TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBBQZ-WTW-P24020177-4
FCC ID:	PY324100620
Product:	NIGHTHAWK BE12000 WiFi 7 Router
Brand:	NETGEAR
Model No.:	RS500
Received Date:	2024/2/16
Test Date:	2024/6/5 ~ 2024/6/19
Issued Date:	2024/7/9
Applicant and Manufacturer:	NETGEAR, INC.
Address:	350 East Plumeria Drive San Jose CA 95134
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Approved by: Jeremy Lin , **Date:** 2024/7/9

Jeremy Lin / Project Engineer

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Testing Laboratory 2021

Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P24020177-4	Original Release	2024/7/9

1 Certificate

Product:	NIGHTHAWK BE12000 WiFi 7 Router
Brand:	NETGEAR
Test Model:	RS500
Sample Status:	Engineering Sample
Applicant and Manufacturer:	NETGEAR, INC.
Test Date:	2024/6/5 ~ 2024/6/19
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 v02r01 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 -16.77 dB at 0.17800 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -2.1 dB at 48.43 MHz
15.407(b)(6) 15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 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.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

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 GHz ~ 18 GHz	2.29 dB
Maximum Power Spectral Density	1 GHz ~ 18 GHz	2.29 dB
Occupied Bandwidth	-	72 Hz
Frequency Stability	-	0.176 ppm
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

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

2.2 Supplementary Information

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

3 General Information

3.1 General Description of EUT

Product	NIGHTHAWK BE12000 WiFi 7 Router
Brand	NETGEAR
Test Model	RS500
Status of EUT	Engineering Sample
Power Supply Rating	12 Vdc from adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	Up to 5764 Mbps
Operating Frequency	6.115 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): 51 802.11ax (HE40), 802.11be (EHT40): 25 802.11ax (HE80), 802.11be (EHT80): 12 802.11ax (HE160), 802.11be (EHT160): 6 802.11be (EHT320): 5
Output Power	6.115 GHz ~ 6.415 GHz : EIRP: 937.562 mW (29.72 dBm) 6.425 GHz ~ 6.525 GHz : EIRP: 887.156 mW (29.48 dBm) 6.535 GHz ~ 6.865 GHz : EIRP: 931.108 mW (29.69 dBm) 6.875 GHz ~ 7.115 GHz : EIRP: 853.1 mW (29.31 dBm)
Equipment Class	6ID: 15E 6 GHz Low-power indoor access point

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Part Number	Specification
AC Adapter 1	NETGEAR	ADS-45FIC-12 12042E	332-11664-02	AC Input : 100-240V ~ 50/60Hz 1.5A DC Output : 12.0V 3.5A 42.0W DC Output Cable : 1.8M / 0core Plug : US, EU, AU Manufacturer: VIETNAM HONOR HIGH TECH COMPANY LIMITED
AC Adapter 2	NETGEAR	AD2150M20	332-11500-05	AC Input : 100-240V ~ 50/60 Hz 1.0A DC Output : 12V 3.5A 42.0W DC Output Cable : 1.8M / 0core Plug : US, EU, AU Manufacturer: PI ELECTRONICS (VIETNAM) COMPANY LIMITED
AC Adapter 3	NETGEAR	AD2150F10	332-11494-02	AC Input : 100-120V ~ 50/60Hz 1.0A DC Output : 12V 3.5A DC Output Cable : 1.8M / 0core Plug : US Manufacturer: PI ELECTRONICS (VIETNAM) COMPANY LIMITED
Ethernet Cable	NETGEAR	N/A	-	Signal Line : 1.95M

2. Simultaneously transmission condition.

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

3. The EUT has two DR filters and the characteristics of the DR filter are the same and meet the pin-for-pin compatible. After pre-scanning, the first DR filter is used as the final test.

DR Filter	Description
1st DR Filter	DFJ6610CA30 (SY01166101J91F31C)
2nd DR Filter	DFJ6610DA30 (SY01166101J91H41C)

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)										Antenna Type	Connector Type
	6000	6200	6300	6500	6700	6800	6900	7000	7100	7125		
ANT 5	4.06	4.04	3.83	2.94	2.68	3.22	3.31	3.74	4.04	4.34	Dipole	ipex(MHF)
ANT 6	4.19	3.43	3.35	3.01	3.62	3.66	3.83	4.05	4.43	4.36	Dipole	ipex(MHF)

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

2. The EUT incorporates a MIMO function:

Modulation Mode	Tx & Rx Configuration	
802.11a	2TX	2RX
802.11ax (HE20)	2TX (Nss1 / Nss2)	2RX
802.11ax (HE40)	2TX (Nss1 / Nss2)	2RX
802.11ax (HE80)	2TX (Nss1 / Nss2)	2RX
802.11ax (HE160)	2TX (Nss1 / Nss2)	2RX
802.11be (EHT20)	2TX (Nss1 / Nss2)	2RX
802.11be (EHT40)	2TX (Nss1 / Nss2)	2RX
802.11be (EHT80)	2TX (Nss1 / Nss2)	2RX
802.11be (EHT160)	2TX (Nss1 / Nss2)	2RX
802.11be (EHT320)	2TX (Nss1 / Nss2)	2RX

Note:

1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160MHz), and 802.11be mode for 20 MHz (40 MHz, 80 MHz, 160MHz, 320 MHz), therefore the investigated worst case to representative mode in test report.
4. For 802.11ax/be, the EUT not support Partial RU (resource unit) and channel puncturing/bandwidth reduction mechanisms.

3.3 Channel List

U-NII-5:

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
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

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
35	6125 MHz	43	6165 MHz	51	6205 MHz	59	6245 MHz
67	6285 MHz	75	6325 MHz	83	6365 MHz	91	6405 MHz

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
39	6145 MHz	55	6225 MHz	71	6305 MHz	87	6385 MHz

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

Channel	Frequency	Channel	Frequency
47	6185 MHz	79	6345 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
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. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. AC Adapter 1 and AC Adapter 2 and AC Adapter 3 Worst Condition: AC Adapter 3 2. The EUT is designed to be positioned on the Z-Plane only.

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

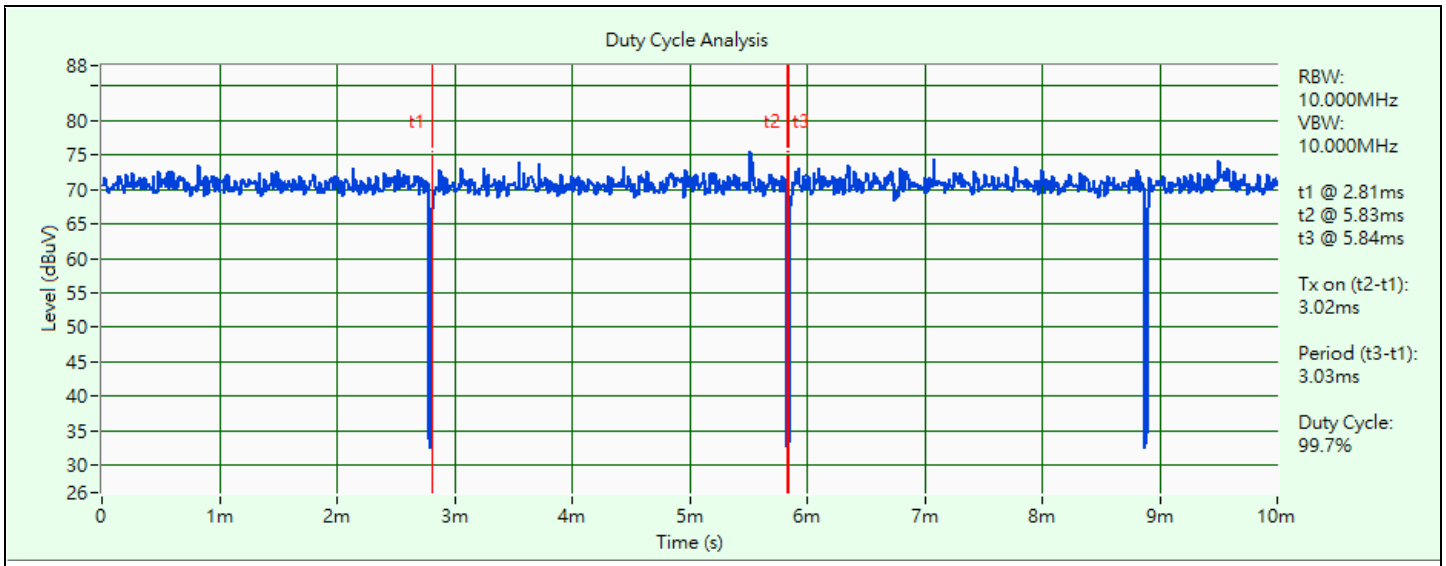
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Maximum RF Output Power / Maximum Power Spectral Density	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0
Emission Bandwidth	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
In-Band Emission Mask	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0
Frequency Stability	802.11a	CDD	1	un-modulation	-
Contention-based Protocol	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	45, 105, 149, 209	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 159, 191	BPSK	MCS0
AC Power Conducted Emissions	802.11be (EHT320)	Beamforming(2T2S)	63	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11be (EHT320)	Beamforming(2T2S)	63	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 233	BPSK	6Mb/s

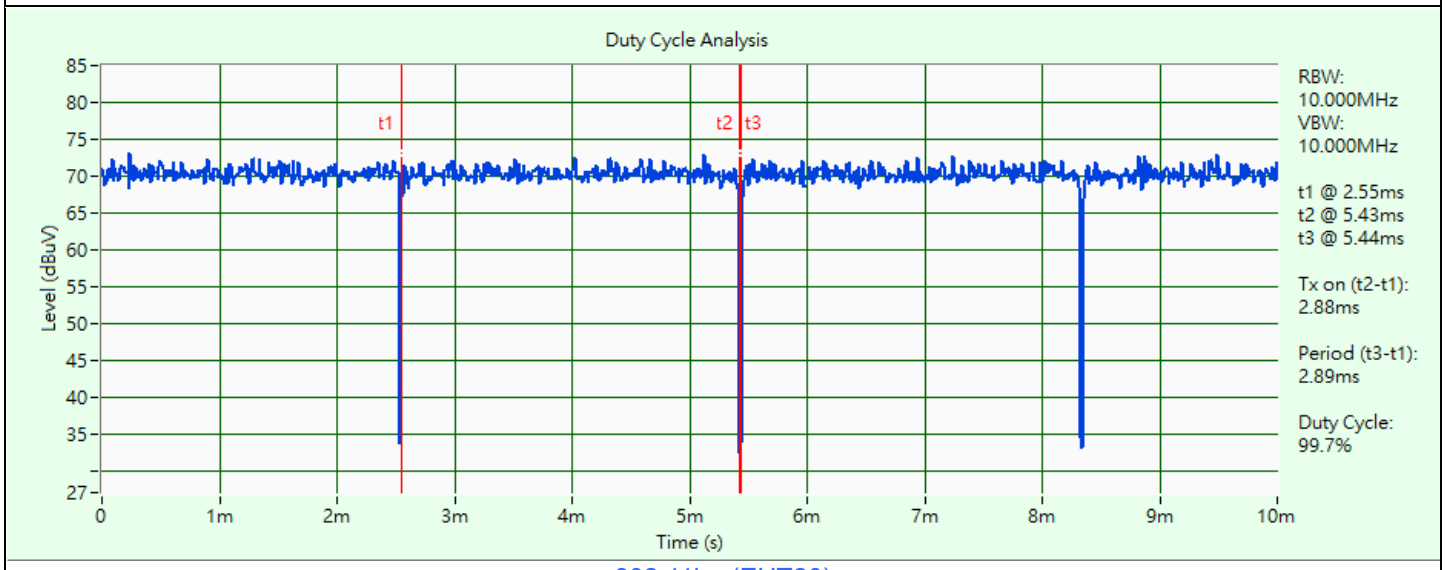
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0
Note: Partial RU (resource unit), channel puncturing and bandwidth reduction mechanisms are not supported.					

3.5 Duty Cycle of Test Signal

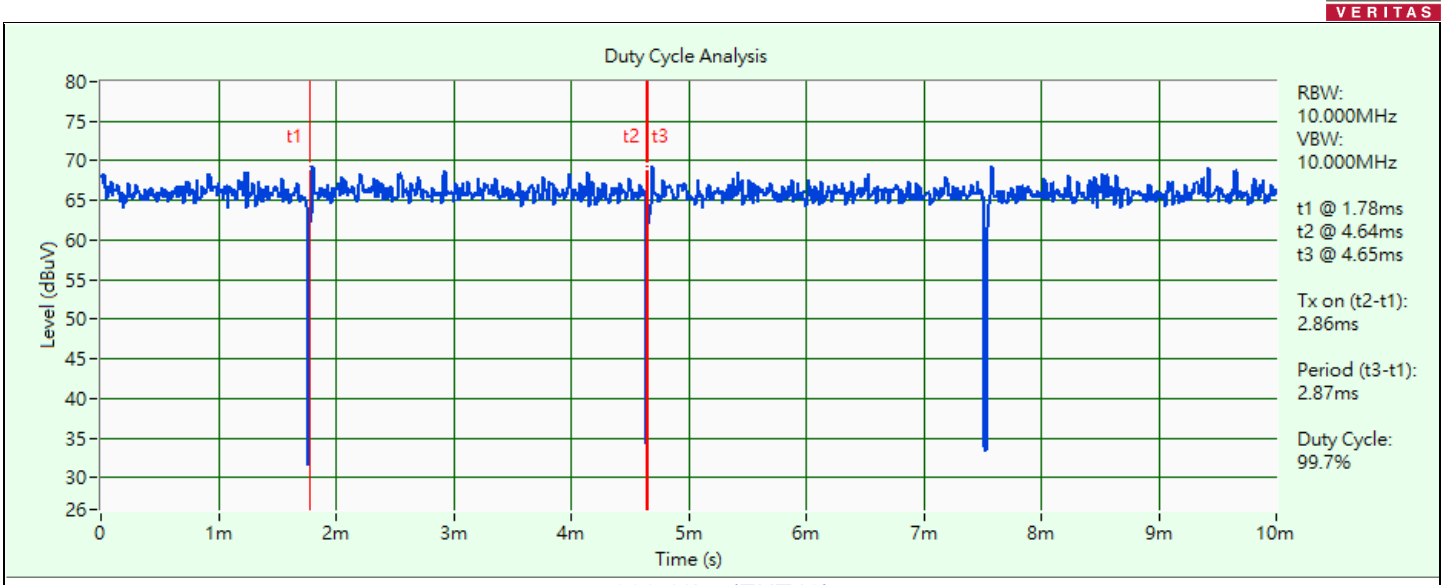
802.11a: Duty cycle = 3.02 ms / 3.03 ms x 100% = 99.7%
802.11be (EHT20): Duty cycle = 2.88 ms / 2.89 ms x 100% = 99.7%
802.11be (EHT40): Duty cycle = 2.86 ms / 2.87 ms x 100% = 99.7%
802.11be (EHT80): Duty cycle = 2.86 ms / 2.87 ms x 100% = 99.7%
802.11be (EHT160): Duty cycle = 2.85 ms / 2.86 ms x 100%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



802.11a



802.11be (EHT20)



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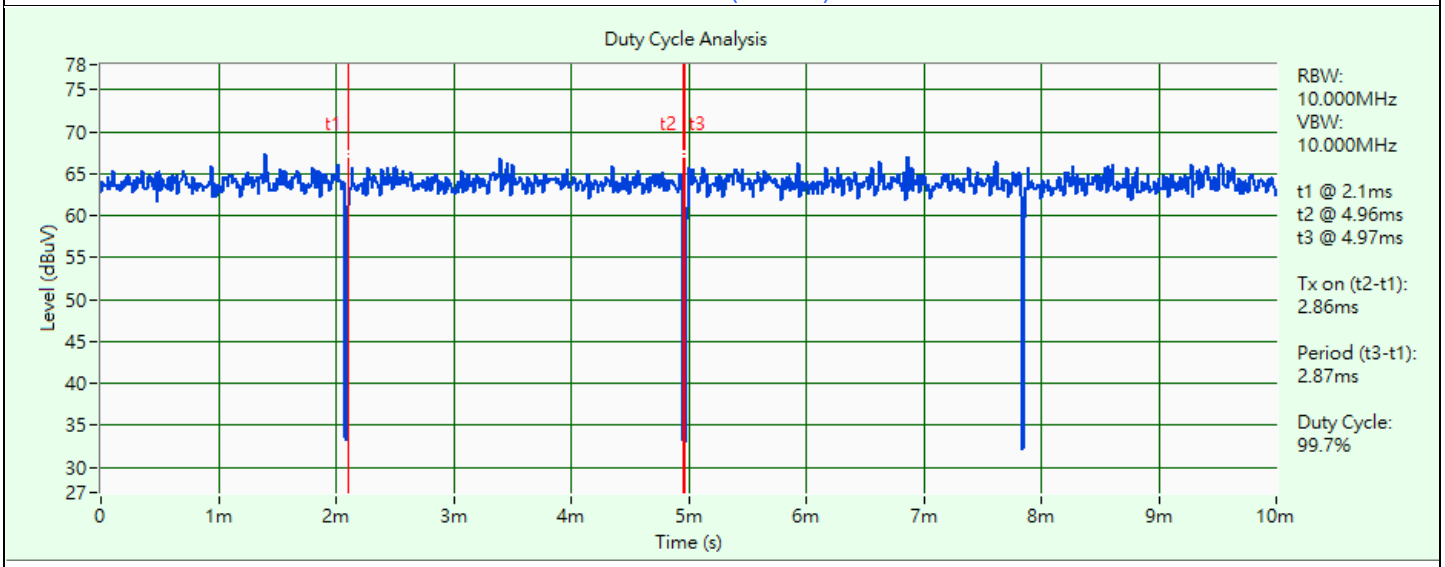

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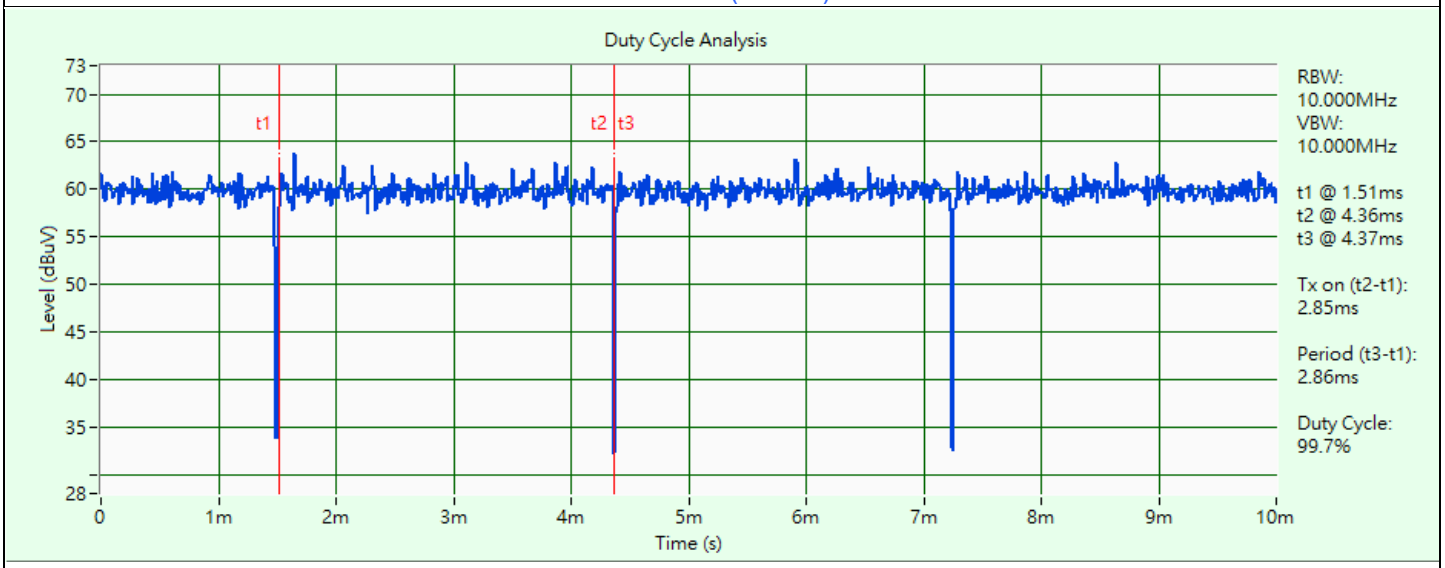
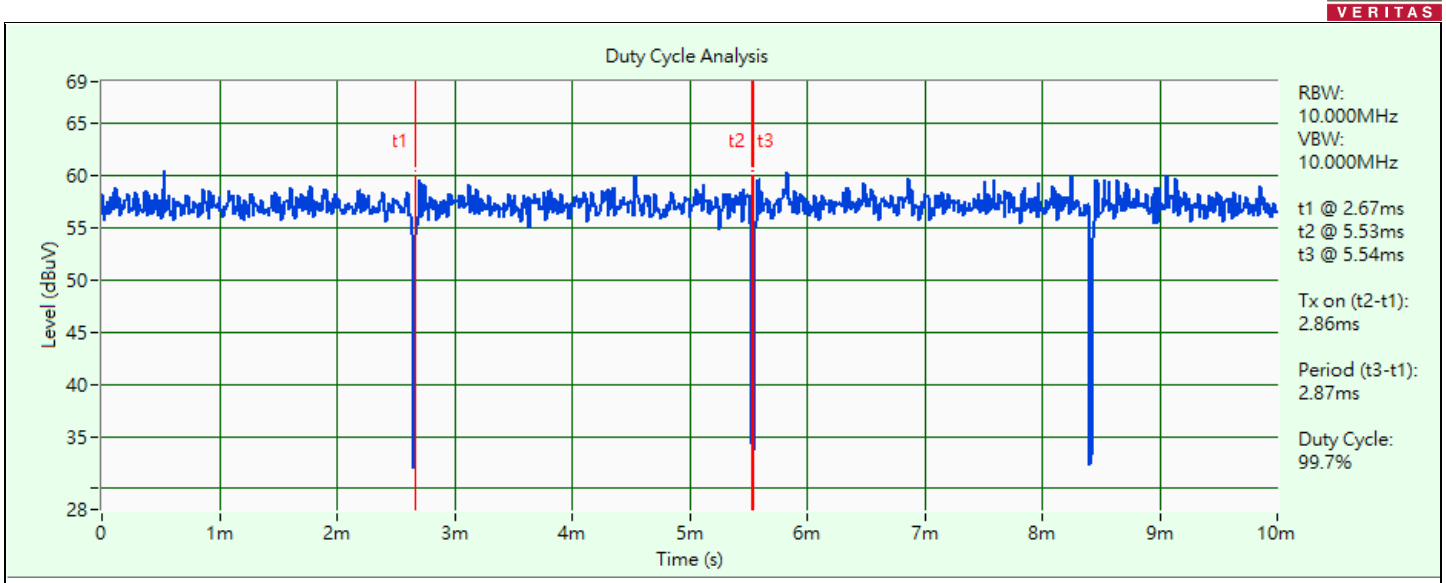


802.11be (EHT160)

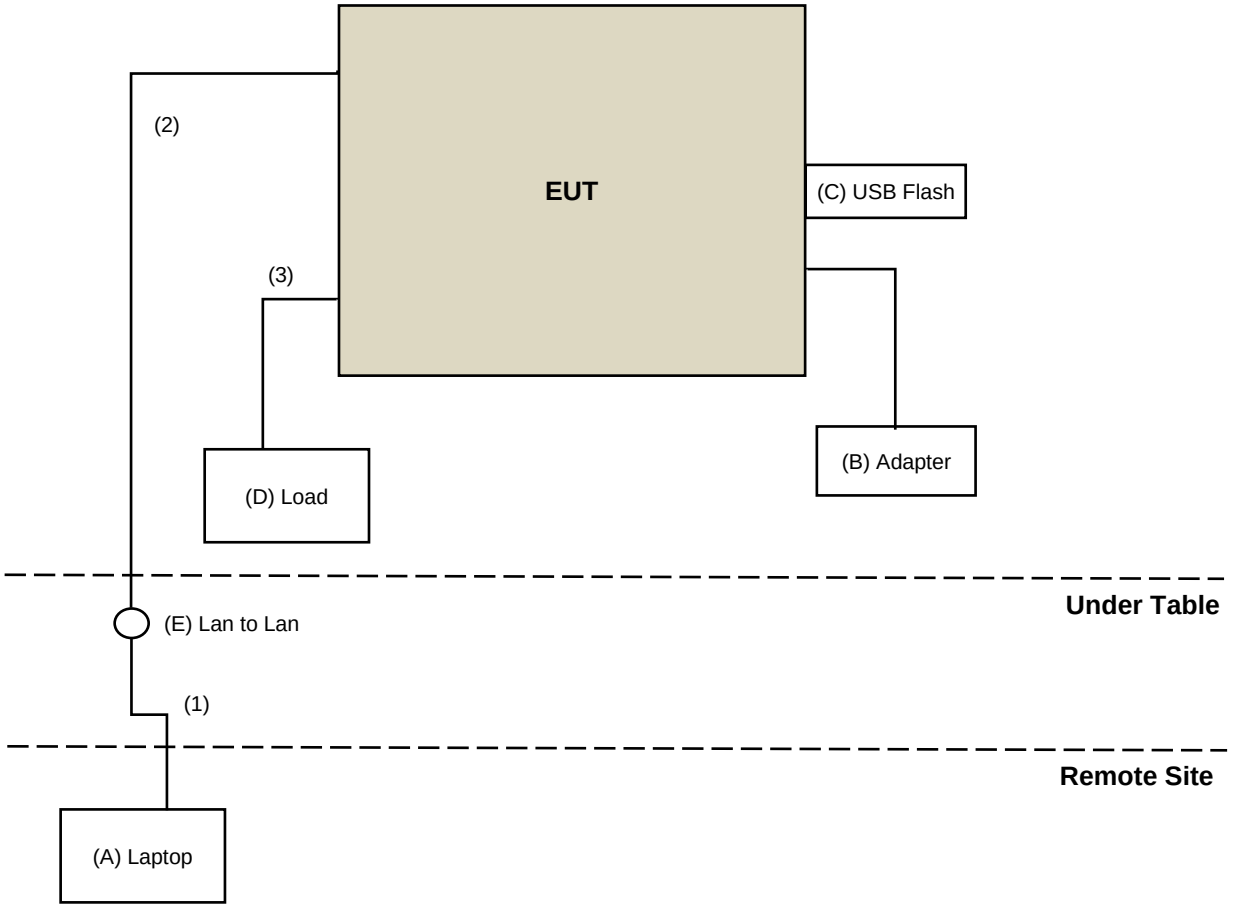


802.11be (EHT320)

3.6 Test Program Used and Operation Descriptions

Controlling software accessMTool_REL_3_2_1_5 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5430	2RL3YW1	N/A	Provided by Lab
B	Adapter	NETGEAR	AD2150F10	N/A	N/A	Accessory of EUT
C	USB Flash	SanDisk	N/A	N/A	N/A	Provided by Lab
D	Load	N/A	N/A	N/A	N/A	Provided by Lab
E	Lan to Lan	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	N	N	Provided by Lab
2	RJ-45 Cable	1	1.95	N	N/A	Accessory of EUT
3	RJ-45 Cable	4	1.5	N	N	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
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
Preamplifier Keysight	83017A	MY53270295	2024/5/1	2025/4/30
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2024/5/1	2025/4/30
	Sucoflex 104	MY 13380+295012/04	2024/5/1	2025/4/30
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/6/14

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

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101105	2024/2/27	2025/2/26
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/6/14

4.4 In-Band Emission Mask

Refer to section 4.3 to get information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.3 to get information of the instruments.

4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Supply JIN YIH Technology	6905S	1720444	N/A	N/A
Digital Multimeter Fluke	87III	70360742	2023/7/6	2024/7/5
Signal & Spectrum Analyzer R&S	FSV3044	101105	2024/2/27	2025/2/26
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2023/12/19	2024/12/18

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/6/14

4.7 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: 2024/6/19

4.8 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance HUBER+SUHNER	E1-011315	13	2023/11/22	2024/11/21
50 ohm terminal resistance	E1-011279	04	2023/11/22	2024/11/21
	E1-011280	05	2023/11/22	2024/11/21
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2023/11/7	2024/11/6
EMI Test Receiver R&S	ESCI	100613	2023/12/4	2024/12/3
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2024/1/6	2025/1/5
LISN R&S	ENV216	101826	2024/3/25	2025/3/24
	ESH3-Z5	100311	2023/9/6	2024/9/5
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2024/1/6	2025/1/5
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2023/8/31	2024/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2024/6/5

4.9 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2023/10/13	2024/10/12
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2024/5/1	2025/4/30
Preamplifier EMCI	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/6/6

4.10 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
	BBHA 9170	9170-480	2023/11/12	2024/11/11
		BBHA9170241	2023/10/16	2024/10/15
		BBHA9170243	2023/11/12	2024/11/11
Preamplifier EMCI	EMC 184045	980116	2023/9/27	2024/9/26
Preamplifier Keysight	83017A	MY53270295	2024/5/1	2025/4/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2024/5/1	2025/4/30
	Sucoflex 104	MY 13380+295012/04	2024/5/1	2025/4/30
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/6/5 ~ 2024/6/6

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

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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

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

5.2 Maximum Power Spectral Density

Operation Band	Equipment Class	Limit
		Maximum Power Density
U-NII-5 U-NII-6 U-NII-7 U-NII-8	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 Frequency Stability

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

5.7 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.

5.8 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.

5.9 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).

5.10 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)

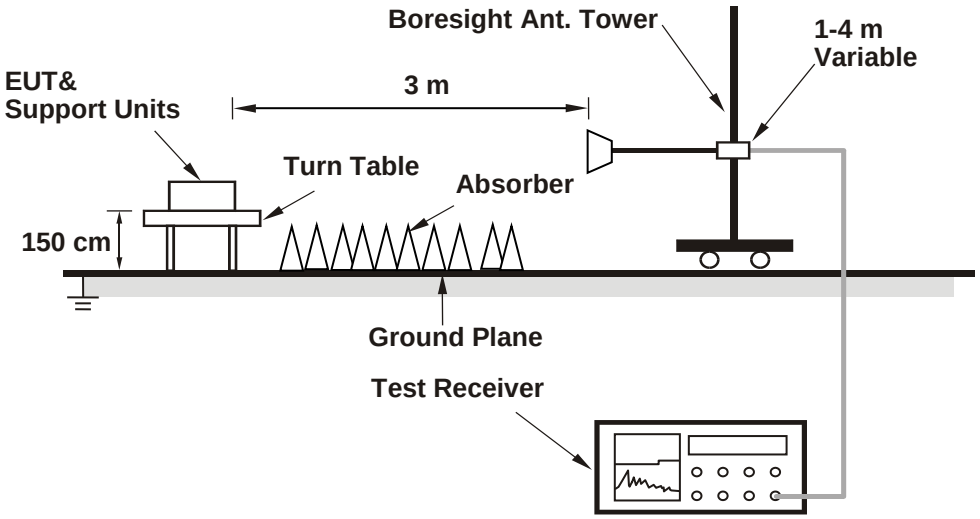
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ 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”.

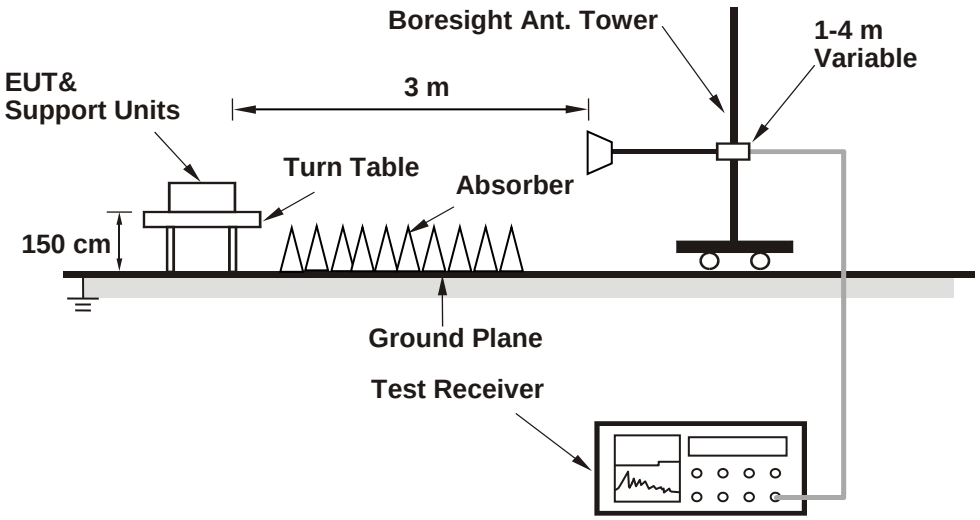
e. Trace average at least 100 traces in power averaging mode.

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

g. 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.

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

i. 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.

j. 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.

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

l. 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

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

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

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

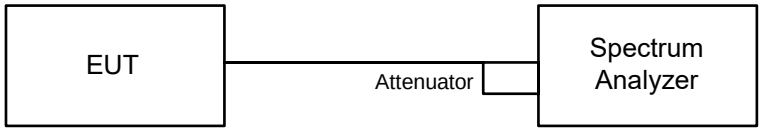
p. Sweep time = auto, trigger set to “free run”.

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

r. Record the max value

6.3 Emission Bandwidth

6.3.1 Test Setup

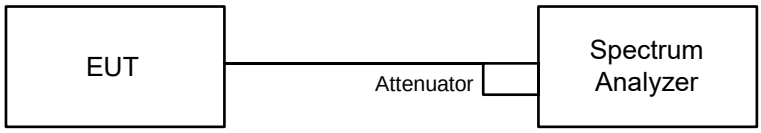


6.3.2 Test Procedure

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

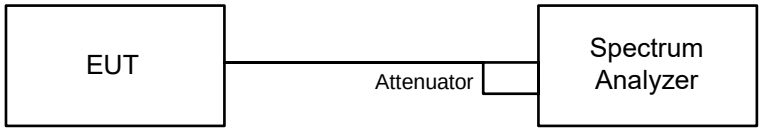


6.4.2 Test Procedure

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

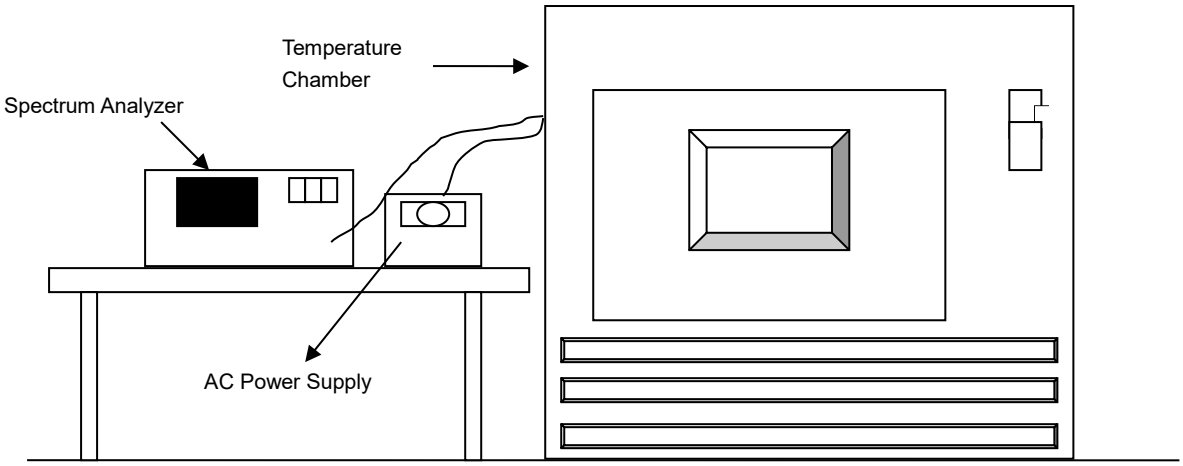


6.5.2 Test Procedure

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 Frequency Stability

6.6.1 Test Setup

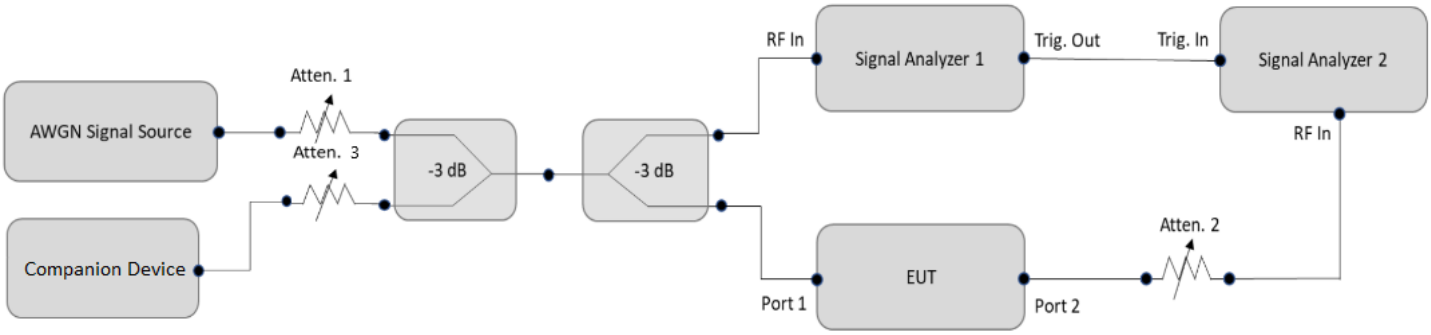


6.6.2 Test Procedure

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

6.7 Contention-based Protocol

6.7.1 Test Setup



6.7.2 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.

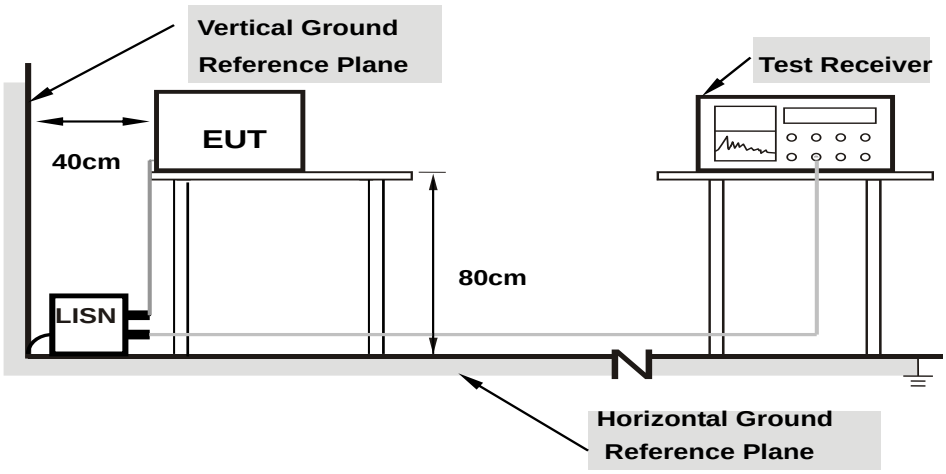
g. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.

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.

6.8 AC Power Conducted Emissions

6.8.1 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).

6.8.2 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.

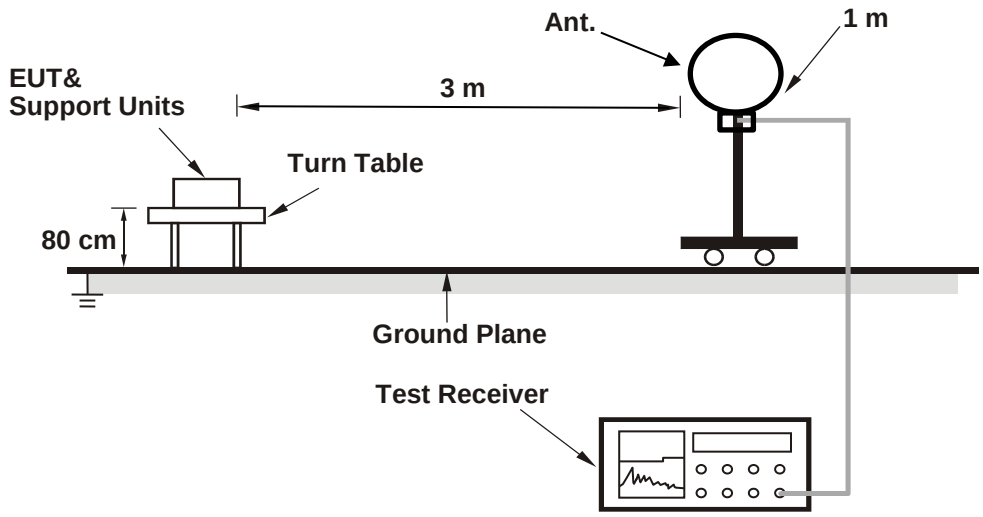
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

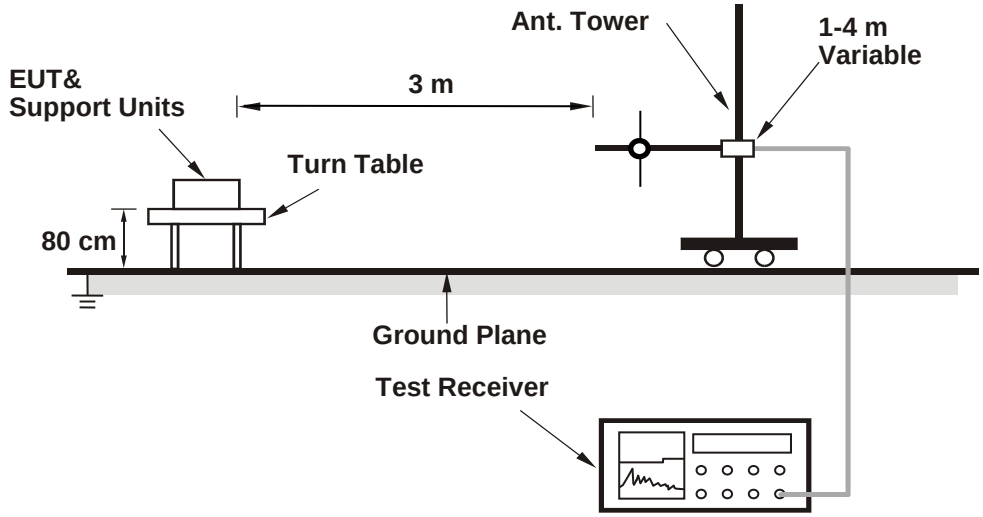
6.9 Unwanted Emissions below 1 GHz

6.9.1 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).

6.9.2 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.

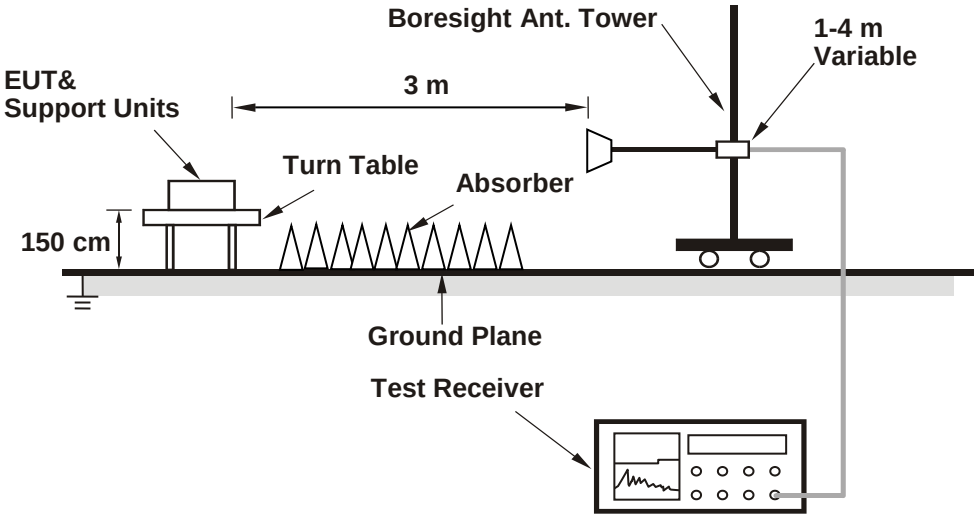
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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.

