TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: **47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.: RFBFLF-WTW-P24030354-3
FCC ID: MSQ-RTBE7J00
Product: BE14000 Tri Band WiFi Router / BE9400 Tri Band WiFi Router
Brand: ASUS
Model No.: BT8, BT6
Series Model: BE14000
Received Date: 2024/5/31
Test Date: 2024/6/20 ~ 2024/8/6
Issued Date: 2024/8/15

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FCC Registration / Designation Number: 723255 / TW2022

Approved by: _____ , **Date:** 2024/8/15
May Chen / Manager

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Prepared by : Phoenix Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBFLF-WTW-P24030354-3	Original release.	2024/8/15

1 Certificate

Product:	BE14000 Tri Band WiFi Router / BE9400 Tri Band WiFi Router
Brand:	ASUS
Test Model:	BT8, BT6
Series Model:	BE14000
Sample Status:	Engineering sample
Applicant:	ASUSTeK COMPUTER INC.
Test Date:	2024/6/20 ~ 2024/8/6
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) 15.407(a)(6)	Maximum RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(5) 15.407(a)(6)	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 -14.61 dB at 0.31797 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.7 dB at 43.77 MHz
15.407(b)(6) 15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 5925.00 and 7125.00 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	Antenna connector is ipex(MHF) not a standard connector.

Notes:

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Emission Bandwidth	-	1050.00 Hz
In-Band Emission Mask	9 kHz ~ 40 GHz	2.6 dB
Occupied Bandwidth	-	1050.00 Hz
Frequency Stability	-	0.16 ppm
Contention-based Protocol	-	2.7 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.1 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.0 dB
	18 GHz ~ 40 GHz	5.3 dB

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

2.2 Supplementary Information

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

3 General Information

3.1 General Description of EUT

Product	BE14000 Tri Band WiFi Router / BE9400 Tri Band WiFi Router
Brand	ASUS
Test Model	BT8, BT6
Series Model	BE14000
Status of EUT	Engineering sample
Power Supply Rating	12 Vdc from adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11ax: up to 3602.9 Mbps 802.11be: up to 8647.2 Mbps
Operating Frequency	5.955 GHz ~ 6.415 GHz 6.435 GHz ~ 6.525 GHz 6.535 GHz ~ 6.865 GHz 6.875 GHz ~ 7.055 GHz
Number of Channel	802.11a, 802.11ax (HE20), 802.11be (EHT20): 59 802.11ax (HE40), 802.11be (EHT40): 29 802.11ax (HE80), 802.11be (EHT80): 14 802.11ax (HE160), 802.11be (EHT160): 7 802.11be (EHT320): 6
Output Power	**CDD Mode:** 5.955 GHz ~ 6.415 GHz: EIRP: 51.937 mW (17.15 dBm) 6.435 GHz ~ 6.525 GHz: EIRP: 49.868 mW (16.98 dBm) 6.535 GHz ~ 6.865 GHz: EIRP: 50.003 mW (16.99 dBm) 6.875 GHz ~ 7.055 GHz: EIRP: 71.75 mW (18.56 dBm) **Beamforming Mode (3T1S):** 5.955 GHz ~ 6.415 GHz: EIRP: 967.555 mW (29.86 dBm) 6.435 GHz ~ 6.525 GHz: EIRP: 570.797 mW (27.56 dBm) 6.535 GHz ~ 6.865 GHz: EIRP: 910.824 mW (29.59 dBm) 6.875 GHz ~ 7.055 GHz: EIRP: 908.155 mW (29.58 dBm) **Beamforming Mode (3T2S):** 5.955 GHz ~ 6.415 GHz: EIRP: 949.718 mW (29.78 dBm) 6.435 GHz ~ 6.525 GHz: EIRP: 492.311 mW (26.92 dBm) 6.535 GHz ~ 6.865 GHz: EIRP: 929.409 mW (29.68 dBm) 6.875 GHz ~ 7.055 GHz: EIRP: 937.855 mW (29.72 dBm)
Equipment Class	6ID: 15E 6 GHz Low-power indoor access point 6PP: 15E 6 GHz Subordinate indoor device

Note:

1. The EUT has below model names, more detailed information as below table.

Product Name	Model Name	I/O port	Description
BE14000 Tri Band WiFi Router	BT8	2.5G*2+1G*2	In all the models, the RF parameters/design are identical; the difference model for the different models is the I/O port supported.
	BE14000		
BE9400 Tri Band WiFi Router	BT6	2.5G*1+1G*3	

2. The EUT uses following accessories.

Item	Brand	Model	Specification
RJ45 cable	Eje	902-0A01287	Specification: Cat 5e, 1.5m
AC Adapter 1 (1st source)	APD	WA-36N12FU	AC Input: 100-240 V~, 50-60 Hz, 0.9 A Max DC Output: 12.0⎓, 3.0 A, 36.0 W DC Output Cable: 1.75 m, unshielded
AC Adapter 2 (2nd source)	I.T.E	MU36D1120300-A1	AC Input: 100-240 V~, 50-60 Hz, 1.0 A Max DC Output: 12.0⎓, 3.0 A DC Output Cable: 1.75 m, unshielded

3. There are WLAN (2.4 GHz), WLAN (5 GHz) and WLAN (6 GHz) technology used for the EUT.

4. Simultaneously transmission combination.

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

5. 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.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	2.4G 0 5G 0	WHA YU	C660-510629-A	1.81 5.03 4.71 4.19 3.99	2.4~2.4835 5.15~5.25 5.25~5.35 5.47~5.725 5.725~5.85	Dipole	ipex(MHF)	87
2	2.4G 1 5G 1	WHA YU	C660-510629-A	2.18 4.43 3.78 3.18 4.59	2.4~2.4835 5.15~5.25 5.25~5.35 5.47~5.725 5.725~5.85	Dipole	ipex(MHF)	92
3	5G 2 (ZW DFS scan, RX only)	WHA YU	C660-510629-A	5.51 4.65 5.95 6.11	5.15~5.25 5.25~5.35 5.47~5.725 5.725~5.85	Dipole	ipex(MHF)	70
4	5G 3	WHA YU	C660-510629-A	4.56 4.84 6.22 6.19	5.15~5.25 5.25~5.35 5.47~5.725 5.725~5.85	Dipole	ipex(MHF)	88
5	6G 0	WHA YU	C660-510629-A	4.25 3.88 3.93 5.12	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	ipex(MHF)	86
6	6G 1	WHA YU	C660-510629-A	3.77 3.26 2.96 3.34	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	ipex(MHF)	83
7	6G 2	WHA YU	C660-510629-A	3.19 3.07 2.36 3.25	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	ipex(MHF)	100

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

2. The directional antenna gain, please refer to the following table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)		Antenna Type	Connector Type
	Nss1	Nss2		
2.4 ~ 2.4835	7.45	-	Dipole	ipex(MHF)
5.15 ~ 5.25	7.59	5.81	Dipole	ipex(MHF)
5.25 ~ 5.35	7.81	6.04	Dipole	ipex(MHF)
5.47 ~ 5.725	7.76	6.05	Dipole	ipex(MHF)
5.725 ~ 5.85	7.54	6.01	Dipole	ipex(MHF)
5.925 ~ 6.425	5.77	3.64	Dipole	ipex(MHF)
6.425~6.525	5.39	3.11	Dipole	ipex(MHF)
6.525~6.875	5.74	3.28	Dipole	ipex(MHF)
6.875~7.125	5.07	3.03	Dipole	ipex(MHF)

3. The EUT incorporates a MIMO function:

6 GHz Band		
Modulation Mode	**TX & RX Configuration**	
802.11a	3TX	3RX
802.11ax (HE20)	3TX	3RX
802.11ax (HE40)	3TX	3RX
802.11ax (HE80)	3TX	3RX
802.11ax (HE160)	3TX	3RX
802.11be (EHT20)	3TX	3RX
802.11be (EHT40)	3TX	3RX
802.11be (EHT80)	3TX	3RX
802.11be (EHT160)	3TX	3RX
802.11be (EHT320)	3TX	3RX

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, 160 MHz) and 802.11be mode for 20 MHz (40 MHz, 80 MHz, 160 MHz) therefore the manufacturer will control the power for 802.11ax mode is same as the 802.11be mode or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

U-NII-5:

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

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

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

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

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

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

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

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

2 channels are provided for 802.11be (EHT320):

Channel	Frequency	Channel	Frequency
31	6105 MHz	63	6265 MHz

U-NII-6:

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

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

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

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

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

Channel	Frequency
103	6465 MHz

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

Channel	Frequency
*111	6505 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
*95	6425 MHz

U-NII-7:

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

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

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

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

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

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

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

Channel	Frequency	Channel	Frequency
143	6665 MHz	*175	6825 MHz

2 channels are provided for 802.11be (EHT320):

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

U-NII-8:

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
185	6875 MHz	189	6895 MHz	193	6915 MHz	197	6935 MHz
201	6955 MHz	205	6975 MHz	209	6995 MHz	213	7015 MHz
217	7035 MHz	221	7055 MHz	225	7075 MHz	229	7095 MHz
233	7115 MHz						

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

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

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

Channel	Frequency	Channel	Frequency
199	6945 MHz	215	7025 MHz

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

Channel	Frequency
207	6985 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
*191	6905 MHz

Note: * mean these are straddle channels.

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The EUT has the following configure modes: Configure A/ Configure B. Pre-scan these modes and find the worst case as a representative test condition except for Unwanted Emissions below 1 GHz and AC Power Conducted Emissions test items. 2. The AC Adapter has the following models: Adapter 1/ Adapter 2. Pre-scan these models of AC Adapters and find the worst case as a representative test condition. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. EUT configure mode worst condition (except Unwanted Emissions below 1 GHz and AC Power Conducted Emissions test items): Configure A 2. AC Adapter worst condition: Adapter 2

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

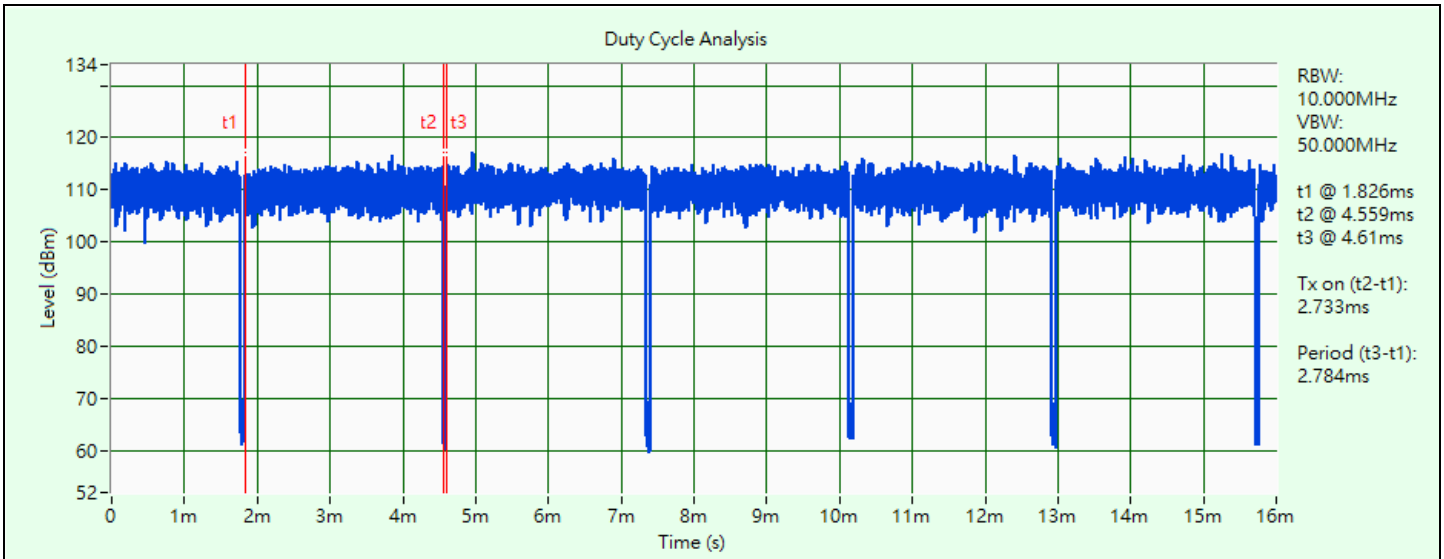
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Maximum RF Output Power	A	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	6Mb/s
		802.11be (EHT20)	Beamforming (3T1S) / Beamforming (3T2S)	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	MCS0
		802.11be (EHT40)		3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 219	BPSK	MCS0
		802.11be (EHT80)		7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
		802.11be (EHT160)		15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
		802.11be (EHT320)		31, 63, 127, 159, 191	BPSK	MCS0
Maximum Power Spectral Density	A	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	6Mb/s
		802.11be (EHT20)	Beamforming (3T1S) / Beamforming (3T2S)	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	MCS0
		802.11be (EHT40)		3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 219	BPSK	MCS0
		802.11be (EHT80)		7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
		802.11be (EHT160)		15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
		802.11be (EHT320)		31, 63, 127, 159, 191	BPSK	MCS0

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Emission Bandwidth	A	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	6Mb/s
		802.11be (EHT20)	Beamforming (3T1S) / Beamforming (3T2S)	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	MCS0
		802.11be (EHT40)		3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 219	BPSK	MCS0
		802.11be (EHT80)		7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
		802.11be (EHT160)		15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
		802.11be (EHT320)		31, 63, 127, 159, 191	BPSK	MCS0
In-Band Emission Mask	A	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	6Mb/s
		802.11be (EHT20)	Beamforming (3T1S) / Beamforming (3T2S)	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	MCS0
		802.11be (EHT40)		3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 219	BPSK	MCS0
		802.11be (EHT80)		7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
		802.11be (EHT160)		15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
		802.11be (EHT320)		31, 63, 127, 159, 191	BPSK	MCS0
Occupied Bandwidth	A	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	6Mb/s
		802.11be (EHT20)	Beamforming (3T1S) / Beamforming (3T2S)	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	MCS0
		802.11be (EHT40)		3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 219	BPSK	MCS0
		802.11be (EHT80)		7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
		802.11be (EHT160)		15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
		802.11be (EHT320)		31, 63, 127, 159, 191	BPSK	MCS0

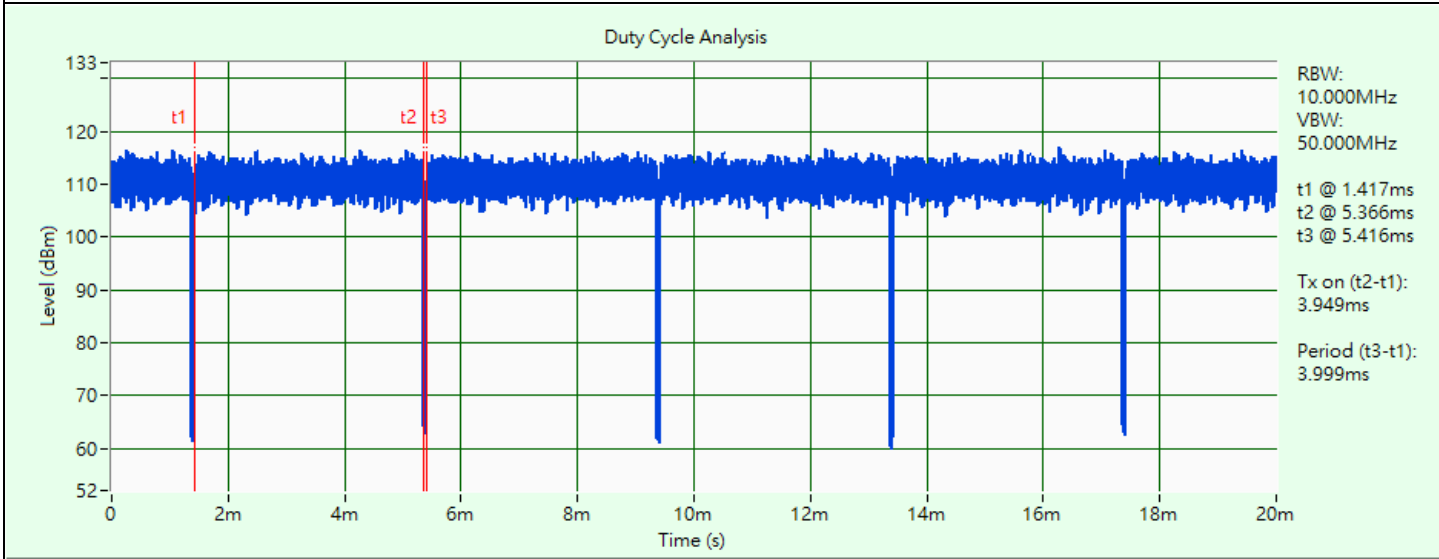
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Frequency Stability	A	802.11a	-	1	unmodulated	-
Contention-based Protocol	A	802.11be (EHT20)	-	1, 97, 129, 189	BPSK	MCS0
		802.11be (EHT320)	-	31, 95, 159, 191	BPSK	MCS0
AC Power Conducted Emissions	A, B	802.11be (EHT320)	Beamforming (3T1S)	31	BPSK	MCS0
			Beamforming (3T2S)	63	BPSK	MCS0
Unwanted Emissions below 1 GHz	A, B	802.11be (EHT320)	Beamforming (3T1S)	31	BPSK	MCS0
			Beamforming (3T2S)	63	BPSK	MCS0
Unwanted Emissions above 1 GHz	A	802.11a	CDD	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	6Mb/s
		802.11be (EHT20)	Beamforming (3T1S) / Beamforming (3T2S)	1, 45, 93, 97, 105, 113, 117, 149, 181, 185, 209, 221	BPSK	MCS0
		802.11be (EHT40)		3, 43, 91, 99, 107, 115, 123, 155, 179, 187, 211, 219	BPSK	MCS0
		802.11be (EHT80)		7, 39, 87, 103, 119, 151, 183, 199, 215	BPSK	MCS0
		802.11be (EHT160)		15, 47, 79, 111, 143, 175, 207	BPSK	MCS0
		802.11be (EHT320)		31, 63, 127, 159, 191	BPSK	MCS0
EUT Configure Mode:	A	Model: BT8				
	B	Model: BT6				
Note: Partial RU (resource unit) and channel puncturing mechanisms are not supported.						

3.5 Duty Cycle of Test Signal

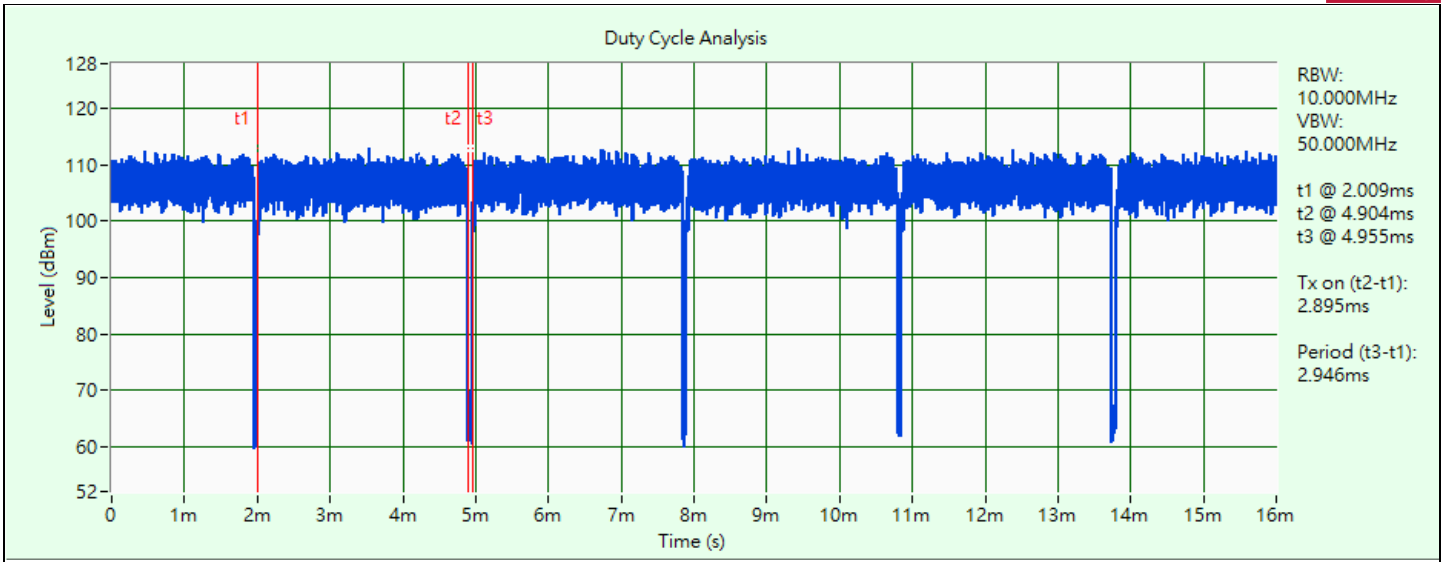
802.11a CDD: Duty cycle = 2.733 ms / 2.784 ms x 100% = 98.2%
802.11be (EHT20) Beamforming (3T1S): Duty cycle = 3.949 ms / 3.999 ms x 100% = 98.7%
802.11be (EHT40) Beamforming (3T1S): Duty cycle = 2.895 ms / 2.946 ms x 100% = 98.3%
802.11be (EHT80) Beamforming (3T1S): Duty cycle = 4.125 ms / 4.186 ms x 100% = 98.5%
802.11be (EHT160) Beamforming (3T1S): Duty cycle = 2.774 ms / 2.824 ms x 100% = 98.2%
802.11be (EHT320) Beamforming (3T1S): Duty cycle = 3.394 ms / 3.445 ms x 100% = 98.5%
802.11be (EHT20) Beamforming (3T2S): Duty cycle = 3.819 ms / 3.869 ms x 100% = 98.7%
802.11be (EHT40) Beamforming (3T2S): Duty cycle = 3.368 ms / 3.41 ms x 100% = 98.8%
802.11be (EHT80) Beamforming (3T2S): Duty cycle = 1.644 ms / 1.67 ms x 100% = 98.4%
802.11be (EHT160) Beamforming (3T2S): Duty cycle = 2.212 ms / 2.254 ms x 100% = 98.1%
802.11be (EHT320) Beamforming (3T2S): Duty cycle = 2.185 ms / 2.226 ms x 100% = 98.2%



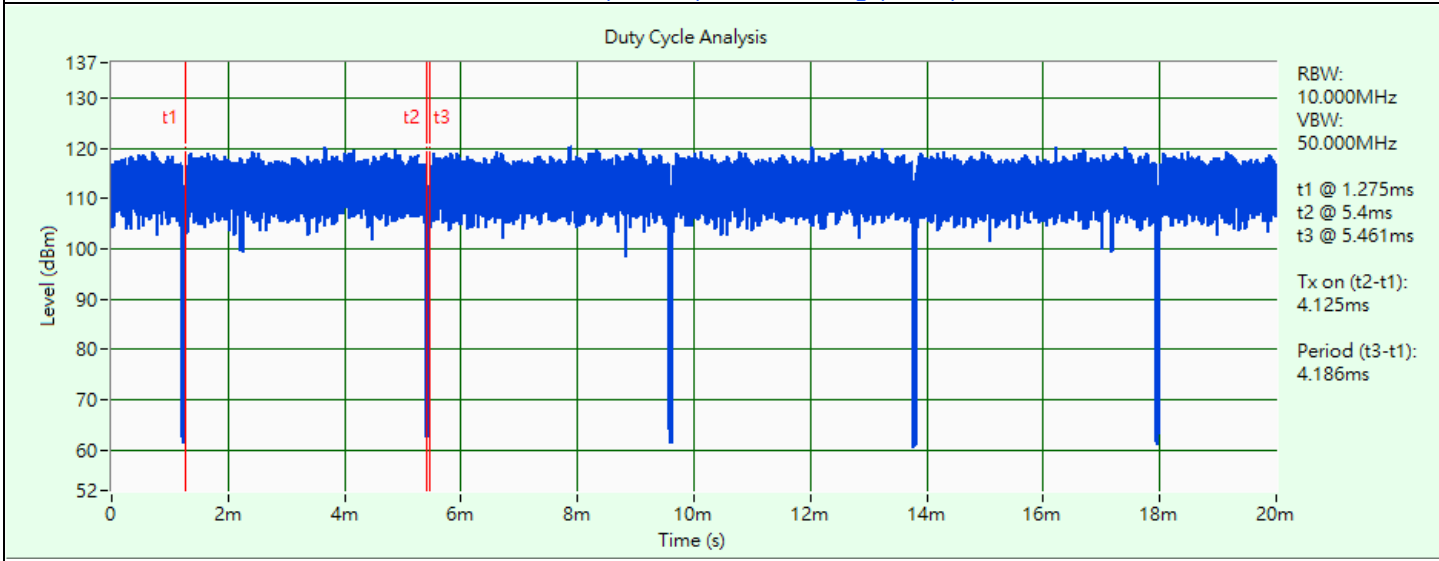
802.11a CDD



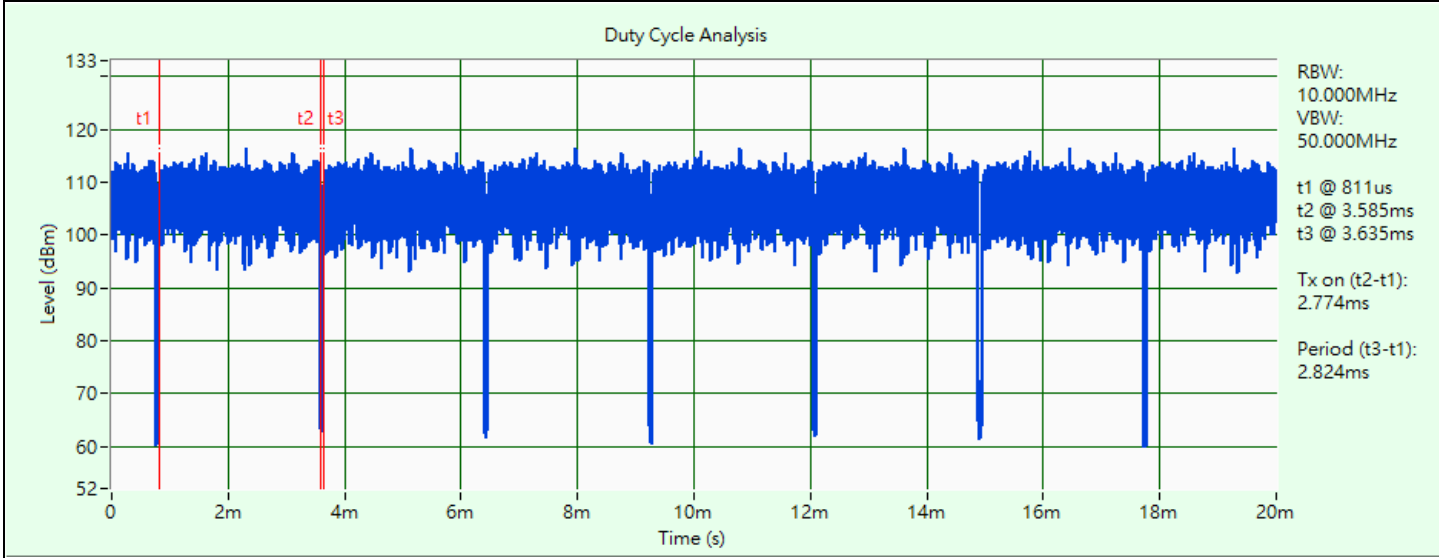
802.11be (EHT20) Beamforming (3T1S)



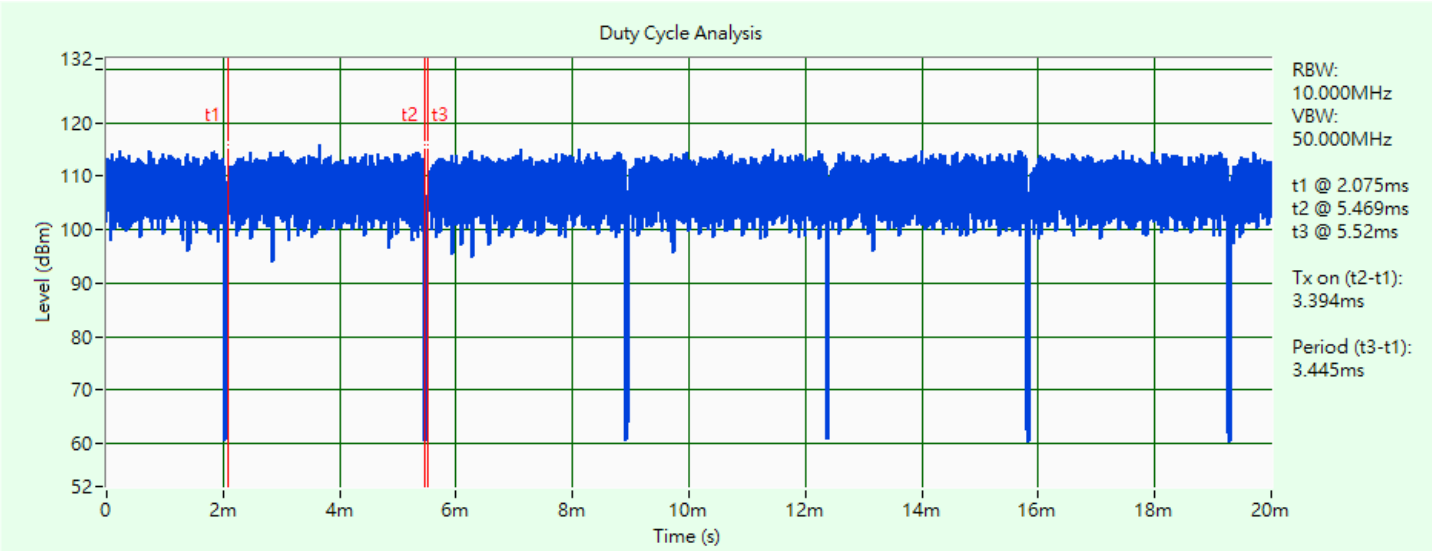
802.11be (EHT40) Beamforming (3T1S)



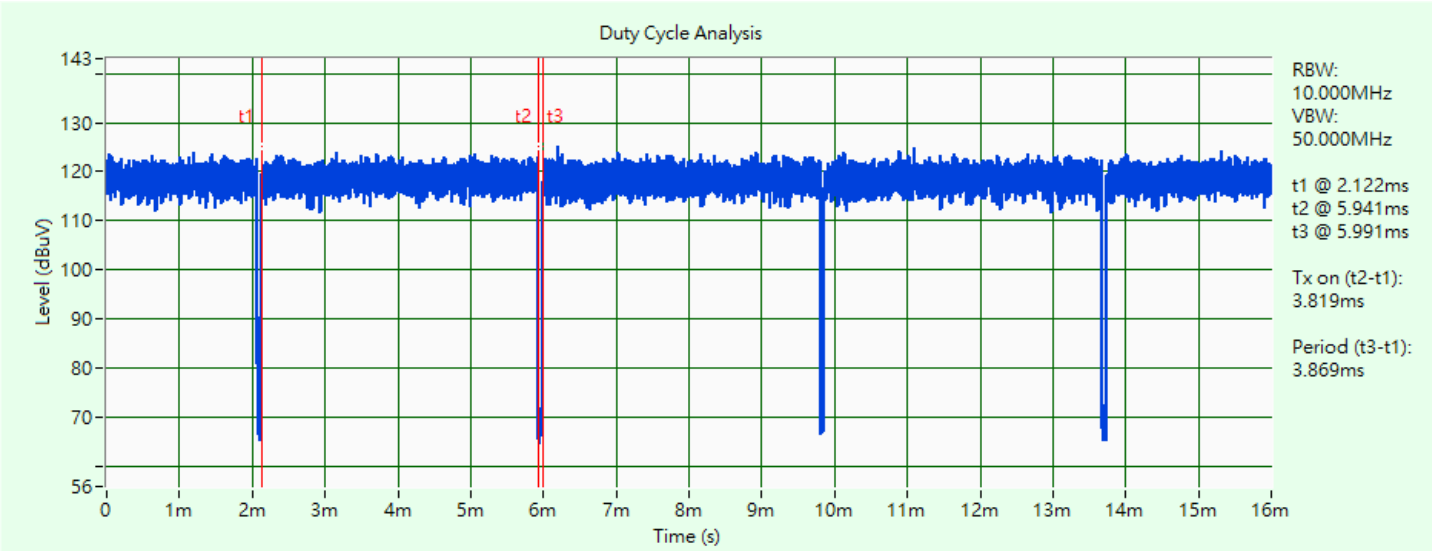
802.11be (EHT80) Beamforming (3T1S)



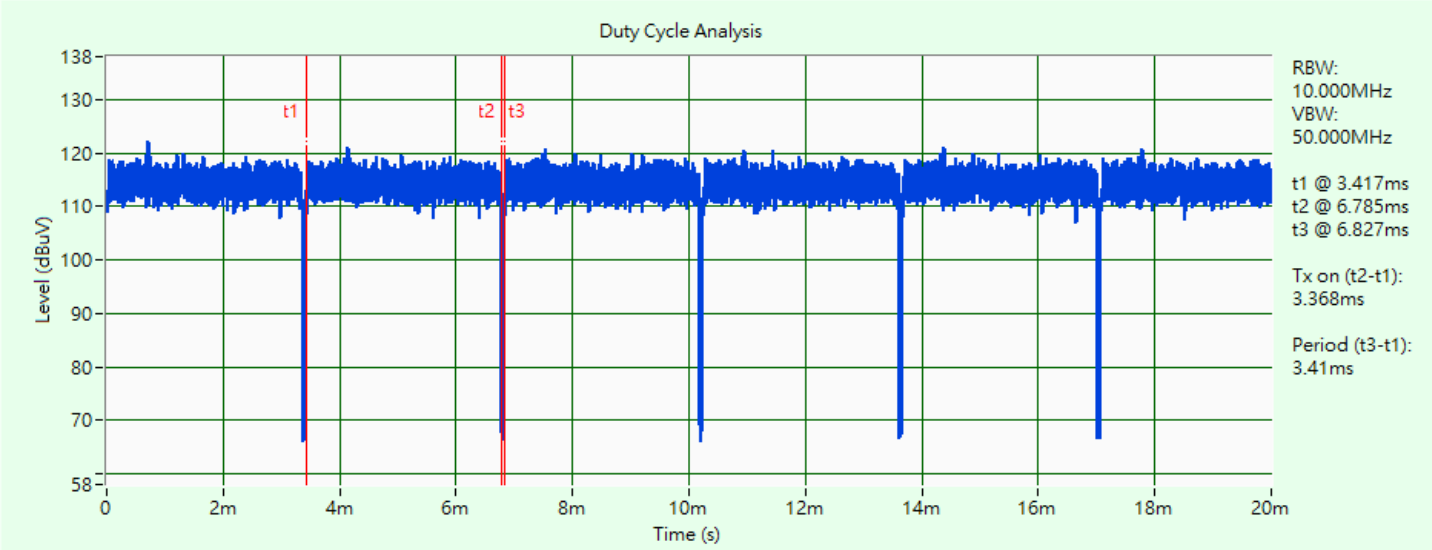
802.11be (EHT160) Beamforming (3T1S)



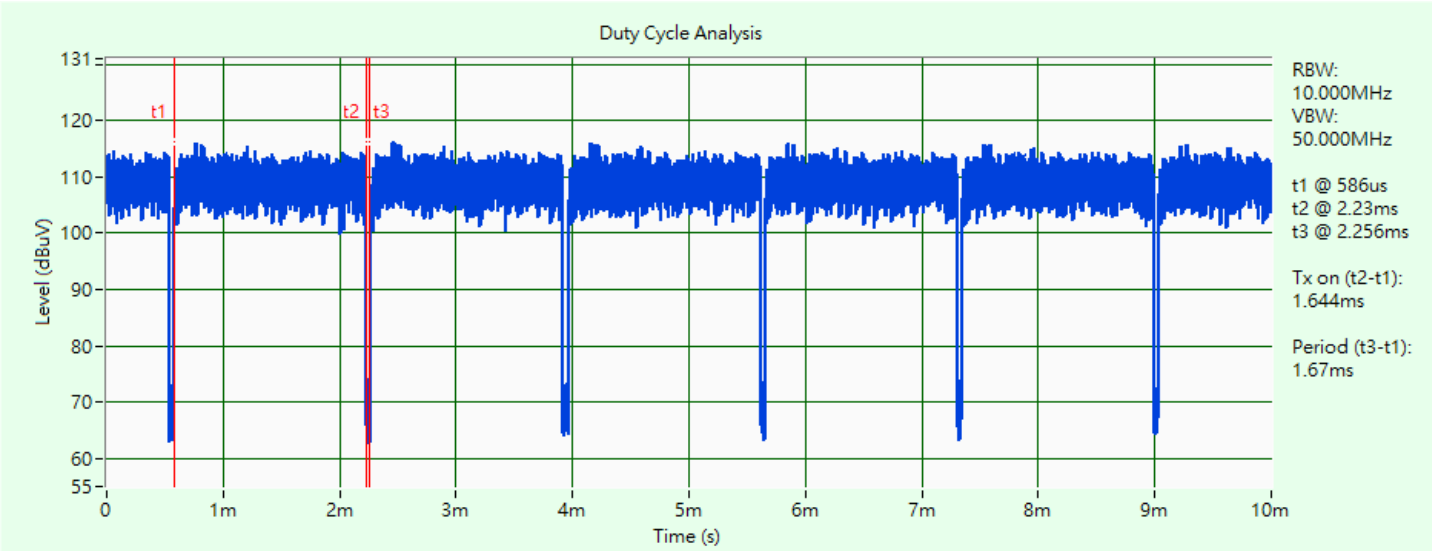
802.11be (EHT320) Beamforming (3T1S)



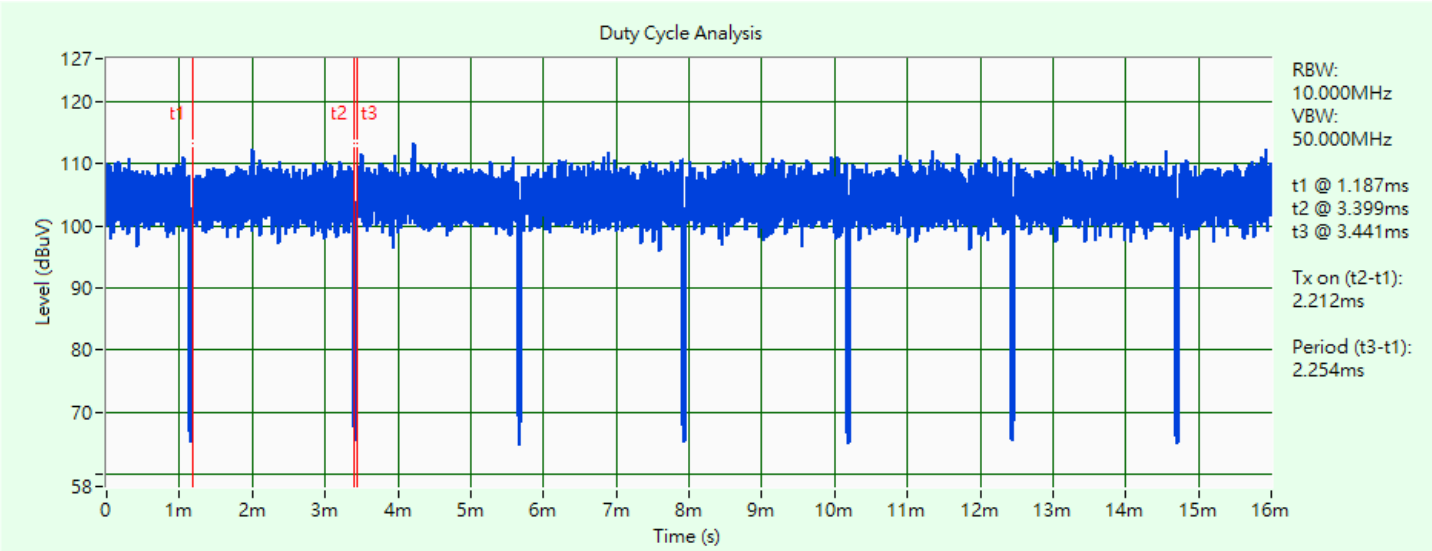
802.11be (EHT20) Beamforming (3T2S)



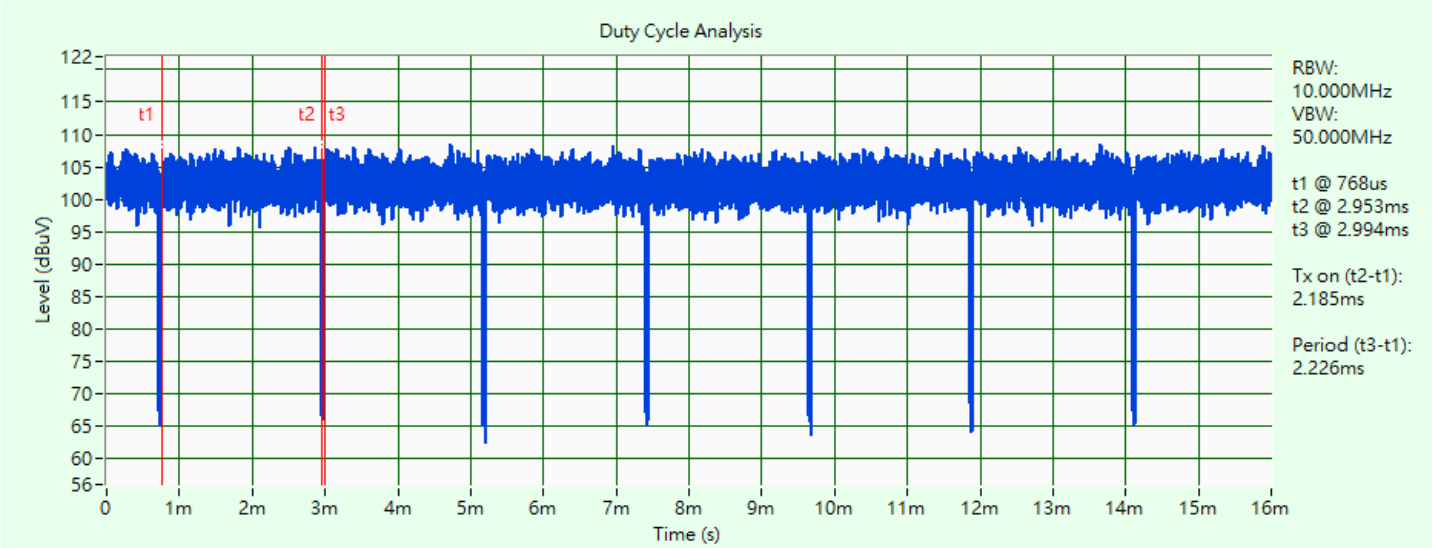
802.11be (EHT40) Beamforming (3T2S)



802.11be (EHT80) Beamforming (3T2S)



802.11be (EHT160) Beamforming (3T2S)



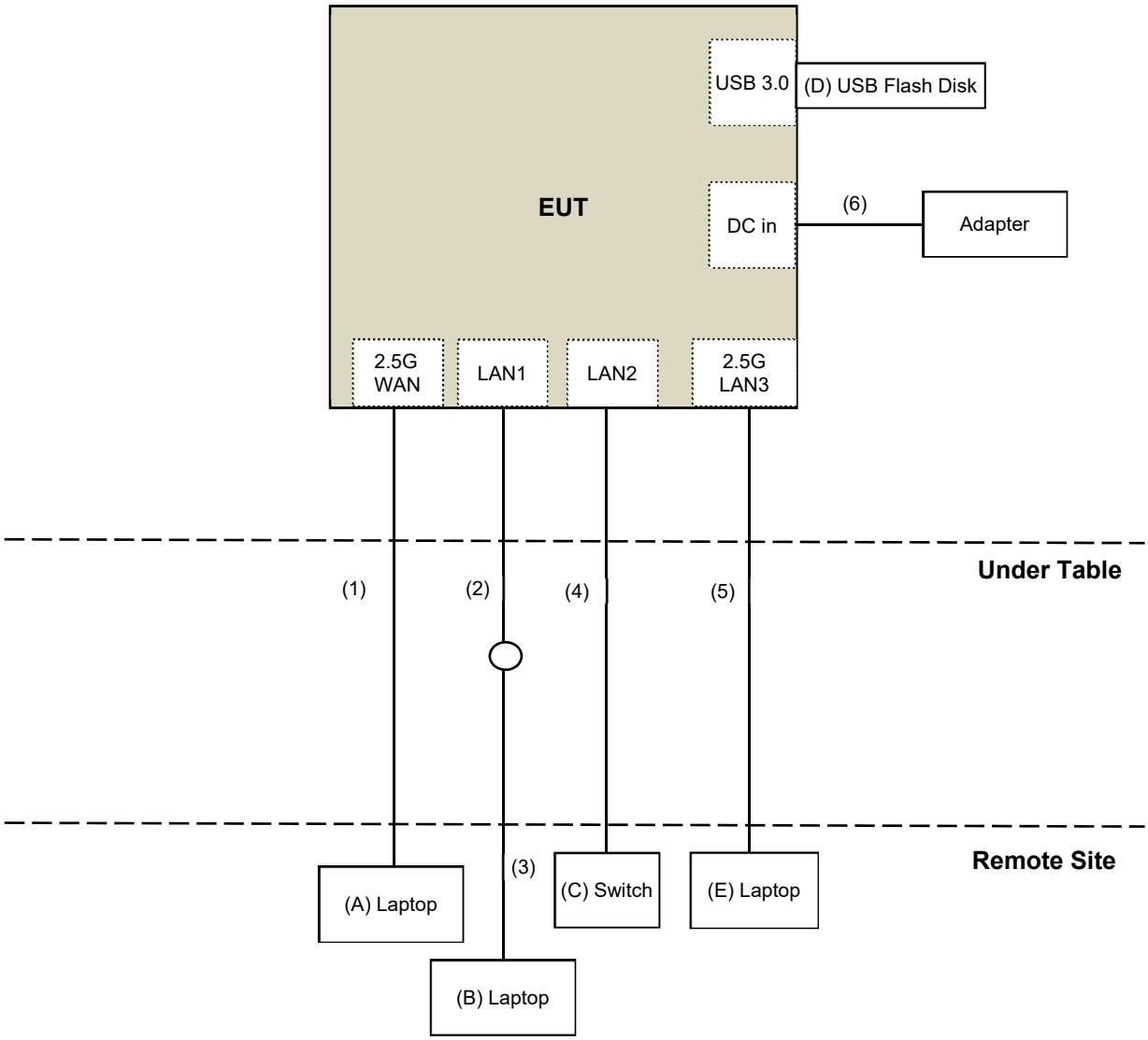
802.11be (EHT320) Beamforming (3T2S)

3.6 Test Program Used and Operation Descriptions

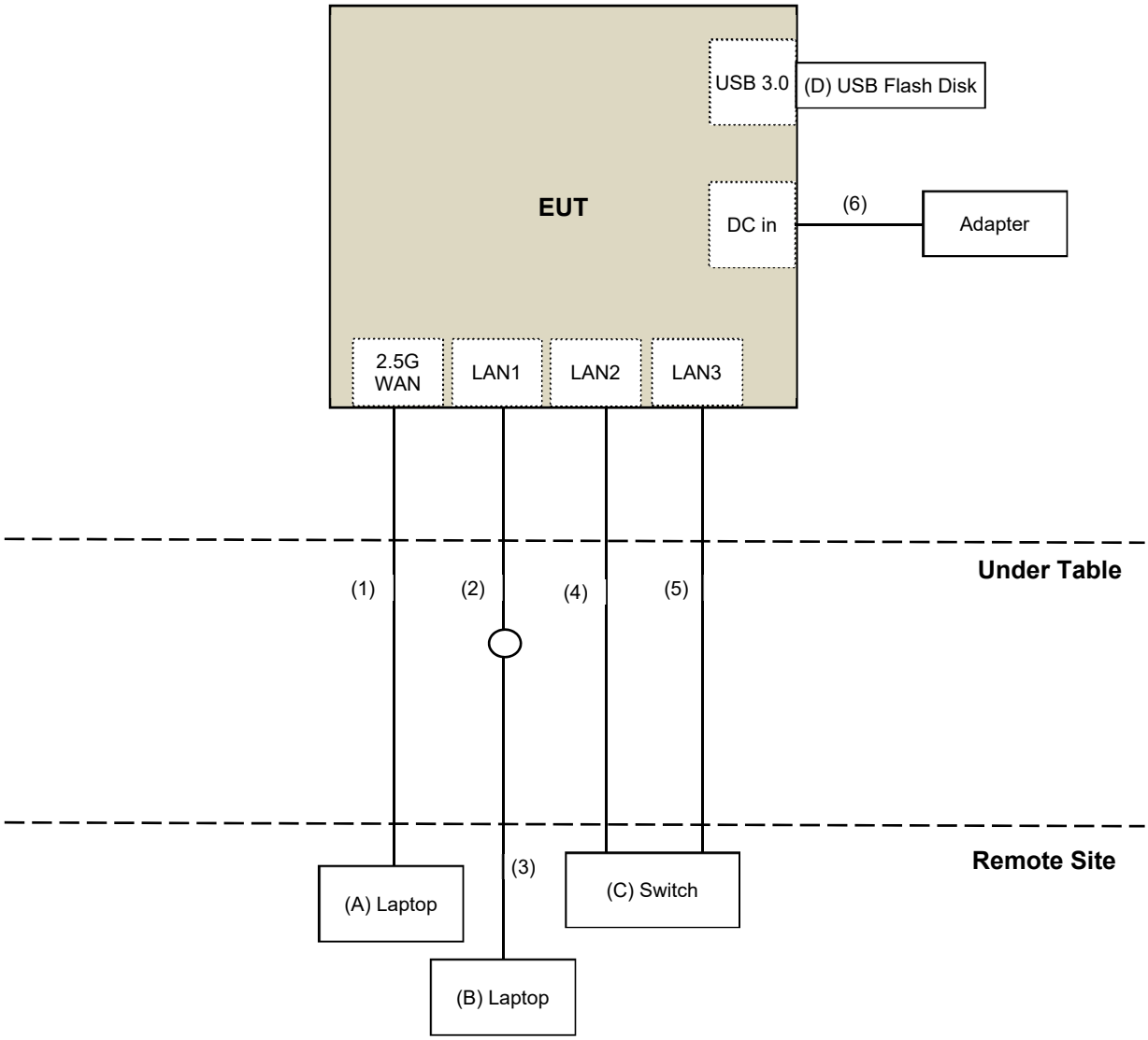
Controlling software (HyperTerminal paste “ASUS BT8 TX CDD command.txt” command) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode B


EUT
USB 3.0
(D) USB Flash Disk
DC in
(6)
Adapter
2.5G WAN
LAN1
LAN2
LAN3
Under Table
(1)
(2)
(4)
(5)
Remote Site
(3)
(A) Laptop
(C) Switch
(B) Laptop

3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	Latitude E6420	HPFC5Q1	DoC	Provided by Lab
B	Laptop	DELL	E6440	F9LYQ32	DoC	Provided by Lab
C	Switch	D-Link	DGS-1005D	DR8WC92000523	N/A	Provided by Lab
D	USB Flash Disk	SanDisk	128GB E4BDC	SDDDC4	N/A	Provided by Lab
E	Laptop	Lenovo	20U5S01X00 L14	PF-28LKK7	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	No	0	Provided by Lab
2	RJ-45 Cable	1	1.5	No	0	Supplied by applicant
3	RJ-45 Cable	1	10	No	0	Provided by Lab
4	RJ-45 Cable	1	10	No	0	Provided by Lab
5	RJ-45 Cable	1	10	No	0	Provided by Lab
6	DC Cable	1	1.75	No	0	Supplied by applicant

4 Test Instruments

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

4.1 Maximum RF Output Power

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

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/8/1 ~ 2024/8/5

4.2 Maximum Power Spectral Density

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

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/8/1 ~ 2024/8/5

4.3 Emission Bandwidth

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

4.4 In-Band Emission Mask

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

4.5 Occupied Bandwidth

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

4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Source GOOD WILL	6905S	1991551	N/A	N/A
MXA Signal Analyzer Keysight	N9020B	MY60112408	2024/3/7	2025/3/6
Software	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	2023/12/20	2024/12/19
True RMS Clamp Meter FLUKE	325	31130711WS	2024/6/13	2025/6/12

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/8/1 ~ 2024/8/5

4.7 Contention-based Protocol

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Frequency Extender Keysight	N5182BX07	MY59360198	2023/10/6	2024/10/5
MXG Vector Signal Generator Keysight	N5182B	MY53052647	2023/10/2	2024/10/1
Power Splitter/Combiner Mini-Circuits	ZFRSC-123-S+	F698501347_01	2023/12/12	2024/12/11
		F698501347_02	2023/12/12	2024/12/11
Signal & Spectrum Analyzer R&S	FSW8	101497	2024/5/21	2025/5/20
Signal Analyzer R&S	FSV40	101516	2024/1/29	2025/1/28

Notes:

1. The test was performed in Adaptivity room.
2. Tested Date: 2024/6/20

4.8 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2023/10/20	2024/10/19
EMI Test Receiver R&S	ESCS 30	847124/029	2023/10/18	2024/10/17
Fixed Attenuator STI	STI02-2200-10	005	2024/2/19	2025/2/18
LISN R&S	ESH3-Z5	835239/001	2024/4/3	2025/4/2
		848773/004	2023/10/13	2024/10/12
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2024/2/19	2025/2/18
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:
1. The test was performed in Conduction 1
2. Tested Date: 2024/8/6

4.9 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-0942	2023/10/12	2024/10/11
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-01	2024/5/16	2025/5/15
Loop Antenna Electro-Metrics	EM-6879	264	2024/2/23	2025/2/22
MXA Signal Analyzer Keysight	N9020B	MY60112410	2024/3/13	2025/3/12
MXE EMI Receiver Keysight	N9038A	MY59050100	2024/6/19	2025/6/18
Preamplifier EMCI	EMC330N	980852	2024/2/17	2025/2/16
	EMC001340	980142	2024/2/19	2025/2/18
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2024/2/19	2025/2/18
		LOOPCAB-002	2024/2/19	2025/2/18
RF Coaxial Cable PEWC	8D	966-6-1	2024/5/16	2025/5/15
		966-6-2	2024/5/16	2025/5/15
		966-6-3	2024/5/16	2025/5/15
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:
1. The test was performed in 966 Chamber No. 6.
2. Tested Date: 2024/7/4 ~ 2024/8/6

4.10 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-2035	2023/11/12	2024/11/11
	BBHA 9170	BBHA9170519	2023/11/12	2024/11/11
MXA Signal Analyzer Keysight	N9020B	MY60112410	2024/3/13	2025/3/12
MXE EMI Receiver Keysight	N9038A	MY59050100	2024/6/19	2025/6/18
Preamplifier EMCI	EMC12630SE	980385	2024/6/1	2025/5/31
	EMC184045SE	980387	2023/8/9	2024/8/8
RF Coaxial Cable EMCI	EMC104-SM-SM-1300	210205	2024/6/1	2025/5/31
	EMC104-SM-SM-2000	210203	2024/6/1	2025/5/31
	EMC104-SM-SM-8000	221015	2024/6/1	2025/5/31
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 6.
2. Tested Date: 2024/6/28 ~ 2024/7/19

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 6PP: 15E 6 GHz Subordinate indoor device	EIRP 30 dBm

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

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

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

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 6PP: 15E 6 GHz Subordinate indoor device	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

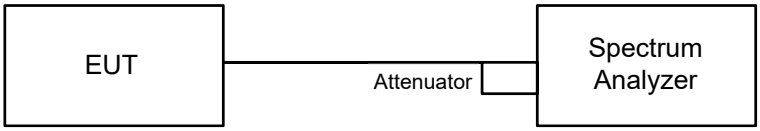
6.1.1 Test Setup

6.1.2 Test Procedure

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to average. Duty factor is not added to measured value.

6.2 Maximum Power Spectral Density

6.2.1 Test Setup



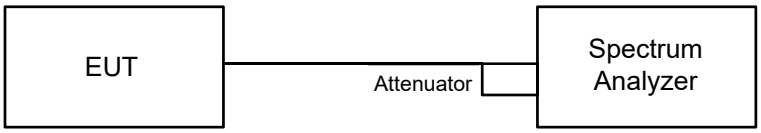
6.2.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-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

6.3 Emission Bandwidth

6.3.1 Test Setup

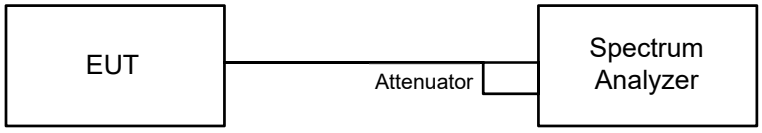


6.3.2 Test Procedure

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.

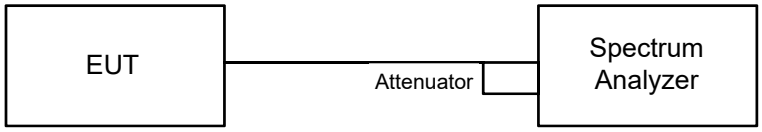
e. Adjust the span to encompass the entire mask as necessary and clear trace.

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

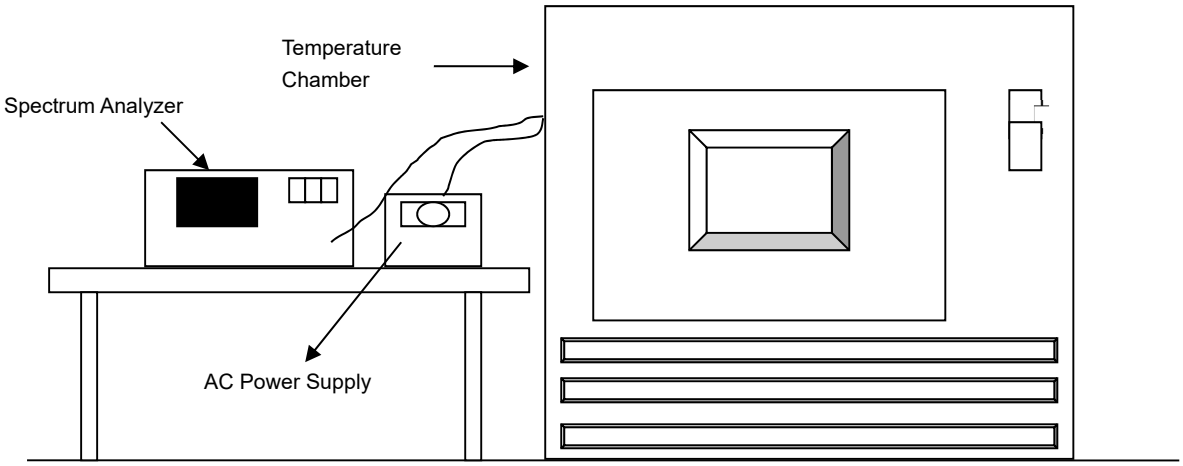


6.5.2 Test Procedure

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

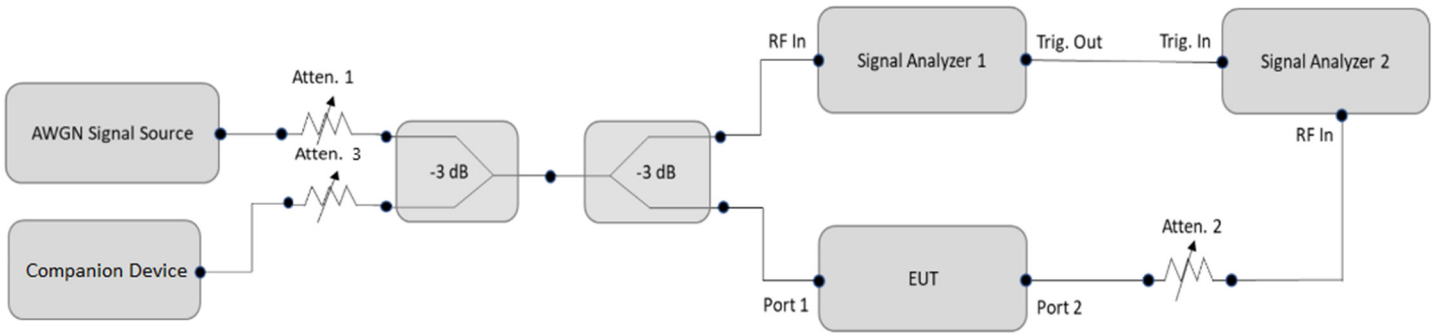


6.6.2 Test Procedure

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.

