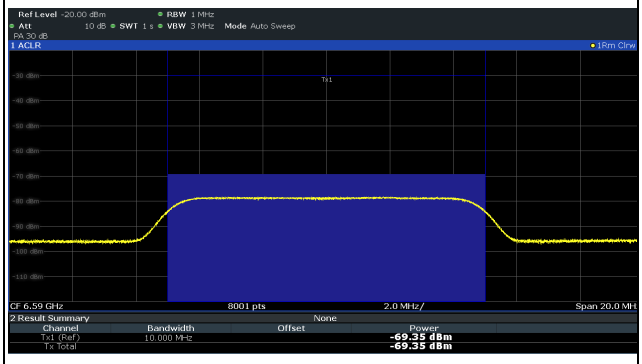
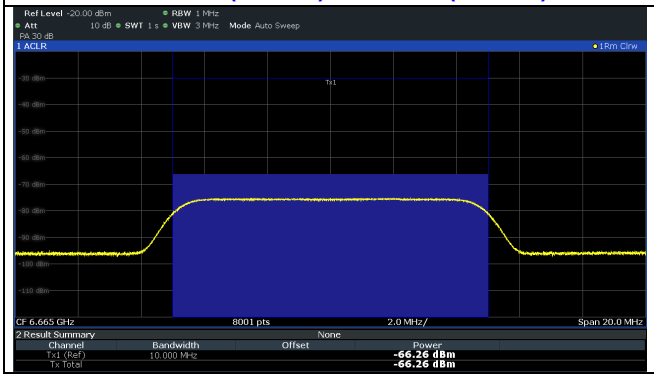
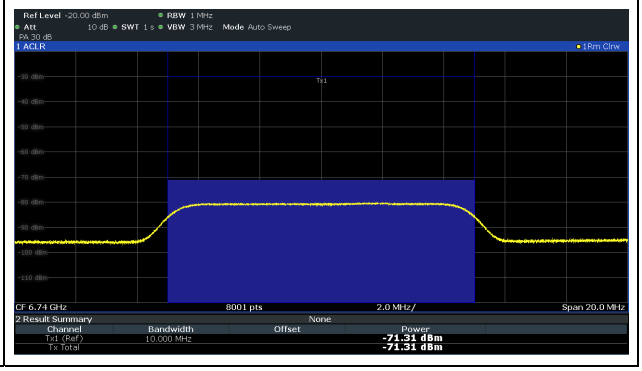
Plots of EUT ceased transmission in the time domain	
802.11ax (HE20) / CH 5	**802.11ax (HE160) / CH 15 (Low Edge)**
	
802.11ax (HE160) / CH 15 (Middle)	**802.11ax (HE160) / CH 15 (High Edge)**
	

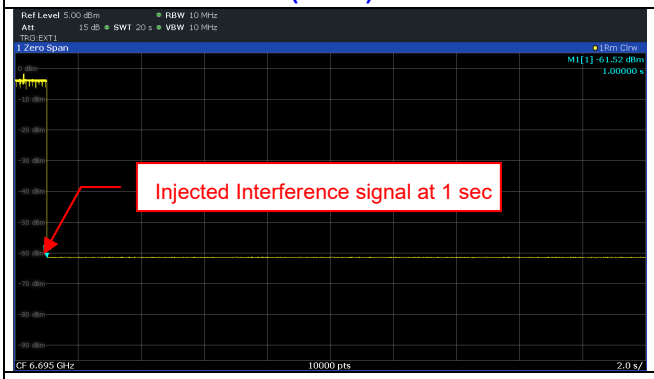
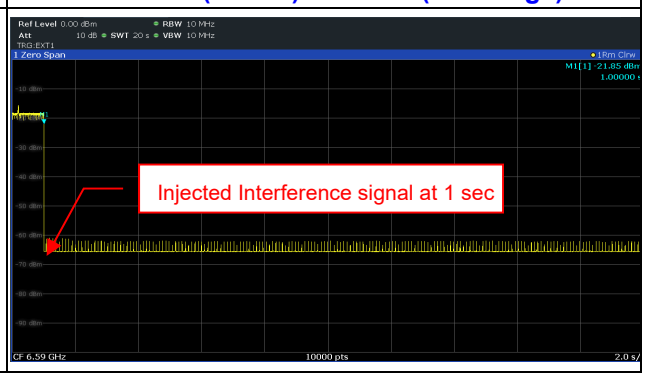
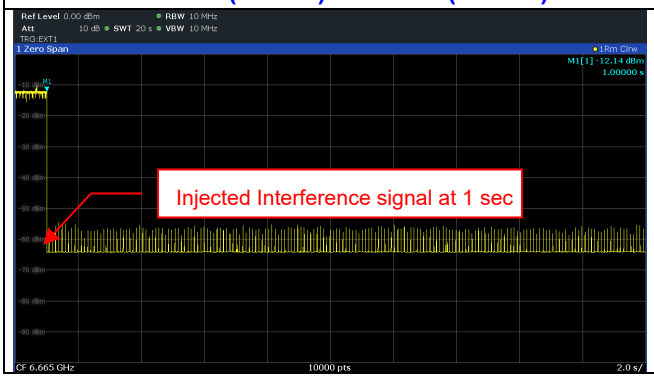
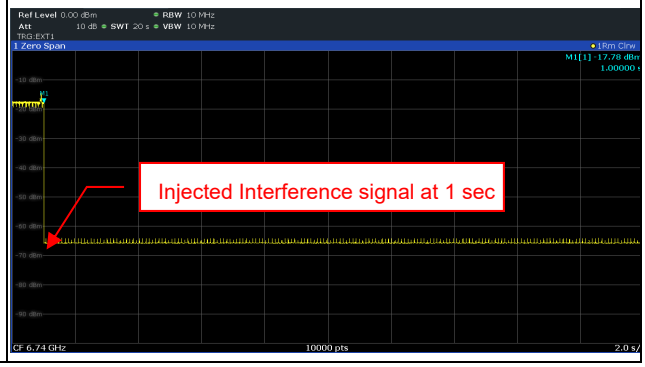
For U-NII-6 band