6.10 Unwanted Emissions above 1 GHz

6.10.1 Test Setup



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

6.10.2 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

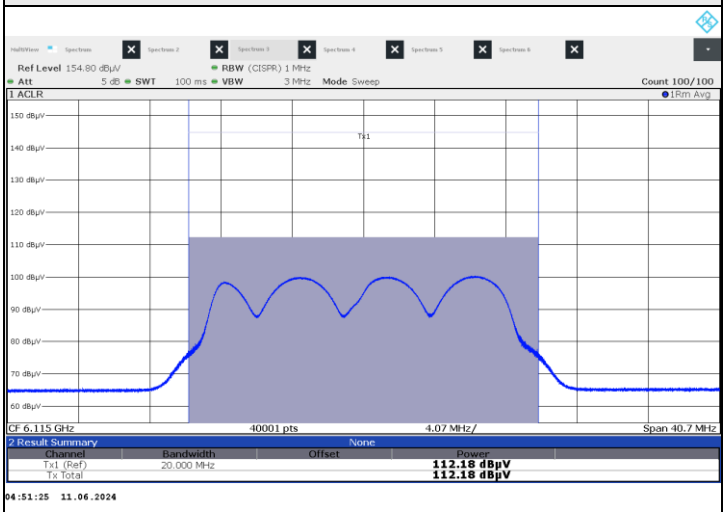
7.1 Maximum RF Output Power

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

802.11a CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
33	6115	112.18	-95.23	49.545	16.95	30	Pass
61	6255	112.08	-95.23	48.417	16.85	30	Pass
93	6415	112.03	-95.23	47.863	16.80	30	Pass
97	6435	111.94	-95.23	46.881	16.71	30	Pass
105	6475	111.96	-95.23	47.098	16.73	30	Pass
113	6515	112.17	-95.23	49.431	16.94	30	Pass
117	6535	112.05	-95.23	48.084	16.82	30	Pass
149	6695	112.03	-95.23	47.863	16.80	30	Pass
181	6855	112.05	-95.23	48.084	16.82	30	Pass
185	6875	111.86	-95.23	46.026	16.63	30	Pass
209	6995	112.10	-95.23	48.641	16.87	30	Pass
229	7095	112.14	-95.23	49.091	16.91	30	Pass
233	7115	111.98	-95.23	47.315	16.75	30	Pass

Spectrum Plot of Maximum Value



802.11a : CH 33

Beamforming (2T1S)

802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
33	6115	114.62	-95.23	86.896	19.39	30	Pass
61	6255	114.60	-95.23	86.497	19.37	30	Pass
93	6415	114.61	-95.23	86.696	19.38	30	Pass
97	6435	114.50	-95.23	84.528	19.27	30	Pass
105	6475	114.58	-95.23	86.099	19.35	30	Pass
113	6515	114.59	-95.23	86.298	19.36	30	Pass
117	6535	114.52	-95.23	84.918	19.29	30	Pass
149	6695	114.52	-95.23	84.918	19.29	30	Pass
181	6855	114.40	-95.23	82.604	19.17	30	Pass
185	6875	114.41	-95.23	82.794	19.18	30	Pass
209	6995	114.49	-95.23	84.333	19.26	30	Pass
229	7095	114.61	-95.23	86.696	19.38	30	Pass
233	7115	103.94	-95.23	7.43	8.71	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
35	6125	116.98	-95.23	149.624	21.75	30	Pass
59	6245	116.76	-95.23	142.233	21.53	30	Pass
91	6405	116.83	-95.23	144.544	21.60	30	Pass
99	6445	116.69	-95.23	139.959	21.46	30	Pass
107	6485	116.54	-95.23	135.207	21.31	30	Pass
115	6525	116.65	-95.23	138.676	21.42	30	Pass
123	6565	116.69	-95.23	139.959	21.46	30	Pass
155	6725	116.55	-95.23	135.519	21.32	30	Pass
179	6845	116.71	-95.23	140.605	21.48	30	Pass
187	6885	116.60	-95.23	137.088	21.37	30	Pass
211	7005	116.71	-95.23	140.605	21.48	30	Pass
227	7085	116.56	-95.23	135.831	21.33	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
39	6145	119.95	-95.23	296.483	24.72	30	Pass
55	6225	119.92	-95.23	294.442	24.69	30	Pass
87	6385	119.94	-95.23	295.801	24.71	30	Pass
103	6465	119.74	-95.23	282.488	24.51	30	Pass
119	6545	119.90	-95.23	293.089	24.67	30	Pass
135	6625	119.71	-95.23	280.543	24.48	30	Pass
151	6705	119.72	-95.23	281.19	24.49	30	Pass
167	6785	119.78	-95.23	285.102	24.55	30	Pass
183	6865	119.66	-95.23	277.332	24.43	30	Pass
199	6945	119.86	-95.23	290.402	24.63	30	Pass
215	7025	119.86	-95.23	290.402	24.63	30	Pass

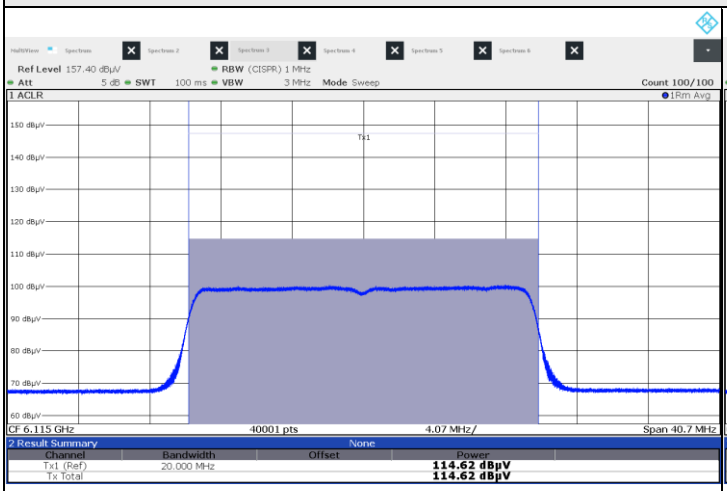
802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
47	6185	122.29	-95.23	508.159	27.06	30	Pass
79	6345	122.28	-95.23	506.991	27.05	30	Pass
111	6505	122.20	-95.23	497.737	26.97	30	Pass
143	6665	122.27	-95.23	505.825	27.04	30	Pass
175	6825	122.18	-95.23	495.45	26.95	30	Pass
207	6985	122.22	-95.23	500.035	26.99	30	Pass

802.11be (EHT320) Beamforming

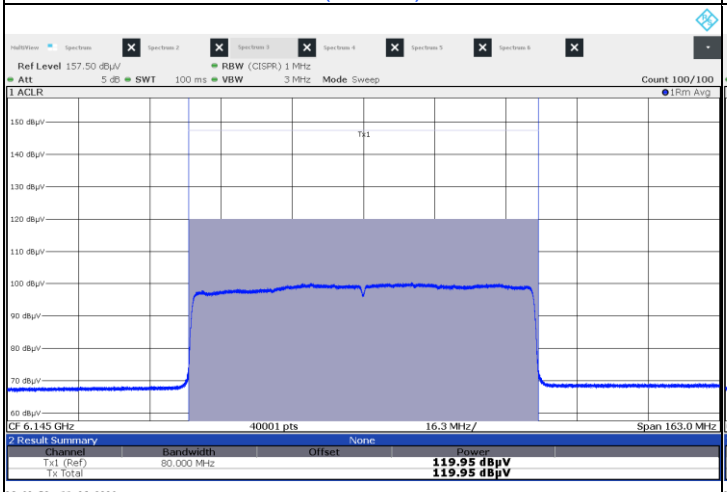
Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
63	6265	124.73	-95.23	891.251	29.50	30	Pass
95	6425	124.65	-95.23	874.984	29.42	30	Pass
127	6585	124.63	-95.23	870.964	29.40	30	Pass
159	6745	124.59	-95.23	862.979	29.36	30	Pass
191	6905	124.49	-95.23	843.335	29.26	30	Pass

Spectrum Plot of Maximum Value

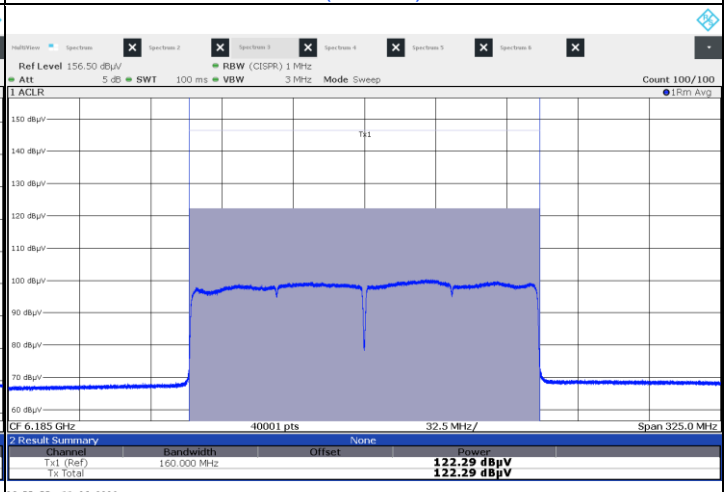


802.11be (EHT20) : CH 33

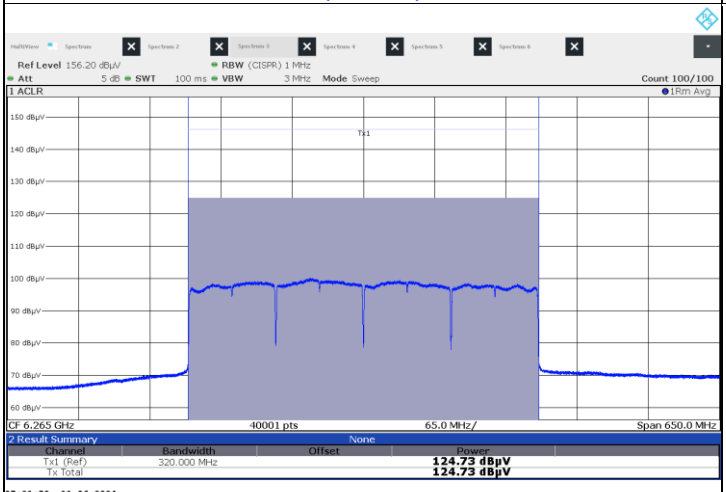
802.11be (EHT40) : CH 35



802.11be (EHT80) : CH 39



802.11be (EHT160) : CH 47



802.11be (EHT320) : CH 63

Beamforming (2T2S)

802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
33	6115	114.80	-95.23	90.573	19.57	30	Pass
61	6255	114.62	-95.23	86.896	19.39	30	Pass
93	6415	114.78	-95.23	90.157	19.55	30	Pass
97	6435	114.59	-95.23	86.298	19.36	30	Pass
105	6475	114.59	-95.23	86.298	19.36	30	Pass
113	6515	114.72	-95.23	88.92	19.49	30	Pass
117	6535	114.59	-95.23	86.298	19.36	30	Pass
149	6695	114.72	-95.23	88.92	19.49	30	Pass
181	6855	114.71	-95.23	88.716	19.48	30	Pass
185	6875	114.69	-95.23	88.308	19.46	30	Pass
209	6995	114.58	-95.23	86.099	19.35	30	Pass
229	7095	114.64	-95.23	87.297	19.41	30	Pass
233	7115	103.95	-95.23	7.447	8.72	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
35	6125	117.04	-95.23	151.705	21.81	30	Pass
59	6245	116.79	-95.23	143.219	21.56	30	Pass
91	6405	116.84	-95.23	144.877	21.61	30	Pass
99	6445	116.71	-95.23	140.605	21.48	30	Pass
107	6485	116.55	-95.23	135.519	21.32	30	Pass
115	6525	116.67	-95.23	139.316	21.44	30	Pass
123	6565	116.71	-95.23	140.605	21.48	30	Pass
155	6725	116.58	-95.23	136.458	21.35	30	Pass
179	6845	116.73	-95.23	141.254	21.50	30	Pass
187	6885	116.61	-95.23	137.404	21.38	30	Pass
211	7005	116.75	-95.23	141.906	21.52	30	Pass
227	7085	116.58	-95.23	136.458	21.35	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
39	6145	120.02	-95.23	301.301	24.79	30	Pass
55	6225	119.95	-95.23	296.483	24.72	30	Pass
87	6385	120.01	-95.23	300.608	24.78	30	Pass
103	6465	119.76	-95.23	283.792	24.53	30	Pass
119	6545	119.94	-95.23	295.801	24.71	30	Pass
135	6625	119.73	-95.23	281.838	24.50	30	Pass
151	6705	119.74	-95.23	282.488	24.51	30	Pass
167	6785	119.80	-95.23	286.418	24.57	30	Pass
183	6865	119.80	-95.23	286.418	24.57	30	Pass
199	6945	119.88	-95.23	291.743	24.65	30	Pass
215	7025	119.86	-95.23	290.402	24.63	30	Pass

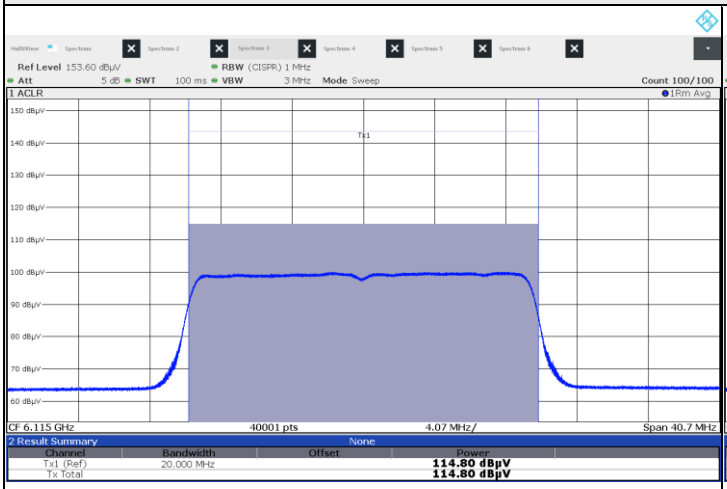
802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
47	6185	122.52	-95.23	535.797	27.29	30	Pass
79	6345	122.45	-95.23	527.23	27.22	30	Pass
111	6505	122.40	-95.23	521.195	27.17	30	Pass
143	6665	122.32	-95.23	511.682	27.09	30	Pass
175	6825	122.20	-95.23	497.737	26.97	30	Pass
207	6985	122.50	-95.23	533.335	27.27	30	Pass

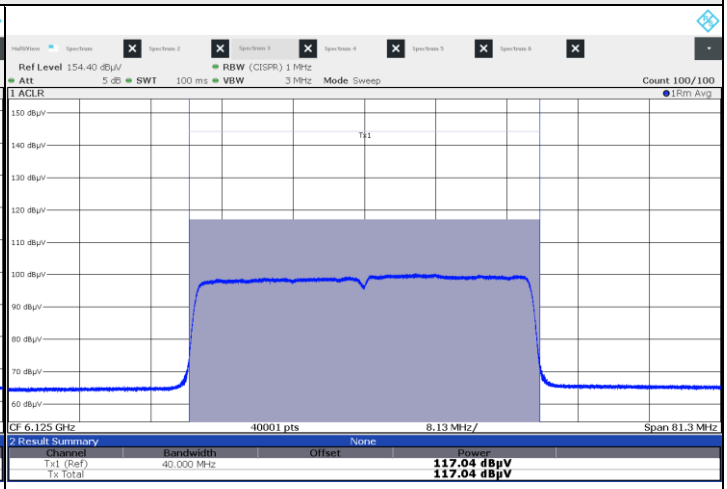
802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
63	6265	124.95	-95.23	937.562	29.72	30	Pass
95	6425	124.71	-95.23	887.156	29.48	30	Pass
127	6585	124.90	-95.23	926.83	29.67	30	Pass
159	6745	124.92	-95.23	931.108	29.69	30	Pass
191	6905	124.54	-95.23	853.1	29.31	30	Pass

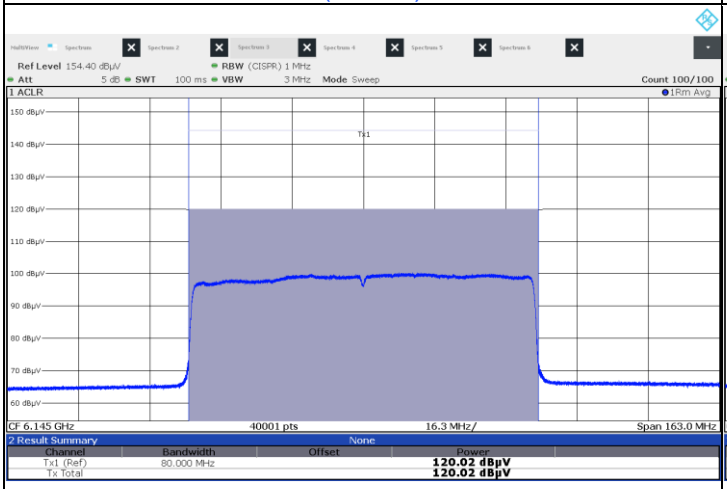
Spectrum Plot of Maximum Value



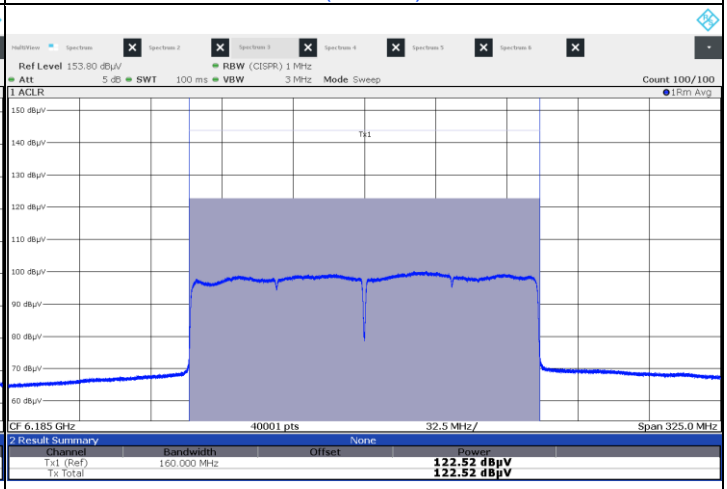
802.11be (EHT20) : CH 33



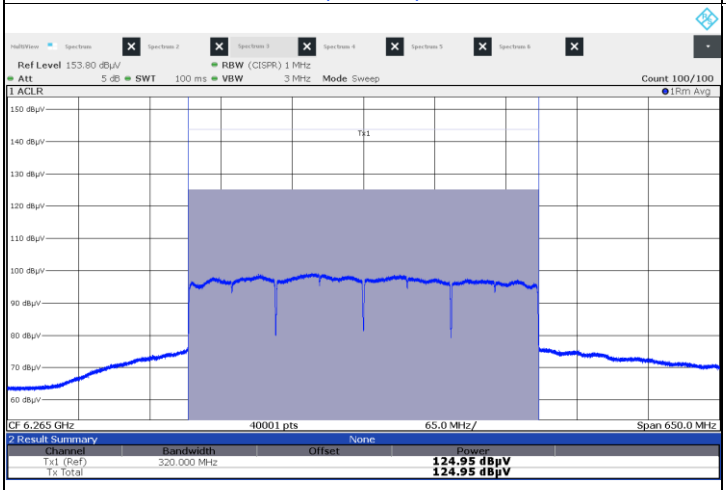
802.11be (EHT40) : CH 35



802.11be (EHT80) : CH 39



802.11be (EHT160) : CH 47



802.11be (EHT320) : CH 63

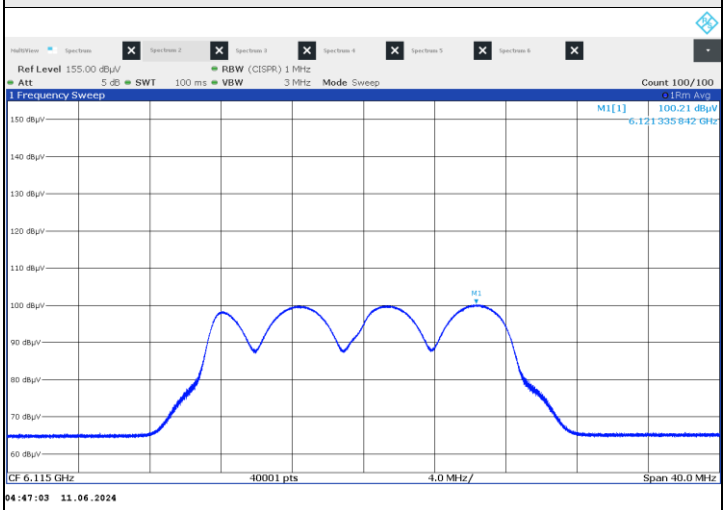
7.2 Maximum Power Spectral Density

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

802.11a

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
33	6115	100.21	-95.23	4.98	5	Pass
61	6255	100.07	-95.23	4.84	5	Pass
93	6415	100.16	-95.23	4.93	5	Pass
97	6435	100.11	-95.23	4.88	5	Pass
105	6475	100.16	-95.23	4.93	5	Pass
113	6515	100.06	-95.23	4.83	5	Pass
117	6535	99.93	-95.23	4.70	5	Pass
149	6695	100.03	-95.23	4.80	5	Pass
181	6855	100.00	-95.23	4.77	5	Pass
185	6875	100.04	-95.23	4.81	5	Pass
209	6995	99.99	-95.23	4.76	5	Pass
229	7095	100.20	-95.23	4.97	5	Pass
233	7115	100.02	-95.23	4.79	5	Pass

Spectrum Plot of Maximum Value



802.11a : CH 33

Beamforming (2T1S)

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
33	6115	100.09	-95.23	4.86	5	Pass
61	6255	100.07	-95.23	4.84	5	Pass
93	6415	100.06	-95.23	4.83	5	Pass
97	6435	100.04	-95.23	4.81	5	Pass
105	6475	100.06	-95.23	4.83	5	Pass
113	6515	100.05	-95.23	4.82	5	Pass
117	6535	99.99	-95.23	4.76	5	Pass
149	6695	99.92	-95.23	4.69	5	Pass
181	6855	99.94	-95.23	4.71	5	Pass
185	6875	100.02	-95.23	4.79	5	Pass
209	6995	99.96	-95.23	4.73	5	Pass
229	7095	100.01	-95.23	4.78	5	Pass
233	7115	88.53	-95.23	-6.70	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
35	6125	100.19	-95.23	4.96	5	Pass
59	6245	100.17	-95.23	4.94	5	Pass
91	6405	100.12	-95.23	4.89	5	Pass
99	6445	100.13	-95.23	4.90	5	Pass
107	6485	100.14	-95.23	4.91	5	Pass
115	6525	100.00	-95.23	4.77	5	Pass
123	6565	99.98	-95.23	4.75	5	Pass
155	6725	100.02	-95.23	4.79	5	Pass
179	6845	100.07	-95.23	4.84	5	Pass
187	6885	100.11	-95.23	4.88	5	Pass
211	7005	100.07	-95.23	4.84	5	Pass
227	7085	100.04	-95.23	4.81	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
39	6145	100.14	-95.23	4.91	5	Pass
55	6225	100.01	-95.23	4.78	5	Pass
87	6385	100.12	-95.23	4.89	5	Pass
103	6465	100.05	-95.23	4.82	5	Pass
119	6545	99.99	-95.23	4.76	5	Pass
135	6625	100.10	-95.23	4.87	5	Pass
151	6705	100.05	-95.23	4.82	5	Pass
167	6785	100.07	-95.23	4.84	5	Pass
183	6865	100.10	-95.23	4.87	5	Pass
199	6945	100.12	-95.23	4.89	5	Pass
215	7025	100.03	-95.23	4.80	5	Pass

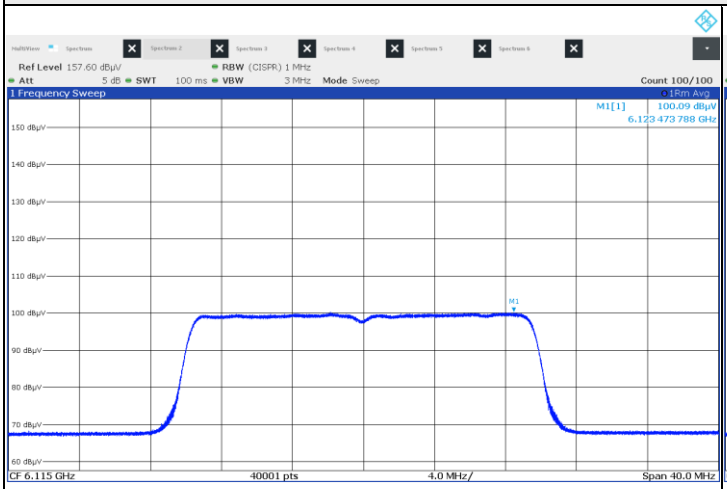
802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
47	6185	100.04	-95.23	4.81	5	Pass
79	6345	99.95	-95.23	4.72	5	Pass
111	6505	100.03	-95.23	4.80	5	Pass
143	6665	100.01	-95.23	4.78	5	Pass
175	6825	99.96	-95.23	4.73	5	Pass
207	6985	100.02	-95.23	4.79	5	Pass

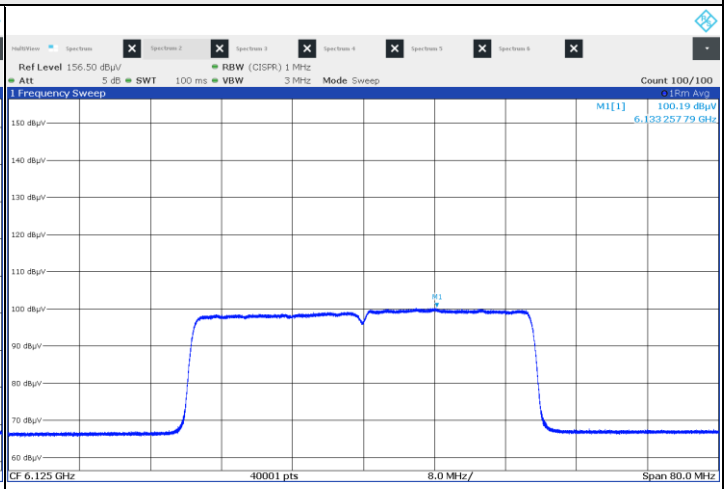
802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
63	6265	100.15	-95.23	4.92	5	Pass
95	6425	100.04	-95.23	4.81	5	Pass
127	6585	100.02	-95.23	4.79	5	Pass
159	6745	100.06	-95.23	4.83	5	Pass
191	6905	99.99	-95.23	4.76	5	Pass

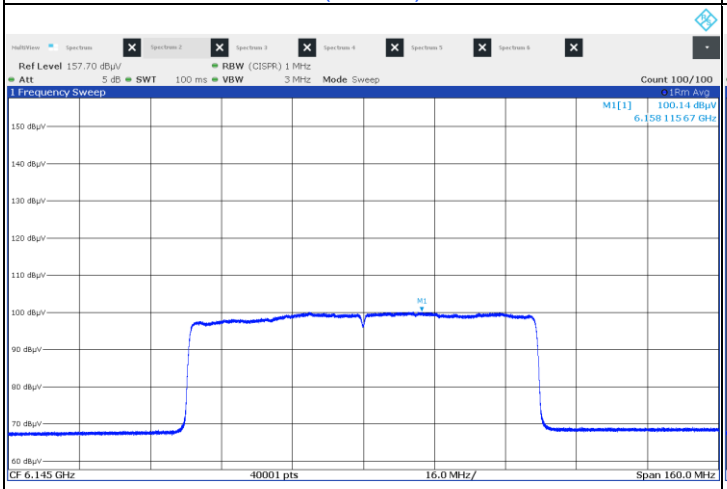
Spectrum Plot of Maximum Value



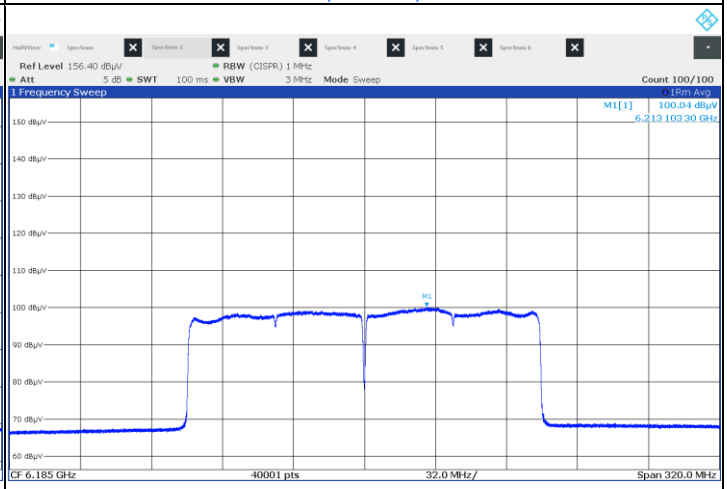
802.11be (EHT20) : CH 33



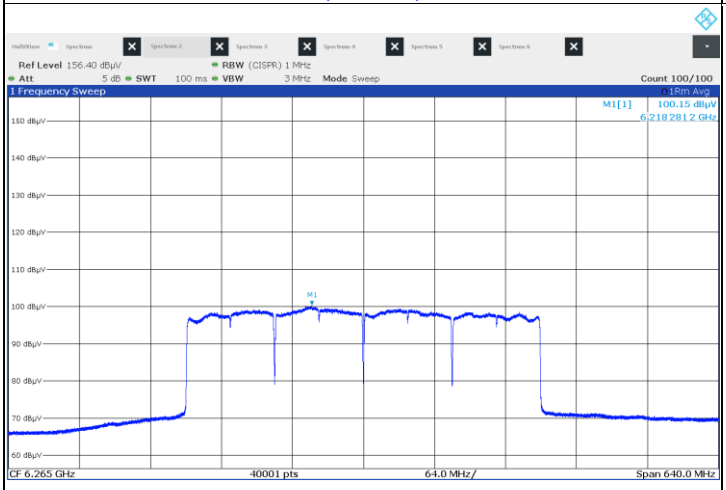
802.11be (EHT40) : CH 35



802.11be (EHT80) : CH 39



802.11be (EHT160) : CH 47



802.11be (EHT320) : CH 63

Beamforming (2T2S)

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
33	6115	100.18	-95.23	4.95	5	Pass
61	6255	100.03	-95.23	4.80	5	Pass
93	6415	100.10	-95.23	4.87	5	Pass
97	6435	100.00	-95.23	4.77	5	Pass
105	6475	100.06	-95.23	4.83	5	Pass
113	6515	100.17	-95.23	4.94	5	Pass
117	6535	100.16	-95.23	4.93	5	Pass
149	6695	100.01	-95.23	4.78	5	Pass
181	6855	100.03	-95.23	4.80	5	Pass
185	6875	99.91	-95.23	4.68	5	Pass
209	6995	99.95	-95.23	4.72	5	Pass
229	7095	100.05	-95.23	4.82	5	Pass
233	7115	87.78	-95.23	-7.45	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
35	6125	100.22	-95.23	4.99	5	Pass
59	6245	100.09	-95.23	4.86	5	Pass
91	6405	100.21	-95.23	4.98	5	Pass
99	6445	100.09	-95.23	4.86	5	Pass
107	6485	100.08	-95.23	4.85	5	Pass
115	6525	100.05	-95.23	4.82	5	Pass
123	6565	99.97	-95.23	4.74	5	Pass
155	6725	99.97	-95.23	4.74	5	Pass
179	6845	100.01	-95.23	4.78	5	Pass
187	6885	100.10	-95.23	4.87	5	Pass
211	7005	100.05	-95.23	4.82	5	Pass
227	7085	100.03	-95.23	4.80	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
39	6145	100.22	-95.23	4.99	5	Pass
55	6225	100.11	-95.23	4.88	5	Pass
87	6385	100.21	-95.23	4.98	5	Pass
103	6465	100.07	-95.23	4.84	5	Pass
119	6545	100.12	-95.23	4.89	5	Pass
135	6625	100.08	-95.23	4.85	5	Pass
151	6705	100.07	-95.23	4.84	5	Pass
167	6785	100.16	-95.23	4.93	5	Pass
183	6865	100.11	-95.23	4.88	5	Pass
199	6945	100.21	-95.23	4.98	5	Pass
215	7025	100.20	-95.23	4.97	5	Pass

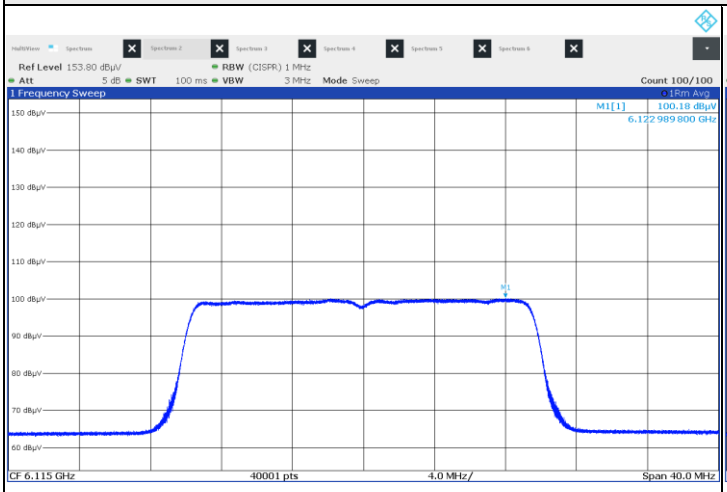
802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
47	6185	100.18	-95.23	4.95	5	Pass
79	6345	100.12	-95.23	4.89	5	Pass
111	6505	100.05	-95.23	4.82	5	Pass
143	6665	100.04	-95.23	4.81	5	Pass
175	6825	99.94	-95.23	4.71	5	Pass
207	6985	100.15	-95.23	4.92	5	Pass

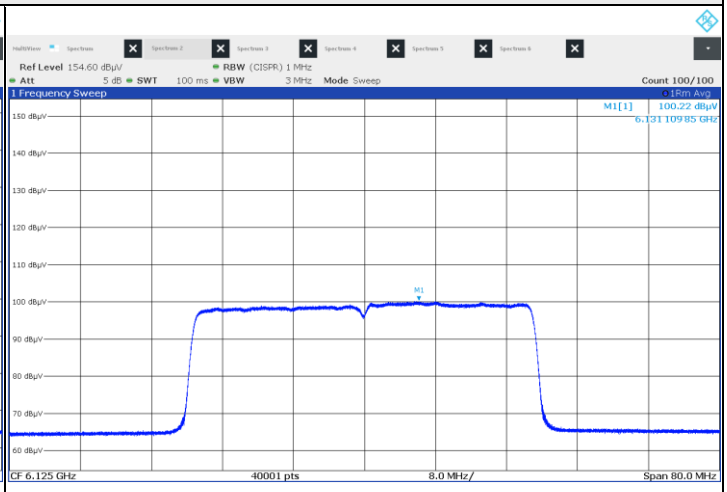
802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
63	6265	99.22	-95.23	3.99	5	Pass
95	6425	99.09	-95.23	3.86	5	Pass
127	6585	99.10	-95.23	3.87	5	Pass
159	6745	99.08	-95.23	3.85	5	Pass
191	6905	98.28	-95.23	3.05	5	Pass

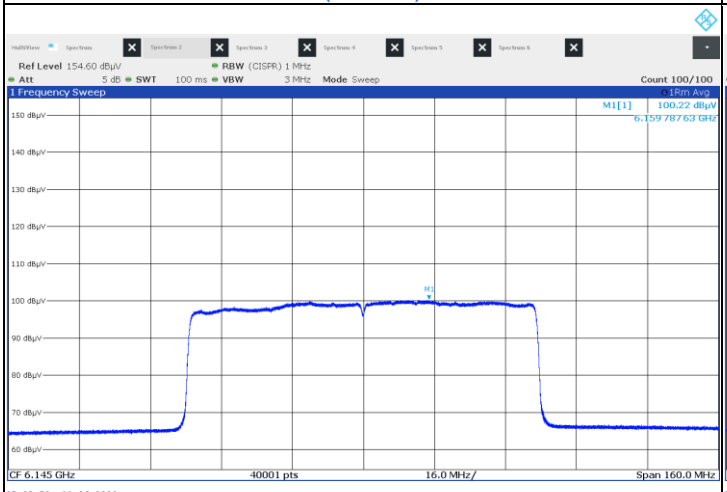
Spectrum Plot of Maximum Value



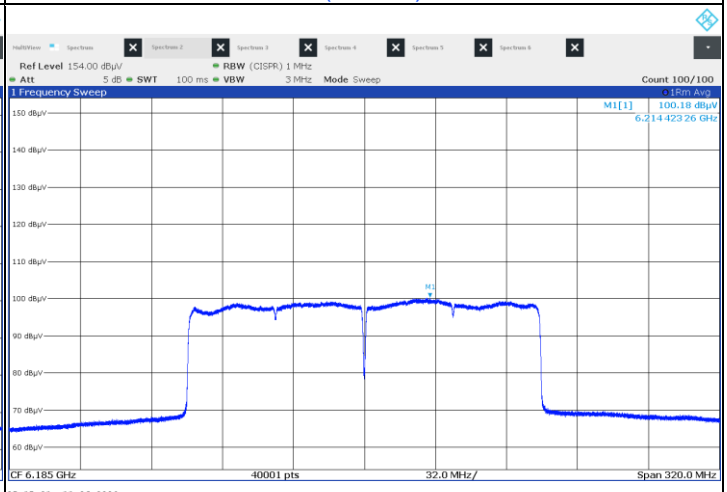
802.11be (EHT20) : CH 33



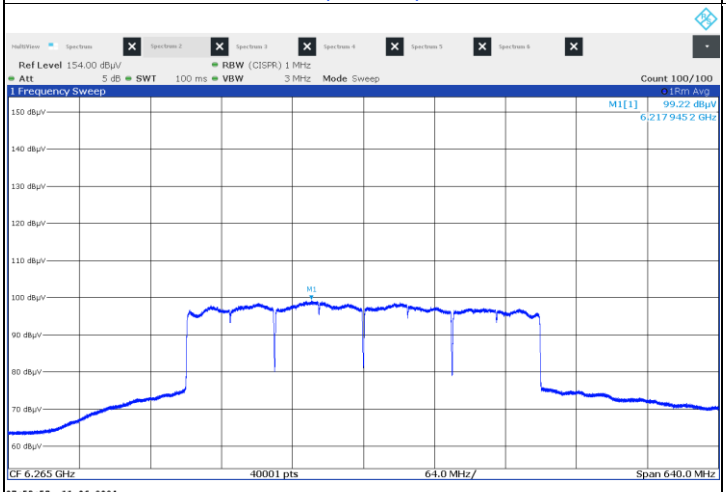
802.11be (EHT40) : CH 35



802.11be (EHT80) : CH 39



802.11be (EHT160) : CH 47



802.11be (EHT320) : CH 63

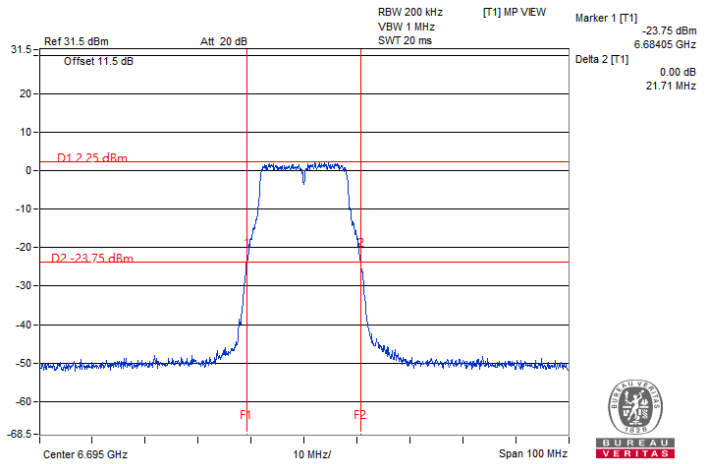
7.3 Emission Bandwidth

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

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	21.59	21.66	320	Pass
61	6255	21.66	21.67	320	Pass
93	6415	21.59	21.50	320	Pass
97	6435	21.42	21.57	320	Pass
105	6475	21.64	21.46	320	Pass
113	6515	21.57	21.61	320	Pass
117	6535	21.66	21.57	320	Pass
149	6695	21.60	21.71	320	Pass
181	6855	21.55	21.46	320	Pass
185	6875	21.52	21.53	320	Pass
209	6995	21.54	21.70	320	Pass
229	7095	21.52	21.62	320	Pass
233	7115	21.64	21.58	320	Pass

Spectrum Plot of Maximum Value



802.11a / Chain 1 : CH 149

Beamforming (2T1S)

802.11be (EHT20) Beamforming

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	21.59	21.65	320	Pass
61	6255	21.82	21.63	320	Pass
93	6415	21.64	21.67	320	Pass
97	6435	21.57	21.50	320	Pass
105	6475	21.63	21.59	320	Pass
113	6515	21.67	21.65	320	Pass
117	6535	21.65	21.59	320	Pass
149	6695	21.58	21.71	320	Pass
181	6855	21.62	21.76	320	Pass
185	6875	21.48	21.61	320	Pass
209	6995	21.91	21.82	320	Pass
229	7095	21.70	21.68	320	Pass
233	7115	21.41	21.77	320	Pass

802.11be (EHT40) Beamforming

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
35	6125	41.35	41.38	320	Pass
59	6245	41.54	41.46	320	Pass
91	6405	41.41	41.50	320	Pass
99	6445	41.53	41.49	320	Pass
107	6485	41.60	41.49	320	Pass
115	6525	41.54	41.35	320	Pass
123	6565	41.23	41.46	320	Pass
155	6725	41.62	41.52	320	Pass
179	6845	41.47	41.52	320	Pass
187	6885	41.49	41.58	320	Pass
211	7005	41.32	41.38	320	Pass
227	7085	41.41	41.23	320	Pass

802.11be (EHT80) Beamforming

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
39	6145	82.38	82.63	320	Pass
55	6225	82.97	82.64	320	Pass
87	6385	82.69	82.53	320	Pass
103	6465	82.27	82.62	320	Pass
119	6545	82.71	82.59	320	Pass
135	6625	82.44	82.61	320	Pass
151	6705	82.24	82.61	320	Pass
167	6785	82.22	82.59	320	Pass
183	6865	82.62	82.45	320	Pass
199	6945	82.57	82.32	320	Pass
215	7025	82.72	82.71	320	Pass

802.11be (EHT160) Beamforming

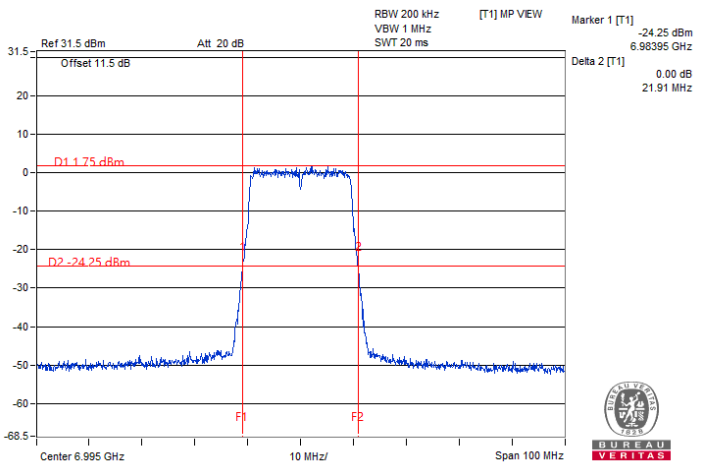
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
47	6185	165.89	165.71	320	Pass
79	6345	166.02	165.92	320	Pass
111	6505	165.88	165.93	320	Pass
143	6665	165.83	165.02	320	Pass
175	6825	165.44	166.14	320	Pass
207	6985	165.53	165.62	320	Pass

802.11be (EHT320) Beamforming

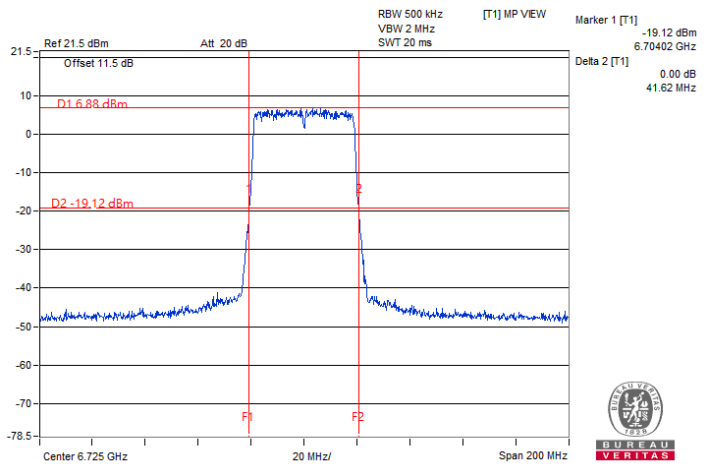
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
63	6265	331.36	331.85	320	Note
95	6425	331.50	332.31	320	Note
127	6585	331.74	341.10	320	Note
159	6745	332.64	332.21	320	Note
191	6905	442.15	388.13	320	Note

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

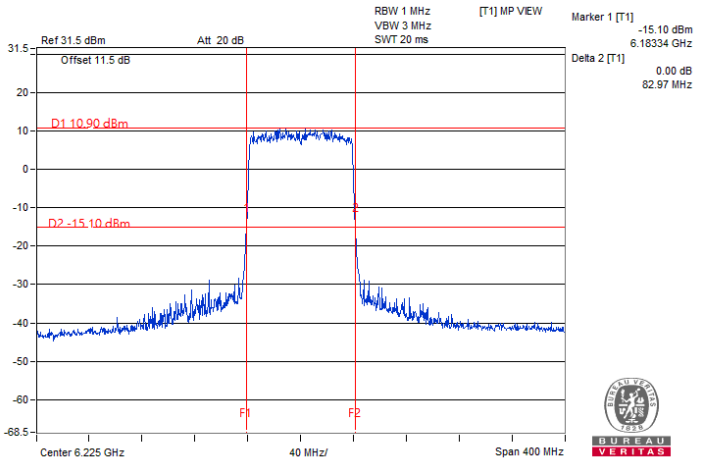
Spectrum Plot of Maximum Value



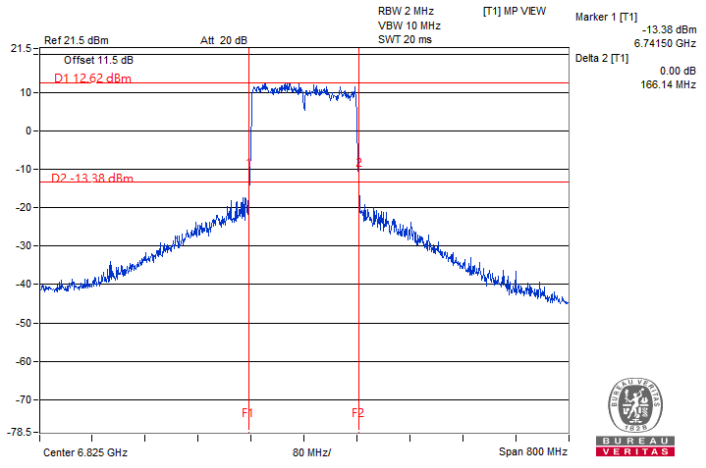
802.11be (EHT20) / Chain 0 : CH 209



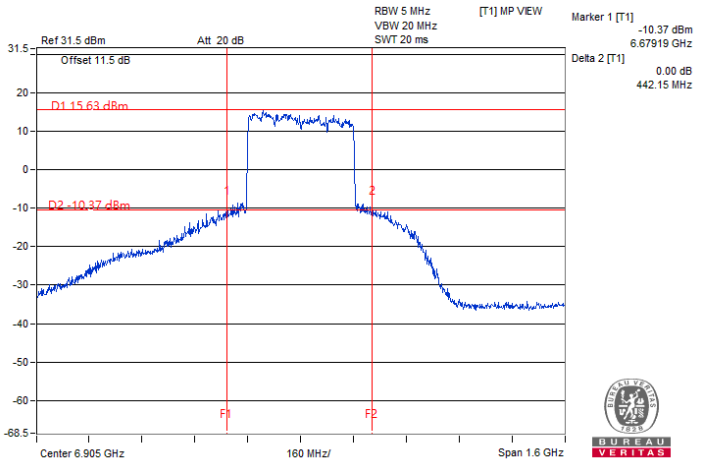
802.11be (EHT40) / Chain 0 : CH 155



802.11be (EHT80) / Chain 0 : CH 55



802.11be (EHT160) / Chain 1 : CH 175



802.11be (EHT320) / Chain 0 : CH 191

Beamforming (2T2S)

802.11be (EHT20) Beamforming

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	21.73	21.81	320	Pass
61	6255	21.98	21.90	320	Pass
93	6415	21.71	21.75	320	Pass
97	6435	21.58	21.76	320	Pass
105	6475	21.60	21.86	320	Pass
113	6515	21.74	22.07	320	Pass
117	6535	21.81	21.97	320	Pass
149	6695	21.55	21.73	320	Pass
181	6855	21.72	22.03	320	Pass
185	6875	21.67	21.92	320	Pass
209	6995	21.54	21.97	320	Pass
229	7095	21.82	21.85	320	Pass
233	7115	21.74	21.90	320	Pass

802.11be (EHT40) Beamforming

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
35	6125	40.95	41.31	320	Pass
59	6245	40.97	41.12	320	Pass
91	6405	41.04	41.13	320	Pass
99	6445	40.83	41.29	320	Pass
107	6485	40.99	41.42	320	Pass
115	6525	40.97	41.32	320	Pass
123	6565	40.89	41.11	320	Pass
155	6725	40.99	41.18	320	Pass
179	6845	40.85	41.18	320	Pass
187	6885	40.90	41.39	320	Pass
211	7005	40.91	41.09	320	Pass
227	7085	40.92	41.24	320	Pass

802.11be (EHT80) Beamforming

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
39	6145	82.80	83.04	320	Pass
55	6225	82.80	82.97	320	Pass
87	6385	82.47	83.26	320	Pass
103	6465	82.81	82.79	320	Pass
119	6545	82.46	82.85	320	Pass
135	6625	82.68	83.18	320	Pass
151	6705	82.80	83.26	320	Pass
167	6785	82.68	83.33	320	Pass
183	6865	82.28	82.88	320	Pass
199	6945	82.46	83.12	320	Pass
215	7025	82.35	118.30	320	Pass

802.11be (EHT160) Beamforming

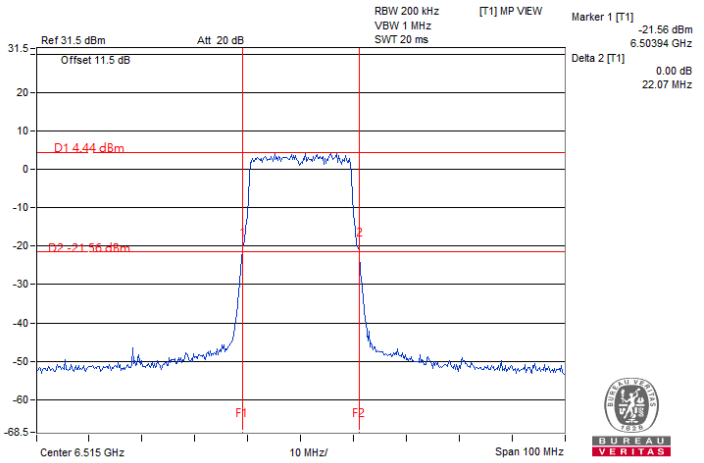
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
47	6185	182.57	170.41	320	Pass
79	6345	166.92	167.38	320	Pass
111	6505	165.56	167.51	320	Pass
143	6665	166.64	166.80	320	Pass
175	6825	165.74	167.29	320	Pass
207	6985	168.62	169.81	320	Pass

802.11be (EHT320) Beamforming

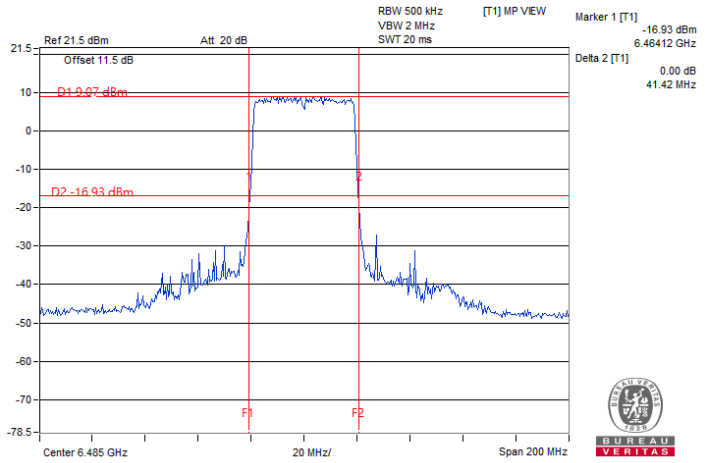
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
63	6265	437.74	567.54	320	Note
95	6425	565.20	512.94	320	Note
127	6585	559.63	581.80	320	Note
159	6745	600.64	561.58	320	Note
191	6905	461.44	477.39	320	Note

