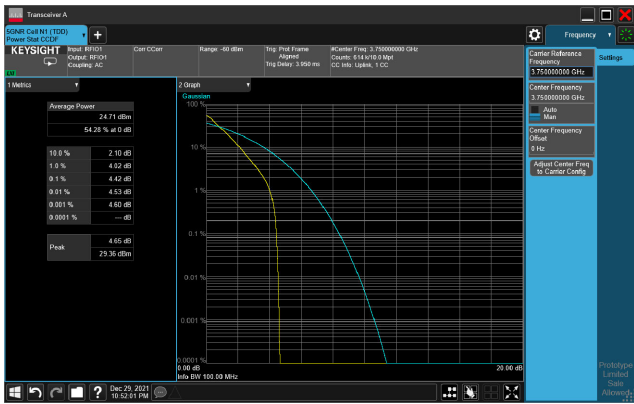
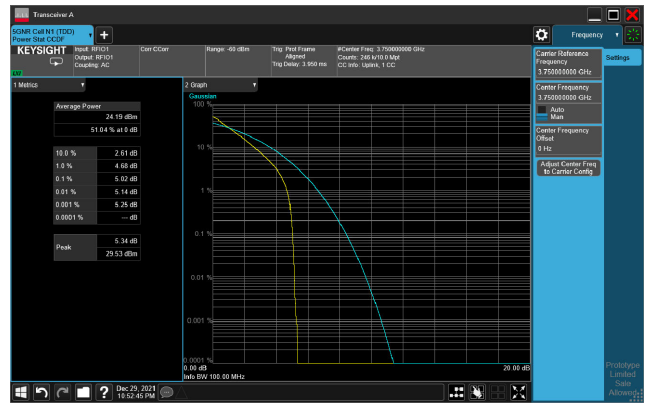


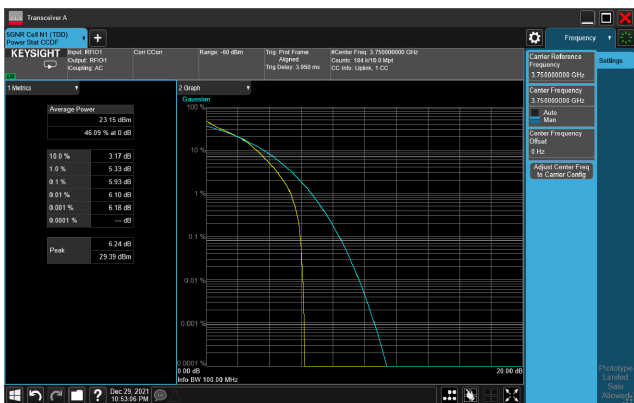
5G NR n77_CH650000_100M_1RB_pi/2 BPSK_Ratio



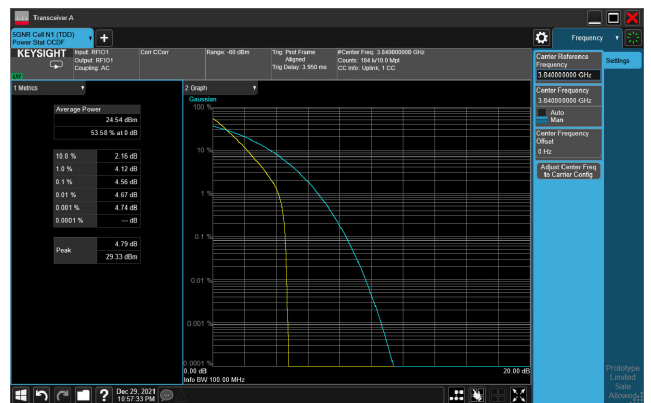
5G NR n77_CH650000_100M_1RB_QPSK_Ratio



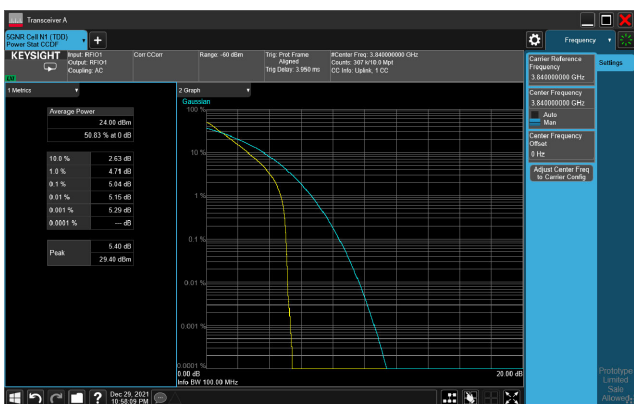
5G NR n77_CH650000_100M_1RB_16-QAM_Ratio



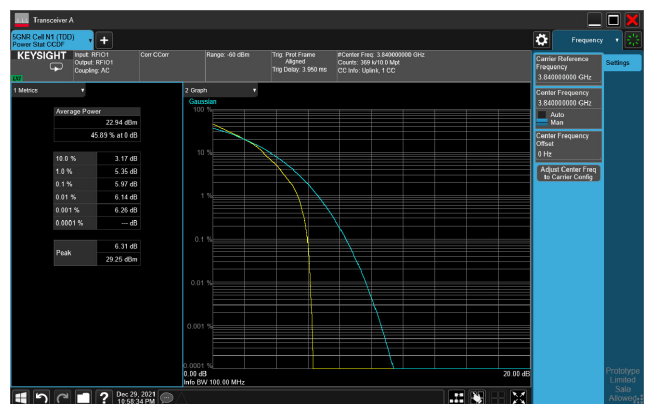
5G NR n77_CH656000_100M_1RB_16-QAM_Ratio



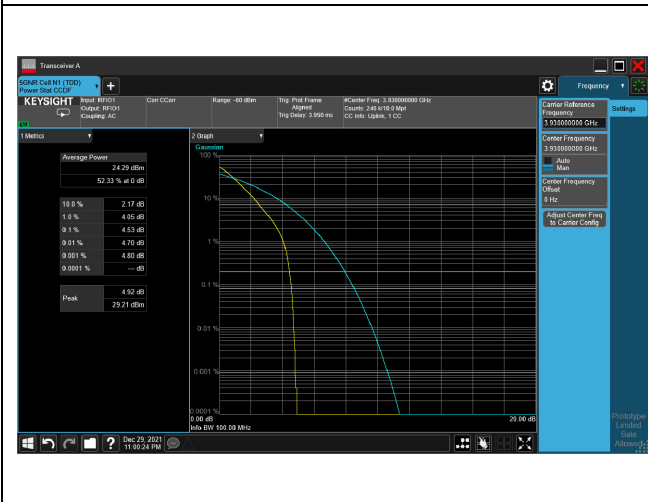
5G NR n77_CH656000_100M_1RB_QPSK_Ratio



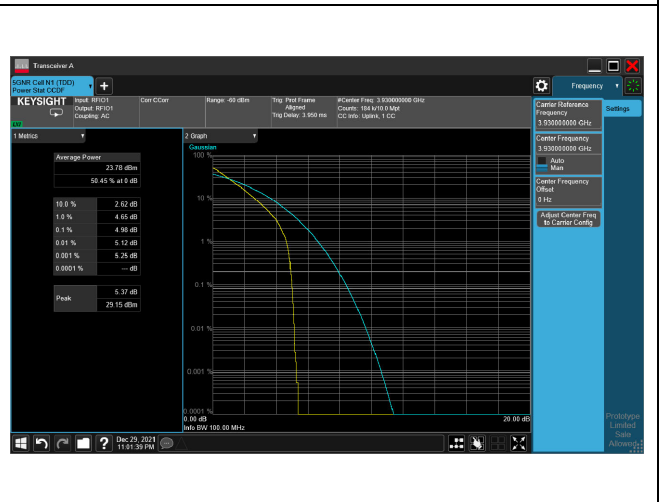
5G NR n77_CH656000_100M_1RB_16-QAM_Ratio



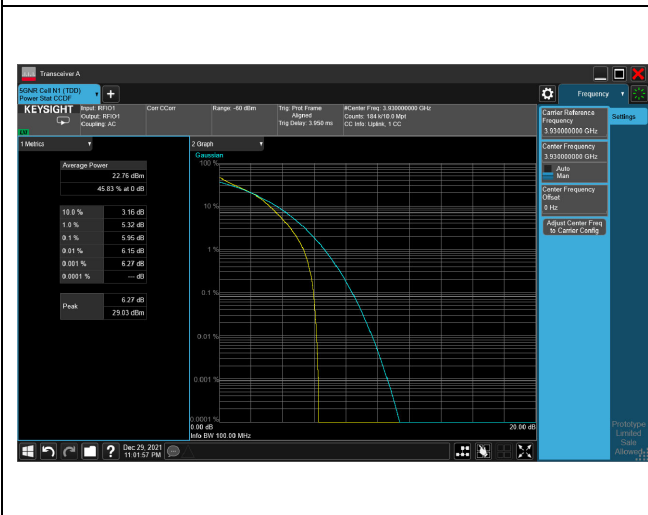
5G NR n77_CH662000_100M_1RB_pi/2 BPSK_Ratio



5G NR n77_CH662000_100M_1RB_QPSK_Ratio



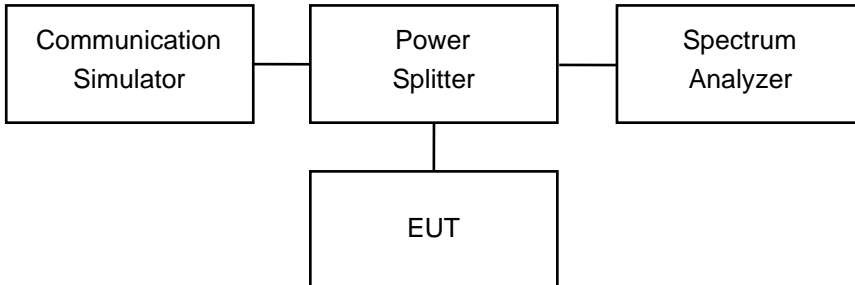
5G NR n77_CH662000_100M_1RB_16-QAM_Ratio



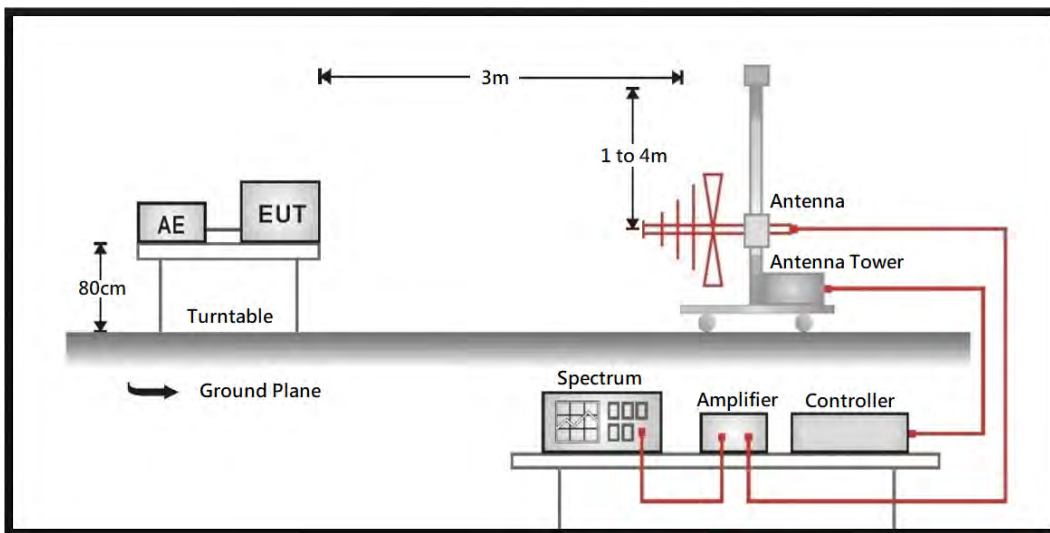
6. Spurious Emissions

6.1. Test Setup

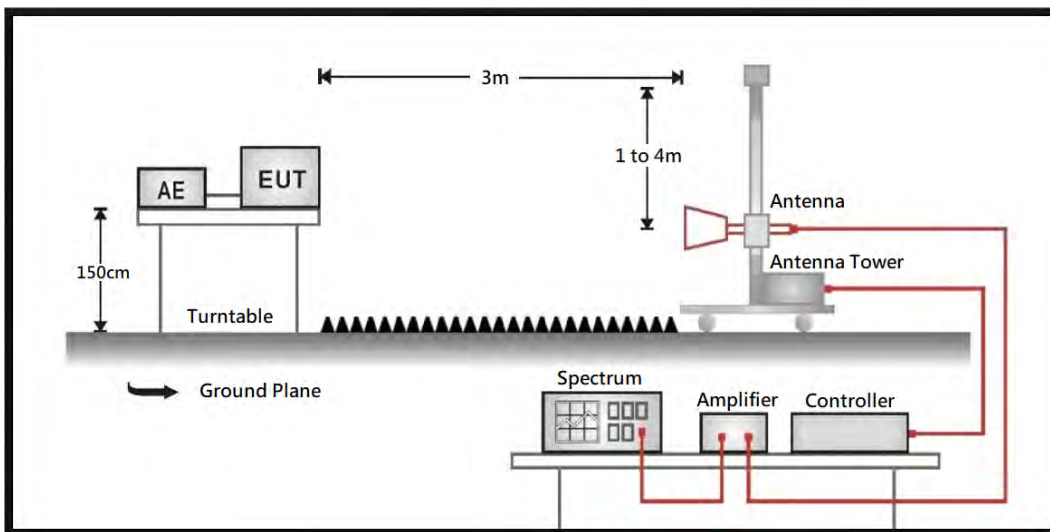
Conducted Spurious Measurement



Radiated Spurious Measurement: below 1GHz



Radiated Spurious Measurement: above 1GHz



6.2. Test Procedure

Conducted Spurious Measurement:

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The path loss was compensated to the results for each measurement. The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10th harmonic.

Radiated Spurious Measurement:

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations. The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10th harmonic. Taking the record of maximum spurious emission.

6.3. Test Methodology and Reference Procedures

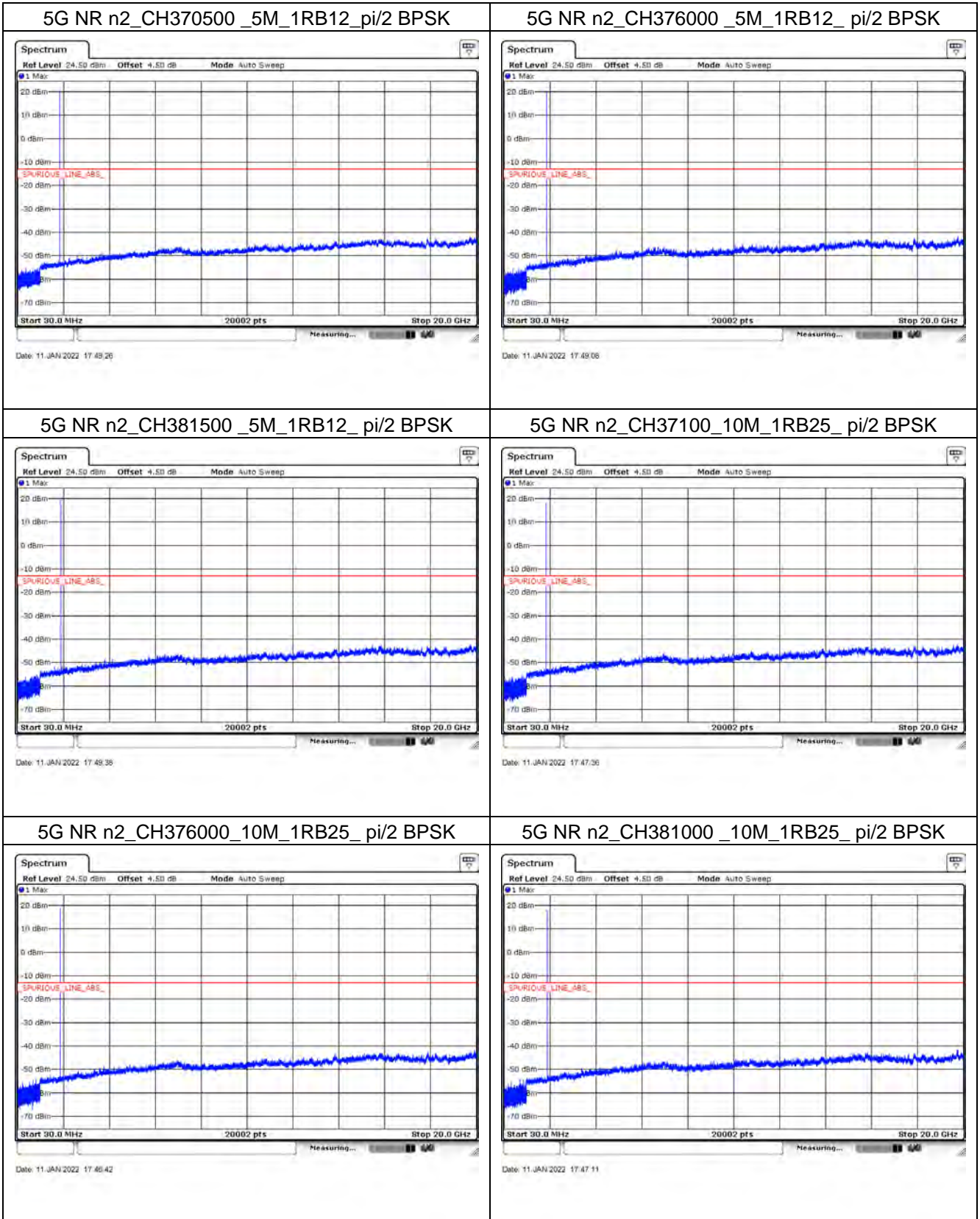
KDB 971168 D01 Power Meas License Digital Systems v03r01

