

FCC ID: KA2E15A1
Report No.: T210319W02-RP2

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RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART E

Test Standard	FCC Part 15.407
Product name	(1) AX1500 Wi-Fi 6 AI Range Extender; (2) AX1500 Mesh Range Extender
Brand Name	D-Link
Model No.	E15
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc.(Wugu Laboratory)

Approved by:



Kevin Tsai
Deputy Manager

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 10, 2021	Initial Issue	ALL	Allison Chen

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	D-Link Corporation 14420 Myford Road Suite 100, Irvine, California 92606, United States
Manufacturer	Amigo Technology Inc. No.82,Gongye 2nd Rd., Annan Dist.,Tainan City 709Tainan,Taiwan.
Equipment	(1) AX1500 Wi-Fi 6 AI Range Extender; (2) AX1500 Mesh Range Extender
Model No.	E15
Model Discrepancy	N/A
Trade Name	D-Link
Received Date	March 19, 2021
Date of Test	April 7 ~ June 15, 2021
Power Operation	Power from AC 120V, 60Hz

Remark:

1. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

1.2 EUT CHANNEL INFORMATION

Frequency Range	<table border="1"> <thead> <tr> <th colspan="2">UNII-1</th></tr> </thead> <tbody> <tr><td>IEEE 802.11a</td><td>5180 ~ 5240 MHz</td></tr> <tr><td>IEEE 802.11n HT 20 MHz</td><td>5180 ~ 5240 MHz</td></tr> <tr><td>IEEE 802.11n HT 40 MHz</td><td>5190 ~ 5230 MHz</td></tr> <tr><td>IEEE 802.11ac VHT 80 MHz</td><td>5210 MHz</td></tr> <tr><td>IEEE 802.11ax 20 MHz</td><td>5180 ~ 5240 MHz</td></tr> <tr><td>IEEE 802.11ax 40 MHz</td><td>5190 ~ 5230 MHz</td></tr> <tr><td>IEEE 802.11ax 80 MHz</td><td>5210 MHz</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">UNII-3</th></tr> </thead> <tbody> <tr><td>IEEE 802.11a</td><td>5745 ~ 5825 MHz</td></tr> <tr><td>IEEE 802.11n HT 20 MHz</td><td>5745 ~ 5825 MHz</td></tr> <tr><td>IEEE 802.11n HT 40 MHz</td><td>5755 ~ 5795 MHz</td></tr> <tr><td>IEEE 802.11ac VHT 80 MHz</td><td>5775 MHz</td></tr> <tr><td>IEEE 802.11ax 20 MHz</td><td>5745 ~ 5825 MHz</td></tr> <tr><td>IEEE 802.11ax 40 MHz</td><td>5755 ~ 5795 MHz</td></tr> <tr><td>IEEE 802.11ax 80 MHz</td><td>5775 MHz</td></tr> </tbody> </table>	UNII-1		IEEE 802.11a	5180 ~ 5240 MHz	IEEE 802.11n HT 20 MHz	5180 ~ 5240 MHz	IEEE 802.11n HT 40 MHz	5190 ~ 5230 MHz	IEEE 802.11ac VHT 80 MHz	5210 MHz	IEEE 802.11ax 20 MHz	5180 ~ 5240 MHz	IEEE 802.11ax 40 MHz	5190 ~ 5230 MHz	IEEE 802.11ax 80 MHz	5210 MHz	UNII-3		IEEE 802.11a	5745 ~ 5825 MHz	IEEE 802.11n HT 20 MHz	5745 ~ 5825 MHz	IEEE 802.11n HT 40 MHz	5755 ~ 5795 MHz	IEEE 802.11ac VHT 80 MHz	5775 MHz	IEEE 802.11ax 20 MHz	5745 ~ 5825 MHz	IEEE 802.11ax 40 MHz	5755 ~ 5795 MHz	IEEE 802.11ax 80 MHz	5775 MHz
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Modulation Type	1. IEEE 802.11a mode: OFDM 2. IEEE 802.11n HT 20 MHz mode: OFDM 3. IEEE 802.11n HT 40 MHz mode: OFDM 4. IEEE 802.11ac VHT 80 MHz mode: OFDM 5. IEEE 802.11ax 20 MHz mode: OFDM 6. IEEE 802.11ax 40 MHz mode: OFDM 7. IEEE 802.11ax 80 MHz mode: OFDM																																

Remark:

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Specification	☐ PIFA ☐ PCB ☐ Dipole ☐ Coils ☒ embedded antenna
Antenna Gain	Chain 0: 3.1 dBi Chain 1: 3.3 dBi Power Directional Gain: 6.21 dBi
Antenna connector	MHF compatible

Notes:

- Power Directional Gain = $10 \cdot \log \{ [10^{(Ant1/20)} + 10^{(Ant2/20)} + \dots + 10^{(Ant N / 20)}]^2 / N \text{ ANT} \}$ dBi
- Two dipole detachable Antennas used which uses a unique coupling to the EUT meeting rule 15.203.

1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87

Remark:

- This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
- ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

Test site	Test Engineer	Remark
AC Conduction Room	Jack Chen	-
Radiation	Ray Li	-
RF Conducted	Jerry Chang	-

Remark: The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC public Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309.

1.6 INSTRUMENT CALIBRATION

Test Date before May 20, 2021

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Coaxial Cable	Woken	WC12	CC003	06/29/2020	06/28/2021
Signal Analyzer	R&S	FSV 40	101073	09/17/2020	09/16/2021
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2020	09/06/2021
Power Meter	Anritsu	ML2487A	6K00003260	05/21/2020	05/20/2021
Power Sensor	Anritsu	MA2490A	032910	05/21/2020	05/20/2021
Software	Radio Test Software.				

Test Date after May 20, 2021

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Coaxial Cable	Woken	WC12	CC003	06/29/2020	06/28/2021
Signal Analyzer	R&S	FSV 40	101073	09/17/2020	09/16/2021
Power Meter	Anritsu	ML2496A	S0013633	11/06/2020	11/05/2021
Power Sensor	Anritsu	MA2491A	1207368	11/06/2020	11/05/2021
Power Sensor	Anritsu	MA2491A	1207365	11/06/2020	11/05/2021
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2020	09/06/2021
Software	Radio Test Software.				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.

AC line Conduction Test Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
CABLE	EMCI	CFD300-NL	CERF	06/29/2020	06/28/2021
EMI Test Receiver	R&S	ESCI	100064	07/17/2020	07/16/2021
LISN	SCHAFFNER	NNB 41	03/10013	02/02/2021	02/01/2022
Software	EZ-EMC(CCS-3A1-CE-wugu)				

3M 966 Chamber Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/24/2021	02/23/2022
Coaxial Cable	EMCI	EMC105	190914+32710 9/4	09/19/2020	09/18/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	12/09/2020	12/08/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	22470/2	12/09/2020	12/08/2021
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/06/2021	01/05/2022
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/30/2020	09/29/2021
High Pass Filters	MICRO TRONICS	HPM13195	003	02/08/2021	02/07/2022
Horn Antenna	ETS LINDGREN	3116	00026370	12/11/2020	12/10/2021
Loop Ant	COM-POWER	AL-130	121051	04/07/2021	04/06/2022
Pre-Amplifier	EMEC	EM330	060609	02/24/2021	02/23/2022
Pre-Amplifier	HP	8449B	3008A00965	02/25/2021	02/24/2022
Pre-Amplifier	MITEQ	AMF-6F-1800 4000-37-8P	985646	09/02/2020	09/01/2021
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	07/24/2020	07/23/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180413				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.



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1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
	N/A				

Support Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	NB(G)	Lenovo	IBM 1951	R33B65	CJ6UPA3489WL
2	NB(L)	Toshiba	PORTEGE R30-A	N/A	PD97260H

1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.407, KDB 789033 D02.

2. TEST SUMMARY

FCC Standard Sec.	Chapter	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207	4.1	AC Conducted Emission	Pass
15.407(a)	4.2	26dB Bandwidth	Pass
15.407(e)	4.2	6dB Bandwidth	Pass
2.1049	4.2	Occupied Bandwidth (99%)	Pass
15.407(a)	4.3	Output Power Measurement	Pass
15.407(a)	4.4	Power Spectral Density	Pass
15.407(b)	4.5	Radiation Band Edge	Pass
15.407(b)	4.5	Radiation Spurious Emission	Pass

3. DESCRIPTION OF TEST MODES

3.1 THE EUT CHANNEL NUMBER OF OPERATING CONDITION

Operation mode	1. IEEE 802.11a mode: 6Mbps 2. IEEE 802.11n HT 20 MHz mode: MCS8 3. IEEE 802.11n HT 40 MHz mode: MCS8 4. IEEE 802.11ac VHT 80 MHz mode: MCS0 5. IEEE 802.11ax 20 mode: MCS0 6. IEEE 802.11ax 40 mode: MCS0 7. IEEE 802.11ax 80 mode: MCS0																																	
Operating Frequency	<table><tr><th></th><th>Mode</th><th>Frequency Range (MHz)</th></tr><tr><td rowspan="7">U-NII-1</td><td>IEEE 802.11a</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11n HT 20 MHz</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11n HT 40 MHz</td><td>5190, 5230</td></tr><tr><td>IEEE 802.11ac VHT 80 MHz</td><td>5210</td></tr><tr><td>IEEE 802.11ax 20 MHz</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11ax 40 MHz</td><td>5190, 5230</td></tr><tr><td>IEEE 802.11ax 80 MHz</td><td>5210</td></tr><tr><td rowspan="7">U-NII-3</td><td>IEEE 802.11a</td><td>5745, 5785, 5825</td></tr><tr><td>IEEE 802.11n HT 20 MHz</td><td>5745, 5785, 5825</td></tr><tr><td>IEEE 802.11n HT 40 MHz</td><td>5755, 5795</td></tr><tr><td>IEEE 802.11ac VHT 80 MHz</td><td>5775</td></tr><tr><td>IEEE 802.11ax 20 MHz</td><td>5745, 5785, 5825</td></tr><tr><td>IEEE 802.11ax 40 MHz</td><td>5755, 5795</td></tr><tr><td>IEEE 802.11ax 80 MHz</td><td>5775</td></tr></table>		Mode	Frequency Range (MHz)	U-NII-1	IEEE 802.11a	5180, 5220, 5240	IEEE 802.11n HT 20 MHz	5180, 5220, 5240	IEEE 802.11n HT 40 MHz	5190, 5230	IEEE 802.11ac VHT 80 MHz	5210	IEEE 802.11ax 20 MHz	5180, 5220, 5240	IEEE 802.11ax 40 MHz	5190, 5230	IEEE 802.11ax 80 MHz	5210	U-NII-3	IEEE 802.11a	5745, 5785, 5825	IEEE 802.11n HT 20 MHz	5745, 5785, 5825	IEEE 802.11n HT 40 MHz	5755, 5795	IEEE 802.11ac VHT 80 MHz	5775	IEEE 802.11ax 20 MHz	5745, 5785, 5825	IEEE 802.11ax 40 MHz	5755, 5795	IEEE 802.11ax 80 MHz	5775
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Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. The system support 802.11a/n ht20/n ht40/ac vht20/40/80/ax hew 20/40/80, the vht20/vht40 were reduced since the identical parameters with 802.11n ht20 and ht40.
3. The worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations. The device supports SISO and MIMO at 802.11a/n/ac/ax mode, per pre-test, MIMO 2TX mode was the worst and reported.
4. The device supports indoor access points and client devices. Both modes have evaluation power and PDS. Since the power of indoor access points is greater than the client device, the client device will be exempt from bandwidth and radiation tests.