Plots of EUT Tx waveform	
802.11ax (HE20) / CH 101	**802.11ax (HE160) / CH 111**
	
Plots of Incumbent signal (AWGN) Level	
802.11ax (HE20) / CH 101	**802.11ax (HE160) / CH 111 (Low Edge)**
	
802.11ax (HE160) / CH 111 (Middle)	**802.11ax (HE160) / CH 111 (High Edge)**
	

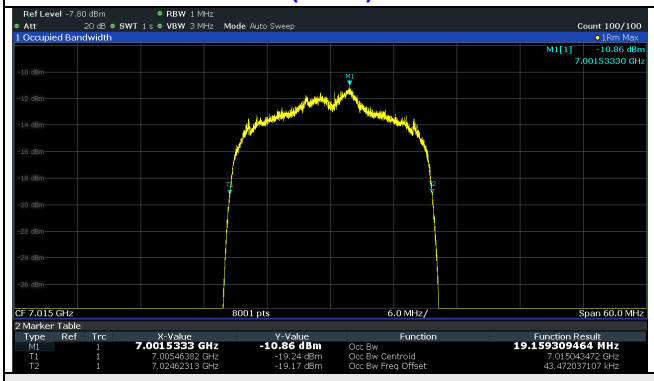
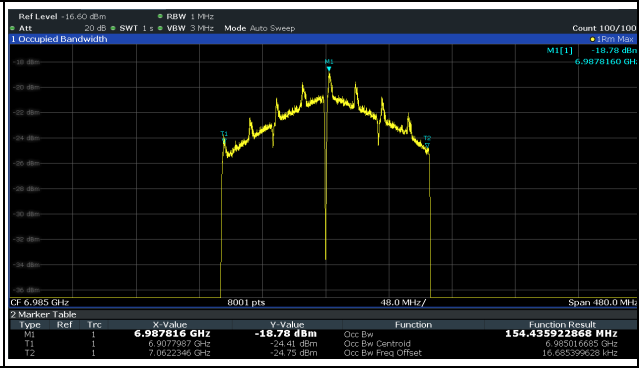
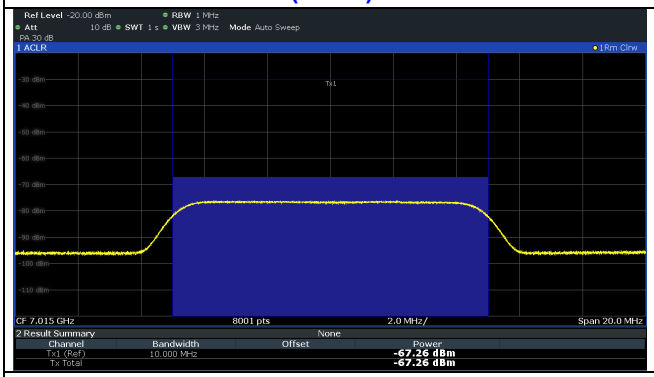
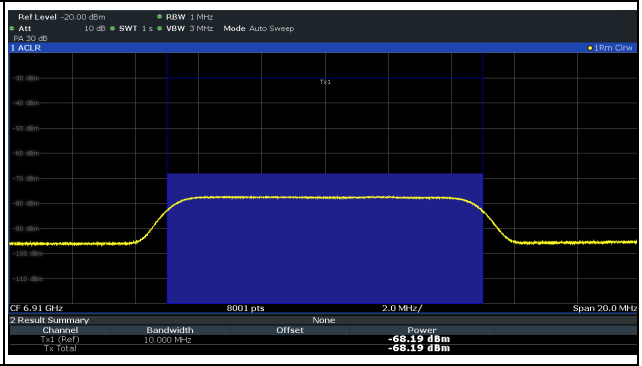
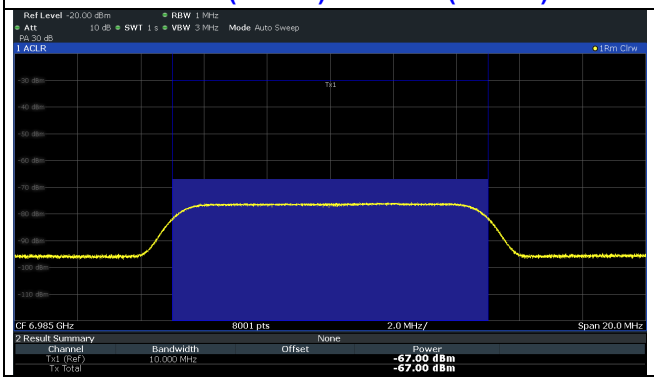
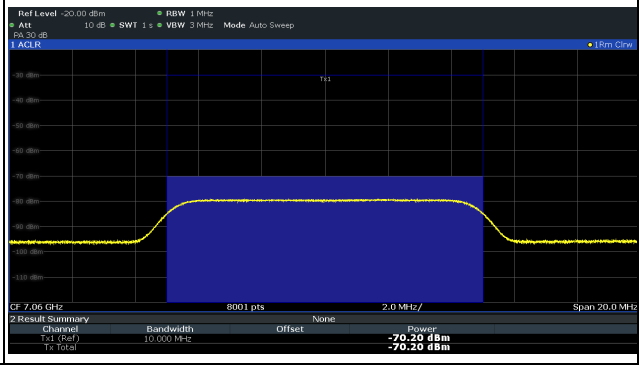
Plots of EUT ceased transmission in the time domain	
802.11ax (HE20) / CH 101	**802.11ax (HE160) / CH 111 (Low Edge)**
	