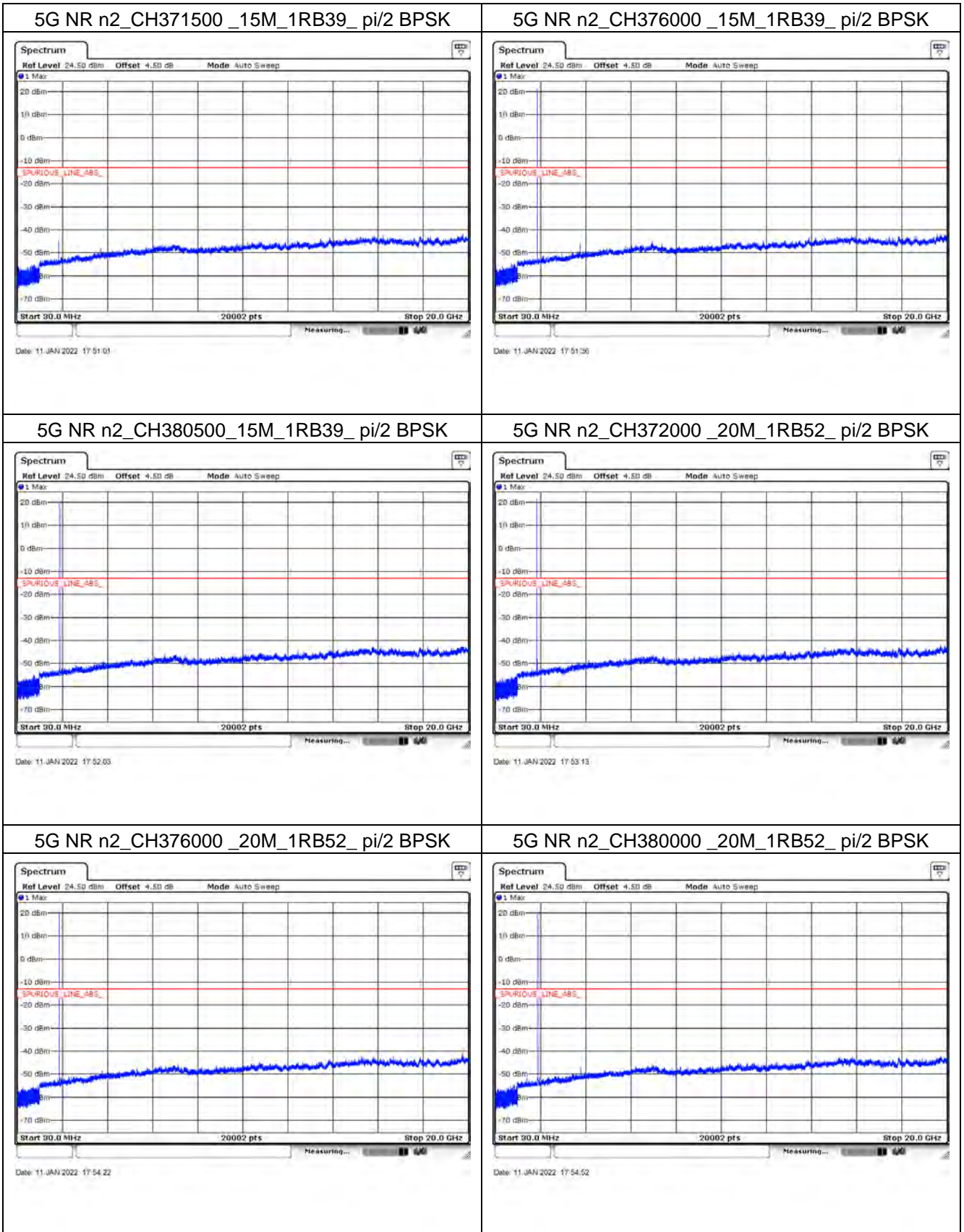
ANSI C63.26-2015

KDB 662911 D01 Multiple Transmitter Output v02r01

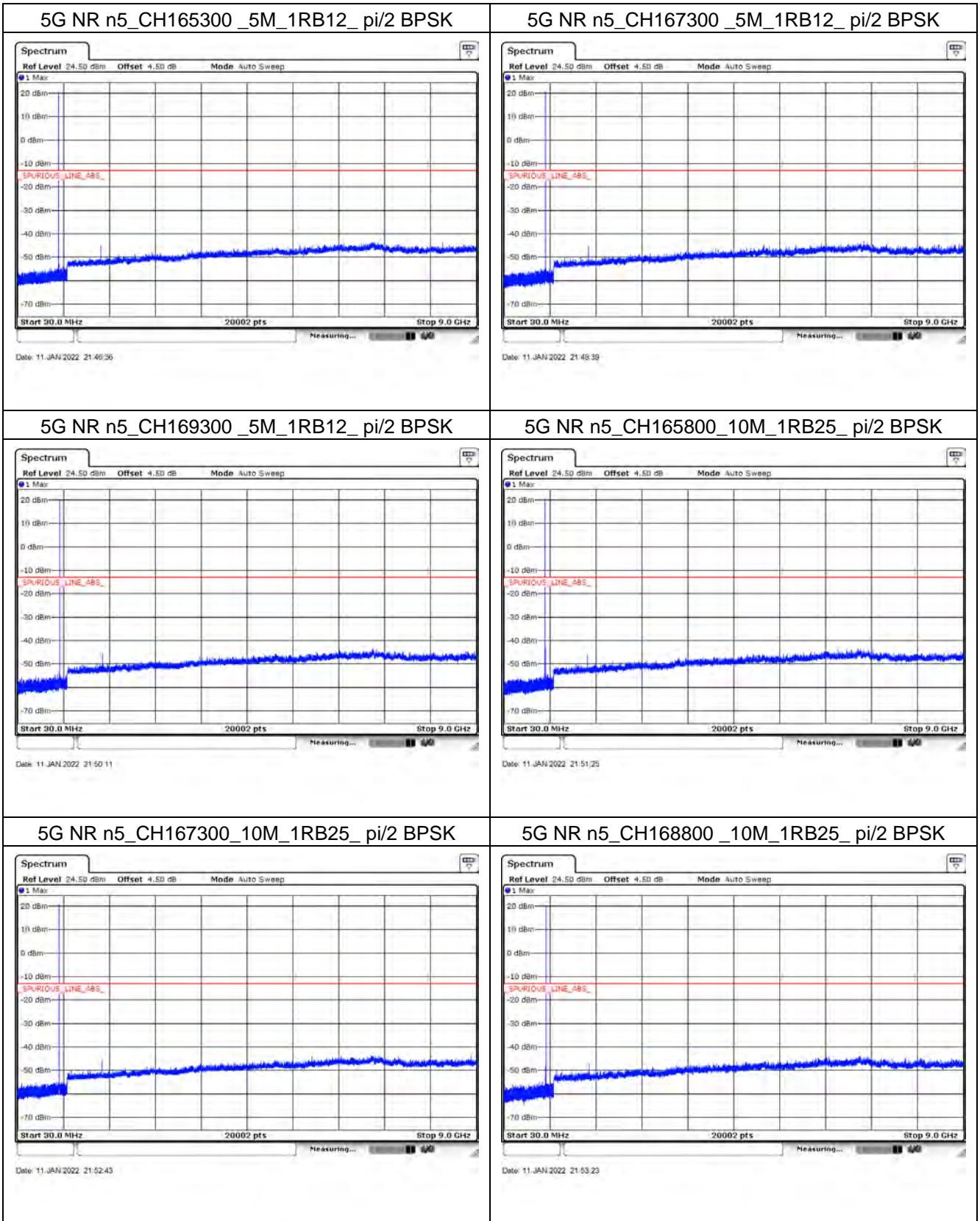
6.4. Test Result of Conducted Spurious Emission

