TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBEIH-WTW-P24070284-5
FCC ID:	P27XER10
Product:	Comcast Xfinity WiFi 7 Tri-band Router
Brand:	Comcast, Rogers, Cox, Sky
Model No.:	XER10
Series Model:	XER10xxxxxxxx, SCER11BELxxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)
Received Date:	2024/7/10
Test Date:	2024/7/26 ~ 2025/2/3
Issued Date:	2025/3/5
Applicant:	Sercomm Corporation
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FCC Registration / Designation Number:	Test Location: 198487 / TW2021 for Test Location(1) 788550 / TW0003 for Test Location(2) 281270 / TW0032 for Test Location(3)

Approved by: Jeremy Lin , **Date:** 2025/3/5

Jeremy Lin / Project Engineer

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Prepared by : Annie Chang / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEIH-WTW-P24070284-5	Original release.	2025/3/5

1 Certificate

Product:	Comcast Xfinity WiFi 7 Tri-band Router
Brand:	Comcast, Rogers, Cox, Sky
Test Model:	XER10
Series Model:	XER10xxxxxxxx, SCER11BELxxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)
Sample Status:	Engineering sample
Applicant:	Sercomm Corporation
Test Date:	2024/7/26 ~ 2025/2/3
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 987594 D02 U-NII 6 GHz EMC Measurement v03 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(5)	Maximum RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(5)	Maximum Power Spectral Density	Pass	Meet the requirement of limit.
15.407(a)(11)	Emission Bandwidth	Pass	Meet the requirement of limit.
---	Occupied Bandwidth	-	Reference only.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -10.94 dB at 0.16564 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -7.1 dB at 358.83 MHz
15.407(b)(6) 15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 5925.00 and 7250.00 MHz
15.407(b)(7)	In-Band Emission Mask	Pass	Meet the requirement of limit.
15.407(d)(6)	Contention-based Protocol	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

Notes:

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Maximum RF Output Power	-	1.1 dB
Maximum Power Spectral Density	-	1.3 dB
Occupied Bandwidth	-	960 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 dB

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

2.2 Supplementary Information

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

3 General Information

3.1 General Description of EUT

Product	Comcast Xfinity WiFi 7 Tri-band Router
Brand	Comcast, Rogers, Cox, Sky
Test Model	XER10
Series Model	XER10xxxxxxxx, SCER11BELxxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)
Model Difference	Marketing Differentiation
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from Adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	Up to 4803.9 Mbps Up to 11528 Mbps (802.11be)
Operating Frequency	5.955 GHz ~ 6.415 GHz, 6.425 GHz ~ 6.525 GHz, 6.535 GHz ~ 6.865 GHz, 6.875 GHz ~ 7.115 GHz
Number of Channel	802.11a, 802.11ax (HE20), 802.11be (EHT20):59 802.11ax (HE40), 802.11be (EHT40):29 802.11ax (HE80), 802.11be (EHT80):14 802.11ax (HE160), 802.11be (EHT160):7 802.11be (EHT320):6
Output Power	5.955 GHz ~ 6.415 GHz : EIRP: 831.764 mW (29.2 dBm) 6.425 GHz ~ 6.525 GHz : EIRP: 849.18 mW (29.29 dBm) 6.535 GHz ~ 6.865 GHz : EIRP: 843.335 mW (29.26 dBm) 6.875 GHz ~ 7.115 GHz : EIRP: 605.341 mW (27.82 dBm)
Equipment Class	6ID: 15E 6 GHz Low-power indoor access point

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter 1	LEADER	ML55-3120460-A1	AC I/P: 100-120V, 50/60Hz, 1.5A DC O/P: 12.0V, 4.6A Non-shielded DC cable (1.8m)
AC Adapter 2	Netbit	NBC56B120460VU	AC I/P: 120V, 60Hz, 1.5A DC O/P: 12.0V, 4.6A Non-shielded DC cable (1.8m)

2. There are Bluetooth, Zigbee, Matter and WLAN (2.4 GHz & 5 GH & 6GHz) technology used for the EUT.
3. Simultaneously transmission combination.

Combination	Technology		
1	WLAN (2.4 GHz)	WLAN (5 GHz)	WLAN (6 GHz)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
5	Chain 0	Sercomm	61720040WA	4.3	5.925~7.125	Dipole	ipex(MHF)
6	Chain 1	Sercomm	61720041WA	3.6	5.925~7.125	Dipole	ipex(MHF)
7	Chain 2	Sercomm	61720042WA	4.5	5.925~7.125	Dipole	ipex(MHF)
8	Chain 3	Sercomm	61720043WA	4.2	5.925~7.125	Dipole	ipex(MHF)

Frequency Range (GHz)	Min. Antenna Gain (dBi)
5.925~7.125	3.0

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

2. The EUT incorporates a MIMO function:

6 GHz Band			
Modulation Mode	Beamforming Mode	Tx & Rx Configuration	
802.11a	Not Support	4TX	4RX
802.11ax (HE20)	Support	4TX	4RX
802.11ax (HE40)	Support	4TX	4RX
802.11ax (HE80)	Support	4TX	4RX
802.11ax (HE160)	Support	4TX	4RX
802.11be (EHT20)	Support	4TX	4RX
802.11be (EHT40)	Support	4TX	4RX
802.11be (EHT80)	Support	4TX	4RX
802.11be (EHT160)	Support	4TX	4RX
802.11be (EHT320)	Support	4TX	4RX

Note:
1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160MHz), and 802.11be mode for 20 MHz (40 MHz, 80 MHz, 160MHz, 320MHz), therefore the manufacturer will control the power for 802.11ax mode is the same as the 802.11be or lower than it and investigated worst case to representative mode in test report.
4. The EUT device modulation technique OFDMA does not support partial RUs (resource units) and channel puncturing/bandwidth reduction mechanisms.

3.3 Channel List

U-NII-5:

24 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

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), 802.11be (EHT40):

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

6 channels are provided for 802.11ax (HE80), 802.11be (EHT80):

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), 802.11be (EHT160):

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

2 channels are provided for 802.11be (EHT320):

Channel	Frequency	Channel	Frequency
31	6105 MHz	63	6265 MHz

U-NII-6:

5 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

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), 802.11be (EHT40):

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

1 channel is provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency
103	6465 MHz

1 channel is provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency
*111	6505 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
*95	6425 MHz

U-NII-7:

17 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

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						

8 channels are provided for 802.11ax (HE40), 802.11be (EHT40):

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

5 channels are provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
*119	6545 MHz	135	6625 MHz	151	6705 MHz	167	6785 MHz
*183	6865 MHz						

2 channels are provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency	Channel	Frequency
143	6665 MHz	*175	6825 MHz

2 channels are provided for 802.11be (EHT320):

Channel	Frequency	Channel	Frequency
*127	6585 MHz	*159	6745 MHz

U-NII-8:

13 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
185	6875 MHz	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						

6 channels are provided for 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
187	6885 MHz	195	6925 MHz	203	6965 MHz	211	7005 MHz
219	7045 MHz	227	7085 MHz				

2 channels are provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency
199	6945 MHz	215	7025 MHz

1 channel is provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency
207	6985 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
*191	6905 MHz

Note: * mean these are straddle channels.

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT has Adapter1(LEADER)/ Adapter2(Netbit). Pre-scan these adapter and find the worst case as a representative test condition.
Worst Case:	1. Adapter1(LEADER)/ Adapter2(Netbit) Worst Condition: Adapter1(LEADER).

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

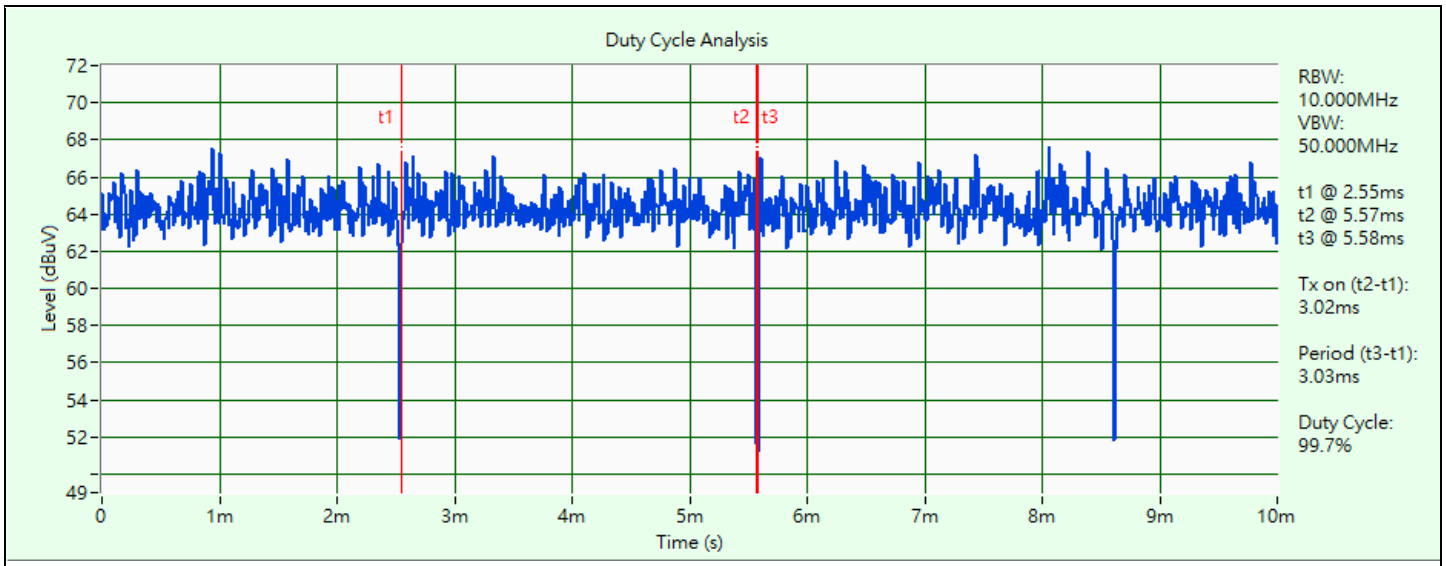
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Maximum RF Output Power	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11ax (HE20)	CDD & Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11ax (HE40)	CDD & Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11ax (HE80)	CDD & Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11ax (HE160)	CDD & Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT20)	CDD & Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	CDD & Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	CDD & Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	CDD & Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	CDD & Beamforming	31, 63, 95, 127, 159, 191	BPSK	MCS0
Maximum Power Spectral Density	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming	31, 63, 95, 127, 159, 191	BPSK	MCS0
Emission Bandwidth	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
	802.11be (EHT40)	Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming	31, 63, 95, 127, 159, 191	BPSK	MCS0
In-Band Emission Mask	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming	31, 63, 95, 127, 159, 191	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming	31, 63, 95, 127, 159, 191	BPSK	MCS0
Contention-based Protocol	802.11be (EHT20)	-	45, 105, 149, 209	BPSK	MCS0
	802.11be (EHT320)	-	31, 95, 159, 191	BPSK	MCS0
AC Power Conducted Emissions	802.11be (EHT320)	Beamforming	95	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11be (EHT320)	Beamforming	95	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	CDD & Beamforming	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0

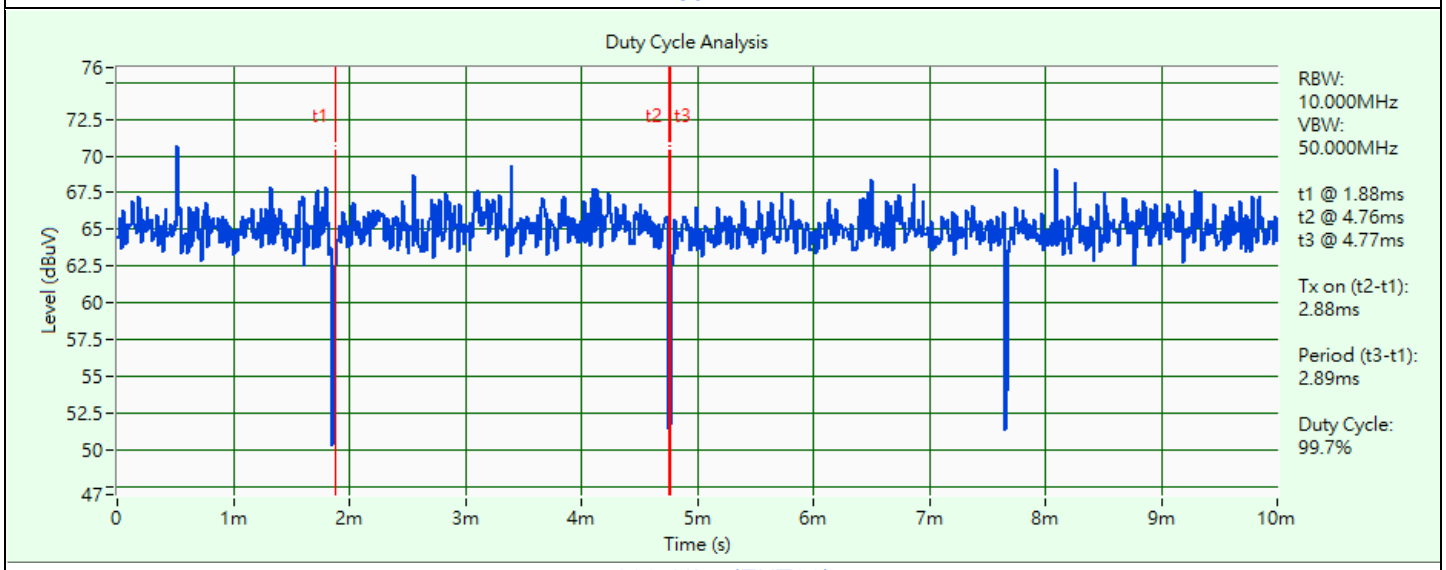
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
	802.11be (EHT40)	CDD & Beamforming	3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	CDD & Beamforming	7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	CDD & Beamforming	15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	CDD & Beamforming	31, 63, 95, 127, 159, 191	BPSK	MCS0
Note: not support channel puncturing.					

3.5 Duty Cycle of Test Signal

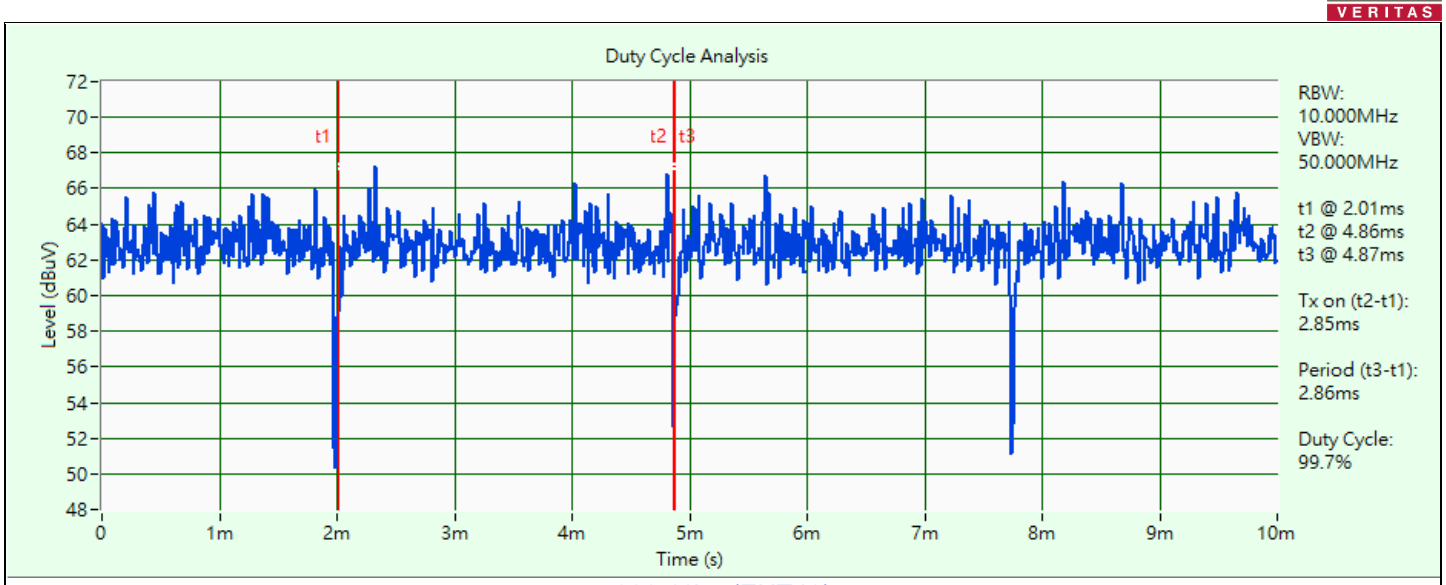
802.11a: Duty cycle = 3.02 ms / 3.03 ms x 100% = 99.7%
802.11be (EHT20): Duty cycle = 2.88 ms / 2.89 ms x 100% = 99.7%
802.11be (EHT40): Duty cycle = 2.85 ms / 2.86 ms x 100% = 99.7%
802.11be (EHT80): Duty cycle = 2.87 ms / 2.89 ms x 100% = 99.3%
802.11be (EHT160): Duty cycle = 2.88 ms / 2.89 ms x 100% = 99.7%
802.11be (EHT320): Duty cycle = 2.87 ms / 2.89 ms x 100% = 99.3%



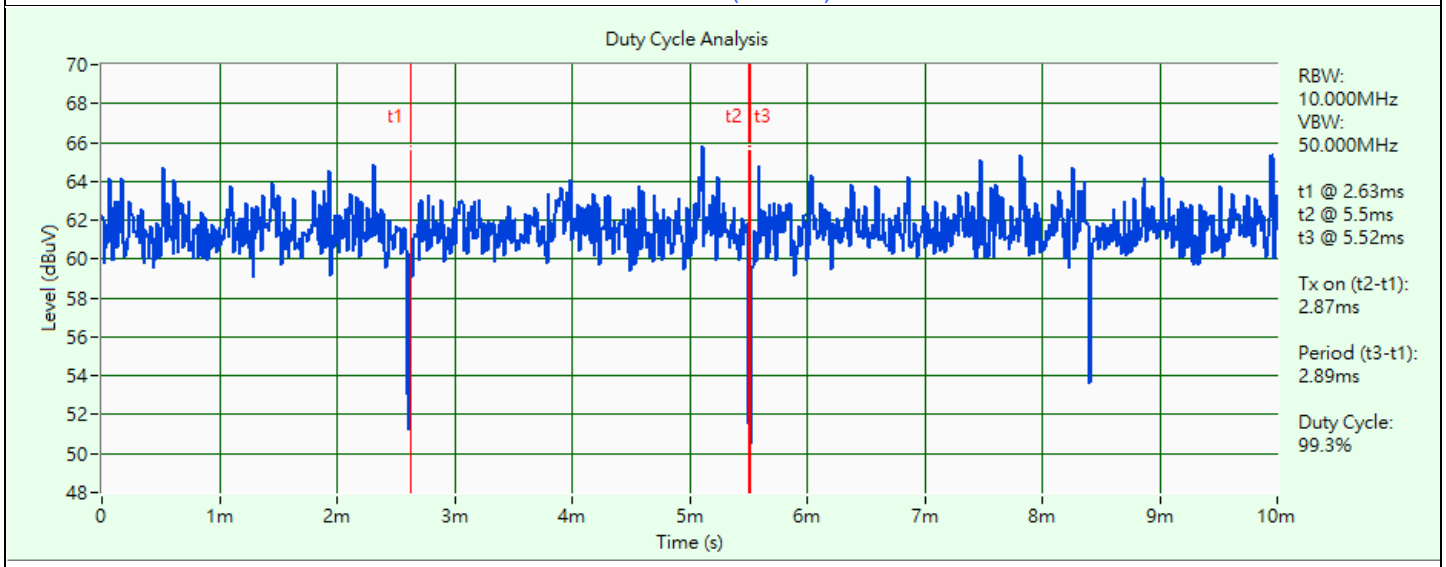
802.11a



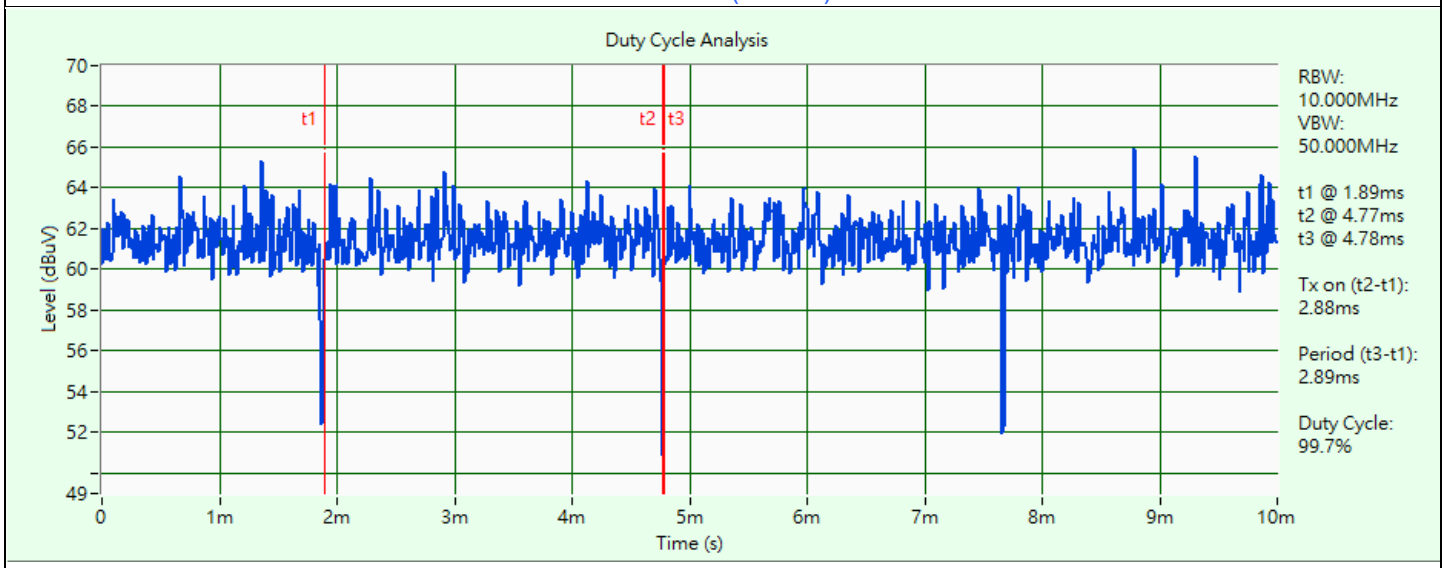
802.11be (EHT20)



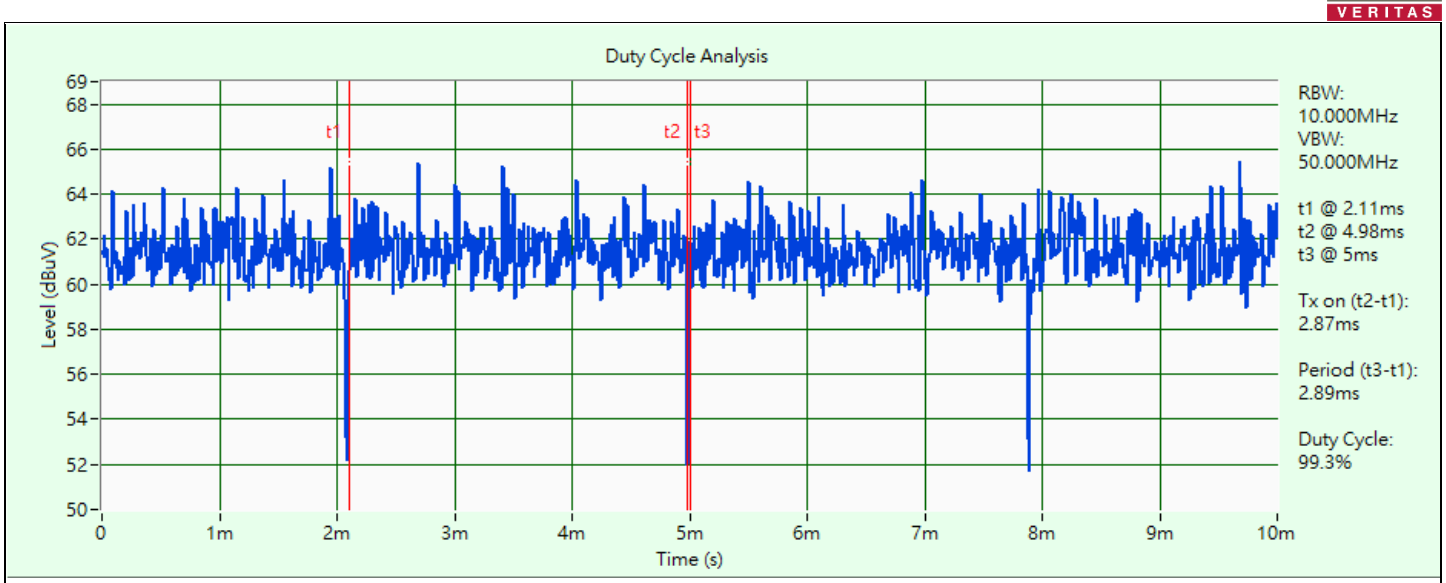
802.11be (EHT40)



802.11be (EHT80)



802.11be (EHT160)



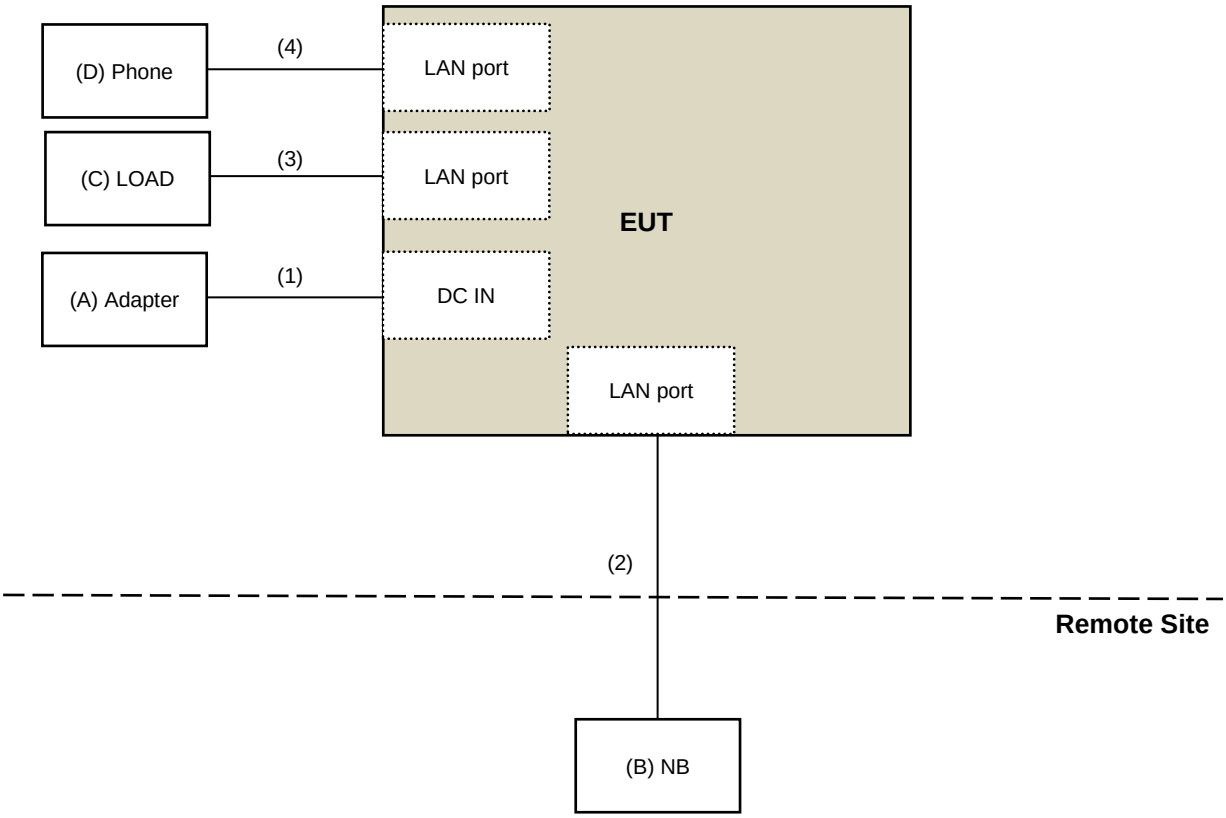
802.11be (EHT320)

3.6 Test Program Used and Operation Descriptions

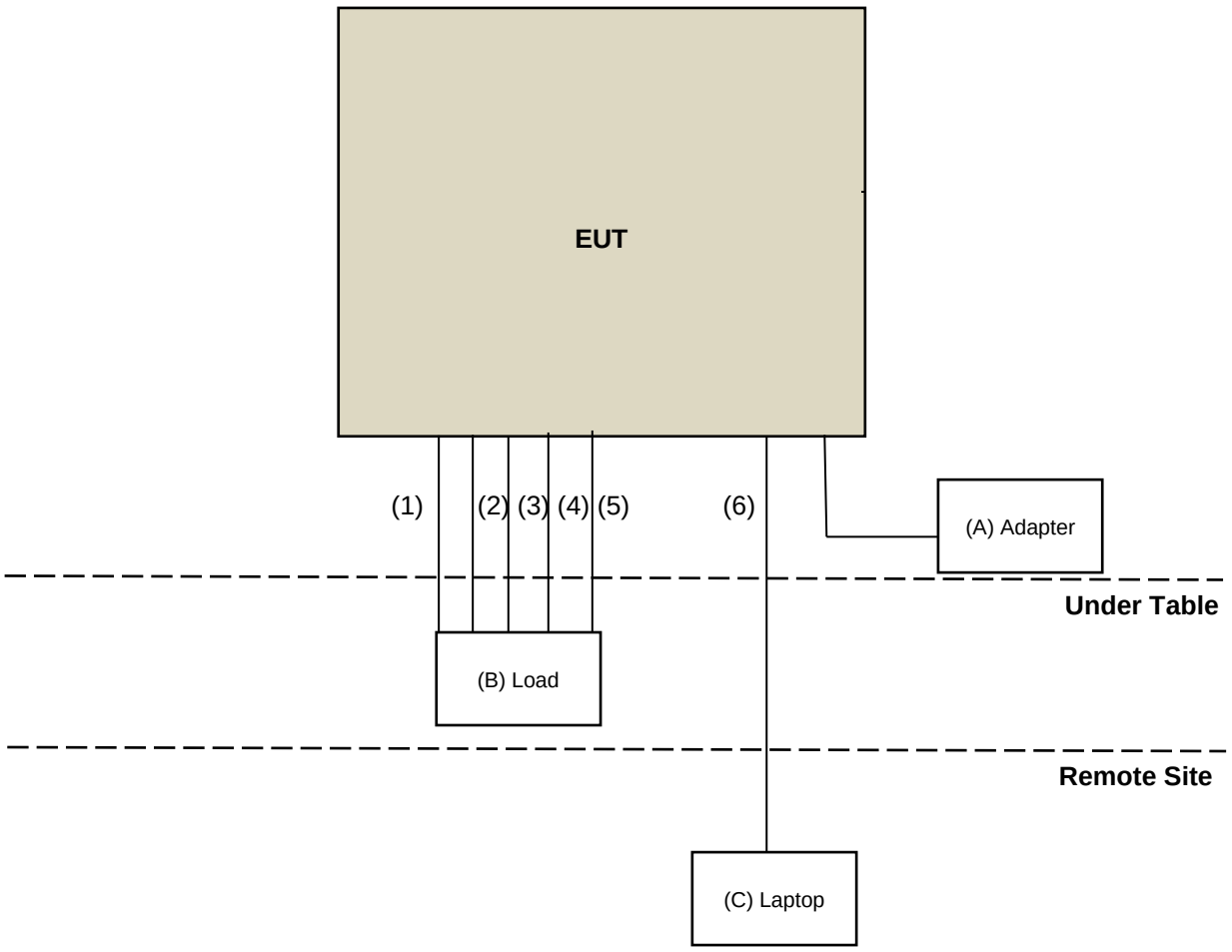
Controlling software (accessMTool 3.3.0.8) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For AC Power Conducted Emissions



For Unwanted Emissions



3.8 Configuration of Peripheral Devices and Cable Connections

For AC Power Conducted Emissions

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	LEADER	ML55-3120460-A1	N/A	N/A	Supplied by applicant
B	NB	DELL	LA65NS2-01	N/A	N/A	Provided by Lab
C	LOAD	BV	BV	N/A	N/A	Provided by Lab
D	Phone	ISit0	IS-333	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Adapter DC cable	1	1.8	N	0	Supplied by applicant
2	LAN cable	1	10	N	0	Provided by Lab
3	LAN cable	4	1.5	N	0	Provided by Lab
4	LAN cable	1	2.17	N	0	Provided by Lab

For Unwanted Emissions

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	LEADER	ML55-3120460-A1	NA	NA	Supplied by applicant
B	Load	N/A	N/A	N/A	NA	Provided by Lab
C	Laptop	Lenovo	L440	R9-0GFJKK	NA	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-11 Cable	1	1.5	NA	0	Provided by Lab
2	RJ-45 Cable	1	1.5	NA	0	Provided by Lab
3	RJ-45 Cable	1	1.5	NA	0	Provided by Lab
4	RJ-45 Cable	1	1.5	NA	0	Provided by Lab
5	RJ-45 Cable	1	1.5	NA	0	Provided by Lab
6	RJ-45 Cable	1	6	NA	0	Provided by Lab

4 Test Instruments

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

4.1 Maximum RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030A	MY54490260	2024/7/17	2025/7/16
Signal Analyzer R&S	FSV40	101042	2024/9/12	2025/9/11
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2025/2/24

4.2 Maximum Power Spectral Density

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

4.3 Emission Bandwidth

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

4.4 In-Band Emission Mask

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

4.5 Occupied Bandwidth

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

4.6 Contention-based Protocol

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/12/28	2024/12/27
MXG Vector Signal Generator Agilent	N5182B	MY53050430	2023/12/4	2024/12/3
MXG Vector Signal Generator Keysight	N5182BU	MY59360189	2023/12/4	2024/12/3
Power Divider Woken	0120A02058001M	DCMD33WIK3	2024/4/29	2025/4/28
		DCMD33WIK7	2024/4/29	2025/4/28

Notes:

1. The test was performed in Adaptivity room.
2. Tested Date: 2024/7/26

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
* Isolation Transformer Erika Fiedler	D-65396	46	2023/4/20	2025/4/19
50 ohm terminal resistance LYNICS	0900510	E1-011484	2024/8/12	2025/8/11
50 ohm terminal resistance SUHNER	65BNC-5001	E1-010773	2024/3/13	2025/3/12
EMI Test Receiver R&S	ESCI	100412	2024/9/3	2025/9/2
Fixed Attenuator STI	STI02-2200-10	NO.1	2024/9/12	2025/9/11
LISN R&S	ENV216	101196	2024/5/22	2025/5/21
		101197	2024/7/11	2025/7/10
LISN Schwarzbeck	NNLK 8121	8121-731	2024/6/12	2025/6/11
		8121-808	2024/4/26	2025/4/25
	NNLK 8129	8129229	2024/6/14	2025/6/13
RF Coaxial Cable PEWC	5D-FB	Cable-CO10-01	2024/2/7	2025/2/6
Software BVADT	Cond_V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. * The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA
2. The test was performed in Linkou Conduction 10.
3. Tested Date: 2024/9/14

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFA-515BSN	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1214	2024/10/15	2025/10/14
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Agilent	N9038A	MY52260177	2024/9/19	2025/9/18
Preamplifier EMCI	EMC330N	980798	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMCCFD400-NM-NM-500	201248	2025/1/14	2026/1/13
	EMCCFD400-NM-NM-3000	201249	2025/1/14	2026/1/13
	EMCCFD400-NM-NM-9000	201251(with PAD)	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208676	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 9.
2. Tested Date: 2025/2/3

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFA-515BSN	N/A	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna RFSPIN	DRH18-E	210104A18E	2024/11/10	2025/11/9
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2024/11/10	2025/11/9
MXE EMI Receiver Agilent	N9038A	MY52260177	2024/9/19	2025/9/18
Preamplifier Agilent	83017A	MY39501357	2024/6/12	2025/6/11
Preamplifier EMCI	EMC184045SE	980788	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2025/1/14	2026/1/13
	EMC101G-KM-KM-3000	201258	2025/1/14	2026/1/13
	EMC101G-KM-KM-5000	201261	2025/1/14	2026/1/13
	EMC104-SM-SM-1000	210103	2025/1/14	2026/1/13
	EMC104-SM-SM-3000	201241	2025/1/14	2026/1/13
	EMC104-SM-SM-9000	201244	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208676	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 9.
2. Tested Date: 2025/1/16 ~ 2025/1/24

5 Limits of Test Items

5.1 Maximum RF Output Power

Operation Band	Equipment Class	Limit
		Maximum Average Power
U-NII-5 U-NII-6 U-NII-7 U-NII-8	6ID: 15E 6 GHz Low-power indoor access point	EIRP 30 dBm

5.2 Maximum Power Spectral Density

Operation Band	Equipment Class	Limit
		Maximum Power Density
U-NII-5 U-NII-6 U-NII-7 U-NII-8	6ID: 15E 6 GHz Low-power indoor access point	EIRP 5 dBm/MHz

5.3 Emission Bandwidth

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

5.4 In-Band Emission Mask

Test Item	Frequencies (MHz)	(X) 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.

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Contention-based Protocol

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

5.7 AC Power Conducted Emissions

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

Notes:

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

5.8 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

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

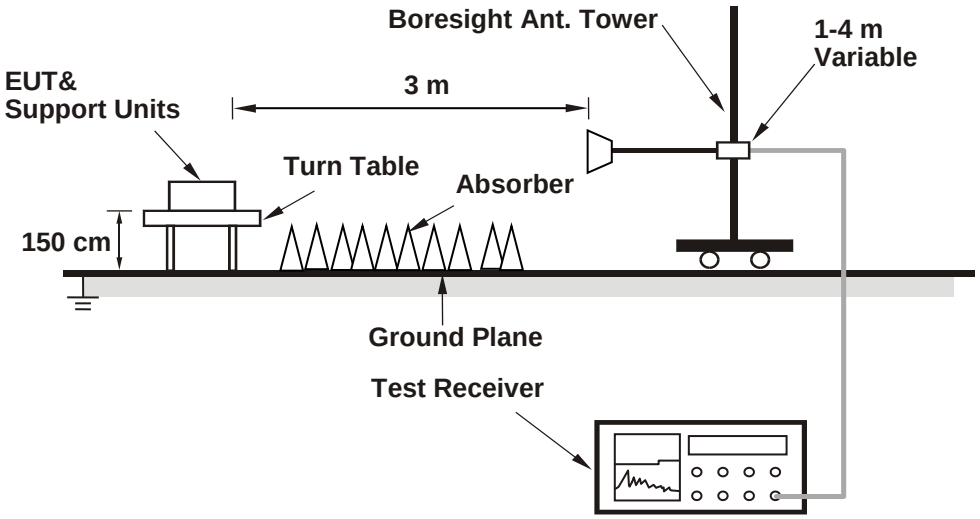
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 Maximum RF Output Power

6.1.1 Test Setup



6.1.2 Test Procedure

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

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP level.

e. Follow ANSI C63.10 section 12.7.3, EIRP Value (dBm) = Field Strength Value (dBuV / m) + Correction Factor @ 3 m.

f. Correction Factor (dB) @ 3 m = 20log(D) – 104.77 = -95.23 dB; where D is the measurement distance @3 m.

Spectrum analyzer setting as below:
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, Detector = RMS

c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)

d. Sweep time = auto, trigger set to “free run”.

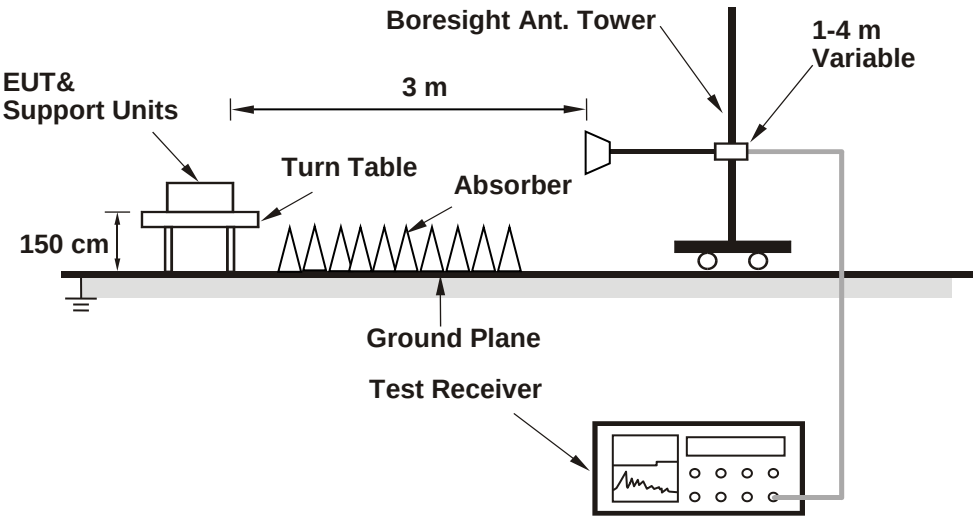
e. Trace average at least 100 traces in power averaging mode.

f. Record the max value

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

6.2 Maximum Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

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

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP level.

e. Follow ANSI C63.10 section 12.7.3, EIRP Value (dBm) = Field Strength Value (dBuV/m) + Correction Factor @ 3 m.

f. Correction Factor (dB) @ 3 m = 20log(D) – 104.77; where D is the measurement distance @3 m = -95.23 dB

Spectrum analyzer setting as below:

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, Detector = RMS

c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)

d. Sweep time = auto, trigger set to “free run”.

e. Trace average at least 100 traces in power averaging mode.

f. Record the max value

Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS

c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)

d. Sweep time = auto, trigger set to “free run”.

e. Add 10 log (1/duty cycle) to spectrum instrument offset.

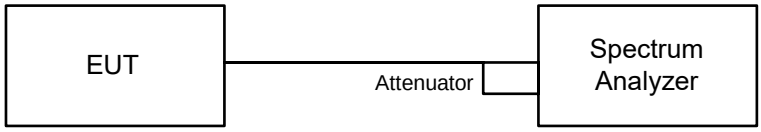
f. Trace average at least 100 traces in power averaging mode.

g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.

h. Record the max value.