802.11ax (HE160) / CH 111 (Middle)	**802.11ax (HE160) / CH 111 (High Edge)**
	

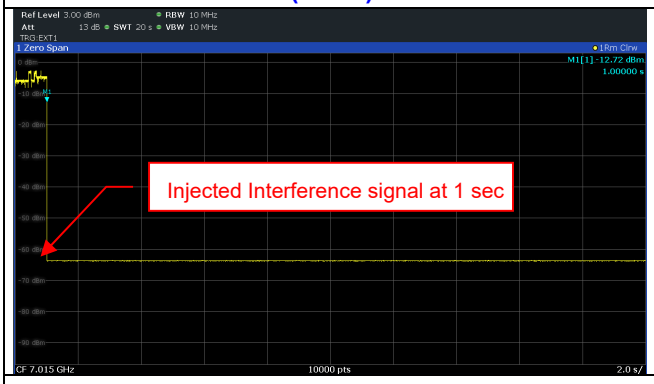
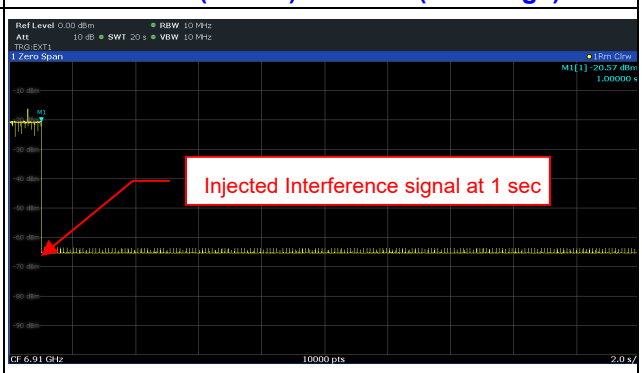
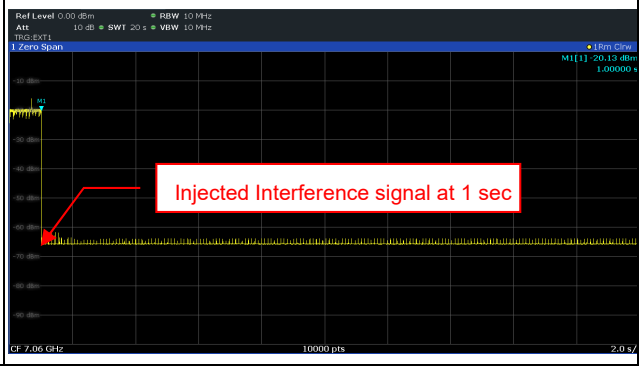
For U-NII-7 band

Plots of EUT Tx waveform	
802.11ax (HE20) / CH 149	**802.11ax (HE160) / CH 143**
	
Plots of Incumbent signal (AWGN) Level	
802.11ax (HE20) / CH 149	**802.11ax (HE160) / CH 143 (Low Edge)**
	
802.11ax (HE160) / CH 143 (Middle)	**802.11ax (HE160) / CH 143 (High Edge)**
	

Plots of EUT ceased transmission in the time domain	
802.11ax (HE20) / CH 149	**802.11ax (HE160) / CH 143 (Low Edge)**
	
802.11ax (HE160) / CH 143 (Middle)	**802.11ax (HE160) / CH 143 (High Edge)**
	

For U-NII-8 band

Plots of EUT Tx waveform	
802.11ax (HE20) / CH 213	**802.11ax (HE160) / CH 207**
	
Plots of Incumbent signal (AWGN) Level	
802.11ax (HE20) / CH 213	**802.11ax (HE160) / CH 207 (Low Edge)**
	
802.11ax (HE160) / CH 207 (Middle)	**802.11ax (HE160) / CH 207 (High Edge)**
	

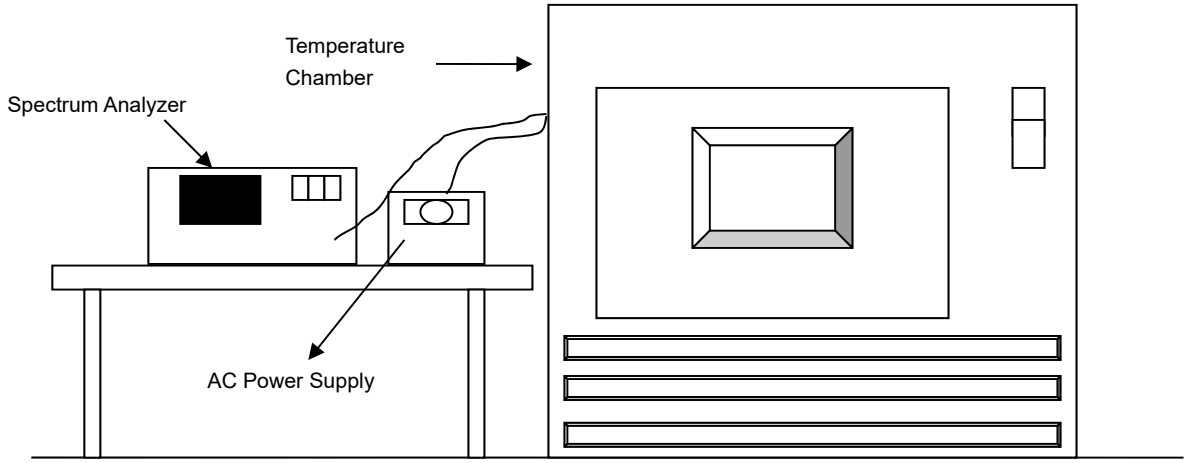
Plots of EUT ceased transmission in the time domain	
802.11ax (HE20) / CH 213	**802.11ax (HE160) / CH 207 (Low Edge)**
	
