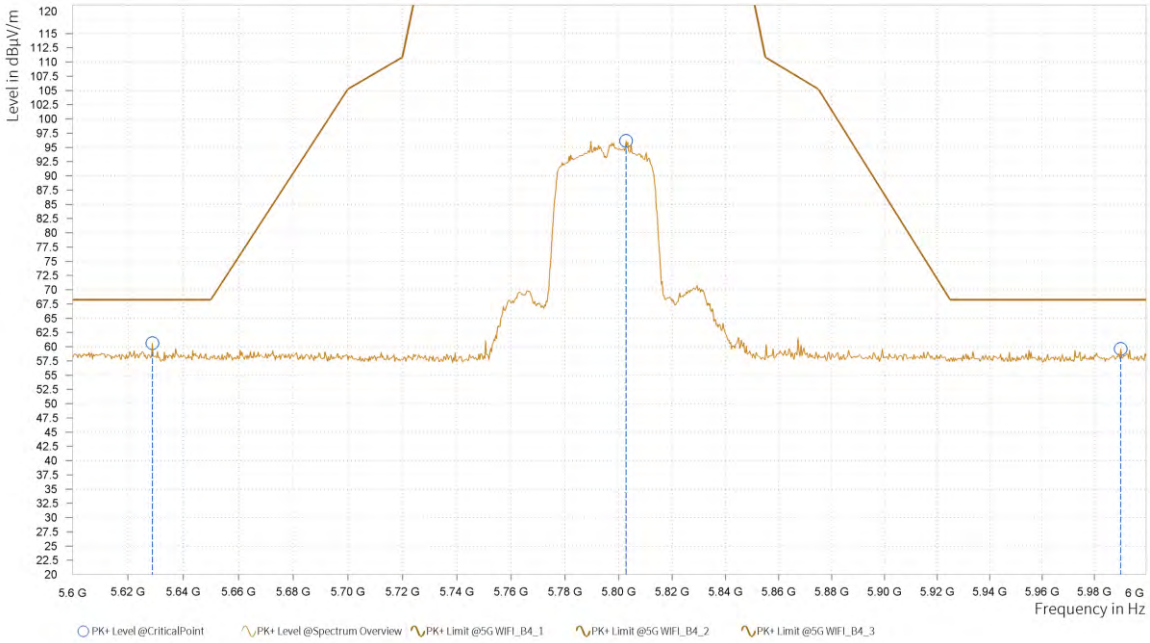
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,628.750	60.63	68.20	7.57	44.34	V	350.2	1.00
11	5,802.813	96.12			44.70	V	281.5	1.00
12	5,990.250	59.62	68.20	8.58	44.39	V	2.3	2.00



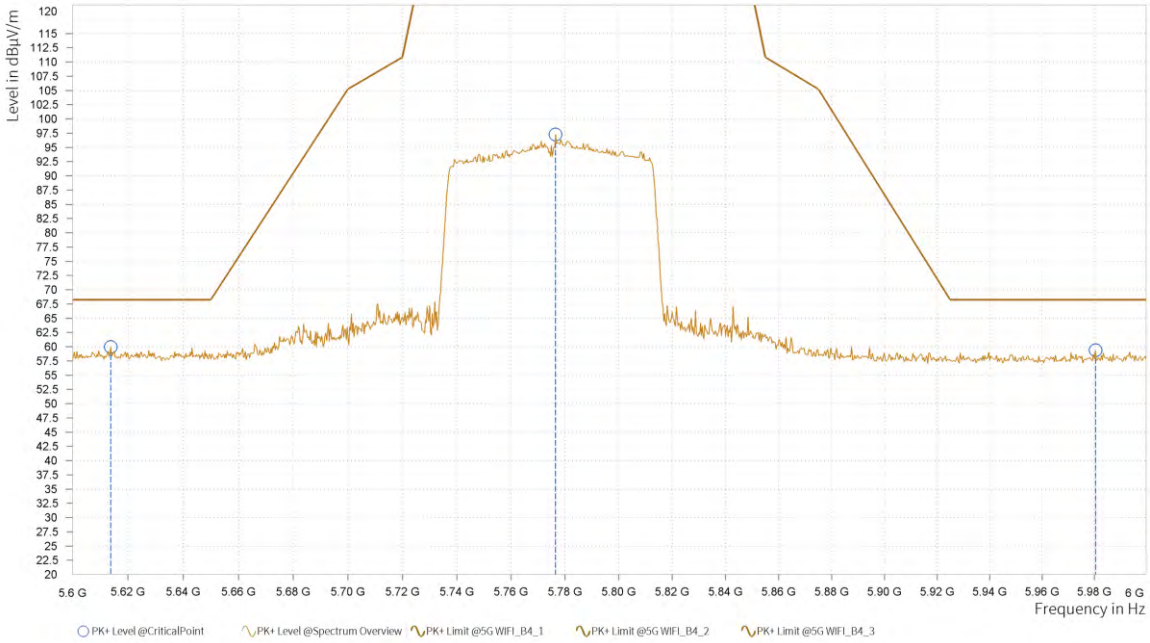
REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5795MHz: Fundamental frequency.

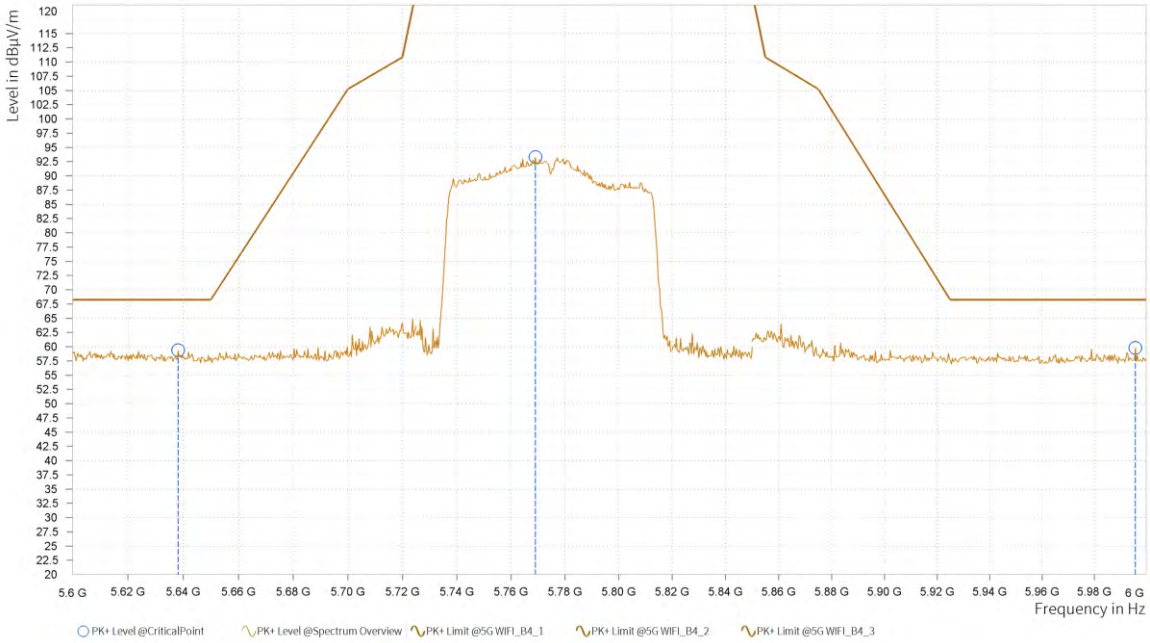
802.11ac (80MHz)			
CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	5,613.750	59.96	68.20	8.24	44.34	H	152.6	2.00
6	5,776.563	97.26			44.61	H	253	1.00
7	5,980.500	59.38	68.20	8.82	44.34	H	165.7	1.00



ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	5,638.125	59.37	68.20	8.83	44.35	V	354.2	2.00
6	5,769.063	93.29			44.58	V	260.1	1.00
7	5,995.875	59.78	68.20	8.42	44.41	V	181.3	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5775MHz: Fundamental frequency.

RADIATED EMISSION
BELOW 1GHz WORST-CASE DATA

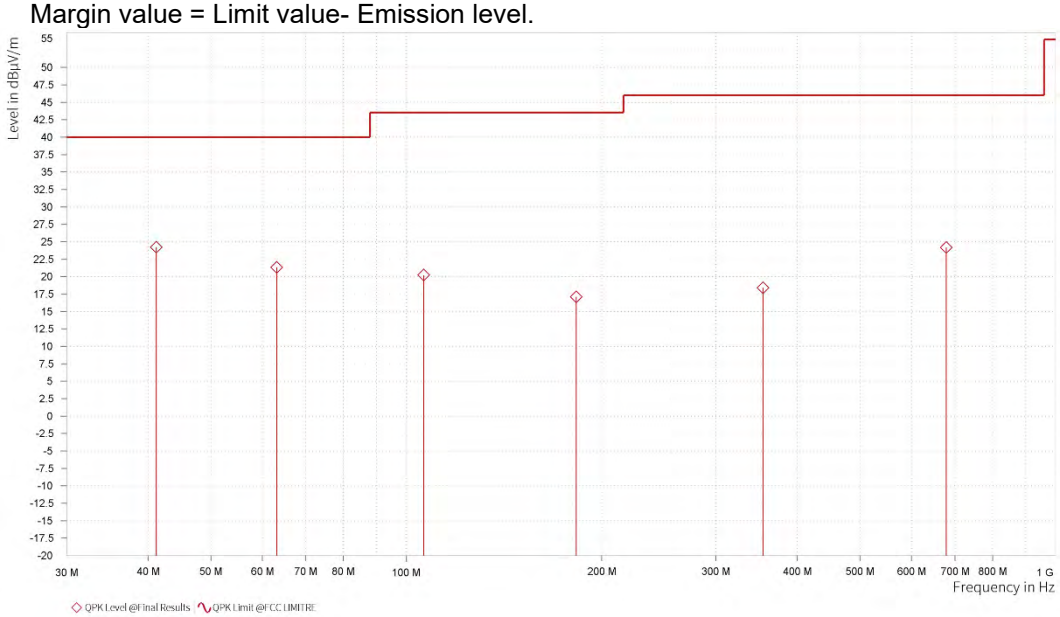
Band 3 802.11n(20MHz)			
CHANNEL	TX Channel 140	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	41.204	24.21	40.00	15.79	-9.72	H	359	1.00	120.000
1	63.126	21.32	40.00	18.68	-10.88	H	0.9	2.00	120.000
1	106.339	20.21	43.50	23.29	-10.83	H	159.4	1.00	120.000
1	182.724	17.09	43.50	26.41	-12.42	H	4.9	1.00	120.000
1	354.223	18.38	46.00	27.62	-4.03	H	4.9	1.00	120.000
1	678.542	24.16	46.00	21.84	-1.08	H	4.9	1.00	120.000

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.



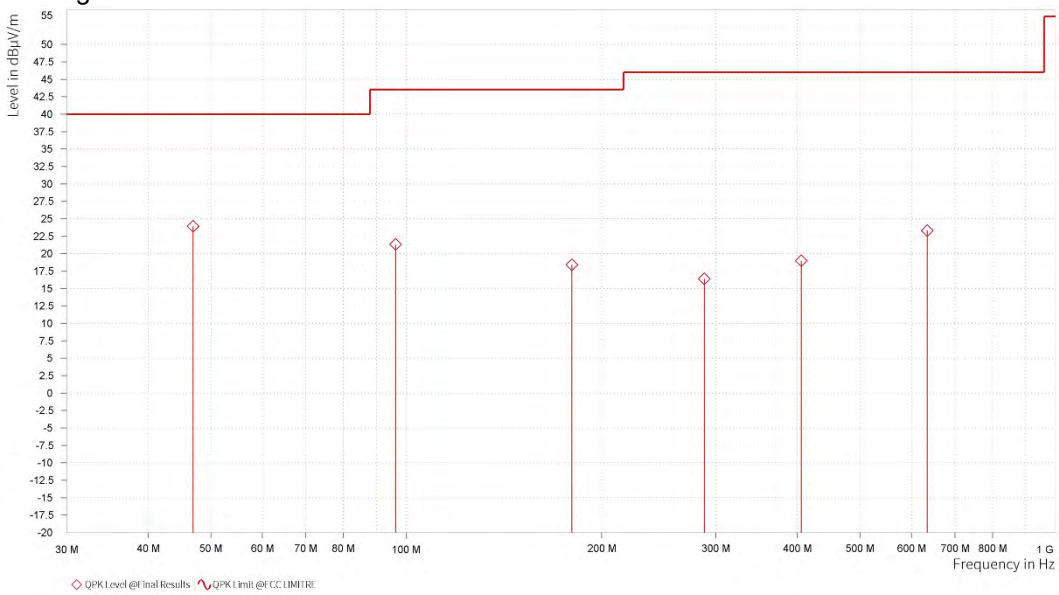
CHANNEL	Channel 140	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	46.927	23.91	40.00	16.09	-9.75	V	42.6	2.00	120.000
1	96.300	21.29	43.50	22.21	-11.80	V	359	1.00	120.000
1	179.817	18.38	43.50	25.12	-12.39	V	359	1.00	120.000
1	287.535	16.39	46.00	29.61	-7.00	V	4.2	1.00	120.000
1	405.972	18.95	46.00	27.05	-2.87	V	4.2	1.00	120.000
1	634.262	23.29	46.00	22.71	-1.94	V	4.2	1.00	120.000

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.



ABOVE 1GHz WORST-CASE DATA

Note: 1. For higher frequency, the emission is too low to be detected.

2.For radiated emission testing, all supported channels, bandwidths and modes have been tested, the report only shown the worst-case data of each sub-band.

Band 1 802.11n(40MHz)			
CHANNEL	TX Channel 38	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,380.000	44.45	74.00	29.55	35.21	54.00	18.79	6.81	H	234.7	1.00
2	15,570.000	48.09	74.00	25.91	37.23	54.00	16.77	9.33	H	359.1	1.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,380.000	45.53	74.00	28.47	34.80	54.00	19.20	6.81	V	28.5	2.00
2	15,570.000	47.00	74.00	27.00	37.15	54.00	16.85	9.33	V	0.9	2.00

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5210MHz: Fundamental frequency.

Band 2 802.11n(40MHz)			
CHANNEL	TX Channel 62	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,620.000	46.92	74.00	27.08	35.71	54.00	18.29	7.13	H	128.9	2.00
2	15,930.000	50.12	74.00	23.88	38.51	54.00	15.49	10.33	H	3.3	2.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,620.000	47.12	74.00	26.88	35.82	54.00	18.18	7.13	V	257.9	2.00
2	15,930.000	49.40	74.00	24.60	38.61	54.00	15.39	10.33	V	1	2.00

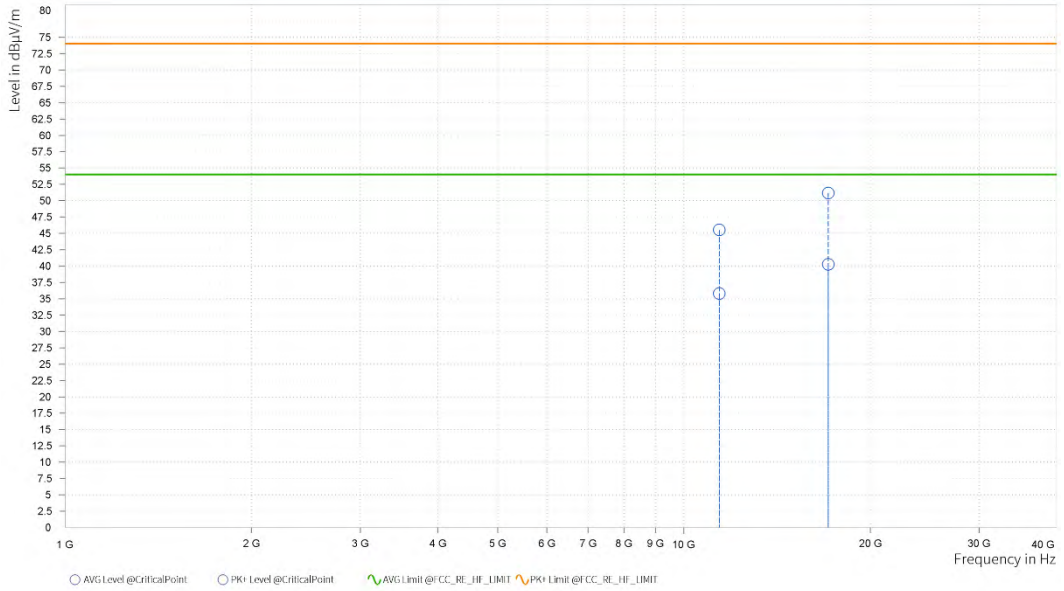
REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5290MHz: Fundamental frequency.

Band 3 802.11n(20MHz)			
CHANNEL	TX Channel 140	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,400.000	45.53	74.00	28.47	35.78	54.00	18.22	7.59	H	1	2.00
2	17,100.000	51.19	74.00	22.81	40.27	54.00	13.73	13.54	H	1	2.00



ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,400.000	46.76	74.00	27.24	35.79	54.00	18.21	7.59	V	358.3	1.00
2	17,100.000	50.43	74.00	23.57	40.48	54.00	13.52	13.54	V	1	1.00

REMARKS:

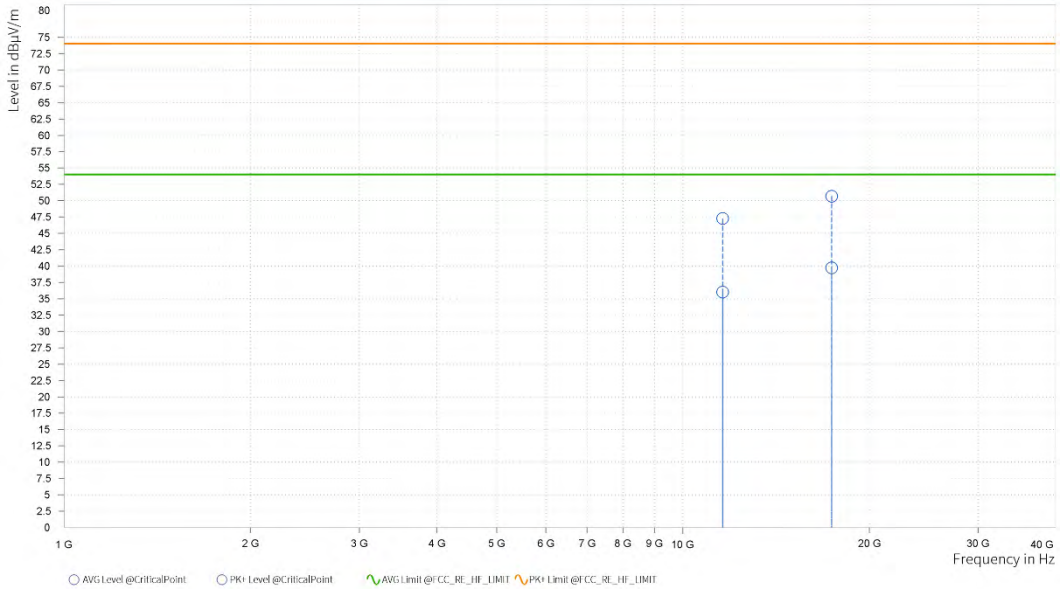
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5530MHz: Fundamental frequency.
4. #: Out of restricted band.

Band 4 802.11n(40MHz)			
CHANNEL	TX Channel 159	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,590.000	47.66	74.00	26.34	36.00	54.00	18.00	8.03	H	126.4	2.00
2	17,385.000	50.19	74.00	23.81	39.68	54.00	14.32	13.21	H	359	1.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,590.000	47.27	74.00	26.73	36.01	54.00	17.99	8.03	V	94.9	1.00
2	17,385.000	50.69	74.00	23.31	39.73	54.00	14.27	13.21	V	2.3	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5785MHz: Fundamental frequency.

3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE:

1 The lower limit shall apply at the transition frequencies.

2 The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3 All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Mar.28,24	Mar.27,26
ELEKTRA test software	Rohde&Schwarz	ELEKTRA	NA	N/A	N/A
LISN network	Rohde&Schwarz	ENV216	102640	Mar.28,24	Mar.27,26
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.27,24	Apr.26,25
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.26,25	Apr.25,26
CABLE	Rohde&Schwarz	W601	N/A	Apr.27,24	Apr.26,25
CABLE	Rohde&Schwarz	W601	N/A	Apr.26,25	Apr.25,26

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.2.3 TEST PROCEDURES

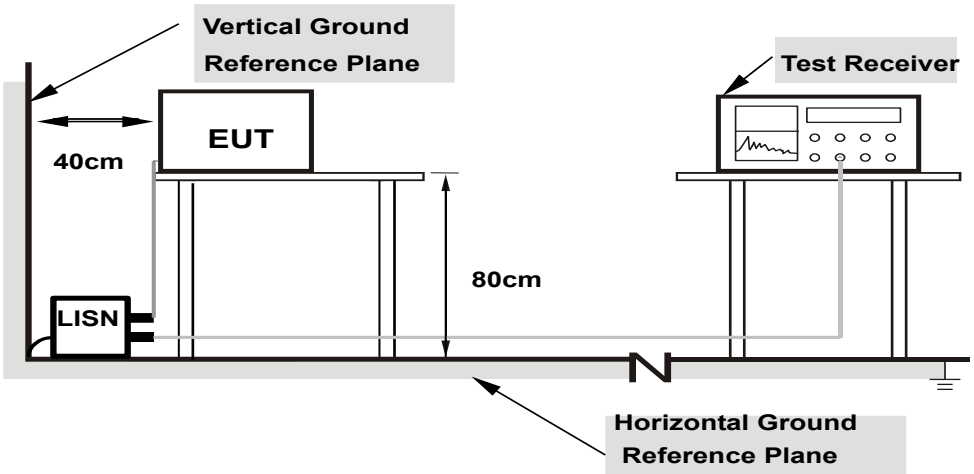
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.7.

3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA			
FREQUENCY RANGE	150KHz ~ 30MHz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak (QP) / Average (AV), 9 kHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	26deg. C, 51%RH
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	CAV Level [dBµV]	CAV: AVG Limit [dBµV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.186	45.97	64.21	18.24	31.51	54.21	22.70	12.17	L1	9.000
1	0.407	40.76	57.72	16.96	32.71	47.72	15.01	11.77	L1	9.000
1	1.046	31.34	56.00	24.66	23.87	46.00	22.13	11.75	L1	9.000
1	3.422	31.54	56.00	24.46	24.98	46.00	21.02	11.78	L1	9.000
1	11.153	41.61	60.00	18.39	35.46	50.00	14.54	11.83	L1	9.000
1	28.415	36.71	60.00	23.29	26.57	50.00	23.43	11.91	L1	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and
3. measurement with the average detector is unnecessary.
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Limit value - Emission level
6. Correction factor = Insertion loss + Cable loss
7. Emission Level = Correction Factor + Reading Value.

FREQUENCY RANGE	150KHz ~ 30MHz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak (QP) / Average (AV), 9 kHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	26deg. C, 51%RH
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.186	44.05	64.21	20.16	29.90	54.21	24.31	12.24	N	9.000
1	0.366	40.34	58.59	18.25	32.76	48.59	15.83	12.83	N	9.000
1	1.500	30.01	56.00	25.99	22.50	46.00	23.50	12.74	N	9.000
1	3.737	30.39	56.00	25.61	22.85	46.00	23.15	12.75	N	9.000
1	11.643	42.31	60.00	17.69	35.79	50.00	14.21	12.80	N	9.000
1	28.878	37.00	60.00	23.00	27.50	50.00	22.50	12.89	N	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and
3. measurement with the average detector is unnecessary.
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Limit value - Emission level
6. Correction factor = Insertion loss + Cable loss
7. Emission Level = Correction Factor + Reading Value.

3.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

3.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

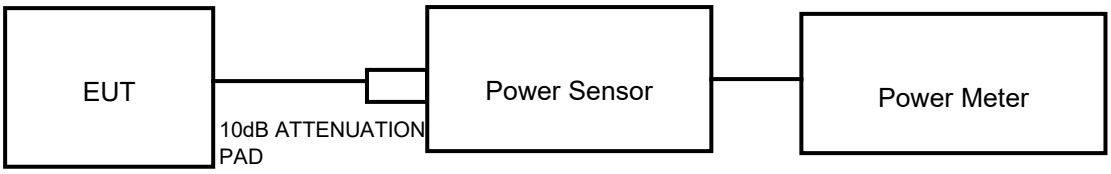
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	B	Indoor Access Point	1 Watt (30 dBm)
	√	Client devices	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

NOTE: Where B is the 26dB emission bandwidth in MHz.

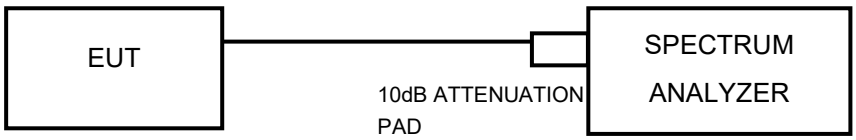
3.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

802.11a, 802.11n/ac/ax (20MHz), 802.11 n/ac/ax (40MHz) ,802.11 ac/ax (160MHz) TEST CONFIGURATION



FOR 26dB BANDWIDTH



3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	R&S	ESW 44	101973	Mar.28,24	Mar.27,26
Open Switch and Control Unit	R&S	OSP-B157W8	100836	N/A	N/A
Vector Signal Generator	R&S	SMBV100B	102176	Mar.29,24	Mar.28,26
Signal Generator	R&S	SMB100A03	182185	Mar.29,24	Mar.28,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Hygrothermograph	DELI	20210528	SZ015	Sep.06,23	Sep.05,25
PC	LENOVO	E14	HRSW0024	N/A	N/A
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.26,25	Apr.25,26
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.26,25	Apr.25,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26
Power Meter	R&S	NRX	102380	Mar.28,24	Mar.27,26
Power Meter probe	R&S	NRP6A	102942	Mar.28,24	Mar.27,26

NOTE:

1. The calibration interval of the above test instruments is 12 /24months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

3.3.4 TEST PROCEDURE

FOR POWER MEASUREMENT

For 802.11a, 802.11n/ac(20MHz), 802.11 n/ac(40MHz)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 99 PERCENT OCCUPIED BANDWIDTH

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

FOR 26dB BANDWIDTH

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

FOR 6dB BANDWIDTH

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

3.3.7 TEST RESULTS

Please Refer to Appendix of this test report.

3.4 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

3.4.1 LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Client devices	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

3.4.2 TEST SETUP

3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.4.4 TEST PROCEDURES

Using method SA-2(Band1/2/3)

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission).
7) Record the max value

Using method SA-2 (Band4)

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Add 10 log(500kHz/RBW) to the test result. 10 log(500kHz/300KHZ) = 2.22dBm
7) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission).
8) Record the max value

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

Same as 3.1.7.

3.4.7 TEST RESULTS

Please Refer to Appendix of this test report.

3.5 AUTOMATICALLY DISCONTINUE TRANSMISSION

3.5.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information, or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

3.5.2 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.5.3 TEST RESULT

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving。 The EUT can detect the controlling of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.6 ANTENNA REQUIREMENTS

3.6.1 STANDARD APPLICABLE

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmits power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.6.2 ANTENNA CONNECTED CONSTRUCTION

An embedded-in antenna design is used.