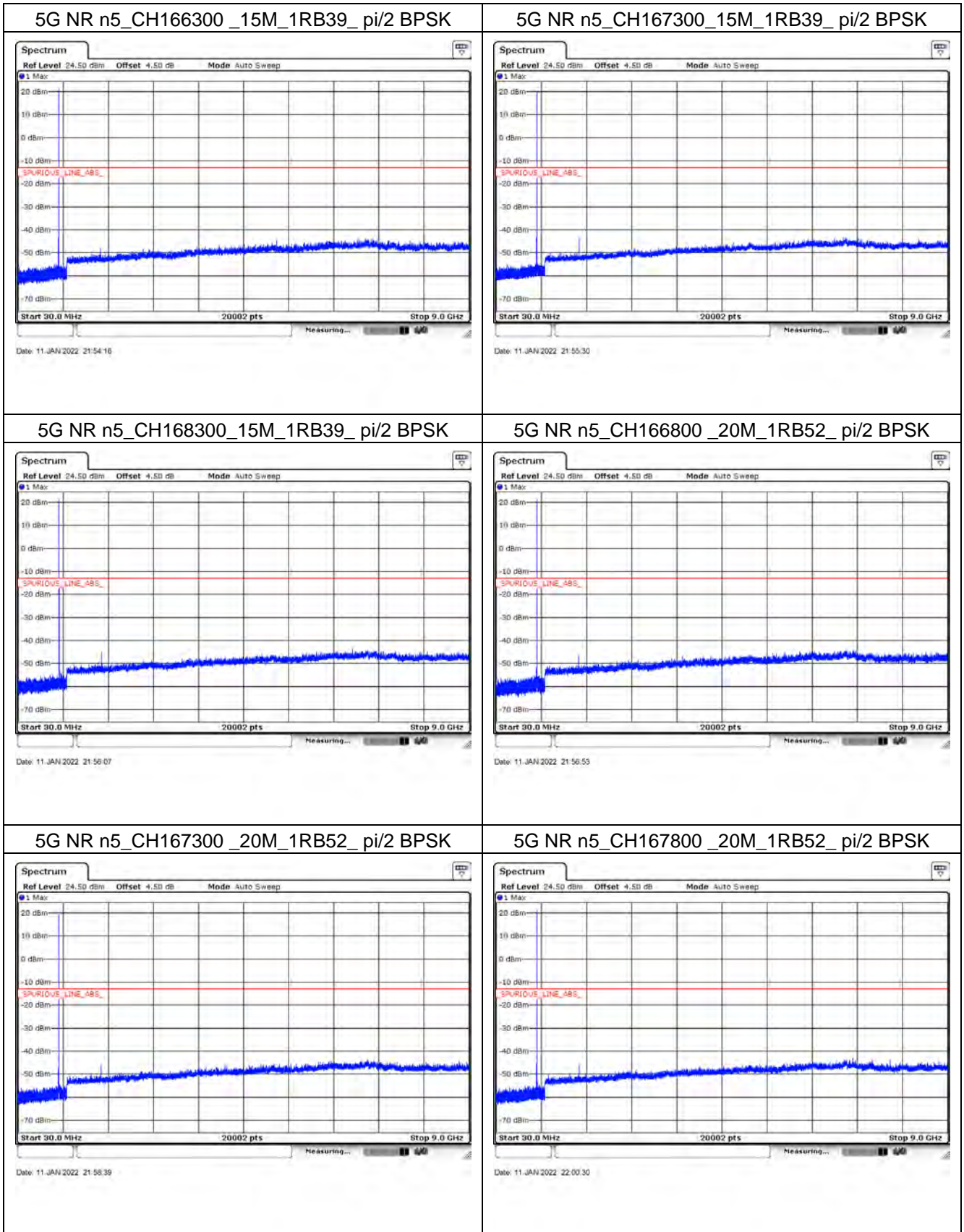
Mode 1: 5G NR n2



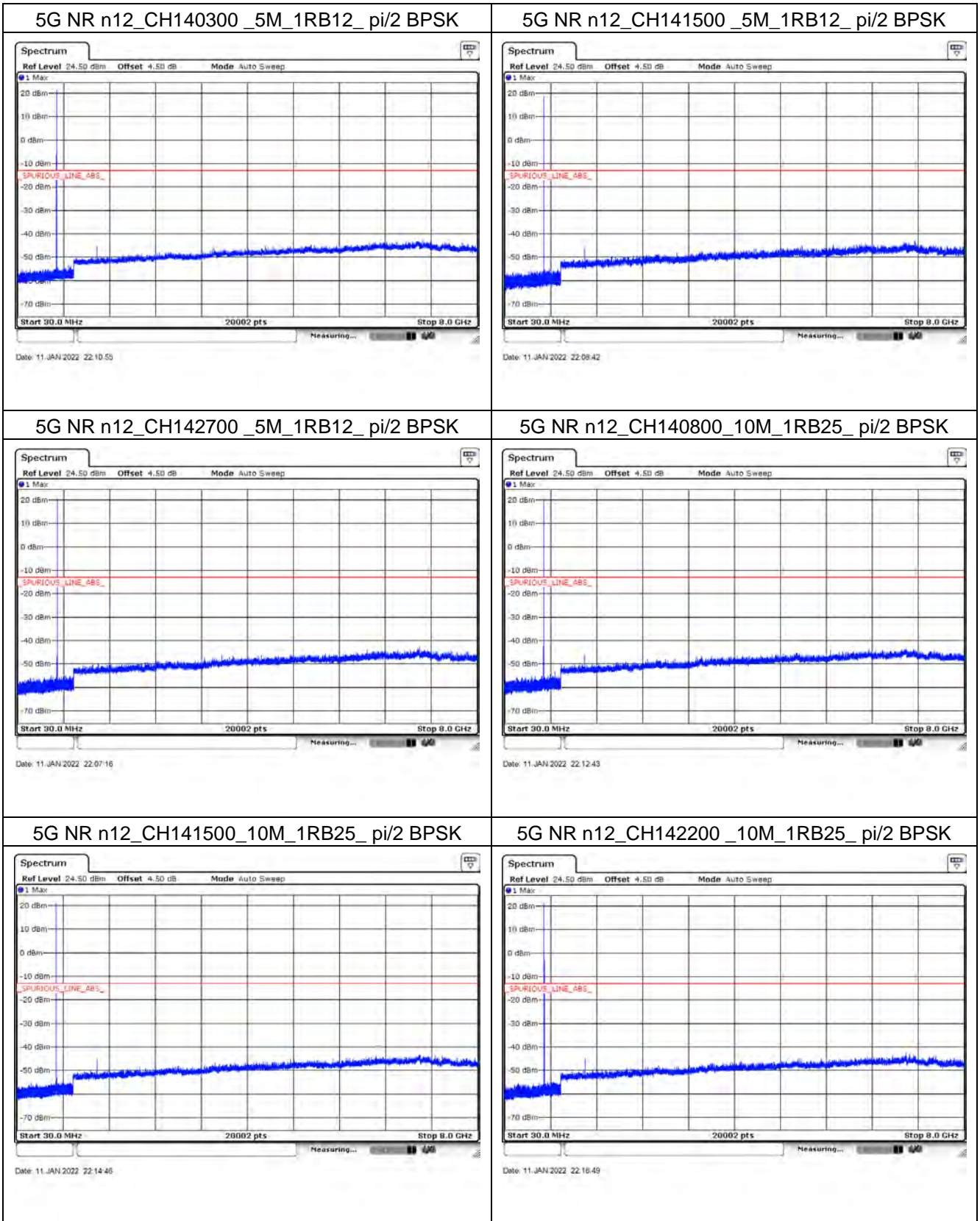


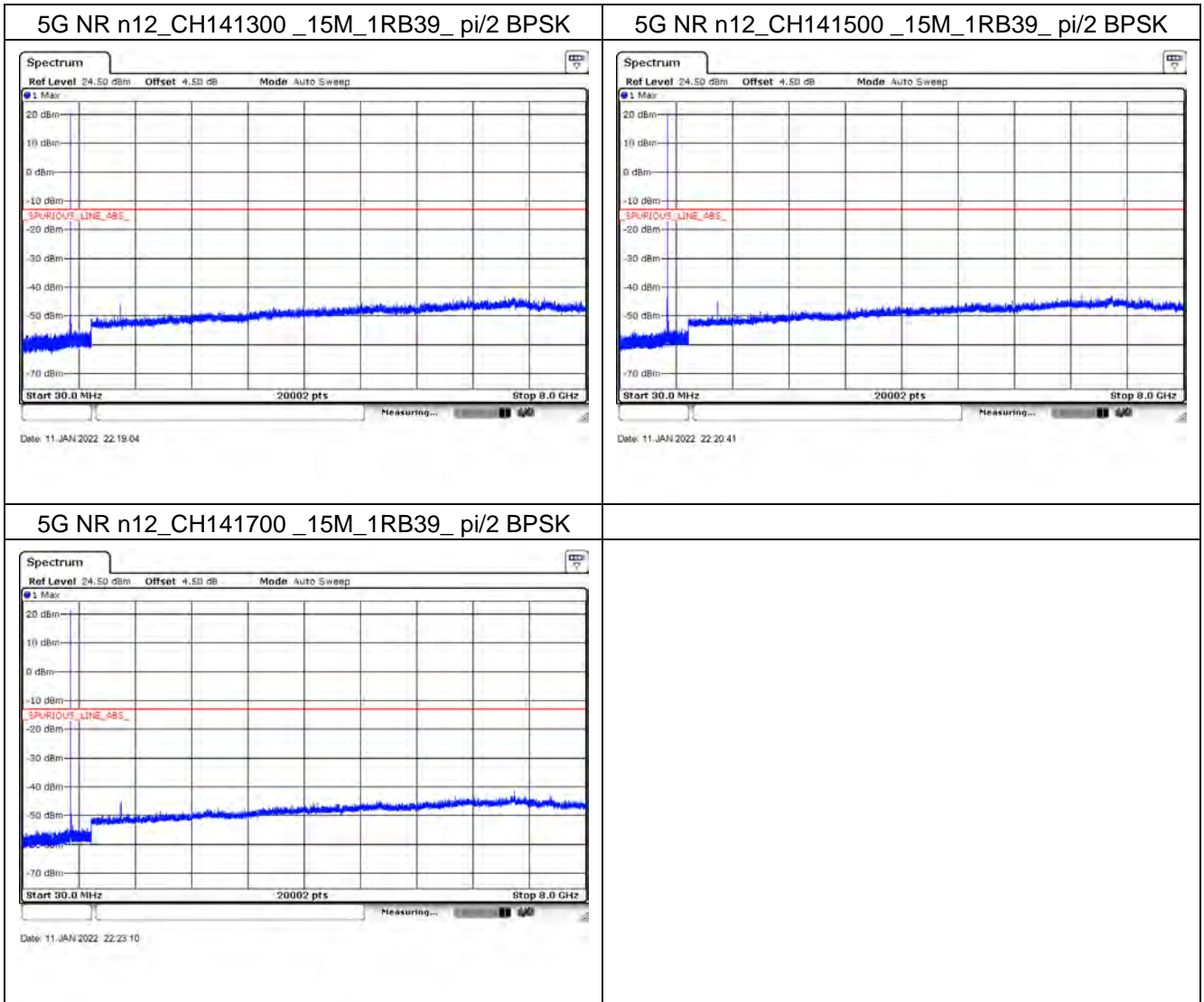
Mode 2: 5G NR n5



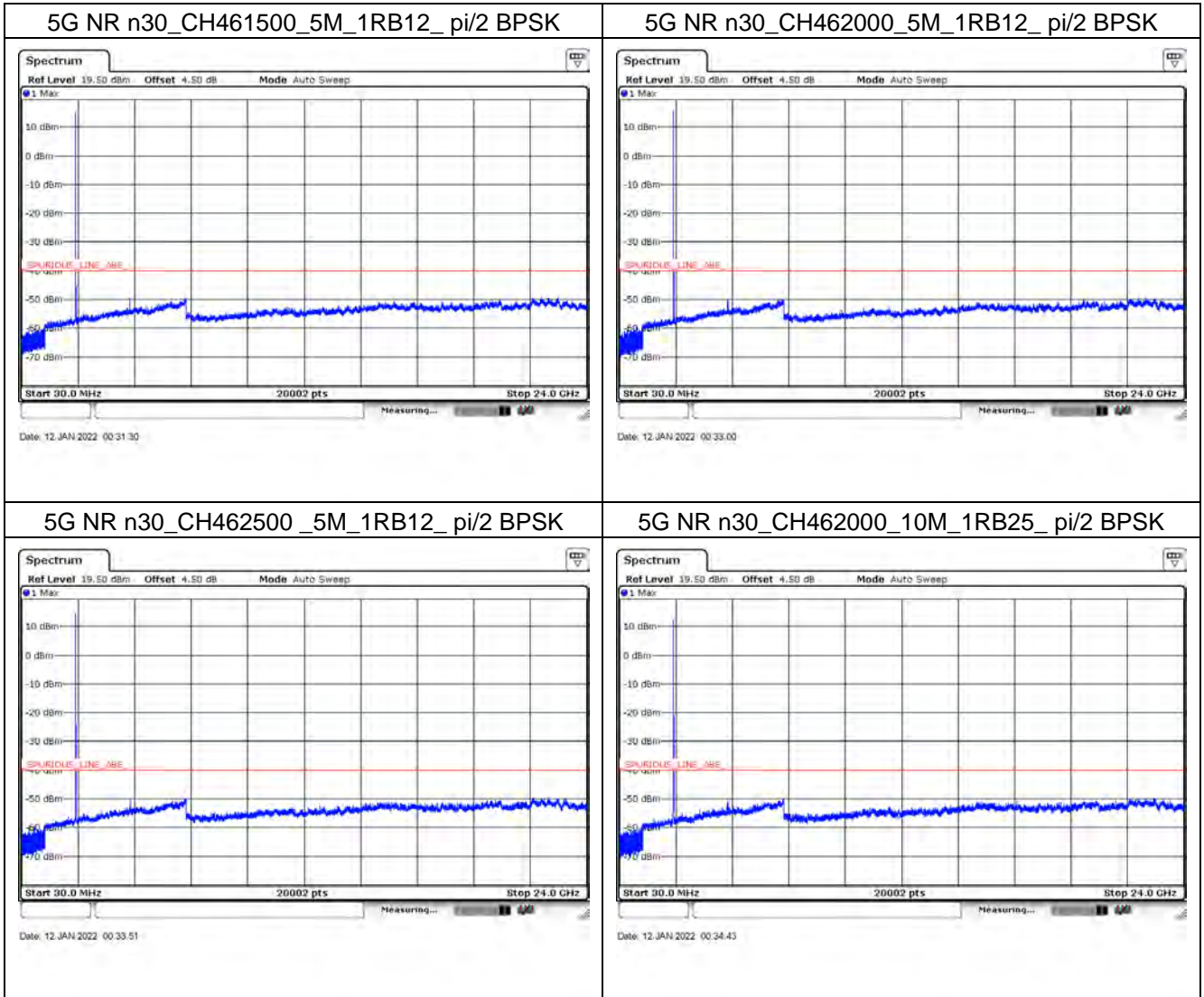


Mode 3: 5G NR n12

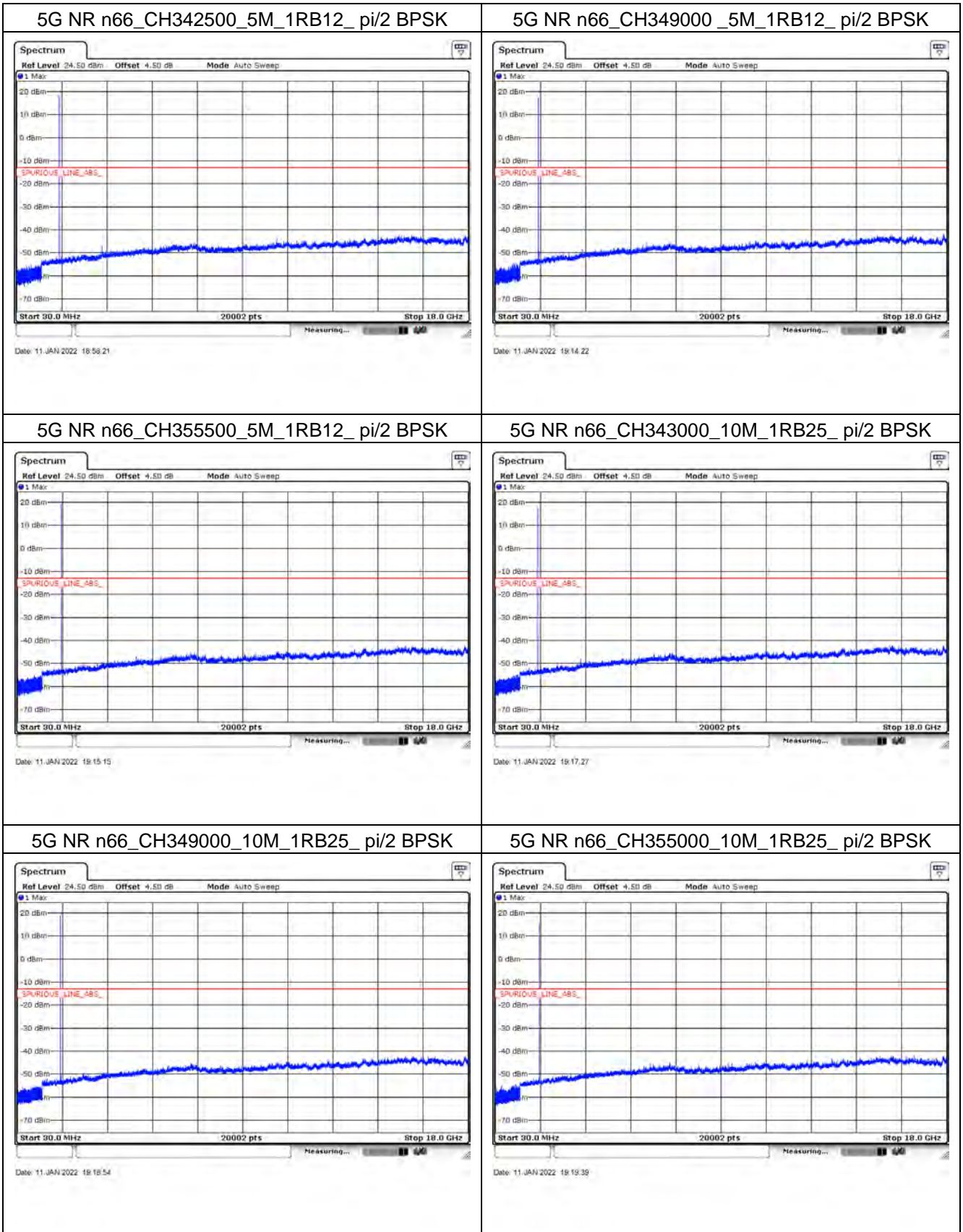


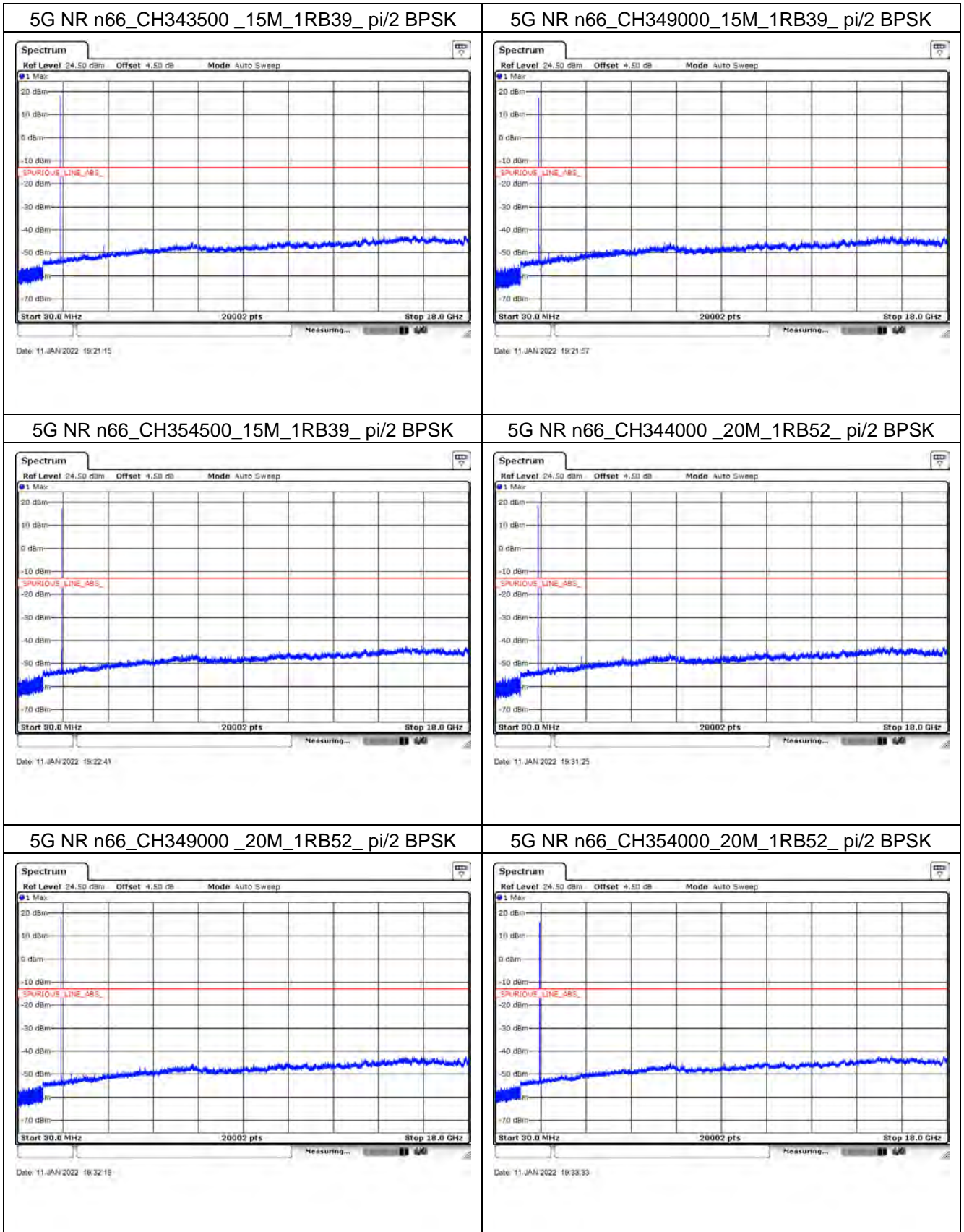