802.11ax (HE160) / CH 207 (Middle)	**802.11ax (HE160) / CH 207 (High Edge)**
	

4.8 Frequency Stability Measurement

4.8.1 Limits of Frequency Stability Measurement

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

4.8.2 Test Setup



4.8.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 15, 2021	Sep. 14, 2022
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	May 30, 2022	May 29, 2023
Three-phase coupling / decoupling network TESEQ	CDN 3063	4006	Mar. 08, 2022	Mar. 07, 2023
AC Power Supply Extech	CFW-105	E000603	NA	NA

Note: 4. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
5. Tested date: Aug. 16, 2022

4.8.4 Test Procedure

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

.

4.8.5 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.8.6 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5955MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
40	120	5954.9939	Pass	5954.9901	Pass	5954.9934	Pass	5954.9936	Pass
30	120	5954.9943	Pass	5954.9975	Pass	5954.9989	Pass	5954.9970	Pass
20	120	5955.0012	Pass	5954.9996	Pass	5955.0020	Pass	5955.0032	Pass
10	120	5955.0000	Pass	5955.0045	Pass	5955.0001	Pass	5955.0010	Pass
5	120	5955.0102	Pass	5955.0130	Pass	5955.0118	Pass	5955.0099	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5955MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5955.0115	Pass	5955.0103	Pass	5955.0093	Pass	5955.0134	Pass
	120	5955.0012	Pass	5954.9996	Pass	5955.0020	Pass	5955.0032	Pass
	102	5954.9994	Pass	5955.0030	Pass	5955.0042	Pass	5955.0016	Pass

4.9 Operational Restrictions for 6 GHz U-NII Devices

4.9.1 Limits of Operational Restrictions for 6 GHz U-NII Devices

(1) Operation of indoor access points in the 5.925-7.125 GHz band is prohibited on oil platforms, cars, trains, boats, and aircraft, except that indoor access points are permitted to operate in the 5.925-6.425 GHz bands in large aircraft while flying above 10,000 feet.
(2) Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.
(3) Transmitters operating under indoor access points are limited to indoor locations.
(4) In the 5.925-7.125 GHz band, indoor access points must bear the following statement in a conspicuous location on the device and in the user's manual: FCC regulations restrict operation of this device to indoor use only. The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.
(5) In the 5.925-7.125 GHz band, Access points may connect to other access points or subordinate devices.
(6) Indoor access points, operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

4.9.2 Test Setup

N/A

4.9.3 Test Instruments

N/A

4.9.4 Test Procedure

N/A.

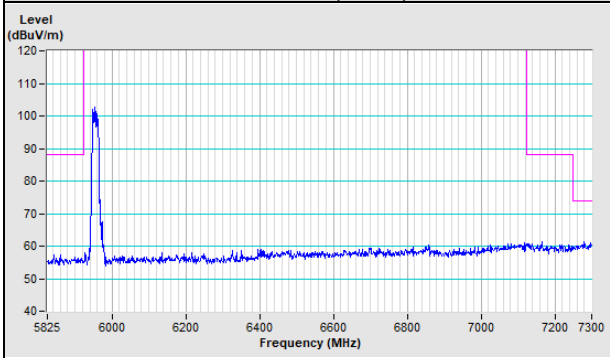
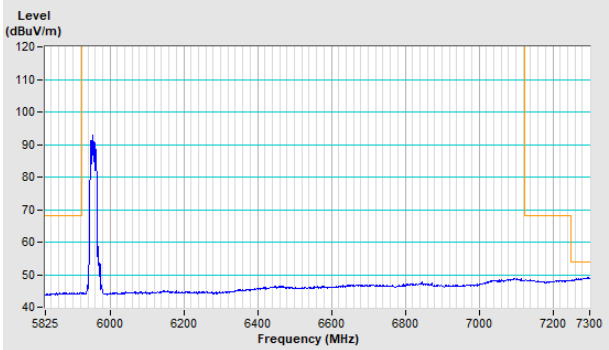
4.9.5 Test Results

Device is an Indoor AP, subordinate modes all restrictions are meet the §15.407 (d) requirements. Please refer to the Attestation letter exhibit supplied within this application.

