

FCC Test Report

(Class II Permissive Change)

Product Name	LV55
Model No	LVSKIHP
FCC ID.	NKR-LVSK-IHP

Applicant	Wistron NeWeb Corporation
Address	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan

Date of Receipt	Jun. 22, 2020
Issued Date	Sep. 04, 2020
Report No.	2071064R-E3032110126
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

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Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Issued Date: Sep. 04, 2020

Report No.: 2071064R-E3032110126



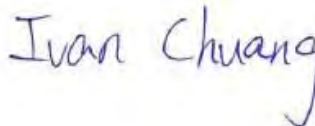
Product Name	LV55
Applicant	Wistron NeWeb Corporation
Address	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan
Manufacturer	Wistron NeWeb Corporation
Model No.	LVSKIHP
FCC ID.	NKR-LVSK-IHP
EUT Adapter Rated Voltage	AC 100-240V / 50-60Hz
EUT Adapter Test Voltage	AC 120V / 60Hz
Trade Name	WNC
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E ANSI C63.4: 2014, ANSI C63.10: 2013 KDB Publication 789033
Test Result	Complied

Documented By :



(Senior Adm. Specialist / Jinn Chen)

Tested By :



(Senior Engineer / Ivan Chuang)

Approved By :



(Director / Vincent Lin)

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Revision History

Report No.	Version	Description	Issued Date
2071064R-E3032110126	V1.0	Initial issue of report.	2020-09-04

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	LV55
Trade Name	WNC
Model No.	LVSKIHP
FCC ID.	NKR-LVSK-IHP
Frequency Range	802.11a/n-20MHz: 5260-5320MHz, 5500-5700MHz 802.11ac/ax-20MHz: 5260-5320MHz, 5500-5700MHz, 5720MHz 802.11n-40MHz: 5270-5310MHz, 5510-5670MHz 802.11ac/ax-40MHz: 5270-5310MHz, 5510-5670MHz, 5710MHz 802.11ac/ax-80MHz: 5290MHz, 5530-5690MHz
Number of Channels	802.11a/n-20MHz: 15 802.11ac/ax-20MHz: 16 802.11n-40MHz: 7 802.11ac/ax-40MHz: 8 802.11ac/ax-80MHz: 4
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2402Mbps
Type of Modulation	802.11a/n/ac/ax: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Channel Control	Auto
Antenna type	Dipole Antenna
Antenna Gain	Refer to the table "Antenna List"
Power Adapter	MFR: Delta, M/N: ADP-120VH D Input: AC 100-240V~2.5A, 50-60Hz Output: 20V, 6A Cable Out: Non-shielded, 3.0m Power Cord: Non-shielded, 2.0m
Hardware Version	0.0.2
Software Version	0.23.11.1dbg

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Directioal Gain
1.	WNC	95XKAC15.GDNDVZ	Dipole antenna	5.22dBi For 5.25~5.35GHz 5.15dBi for 5.47~5.725GHz
2.	WNC	95XKAC15.GDOVZ	Dipole antenna	
3.	WNC	95XKAC15.GDPVZ	Dipole antenna	
4.	WNC	95XKAC15.GDQVZ	Dipole antenna	

Note: The antenna of EUT is conform to FCC 15.203.

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 052:	5260 MHz	Channel 056:	5280 MHz	Channel 060:	5300 MHz	Channel 064:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz		

802.11ac/ax-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 052:	5260 MHz	Channel 056:	5280 MHz	Channel 060:	5300 MHz	Channel 064:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz	Channel 144:	5720 MHz

802.11n-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 054:	5270 MHz	Channel 062:	5310 MHz	Channel 102:	5510 MHz	Channel 110:	5550 MHz
Channel 118:	5590 MHz	Channel 126:	5630 MHz	Channel 134:	5670 MHz		

802.11ac/ax-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 054:	5270 MHz	Channel 062:	5310 MHz	Channel 102:	5510 MHz	Channel 110:	5550 MHz
Channel 118:	5590 MHz	Channel 126:	5630 MHz	Channel 134:	5670 MHz	Channel 142:	5710 MHz

802.11ac/ax-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 058:	5290 MHz	Channel 106:	5530 MHz	Channel 122:	5610 MHz	Channel 138:	5690 MHz

Note:

1. This device is a LV55 with built-in WLAN(802.11a/b/g/n/ac/ax) transceiver, this report for 5GHz WLAN.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.
3. This is to request a Class II permissive change for FCC ID: NKR-LVSK-IHP, originally granted on 07/27/2020.

The major change filed under this application is:

Change #1: Add 5.25-5.35 GHz and 5.47-5.725 GHz bands by software, All other hardware is identical with original granted.

Test Mode	Mode 1: Transmit (802.11a-CDD) Mode 2: Transmit (802.11n-20MBW-CDD) Mode 3: Transmit (802.11n-40MBW-CDD) Mode 4: Transmit (802.11ac-20MBW-CDD) Mode 5: Transmit (802.11ac-40MBW-CDD) Mode 6: Transmit (802.11ac-80MBW-CDD) Mode 7: Transmit (802.11ax-20MBW-CDD) Mode 8: Transmit (802.11ax-40MBW-CDD) Mode 9: Transmit (802.11ax-80MBW-CDD) Mode 10: Transmit (802.11n-20MBW-Beamforming) Mode 11: Transmit (802.11n-40MBW-Beamforming) Mode 12: Transmit (802.11ac-20MBW-Beamforming) Mode 13: Transmit (802.11ac-40MBW-Beamforming) Mode 14: Transmit (802.11ac-80MBW-Beamforming) Mode 15: Transmit (802.11ax-20MBW-Beamforming) Mode 16: Transmit (802.11ax-40MBW-Beamforming) Mode 17: Transmit (802.11ax-80MBW-Beamforming) Mode 18: Transmit (CDD) Mode 19: Transmit (Beamforming)
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Note:1. There are 4 modes for Beamforming measuring item, "Nss=1" , "Nss=2" , "Nss=3" and "Nss=4".

The worst measuring result is in "Nss=1" mode.

2.RU Config-edge Mode:20M for 26/0+26/8,40M for 106/53+106/56, 80M for 242/61+242/64

3.RU Config-center Mode:20M for 52/38+52/39,40M for 106/54+106/55,
80M for 106/54+242/62+242/63+106/59

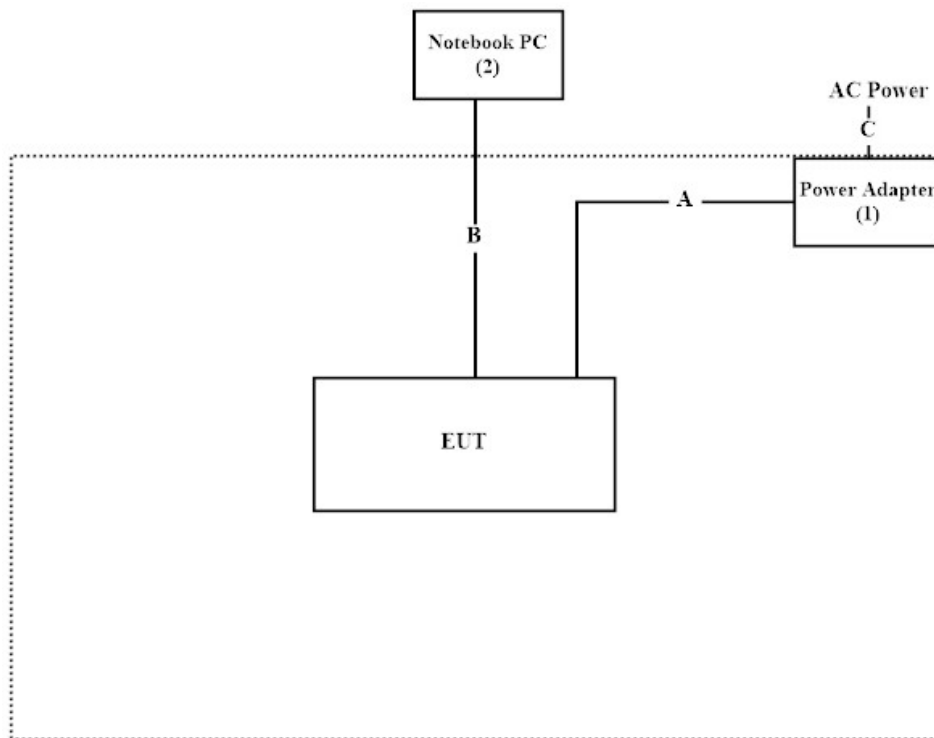
1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	Delta	ADP-120VH D	N/A	N/A
2	Notebook PC	DELL	Latitude 5501	9V4JL13	N/A

Signal Cable Type	Signal cable Description
A	Power Cable Non-shielded, 3m
B	LAN Cable Non-shielded, 2m
C	Power Cable Non-shielded, 1.8m

1.3. Configuration of tested System



1.4. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4.
2. Execute software “QSPR v5.0-00163” on the Notebook PC.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous Transmit.
5. Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	24.2 °C
	Humidity (%RH)	10~90 %	62 %
Radiated Emission	Temperature (°C)	10~40 °C	23.8 °C
	Humidity (%RH)	10~90 %	67.8 %
Conductive	Temperature (°C)	10~40 °C	23.5 °C
	Humidity (%RH)	10~90 %	55 %

USA : FCC Registration Number: TW0023

Canada : IC Registration Number: 25880

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No.159, Sec. 2, Wenhua 1st Rd., Linkou Dist.,
New Taipei City 24457, Taiwan, R.O.C.

Phone number : 886-2-2602-7968
Fax number : 866-2-2602-3286
Email address : info.tw@dekra.com
Website : <http://www.dekra.com.tw>

1.6. List of Test Equipment

For Conduction measurements /ASR1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	EMI Test Receiver	R&S	ESR7	101601	2020.05.28	2021.05.27
X	Two-Line V-Network	R&S	ENV216	101306	2020.03.25	2021.03.24
X	Two-Line V-Network	R&S	ENV216	101307	2020.04.17	2021.04.16
X	Coaxial Cable	DEKRA	RG400_BNC	RF001	2020.05.24	2021.05.23

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Testing System V1.2

For Conducted measurements /ASR2

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103466	2019.12.16	2020.12.15
X	Peak Power Analyzer	KEYSIGHT	8900B	MY51000539	2020.05.13	2021.05.12
X	Power Sensor	KEYSIGHT	N1923A	MY59240002	2020.05.22	2021.05.21
X	Power Sensor	KEYSIGHT	N1923A	MY59240003	2020.05.22	2021.05.21

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Conduction Test System V9.0.5

For Radiated measurements /ACB1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Loop Antenna	AMETEK	HLA6121	49611	2020.03.16	2021.03.15
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-953	2020.01.03	2021.01.02
X	Horn Antenna	ETS-Lindgren	3117	00203800	2019.12.12	2020.12.11
X	Horn Antenna	ETS-Lindgren	3117	00203761	2019.10.31	2020.10.30
X	Horn Antenna	Com-Power	AH-840	101087	2020.06.08	2021.06.07
X	Pre-Amplifier	EMCI	EMC001330	980301	2020.06.04	2021.06.03
X	Pre-Amplifier	EMCI	EMC051835SE	980313	2019.09.17	2020.09.16
X	Pre-Amplifier	EMCI	EMC05820SE	980308	2019.09.02	2020.09.01
X	Pre-Amplifier	EMCI	EMC184045SE	980314	2020.06.10	2021.06.09
	Filter	MICRO TRONICS	BRM50702	G251	2019.09.03	2020.09.02
X	Filter	MICRO TRONICS	BRM50716	G188	2019.09.03	2020.09.02
X	EMI Test Receiver	R&S	ESR7	101602	2019.12.16	2020.12.15
X	Spectrum Analyzer	R&S	FSV40	101148	2020.03.16	2021.03.15
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF002	2020.07.03	2021.07.02
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2020.06.10	2021.06.09

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Testing System V1.2

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

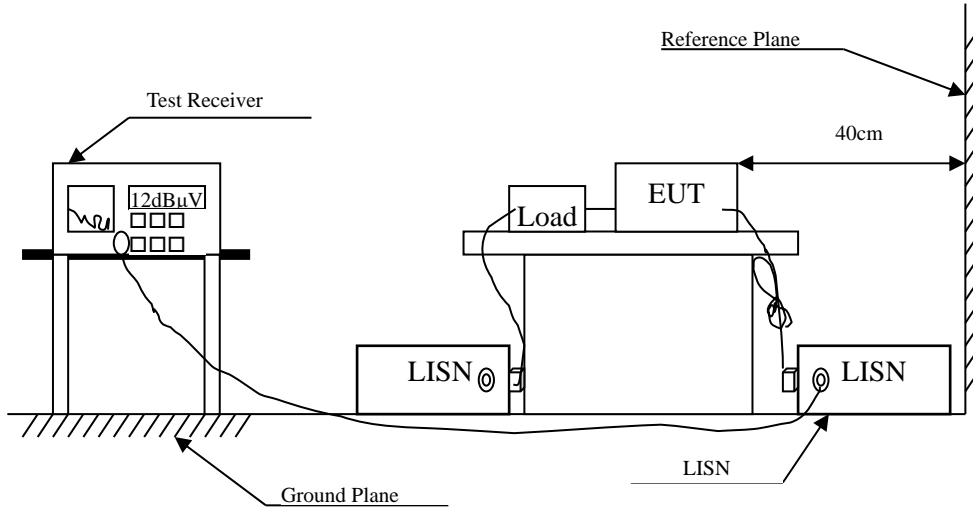
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty	
Conducted Emission	±3.42 dB	
Maximun conducted output power	Power Meter ±0.91 dB	Spectrum Analyzer ±2.53 dB
Peak Power Spectral Density	±2.53 dB	
Radiated Emission	Under 1GHz ±4.06 dB	Above 1GHz ±3.73 dB
Band Edge	Under 1GHz ±4.06 dB	Above 1GHz ±3.73 dB
Duty Cycle	±2.31 ms	

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dB μ V) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

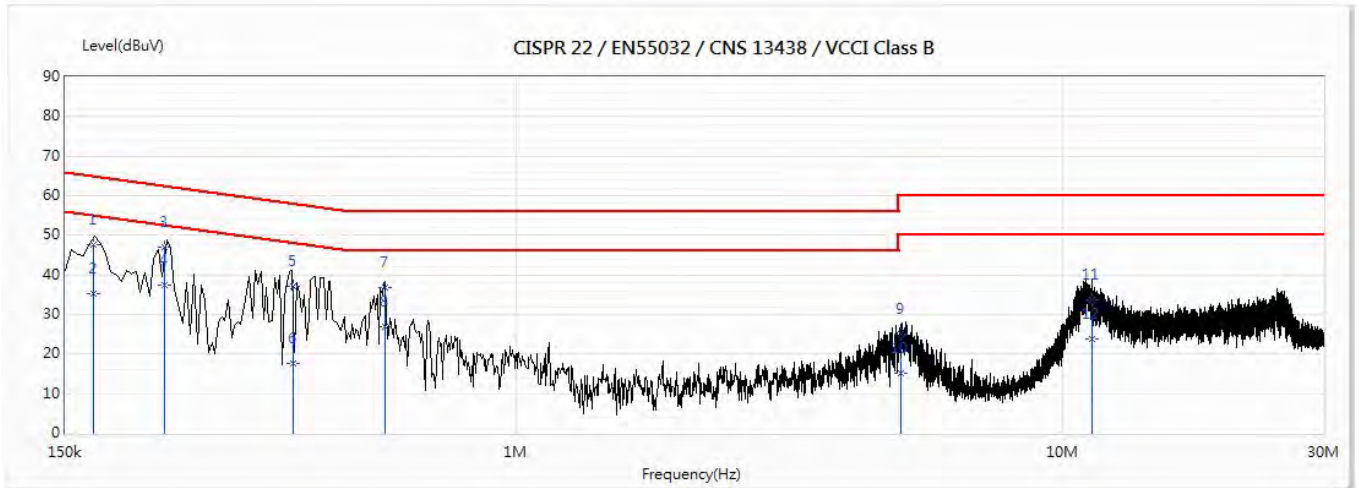
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.4. Test Result of Conducted Emission

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : L 1
 Test Mode : Mode 9: Transmit (802.11ax-80MBW-CDD) (5290MHz) (RU Config-Full)
 Test Date : 2020/08/13

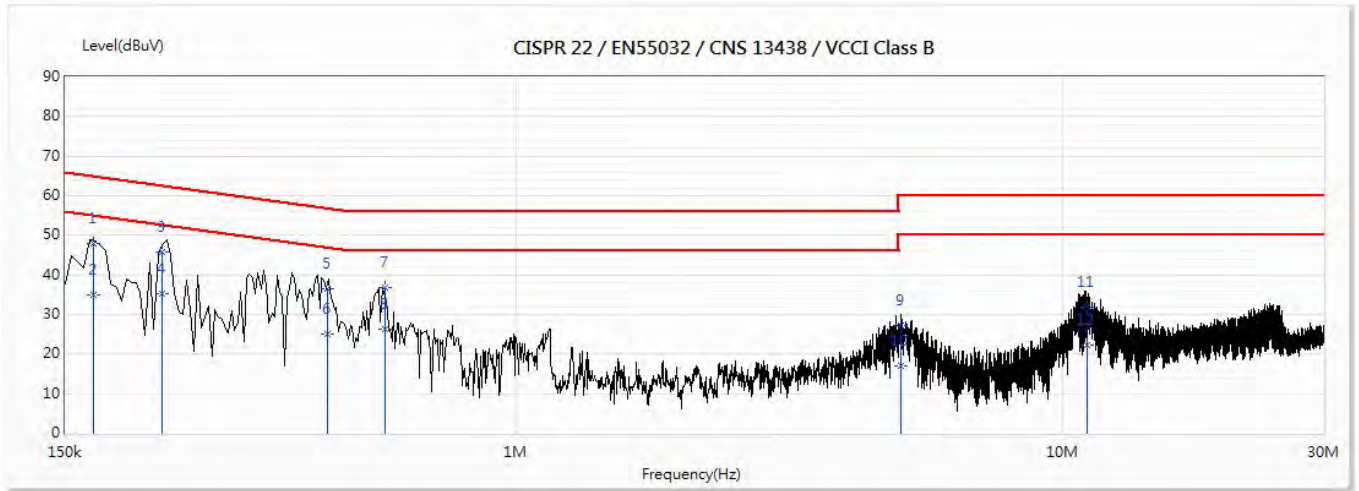


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.169	47.65	65.03	-17.38	37.99	9.66	QP
2	0.169	35.16	55.03	-19.87	25.51	9.66	AV
3	0.227	47.04	62.55	-15.51	37.38	9.65	QP
*4	0.227	37.48	52.55	-15.07	27.82	9.65	AV
5	0.391	37.01	58.04	-21.02	27.36	9.66	QP
6	0.391	17.67	48.04	-30.37	8.01	9.66	AV
7	0.576	36.68	56.00	-19.32	27.02	9.66	QP
8	0.576	26.78	46.00	-19.22	17.12	9.66	AV
9	5.065	25.16	60.00	-34.84	15.36	9.80	QP
10	5.065	15.04	50.00	-34.96	5.24	9.80	AV
11	11.287	33.64	60.00	-26.36	23.73	9.91	QP
12	11.287	23.77	50.00	-26.23	13.86	9.91	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : N
 Test Mode : Mode 9: Transmit (802.11ax-80MBW-CDD) (5290MHz) (RU Config-Full)
 Test Date : 2020/08/13

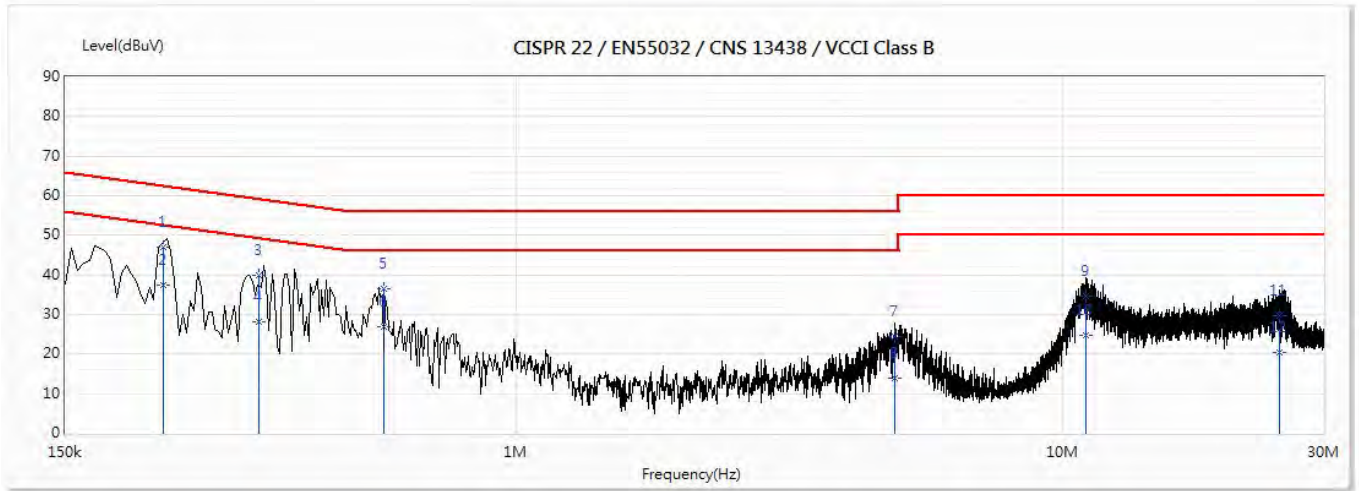


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.169	47.92	65.00	-17.08	38.25	9.67	QP
2	0.169	35.02	55.00	-19.97	25.35	9.67	AV
*3	0.225	45.80	62.62	-16.81	36.13	9.67	QP
4	0.225	35.38	52.62	-17.24	25.71	9.67	AV
5	0.452	36.43	56.83	-20.40	26.76	9.67	QP
6	0.452	24.98	46.83	-21.85	15.31	9.67	AV
7	0.577	36.85	56.00	-19.15	27.18	9.67	QP
8	0.577	26.38	46.00	-19.62	16.71	9.67	AV
9	5.068	27.33	60.00	-32.67	17.52	9.81	QP
10	5.068	17.12	50.00	-32.88	7.31	9.81	AV
11	11.056	31.73	60.00	-28.27	21.81	9.93	QP
12	11.056	22.40	50.00	-27.60	12.47	9.93	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : L 1
 Test Mode : Mode 9: Transmit (802.11ax-80MBW-CDD) (5610MHz) (RU Config-Full)
 Test Date : 2020/08/13

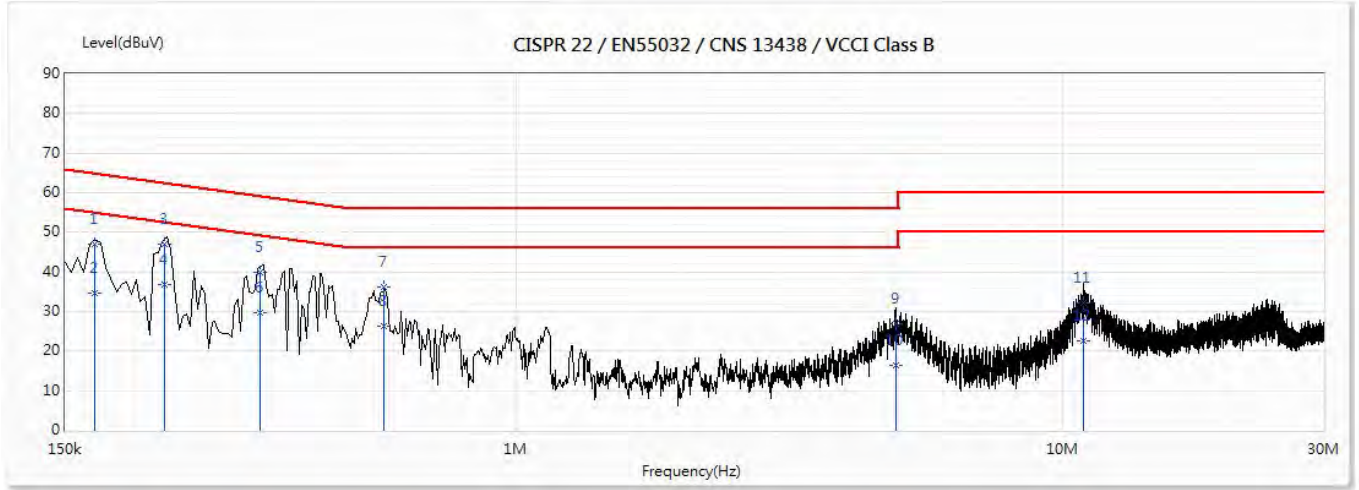


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.226	46.87	62.59	-15.72	37.21	9.65	QP
*2	0.226	37.52	52.59	-15.07	27.87	9.65	AV
3	0.339	39.76	59.23	-19.48	30.10	9.66	QP
4	0.339	28.19	49.23	-21.05	18.53	9.66	AV
5	0.574	36.54	56.00	-19.46	26.87	9.66	QP
6	0.574	26.80	46.00	-19.20	17.14	9.66	AV
7	4.943	24.28	56.00	-31.72	14.49	9.80	QP
8	4.943	13.86	46.00	-32.14	4.06	9.80	AV
9	11.036	34.53	60.00	-25.47	24.63	9.90	QP
10	11.036	24.86	50.00	-25.14	14.96	9.90	AV
11	24.86	29.71	60.00	-30.29	19.75	9.96	QP
12	24.86	20.30	50.00	-29.70	10.34	9.96	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : N
 Test Mode : Mode 9: Transmit (802.11ax-80MBW-CDD) (5610MHz) (RU Config-Full)
 Test Date : 2020/08/13

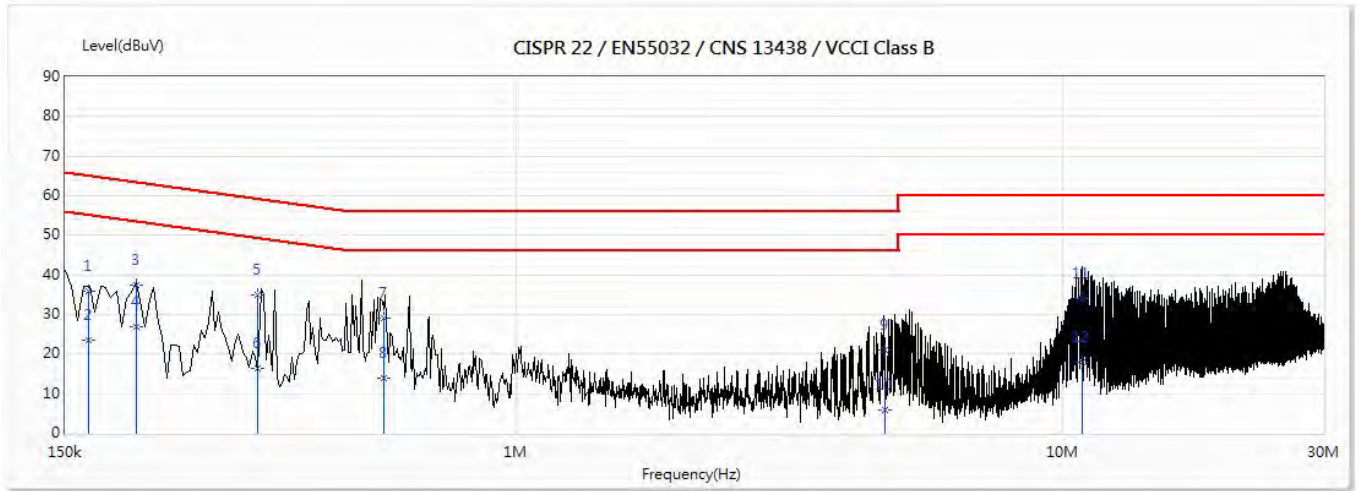


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.17	46.94	64.97	-18.03	37.27	9.67	QP
2	0.17	34.76	54.97	-20.21	25.09	9.67	AV
*3	0.227	46.90	62.55	-15.65	37.23	9.67	QP
4	0.227	36.89	52.55	-15.65	27.22	9.67	AV
5	0.341	39.94	59.18	-19.24	30.27	9.67	QP
6	0.341	29.64	49.18	-19.55	19.97	9.67	AV
7	0.573	36.32	56.00	-19.68	26.65	9.67	QP
8	0.573	26.44	46.00	-19.56	16.76	9.67	AV
9	4.951	26.77	56.00	-29.23	16.96	9.81	QP
10	4.951	16.37	46.00	-29.63	6.56	9.81	AV
11	10.926	32.21	60.00	-27.79	22.29	9.92	QP
12	10.926	22.46	50.00	-27.54	12.53	9.92	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : L 1
 Test Mode : Mode 17: Transmit (802.11ax-80MBW-Beamforming)(5290MHz)
 Test Date : 2020/08/13

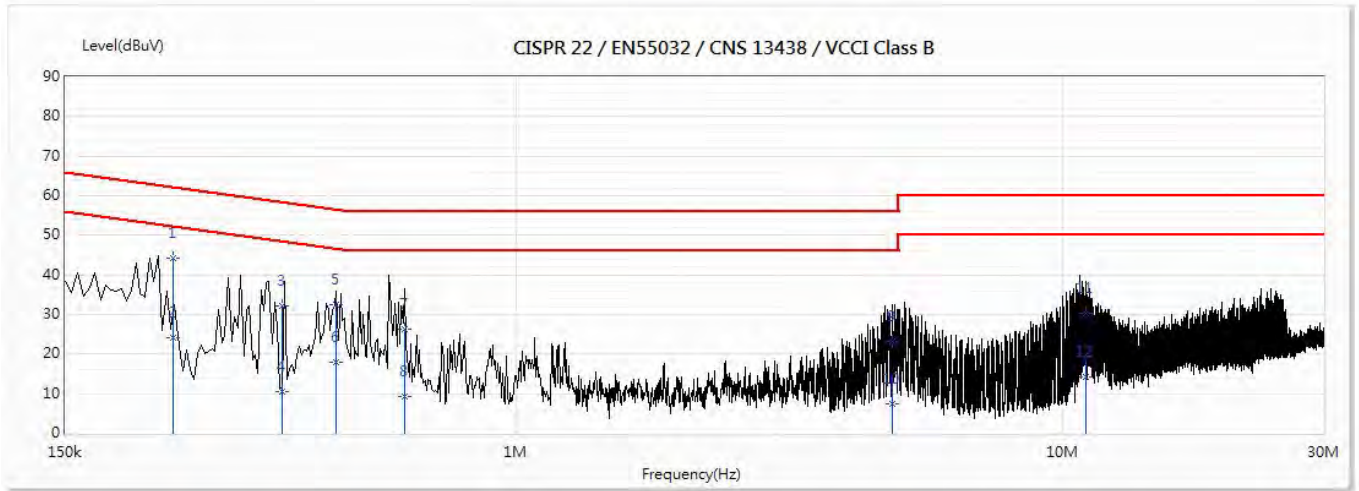


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.166	36.01	65.18	-29.17	26.35	9.66	QP
2	0.166	23.37	55.18	-31.81	13.71	9.66	AV
3	0.202	37.44	63.53	-26.09	27.78	9.65	QP
4	0.202	26.81	53.53	-26.72	17.15	9.65	AV
*5	0.337	34.81	59.27	-24.46	25.15	9.66	QP
6	0.337	16.46	49.27	-32.80	6.81	9.66	AV
7	0.572	29.21	56.00	-26.79	19.55	9.66	QP
8	0.572	13.80	46.00	-32.20	4.14	9.66	AV
9	4.728	21.00	56.00	-35.00	11.21	9.79	QP
10	4.728	5.84	46.00	-40.16	-3.95	9.79	AV
11	10.838	33.95	60.00	-26.05	24.05	9.90	QP
12	10.838	17.85	50.00	-32.15	7.95	9.90	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : N
 Test Mode : Mode 17: Transmit (802.11ax-80MBW-Beamforming)(5290MHz)
 Test Date : 2020/08/13

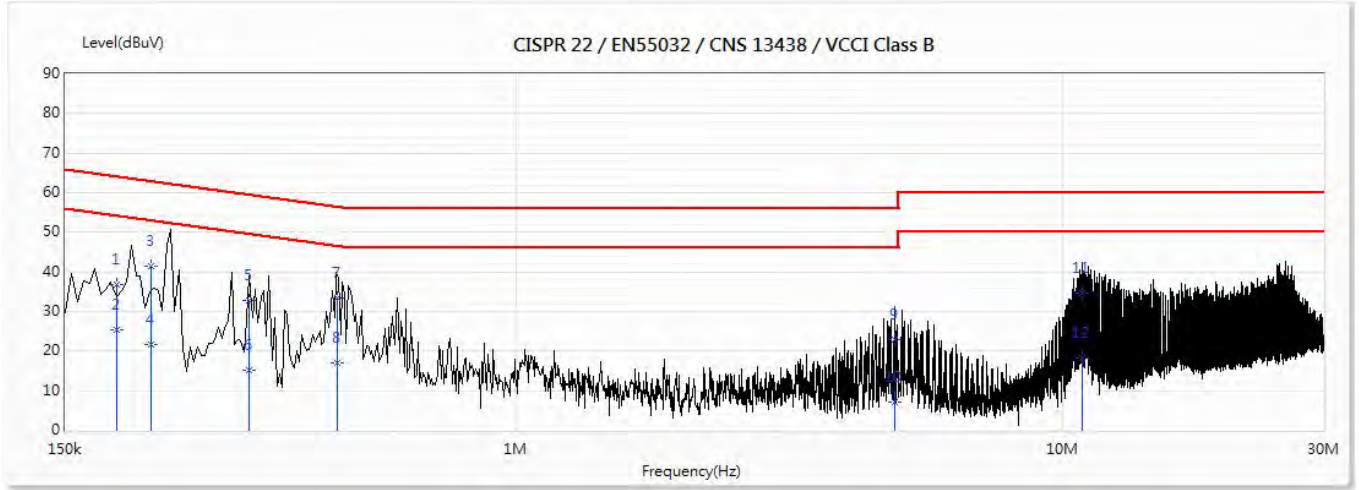


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.236	44.33	62.23	-17.91	34.66	9.67	QP
2	0.236	24.15	52.23	-28.09	14.48	9.67	AV
3	0.374	32.27	58.40	-26.13	22.61	9.67	QP
4	0.374	10.43	48.40	-37.97	0.76	9.67	AV
5	0.47	32.41	56.51	-24.10	22.75	9.67	QP
6	0.47	18.09	46.51	-28.42	8.42	9.67	AV
7	0.628	26.22	56.00	-29.78	16.54	9.68	QP
8	0.628	9.34	46.00	-36.66	-0.34	9.68	AV
9	4.88	23.19	56.00	-32.81	13.39	9.81	QP
10	4.88	7.55	46.00	-38.45	-2.26	9.81	AV
11	11.013	30.22	60.00	-29.78	20.29	9.93	QP
12	11.013	14.31	50.00	-35.69	4.38	9.93	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : L 1
 Test Mode : Mode 17: Transmit (802.11ax-80MBW-Beamforming) (5610MHz)
 Test Date : 2020/08/13

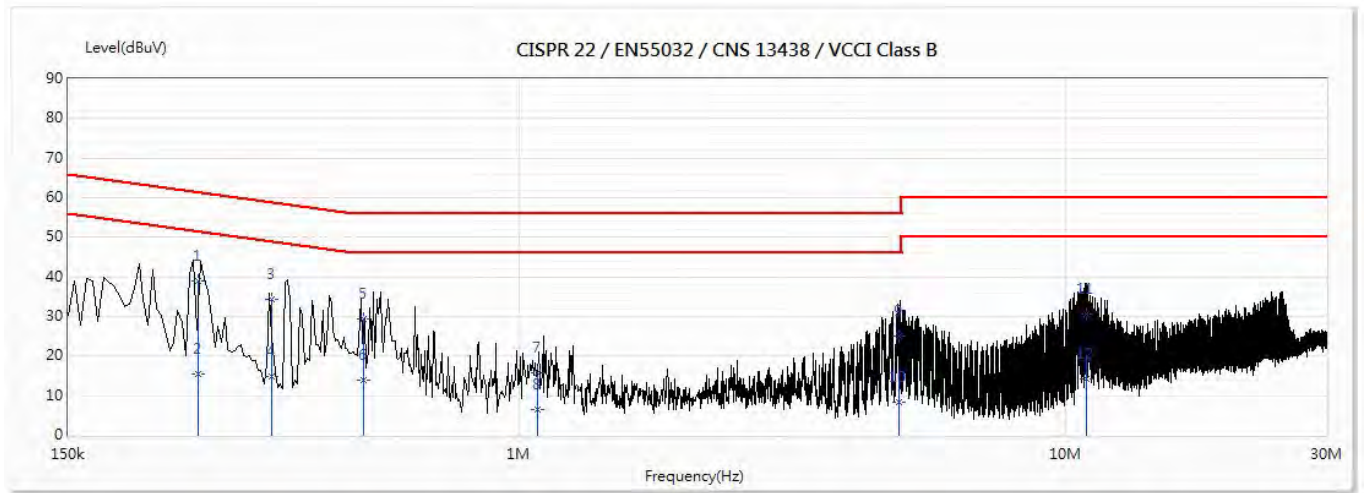


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.186	36.78	64.19	-27.41	27.13	9.65	QP
2	0.186	25.29	54.19	-28.91	15.63	9.65	AV
*3	0.215	41.40	63.00	-21.60	31.75	9.65	QP
4	0.215	21.80	53.00	-31.20	12.15	9.65	AV
5	0.324	32.79	59.59	-26.80	23.14	9.65	QP
6	0.324	15.25	49.59	-34.34	5.59	9.65	AV
7	0.471	33.30	56.50	-23.20	23.64	9.66	QP
8	0.471	17.08	46.50	-29.42	7.42	9.66	AV
9	4.924	22.87	56.00	-33.13	13.07	9.80	QP
10	4.924	6.96	46.00	-39.04	-2.83	9.80	AV
11	10.861	34.64	60.00	-25.36	24.74	9.90	QP
12	10.861	18.10	50.00	-31.90	8.20	9.90	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : LV55
 Test Item : Conducted Emission Test
 Power Line : N
 Test Mode : Mode 17: Transmit (802.11ax-80MBW-Beamforming) (5610MHz)
 Test Date : 2020/08/13



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.259	39.03	61.45	-22.42	29.36	9.67	QP
2	0.259	15.54	51.45	-35.91	5.87	9.67	AV
3	0.354	34.26	58.87	-24.61	24.60	9.67	QP
4	0.354	14.89	48.87	-33.98	5.22	9.67	AV
5	0.519	29.37	56.00	-26.63	19.70	9.67	QP
6	0.519	13.80	46.00	-32.20	4.13	9.67	AV
7	1.084	15.63	56.00	-40.37	5.94	9.69	QP
8	1.084	6.50	46.00	-39.50	-3.19	9.69	AV
9	4.967	25.04	56.00	-30.96	15.23	9.81	QP
10	4.967	8.41	46.00	-37.59	-1.40	9.81	AV
11	10.898	30.57	60.00	-29.43	20.65	9.92	QP
12	10.898	14.18	50.00	-35.82	4.26	9.92	AV

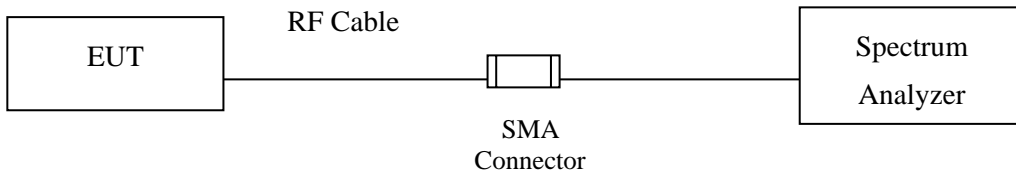
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ * “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

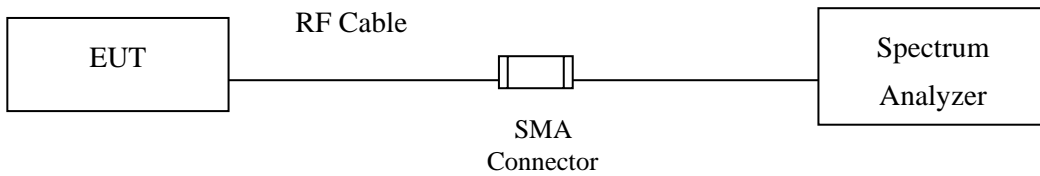
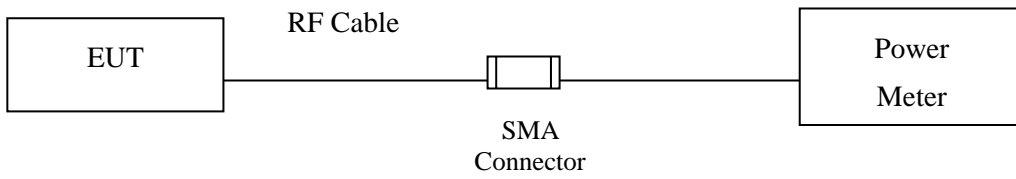
3. Maximun conducted output power

3.1. Test Setup

Occupied Bandwidth



Conduction Power Measurement



3.2. Limits

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W, provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, if transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, if transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, if transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater than the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter) and KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

3.4. Test Result of Maximum conducted output power

Product : LV55
 Test Item : Maximum conducted output power
 Test Mode : Mode 1: Transmit (802.11a-CDD)
 Test Date : 2020/08/13

Chain A

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
52	5260	17.51	--	--	--	--	--	--	--
60	5300	17.54	17.48	17.44	17.4	17.35	17.29	17.23	17.18
64	5320	17.32	--	--	--	--	--	--	--
100	5500	17.46	--	--	--	--	--	--	--
116	5580	17.21	17.17	17.12	17.06	17.01	16.96	16.93	16.89
140	5700	17.26	--	--	--	--	--	--	--

Chain B

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
52	5260	17.68	--	--	--	--	--	--	--
60	5300	17.63	17.56	17.5	17.46	17.39	17.35	17.31	17.26
64	5320	17.65	--	--	--	--	--	--	--
100	5500	17.61	--	--	--	--	--	--	--
116	5580	17.52	17.48	17.45	17.39	17.35	17.31	17.26	17.21
140	5700	17.53	--	--	--	--	--	--	--

Chain C

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
52	5260	17.77	--	--	--	--	--	--	--
60	5300	17.81	17.75	17.68	17.62	17.56	17.52	17.48	17.42
64	5320	17.51	--	--	--	--	--	--	--
100	5500	18.06	--	--	--	--	--	--	--
116	5580	17.98	17.91	17.88	17.84	17.81	17.74	17.7	17.66
140	5700	17.68	--	--	--	--	--	--	--

Chain D

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
52	5260	17.52	--	--	--	--	--	--	--
60	5300	17.55	17.5	17.45	17.38	17.35	17.29	17.25	17.19
64	5320	17.35	--	--	--	--	--	--	--
100	5500	17.42	--	--	--	--	--	--	--
116	5580	17.63	17.57	17.51	17.48	17.44	17.38	17.31	17.26
140	5700	17.33	--	--	--	--	--	--	--

Maximum conducted output power Measurement:

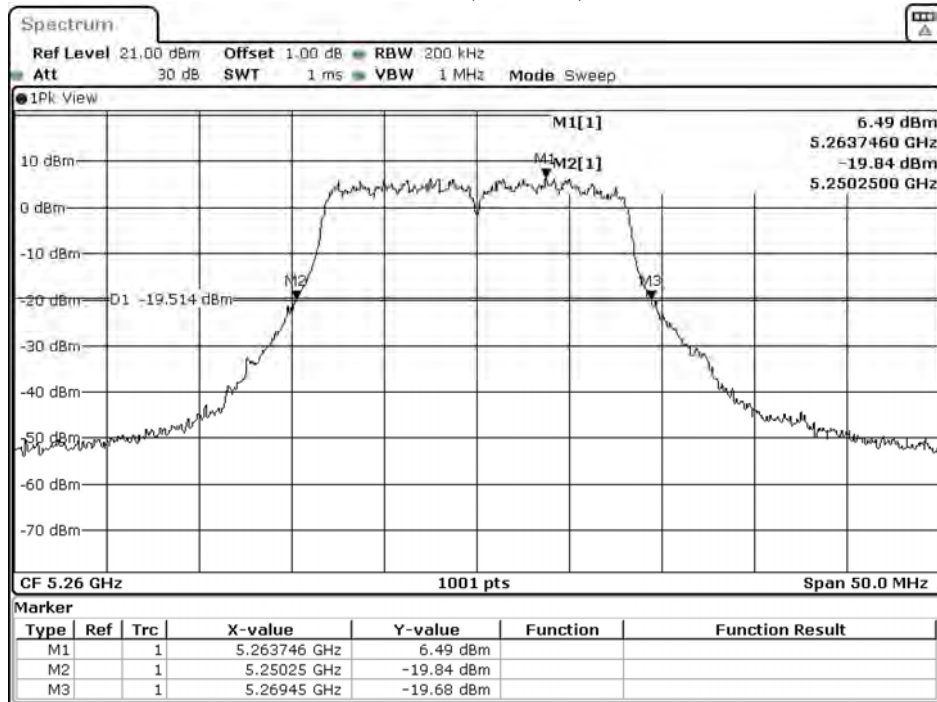
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
52	5260	18.950	17.51	17.68	17.77	17.52	23.64	24	23.78	Pass
60	5300	18.850	17.54	17.63	17.81	17.55	23.65	24	23.75	Pass
64	5320	18.900	17.32	17.65	17.51	17.35	23.48	24	23.76	Pass
100	5500	18.950	17.46	17.61	18.06	17.42	23.67	24	23.78	Pass
116	5580	18.700	17.21	17.52	17.98	17.63	23.61	24	23.72	Pass
140	5700	18.850	17.26	17.53	17.68	17.33	23.47	24	23.75	Pass

