TEST REPORT

Applicant Name :	Thundercomm Technology Co., Ltd □
Address :	No. 107, Middle Datagu Road, Xiantao Street, Yubei District, Chongqing, China, 401122
Report Number :	SZNS220928-44462E-RF-00E
FCC ID:	2AOHHTURBOX-C6490

Test Standard (s)

FCC PART 15 SUBPART E

Sample Description

Product Type:	C6490
Model No.:	C6490-U4A
Multiple Model(s) No.:	C6490-U46,C6490-U4AS,C6490-U46S
Trade Mark:	TurboX
Date Received:	2022/09/28
Report Date:	2023/05/26

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Andy Yu
EMC Engineer

Approved By:

Candy Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".
Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.
This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	SZNS220928-44462E-RF-00E	Original Report	2023/03/27
1	SZNS220928-44462E-RF-00E	Update report according to PAG response	2023/05/26

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	C6490
Tested Model	C6490-U4A
Multiple Models	C6490-U46,C6490-U4AS,C6490-U46S (model difference see product declaration letter of similarity)
Frequency Range	U-NII 5: 5925-6425 MHz, U-NII 6: 6425-6525 MHz U-NII 7:6525-6875 MHz, U-NII 8:6875-7125 MHz
Mode	802.11a/ax20/ax40/ax80/ax160
Maximum Conducted Average Output Power	5925-6425 MHz: 10.69dBm, 6425-6525MHz: 9.10dBm 6525-6875 MHz: 9.50dBm, 6875-7125 MHz: 9.03dBm
Modulation Technique	OFDM, OFDMA
Antenna Specification*	2.6dBi (It is provided by the applicant)
Voltage Range	DC 3.8V
Sample serial number	SZNS220928-44462E-RF-S1 for Conducted and Radiated Emissions Test SZNS220928-44462E-RF-S2 RF conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Note: Pre-scan all models, the worst case model C6490-U4A was selected to test.	

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.And

KDB789033 D02 General U-NII Test Procedures New Rules v02r01,
KDB 987594 D02 U-NII 6 GHZ EMC Measurement v01r01,
KDB662911D01v02r01 and ANS C63.10-2013.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		$0.082*10^{-7}$
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz - 26.5GHz	5.06dB
	26.5GHz - 40GHz	4.72dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

Test Site 1:
The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

Test Site 2:
The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0016.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer.

The EUT can operate in 802.11a/ax20/ax40/ax80/ax160 modes.

For 5925-7125 MHz Band, 109 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5955	47	6185	93	6415	141	6655	187	6885
3	5965	49	6195	97	6435	143	6665	189	6895
5	5975	51	6205	99	6445	145	6675	193	6915
7	5985	53	6215	101	6455	147	6685	195	6925
9	5995	55	6225	103	6465	149	6695	197	6935
11	6005	57	6235	105	6475	151	6705	199	6945
13	6015	59	6245	107	6485	153	6715	201	6955
15	6025	61	6255	109	6495	155	6725	203	6965
17	6035	65	6275	111	6505	157	6735	205	6975
19	6045	67	6285	113	6515	161	6755	207	6985
21	6055	69	6295	115	6525	163	6765	209	6995
23	6065	71	6305	117	6535	165	6775	211	7005
25	6075	73	6315	119	6545	167	6785	213	7015
27	6085	75	6325	121	6555	169	6795	215	7025
29	6095	77	6335	123	6565	171	6805	217	7035
33	6115	79	6345	125	6575	173	6815	219	7045
35	6125	81	6355	129	6595	175	6825	221	7055
37	6135	83	6365	131	6605	177	6835	225	7075
39	6145	85	6375	133	6615	179	6845	227	7085
41	6155	87	6385	135	6625	181	6855	229	7095
43	6165	89	6395	137	6635	183	6865	233	7115
45	6175	91	6405	139	6645	185	6875	/	/

Tested Channels:

CH. #	U-NII 5	U-NII 6	U-NII 7	U-NII 8
	802.11a/ax20	802.11a/ax20	802.11a/ax20	802.11a/ax20
Low	1	97	117	189
Middle	45	105	149	209
High	93	113	181	233
Straddle	-	-	-	185

CH. #	U-NII 5	U-NII 6	U-NII 7	U-NII 8
	802.11 ax40	802.11 ax40	802.11 ax40	802.11 ax40
Low	3	99	123	195
Middle	43	-	147	203
High	91	107	179	227
Straddle	-	115	-	187

CH. #	U-NII 5	U-NII 6	U-NII 7	U-NII 8
	802.11 ax80	802.11 ax80	802.11 ax80	802.11 ax80
Low	7	-	135	199
Middle	39	103	151	-
High	87	-	167	215
Straddle	-	119	183	-

CH. #	U-NII 5	U-NII 6	U-NII 7	U-NII 8
	802.11 ax160	802.11 ax160	802.11 ax160	802.11 ax160
Low	15	-	-	-
Middle	47	-	143	207
High	79	-	-	-
Straddle	-	111	175	-

EUT Exercise Software

"QRCT *" exercise software was used. The software and power level was provided by the applicant.

The worst case was performed under:

U-NII	Test Mode	Data rate	RU Size	RU Index	Power Level*		
					Low Channel	Middle Channel	High Channel
5925 – 6425MHz	802.11a	6 Mbps	NA	NA	2	2	2
	11AX20	MCS0	26Tone	RU0	-4	-4	-4
			52Tone	RU37	-3	-3	-3
			106Tone	RU53	-1	-1	-1
			242Tone	RU61	2	2	2
	11AX40	MCS0	26Tone	RU0	-6	-6	-6
			52Tone	RU37	-3	-3	-3
			106Tone	RU53	0	0	0
			242Tone	RU61	3	3	3
			484Tone	RU65	4	5	5
	11AX80	MCS0	26Tone	RU0	-6	-6	-6
			52Tone	RU37	-3	-3	-3
			106Tone	RU53	-1	-1	-1
			242Tone	RU61	4	4	4
			484Tone	RU65	6	6	6
			996Tone	RU67	7	7	7
	11AX160	MCS0	26Tone	RU0	-13	-13	-13
			52Tone	RU37	-8	-8	-8
			106Tone	RU53	-2	-2	-2
			242Tone	RU61	1	1	1
			484Tone	RU65	5	5	5
			996Tone	RU67	9	9	9
			2*996Tone	RU68	11	11	11

U-NII	Test Mode	Data rate	RU Size	RU Index	Power Level*			
					Low Channel	Middle Channel	High Channel	Straddle Channel
6425-6525MHz	802.11a	6 Mbps	NA	NA	-2	0	0	/
	11AX20	MCS0	26Tone	RU0	-8	-8	-8	/
			52Tone	RU37	-7	-7	-7	/
			106Tone	RU53	-5	-5	-5	/
			242Tone	RU61	0	0	1	/
	11AX40	MCS0	26Tone	RU0	-6	/	-6	-6
			52Tone	RU37	-3	/	-3	-3
			106Tone	RU53	0	/	0	0
			242Tone	RU61	3	/	3	3
			484Tone	RU65	5	/	5	5
	11AX80	MCS0	26Tone	RU0	/	-10	/	-10
			52Tone	RU37	/	-5	/	-5
			106Tone	RU53	/	-2	/	-2
			242Tone	RU61	/	1	/	1
			484Tone	RU65	/	4	/	4
			996Tone	RU67	/	7	/	7
	11AX160	MCS0	26Tone	RU0	/	/	/	-15
			52Tone	RU37	/	/	/	-11
			106Tone	RU53	/	/	/	-7
			242Tone	RU61	/	/	/	-4
			484Tone	RU65	/	/	/	-1
			996Tone	RU67	/	/	/	3
			2*996Tone	RU68	/	/	/	11

U-NII	Test Mode	Data rate	RU Size	RU Index	Power Level*			
					Low Channel	Middle Channel	High Channel	Straddle Channel
6525 – 6875MHz	802.11a	6 Mbps	NA	NA	2	2	1	/
	11AX20	MCS0	26Tone	RU0	-10	-10	-10	/
			52Tone	RU37	-4	-4	-4	/
			106Tone	RU53	-1	-1	-1	/
			242Tone	RU61	1	1	1	/
	11AX40	MCS0	26Tone	RU0	-9	-9	-9	/
			52Tone	RU37	-4	-4	-4	/
			106Tone	RU53	-1	-1	-1	/
			242Tone	RU61	1	1	1	/
			484Tone	RU65	4	4	4	/
	11AX80	MCS0	26Tone	RU0	-7	-7	-7	-7
			52Tone	RU37	-4	-4	-4	-4
			106Tone	RU53	-1	-1	-1	-1
			242Tone	RU61	1	1	1	1
			484Tone	RU65	4	4	4	4
			996Tone	RU67	6	6	6	6
	11AX160	MCS0	26Tone	RU0	/	-14	/	-15
			52Tone	RU37	/	-6	/	-6
			106Tone	RU53	/	-3	/	-3
			242Tone	RU61	/	0	/	0
			484Tone	RU65	/	3	/	3
			996Tone	RU67	/	6	/	6
			2*996Tone	RU68	/	11	/	11

U-NII	Test Mode	Data rate	RU Size	RU Index	Power Level*			
					Low Channel	Middle Channel	High Channel	Straddle Channel
6875-7125MHz	802.11a	6 Mbps	NA	NA	1	1	1	1
	11AX20	MCS0	26Tone	RU0	-9	-9	-9	-9
			52Tone	RU37	-9	-9	-9	-9
			106Tone	RU53	-9	-9	-9	-9
			242Tone	RU61	1	1	-8	1
	11AX40	MCS0	26Tone	RU0	-9	-9	-9	-9
			52Tone	RU37	-6	-6	-6	-6
			106Tone	RU53	-3	-3	-3	-3
			242Tone	RU61	0	0	0	0
			484Tone	RU65	4	4	4	4
	11AX80	MCS0	26Tone	RU0	-10	/	-10	/
			52Tone	RU37	-8	/	-8	/
			106Tone	RU53	-5	/	-5	/
			242Tone	RU61	-2	/	-2	/
			484Tone	RU65	1	/	1	/
			996Tone	RU67	6	/	6	/
	11AX160	MCS0	26Tone	RU0	/	-14	/	/
			52Tone	RU37	/	-8	/	/
			106Tone	RU53	/	-4	/	/
			242Tone	RU61	/	-1	/	/
			484Tone	RU65	/	2	/	/
			996Tone	RU67	/	5	/	/
			2*996Tone	RU68	/	11	/	/

The worse-case data rates are determined to be as follows for each mode based upon investigations by measuring the output power and PSD across all data rated bandwidths, and modulations.

The device support SISO and MIMO, for ax mode, the MIMO mode support beam-forming, the SISO/MIMO and beam-forming/non beam-forming modes have same parameter, which was declared by applicant. The MIMO/beam-forming was the worst mode which was selected to test.

All the antenna ports have the same power level.

Duty cycle

5925 MHz - 6425 MHz:

Mode	On Tome (ms)	Period (ms)	Duty Cycle X[%]
A	2.10	2.12	99.057
AX20	5.45	5.47	99.634
AX40	5.45	5.47	99.634
AX80	5.45	5.46	99.817
AX160	5.45	5.47	99.634

6425 MHz - 6525 MHz:

Mode	On Tome (ms)	Period (ms)	Duty Cycle X[%]
A	2.10	2.12	99.057
AX20	5.45	5.47	99.634
AX40	5.45	5.46	99.817
AX80	5.45	5.46	99.817
AX160	5.45	5.47	99.634

6525 MHz – 6875 MHz:

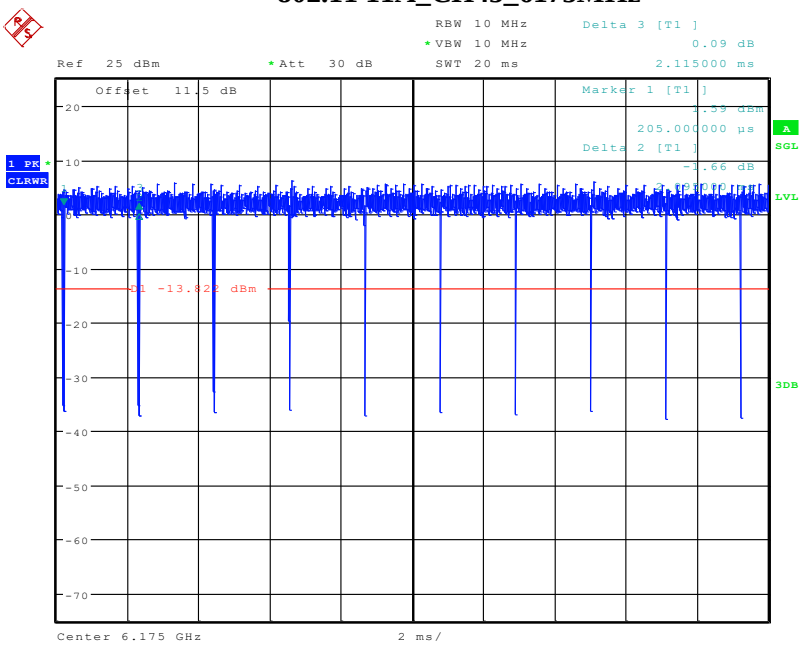
Mode	On Tome (ms)	Period (ms)	Duty Cycle X[%]
A	2.10	2.12	99.057
AX20	5.45	5.47	99.634
AX40	5.45	5.46	99.817
AX80	5.45	5.47	99.634
AX160	5.45	5.46	99.817

6875MHz –7125 MHz:

Mode	On Tome (ms)	Period (ms)	Duty Cycle X[%]
A	2.10	2.12	99.057
AX20	5.45	5.47	99.634
AX40	5.45	5.47	99.634
AX80	5.45	5.47	99.634
AX160	5.45	5.46	99.817

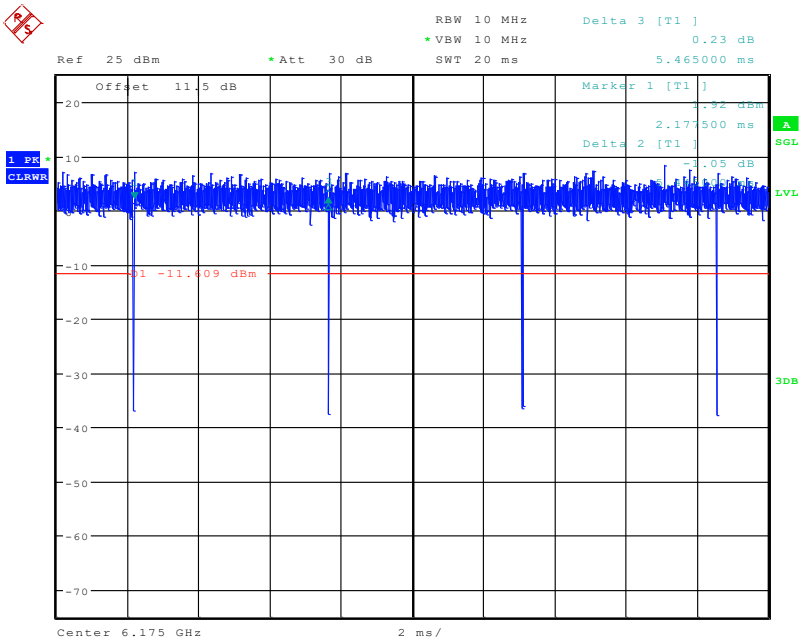
5925 MHz – 6425 MHz:

802.11 11A_CH45_6175MHz



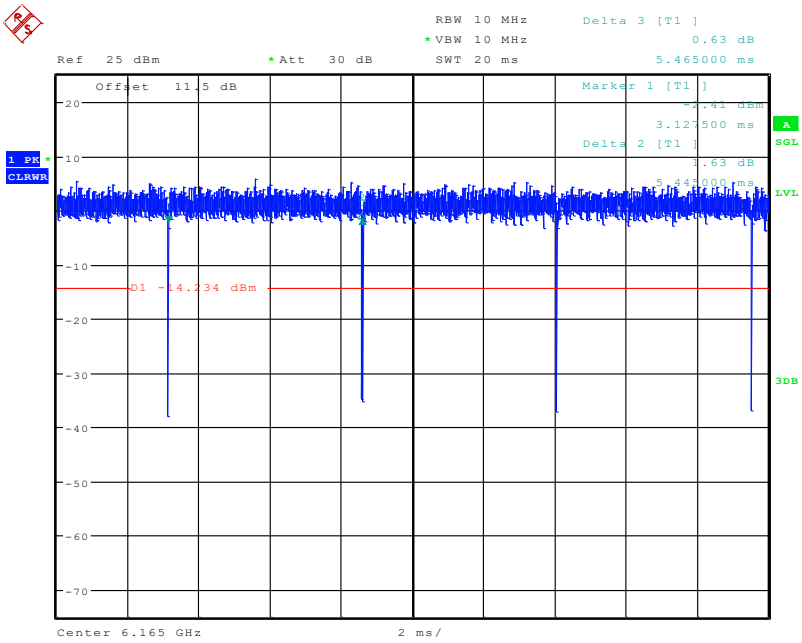
Date: 14.FEB.2023 21:32:05

802. 11AX_HE20_CH45_6175MHz



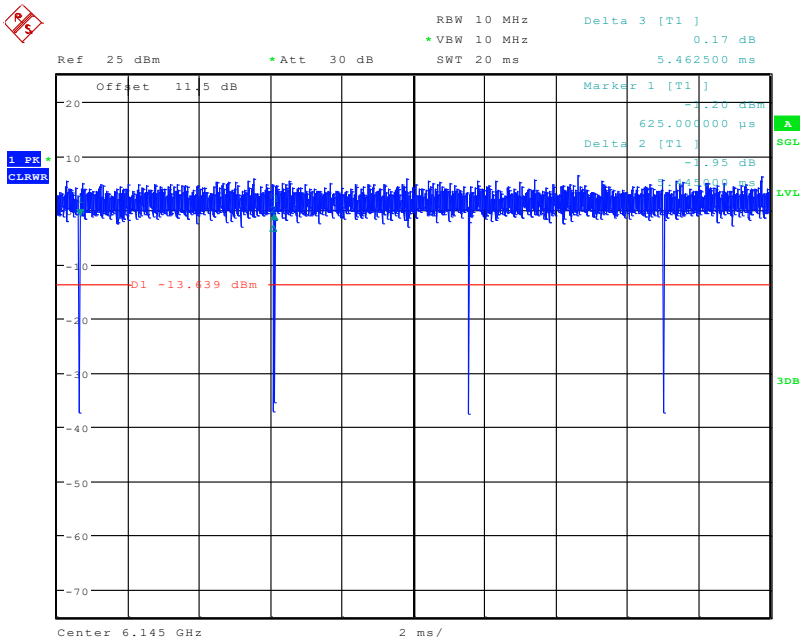
Date: 14.FEB.2023 21:52:44

802.11AX_HE40_CH43_6165MHz



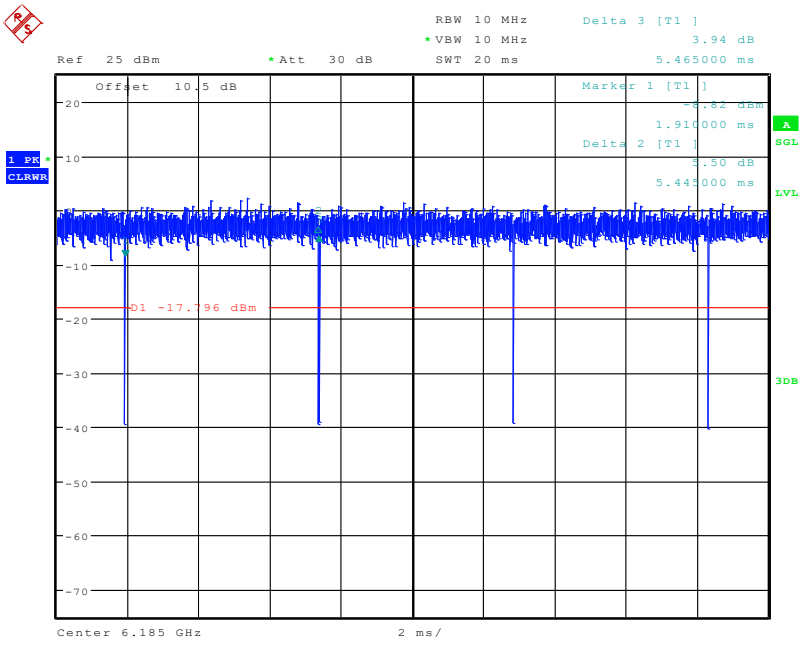
Date: 14.FEB.2023 22:19:26

802. 11AX_HE80_CH39_6145MHz



Date: 14.FEB.2023 22:47:22

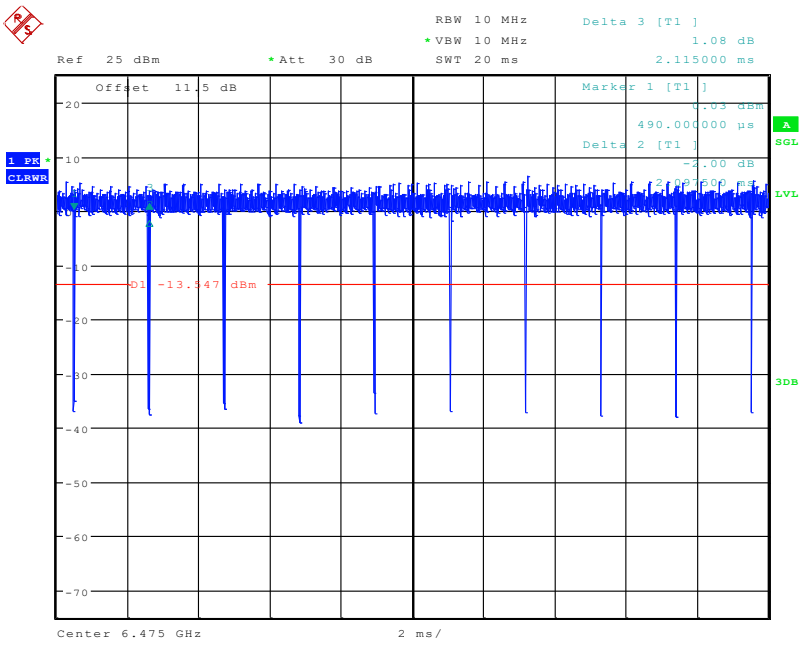
802. 11AX_HE160_CH47_6185MHz



Date: 13.FEB.2023 23:52:40

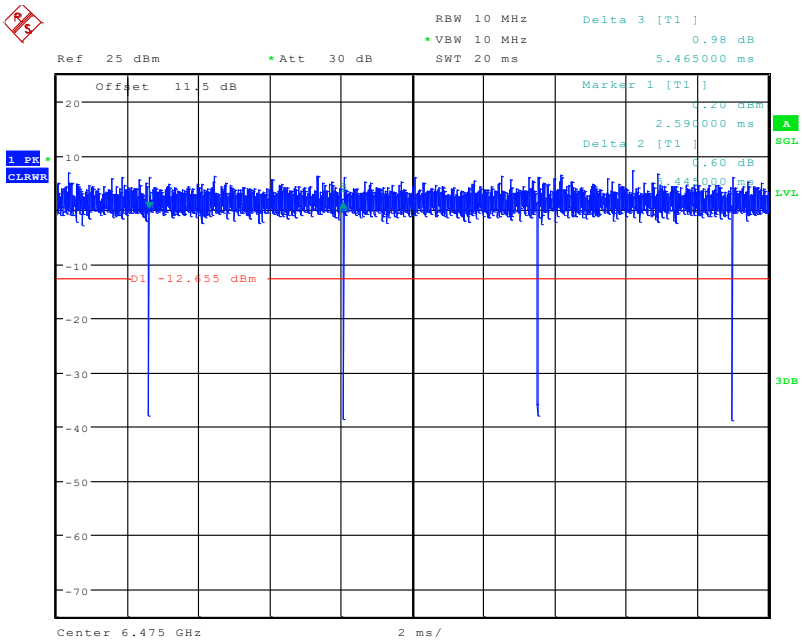
6425 MHz - 6525 MHz:

802.11 11A_CH105_6475MHz



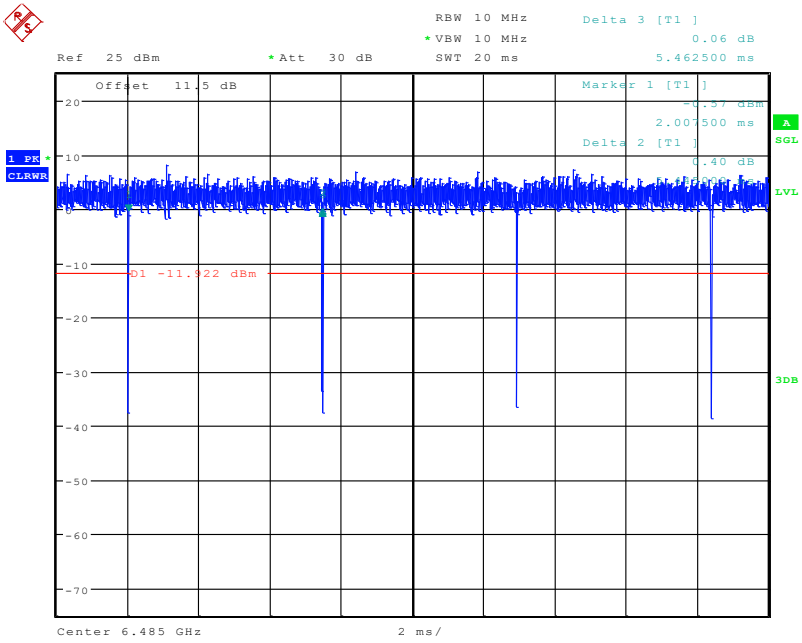
Date: 14.FEB.2023 23:25:01

802. 11AX_HE20_CH105_6475MHz



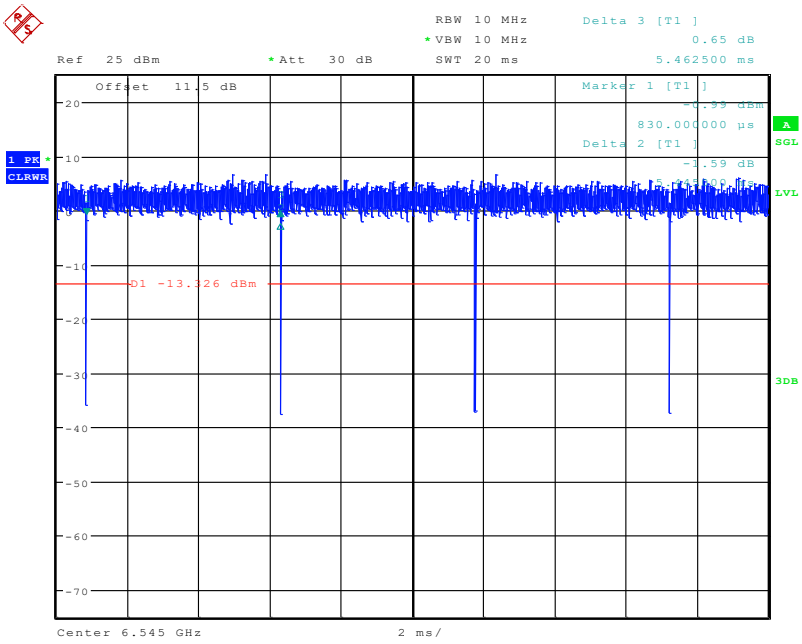
Date: 14.FEB.2023 23:44:19

802.11AX_HE40_CH107_6485MHz



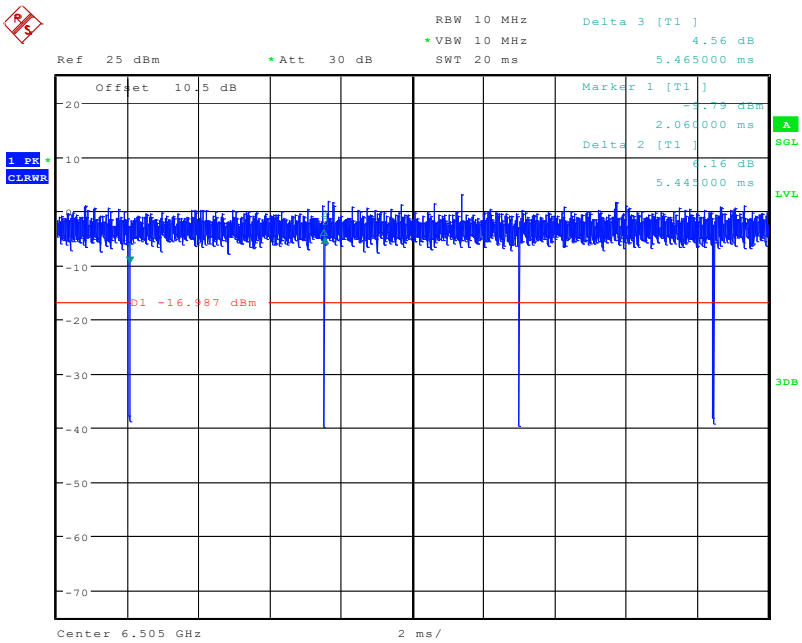
Date: 15.FEB.2023 00:12:38

802. 11AX_HE80_CH119_6545MHz



Date: 15.FEB.2023 00:29:25

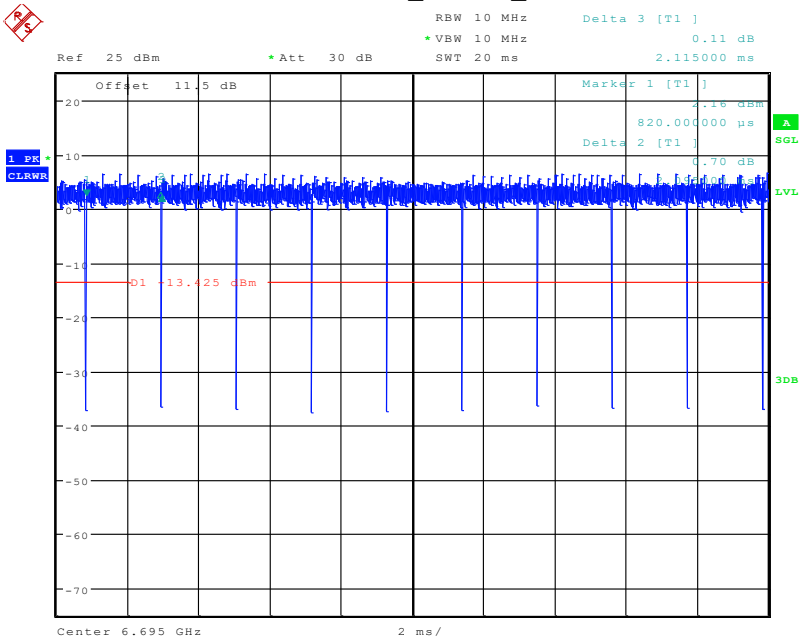
802. 11AX_HE160_CH111_6505MHz



Date: 13.FEB.2023 23:45:15

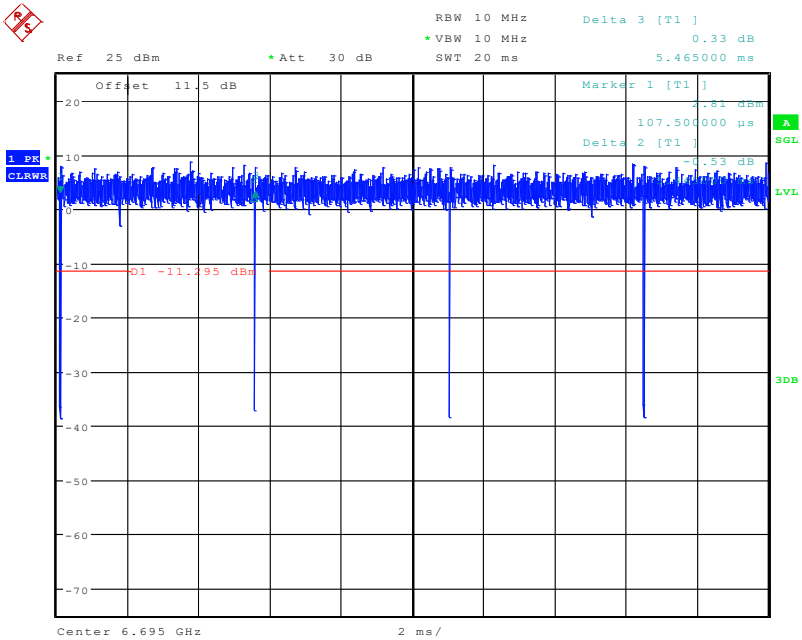
6525 MHz – 6875 MHz:

802.11 11A_CH149_6695MHz



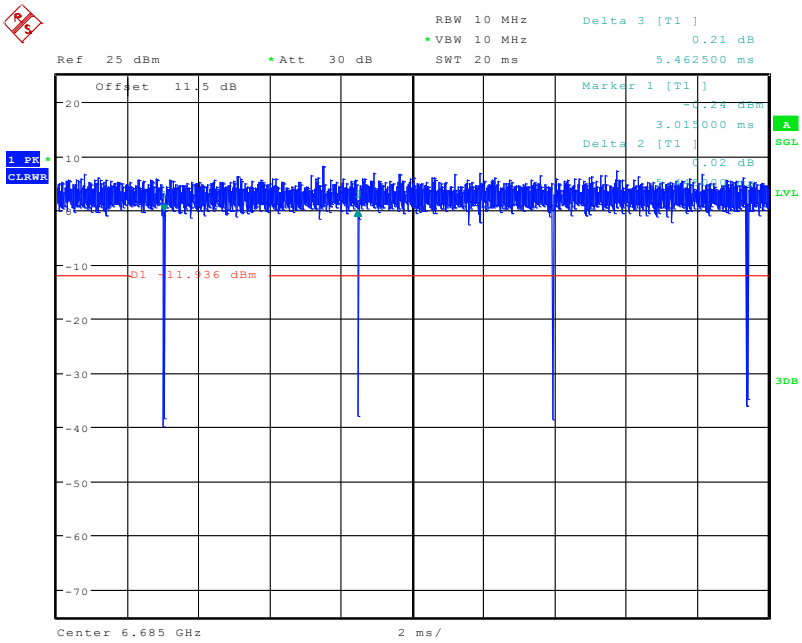
Date: 15.FEB.2023 00:53:25

802. 11AX_HE20_CH149_6695MHz



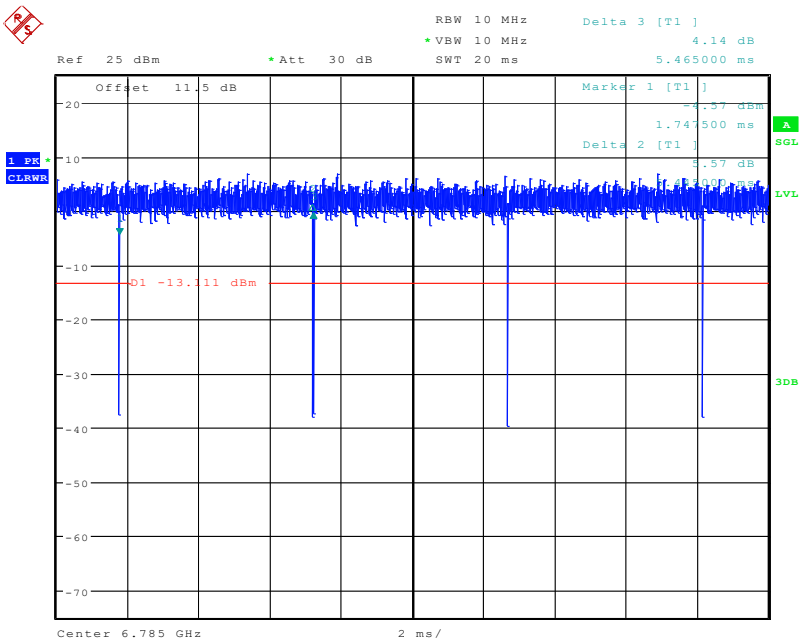
Date: 15.FEB.2023 18:12:30

802.11AX_HE40_CH147_6685MHz



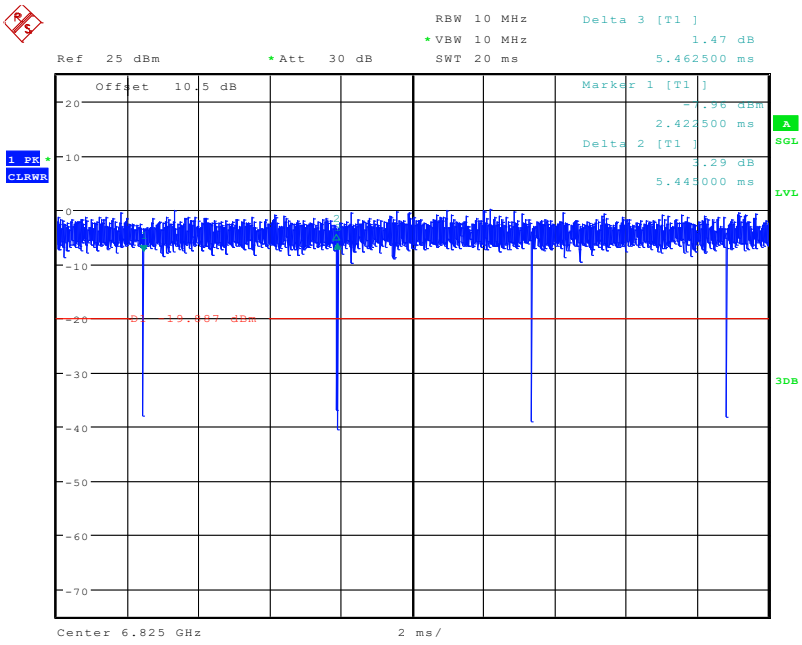
Date: 15.FEB.2023 18:30:05

802. 11AX_HE80_CH167_6785MHz



Date: 15.FEB.2023 18:56:28

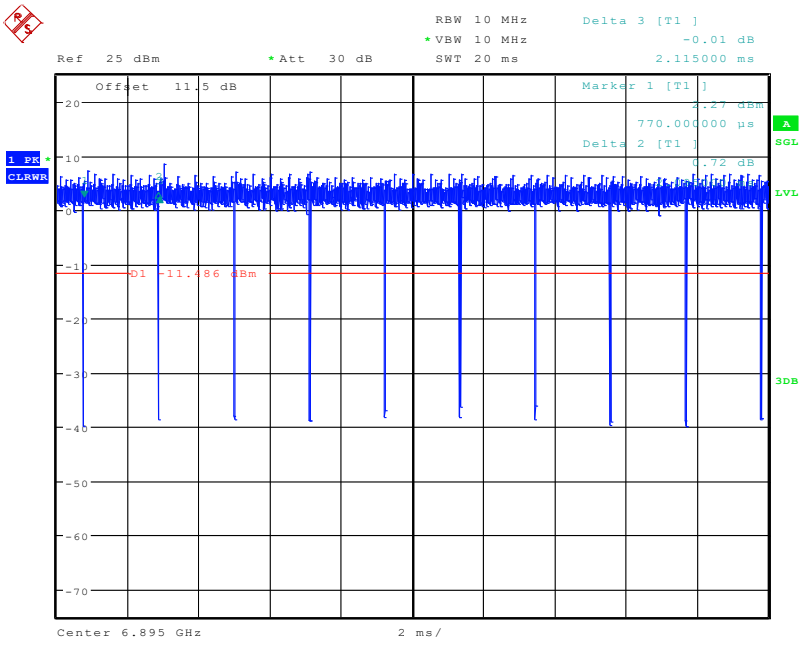
802. 11AX_HE160_CH175_6825MHz



Date: 13.FEB.2023 23:37:05

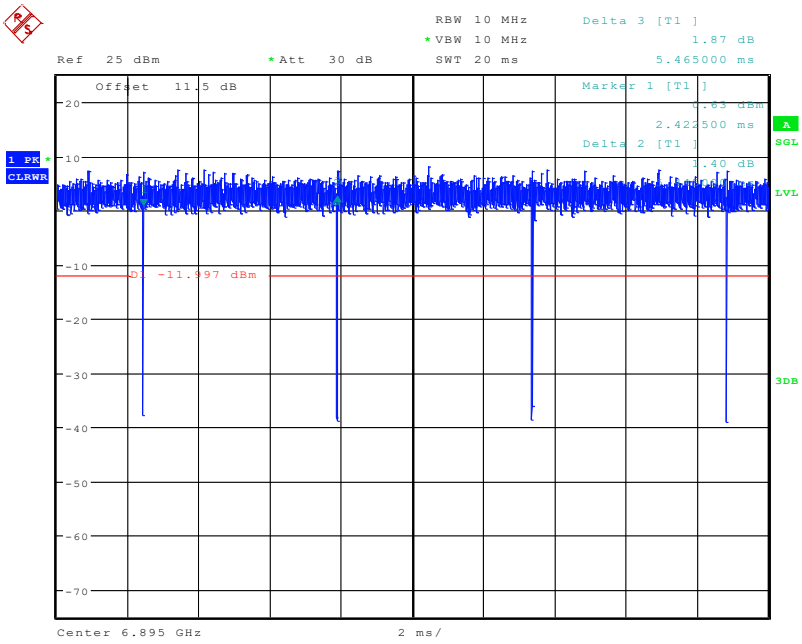
6875MHz –7125 MHz:

802.11 11A_CH189_6895MHz



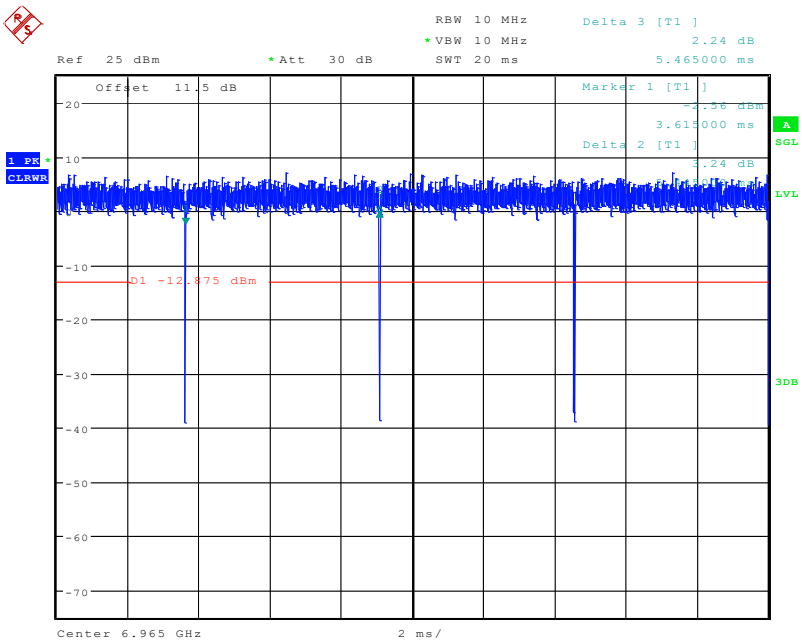
Date: 15.FEB.2023 20:33:13

802. 11AX_HE20_CH189_6895MHz



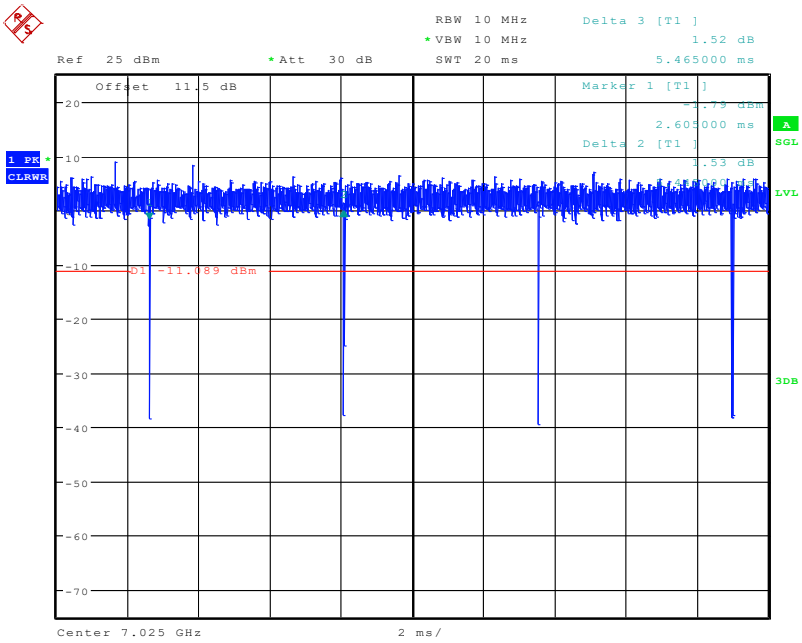
Date: 15.FEB.2023 20:09:52

802. 11AX_HE40_CH203_6965MHz



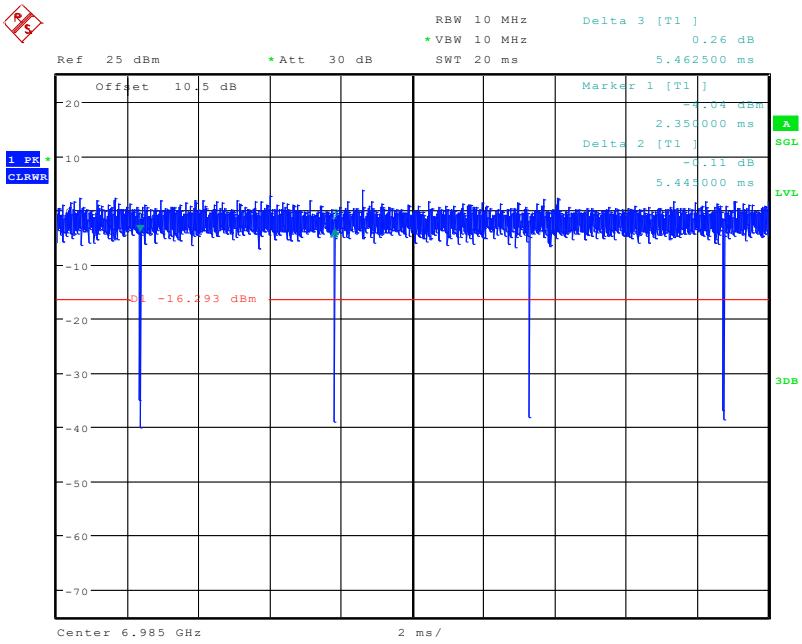
Date: 15.FEB.2023 19:29:14

802.11AX_HE80_CH215_7025MHz



Date: 15.FEB.2023 19:11:07

802. 11AX_HE160_CH207_6985MHz



Date: 13.FEB.2023 23:34:09

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

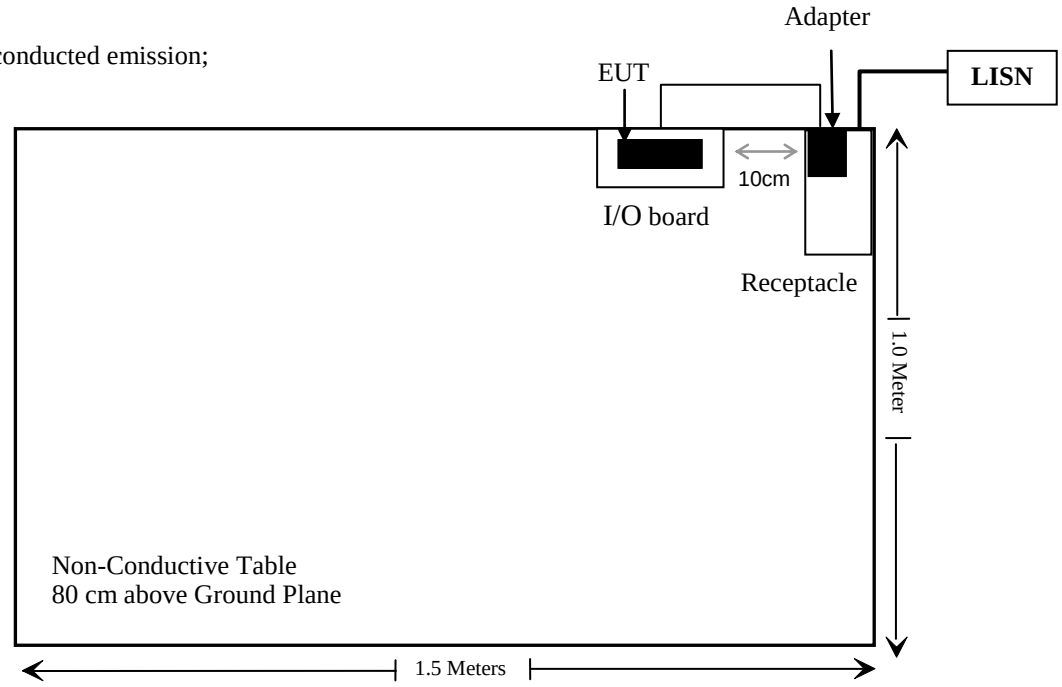
Manufacturer	Description	Model	Serial Number
LIANYUNDA	Adapter	LYD120200B	Unkown
Thundercomm Technology Co., Ltd	Test jig	I/O board	Unkown

External I/O Cable

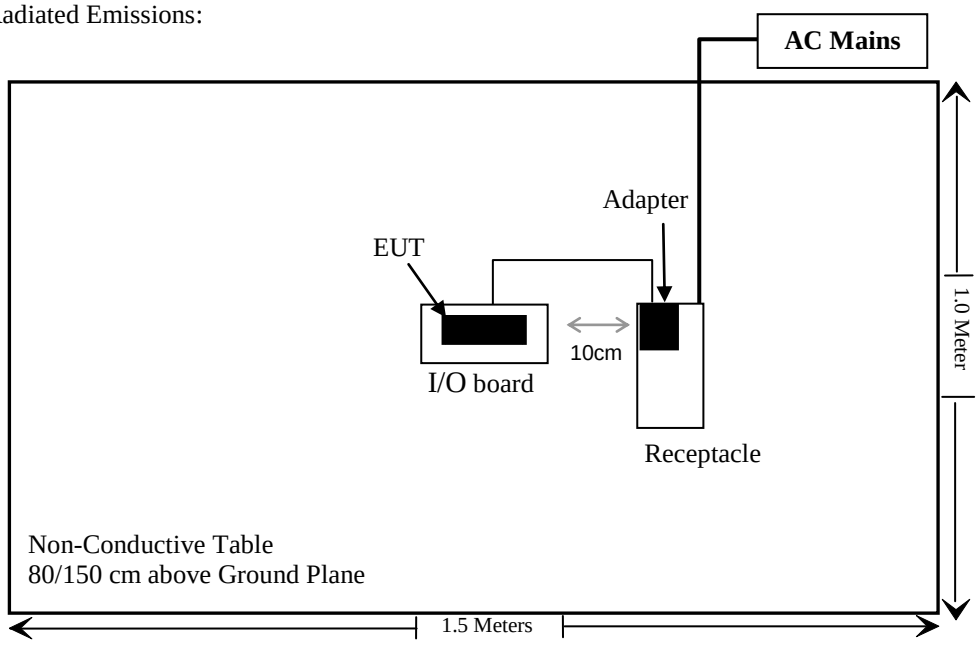
Cable Description	Length (m)	From Port	To
Un-shielding Un-Detachable DC Cable	1.0	EUT	Adapter

Block Diagram of Test Setup

For conducted emission;



For Radiated Emissions:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §1.1307 (b) (3) & §2.1091	MPE-Based Exemption	Compliant
§15.203	Antenna Requirement	Compliant
§15.407(b)(9)& §15.207(a)	Conducted Emissions	Compliant
§15.205& §15.209 & §15.407(b)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (10)	26 dB Emission Bandwidth & 99% Occupied bandwidth	Compliant
§15.407(a) (8)	Conducted Transmitter Output Power	Compliant
§15.407 (a) (8)	Power Spectral Density	Compliant
§15.407 (b) (7)	In-Band Emissions	Compliant
§15.407 (d) (6)	Contention Based Protocol	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/12/13	2022/12/12
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2021/12/13	2022/12/12
Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13
Conducted Emission Test Software: e3 19821b (V9)					
Radiated Emissions Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2022/11/08	2023/11/07
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2022/11/08	2023/11/07
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2022/11/08	2023/11/07
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200982	2022/07/04	2023/07/03
Keysight	MXA Signal Analyzer	N9020A	MY59362526	2022/10/07	2023/10/06
Agilent	USB wideband power sensor	U2021XA	MY54250003	2022/06/27	2023/06/26
WEINSCHEL	10dB Attenuator	5324	AU 3842	2022/11/25	2023/11/24
AGILENT	Vector Signal Generator	N5182B	MY53052129	2022/11/25	2023/11/24
Keysight	Frequency Extender	N5182BX07	MY59362537	2022/11/14	2023/11/13
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.31	RF-01	Each time	

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307 (b) (3) & §2.1091- MPE-Based Exemption

Applicable Standard

According to subpart 1.1307 (b) (3) and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of §1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R^2.
1.34-30	3,450 R^2/f^2.
30-300	3.83 R^2.
300-1,500	0.0128 R^2f.
1,500-100,000	19.2R^2.

Ris the minimum separation distance in meters
f = frequency in MHz

Result

For worst case:

Mode	Frequency (MHz)	Tune up conducted power	Antenna Gain		ERP		Evaluation Distance (m)	ERP Limit (W)
		(dBm)	(dBi)	(dBd)	(dBm)	(W)		
BT	2402-2480	2.5	2.5	0.35	2.85	0.002	0.2	0.768
BLE	2402-2480	11.0	2.5	0.35	11.35	0.014	0.2	0.768
2.4G Wi-Fi	2412-2462	20.5	5.5	3.35	23.85	0.243	0.2	0.768
5G Wi-Fi	5150-5250	18.5	5.6	3.45	21.95	0.157	0.2	0.768
	5250-5350	19.0	5.6	3.45	22.45	0.176	0.2	0.768
	5470-5725	18.5	5.6	3.45	21.95	0.157	0.2	0.768
	5725-5850	16.0	5.6	3.45	19.45	0.088	0.2	0.768
	5850-5895	18.0	5.6	3.45	21.45	0.140	0.2	0.768
6G Wi-Fi	5925-6425	11.0	5.6	3.45	14.45	0.028	0.2	0.768
	6425-6525	9.5	5.6	3.45	12.95	0.020	0.2	0.768
	6525-6875	10.0	5.6	3.45	13.45	0.022	0.2	0.768
	6875-7125	9.5	5.6	3.45	12.95	0.020	0.2	0.768

Note: 1. The tune up conducted power and antenna gain was declared by the applicant.
2. The BT, 2.4G Wi-Fi, 5G Wi-Fi and 6G Wi-Fi cannot Simultaneous transmitting.
3. For the 2.4G Wi-Fi, as it can support the beam-forming function, so the directional antenna gain should add the 10lg2, 2.5dBi+10lg2=5.5dBi.
4. For the 5G Wi-Fi & 6G Wi-Fi, as it can support the beam-forming function, so the directional antenna gain should add the 10lg2, 2.6dBi+10lg2=5.6dBi.
5. 0dBd=2.15dBi

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.
c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407 (a), if the transmitting antennas of directional gain greater than 6dBi are used, the transmit power and power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

No standard antenna connect port with this module, The EUT tested with two FPC antennas arrangement for Wi-Fi which were integrated on the main PCB use the MHF-Type connector and no consideration of replacement, fulfill the requirement of this section. Please refer to the EUT photos.

Type	Antenna Gain	Impedance	Frequency Range
FPC	2.6dBi	50Ω	5925-7125MHz

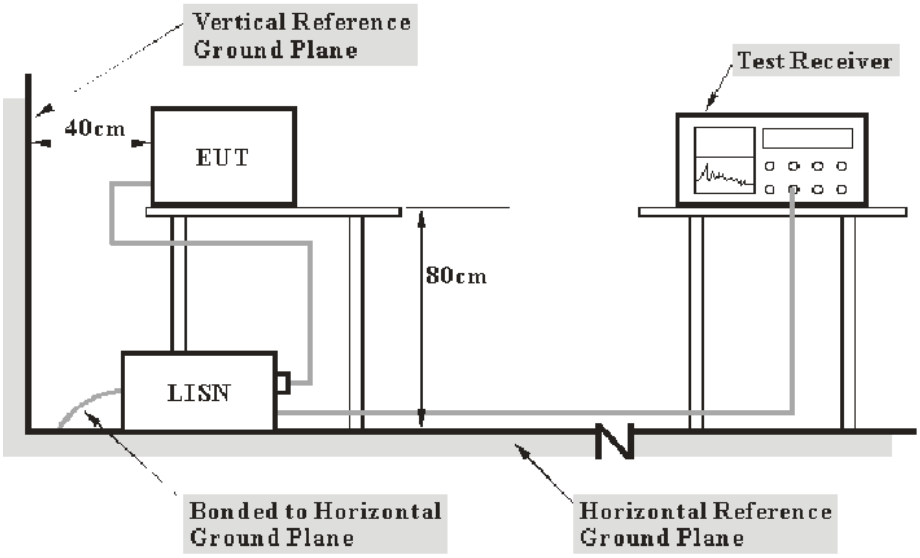
Result: Compliant.

FCC §15.407 (b) (9) §15.207 (a) – CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (9)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and Average detection mode.

Transd Factor & Margin Calculation

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

Test Data

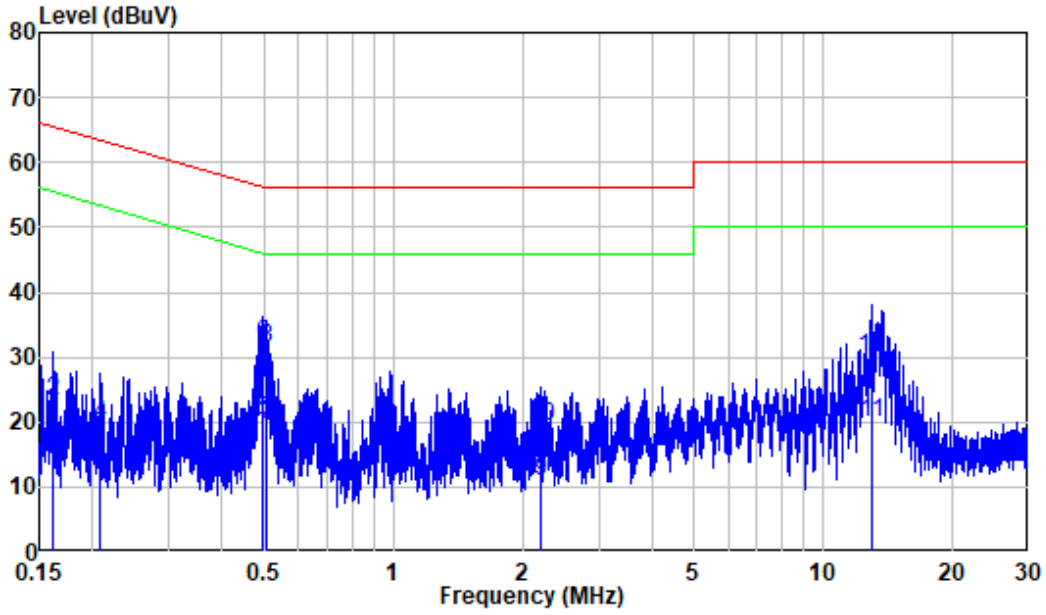
Environmental Conditions

Temperature:	23 ℃
Relative Humidity:	41%
ATM Pressure:	101.0 kPa

The testing was performed by Jason Liu on 2022-11-01.

EUT operation mode: Transmitting (worst case is 802.11a, 6175MHz)

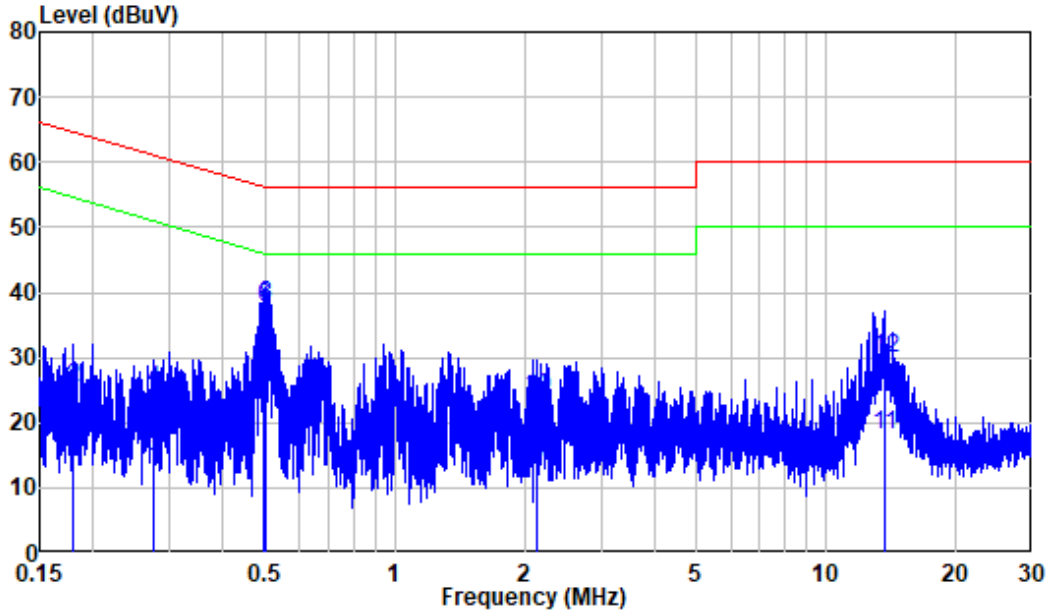
AC 120V/60 Hz, Line:



Site : Shielding Room
Condition: Line
Job No. : SZNS220928-44462E-RF
Mode : 6G WIFI
Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.161	9.80	3.54	13.34	55.39	-42.05	Average
2	0.161	9.80	13.49	23.29	65.39	-42.10	QP
3	0.208	9.80	2.09	11.89	53.30	-41.41	Average
4	0.208	9.80	9.97	19.77	63.30	-43.53	QP
5	0.495	9.80	10.39	20.19	46.09	-25.90	Average
6	0.495	9.80	22.26	32.06	56.09	-24.03	QP
7	0.505	9.80	9.76	19.56	46.00	-26.44	Average
8	0.505	9.80	21.71	31.51	56.00	-24.49	QP
9	2.207	9.82	0.92	10.74	46.00	-35.26	Average
10	2.207	9.82	9.45	19.27	56.00	-36.73	QP
11	12.894	9.93	9.89	19.82	50.00	-30.18	Average
12	12.894	9.93	19.82	29.75	60.00	-30.25	QP

AC 120V/60 Hz, Neutral:



Site : Shielding Room
Condition: Neutral
Job No. : SZNS220928-44462E-RF
Mode : 6G WIFI
Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.180	9.80	4.92	14.72	54.50	-39.78	Average
2	0.180	9.80	15.70	25.50	64.50	-39.00	QP
3	0.277	9.80	5.10	14.90	50.92	-36.02	Average
4	0.277	9.80	15.30	25.10	60.92	-35.82	QP
5	0.494	9.80	14.90	24.70	46.09	-21.39	Average
6	0.494	9.80	28.04	37.84	56.09	-18.25	QP
7	0.501	9.80	15.25	25.05	46.00	-20.95	Average
8	0.501	9.80	28.26	38.06	56.00	-17.94	QP
9	2.133	9.82	3.34	13.16	46.00	-32.84	Average
10	2.133	9.82	14.15	23.97	56.00	-32.03	QP
11	13.659	10.04	7.93	17.97	50.00	-32.03	Average
12	13.659	10.04	19.89	29.93	60.00	-30.07	QP

§15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION

Applicable Standard

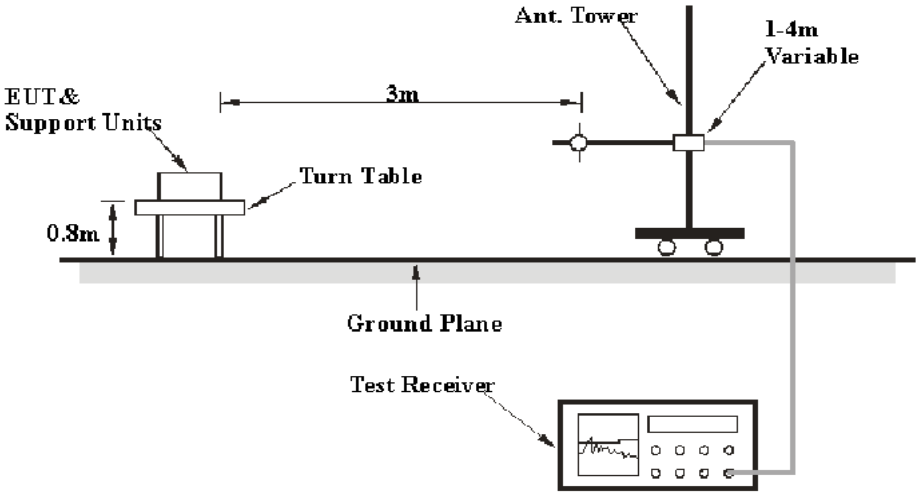
FCC §15.407 (b); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(6) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

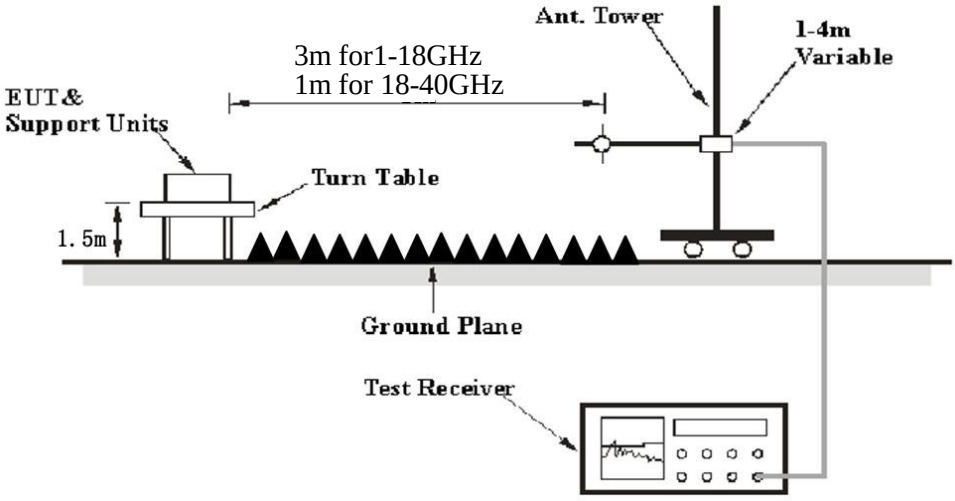
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

Below 1 GHz:



Above 1 GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	1MHz	10 Hz Note 1	/	Average
	1MHz	＞1/T Note 2	/	Average

Note 1: when duty cycle is no less than 98%
Note 2: when duty cycle is less than 98%

Test Procedure

Radiated Spurious Emission

During the radiated emission test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all the installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to ANSI C63.10-2013,9.4: For field strength measurements made at other than the distance at which the applicable limit is specified,extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance). In some cases, a different distance correction factor may be required;

$$E_{\mathrm{SpecLimit}} = E_{\mathrm{Meas}} + 20\log\left(\frac{d_{\mathrm{Meas}}}{d_{\mathrm{SpecLimit}}}\right)$$

where

$E_{\mathrm{SpecLimit}}$	is the field strength of the emission at the distance specified by the limit, in dBμV/m
E_{Meas}	is the field strength of the emission at the measurement distance, in dBμV/m
d_{Meas}	is the measurement distance, in m
$d_{\mathrm{SpecLimit}}$	is the distance specified by the limit, in m

So the extrapolation factor of 1m is 20*log(1/3)= -9.5 dB, for 18-40GHz range, the limit of 1m distance was added by 9.5dB from limit of 3m to compared with the result measurement at 1m distance.

Factor & Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

Test Data

Environmental Conditions

Temperature:	24~25.6℃
Relative Humidity:	50~57%
ATM Pressure:	101.0 kPa

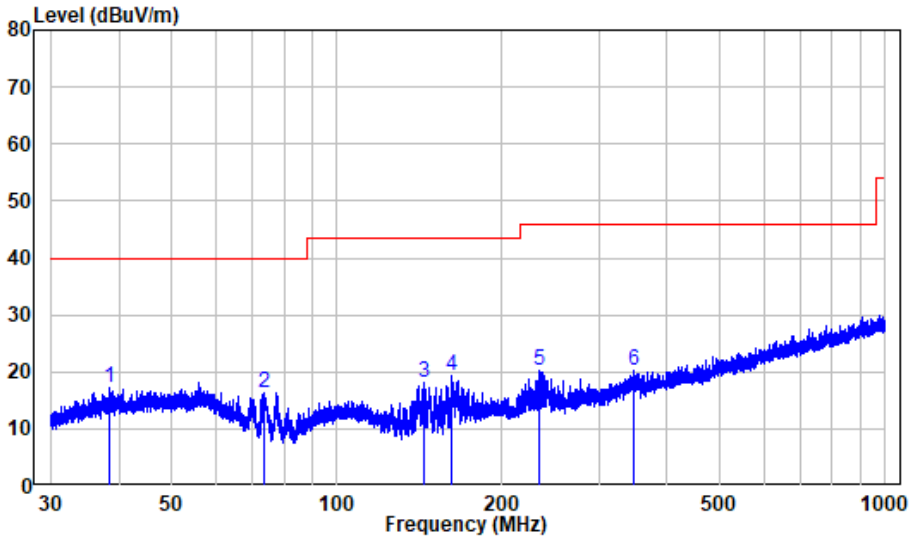
The testing was performed by Level Li on 2022-10-31 for below 1GHz and Level Li on 2022-10-22 rabove 1GHz.

EUT operation mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case X-axes of orientation was recorded)

30 MHz – 1 GHz: *(worst case is 802.11a, 6175MHz)*

Note: When the test result of peak was less than the limit of QP more than 6dB, just peak value were recorded.

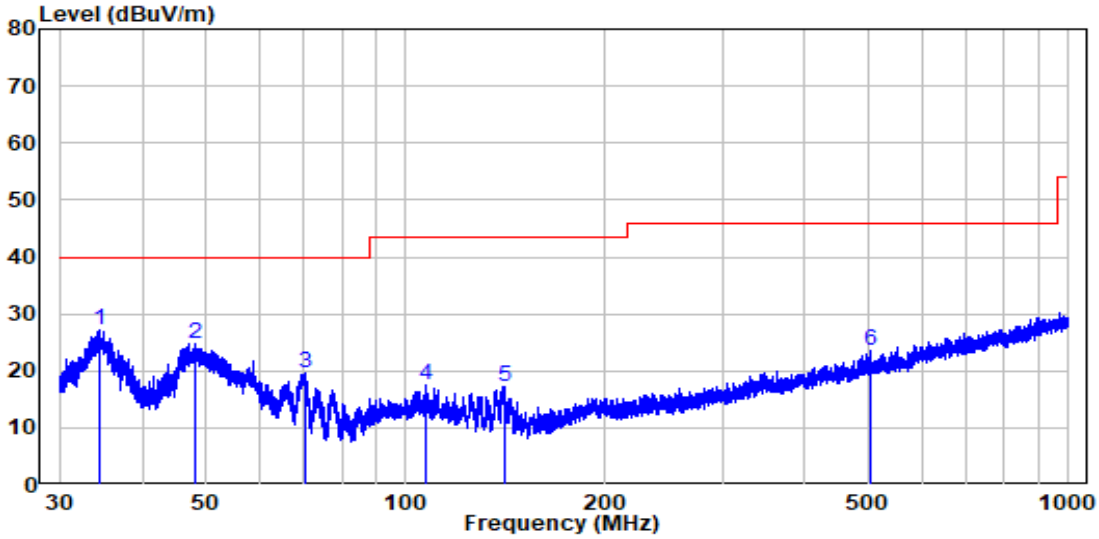
Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No. : SZNS220928-44462E-RF
Test Mode: 6G WIFI

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	38.346	-10.74	28.10	17.36	40.00	-22.64	Peak
2	73.746	-16.01	32.36	16.35	40.00	-23.65	Peak
3	144.082	-15.52	33.55	18.03	43.50	-25.47	Peak
4	162.184	-14.29	33.65	19.36	43.50	-24.14	Peak
5	234.168	-10.98	31.08	20.10	46.00	-25.90	Peak
6	347.875	-7.27	27.45	20.18	46.00	-25.82	Peak

Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : SZNS220928-44462E-RF
Test Mode: 6G WIFI

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	34.381	-11.74	38.77	27.03	40.00	-12.97	Peak
2	47.973	-10.00	34.85	24.85	40.00	-15.15	Peak
3	70.367	-14.94	34.42	19.48	40.00	-20.52	Peak
4	107.416	-11.97	29.51	17.54	43.50	-25.96	Peak
5	140.712	-15.49	32.83	17.34	43.50	-26.16	Peak
6	503.822	-4.26	27.93	23.67	46.00	-22.33	Peak

Above 1GHz:

WIFI 6E_ U-NII 5：

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
5955MHz									
5850	62.95	PK	267	2.2	H	-1.81	61.14	68.2	-7.06
5850	63.05	PK	313	2.5	V	-1.81	61.24	68.2	-6.96
5925	62.62	PK	209	1.0	H	-1.82	60.80	68.2	-7.40
5925	62.16	PK	42	1.1	V	-1.82	60.34	68.2	-7.86
11910	56.59	PK	108	2.4	H	6.85	63.44	74	-10.56
11910	41.68	AV	108	2.4	H	6.85	48.53	54	-5.47
11910	56.03	PK	357	1.9	V	6.85	62.88	74	-11.12
11910	41.56	AV	357	1.9	V	6.85	48.41	54	-5.59
6175MHz									
12350	54.92	PK	240	1.3	H	6.57	61.49	74	-12.51
12350	40.27	AV	240	1.3	H	6.57	46.84	54	-7.16
12350	55.15	PK	191	2.4	V	6.57	61.72	74	-12.28
12350	40.18	AV	191	2.4	V	6.57	46.75	54	-7.25
6415MHz									
12830	55.04	PK	161	2.1	H	5.8	60.84	68.2	-7.36
12830	55.39	PK	144	2.1	V	5.8	61.19	68.2	-7.01

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax20_242Tone_RU61 (Worst Case)									
5955MHz									
5850	62.49	PK	129	2.3	H	-1.81	60.68	68.2	-7.52
5850	62.57	PK	307	1.3	V	-1.81	60.76	68.2	-7.44
5925	63.24	PK	256	1.4	H	-1.82	61.42	68.2	-6.78
5925	62.43	PK	150	2.5	V	-1.82	60.61	68.2	-7.59
11910	56.69	PK	132	2.4	H	6.85	63.54	74	-10.46
11910	41.65	AV	132	2.4	H	6.85	48.50	54	-5.50
11910	56.55	PK	42	1.9	V	6.85	63.40	74	-10.60
11910	41.42	AV	42	1.9	V	6.85	48.27	54	-5.73
6175MHz									
12350	55.27	PK	50	2.5	H	6.57	61.84	74	-12.16
12350	40.76	AV	50	2.5	H	6.57	47.33	54	-6.67
12350	54.84	PK	46	2.4	V	6.57	61.41	74	-12.59
12350	40.75	AV	46	2.4	V	6.57	47.32	54	-6.68
6415MHz									
12830	56.04	PK	192	2	H	5.8	61.84	68.2	-6.36
12830	55.46	PK	23	2	V	5.8	61.26	68.2	-6.94

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax40_484Tone_RU65 (Worst Case)									
5965MHz									
5850	62.57	PK	257	1.2	H	-1.81	60.76	68.2	-7.44
5850	62.89	PK	349	2	V	-1.81	61.08	68.2	-7.12
5925	63.90	PK	176	1.3	H	-1.82	62.08	68.2	-6.12
5925	63.86	PK	286	1.6	V	-1.82	62.04	68.2	-6.16
11930	55.90	PK	322	2.4	H	6.92	62.82	74	-11.18
11930	40.94	AV	322	2.4	H	6.92	47.86	54	-6.14
11930	56.08	PK	116	1.9	V	6.92	63.00	74	-11.00
11930	41.02	AV	116	1.9	V	6.92	47.94	54	-6.06
6165MHz									
12330	55.21	PK	40	2.4	H	6.51	61.72	74	-12.28
12330	40.65	AV	40	2.4	H	6.51	47.16	54	-6.84
12330	55.33	PK	43	1.9	V	6.51	61.84	74	-12.16
12330	40.46	AV	43	1.9	V	6.51	46.97	54	-7.03
6405MHz									
12810	54.94	PK	212	1.6	H	5.91	60.85	68.2	-7.35
12810	55.51	PK	222	1.6	V	5.91	61.42	68.2	-6.78

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax80_996Tone_RU67(Worst Case)									
5985MHz									
5850	63.82	PK	337	1.1	H	-1.81	62.01	68.2	-6.19
5850	63.96	PK	311	1.4	V	-1.81	62.15	68.2	-6.05
5925	64.28	PK	205	1.5	H	-1.82	62.46	68.2	-5.74
5925	64.15	PK	110	1.5	V	-1.82	62.33	68.2	-5.87
11970	55.23	PK	210	2.1	H	6.92	62.15	74	-11.85
11970	41.08	AV	210	2.1	H	6.92	48.00	54	-6.00
11970	55.18	PK	357	2.5	V	6.92	62.10	74	-11.90
11970	40.70	AV	357	2.5	V	6.92	47.62	54	-6.38
6145MHz									
12290	55.72	PK	97	1.6	H	6.43	62.15	74	-11.85
12290	40.77	AV	97	1.6	H	6.43	47.2	54	-6.80
12290	55.40	PK	62	1.9	V	6.43	61.83	74	-12.17
12290	40.47	AV	62	1.9	V	6.43	46.9	54	-7.10
6385MHz									
12770	56.71	PK	116	2.5	H	5.98	62.69	68.2	-5.51
12770	55.28	PK	66	2.5	V	5.98	61.26	68.2	-6.94

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax160_2*996Tone_RU68(Worst Case)									
6025MHz									
5850	62.65	PK	334	1.1	H	-1.81	60.84	68.2	-7.36
5850	62.36	PK	67	1.8	V	-1.81	60.55	68.2	-7.65
5925	63.68	PK	221	1.2	H	-1.82	61.86	68.2	-6.34
5925	63.64	PK	211	1.9	V	-1.82	61.82	68.2	-6.38
12050	55.21	PK	34	1.7	H	6.94	62.15	74	-11.85
12050	41.06	AV	34	1.7	H	6.94	48.00	54	-6.00
12050	55.16	PK	166	1.9	V	6.94	62.10	74	-11.90
12050	40.68	AV	166	1.9	V	6.94	47.62	54	-6.38
6185MHz									
12370	55.75	PK	342	1.4	H	6.40	62.15	74	-11.85
12370	40.80	AV	342	1.4	H	6.40	47.2	54	-6.80
12370	55.43	PK	53	1.5	V	6.40	61.83	74	-12.17
12370	40.50	AV	53	1.5	V	6.40	46.9	54	-7.10
6345MHz									
12690	55.71	PK	114	2.4	H	5.72	61.43	74	-12.57
12690	41.40	AV	105	2.4	H	5.72	47.12	54	-6.88
12690	55.82	PK	15	1.4	V	5.72	61.54	74	-12.46
12690	41.46	AV	15	1.4	V	5.72	47.18	54	-6.82

WIFI 6E_ U-NII 6:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
6435MHz									
12870	55.96	PK	73	1.8	H	5.7	61.66	68.2	-6.54
12870	55.26	PK	63	1.8	V	5.7	60.96	68.2	-7.24
6475MHz									
12950	56.10	PK	337	2	H	5.65	61.75	68.2	-6.45
12950	55.50	PK	74	2	V	5.65	61.15	68.2	-7.05
6515MHz									
13030	55.85	PK	354	2	H	5.79	61.64	68.2	-6.56
13030	55.47	PK	197	2	V	5.79	61.26	68.2	-6.94

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax20_242Tone_RU61 (Worst Case)									
6435MHz									
12870	57.24	PK	290	2.4	H	5.7	62.94	68.2	-5.26
12870	55.96	PK	293	2.4	V	5.7	61.66	68.2	-6.54
6475MHz									
12950	56.77	PK	225	1.4	H	5.65	62.42	68.2	-5.78
12950	56.03	PK	53	1.4	V	5.65	61.68	68.2	-6.52
6515MHz									
13030	55.81	PK	186	2.2	H	5.79	61.6	68.2	-6.60
13030	55.34	PK	148	2.2	V	5.79	61.13	68.2	-7.07

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax40_484Tone_RU65 (Worst Case)									
6445MHz									
12890	56.51	PK	267	2.2	H	5.71	62.22	68.2	-5.98
12890	55.05	PK	273	2.2	V	5.71	60.76	68.2	-7.44
6485MHz									
12970	57.54	PK	339	1.8	H	5.63	63.17	68.2	-5.03
12970	55.30	PK	336	1.8	V	5.63	60.93	68.2	-7.27
6525MHz									
13050	58.38	PK	274	1.7	H	5.93	64.31	68.2	-3.89
13050	55.88	PK	292	1.7	V	5.93	61.81	68.2	-6.39
802.11ax80_996Tone_RU67(Worst Case)									
6465MHz									
12930	55.56	PK	60	1.1	H	5.68	61.24	68.2	-6.96
12930	55.28	PK	285	1.1	V	5.68	60.96	68.2	-7.24
6545MHz									
13090	56.52	PK	88	1.6	H	5.91	62.43	68.2	-5.77
13090	56.68	PK	53	1.6	V	5.91	62.59	68.2	-5.61
802.11AX160									
6505MHz									
13010	55.58	PK	71	2.1	H	5.66	61.24	68.2	-6.96
13010	54.88	PK	85	2.1	V	5.66	60.54	68.2	-7.66

WIFI 6E_ U-NII 7：

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
6535MHz									
13070	56.27	PK	108	1.9	H	5.92	62.19	68.2	-6.01
13070	56.01	PK	204	1.1	V	5.92	61.93	68.2	-6.27
6695MHz									
13390	57.58	PK	123	1.6	H	6.53	64.11	74	-9.89
13390	43.14	AV	123	1.6	H	6.53	49.67	54	-4.33
13390	56.97	PK	61	1.6	V	6.53	63.50	74	-10.50
13390	42.73	AV	61	1.6	V	6.53	49.26	54	-4.74
6855MHz									
13710	56.65	PK	226	1.7	H	7.50	64.15	68.2	-4.05
13710	56.12	PK	102	1.1	V	7.50	63.62	68.2	-4.58
802.11ax20_242Tone_RU61 (Worst Case)									
6535MHz									
13070	55.94	PK	160	2.3	H	5.92	61.86	68.2	-6.34
13070	55.66	PK	207	1.5	V	5.92	61.58	68.2	-6.62
6695MHz									
13390	58.25	PK	338	1.5	H	6.53	64.78	74	-9.22
13390	43.42	AV	338	1.5	H	6.53	49.95	54	-4.05
13390	57.77	PK	61	1.4	V	6.53	64.30	74	-9.70
13390	43.18	AV	61	1.4	V	6.53	49.71	54	-4.29
6855MHz									
13710	56.68	PK	75	1.9	H	7.50	64.18	68.2	-4.02
13710	56.25	PK	216	1.9	V	7.50	63.75	68.2	-4.45

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax40_484Tone_RU65 (Worst Case)									
6565MHz									
13130	58.76	PK	162	2.3	H	5.85	64.61	68.2	-3.59
13130	58.24	PK	235	2.1	V	5.85	64.09	68.2	-4.11
6685MHz									
13370	58.16	PK	248	1.2	H	6.52	64.68	74	-9.32
13370	42.87	AV	248	1.2	H	6.52	49.39	54	-4.61
13370	57.94	PK	192	2.2	V	6.52	64.46	74	-9.54
13370	42.69	AV	192	2.2	V	6.52	49.21	54	-4.79
6845MHz									
13690	56.95	PK	63	1.1	H	7.44	64.39	68.2	-3.81
13690	56.53	PK	301	1.3	V	7.44	63.97	68.2	-4.23
802.11ax80_996Tone_RU67(Worst Case)									
6625MHz									
13250	58.68	PK	338	2.2	H	6.30	64.98	74	-9.02
13250	43.23	AV	338	2.2	H	6.30	49.53	54	-4.47
13250	58.12	PK	153	2.1	V	6.30	64.42	74	-9.58
13250	43.01	AV	153	2.1	V	6.30	49.31	54	-4.69
6705MHz									
13410	57.94	PK	197	1.3	H	6.57	64.51	68.2	-3.69
13410	57.69	PK	17	2.5	V	6.57	64.26	68.2	-3.94
6785MHz									
13570	57.78	PK	41	2.4	H	6.98	64.76	68.2	-3.44
13570	57.54	PK	356	1.3	V	6.98	64.52	68.2	-3.68
6865MHz									
13730	56.44	PK	34	1.6	H	7.55	63.99	68.2	-4.21
13730	56.20	PK	70	1.6	V	7.55	63.75	68.2	-4.45
802.11ax160_2*996Tone_RU68(Worst Case)									
6665MHz									
13330	58.55	PK	8	1.5	H	6.41	64.96	74	-9.04
13330	43.42	AV	8	1.5	H	6.41	49.83	54	-4.17
13330	58.28	PK	338	1.2	V	6.41	64.69	74	-9.31
13330	43.16	AV	338	1.2	V	6.41	49.57	54	-4.43
6825MHz									
13650	57.33	PK	108	1.1	H	7.25	64.58	68.2	-3.62
13650	57.09	PK	74	1.6	V	7.25	64.34	68.2	-3.86

