DC 4(5M)_n2(5M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3466.00	-59.05	9.84	10.37	0	-58.52	-13.00	45.52	H
5199.00	-57.18	11.84	11.70	0	-57.32	-13.00	44.32	H
6932.00	-47.55	12.97	10.33	0	-50.18	-13.00	37.18	V
3704.00	-59.27	9.89	10.55	0	-58.60	-13.00	45.60	H
5556.00	-54.80	11.63	11.20	0	-55.23	-13.00	42.23	H
7408.00	-46.95	12.59	10.12	0	-49.42	-13.00	36.42	V

DC 4(5M)_n2(5M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3466.00	-59.05	9.84	10.37	0	-58.52	-13.00	45.52	H
5199.00	-57.18	11.84	11.70	0	-57.32	-13.00	44.32	H
6932.00	-47.55	12.97	10.33	0	-50.18	-13.00	37.18	V
3760.00	-58.81	10.10	10.45	0	-58.47	-13.00	45.47	V
5640.00	-54.31	11.61	11.20	0	-54.72	-13.00	41.72	V
7520.00	-47.77	12.82	10.31	0	-50.29	-13.00	37.29	V

DC 4(5M)_n2(5M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3466.00	-59.05	9.84	10.37	0	-58.52	-13.00	45.52	H
5199.00	-57.18	11.84	11.70	0	-57.32	-13.00	44.32	H
6932.00	-47.55	12.97	10.33	0	-50.18	-13.00	37.18	V
3816.00	-58.26	10.12	10.25	0	-58.13	-13.00	45.13	H
5724.00	-54.77	11.65	10.99	0	-55.43	-13.00	42.43	V
7632.00	-47.09	13.21	10.40	0	-49.90	-13.00	36.90	H

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DC 7(5M)_n5(5M), CH21100,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1652.96	-45.05	7.12	9.10	2.15	-45.22	-13.00	32.22	H
2479.44	-37.25	8.96	10.16	2.15	-38.19	-13.00	25.19	H
3305.92	-61.00	9.67	10.35	2.15	-62.48	-13.00	49.48	H
5070.00	-49.59	11.46	11.27	0	-49.78	-13.00	36.78	H
7605.00	-43.42	13.21	10.40	0	-46.23	-13.00	33.23	H
10140.00	-41.42	15.11	12.05	0	-44.48	-13.00	31.48	V

DC 7(5M)_n5(5M), CH21100,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.50	-43.78	7.23	9.10	2.15	-44.06	-13.00	31.06	V
2509.38	-38.17	8.67	10.12	2.15	-38.87	-13.00	25.87	H
3345.84	-61.70	9.47	10.43	2.15	-62.90	-13.00	49.90	H
5072.00	-55.46	11.46	11.27	0	-55.65	-13.00	42.65	V
7608.00	-46.48	13.21	10.40	0	-49.29	-13.00	36.29	V
10144.00	-40.31	15.11	12.04	0	-43.37	-13.00	30.37	H

DC 7(5M)_n5(5M), CH21100,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1692.90	-44.24	7.36	9.10	2.15	-44.65	-13.00	31.65	V
3385.80	-60.54	9.55	10.44	2.15	-61.80	-13.00	48.80	H
4232.25	-57.05	10.33	10.66	2.15	-58.87	-13.00	45.87	V
5070.50	-49.56	11.46	11.27	0	-49.76	-13.00	36.76	H
7605.50	-39.31	13.21	10.40	0	-42.12	-13.00	29.12	V
10144.00	-40.92	15.11	12.04	0	-43.98	-13.00	30.98	H

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DC 4(5M)_n7(5M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3466.00	-60.04	9.84	10.37	0.00	-59.51	-13.00	46.51	H
5199.00	-55.95	11.84	11.70	0	-56.10	-13.00	43.10	H
6932.00	-48.59	12.97	10.33	0	-51.22	-13.00	38.22	V
5006.00	-48.82	11.66	11.23	0	-49.25	-13.00	36.25	H
7509.00	-47.54	13.35	10.28	0	-50.61	-13.00	37.61	V
10012.00	-42.83	15.02	12.07	0	-45.77	-13.00	32.77	V