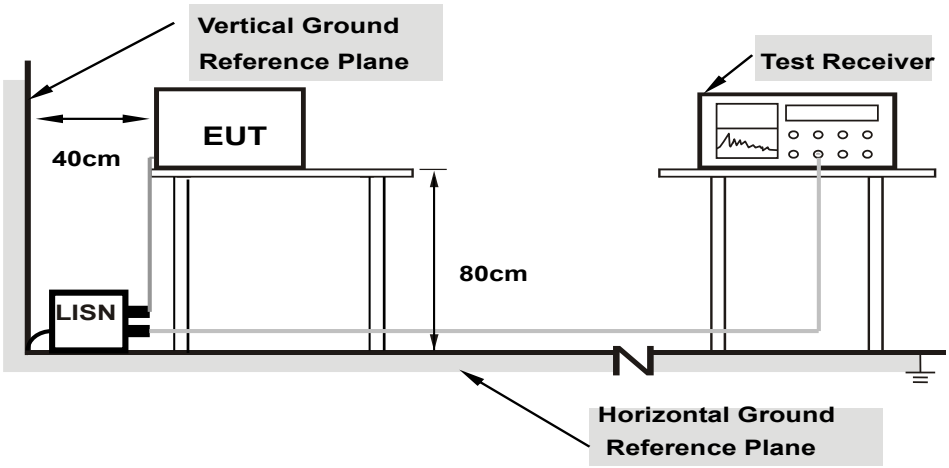
g. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.

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.

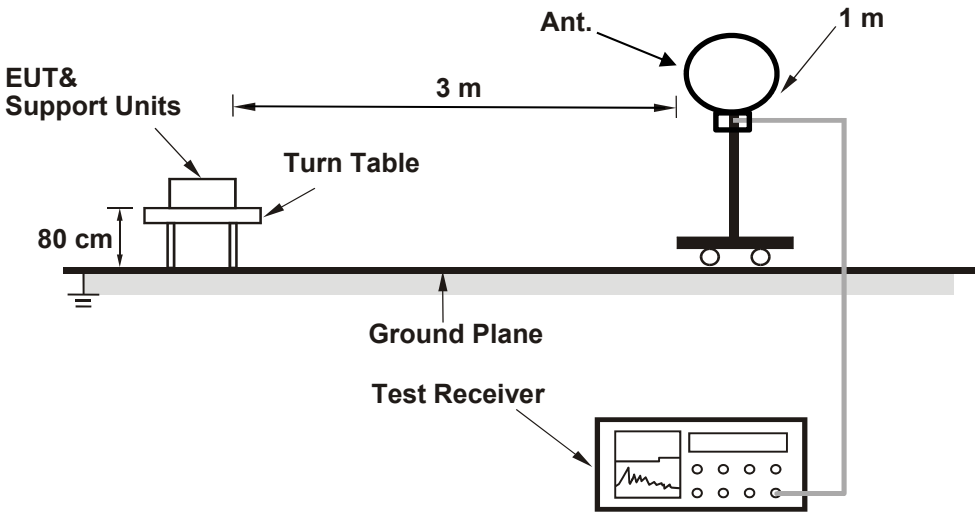
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

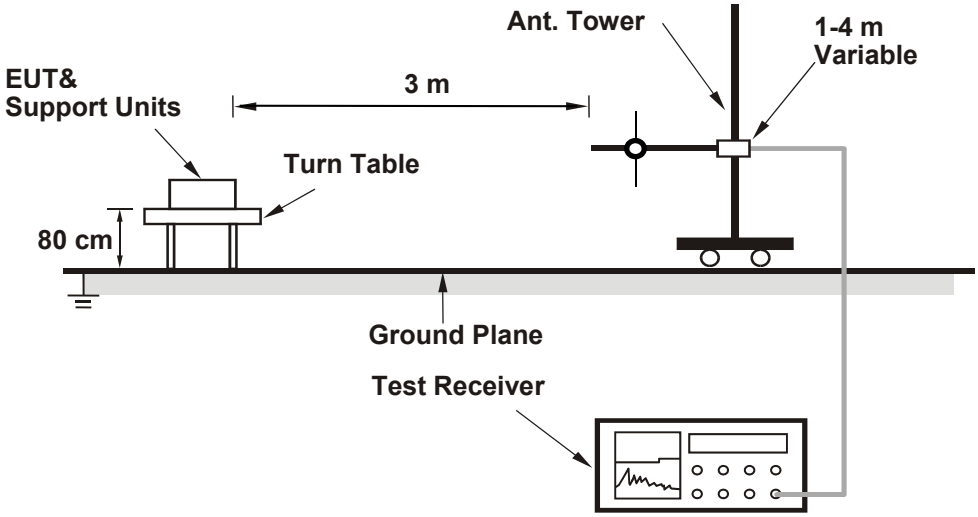
6.9 Unwanted Emissions below 1 GHz

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.

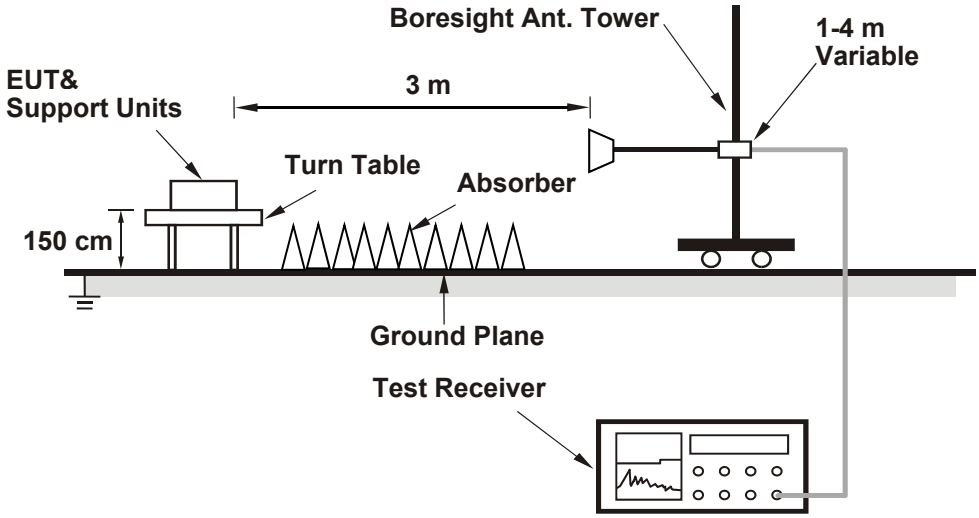
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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:	Katina Lu

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
1	5955	7.31	8.04	7.63	17.545	12.44	4.25	46.682	16.69	30	Pass
45	6175	7.44	7.66	7.77	17.365	12.40	4.25	46.203	16.65	30	Pass
93	6415	7.65	7.96	8.72	19.52	12.90	4.25	51.937	17.15	30	Pass
97	6435	7.76	7.39	8.70	18.866	12.76	3.88	46.098	16.64	30	Pass
105	6475	8.31	7.84	8.78	20.409	13.10	3.88	49.868	16.98	30	Pass
113	6515	7.81	7.54	8.59	18.943	12.77	3.88	46.286	16.65	30	Pass
117	6535	7.79	7.37	8.51	18.565	12.69	3.93	45.888	16.62	30	Pass
149	6695	7.73	7.44	8.41	18.41	12.65	3.93	45.504	16.58	30	Pass
181	6855	8.23	7.55	8.97	20.23	13.06	3.93	50.003	16.99	30	Pass
185	6875	7.59	6.94	8.46	17.699	12.48	5.12	57.537	17.6	30	Pass
209	6995	8.64	8.30	9.03	22.071	13.44	5.12	71.75	18.56	30	Pass
221	7055	8.64	8.62	8.70	22.002	13.42	5.12	71.526	18.54	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-5, the maximum gain is 4.25 dBi.
3. For U-NII-6, the maximum gain is 3.88 dBi.
4. For U-NII-7, the maximum gain is 3.93 dBi.
5. For U-NII-8, the maximum gain is 5.12 dBi.

802.11be (EHT20) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
1	5955	7.99	8.55	7.97	19.723	12.95	5.77	74.469	18.72	30	Pass
45	6175	8.34	8.53	8.93	21.768	13.38	5.77	82.19	19.15	30	Pass
93	6415	8.00	8.75	9.32	22.359	13.49	5.77	84.421	19.26	30	Pass
97	6435	8.07	8.16	9.22	21.314	13.29	5.39	73.734	18.68	30	Pass
105	6475	8.27	7.82	8.71	20.198	13.05	5.39	69.873	18.44	30	Pass
113	6515	8.09	7.89	8.86	20.285	13.07	5.39	70.174	18.46	30	Pass
117	6535	7.85	8.01	9.11	20.567	13.13	5.74	77.121	18.87	30	Pass
149	6695	8.61	8.73	9.16	22.967	13.61	5.74	86.12	19.35	30	Pass
181	6855	8.53	8.87	9.32	23.388	13.69	5.74	87.699	19.43	30	Pass
185	6875	8.05	7.69	9.17	20.518	13.12	5.74	76.937	18.86	30	Pass
209	6995	8.54	8.50	9.44	23.015	13.62	5.07	73.962	18.69	30	Pass
221	7055	9.20	8.90	9.06	24.134	13.83	5.07	77.558	18.9	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 5.77 dBi.
3. For U-NII-6, the directional gain is 5.39 dBi.
4. For U-NII-7, the directional gain is 5.74 dBi.
5. For U-NII-8, the directional gain is 5.07 dBi.

802.11be (EHT40) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
3	5965	10.74	11.12	10.96	37.273	15.71	5.77	140.732	21.48	30	Pass
43	6165	11.30	11.55	11.87	43.16	16.35	5.77	162.96	22.12	30	Pass
91	6405	11.55	11.49	12.14	44.75	16.51	5.77	168.964	22.28	30	Pass
99	6445	11.71	11.22	12.59	46.224	16.65	5.39	159.907	22.04	30	Pass
107	6485	11.90	10.92	12.16	44.291	16.46	5.39	153.22	21.85	30	Pass
115	6525	11.50	10.87	11.90	41.832	16.22	5.74	156.859	21.96	30	Pass
123	6565	11.29	10.90	11.91	41.285	16.16	5.74	154.808	21.9	30	Pass
155	6725	11.16	10.93	12.06	41.519	16.18	5.74	155.685	21.92	30	Pass
179	6845	11.78	11.32	12.16	45.062	16.54	5.74	168.97	22.28	30	Pass
187	6885	11.73	11.68	12.78	48.584	16.86	5.07	156.132	21.93	30	Pass
211	7005	10.93	11.15	11.49	39.513	15.97	5.07	126.981	21.04	30	Pass
219	7045	11.78	11.80	12.52	48.067	16.82	5.07	154.471	21.89	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 5.77 dBi.
3. For U-NII-6, the directional gain is 5.39 dBi.
4. For U-NII-7, the directional gain is 5.74 dBi.
5. For U-NII-8, the directional gain is 5.07 dBi.

802.11be (EHT80) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
7	5985	13.84	14.23	14.69	80.14	19.04	5.77	302.586	24.81	30	Pass
39	6145	14.33	14.72	14.83	87.159	19.40	5.77	329.088	25.17	30	Pass
87	6385	13.56	14.55	15.17	84.094	19.25	5.77	317.516	25.02	30	Pass
103	6465	14.60	13.96	15.50	89.21	19.50	5.39	308.613	24.89	30	Pass
119	6545	14.22	13.38	14.91	79.175	18.99	5.74	296.885	24.73	30	Pass
151	6705	14.01	13.08	14.64	74.608	18.73	5.74	279.76	24.47	30	Pass
183	6865	13.72	13.37	14.71	74.858	18.74	5.74	280.697	24.48	30	Pass
199	6945	14.59	14.87	15.29	93.271	19.70	5.07	299.741	24.77	30	Pass
215	7025	14.83	14.82	15.15	93.482	19.71	5.07	300.419	24.78	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 5.77 dBi.
3. For U-NII-6, the directional gain is 5.39 dBi.
4. For U-NII-7, the directional gain is 5.74 dBi.
5. For U-NII-8, the directional gain is 5.07 dBi.

802.11be (EHT160) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
15	6025	16.92	16.63	17.09	146.398	21.66	5.77	552.758	27.43	30	Pass
47	6185	16.56	17.12	17.27	150.146	21.77	5.77	566.91	27.54	30	Pass
79	6345	16.76	17.40	18.27	169.521	22.29	5.77	640.064	28.06	30	Pass
111	6505	17.37	17.04	17.77	164.999	22.17	5.39	570.797	27.56	30	Pass
143	6665	17.84	16.75	18.02	171.516	22.34	5.74	643.139	28.08	30	Pass
175	6825	17.53	17.39	17.64	169.528	22.29	5.74	635.684	28.03	30	Pass
207	6985	17.77	17.46	18.17	181.174	22.58	5.07	582.232	27.65	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 5.77 dBi.
3. For U-NII-6, the directional gain is 5.39 dBi.
4. For U-NII-7, the directional gain is 5.74 dBi.
5. For U-NII-8, the directional gain is 5.07 dBi.

802.11be (EHT320) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
31	6105	19.17	19.27	19.50	256.257	24.09	5.77	967.555	29.86	30	Pass
63	6265	19.65	19.21	18.76	250.788	23.99	5.77	946.906	29.76	30	Pass
127	6585	19.07	18.56	19.30	237.617	23.76	5.74	891	29.5	30	Pass
159	6745	19.32	18.66	19.24	242.904	23.85	5.74	910.824	29.59	30	Pass
191	6905	19.73	18.89	20.46	282.592	24.51	5.07	908.155	29.58	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 5.77 dBi.
3. For U-NII-6, the directional gain is 5.39 dBi.
4. For U-NII-7, the directional gain is 5.74 dBi.
5. For U-NII-8, the directional gain is 5.07 dBi.

802.11be (EHT20) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
1	5955	10.61	10.97	11.56	38.332	15.84	3.64	88.626	19.48	30	Pass
45	6175	11.30	11.20	11.90	42.16	16.25	3.64	97.477	19.89	30	Pass
93	6415	10.23	10.85	11.73	37.599	15.75	3.64	86.931	19.39	30	Pass
97	6435	10.52	10.55	12.05	38.655	15.87	3.11	79.105	18.98	30	Pass
105	6475	11.26	11.57	12.27	44.586	16.49	3.11	91.243	19.6	30	Pass
113	6515	10.71	10.13	11.54	36.336	15.60	3.11	74.36	18.71	30	Pass
117	6535	11.23	10.33	11.69	38.82	15.89	3.28	82.614	19.17	30	Pass
149	6695	10.59	9.79	11.75	35.945	15.56	3.28	76.496	18.84	30	Pass
181	6855	10.46	10.81	10.70	34.917	15.43	3.28	74.308	18.71	30	Pass
185	6875	12.03	11.56	12.54	48.228	16.83	3.28	102.636	20.11	30	Pass
209	6995	11.73	12.34	12.20	48.629	16.87	3.03	97.7	19.9	30	Pass
221	7055	11.44	11.55	11.94	43.852	16.42	3.03	88.103	19.45	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 3.64 dBi.
3. For U-NII-6, the directional gain is 3.11 dBi.
4. For U-NII-7, the directional gain is 3.28 dBi.
5. For U-NII-8, the directional gain is 3.03 dBi.

802.11be (EHT40) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
3	5965	13.05	12.75	13.77	62.843	17.98	3.64	145.297	21.62	30	Pass
43	6165	12.98	13.72	14.72	73.06	18.64	3.64	168.919	22.28	30	Pass
91	6405	12.53	13.68	14.18	67.422	18.29	3.64	155.884	21.93	30	Pass
99	6445	14.66	13.81	15.25	86.782	19.38	3.11	177.595	22.49	30	Pass
107	6485	13.14	12.17	13.50	59.475	17.74	3.11	121.712	20.85	30	Pass
115	6525	13.88	13.73	13.95	72.87	18.63	3.28	155.077	21.91	30	Pass
123	6565	13.96	12.80	13.64	67.064	18.26	3.28	142.722	21.54	30	Pass
155	6725	14.14	13.62	14.28	75.748	18.79	3.28	161.202	22.07	30	Pass
179	6845	14.15	13.01	15.00	77.623	18.90	3.28	165.193	22.18	30	Pass
187	6885	13.54	13.60	15.08	77.714	18.90	3.03	156.135	21.93	30	Pass
211	7005	14.42	13.89	14.69	81.604	19.12	3.03	163.95	22.15	30	Pass
219	7045	13.93	14.10	14.33	77.523	18.89	3.03	155.751	21.92	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 3.64 dBi.
3. For U-NII-6, the directional gain is 3.11 dBi.
4. For U-NII-7, the directional gain is 3.28 dBi.
5. For U-NII-8, the directional gain is 3.03 dBi.

802.11be (EHT80) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
7	5985	16.78	16.27	16.25	132.177	21.21	3.64	305.602	24.85	30	Pass
39	6145	17.08	17.39	17.88	167.254	22.23	3.64	386.702	25.87	30	Pass
87	6385	15.88	17.03	17.91	150.994	21.79	3.64	349.108	25.43	30	Pass
103	6465	16.24	16.03	17.02	132.509	21.22	3.11	271.172	24.33	30	Pass
119	6545	16.92	16.40	17.68	151.469	21.80	3.28	322.347	25.08	30	Pass
151	6705	16.97	16.28	18.06	156.209	21.94	3.28	332.434	25.22	30	Pass
183	6865	16.92	16.19	17.98	153.601	21.86	3.28	326.884	25.14	30	Pass
199	6945	16.58	16.44	16.89	138.42	21.41	3.03	278.099	24.44	30	Pass
215	7025	17.40	17.29	18.41	177.876	22.50	3.03	357.369	25.53	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 3.64 dBi.
3. For U-NII-6, the directional gain is 3.11 dBi.
4. For U-NII-7, the directional gain is 3.28 dBi.
5. For U-NII-8, the directional gain is 3.03 dBi.

802.11be (EHT160) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
15	6025	20.12	19.45	20.20	295.619	24.71	3.64	683.49	28.35	30	Pass
47	6185	19.25	19.22	19.62	259.322	24.14	3.64	599.569	27.78	30	Pass
79	6345	19.48	19.48	19.92	275.606	24.40	3.64	637.219	28.04	30	Pass
111	6505	19.28	18.36	19.41	240.569	23.81	3.11	492.311	26.92	30	Pass
143	6665	19.77	18.32	19.91	260.711	24.16	3.28	554.829	27.44	30	Pass
175	6825	19.60	20.28	21.04	324.918	25.12	3.28	691.471	28.4	30	Pass
207	6985	20.30	20.21	20.22	317.302	25.01	3.03	637.489	28.04	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 3.64 dBi.
3. For U-NII-6, the directional gain is 3.11 dBi.
4. For U-NII-7, the directional gain is 3.28 dBi.
5. For U-NII-8, the directional gain is 3.03 dBi.

802.11be (EHT320) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2							
31	6105	20.84	21.34	21.28	391.76	25.93	3.64	905.775	29.57	30	Pass
63	6265	21.69	20.93	21.44	410.766	26.14	3.64	949.718	29.78	30	Pass
127	6585	21.12	21.37	22.31	436.724	26.40	3.28	929.409	29.68	30	Pass
159	6745	20.94	21.20	22.03	415.579	26.19	3.28	884.41	29.47	30	Pass
191	6905	20.97	21.99	22.64	466.805	26.69	3.03	937.855	29.72	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-5, the directional gain is 3.64 dBi.
3. For U-NII-6, the directional gain is 3.11 dBi.
4. For U-NII-7, the directional gain is 3.28 dBi.
5. For U-NII-8, the directional gain is 3.03 dBi.

7.2 Maximum Power Spectral Density

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

802.11a CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
1	5955	-6.27	-5.69	-5.57	-1.06	5.77	4.71	5	Pass
45	6175	-6.60	-5.61	-5.68	-1.17	5.77	4.6	5	Pass
93	6415	-7.14	-5.64	-4.58	-0.89	5.77	4.88	5	Pass
97	6435	-5.70	-6.13	-4.83	-0.75	5.39	4.64	5	Pass
105	6475	-5.30	-5.65	-5.40	-0.68	5.39	4.71	5	Pass
113	6515	-5.91	-5.54	-5.39	-0.84	5.39	4.55	5	Pass
117	6535	-6.64	-5.99	-5.28	-1.16	5.74	4.58	5	Pass
149	6695	-5.50	-6.74	-5.90	-1.25	5.74	4.49	5	Pass
181	6855	-5.73	-5.70	-5.50	-0.87	5.74	4.87	5	Pass
185	6875	-5.73	-5.96	-5.14	-0.82	5.74	4.92	5	Pass
209	6995	-4.80	-5.25	-4.66	-0.12	5.07	4.95	5	Pass
221	7055	-5.22	-4.13	-5.40	-0.11	5.07	4.96	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 5.77 dBi.
4. For U-NII-6, The directional gain is 5.39 dBi.
5. For U-NII-7, The directional gain is 5.74 dBi.
6. For U-NII-8, The directional gain is 5.07 dBi.

802.11be (EHT20) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
1	5955	-6.13	-5.92	-6.30	-1.34	5.77	4.43	5	Pass
45	6175	-6.00	-5.45	-6.71	-1.25	5.77	4.52	5	Pass
93	6415	-6.88	-5.53	-5.46	-1.14	5.77	4.63	5	Pass
97	6435	-5.84	-5.46	-5.80	-0.93	5.39	4.46	5	Pass
105	6475	-6.31	-5.37	-5.41	-0.90	5.39	4.49	5	Pass
113	6515	-5.59	-5.99	-5.39	-0.88	5.39	4.51	5	Pass
117	6535	-6.11	-5.97	-5.73	-1.16	5.74	4.58	5	Pass
149	6695	-6.31	-5.86	-5.98	-1.27	5.74	4.47	5	Pass
181	6855	-5.36	-5.79	-6.21	-1.00	5.74	4.74	5	Pass
185	6875	-5.52	-5.75	-6.07	-1.00	5.74	4.74	5	Pass
209	6995	-5.01	-6.13	-4.46	-0.37	5.07	4.7	5	Pass
221	7055	-4.81	-5.88	-5.55	-0.62	5.07	4.45	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 5.77 dBi.
4. For U-NII-6, The directional gain is 5.39 dBi.
5. For U-NII-7, The directional gain is 5.74 dBi.
6. For U-NII-8, The directional gain is 5.07 dBi.

802.11be (EHT40) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
3	5965	-5.77	-5.07	-6.86	-1.07	5.77	4.7	5	Pass
43	6165	-6.80	-5.37	-5.55	-1.09	5.77	4.68	5	Pass
91	6405	-6.33	-6.46	-5.50	-1.30	5.77	4.47	5	Pass
99	6445	-5.20	-6.27	-5.81	-0.97	5.39	4.42	5	Pass
107	6485	-5.63	-5.09	-5.04	-0.47	5.39	4.92	5	Pass
115	6525	-6.58	-6.07	-5.00	-1.06	5.74	4.68	5	Pass
123	6565	-6.63	-5.05	-5.38	-0.86	5.74	4.88	5	Pass
155	6725	-5.45	-6.52	-5.08	-0.87	5.74	4.87	5	Pass
179	6845	-5.19	-5.48	-6.05	-0.79	5.74	4.95	5	Pass
187	6885	-5.41	-5.22	-5.03	-0.45	5.07	4.62	5	Pass
211	7005	-5.21	-4.63	-4.82	-0.11	5.07	4.96	5	Pass
219	7045	-4.55	-4.93	-5.12	-0.09	5.07	4.98	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 5.77 dBi.
4. For U-NII-6, The directional gain is 5.39 dBi.
5. For U-NII-7, The directional gain is 5.74 dBi.
6. For U-NII-8, The directional gain is 5.07 dBi.

802.11be (EHT80) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
7	5985	-6.00	-5.78	-5.98	-1.15	5.77	4.62	5	Pass
39	6145	-6.13	-5.75	-5.97	-1.18	5.77	4.59	5	Pass
87	6385	-5.70	-6.40	-4.99	-0.89	5.77	4.88	5	Pass
103	6465	-5.29	-5.27	-5.45	-0.56	5.39	4.83	5	Pass
119	6545	-6.01	-5.89	-5.28	-0.94	5.74	4.8	5	Pass
151	6705	-6.99	-5.23	-5.60	-1.11	5.74	4.63	5	Pass
183	6865	-5.61	-5.50	-5.51	-0.77	5.74	4.97	5	Pass
199	6945	-5.06	-5.30	-5.08	-0.37	5.07	4.7	5	Pass
215	7025	-5.44	-5.11	-5.15	-0.46	5.07	4.61	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 5.77 dBi.
4. For U-NII-6, The directional gain is 5.39 dBi.
5. For U-NII-7, The directional gain is 5.74 dBi.
6. For U-NII-8, The directional gain is 5.07 dBi.

802.11be (EHT160) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
15	6025	-6.65	-5.18	-6.20	-1.19	5.77	4.58	5	Pass
47	6185	-6.27	-5.78	-5.35	-1.01	5.77	4.76	5	Pass
79	6345	-6.33	-6.68	-4.92	-1.14	5.77	4.63	5	Pass
111	6505	-5.72	-5.70	-5.01	-0.69	5.39	4.7	5	Pass
143	6665	-5.58	-6.45	-4.93	-0.84	5.74	4.9	5	Pass
175	6825	-5.89	-5.12	-7.04	-1.18	5.74	4.56	5	Pass
207	6985	-7.17	-4.31	-4.54	-0.39	5.07	4.68	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 5.77 dBi.
4. For U-NII-6, The directional gain is 5.39 dBi.
5. For U-NII-7, The directional gain is 5.74 dBi.
6. For U-NII-8, The directional gain is 5.07 dBi.

802.11be (EHT320) Beamforming (3T1S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
31	6105	-6.45	-5.91	-5.72	-1.24	5.77	4.53	5	Pass
63	6265	-5.77	-5.76	-6.27	-1.16	5.77	4.61	5	Pass
127	6585	-6.88	-5.89	-5.49	-1.28	5.74	4.46	5	Pass
159	6745	-5.87	-5.84	-5.06	-0.80	5.74	4.94	5	Pass
191	6905	-6.27	-5.14	-4.18	-0.34	5.07	4.73	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 5.77 dBi.
4. For U-NII-6, The directional gain is 5.39 dBi.
5. For U-NII-7, The directional gain is 5.74 dBi.
6. For U-NII-8, The directional gain is 5.07 dBi.

802.11be (EHT20) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
1	5955	-3.93	-3.39	-3.29	1.24	3.64	4.88	5	Pass
45	6175	-3.38	-3.86	-3.58	1.17	3.64	4.81	5	Pass
93	6415	-3.98	-3.27	-3.64	1.15	3.64	4.79	5	Pass
97	6435	-3.64	-3.28	-2.38	1.70	3.11	4.81	5	Pass
105	6475	-3.69	-3.34	-2.49	1.63	3.11	4.74	5	Pass
113	6515	-2.70	-3.67	-3.07	1.64	3.11	4.75	5	Pass
117	6535	-3.66	-4.27	-2.36	1.42	3.28	4.7	5	Pass
149	6695	-3.76	-3.95	-3.07	1.19	3.28	4.47	5	Pass
181	6855	-3.81	-3.32	-3.14	1.36	3.28	4.64	5	Pass
185	6875	-3.74	-4.83	-2.28	1.28	3.28	4.56	5	Pass
209	6995	-3.42	-2.66	-2.73	1.85	3.03	4.88	5	Pass
221	7055	-2.95	-3.32	-2.23	1.96	3.03	4.99	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 3.64 dBi.
4. For U-NII-6, The directional gain is 3.11 dBi.
5. For U-NII-7, The directional gain is 3.28 dBi.
6. For U-NII-8, The directional gain is 3.03 dBi.

802.11be (EHT40) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
3	5965	-3.30	-4.49	-3.38	1.08	3.64	4.72	5	Pass
43	6165	-4.16	-3.35	-3.78	1.02	3.64	4.66	5	Pass
91	6405	-4.29	-3.98	-3.30	0.93	3.64	4.57	5	Pass
99	6445	-3.09	-3.84	-2.36	1.72	3.11	4.83	5	Pass
107	6485	-3.53	-4.33	-2.68	1.31	3.11	4.42	5	Pass
115	6525	-3.58	-3.35	-2.87	1.51	3.28	4.79	5	Pass
123	6565	-3.10	-4.09	-2.75	1.49	3.28	4.77	5	Pass
155	6725	-3.61	-3.67	-2.59	1.51	3.28	4.79	5	Pass
179	6845	-3.89	-4.75	-2.39	1.21	3.28	4.49	5	Pass
187	6885	-4.18	-3.21	-2.87	1.39	3.03	4.42	5	Pass
211	7005	-2.37	-3.96	-2.93	1.73	3.03	4.76	5	Pass
219	7045	-3.43	-2.77	-2.70	1.82	3.03	4.85	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 3.64 dBi.
4. For U-NII-6, The directional gain is 3.11 dBi.
5. For U-NII-7, The directional gain is 3.28 dBi.
6. For U-NII-8, The directional gain is 3.03 dBi.

802.11be (EHT80) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
7	5985	-3.21	-3.52	-3.77	1.28	3.64	4.92	5	Pass
39	6145	-3.45	-3.60	-3.46	1.27	3.64	4.91	5	Pass
87	6385	-3.89	-3.63	-3.38	1.14	3.64	4.78	5	Pass
103	6465	-3.15	-3.43	-2.25	1.86	3.11	4.97	5	Pass
119	6545	-3.16	-3.73	-2.47	1.68	3.28	4.96	5	Pass
151	6705	-3.47	-3.83	-2.53	1.53	3.28	4.81	5	Pass
183	6865	-3.25	-4.73	-2.82	1.25	3.28	4.53	5	Pass
199	6945	-3.52	-4.07	-2.24	1.56	3.03	4.59	5	Pass
215	7025	-3.05	-3.23	-2.44	1.88	3.03	4.91	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 3.64 dBi.
4. For U-NII-6, The directional gain is 3.11 dBi.
5. For U-NII-7, The directional gain is 3.28 dBi.
6. For U-NII-8, The directional gain is 3.03 dBi.

802.11be (EHT160) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
15	6025	-3.01	-4.05	-3.30	1.34	3.64	4.98	5	Pass
47	6185	-3.41	-3.99	-3.68	1.08	3.64	4.72	5	Pass
79	6345	-4.22	-3.31	-3.59	1.08	3.64	4.72	5	Pass
111	6505	-3.86	-4.11	-2.45	1.36	3.11	4.47	5	Pass
143	6665	-3.22	-3.54	-3.02	1.52	3.28	4.8	5	Pass
175	6825	-3.93	-3.61	-3.34	1.15	3.28	4.43	5	Pass
207	6985	-3.58	-2.88	-2.52	1.80	3.03	4.83	5	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 3.64 dBi.
4. For U-NII-6, The directional gain is 3.11 dBi.
5. For U-NII-7, The directional gain is 3.28 dBi.
6. For U-NII-8, The directional gain is 3.03 dBi.

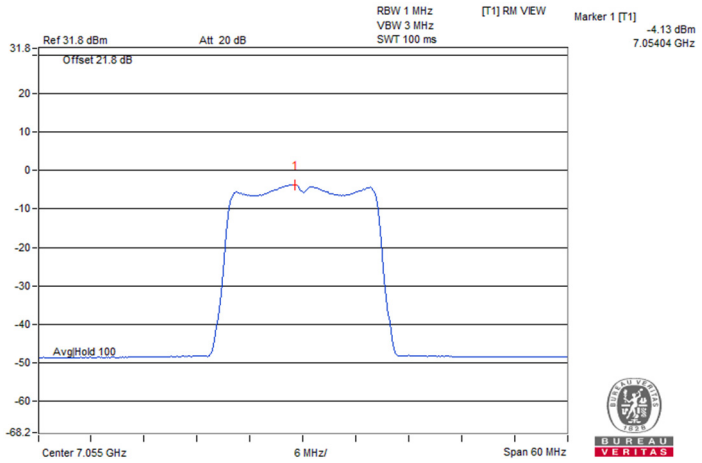
802.11be (EHT320) Beamforming (3T2S)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2					
31	6105	-3.73	-3.74	-3.41	1.15	3.64	4.79	5	Pass
63	6265	-3.29	-4.19	-3.45	1.15	3.64	4.79	5	Pass
127	6585	-3.35	-3.58	-3.33	1.35	3.28	4.63	5	Pass
159	6745	-3.69	-3.70	-2.51	1.51	3.28	4.79	5	Pass
191	6905	-3.77	-2.99	-2.29	1.80	3.03	4.83	5	Pass

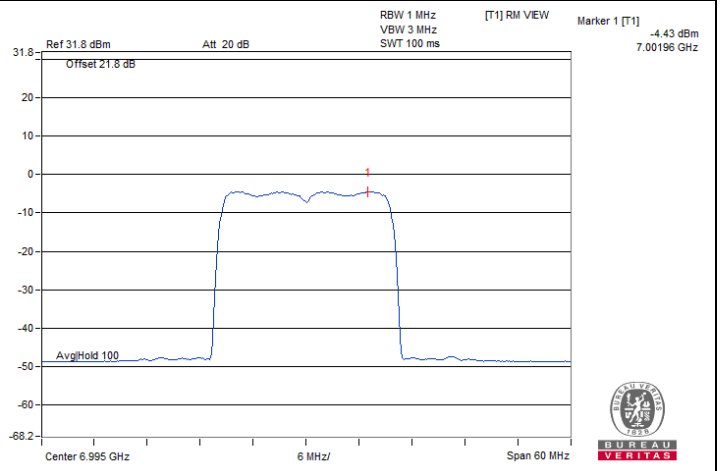
Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-5, The directional gain is 3.64 dBi.
4. For U-NII-6, The directional gain is 3.11 dBi.
5. For U-NII-7, The directional gain is 3.28 dBi.
6. For U-NII-8, The directional gain is 3.03 dBi.

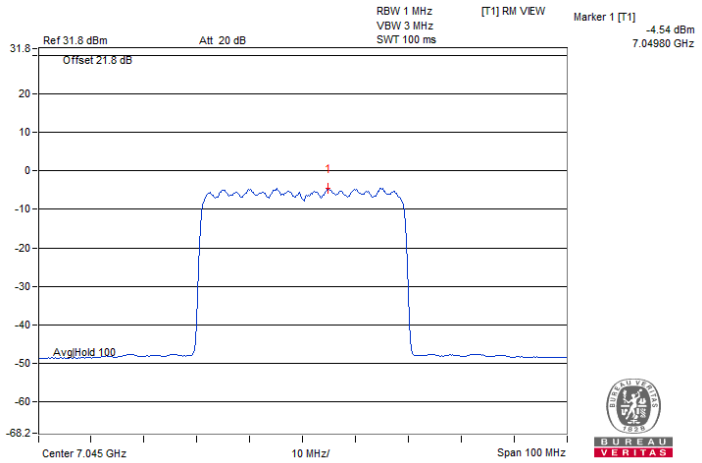
Spectrum Plot of Maximum Value



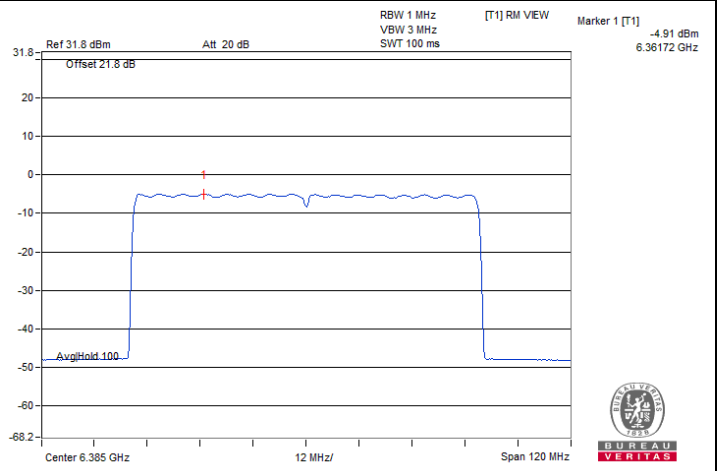
802.11a CDD / Chain 1 : CH 221



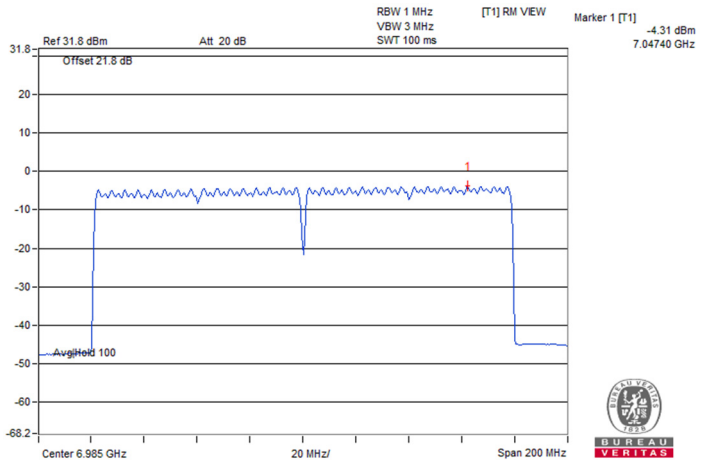
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 209



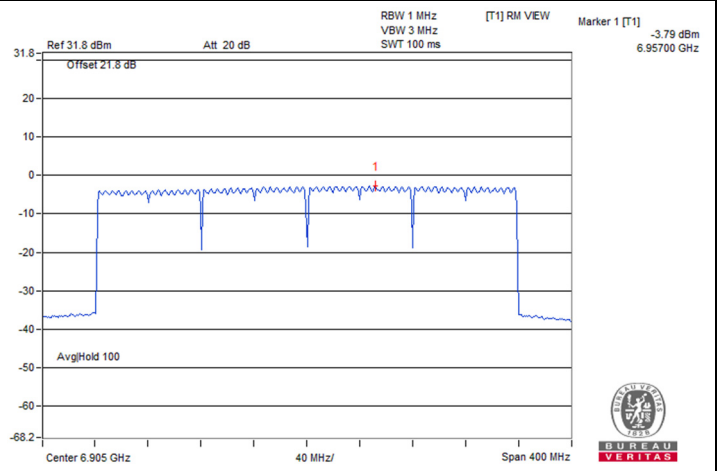
802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 219



802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 87

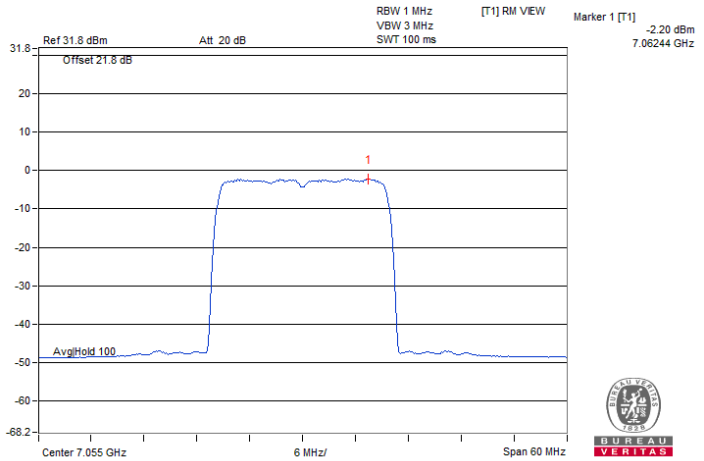


802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 207

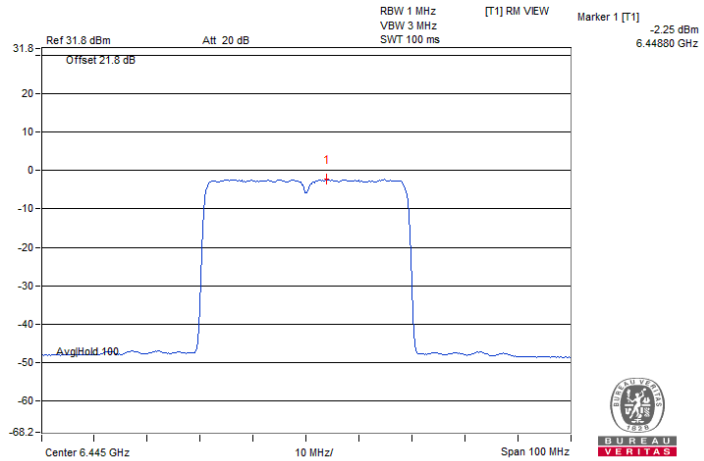


802.11be (EHT320) Beamforming (3T1S) / Chain 2 : CH 191

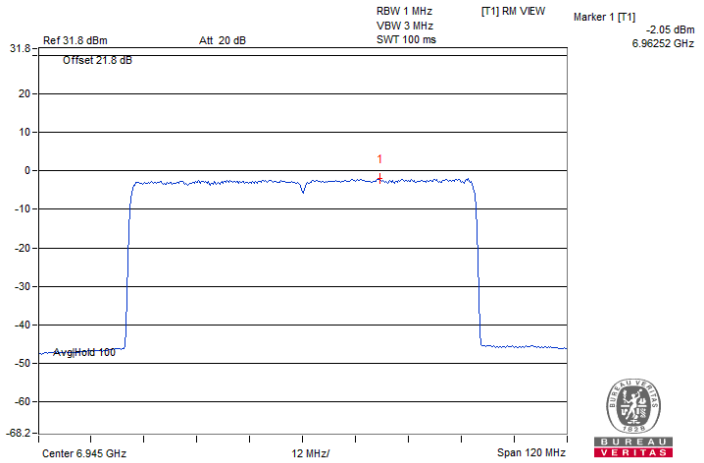
Spectrum Plot of Maximum Value



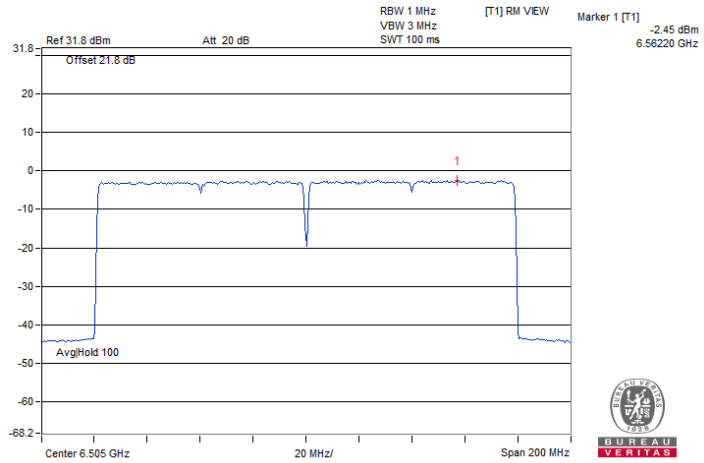
802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 221



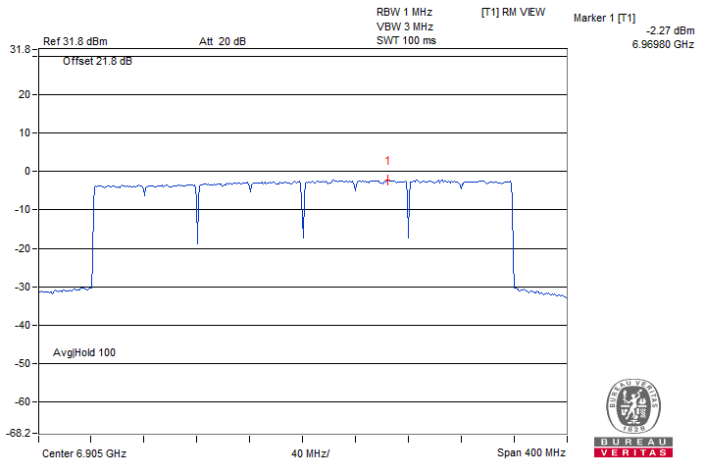
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 99



802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 199



802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 111



802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 191

7.3 Emission Bandwidth

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

802.11a CDD

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
1	5955	18.49	18.48	18.29	320	Pass
45	6175	18.44	18.36	18.30	320	Pass
93	6415	18.27	18.31	18.22	320	Pass
97	6435	18.35	18.39	18.45	320	Pass
105	6475	18.55	18.40	18.24	320	Pass
113	6515	18.45	18.24	18.24	320	Pass
117	6535	18.35	18.46	18.48	320	Pass
149	6695	18.25	18.17	18.43	320	Pass
181	6855	18.34	18.33	18.27	320	Pass
185	6875	18.46	18.19	18.44	320	Pass
209	6995	18.39	18.24	18.45	320	Pass
221	7055	18.43	18.39	18.32	320	Pass

802.11be (EHT20) Beamforming (3T1S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
1	5955	19.85	19.93	19.90	320	Pass
45	6175	19.92	19.91	19.92	320	Pass
93	6415	19.90	19.91	19.84	320	Pass
97	6435	19.81	19.83	19.86	320	Pass
105	6475	19.89	19.88	19.88	320	Pass
113	6515	19.87	19.88	19.79	320	Pass
117	6535	19.82	19.87	19.88	320	Pass
149	6695	19.91	19.90	19.82	320	Pass
181	6855	19.93	19.85	19.92	320	Pass
185	6875	19.84	19.81	19.91	320	Pass
209	6995	19.90	19.93	19.96	320	Pass
221	7055	19.84	19.81	19.91	320	Pass

802.11be (EHT40) Beamforming (3T1S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
3	5965	39.66	39.69	39.75	320	Pass
43	6165	39.71	39.92	39.79	320	Pass
91	6405	39.75	39.79	39.80	320	Pass
99	6445	39.85	39.79	39.76	320	Pass
107	6485	39.66	39.80	39.60	320	Pass
115	6525	39.83	39.78	39.73	320	Pass
123	6565	39.89	39.91	39.88	320	Pass
155	6725	39.92	39.68	39.89	320	Pass
179	6845	39.74	39.76	39.68	320	Pass
187	6885	39.68	39.79	39.83	320	Pass
211	7005	39.94	39.74	39.78	320	Pass
219	7045	39.69	39.71	39.74	320	Pass

802.11be (EHT80) Beamforming (3T1S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
7	5985	80.27	80.24	80.27	320	Pass
39	6145	80.18	80.16	80.21	320	Pass
87	6385	80.15	80.08	80.24	320	Pass
103	6465	80.22	80.24	80.29	320	Pass
119	6545	80.23	80.16	80.15	320	Pass
151	6705	80.23	80.31	80.16	320	Pass
183	6865	80.13	80.19	80.23	320	Pass
199	6945	80.21	80.00	80.21	320	Pass
215	7025	80.22	80.25	80.26	320	Pass

802.11be (EHT160) Beamforming (3T1S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
15	6025	162.14	162.30	162.31	320	Pass
47	6185	162.25	162.17	162.17	320	Pass
79	6345	162.23	162.11	162.33	320	Pass
111	6505	162.30	162.43	162.21	320	Pass
143	6665	162.15	162.03	162.36	320	Pass
175	6825	162.07	162.05	162.34	320	Pass
207	6985	162.39	162.24	162.24	320	Pass

802.11be (EHT320) Beamforming (3T1S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
31	6105	326.92	327.69	327.62	320	Note
63	6265	327.33	327.62	327.30	320	Note
127	6585	327.77	327.66	327.55	320	Note
159	6745	327.39	327.69	327.63	320	Note
191	6905	327.86	327.56	327.58	320	Note

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

802.11be (EHT20) Beamforming (3T2S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
1	5955	19.99	19.92	19.88	320	Pass
45	6175	19.89	19.95	19.79	320	Pass
93	6415	19.90	19.86	19.80	320	Pass
97	6435	19.88	19.89	19.83	320	Pass
105	6475	19.90	19.93	19.84	320	Pass
113	6515	19.82	19.96	19.79	320	Pass
117	6535	19.86	19.99	19.91	320	Pass
149	6695	19.89	19.87	19.85	320	Pass
181	6855	19.93	19.94	19.83	320	Pass
185	6875	19.89	19.86	19.85	320	Pass
209	6995	19.95	19.95	19.81	320	Pass
221	7055	19.91	19.92	19.80	320	Pass

802.11be (EHT40) Beamforming (3T2S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
3	5965	39.91	39.77	39.78	320	Pass
43	6165	39.87	39.81	39.75	320	Pass
91	6405	39.89	39.90	39.78	320	Pass
99	6445	39.77	39.85	39.81	320	Pass
107	6485	39.82	39.65	39.84	320	Pass
115	6525	39.93	39.70	39.79	320	Pass
123	6565	39.90	39.88	39.64	320	Pass
155	6725	39.75	39.82	39.88	320	Pass
179	6845	39.84	39.72	39.77	320	Pass
187	6885	39.83	39.73	39.78	320	Pass
211	7005	39.87	39.64	39.96	320	Pass
219	7045	39.74	39.76	39.77	320	Pass

802.11be (EHT80) Beamforming (3T2S)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
7	5985	80.24	80.13	80.27	320	Pass
39	6145	80.25	80.19	80.23	320	Pass
87	6385	80.18	80.21	80.27	320	Pass
103	6465	80.20	80.25	80.31	320	Pass
119	6545	80.21	80.15	80.25	320	Pass
151	6705	80.17	80.28	80.28	320	Pass
183	6865	80.28	80.14	80.17	320	Pass
199	6945	80.21	80.14	80.16	320	Pass
215	7025	80.23	80.21	80.08	320	Pass

802.11be (EHT160) Beamforming (3T2S)

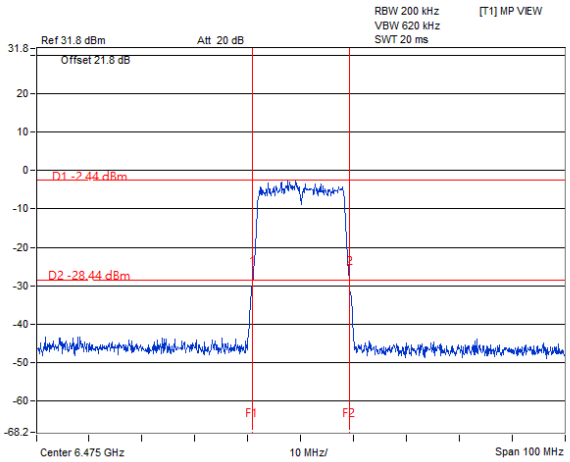
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
15	6025	162.24	162.26	162.46	320	Pass
47	6185	162.25	162.20	162.35	320	Pass
79	6345	162.20	162.27	162.46	320	Pass
111	6505	162.36	162.31	162.45	320	Pass
143	6665	162.20	162.39	162.30	320	Pass
175	6825	162.27	162.19	162.45	320	Pass
207	6985	162.32	162.46	162.31	320	Pass

802.11be (EHT320) Beamforming (3T2S)

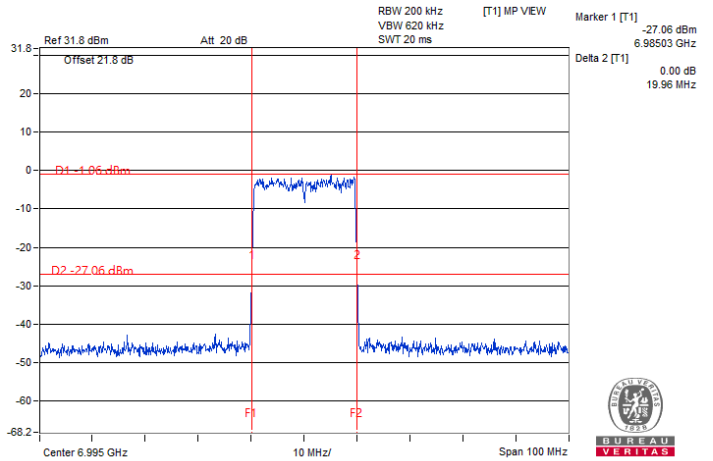
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2		
31	6105	327.08	327.40	327.88	320	Note
63	6265	327.67	327.60	327.75	320	Note
127	6585	327.49	327.52	327.85	320	Note
159	6745	327.42	327.83	327.84	320	Note
191	6905	327.71	327.78	327.40	320	Note

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

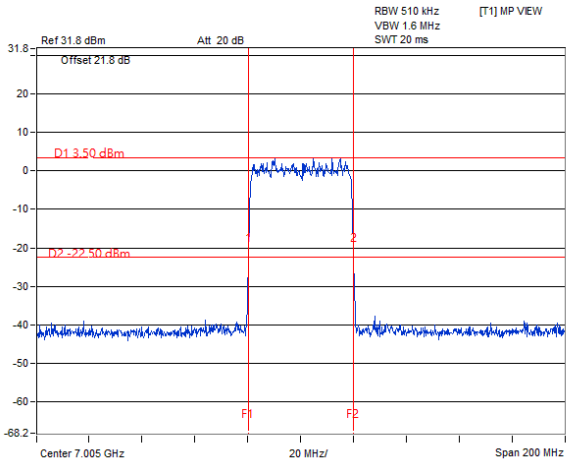
Spectrum Plot of Maximum Value



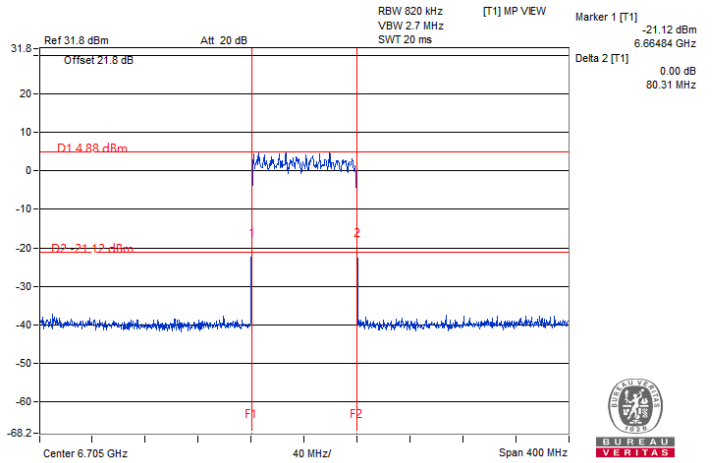
802.11a CDD / Chain 0 : CH 105



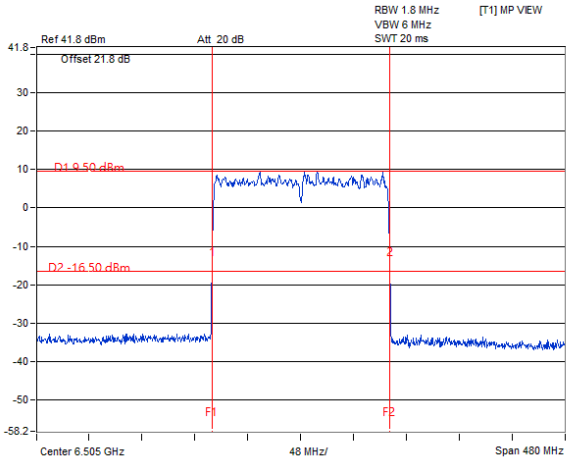
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 209



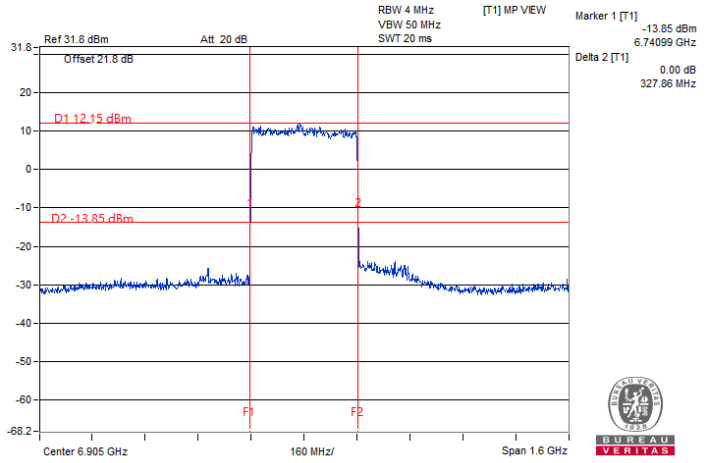
802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 211



802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 151

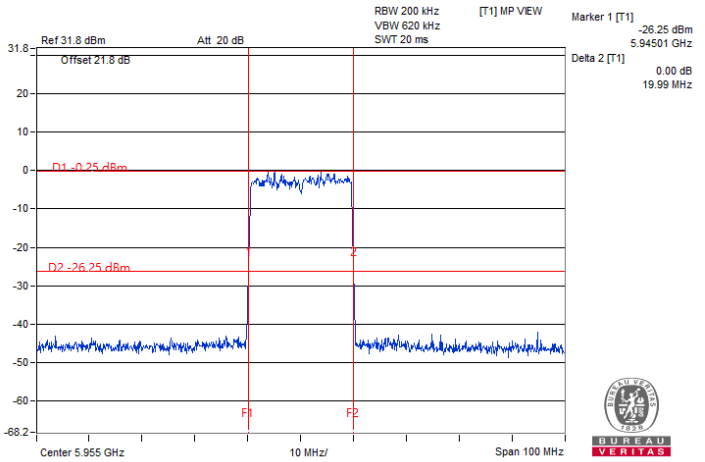


802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 111

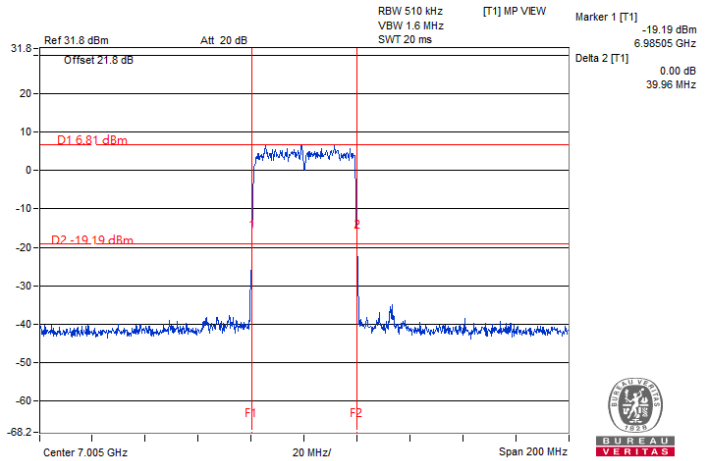


802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 191

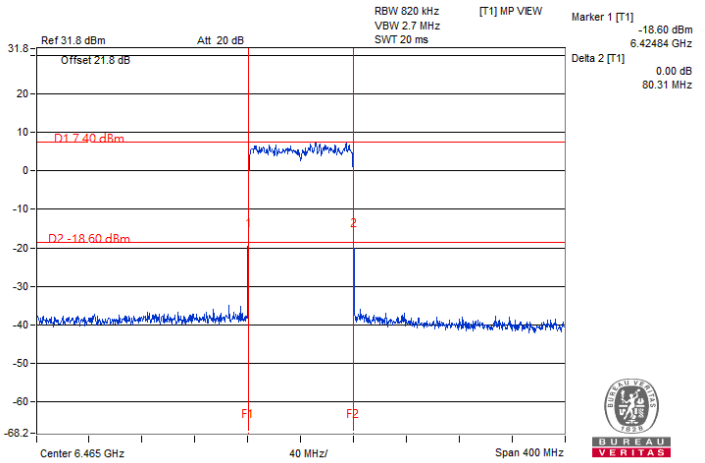
Spectrum Plot of Maximum Value



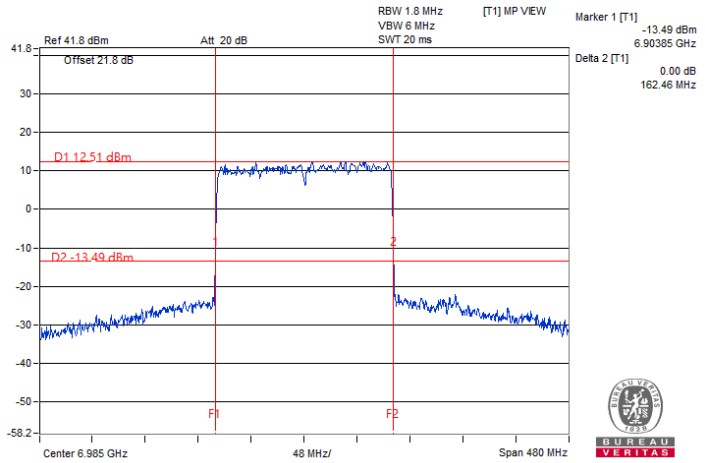
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 1