WIFI 6E_ U-NII 8:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
6875MHz									
13750	56.37	PK	119	1.5	H	7.55	63.92	68.2	-4.28
13750	56.06	PK	101	1.2	V	7.55	63.61	68.2	-4.59
6895MHz									
13790	55.95	PK	242	1.1	H	7.67	63.62	68.2	-4.58
13790	56.34	PK	238	2.5	V	7.67	64.01	68.2	-4.19
6995MHz									
13990	55.05	PK	214	1.9	H	8.30	63.35	68.2	-4.85
13990	55.19	PK	46	1.5	V	8.30	63.49	68.2	-4.71
7115MHz									
7125	65.28	PK	27	1.6	H	1.90	67.18	68.2	-1.02
7125	53.96	PK	27	1.6	V	1.90	55.86	68.2	-12.34
7250	60.09	PK	151	1.4	H	2.96	63.05	74	-10.95
7250	46.74	AV	151	1.4	H	2.96	49.70	54	-4.30
7250	60.24	PK	265	1.9	V	2.96	63.20	74	-10.80
7250	46.89	AV	265	1.9	V	2.96	49.85	54	-4.15
14230	54.81	PK	319	1.6	H	7.96	62.77	68.2	-5.43
14230	55.12	PK	83	1.1	V	7.96	63.08	68.2	-5.12

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax20_242Tone_RU61 (Worst Case)									
6875MHz									
13750	56.74	PK	250	1	H	7.55	64.29	68.2	-3.91
13750	55.95	PK	158	1.6	V	7.55	63.50	68.2	-4.70
6895MHz									
13790	56.34	PK	346	2	H	7.67	64.01	68.2	-4.19
13790	56.36	PK	201	2.3	V	7.67	64.03	68.2	-4.17
6995MHz									
13990	54.89	PK	25	1.2	H	8.30	63.19	68.2	-5.01
13990	56.32	PK	344	1.7	V	8.30	64.62	68.2	-3.58
7115MHz									
7125.00	56.28	PK	184	2.2	H	10.71	66.99	68.2	-1.21
7125.00	48.23	PK	184	2.2	V	10.71	58.94	68.2	-9.26
7250	60.11	PK	170	1.1	H	2.96	63.07	74	-10.93
7250	46.97	AV	170	1.1	H	2.96	49.93	54	-4.07
7250	60.73	PK	190	1.5	V	2.96	63.69	74	-10.31
7250	46.24	AV	190	1.5	V	2.96	49.20	54	-4.80
14230	54.82	PK	19	2	H	7.96	62.78	68.2	-5.42
14230	55.45	PK	289	1.4	V	7.96	63.41	68.2	-4.79

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax40_484Tone_RU65 (Worst Case)									
6885MHz									
13770	56.92	PK	318	2	H	7.61	64.53	68.2	-3.67
13770	56.82	PK	110	1.3	V	7.61	64.43	68.2	-3.77
6925MHz									
13850	56.47	PK	100	1.6	H	7.95	64.42	68.2	-3.78
13850	56.12	PK	203	1.3	V	7.95	64.07	68.2	-4.13
6965MHz									
13930	56.14	PK	254	1.3	H	8.17	64.31	68.2	-3.89
13930	56.02	PK	327	1.1	V	8.17	64.19	68.2	-4.01
7085MHz									
7125	62.77	PK	1	1.6	H	1.90	64.67	68.2	-3.53
7125	62.42	PK	252	1.6	V	1.90	64.32	68.2	-3.88
7250	60.07	PK	162	2	H	2.96	63.03	74	-10.97
7250	46.50	AV	162	2	H	2.96	49.46	54	-4.54
7250	60.07	PK	83	1.3	V	2.96	63.03	74	-10.97
7250	46.07	AV	83	1.3	V	2.96	49.03	54	-4.97
14170	55.07	PK	200	1.3	H	8.07	63.14	68.2	-5.06
14170	55.08	PK	300	1.9	V	8.07	63.15	68.2	-5.05

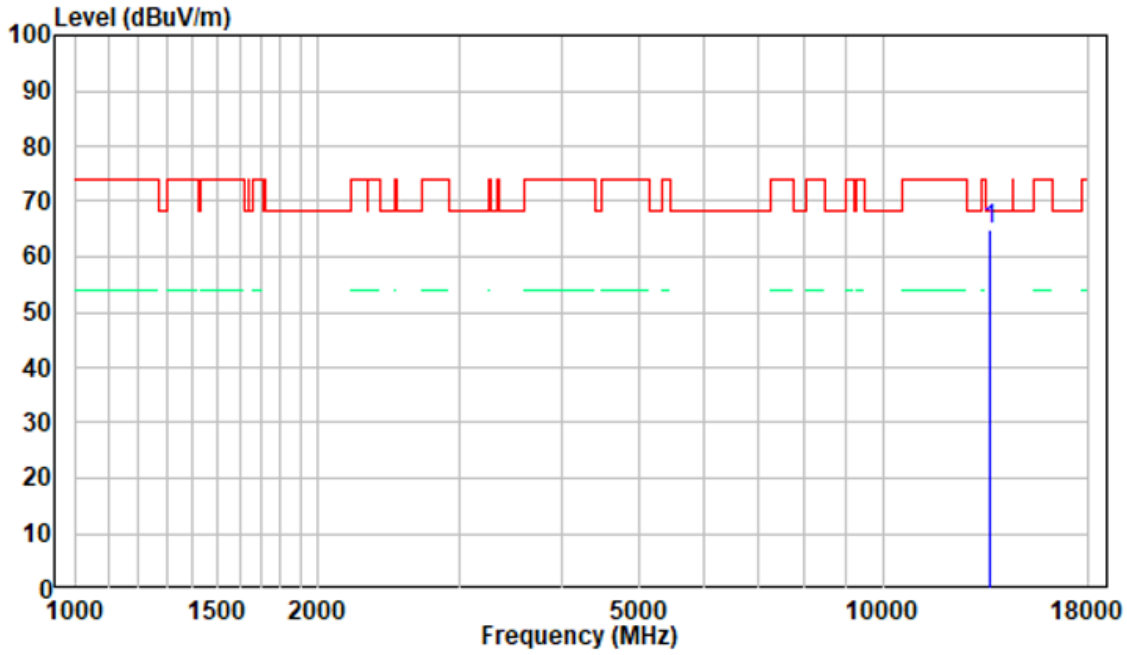
Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11ax80_996Tone_RU67(Worst Case)									
6945MHz									
13890	55.20	PK	246	1.6	H	8.05	63.25	68.2	-4.95
13890	55.35	PK	238	1.8	V	8.05	63.40	68.2	-4.80
7025MHz									
7125	62.92	PK	124	1.7	H	1.90	64.81	68.2	-3.39
7125	61.80	PK	192	1.9	V	1.90	63.69	68.2	-4.51
7250	60.68	PK	98	1.8	H	2.96	63.64	74	-10.36
7250	46.95	AV	98	1.8	H	2.96	49.91	54	-4.09
7250	60.43	PK	357	1.2	V	2.96	63.39	74	-10.61
7250	46.24	AV	357	1.2	V	2.96	49.20	54	-4.80
14050	54.87	PK	310	1	H	8.35	63.22	68.2	-4.98
14050	55.29	PK	67	2.1	V	8.35	63.64	68.2	-4.56
802.11ax160_2*996Tone_RU68(Worst Case)									
6985MHz									
7125	63.60	PK	162	1.2	H	1.90	65.49	68.2	-2.71
7125	62.15	PK	129	1.1	V	1.90	64.04	68.2	-4.16
7250	60.55	PK	129	1.8	H	2.96	63.51	74	-10.49
7250	46.89	AV	129	1.8	H	2.96	49.85	54	-4.15
7250	60.69	PK	157	1.7	V	2.96	63.65	74	-10.35
7250	46.10	AV	157	1.7	V	2.96	49.06	54	-4.94
13970	55.31	PK	281	2	H	8.27	63.58	68.2	-4.62
13970	54.94	PK	180	1.7	V	8.27	63.21	68.2	-4.99

Note:
Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Factor + Reading
Margin = Corrected. Amplitude - Limit
The other spurious emission which is in the noise floor level was not recorded.
The test result of peak was less than the limit of average, so just peak values were recorded.

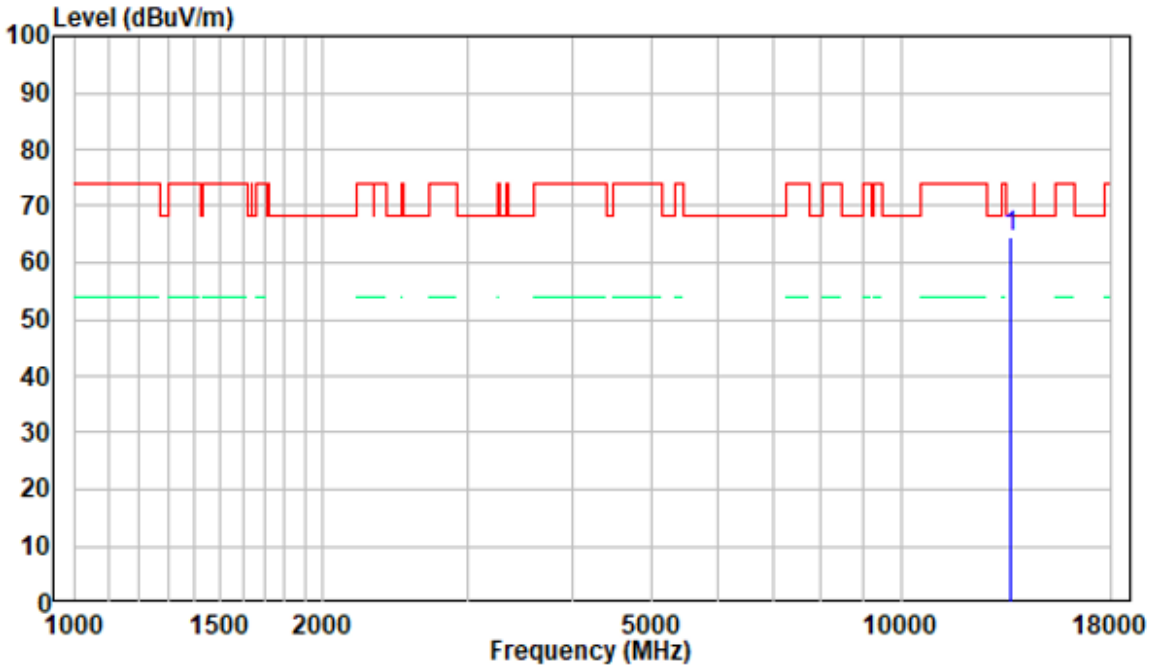
1 GHz - 18 GHz: (Pre-Scan plots)

802.11 ax80, 6785MHz

Horizontal



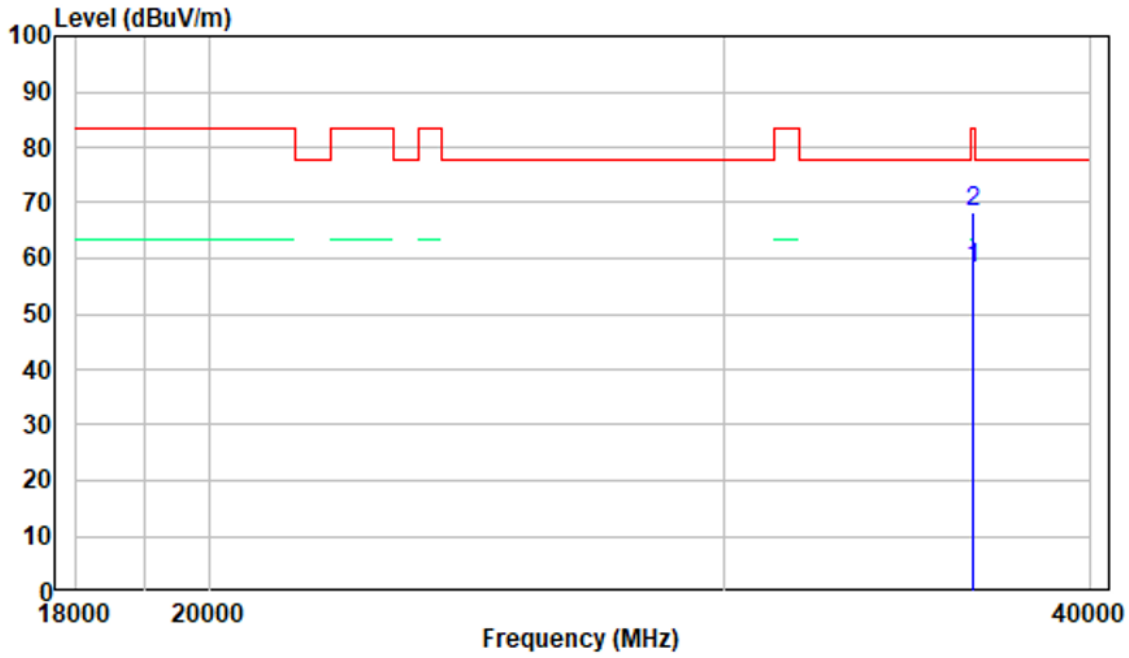
Vertical



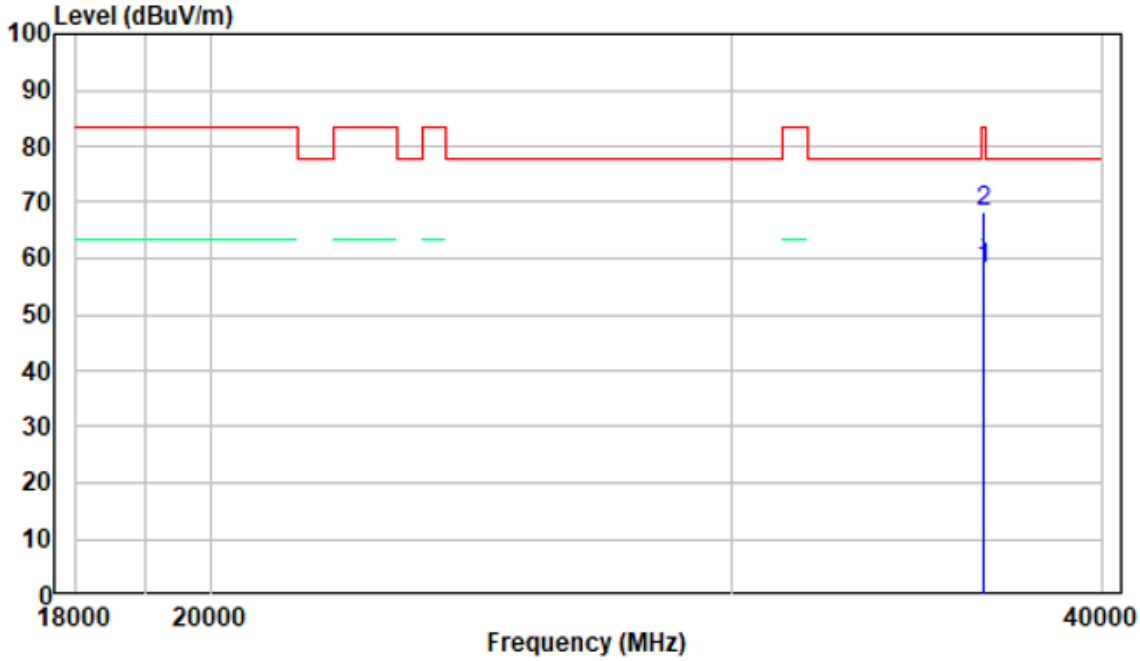
18-40GHz: (Pre-Scan plots)

802.11 ax80, 6785MHz

Horizontal



Vertical



FCC §15.407(a)(10) – 26 dB Emission Bandwidth & 99% Occupied bandwidth

Applicable Standard

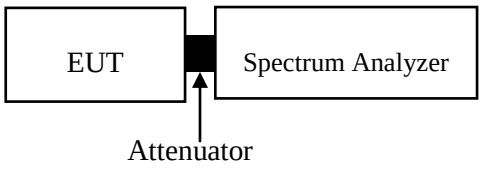
According to FCC §15.407(a)(10), The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz..

Test Procedure

Test Method: KDB789033 D02 Clause II.C

1. Emission Bandwidth (EBW)

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 maximum 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%.
f) For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥3* RBW.
g) Measure and record the results in the test report.



Test Data

Environmental Conditions

Temperature:	24~26℃
Relative Humidity:	30~50%
ATM Pressure:	101.0 kPa

The testing was performed by Roger Ling from 2023-02-13 to 2023-03-15.

EUT operation mode: Transmitting

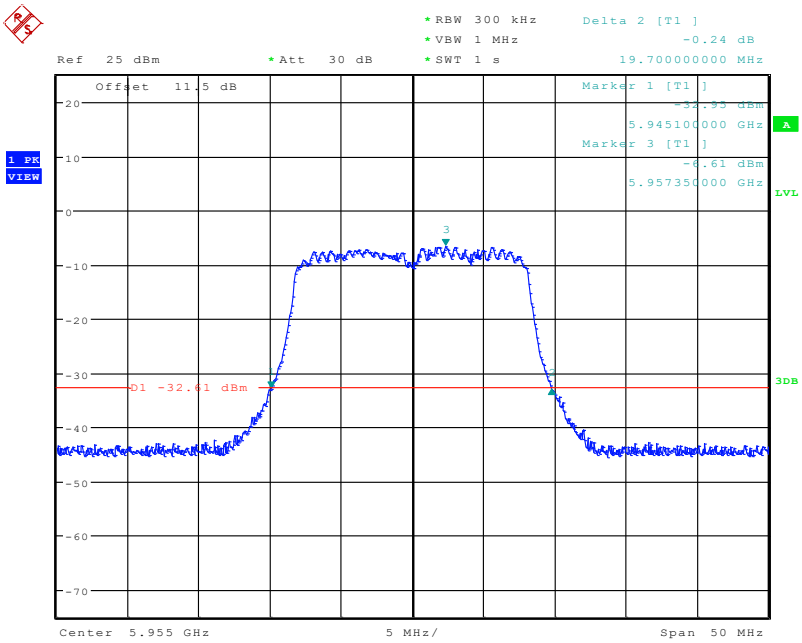
Test Result: Pass, the test data and plots as follows (the test data of ant 1 is worst case)

Note: For 802.11ax mode, the full RU mode is worst case.

5925 MHz - 6425 MHz:

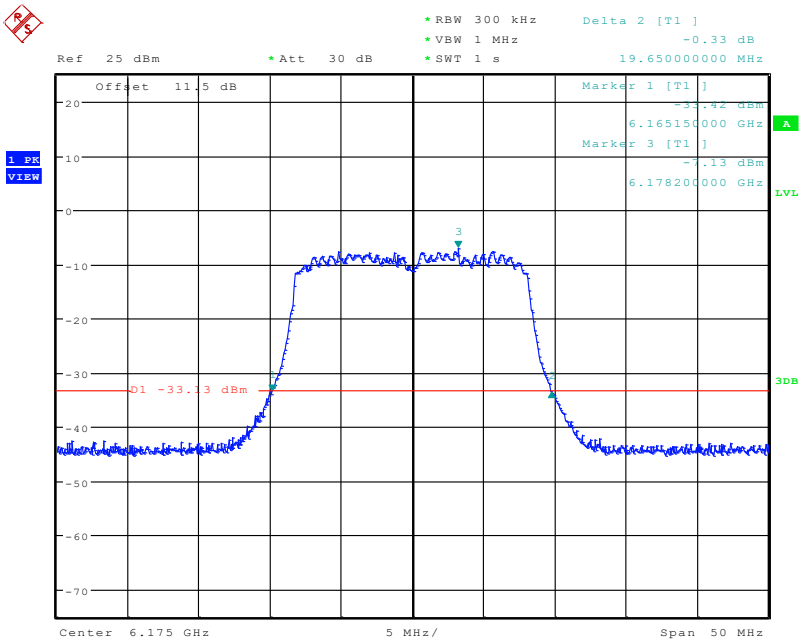
Frequency (MHz)	Antenna Port	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11a				
5955	1	19.70	16.50	320
6175	1	19.65	16.50	320
6415	1	19.55	16.45	320
802.11ax20				
5955	1	21.65	19.00	320
6175	1	21.60	19.00	320
6415	1	21.65	19.00	320
802.11ax40				
5965	1	40.40	37.70	320
6165	1	40.70	37.70	320
6405	1	40.80	37.70	320
802.11ax80				
5985	1	83.60	77.60	320
6145	1	83.40	77.40	320
6385	1	83.80	77.20	320
802.11ax160				
6025	1	166.40	156.00	320
6185	1	167.60	156.80	320
6345	1	166.80	155.60	320

