		3969.99	-21.20	3.82	43.87	9.12	27.97	30.00	2.03	H
	25MHz	3712.50	-21.74	3.62	43.46	8.29	26.39	30.00	3.61	H
		3840.00	-21.15	3.89	43.44	8.70	27.10	30.00	2.90	H
		3967.50	-21.89	3.82	44.29	9.14	27.72	30.00	2.28	V
	30MHz	3715.02	-22.99	3.61	44.57	8.32	26.29	30.00	3.71	H
		3840.00	-20.86	3.89	43.44	8.70	27.39	30.00	2.61	H
		3964.98	-21.52	3.82	43.90	9.16	27.72	30.00	2.28	H
	40MHz	3720.00	-22.95	3.60	44.62	8.32	26.39	30.00	3.61	H
		3840.00	-21.06	3.89	43.44	8.70	27.19	30.00	2.81	H
		3960.00	-22.54	3.83	44.74	9.20	27.57	30.00	2.43	H
	50MHz	3725.01	-23.20	3.58	44.76	8.38	26.36	30.00	3.64	H
		3840.00	-20.80	3.89	43.44	8.70	27.45	30.00	2.55	H
		3954.48	-20.66	3.83	43.19	9.18	27.88	30.00	2.12	H
	60MHz	3730.02	-22.11	3.56	44.14	8.41	26.88	30.00	3.12	H
		3840.00	-21.00	3.89	43.44	8.70	27.25	30.00	2.75	H
		3949.98	-22.41	3.83	44.47	9.14	27.37	30.00	2.63	H
	70MHz	3735.00	-21.89	3.59	43.77	8.44	26.73	30.00	3.27	H
		3840.00	-20.66	3.89	43.44	8.70	27.59	30.00	2.41	H
		3945.00	-21.19	3.83	43.53	9.12	27.63	30.00	2.37	H
	80MHz	3740.01	-21.62	3.62	43.45	8.47	26.68	30.00	3.32	H
		3840.00	-20.76	3.89	43.44	8.70	27.49	30.00	2.51	H
		3939.99	-22.29	3.83	44.18	9.10	27.16	30.00	2.84	H
	90MHz	3745.02	-22.16	3.65	43.94	8.50	26.63	30.00	3.37	H
		3840.00	-20.99	3.89	43.44	8.70	27.26	30.00	2.74	H
		3934.98	-22.61	3.83	44.98	9.10	27.64	30.00	2.36	H
	100MHz	3750.00	-21.87	3.67	43.93	8.50	26.89	30.00	3.11	H
		3840.00	-20.54	3.89	43.44	8.70	27.71	30.00	2.29	H
		3930.00	-22.03	3.83	44.53	9.10	27.77	30.00	2.23	V
16QAM	10MHz	3705.00	-22.68	3.65	43.47	8.25	25.39	30.00	4.61	H
		3840.00	-22.41	3.89	43.44	8.70	25.84	30.00	4.16	H
		3975.00	-23.87	3.82	44.62	9.22	26.15	30.00	3.85	H
	15MHz	3707.52	-23.36	3.64	44.60	8.26	25.86	30.00	4.14	H
		3840.00	-22.03	3.89	43.44	8.70	26.22	30.00	3.78	H
		3972.48	-23.62	3.82	44.95	9.16	26.67	30.00	3.33	H
	20MHz	3710.01	-22.89	3.63	43.69	8.28	25.45	30.00	4.55	H
		3840.00	-21.95	3.89	43.44	8.70	26.30	30.00	3.70	H
		3969.99	-22.80	3.82	43.87	9.12	26.37	30.00	3.63	H
	25MHz	3712.50	-22.60	3.62	43.46	8.29	25.53	30.00	4.47	H
		3840.00	-21.78	3.89	43.44	8.70	26.47	30.00	3.53	H
		3967.50	-23.13	3.82	44.29	9.14	26.48	30.00	3.52	H
	30MHz	3715.02	-24.17	3.61	44.57	8.32	25.11	30.00	4.89	H
		3840.00	-22.38	3.89	43.44	8.70	25.87	30.00	4.13	H
		3964.98	-22.76	3.82	43.90	9.16	26.48	30.00	3.52	H
	40MHz	3720.00	-24.37	3.60	44.62	8.32	24.97	30.00	5.03	V
		3840.00	-21.84	3.89	43.44	8.70	26.41	30.00	3.59	H
		3960.00	-23.29	3.83	44.74	9.20	26.82	30.00	3.18	H
	50MHz	3725.01	-23.88	3.58	44.76	8.38	25.68	30.00	4.32	H
		3840.00	-21.72	3.89	43.44	8.70	26.53	30.00	3.47	H

		3954.48	-22.05	3.83	43.19	9.18	26.49	30.00	3.51	H
	60MHz	3730.02	-23.17	3.56	44.14	8.41	25.82	30.00	4.18	H
		3840.00	-21.71	3.89	43.44	8.70	26.54	30.00	3.46	H
		3949.98	-23.33	3.83	44.47	9.14	26.45	30.00	3.55	H
	70MHz	3735.00	-23.11	3.59	43.77	8.44	25.51	30.00	4.49	H
		3840.00	-21.56	3.89	43.44	8.70	26.69	30.00	3.31	H
		3945.00	-22.49	3.83	43.53	9.12	26.33	30.00	3.67	H
	80MHz	3740.01	-22.72	3.62	43.45	8.47	25.58	30.00	4.42	H
		3840.00	-21.68	3.89	43.44	8.70	26.57	30.00	3.43	H
		3939.99	-23.34	3.83	44.18	9.10	26.11	30.00	3.89	H
	90MHz	3745.02	-23.33	3.65	43.94	8.50	25.46	30.00	4.54	H
		3840.00	-21.89	3.89	43.44	8.70	26.36	30.00	3.64	H
		3934.98	-23.95	3.83	44.98	9.10	26.30	30.00	3.70	H
	100MHz	3750.00	-23.02	3.67	43.93	8.50	25.74	30.00	4.26	H
		3840.00	-21.96	3.89	43.44	8.70	26.29	30.00	3.71	H
		3930.00	-24.04	3.83	44.53	9.10	25.76	30.00	4.24	V
64QAM	10MHz	3975.00	-25.44	3.82	44.62	9.22	24.58	30.00	5.42	H
	15MHz	3972.48	-24.97	3.82	44.95	9.16	25.32	30.00	4.68	H
	20MHz	3969.99	-23.95	3.82	43.87	9.12	25.22	30.00	4.78	V
	25MHz	3967.50	-24.52	3.82	44.29	9.14	25.09	30.00	4.91	V
	30MHz	3964.98	-24.06	3.82	43.90	9.16	25.18	30.00	4.82	H
	40MHz	3960.00	-24.86	3.83	44.74	9.20	25.25	30.00	4.75	H
	50MHz	3954.48	-23.32	3.83	43.19	9.18	25.22	30.00	4.78	V
	60MHz	3949.98	-24.68	3.83	44.47	9.14	25.10	30.00	4.90	H
	70MHz	3945.00	-23.89	3.83	43.53	9.12	24.93	30.00	5.07	H
	80MHz	3939.99	-24.52	3.83	44.18	9.10	24.93	30.00	5.07	H
	90MHz	3934.98	-25.14	3.83	44.98	9.10	25.11	30.00	4.89	H
	100MHz	3930.00	-24.53	3.83	44.53	9.10	25.27	30.00	4.73	H
256QAM	10MHz	3975.00	-27.11	3.82	44.62	9.22	22.91	30.00	7.09	H
	15MHz	3972.48	-27.67	3.82	44.95	9.16	22.62	30.00	7.38	H
	20MHz	3969.99	-25.61	3.82	43.87	9.12	23.56	30.00	6.44	H
	25MHz	3967.50	-26.27	3.82	44.29	9.14	23.34	30.00	6.66	H
	30MHz	3964.98	-25.88	3.82	43.90	9.16	23.36	30.00	6.64	V
	40MHz	3960.00	-26.50	3.83	44.74	9.20	23.61	30.00	6.39	H
	50MHz	3954.48	-25.06	3.83	43.19	9.18	23.48	30.00	6.52	H
	60MHz	3949.98	-26.40	3.83	44.47	9.14	23.38	30.00	6.62	H
	70MHz	3945.00	-25.76	3.83	43.53	9.12	23.06	30.00	6.94	H
	80MHz	3939.99	-26.64	3.83	44.18	9.10	22.81	30.00	7.19	H
	90MHz	3934.98	-27.22	3.83	44.98	9.10	23.03	30.00	6.97	H
	100MHz	3930.00	-26.26	3.83	44.53	9.10	23.54	30.00	6.46	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 3.37 dB, k = 2.

A.2 Emission Limit

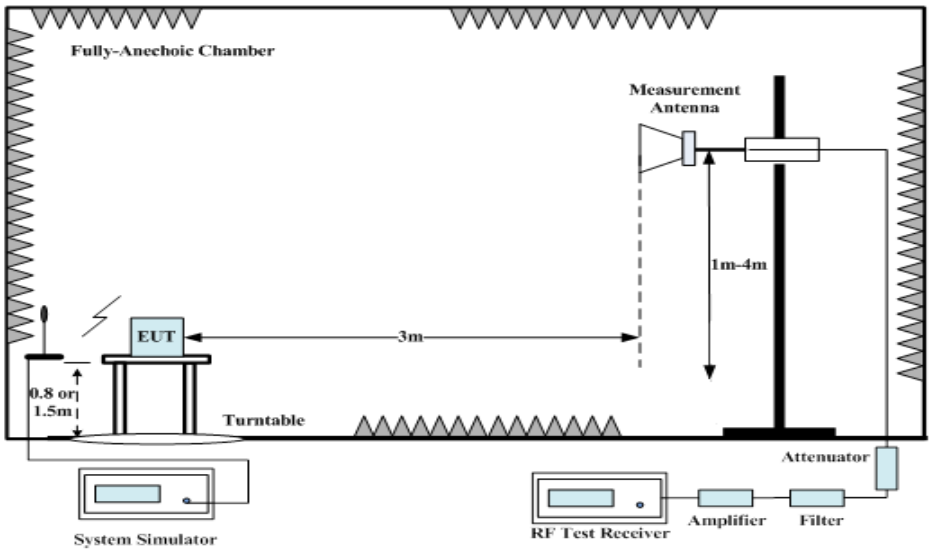
A.2.1 Measurement Method

The measurement procedures in TIA-603E-2016 are used.

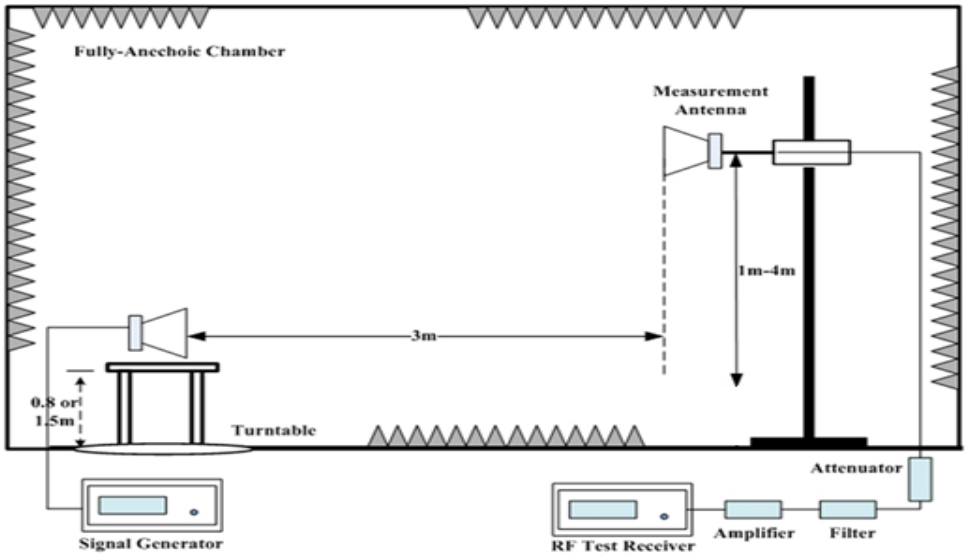
The spectrum was scanned from 9 kHz to the lower of the 10th harmonic of the highest fundamental frequency and 40GHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of each NR Band.