Note:

- Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
- 26dB Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

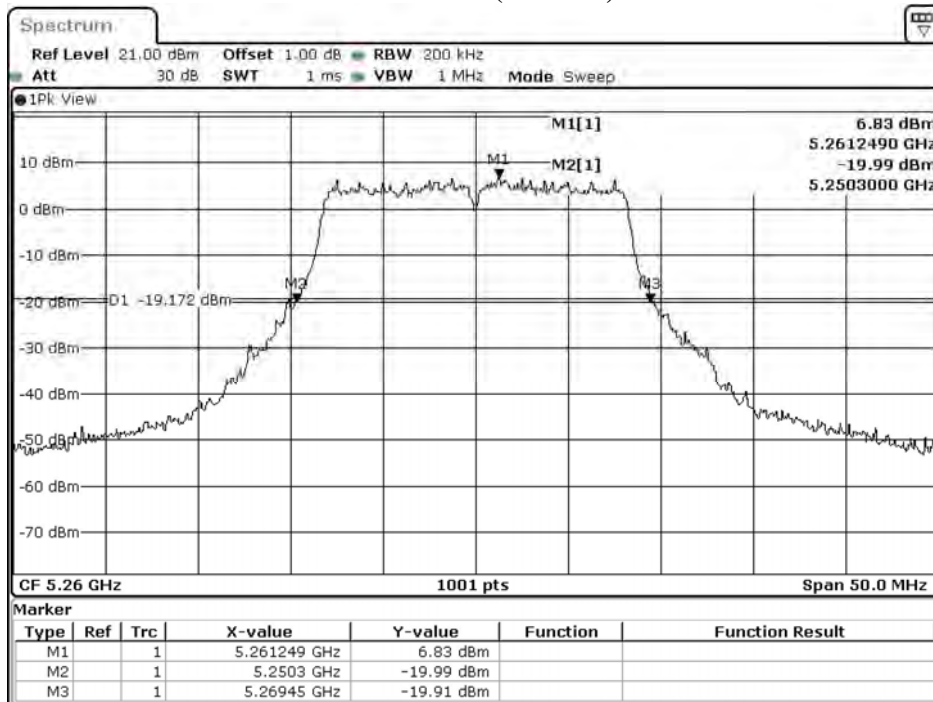
26dB Occupied Bandwidth:

Channel 52: (Chain A)



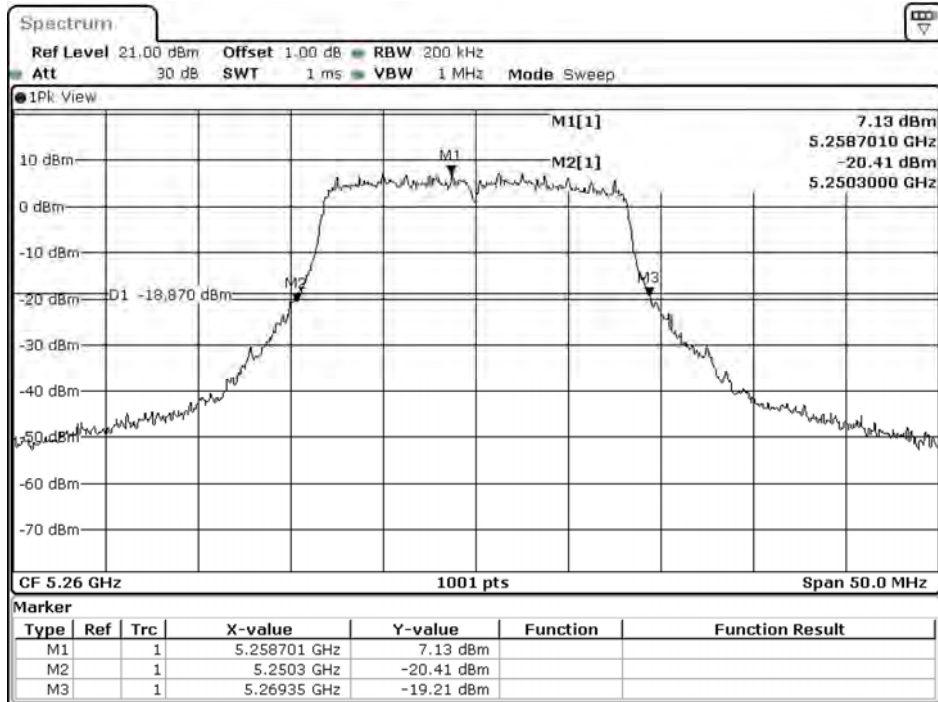
Date: 29.JUL.2020 04:03:23

Channel 52: (Chain B)



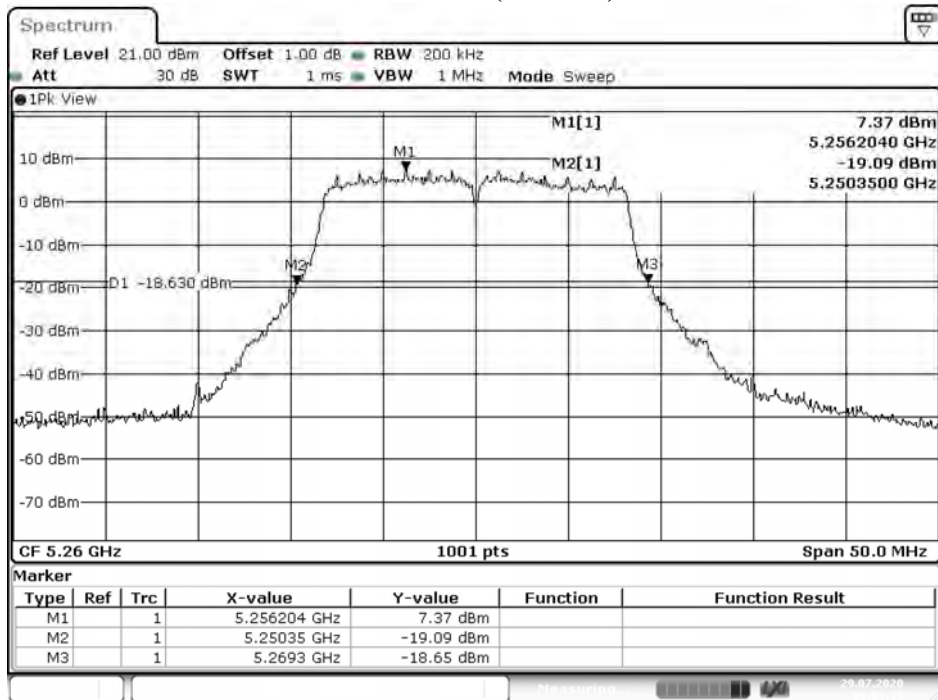
Date: 28.JUL.2020 16:05:33

Channel 52: (Chain C)



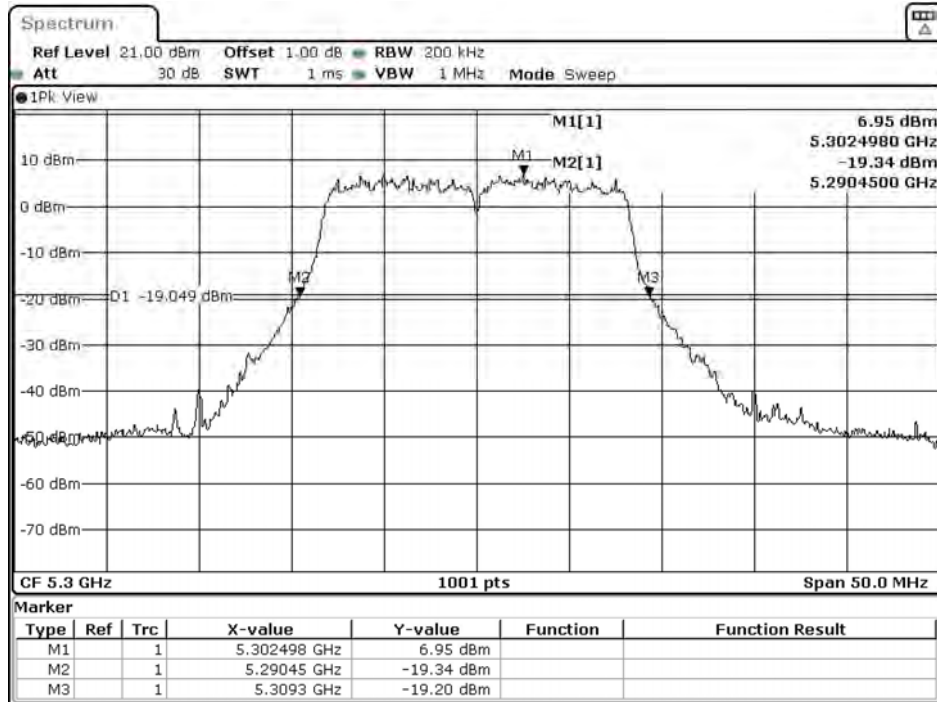
Date: 29.JUL.2020 00:00:11

Channel 52: (Chain D)



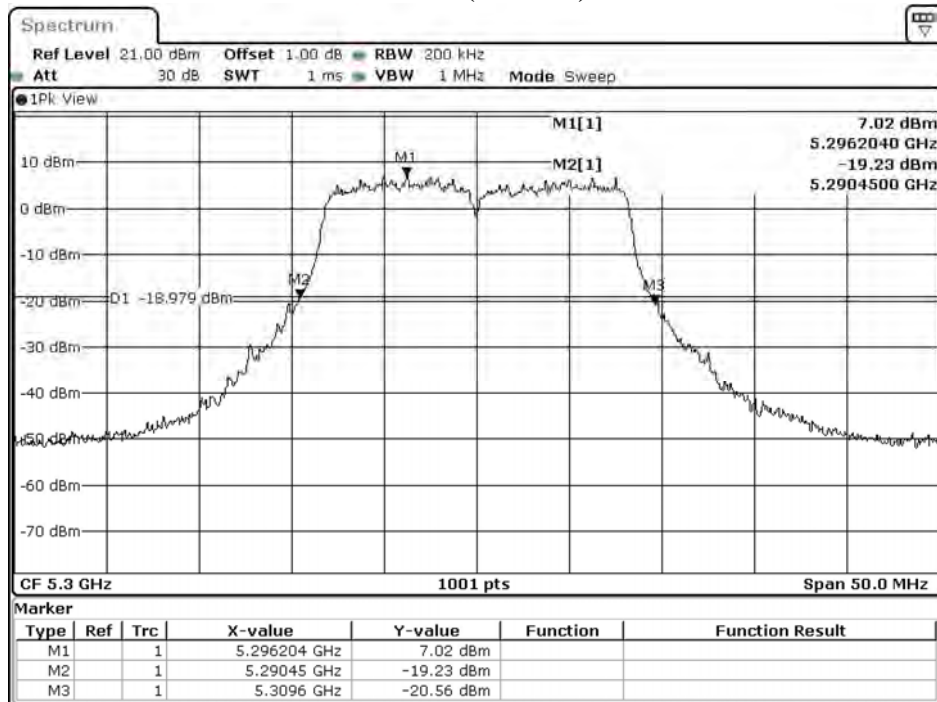
Date: 29.JUL.2020 00:03:15

Channel 60: (Chain A)



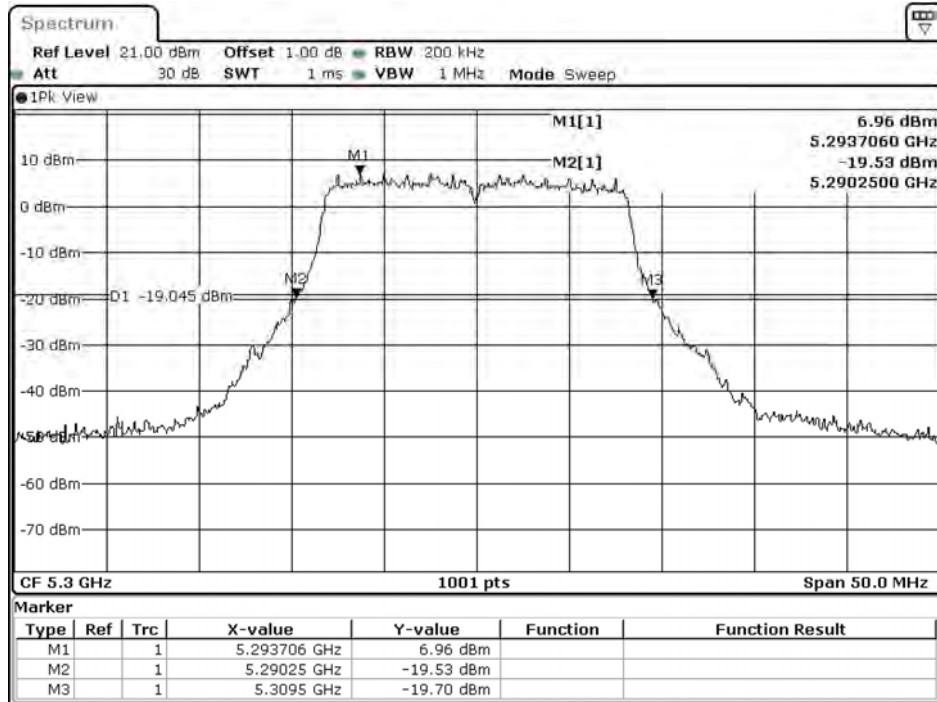
Date: 29.JUL.2020 04:06:52

Channel 60: (Chain B)



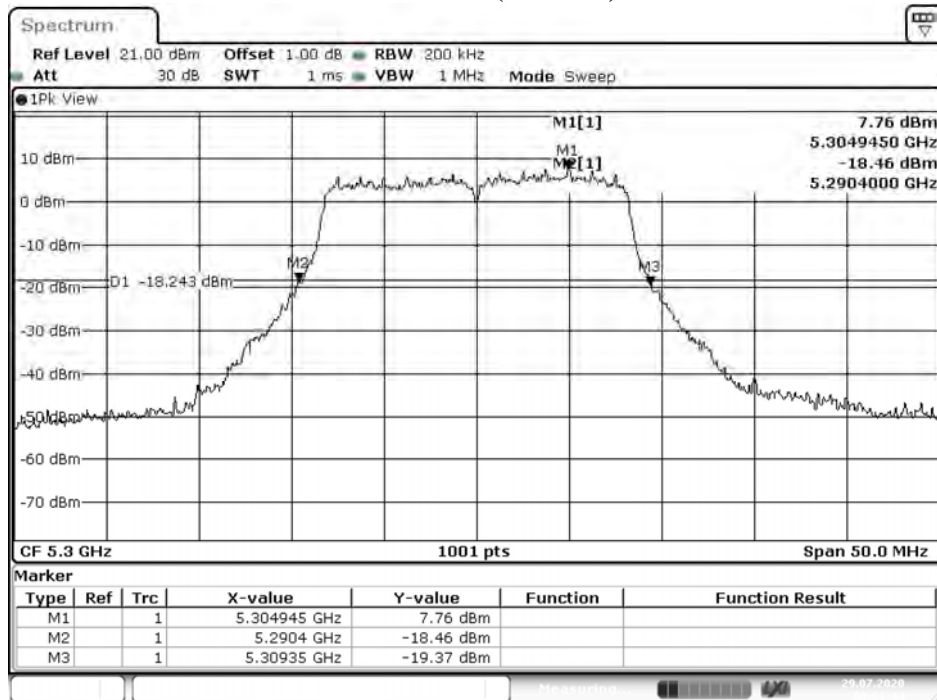
Date: 28.JUL.2020 16:09:03

Channel 60: (Chain C)



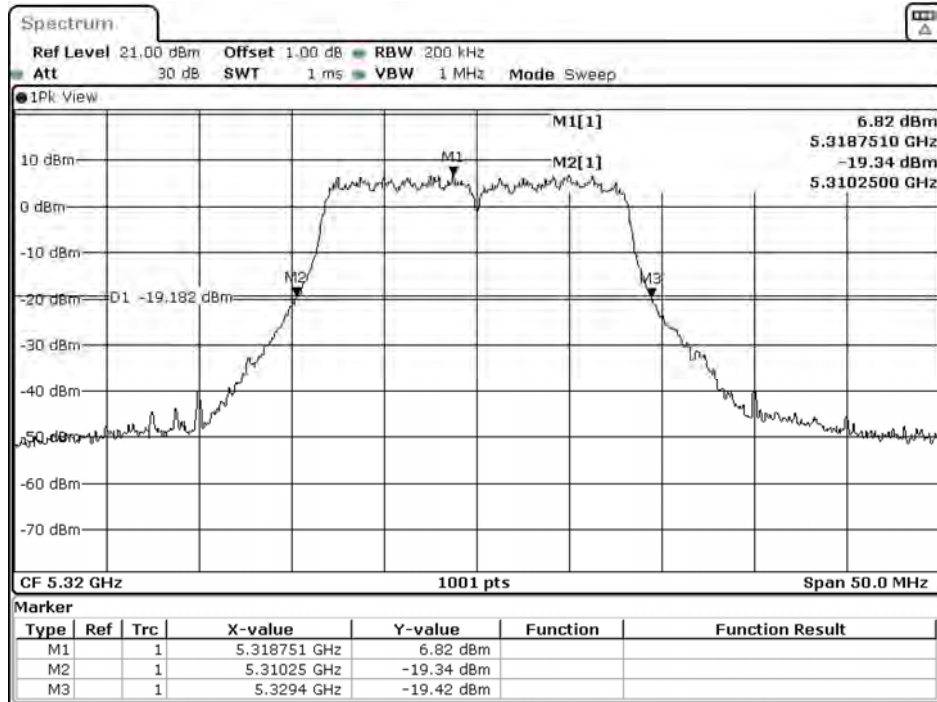
Date: 29 JUL 2020 00:03:41

Channel 60: (Chain D)



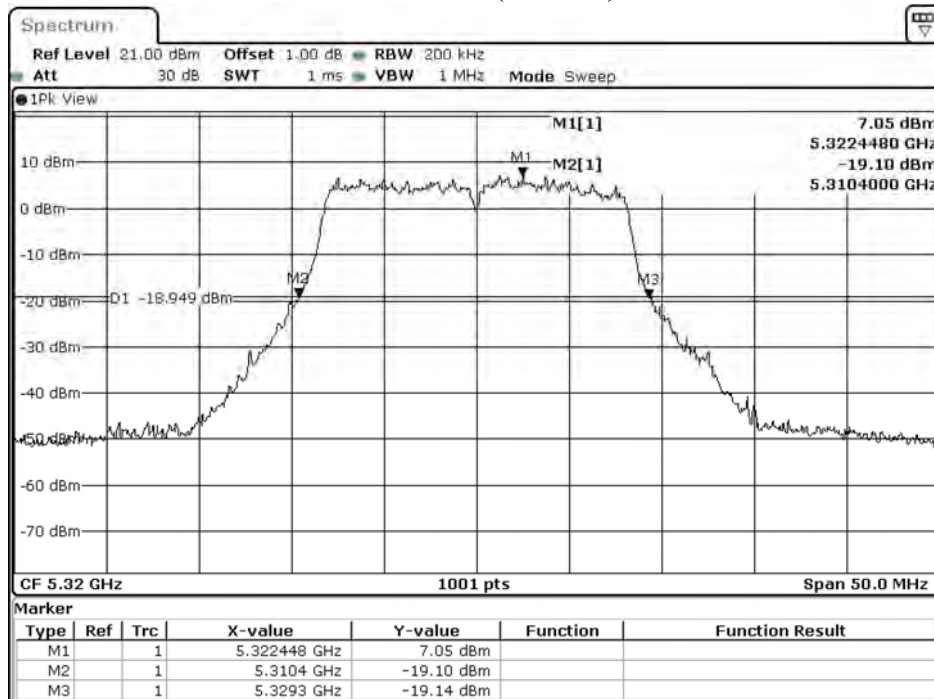
Date: 29 JUL 2020 00:06:45

Channel 64: (Chain A)



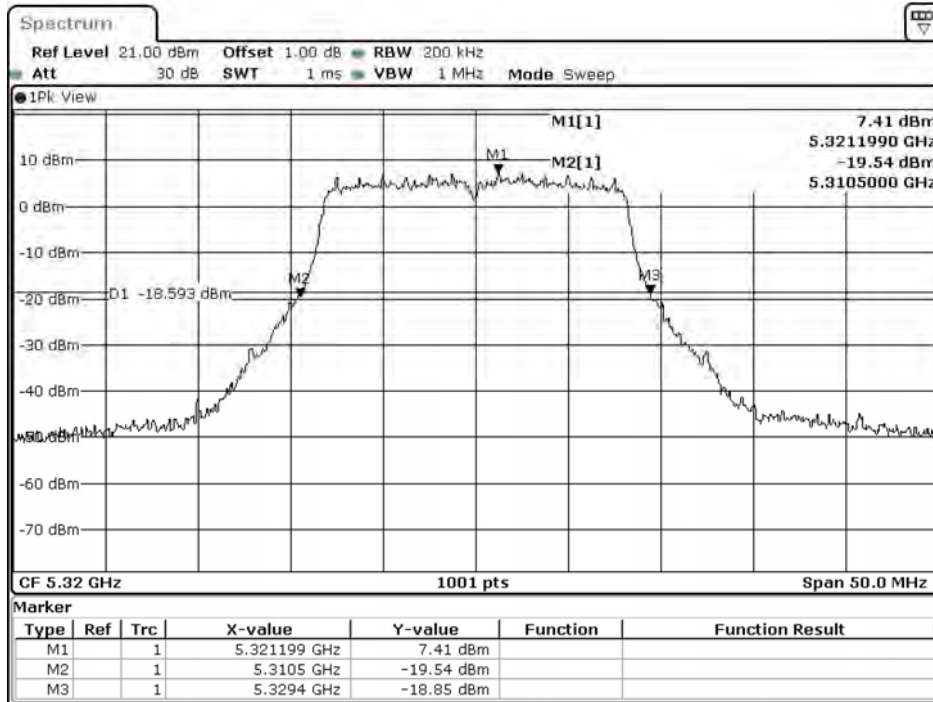
Date: 29 JUL 2020 04:09:14

Channel 64: (Chain B)



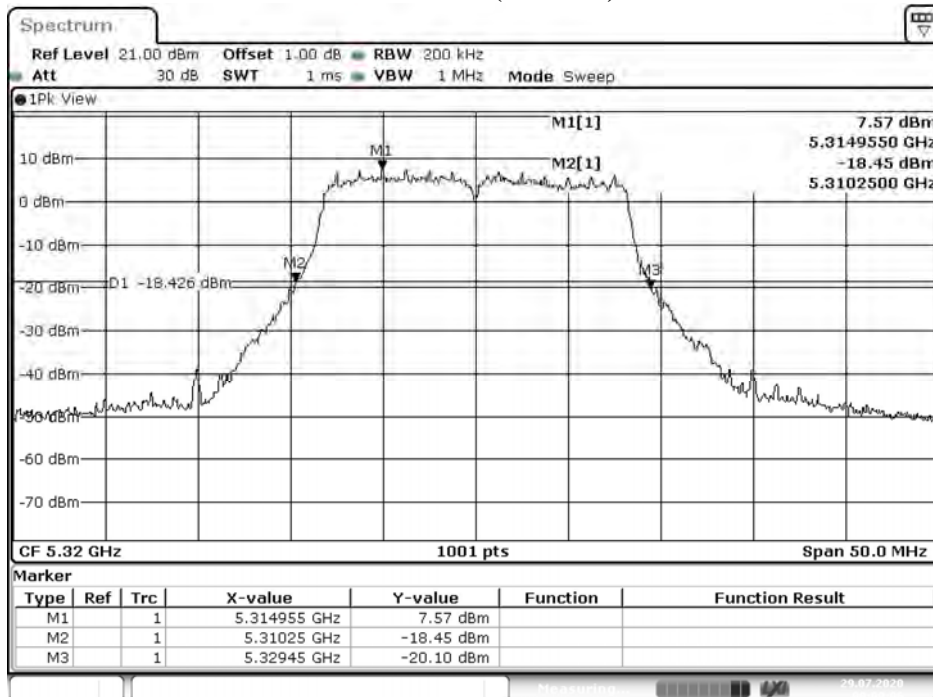
Date: 28 JUL 2020 16:11:24

Channel 64: (Chain C)



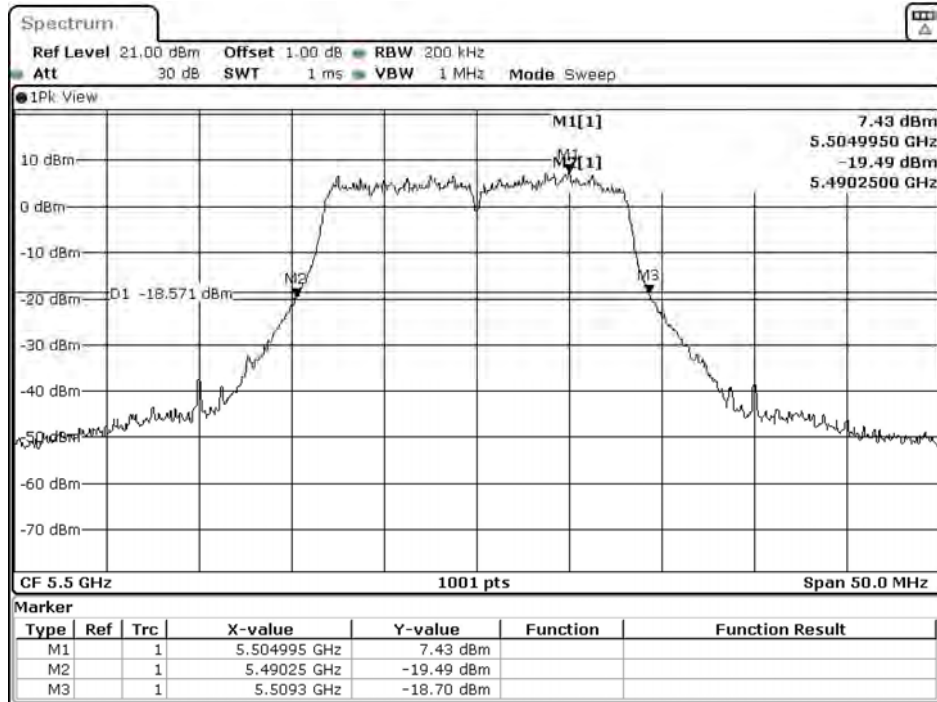
Date: 29.JUL.2020 00:06:03

Channel 64: (Chain D)



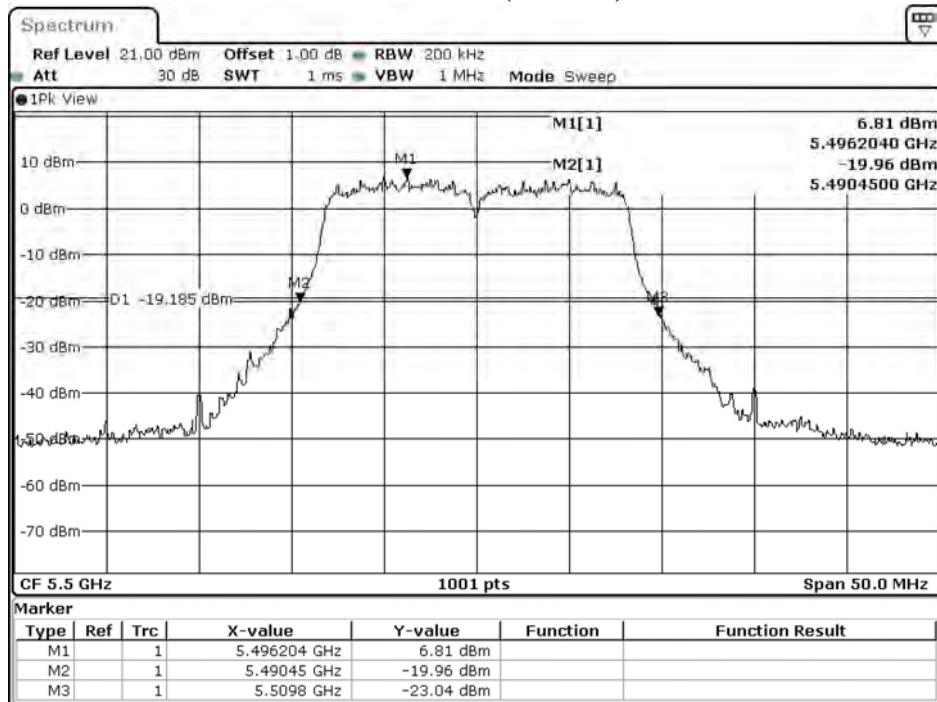
Date: 29.JUL.2020 00:09:06

Channel 100: (Chain A)



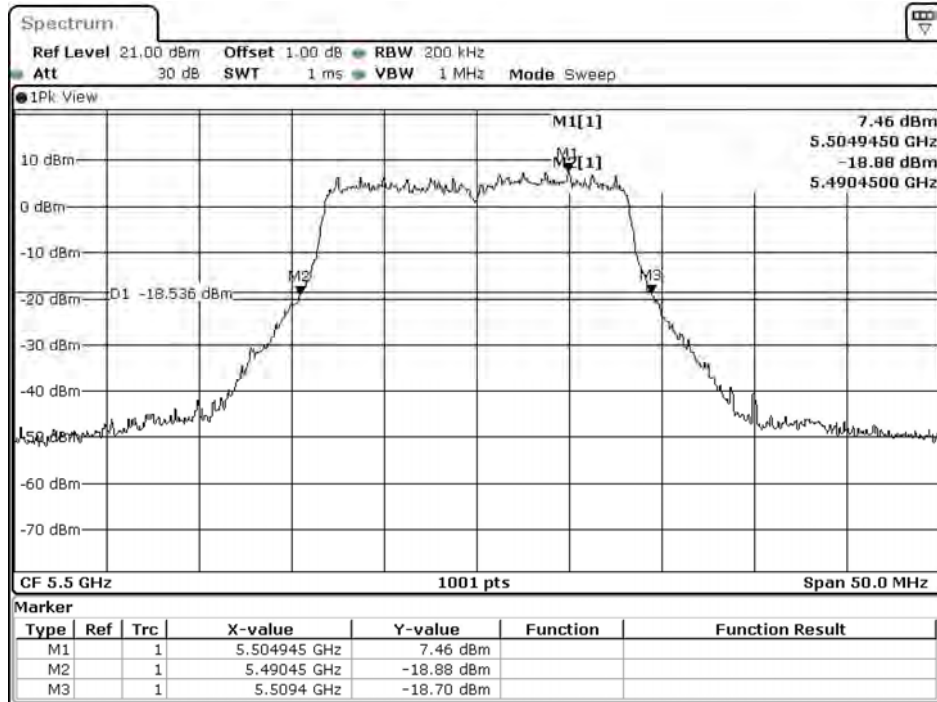
Date: 29.JUL.2020 04:11:25

Channel 100: (Chain B)



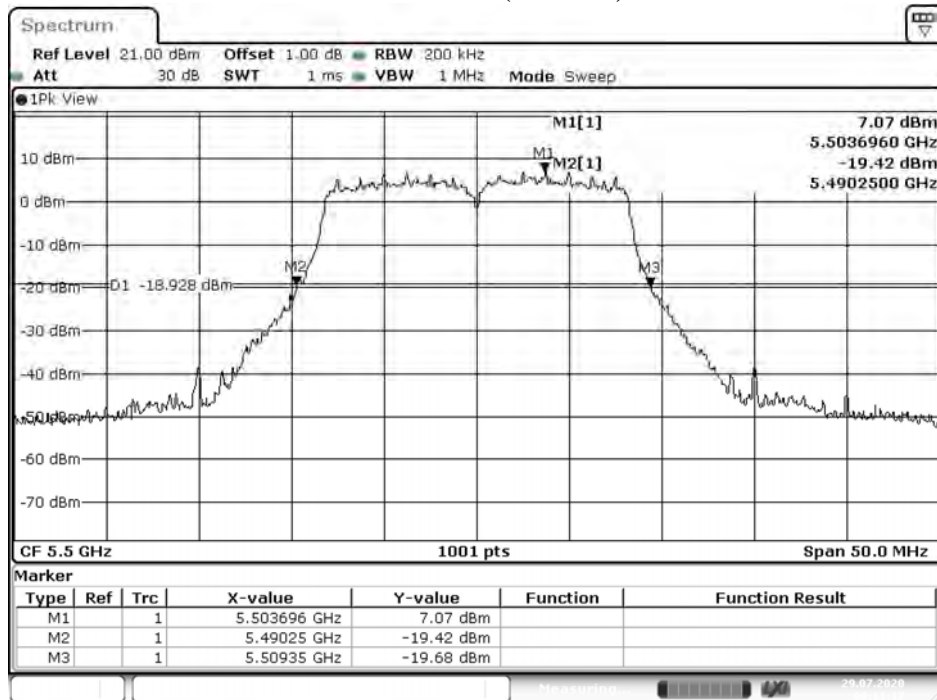
Date: 28.JUL.2020 16:13:35

Channel 100: (Chain C)



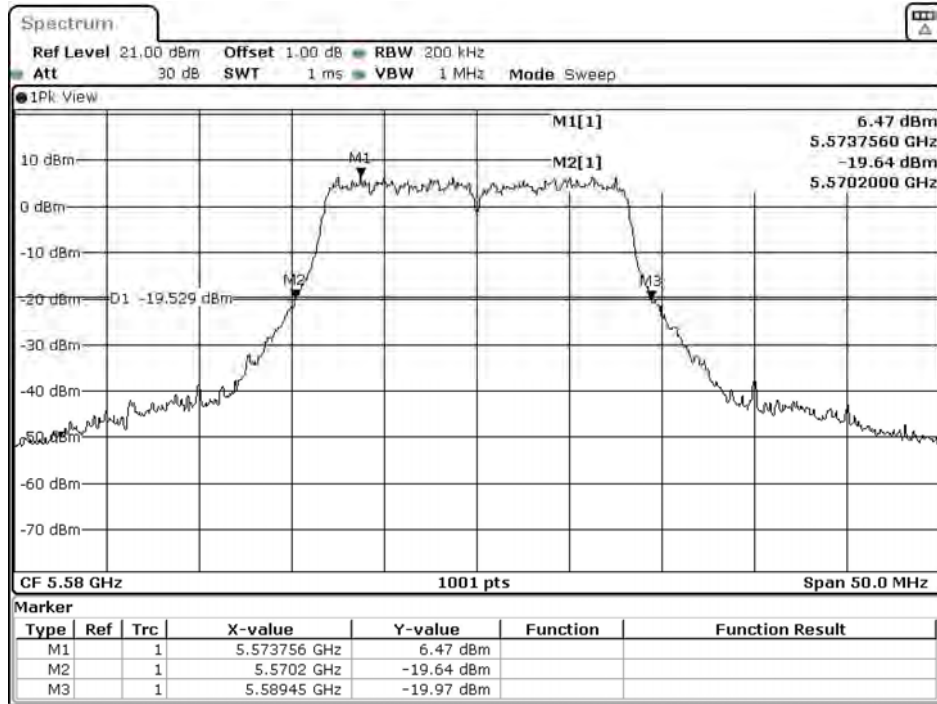
Date: 29 JUL 2020 00:08:14

Channel 100: (Chain D)



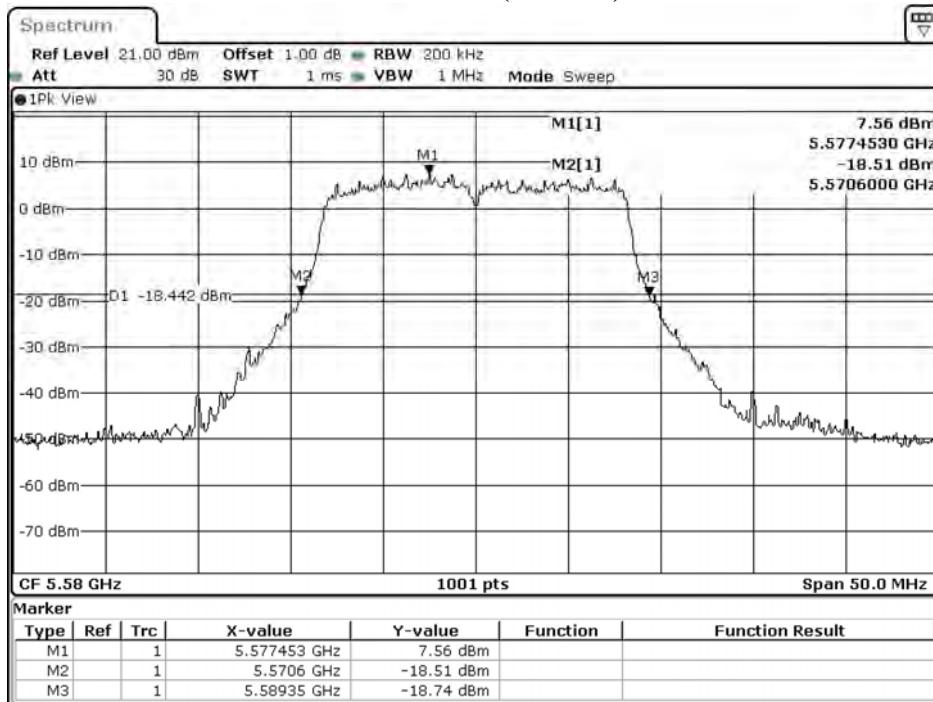
Date: 29 JUL 2020 00:11:17

Channel 116: (Chain A)



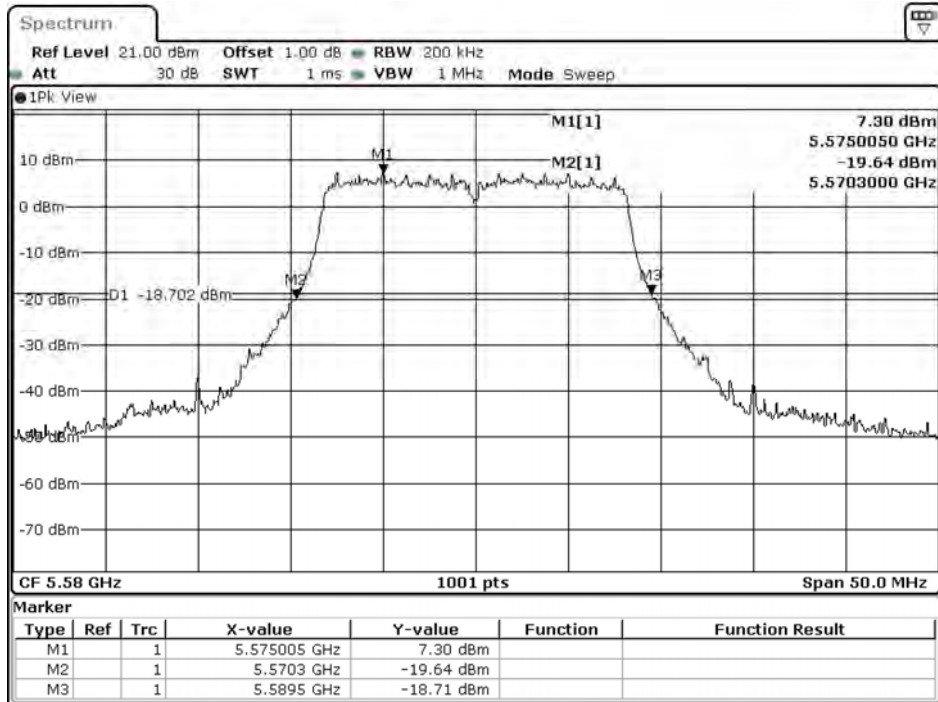
Date: 29 JUL 2020 04:13:49

Channel 116: (Chain B)



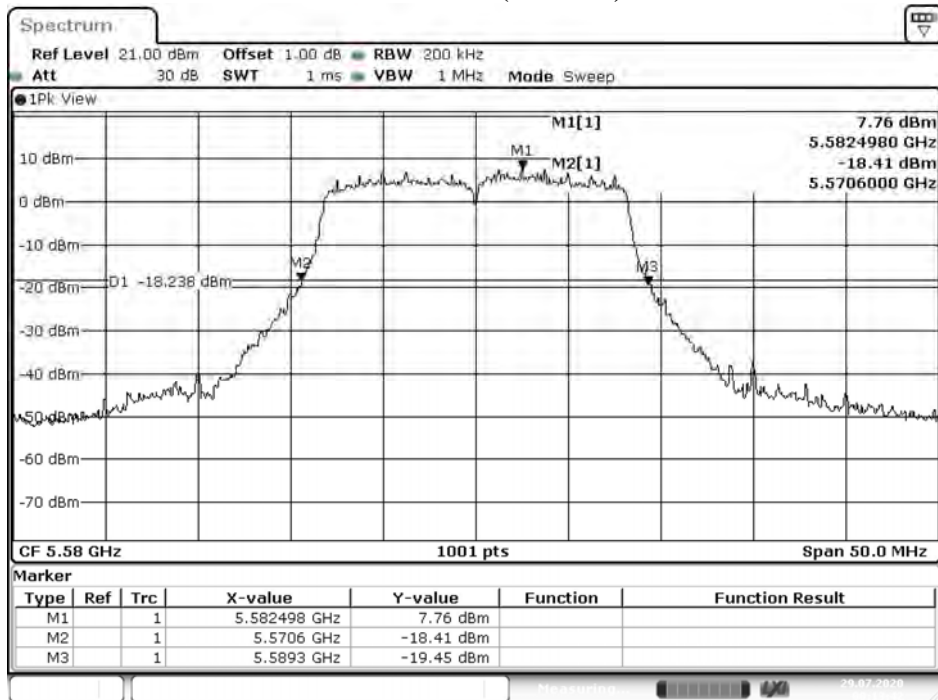
Date: 28 JUL 2020 16:15:59

Channel 116: (Chain C)



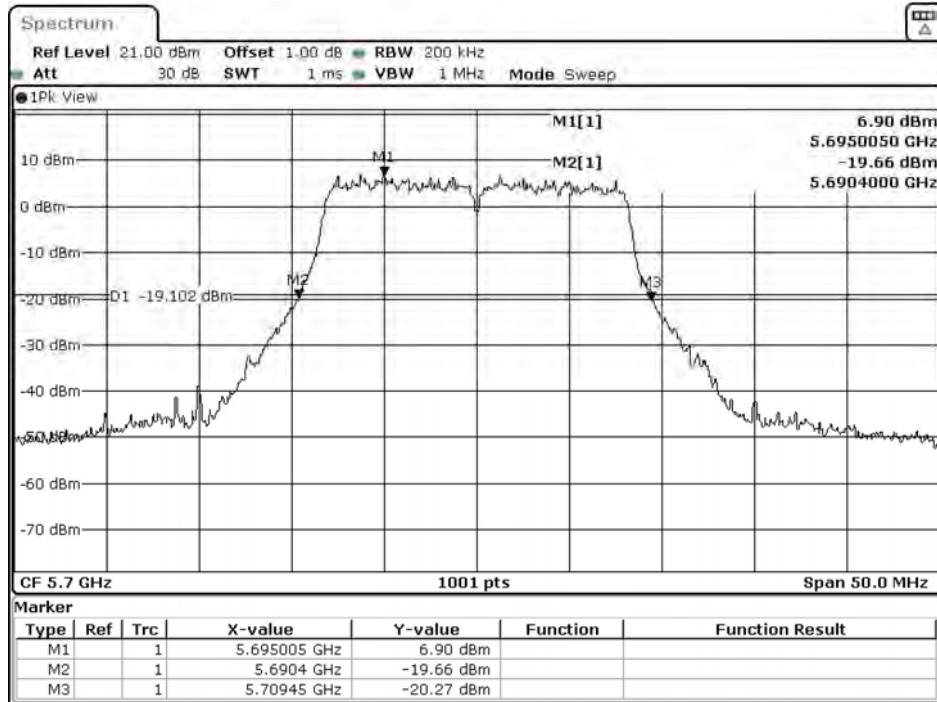
Date: 29.JUL.2020 00:10:38

Channel 116: (Chain D)



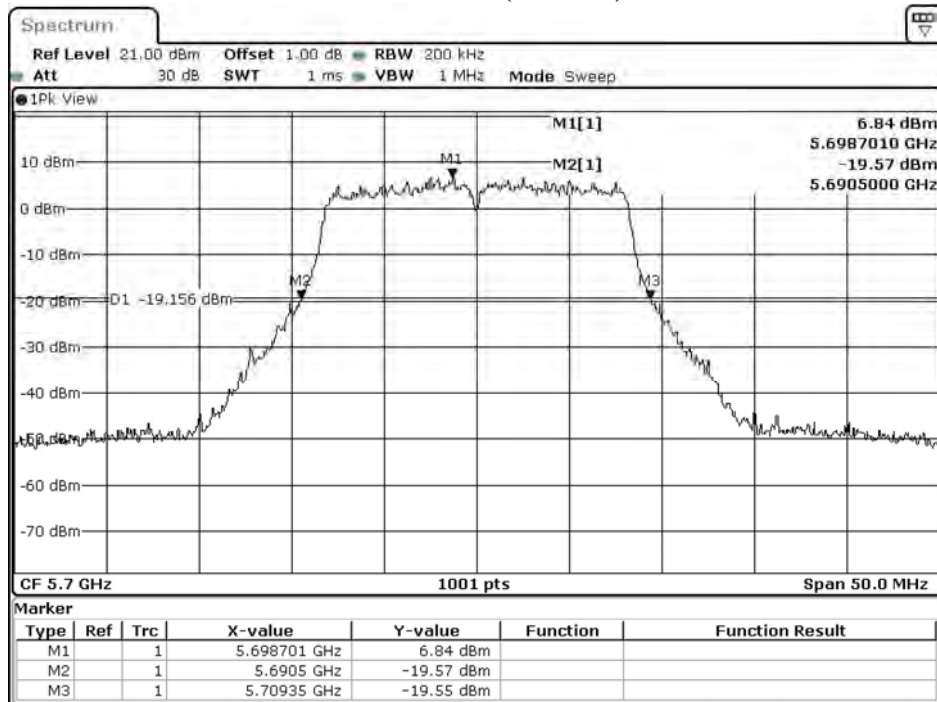
Date: 29.JUL.2020 00:13:42

Channel 140: (Chain A)