802.11A_CH1_5955MHz-26dB Bandwidth



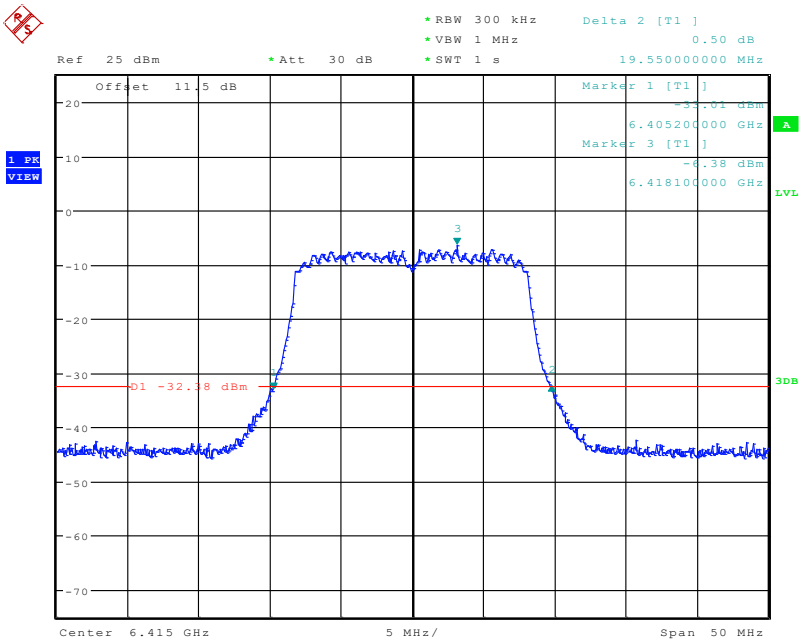
Date: 14.FEB.2023 21:36:13

802.11 11A_CH45_6175MHz-26dB Bandwidth



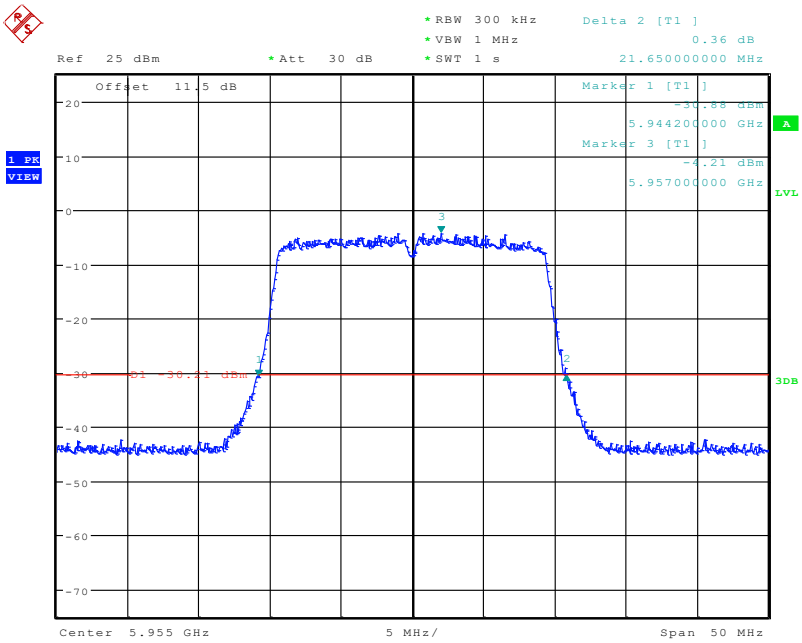
Date: 14.FEB.2023 21:33:38

802.11 A_CH93_6415MHz-26dB Bandwidth



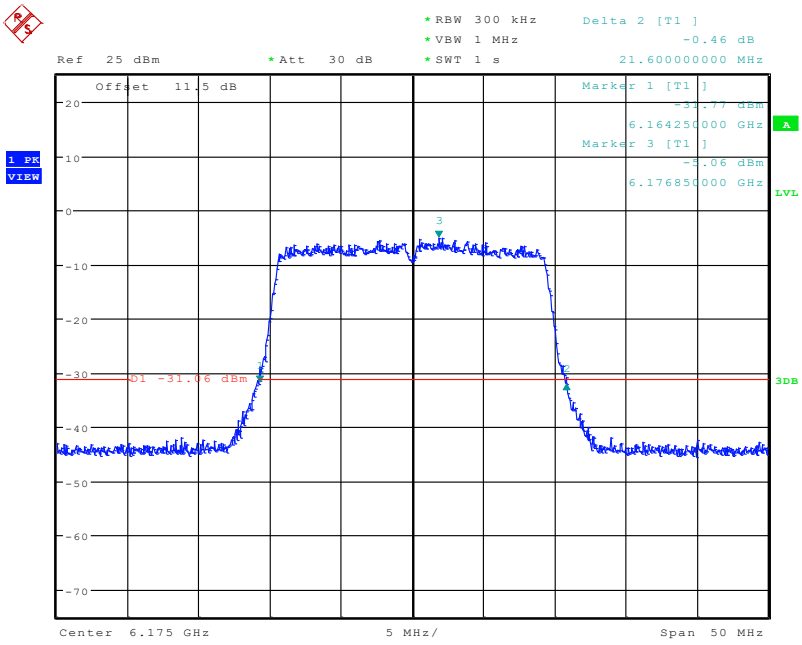
Date: 14.FEB.2023 21:26:39

802. 11AX_HE20_CH1_5955MHz-26dB Bandwidth



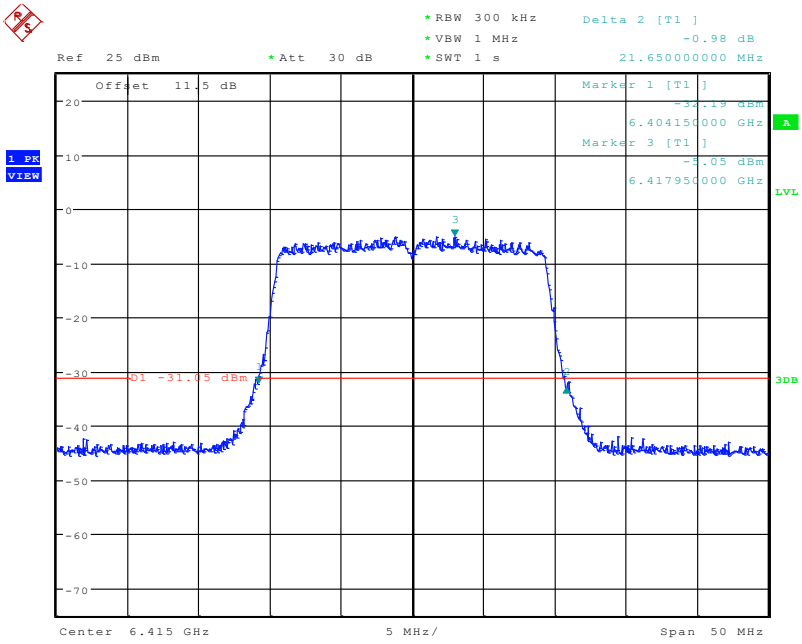
Date: 14.FEB.2023 21:51:12

802. 11AX_HE20_CH45_6175MHz-26dB



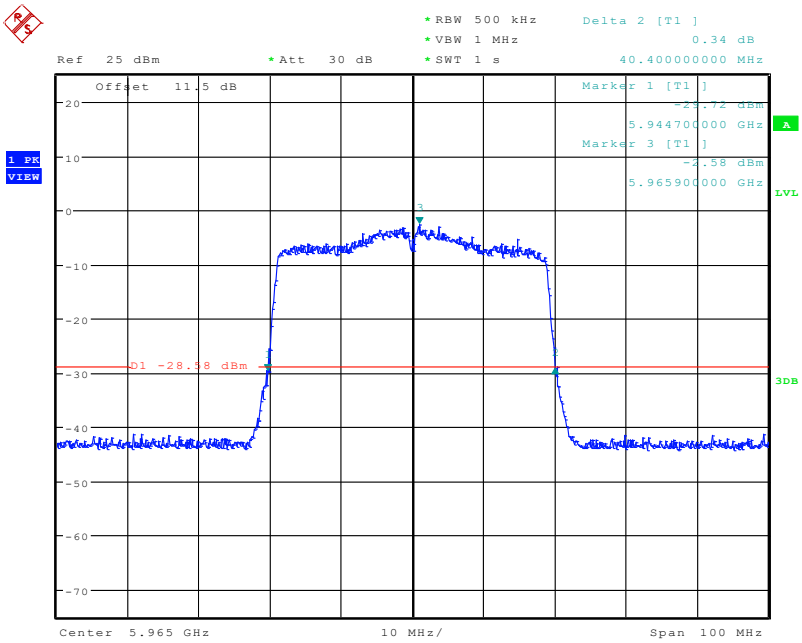
Date: 14.FEB.2023 21:54:17

802.11AX_HE20_CH93_6415MHz-26dB Bandwidth



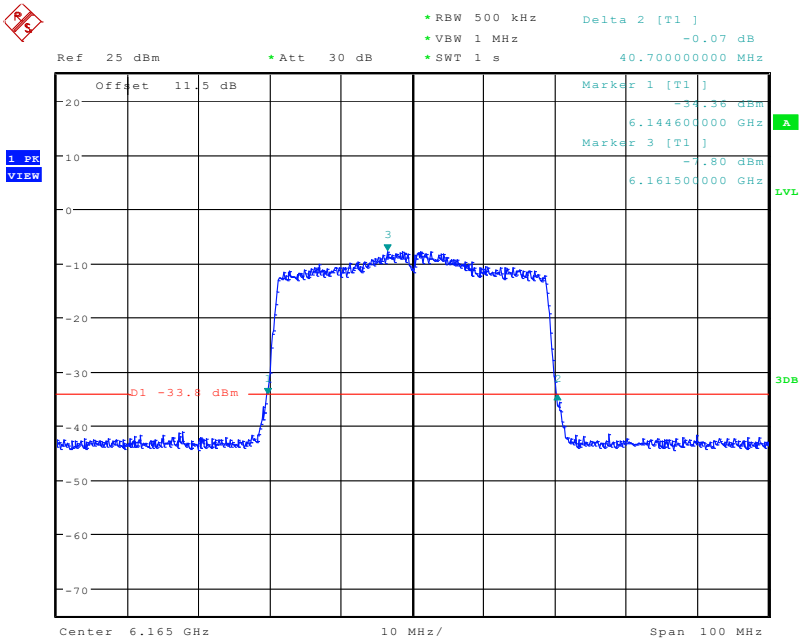
Date: 14.FEB.2023 22:02:38

802. 11AX_HE40_CH3_5965MHz-26dB Bandwidth



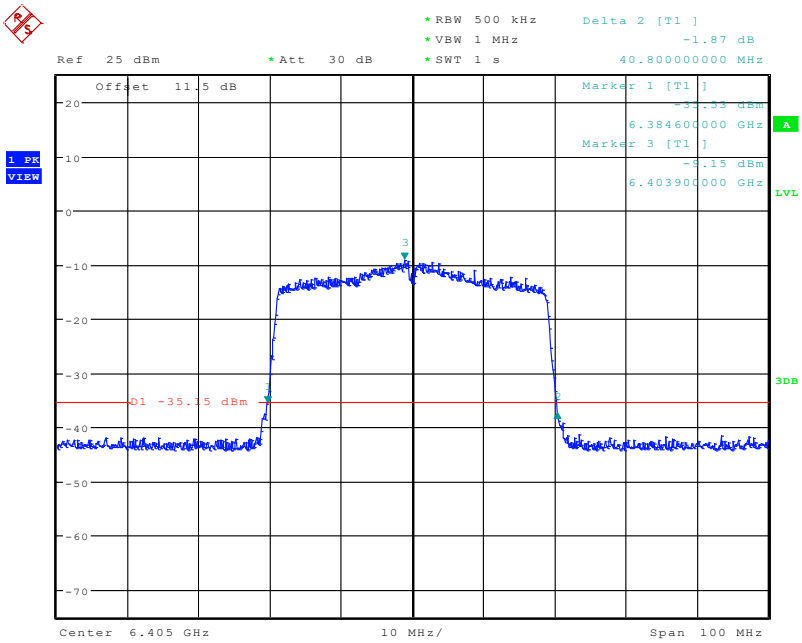
Date: 15.MAR.2023 00:30:44

802.11AX_HE40_CH43_6165MHz-26dB Bandwidth



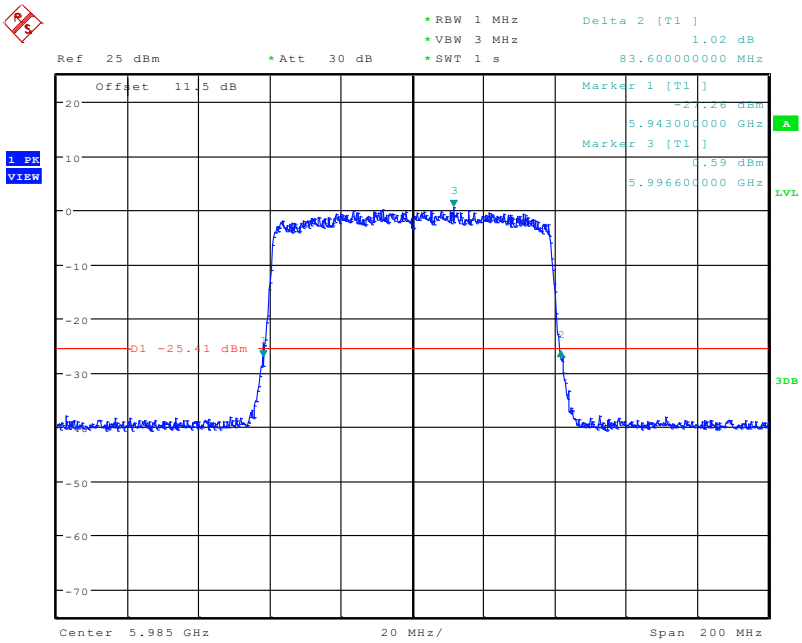
Date: 15.MAR.2023 01:59:29

802.11AX_HE40_CH91_6405MHz-26dB Bandwidth



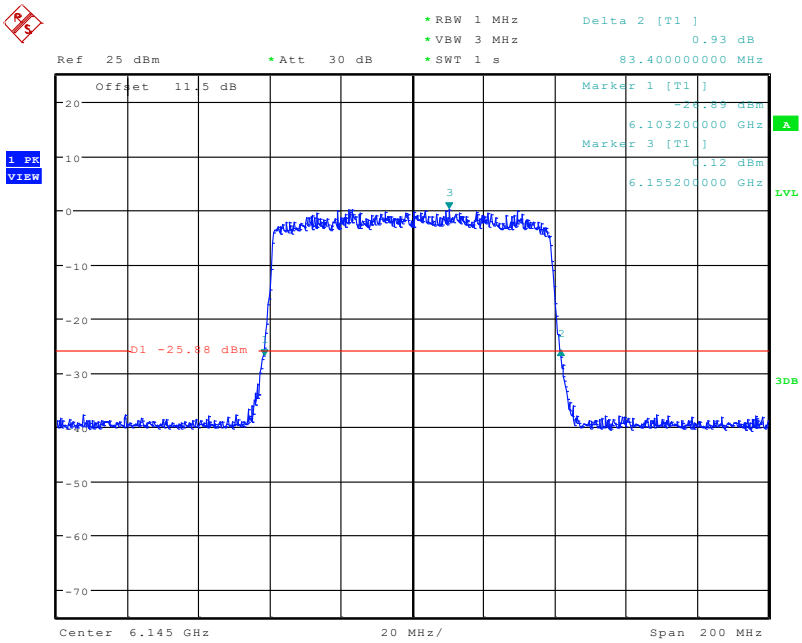
Date: 15.MAR.2023 02:01:31

802. 11AX_HE80_CH7_5985MHz-26dB Bandwidth



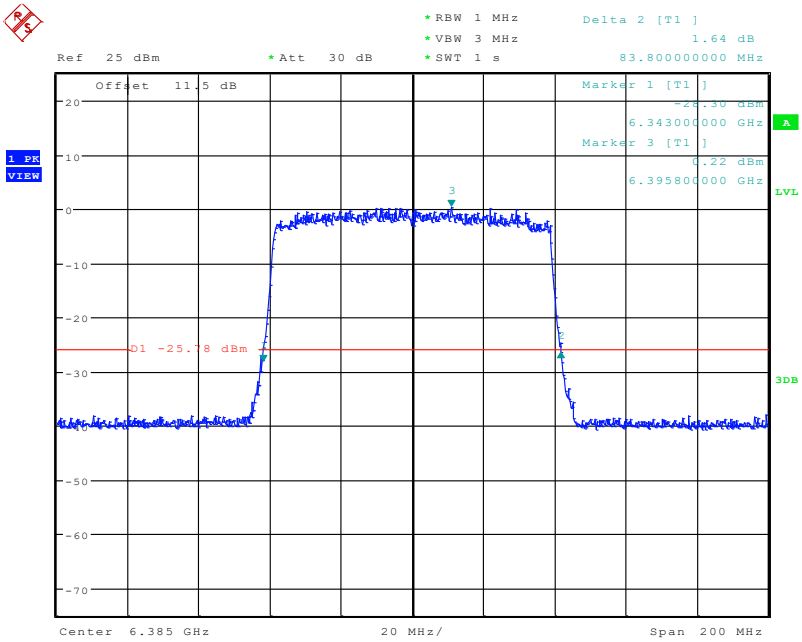
Date: 14.FEB.2023 22:45:10

802. 11AX_HE80_CH39_6145MHz-26dB Bandwidth



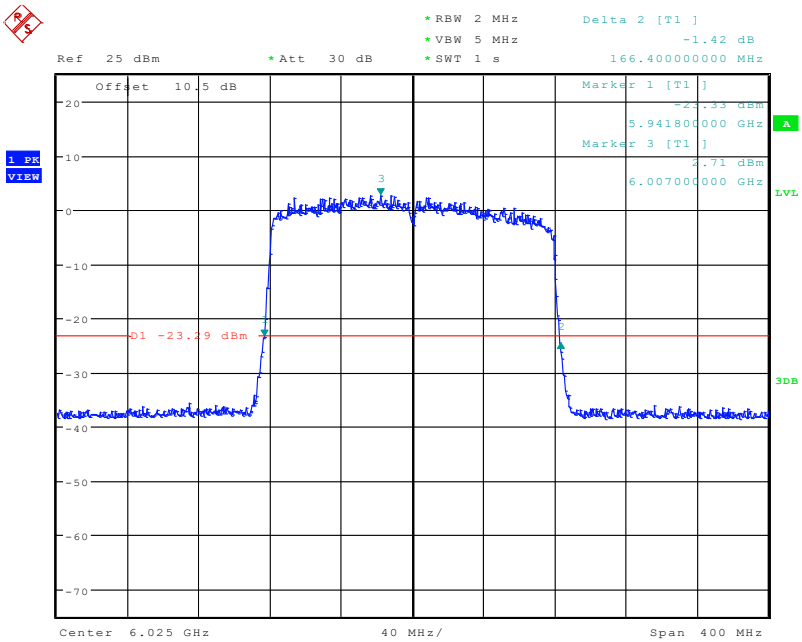
Date: 14.FEB.2023 22:48:55

802. 11AX_HE80_CH87_6385MHz-26dB Bandwidth



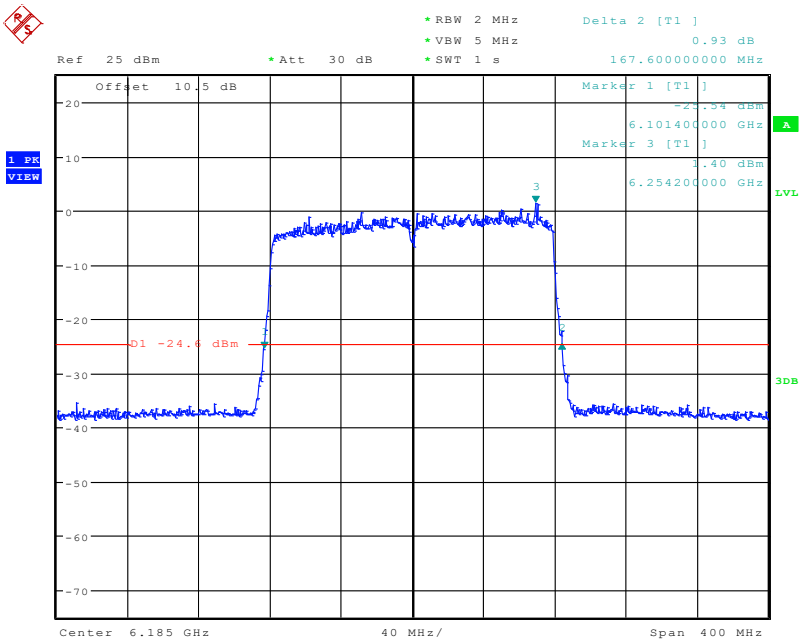
Date: 14.FEB.2023 23:01:26

802. 11AX_HE160_CH15_6025MHz-26dB Bandwidth



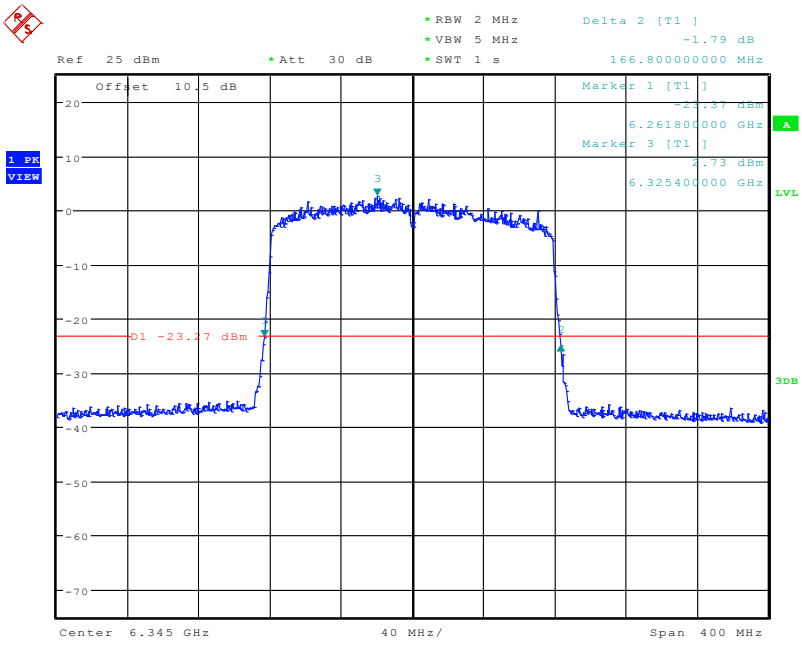
Date: 13.FEB.2023 23:56:19

802. 11AX_HE160_CH47_6185MHz-26dB Bandwidth



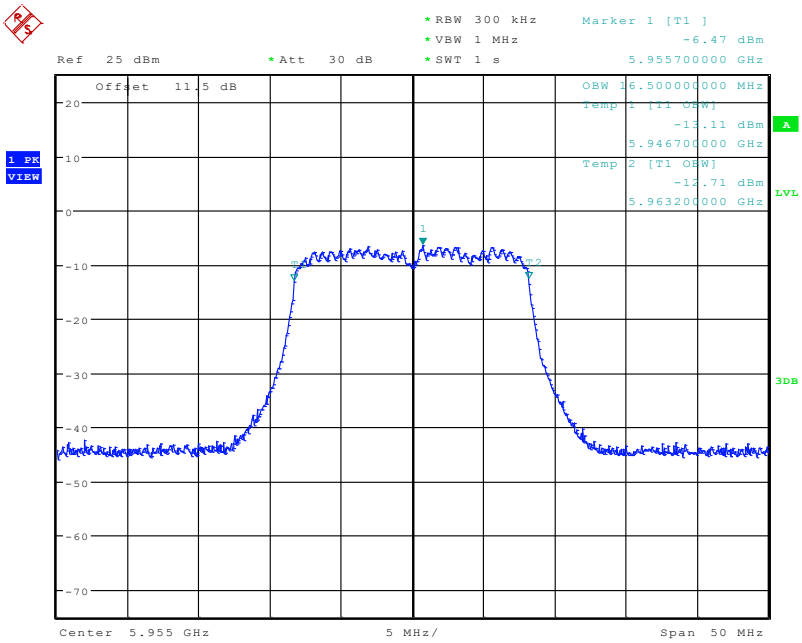
Date: 13.FEB.2023 23:54:09

802. 11AX_HE160_CH79_6345MHz-26dB Bandwidth



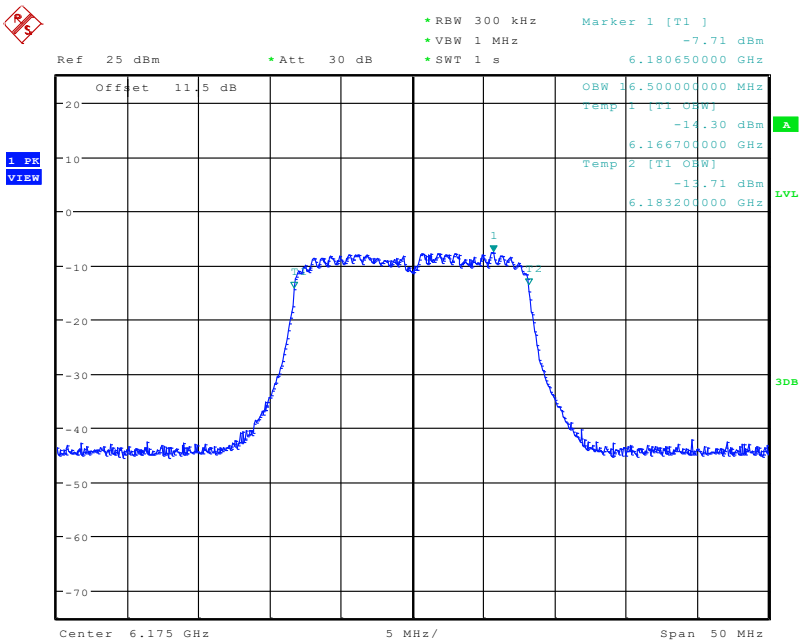
Date: 13.FEB.2023 23:49:07

802.11A_CH1_5955MHz-99% Bandwidth



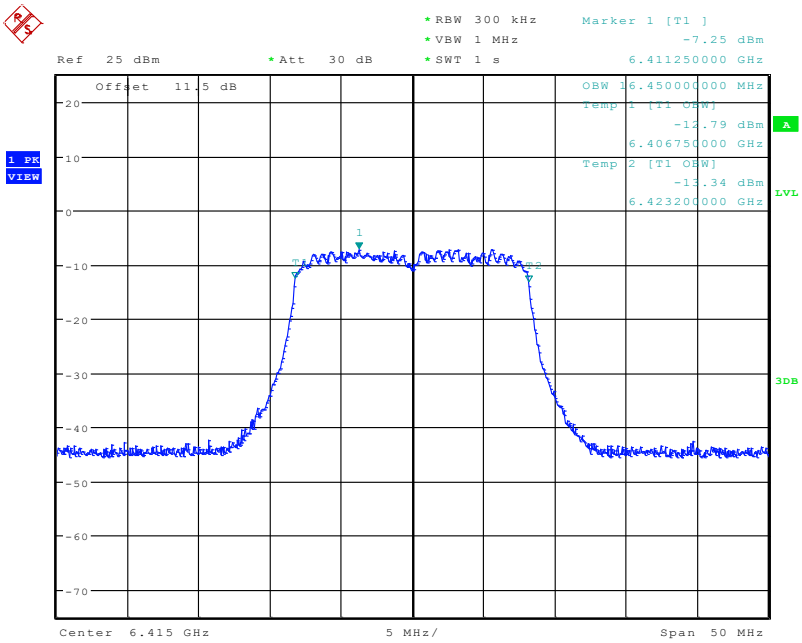
Date: 14.FEB.2023 21:35:52

802.11 11A_CH45_6175MHz-99% Bandwidth



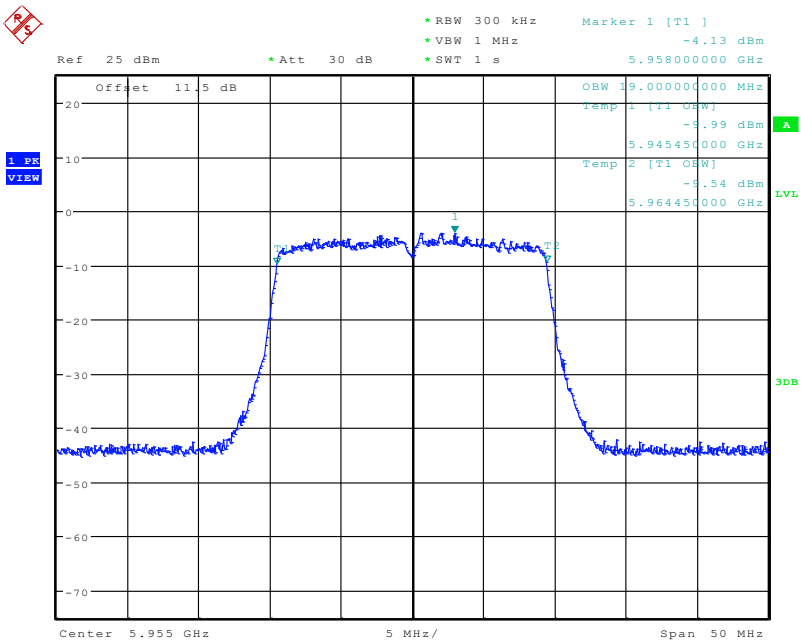
Date: 14.FEB.2023 21:33:18

802.11 A_CH93_6415MHz-99% Bandwidth



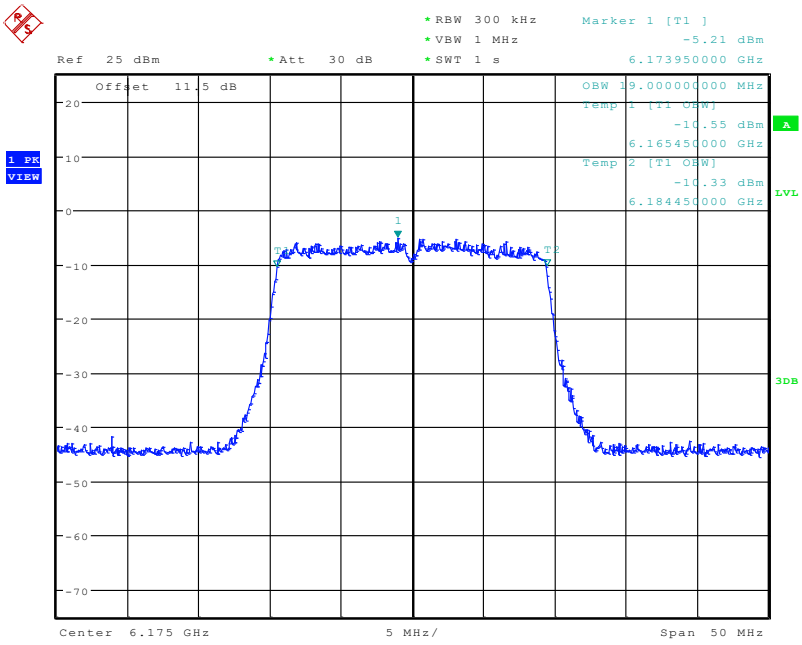
Date: 14.FEB.2023 21:26:19

802. 11AX_HE20_CH1_5955MHz-99% Bandwidth



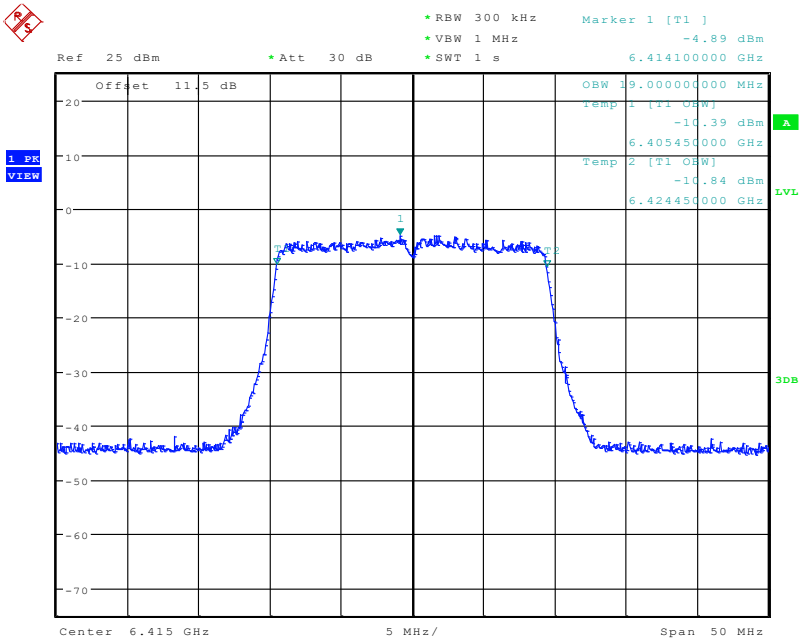
Date: 14.FEB.2023 21:50:41

802. 11AX_HE20_CH45_6175MHz-26dB



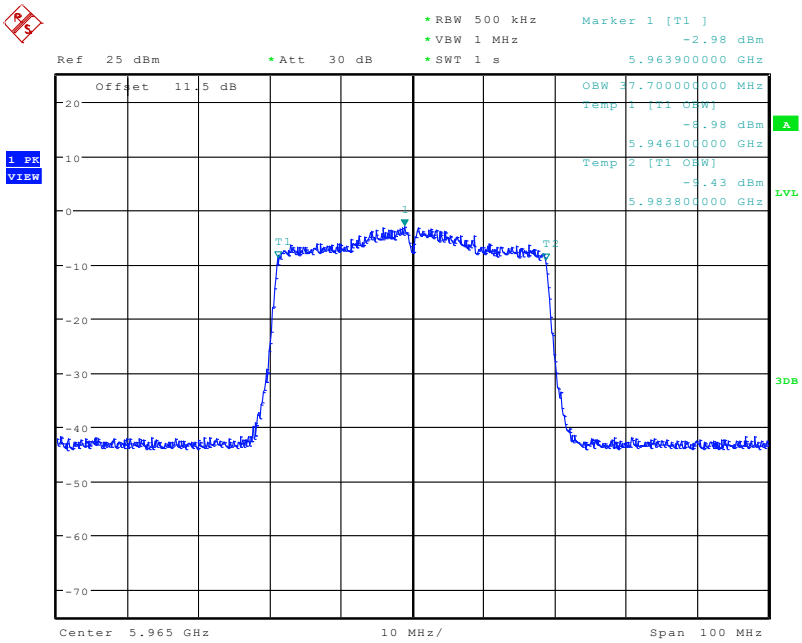
Date: 14.FEB.2023 21:53:58

802.11AX_HE20_CH93_6415MHz-99% Bandwidth



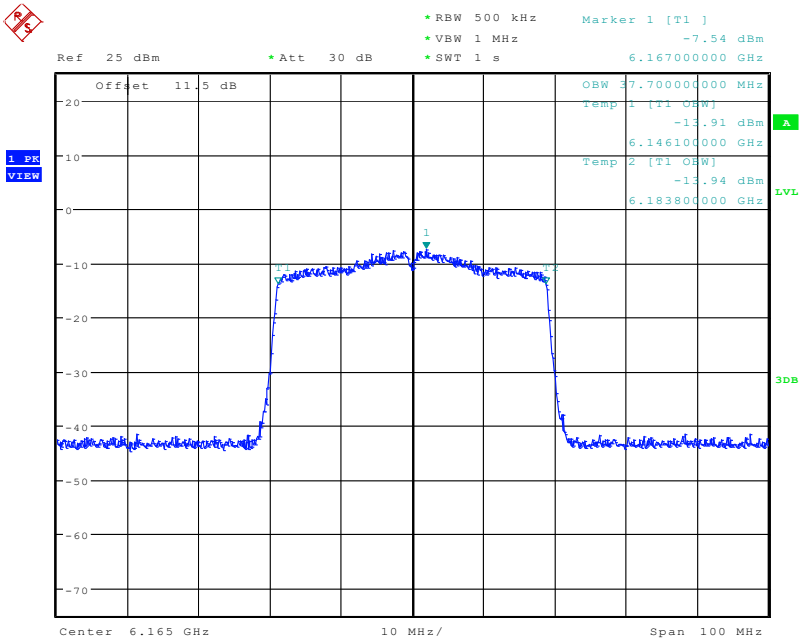
Date: 14.FEB.2023 22:02:19

802. 11AX_HE40_CH3_5965MHz-99% Bandwidth



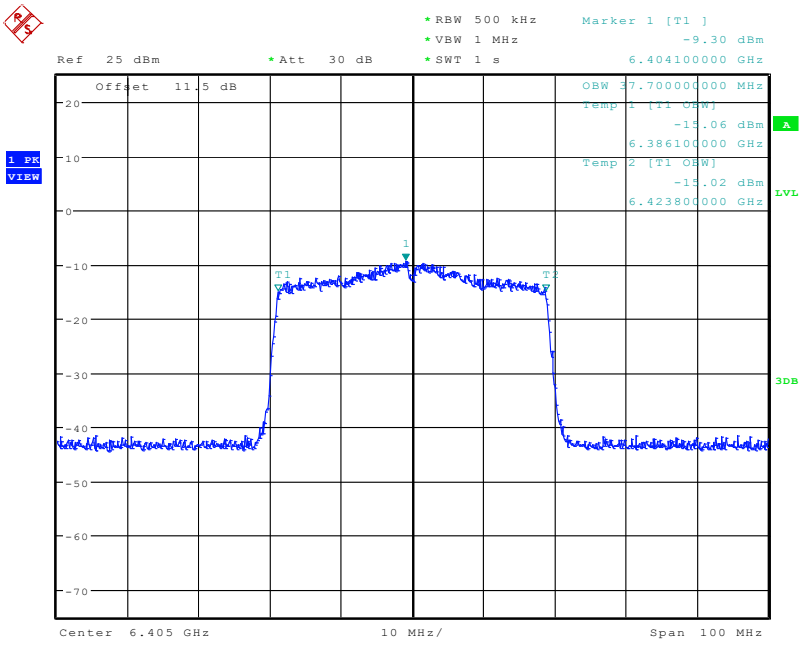
Date: 15.MAR.2023 00:30:26

802.11AX_HE40_CH43_6165MHz-99% Bandwidth



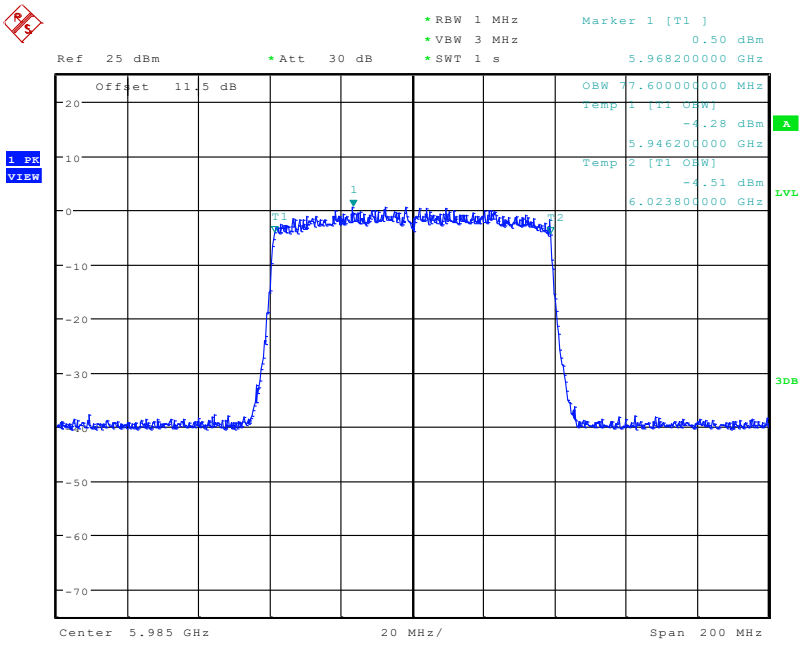
Date: 15.MAR.2023 01:59:09

802.11AX_HE40_CH91_6405MHz-99% Bandwidth



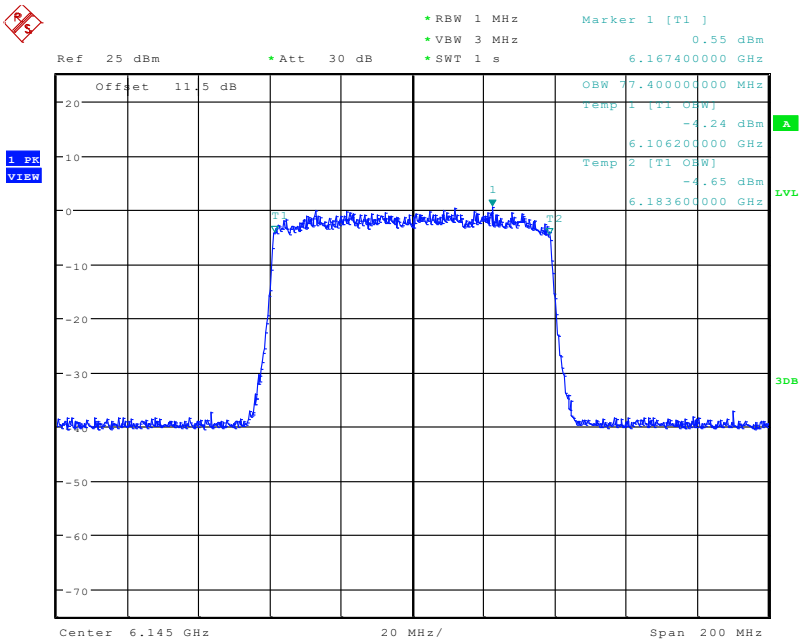
Date: 15.MAR.2023 02:01:12

802. 11AX_HE80_CH7_5985MHz-99% Bandwidth



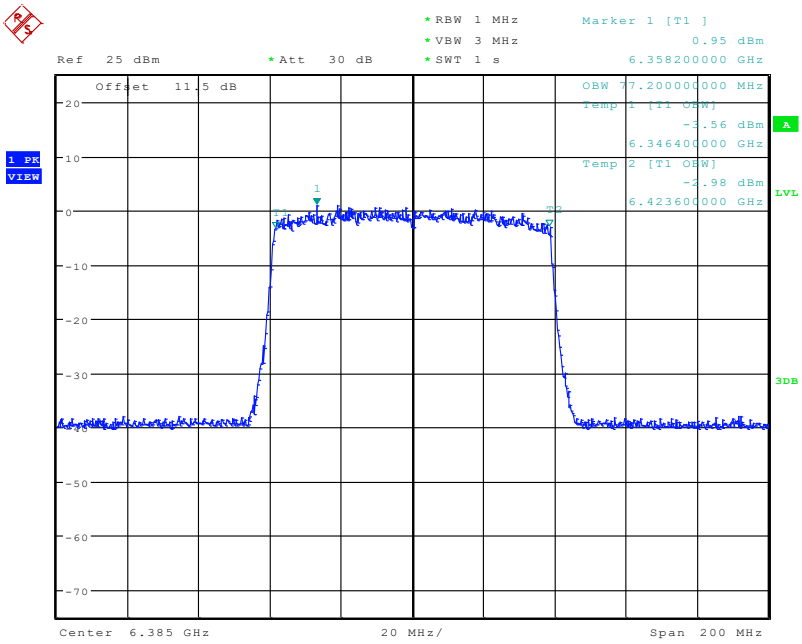
Date: 14.FEB.2023 22:44:50

802. 11AX_HE80_CH39_6145MHz-99% Bandwidth



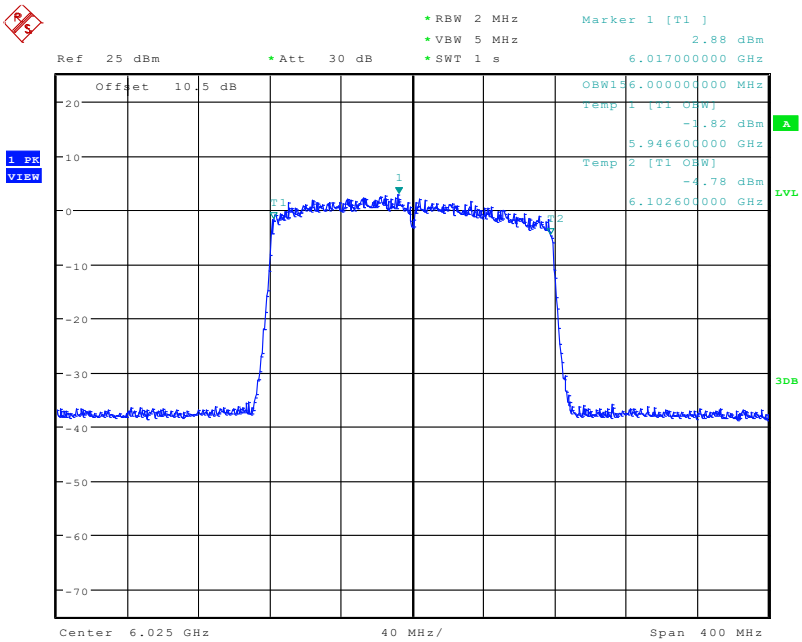
Date: 14.FEB.2023 22:48:35

802. 11AX_HE80_CH87_6385MHz-99% Bandwidth



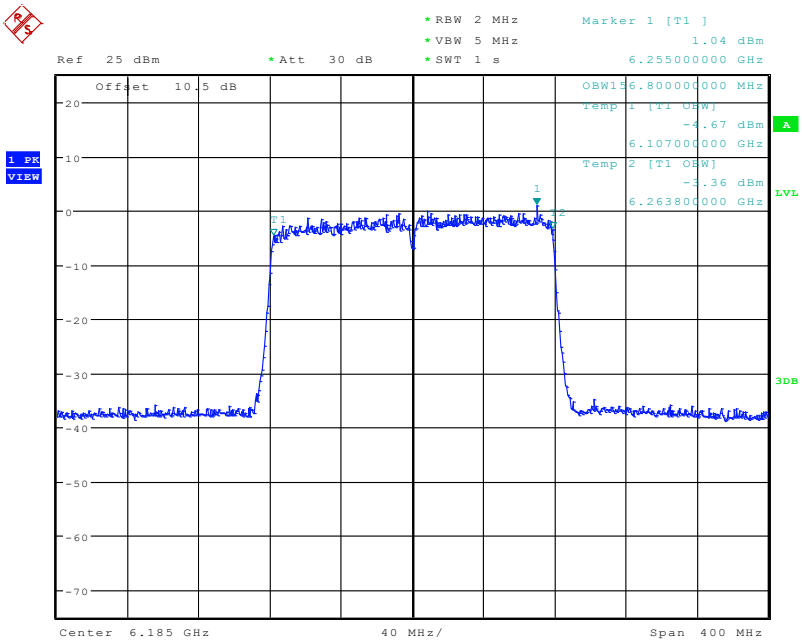
Date: 14.FEB.2023 23:01:06

802. 11AX_HE160_CH15_6025MHz-99% Bandwidth



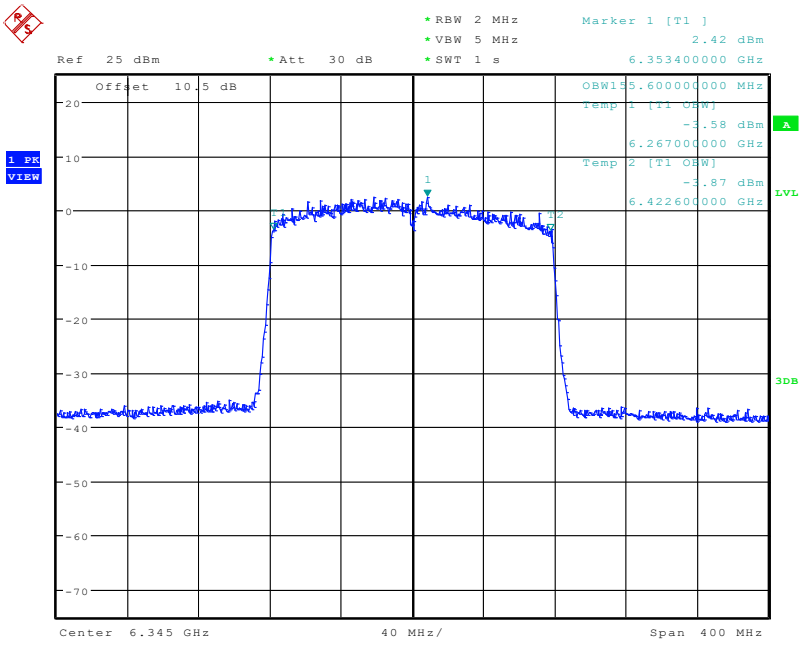
Date: 13.FEB.2023 23:55:59

802. 11AX_HE160_CH47_6185MHz-99% Bandwidth



Date: 13.FEB.2023 23:53:49

802. 11AX_HE160_CH79_6345MHz-99% Bandwidth

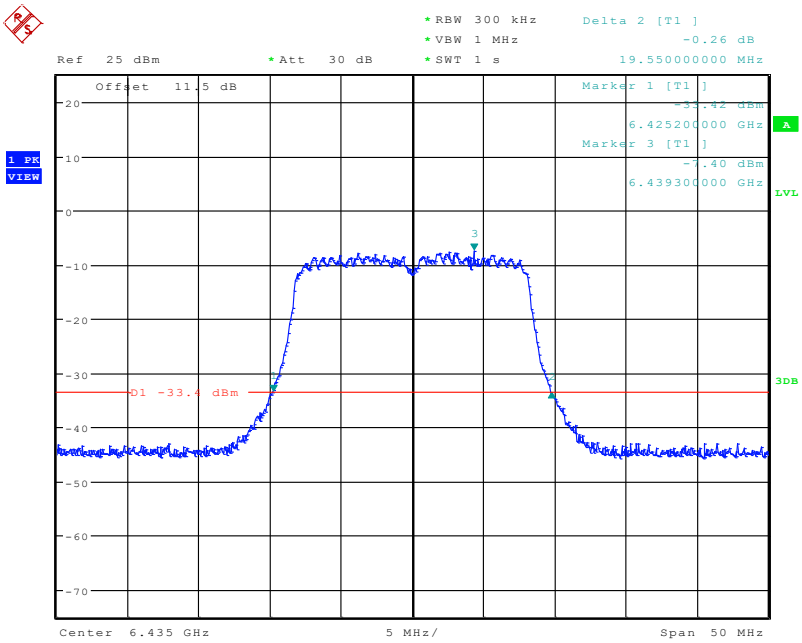


Date: 13.FEB.2023 23:48:47

6425 MHz - 6525 MHz:

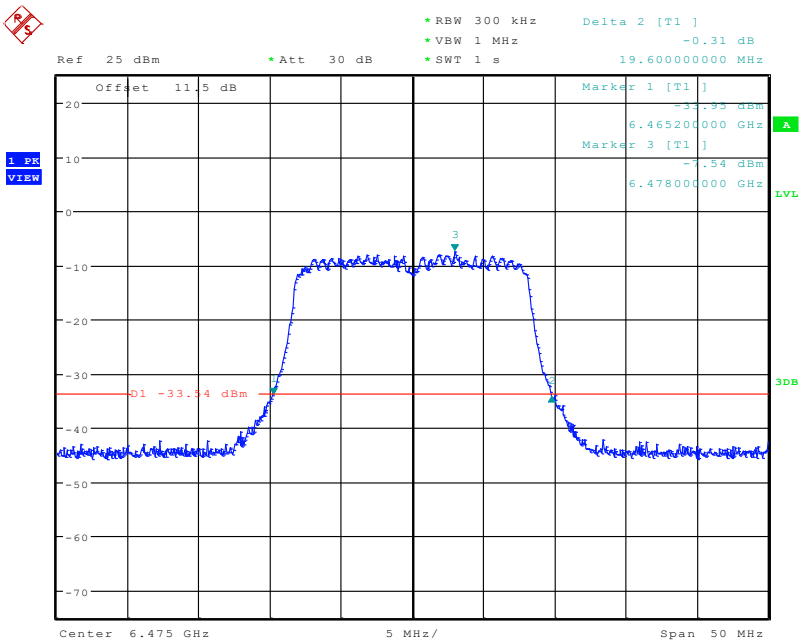
Frequency (MHz)	Antenna Port	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11a				
6435	1	19.55	16.50	320
6475	1	19.60	16.50	320
6515	1	19.75	16.50	320
802.11ax20				
6435	1	21.55	18.95	320
6475	1	21.55	18.95	320
6515	1	21.70	18.95	320
802.11ax40				
6445	1	40.70	37.70	320
6485	1	40.70	37.80	320
6525	1	40.70	37.80	320
802.11ax80				
6465	1	84.00	77.40	320
6545	1	83.20	77.40	320
802.11ax160				
6505	1	168.40	157.20	320