DC 4(5M)_n7(5M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3466.00	-59.61	9.84	10.37	0	-59.08	-13.00	46.08	V
5199.00	-56.70	11.84	11.70	0	-56.85	-13.00	43.85	H
6932.00	-49.48	12.97	10.33	0	-52.11	-13.00	39.11	H
5070.00	-48.67	11.46	11.27	0	-48.86	-13.00	35.86	H
7605.00	-43.96	13.21	10.40	0	-46.78	-13.00	33.78	V
10140.00	-40.49	15.11	12.05	0	-43.54	-13.00	30.54	V

DC 4(5M)_n7(5M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3466.00	-59.65	9.84	10.37	0	-59.12	-13.00	46.12	H
5199.00	-56.07	11.84	11.70	0	-56.22	-13.00	43.22	V
6932.00	-47.15	12.97	10.33	0	-49.78	-13.00	36.78	V
5136.00	-50.09	11.67	11.44	0	-50.32	-13.00	37.32	H
7704.00	-41.70	13.21	10.72	0	-44.19	-13.00	31.19	V
10272.00	-39.97	15.42	12.17	0	-43.22	-13.00	30.22	V

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DC 7(5M)_n26(814MHz-824MHz)(5M), CH163300,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.00	-50.90	11.46	11.27	0.00	-51.09	-25.00	26.09	H
7605.00	-42.18	13.21	10.40	0.00	-44.99	-25.00	19.99	V
10140.00	-39.59	15.11	12.05	0.00	-42.65	-25.00	17.65	H
1633.00	-44.64	7.09	9.10	2.15	-44.78	-13.00	31.78	H
2449.50	-38.61	8.76	9.95	2.15	-39.56	-13.00	26.56	V
3266.00	-60.24	9.74	10.25	2.15	-61.88	-13.00	48.88	H

DC 7(5M)_n26(814MHz-824MHz)(5M), CH163800,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.00	-52.17	11.46	11.27	0.00	-52.37	-13.00	39.37	H
7605.00	-46.51	13.21	10.40	0.00	-49.32	-13.00	36.32	V
10140.00	-41.26	15.11	12.05	0.00	-44.32	-13.00	31.32	H
1638.00	-45.05	7.09	9.12	2.15	-45.17	-25.00	20.17	H
2457.00	-37.62	8.66	10.14	2.15	-38.29	-25.00	13.29	V
3276.00	-59.94	9.74	10.24	2.15	-61.59	-25.00	36.59	V

DC 7(5M)_n26(814MHz-824MHz)(5M), CH164300,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.00	-50.48	11.46	11.27	0.00	-50.67	-25.00	25.67	H
7605.00	-43.84	13.21	10.40	0.00	-46.65	-25.00	21.65	V
10140.00	-40.86	15.11	12.05	0.00	-43.92	-25.00	18.92	V
1643.00	-45.36	7.13	9.14	2.15	-45.50	-13.00	32.50	H
2464.50	-37.71	8.96	10.15	2.15	-38.67	-13.00	25.67	V
3286.00	-60.97	9.74	10.23	2.15	-62.62	-13.00	49.62	V

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DC 4(5M)_n41(10M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.00	-55.28	9.84	10.37	0.00	-54.75	-13.00	41.75	H
5197.50	-56.38	11.84	11.69	0.00	-56.53	-13.00	43.53	H
6930.00	-48.73	12.92	10.34	0.00	-51.30	-13.00	38.30	H
5002.00	-54.40	11.66	11.23	0.00	-54.83	-25.00	29.83	H
7503.00	-47.43	13.16	10.27	0.00	-50.32	-25.00	25.32	H
10004.00	-42.56	15.61	12.09	0.00	-46.09	-25.00	21.09	H

