



FCC ID: M82-AIM75L
Report No.: T201102D09-RP4

IC: 9404A-AIM75L

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RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART E

INDUSTRY CANADA RSS-247

Test Standard	FCC Part 15.407+ RSS-247 issue 2 and RSS-GEN issue 5
Product name	Tablet PC
Brand Name	ADVANTECH
Model No.	FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank) IC: AIM-75S-6; AIM-75H-6
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	September 7, 2021	Initial Issue	ALL	Allison Chen

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Advantech Co., Ltd. No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Manufacturer	Advantech Co., Ltd. No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Equipment	Tablet PC
Model No.	FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank) IC: AIM-75S-6; AIM-75H-6
Model Discrepancy	Please see remark as below.
Trade Name	ADVANTECH
Received Date	November 02, 2020
Date of Test	January 21 ~ August 17, 2021
Power Supply	1. EUT Power by Adapter. (1) FSP / FSP045-A1BR I/P: 100-240Vac, 50-60Hz, 1.2A O/P: 5Vdc, 3.0A, 15.0W; 9.0Vdc, 3.0A, 27.0W; 12.0Vdc, 3.0A, 36.0W; 15.0Vdc, 3.0A, 45.0W; 20.0Vdc, 2.25A, 45.0W (2) GlobTek, Inc / GTM96605-GEN2-A1-T2 I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 5Vdc, 4.6A; 5.8Vdc, 4.6A; 9Vdc, 4.4A; 12Vdc, 4A; 15Vdc, 3.6A; 20Vdc, 3A (3) DELTA / MEA-045AA2C I/P: 100-240V~1.0A Max. 50-60Hz O/P: 5VDC, 3A; 9VDC, 3A; 10VDC, 3A; 12VDC, 3A; 15VDC, 3A; 20VDC, 2.25A 2. EUT Power by Rechargeable Li-ion Battery. ADVANTECH / AIM-BAT-8 Rating: 3.8Vdc, 4900mAh, 18.62Wh
HW Version	AX2
SW Version	0.3.6.9_20201021.021551
EUT Serial #	200CT32E00162
Module	Qualcomm / WCN3990
Operating conditions for the EUT	QRCT _ V3.0.303.0

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Remark:

1. For more details, refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Disclaimer: Variant information between/among model numbers / trademarks are provided by the applicant, test results of this report are applicable to the sample EUT received of main test model name.
4. Model Discrepancy:

Model	Adapter	Tablet color
AIM-75H-6	1. GlobTek, Inc / GTM96605-GEN2-A1-T2 I/P: 100-240VAC, 50-60Hz, 1.5A O/P: 5VDC, 4.6A; 5.8VDC, 4.6A; 9VDC, 4.4A; 12VDC, 4A; 15VDC, 3.6A; 20VDC, 3A 2. DELTA / MEA-045AA2C IP: 100-240V~1.0A Max. 50-60Hz O/P: 5VDC, 3A; 9VDC, 3A; 10VDC, 3A; 12VDC, 3A; 15VDC, 3A; 20VDC, 2.25A	White
AIM-75S-6	1. FSP / FSP045-A1BR I/P: 100-240VAC, 50-60Hz, 1.2A O/P: 5.0VDC, 3.0A 15.0W; 9.0VDC, 3.0A 27.0W; 12.0VDC, 3.0A 36.0W; 15.0VDC, 3.0A 45.0W; 20.0VDC, 2.25A 45.0W	Black
AIM-75S-6XXXXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank)	All the above models are identical except for the designation of model numbers. The suffix of (where "X" may be any alphanumeric character, "-" or blank) on model number is just for marketing purpose only.	

1.2 EUT CHANNEL INFORMATION

Frequency Range	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 20 MHz	5180 ~ 5240 MHz
	IEEE 802.11ac VHT 40 MHz	5190 ~ 5230 MHz
	IEEE 802.11ac VHT 80 MHz	5210 MHz
	UNII-2a	
	IEEE 802.11a	5260 ~ 5320 MHz
	IEEE 802.11n HT 20 MHz	5260 ~ 5320 MHz
	IEEE 802.11n HT 40 MHz	5270 ~ 5310 MHz
	IEEE 802.11ac VHT 20 MHz	5260 ~ 5320 MHz
	IEEE 802.11ac VHT 40 MHz	5270 ~ 5310 MHz
	IEEE 802.11ac VHT 80 MHz	5290 MHz
	UNII-2c	
	IEEE 802.11a	5500 ~ 5700 MHz
	IEEE 802.11n HT 20 MHz	5500 ~ 5700 MHz
	IEEE 802.11n HT 40 MHz	5510 ~ 5670 MHz
	IEEE 802.11ac VHT 20 MHz	5500 ~ 5700 MHz
	IEEE 802.11ac VHT 40 MHz	5510 ~ 5670 MHz
	IEEE 802.11ac VHT 80 MHz	5530, 5610 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 20 MHz	5745 ~ 5825 MHz
	IEEE 802.11ac VHT 40 MHz	5755 ~ 5795 MHz
	IEEE 802.11ac VHT 80 MHz	5775 MHz
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 20 MHz mode: OFDM 5. IEEE 802.11ac VHT 40 MHz mode: OFDM 6. IEEE 802.11ac VHT 80 MHz mode: OFDM	

Remark:

1. Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 for test channels.
2. For Canada the EUT Frequency Range 5600~5650MHz will be disabled.

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 Type	Omni-directional antenna			
Antenna Gain	Band	Chain0 (dBi)	Chain1 (dBi)	Power Directional Gain: (dBi)
	5G_U-NII 1	2.83	2.78	2.81
	5G_U-NII 2a	2.83	2.78	2.81
	5G_U-NII 2c	2.83	2.78	2.81
	5G_U-NII 3	2.83	2.78	2.81
Antenna Connector	N/A			

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:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
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.)

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	Jerry Chang	-
Radiation	Ray Li	-
RF Conducted	Dally Hong	-

Remark: The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

1.6 INSTRUMENT CALIBRATION

3M 966 Chamber Test Site					
Equipment	Manufacturer	Model	Serial Number	Cal Date	Cal Due
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/25/2021	02/24/2022
Coaxial Cable	EMCI	EMC105	190914+327109/4	09/19/2020	09/18/2021
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	02/25/2021	02/24/2022
Horn Antenna	ETS LINDGREN	3116	00026370	12/11/2020	12/10/2021
Loop Ant	COM-POWER	AL-130	121051	03/27/2020	03/26/2021
Pre-Amplifier	EMEC	EM330	060609	02/25/2021	02/24/2022
Pre-Amplifier	HP	8449B	3008A00965	02/25/2021	02/24/2022
Pre-Amplifier	MITEQ	AMF-6F-18004000-37-8P	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 6.11-20180419c				

Remark:

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

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Test Date: March 15 ~ June 25, 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	1242004	11/06/2020	11/05/2021
Power Seneor	Anritsu	MA2411B	1207365	11/06/2020	11/05/2021
Software	N/A				

Test Date: August 17, 2021

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Coaxial Cable	Woken	WC12	CC003	06/28/2021	06/27/2022
Coaxial Cable	Woken	WC12	CC001	06/28/2021	06/27/2022
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2020	09/06/2021
Software	Radio Test Software Ver. 21				

Test Date: January 21, 2021

Conducted Emission 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	02/13/2020	02/12/2021
Software	EZ-EMC(CCS-3A1-CE)				

Test Date: April 23, 2021

Conducted Emission 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)				

Remark:

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

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(J)	TOSHIBA	PT345T-00L002	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, KDB 905462 D02, RSS-247 Issue 2 and RSS-GEN Issue 5.

2. TEST SUMMARY

FCC Standard Sec.	IC Standard Sec.	Chapter	Test Item	Result
15.203	-	1.3	Antenna Requirement	Pass
15.207	RSS-Gen(8.8)	4.1	AC Conducted Emission	Pass
15.403(i)	-	4.2	26dB Bandwidth	Pass
15.407(e)	RSS-247(6.2.4)	4.2	6dB Bandwidth	Pass
15.403(i)	RSS-Gen (6.7)	4.2	Occupied Bandwidth (99%)	Pass
15.407(a)	RSS-247(6.2.1.1) RSS-247(6.2.2.1) RSS-247(6.2.3.1) RSS-247(6.2.4.1)	4.3	Output Power Measurement	Pass
15.407(a)	RSS-247(6.2.1.1) RSS-247(6.2.2.1) RSS-247(6.2.3.1) RSS-247(6.2.4.1)	4.4	Power Spectral Density	Pass
15.407(b)	RSS-247(6.2.1.2) RSS-247(6.2.2.2) RSS-247(6.2.3.2) RSS-247(6.2.4.2)	4.5	Radiation Band Edge	Pass
15.407(b)	RSS-247(6.2.1.2) RSS-247(6.2.2.2) RSS-247(6.2.3.2) RSS-247(6.2.4.2)	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		
Operating Frequency		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
	U-NII-2a	IEEE 802.11a	5260, 5280, 5320
		IEEE 802.11n HT 20 MHz	5260, 5280, 5320
		IEEE 802.11n HT 40 MHz	5270, 5310
		IEEE 802.11ac VHT 80 MHz	5290
	U-NII-2c	IEEE 802.11a	5500, 5580, 5700
		IEEE 802.11n HT 20 MHz	5500, 5580, 5700
		IEEE 802.11n HT 40 MHz	5510, 5550, 5670
		IEEE 802.11ac VHT 80 MHz	5530, 5610
	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

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. For Canada the EUT Frequency Range 5600~5650MHz will be disabled.

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 Adapter. (GlobTek) 120VAC Mode 2: EUT power by Adapter. (GlobTek) 240VAC Mode 3: EUT power by Adapter. (FSP) 120VAC Mode 4: EUT power by Adapter. (FSP) 240VAC Mode 5: EUT power by Adapter. (DELTA) 120VAC Mode 6: EUT power by Adapter. (DELTA) 240VAC
Worst Mode	☐ Mode 1 ☐ Mode 2 ☒ Mode 3 ☒ Mode 4 ☐ Mode 5 ☐ Mode 6

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by Adapter. (GlobTek) Mode 2: EUT power by Adapter. (FSP) Mode 3: EUT power by Adapter. (DELTA) Mode 4: EUT power by Battery
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 Adapter. (GlobTek) Mode 2: EUT power by Adapter. (FSP) Mode 3: EUT power by Adapter. (DELTA) Mode 4: EUT power by Battery
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(X-Plane) were recorded in this report.
3. AC power line conducted emission and for below 1G radiation emission were performed the EUT transmit at the highest output power channel as worse case.

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3.3 EUT DUTY CYCLE

Temperature: 22.8°C

Humidity: 53% RH

Tested by: Dally Hong

Test date: March 16, 2021

Duty Cycle				
Configuration	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	99.52	0.02	0.49	0.01
802.11n HT20	98.00	0.09	1.02	0.01
802.11n HT40	83.33	0.79	10.00	10.00
802.11ac VHT80	75.00	1.25	13.33	14.00



4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a) and RSS-GEN section 8.8,

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

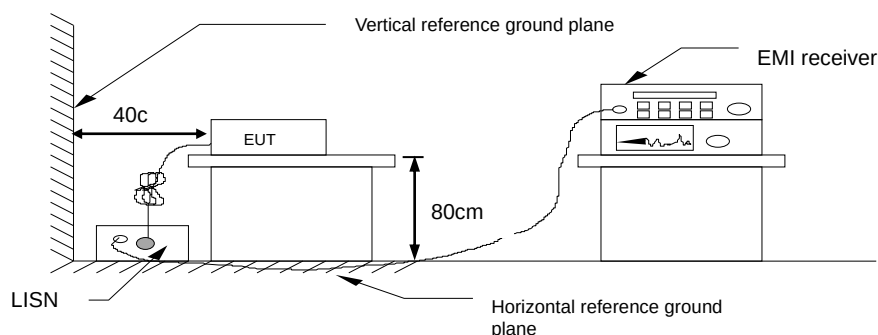
* Decreases with the logarithm of the frequency.

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

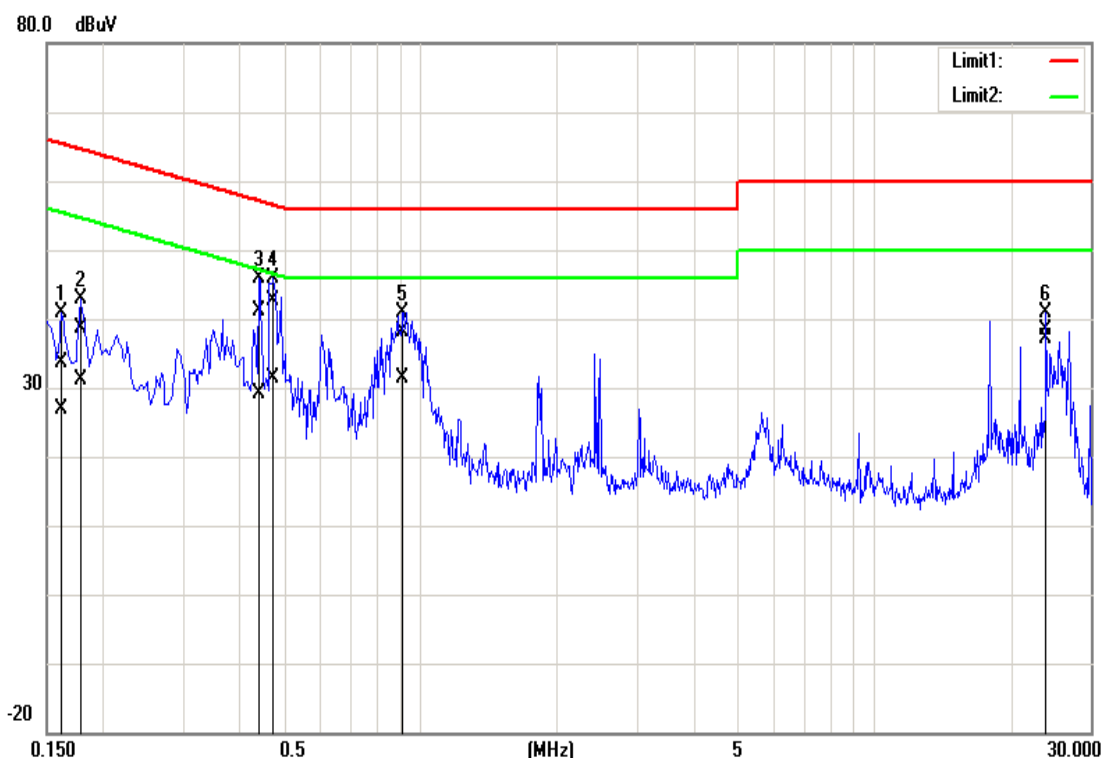
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Test Data