The procedure of radiated spurious emissions is as follows:

For measurements performed at frequencies less than or equal to 1 GHz, the EUT was placed on a 80cm-high non-conductive support; For measurements performed at frequencies above 1GHz,EUT was placed on a 1.5-meter-high non-conductive support. A measurement antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. In the initial test, the height of the measurement antenna was varied from 1 m to 4 m for the relative positioning that produces the maximum radiated signal level. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



1. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
2. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. The height of measurement antenna varied between 1 m to 4 m to maximize the received signal amplitude for each emission that was detected and measured in the initial test. A power (P_{Mea}) is applied to the input of the substitution antenna and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test was performed with the measurement antenna in both vertical and horizontal polarization.

3. The Path loss (P_{pl}) between the Signal Source and the Substitution Antenna and the Substitution Antenna Gain (G_a) were recorded after test.A amplifier was connected in for the test. The Path loss (P_{pl}) is the summation of the cable loss and the gain of the amplifier.
4. The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{Mea} - P_{pl} + G_a$$

This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

A.2.2 Measurement Limit

NR n5/n26: 22.917 specifies that Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

NR n26 (814MHz~824MHz): Part 90.691 states that out-of-band emission requirement shall apply only to the ‘‘outer’’ channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows: For any frequency removed from the EA licensee’s frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116\text{Log}_{10}(f/6.1)$ decibels or 50 + 10 Log_{10}(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz. For any frequency removed from the EA licensee’s frequency block

greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log$_{10}$(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

NR n7/n41: 27.53(m) (4) specifies " For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. ".

NR n66: 27.53(h) specifies "AWS emission limits—(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log$_{10}$ (P) dB”

NR n77L, n78L: Part 27.53(n) states for mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed−13 dBm/ MHz

NR n77H: Part 27.53(l) states for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz

A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of each NR Band. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of each NR Band into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.

For NR operation, all subcarrier spacing (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration.

Spurious emissions shown in this section measured while operating in EN-DC mode with sub 6GHz NR carrier as well as an LTE (anchor). Spurious emission from the NR carrier device is subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirement of the rules under which the LTE carrier operates.

The range of evaluated frequency is from 9 kHz to 10th harmonic of the fundamental frequency of the transmitter. Measurement value showed only up to 6 maximum emissions noted.

A.2.4 Measurement Results Table

Frequency	Channel	Frequency Range	Result
NR Bands	Low	9kHz-40GHz	Pass
	Middle	9kHz-40GHz	Pass
	High	9kHz-40GHz	Pass

A.2.5 Sweep Table

Subrange	RBW	VBW
9~150 kHz	0.2kHz	0.6kHz
150kHz~30MHz	9kHz	27kHz
30MHz~1 GHz	100KHz	300KHz
1~40 GHz	1 MHz	3 MHz

A.2.6 Measurement Result

NR n5, 5MHz, PI/2 BPSK, Channel 165300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2480.00	-44.49	4.34	10.34	2.15	-40.64	-13.00	27.64	V
4959.00	-55.88	4.92	11.22	2.15	-51.73	-13.00	38.73	H
5785.00	-54.06	5.69	11.09	2.15	-50.81	-13.00	37.81	H
6612.50	-51.15	6.98	10.32	2.15	-49.96	-13.00	36.96	V
7435.50	-47.49	7.89	10.10	2.15	-47.43	-13.00	34.43	V
8266.00	-50.70	7.60	11.20	2.15	-49.25	-13.00	36.25	V

NR n5, 5MHz, PI/2 BPSK, Channel 167300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2516.00	-52.05	4.30	10.30	2.15	-48.20	-13.00	35.20	V
5019.00	-55.98	5.10	11.41	2.15	-51.82	-13.00	38.82	H
5855.50	-55.04	5.60	10.98	2.15	-51.81	-13.00	38.81	H
6704.00	-52.55	6.22	10.48	2.15	-50.44	-13.00	37.44	H
7530.00	-48.42	7.72	10.26	2.15	-48.03	-13.00	35.03	H
8370.50	-48.60	8.18	11.30	2.15	-47.63	-13.00	34.63	H

NR n5, 5MHz, PI/2 BPSK, Channel 169300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2539.50	-48.35	4.65	10.30	2.15	-44.85	-13.00	31.85	V
4232.50	-52.72	4.49	10.23	2.15	-49.13	-13.00	36.13	H
5079.00	-53.82	5.30	11.60	2.15	-49.67	-13.00	36.67	V
6772.00	-51.17	6.40	10.34	2.15	-49.38	-13.00	36.38	H
7607.50	-48.48	7.58	10.32	2.15	-47.89	-13.00	34.89	V
8462.50	-49.40	8.02	11.30	2.15	-48.27	-13.00	35.27	V

NR EN-DC B2-n5, 5MHz, PI/2 BPSK, Channel 165300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1657.50	-45.55	3.57	9.52	2.15	-41.75	-13.00	28.75	H
2488.50	-38.39	4.61	10.25	2.15	-34.90	-13.00	21.90	V
7534.50	-49.69	8.25	10.30	0.00	-47.64	-13.00	34.64	V
9400.50	-49.47	9.04	11.60	0.00	-46.91	-13.00	33.91	H
11281.00	-40.77	9.88	12.80	0.00	-37.85	-13.00	24.85	V
13153.50	-48.10	10.70	12.65	0.00	-46.15	-13.00	33.15	H

NR EN-DC B2-n5, 5MHz, PI/2 BPSK, Channel 167300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1668.50	-44.66	3.58	9.54	2.15	-40.85	-13.00	27.85	H
2496.50	-38.86	4.62	10.21	2.15	-35.42	-13.00	22.42	V
7506.50	-50.34	8.37	10.30	0.00	-48.41	-13.00	35.41	V
9411.50	-49.24	9.09	11.62	0.00	-46.71	-13.00	33.71	V
11280.50	-42.15	9.88	12.80	0.00	-39.23	-13.00	26.23	V
13162.00	-46.88	10.66	12.64	0.00	-44.90	-13.00	31.90	H

NR EN-DC B2-n5, 5MHz, PI/2 BPSK, Channel 169300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1696.50	-45.42	3.60	9.59	2.15	-41.58	-13.00	28.58	H
2526.50	-38.35	4.65	10.15	2.15	-35.00	-13.00	22.00	V
7516.50	-50.31	8.32	10.30	0.00	-48.33	-13.00	35.33	V
9413.00	-49.94	9.10	11.63	0.00	-47.41	-13.00	34.41	V
11281.00	-42.06	9.88	12.80	0.00	-39.14	-13.00	26.14	H
13157.50	-47.79	10.68	12.64	0.00	-45.83	-13.00	32.83	V

NR n7, 5MHz, PI/2 BPSK, Channel 500500

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5009.50	-55.25	5.13	11.36	-49.02	-25.00	24.02	H
7514.50	-48.81	7.71	10.23	-46.29	-25.00	21.29	H
10020.00	-43.82	9.34	11.78	-41.38	-25.00	16.38	H
12525.00	-35.82	12.39	13.52	-34.69	-25.00	9.69	H
15029.50	-42.99	14.73	14.69	-43.03	-25.00	18.03	H
17514.00	-34.96	19.71	13.11	-41.56	-25.00	16.56	H

NR n7, 5MHz, PI/2 BPSK, Channel 507000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5069.50	-54.20	5.30	11.60	-47.90	-25.00	22.90	H
7604.50	-46.93	7.58	10.31	-44.20	-25.00	19.20	H
10139.50	-42.57	9.75	11.78	-40.54	-25.00	15.54	H
12674.50	-37.79	11.69	13.15	-36.33	-25.00	11.33	H
15209.50	-43.34	15.10	15.02	-43.42	-25.00	18.42	H
17723.50	-36.60	19.56	13.42	-42.74	-25.00	17.74	H

NR n7, 5MHz, PI/2 BPSK, Channel 513500

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5130.00	-55.73	5.56	11.60	-49.69	-25.00	24.69	V
7694.50	-47.49	6.70	10.58	-43.61	-25.00	18.61	H
10259.50	-42.49	10.85	11.90	-41.44	-25.00	16.44	V
12824.50	-37.07	13.15	12.95	-37.27	-25.00	12.27	H
15389.50	-41.18	14.87	15.38	-40.67	-25.00	15.67	H
17974.50	-35.91	19.99	13.45	-42.45	-25.00	17.45	H

NR EN-DC B5-n7, 5MHz, PI/2 BPSK, Channel 500500

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5005.00	-56.48	6.59	9.91	-53.16	-25.00	28.16	V
7500.00	-51.63	8.39	12.20	-47.82	-25.00	22.82	H
10010.00	-48.82	9.21	12.90	-45.13	-25.00	20.13	H
12513.00	-40.94	10.21	13.21	-37.94	-25.00	12.94	V
15003.50	-50.02	11.22	14.00	-47.24	-25.00	22.24	H
17518.00	-44.62	12.79	14.93	-42.48	-25.00	17.48	H

NR EN-DC B5-n7, 5MHz, PI/2 BPSK, Channel 507000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5070.00	-54.92	6.69	10.00	-51.61	-25.00	26.61	H
7586.00	-52.89	8.03	12.27	-48.65	-25.00	23.65	H
10140.50	-49.67	9.40	12.96	-46.11	-25.00	21.11	H
12674.50	-48.36	10.34	13.30	-45.40	-25.00	20.40	H
15180.50	-50.34	11.39	13.89	-47.84	-25.00	22.84	V
17732.50	-45.67	12.36	15.23	-42.80	-25.00	17.80	H

NR EN-DC B5-n7, 5MHz, PI/2 BPSK, Channel 513500

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5135.00	-55.63	6.86	10.09	-52.40	-25.00	27.40	H
7683.50	-54.08	8.35	12.35	-50.08	-25.00	25.08	V
10270.00	-46.43	9.54	13.01	-42.96	-25.00	17.96	H
12837.50	-48.53	10.67	13.40	-45.80	-25.00	20.80	H
15377.50	-49.81	11.37	13.77	-47.41	-25.00	22.41	H
17989.50	-44.62	12.90	15.59	-41.93	-25.00	16.93	V

NR n26_part22, 5MHz, Channel 165300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1641.00	-57.81	3.56	9.50	2.15	-54.02	-13.00	41.02	H
2470.00	-51.43	4.59	10.32	2.15	-47.85	-13.00	34.85	H
3302.50	-58.91	5.29	10.41	2.15	-55.94	-13.00	42.94	V
4132.50	-54.58	6.05	10.40	2.15	-52.38	-13.00	39.38	V
4959.00	-54.12	6.67	11.22	2.15	-51.72	-13.00	38.72	H
5785.50	-51.38	7.21	11.03	2.15	-49.71	-13.00	36.71	H