3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conducted Emission	
Test Condition	AC Power line conducted emission for line and neutral
Power supply Mode	Mode 1: EUT power by AC 120V
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Remark:

1. The worst mode was record in this test report.
2. AC power line conducted emission and for below 1G radiation emission were performed the EUT transmit at the highest output power channel as

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by AC 120V
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4
Worst Position	☐ Placed in fixed position. ☐ Placed in fixed position at X-Plane (E2-Plane) ☒ Placed in fixed position at Y-Plane (E1-Plane) ☐ Placed in fixed position at Z-Plane (H-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by AC 120V
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Remark:

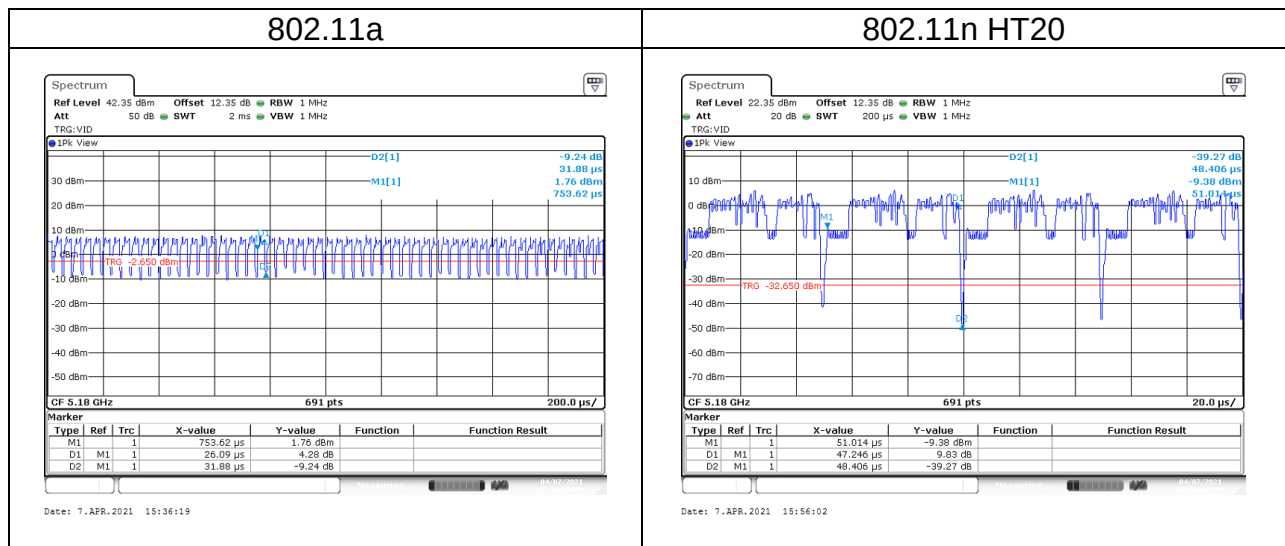
1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Y-Plane) were recorded in this report

3.3 EUT DUTY CYCLE

Temperature: 23.5°C **Test date:** April 7, 2021
Humidity: 47.9% RH **Tested by:** Jerry Chang

Temperature: 22.6°C **Test date:** April 20, 2021
Humidity: 50.2% RH **Tested by:** Jerry Chang

Duty Cycle				
Configuration	Duty Cycle (%)	Duty Factor (dB) $=10 \cdot \log(1/\text{Duty Cycle})$	1/T (kHz)	VBW setting (kHz)
802.11a	81.84	0.87	38.33	39.00
802.11n_20	97.60	0.11	21.17	22.00
802.11n_40	98.41	0.07	22.26	0.01
802.11ac_80	98.39	0.07	22.62	0.01
802.11ax_20	95.56	0.20	14.75	15.00
802.11ax_40	74.56	1.27	9.69	10.00
802.11ax_80	73.91	1.31	9.80	10.00





4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a),

Frequency Range (MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

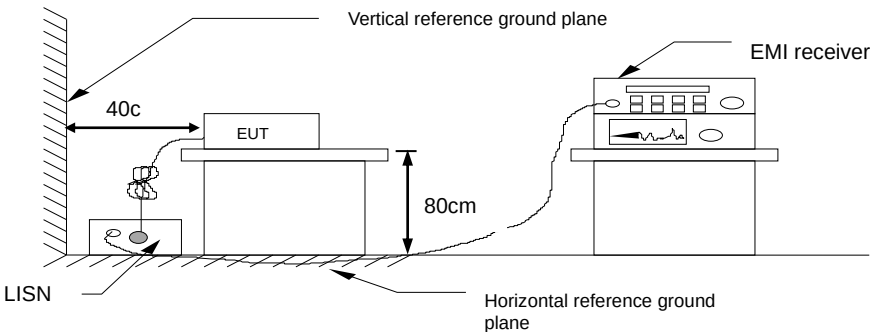
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

4.1.3 Test Setup



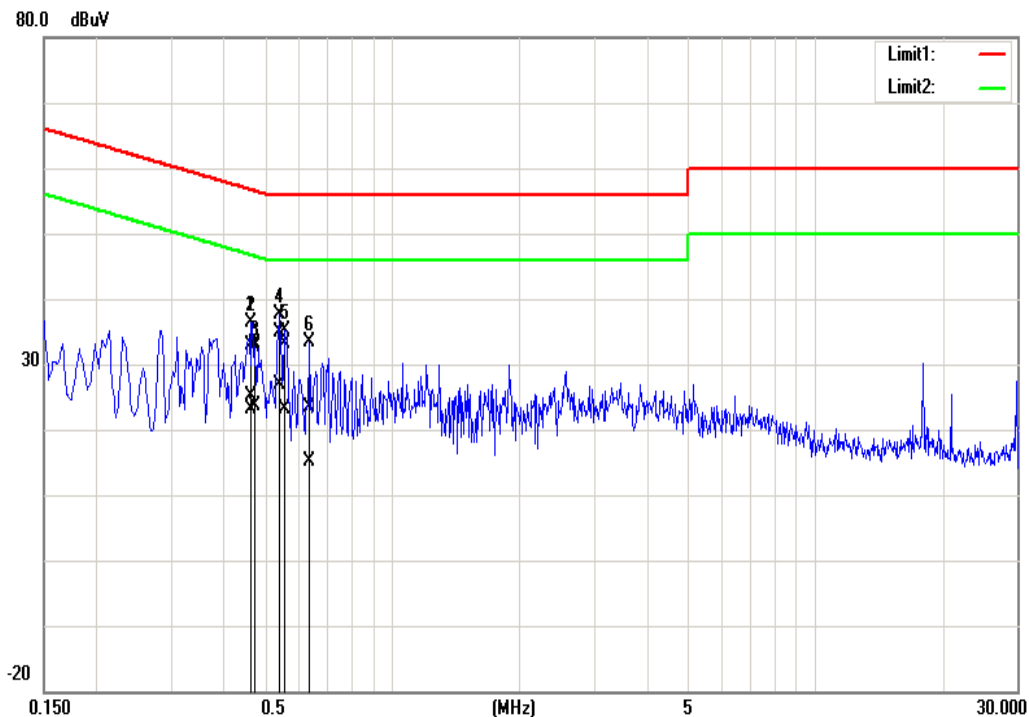
4.1.4 Test Result

Pass.

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Test Data

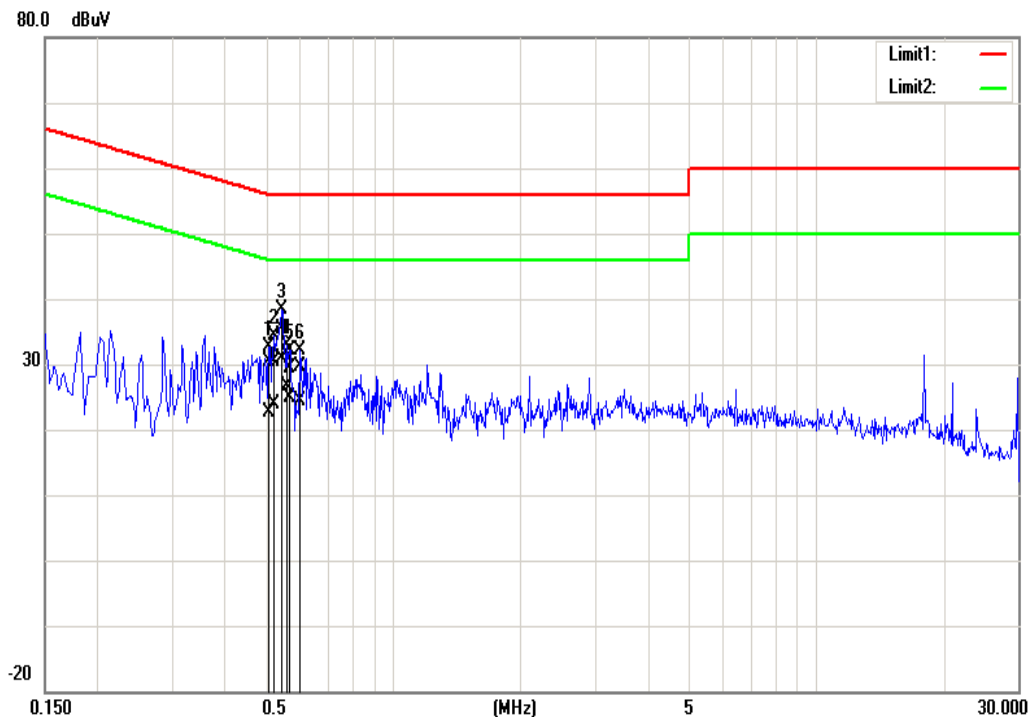
Test Mode:	Mode 1	Temp/Hum	25.3(°C)/ 48.3%RH
Phase:	Line	Test Date	June 11, 2021
Test Voltage:	120Vac, 60Hz	Test Engineer	Jack Chen



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.4580	22.59	14.78	10.29	32.88	25.07	56.73	46.73	-23.85	-21.66	Pass
0.4660	22.59	12.87	10.29	32.88	23.16	56.58	46.58	-23.70	-23.42	Pass
0.4740	22.77	13.30	10.29	33.06	23.59	56.44	46.44	-23.38	-22.85	Pass
0.5420	24.67	16.64	10.29	34.96	26.93	56.00	46.00	-21.04	-19.07	Pass
0.5580	22.89	12.72	10.29	33.18	23.01	56.00	46.00	-22.82	-22.99	Pass
0.6380	13.13	4.89	10.29	23.42	15.18	56.00	46.00	-32.58	-30.82	Pass

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Test Mode:	Mode 1	Temp/Hum	25.3(°C)/ 48.3%RH
Phase:	Neutral	Test Date	June 11, 2021
Test Voltage:	120Vac, 60Hz	Test Engineer	Jack Chen



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.5100	20.10	12.39	10.29	30.39	22.68	56.00	46.00	-25.61	-23.32	Pass
0.5220	20.19	13.49	10.29	30.48	23.78	56.00	46.00	-25.52	-22.22	Pass
0.5460	25.03	20.65	10.29	35.32	30.94	56.00	46.00	-20.68	-15.06	Pass
0.5620	21.46	16.33	10.29	31.75	26.62	56.00	46.00	-24.25	-19.38	Pass
0.5700	19.14	14.50	10.29	29.43	24.79	56.00	46.00	-26.57	-21.21	Pass
0.6020	19.42	14.00	10.29	29.71	24.29	56.00	46.00	-26.29	-21.71	Pass

4.2 26dB BANDWIDTH, 6dB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

4.2.1 Test Limit

26 dB Bandwidth : For reporting purposes only.