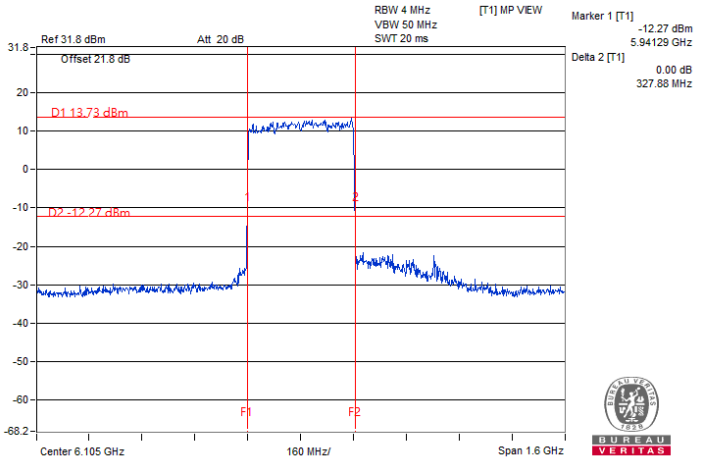
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 211



802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 103



802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 207

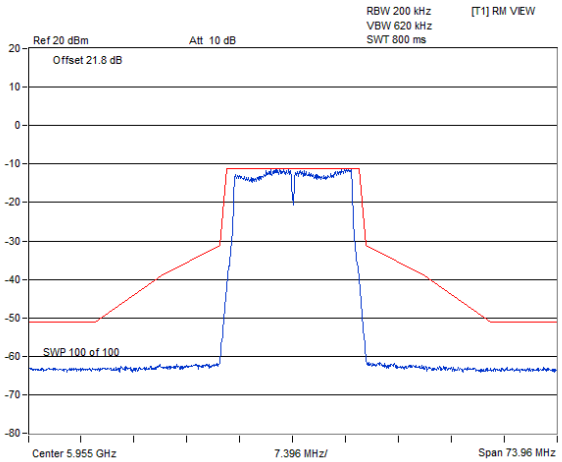
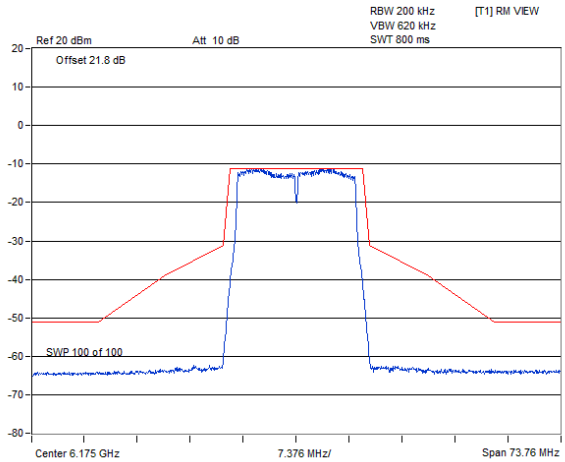
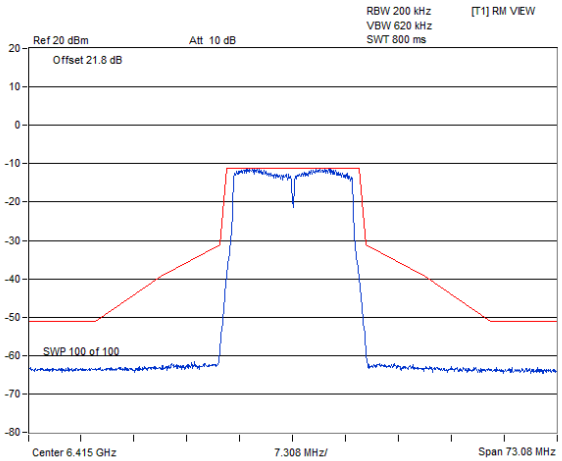
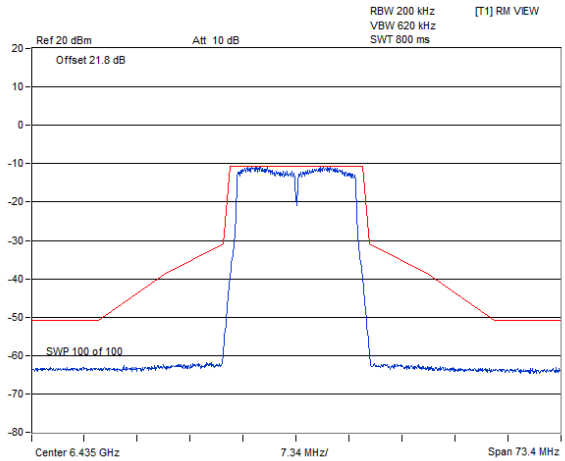
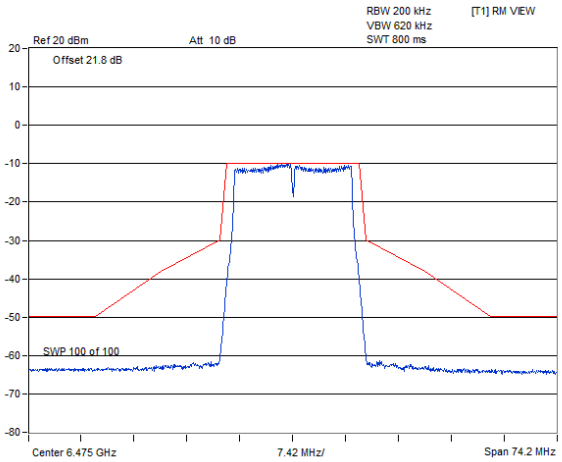
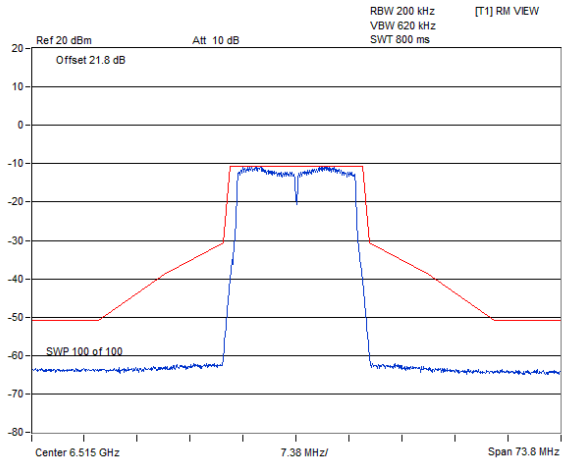


802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 31

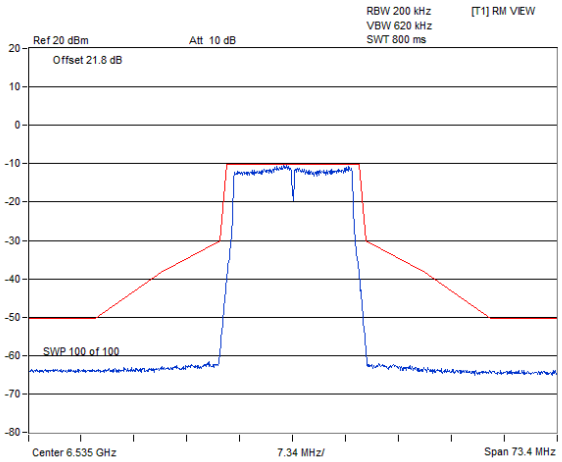
7.4 In-Band Emission Mask

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

802.11a CDD

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

Spectrum Plot



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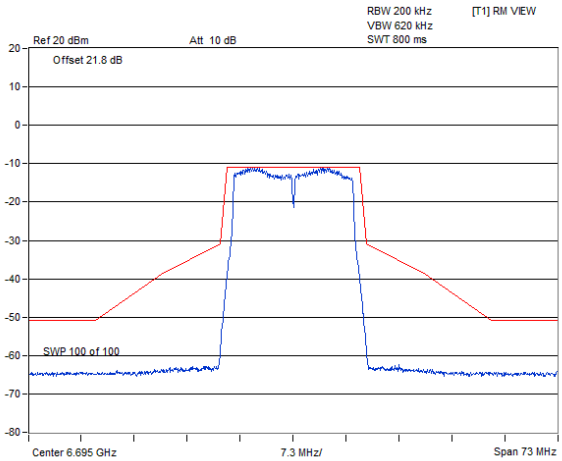

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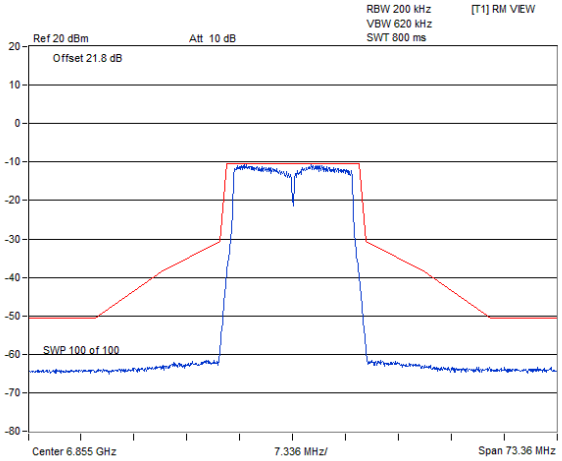

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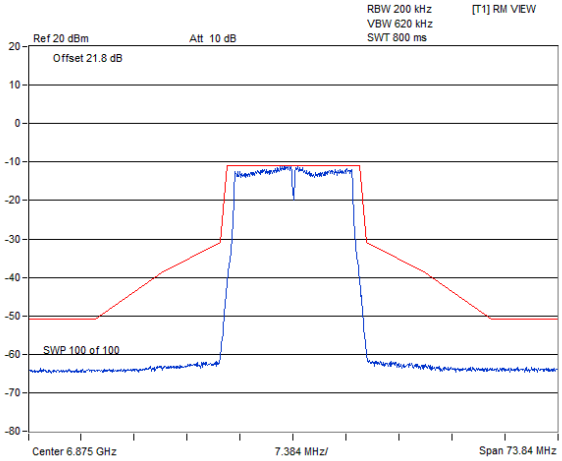

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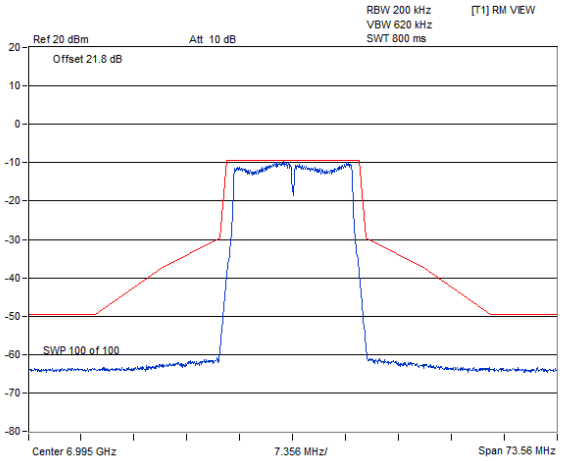

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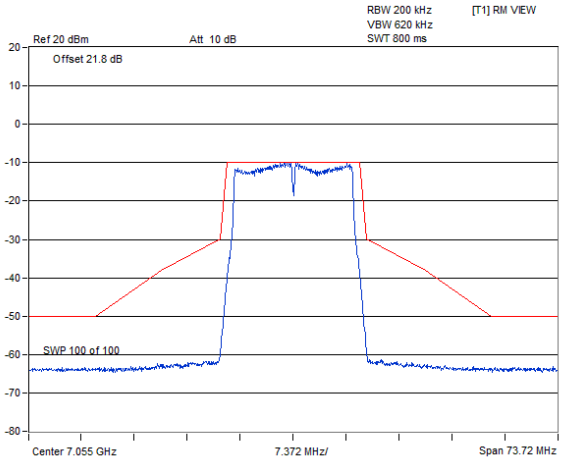
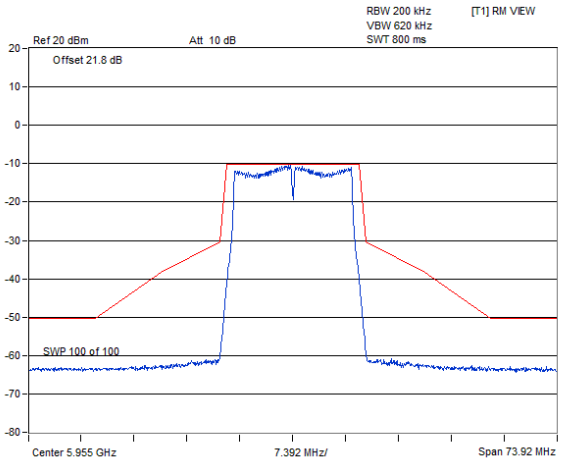
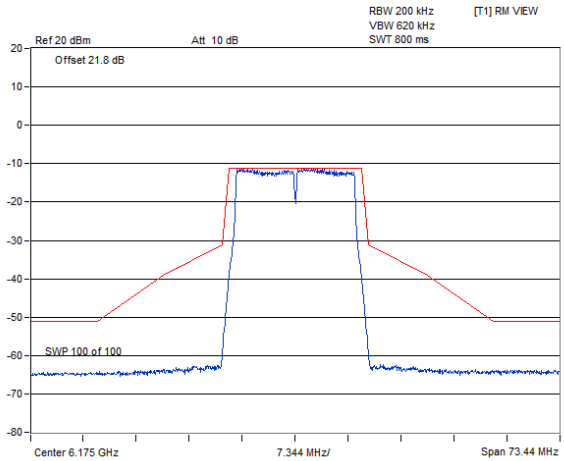


802.11a CDD / Chain 0 : CH 221

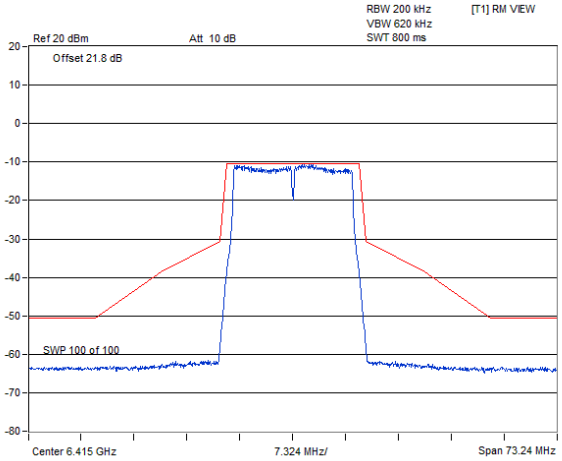
Spectrum Plot



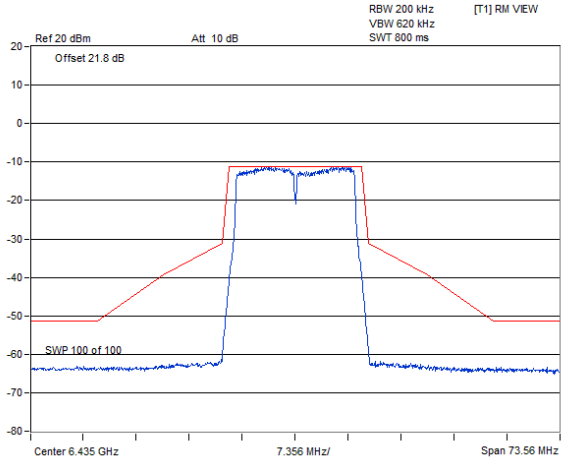
802.11a CDD / Chain 1 : CH 1



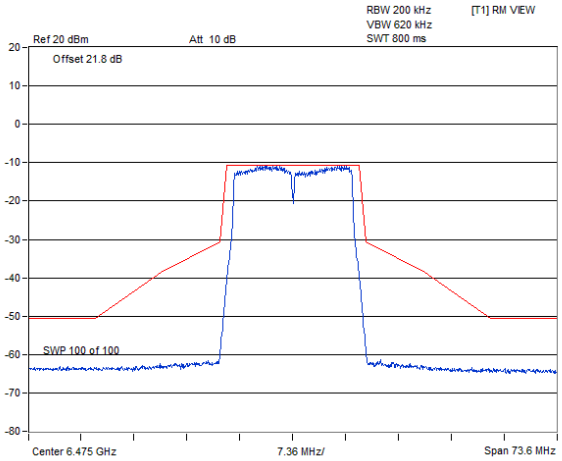
802.11a CDD / Chain 1 : CH 45



802.11a CDD / Chain 1 : CH 93



802.11a CDD / Chain 1 : CH 97



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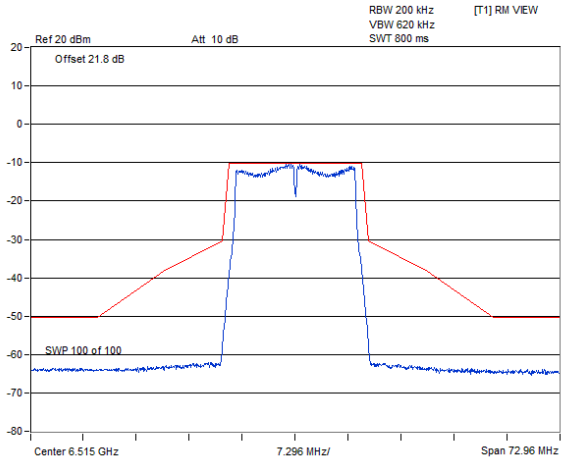
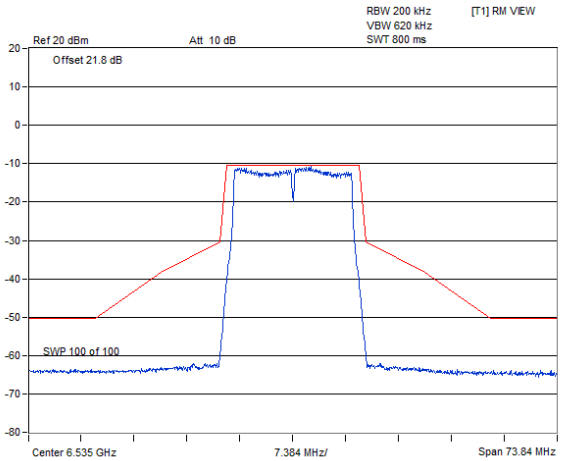


802.11a CDD / Chain 1 : CH 113

Spectrum Plot



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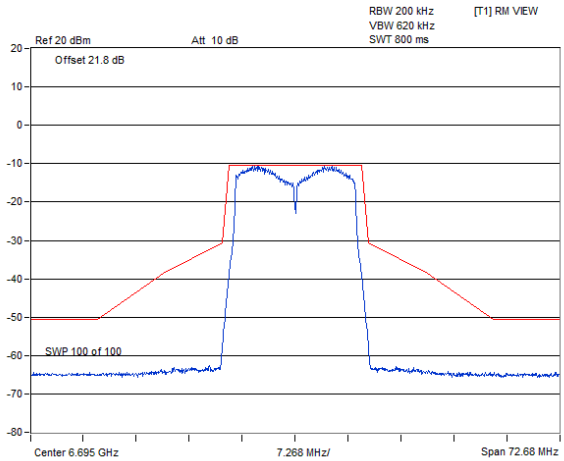

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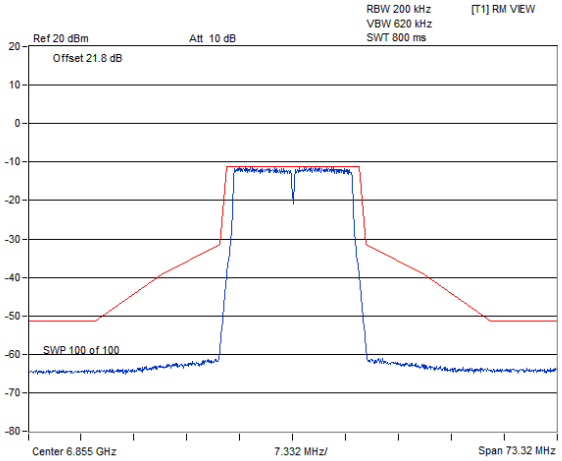
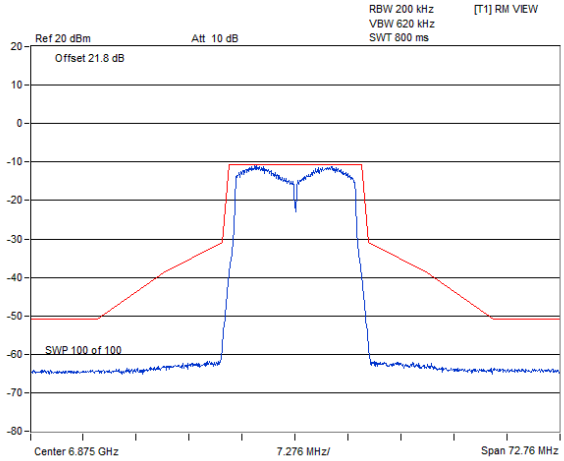


802.11a CDD / Chain 1 : CH 181



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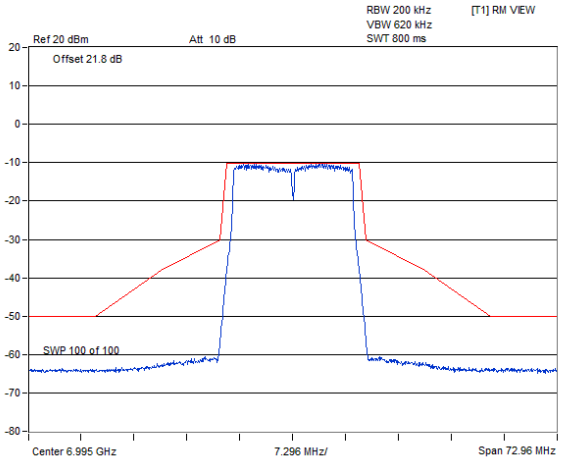

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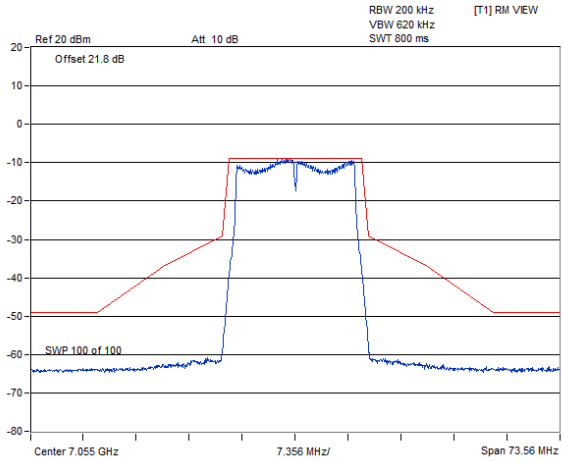
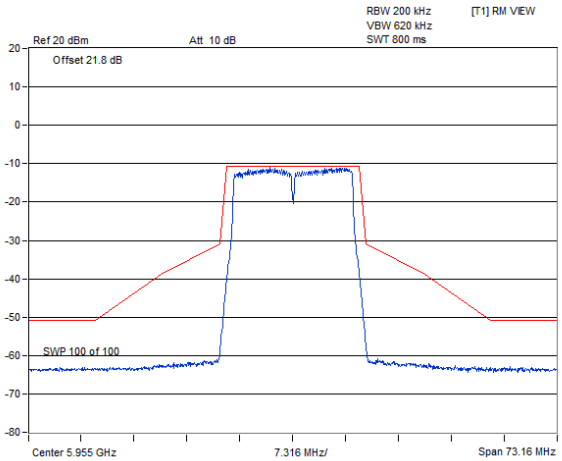
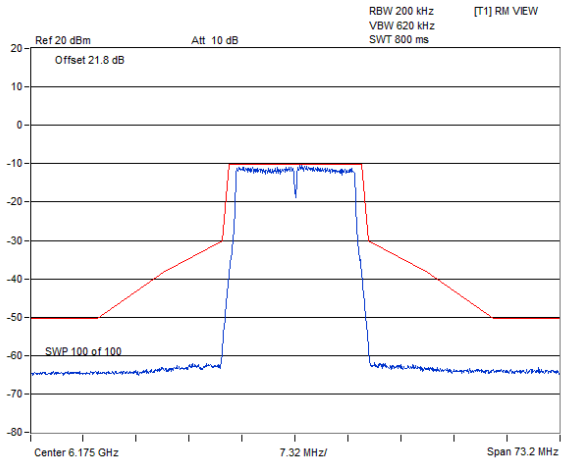


802.11a CDD / Chain 1 : CH 221

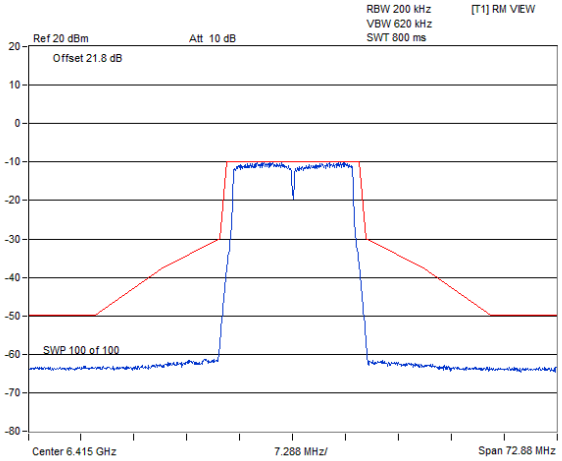
Spectrum Plot



802.11a CDD / Chain 2 : CH 1



802.11a CDD / Chain 2 : CH 45



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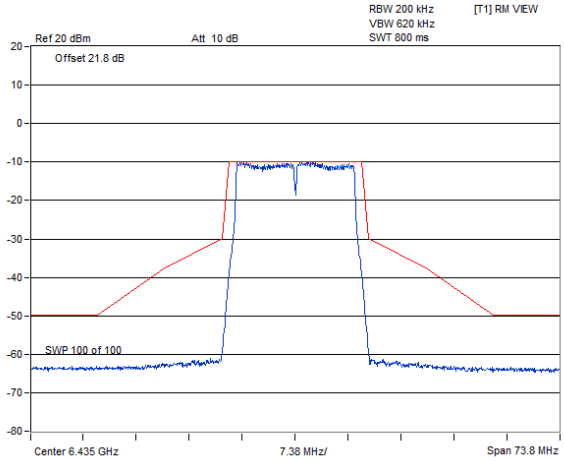

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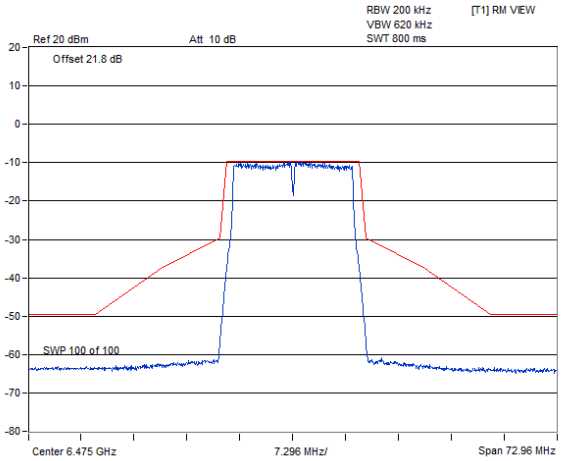

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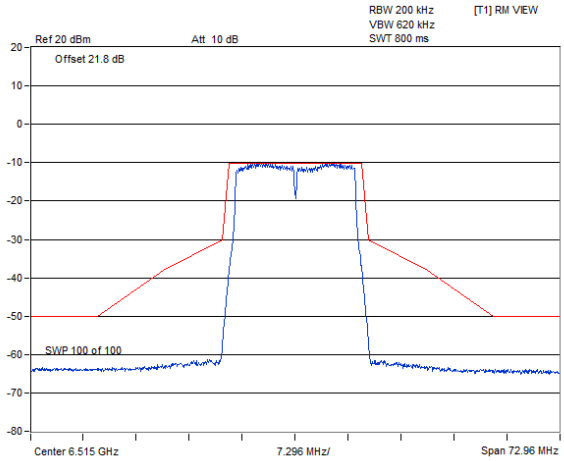
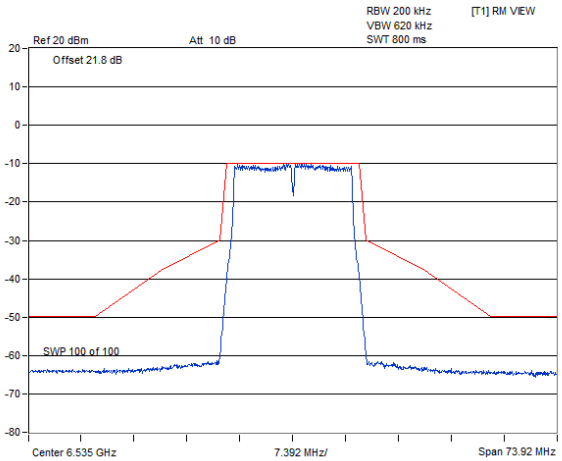
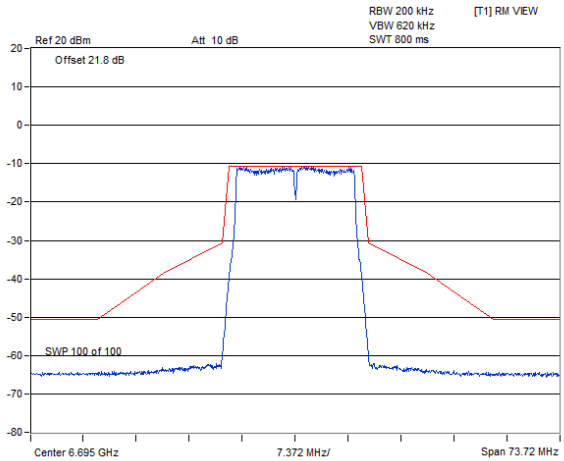


802.11a CDD / Chain 2 : CH 113

Spectrum Plot



802.11a CDD / Chain 2 : CH 117



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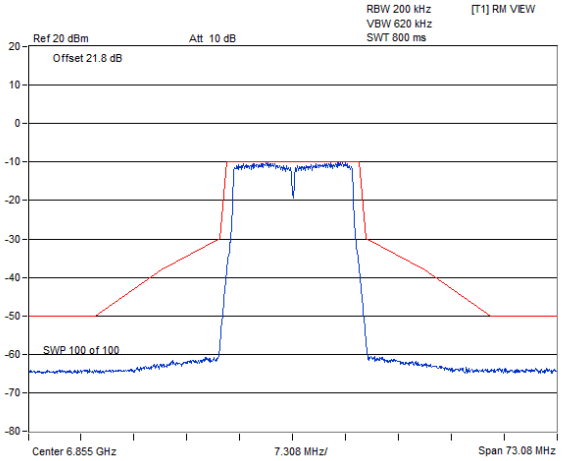
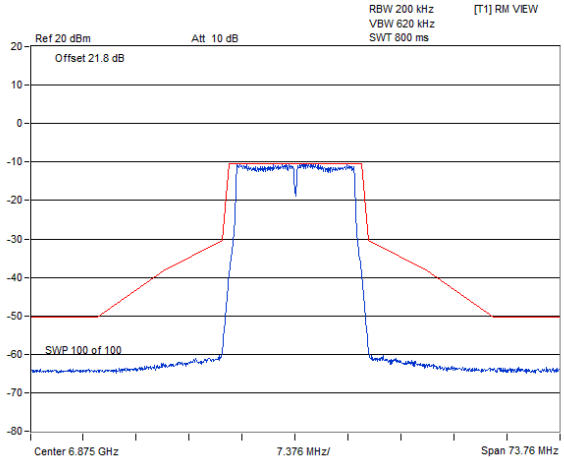


802.11a CDD / Chain 2 : CH 181



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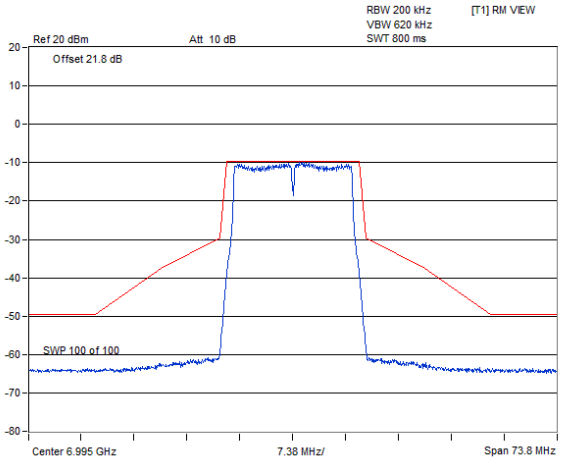
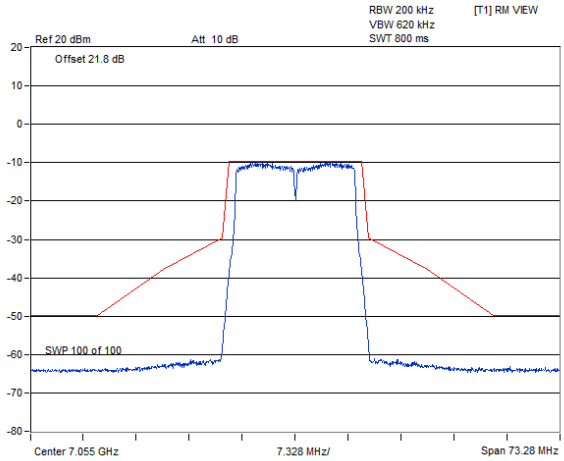
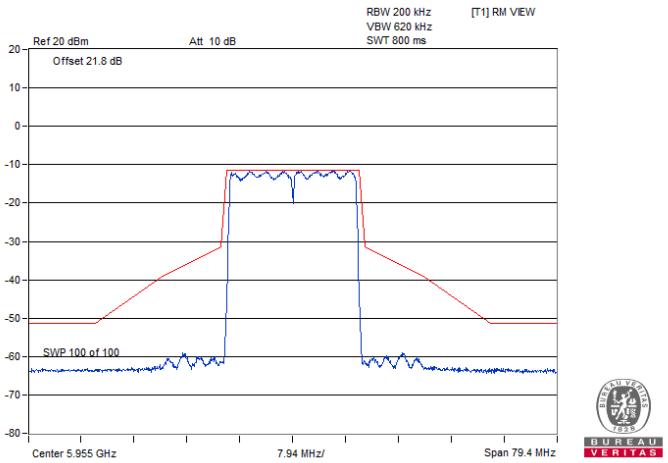
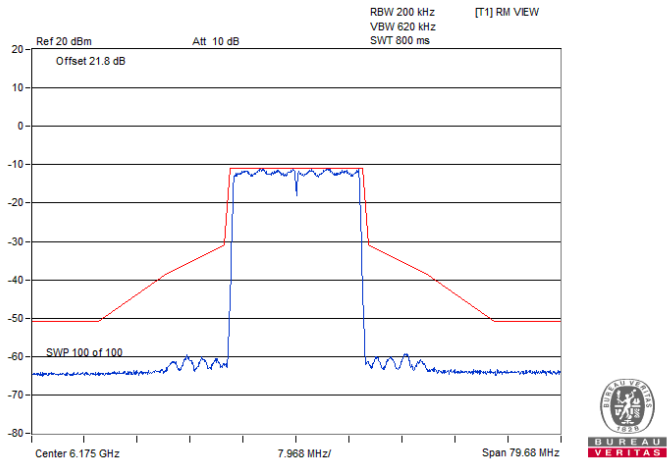
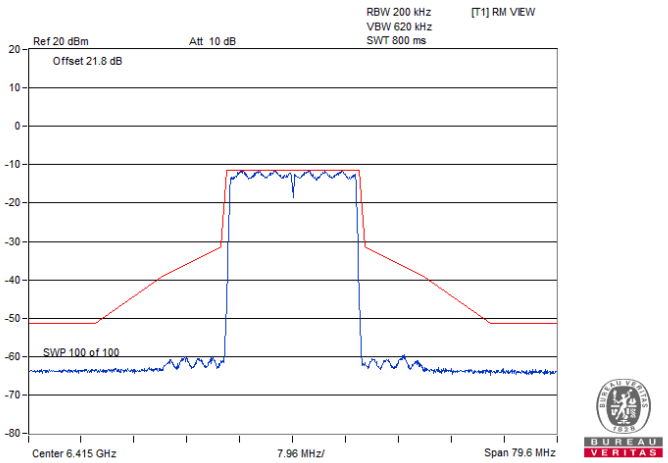
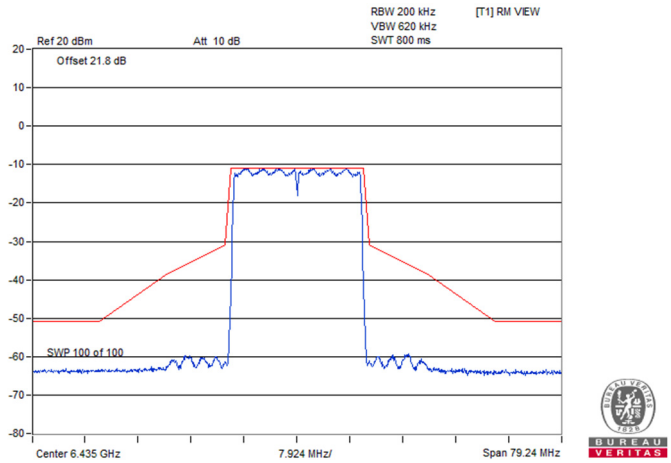
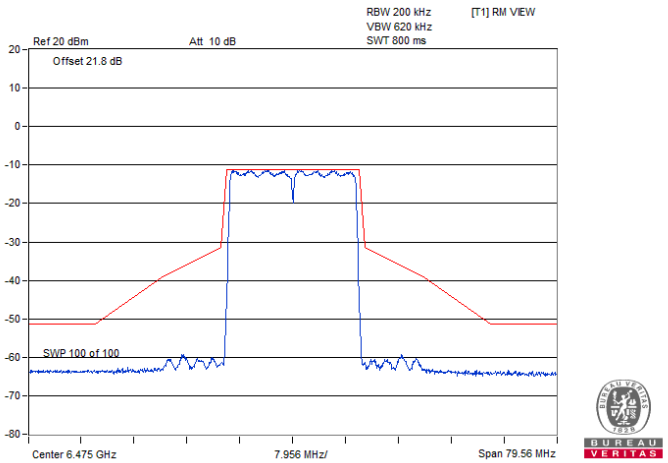
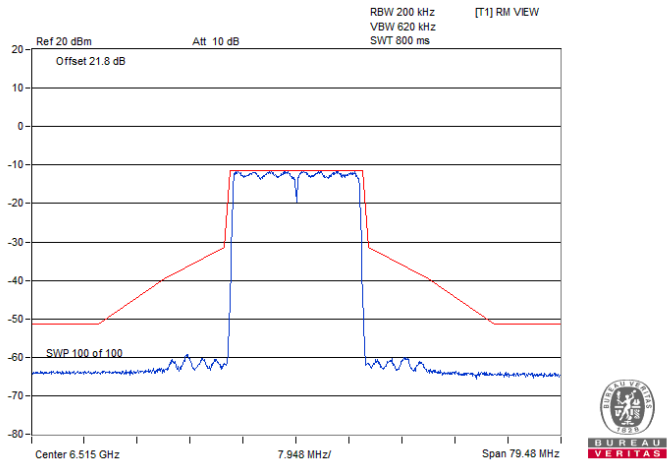


802.11a CDD / Chain 2 : CH 209

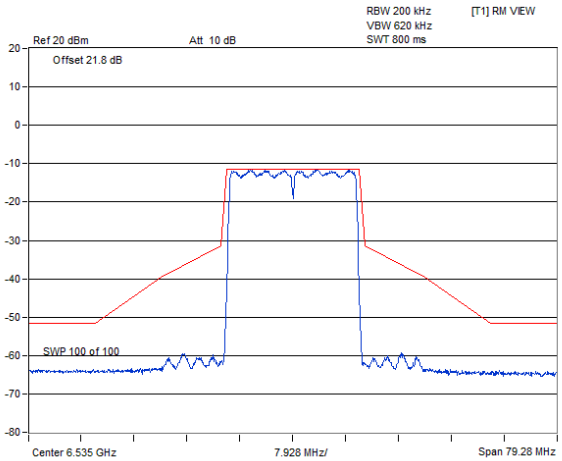


802.11a CDD / Chain 2 : CH 221

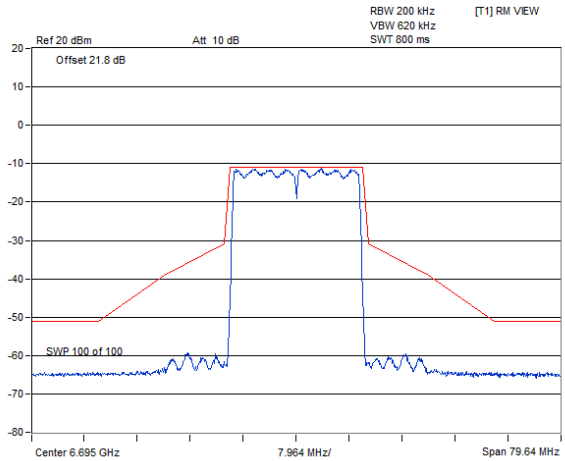
802.11be (EHT20) Beamforming (3T1S)

Spectrum Plot	
 802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 1	 802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 45
 802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 93	 802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 97
 802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 105	 802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 113

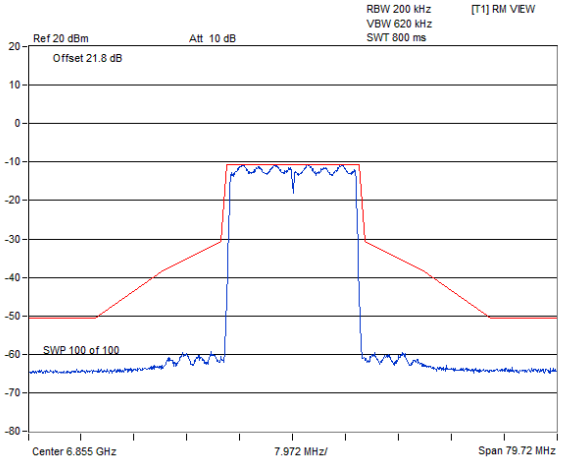
Spectrum Plot



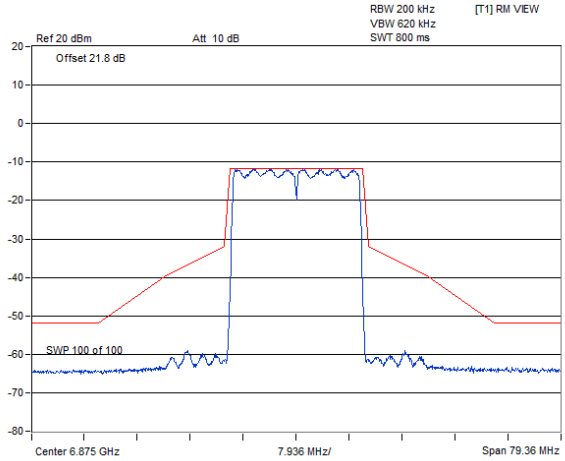
802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 117



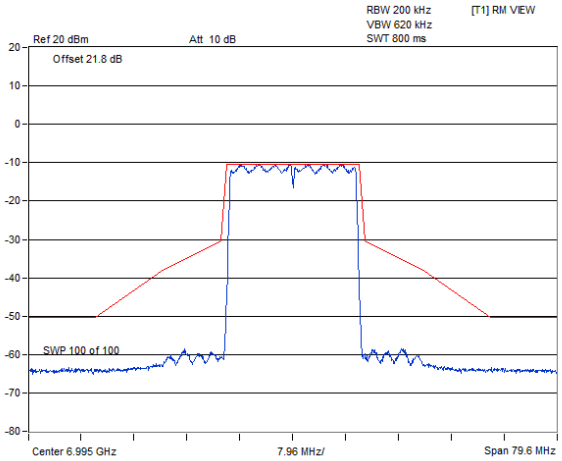
802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 149



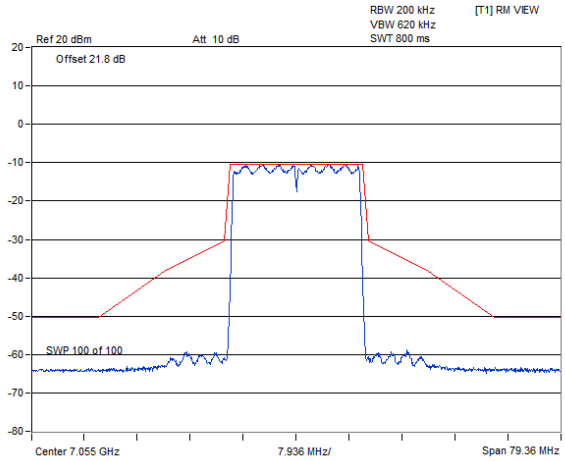
802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 181



802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 185

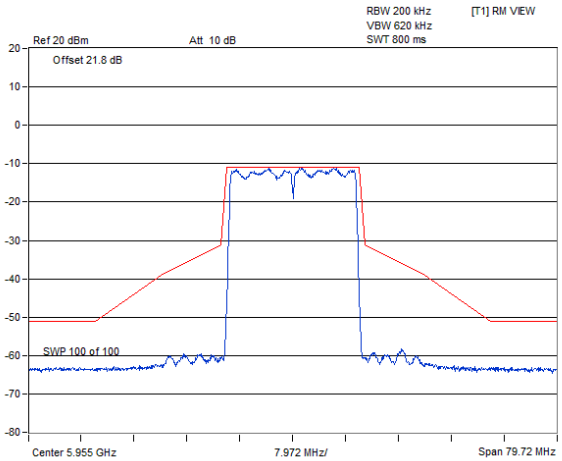


802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 209

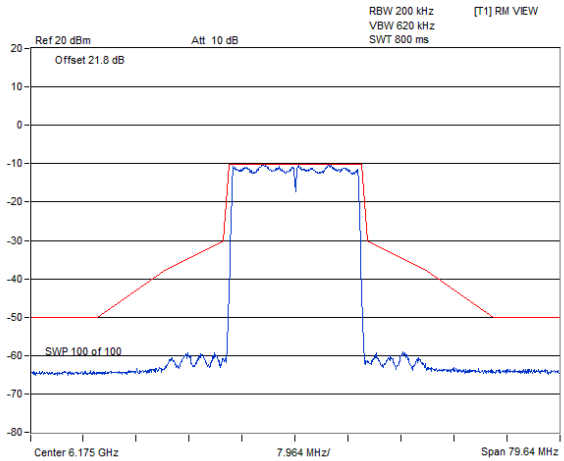


802.11be (EHT20) Beamforming (3T1S) / Chain 0 : CH 221

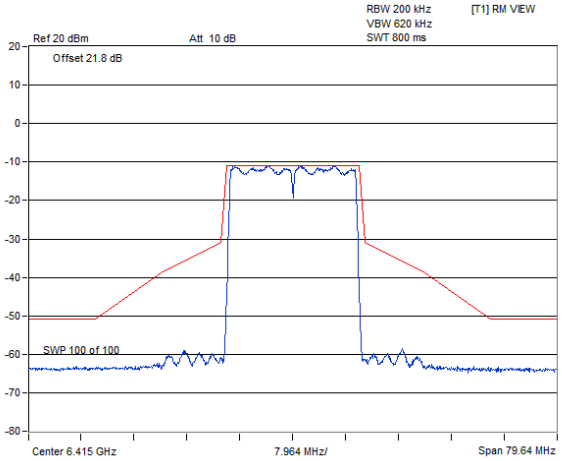
Spectrum Plot



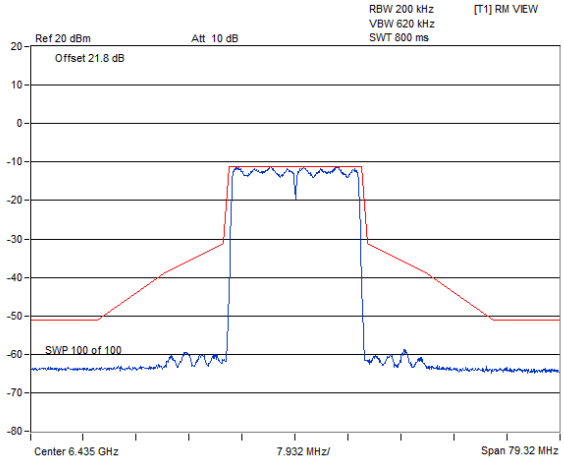
802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 1



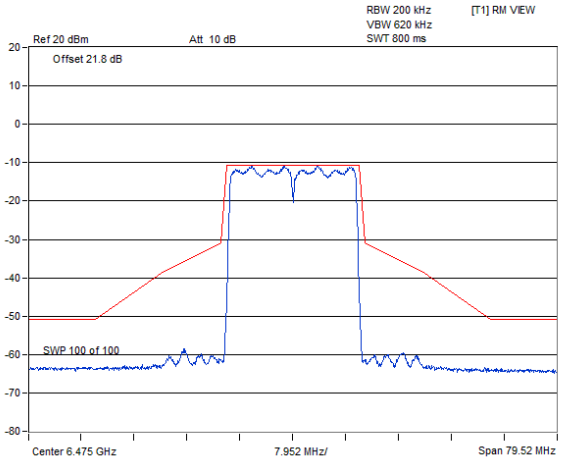
802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 45



802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 93



802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 97



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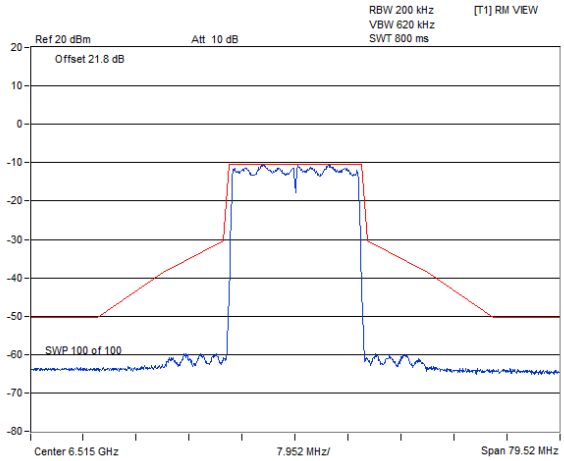
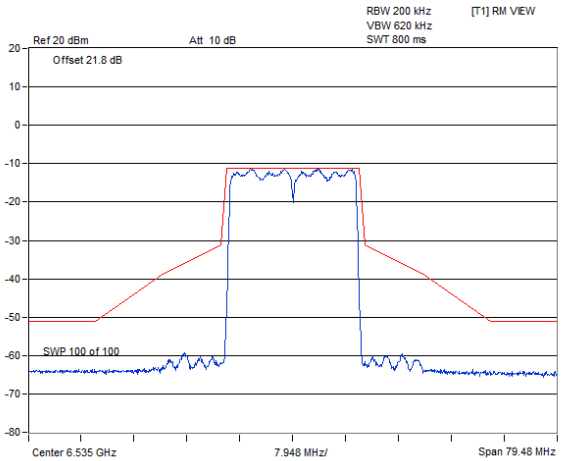
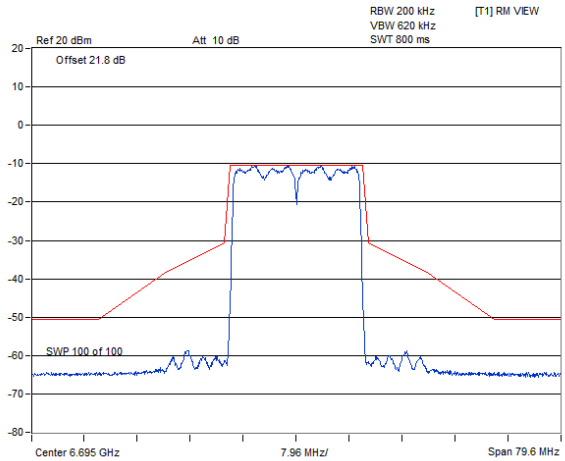


802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 113

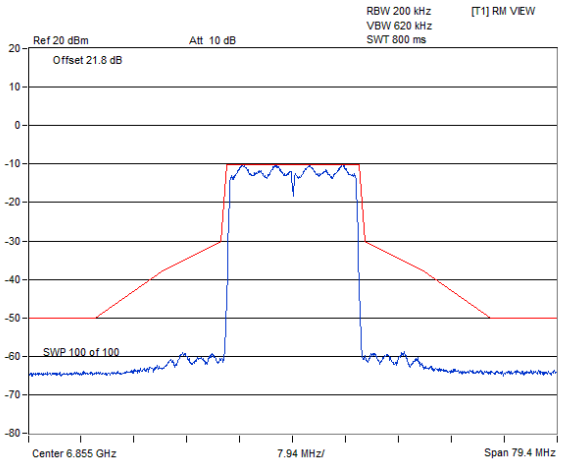
Spectrum Plot



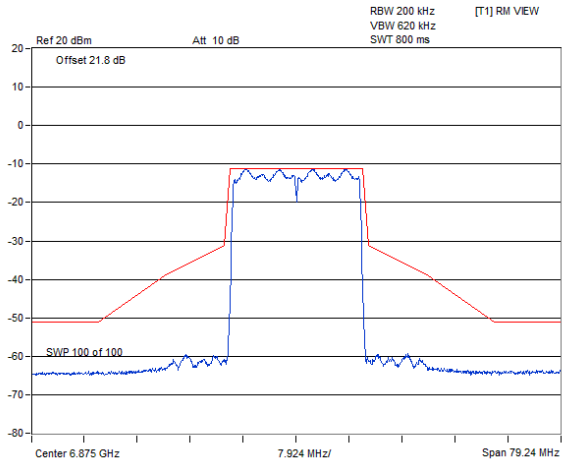
802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 117



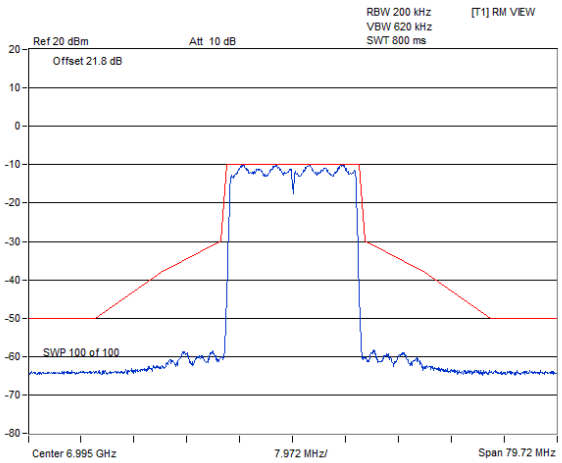
802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 149



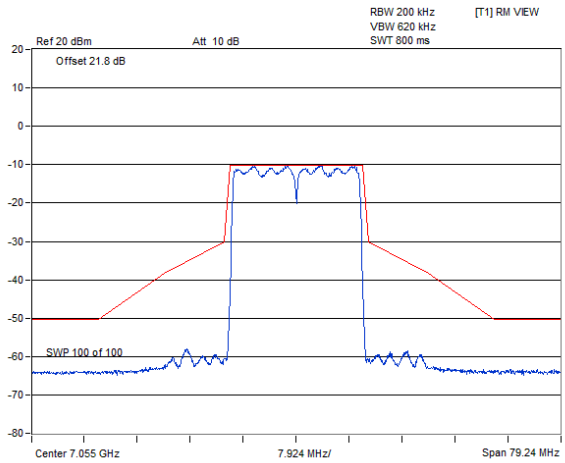
802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 181



802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 185

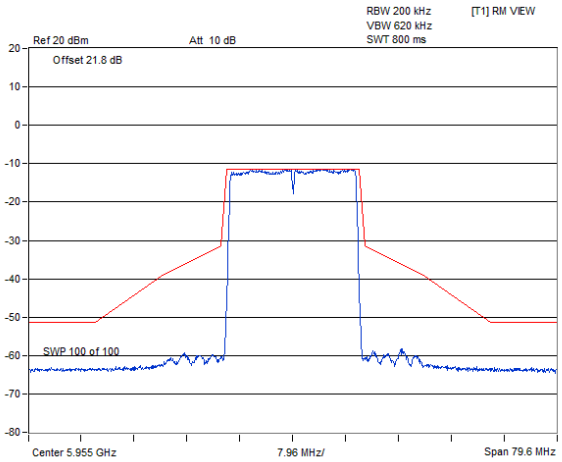


802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 209

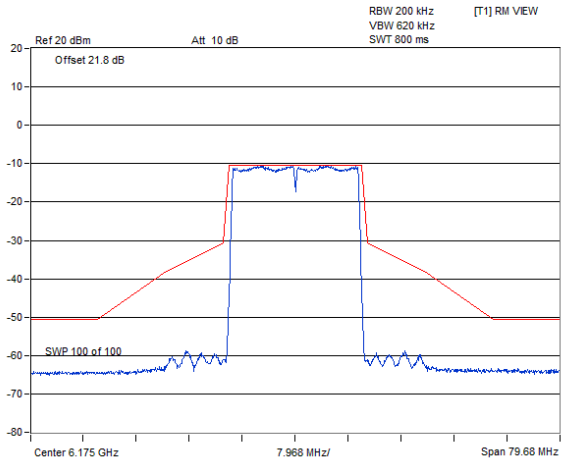


802.11be (EHT20) Beamforming (3T1S) / Chain 1 : CH 221

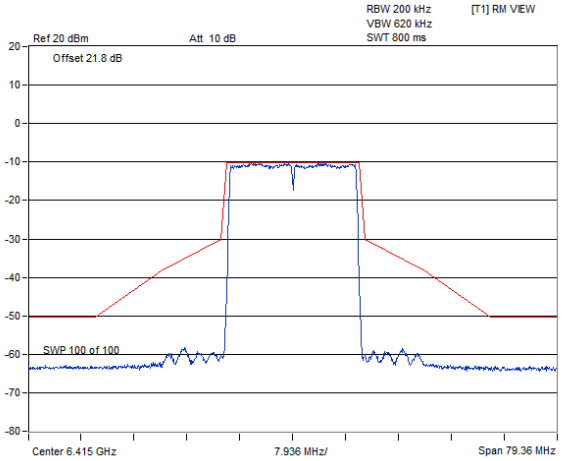
Spectrum Plot



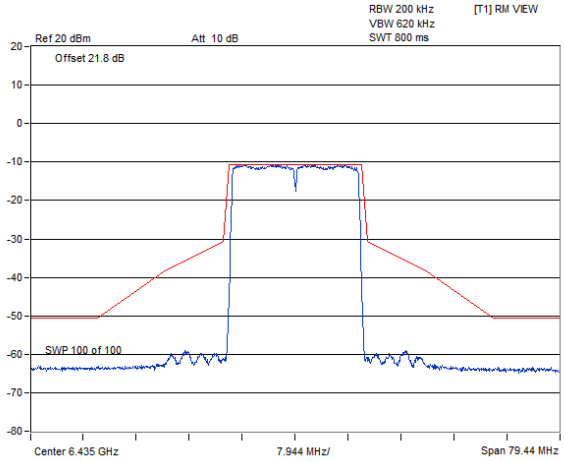
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 1



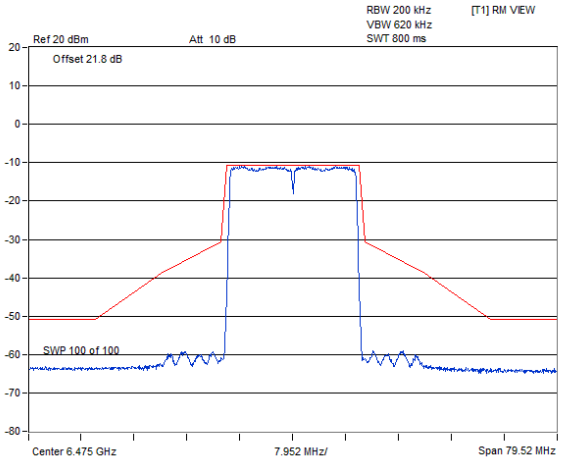
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 45