DC 4(5M)_n41(10M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.00	-55.44	9.84	10.37	0.00	-54.91	-13.00	41.91	H
5197.50	-56.81	11.84	11.69	0.00	-56.97	-13.00	43.97	H
6930.00	-48.92	12.92	10.34	0.00	-51.50	-13.00	38.50	V
5186.00	-48.04	11.33	11.64	0.00	-47.72	-25.00	22.72	H
7779.50	-38.32	13.08	10.96	0.00	-40.44	-25.00	15.44	H
10372.00	-40.94	15.15	12.13	0.00	-43.96	-25.00	18.96	H

DC 4(5M)_n41(10M), CH20175,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.00	-57.38	9.84	10.37	0.00	-56.85	-13.00	43.85	H
5197.50	-57.38	11.84	11.69	0.00	-57.53	-13.00	44.53	V
6930.00	-49.54	12.92	10.34	0.00	-52.12	-13.00	39.12	H
5370.00	-56.59	11.51	11.41	0.00	-56.68	-25.00	31.68	V
8055.00	-47.31	13.45	11.30	0.00	-49.46	-25.00	24.46	V
10740.00	-38.87	16.04	12.25	0.00	-42.65	-25.00	17.65	H

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DC 12(5M)_n66(5M), CH23095,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-57.69	6.36	8.01	2.15	-58.20	-13.00	45.20	H
2122.50	-51.17	7.62	8.32	2.15	-52.63	-13.00	39.63	H
2830.00	-46.18	9.44	10.48	2.15	-47.29	-13.00	34.29	V
3424.50	-65.69	9.62	10.35	0.00	-64.97	-13.00	51.97	H
5137.00	-63.66	11.67	11.44	0.00	-63.88	-13.00	50.88	H
6850.00	-58.39	12.60	10.37	0.00	-60.62	-13.00	47.62	V

DC 12(5M)_n66(5M), CH23095,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-57.66	6.36	8.01	2.15	-58.17	-13.00	45.17	V
2122.50	-51.16	7.62	8.32	2.15	-52.62	-13.00	39.62	H
2830.00	-46.24	9.44	10.48	2.15	-47.35	-13.00	34.35	V
3475.00	-65.05	9.84	10.37	0.00	-64.51	-13.00	51.51	H
5212.50	-64.71	11.91	11.52	0.00	-65.10	-13.00	52.10	H
6950.00	-57.67	12.57	10.33	0.00	-59.91	-13.00	46.91	V

DC 12(5M)_n66(5M), CH23095,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-57.60	6.36	8.01	2.15	-58.11	-13.00	45.11	V
2122.50	-51.17	7.62	8.32	2.15	-52.62	-13.00	39.62	V
2830.00	-46.23	9.44	10.48	2.15	-47.34	-13.00	34.34	H
3525.00	-64.13	10.13	10.57	0.00	-63.69	-13.00	50.69	V
5287.50	-64.48	11.77	11.46	0.00	-64.79	-13.00	51.79	H
7050.00	-56.35	13.29	10.37	0.00	-59.27	-13.00	46.27	V

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

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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 CMW500.

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 CMW500, and in a simulated call on middle channel for each LTE 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 CMW500 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.

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A.3.2 Measurement results

n2

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	1850.096	1909.872		
50				0.00	0.0000
40				-2.80	0.0015
30				-0.50	0.0003
10				-0.40	0.0002
0				0.20	0.0001
-10				-1.30	0.0007
-20				0.20	0.0001
-30				-2.10	0.0011

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	1850.096	1909.872	-2.30	0.0012
4.54				0.10	0.0001

n7

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	2500.448	2569.536		
50				4.90	0.0019
40				0.70	0.0003
30				0.40	0.0002
10				5.10	0.0020
0				-1.00	0.0004
-10				2.90	0.0011
-20				2.60	0.0010
-30				6.30	0.0025