3.6.3 ANTENNA GAIN

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

5. MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

6. Appendix

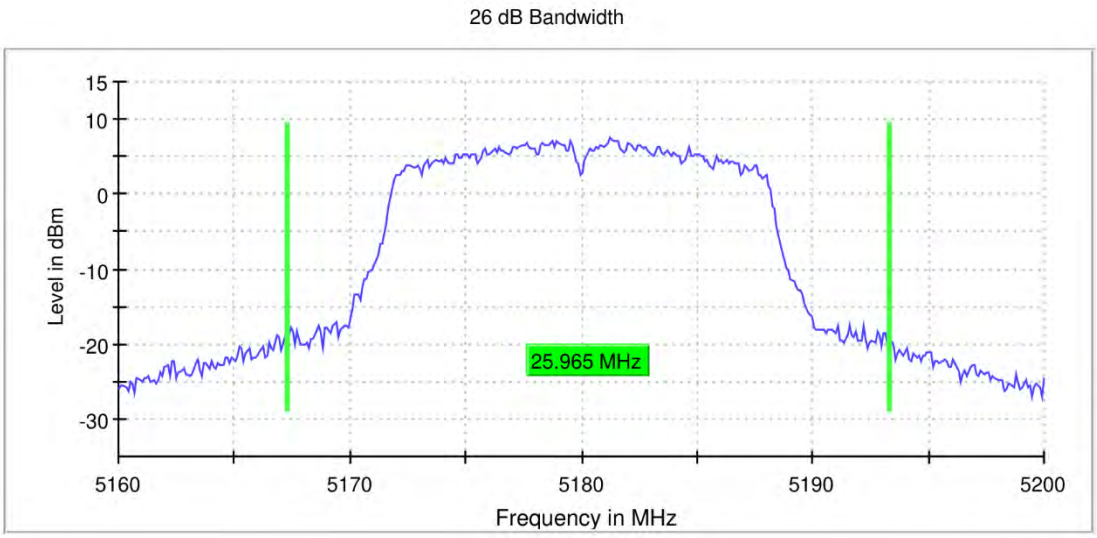
EMISSION BANDWIDTH

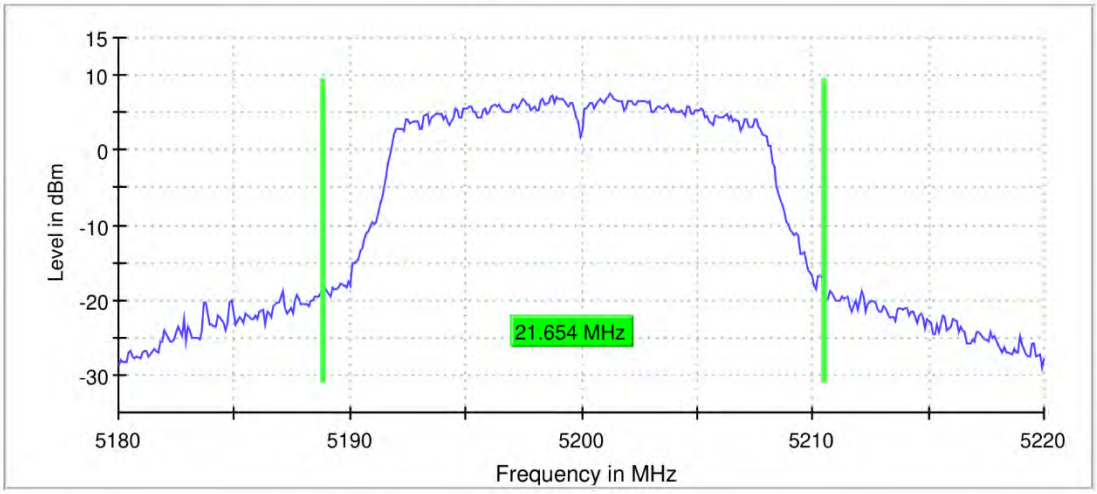
TEST RESULT

TestMode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	ANT6	5180	25.965	5167.318	5193.283	---	---
	ANT6	5200	21.654	5188.822	5210.476	---	---
	ANT6	5240	22.155	5229.223	5251.378	---	---
	ANT6	5260	22.356	5248.622	5270.977	---	---
	ANT6	5300	22.857	5288.822	5311.679	---	---
	ANT6	5320	23.759	5307.920	5331.679	---	---
	ANT6	5500	25.564	5487.018	5512.581	---	---
	ANT6	5580	23.158	5568.822	5591.980	---	---
	ANT6	5700	24.060	5688.922	5712.982	---	---
	ANT6	5720	25.764	5706.817	5732.581	---	---
11N20SISO	ANT6	5180	20.652	5169.724	5190.376	---	---
	ANT6	5200	22.356	5189.223	5211.579	---	---
	ANT6	5240	22.155	5228.120	5250.276	---	---
	ANT6	5260	20.551	5249.724	5270.276	---	---
	ANT6	5300	20.551	5289.724	5310.276	---	---
	ANT6	5320	20.551	5309.724	5330.276	---	---
	ANT6	5500	21.053	5489.223	5510.276	---	---
	ANT6	5580	22.957	5569.323	5592.281	---	---
	ANT6	5700	21.253	5689.323	5710.576	---	---
	ANT6	5720	23.258	5708.321	5731.579	---	---
11N40SISO	ANT6	5190	40.301	5169.850	5210.150	---	---
	ANT6	5230	40.602	5209.850	5250.451	---	---
	ANT6	5270	40.602	5249.549	5290.150	---	---
	ANT6	5310	40.602	5289.699	5330.301	---	---
	ANT6	5510	40.752	5489.699	5530.451	---	---
	ANT6	5550	40.752	5529.699	5570.451	---	---
	ANT6	5670	41.053	5649.248	5690.301	---	---
	ANT6	5710	40.752	5689.549	5730.301	---	---
11AC80SISO	ANT6	5210	82.257	5169.122	5251.379	---	---
	ANT6	5290	82.759	5248.621	5331.379	---	---

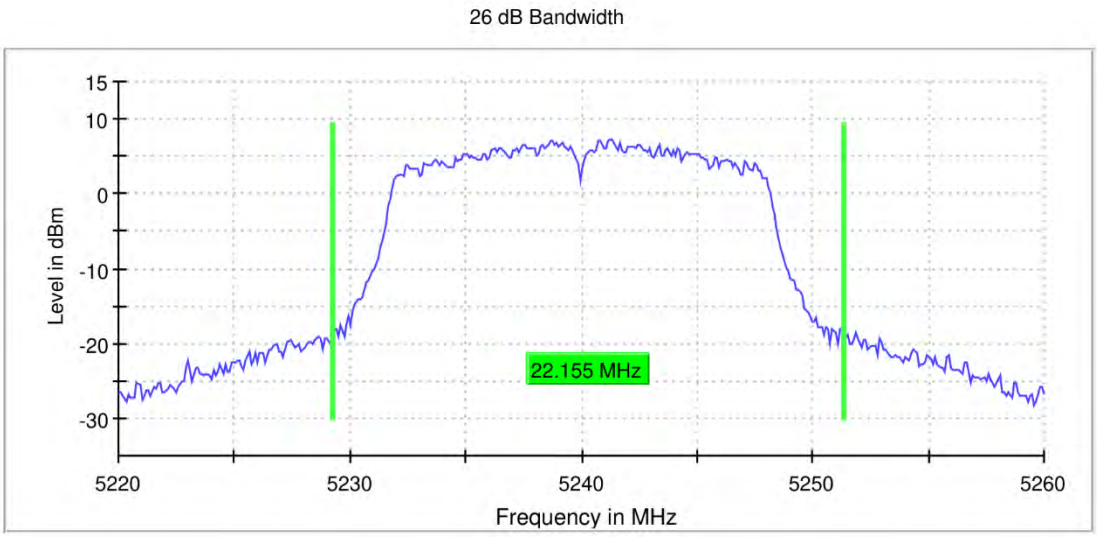
	ANT6	5530	84.263	5487.116	5571.379	---	---
	ANT6	5610	82.759	5568.621	5651.379	---	---
	ANT6	5690	83.260	5648.621	5731.881	---	---

TEST GRAPHS

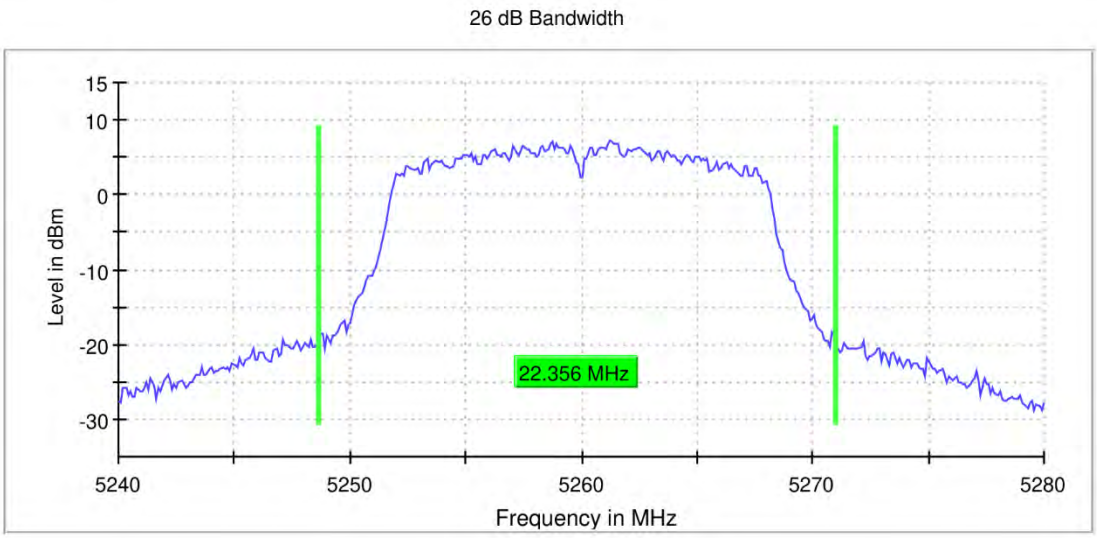
11A_ANT6_5180


11A _ANT6_5200


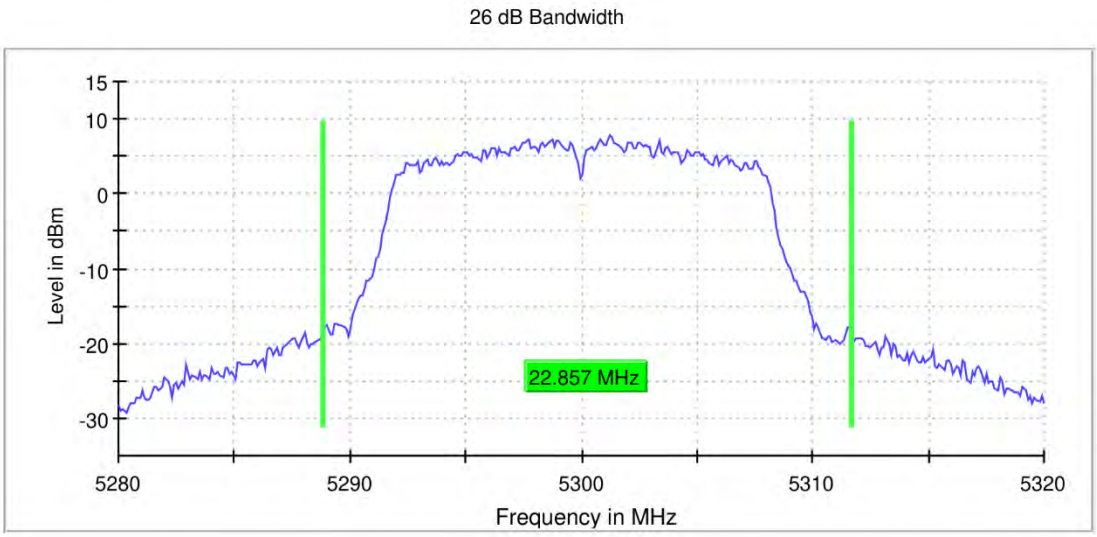
11A _ANT6_5240



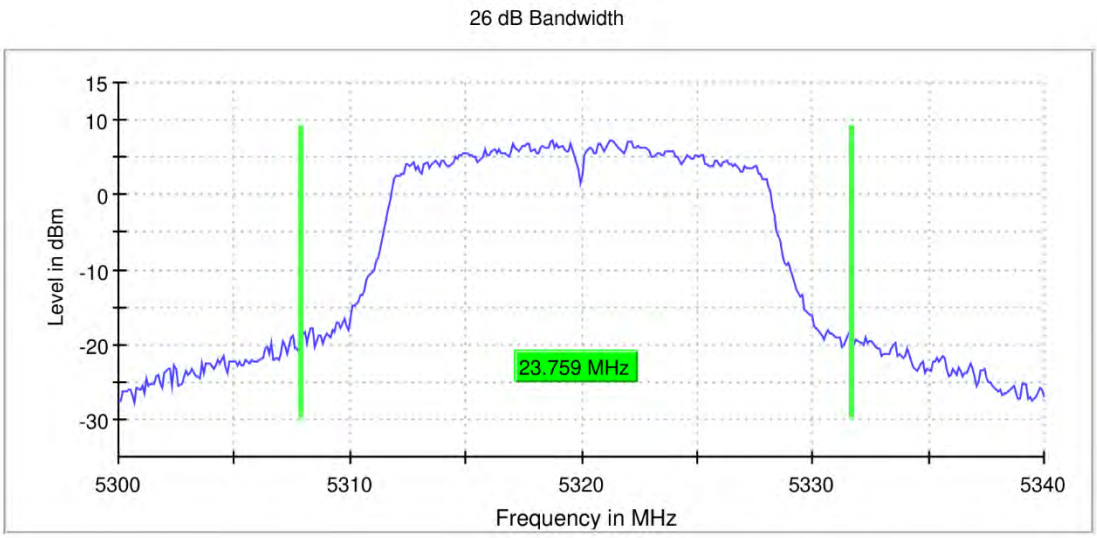
11A _ANT6_5260



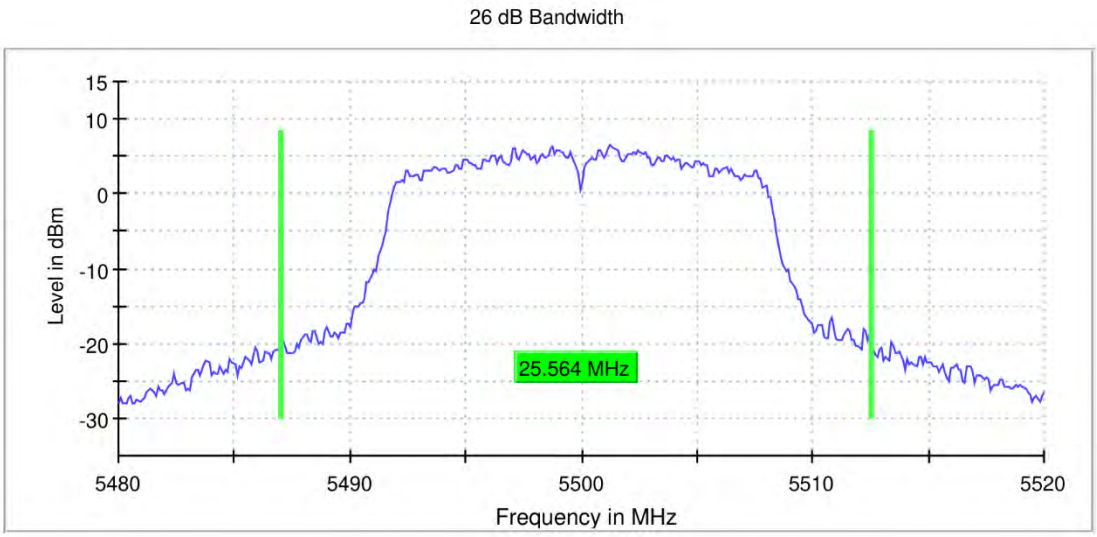
11A _ANT6_5300



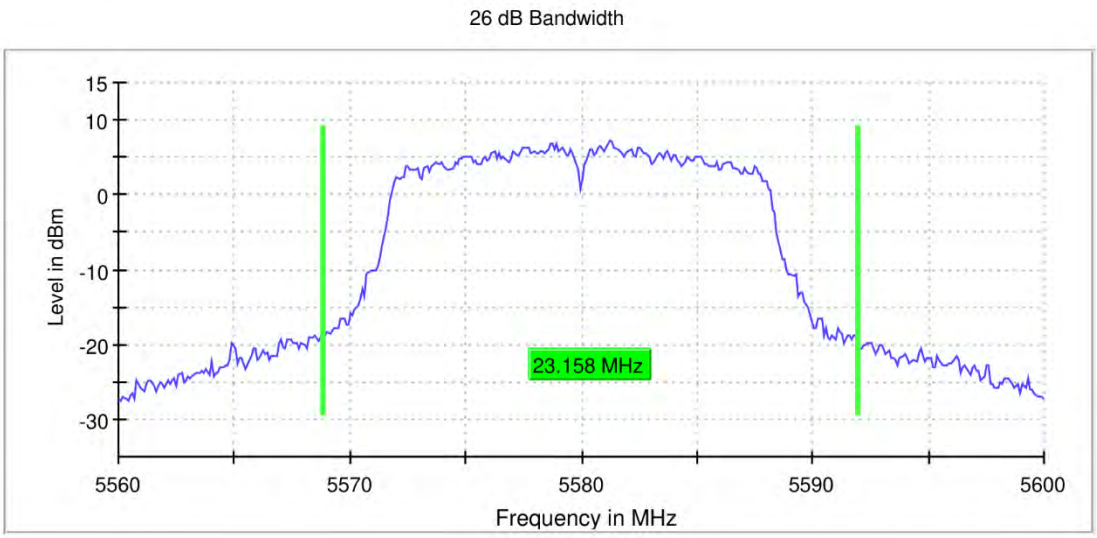
11A _ANT6_5320



11A _ANT6_5500



11A _ANT6_5580



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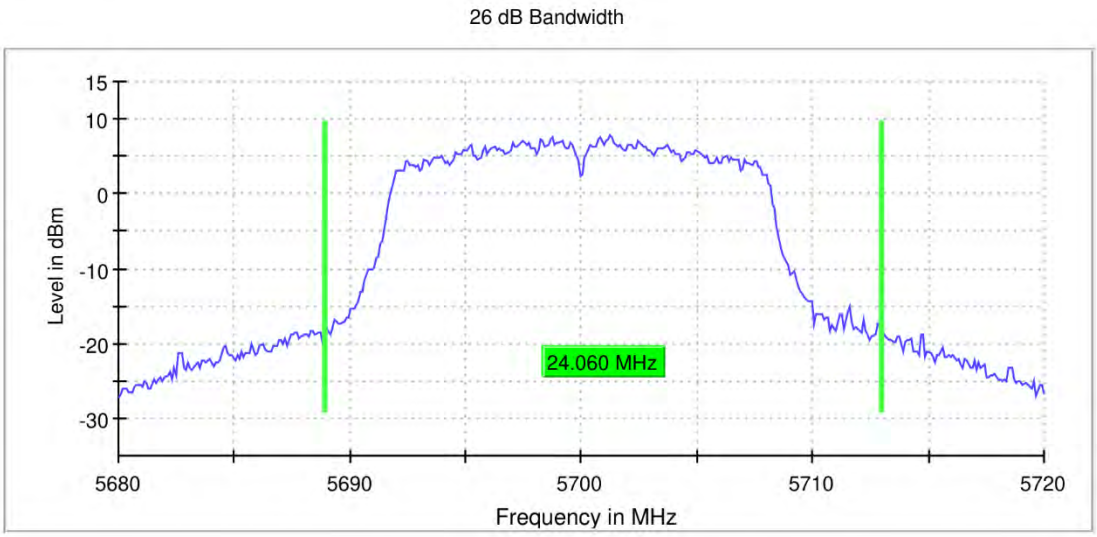
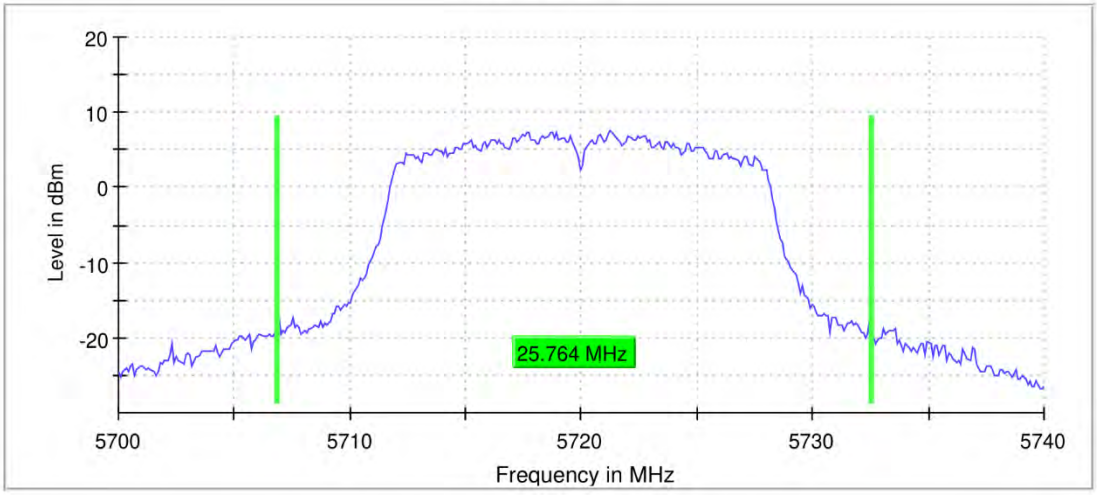


11A _ANT6_5720



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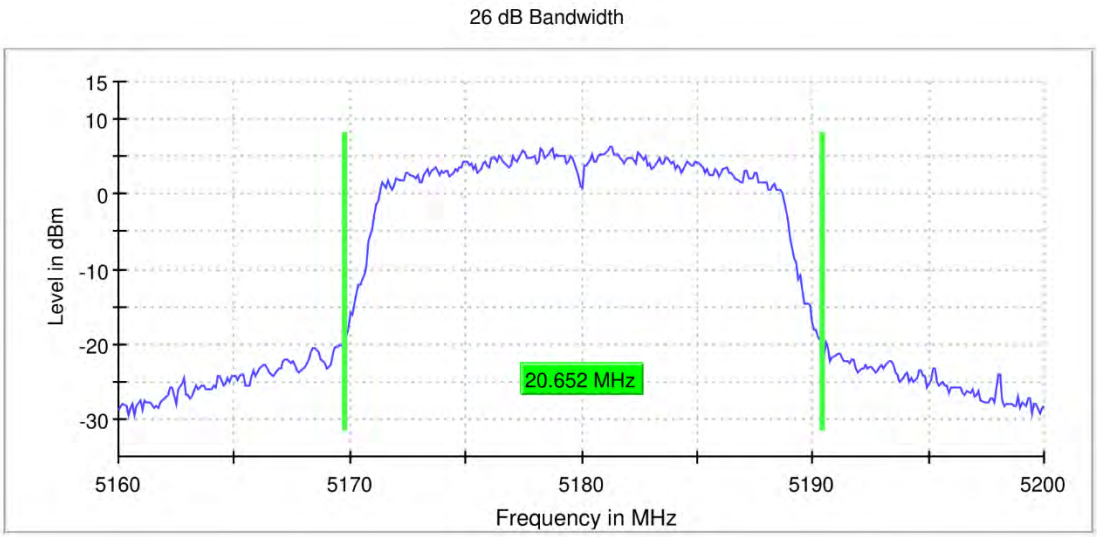
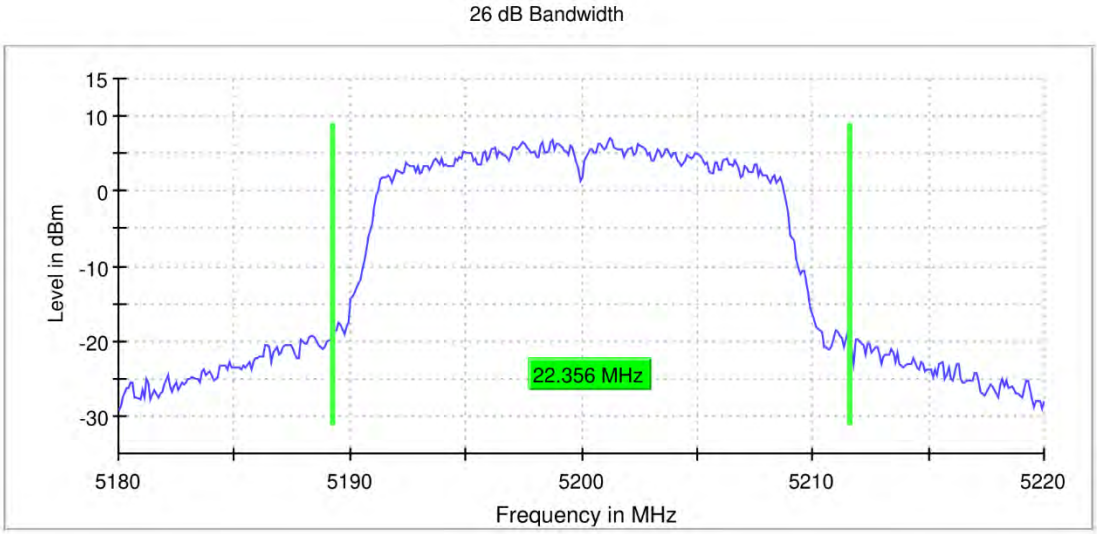
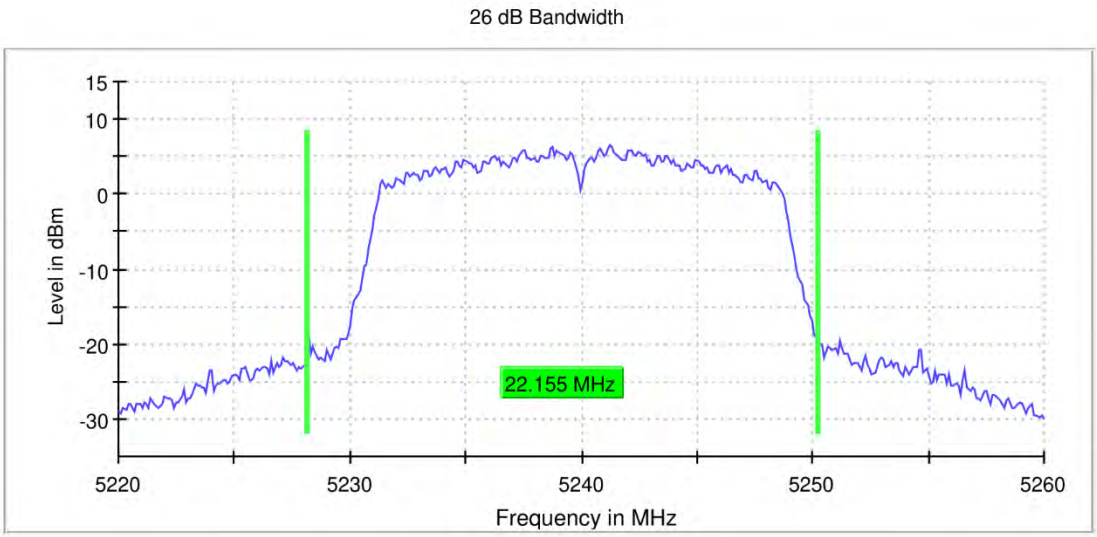