6.3 Emission Bandwidth

6.3.1 Test Setup

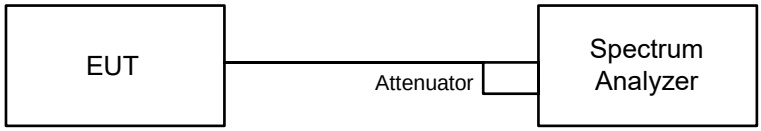


6.3.2 Test Procedure

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

6.4 In-Band Emission Mask

6.4.1 Test Setup

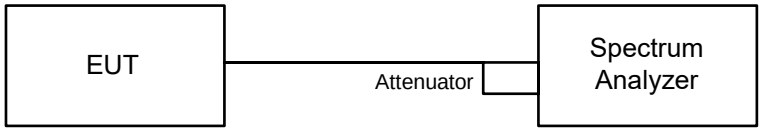


6.4.2 Test Procedure

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

6.5 Occupied Bandwidth

6.5.1 Test Setup

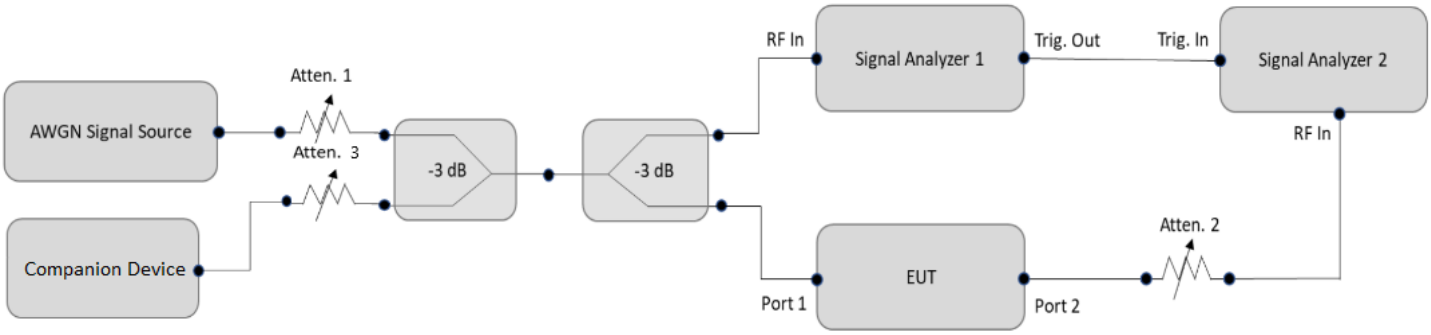


6.5.2 Test Procedure

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

6.6 Contention-based Protocol

6.6.1 Test Setup



6.6.2 Test Procedure

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.

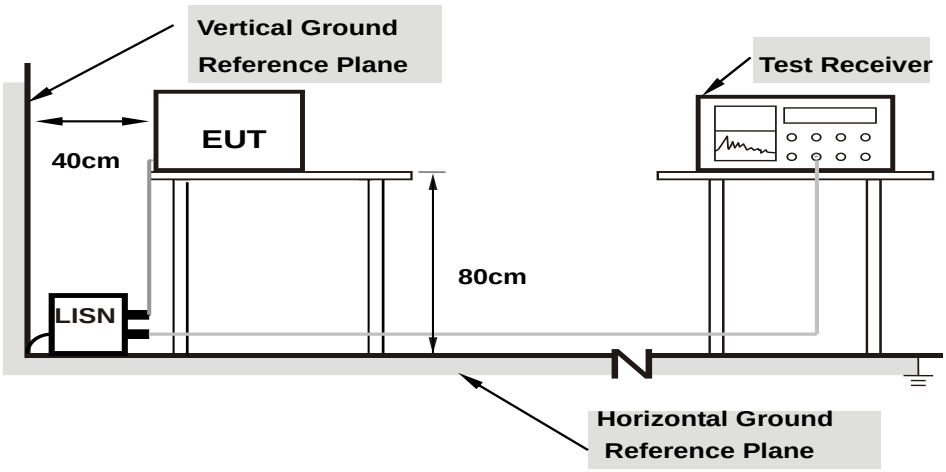
g. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.

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.

6.7 AC Power Conducted Emissions

6.7.1 Test Setup



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

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

6.7.2 Test Procedure

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

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

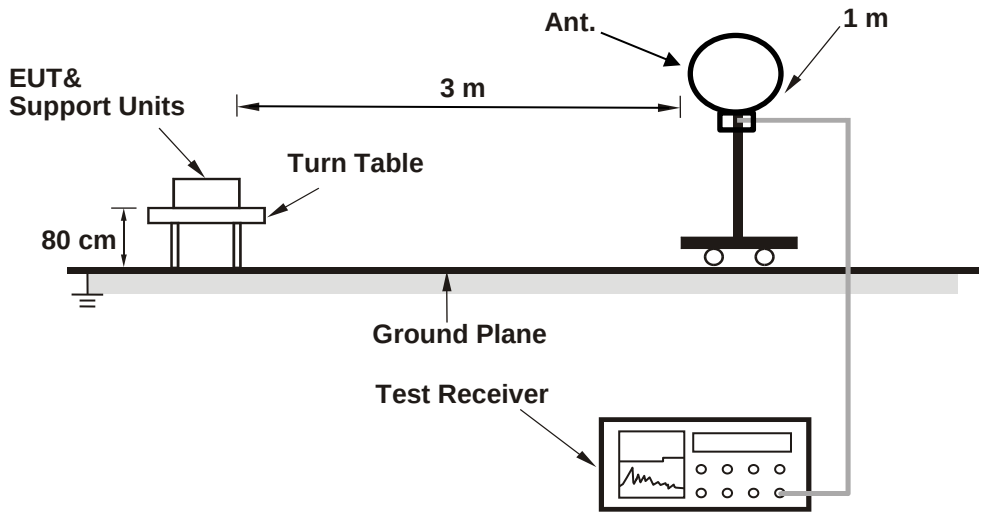
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

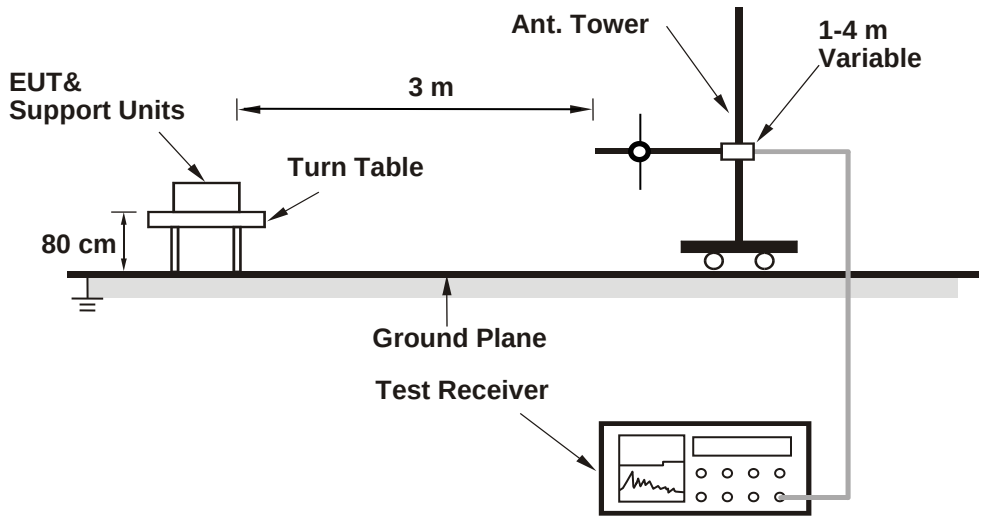
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

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

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

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

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

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

Notes:

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

For Radiated emission above 30 MHz

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

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

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

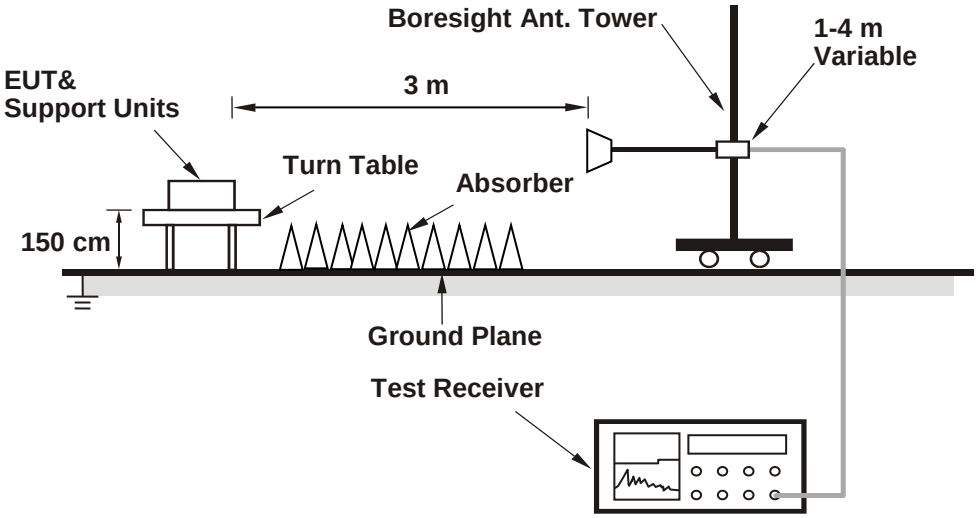
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 Test Procedure

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

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

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

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

Notes:

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

7 Test Results of Test Item

7.1 Maximum RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
1	5955	108.46	-95.23	21.038	13.23	30	Pass
45	6175	108.47	-95.23	21.086	13.24	30	Pass
93	6415	108.52	-95.23	21.33	13.29	30	Pass
97	6435	108.78	-95.23	22.646	13.55	30	Pass
105	6475	108.55	-95.23	21.478	13.32	30	Pass
113	6515	108.47	-95.23	21.086	13.24	30	Pass
117	6535	108.35	-95.23	20.512	13.12	30	Pass
149	6695	108.31	-95.23	20.324	13.08	30	Pass
181	6855	108.51	-95.23	21.281	13.28	30	Pass
185	6875	108.66	-95.23	22.029	13.43	30	Pass
209	6995	108.58	-95.23	21.627	13.35	30	Pass
229	7095	108.67	-95.23	22.08	13.44	30	Pass
233	7115	108.56	-95.23	21.528	13.33	30	Pass

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
1	5955	108.88	-95.23	23.174	13.65	30	Pass
45	6175	108.58	-95.23	21.627	13.35	30	Pass
93	6415	109.22	-95.23	25.061	13.99	30	Pass
97	6435	108.64	-95.23	21.928	13.41	30	Pass
105	6475	108.72	-95.23	22.336	13.49	30	Pass
113	6515	108.80	-95.23	22.751	13.57	30	Pass
117	6535	109.02	-95.23	23.933	13.79	30	Pass
149	6695	108.82	-95.23	22.856	13.59	30	Pass
181	6855	109.10	-95.23	24.378	13.87	30	Pass
185	6875	109.02	-95.23	23.933	13.79	30	Pass
209	6995	108.73	-95.23	22.387	13.50	30	Pass
229	7095	109.03	-95.23	23.988	13.80	30	Pass
233	7115	104.69	-95.23	8.831	9.46	30	Pass

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
3	5965	111.99	-95.23	47.424	16.76	30	Pass
43	6165	111.85	-95.23	45.92	16.62	30	Pass
91	6405	111.84	-95.23	45.814	16.61	30	Pass
99	6445	111.85	-95.23	45.92	16.62	30	Pass
107	6485	112.08	-95.23	48.417	16.85	30	Pass
115	6525	112.19	-95.23	49.659	16.96	30	Pass
123	6565	112.10	-95.23	48.641	16.87	30	Pass
155	6725	112.01	-95.23	47.643	16.78	30	Pass
179	6845	111.81	-95.23	45.499	16.58	30	Pass
187	6885	111.81	-95.23	45.499	16.58	30	Pass
211	7005	111.75	-95.23	44.875	16.52	30	Pass
227	7085	112.03	-95.23	47.863	16.80	30	Pass

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
7	5985	114.81	-95.23	90.782	19.58	30	Pass
39	6145	114.34	-95.23	81.47	19.11	30	Pass
87	6385	114.59	-95.23	86.298	19.36	30	Pass
103	6465	114.42	-95.23	82.985	19.19	30	Pass
119	6545	114.68	-95.23	88.105	19.45	30	Pass
151	6705	114.43	-95.23	83.176	19.20	30	Pass
183	6865	114.50	-95.23	84.528	19.27	30	Pass
199	6945	114.57	-95.23	85.901	19.34	30	Pass
215	7025	114.77	-95.23	89.95	19.54	30	Pass

802.11ax (HE160) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
15	6025	117.18	-95.23	156.675	21.95	30	Pass
47	6185	117.38	-95.23	164.059	22.15	30	Pass
79	6345	118.03	-95.23	190.546	22.80	30	Pass
111	6505	117.72	-95.23	177.419	22.49	30	Pass
143	6665	117.37	-95.23	163.682	22.14	30	Pass
175	6825	117.33	-95.23	162.181	22.10	30	Pass
207	6985	117.44	-95.23	166.341	22.21	30	Pass

802.11be (EHT20) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
1	5955	108.95	-95.23	23.55	13.72	30	Pass
45	6175	108.62	-95.23	21.827	13.39	30	Pass
93	6415	109.28	-95.23	25.41	14.05	30	Pass
97	6435	108.75	-95.23	22.491	13.52	30	Pass
105	6475	108.81	-95.23	22.803	13.58	30	Pass
113	6515	108.89	-95.23	23.227	13.66	30	Pass
117	6535	109.12	-95.23	24.491	13.89	30	Pass
149	6695	108.85	-95.23	23.014	13.62	30	Pass
181	6855	109.16	-95.23	24.717	13.93	30	Pass
185	6875	109.17	-95.23	24.774	13.94	30	Pass
209	6995	108.78	-95.23	22.646	13.55	30	Pass
229	7095	109.15	-95.23	24.66	13.92	30	Pass
233	7115	104.83	-95.23	9.12	9.60	30	Pass

802.11be (EHT40) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
3	5965	112.02	-95.23	47.753	16.79	30	Pass
43	6165	111.94	-95.23	46.881	16.71	30	Pass
91	6405	111.97	-95.23	47.206	16.74	30	Pass
99	6445	111.96	-95.23	47.098	16.73	30	Pass
107	6485	112.21	-95.23	49.888	16.98	30	Pass
115	6525	112.34	-95.23	51.404	17.11	30	Pass
123	6565	112.16	-95.23	49.317	16.93	30	Pass
155	6725	112.07	-95.23	48.306	16.84	30	Pass
179	6845	111.87	-95.23	46.132	16.64	30	Pass
187	6885	111.92	-95.23	46.666	16.69	30	Pass
211	7005	111.85	-95.23	45.92	16.62	30	Pass
227	7085	112.11	-95.23	48.753	16.88	30	Pass

802.11be (EHT80) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
7	5985	114.85	-95.23	91.622	19.62	30	Pass
39	6145	114.48	-95.23	84.14	19.25	30	Pass
87	6385	114.62	-95.23	86.896	19.39	30	Pass
103	6465	114.55	-95.23	85.507	19.32	30	Pass
119	6545	114.71	-95.23	88.716	19.48	30	Pass
151	6705	114.56	-95.23	85.704	19.33	30	Pass
183	6865	114.61	-95.23	86.696	19.38	30	Pass
199	6945	114.66	-95.23	87.7	19.43	30	Pass
215	7025	114.82	-95.23	90.991	19.59	30	Pass

802.11be (EHT160) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
15	6025	117.23	-95.23	158.489	22.00	30	Pass
47	6185	117.51	-95.23	169.044	22.28	30	Pass
79	6345	118.08	-95.23	192.752	22.85	30	Pass
111	6505	117.85	-95.23	182.81	22.62	30	Pass
143	6665	117.45	-95.23	166.725	22.22	30	Pass
175	6825	117.47	-95.23	167.494	22.24	30	Pass
207	6985	117.52	-95.23	169.434	22.29	30	Pass

802.11be (EHT320) CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
31	6105	120.25	-95.23	317.687	25.02	30	Pass
63	6265	120.85	-95.23	364.754	25.62	30	Pass
95	6425	120.95	-95.23	373.25	25.72	30	Pass
127	6585	120.71	-95.23	353.183	25.48	30	Pass
159	6745	120.31	-95.23	322.107	25.08	30	Pass
191	6905	118.92	-95.23	233.884	23.69	30	Pass

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
1	5955	113.78	-95.23	71.614	18.55	30	Pass
45	6175	113.69	-95.23	70.146	18.46	30	Pass
93	6415	113.69	-95.23	70.146	18.46	30	Pass
97	6435	113.82	-95.23	72.277	18.59	30	Pass
105	6475	113.61	-95.23	68.865	18.38	30	Pass
113	6515	113.42	-95.23	65.917	18.19	30	Pass
117	6535	113.45	-95.23	66.374	18.22	30	Pass
149	6695	113.79	-95.23	71.779	18.56	30	Pass
181	6855	113.72	-95.23	70.632	18.49	30	Pass
185	6875	113.66	-95.23	69.663	18.43	30	Pass
209	6995	113.80	-95.23	71.945	18.57	30	Pass
229	7095	113.69	-95.23	70.146	18.46	30	Pass
233	7115	111.14	-95.23	38.994	15.91	30	Pass

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
3	5965	115.53	-95.23	107.152	20.30	30	Pass
43	6165	115.62	-95.23	109.396	20.39	30	Pass
91	6405	115.60	-95.23	108.893	20.37	30	Pass
99	6445	115.87	-95.23	115.878	20.64	30	Pass
107	6485	116.11	-95.23	122.462	20.88	30	Pass
115	6525	115.66	-95.23	110.408	20.43	30	Pass
123	6565	115.94	-95.23	117.761	20.71	30	Pass
155	6725	115.77	-95.23	113.24	20.54	30	Pass
179	6845	116.04	-95.23	120.504	20.81	30	Pass
187	6885	116.10	-95.23	122.18	20.87	30	Pass
211	7005	115.90	-95.23	116.681	20.67	30	Pass
227	7085	115.84	-95.23	115.08	20.61	30	Pass

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
7	5985	119.03	-95.23	239.883	23.80	30	Pass
39	6145	118.60	-95.23	217.27	23.37	30	Pass
87	6385	118.68	-95.23	221.309	23.45	30	Pass
103	6465	118.88	-95.23	231.739	23.65	30	Pass
119	6545	119.15	-95.23	246.604	23.92	30	Pass
151	6705	118.74	-95.23	224.388	23.51	30	Pass
183	6865	119.09	-95.23	243.22	23.86	30	Pass
199	6945	119.10	-95.23	243.781	23.87	30	Pass
215	7025	118.58	-95.23	216.272	23.35	30	Pass

802.11ax (HE160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
15	6025	121.12	-95.23	388.15	25.89	30	Pass
47	6185	121.18	-95.23	393.55	25.95	30	Pass
79	6345	121.23	-95.23	398.107	26.00	30	Pass
111	6505	121.66	-95.23	439.542	26.43	30	Pass
143	6665	121.23	-95.23	398.107	26.00	30	Pass
175	6825	121.37	-95.23	411.15	26.14	30	Pass
207	6985	121.64	-95.23	437.522	26.41	30	Pass

802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
1	5955	113.87	-95.23	73.114	18.64	30	Pass
45	6175	113.82	-95.23	72.277	18.59	30	Pass
93	6415	113.72	-95.23	70.632	18.49	30	Pass
97	6435	113.85	-95.23	72.778	18.62	30	Pass
105	6475	113.75	-95.23	71.121	18.52	30	Pass
113	6515	113.55	-95.23	67.92	18.32	30	Pass
117	6535	113.47	-95.23	66.681	18.24	30	Pass
149	6695	113.81	-95.23	72.111	18.58	30	Pass
181	6855	113.79	-95.23	71.779	18.56	30	Pass
185	6875	113.75	-95.23	71.121	18.52	30	Pass
209	6995	113.85	-95.23	72.778	18.62	30	Pass
229	7095	113.72	-95.23	70.632	18.49	30	Pass
233	7115	111.29	-95.23	40.365	16.06	30	Pass

802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
3	5965	115.67	-95.23	110.662	20.44	30	Pass
43	6165	115.72	-95.23	111.944	20.49	30	Pass
91	6405	115.65	-95.23	110.154	20.42	30	Pass
99	6445	115.92	-95.23	117.22	20.69	30	Pass
107	6485	116.15	-95.23	123.595	20.92	30	Pass
115	6525	115.79	-95.23	113.763	20.56	30	Pass
123	6565	116.02	-95.23	119.95	20.79	30	Pass
155	6725	115.82	-95.23	114.551	20.59	30	Pass
179	6845	116.12	-95.23	122.744	20.89	30	Pass
187	6885	116.11	-95.23	122.462	20.88	30	Pass
211	7005	115.95	-95.23	118.032	20.72	30	Pass
227	7085	115.92	-95.23	117.22	20.69	30	Pass

802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
7	5985	119.08	-95.23	242.661	23.85	30	Pass
39	6145	118.72	-95.23	223.357	23.49	30	Pass
87	6385	118.75	-95.23	224.905	23.52	30	Pass
103	6465	119.02	-95.23	239.332	23.79	30	Pass
119	6545	119.22	-95.23	250.611	23.99	30	Pass
151	6705	118.78	-95.23	226.464	23.55	30	Pass
183	6865	119.12	-95.23	244.906	23.89	30	Pass
199	6945	119.15	-95.23	246.604	23.92	30	Pass
215	7025	118.73	-95.23	223.872	23.50	30	Pass

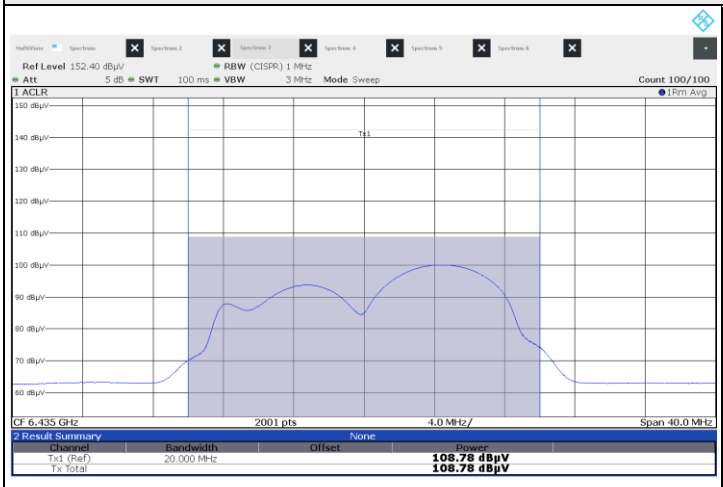
802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
15	6025	121.25	-95.23	399.945	26.02	30	Pass
47	6185	121.27	-95.23	401.791	26.04	30	Pass
79	6345	121.37	-95.23	411.15	26.14	30	Pass
111	6505	121.72	-95.23	445.656	26.49	30	Pass
143	6665	121.36	-95.23	410.204	26.13	30	Pass
175	6825	121.45	-95.23	418.794	26.22	30	Pass
207	6985	121.77	-95.23	450.817	26.54	30	Pass

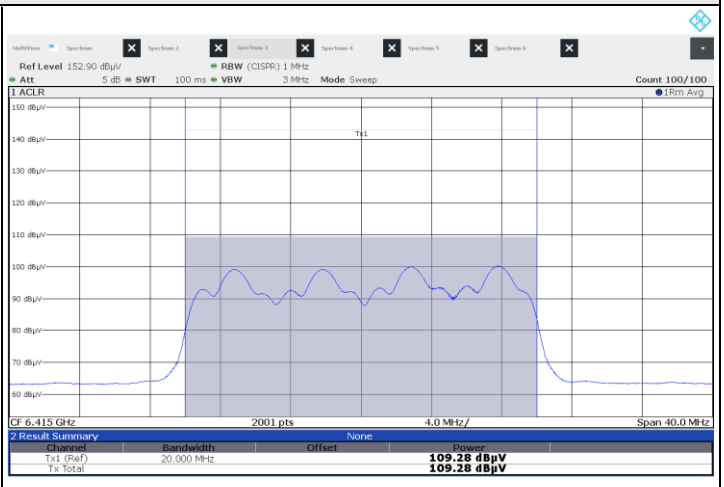
802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
31	6105	123.91	-95.23	737.904	28.68	30	Pass
63	6265	124.43	-95.23	831.764	29.20	30	Pass
95	6425	124.52	-95.23	849.18	29.29	30	Pass
127	6585	124.49	-95.23	843.335	29.26	30	Pass
159	6745	124.42	-95.23	829.851	29.19	30	Pass
191	6905	123.05	-95.23	605.341	27.82	30	Pass

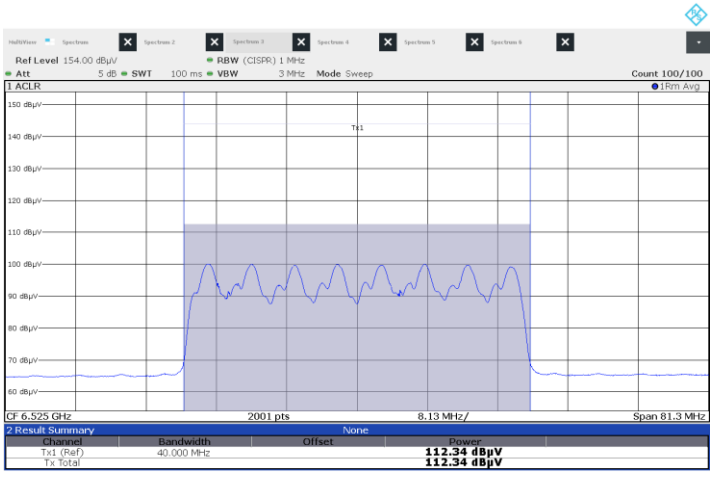
Spectrum Plot of Maximum Value



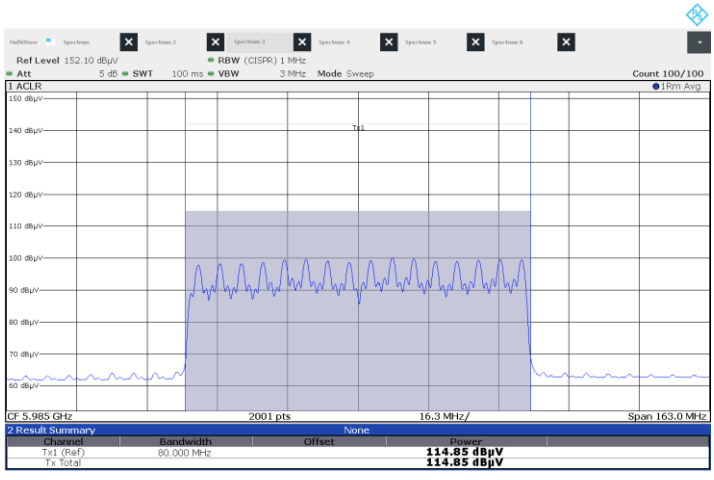
802.11a CDD : CH 97



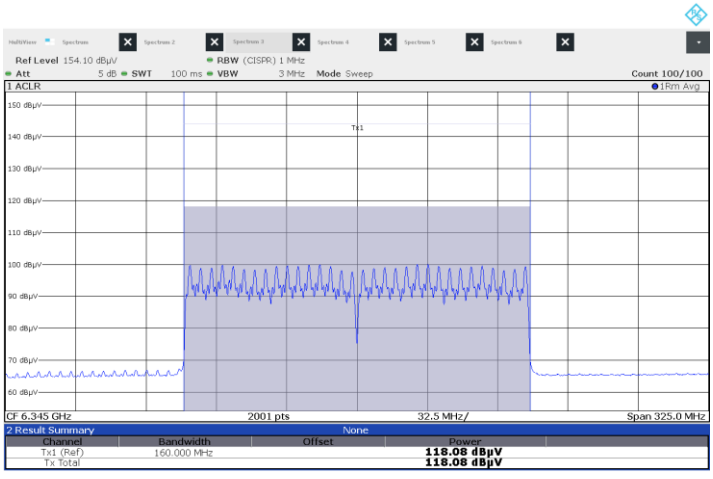
802.11be (EHT20) CDD : CH 93



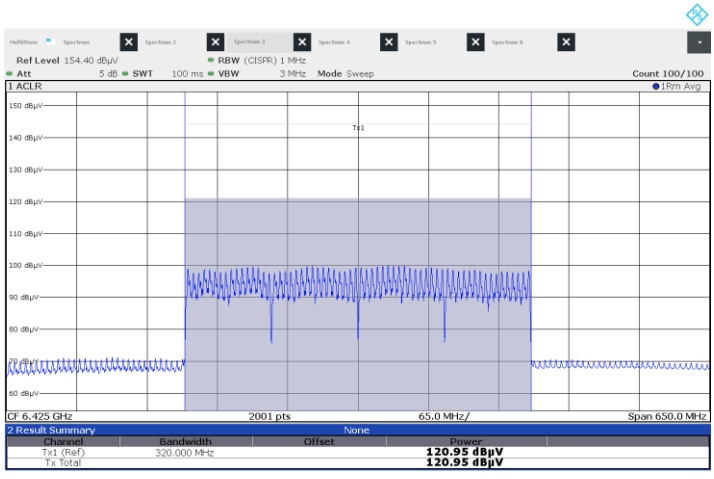
802.11be (EHT40) CDD : CH 115



802.11be (EHT80) CDD : CH 7

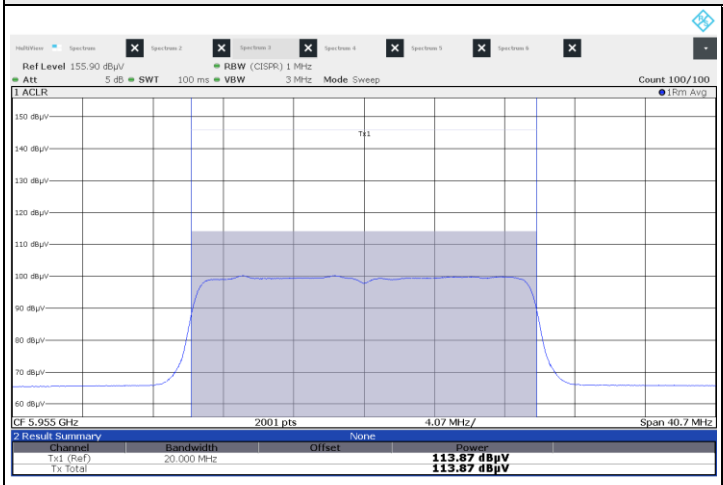


802.11be (EHT160) CDD : CH 79

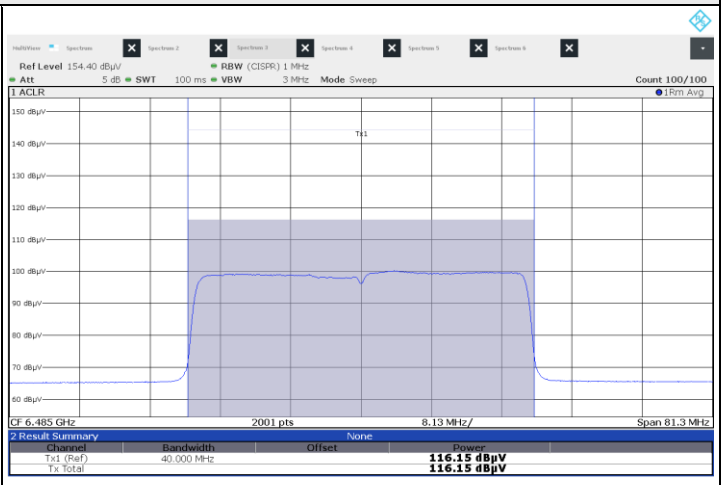


802.11be (EHT320) CDD : CH 95

Spectrum Plot of Maximum Value



802.11be (EHT20) Beamforming : CH 1



802.11be (EHT40) Beamforming : CH 107

802.11be (EHT80) Beamforming : CH 119

802.11be (EHT160) Beamforming : CH 207

802.11be (EHT320) Beamforming : CH 95

7.2 Maximum Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	5955	100.18	-95.23	4.95	5	Pass
45	6175	100.08	-95.23	4.85	5	Pass
93	6415	100.09	-95.23	4.86	5	Pass
97	6435	100.19	-95.23	4.96	5	Pass
105	6475	100.18	-95.23	4.95	5	Pass
113	6515	100.08	-95.23	4.85	5	Pass
117	6535	100.03	-95.23	4.80	5	Pass
149	6695	100.18	-95.23	4.95	5	Pass
181	6855	100.15	-95.23	4.92	5	Pass
185	6875	100.13	-95.23	4.90	5	Pass
209	6995	100.13	-95.23	4.90	5	Pass
229	7095	100.18	-95.23	4.95	5	Pass
233	7115	100.07	-95.23	4.84	5	Pass

802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	5955	100.19	-95.23	4.96	5	Pass
45	6175	100.15	-95.23	4.92	5	Pass
93	6415	100.17	-95.23	4.94	5	Pass
97	6435	100.16	-95.23	4.93	5	Pass
105	6475	100.17	-95.23	4.94	5	Pass
113	6515	100.17	-95.23	4.94	5	Pass
117	6535	100.12	-95.23	4.89	5	Pass
149	6695	100.18	-95.23	4.95	5	Pass
181	6855	100.18	-95.23	4.95	5	Pass
185	6875	100.17	-95.23	4.94	5	Pass
209	6995	100.19	-95.23	4.96	5	Pass
229	7095	100.17	-95.23	4.94	5	Pass
233	7115	97.82	-95.23	2.59	5	Pass

802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
3	5965	100.08	-95.23	4.85	5	Pass
43	6165	100.12	-95.23	4.89	5	Pass
91	6405	100.06	-95.23	4.83	5	Pass
99	6445	100.05	-95.23	4.82	5	Pass
107	6485	100.21	-95.23	4.98	5	Pass
115	6525	100.12	-95.23	4.89	5	Pass
123	6565	100.18	-95.23	4.95	5	Pass
155	6725	100.07	-95.23	4.84	5	Pass
179	6845	100.15	-95.23	4.92	5	Pass
187	6885	100.08	-95.23	4.85	5	Pass
211	7005	100.05	-95.23	4.82	5	Pass
227	7085	100.07	-95.23	4.84	5	Pass

802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
7	5985	100.12	-95.23	4.89	5	Pass
39	6145	100.15	-95.23	4.92	5	Pass
87	6385	100.07	-95.23	4.84	5	Pass
103	6465	100.08	-95.23	4.85	5	Pass
119	6545	100.17	-95.23	4.94	5	Pass
151	6705	100.15	-95.23	4.92	5	Pass
183	6865	100.08	-95.23	4.85	5	Pass
199	6945	100.13	-95.23	4.90	5	Pass
215	7025	100.11	-95.23	4.88	5	Pass

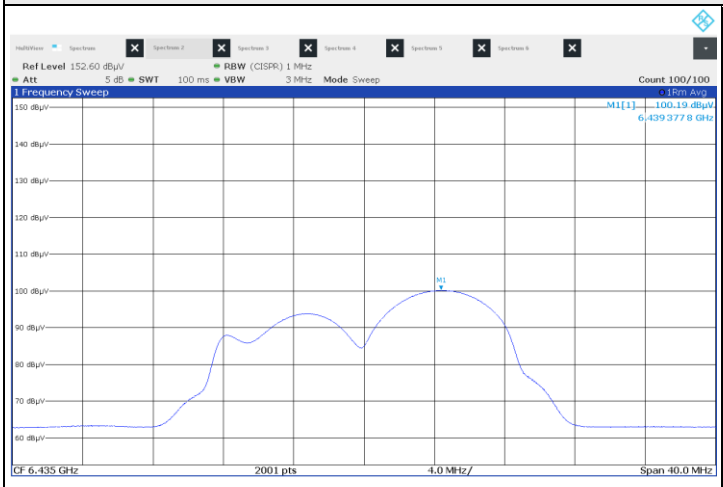
802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
15	6025	100.12	-95.23	4.89	5	Pass
47	6185	100.08	-95.23	4.85	5	Pass
79	6345	100.11	-95.23	4.88	5	Pass
111	6505	100.07	-95.23	4.84	5	Pass
143	6665	100.05	-95.23	4.82	5	Pass
175	6825	100.12	-95.23	4.89	5	Pass
207	6985	100.18	-95.23	4.95	5	Pass

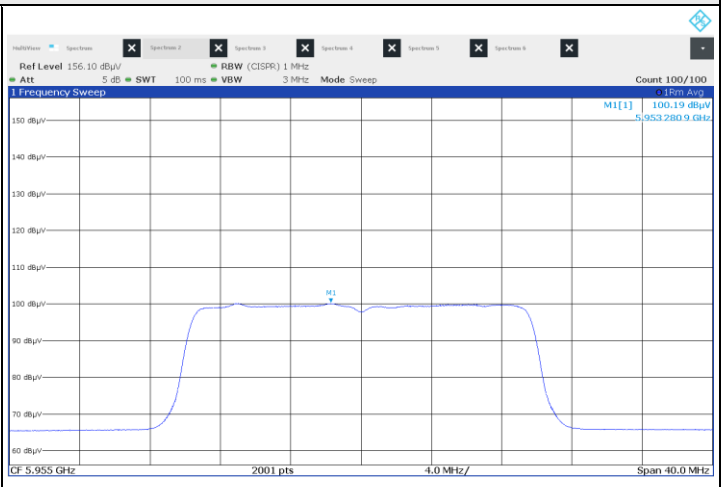
802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
31	6105	100.05	-95.23	4.82	5	Pass
63	6265	100.19	-95.23	4.96	5	Pass
95	6425	100.21	-95.23	4.98	5	Pass
127	6585	100.03	-95.23	4.80	5	Pass
159	6745	100.15	-95.23	4.92	5	Pass
191	6905	99.25	-95.23	4.02	5	Pass

Spectrum Plot of Maximum Value



802.11a CDD : CH 97

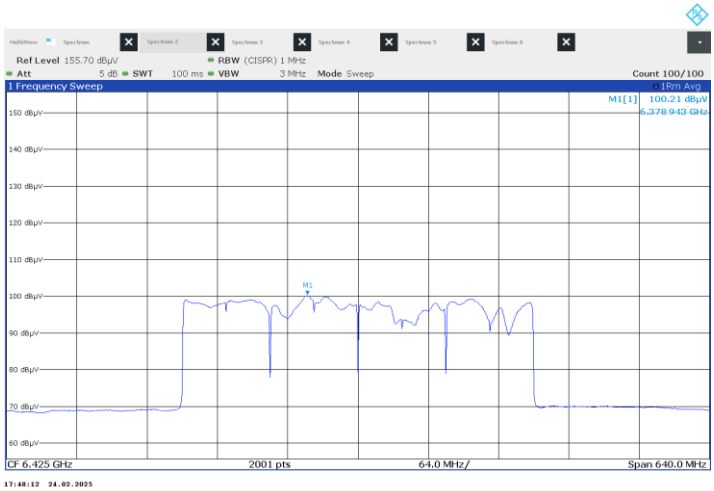


802.11be (EHT20) Beamforming : CH 1

802.11be (EHT40) Beamforming : CH 107

802.11be (EHT80) Beamforming : CH 119

802.11be (EHT160) Beamforming : CH 207



802.11be (EHT320) Beamforming : CH 95

7.3 Emission Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)				Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	5955	21.59	21.60	21.59	21.72	320	Pass
45	6175	21.61	21.49	21.62	21.79	320	Pass
93	6415	21.68	21.67	21.63	21.69	320	Pass
97	6435	21.71	21.62	21.69	21.62	320	Pass
105	6475	21.61	21.58	21.59	21.60	320	Pass
113	6515	21.69	21.69	21.63	21.61	320	Pass
117	6535	21.63	21.50	21.71	21.46	320	Pass
149	6695	21.66	21.70	21.60	21.68	320	Pass
181	6855	21.59	21.56	21.64	21.66	320	Pass
185	6875	21.79	21.66	21.80	21.78	320	Pass
209	6995	21.47	21.49	21.46	21.44	320	Pass
229	7095	21.63	21.54	21.71	21.69	320	Pass
233	7115	21.56	21.46	21.68	21.47	320	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)				Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	5955	21.57	21.73	21.68	21.66	320	Pass
45	6175	21.63	21.69	21.83	21.86	320	Pass
93	6415	21.83	21.68	21.62	21.67	320	Pass
97	6435	21.75	21.74	21.89	21.75	320	Pass
105	6475	21.81	21.88	21.52	21.81	320	Pass
113	6515	21.92	21.86	21.69	21.84	320	Pass
117	6535	21.59	21.74	21.62	21.60	320	Pass
149	6695	21.61	21.89	21.65	21.79	320	Pass
181	6855	21.62	21.70	21.71	21.67	320	Pass
185	6875	21.74	21.69	21.67	21.82	320	Pass
209	6995	21.74	21.72	21.61	21.78	320	Pass
229	7095	21.86	21.65	21.76	21.78	320	Pass
233	7115	21.46	21.89	21.56	21.87	320	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)				Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
3	5965	40.54	41.11	41.11	41.21	320	Pass
43	6165	41.08	40.85	41.28	41.13	320	Pass
91	6405	40.91	40.92	41.09	41.06	320	Pass
99	6445	41.00	41.08	41.08	41.23	320	Pass
107	6485	41.38	41.13	41.16	40.86	320	Pass
115	6525	41.13	40.89	41.04	41.15	320	Pass
123	6565	41.14	41.09	40.84	41.10	320	Pass
155	6725	40.97	41.21	40.77	41.16	320	Pass
179	6845	41.13	41.15	40.83	40.76	320	Pass
187	6885	41.20	41.22	41.00	41.07	320	Pass
211	7005	40.81	40.61	40.00	40.71	320	Pass
227	7085	40.99	40.98	40.89	40.74	320	Pass

802.11be (EHT80)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)				Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
7	5985	82.26	82.92	83.12	82.76	320	Pass
39	6145	83.06	82.71	82.62	82.99	320	Pass
87	6385	83.06	83.02	82.75	83.03	320	Pass
103	6465	82.84	82.80	82.69	82.79	320	Pass
119	6545	83.05	82.93	82.82	83.00	320	Pass
151	6705	82.77	82.81	82.69	82.76	320	Pass
183	6865	82.61	83.33	82.85	82.68	320	Pass
199	6945	82.71	82.33	82.53	82.38	320	Pass
215	7025	82.52	82.31	82.28	81.81	320	Pass

802.11be (EHT160)

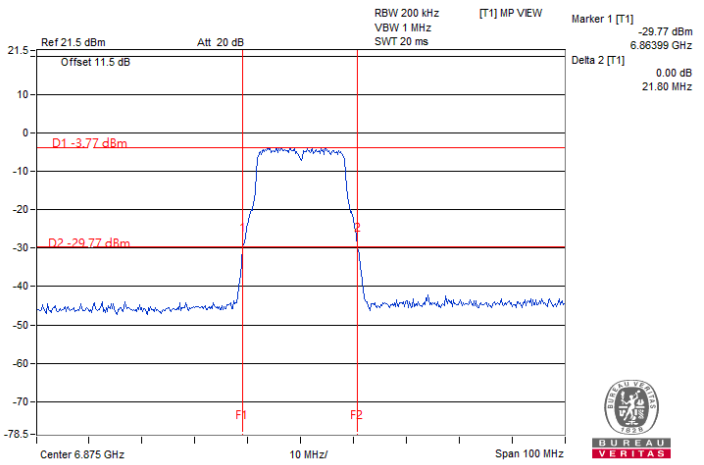
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
15	6025	164.62	165.71	165.38	165.11	320	Pass
47	6185	165.74	165.52	165.23	165.35	320	Pass
79	6345	165.75	165.77	165.51	166.10	320	Pass
111	6505	165.93	166.56	166.28	166.70	320	Pass
143	6665	166.04	165.43	165.58	166.33	320	Pass
175	6825	165.72	165.73	165.99	166.22	320	Pass
207	6985	165.57	165.86	164.32	164.53	320	Pass

802.11be (EHT320)

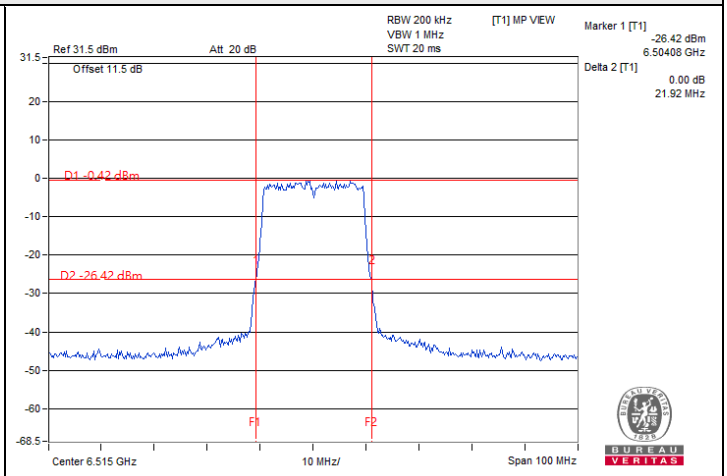
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
31	6105	329.78	330.87	330.65	330.91	320	Note
63	6265	331.52	330.88	331.76	331.64	320	Note
95	6425	330.66	331.18	331.41	331.16	320	Note
127	6585	329.99	329.09	330.87	330.21	320	Note
159	6745	331.00	331.10	330.92	330.14	320	Note
191	6905	330.74	331.47	331.57	330.79	320	Note

Note: For channels with a nominal bandwidth of 320 MHz, compliance is demonstrated by way of the 99% BW.