802.11A_CH97_6435MHz-26dB Bandwidth



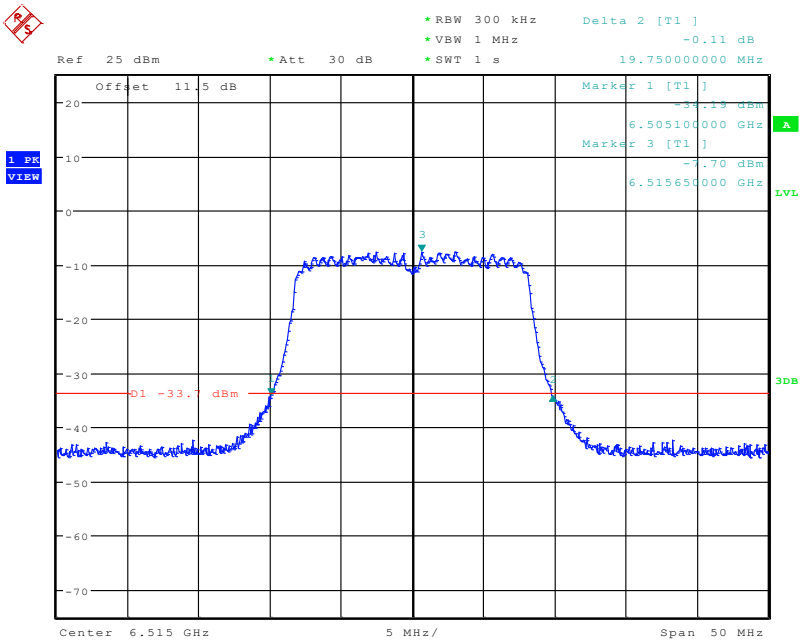
Date: 14.FEB.2023 23:12:49

802.11 11A_CH105_6475MHz-26dB Bandwidth



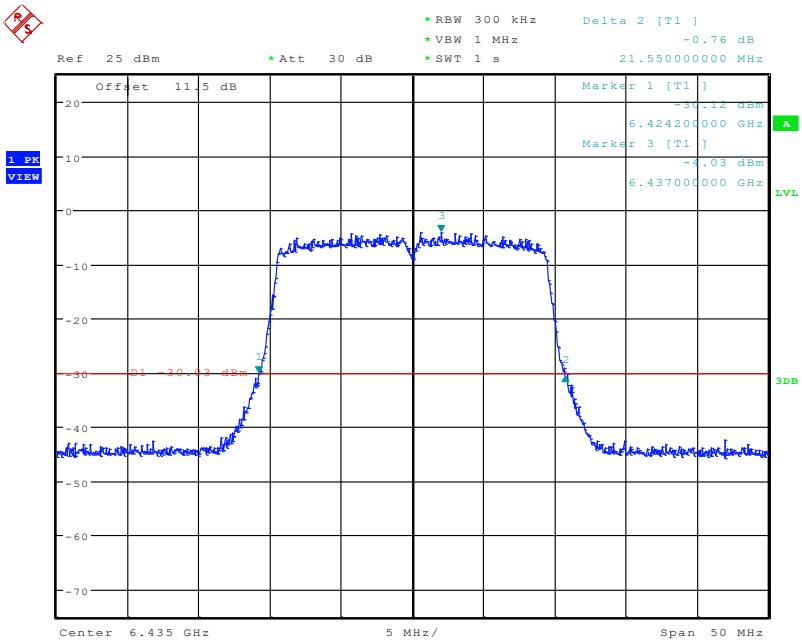
Date: 14.FEB.2023 23:26:34

802.11 A_CH113_6515MHz-26dB Bandwidth



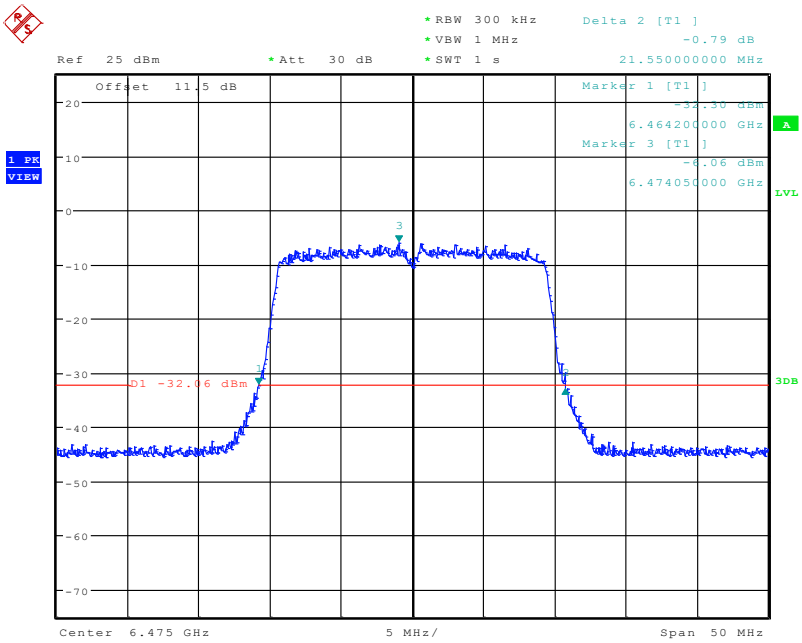
Date: 14.FEB.2023 23:35:18

802. 11AX_HE20_CH97_6435MHz-26dB Bandwidth



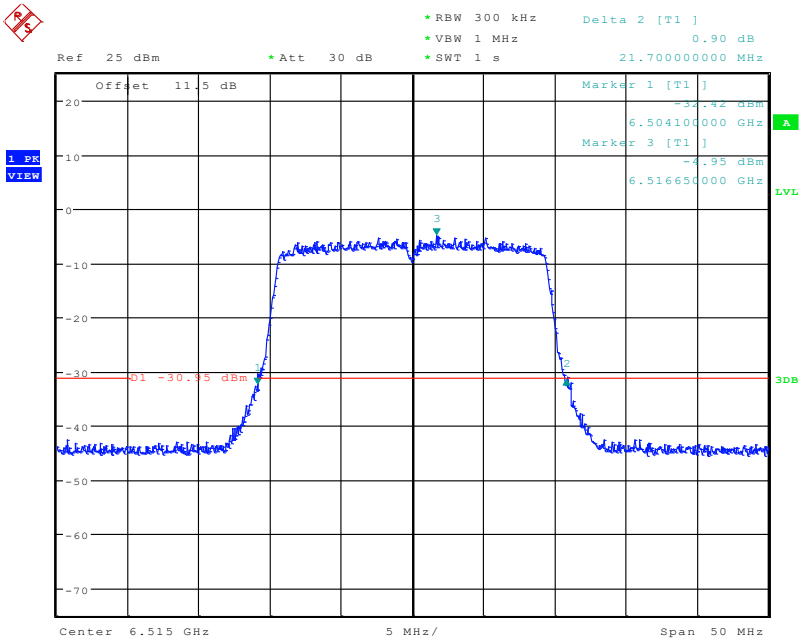
Date: 14.FEB.2023 23:43:15

802. 11AX_HE20_CH105_6475MHz-26dB



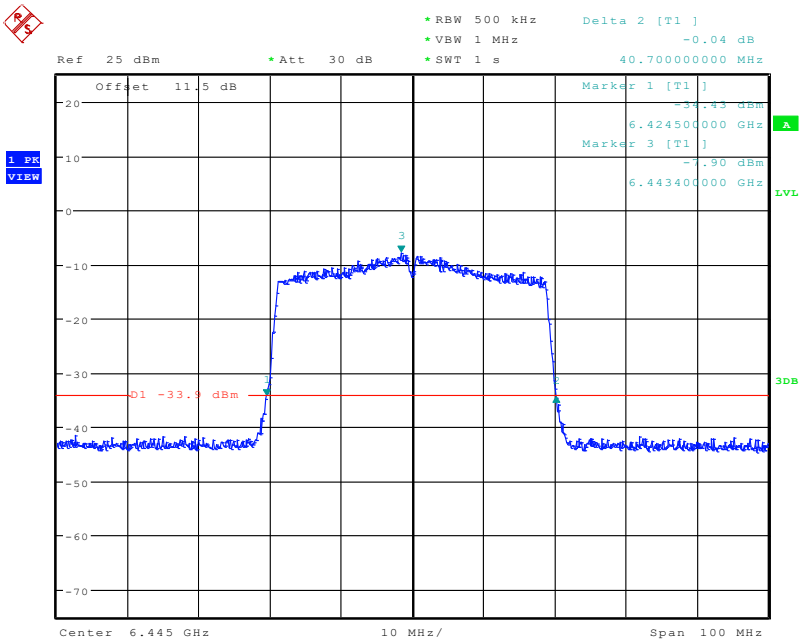
Date: 14.FEB.2023 23:45:53

802.11AX_HE20_CH113_6515MHz-26dB Bandwidth



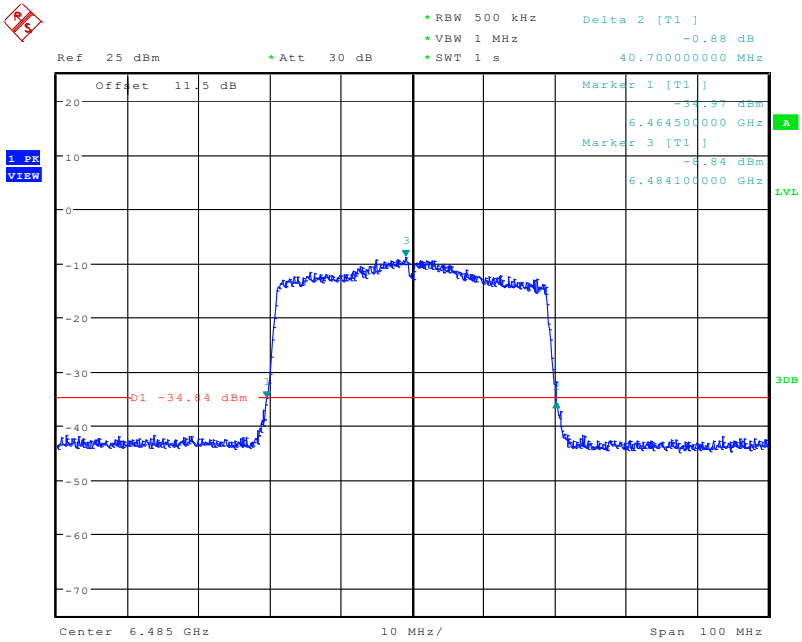
Date: 14.FEB.2023 23:54:11

802. 11AX_HE40_CH99_6445MHz-26dB Bandwidth



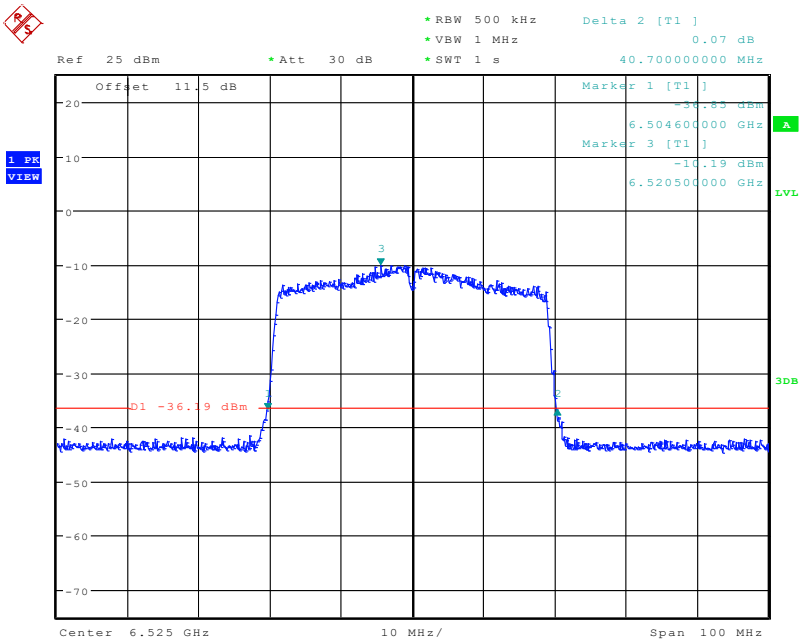
Date: 15.MAR.2023 02:03:37

802.11AX_HE40_CH107_6485MHz-26dB Bandwidth



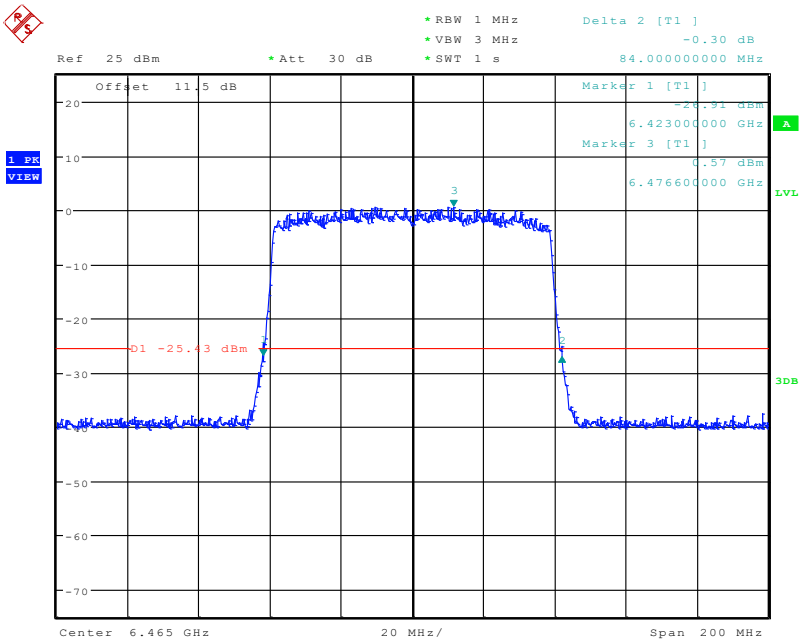
Date: 15.MAR.2023 02:05:16

802.11AX_HE40_CH115_6525MHz-26dB Bandwidth



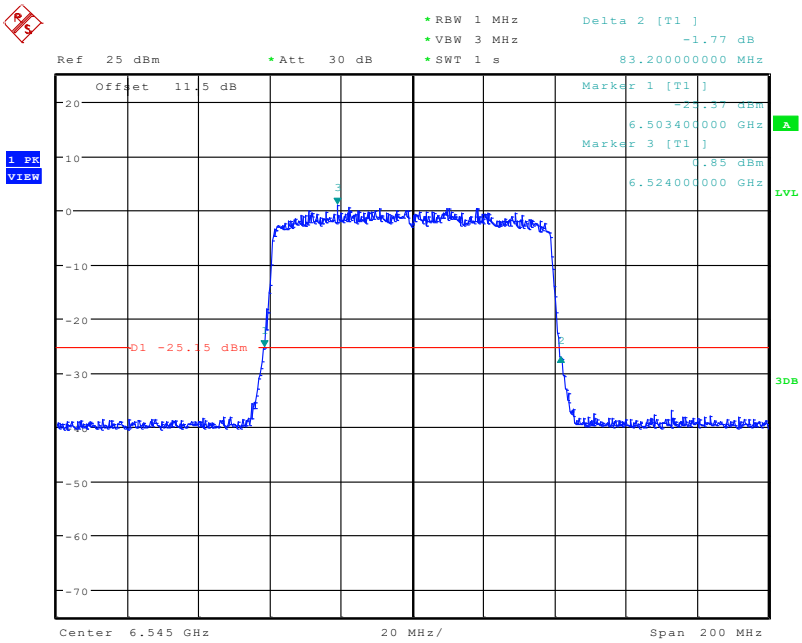
Date: 15.MAR.2023 02:06:49

802. 11AX_HE80_CH103_6465MHz-26dB Bandwidth



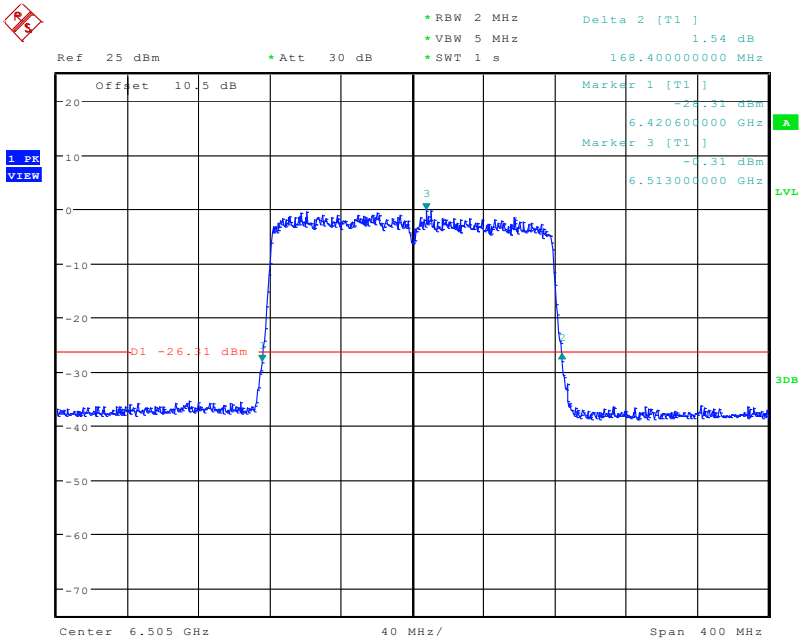
Date: 15.FEB.2023 00:27:17

802. 11AX_HE80_CH119_6545MHz-26dB Bandwidth



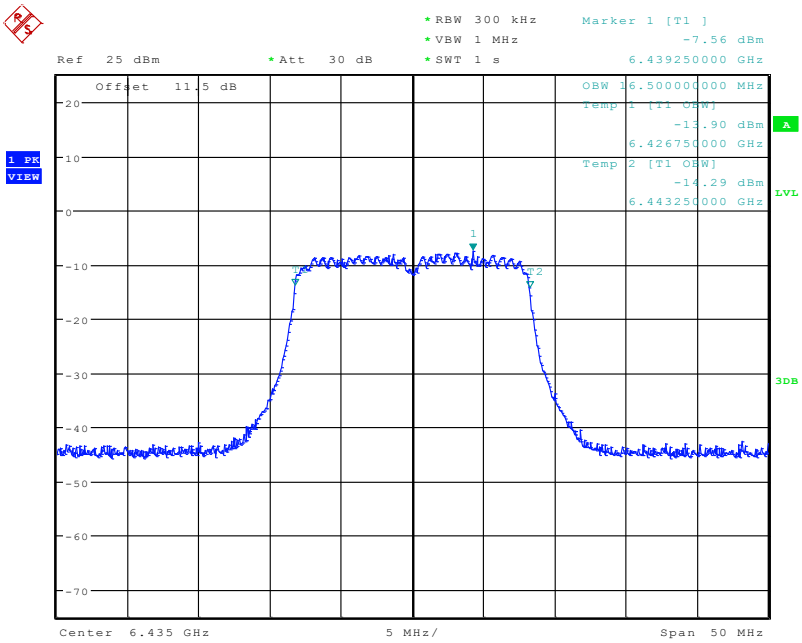
Date: 15.FEB.2023 00:30:58

802. 11AX_HE160_CH111_6505MHz-26dB Bandwidth



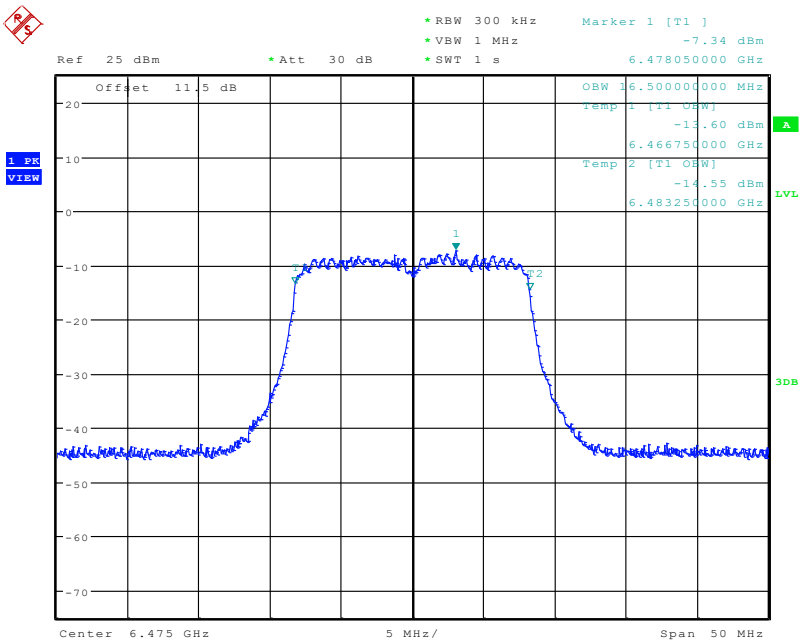
Date: 13.FEB.2023 23:46:44

802.11A_CH97_6435MHz-99% Bandwidth



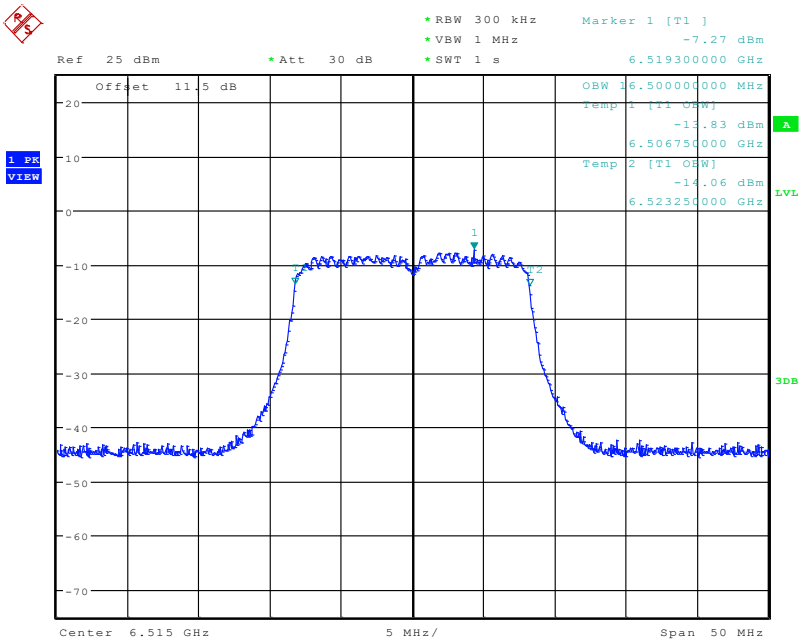
Date: 14.FEB.2023 23:12:29

802.11 11A_CH105_6475MHz-99% Bandwidth



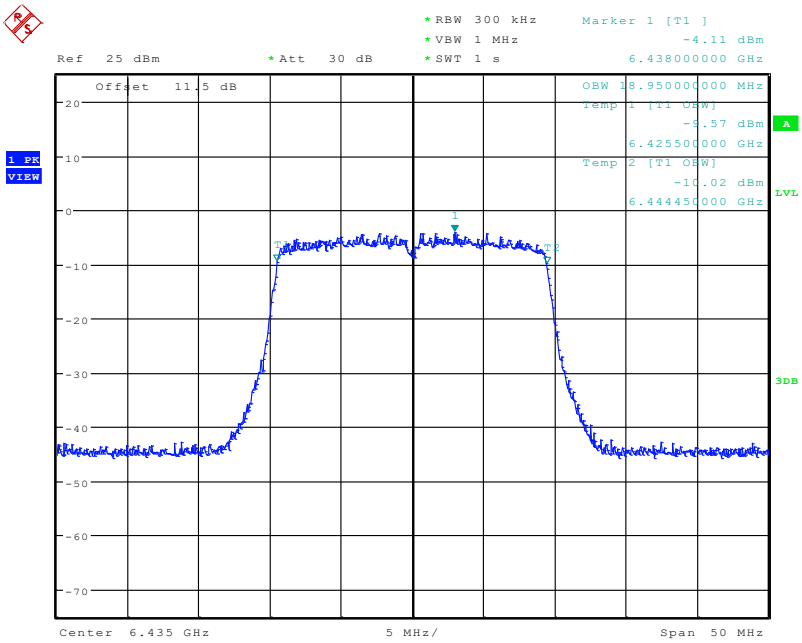
Date: 14.FEB.2023 23:26:14

802.11 A_CH113_6515MHz-99% Bandwidth



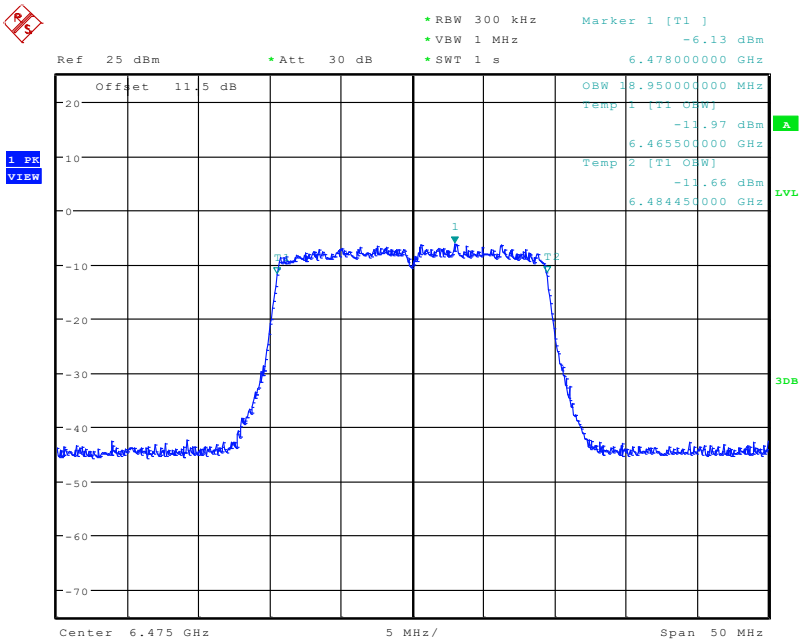
Date: 14.FEB.2023 23:34:59

802. 11AX_HE20_CH97_6435MHz-99% Bandwidth



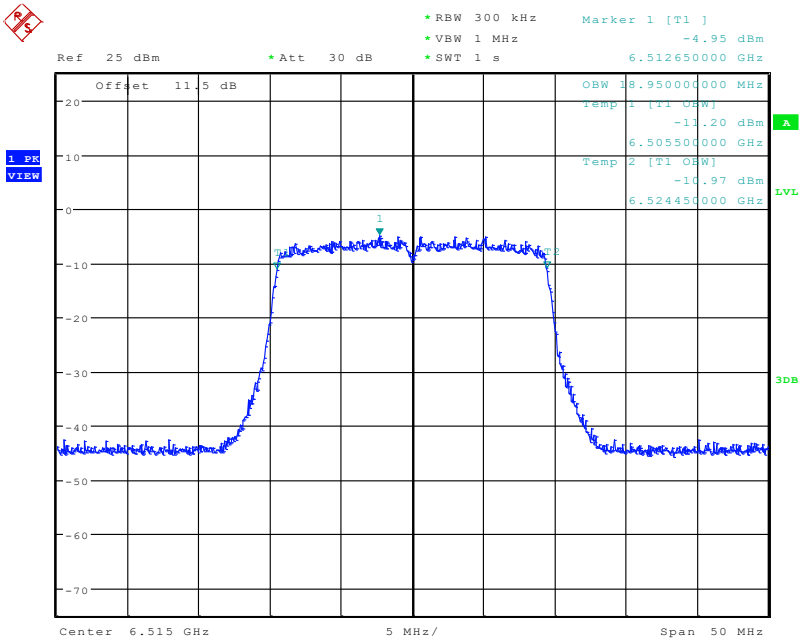
Date: 14.FEB.2023 23:42:54

802. 11AX_HE20_CH105_6475MHz-26dB



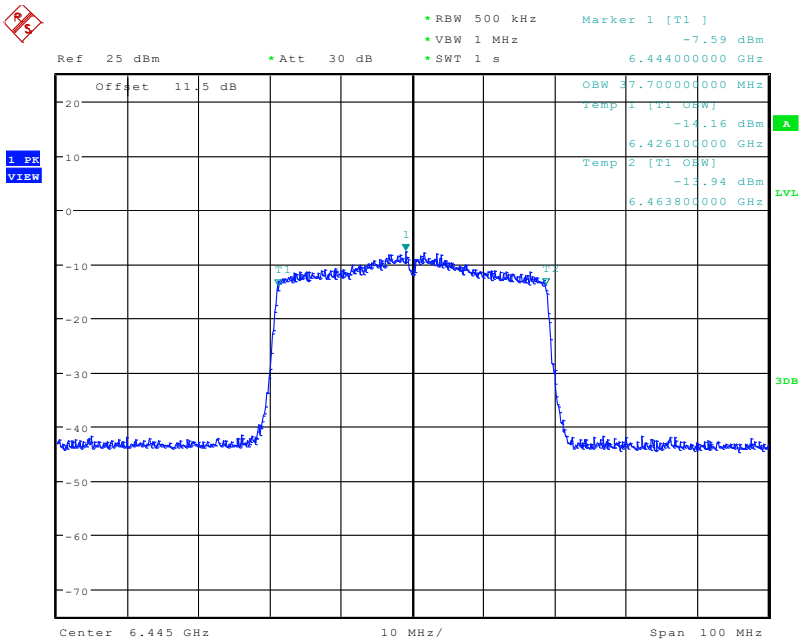
Date: 14.FEB.2023 23:45:32

802.11AX_HE20_CH113_6515MHz-99% Bandwidth



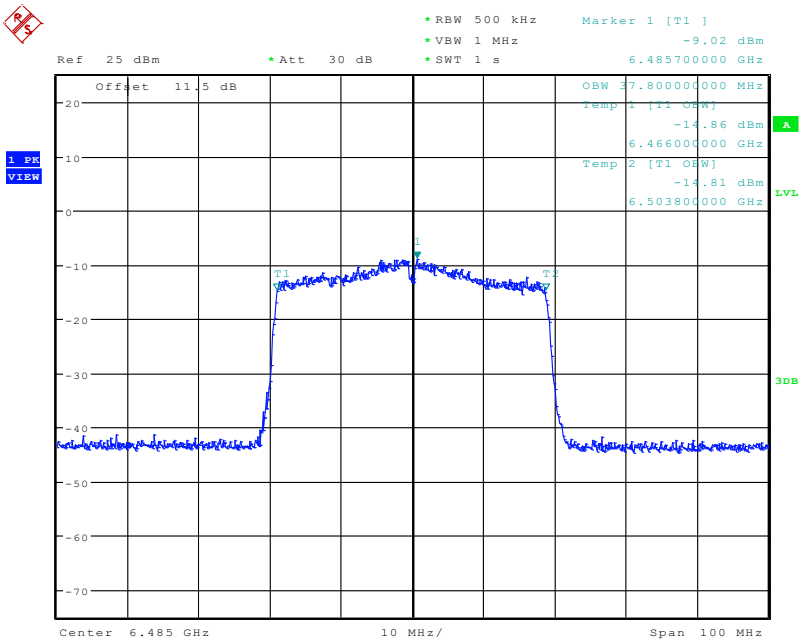
Date: 14.FEB.2023 23:53:52

802. 11AX_HE40_CH99_6445MHz-99% Bandwidth



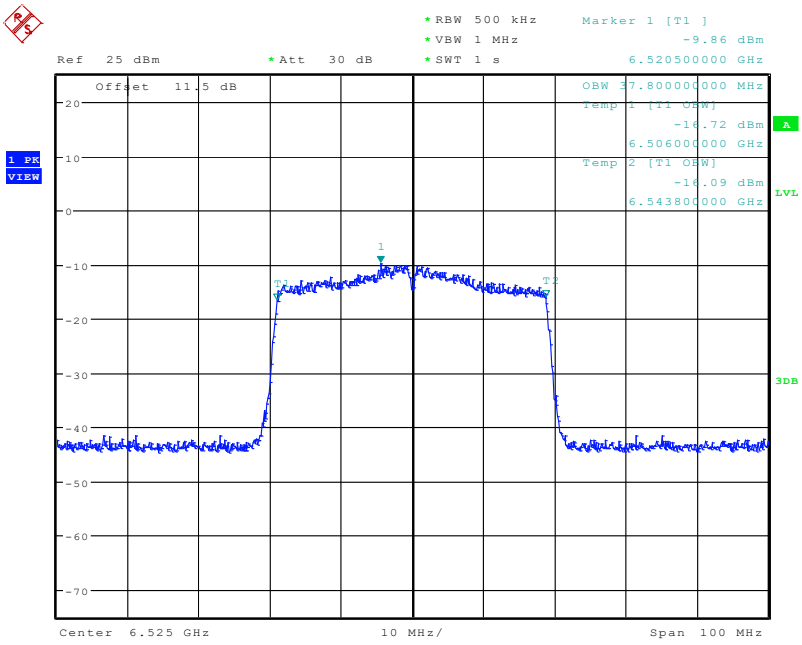
Date: 15.MAR.2023 02:03:17

802.11AX_HE40_CH107_6485MHz-99% Bandwidth



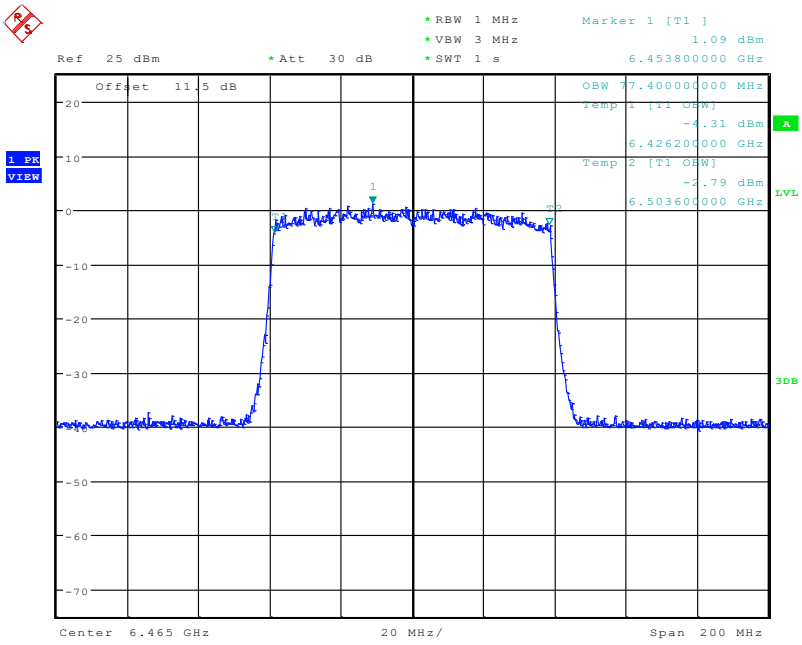
Date: 15.MAR.2023 02:04:56

802.11AX_HE40_CH115_6525MHz-99% Bandwidth



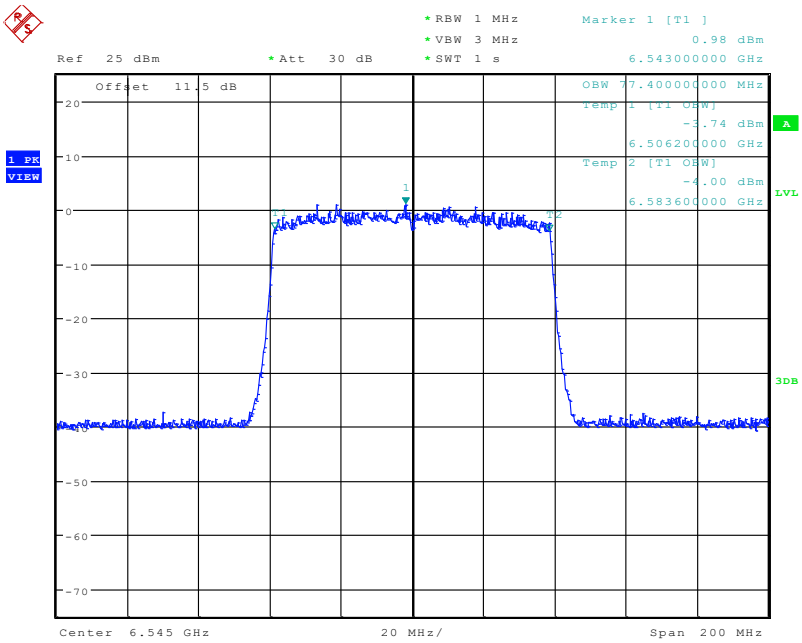
Date: 15.MAR.2023 02:06:30

802. 11AX_HE80_CH103_6465MHz-99% Bandwidth



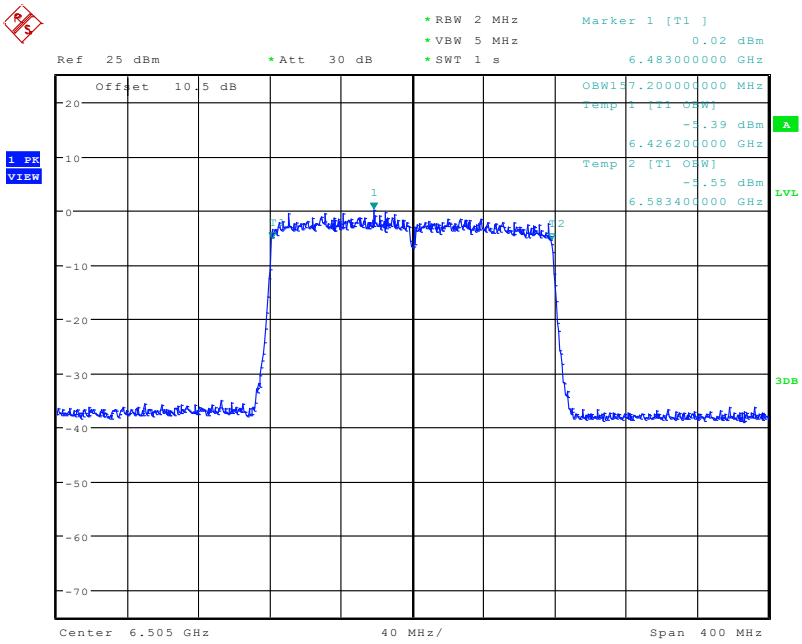
Date: 15.FEB.2023 00:26:56

802. 11AX_HE80_CH119_6545MHz-99% Bandwidth



Date: 15.FEB.2023 00:30:38

802. 11AX_HE160_CH111_6505MHz-99% Bandwidth

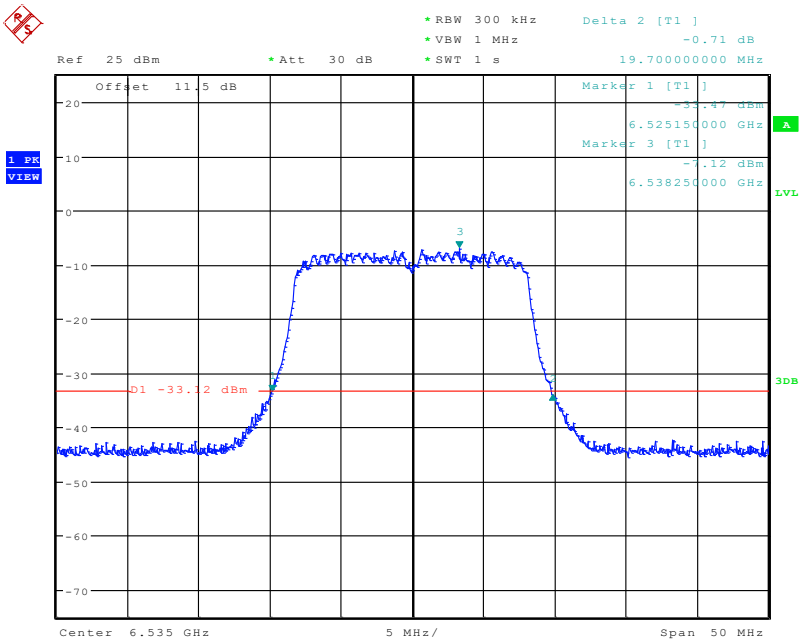


Date: 13.FEB.2023 23:46:25

6525 MHz – 6875 MHz:

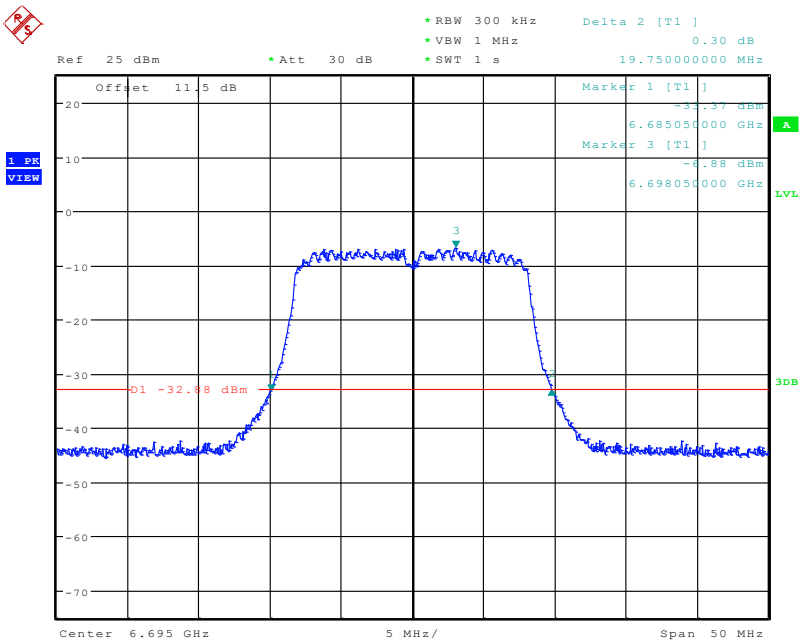
Frequency (MHz)	Antenna Port	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11a				
6535	1	19.70	16.45	320
6695	1	19.75	16.45	320
6855	1	19.55	16.50	320
802.11ax20				
6535	1	21.60	18.95	320
6695	1	21.60	19.00	320
6855	1	21.65	19.00	320
802.11ax40				
6565	1	40.80	37.70	320
6685	1	40.80	37.80	320
6845	1	41.00	37.80	320
802.11ax80				
6625	1	83.60	77.40	320
6705	1	83.40	77.40	320
6785	1	83.60	77.40	320
6865	1	83.60	77.40	320
802.11ax160				
6665	1	166.00	155.60	320
6825	1	167.60	156.80	320