NR n26_part22, 5MHz, Channel 167300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1660.50	-58.40	3.57	9.52	2.15	-54.60	-13.00	41.60	H
2506.50	-51.60	4.63	10.19	2.15	-48.19	-13.00	35.19	V
3339.00	-59.66	5.31	10.48	2.15	-56.64	-13.00	43.64	V
4183.00	-54.24	6.17	10.47	2.15	-52.09	-13.00	39.09	H
5019.00	-54.57	6.57	11.34	2.15	-51.95	-13.00	38.95	H
5855.50	-52.57	7.25	10.77	2.15	-51.20	-13.00	38.20	H

NR n26_part22, 5MHz, Channel 169300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1705.50	-57.70	3.60	9.62	2.15	-53.83	-13.00	40.83	V
2548.50	-51.19	4.67	10.10	2.15	-47.91	-13.00	34.91	V
3400.00	-59.47	5.36	10.50	2.15	-56.48	-13.00	43.48	H
4232.50	-50.24	6.26	10.57	2.15	-48.08	-13.00	35.08	V
5079.00	-51.50	6.71	11.46	2.15	-48.90	-13.00	35.90	V
5925.00	-52.84	7.47	10.50	2.15	-51.96	-13.00	38.96	V

NR n26_part90, 5MHz, Channel 163300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1638.00	-58.09	3.56	9.50	2.15	-54.30	-13.00	41.30	V
2461.00	-51.19	4.58	10.36	2.15	-47.56	-13.00	34.56	V
3253.00	-59.77	5.27	10.31	2.15	-56.88	-13.00	43.88	H
4082.00	-55.72	6.04	10.40	2.15	-53.51	-13.00	40.51	H
4899.00	-54.41	6.73	11.40	2.15	-51.89	-13.00	38.89	V
5715.50	-52.77	7.30	11.17	2.15	-51.05	-13.00	38.05	V

NR n26_part90, 5MHz, Channel 163800

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1649.00	-58.22	3.56	9.50	2.15	-54.43	-13.00	41.43	V
2449.00	-48.21	4.57	10.40	2.15	-44.53	-13.00	31.53	H
3299.00	-59.15	5.29	10.40	2.15	-56.19	-13.00	43.19	H
4116.50	-55.85	6.04	10.40	2.15	-53.64	-13.00	40.64	H
4920.50	-55.03	6.73	11.32	2.15	-52.59	-13.00	39.59	H
5748.00	-54.55	7.27	11.10	2.15	-52.87	-13.00	39.87	V

NR n26_part90, 5MHz, Channel 164300

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1649.50	-57.77	3.56	9.50	2.15	-53.98	-13.00	40.98	V
2465.00	-50.86	4.59	10.34	2.15	-47.26	-13.00	34.26	V
3301.50	-59.76	5.29	10.40	2.15	-56.80	-13.00	43.80	V
4133.50	-56.03	6.06	10.40	2.15	-53.84	-13.00	40.84	V
4942.00	-54.31	6.70	11.23	2.15	-51.93	-13.00	38.93	H
5766.50	-53.55	7.24	11.07	2.15	-51.87	-13.00	38.87	H

NR n41, 100MHz, PI/2 BPSK, Channel 509040

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
4997.50	-54.90	5.17	11.30	-48.77	-25.00	23.77	H
7496.00	-48.26	7.70	10.19	-45.77	-25.00	20.77	H
9995.00	-43.21	9.36	11.79	-40.78	-25.00	15.78	V
12493.50	-34.83	12.34	13.59	-33.58	-25.00	8.58	V
14992.50	-41.58	14.77	14.57	-41.78	-25.00	16.78	H
17502.50	-34.84	19.72	13.10	-41.46	-25.00	16.46	V

NR n41, 100MHz, PI/2 BPSK, Channel 518598

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5186.50	-53.81	5.75	11.67	-47.89	-25.00	22.89	V
7779.50	-51.22	7.37	10.76	-47.83	-25.00	22.83	H
10373.00	-38.22	10.72	11.97	-36.97	-25.00	11.97	V
12966.00	-38.05	12.53	12.73	-37.85	-25.00	12.85	H
15559.50	-39.86	16.71	15.60	-40.97	-25.00	15.97	V
18000.00	-54.29	0.00	13.40	-40.89	-25.00	15.89	H

NR n41, 100MHz, PI/2 BPSK, Channel 528000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5375.50	-48.59	5.74	11.65	-42.68	-25.00	17.68	V
8063.00	-49.27	7.86	11.13	-46.00	-25.00	21.00	V
10751.00	-47.47	9.83	12.15	-45.15	-25.00	20.15	H
13438.50	-38.87	12.56	12.36	-39.07	-25.00	14.07	H
16126.00	-44.29	17.04	15.10	-46.23	-25.00	21.23	H
17978.50	-34.73	19.98	13.44	-41.27	-25.00	16.27	V

NR EN-DC B66 -n41, 20MHz, PI/2 BPSK, Channel 501204

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5034.00	-56.39	6.59	9.95	-53.03	-25.00	28.03	H
7537.50	-52.06	8.24	12.23	-48.07	-25.00	23.07	V
10023.50	-49.21	9.25	12.91	-45.55	-25.00	20.55	V
12530.50	-48.24	10.26	13.22	-45.28	-25.00	20.28	H
13961.50	-44.56	10.83	14.48	-40.91	-13.00	27.91	V
17516.00	-44.72	12.79	14.92	-42.59	-25.00	17.59	V

NR EN-DC B66-n41, 20MHz, PI/2 BPSK, Channel 518598

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7764.50	-53.31	8.34	12.41	-49.24	-25.00	24.24	V
10393.50	-48.15	9.79	13.06	-44.88	-25.00	19.88	H
12938.00	-50.63	10.49	13.46	-47.66	-25.00	22.66	V
13961.50	-46.17	10.83	14.48	-42.52	-13.00	29.52	H
15587.50	-50.27	11.49	13.70	-48.06	-25.00	23.06	V
16841.50	-44.71	12.07	13.74	-43.04	-25.00	18.04	H

NR EN-DC B66-n41, 20MHz, PI/2 BPSK, Channel 535998

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
8047.00	-51.92	8.32	12.64	-47.60	-25.00	22.60	V
10719.00	-50.68	9.35	13.14	-46.89	-25.00	21.89	H
13421.50	-48.44	10.58	14.09	-44.93	-25.00	19.93	H
13962.00	-45.10	10.83	14.48	-41.45	-13.00	28.45	H
16094.50	-48.18	11.85	13.68	-46.35	-25.00	21.35	H
17404.50	-43.97	12.51	14.69	-41.79	-25.00	16.79	H

NR n66, 10MHz, Channel 343000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
8554.00	-58.67	8.52	11.20	-55.99	-13.00	42.99	V
10265.00	-50.97	10.80	11.90	-49.87	-13.00	36.87	V
11975.50	-47.47	12.28	13.05	-46.70	-13.00	33.70	V
13686.00	-48.25	13.00	12.20	-49.05	-13.00	36.05	H
15397.00	-55.89	14.88	15.39	-55.38	-13.00	42.38	H
17093.00	-48.82	18.46	13.51	-53.77	-13.00	40.77	H

NR n66, 10MHz, Channel 349000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
8725.50	-59.71	8.45	11.10	-57.06	-13.00	44.06	V
10470.50	-54.73	10.36	11.93	-53.16	-13.00	40.16	V
12215.50	-51.22	12.17	13.40	-49.99	-13.00	36.99	V
13961.00	-42.48	14.62	12.16	-44.94	-13.00	31.94	H
15706.00	-54.58	16.64	15.51	-55.71	-13.00	42.71	V
17462.00	-45.98	19.26	13.06	-52.18	-13.00	39.18	V

NR n66, 10MHz, Channel 355000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
8897.00	-61.45	8.04	11.59	-57.90	-13.00	44.90	H
10676.50	-57.86	10.04	12.08	-55.82	-13.00	42.82	H
12455.50	-50.94	12.90	13.51	-50.33	-13.00	37.33	V
14235.00	-46.46	13.14	12.64	-46.96	-13.00	33.96	H
16014.50	-55.19	17.47	15.36	-57.30	-13.00	44.30	V
17786.50	-47.44	19.55	13.49	-53.50	-13.00	40.50	H

NR EN-DC B2–n66, 10MHz, Channel 343000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7420.50	-61.82	7.98	10.10	-59.70	-13.00	46.70	H
9254.50	-61.28	8.85	11.70	-58.43	-13.00	45.43	V
11123.00	-60.88	9.90	12.62	-58.16	-13.00	45.16	V
12004.00	-57.27	11.96	13.11	-56.12	-13.00	43.12	H
13725.00	-55.52	13.15	12.18	-56.49	-13.00	43.49	H
15456.00	-58.67	14.99	15.51	-58.15	-13.00	45.15	H

NR EN-DC B2–n66, 10MHz, Channel 349000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
9401.00	-60.55	9.10	11.50	-58.15	-13.00	45.15	H
11281.00	-58.65	10.63	12.62	-56.66	-13.00	43.66	H
13167.50	-56.09	13.19	12.53	-56.75	-13.00	43.75	V
13953.50	-54.99	14.67	12.15	-57.51	-13.00	44.51	H
15702.50	-56.78	16.65	15.50	-57.93	-13.00	44.93	V
17442.00	-47.51	19.25	13.04	-53.72	-13.00	40.72	H

NR EN-DC B2–n66, 10MHz, Channel 355000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
9533.00	-61.96	9.13	11.87	-59.22	-13.00	46.22	H
11431.00	-57.13	12.45	12.57	-57.01	-13.00	44.01	V
13350.50	-54.99	13.12	12.45	-55.66	-13.00	42.66	V
12424.50	-54.76	13.13	13.45	-54.44	-13.00	41.44	H
14192.00	-54.85	14.37	12.58	-56.64	-13.00	43.64	V
15951.50	-58.05	16.35	15.50	-58.90	-13.00	45.90	V

NR n77L, PI/2 BPSK, Channel 632668

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6980.00	-48.50	8.06	10.40	-46.16	-13.00	33.16	H
8711.00	-50.25	8.48	11.10	-47.63	-13.00	34.63	H
10470.00	-42.14	10.36	11.93	-40.57	-13.00	27.57	H
12196.00	-48.33	12.18	13.40	-47.11	-13.00	34.11	V
13960.00	-41.31	14.63	12.16	-43.78	-13.00	30.78	V
15702.50	-45.86	16.65	15.50	-47.01	-13.00	34.01	V

NR n77L, PI/2 BPSK, Channel 633334

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6999.50	-47.88	7.80	10.40	-45.28	-13.00	32.28	V
8728.00	-49.81	8.45	11.10	-47.16	-13.00	34.16	H
10499.50	-38.32	10.38	11.90	-36.80	-13.00	23.80	H
12228.00	-48.34	12.16	13.40	-47.10	-13.00	34.10	V
14000.50	-42.26	14.37	12.20	-44.43	-13.00	31.43	V
15786.50	-46.11	16.47	15.59	-46.99	-13.00	33.99	H

NR n77L, PI/2 BPSK, Channel 634000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7020.00	-46.65	7.52	10.44	-43.73	-13.00	30.73	H
8753.00	-49.99	7.91	11.11	-46.79	-13.00	33.79	V
10530.00	-42.52	10.41	11.93	-41.00	-13.00	28.00	H
12236.50	-49.05	11.47	13.40	-47.12	-13.00	34.12	V
14040.50	-41.88	14.12	12.24	-43.76	-13.00	30.76	V
15841.00	-45.32	16.33	15.60	-46.05	-13.00	33.05	H