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	2500.448	2569.536	1.30	0.0005
4.54				4.30	0.0017

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Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	699.176	715.088		
50				-0.80	0.0011
40				0.80	0.0011
30				2.20	0.0031
10				3.50	0.0049
0				-1.40	0.0020
-10				1.30	0.0018
-20				0.50	0.0007
-30				2.60	0.0037

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	699.176	715.088	2.60	0.0037
4.54				-1.80	0.0025

n26_Part22

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	824.208	847.848		
50				-3.20	0.0038
40				-9.00	0.0108
30				-3.00	0.0036
10				-2.50	0.0030
0				0.20	0.0002
-10				-3.40	0.0041
-20				-5.50	0.0066
-30				-1.90	0.0023

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	824.208	847.848	-2.70	0.0032
4.54				-3.70	0.0044

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n26_Part90

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	814.192	823.456		
50				1.50	0.0018
40				3.70	0.0045
30				4.00	0.0049
10				4.30	0.0053
0				2.40	0.0029
-10				1.80	0.0022
-20				3.20	0.0039
-30				2.50	0.0031

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	814.192	823.456	3.70	0.0045
4.54				2.50	0.0031

n41

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	2496.720	2688.144		
50				-0.70	0.0003
40				2.90	0.0011
30				2.00	0.0008
10				6.40	0.0025
0				6.70	0.0026
-10				-0.90	0.0003
-20				1.80	0.0007
-30				2.70	0.0010

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	2496.720	2688.144	0.40	0.0002
4.54				10.40	0.0040

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Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	1710.256	1779.344		
50				4.30	0.0025
40				3.60	0.0021
30				2.20	0.0013
10				-0.10	0.0001
0				0.40	0.0002
-10				2.00	0.0011
-20				1.10	0.0006
-30				2.10	0.0012

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	1710.256	1779.344	2.30	0.0013
4.54				2.30	0.0013

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Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	663.561	695.978		
50				1.00	0.0015
40				-3.00	0.0044
30				-2.50	0.0037
10				0.40	0.0006
0				-2.20	0.0032
-10				-1.40	0.0021
-20				-1.60	0.0024
-30				-1.40	0.0021

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	663.561	695.978	-3.20	0.0047
4.54				1.80	0.0026

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n77L

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	3450.704	3548.208		
50				1.30	0.0004
40				-0.50	0.0001
30				-5.40	0.0015
10				0.10	0.0000
0				-4.70	0.0013
-10				-0.40	0.0001
-20				-2.40	0.0007
-30				-2.30	0.0007

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	3450.704	3548.208	-1.40	0.0004
4.54				-2.10	0.0006

n77H

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	3700.400	3978.480		
50				-4.40	0.0011
40				-3.30	0.0009
30				-6.40	0.0017
10				-6.50	0.0017
0				-2.30	0.0006
-10				1.10	0.0003
-20				-5.70	0.0015
-30				-7.00	0.0018

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	3700.400	3978.480	0.00	0.0000
4.54				-2.60	0.0007

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n78L

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.92	3450.672	3548.240		
50				9.20	0.0026
40				11.30	0.0032
30				4.60	0.0013
10				8.60	0.0025
0				10.70	0.0031
-10				11.80	0.0034
-20				5.00	0.0014
-30				9.30	0.0027

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.41	20	3450.672	3548.240	7.80	0.0022
4.54				2.60	0.0007

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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 extreme and mid 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.