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

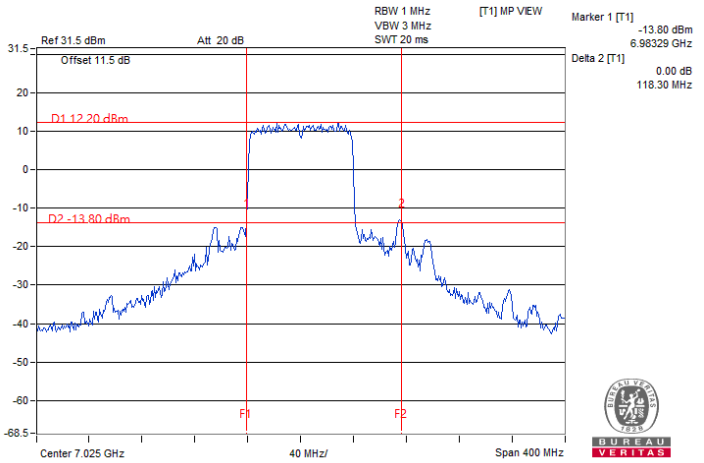
Spectrum Plot of Maximum Value



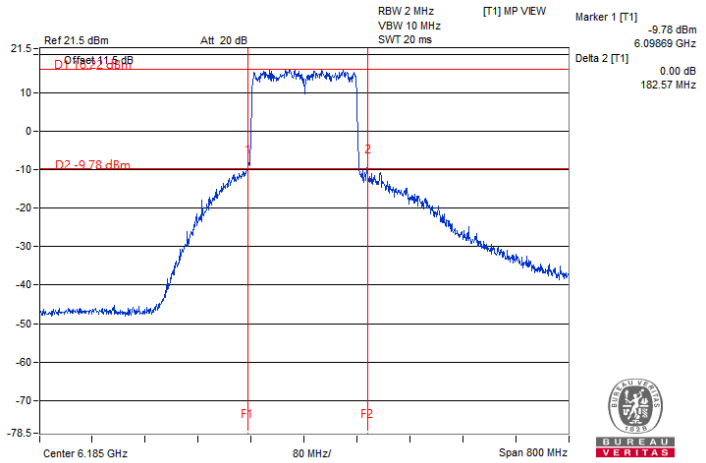
802.11be (EHT20) / Chain 1 : CH 113



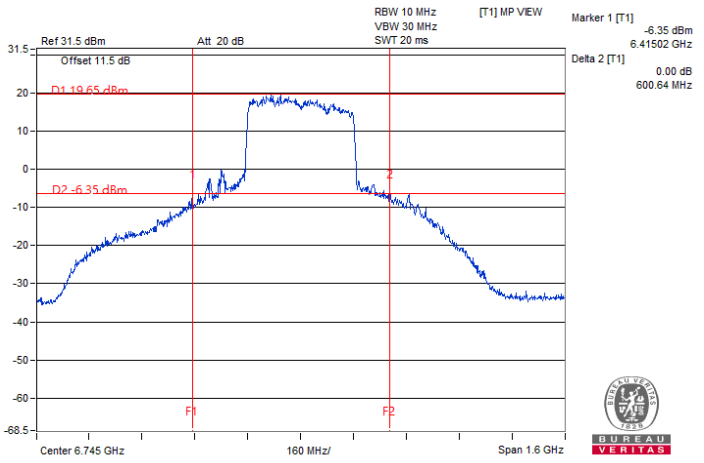
802.11be (EHT40) / Chain 1 : CH 107



802.11be (EHT80) / Chain 1 : CH 215



802.11be (EHT160) / Chain 0 : CH 47

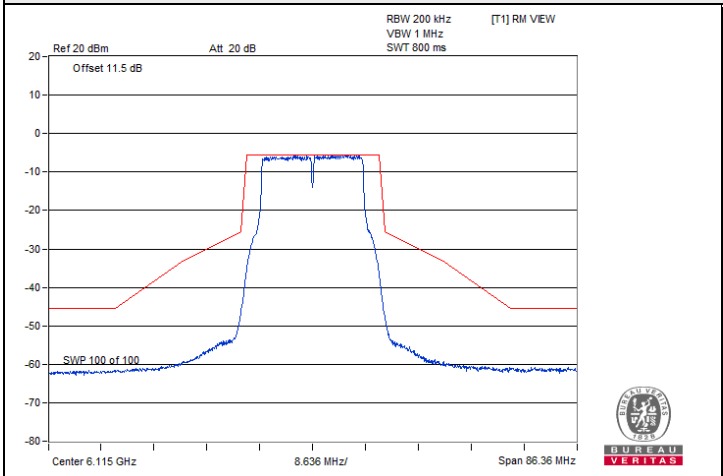
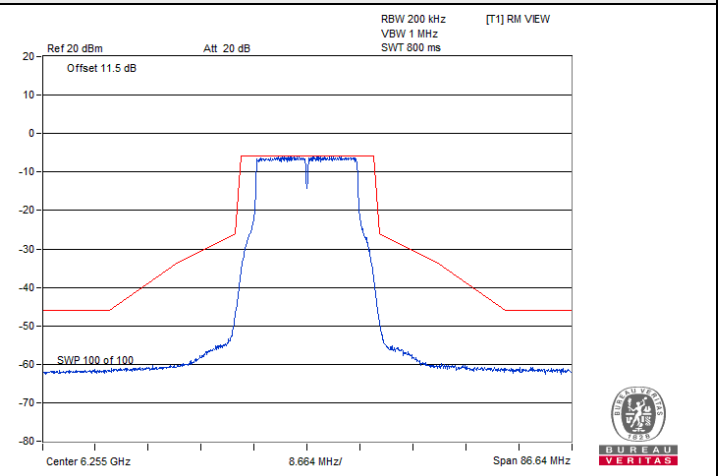
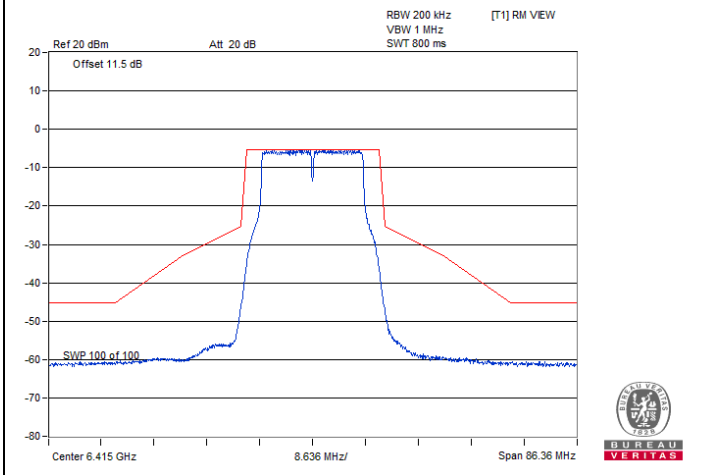
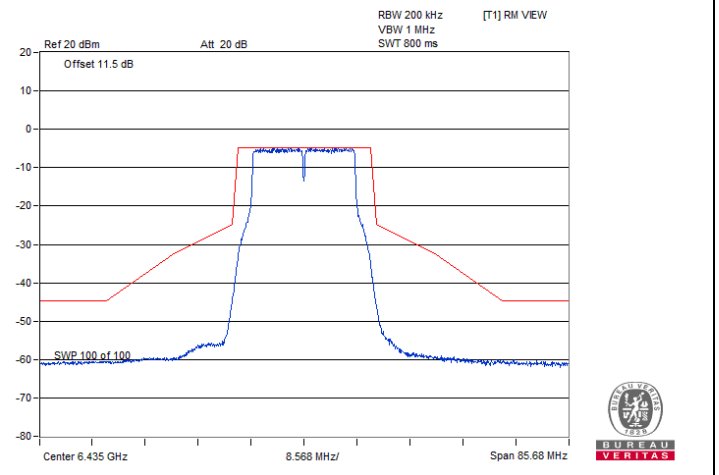
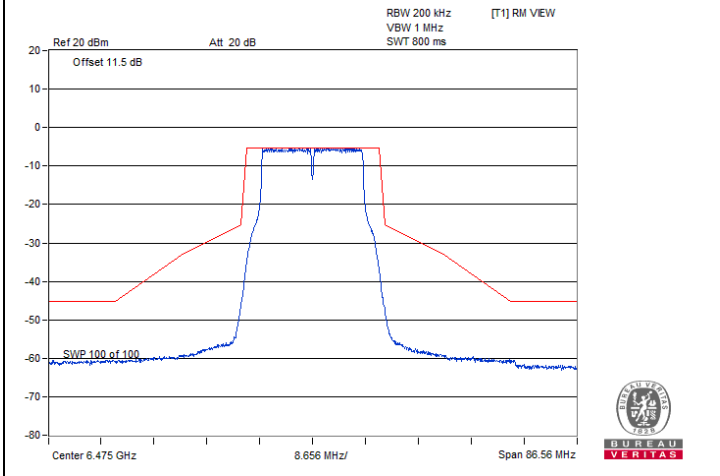
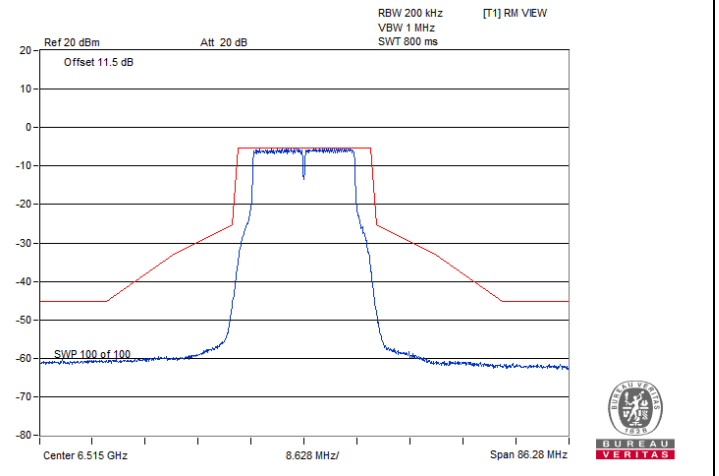


802.11be (EHT320) / Chain 0 : CH 159

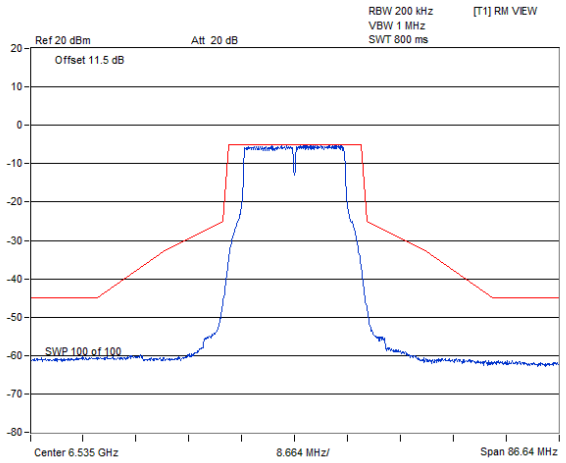
7.4 In-Band Emission Mask

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

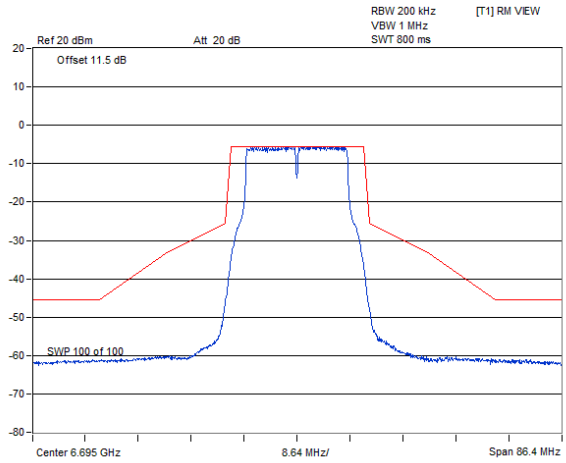
802.11a

Spectrum Plot	
	
802.11a / Chain 0 : CH 33	802.11a / Chain 0 : CH 61
	
802.11a / Chain 0 : CH 93	802.11a / Chain 0 : CH 97
	
802.11a / Chain 0 : CH 105	802.11a / Chain 0 : CH 113

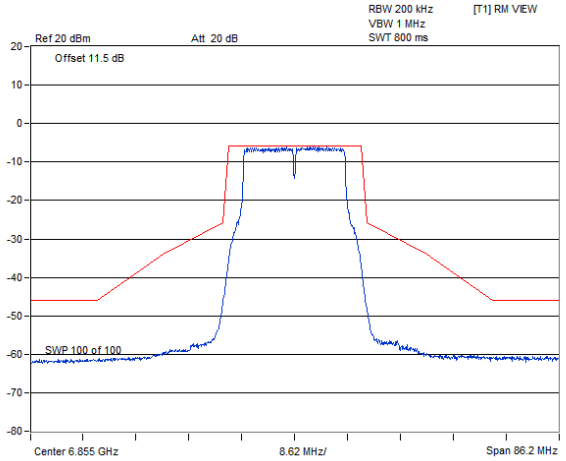
Spectrum Plot



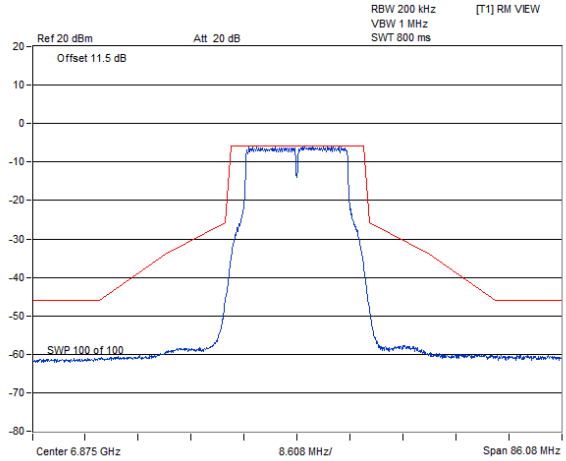
802.11a / Chain 0 : CH 117



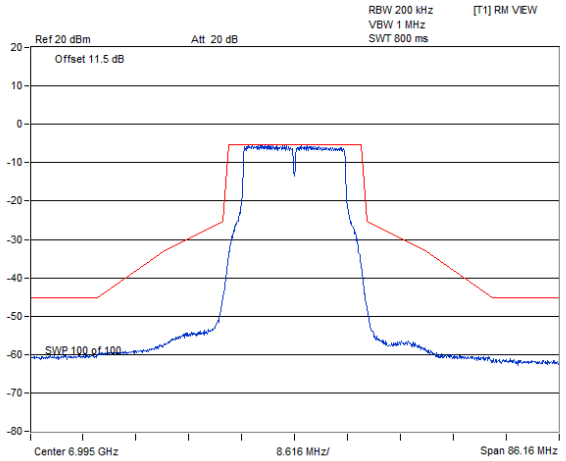
802.11a / Chain 0 : CH 149



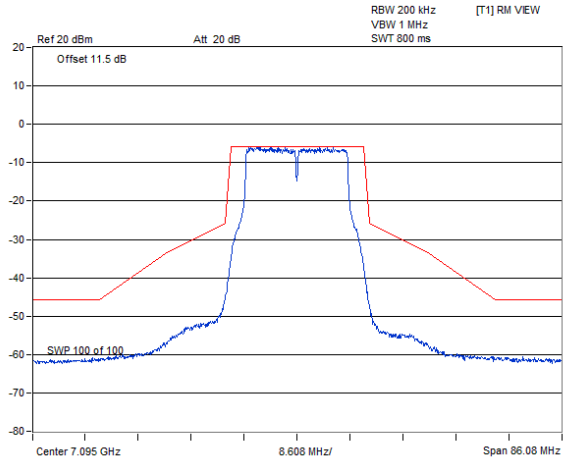
802.11a / Chain 0 : CH 181



802.11a / Chain 0 : CH 185

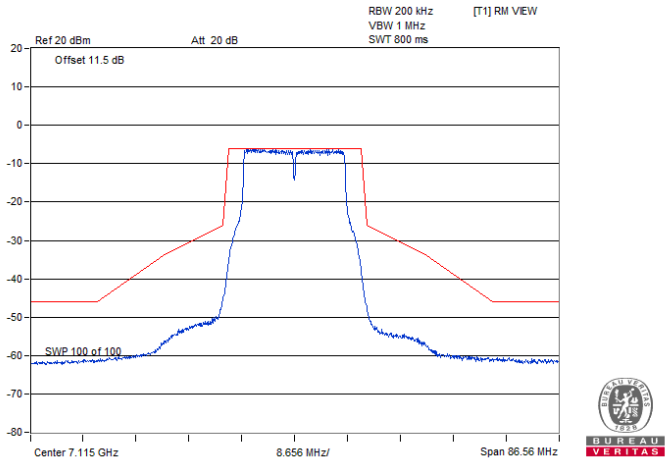


802.11a / Chain 0 : CH 209

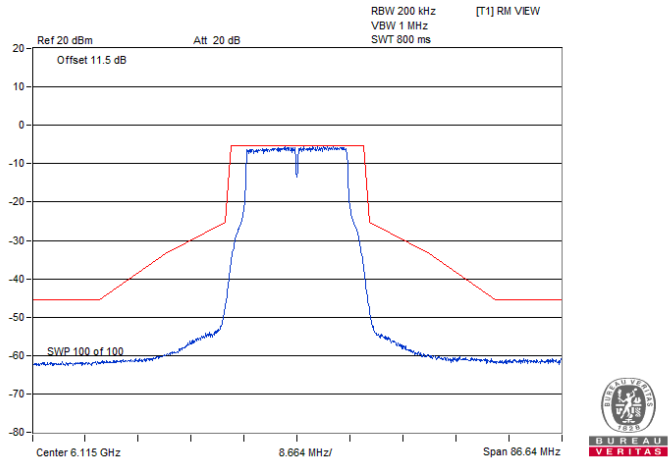


802.11a / Chain 0 : CH 229

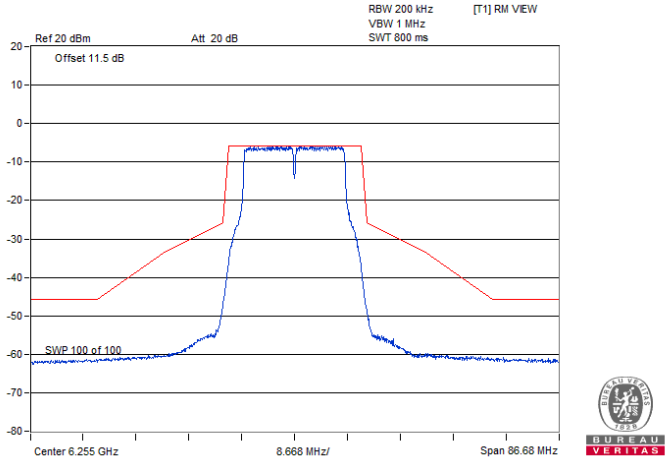
Spectrum Plot



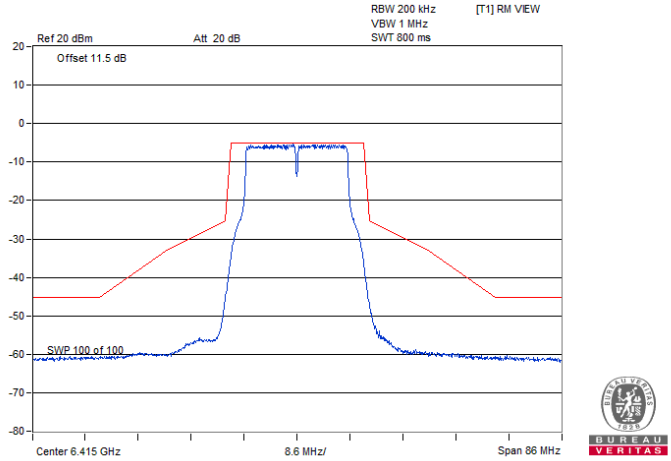
802.11a / Chain 0 : CH 233



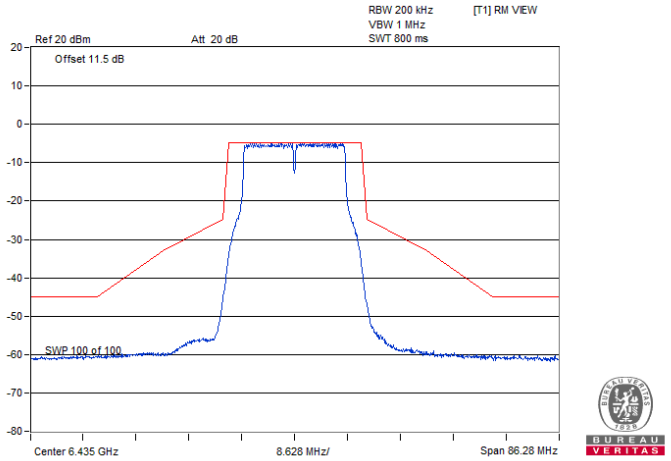
802.11a / Chain 1 : CH 33



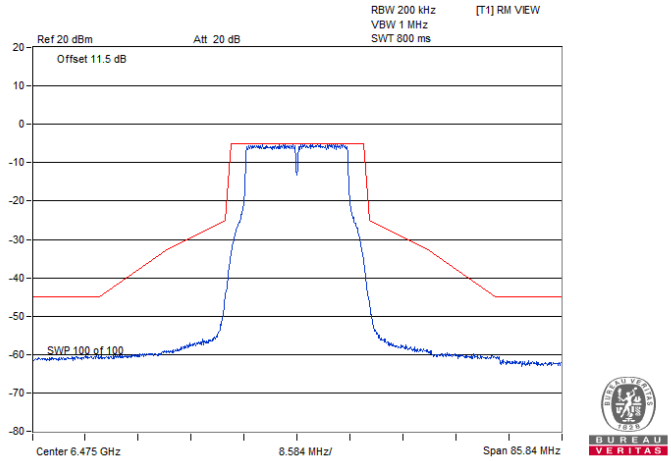
802.11a / Chain 1 : CH 61



802.11a / Chain 1 : CH 93

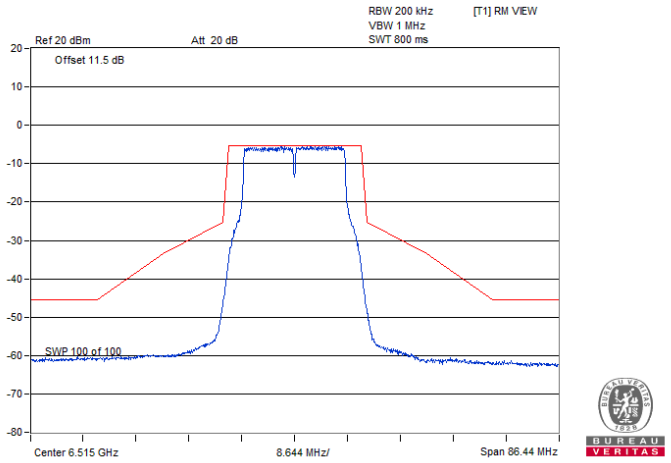


802.11a / Chain 1 : CH 97

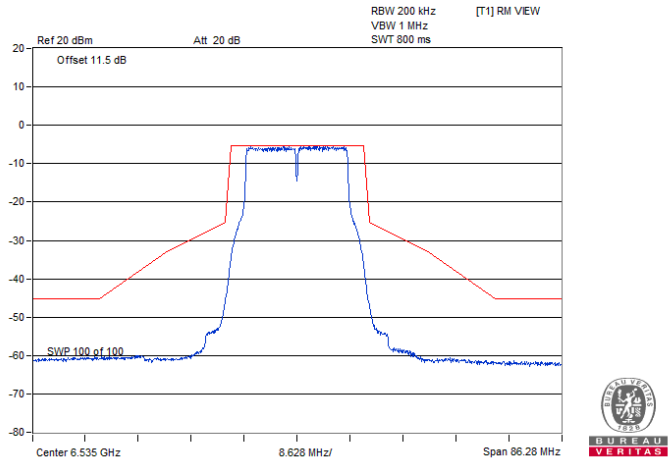


802.11a / Chain 1 : CH 105

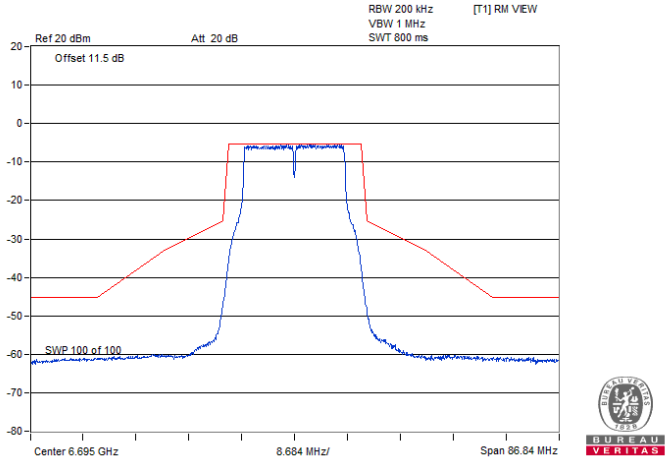
Spectrum Plot



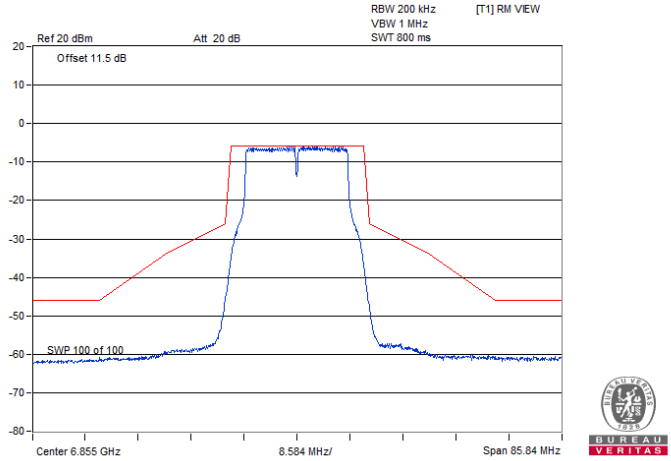
802.11a / Chain 1 : CH 113



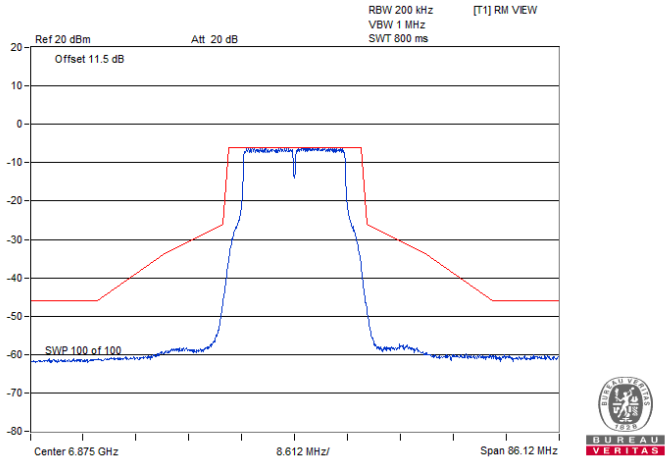
802.11a / Chain 1 : CH 117



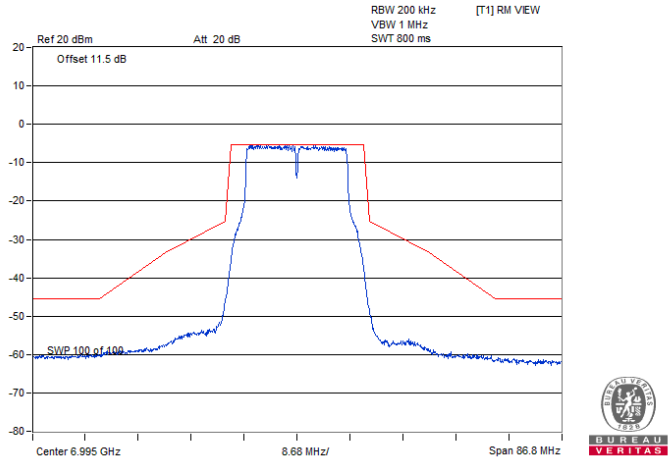
802.11a / Chain 1 : CH 149



802.11a / Chain 1 : CH 181

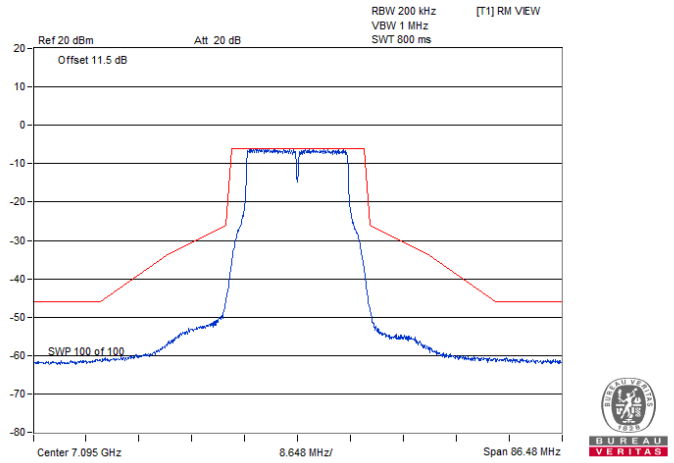


802.11a / Chain 1 : CH 185

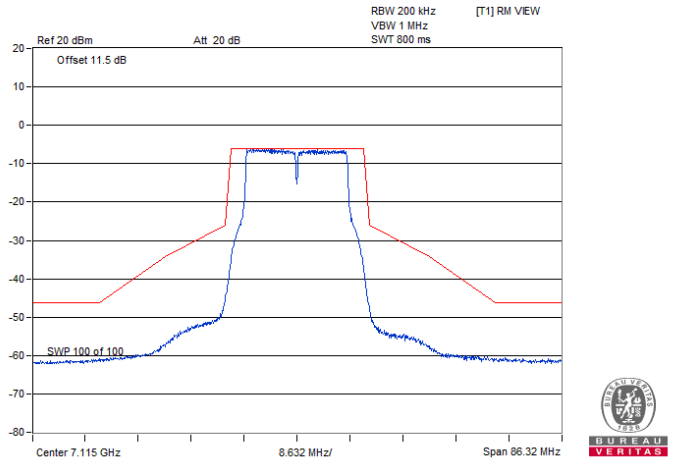


802.11a / Chain 1 : CH 209

Spectrum Plot



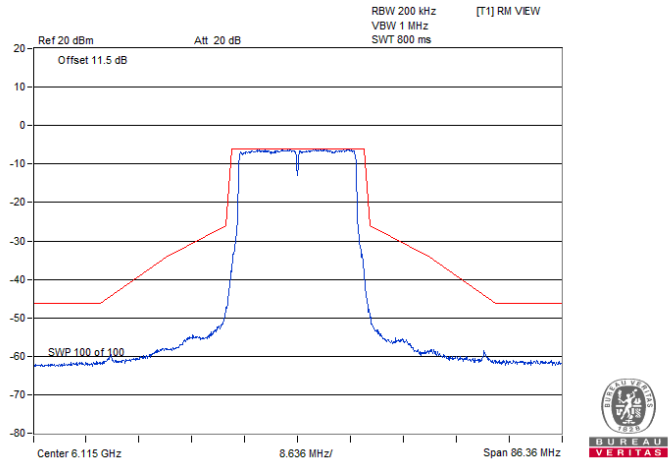
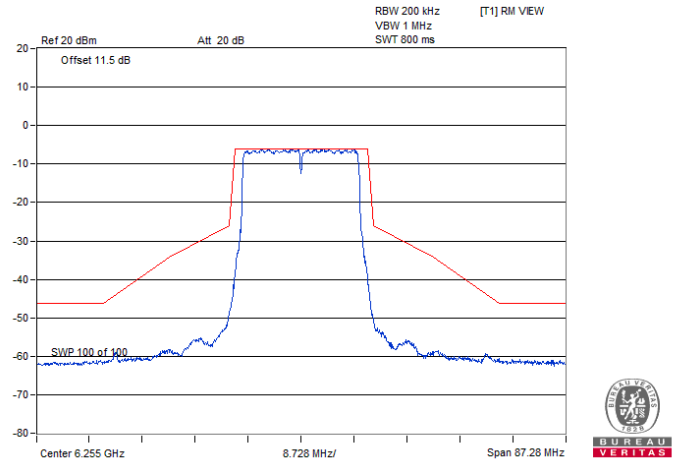
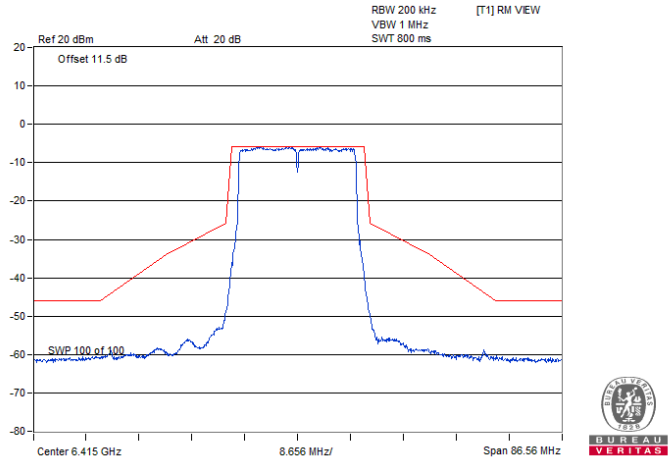
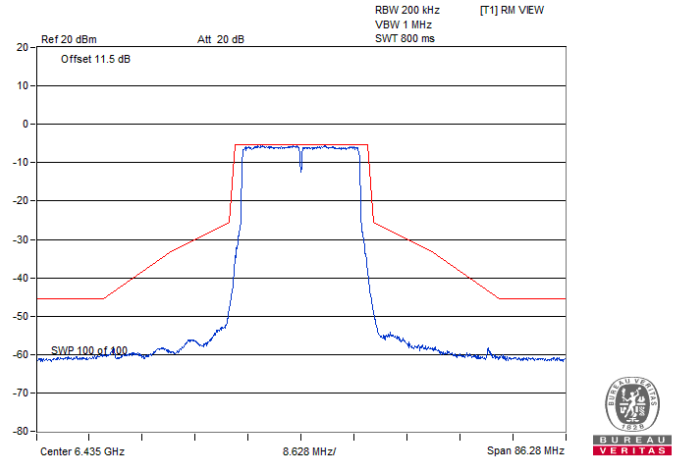
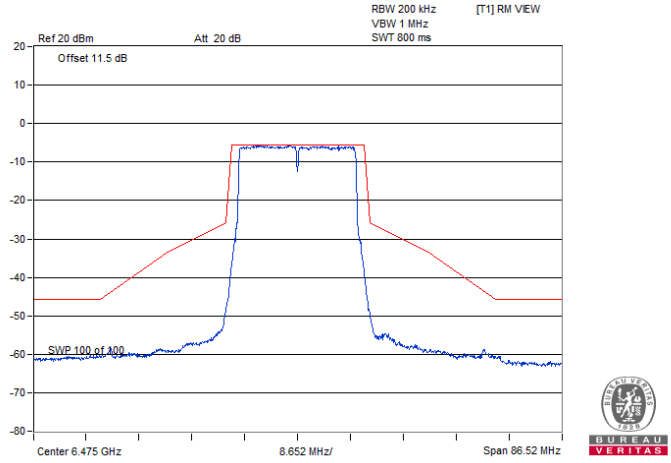
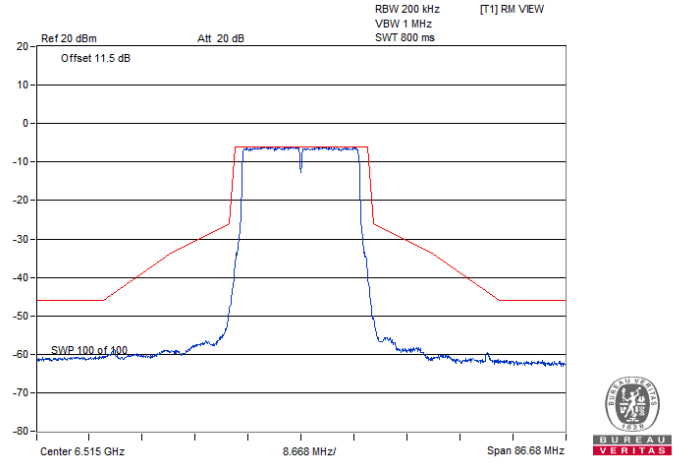
802.11a / Chain 1 : CH 229



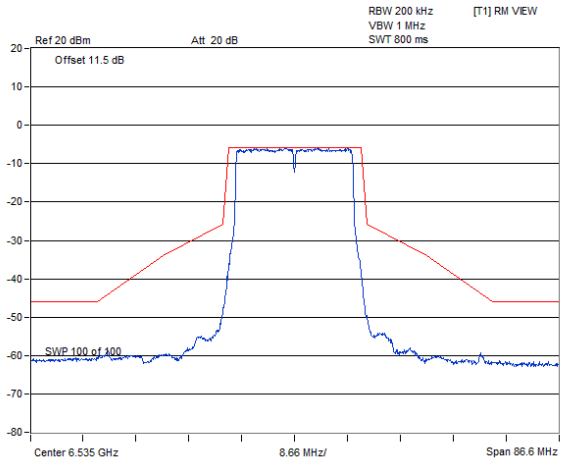
802.11a / Chain 1 : CH 233

Beamforming (2T1S)