Test Mode:	Mode 3	Temp/Hum	22.9(°C)/ 53%RH
Phase:	Line	Test Date	January 21, 2021
		Test Engineer	Jerry Chang

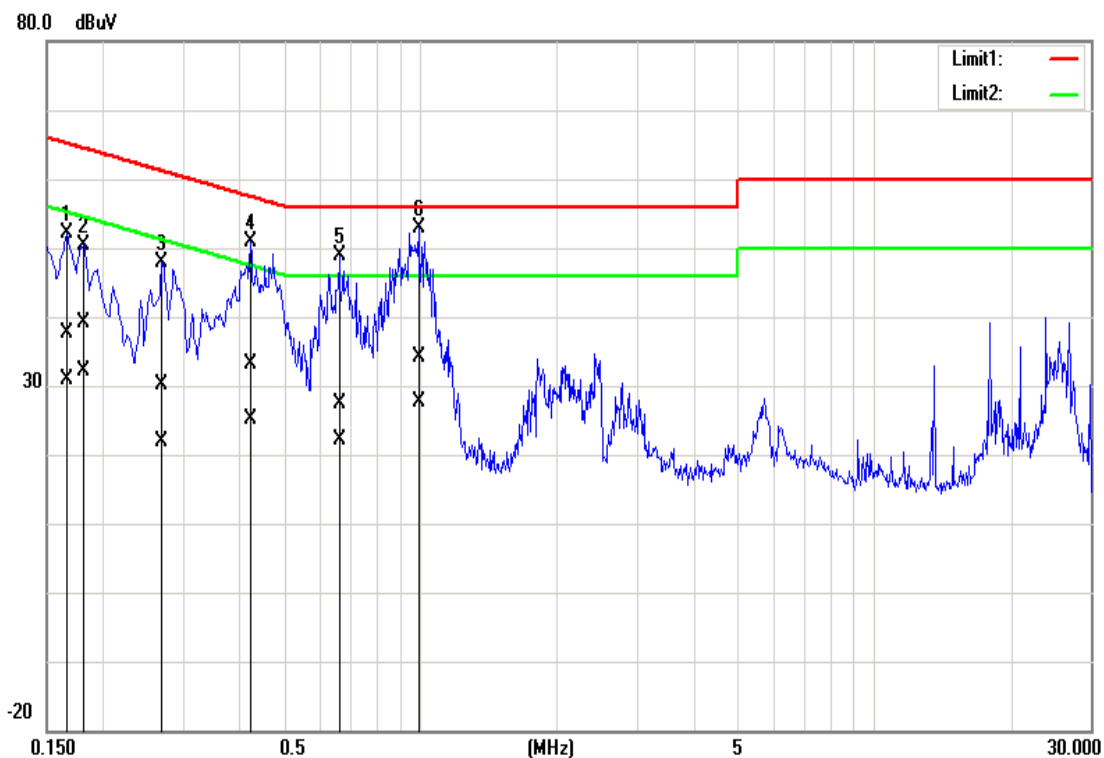


Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1620	23.31	16.71	10.21	33.52	26.92	65.36	55.36	-31.84	-28.44	Pass
0.1780	28.34	21.03	10.21	38.55	31.24	64.58	54.58	-26.03	-23.34	Pass
0.4420	30.82	18.90	10.22	41.04	29.12	57.02	47.02	-15.98	-17.90	Pass
0.4740	32.44	21.04	10.22	42.66	31.26	56.44	46.44	-13.78	-15.18	Pass
0.9140	27.91	21.14	10.24	38.15	31.38	56.00	46.00	-17.85	-14.62	Pass
23.9500	28.17	26.82	10.31	38.48	37.13	60.00	50.00	-21.52	-12.87	Pass

Note: Correction factor = LISN loss + Cable loss.

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Test Mode:	Mode 3	Temp/Hum	22.9(°C)/ 53%RH
Phase:	Neutral	Test Date	January 21, 2021
		Test Engineer	Jerry Chang

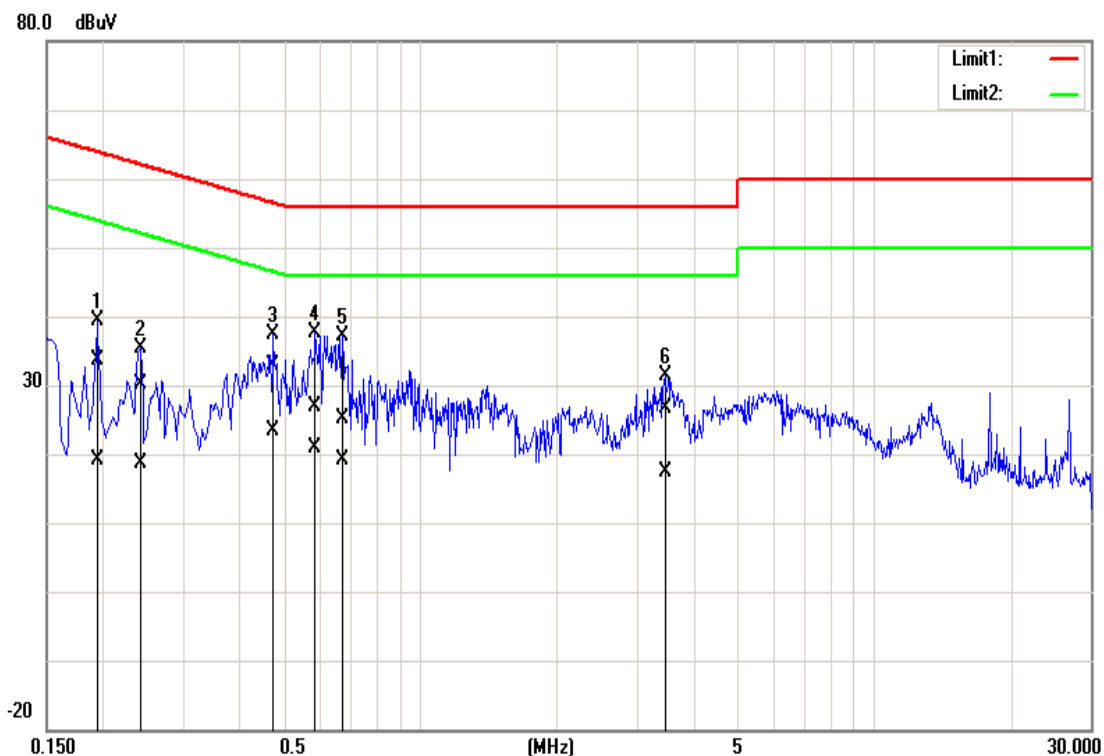


Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1660	27.37	20.64	10.18	37.55	30.82	65.15	55.16	-27.60	-24.34	Pass
0.1820	28.87	22.01	10.19	39.06	32.20	64.39	54.39	-25.33	-22.19	Pass
0.2700	19.97	11.61	10.19	30.16	21.80	61.12	51.12	-30.96	-29.32	Pass
0.4220	23.00	15.05	10.19	33.19	25.24	57.41	47.41	-24.22	-22.17	Pass
0.6620	17.19	11.89	10.19	27.38	22.08	56.00	46.00	-28.62	-23.92	Pass
0.9900	23.82	17.34	10.21	34.03	27.55	56.00	46.00	-21.97	-18.45	Pass

Note: Correction factor = LISN loss + Cable loss.

Report No.: T201102D09-RP4

Test Mode:	Mode 4	Temp/Hum	22.5(°C)/ 54%RH
Phase:	Line	Test Date	April 23, 2021
		Test Engineer	Jerry Chang

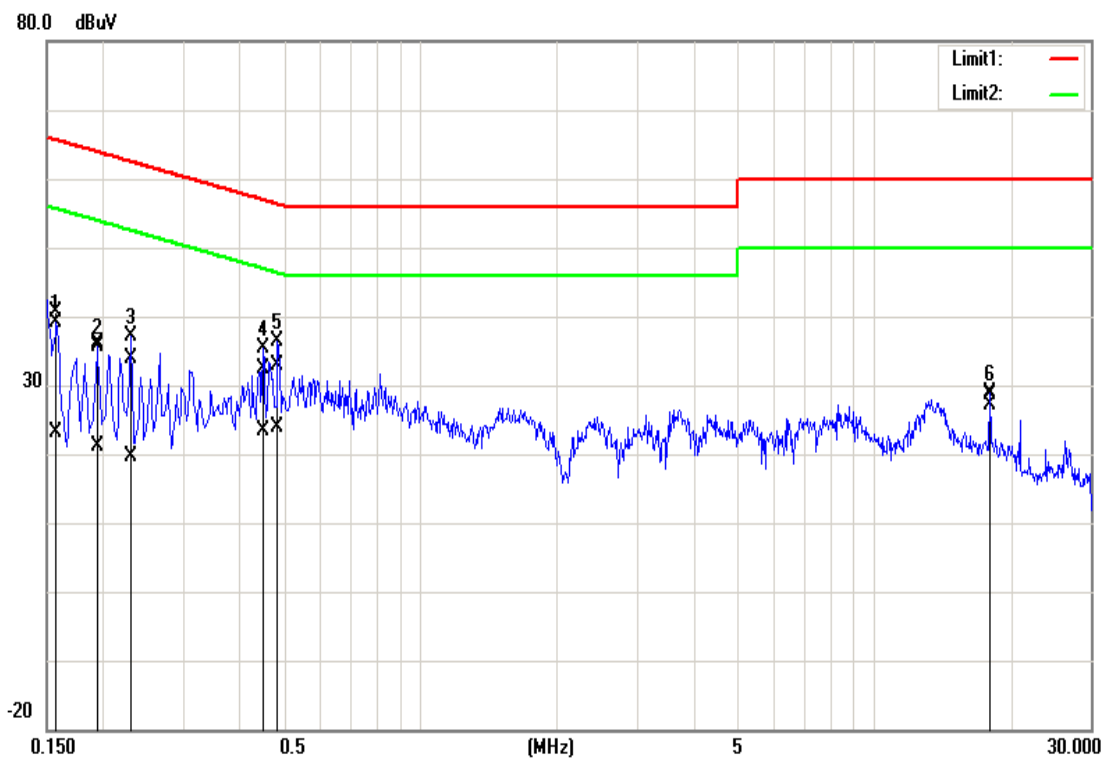


Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1940	23.43	8.87	10.29	33.72	19.16	63.86	53.86	-30.14	-34.70	Pass
0.2420	19.83	8.35	10.29	30.12	18.64	62.02	52.03	-31.90	-33.39	Pass
0.4740	22.69	13.17	10.29	32.98	23.46	56.44	46.44	-23.46	-22.98	Pass
0.5860	16.49	10.68	10.29	26.78	20.97	56.00	46.00	-29.22	-25.03	Pass
0.6740	14.89	8.76	10.29	25.18	19.05	56.00	46.00	-30.82	-26.95	Pass
3.4580	16.34	6.91	10.35	26.69	17.26	56.00	46.00	-29.31	-28.74	Pass

Note: Correction factor = LISN loss + Cable loss.

Report No.: T201102D09-RP4

Test Mode:	Mode 4	Temp/Hum	22.5(°C)/ 54%RH
Phase:	Neutral	Test Date	April 23, 2021
		Test Engineer	Jerry Chang



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
0.1580	30.34	12.91	10.26	40.60	23.17	65.57	55.57	-24.97	-32.40	Pass
0.1940	25.78	10.86	10.26	36.04	21.12	63.86	53.86	-27.82	-32.74	Pass
0.2300	23.60	9.32	10.26	33.86	19.58	62.45	52.45	-28.59	-32.87	Pass
0.4500	22.21	13.19	10.26	32.47	23.45	56.88	46.88	-24.41	-23.43	Pass
0.4860	22.53	13.59	10.26	32.79	23.85	56.24	46.24	-23.45	-22.39	Pass
17.9580	18.20	16.75	10.47	28.67	27.22	60.00	50.00	-31.33	-22.78	Pass

Note: Correction factor = LISN loss + Cable loss.

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. Detector = 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. Detector = 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.

Report No.: T201102D09-RP4

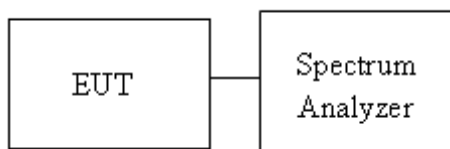
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99%

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



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4.2.4 Test Result

Temperature: 22.2 ~ 22.8°C

Humidity: 48 ~ 53% RH

Tested by: Dally Hong

Test date: March 15 ~ June 25, 2021

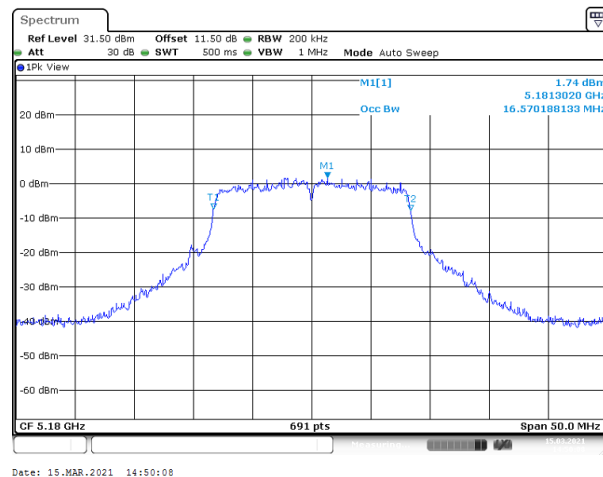
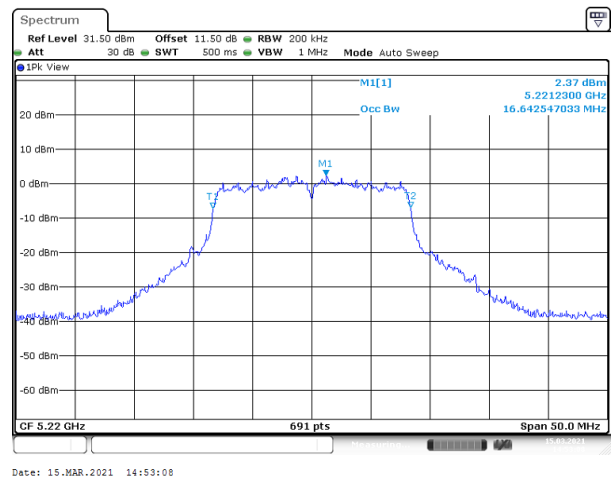
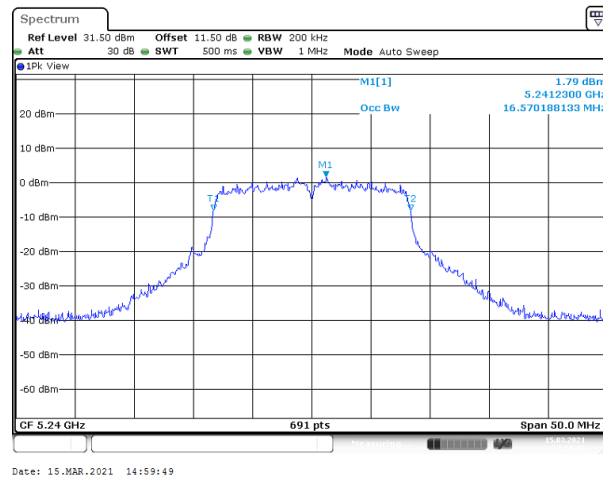
UNII-1 5150-5250 MHz					
Test mode: IEEE 802.11a mode					
Channel	Frequency (MHz)	Chain 0 OBW (99%) (MHz)	Chain 1 OBW (99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
Low	5180	16.57	16.57	23.77	23.91
Mid	5220	16.64	16.57	22.90	23.41
High	5240	16.57	16.57	24.13	23.12
Test mode: IEEE 802.11n HT20 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	17.80	17.73	25.07	24.06
Mid	5220	17.80	17.73	25.0	24.28
High	5240	17.80	17.73	25.14	24.42
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	36.47	36.24	42.32	42.44
High	5230	36.35	36.35	42.32	42.67
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)
Mid	5210	77.11	76.64	93.68	94.84

