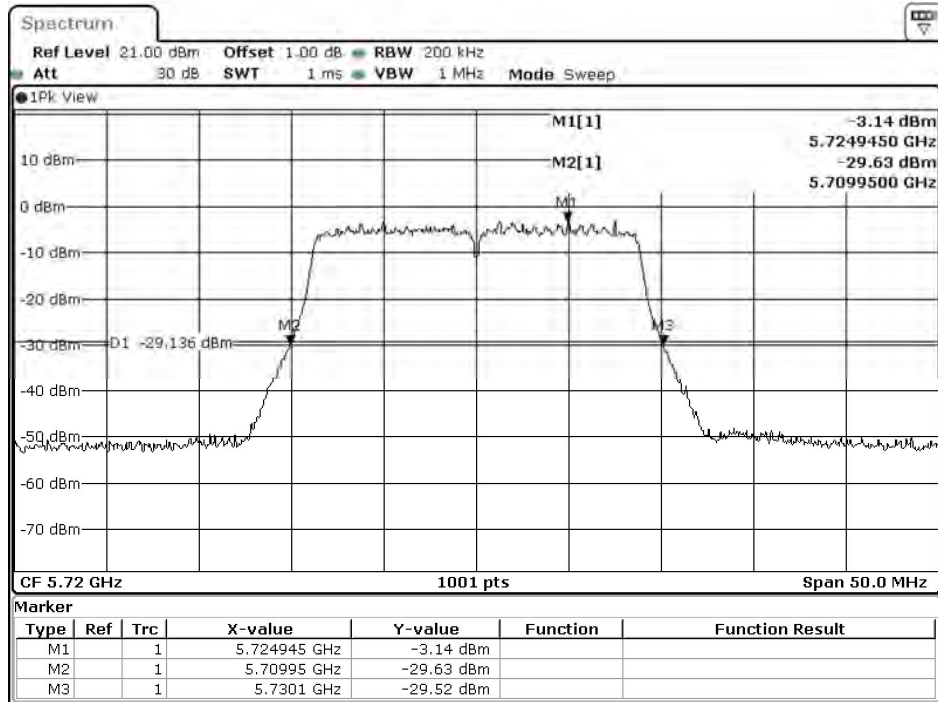
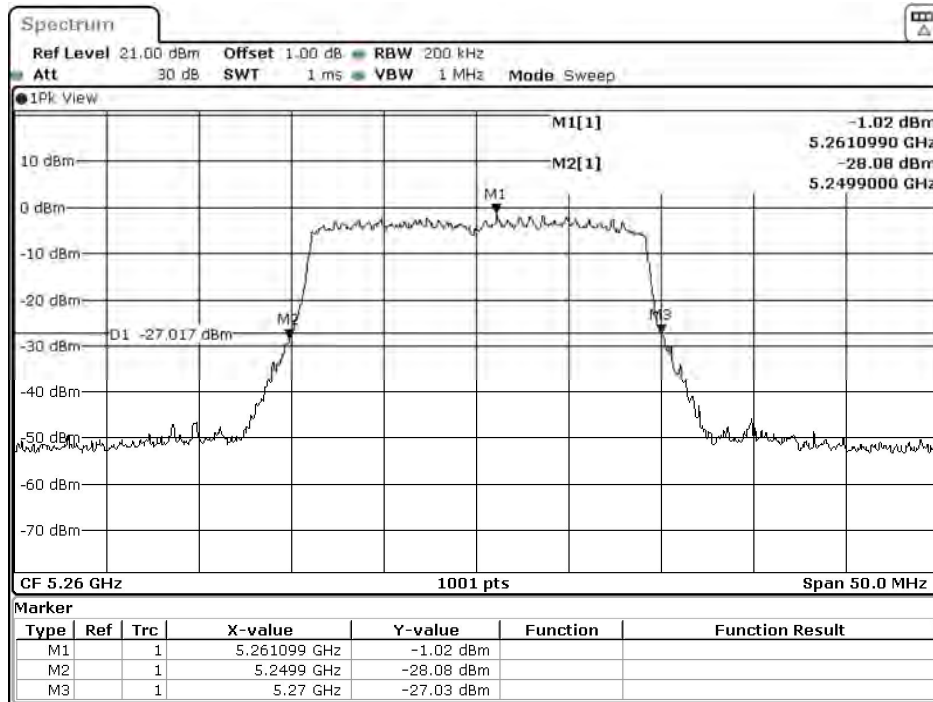


Channel 144 - Chain A



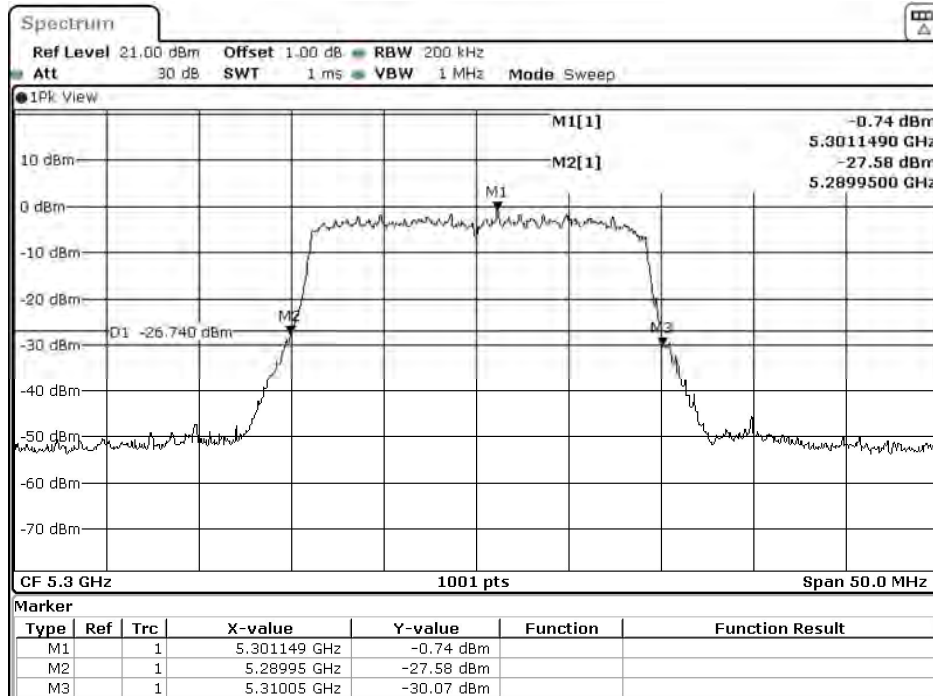
Date: 10.MAR.2021 05:49:59

26dB Occupied Bandwidth: Channel 52 - Chain B



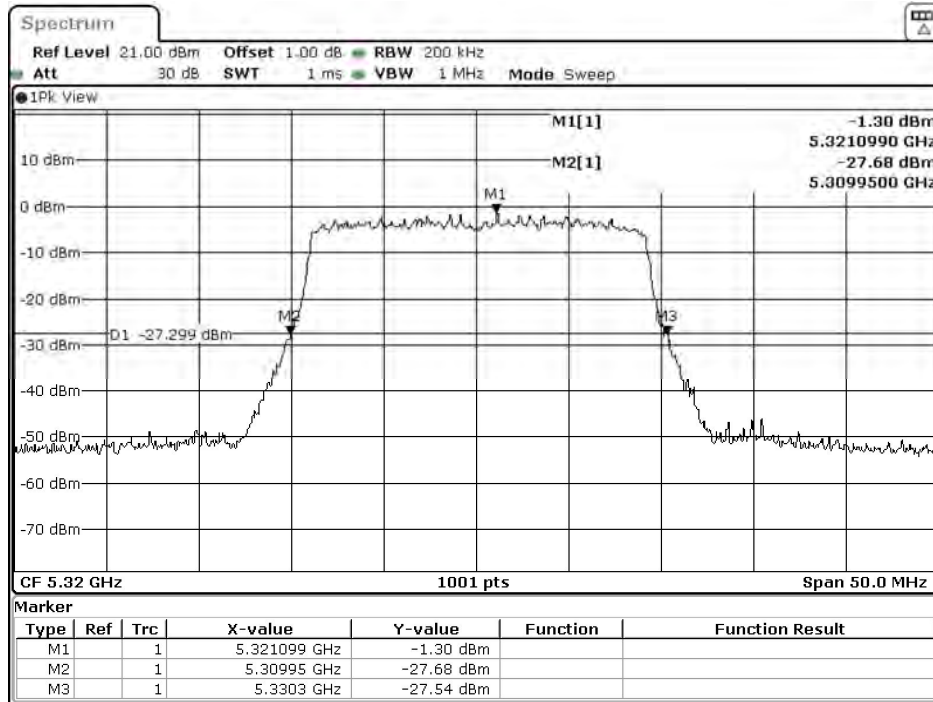
Date: 10.MAR.2021 06:54:34

Channel 60 - Chain B



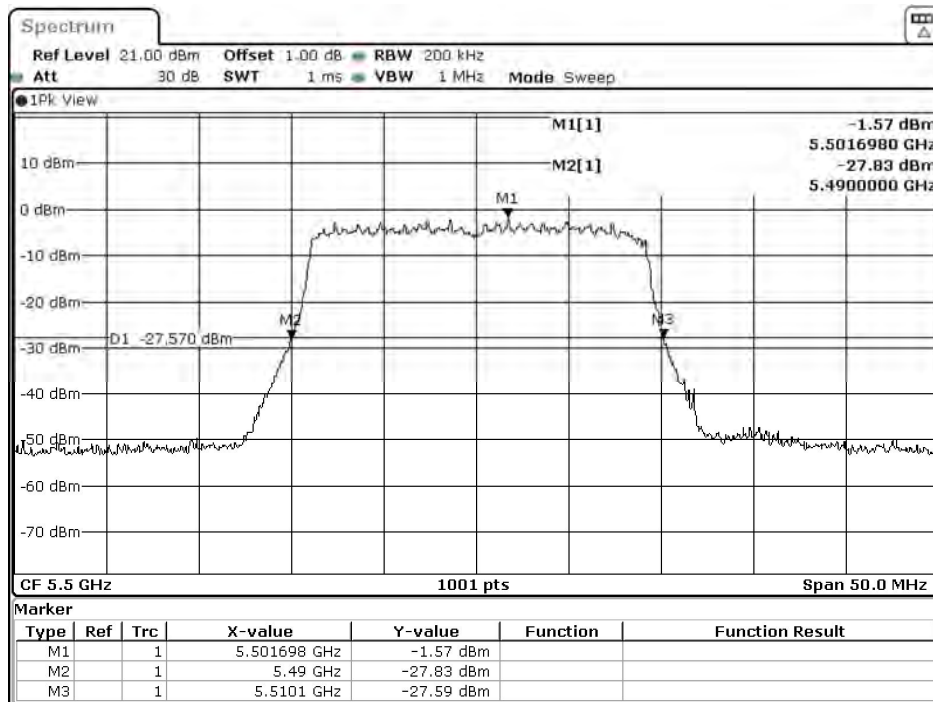
Date: 10.MAR.2021 07:04:55

Channel 64 - Chain B



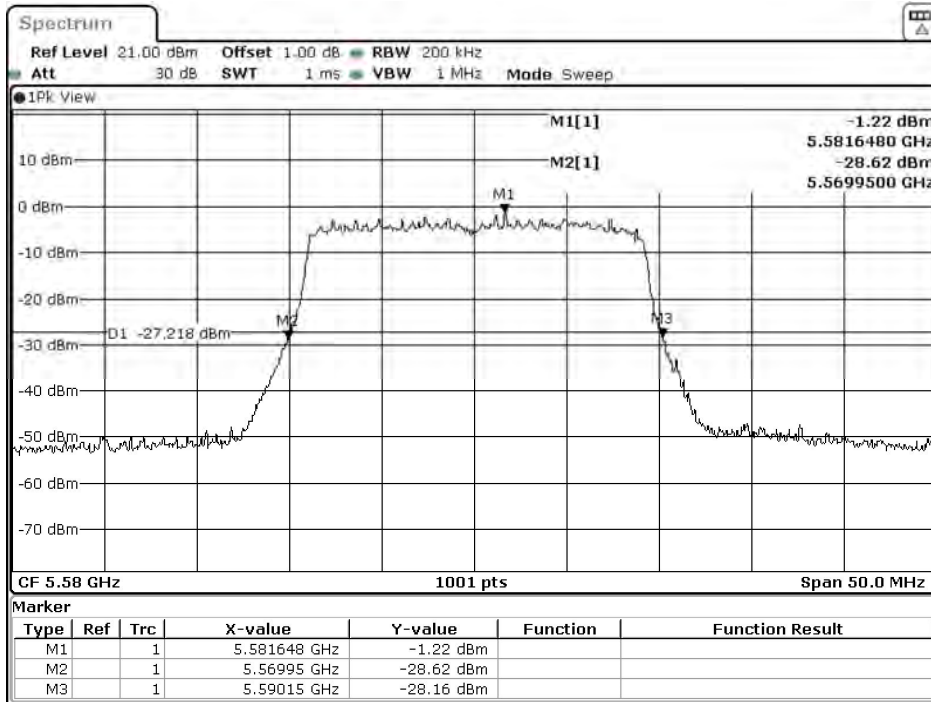
Date: 10.MAR.2021 07:08:10

Channel 100 - Chain B



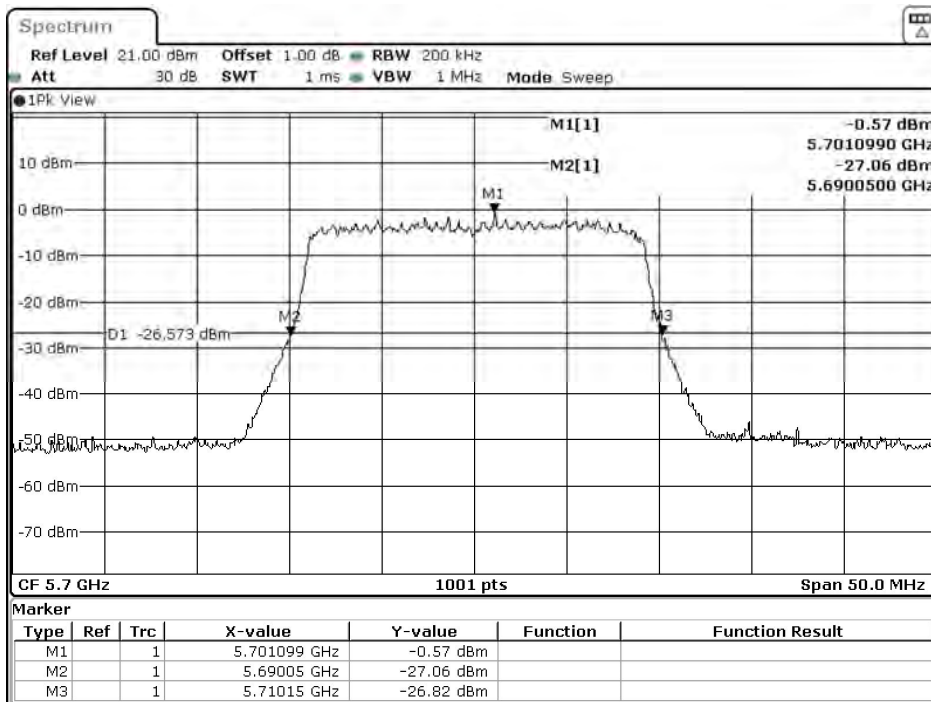
Date: 10.MAR.2021 07:10:03

Channel 116 - Chain B



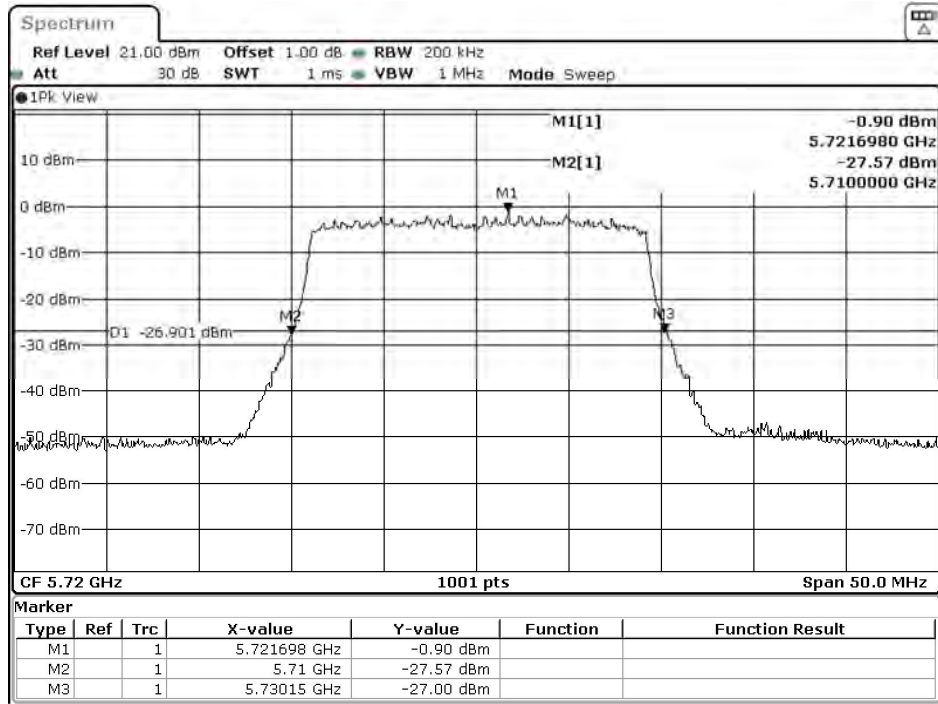
Date: 10.MAR.2021 07:12:57

Channel 140 - Chain B



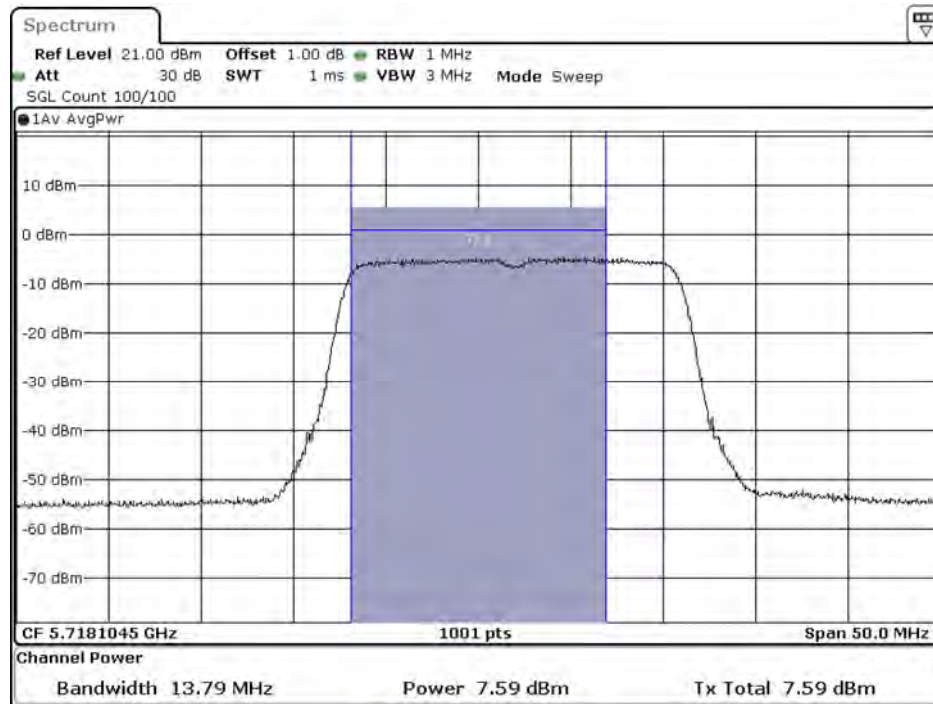
Date: 10.MAR.2021 07:14:50

Channel 144 - Chain B



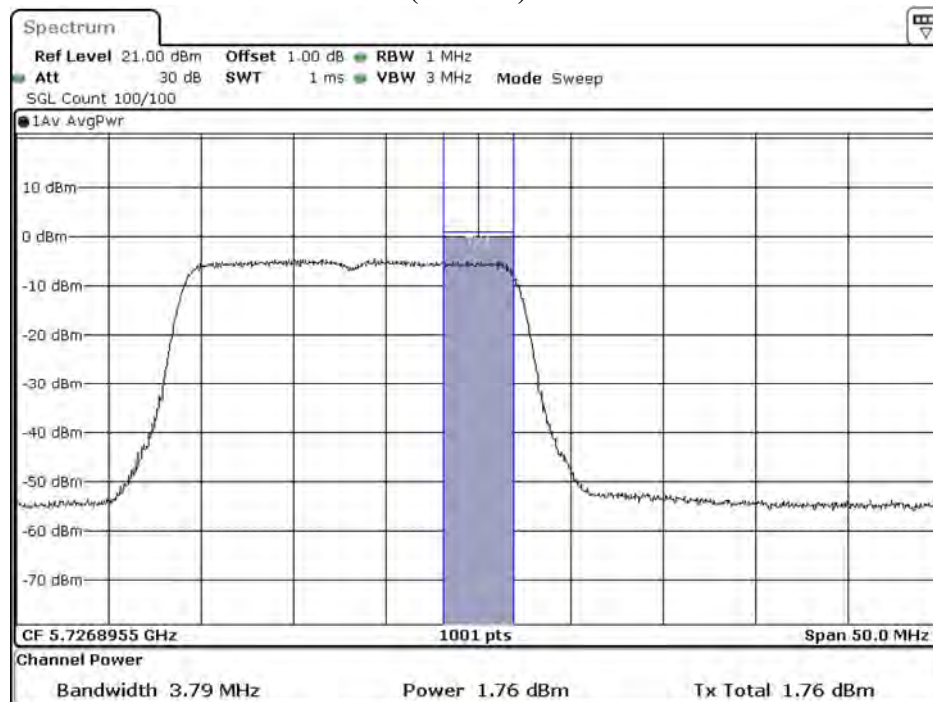
Date: 10.MAR.2021 06:49:22

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



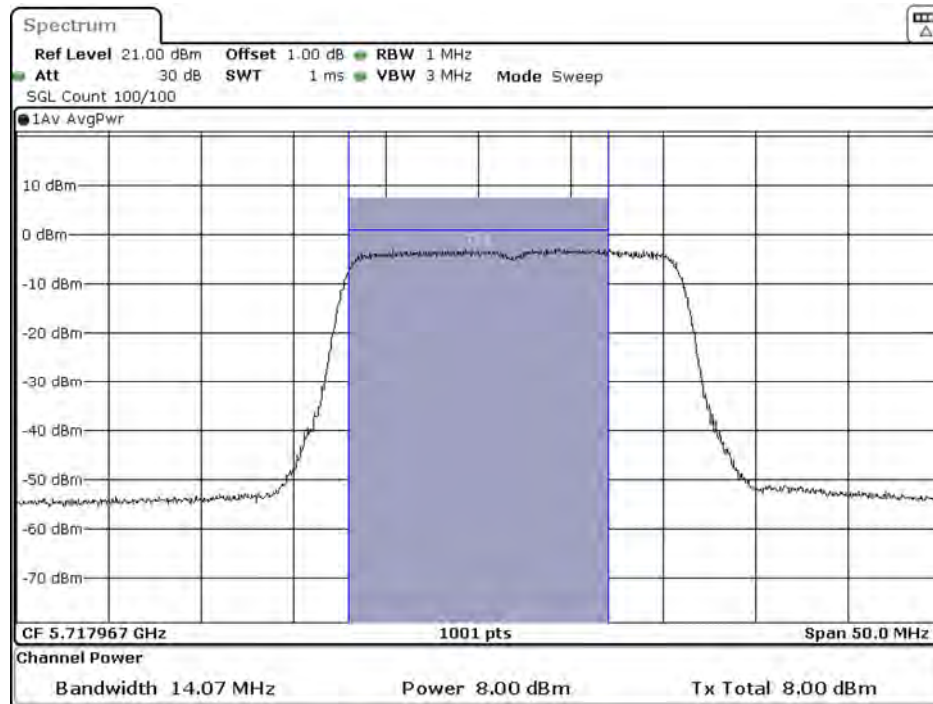
Date: 10.MAR.2021 05:50:24

Channel 144 (U-NII-3) - Chain A

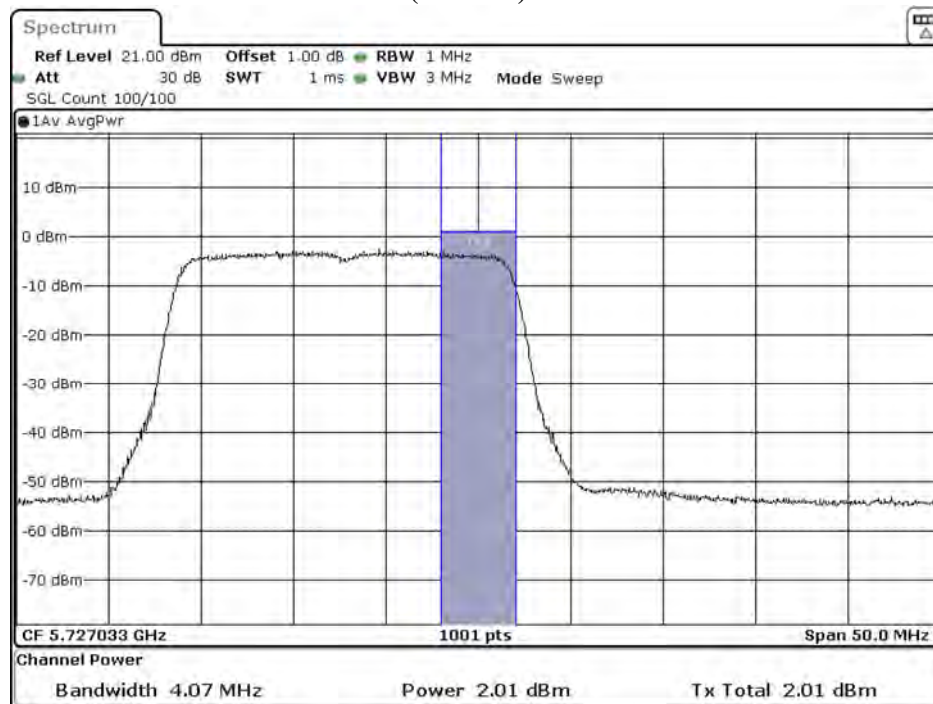


Date: 10.MAR.2021 05:50:46

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



Channel 144 (U-NII-3) - Chain B



Product : Wireless module
 Test Item : Maximum conducted output power
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) – Panel Antenna
 Test Date : 2021/02/19

Chain A

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	Data Rate (Mbps)							
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15
		Measurement Level (dBm)							
38	5190	10.18	--	--	--	--	--	--	--
46	5230	10.37	10.31	10.22	10.18	10.08	10	9.96	9.93
54	5270	10.48	--	--	--	--	--	--	--
62	5310	10.42	10.36	10.28	10.2	10.1	10.07	10	9.92
102	5510	9.66	--	--	--	--	--	--	--
110	5550	9.6	9.57	9.5	9.43	9.37	9.29	9.2	9.12
134	5670	9.52	--	--	--	--	--	--	--
142	5710(band3)	8.76	8.69	8.63	8.57	8.48	8.38	8.33	8.28
142	5710(band3)	-2.93	-3	-3.03	-3.06	-3.12	-3.2	-3.26	-3.32
151	5755	15.4	--	--	--	--	--	--	--
159	5795	16.55	16.47	16.4	16.3	16.27	16.18	16.09	16.02

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	Data Rate (Mbps)							
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15
		Measurement Level (dBm)							
38	5190	10.52	--	--	--	--	--	--	--
46	5230	10.55	10.51	10.47	10.4	10.35	10.25	10.19	10.1
54	5270	10.67	--	--	--	--	--	--	--
62	5310	10.48	10.45	10.39	10.32	10.23	10.14	10.1	10.06
102	5510	9.85	--	--	--	--	--	--	--
110	5550	10.12	10.08	10	9.92	9.87	9.8	9.76	9.67
134	5670	10.21	--	--	--	--	--	--	--
142	5710(band3)	9.39	9.31	9.25	9.2	9.17	9.12	9.04	8.94
142	5710(band3)	-2.41	-2.46	-2.54	-2.61	-2.64	-2.74	-2.78	-2.82
151	5755	16.53	--	--	--	--	--	--	--
159	5795	17.14	17.08	17.01	16.94	16.85	16.77	16.7	16.67

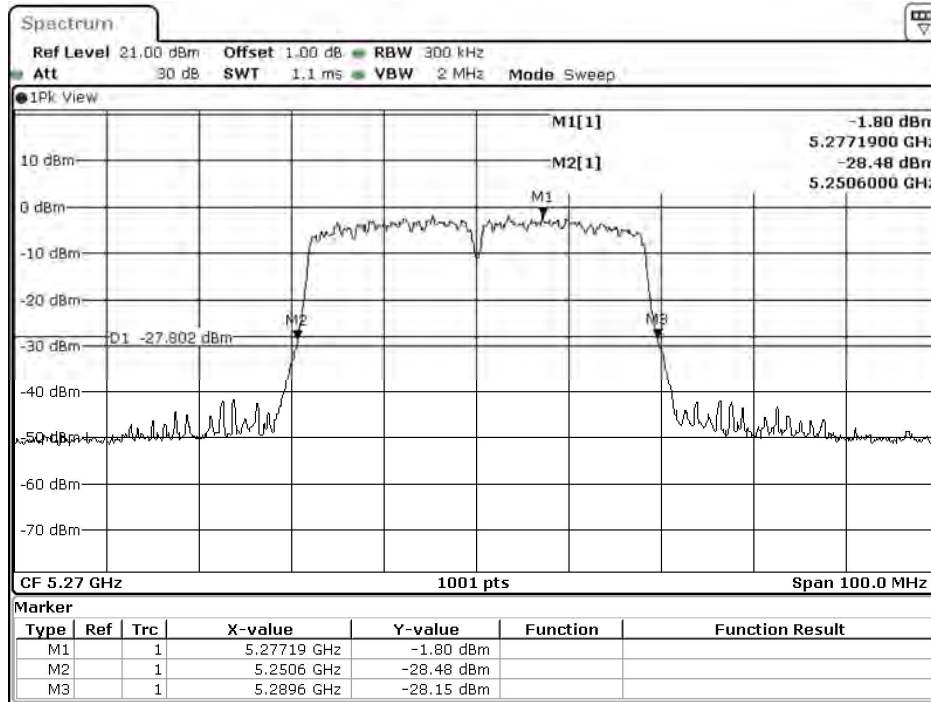
Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
38	5190	--	10.18	10.52	13.36	13.62	--
46	5230	--	10.37	10.55	13.47	13.62	--
54	5270	38.70	10.48	10.67	13.59	13.62	26.88
62	5310	39.10	10.42	10.48	13.46	13.62	26.92
102	5510	38.80	9.66	9.85	12.77	13.06	26.89
110	5550	39.20	9.60	10.12	12.88	13.06	26.93
134	5670	39.20	9.52	10.21	12.89	13.06	26.93
142F(Band3)	5710	34.70	8.76	9.39	12.34	13.06	26.40
142F(Band4)	5710	--	-2.93	-2.41	0.59	30	--
151	5755	--	15.40	16.53	19.01	30	--
159	5795	--	16.55	17.14	19.87	30	--