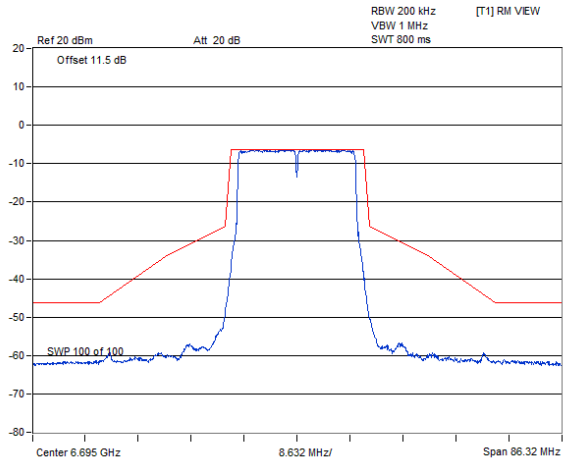
802.11be (EHT20) Beamforming

Spectrum Plot	
	
802.11be (EHT20) / Chain 0 : CH 33	802.11be (EHT20) / Chain 0 : CH 61
	
802.11be (EHT20) / Chain 0 : CH 93	802.11be (EHT20) / Chain 0 : CH 97
	
802.11be (EHT20) / Chain 0 : CH 105	802.11be (EHT20) / Chain 0 : CH 113

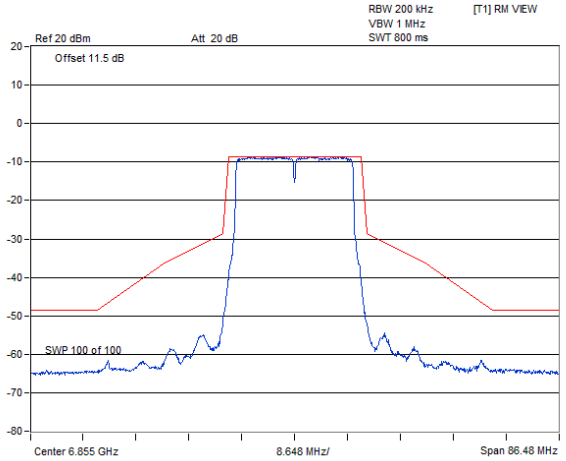
Spectrum Plot



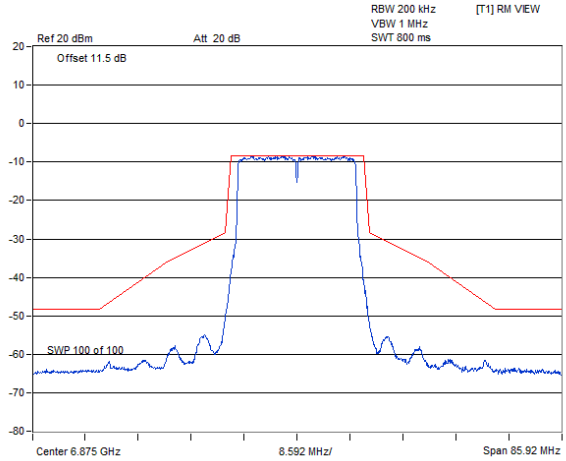
802.11be (EHT20) / Chain 0 : CH 117



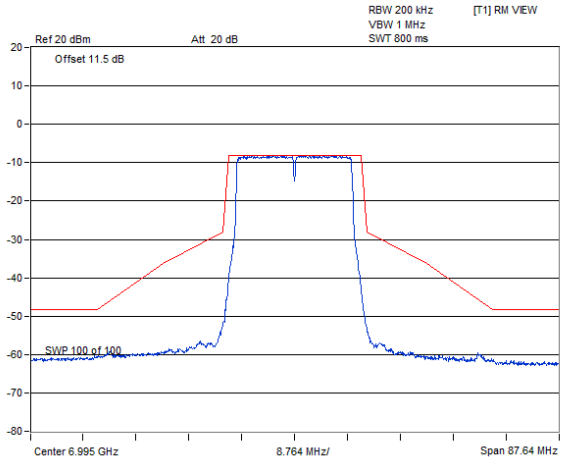
802.11be (EHT20) / Chain 0 : CH 149



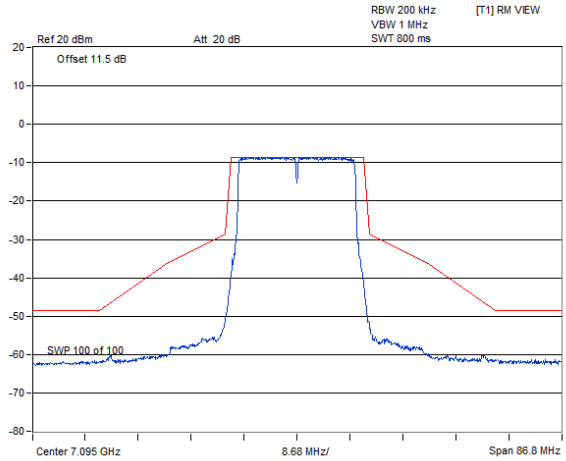
802.11be (EHT20) / Chain 0 : CH 181



802.11be (EHT20) / Chain 0 : CH 185

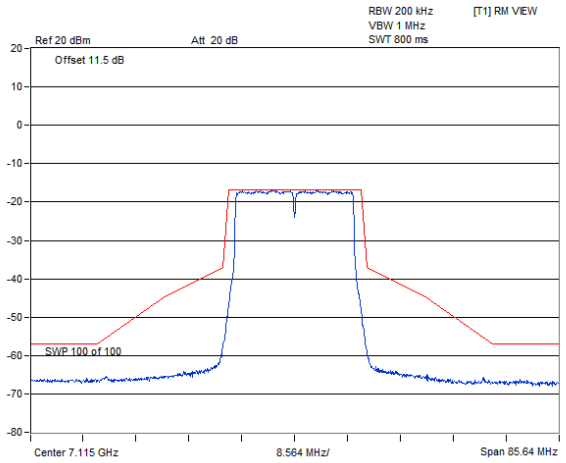


802.11be (EHT20) / Chain 0 : CH 209

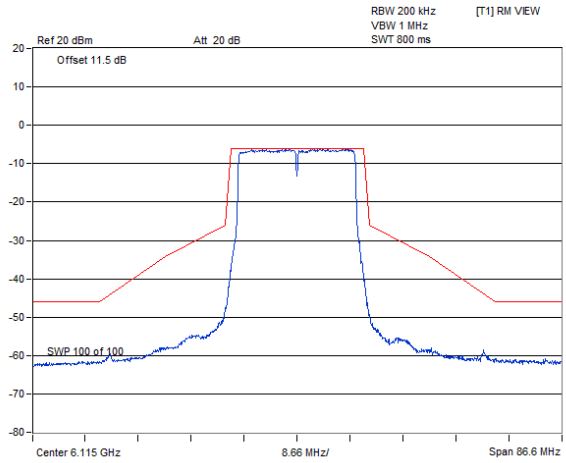


802.11be (EHT20) / Chain 0 : CH 229

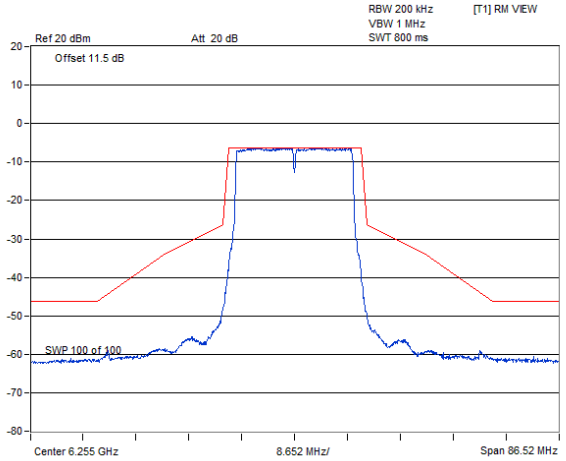
Spectrum Plot



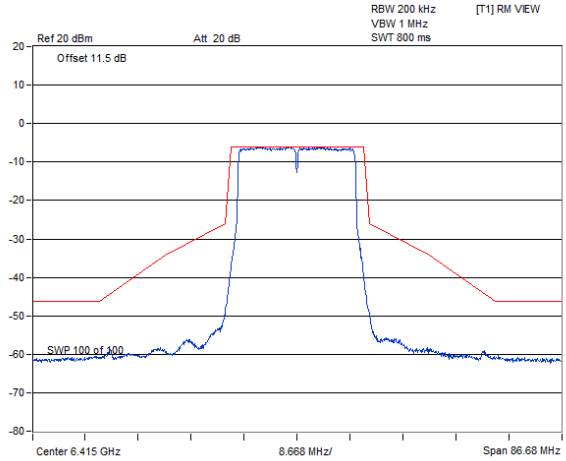
802.11be (EHT20) / Chain 0 : CH 233



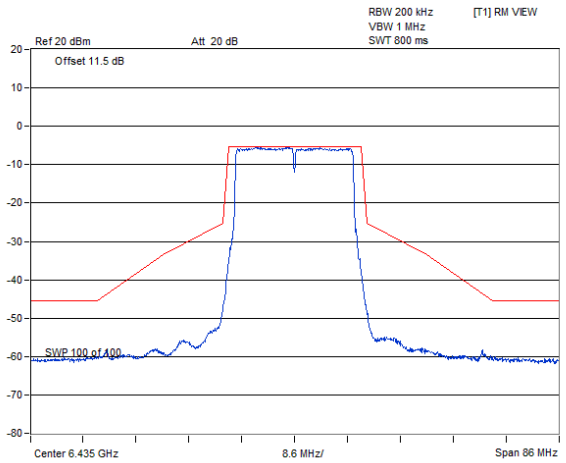
802.11be (EHT20) / Chain 1 : CH 33



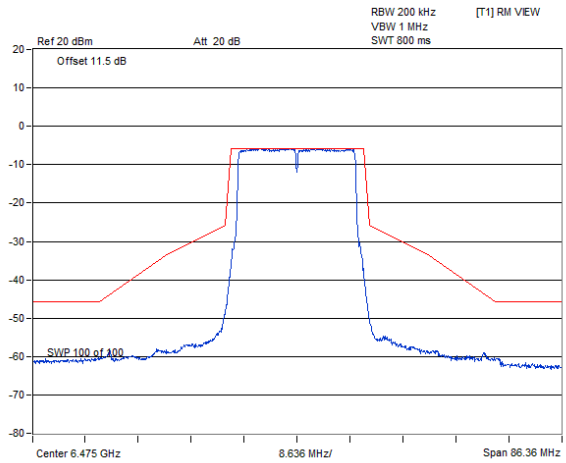
802.11be (EHT20) / Chain 1 : CH 61



802.11be (EHT20) / Chain 1 : CH 93

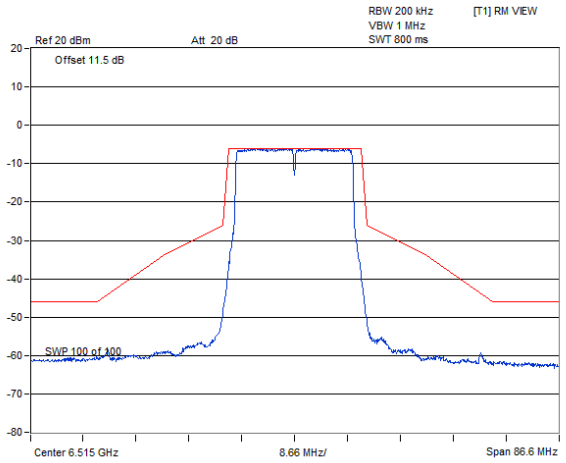


802.11be (EHT20) / Chain 1 : CH 97

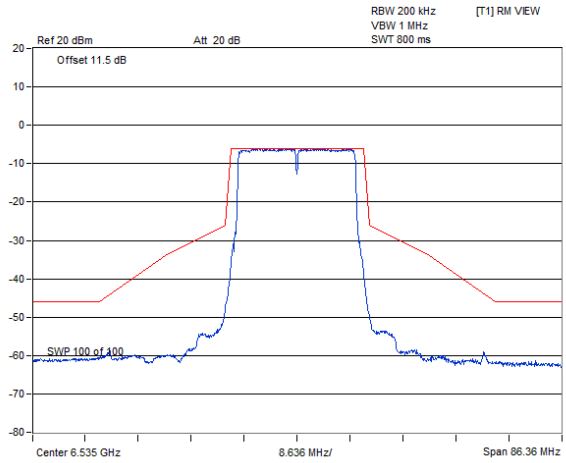


802.11be (EHT20) / Chain 1 : CH 105

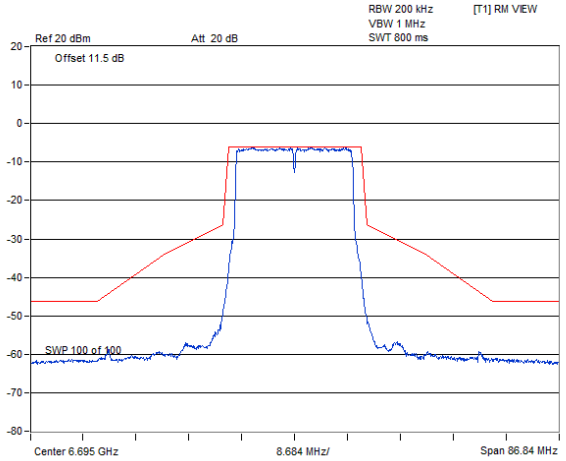
Spectrum Plot



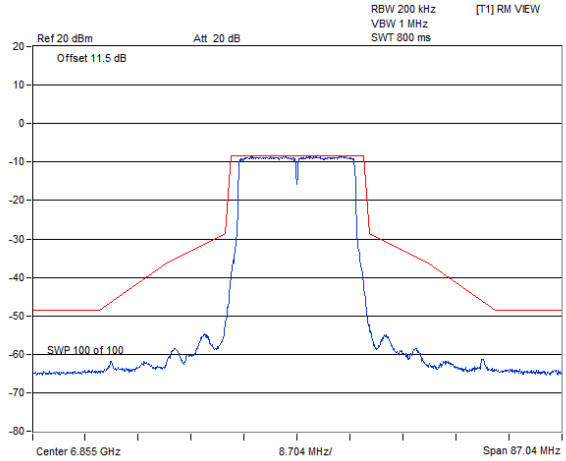
802.11be (EHT20) / Chain 1 : CH 113



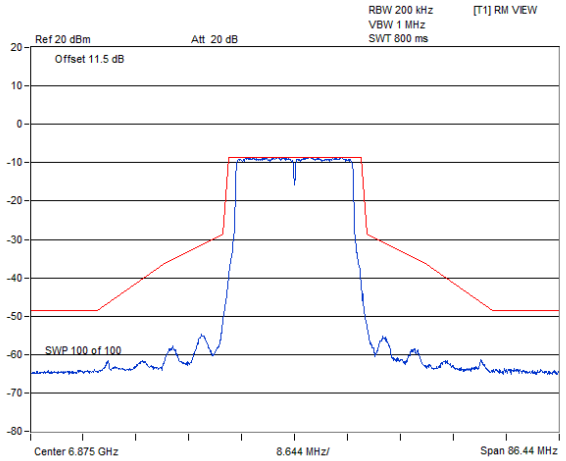
802.11be (EHT20) / Chain 1 : CH 117



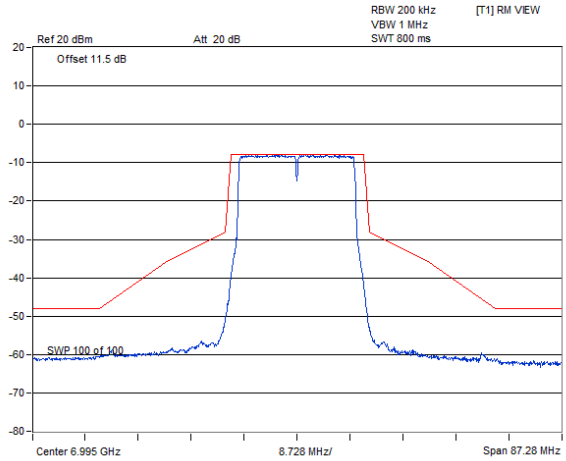
802.11be (EHT20) / Chain 1 : CH 149



802.11be (EHT20) / Chain 1 : CH 181

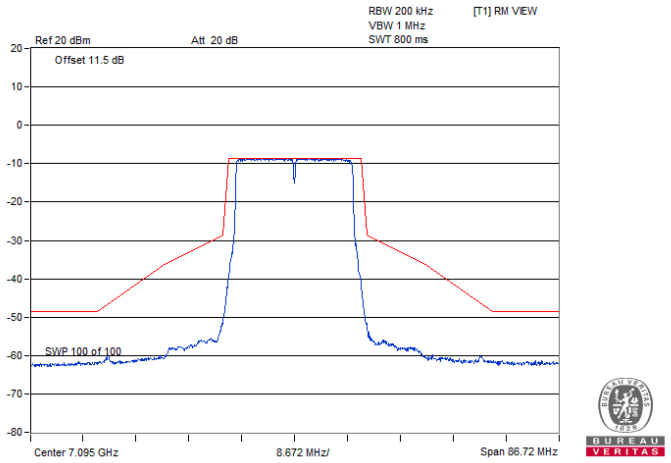


802.11be (EHT20) / Chain 1 : CH 185

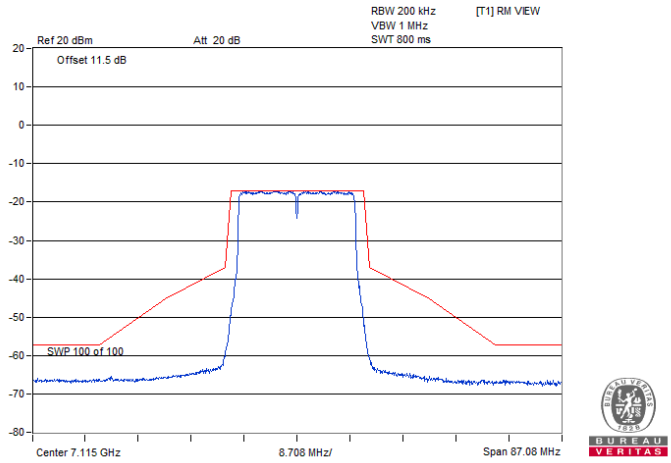


802.11be (EHT20) / Chain 1 : CH 209

Spectrum Plot

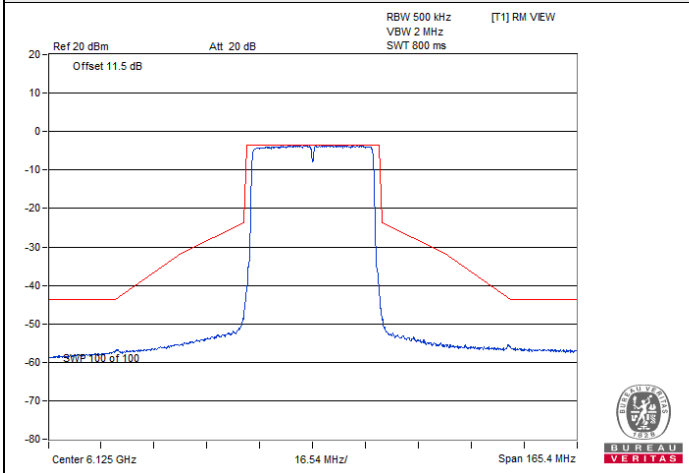
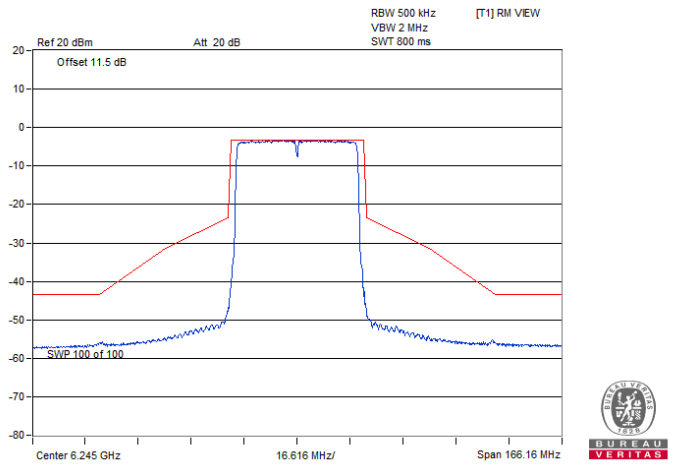
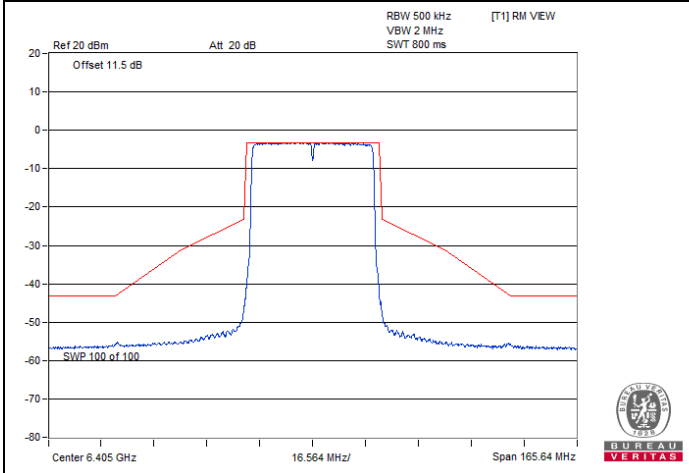
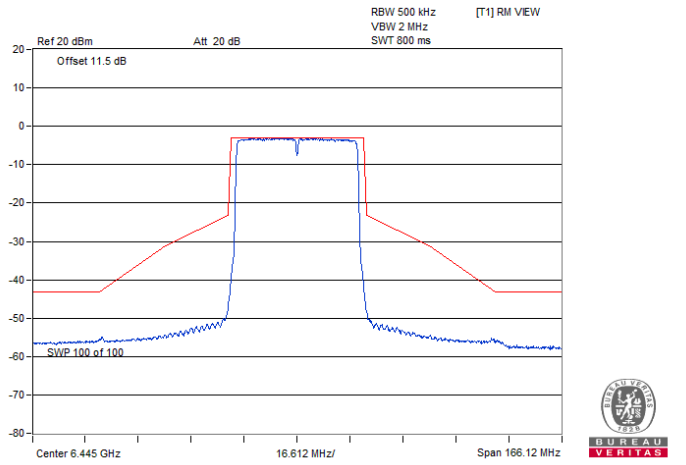
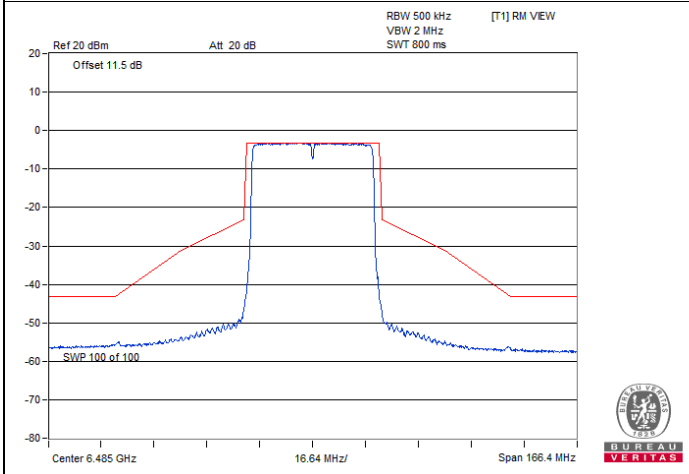
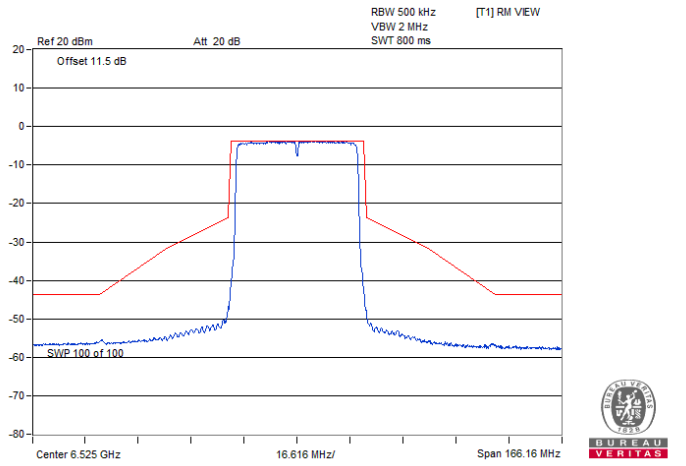


802.11be (EHT20) / Chain 1 : CH 229

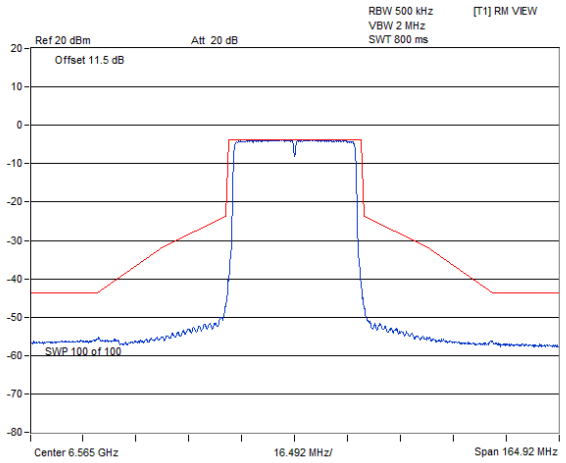


802.11be (EHT20) / Chain 1 : CH 233

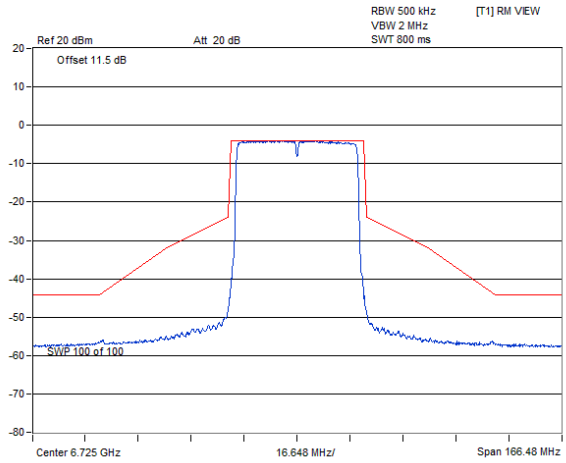
802.11be (EHT40) Beamforming

Spectrum Plot	
	
802.11be (EHT40) / Chain 0 : CH 35	802.11be (EHT40) / Chain 0 : CH 59
	
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

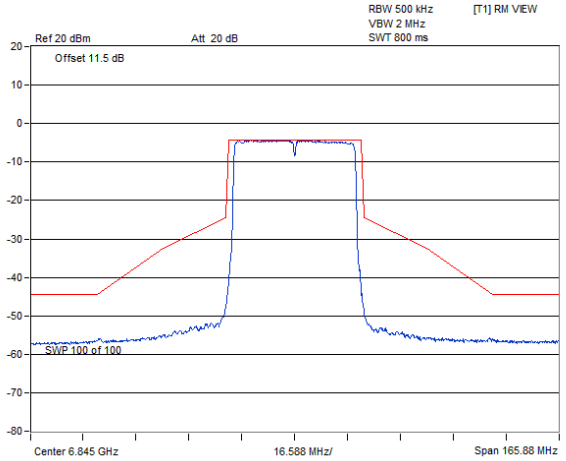
Spectrum Plot



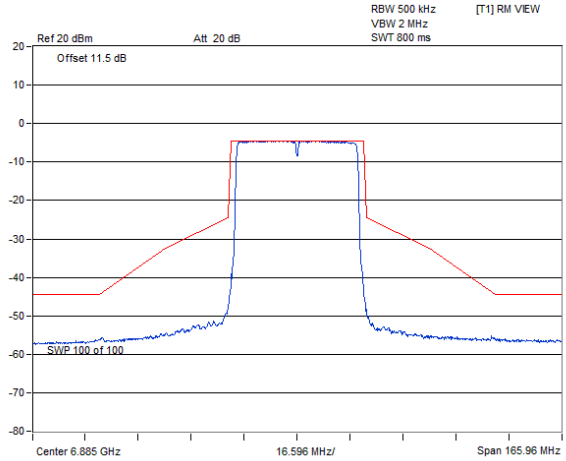
802.11be (EHT40) / Chain 0 : CH 123



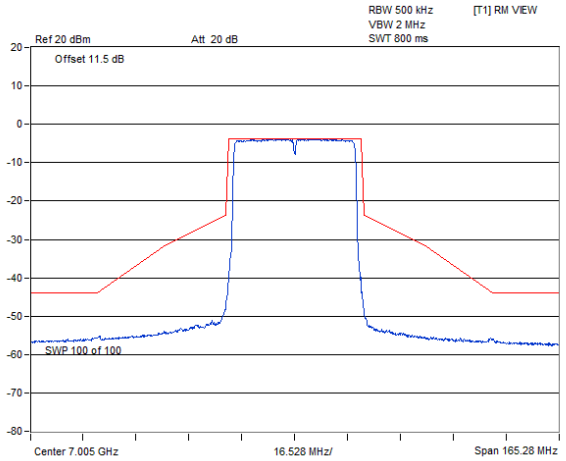
802.11be (EHT40) / Chain 0 : CH 155



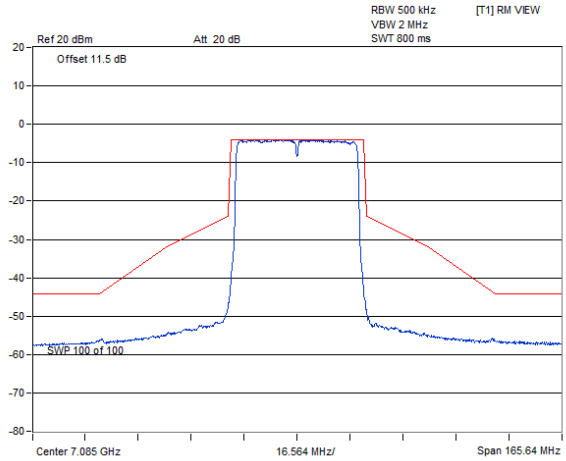
802.11be (EHT40) / Chain 0 : CH 179



802.11be (EHT40) / Chain 0 : CH 187

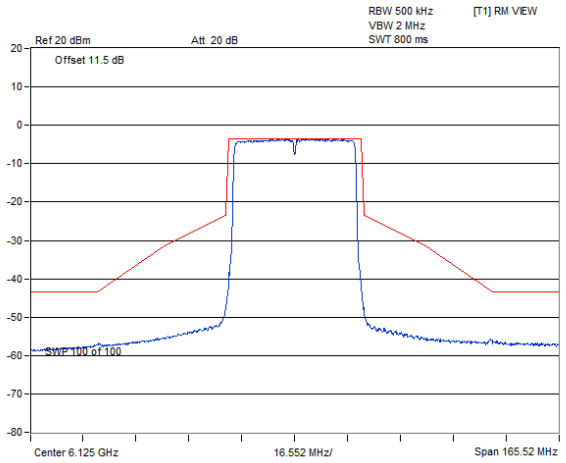


802.11be (EHT40) / Chain 0 : CH 211

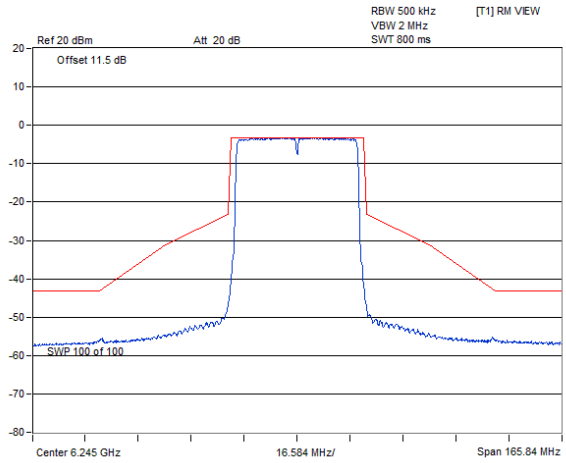


802.11be (EHT40) / Chain 0 : CH 227

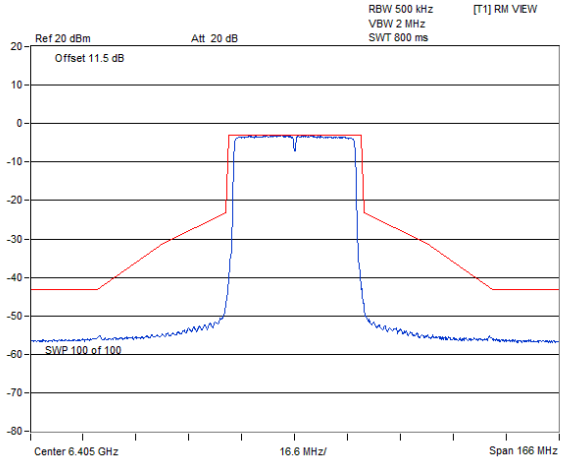
Spectrum Plot



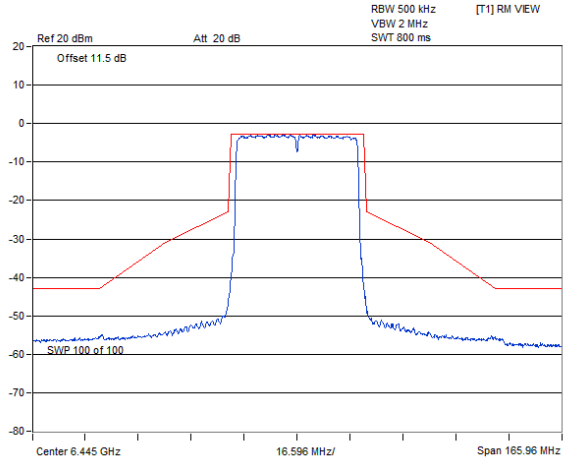
802.11be (EHT40) / Chain 1 : CH 35



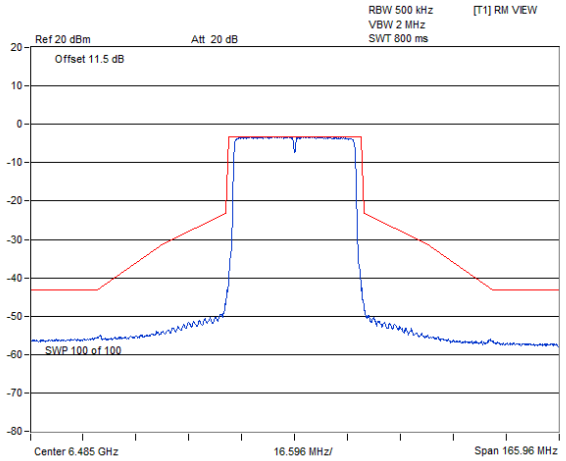
802.11be (EHT40) / Chain 1 : CH 59



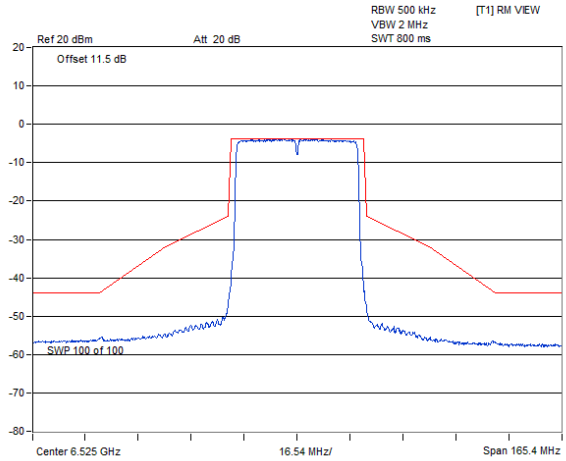
802.11be (EHT40) / Chain 1 : CH 91



802.11be (EHT40) / Chain 1 : CH 99

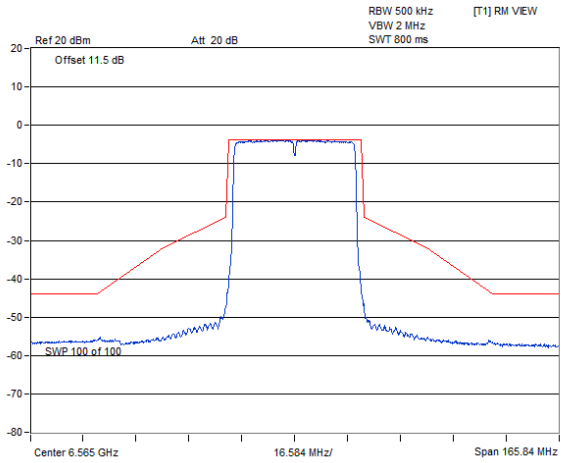


802.11be (EHT40) / Chain 1 : CH 107

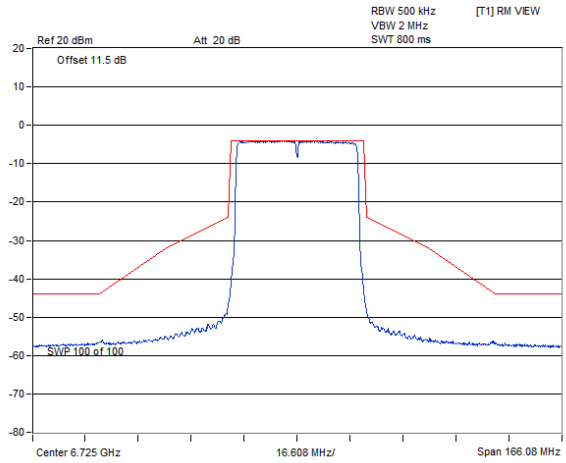


802.11be (EHT40) / Chain 1 : CH 115

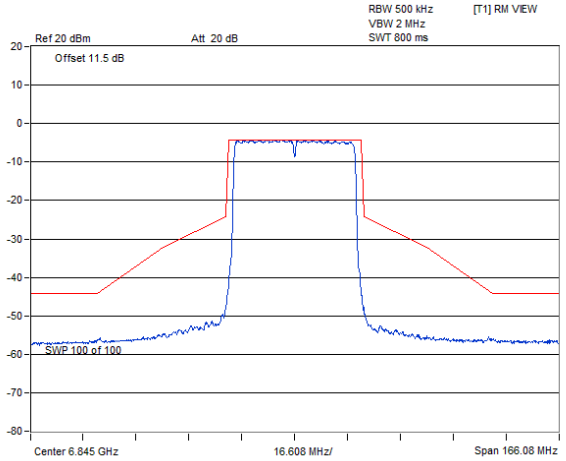
Spectrum Plot



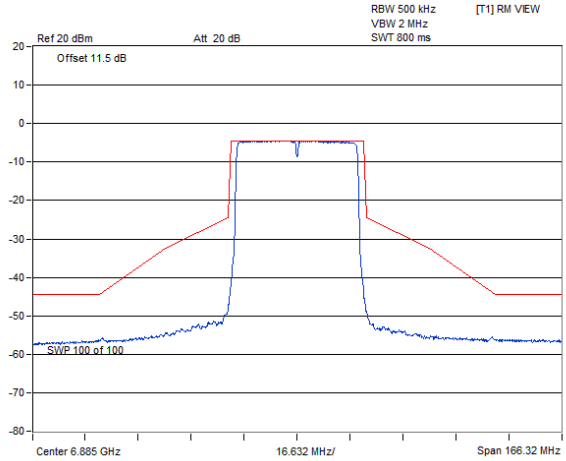
802.11be (EHT40) / Chain 1 : CH 123



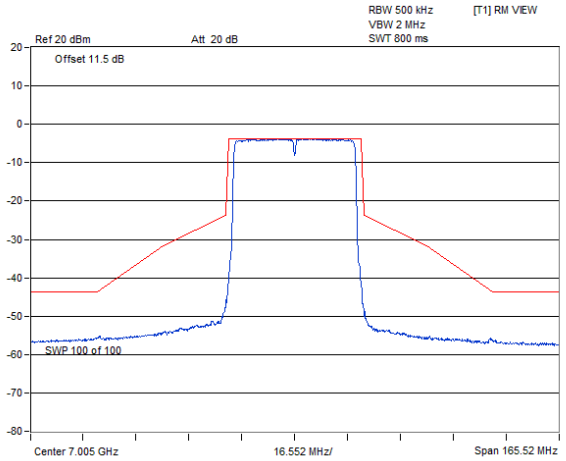
802.11be (EHT40) / Chain 1 : CH 155



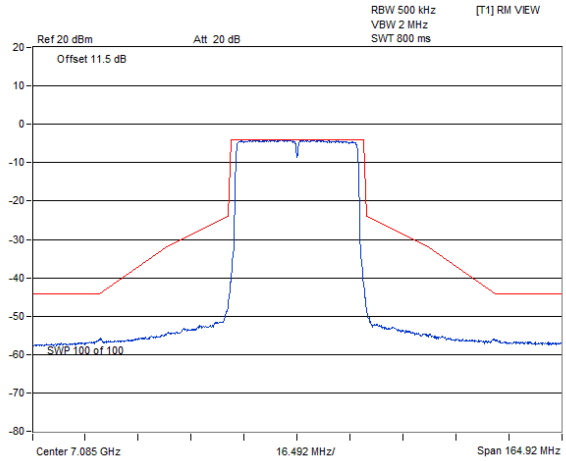
802.11be (EHT40) / Chain 1 : CH 179



802.11be (EHT40) / Chain 1 : CH 187

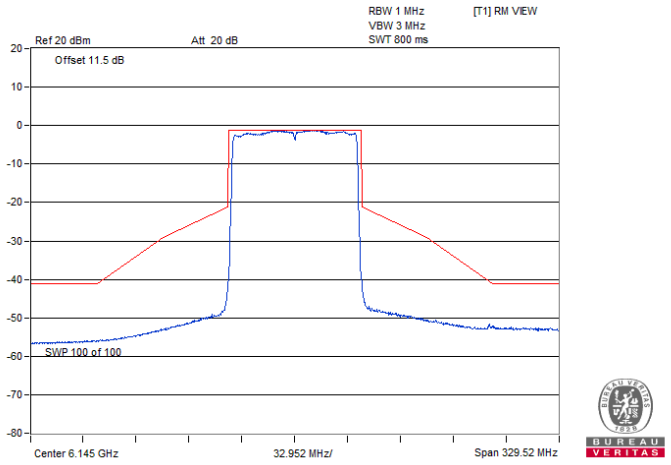
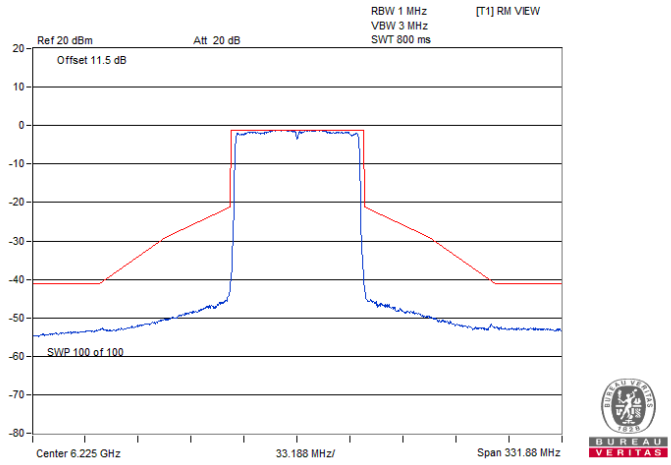
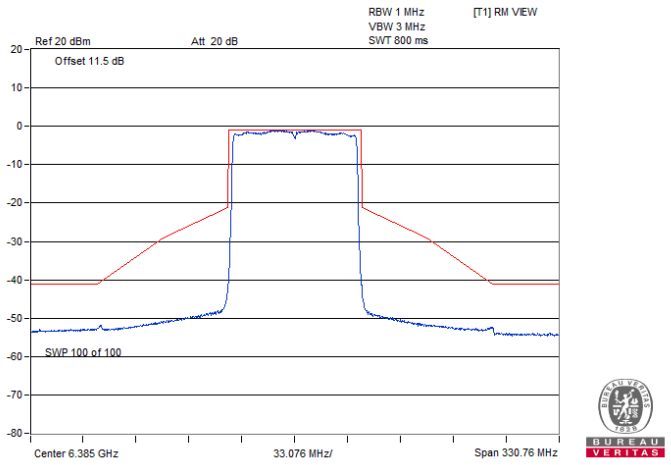
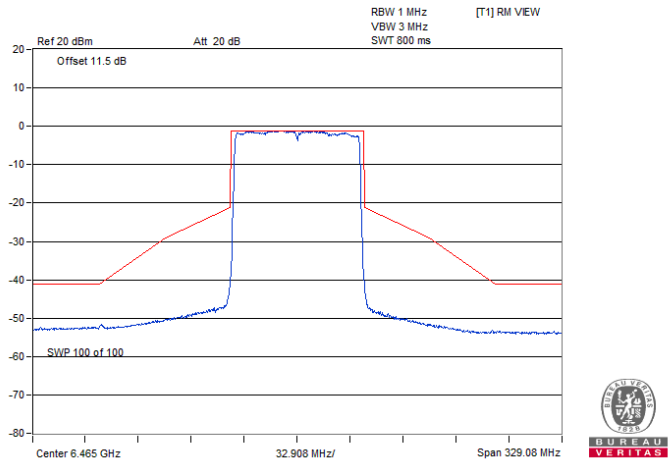
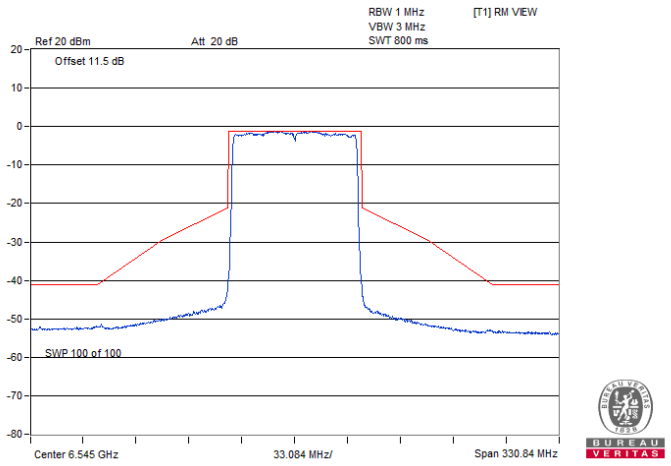
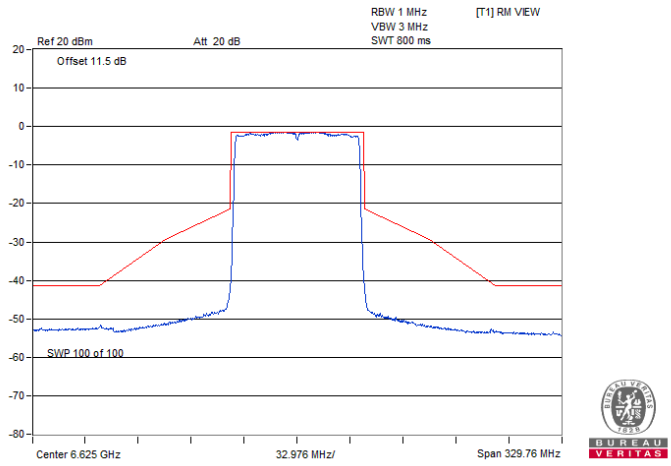