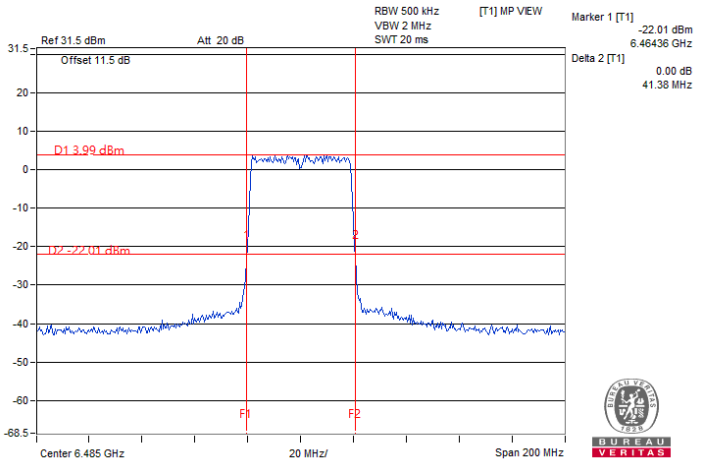
Spectrum Plot of Maximum Value



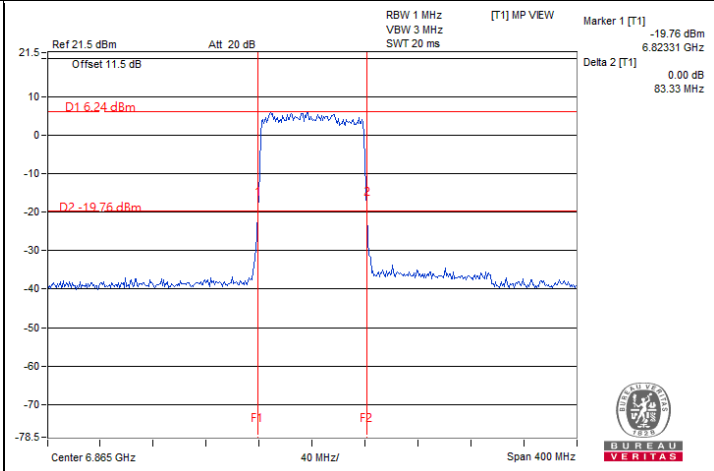
802.11a / Chain 2 : CH 185



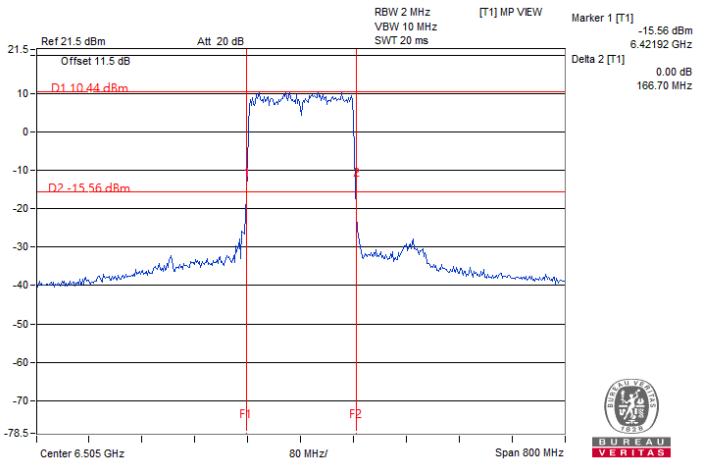
802.11be (EHT20) / Chain 0 : CH 113



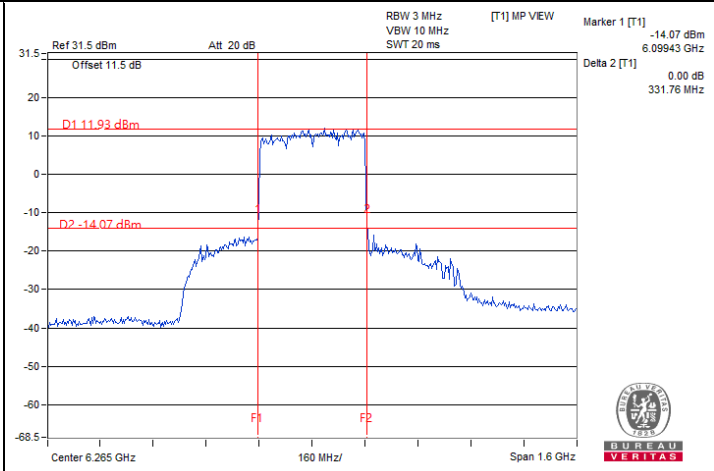
802.11be (EHT40) / Chain 0 : CH 107



802.11be (EHT80) / Chain 1 : CH 183



802.11be (EHT160) / Chain 3 : CH 111

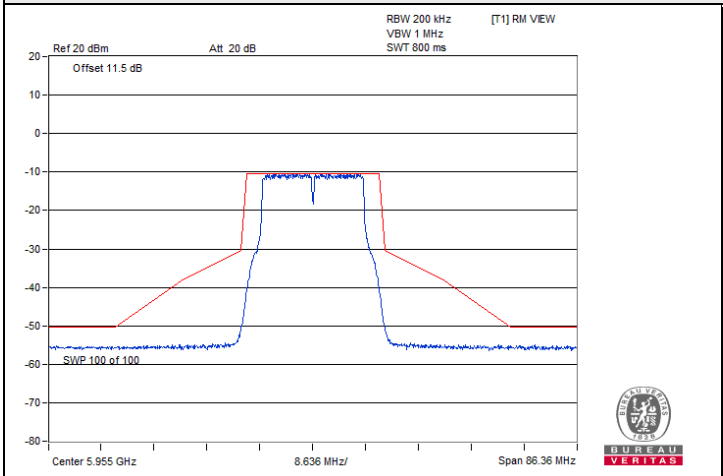
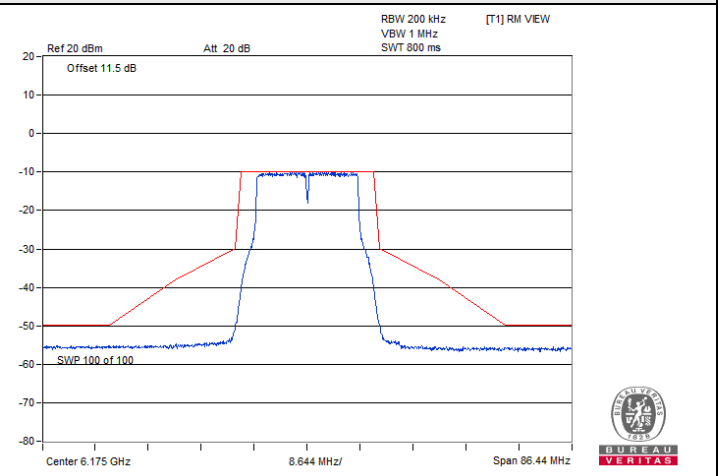
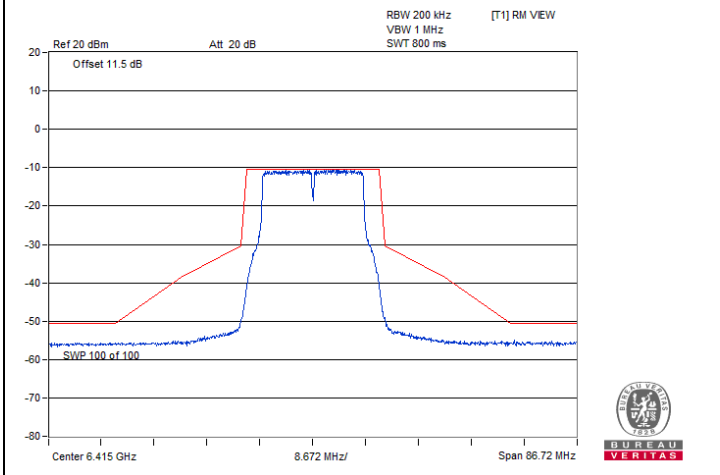
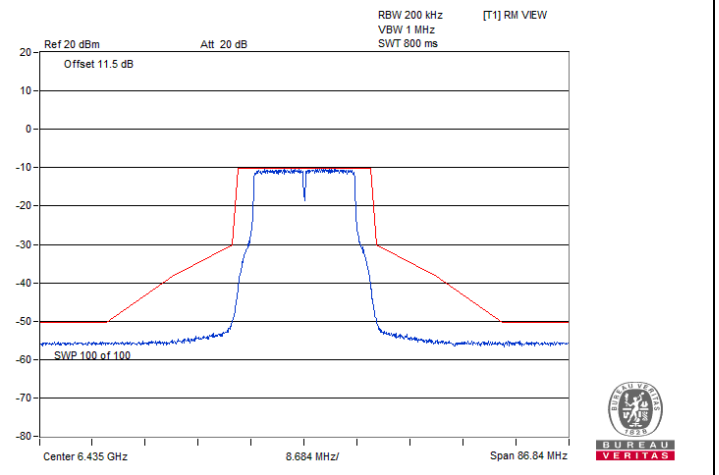
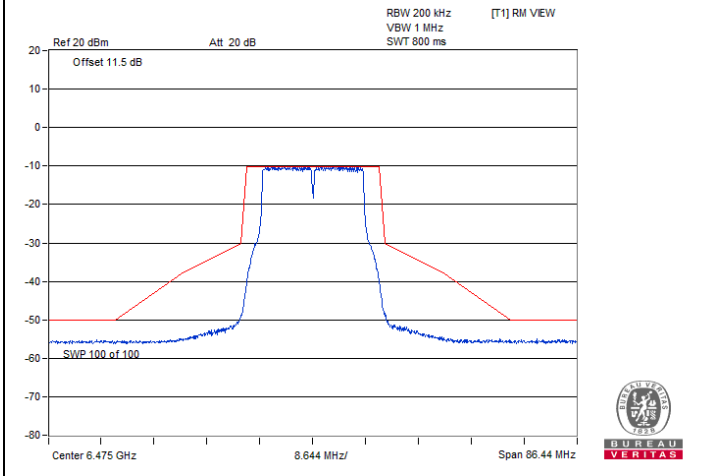
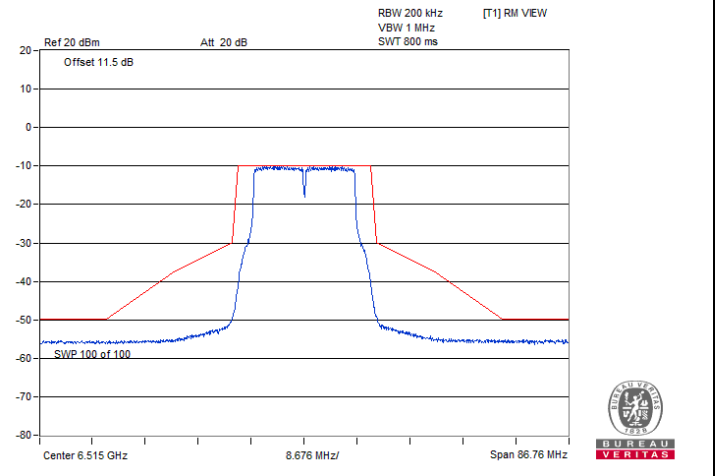