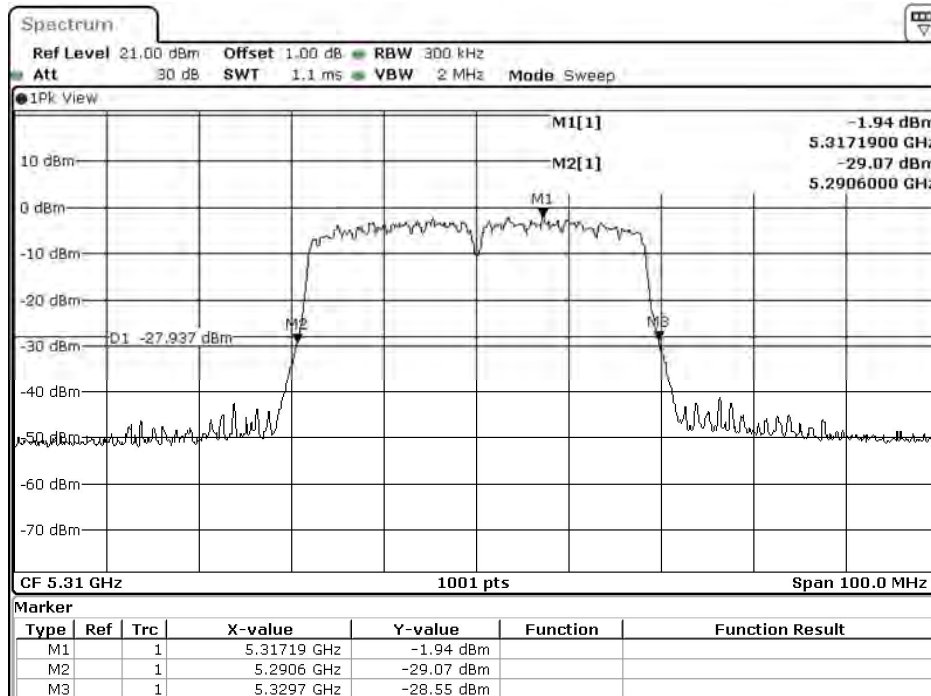
26dB Occupied Bandwidth:

Channel 54 - Chain A



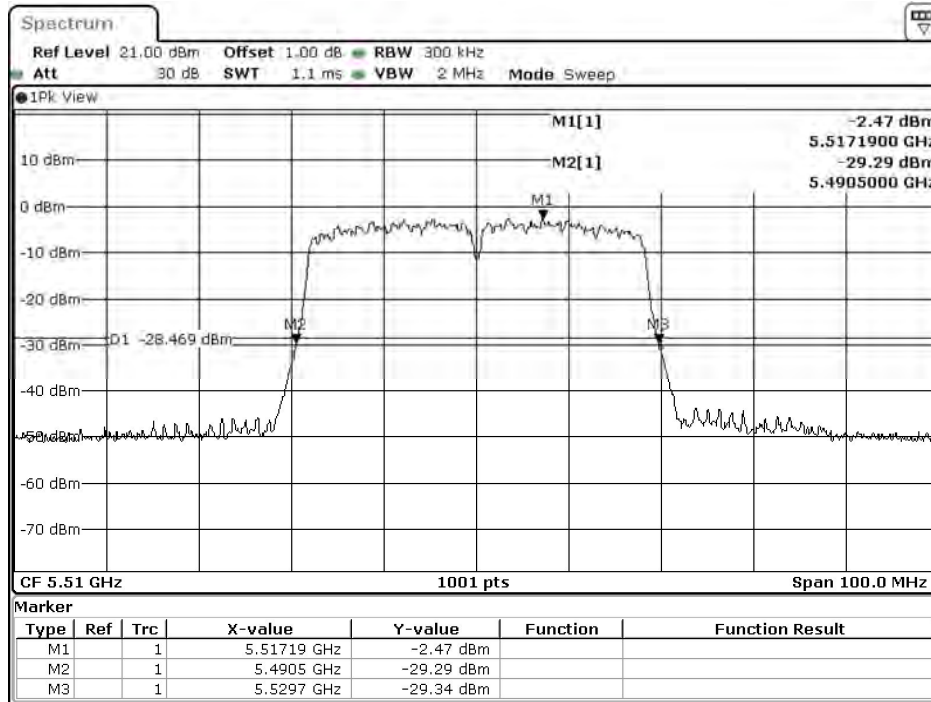
Date: 10.MAR.2021 06:17:43

Channel 62 - Chain A



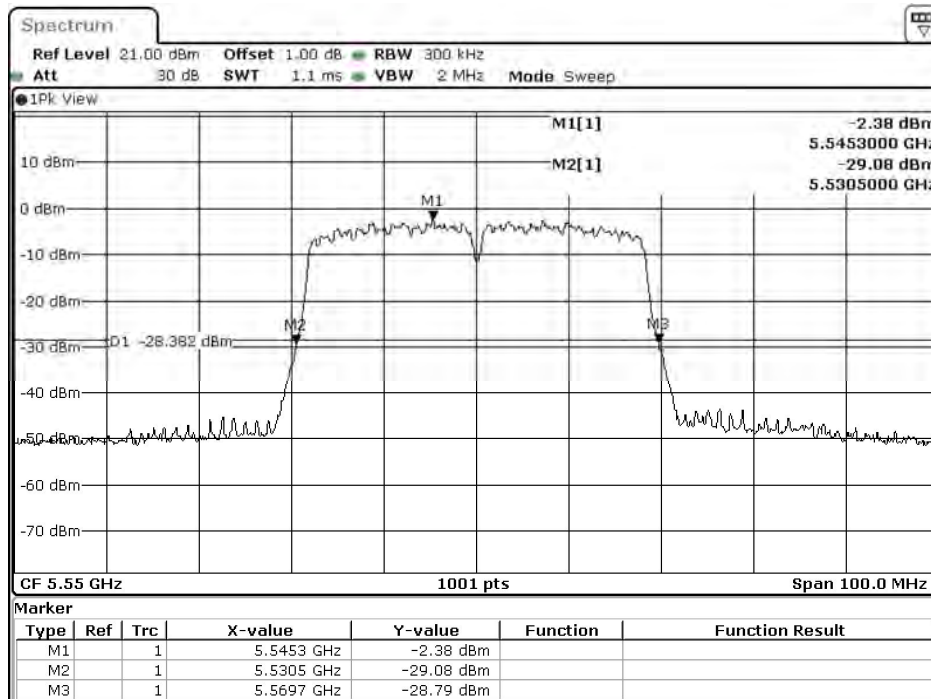
Date: 10.MAR.2021 06:18:58

Channel 102 - Chain A



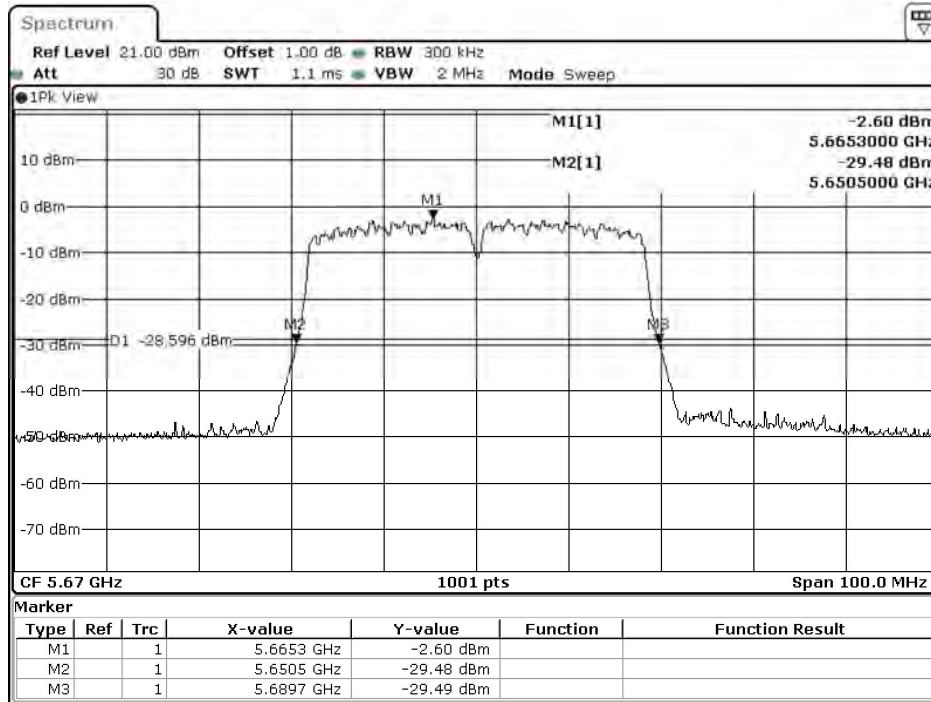
Date: 10.MAR.2021 06:20:17

Channel 110 - Chain A



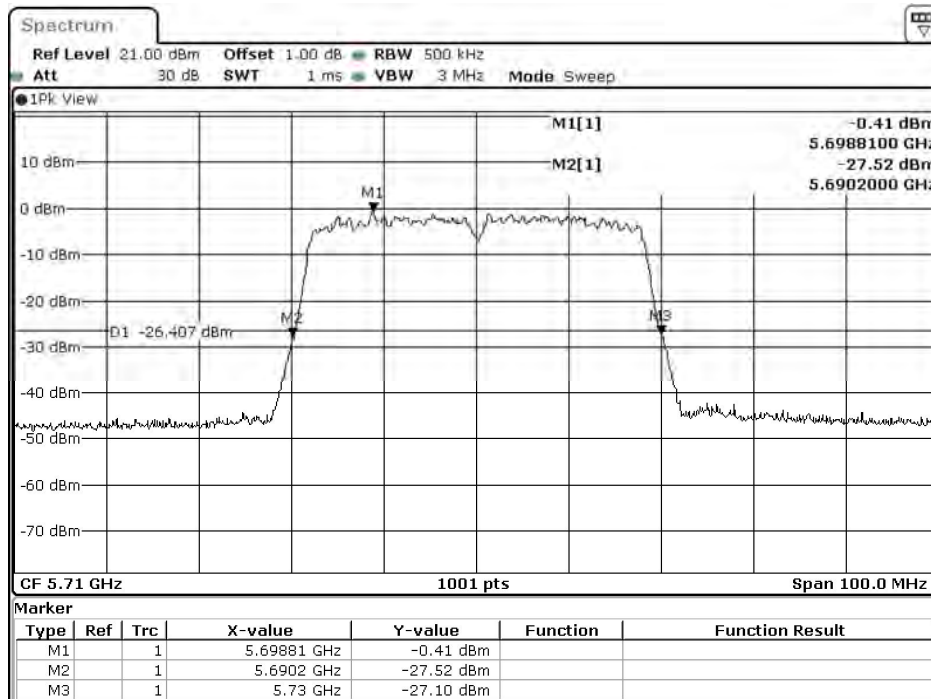
Date: 10.MAR.2021 06:21:35

Channel 134 - Chain A



Date: 10.MAR.2021 06:22:56

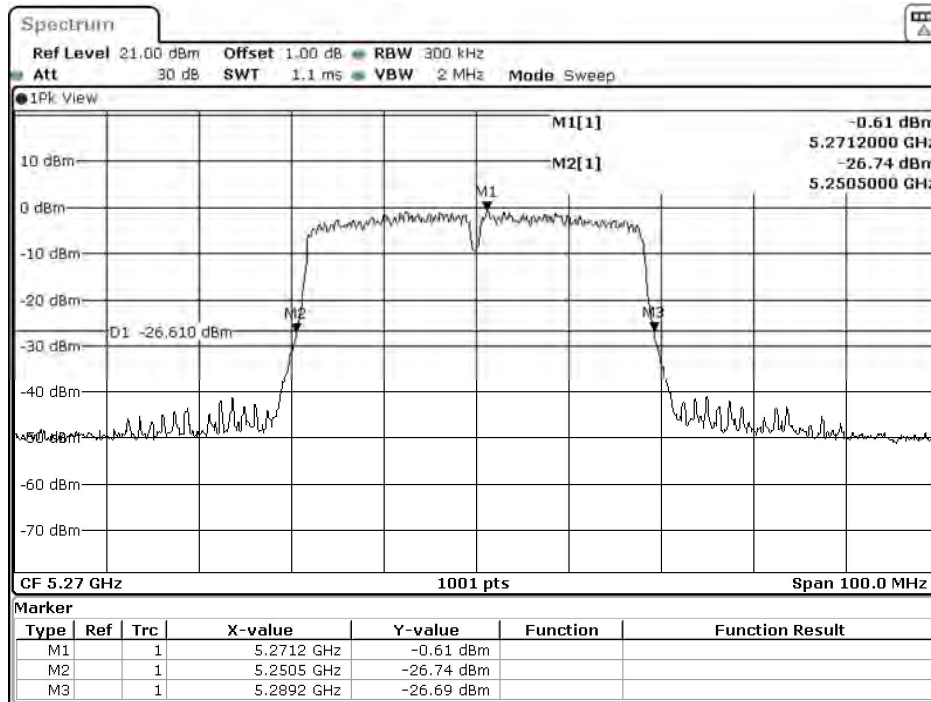
Channel 142 - Chain A



Date: 10.MAR.2021 05:52:31

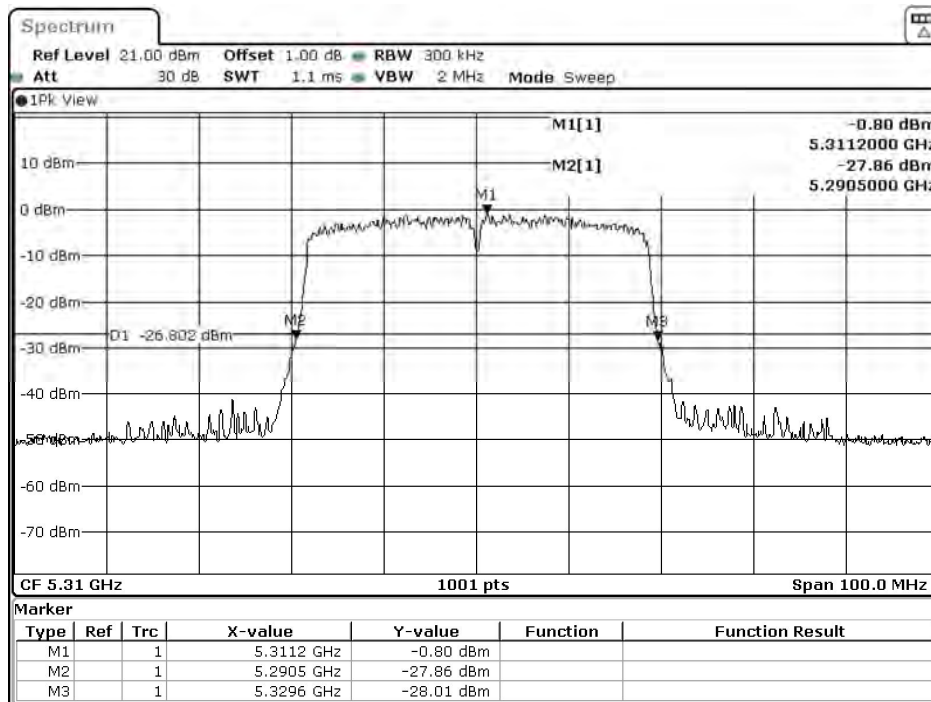
26dB Occupied Bandwidth:

Channel 54 - Chain B



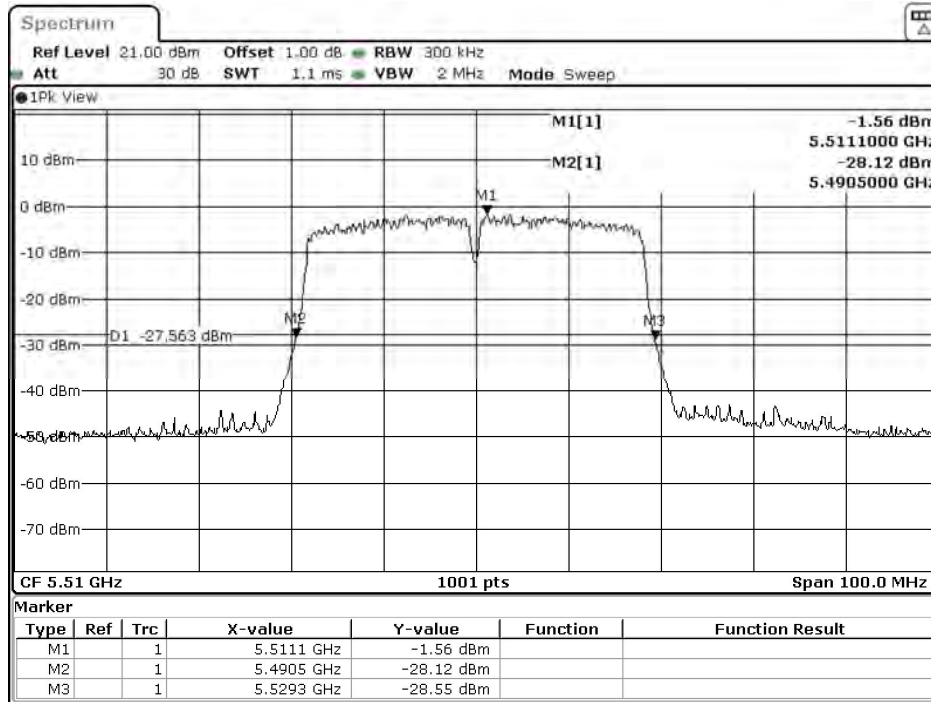
Date: 10.MAR.2021 07:17:06

Channel 62 - Chain B



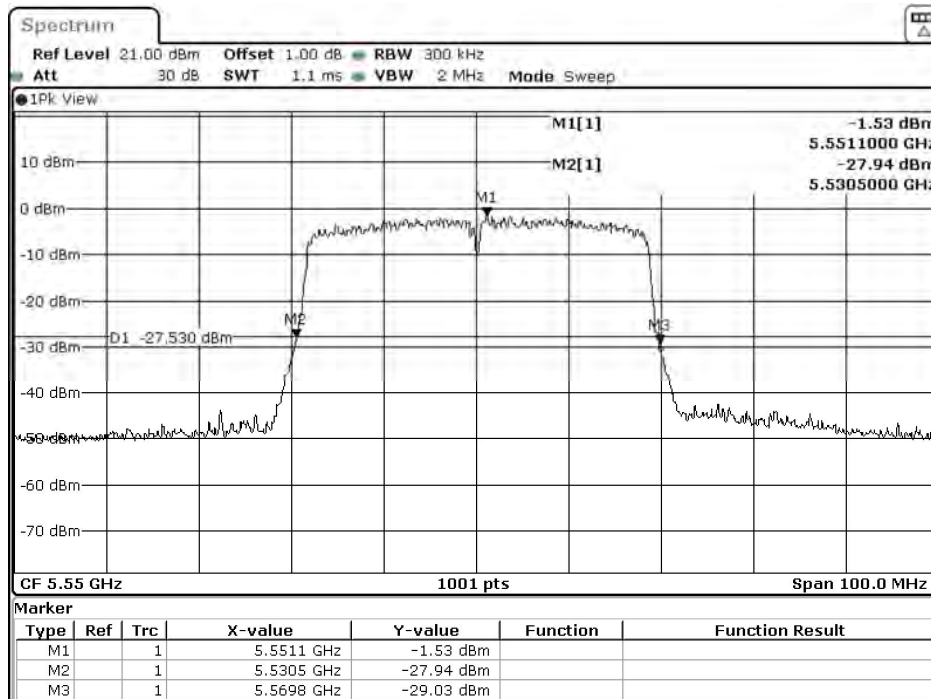
Date: 10.MAR.2021 07:18:21

Channel 102 - Chain B



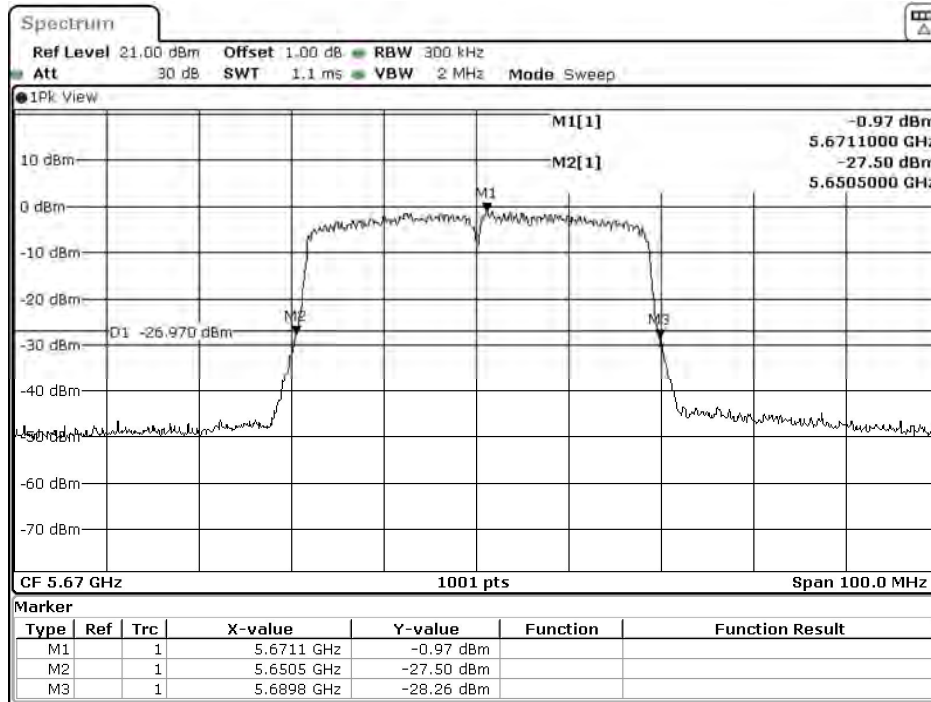
Date: 10.MAR.2021 07:19:40

Channel 110 - Chain B



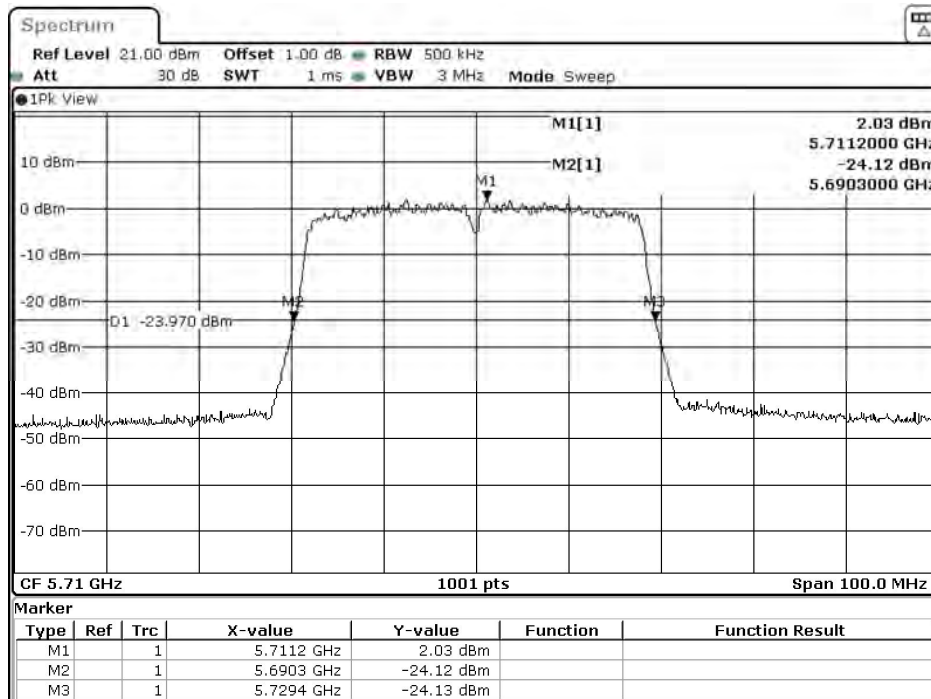
Date: 10.MAR.2021 07:20:58

Channel 134 - Chain B



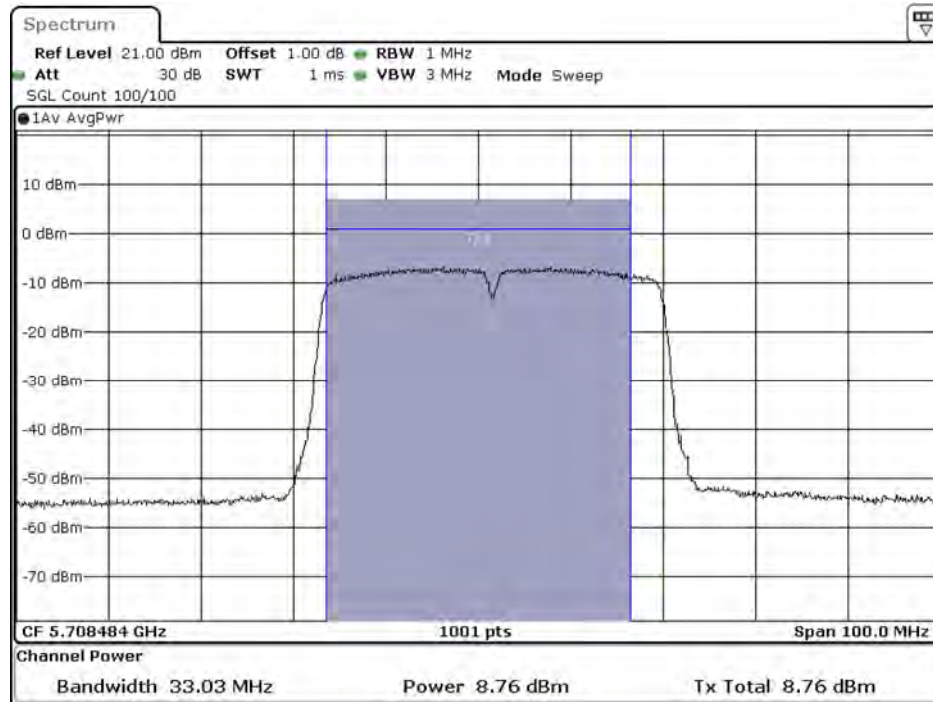
Date: 10.MAR.2021 07:22:18

Channel 142 - Chain B



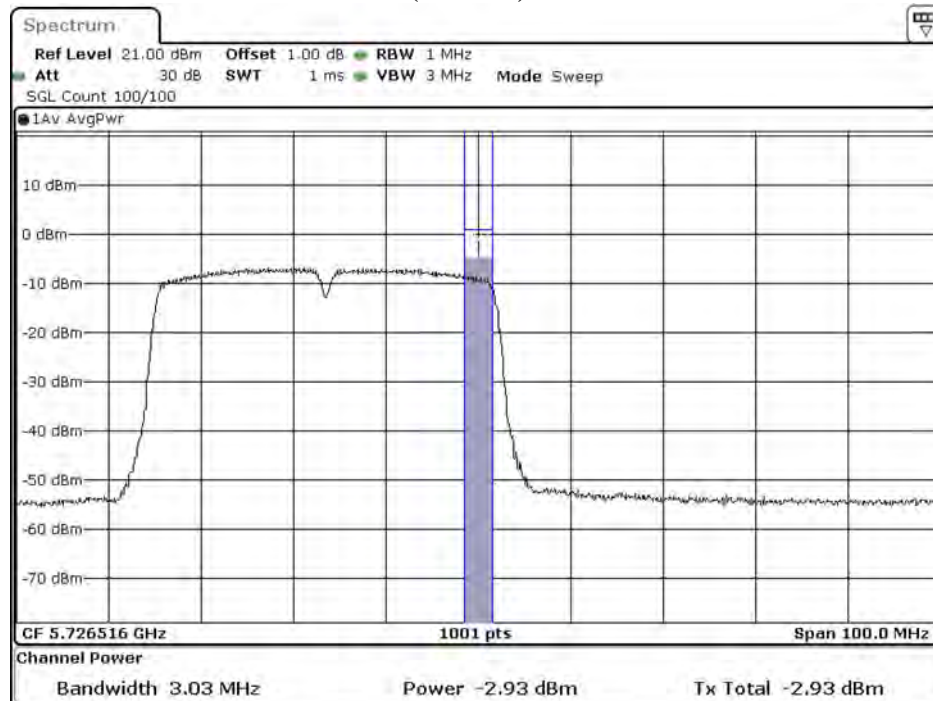
Date: 10.MAR.2021 06:51:54

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



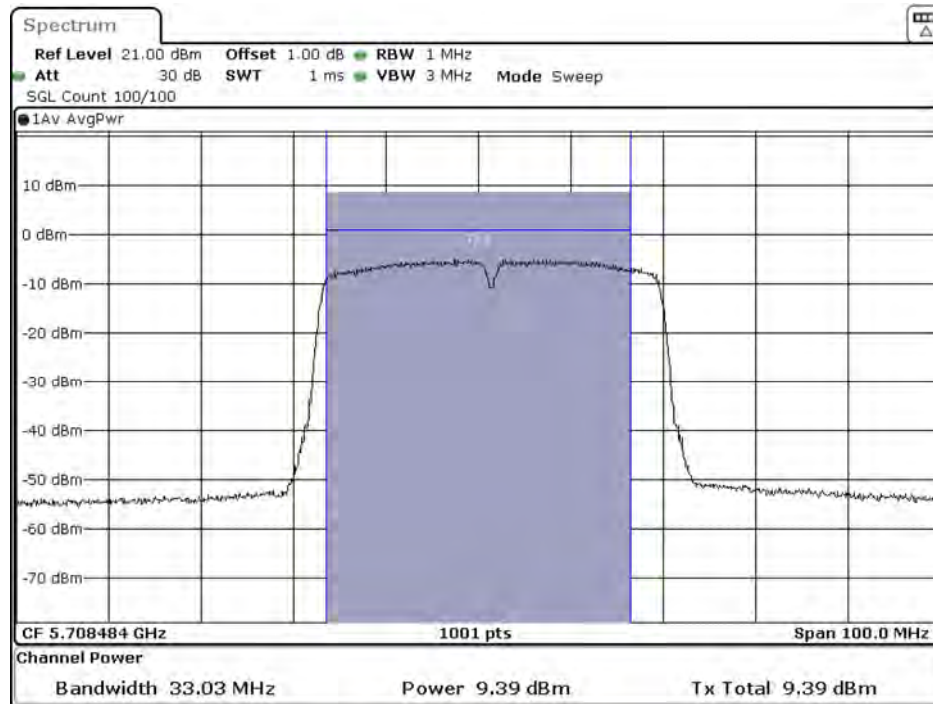
Date: 10.MAR.2021 05:52:56

Channel 142 (U-NII-3) - Chain A



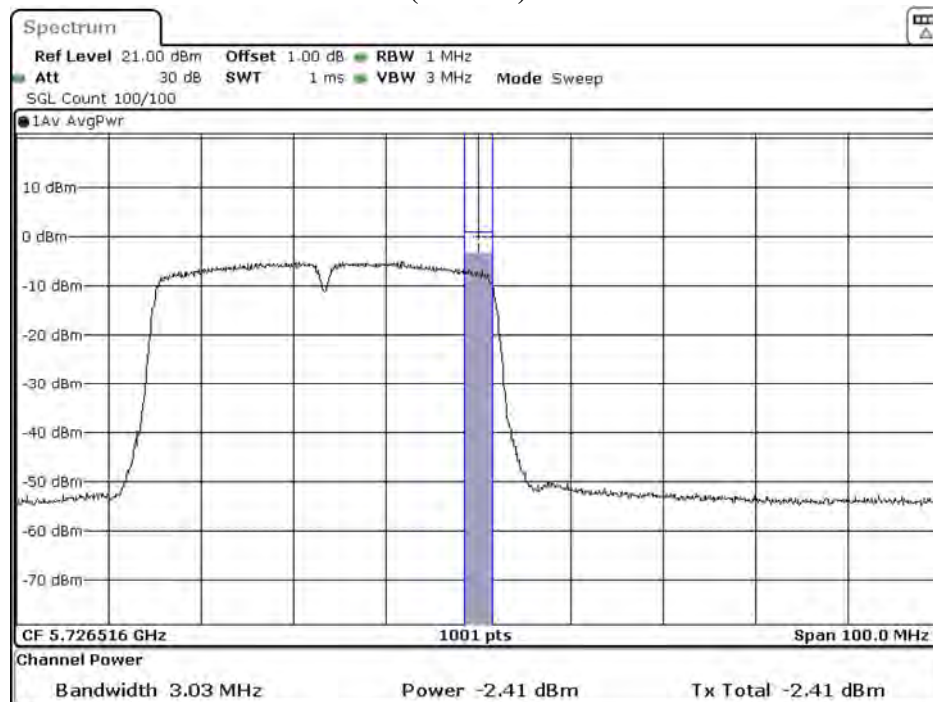
Date: 10.MAR.2021 05:53:18

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



Date: 10.MAR.2021 06:52:19

Channel 142 (U-NII-3) - Chain B



Date: 10.MAR.2021 06:52:41

Product : Wireless module
 Test Item : Maximum conducted output power
 Test Mode : Mode 4: Transmit (802.11ac-20BW 7.2Mbps) – Panel Antenna
 Test Date : 2021/02/19