UNII-2a 5250-5350 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	5260	16.57	16.57	24.28	23.91
Mid	5280	16.64	16.57	24.20	23.33
High	5320	16.57	16.57	24.35	23.19
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	5260	17.80	17.73	25.58	23.77
Mid	5280	17.73	17.73	25.36	24.06
High	5320	17.80	17.73	25.14	23.77
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	5270	36.35	36.35	42.20	42.32
High	5310	36.47	36.35	42.32	42.20
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)
Mid	5290	77.11	78.03	96.23	94.84

UNII-2c 5475-5725 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	5500	16.57	16.57	24.06	23.26
Mid	5580	16.64	16.57	23.26	23.91
High	5700	16.64	16.57	23.62	23.48
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	5500	17.73	17.73	24.86	23.91
Mid	5580	17.80	17.66	24.86	23.77
High	5700	17.73	17.80	25.07	23.62
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	5510	36.35	36.24	41.97	42.20
Mid	5550	36.35	36.35	41.86	42.44
High	5670	36.35	36.35	42.09	42.44
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	5530	76.87	77.11	94.61	107.83
High	5610	77.11	76.87	94.15	97.62

UNII-3 5725-5825MHz					
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	16.57	16.57	15.70	16.0
Mid	5785	16.57	16.57	15.39	16.30
High	5825	16.64	16.57	15.52	15.13
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	17.80	17.73	15.65	16.57
Mid	5785	17.73	17.73	16.13	16.57
High	5825	17.73	17.80	15.48	16.35
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	36.35	36.35	35.71	36.41
High	5795	36.58	36.47	13.20	14.47
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)
Mid	5775	77.11	76.87	76.52	76.52

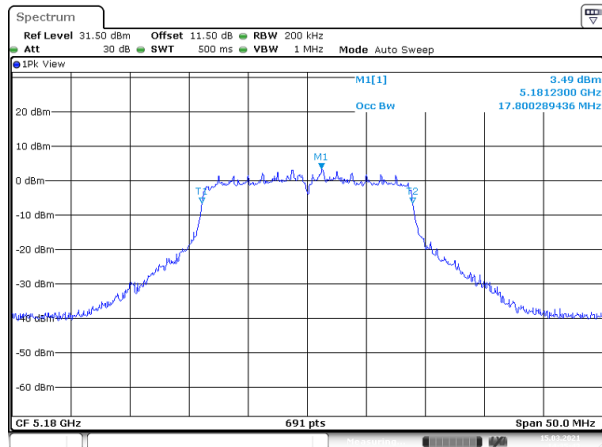
Report No.: T201102D09-RP4

Test Data (99% OBW)**Chain 0****UNII-1 IEEE 802.11a mode****Low CH****Mid CH****High CH**

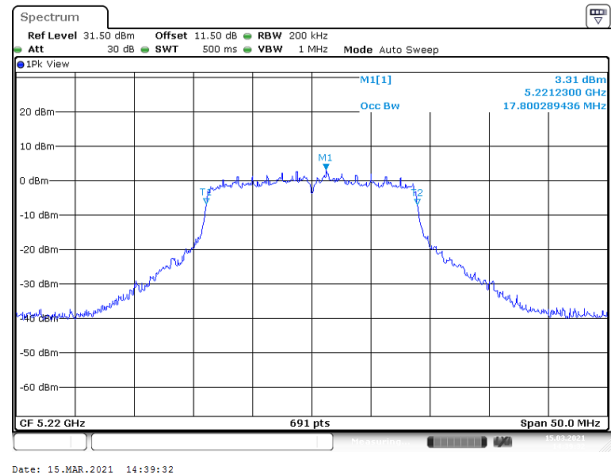
Chain 0

UNII-1 IEEE 802.11n HT20 mode

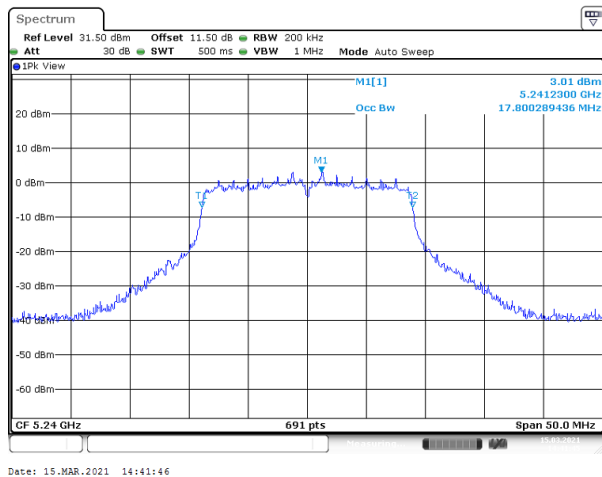
Low CH



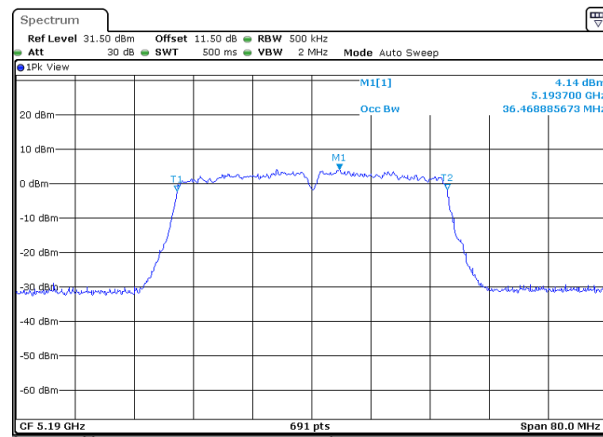
Mid CH



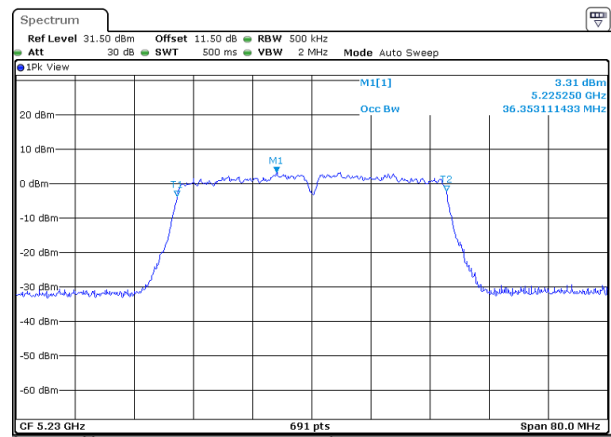
High CH



Report No.: T201102D09-RP4

Chain 0**UNII-1 IEEE 802.11n HT40 mode****Low CH**

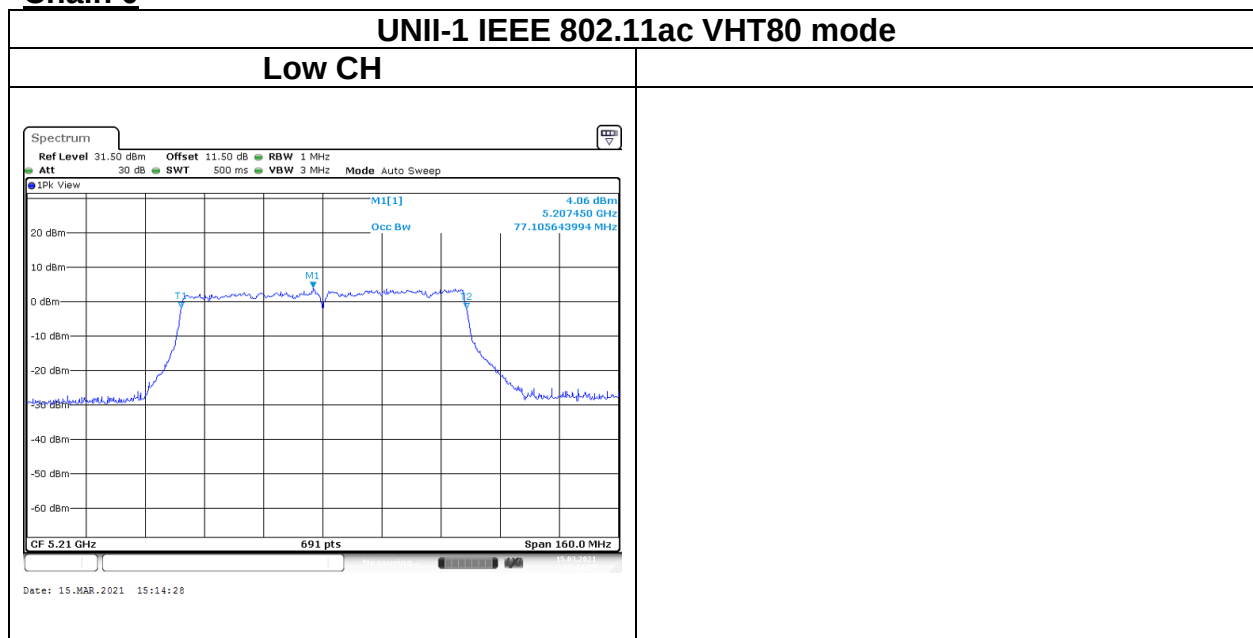
Date: 15.MAR.2021 15:04:37

High CH

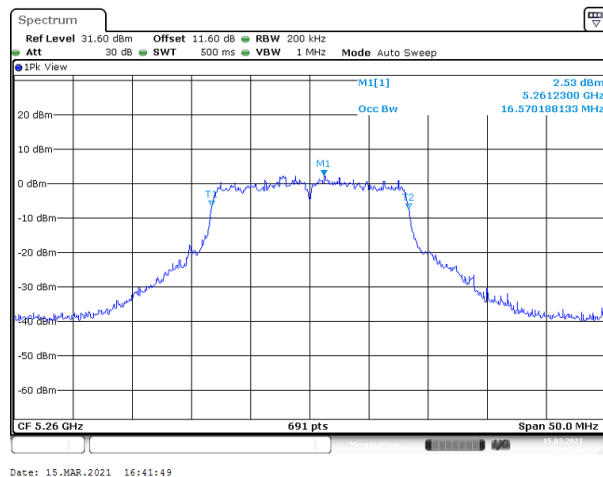
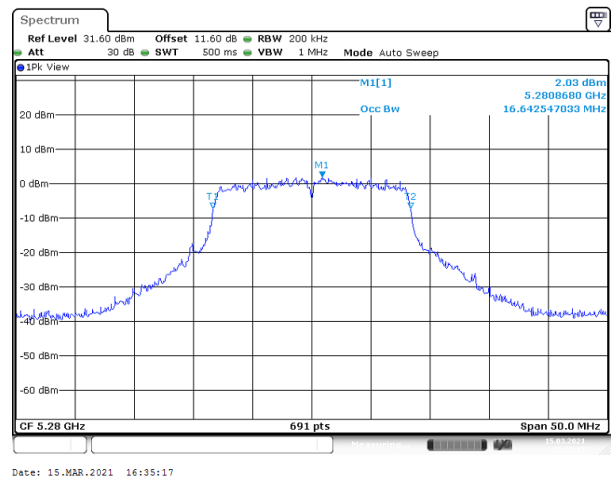
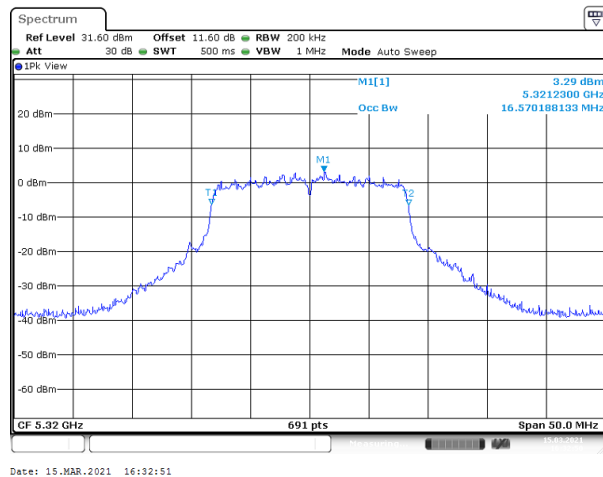
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Report No.: T201102D09-RP4

Chain 0



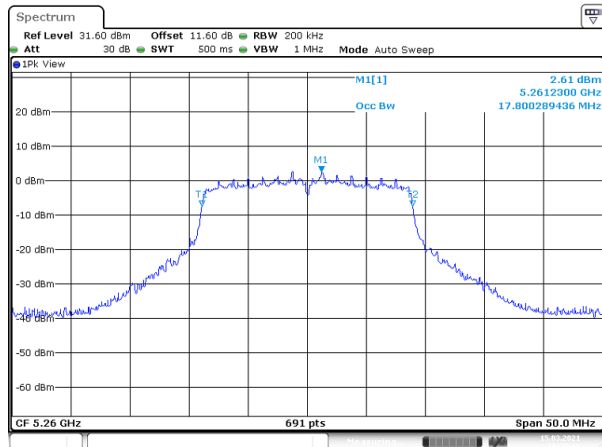
Report No.: T201102D09-RP4

Test Data (99% OBW)**Chain 0****UNII-2a IEEE 802.11a mode****Low CH****Mid CH****High CH**