802.11be (EHT320) / Chain 2 : CH 63

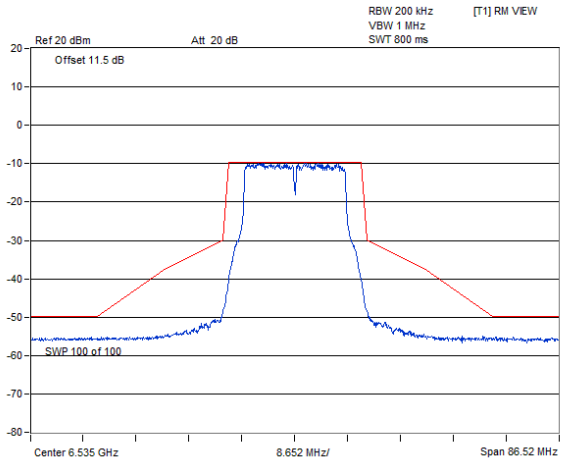
7.4 In-Band Emission Mask

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

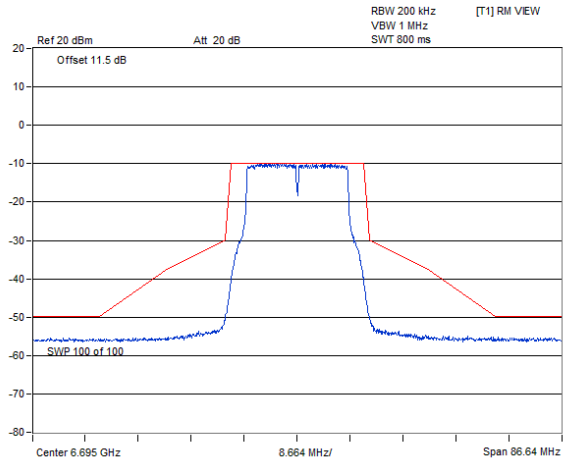
802.11a

Spectrum Plot	
	
802.11a / Chain 0 : CH 1	802.11a / Chain 0 : CH 45
	
802.11a / Chain 0 : CH 93	802.11a / Chain 0 : CH 97
	
802.11a / Chain 0 : CH 105	802.11a / Chain 0 : CH 113

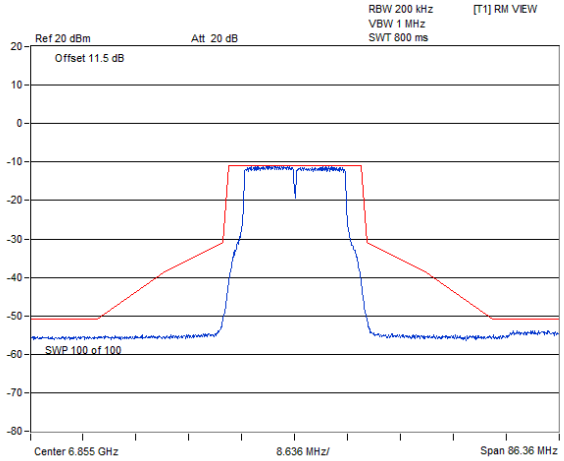
Spectrum Plot



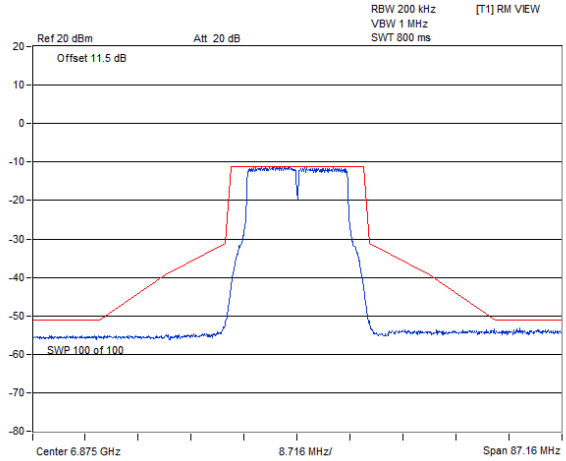
802.11a / Chain 0 : CH 117



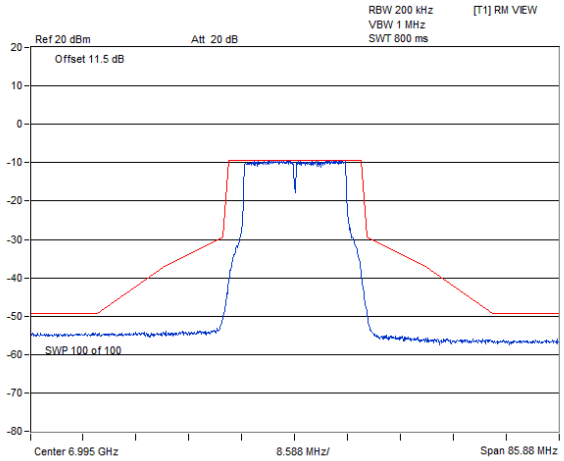
802.11a / Chain 0 : CH 149



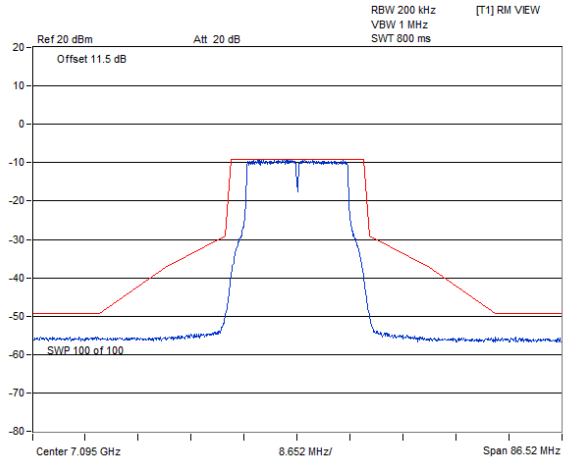
802.11a / Chain 0 : CH 181



802.11a / Chain 0 : CH 185

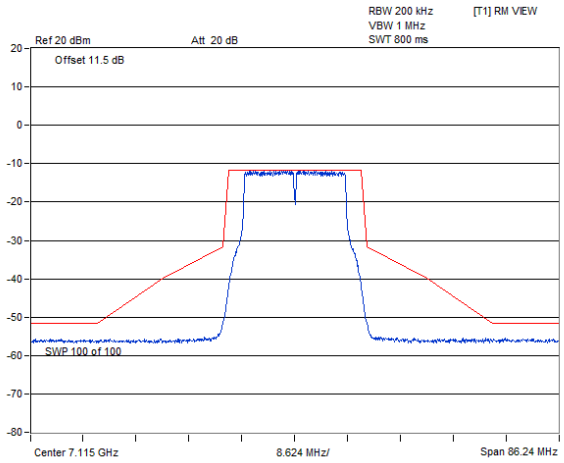


802.11a / Chain 0 : CH 209

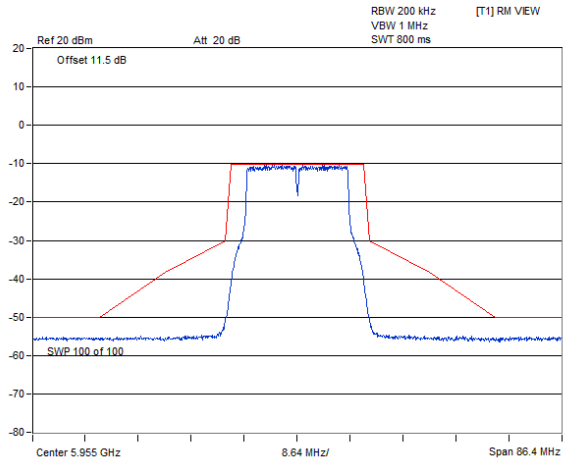


802.11a / Chain 0 : CH 229

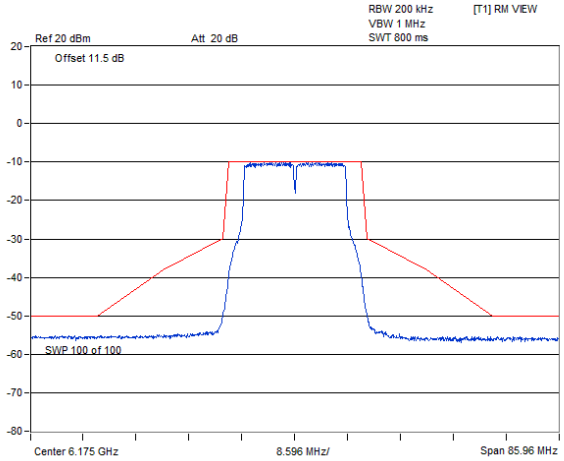
Spectrum Plot



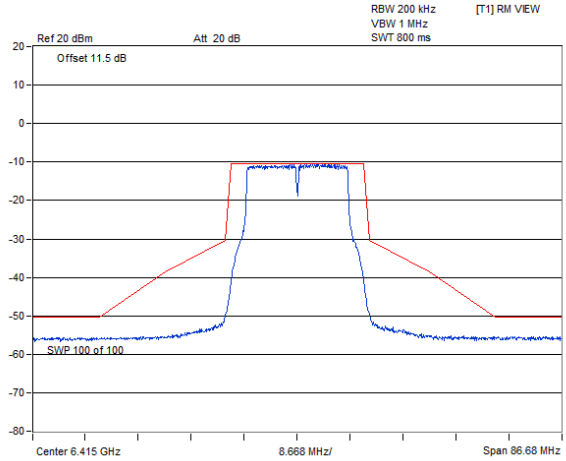
802.11a / Chain 0 : CH 233



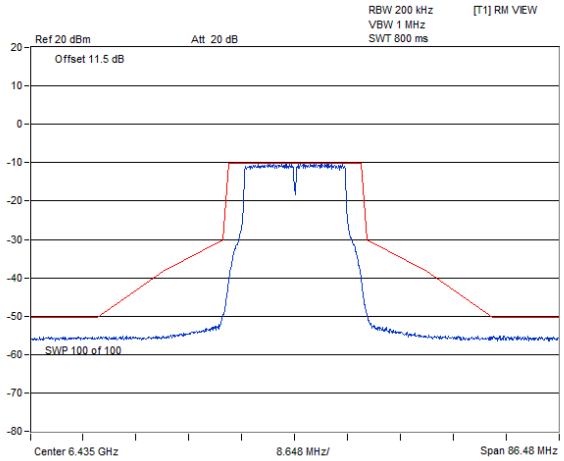
802.11a / Chain 1 : CH 1



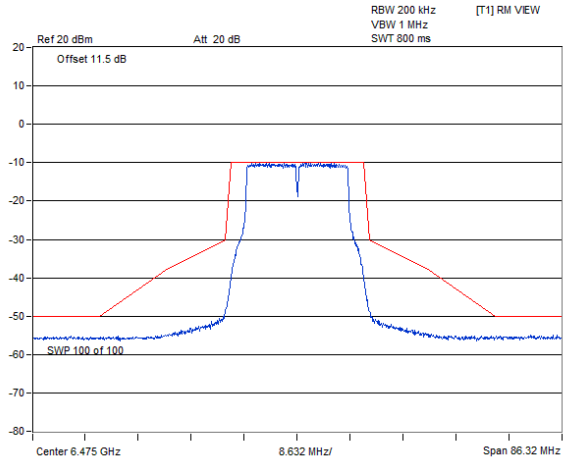
802.11a / Chain 1 : CH 45



802.11a / Chain 1 : CH 93

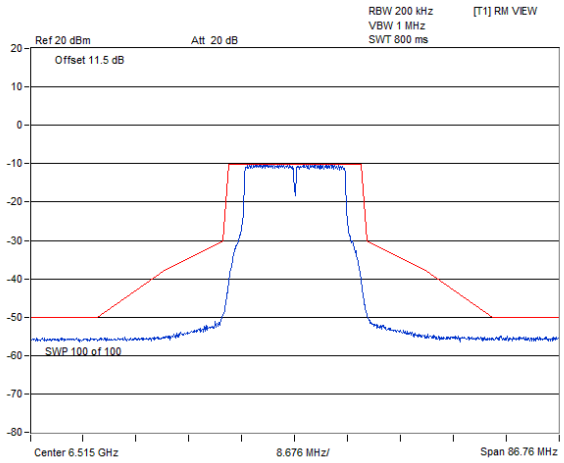


802.11a / Chain 1 : CH 97

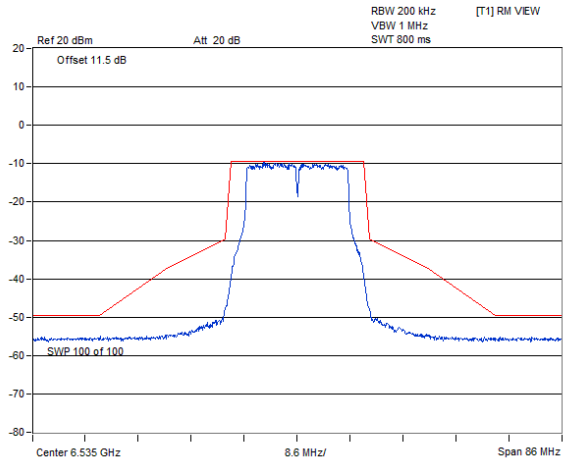


802.11a / Chain 1 : CH 105

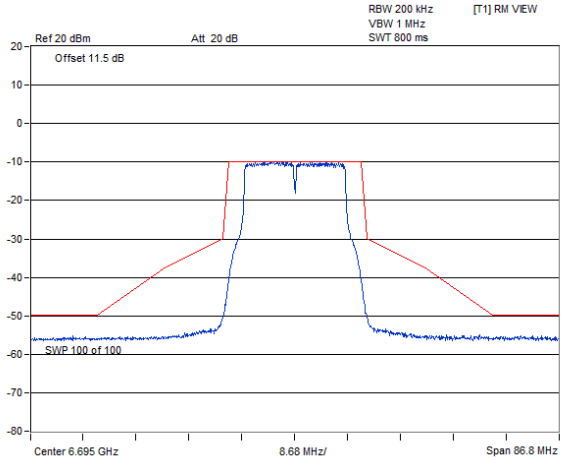
Spectrum Plot



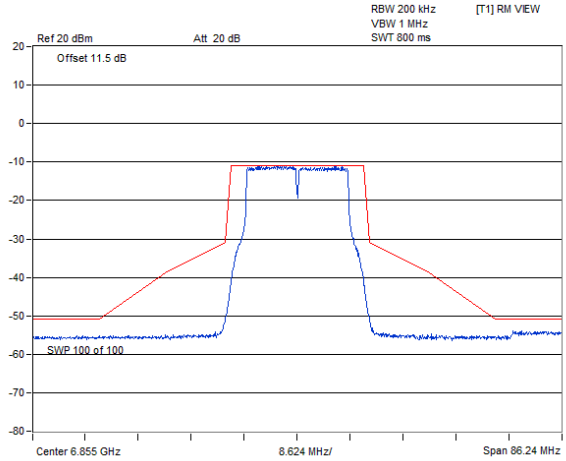
802.11a / Chain 1 : CH 113



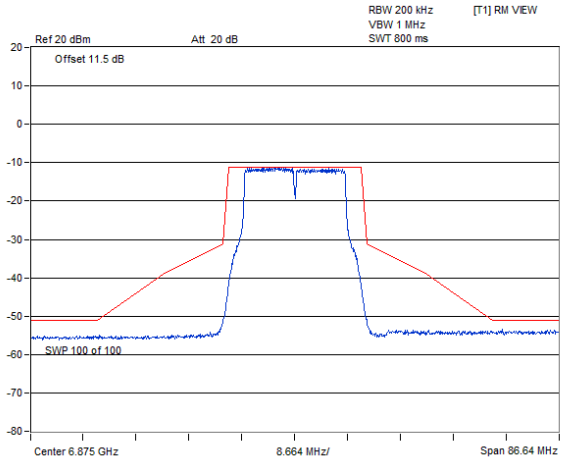
802.11a / Chain 1 : CH 117



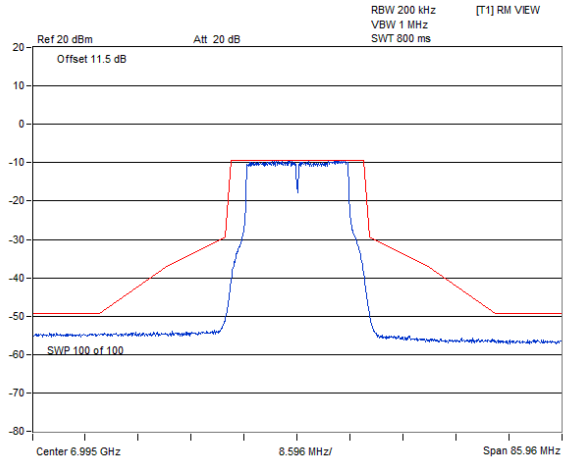
802.11a / Chain 1 : CH 149



802.11a / Chain 1 : CH 181

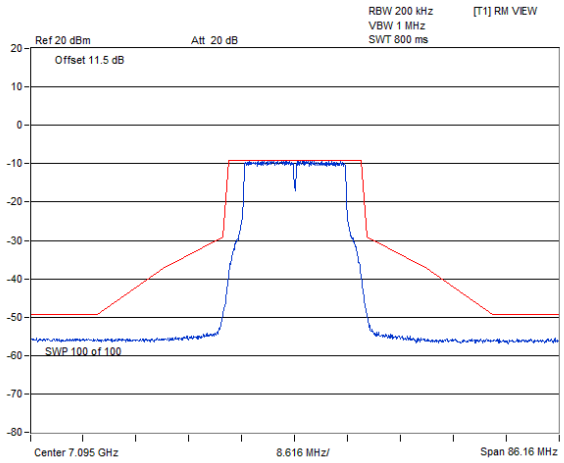


802.11a / Chain 1 : CH 185

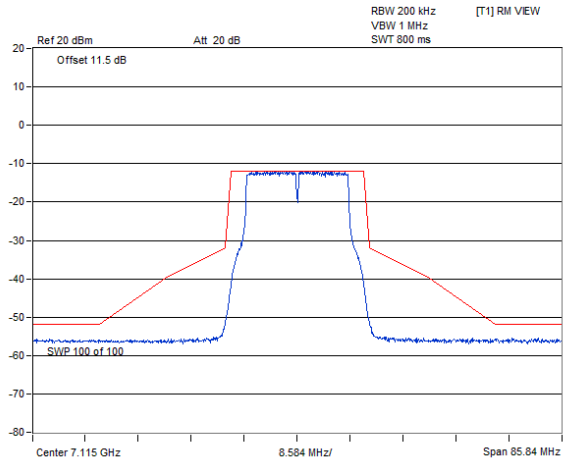


802.11a / Chain 1 : CH 209

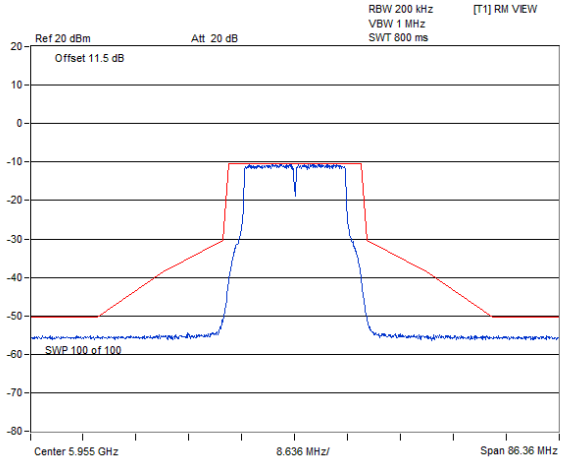
Spectrum Plot



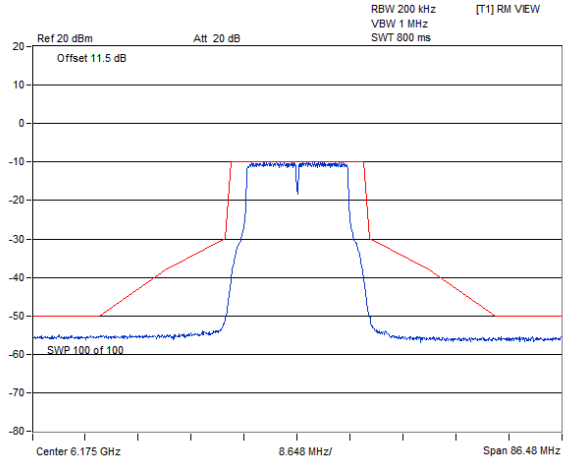
802.11a / Chain 1 : CH 229



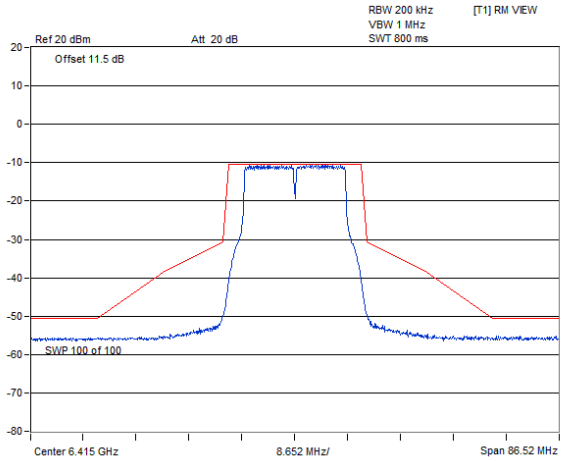
802.11a / Chain 1 : CH 233



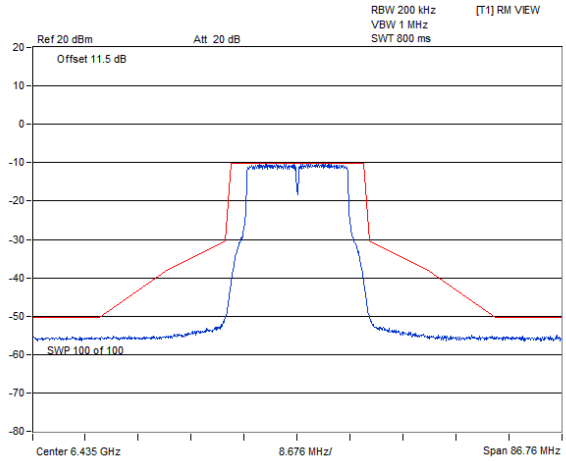
802.11a / Chain 2 : CH 1



802.11a / Chain 2 : CH 45

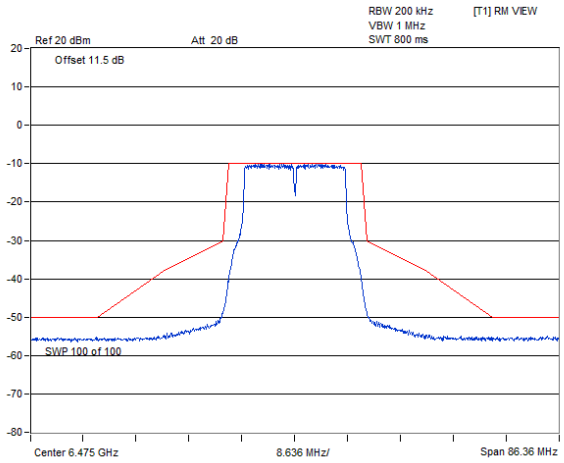


802.11a / Chain 2 : CH 93

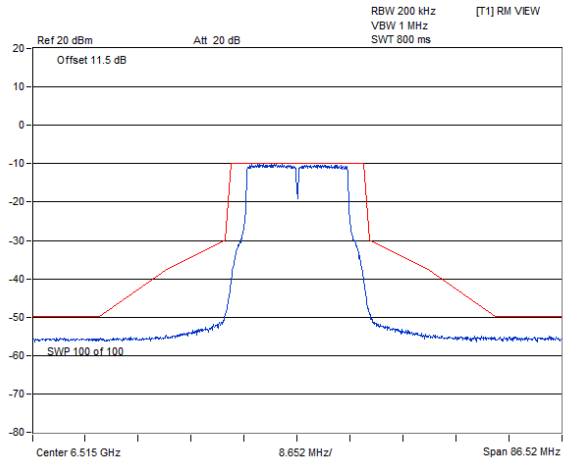


802.11a / Chain 2 : CH 97

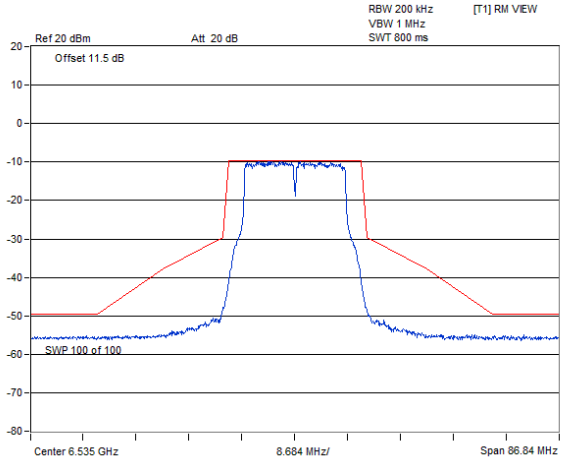
Spectrum Plot



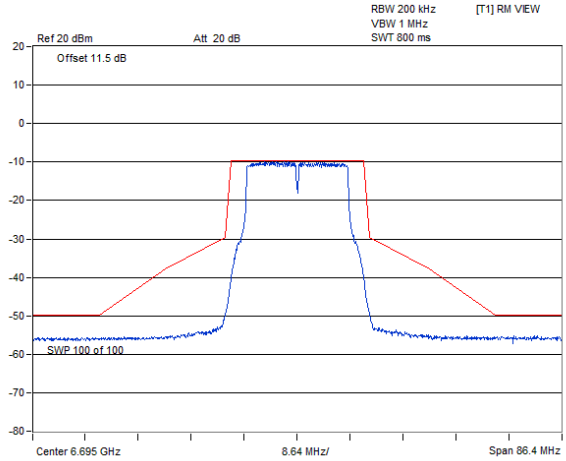
802.11a / Chain 2 : CH 105



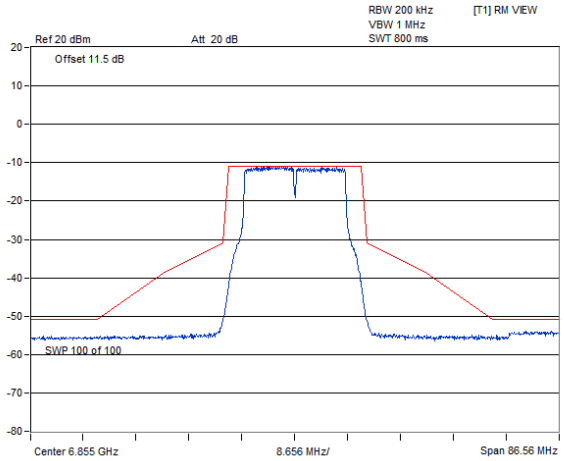
802.11a / Chain 2 : CH 113



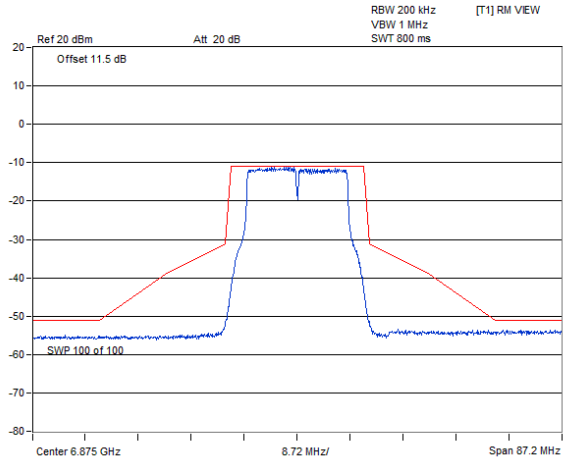
802.11a / Chain 2 : CH 117



802.11a / Chain 2 : CH 149

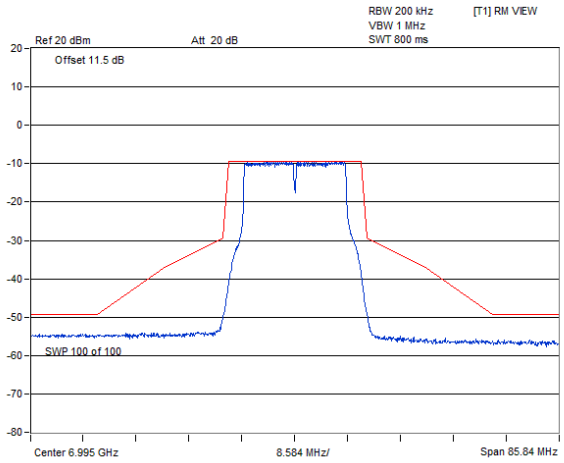


802.11a / Chain 2 : CH 181

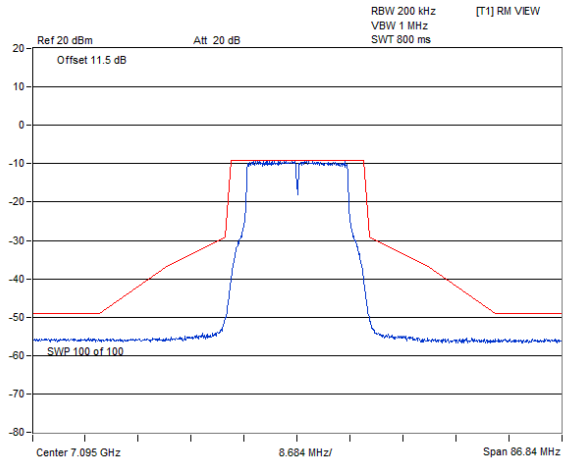


802.11a / Chain 2 : CH 185

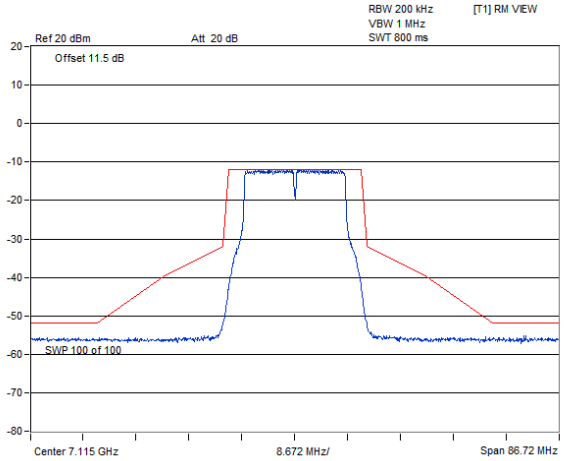
Spectrum Plot



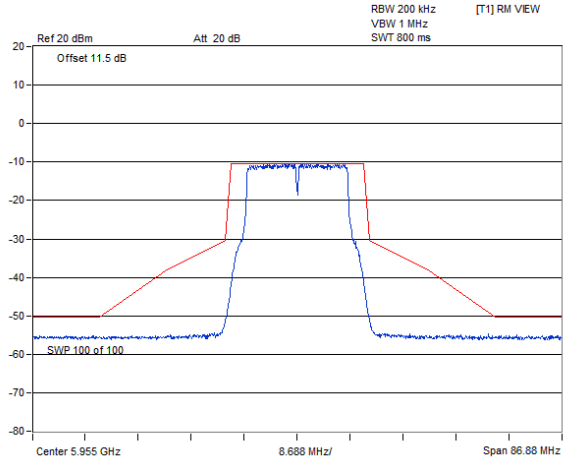
802.11a / Chain 2 : CH 209



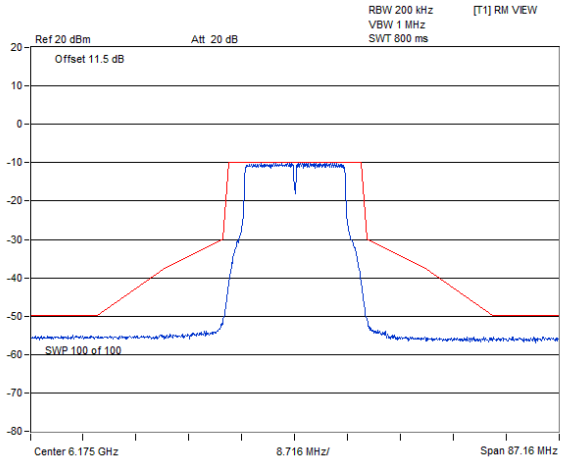
802.11a / Chain 2 : CH 229



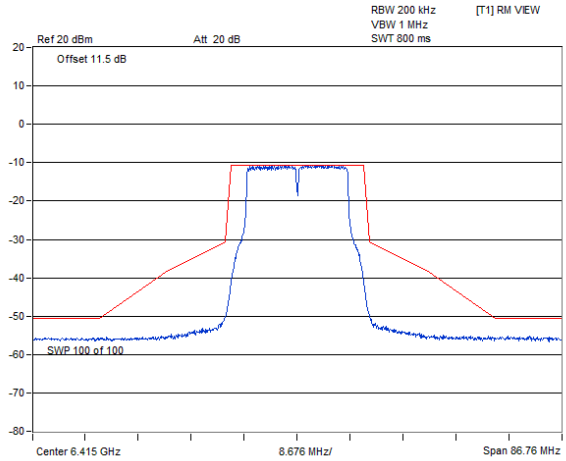
802.11a / Chain 2 : CH 233



802.11a / Chain 3 : CH 1

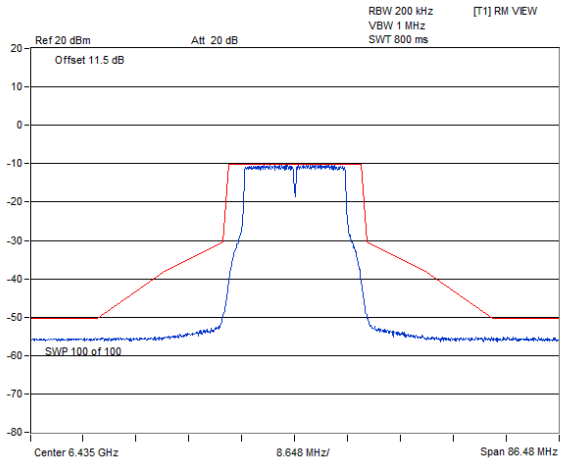


802.11a / Chain 3 : CH 45

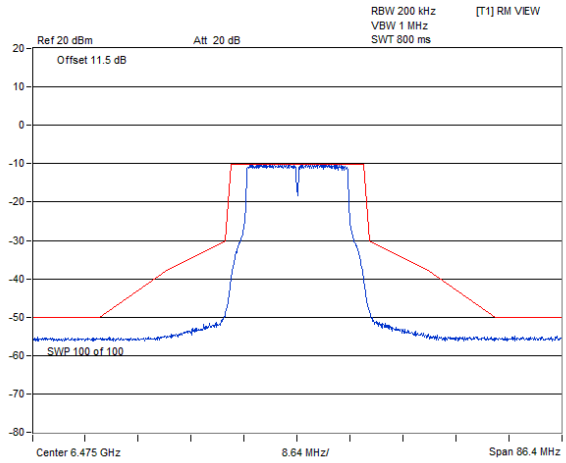


802.11a / Chain 3 : CH 93

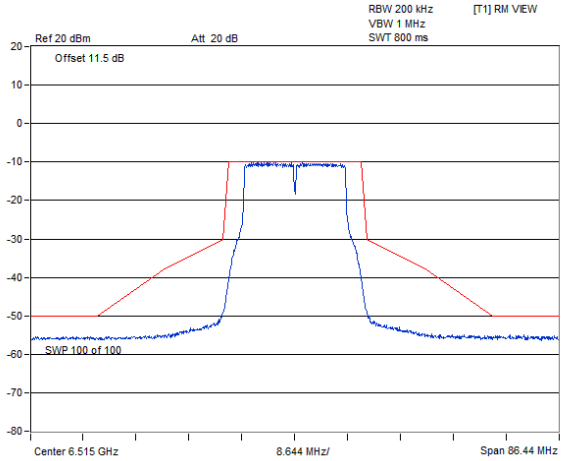
Spectrum Plot



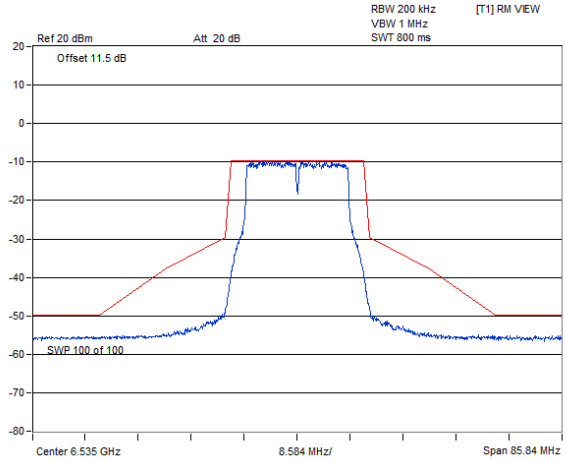
802.11a / Chain 3 : CH 97



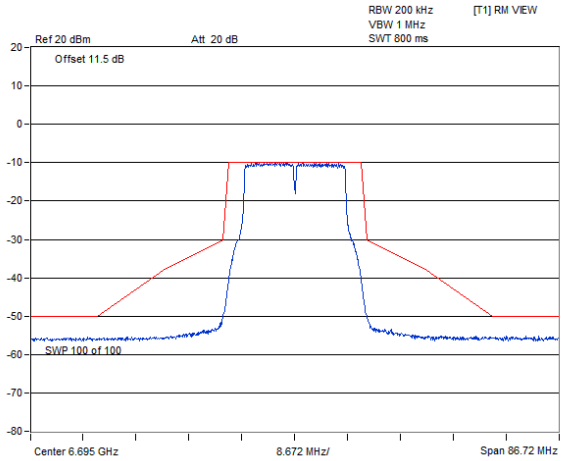
802.11a / Chain 3 : CH 105



802.11a / Chain 3 : CH 113



802.11a / Chain 3 : CH 117



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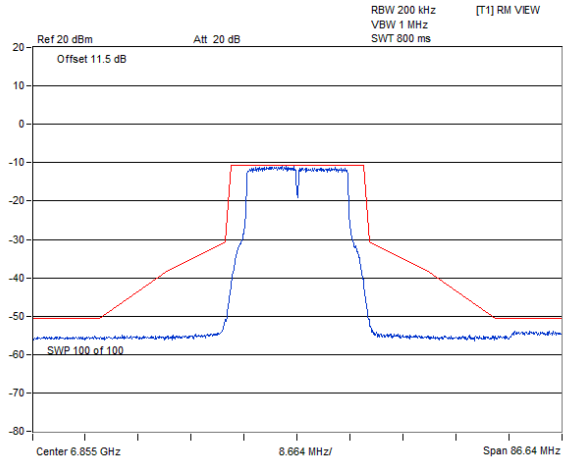
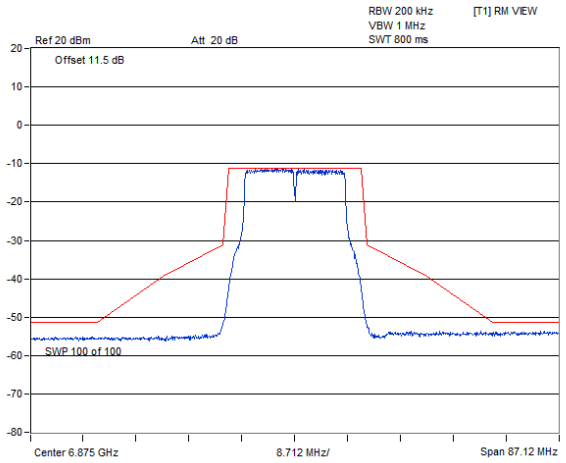
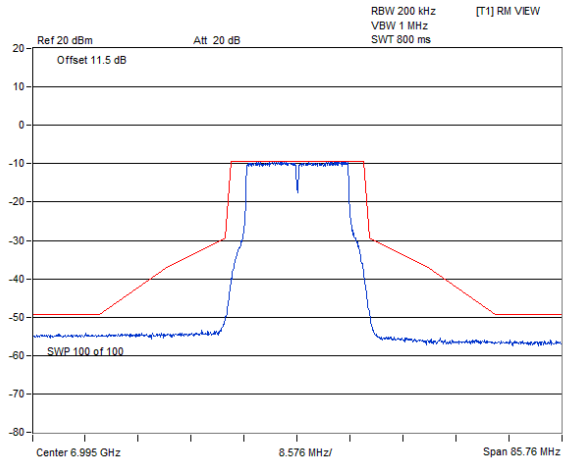


802.11a / Chain 3 : CH 181

Spectrum Plot



802.11a / Chain 3 : CH 185



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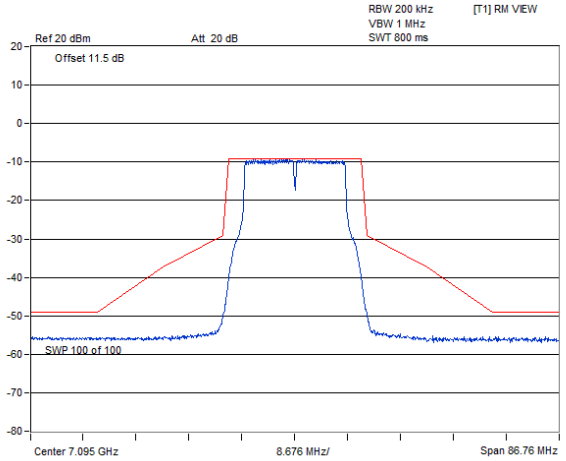
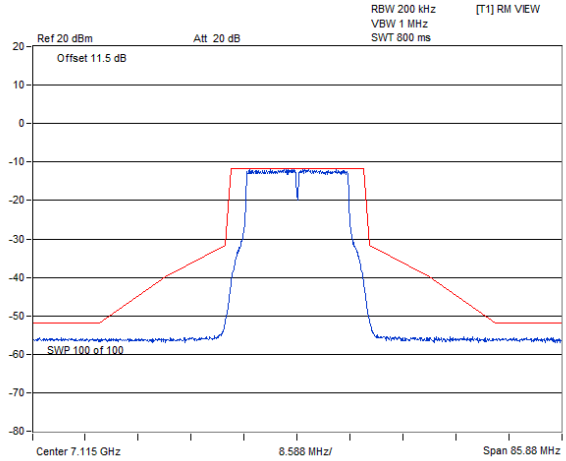
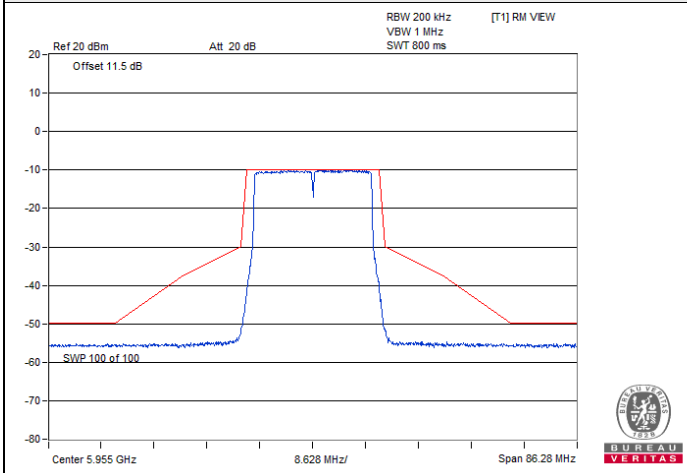
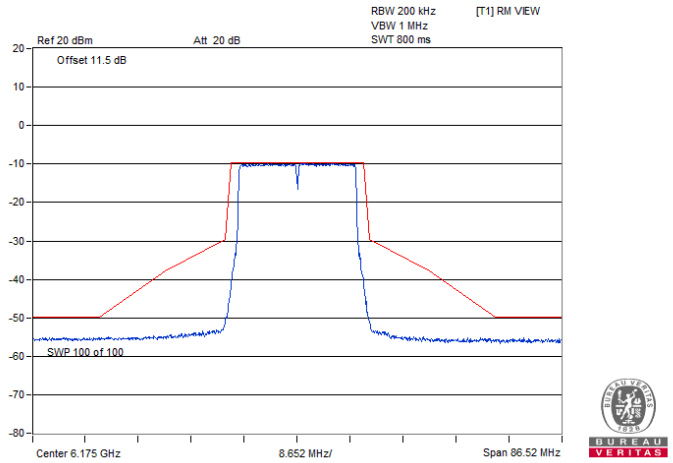
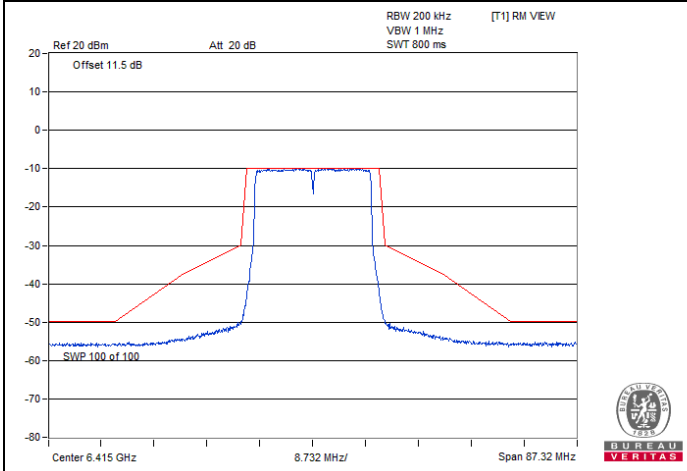
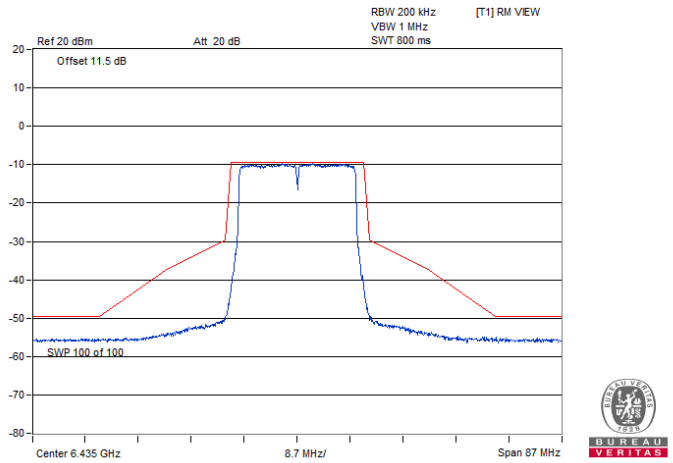


802.11a / Chain 3 : CH 229



802.11a / Chain 3 : CH 233

802.11be (EHT20)

Spectrum Plot	
	
802.11be (EHT20) / Chain 0 : CH 1	802.11be (EHT20) / Chain 0 : CH 45
	
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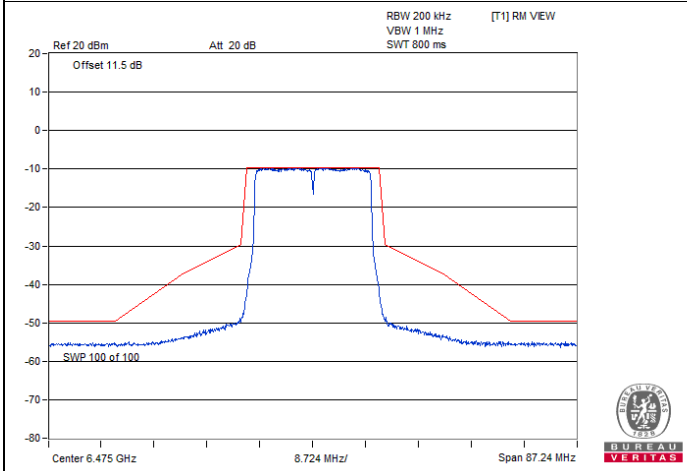
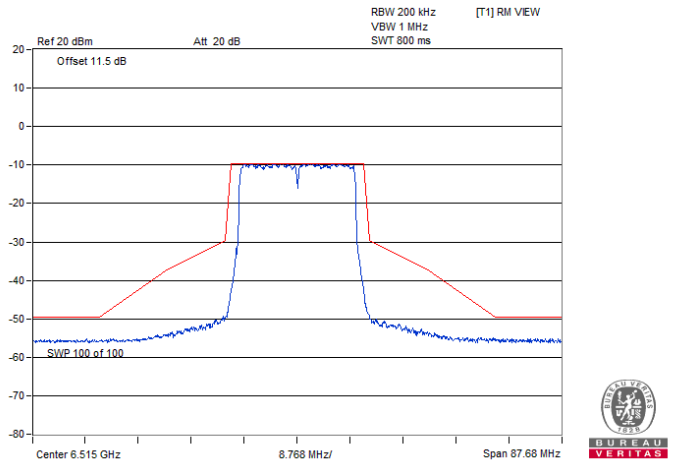
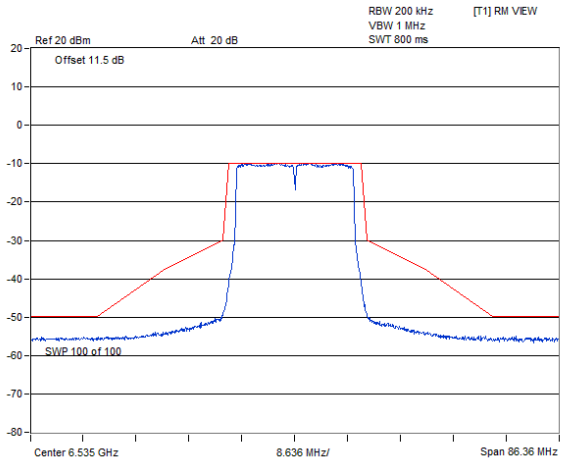
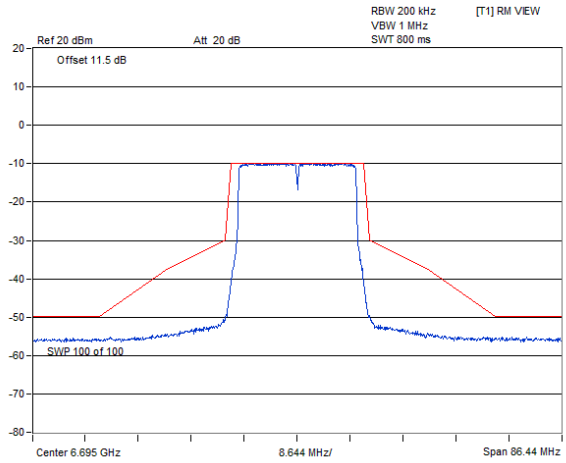
	