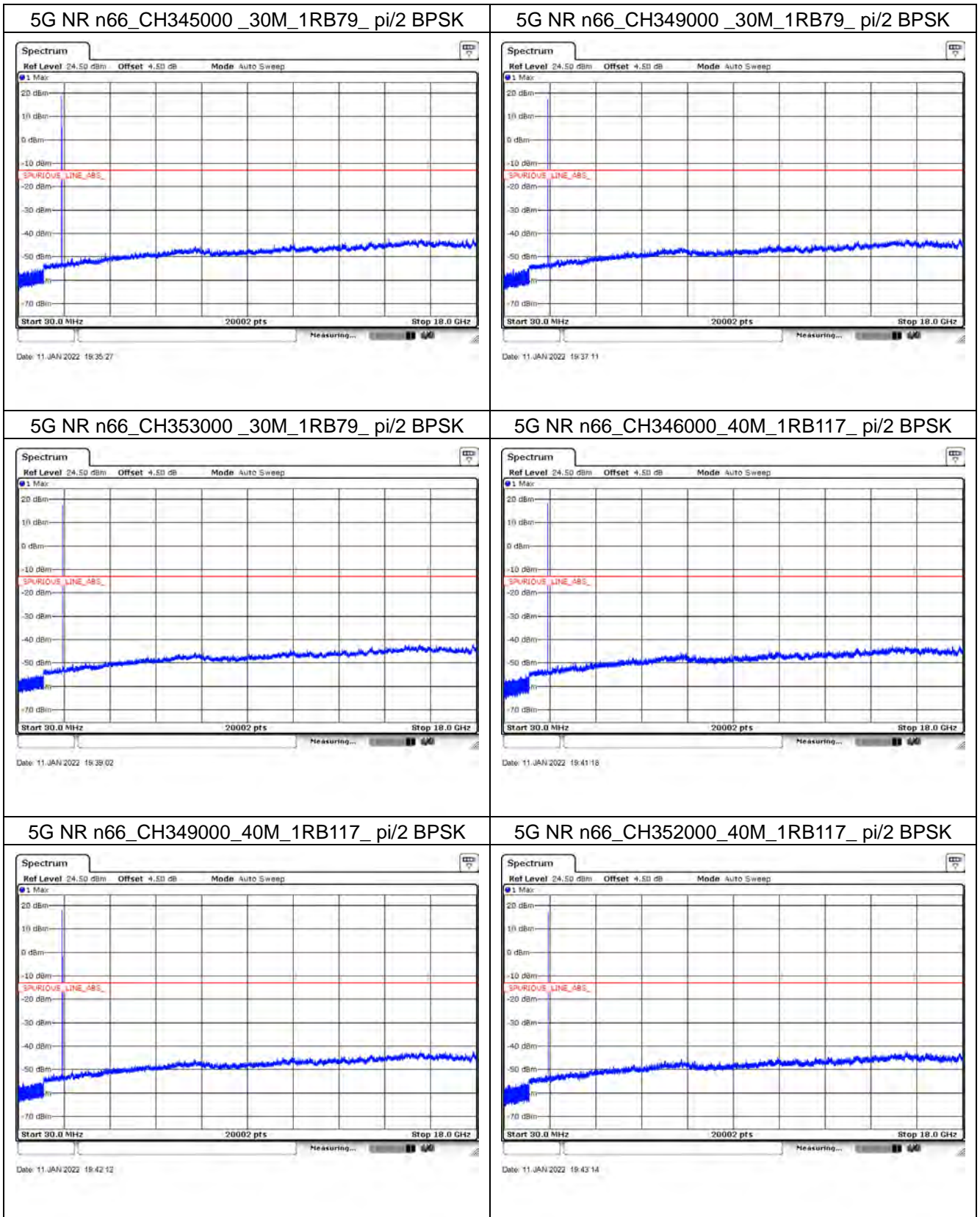
Mode 4: 5G NR n30



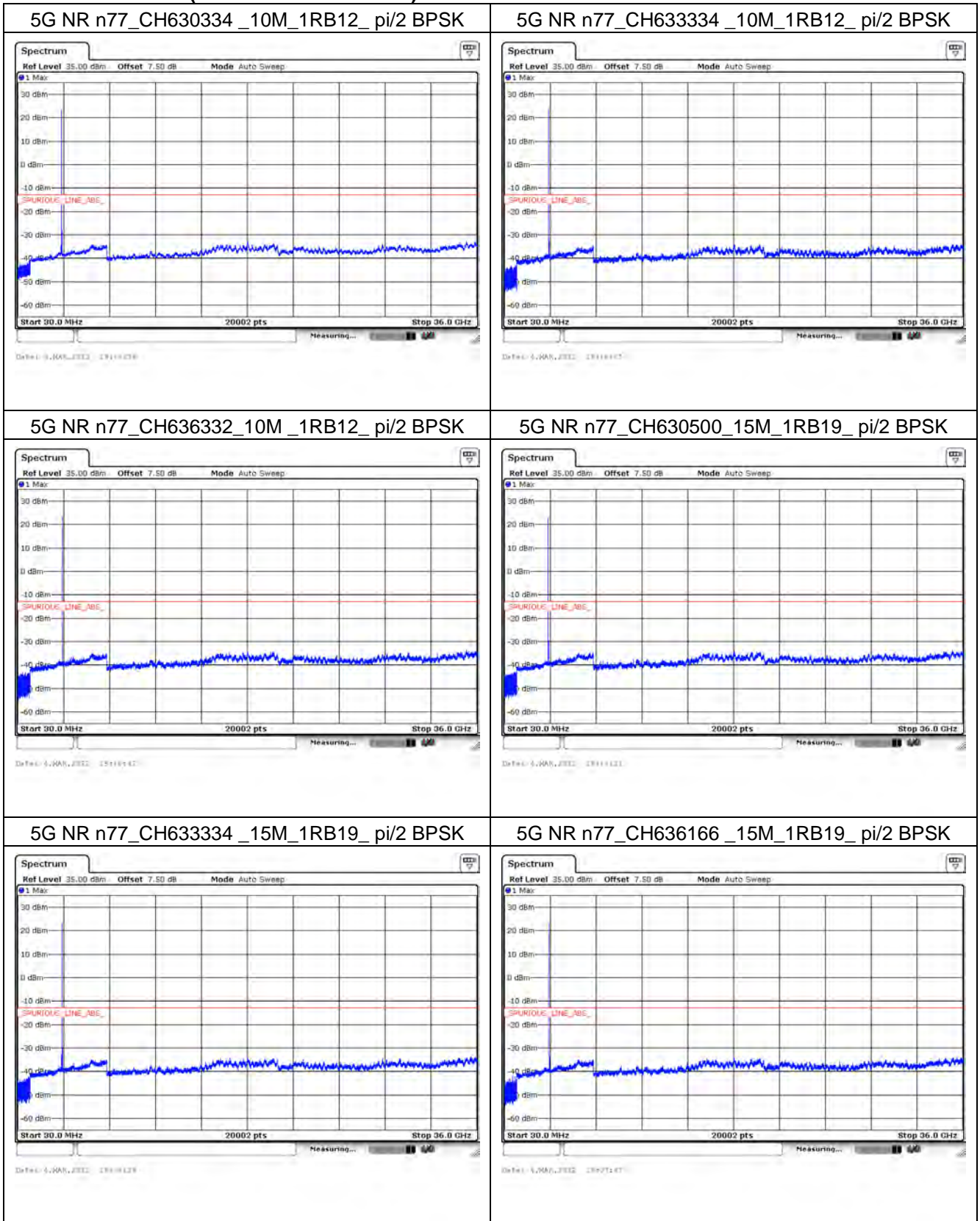
Mode 5: 5G NR n66

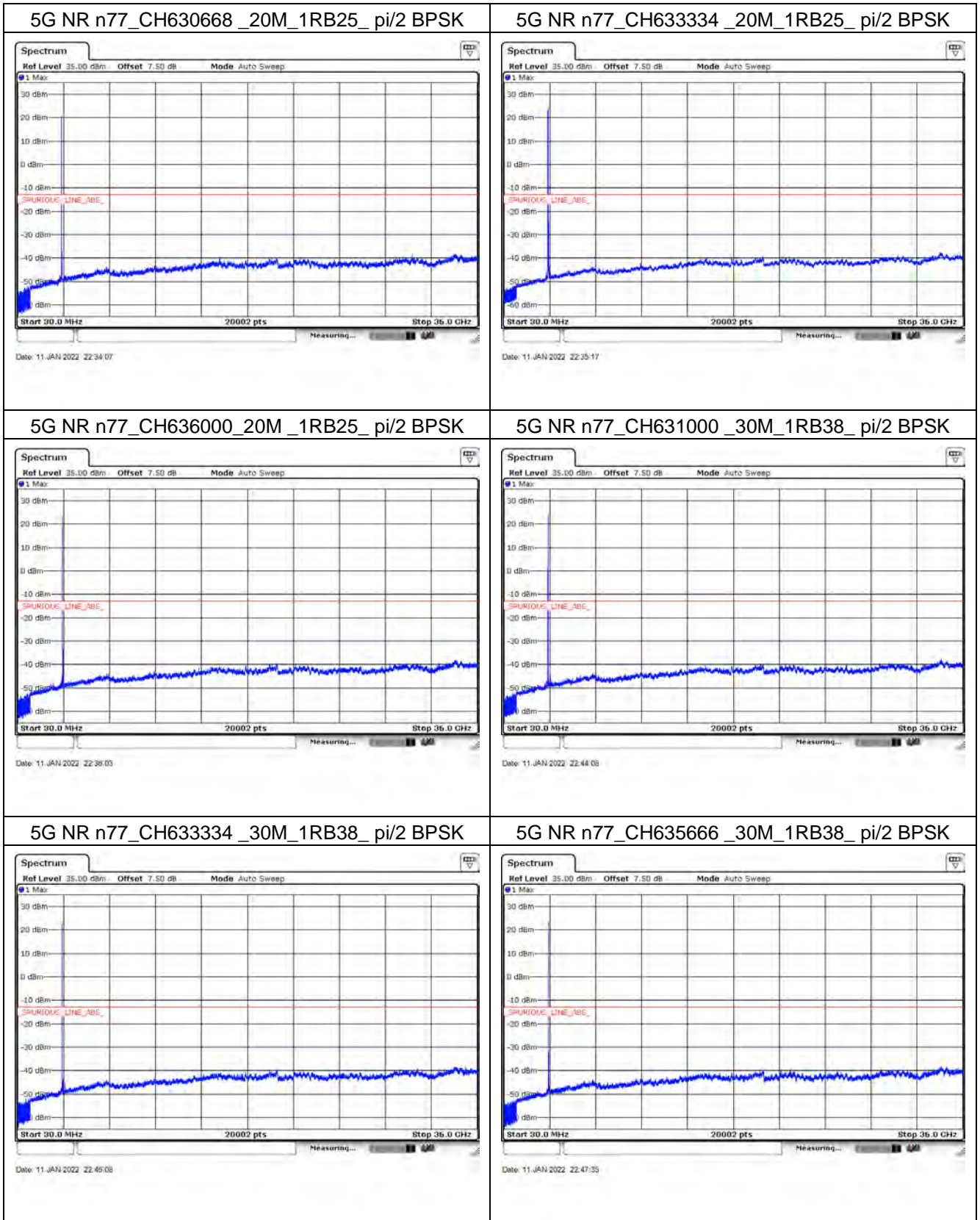


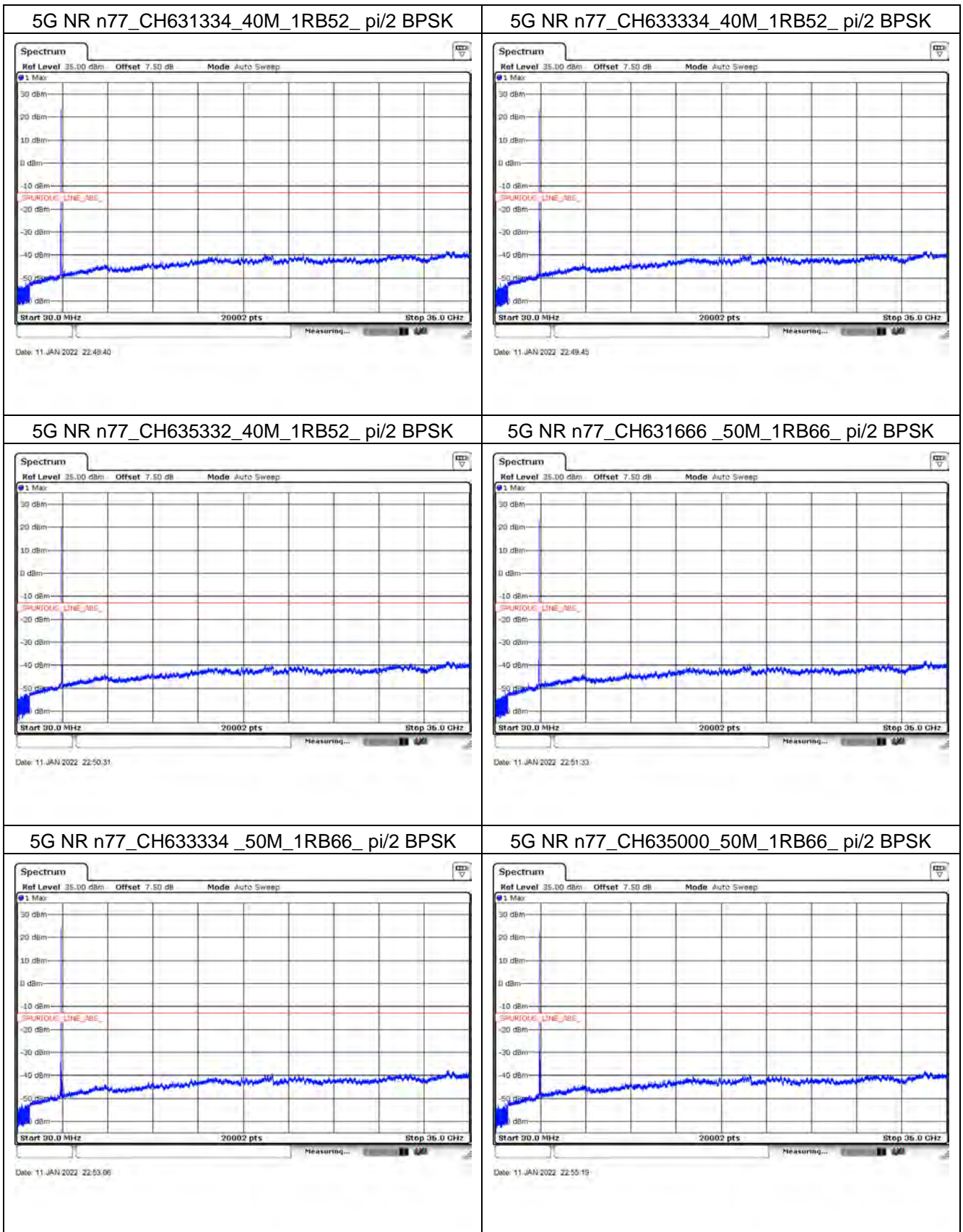


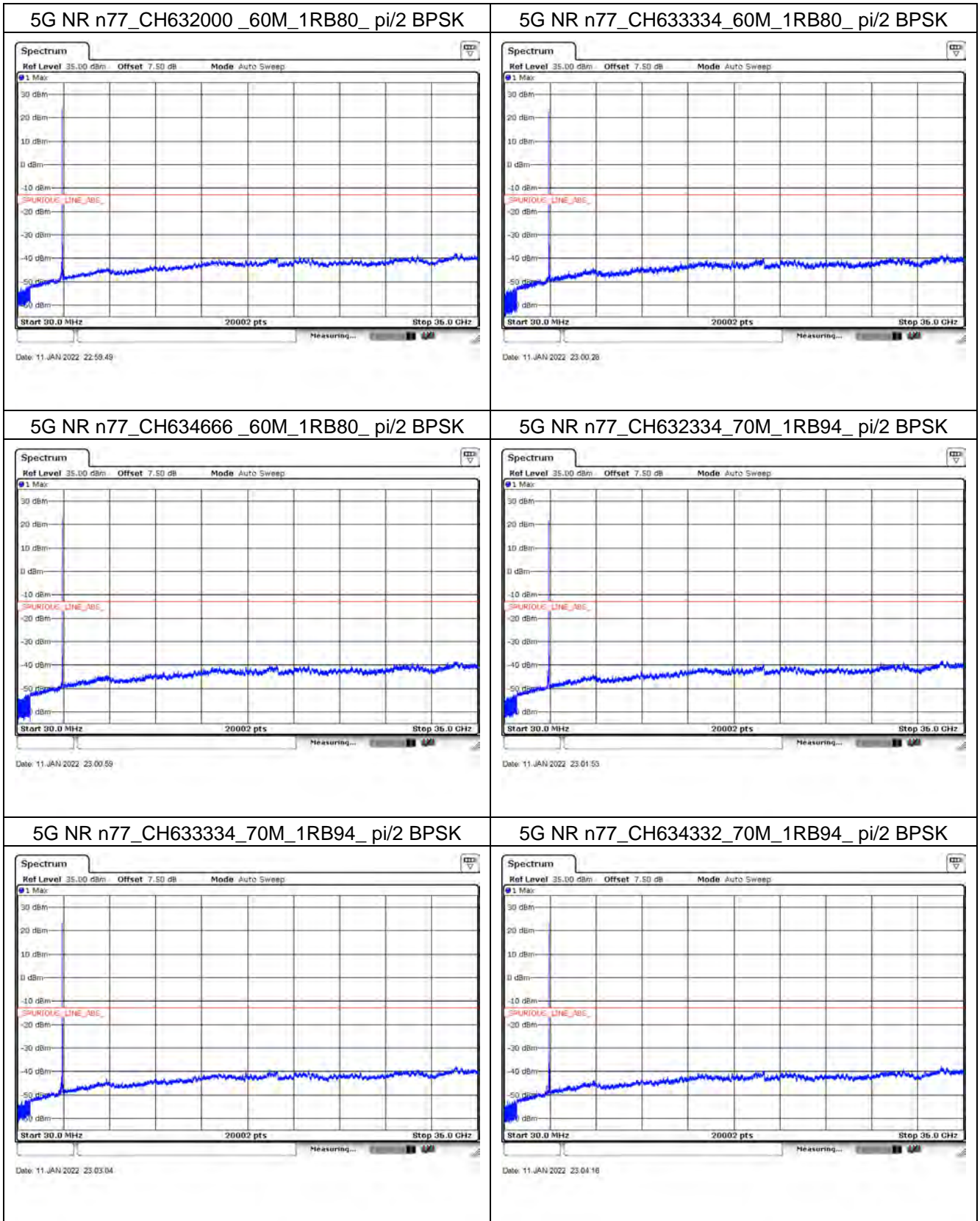


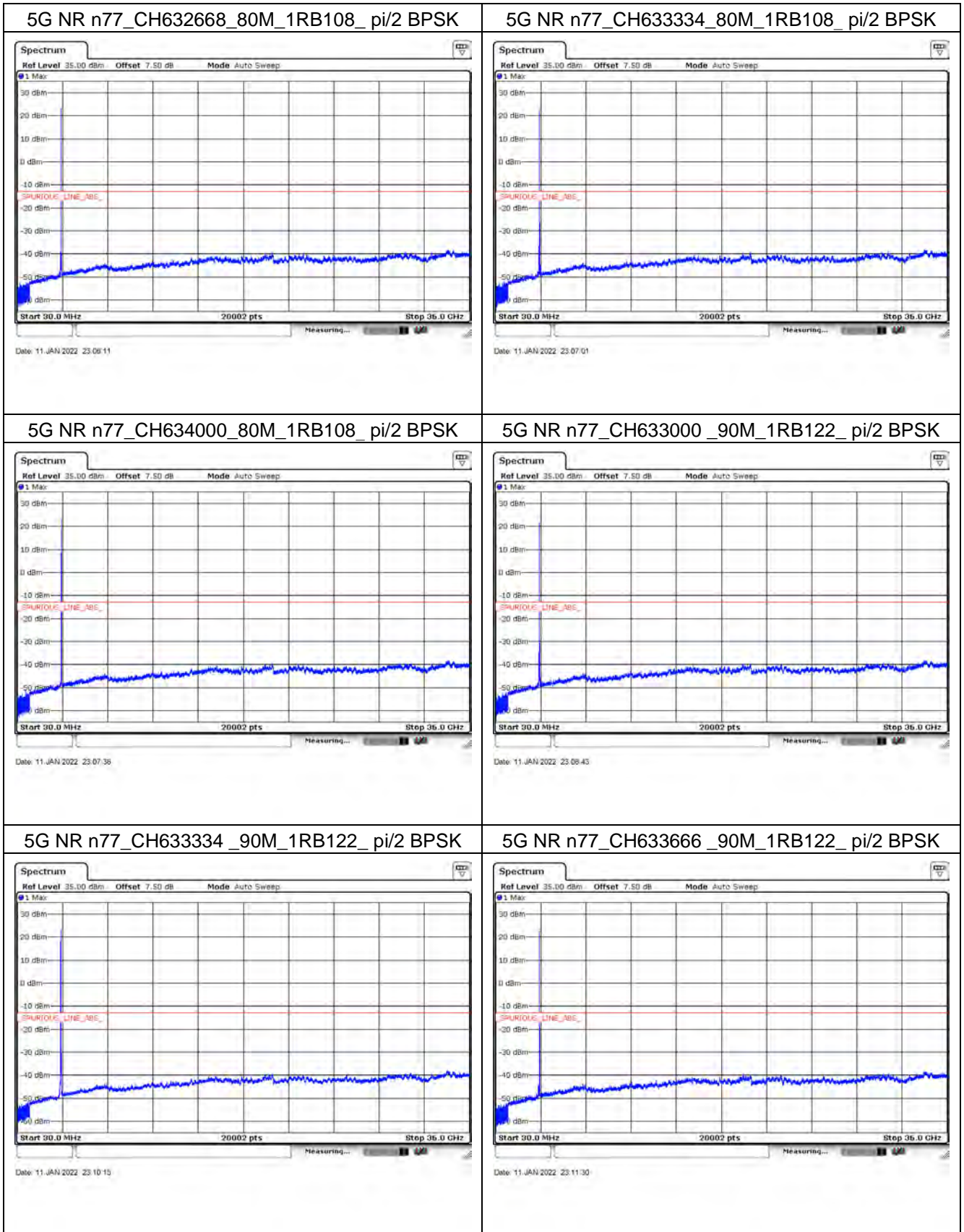
Mode 6: 5G NR n77 (Part 27 3450~3550 MHz)