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	MCS16	
		Measurement Level (dBm)									
36	5180	8.57	--	--	--	--	--	--	--	--	
44	5220	8.8	8.74	8.64	8.54	8.50	8.41	8.31	8.26	8.18	
48	5240	8.6	--	--	--	--	--	--	--	--	
52	5260	8.46	--	--	--	--	--	--	--	--	
60	5300	8.82	8.78	8.69	8.60	8.55	8.46	8.43	8.37	8.27	
64	5320	9.03	--	--	--	--	--	--	--	--	
100	5500	8.51	--	--	--	--	--	--	--	--	
116	5580	8.77	8.70	8.62	8.57	8.49	8.40	8.30	8.22	8.18	
140	5700	8.31	--	--	--	--	--	--	--	--	
144	5720(band3)	7.53	7.44	7.41	7.36	7.30	7.23	7.17	7.09	7.05	
144	5720(band4)	2.14	2.05	1.97	1.88	1.81	1.76	1.70	1.63	1.56	
149	5745	17.29	--	--	--	--	--	--	--	--	
157	5785	23.8	23.76	23.72	23.65	23.60	23.56	23.46	23.43	23.36	
165	5825	18.16	--	--	--	--	--	--	--	--	

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

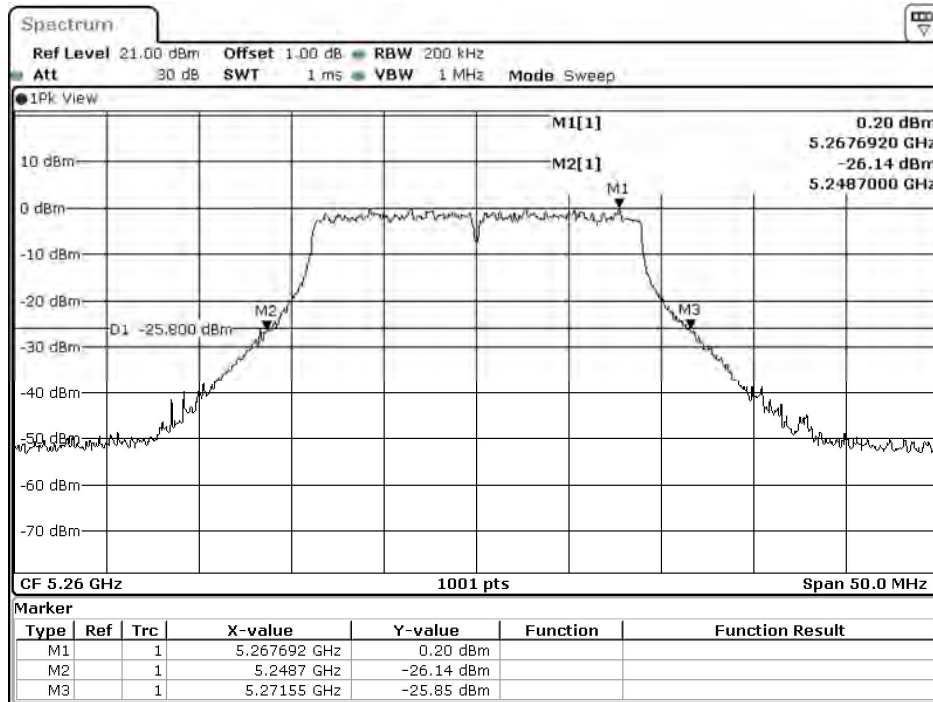
Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	MCS16	
		Measurement Level (dBm)									
36	5180	8.86	--	--	--	--	--	--	--	--	
44	5220	8.81	8.77	8.72	8.68	8.65	8.60	8.50	8.46	8.43	
48	5240	9.21	--	--	--	--	--	--	--	--	
52	5260	9.12	--	--	--	--	--	--	--	--	
60	5300	9.34	9.26	9.19	9.15	9.05	9.00	8.96	8.93	8.85	
64	5320	9.23	--	--	--	--	--	--	--	--	
100	5500	8.75	--	--	--	--	--	--	--	--	
116	5580	9.17	9.14	9.06	8.98	8.91	8.85	8.81	8.74	8.67	
140	5700	8.76	--	--	--	--	--	--	--	--	
144	5720(band3)	7.79	7.70	7.67	7.62	7.56	7.53	7.50	7.41	7.38	
144	5720(band4)	2.76	2.66	2.59	2.51	2.42	2.38	2.32	2.29	2.19	
149	5745	18.21	--	--	--	--	--	--	--	--	
157	5785	23.83	23.78	23.70	23.65	23.57	23.52	23.44	23.35	23.29	
165	5825	18.75	--	--	--	--	--	--	--	--	

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

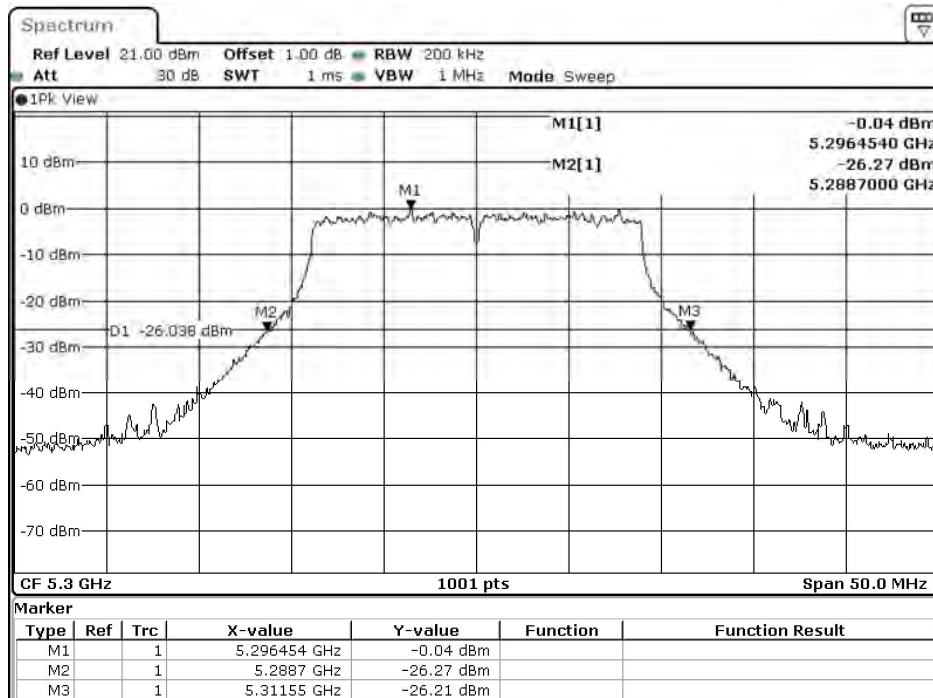
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit		Result
						(dBm)	dBm+10log(BW)	
36	5180	--	8.57	8.86	11.73	13.62	--	Pass
44	5220	--	8.80	8.81	11.82	13.62	--	Pass
48	5240	--	8.60	9.21	11.93	13.62	--	Pass
52	5260	22.85	8.46	9.12	11.81	13.62	24.59	Pass
60	5300	22.50	8.82	9.34	12.10	13.62	24.52	Pass
64	5320	22.40	9.03	9.23	12.14	13.62	24.50	Pass
100	5500	22.40	8.51	8.75	11.64	13.06	24.50	Pass
116	5580	22.60	8.77	9.17	11.98	13.06	24.54	Pass
140	5700	22.40	8.31	8.76	11.55	13.06	24.50	Pass
144(Band3)	5720	16.05	7.53	7.79	10.80	13.06	23.05	Pass
144(Band4)	5720	--	2.14	2.76	5.60	30	--	Pass
149	5745	--	17.29	18.21	20.78	30	--	Pass
157	5785	--	23.80	23.83	26.83	30	--	Pass
165	5825	--	18.16	18.75	21.48	30	--	Pass