NR EN-DC B2–n77L, PI/2 BPSK, Channel 630668

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3784.00	-38.29	6.19	8.60	-35.88	-13.00	22.88	H
5628.00	-37.03	7.26	10.57	-33.72	-13.00	20.72	V
7522.00	-50.65	8.30	12.22	-46.73	-13.00	33.73	V
6919.00	-53.60	7.73	11.50	-49.83	-13.00	36.83	H
10402.50	-48.14	9.80	13.06	-44.88	-13.00	31.88	H
13828.00	-48.07	10.66	14.40	-44.33	-13.00	31.33	H

NR EN-DC B2–n77L, PI/2 BPSK, Channel 633334

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3752.00	-39.15	6.29	8.55	-36.89	-13.00	23.89	V
5654.00	-36.59	7.27	10.57	-33.29	-13.00	20.29	H
7503.50	-51.49	8.38	12.20	-47.67	-13.00	34.67	H
7000.00	-50.11	8.30	11.60	-46.81	-13.00	33.81	V
10499.50	-49.82	9.65	13.10	-46.37	-13.00	33.37	V
13984.50	-48.67	10.84	14.49	-45.02	-13.00	32.02	H

NR EN-DC B2–n77L, PI/2 BPSK, Channel 636000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3768.00	-38.92	6.24	8.58	-36.58	-13.00	23.58	H
5653.50	-37.12	7.27	10.57	-33.82	-13.00	20.82	V
7500.00	-51.55	8.39	12.20	-47.74	-13.00	34.74	H
7080.00	-51.57	8.18	11.70	-48.05	-13.00	35.05	H
10598.50	-50.90	9.29	13.12	-47.07	-13.00	34.07	H
14156.50	-49.43	10.96	14.47	-45.92	-13.00	32.92	V

NR n77H, PI/2 BPSK, Channel 649334

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7499.50	-49.87	7.70	10.20	-47.37	-13.00	34.37	V
9307.00	-48.61	8.51	11.67	-45.45	-13.00	32.45	H
11220.00	-43.43	10.71	12.68	-41.46	-13.00	28.46	H
13111.50	-45.73	12.50	12.59	-45.64	-13.00	32.64	V
15000.00	-47.40	14.76	14.60	-47.56	-13.00	34.56	H
16878.50	-38.89	17.92	13.92	-42.89	-13.00	29.89	V

NR n77H, PI/2 BPSK, Channel 656000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7674.50	-51.62	7.02	10.50	-48.14	-13.00	35.14	V
9605.00	-50.69	8.73	11.90	-47.52	-13.00	34.52	H
11520.00	-41.31	12.18	12.52	-40.97	-13.00	27.97	H
13456.50	-43.81	12.61	12.34	-44.08	-13.00	31.08	V
15384.50	-47.30	14.86	15.37	-46.79	-13.00	33.79	H
17315.50	-35.96	19.25	13.17	-42.04	-13.00	29.04	V

NR n77H, PI/2 BPSK, Channel 662666

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7926.50	-50.44	8.83	11.11	-48.16	-13.00	35.16	H
9812.00	-49.28	9.14	11.90	-46.52	-13.00	33.52	H
11819.50	-36.51	11.61	12.90	-35.22	-13.00	22.22	H
13816.00	-43.82	13.04	12.10	-44.76	-13.00	31.76	H
15780.00	-45.88	16.48	15.58	-46.78	-13.00	33.78	H
17684.00	-36.07	19.57	13.37	-42.27	-13.00	29.27	H

NR EN-DC B2–n77H, PI/2 BPSK, Channel 647334

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3762.00	-42.28	3.80	10.15	-35.93	-13.00	22.93	H
5651.50	-39.50	5.59	11.40	-33.69	-13.00	20.69	V
7515.00	-49.97	7.71	10.23	-47.45	-13.00	34.45	H
6920.00	-53.58	6.47	10.34	-49.71	-13.00	36.71	H
10366.00	-46.11	10.75	11.97	-44.89	-13.00	31.89	V
13834.50	-43.57	13.07	12.10	-44.54	-13.00	31.54	H

NR EN-DC B2–n77H, PI/2 BPSK, Channel 656000

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3762.00	-42.28	3.80	10.15	-35.93	-13.00	22.93	H
5651.50	-39.50	5.59	11.40	-33.69	-13.00	20.69	V
7515.00	-49.97	7.71	10.23	-47.45	-13.00	34.45	H
7024.50	-51.20	7.46	10.45	-48.21	-13.00	35.21	H
10481.50	-47.23	10.37	11.92	-45.68	-13.00	32.68	H
13998.00	-42.39	14.39	12.20	-44.58	-13.00	31.58	H

NR EN-DC B2–n77H, PI/2 BPSK, Channel 664666

Frequency (MHz)	P_{Mea} (dBm)	P_{pl} (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3762.00	-42.28	3.80	10.15	-35.93	-13.00	22.93	H
5651.50	-39.50	5.59	11.40	-33.69	-13.00	20.69	V
7515.00	-49.97	7.71	10.23	-47.45	-13.00	34.45	H
7082.00	-52.73	6.93	10.37	-49.29	-13.00	36.29	H
10600.50	-50.15	9.09	12.00	-47.24	-13.00	34.24	H
14180.50	-43.23	14.40	12.54	-45.09	-13.00	32.09	H

Note: Peak EIRP (dBm) = PMea(dBm) - Path Loss(dB) + Antenna Gain(dBi)

Note: The maximum value of expanded measurement uncertainty for this test item is U = 3.37 dB, *k* = 2.

A.3 Frequency Stability

A.3.1 Method of Measurement

Frequency stability is a measure of the frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at +20 °C and rated supply voltage. Two reference points are established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as F_L and F_H respectively.

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of MT8000A.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30℃.
3. With the EUT, powered via nominal voltage, connected to the MT8000A, and in a simulated call on middle channel for each NR band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10℃ increments from -30℃ to +50℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50℃.
7. With the EUT, powered via nominal voltage, connected to the MT8000A and in a simulated call on the center channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 ℃ decrements from +50℃ to -30℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of the lower, higher and nominal voltage. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress.

A.3.2 Measurement results

n5

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	824.224	847.832		
50				2.80	0.0033
40				3.00	0.0036
30				0.80	0.0010
10				-0.70	0.0008
0				0.70	0.0008
-10				-2.10	0.0025
-20				4.20	0.0050
-30				0.80	0.0010

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.224	847.832	-3.10	0.0037
4.47				4.30	0.0051

n7

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	2500.592	2569.376		
50				-5.00	0.0020
40				1.30	0.0005
30				-1.30	0.0005
10				6.00	0.0024
0				3.70	0.0015
-10				6.40	0.0025
-20				3.00	0.0012
-30				11.10	0.0044

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2500.592	2569.376	7.90	0.0031
4.47				10.50	0.0041

n26_Part22

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	824.224	847.832		
50				-4.40	0.0053
40				-5.00	0.0060
30				-7.80	0.0093
10				-2.10	0.0025
0				-2.50	0.0030
-10				-3.50	0.0042
-20				-6.50	0.0078
-30				-4.40	0.0053

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.224	847.832	-3.90	0.0047
4.47				-6.30	0.0075

n26_Part90

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	814.192	823.456		
50				-4.00	0.0049
40				-2.10	0.0026
30				-0.60	0.0007
10				-1.60	0.0020
0				-2.20	0.0027
-10				-0.80	0.0010
-20				-2.00	0.0024
-30				-1.90	0.0023

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	814.192	823.456	0.70	0.0009
4.47				-0.70	0.0009

n41

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	2496.752	2688.128		
50				-13.40	0.0052
40				23.00	0.0089
30				-11.80	0.0046
10				13.20	0.0051
0				13.50	0.0052
-10				7.80	0.0030
-20				18.20	0.0070
-30				-3.10	0.0012

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2496.752	2688.128	-25.50	0.0098
4.47				-5.30	0.0020

n66

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	1710.272	1779.360		
50				0.00	0.0000
40				3.40	0.0019
30				-1.70	0.0010
10				4.70	0.0027
0				1.60	0.0009
-10				-3.80	0.0022
-20				0.50	0.0003
-30				3.20	0.0018

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.272	1779.360	2.50	0.0014
4.47				-0.20	0.0001

n77L

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	3450.720	3548.208	-8.70	0.0025
50				0.50	0.0001
40				-10.50	0.0030
30				9.60	0.0027
10				-2.80	0.0008
0				0.60	0.0002
-10				-11.90	0.0034
-20				3.70	0.0011
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3450.720	3548.208	-9.00	0.0026
4.47				-0.20	0.0001

n77H

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.88	3700.416	3978.464	-10.00	0.0026
50				-6.60	0.0017
40				8.80	0.0023
30				-16.60	0.0043
10				4.20	0.0011
0				7.30	0.0019
-10				6.00	0.0016
-20				-6.30	0.0016
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3700.416	3978.464	-2.80	0.0007
4.47				20.70	0.0054

Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.047k Hz, k = 2.

A.4 Occupied Bandwidth

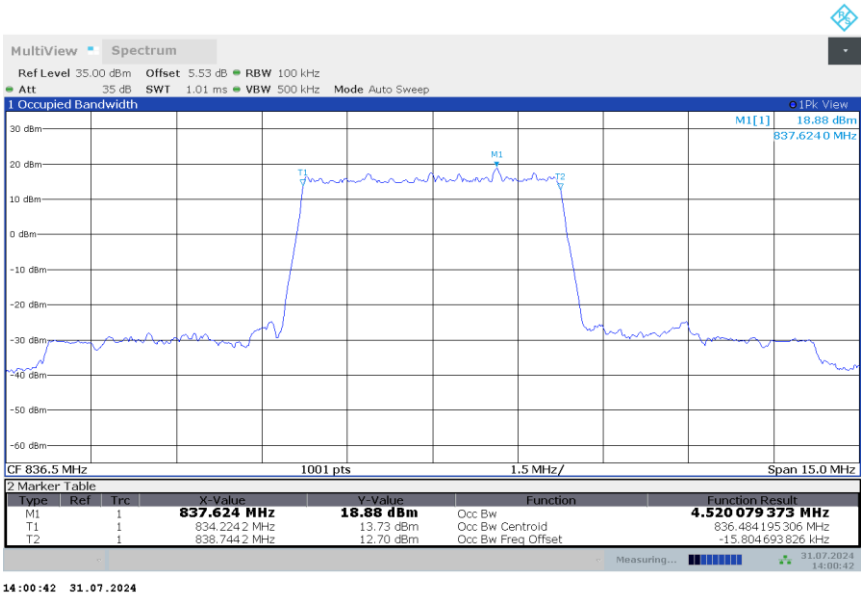
Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the mid frequencies frequency. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.
The measurement method is from ANSI C63.26:
a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts.
b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
d) Set the detection mode to peak, and the trace mode to max-hold.

n5

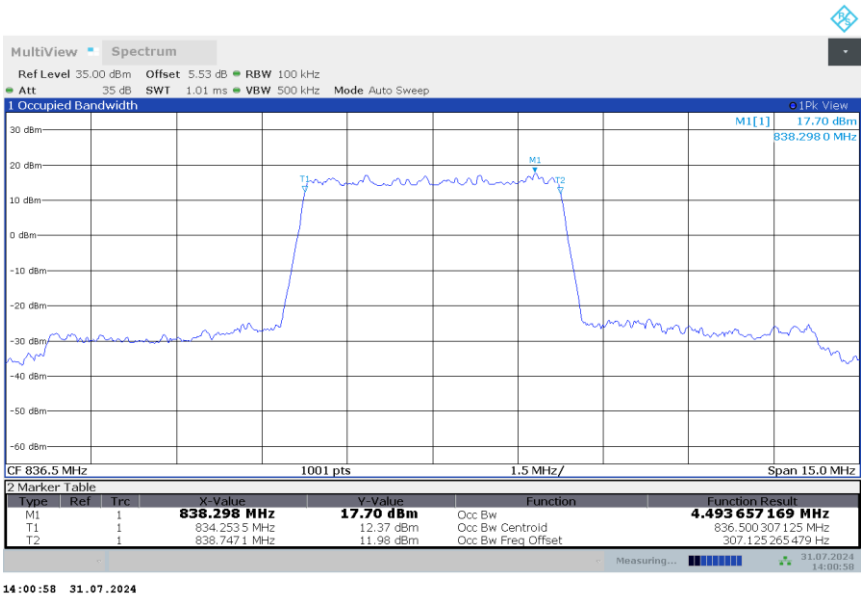
n5,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	4.520	4.494

n5,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n5,5MHz Bandwidth,DFT-s-QPSK (99% BW)