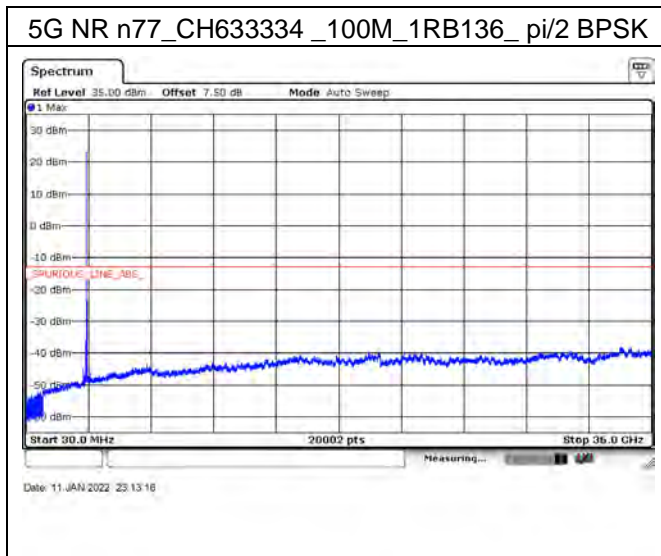




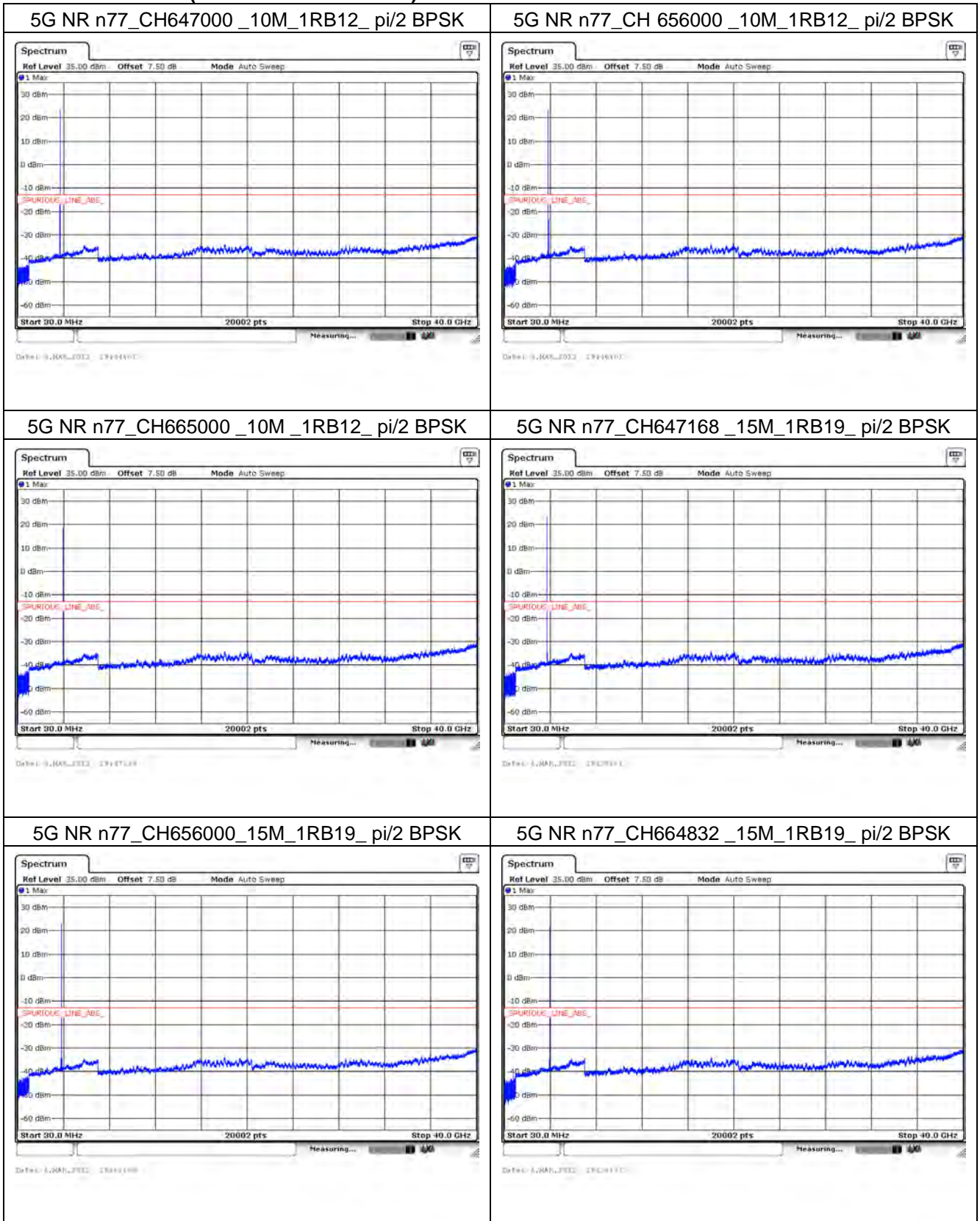


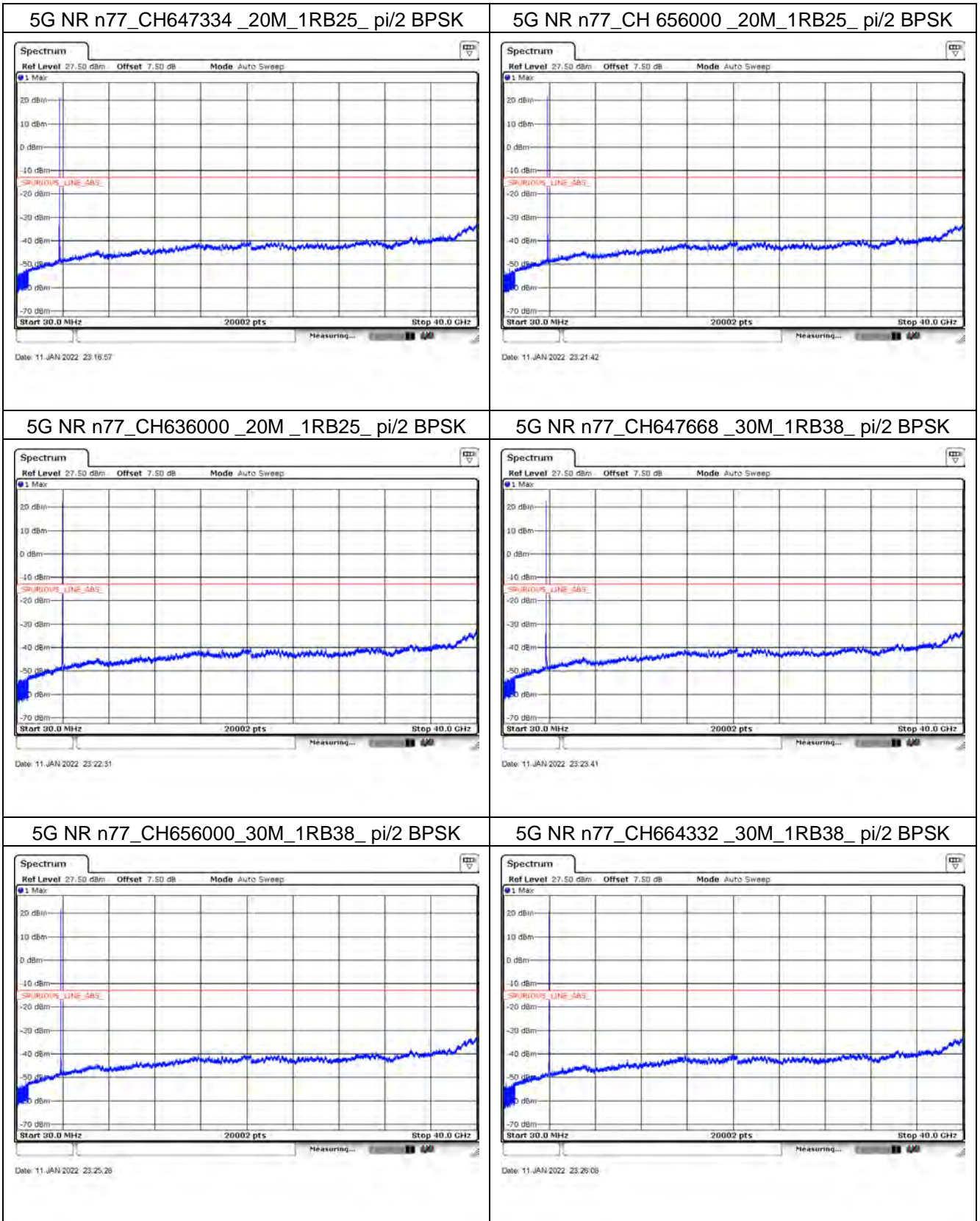


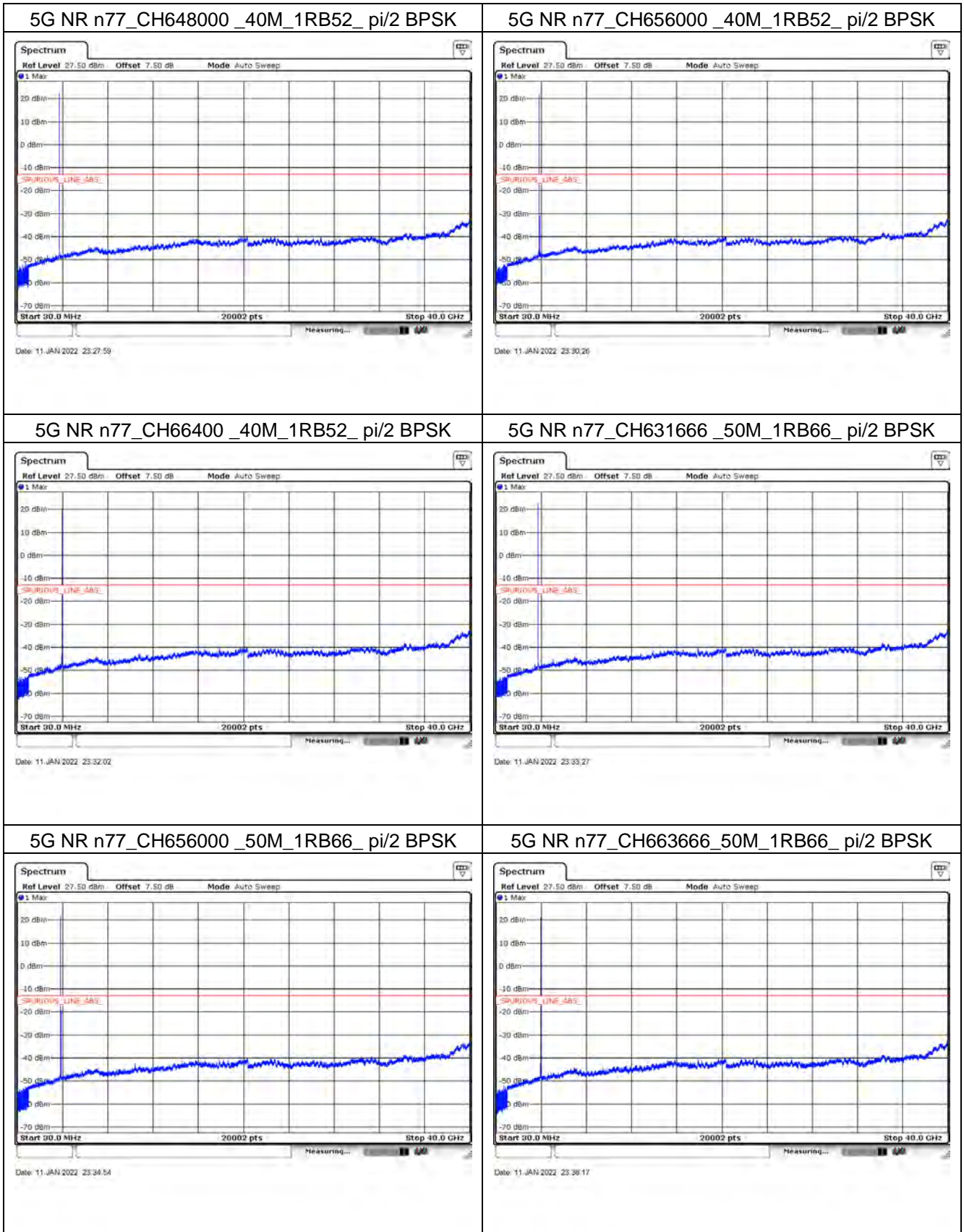


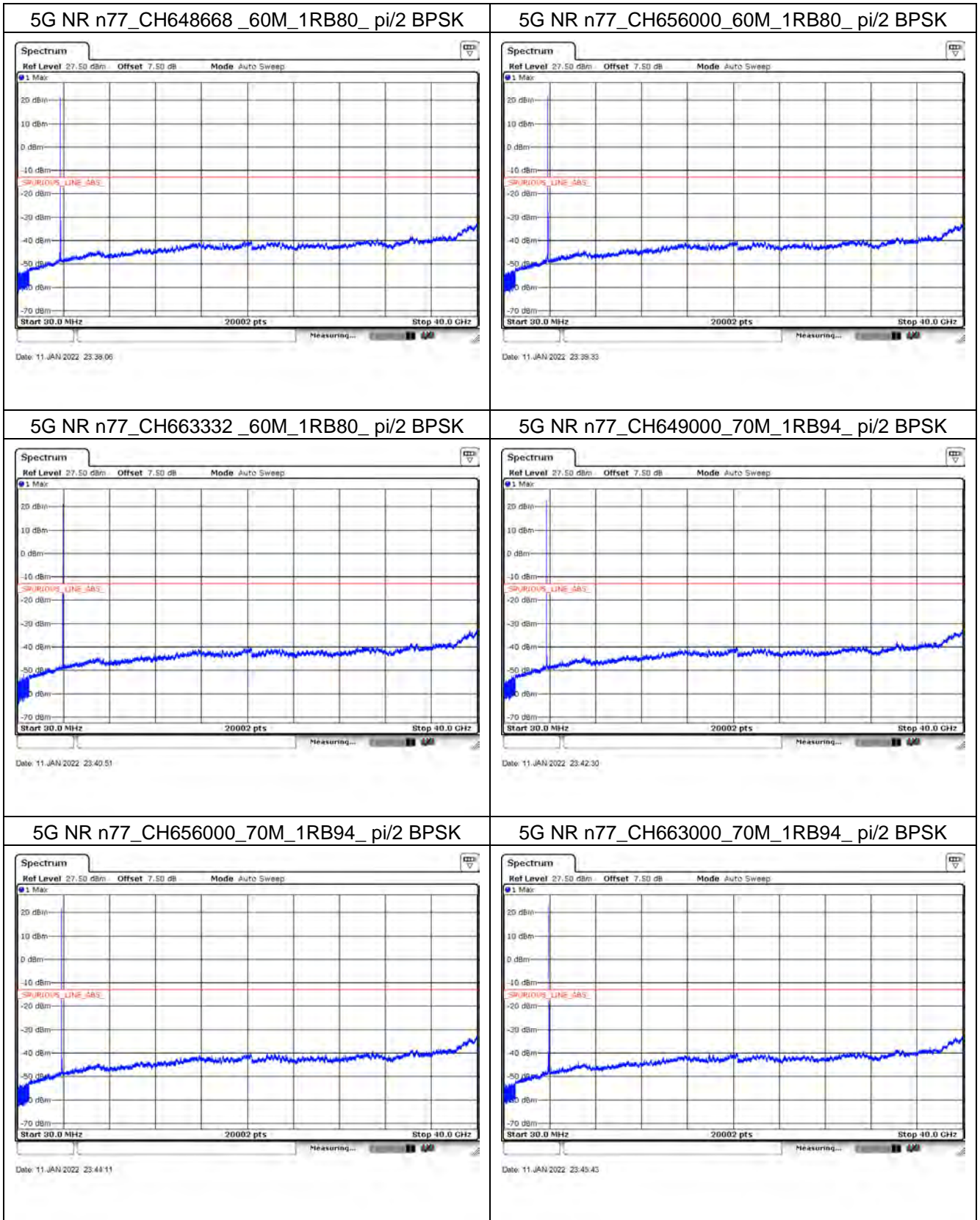


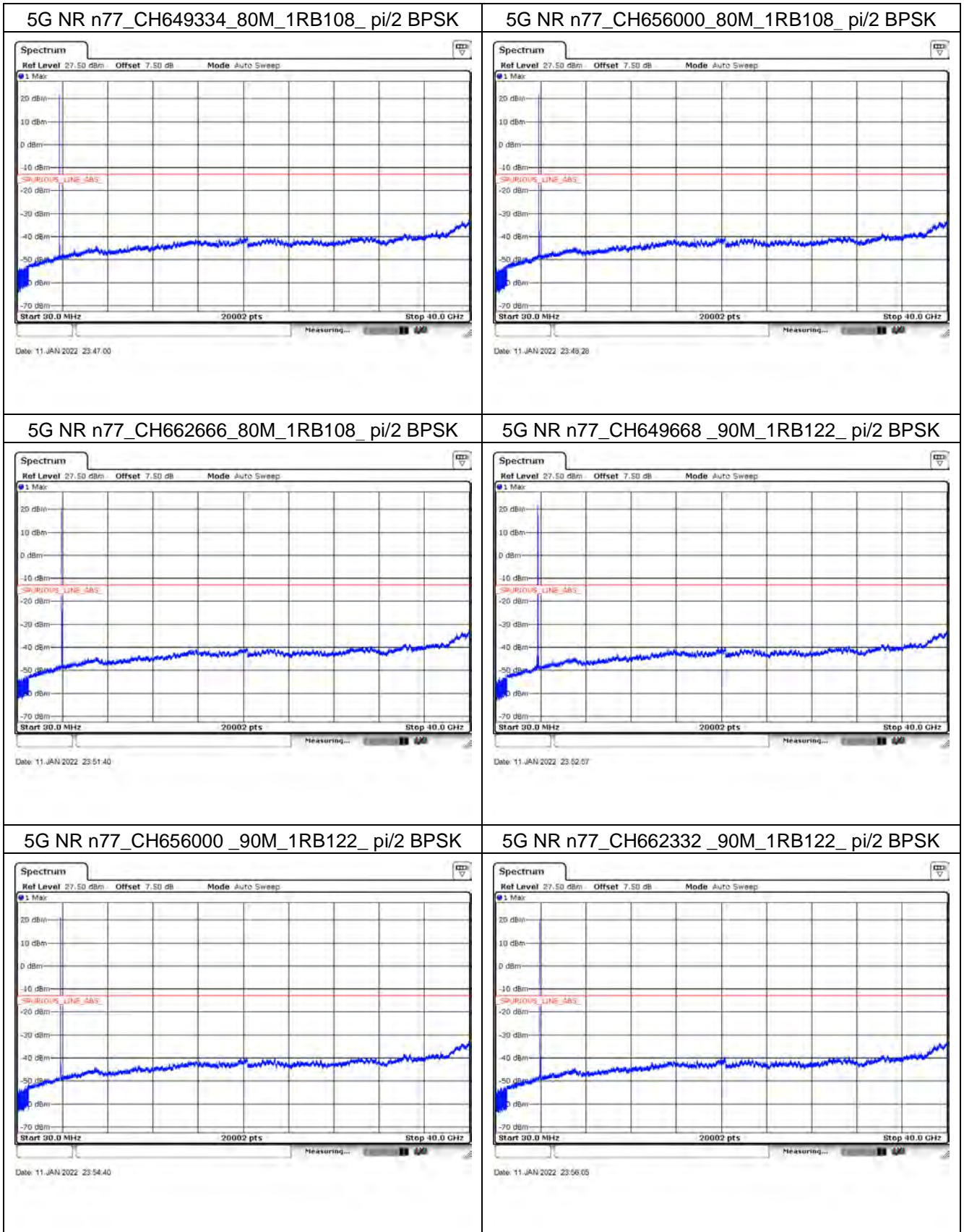
Mode 7: 5G NR n77 (Part 27 3700~3980 MHz)