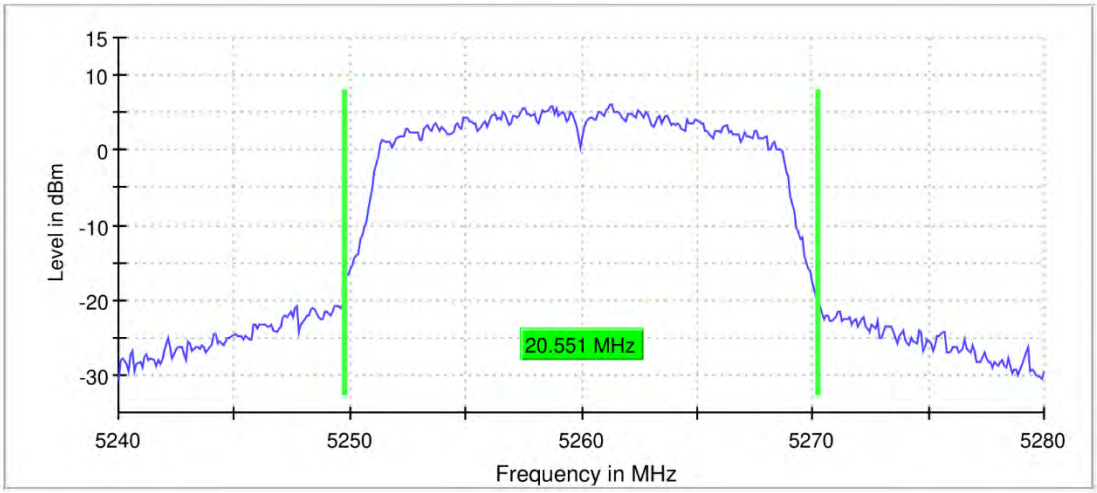
11N20 _ANT6_5200



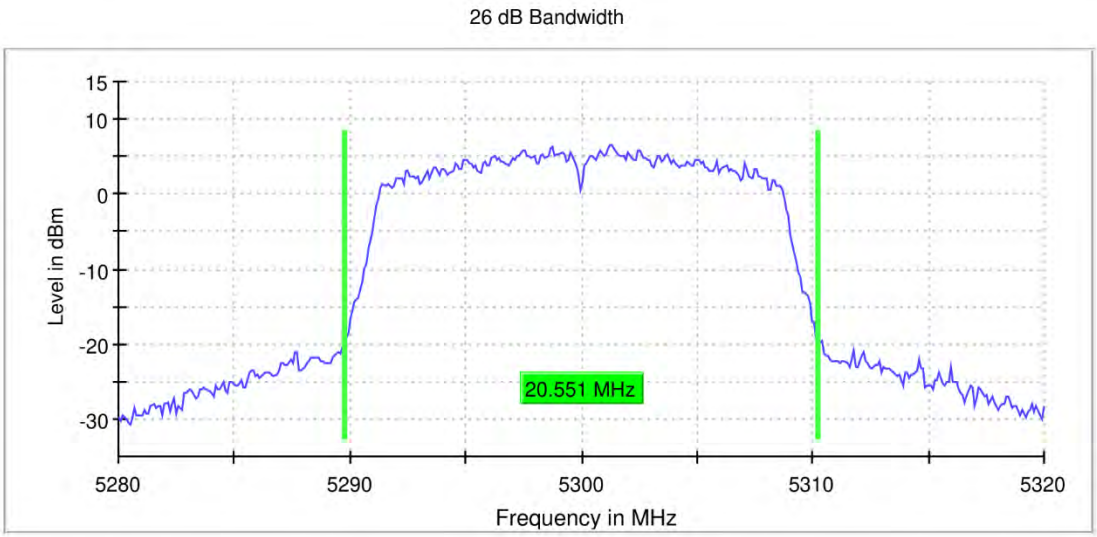
11N20 _ANT6_5240



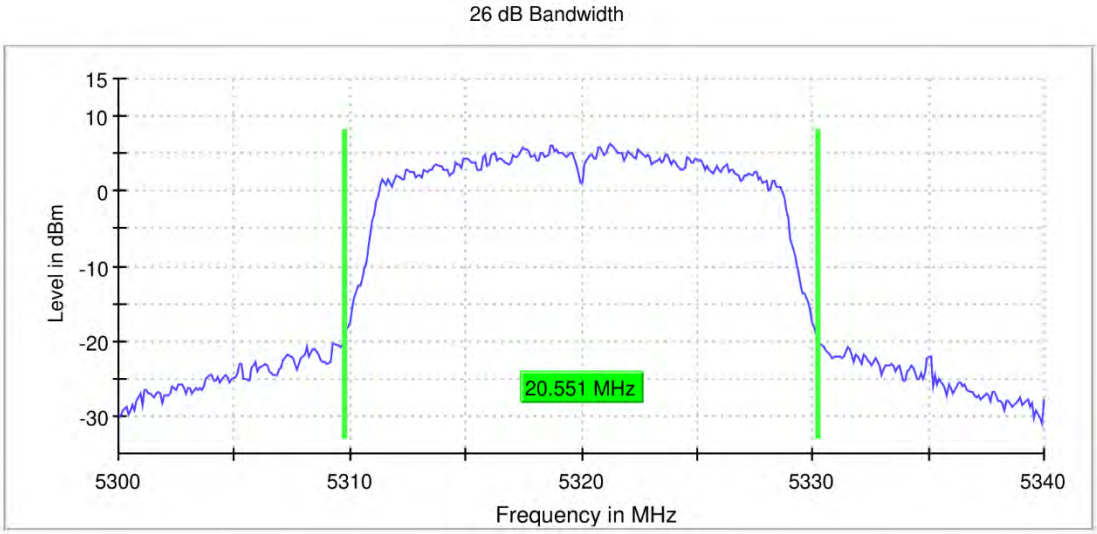
11N20 _ANT6_5260



11N20_ANT6_5300



11N20 _ANT6_5320



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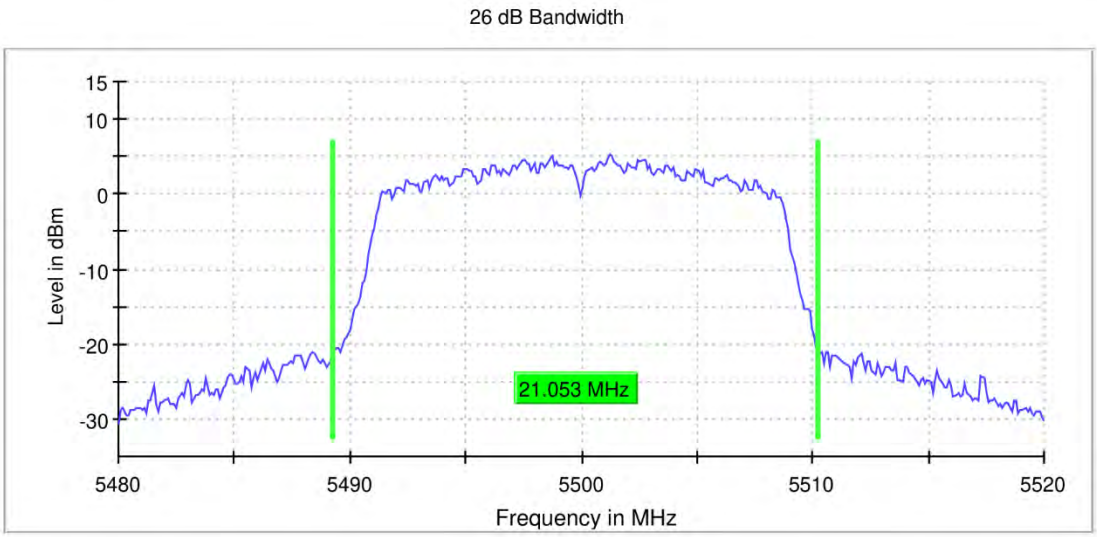
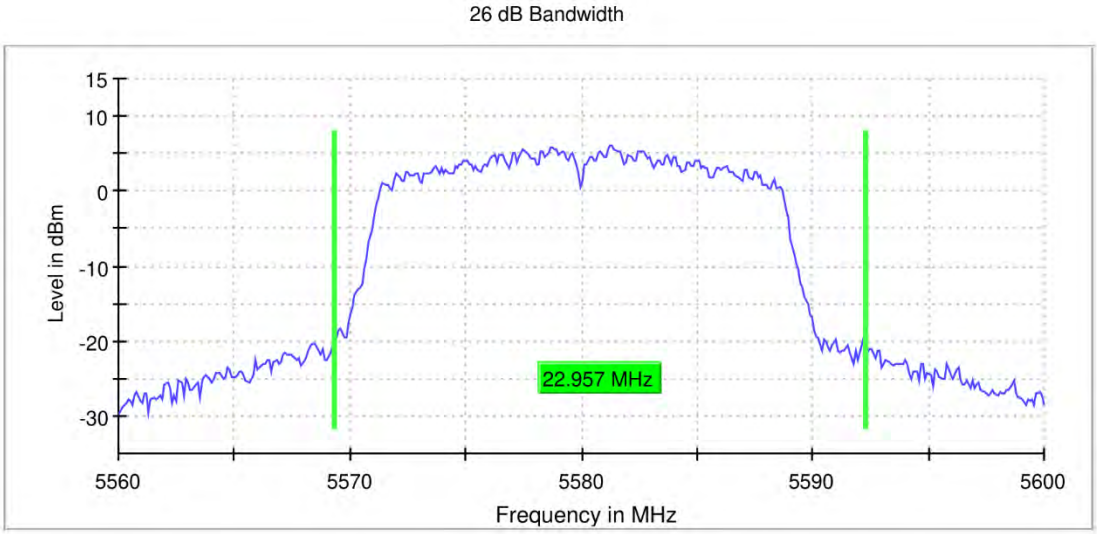


11N20_ANT6_5580



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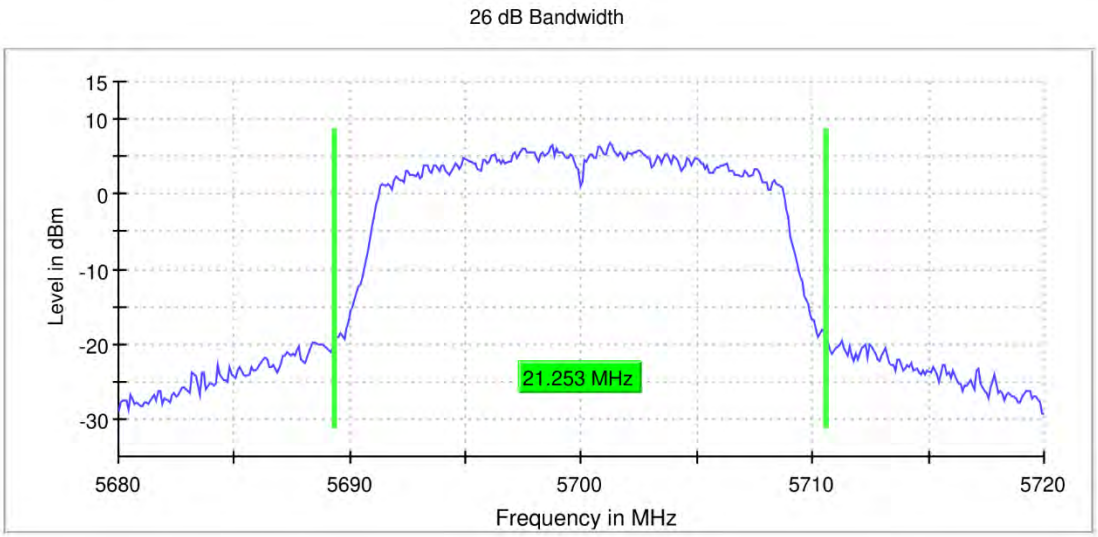

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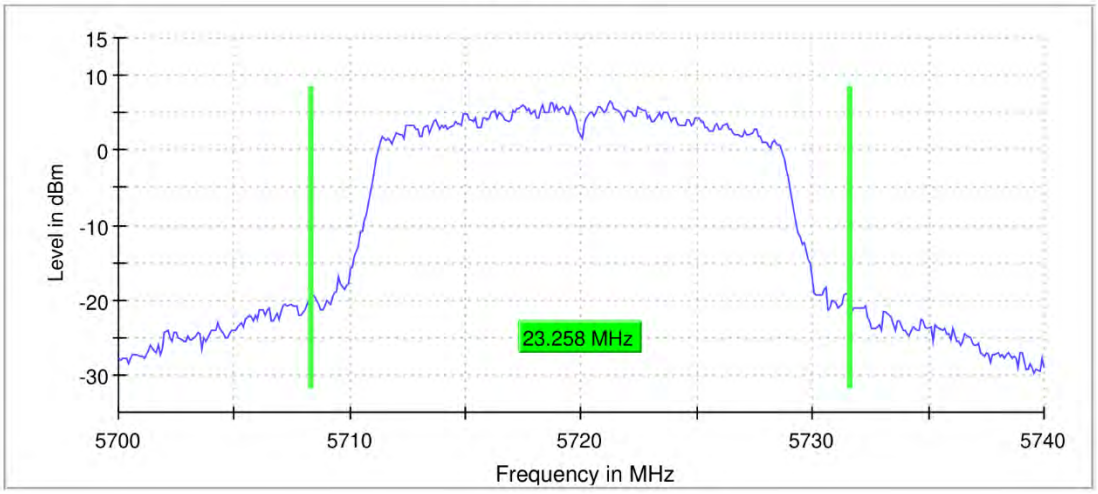
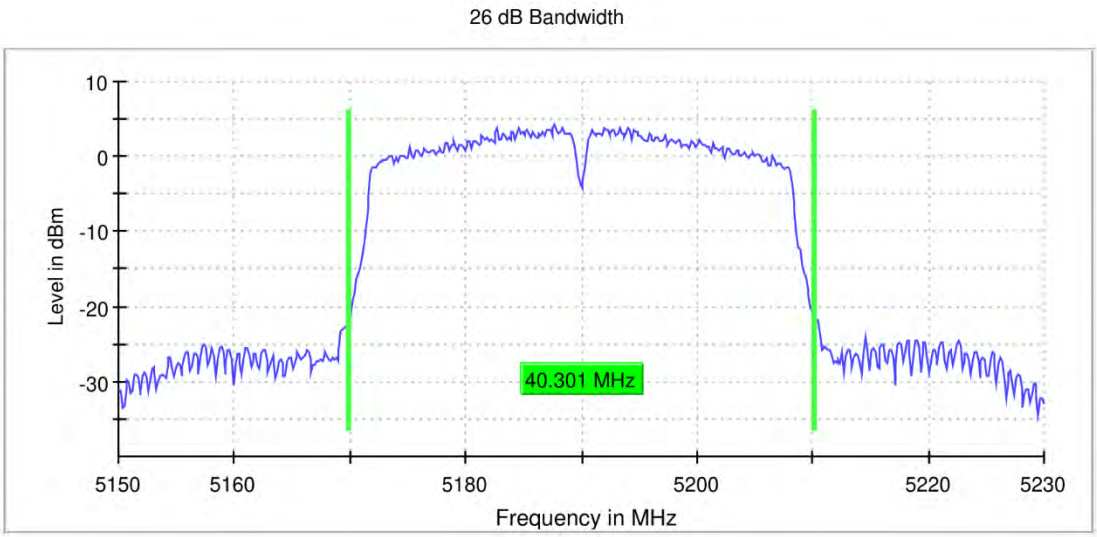
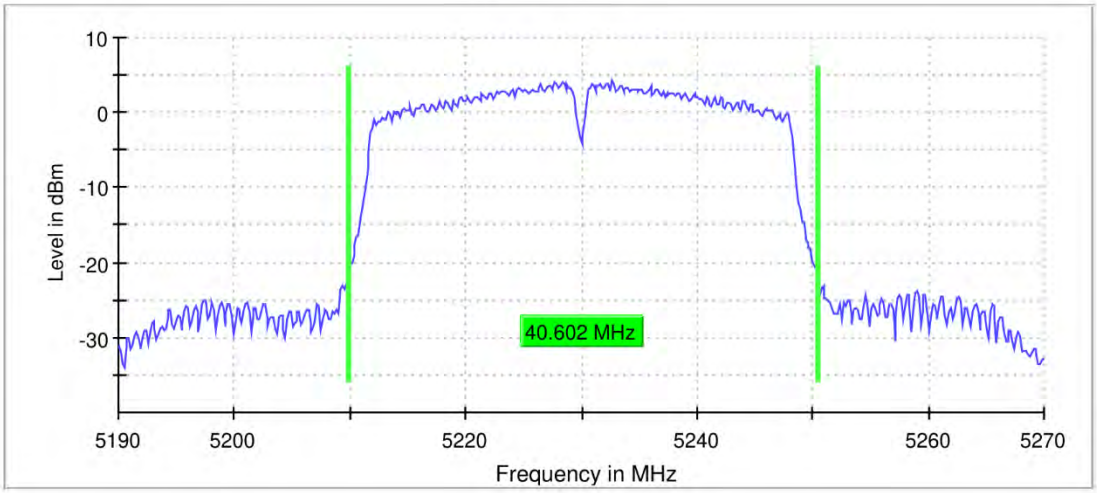