802.11A_CH117_6535MHz-26dB Bandwidth



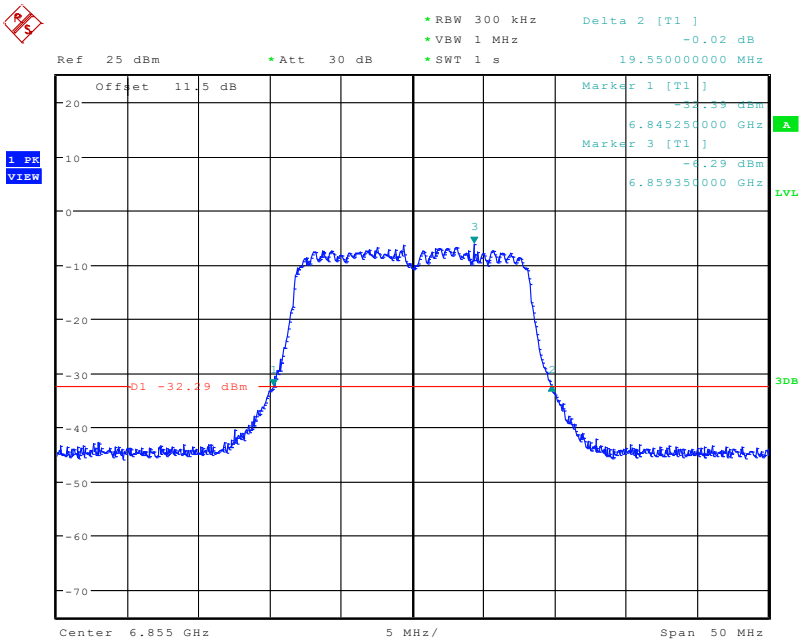
Date: 15.FEB.2023 00:40:34

802.11 11A_CH149_6695MHz-26dB Bandwidth



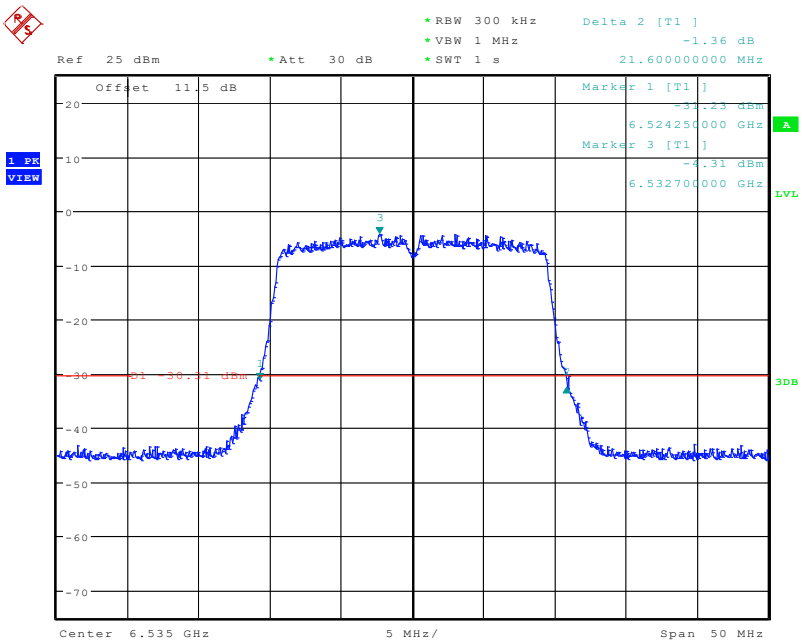
Date: 15.FEB.2023 00:54:58

802.11 A_CH181_6855MHz-26dB Bandwidth



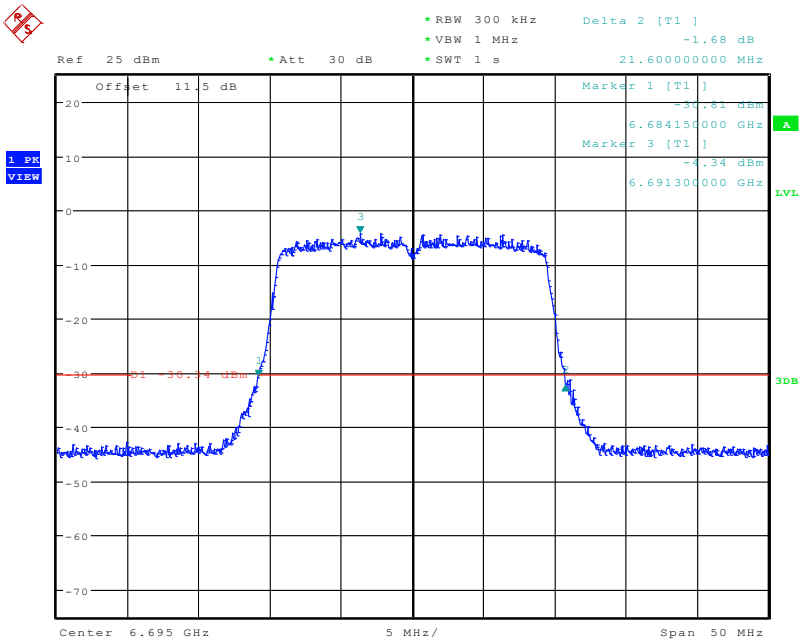
Date: 15.FEB.2023 18:01:29

802. 11AX_HE20_CH117_6535MHz-26dB Bandwidth



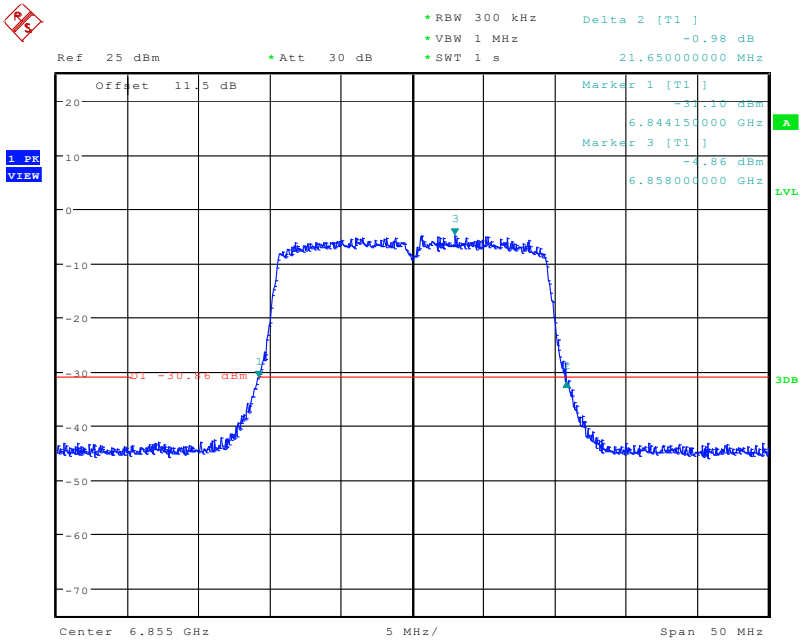
Date: 15.FEB.2023 18:05:25

802. 11AX_HE20_CH149_6695MHz-26dB



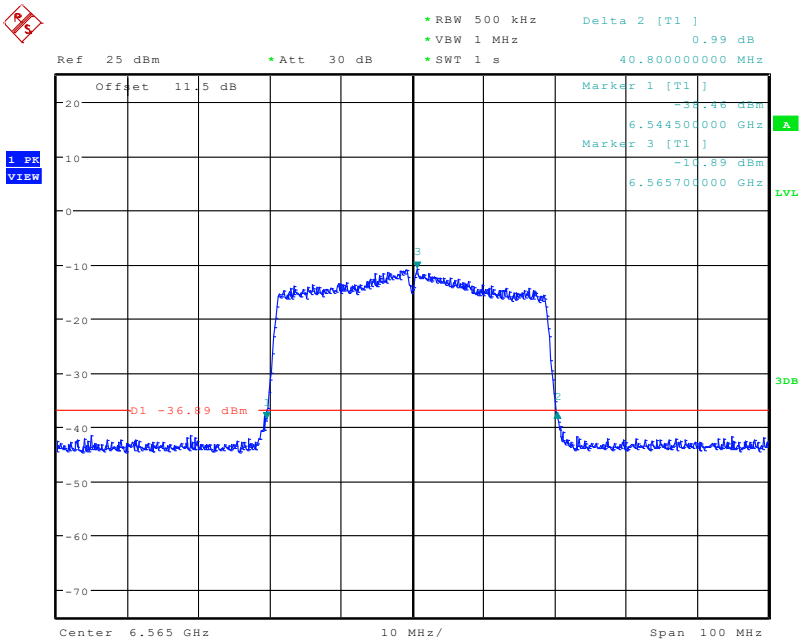
Date: 15.FEB.2023 18:14:00

802.11AX_HE20_CH181_6855MHz-26dB Bandwidth



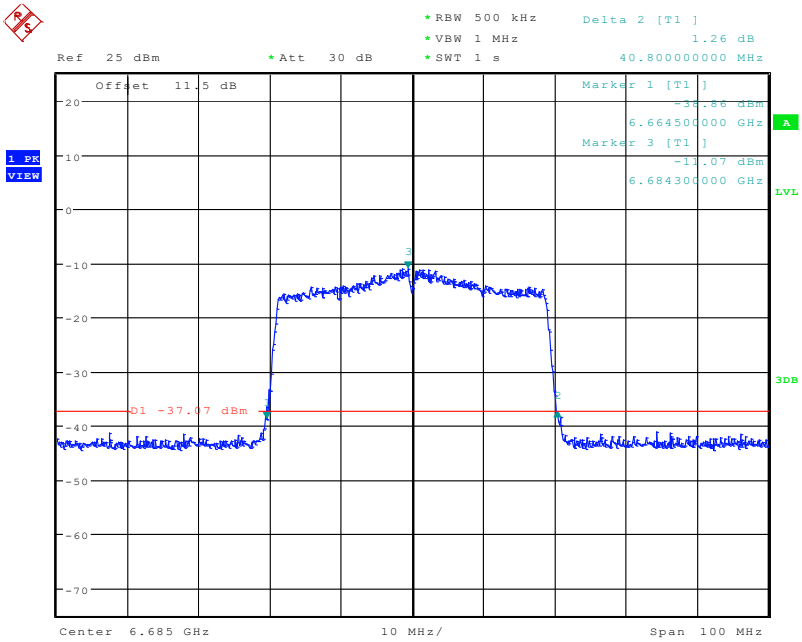
Date: 15.FEB.2023 18:16:38

802. 11AX_HE40_CH123_6565MHz-26dB Bandwidth



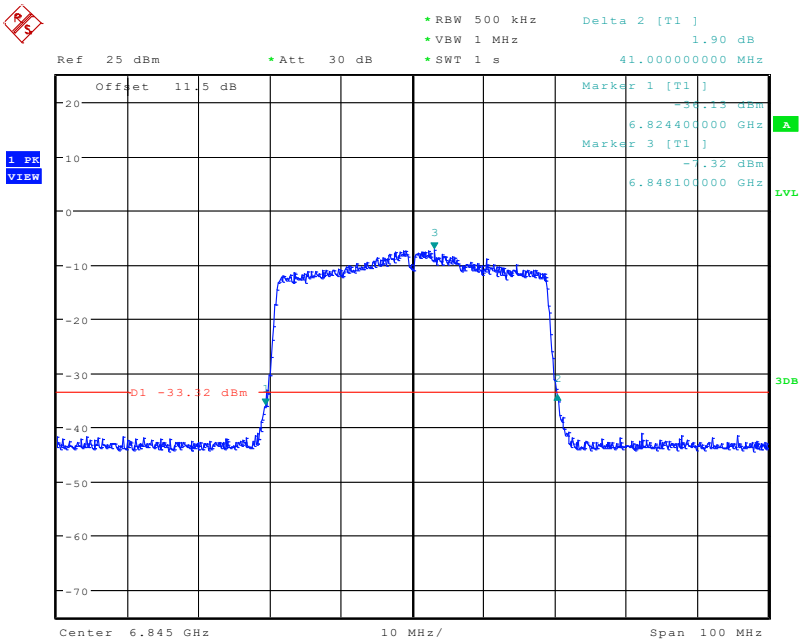
Date: 15.MAR.2023 02:08:40

802.11AX_HE40_CH147_6685MHz-26dB Bandwidth



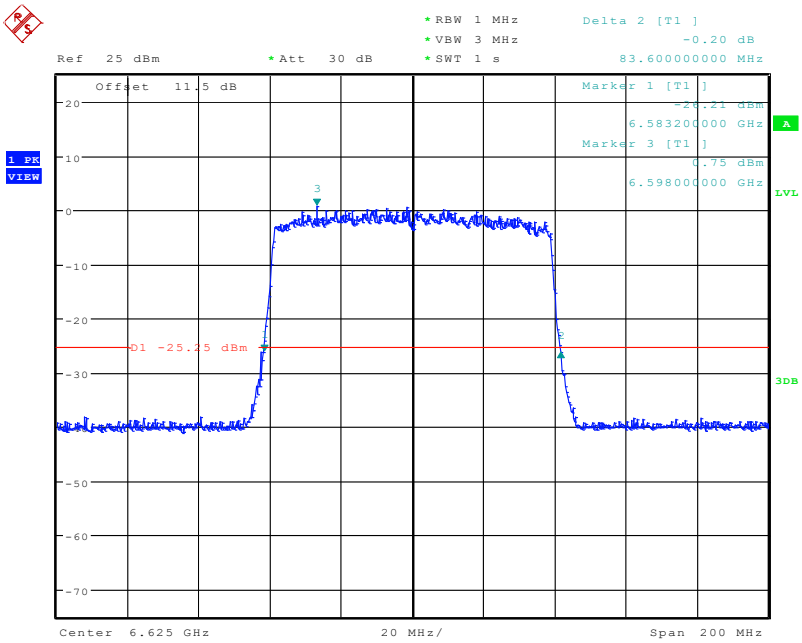
Date: 15.MAR.2023 02:10:45

802.11AX_HE40_CH179_6845MHz-26dB Bandwidth



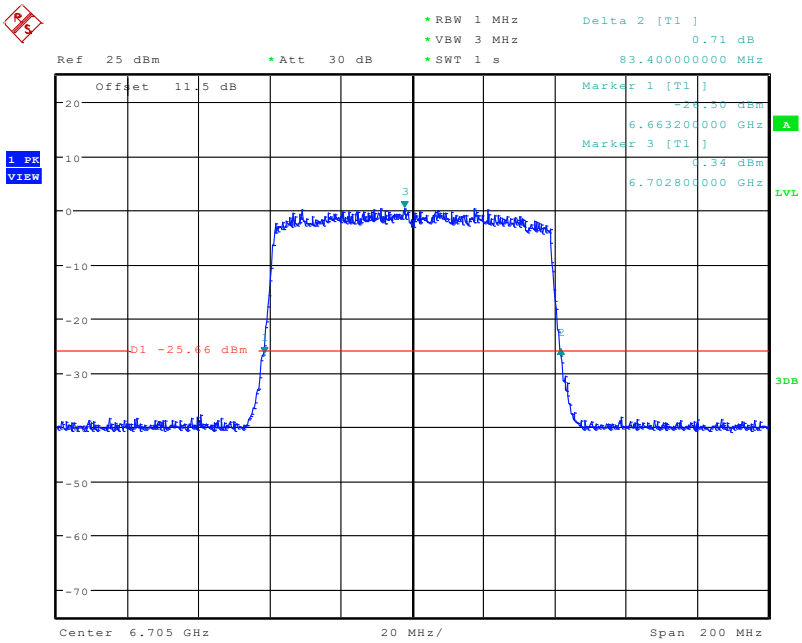
Date: 15.MAR.2023 02:12:57

802. 11AX_HE80_CH135_6625MHz-26dB Bandwidth



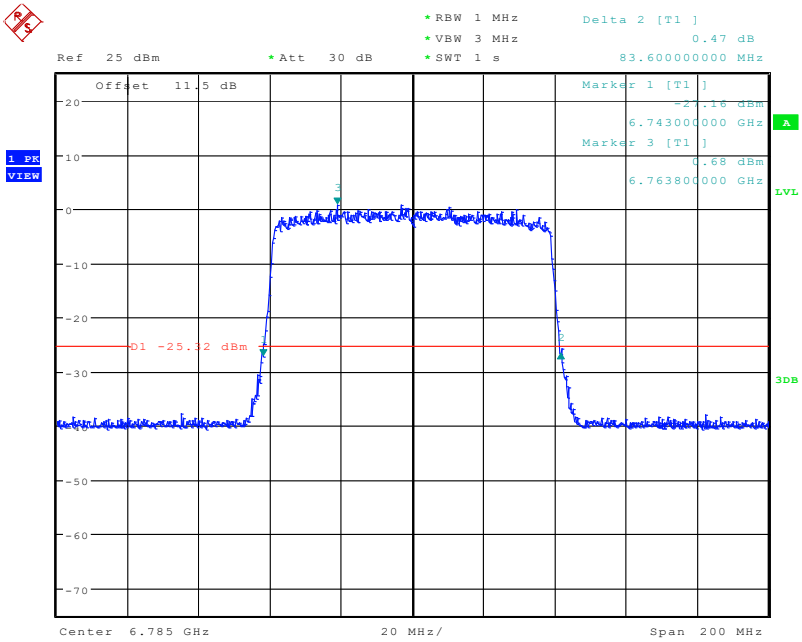
Date: 15.FEB.2023 18:45:58

802. 11AX_HE80_CH151_6705MHz-26dB Bandwidth



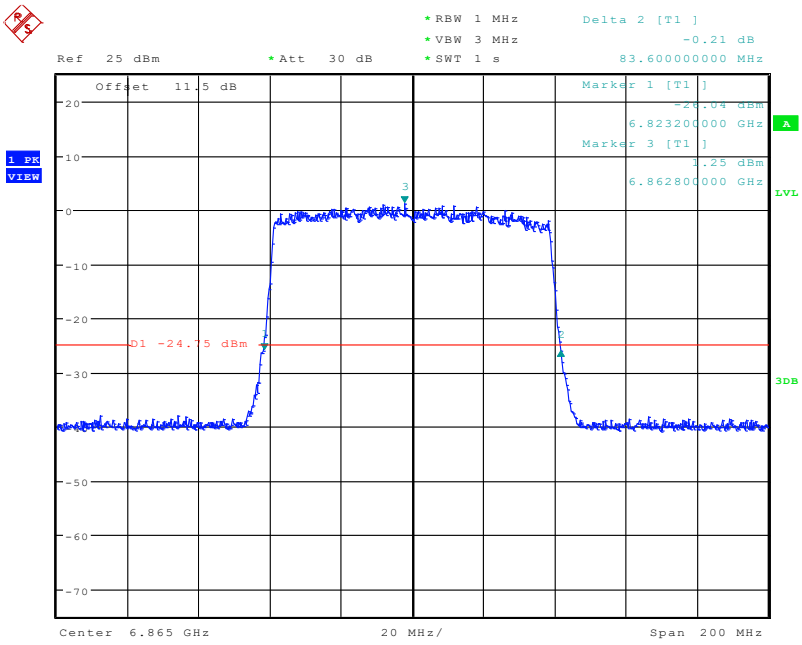
Date: 15.FEB.2023 18:54:40

802. 11AX_HE80_CH167_6785MHz-26dB Bandwidth



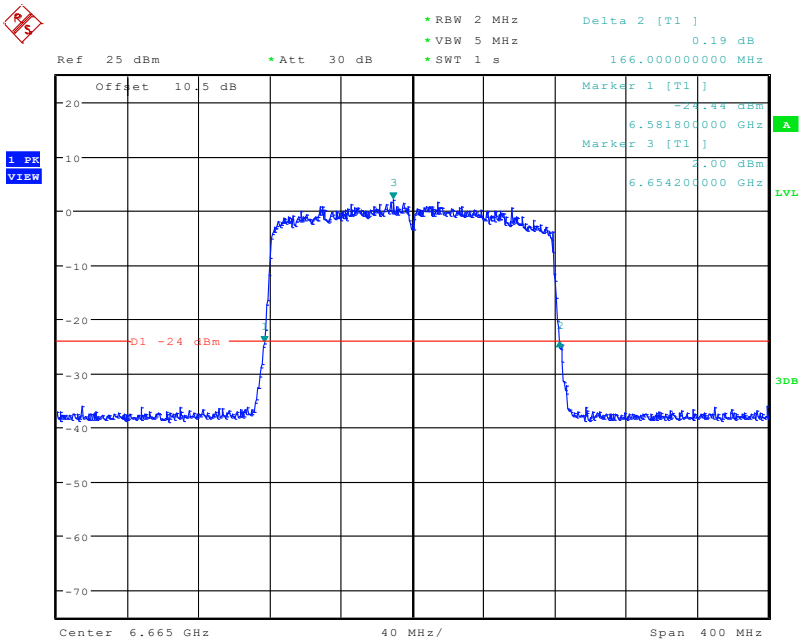
Date: 15.FEB.2023 18:57:59

802. 11AX_HE80_CH183_6865MHz-26dB Bandwidth



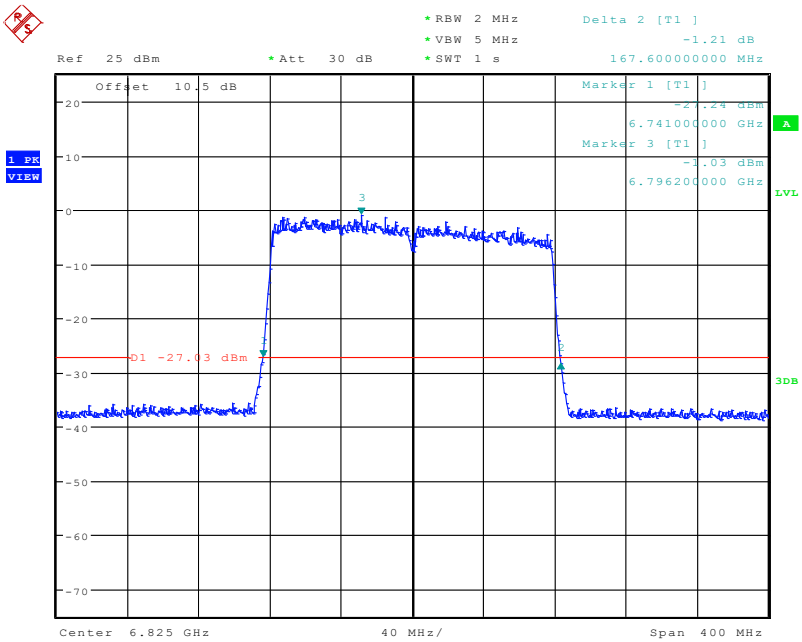
Date: 15.FEB.2023 19:08:46

802. 11AX_HE160_CH143_6665MHz-26dB Bandwidth



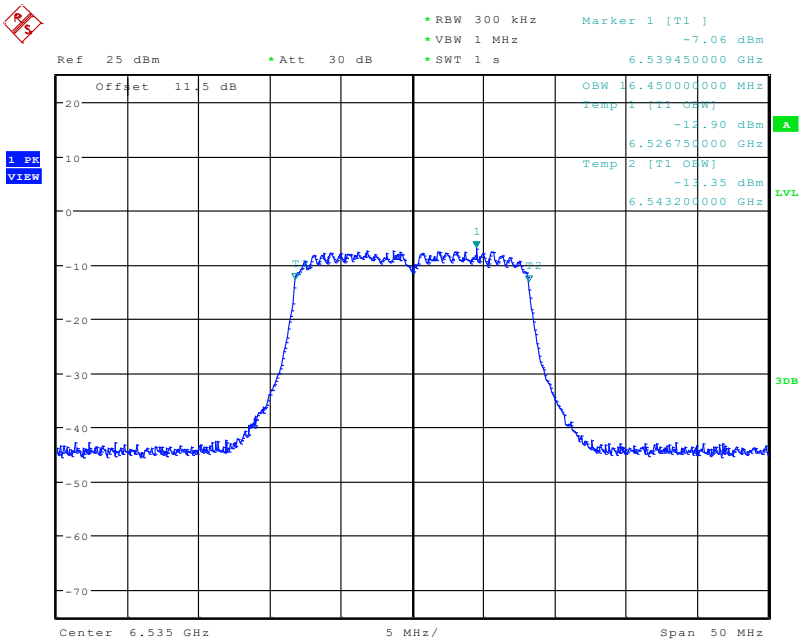
Date: 13.FEB.2023 23:41:25

802. 11AX_HE160_CH175_6825MHz-26dB Bandwidth



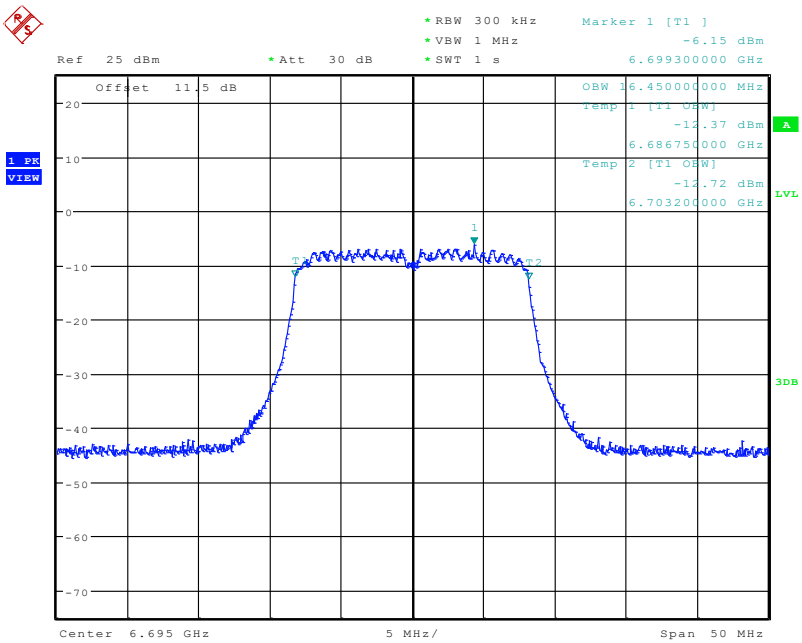
Date: 13.FEB.2023 23:38:36

802.11A_CH117_6535MHz-99% Bandwidth



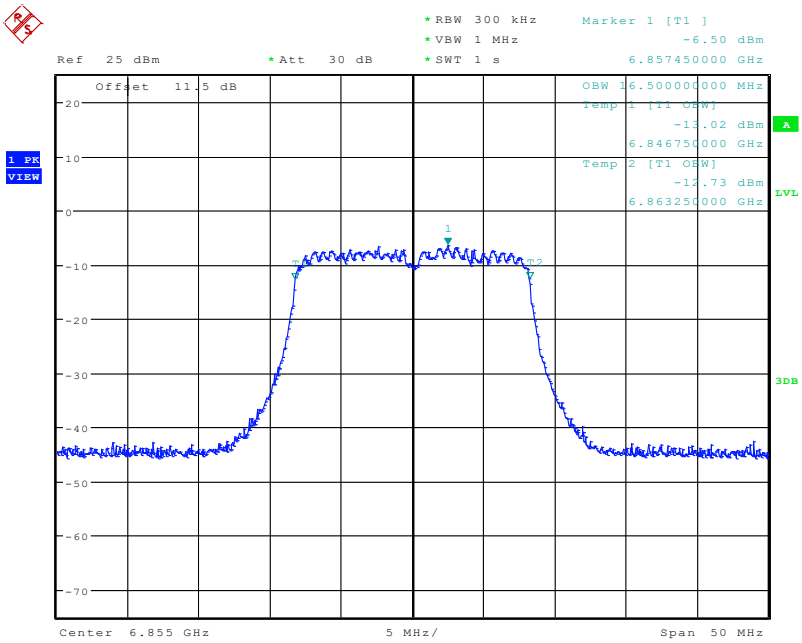
Date: 15.FEB.2023 00:40:14

802.11 11A_CH149_6695MHz-99% Bandwidth



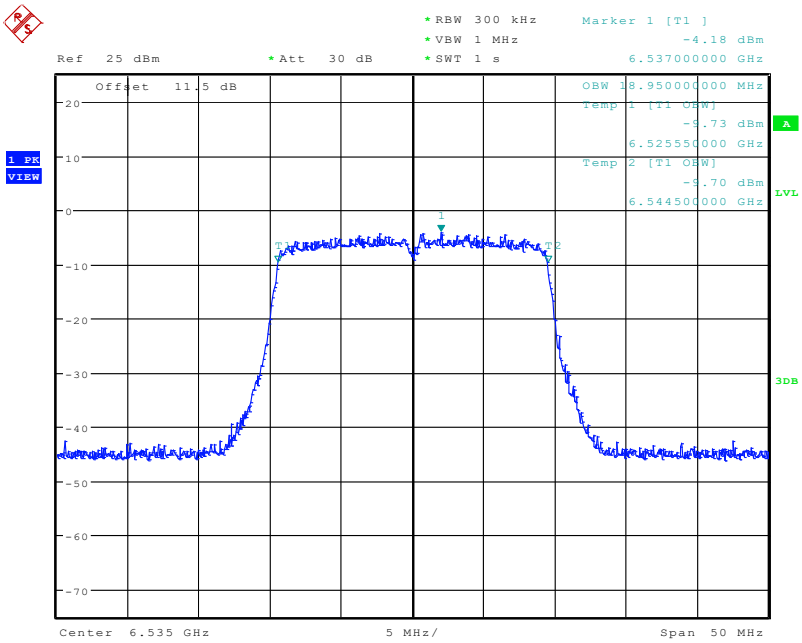
Date: 15.FEB.2023 00:54:38

802.11 A_CH181_6855MHz-99% Bandwidth



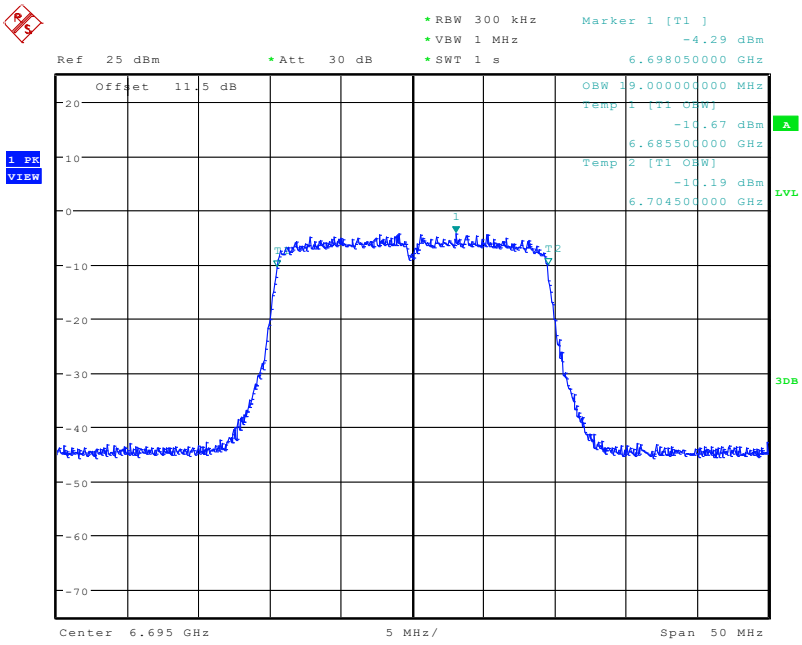
Date: 15.FEB.2023 18:01:10

802. 11AX_HE20_CH117_6535MHz-99% Bandwidth



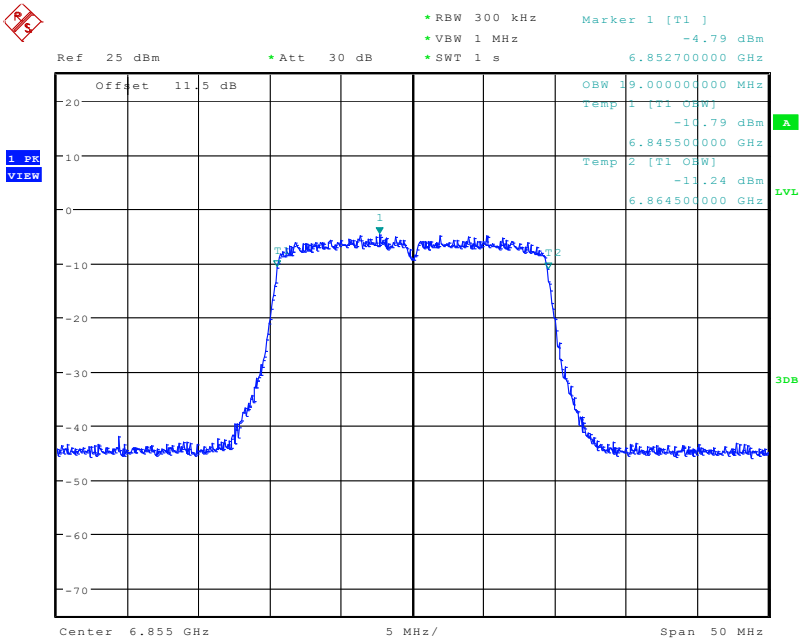
Date: 15.FEB.2023 18:05:05

802. 11AX_HE20_CH149_6695MHz-26dB



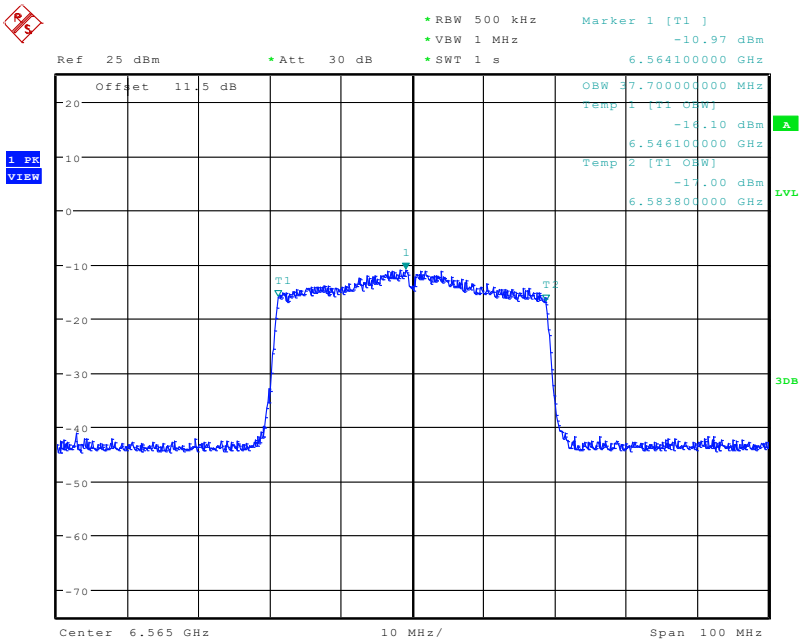
Date: 15.FEB.2023 18:13:41

802.11AX_HE20_CH181_6855MHz-99% Bandwidth



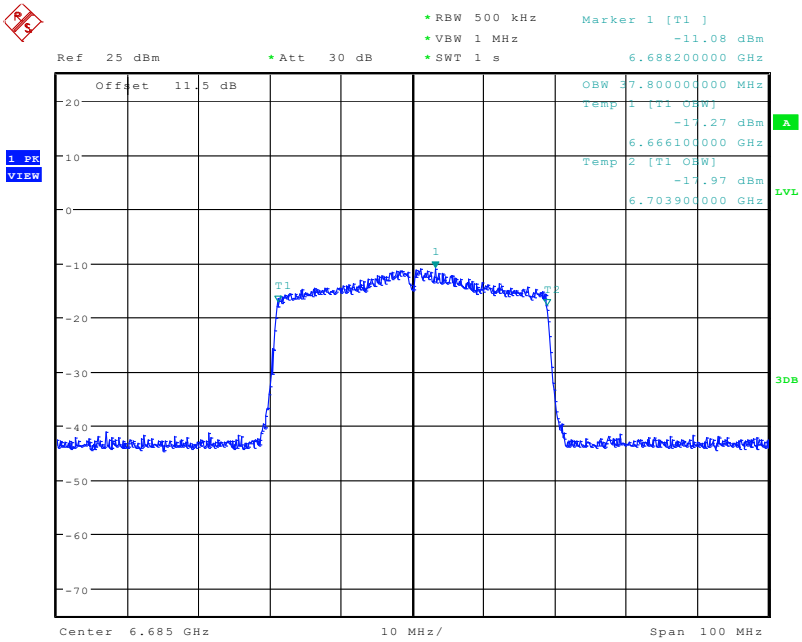
Date: 15.FEB.2023 18:16:18

802. 11AX_HE40M_CH123_6565MHz-99% Bandwidth



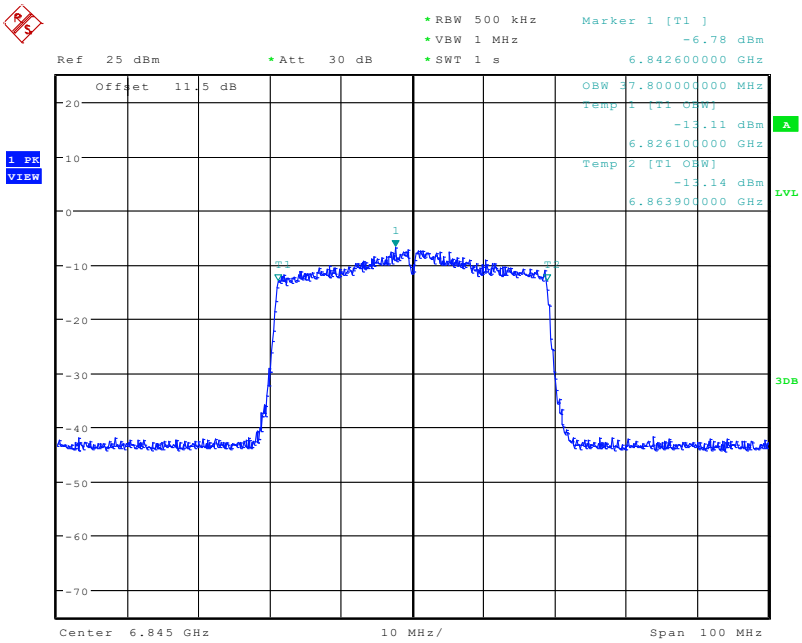
Date: 15.MAR.2023 02:08:20

802.11AX_HE40_CH147_6685MHz-99% Bandwidth



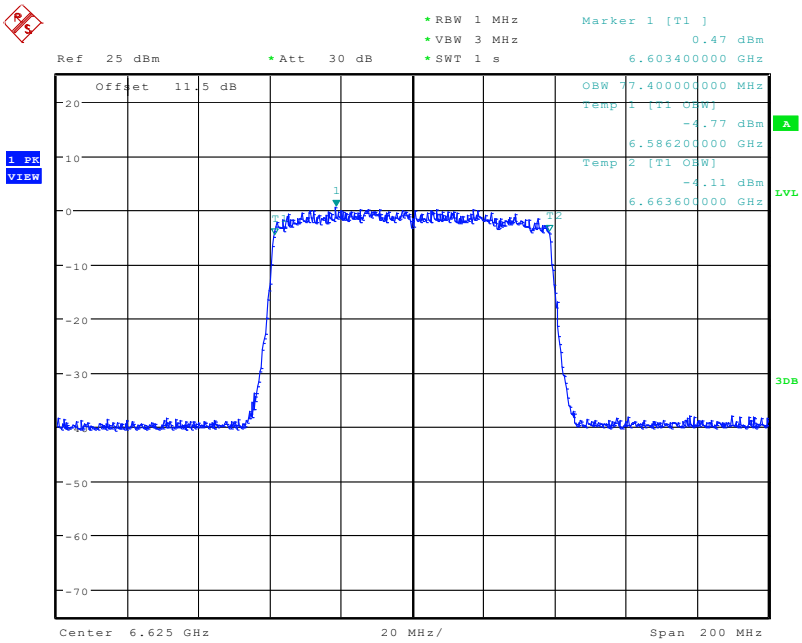
Date: 15.MAR.2023 02:10:26

802.11AX_HE40_CH179_6845MHz-99% Bandwidth



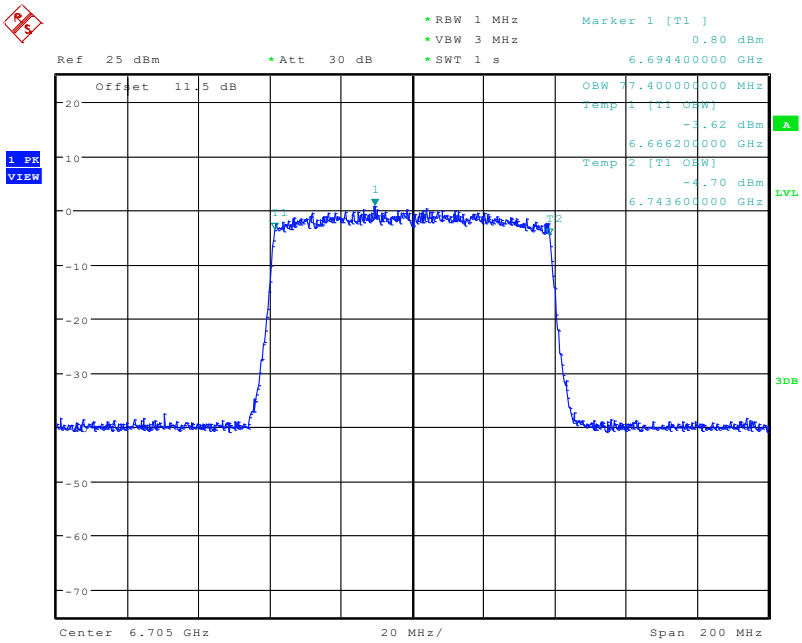
Date: 15.MAR.2023 02:12:37

802. 11AX_HE80_CH135_6625MHz-99% Bandwidth



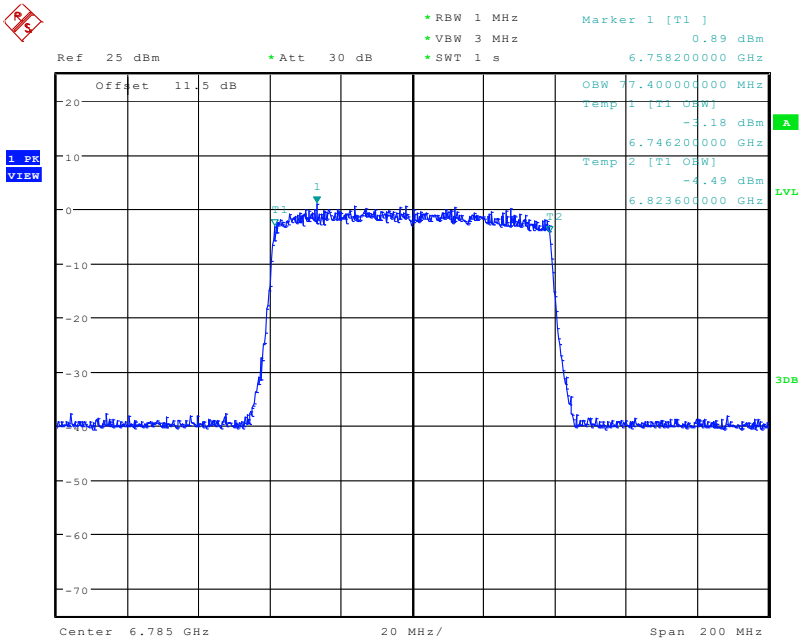
Date: 15.FEB.2023 18:45:39

802. 11AX_HE80_CH151_6705MHz-99% Bandwidth



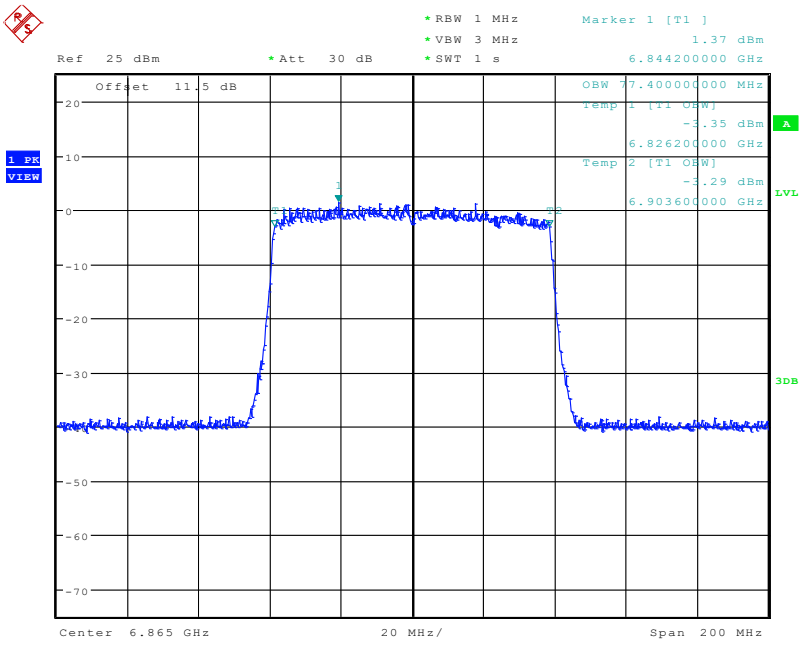
Date: 15.FEB.2023 18:54:20

802. 11AX_HE80_CH167_6785MHz-99% Bandwidth



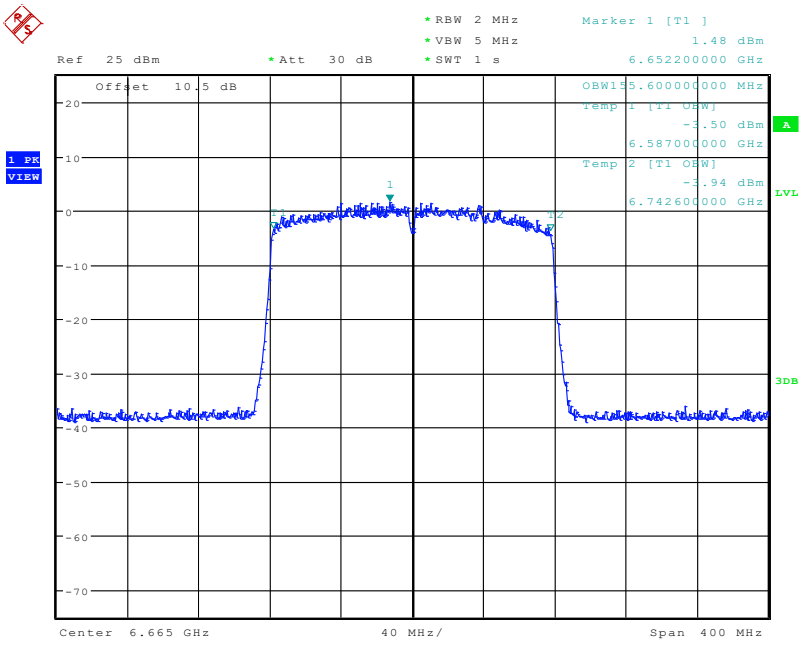
Date: 15.FEB.2023 18:57:40

802. 11AX_HE80_CH183_6865MHz-99% Bandwidth



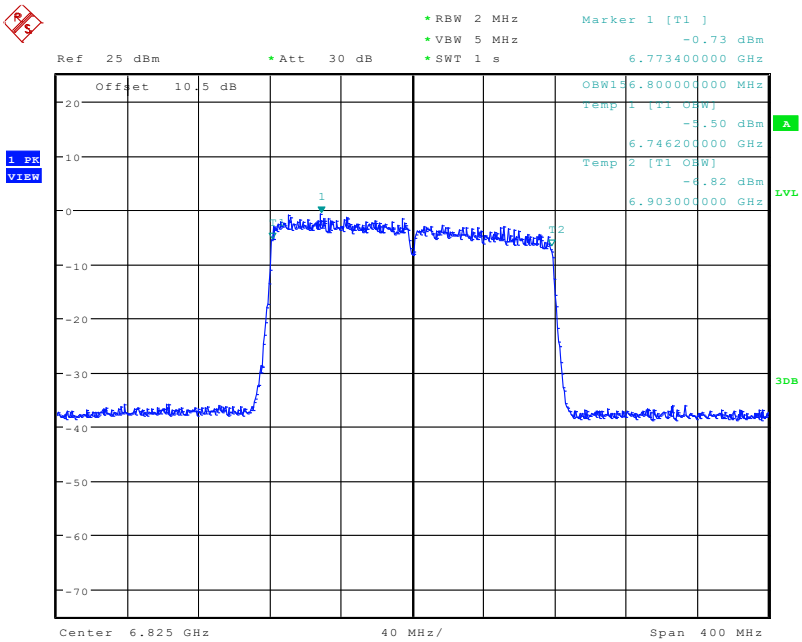
Date: 15.FEB.2023 19:08:26

802. 11AX_HE160_CH143_6665MHz-99% Bandwidth



Date: 13.FEB.2023 23:41:06

802. 11AX_HE160_CH175_6825MHz-99% Bandwidth

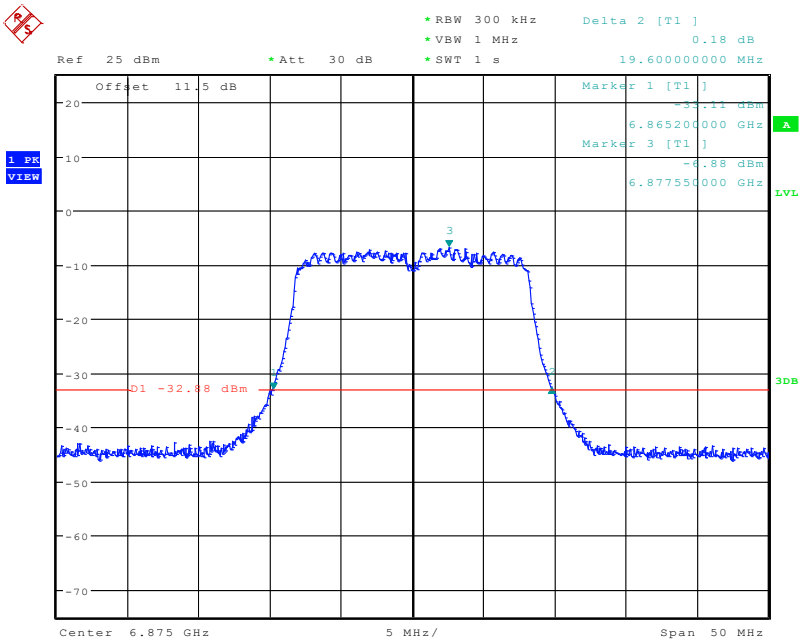


Date: 13.FEB.2023 23:38:17

6875MHz –7125 MHz:

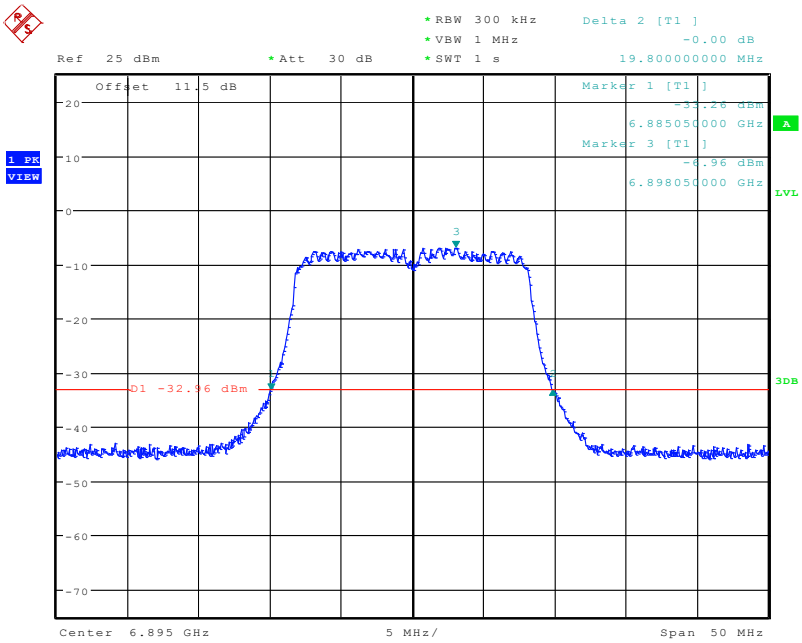
Frequency (MHz)	Antenna Port	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11a				
6875	1	19.60	16.50	320
6895	1	19.80	16.50	320
6995	1	19.70	16.50	320
7115	1	19.75	16.50	320
802.11ax20				
6875	1	21.55	19.00	320
6895	1	21.65	19.00	320
6995	1	21.50	19.00	320
7115	1	21.60	19.00	320
802.11ax40				
6885	1	40.60	37.70	320
6925	1	40.60	37.70	320
6965	1	40.60	37.70	320
7085	1	40.80	37.70	320
802.11ax80				
6945	1	83.20	77.60	320
7025	1	83.60	77.40	320
802.11ax160				
6985	1	167.20	156.00	320