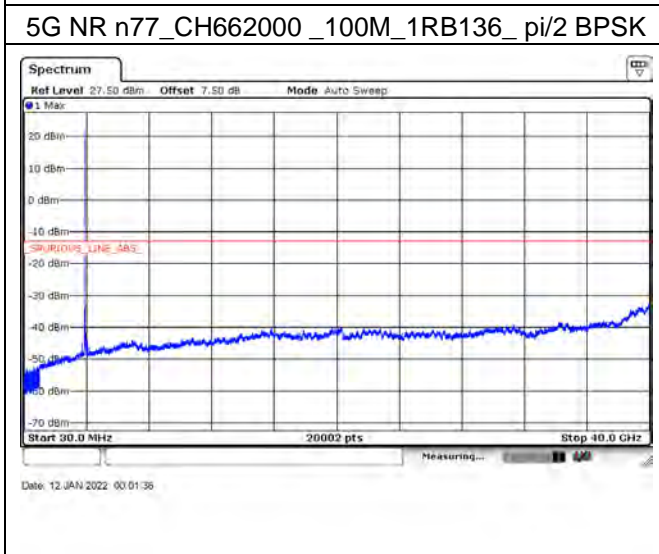
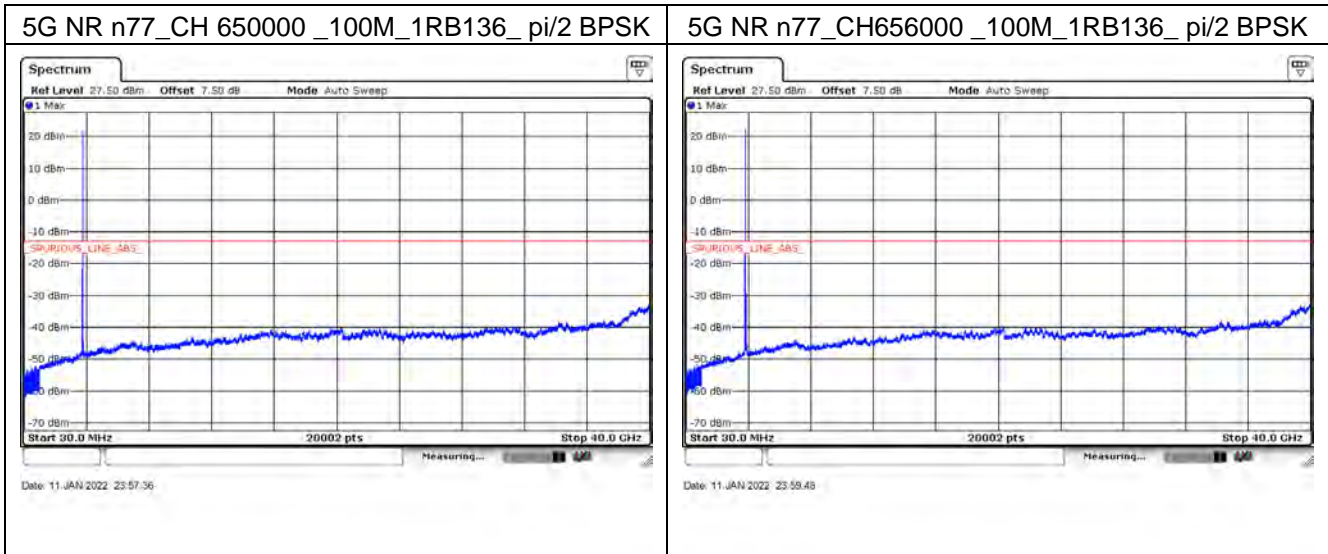






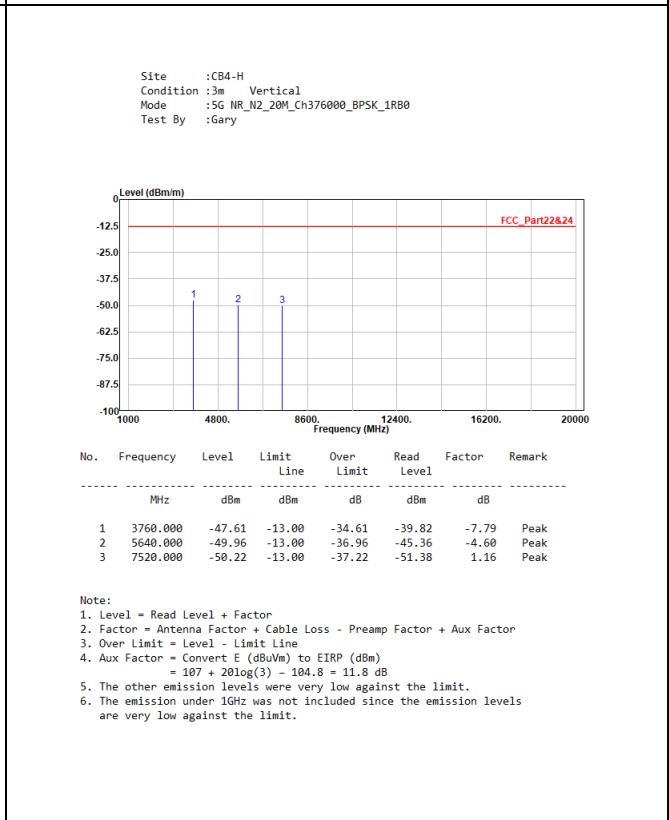
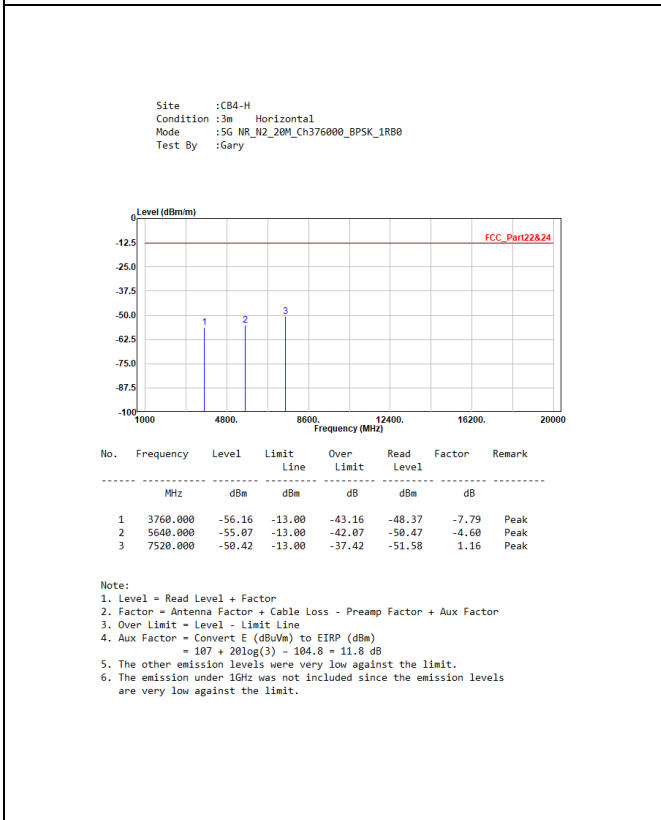
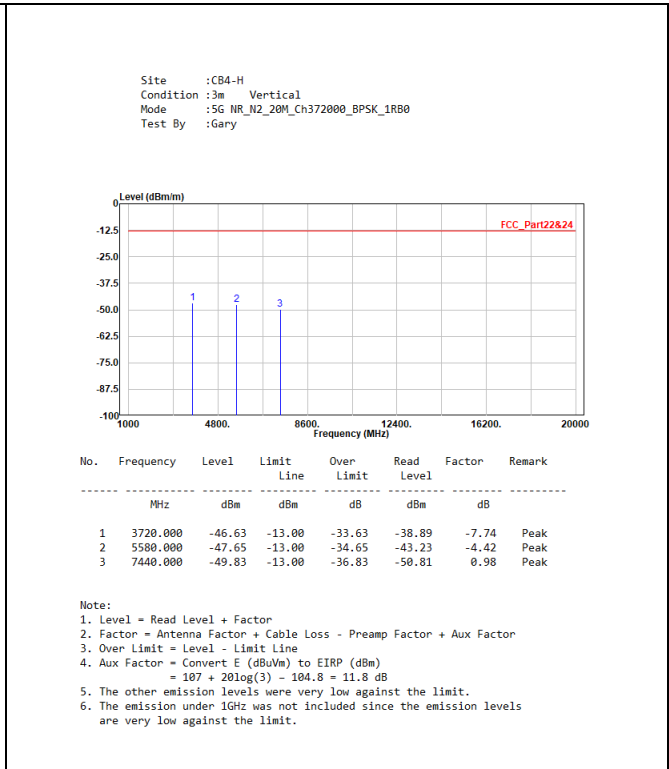
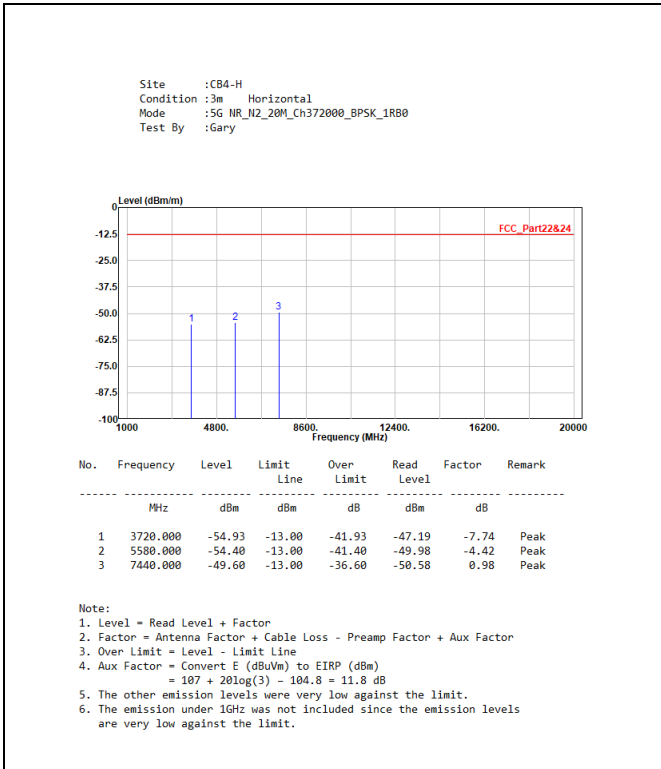




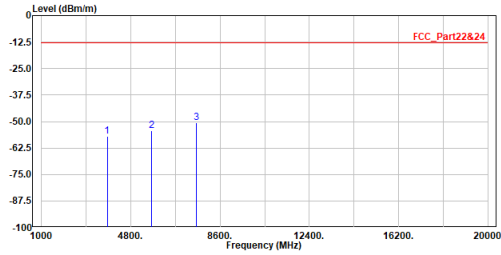


6.5. Test Result of Radiated Spurious Emission

Mode 1: 5G NR n2



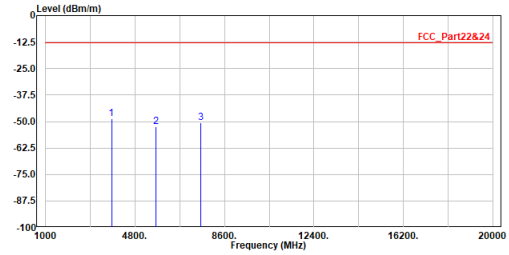
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N2_20M_Ch380000_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3800.000	-57.09	-13.00	-44.09	-49.33	-7.76	Peak
2	5700.000	-54.41	-13.00	-41.41	-49.82	-4.59	Peak
3	7600.000	-50.41	-13.00	-37.41	-51.45	1.04	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