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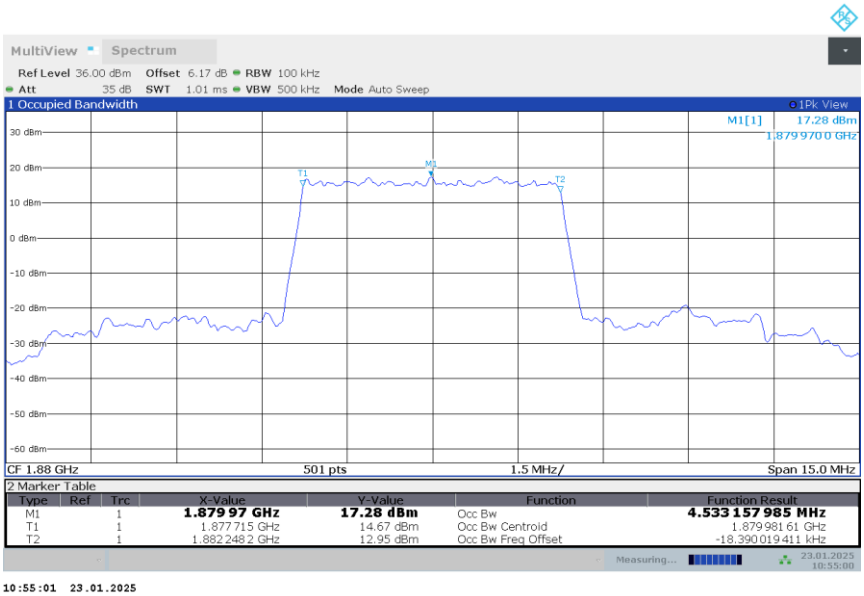
n2

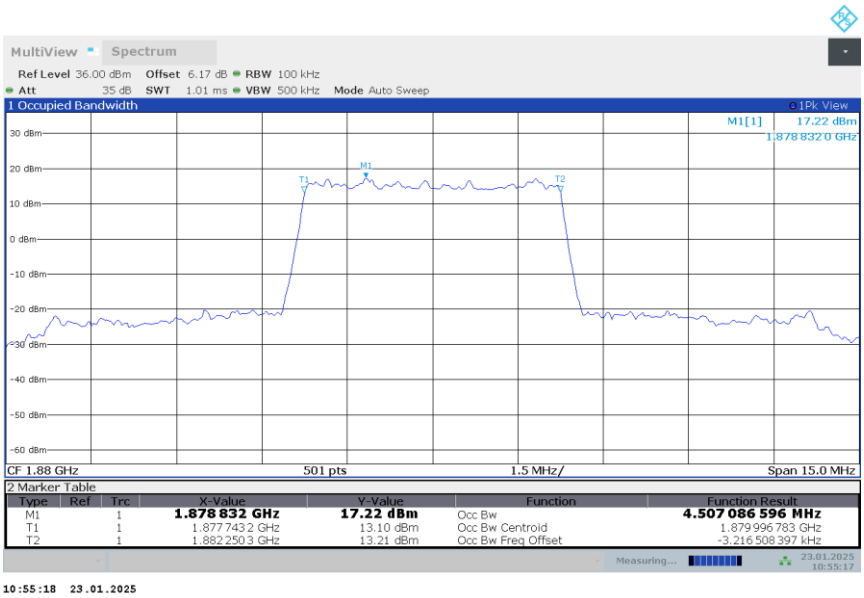
n2,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	4.533	4.507	4.520

n2,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,5MHz Bandwidth,DFT-s-QPSK (99% BW)