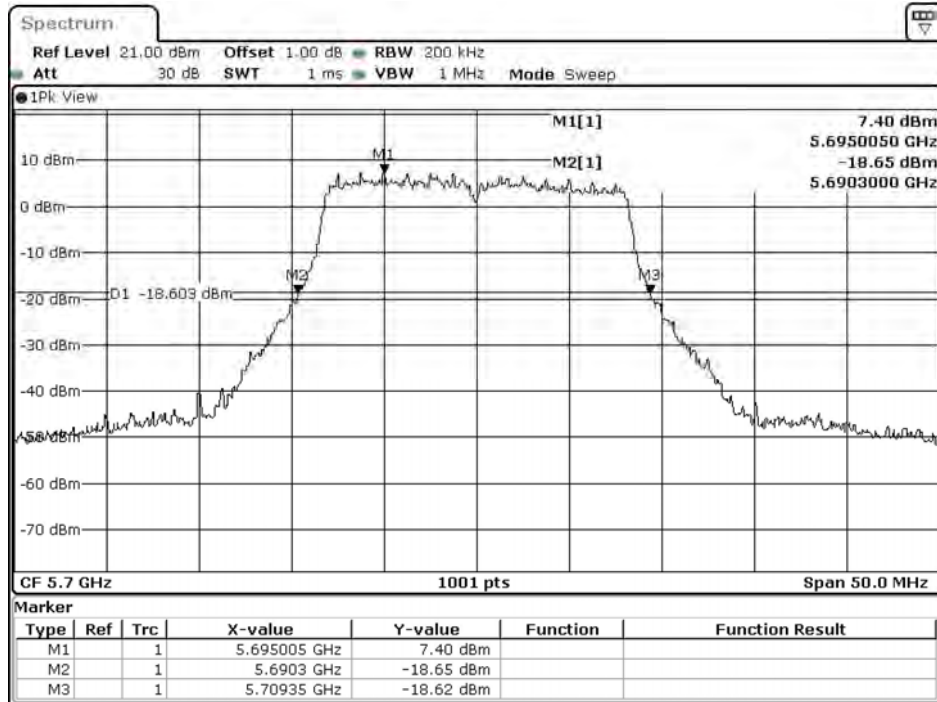
Date: 29.JUL.2020 04:17:00

Channel 140: (Chain B)



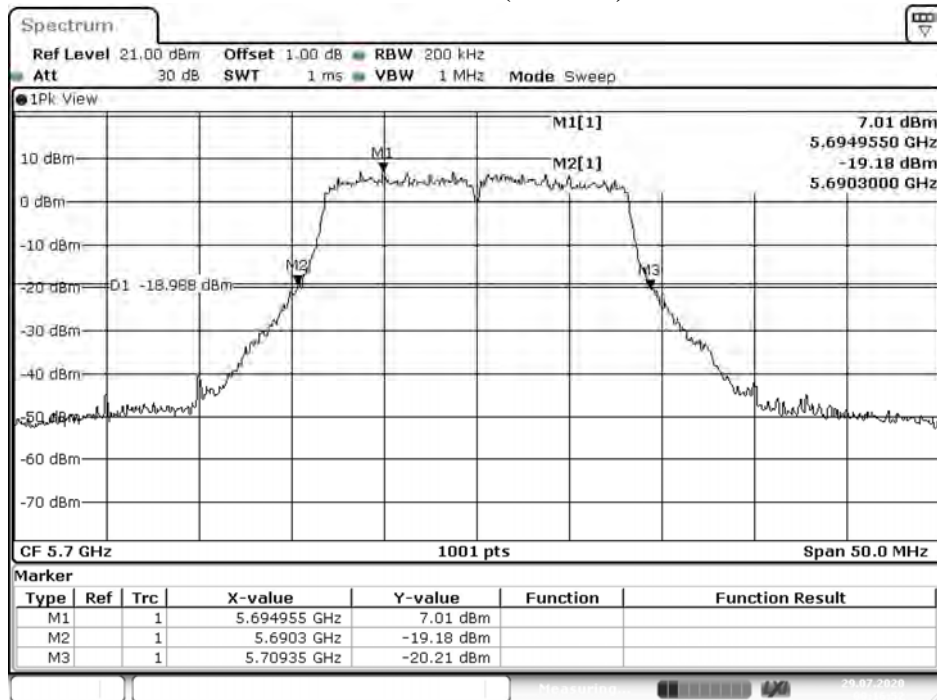
Date: 28.JUL.2020 16:19:10

Channel 140: (Chain C)



Date: 29 JUL 2020 00:13:49

Channel 140: (Chain D)



Date: 29 JUL 2020 00:16:52

Product : LV55
 Test Item : Maximum conducted output power
 Test Mode : Mode 2: Transmit (802.11n-20MBW-CDD)
 Test Date : 2020/08/13

Chain A

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
52	5260	17.52	--	--	--	--	--	--	--
60	5300	17.71	17.65	17.58	17.54	17.51	17.45	17.40	17.34
64	5320	17.53	--	--	--	--	--	--	--
100	5500	17.44	--	--	--	--	--	--	--
116	5580	17.29	17.23	17.17	17.1	17.06	17.03	16.99	16.94
140	5700	17.58	--	--	--	--	--	--	--

Chain B

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
52	5260	17.77	--	--	--	--	--	--	--
60	5300	17.83	17.76	17.69	17.64	17.58	17.51	17.48	17.42
64	5320	17.39	--	--	--	--	--	--	--
100	5500	17.73	--	--	--	--	--	--	--
116	5580	17.49	17.43	17.38	17.34	17.29	17.24	17.19	17.16
140	5700	17.75	--	--	--	--	--	--	--

Chain C

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
52	5260	17.88	--	--	--	--	--	--	--
60	5300	17.94	17.89	17.86	17.8	17.75	17.72	17.66	17.61
64	5320	17.65	--	--	--	--	--	--	--
100	5500	17.94	--	--	--	--	--	--	--
116	5580	17.63	17.56	17.5	17.45	17.41	17.36	17.32	17.26
140	5700	17.86	--	--	--	--	--	--	--

Chain D

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
52	5260	17.41	--	--	--	--	--	--	--
60	5300	17.55	17.52	17.47	17.43	17.39	17.36	17.3	17.24
64	5320	17.41	--	--	--	--	--	--	--
100	5500	17.39	--	--	--	--	--	--	--
116	5580	17.44	17.39	17.34	17.29	17.24	17.18	17.13	17.06
140	5700	17.53	--	--	--	--	--	--	--

Maximum conducted output power Measurement:

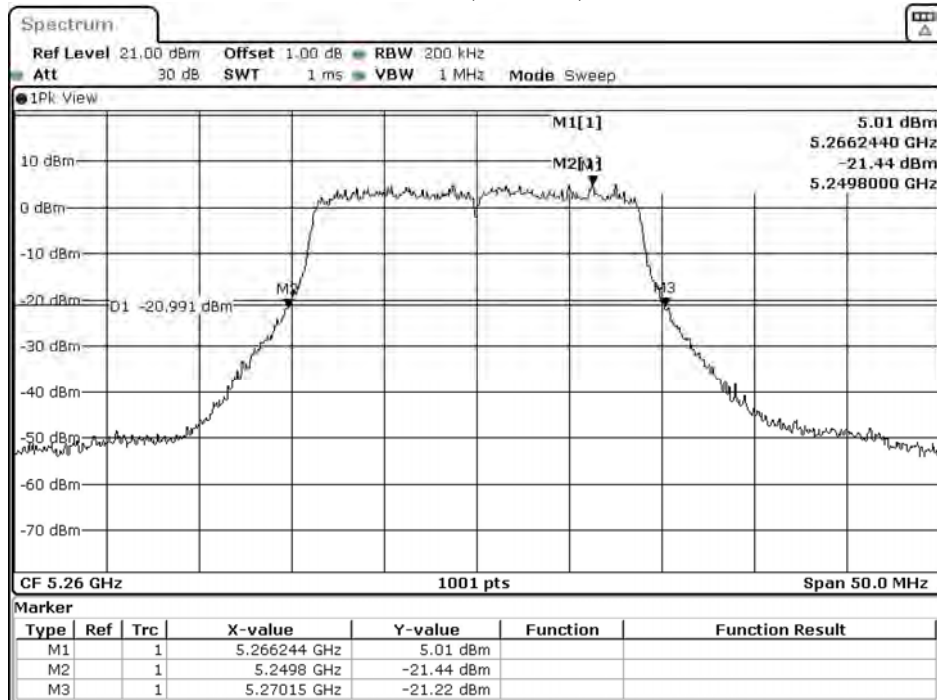
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
52	5260	20.150	17.52	17.77	17.88	17.41	23.67	24	24.04	Pass
60	5300	20.050	17.71	17.83	17.94	17.55	23.78	24	24.02	Pass
64	5320	20.050	17.53	17.39	17.65	17.41	23.52	24	24.02	Pass
100	5500	20.050	17.44	17.73	17.94	17.39	23.65	24	24.02	Pass
116	5580	20.150	17.29	17.49	17.63	17.44	23.48	24	24.04	Pass
140	5700	20.000	17.58	17.75	17.86	17.53	23.70	24	24.01	Pass

Note:

- Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
- 26dB Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

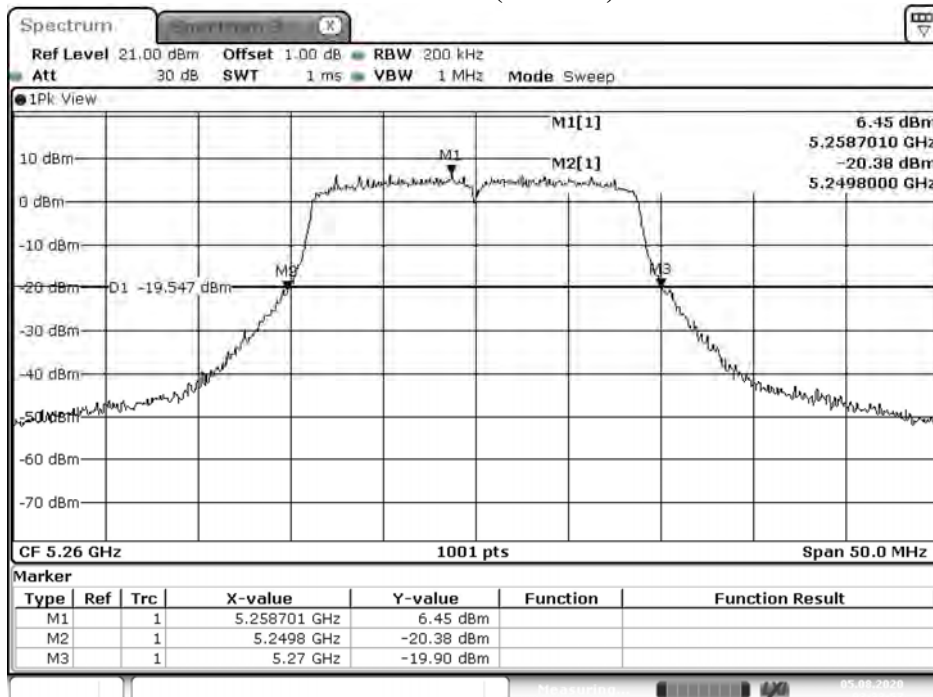
26dB Occupied Bandwidth:

Channel 52: (Chain A)



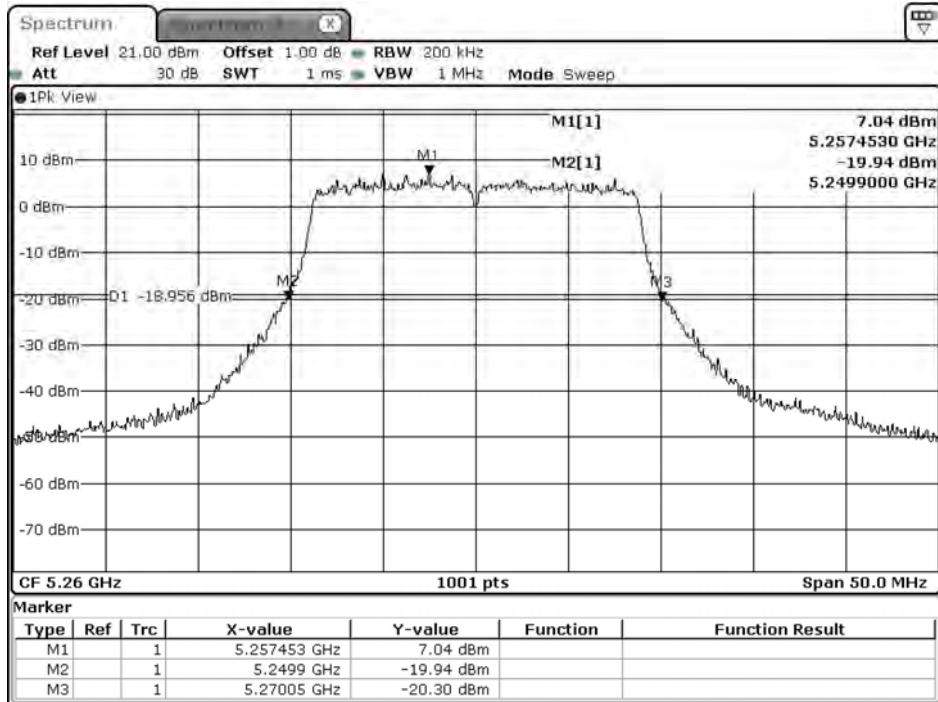
Date: 5.AUG.2020 07:34:10

Channel 52: (Chain B)



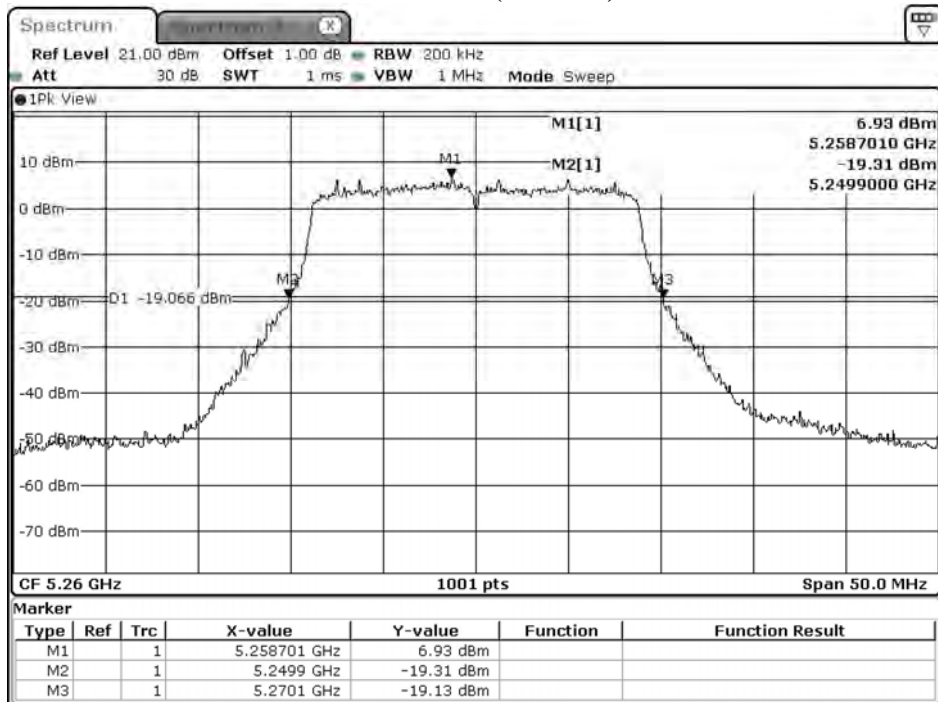
Date: 5.AUG.2020 03:33:57

Channel 52: (Chain C)



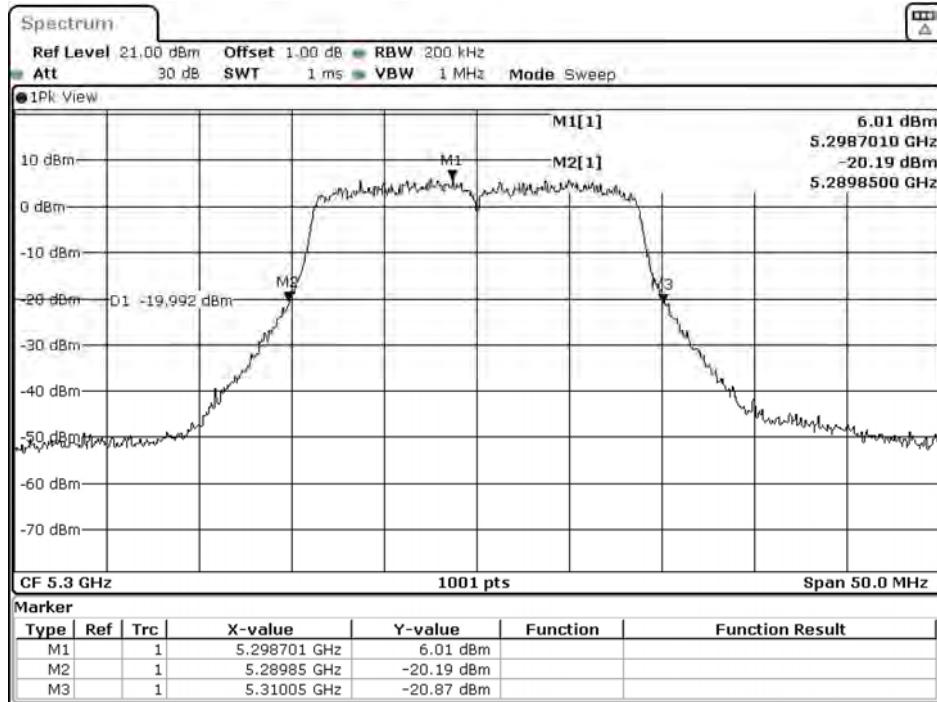
Date: 5.AUG.2020 03:30:58

Channel 52: (Chain D)



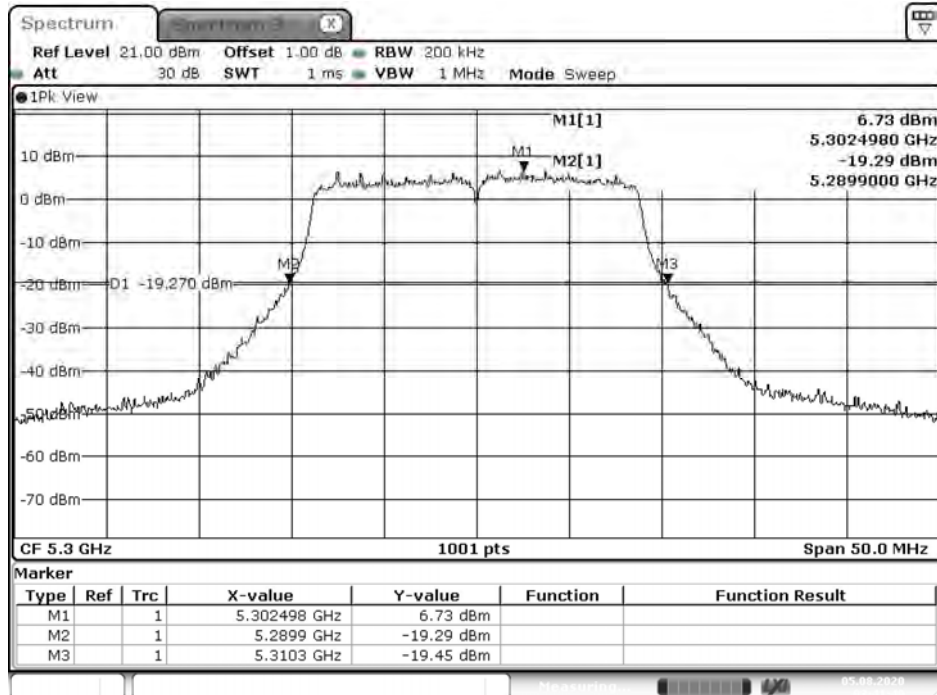
Date: 4.AUG.2020 19:36:25

Channel 60: (Chain A)



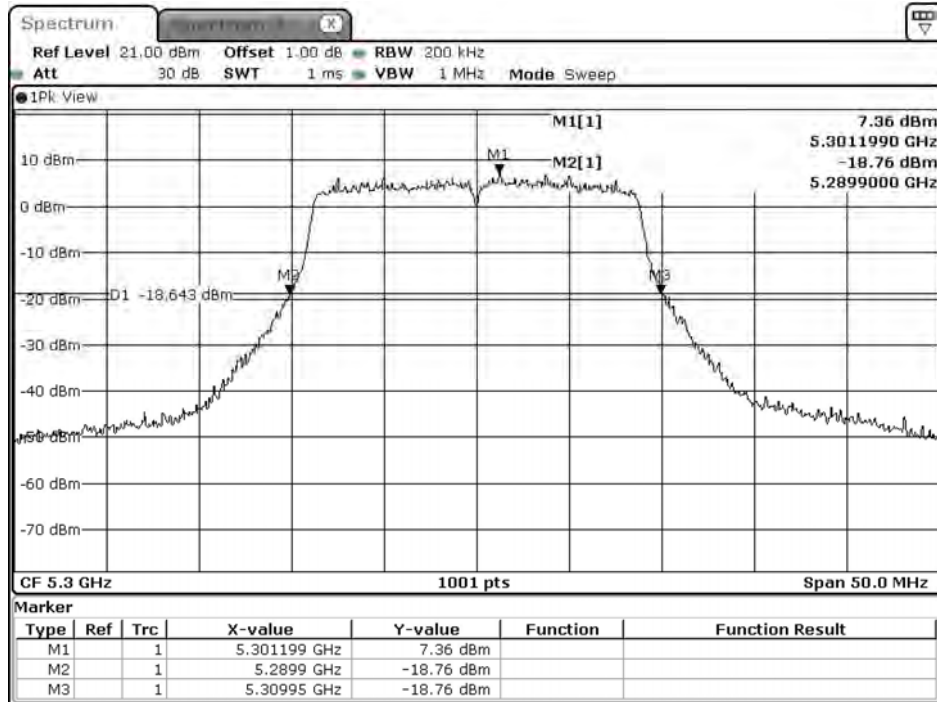
Date: 5.AUG.2020 07:42:01

Channel 60: (Chain B)



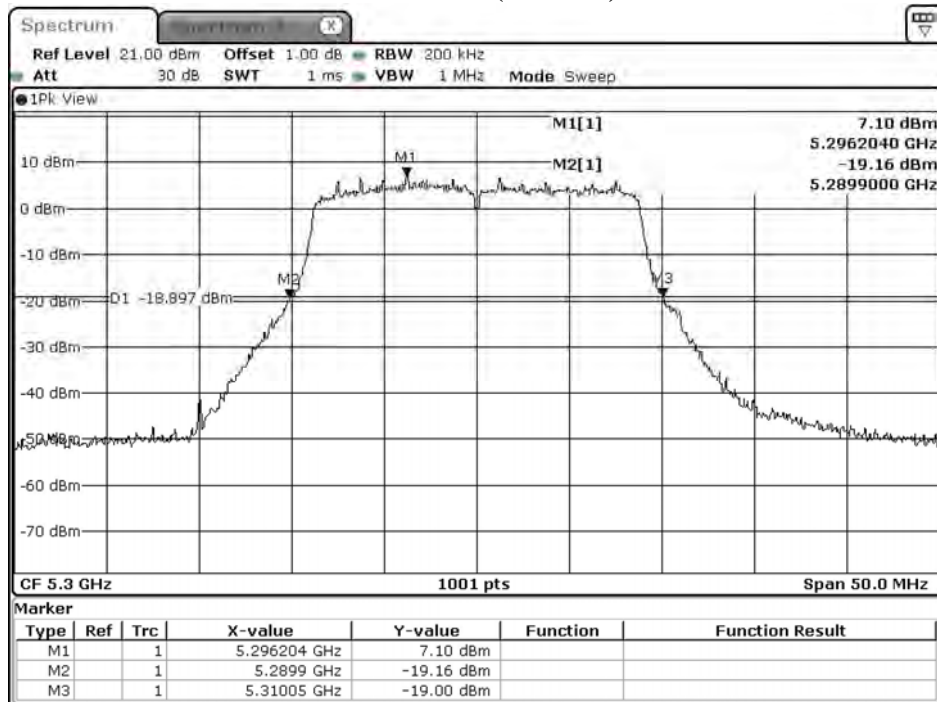
Date: 5.AUG.2020 03:41:49

Channel 60: (Chain C)



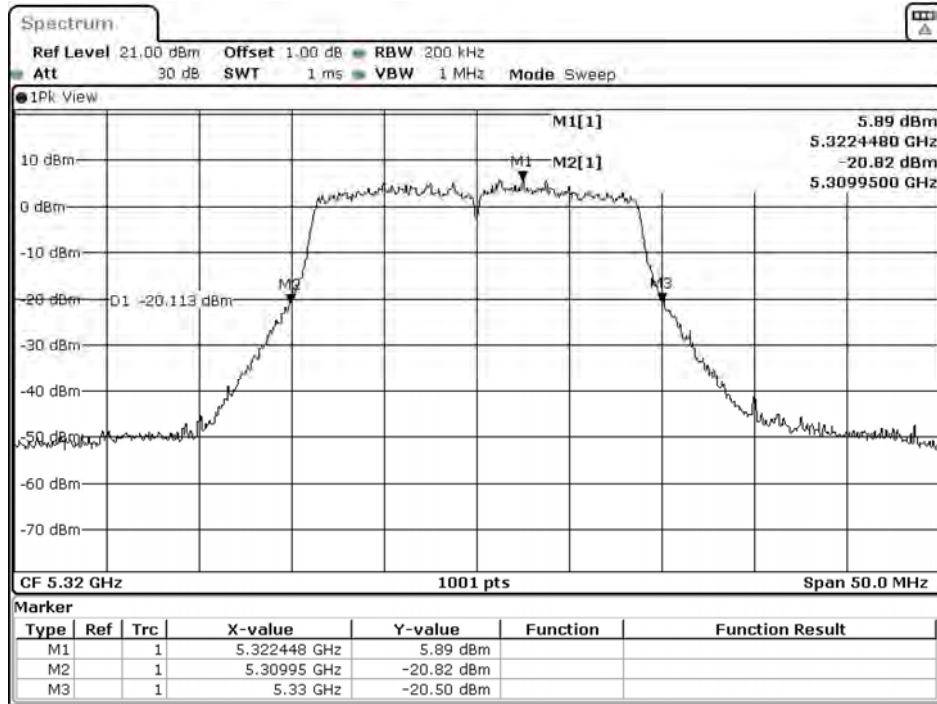
Date: 5.AUG.2020 03:38:50

Channel 60: (Chain D)



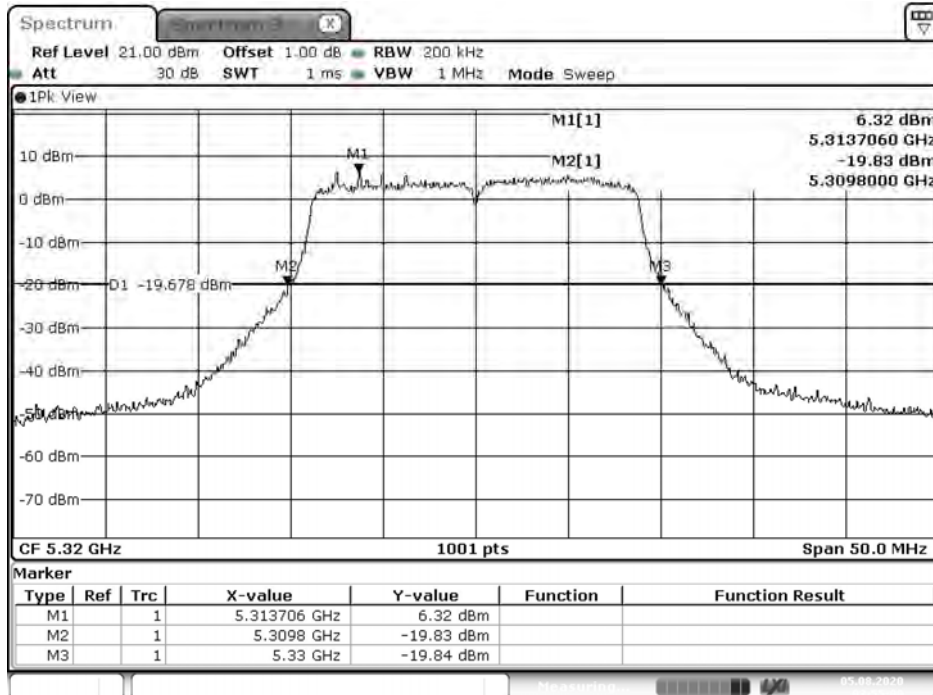
Date: 4.AUG.2020 19:44:16

Channel 64: (Chain A)



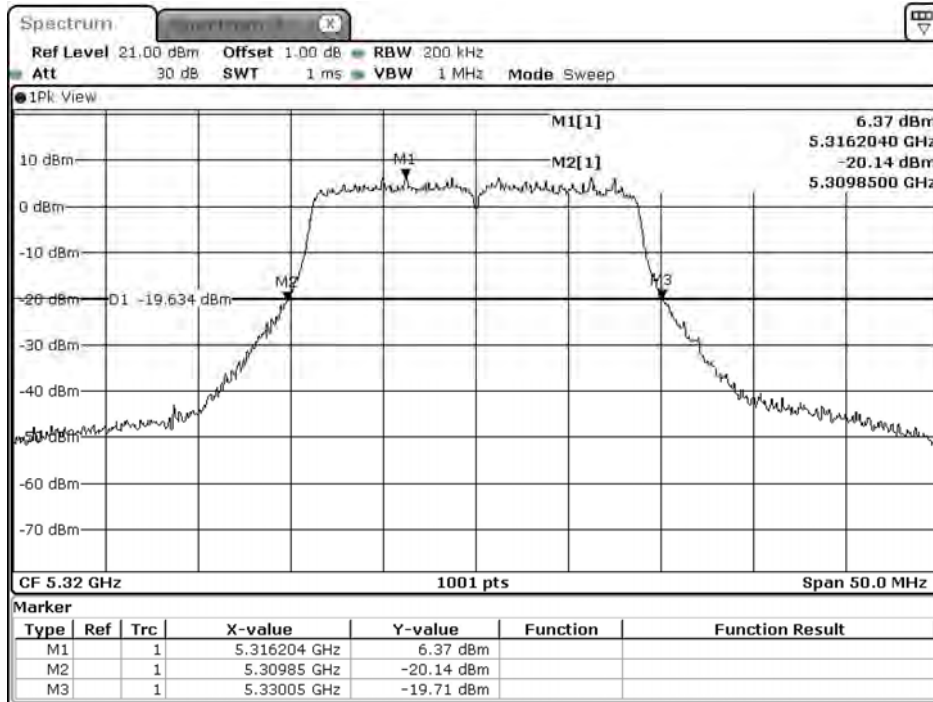
Date: 5.AUG.2020 07:54:57

Channel 64: (Chain B)



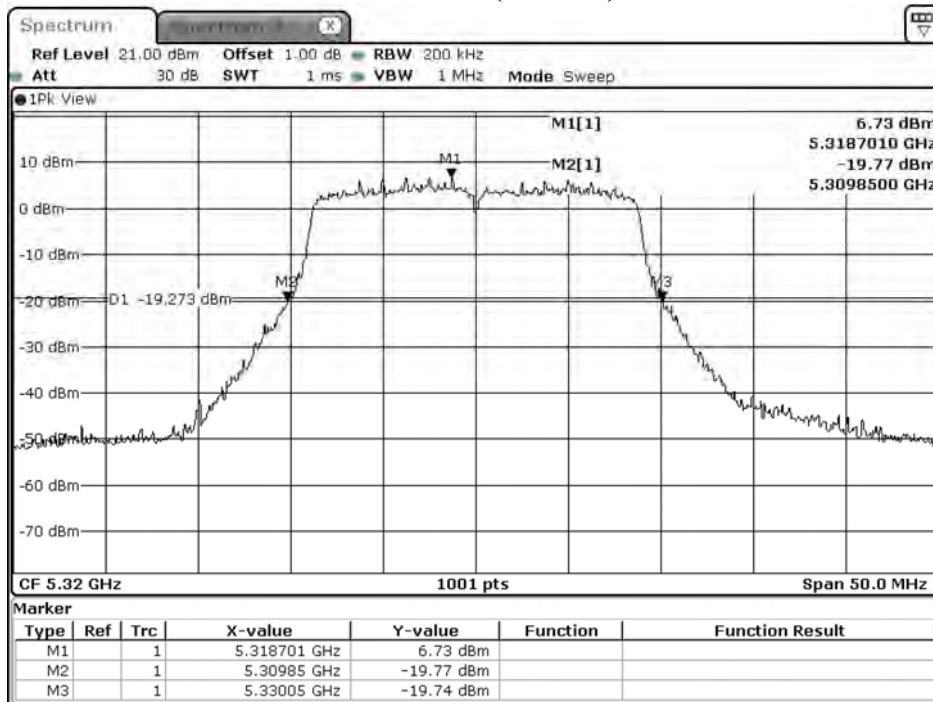
Date: 5.AUG.2020 03:55:01

Channel 64: (Chain C)



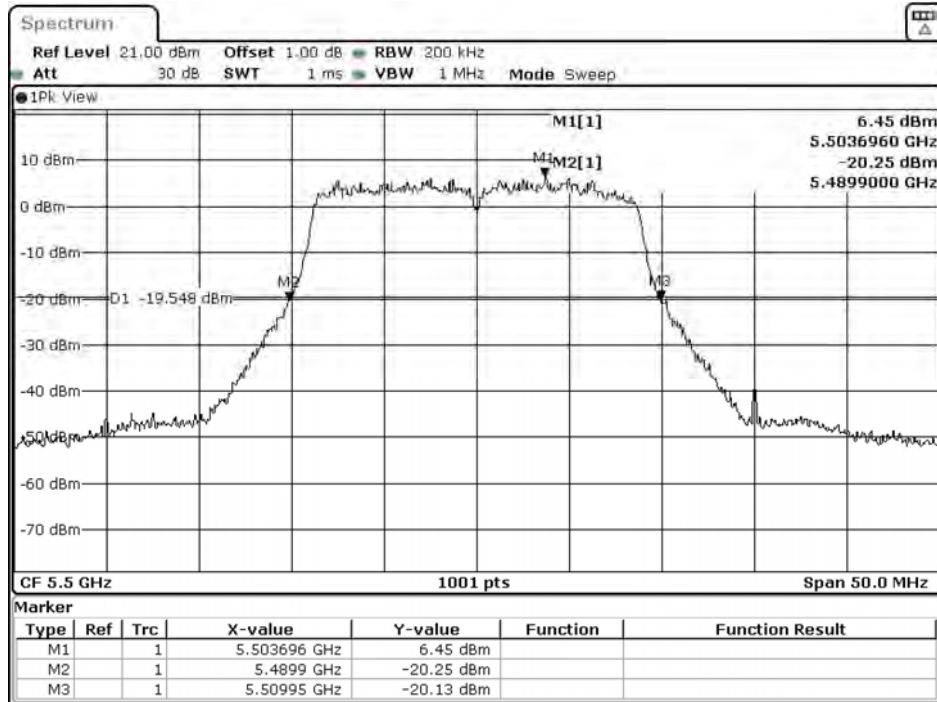
Date: 5.AUG.2020 03:51:45

Channel 64: (Chain D)



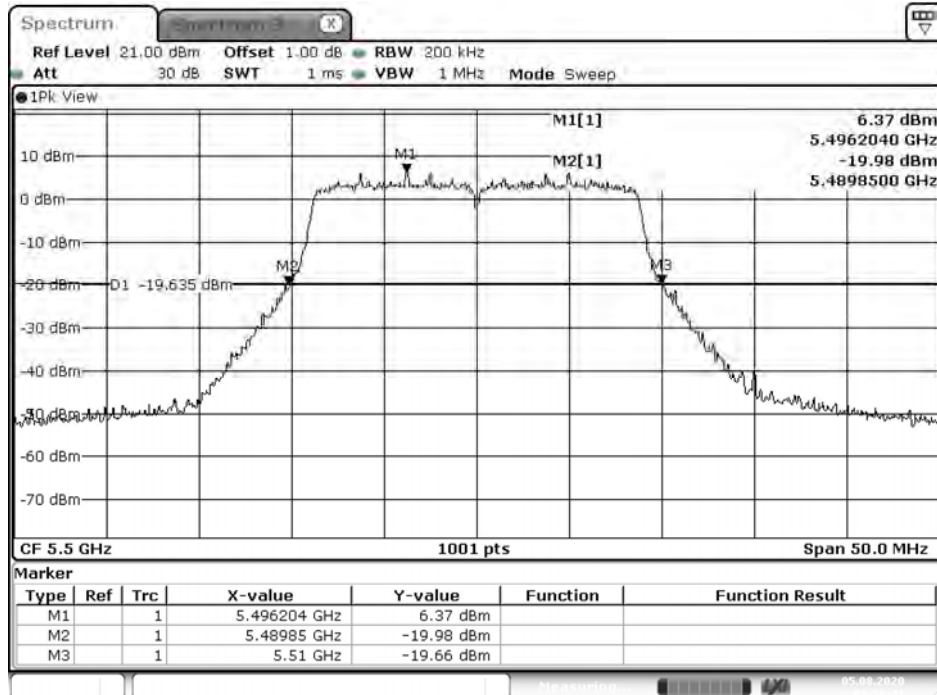
Date: 4.AUG.2020 19:57:12

Channel 100: (Chain A)



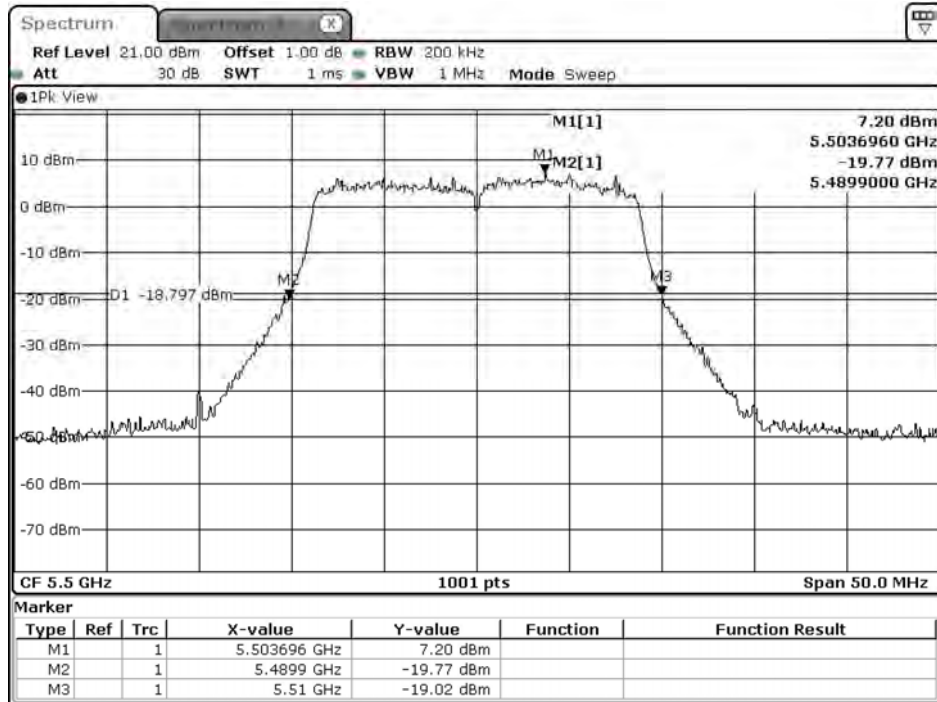
Date: 5.AUG.2020 07:56:54

Channel 100: (Chain B)



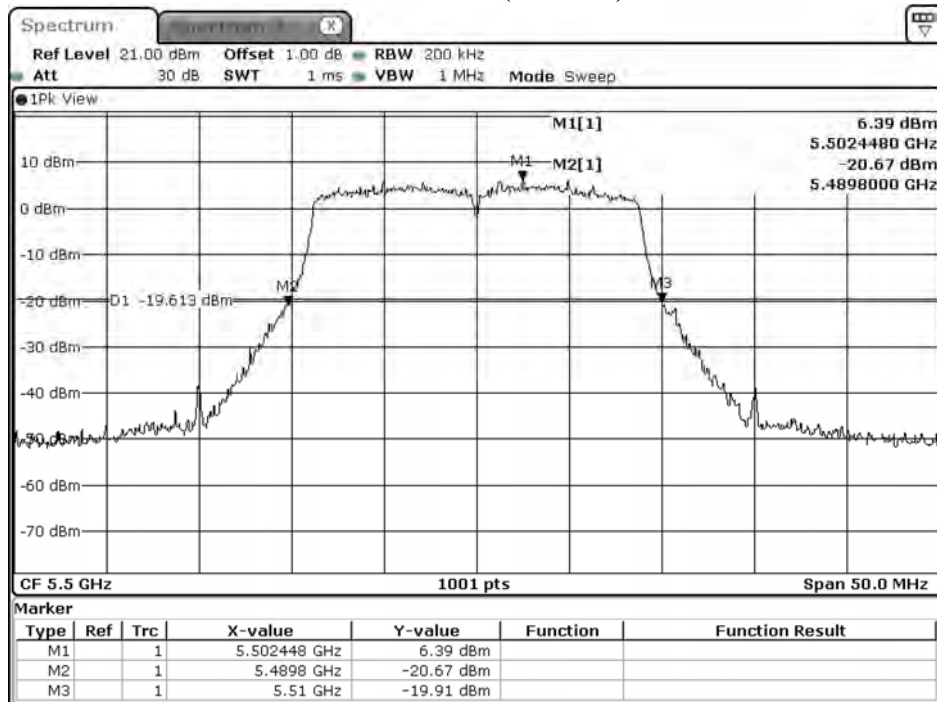
Date: 5.AUG.2020 03:56:41

Channel 100: (Chain C)



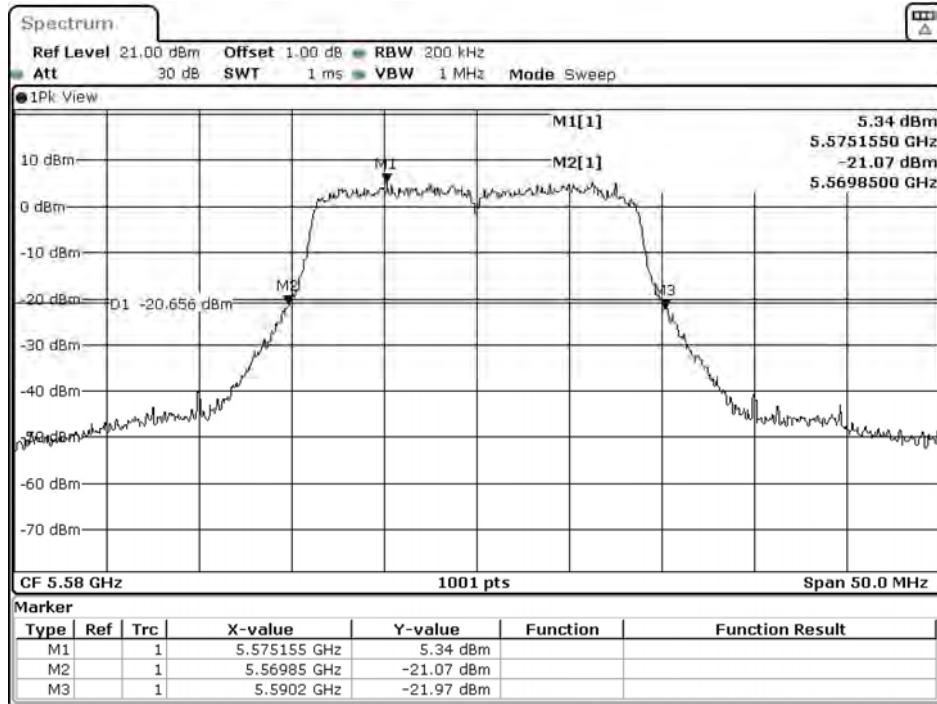
Date: 5.AUG.2020 03:53:43

Channel 100: (Chain D)



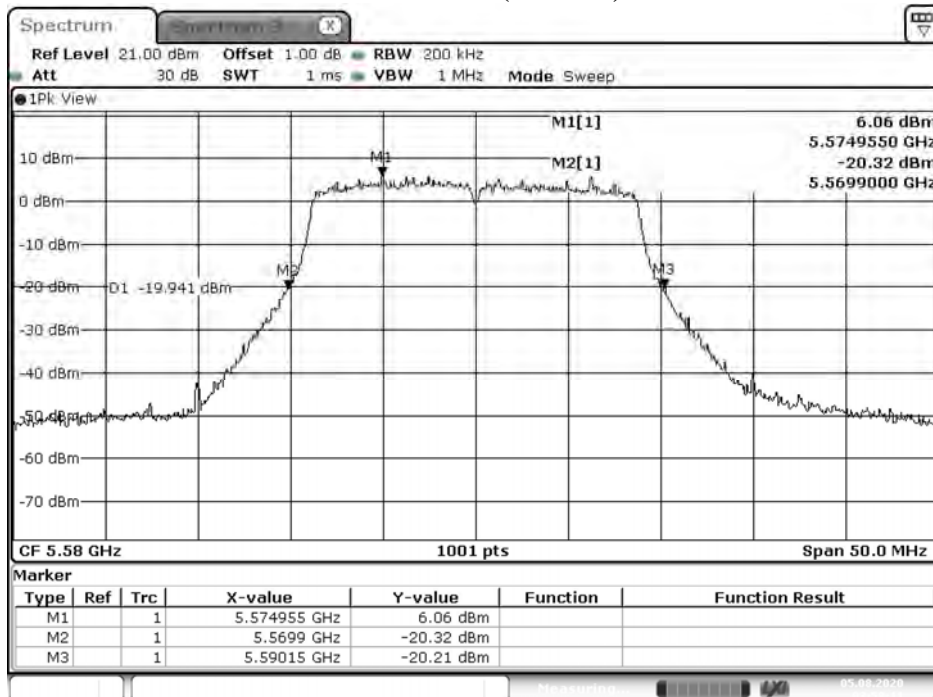
Date: 4.AUG.2020 19:59:09

Channel 116: (Chain A)