6 dB Bandwidth : Least 500kHz.

Occupied Bandwidth(99%) : For reporting purposes only.

4.2.2 Test Procedure

26dB

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW: approximately 1% of the emission bandwidth.
3. Set the VBW>RBW.
4. Detoctor = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26dB down from the peak of the emission. Compare this with the RBW setting of the analyser. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

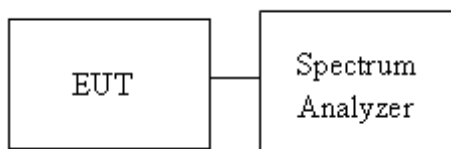
6dB

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = 100 kHz.
3. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
4. Detoctor = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

99%

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set center frequency to the nominal EUT channel center frequency.
3. Set span = 1.5 times to 5.0 times the OBW.
4. Set RBW = 1 % to 5% of the OBW.
5. Set VBW $\geq 3 \times$ RBW

4.2.3 Test Setup



4.2.4 Test Result

Temperature:	24.1°C	Test date:	April 8, 2021
Humidity:	48.2% RH	Tested by:	Jerry Chang
Temperature:	22.5°C	Test date:	April 9, 2021
Humidity:	49.9% RH	Tested by:	Jerry Chang
Temperature:	23.2°C	Test date:	April 22, 2021
Humidity:	48.7% RH	Tested by:	Jerry Chang
Temperature:	23.1°C	Test date:	April 26, 2021
Humidity:	49.4% RH	Tested by:	Jerry Chang
Temperature:	23.8°C	Test date:	May 29, 2021
Humidity:	46.4% RH	Tested by:	Jerry Chang

UNII-1 5150-5250 MHz					
Test mode: IEEE 802.11a mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5180	16.8596	16.4254	33.0435	22.4638
Mid	5220	17.1490	16.4978	35.0725	31.9565
High	5240	17.2937	16.5701	37.971	21.087
Test mode: IEEE 802.11n HT20 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5180	18.3068	17.7279	34.5652	22.4638
Mid	5220	17.8726	17.6555	32.6087	25.5797
High	5240	18.3068	17.7279	34.1304	23.7681
Test mode: IEEE 802.11n HT40 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5190	41.9102	38.0897	75.942	75.942
High	5230	52.9088	37.1635	76.638	70.725
Test mode: IEEE 802.11ac VHT80 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5210	78.0318	76.8740	153.043	85.797

UNII-1 5150-5250 MHz					
Test mode: IEEE 802.11ax 20 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5180	18.130	18.160	20.44	20.39
Mid	5220	18.206	18.012	19.82	20.03
High	5240	18.100	18.154	20.36	19.59
Test mode: IEEE 802.11ax 40 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5190	17.736	17.655	20.39	20.46
High	5230	17.698	17.652	20.36	19.99
Test mode: IEEE 802.11ax 80 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5190	75.631	75.579	86.52	82.83

UNII-3					
Test mode: IEEE 802.11a mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5745	16.8596	18.2344	15.1739	15.1739
Mid	5785	22.2865	17.6555	15.7391	15.7391
High	5825	16.7149	22.8654	15.3913	15.1739
Test mode: IEEE 802.11n HT20 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5745	17.8002	19.5369	15.7391	15.3478
Mid	5785	19.2474	22.8654	15.7391	15.1739
High	5825	18.0173	20.5499	15.7391	15.7391
Test mode: IEEE 802.11n HT40 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5755	46.3096	53.8350	35.246	35.246
High	5795	45.3835	54.4138	35.246	35.246
Test mode: IEEE 802.11ac VHT80 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5775	79.4211	93.7771	75.362	75.362