802.11be (EHT20) / Chain 0 : CH 105	802.11be (EHT20) / Chain 0 : CH 113

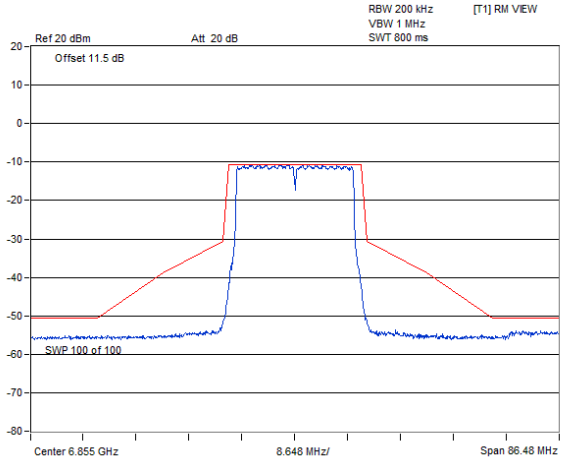
Spectrum Plot



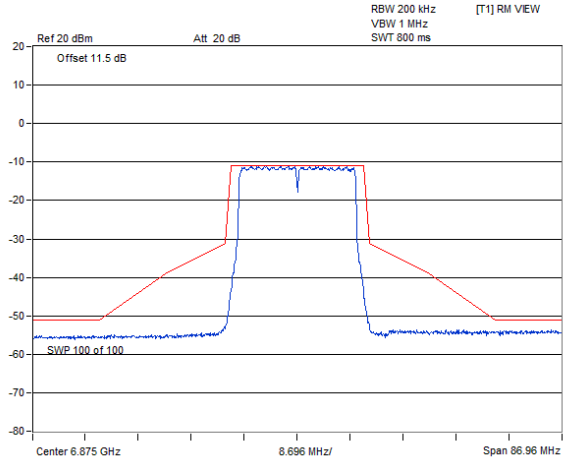
802.11be (EHT20) / Chain 0 : CH 117



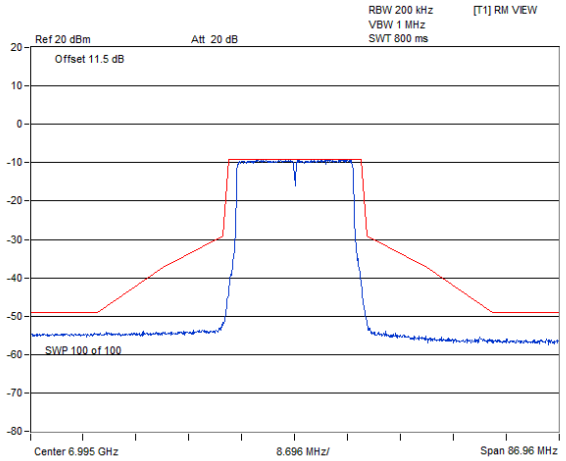
802.11be (EHT20) / Chain 0 : CH 149



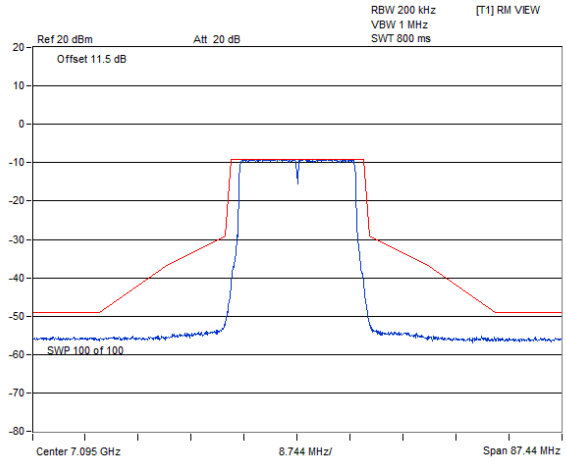
802.11be (EHT20) / Chain 0 : CH 181



802.11be (EHT20) / Chain 0 : CH 185

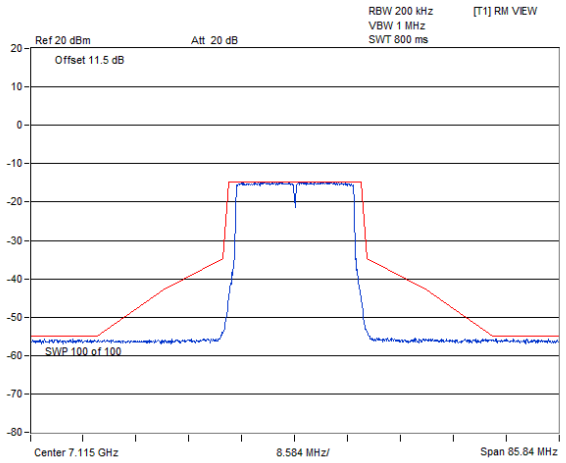


802.11be (EHT20) / Chain 0 : CH 209

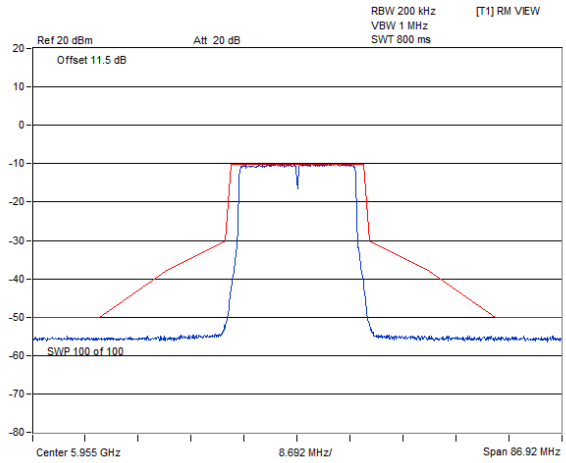


802.11be (EHT20) / Chain 0 : CH 229

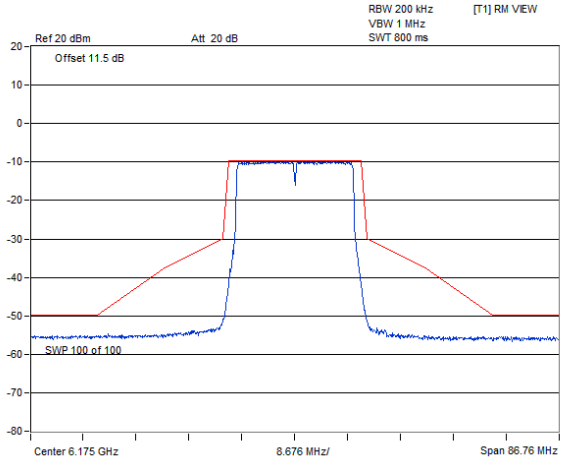
Spectrum Plot



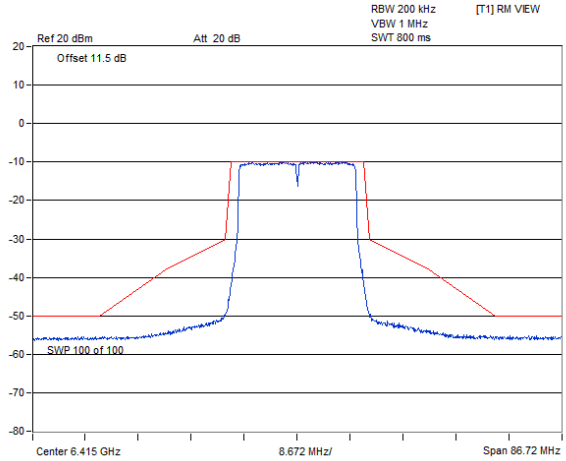
802.11be (EHT20) / Chain 0 : CH 233



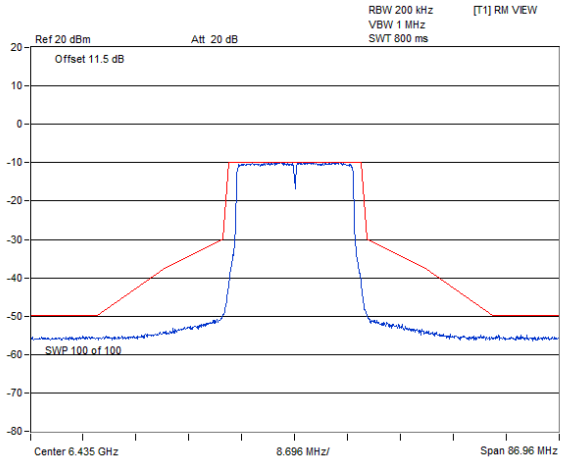
802.11be (EHT20) / Chain 1 : CH 1



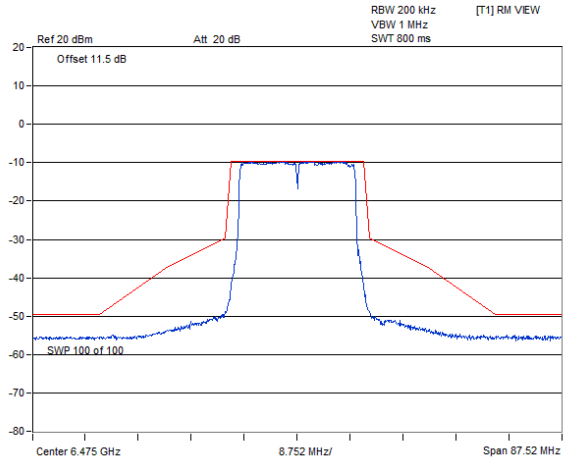
802.11be (EHT20) / Chain 1 : CH 45



802.11be (EHT20) / Chain 1 : CH 93

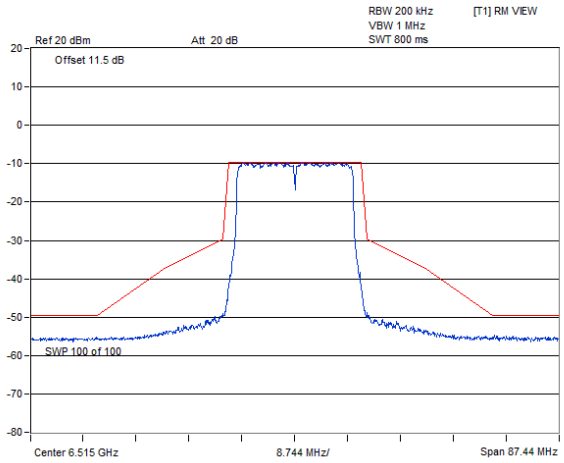


802.11be (EHT20) / Chain 1 : CH 97

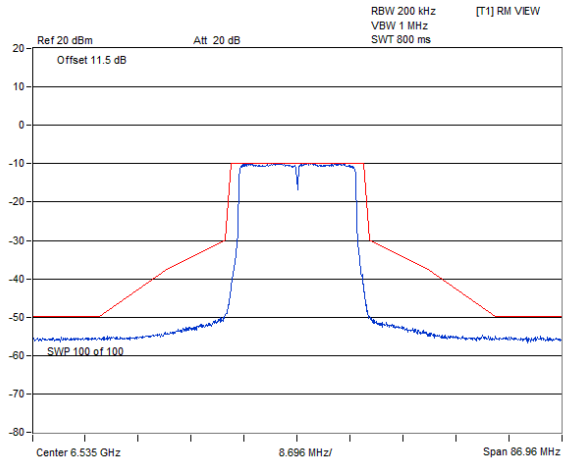


802.11be (EHT20) / Chain 1 : CH 105

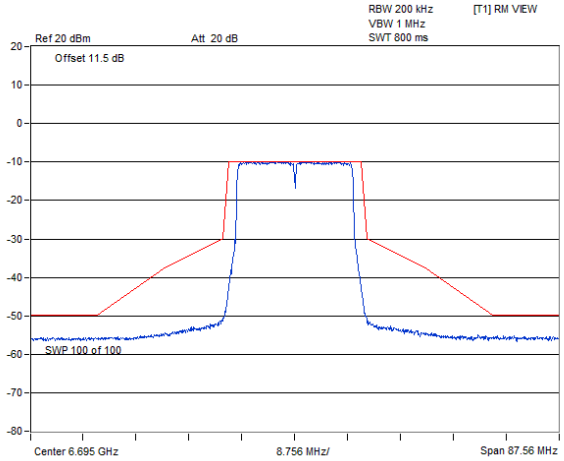
Spectrum Plot



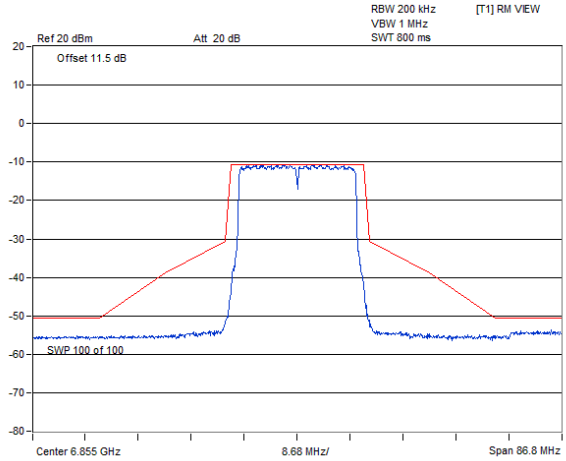
802.11be (EHT20) / Chain 1 : CH 113



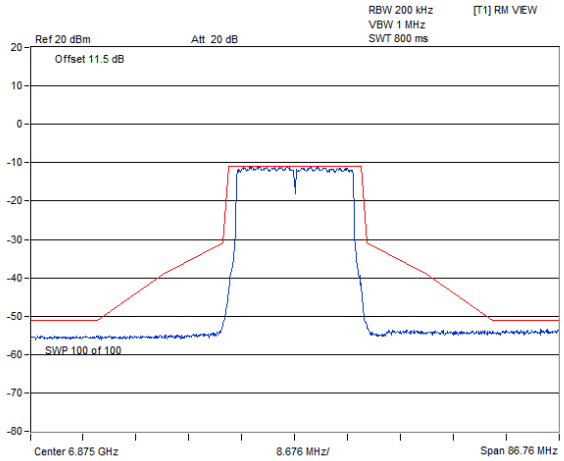
802.11be (EHT20) / Chain 1 : CH 117



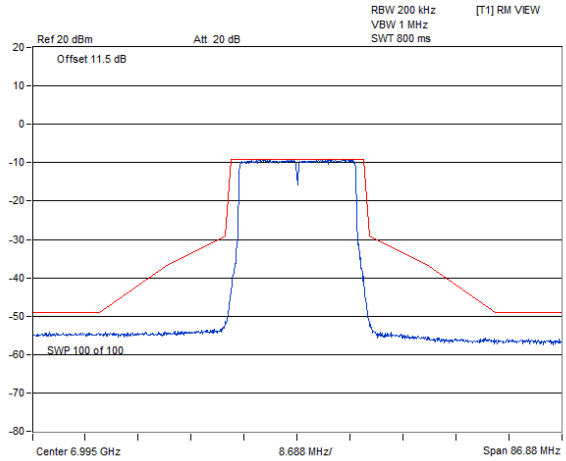
802.11be (EHT20) / Chain 1 : CH 149



802.11be (EHT20) / Chain 1 : CH 181

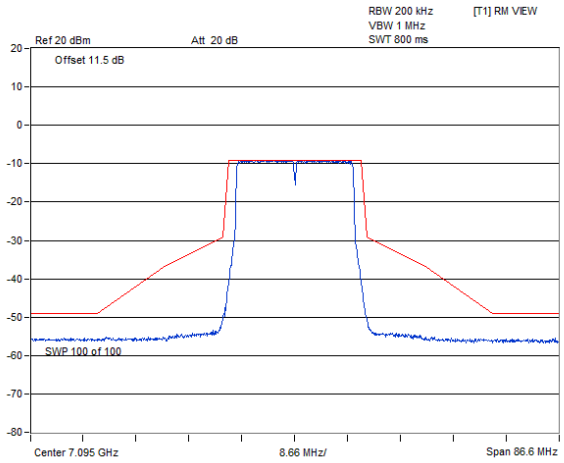


802.11be (EHT20) / Chain 1 : CH 185

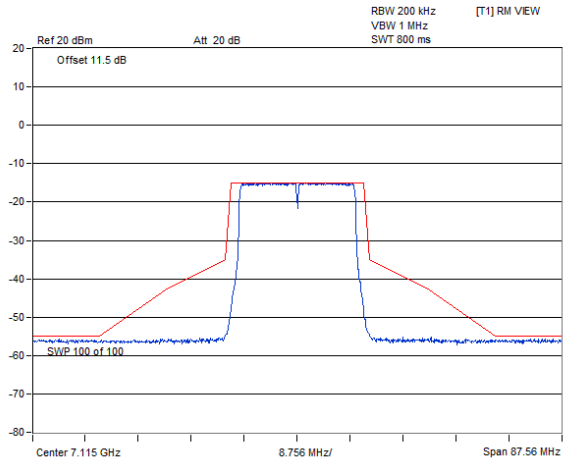


802.11be (EHT20) / Chain 1 : CH 209

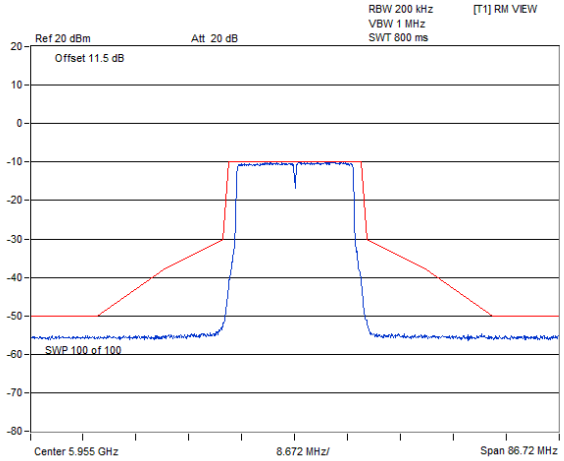
Spectrum Plot



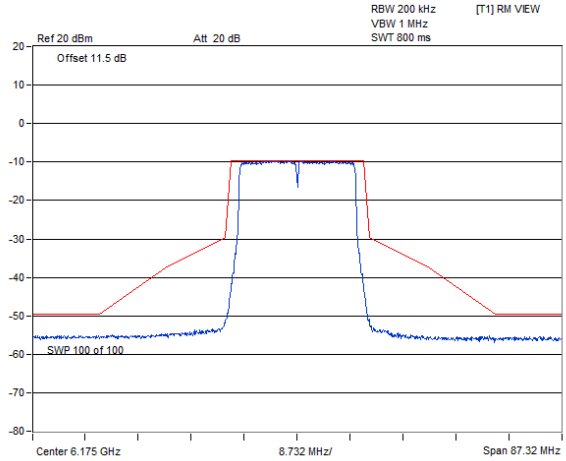
802.11be (EHT20) / Chain 1 : CH 229



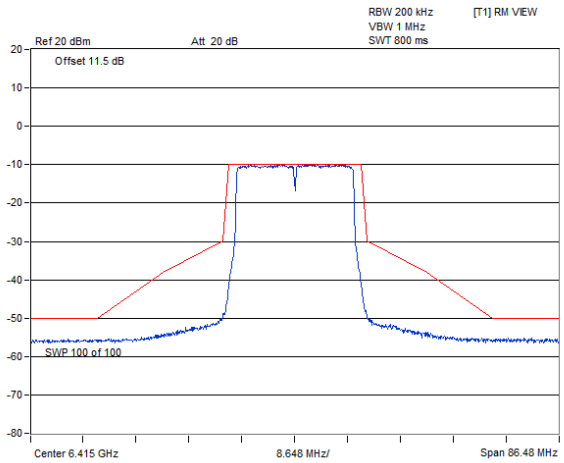
802.11be (EHT20) / Chain 1 : CH 233



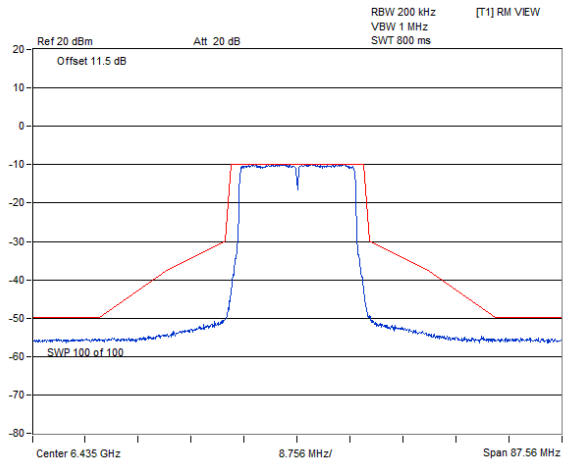
802.11be (EHT20) / Chain 2 : CH 1



802.11be (EHT20) / Chain 2 : CH 45

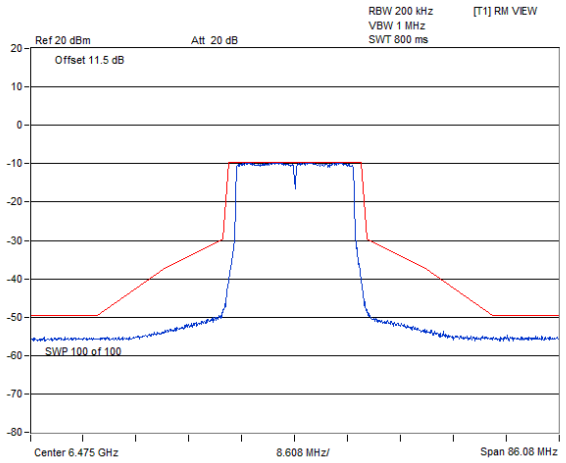


802.11be (EHT20) / Chain 2 : CH 93

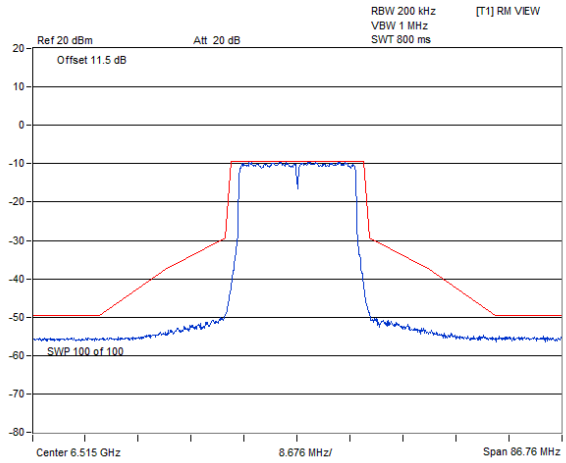


802.11be (EHT20) / Chain 2 : CH 97

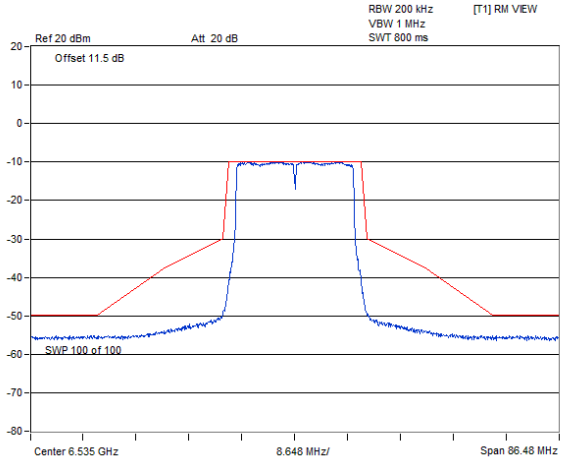
Spectrum Plot



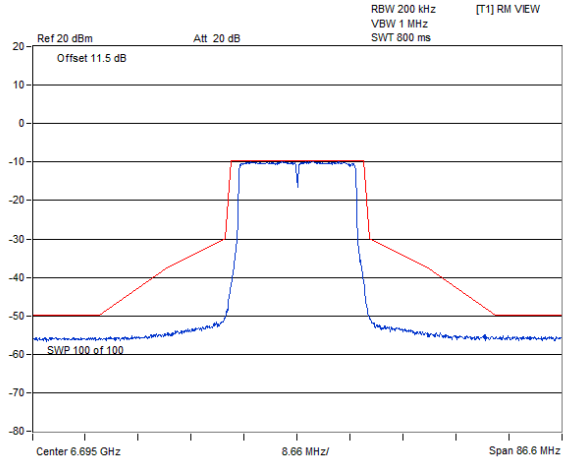
802.11be (EHT20) / Chain 2 : CH 105



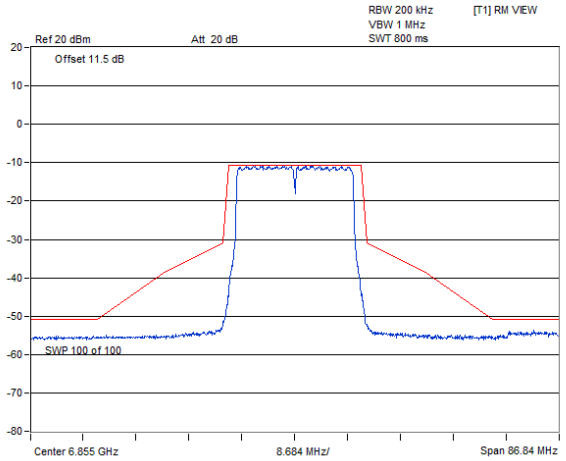
802.11be (EHT20) / Chain 2 : CH 113



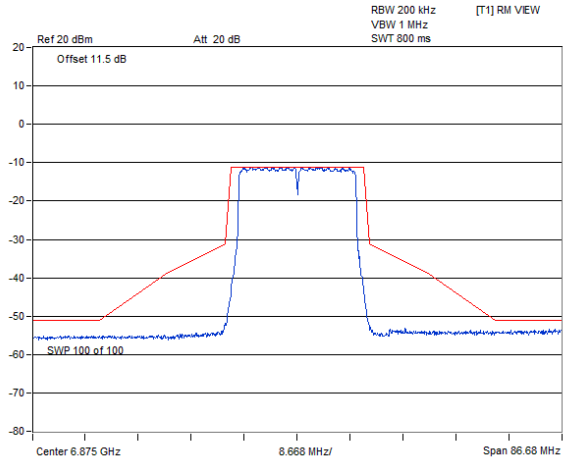
802.11be (EHT20) / Chain 2 : CH 117



802.11be (EHT20) / Chain 2 : CH 149

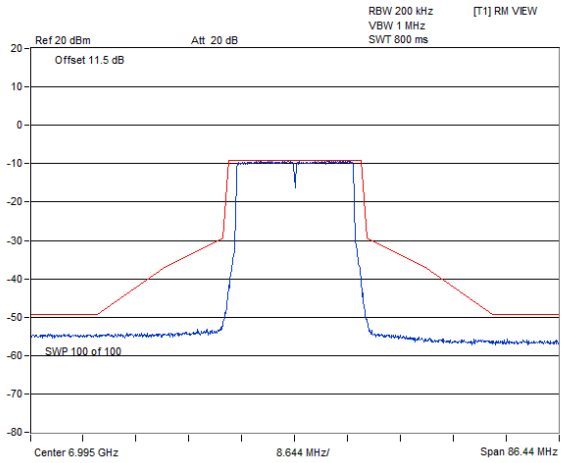


802.11be (EHT20) / Chain 2 : CH 181

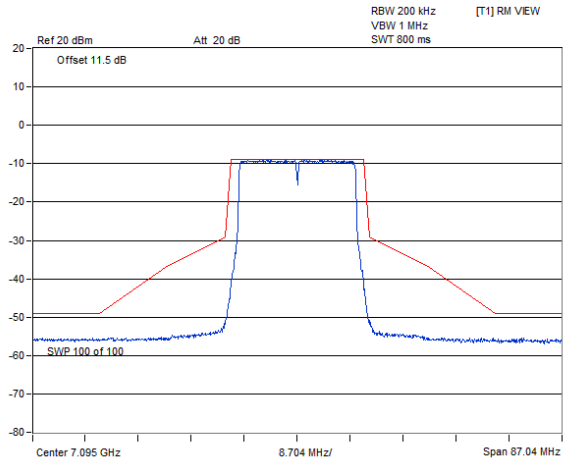


802.11be (EHT20) / Chain 2 : CH 185

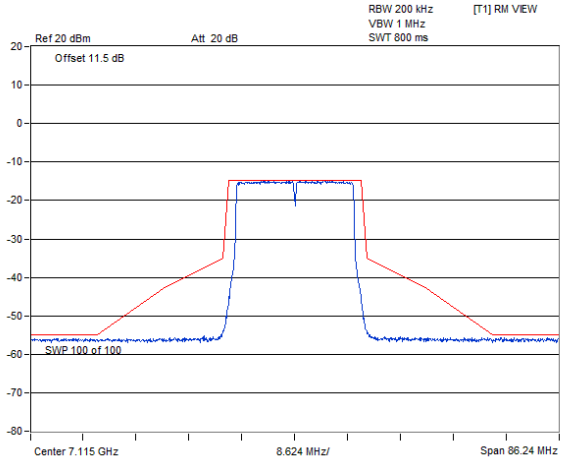
Spectrum Plot



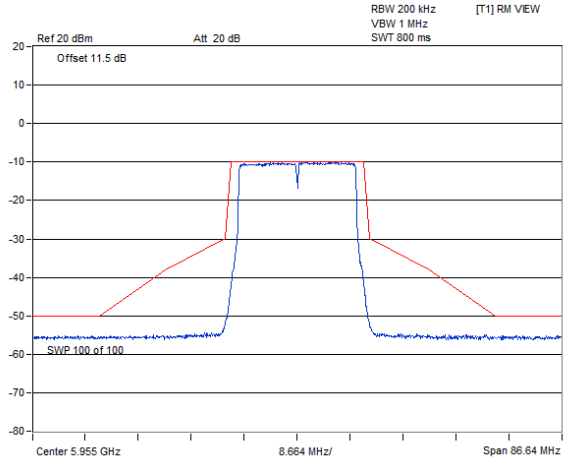
802.11be (EHT20) / Chain 2 : CH 209



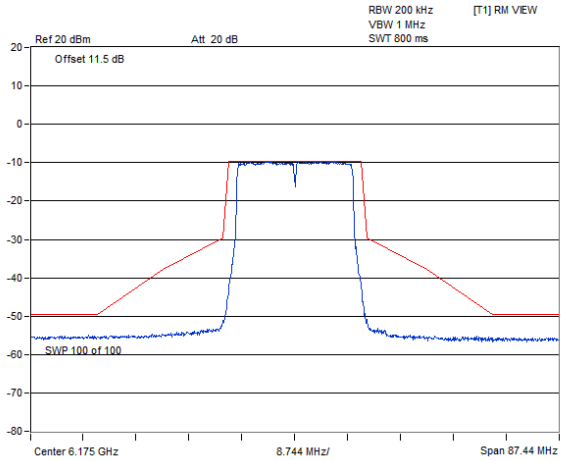
802.11be (EHT20) / Chain 2 : CH 229



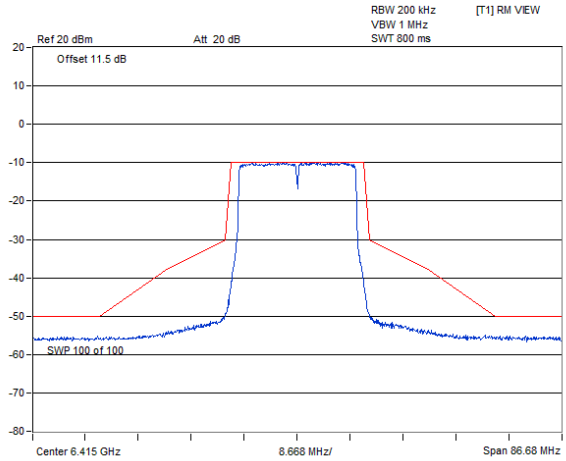
802.11be (EHT20) / Chain 2 : CH 233



802.11be (EHT20) / Chain 3 : CH 1

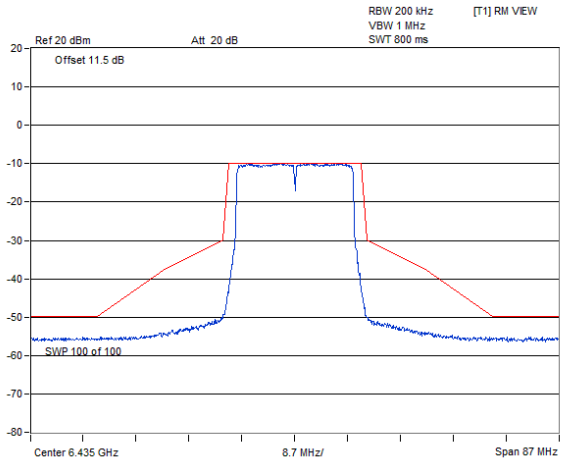


802.11be (EHT20) / Chain 3 : CH 45

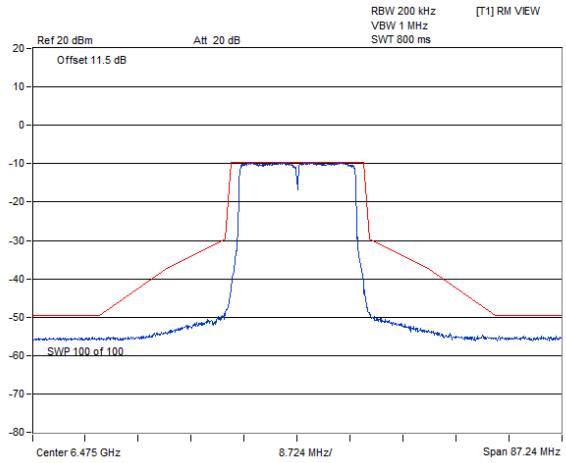


802.11be (EHT20) / Chain 3 : CH 93

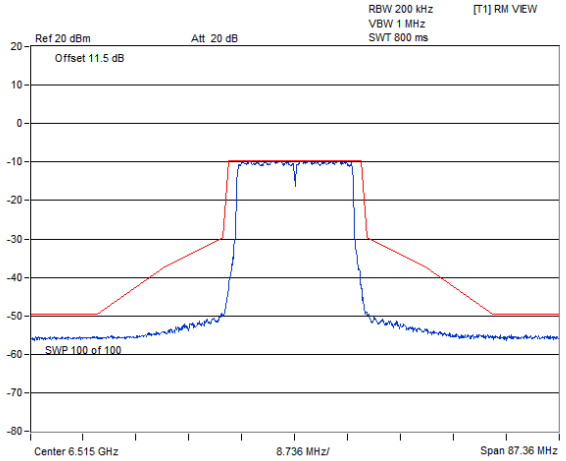
Spectrum Plot



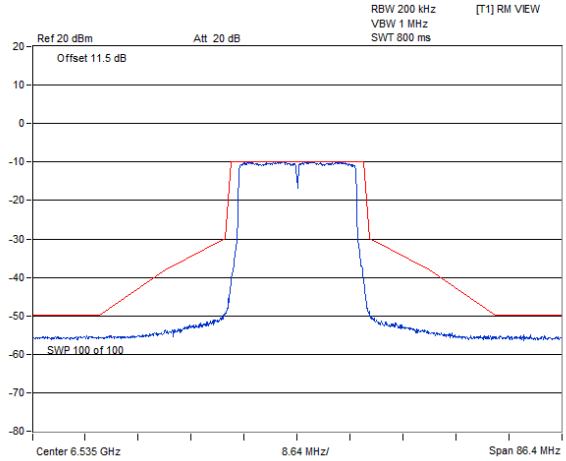
802.11be (EHT20) / Chain 3 : CH 97



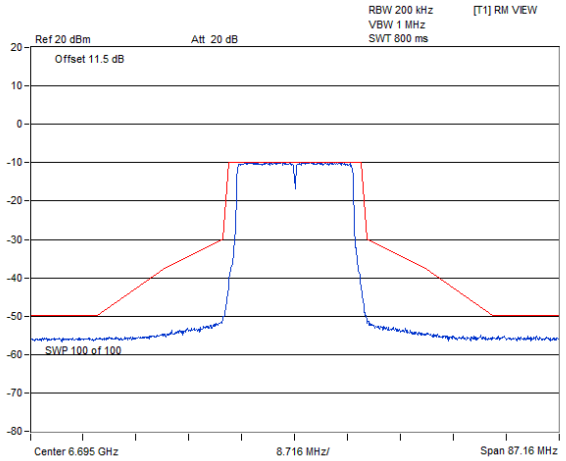
802.11be (EHT20) / Chain 3 : CH 105



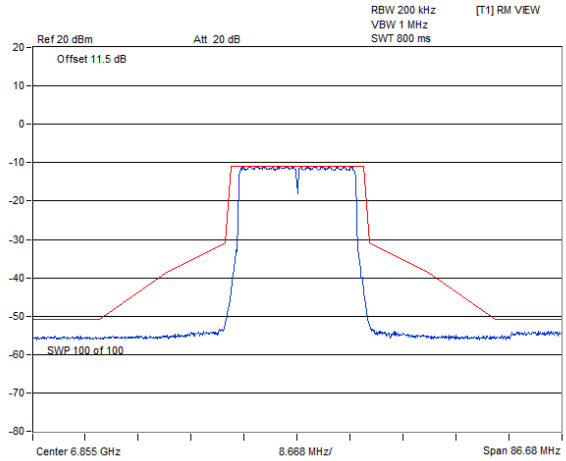
802.11be (EHT20) / Chain 3 : CH 113



802.11be (EHT20) / Chain 3 : CH 117

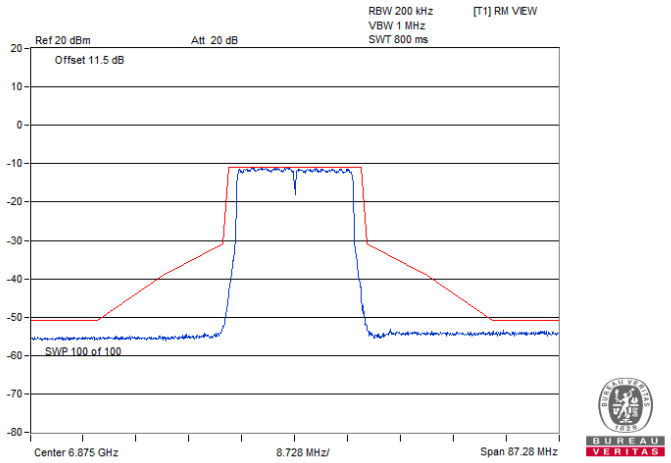


802.11be (EHT20) / Chain 3 : CH 149

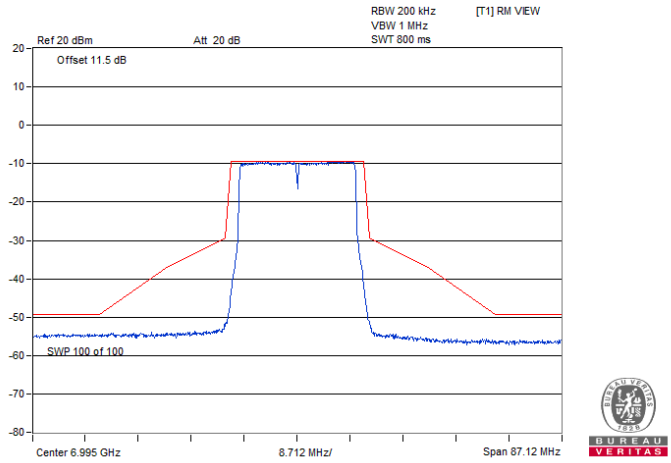


802.11be (EHT20) / Chain 3 : CH 181

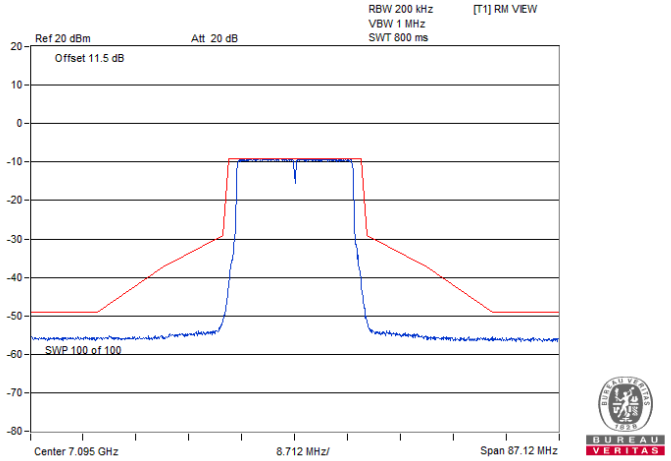
Spectrum Plot



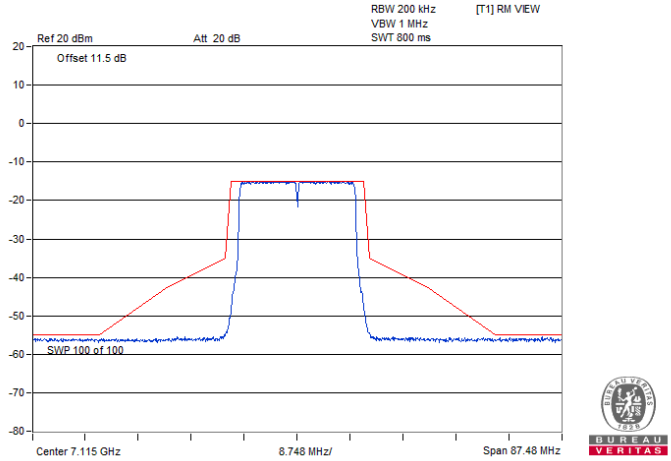
802.11be (EHT20) / Chain 3 : CH 185



802.11be (EHT20) / Chain 3 : CH 209

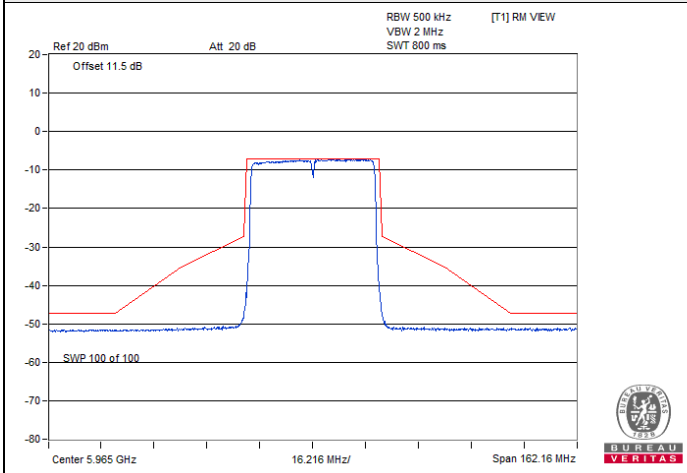
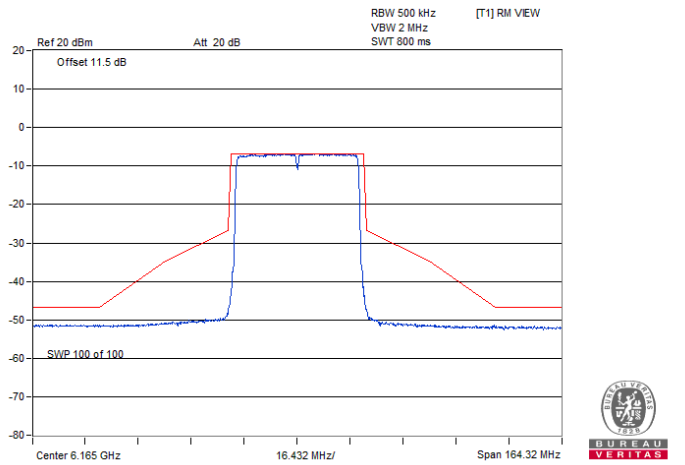
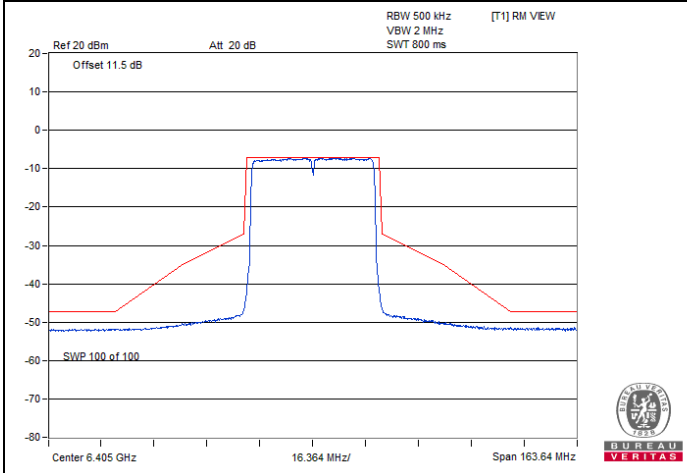
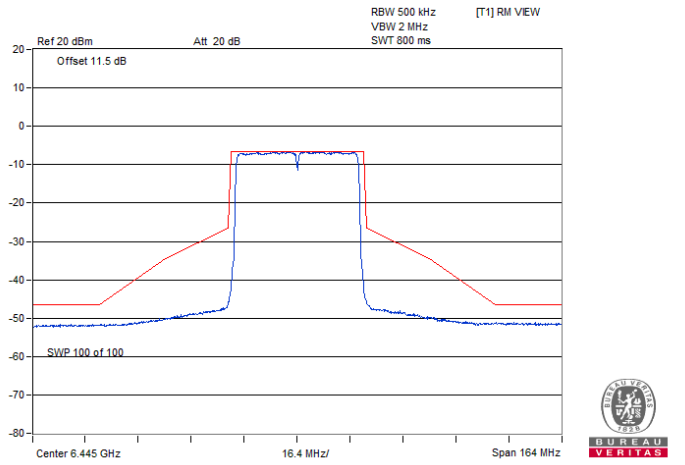
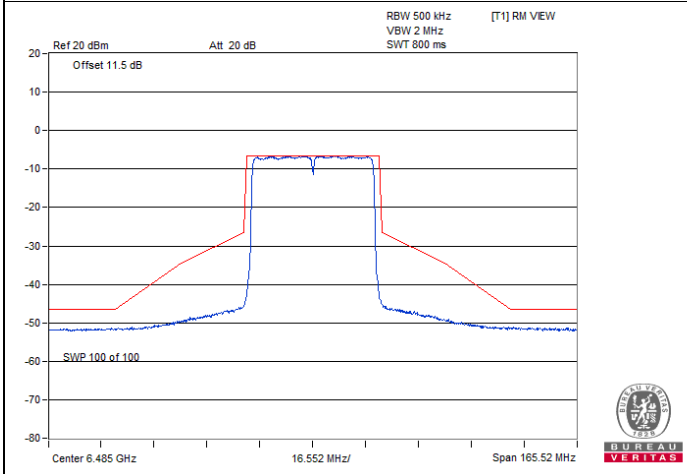
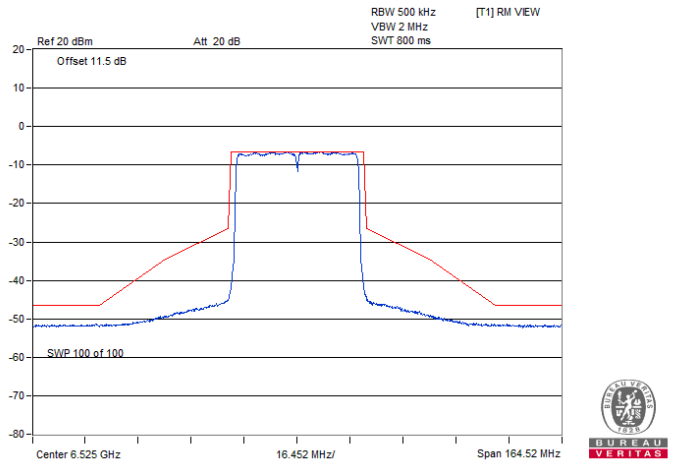


802.11be (EHT20) / Chain 3 : CH 229

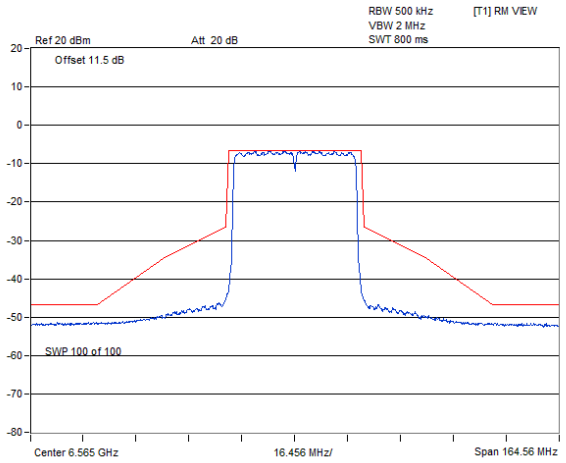


802.11be (EHT20) / Chain 3 : CH 233

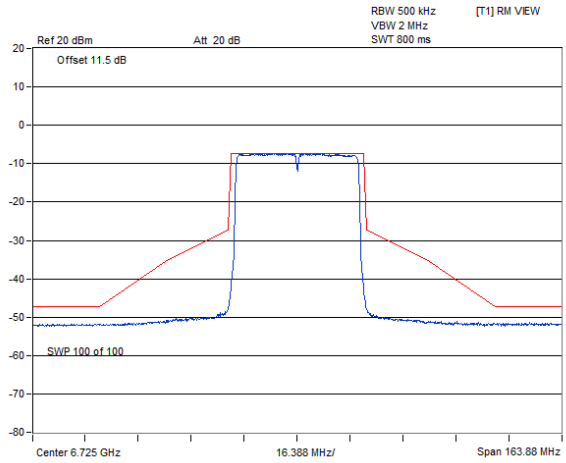
802.11be (EHT40)