Chain 0

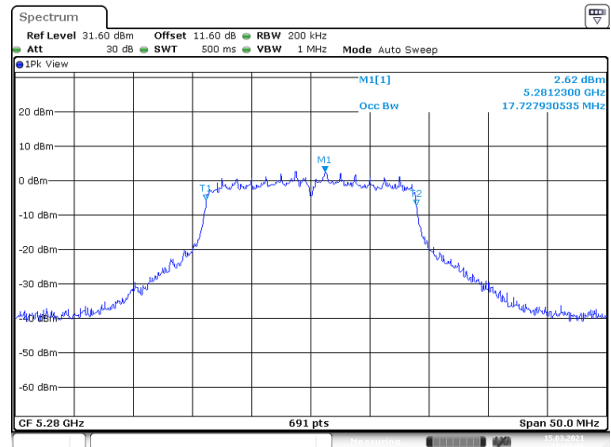
UNII-2a IEEE 802.11n HT20 mode

Low CH



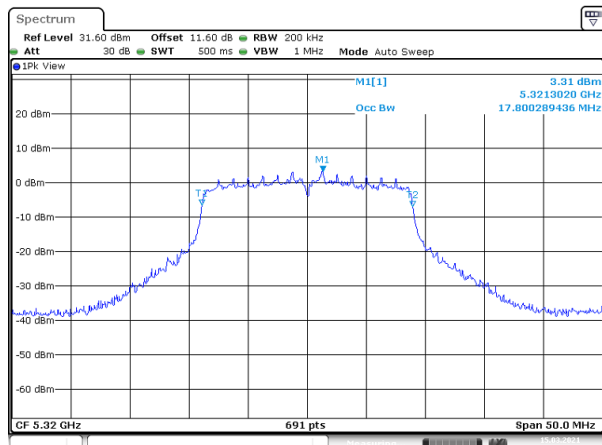
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Mid CH

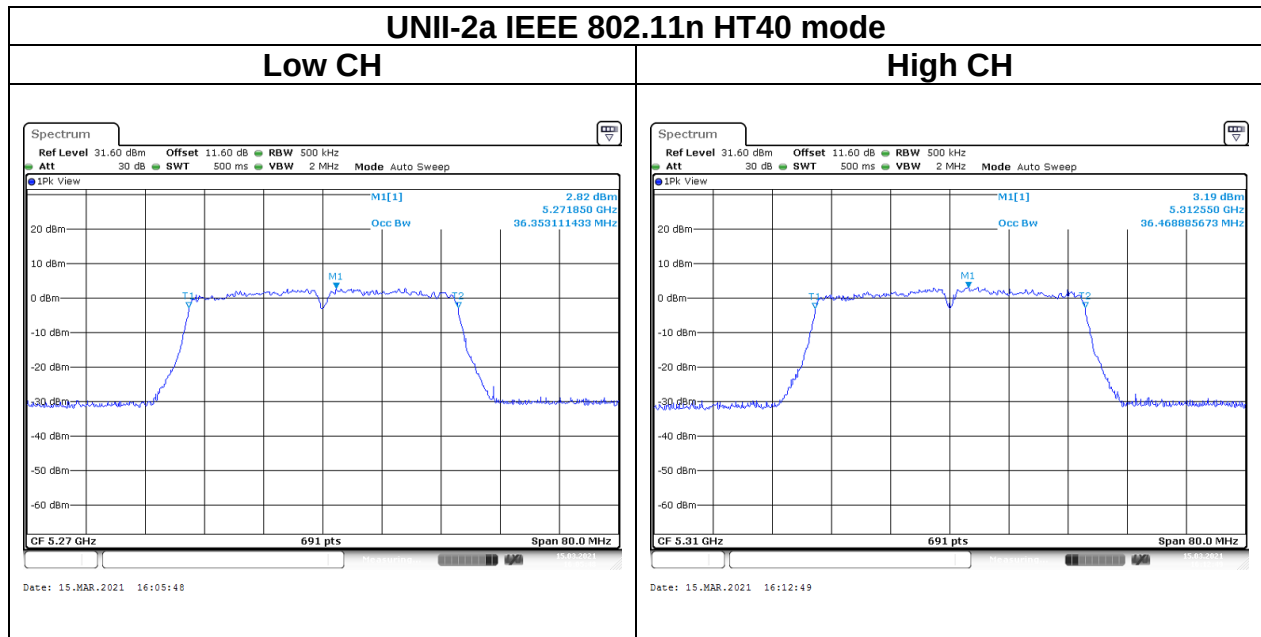


Date: 15.MAR.2021 16:23:06

High CH



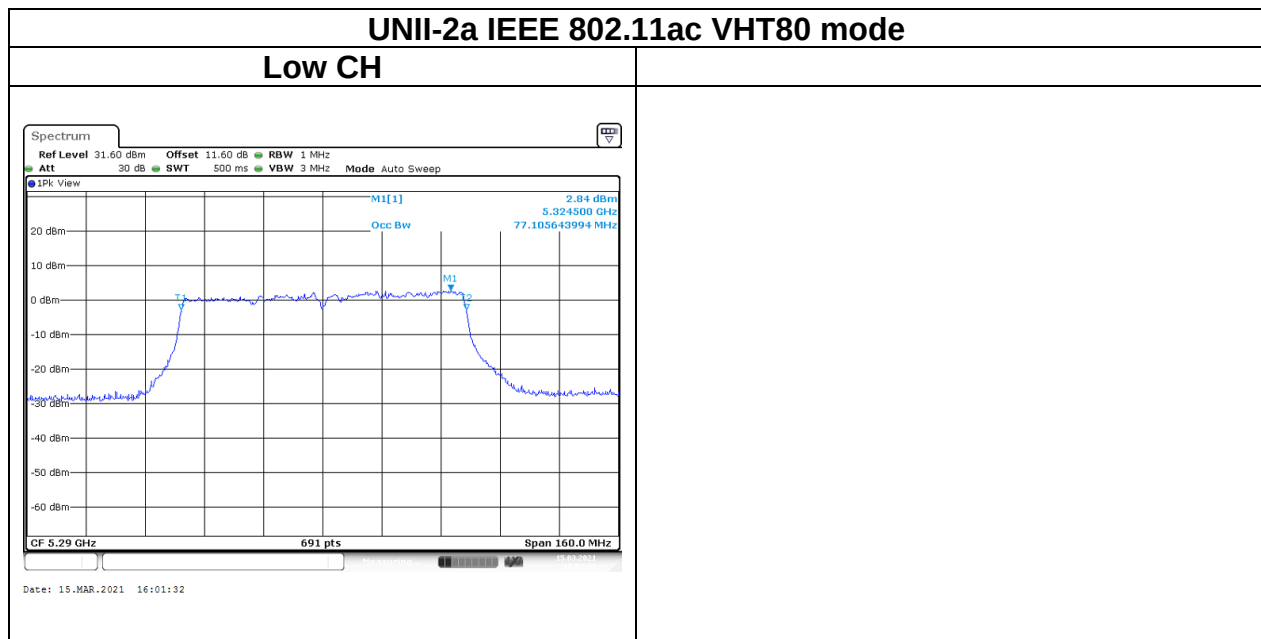
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Chain 0

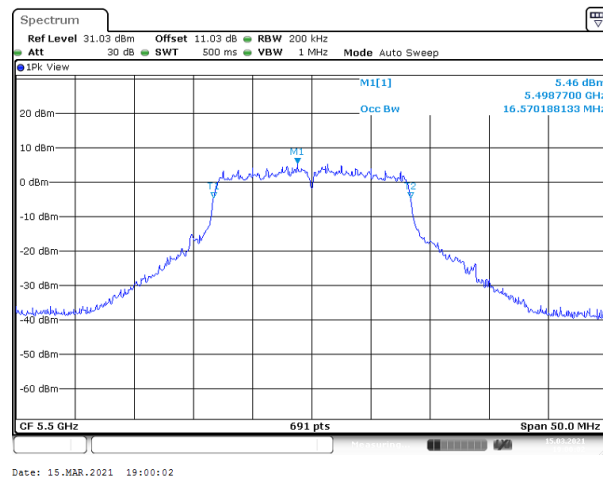
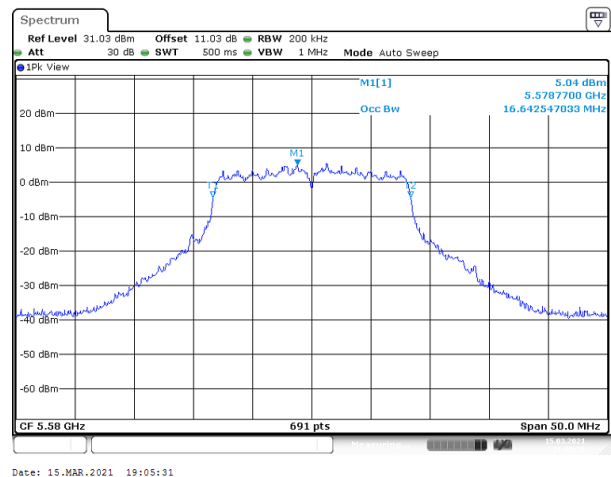
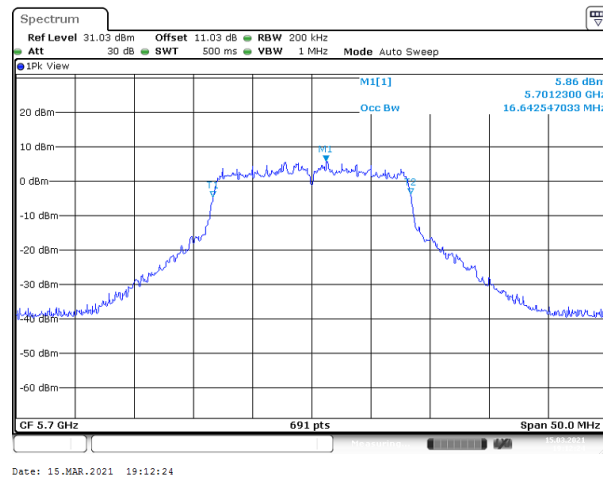
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Chain 0

Report No.: T201102D09-RP4

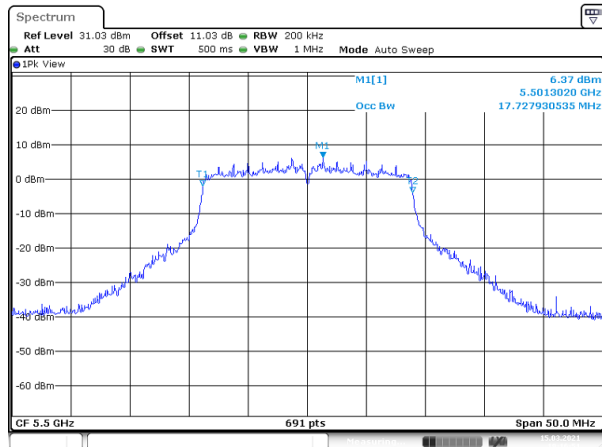
Test Data (99% OBW)**Chain 0****UNII-2c IEEE 802.11a mode****Low CH****Mid CH****High CH**