802.11be (EHT40) / Chain 1 : CH 211

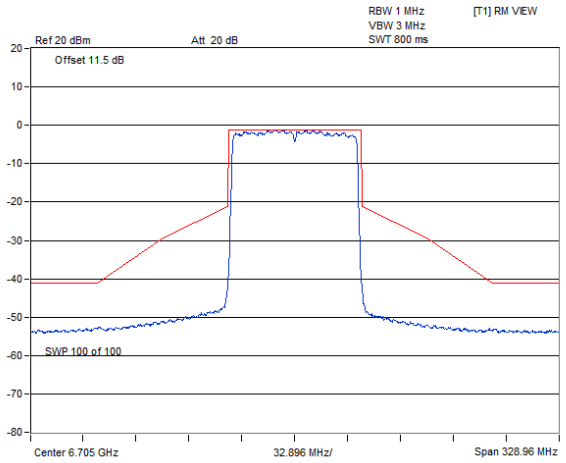


802.11be (EHT40) / Chain 1 : CH 227

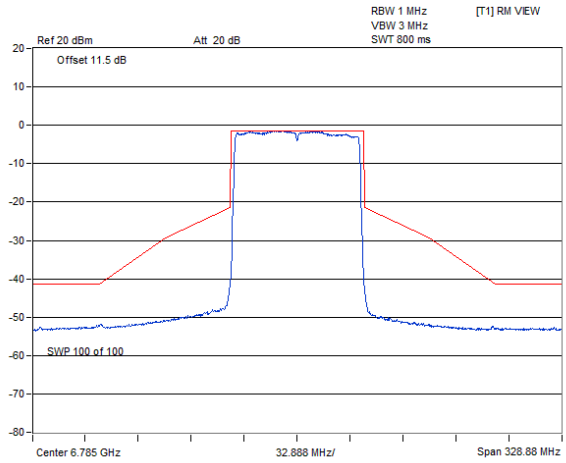
802.11be (EHT80) Beamforming

Spectrum Plot	
	
802.11be (EHT80) / Chain 0 : CH 39	802.11be (EHT80) / Chain 0 : CH 55
	
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 135

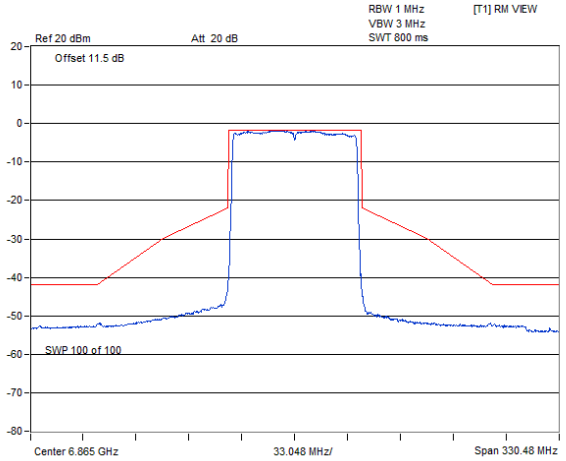
Spectrum Plot



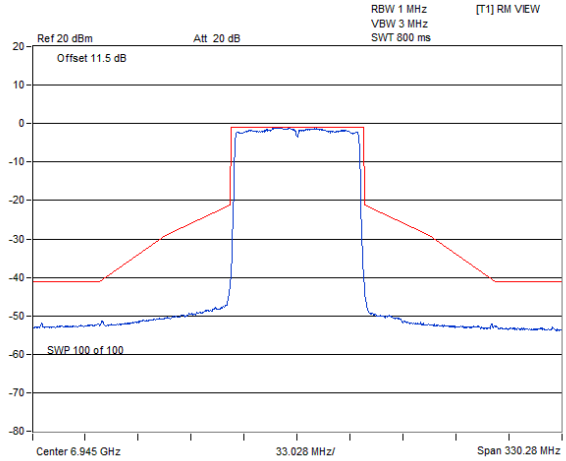
802.11be (EHT80) / Chain 0 : CH 151



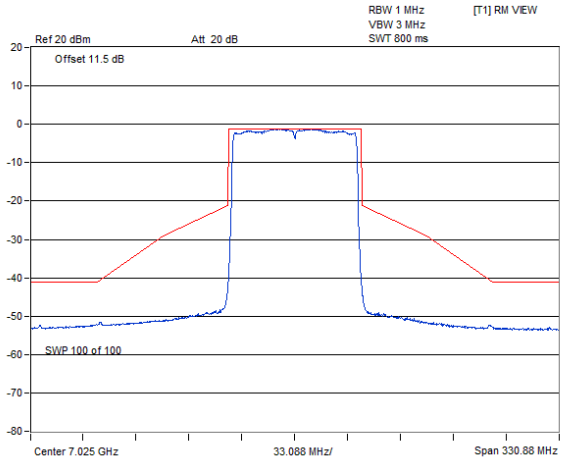
802.11be (EHT80) / Chain 0 : CH 167



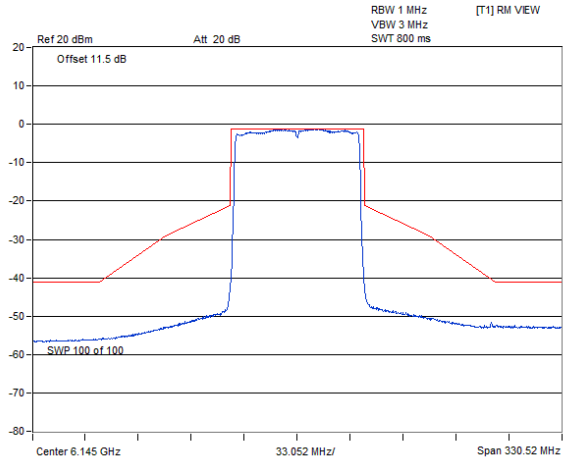
802.11be (EHT80) / Chain 0 : CH 183



802.11be (EHT80) / Chain 0 : CH 199

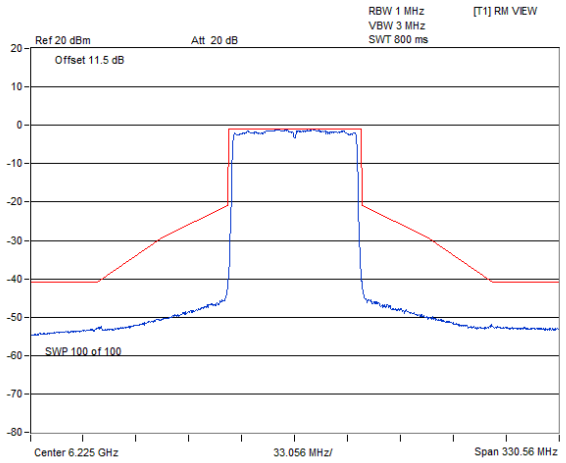


802.11be (EHT80) / Chain 0 : CH 215

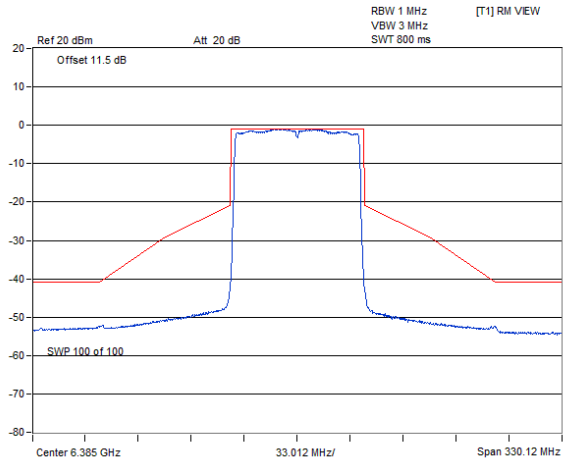


802.11be (EHT80) / Chain 1 : CH 39

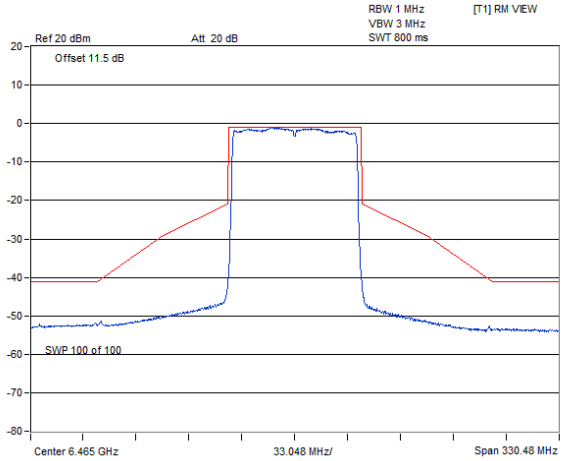
Spectrum Plot



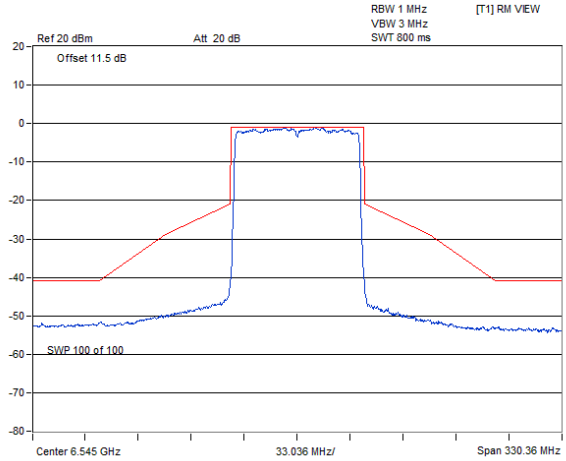
802.11be (EHT80) / Chain 1 : CH 55



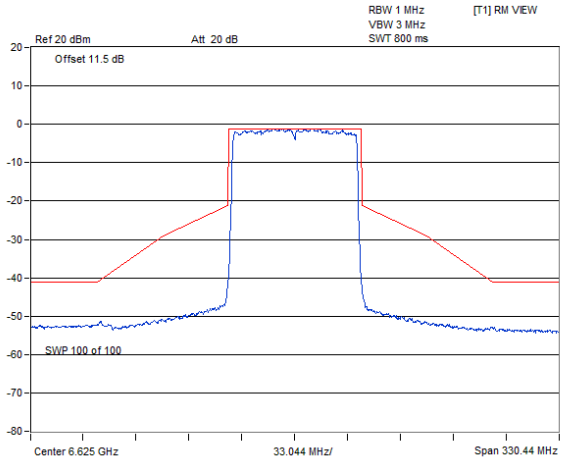
802.11be (EHT80) / Chain 1 : CH 87



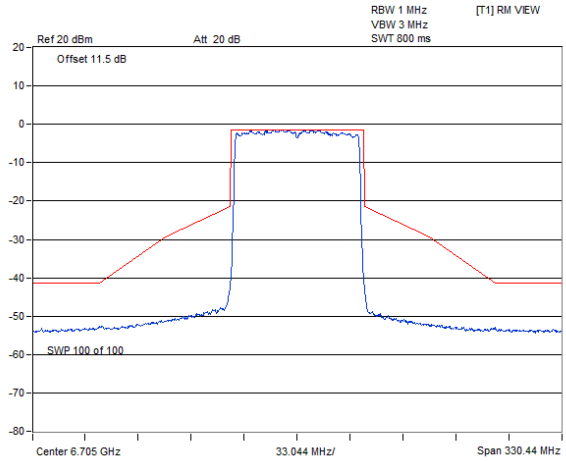
802.11be (EHT80) / Chain 1 : CH 103



802.11be (EHT80) / Chain 1 : CH 119

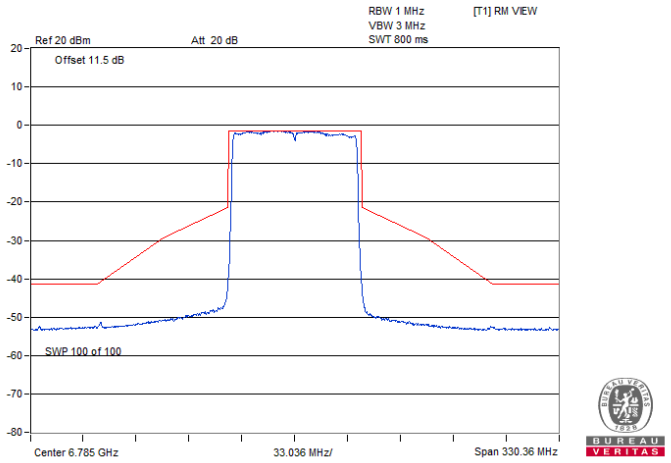


802.11be (EHT80) / Chain 1 : CH 135

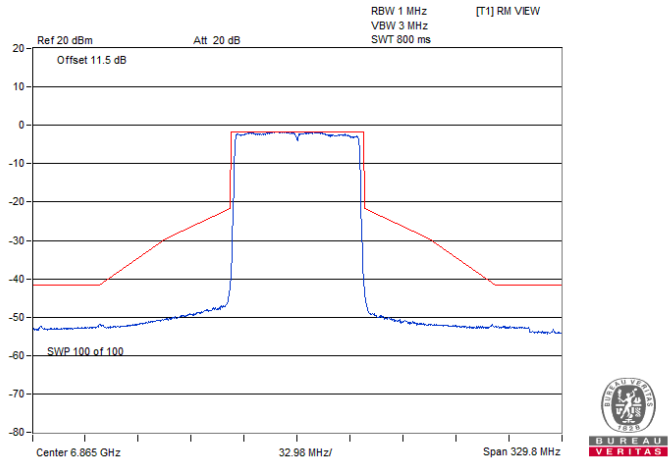


802.11be (EHT80) / Chain 1 : CH 151

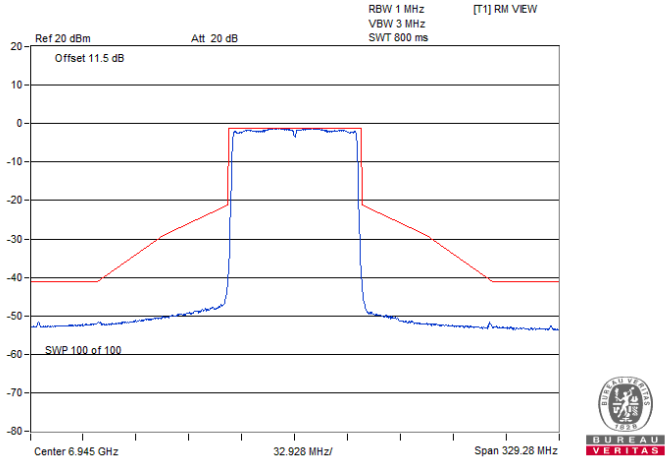
Spectrum Plot



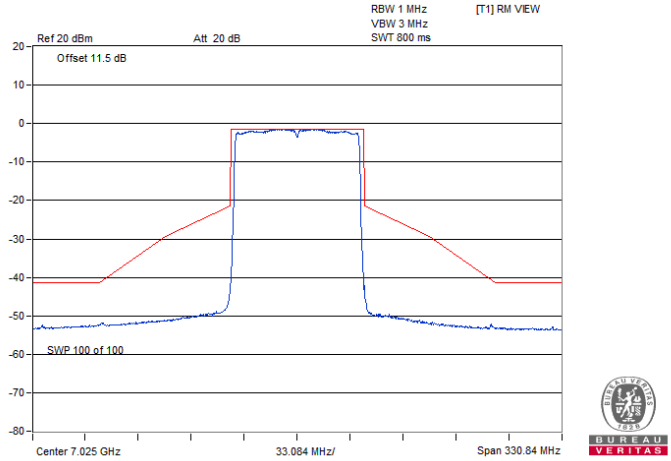
802.11be (EHT80) / Chain 1 : CH 167



802.11be (EHT80) / Chain 1 : CH 183

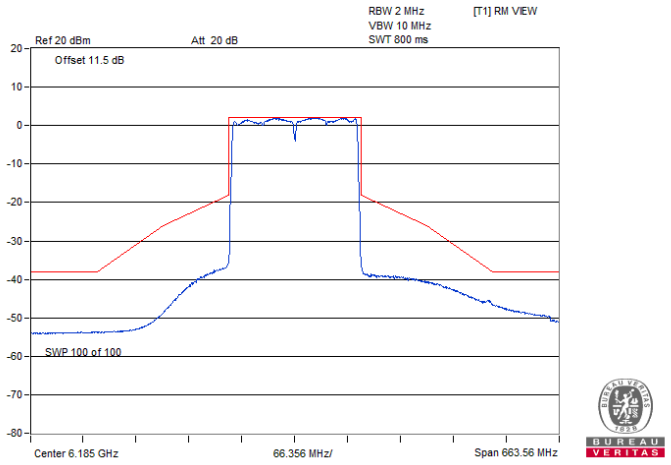
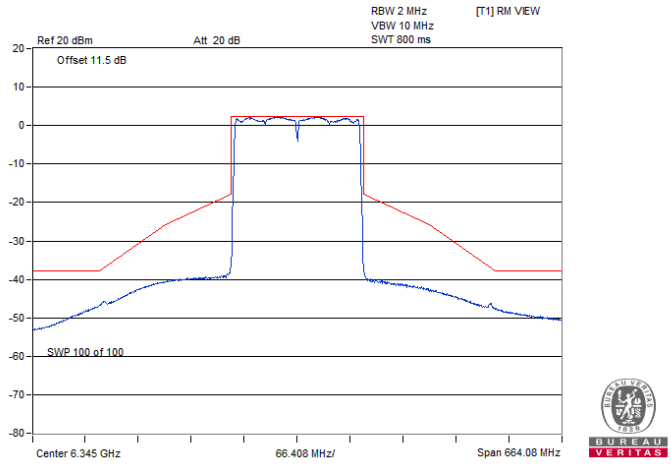
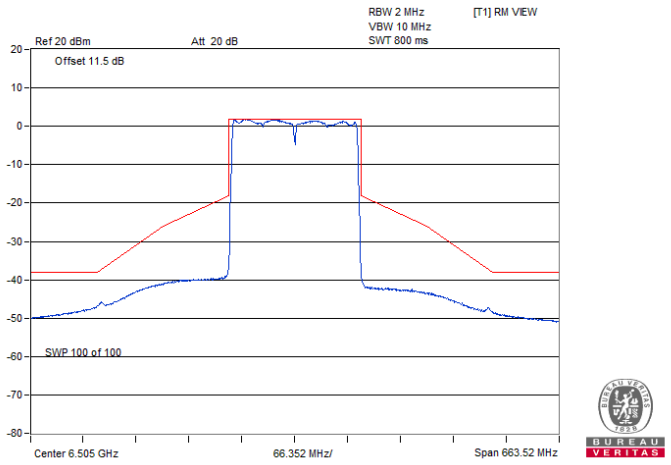
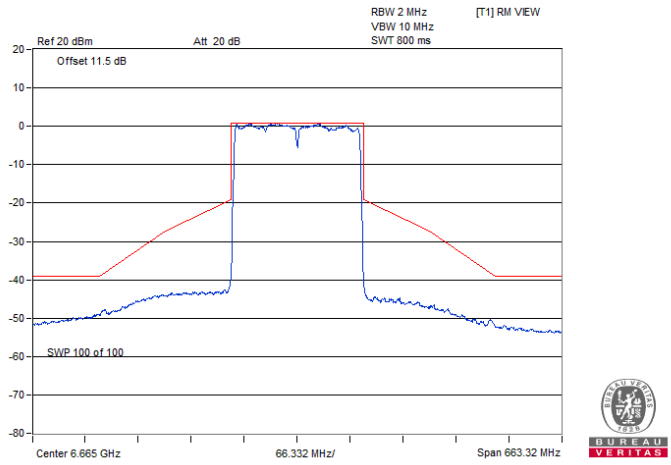
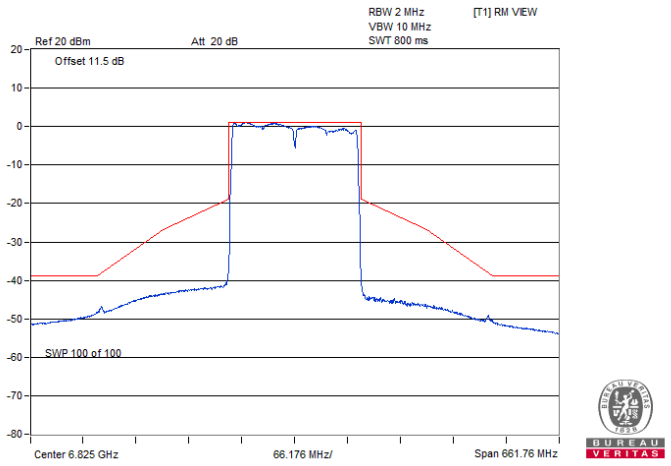
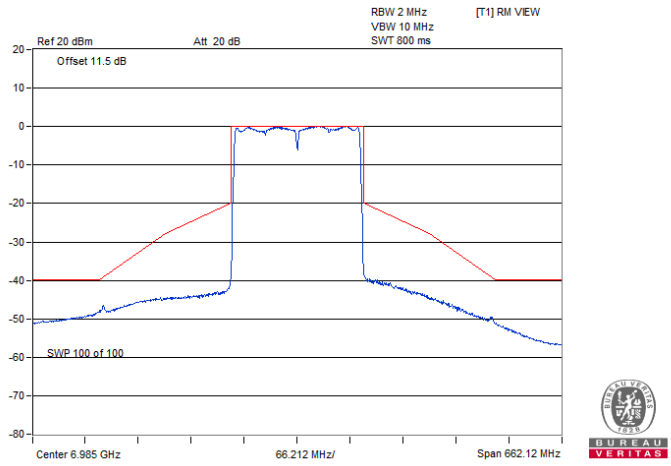


802.11be (EHT80) / Chain 1 : CH 199

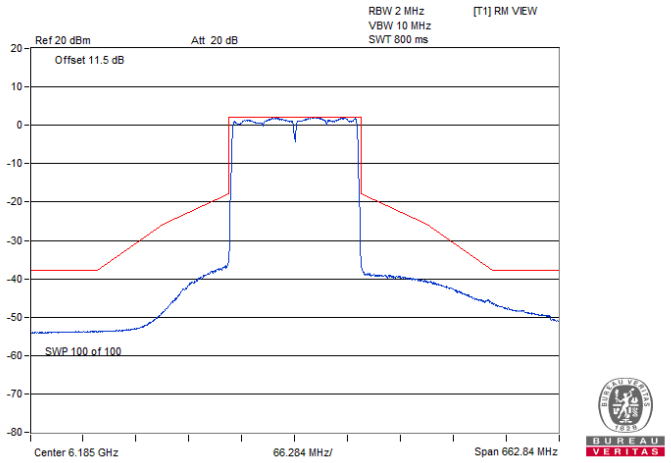


802.11be (EHT80) / Chain 1 : CH 215

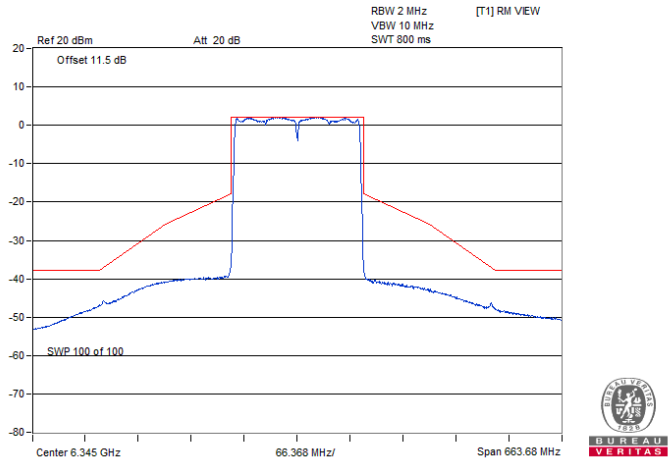
802.11be (EHT160) Beamforming

Spectrum Plot	
	
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	802.11be (EHT160) / Chain 0 : CH 207

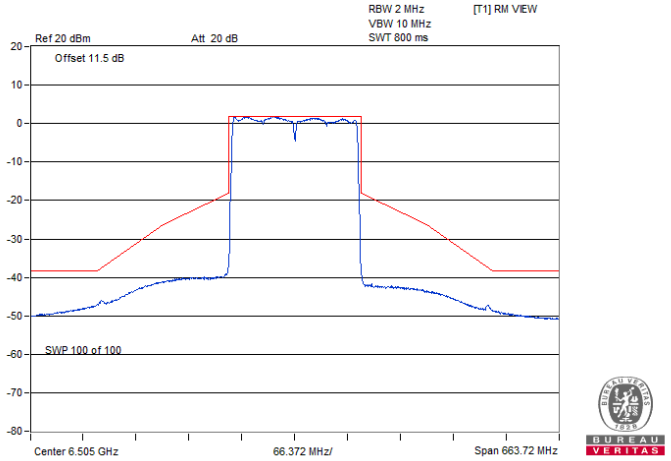
Spectrum Plot



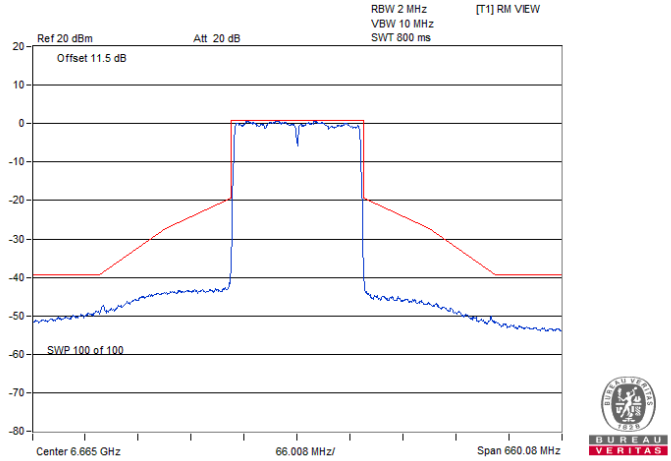
802.11be (EHT160) / Chain 1 : CH 47



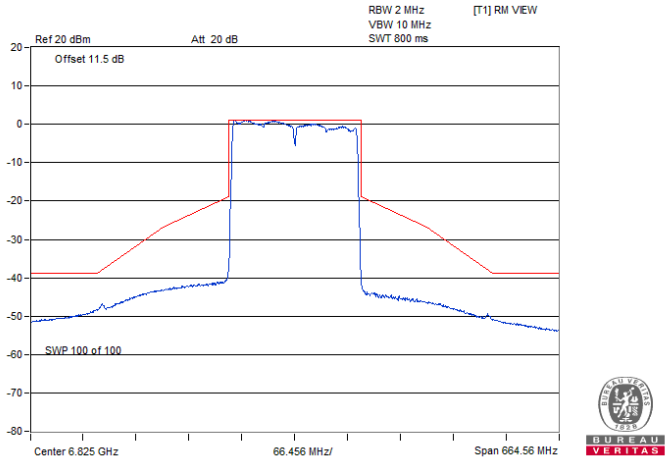
802.11be (EHT160) / Chain 1 : CH 79



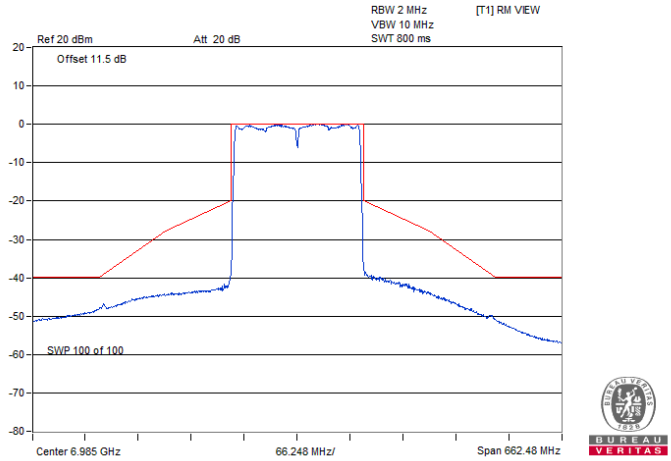
802.11be (EHT160) / Chain 1 : CH 111



802.11be (EHT160) / Chain 1 : CH 143

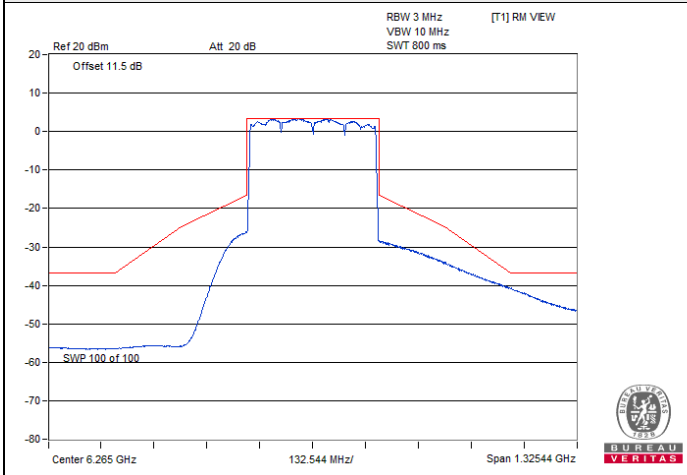
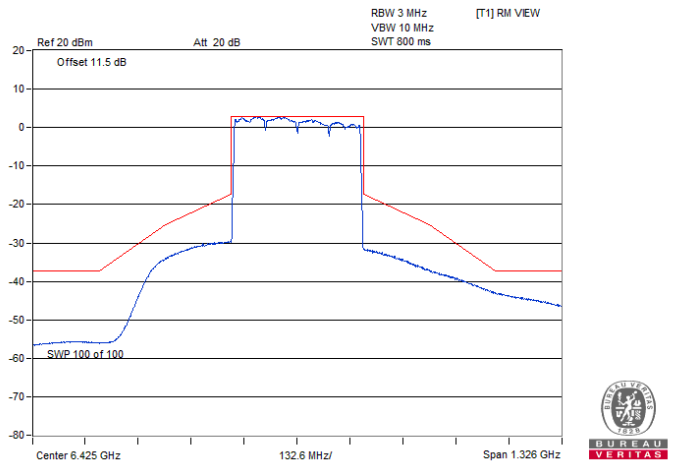
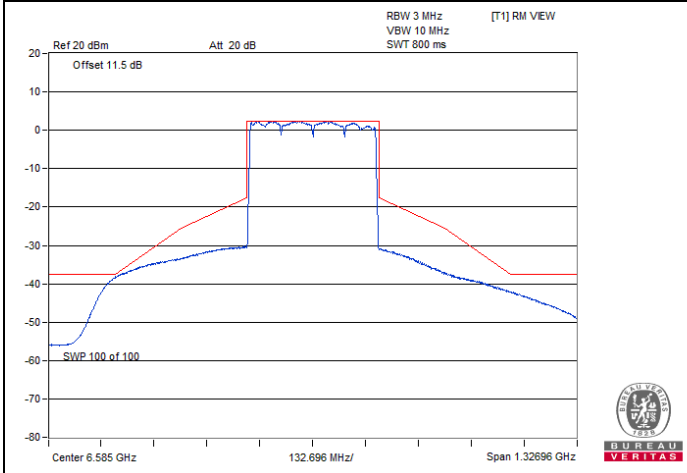
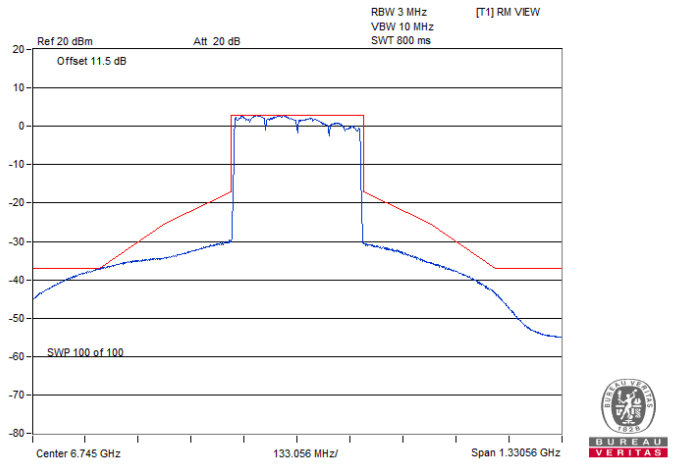
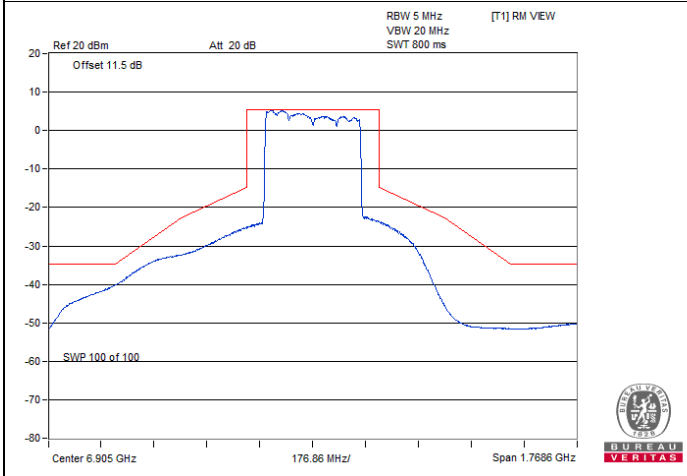
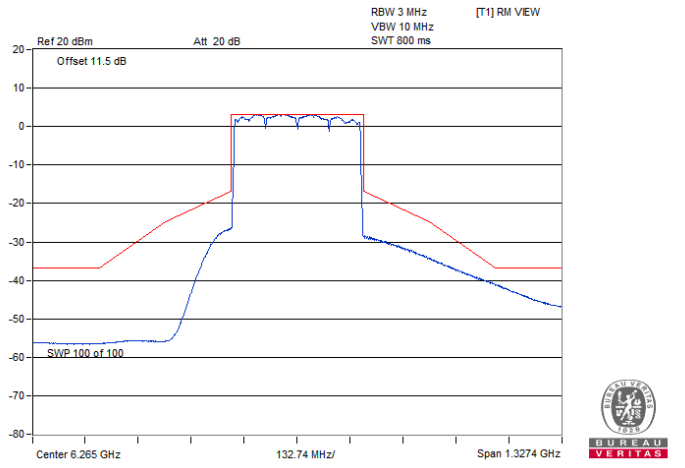


802.11be (EHT160) / Chain 1 : CH 175

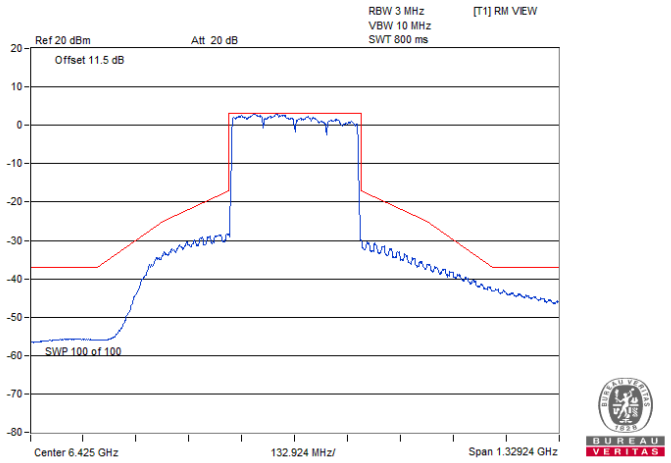


802.11be (EHT160) / Chain 1 : CH 207

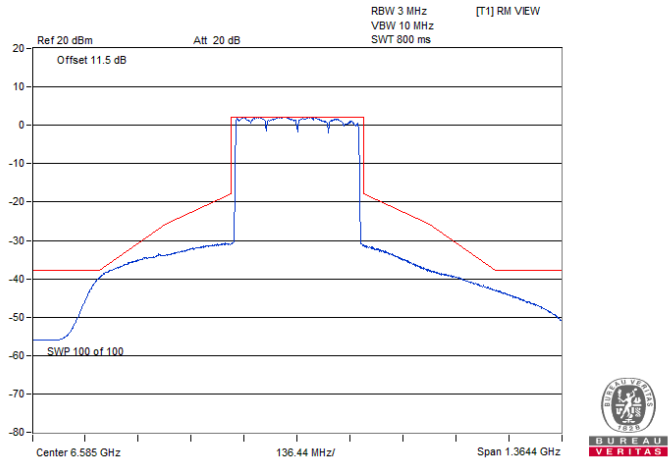
802.11be (EHT320) Beamforming

Spectrum Plot	
	
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	802.11be (EHT320) / Chain 1 : CH 63

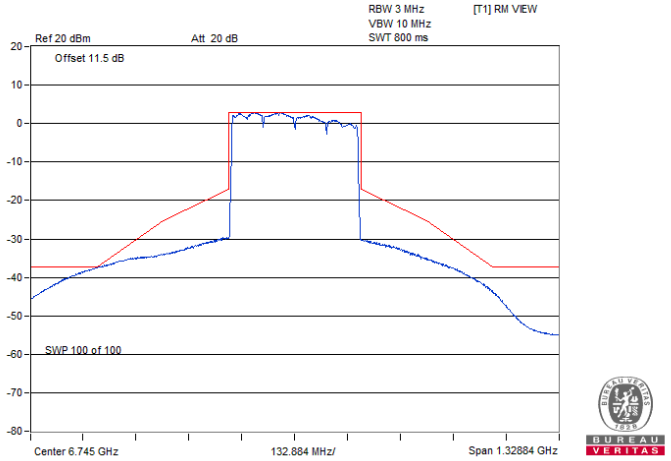
Spectrum Plot



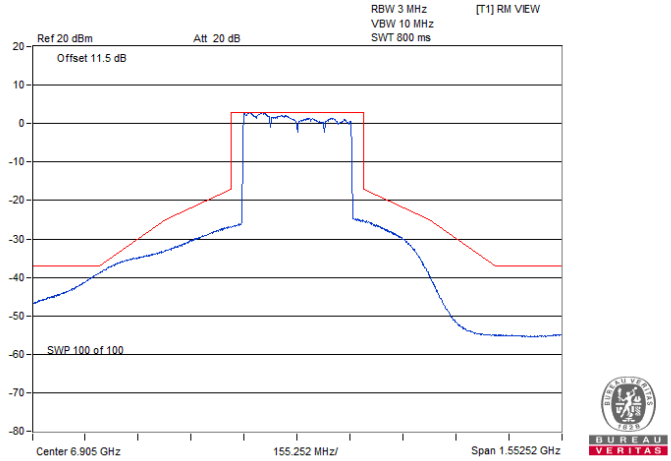
802.11be (EHT320) / Chain 1 : CH 95



802.11be (EHT320) / Chain 1 : CH 127



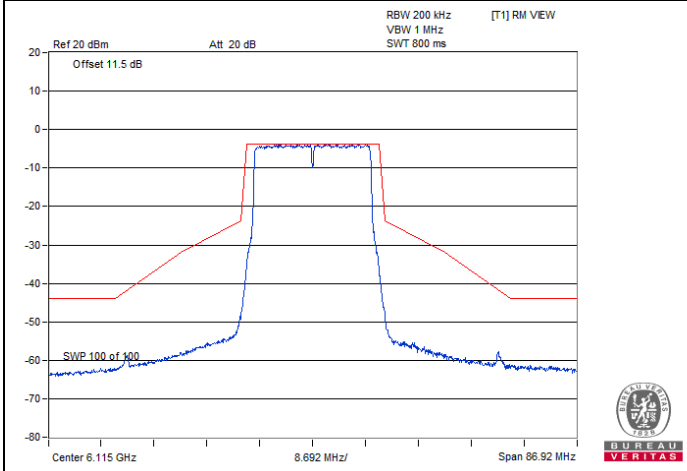
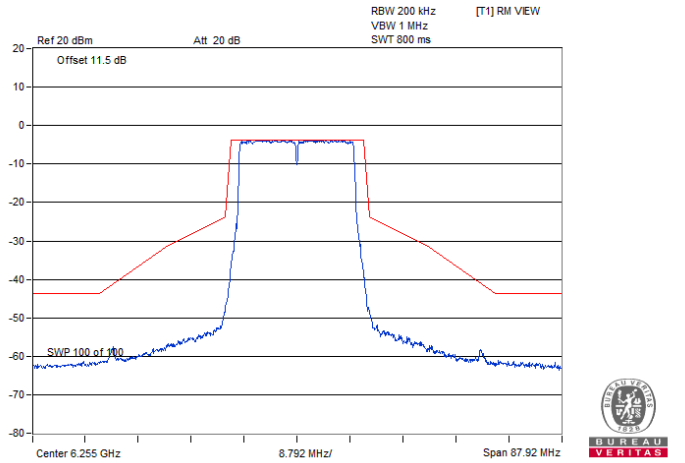
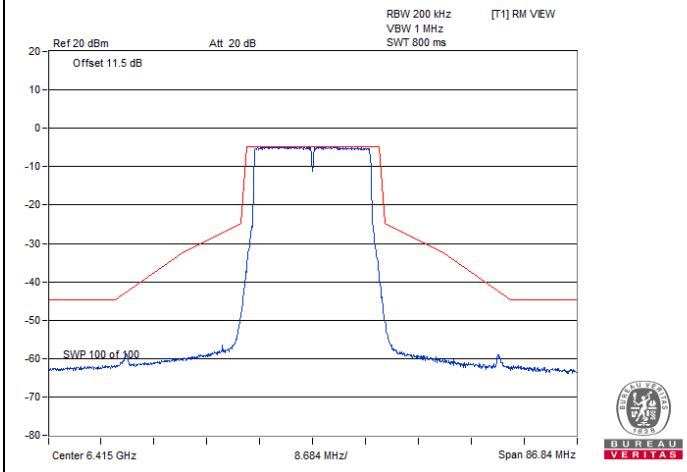
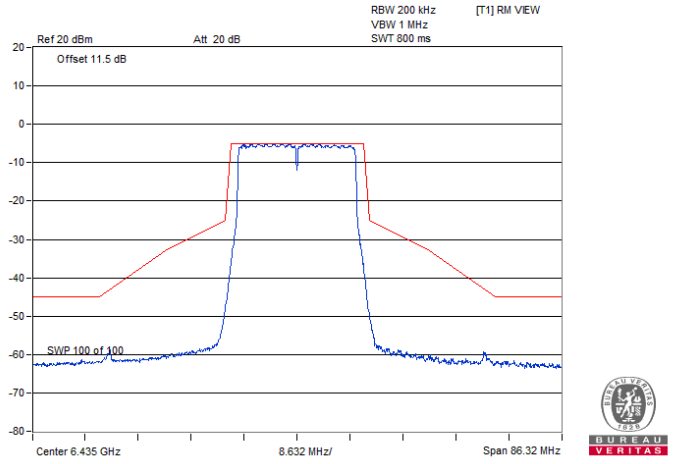
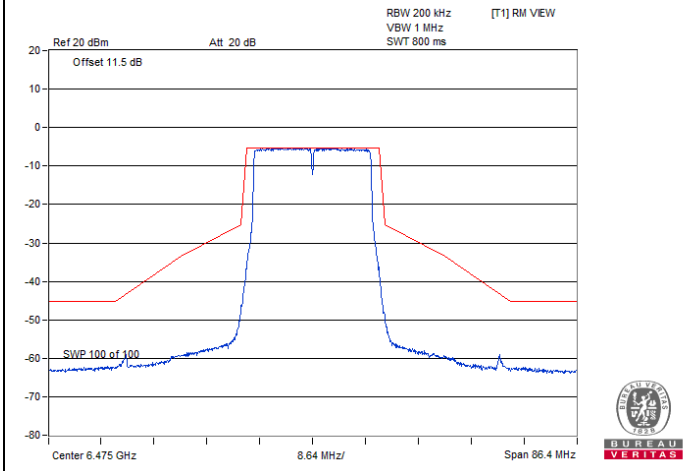
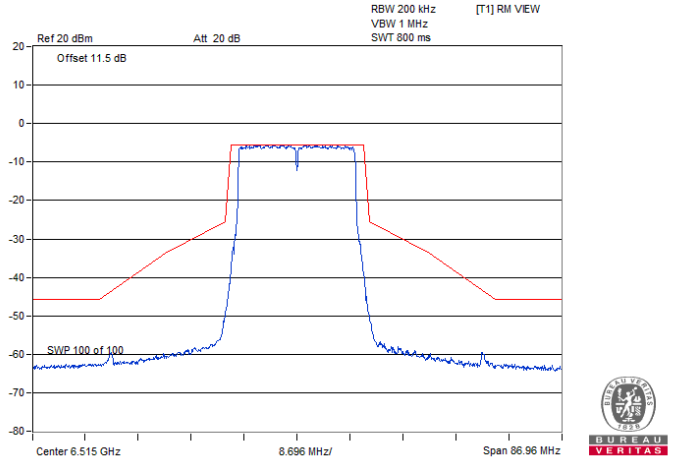
802.11be (EHT320) / Chain 1 : CH 159



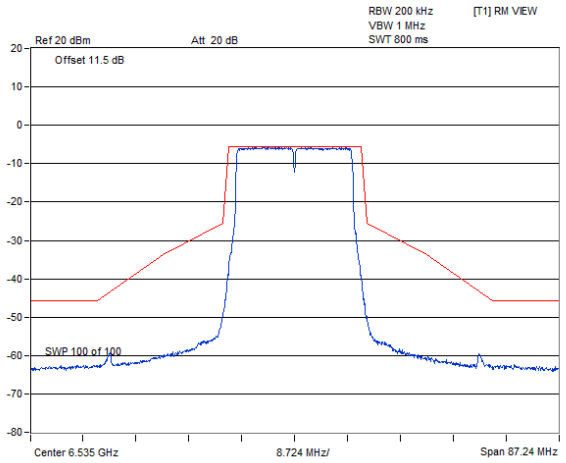
802.11be (EHT320) / Chain 1 : CH 191

Beamforming (2T2S)