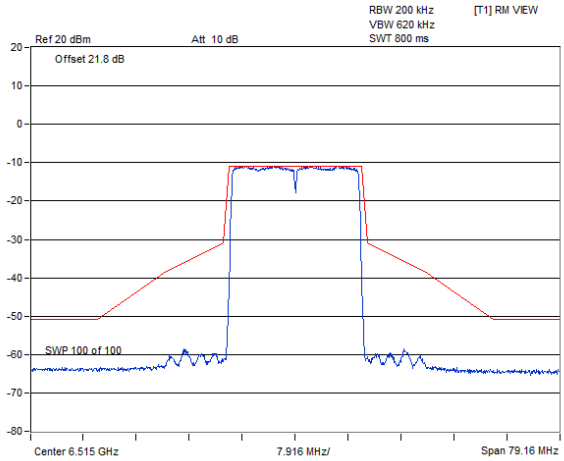
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 93



802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 97

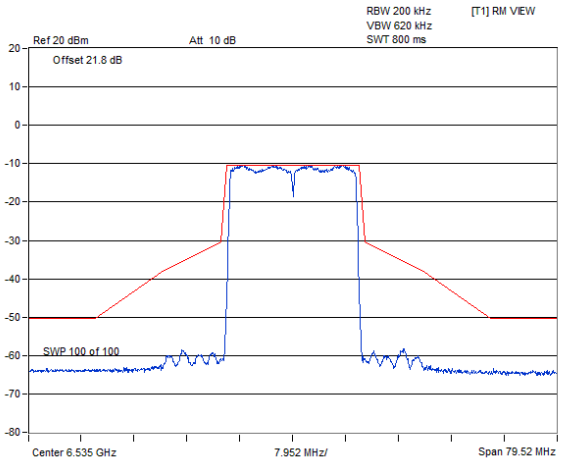


802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 105

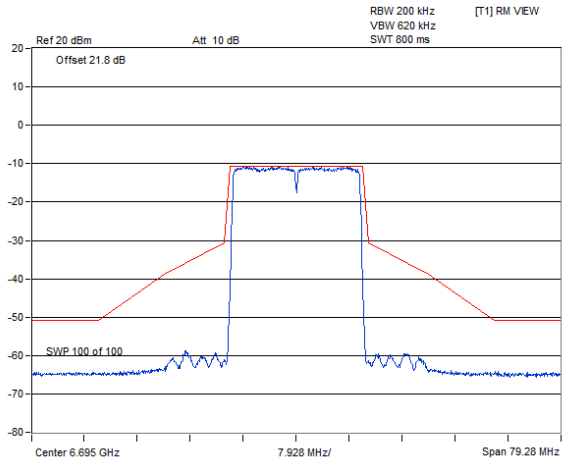


802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 113

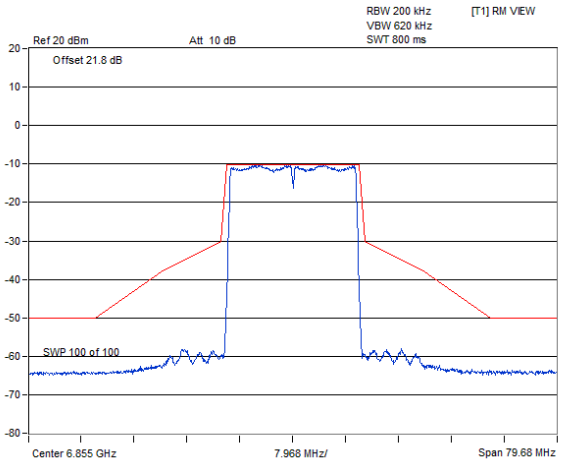
Spectrum Plot



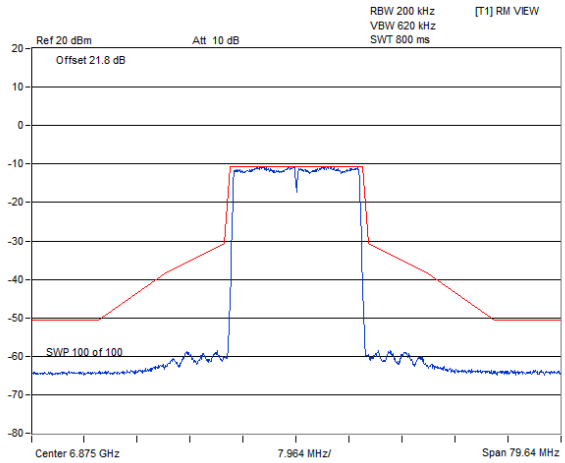
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 117



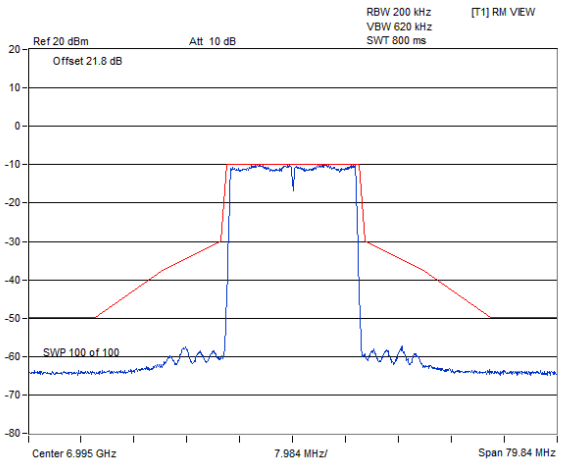
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 149



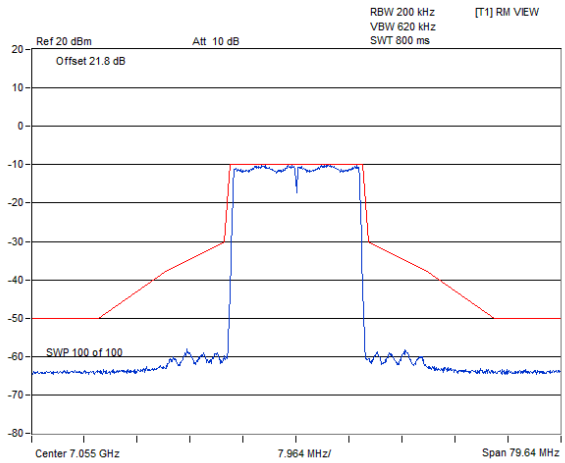
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 181



802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 185

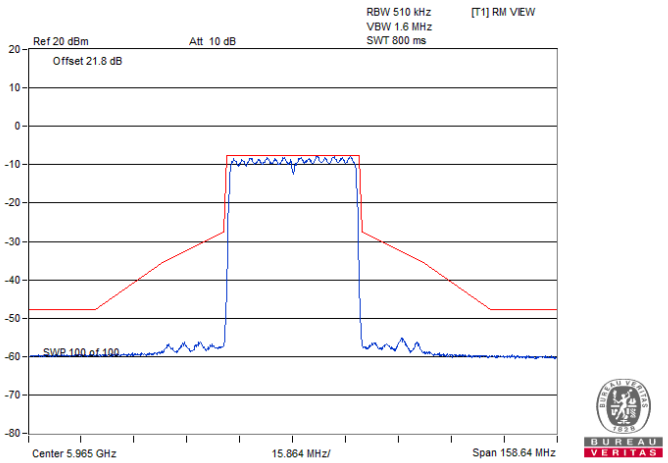
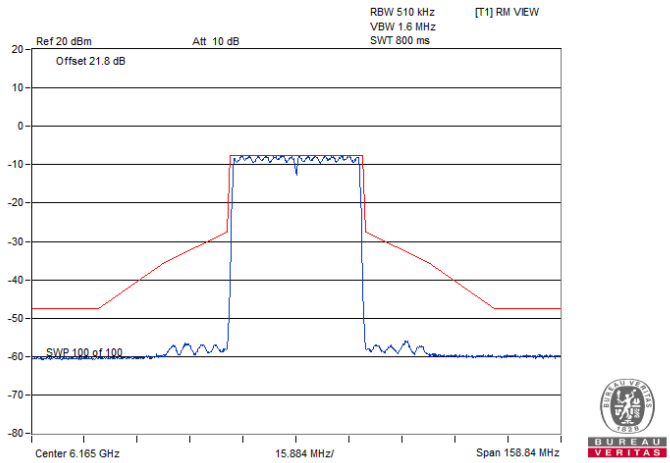
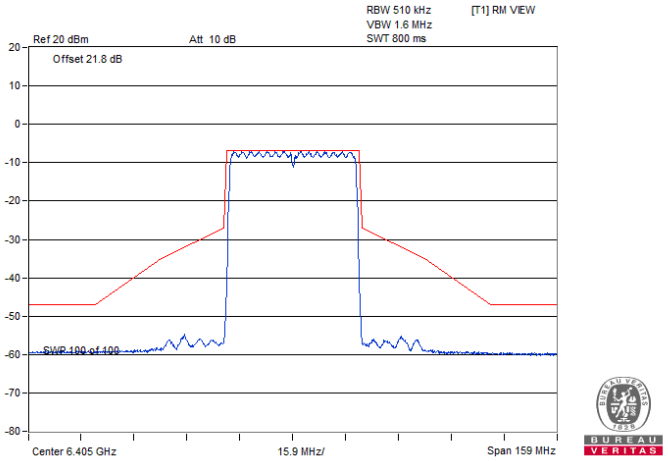
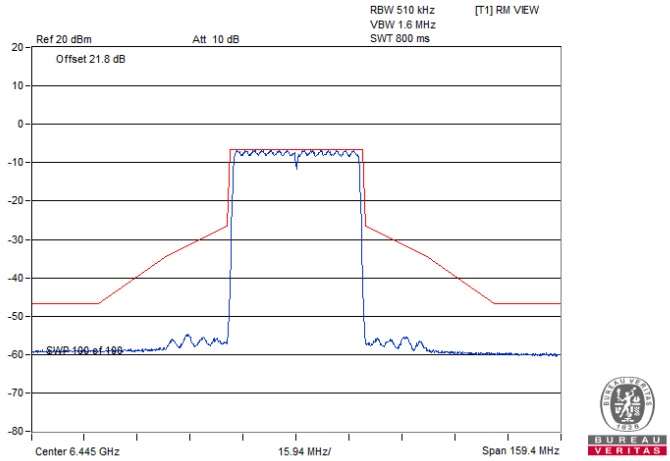
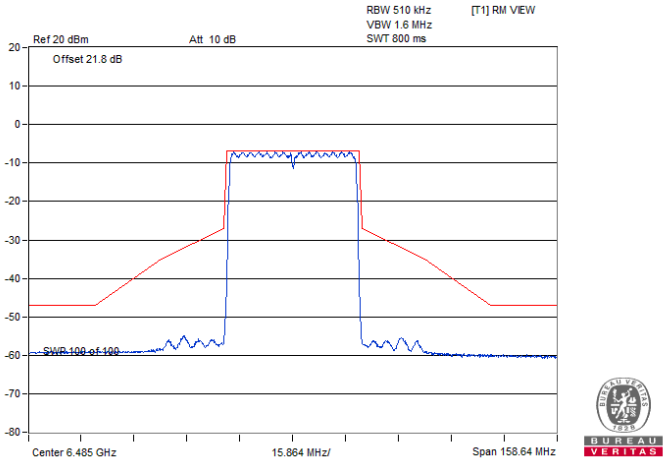
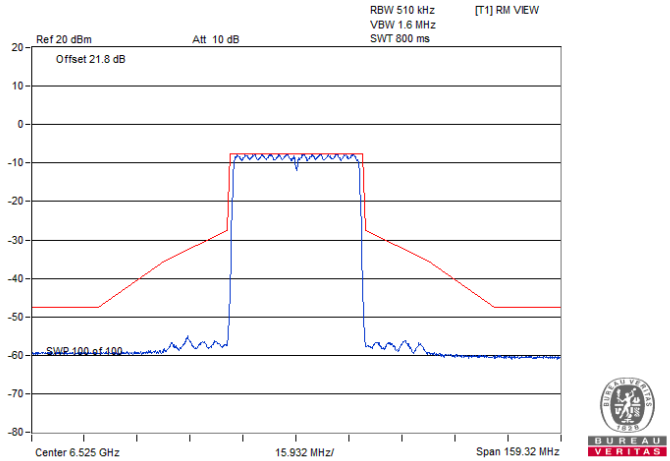


802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 209

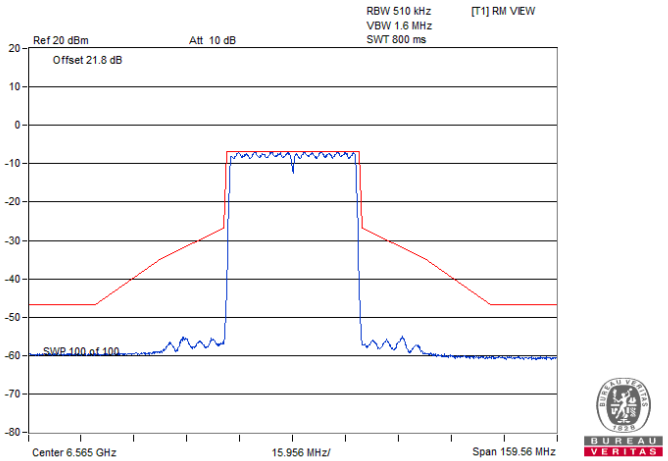


802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 221

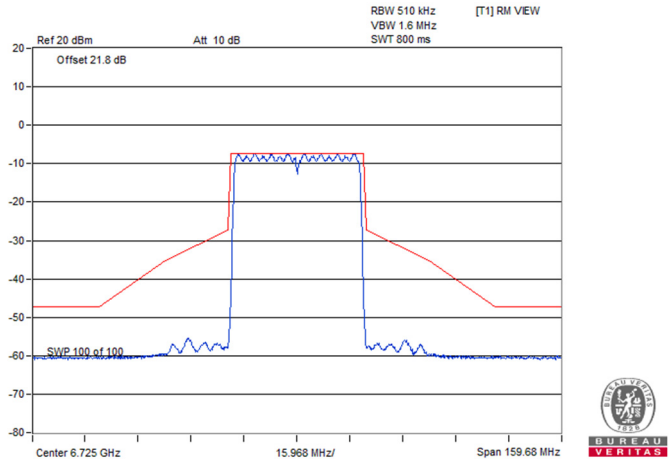
802.11be (EHT40) Beamforming (3T1S)

Spectrum Plot	
 802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 3	 802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 43
 802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 91	 802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 99
 802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 107	 802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 115

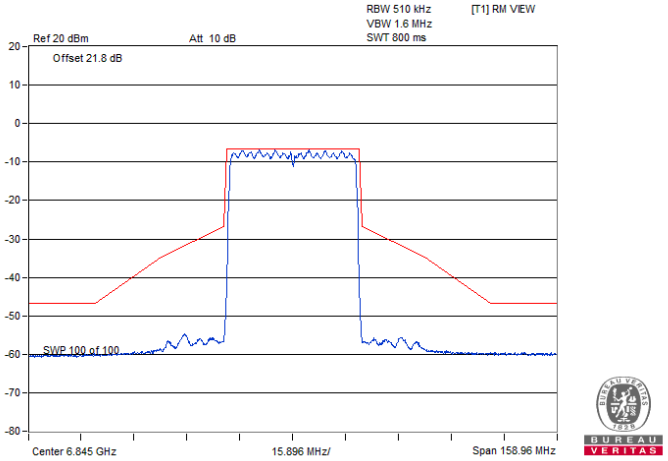
Spectrum Plot



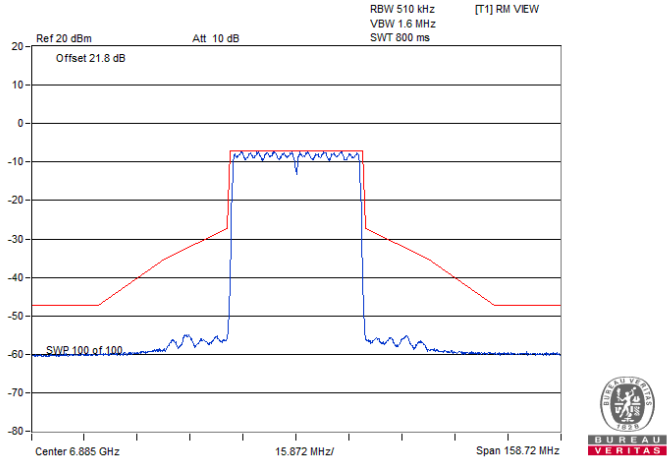
802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 123



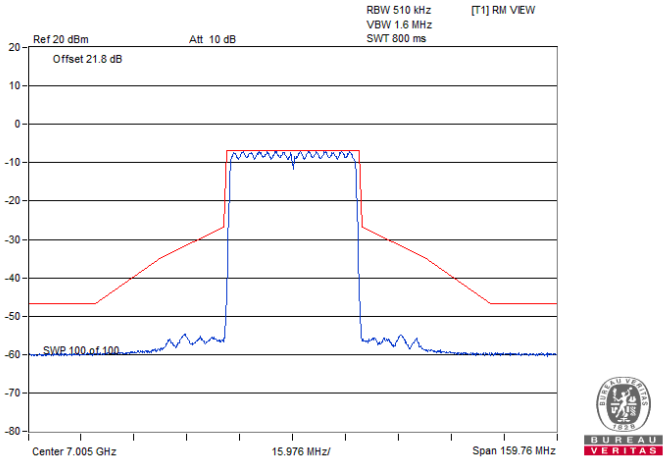
802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 155



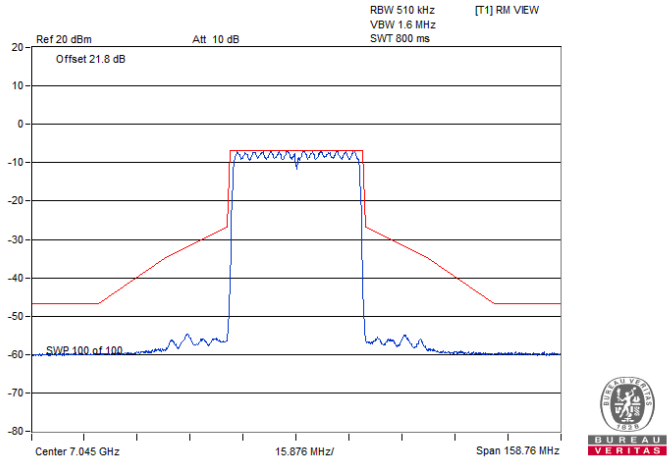
802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 179



802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 187

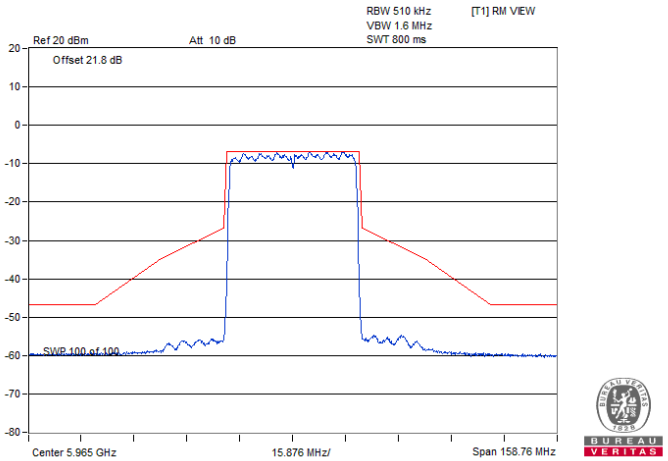


802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 211

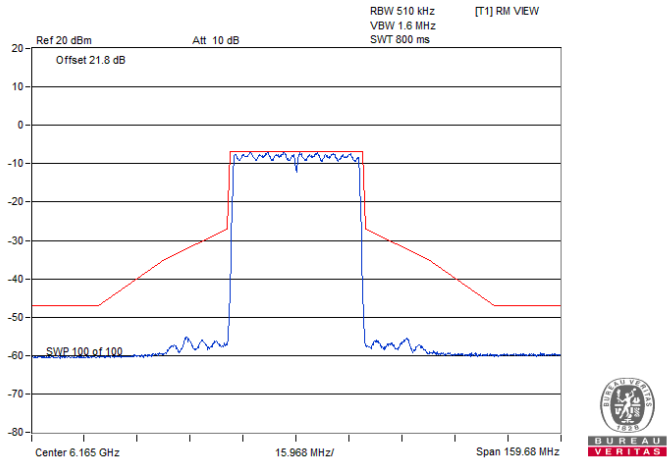


802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 219

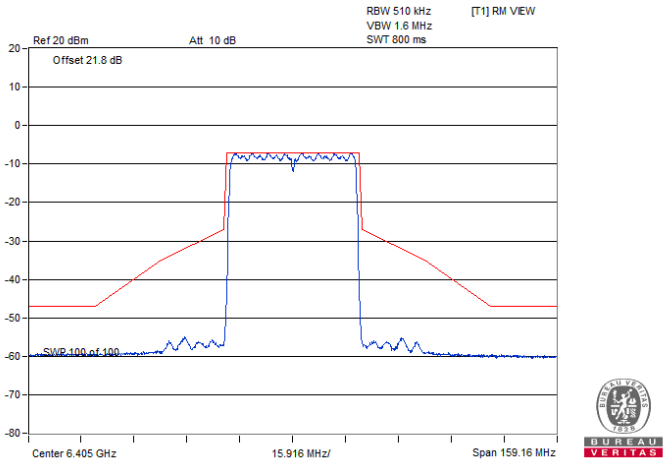
Spectrum Plot



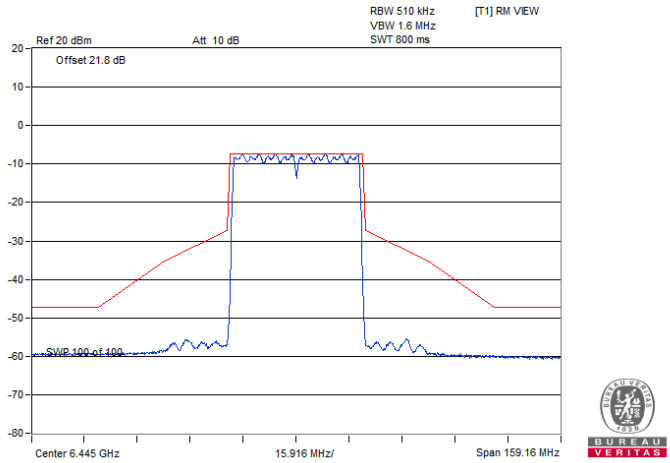
802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 3



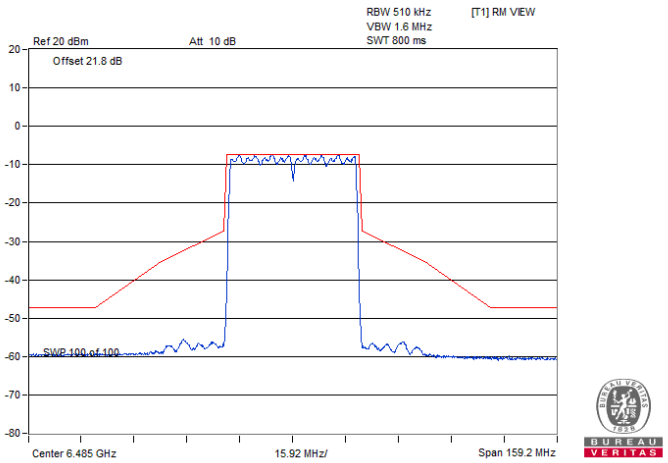
802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 43



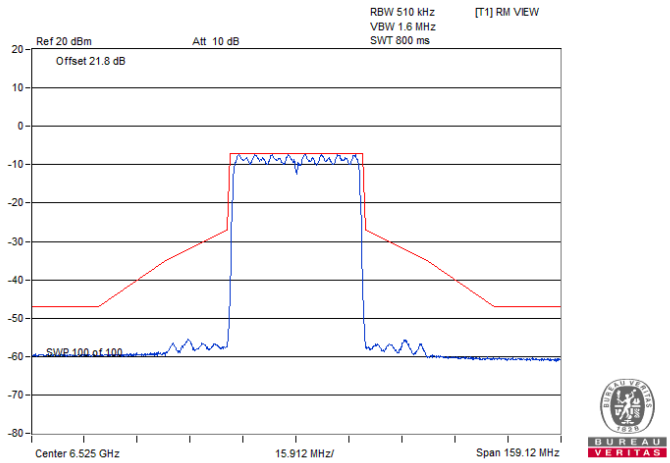
802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 91



802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 99

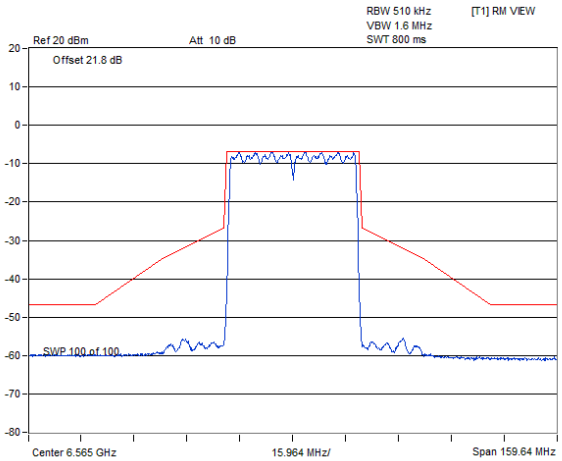


802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 107

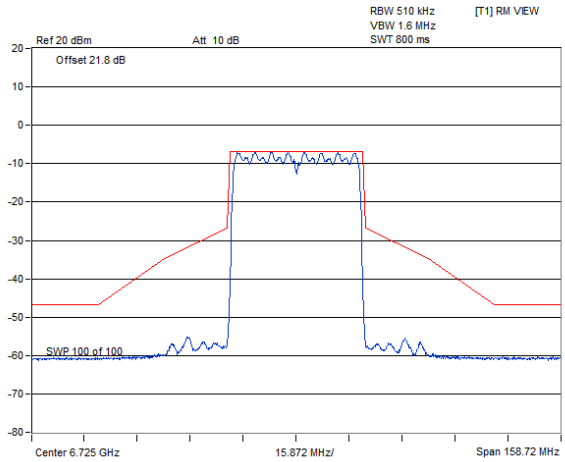


802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 115

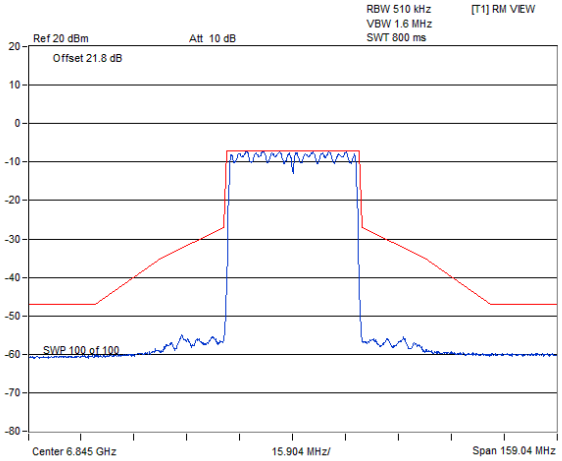
Spectrum Plot



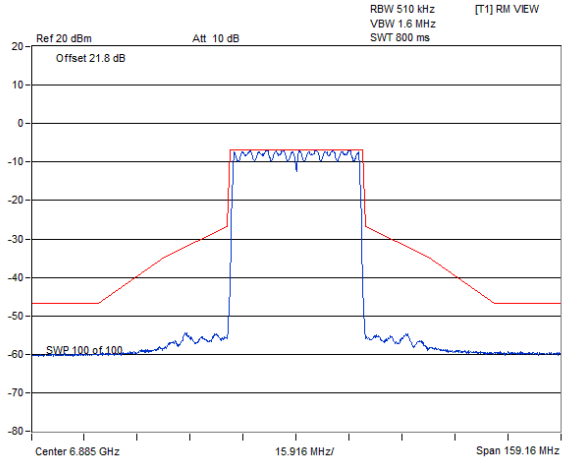
802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 123



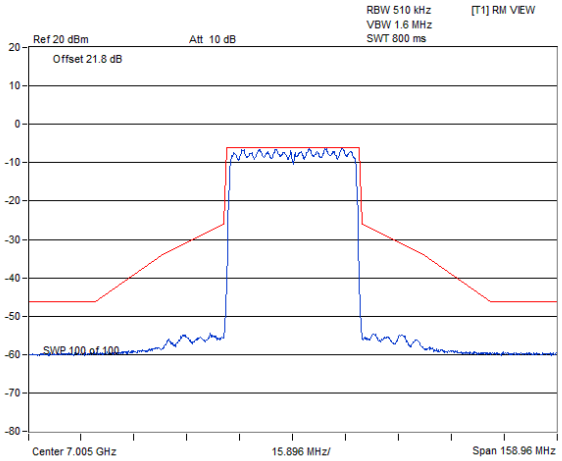
802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 155



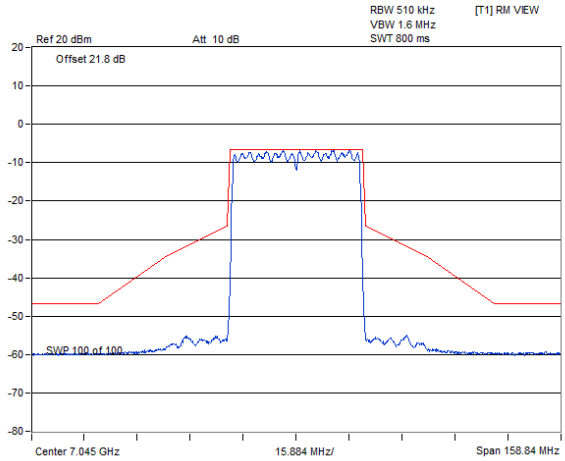
802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 179



802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 187

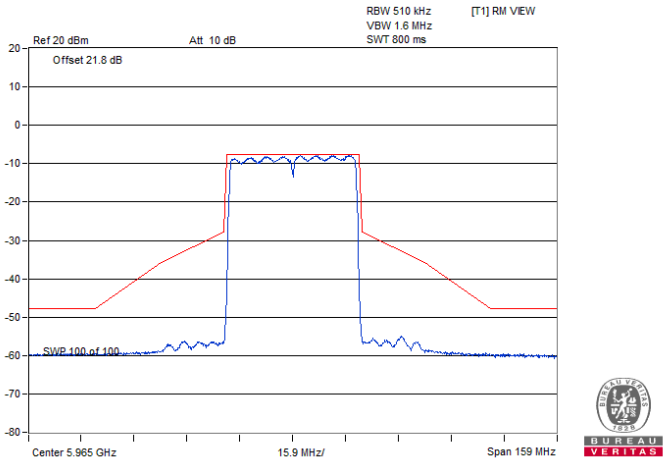


802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 211

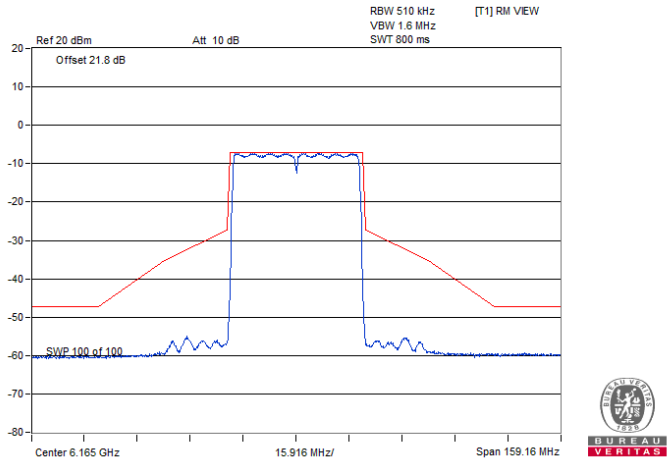


802.11be (EHT40) Beamforming (3T1S) / Chain 1 : CH 219

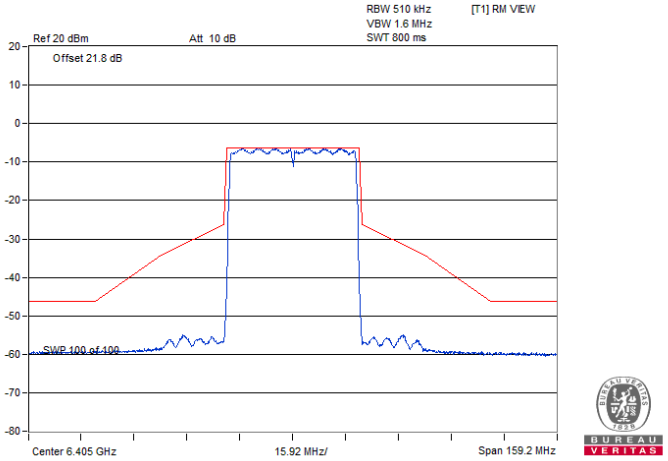
Spectrum Plot



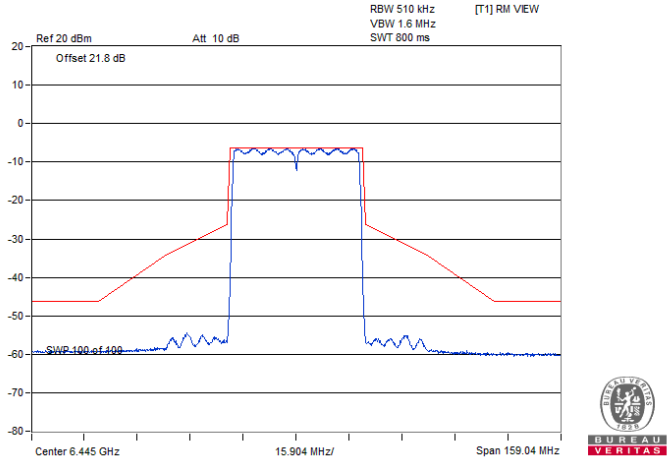
802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 3



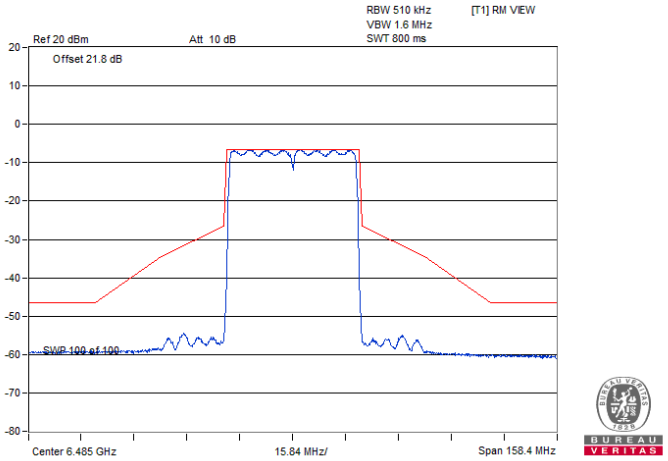
802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 43



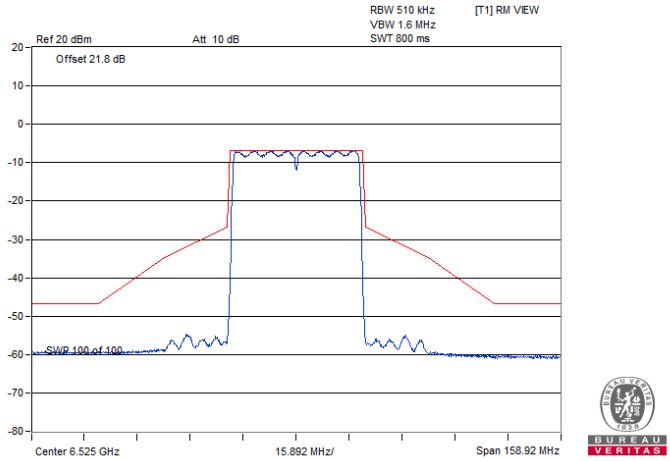
802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 91



802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 99

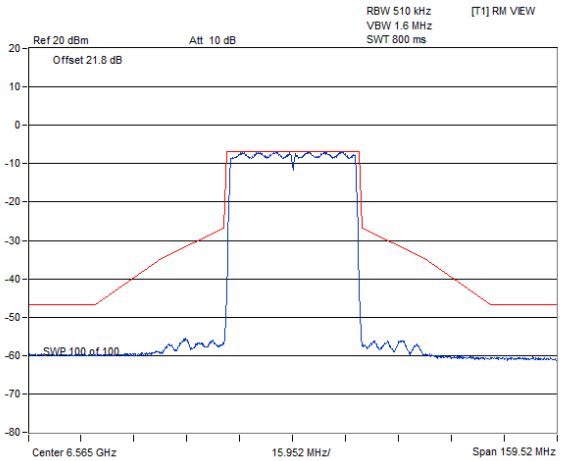


802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 107

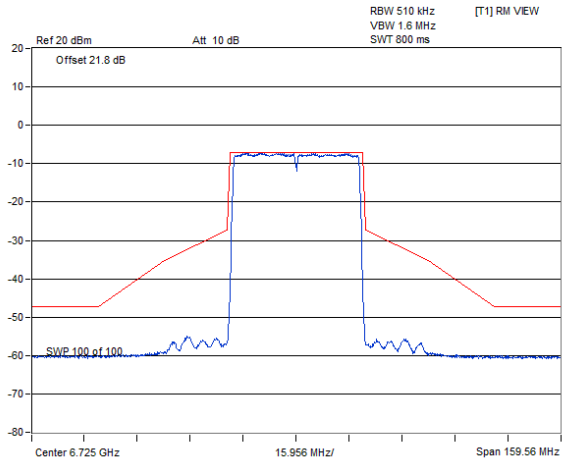


802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 115

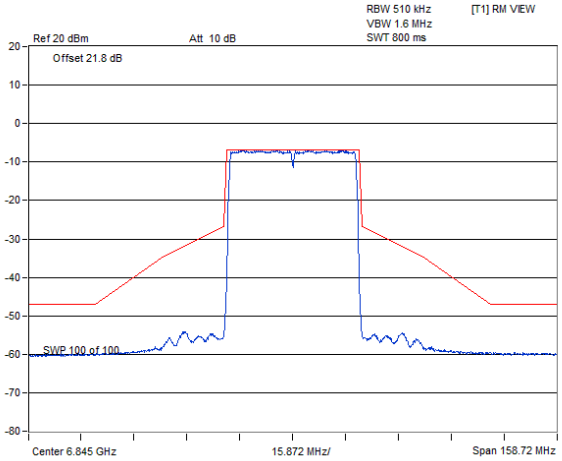
Spectrum Plot



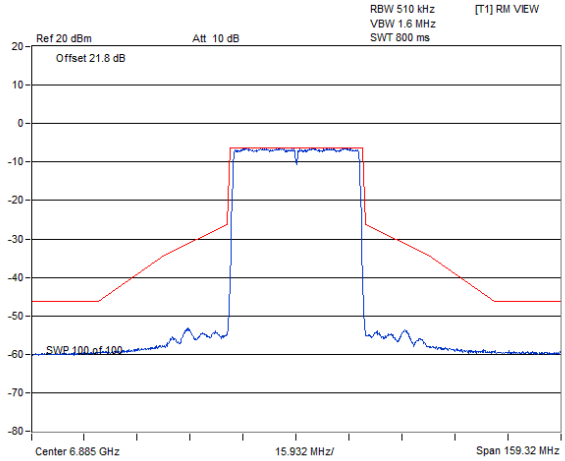
802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 123



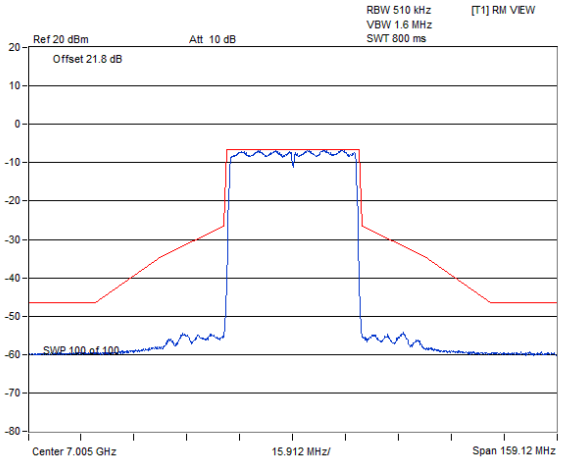
802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 155



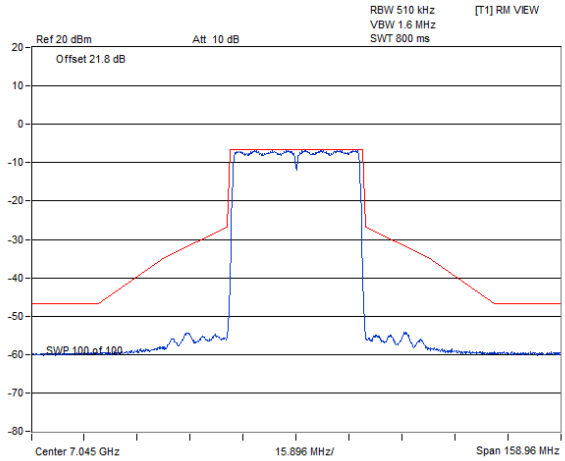
802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 179



802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 187

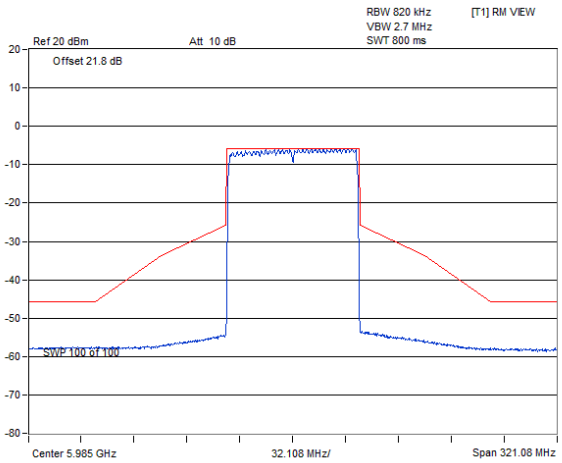
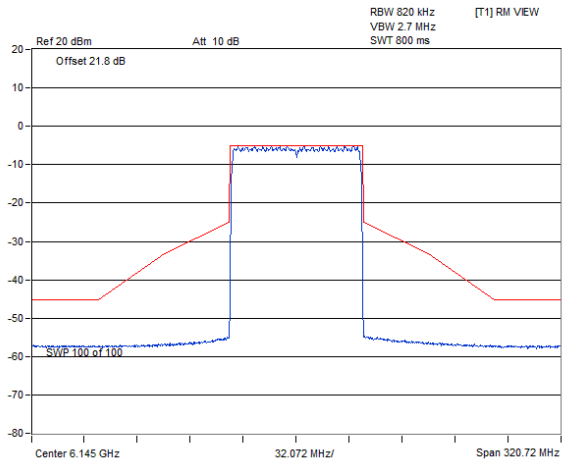
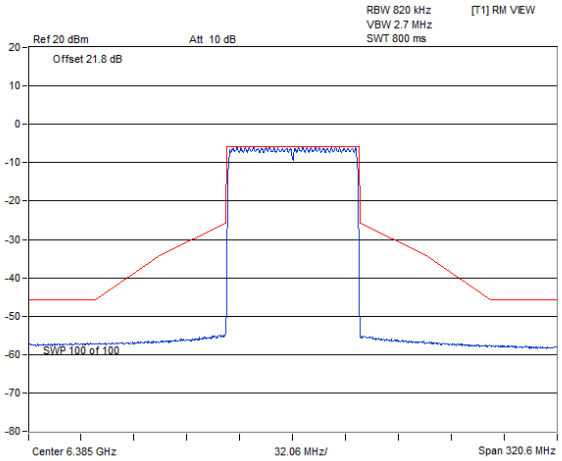
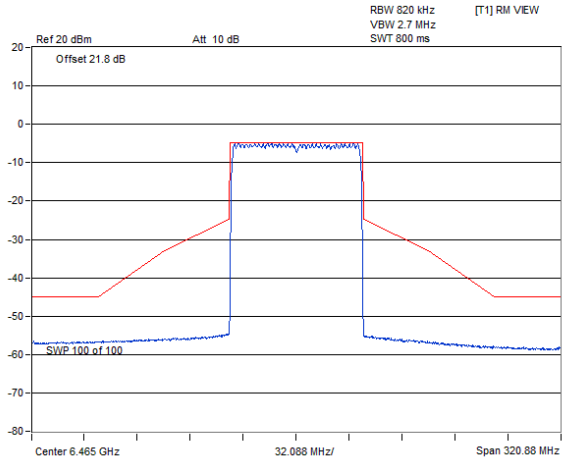
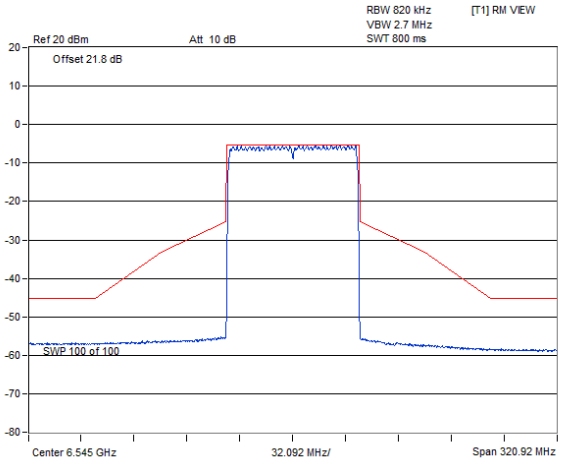
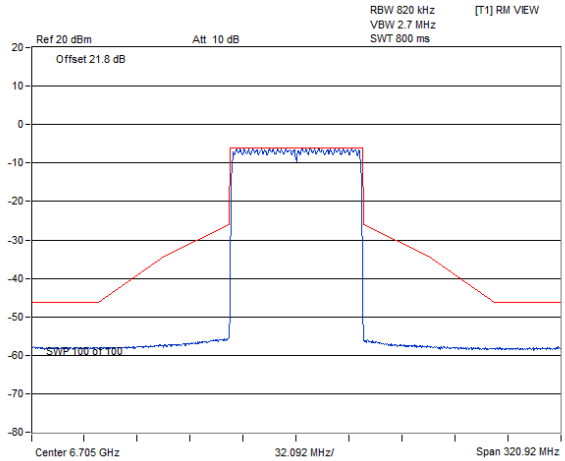


802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 211

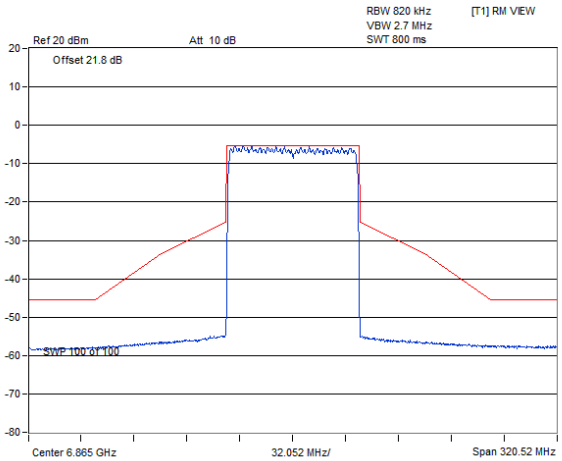


802.11be (EHT40) Beamforming (3T1S) / Chain 2 : CH 219

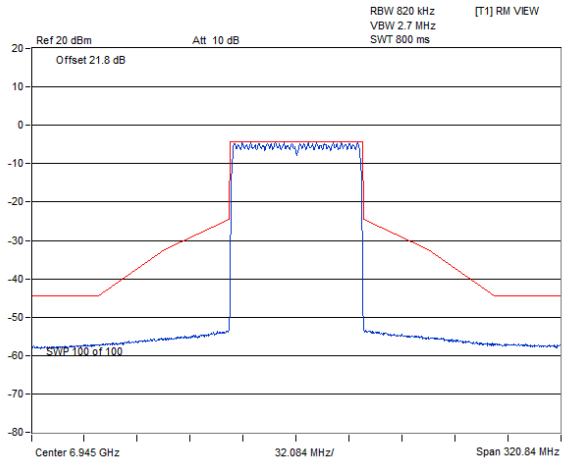
802.11be (EHT80) Beamforming (3T1S)

Spectrum Plot	
	
802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 7	802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 39
	
802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 87	802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 103
	
802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 119	802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 151

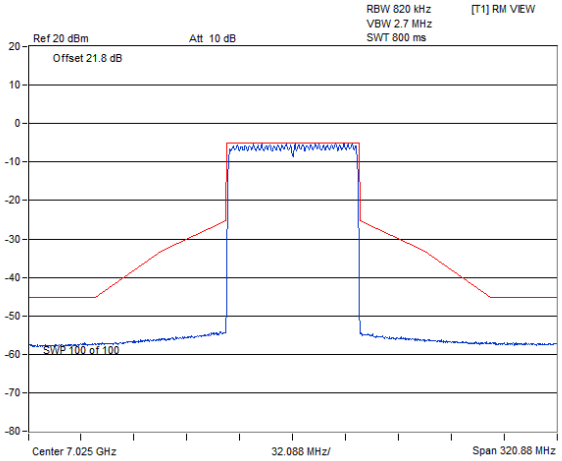
Spectrum Plot



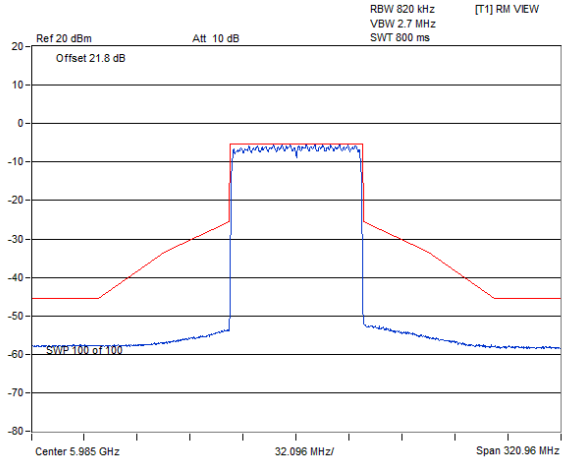
802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 183



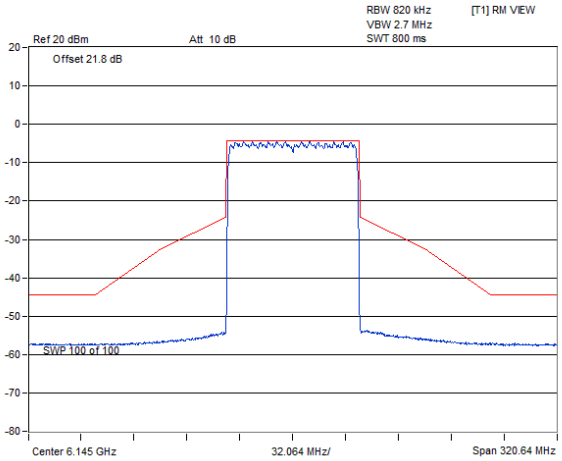
802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 199



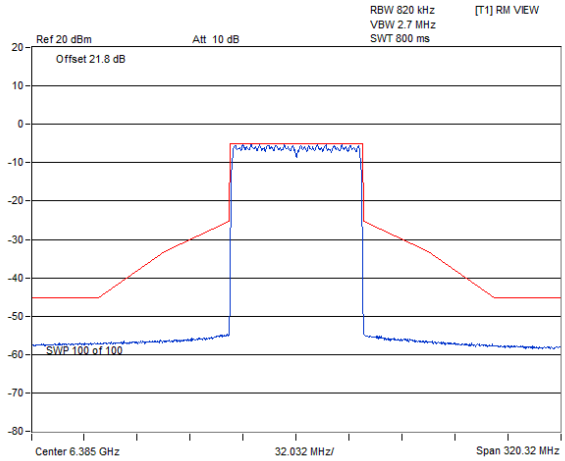
802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 215



802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 7

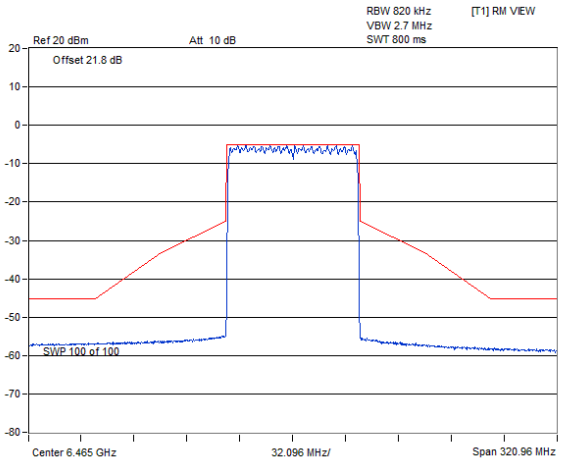


802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 39

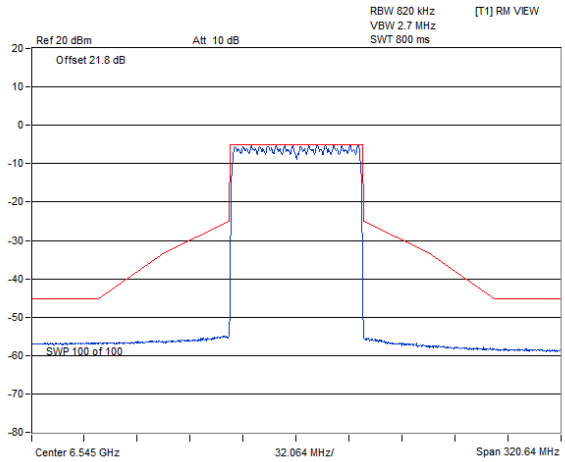


802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 87

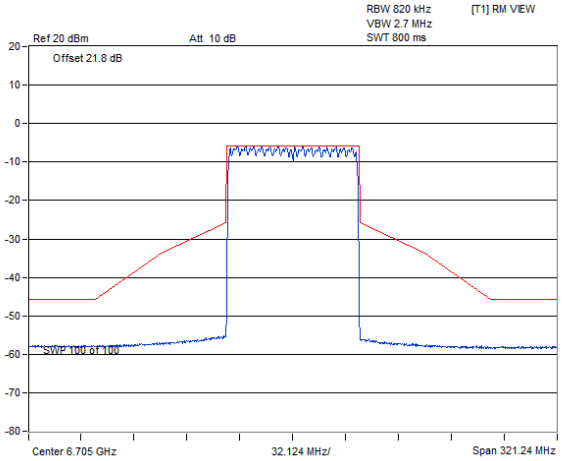
Spectrum Plot



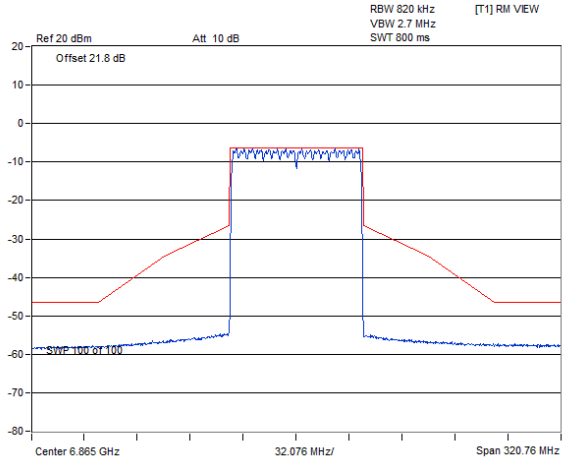
802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 103



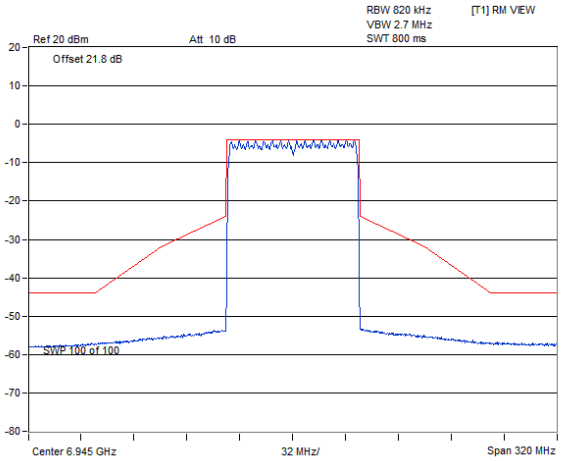
802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 119



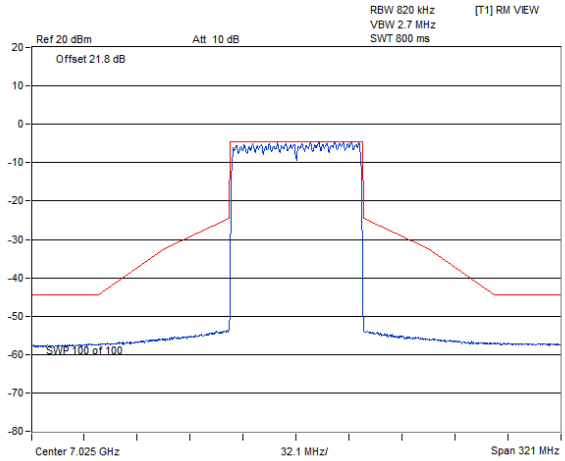
802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 151



802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 183

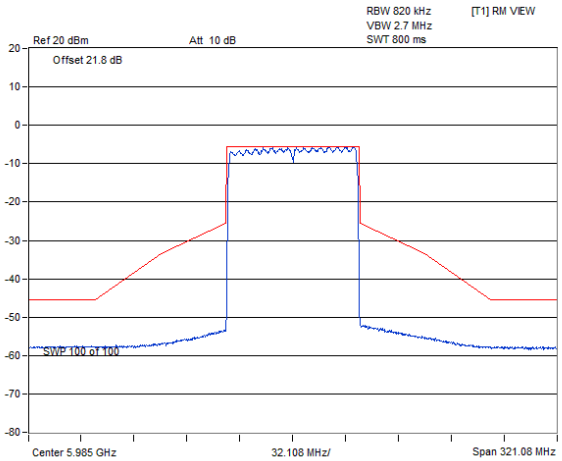


802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 199

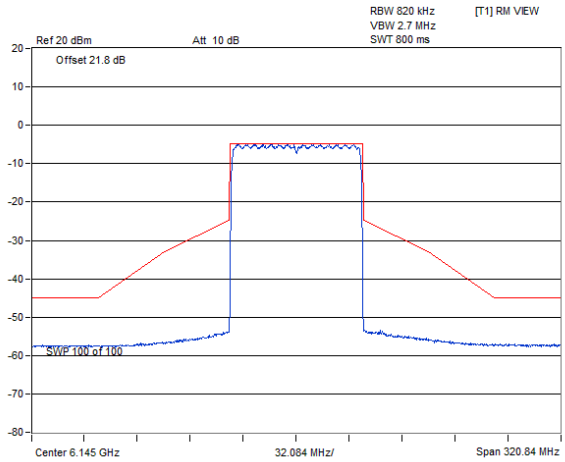


802.11be (EHT80) Beamforming (3T1S) / Chain 1 : CH 215

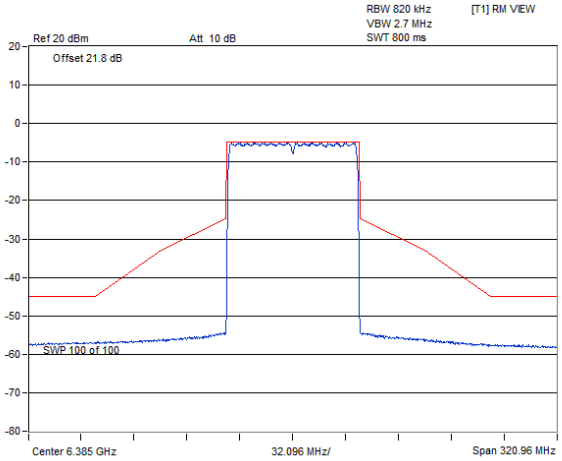
Spectrum Plot



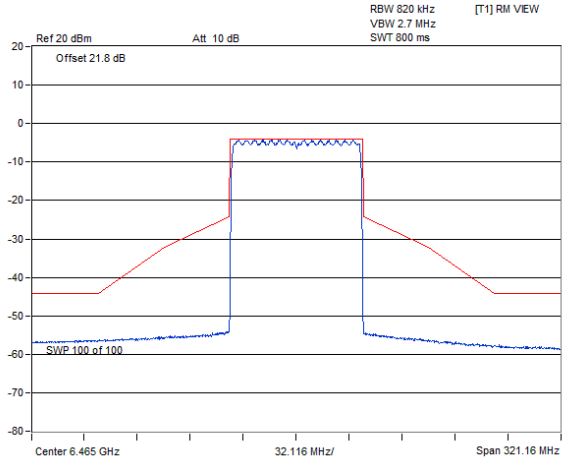
802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 7