Spectrum Plot	
	
802.11be (EHT40) / Chain 0 : CH 3	802.11be (EHT40) / Chain 0 : CH 43
	
802.11be (EHT40) / Chain 0 : CH 91	802.11be (EHT40) / Chain 0 : CH 99
	
802.11be (EHT40) / Chain 0 : CH 107	802.11be (EHT40) / Chain 0 : CH 115

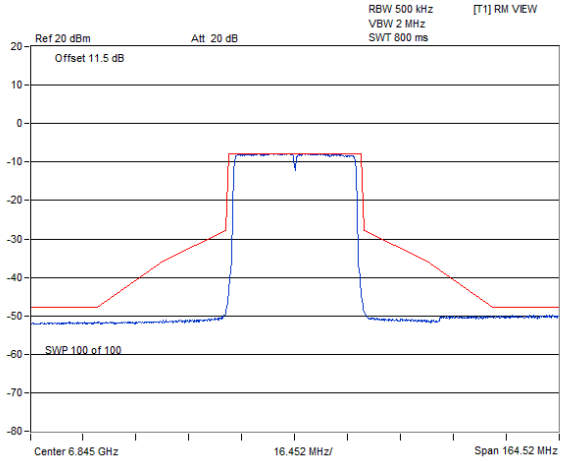
Spectrum Plot



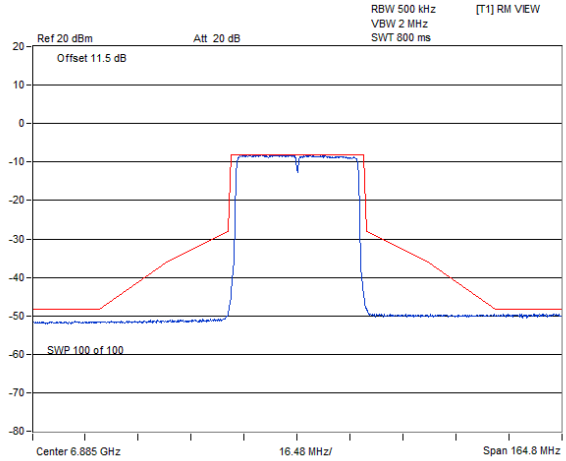
802.11be (EHT40) / Chain 0 : CH 123



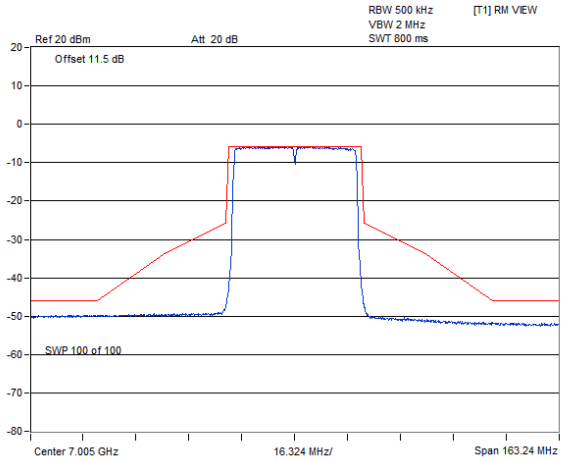
802.11be (EHT40) / Chain 0 : CH 155



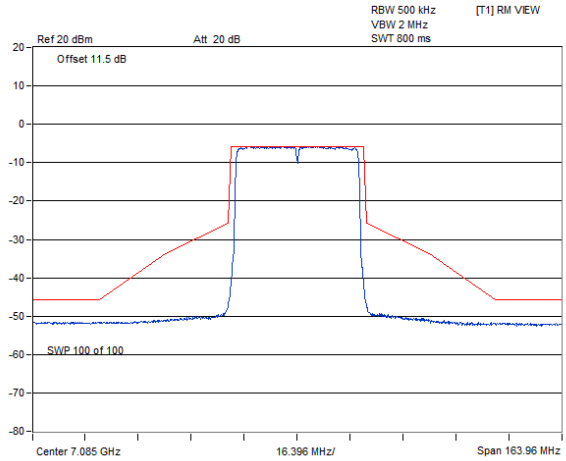
802.11be (EHT40) / Chain 0 : CH 179



802.11be (EHT40) / Chain 0 : CH 187

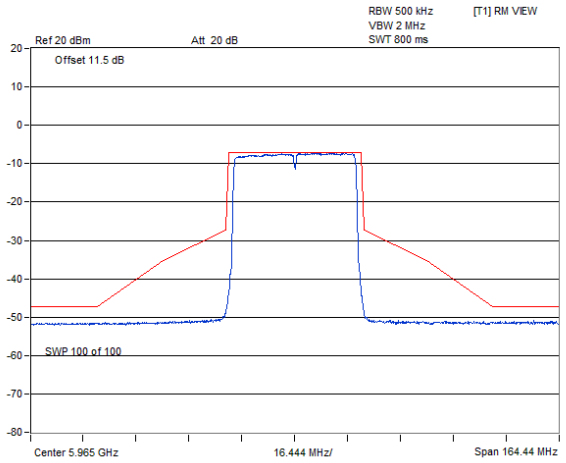


802.11be (EHT40) / Chain 0 : CH 211

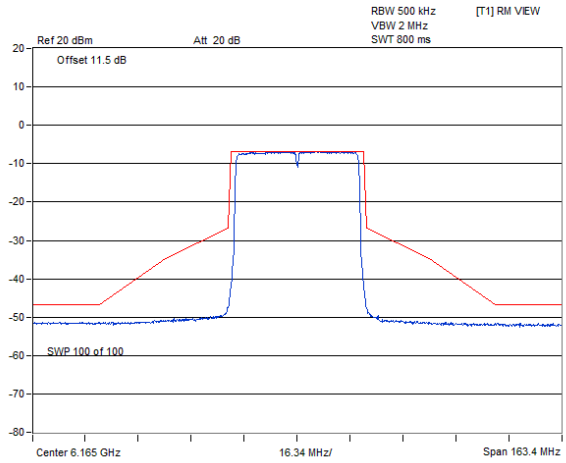


802.11be (EHT40) / Chain 0 : CH 227

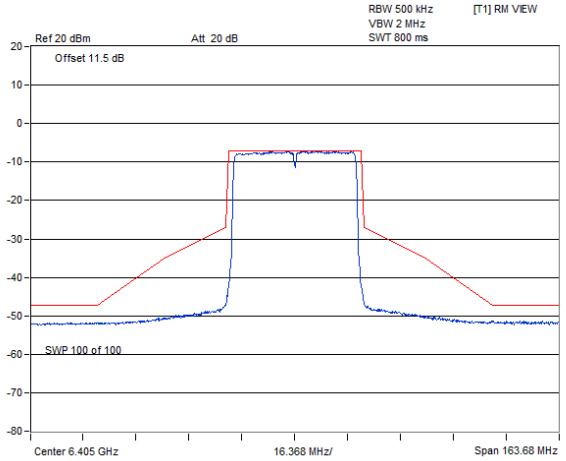
Spectrum Plot



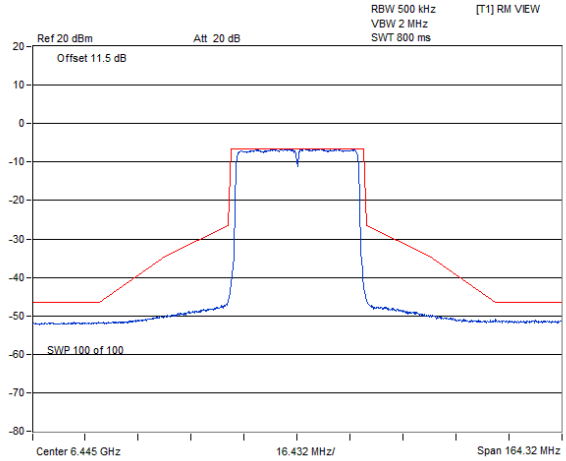
802.11be (EHT40) / Chain 1 : CH 3



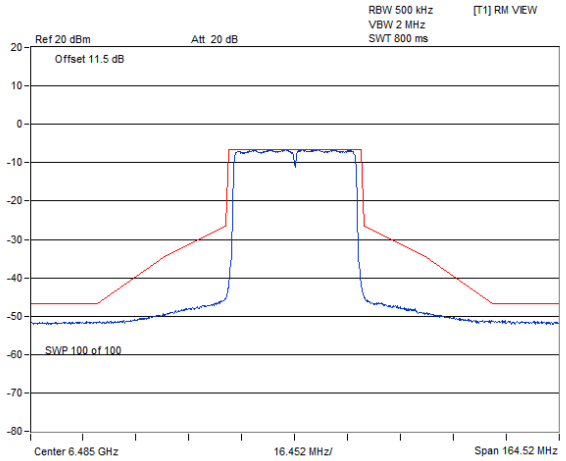
802.11be (EHT40) / Chain 1 : CH 43



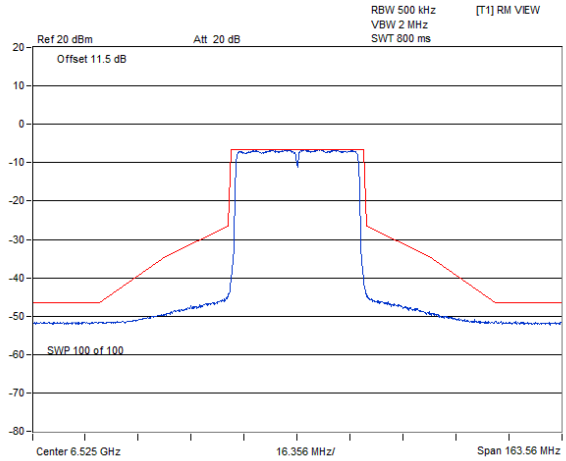
802.11be (EHT40) / Chain 1 : CH 91



802.11be (EHT40) / Chain 1 : CH 99

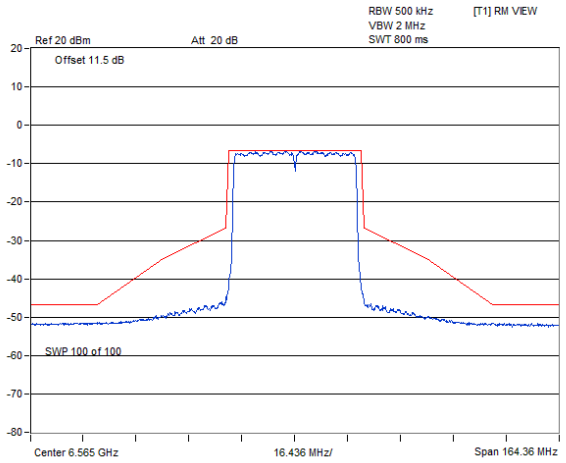


802.11be (EHT40) / Chain 1 : CH 107

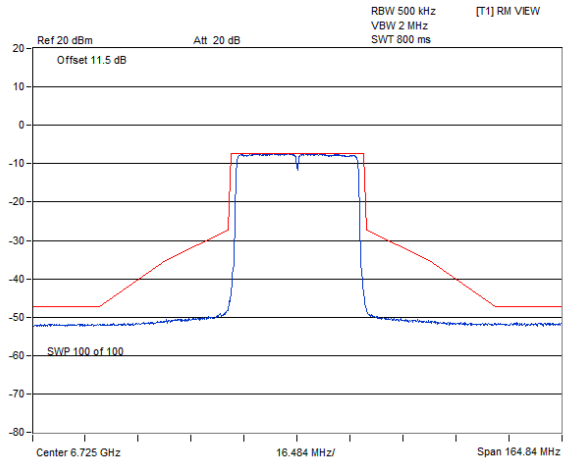


802.11be (EHT40) / Chain 1 : CH 115

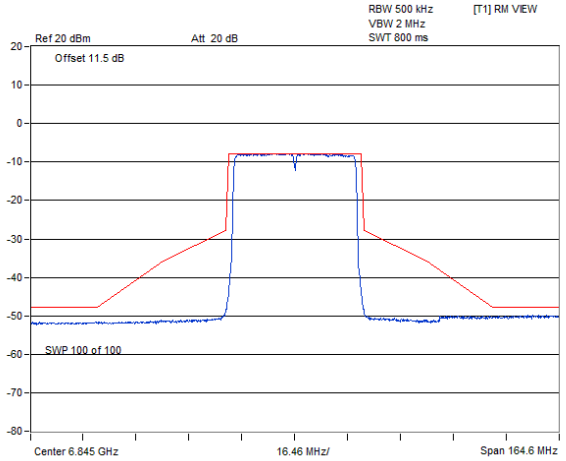
Spectrum Plot



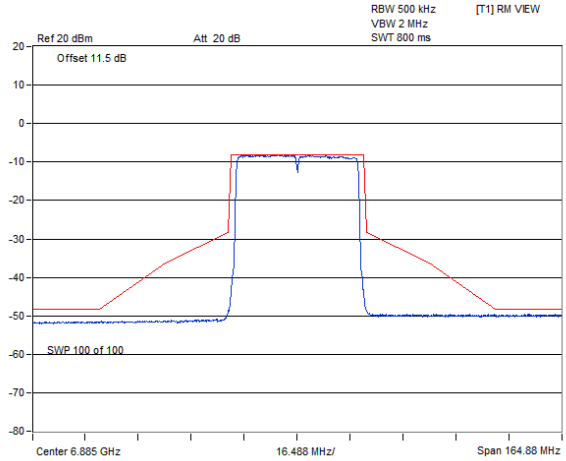
802.11be (EHT40) / Chain 1 : CH 123



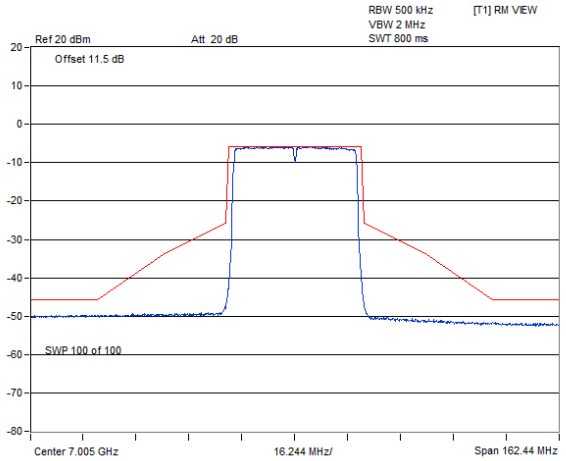
802.11be (EHT40) / Chain 1 : CH 155



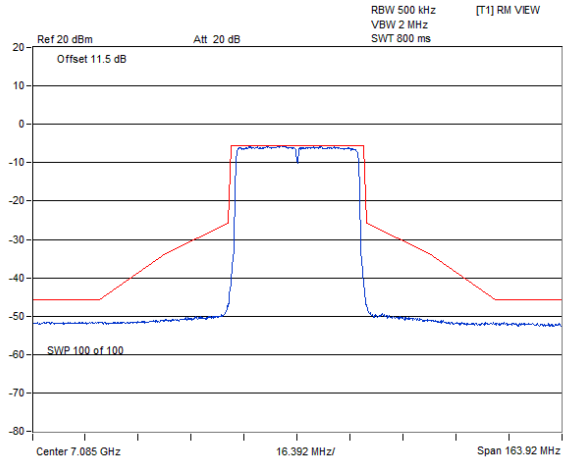
802.11be (EHT40) / Chain 1 : CH 179



802.11be (EHT40) / Chain 1 : CH 187

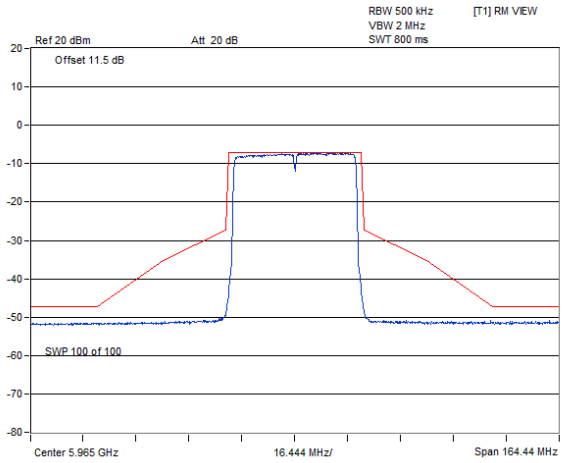


802.11be (EHT40) / Chain 1 : CH 211

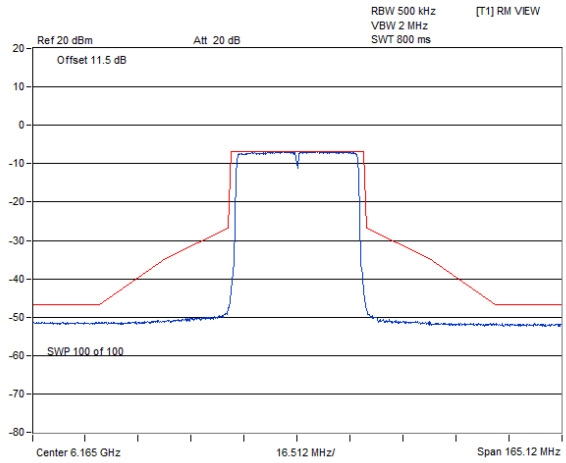


802.11be (EHT40) / Chain 1 : CH 227

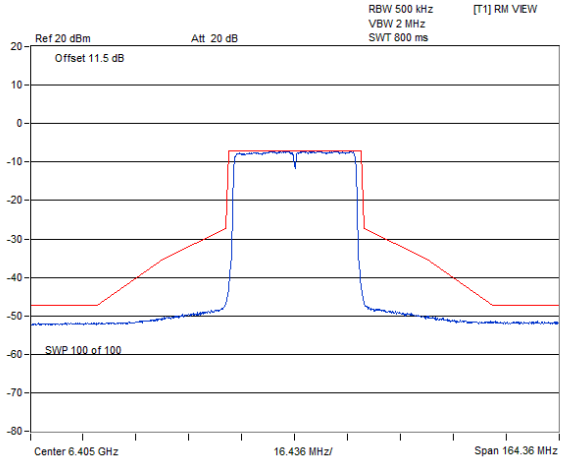
Spectrum Plot



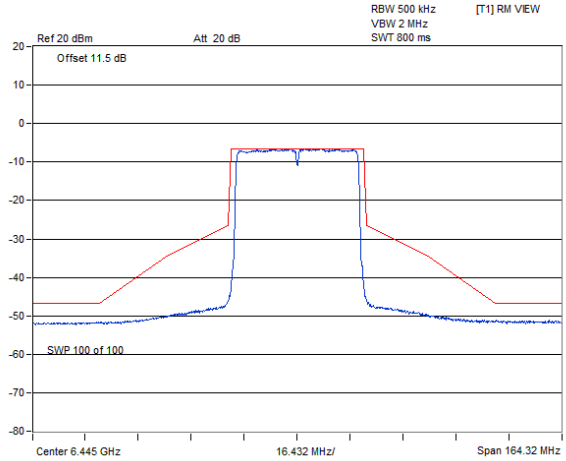
802.11be (EHT40) / Chain 2 : CH 3



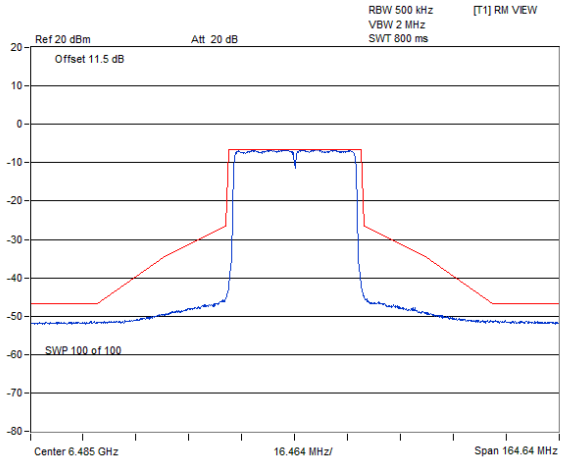
802.11be (EHT40) / Chain 2 : CH 43



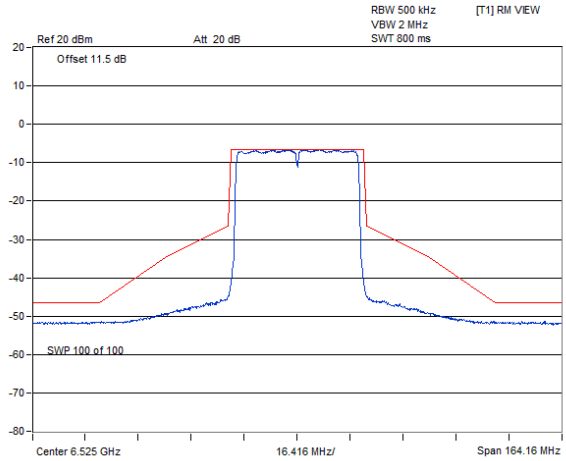
802.11be (EHT40) / Chain 2 : CH 91



802.11be (EHT40) / Chain 2 : CH 99

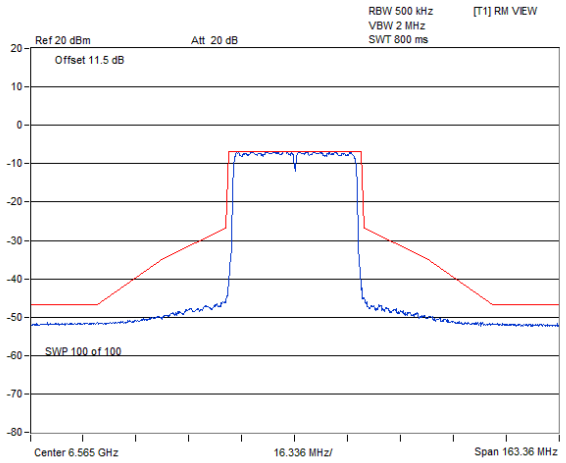


802.11be (EHT40) / Chain 2 : CH 107

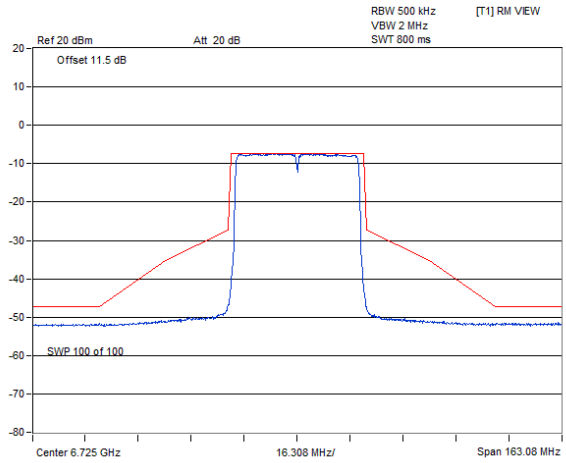


802.11be (EHT40) / Chain 2 : CH 115

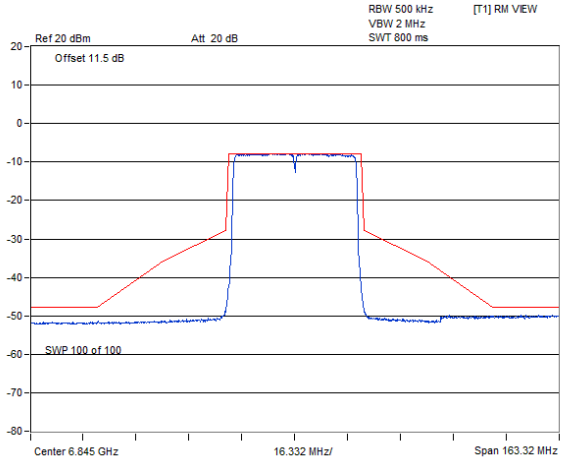
Spectrum Plot



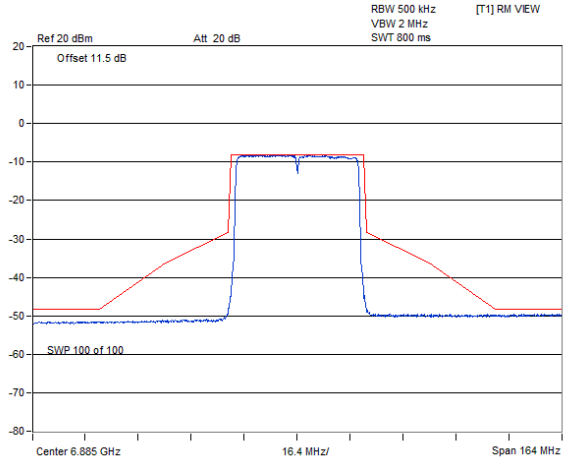
802.11be (EHT40) / Chain 2 : CH 123



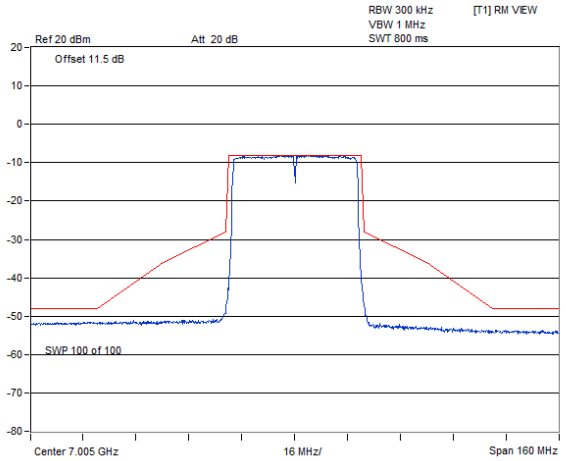
802.11be (EHT40) / Chain 2 : CH 155



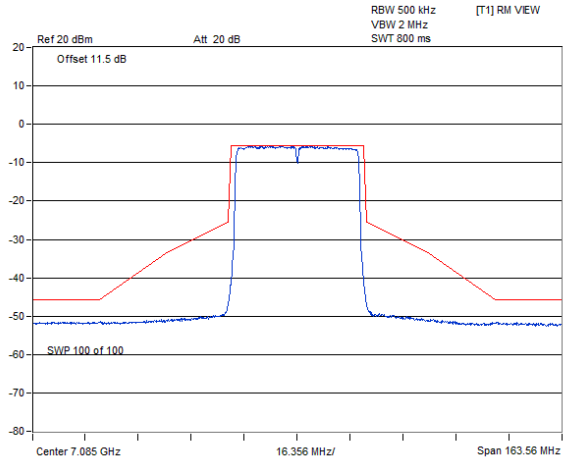
802.11be (EHT40) / Chain 2 : CH 179



802.11be (EHT40) / Chain 2 : CH 187

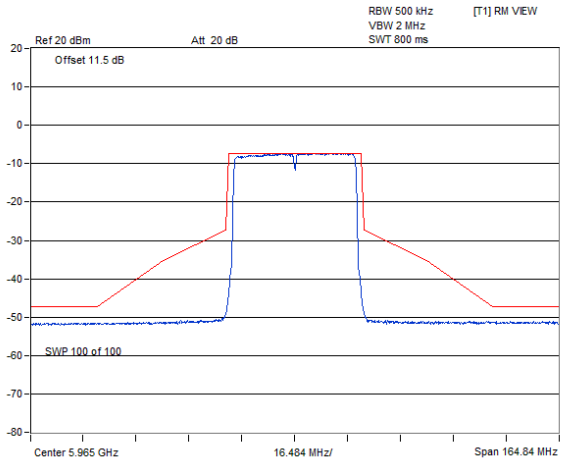


802.11be (EHT40) / Chain 2 : CH 211

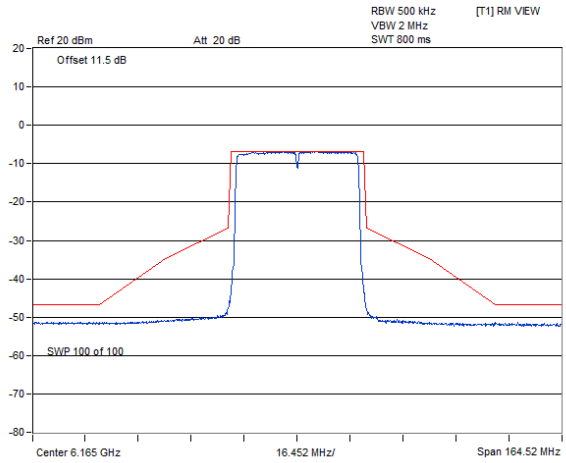


802.11be (EHT40) / Chain 2 : CH 227

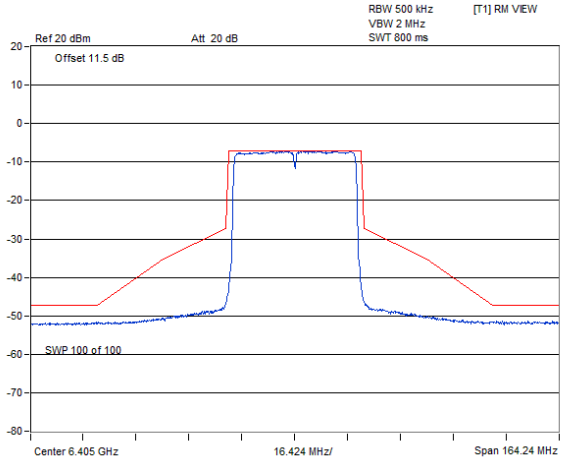
Spectrum Plot



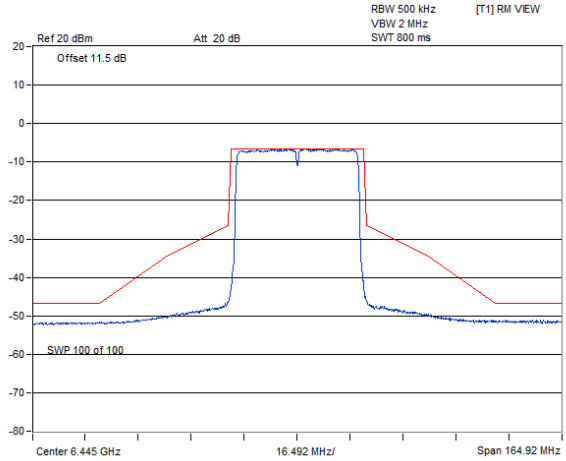
802.11be (EHT40) / Chain 3 : CH 3



802.11be (EHT40) / Chain 3 : CH 43



802.11be (EHT40) / Chain 3 : CH 91



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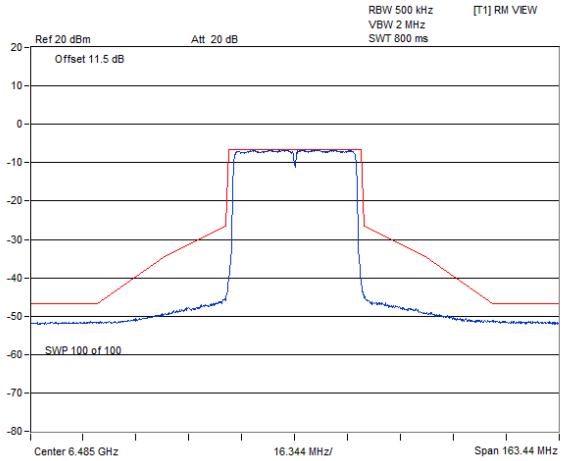
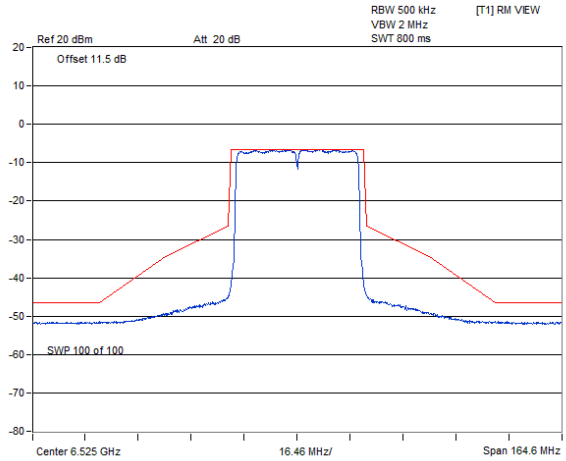
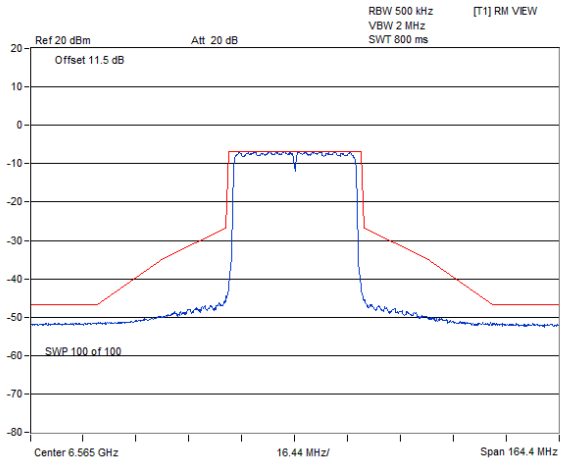


802.11be (EHT40) / Chain 3 : CH 107



802.11be (EHT40) / Chain 3 : CH 115

Spectrum Plot



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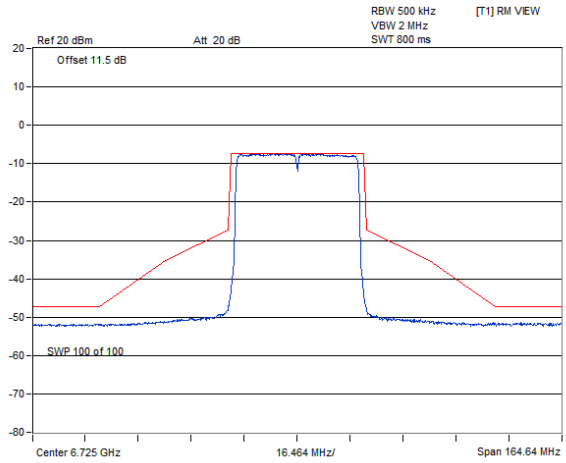
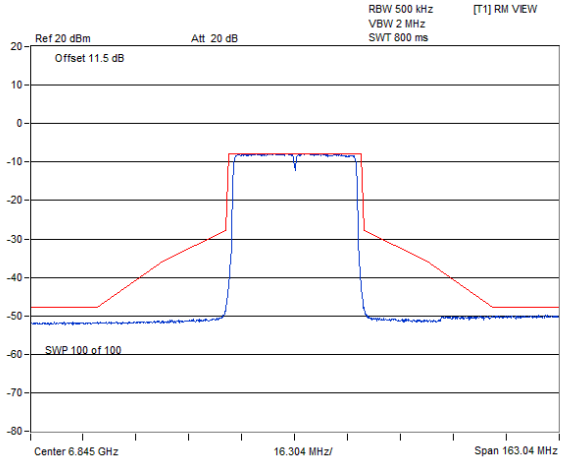


802.11be (EHT40) / Chain 3 : CH 155



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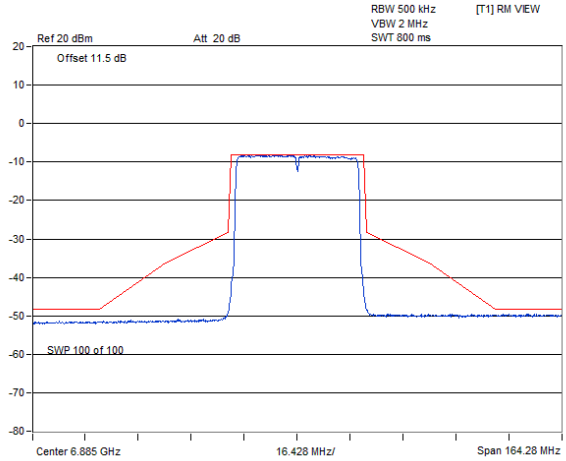
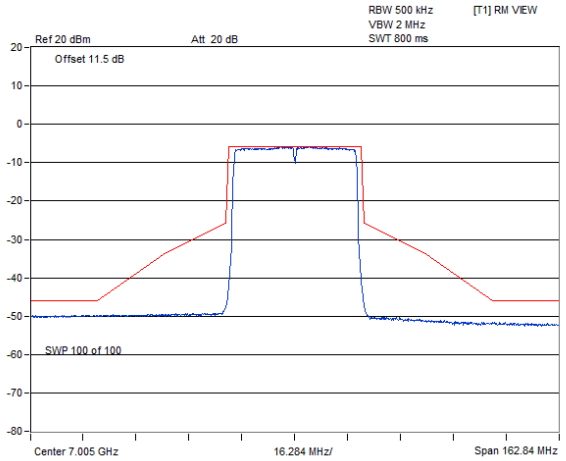


802.11be (EHT40) / Chain 3 : CH 187



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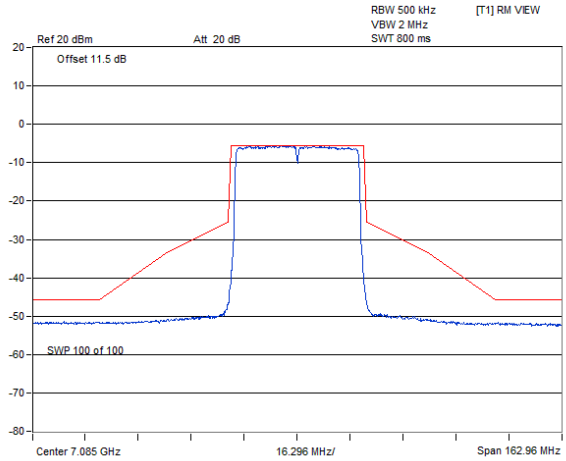
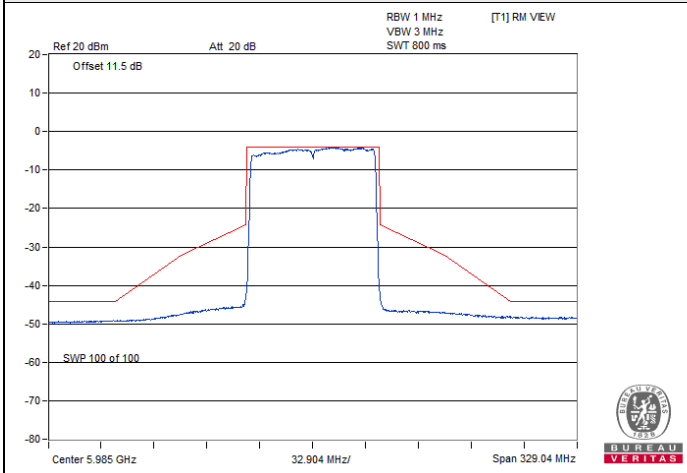
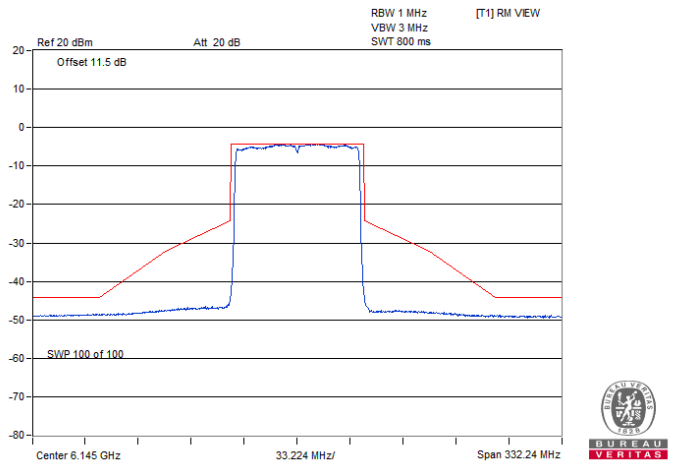


802.11be (EHT40) / Chain 3 : CH 227

802.11be (EHT80)

Spectrum Plot	
	
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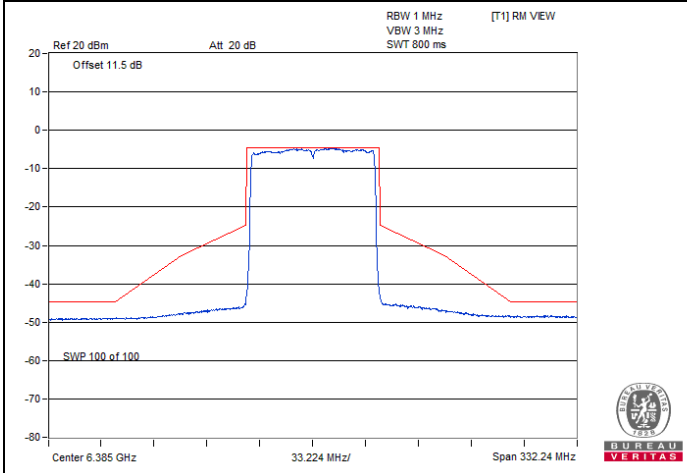
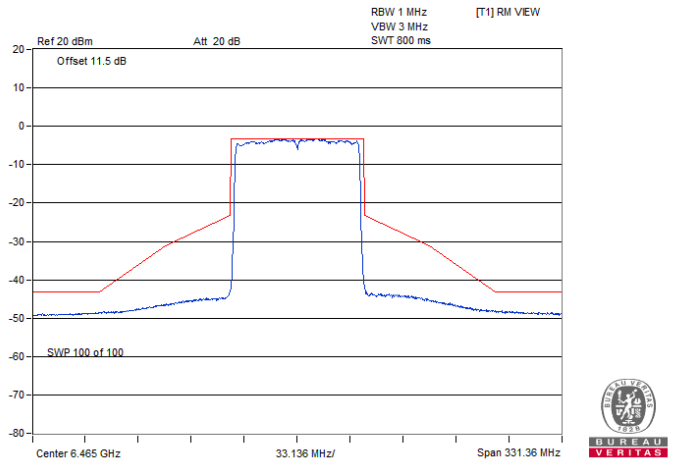
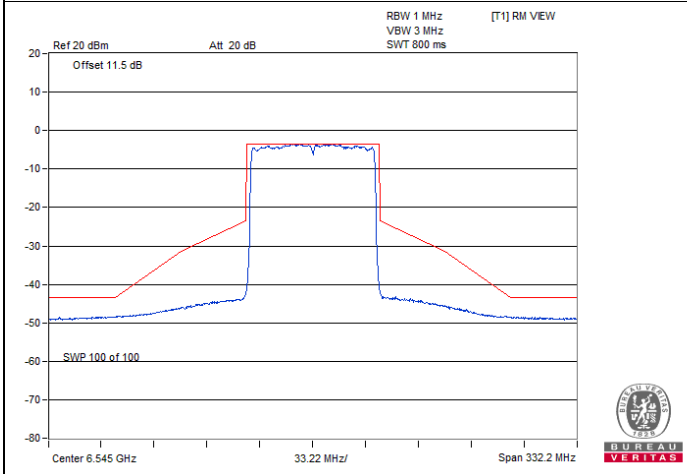
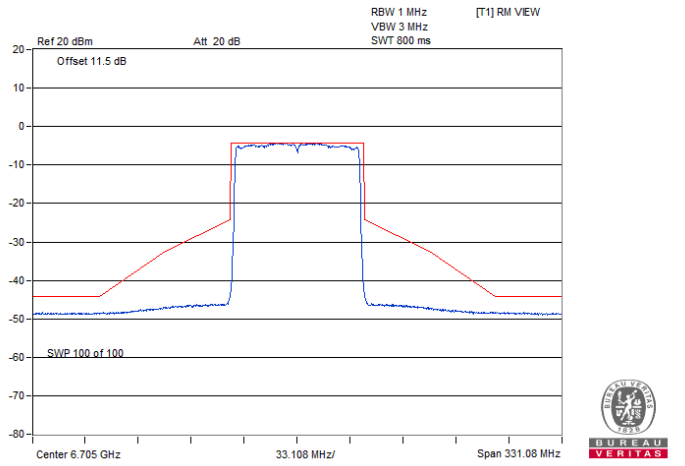
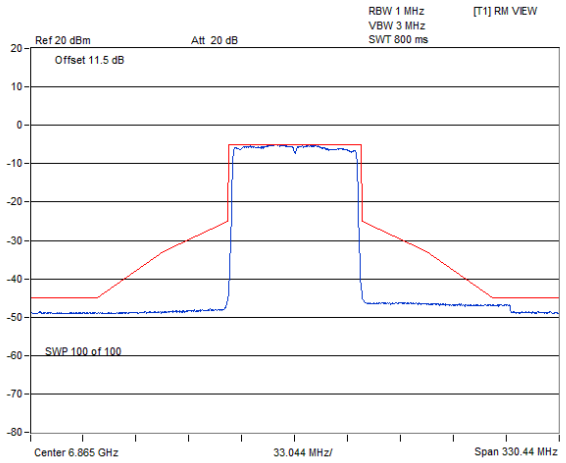
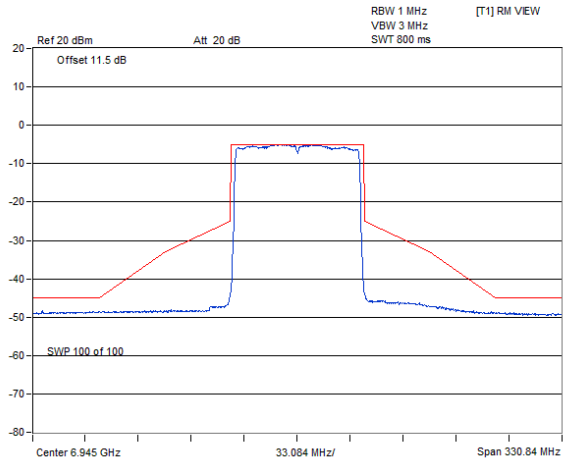
	