Report No.: T201102D09-RP4

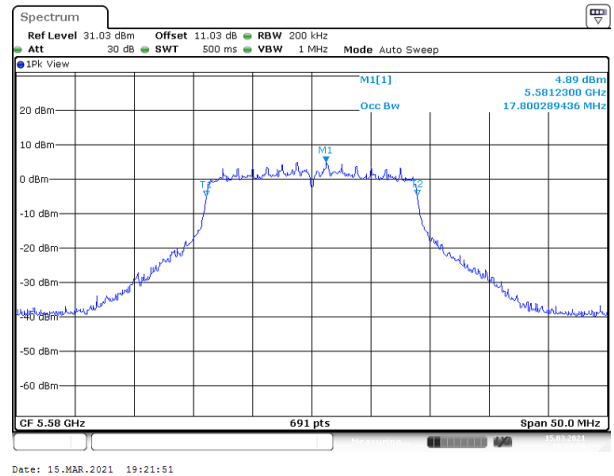
Chain 0

UNII-2c IEEE 802.11n HT20 mode

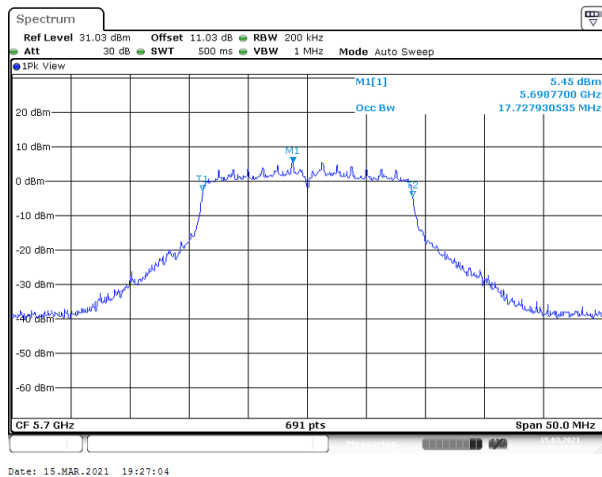
Low CH



Mid CH



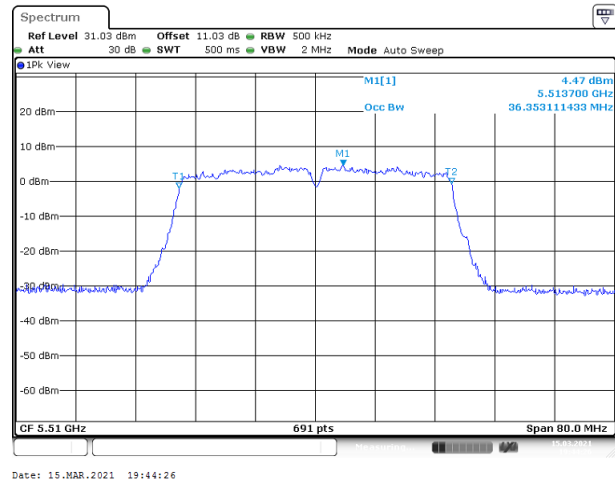
High CH



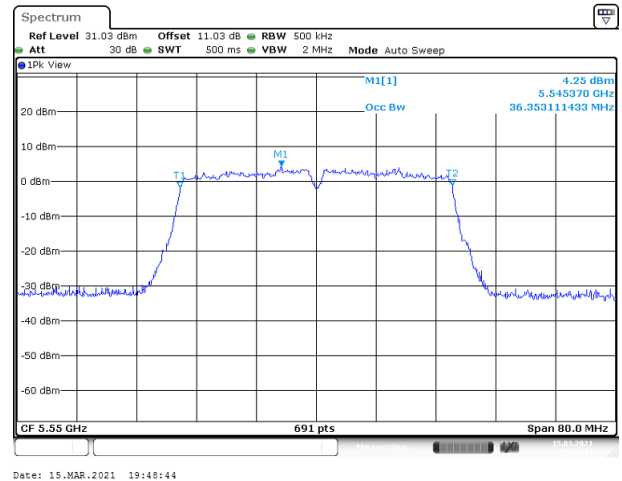
Chain 0

UNII-2c IEEE 802.11n HT40 mode

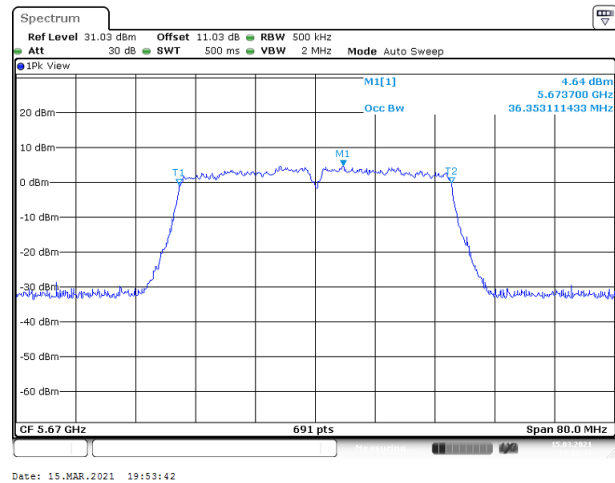
Low CH



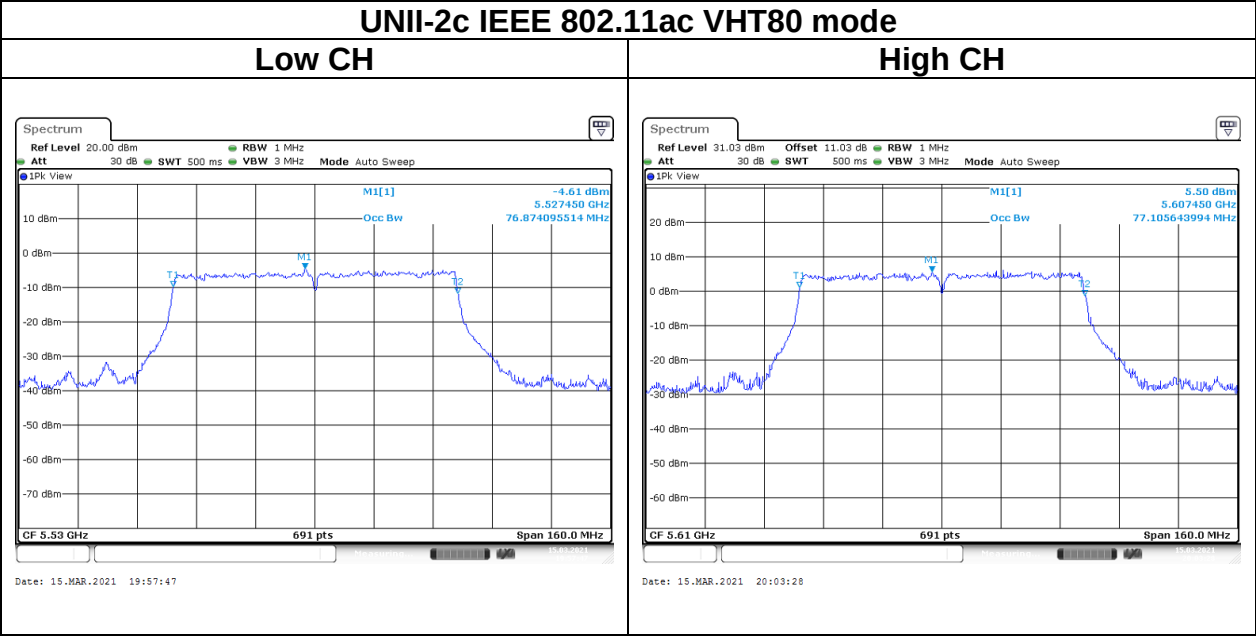
Mid CH



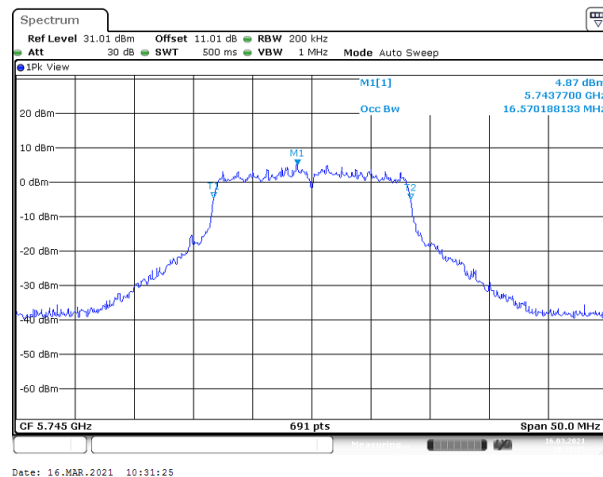
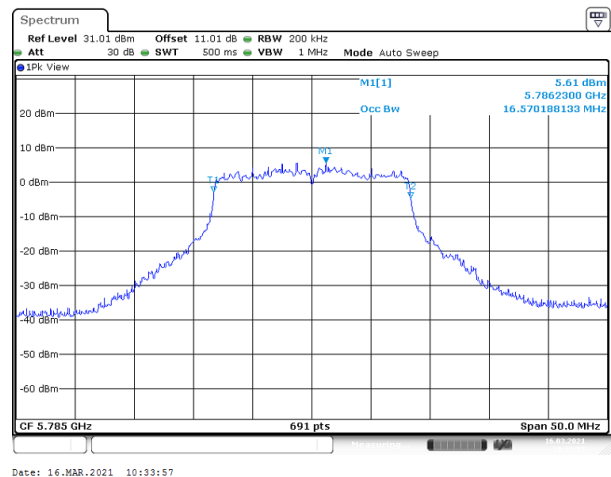
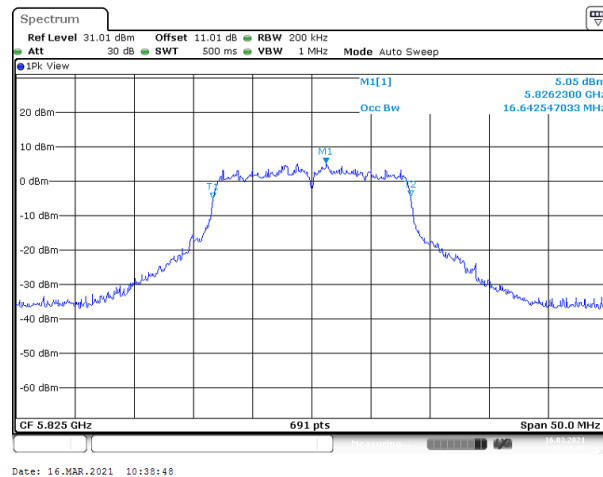
High CH



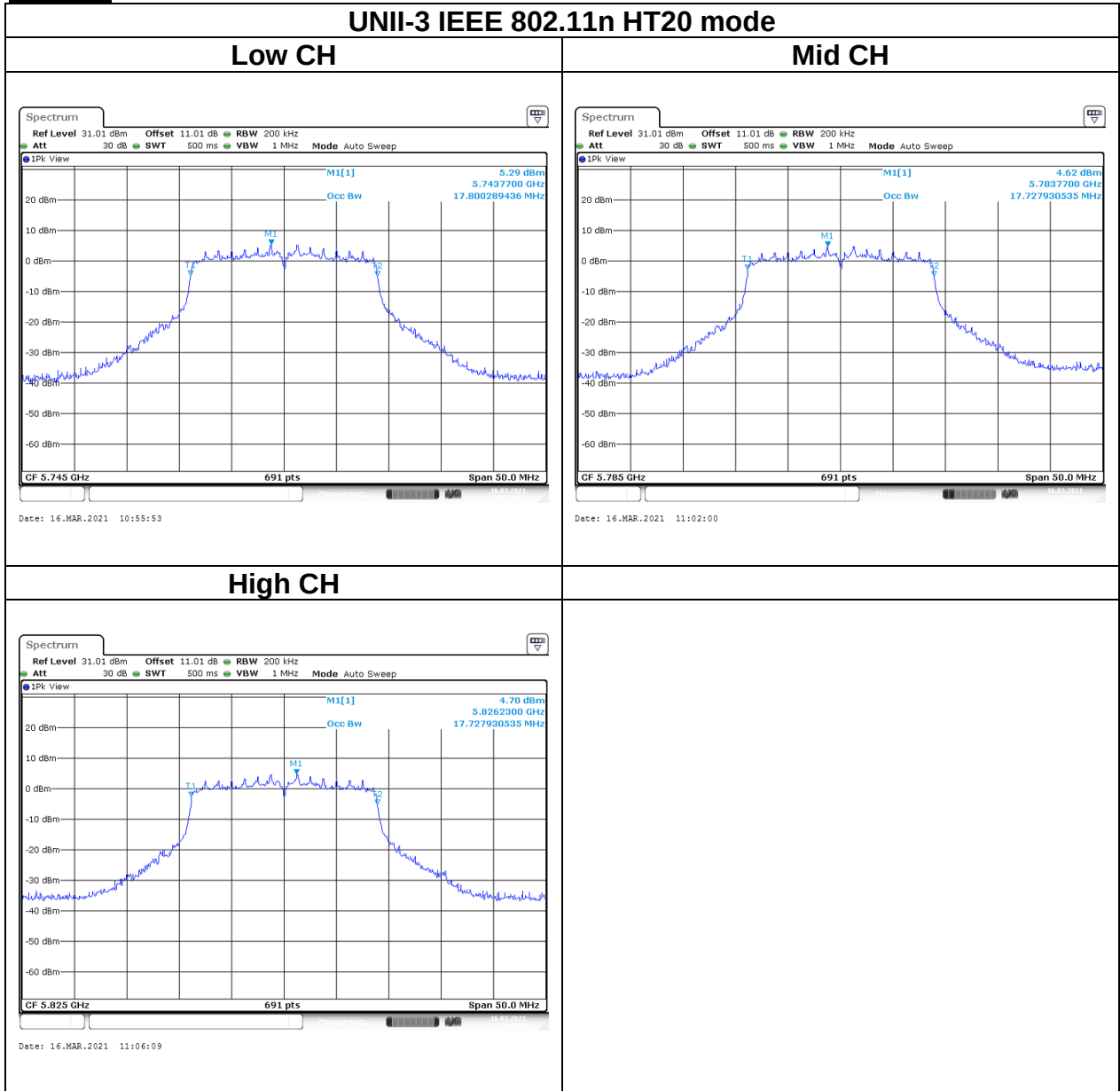
Chain 0



Report No.: T201102D09-RP4

Test Data (99% OBW)**Chain 0****UNII-3 IEEE 802.11a mode****Low CH****Mid CH****High CH**