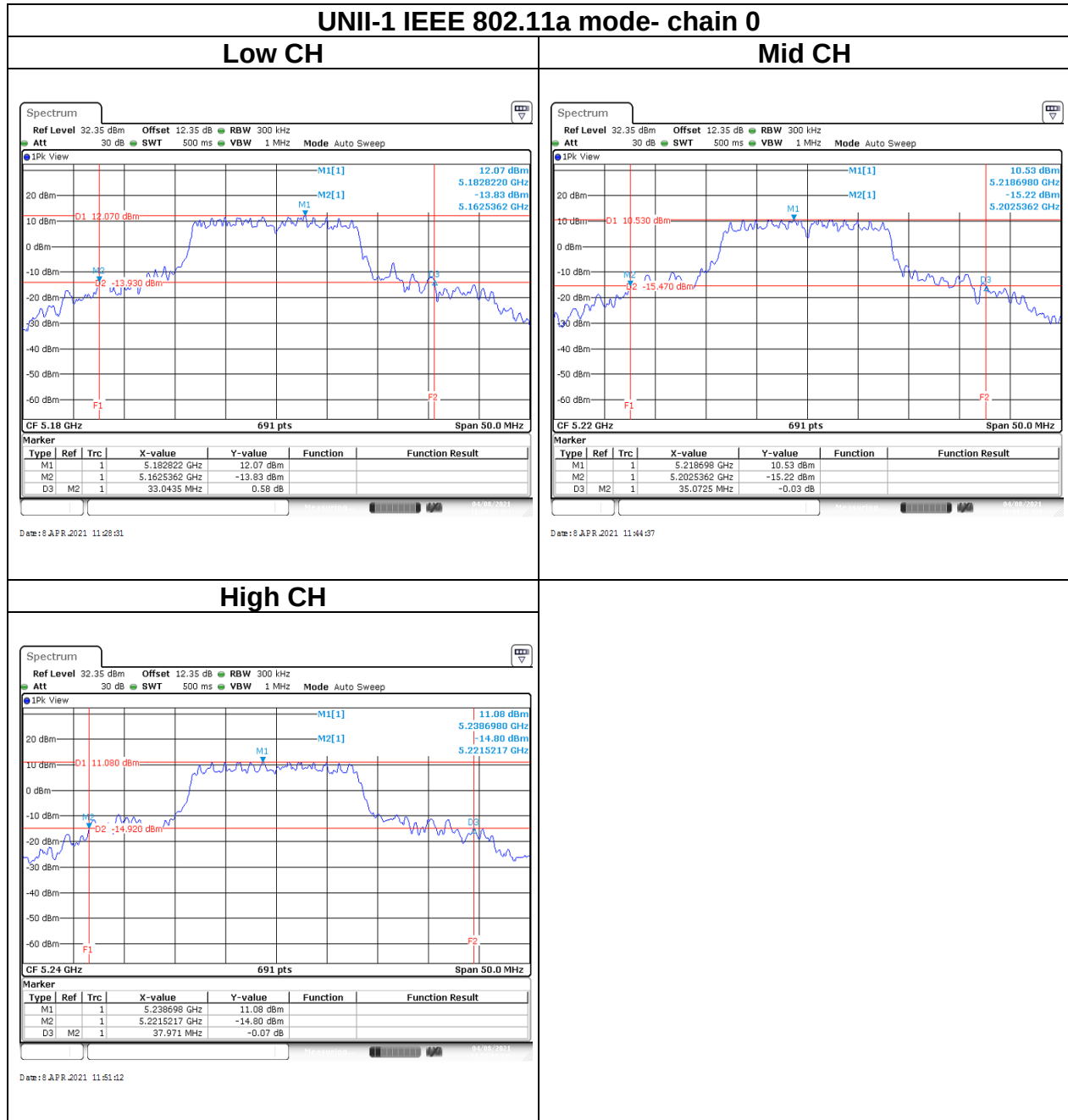
Report No.: T210319W02-RP2

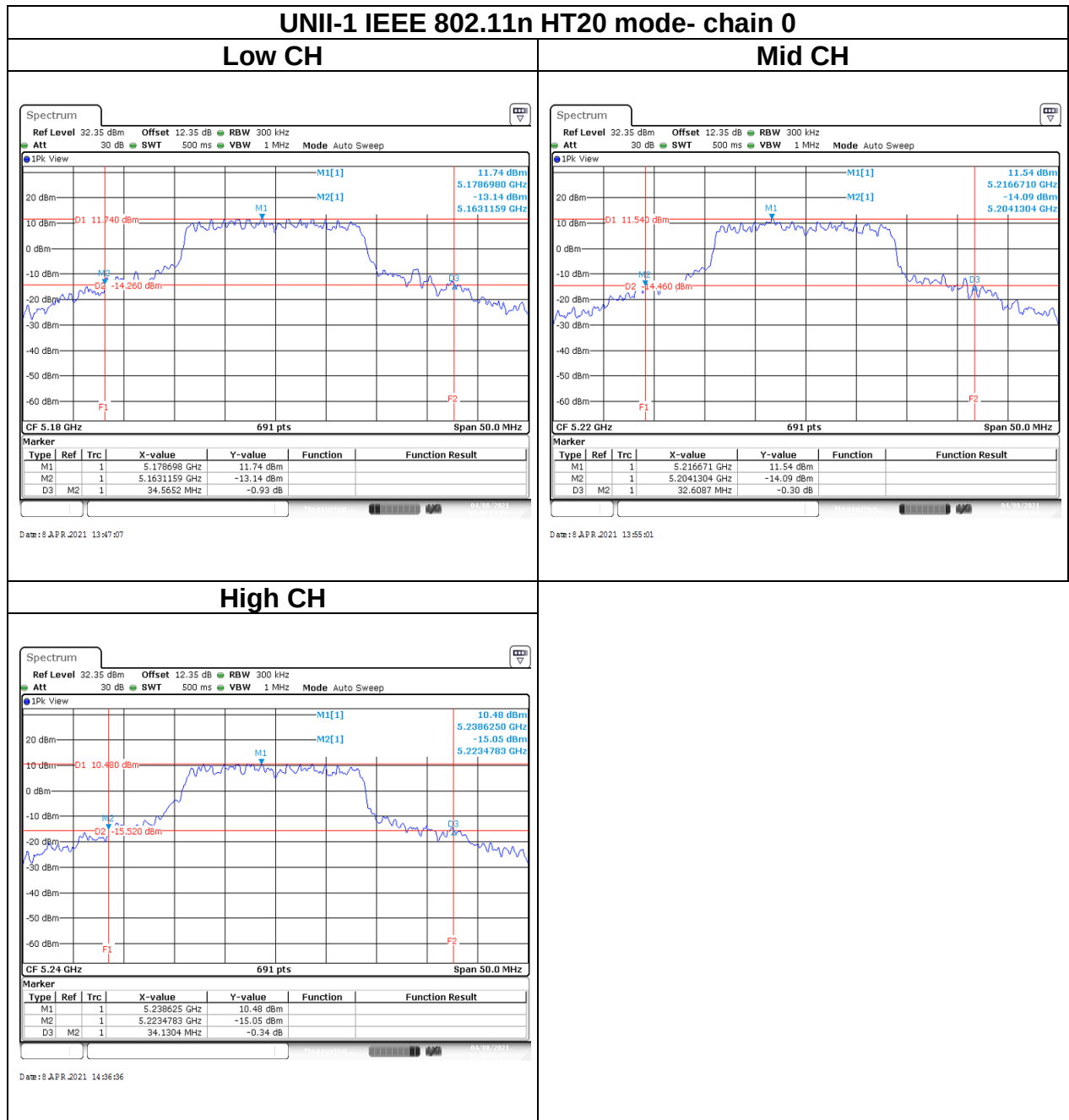
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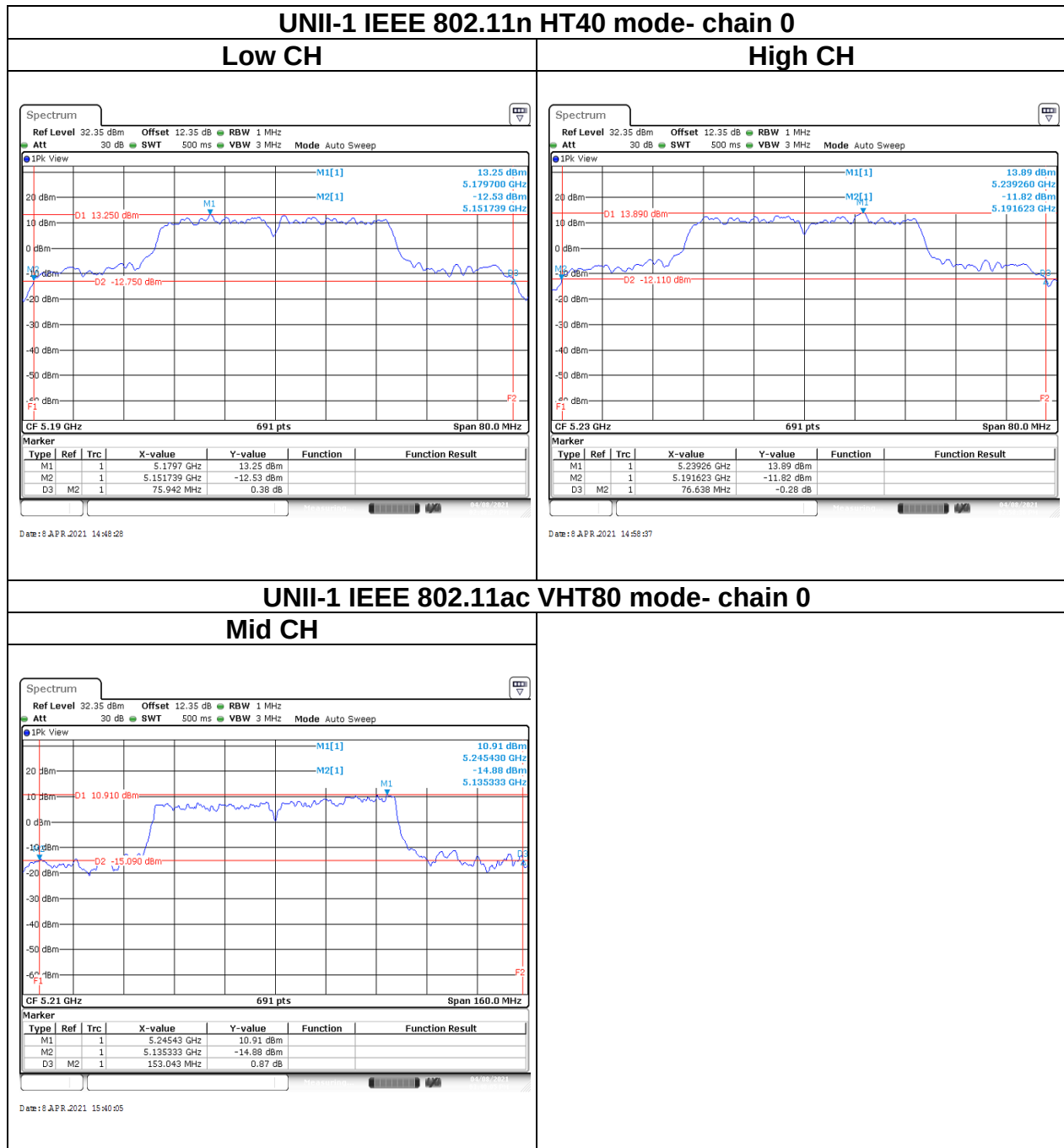
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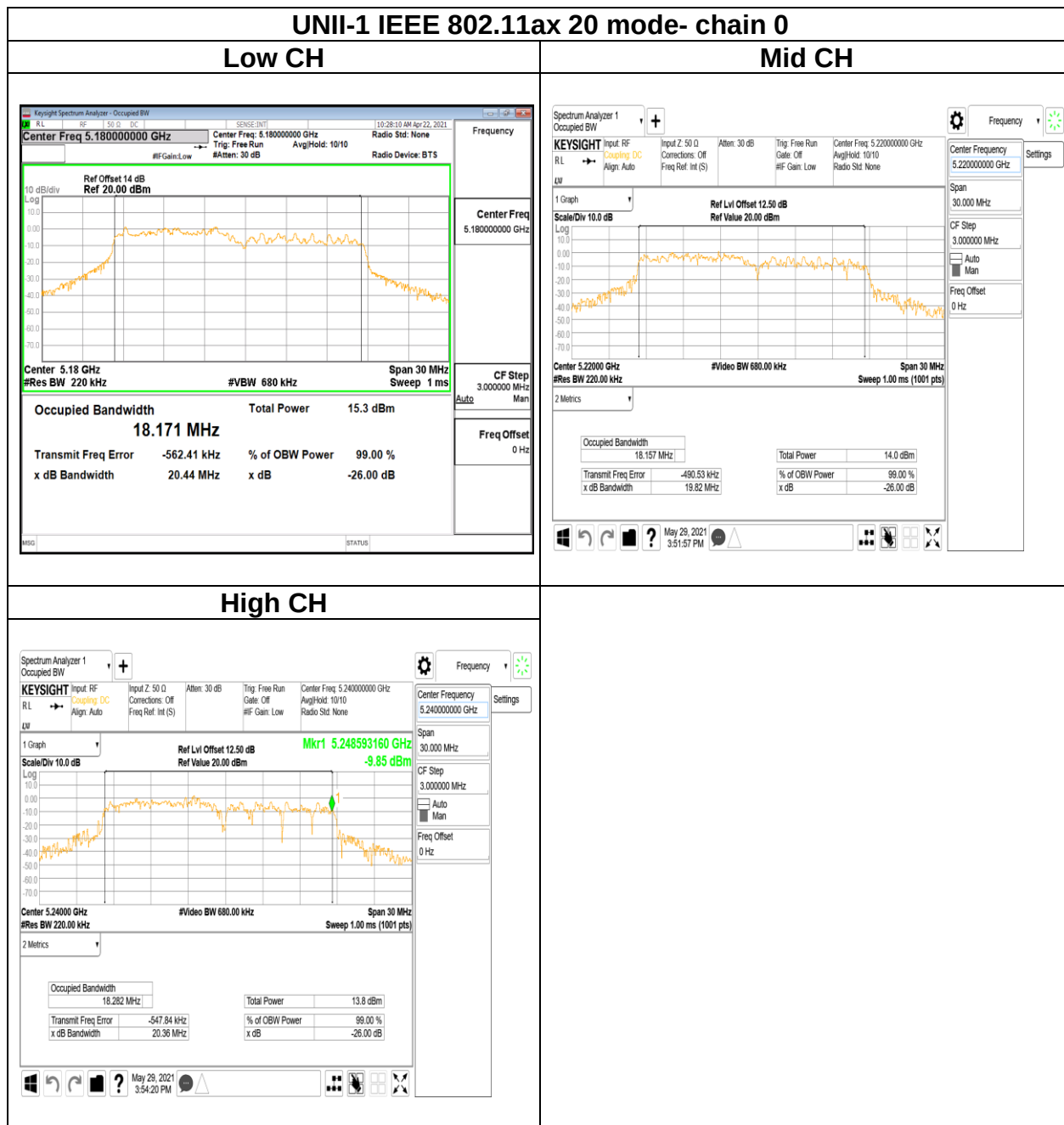
UNII-3					
Test mode: IEEE 802.11ax 20 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5745	18.213	18.177	17.09	17.08
Mid	5785	18.171	18.184	17.08	17.05
High	5825	18.196	18.198	17.10	17.10
Test mode: IEEE 802.11ax 40 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5755	17.741	17.775	16.58	16.56
High	5795	17.766	17.807	16.50	16.49
Test mode: IEEE 802.11ax 80 mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)
Low	5775	75.753	75.637	75.28	75.28