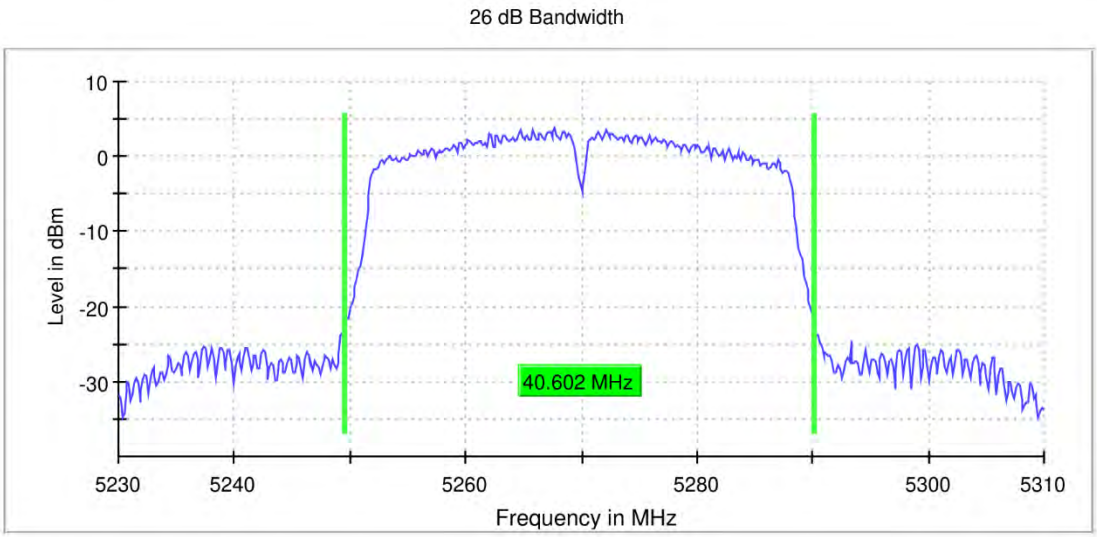
11N40 _ANT6_5190



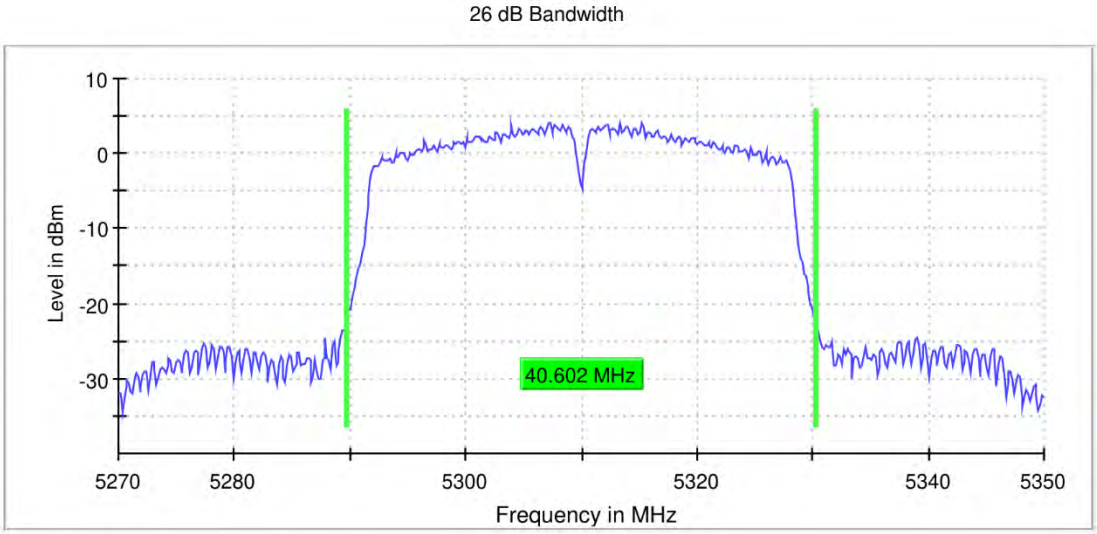
11N40 _ANT6_5230



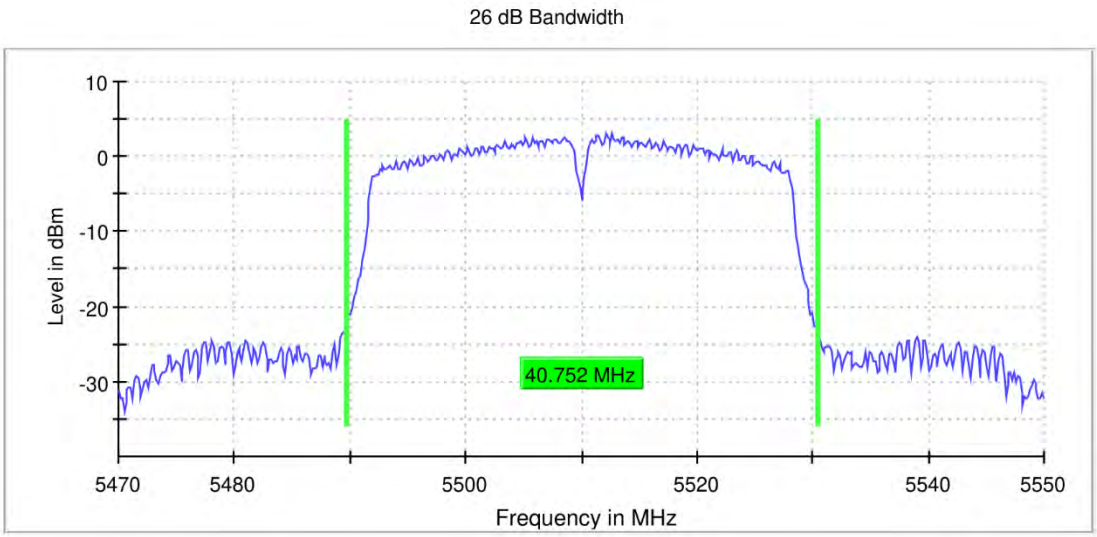
11N40 _ANT6_5270



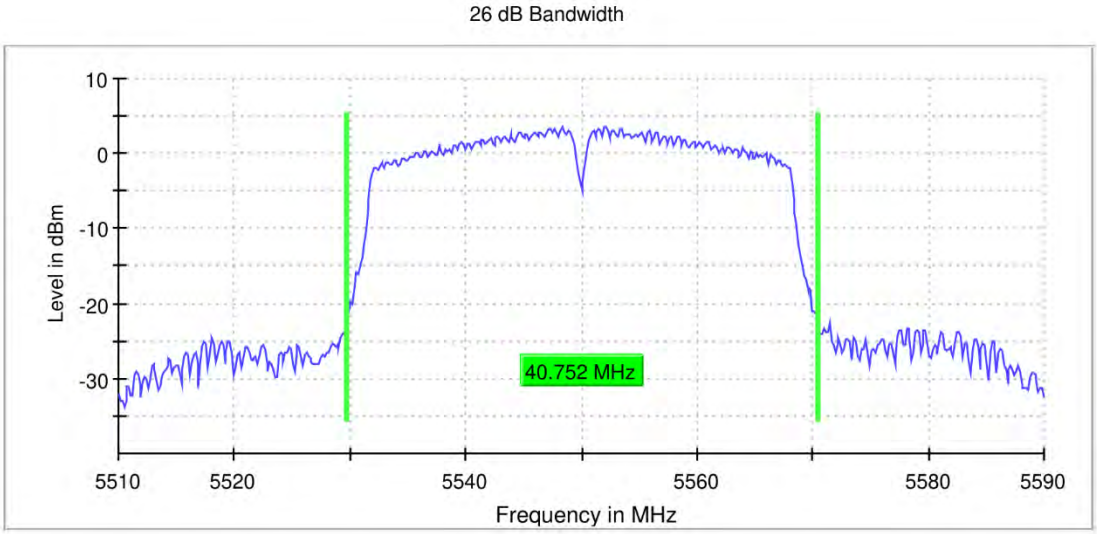
11N40 _ANT6_5310



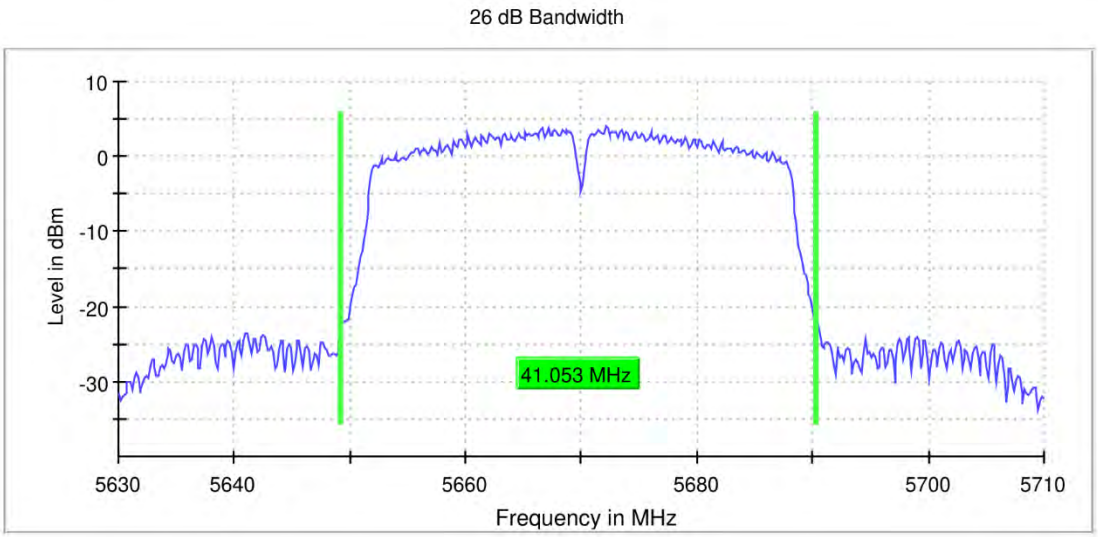
11N40 _ANT6_5510



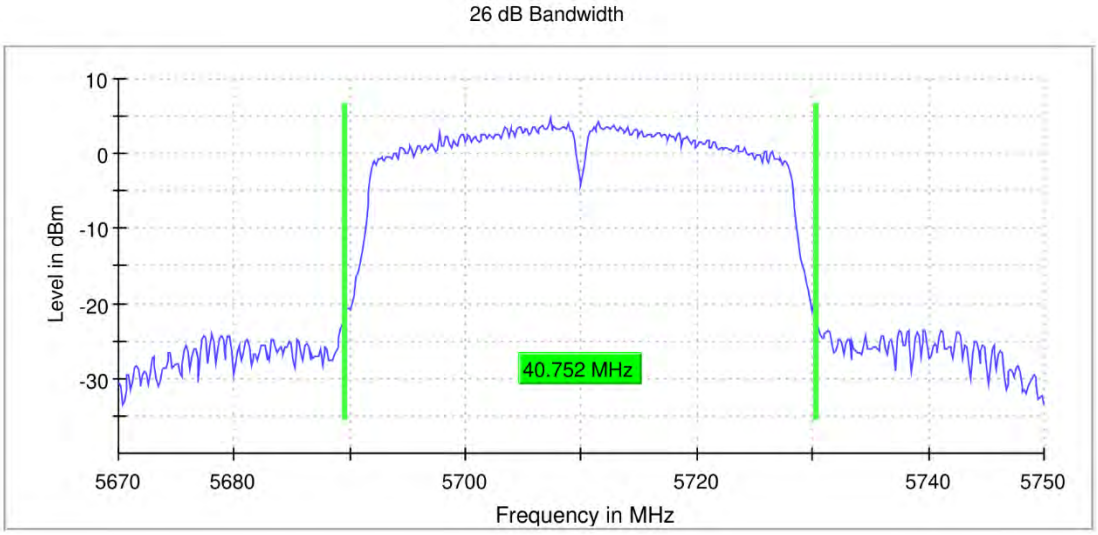
11N40 _ANT6_5550



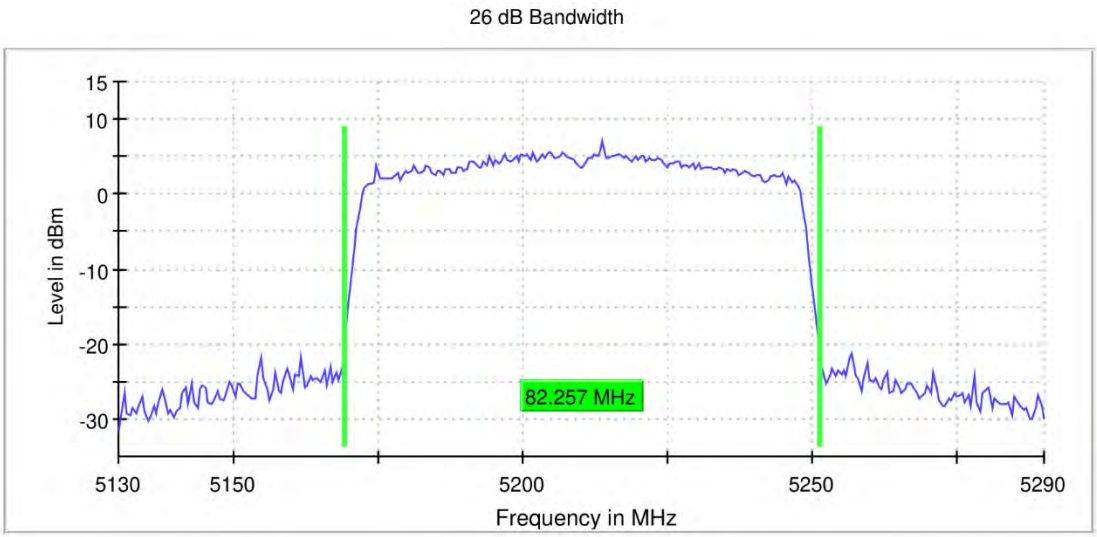
11N40 _ANT6_5670



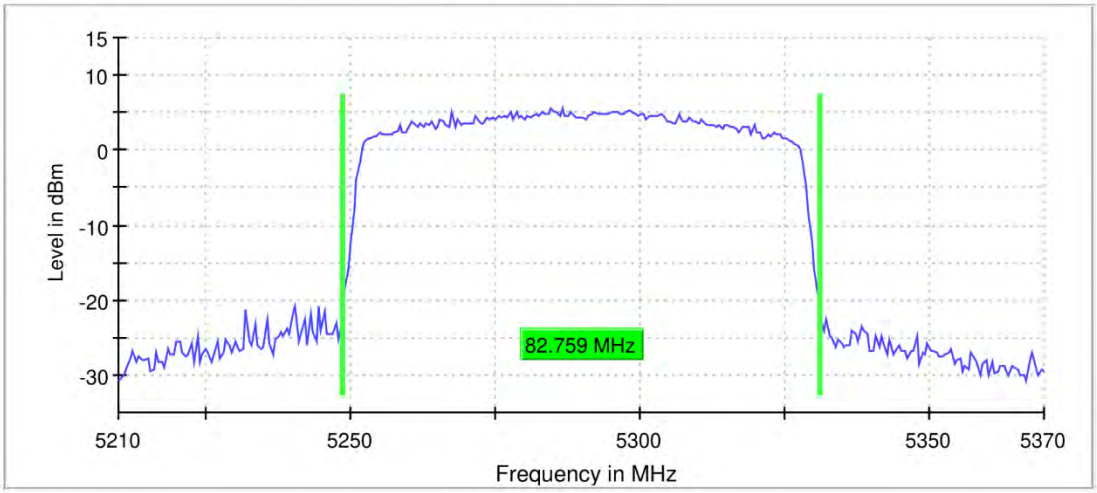
11N40 _ANT6_5710



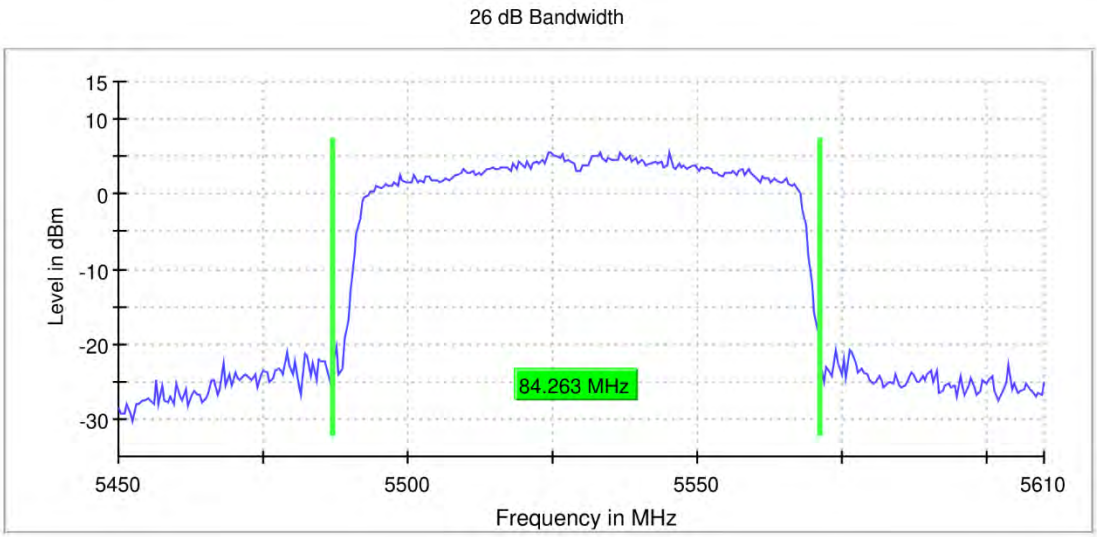
11AC80 _ANT6_5210



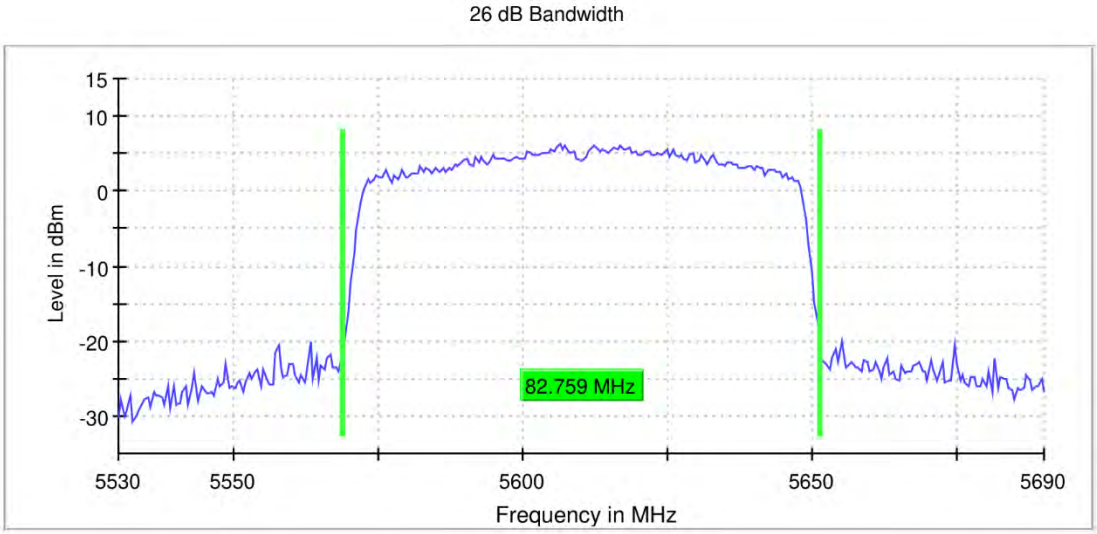
11AC80 _ANT6_5290



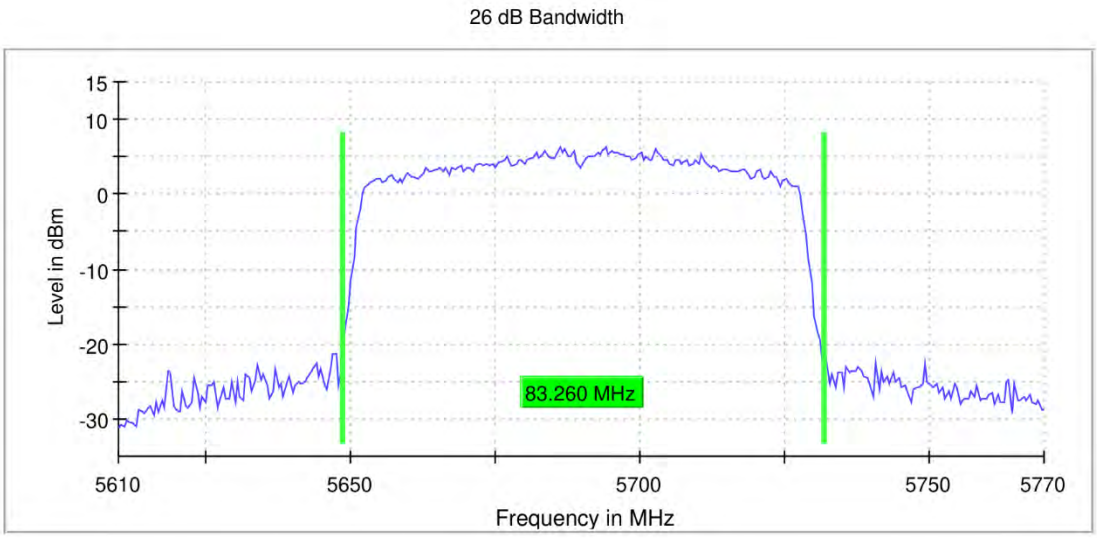
11AC80 _ANT6_5530



11AC80 _ANT6_5610



11AC80 _ANT6_5690



20M

RBW300 KHz

VBW 1 MHz

40M

RBW500 KHz

VBW 2 MHz

80M

RBW 1.000 MHz

VBW 3.000 MHz

OCCUPIED CHANNEL BANDWIDTH

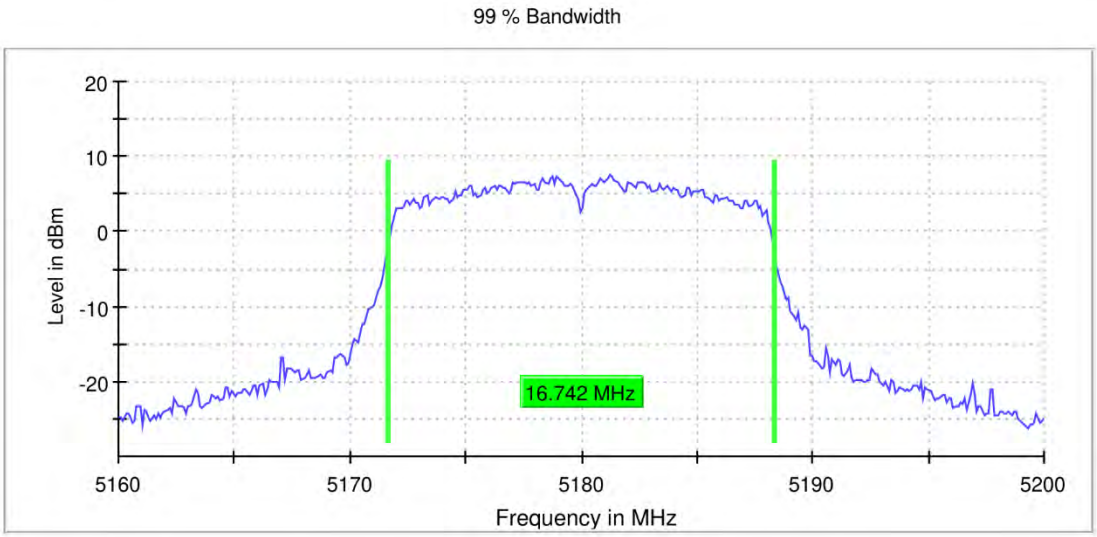
TEST RESULT

TestMode	Antenna	Frequency [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	ANT6	5180	16.742	5171.629	5188.371	---	---
	ANT6	5200	16.642	5191.629	5208.271	---	---
	ANT6	5240	16.742	5231.629	5248.371	---	---
	ANT6	5260	16.642	5251.629	5268.271	---	---
	ANT6	5300	16.742	5291.629	5308.371	---	---
	ANT6	5320	16.642	5311.629	5328.271	---	---
	ANT6	5500	16.742	5491.629	5508.371	---	---
	ANT6	5580	16.742	5571.629	5588.371	---	---
	ANT6	5700	16.742	5691.629	5708.371	---	---
	ANT6	5720	16.842	5711.529	5728.371	---	---
	ANT6	5745	16.742	5736.629	5753.371	---	---
	ANT6	5785	16.642	5776.629	5793.271	---	---
	ANT6	5825	16.742	5816.629	5833.371	---	---
11N20SISO	ANT6	5180	17.744	5171.128	5188.872	---	---
	ANT6	5200	17.744	5191.128	5208.872	---	---
	ANT6	5240	17.744	5231.128	5248.872	---	---
	ANT6	5260	17.744	5251.128	5268.872	---	---
	ANT6	5300	17.744	5291.128	5308.872	---	---
	ANT6	5320	17.744	5311.128	5328.872	---	---
	ANT6	5500	17.744	5491.128	5508.872	---	---
	ANT6	5580	17.744	5571.128	5588.872	---	---
	ANT6	5700	17.744	5691.128	5708.872	---	---
	ANT6	5720	17.845	5711.028	5728.872	---	---
	ANT6	5745	17.744	5736.128	5753.872	---	---
	ANT6	5785	17.744	5776.128	5793.872	---	---
	ANT6	5825	17.744	5816.128	5833.872	---	---
11N20SISO	ANT6	5190	36.364	5171.818	5208.182	---	---
	ANT6	5230	36.364	5211.818	5248.182	---	---
	ANT6	5270	36.364	5251.818	5288.182	---	---
	ANT6	5310	36.364	5291.818	5328.182	---	---

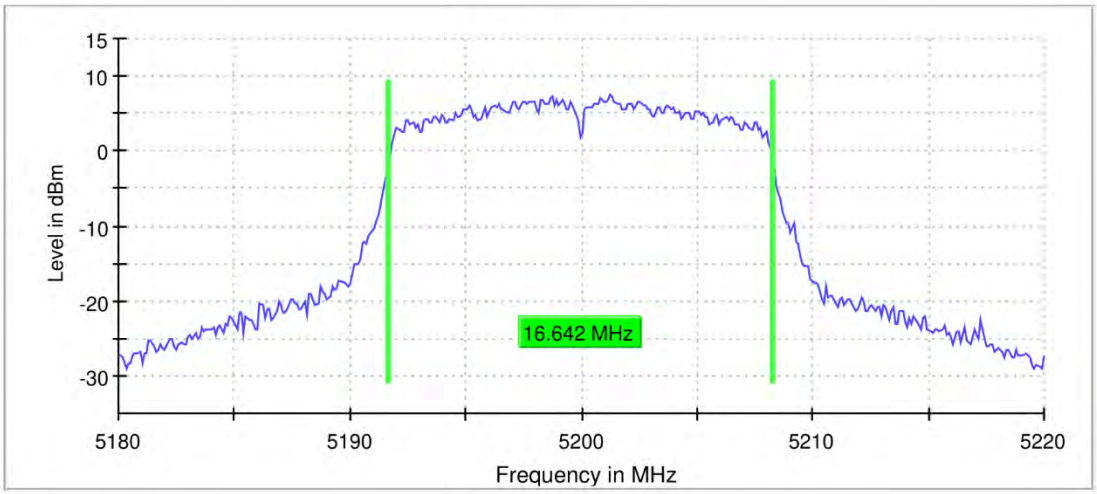
	ANT6	5510	36.364	5491.818	5528.182	---	---
	ANT6	5550	36.364	5531.818	5568.182	---	---
	ANT6	5670	36.364	5651.818	5688.182	---	---
	ANT6	5710	36.614	5691.567	5728.182	---	---
	ANT6	5755	36.364	5736.818	5773.182	---	---
	ANT6	5795	5795	36.614	5776.567	---	---
11AC80SISO	ANT6	5210	5210	75.737	5172.132	---	---
	ANT6	5290	5290	75.737	5252.132	---	---
	ANT6	5530	5530	75.737	5492.132	---	---
	ANT6	5610	5610	75.737	5572.132	---	---
	ANT6	5690	5690	75.737	5652.132	---	---
	ANT6	5775	5775	75.737	5737.132	---	---