802.11be (EHT80) / Chain 0 : CH 87	802.11be (EHT80) / Chain 0 : CH 103
	
802.11be (EHT80) / Chain 0 : CH 119	802.11be (EHT80) / Chain 0 : CH 151

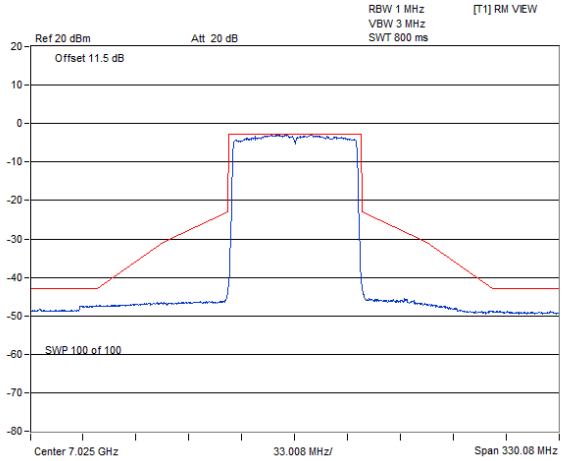
Spectrum Plot



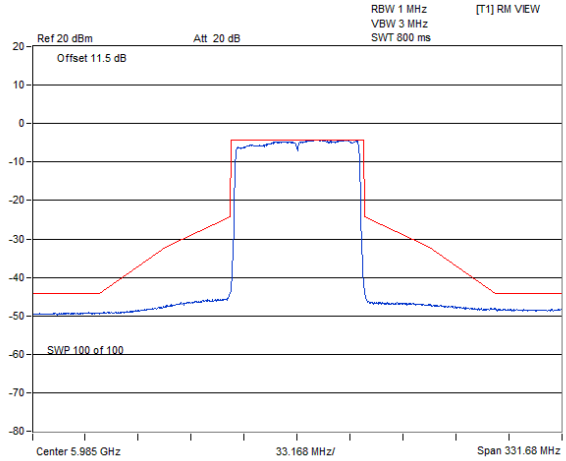
802.11be (EHT80) / Chain 0 : CH 183



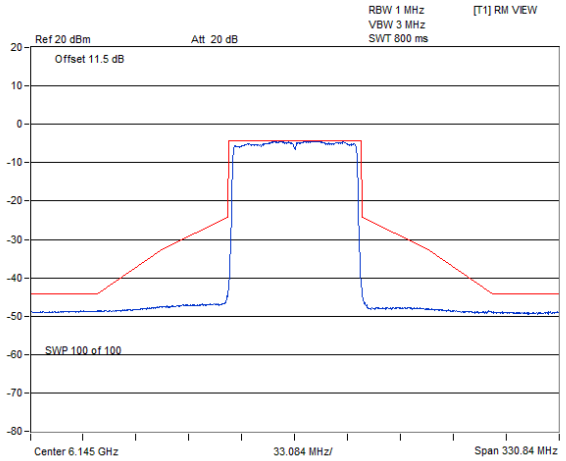
802.11be (EHT80) / Chain 0 : CH 199



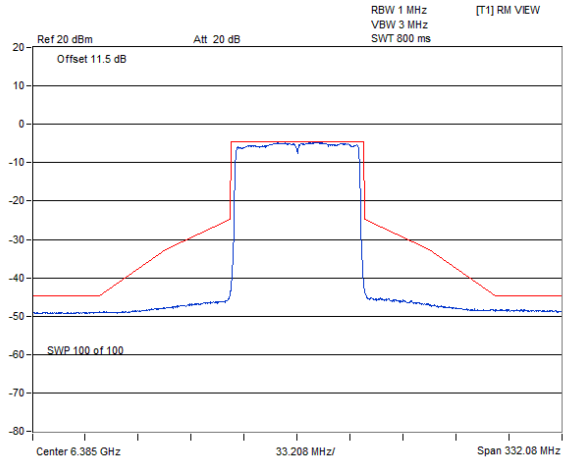
802.11be (EHT80) / Chain 0 : CH 215



802.11be (EHT80) / Chain 1 : CH 7

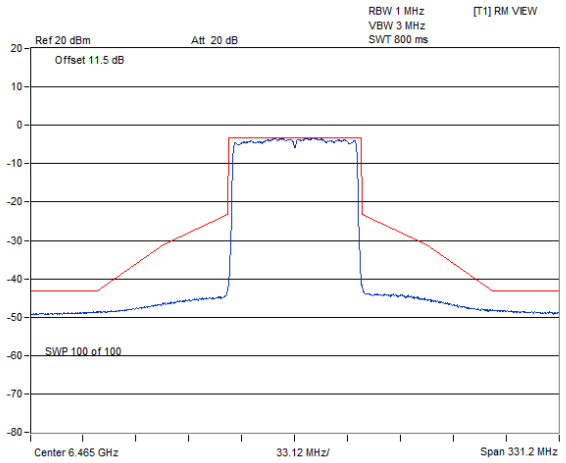


802.11be (EHT80) / Chain 1 : CH 39

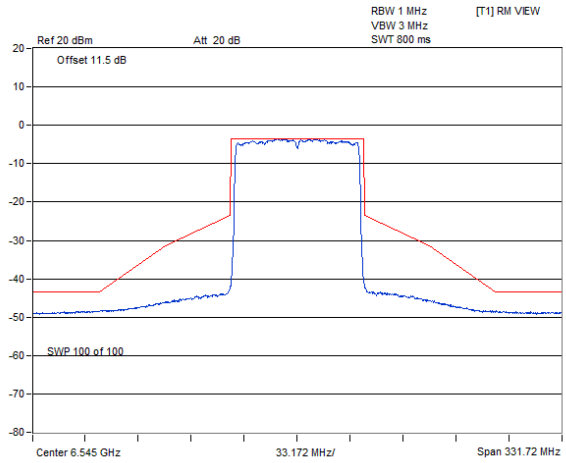


802.11be (EHT80) / Chain 1 : CH 87

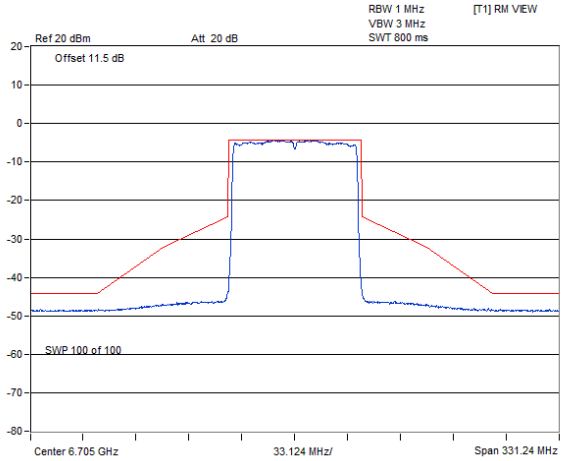
Spectrum Plot



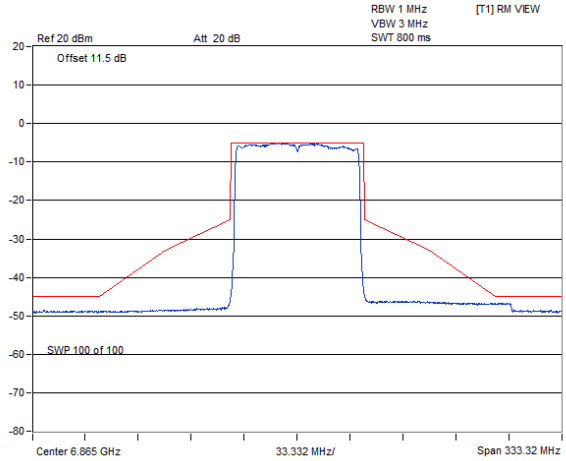
802.11be (EHT80) / Chain 1 : CH 103



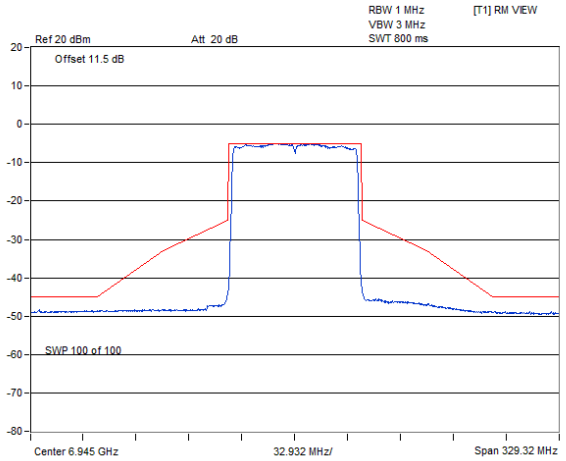
802.11be (EHT80) / Chain 1 : CH 119



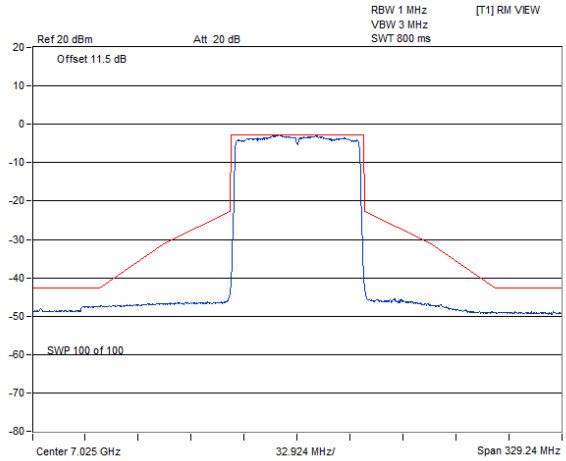
802.11be (EHT80) / Chain 1 : CH 151



802.11be (EHT80) / Chain 1 : CH 183

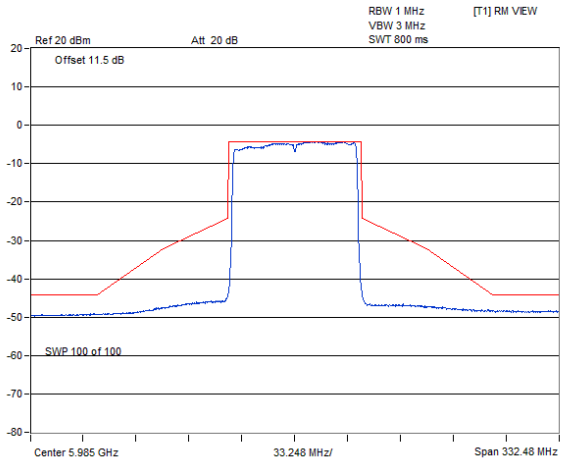


802.11be (EHT80) / Chain 1 : CH 199

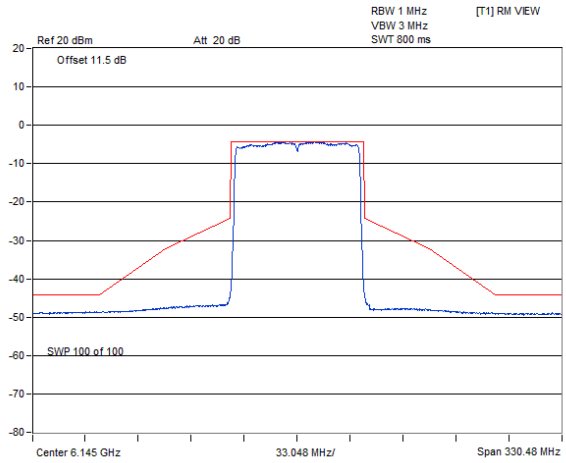


802.11be (EHT80) / Chain 1 : CH 215

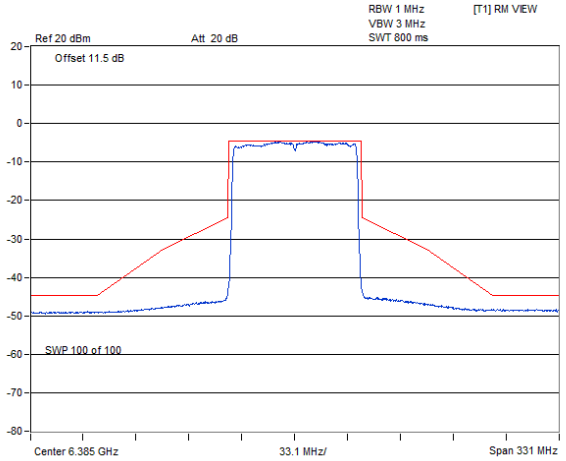
Spectrum Plot



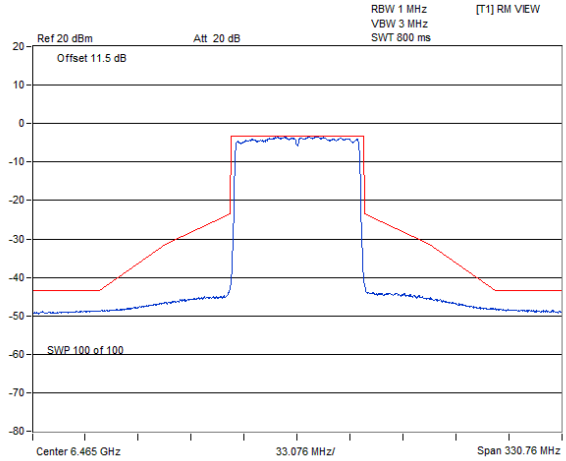
802.11be (EHT80) / Chain 2 : CH 7



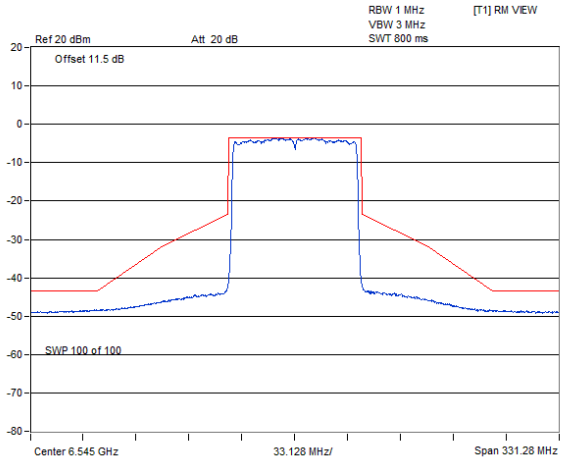
802.11be (EHT80) / Chain 2 : CH 39



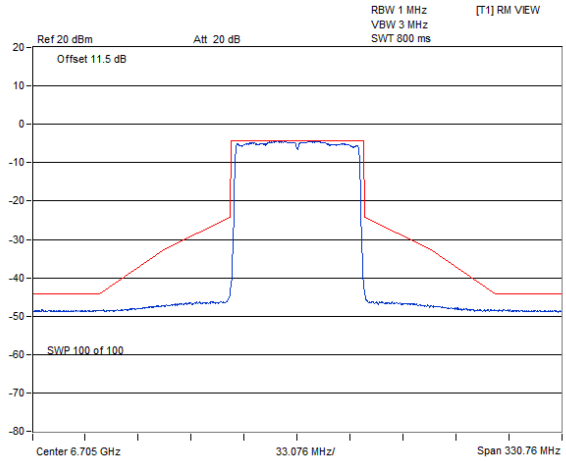
802.11be (EHT80) / Chain 2 : CH 87



802.11be (EHT80) / Chain 2 : CH 103

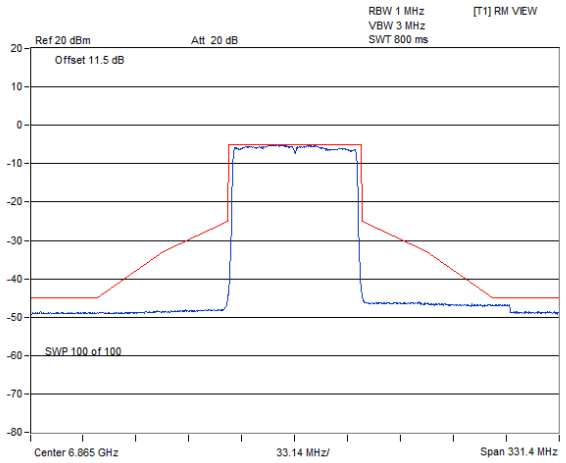


802.11be (EHT80) / Chain 2 : CH 119

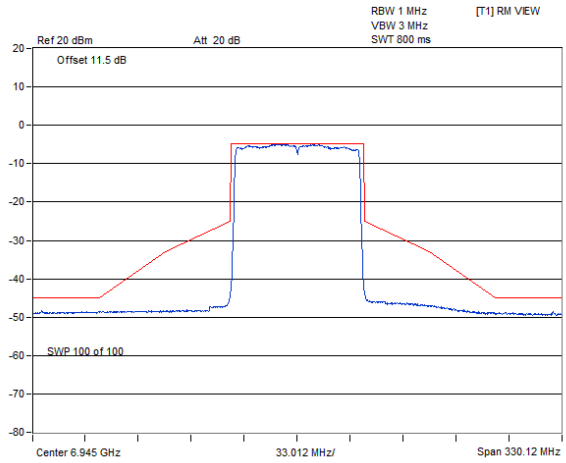


802.11be (EHT80) / Chain 2 : CH 151

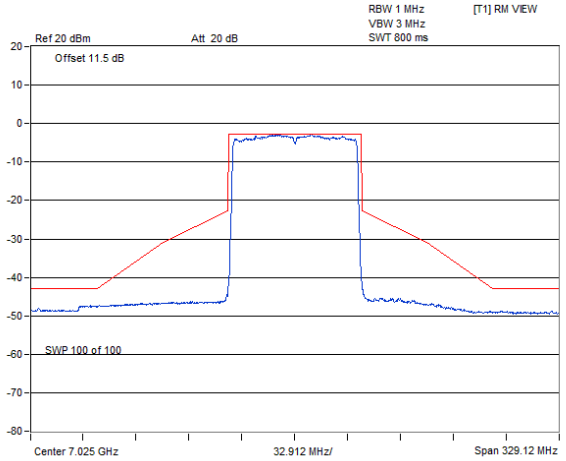
Spectrum Plot



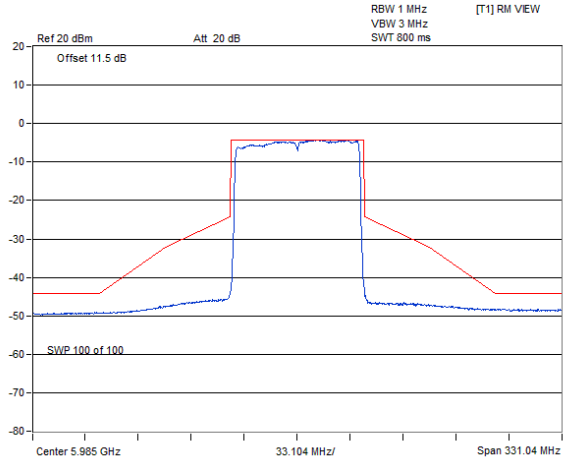
802.11be (EHT80) / Chain 2 : CH 183



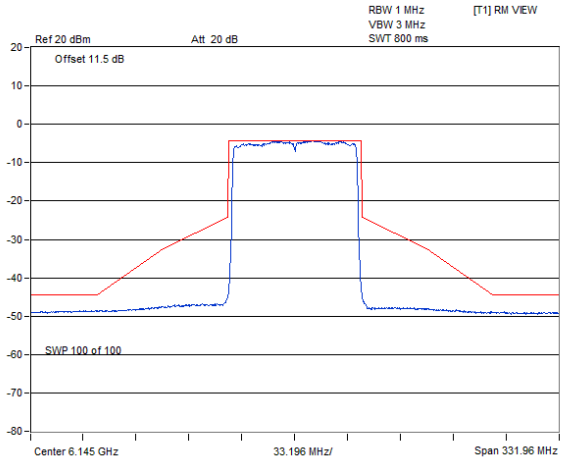
802.11be (EHT80) / Chain 2 : CH 199



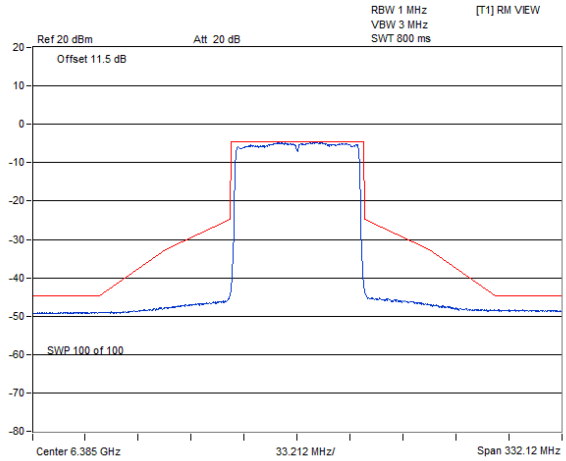
802.11be (EHT80) / Chain 2 : CH 215



802.11be (EHT80) / Chain 3 : CH 7

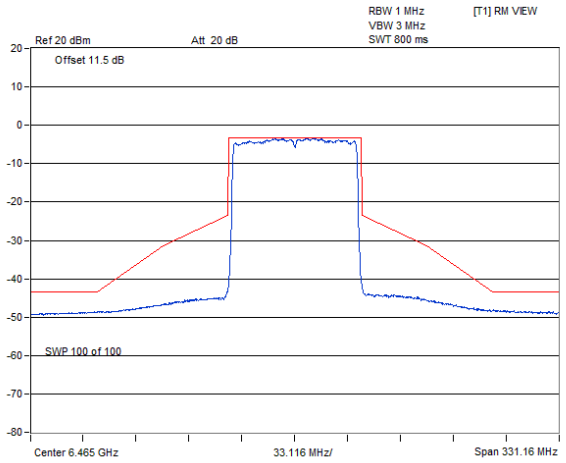


802.11be (EHT80) / Chain 3 : CH 39

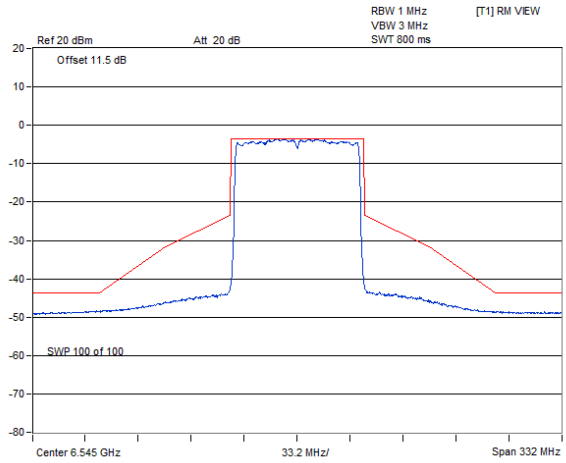


802.11be (EHT80) / Chain 3 : CH 87

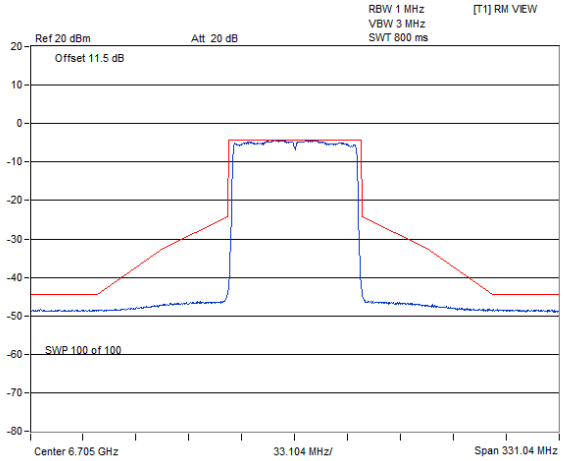
Spectrum Plot



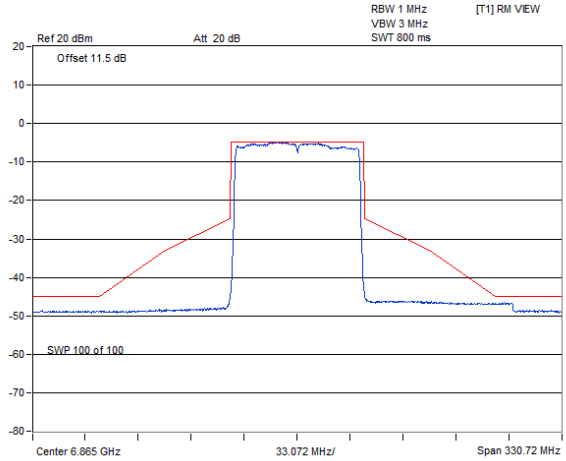
802.11be (EHT80) / Chain 3 : CH 103



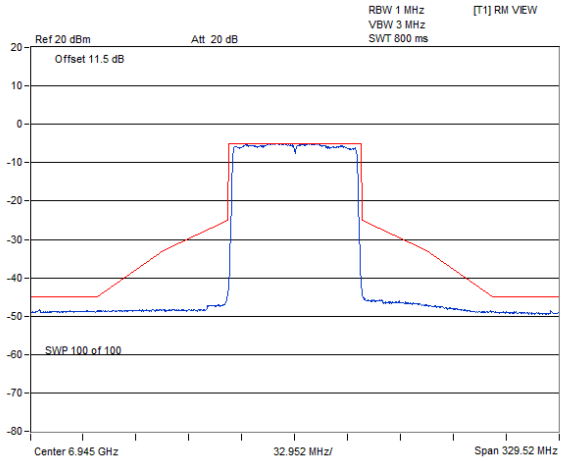
802.11be (EHT80) / Chain 3 : CH 119



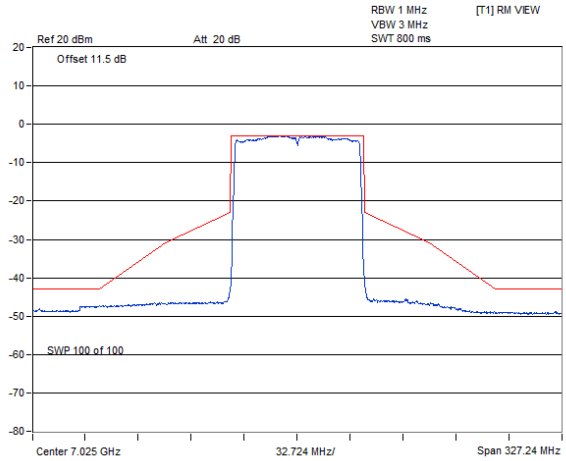
802.11be (EHT80) / Chain 3 : CH 151



802.11be (EHT80) / Chain 3 : CH 183

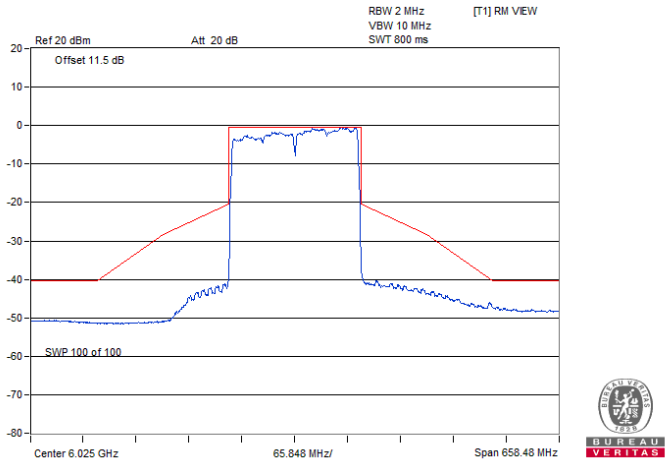
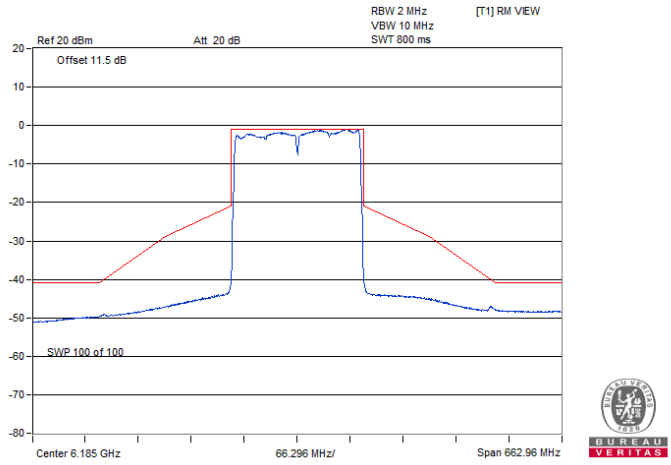
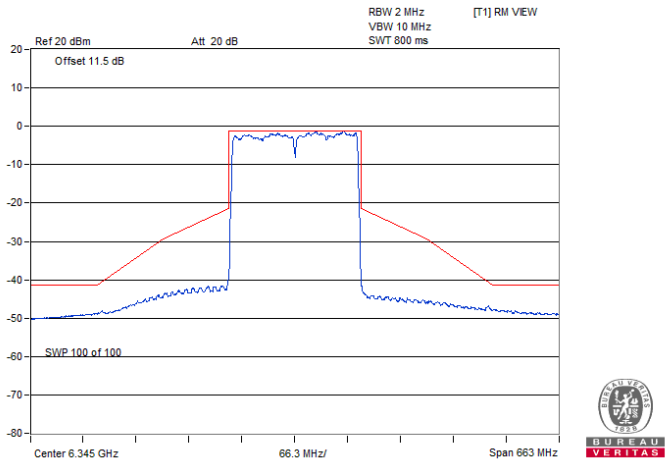
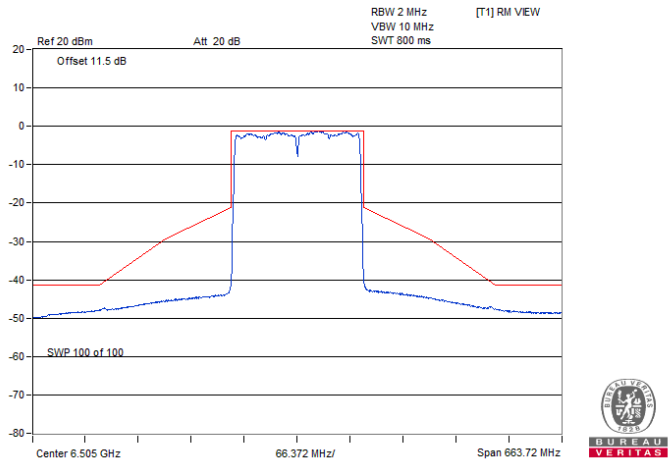
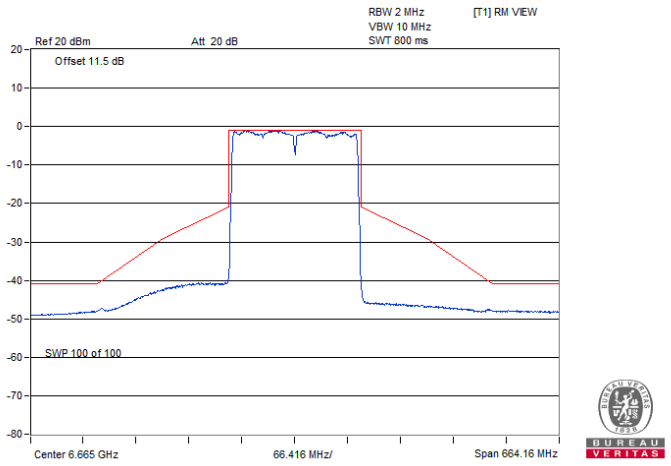
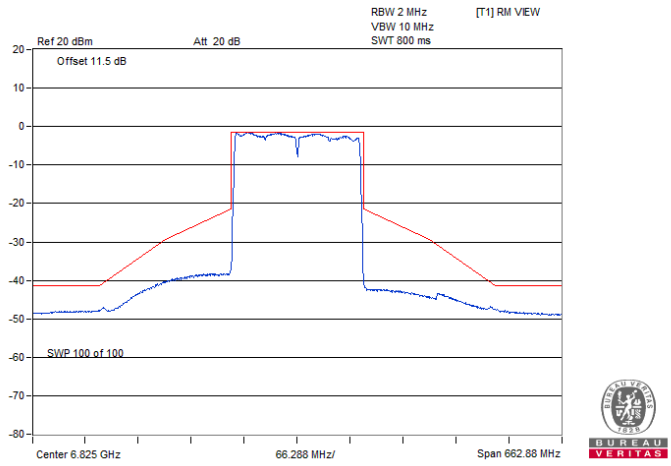


802.11be (EHT80) / Chain 3 : CH 199

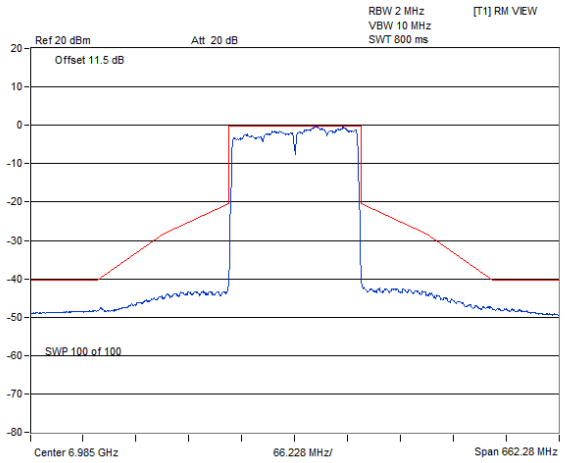


802.11be (EHT80) / Chain 3 : CH 215

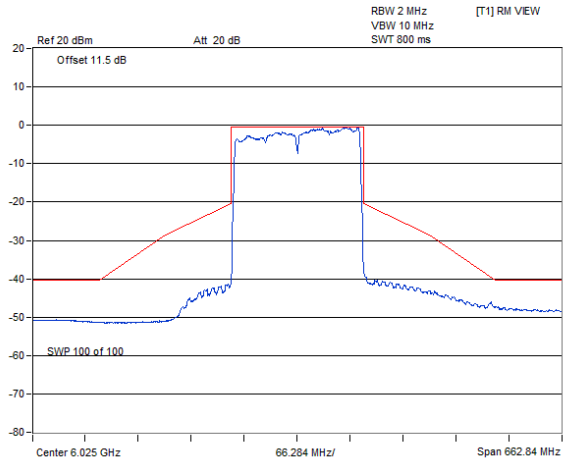
802.11be (EHT160)

Spectrum Plot	
	
802.11be (EHT160) / Chain 0 : CH 15	802.11be (EHT160) / Chain 0 : CH 47
	
802.11be (EHT160) / Chain 0 : CH 79	802.11be (EHT160) / Chain 0 : CH 111
	
802.11be (EHT160) / Chain 0 : CH 143	802.11be (EHT160) / Chain 0 : CH 175

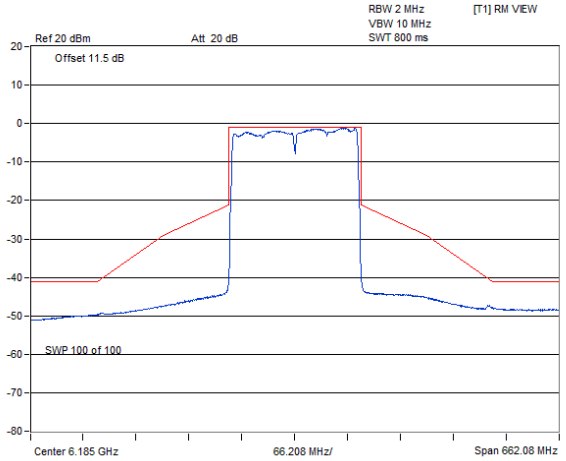
Spectrum Plot



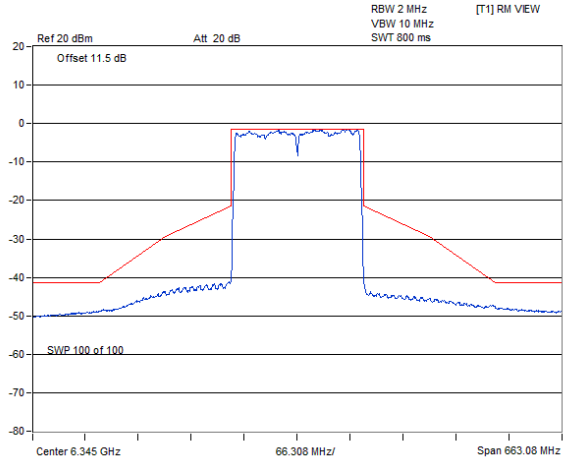
802.11be (EHT160) / Chain 0 : CH 207



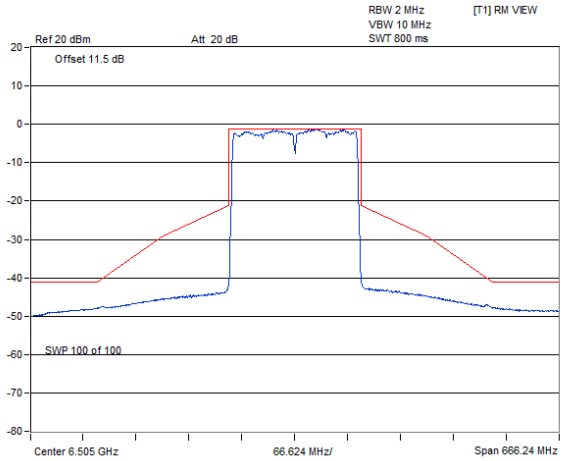
802.11be (EHT160) / Chain 1 : CH 15



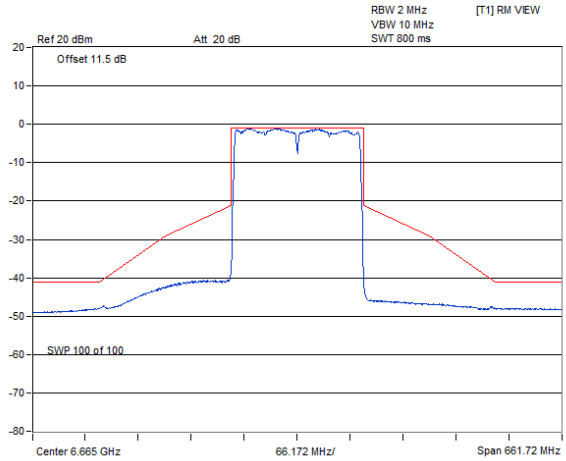
802.11be (EHT160) / Chain 1 : CH 47



802.11be (EHT160) / Chain 1 : CH 79

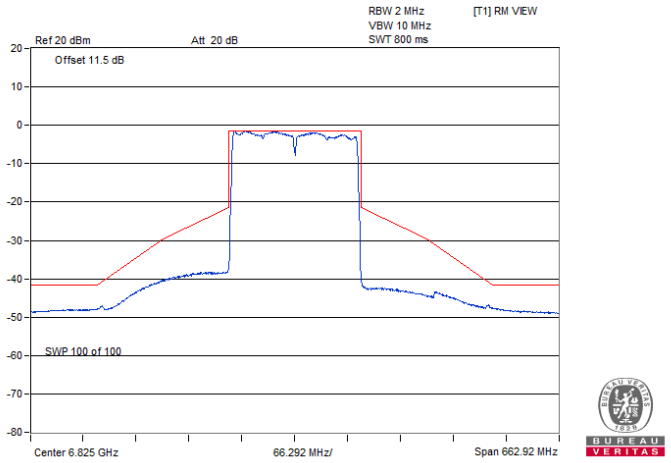


802.11be (EHT160) / Chain 1 : CH 111

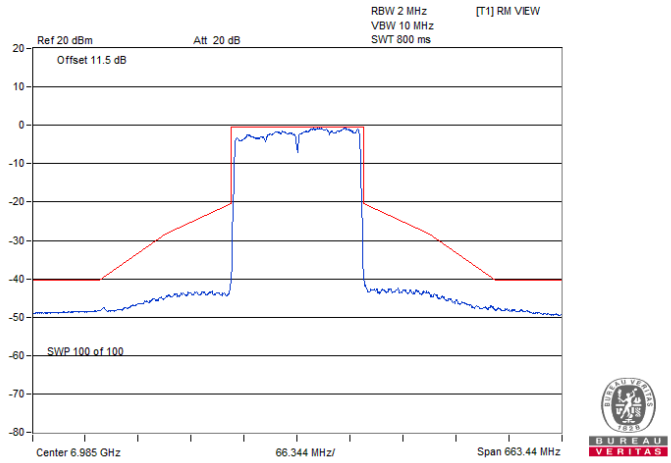


802.11be (EHT160) / Chain 1 : CH 143

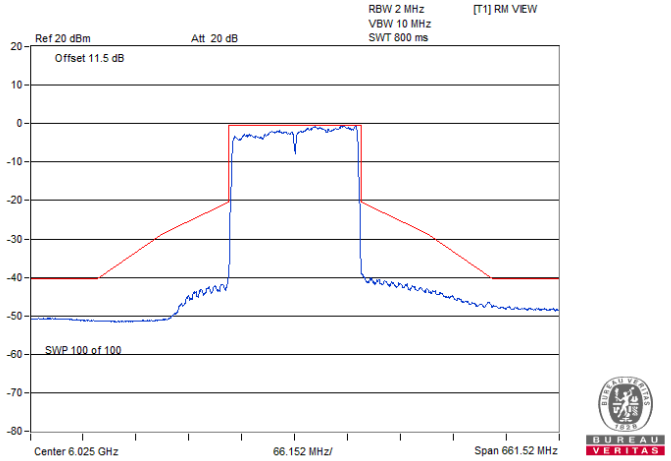
Spectrum Plot



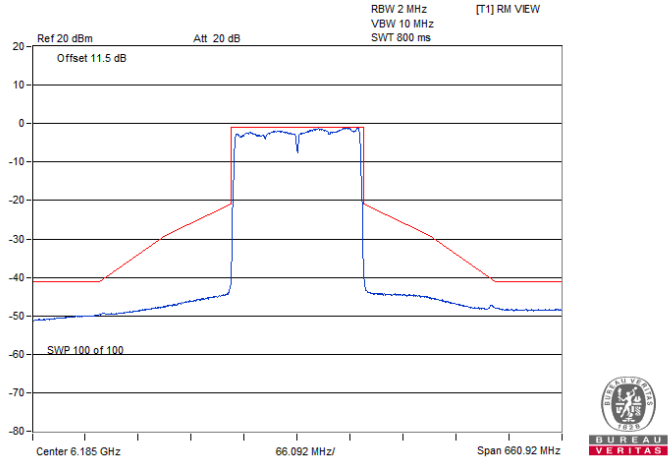
802.11be (EHT160) / Chain 1 : CH 175



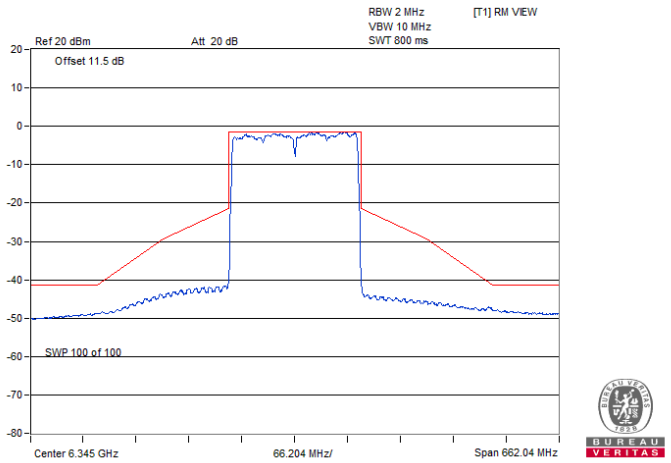
802.11be (EHT160) / Chain 1 : CH 207



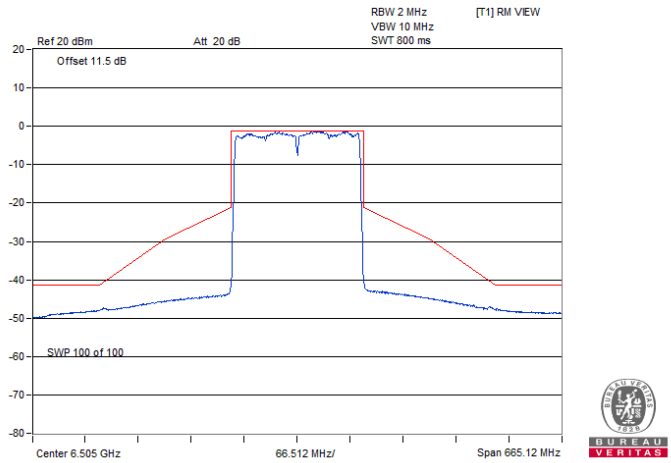
802.11be (EHT160) / Chain 2 : CH 15



802.11be (EHT160) / Chain 2 : CH 47

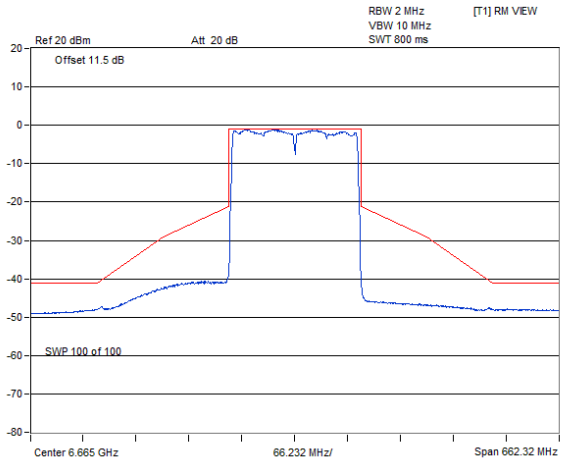


802.11be (EHT160) / Chain 2 : CH 79

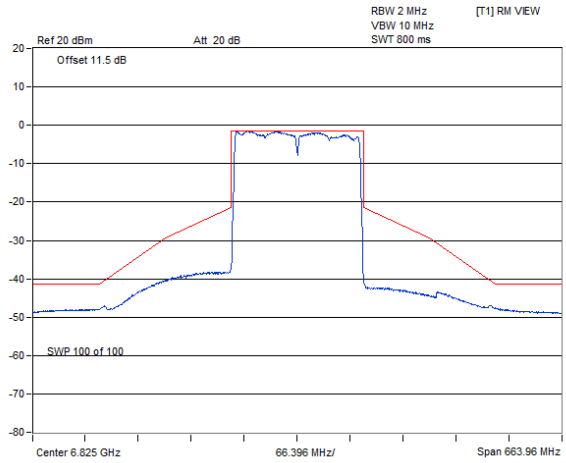


802.11be (EHT160) / Chain 2 : CH 111

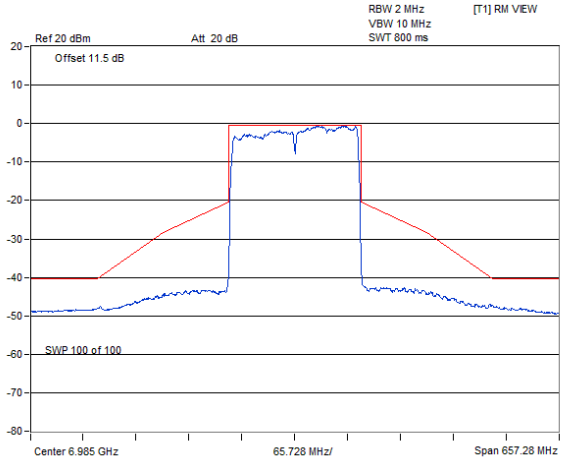
Spectrum Plot



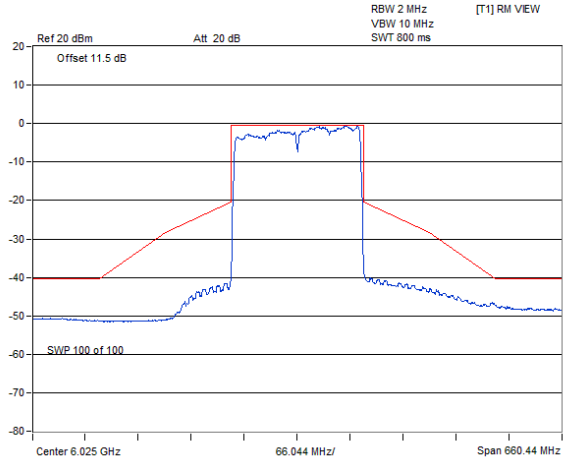
802.11be (EHT160) / Chain 2 : CH 143



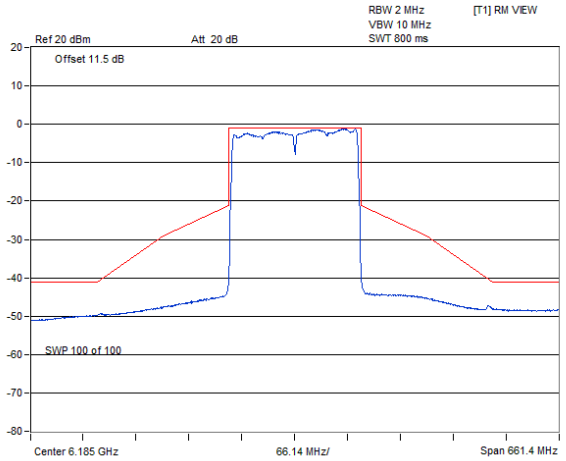
802.11be (EHT160) / Chain 2 : CH 175



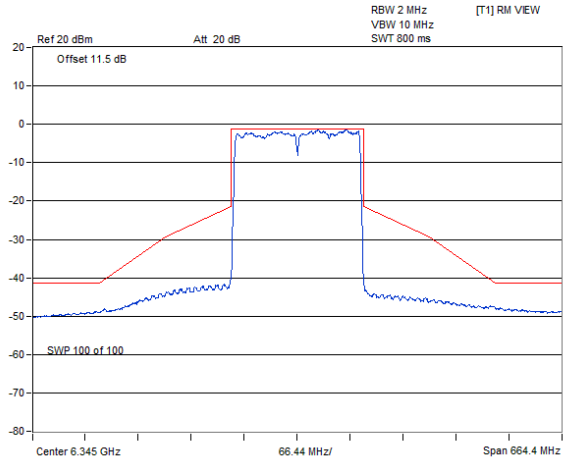
802.11be (EHT160) / Chain 2 : CH 207



802.11be (EHT160) / Chain 3 : CH 15

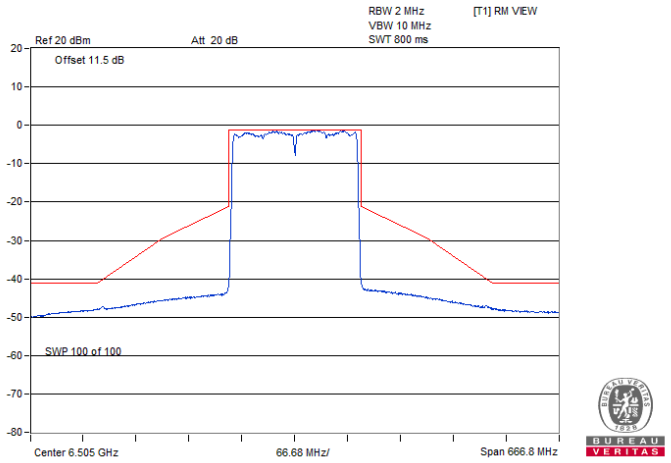


802.11be (EHT160) / Chain 3 : CH 47

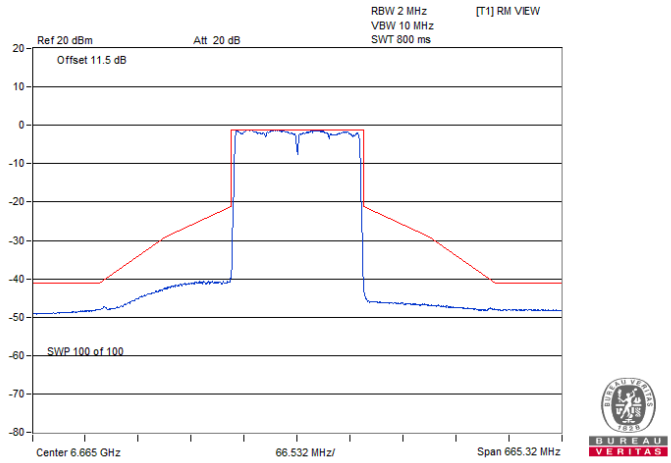


802.11be (EHT160) / Chain 3 : CH 79

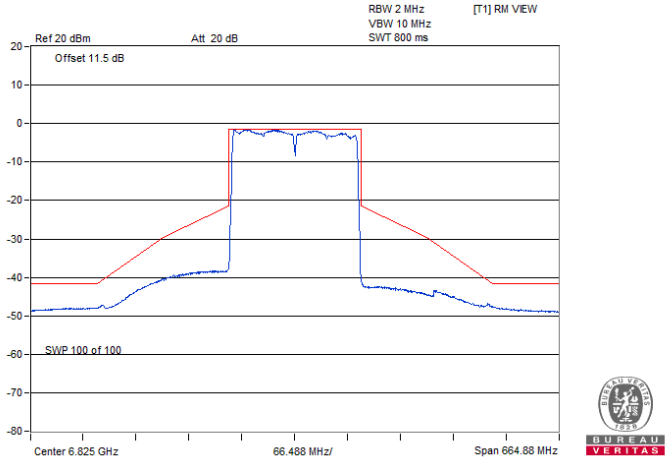
Spectrum Plot



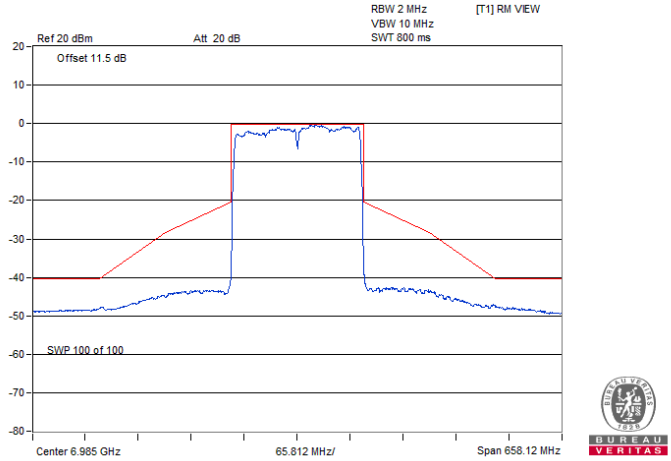
802.11be (EHT160) / Chain 3 : CH 111



802.11be (EHT160) / Chain 3 : CH 143

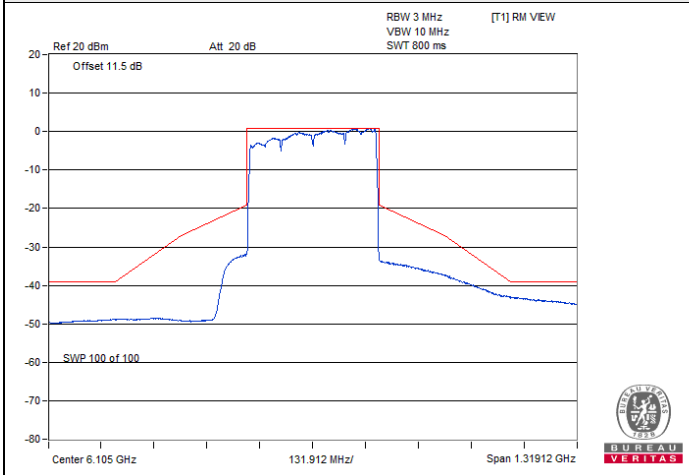
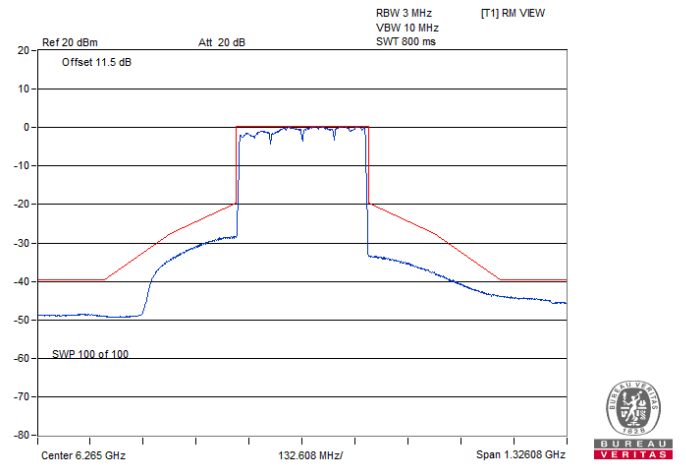
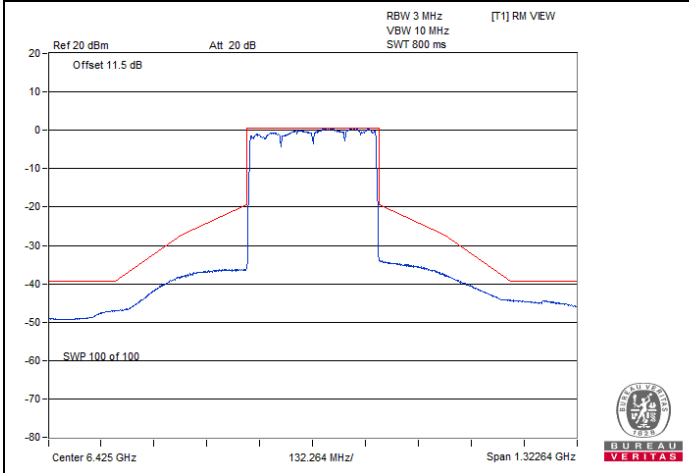
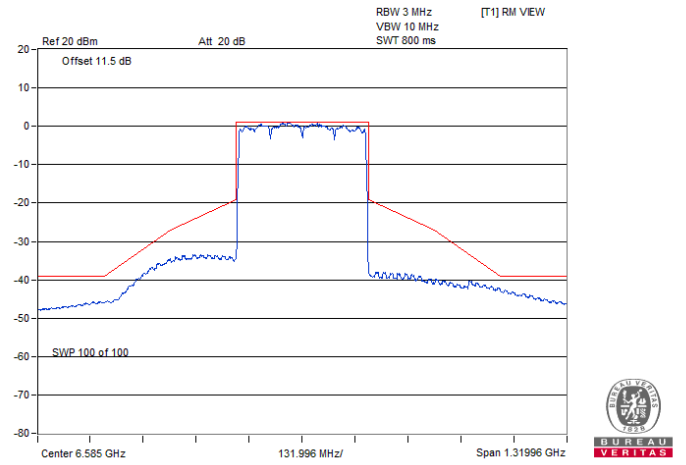
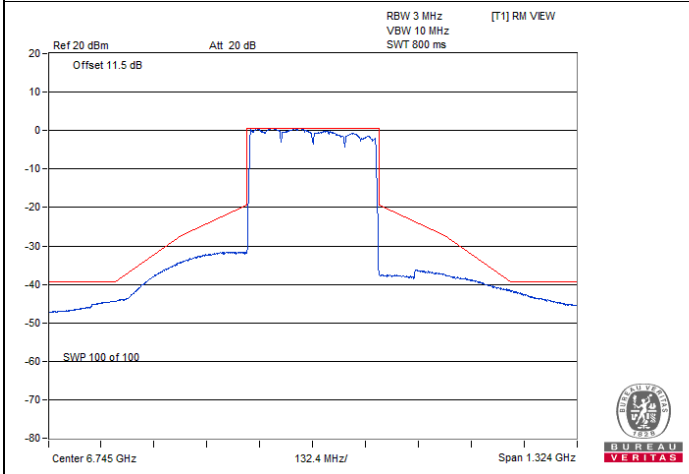
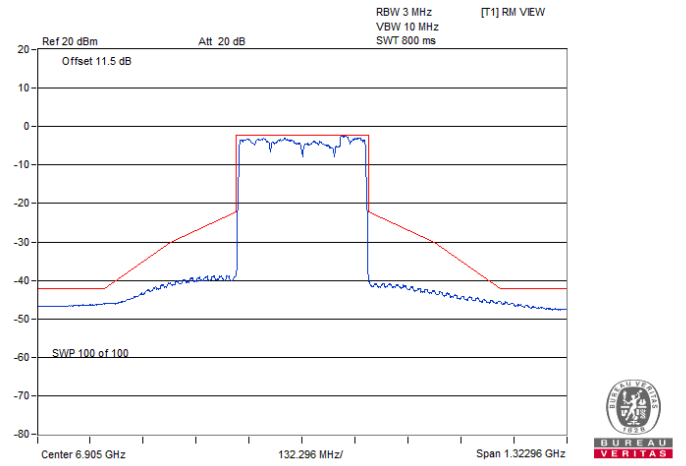