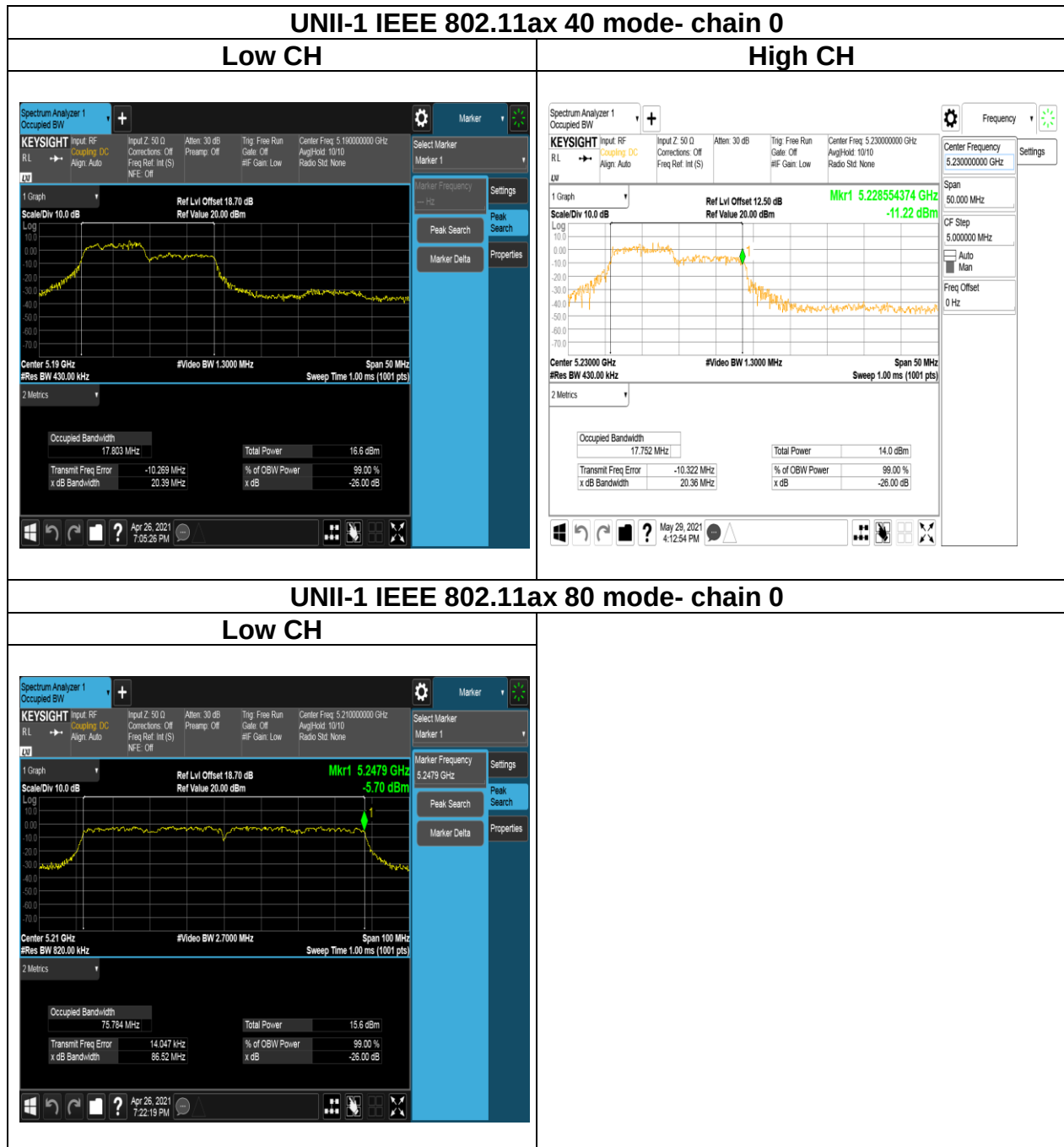
Test Plots (26dB BANDWIDTH)