Chain 0

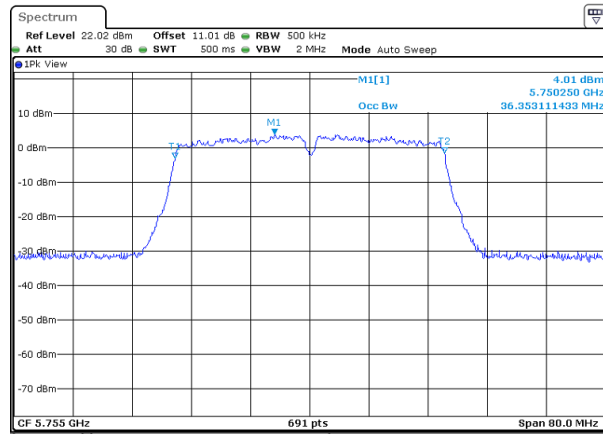


Report No.: T201102D09-RP4

Chain 0

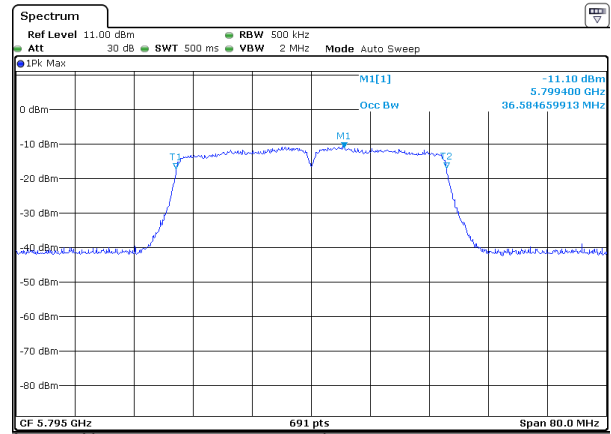
UNII-3 IEEE 802.11n HT40 mode

Low CH



Date: 16.MAR.2021 11:11:56

High CH

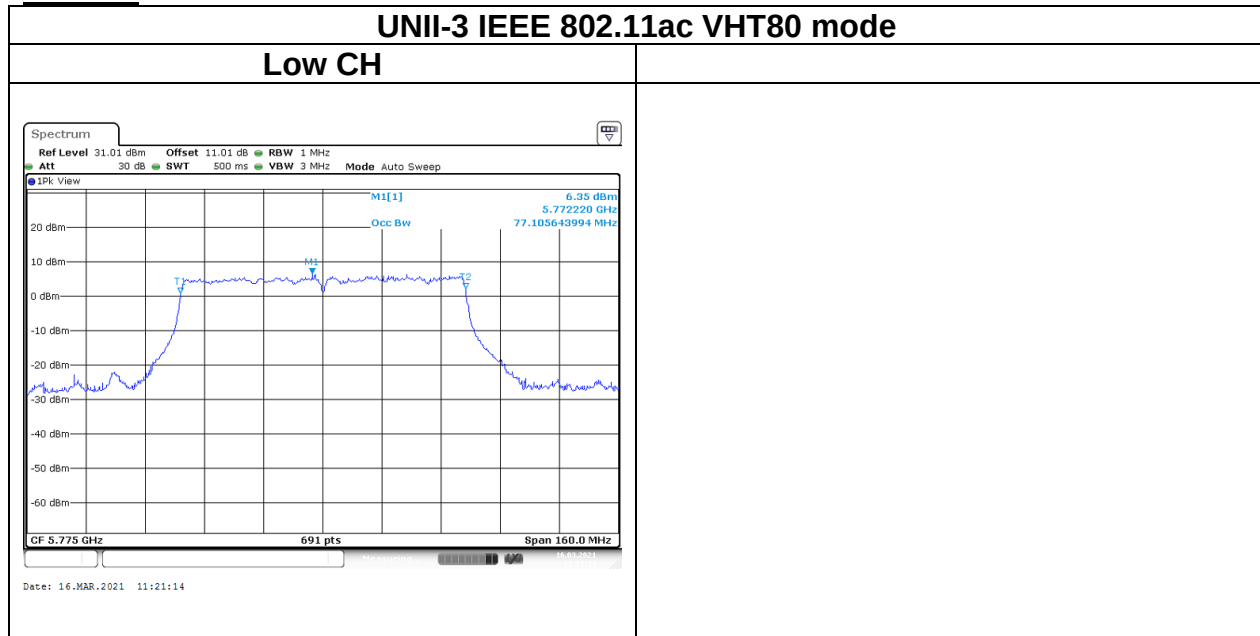


Date: 25.JUN.2021 13:26:40

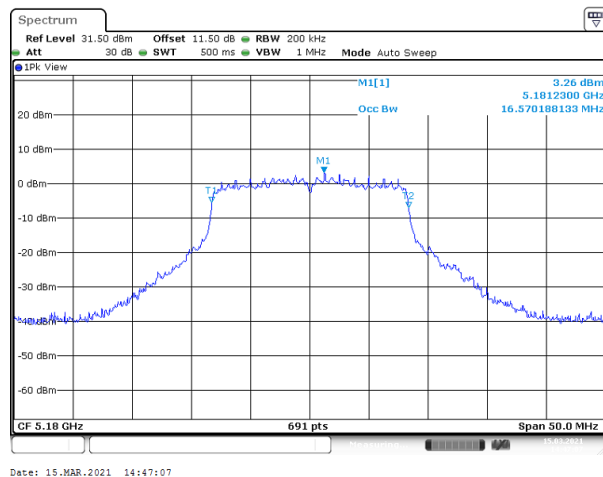
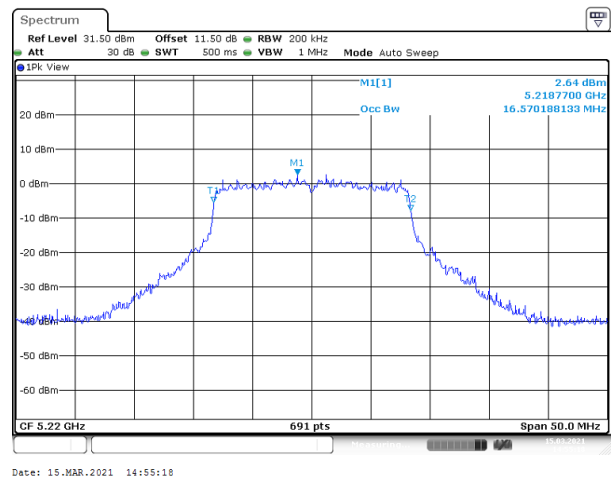
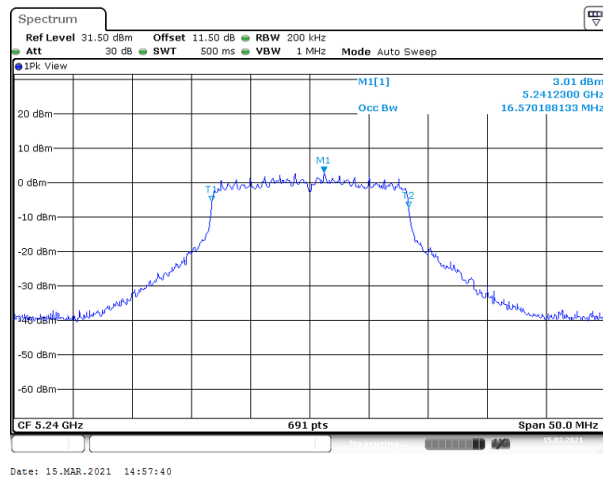
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Chain 0

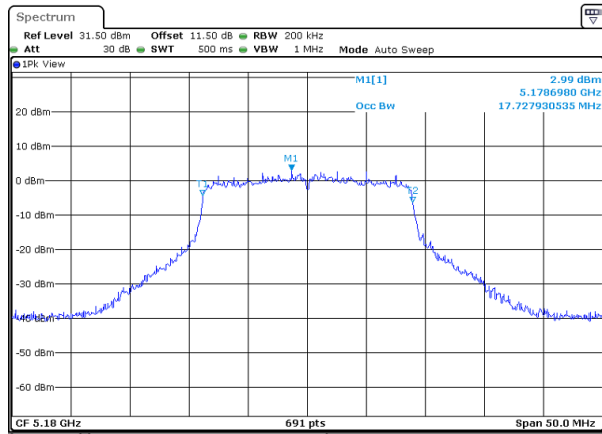
Report No.: T201102D09-RP4

Test Data (99% OBW)**Chain 1****UNII-1 IEEE 802.11a mode****Low CH****Mid CH****High CH**

Chain 1

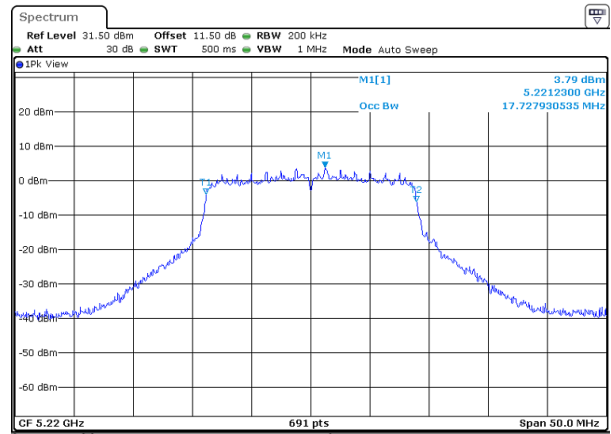
UNII-1 IEEE 802.11n HT20 mode

Low CH



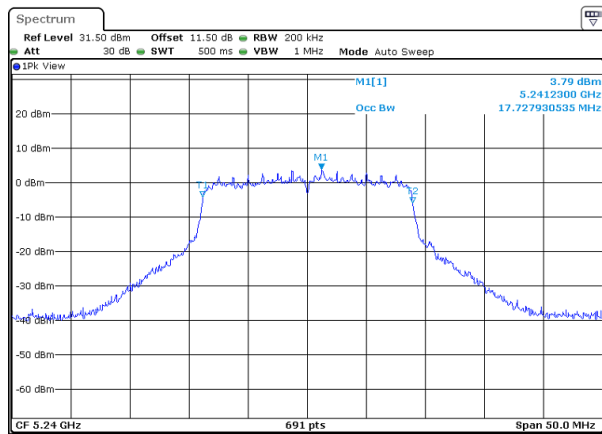
Date: 15.MAR.2021 14:25:24

Mid CH



Date: 15.MAR.2021 14:28:26

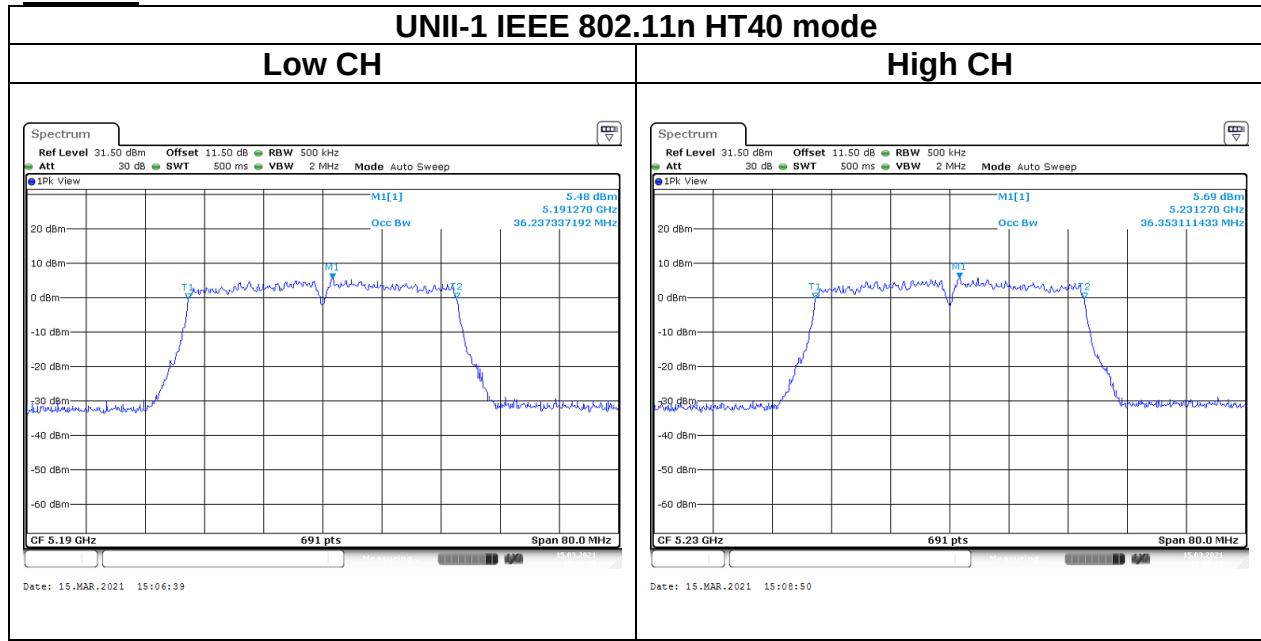
High CH



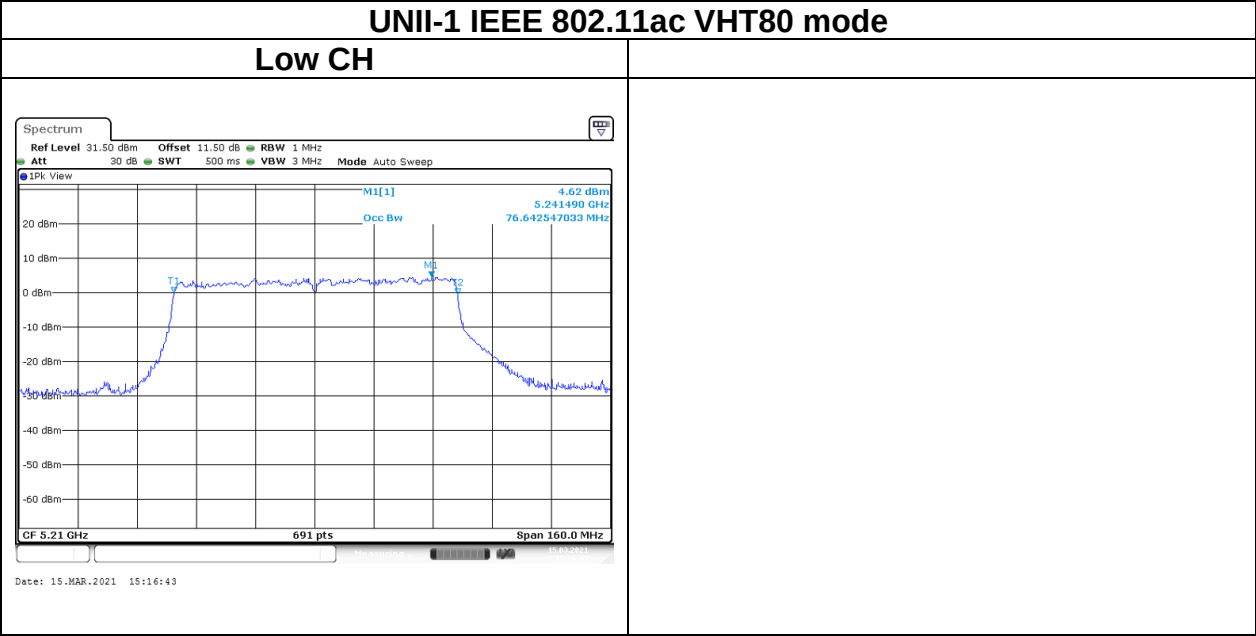
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Report No.: T201102D09-RP4

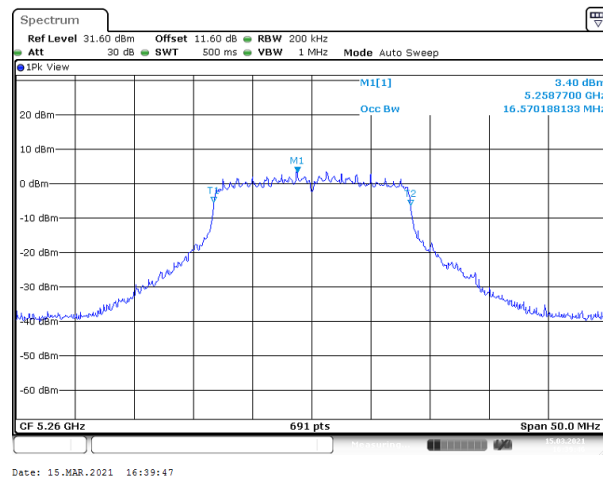
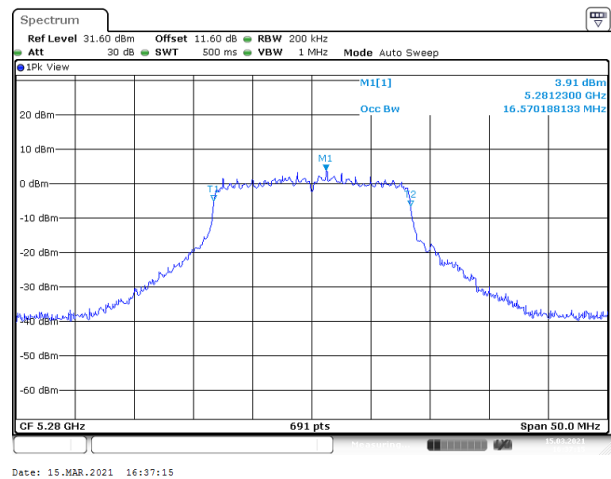
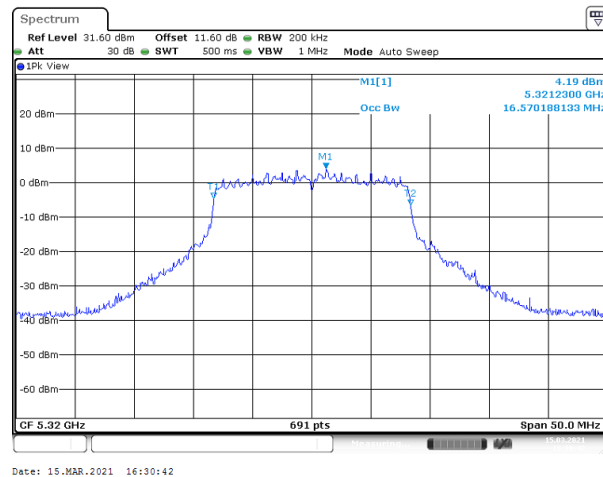
Chain 1