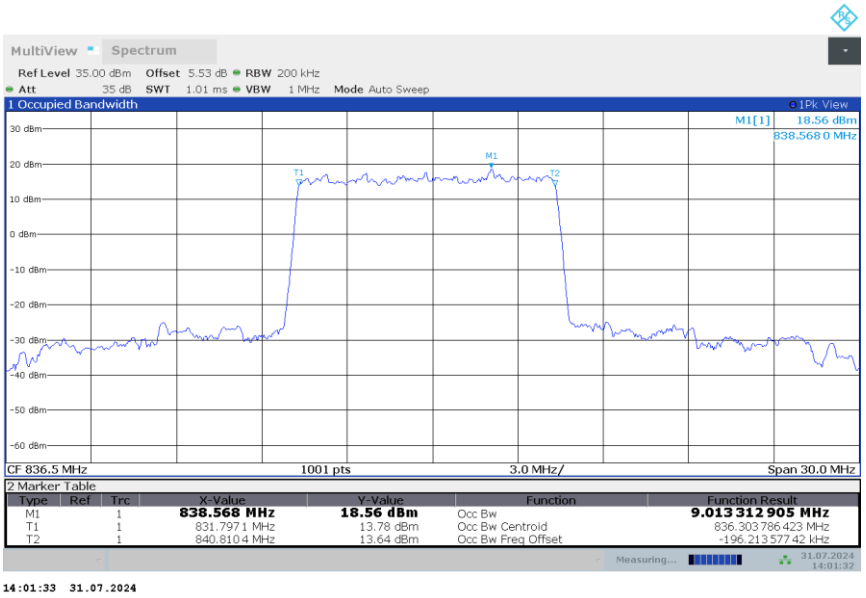


n5

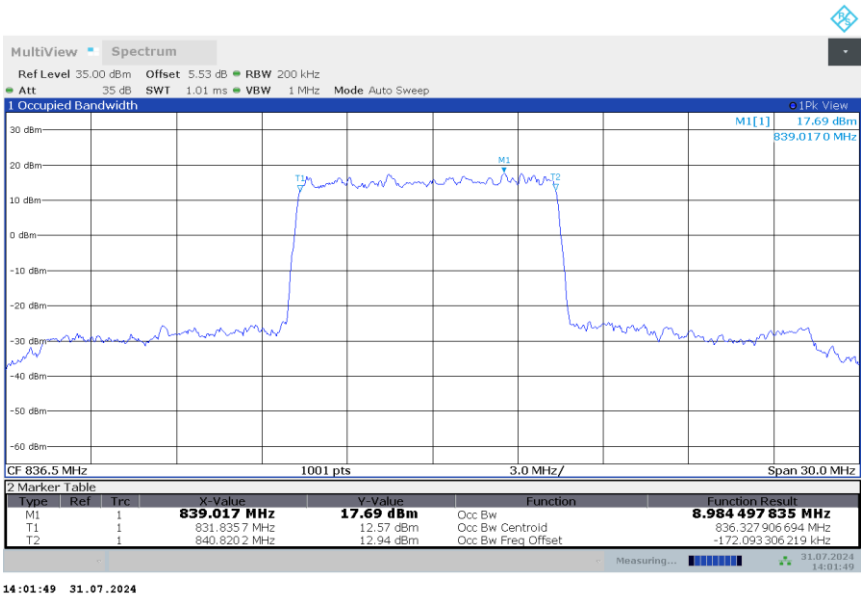
n5,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	9.013	8.984

n5,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n5,10MHz Bandwidth,DFT-s-QPSK (99% BW)

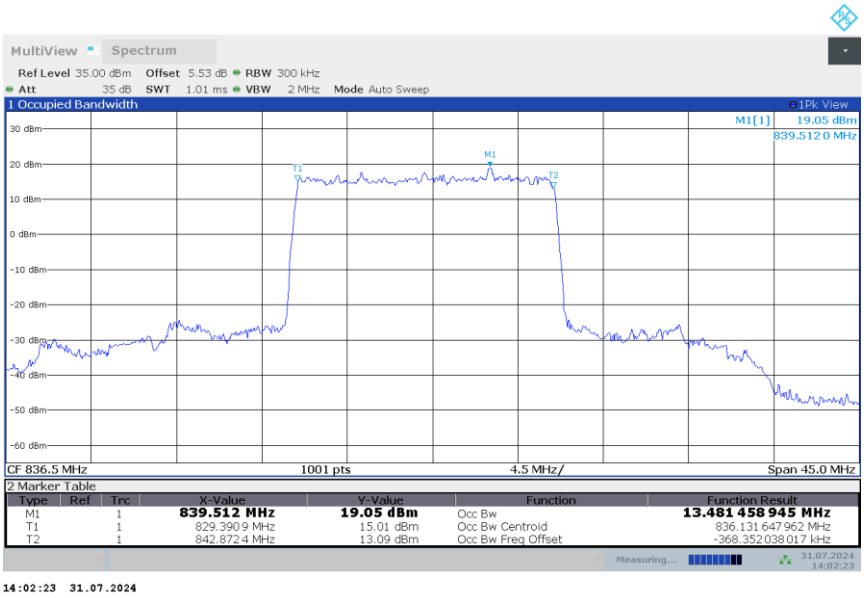


n5

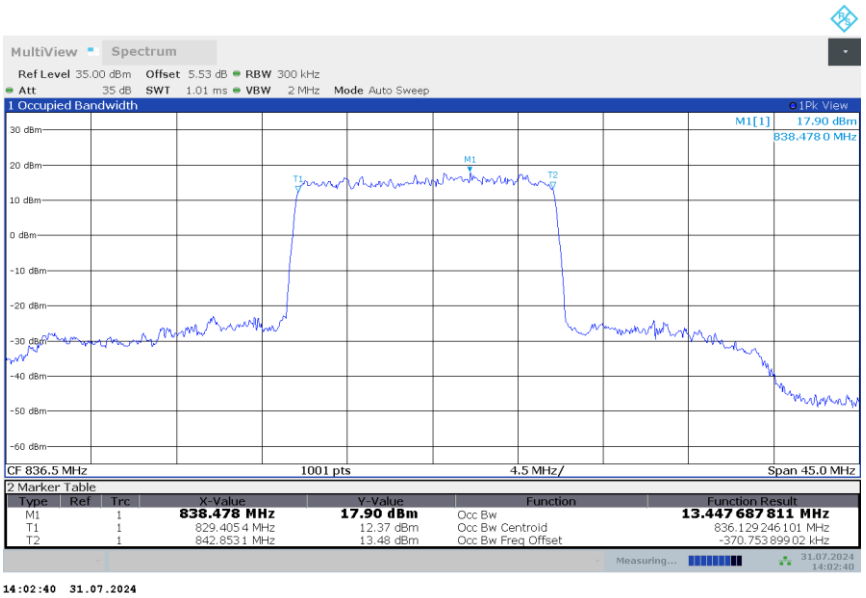
n5,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	13.481	13.448

n5,15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n5,15MHz Bandwidth,DFT-s-QPSK (99% BW)

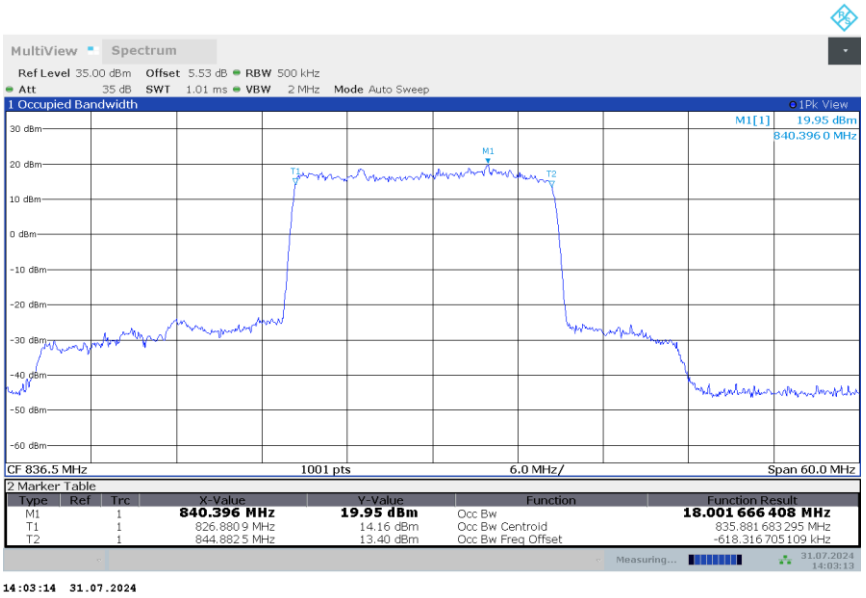


n5

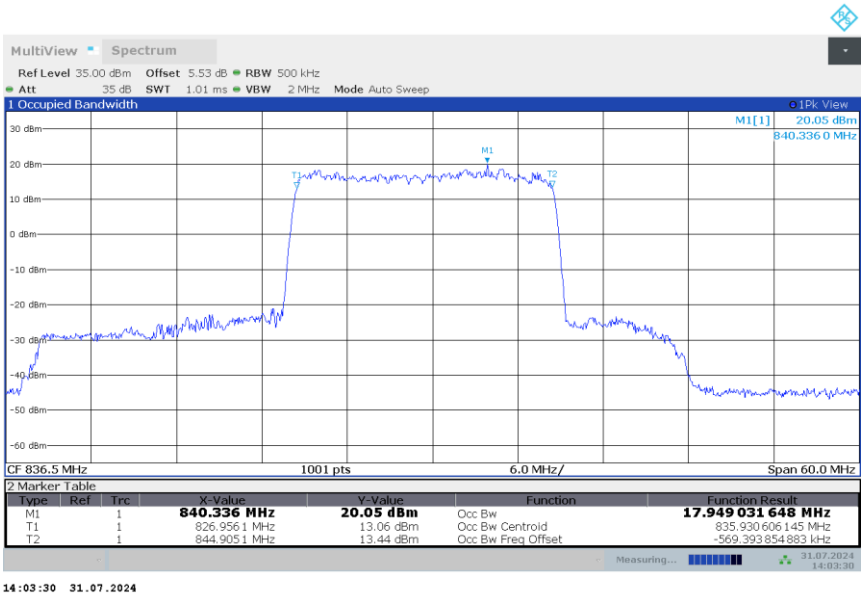
n5,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	18.002	17.949

n5,20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n5,20MHz Bandwidth,DFT-s-QPSK (99% BW)