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Annex A - Band-Edge Measurement

<table>
<tr><th colspan="2">802.11ax (HE20) Channel 1</th></tr>
<tr><th>Horizontal (Peak)</th><th>Horizontal (Average)</th></tr>
<tr><td> 
</td><td> 
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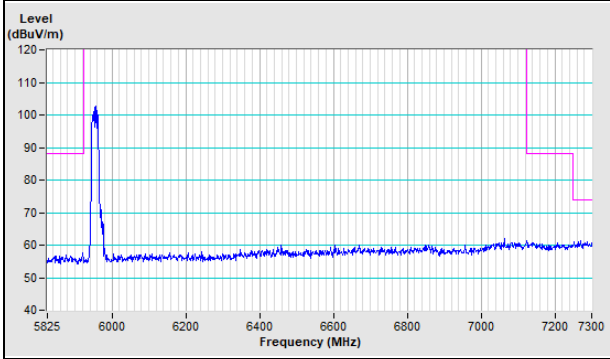
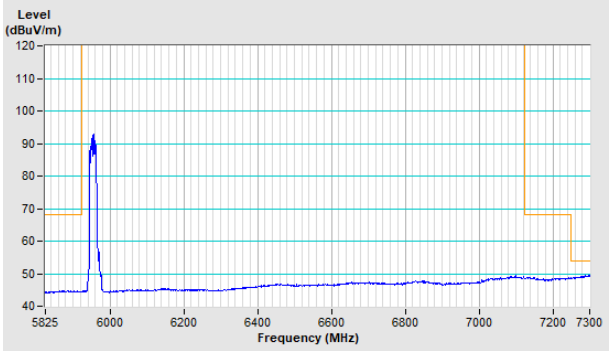
<tr><td> 
</td><td> 
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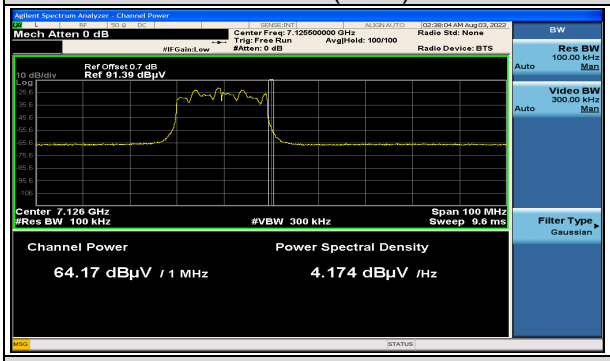
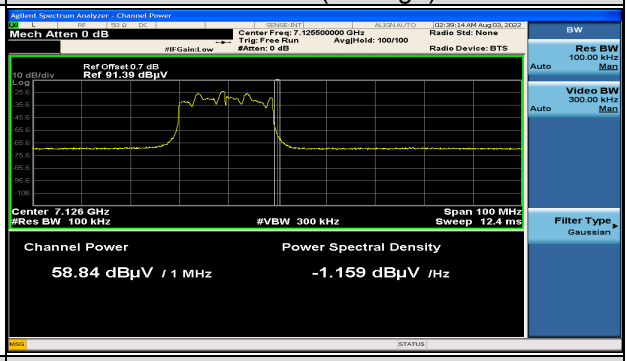
<tr><th colspan="2">802.11ax (HE20) Channel 233</th></tr>
<tr><th>Horizontal (Peak)</th><th>Horizontal (Average)</th></tr>
<tr><td> 
</td><td> 
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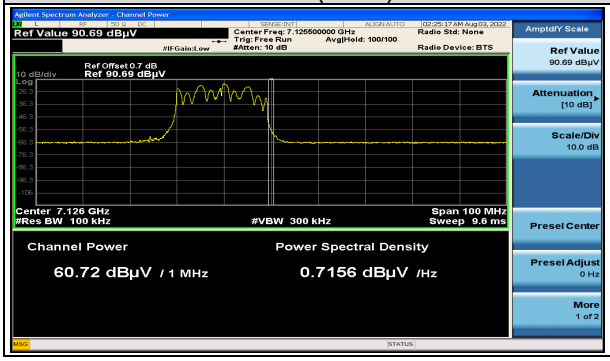
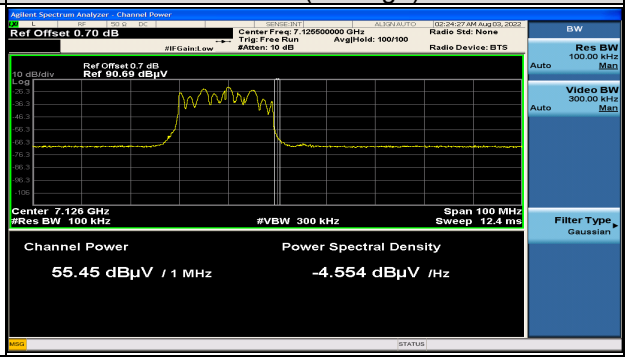
<tr><th>Vertical (Peak)</th><th>Vertical (Average)</th></tr>
<tr><td> 
</td><td> 
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802.11ax (HE40) Channel 3	
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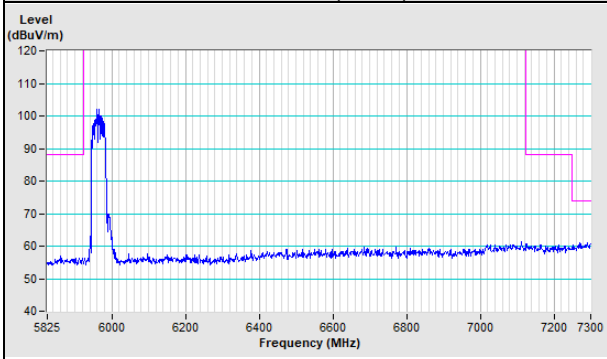
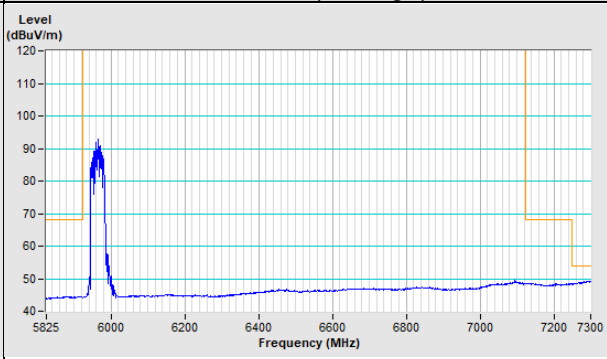
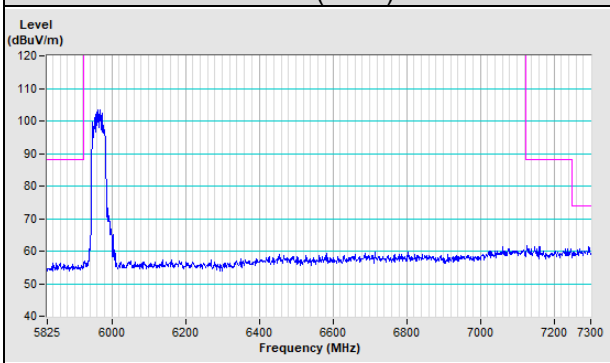
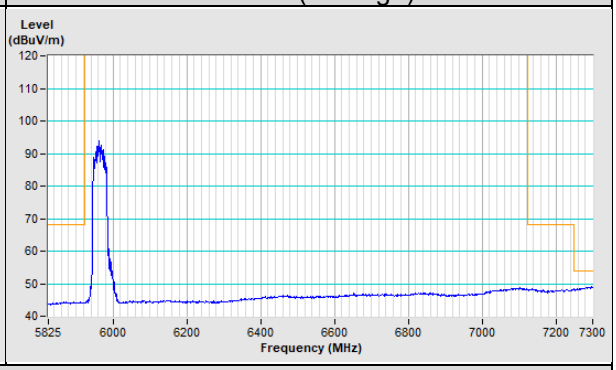
	