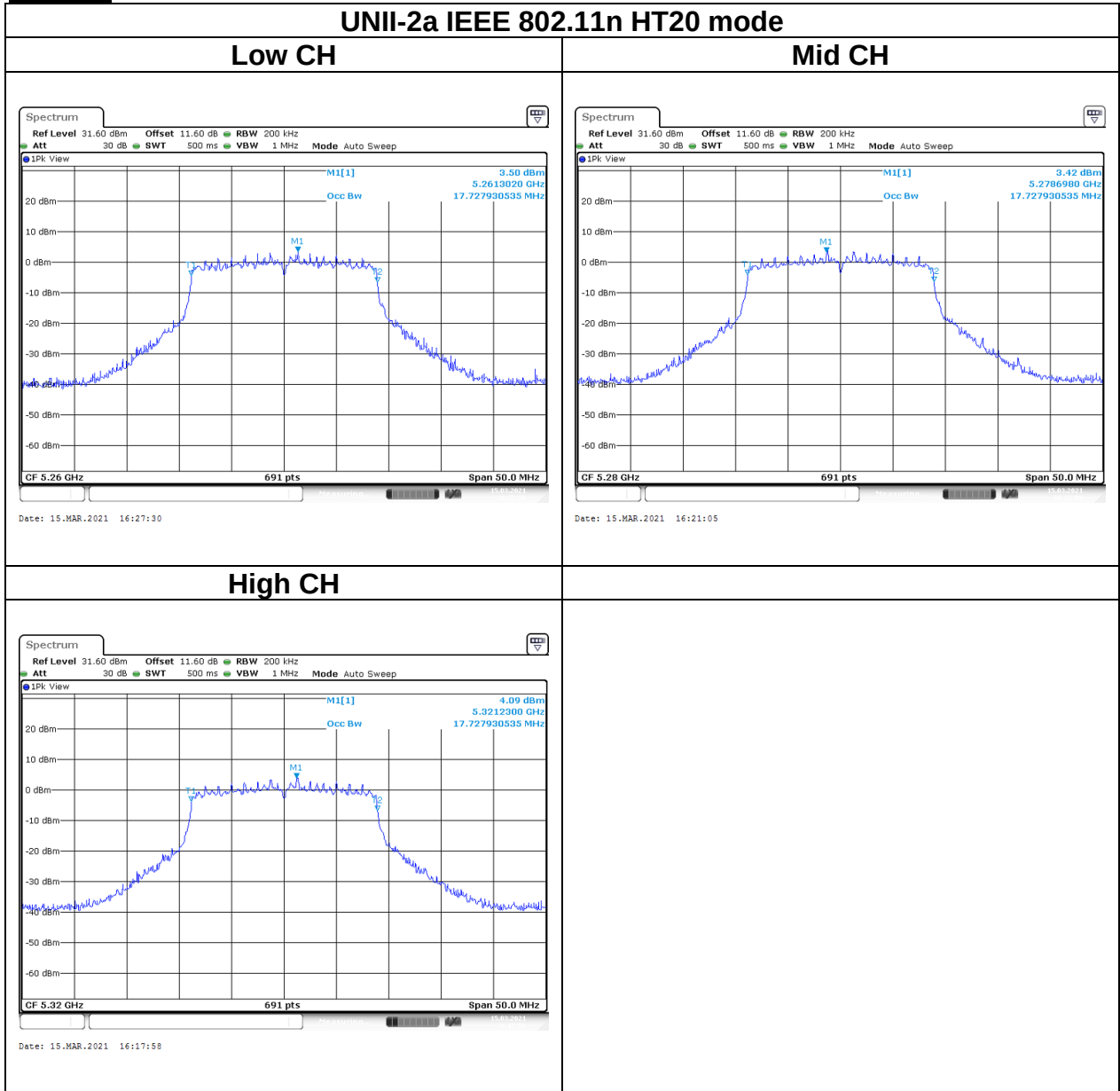
Chain 1

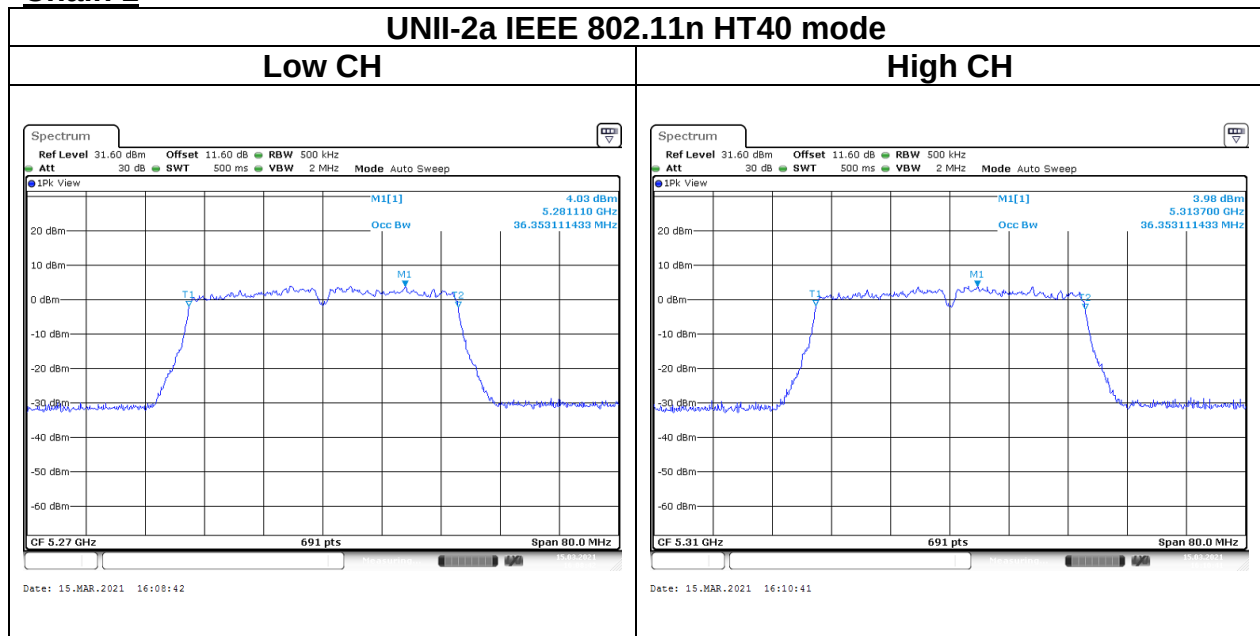


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Test Data (99% OBW)**Chain 1****UNII-2a IEEE 802.11a mode****Low CH****Mid CH****High CH**

Chain 1

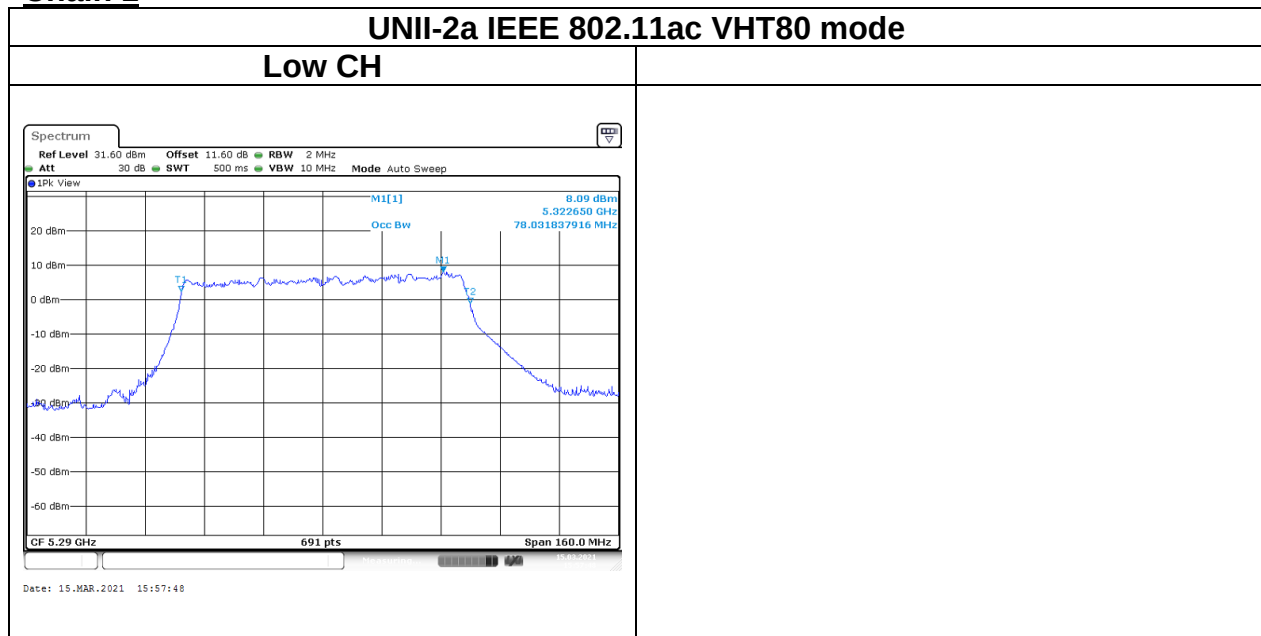


Chain 1

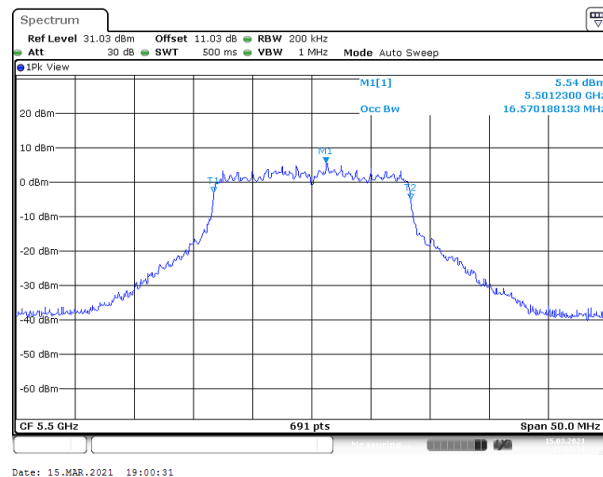
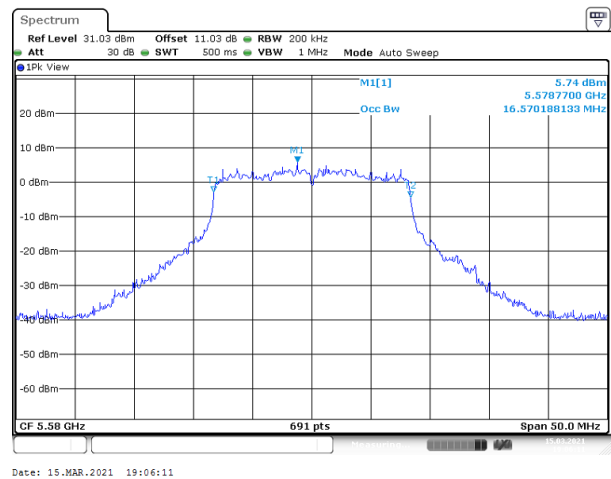
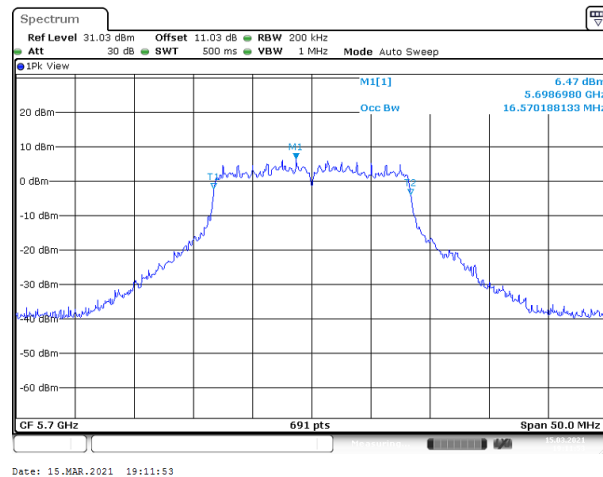
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Chain 1



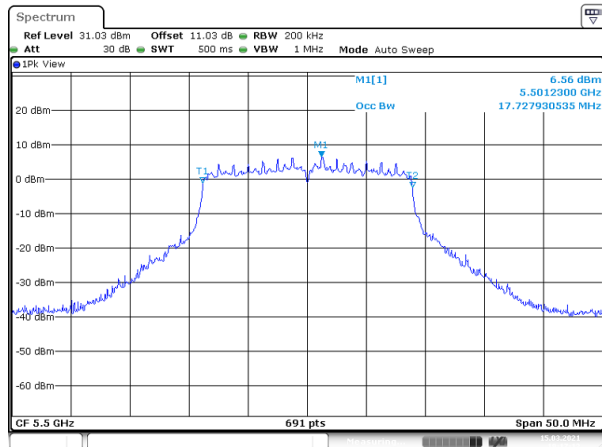
Report No.: T201102D09-RP4

Test Data (99% OBW)**Chain 1****UNII-2c IEEE 802.11a mode****Low CH****Mid CH****High CH**