TEST GRAPHS

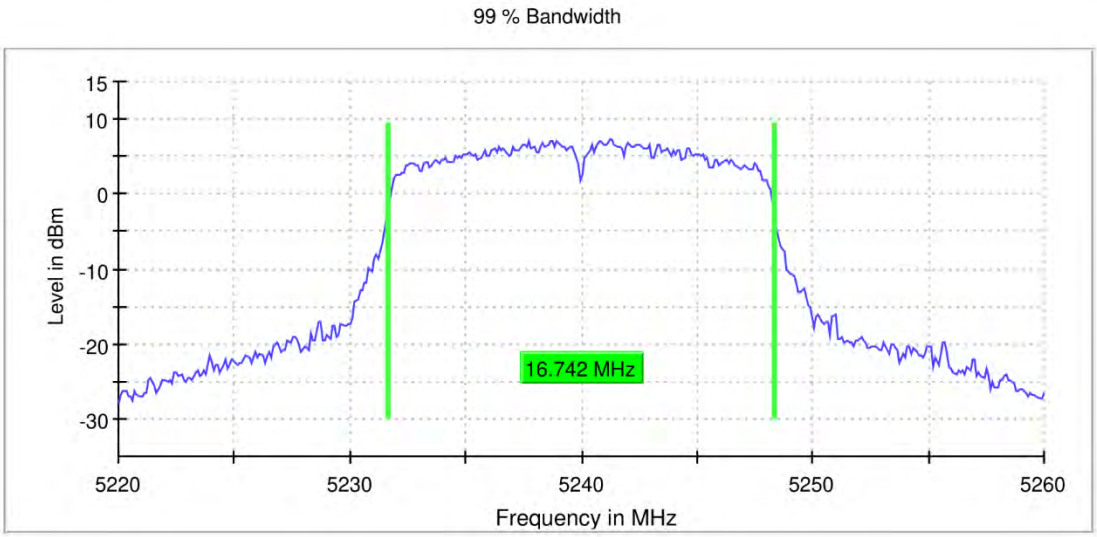
11A_ANT6_5180



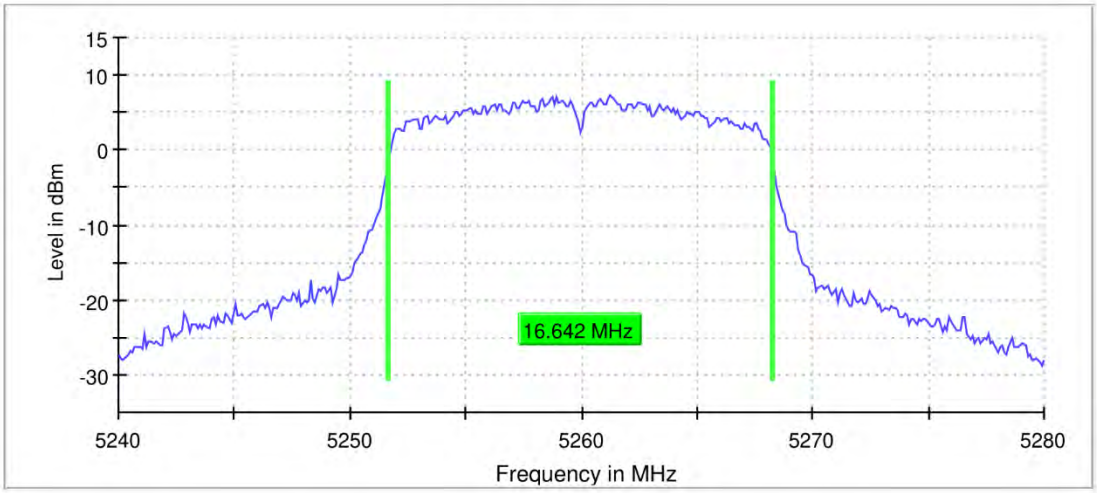
11A _ANT6_5200



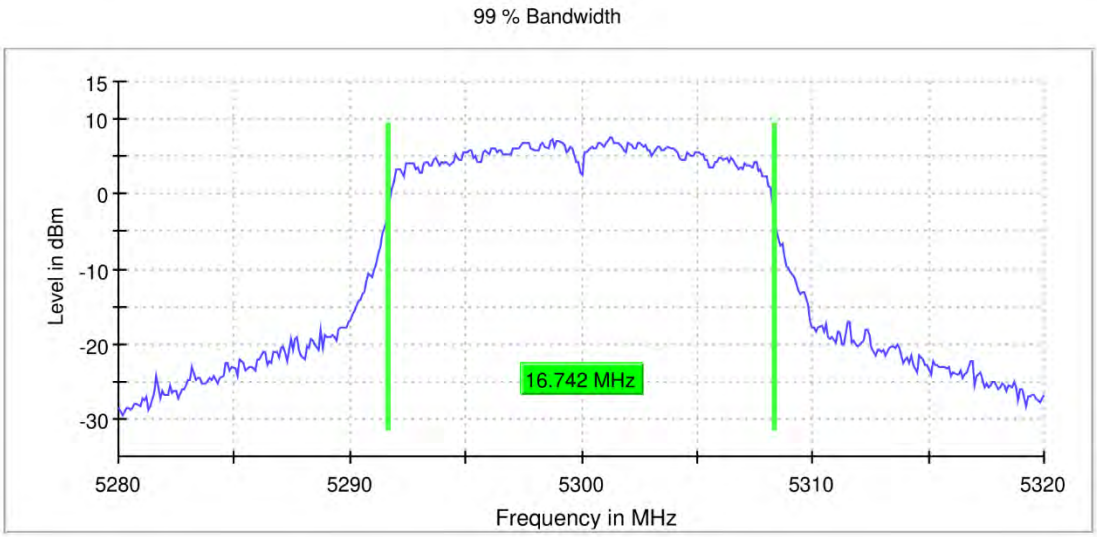
11A _ANT6_5240



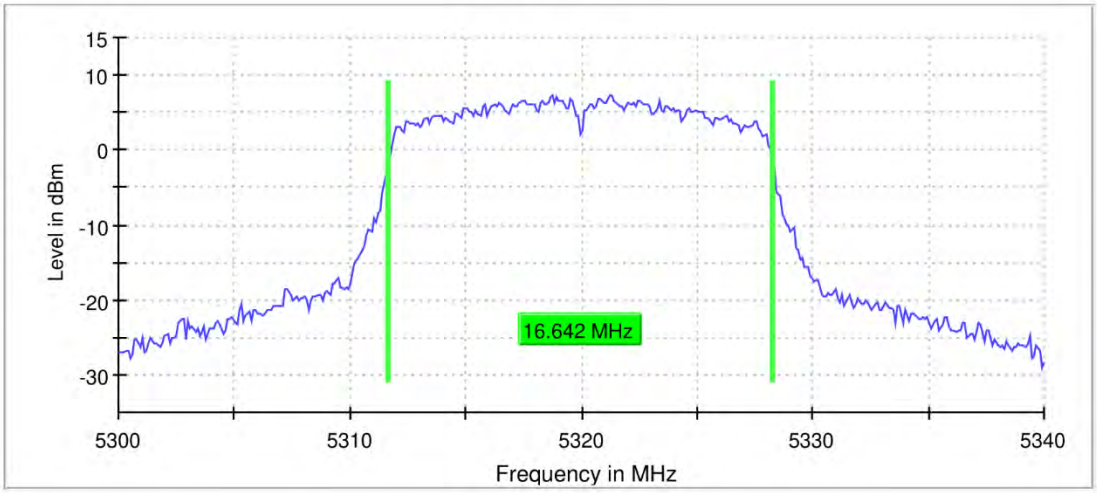
11A _ANT6_5260



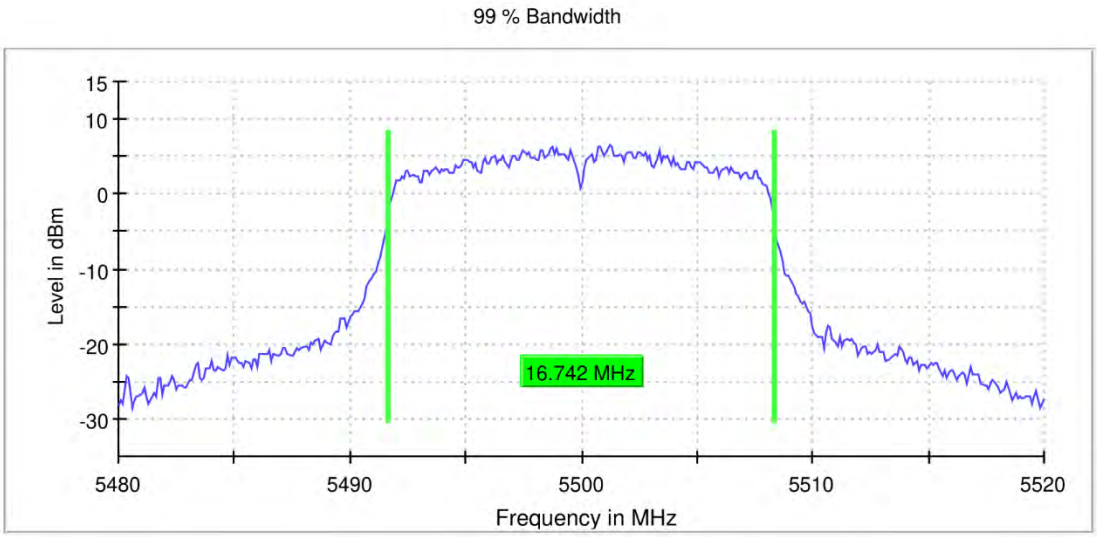
11A _ANT6_5300



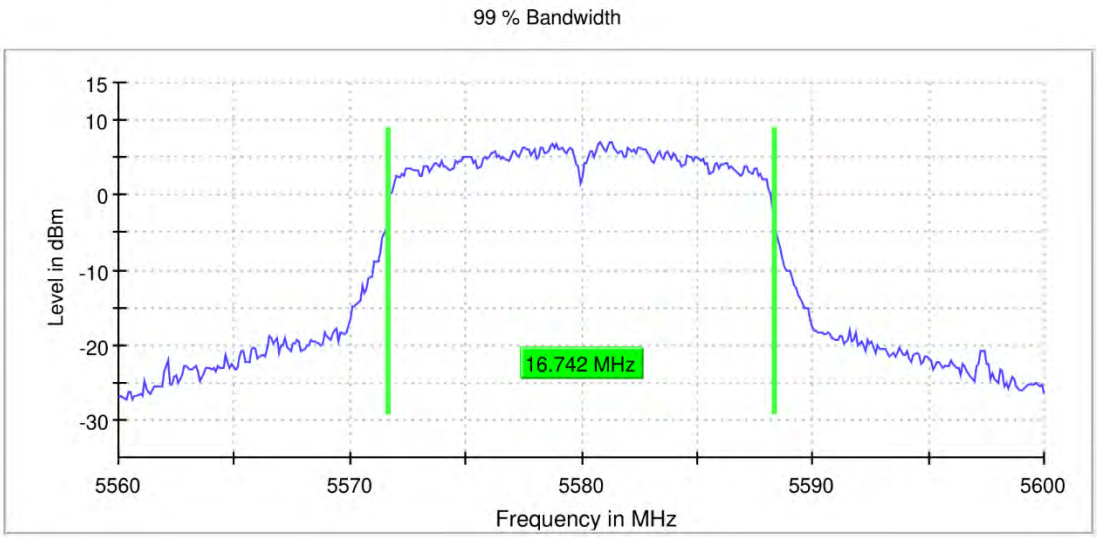
11A _ANT6_5320



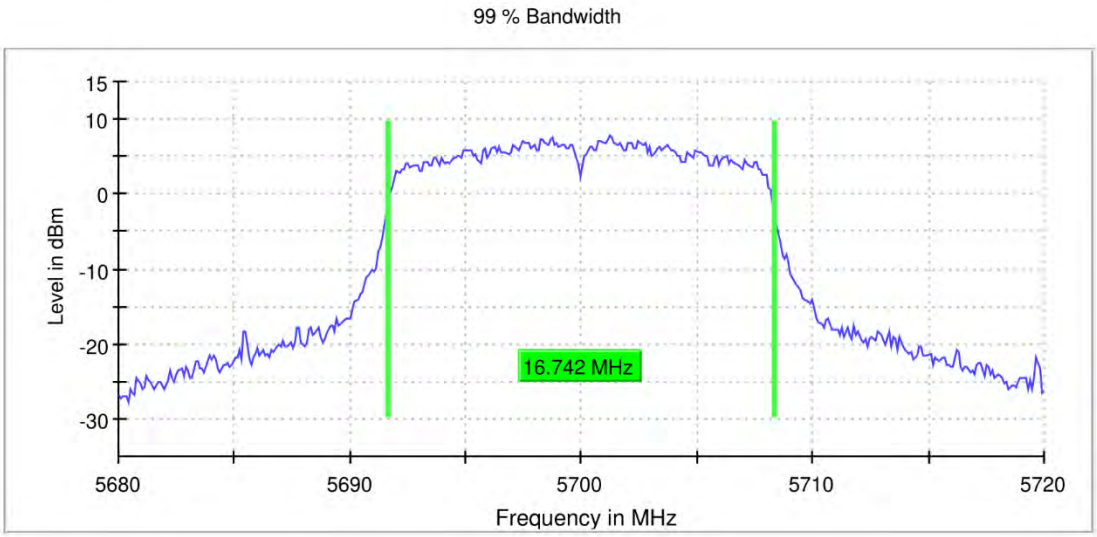
11A _ANT6_5500



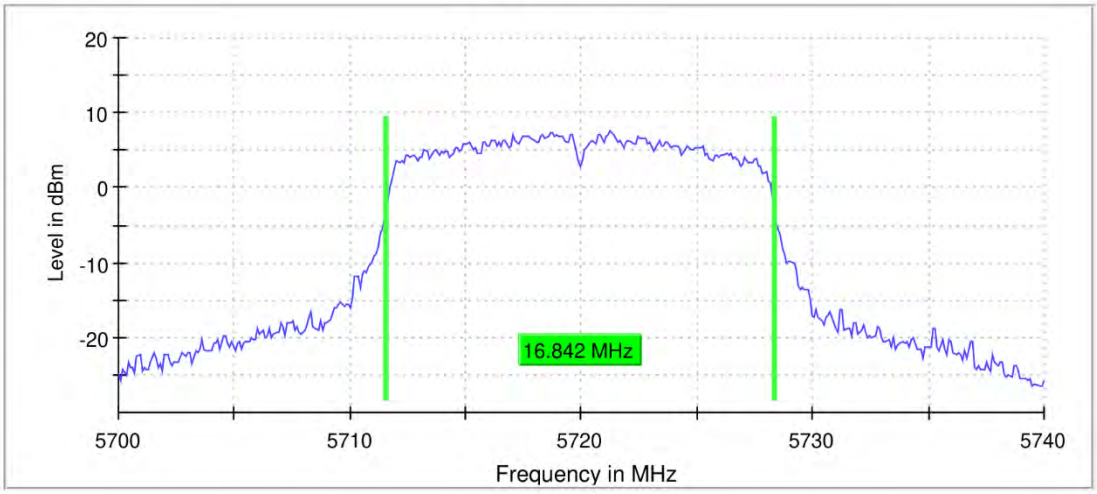
11A _ANT6_5580



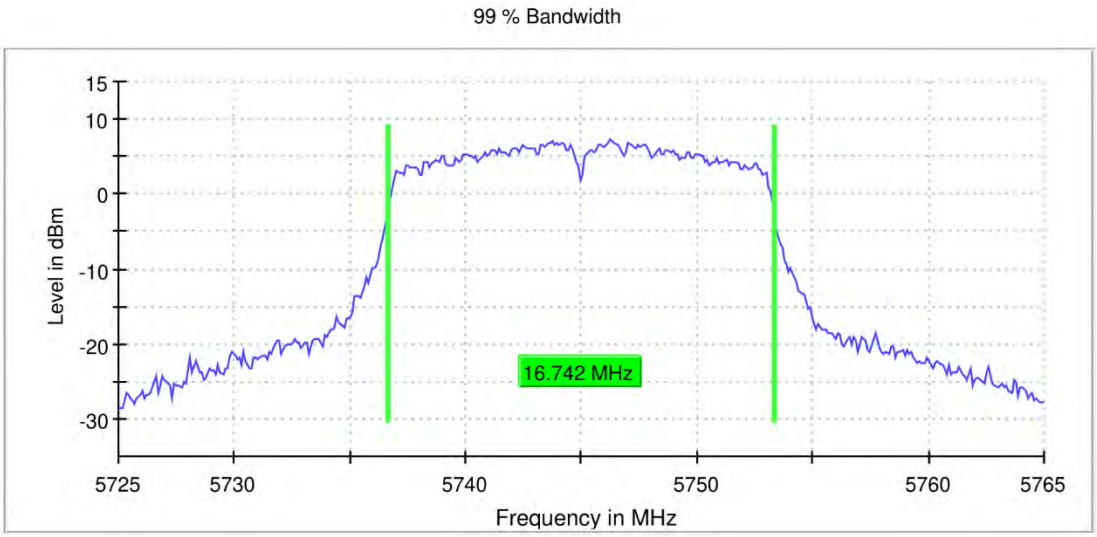
11A _ANT6_5700



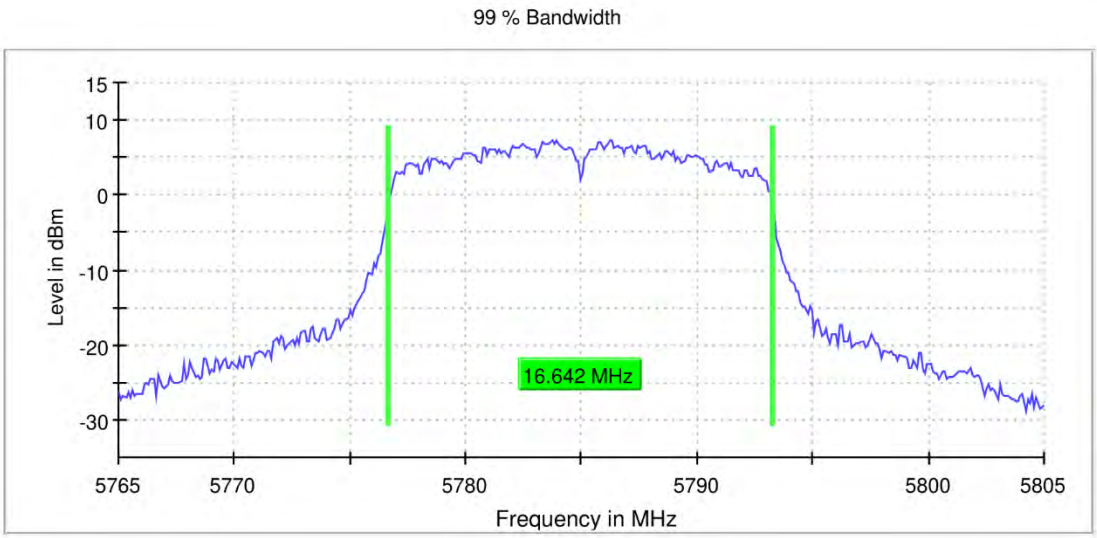
11A _ANT6_5720



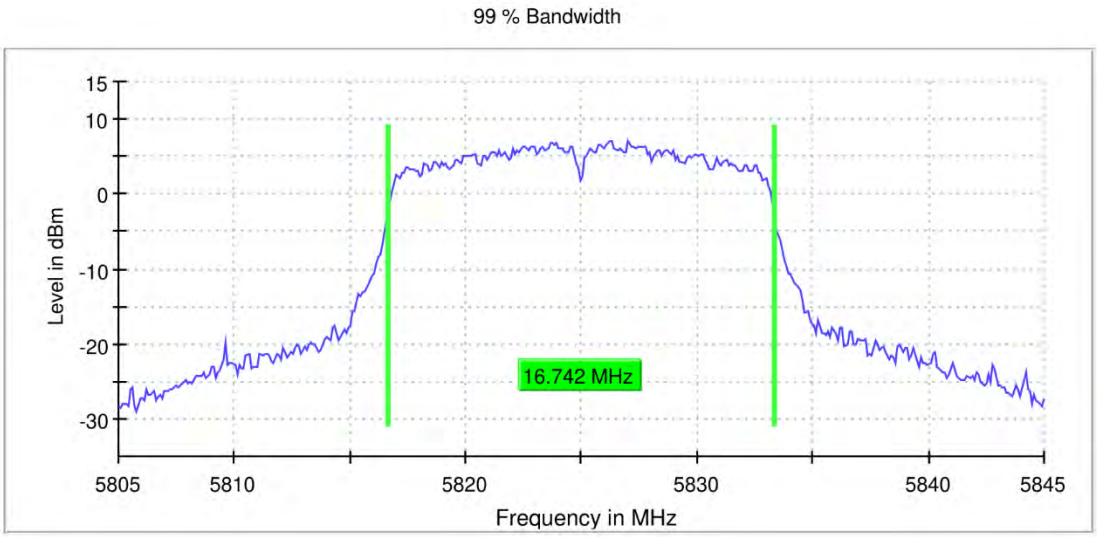
11A _ANT6_5745



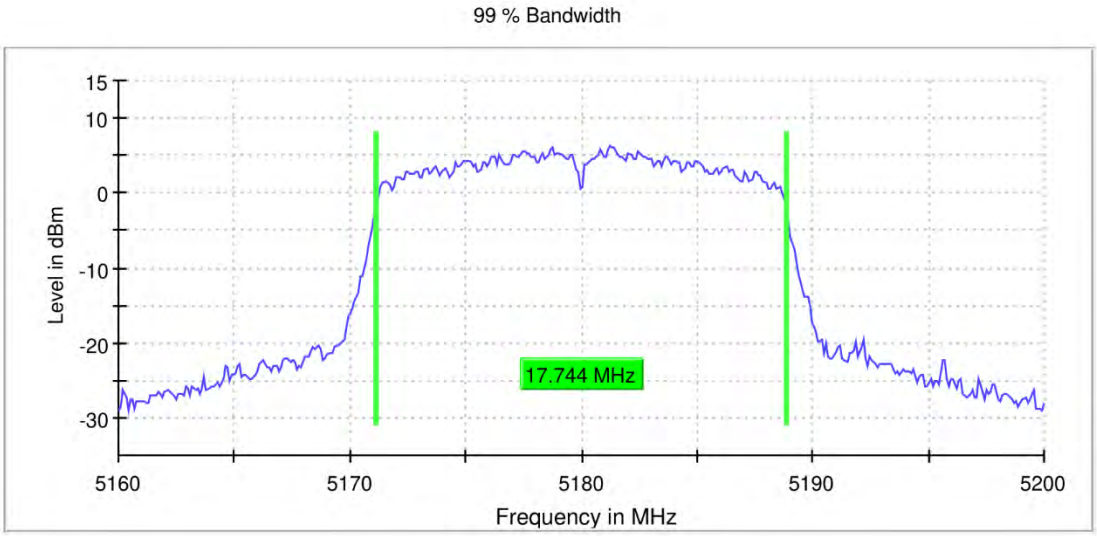
11A _ANT6_5785



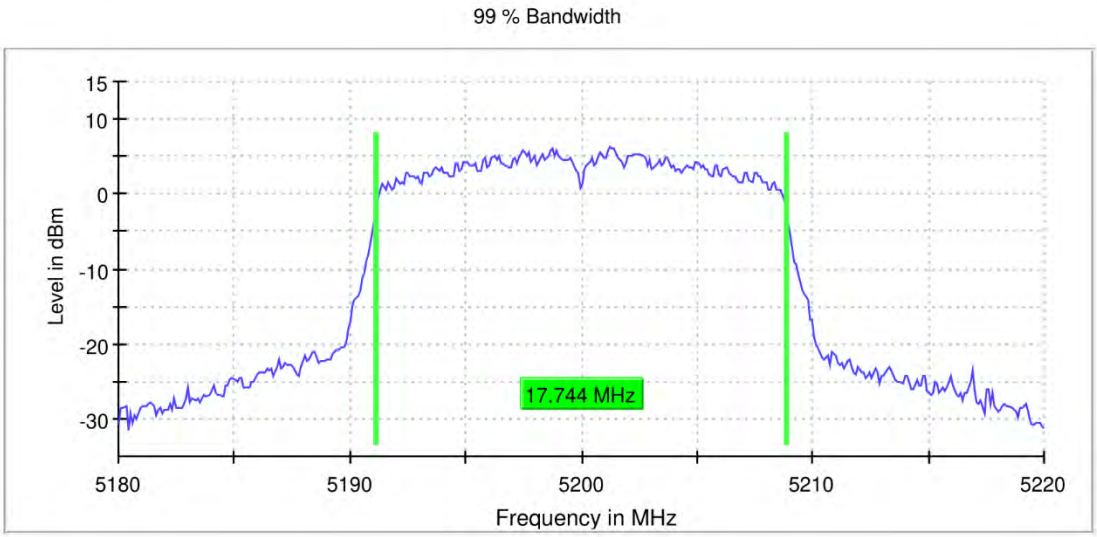
11A_ANT6_5825



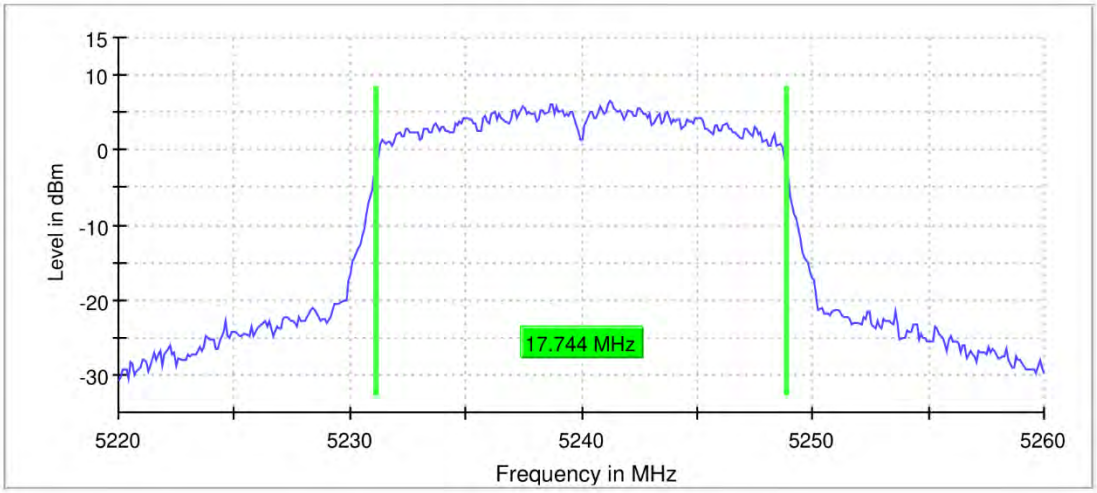
11N20_ANT6_5180



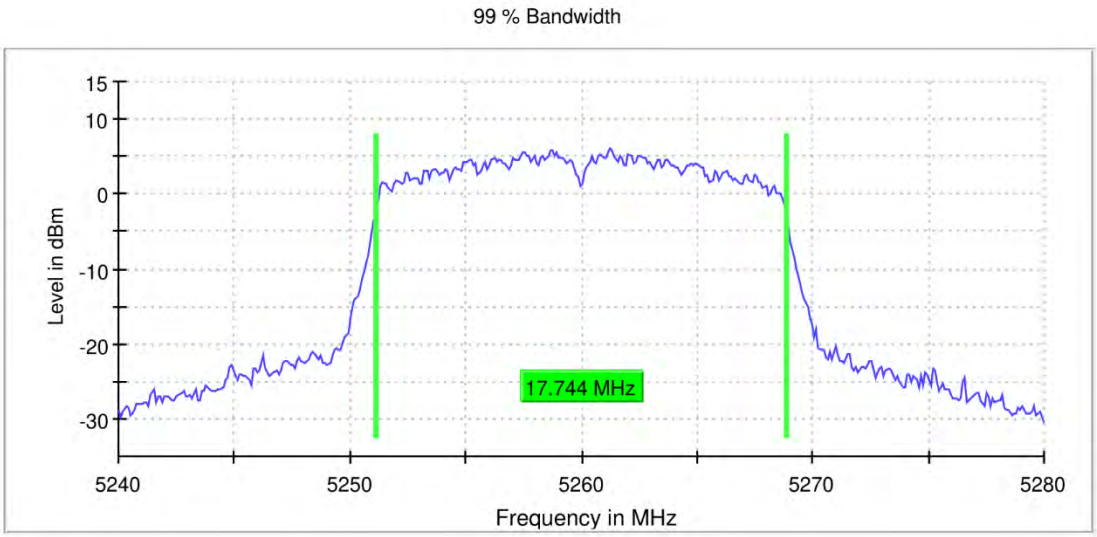
11N20 _ANT6_5200



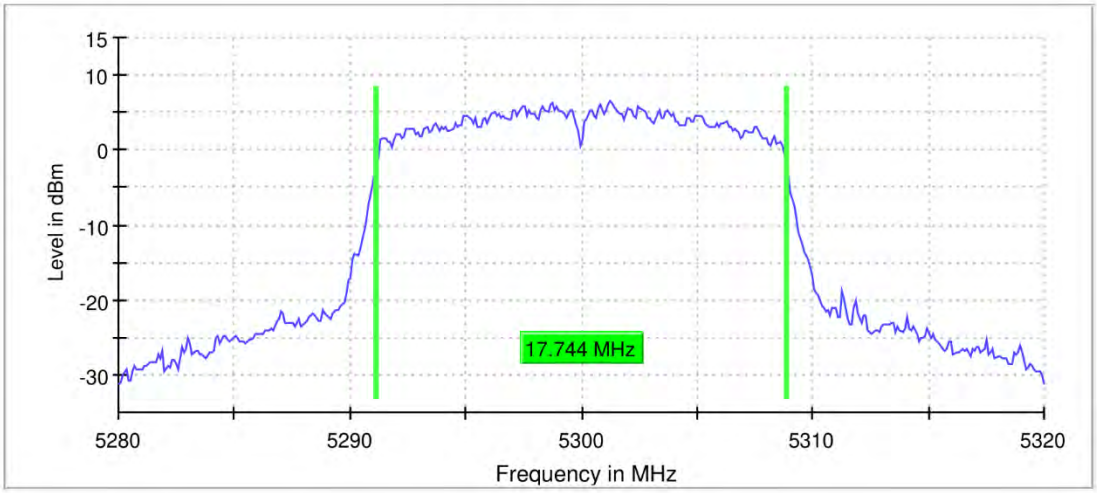
11N20 _ANT6_5240



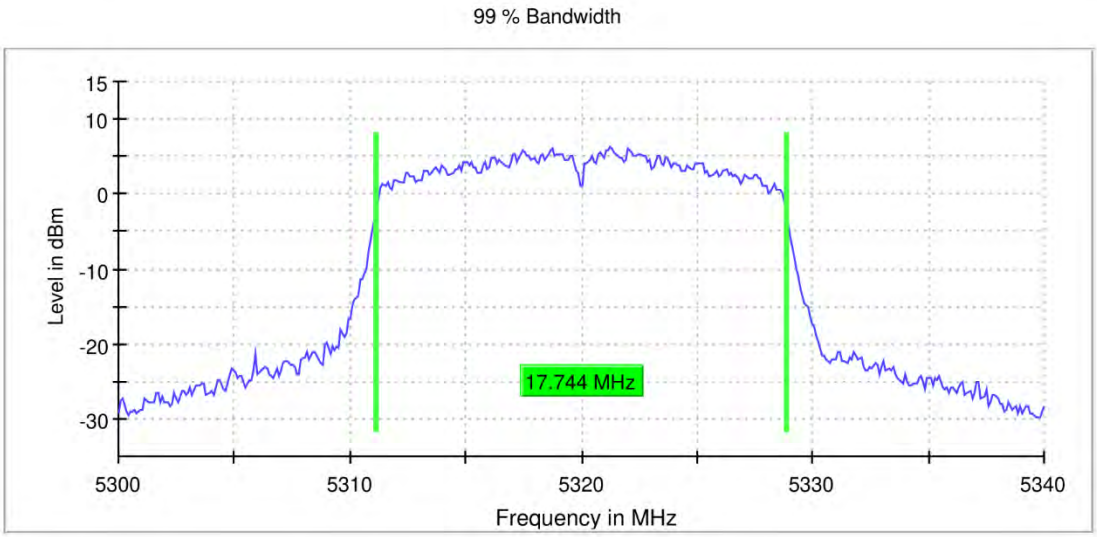
11N20 _ANT6_5260



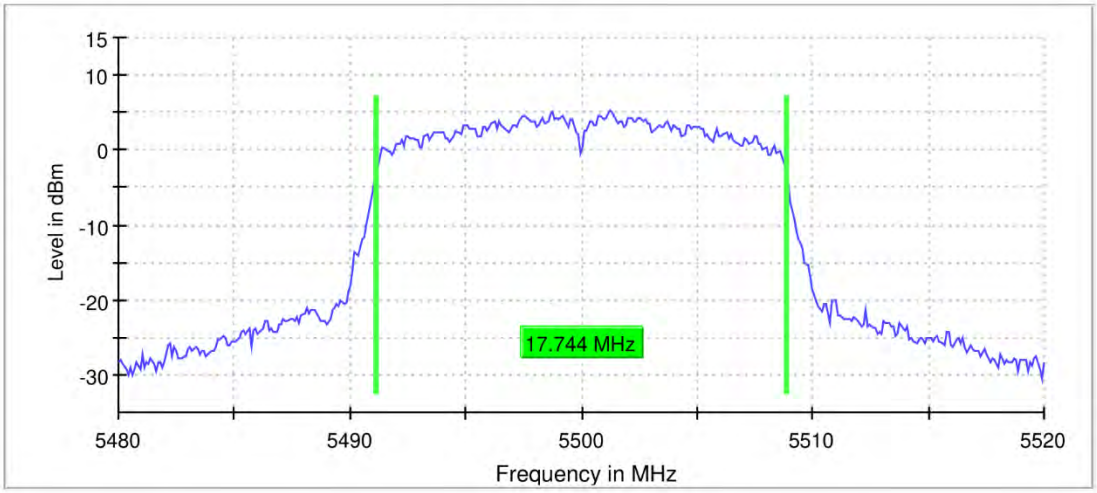
11N20_ANT6_5300



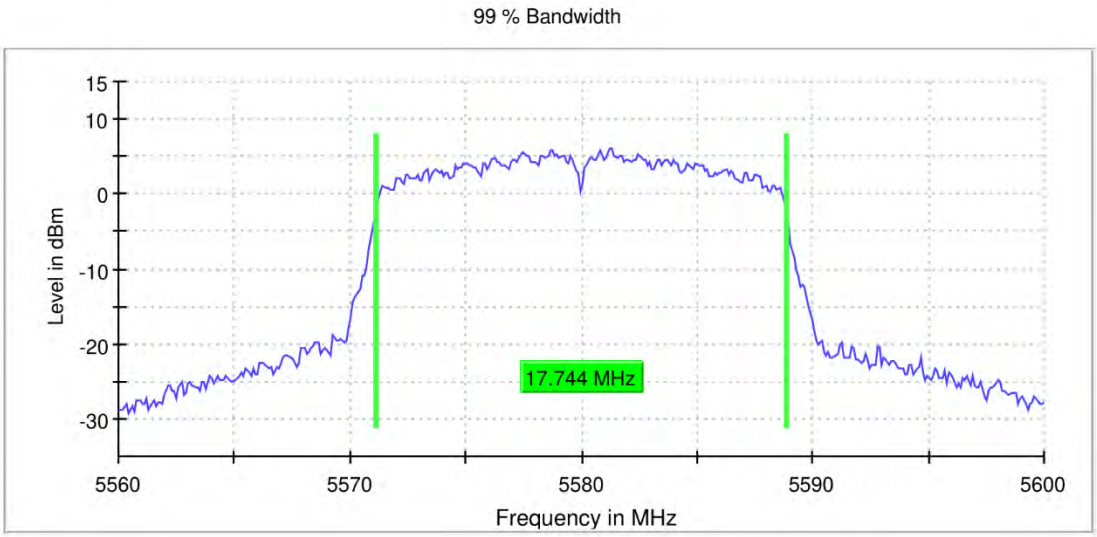