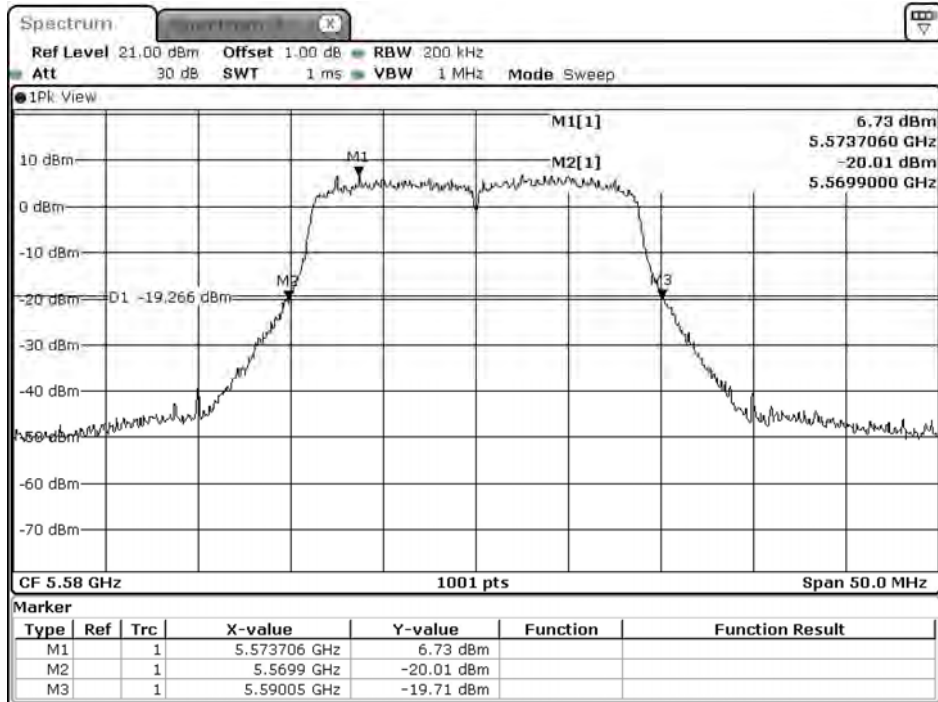
Date: 5.AUG.2020 07:58:24

Channel 116: (Chain B)



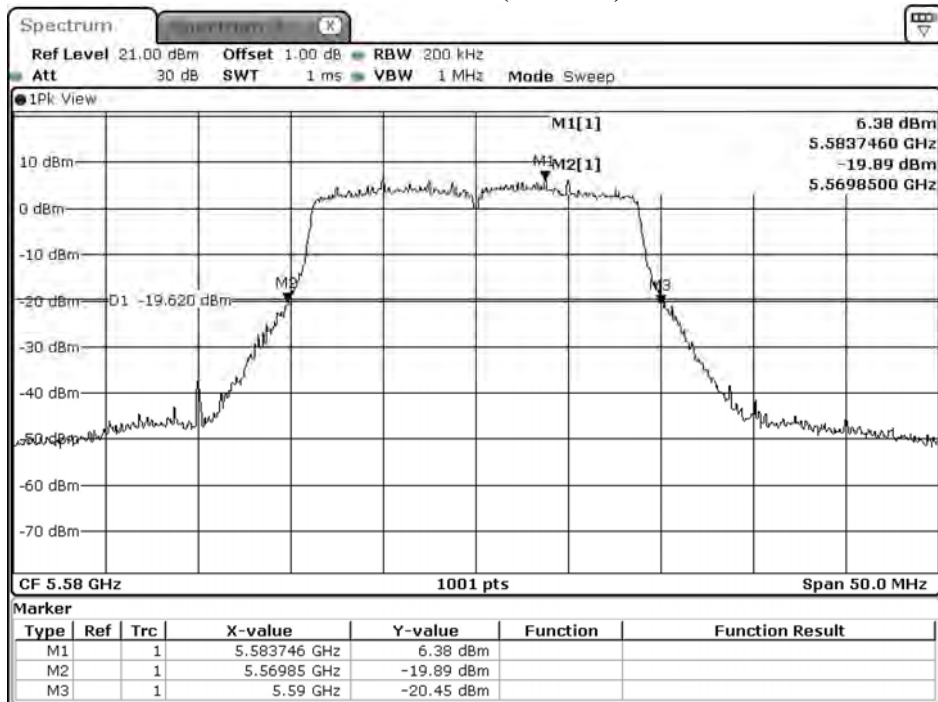
Date: 5.AUG.2020 03:58:11

Channel 116: (Chain C)



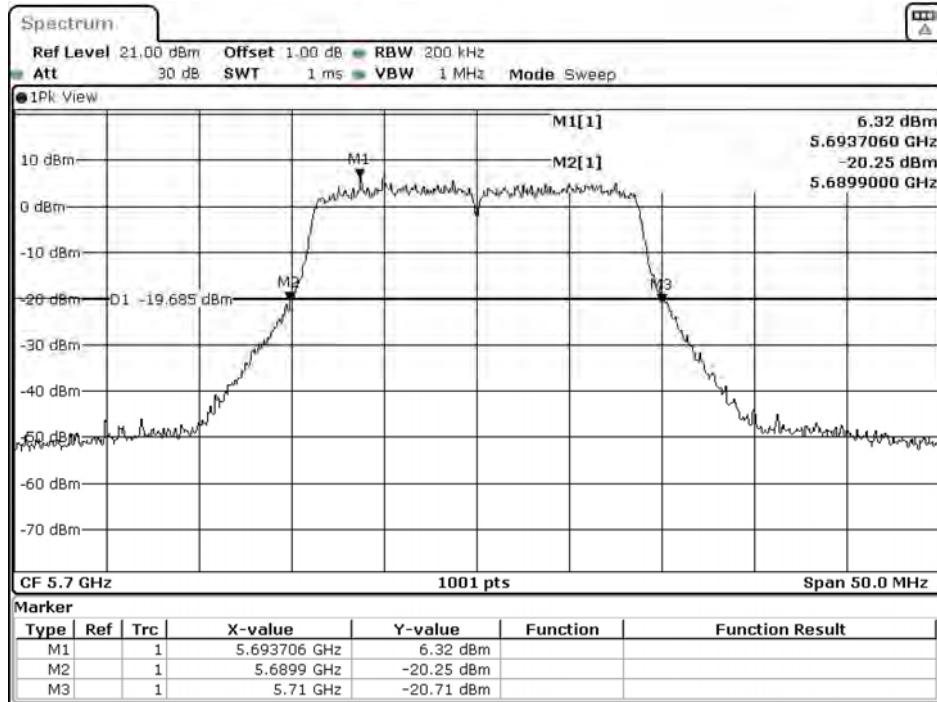
Date: 5.AUG.2020 03:55:12

Channel 116: (Chain D)



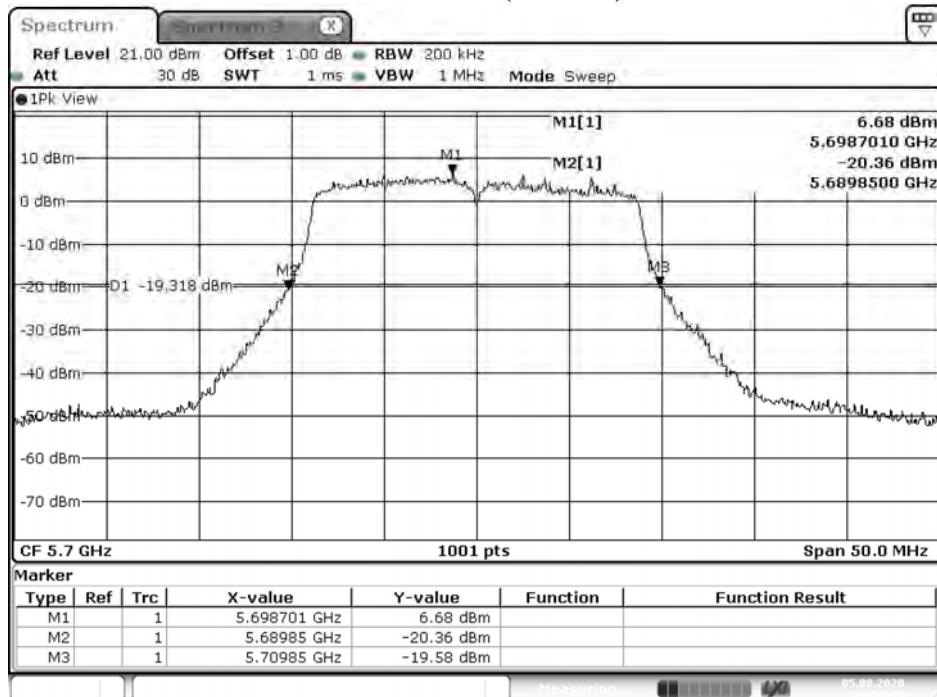
Date: 4.AUG.2020 20:00:39

Channel 140: (Chain A)



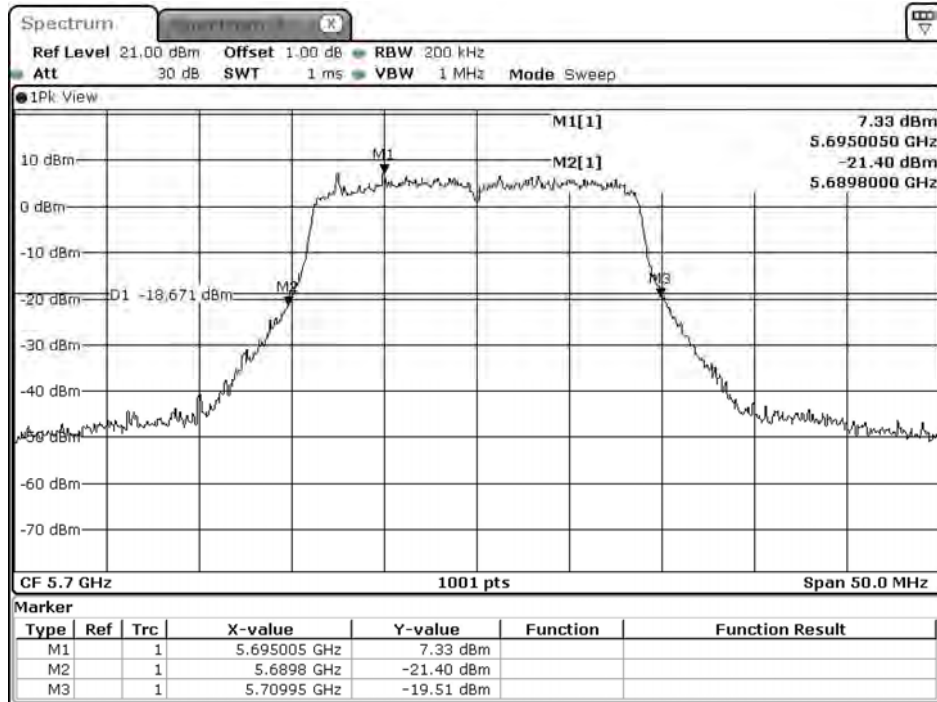
Date: 5.AUG.2020 07:59:47

Channel 140: (Chain B)



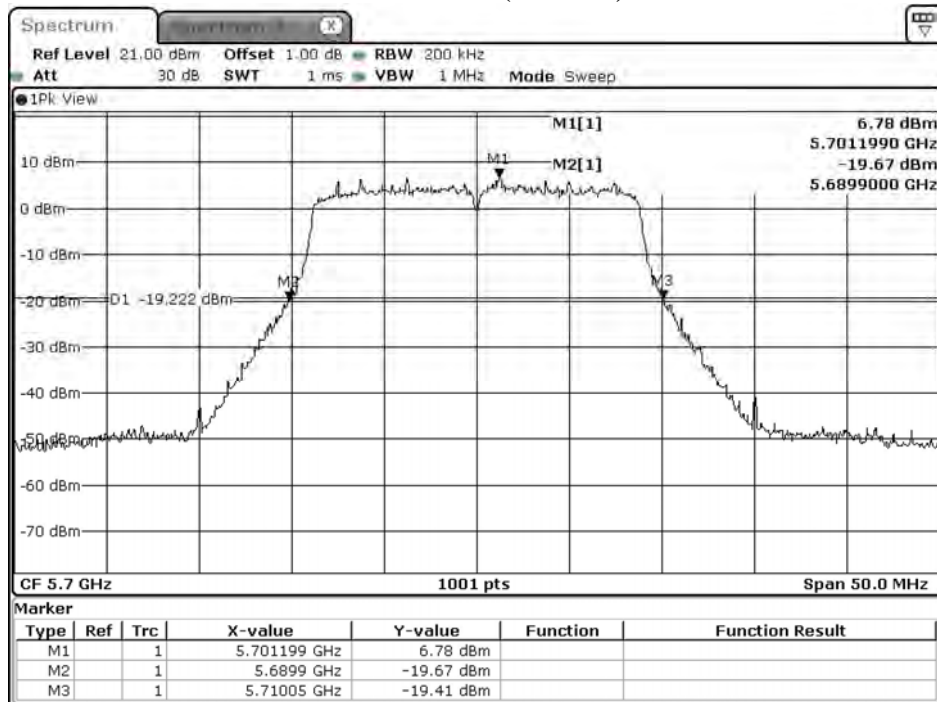
Date: 5.AUG.2020 03:59:34

Channel 140: (Chain C)



Date: 5.AUG.2020 03:56:35

Channel 140: (Chain D)



Date: 4.AUG.2020 20:02:02

Product : LV55
 Test Item : Maximum conducted output power
 Test Mode : Mode 3: Transmit (802.11n-40MBW-CDD)
 Test Date : 2020/08/13

Chain A

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
54	5270	17.86	--	--	--	--	--	--	--
62	5310	17.41	17.37	17.31	17.26	17.2	17.17	17.12	17.09
102	5510	17.39	--	--	--	--	--	--	--
110	5550	17.52	17.47	17.42	17.38	17.33	17.28	17.25	17.21
134	5670	17.55	--	--	--	--	--	--	--

Chain B

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
54	5270	17.97	--	--	--	--	--	--	--
62	5310	17.55	17.5	17.45	17.4	17.34	17.28	17.21	17.16
102	5510	17.18	--	--	--	--	--	--	--
110	5550	17.36	17.33	17.29	17.24	17.19	17.16	17.09	17.04
134	5670	17.96	--	--	--	--	--	--	--

Chain C

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
54	5270	17.83	--	--	--	--	--	--	--
62	5310	17.62	17.57	17.53	17.49	17.46	17.43	17.37	17.33
102	5510	17.88	--	--	--	--	--	--	--
110	5550	17.58	17.53	17.47	17.44	17.4	17.33	17.28	17.25
134	5670	17.77	--	--	--	--	--	--	--

Chain D

Cable loss=1.0dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)							
		0	1	2	3	4	5	6	7
		Measurement Level (dBm)							
54	5270	17.44	--	--	--	--	--	--	--
62	5310	17.59	17.55	17.48	17.42	17.37	17.33	17.29	17.24
102	5510	17.51	--	--	--	--	--	--	--
110	5550	17.43	17.37	17.33	17.29	17.24	17.19	17.14	17.09
134	5670	17.73	--	--	--	--	--	--	--

Maximum conducted output power Measurement:

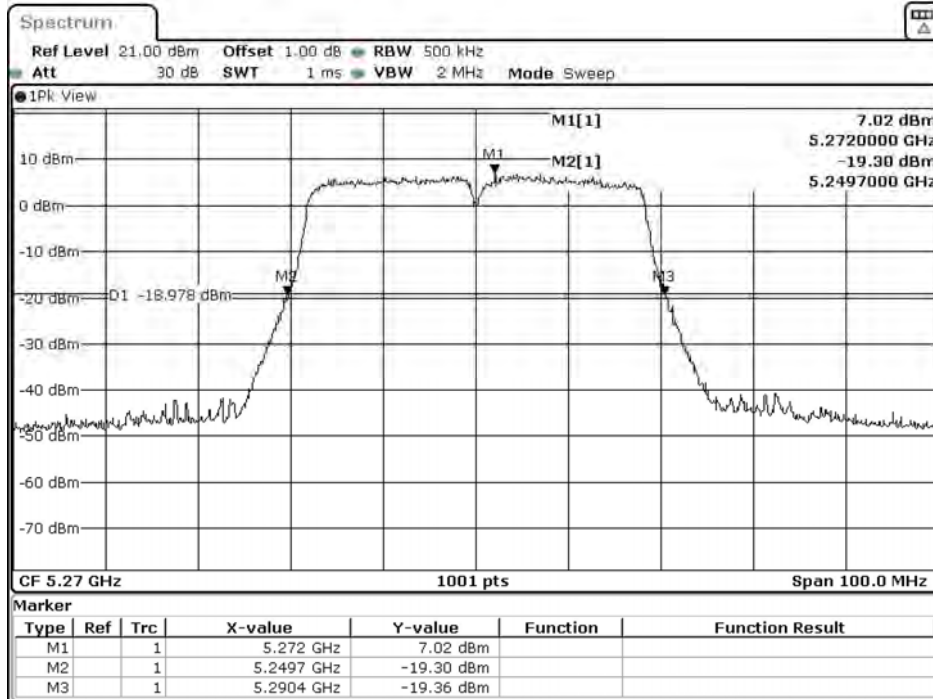
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
54	5270	40.400	17.86	17.97	17.83	17.44	23.80	24	27.06	Pass
62	5310	40.200	17.41	17.55	17.62	17.59	23.56	24	27.04	Pass
102	5510	40.300	17.39	17.18	17.88	17.51	23.52	24	27.05	Pass
110	5550	40.400	17.52	17.36	17.58	17.43	23.49	24	27.06	Pass
134	5670	40.500	17.55	17.96	17.77	17.73	23.78	24	27.07	Pass

Note:

- Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
- 26dB Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

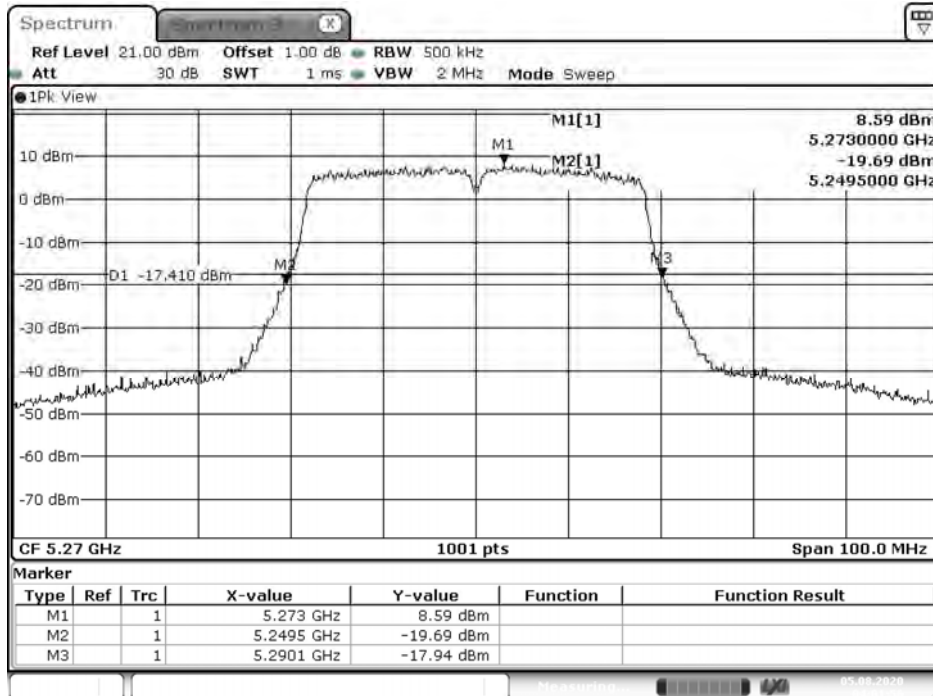
26dB Occupied Bandwidth:

Channel 54 (Chain A)



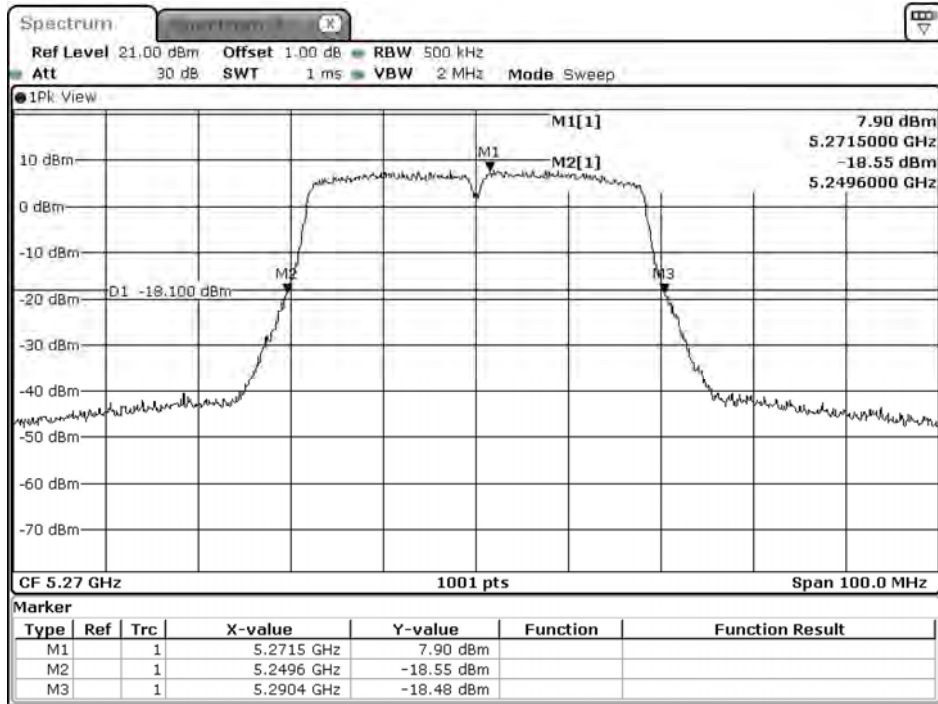
Date: 5.AUG.2020 08:02:08

Channel 54 (Chain B)



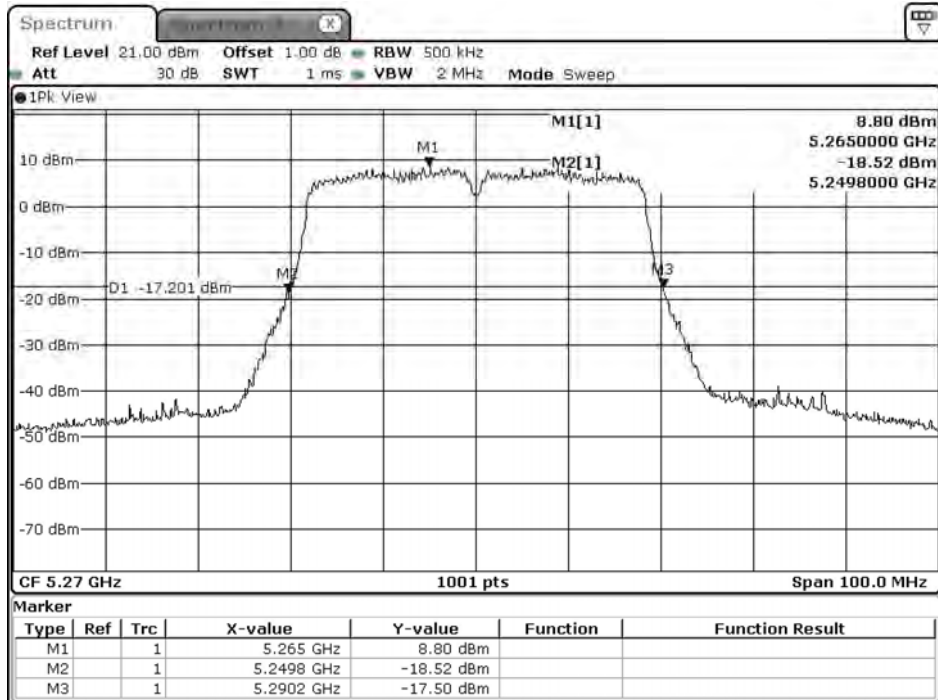
Date: 5.AUG.2020 04:01:56

Channel 54 (Chain C)



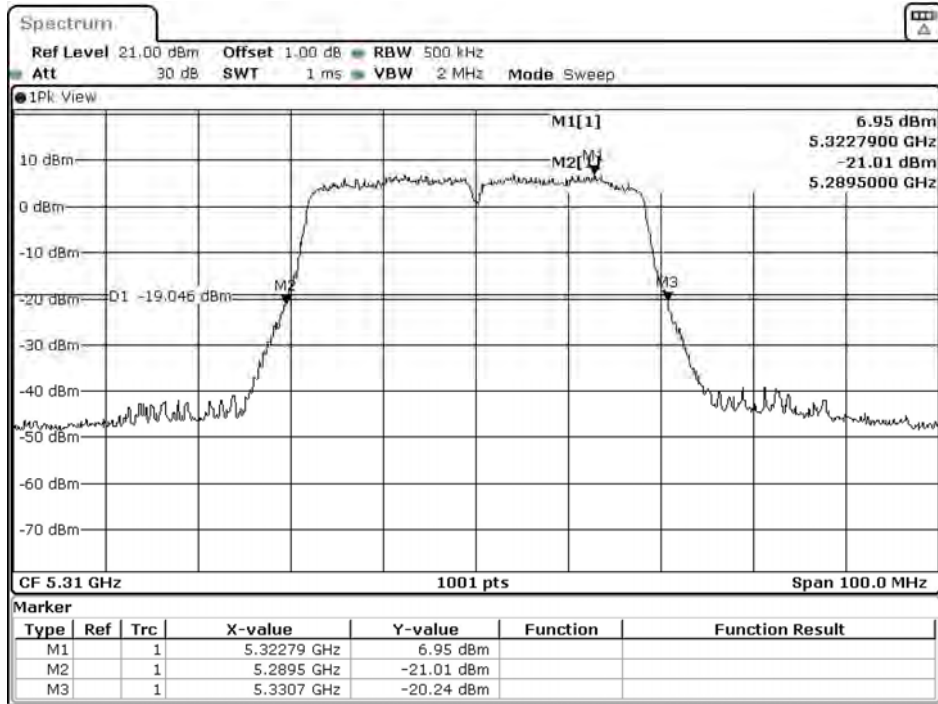
Date: 5.AUG.2020 03:58:57

Channel 54 (Chain D)



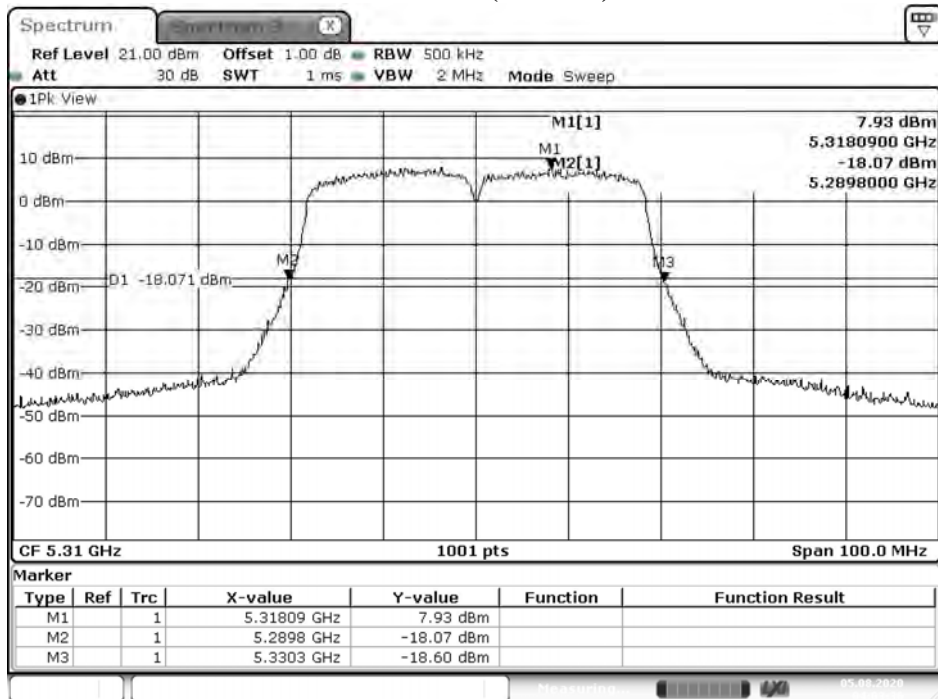
Date: 4.AUG.2020 20:04:24

Channel 62 (Chain A)



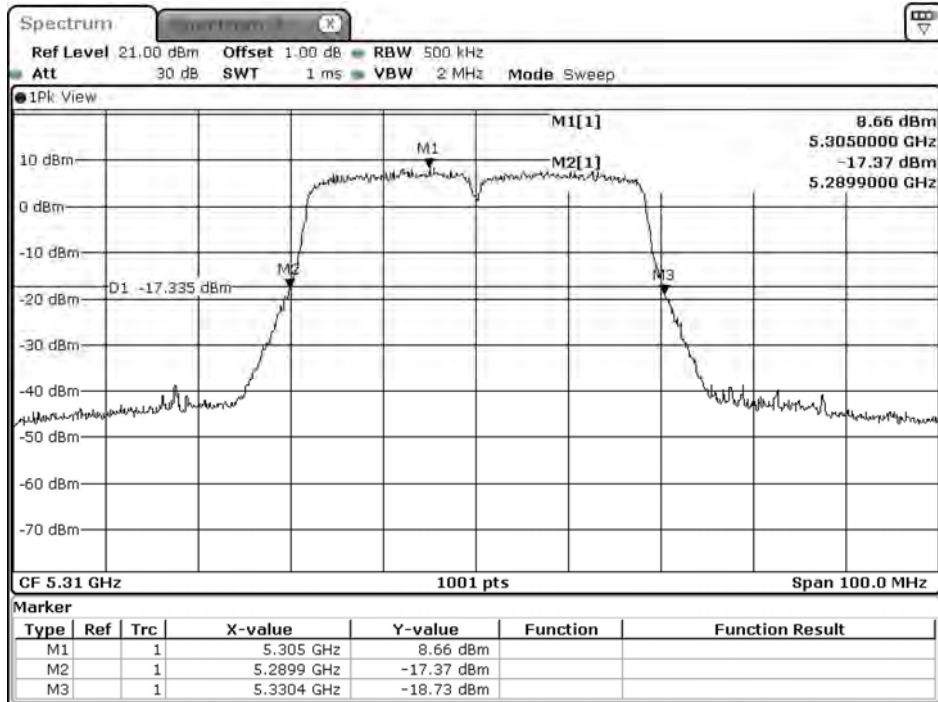
Date: 5.AUG.2020 08:03:49

Channel 62 (Chain B)



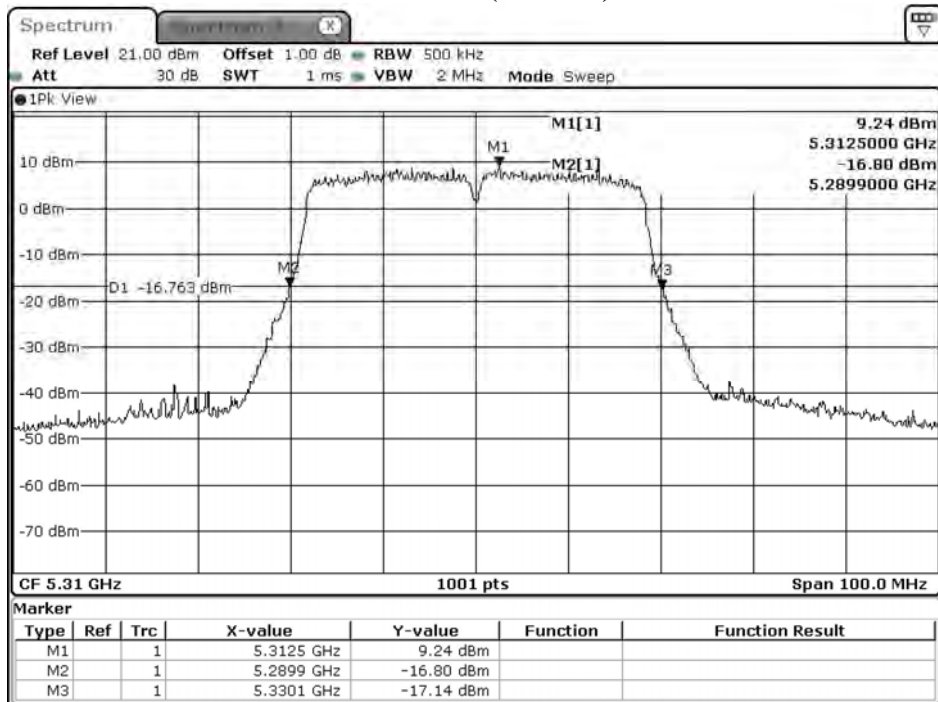
Date: 5.AUG.2020 04:03:37

Channel 62 (Chain C)



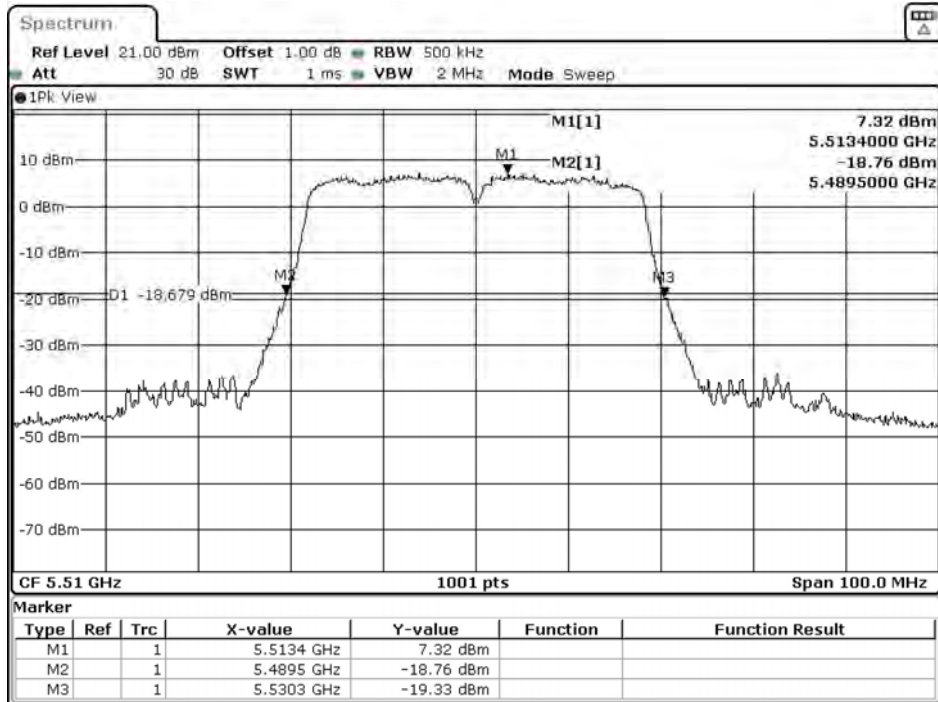
Date: 5.AUG.2020 04:00:38

Channel 62 (Chain D)



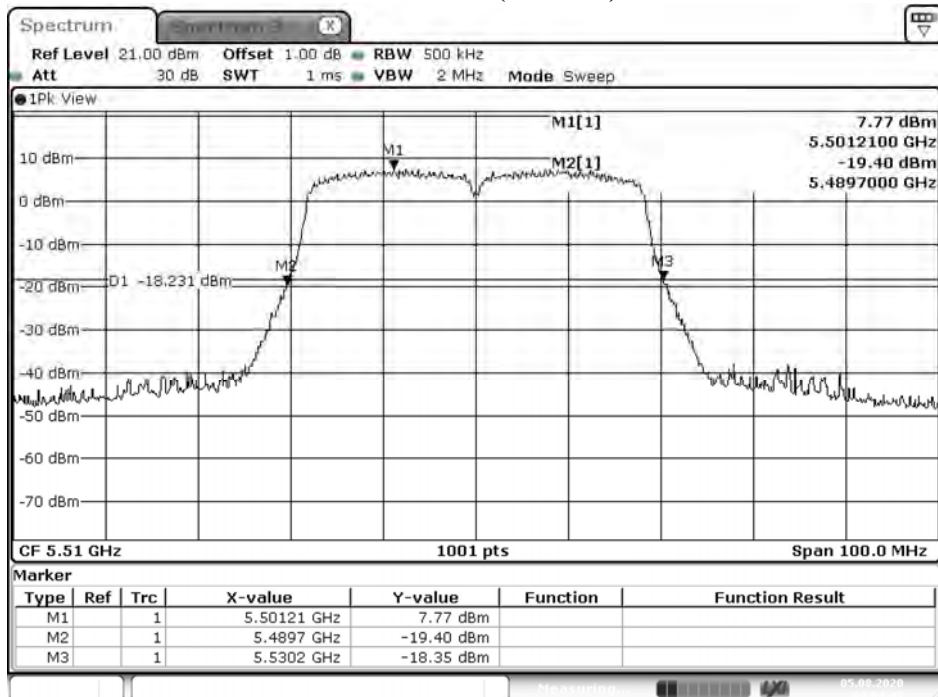
Date: 4.AUG.2020 20:06:04

Channel 102 (Chain A)



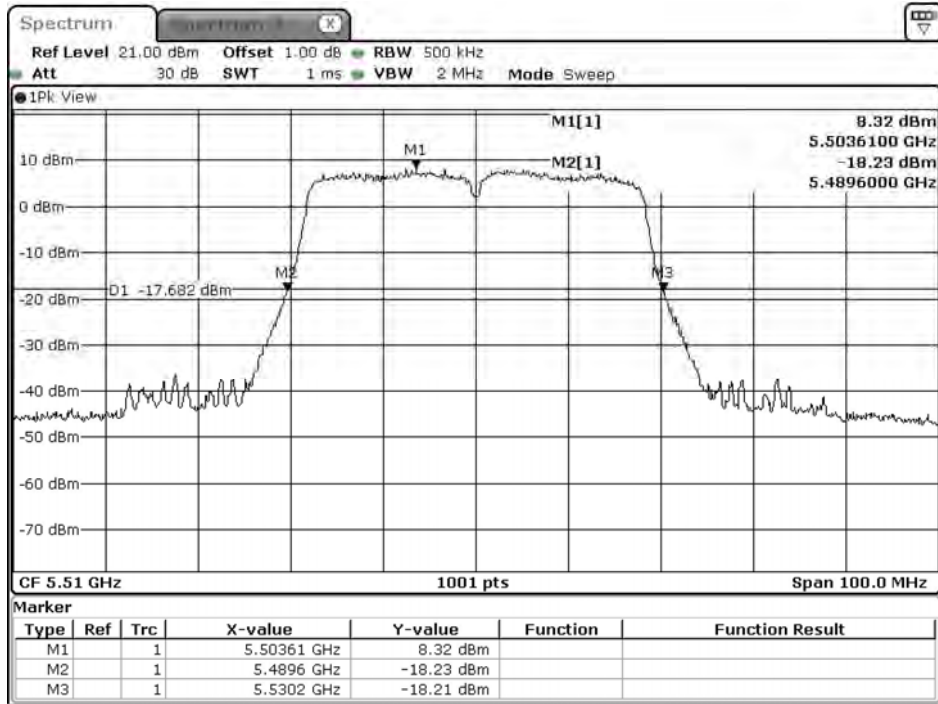
Date: 5.AUG.2020 08:05:00

Channel 102 (Chain B)



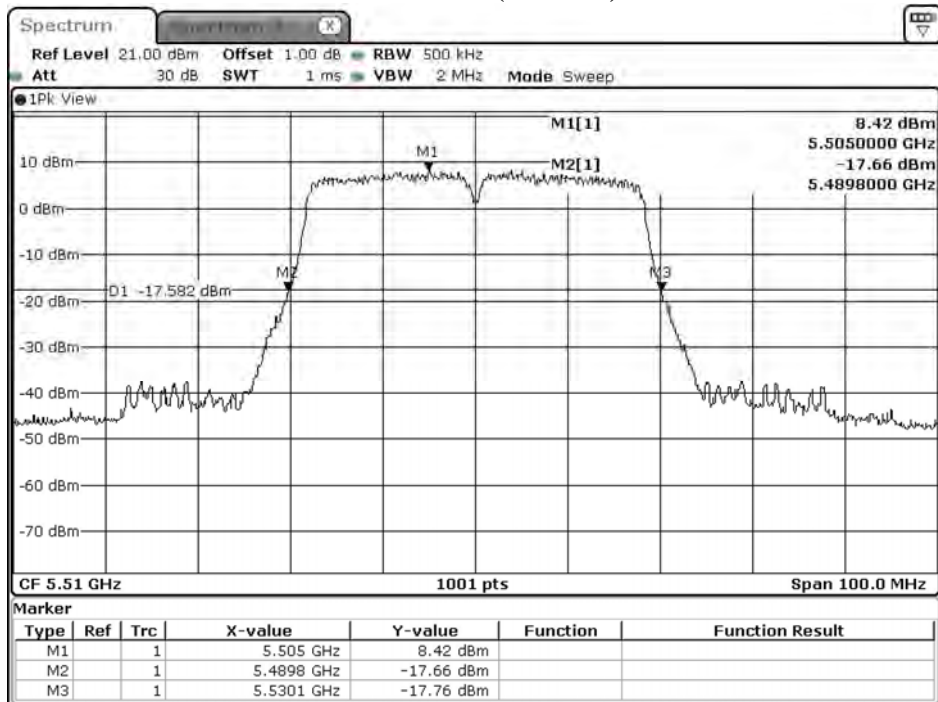
Date: 5.AUG.2020 04:04:48

Channel 102 (Chain C)



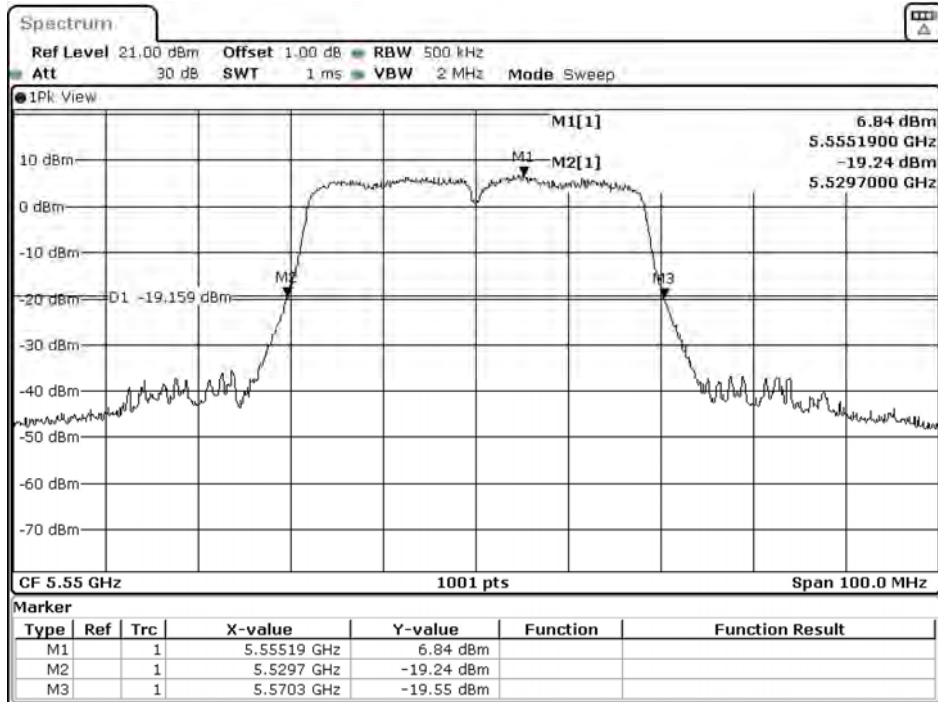
Date: 5.AUG.2020 04:01:49

Channel 102 (Chain D)