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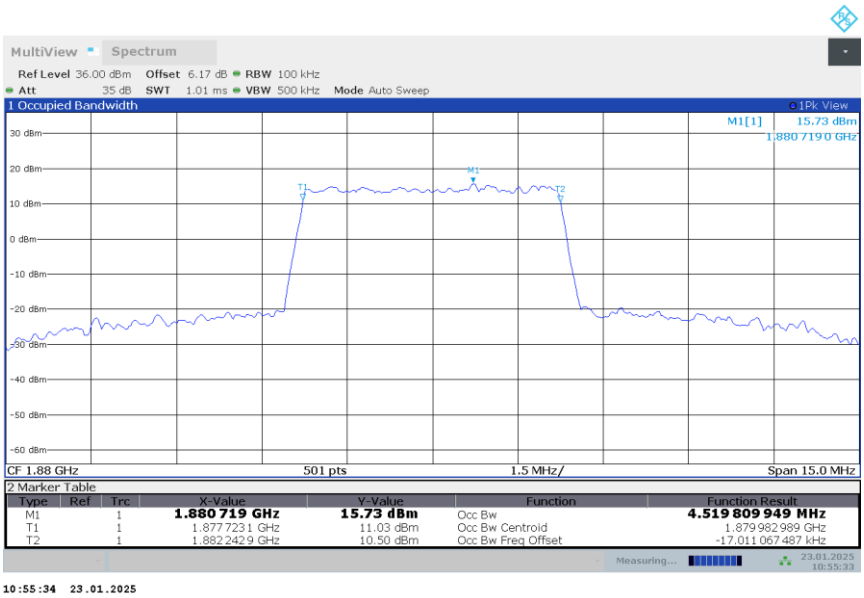
n2,5MHz Bandwidth,DFT-s-16QAM (99% BW)



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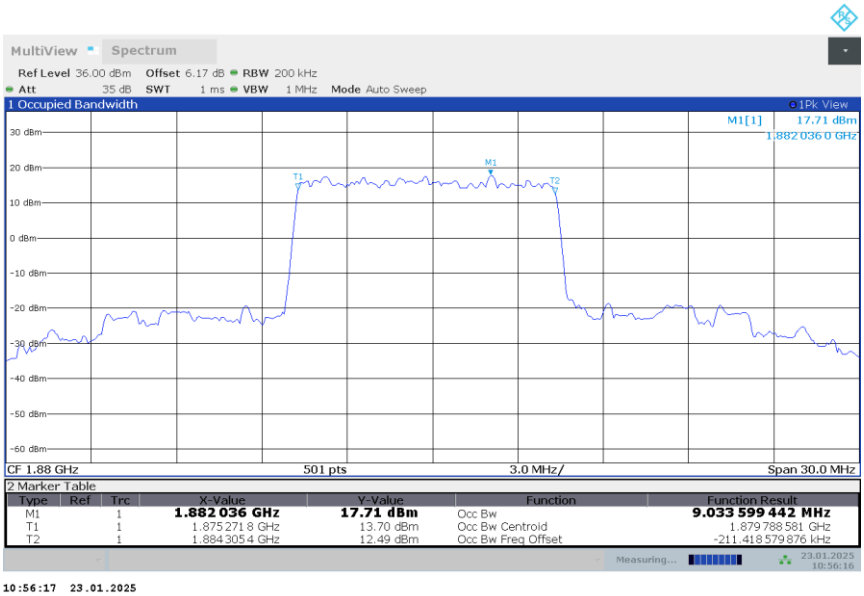
n2

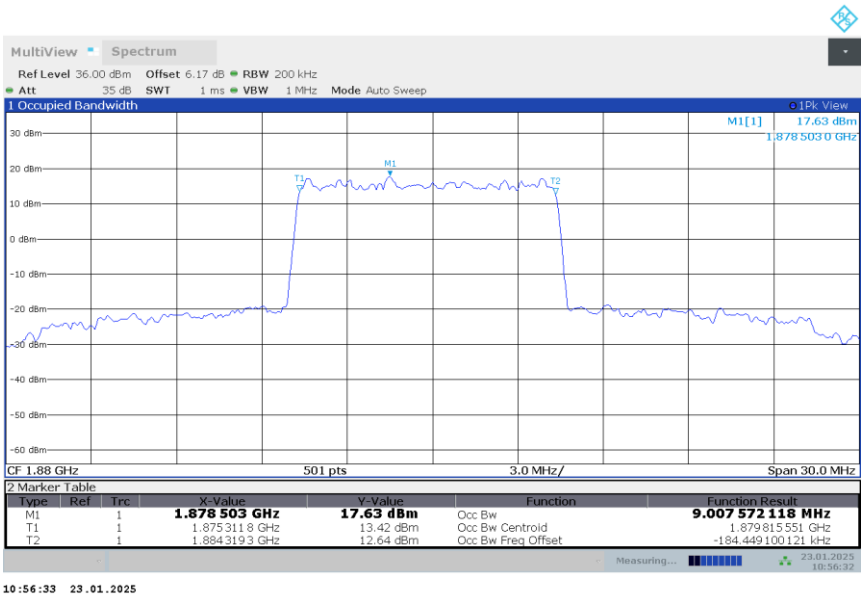
n2,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	9.034	9.008	9.008