26dB Occupied Bandwidth: Channel 52 - Chain A



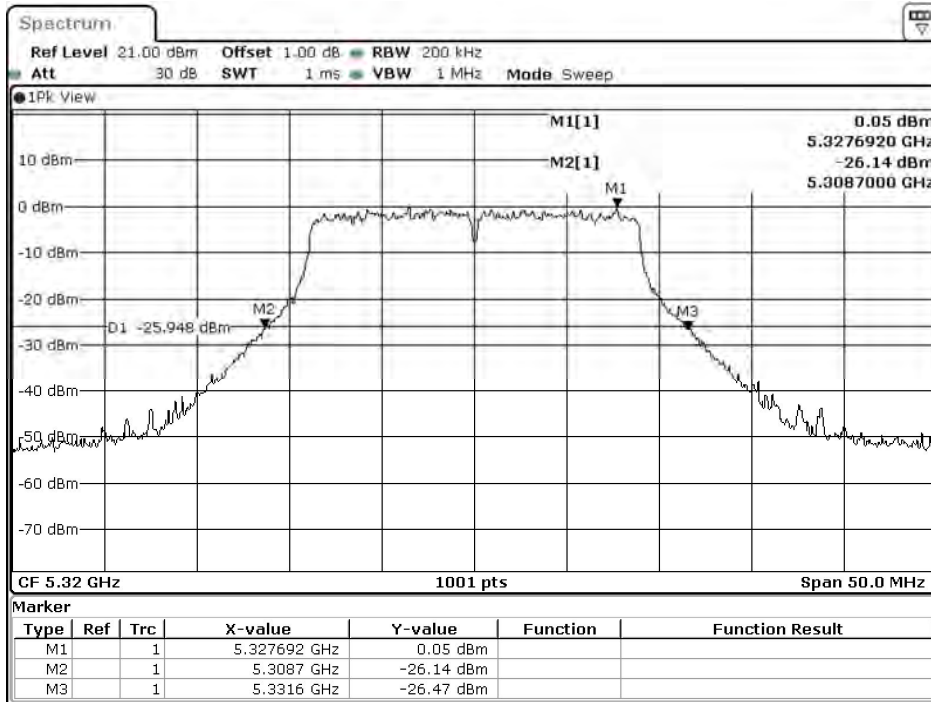
Date: 22.FEB.2021 08:33:19

Channel 60 - Chain A



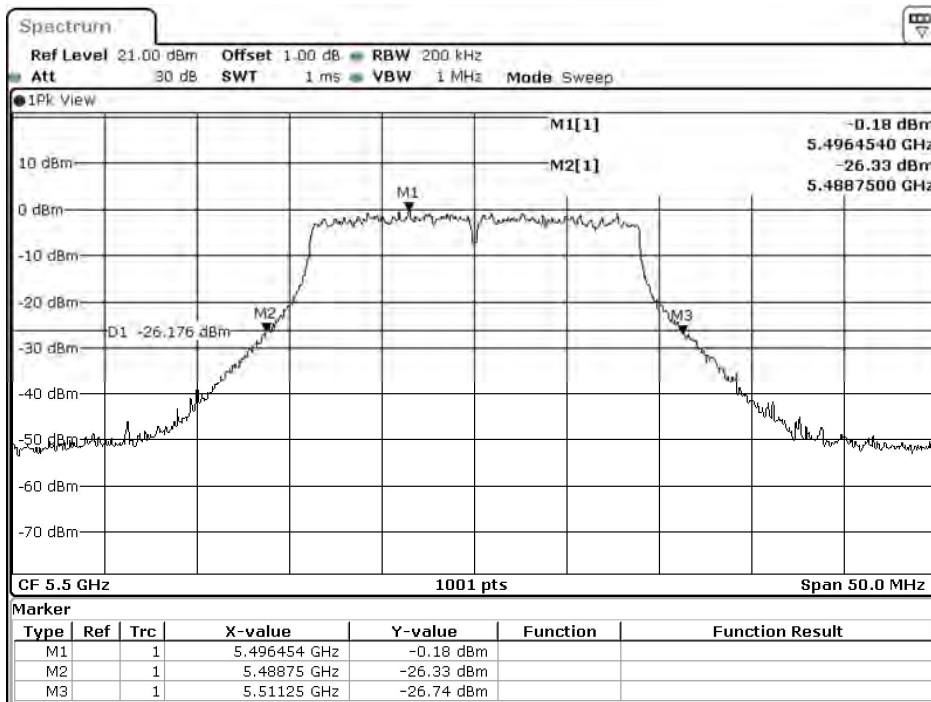
Date: 22.FEB.2021 08:36:37

Channel 64 - Chain A



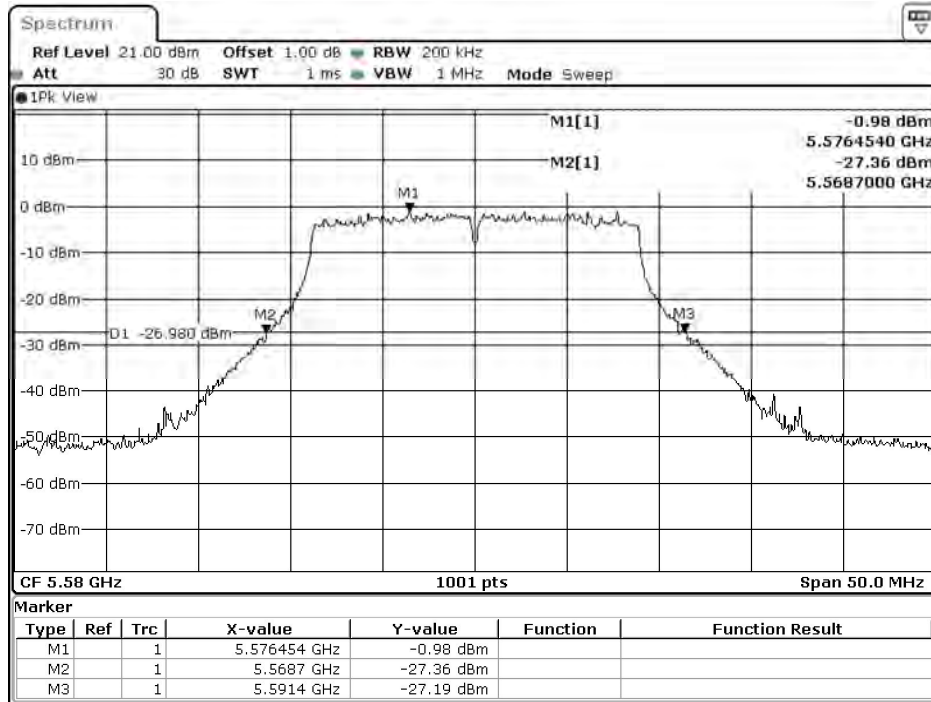
Date: 22.FEB.2021 08:41:49

Channel 100 - Chain A



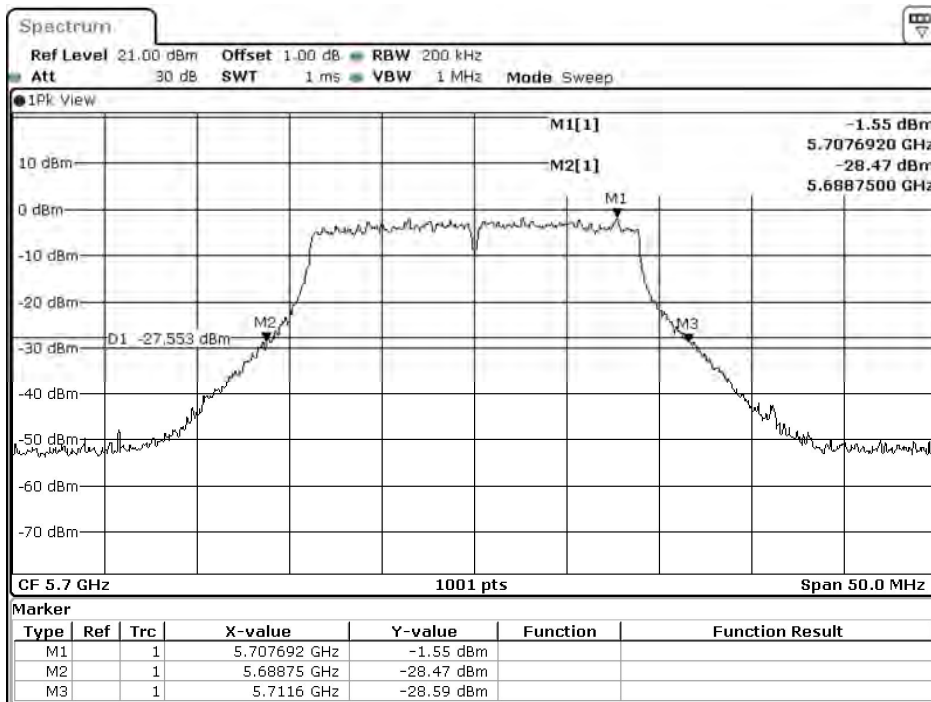
Date: 22.FEB.2021 08:43:43

Channel 116 - Chain A



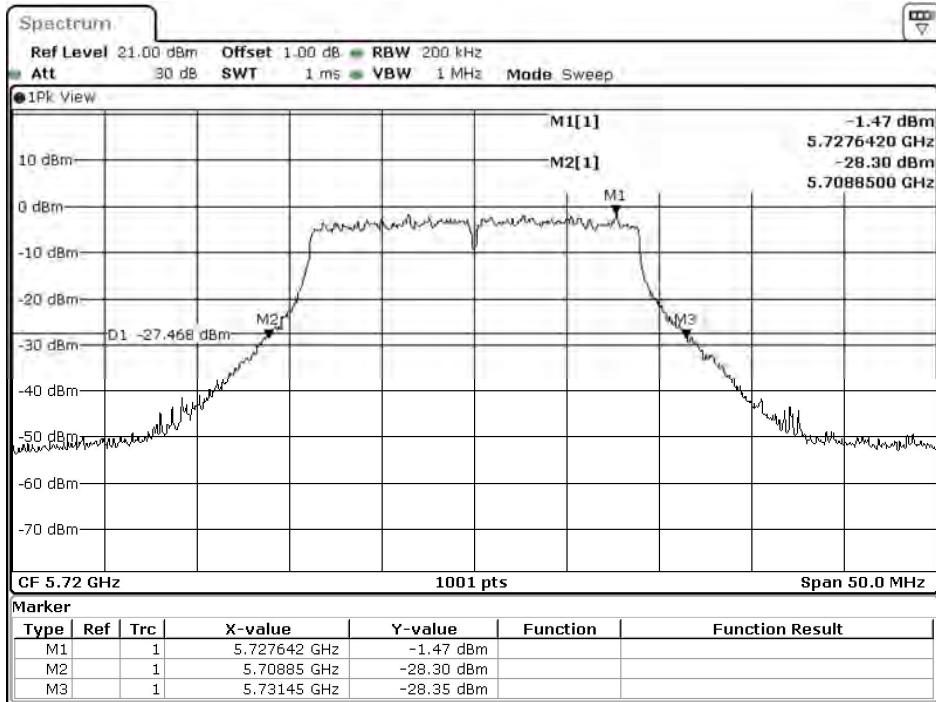
Date: 22.FEB.2021 08:47:08

Channel 140 - Chain A



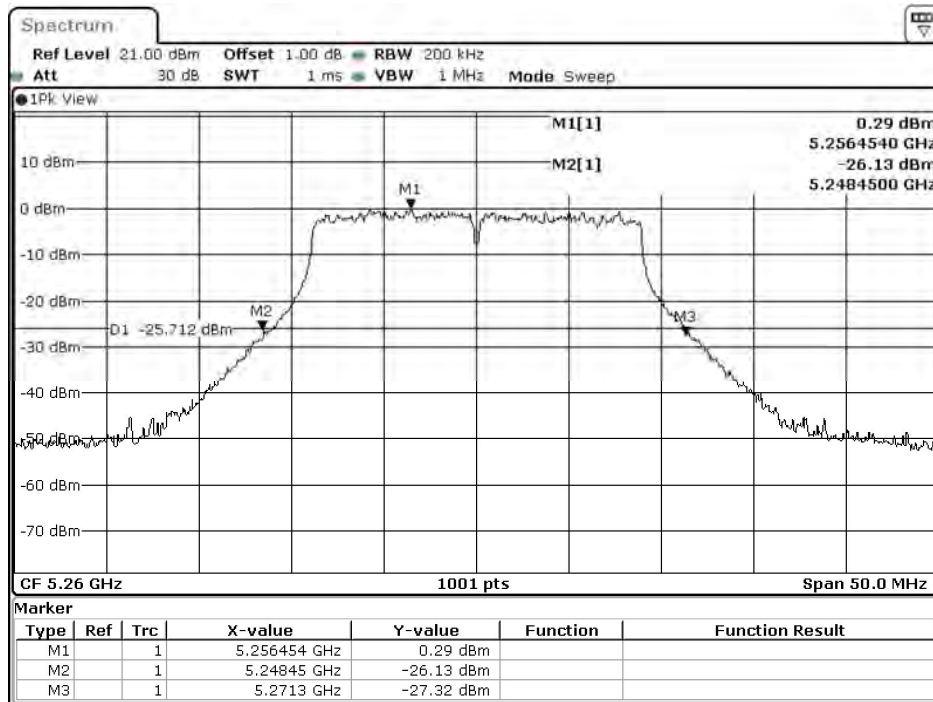
Date: 22.FEB.2021 08:48:55

Channel 144 - Chain A



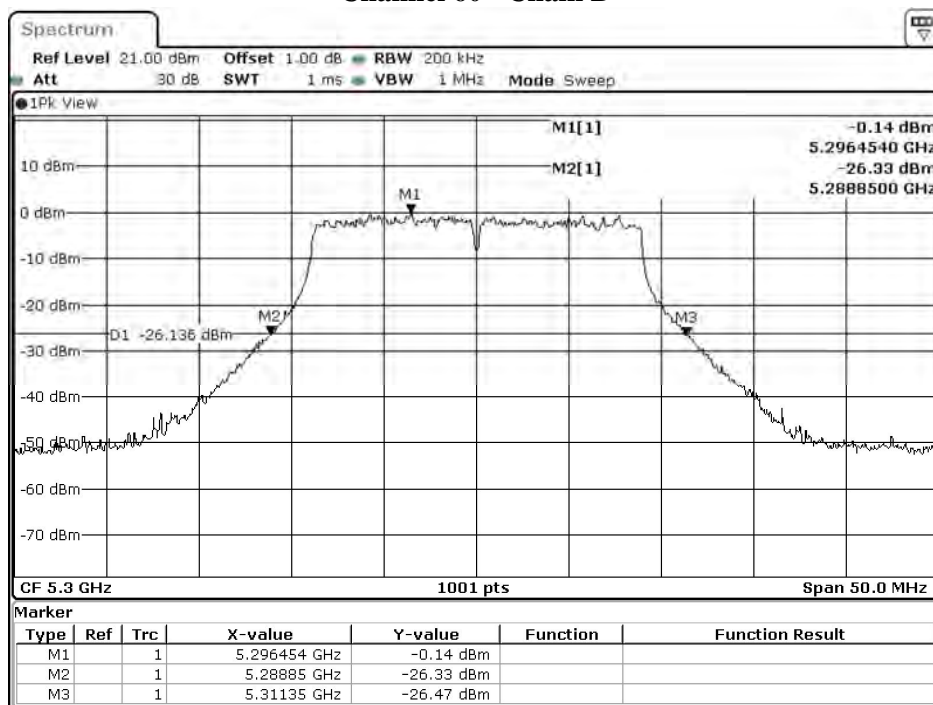
Date: 22.FEB.2021 09:50:10

26dB Occupied Bandwidth: Channel 52 - Chain B



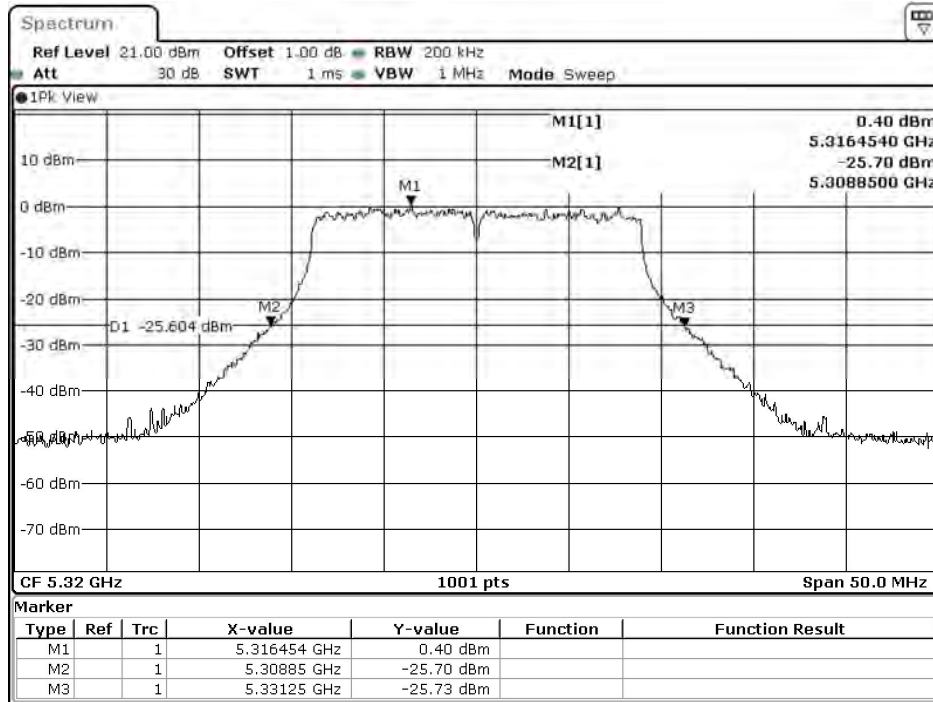
Date: 22.FEB.2021 10:38:41

Channel 60 - Chain B



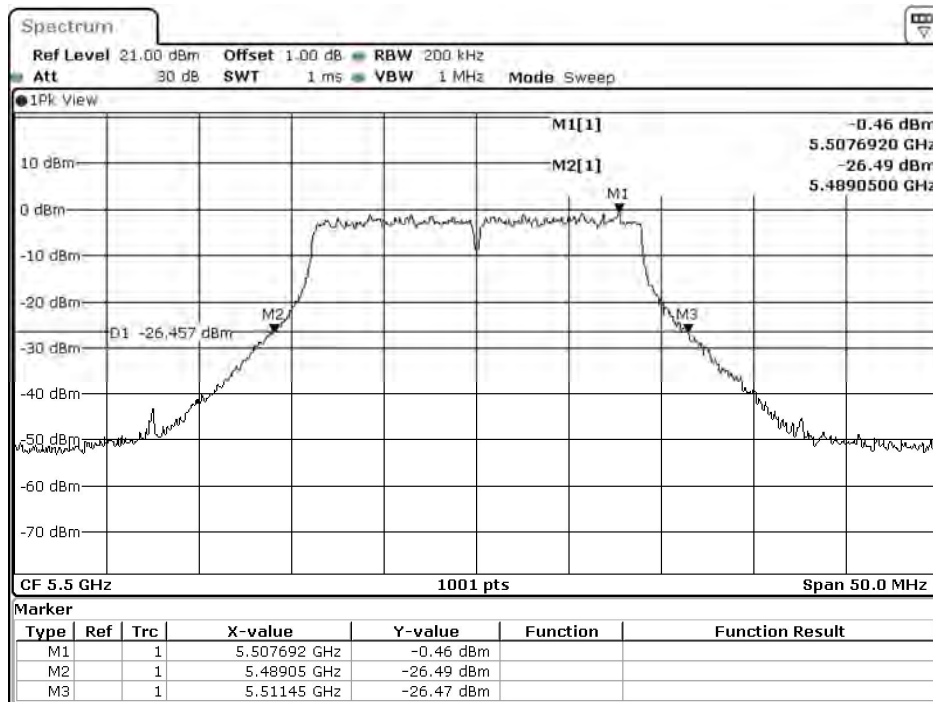
Date: 22.FEB.2021 10:42:00

Channel 64 - Chain B



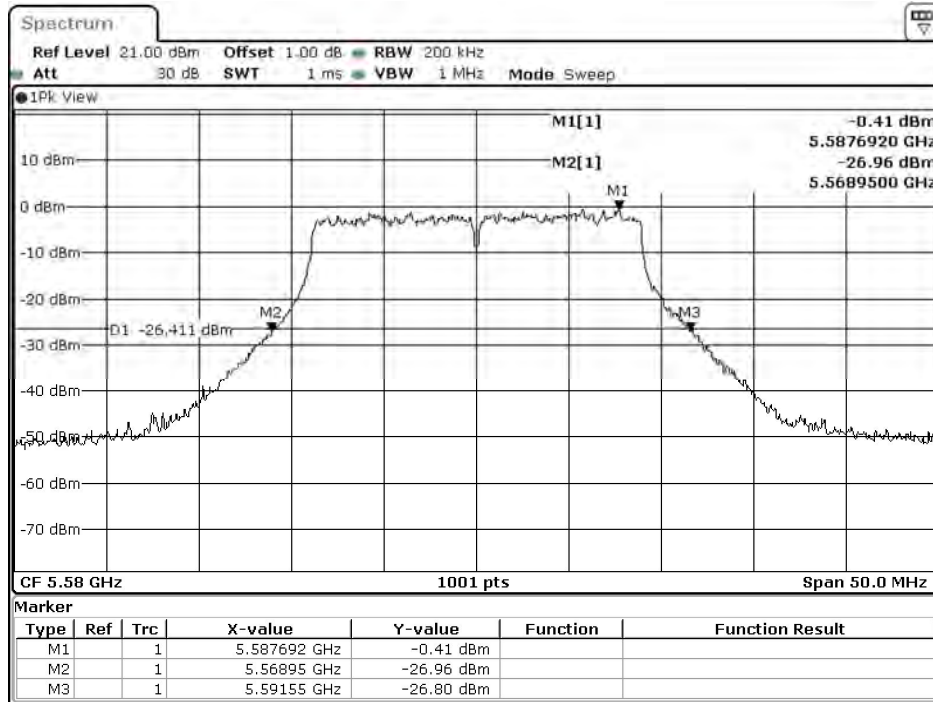
Date: 22.FEB.2021 10:47:12

Channel 100 - Chain B



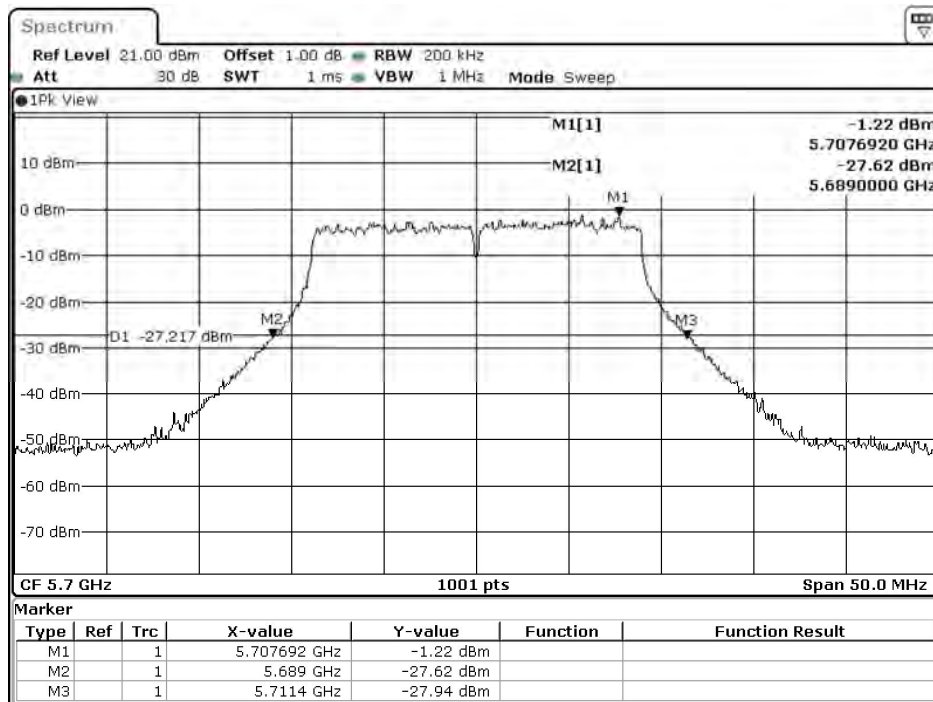
Date: 22.FEB.2021 10:49:05

Channel 116 - Chain B



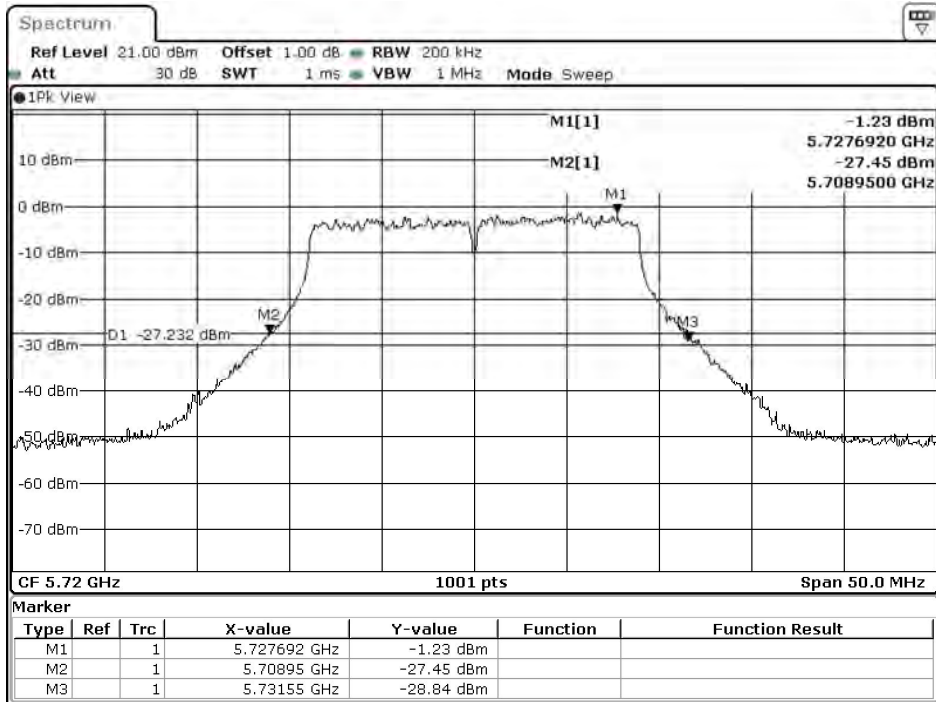
Date: 22.FEB.2021 10:52:30

Channel 140 - Chain B



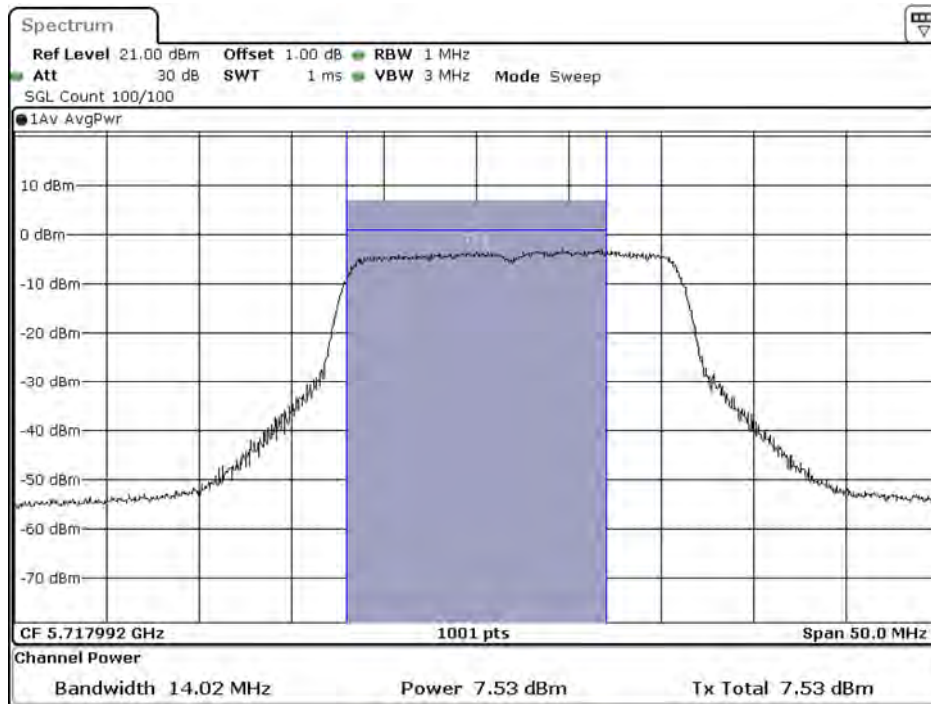
Date: 22.FEB.2021 10:54:17

Channel 144 - Chain B



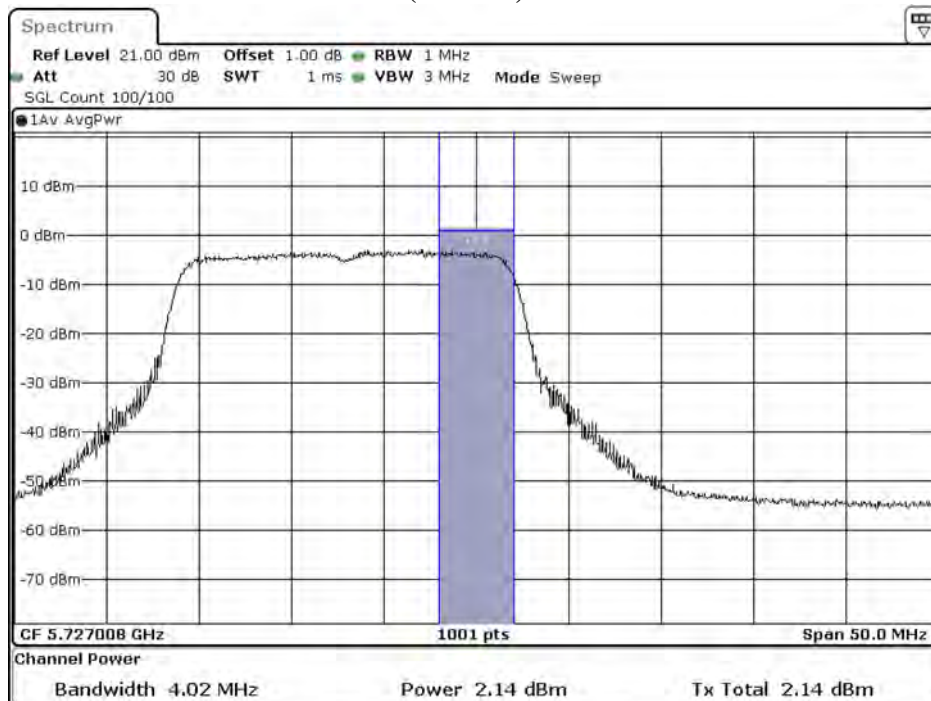
Date: 22.FEB.2021 11:55:33

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



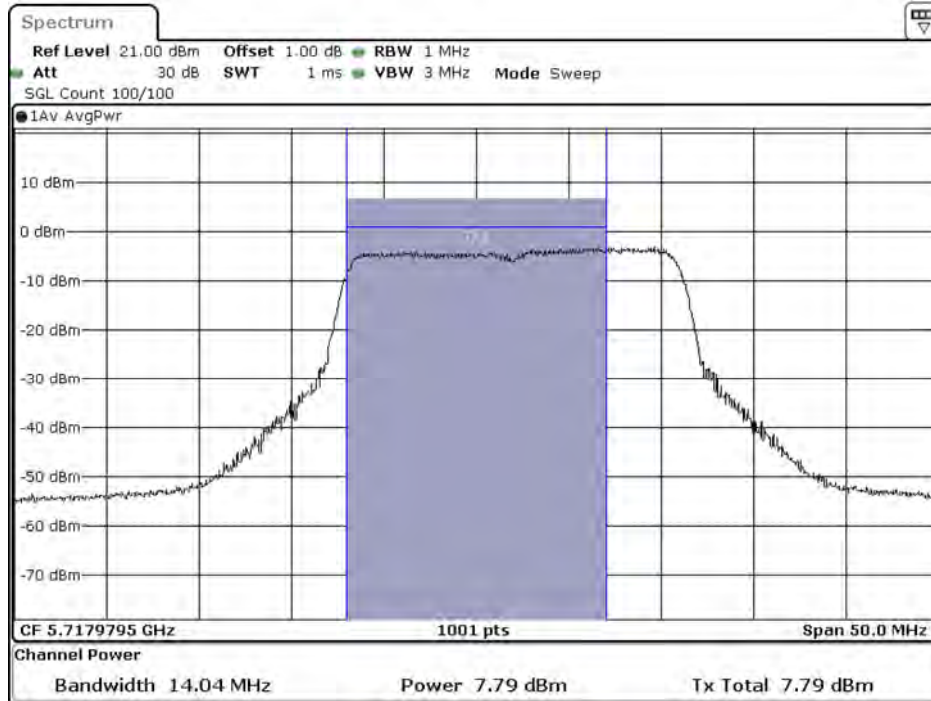
Date: 22.FEB.2021 09:51:18

Channel 144 (U-NII-3) - Chain A



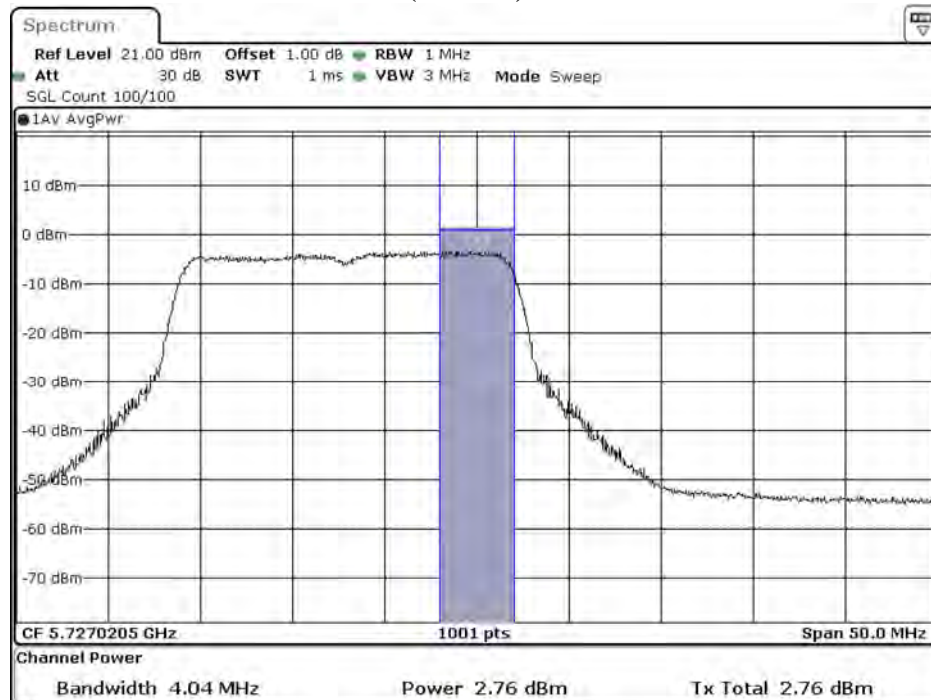
Date: 22.FEB.2021 09:51:41

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



Date: 22 FEB. 2021 11:58:41

Channel 144 (U-NII-3) - Chain B



Date: 22 FEB. 2021 11:57:04

Product : Wireless module
 Test Item : Maximum conducted output power
 Test Mode : Mode 5: Transmit (802.11ac-40BW 15Mbps) – Panel Antenna
 Test Date : 2021/02/19

Chain A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	MCS16
		Measurement Level (dBm)								
38	5190	10.24	--	--	--	--	--	--	--	--
46	5230	10.41	10.32	10.29	10.21	10.18	10.12	10.09	10.05	9.95
54	5270	10.51	--	--	--	--	--	--	--	--
62	5310	10.44	10.38	10.33	10.29	10.26	10.22	10.16	10.09	10.01
102	5510	9.67	--	--	--	--	--	--	--	--
110	5550	9.63	9.54	9.47	9.43	9.33	9.30	9.27	9.23	9.16
134	5670	9.53	--	--	--	--	--	--	--	--
142	5710(band3)	8.66	8.59	8.50	8.46	8.38	8.32	8.26	8.22	8.14
142	5710(band3)	-1.56	-1.59	-1.64	-1.70	-1.77	-1.83	-1.88	-1.92	-2.00
151	5755	15.45	--	--	--	--	--	--	--	--
159	5795	16.57	16.47	16.38	16.34	16.26	16.23	16.15	16.09	16.00

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	MCS16
		Measurement Level (dBm)								
38	5190	10.58	--	--	--	--	--	--	--	--
46	5230	10.58	10.48	10.40	10.34	10.31	10.25	10.16	10.11	10.06
54	5270	10.7	--	--	--	--	--	--	--	--
62	5310	10.52	10.46	10.38	10.35	10.29	10.23	10.18	10.15	10.10
102	5510	9.89	--	--	--	--	--	--	--	--
110	5550	10.14	10.08	9.98	9.89	9.84	9.75	9.72	9.62	9.52
134	5670	10.23	--	--	--	--	--	--	--	--
142	5710(band3)	9.37	9.28	9.23	9.18	9.11	9.08	9.04	8.94	8.84
142	5710(band3)	-1.7	-1.77	-1.83	-1.93	-2.03	-2.11	-2.14	-2.20	-2.25
151	5755	16.55	--	--	--	--	--	--	--	--
159	5795	17.15	17.08	17.01	16.94	16.85	16.80	16.77	16.73	16.63

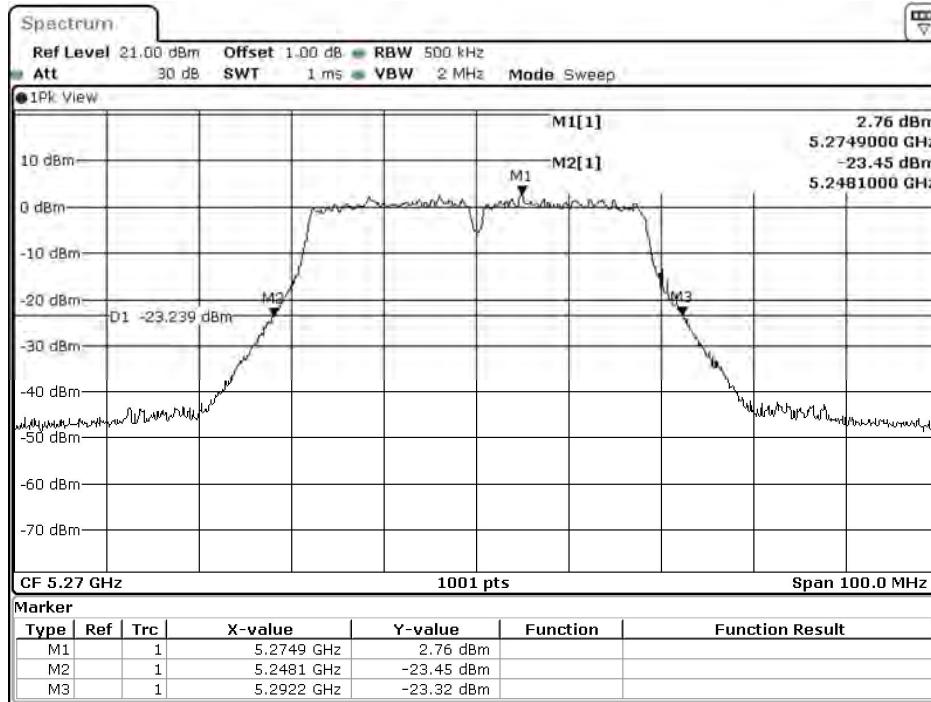
Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
38	5190	--	10.24	10.58	13.42	13.62	--
46	5230	--	10.41	10.58	13.51	13.62	--
54	5270	44.10	10.51	10.70	13.62	13.62	27.44
62	5310	44.20	10.44	10.52	13.49	13.62	27.45
102	5510	44.50	9.67	9.89	12.79	13.06	27.48
110	5550	44.70	9.63	10.14	12.90	13.06	27.50
134	5670	44.60	9.53	10.23	12.90	13.06	27.49
142F(Band3)	5710	37.10	8.66	9.37	12.28	13.06	26.69
142F(Band4)	5710	--	-1.56	-1.70	1.62	30	--
151	5755	--	15.45	16.55	19.05	30	--
159	5795	--	16.57	17.15	19.88	30	--

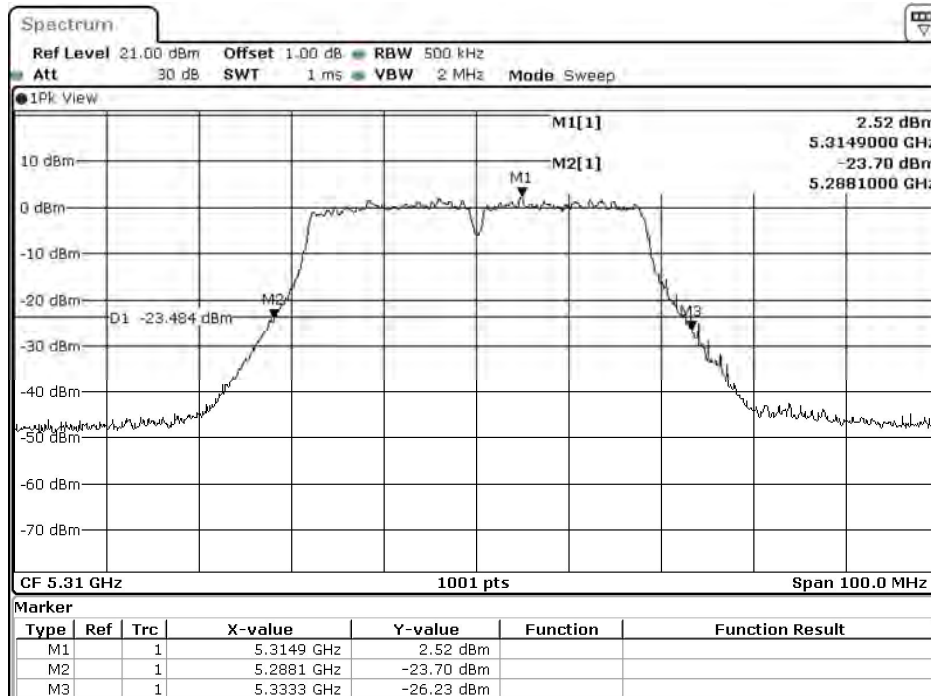
26dB Occupied Bandwidth:

Channel 54 - Chain A



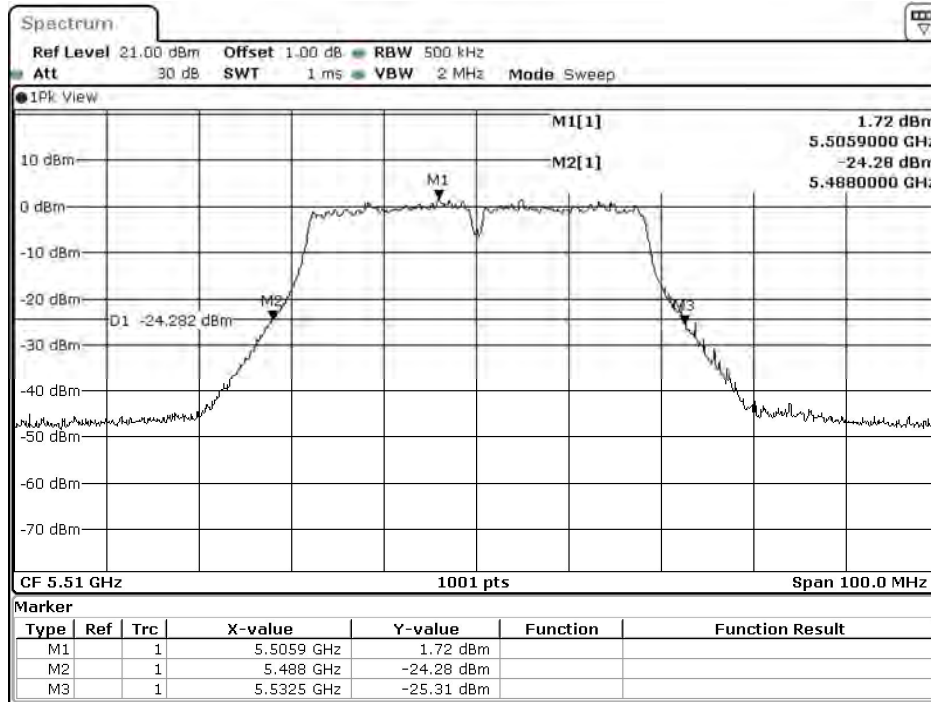
Date: 22.FEB.2021 10:11:35

Channel 62 - Chain A



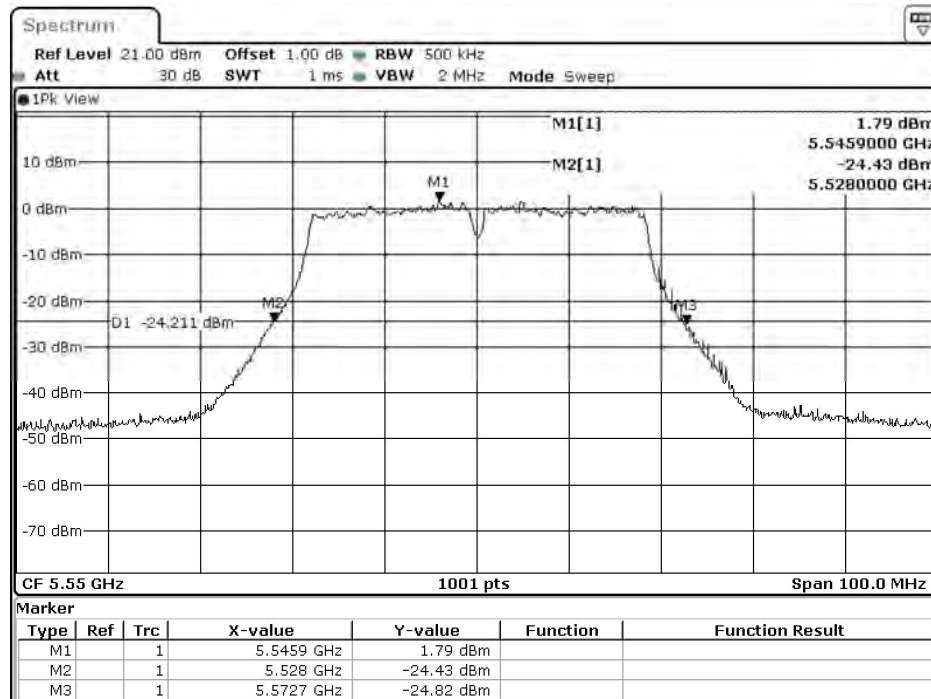
Date: 22.FEB.2021 10:14:13

Channel 102 - Chain A



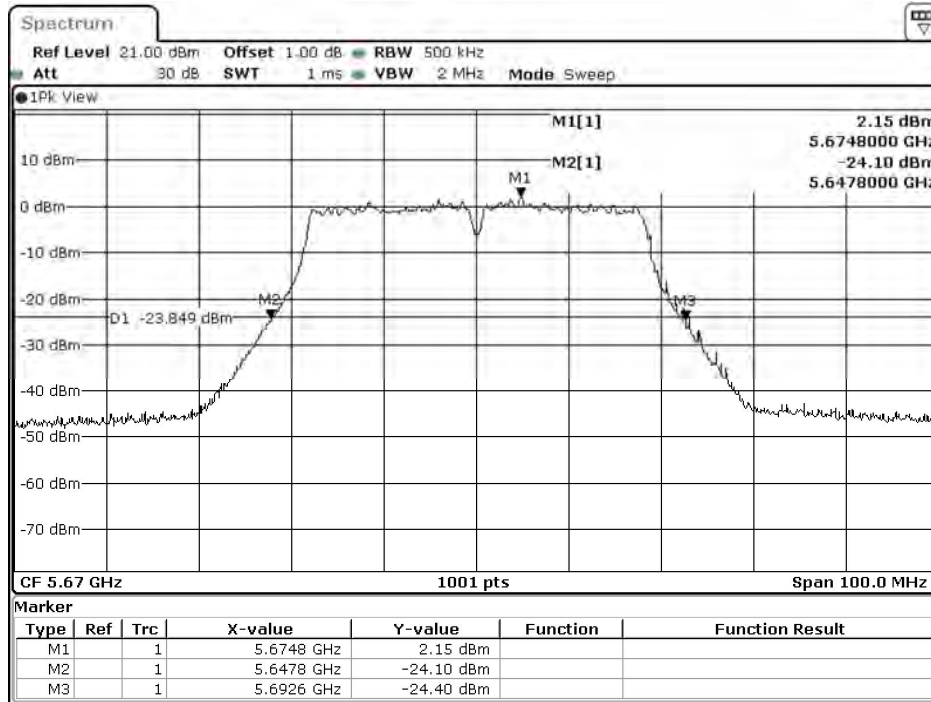
Date: 22.FEB.2021 10:16:16

Channel 110 - Chain A



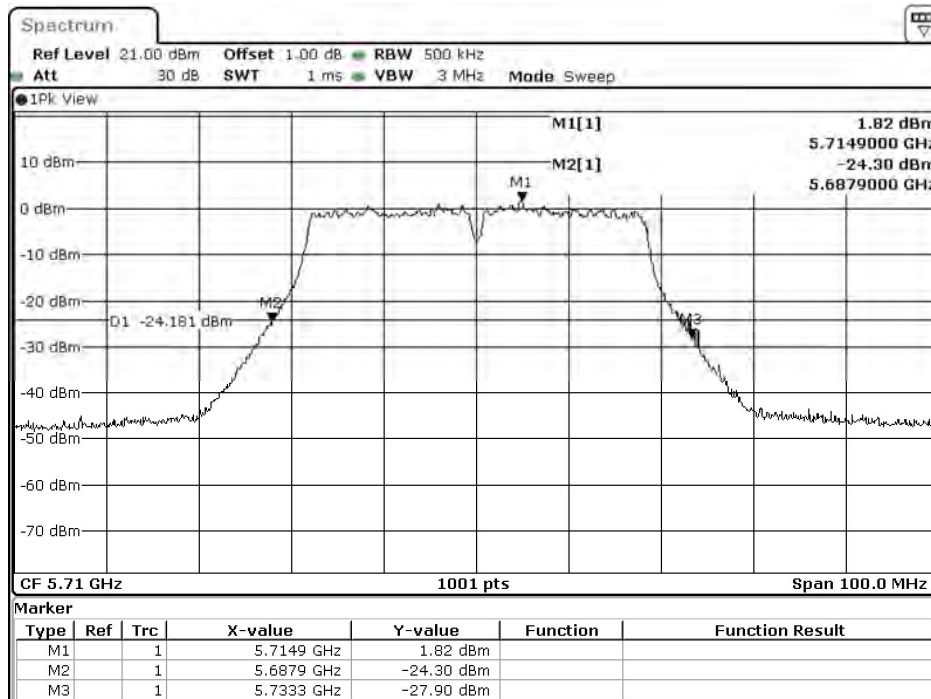
Date: 22.FEB.2021 10:18:06

Channel 134 - Chain A



Date: 22.FEB.2021 10:19:52

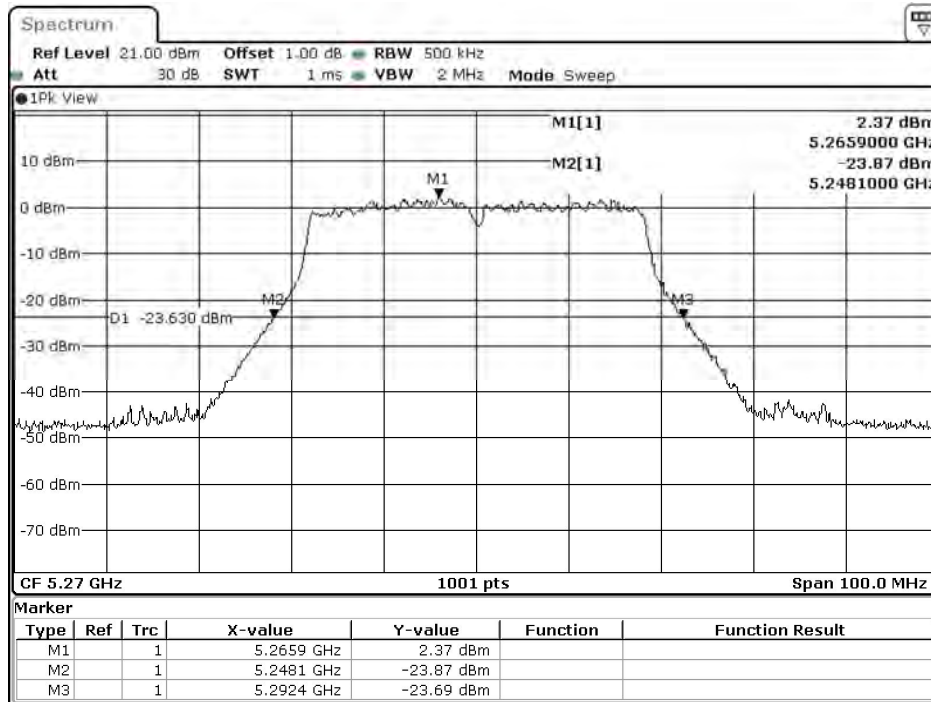
Channel 142 - Chain A



Date: 22.FEB.2021 10:04:38

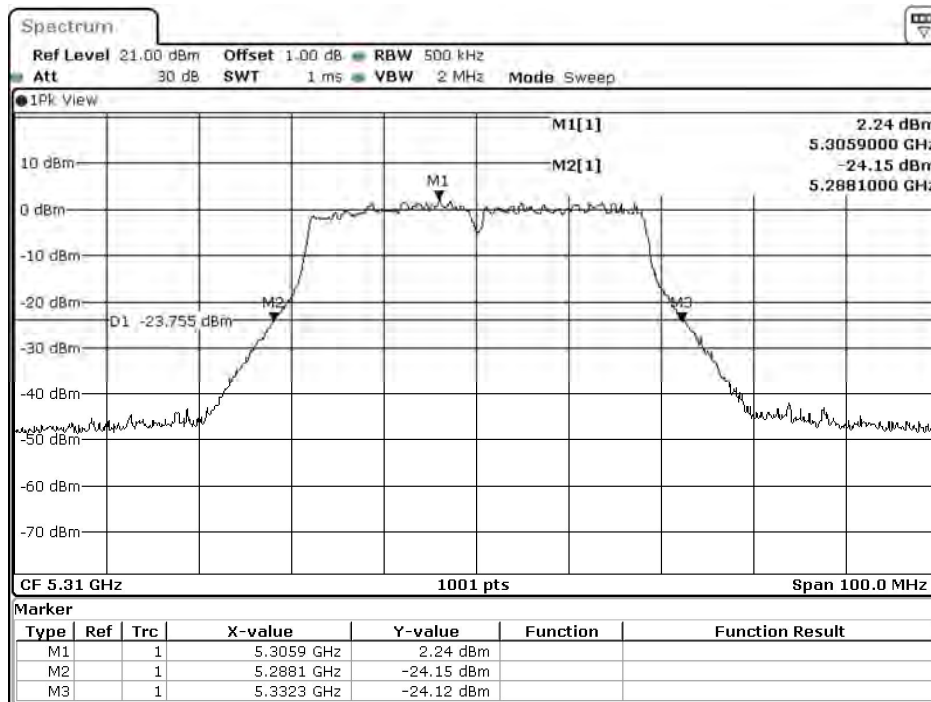
26dB Occupied Bandwidth:

Channel 54 - Chain B



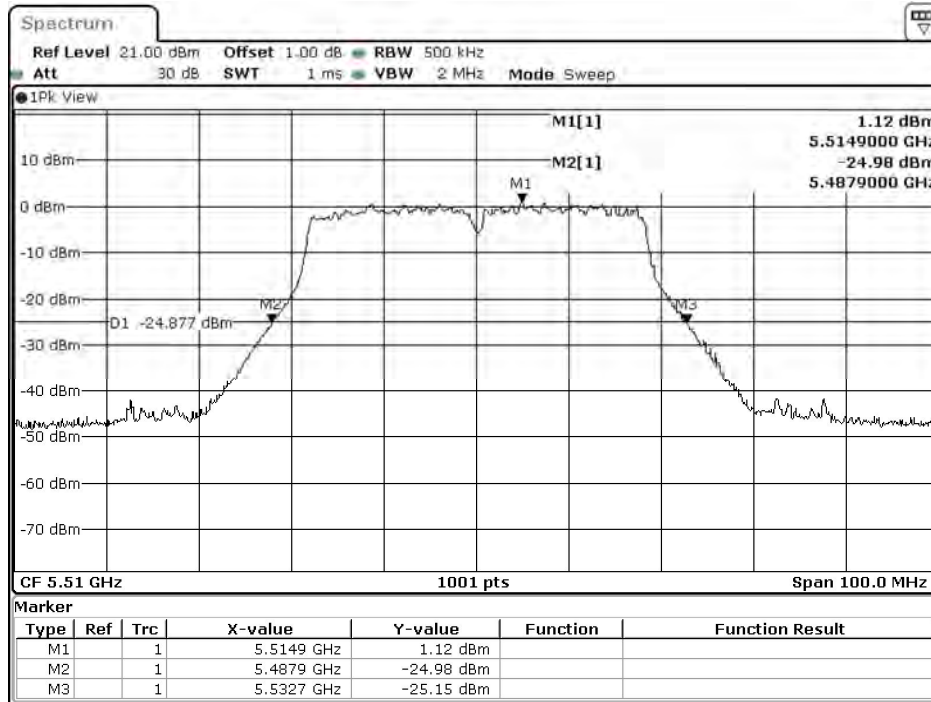
Date: 22.FEB.2021 12:16:58

Channel 62 - Chain B



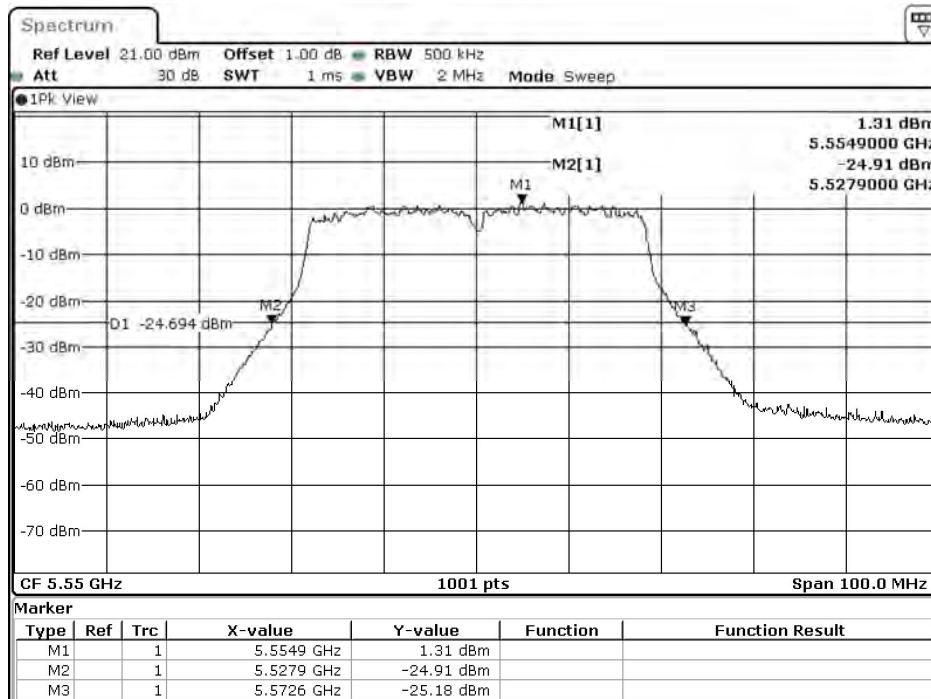
Date: 22.FEB.2021 12:19:36

Channel 102 - Chain B



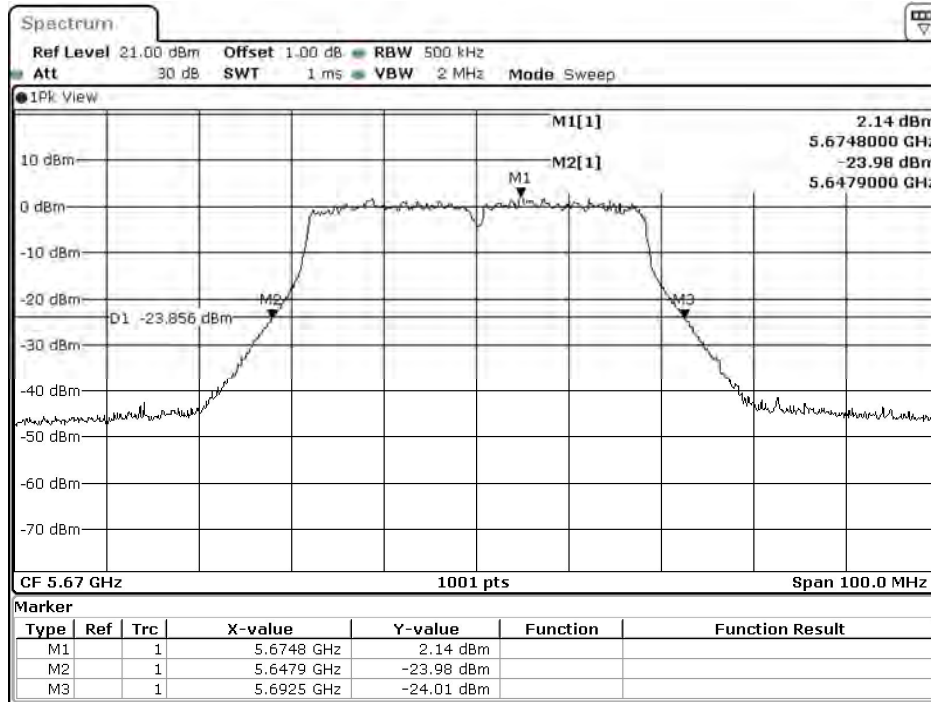
Date: 22.FEB.2021 12:21:39

Channel 110 - Chain B



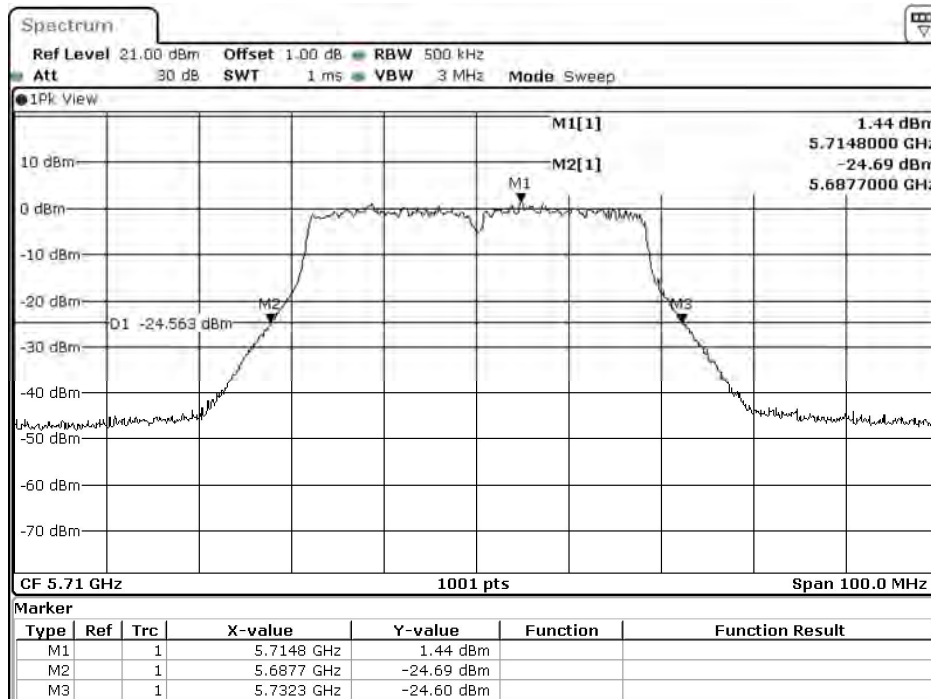
Date: 22.FEB.2021 12:23:29

Channel 134 - Chain B



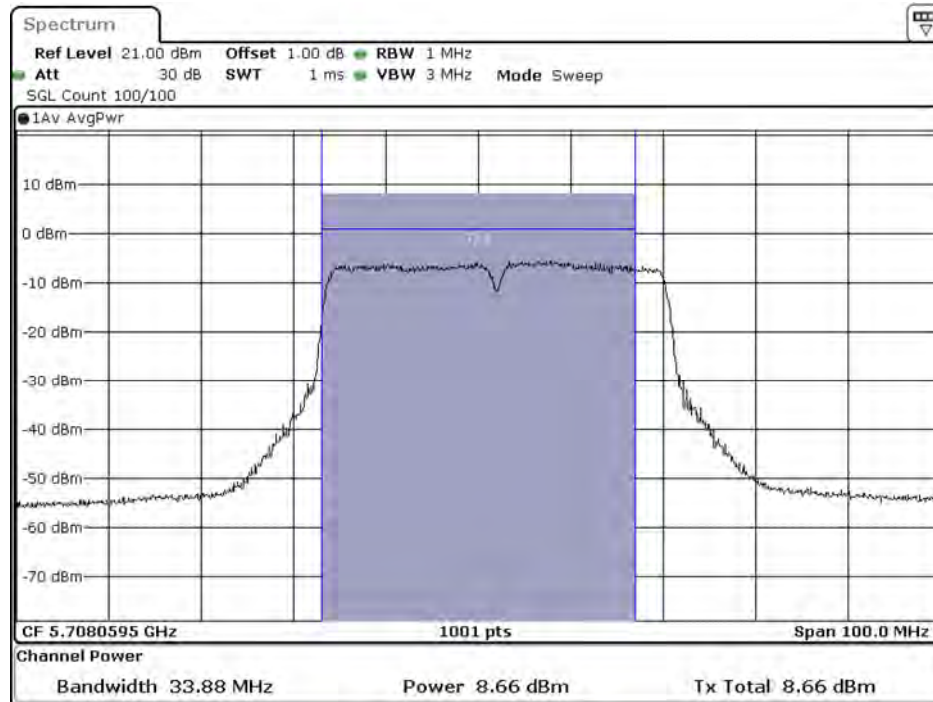
Date: 22.FEB.2021 12:25:15

Channel 142 - Chain B



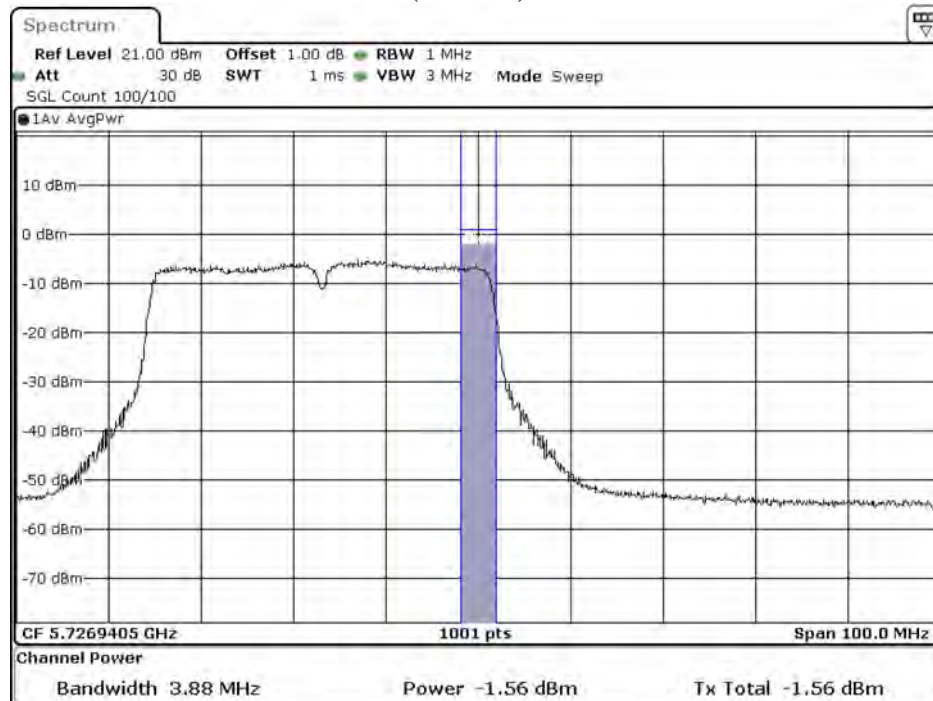
Date: 22.FEB.2021 12:10:01

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



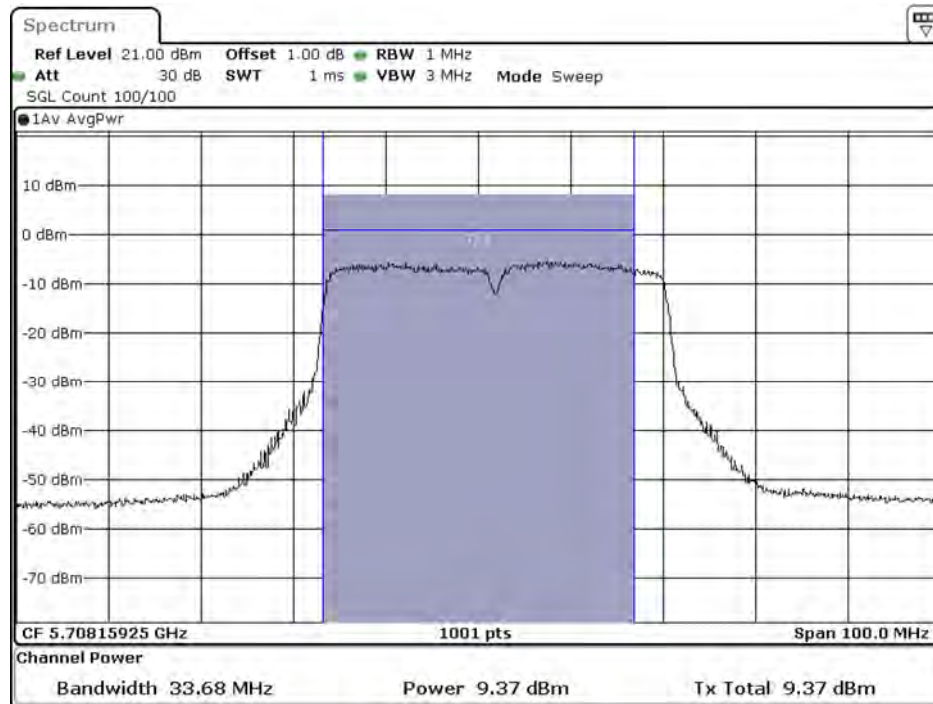
Date: 22.FEB.2021 10:05:45

Channel 142 (U-NII-3) - Chain A



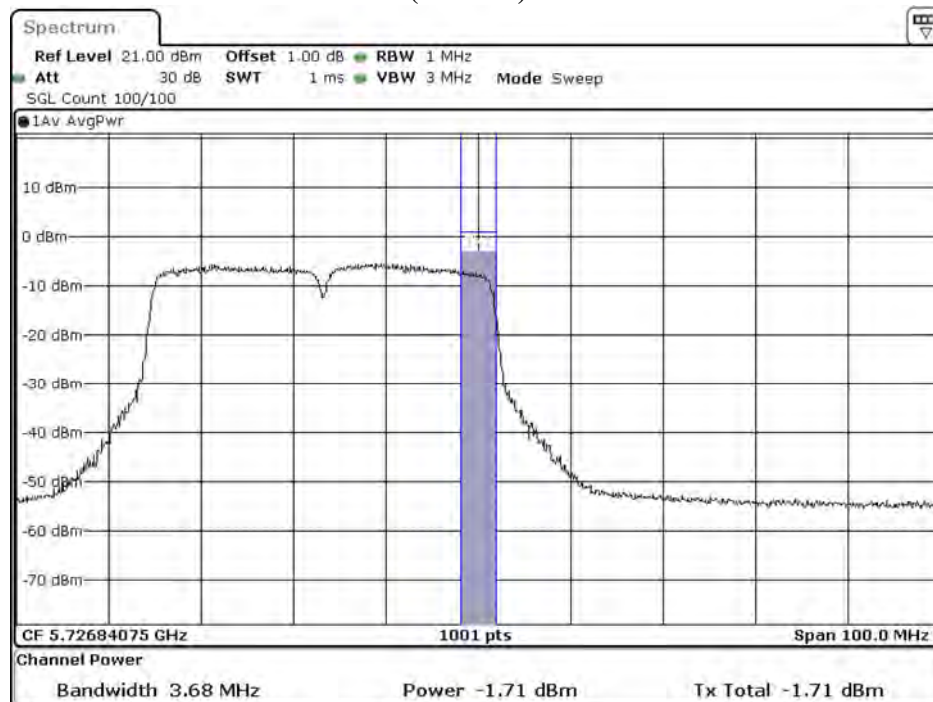
Date: 22.FEB.2021 10:06:08

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



Date: 22.FEB.2021 12:11:08

Channel 142 (U-NII-3) - Chain B



Date: 22.FEB.2021 12:11:31

Product : Wireless module
 Test Item : Maximum conducted output power
 Test Mode : Mode 6: Transmit (802.11ac-80BW 32.5Mbps) – Panel Antenna
 Test Date : 2021/02/19

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No	Frequency (MHz)	Data Rate (Mbps)									
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	MCS16	MCS17
42	5210	10.12	--	--	--	--	--	--	--	--	--
58	5290	8.91	8.88	8.84	8.74	8.68	8.65	8.59	8.56	8.51	8.45
106	5530	9.37	--	--	--	--	--	--	--		
122	5610	9.51	9.41	9.34	9.29	9.25	9.15	9.07	9.04	8.97	8.9
138ac80(Band3)	5690	8.7	--	--	--	--	--	--	--	--	--
138ac80(Band4)	5690	-4.92	--	--	--	--	--	--	--	--	--
155	5775	11.04	10.97	10.9	10.81	10.73	10.67	10.58	10.53	10.48	10.45

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain B

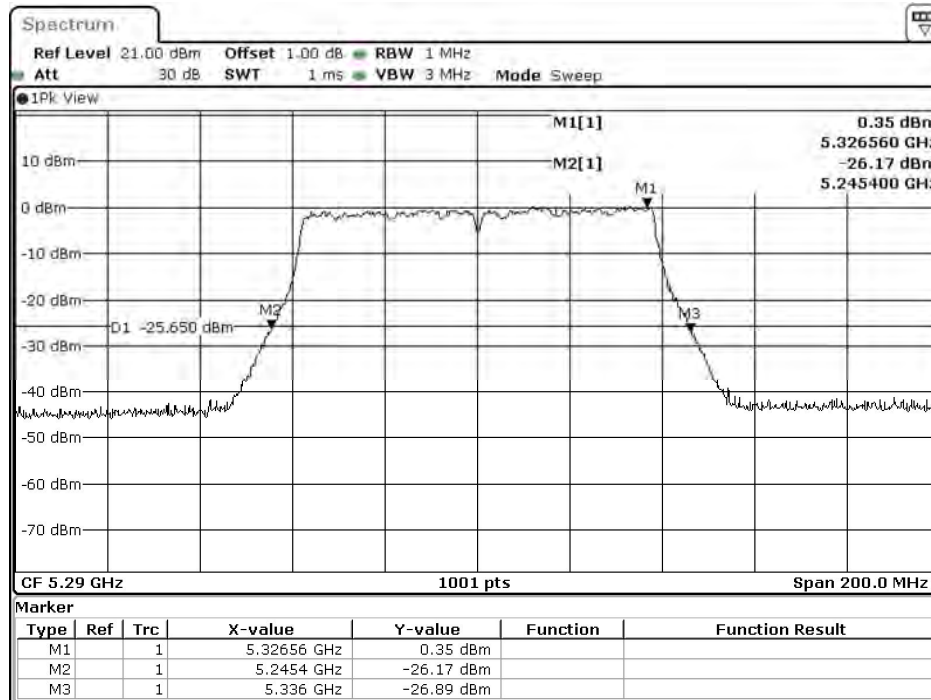
Cable loss=1dB		Maximum conducted output power									
Channel No	Frequency (MHz)	Data Rate (Mbps)									
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	MCS16	MCS17
42	5210	10.43	--	--	--	--	--	--	--	--	--
58	5290	9.43	9.33	9.3	9.25	9.18	9.1	9.06	8.99	8.93	8.87
106	5530	9.84	--	--	--	--	--	--	--	--	--
122	5610	10.06	10.03	9.93	9.89	9.86	9.81	9.73	9.65	9.58	9.53
138ac80(Band3)	5690	9.38	--	--	--	--	--	--	--	--	--
138ac80(Band4)	5690	-5.05	--	--	--	--	--	--	--	--	--
155	5775	11.94	11.87	11.77	11.69	11.65	11.55	11.45	11.38	11.3	11.27

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Maximum conducted output power Measurement

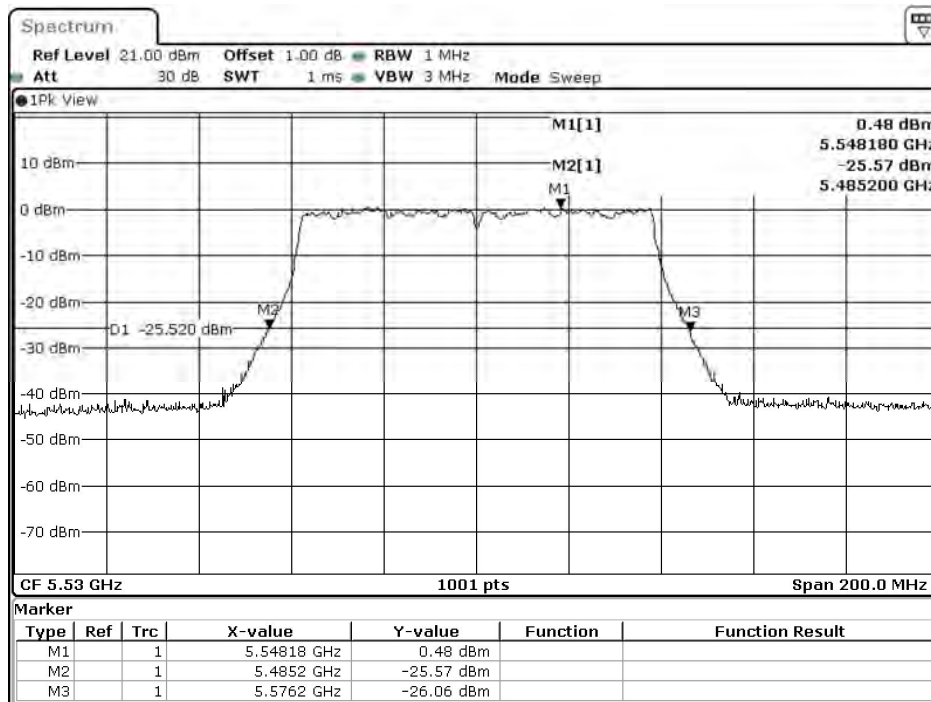
Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
42	5210	--	10.12	10.43	13.29	13.62	--
58	5290	88.40	8.91	9.43	12.19	13.62	--
106	5530	88.20	9.37	9.84	12.62	13.06	30.45
122	5610	87.60	9.51	10.06	12.80	13.06	30.43
138F(Band3)	5690	79.80	8.70	9.38	12.73	13.06	30.02
138F(Band4)	5690	--	-4.92	-5.05	-1.31	30	--
155	5775	--	11.04	11.94	14.52	30	--