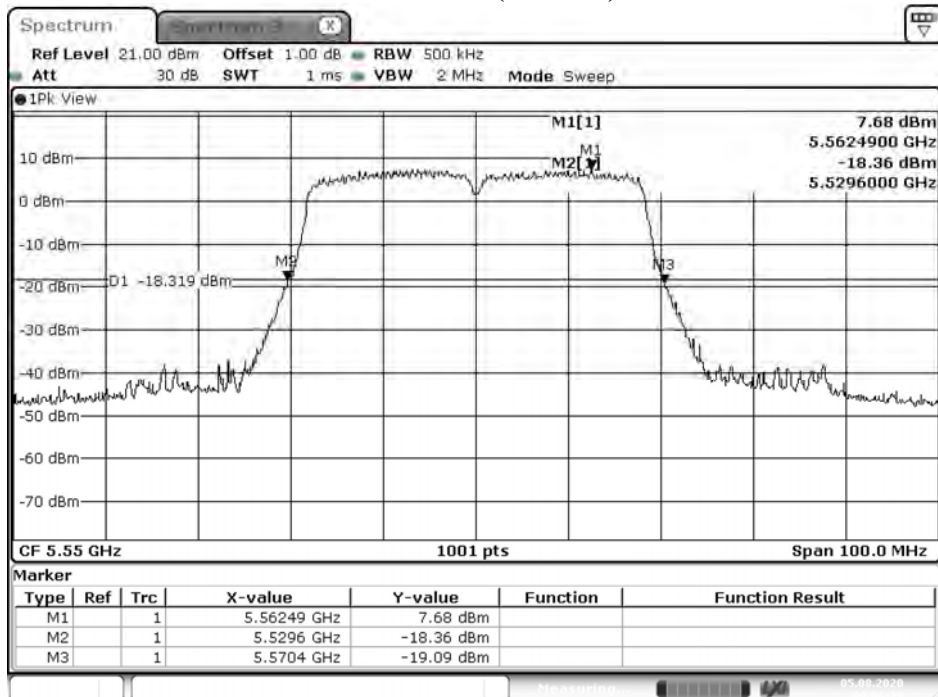
Date: 4.AUG.2020 20:07:15

Channel 110 (Chain A)



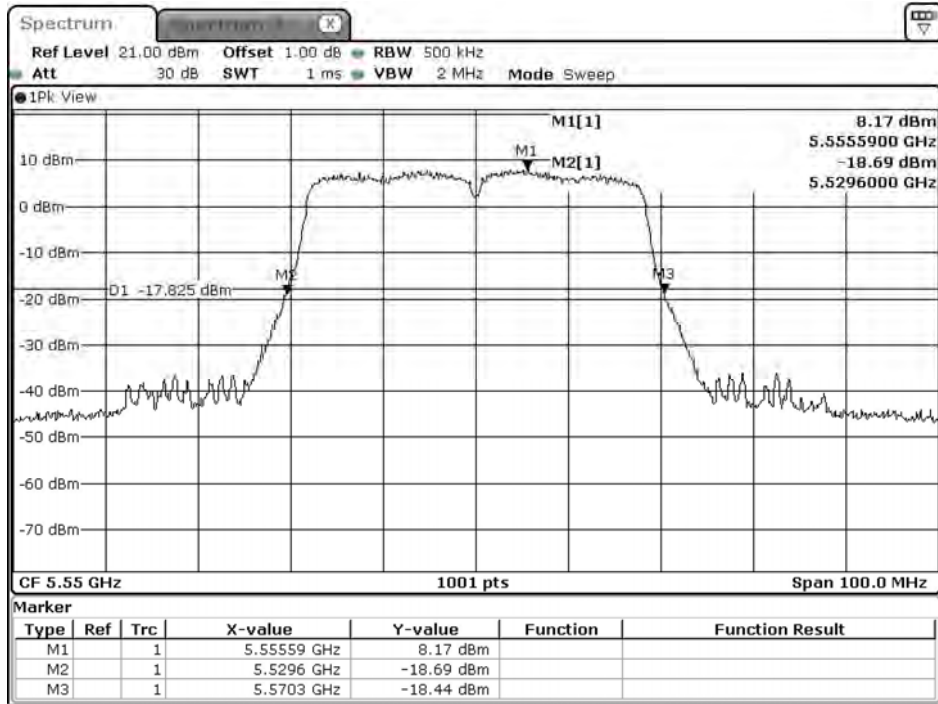
Date: 5.AUG.2020 08:06:36

Channel 110 (Chain B)



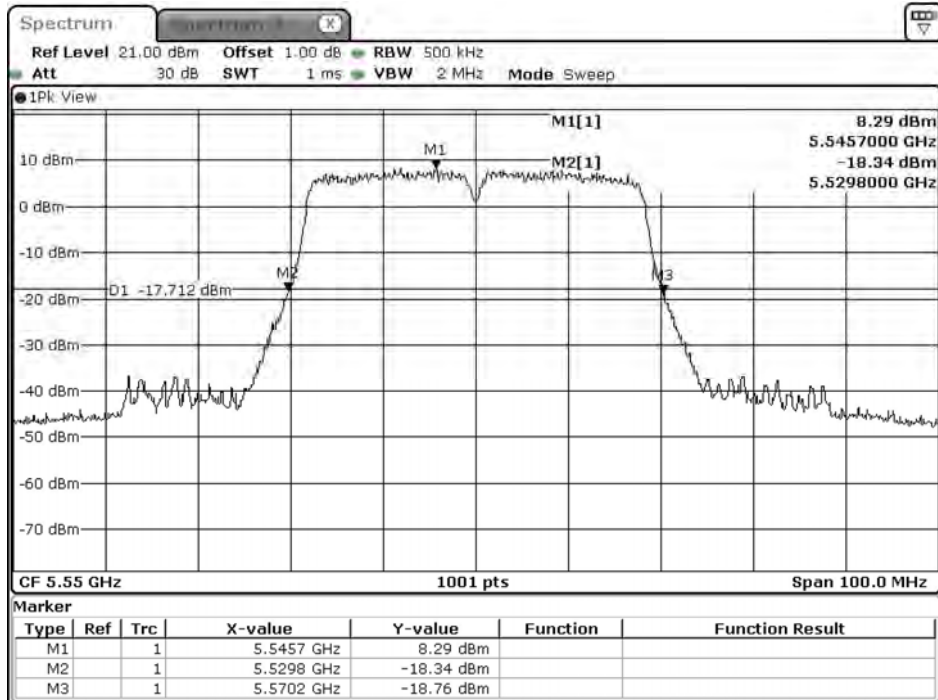
Date: 5.AUG.2020 04:06:24

Channel 110 (Chain C)



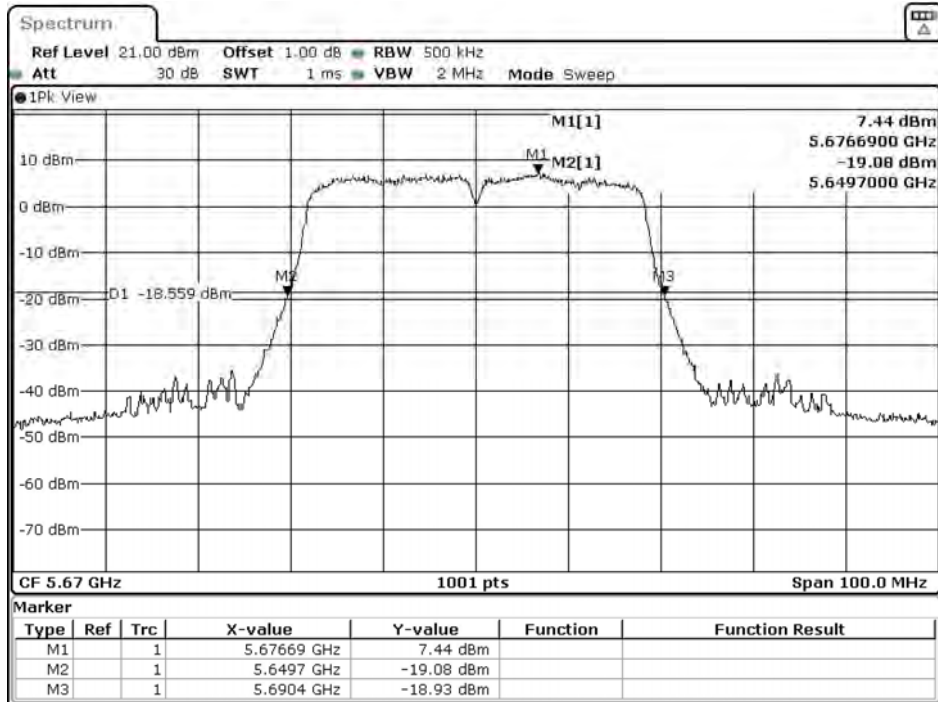
Date: 5.AUG.2020 04:03:24

Channel 110 (Chain D)



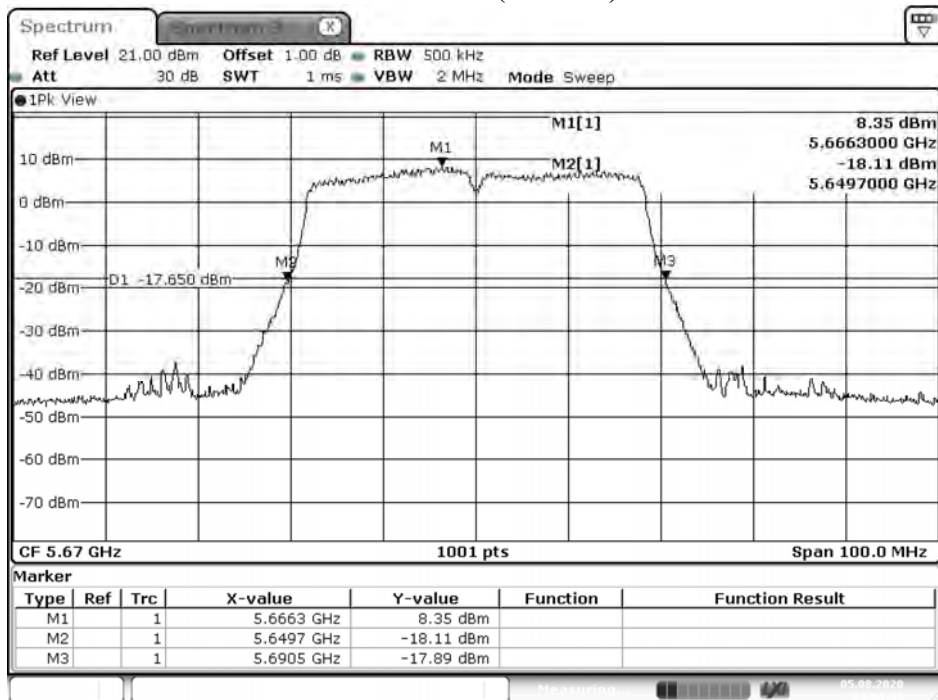
Date: 4.AUG.2020 20:08:51

Channel 134 (Chain A)



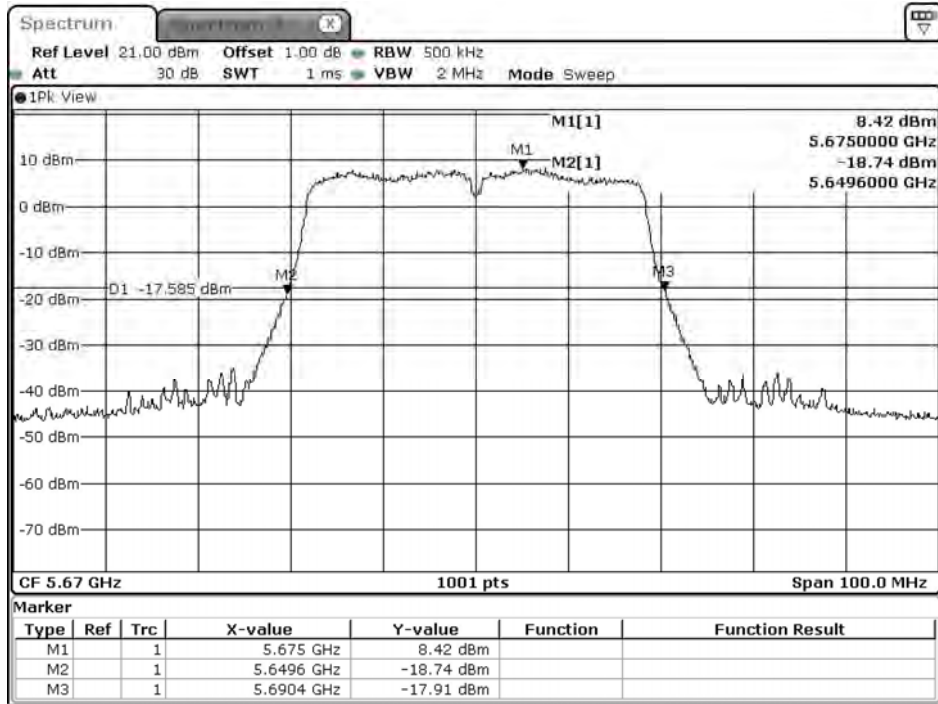
Date: 5.AUG.2020 08:08:45

Channel 134 (Chain B)



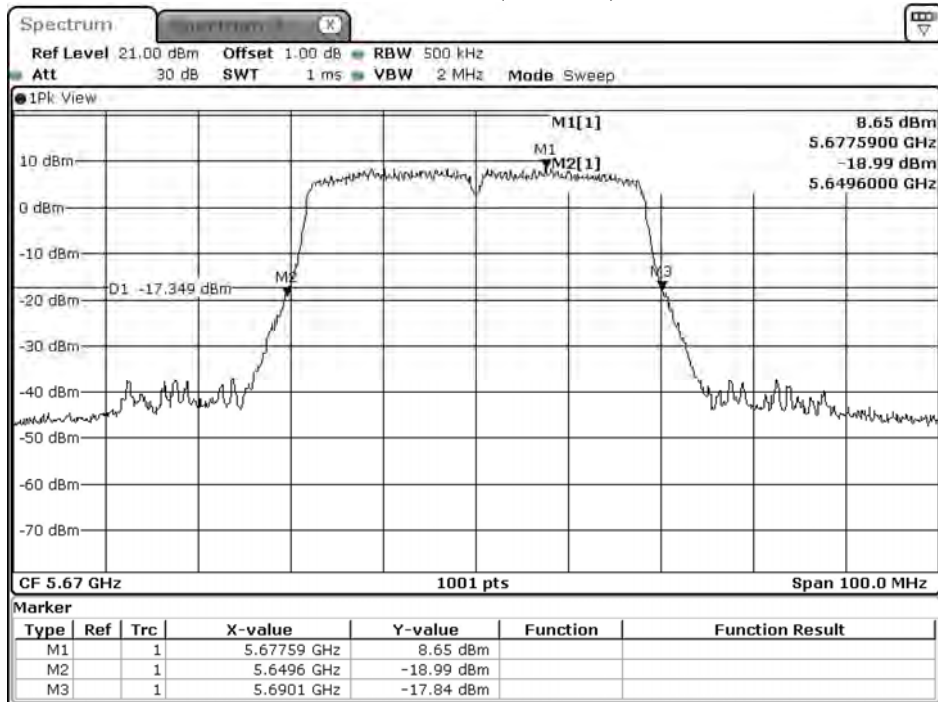
Date: 5.AUG.2020 04:08:33

Channel 134 (Chain C)



Date: 5.AUG.2020 04:05:34

Channel 134 (Chain D)



Date: 4.AUG.2020 20:11:01

Product : LV55
 Test Item : Maximum conducted output power
 Test Mode : Mode 4: Transmit (802.11ac-20MBW-CDD)
 Test Date : 2020/09/04

Chain A

Cable loss=1.0dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
		Measurement Level (dBm)									
52	5260	17.52	--	--	--	--	--	--	--	--	--
60	5300	17.74	17.68	17.64	17.59	17.52	17.46	17.42	17.36	17.33	17.27
64	5320	17.59	--	--	--	--	--	--	--	--	--
100	5500	17.38	--	--	--	--	--	--	--	--	--
116	5580	17.41	17.36	17.31	17.27	17.21	17.16	17.10	17.04	17.00	16.97
140	5700	17.44	--	--	--	--	--	--	--	--	--
144(U-NII-2C)	5720	16.76	--	--	--	--	--	--	--	--	--
144(U-NII-3)	5720	11.36	--	--	--	--	--	--	--	--	--

Chain B

Cable loss=1.0dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
		Measurement Level (dBm)									
52	5260	17.64	--	--	--	--	--	--	--	--	--
60	5300	17.88	17.84	17.79	17.74	17.71	17.64	17.58	17.51	17.47	17.41
64	5320	17.31	--	--	--	--	--	--	--	--	--
100	5500	17.69	--	--	--	--	--	--	--	--	--
116	5580	17.44	17.37	17.31	17.25	17.22	17.17	17.11	17.06	17.00	16.95
140	5700	17.65	--	--	--	--	--	--	--	--	--
144(U-NII-2C)	5720	16.74	--	--	--	--	--	--	--	--	--
144(U-NII-3)	5720	11.41	--	--	--	--	--	--	--	--	--

Chain C

Cable loss=1.0dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
		Measurement Level (dBm)									
52	5260	17.74	--	--	--	--	--	--	--	--	--
60	5300	17.93	17.89	17.84	17.79	17.75	17.71	17.65	17.62	17.57	17.52
64	5320	17.52	--	--	--	--	--	--	--	--	--
100	5500	17.87	--	--	--	--	--	--	--	--	--
116	5580	17.53	17.46	17.39	17.33	17.29	17.24	17.18	17.14	17.11	17.05
140	5700	17.88	--	--	--	--	--	--	--	--	--
144(U-NII-2C)	5720	16.87	--	--	--	--	--	--	--	--	--
144(U-NII-3)	5720	11.65	--	--	--	--	--	--	--	--	--

Chain D

Cable loss=1.0dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
		Measurement Level (dBm)									
52	5260	17.44	--	--	--	--	--	--	--	--	--
60	5300	17.53	17.49	17.46	17.42	17.37	17.30	17.25	17.19	17.16	17.12
64	5320	17.48	--	--	--	--	--	--	--	--	--
100	5500	17.32	--	--	--	--	--	--	--	--	--
116	5580	17.41	17.38	17.32	17.26	17.22	17.16	17.13	17.06	17.00	16.94
140	5700	17.58	--	--	--	--	--	--	--	--	--
144(U-NII-2C)	5720	16.83	--	--	--	--	--	--	--	--	--
144(U-NII-3)	5720	11.74	--	--	--	--	--	--	--	--	--

Maximum conducted output power Measurement:

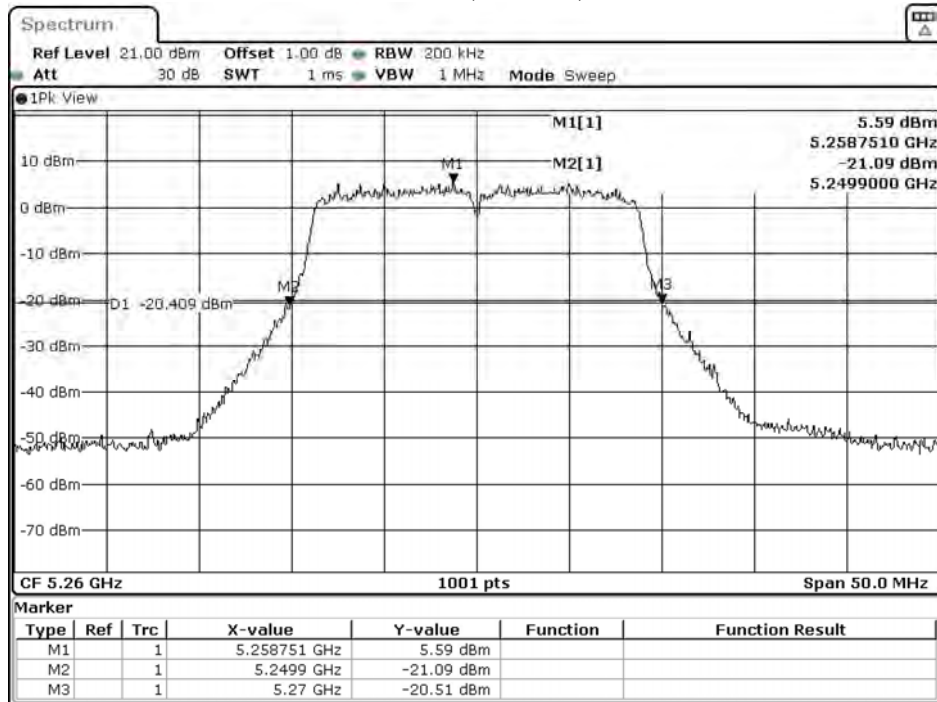
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
52	5260	20.100	17.52	17.64	17.74	17.44	23.61	24	24.03	Pass
60	5300	20.200	17.74	17.88	17.93	17.53	23.79	24	24.05	Pass
64	5320	20.100	17.59	17.31	17.52	17.48	23.50	24	24.03	Pass
100	5500	20.050	17.38	17.69	17.87	17.32	23.59	24	24.02	Pass
116	5580	20.050	17.41	17.44	17.53	17.41	23.47	24	24.02	Pass
140	5700	20.050	17.44	17.65	17.88	17.58	23.66	24	24.02	Pass
144(U-NII-2C)	5720	15.250	16.76	16.74	16.87	16.83	22.82	24	22.83	Pass
144(U-NII-3)	5720	--	11.36	11.41	11.65	11.74	17.56	30	--	Pass

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 26dB Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

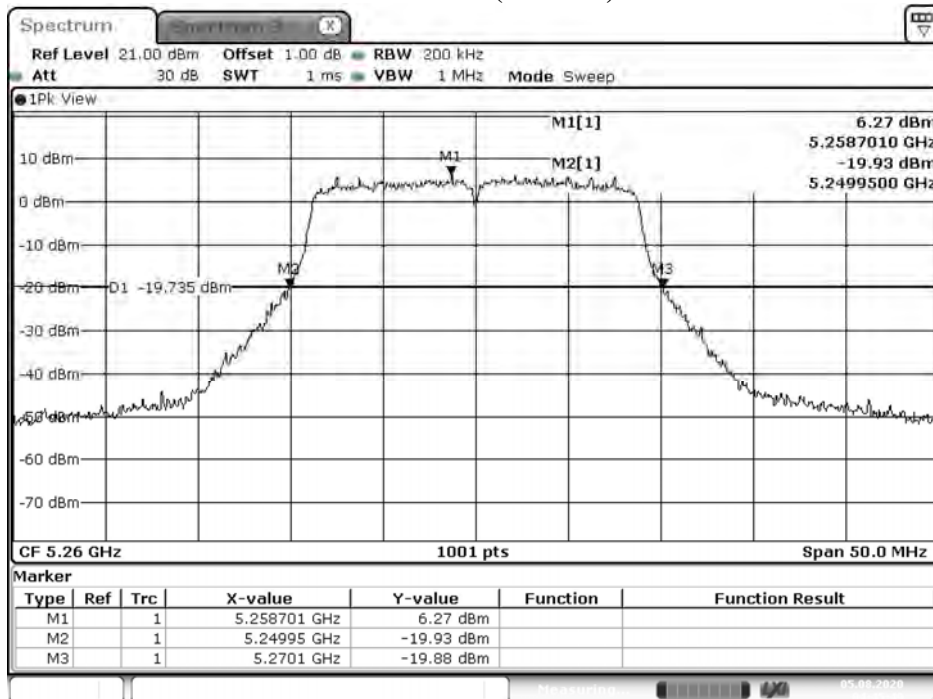
26dB Occupied Bandwidth:

Channel 52: (Chain A)



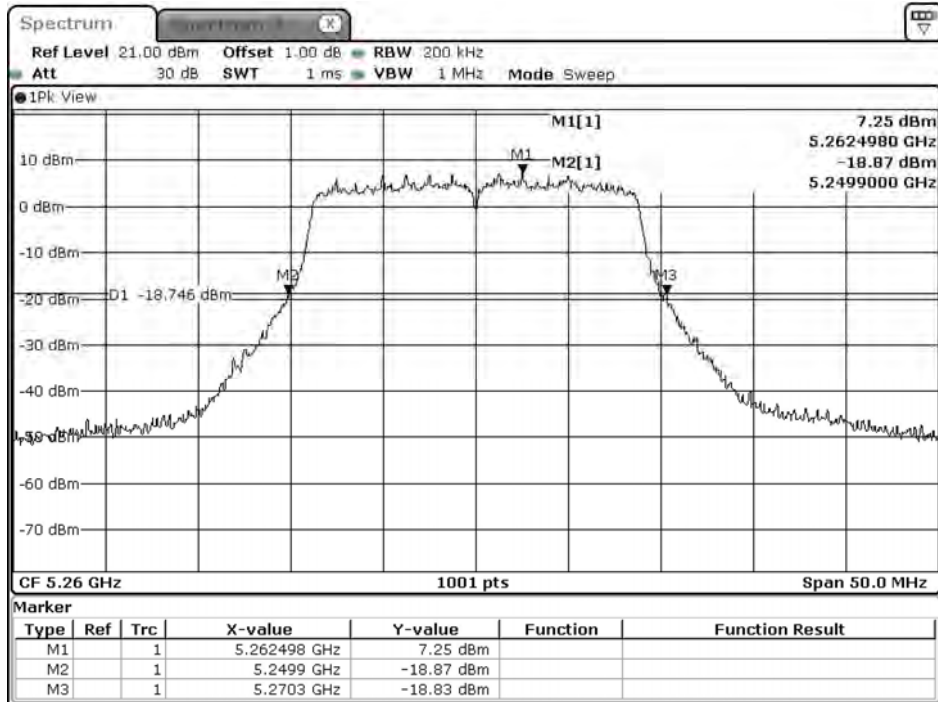
Date: 5.AUG.2020 08:46:18

Channel 52: (Chain B)



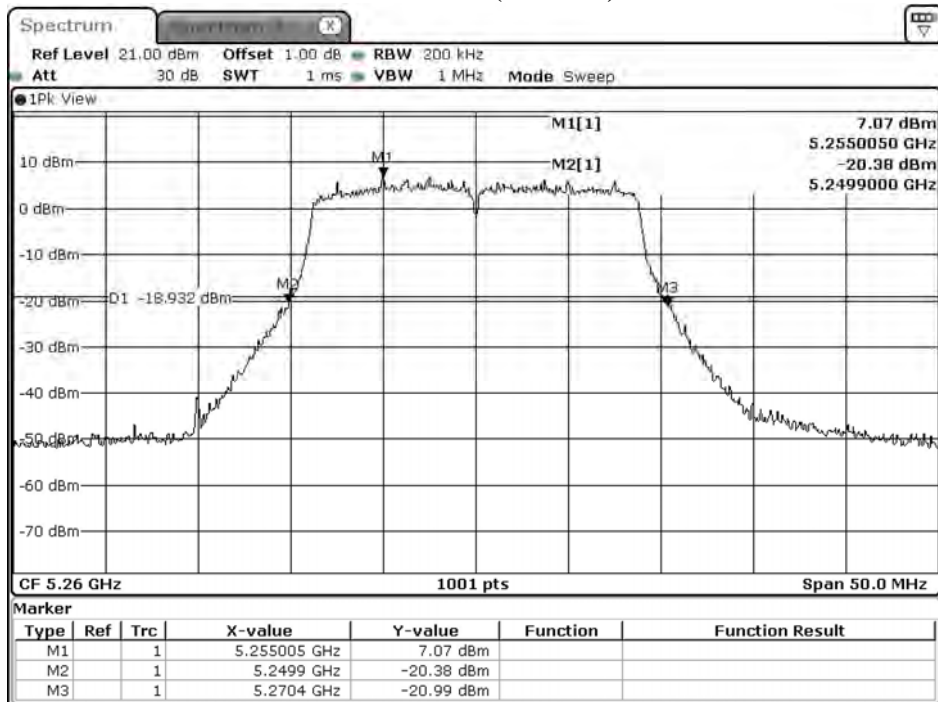
Date: 5.AUG.2020 04:45:50

Channel 52: (Chain C)



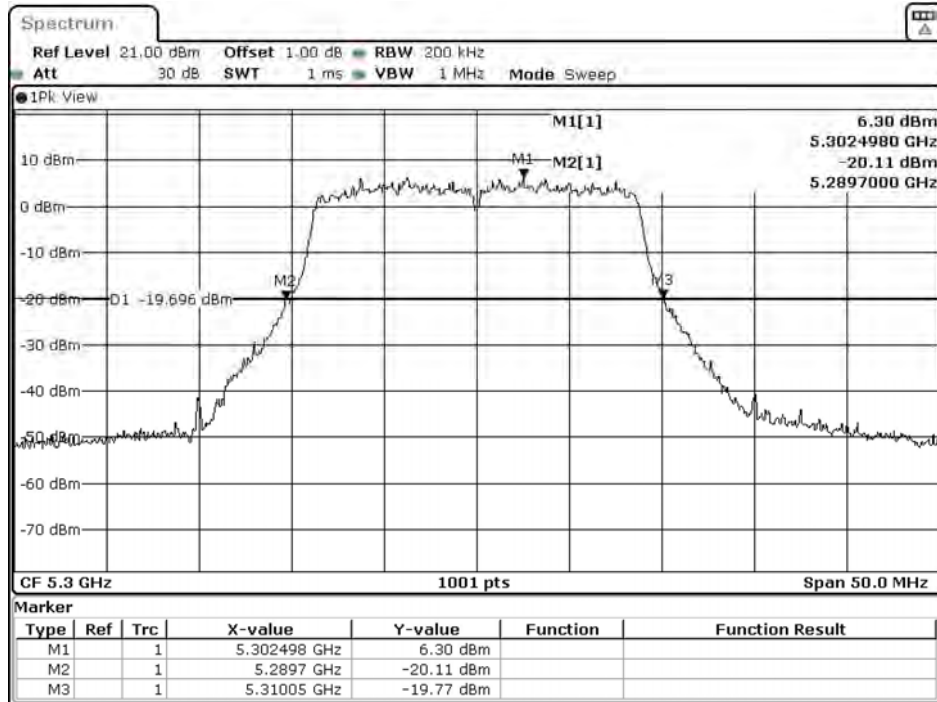
Date: 5.AUG.2020 04:42:51

Channel 52: (Chain D)



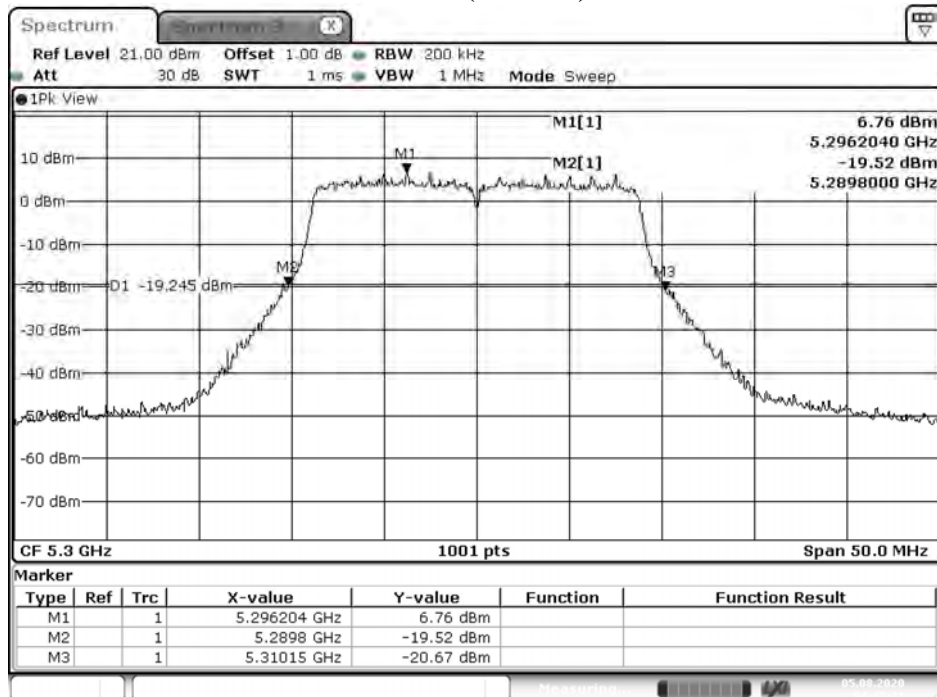
Date: 4.AUG.2020 20:48:17

Channel 60: (Chain A)



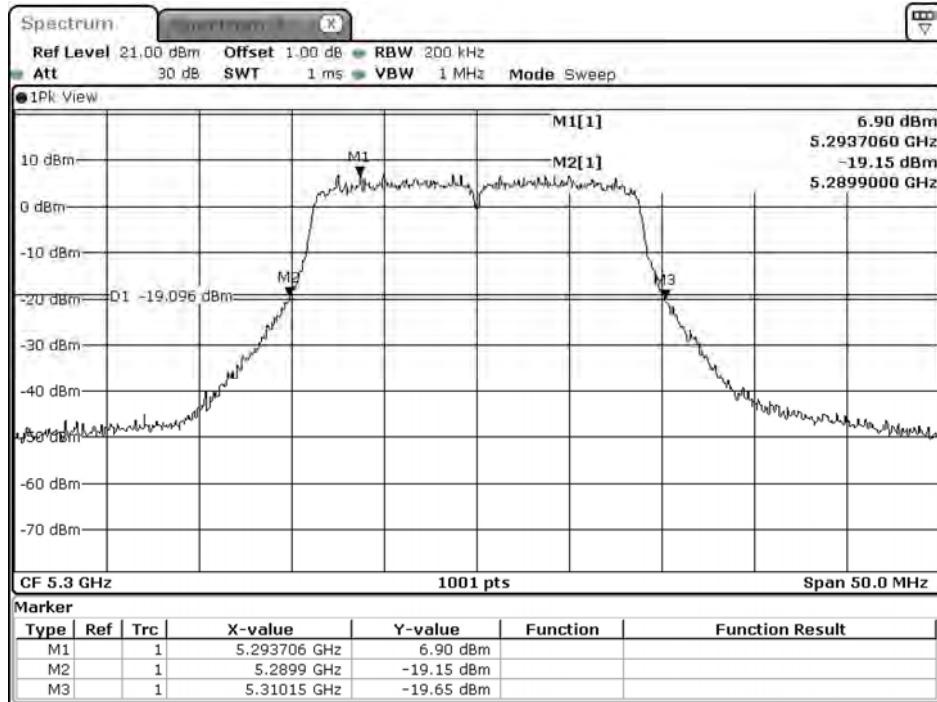
Date: 5.AUG.2020 08:47:34

Channel 60: (Chain B)



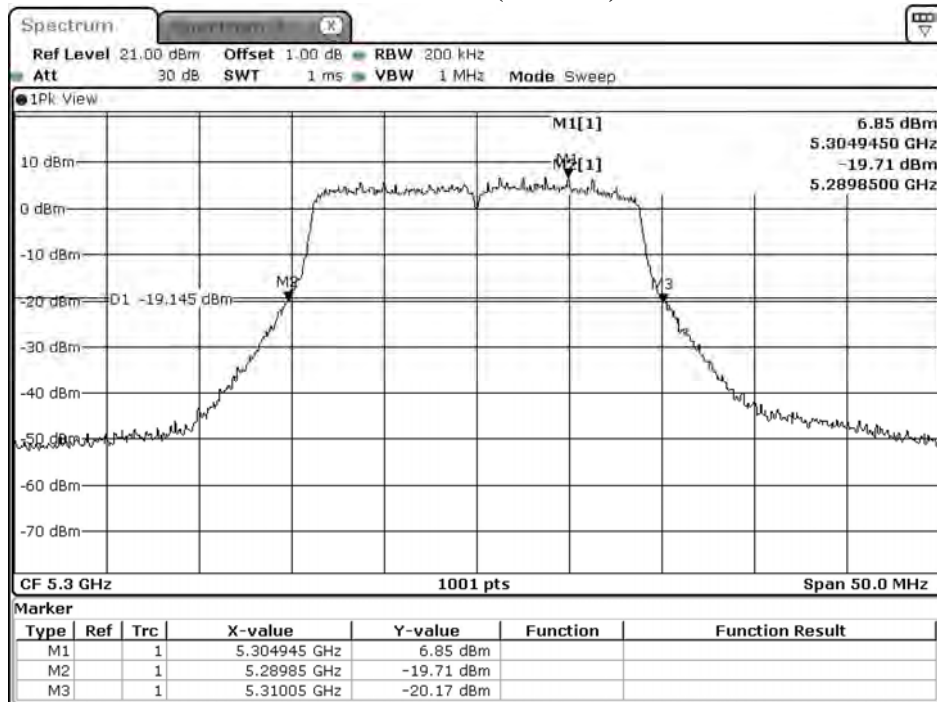
Date: 5.AUG.2020 04:47:22

Channel 60: (Chain C)



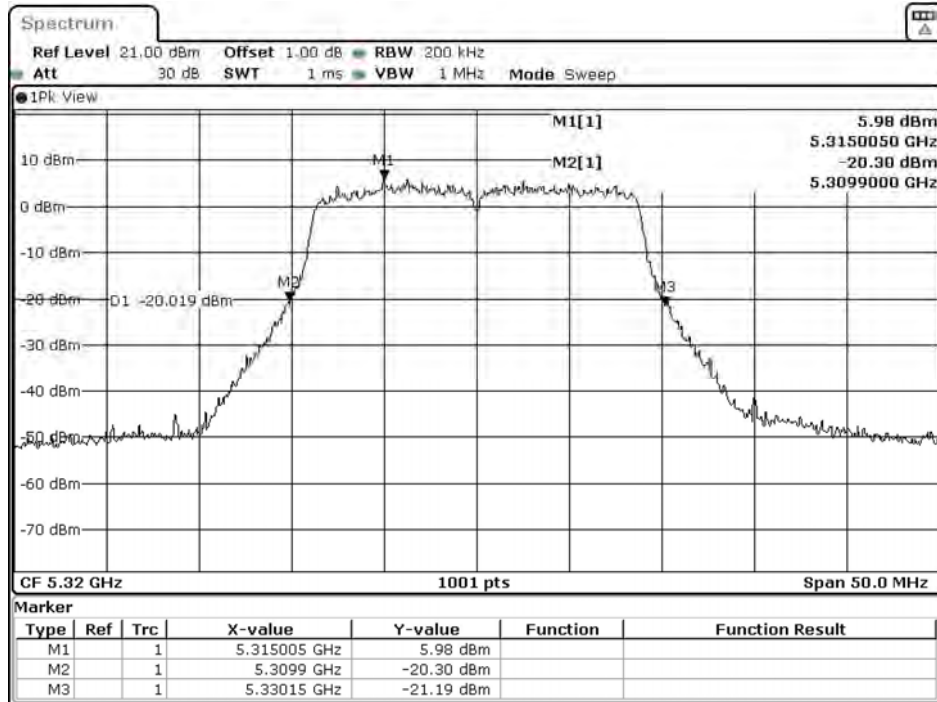
Date: 5.AUG.2020 04:44:22

Channel 60: (Chain D)



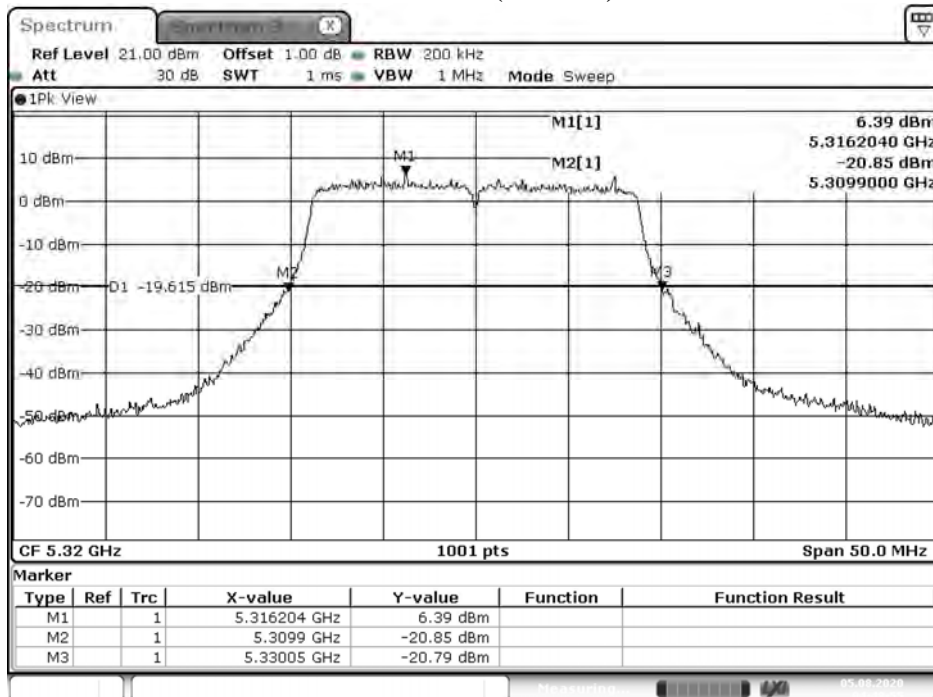
Date: 4.AUG.2020 20:49:49

Channel 64: (Chain A)



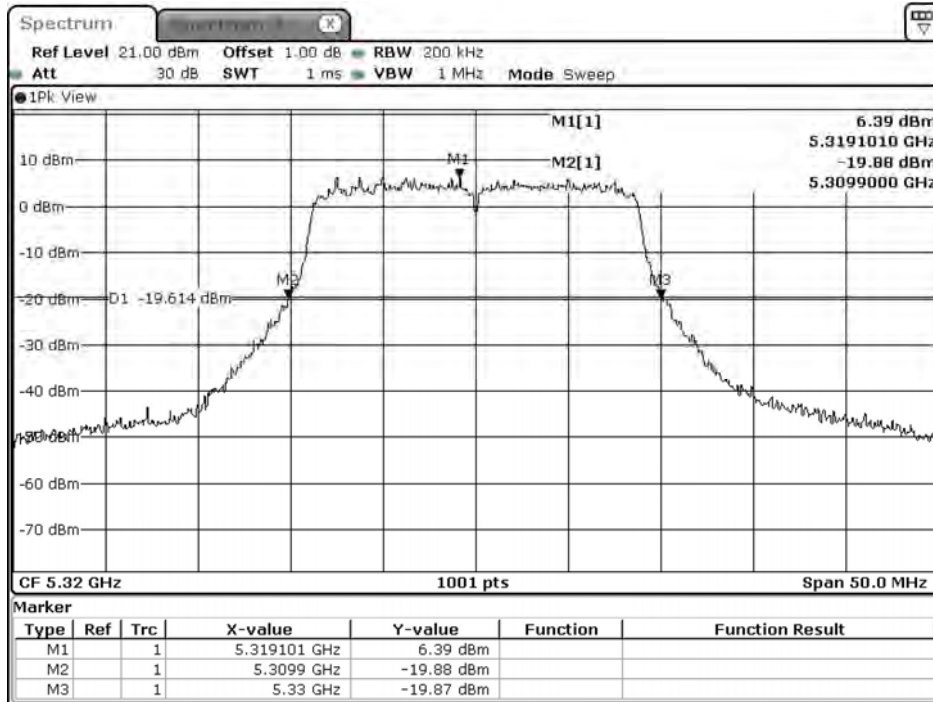
Date: 5.AUG.2020 08:49:08

Channel 64: (Chain B)



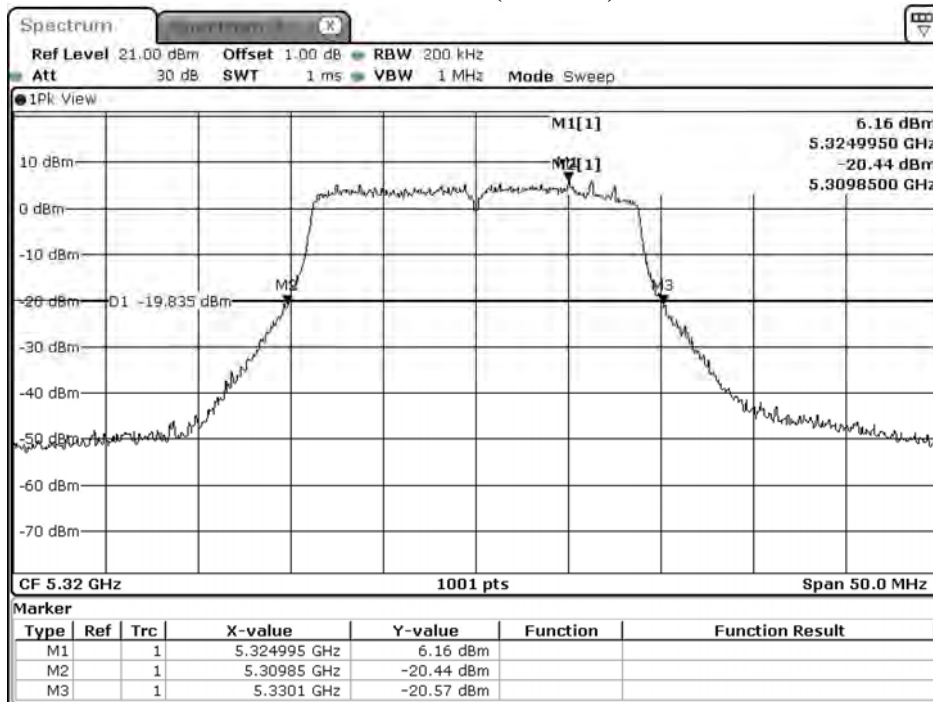
Date: 5.AUG.2020 04:48:55

Channel 64: (Chain C)



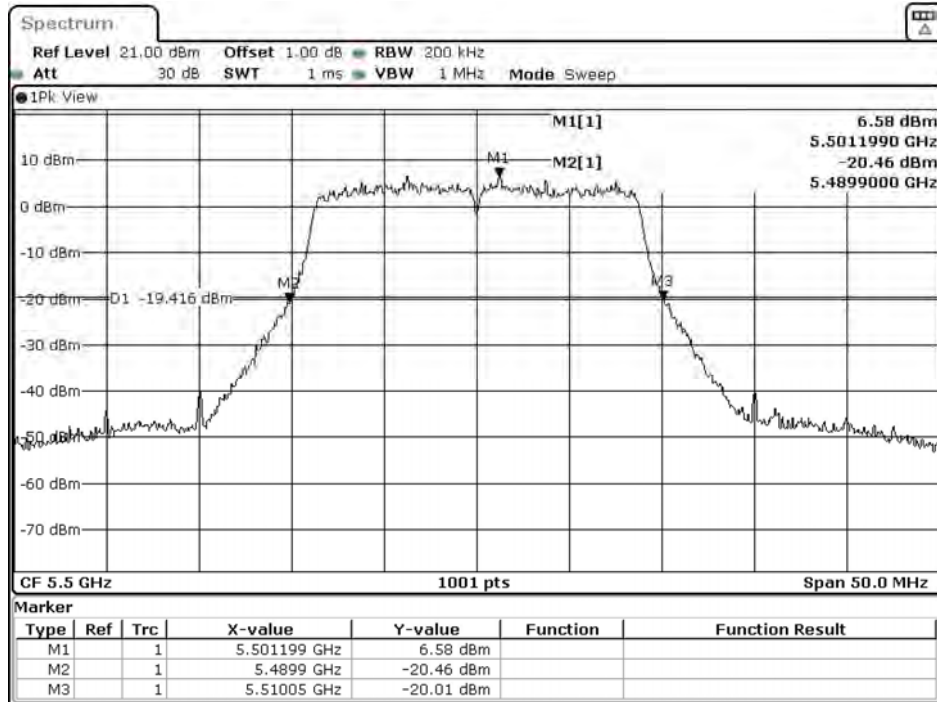
Date: 5.AUG.2020 04:45:56

Channel 64: (Chain D)