802.11A_CH185_6875MHz-26dB Bandwidth



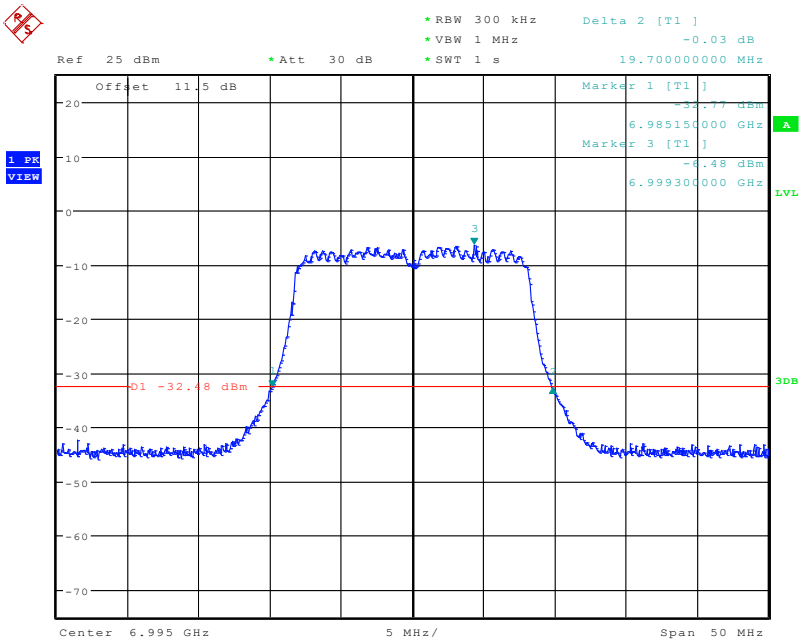
Date: 15.FEB.2023 20:45:41

802.11 11A_CH189_6895MHz-26dB Bandwidth



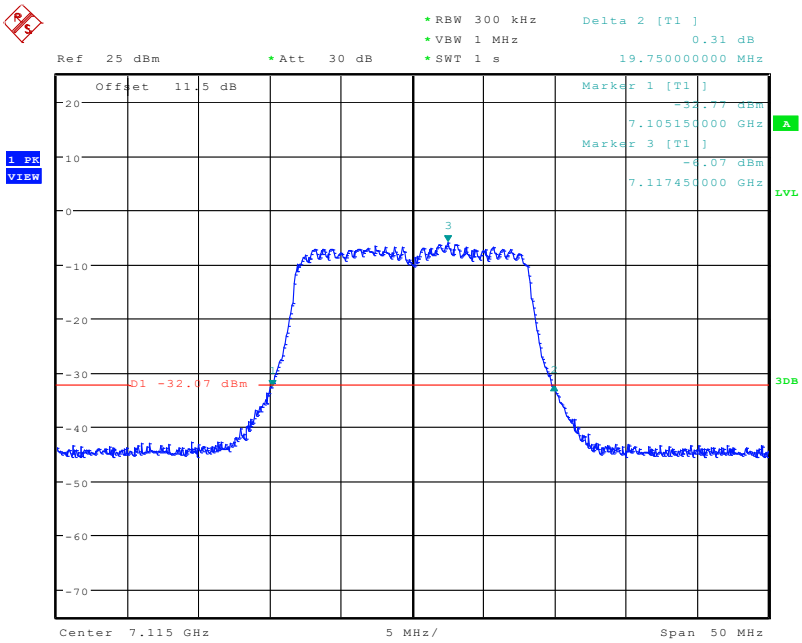
Date: 15.FEB.2023 20:34:43

802.11 A_CH209_6995MHz-26dB Bandwidth



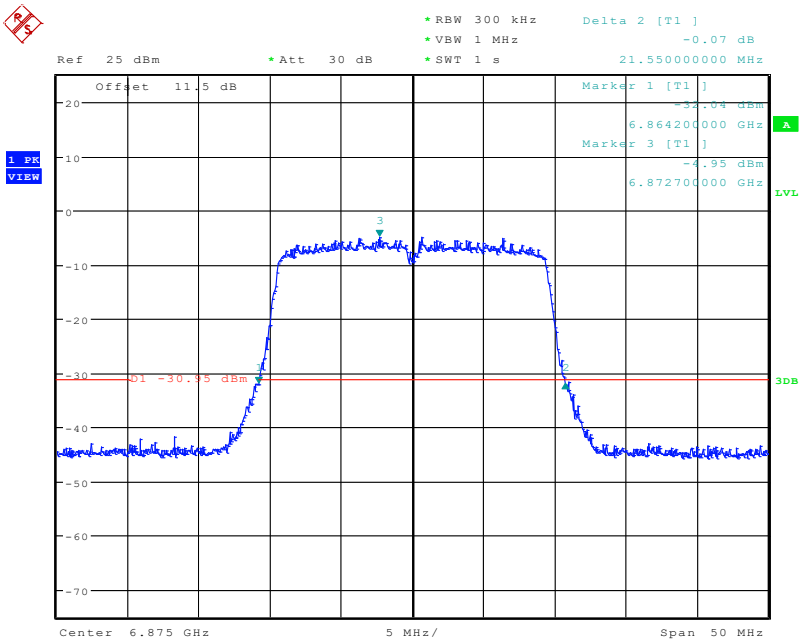
Date: 15.FEB.2023 20:32:16

802. 11AX _CH233_7115MHz-26dB Bandwidth



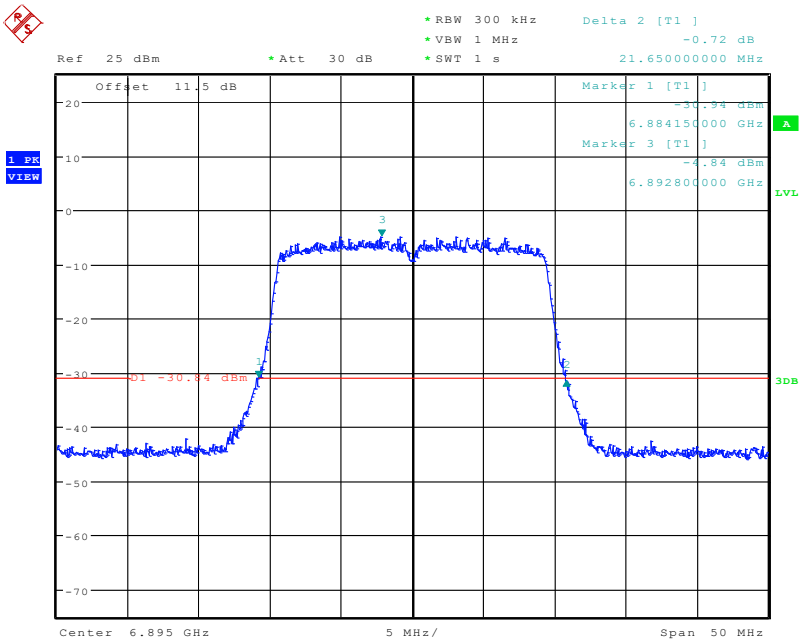
Date: 15.FEB.2023 20:24:02

802.11AX_HE20 _CH185_6875MHz-26dB Bandwidth



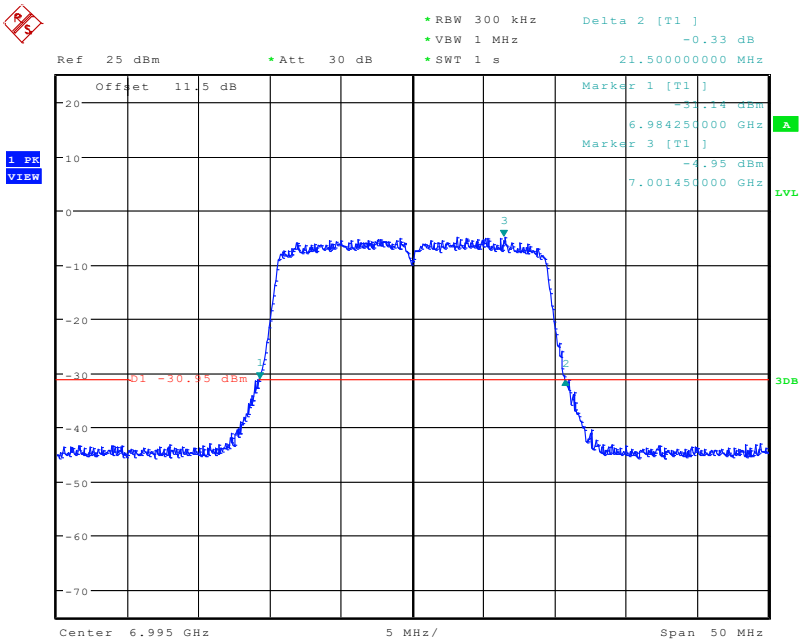
Date: 15.FEB.2023 20:19:01

802.11AX_HE20 _CH189_6895MHz-26dB Bandwidth



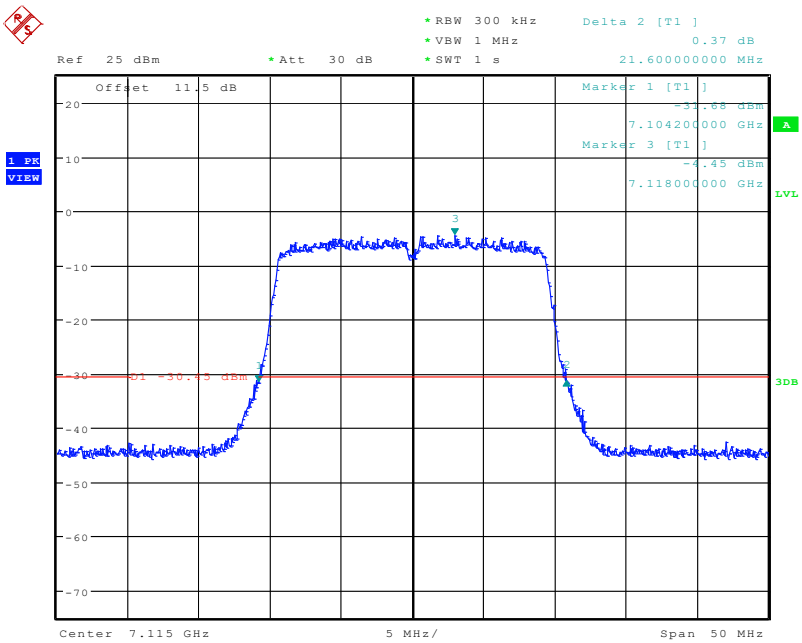
Date: 15.FEB.2023 20:11:23

802.11AX_HE20 _CH209_6995MHz-26dB Bandwidth



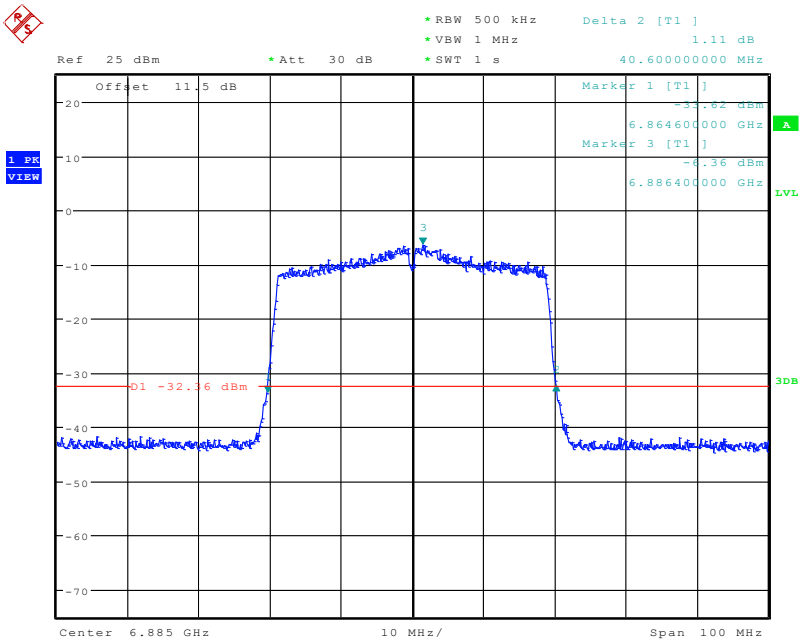
Date: 15.FEB.2023 20:08:27

802.11AX_HE20_CH233_7115MHz-26dB Bandwidth



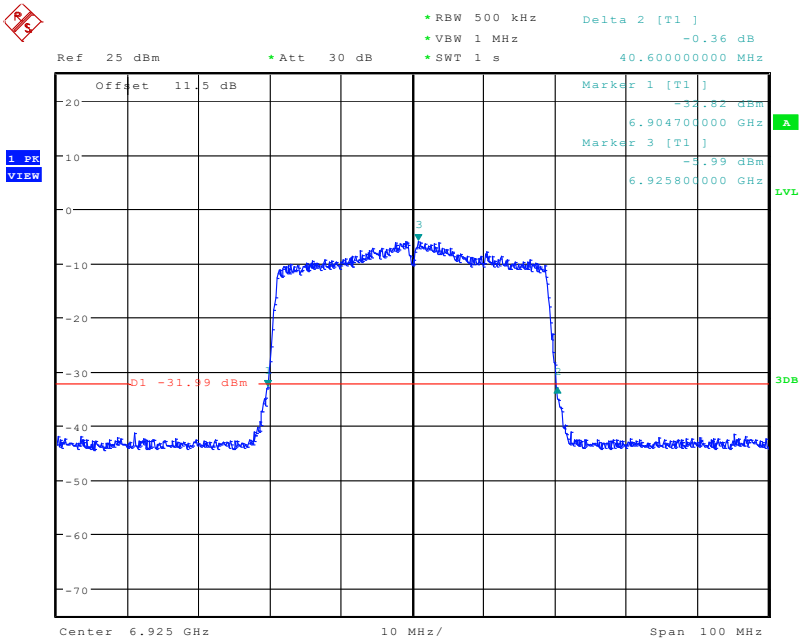
Date: 15.FEB.2023 20:00:16

802.11AX_HE40_CH187_6885MHz-26dB Bandwidth



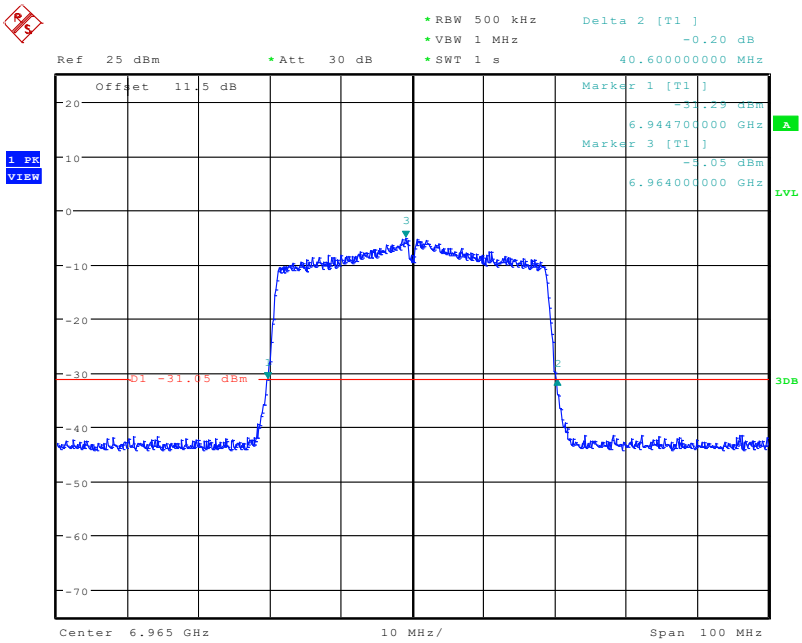
Date: 15.MAR.2023 02:14:42

802.11AX_HE40_CH195_6925MHz-26dB Bandwidth

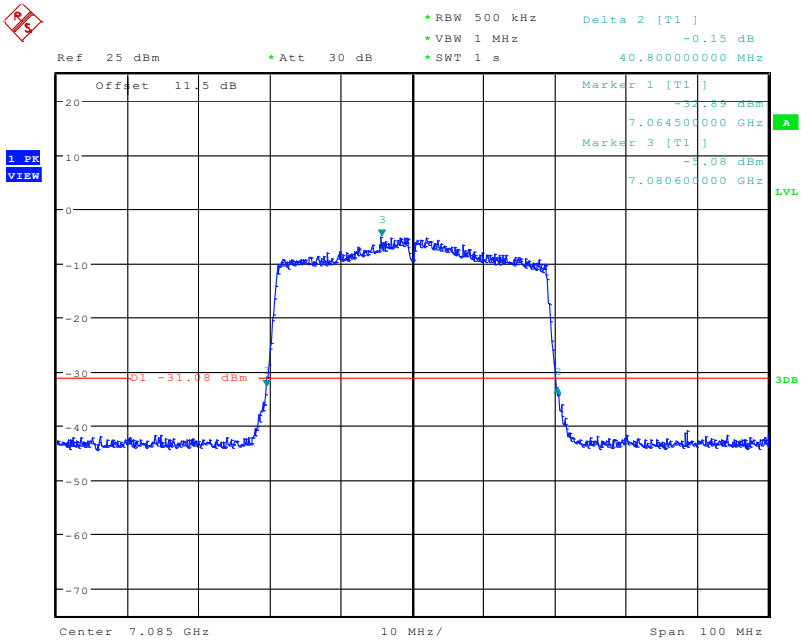


Date: 15.MAR.2023 02:16:45

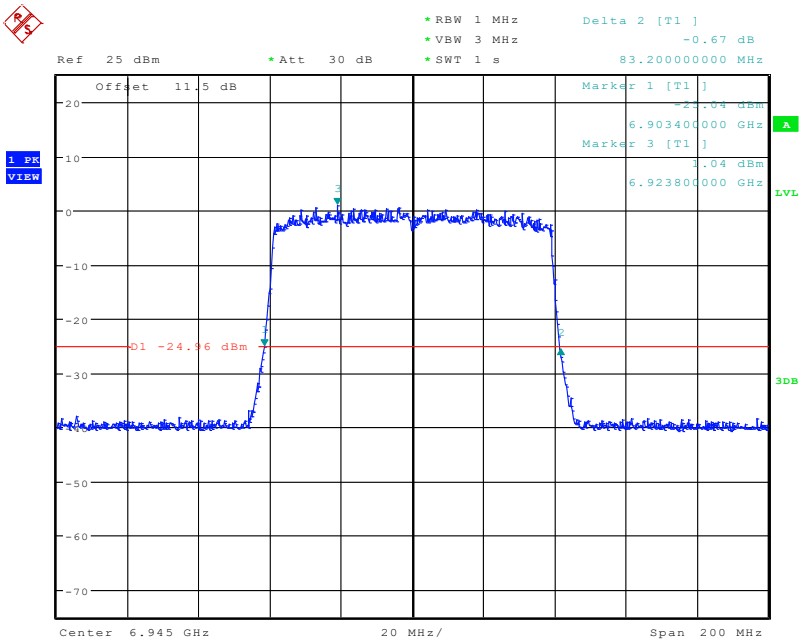
802. 11AX_HE40_CH203_6965MHz-26dB Bandwidth