26dB Occupied Bandwidth: Channel 58 - Chain A



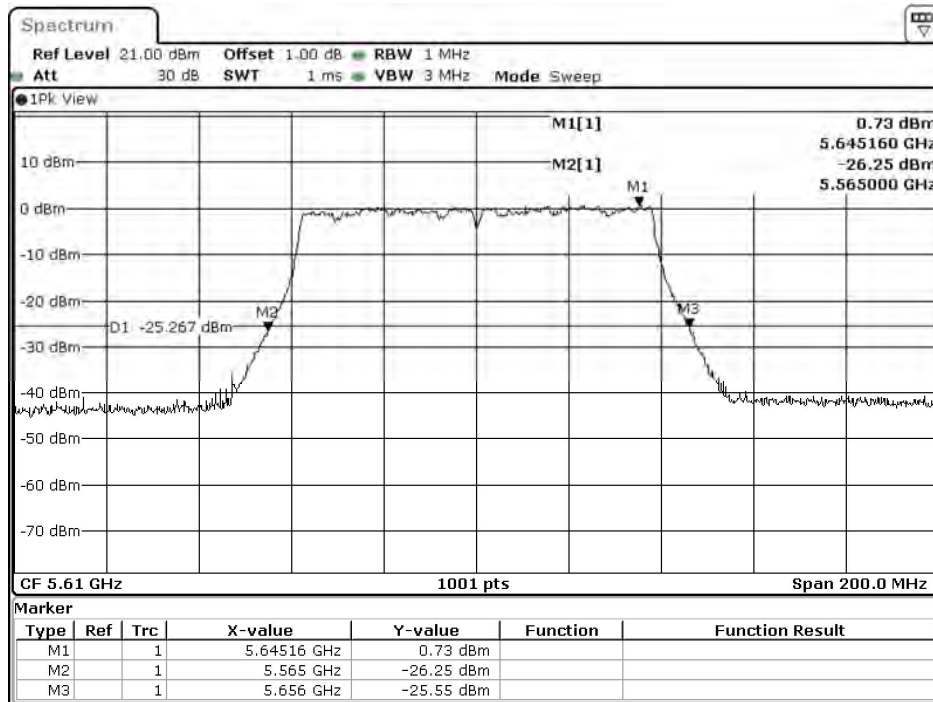
Date: 22.FEB.2021 10:35:08

Channel 106 - Chain A



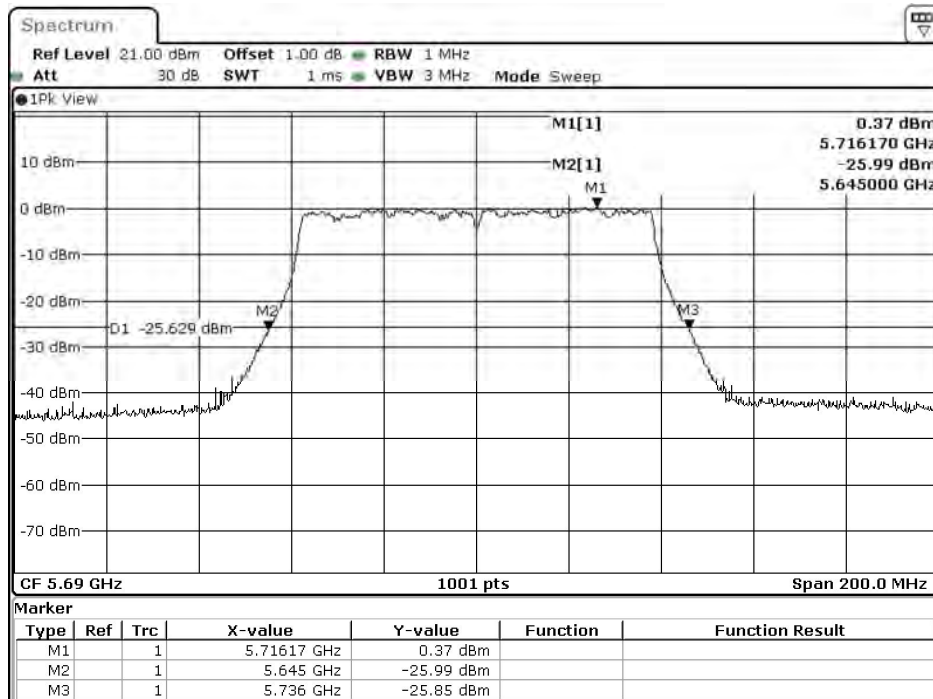
Date: 22.FEB.2021 10:37:21

Channel 122 - Chain A



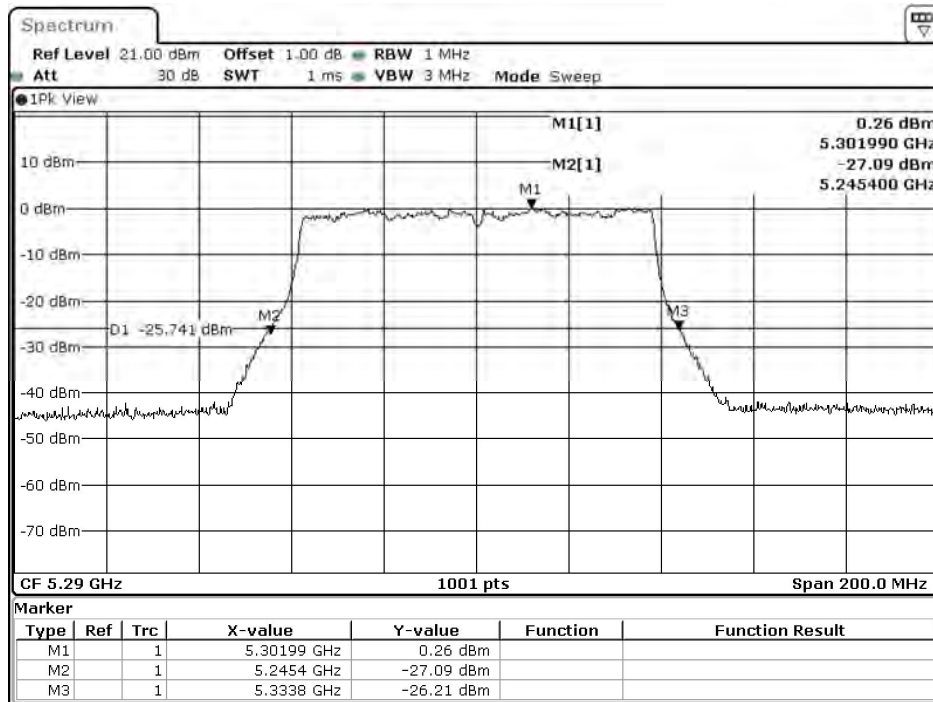
Date: 22.FEB.2021 10:39:04

Channel 138 - Chain A



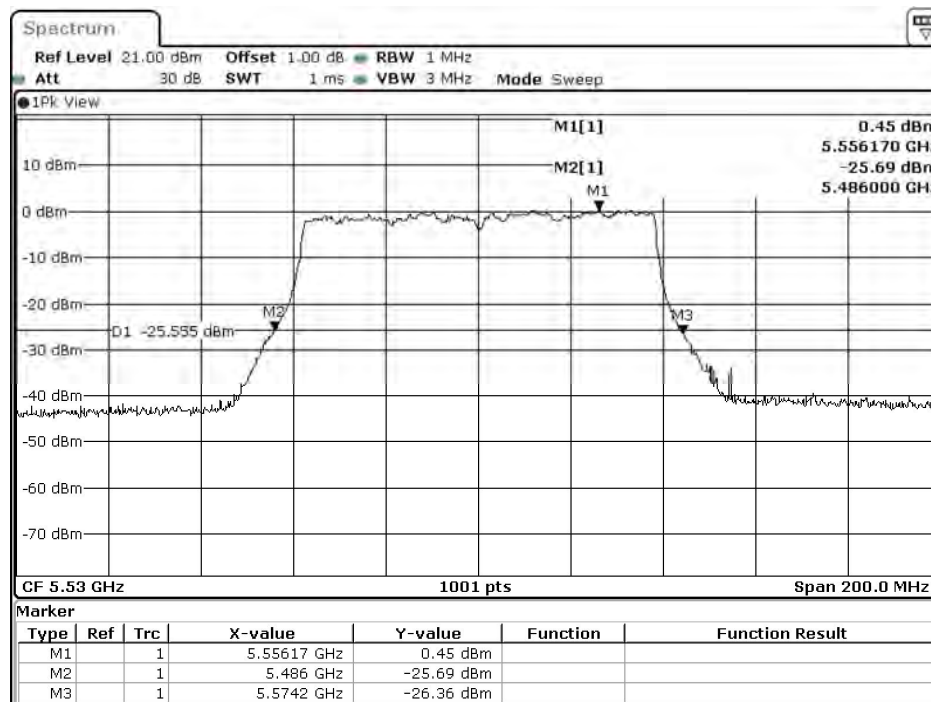
Date: 22.FEB.2021 10:41:10

26dB Occupied Bandwidth: Channel 58 - Chain B



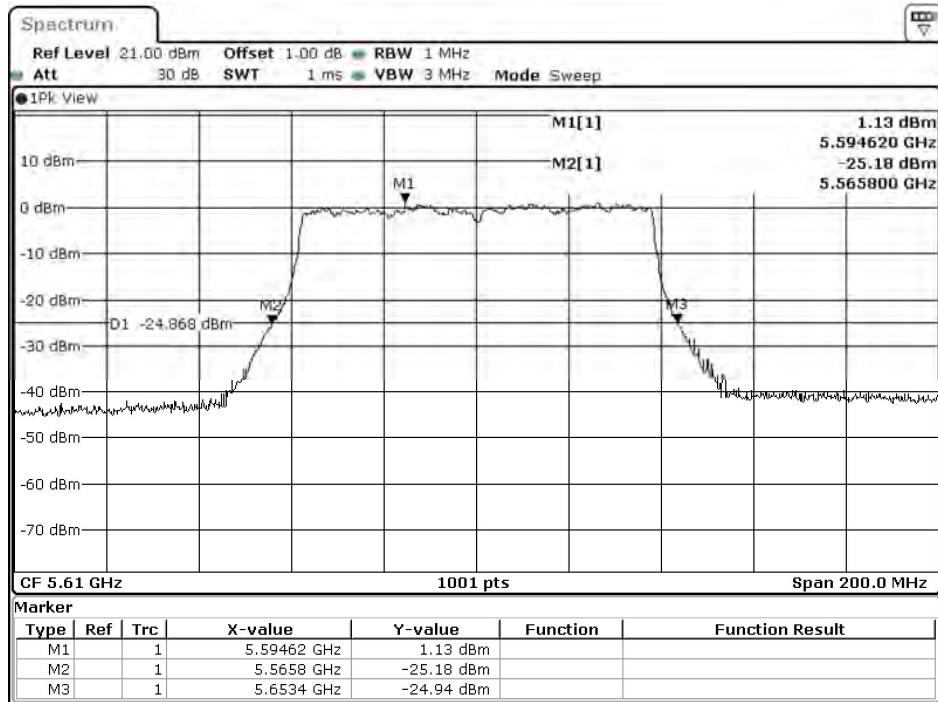
Date: 22.FEB.2021 12:40:31

Channel 106 - Chain B



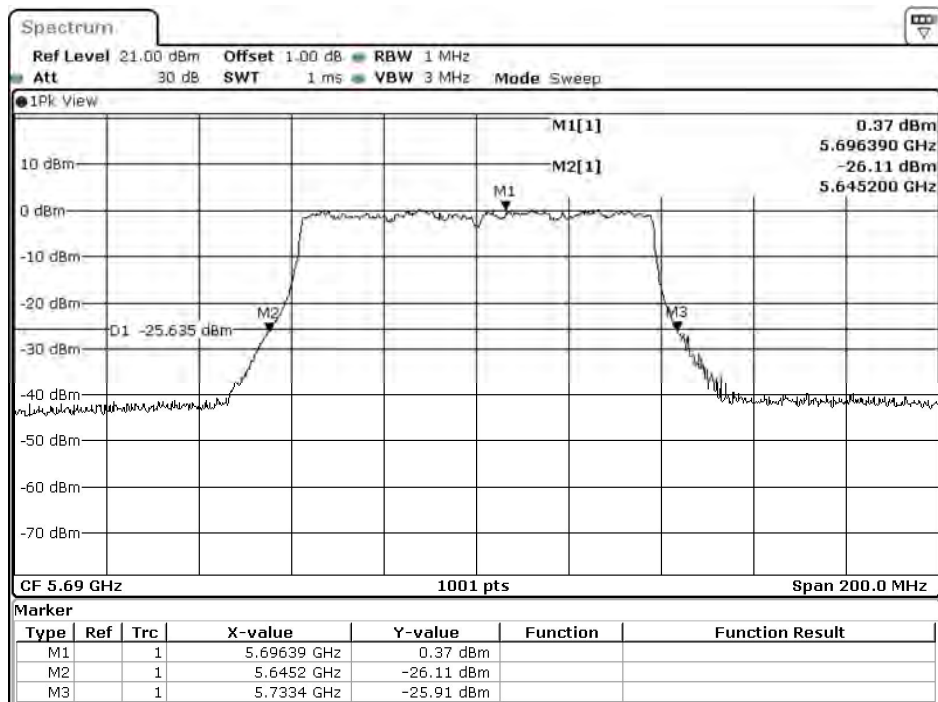
Date: 22.FEB.2021 12:42:44

Channel 122 - Chain B



Date: 22.FEB.2021 12:44:27

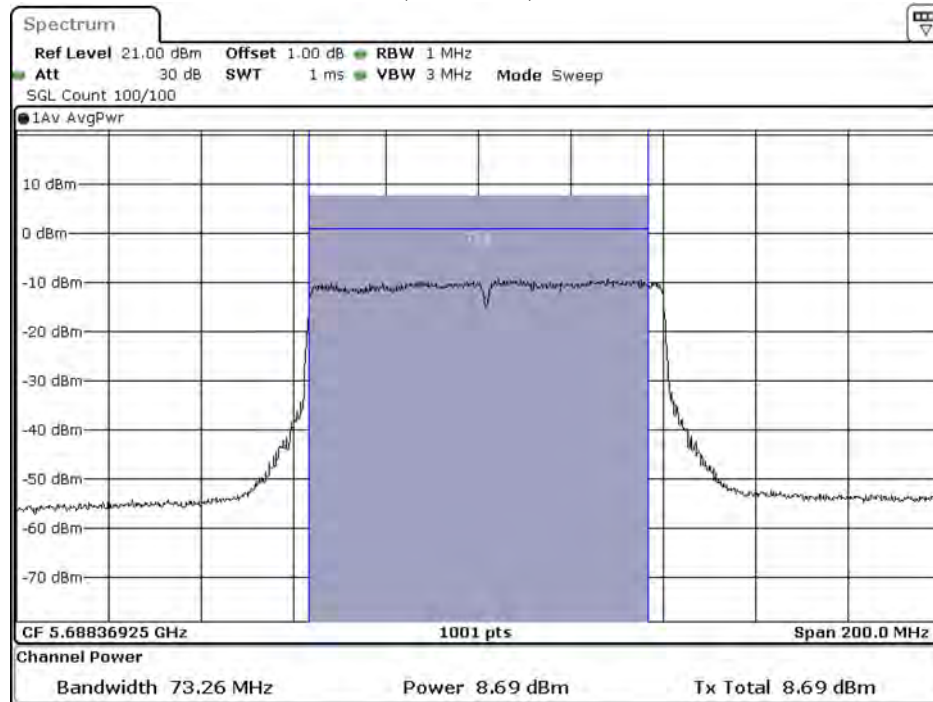
Channel 138 - Chain B



Date: 22.FEB.2021 12:46:33

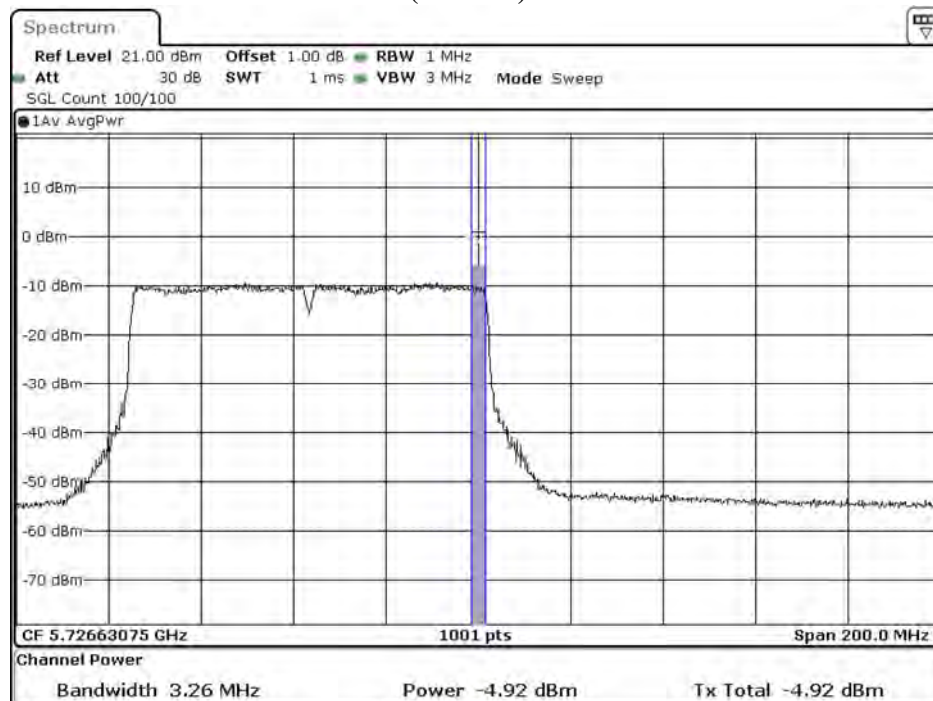
Maximum conducted output power:

Channel 138 (U-NII-2C) - Chain A



Date: 22.FEB.2021 10:42:18

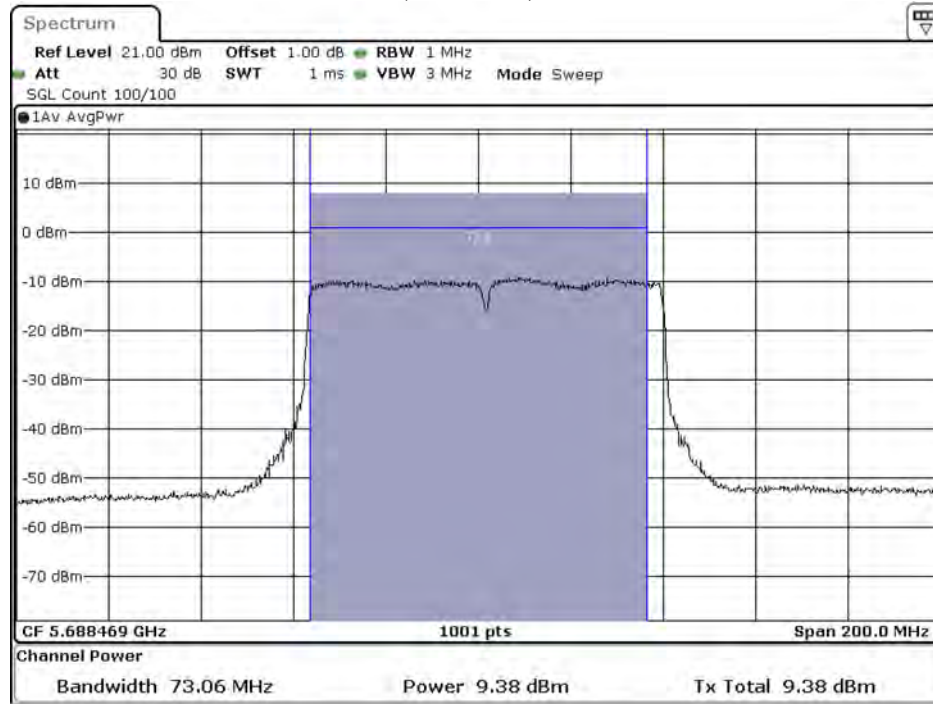
Channel 138 (U-NII-3) - Chain A



Date: 22.FEB.2021 10:42:40

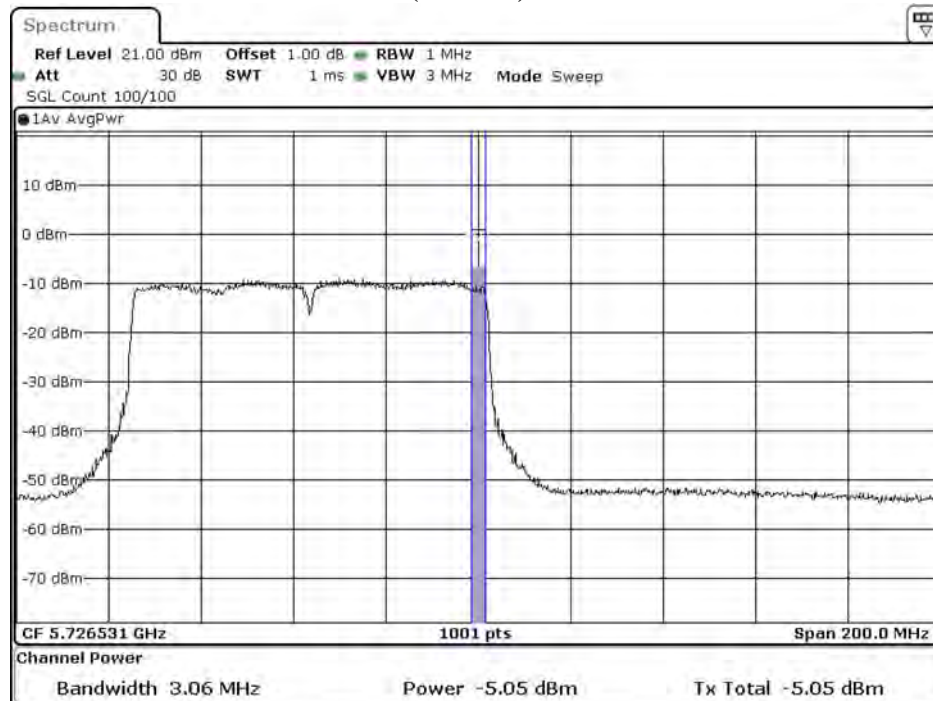
Maximum conducted output power:

Channel 138 (U-NII-2C) - Chain B



Date: 22.FEB.2021 12:47:41

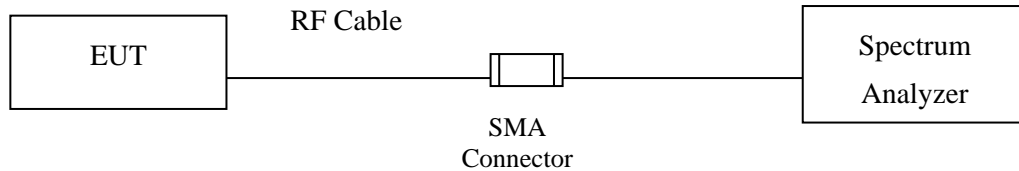
Channel 138 (U-NII-3) - Chain B



Date: 22.FEB.2021 12:48:03

4. Peak Power Spectral Density

4.1. Test Setup



4.2. 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 power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density 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 or maximum power spectral density. 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 and maximum power spectral density 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 power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density 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 power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density 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 power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density 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.

4.3. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.

SA-1 method is selected to run the test.

For the band 5.725-5.85 GHz, Scale the observed power level to an equivalent value in 500 kHz by adjusting (increase) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500\text{ kHz}/100\text{ kHz}) = 6.98\text{ dB}$.

4.4. Uncertainty

±1.30dB

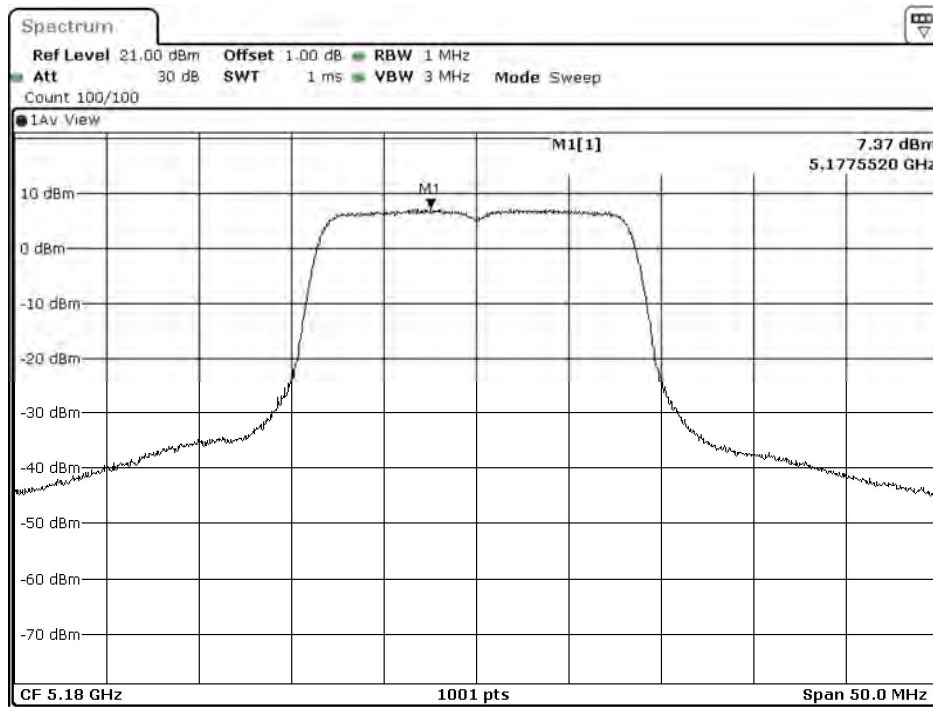
4.5. Test Result of Peak Power Spectral Density

Product : Wireless module
 Test Item : Peak Power Spectral Density
 Test Mode : Mode 1: Transmit (802.11a 6Mbps) – Dipole Antenna
 Test Date : 2021/02/19

Channel Number	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	6	7.37	8.39	Pass
44	5220	6	7.83	8.39	Pass
48	5240	6	7.71	8.39	Pass
52	5260	6	8.17	8.85	Pass
60	5300	6	7.77	8.85	Pass
64	5320	6	7.07	8.85	Pass
100	5500	6	5.70	8.13	Pass
116	5580	6	7.49	8.13	Pass
140	5700	6	4.39	8.13	Pass

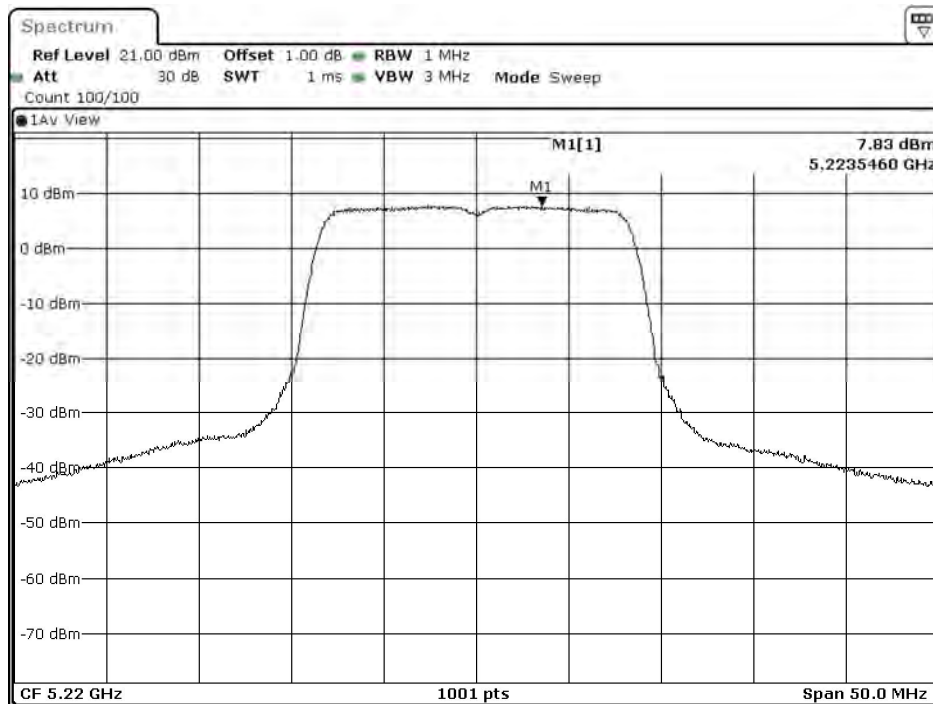
Channel Number	Frequency (MHz)	Data Rate (Mbps)	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	6	1.20	6.98	8.34	27.43	Pass
157	5785	6	2.46	6.98	9.60	27.43	Pass
165	5825	6	1.42	6.98	8.56	27.43	Pass

Channel 36:



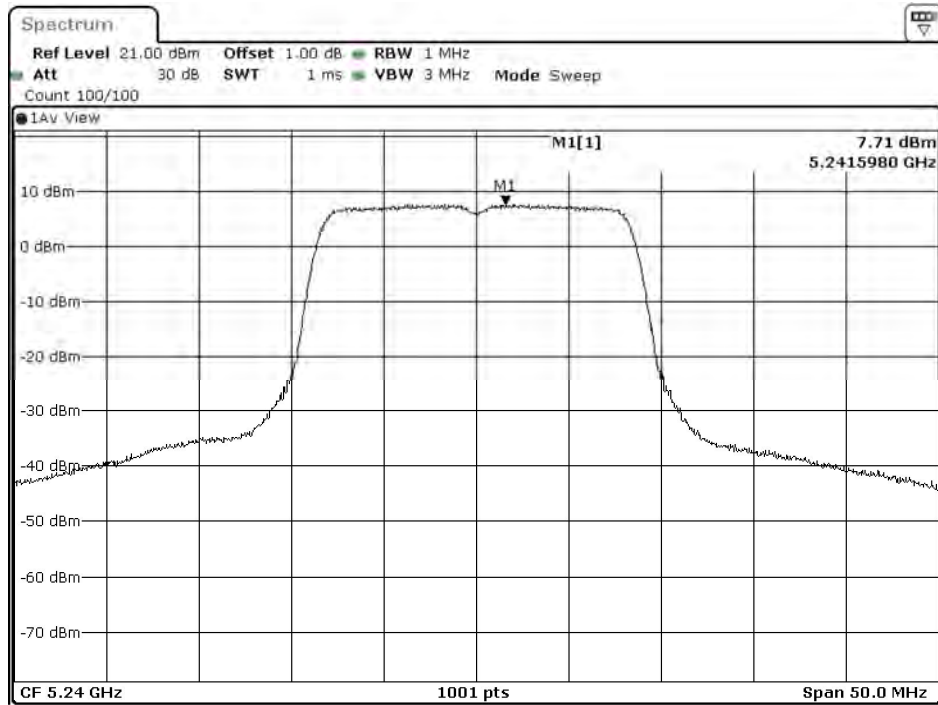
Date: 22.FEB.2021 03:36:56

Channel 44:



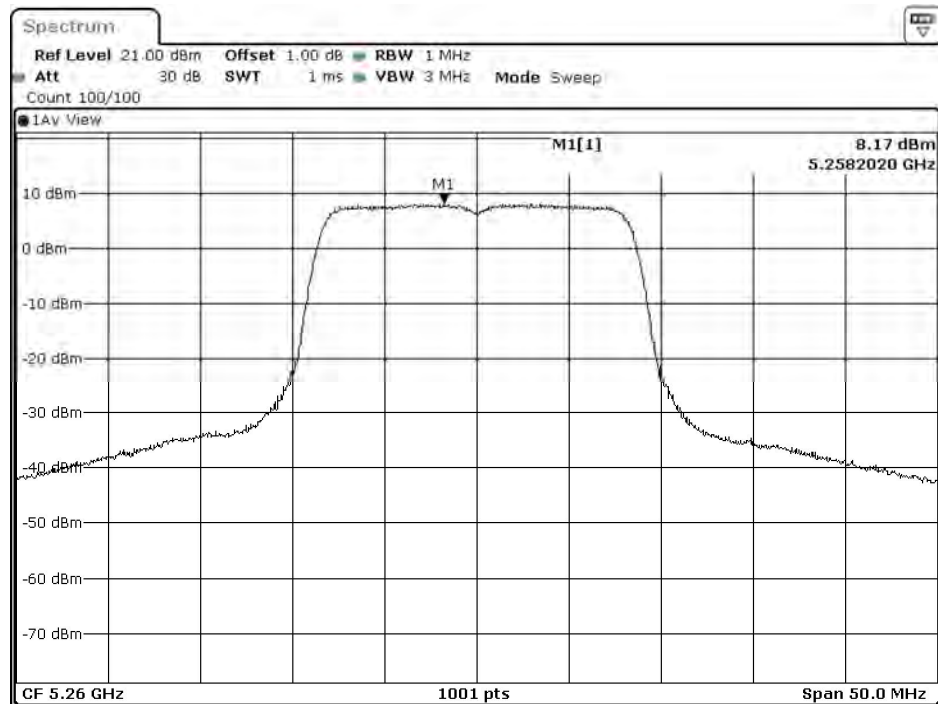
Date: 22.FEB.2021 03:40:36

Channel 48:



Date: 22.FEB.2021 03:42:28

Channel 52:



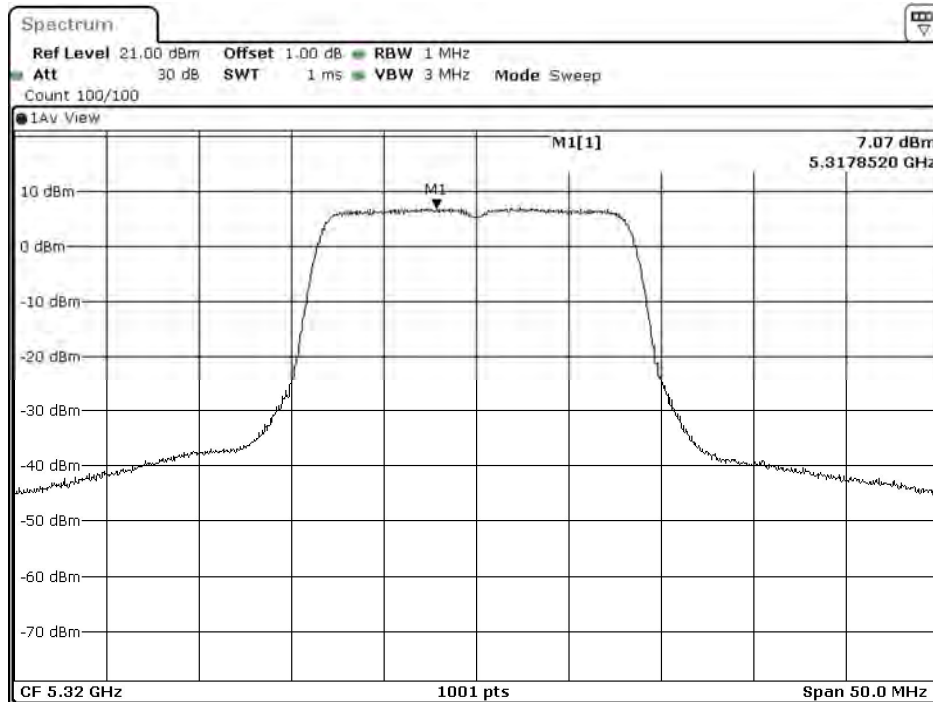
Date: 22.FEB.2021 03:44:03

Channel 60:



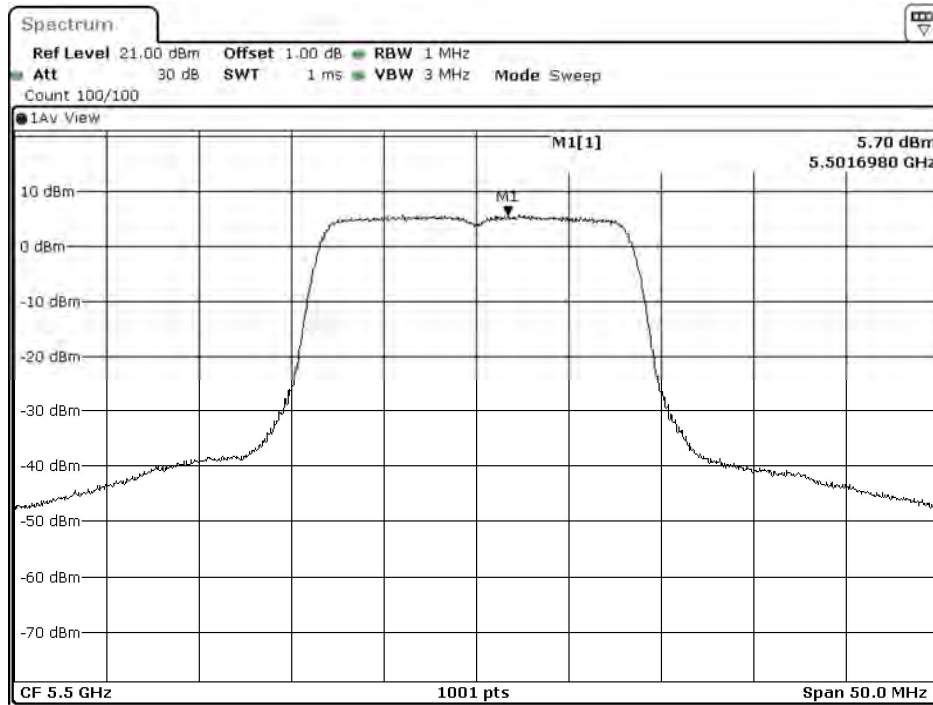
Date: 22.FEB.2021 03:45:39

Channel 64:



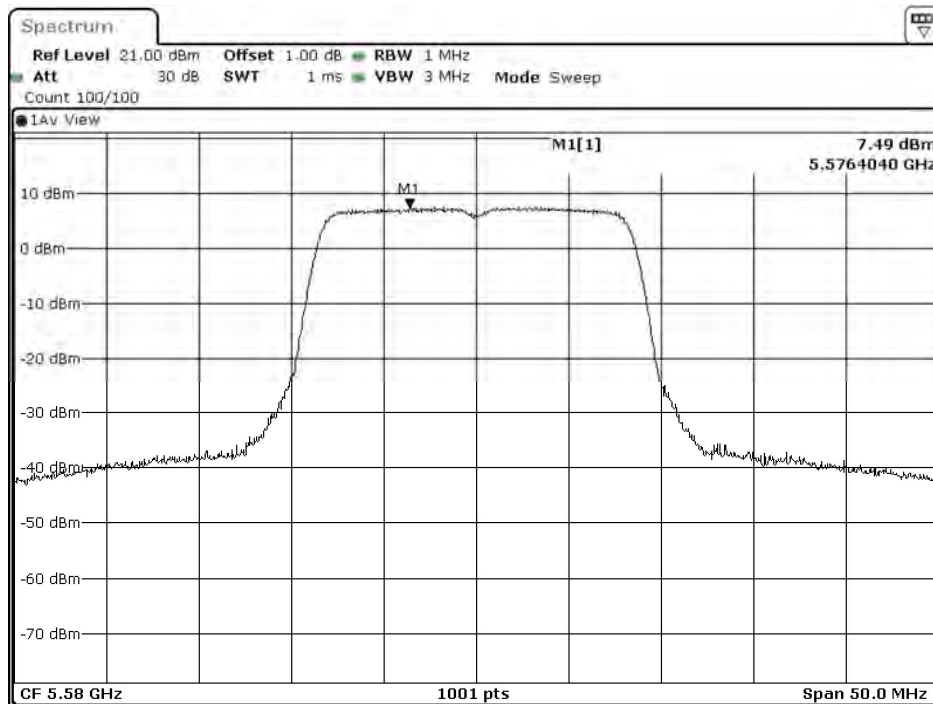
Date: 22.FEB.2021 03:47:16

Channel 100:



Date: 22.FEB.2021 03:49:32

Channel 116:



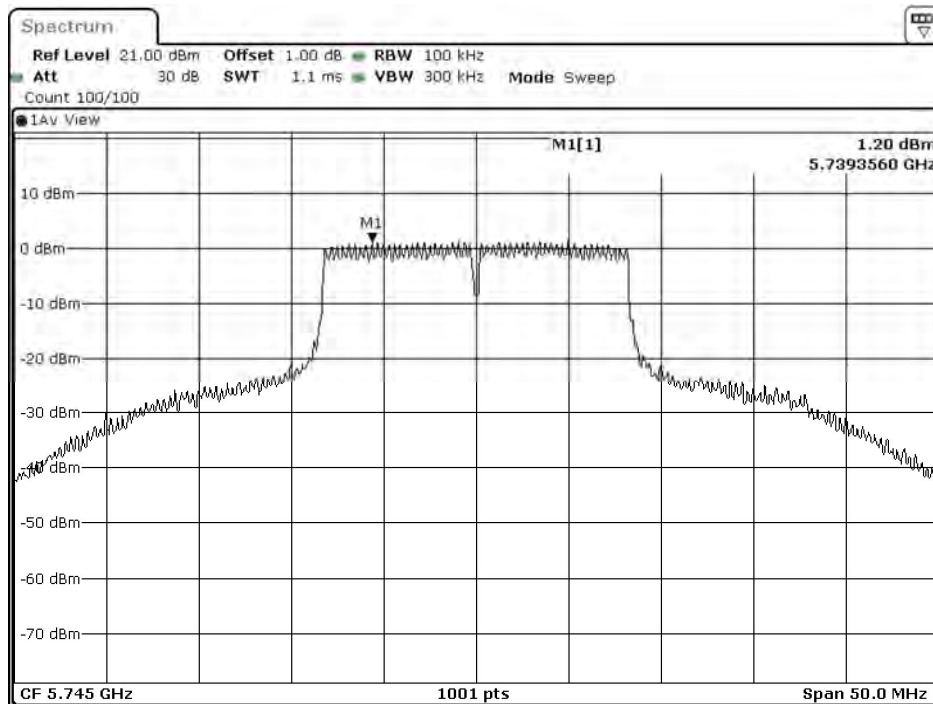
Date: 22.FEB.2021 03:51:09

Channel 140:



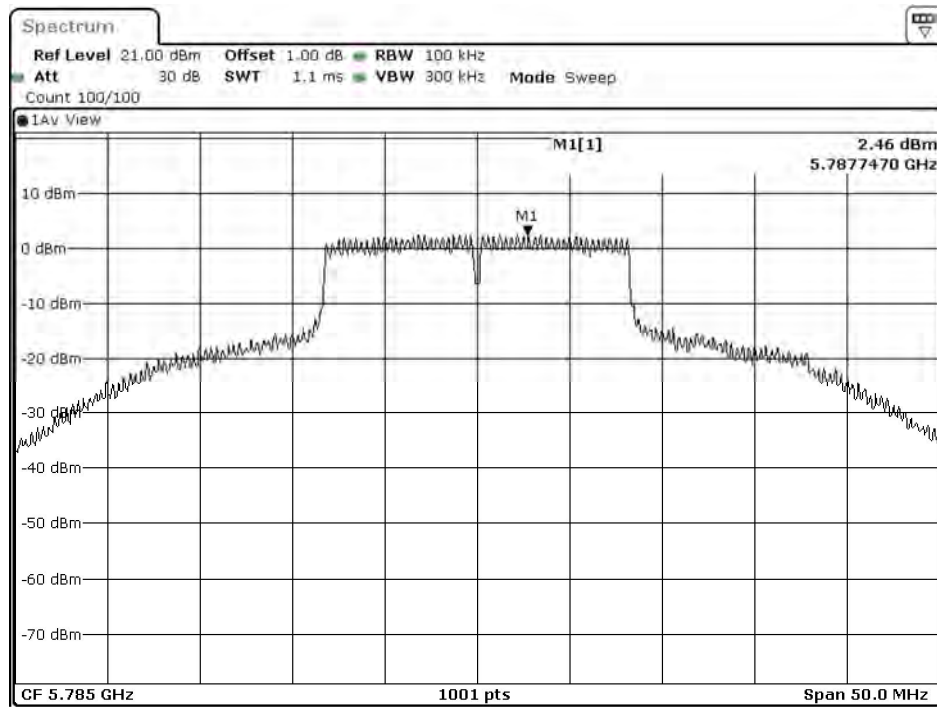
Date: 22.FEB.2021 03:52:56

Channel 149



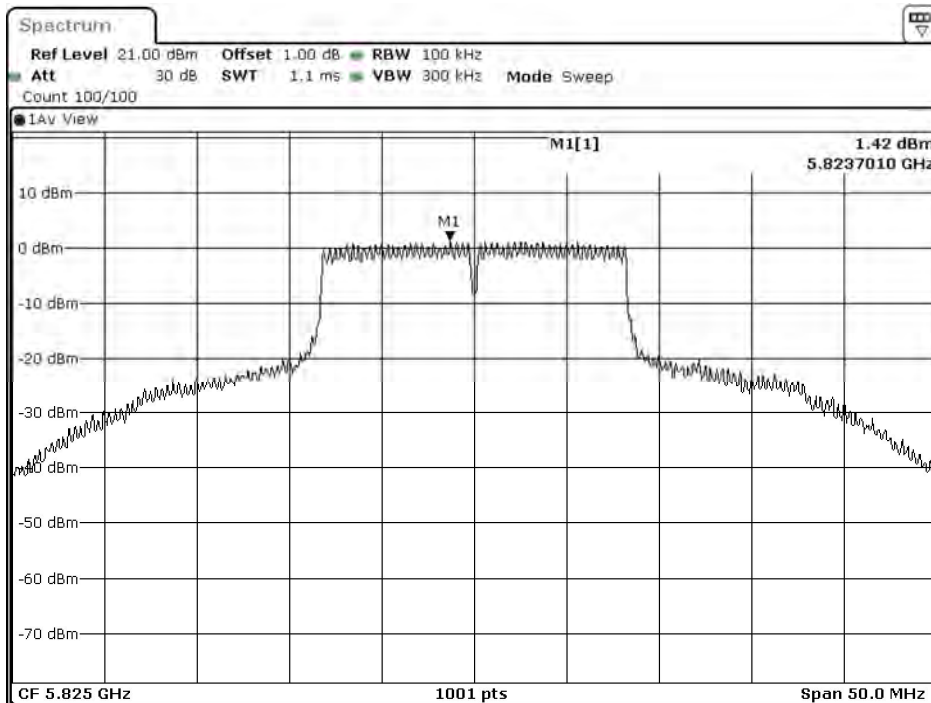
Date: 22.FEB.2021 03:54:13

Channel 157



Date: 22.FEB.2021 03:55:36

Channel 165



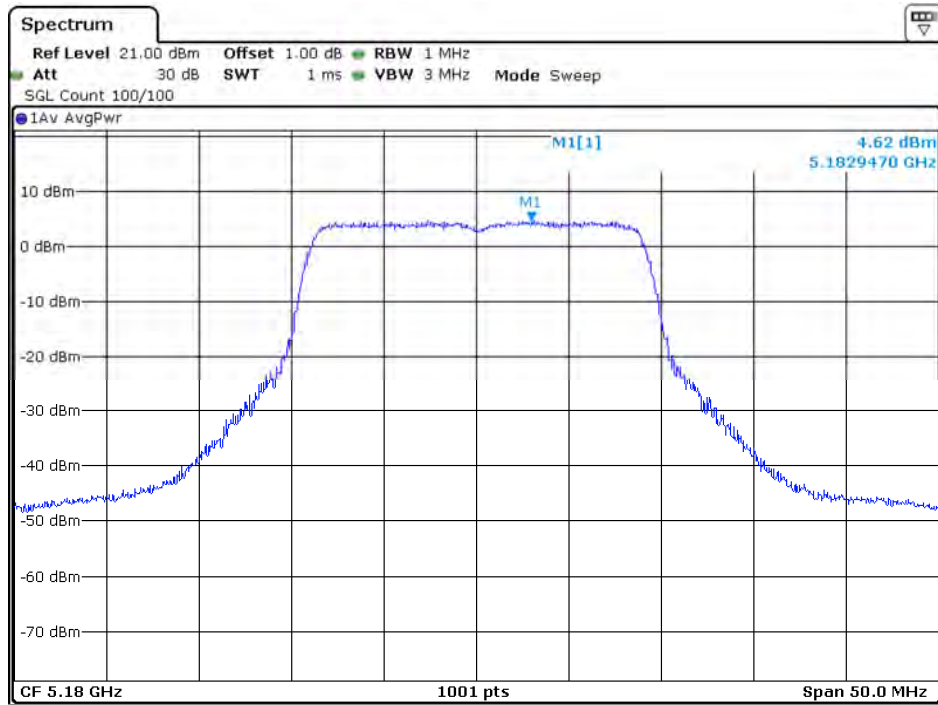
Date: 22.FEB.2021 03:56:51

Product : Wireless module
 Test Item : Peak Power Spectral Density
 Test Mode : Mode 4: Transmit (802.11ac-20BW 7.2Mbps) – Dipole Antenna
 Test Date : 2021/02/19

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain (dBm)	PPSD/MHz (dBm)	10*log(2) (dB)	Total PPSD/MHz z (dBm)	Limit (dBm)	Result
36	5180	HT8	A	4.62	3.01	7.76	8.39	Pass
			B	4.95	3.01	8.09	8.39	Pass
44	5220	HT8	A	4.94	3.01	8.08	8.39	Pass
			B	4.73	3.01	7.87	8.39	Pass
48	5240	HT8	A	4.90	3.01	8.04	8.39	Pass
			B	4.70	3.01	7.84	8.39	Pass
52	5260	HT8	A	5.59	3.01	8.73	8.85	Pass
			B	5.08	3.01	8.22	8.85	Pass
60	5300	HT8	A	5.23	3.01	8.37	8.85	Pass
			B	4.95	3.01	8.09	8.85	Pass
64	5320	HT8	A	2.75	3.01	5.89	8.85	Pass
			B	1.87	3.01	5.01	8.85	Pass
100	5500	HT8	A	1.94	3.01	5.08	8.13	Pass
			B	1.08	3.01	4.22	8.13	Pass
116	5580	HT8	A	4.92	3.01	8.06	8.13	Pass
			B	4.84	3.01	7.98	8.13	Pass
140	5700	HT8	A	0.67	3.01	3.81	8.13	Pass
			B	0.48	3.01	3.62	8.13	Pass
144	5720(Band3)	HT8	A	4.60	3.01	7.74	8.13	Pass
			B	4.84	3.01	7.98	8.13	Pass

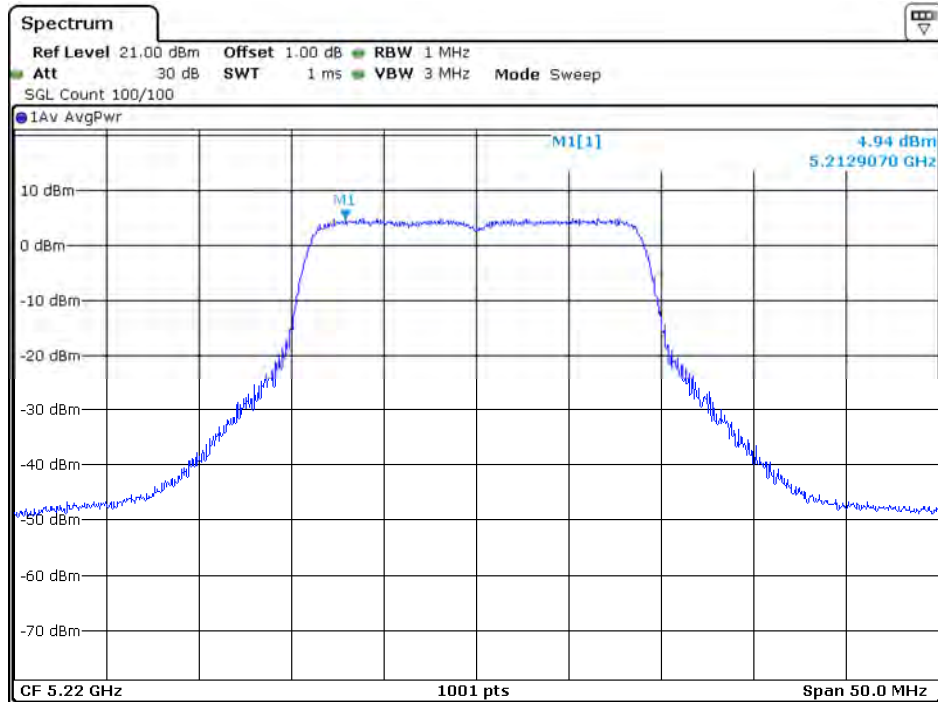
Channel	Frequency (MHz)	Data Rata (Mbps)	Chain (dBm)	PPSD (dBm)	BWCF (dB)	10*log(2) (dB)	Duty factor (db)	Total PPSD (dBm)	Limit (dBm)	Result
144	5720(Band4)	HT8	A	-4.32	6.98	3.01	0.13	5.80	27.43	Pass
			B	-3.90	6.98	3.01	0.13	6.22		Pass
149	5745	HT8	A	1.21	6.98	3.01	0.13	11.33	27.43	Pass
			B	1.71	6.98	3.01	0.13	11.83		Pass
157	5785	HT8	A	2.06	6.98	3.01	0.13	12.18	27.43	Pass
			B	2.59	6.98	3.01	0.13	12.71		Pass
165	5825	HT8	A	0.66	6.98	3.01	0.13	10.78	27.43	Pass
			B	1.59	6.98	3.01	0.13	11.71		Pass

Channel 36 - Chain A



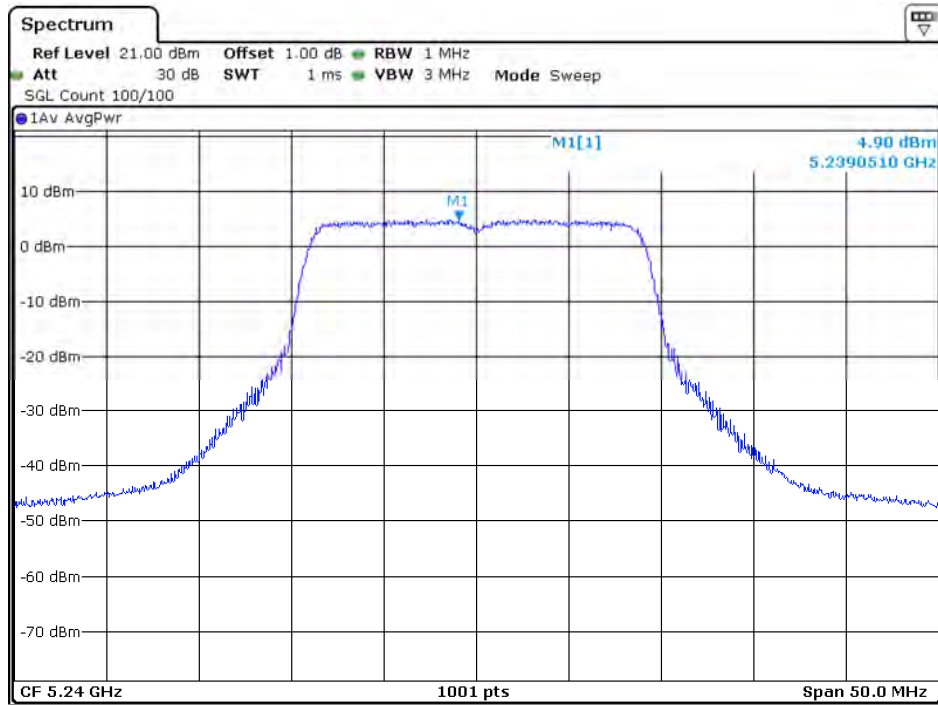
Date: 22.FEB.2021 04:51:08

Channel 44 - Chain A



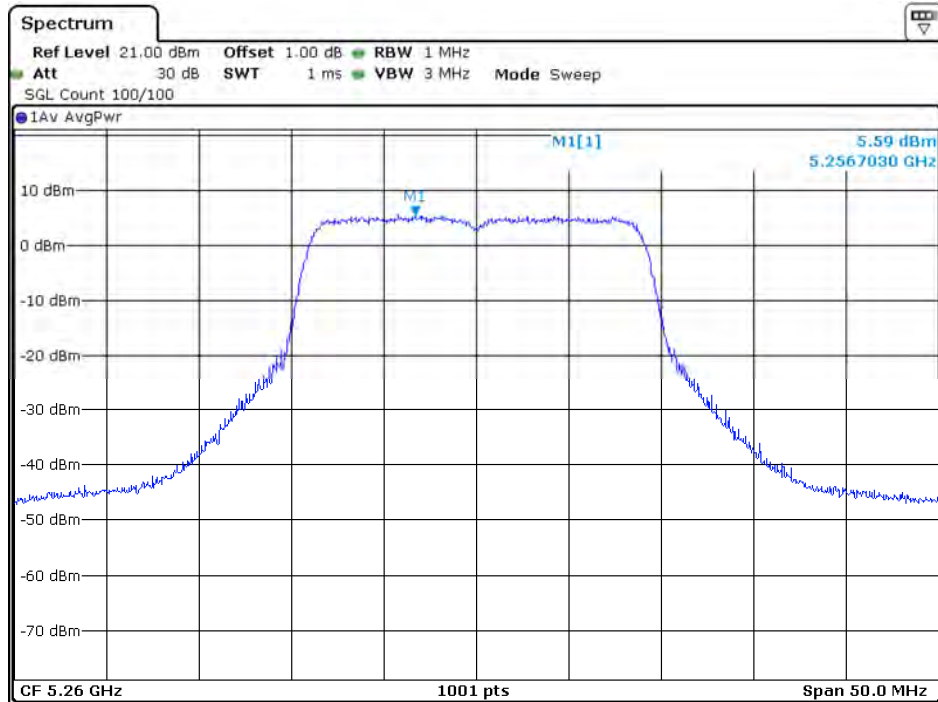
Date: 22.FEB.2021 04:58:00

Channel 48 - Chain A



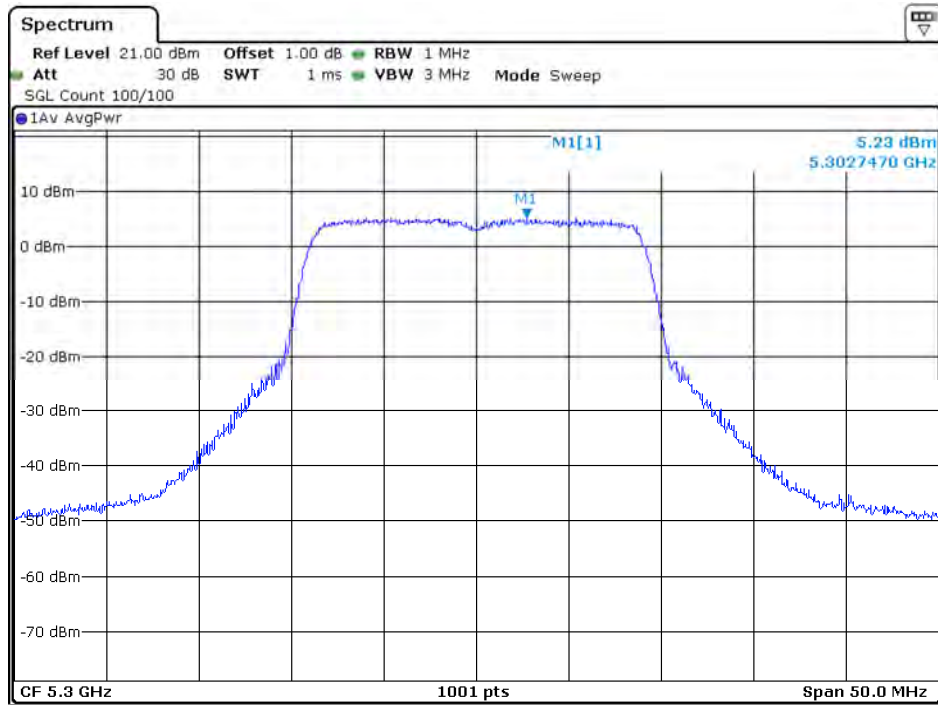
Date: 22.FEB.2021 05:00:29

Channel 52 - Chain A



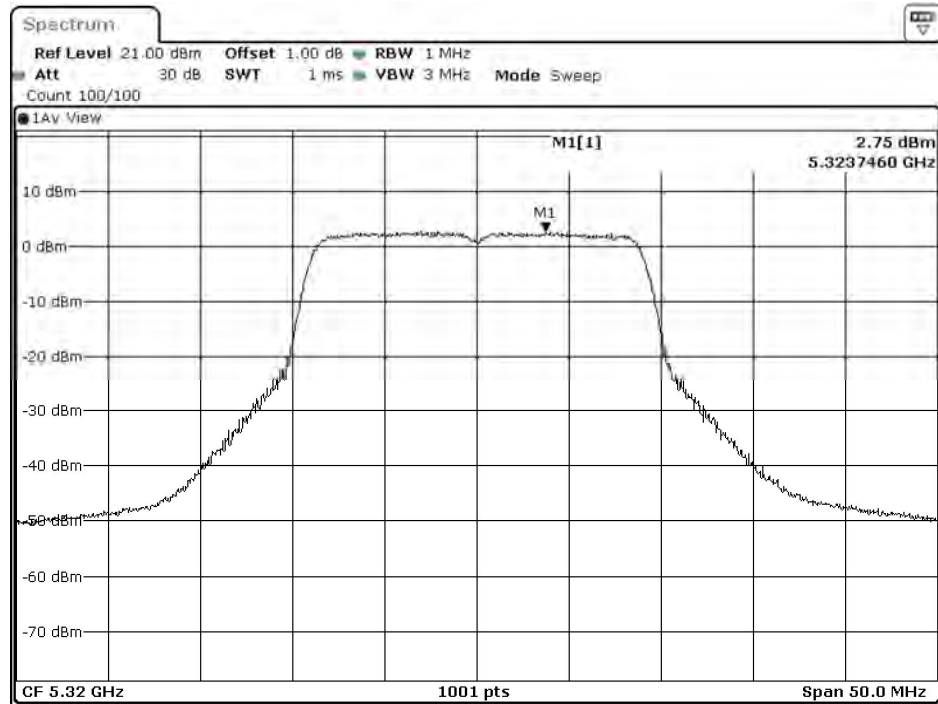
Date: 22.FEB.2021 05:03:10

Channel 60 - Chain A



Date: 22.FEB.2021 05:05:09

Channel 64 - Chain A



Date: 22.FEB.2021 04:27:27

Channel 100 - Chain A



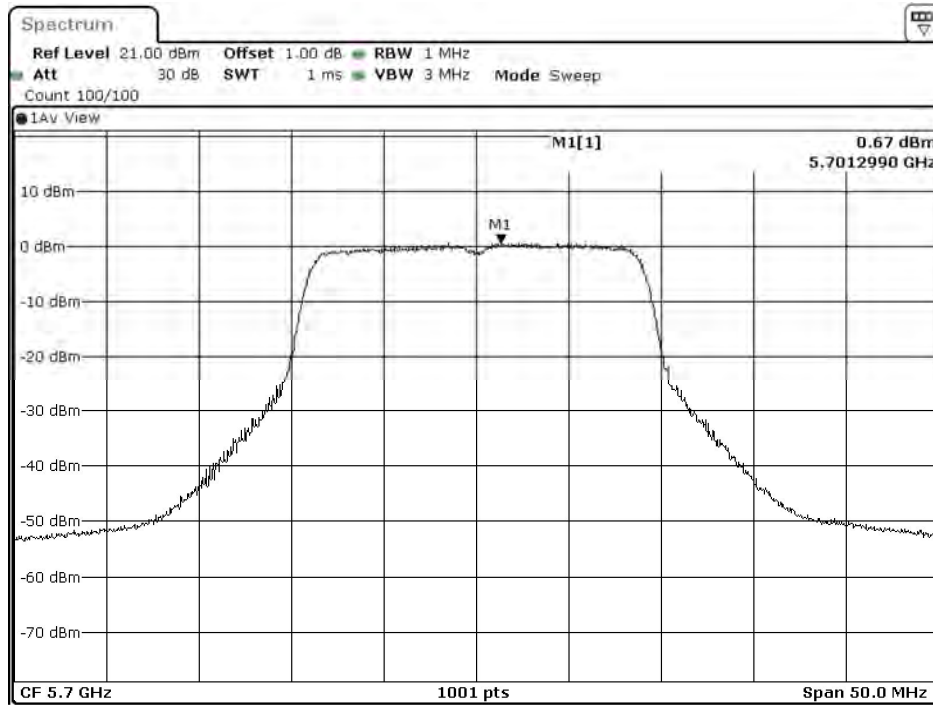
Date: 22.FEB.2021 04:31:11

Channel 116 - Chain A



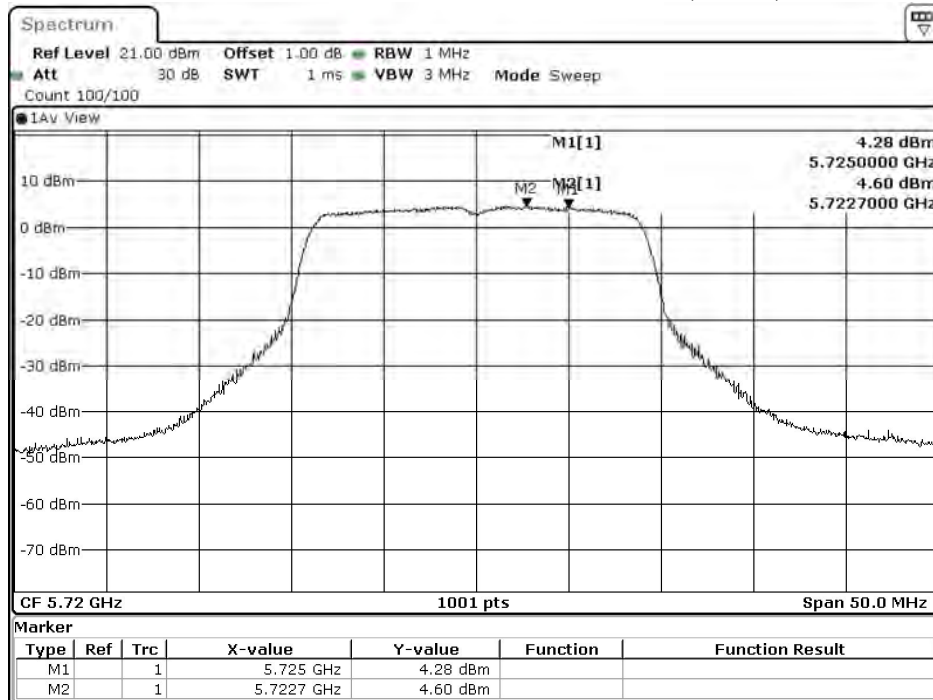
Date: 22.FEB.2021 05:08:33

Channel 140 - Chain A



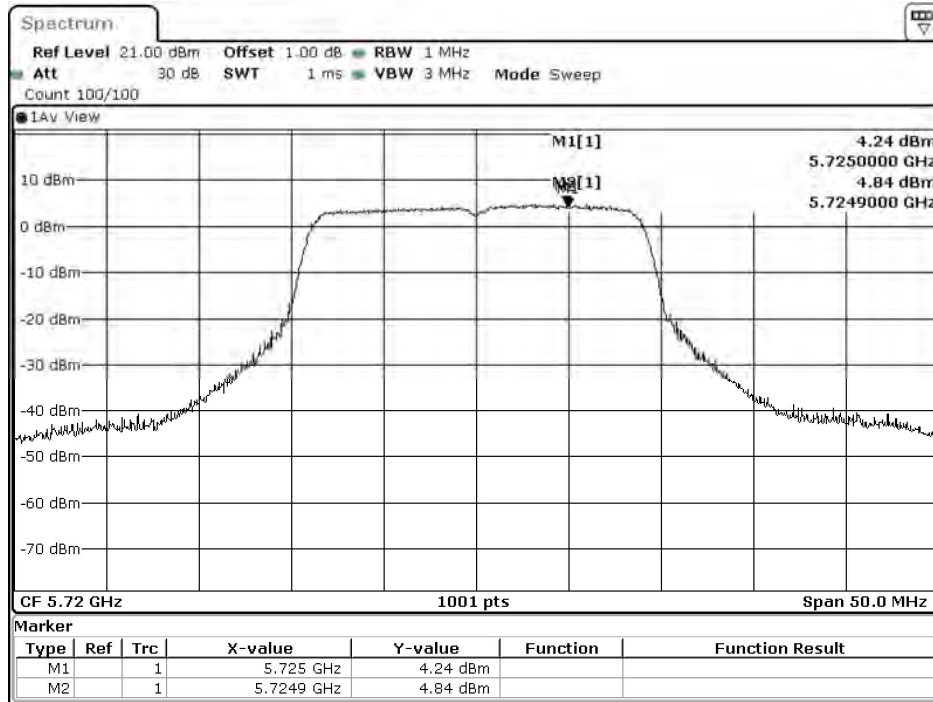
Date: 22.FEB.2021 04:34:40

Channel 144 - Chain A (Band3)



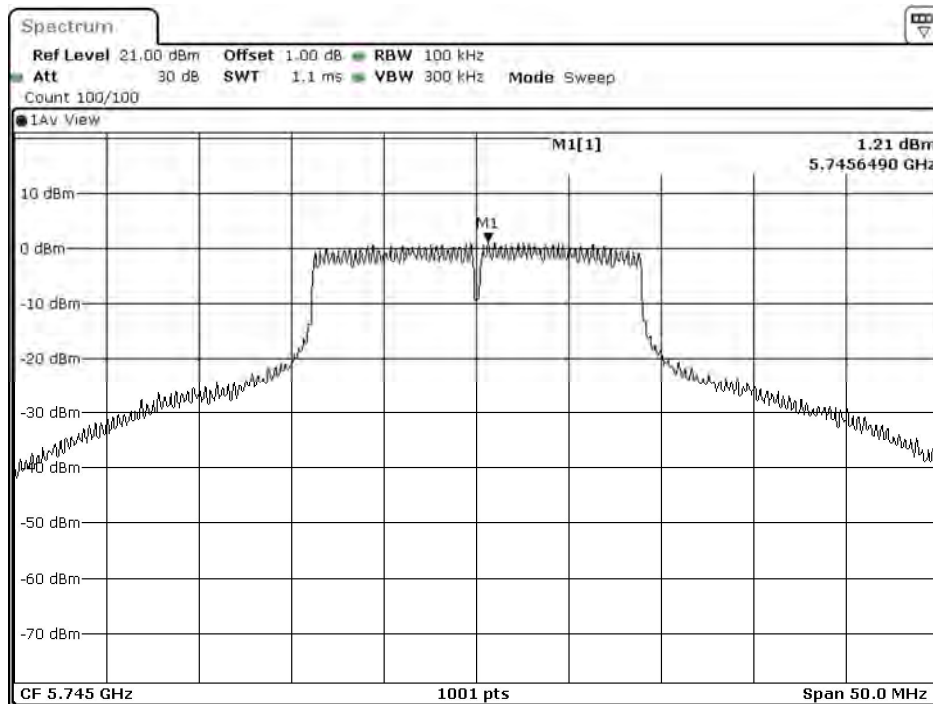
Date: 22.FEB.2021 05:23:31

Channel 144 - Chain A (Band4)