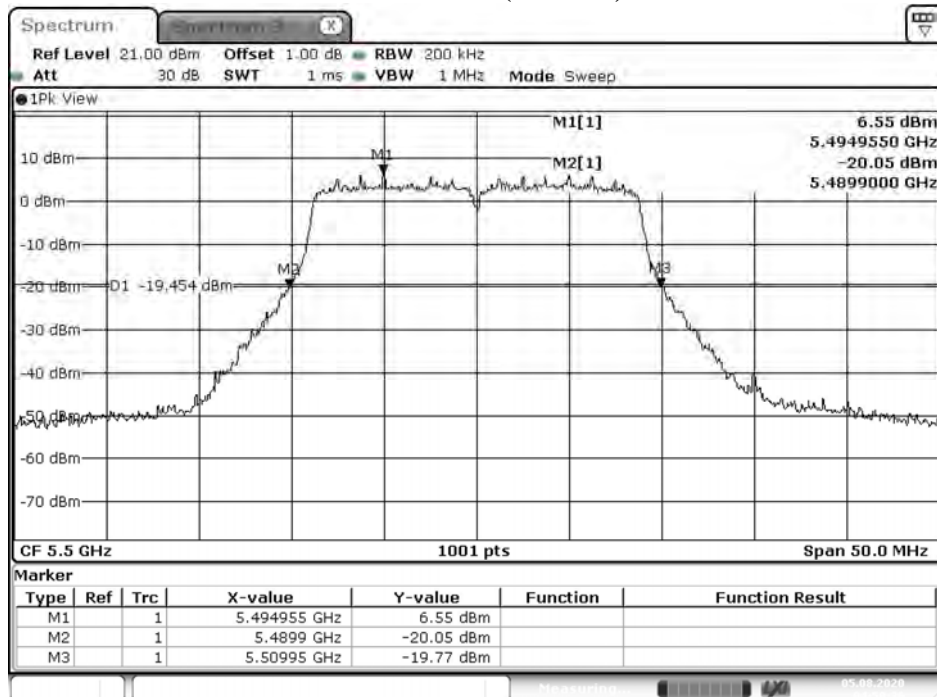
Date: 4.AUG.2020 20:51:23

Channel 100: (Chain A)



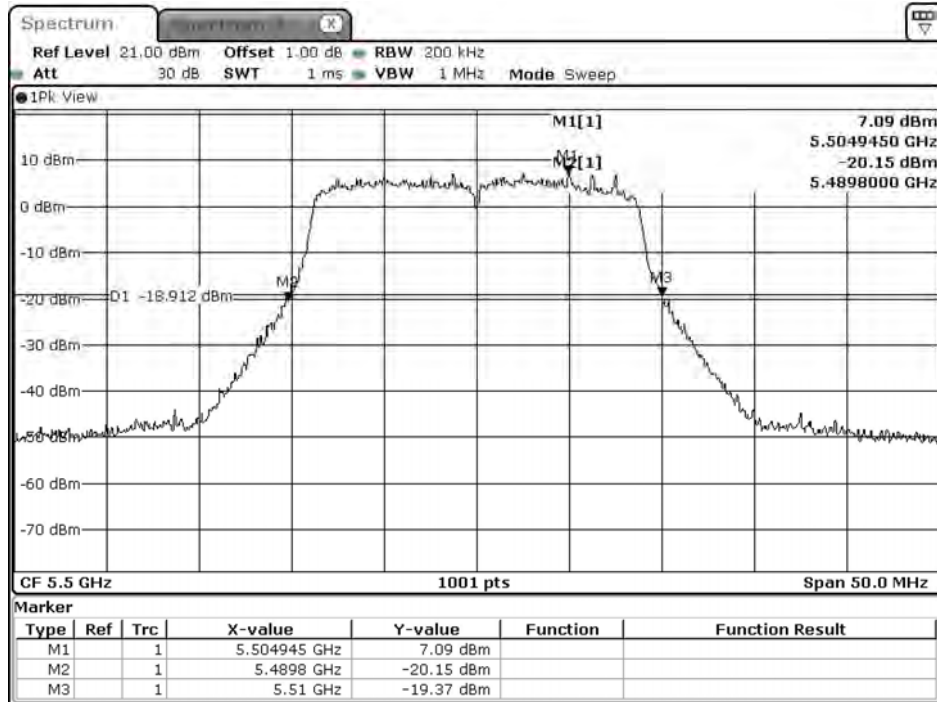
Date: 5.AUG.2020 08:50:49

Channel 100: (Chain B)



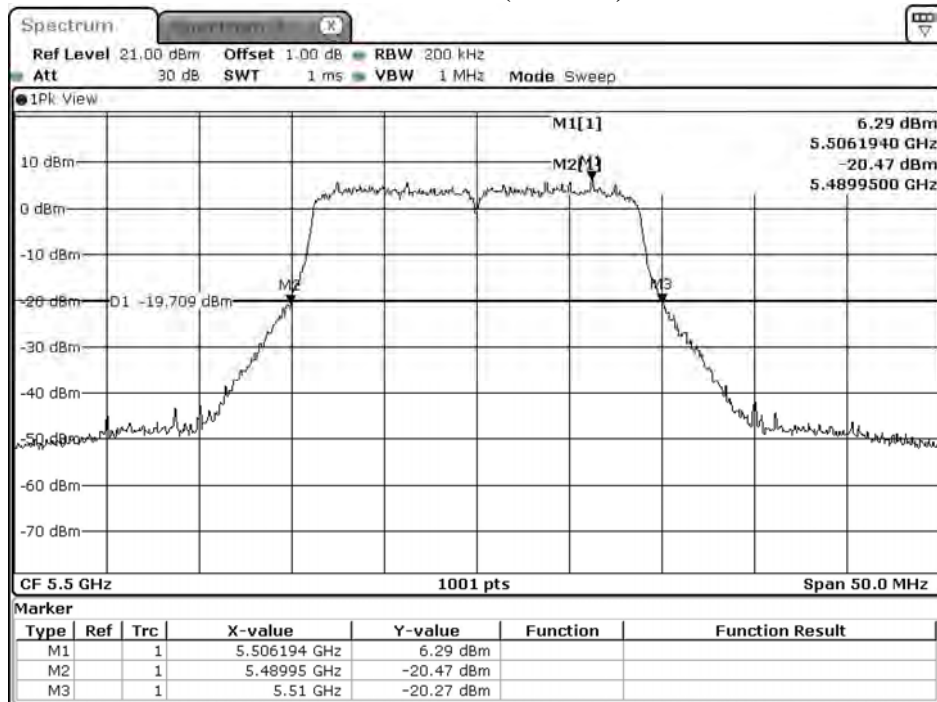
Date: 5.AUG.2020 04:50:36

Channel 100: (Chain C)



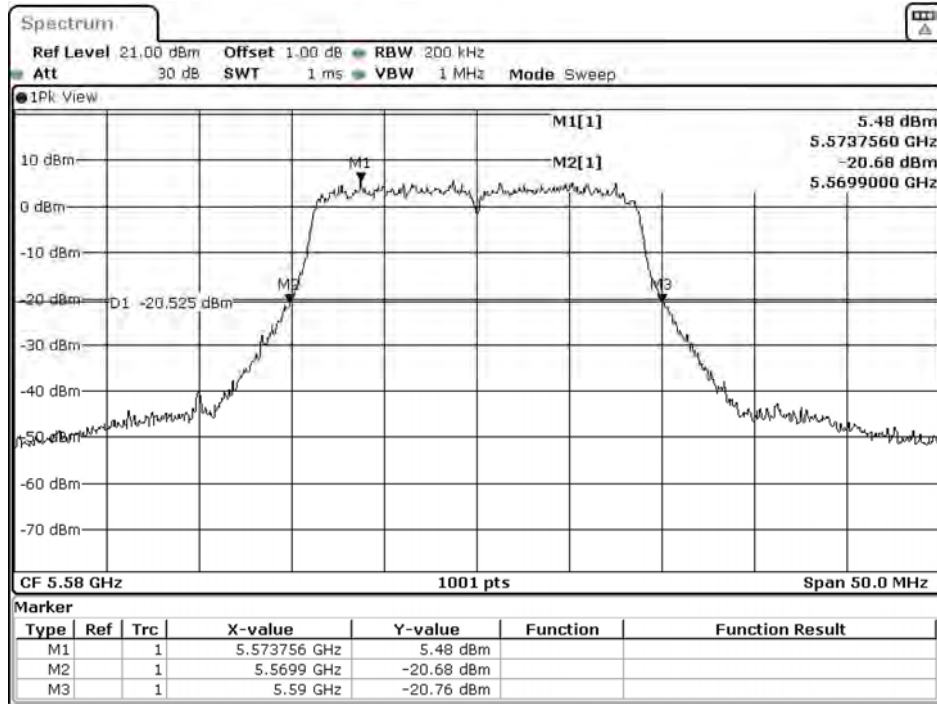
Date: 5.AUG.2020 04:47:38

Channel 100: (Chain D)



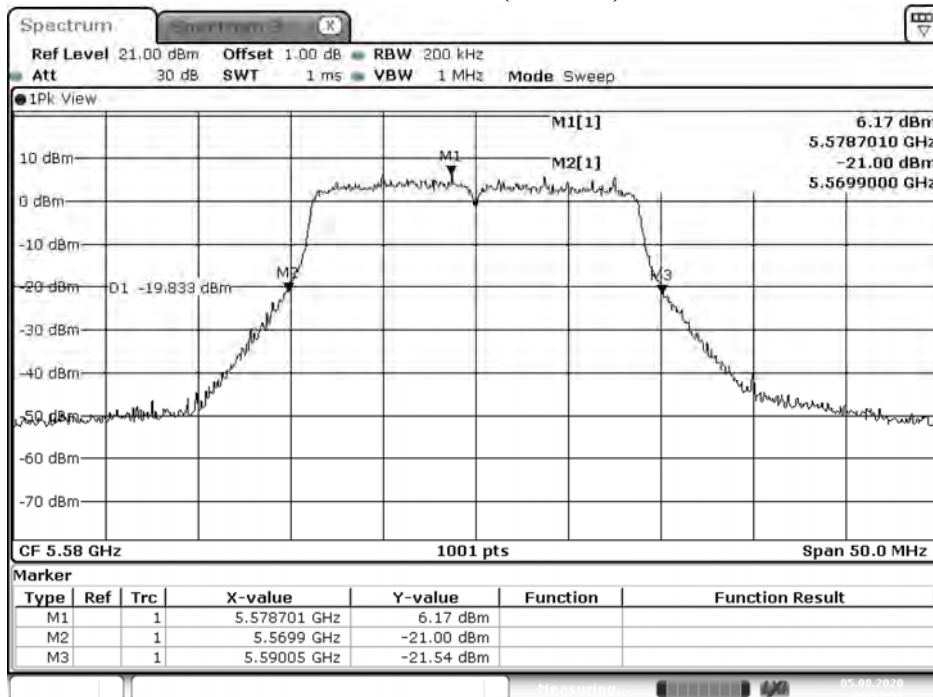
Date: 4.AUG.2020 20:53:04

Channel 116: (Chain A)



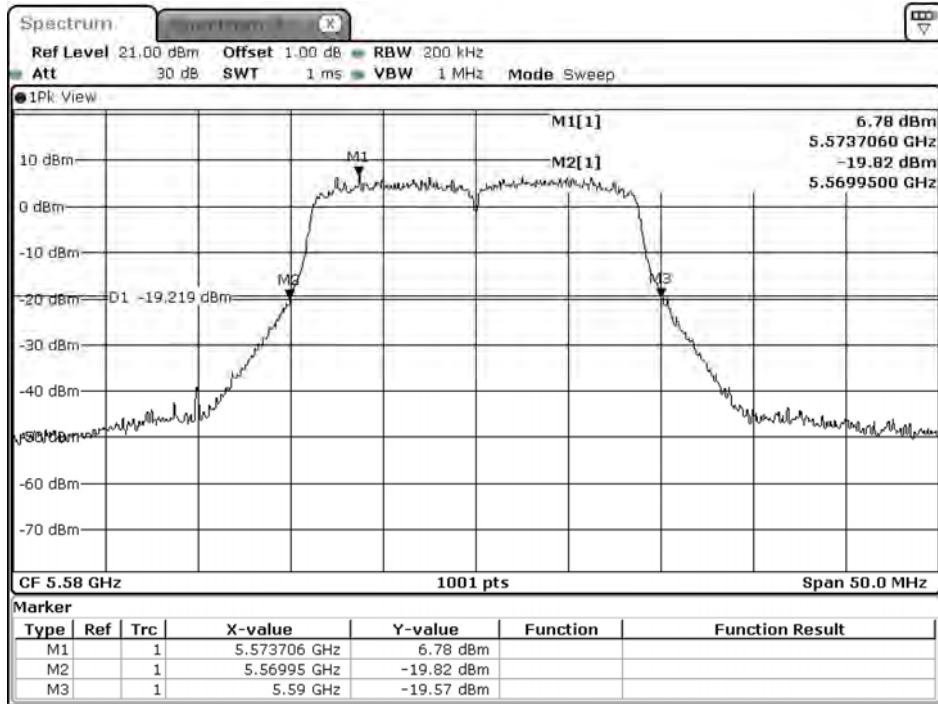
Date: 5.AUG.2020 08:52:04

Channel 116: (Chain B)



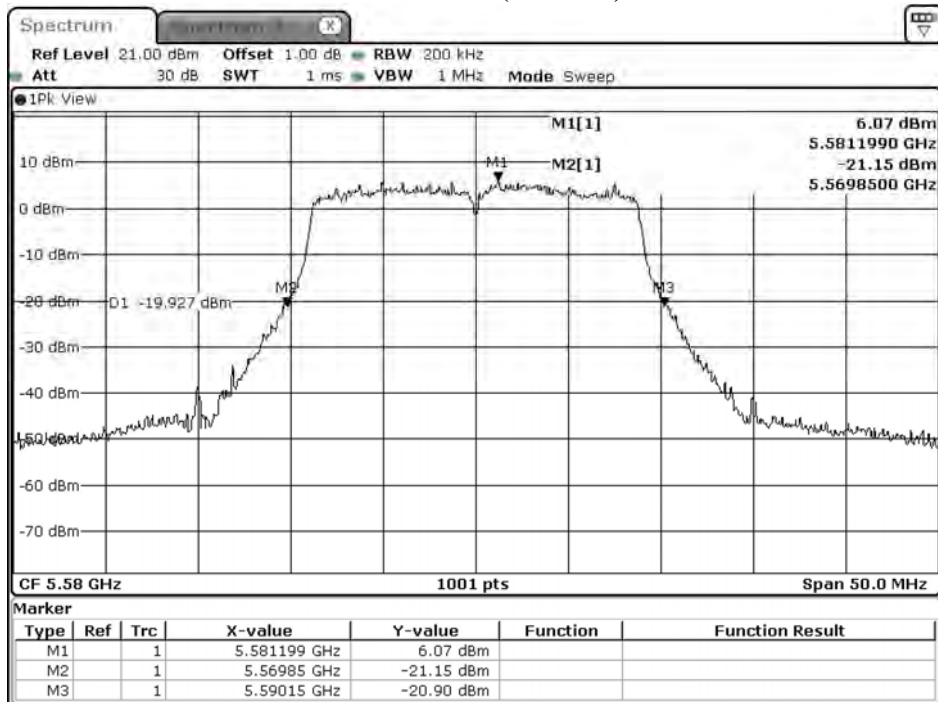
Date: 5.AUG.2020 04:51:52

Channel 116: (Chain C)



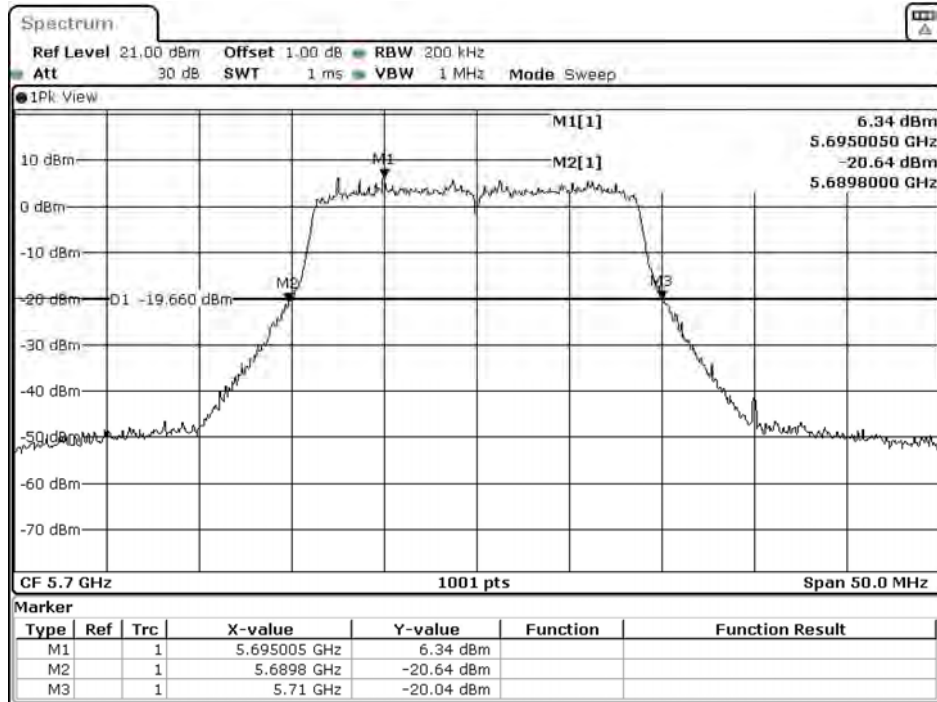
Date: 5.AUG.2020 04:48:53

Channel 116: (Chain D)



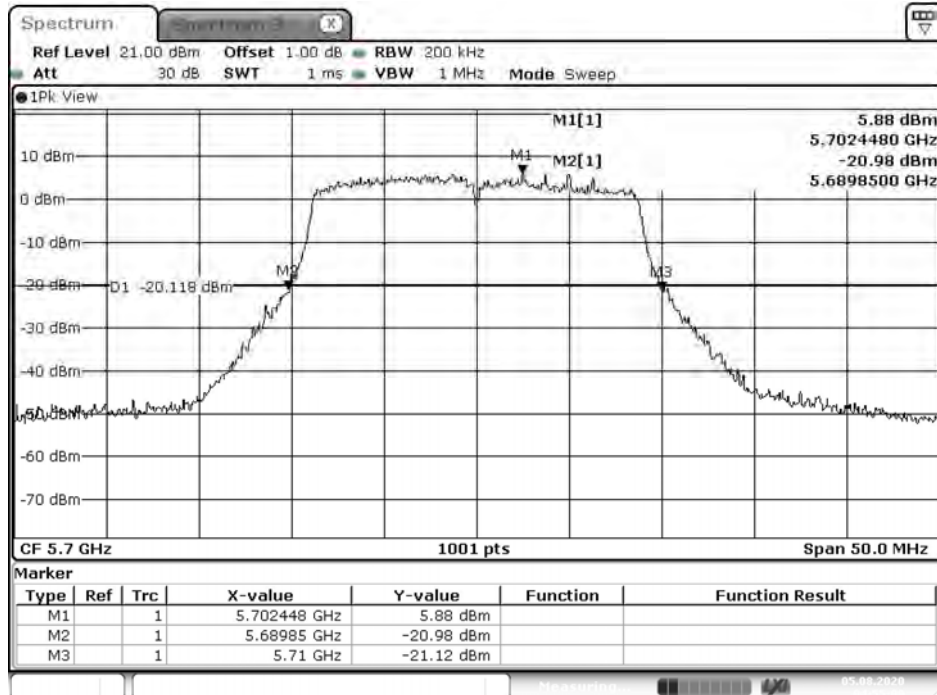
Date: 4.AUG.2020 20:54:19

Channel 140: (Chain A)



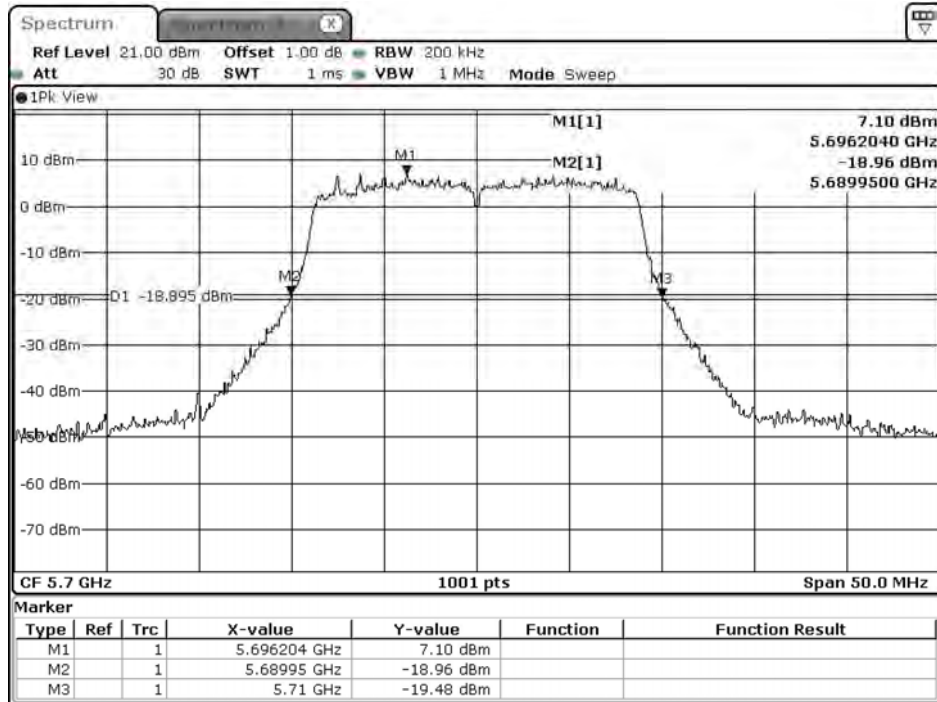
Date: 5.AUG.2020 08:55:12

Channel 140: (Chain B)



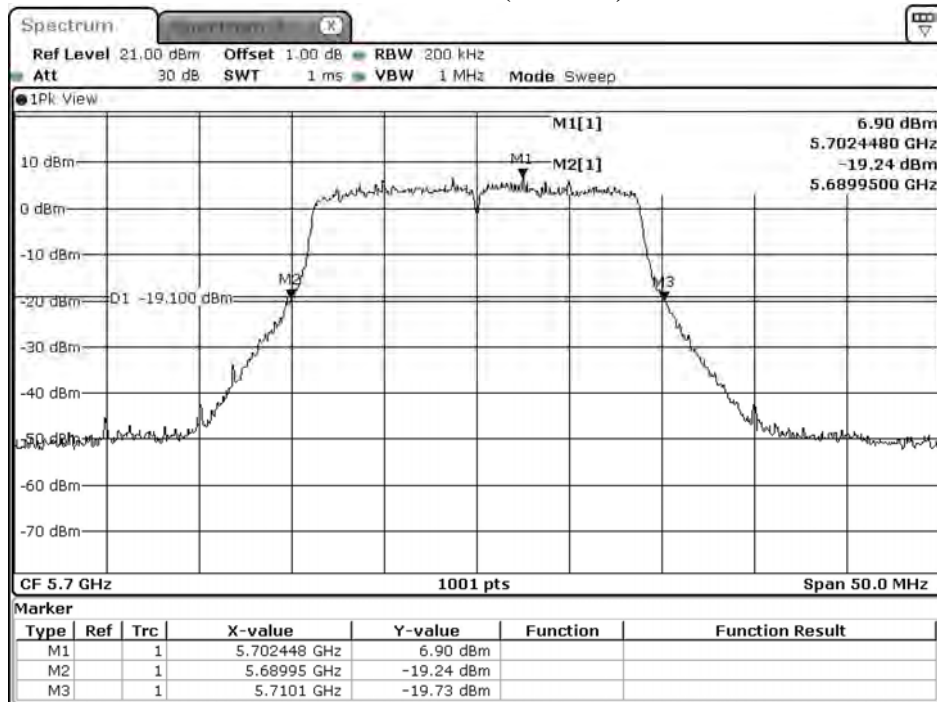
Date: 5.AUG.2020 04:55:00

Channel 140: (Chain C)



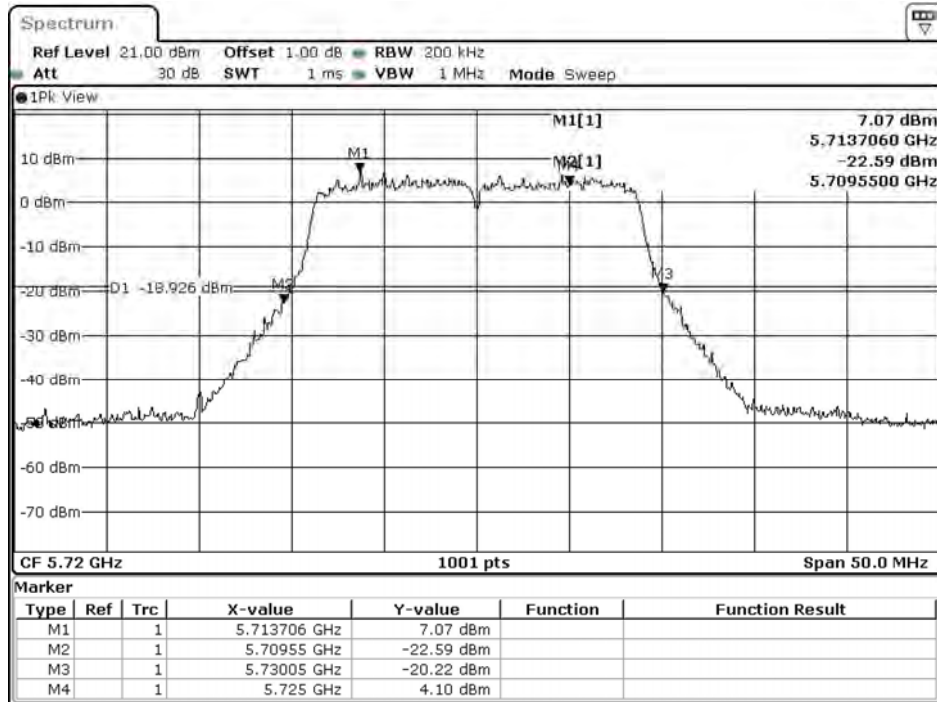
Date: 5.AUG.2020 04:52:01

Channel 140: (Chain D)



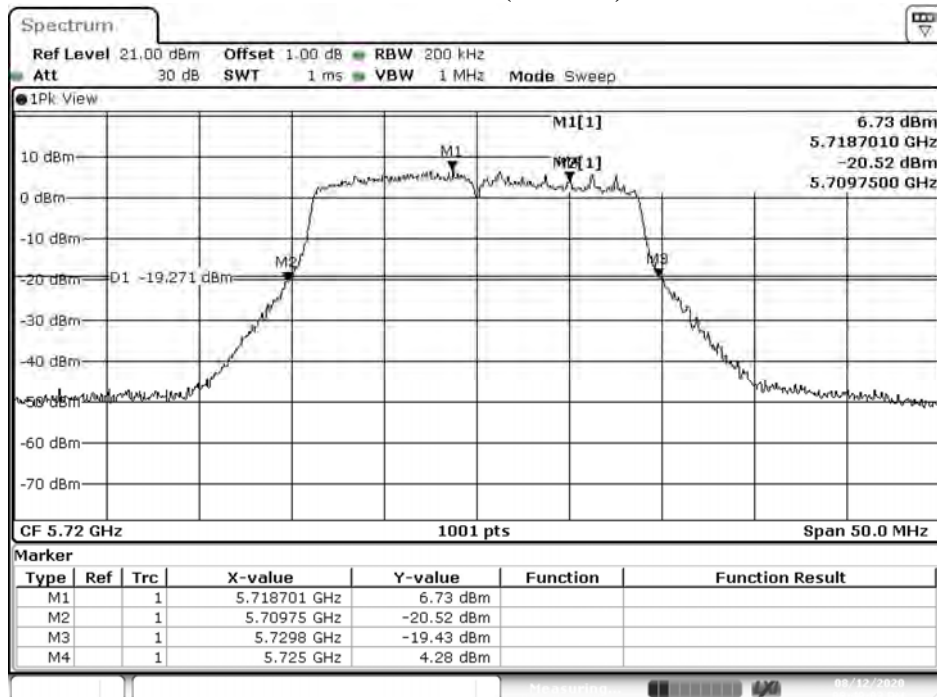
Date: 4.AUG.2020 20:57:28

Channel 144: (Chain A)



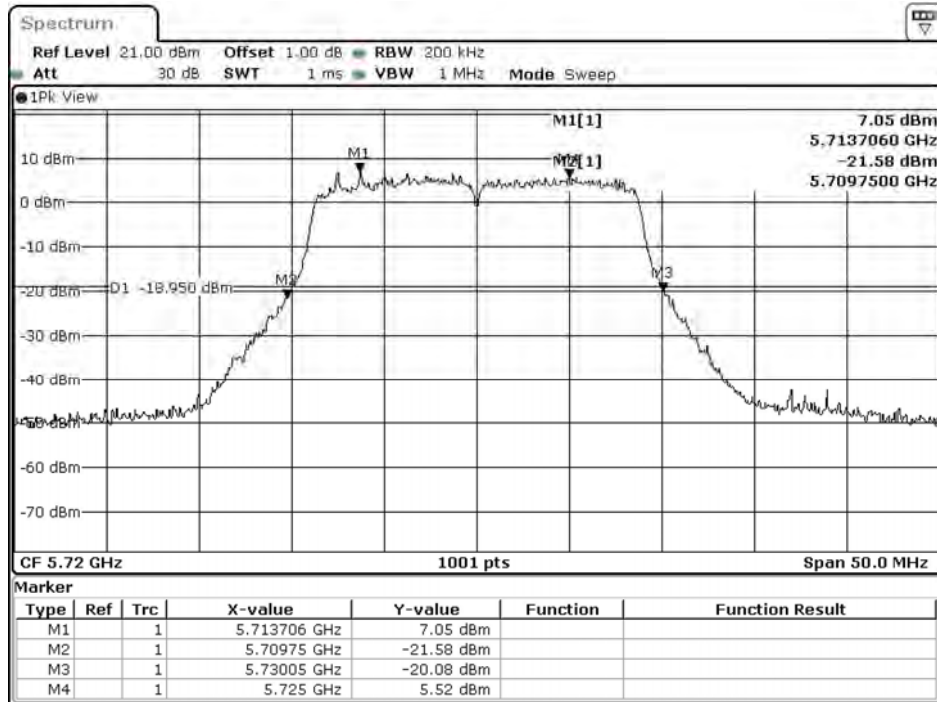
Date: 13.AUG.2020 08:46:57

Channel 144: (Chain B)



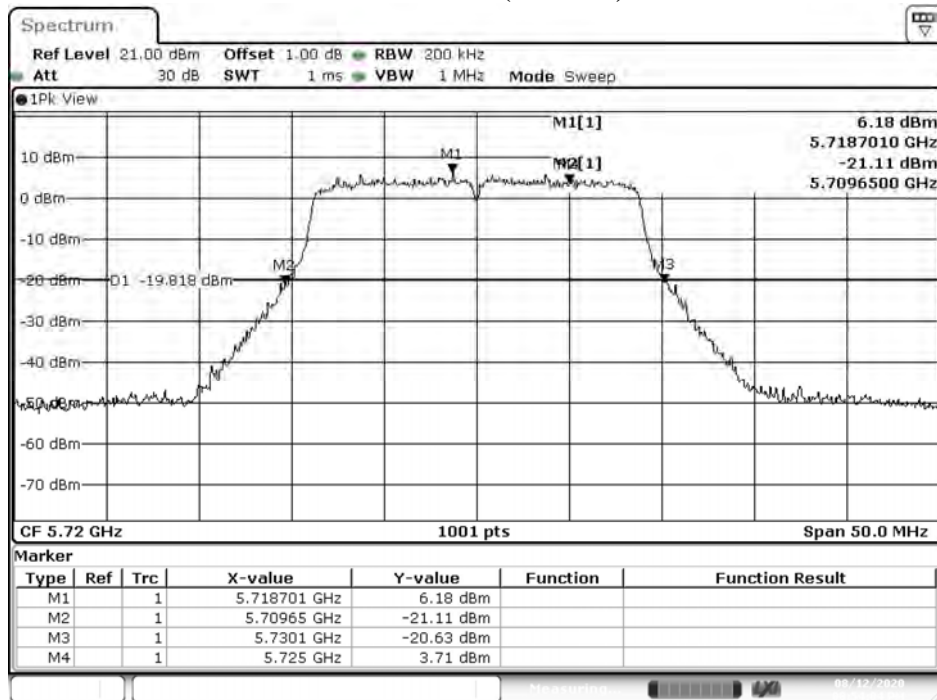
Date: 12.AUG.2020 20:49:03

Channel 144: (Chain C)



Date: 13.AUG.2020 08:51:26

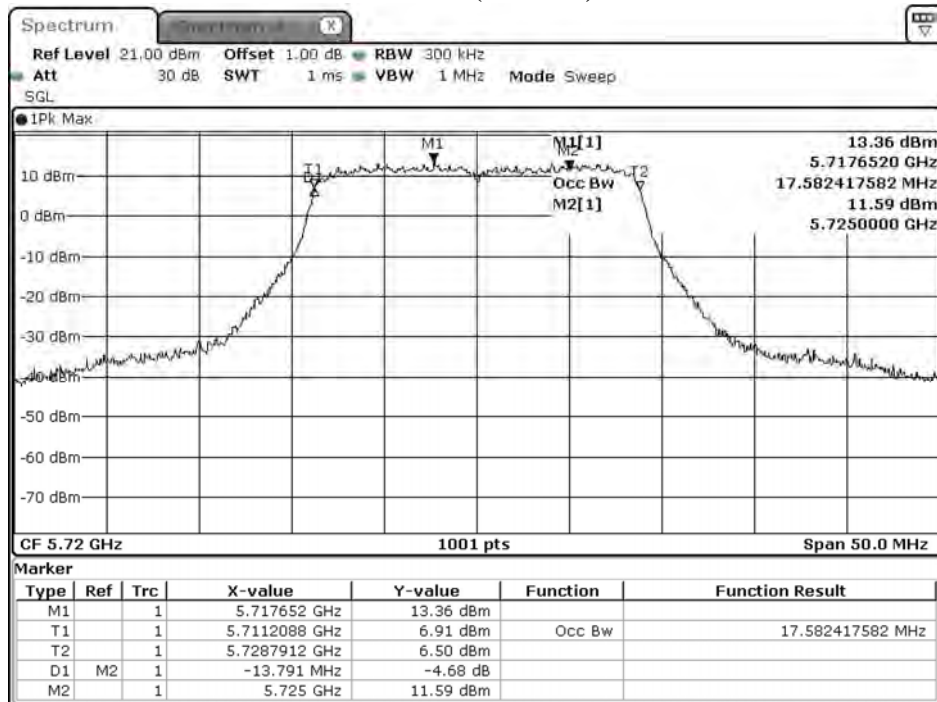
Channel 144: (Chain D)



Date: 12.AUG.2020 20:54:04

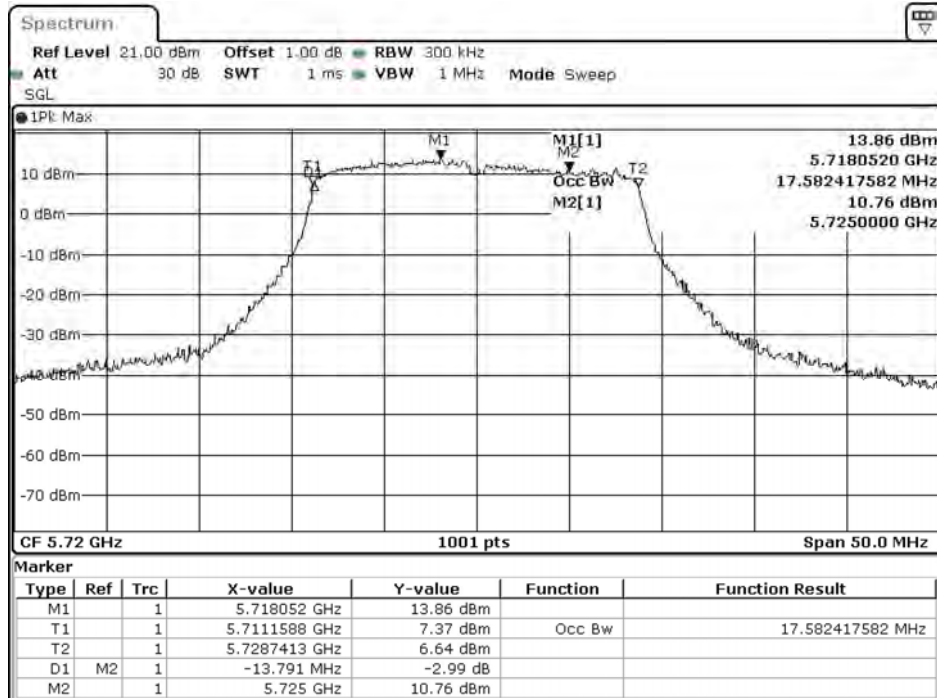
99% Occupied Bandwidth:

Channel 144: (Chain A)



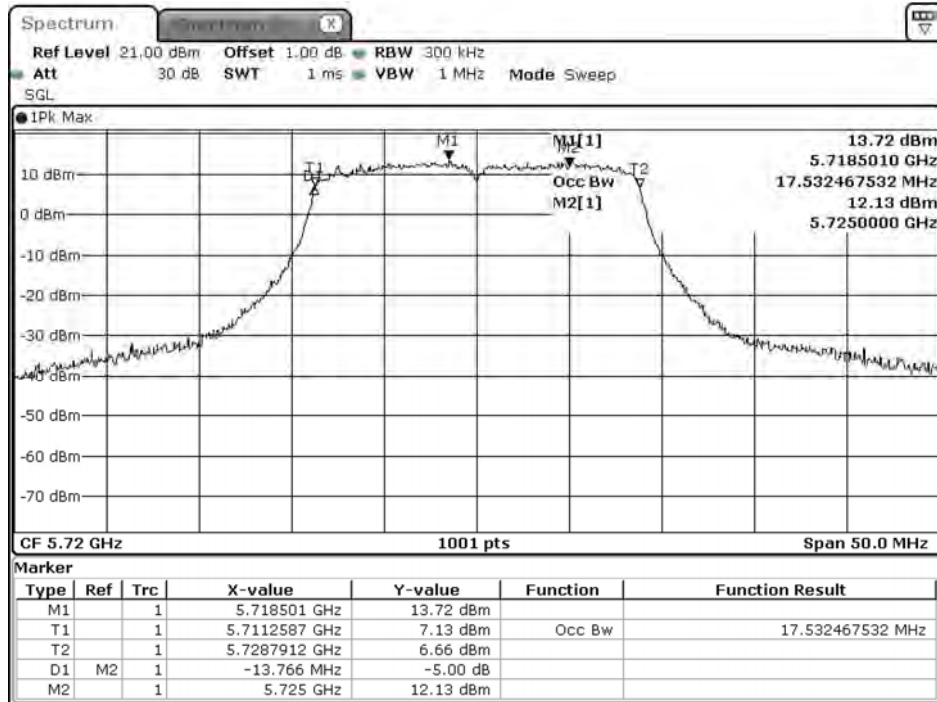
Date: 6.AUG.2020 03:24:26

Channel 144: (Chain B)



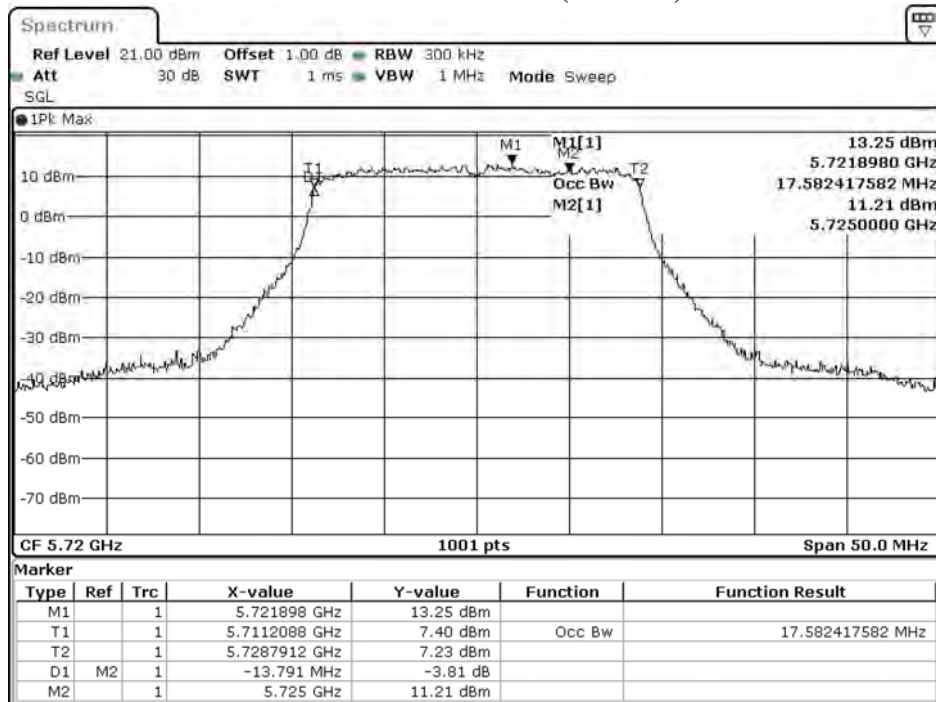
Date: 6.AUG.2020 03:27:31

Channel 144: (Chain C)



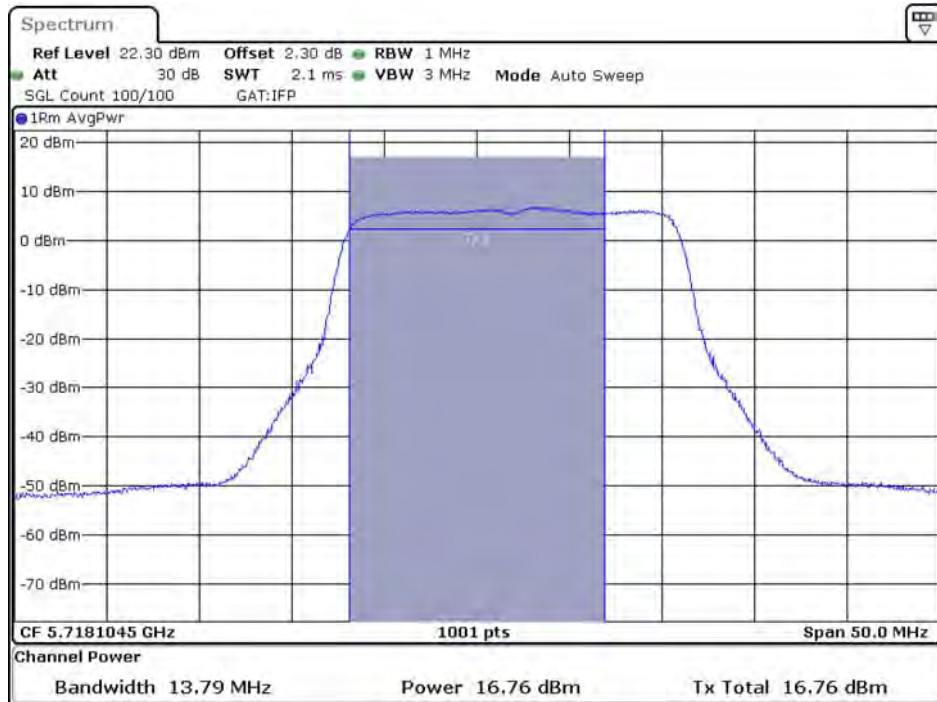
Date: 6.AUG.2020 07:27:49

Channel 144: (Chain D)