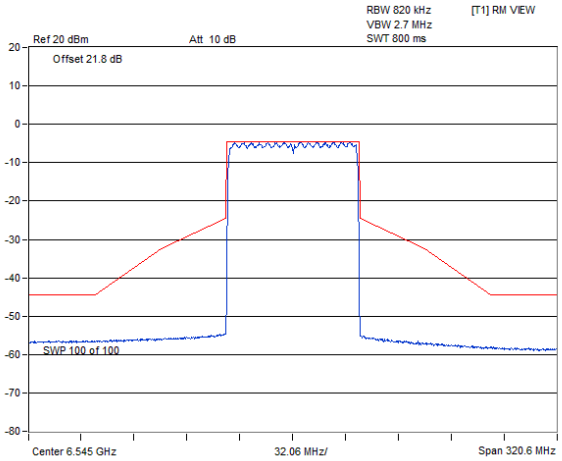
802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 39



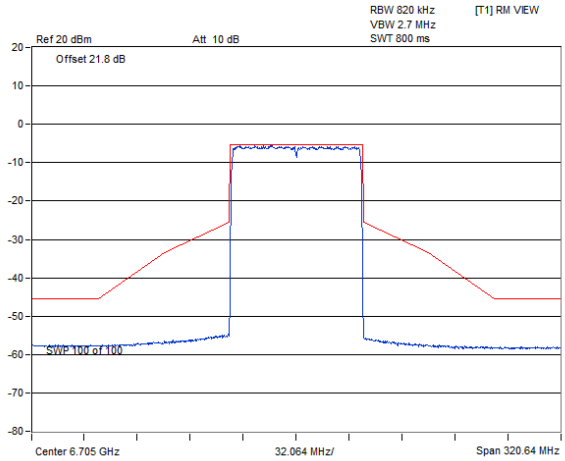
802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 87



802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 103

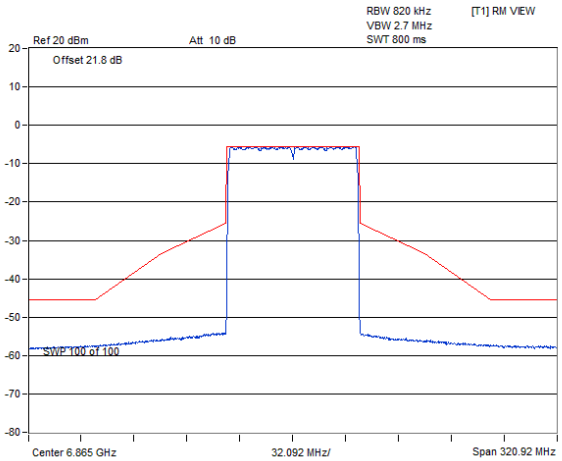


802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 119

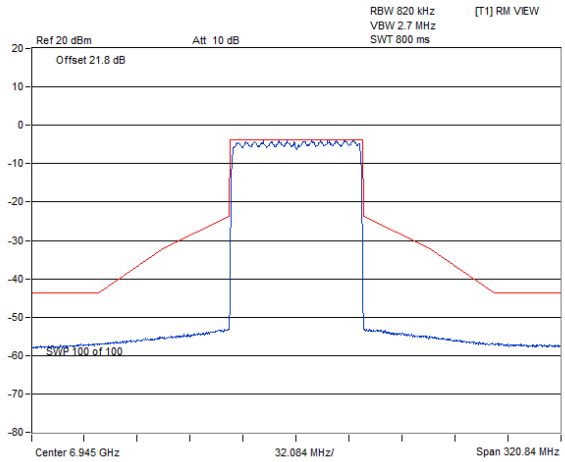


802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 151

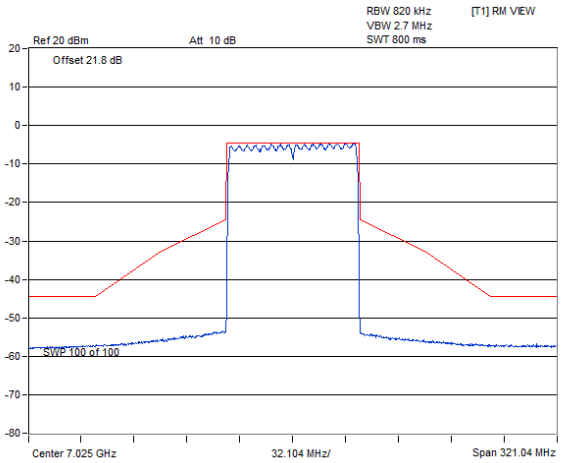
Spectrum Plot



802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 183



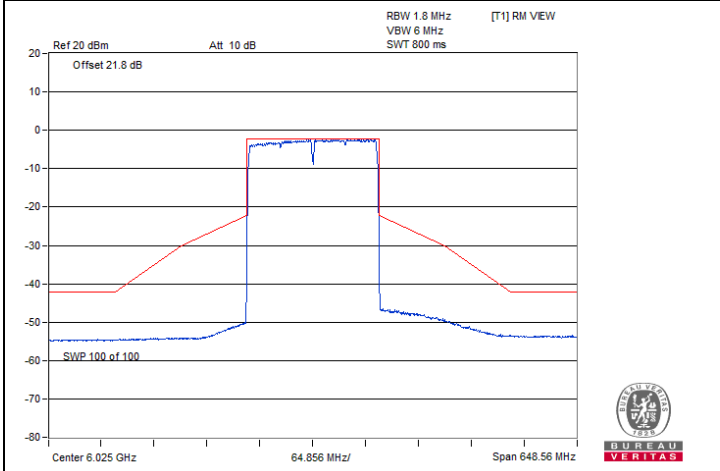
802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 199



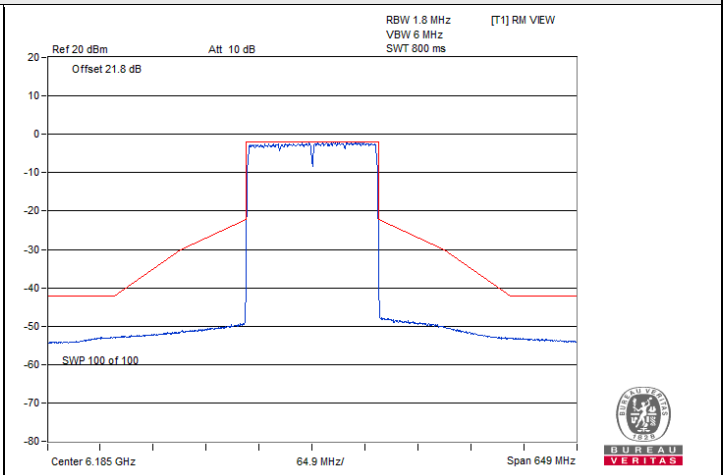
802.11be (EHT80) Beamforming (3T1S) / Chain 2 : CH 215

802.11be (EHT160) Beamforming (3T1S)

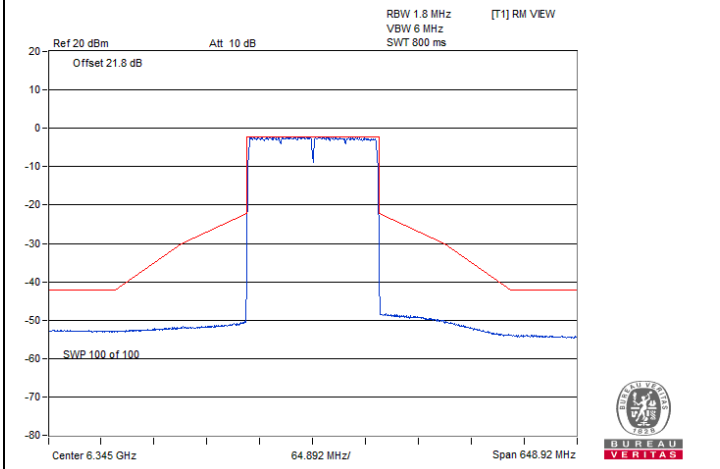
Spectrum Plot



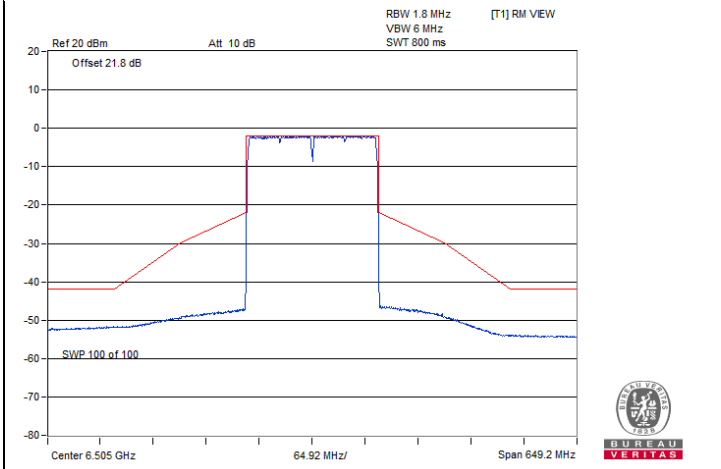
802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 15



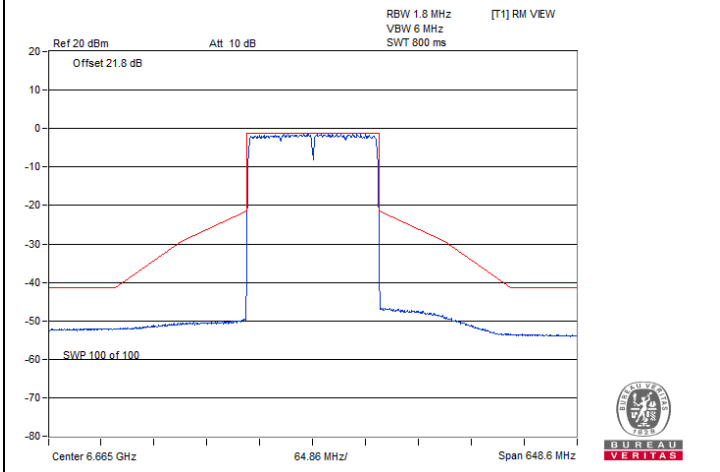
802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 47



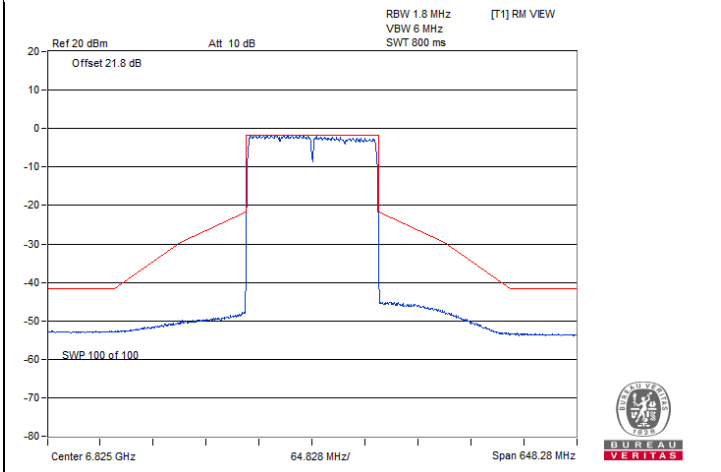
802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 79



802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 111

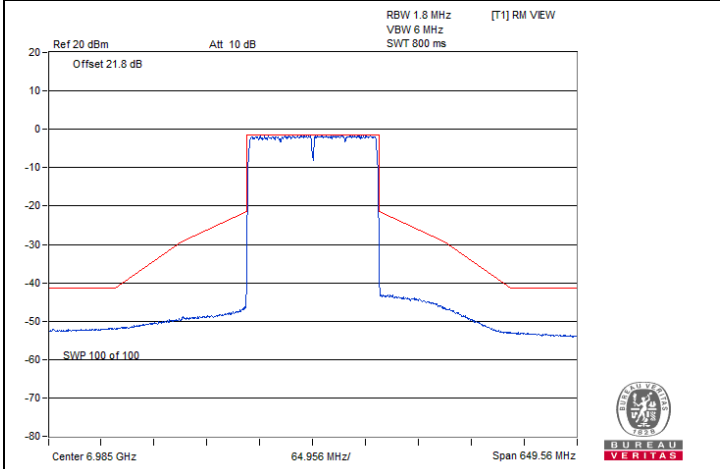


802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 143

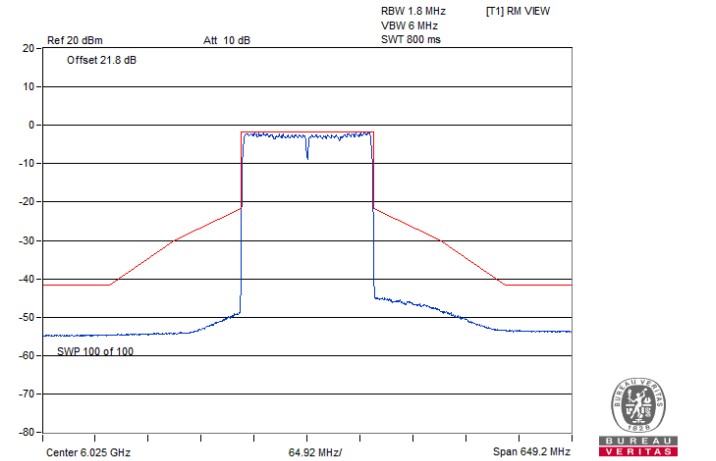


802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 175

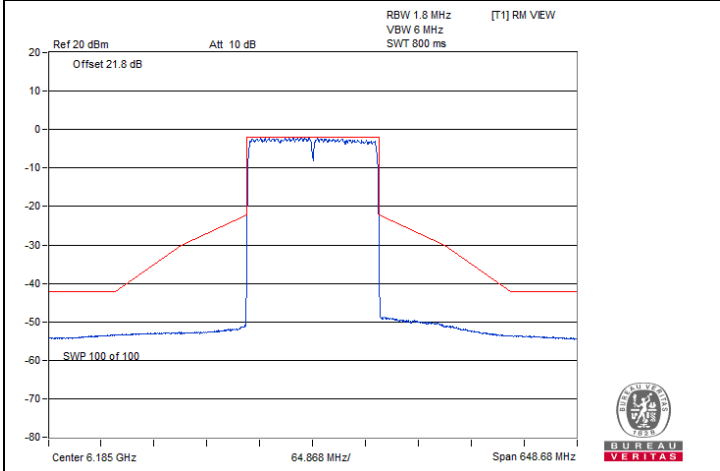
Spectrum Plot



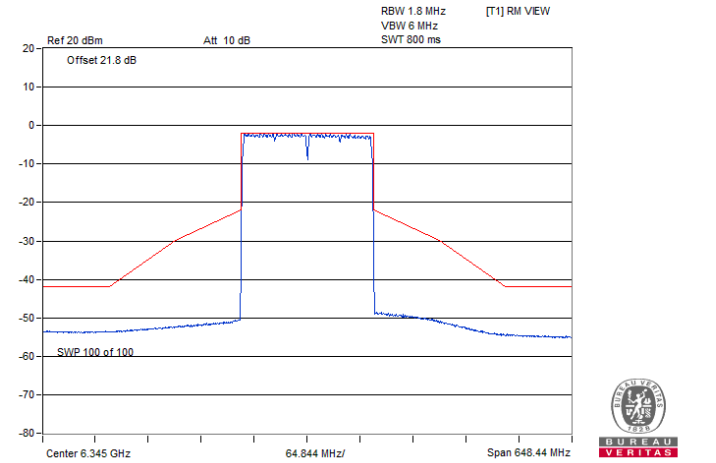
802.11be (EHT160) Beamforming (3T1S) / Chain 0 : CH 207



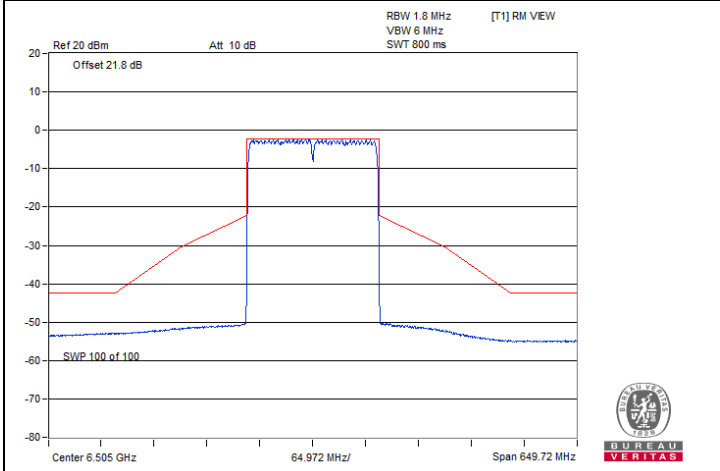
802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 15



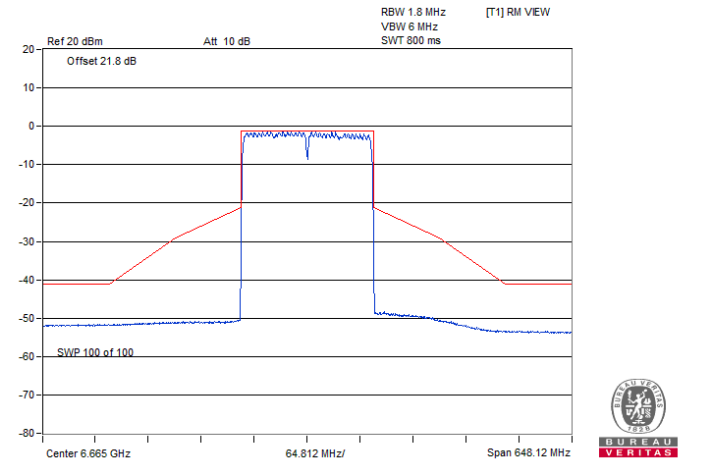
802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 47



802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 79

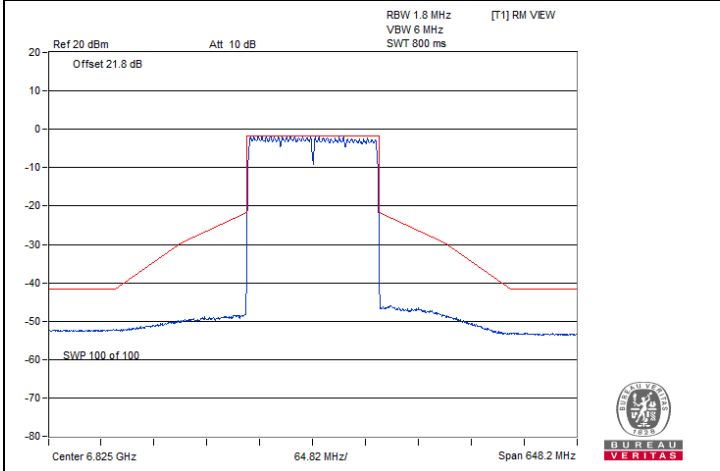


802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 111

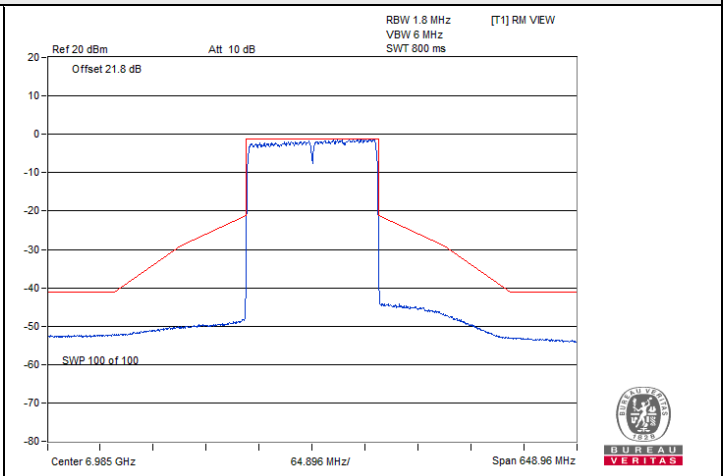


802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 143

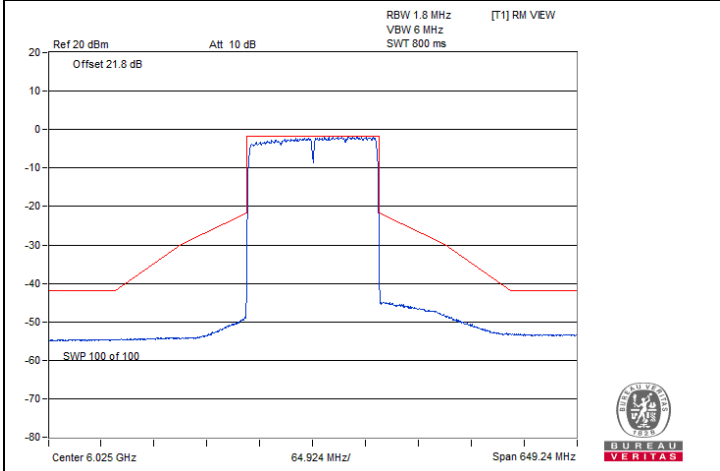
Spectrum Plot



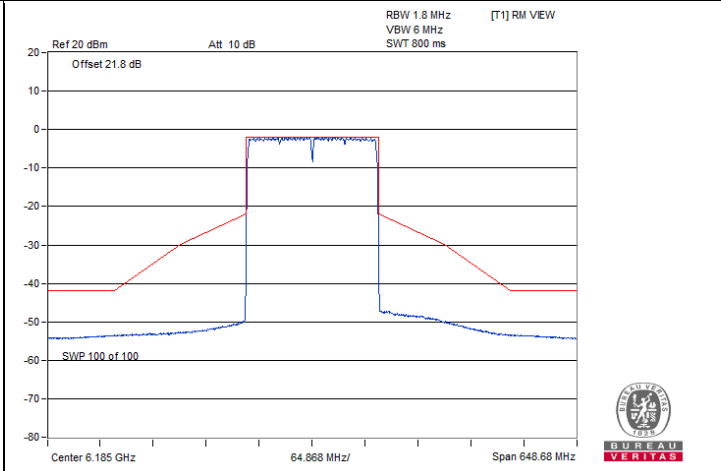
802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 175



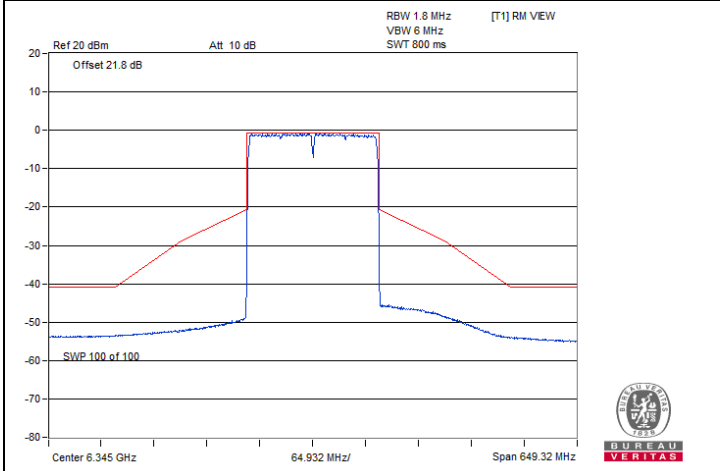
802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 207



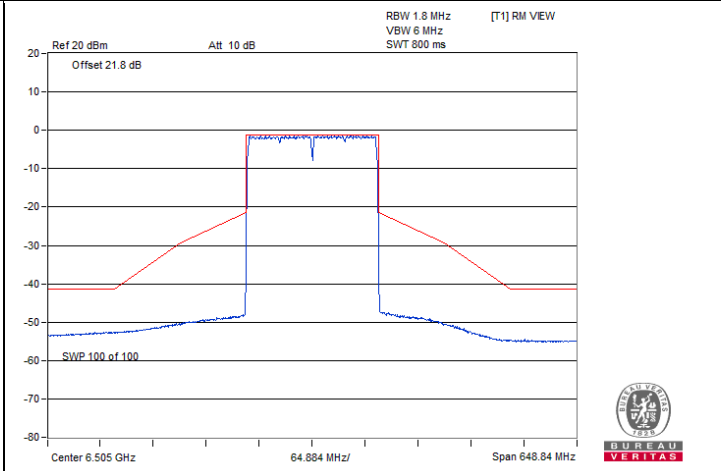
802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 15



802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 47

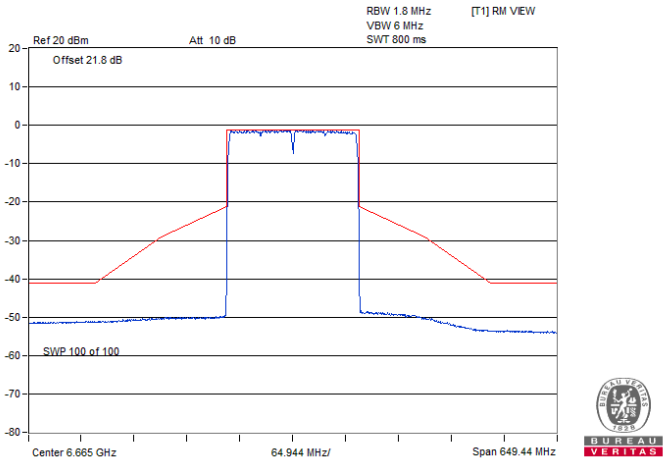


802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 79

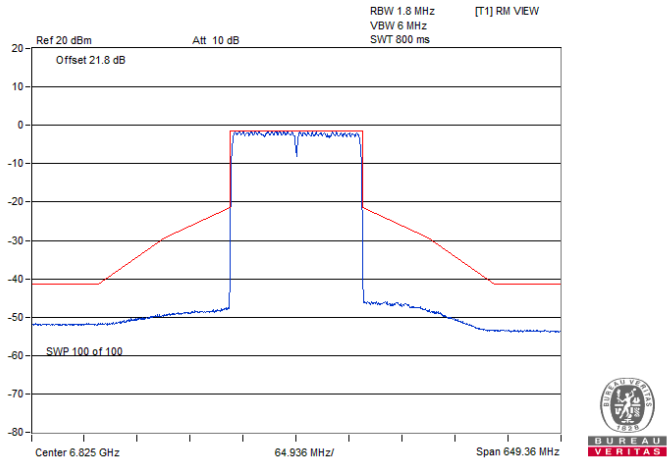


802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 111

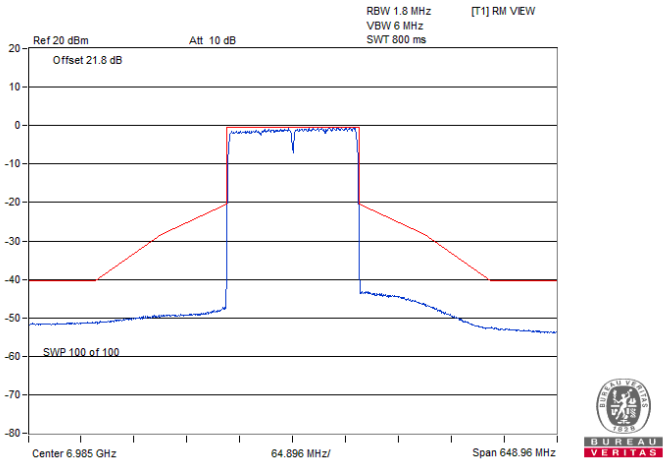
Spectrum Plot



802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 143



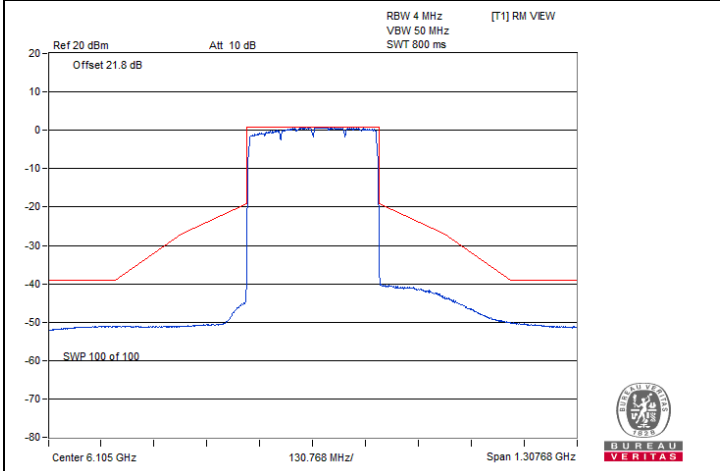
802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 175



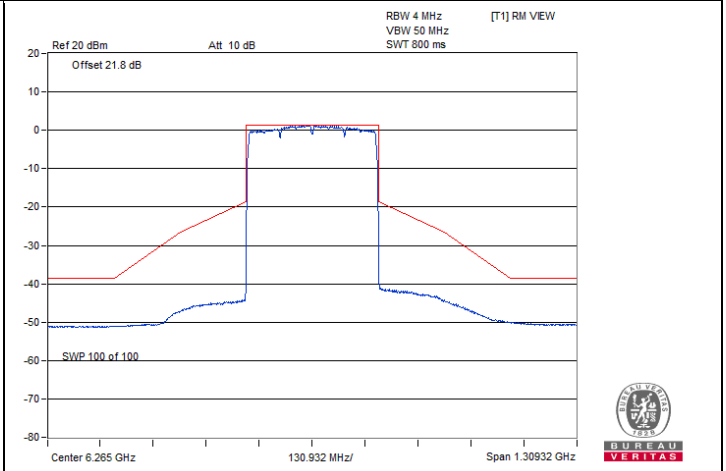
802.11be (EHT160) Beamforming (3T1S) / Chain 2 : CH 207

802.11be (EHT320) Beamforming (3T1S)

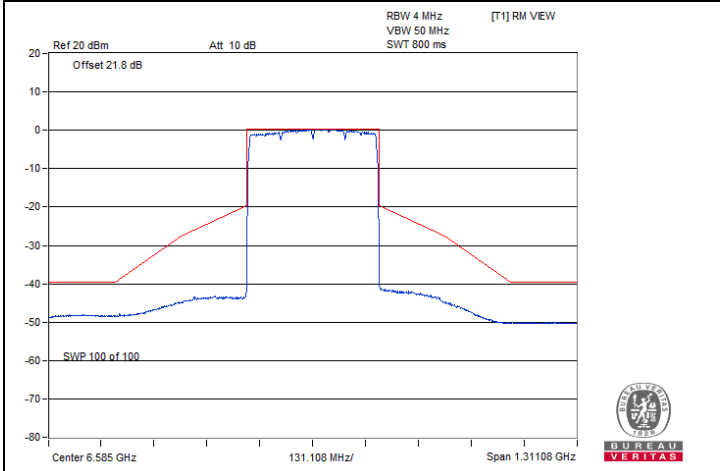
Spectrum Plot



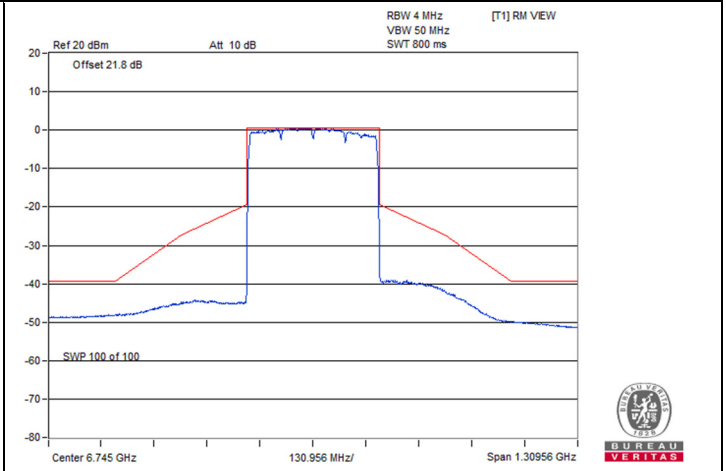
802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 31



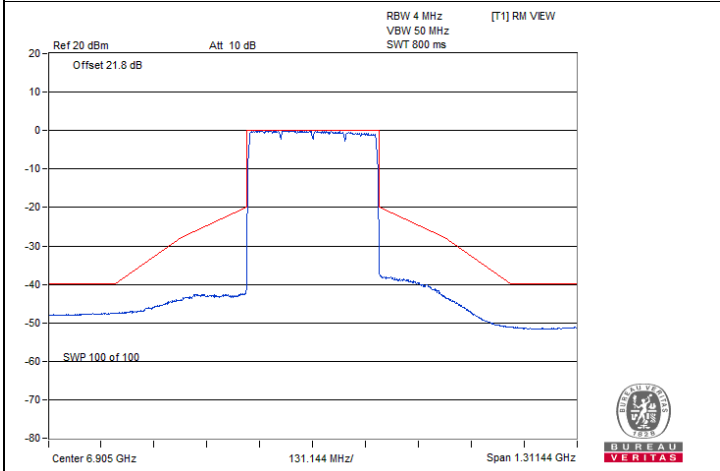
802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 63



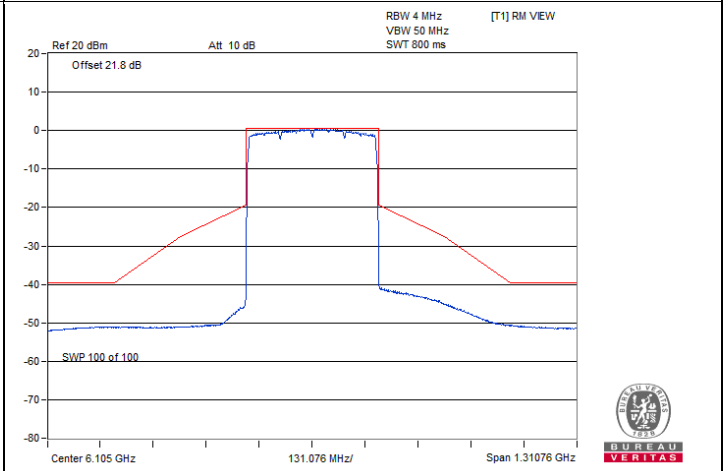
802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 127



802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 159

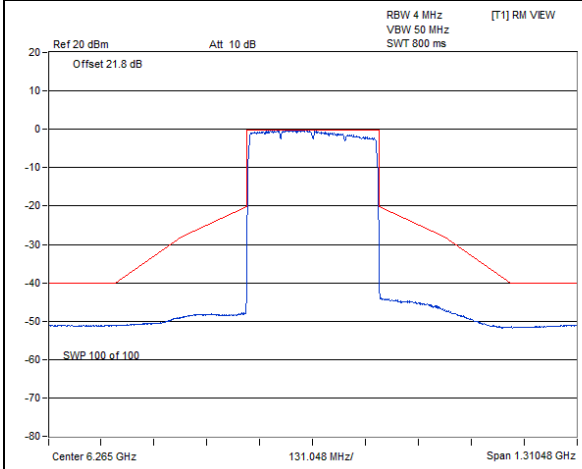


802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 191

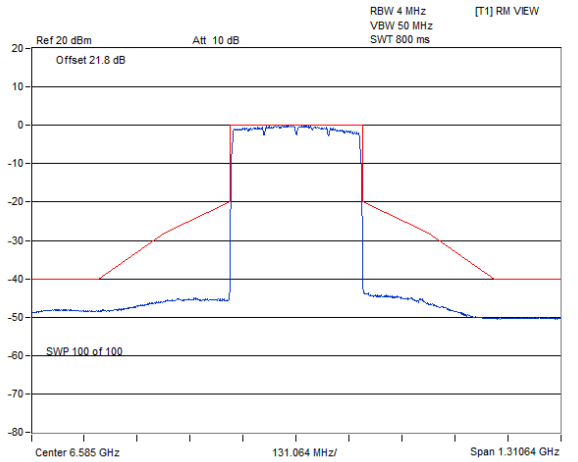


802.11be (EHT320) Beamforming (3T1S) / Chain 1 : CH 31

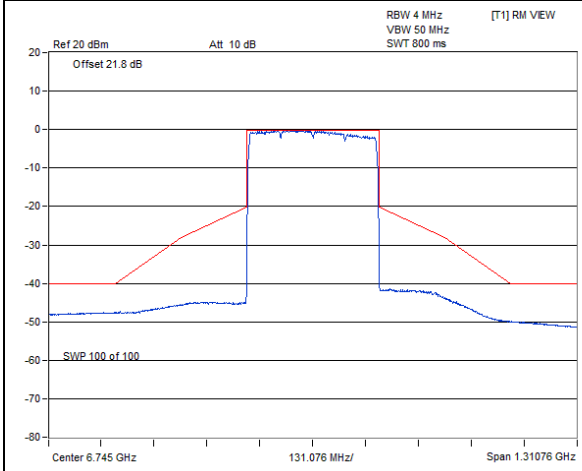
Spectrum Plot



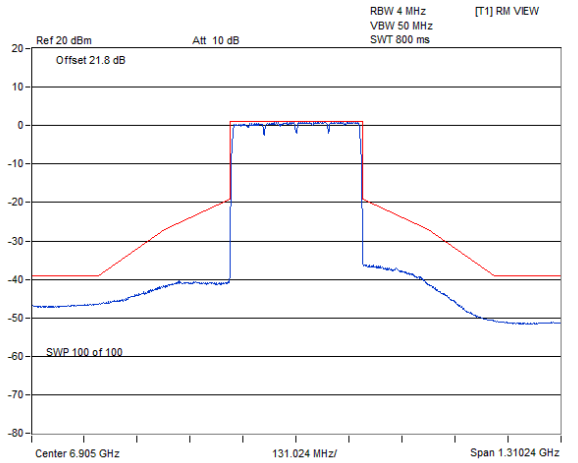
802.11be (EHT320) Beamforming (3T1S) / Chain 1 : CH 63



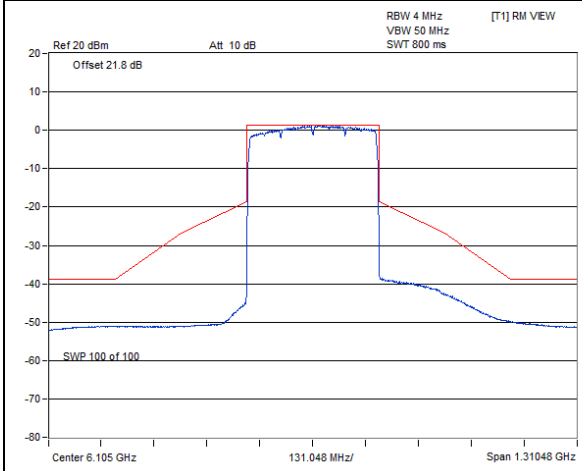
802.11be (EHT320) Beamforming (3T1S) / Chain 1 : CH 127



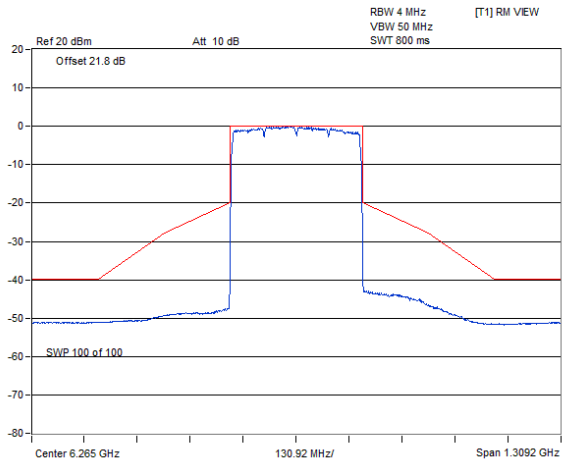
802.11be (EHT320) Beamforming (3T1S) / Chain 1 : CH 159



802.11be (EHT320) Beamforming (3T1S) / Chain 1 : CH 191

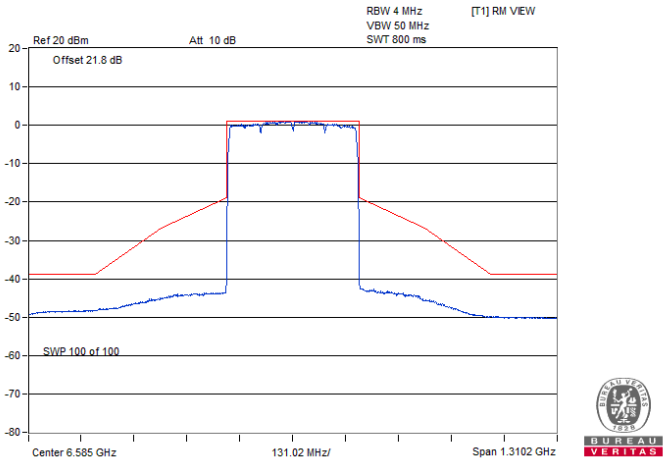


802.11be (EHT320) Beamforming (3T1S) / Chain 2 : CH 31

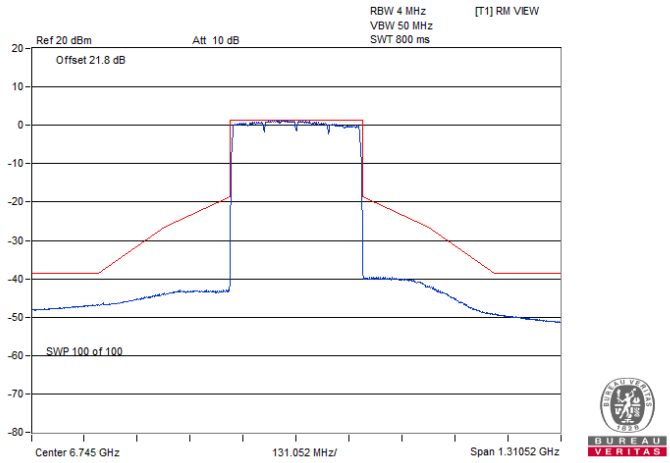


802.11be (EHT320) Beamforming (3T1S) / Chain 2 : CH 63

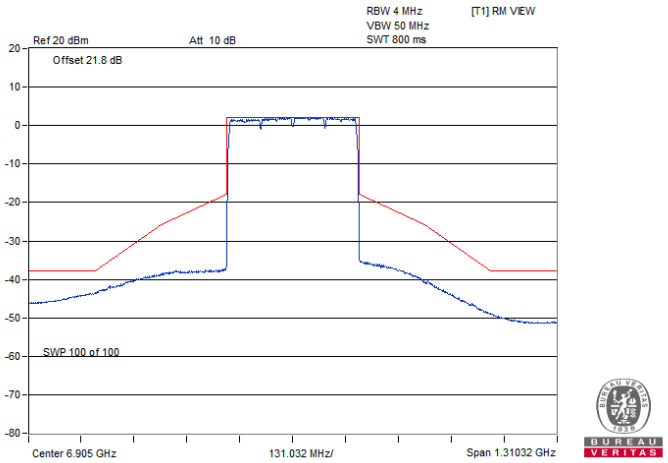
Spectrum Plot



802.11be (EHT320) Beamforming (3T1S) / Chain 2 : CH 127



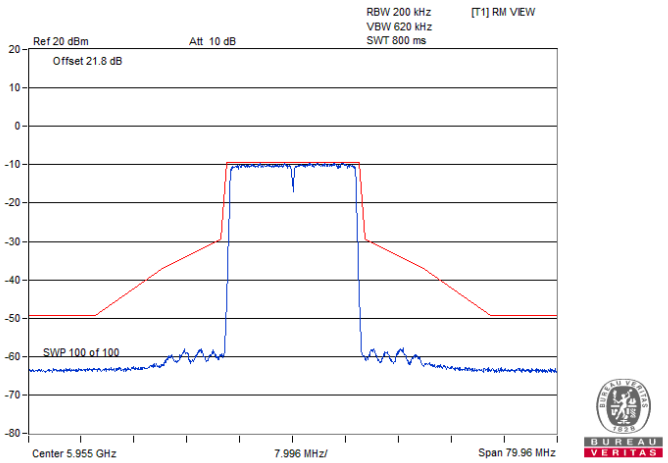
802.11be (EHT320) Beamforming (3T1S) / Chain 2 : CH 159



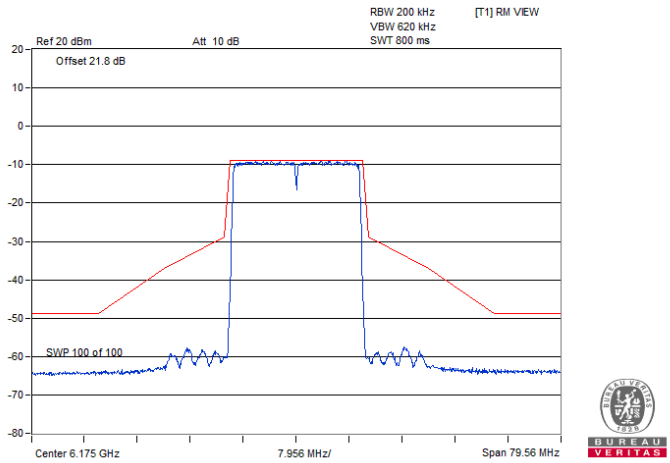
802.11be (EHT320) Beamforming (3T1S) / Chain 2 : CH 191

802.11be (EHT20) Beamforming (3T2S)

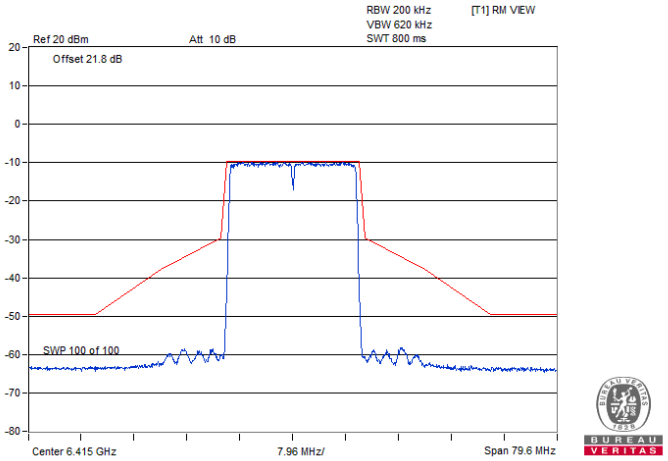
Spectrum Plot



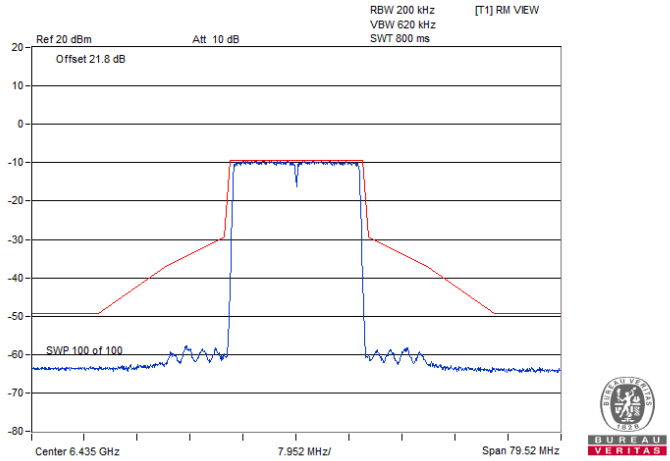
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 1



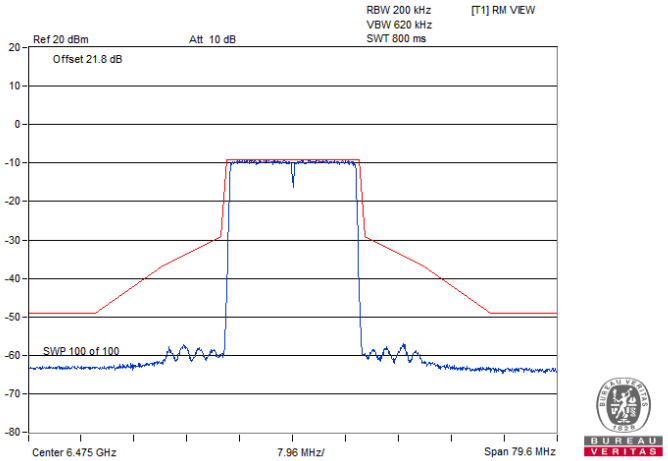
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 45



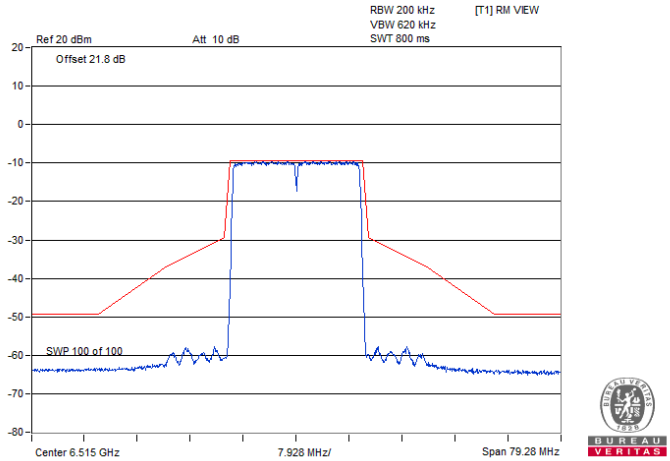
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 93



802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 97

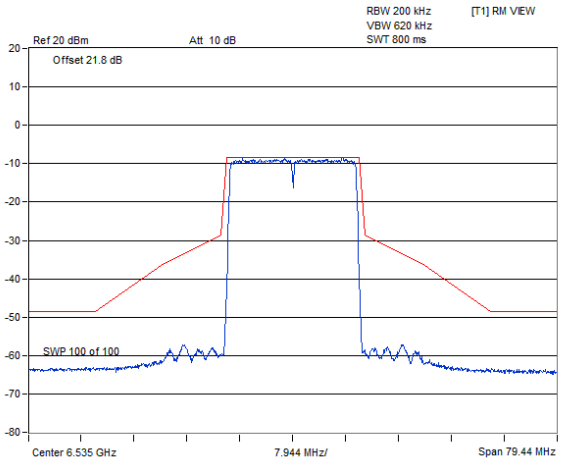


802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 105

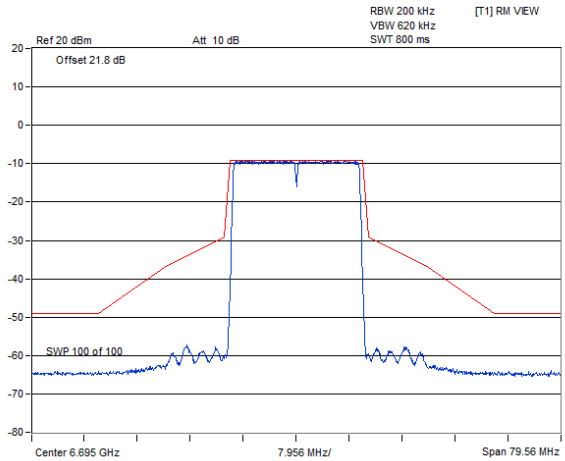


802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 113

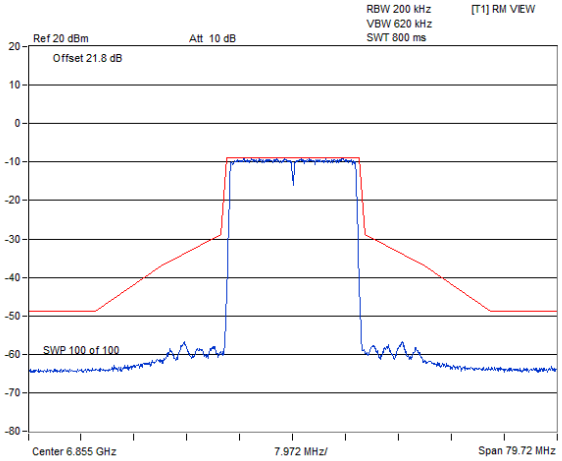
Spectrum Plot



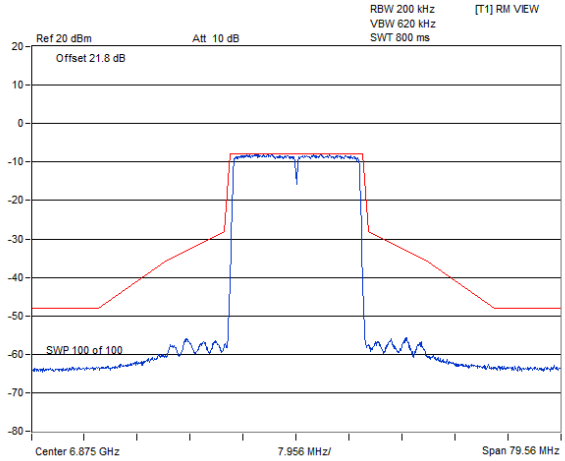
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 117



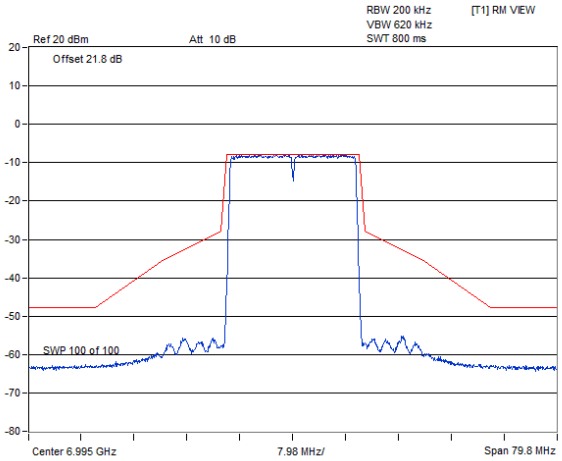
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 149



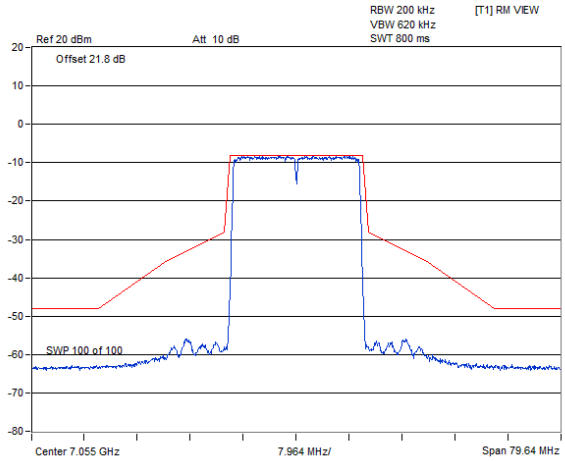
802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 181



802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 185

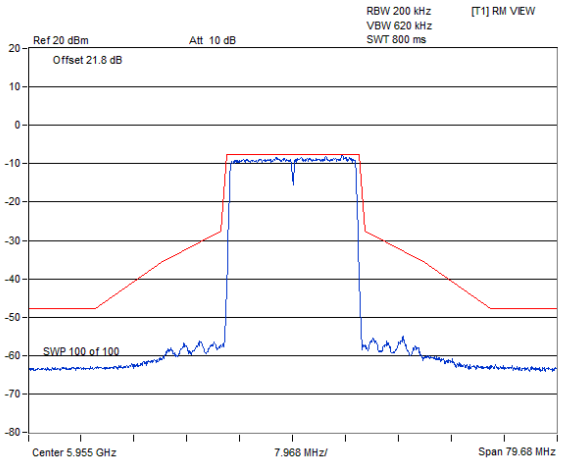


802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 209

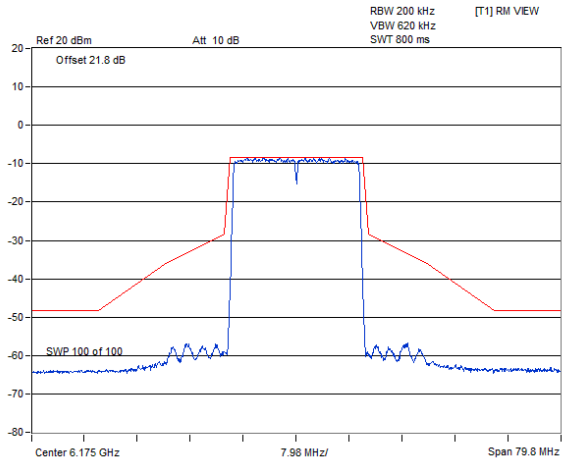


802.11be (EHT20) Beamforming (3T2S) / Chain 0 : CH 221

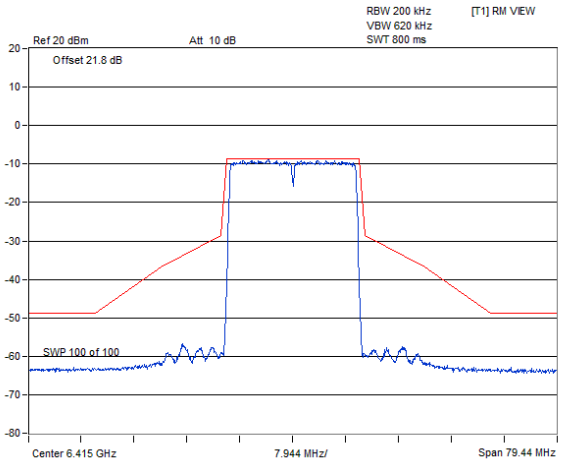
Spectrum Plot



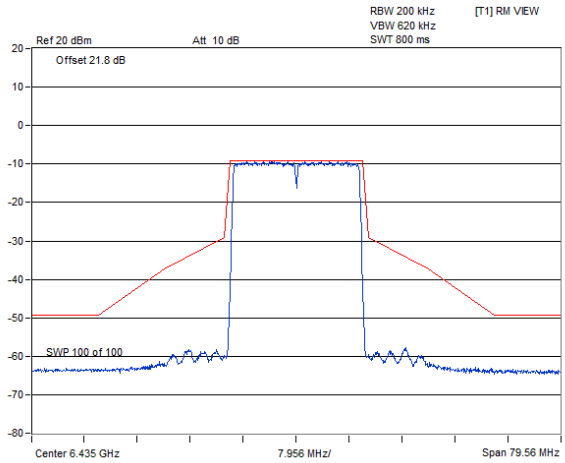
802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 1



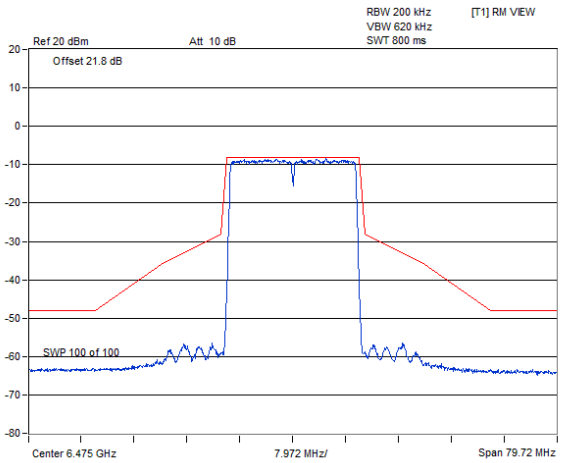
802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 45



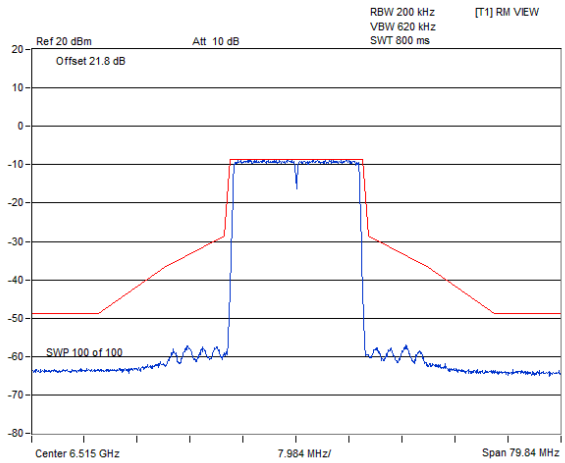
802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 93