802.11be (EHT160) / Chain 3 : CH 175

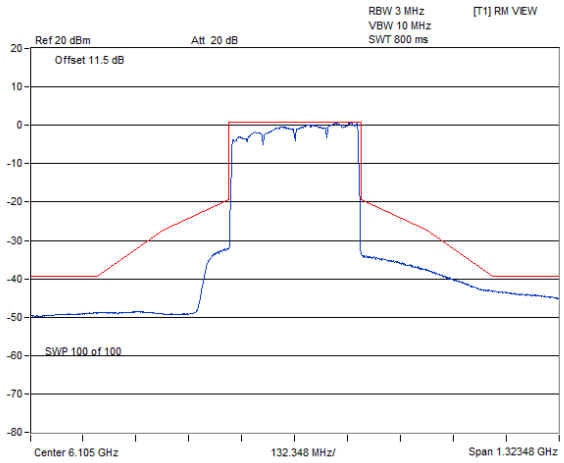


802.11be (EHT160) / Chain 3 : CH 207

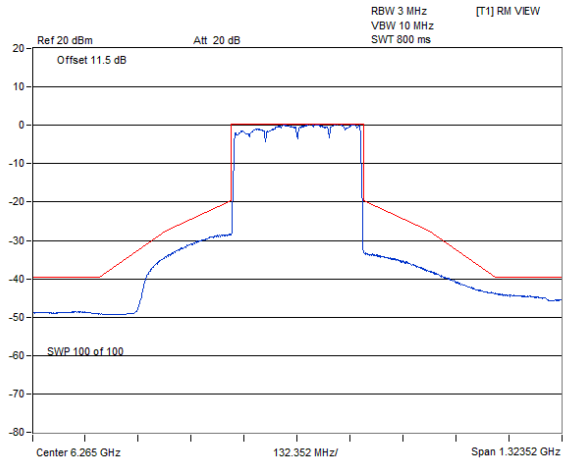
802.11be (EHT320)

Spectrum Plot	
	
802.11be (EHT320) / Chain 0 : CH 31	802.11be (EHT320) / Chain 0 : CH 63
	
802.11be (EHT320) / Chain 0 : CH 95	802.11be (EHT320) / Chain 0 : CH 127
	
802.11be (EHT320) / Chain 0 : CH 159	802.11be (EHT320) / Chain 0 : CH 191

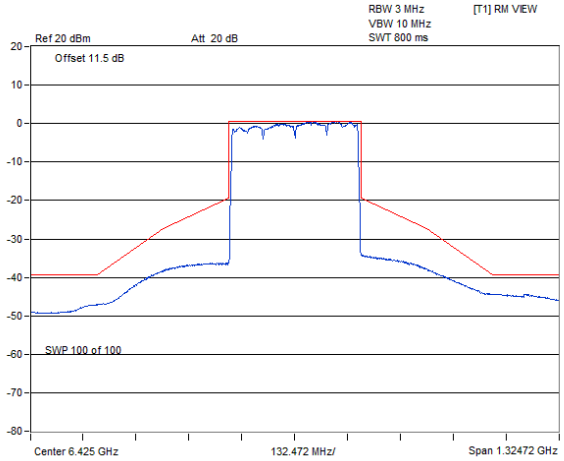
Spectrum Plot



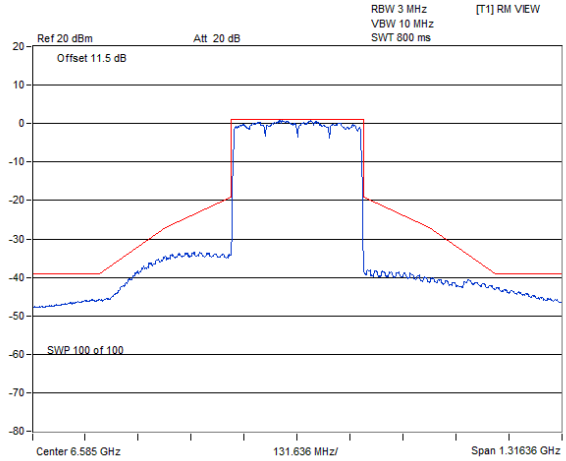
802.11be (EHT320) / Chain 1 : CH 31



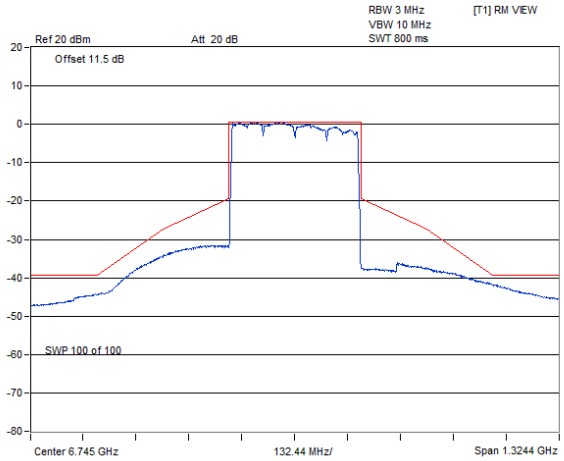
802.11be (EHT320) / Chain 1 : CH 63



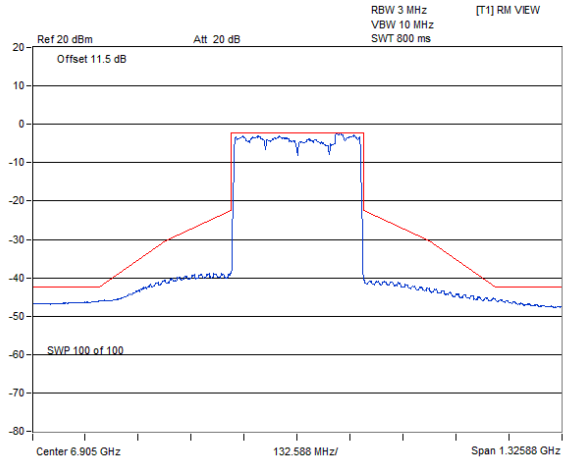
802.11be (EHT320) / Chain 1 : CH 95



802.11be (EHT320) / Chain 1 : CH 127

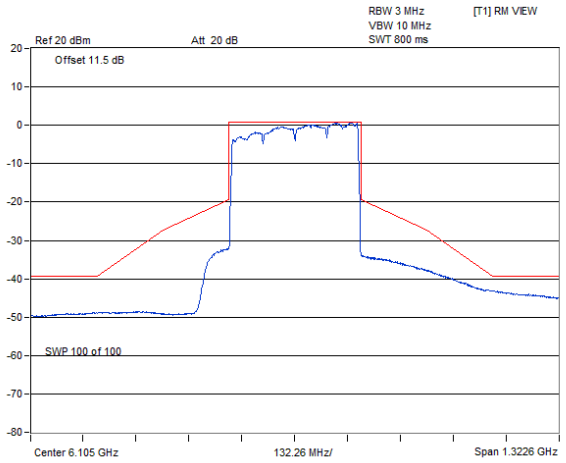


802.11be (EHT320) / Chain 1 : CH 159

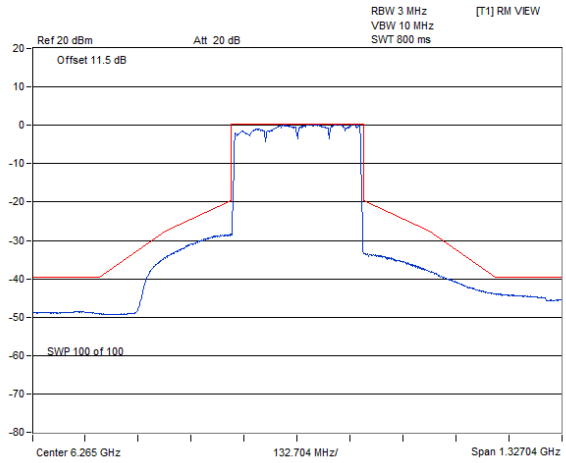


802.11be (EHT320) / Chain 1 : CH 191

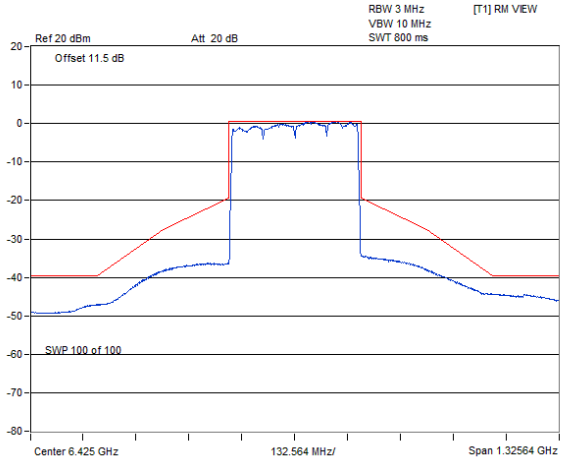
Spectrum Plot



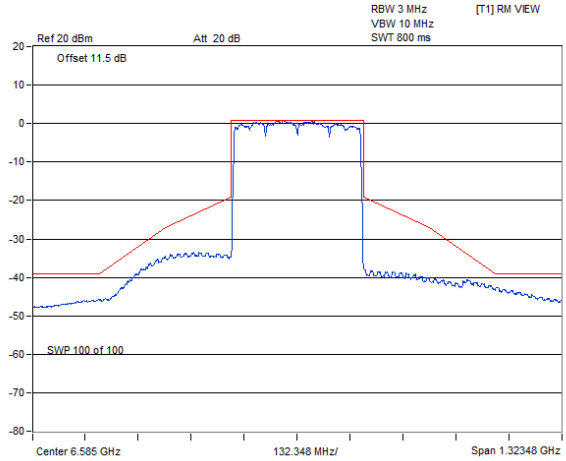
802.11be (EHT320) / Chain 2 : CH 31



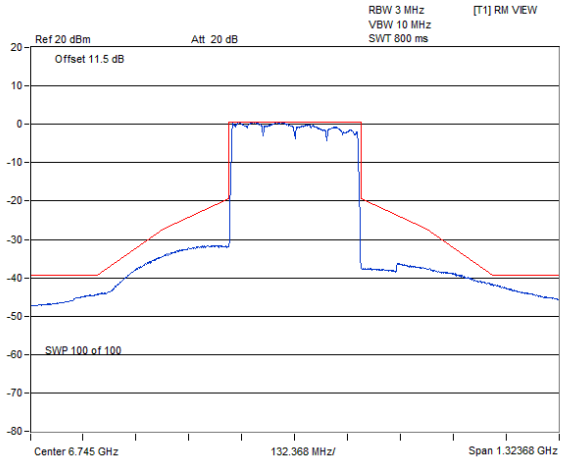
802.11be (EHT320) / Chain 2 : CH 63



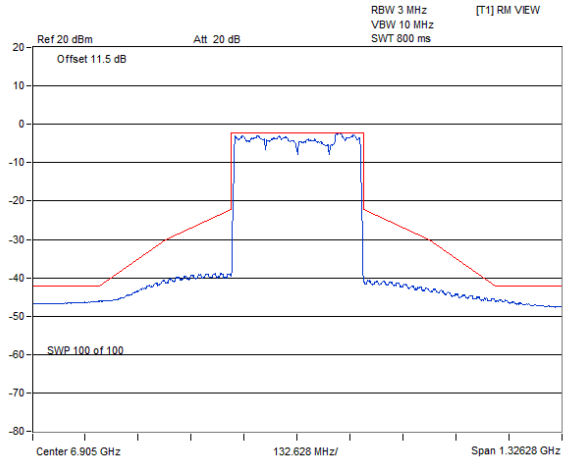
802.11be (EHT320) / Chain 2 : CH 95



802.11be (EHT320) / Chain 2 : CH 127

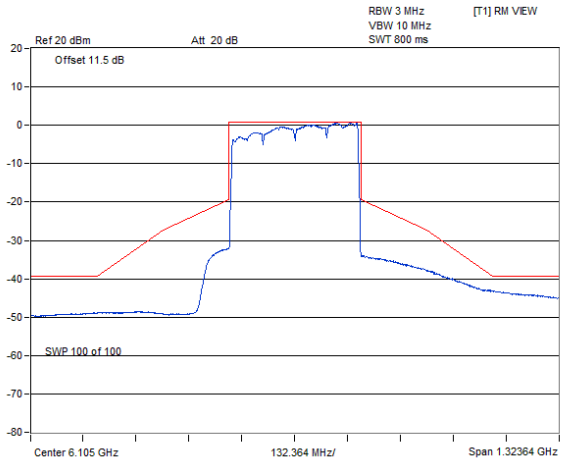


802.11be (EHT320) / Chain 2 : CH 159

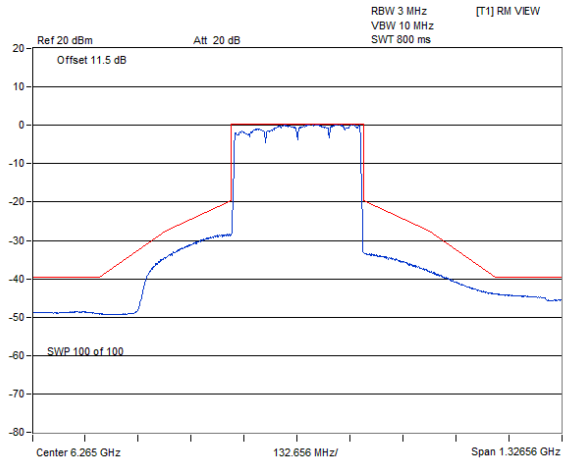


802.11be (EHT320) / Chain 2 : CH 191

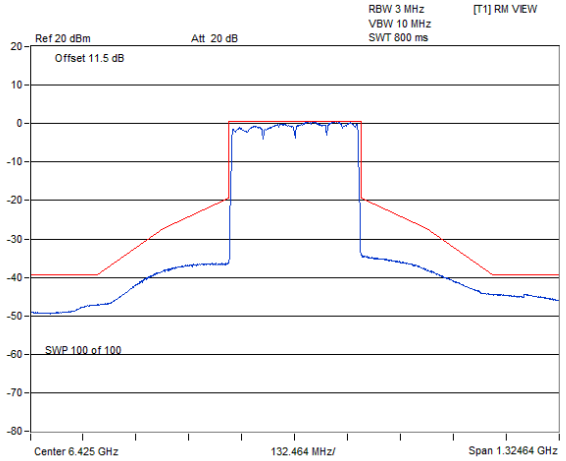
Spectrum Plot



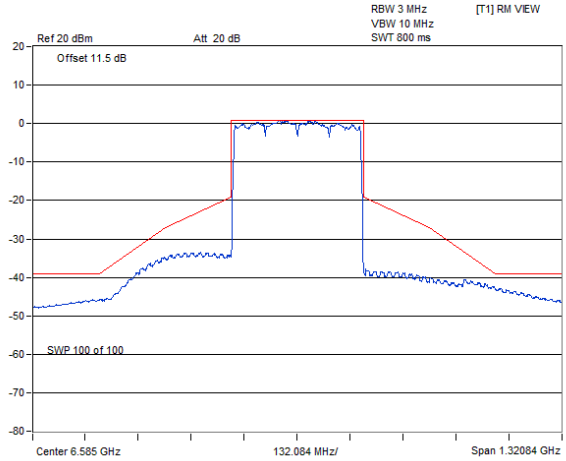
802.11be (EHT320) / Chain 3 : CH 31



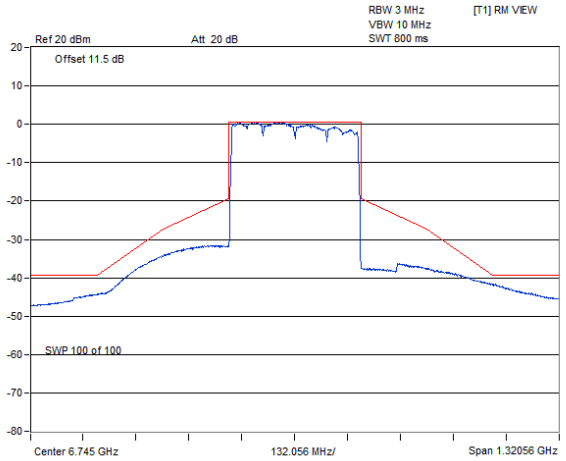
802.11be (EHT320) / Chain 3 : CH 63



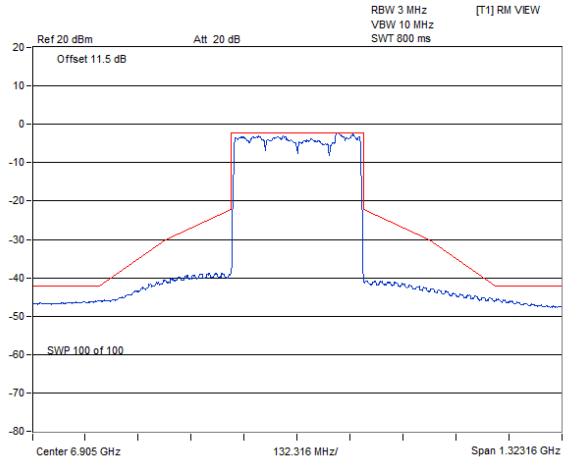
802.11be (EHT320) / Chain 3 : CH 95



802.11be (EHT320) / Chain 3 : CH 127



802.11be (EHT320) / Chain 3 : CH 159



802.11be (EHT320) / Chain 3 : CH 191

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
1	5955	17.13	17.16	17.16	17.04
45	6175	17.04	17.04	17.04	17.16
93	6415	17.04	17.04	17.04	17.04
97	6435	17.04	17.04	17.04	17.04
105	6475	17.16	17.04	17.04	17.04
113	6515	17.28	17.16	17.16	17.04
117	6535	17.16	17.04	17.16	17.04
149	6695	17.16	17.04	17.16	17.04
181	6855	17.04	17.04	17.16	17.04
185	6875	17.04	17.16	16.92	17.04
209	6995	17.28	17.16	17.16	17.16
229	7095	17.04	16.92	17.16	16.92
233	7115	16.92	17.04	17.04	17.04

802.11be (EHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
1	5955	19.14	19.20	19.20	19.20
45	6175	19.08	19.20	19.20	19.20
93	6415	19.20	19.20	19.20	19.20
97	6435	19.20	19.20	19.20	19.08
105	6475	19.20	19.20	19.20	19.20
113	6515	19.08	19.20	19.32	19.08
117	6535	19.20	19.20	19.20	19.08
149	6695	19.20	19.08	19.20	19.20
181	6855	19.20	19.20	19.20	19.08
185	6875	19.20	19.20	19.08	19.08
209	6995	19.08	19.20	19.20	19.32
229	7095	19.20	19.08	19.32	19.08
233	7115	19.08	19.08	19.08	19.08

802.11be (EHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
3	5965	37.92	37.92	37.92	37.92
43	6165	38.40	37.92	37.92	38.40
91	6405	37.92	37.92	38.16	38.16
99	6445	38.40	37.92	38.16	37.92
107	6485	38.16	38.16	38.16	38.16
115	6525	38.96	38.16	37.92	38.16
123	6565	38.16	38.16	38.16	37.92
155	6725	38.16	38.16	38.16	38.16
179	6845	37.92	37.92	38.16	37.92
187	6885	38.16	37.92	37.92	37.92
211	7005	37.92	37.92	37.92	37.92
227	7085	38.16	38.16	37.92	38.16

802.11be (EHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
7	5985	77.22	77.28	77.28	77.28
39	6145	77.28	77.76	77.76	77.28
87	6385	77.28	77.76	77.76	77.76
103	6465	77.28	76.80	77.28	76.80
119	6545	77.28	77.28	77.28	77.28
151	6705	77.28	77.28	77.28	77.28
183	6865	77.28	77.76	77.76	77.28
199	6945	77.28	77.28	77.28	77.28
215	7025	77.28	76.80	76.80	77.28

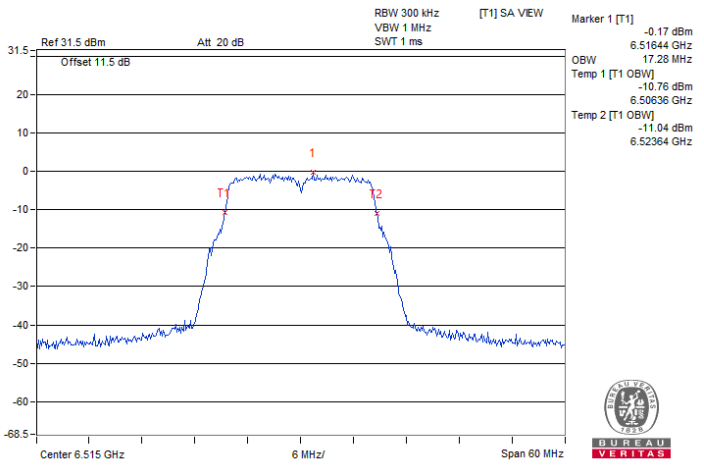
802.11be (EHT160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
15	6025	156.52	156.48	156.48	156.48
47	6185	157.44	157.44	157.44	157.44
79	6345	157.44	157.44	157.44	157.44
111	6505	157.44	157.44	157.44	157.44
143	6665	156.48	157.44	156.48	156.48
175	6825	157.44	157.44	156.48	156.48
207	6985	156.48	156.48	156.48	156.48

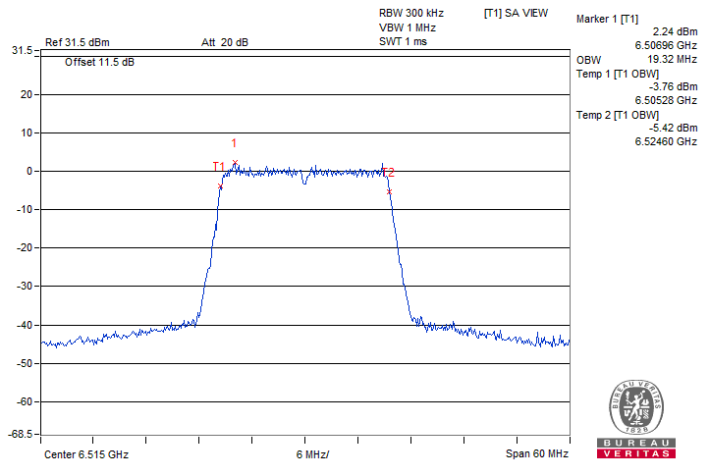
802.11be (EHT320)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
31	6105	314.44	316.80	316.80	316.80
63	6265	316.80	314.88	314.88	314.88
95	6425	314.88	314.88	314.88	314.88
127	6585	314.88	316.80	316.80	316.80
159	6745	316.80	316.80	316.80	314.88
191	6905	316.80	316.80	316.80	316.80

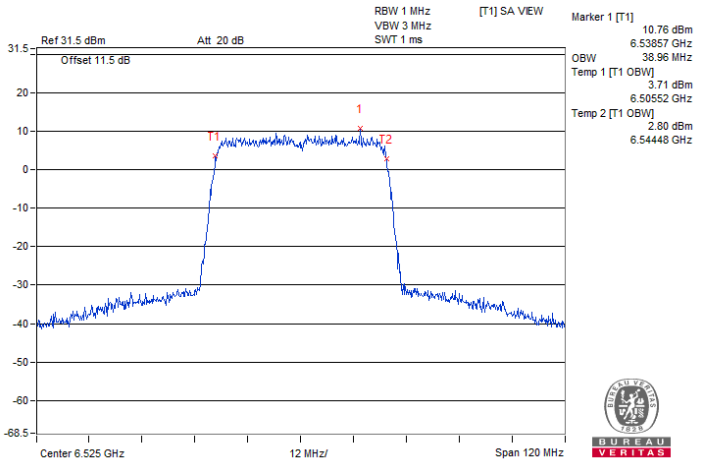
Spectrum Plot of Maximum Value



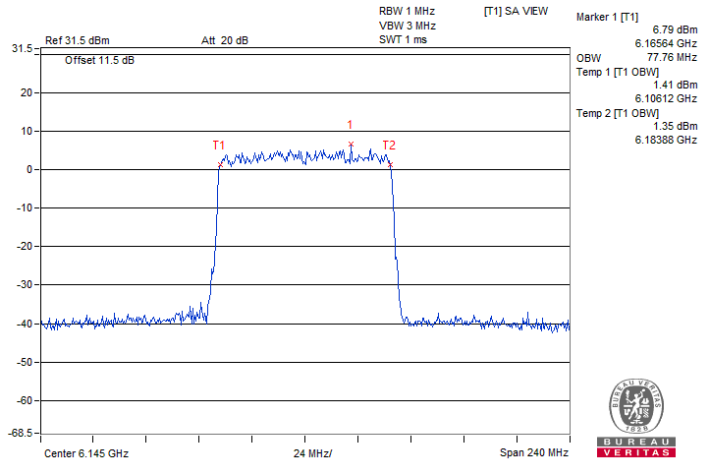
802.11a / Chain 0 : CH 113



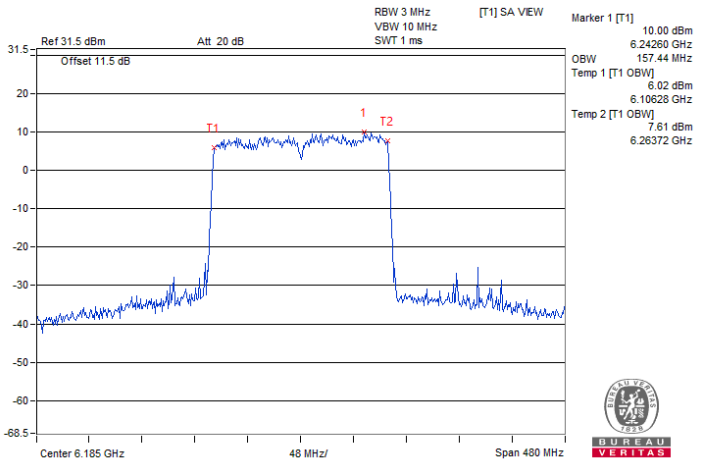
802.11be (EHT20) / Chain 2 : CH 113



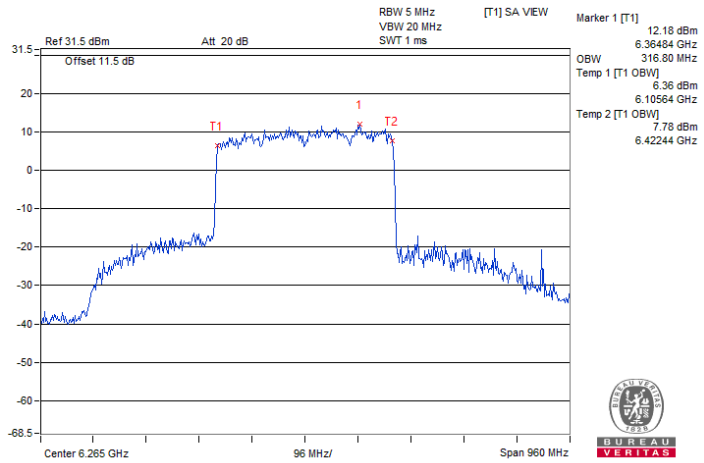
802.11be (EHT40) / Chain 0 : CH 115



802.11be (EHT80) / Chain 1 : CH 39



802.11be (EHT160) / Chain 0 : CH 47



802.11be (EHT320) / Chain 0 : CH 63

7.6 Contention-based Protocol

Environmental Conditions:	25°C, 60% RH	Tested By:	Tank Wu

Companion Device Information			
Product	**Brand**	**Model No.**	**Software/Firmware Version**
Wireless Module	Intel	BE200	23.40.0.4

Note: The EUT device modulation technique OFDMA does not support partial RUs (resource units), channel puncturing, and bandwidth reduction mechanisms.

For U-NII-5

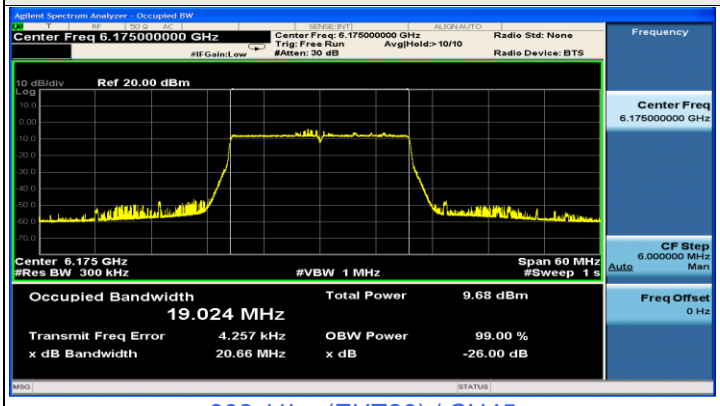
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	45	6175	6175	-61	3	0	-64	-62	OFF
					-63	3	0	-66	-62	Minimal
					-79	3	0	-82	-62	ON
	320	31	6105	5950	-60	3	0	-63	-62	OFF
					-62	3	0	-65	-62	Minimal
					-79	3	0	-82	-62	ON
				6105	-60	3	0	-63	-62	OFF
					-71	3	0	-74	-62	Minimal
					-79	3	0	-82	-62	ON
				6260	-61	3	0	-64	-62	OFF
					-64	3	0	-67	-62	Minimal
					-79	3	0	-82	-62	ON

Notes:

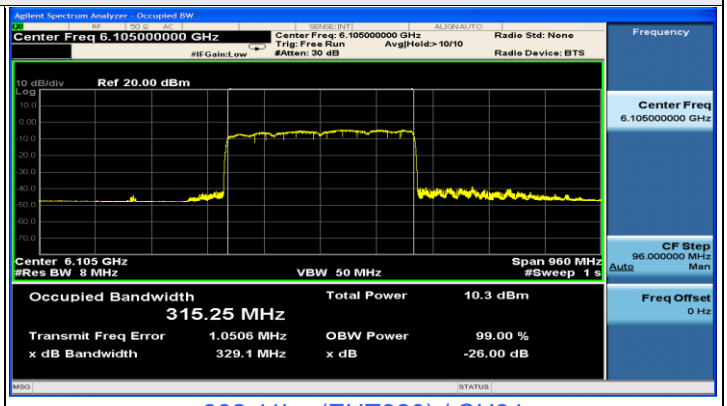
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 1) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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
802.11be	20	6175	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	320	5950	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6105	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6260	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

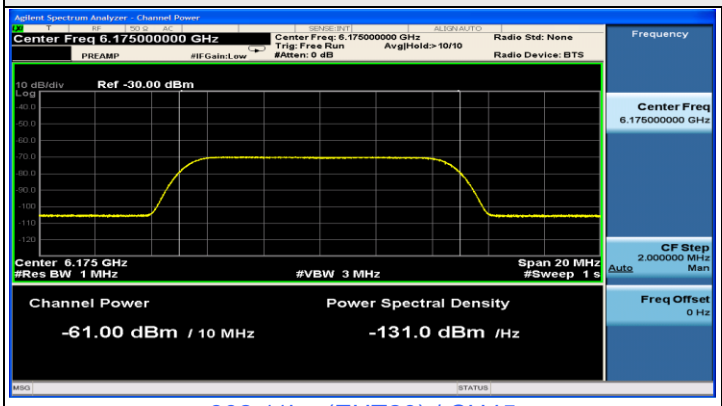
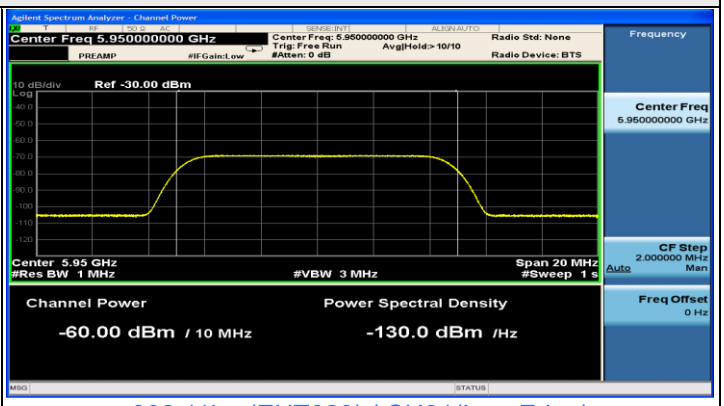
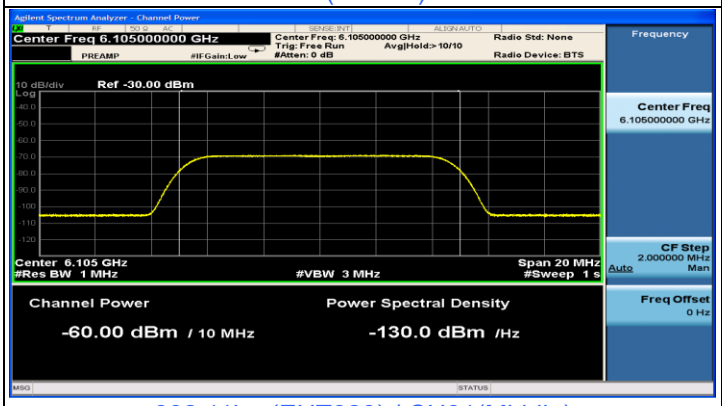
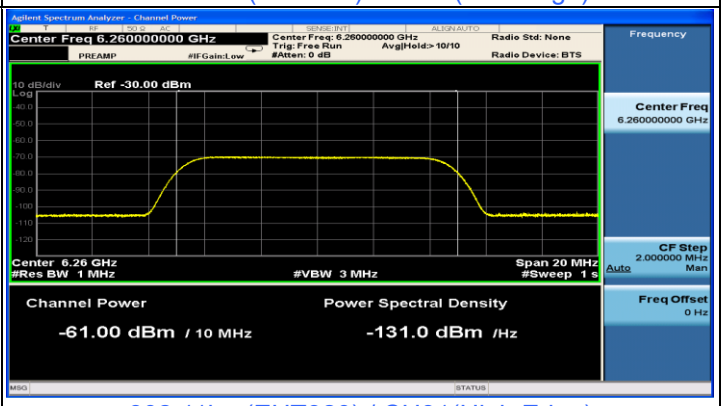
Plots of EUT Tx waveform

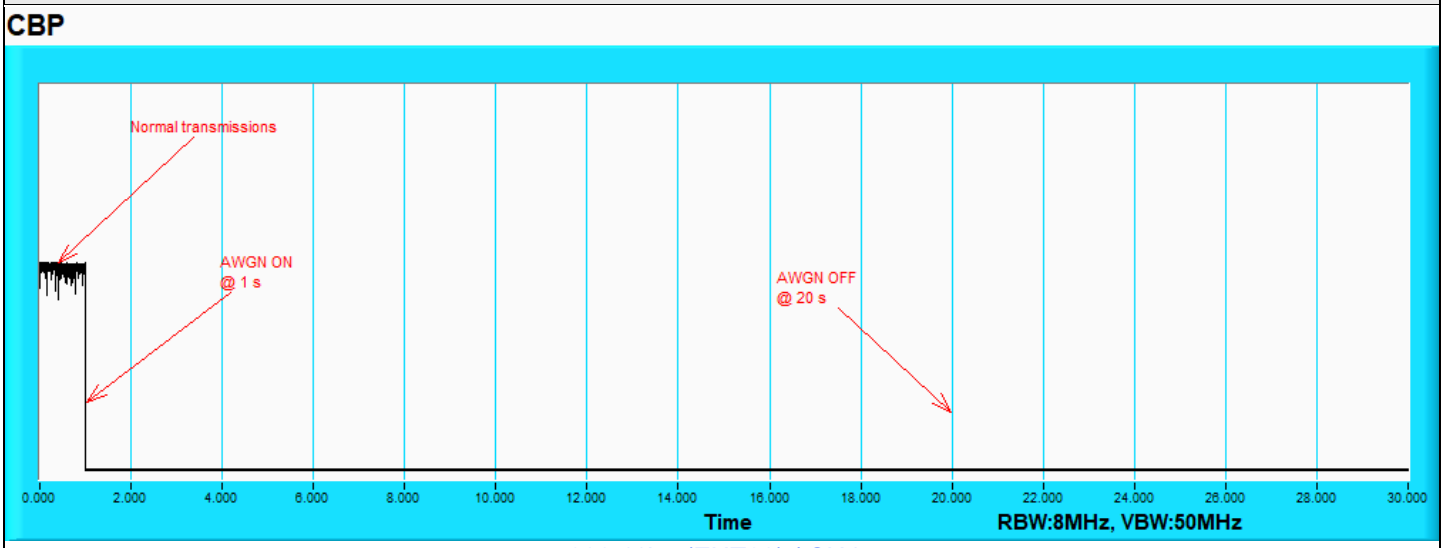


802.11be (EHT20) / CH45



802.11be (EHT320) / CH31

Plots of Injected signal (AWGN) level	
	
802.11be (EHT20) / CH45	802.11be (EHT320) / CH31(Low Edge)
	
802.11be (EHT320) / CH31(Middle)	802.11be (EHT320) / CH31(High Edge)

Plots of EUT ceased transmission in the time domain

802.11be (EHT20) / CH45