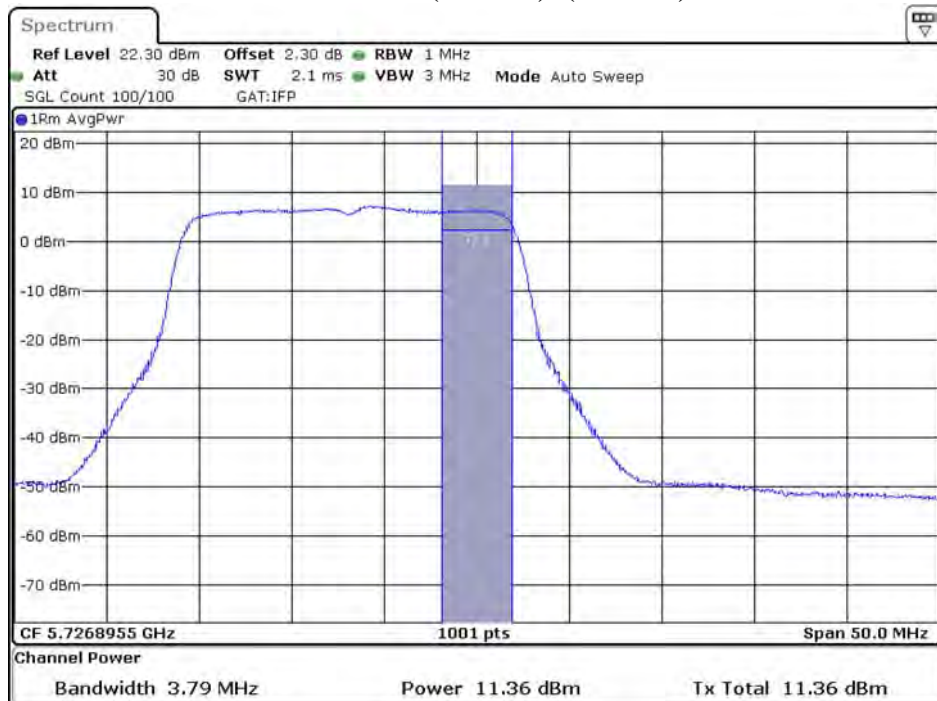
Date: 5.AUG.2020 19:29:59

**Maximum conducted output power:
Channel 144 (U-NII-2C): (Chain A)**



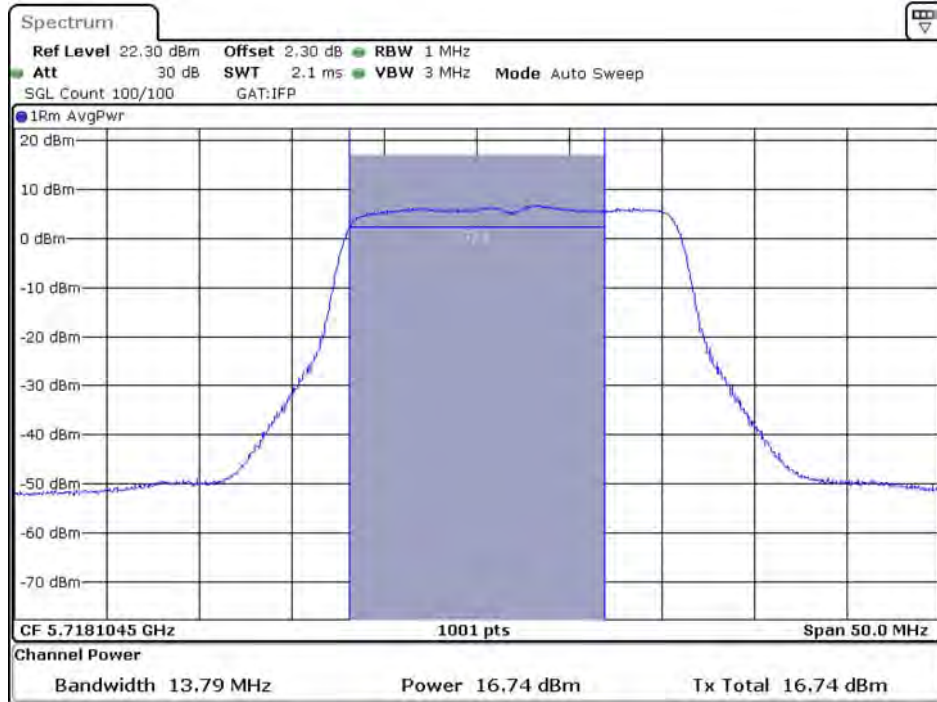
Date: 4.SEP.2020 15:06:00

**Maximum conducted output power:
Channel 144 (U-NII-3): (Chain A)**



Date: 4.SEP.2020 15:10:01

**Maximum conducted output power:
Channel 144 (U-NII-2C): (Chain B)**



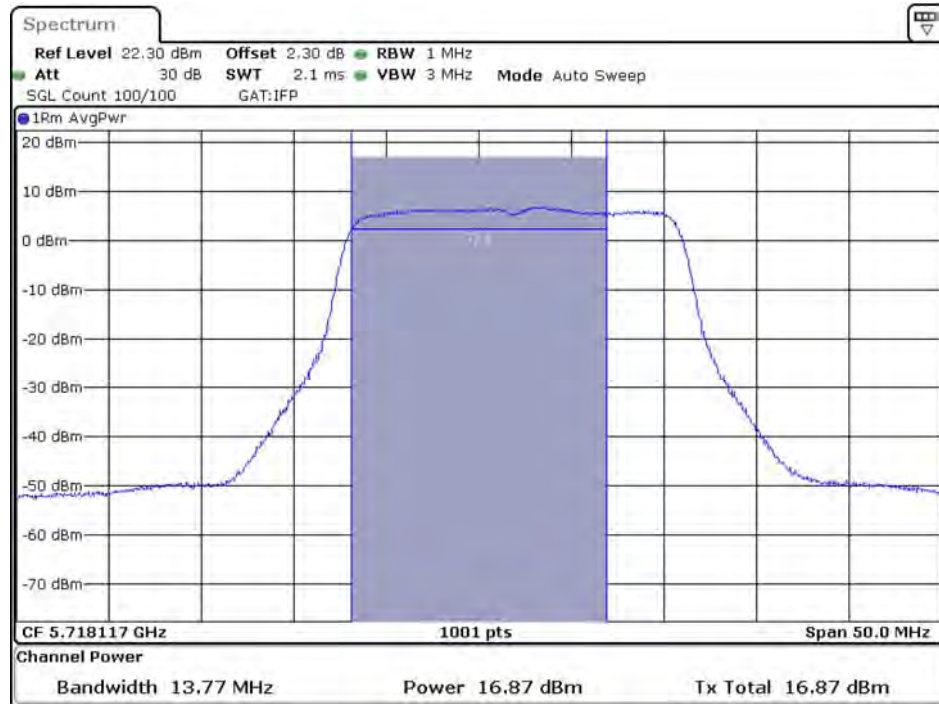
Date: 4.SEP.2020 15:07:05

**Maximum conducted output power:
Channel 144 (U-NII-3): (Chain B)**



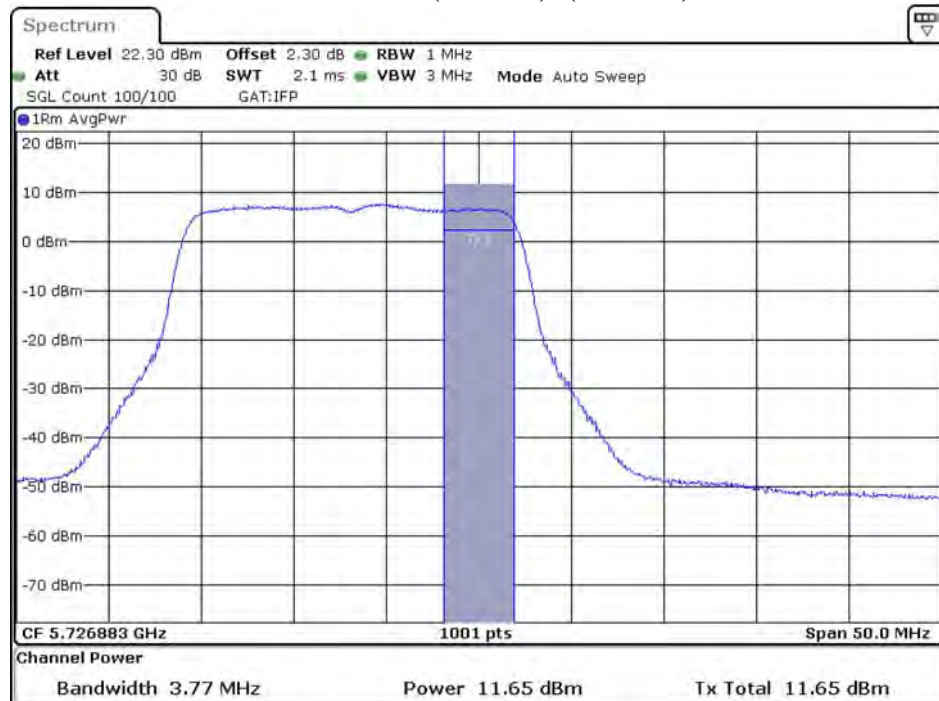
Date: 4.SEP.2020 15:10:51

**Maximum conducted output power:
Channel 144 (U-NII-2C): (Chain C)**



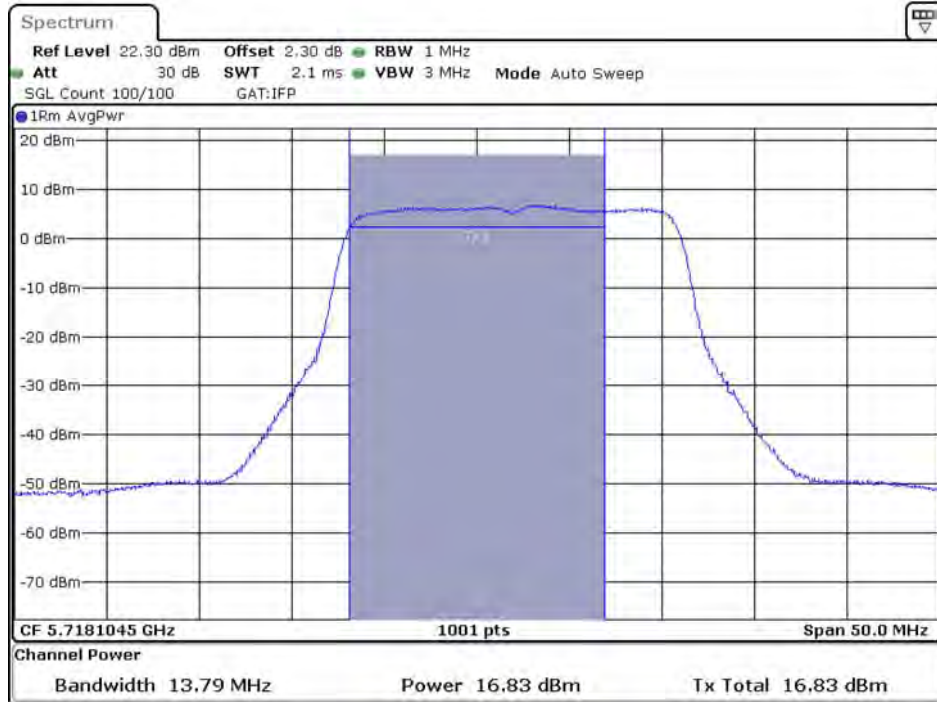
Date: 4.SEP.2020 15:07:53

**Maximum conducted output power:
Channel 144 (U-NII-3): (Chain C)**



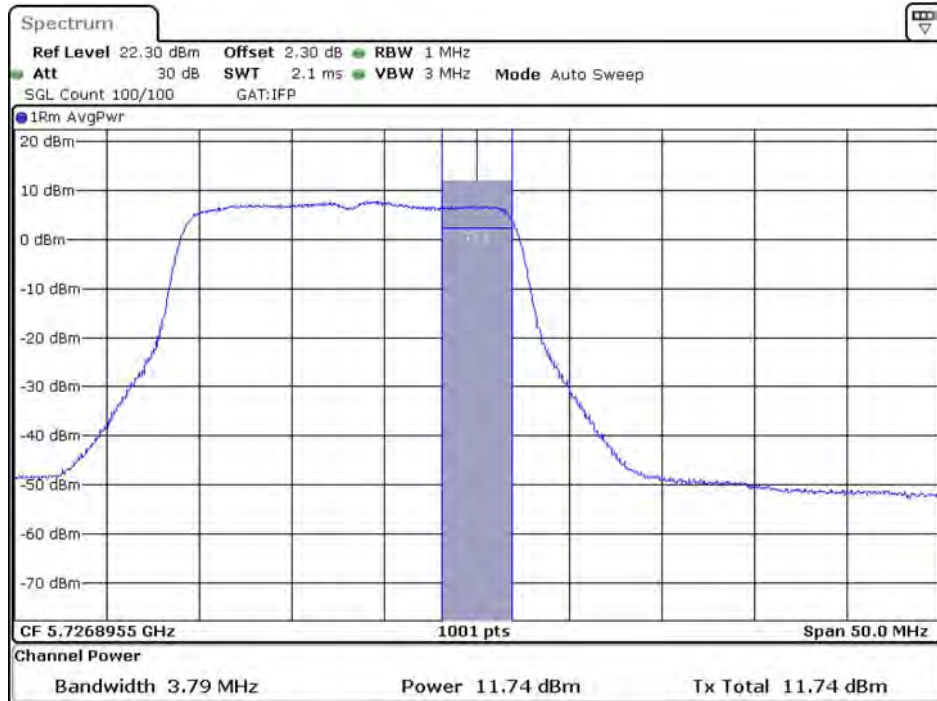
Date: 4.SEP.2020 15:11:58

**Maximum conducted output power:
Channel 144 (U-NII-2C): (Chain D)**



Date: 4.SEP.2020 15:08:40

**Maximum conducted output power:
Channel 144 (U-NII-3): (Chain D)**



Date: 4.SEP.2020 15:12:53

Product : LV55
 Test Item : Maximum conducted output power
 Test Mode : Mode 5: Transmit (802.11ac-40MBW-CDD)
 Test Date : 2020/09/04

Chain A

Cable loss=1.0dB		Maximum conducted output power									
Channel No	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
54	5270	17.82	--	--	--	--	--	--	--	--	--
62	5310	17.43	17.38	17.32	17.28	17.23	17.20	17.17	17.11	17.07	17.01
102	5510	17.41	--	--	--	--	--	--	--	--	--
110	5550	17.58	17.52	17.47	17.43	17.38	17.33	17.29	17.22	17.15	17.11
134	5670	17.53	--	--	--	--	--	--	--	--	--
142(U-NII-2C)	5710	17.01	--	--	--	--	--	--	--	--	--
142(U-NII-3)	5710	7.29	--	--	--	--	--	--	--	--	--

Chain B

Cable loss=1.0dB		Maximum conducted output power									
Channel No	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
54	5270	17.93	--	--	--	--	--	--	--	--	--
62	5310	17.52	17.49	17.43	17.39	17.34	17.29	17.26	17.22	17.18	17.14
102	5510	17.18	--	--	--	--	--	--	--	--	--
110	5550	17.32	17.26	17.22	17.17	17.13	17.07	17.03	16.96	16.92	16.88
134	5670	17.87	--	--	--	--	--	--	--	--	--
142(U-NII-2C)	5710	17.01	--	--	--	--	--	--	--	--	--
142(U-NII-3)	5710	7.49	--	--	--	--	--	--	--	--	--

Chain C

Cable loss=1.0dB		Maximum conducted output power									
Channel No	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
54	5270	17.96	--	--	--	--	--	--	--	--	--
62	5310	17.58	17.55	17.52	17.46	17.41	17.38	17.34	17.27	17.23	17.16
102	5510	17.82	--	--	--	--	--	--	--	--	--
110	5550	17.55	17.5	17.45	17.38	17.34	17.31	17.27	17.20	17.15	17.09
134	5670	17.64	--	--	--	--	--	--	--	--	--
142(U-NII-2C)	5710	17.41	--	--	--	--	--	--	--	--	--
142(U-NII-3)	5710	7.18	--	--	--	--	--	--	--	--	--

Chain D

Cable loss=1.0dB		Maximum conducted output power									
Channel No	Frequency (MHz)	For different Data Rate (MCS index)									
		0	1	2	3	4	5	6	7	8	9
54	5270	17.77	--	--	--	--	--	--	--	--	--
62	5310	17.52	17.49	17.43	17.39	17.36	17.31	17.27	17.23	17.18	17.11
102	5510	17.53	--	--	--	--	--	--	--	--	--
110	5550	17.48	17.41	17.36	17.29	17.26	17.20	17.17	17.12	17.05	17.00
134	5670	17.67	--	--	--	--	--	--	--	--	--
142(U-NII-2C)	5710	17.87	--	--	--	--	--	--	--	--	--
142(U-NII-3)	5710	7.33	--	--	--	--	--	--	--	--	--

Maximum conducted output power Measurement:

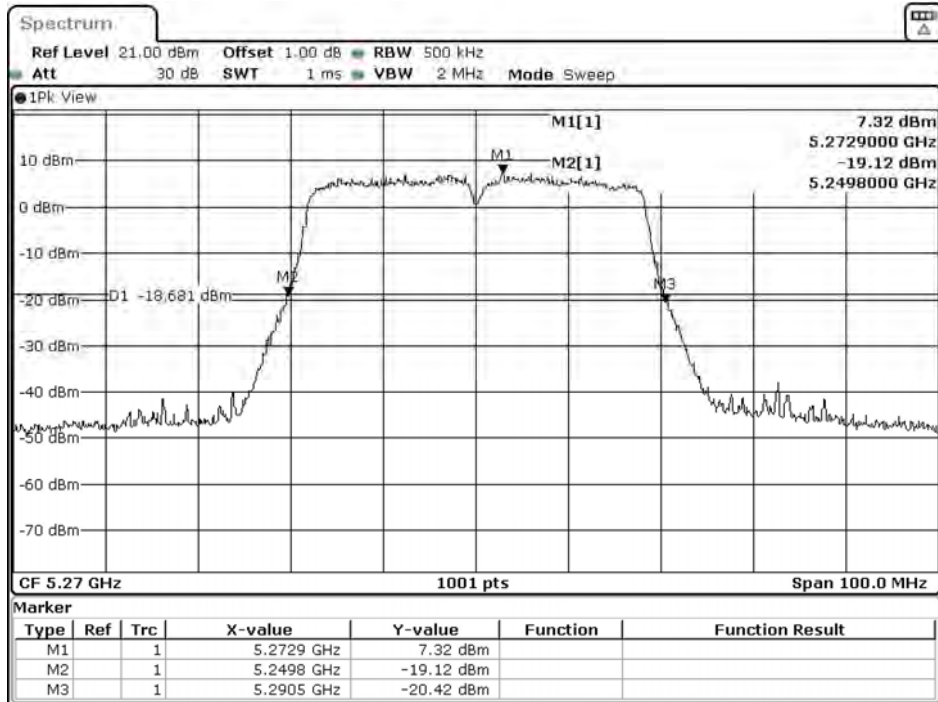
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
54	5270	40.300	17.82	17.93	17.96	17.77	23.89	24	27.05	Pass
62	5310	40.300	17.43	17.52	17.58	17.52	23.53	24	27.05	Pass
102	5510	40.300	17.41	17.18	17.82	17.53	23.51	24	27.05	Pass
110	5550	40.400	17.58	17.32	17.55	17.48	23.50	24	27.06	Pass
134	5670	40.500	17.53	17.87	17.64	17.67	23.70	24	27.07	Pass
142(U-NII-2C)	5710	35.600	17.01	17.01	17.41	17.87	23.36	24	26.51	Pass
142(U-NII-3)	5710	--	7.29	7.49	7.18	7.33	13.34	30	--	Pass

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 26dB Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

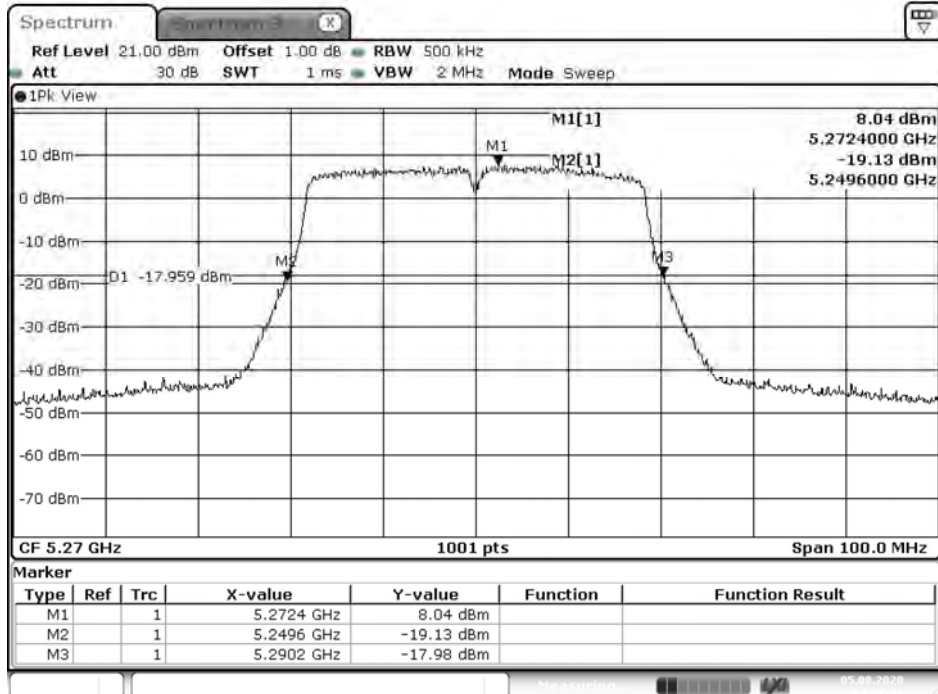
26dB Occupied Bandwidth:

Channel 54 (Chain A)



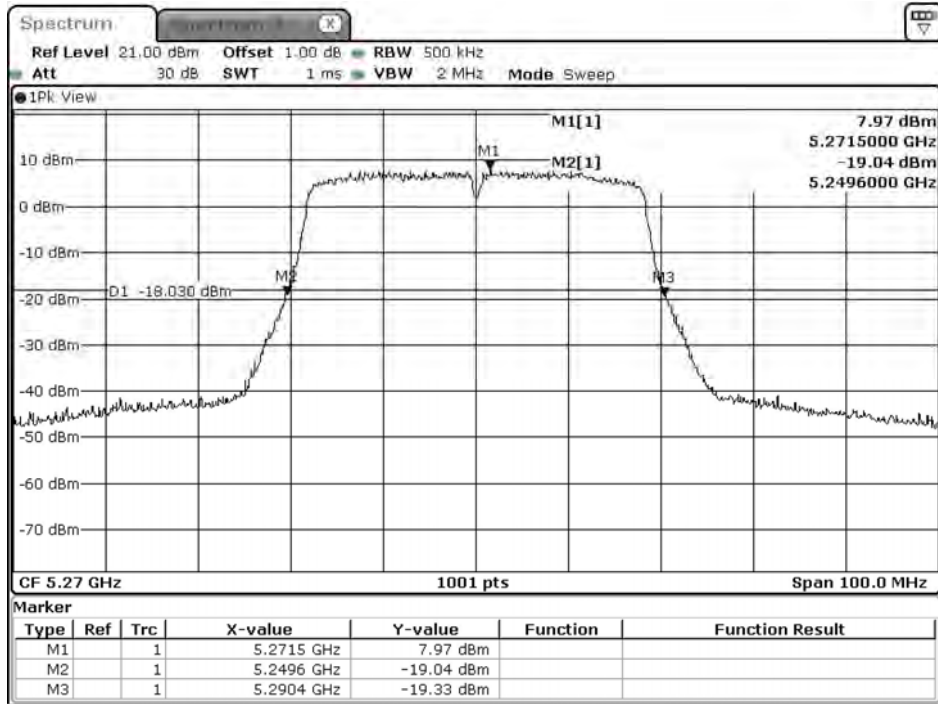
Date: 5.AUG.2020 08:57:32

Channel 54 (Chain B)



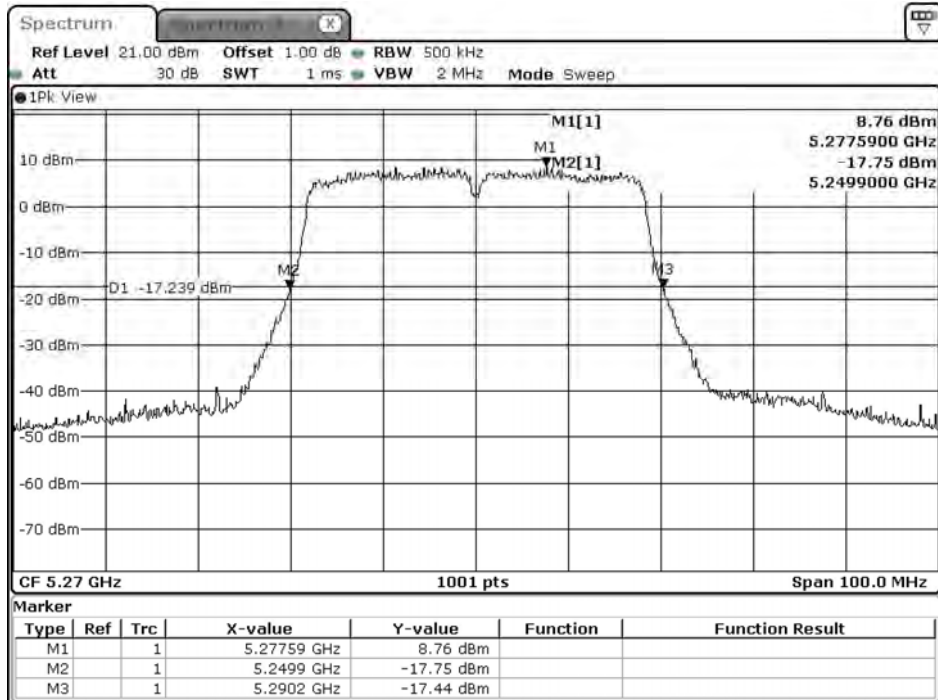
Date: 5.AUG.2020 04:57:20

Channel 54 (Chain C)



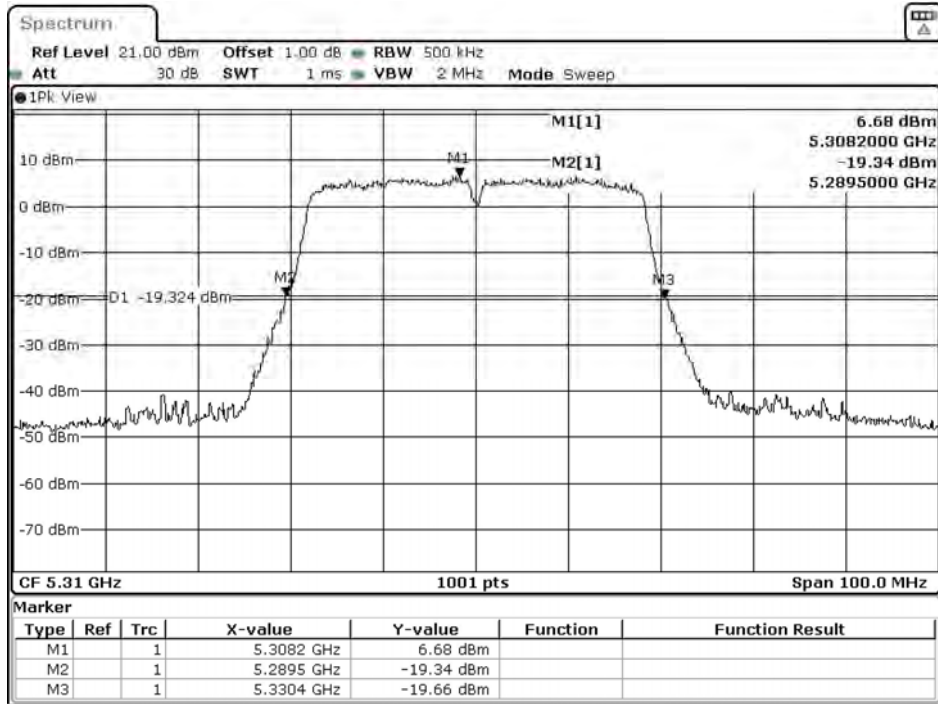
Date: 5.AUG.2020 04:54:21

Channel 54 (Chain D)



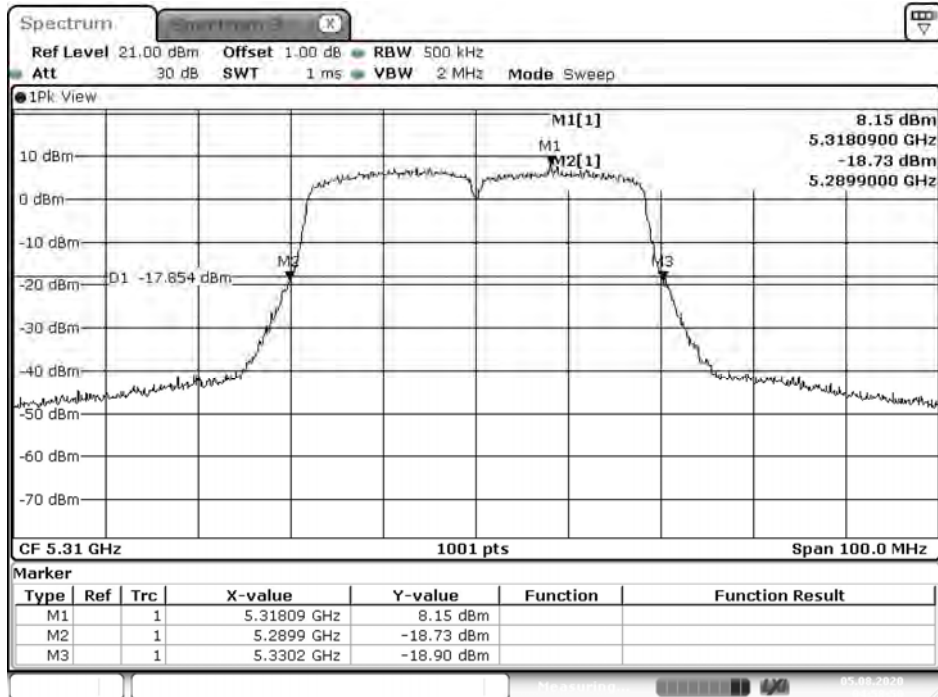
Date: 4.AUG.2020 20:59:47

Channel 62 (Chain A)



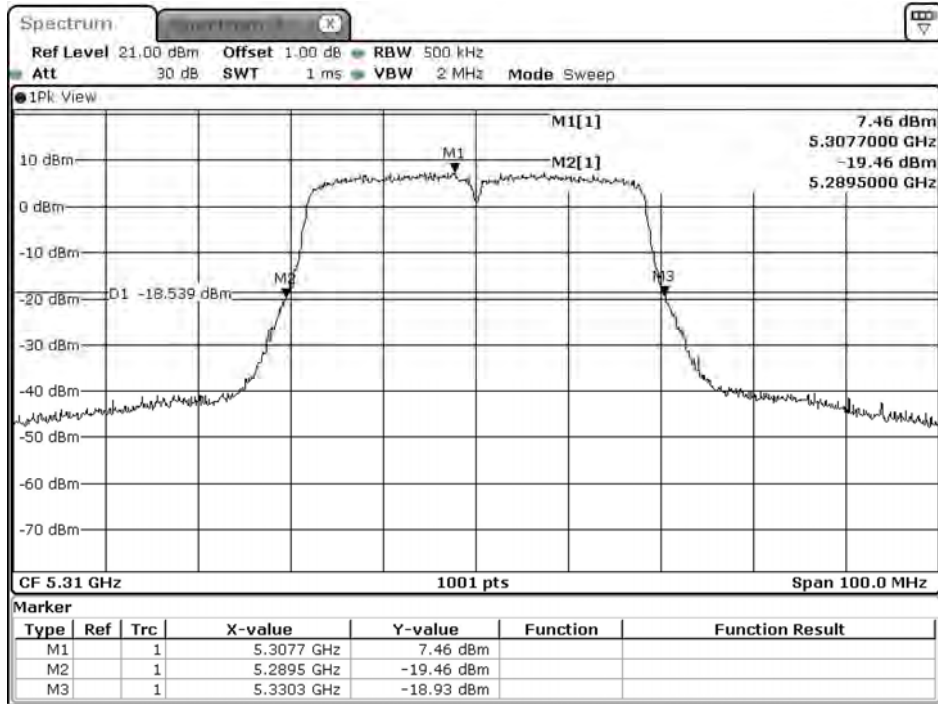
Date: 5.AUG.2020 08:59:02

Channel 62 (Chain B)



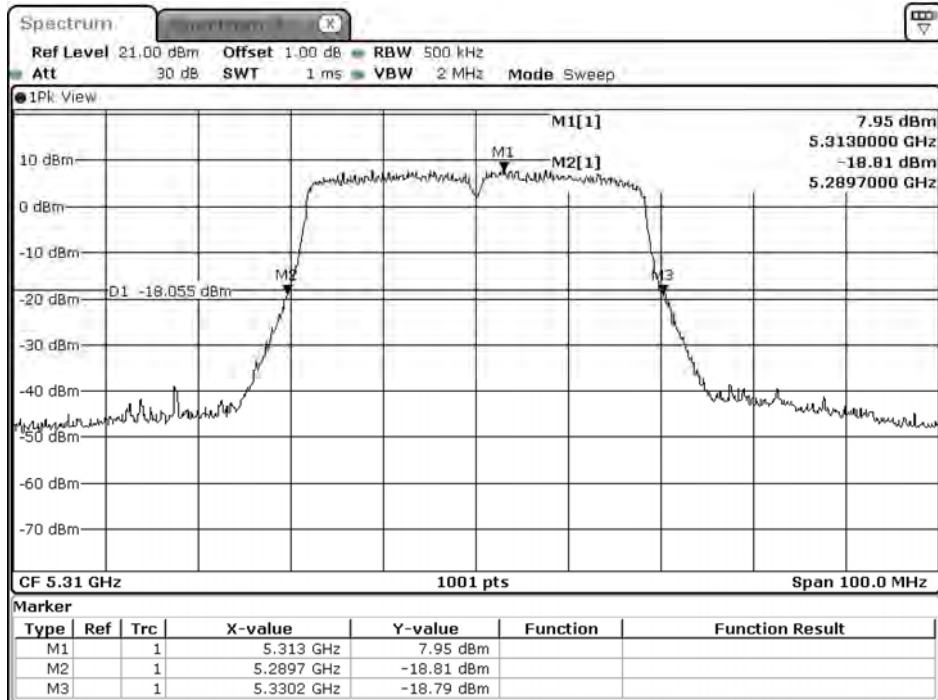
Date: 5.AUG.2020 04:58:50

Channel 62 (Chain C)



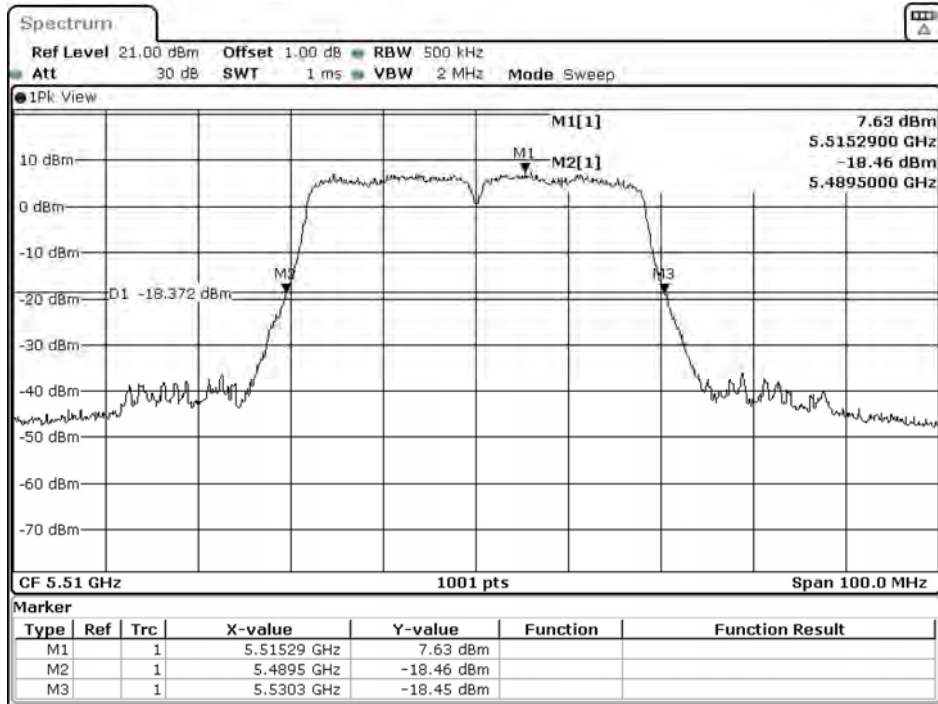
Date: 5.AUG.2020 04:55:51

Channel 62 (Chain D)



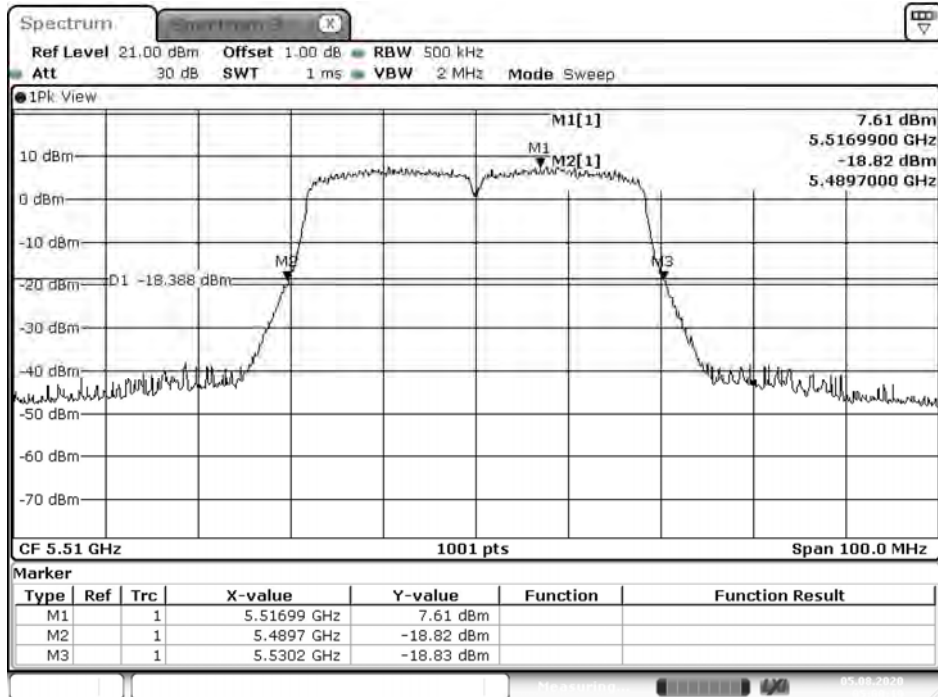
Date: 4.AUG.2020 21:01:18

Channel 102 (Chain A)



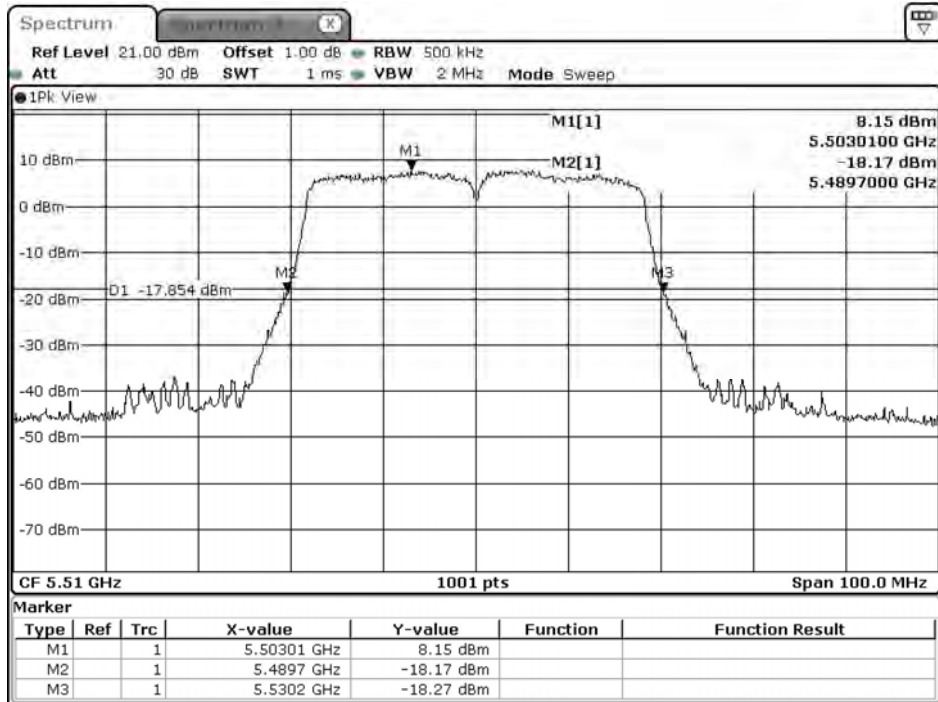
Date: 5.AUG.2020 09:00:31

Channel 102 (Chain B)



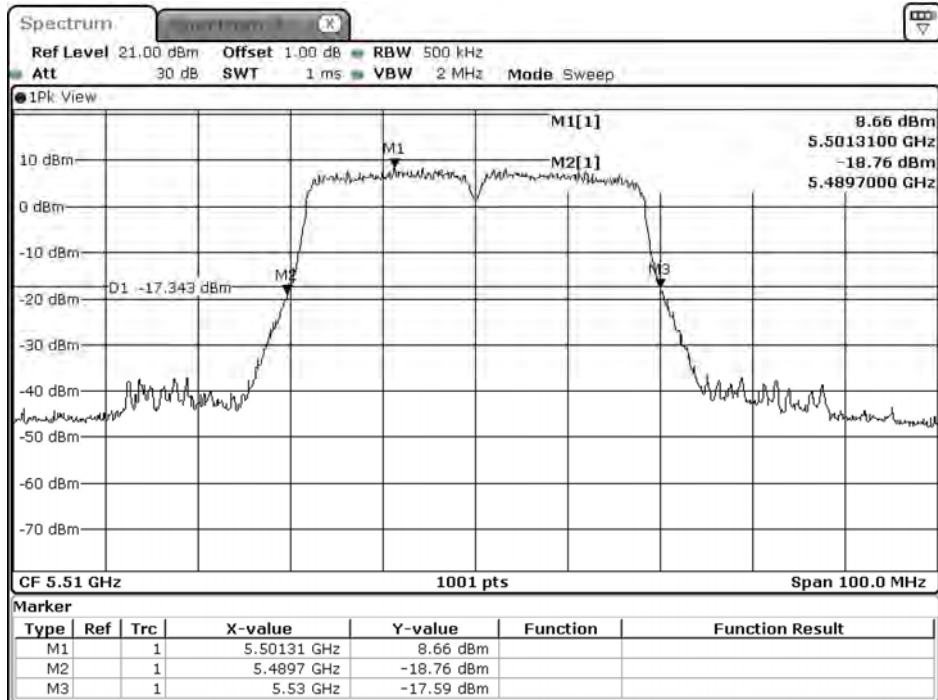
Date: 5.AUG.2020 05:00:19

Channel 102 (Chain C)



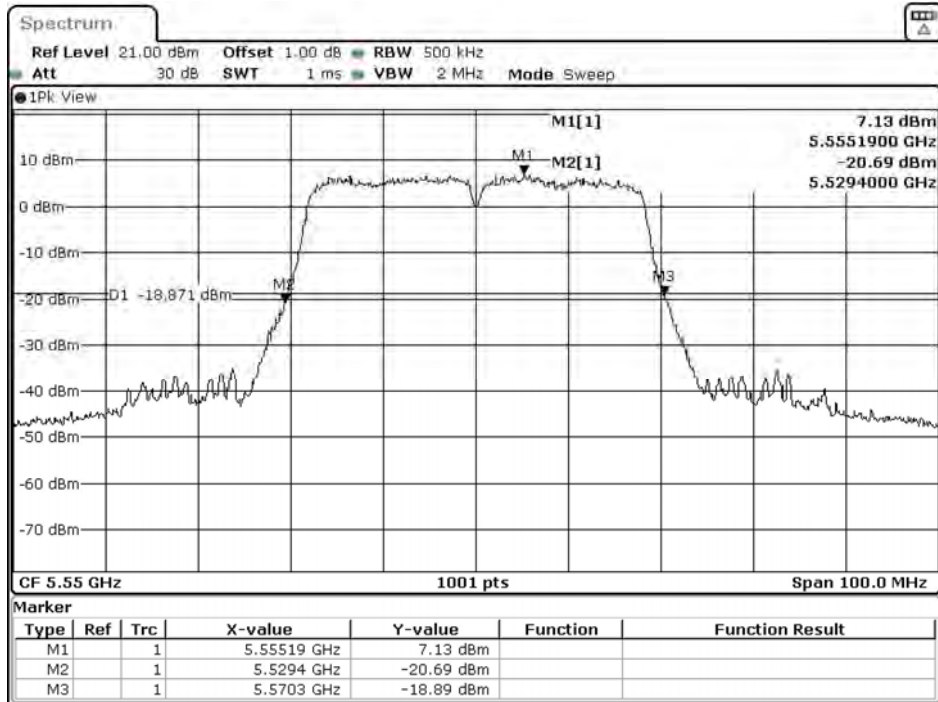
Date: 5.AUG.2020 04:57:37

Channel 102 (Chain D)