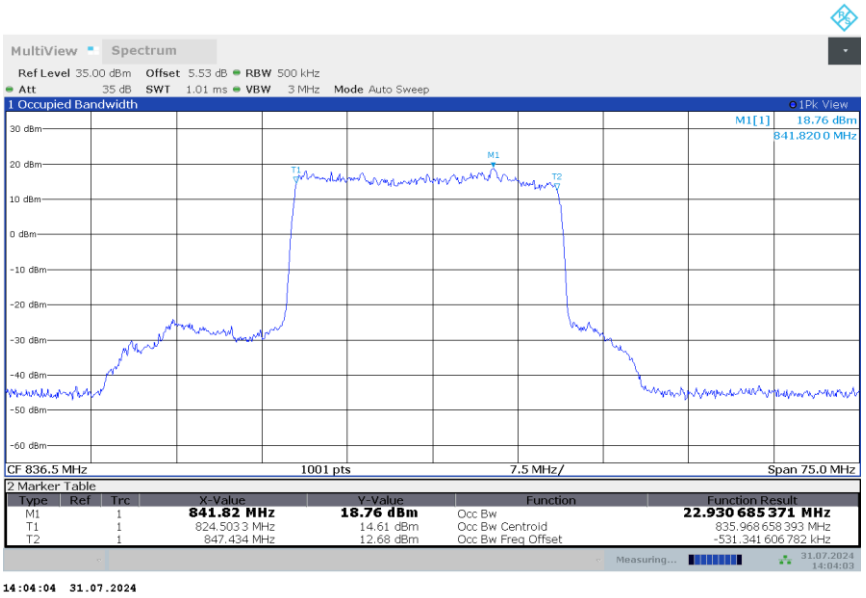


n5

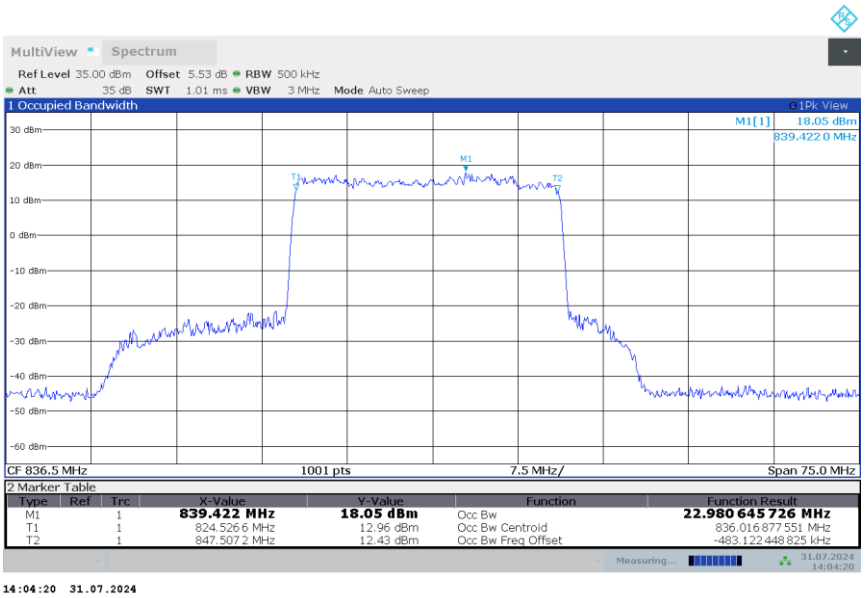
n5,25MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	22.931	22.981

n5,25MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n5,25MHz Bandwidth,DFT-s-QPSK (99% BW)

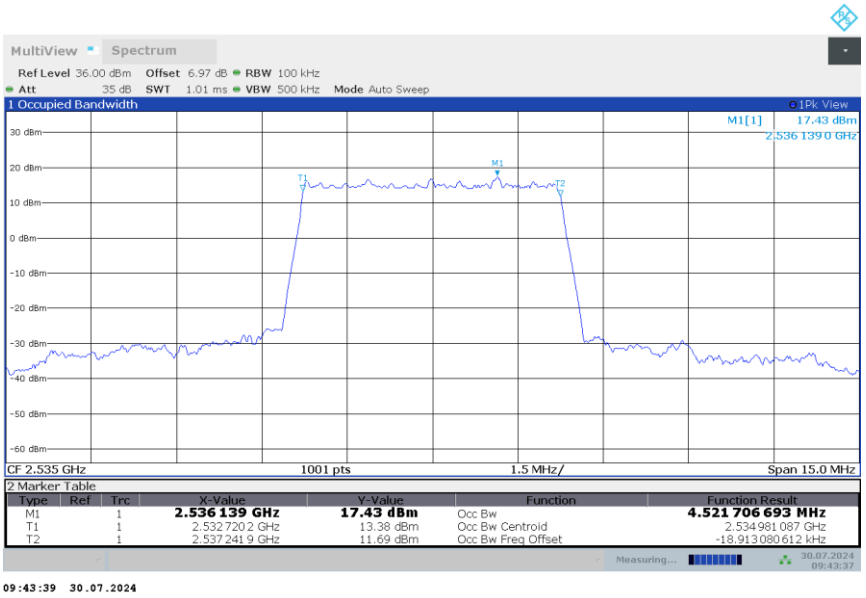


n7

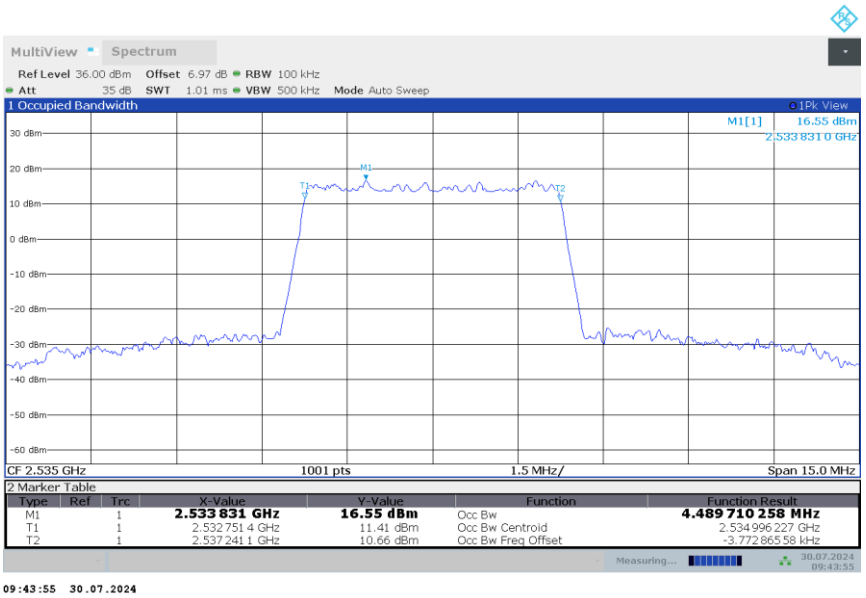
n7,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	4.522	4.490

n7,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,5MHz Bandwidth,DFT-s-QPSK (99% BW)

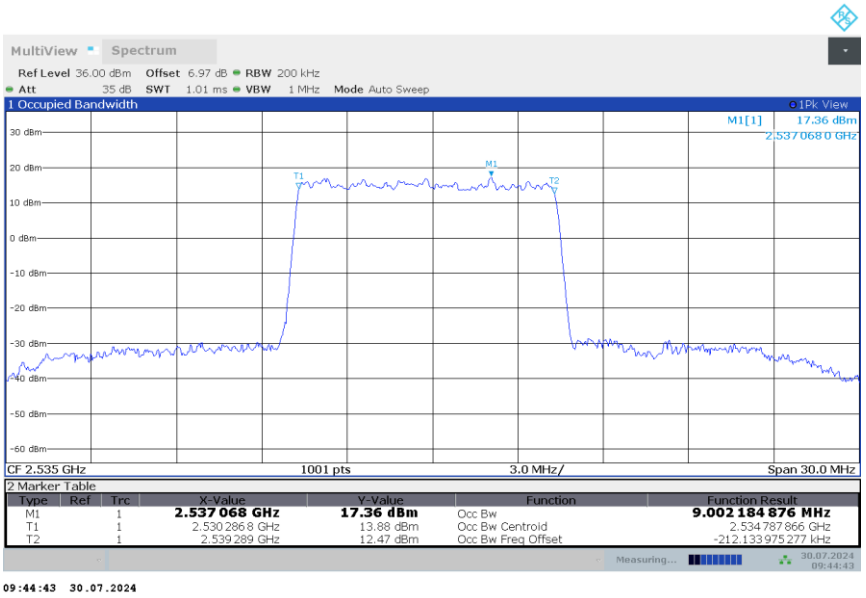


n7

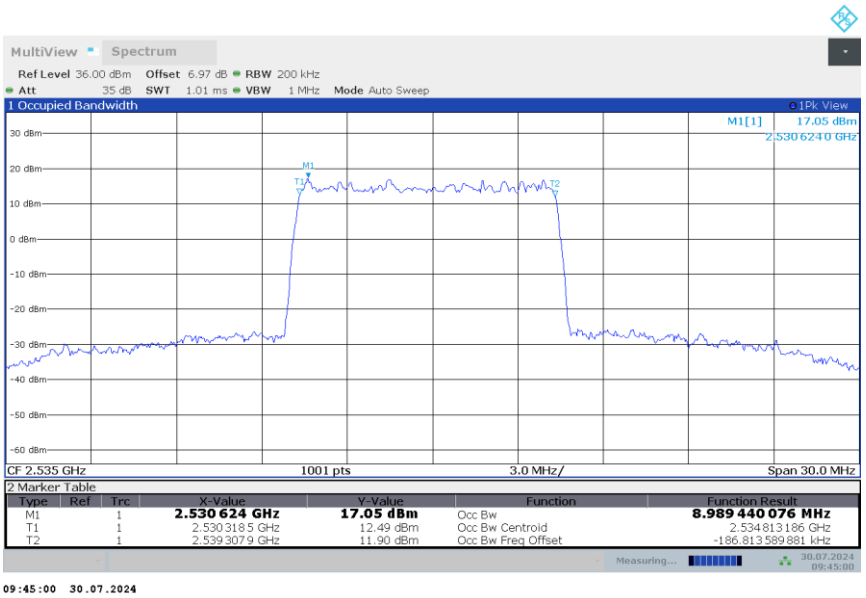
n7,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	9.002	8.989

n7,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,10MHz Bandwidth,DFT-s-QPSK (99% BW)