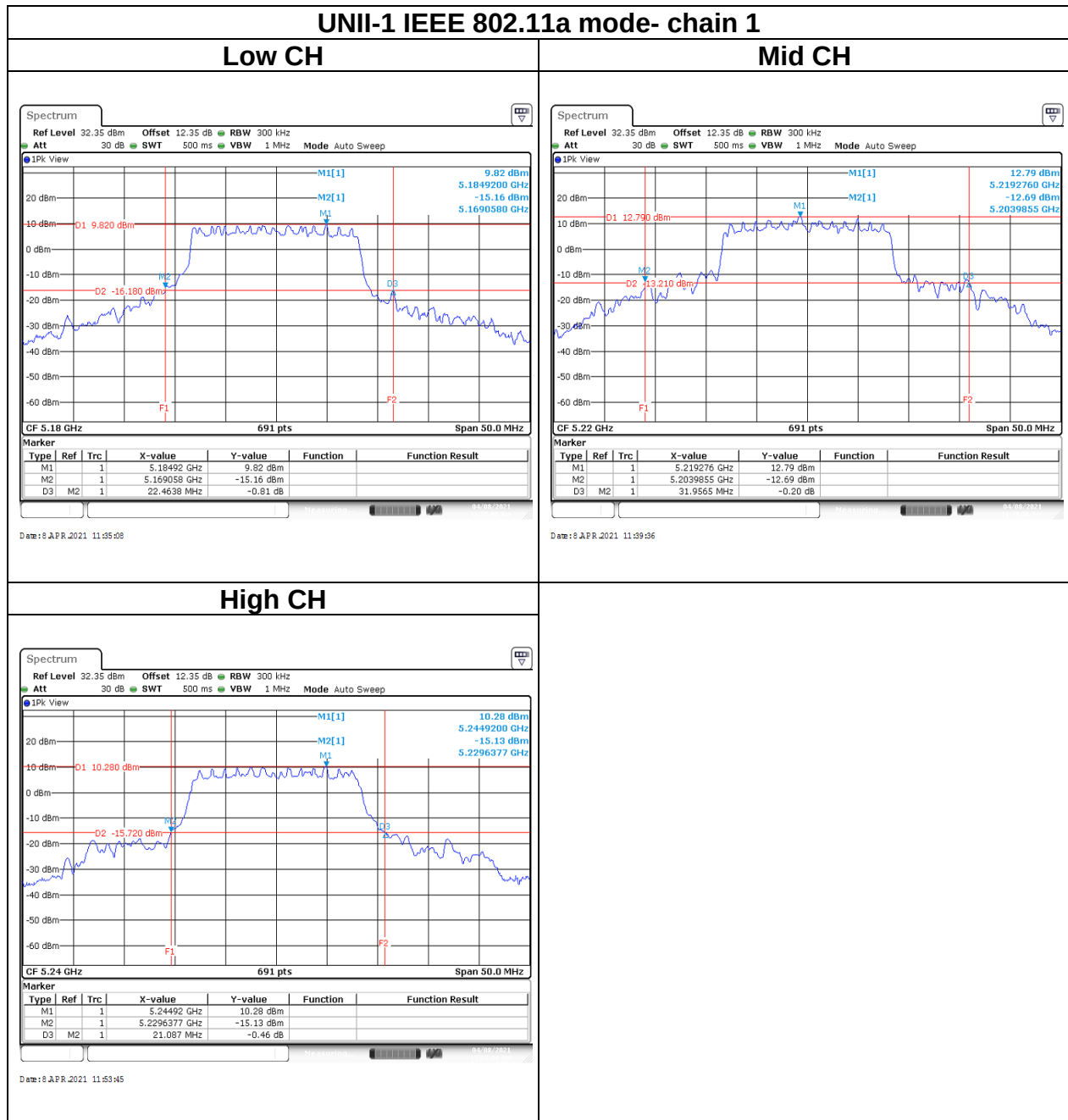


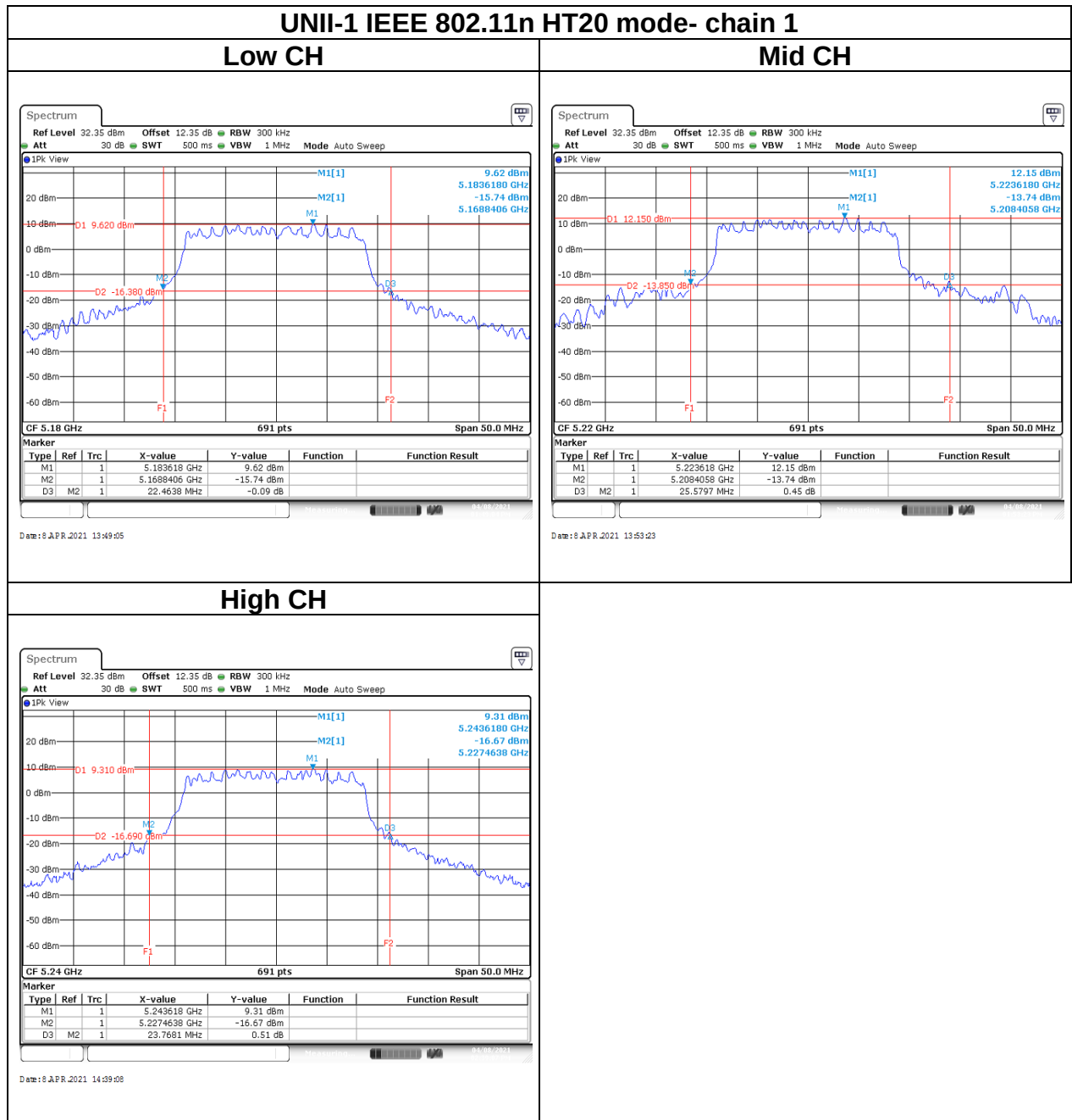




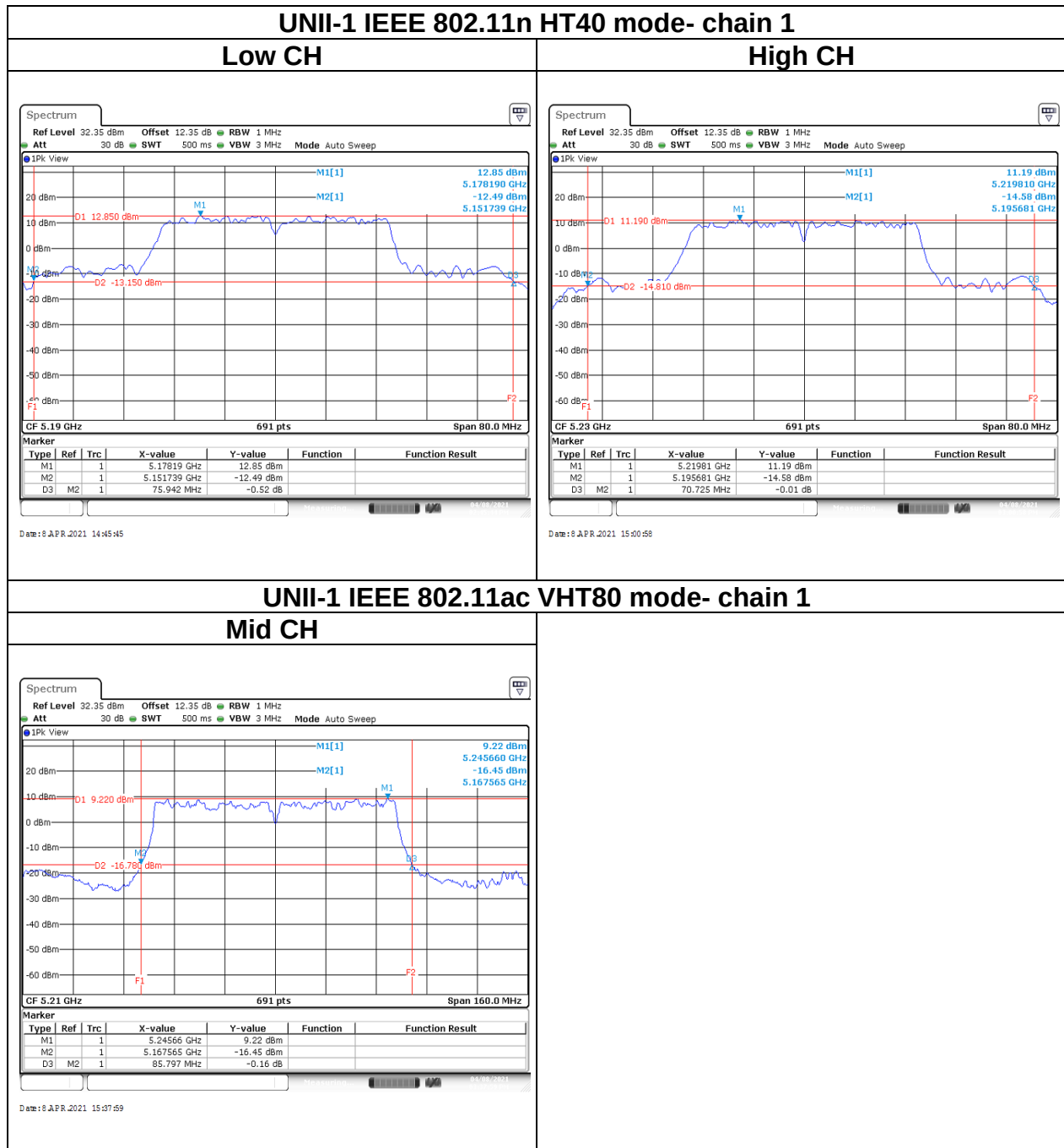


Report No.: T210319W02-RP2



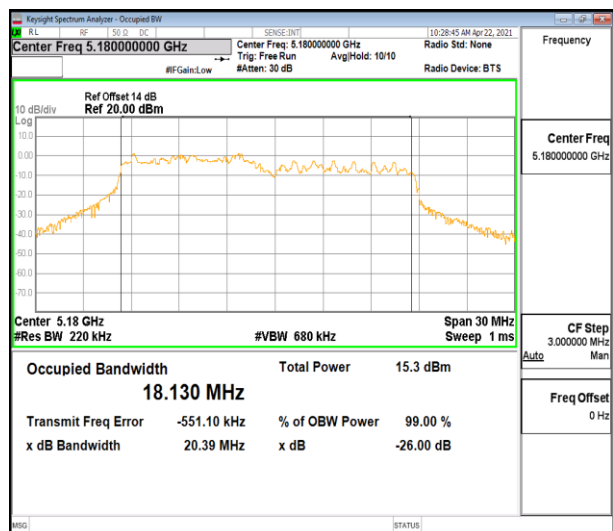


Report No.: T210319W02-RP2

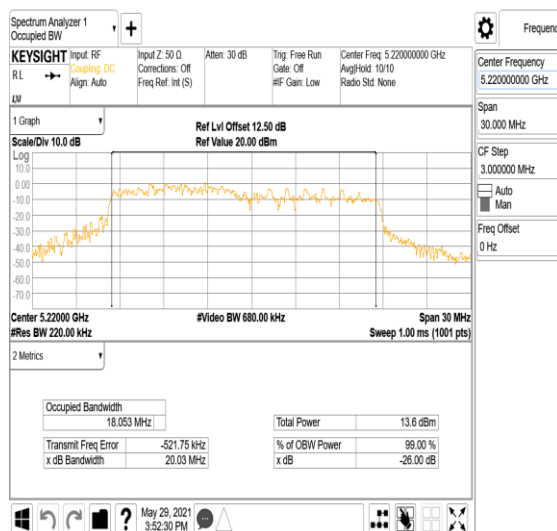