11N20 _ANT6_5320



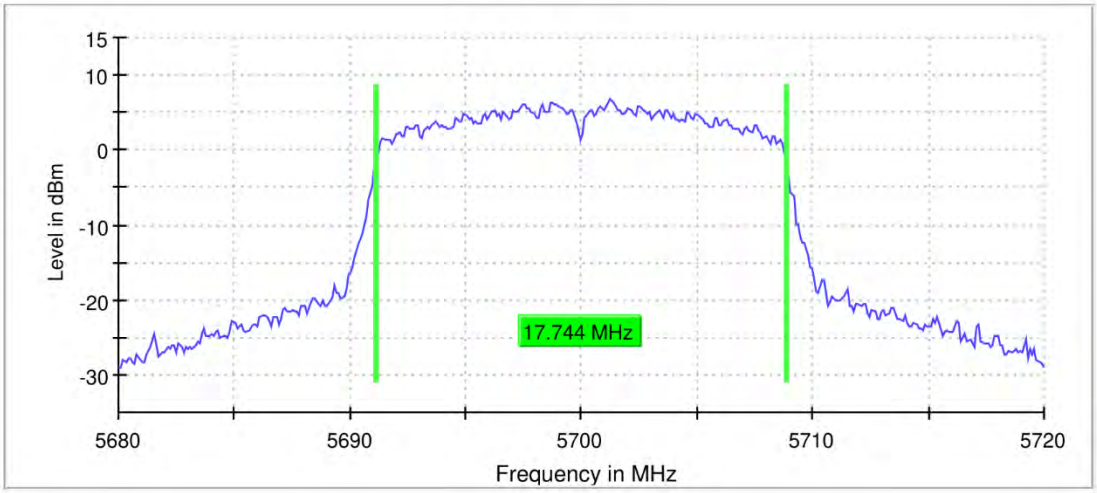
11N20 _ANT6_5500



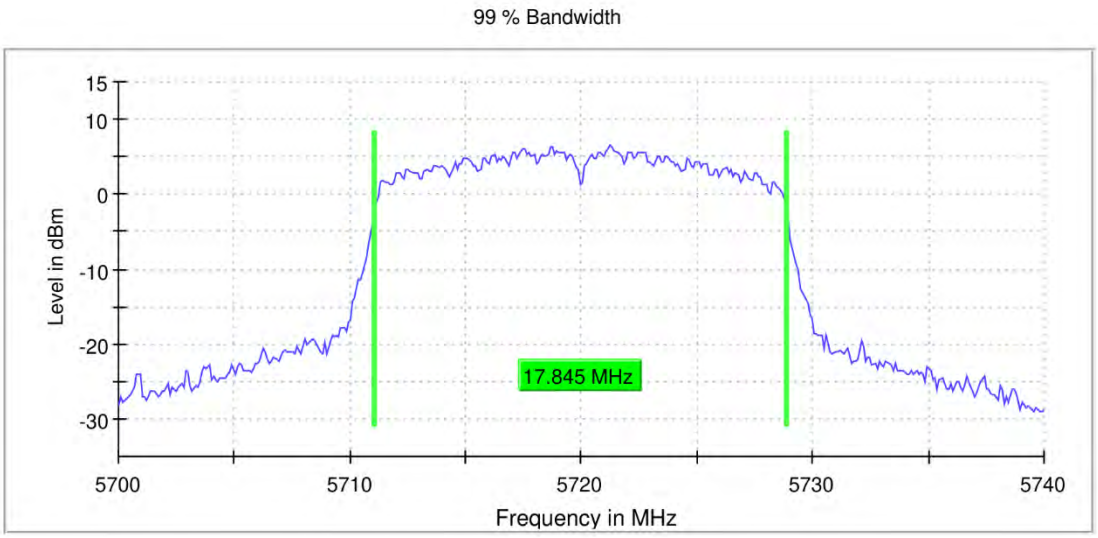
11N20_ANT6_5580



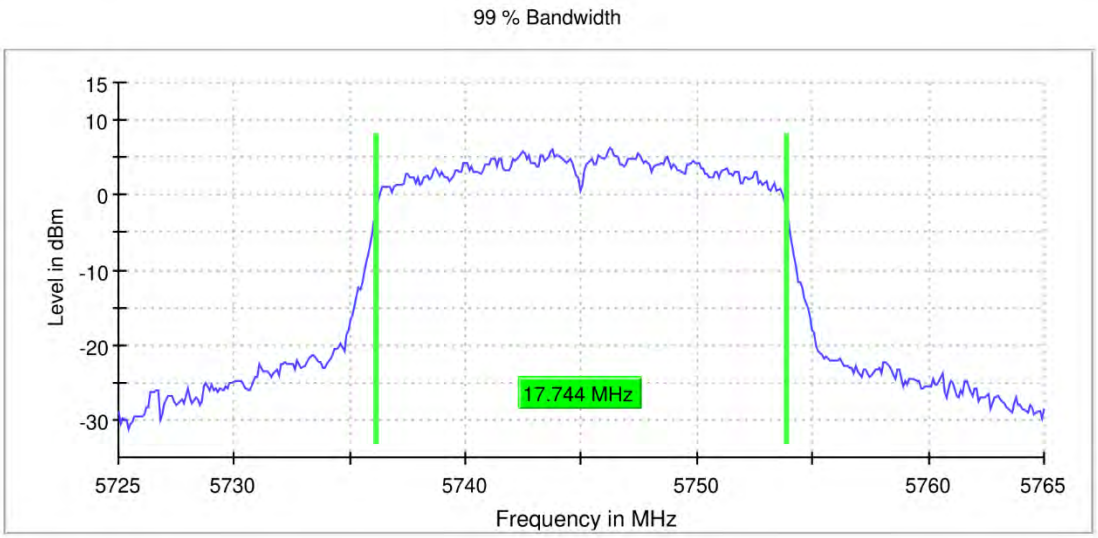
11N20_ANT6_5700



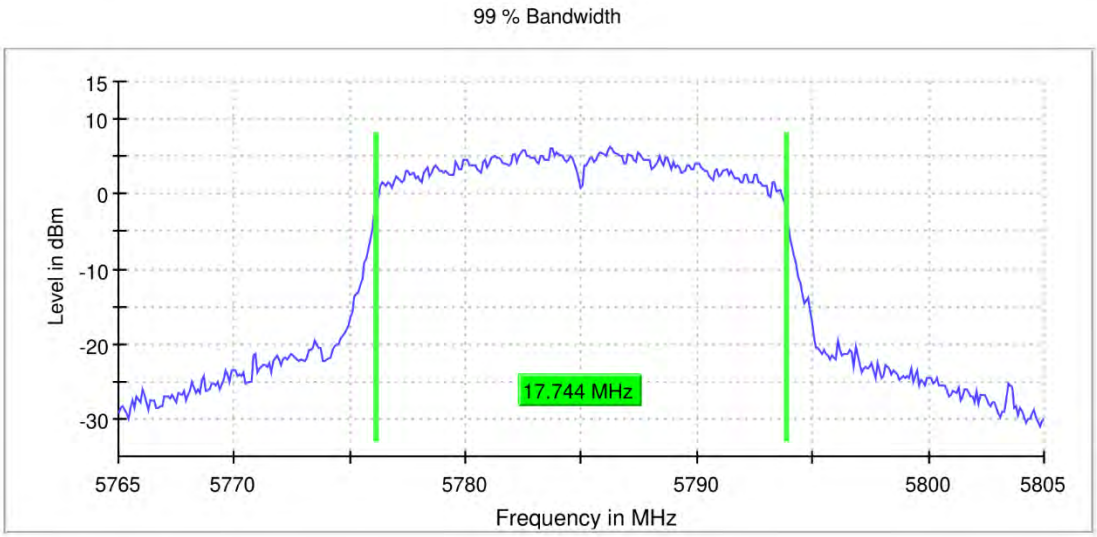
11N20 _ANT6_5720



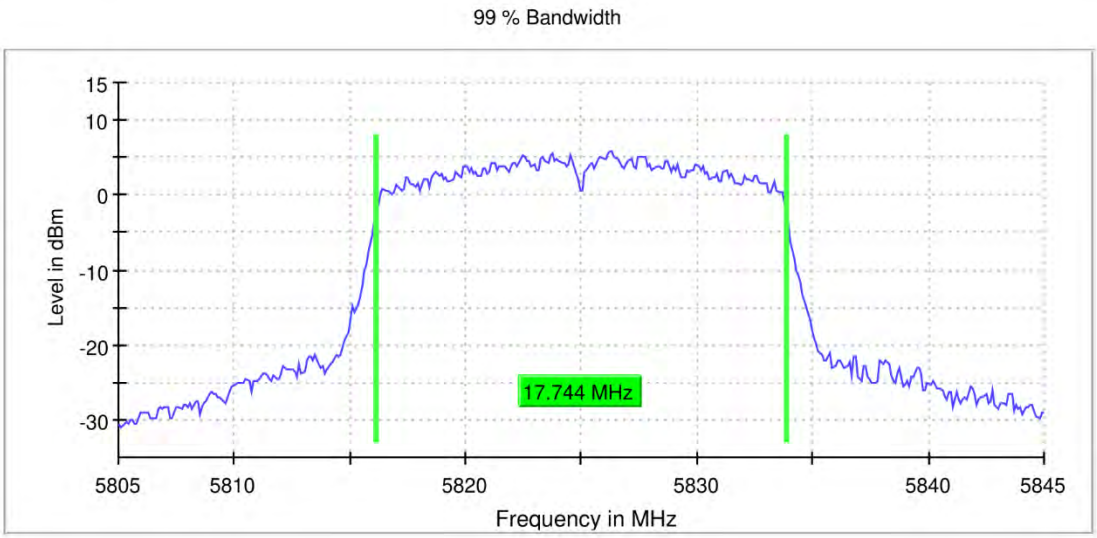
11N20 _ANT6_5745



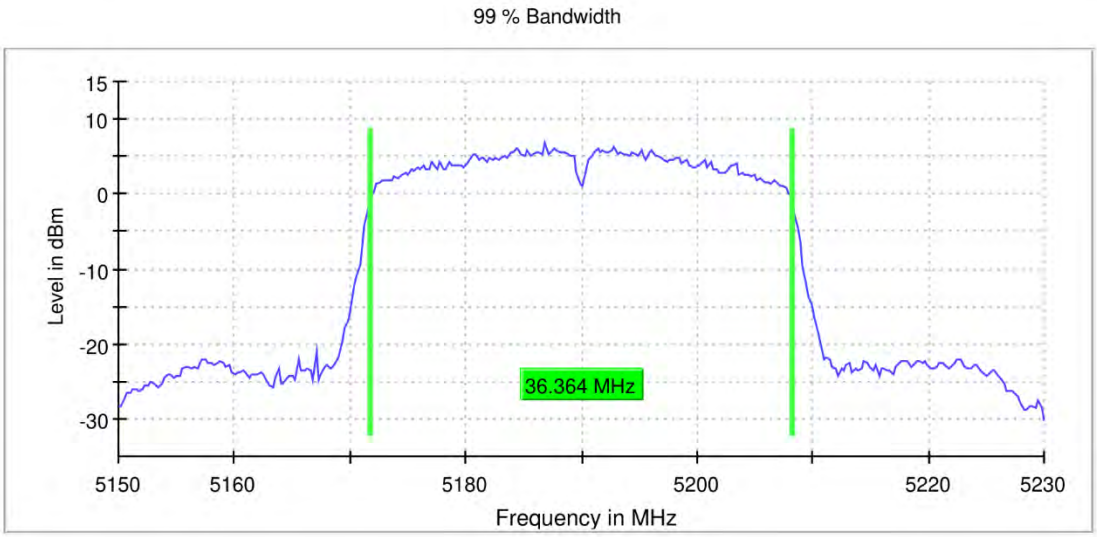
11N20 _ANT6_5785



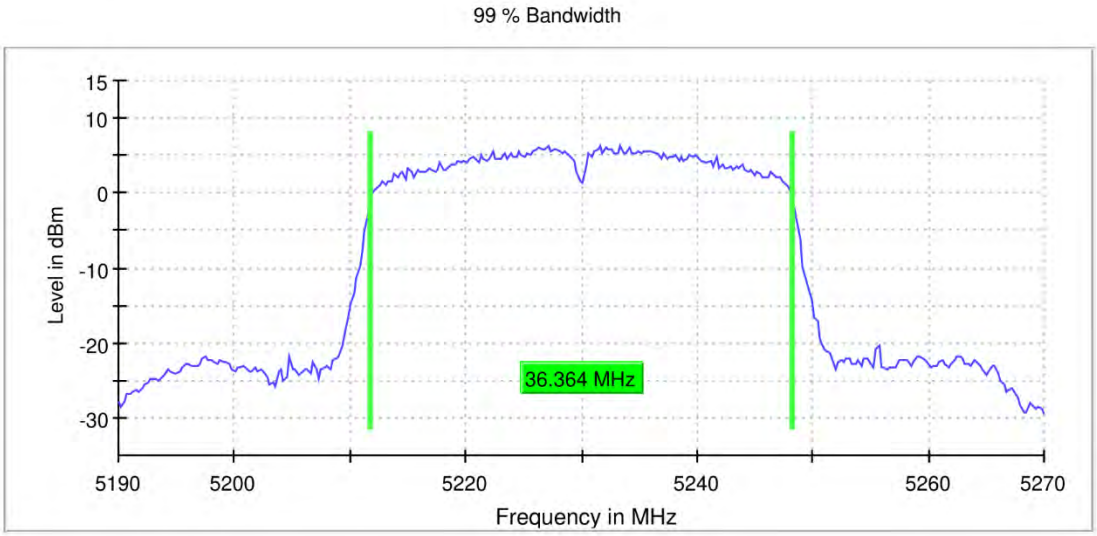
11N20 _ANT6_5825



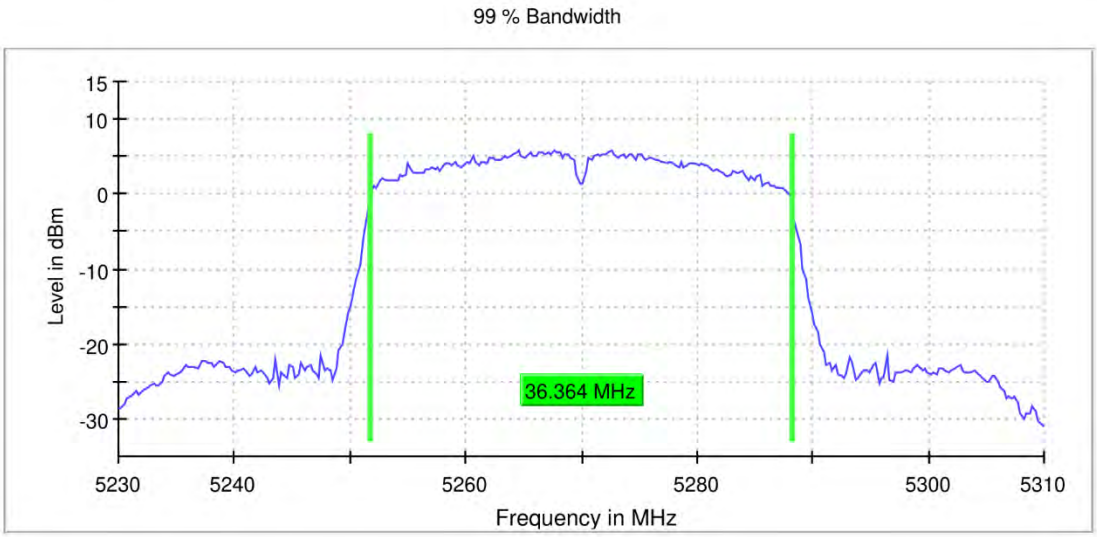
11N40 _ANT6_5190



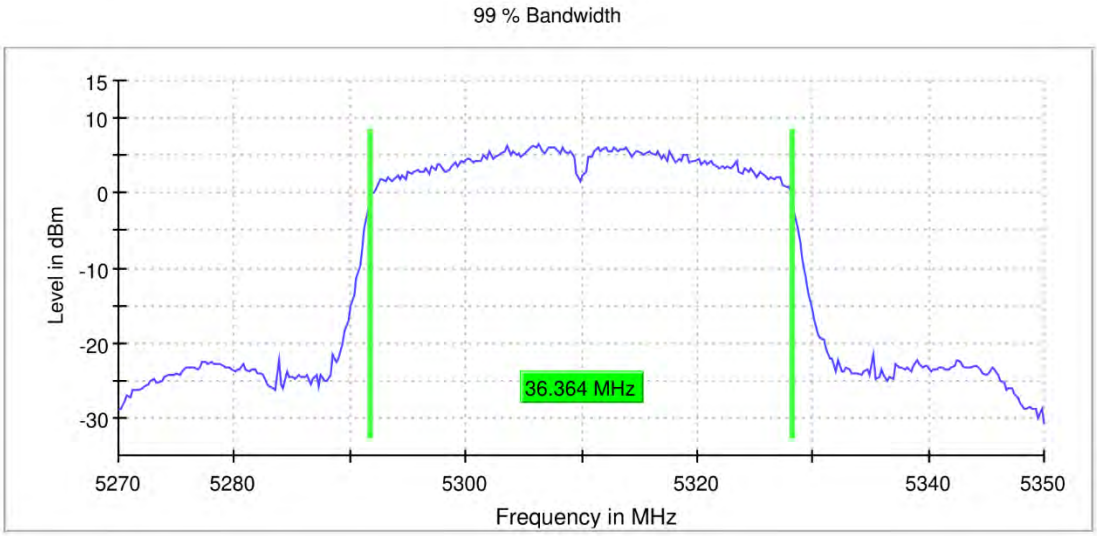
11N40 _ANT6_5230



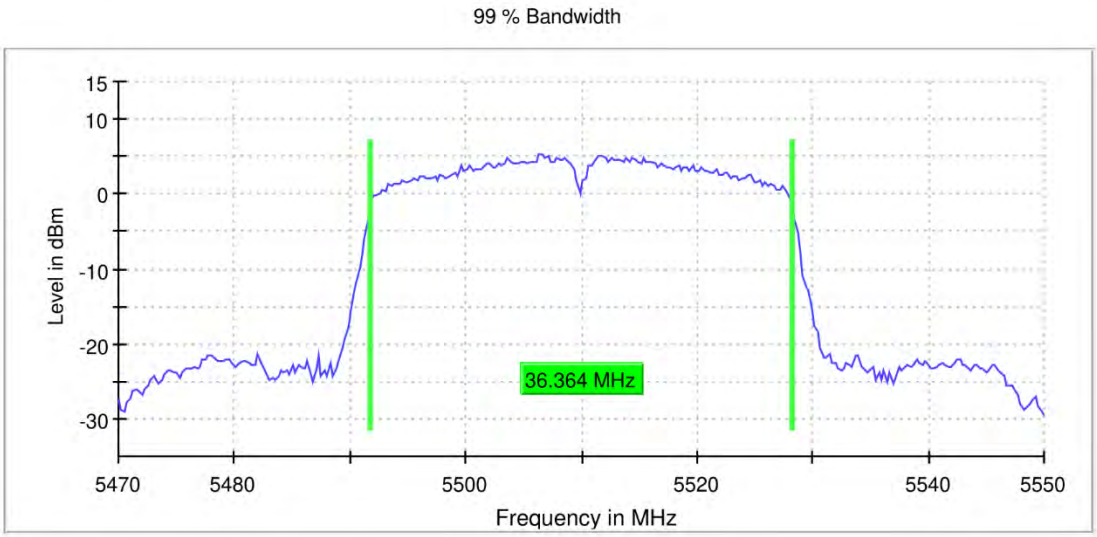
11N40 _ANT6_5270



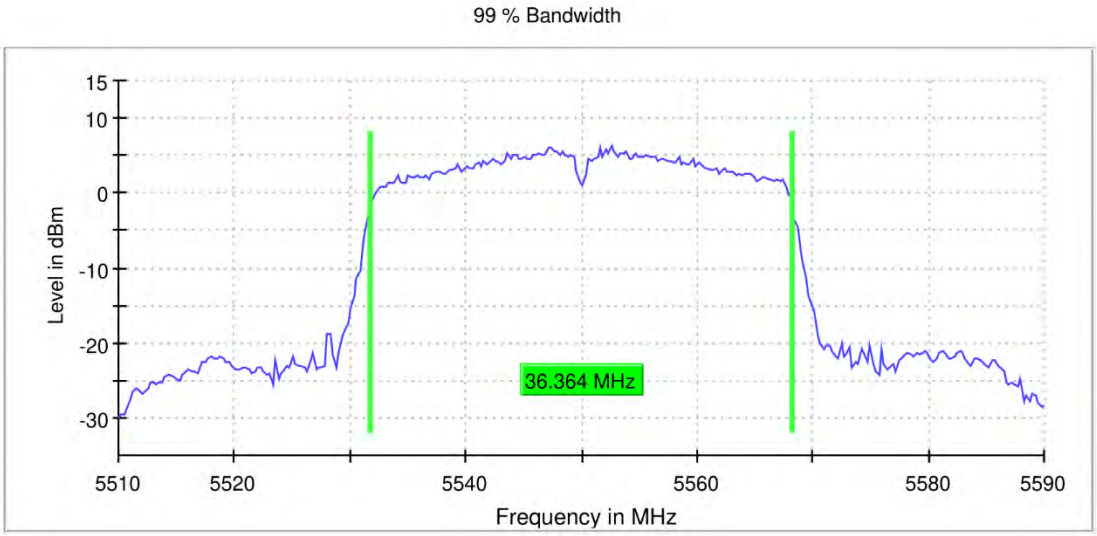
11N40 _ANT6_5310



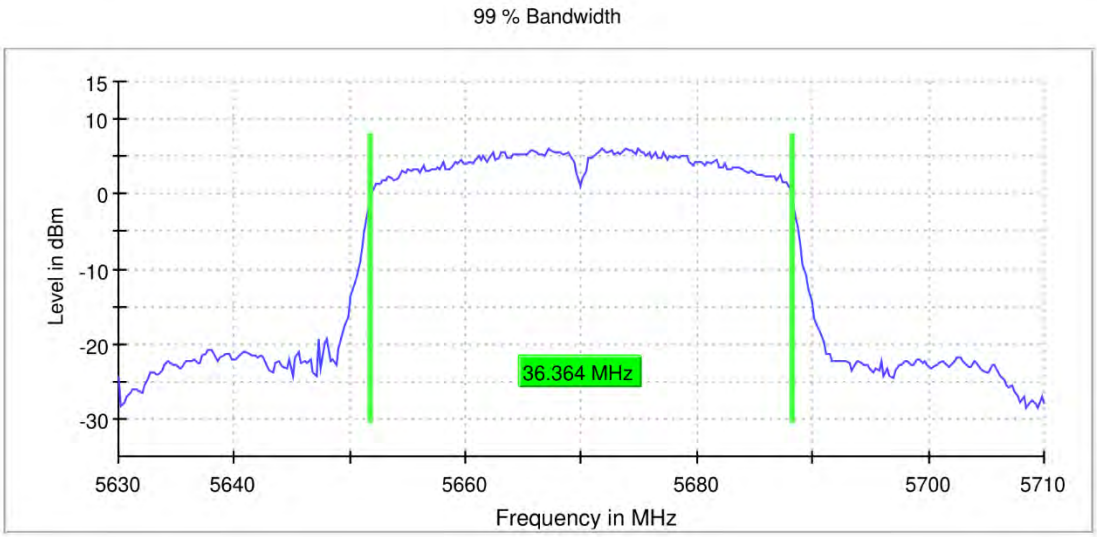
11N40 _ANT6_5510



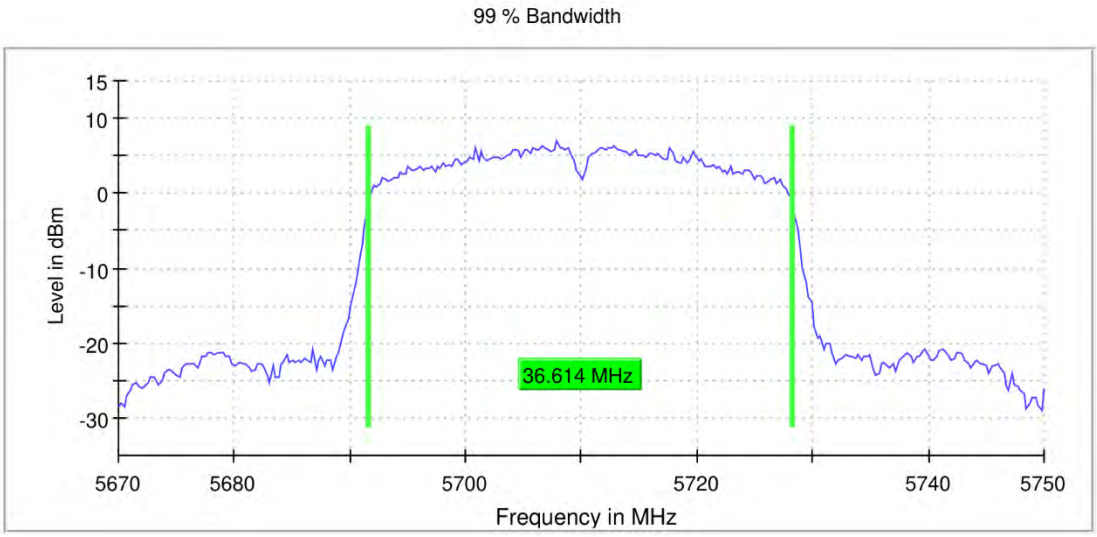
11N40 _ANT6_5550



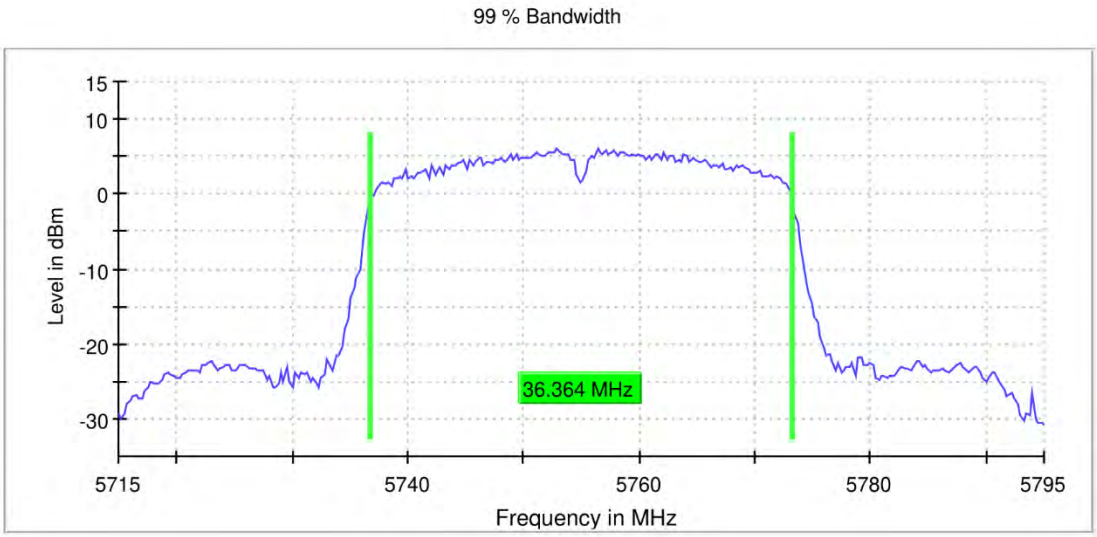
11N40 _ANT6_5670



11N40 _ANT6_5710



11N40 _ANT6_5755



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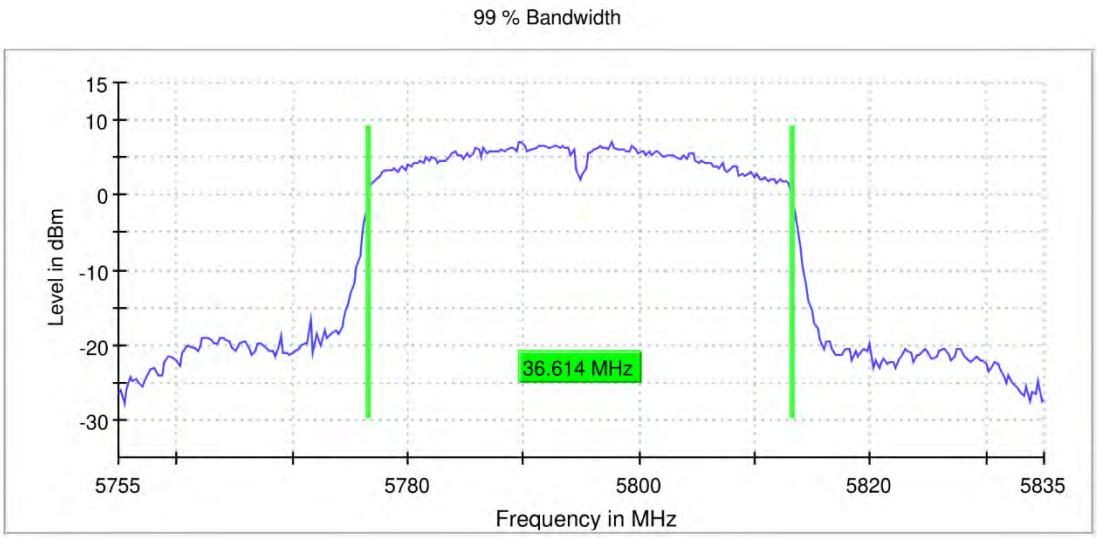
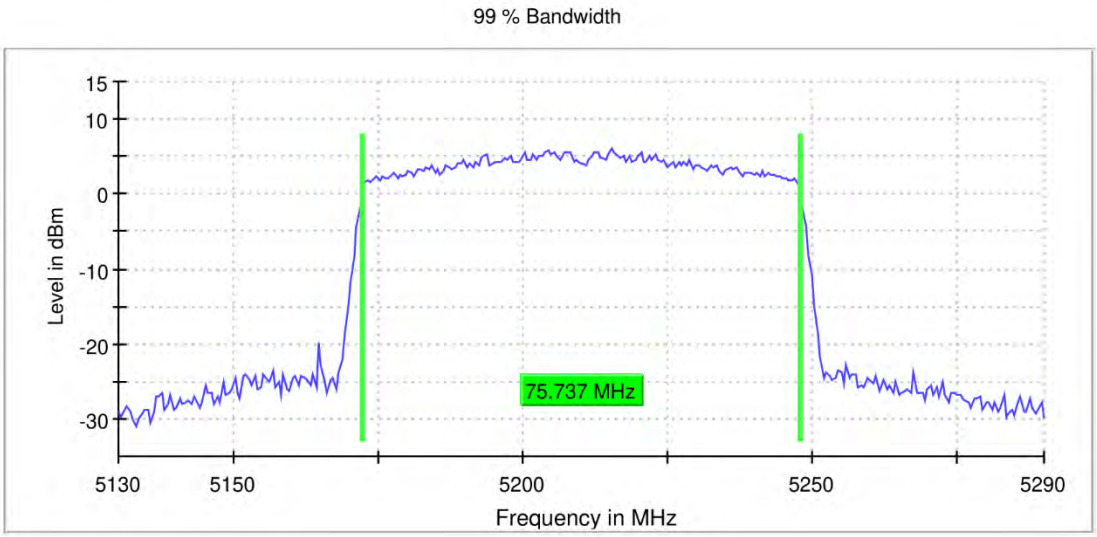
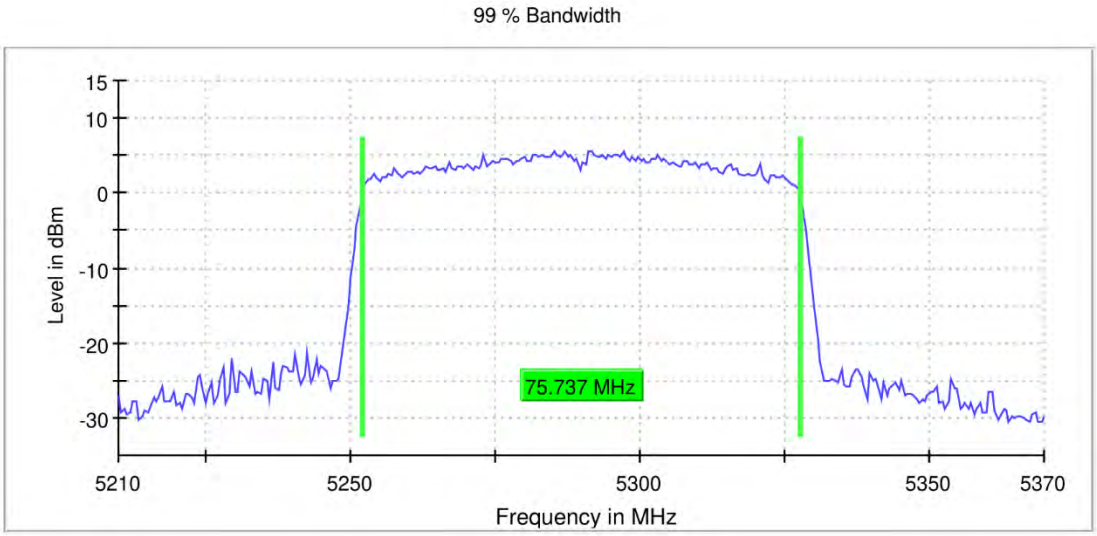