Vertical (Peak)	Vertical (Average)
	
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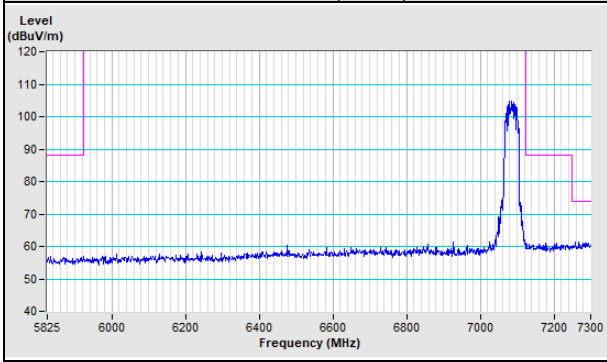
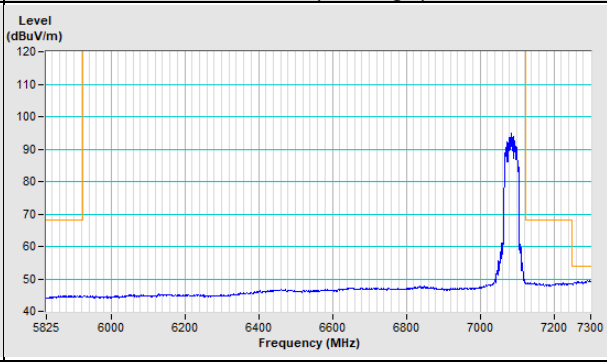
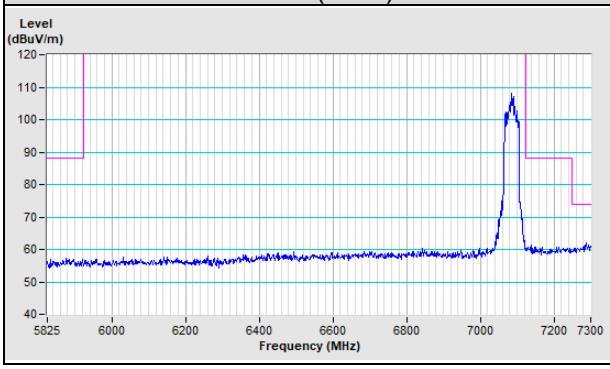
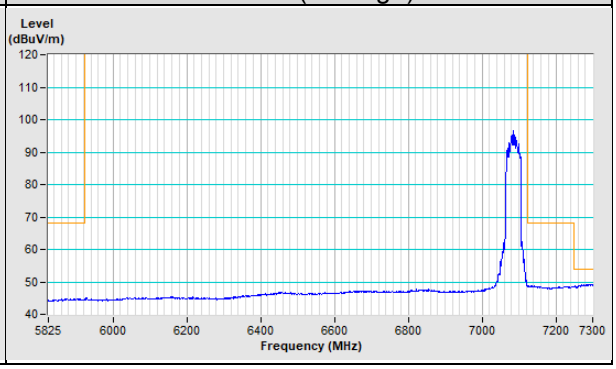
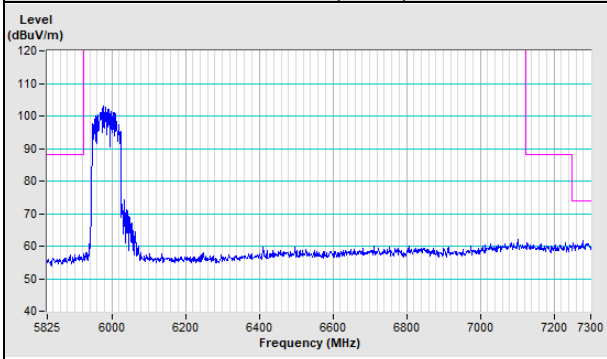
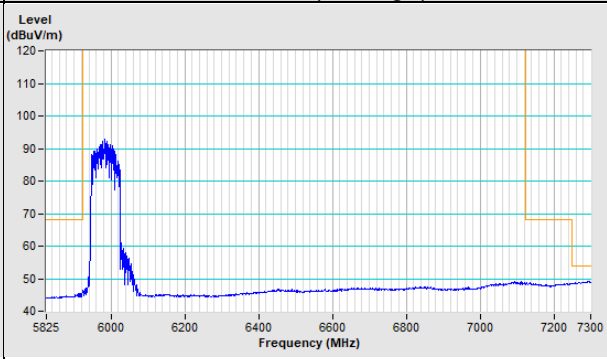
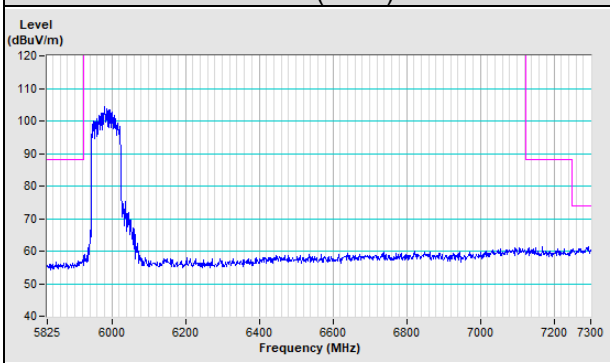
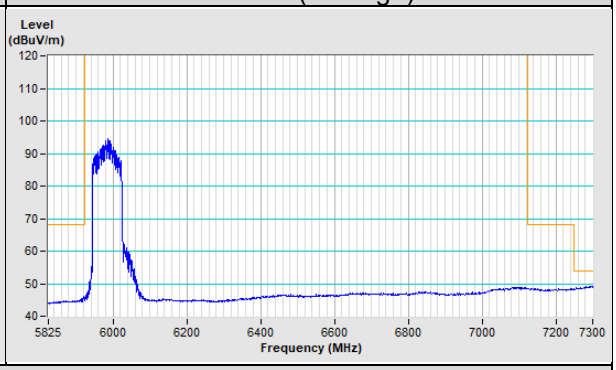
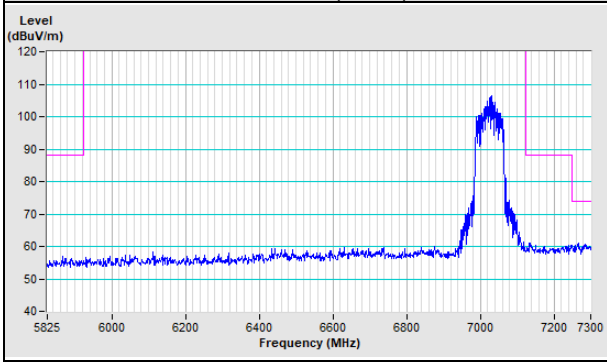
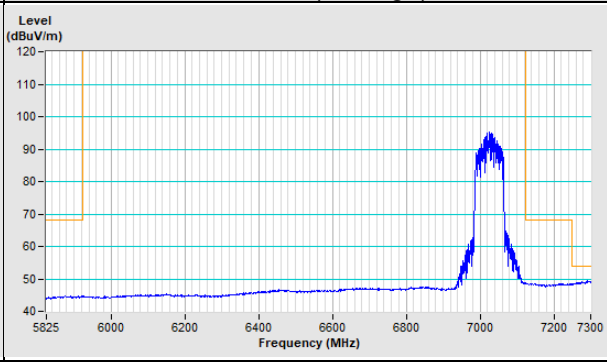