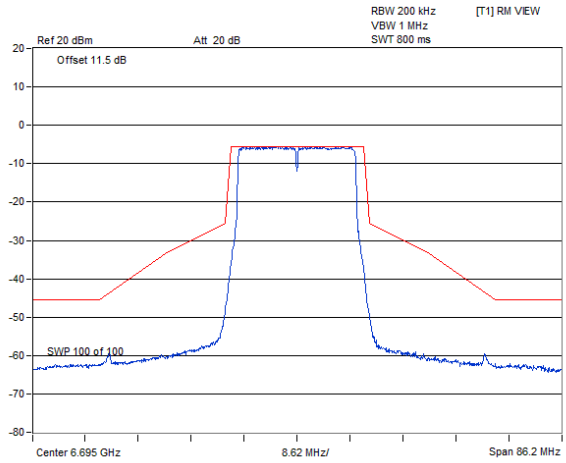
802.11be (EHT20) Beamforming

Spectrum Plot	
	
802.11be (EHT20) / Chain 0 : CH 33	802.11be (EHT20) / Chain 0 : CH 61
	
802.11be (EHT20) / Chain 0 : CH 93	802.11be (EHT20) / Chain 0 : CH 97
	
802.11be (EHT20) / Chain 0 : CH 105	802.11be (EHT20) / Chain 0 : CH 113

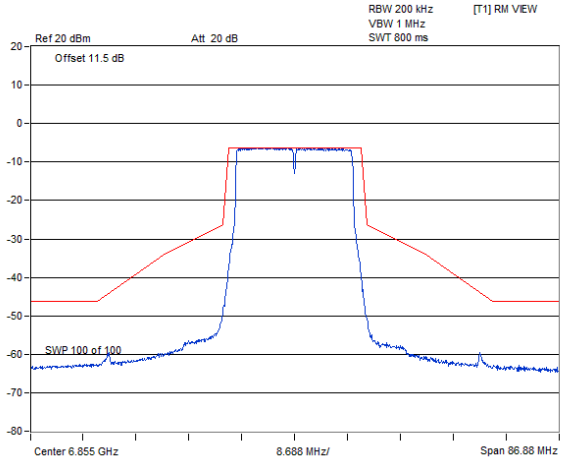
Spectrum Plot



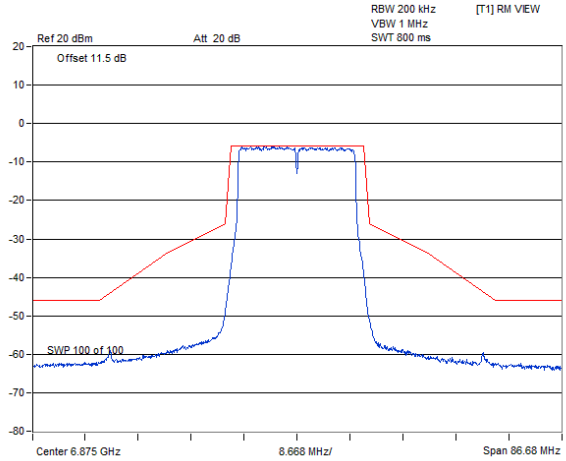
802.11be (EHT20) / Chain 0 : CH 117



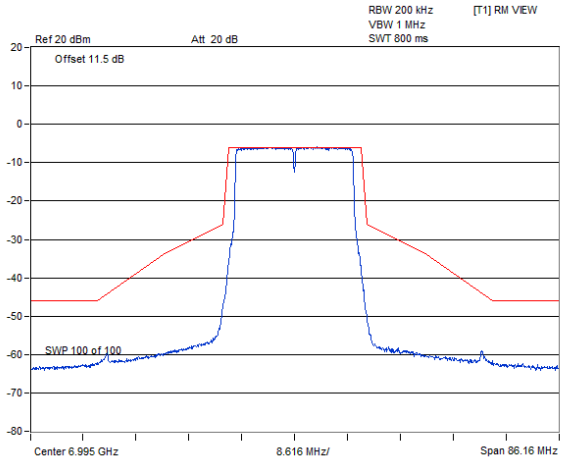
802.11be (EHT20) / Chain 0 : CH 149



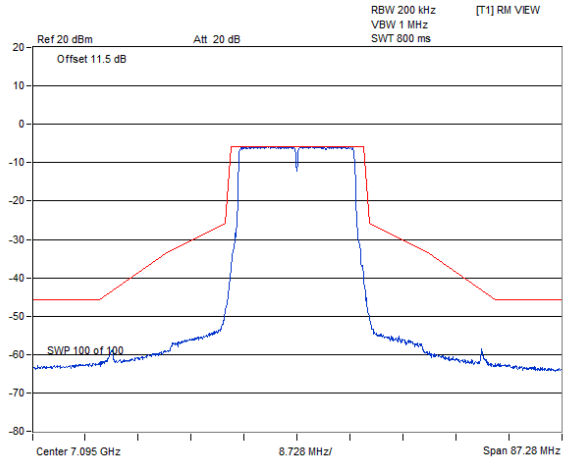
802.11be (EHT20) / Chain 0 : CH 181



802.11be (EHT20) / Chain 0 : CH 185

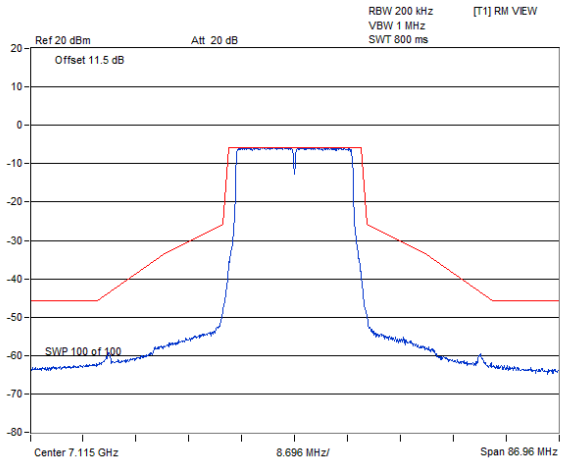


802.11be (EHT20) / Chain 0 : CH 209

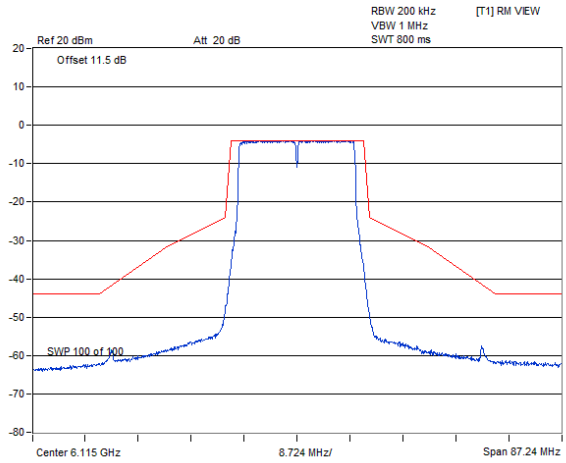


802.11be (EHT20) / Chain 0 : CH 229

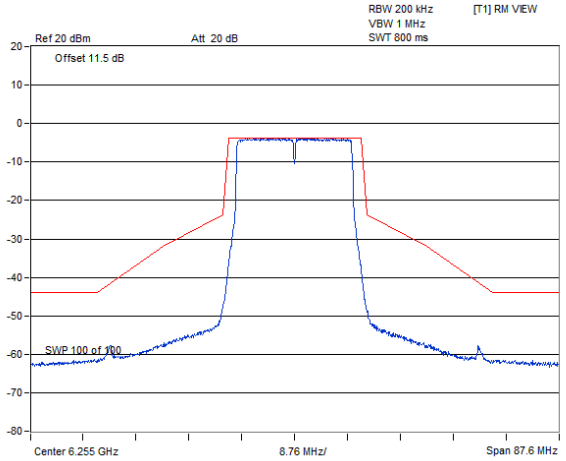
Spectrum Plot



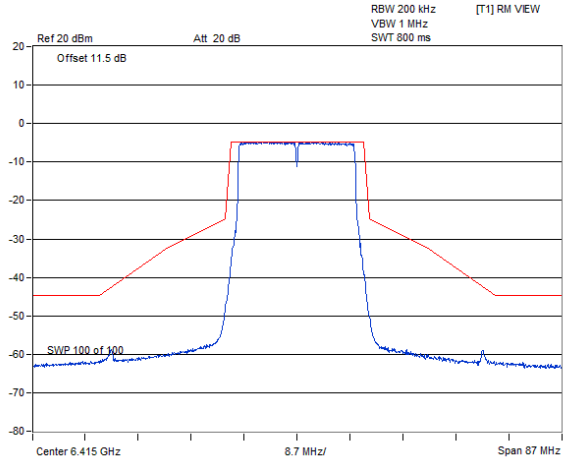
802.11be (EHT20) / Chain 0 : CH 233



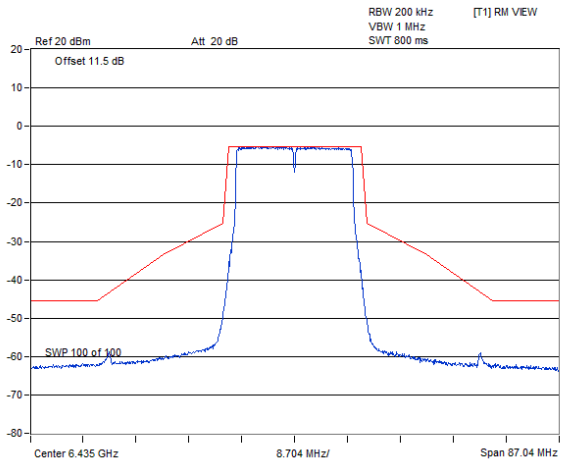
802.11be (EHT20) / Chain 1 : CH 33



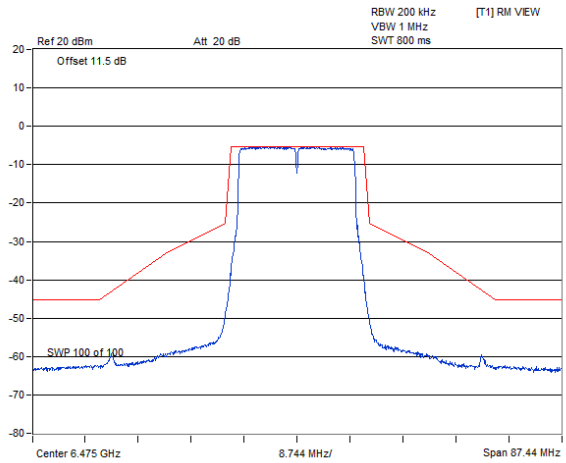
802.11be (EHT20) / Chain 1 : CH 61



802.11be (EHT20) / Chain 1 : CH 93

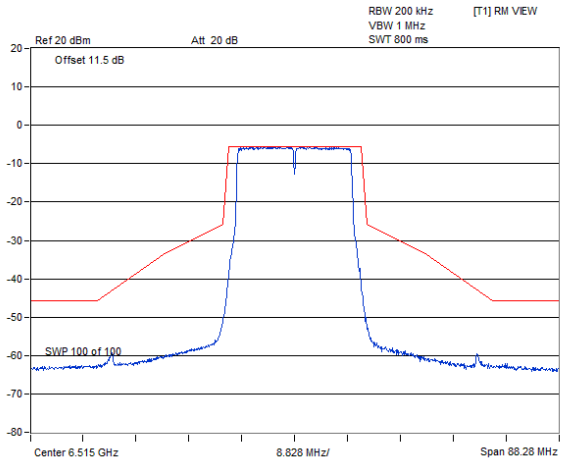


802.11be (EHT20) / Chain 1 : CH 97

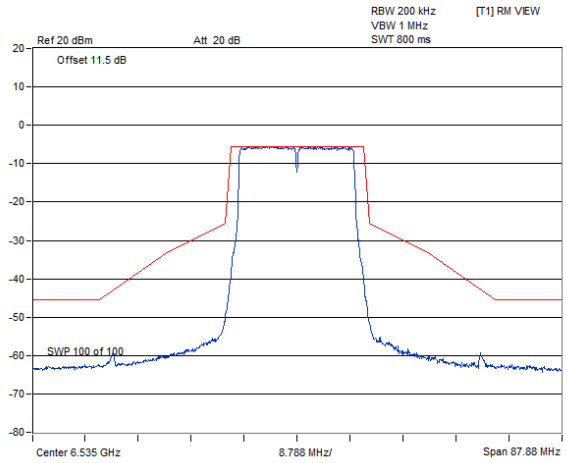


802.11be (EHT20) / Chain 1 : CH 105

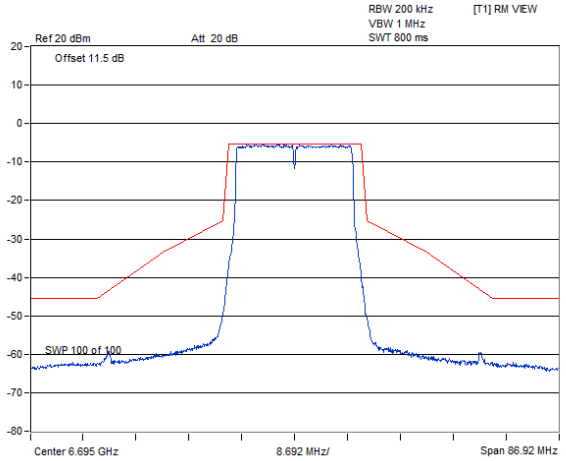
Spectrum Plot



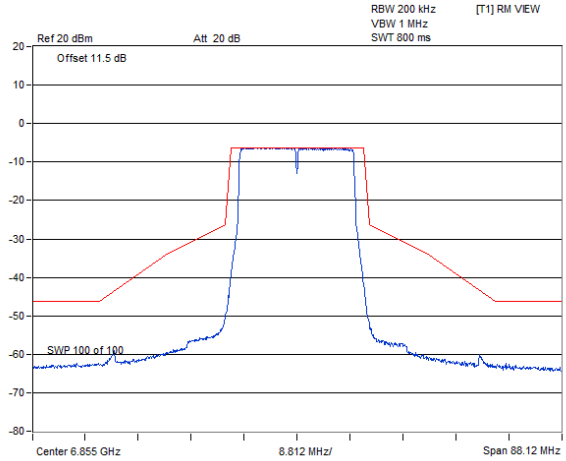
802.11be (EHT20) / Chain 1 : CH 113



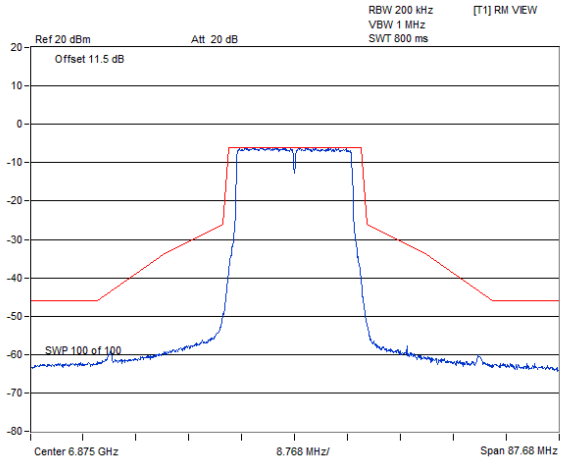
802.11be (EHT20) / Chain 1 : CH 117



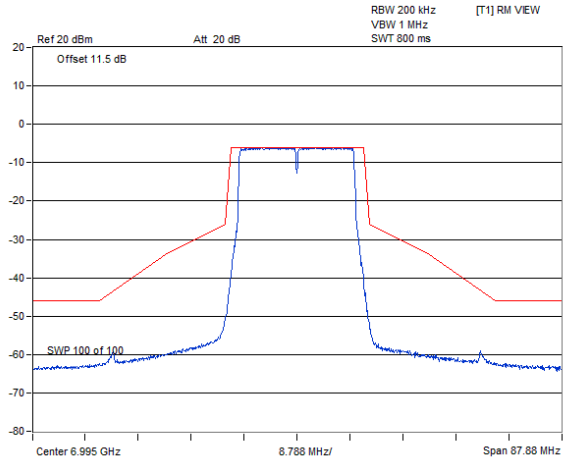
802.11be (EHT20) / Chain 1 : CH 149



802.11be (EHT20) / Chain 1 : CH 181

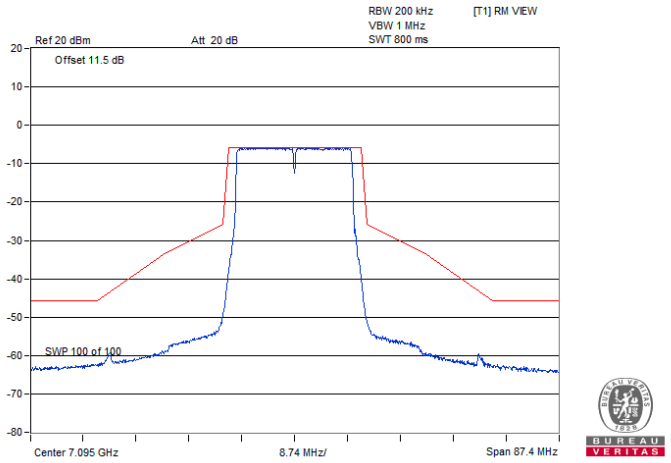


802.11be (EHT20) / Chain 1 : CH 185

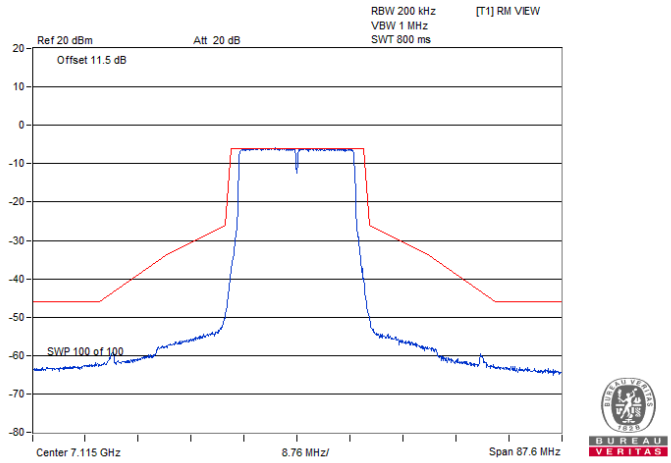


802.11be (EHT20) / Chain 1 : CH 209

Spectrum Plot

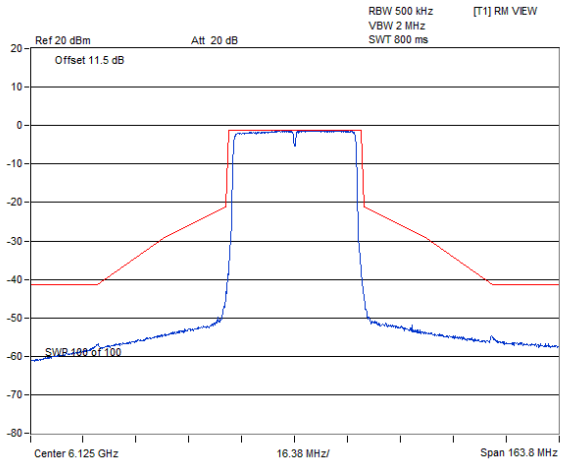
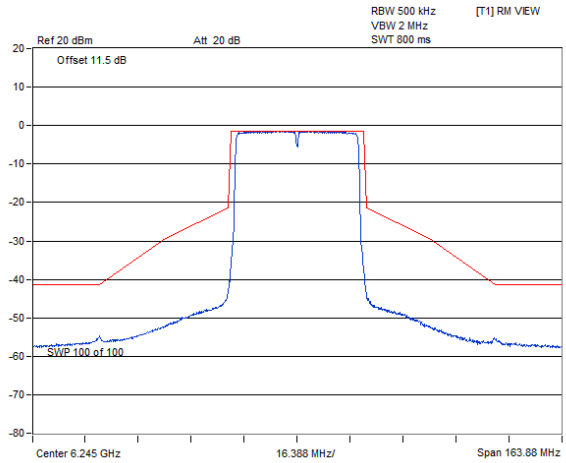
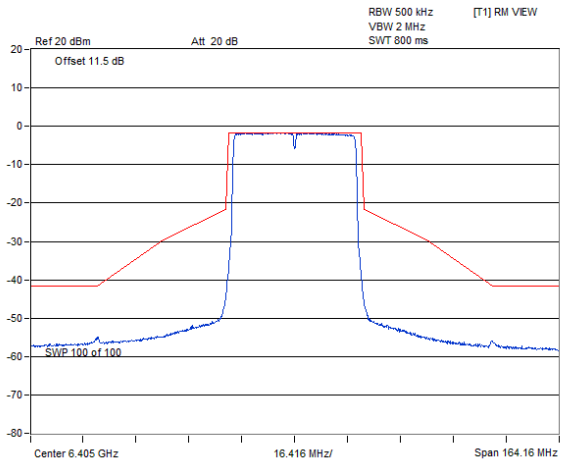
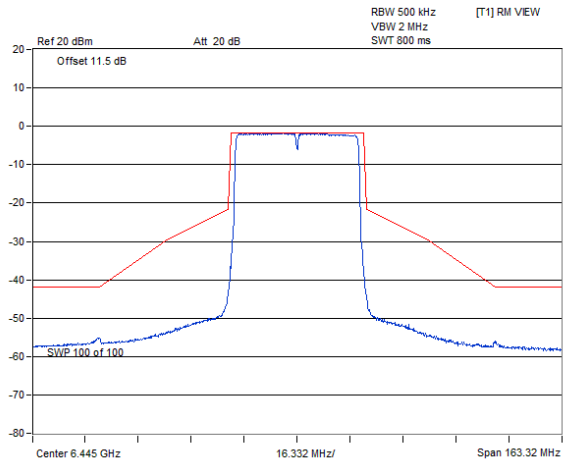
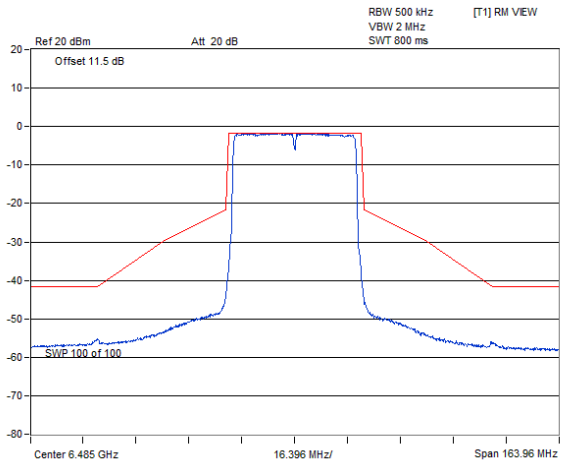
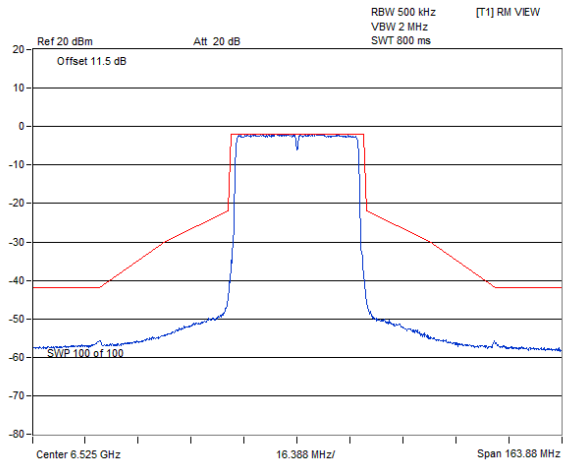


802.11be (EHT20) / Chain 1 : CH 229

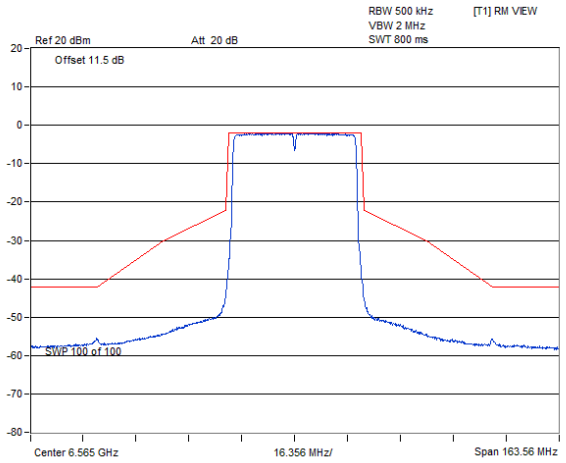


802.11be (EHT20) / Chain 1 : CH 233

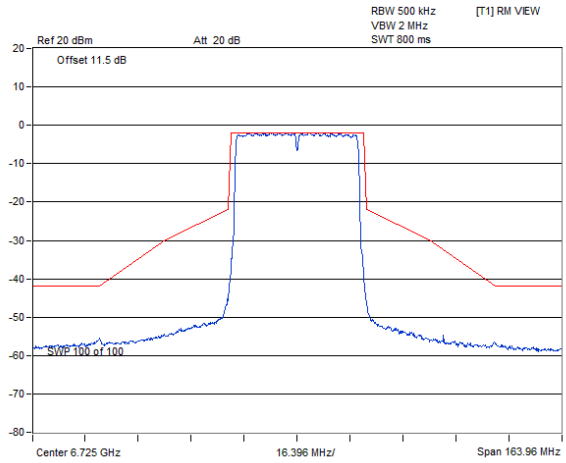
802.11be (EHT40) Beamforming

Spectrum Plot	
	
802.11be (EHT40) / Chain 0 : CH 35	802.11be (EHT40) / Chain 0 : CH 59
	
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

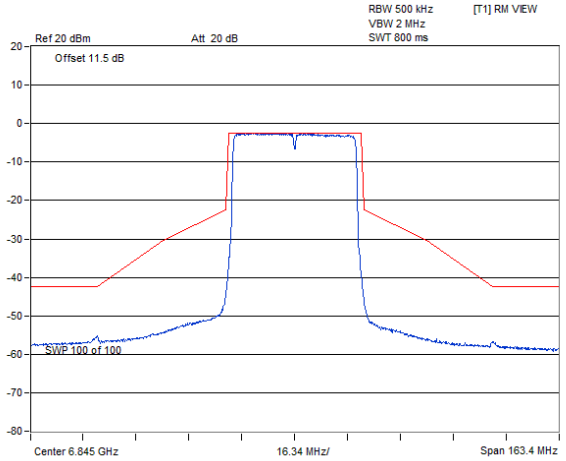
Spectrum Plot



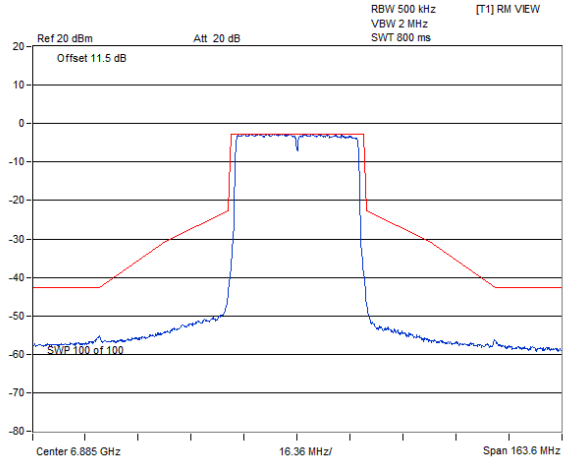
802.11be (EHT40) / Chain 0 : CH 123



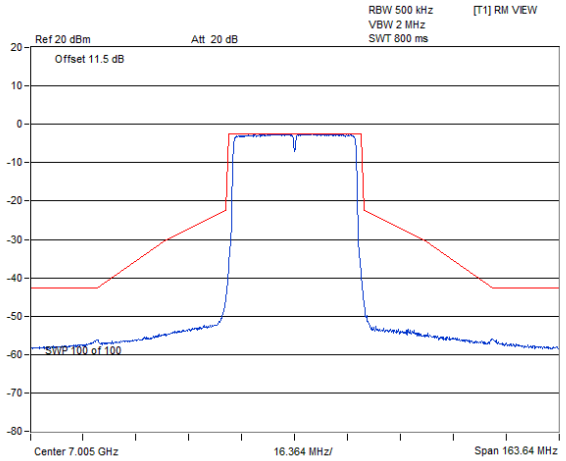
802.11be (EHT40) / Chain 0 : CH 155



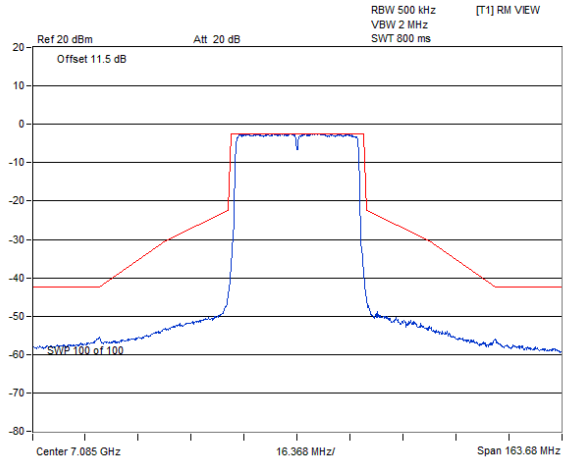
802.11be (EHT40) / Chain 0 : CH 179



802.11be (EHT40) / Chain 0 : CH 187

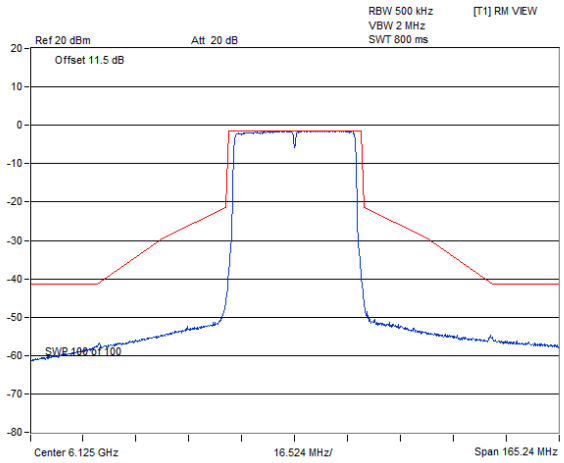


802.11be (EHT40) / Chain 0 : CH 211

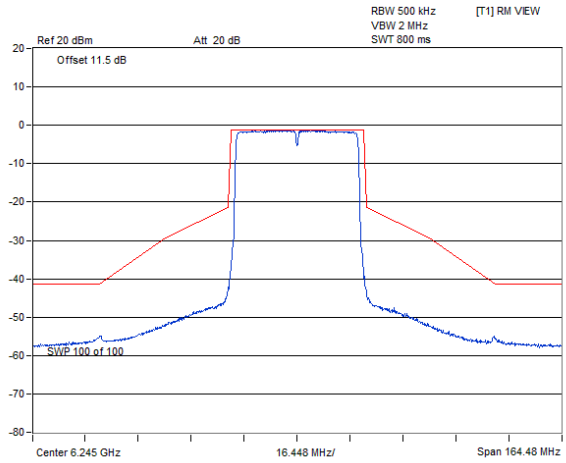


802.11be (EHT40) / Chain 0 : CH 227

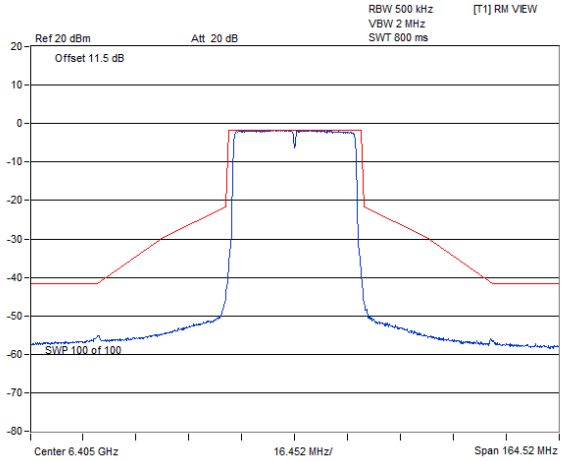
Spectrum Plot



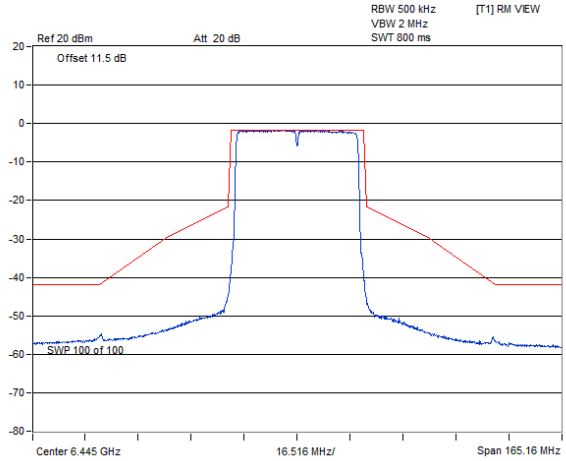
802.11be (EHT40) / Chain 1 : CH 35



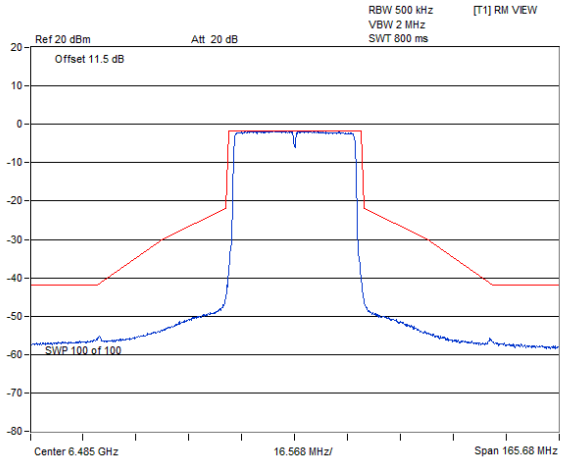
802.11be (EHT40) / Chain 1 : CH 59



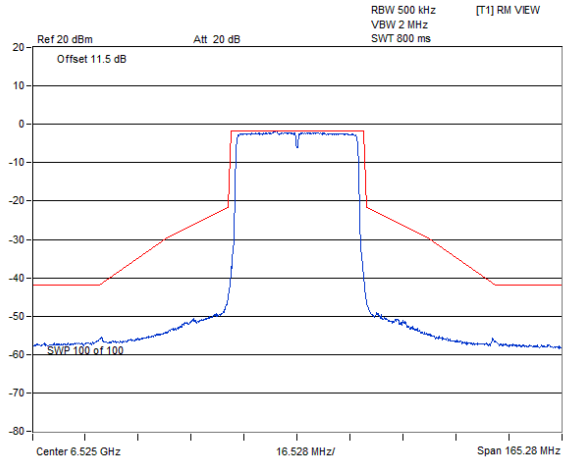
802.11be (EHT40) / Chain 1 : CH 91



802.11be (EHT40) / Chain 1 : CH 99

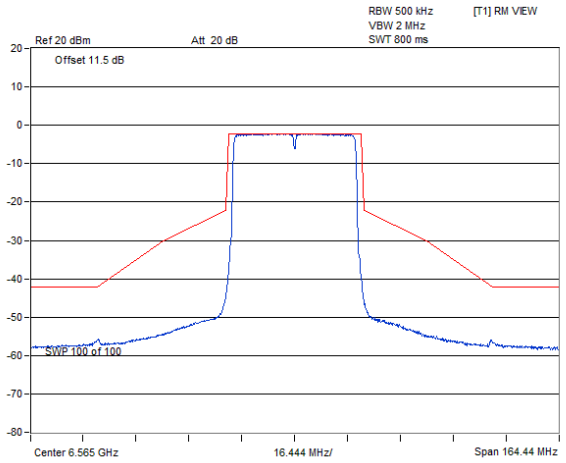


802.11be (EHT40) / Chain 1 : CH 107

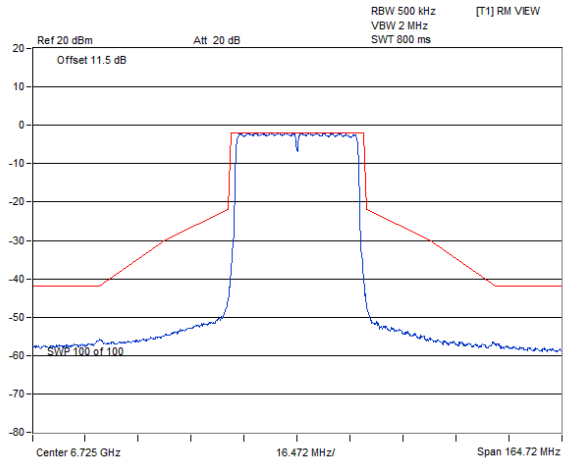


802.11be (EHT40) / Chain 1 : CH 115

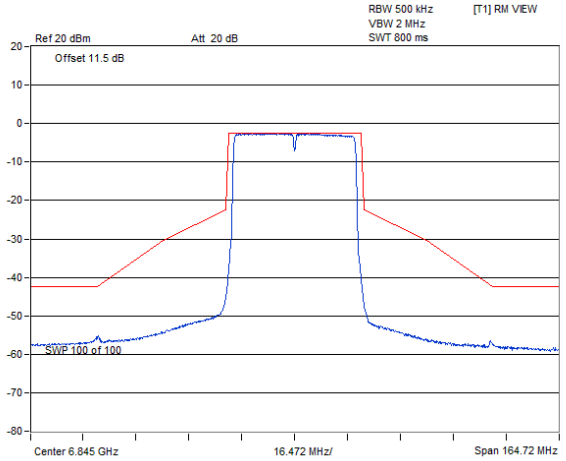
Spectrum Plot



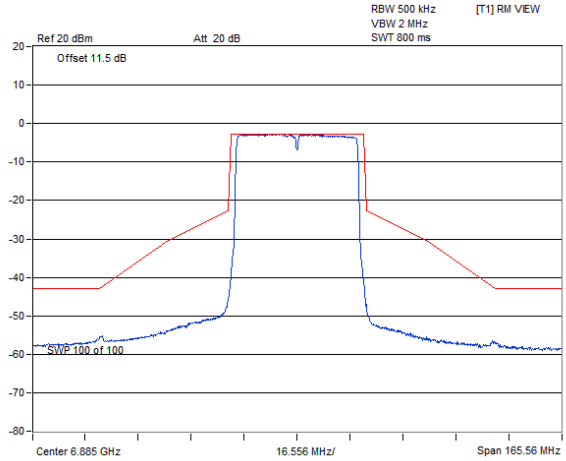
802.11be (EHT40) / Chain 1 : CH 123



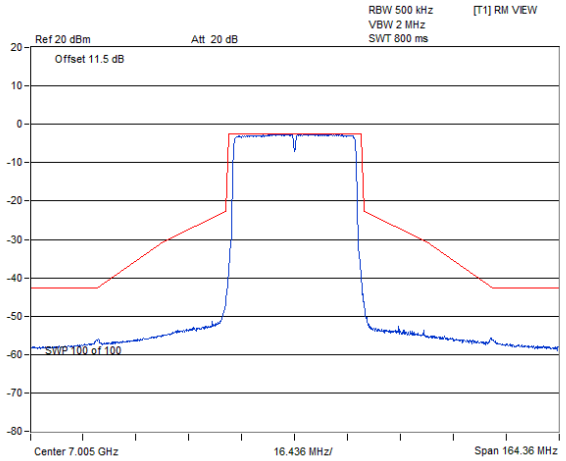
802.11be (EHT40) / Chain 1 : CH 155



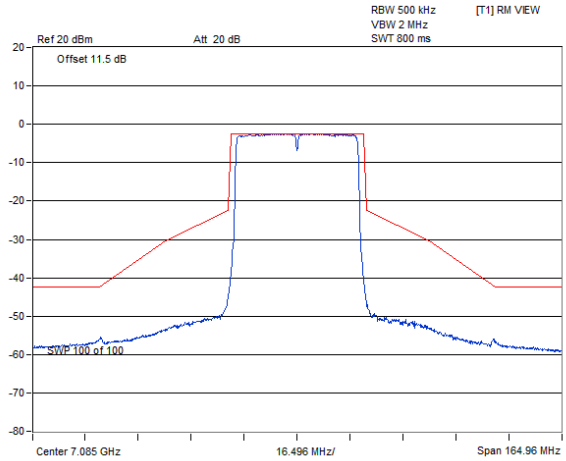
802.11be (EHT40) / Chain 1 : CH 179



802.11be (EHT40) / Chain 1 : CH 187

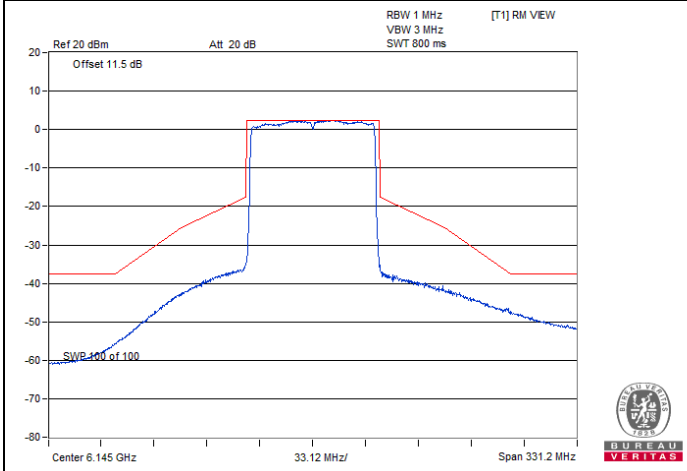
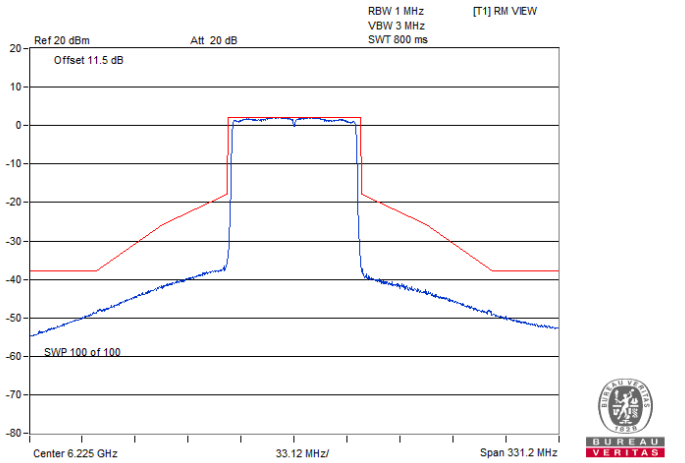
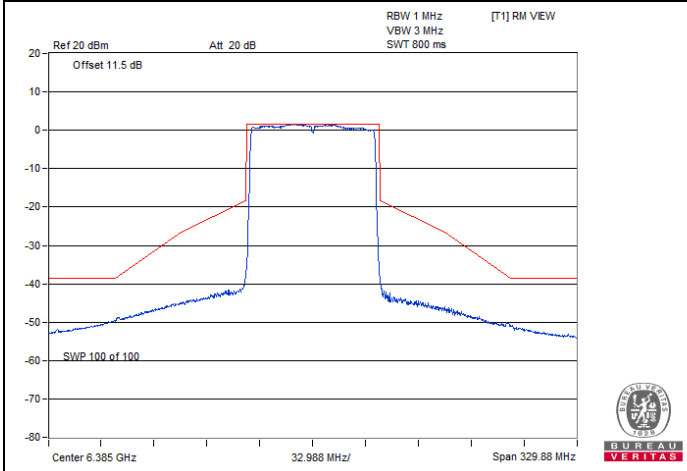
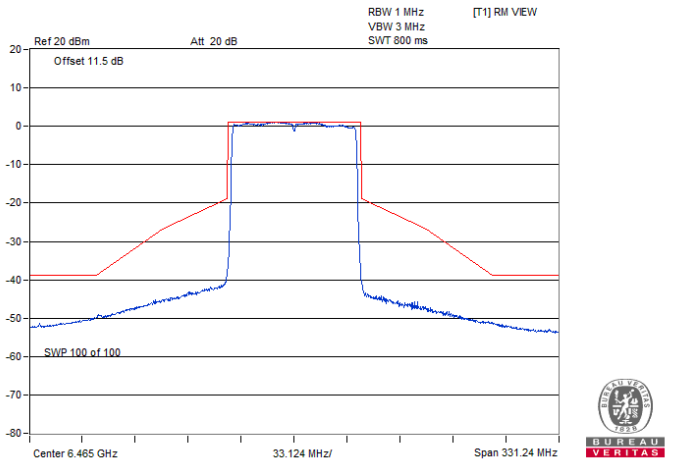
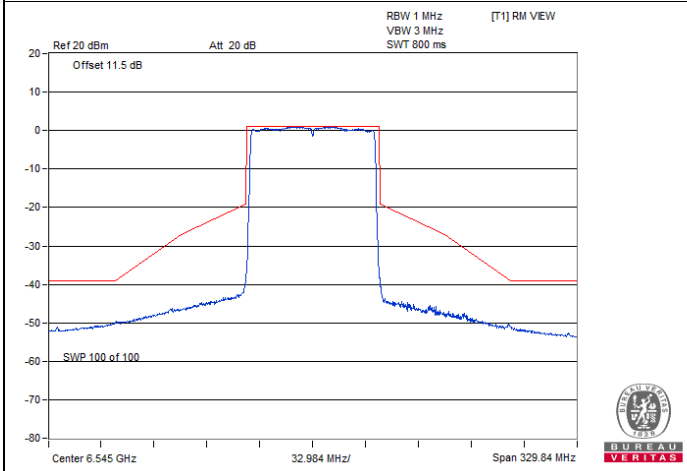
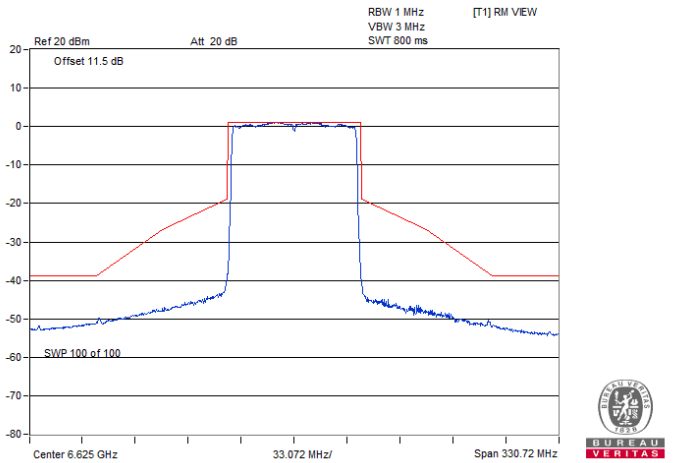


802.11be (EHT40) / Chain 1 : CH 211

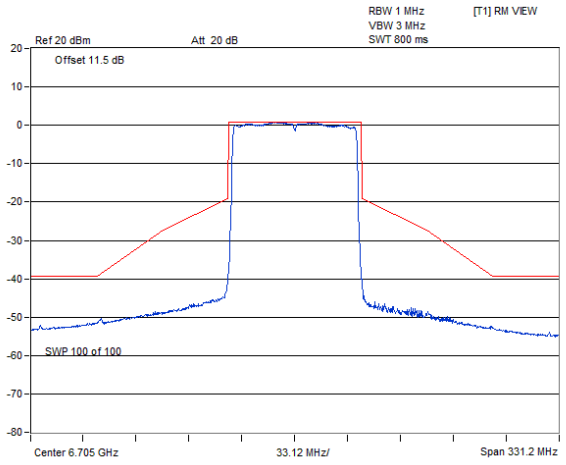


802.11be (EHT40) / Chain 1 : CH 227

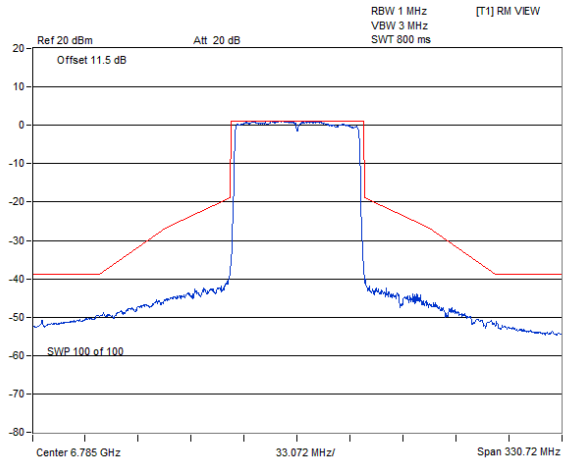
802.11be (EHT80) Beamforming

Spectrum Plot	
	
802.11be (EHT80) / Chain 0 : CH 39	802.11be (EHT80) / Chain 0 : CH 55
	
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 135

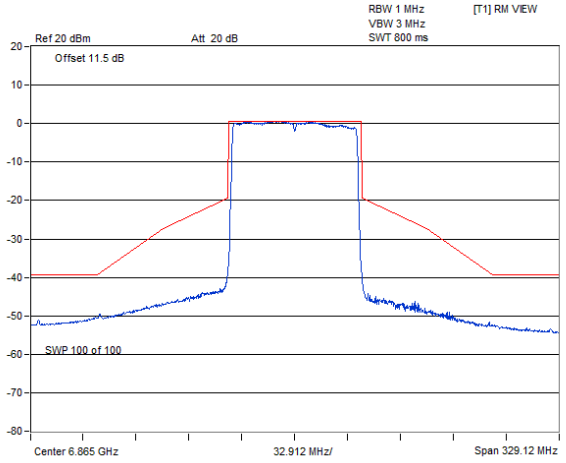
Spectrum Plot



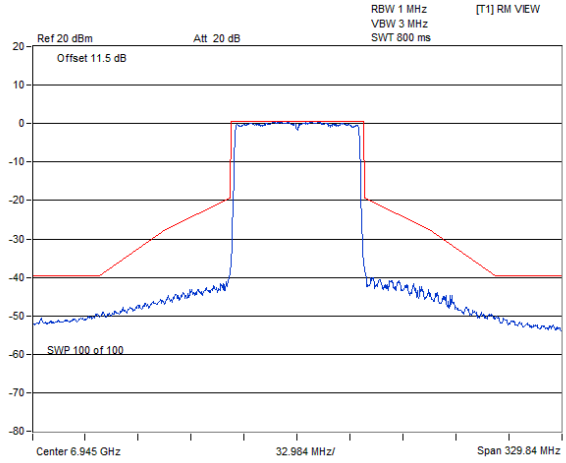
802.11be (EHT80) / Chain 0 : CH 151



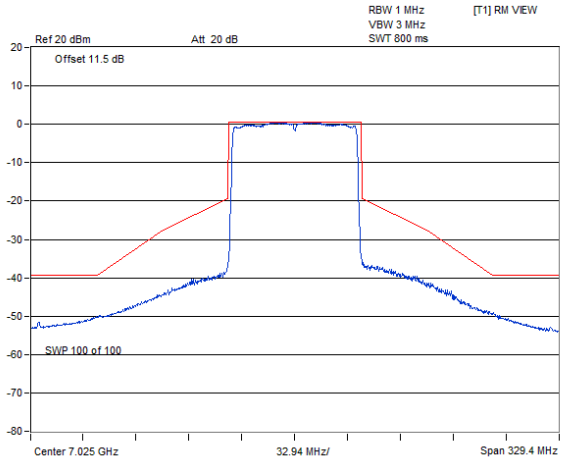
802.11be (EHT80) / Chain 0 : CH 167



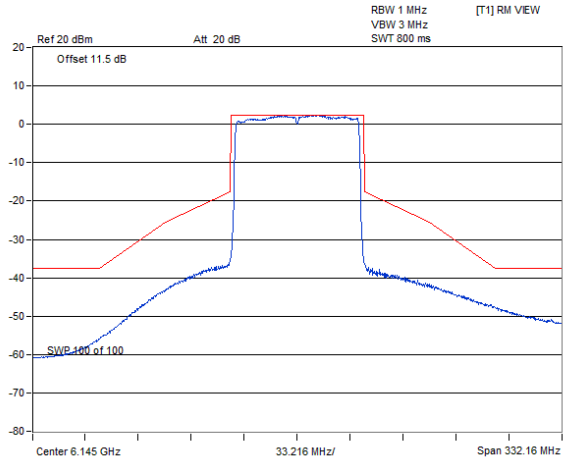
802.11be (EHT80) / Chain 0 : CH 183



802.11be (EHT80) / Chain 0 : CH 199

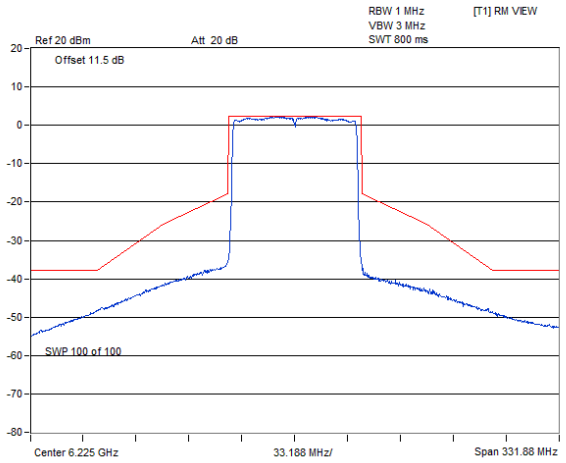


802.11be (EHT80) / Chain 0 : CH 215

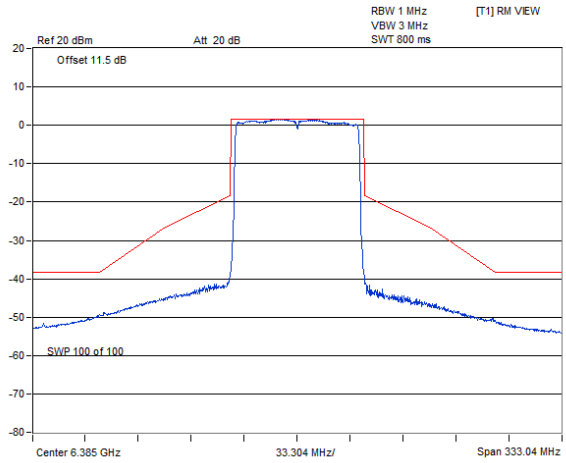


802.11be (EHT80) / Chain 1 : CH 39

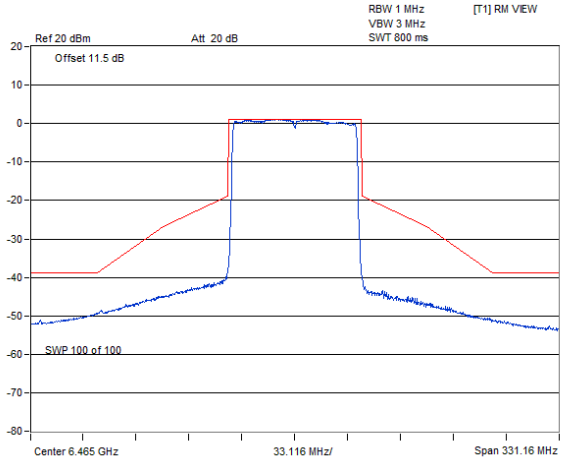
Spectrum Plot



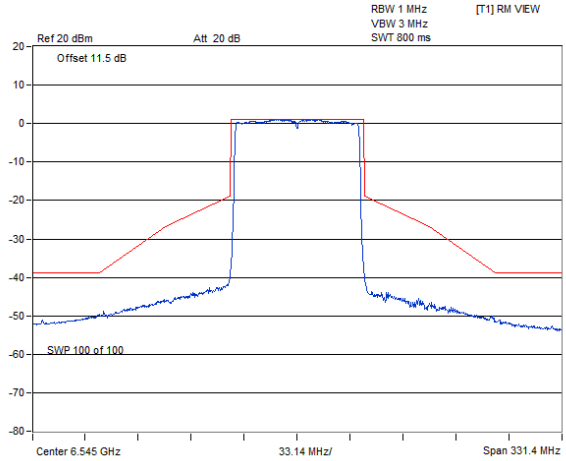
802.11be (EHT80) / Chain 1 : CH 55



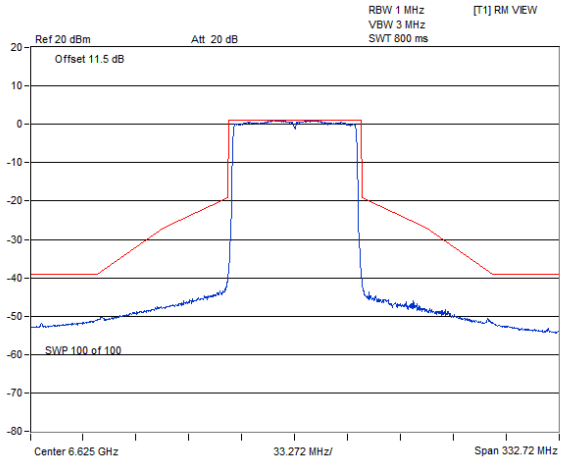
802.11be (EHT80) / Chain 1 : CH 87



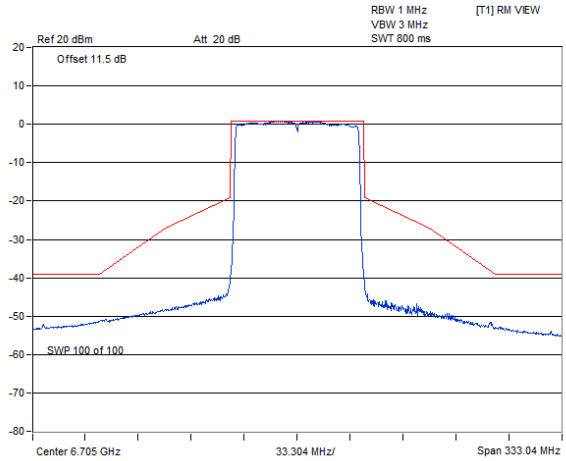
802.11be (EHT80) / Chain 1 : CH 103



802.11be (EHT80) / Chain 1 : CH 119

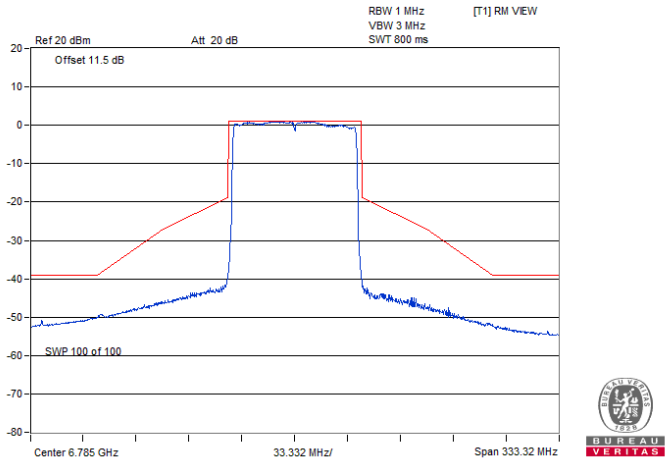


802.11be (EHT80) / Chain 1 : CH 135

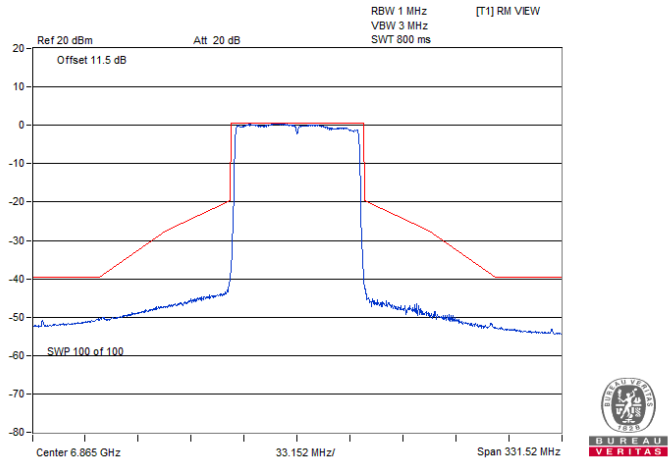


802.11be (EHT80) / Chain 1 : CH 151

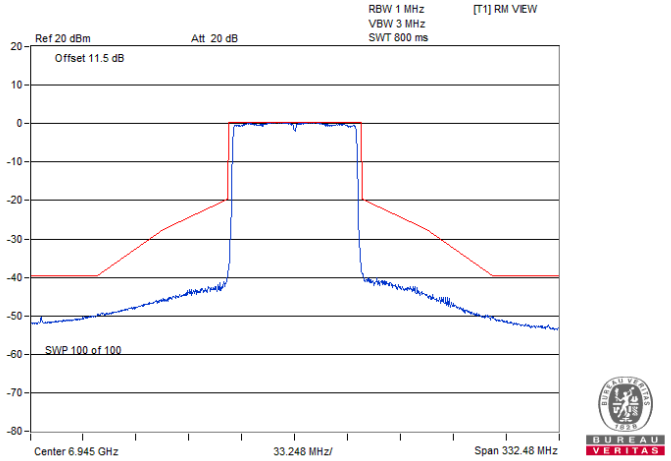
Spectrum Plot



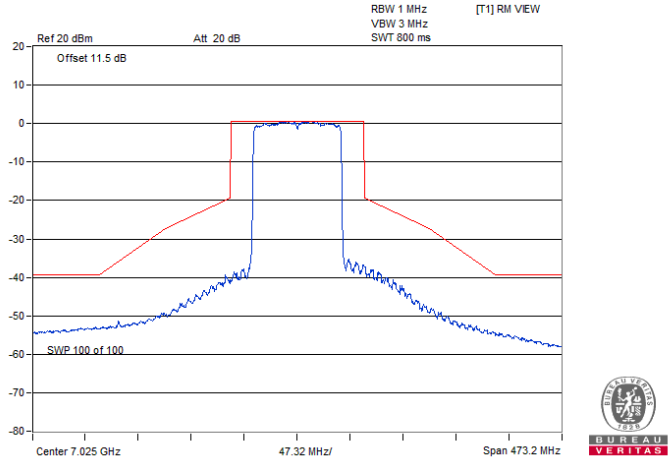
802.11be (EHT80) / Chain 1 : CH 167



802.11be (EHT80) / Chain 1 : CH 183

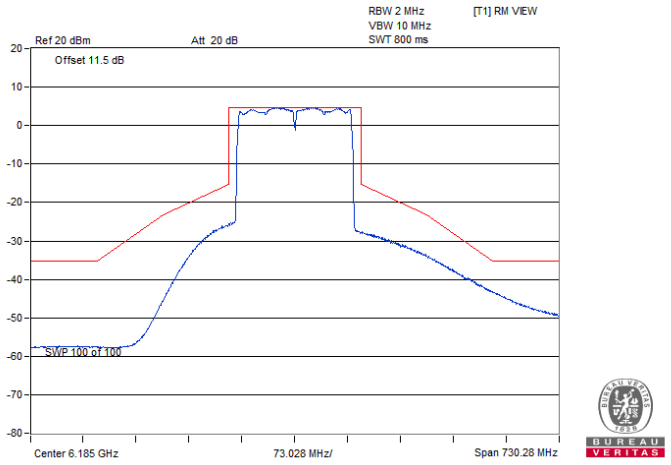
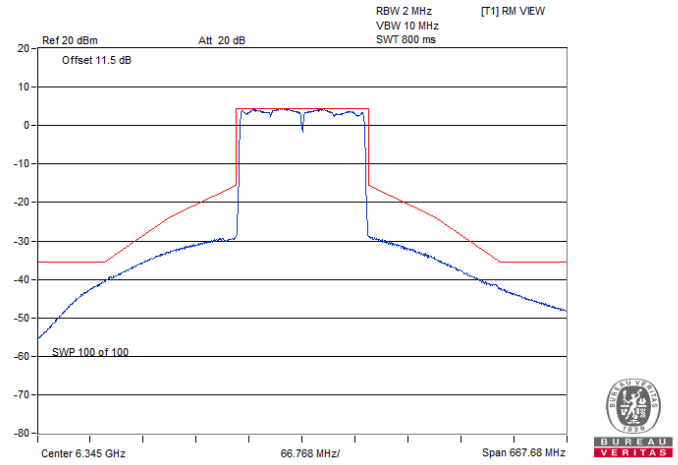
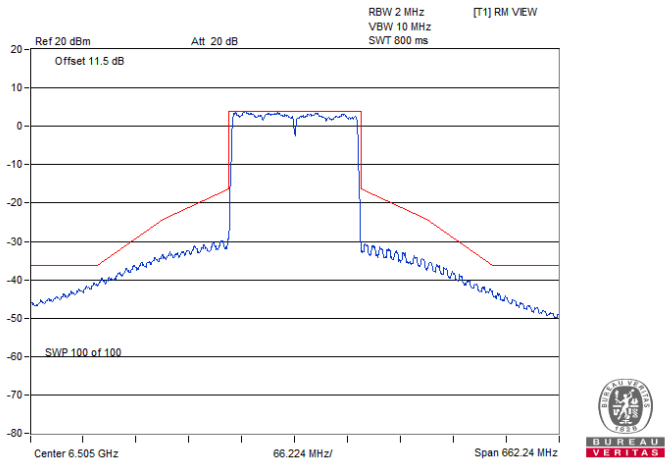
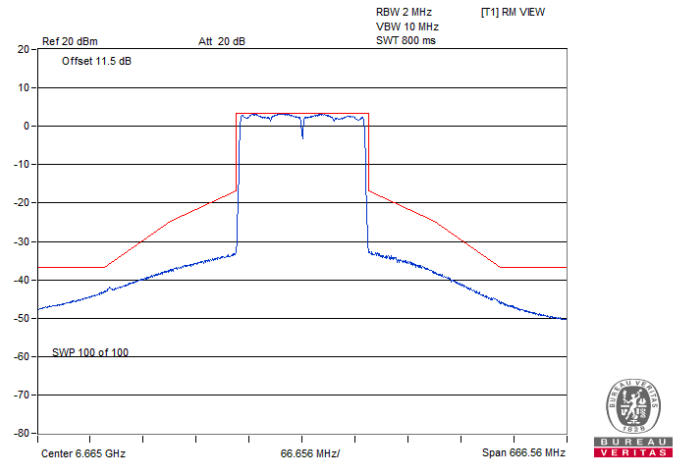
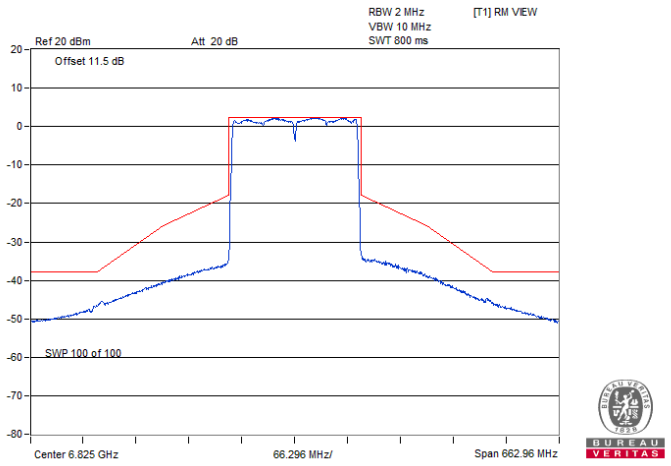
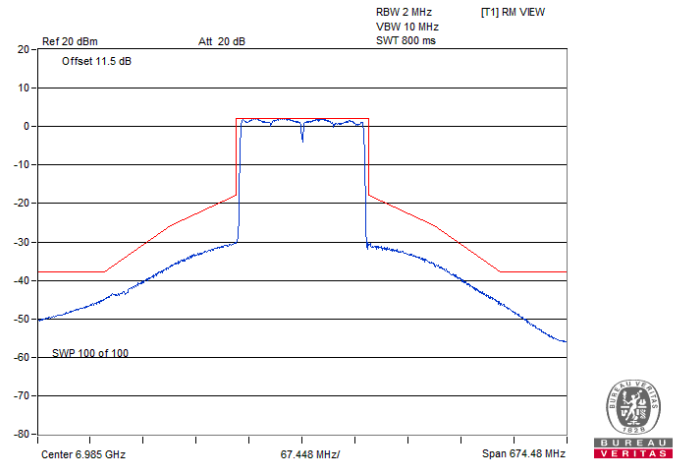