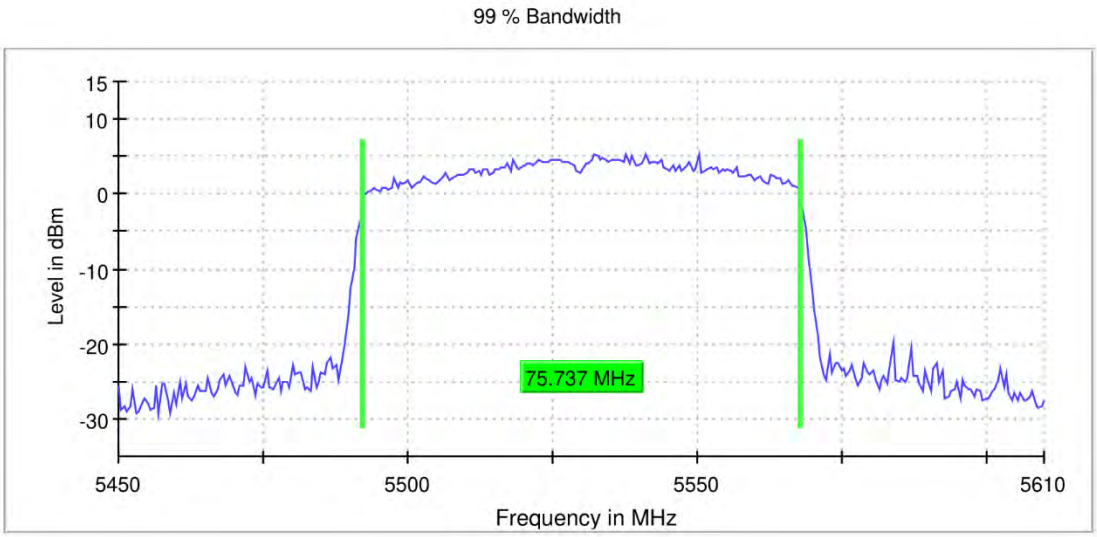
11AC80 _ANT6_5210



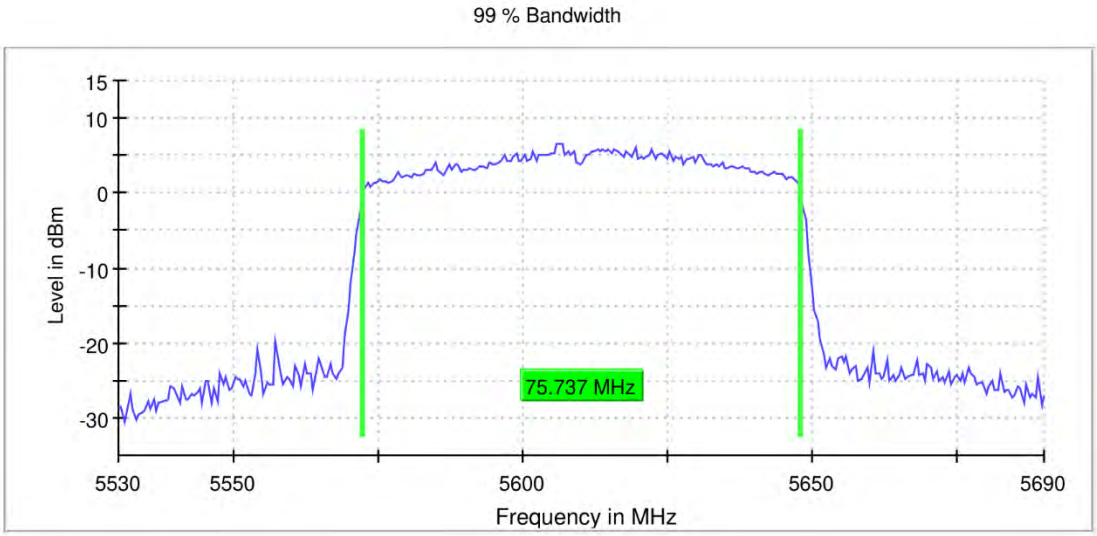
11AC80 _ANT6_5290



11AC80 _ANT6_5530

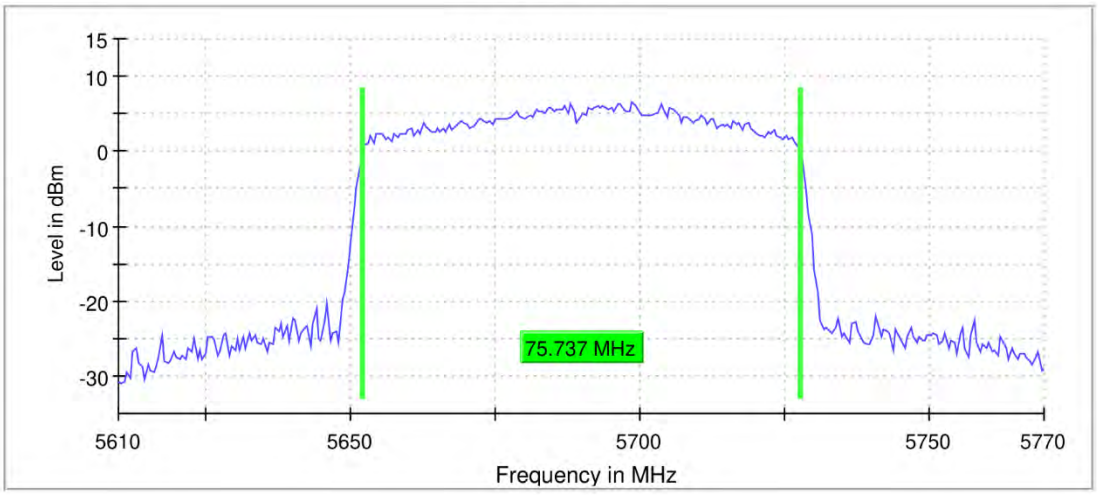


11AC80 _ANT6_5610



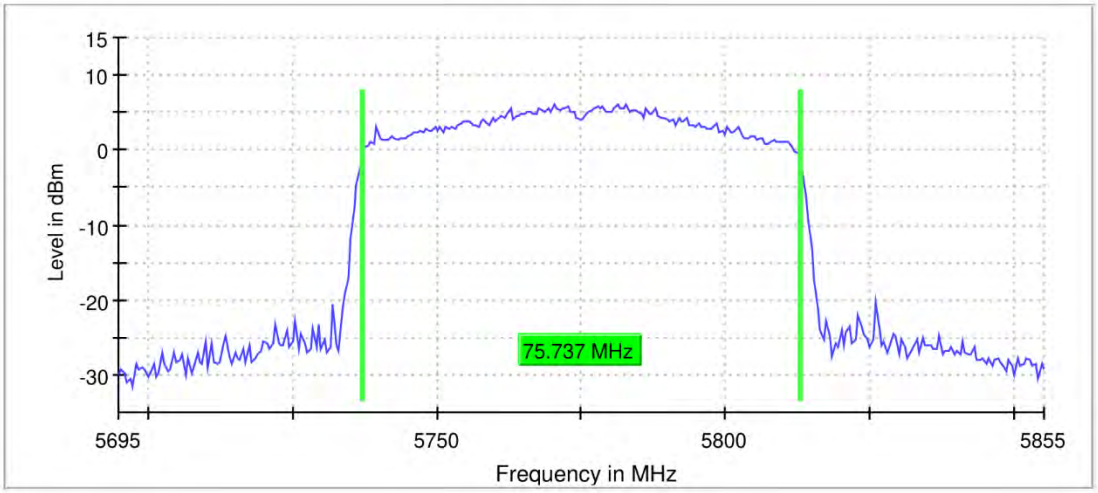
11AC80 _ANT6_5690

99 % Bandwidth



11AC80 _ANT6_5775

99 % Bandwidth



20M

RBW 200.000 kHz

VBW 1.000 MHz

40M

RBW 500.000 kHz

VBW 2.000 MHz

80M

RBW 1.000 MHz

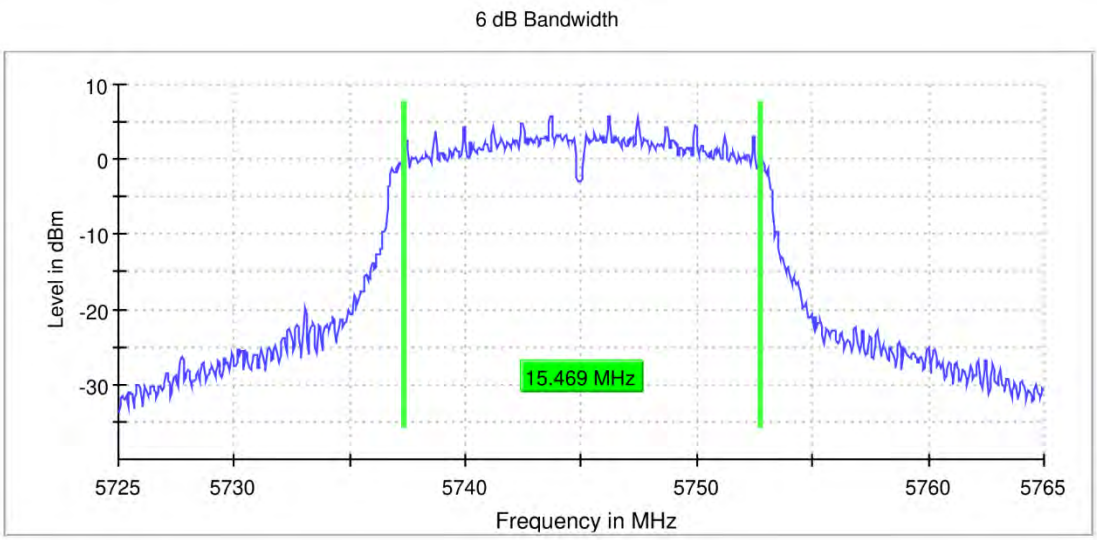
VBW 3.000 MHz

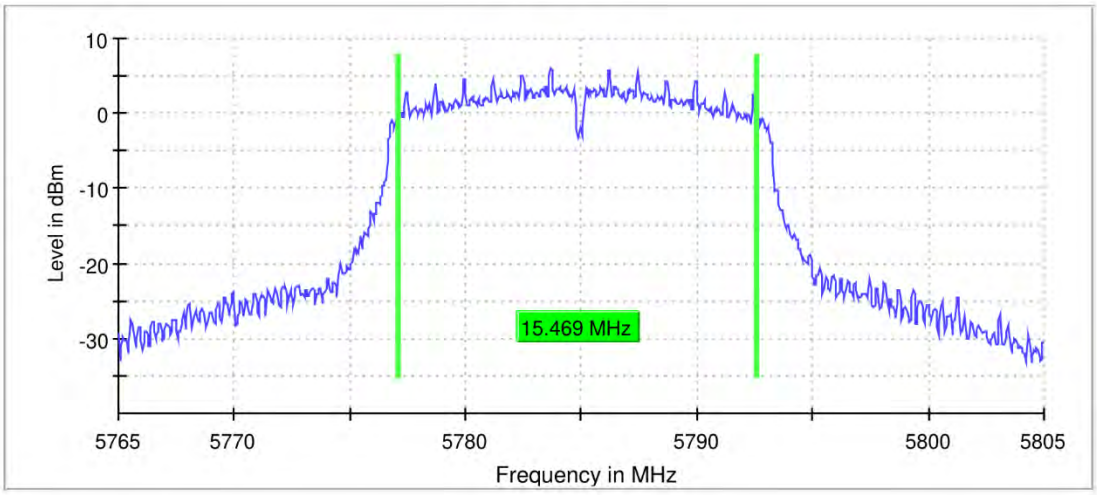
MIN EMISSION BANDWIDTH

TEST RESULT B4

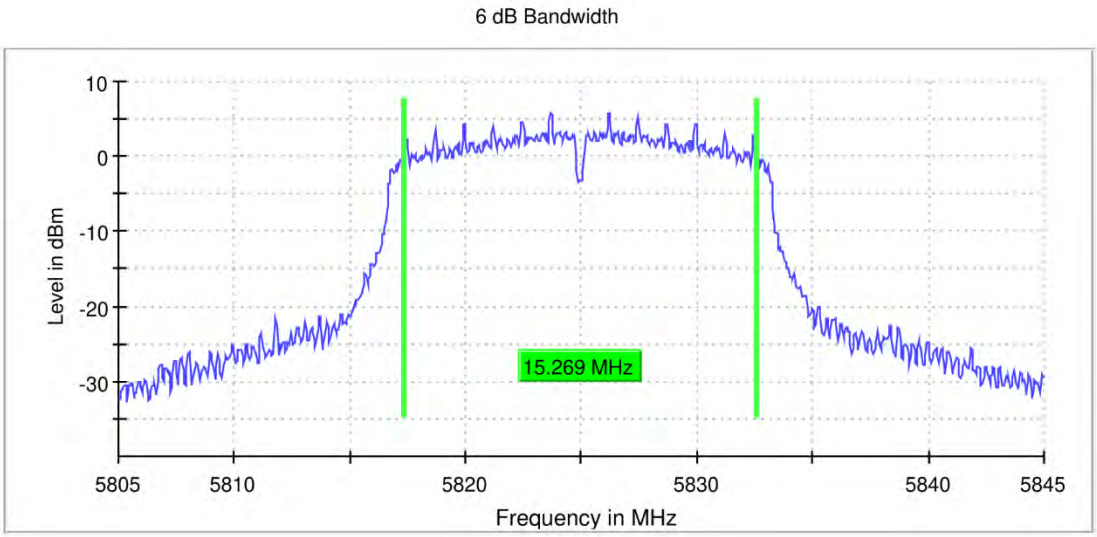
TestMode	Antenna	Frequency [MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	ANT6	5745	15.469	5737.315	5752.785	0.5	PASS
	ANT6	5785	15.469	5777.115	5792.584	0.5	PASS
	ANT6	5825	15.269	5817.315	5832.584	0.5	PASS
11N20SISO	ANT6	5745	15.770	5737.015	5752.785	0.5	PASS
	ANT6	5785	15.469	5777.115	5792.584	0.5	PASS
	ANT6	5825	15.569	5817.315	5832.885	0.5	PASS
11N40SISO	ANT6	5755	35.222	5737.364	5772.586	0.5	PASS
	ANT6	5795	35.222	5777.364	5812.586	0.5	PASS
11AC80SISO	ANT6	5775	75.173	5737.413	5812.587	0.5	PASS

TEST GRAPHS B4

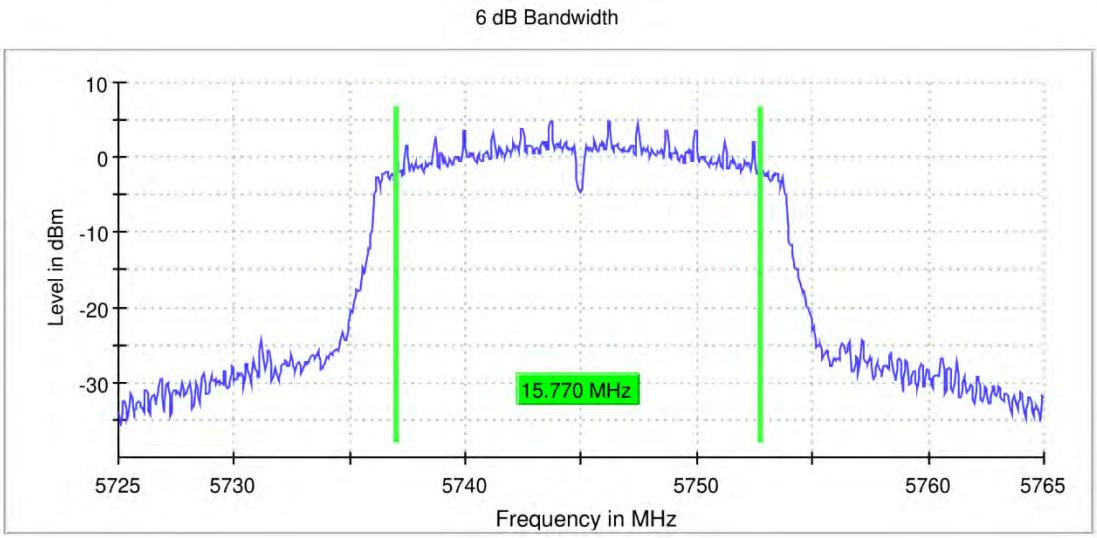
11A _ANT6_5745


11A _ANT6_5785


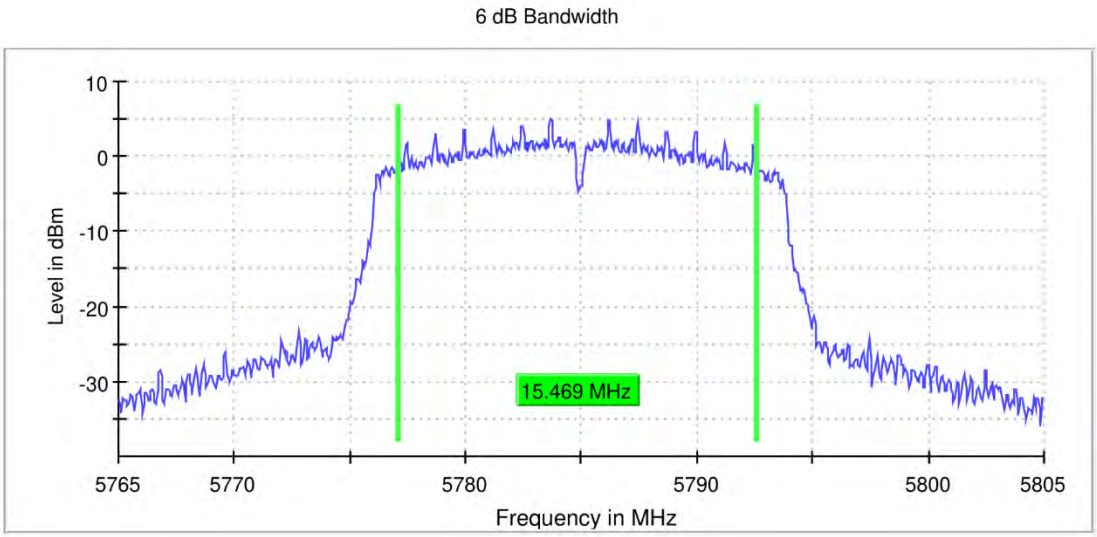
11A _ANT6_5825



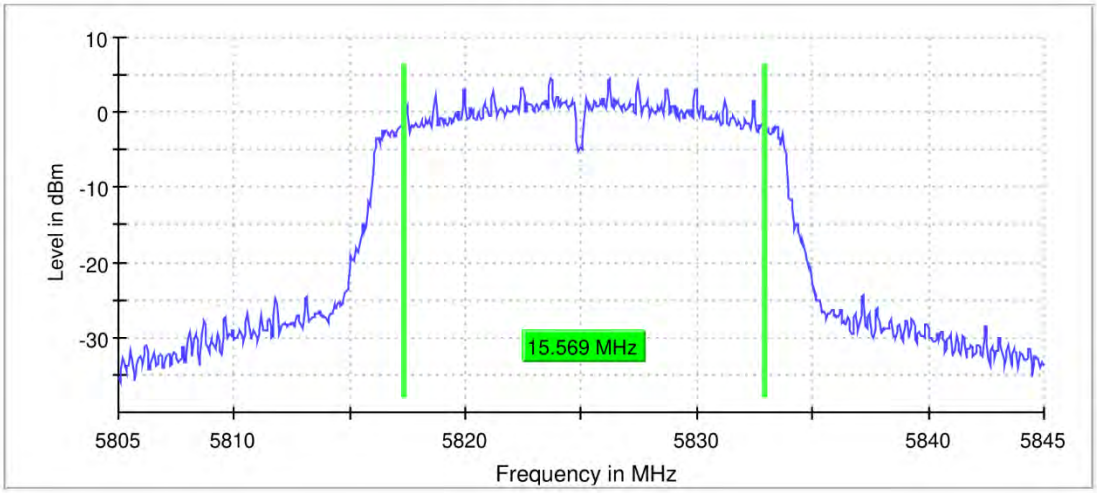
11N20 _ANT6_5745



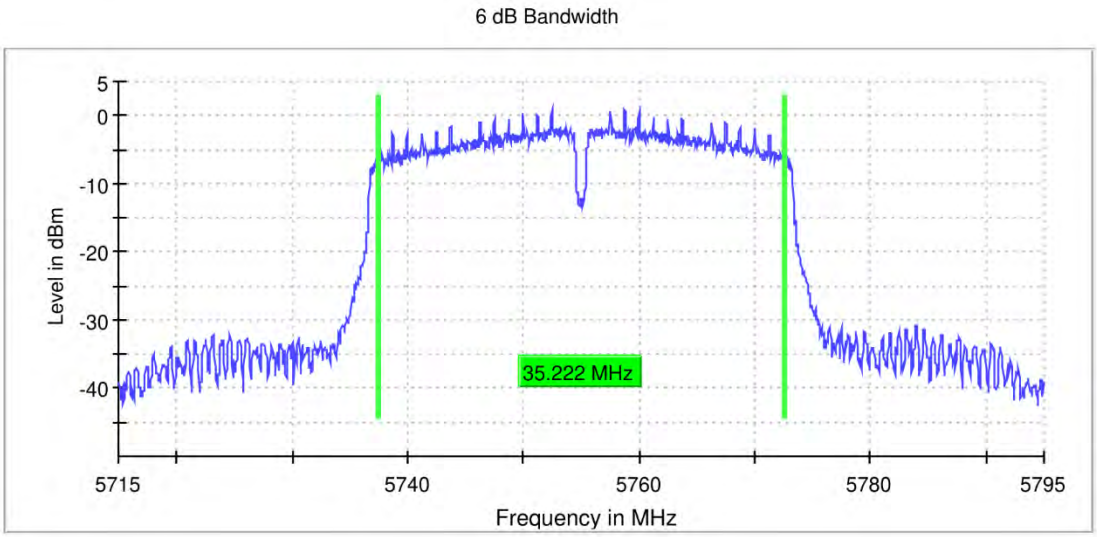
11N20_ANT6_5785



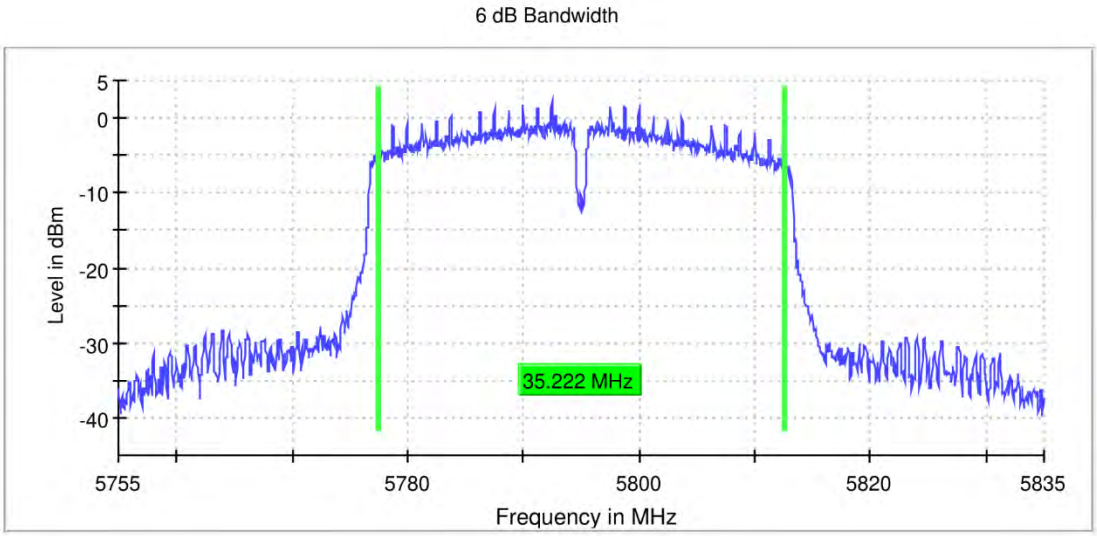
11N20_ANT6_5825



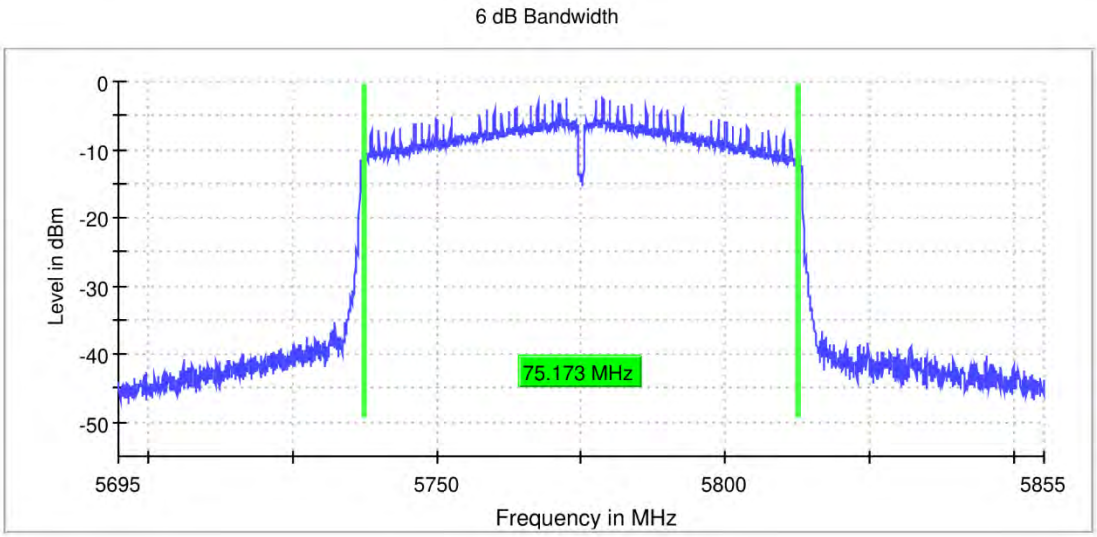
11N40_ANT6_5755



11N40_ANT6_5795



11AC80_ANT6_5775



20M

RBW 100.000 kHz

VBW 300.000 kHz

40M

RBW 100.000 kHz

VBW 300.000 kHz

80M

RBW 100.000 kHz

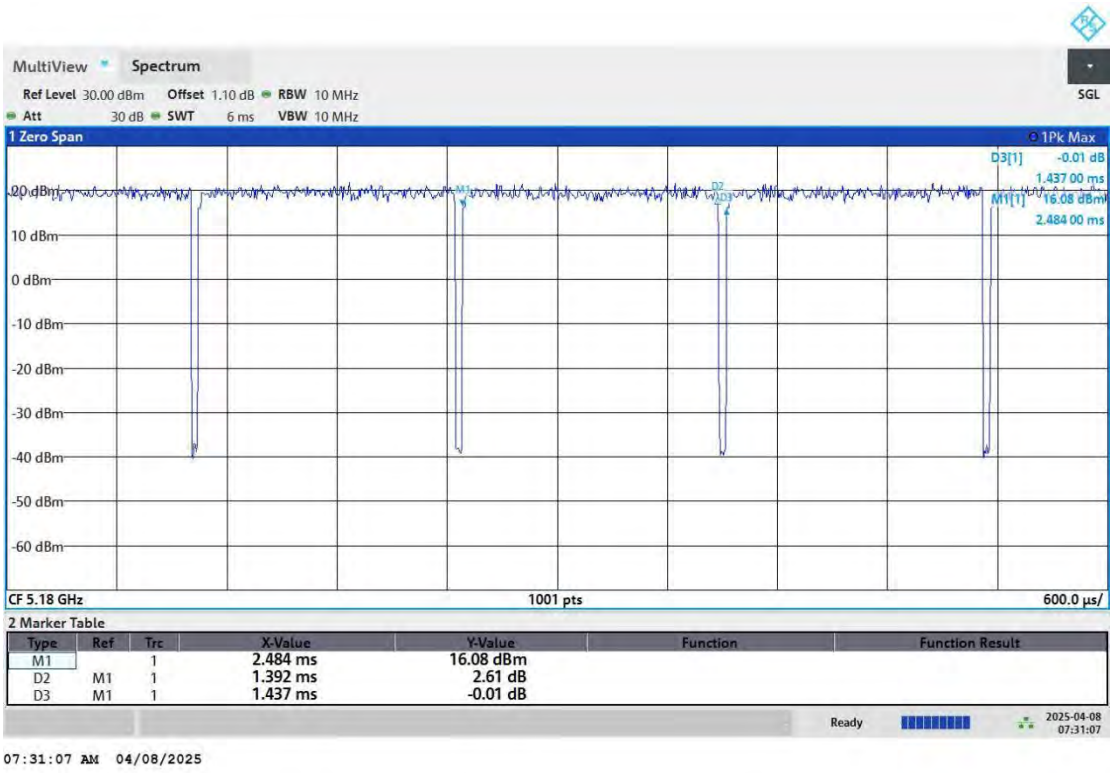
VBW 300.000 kHz

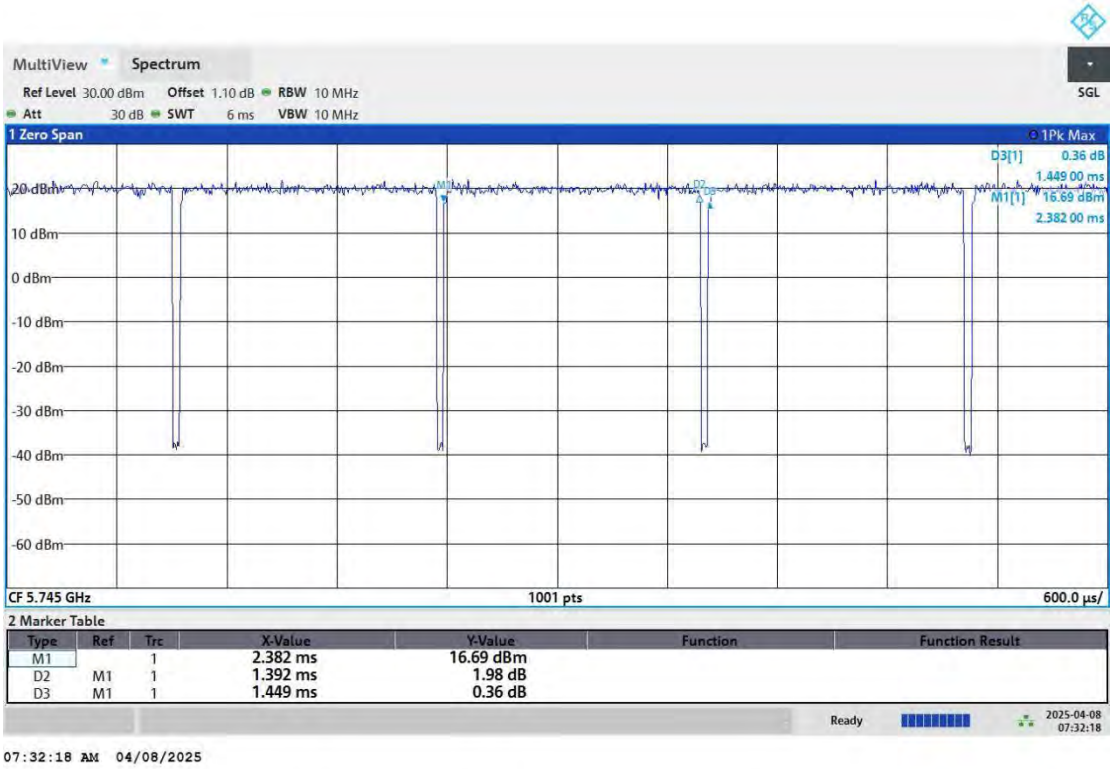
DUTY CYCLE

TEST RESULT

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	dutycycle factor
11A	ANT6	5180	1.392	1.437	96.87	0.14
	ANT6	5745	1.392	1.449	96.07	0.17
11N20SISO	ANT6	5180	1.302	1.341	97.09	0.13
	ANT6	5745	1.296	1.335	97.08	0.13
11N40SISO	ANT6	5180	0.648	0.693	93.51	0.29
	ANT6	5745	0.648	0.693	93.51	0.29
11AC80SISO	ANT6	5210	0.324	0.369	87.80	0.56
	ANT6	5775	0.325	0.369	88.08	0.55