802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 97

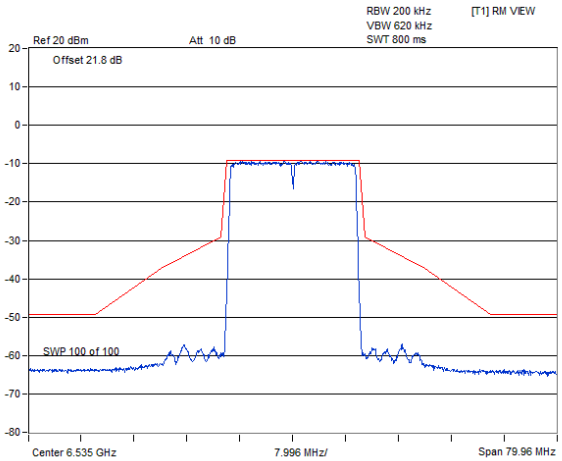


802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 105

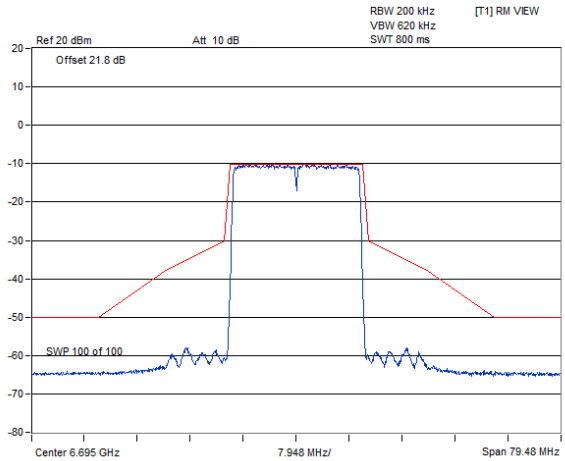


802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 113

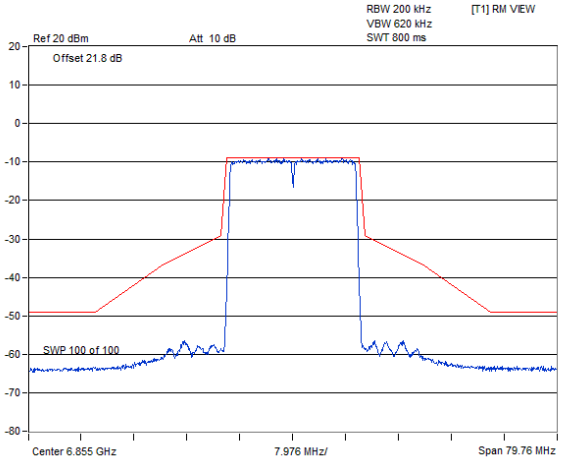
Spectrum Plot



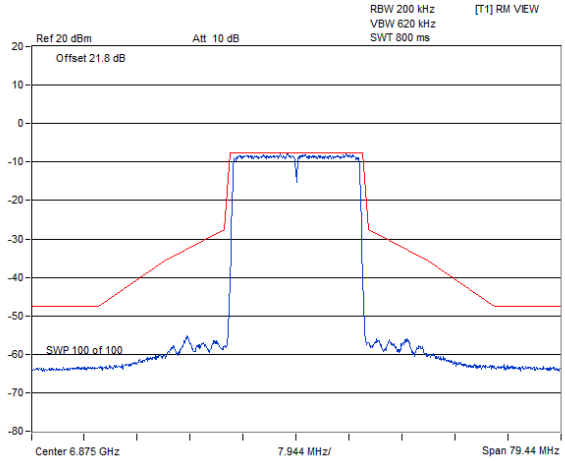
802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 117



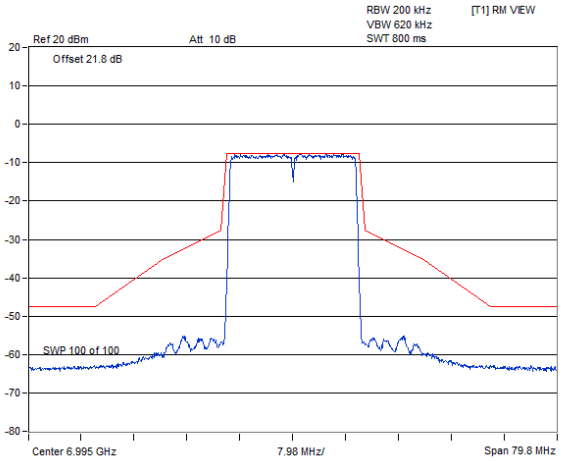
802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 149



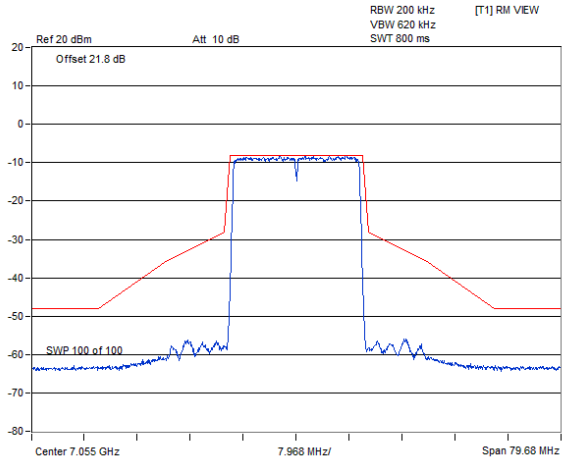
802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 181



802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 185

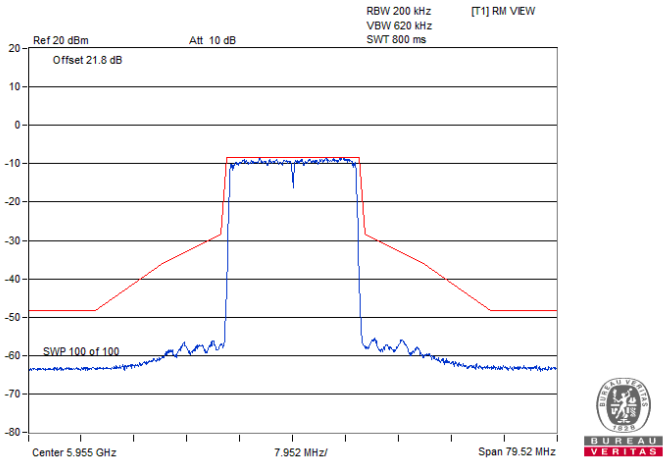


802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 209

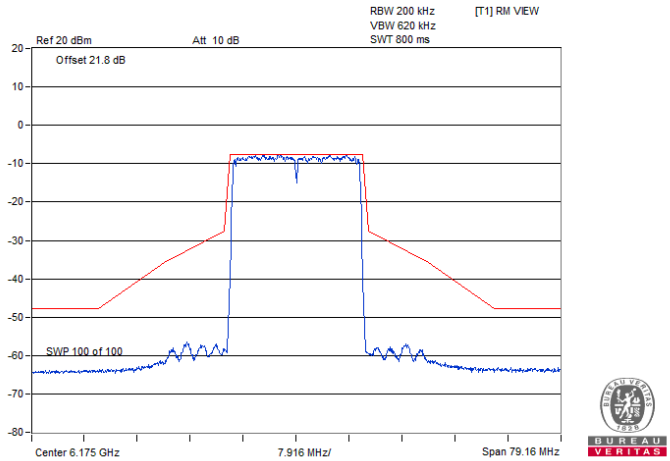


802.11be (EHT20) Beamforming (3T2S) / Chain 1 : CH 221

Spectrum Plot



802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 1



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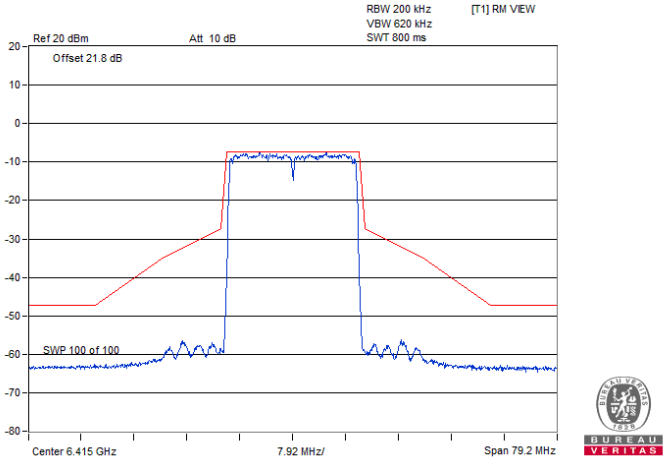
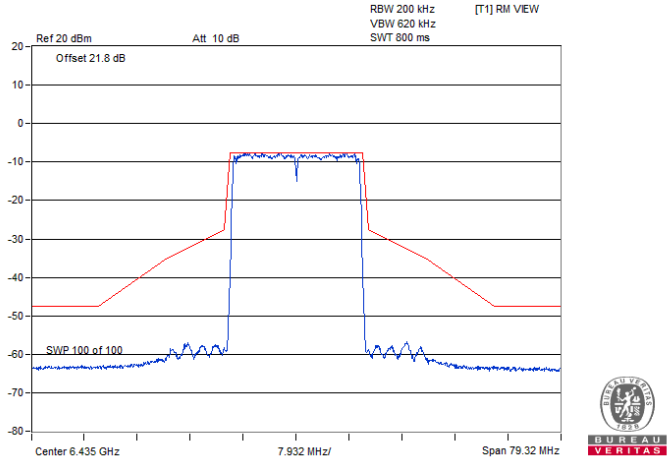
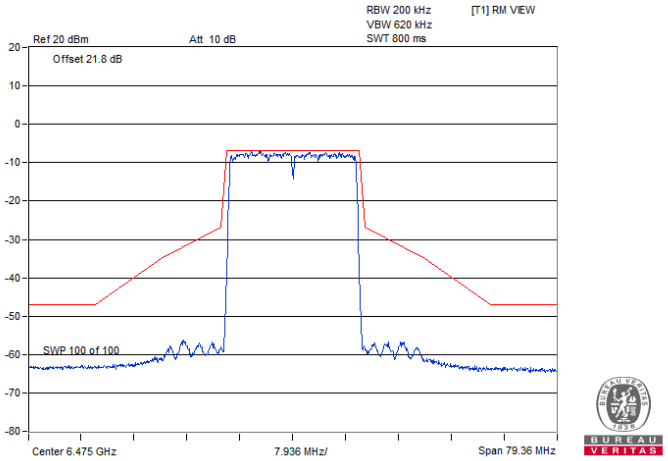


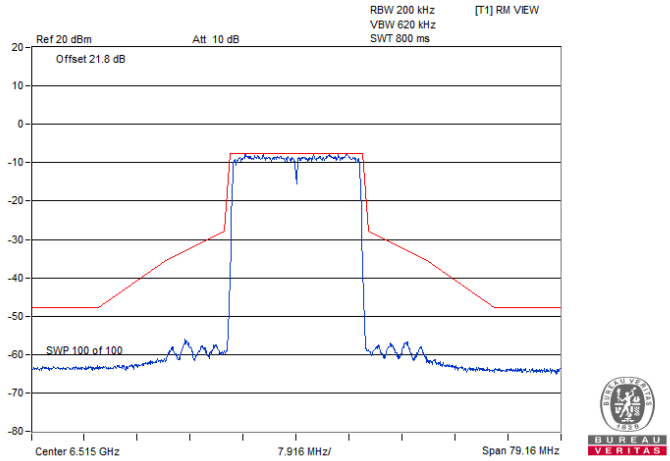
802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 93



802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 97

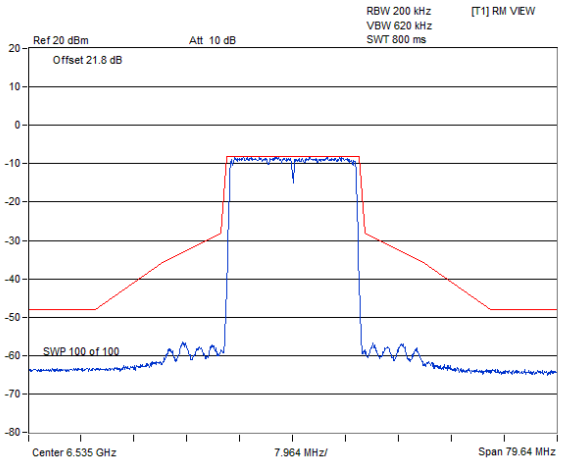


802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 105

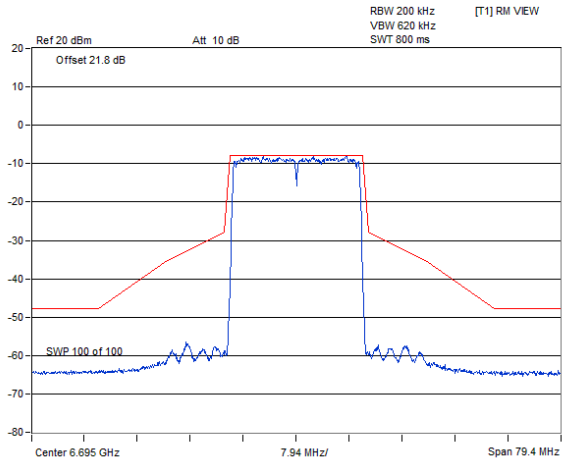


802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 113

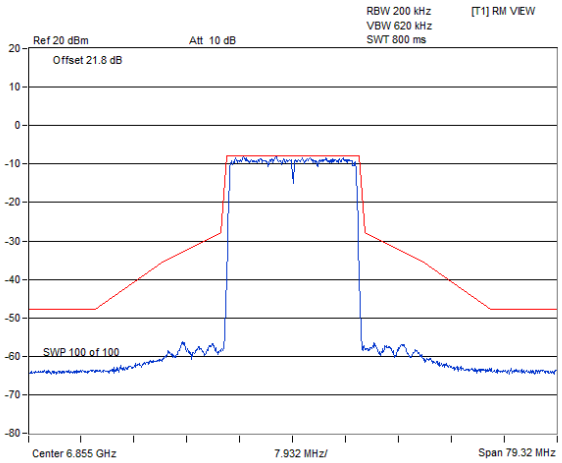
Spectrum Plot



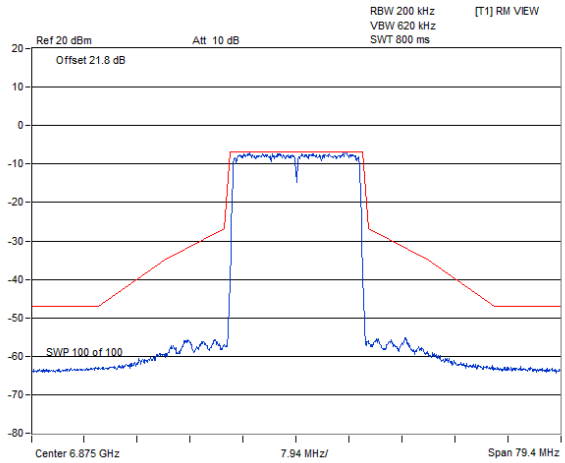
802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 117



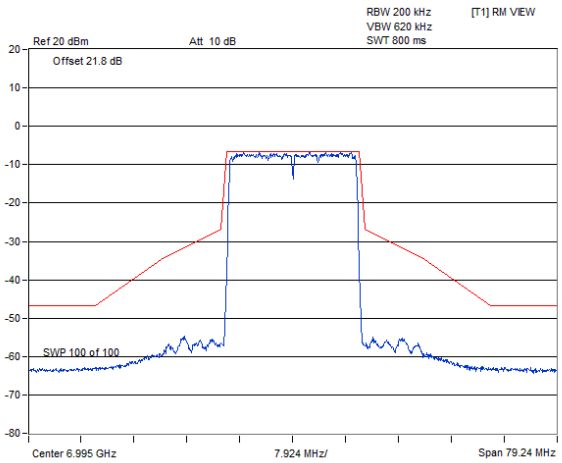
802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 149



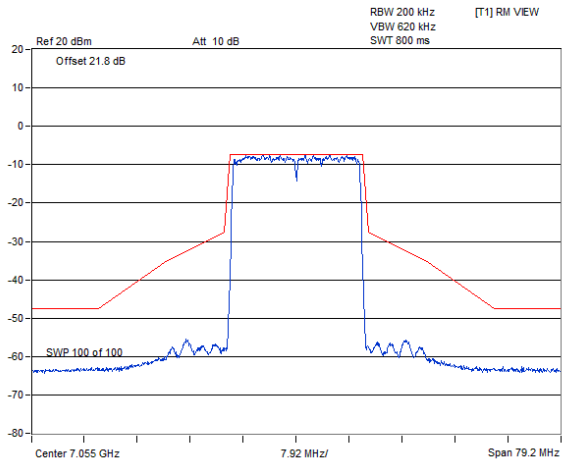
802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 181



802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 185

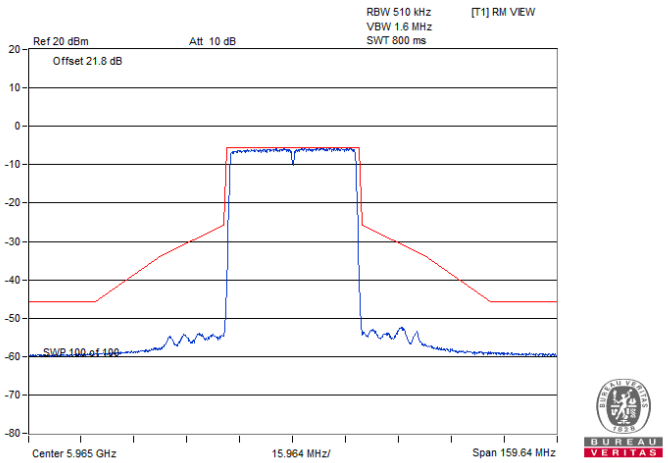
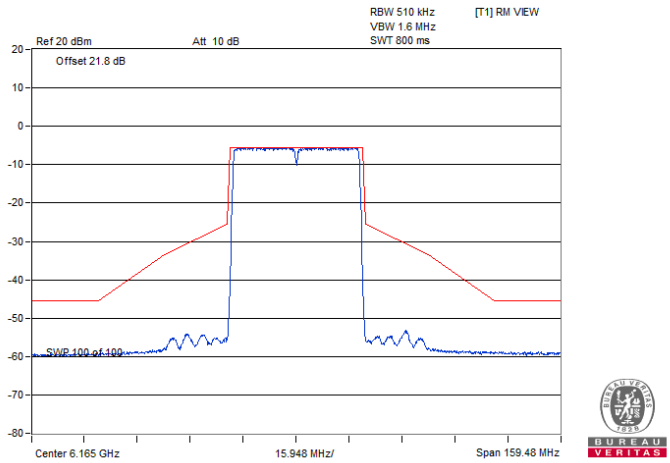
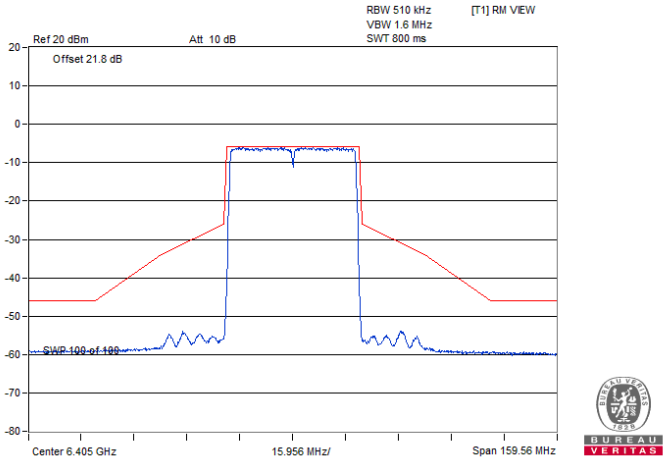
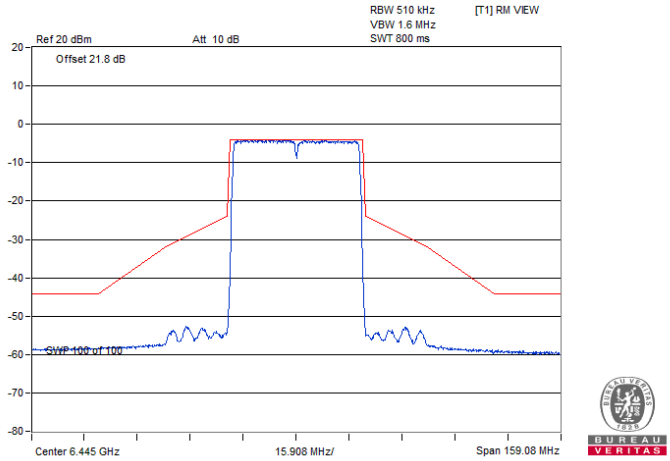
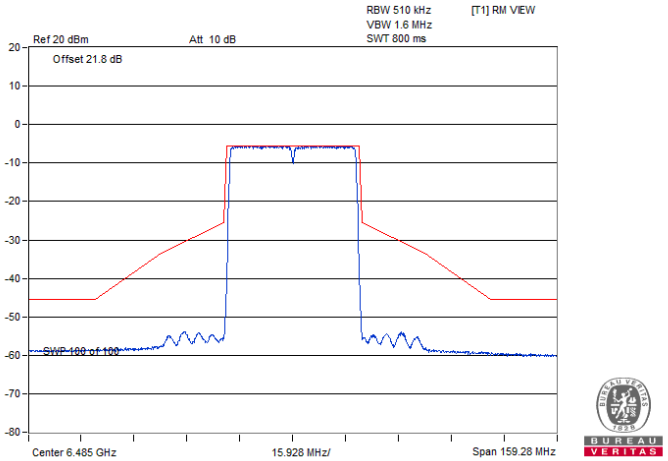
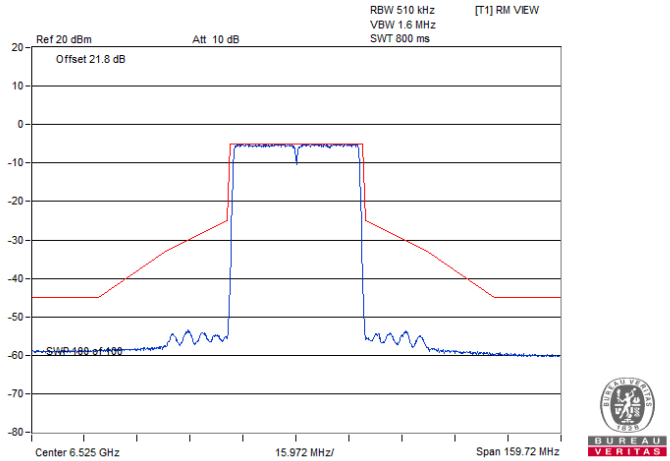


802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 209

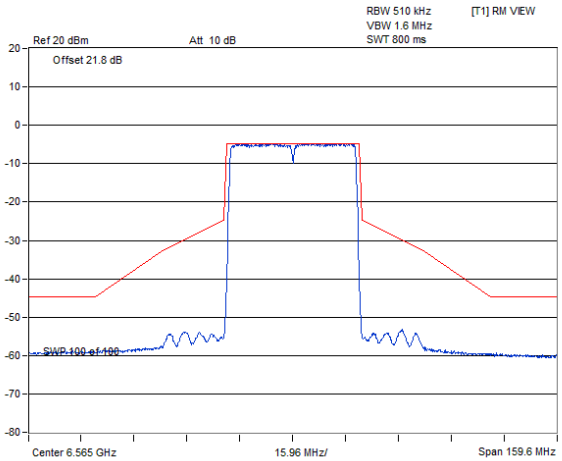


802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 221

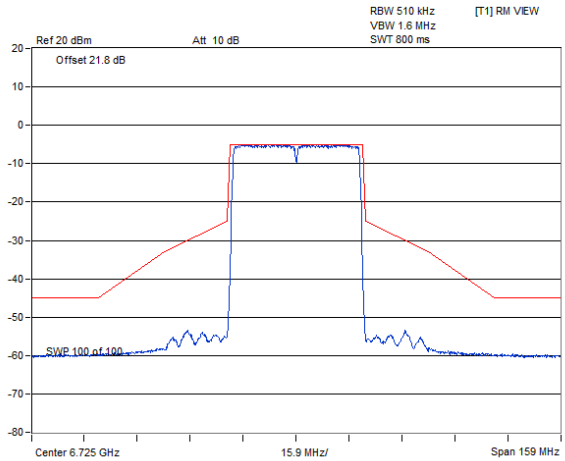
802.11be (EHT40) Beamforming (3T2S)

Spectrum Plot	
	
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 3	802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 43
	
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 91	802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 99
	
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 107	802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 115

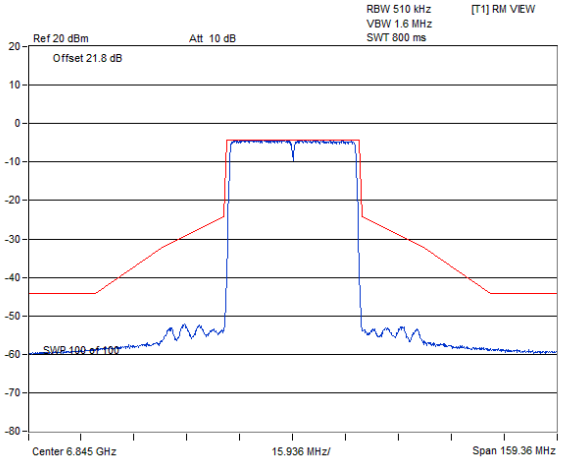
Spectrum Plot



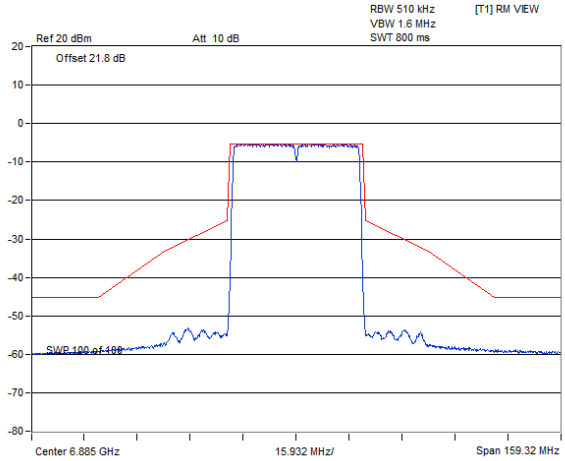
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 123



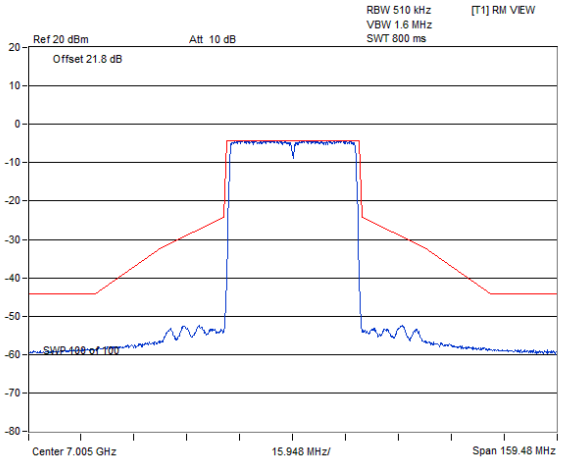
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 155



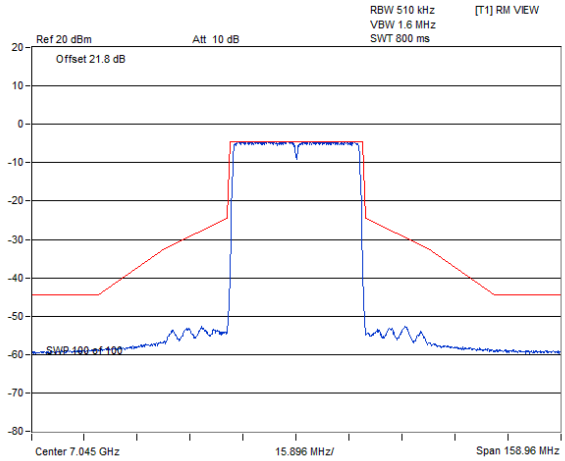
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 179



802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 187

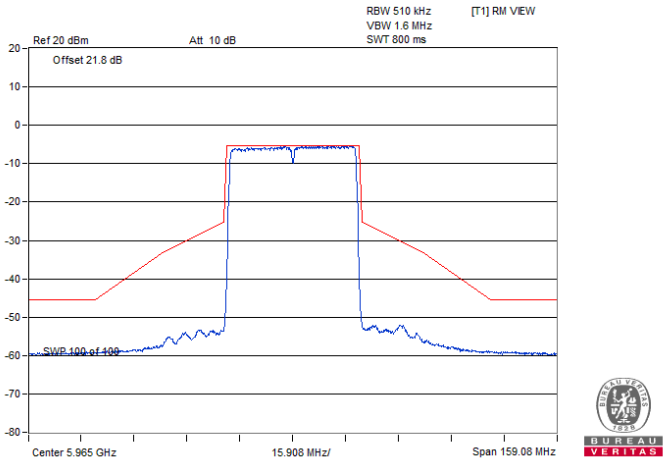


802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 211

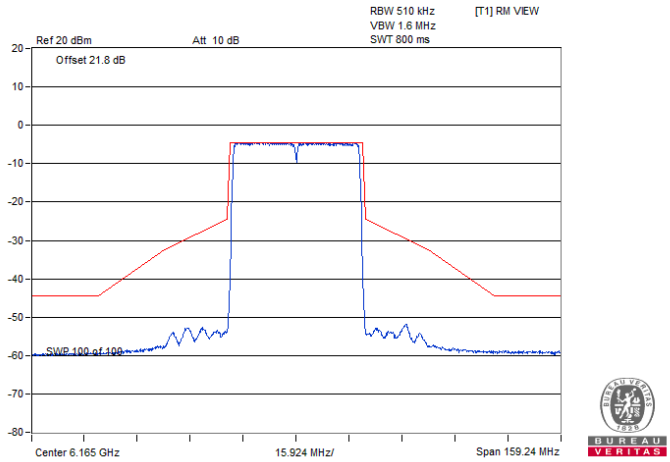


802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 219

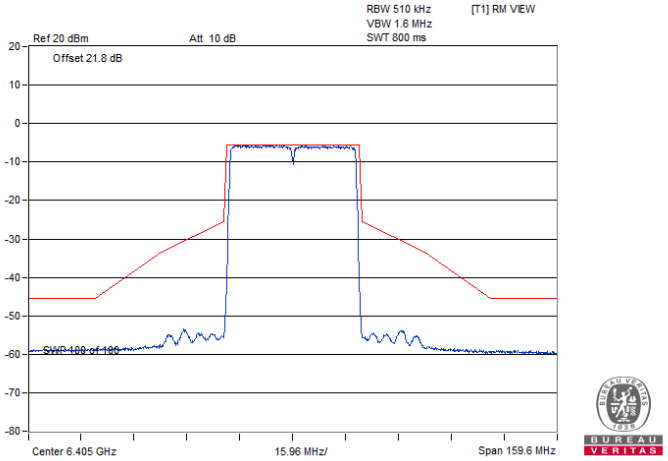
Spectrum Plot



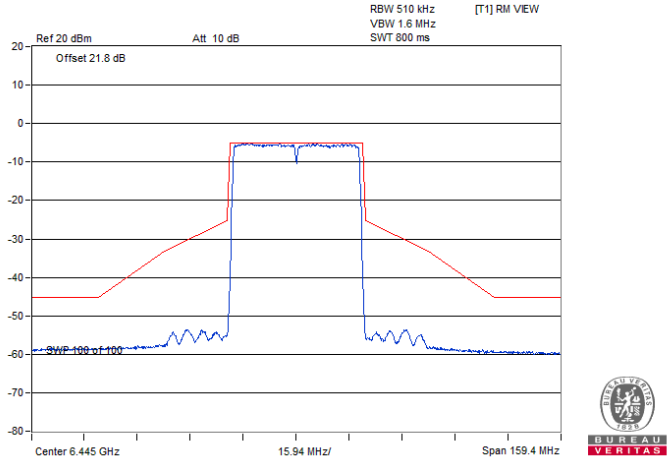
802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 3



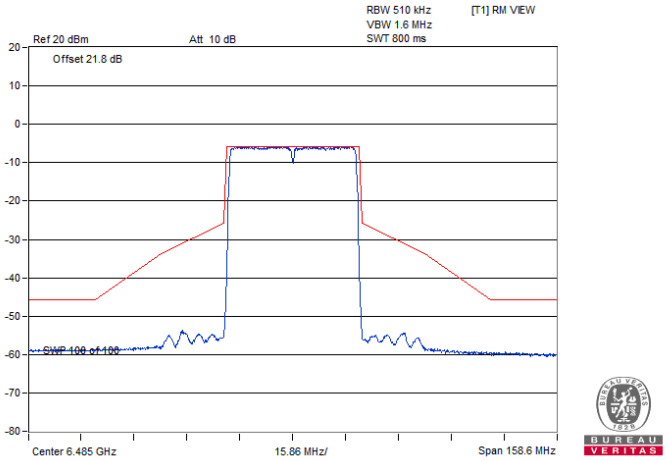
802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 43



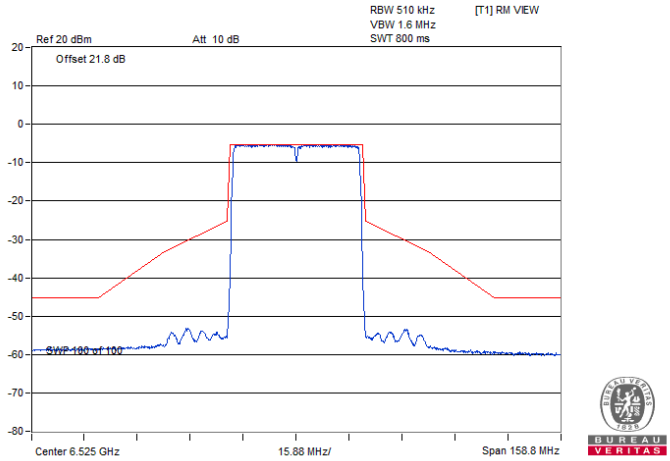
802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 91



802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 99

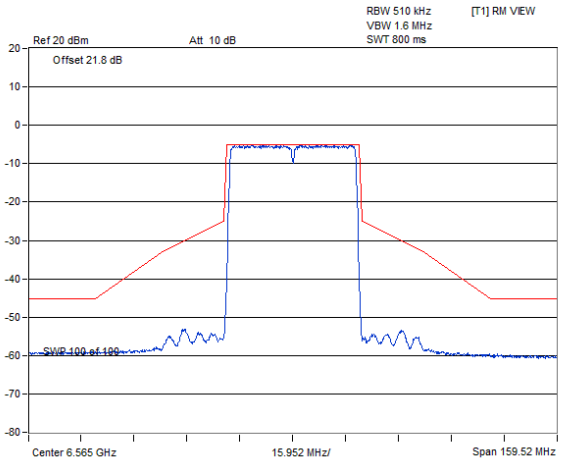


802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 107

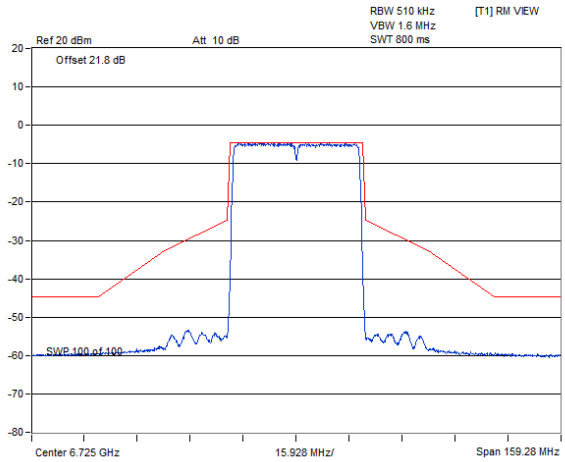


802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 115

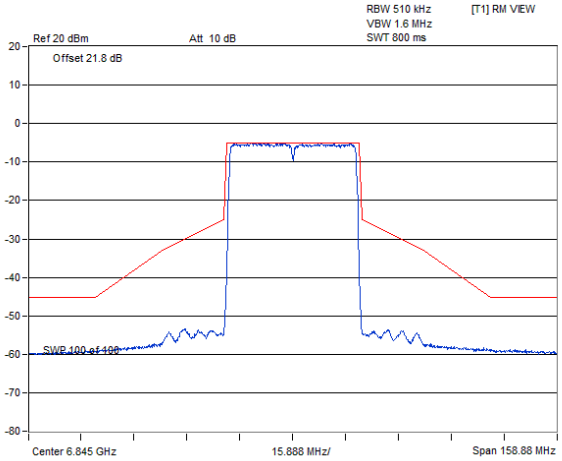
Spectrum Plot



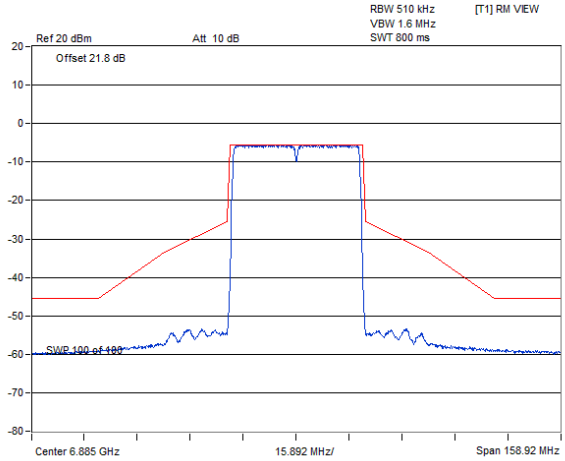
802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 123



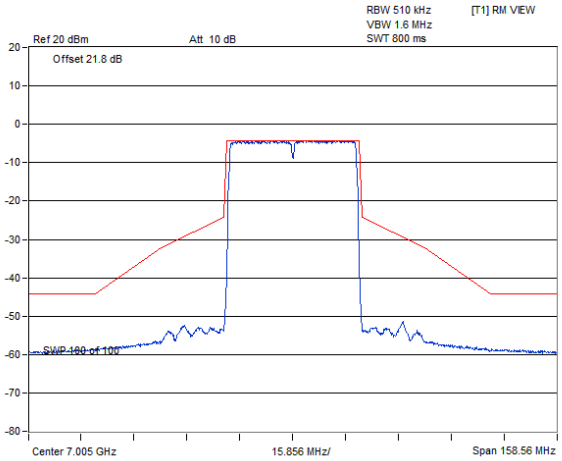
802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 155



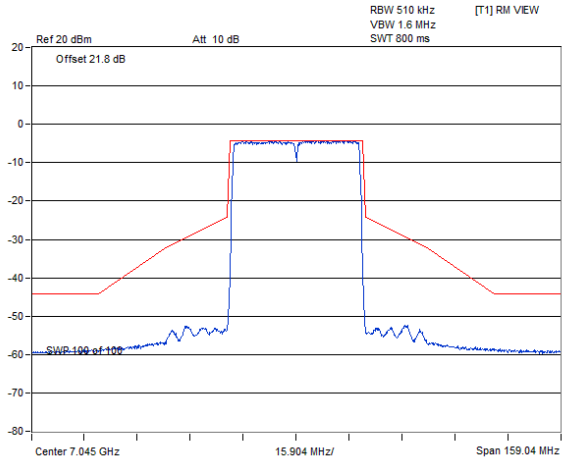
802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 179



802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 187

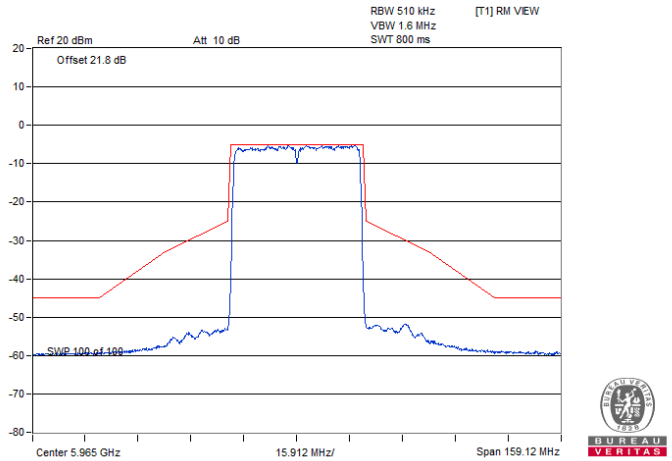


802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 211

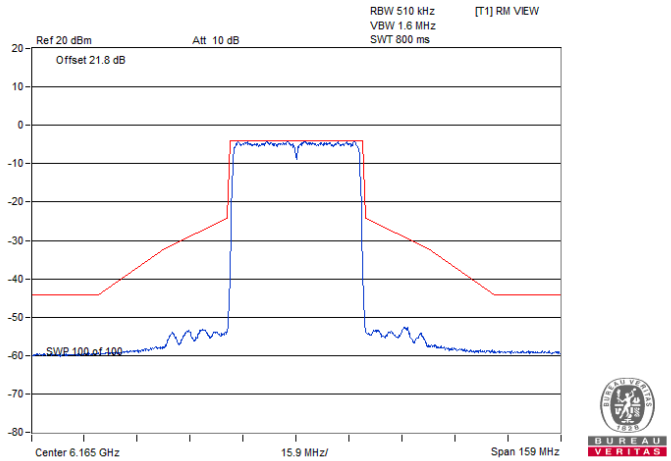


802.11be (EHT40) Beamforming (3T2S) / Chain 1 : CH 219

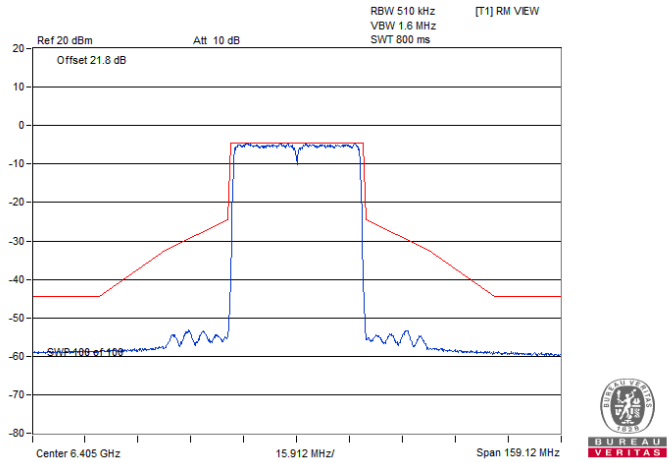
Spectrum Plot



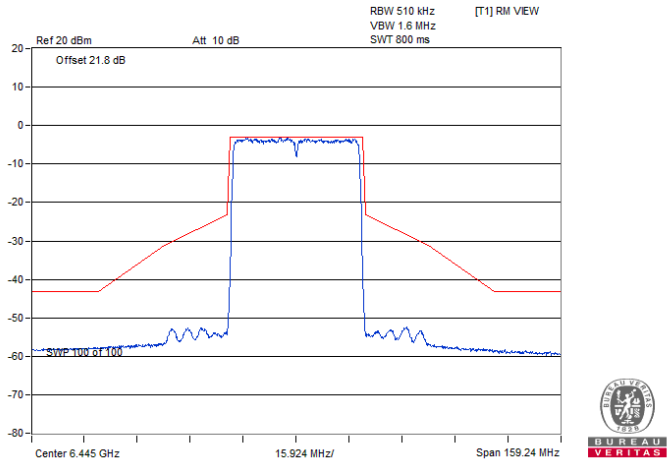
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 3



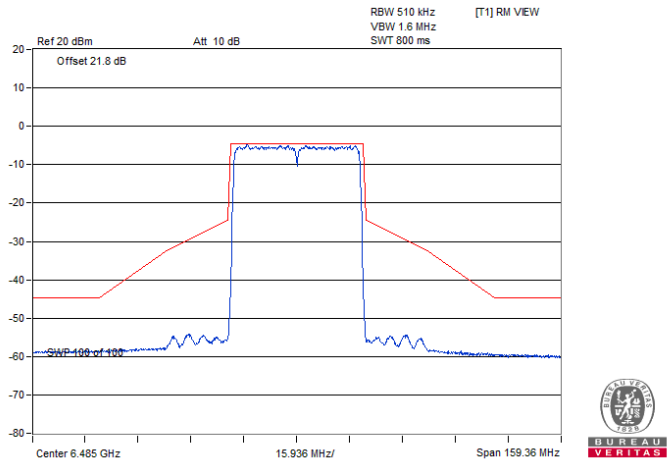
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 43



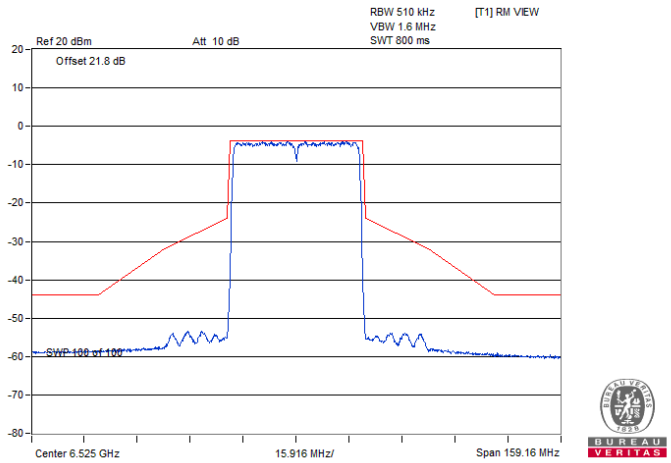
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 91



802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 99

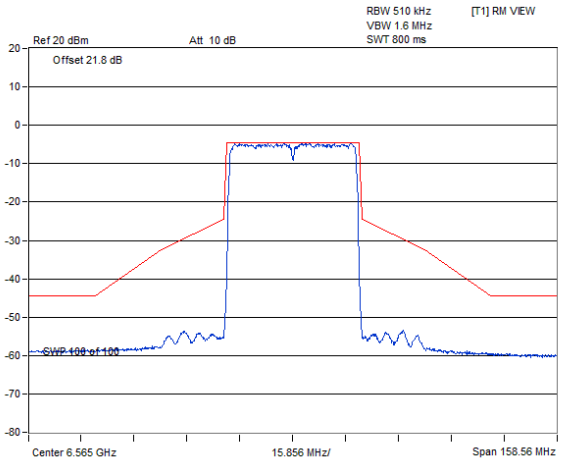


802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 107

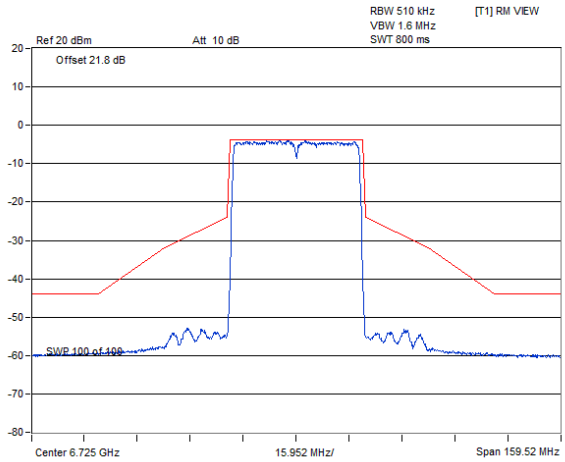


802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 115

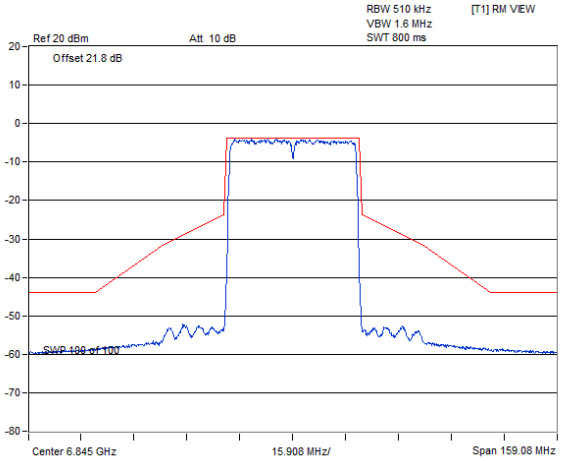
Spectrum Plot



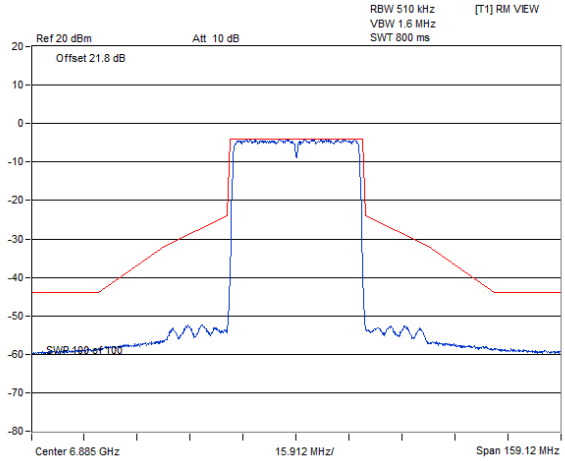
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 123



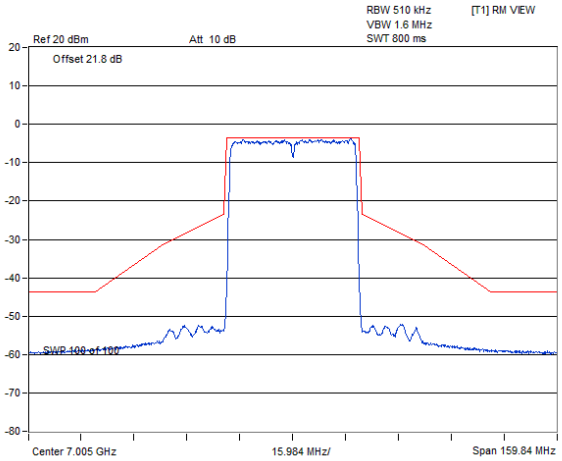
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 155



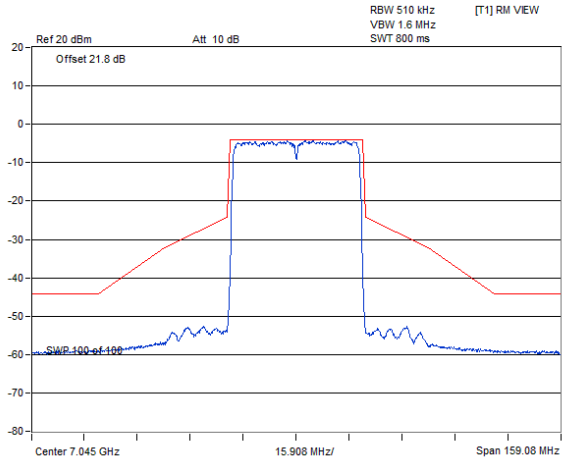
802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 179



802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 187

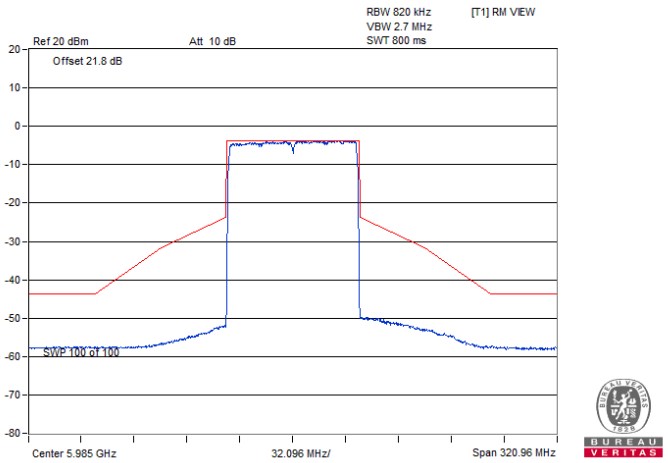
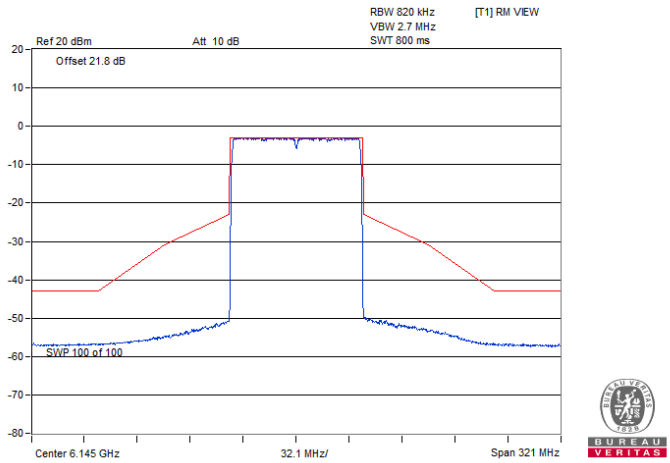
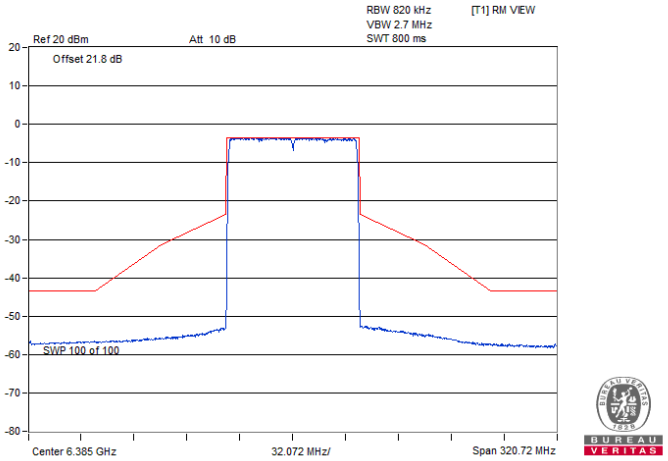
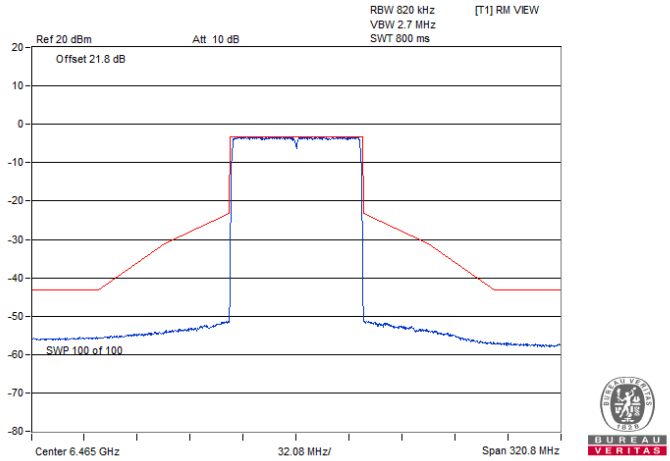
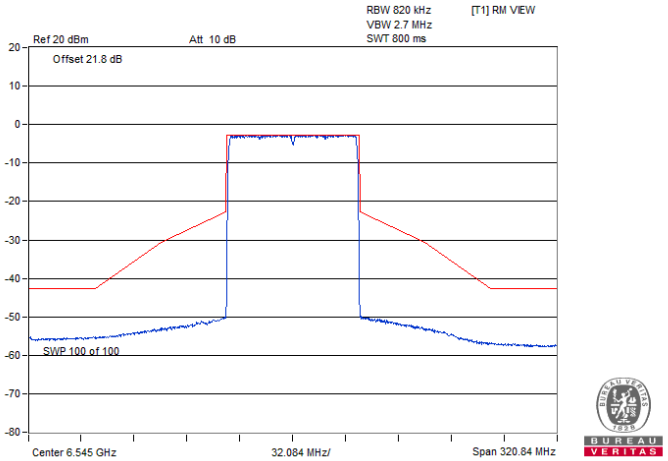
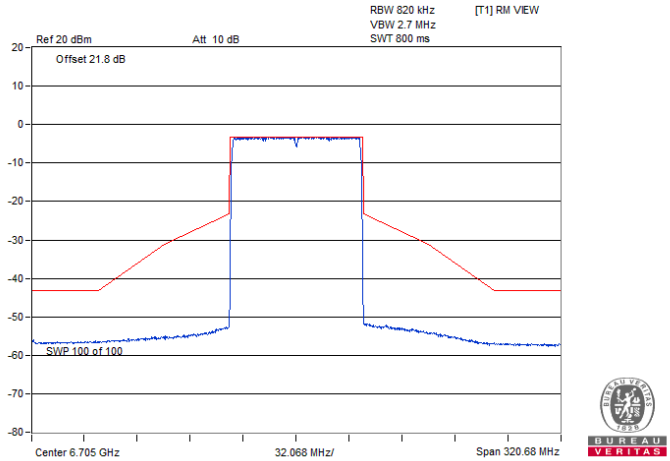


802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 211

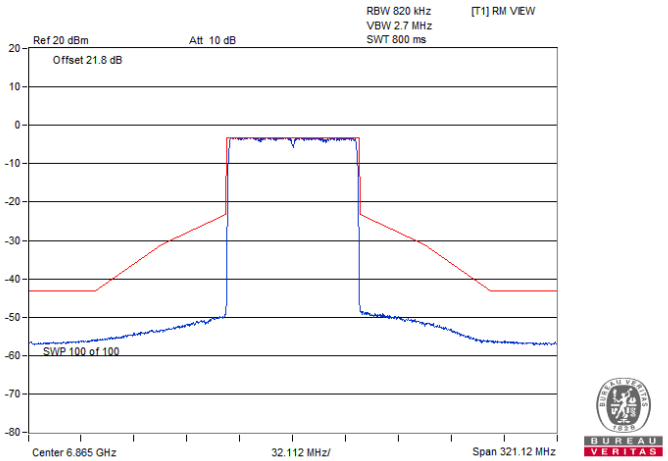


802.11be (EHT40) Beamforming (3T2S) / Chain 2 : CH 219

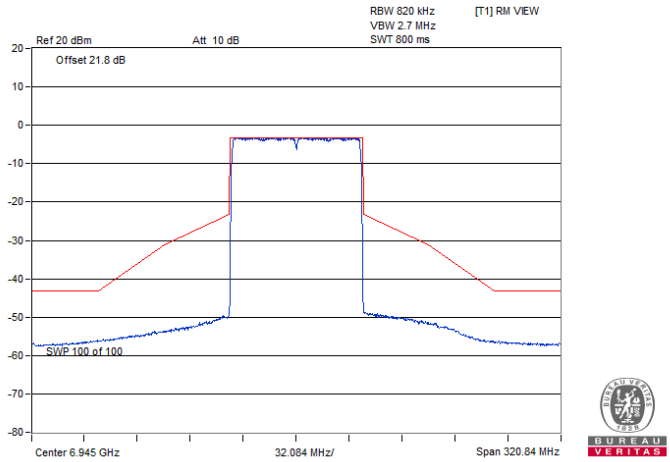
802.11be (EHT80) Beamforming (3T2S)

Spectrum Plot	
	
802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 7	802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 39
	
802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 87	802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 103
	
802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 119	802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 151