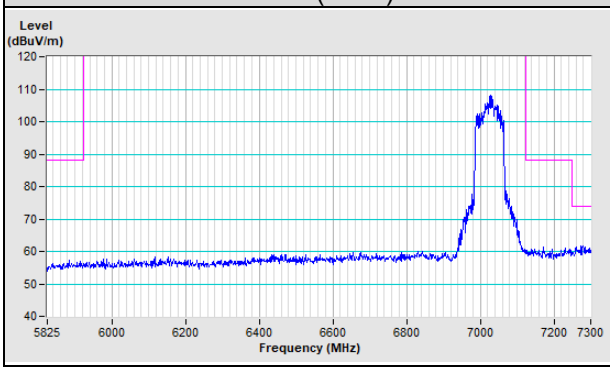
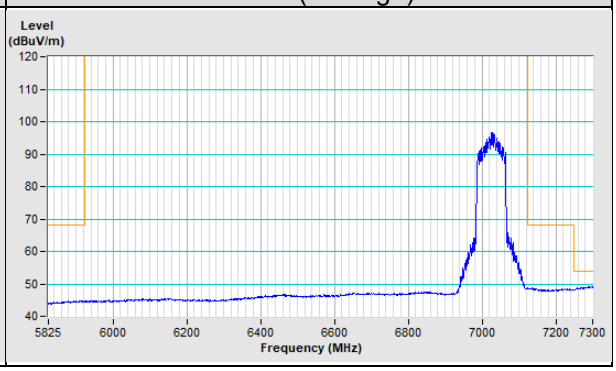
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ax (HE80) Channel 7	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ax (HE80) Channel 215	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ax (HE160) Channel 15	
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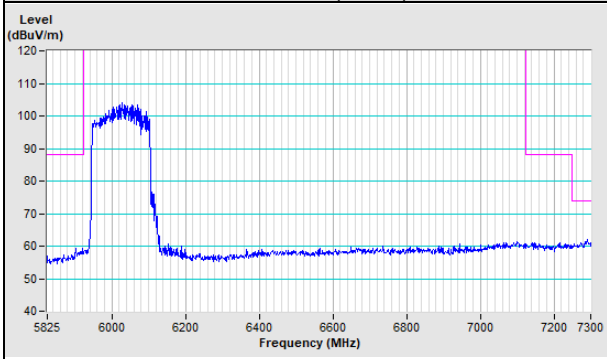	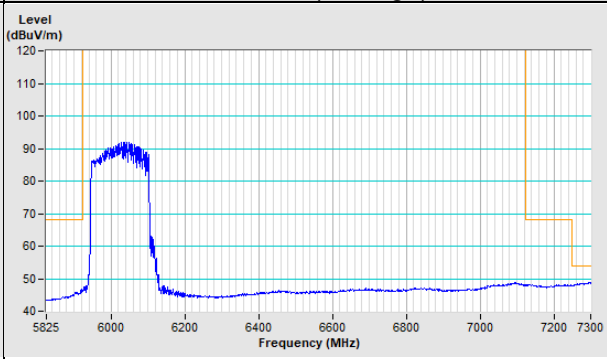
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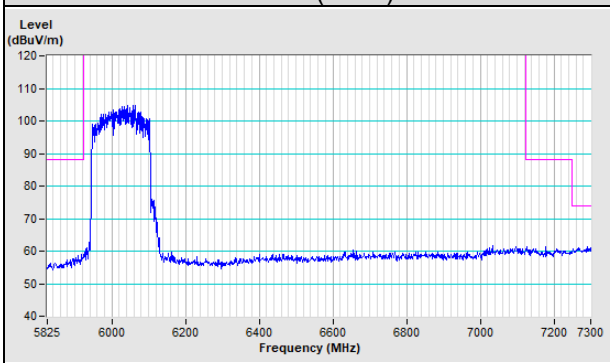