n2,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,10MHz Bandwidth,DFT-s-QPSK (99% BW)



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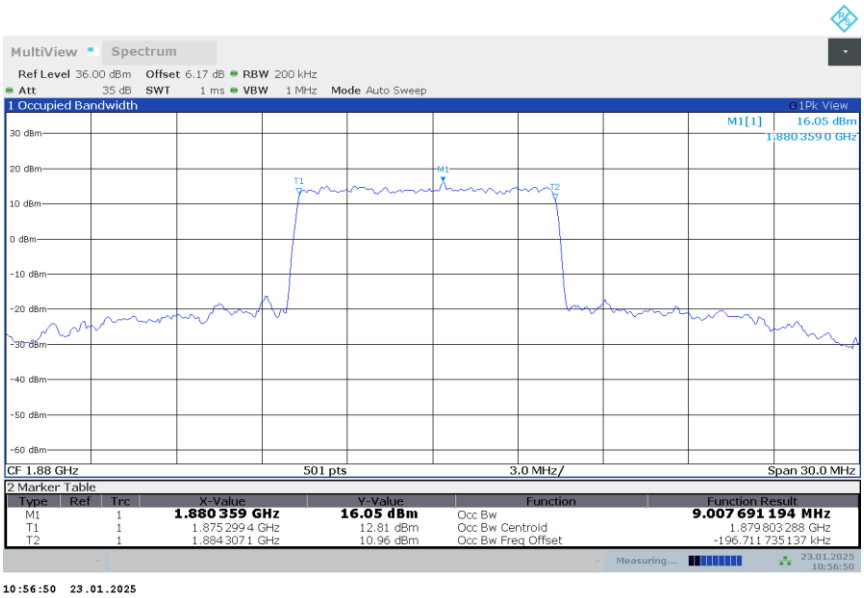
n2,10MHz Bandwidth,DFT-s-16QAM (99% BW)



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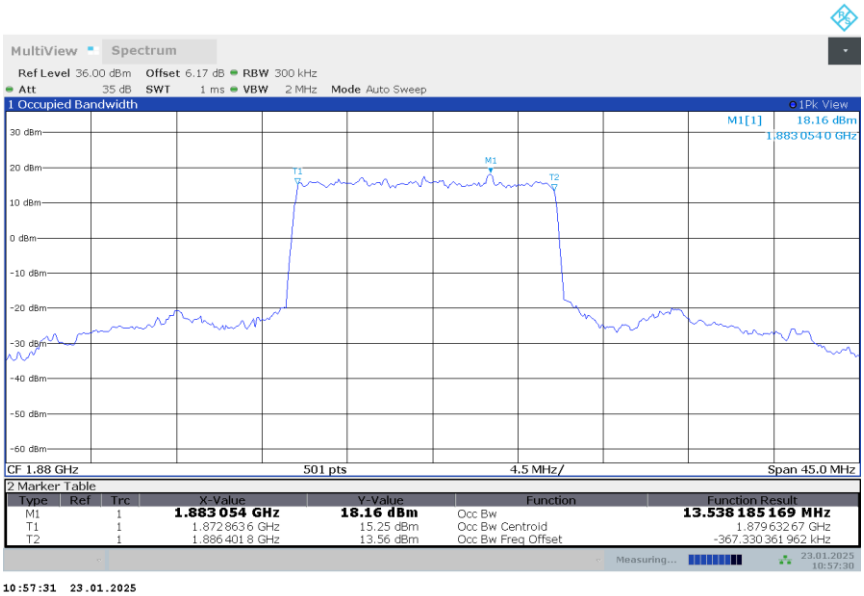
n2