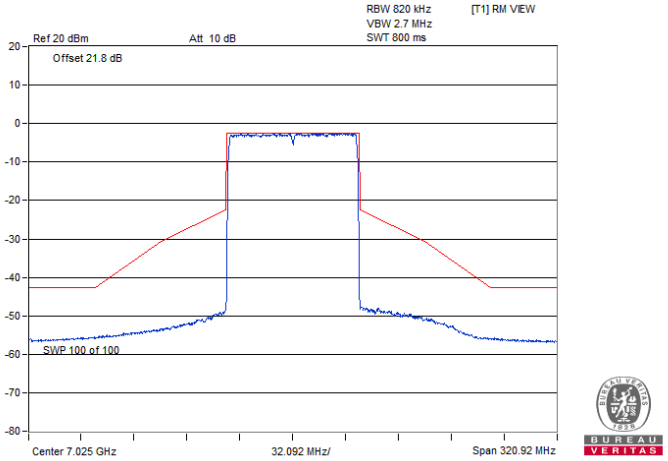
Spectrum Plot



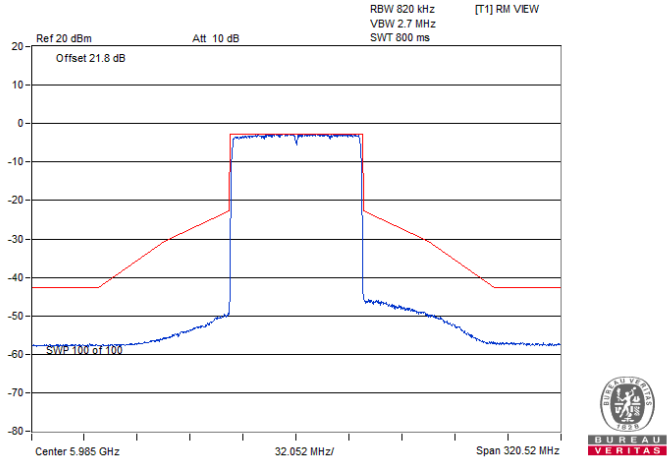
802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 183



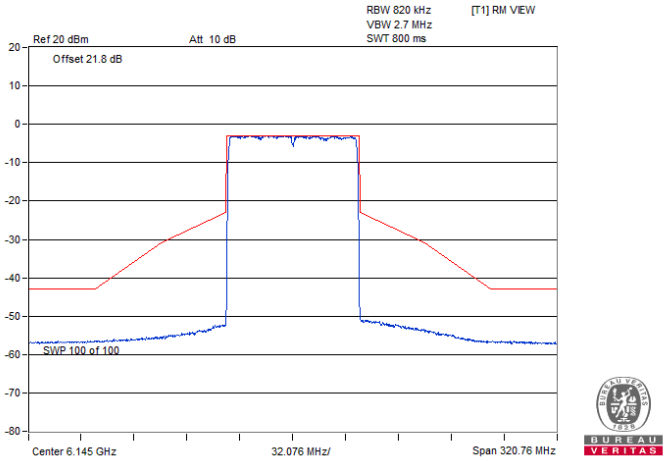
802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 199



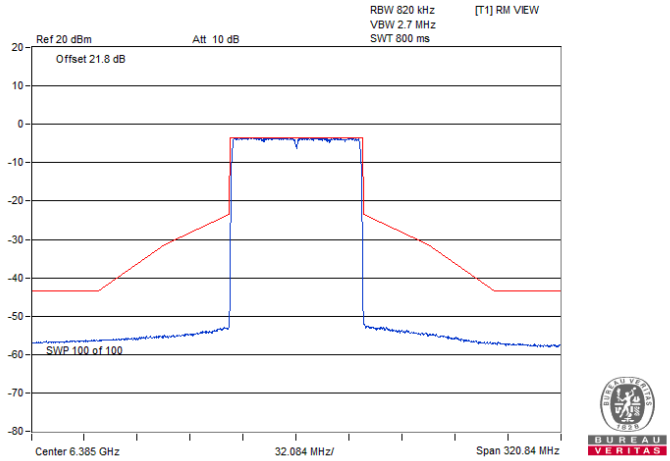
802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 215



802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 7

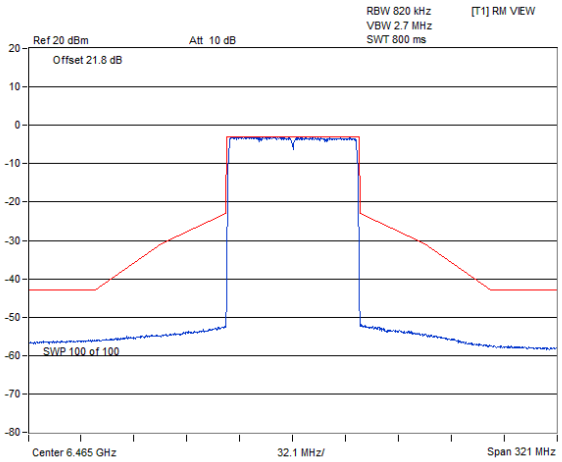


802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 39

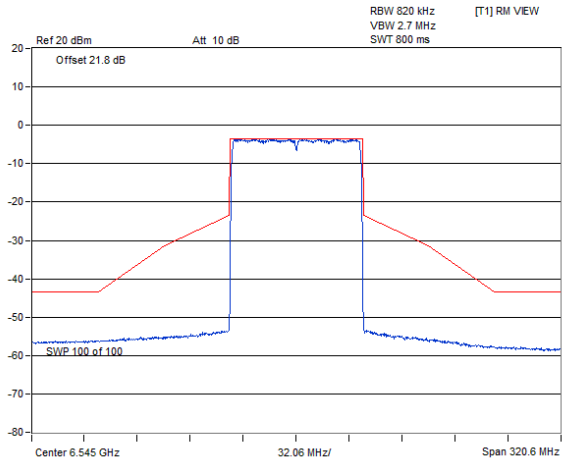


802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 87

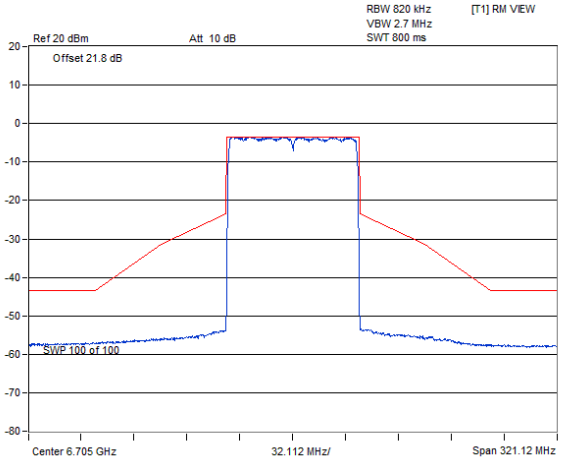
Spectrum Plot



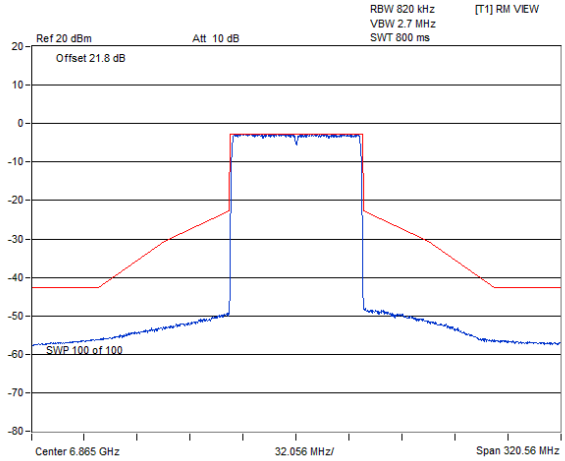
802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 103



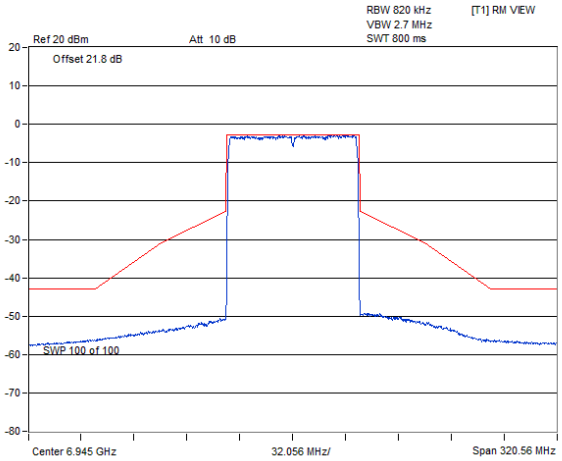
802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 119



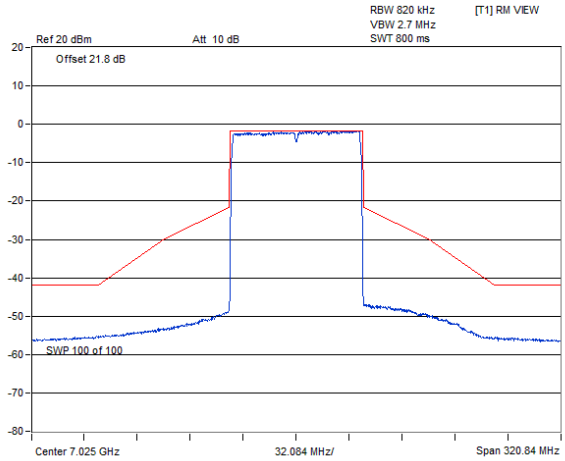
802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 151



802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 183

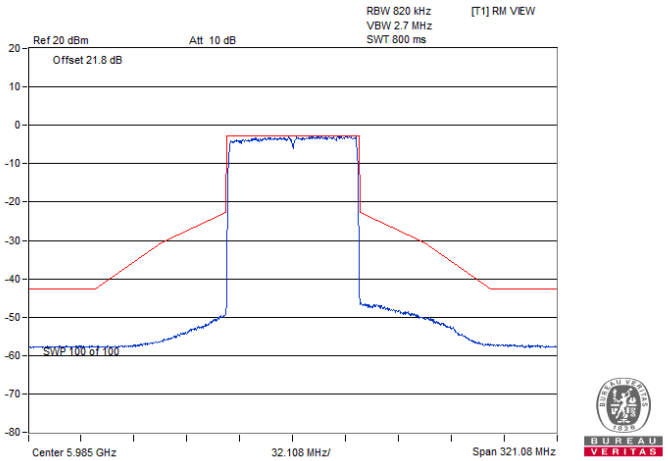


802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 199

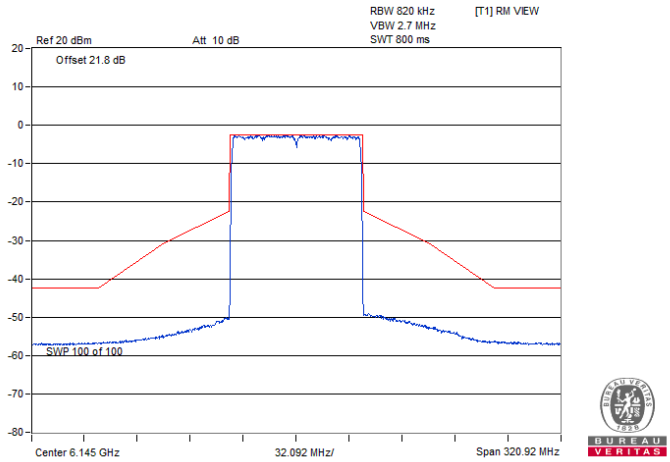


802.11be (EHT80) Beamforming (3T2S) / Chain 1 : CH 215

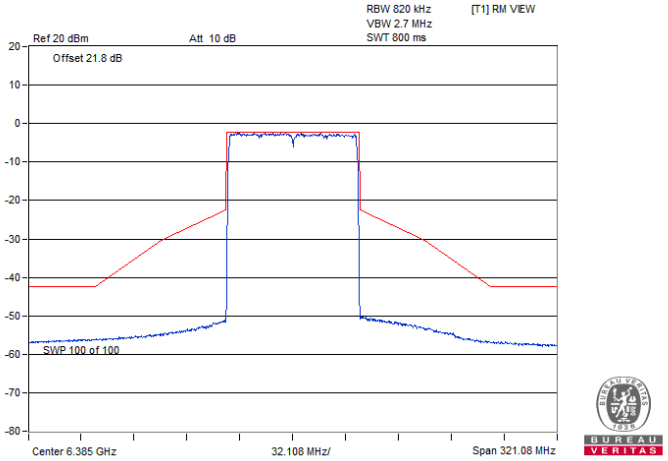
Spectrum Plot



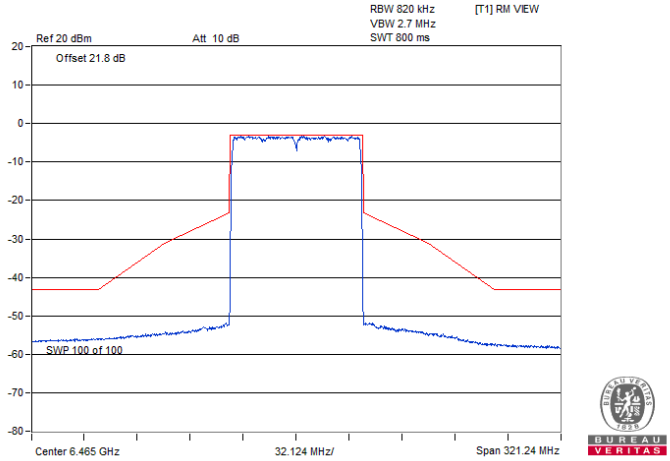
802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 7



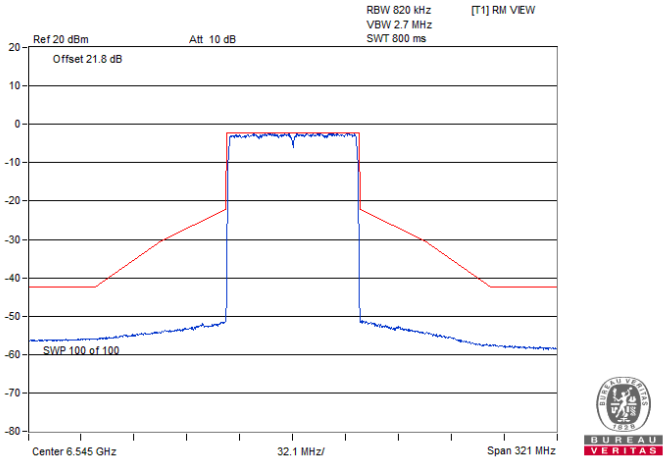
802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 39



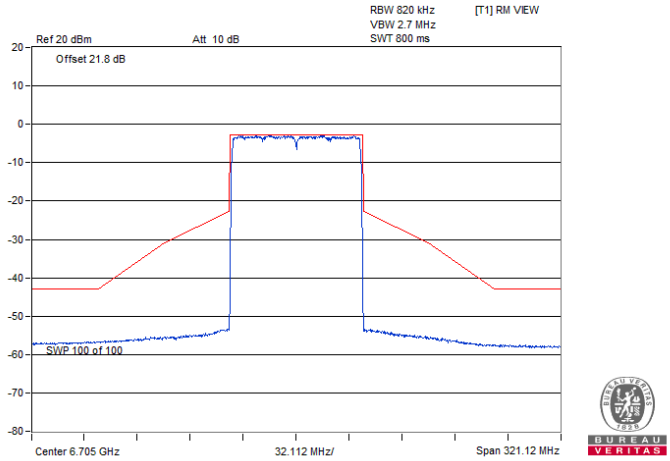
802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 87



802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 103

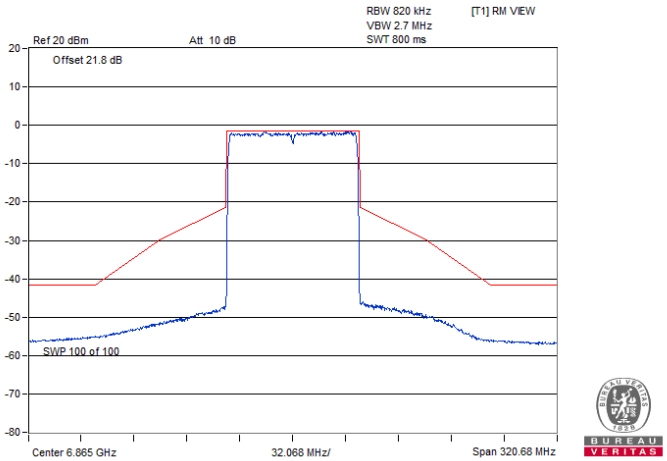


802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 119

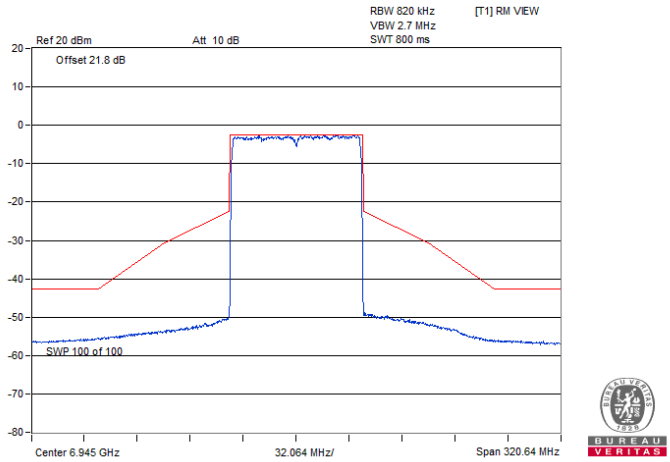


802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 151

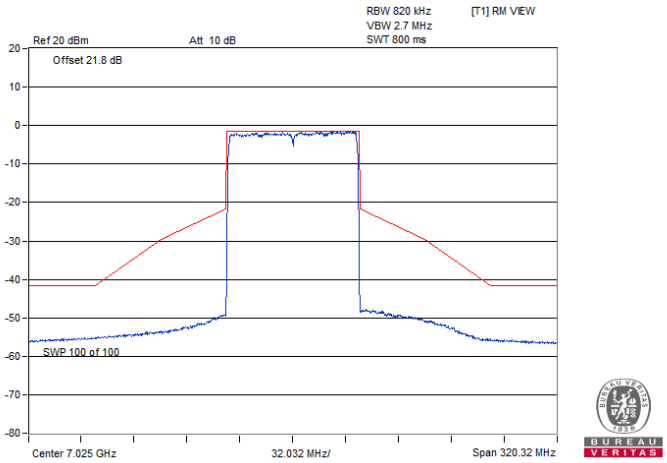
Spectrum Plot



802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 183

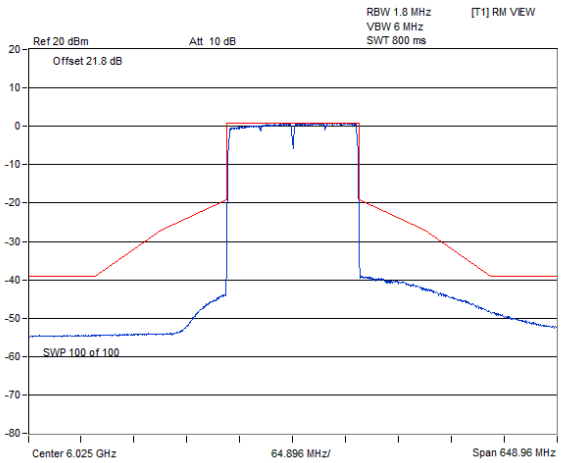
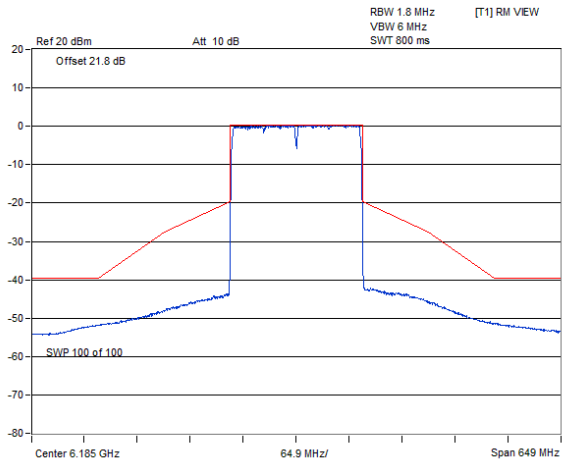
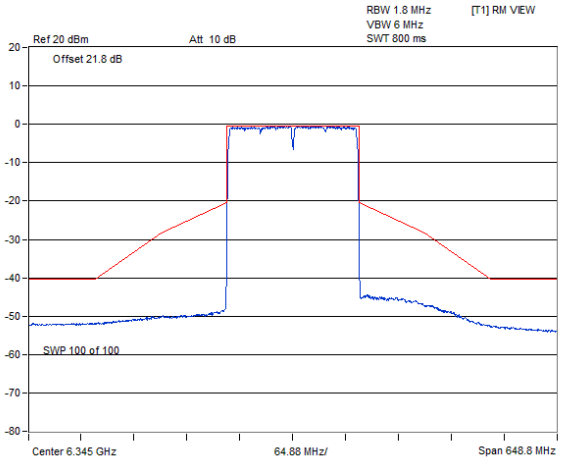
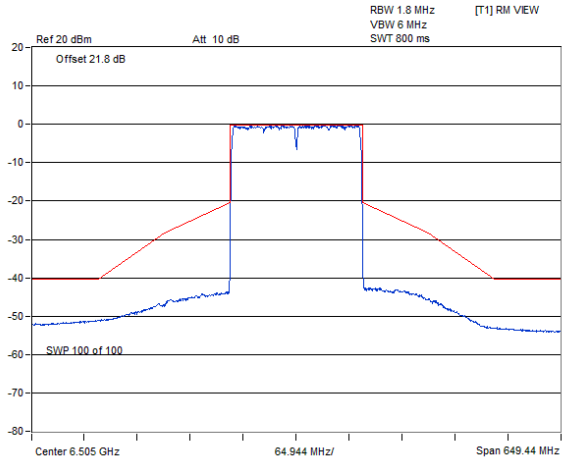
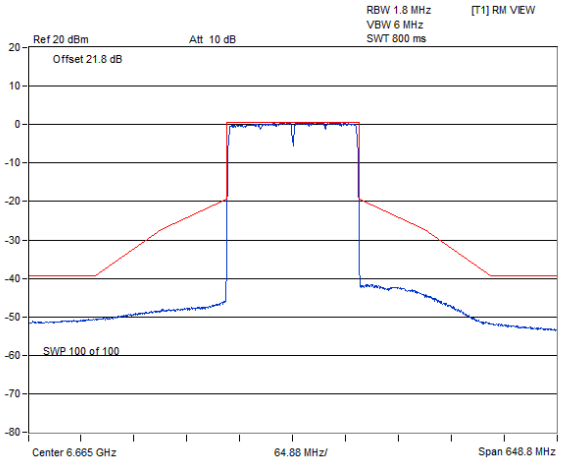
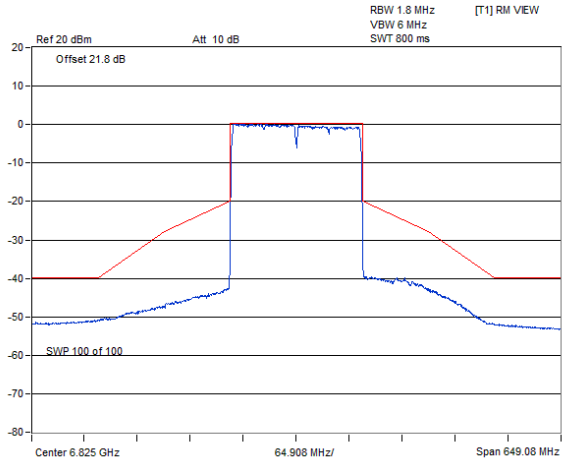


802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 199

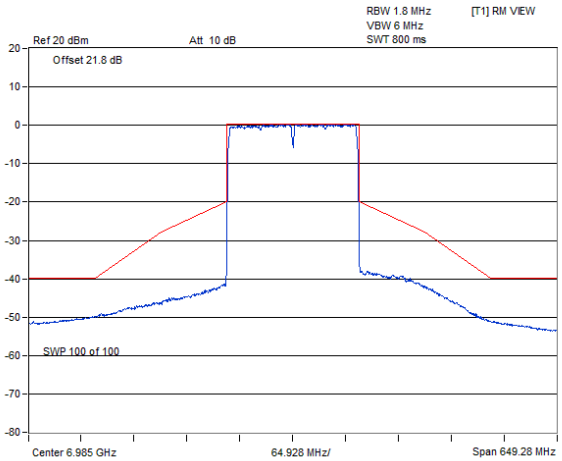


802.11be (EHT80) Beamforming (3T2S) / Chain 2 : CH 215

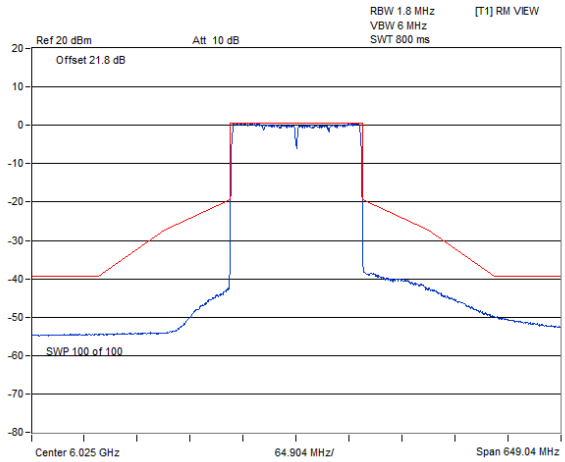
802.11be (EHT160) Beamforming (3T2S)

Spectrum Plot	
	
802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 15	802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 47
	
802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 79	802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 111
	
802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 143	802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 175

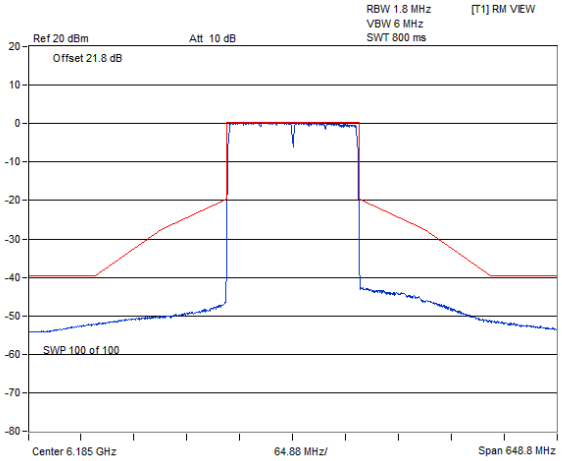
Spectrum Plot



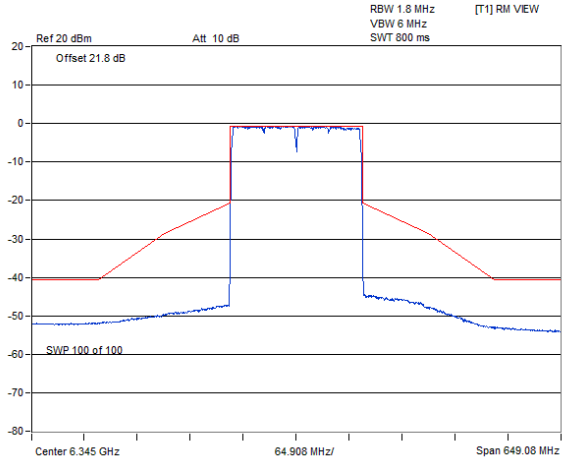
802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 207



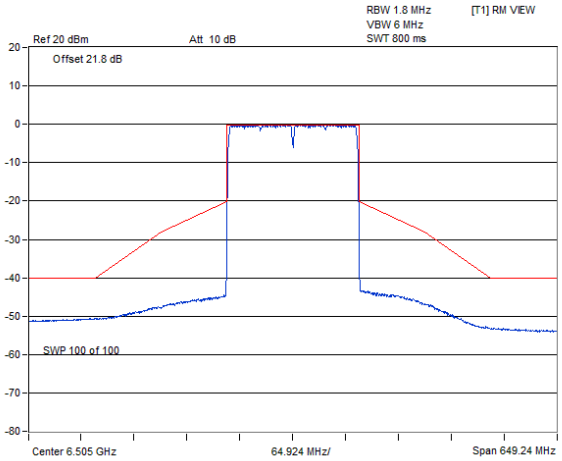
802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 15



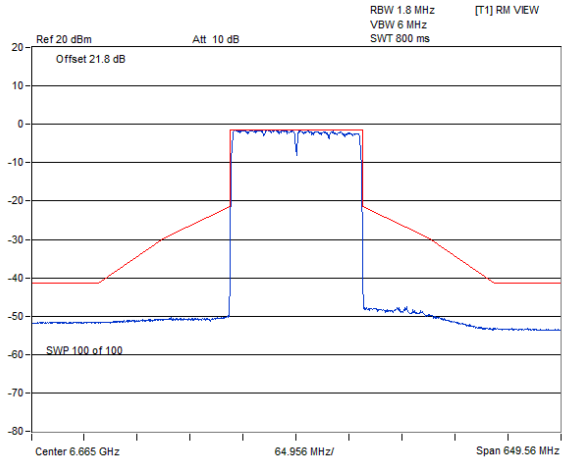
802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 47



802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 79

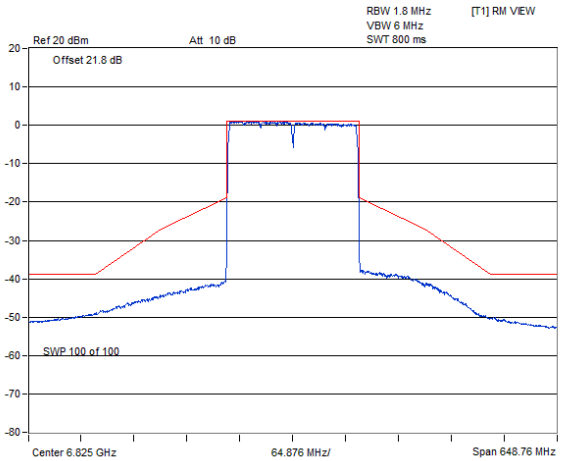


802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 111

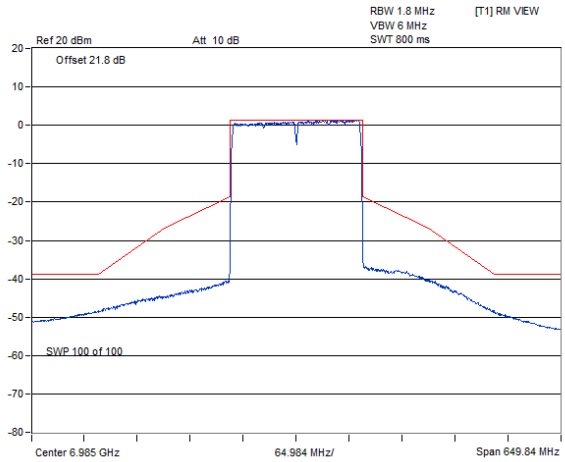


802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 143

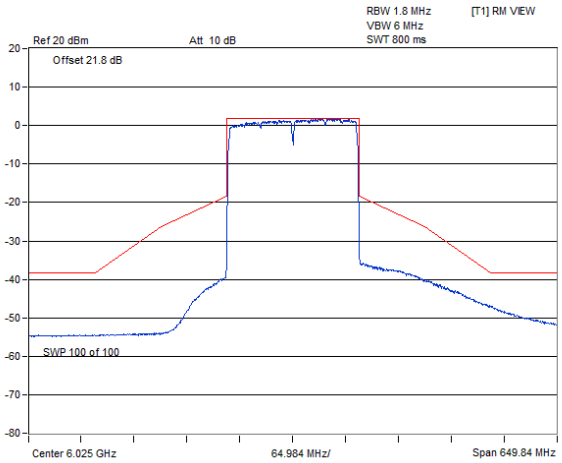
Spectrum Plot



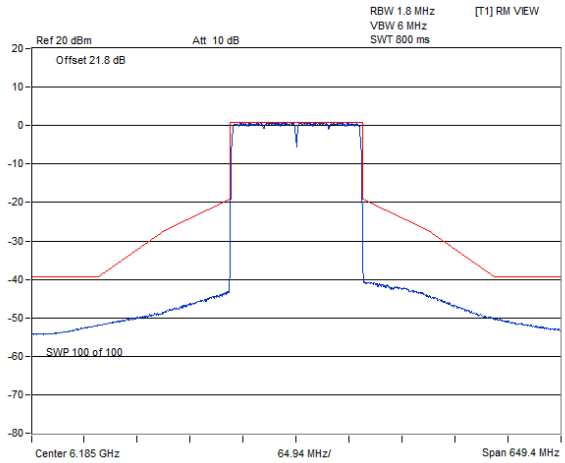
802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 175



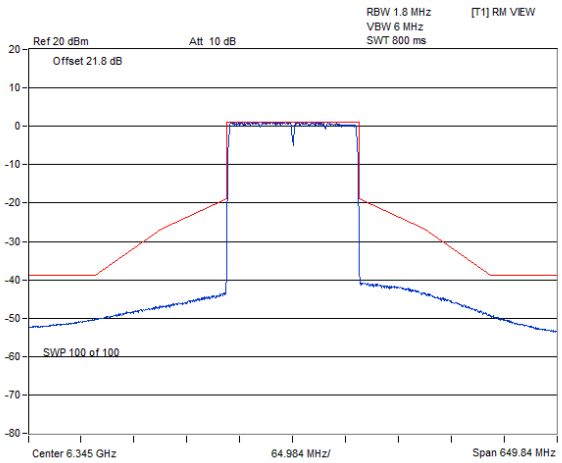
802.11be (EHT160) Beamforming (3T2S) / Chain 1 : CH 207



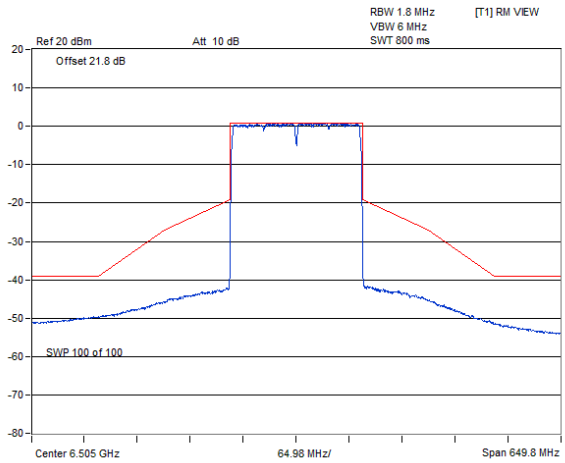
802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 15



802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 47

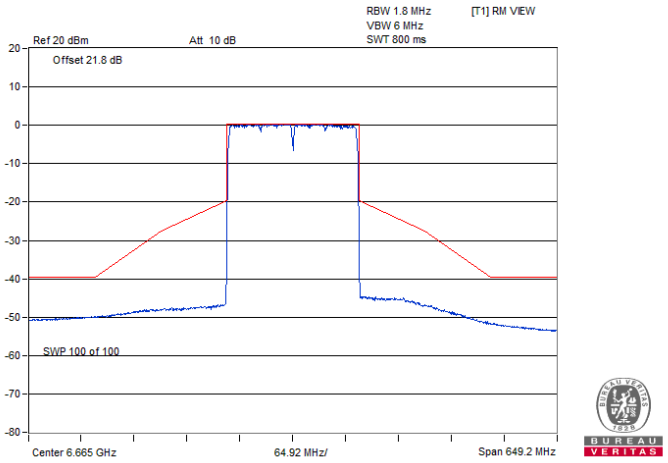


802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 79

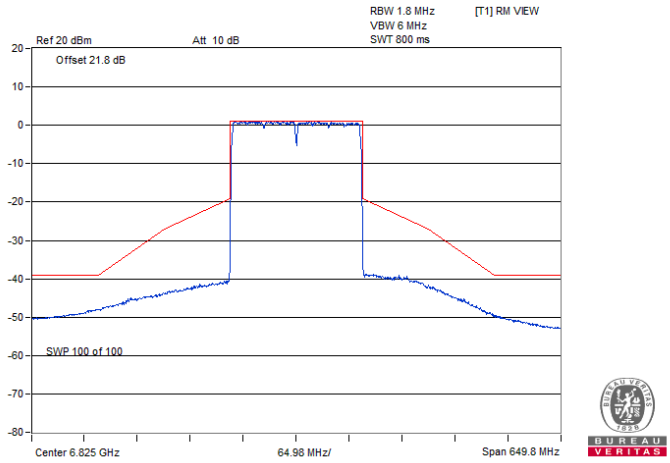


802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 111

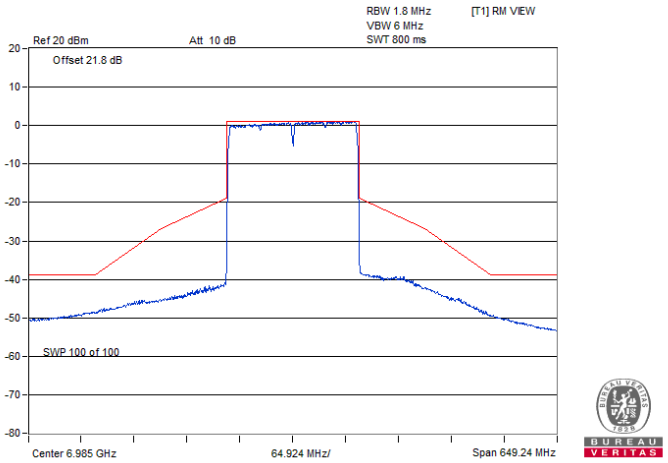
Spectrum Plot



802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 143



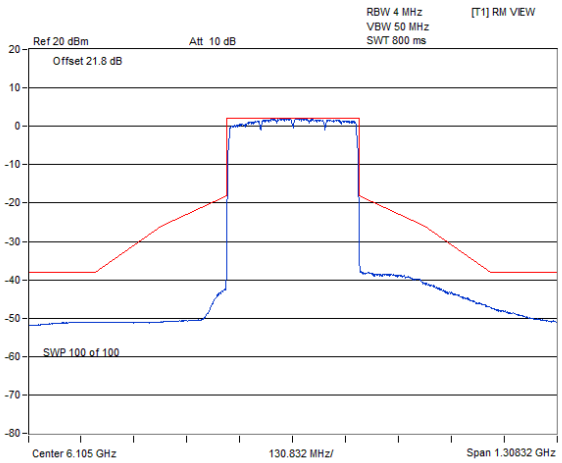
802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 175



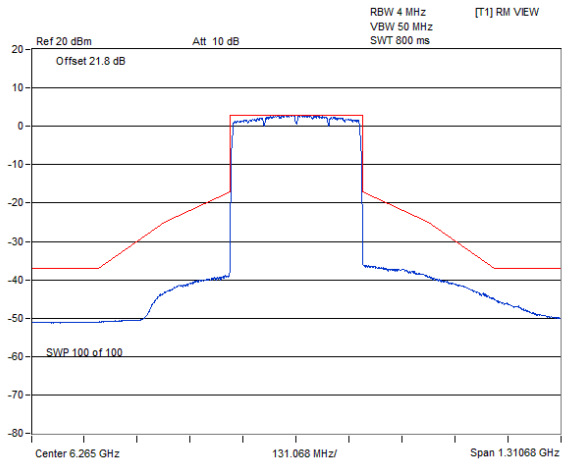
802.11be (EHT160) Beamforming (3T2S) / Chain 2 : CH 207

802.11be (EHT320) Beamforming (3T2S)

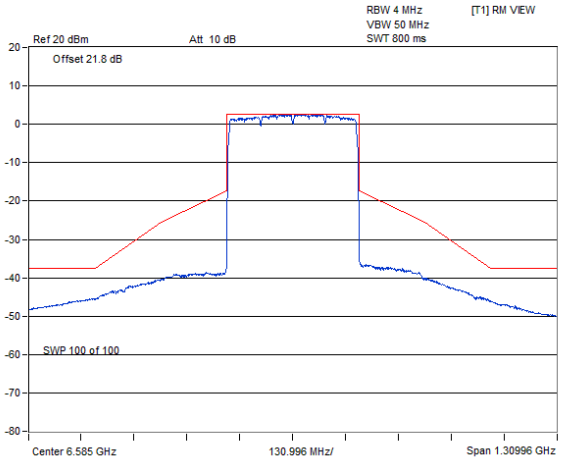
Spectrum Plot



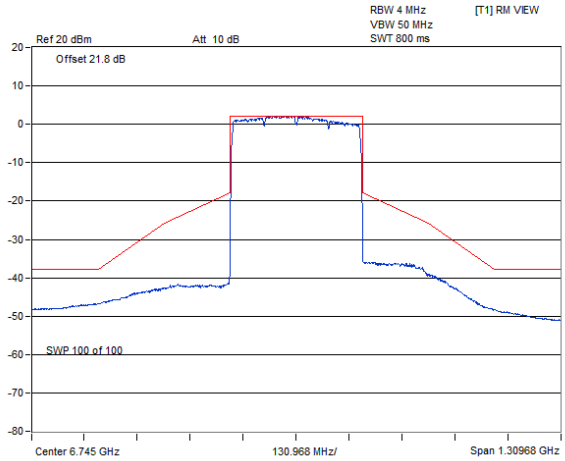
802.11be (EHT320) Beamforming (3T2S) / Chain 0 : CH 31



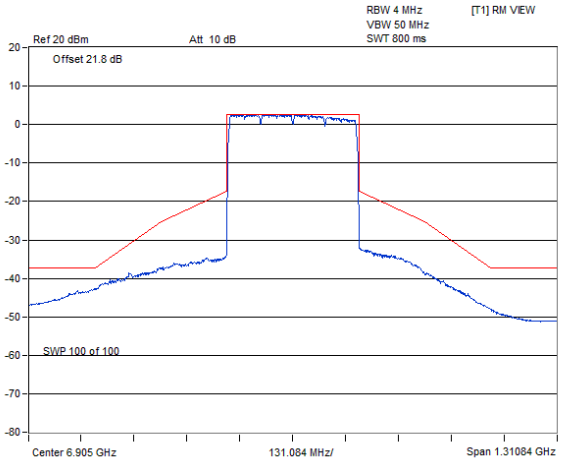
802.11be (EHT320) Beamforming (3T2S) / Chain 0 : CH 63



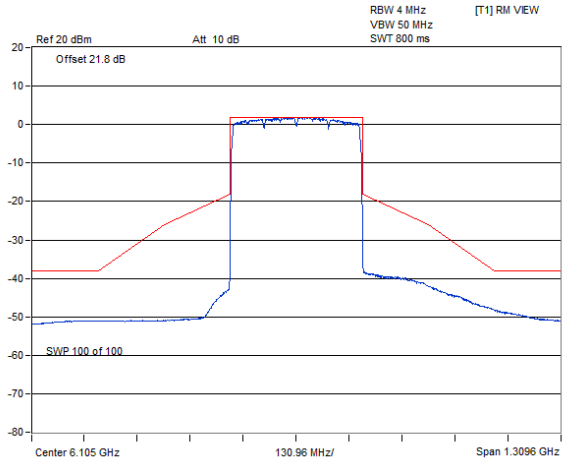
802.11be (EHT320) Beamforming (3T2S) / Chain 0 : CH 127



802.11be (EHT320) Beamforming (3T2S) / Chain 0 : CH 159

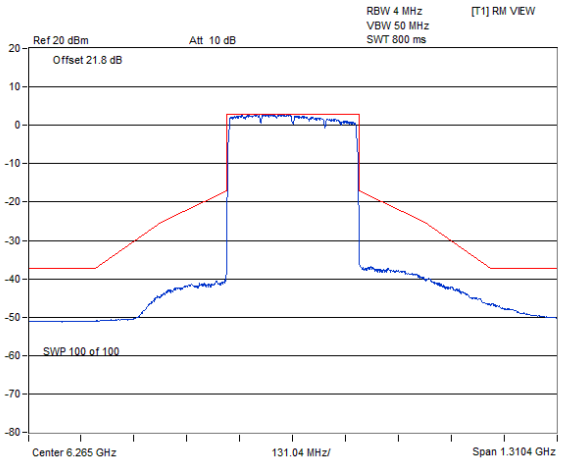


802.11be (EHT320) Beamforming (3T2S) / Chain 0 : CH 191

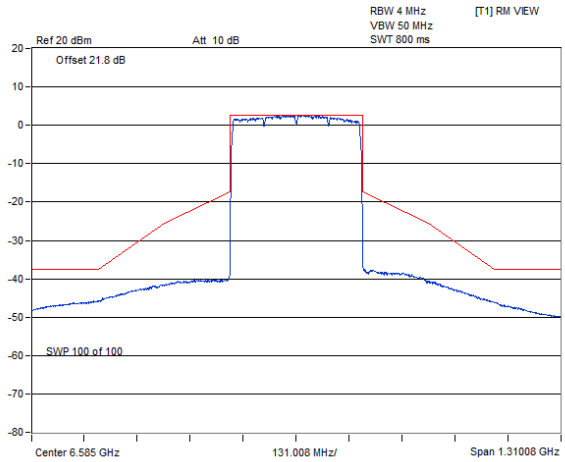


802.11be (EHT320) Beamforming (3T2S) / Chain 1 : CH 31

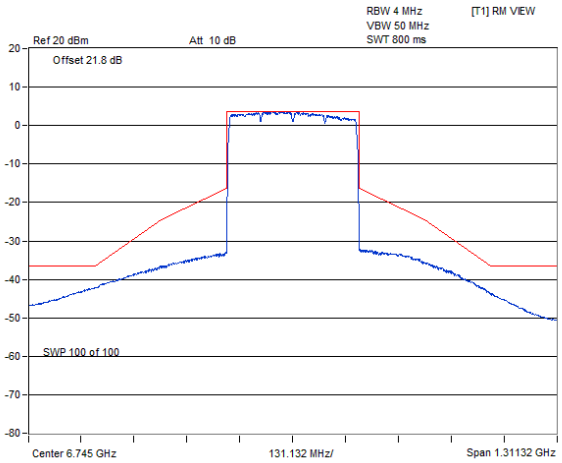
Spectrum Plot



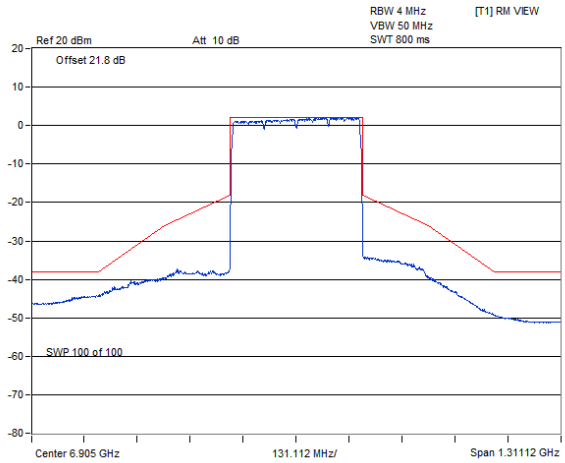
802.11be (EHT320) Beamforming (3T2S) / Chain 1 : CH 63



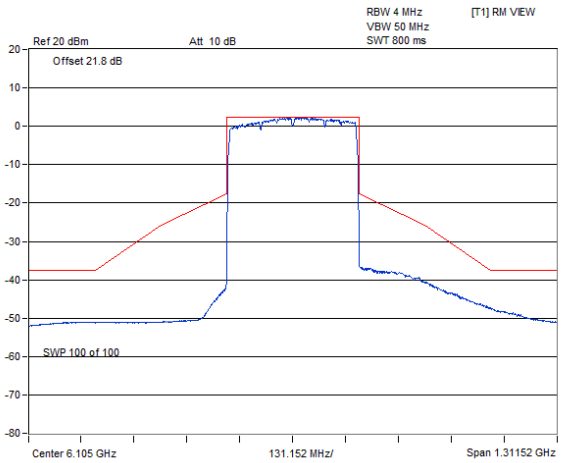
802.11be (EHT320) Beamforming (3T2S) / Chain 1 : CH 127



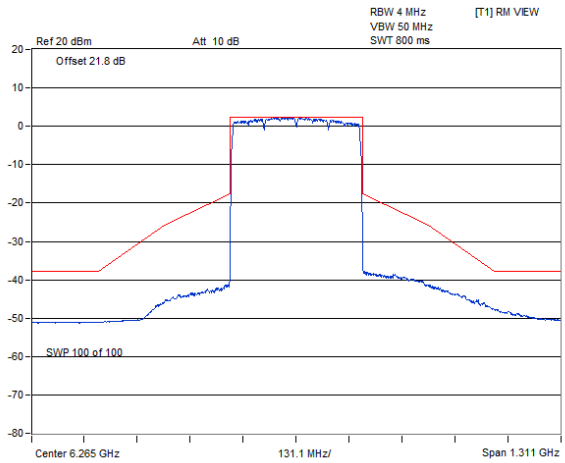
802.11be (EHT320) Beamforming (3T2S) / Chain 1 : CH 159



802.11be (EHT320) Beamforming (3T2S) / Chain 1 : CH 191

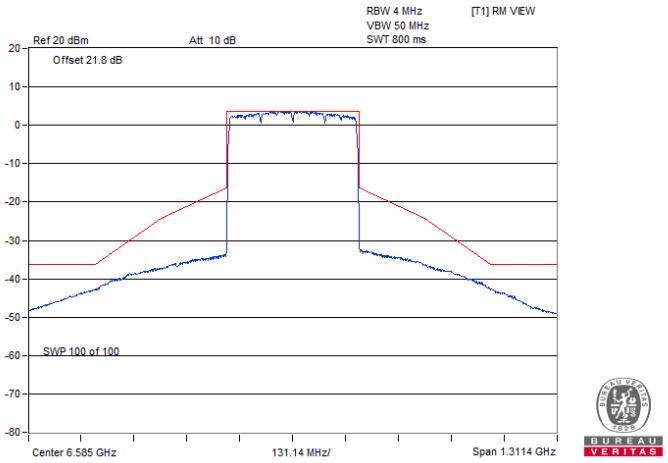


802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 31

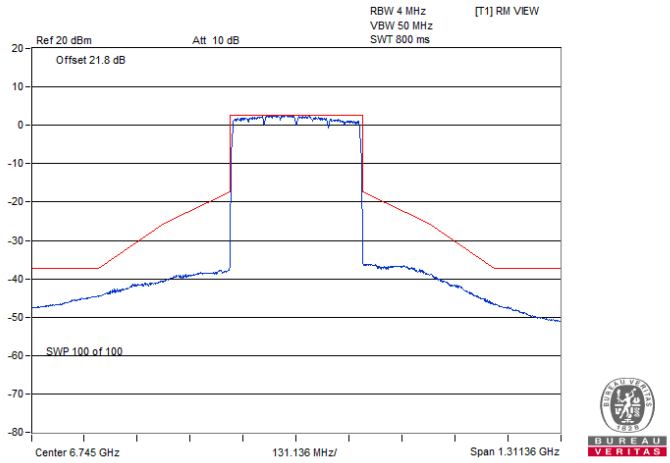


802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 63

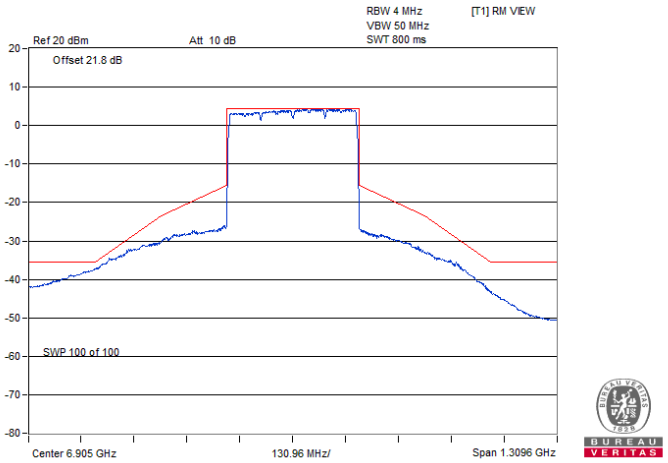
Spectrum Plot



802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 127



802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 159



802.11be (EHT320) Beamforming (3T2S) / Chain 2 : CH 191

7.5 Occupied Bandwidth

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

802.11a CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
1	5955	16.56	16.50	16.44
45	6175	16.44	16.56	16.50
93	6415	16.38	16.44	16.50
97	6435	16.38	16.44	16.50
105	6475	16.50	16.44	16.50
113	6515	16.44	16.50	16.44
117	6535	16.50	16.50	16.44
149	6695	16.44	16.44	16.50
181	6855	16.44	16.44	16.50
185	6875	16.50	16.44	16.50
209	6995	16.50	16.38	16.50
221	7055	16.50	16.50	16.44

802.11be (EHT20) Beamforming (3T1S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
1	5955	18.90	18.96	18.96
45	6175	18.96	18.96	19.02
93	6415	18.96	18.96	18.96
97	6435	18.96	18.96	18.96
105	6475	18.96	18.90	18.96
113	6515	18.96	18.96	18.96
117	6535	18.96	18.84	18.90
149	6695	18.96	18.90	18.96
181	6855	18.90	18.96	18.96
185	6875	18.96	18.90	18.96
209	6995	18.96	18.96	19.02
221	7055	18.96	18.90	19.02

802.11be (EHT40) Beamforming (3T1S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
3	5965	38.04	37.92	38.04
43	6165	38.16	38.28	37.92
91	6405	37.92	38.04	38.16
99	6445	38.04	38.28	37.92
107	6485	37.92	38.04	38.16
115	6525	38.16	37.68	38.04
123	6565	38.16	38.16	38.04
155	6725	38.04	37.92	38.04
179	6845	37.80	38.16	38.16
187	6885	38.28	38.28	38.04
211	7005	38.04	38.04	38.16
219	7045	37.80	38.16	38.04

802.11be (EHT80) Beamforming (3T1S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
7	5985	77.28	77.52	77.28
39	6145	77.28	77.28	77.28
87	6385	77.52	77.52	77.28
103	6465	77.52	77.52	77.52
119	6545	77.28	77.28	77.52
151	6705	77.52	77.52	77.52
183	6865	77.28	77.52	77.52
199	6945	77.28	77.04	77.28
215	7025	77.76	77.52	77.52

802.11be (EHT160) Beamforming (3T1S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
15	6025	156.96	157.44	156.96
47	6185	156.96	157.92	157.44
79	6345	156.96	157.44	156.96
111	6505	156.96	156.48	156.48
143	6665	157.44	157.44	156.48
175	6825	156.96	157.44	156.48
207	6985	157.44	157.44	156.48

802.11be (EHT320) Beamforming (3T1S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
31	6105	313.92	314.88	314.88
63	6265	314.88	315.84	313.92
127	6585	314.88	315.84	315.84
159	6745	314.88	314.88	314.88
191	6905	315.84	314.88	314.88

802.11be (EHT20) Beamforming (3T2S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
1	5955	18.96	18.96	19.02
45	6175	18.90	18.96	18.96
93	6415	18.90	18.96	18.90
97	6435	18.90	18.96	18.96
105	6475	18.96	18.90	19.02
113	6515	18.90	18.96	18.96
117	6535	18.96	18.96	18.96
149	6695	18.90	18.96	18.96
181	6855	18.96	18.96	18.90
185	6875	18.96	18.96	18.90
209	6995	18.96	18.90	19.02
221	7055	18.96	18.90	18.96

802.11be (EHT40) Beamforming (3T2S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
3	5965	38.16	38.04	38.16
43	6165	38.16	38.04	38.04
91	6405	38.04	37.92	38.16
99	6445	38.16	38.04	37.92
107	6485	38.04	38.16	38.16
115	6525	37.92	37.92	37.80
123	6565	38.04	38.16	38.16
155	6725	38.04	38.04	38.04
179	6845	38.04	38.16	38.04
187	6885	38.28	38.04	38.16
211	7005	38.28	38.16	38.16
219	7045	38.28	38.04	38.04

802.11be (EHT80) Beamforming (3T2S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
7	5985	77.28	77.52	77.52
39	6145	77.76	77.28	77.28
87	6385	77.28	77.52	77.52
103	6465	77.52	77.28	77.52
119	6545	77.52	77.28	77.76
151	6705	77.52	77.76	77.76
183	6865	77.52	77.28	77.28
199	6945	77.52	77.52	77.52
215	7025	77.52	77.52	77.52

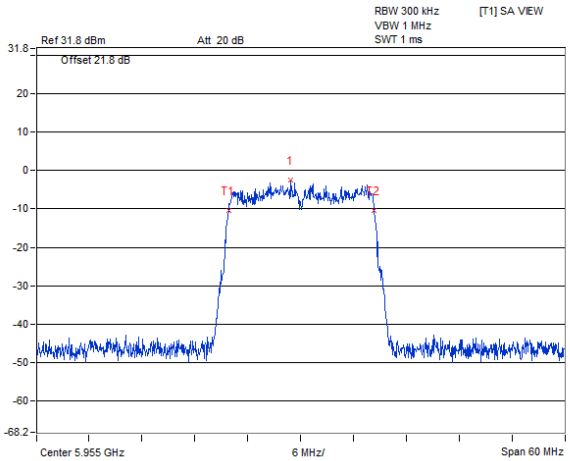
802.11be (EHT160) Beamforming (3T2S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
15	6025	156.96	157.44	157.44
47	6185	156.96	156.48	156.48
79	6345	156.96	156.96	156.96
111	6505	157.44	156.96	157.44
143	6665	156.96	157.44	157.44
175	6825	156.96	156.96	157.44
207	6985	157.44	156.96	156.96

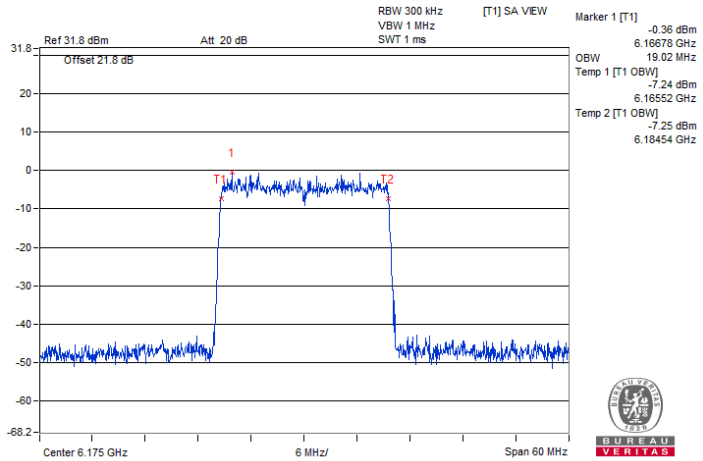
802.11be (EHT320) Beamforming (3T2S)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
31	6105	314.88	314.88	313.92
63	6265	313.92	313.92	312.96
127	6585	314.88	314.88	314.88
159	6745	312.96	314.88	314.88
191	6905	315.84	314.88	314.88

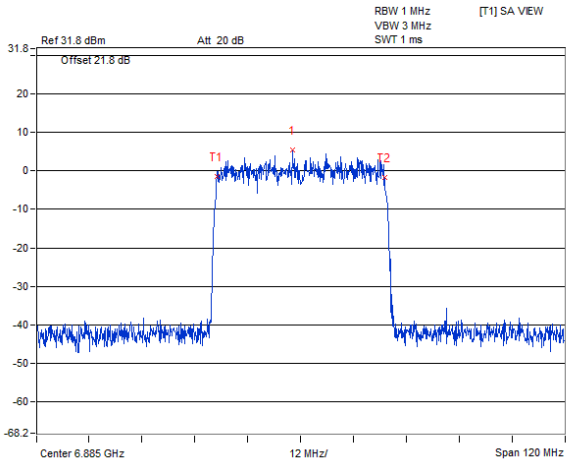
Spectrum Plot of Maximum Value



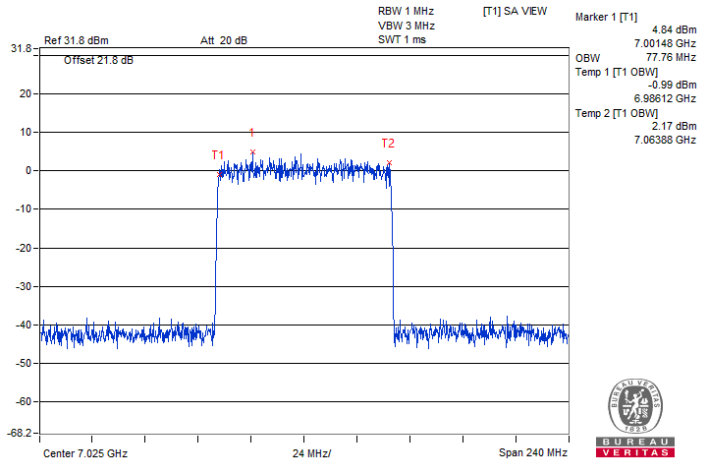
802.11a CDD / Chain 0 : CH 1



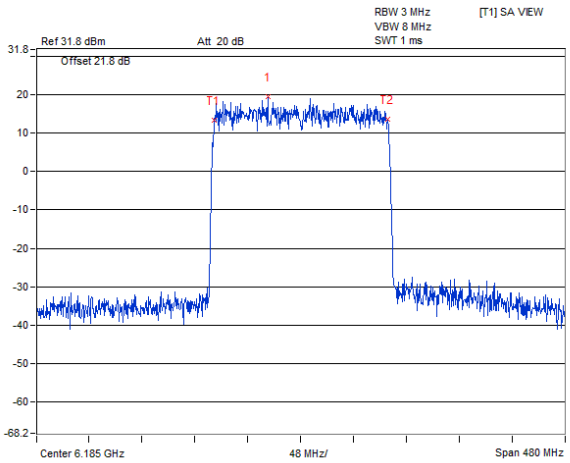
802.11be (EHT20) Beamforming (3T1S) / Chain 2 : CH 45