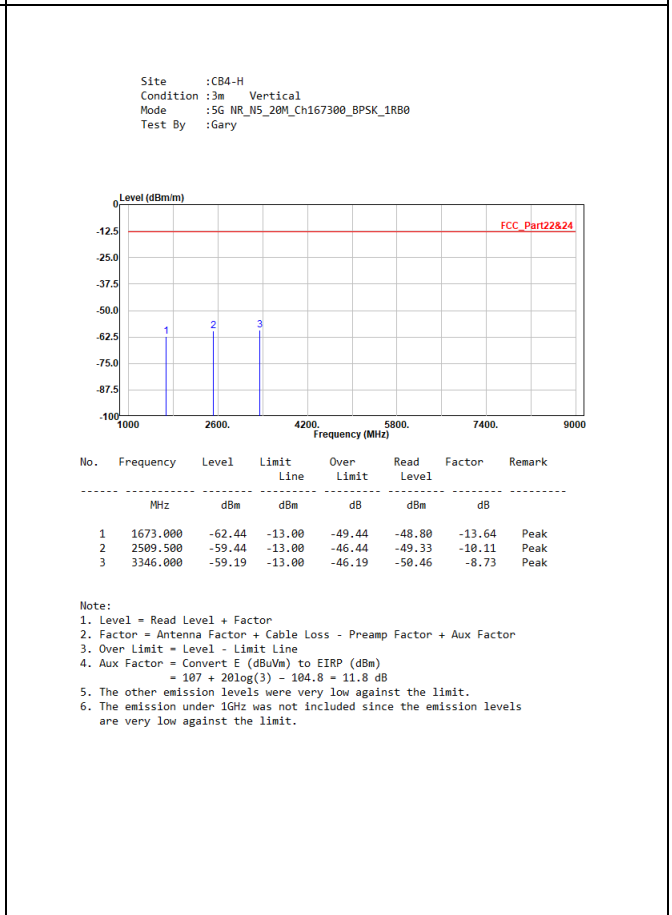
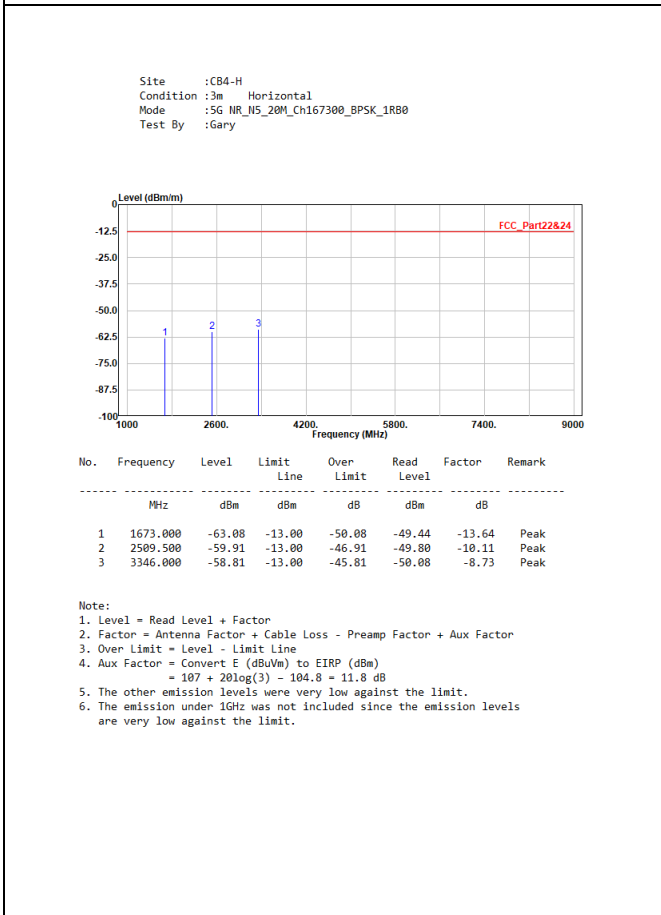
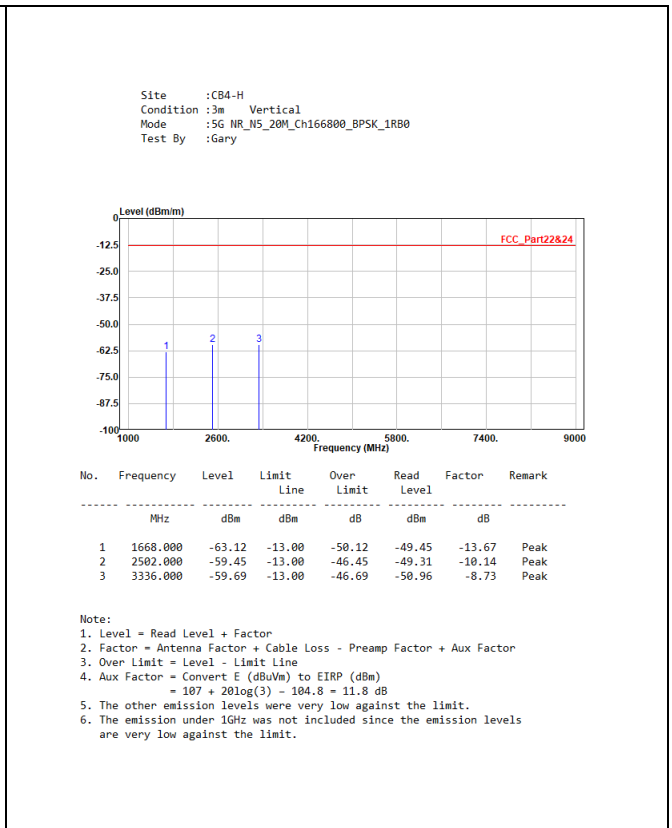
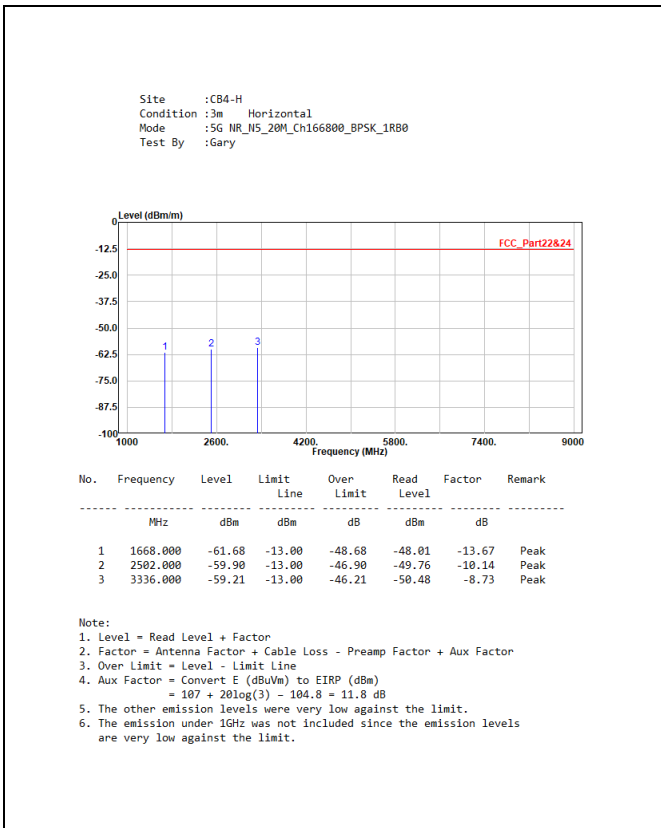
Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N2_20M_Ch380000_BPSK_1RB0
 Test By :Gary



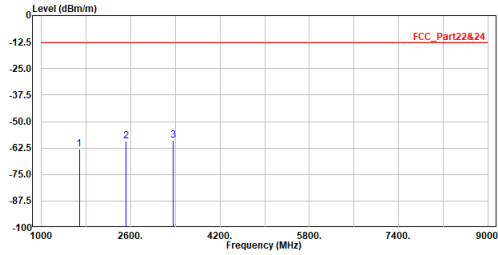
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3800.000	-48.83	-13.00	-35.83	-41.07	-7.76	Peak
2	5700.000	-52.51	-13.00	-39.51	-47.92	-4.59	Peak
3	7600.000	-50.51	-13.00	-37.51	-51.55	1.04	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Mode 2: 5G NR n5



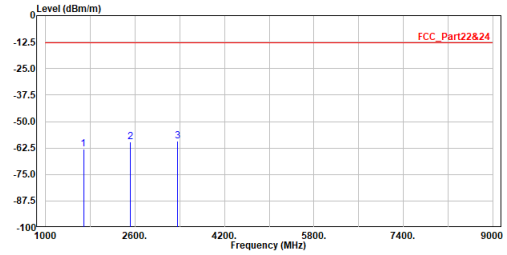
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N5_20M_Ch167800_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1678.000	-62.90	-13.00	-49.90	-49.29	-13.61	Peak
2	2517.000	-59.32	-13.00	-46.32	-49.24	-10.08	Peak
3	3356.000	-58.81	-13.00	-45.81	-50.07	-8.74	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N5_20M_Ch167800_BPSK_1RB0
 Test By :Gary

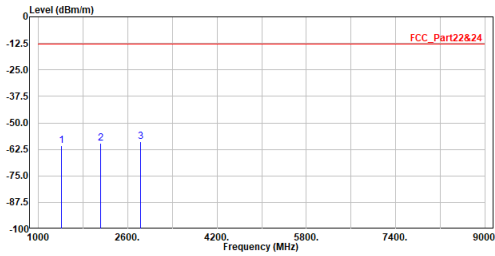


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1678.000	-63.07	-13.00	-50.07	-49.46	-13.61	Peak
2	2517.000	-59.57	-13.00	-46.57	-49.49	-10.08	Peak
3	3356.000	-59.30	-13.00	-46.30	-50.56	-8.74	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Mode 3: 5G NR n12

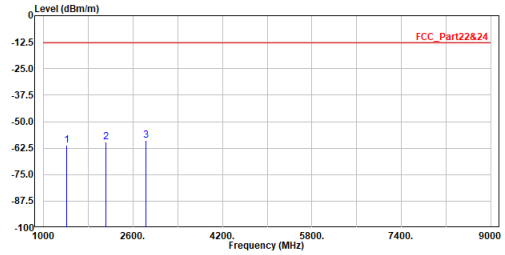
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N12_15M_Ch141300_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1413.000	-60.93	-13.00	-47.93	-48.80	-12.13	Peak
2	2119.500	-59.76	-13.00	-46.76	-48.99	-10.77	Peak
3	2826.000	-58.78	-13.00	-45.78	-49.43	-9.35	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

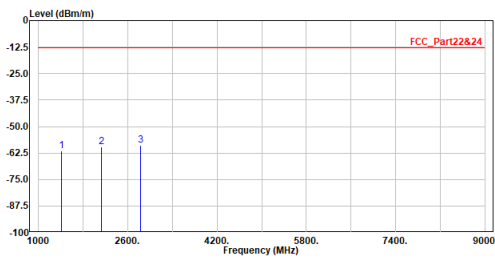
Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N12_15M_Ch141300_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1413.000	-61.11	-13.00	-48.11	-48.98	-12.13	Peak
2	2119.500	-59.81	-13.00	-46.81	-49.04	-10.77	Peak
3	2826.000	-58.85	-13.00	-45.85	-49.50	-9.35	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

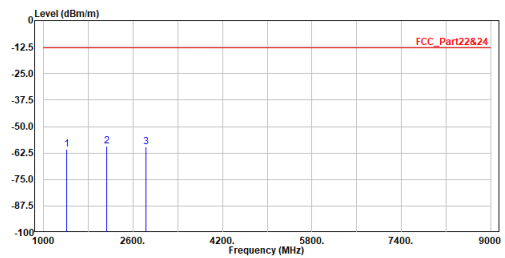
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N12_15M_Ch141500_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1415.000	-61.50	-13.00	-48.50	-49.35	-12.15	Peak
2	2122.500	-59.67	-13.00	-46.67	-48.95	-10.72	Peak
3	2830.000	-58.75	-13.00	-45.75	-49.38	-9.37	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

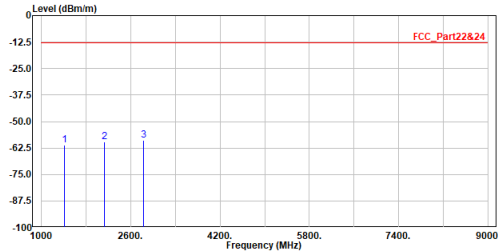
Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N12_15M_Ch141500_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1415.000	-60.79	-13.00	-47.79	-48.64	-12.15	Peak
2	2122.500	-59.20	-13.00	-46.20	-48.48	-10.72	Peak
3	2830.000	-59.49	-13.00	-46.49	-50.12	-9.37	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

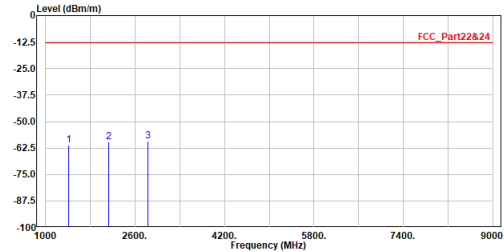
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N12_15M_Ch141700_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1417.000	-61.15	-13.00	-48.15	-48.98	-12.17	Peak
2	2125.500	-59.63	-13.00	-46.63	-48.96	-10.67	Peak
3	2834.000	-58.92	-13.00	-45.92	-49.52	-9.40	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) = 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

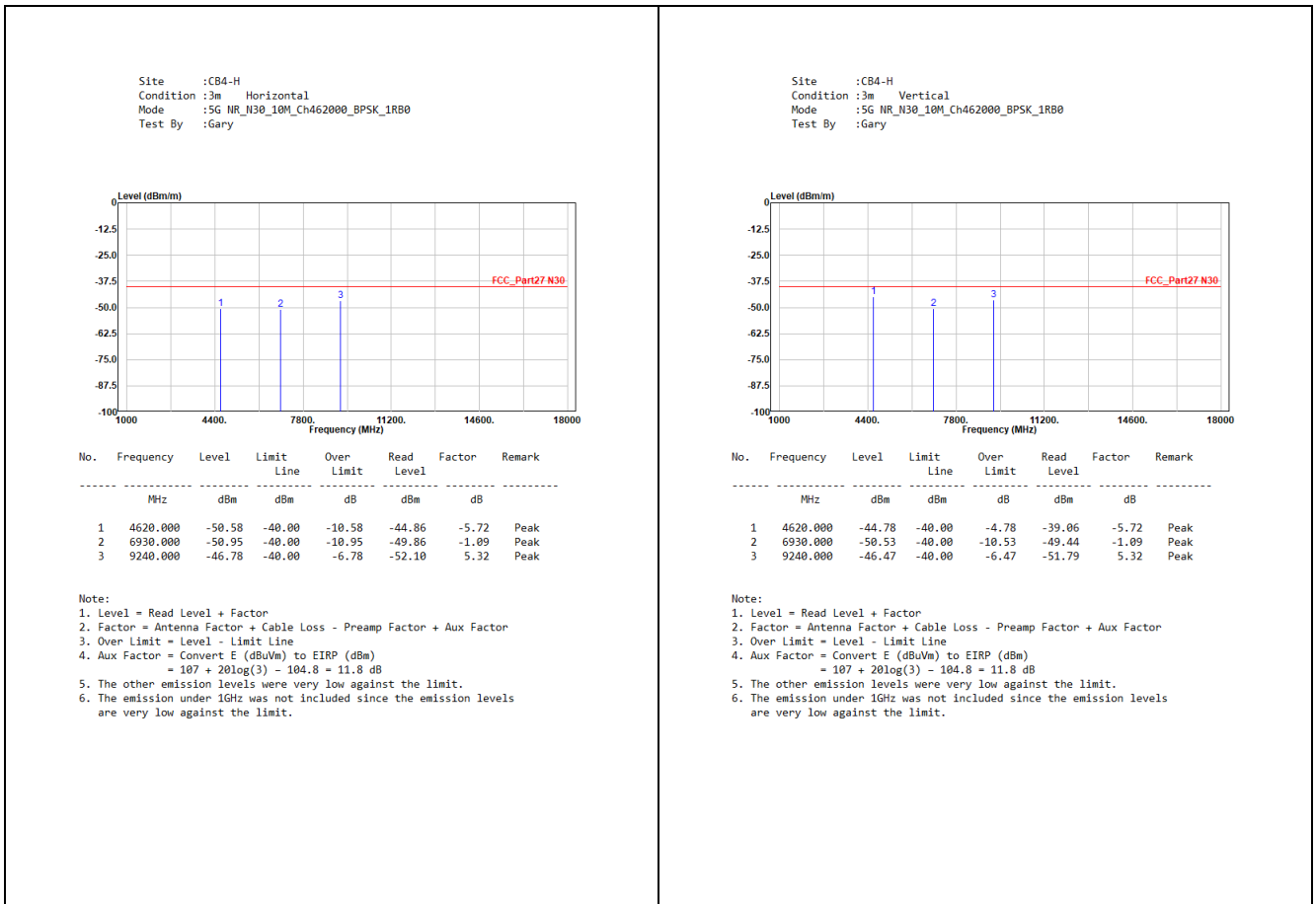
Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N12_15M_Ch141700_BPSK_1RB0
 Test By :Gary



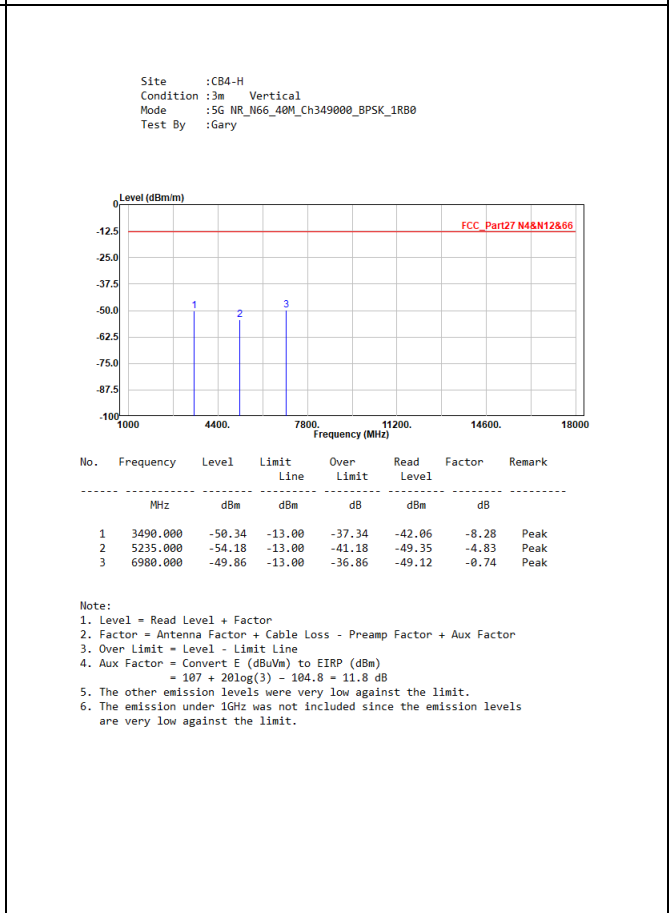
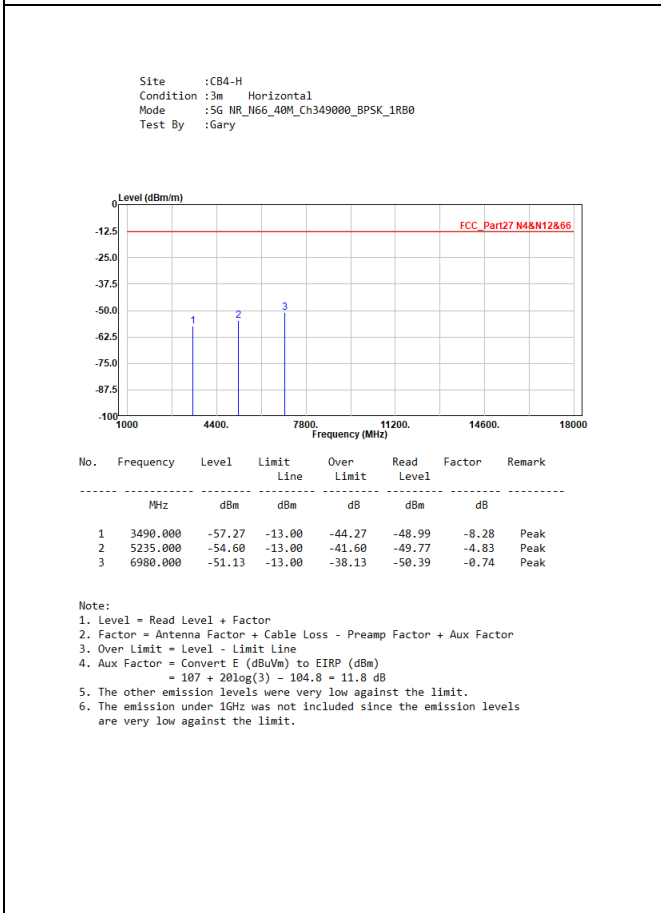
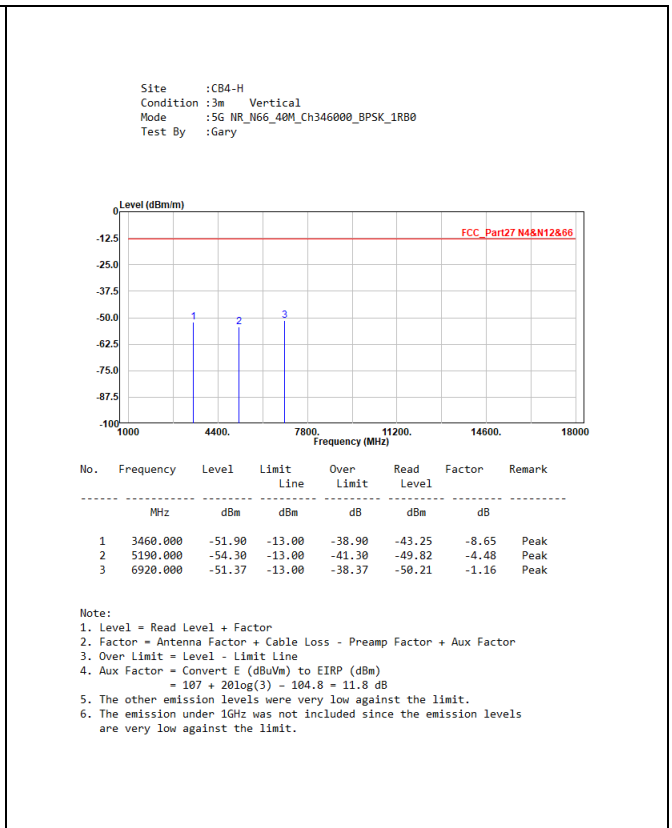
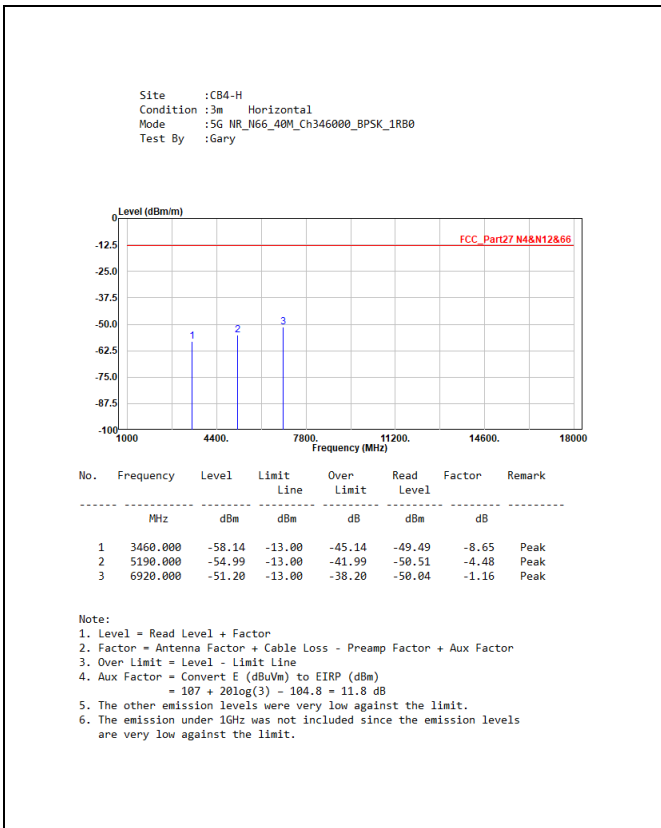
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1417.000	-60.99	-13.00	-47.99	-48.82	-12.17	Peak
2	2125.500	-59.65	-13.00	-46.65	-48.98	-10.67	Peak
3	2834.000	-59.21	-13.00	-46.21	-49.81	-9.40	Peak