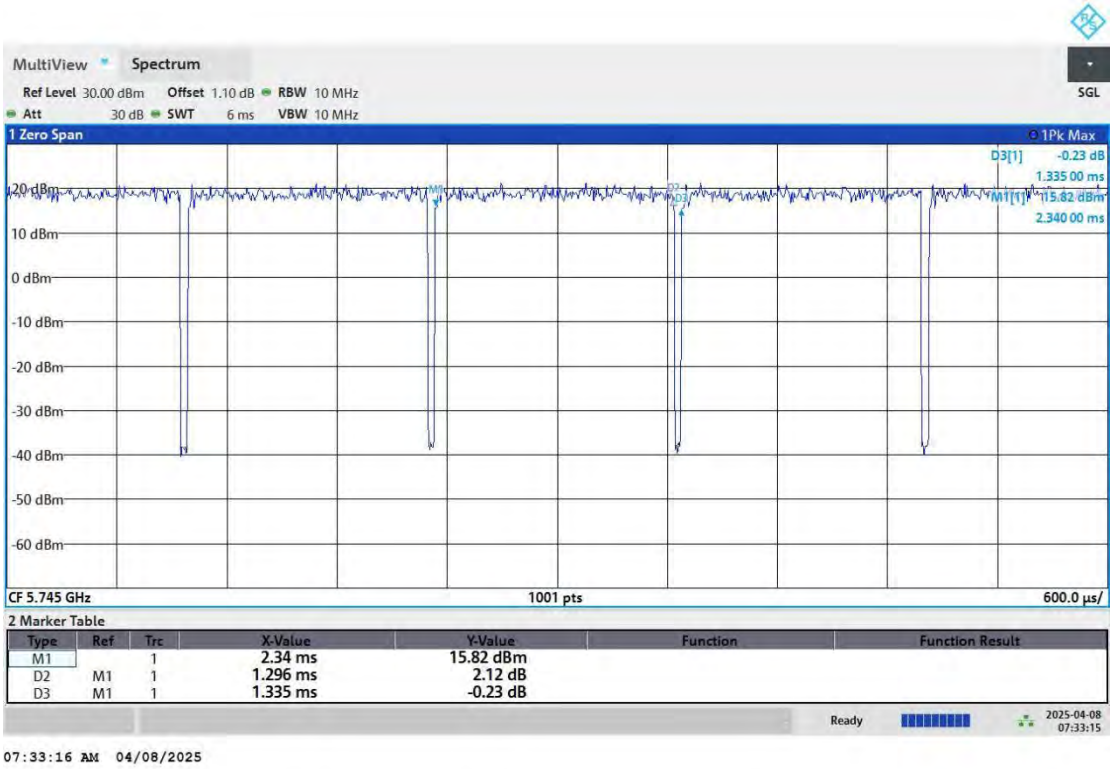
TEST GRAPHS

11A _ANT6_5180

Band4-11A _ANT6_5745

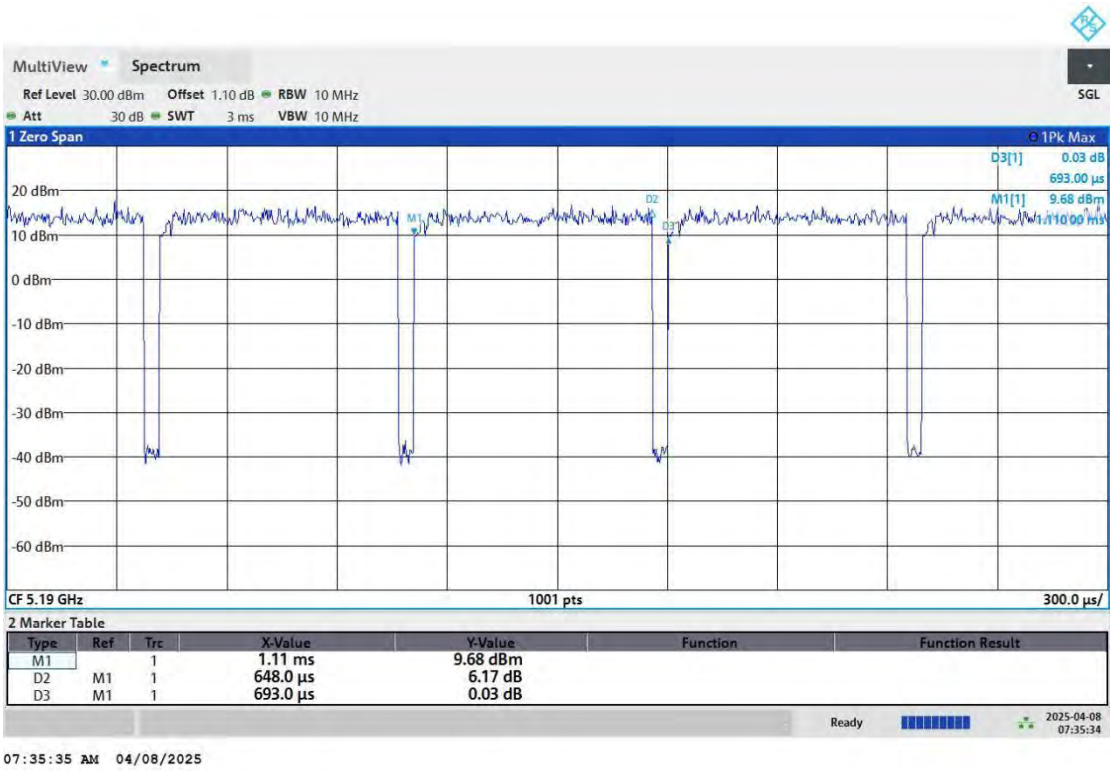


11N20SISO_ANT6 _5180

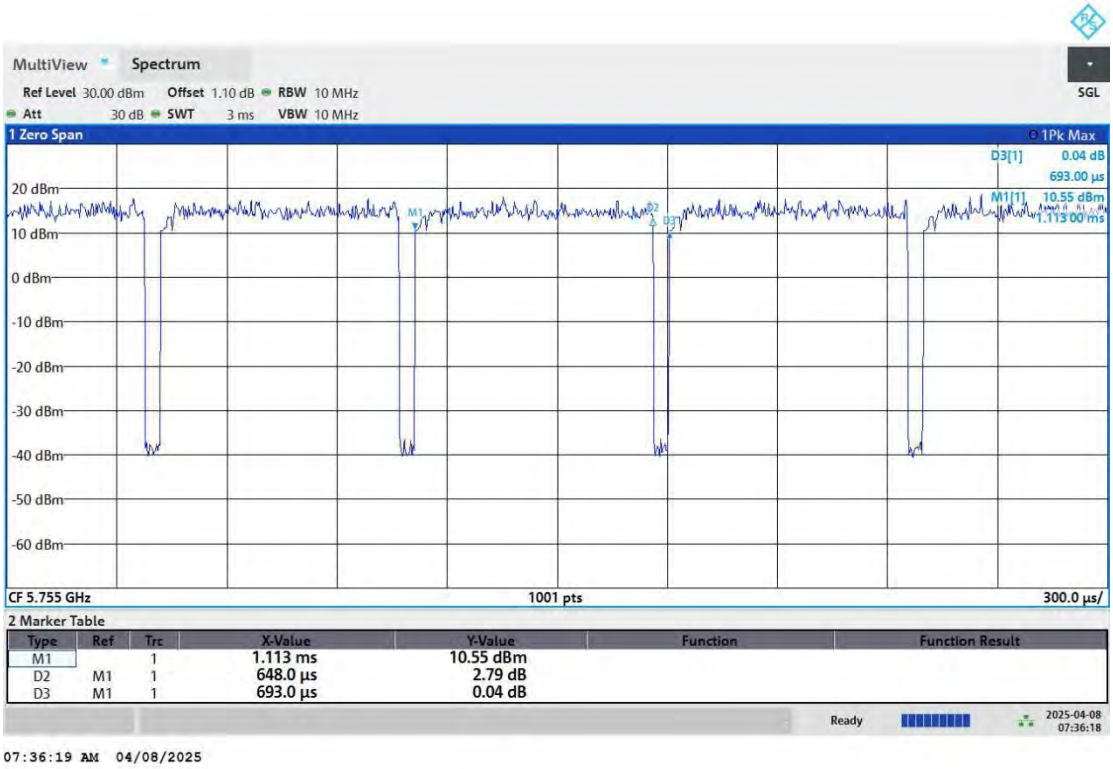
Band4-11N20SISO_ANT6 _5745



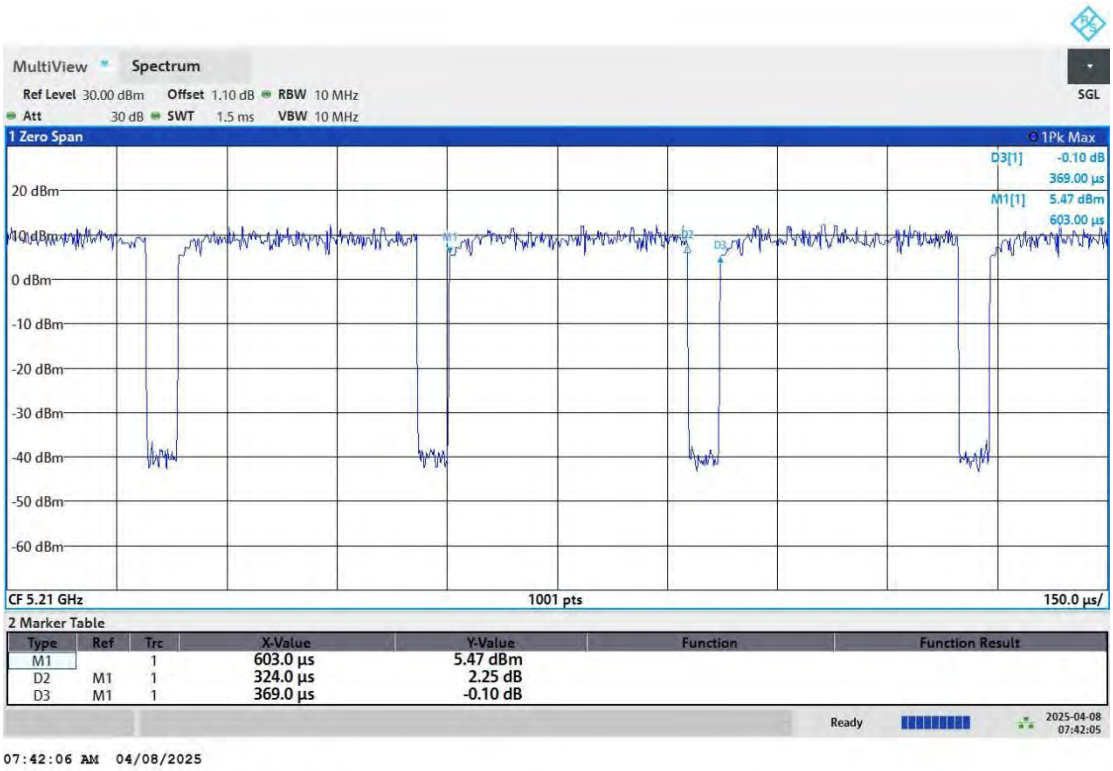
11N40SISO_ANT6 _5190



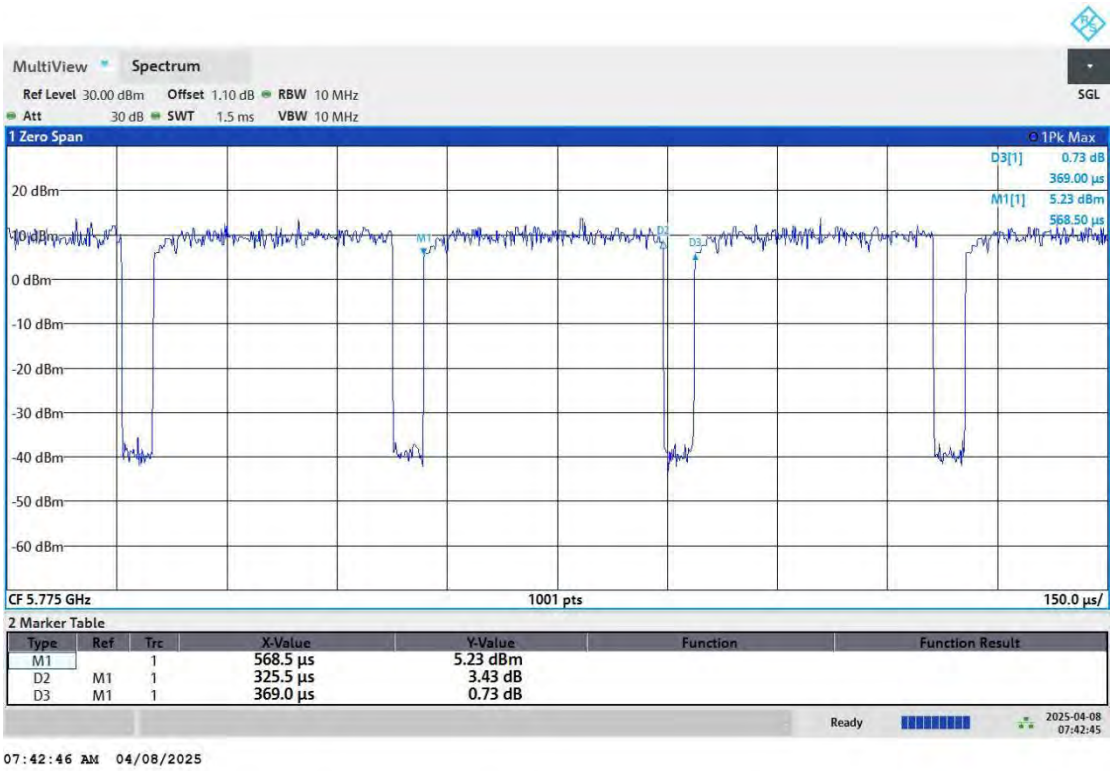
Band4-11N40SISO_ANT6 _5755



11AC80SISO_ANT6 _5210



Band4-11AC80SISO_ANT6 _5775


MultiView
Spectrum
Ref Level 30.00 dBm Offset 1.10 dB RBW 10 MHz
Att 30 dB SWT 1.5 ms VBW 10 MHz
SGL
1 Zero Span
1Pk Max
D3[1] 0.73 dB
369.00 µs
M1[1] 5.23 dBm
568.50 µs
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
CF 5.775 GHz
1001 pts
150.0 µs/
2 Marker Table
Type Ref Trc X-Value Y-Value Function Function Result
M1 1 568.5 µs 5.23 dBm
D2 M1 1 325.5 µs 3.43 dB
D3 M1 1 369.0 µs 0.73 dB
Ready
2025-04-08
07:42:45
07:42:46 AM 04/08/2025

MAXIMUM CONDUCTED OUTPUT POWER

TEST RESULT

Test Mode	TX Mod.	Freq. (MHz)	Ant.	Maximum Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	EIRP (dBm)	Verdict
11A	SISO	5180	ANT6	15.98	≤24.00	14.98	Pass
		5200	ANT6	16.31	≤24.00	15.31	Pass
		5240	ANT6	16.28	≤24.00	15.28	Pass
11N20	SISO	5180	ANT6	17.86	≤24.00	16.86	Pass
		5200	ANT6	14.89	≤24.00	13.89	Pass
		5240	ANT6	15.02	≤24.00	14.02	Pass
11N40	SISO	5190	ANT6	12.53	≤24.00	12.33	Pass
		5230	ANT6	13.41	≤24.00	12.41	Pass
11AC20	SISO	5180	ANT6	14.70	≤24.00	13.70	Pass
		5200	ANT6	14.42	≤24.00	13.42	Pass
		5240	ANT6	14.37	≤24.00	13.37	Pass
11AC40	SISO	5190	ANT6	13.30	≤24.00	12.30	Pass
		5230	ANT6	12.18	≤24.00	11.18	Pass
11AC80	SISO	5210	ANT6	12.67	≤24.00	11.67	Pass

Test Mode	TX Mod.	Freq. (MHz)	Ant.	Maximum Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	EIRP (dBm)	FCC EIRP Limit	Verdict
11A	SISO	5260	ANT6	16.85	≤24.00	15.95	≤30.00	Pass
		5300	ANT6	17.09	≤24.00	16.19	≤30.00	Pass
		5320	ANT6	13.84	≤24.00	12.94	≤30.00	Pass
11N20	SISO	5260	ANT6	15.67	≤24.00	14.77	≤30.00	Pass
		5300	ANT6	15.86	≤24.00	14.96	≤30.00	Pass
		5320	ANT6	15.63	≤24.00	14.73	≤30.00	Pass
11N40	SISO	5270	ANT6	14.20	≤24.00	13.3	≤30.00	Pass
		5310	ANT6	12.74	≤24.00	11.84	≤30.00	Pass
11AC20	SISO	5260	ANT6	15.18	≤24.00	14.28	≤30.00	Pass
		5300	ANT6	15.39	≤24.00	14.49	≤30.00	Pass
		5320	ANT6	15.43	≤24.00	14.53	≤30.00	Pass
11AC40	SISO	5270	ANT6	14.19	≤24.00	13.29	≤30.00	Pass
		5310	ANT6	14.20	≤24.00	13.3	≤30.00	Pass
11AC80	SISO	5290	ANT6	12.75	≤24.00	11.85	≤30.00	Pass

Test Mode	TX Mod.	Freq. (MHz)	Ant.	Maximum Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	EIRP (dBm)	FCC EIRP Limit	Verdict
11A	SISO	5500	ANT6	17.41	≤24.00	17.41	≤30.00	Pass
		5580	ANT6	17.31	≤24.00	17.31	≤30.00	Pass
		5700	ANT6	11.76	≤24.00	11.76	≤30.00	Pass
		5720	ANT6	17.31	≤24.00	17.31	≤30.00	Pass
11N20	SISO	5500	ANT6	16.59	≤24.00	16.59	≤30.00	Pass
		5580	ANT6	16.23	≤24.00	16.23	≤30.00	Pass
		5700	ANT6	10.84	≤24.00	10.84	≤30.00	Pass
		5720	ANT6	16.05	≤24.00	16.05	≤30.00	Pass
11N40	SISO	5510	ANT6	15.31	≤24.00	15.31	≤30.00	Pass
		5550	ANT6	15.10	≤24.00	15.10	≤30.00	Pass
		5670	ANT6	14.66	≤24.00	14.66	≤30.00	Pass
		5710	ANT6	14.66	≤24.00	14.66	≤30.00	Pass
11AC20	SISO	5500	ANT6	16.05	≤24.00	16.05	≤30.00	Pass
		5580	ANT6	15.52	≤24.00	15.52	≤30.00	Pass
		5700	ANT6	15.58	≤24.00	15.58	≤30.00	Pass
		5720	ANT6	15.57	≤24.00	15.57	≤30.00	Pass
11AC40	SISO	5510	ANT6	15.13	≤24.00	15.13	≤30.00	Pass
		5550	ANT6	15.08	≤24.00	15.08	≤30.00	Pass
		5670	ANT6	14.63	≤24.00	14.63	≤30.00	Pass
		5710	ANT6	14.59	≤24.00	14.59	≤30.00	Pass
11AC80	SISO	5530	ANT6	13.68	≤24.00	13.68	≤30.00	Pass
		5610	ANT6	13.28	≤24.00	13.28	≤30.00	Pass
		5690	ANT6	13.16	≤24.00	13.16	≤30.00	Pass

Test Mode	TX Mod.	Freq. (MHz)	Ant.	Maximum Conducted Power (dBm)	Conducted Power Limit (dBm)	EIRP (dBm)	Verdict
11A	SISO	5745	ANT6	17.23	≤30.00	16.63	Pass
		5785	ANT6	16.88	≤30.00	16.28	Pass
		5825	ANT6	16.79	≤30.00	16.19	Pass
11N20	SISO	5745	ANT6	15.97	≤30.00	15.37	Pass
		5785	ANT6	15.67	≤30.00	15.07	Pass
		5825	ANT6	15.70	≤30.00	15.10	Pass
11N40	SISO	5755	ANT6	14.44	≤30.00	13.84	Pass
		5795	ANT6	13.98	≤30.00	13.38	Pass
11AC20	SISO	5745	ANT6	15.33	≤30.00	14.73	Pass
		5785	ANT6	15.32	≤30.00	14.72	Pass
		5825	ANT6	15.19	≤30.00	14.59	Pass
11AC40	SISO	5755	ANT6	14.42	≤30.00	13.82	Pass
		5795	ANT6	13.94	≤30.00	13.34	Pass
11AC80	SISO	5775	ANT6	13.02	≤30.00	12.42	Pass

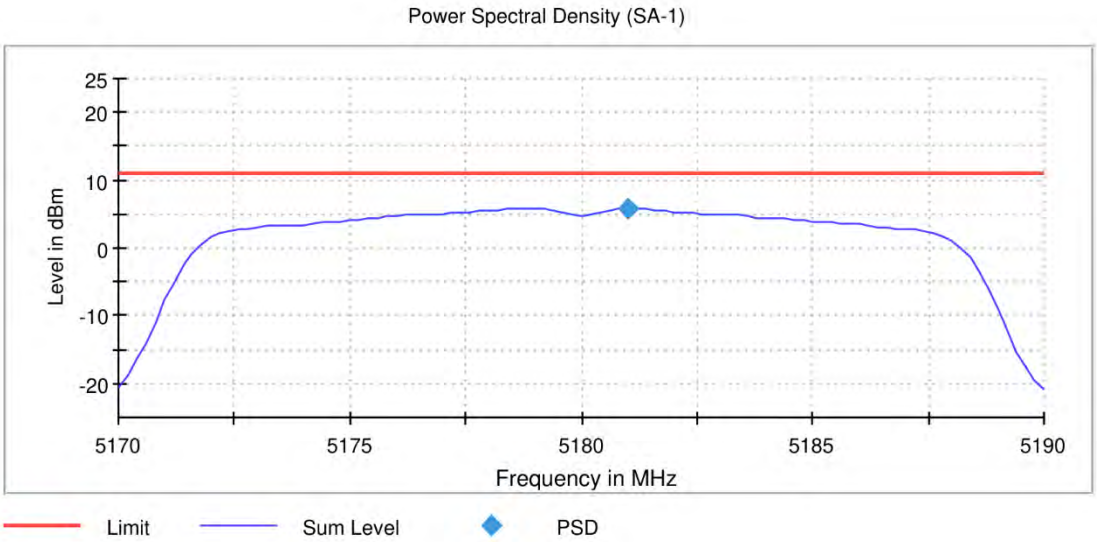
MAXIMUM POWER SPECTRAL DENSITY

TEST RESULT

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	PSD Limit [dBm/MHz]	Verdict
11A	ANT6	5180	5.847	≤11.00	Pass
	ANT6	5200	5.822	≤11.00	Pass
	ANT6	5240	5.807	≤11.00	Pass
	ANT6	5260	5.639	≤11.00	Pass
	ANT6	5300	5.937	≤11.00	Pass
	ANT6	5320	5.948	≤11.00	Pass
	ANT6	5500	4.711	≤11.00	Pass
	ANT6	5580	5.458	≤11.00	Pass
	ANT6	5700	6.096	≤11.00	Pass
	ANT6	5720	5.942	≤11.00	Pass
	ANT6	5745	2.806	≤30.00	Pass
	ANT6	5785	2.875	≤30.00	Pass
	ANT6	5825	2.825	≤30.00	Pass
11N20SISO	ANT6	5180	4.404	≤11.00	Pass
	ANT6	5200	4.431	≤11.00	Pass
	ANT6	5240	4.544	≤11.00	Pass
	ANT6	5260	4.189	≤11.00	Pass
	ANT6	5300	4.539	≤11.00	Pass
	ANT6	5320	4.484	≤11.00	Pass
	ANT6	5500	3.354	≤11.00	Pass
	ANT6	5580	4.225	≤11.00	Pass
	ANT6	5700	4.740	≤11.00	Pass
	ANT6	5720	4.666	≤11.00	Pass
	ANT6	5745	1.574	≤30.00	Pass
	ANT6	5785	1.560	≤30.00	Pass
	ANT6	5825	1.113	≤30.00	Pass
11N40SISO	ANT6	5190	0.341	≤11.00	Pass
	ANT6	5230	0.541	≤11.00	Pass
	ANT6	5270	0.008	≤11.00	Pass
	ANT6	5310	0.456	≤11.00	Pass

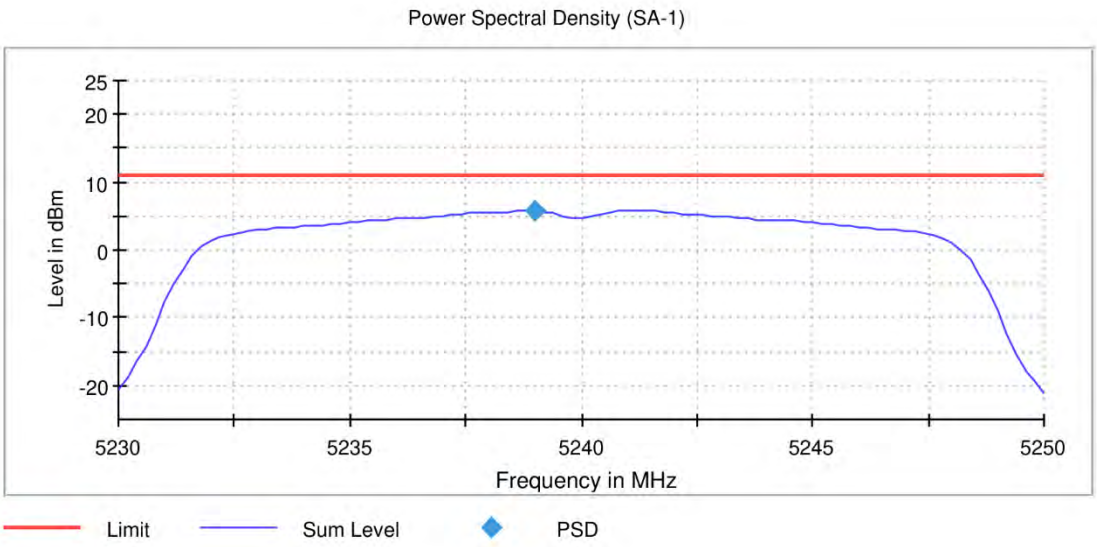
	ANT6	5510	-0.624	≤11.00	Pass
	ANT6	5550	-0.155	≤11.00	Pass
	ANT6	5670	0.463	≤11.00	Pass
	ANT6	5710	0.645	≤11.00	Pass
	ANT6	5755	-2.729	≤30.00	Pass
	ANT6	5795	-1.558	≤30.00	Pass
11AC80SISO	ANT6	5210	-4.055	≤11.00	Pass
	ANT6	5290	-4.127	≤11.00	Pass
	ANT6	5530	-4.752	≤11.00	Pass
	ANT6	5610	-3.774	≤11.00	Pass
	ANT6	5690	-3.532	≤11.00	Pass
	ANT6	5775	-6.540	≤30.00	Pass

TEST GRAPHS

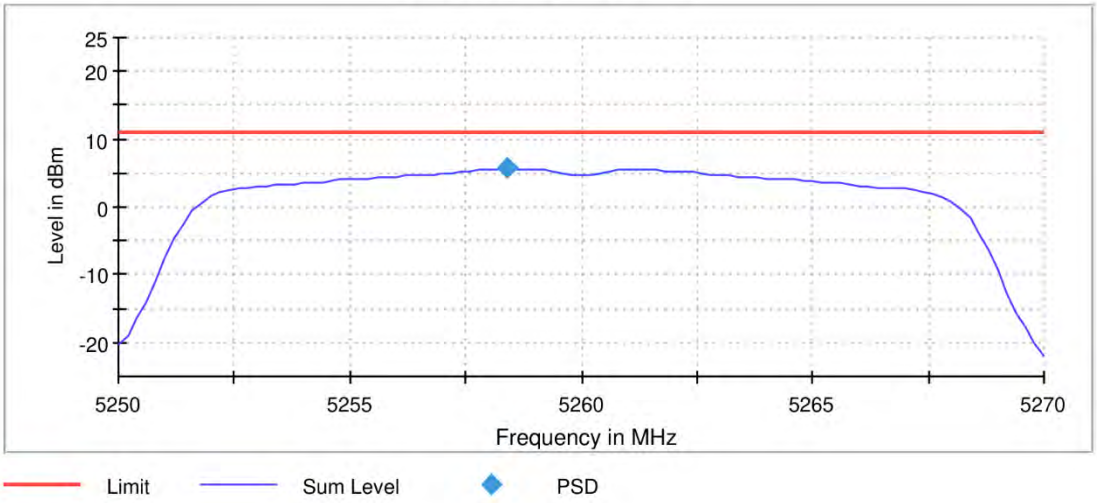
11A_ANT6_5180


11A _ANT6_5200

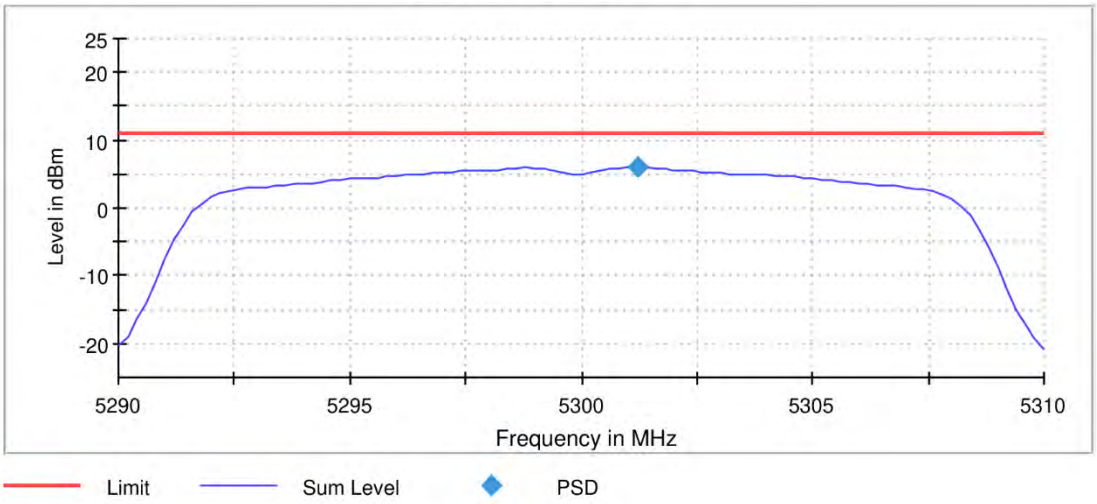
11A _ANT6_5240



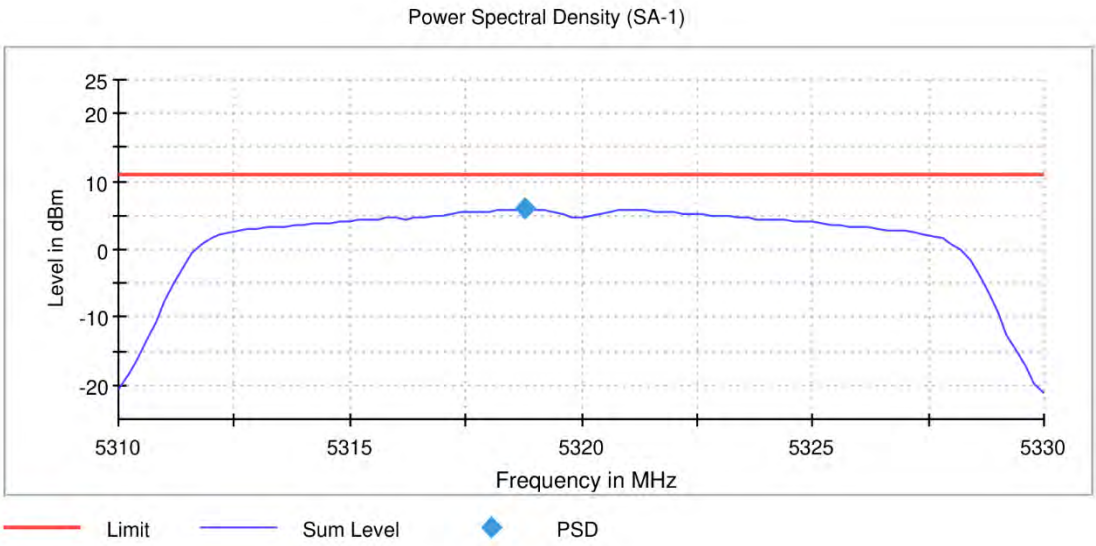
11A _ANT6_5260



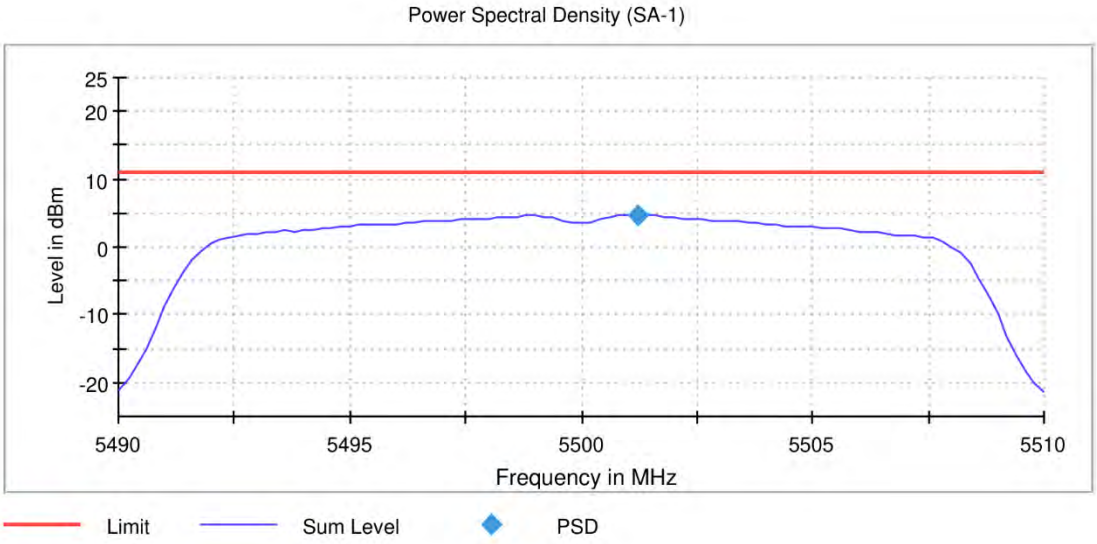
11A _ANT6_5300



11A _ANT6_5320



11A _ANT6_5500



11A _ANT6_5580