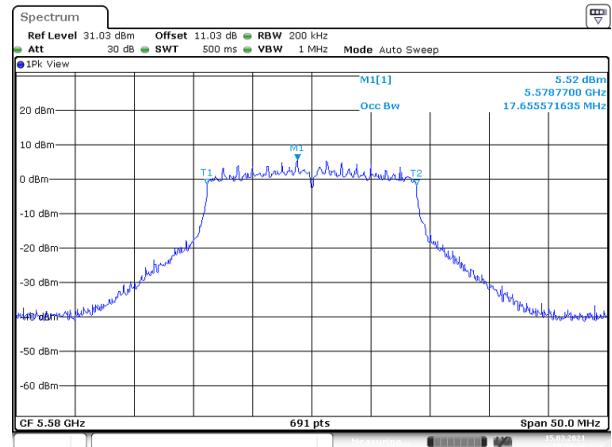
Chain 1

UNII-2c IEEE 802.11n HT20 mode

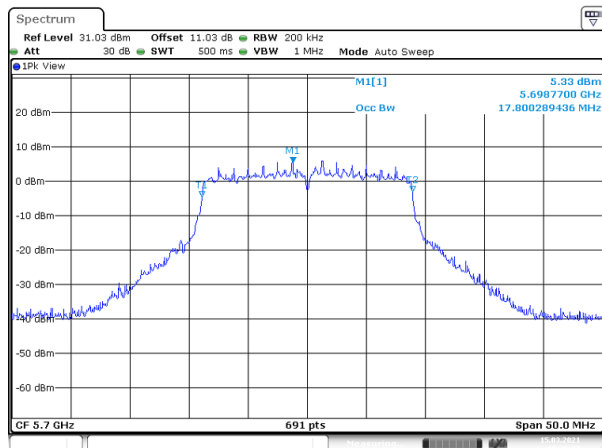
Low CH



Mid CH



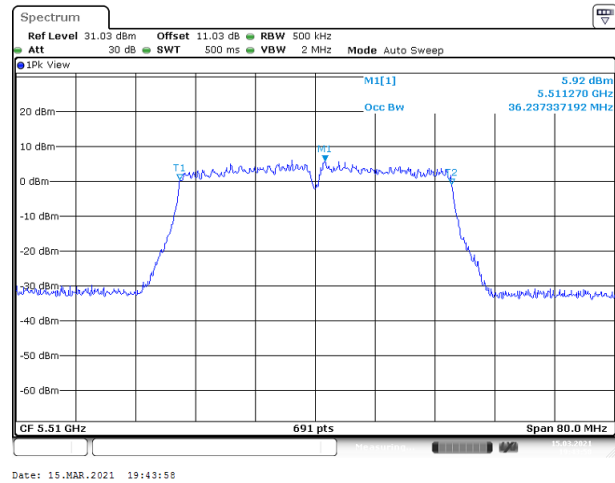
High CH



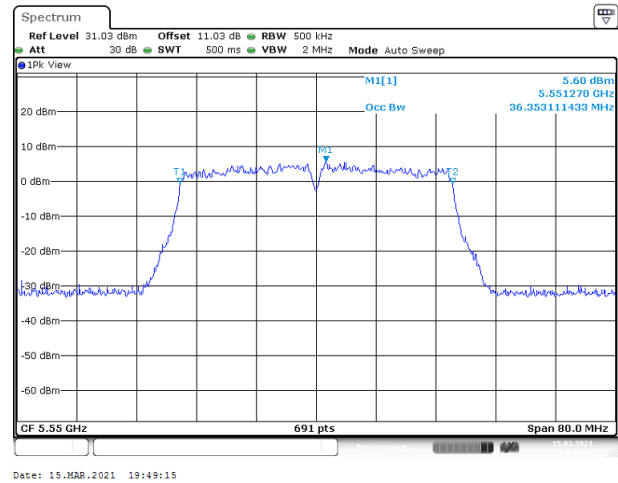
Chain 1

UNII-2c IEEE 802.11n HT40 mode

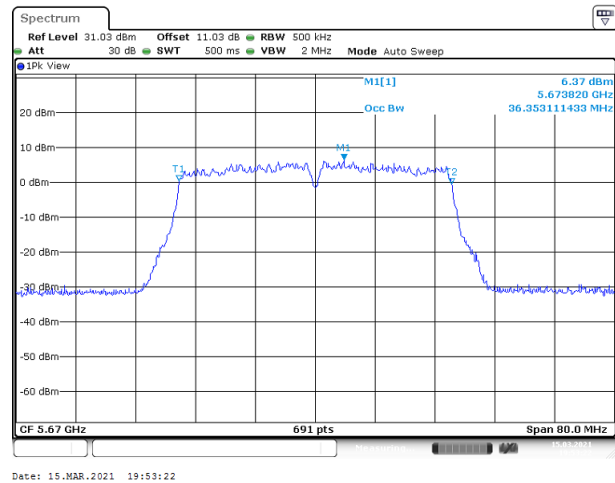
Low CH

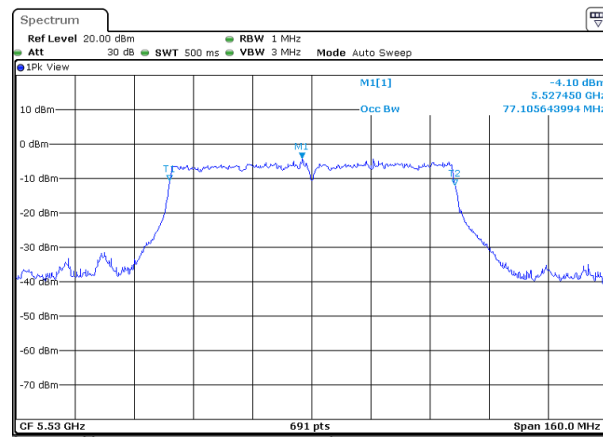


Mid CH

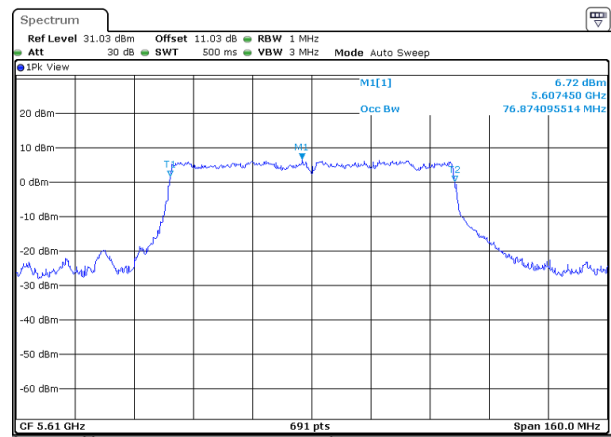


High CH



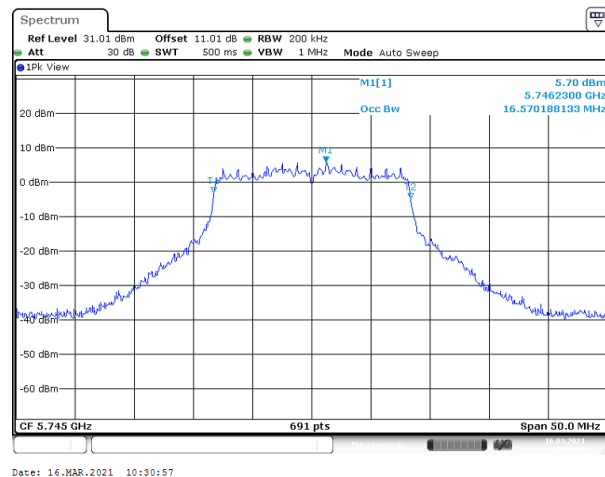
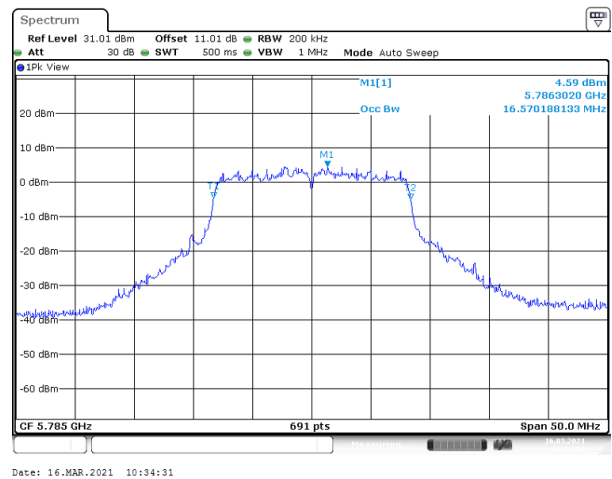
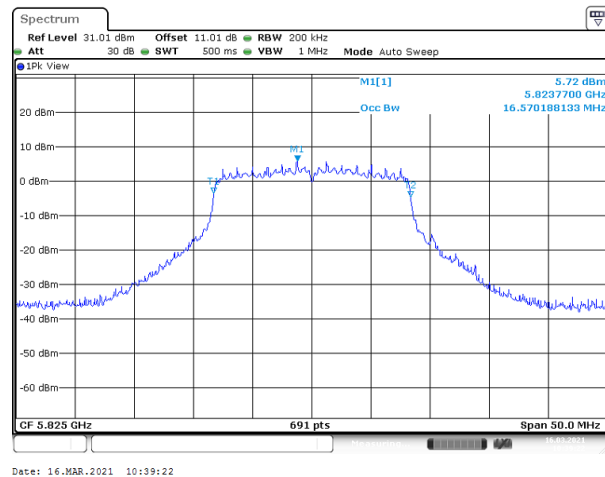
Chain 1**UNII-2c IEEE 802.11ac VHT80 mode****Low CH**

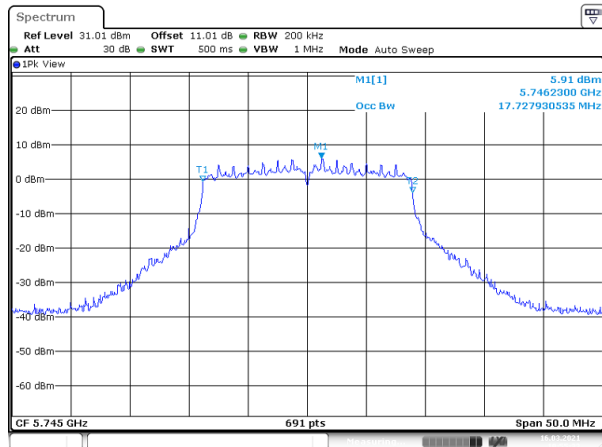
Date: 15.MAR.2021 19:58:07

High CH

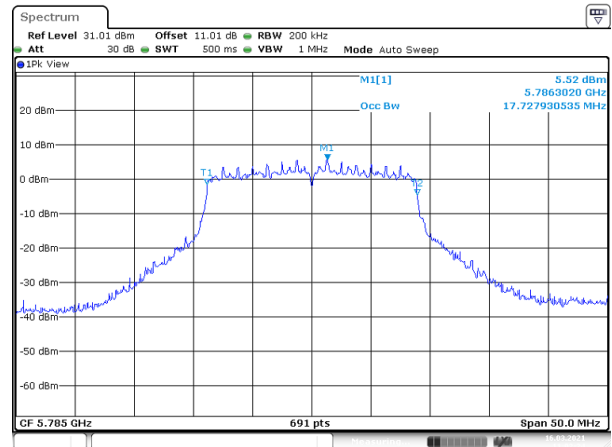
Date: 15.MAR.2021 20:03:54

Report No.: T201102D09-RP4

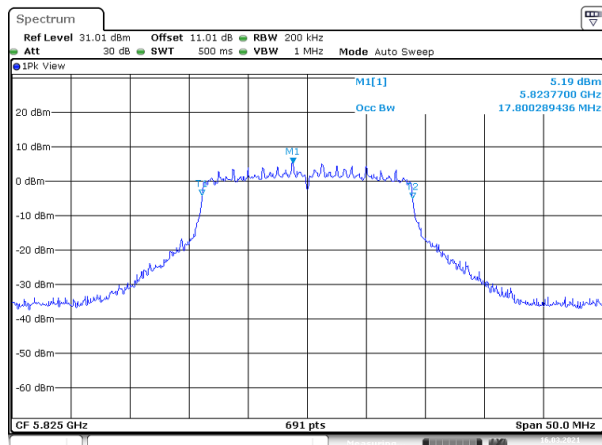
Test Data (99% OBW)**Chain 1****UNII-3 IEEE 802.11a mode****Low CH****Mid CH****High CH**

Chain 1**UNII-3 IEEE 802.11n HT20 mode****Low CH**

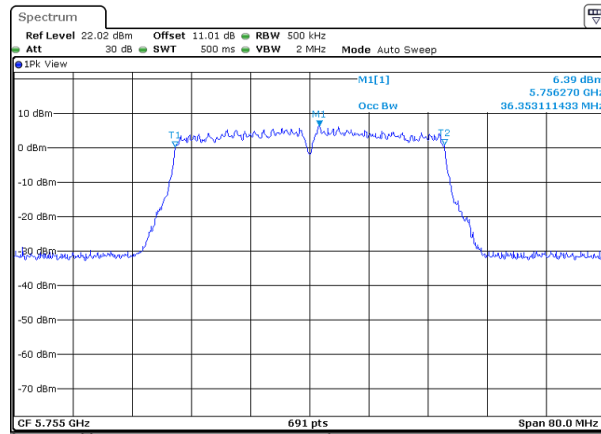
Date: 16.MAR.2021 10:55:33

Mid CH

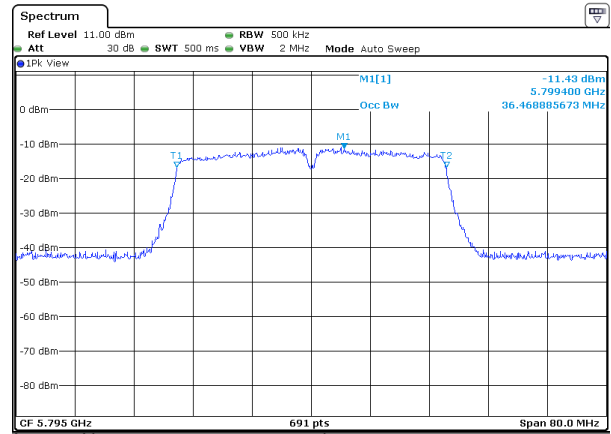
Date: 16.MAR.2021 11:02:24

High CH

Date: 16.MAR.2021 11:05:46

Chain 1**UNII-3 IEEE 802.11n HT40 mode****Low CH**

Date: 16.MAR.2021 11:11:34

High CH

Date: 25.JUN.2021 13:28:06

Report No.: T201102D09-RP4

Chain 1