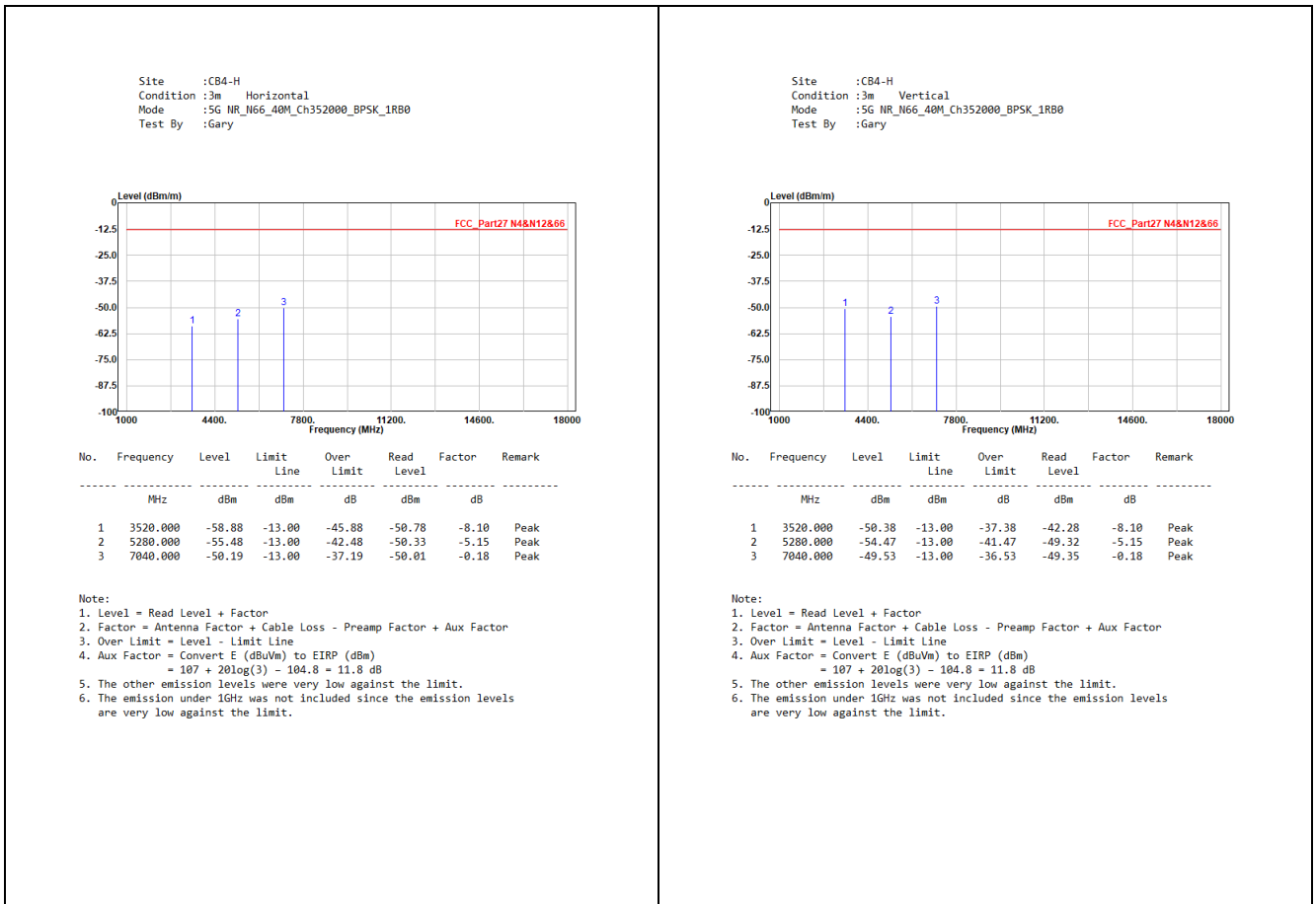
Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) = 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Mode 4: 5G NR n30

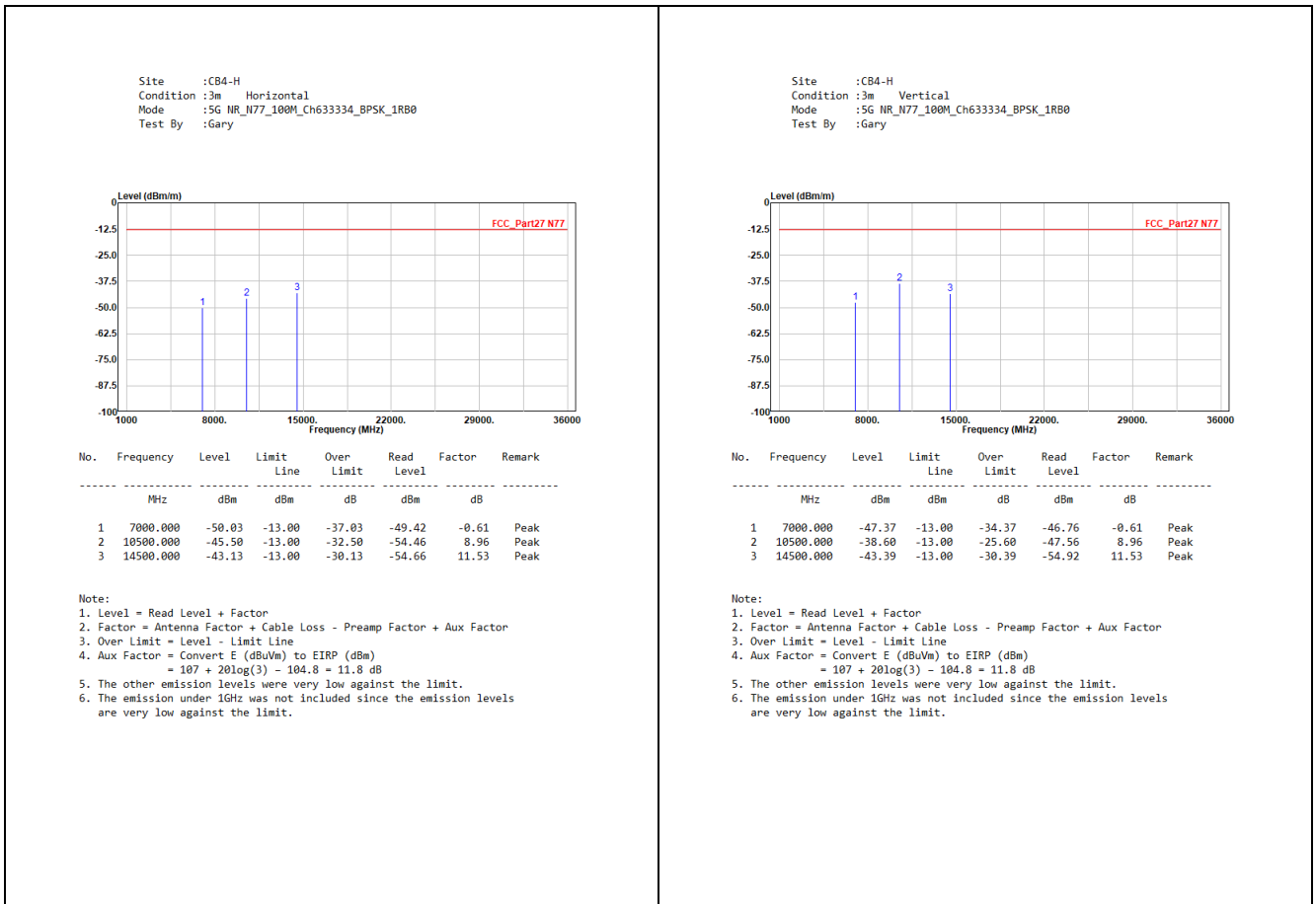


Mode 5: 5G NR n66



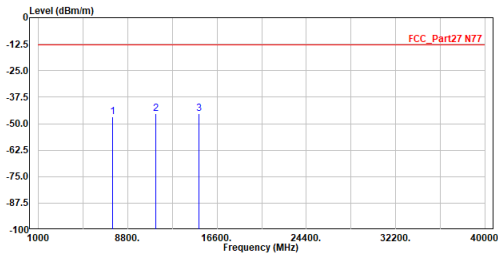


Mode 6: 5G NR n77 (Part 27 3450~3550 MHz)



Mode 7: 5G NR n77 (Part 27 3700~3980 MHz)

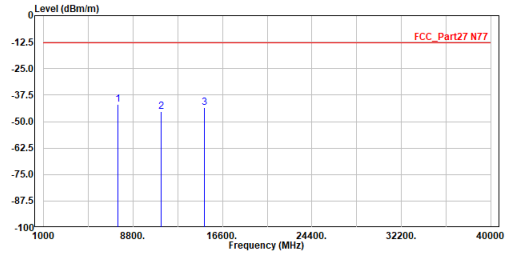
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N77_100M_Ch650000_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7500.000	-46.86	-13.00	-33.86	-47.92	1.06	Peak
2	11250.000	-45.25	-13.00	-32.25	-55.05	9.80	Peak
3	15000.000	-45.32	-13.00	-32.32	-56.57	11.25	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

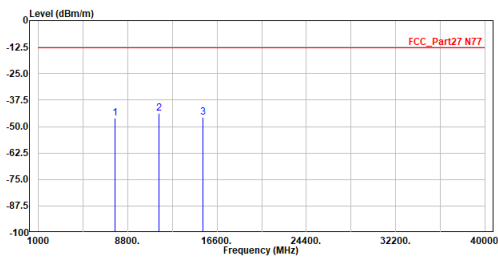
Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N77_100M_Ch650000_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7500.000	-41.81	-13.00	-28.81	-42.87	1.06	Peak
2	11250.000	-45.28	-13.00	-32.28	-55.08	9.80	Peak
3	15000.000	-43.40	-13.00	-30.40	-54.65	11.25	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

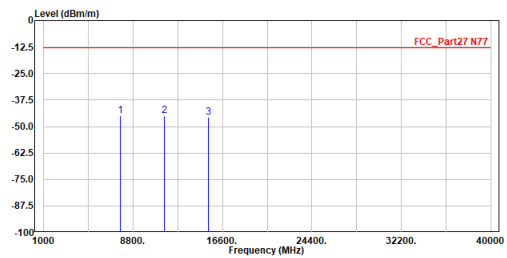
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N77_100M_Ch656000_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7600.000	-46.21	-13.00	-33.21	-47.22	1.01	Peak
2	11520.000	-43.82	-13.00	-30.82	-54.11	10.29	Peak
3	15360.000	-45.65	-13.00	-32.65	-55.74	10.09	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

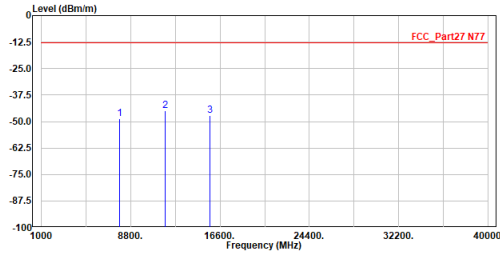
Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N77_100M_Ch656000_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7600.000	-44.96	-13.00	-31.96	-45.97	1.01	Peak
2	11520.000	-44.99	-13.00	-31.99	-55.28	10.29	Peak
3	15360.000	-45.51	-13.00	-32.51	-55.60	10.09	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

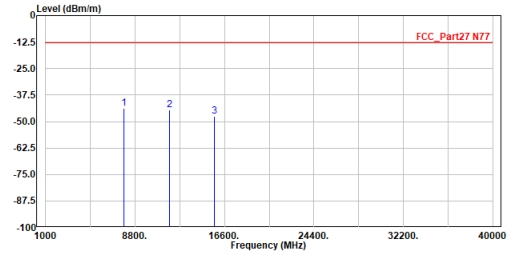
Site :CB4-H
 Condition :3m Horizontal
 Mode :5G NR_N77_100M_Ch662000_BPSK_1RB0
 Test By :Gary



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	Limit	Level	dB	
1	7860.000	-48.70	-13.00	-35.70	-50.32	1.62	Peak
2	11790.000	-44.76	-13.00	-31.76	-53.89	9.13	Peak
3	15720.000	-47.32	-13.00	-34.32	-56.46	9.14	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :CB4-H
 Condition :3m Vertical
 Mode :5G NR_N77_100M_Ch662000_BPSK_1RB0
 Test By :Gary

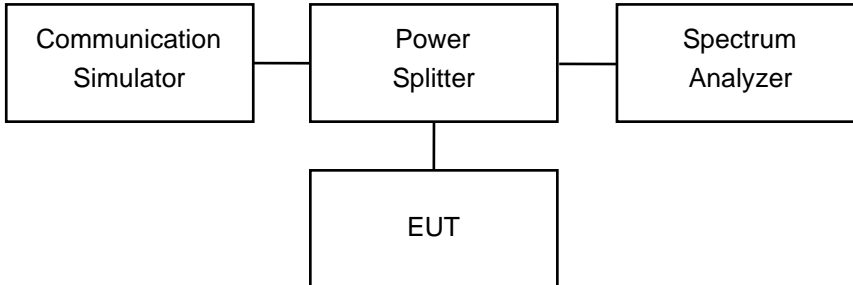


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	Limit	Level	dB	
1	7860.000	-43.72	-13.00	-30.72	-45.34	1.62	Peak
2	11790.000	-44.71	-13.00	-31.71	-53.84	9.13	Peak
3	15720.000	-47.40	-13.00	-34.40	-56.54	9.14	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
 3. Over Limit = Level - Limit Line
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
 = 107 + 20log(3) - 104.8 = 11.8 dB
 5. The other emission levels were very low against the limit.
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

7. Conducted Band Edge

7.1. Test Setup



7.2. Test Procedure

1. The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The path loss was compensated to the results for each measurement.
2. In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

7.3. Test Methodology and Reference Procedures

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI C63.26-2015

KDB 662911 D01 Multiple Transmitter Output v02r01

7.4. Test Result of Conducted Band Edge

Mode 1: 5G NR n2