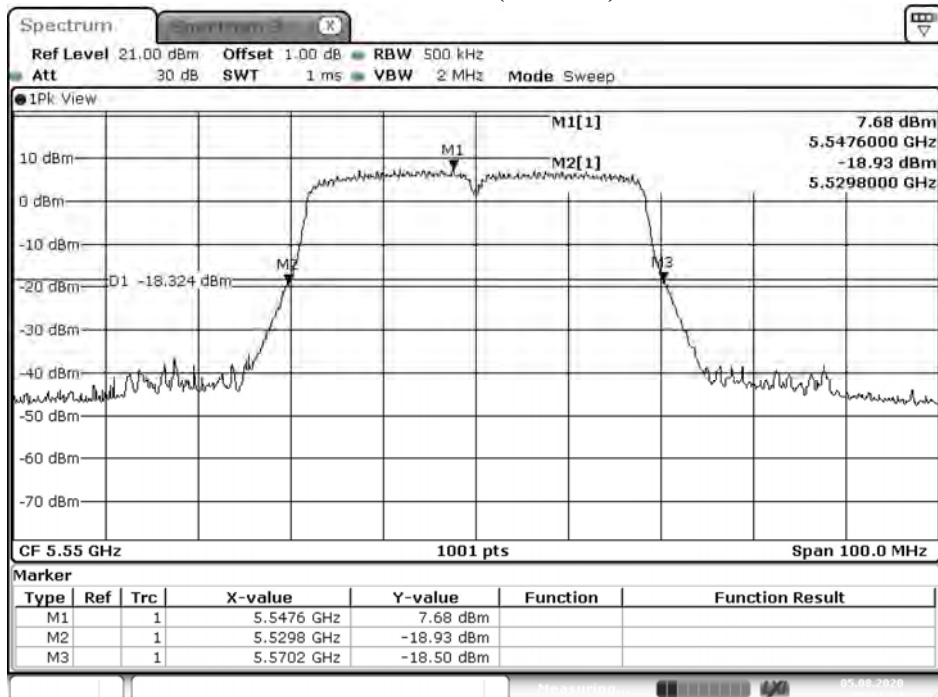
Date: 4.AUG.2020 21:02:47

Channel 110 (Chain A)



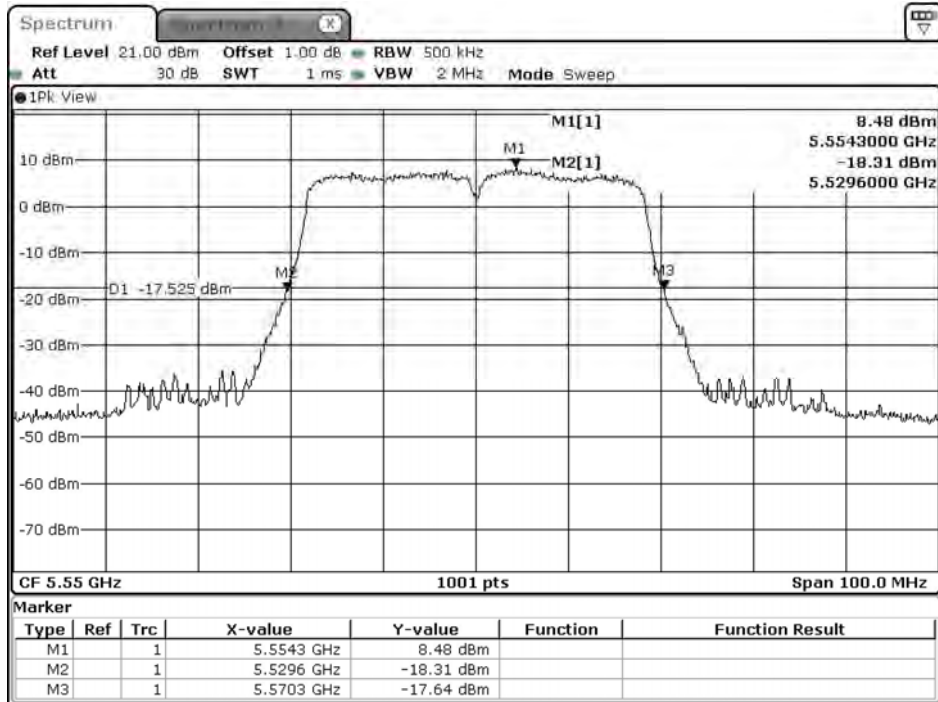
Date: 5.AUG.2020 09:02:07

Channel 110 (Chain B)



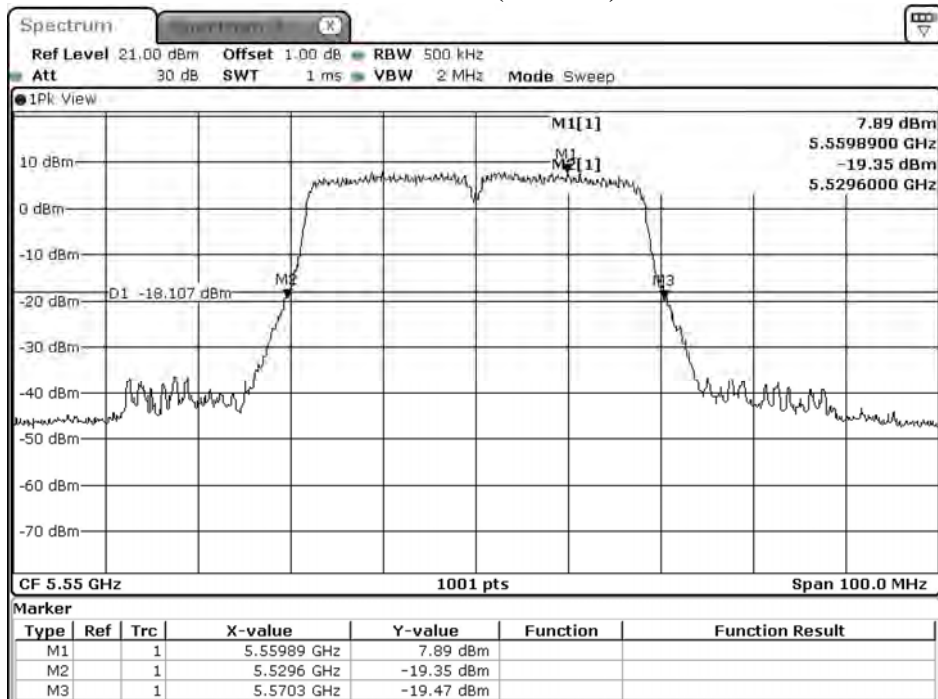
Date: 5.AUG.2020 05:01:55

Channel 110 (Chain C)



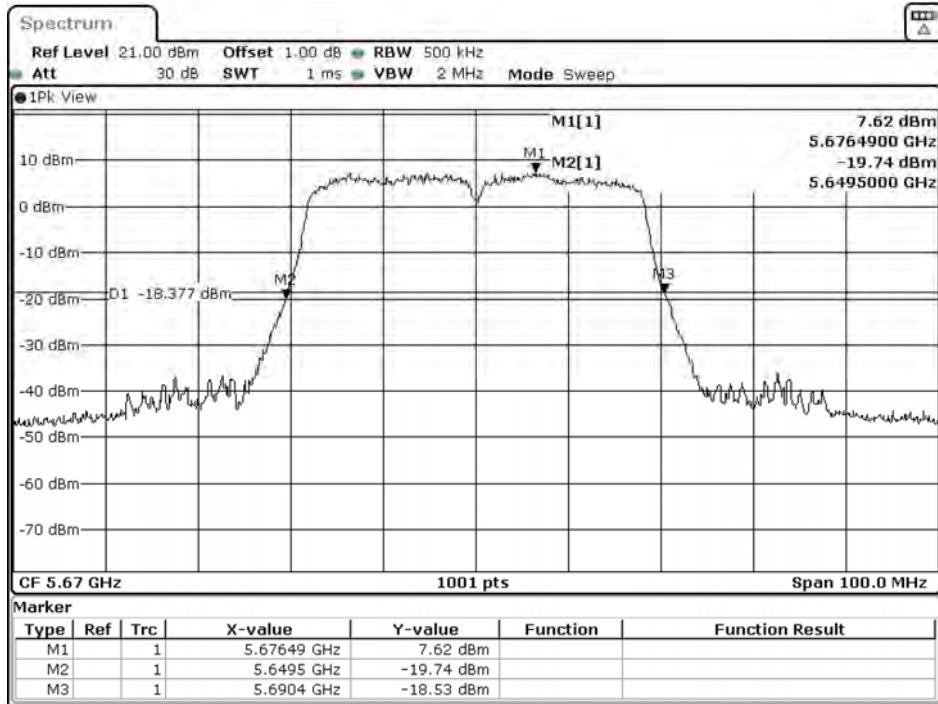
Date: 5.AUG.2020 04:58:54

Channel 110 (Chain D)



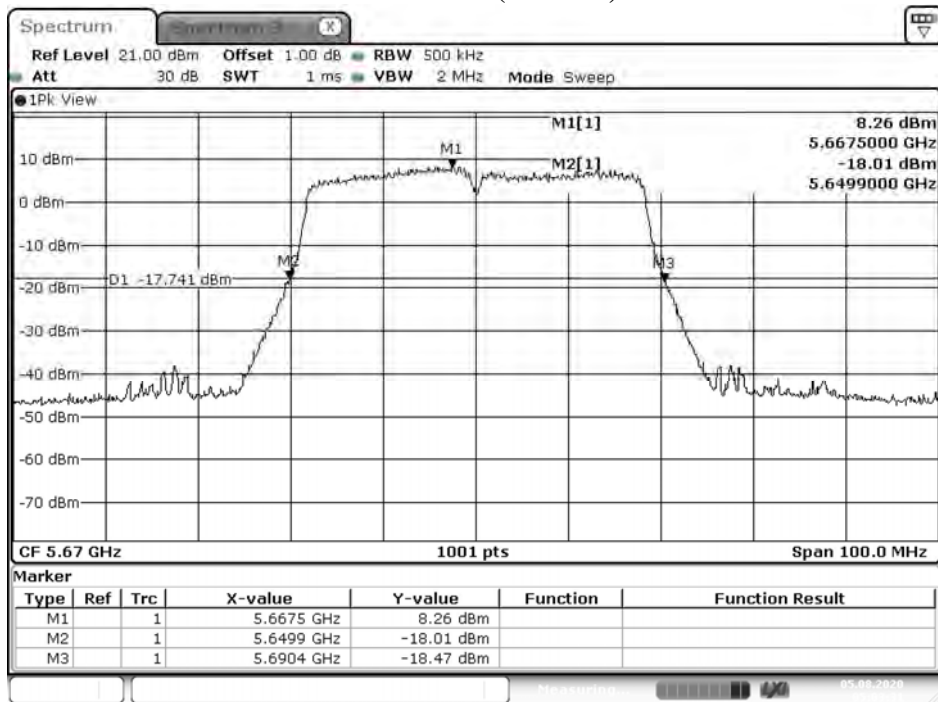
Date: 4.AUG.2020 21:04:19

Channel 134 (Chain A)



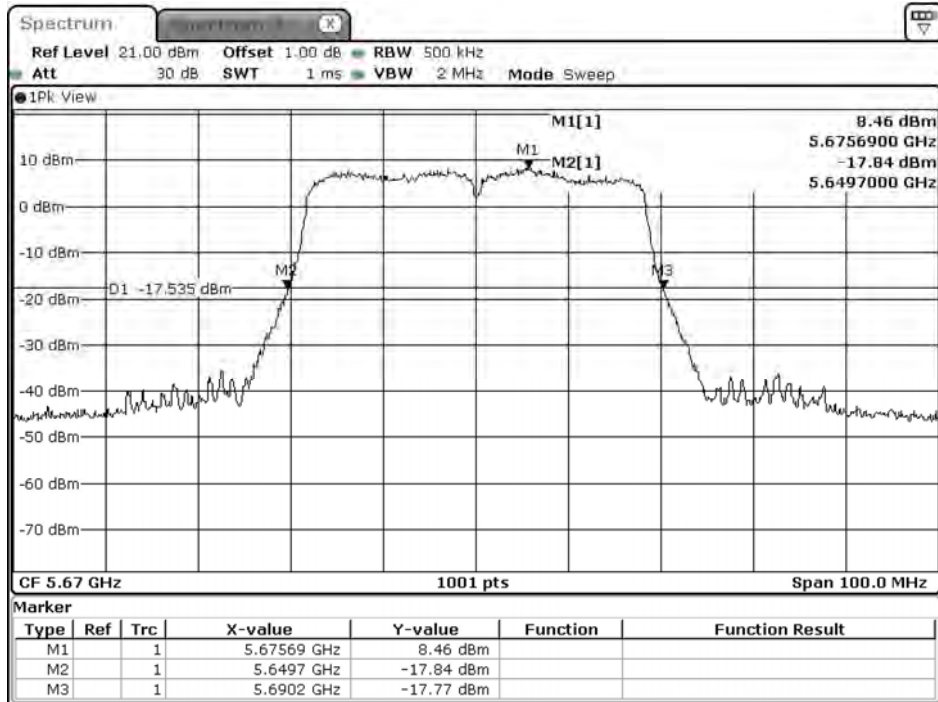
Date: 5.AUG.2020 09:03:44

Channel 134 (Chain B)



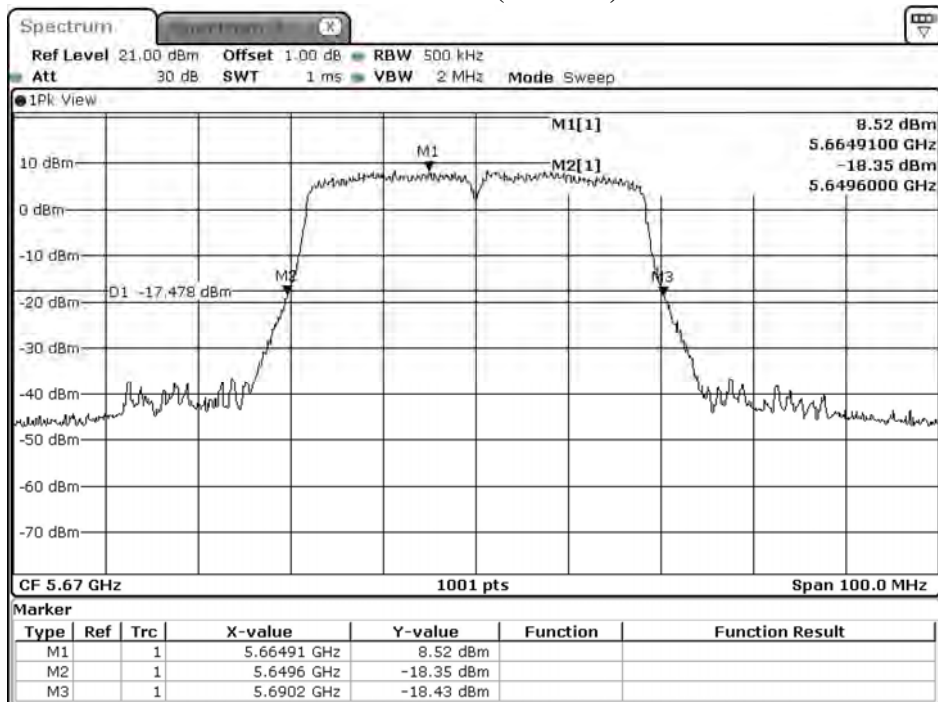
Date: 5.AUG.2020 05:03:31

Channel 134 (Chain C)



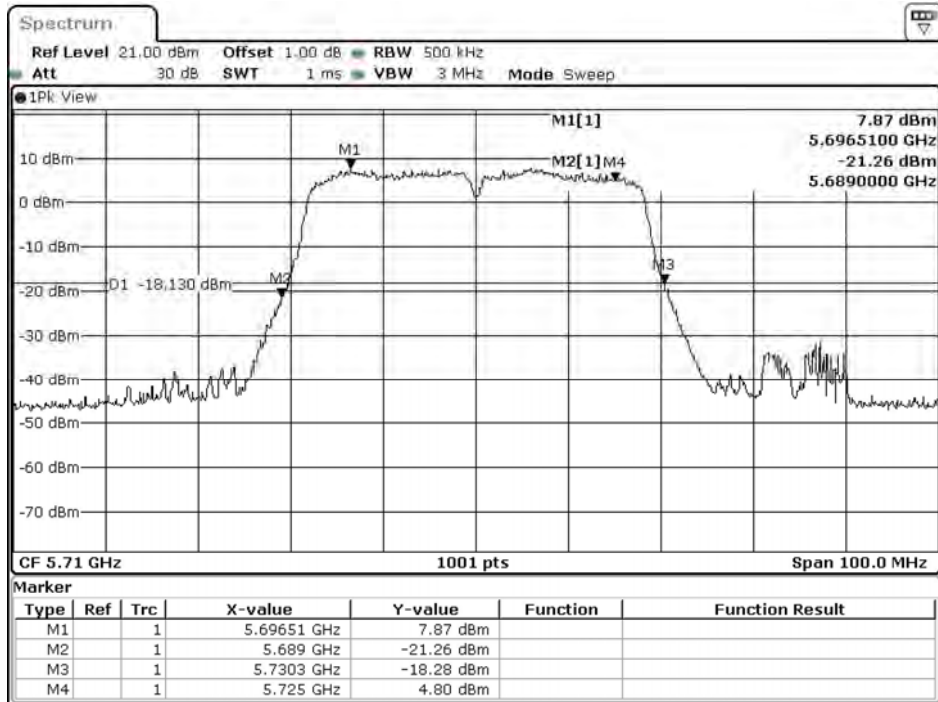
Date: 5.AUG.2020 05:00:32

Channel 134 (Chain D)



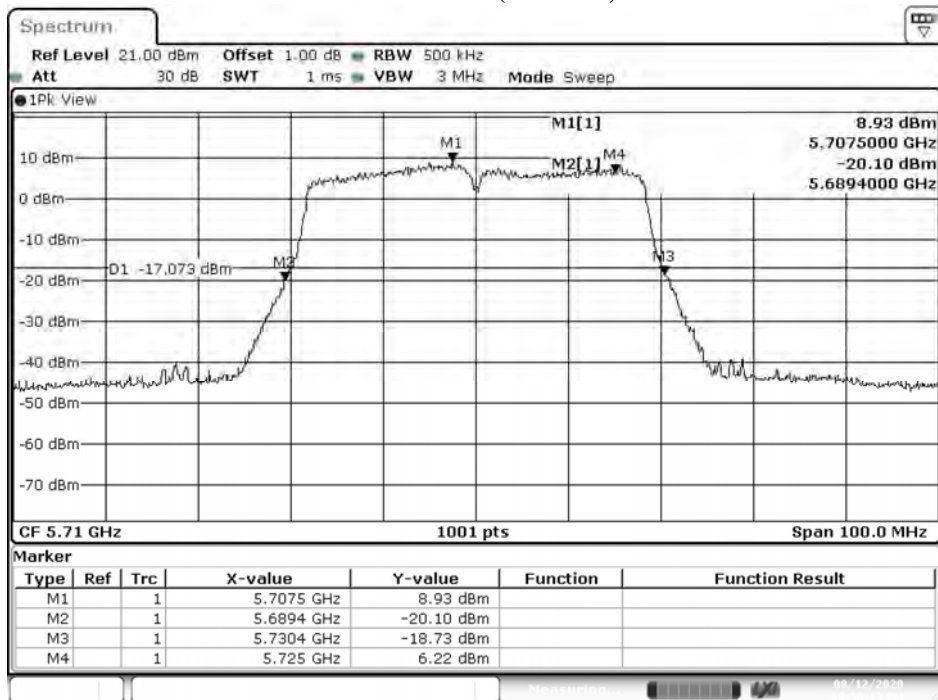
Date: 4.AUG.2020 21:05:59

Channel 142 (Chain A)



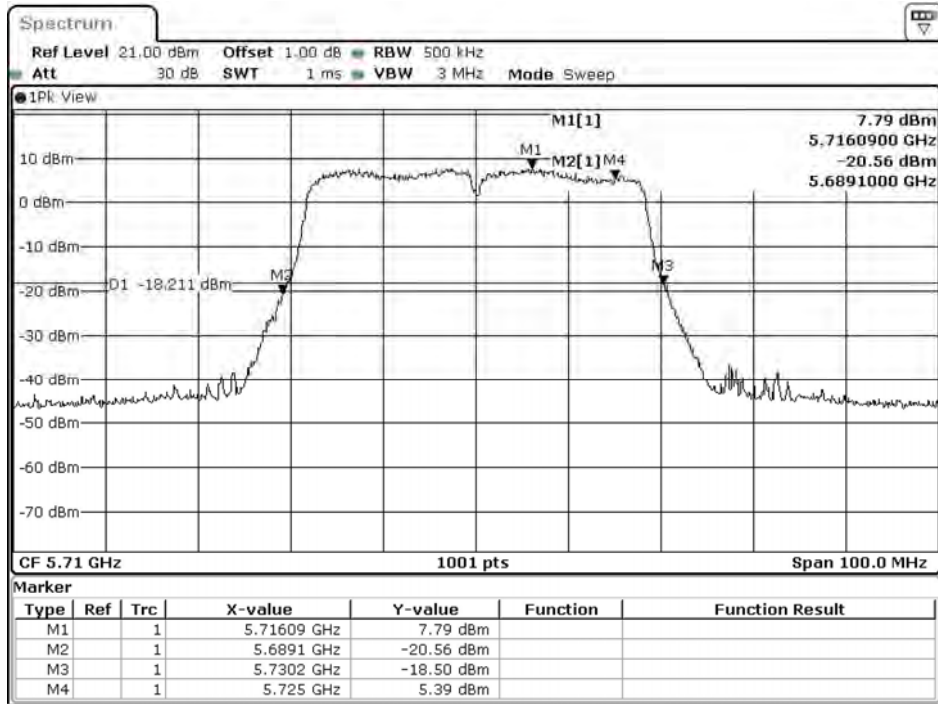
Date: 13.AUG.2020 08:48:09

Channel 142 (Chain B)



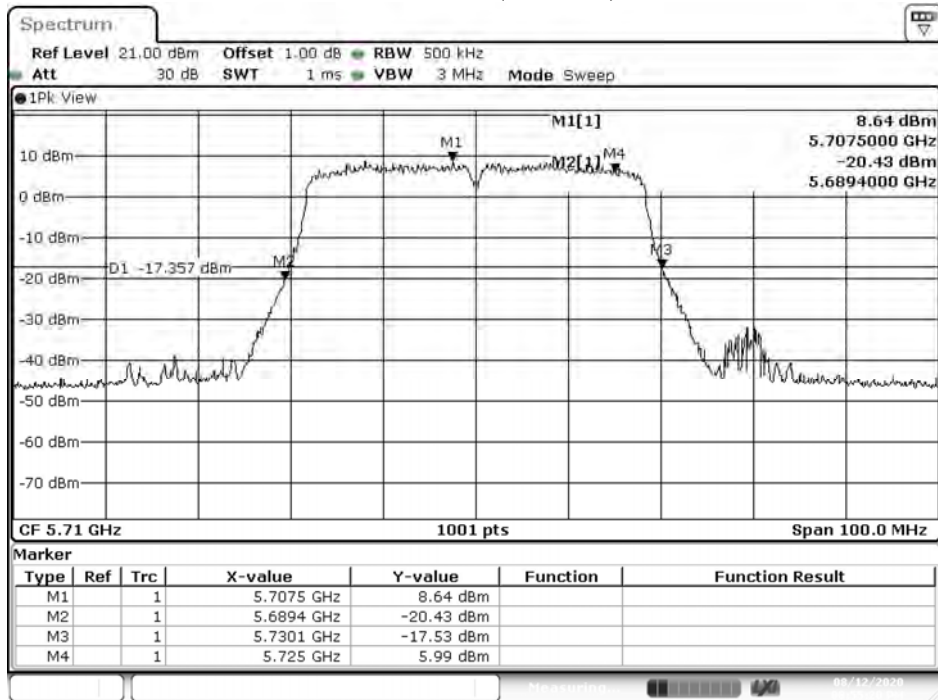
Date: 12.AUG.2020 20:50:13

Channel 142 (Chain C)



Date: 13.AUG.2020 08:53:12

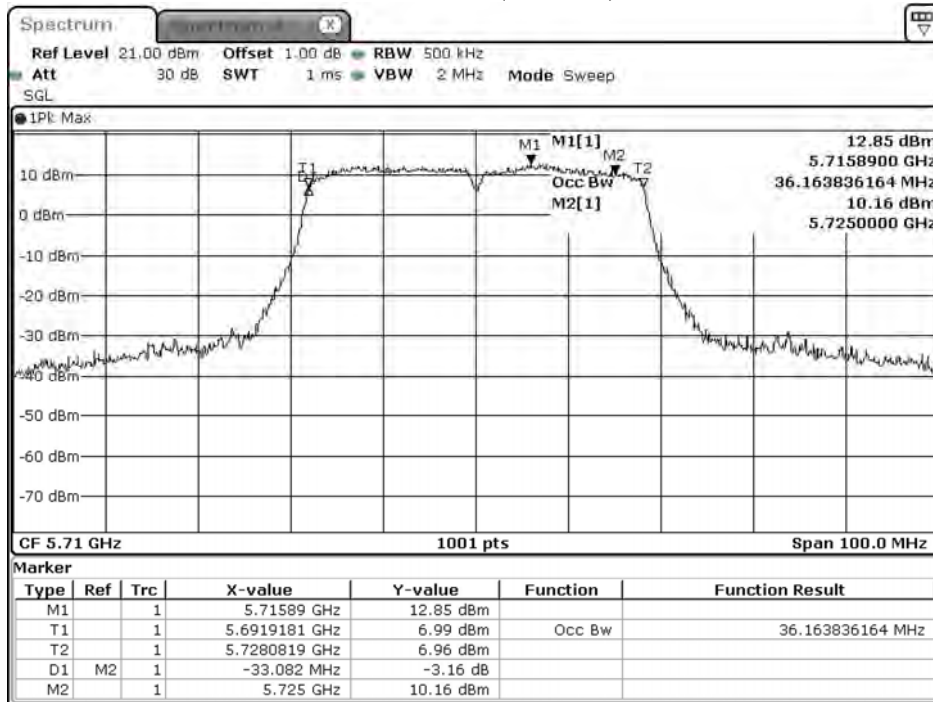
Channel 142 (Chain D)



Date: 12.AUG.2020 20:55:20

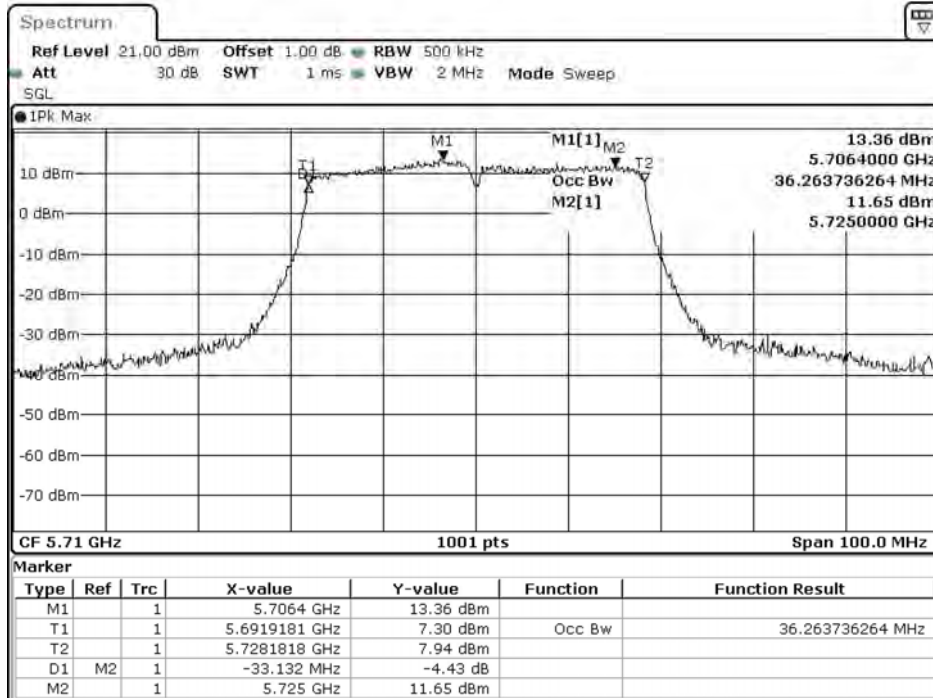
99% Occupied Bandwidth:

Channel 142 (Chain A)



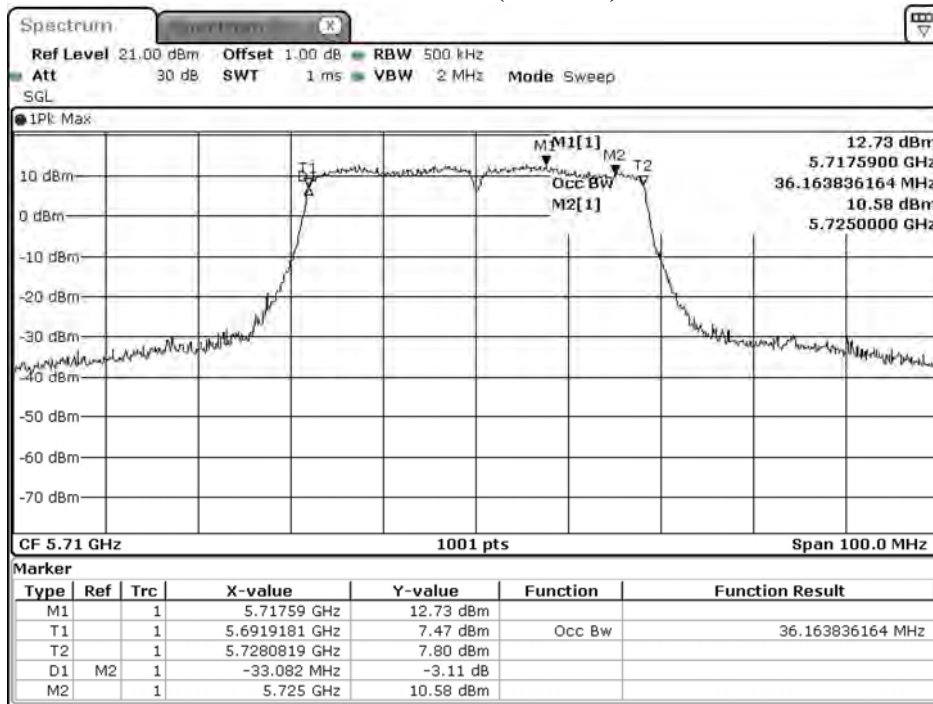
Date: 6.AUG.2020 03:28:45

Channel 142 (Chain B)



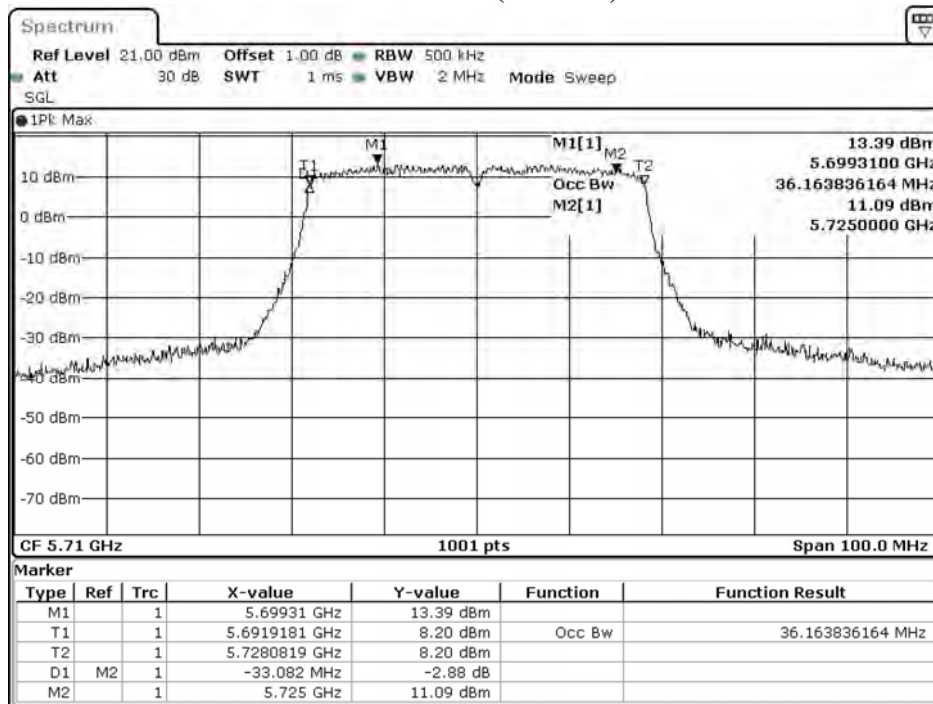
Date: 6.AUG.2020 03:31:50

Channel 142 (Chain C)



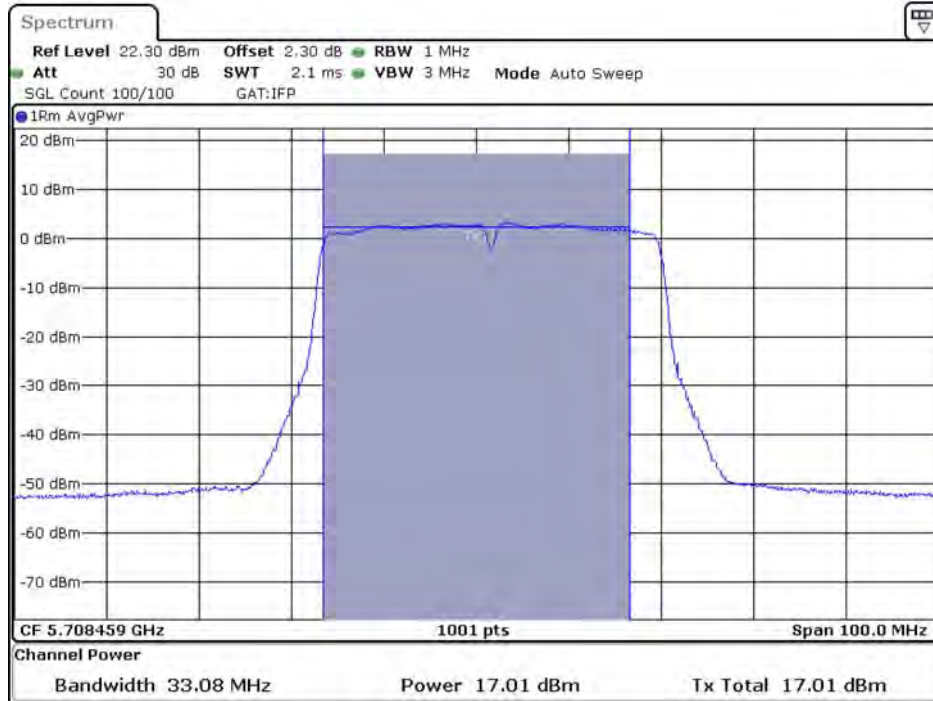
Date: 6.AUG.2020 07:32:08

Channel 142 (Chain D)



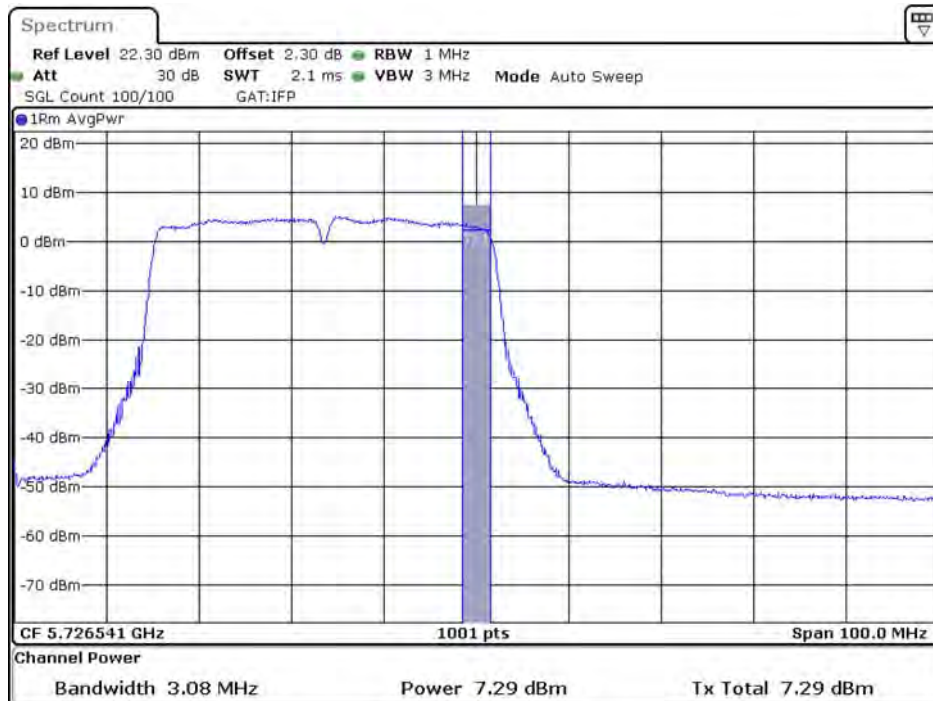
Date: 5.AUG.2020 19:34:18

**Maximum conducted output power:
Channel 142 (U-NII-2C) (Chain A)**



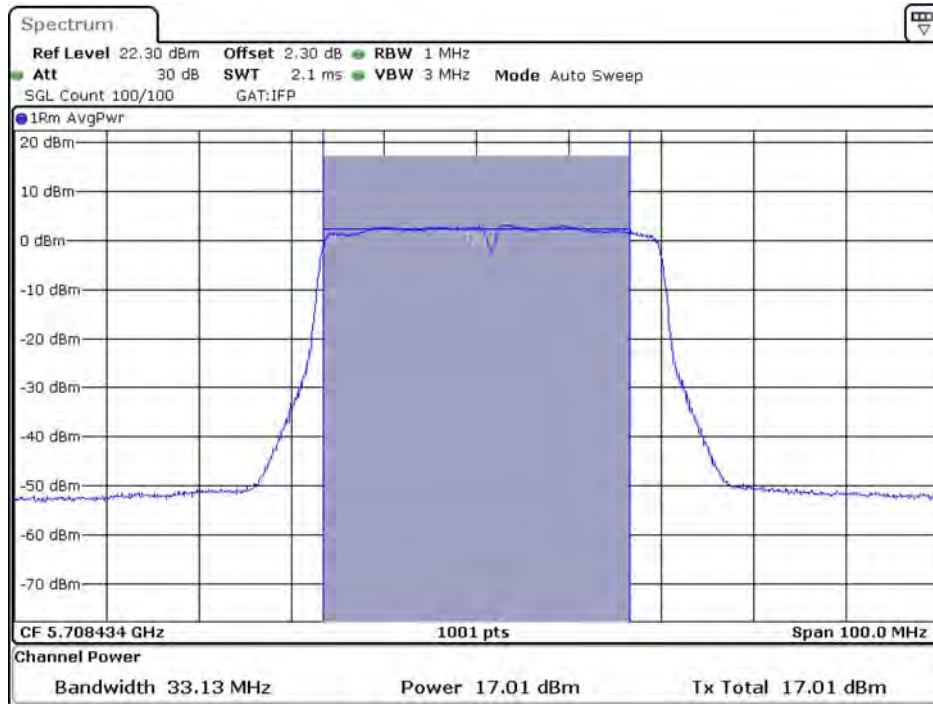
Date: 4.SEP.2020 15:14:48

**Maximum conducted output power:
Channel 142 (U-NII-3) (Chain A)**



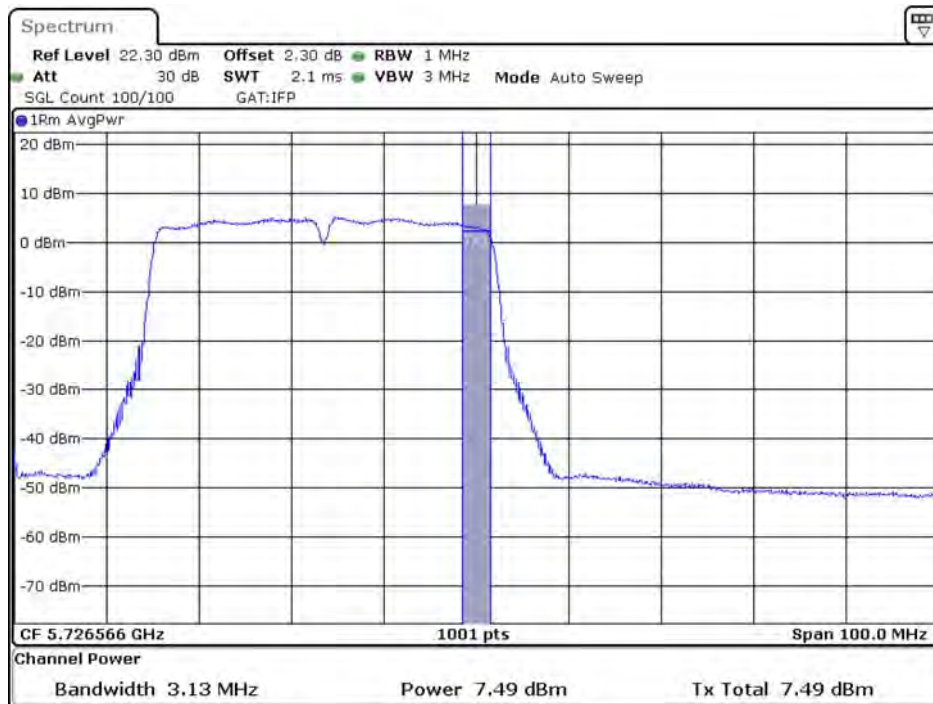
Date: 4.SEP.2020 15:19:24

**Maximum conducted output power:
Channel 142 (U-NII-2C) (Chain B)**



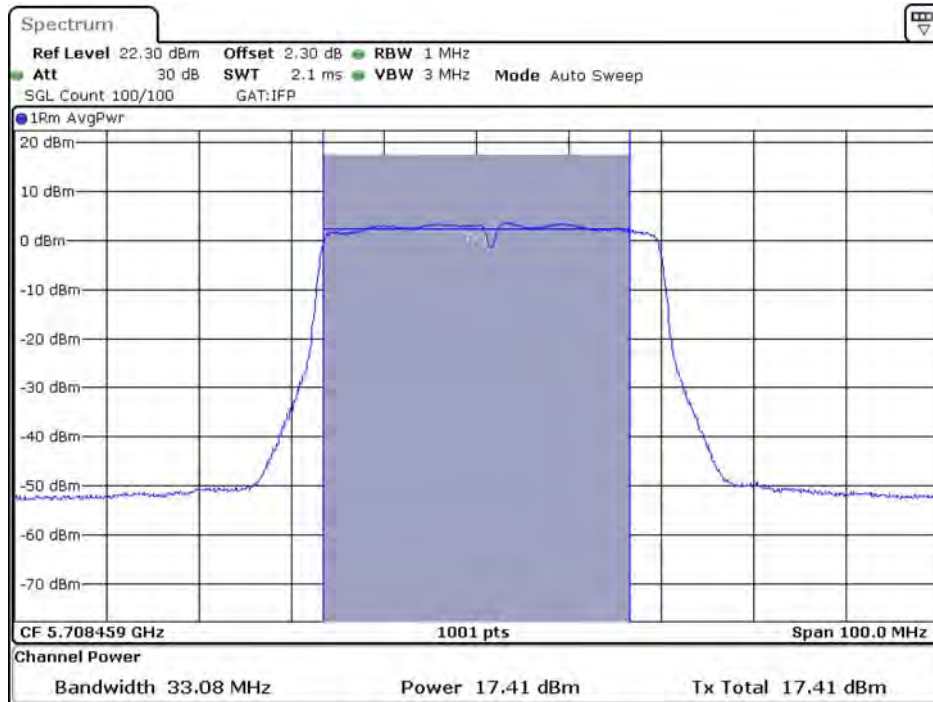
Date: 4.SEP.2020 15:15:54

**Maximum conducted output power:
Channel 142 (U-NII-3) (Chain B)**



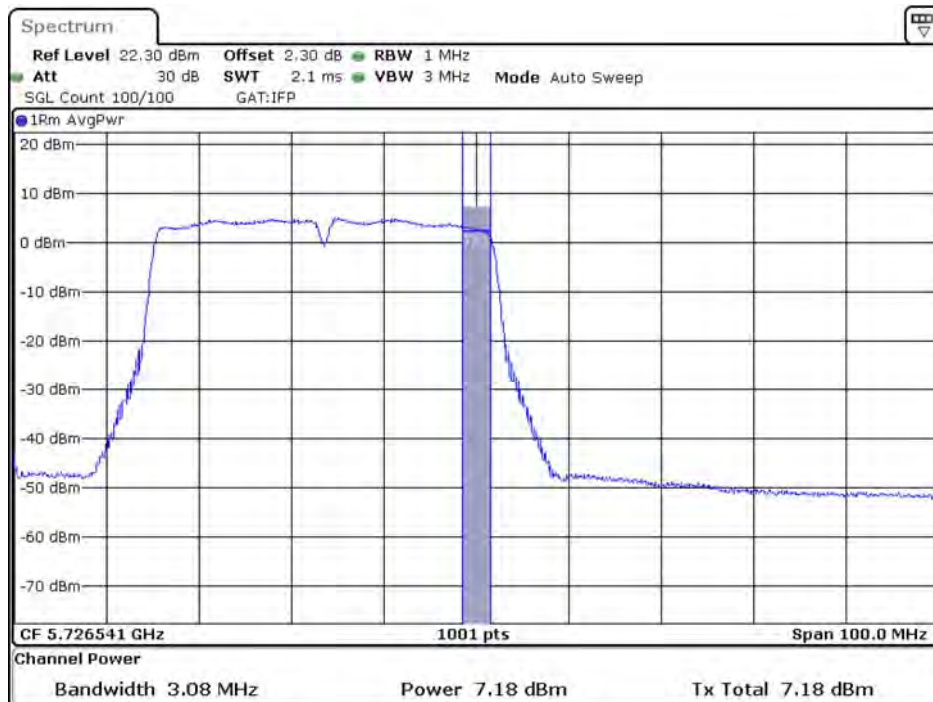
Date: 4.SEP.2020 15:20:30

**Maximum conducted output power:
Channel 142 (U-NII-2C) (Chain C)**



Date: 4.SEP.2020 15:17:22

**Maximum conducted output power:
Channel 142 (U-NII-3) (Chain C)**



Date: 4.SEP.2020 15:22:15