UNII-1 IEEE 802.11ax 20 mode- chain 1

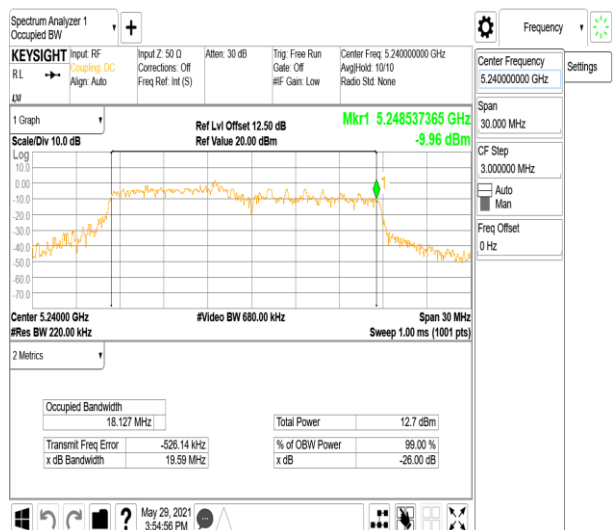
Low CH

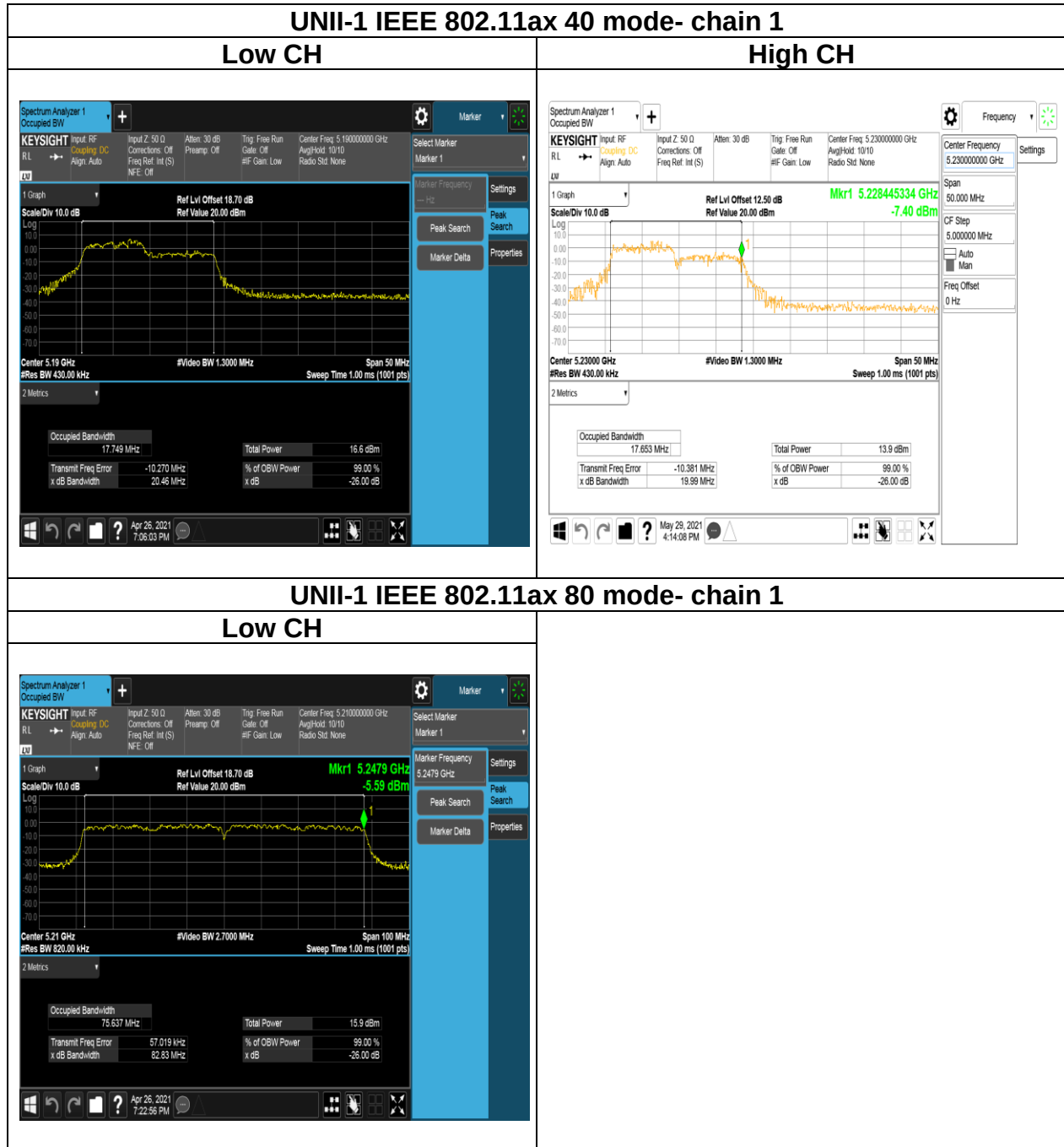


Mid CH

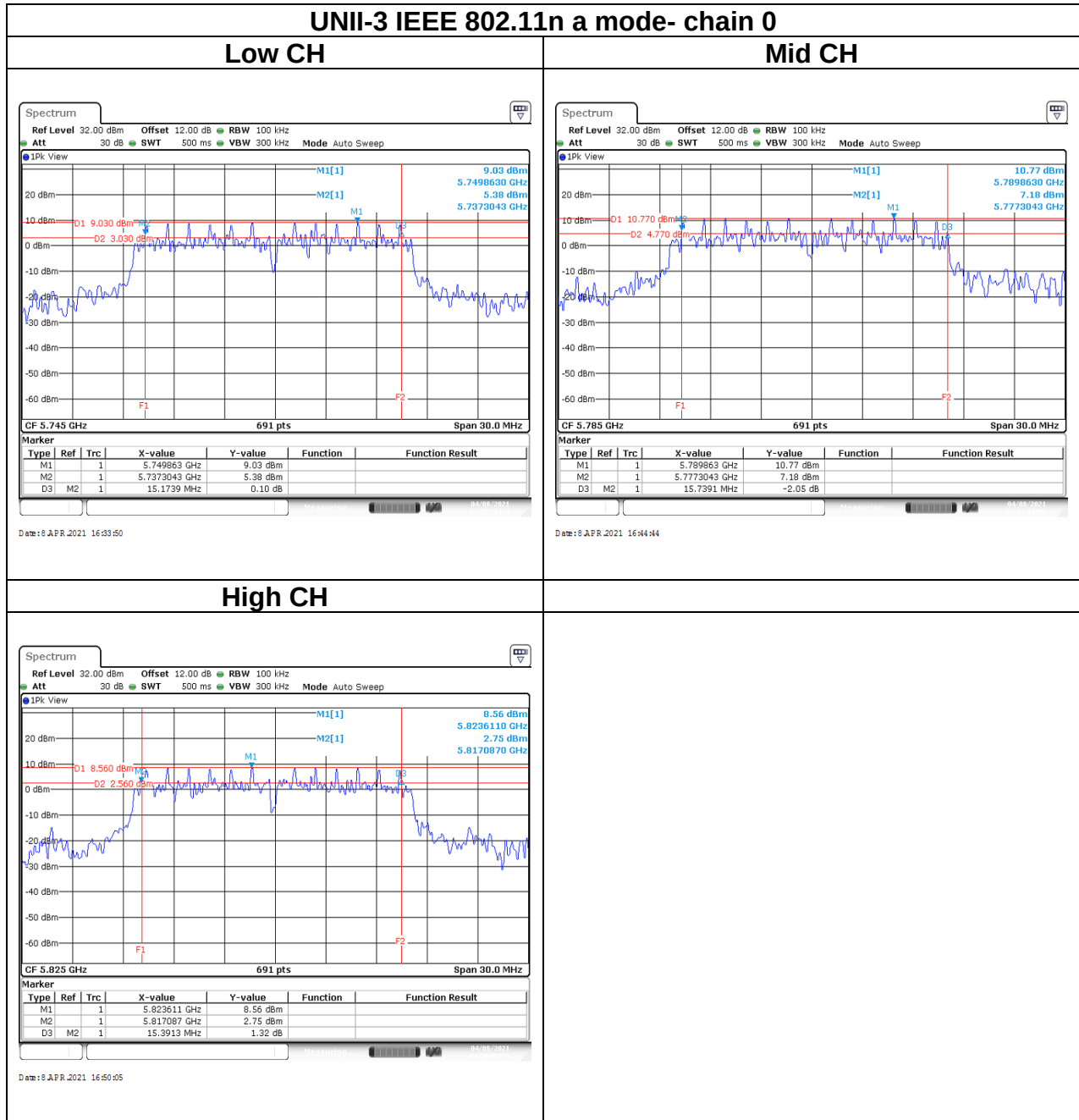


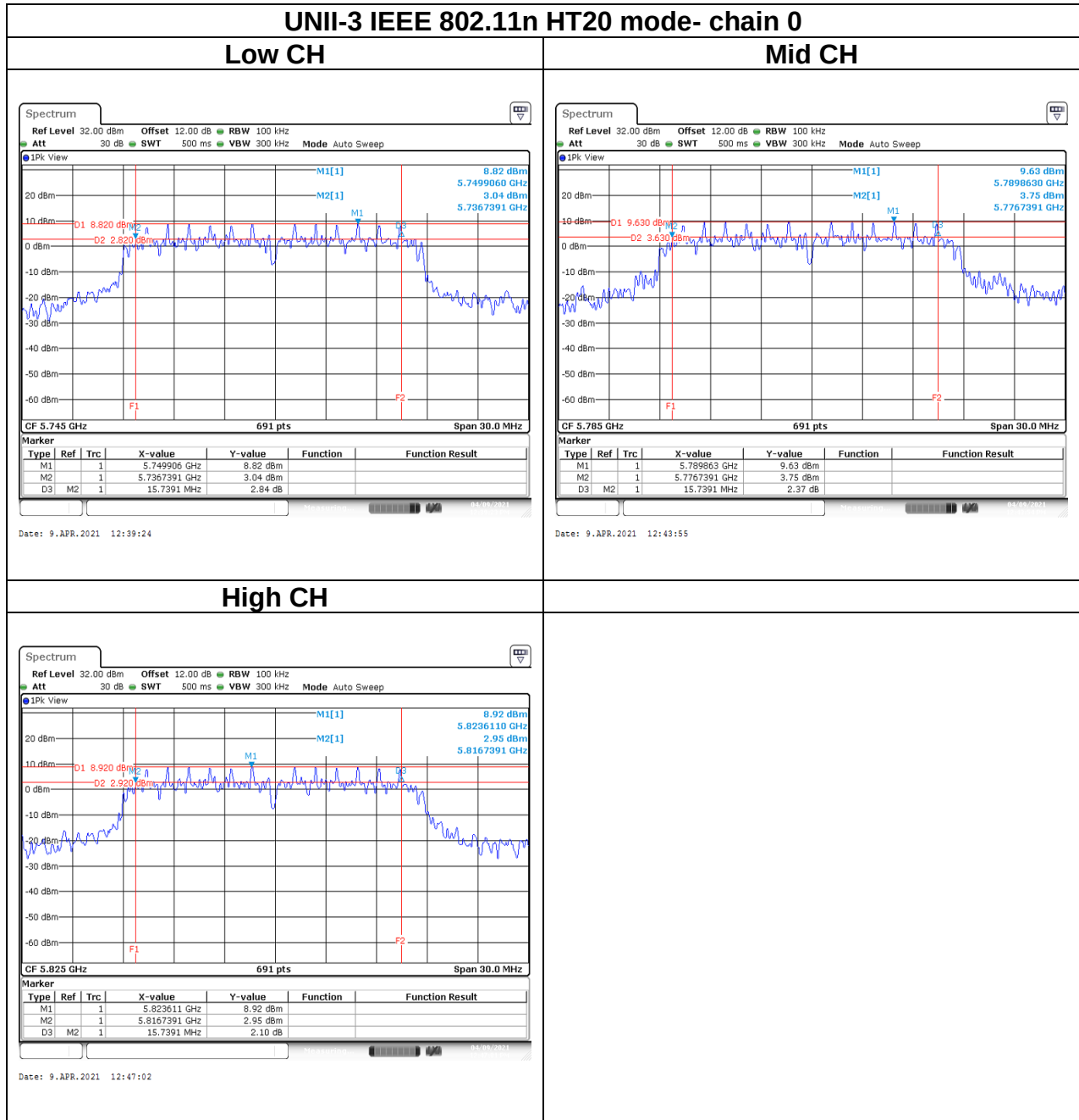
High CH

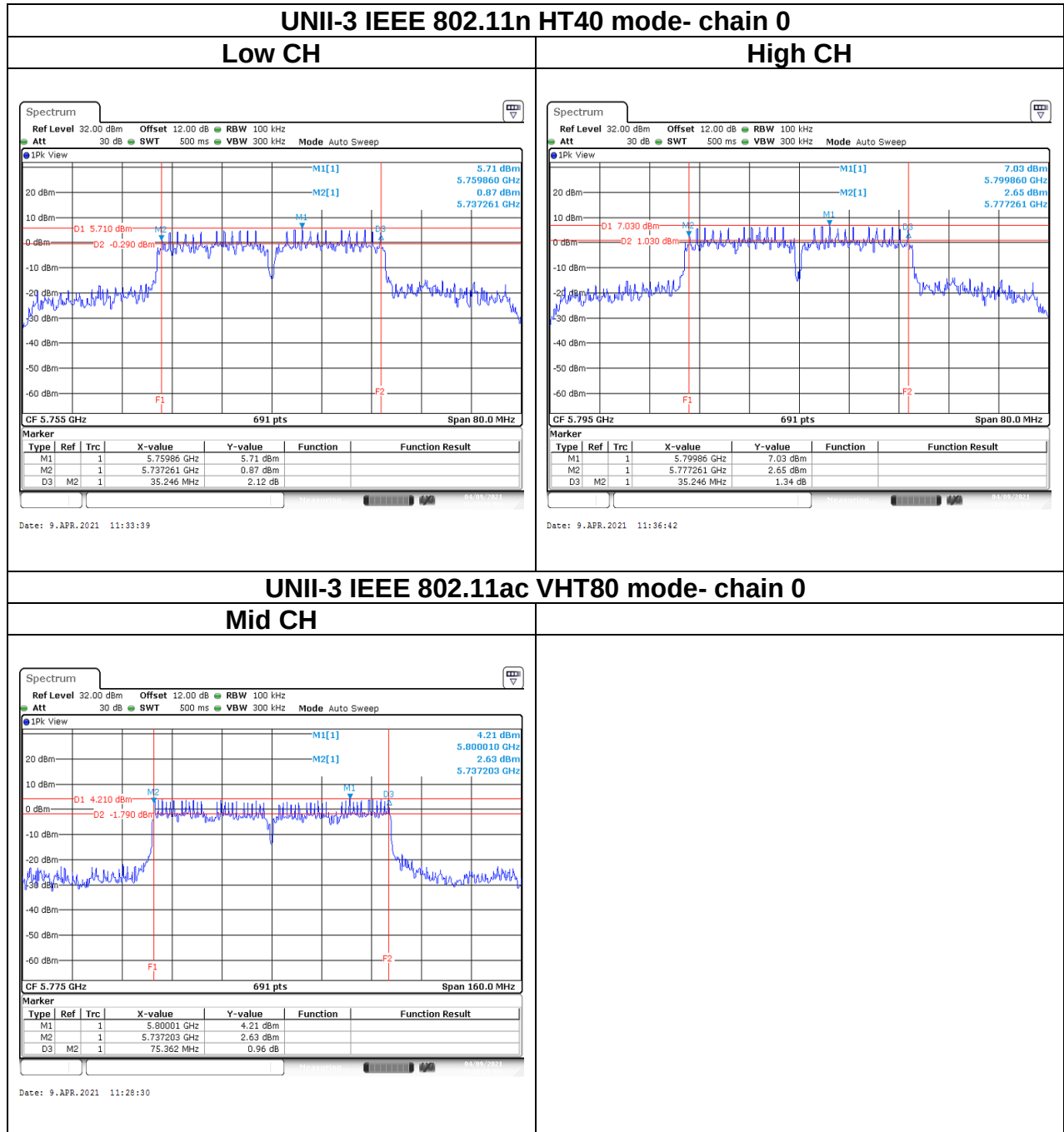


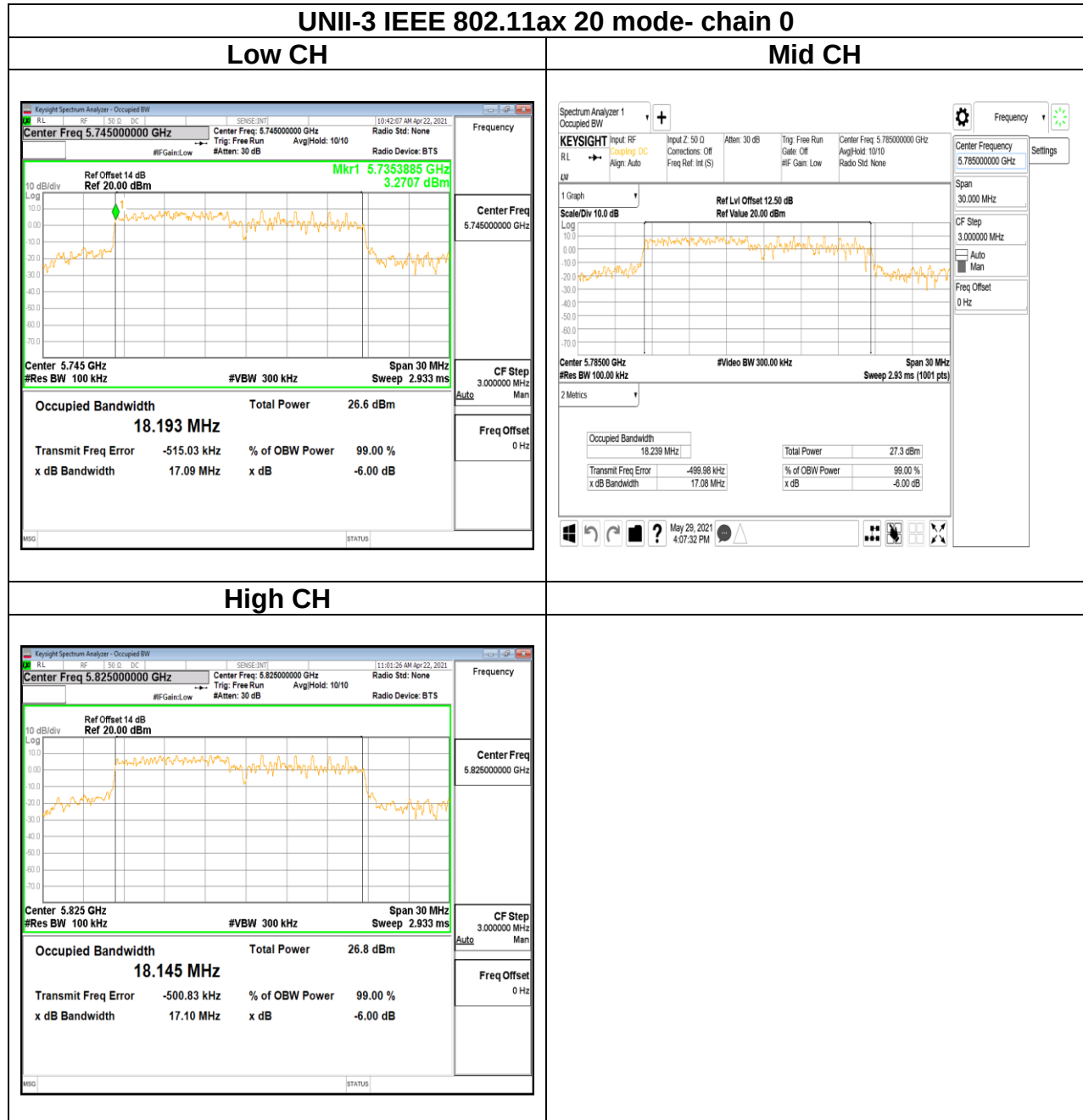