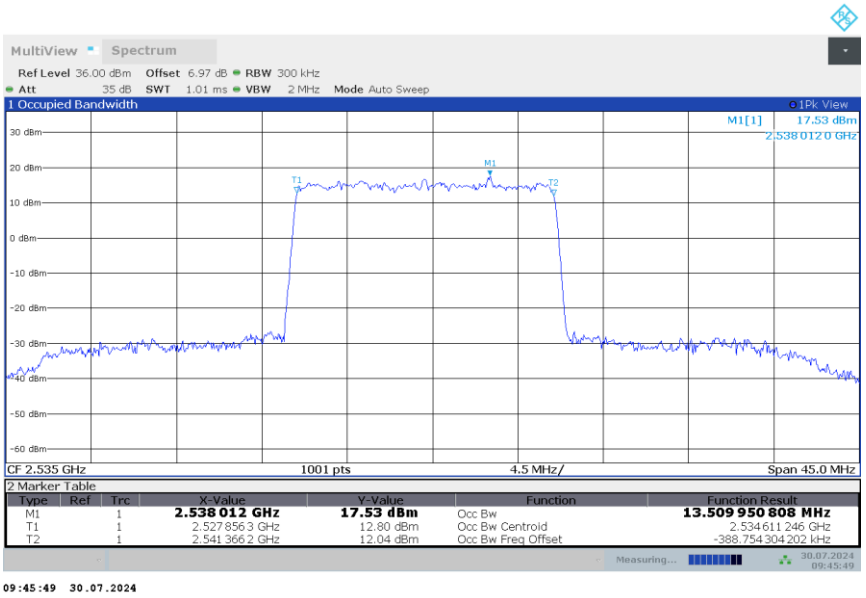


n7

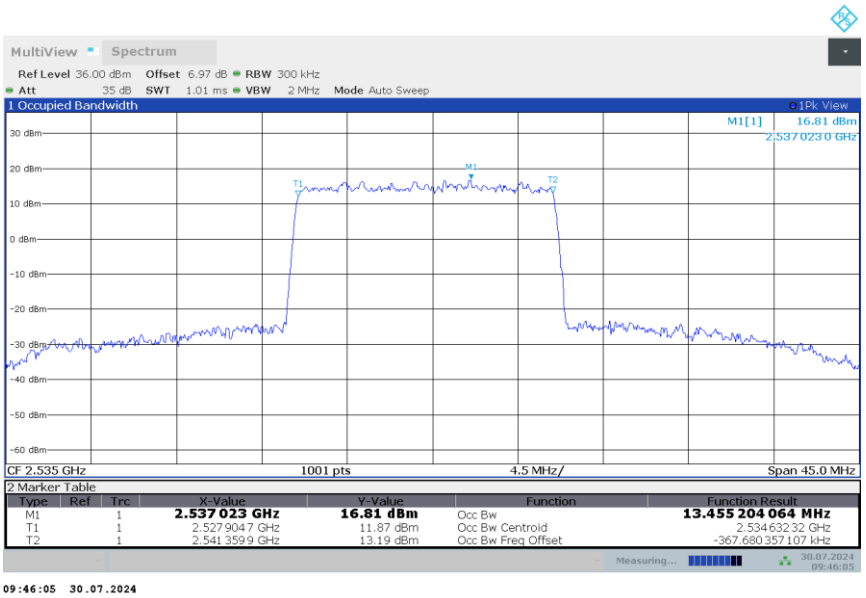
n7,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	13.510	13.455

n7,15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,15MHz Bandwidth,DFT-s-QPSK (99% BW)

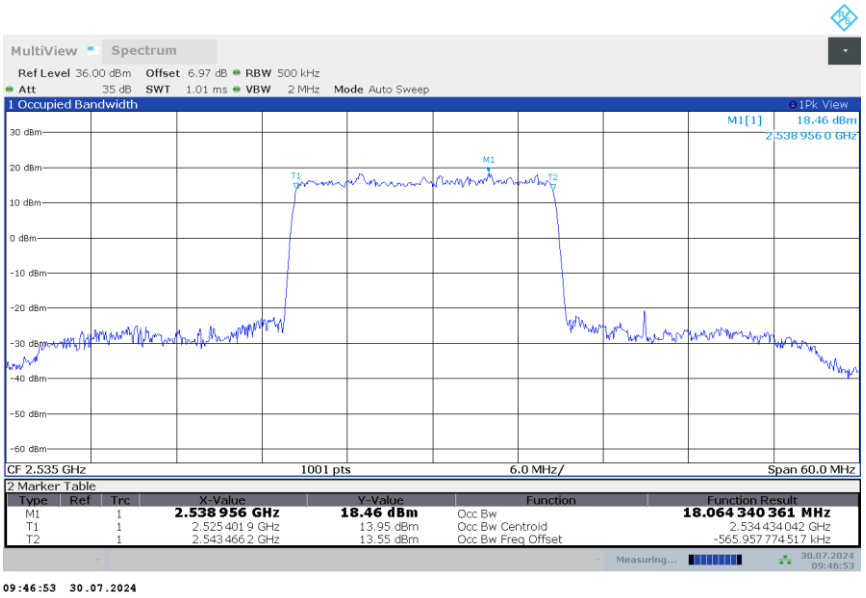


n7

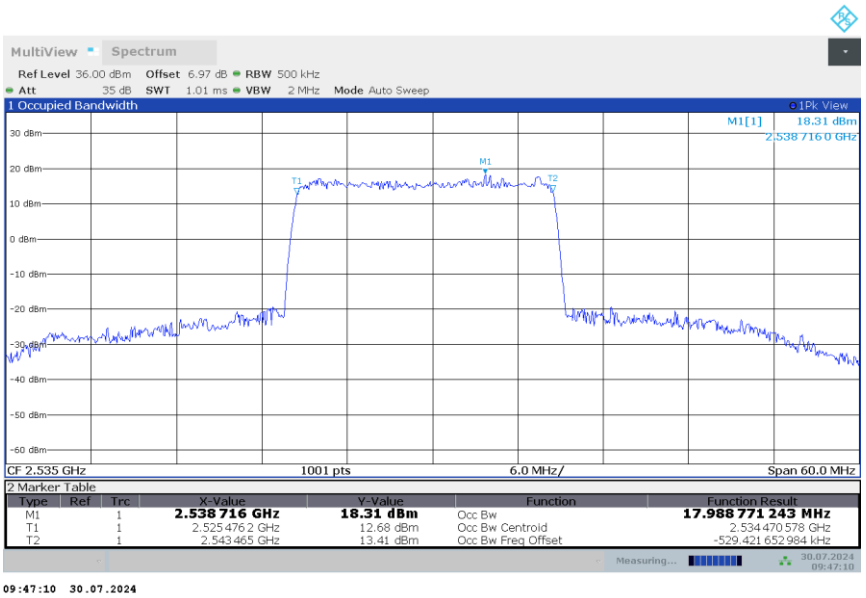
n7,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	18.064	17.989

n7,20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,20MHz Bandwidth,DFT-s-QPSK (99% BW)

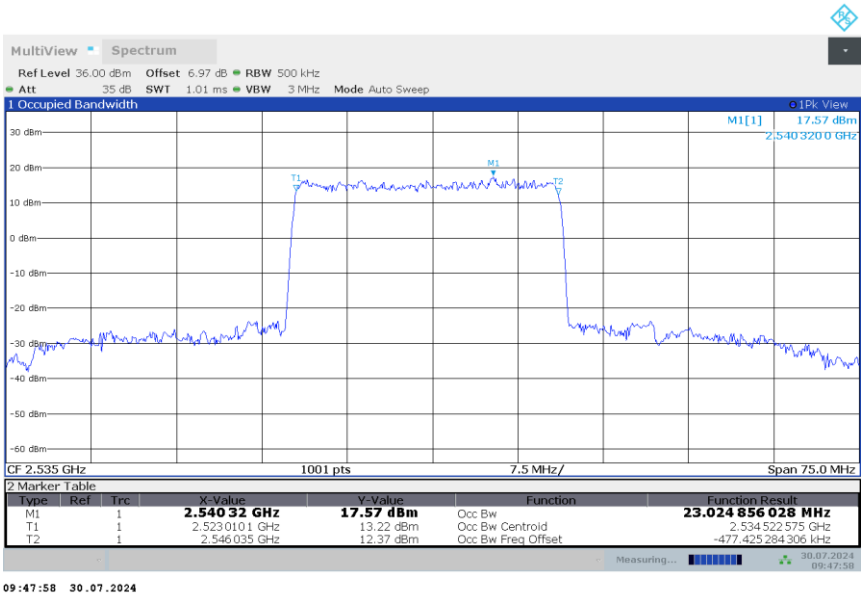


n7

n7,25MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	23.025	23.001

n7,25MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



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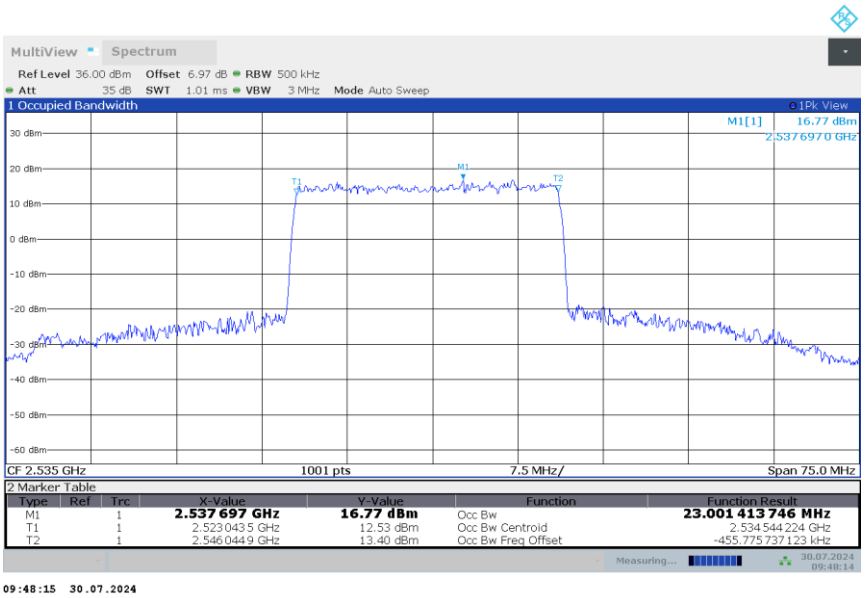
n7,25MHz Bandwidth,DFT-s-QPSK (99% BW)



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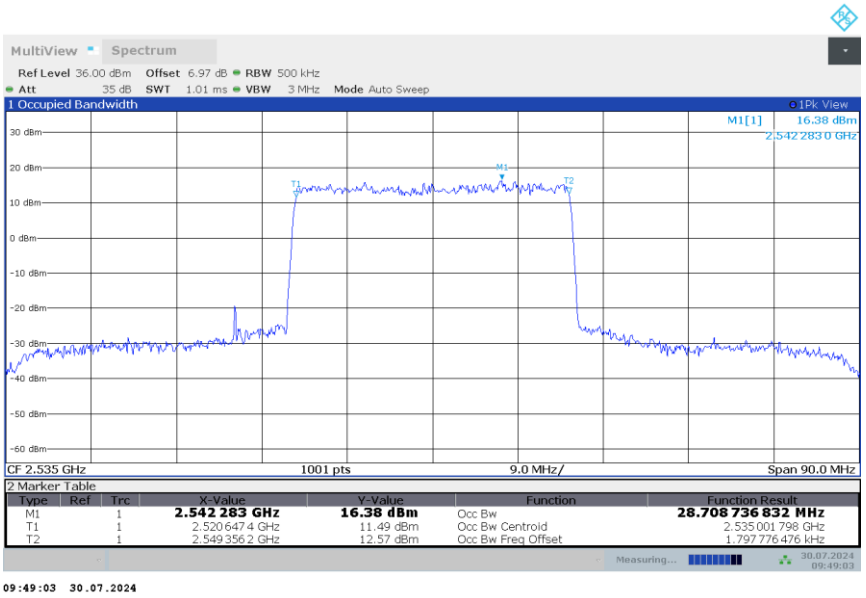
n7