802.11AX_HE40_CH227_7085MHz-26dB Bandwidth

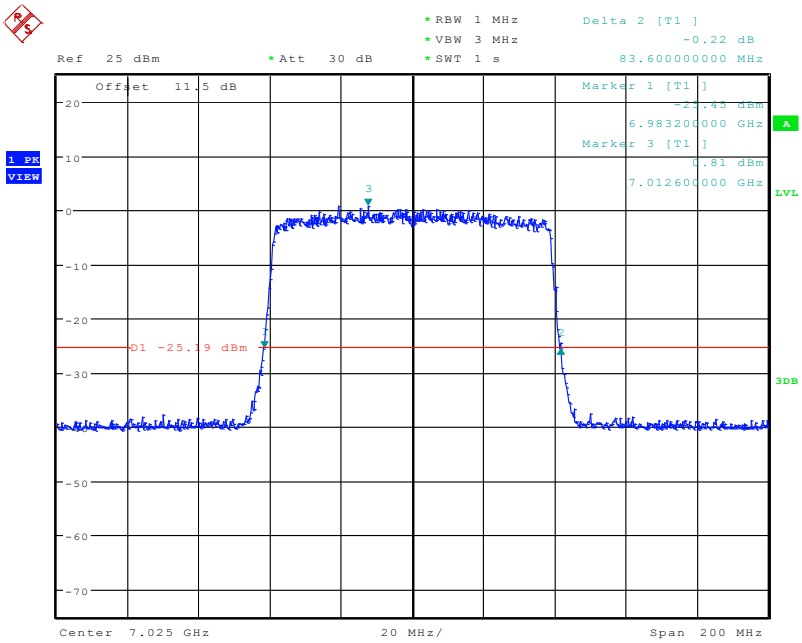


802.11AX_HE80M_CH199_6945MHz-26dB Bandwidth



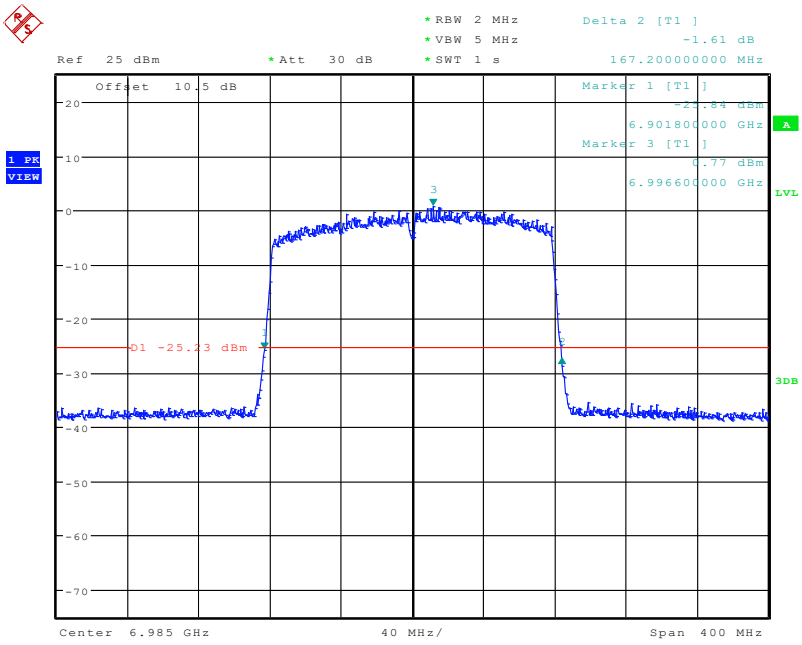
Date: 15.FEB.2023 19:19:30

802. 11AX_HE80_CH215_7025MHz-26dB Bandwidth



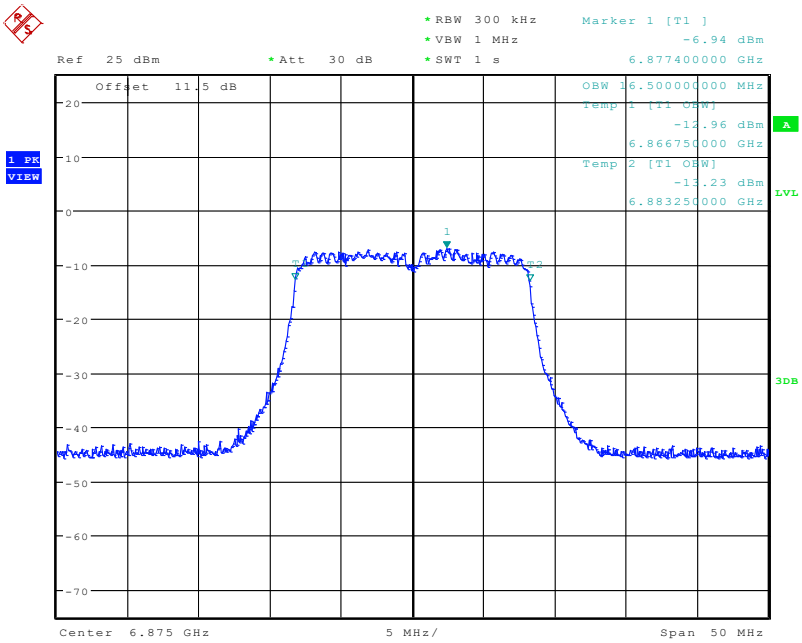
Date: 15.FEB.2023 19:12:38

802. 11AX_HE160_CH207_6985MHz-26dB Bandwidth



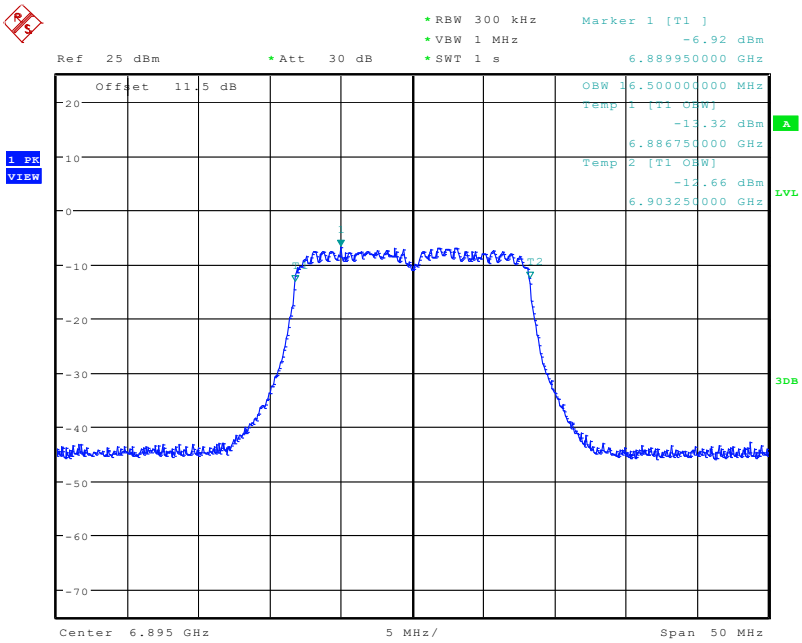
Date: 13.FEB.2023 23:35:41

802.11A_CH185_6875MHz-99% Bandwidth



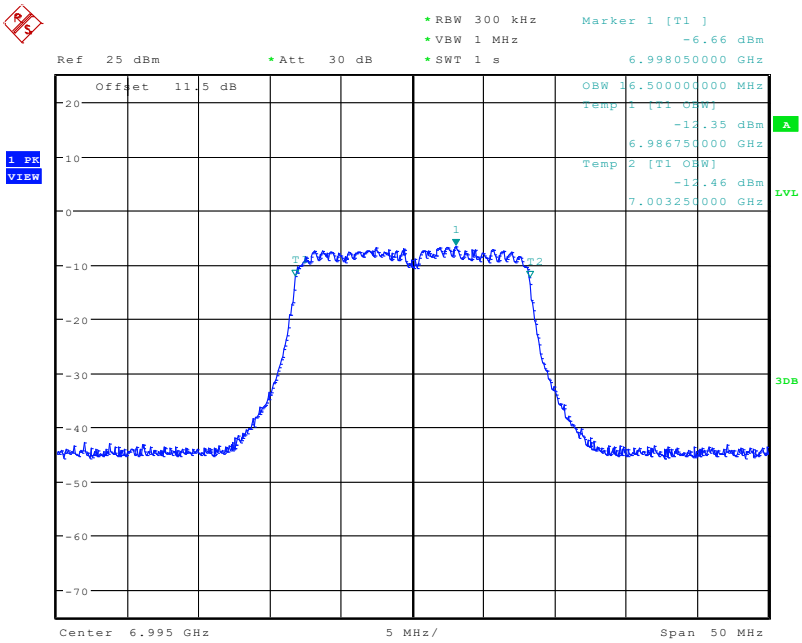
Date: 15.FEB.2023 20:45:22

802.11 11A_CH189_6895MHz-99% Bandwidth



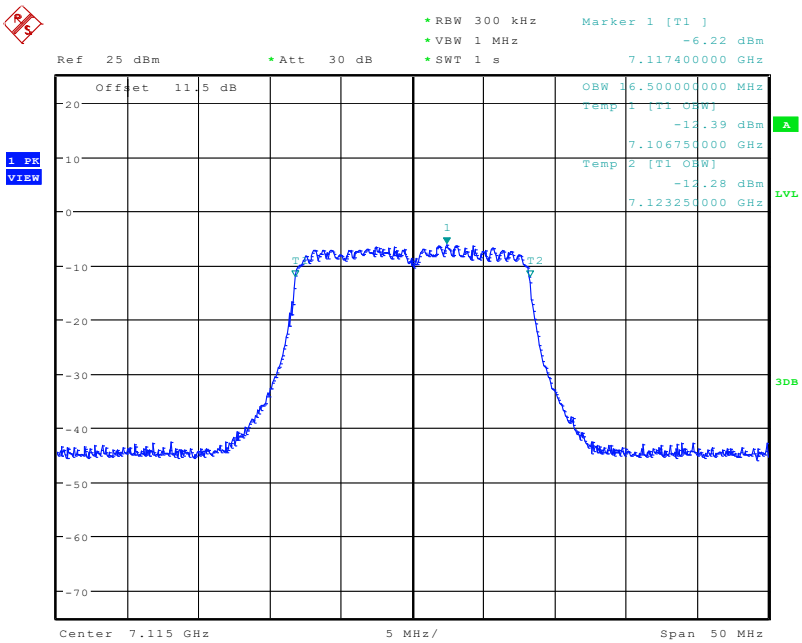
Date: 15.FEB.2023 20:34:24

802.11 A_CH209_6995MHz-99% Bandwidth



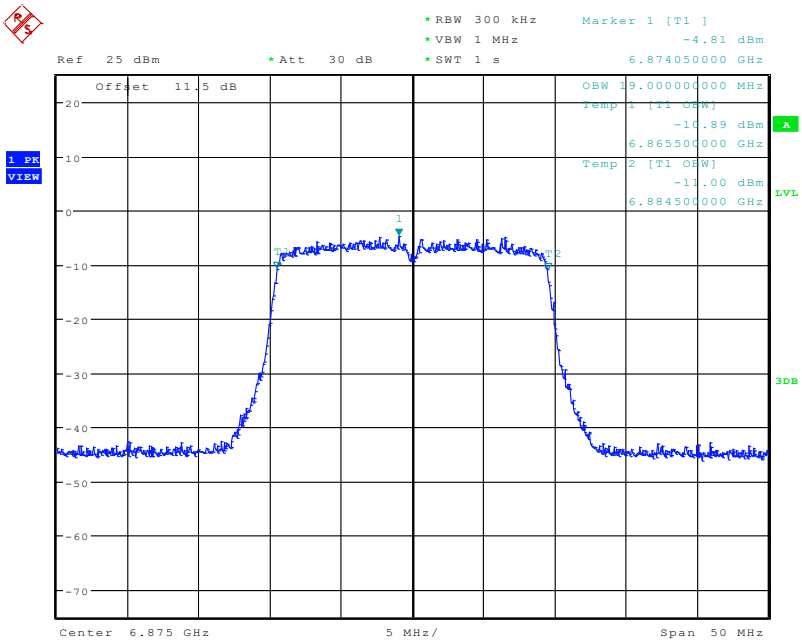
Date: 15.FEB.2023 20:31:56

802. 11AX _CH233_7115MHz-99% Bandwidth



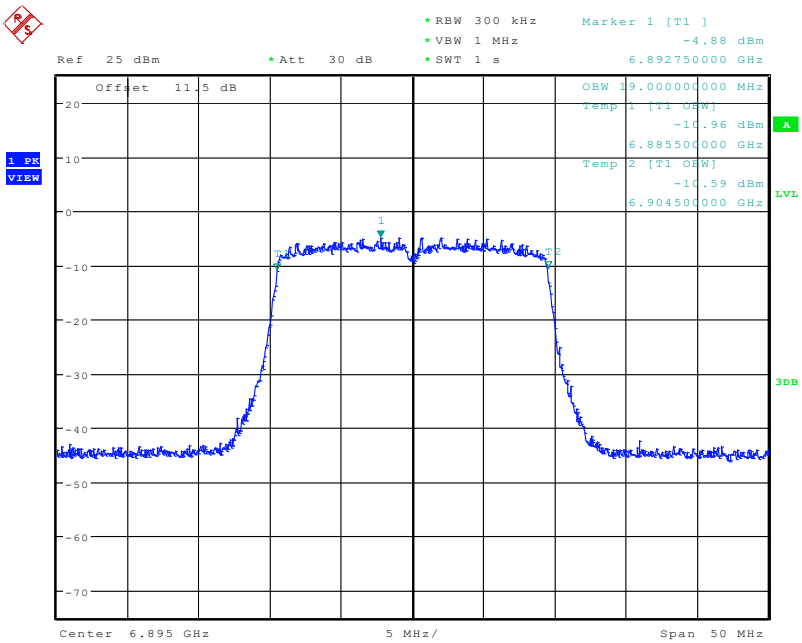
Date: 15.FEB.2023 20:23:43

802.11AX_HE20 _CH185_6875MHz-99% Bandwidth



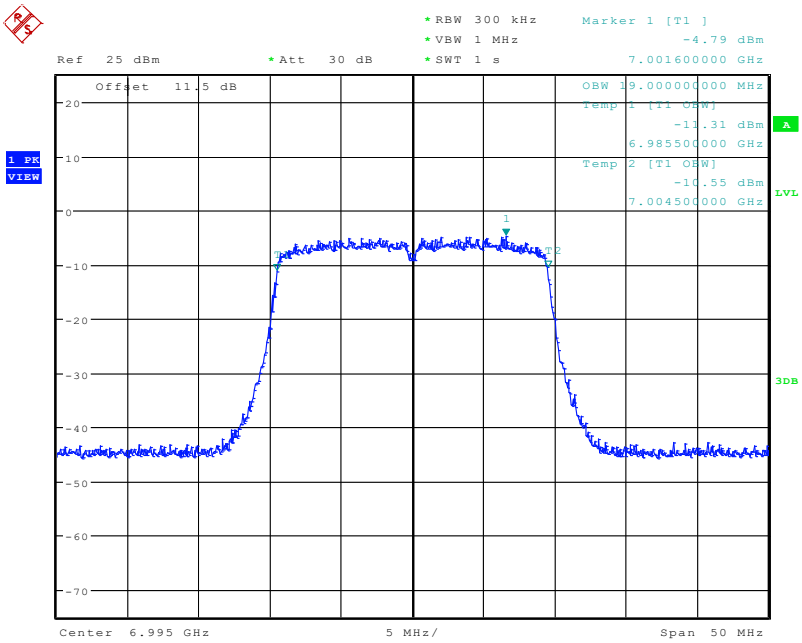
Date: 15.FEB.2023 20:18:42

802.11AX_HE20 _CH189_6895MHz-99% Bandwidth



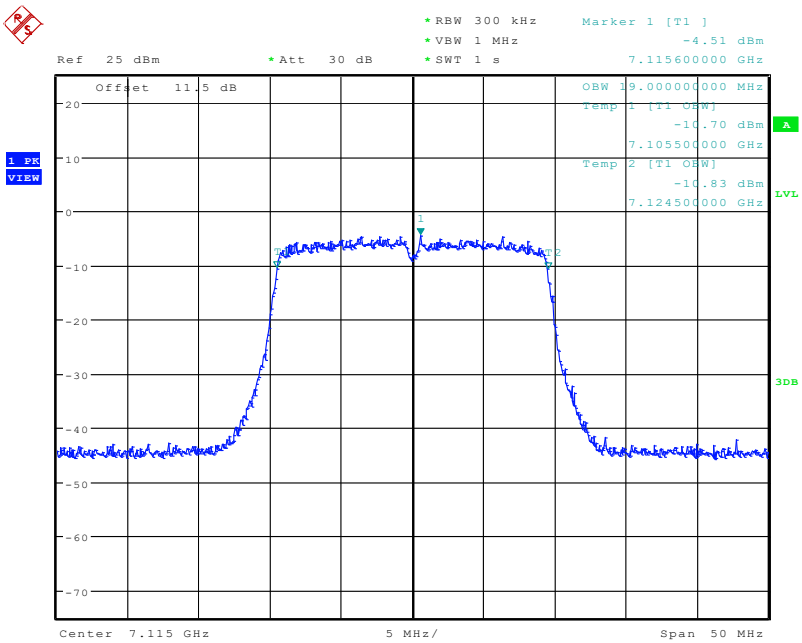
Date: 15.FEB.2023 20:11:03

802.11AX_HE20 _CH209_6995MHz-99% Bandwidth



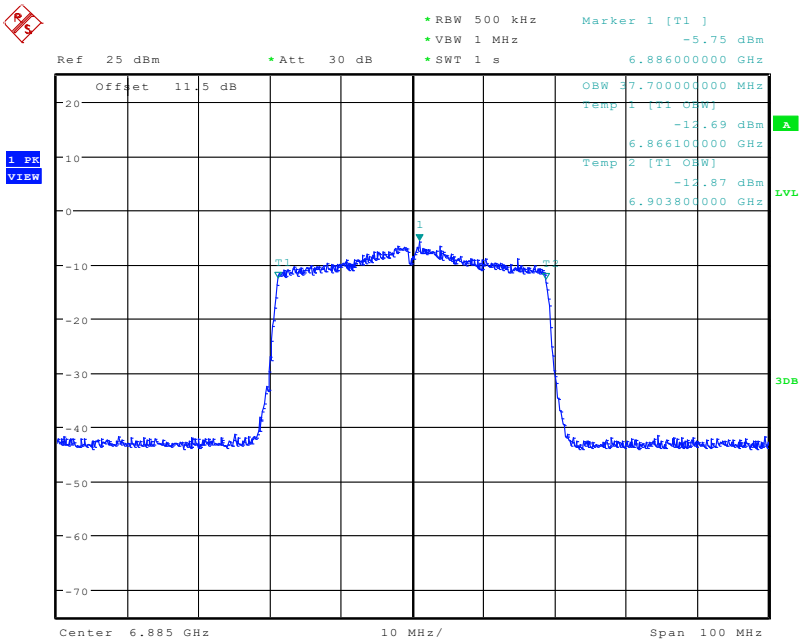
Date: 15.FEB.2023 20:08:08

802.11AX_HE20 _CH233_7115MHz-99% Bandwidth



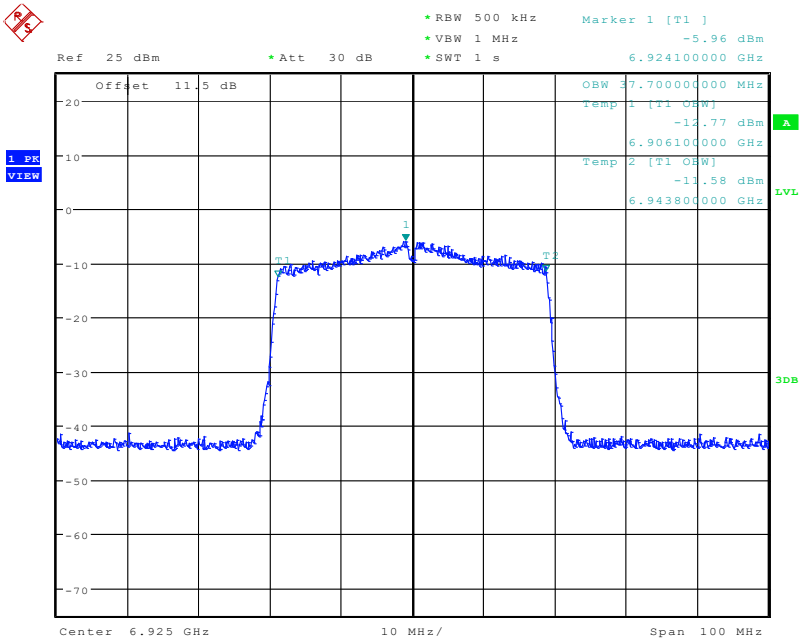
Date: 15.FEB.2023 19:59:56

802.11AX_HE40_CH187_6885MHz-99% Bandwidth



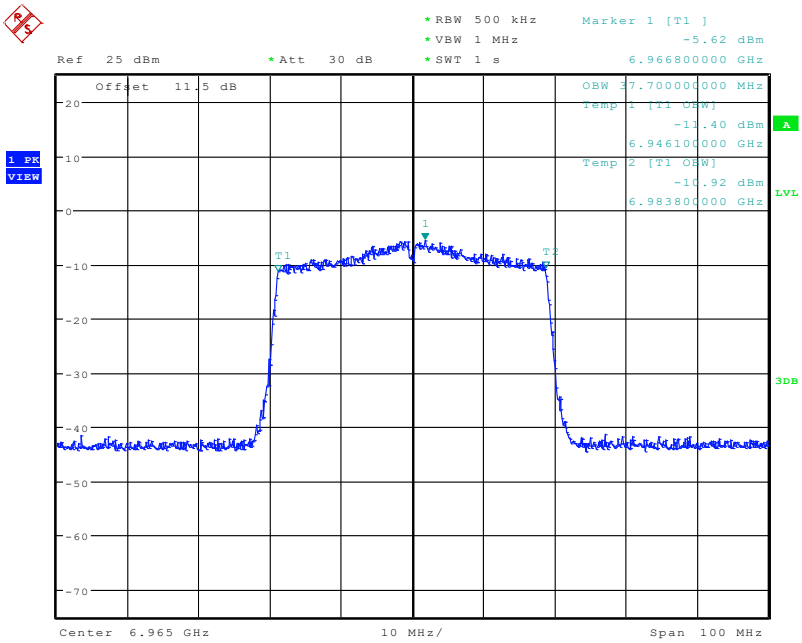
Date: 15.MAR.2023 02:14:23

802.11AX_HE40_CH195_6925MHz-99% Bandwidth



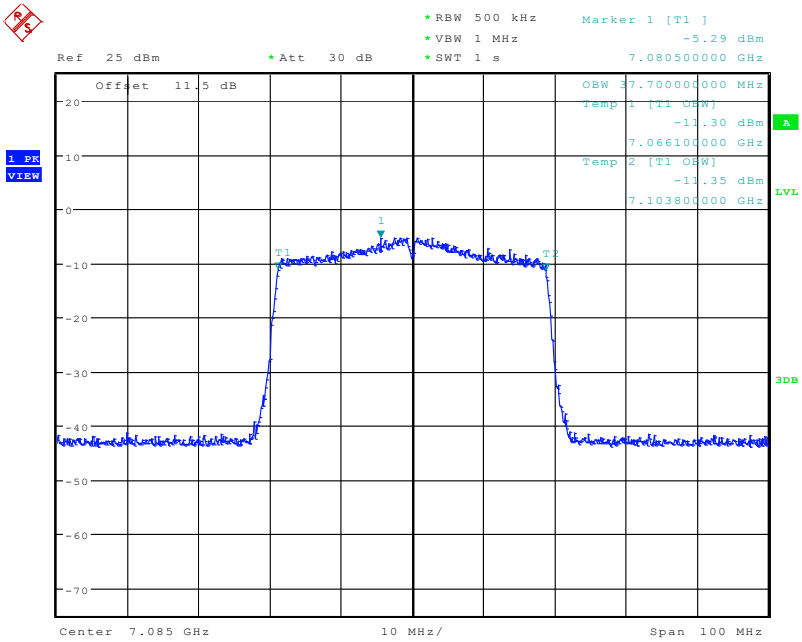
Date: 15.MAR.2023 02:16:25

802. 11AX_HE40_CH203_6965MHz-99% Bandwidth



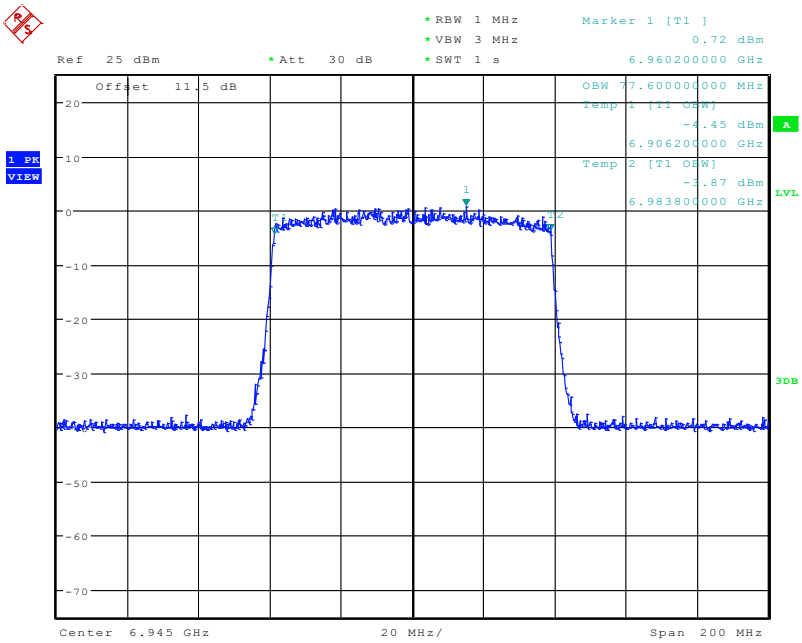
Date: 15.MAR.2023 02:18:10

802.11AX_HE40_CH227_7085MHz-99% Bandwidth



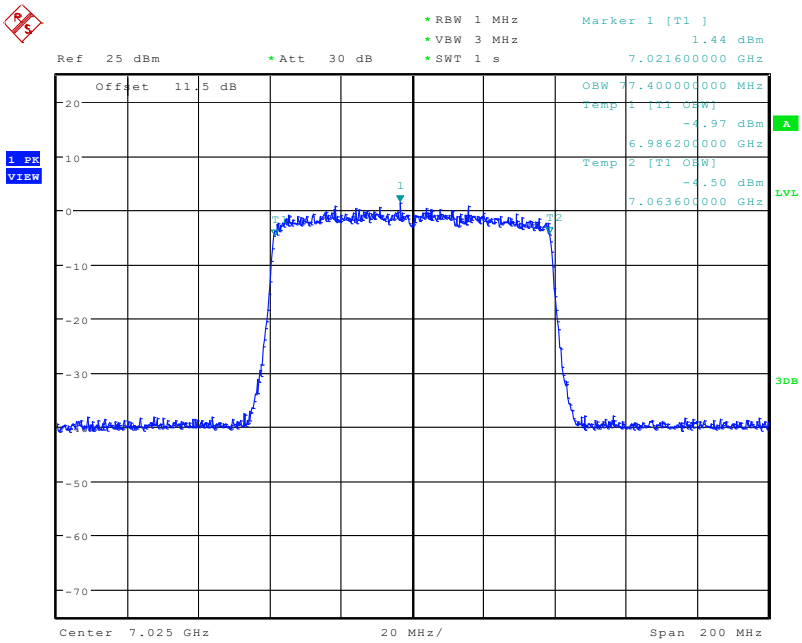
Date: 15.MAR.2023 02:19:54

802.11AX_HE80_CH199_6945MHz-99% Bandwidth



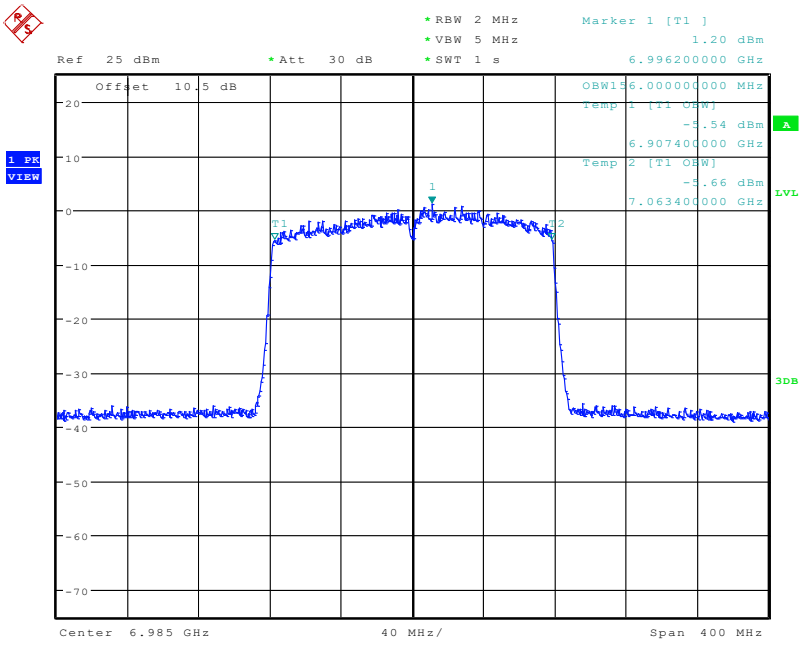
Date: 15.FEB.2023 19:19:11

802. 11AX_HE80_CH215_7025MHz-99% Bandwidth



Date: 15.FEB.2023 19:12:18

802. 11AX_HE160_CH207_6985MHz-99% Bandwidth



Date: 13.FEB.2023 23:35:21

FCC §15.407(a)(8) –CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

According to the FCC §15.407(a)(8), For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

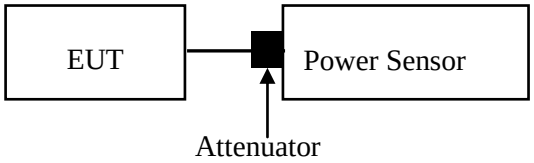
Test Procedure

Test Method: KDB789033 D02 Clause II.E.3

a) Place the EUT on a bench and set it in transmitting mode.

b) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.

c) Add a correction factor to the display.



Test Data

Environmental Conditions

Temperature:	26℃
Relative Humidity:	30%
ATM Pressure:	101.0 kPa

The testing was performed by Roger Ling from 2023-02-13 to 2023-02-14.

EUT operation mode: Transmitting

Test Result: Pass, the test data as follows

5925 MHz – 6425 MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11a						
5955	2	0.69	3.63	2.6	6.23	24
	1	0.55				
6175	2	-0.25	3.45	2.6	6.05	
	1	1.03				
6415	2	0.20	3.84	2.6	6.44	
	1	1.38				
802.11ax20_242Tone_RU61						
5955	2	1.21	3.97	5.6	9.57	24
	1	0.70				
6175	2	0.20	3.72	5.6	9.32	
	1	1.16				
6415	2	0.56	4.08	5.6	9.68	
	1	1.52				
802.11ax40_484Tone_RU65						
5965	2	2.64	5.94	5.6	11.54	24
	1	3.21				
6165	2	2.20	5.66	5.6	11.26	
	1	3.05				
6405	2	4.12	7.35	5.6	12.95	
	1	4.54				
802.11ax80_996Tone_RU67						
5985	2	5.78	9.19	5.6	14.79	24
	1	6.55				
6145	2	5.45	8.81	5.6	14.41	
	1	6.12				
6385	2	5.82	8.96	5.6	14.56	
	1	6.08				
802.11ax160_2×996Tone_RU68						
6025	2	7.46	10.66	5.6	16.26	24
	1	7.83				
6185	2	5.06	9.21	5.6	14.81	
	1	7.10				
6345	2	6.97	10.69	5.6	16.29	
	1	8.29				

6425 MHz – 6525 MHz:

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11a						
6435	2	-0.56	2.14	2.6	4.74	24
	1	-1.21				
6475	2	-0.65	1.99	2.6	4.59	
	1	-1.42				
6515	2	-0.43	2.06	2.6	4.66	
	1	-1.55				
802.11ax20_242Tone_RU61						
6435	2	1.37	4.18	5.6	9.78	24
	1	0.96				
6475	2	-0.56	2.22	5.6	7.82	
	1	-1.03				
6515	2	0.52	3.19	5.6	8.79	
	1	-0.18				
802.11ax40_484Tone_RU65						
6445	2	3.19	6.67	5.6	12.27	24
	1	4.09				
6485	2	3.48	6.69	5.6	12.29	
	1	3.88				
6525	2	3.81	6.92	5.6	12.52	
	1	4.01				
802.11ax80_996Tone_RU67						
6465	2	6.10	9.10	5.6	14.70	24
	1	6.07				
6545	2	5.93	8.92	5.6	14.52	
	1	5.89				
802.11ax160_2×996Tone_RU68						
6505	2	4.56	8.12	5.6	13.72	24
	1	5.59				

6525 MHz – 6875 MHz:

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11a						
6535	2	-0.06	3.18	2.6	5.78	24
	1	0.38				
6695	2	0.48	3.91	2.6	6.51	
	1	1.28				
6855	2	0.47	3.90	2.6	6.50	
	1	1.28				
802.11ax20_242Tone_RU61						
6535	2	1.16	4.16	5.6	9.76	24
	1	1.14				
6695	2	1.18	4.17	5.6	9.77	
	1	1.13				
6855	2	0.67	4.16	5.6	9.76	
	1	1.58				
802.11ax40_484Tone_RU65						
6565	2	2.89	6.10	5.6	11.70	24
	1	3.28				
6685	2	3.34	6.64	5.6	12.24	
	1	3.91				
6845	2	3.98	7.22	5.6	12.82	
	1	4.43				
802.11ax80_996Tone_RU67						
6625	2	5.55	8.98	5.6	14.58	24
	1	6.36				
6705	2	5.80	8.88	5.6	14.48	
	1	5.94				
6785	2	5.80	9.16	5.6	14.76	
	1	6.47				
6865	2	6.37	9.35	5.6	14.95	
	1	6.31				
802.11ax160_2×996Tone_RU68						
6665	2	6.58	9.50	5.6	15.10	24
	1	6.40				
6825	2	3.65	7.26	5.6	12.86	
	1	4.77				

6875 MHz – 7125 MHz:

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11a						
6875	2	0.12	3.74	2.6	6.34	24
	1	1.27				
6895	2	0.36	3.48	2.6	6.08	
	1	0.57				
6995	2	0.64	3.78	2.6	6.38	
	1	0.90				
7115	2	0.88	3.95	2.6	6.55	
	1	0.99				
802.11ax20_242Tone_RU61						
6875	2	0.45	3.99	5.6	9.59	24
	1	1.46				
6895	2	0.56	3.70	5.6	9.30	
	1	0.82				
6995	2	0.82	3.99	5.6	9.59	
	1	1.13				
7115	2	-7.01	-3.90	5.6	1.70	
	1	-6.82				
802.11ax40_484Tone_RU65						
6885	2	3.79	6.93	5.6	12.53	24
	1	4.05				
6925	2	3.42	6.53	5.6	12.13	
	1	3.61				
6965	2	3.43	6.59	5.6	12.19	
	1	3.73				
7085	2	3.72	7.11	5.6	12.71	
	1	4.45				
802.11ax80_996Tone_RU67						
6945	2	5.92	8.94	5.6	14.54	24
	1	5.94				
7025	2	5.88	9.03	5.6	14.63	
	1	6.16				
802.11ax160_2×996Tone_RU68						
6985	2	5.21	8.45	5.6	14.05	24
	1	5.65				

For Partial RU:

5925 MHz – 6425MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax20_26Tone_RU0						
5955	1	-7.82	-5.71	5.6	-0.11	24
	2	-9.85				
6175	1	-8.84	-6.20	5.6	-0.60	
	2	-9.61				
6415	1	-8.53	-5.25	5.6	0.35	
	2	-8.01				
802.11ax20_52Tone_RU37						
5955	1	-4.86	-2.57	5.6	3.03	24
	2	-6.44				
6175	1	-7.05	-4.44	5.6	1.16	
	2	-7.9				
6415	1	-6.82	-3.52	5.6	2.08	
	2	-6.26				
802.11ax20_106Tone_RU53						
5955	1	-2.07	-0.12	5.6	5.48	24
	2	-4.54				
6175	1	-4.98	-2.36	5.6	3.24	
	2	-5.8				
6415	1	-4.71	-1.37	5.6	4.23	
	2	-4.08				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax40_26Tone_RU0						
5965	1	-9.39	-6.52	5.6	-0.92	24
	2	-9.68				
6165	1	-9.93	-6.69	5.6	-1.09	
	2	-9.49				
6405	1	-8.13	-5.14	5.6	0.46	
	2	-8.17				
802.11ax40_52Tone_RU37						
5965	1	-6.51	-4.06	5.6	1.54	24
	2	-7.71				
6165	1	-6.88	-3.69	5.6	1.91	
	2	-6.53				
6405	1	-4.9	-1.96	5.6	3.64	
	2	-5.05				
802.11ax40_106Tone_RU53						
5965	1	-3.36	-0.08	5.6	5.52	24
	2	-2.84				
6165	1	-4	-0.81	5.6	4.79	
	2	-3.64				
6405	1	-1.89	0.93	5.6	6.53	
	2	-2.27				
802.11ax40_242Tone_RU61						
5965	1	-0.36	2.42	5.6	8.02	24
	2	-0.83				
6165	1	-1.12	2.07	5.6	7.67	
	2	-0.77				
6405	1	-0.62	2.24	5.6	7.84	
	2	-0.93				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax80_26Tone_RU0						
5985	1	-9.64	-6.46	5.6	-0.86	24
	2	-9.31				
6145	1	-9.63	-6.77	5.6	-1.17	
	2	-9.93				
6385	1	-9.56	-6.57	5.6	-0.97	
	2	-9.61				
802.11ax80_52Tone_RU37						
5985	1	-6.26	-2.87	5.6	2.73	24
	2	-5.53				
6145	1	-6.56	-3.38	5.6	2.22	
	2	-6.23				
6385	1	-6.39	-3.17	5.6	2.43	
	2	-5.98				
802.11ax80_106Tone_RU53						
5985	1	-3.25	-0.45	5.6	5.15	24
	2	-3.68				
6145	1	-4.05	-1.14	5.6	4.46	
	2	-4.26				
6385	1	-3.21	-0.49	5.6	5.11	
	2	-3.81				
802.11ax80_242Tone_RU61						
5985	1	-0.26	2.49	5.6	8.09	24
	2	-0.79				
6145	1	-1.05	1.85	5.6	7.45	
	2	-1.28				
6385	1	-0.19	2.48	5.6	8.08	
	2	-0.89				
802.11ax80_484Tone_RU65						
5985	1	0.82	3.41	5.6	9.01	24
	2	-0.06				
6145	1	-0.29	2.53	5.6	8.13	
	2	-0.67				
6385	1	0.61	3.29	5.6	8.89	
	2	-0.08				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax160_26Tone_RU0						
6025	1	-10.63	-7.56	5.6	-1.96	24
	2	-10.52				
6185	1	-13.16	-9.14	5.6	-3.54	
	2	-11.33				
6345	1	-11.05	-8.41	5.6	-2.81	
	2	-11.82				
802.11ax160_52Tone_RU37						
6025	1	-8.23	-4.93	5.6	0.67	24
	2	-7.67				
6185	1	-10.14	-6.16	5.6	-0.56	
	2	-8.38				
6345	1	-8.45	-6.04	5.6	-0.44	
	2	-9.74				
802.11ax160_106Tone_RU53						
6025	1	-4.69	-1.46	5.6	4.14	24
	2	-4.27				
6185	1	-7.01	-3.03	5.6	2.57	
	2	-5.25				
6345	1	-5.26	-2.35	5.6	3.25	
	2	-5.46				
802.11ax160_242Tone_RU61						
6025	1	-1.6	1.55	5.6	7.15	24
	2	-1.33				
6185	1	-4.23	-0.20	5.6	5.40	
	2	-2.38				
6345	1	-2.17	0.65	5.6	6.25	
	2	-2.55				
802.11ax160_484Tone_RU65						
6025	1	1.45	4.65	5.6	10.25	24
	2	1.82				
6185	1	-0.99	2.57	5.6	8.17	
	2	0.05				
6345	1	0.93	3.65	5.6	9.25	
	2	0.33				
802.11ax160_996Tone_RU67						
6025	1	4.32	7.57	5.6	13.17	24
	2	4.79				
6185	1	1.83	5.49	5.6	11.09	
	2	3.04				
6345	1	3.64	6.59	5.6	12.19	
	2	3.52				

6425 MHz – 6525MHz:

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax20_26Tone_RU0						
6435	1	-8.47	-5.32	5.6	0.28	24
	2	-8.19				
6475	1	-9.73	-6.87	5.6	-1.27	
	2	-10.04				
6515	1	-9.09	-6.14	5.6	-0.54	
	2	-9.21				
802.11ax20_52Tone_RU37						
6435	1	-7.16	-3.81	5.6	1.79	24
	2	-6.51				
6475	1	-6.82	-3.94	5.6	1.66	
	2	-7.09				
6515	1	-7.75	-4.30	5.6	1.30	
	2	-6.92				
802.11ax20_106Tone_RU53						
6435	1	-6.01	-2.71	5.6	2.89	24
	2	-5.45				
6475	1	-5.37	-2.46	5.6	3.14	
	2	-5.57				
6515	1	-6.66	-3.17	5.6	2.43	
	2	-5.74				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax40_26Tone_RU0						
6445	1	-8.93	-5.40	5.6	0.20	24
	2	-7.95				
6485	1	-8.65	-5.41	5.6	0.19	
	2	-8.21				
6525	1	-8.22	-5.19	5.6	0.41	
	2	-8.19				
802.11ax40_52Tone_RU37						
6445	1	-5.96	-2.49	5.6	3.11	24
	2	-5.08				
6485	1	-5.57	-2.41	5.6	3.19	
	2	-5.28				
6525	1	-5.39	-2.49	5.6	3.11	
	2	-5.61				
802.11ax40_106Tone_RU53						
6445	1	-2.87	0.62	5.6	6.22	24
	2	-1.95				
6485	1	-2.6	0.51	5.6	6.11	
	2	-2.41				
6525	1	-2.34	0.59	5.6	6.19	
	2	-2.51				
802.11ax40_242Tone_RU61						
6445	1	0.15	3.65	5.6	9.25	24
	2	1.08				
6485	1	0.47	3.68	5.6	9.28	
	2	0.86				
6525	1	0.7	3.78	5.6	9.38	
	2	0.83				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax80_26Tone_RU0						
6465	1	-9.11	-6.07	5.6	-0.47	24
	2	-9.06				
6545	1	-9.11	-6.39	5.6	-0.79	
	2	-9.72				
802.11ax80_52Tone_RU37						
6465	1	-5.91	-2.93	5.6	2.67	24
	2	-5.97				
6545	1	-6.12	-3.14	5.6	2.46	
	2	-6.18				
802.11ax80_106Tone_RU53						
6465	1	-2.98	0.01	5.6	5.61	24
	2	-3.02				
6545	1	-3.13	-0.15	5.6	5.45	
	2	-3.19				
802.11ax80_242Tone_RU61						
6465	1	0.01	3.04	5.6	8.64	24
	2	0.04				
6545	1	-0.13	2.82	5.6	8.42	
	2	-0.26				
802.11ax80_484Tone_RU65						
6465	1	2.2	5.47	5.6	11.07	24
	2	2.71				
6545	1	2.13	5.13	5.6	10.73	
	2	2.11				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax160_26Tone_RU0						
6505	1	-13.65	-10.38	5.6	-4.78	24
	2	-13.14				
802.11ax160_52Tone_RU37						
6505	1	-10.48	-7.55	5.6	-1.95	24
	2	-10.64				
802.11ax160_106Tone_RU53						
6505	1	-7.45	-4.70	5.6	0.90	24
	2	-7.98				
802.11ax160_242Tone_RU61						
6505	1	-4.48	-1.55	5.6	4.05	24
	2	-4.65				
802.11ax160_484Tone_RU65						
6505	1	-1.56	1.33	5.6	6.93	24
	2	-1.81				
802.11ax160_996Tone_RU67						
6505	1	1.39	4.38	5.6	9.98	24
	2	1.34				

6525 MHz – 6875MHz:

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax20_26Tone_RU0						
6535	1	-8.13	-5.11	5.6	0.49	24
	2	-8.12				
6695	1	-8.03	-5.06	5.6	0.54	
	2	-8.11				
6855	1	-8.53	-5.50	5.6	0.10	
	2	-8.49				
802.11ax20_52Tone_RU37						
6535	1	-5.1	-2.10	5.6	3.50	24
	2	-5.13				
6695	1	-5.18	-2.07	5.6	3.53	
	2	-4.98				
6855	1	-5.34	-2.43	5.6	3.17	
	2	-5.54				
802.11ax20_106Tone_RU53						
6535	1	-3.1	-0.07	5.6	5.53	24
	2	-3.06				
6695	1	-3.1	-0.03	5.6	5.57	
	2	-2.98				
6855	1	-2.38	0.11	5.6	5.71	
	2	-3.49				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax40_26Tone_RU0						
6565	1	-9.15	-6.00	5.6	-0.40	24
	2	-8.88				
6685	1	-8.69	-5.63	5.6	-0.03	
	2	-8.59				
6845	1	-8.05	-5.30	5.6	0.30	
	2	-8.59				
802.11ax40_52Tone_RU37						
6565	1	-6.26	-3.03	5.6	2.57	24
	2	-5.84				
6685	1	-5.82	-2.70	5.6	2.90	
	2	-5.61				
6845	1	-5.09	-2.34	5.6	3.26	
	2	-5.62				
802.11ax40_106Tone_RU53						
6565	1	-3.38	-0.15	5.6	5.45	24
	2	-2.96				
6685	1	-3.14	-0.15	5.6	5.45	
	2	-3.18				
6845	1	-2.33	0.29	5.6	5.89	
	2	-3.15				
802.11ax40_242Tone_RU61						
6565	1	-0.67	2.72	5.6	8.32	24
	2	0.05				
6685	1	-0.31	2.70	5.6	8.30	
	2	-0.32				
6845	1	0.48	3.03	5.6	8.63	
	2	-0.49				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax80_26Tone_RU0						
6625	1	-9.49	-6.36	5.6	-0.76	24
	2	-9.25				
6705	1	-9.31	-6.41	5.6	-0.81	
	2	-9.54				
6785	1	-9.32	-6.41	5.6	-0.81	
	2	-9.53				
6865	1	-8.94	-6.13	5.6	-0.53	
	2	-9.35				
802.11ax80_52Tone_RU37						
6625	1	-6.47	-3.08	5.6	2.52	24
	2	-5.74				
6705	1	-6.33	-3.23	5.6	2.37	
	2	-6.16				
6785	1	-6.3	-2.98	5.6	2.62	
	2	-5.7				
6865	1	-5.63	-2.68	5.6	2.92	
	2	-5.76				
802.11ax80_106Tone_RU53						
6625	1	-3.84	-0.50	5.6	5.10	24
	2	-3.21				
6705	1	-3.4	-0.48	5.6	5.12	
	2	-3.58				
6785	1	-3.39	-0.46	5.6	5.14	
	2	-3.56				
6865	1	-2.82	-0.05	5.6	5.55	
	2	-3.32				
802.11ax80_242Tone_RU61						
6625	1	-0.82	2.54	5.6	8.14	24
	2	-0.15				
6705	1	-0.27	2.62	5.6	8.22	
	2	-0.52				
6785	1	-0.31	2.62	5.6	8.22	
	2	-0.48				
6865	1	0.27	2.97	5.6	8.57	
	2	-0.38				
802.11ax80_484Tone_RU65						
6625	1	2.08	5.49	5.6	11.09	24
	2	2.84				
6705	1	2.71	5.57	5.6	11.17	
	2	2.41				
6785	1	2.77	5.60	5.6	11.20	
	2	2.41				
6865	1	3.18	5.84	5.6	11.44	
	2	2.45				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax160_26Tone_RU0						
6665	1	-11.42	-8.55	5.6	-2.95	24
	2	-11.7				
6825	1	-14.52	-10.99	5.6	-5.39	
	2	-13.53				
802.11ax160_52Tone_RU37						
6665	1	-8.79	-5.80	5.6	-0.20	24
	2	-8.83				
6825	1	-11.35	-8.00	5.6	-2.40	
	2	-10.7				
802.11ax160_106Tone_RU53						
6665	1	-5.58	-2.70	5.6	2.90	24
	2	-5.85				
6825	1	-8.58	-4.88	5.6	0.72	
	2	-7.3				
802.11ax160_242Tone_RU61						
6665	1	-2.61	0.37	5.6	5.97	24
	2	-2.68				
6825	1	-5.47	-1.90	5.6	3.70	
	2	-4.41				
802.11ax160_484Tone_RU65						
6665	1	0.56	3.37	5.6	8.97	24
	2	0.15				
6825	1	-2.6	1.13	5.6	6.73	
	2	-1.27				
802.11ax160_996Tone_RU67						
6665	1	3.58	6.46	5.6	12.06	24
	2	3.31				
6825	1	0.65	3.84	5.6	9.44	
	2	1.01				

6875MHz – 7125MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax20_26Tone_RU0						
6875	1	-8.61	-6.02	5.6	-0.42	24
	2	-9.50				
6895	1	-9.12	-6.09	5.6	-0.49	
	2	-9.09				
6995	1	-8.72	-6.05	5.6	-0.45	
	2	-9.44				
7115	1	-16.71	-13.79	5.6	-8.19	
	2	-16.89				
802.11ax20_52Tone_RU37						
6875	1	-8.25	-5.85	5.6	-0.25	24
	2	-9.56				
6895	1	-9.25	-6.20	5.6	-0.60	
	2	-9.17				
6995	1	-8.88	-6.15	5.6	-0.55	
	2	-9.45				
7115	1	-13.87	-10.91	5.6	-5.31	
	2	-13.97				
802.11ax20_106Tone_RU53						
6875	1	-8.25	-5.82	5.6	-0.22	24
	2	-9.50				
6895	1	-9.26	-6.19	5.6	-0.59	
	2	-9.15				
6995	1	-9.00	-6.18	5.6	-0.58	
	2	-9.38				
7115	1	-11.90	-8.90	5.6	-3.30	
	2	-11.93				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax40_26Tone_RU0						
6885	1	-8.71	-5.54	5.6	0.06	24
	2	-8.39				
6925	1	-9.07	-6.03	5.6	-0.43	
	2	-9.01				
6965	1	-9.33	-6.28	5.6	-0.68	
	2	-9.25				
7058	1	-8.63	-5.71	5.6	-0.11	
	2	-8.81				
802.11ax40_52Tone_RU37						
6885	1	-6.73	-3.51	5.6	2.09	24
	2	-6.32				
6925	1	-7.08	-4.00	5.6	1.60	
	2	-6.95				
6965	1	-7.28	-4.18	5.6	1.42	
	2	-7.10				
7058	1	-6.67	-3.71	5.6	1.89	
	2	-6.77				
802.11ax40_106Tone_RU53						
6885	1	-3.95	-0.71	5.6	4.89	24
	2	-3.50				
6925	1	-4.32	-1.23	5.6	4.37	
	2	-4.17				
6965	1	-4.53	-1.44	5.6	4.16	
	2	-4.38				
7058	1	-3.82	-0.93	5.6	4.67	
	2	-4.07				
802.11ax40_242Tone_RU61						
6885	1	-1.16	1.94	5.6	7.54	24
	2	-0.98				
6925	1	-1.18	1.78	5.6	7.38	
	2	-1.29				
6965	1	-1.35	1.70	5.6	7.30	
	2	-1.28				
7058	1	-0.79	2.16	5.6	7.76	
	2	-0.92				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax80_26Tone_RU0						
6945	1	-10.05	-6.90	5.6	-1.30	24
	2	-9.77				
7025	1	-9.57	-6.91	5.6	-1.31	
	2	-10.30				
802.11ax80_52Tone_RU37						
6945	1	-8.24	-5.09	5.6	0.51	24
	2	-7.97				
7025	1	-7.76	-5.08	5.6	0.52	
	2	-8.45				
802.11ax80_106Tone_RU53						
6945	1	-6.38	-3.21	5.6	2.39	24
	2	-6.06				
7025	1	-5.92	-3.18	5.6	2.42	
	2	-6.47				
802.11ax80_242Tone_RU61						
6945	1	-3.28	-0.08	5.6	5.52	24
	2	-2.91				
7025	1	-2.75	-0.05	5.6	5.55	
	2	-3.40				
802.11ax80_484Tone_RU65						
6945	1	-0.84	2.27	5.6	7.87	24
	2	-0.65				
7025	1	-0.33	2.38	5.6	7.98	
	2	-0.96				

Frequency (MHz)	Antenna Port	Reading (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax160_26Tone_RU0						
6985	1	-12.89	-9.75	5.6	-4.15	24
	2	-12.63				
802.11ax160_52Tone_RU37						
6985	1	-9.83	-6.60	5.6	-1.00	24
	2	-9.4				
802.11ax160_106Tone_RU53						
6985	1	-6.85	-3.59	5.6	2.01	24
	2	-6.37				
802.11ax160_242Tone_RU61						
6985	1	-3.82	-0.66	5.6	4.94	24
	2	-3.53				
802.11ax160_484Tone_RU65						
6985	1	-0.79	2.17	5.6	7.77	24
	2	-0.90				
802.11ax160_996Tone_RU67						
6985	1	1.62	4.18	5.6	9.78	24
	2	0.66				

Note1:

The EUT employ CDD for MIMO

Directional Gain = G_{ANT} + *Array Gain*, G_{ANT} = 2.6dBi

For Output Power Measurement,

For 802.11a mode, *Array Gain* = 0dB for $N_{ANT} \leqslant 4$

Directional Gain =2.6dBi + 0dB = 2.6dBi

For 802.11 ax mode, the device support beam-forming function.

Directional Gain = G_{ANT} + 10*log(2/1) =5.6dBi

Note 2: Non-Beam Forming mode share the same power with the Beam Forming mode.

FCC §15.407(a)(8) –POWER SPECTRAL DENSITY

Applicable Standard

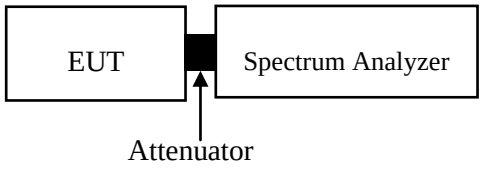
According to the FCC §15.407(a)(8), For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

Test Procedure

Test Method: KDB789033 D02 Clause II.F

For devices operating in the band 5.925-7.125 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in §15.407(a)(8). Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.l.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.



Test Data

Environmental Conditions

Temperature:	26℃
Relative Humidity:	30%
ATM Pressure:	101.0 kPa

The testing was performed by Roger Ling from 2023-02-13 to 2023-03-24.

EUT operation mode: Transmitting

Test Result: Pass, the test data and plots as follows

Note: For 802.11ax mode, the full RU mode is worst case.

5925 MHz – 6425 MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total PSD (dBm/MHz)	Antenna Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)
802.11a						
5955	2	-10.43	-7.42	5.6	-1.82	-1
	1	-10.44				
6175	2	-11.22	-7.49	5.6	-1.89	
	1	-9.89				
6415	2	-10.89	-7.27	5.6	-1.67	
	1	-9.75				
802.11ax20						
5955	2	-10.33	-7.62	5.6	-2.02	-1
	1	-10.96				
6175	2	-11.17	-7.77	5.6	-2.17	
	1	-10.43				
6415	2	-11.04	-7.53	5.6	-1.93	
	1	-10.09				
802.11ax40						
5965	2	-11.78	-8.55	5.6	-2.95	-1
	1	-11.36				
6165	2	-12.02	-8.68	5.6	-3.08	
	1	-11.38				
6405	2	-10.47	-7.18	5.6	-1.58	
	1	-9.92				
802.11ax80						
5985	2	-11.66	-8.30	5.6	-2.70	-1
	1	-10.99				
6145	2	-11.95	-8.58	5.6	-2.98	
	1	-11.25				
6385	2	-11.66	-8.54	5.6	-2.94	
	1	-11.44				
802.11ax160						
6025	2	-12.22	-9.35	5.6	-3.75	-1
	1	-12.50				
6185	2	-15.08	-11.08	5.6	-5.48	
	1	-13.28				
6345	2	-12.75	-9.35	5.6	-3.75	
	1	-12.00				

6425 MHz – 6525 MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total PSD (dBm/MHz)	Antenna Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)
802.11a						
6435	2	-11.70	-8.96	5.6	-3.36	-1
	1	-12.26				
6475	2	-11.79	-9.13	5.6	-3.53	
	1	-12.53				
6515	2	-11.55	-9.11	5.6	-3.51	
	1	-12.77				
802.11ax20						
6435	2	-10.38	-7.41	5.6	-1.81	-1
	1	-10.46				
6475	2	-12.30	-9.45	5.6	-3.85	
	1	-12.63				
6515	2	-11.21	-8.54	5.6	-2.94	
	1	-11.93				
802.11ax40						
6445	2	-11.36	-7.86	5.6	-2.26	-1
	1	-10.43				
6485	2	-11.03	-7.81	5.6	-2.21	
	1	-10.62				
6525	2	-10.41	-7.42	5.6	-1.82	
	1	-10.45				
802.11ax80						
6465	2	-11.44	-8.40	5.6	-2.80	-1
	1	-11.38				
6545	2	-11.57	-8.61	5.6	-3.01	
	1	-11.68				
802.11ax160						
6505	2	-15.95	-12.19	5.6	-6.59	-1
	1	-14.56				

6525 MHz – 6875 MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total PSD (dBm/MHz)	Antenna Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)
802.11a						
6535	2	-11.20	-7.95	5.6	-2.35	-1
	1	-10.74				
6695	2	-10.63	-7.26	5.6	-1.66	
	1	-9.94				
6855	2	-10.64	-7.26	5.6	-1.66	
	1	-9.93				
802.11ax20						
6535	2	-10.52	-7.51	5.6	-1.91	-1
	1	-10.53				
6695	2	-10.58	-7.50	5.6	-1.90	
	1	-10.45				
6855	2	-10.97	-7.53	5.6	-1.93	
	1	-10.15				
802.11ax40						
6565	2	-11.55	-8.35	5.6	-2.75	-1
	1	-11.18				
6685	2	-11.08	-7.83	5.6	-2.23	
	1	-10.62				
6845	2	-10.41	-7.28	5.6	-1.68	
	1	-10.17				
802.11ax80						
6625	2	-11.76	-8.45	5.6	-2.85	-1
	1	-11.18				
6705	2	-11.69	-8.66	5.6	-3.06	
	1	-11.65				
6785	2	-11.74	-8.44	5.6	-2.84	
	1	-11.17				
6865	2	-10.90	-8.06	5.6	-2.46	
	1	-11.25				
802.11ax160						
6665	2	-13.46	-10.60	5.6	-5.00	-1
	1	-13.77				
6825	2	-16.40	-12.64	5.6	-7.04	
	1	-15.01				

6875MHz –7125MHz

Frequency (MHz)	Antenna Port	Reading (dBm)	Total PSD (dBm/MHz)	Antenna Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)
802.11a						
6875	2	-10.98	-7.42	5.6	-1.82	-1
	1	-9.95				
6895	2	-10.75	-7.68	5.6	-2.08	
	1	-10.63				
6995	2	-10.43	-7.36	5.6	-1.76	
	1	-10.31				
7115	2	-10.66	-7.57	5.6	-1.97	
	1	-10.51				
802.11ax20						
6875	2	-11.19	-7.68	5.6	-2.08	-1
	1	-10.24				
6895	2	-11.10	-7.94	5.6	-2.34	
	1	-10.81				
6995	2	-10.90	-7.69	5.6	-2.09	
	1	-10.51				
7115	2	-19.95	-16.87	5.6	-11.27	
	1	-19.81				
802.11ax40						
6885	2	-10.56	-7.53	5.6	-1.93	-1
	1	-10.52				
6925	2	-10.94	-7.93	5.6	-2.33	
	1	-10.95				
6965	2	-10.94	-7.85	5.6	-2.25	
	1	-10.79				
7085	2	-10.70	-7.42	5.6	-1.82	
	1	-10.18				
802.11ax80						
6945	2	-11.48	-8.56	5.6	-2.96	-1
	1	-11.67				
7025	2	-11.59	-8.42	5.6	-2.82	
	1	-11.28				
802.11ax160						
6985	2	-14.59	-11.56	5.6	-5.96	-1
	1	-14.55				

Note1: The test plots of PSD please refer to the Appendix A.

Note2:

The EUT employ CDD for MIMO

Directional Gain = G_{ANT} + Array Gain, G_{ANT} = 2.6dBi

For PSD Measurement,

For 802.11a mode, *Array Gain = 10*logN_{ANT}=10*log2=3dB*

Directional Gain =2.6dBi + 3dB = 5.6dBi

For 802.11n/ac/ax mode, the device support beam-forming function.

Directional gain = G_{ANT} + 10*log(2/1) =5.6dBi

Note 3: Non-Beam Forming mode share the same power with the Beam Forming mode.

FCC §15.407(b) (7) IN-BAND EMISSIONS

Applicable Standard

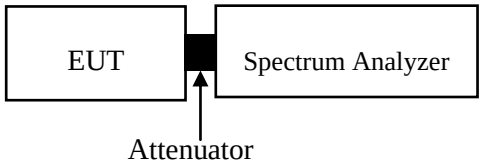
According to FCC §15.407(b) (7),

For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. 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, and 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. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

Test Procedure

Test Method: KDB 987594 D02 Clause J

1. Connect output of the antenna port to a spectrum analyzer or EMI receiver, with appropriate attenuation, as to not damage the instrumentation.
2. Set the reference level of the measuring equipment in accordance with procedure 4.1.5.2 of ANSI C63.10-2013.
3. Take nominal bandwidth as reference channel bandwidth provided that 26 dB emission bandwidth is always larger than nominal bandwidth.
4. Measure the power spectral density (which will be used 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.
5. 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.
   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.
6. Adjust the span to encompass the entire mask as necessary.
7. Clear trace.
8. Trace average at least 100 traces in power averaging (rms) mode.
9. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.



Test Data

Environmental Conditions

Temperature:	23~26℃
Relative Humidity:	30~48%
ATM Pressure:	100.2~101.0 kPa

The testing was performed by Roger Ling from 2023-02-06 to 2023-05-25.

EUT operation mode: Transmitting

Test Result: Pass

The test plots Please refer to the Appendix B.

Note: for 802.11AX partial RU mode, pre-scan with all RU mode, and the worst case 26Tone and maximum Tone was recorded.

FCC §15.407(d) (6) CONTENTION BASED PROTOCOL

Applicable Standard

According to FCC15.407(d) (6) &KDB 98754 D02.

Indoor access points , subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band . To ensure incumbent co-channel operations are detected in a technology-agnosticic manner,unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least-62 dBm or lower . Upon detection of energy in the band , unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold(-62dBm)1.The -62dBm(or lower) Threshold is referenced to a 0dBi antenna gain.

To ensure incumbent operations are reliably detected in the band , low power indoor devices must detect RF energy throughout intended operating channel . For example , an 802 .device that plans to transmit a 40 MHz-wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel.Additionally , low-power indoor devices must detect co-channel energy with 90% or greater certainty .

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

where:
$BWEUT$: Transmission bandwidth of EUT signal
$BWInc$: Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)
$fc1$: Center frequency of EUT transmission
$fc2$: Center frequency of simulated incumbent signal

Test Procedure

Test Method: KDB 987594 D02 Clause I

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EEUT 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, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. 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 as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. 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.
9. (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.
10. Refer to Table 1 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 5, choose a different center frequency for the AWGN signal and repeat the process.

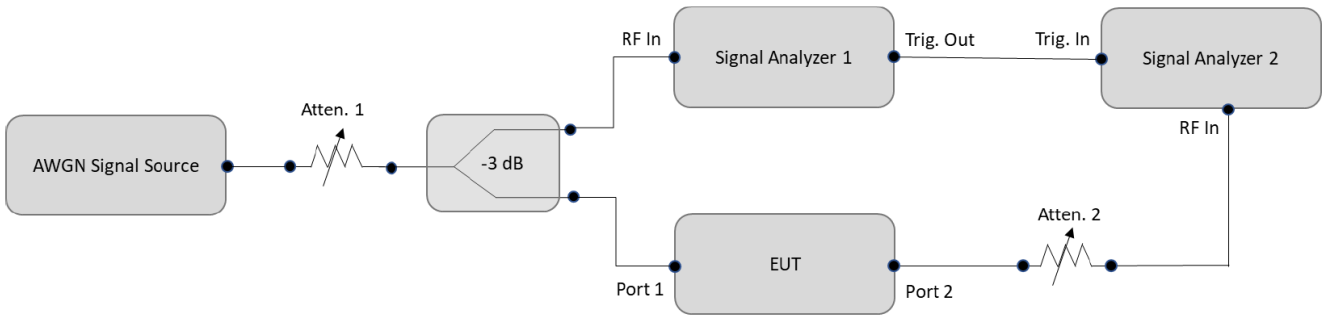


Figure 2. Contention-based protocol test setup, conducted method Step-by-Step Procedure, Conducted Setup

Test Data

Environmental Conditions

Temperature:	26℃
Relative Humidity:	30%
ATM Pressure:	101.0 kPa

The testing was performed by Roger Ling on 2022-12-13.

EUT operation mode: Transmitting

Test Result: Pass

The test plots Please refer to the Appendix C

******* END OF REPORT *******