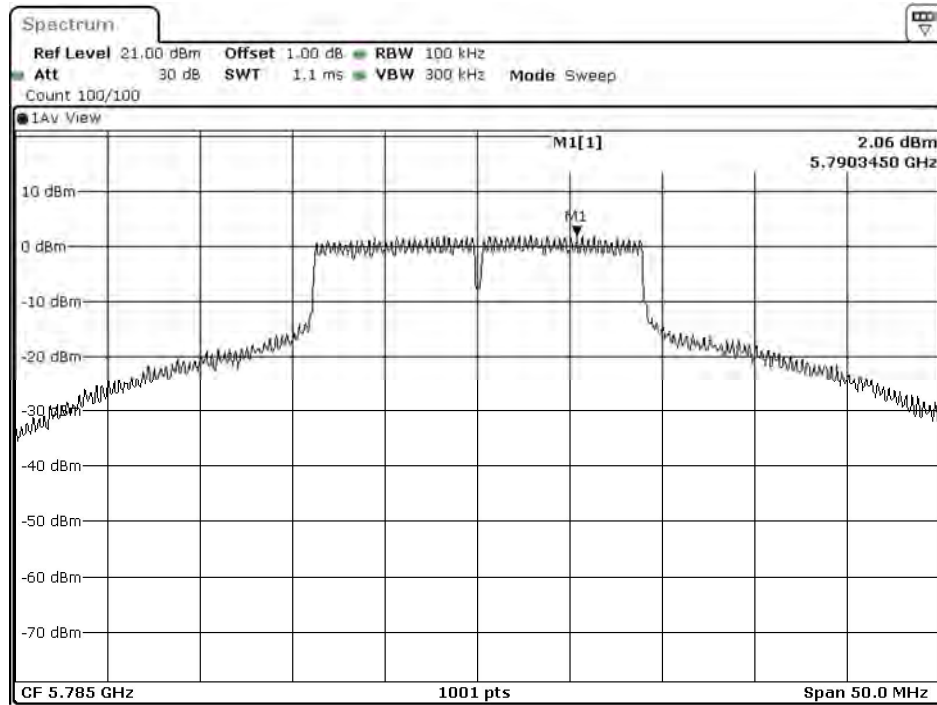
Date: 22.FEB.2021 07:28:53

Channel 149 - Chain A



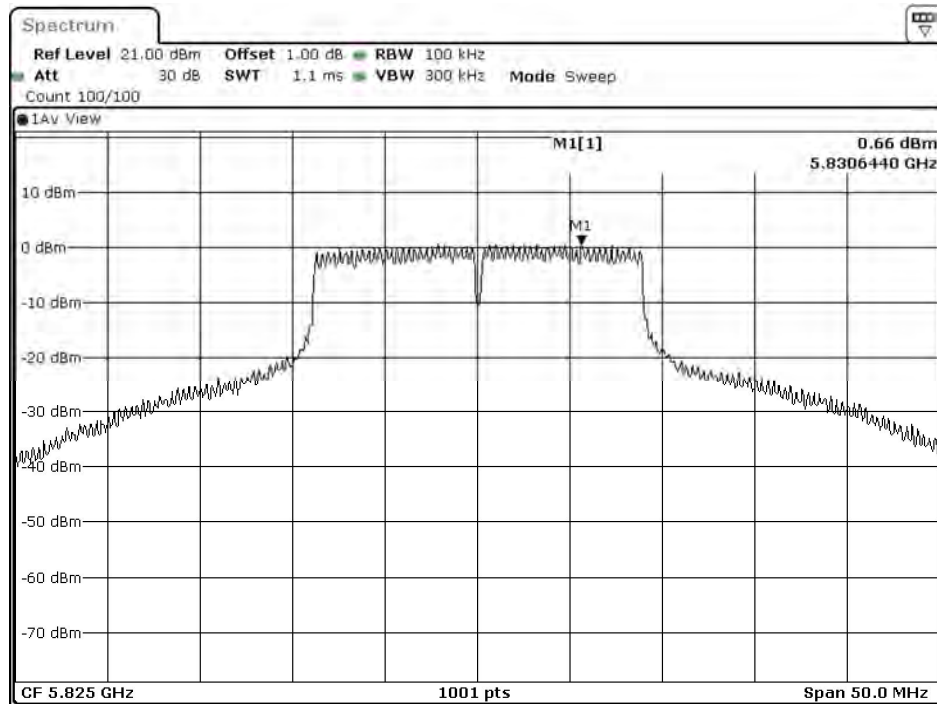
Date: 22.FEB.2021 04:36:02

Channel 157 - Chain A



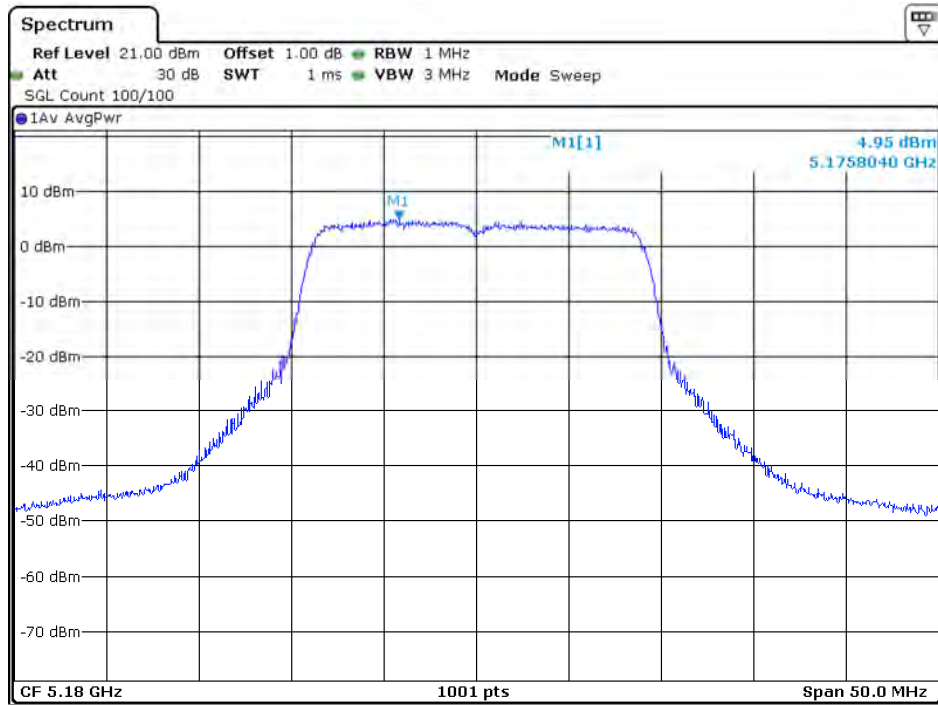
Date: 22.FEB.2021 04:37:31

Channel 165 - Chain A



Date: 22.FEB.2021 04:38:54

Channel 36 - Chain B



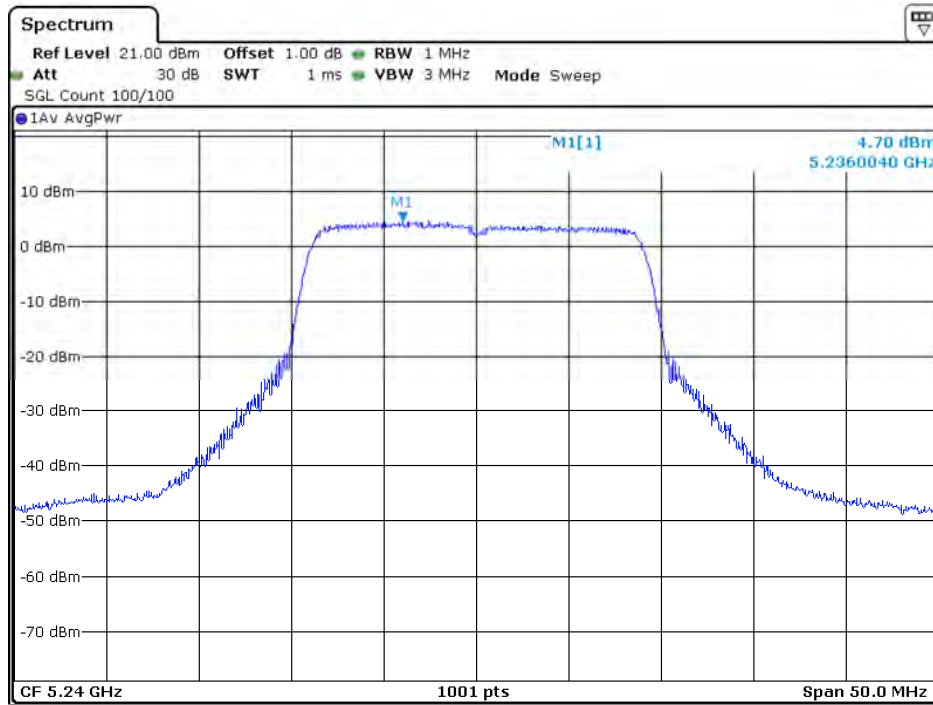
Date: 22.FEB.2021 06:58:06

Channel 44 - Chain B



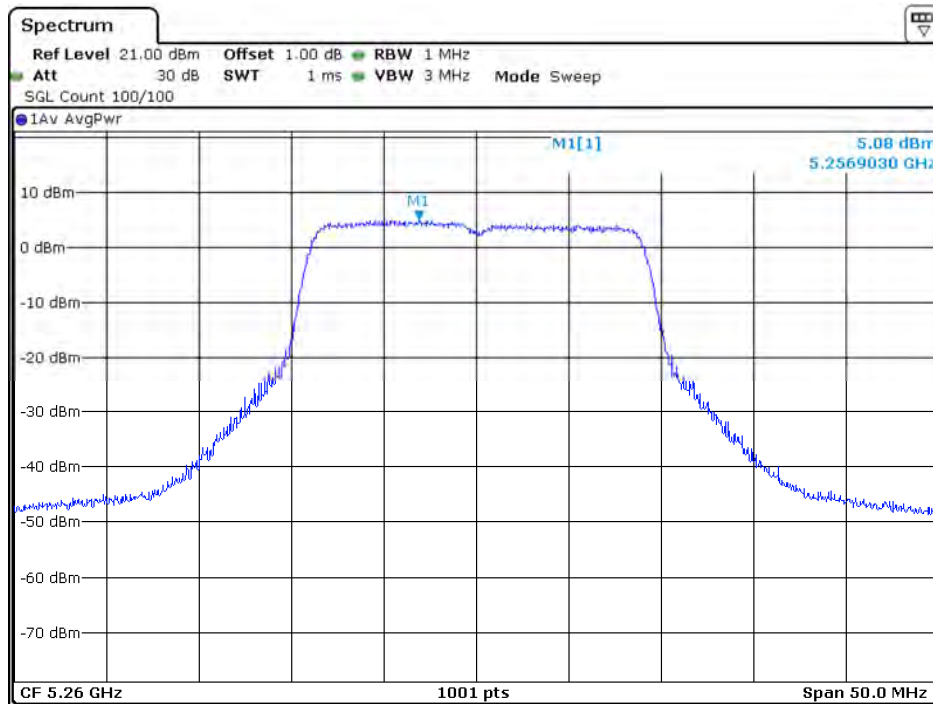
Date: 22.FEB.2021 07:04:29

Channel 48 – Chain B



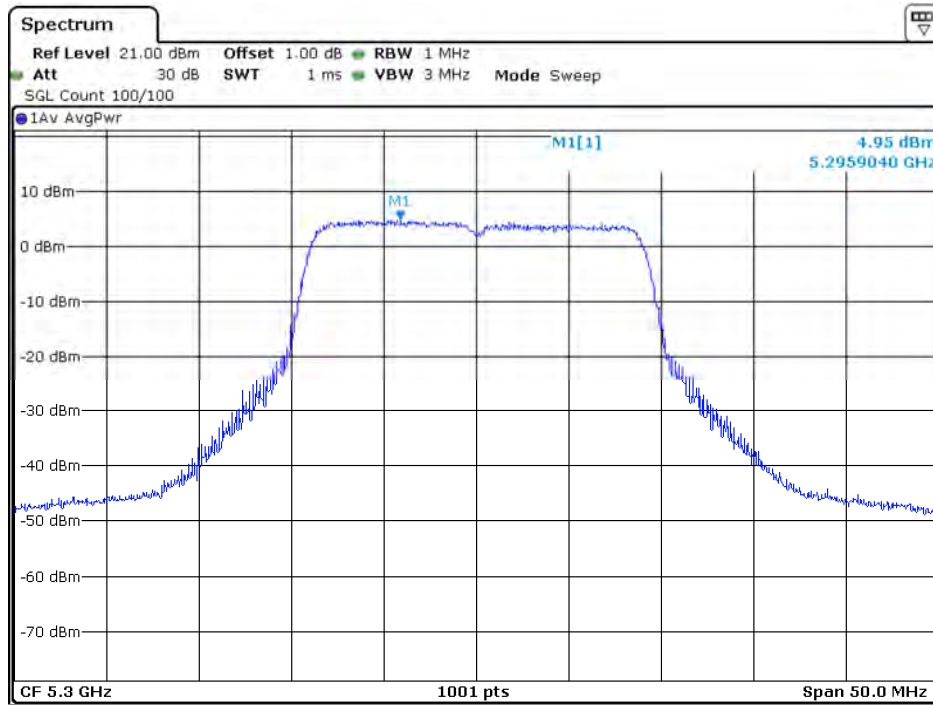
Date: 22.FEB.2021 07:06:14

Channel 52 - Chain B



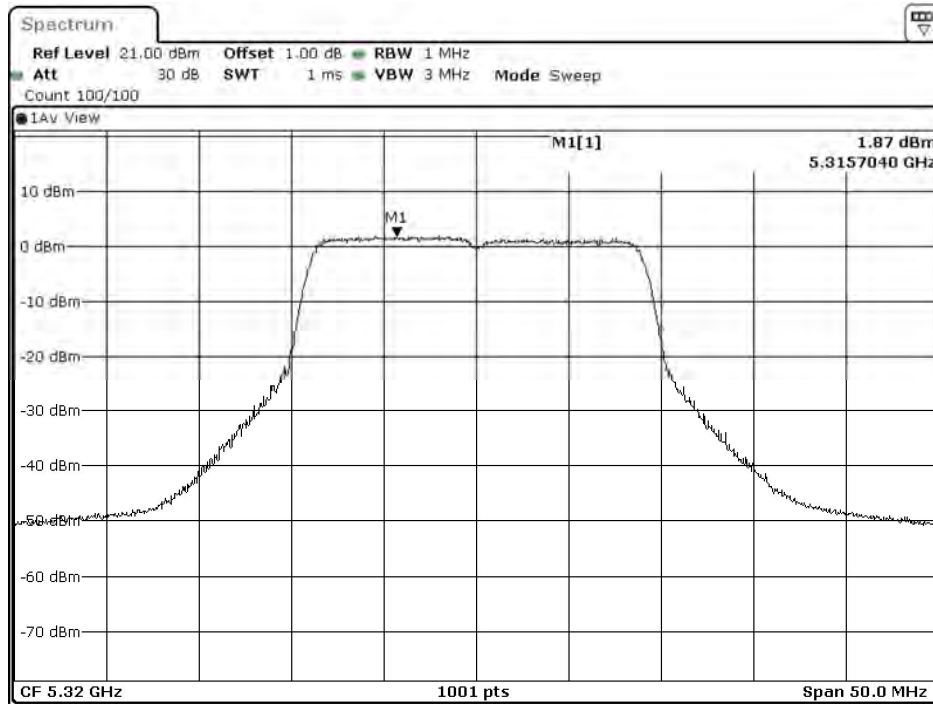
Date: 22.FEB.2021 07:09:07

Channel 60 - Chain B



Date: 22.FEB.2021 07:11:17

Channel 64 - Chain B



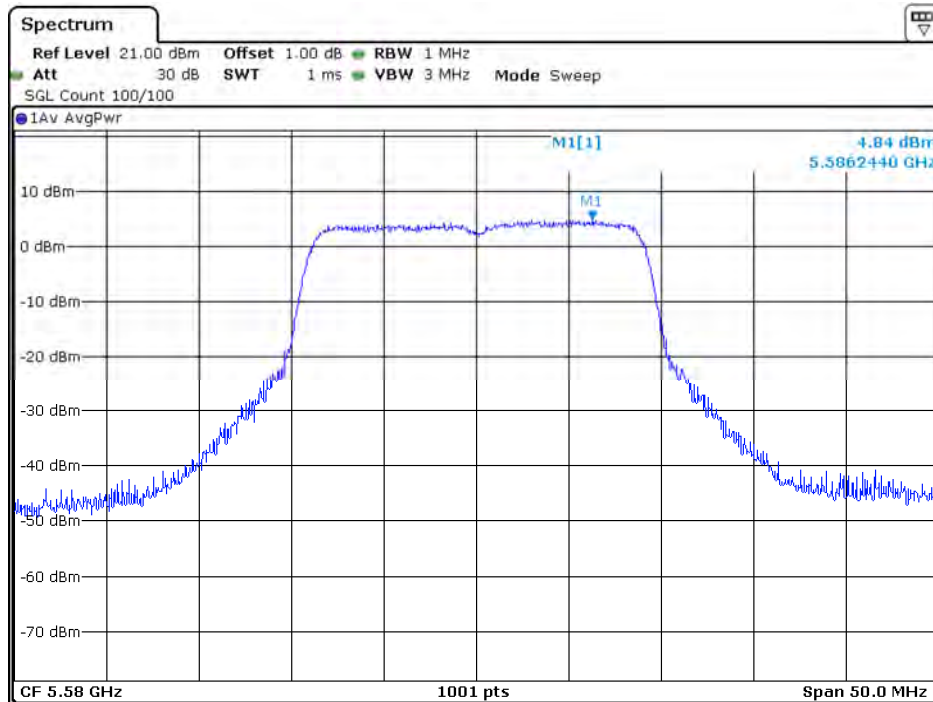
Date: 22.FEB.2021 06:32:49

Channel 100 - Chain B



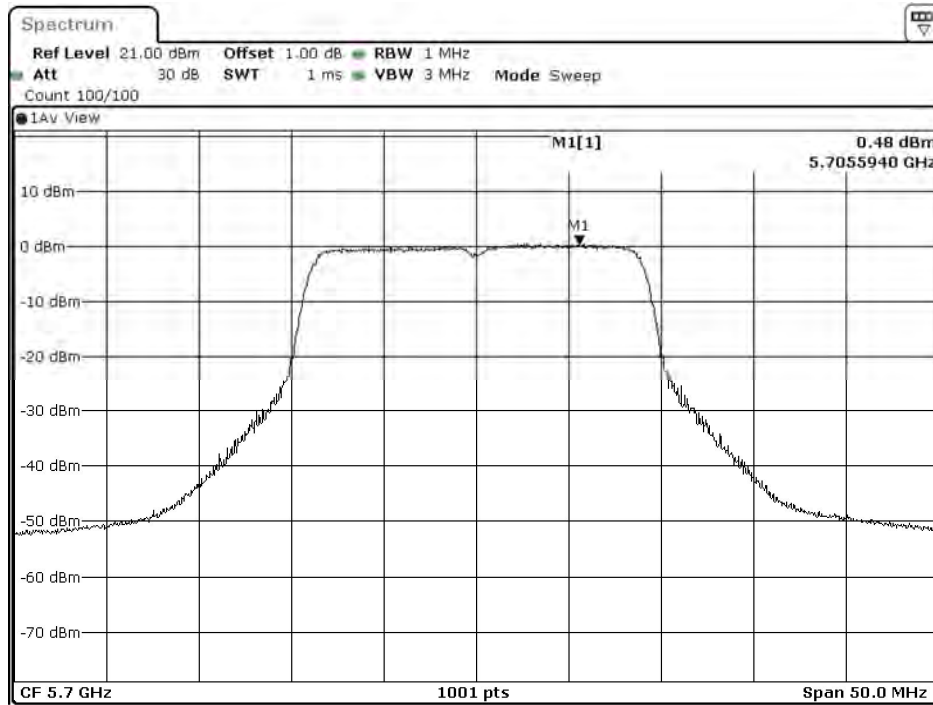
Date: 22.FEB.2021 06:36:33

Channel 116 - Chain B



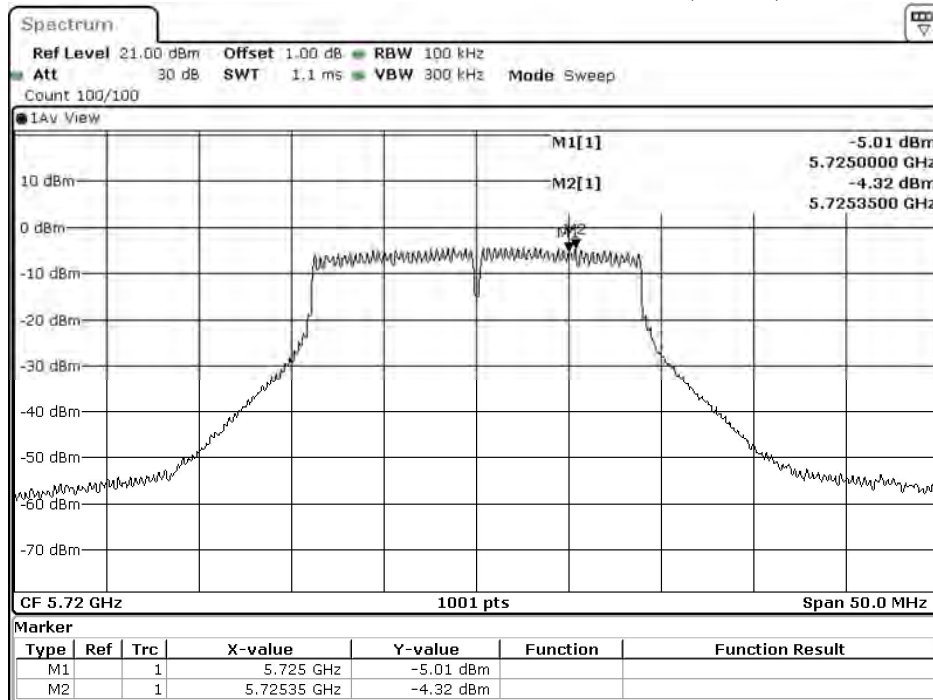
Date: 22.FEB.2021 07:14:18

Channel 140 - Chain B



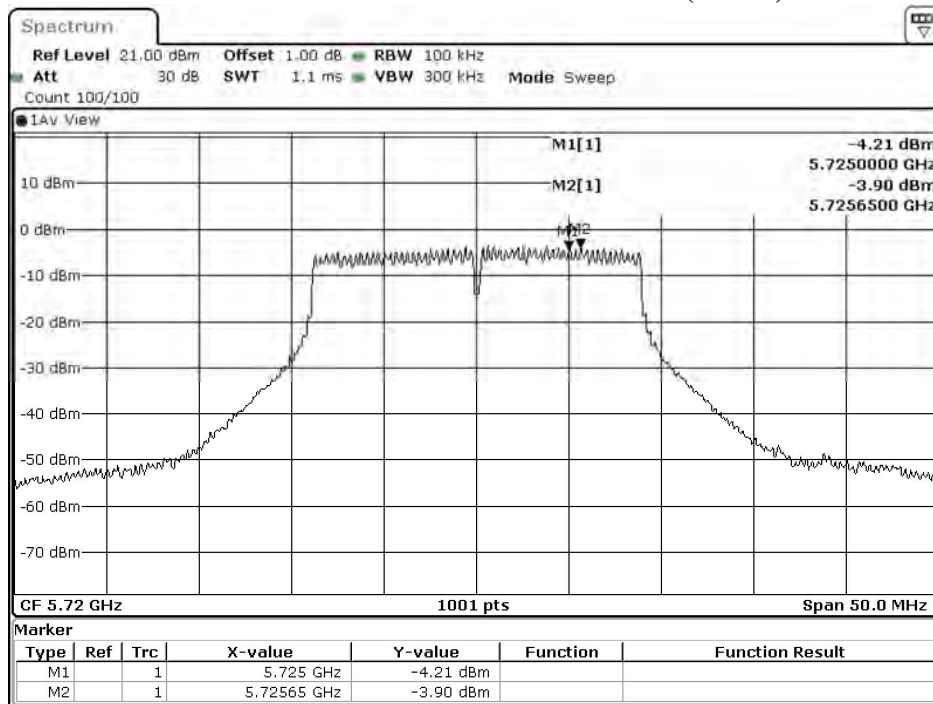
Date: 22.FEB.2021 06:40:02

Channel 144 - Chain B (Band3)



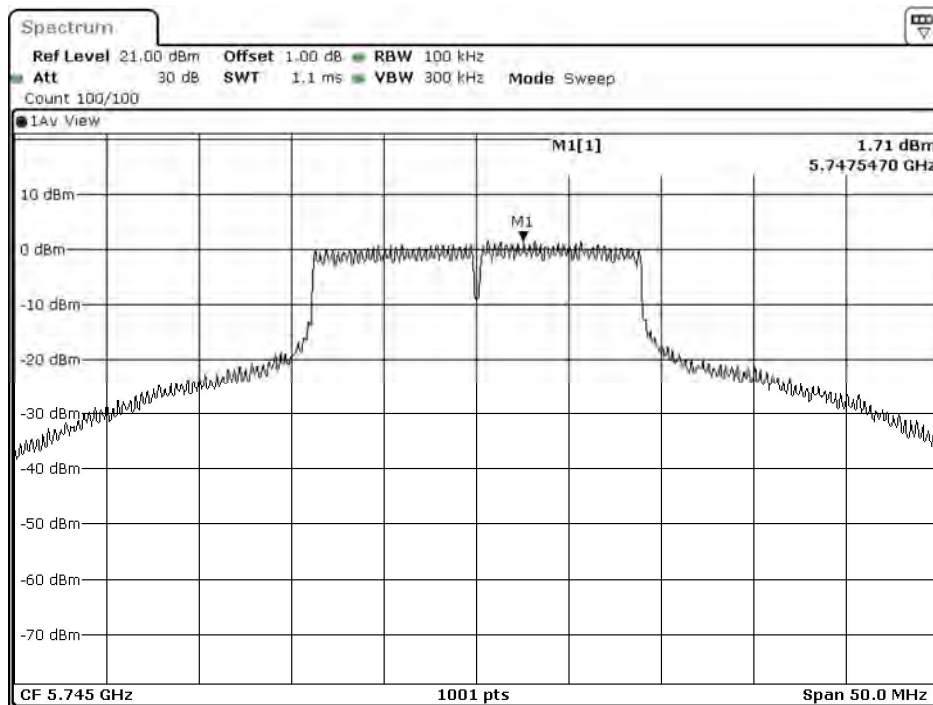
Date: 22.FEB.2021 05:23:52

Channel 144 - Chain B (Band4)



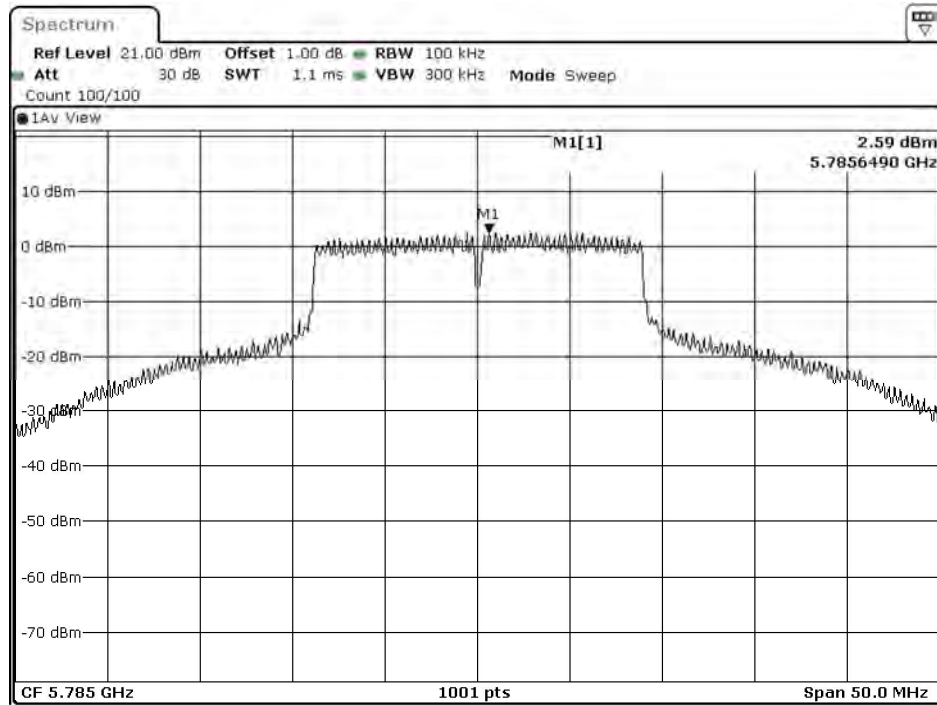
Date: 22.FEB.2021 07:29:14

Channel 149 - Chain B



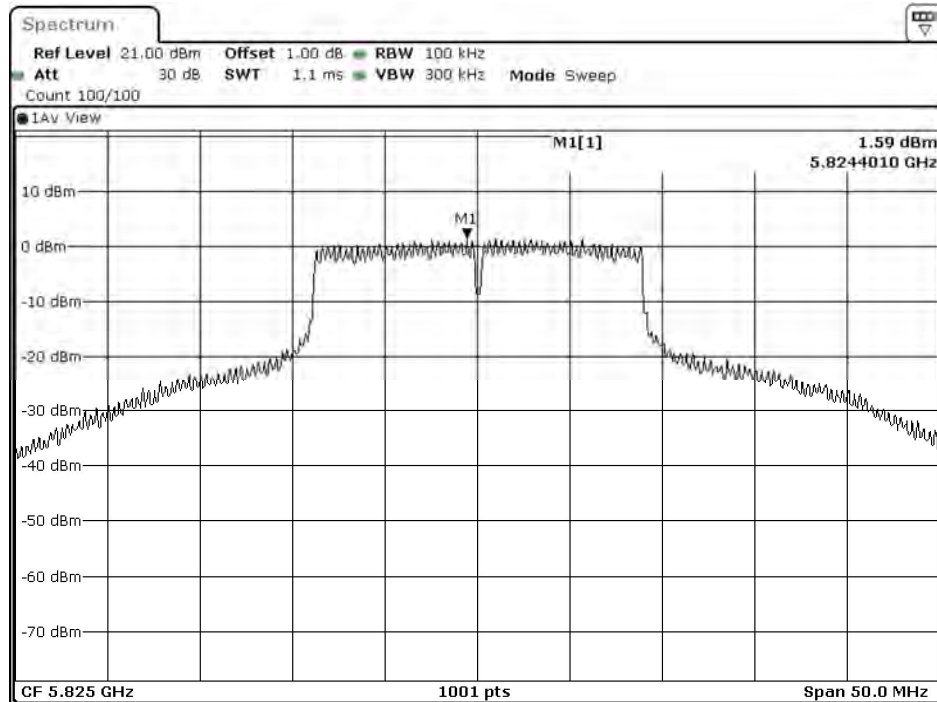
Date: 22.FEB.2021 06:41:25

Channel 157 - Chain B



Date: 22.FEB.2021 06:42:53

Channel 165 - Chain B



Date: 22.FEB.2021 06:44:16

Product : Wireless module
 Test Item : Peak Power Spectral Density
 Test Mode : Mode 5: Transmit (802.11ac-40BW 15Mbps) – Dipole Antenna
 Test Date : 2021/02/19

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain (dBm)	PPSD/MHz (dBm)	10*log(2) (dB)	Duty factor (db)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
38	5190	HT8	A	2.79	3.01	0.24	6.04	8.39	Pass
			B	2.89	3.01	0.24	6.14	8.39	Pass
46	5230	HT8	A	3.24	3.01	0.24	6.49	8.39	Pass
			B	2.57	3.01	0.24	5.82	8.39	Pass
54	5270	HT8	A	3.33	3.01	0.24	6.58	8.85	Pass
			B	2.93	3.01	0.24	6.18	8.85	Pass
62	5310	HT8	A	1.00	3.01	0.24	4.25	8.85	Pass
			B	0.48	3.01	0.24	3.73	8.85	Pass
102	5510	HT8	A	-0.73	3.01	0.24	2.52	8.13	Pass
			B	-1.36	3.01	0.24	1.89	8.13	Pass
110	5550	HT8	A	2.78	3.01	0.24	6.03	8.13	Pass
			B	2.21	3.01	0.24	5.46	8.13	Pass
134	5670	HT8	A	-0.76	3.01	0.24	2.49	8.13	Pass
			B	-0.38	3.01	0.24	2.87	8.13	Pass
142	5710(Band3)	HT8	A	2.96	3.01	0.24	6.21	8.13	Pass
			B	2.91	3.01	0.24	6.16	8.13	Pass

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain (dBm)	PPSD (dBm)	BWCF (dB)	10*log(2) (dB)	Duty factor (db)	Total PPSD (dBm)	Limit (dBm)	Result
142	5710(Band4)	HT8	A	-7.30	6.98	3.01	0.24	2.93	27.43	Pass
			B	-6.87	6.98	3.01	0.24	3.36		Pass
151	5755	HT8	A	-4.06	6.98	3.01	0.24	6.17	27.43	Pass
			B	-3.22	6.98	3.01	0.24	7.01		Pass
159	5795	HT8	A	-3.06	6.98	3.01	0.24	7.17	27.43	Pass
			B	-2.44	6.98	3.01	0.24	7.79		Pass