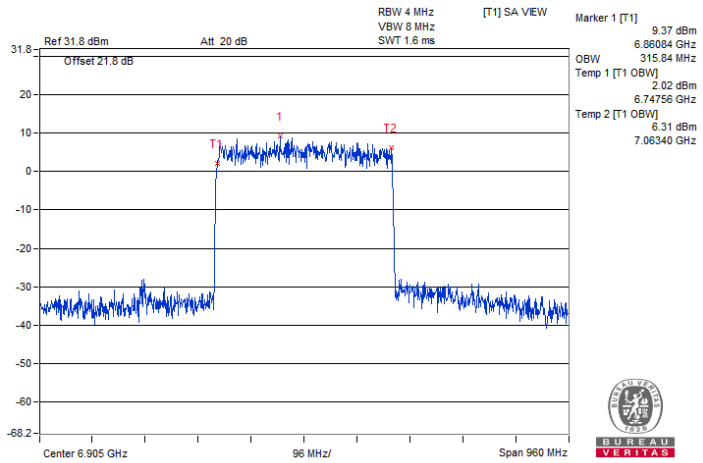
802.11be (EHT40) Beamforming (3T1S) / Chain 0 : CH 187



802.11be (EHT80) Beamforming (3T1S) / Chain 0 : CH 215

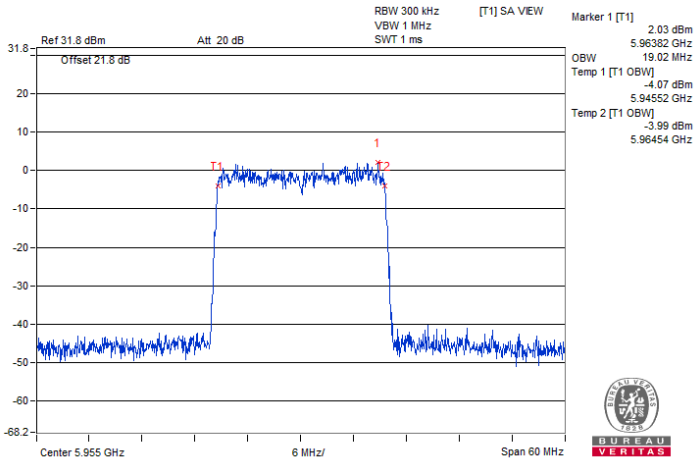


802.11be (EHT160) Beamforming (3T1S) / Chain 1 : CH 47

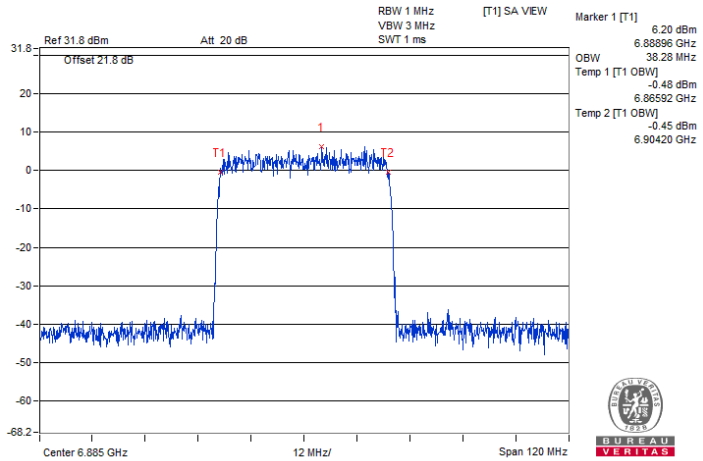


802.11be (EHT320) Beamforming (3T1S) / Chain 0 : CH 191

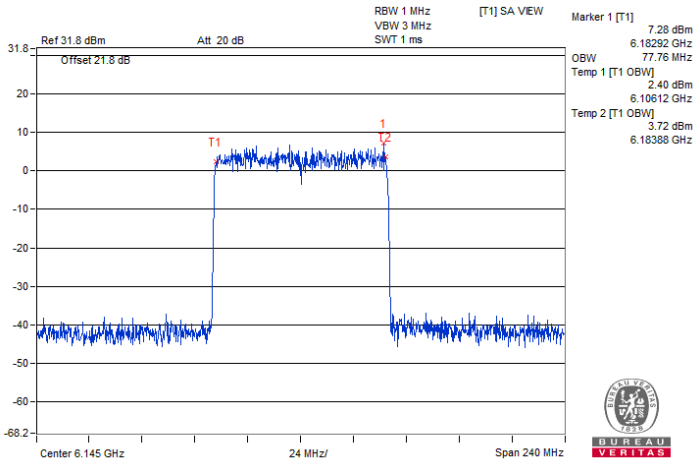
Spectrum Plot of Maximum Value



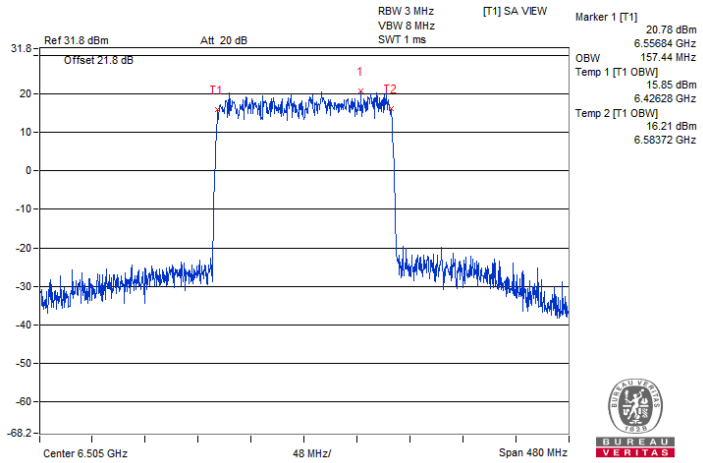
802.11be (EHT20) Beamforming (3T2S) / Chain 2 : CH 1



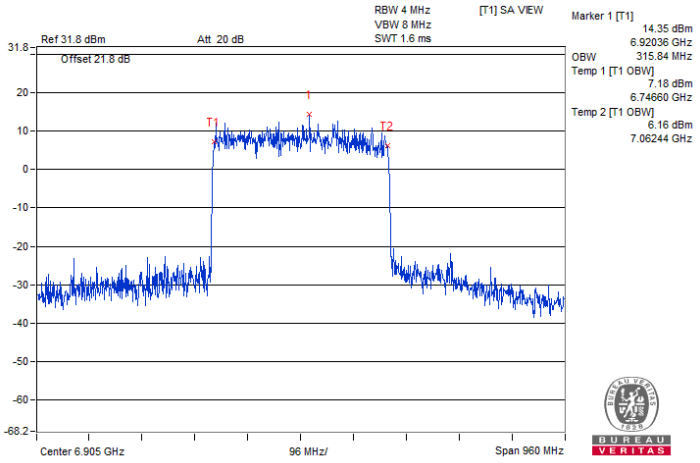
802.11be (EHT40) Beamforming (3T2S) / Chain 0 : CH 187



802.11be (EHT80) Beamforming (3T2S) / Chain 0 : CH 39



802.11be (EHT160) Beamforming (3T2S) / Chain 0 : CH 111



802.11be (EHT320) Beamforming (3T2S) / Chain 0 : CH 191

7.6 Frequency Stability

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

Frequency Stability Versus Temperature									
Operating Frequency: 5955 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	5955.0235	Pass	5955.0206	Pass	5955.023	Pass	5955.0218	Pass
30	120	5954.9905	Pass	5954.9917	Pass	5954.9897	Pass	5954.9897	Pass
20	120	5954.9856	Pass	5954.9827	Pass	5954.9853	Pass	5954.9808	Pass
10	120	5954.9926	Pass	5954.9946	Pass	5954.993	Pass	5954.9934	Pass
0	120	5955.0121	Pass	5955.0118	Pass	5955.0111	Pass	5955.0132	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5955 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	5954.9854	Pass	5954.9879	Pass	5954.9907	Pass	5954.9898	Pass
	120	5954.9856	Pass	5954.9827	Pass	5954.9853	Pass	5954.9808	Pass
	102	5954.9932	Pass	5954.9935	Pass	5954.9893	Pass	5954.9917	Pass

7.7 Contention-based Protocol

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

Companion Device Information			
Product	**Brand**	**Model No.**	**Software/Firmware Version**
Intel(R) Wi-Fi 7 BE200 320MHz	Intel	BE200	23.50.0.6

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

For U-NII-5

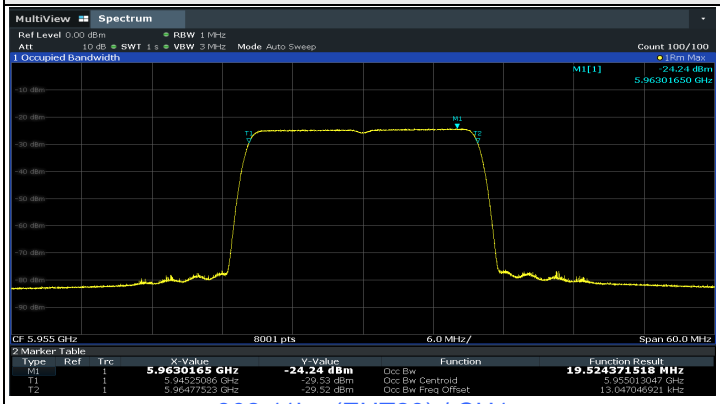
Contention Based Protocol Measurement										
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Freq. (MHz)**	**Injected Signal (AWGN)**		**Antenna Gain (dBi)**	**Path Loss (dB) (Note 3)**	**Adjusted Power (dBm)**	**Detection Limit**	**EUT TX Status**
				Freq. (MHz)	**Power (dBm)**					
802.11be	20	1	5955	5955	-72.08	3.19	0	-75.27	-62	OFF
					-72.58	3.19	0	-75.77	-62	Minimal
					-78.81	3.19	0	-82	-62	ON
	320	31	6105	5950	-72.01	3.19	0	-75.2	-62	OFF
					-72.51	3.19	0	-75.7	-62	Minimal
					-78.81	3.19	0	-82	-62	ON
				6105	-71.34	3.19	0	-74.53	-62	OFF
					-71.84	3.19	0	-75.03	-62	Minimal
					-78.81	3.19	0	-82	-62	ON
				6260	-72.51	3.19	0	-75.7	-62	OFF
					-73.01	3.19	0	-76.2	-62	Minimal
					-78.81	3.19	0	-82	-62	ON

Notes:

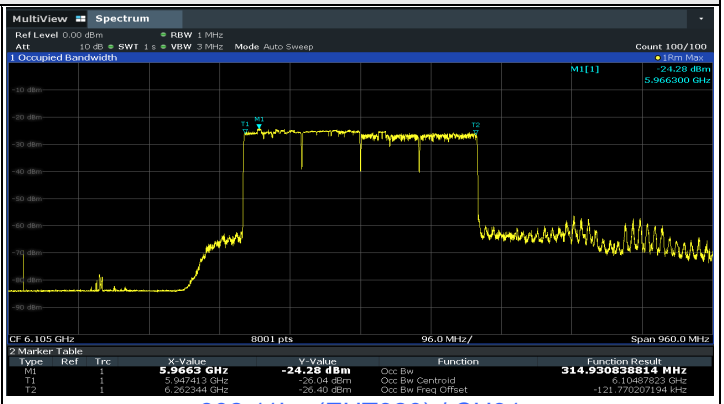
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 2) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	5955	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	320	5950	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6105	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6260	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass

Plots of EUT Tx waveform

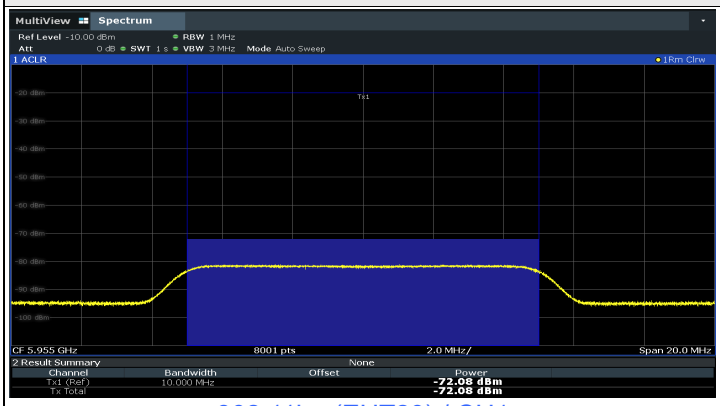


802.11be (EHT20) / CH1

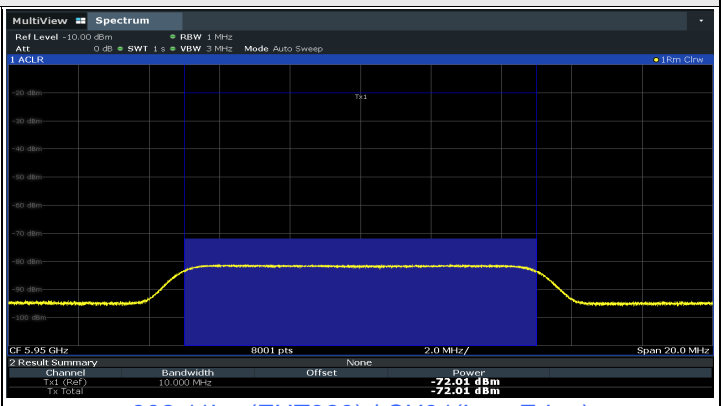


802.11be (EHT320) / CH31

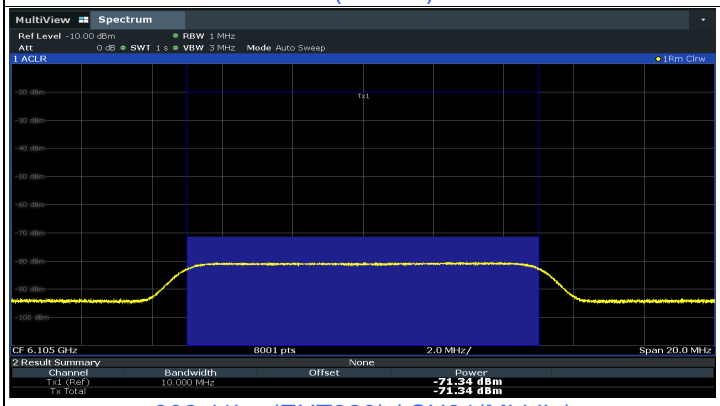
Plots of Injected signal (AWGN) level



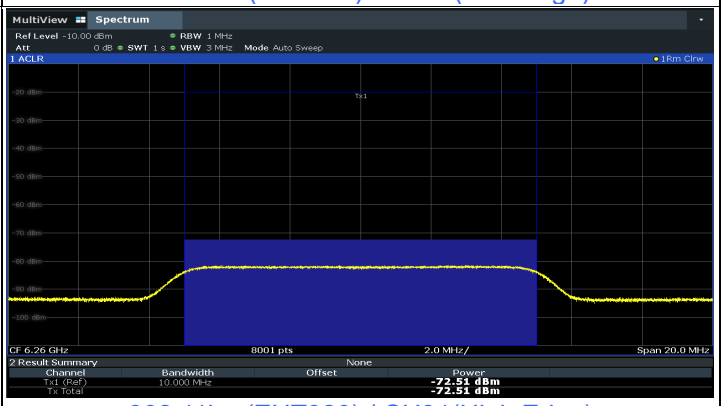
802.11be (EHT20) / CH1



802.11be (EHT320) / CH31(Low Edge)



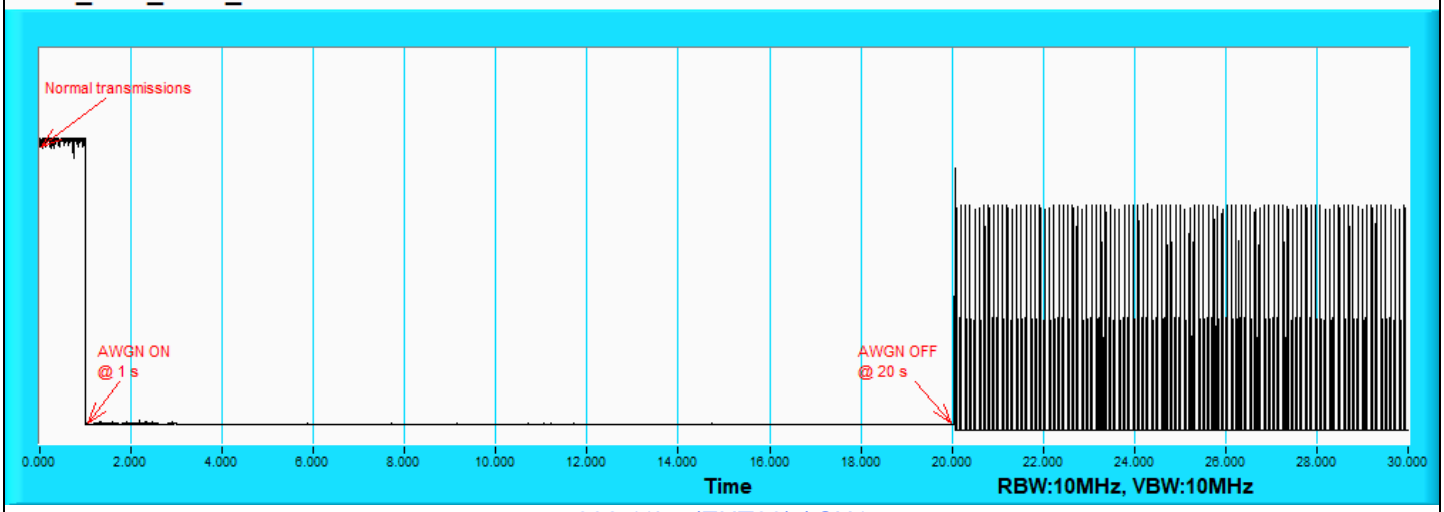
802.11be (EHT320) / CH31(Middle)



802.11be (EHT320) / CH31(High Edge)

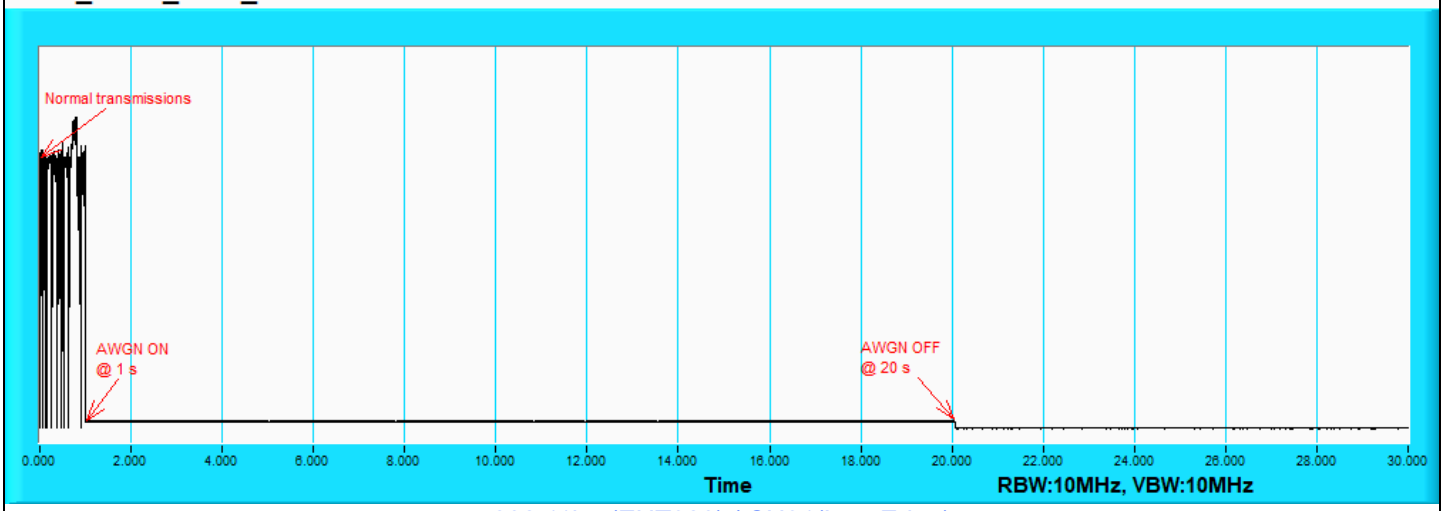
Plots of EUT ceased transmission in the time domain

UNII5_20M_5955_Test Result



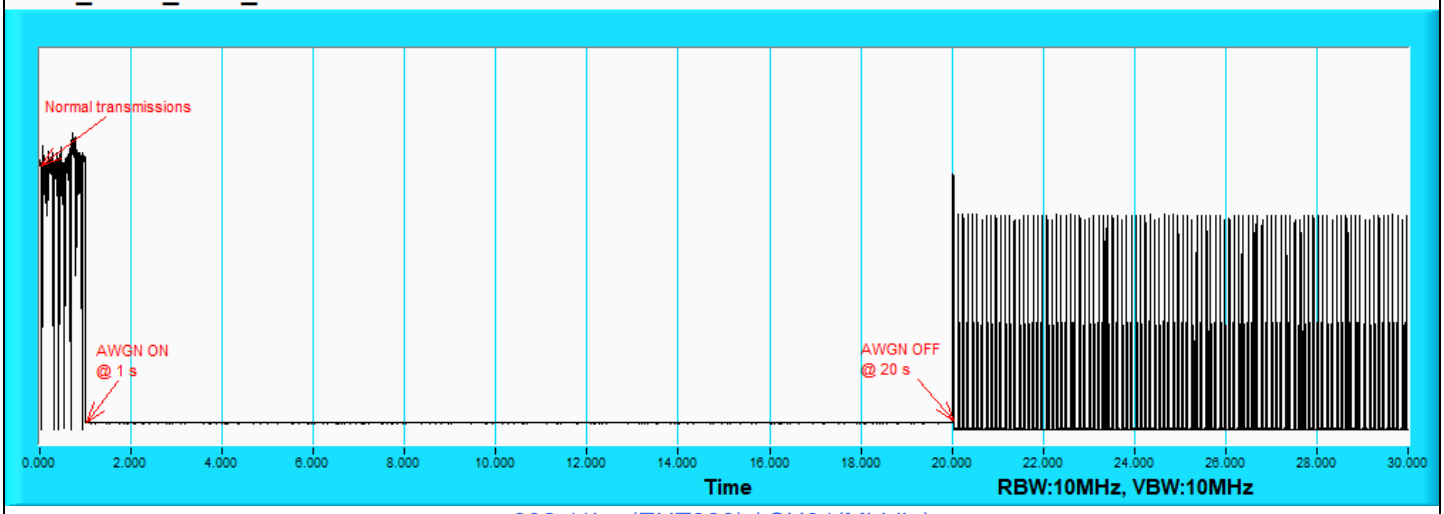
802.11be (EHT20) / CH1

UNII5_320M_5950_Test Result



802.11be (EHT320) / CH31(Low Edge)

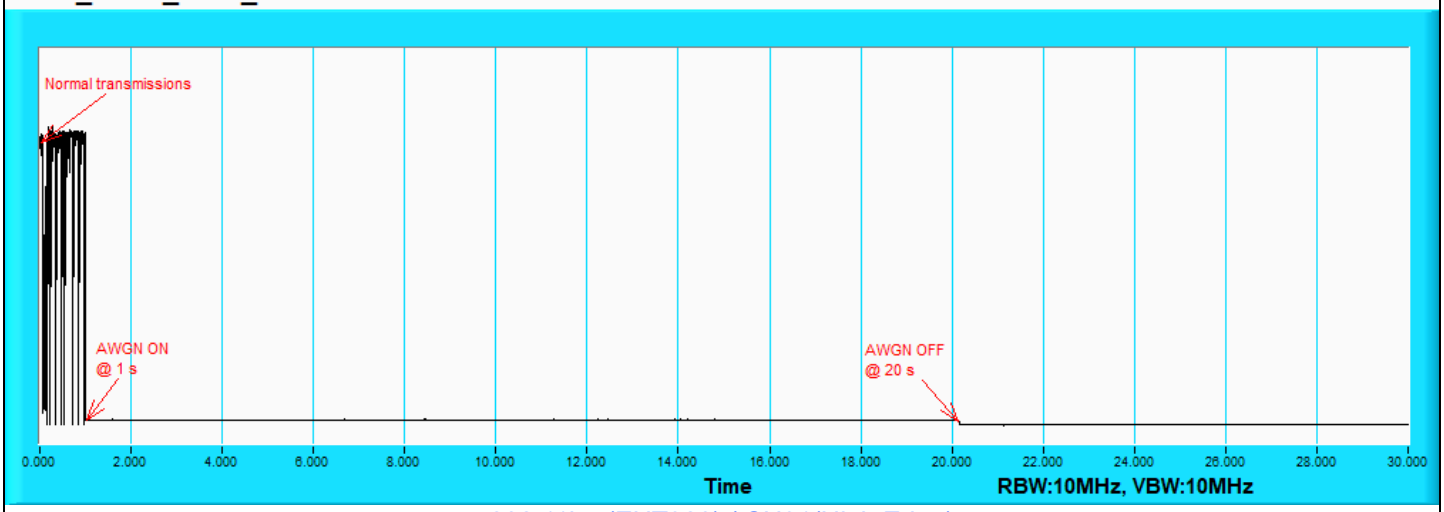
UNII5_320M_6105_Test Result



802.11be (EHT320) / CH31(Middle)

Plots of EUT ceased transmission in the time domain

UNII5_320M_6260_Test Result



802.11be (EHT320) / CH31(High Edge)

For U-NII-6

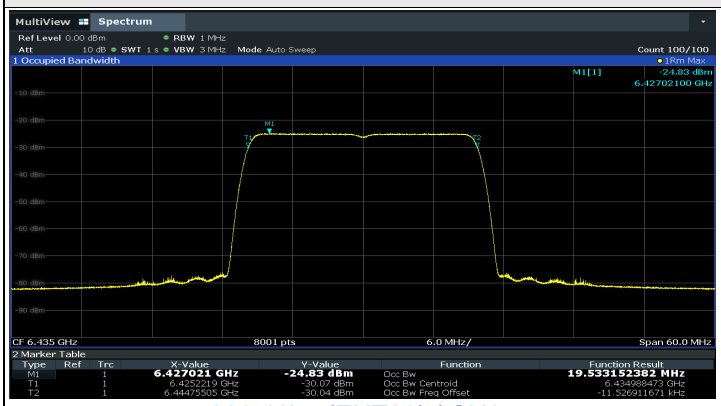
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	97	6435	6435	-72.4	3.07	0	-75.47	-62	OFF
					-72.9	3.07	0	-75.97	-62	Minimal
					-78.93	3.07	0	-82	-62	ON
	320	95	6425	6270	-71.41	3.07	0	-74.48	-62	OFF
					-71.91	3.07	0	-74.98	-62	Minimal
					-78.93	3.07	0	-82	-62	ON
				6425	-71.3	3.07	0	-74.37	-62	OFF
					-71.8	3.07	0	-74.87	-62	Minimal
					-78.93	3.07	0	-82	-62	ON
				6580	-70.86	3.07	0	-73.93	-62	OFF
					-71.36	3.07	0	-74.43	-62	Minimal
					-78.93	3.07	0	-82	-62	ON

Notes:

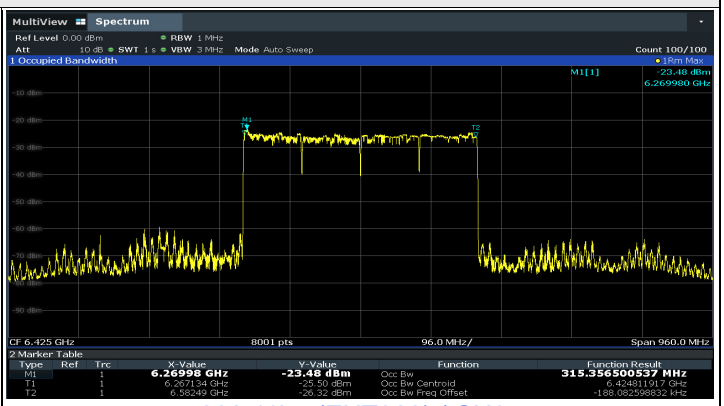
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 2) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	6435	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

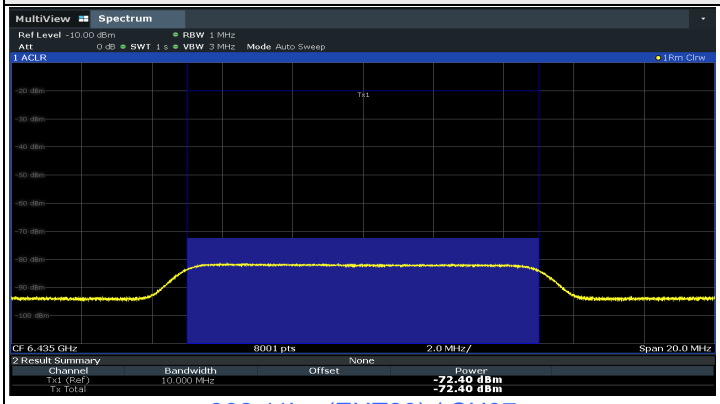


802.11be (EHT20) / CH97

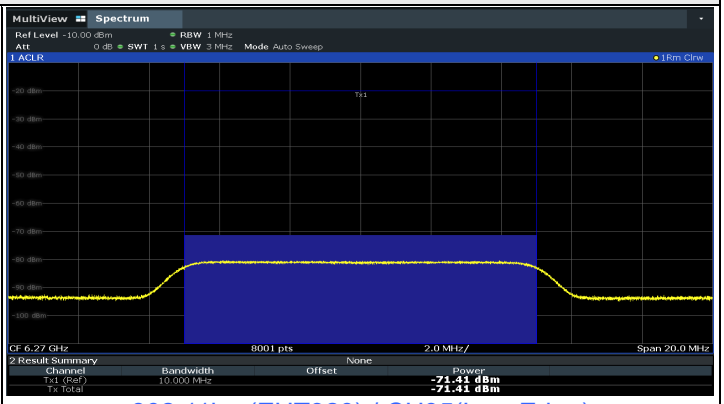


802.11be (EHT320) / CH95

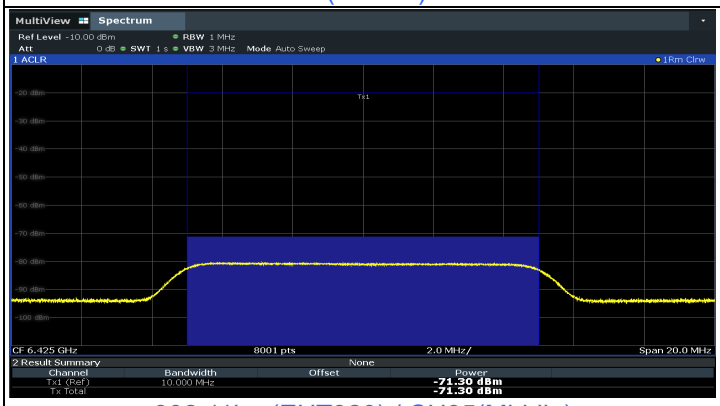
Plots of Injected signal (AWGN) level



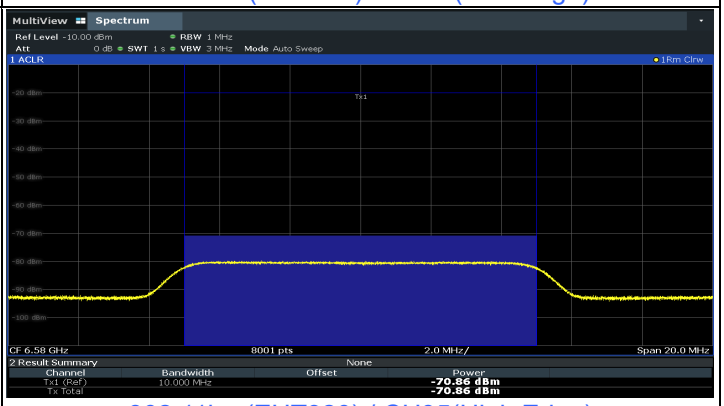
802.11be (EHT20) / CH97



802.11be (EHT320) / CH95(Low Edge)



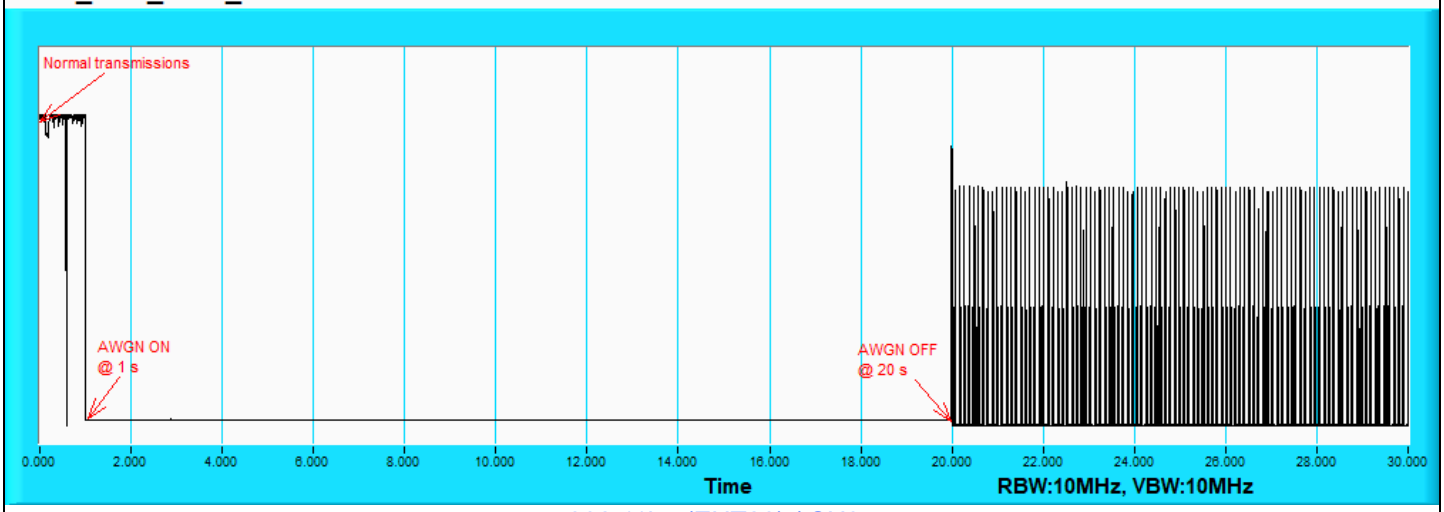
802.11be (EHT320) / CH95(Middle)



802.11be (EHT320) / CH95(High Edge)

Plots of EUT ceased transmission in the time domain

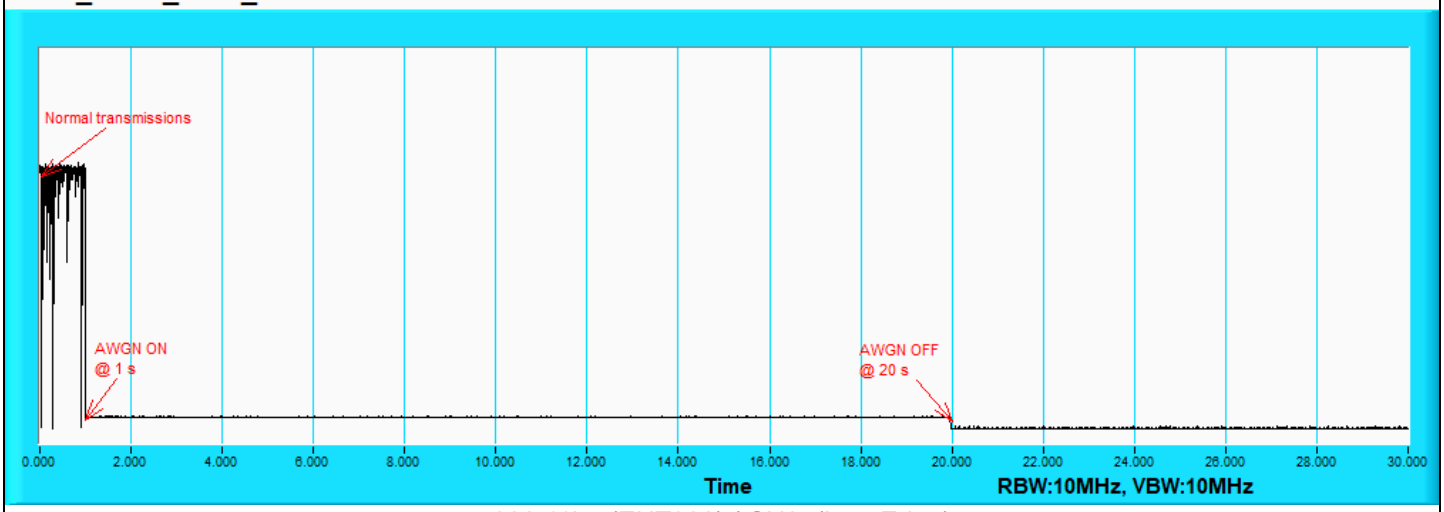
UNII6_20M_6435_Test Result



802.11be (EHT20) / CH97

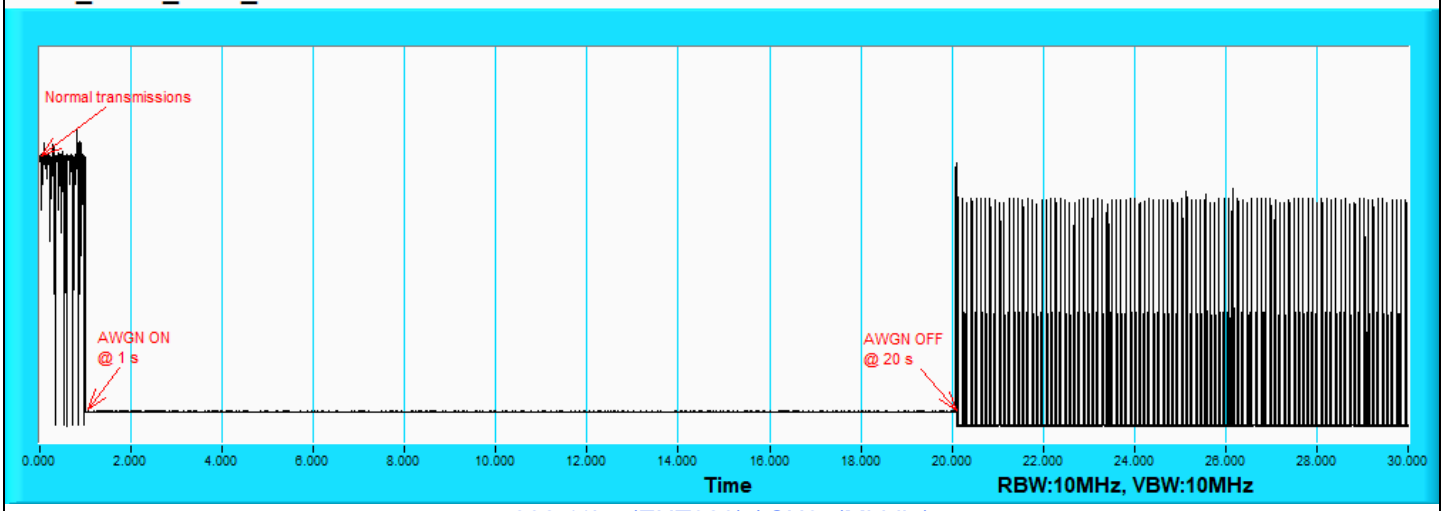
Plots of EUT ceased transmission in the time domain

UNII6_320M_6270_Test Result



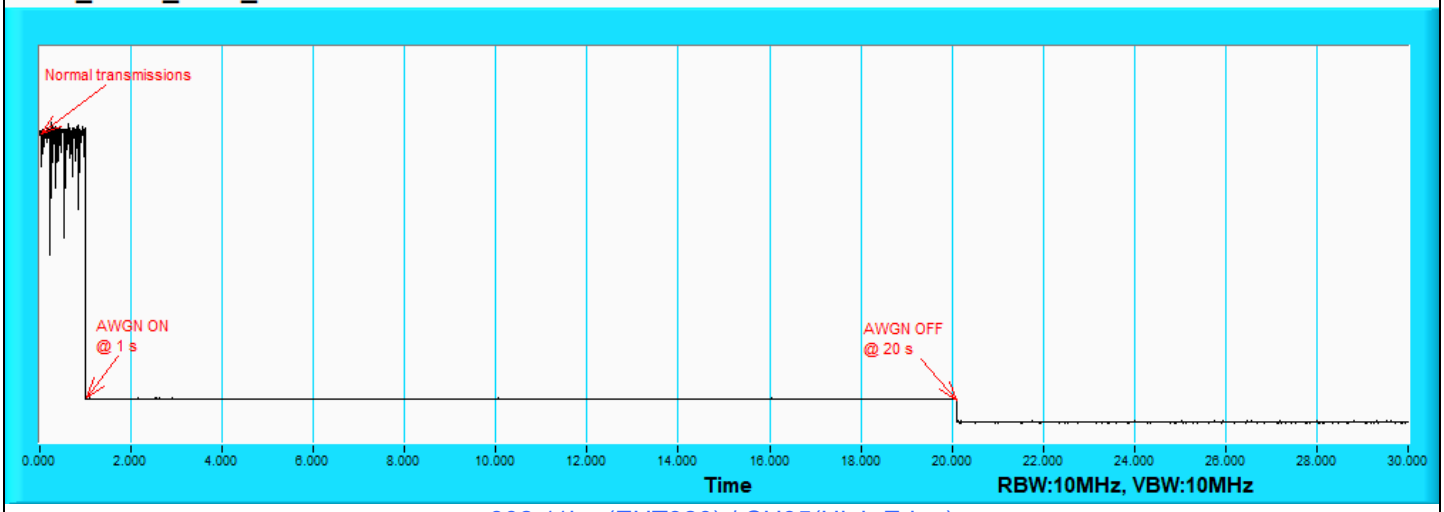
802.11be (EHT320) / CH95(Low Edge)

UNII6_320M_6425_Test Result



802.11be (EHT320) / CH95(Middle)

UNII6_320M_6580_Test Result



802.11be (EHT320) / CH95(High Edge)

For U-NII-7

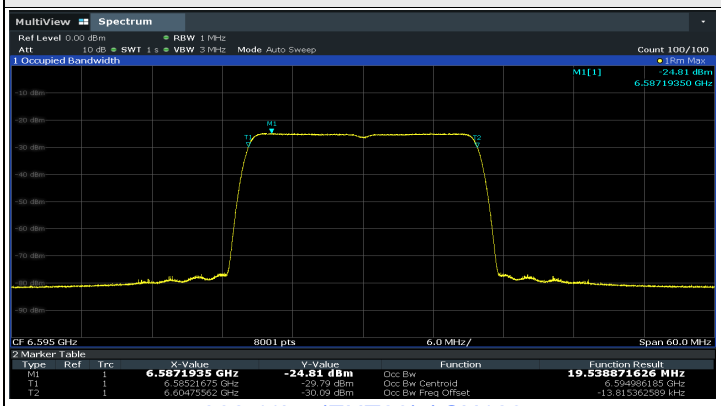
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	129	6595	6595	-70.87	2.36	0	-73.23	-62	OFF
					-71.37	2.36	0	-73.73	-62	Minimal
					-79.64	2.36	0	-82	-62	ON
	320	159	6745	6590	-71.84	2.36	0	-74.2	-62	OFF
					-72.34	2.36	0	-74.7	-62	Minimal
					-79.64	2.36	0	-82	-62	ON
				6745	-68.8	2.36	0	-71.16	-62	OFF
					-69.3	2.36	0	-71.66	-62	Minimal
					-79.64	2.36	0	-82	-62	ON
				6900	-67.82	2.36	0	-70.18	-62	OFF
					-68.32	2.36	0	-70.68	-62	Minimal
					-79.64	2.36	0	-82	-62	ON

Notes:

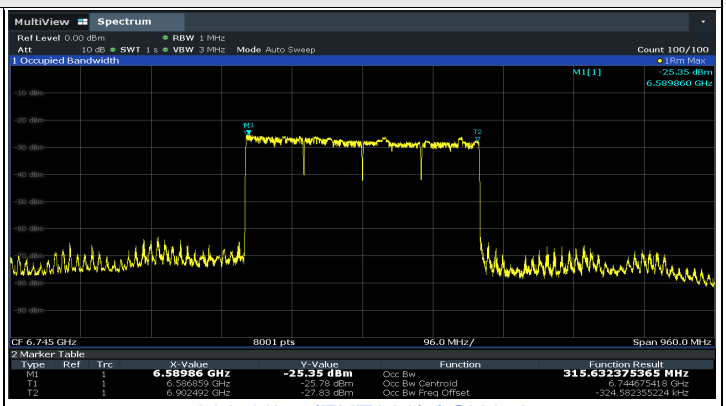
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 2) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

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	6595	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	320	6590	v	v	v	v	v	v	v	x	v	v	90%	90%	Pass
		6745	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6900	v	v	v	x	v	v	v	v	v	v	90%	90%	Pass

Plots of EUT Tx waveform

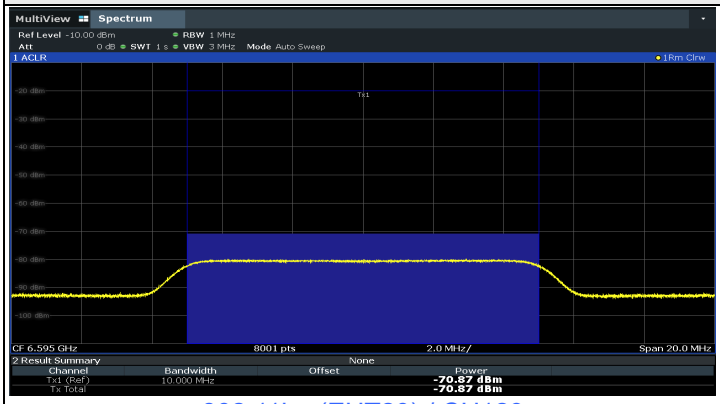


802.11be (EHT20) / CH129

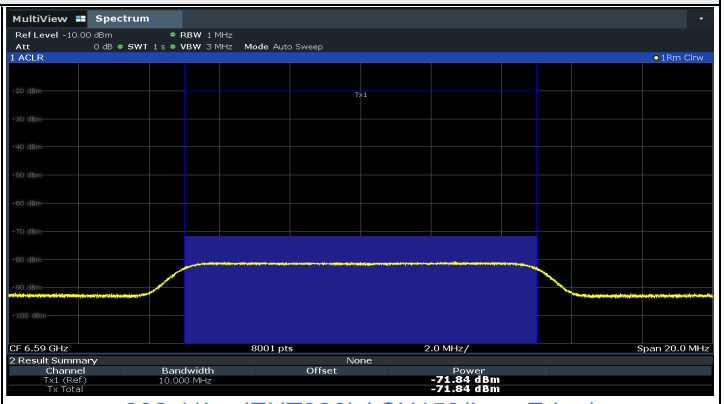


802.11be (EHT320) / CH159

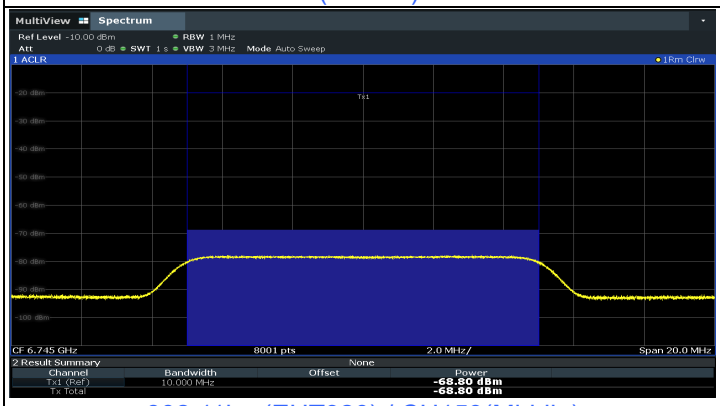
Plots of Injected signal (AWGN) level



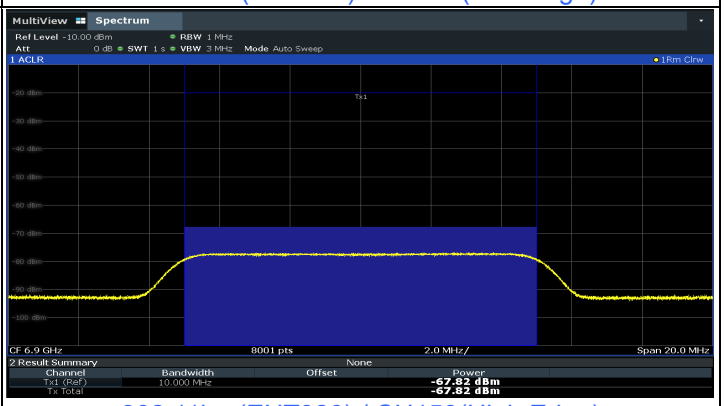
802.11be (EHT20) / CH129



802.11be (EHT320) / CH159(Low Edge)



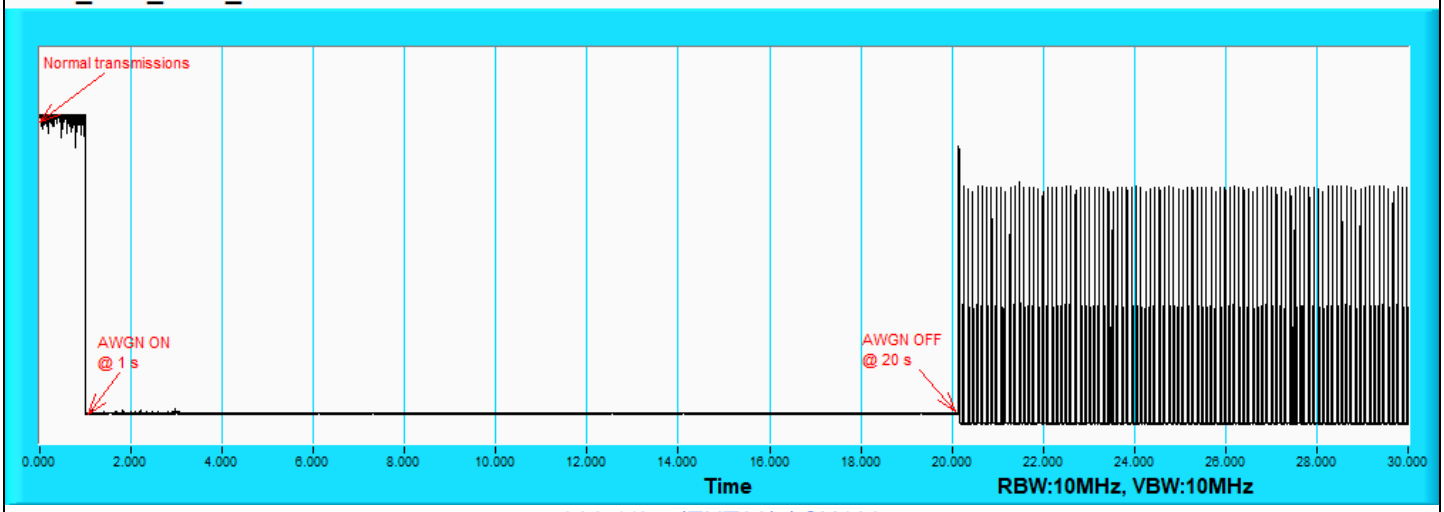
802.11be (EHT320) / CH159(Middle)



802.11be (EHT320) / CH159(High Edge)

Plots of EUT ceased transmission in the time domain

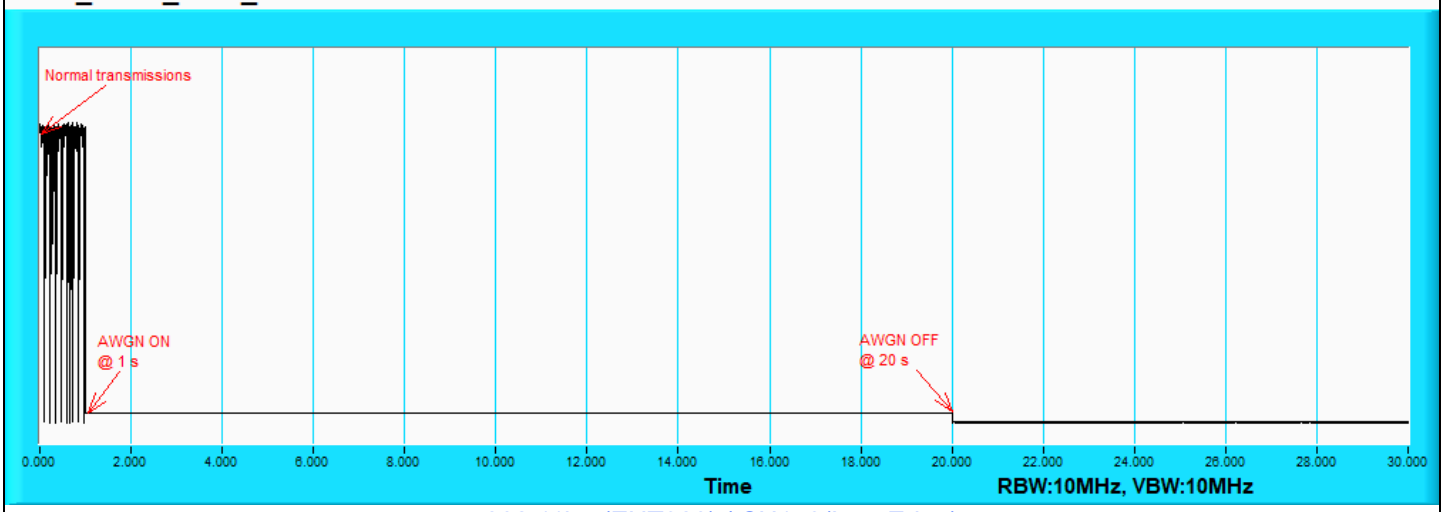
UNII7_20M_6595_Test Result



802.11be (EHT20) / CH129

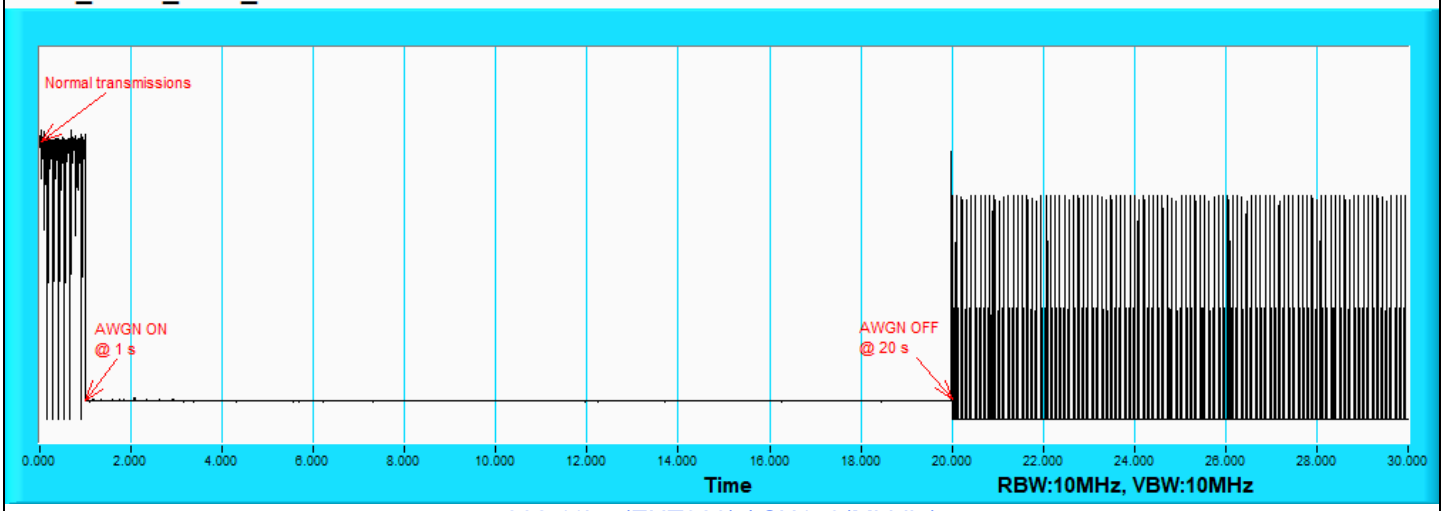
Plots of EUT ceased transmission in the time domain

UNII7_320M_6590_Test Result



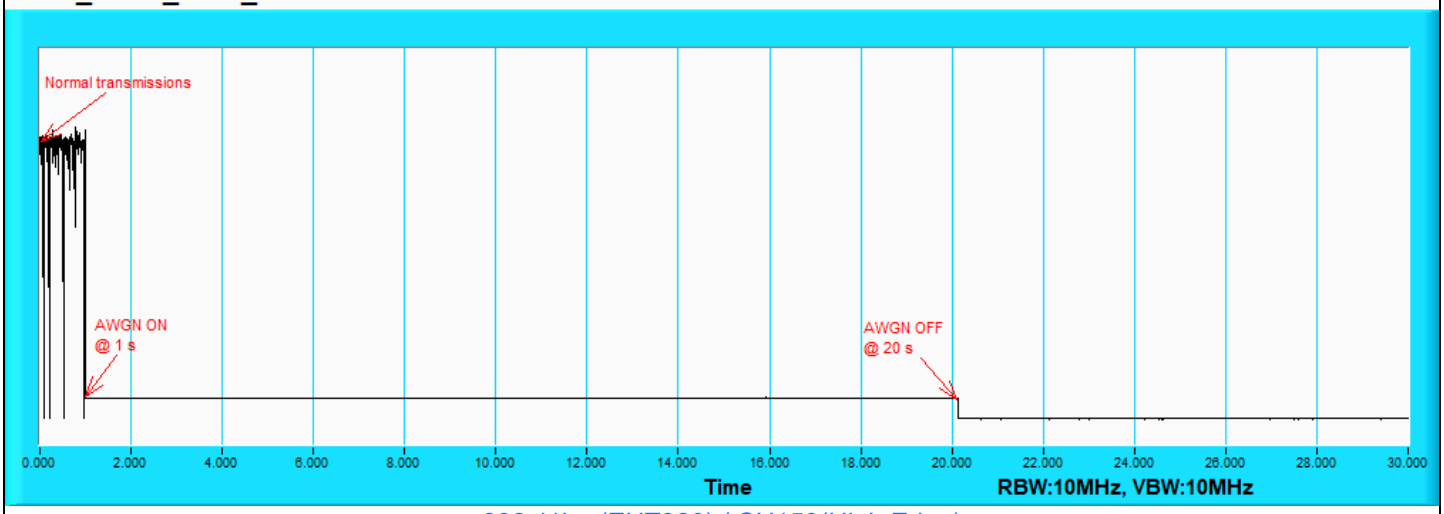
802.11be (EHT320) / CH159(Low Edge)

UNII7_320M_6745_Test Result



802.11be (EHT320) / CH159(Middle)

UNII7_320M_6900_Test Result



802.11be (EHT320) / CH159(High Edge)