802.11be (EHT80) / Chain 1 : CH 199

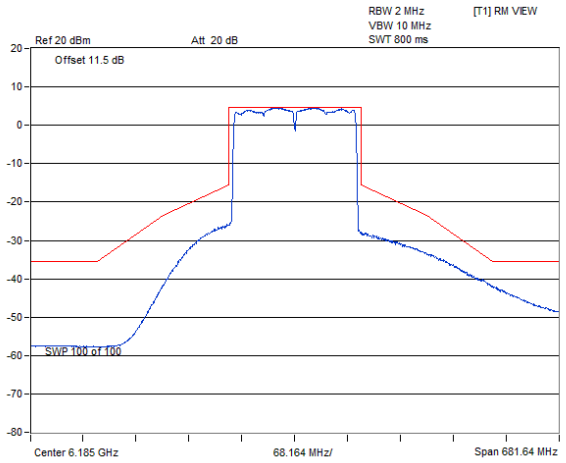


802.11be (EHT80) / Chain 1 : CH 215

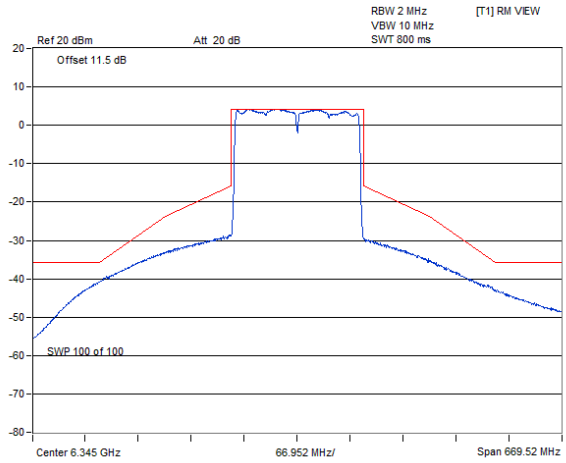
802.11be (EHT160) Beamforming

Spectrum Plot	
	
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	802.11be (EHT160) / Chain 0 : CH 207

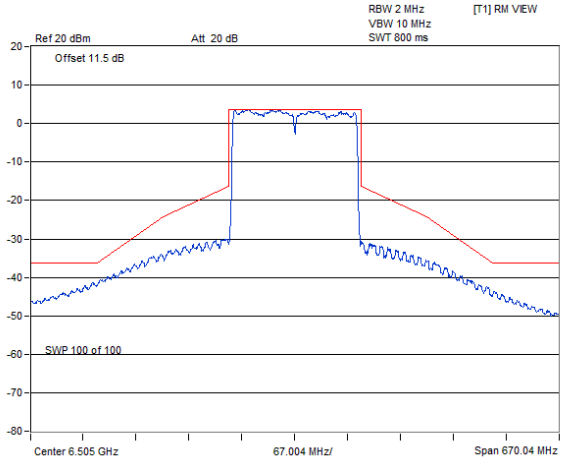
Spectrum Plot



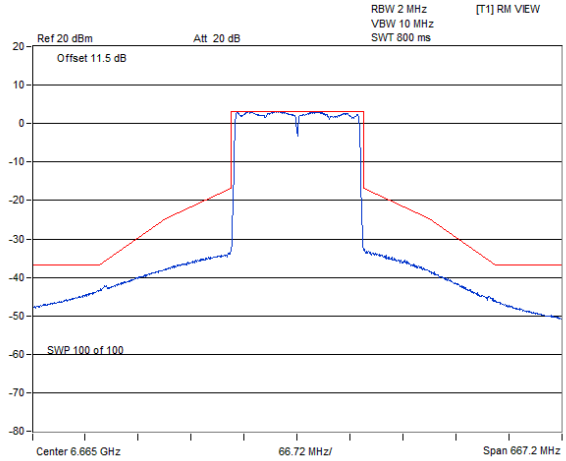
802.11be (EHT160) / Chain 1 : CH 47



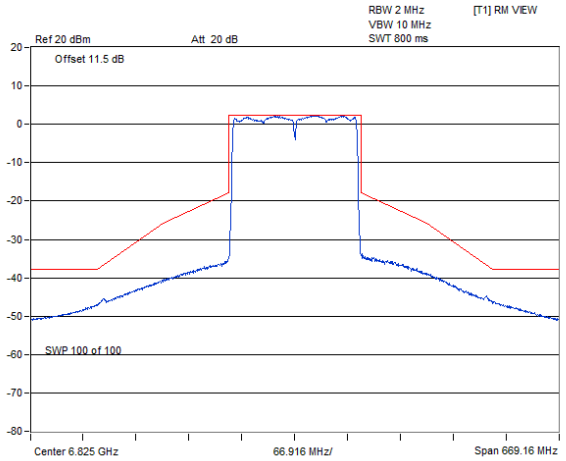
802.11be (EHT160) / Chain 1 : CH 79



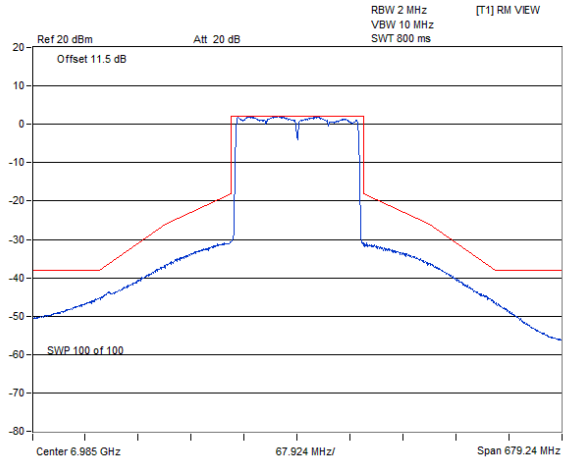
802.11be (EHT160) / Chain 1 : CH 111



802.11be (EHT160) / Chain 1 : CH 143

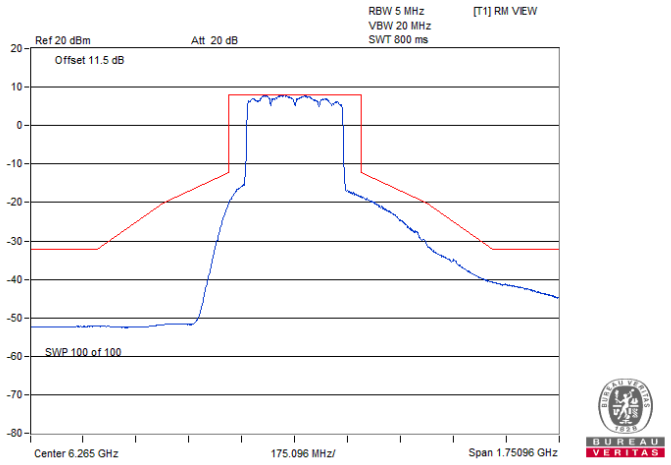
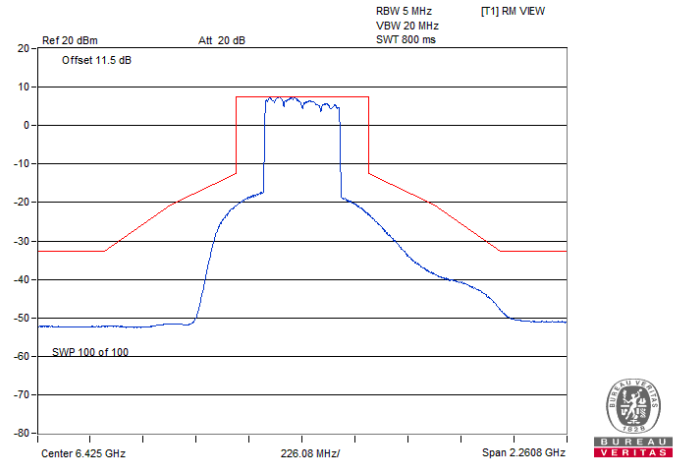
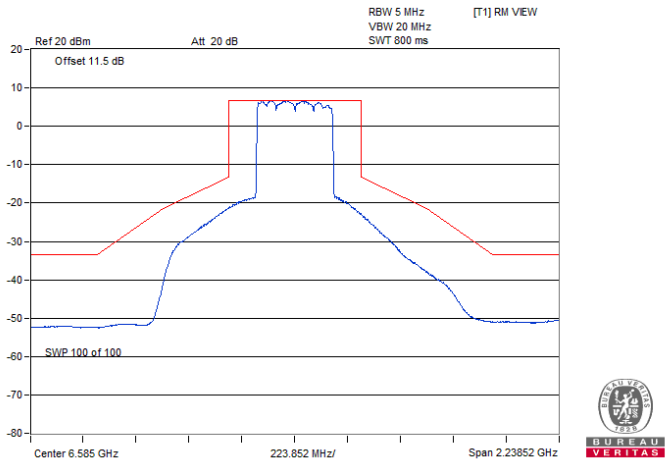
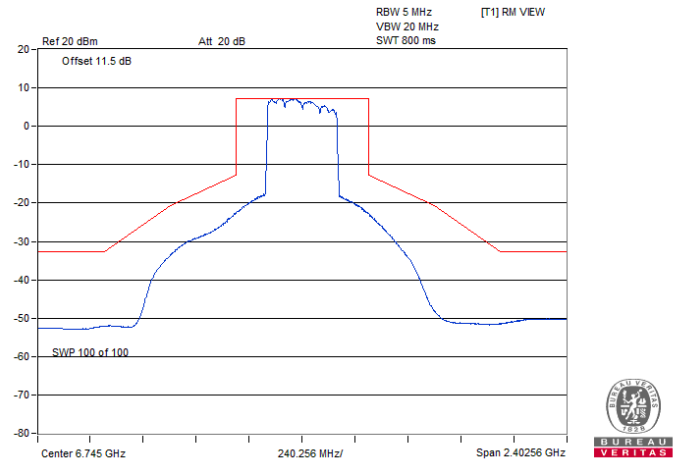
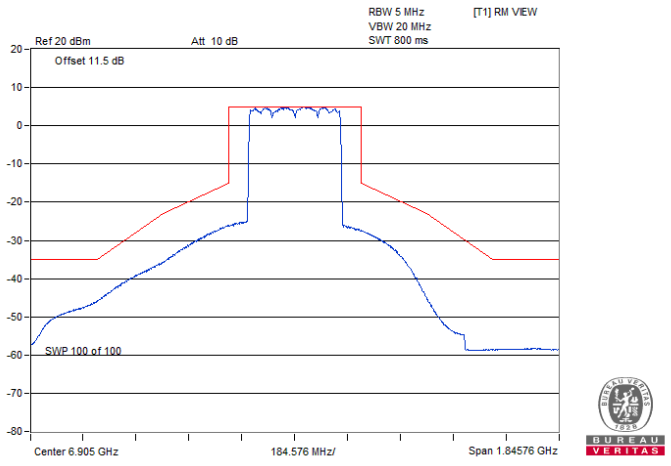
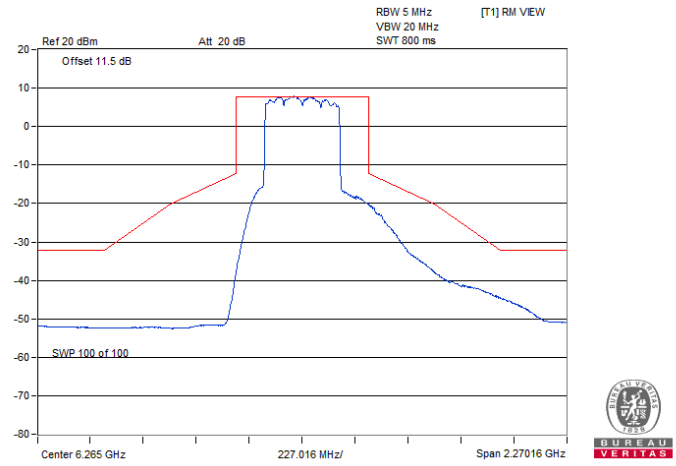


802.11be (EHT160) / Chain 1 : CH 175

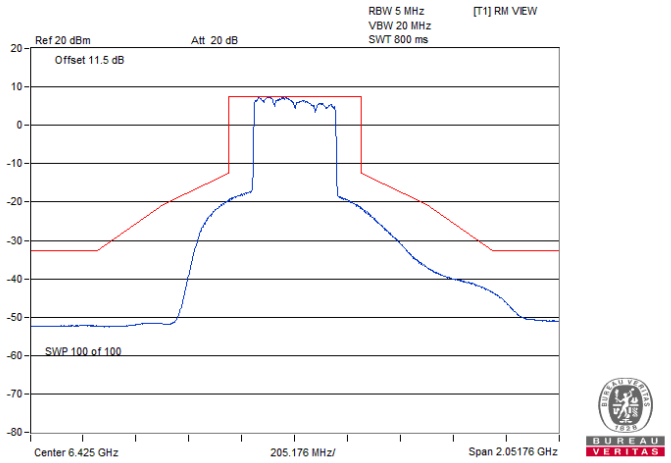


802.11be (EHT160) / Chain 1 : CH 207

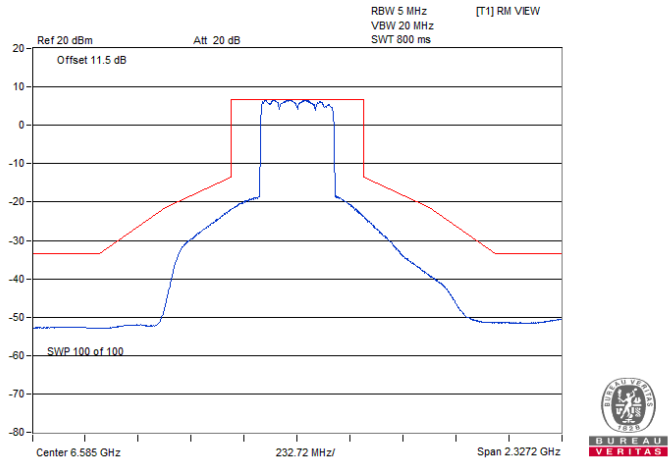
802.11be (EHT320) Beamforming

Spectrum Plot	
	
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	802.11be (EHT320) / Chain 1 : CH 63

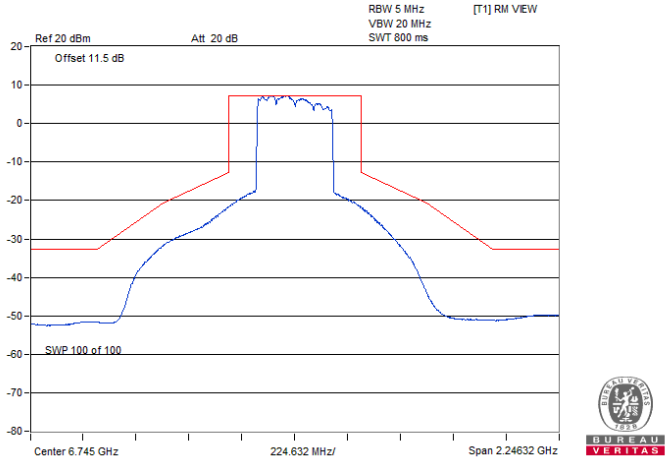
Spectrum Plot



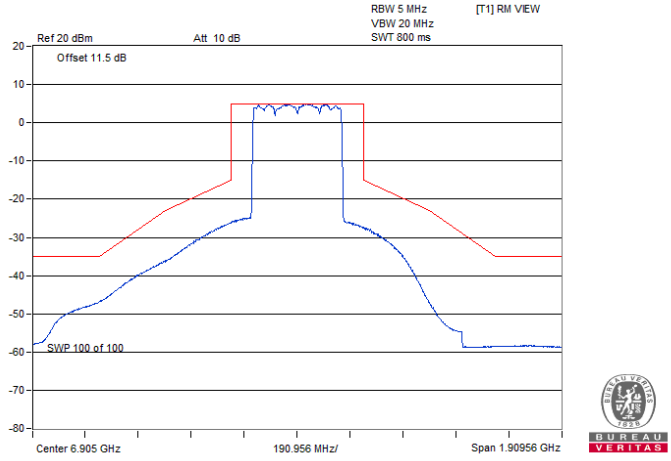
802.11be (EHT320) / Chain 1 : CH 95



802.11be (EHT320) / Chain 1 : CH 127



802.11be (EHT320) / Chain 1 : CH 159



802.11be (EHT320) / Chain 1 : CH 191

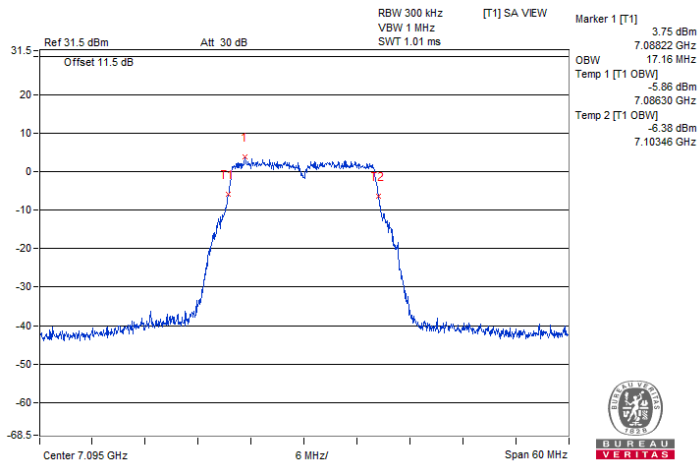
7.5 Occupied Bandwidth

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

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	17.10	17.10
61	6255	17.10	17.10
93	6415	17.10	17.10
97	6435	17.10	17.04
105	6475	17.10	17.10
113	6515	17.10	17.10
117	6535	17.10	17.16
149	6695	17.10	17.04
181	6855	17.10	17.04
185	6875	17.10	17.04
209	6995	17.10	17.04
229	7095	17.16	17.16
233	7115	17.10	17.16

Spectrum Plot of Maximum Value



802.11a / Chain 0 : CH 229

Beamforming (2T1S)

802.11be (EHT20) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	19.14	19.14
61	6255	19.14	19.14
93	6415	19.14	19.20
97	6435	19.14	19.14
105	6475	19.14	19.08
113	6515	19.14	19.08
117	6535	19.14	19.14
149	6695	19.14	19.14
181	6855	19.14	19.08
185	6875	19.14	19.14
209	6995	19.20	19.20
229	7095	19.20	19.20
233	7115	19.20	19.20

802.11be (EHT40) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
35	6125	37.92	38.04
59	6245	38.04	38.04
91	6405	38.16	37.92
99	6445	37.92	38.04
107	6485	38.04	38.04
115	6525	37.92	37.92
123	6565	38.16	37.92
155	6725	37.92	38.04
179	6845	38.04	38.04
187	6885	38.04	38.04
211	7005	37.92	38.04
227	7085	37.92	37.92

802.11be (EHT80) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
39	6145	77.28	77.28
55	6225	77.04	77.28
87	6385	77.28	77.28
103	6465	77.28	77.28
119	6545	77.28	77.28
135	6625	77.28	77.28
151	6705	77.28	77.28
167	6785	77.28	77.52
183	6865	77.28	77.52
199	6945	77.28	77.28
215	7025	77.28	77.28

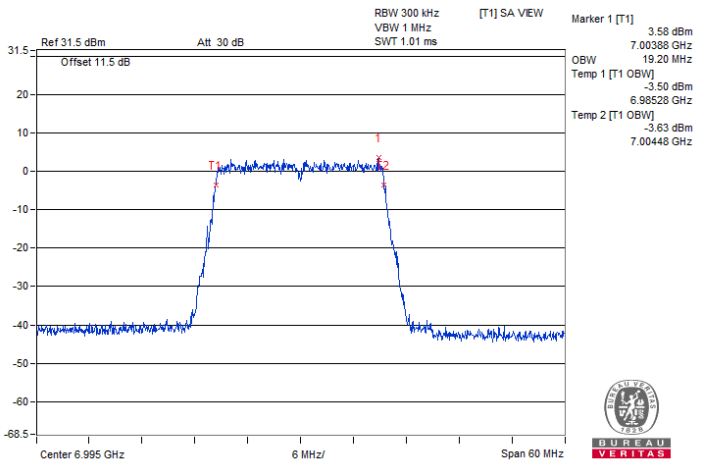
802.11be (EHT160) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
47	6185	156.96	156.96
79	6345	156.96	156.96
111	6505	156.96	156.96
143	6665	156.48	156.96
175	6825	156.96	156.96
207	6985	156.48	156.48

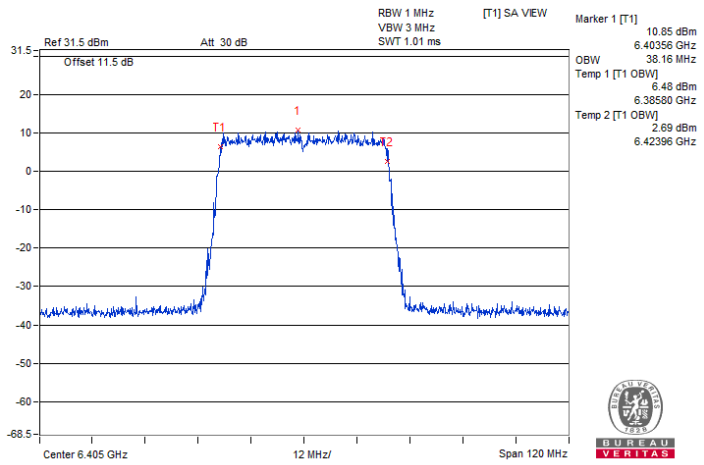
802.11be (EHT320) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
63	6265	315.84	315.84
95	6425	316.80	316.80
127	6585	316.80	316.80
159	6745	315.84	315.84
191	6905	317.76	317.76

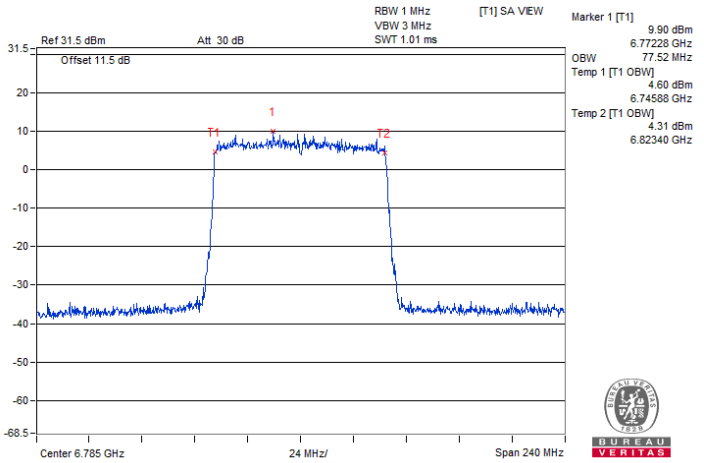
Spectrum Plot of Maximum Value



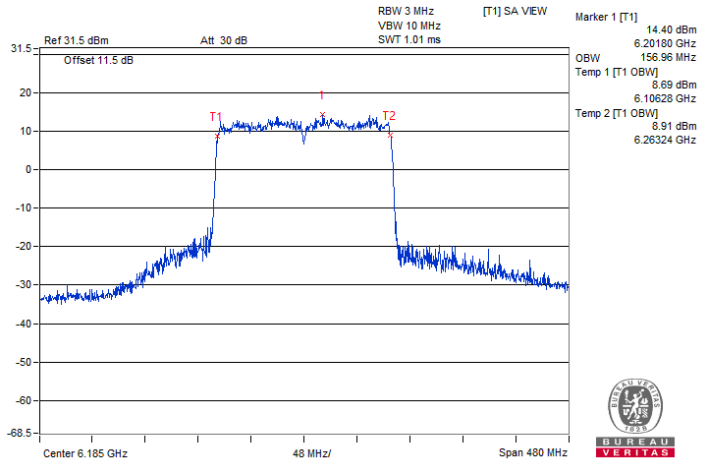
802.11be (EHT20) / Chain 0 : CH 209



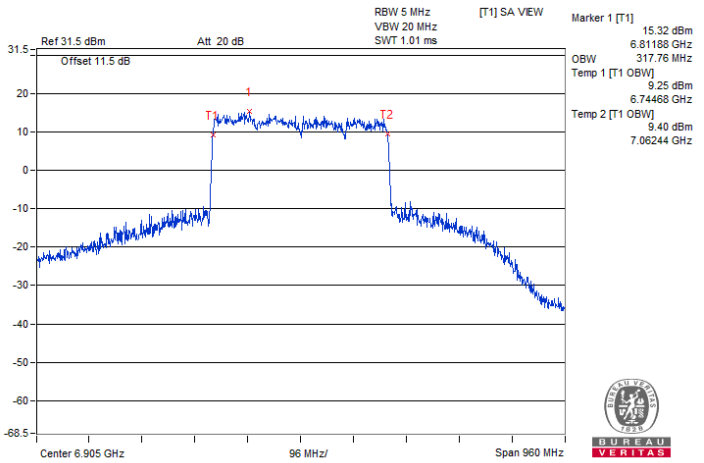
802.11be (EHT40) / Chain 0 : CH 91



802.11be (EHT80) / Chain 1 : CH 167



802.11be (EHT160) / Chain 0 : CH 47



802.11be (EHT320) / Chain 0 : CH 191

Beamforming (2T2S)

802.11be (EHT20) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	19.20	19.20
61	6255	19.20	19.20
93	6415	19.20	19.20
97	6435	19.14	19.08
105	6475	19.08	19.20
113	6515	19.20	19.20
117	6535	19.20	19.08
149	6695	19.14	19.20
181	6855	19.20	19.32
185	6875	19.14	19.20
209	6995	19.14	19.08
229	7095	19.14	19.32
233	7115	19.20	19.20

802.11be (EHT40) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
35	6125	38.04	37.92
59	6245	38.04	37.92
91	6405	38.04	37.92
99	6445	38.04	38.16
107	6485	37.92	37.92
115	6525	38.04	37.92
123	6565	38.04	38.40
155	6725	38.04	37.92
179	6845	37.92	37.92
187	6885	37.92	37.92
211	7005	38.04	37.92
227	7085	38.04	37.92

802.11be (EHT80) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
39	6145	77.28	77.28
55	6225	77.28	77.28
87	6385	77.28	77.28
103	6465	77.28	77.28
119	6545	77.28	77.28
135	6625	77.52	76.80
151	6705	77.52	77.28
167	6785	77.28	77.28
183	6865	77.52	77.28
199	6945	77.28	77.76
215	7025	77.52	77.28

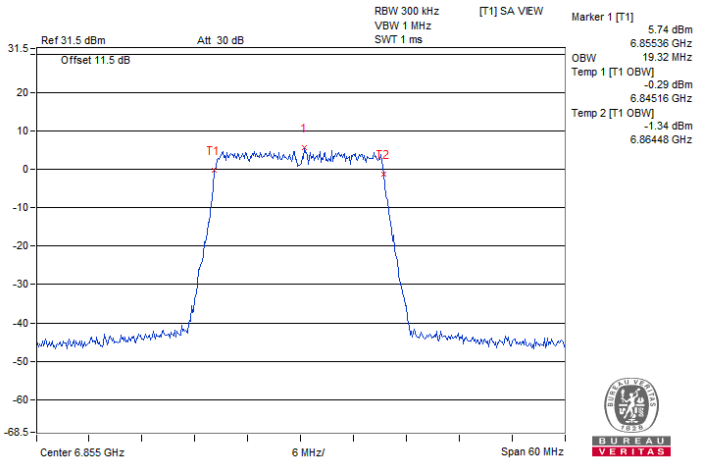
802.11be (EHT160) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
47	6185	156.96	156.48
79	6345	157.44	157.44
111	6505	156.96	157.44
143	6665	156.96	157.44
175	6825	156.96	156.48
207	6985	156.96	157.44

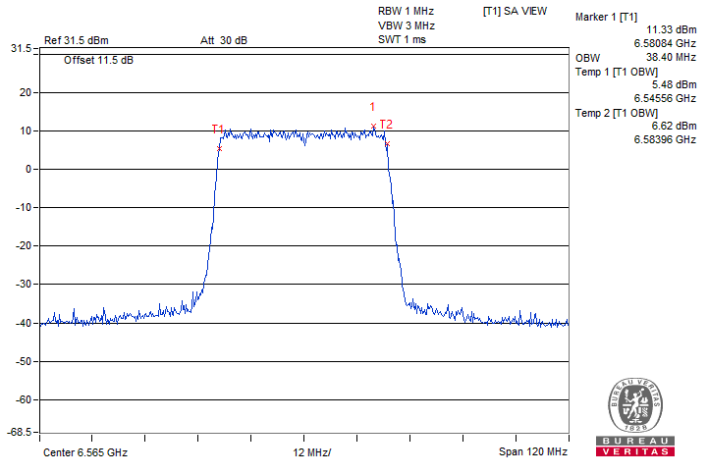
802.11be (EHT320) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
63	6265	316.80	316.80
95	6425	317.76	318.72
127	6585	318.72	318.72
159	6745	317.76	318.72
191	6905	315.84	317.76

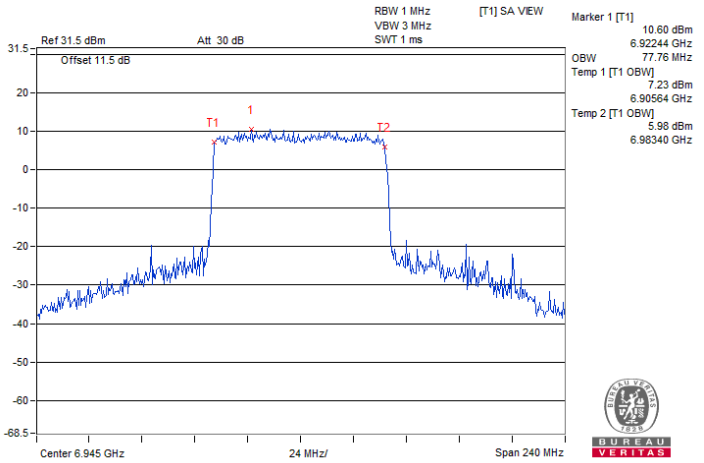
Spectrum Plot of Maximum Value



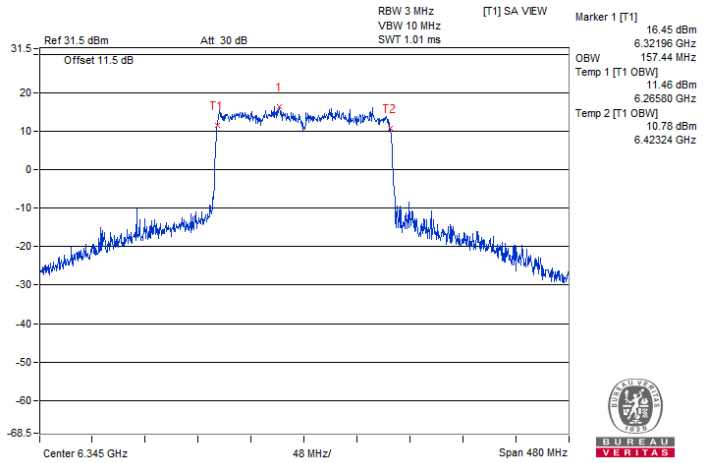
802.11be (EHT20) / Chain 1 : CH 181



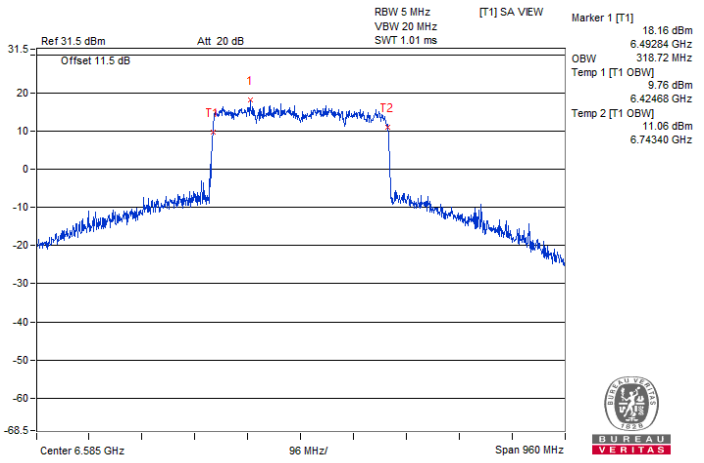
802.11be (EHT40) / Chain 1 : CH 123



802.11be (EHT80) / Chain 1 : CH 199



802.11be (EHT160) / Chain 0 : CH 79



802.11be (EHT320) / Chain 0 : CH 127

7.6 Frequency Stability

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

Frequency Stability Versus Temperature									
Operating Frequency: 6115 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	6114.9952	Pass	6114.9939	Pass	6114.9963	Pass	6114.9951	Pass
30	120	6114.9791	Pass	6114.9803	Pass	6114.9783	Pass	6114.9782	Pass
20	120	6114.9741	Pass	6114.9712	Pass	6114.9739	Pass	6114.9753	Pass
10	120	6114.9874	Pass	6114.9834	Pass	6114.9878	Pass	6114.9822	Pass
0	120	6115.0012	Pass	6115.0009	Pass	6115.0002	Pass	6115.0024	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 6115 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	6114.995	Pass	6114.9961	Pass	6114.9961	Pass	6114.9959	Pass
	120	6114.9874	Pass	6114.9834	Pass	6114.9878	Pass	6114.9822	Pass
	102	6114.9913	Pass	6114.9904	Pass	6114.9913	Pass	6114.9948	Pass

7.7 Contention-based Protocol

Environmental Conditions:	25°C, 60% RH	Tested By:	Stan Shih

Companion Device Information			
Product	**Brand**	**Model No.**	**Software/Firmware Version**
NIGHTHAWK BE12000 WiFi 7 Router	NETGEAR	RS500	V1.0.0.27

For U-NII-5

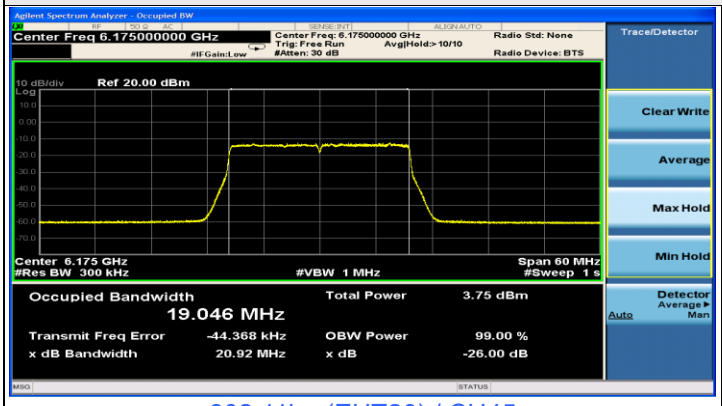
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	45	6175	6175	-65	2.68	0	-67.68	-62	OFF
					-66	2.68	0	-68.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
	320	63	6265	6110	-65	2.68	0	-67.68	-62	OFF
					-67	2.68	0	-69.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6265	-63	2.68	0	-65.68	-62	OFF
					-64	2.68	0	-66.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6420	-65	2.68	0	-67.68	-62	OFF
					-67	2.68	0	-69.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON

Notes:

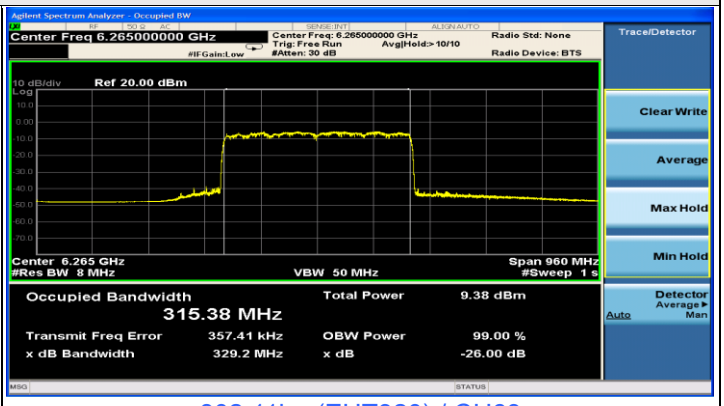
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 0) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	6110	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6265	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6420	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

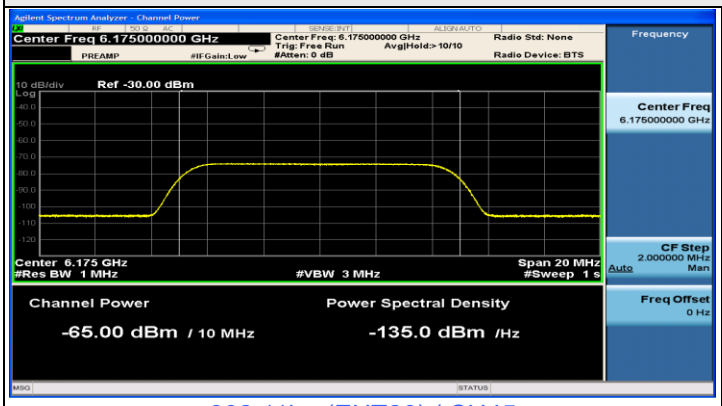
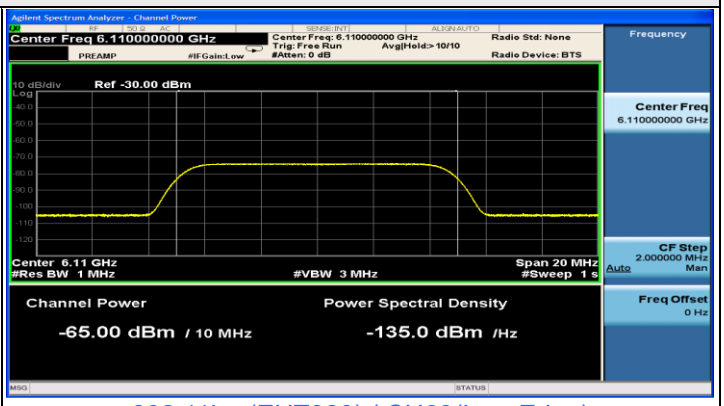
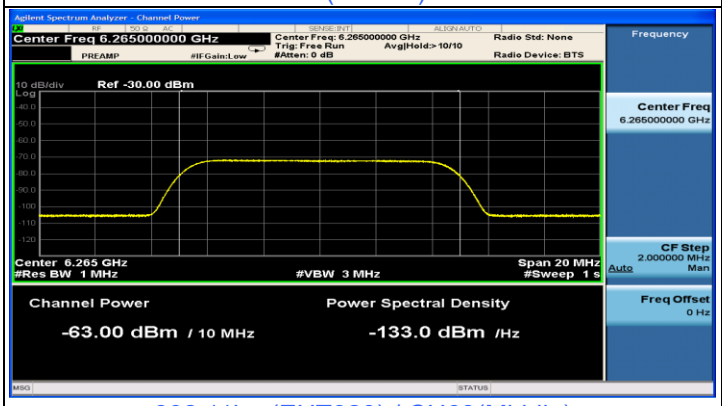
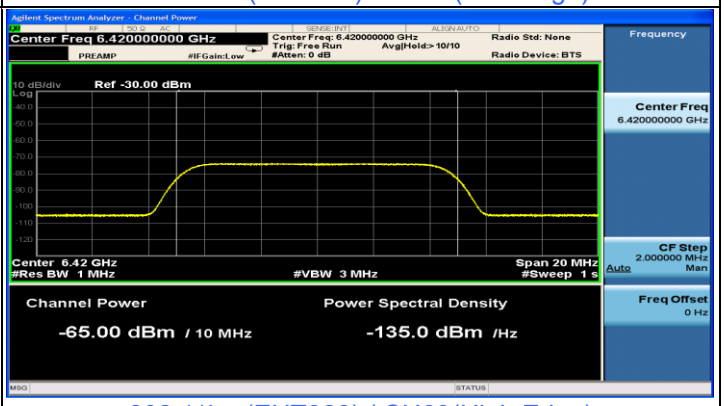
Plots of EUT Tx waveform