Test Plots (6dB BANDWIDTH)

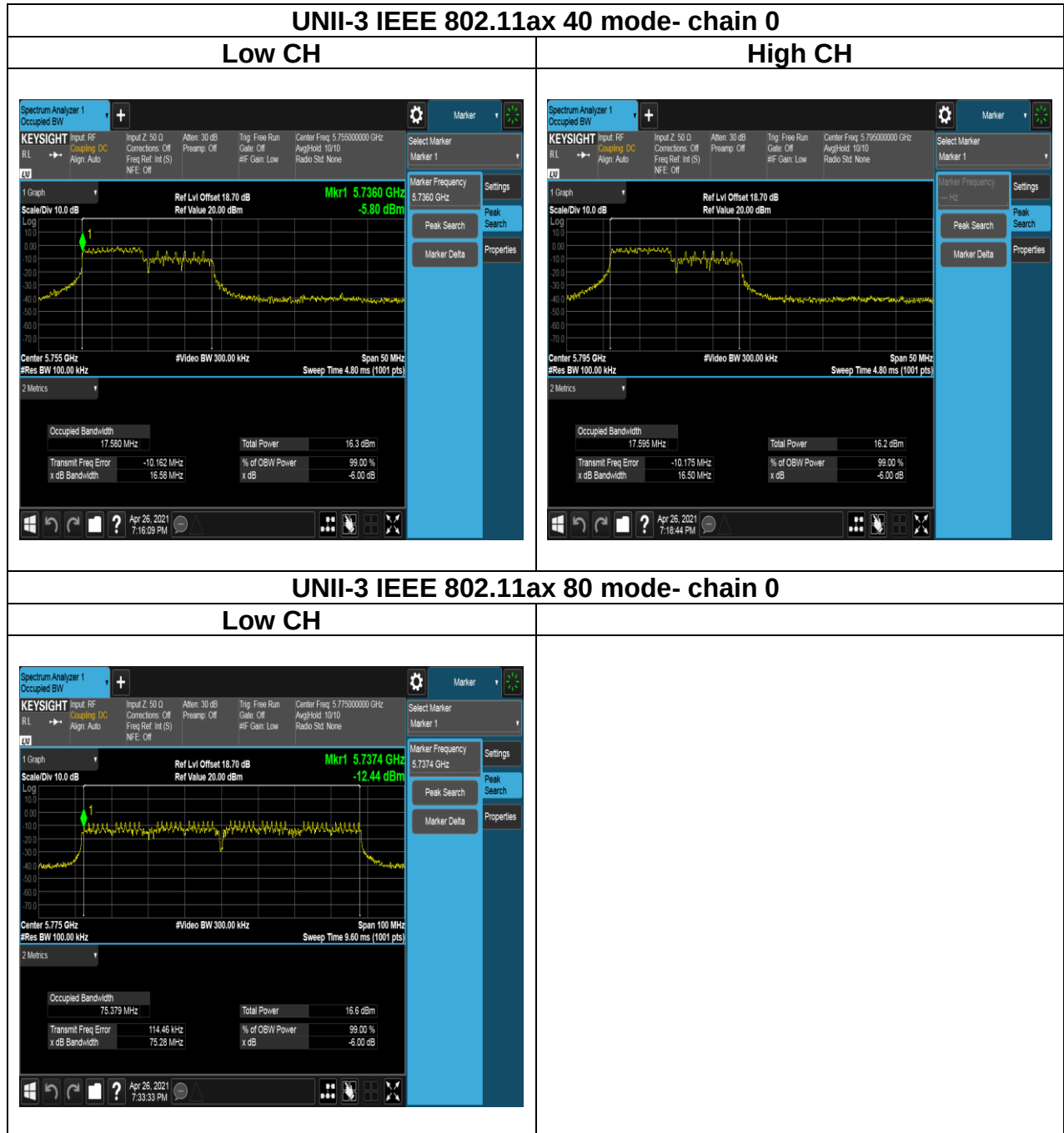






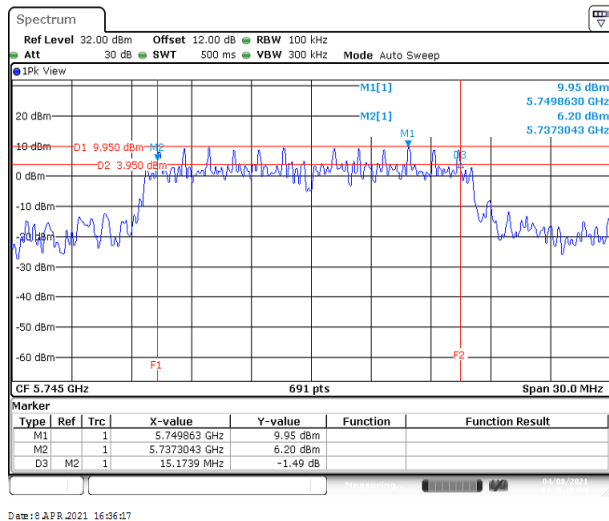


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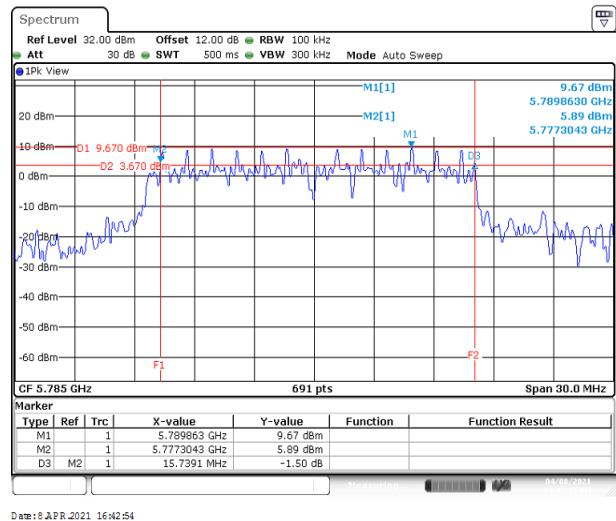


UNII-3 IEEE 802.11n a mode- chain 1

Low CH



Mid CH



High CH