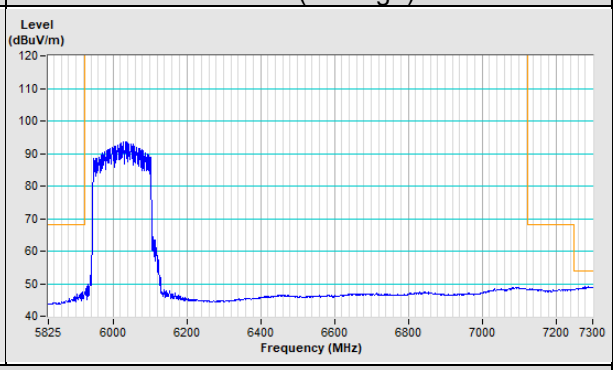
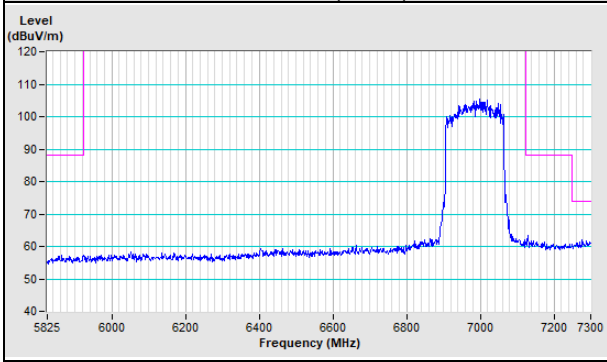
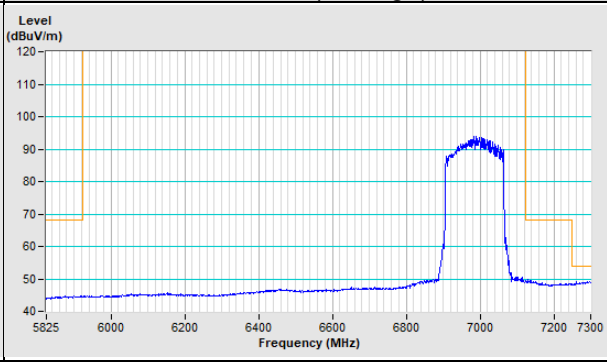
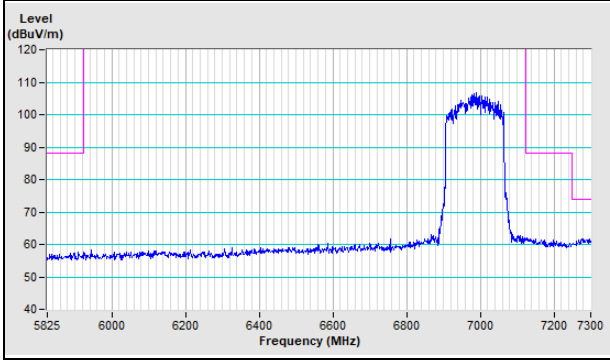
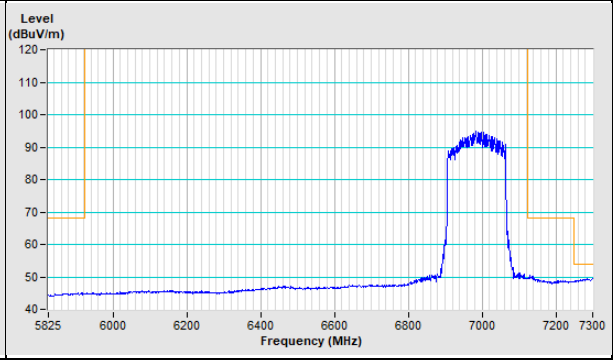
	
802.11ax (HE160) Channel 207	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

Appendix A– 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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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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