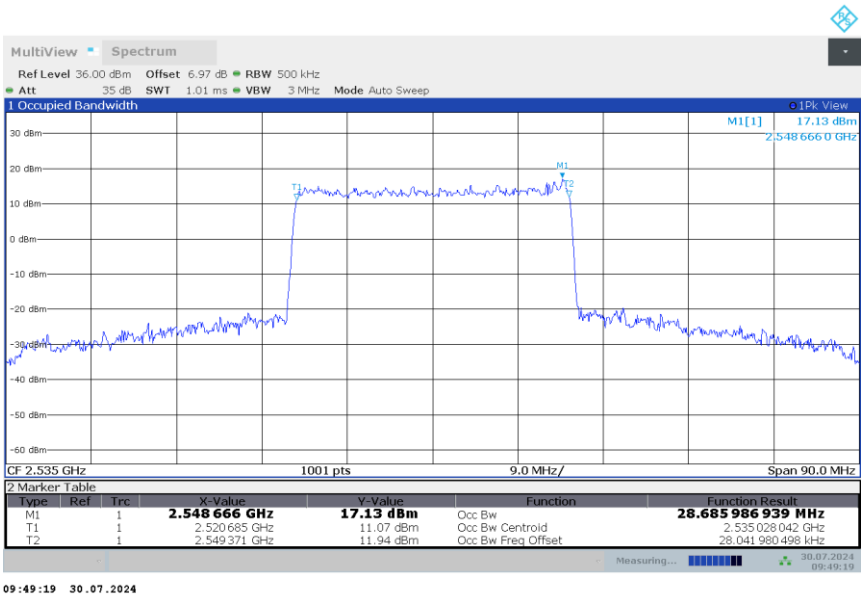
n7,30MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	28.709	28.686

n7,30MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,30MHz Bandwidth,DFT-s-QPSK (99% BW)

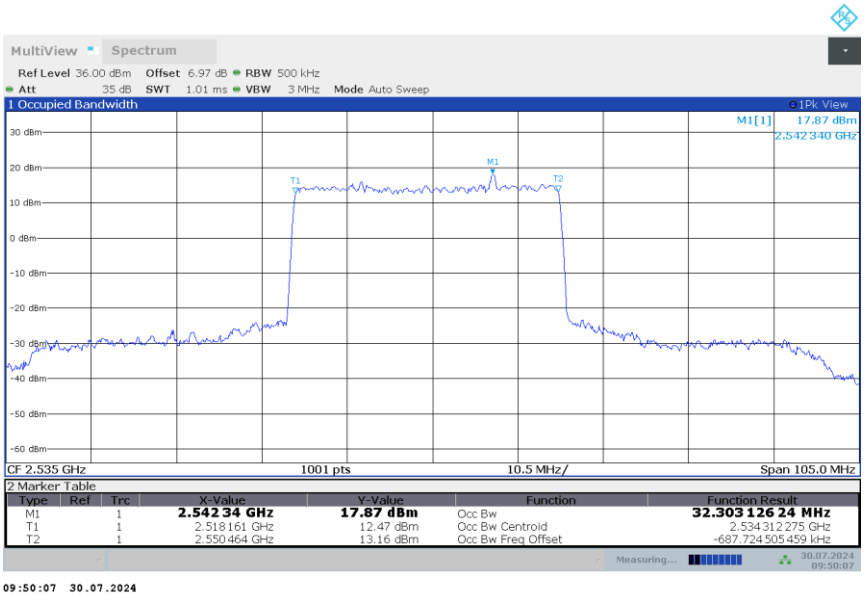


n7

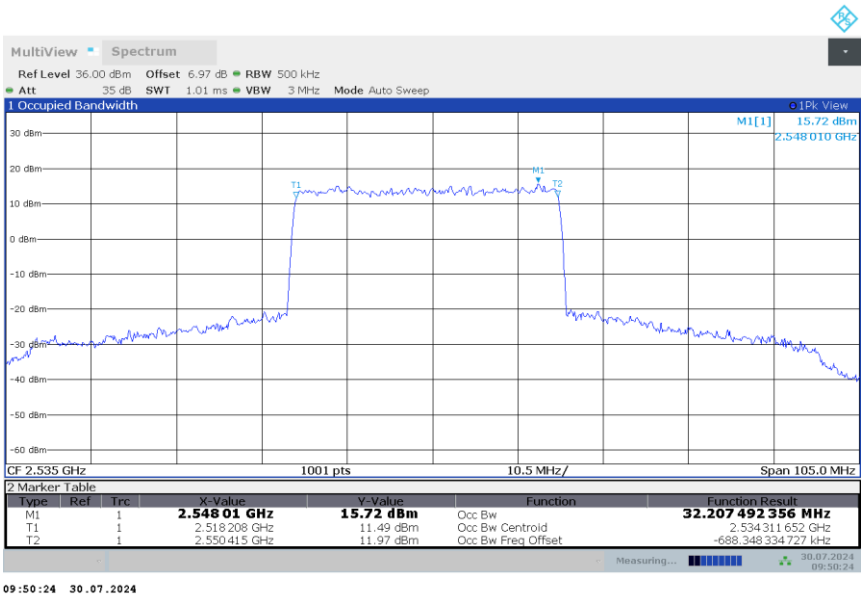
n7,35MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	32.303	32.207

n7,35MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,35MHz Bandwidth,DFT-s-QPSK (99% BW)

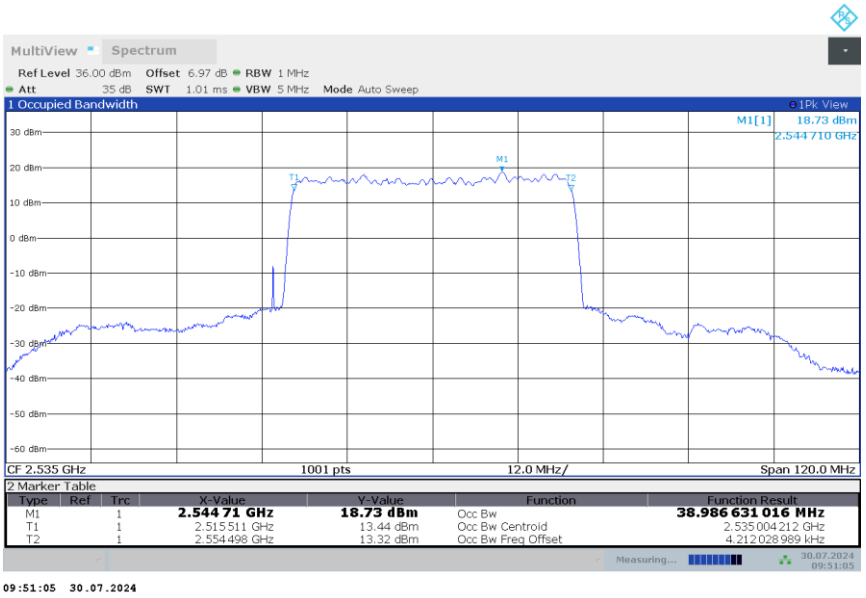


n7

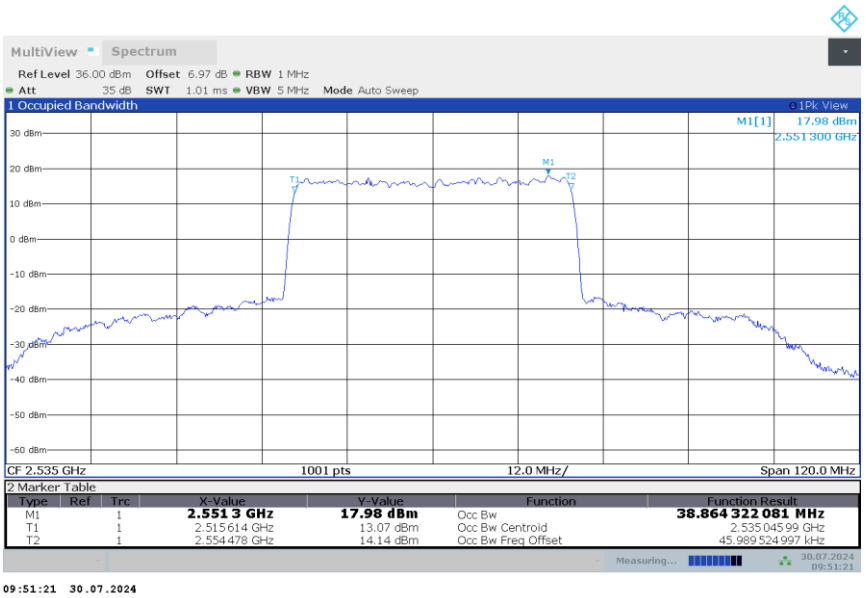
n7,40MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	38.987	38.864

n7,40MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n7,40MHz Bandwidth,DFT-s-QPSK (99% BW)

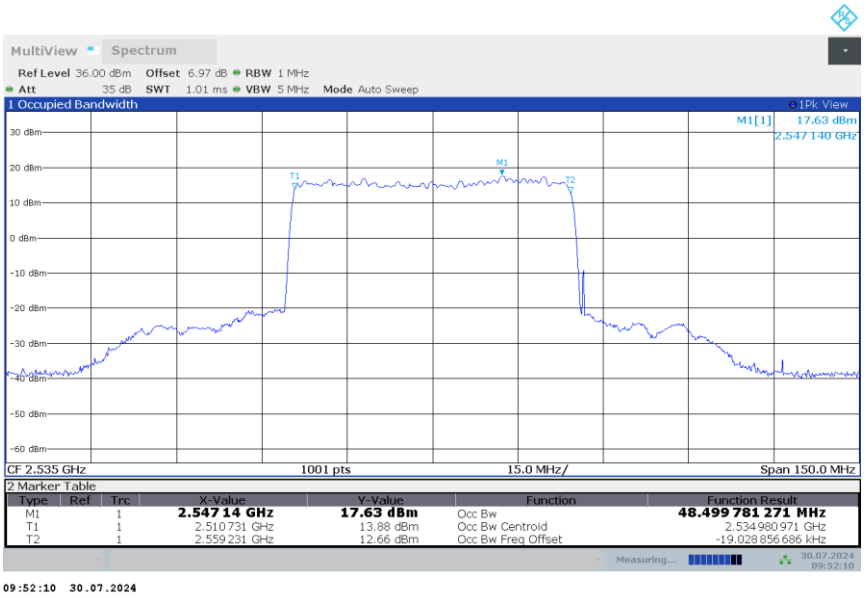


n7

n7,50MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2535	48.500	48.259

n7,50MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



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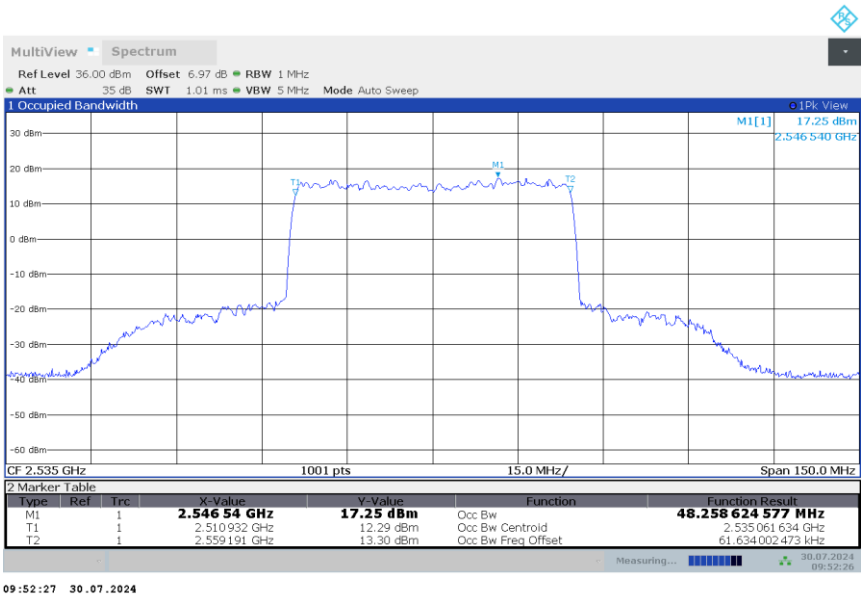
n7,50MHz Bandwidth,DFT-s-QPSK (99% BW)



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