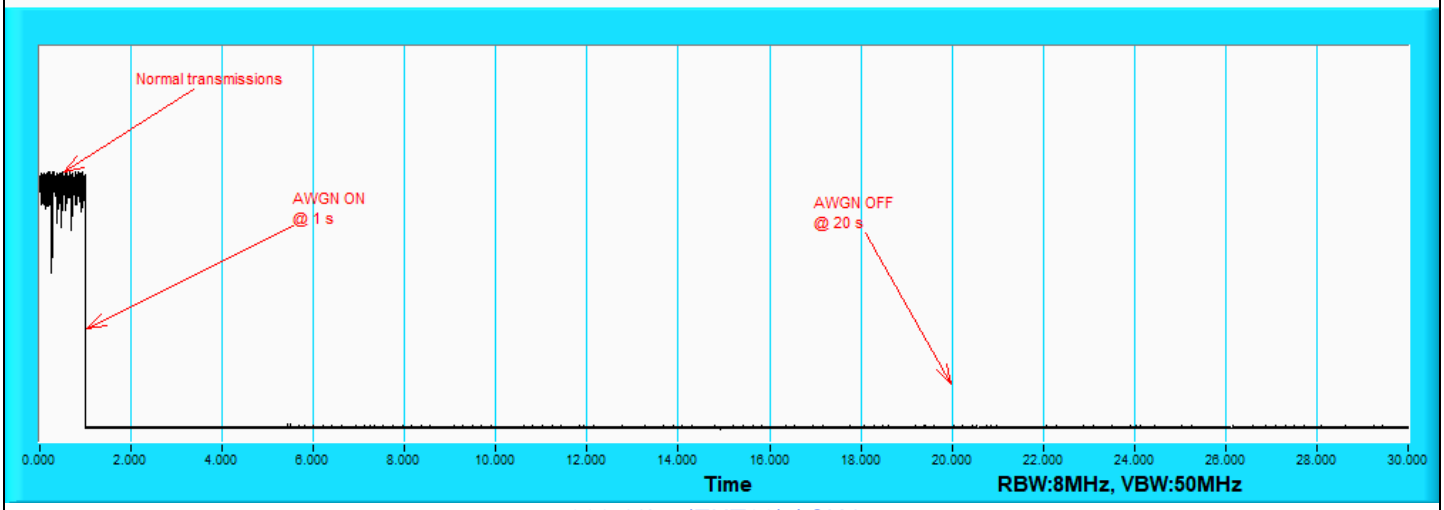


802.11be (EHT20) / CH45

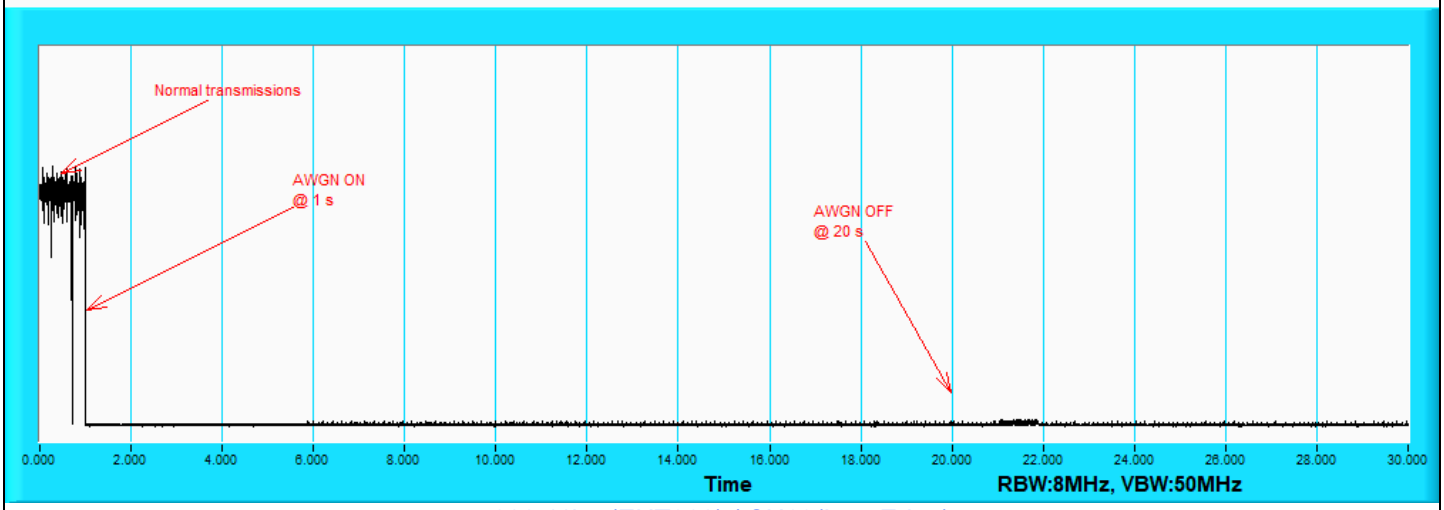


802.11be (EHT320) / CH63

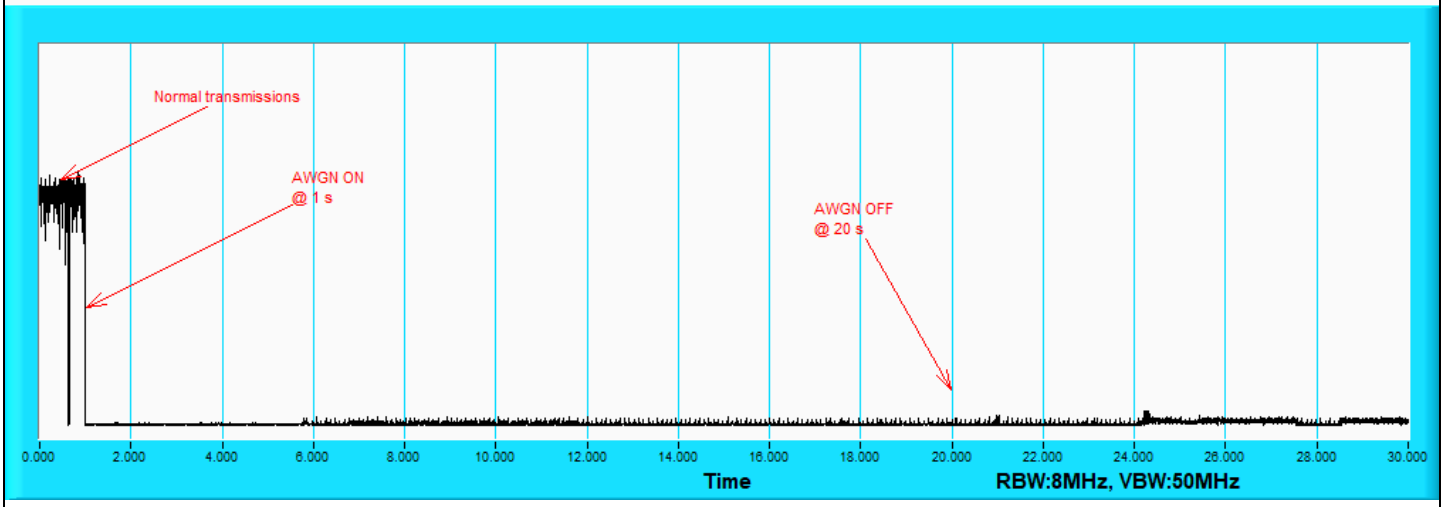
Plots of Injected signal (AWGN) level	
	
802.11be (EHT20) / CH45	802.11be (EHT320) / CH63(Low Edge)
	
802.11be (EHT320) / CH63(Middle)	802.11be (EHT320) / CH63(High Edge)

Plots of EUT ceased transmission in the time domain

802.11be (EHT20) / CH45

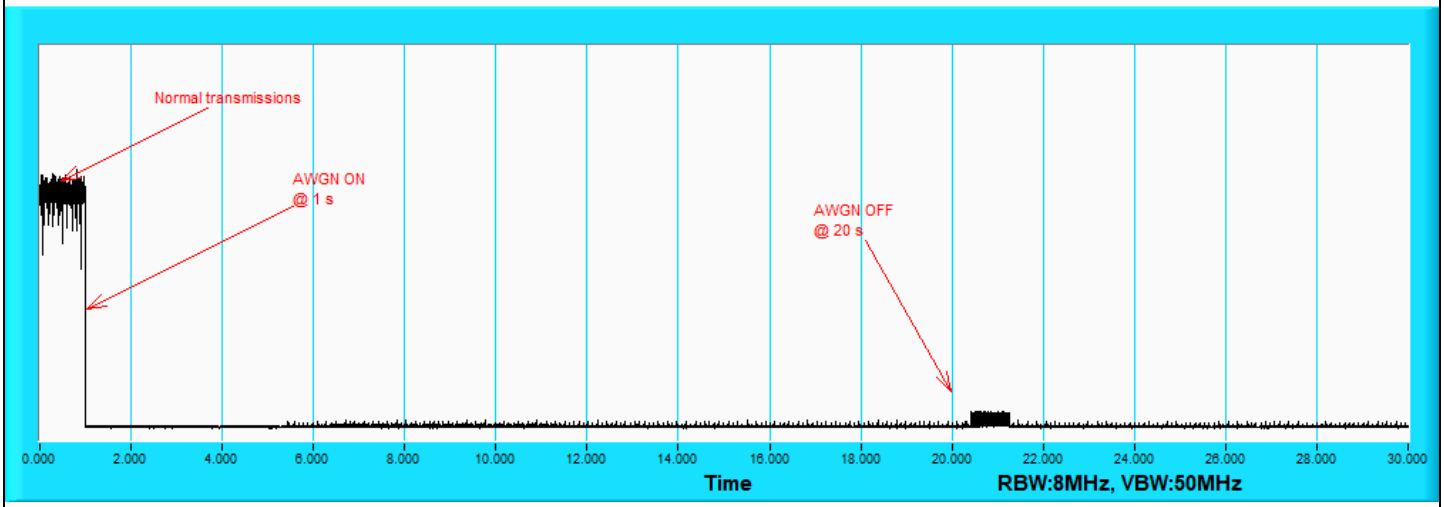
Plots of EUT ceased transmission in the time domain



802.11be (EHT320) / CH63(Low Edge)



802.11be (EHT320) / CH63(Middle)



802.11be (EHT320) / CH63(High Edge)

For U-NII-6

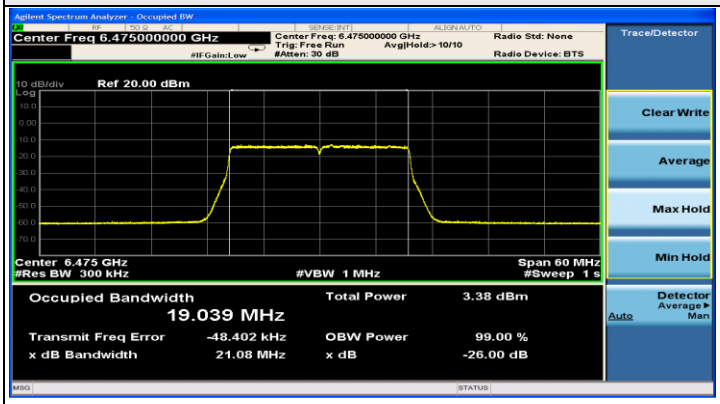
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	105	6475	6475	-67	2.68	0	-69.68	-62	OFF
					-68	2.68	0	-70.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
	320	95	6425	6270	-62	2.68	0	-64.68	-62	OFF
					-63	2.68	0	-65.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6425	-62	2.68	0	-64.68	-62	OFF
					-64	2.68	0	-66.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6580	-61	2.68	0	-63.68	-62	OFF
					-64	2.68	0	-66.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON

Notes:

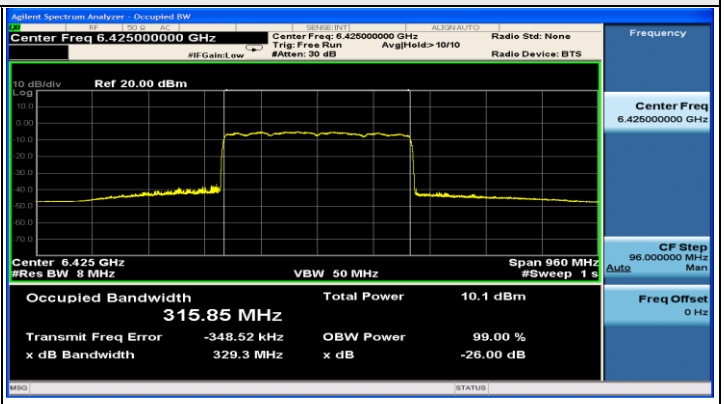
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 0) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	6475	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	320	6270	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6425	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6580	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

Plots of EUT Tx waveform

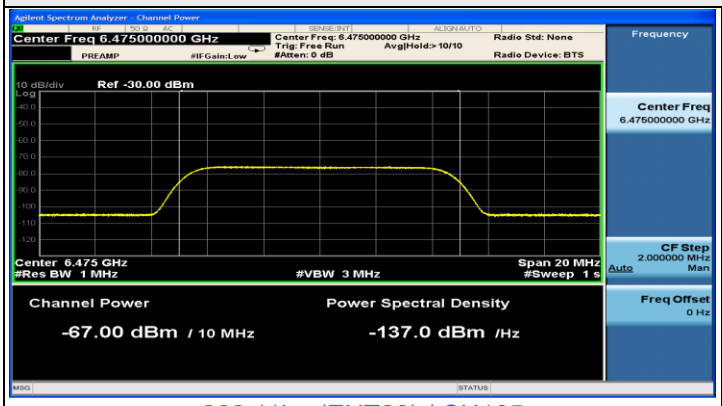


802.11be (EHT20) / CH105

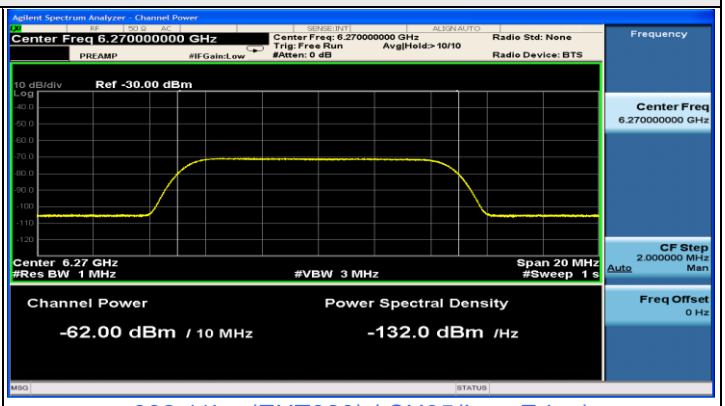


802.11be (EHT320) / CH95

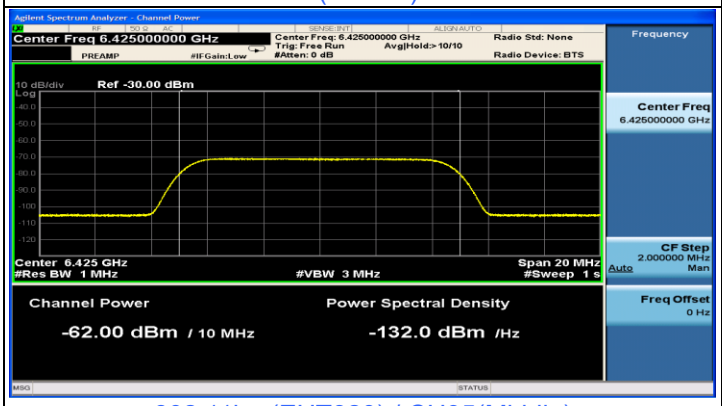
Plots of Injected signal (AWGN) level



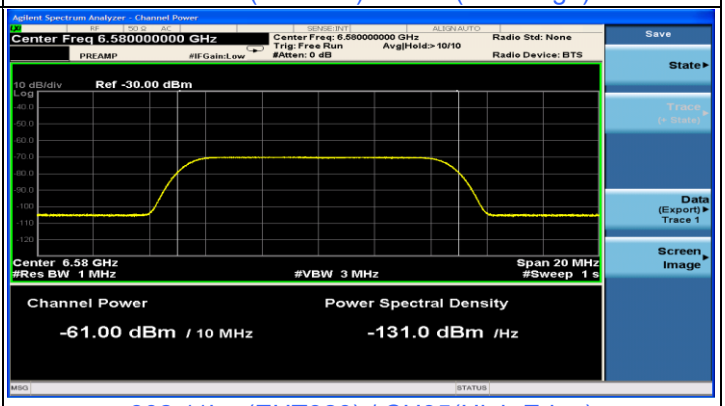
802.11be (EHT20) / CH105



802.11be (EHT320) / CH95(Low Edge)

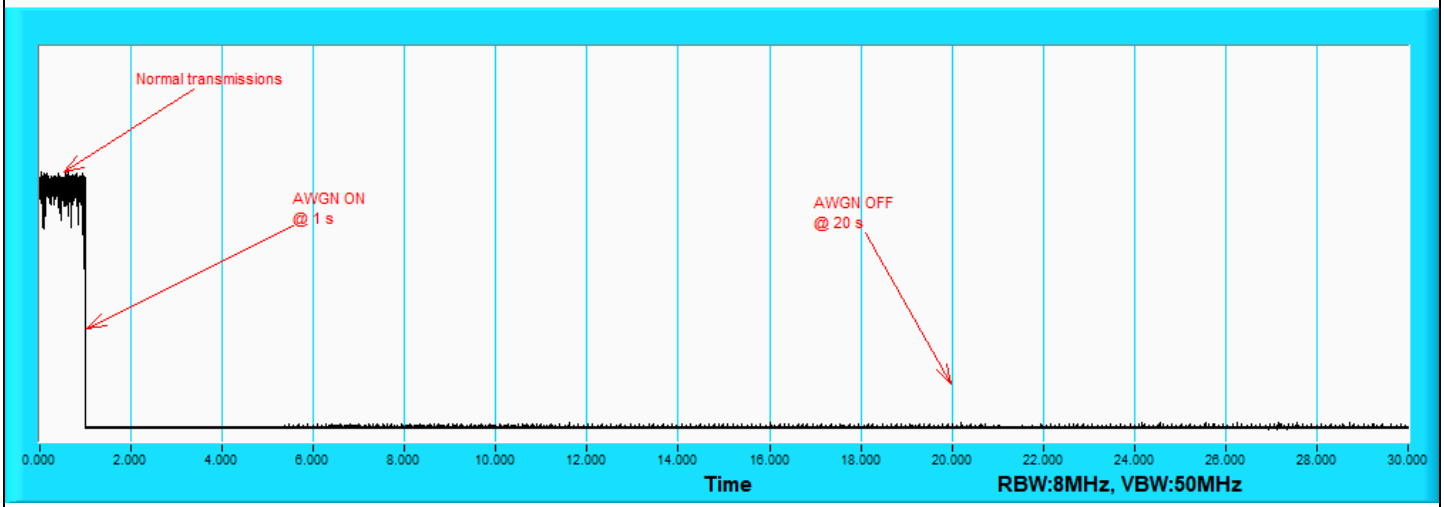


802.11be (EHT320) / CH95(Middle)

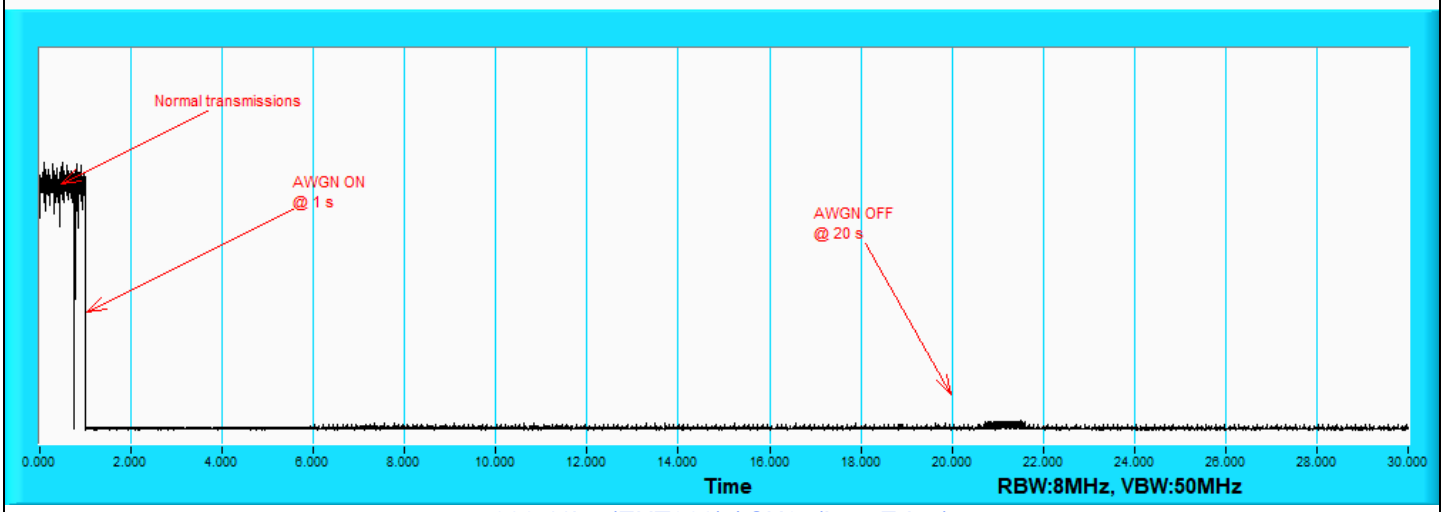
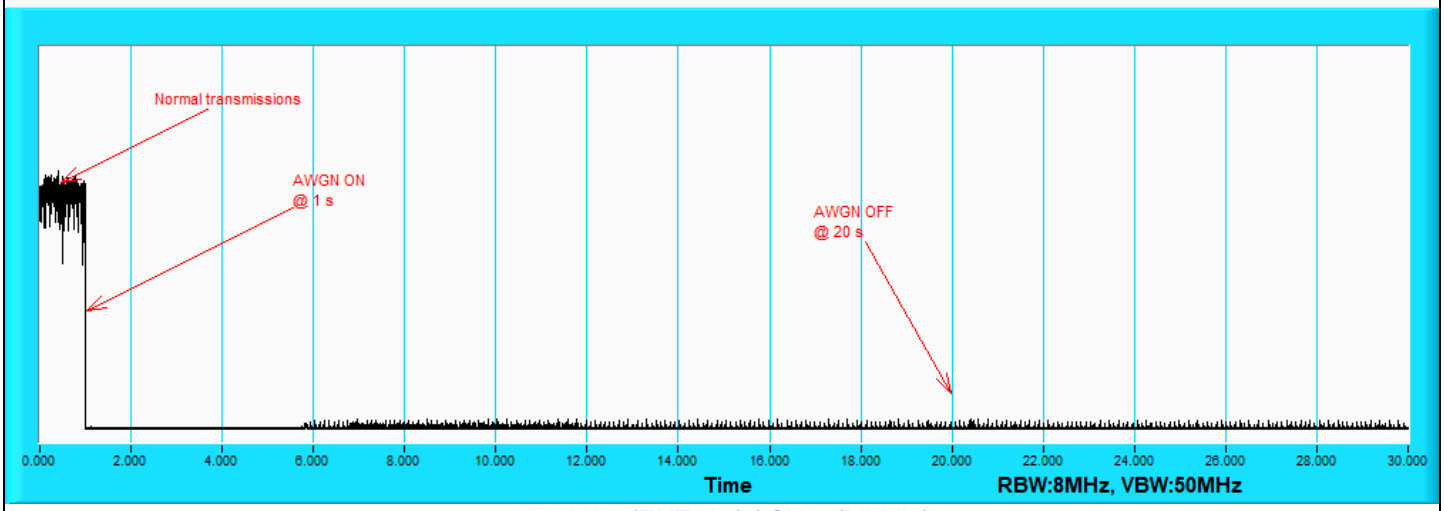
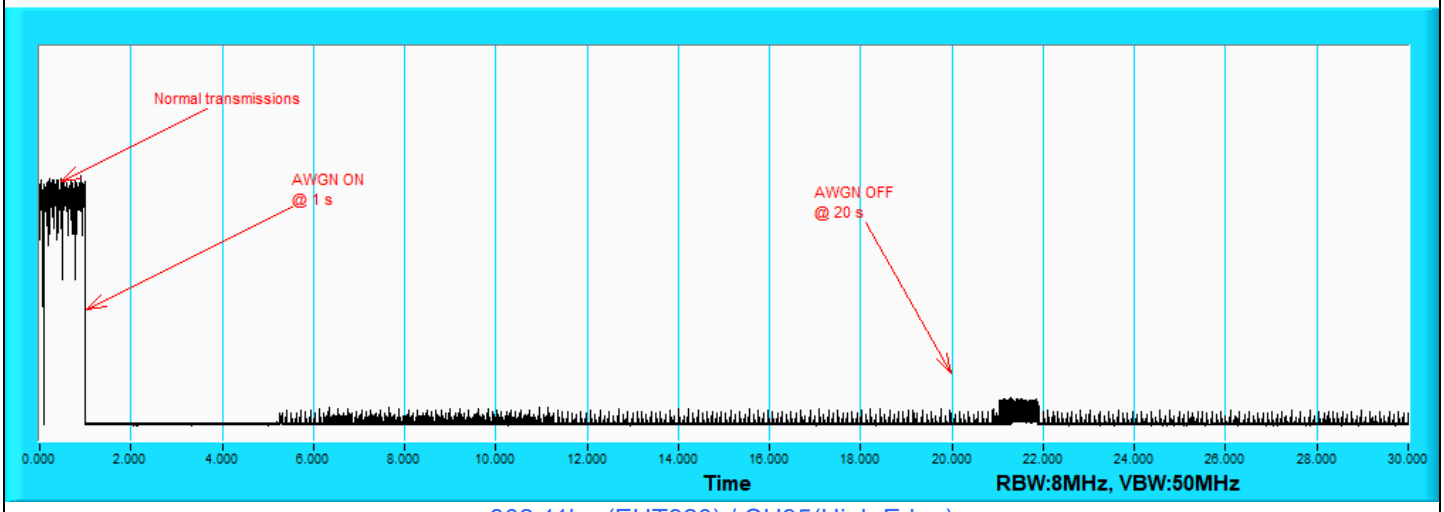


802.11be (EHT320) / CH95(High Edge)

Plots of EUT ceased transmission in the time domain



802.11be (EHT20) / CH105

Plots of EUT ceased transmission in the time domain

802.11be (EHT320) / CH95(Low Edge)

802.11be (EHT320) / CH95(Middle)

802.11be (EHT320) / CH95(High Edge)

For U-NII-7

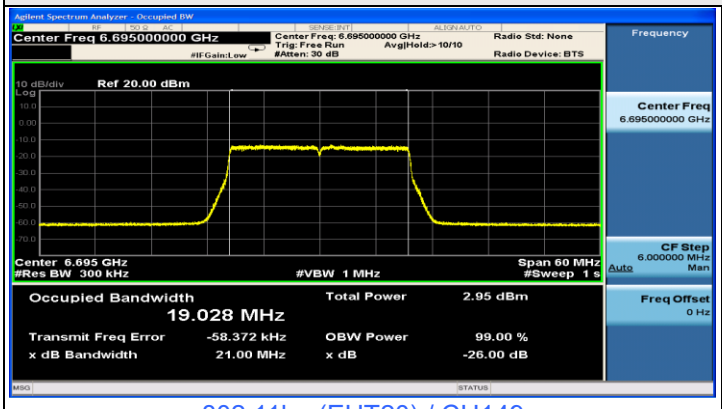
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	149	6695	6695	-66	2.68	0	-68.68	-62	OFF
					-68	2.68	0	-70.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
	320	159	6745	6590	-63	2.68	0	-65.68	-62	OFF
					-67	2.68	0	-69.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6745	-63	2.68	0	-65.68	-62	OFF
					-66	2.68	0	-68.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6900	-63	2.68	0	-65.68	-62	OFF
					-65	2.68	0	-67.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON

Notes:

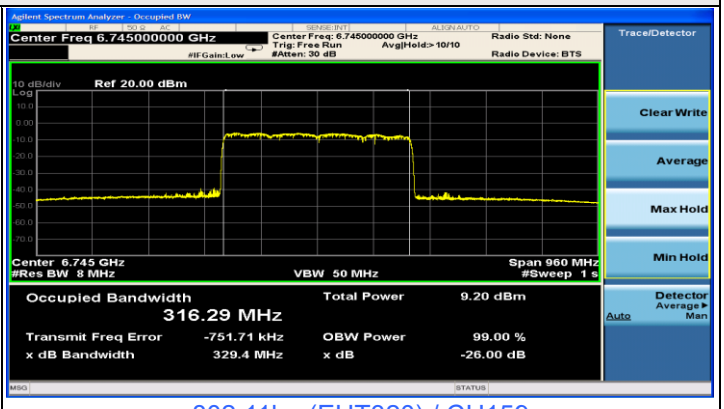
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 0) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	6695	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	320	6590	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6745	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6900	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

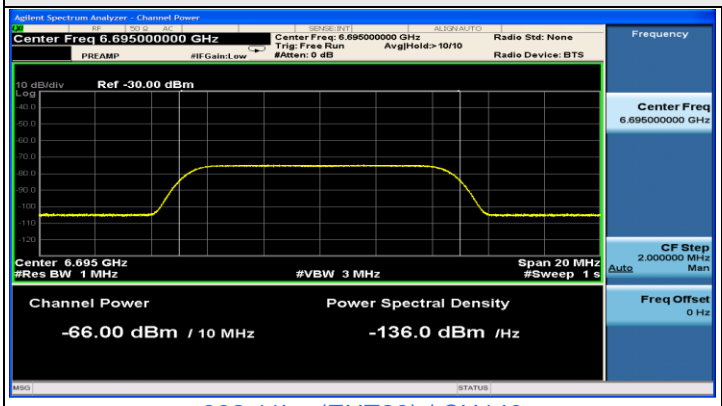
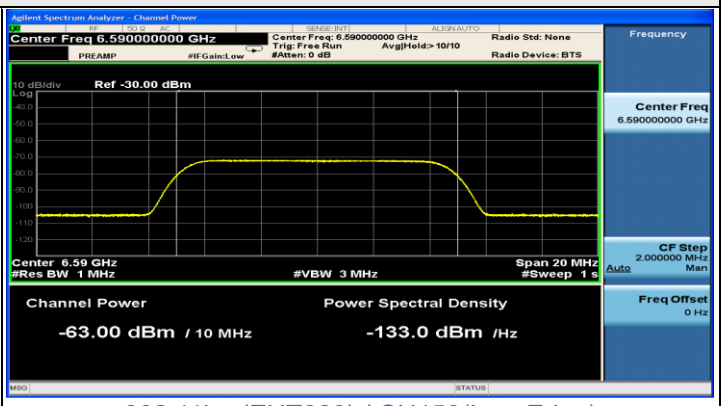
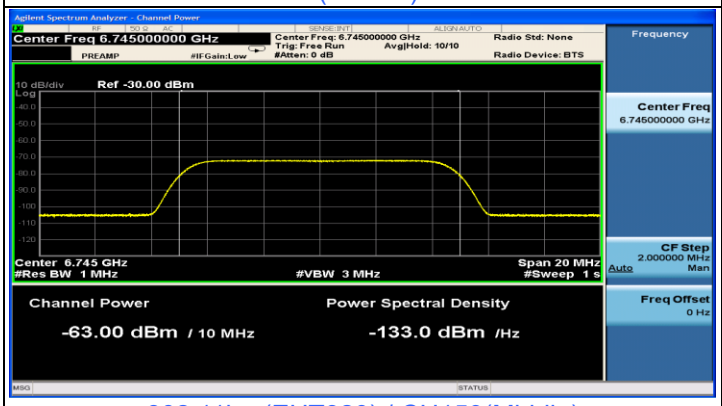
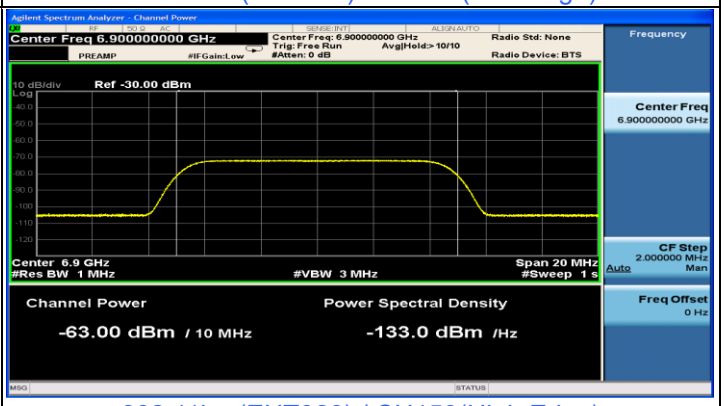
Plots of EUT Tx waveform

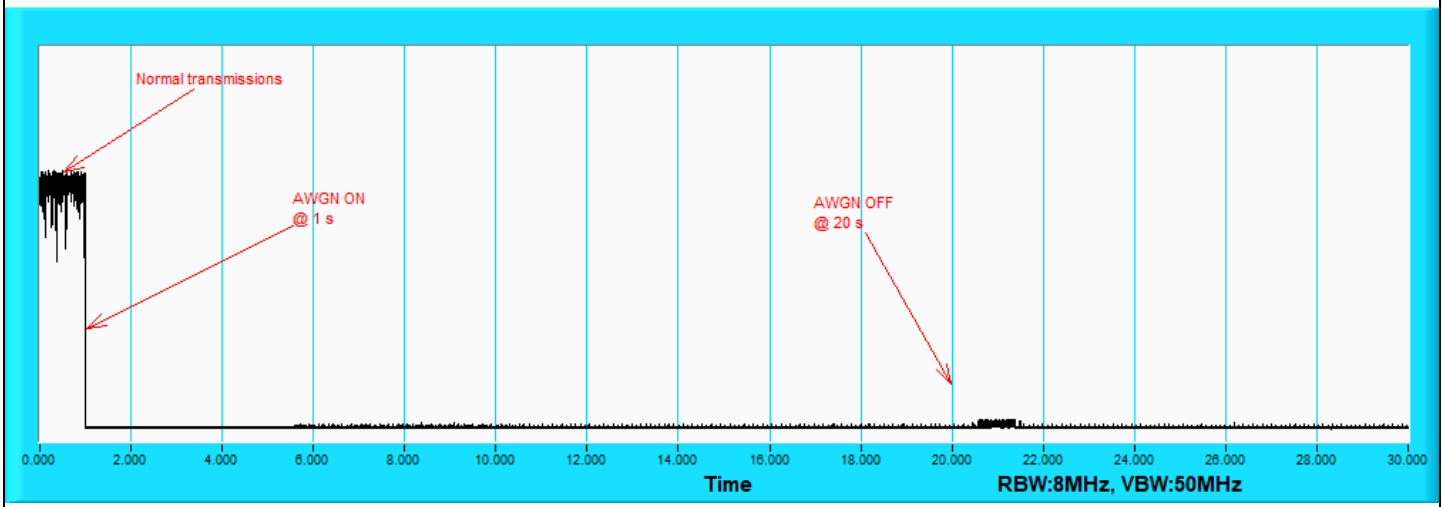


802.11be (EHT20) / CH149

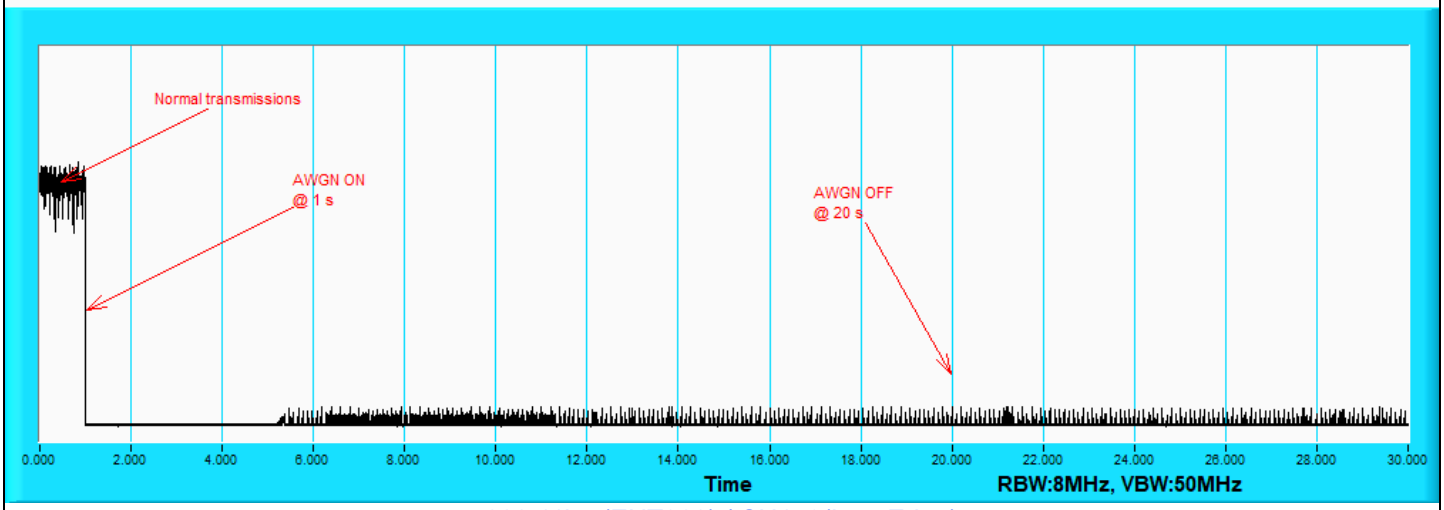


802.11be (EHT320) / CH159

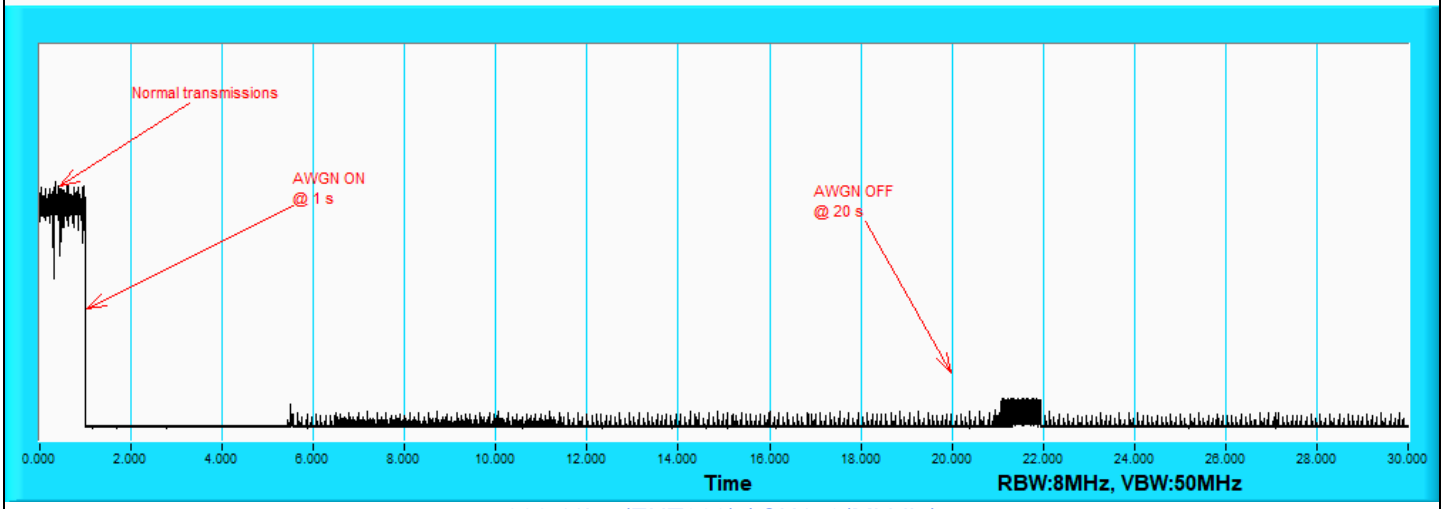
Plots of Injected signal (AWGN) level	
	
802.11be (EHT20) / CH149	802.11be (EHT320) / CH159(Low Edge)
	
802.11be (EHT320) / CH159(Middle)	802.11be (EHT320) / CH159(High Edge)

Plots of EUT ceased transmission in the time domain

802.11be (EHT20) / CH149

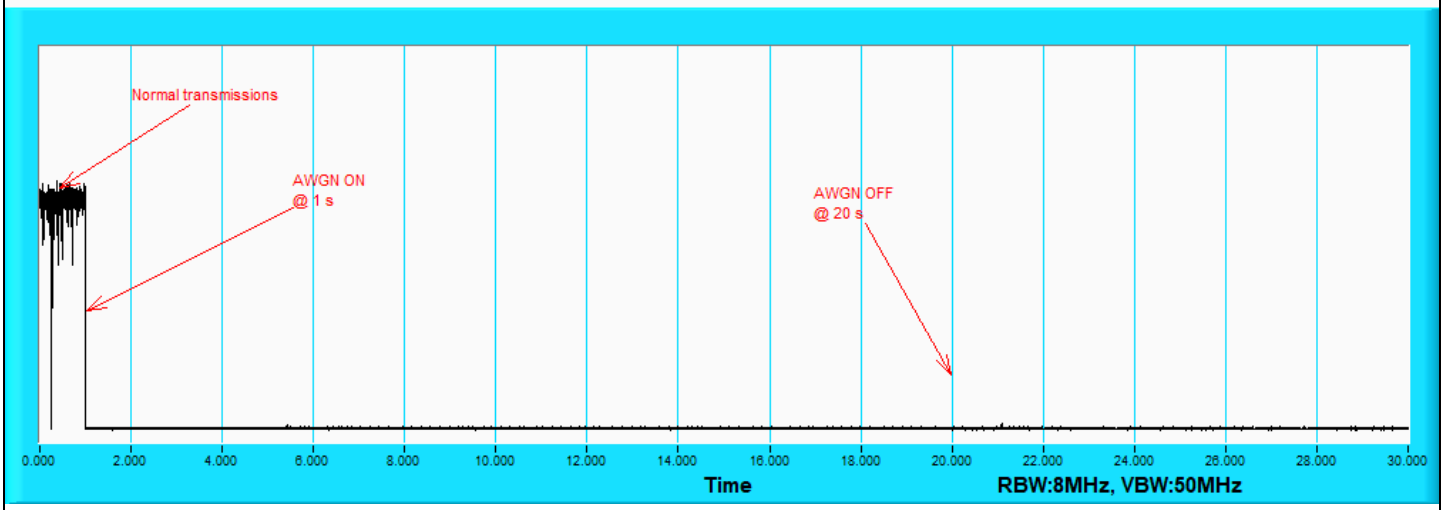
Plots of EUT ceased transmission in the time domain



802.11be (EHT320) / CH159(Low Edge)



802.11be (EHT320) / CH159(Middle)



802.11be (EHT320) / CH159(High Edge)

For U-NII-8

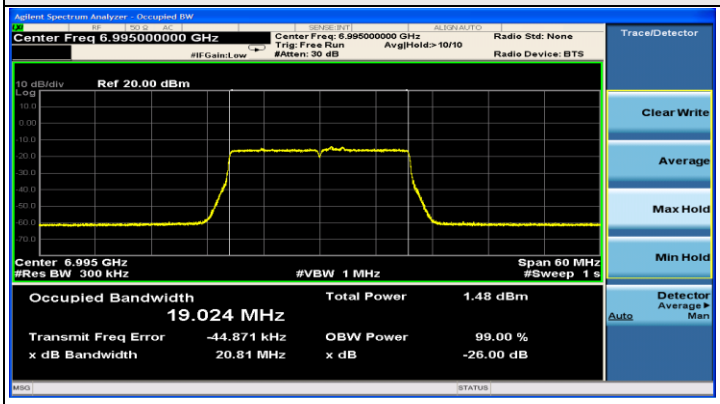
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	209	6995	6995	-66	2.68	0	-68.68	-62	OFF
					-69	2.68	0	-71.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
	320	191	6905	6750	-62	2.68	0	-64.68	-62	OFF
					-65	2.68	0	-67.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				6905	-62	2.68	0	-64.68	-62	OFF
					-65	2.68	0	-67.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON
				7060	-62	2.68	0	-64.68	-62	OFF
					-64	2.68	0	-66.68	-62	Minimal
					-79.32	2.68	0	-82	-62	ON

Notes:

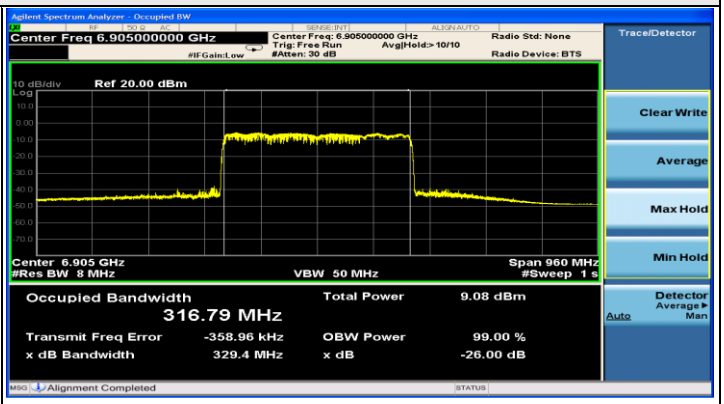
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 0) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	6995	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	320	6750	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6905	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		7060	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

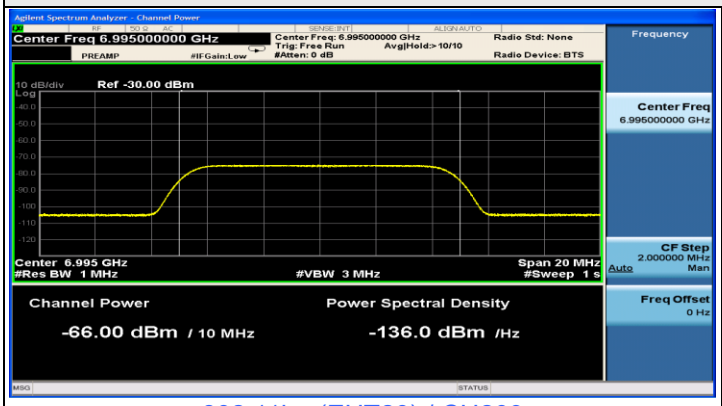
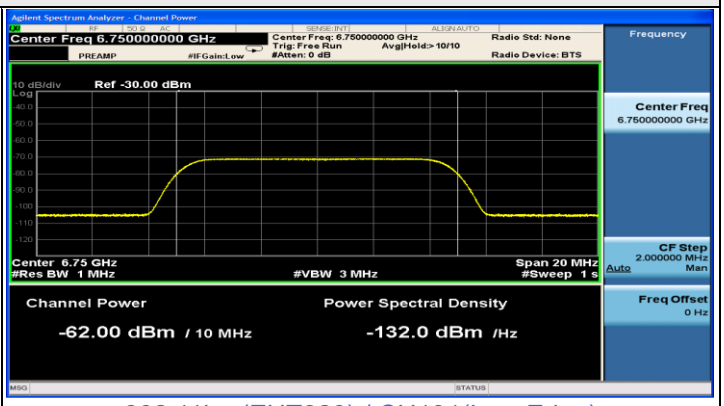
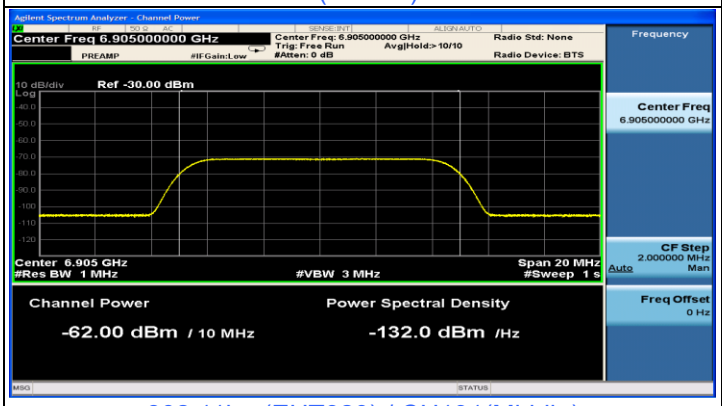
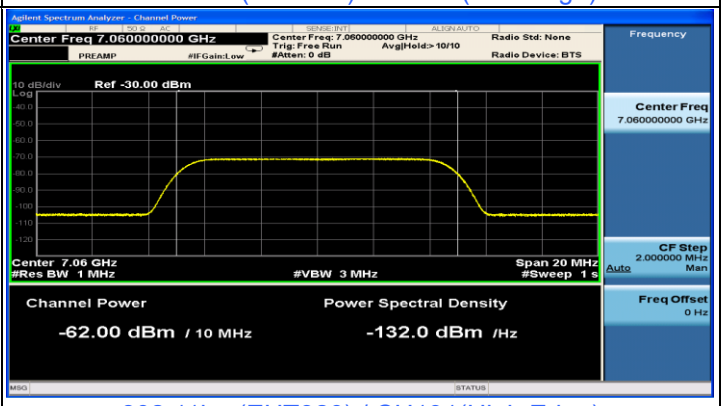
Plots of EUT Tx waveform

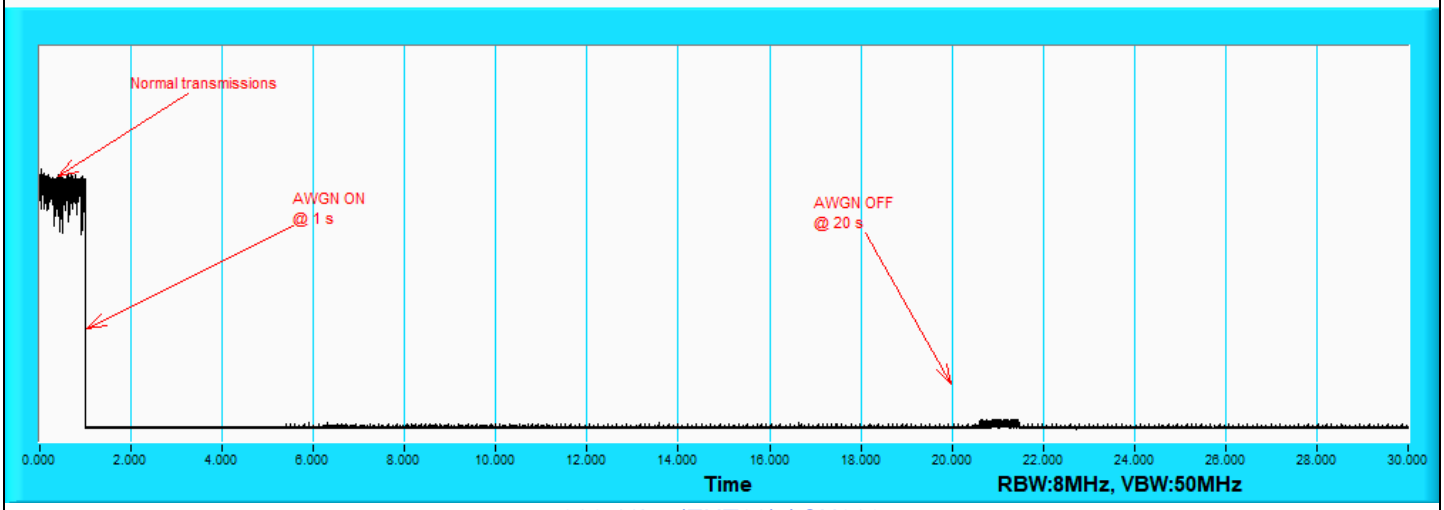


802.11be (EHT20) / CH209



802.11be (EHT320) / CH191

Plots of Injected signal (AWGN) level	
	
802.11be (EHT20) / CH209	802.11be (EHT320) / CH191(Low Edge)
	
802.11be (EHT320) / CH191(Middle)	802.11be (EHT320) / CH191(High Edge)

Plots of EUT ceased transmission in the time domain

802.11be (EHT20) / CH209