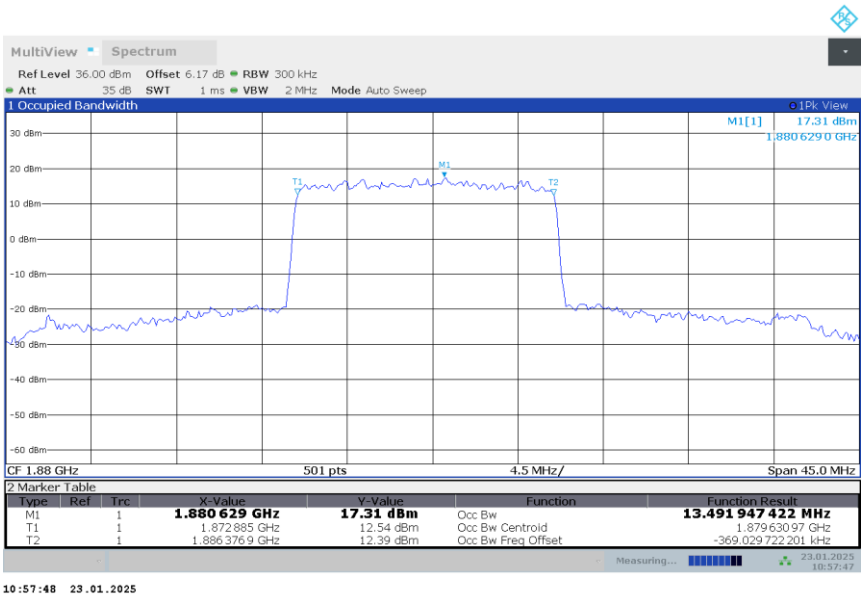
n2,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	13.538	13.492	13.485

n2,15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,15MHz Bandwidth,DFT-s-QPSK (99% BW)



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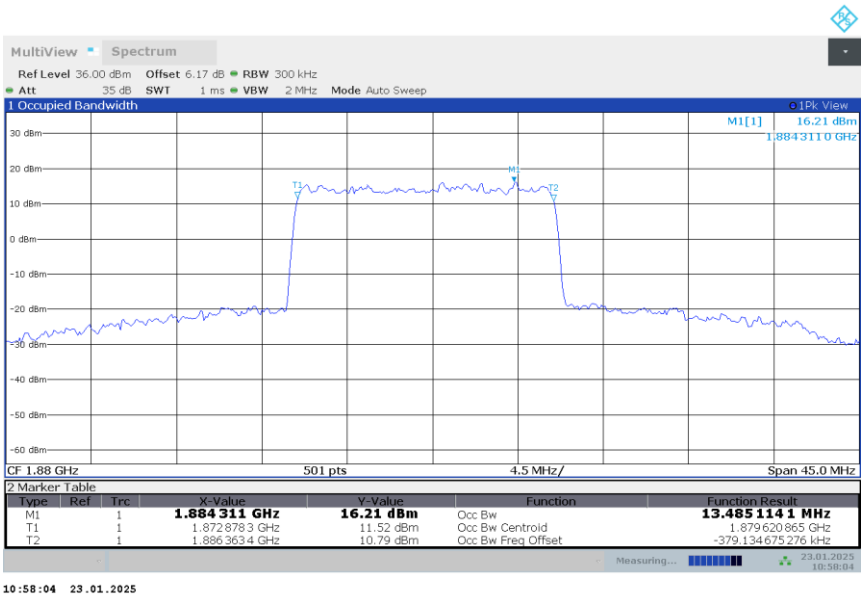
n2,15MHz Bandwidth,DFT-s-16QAM (99% BW)



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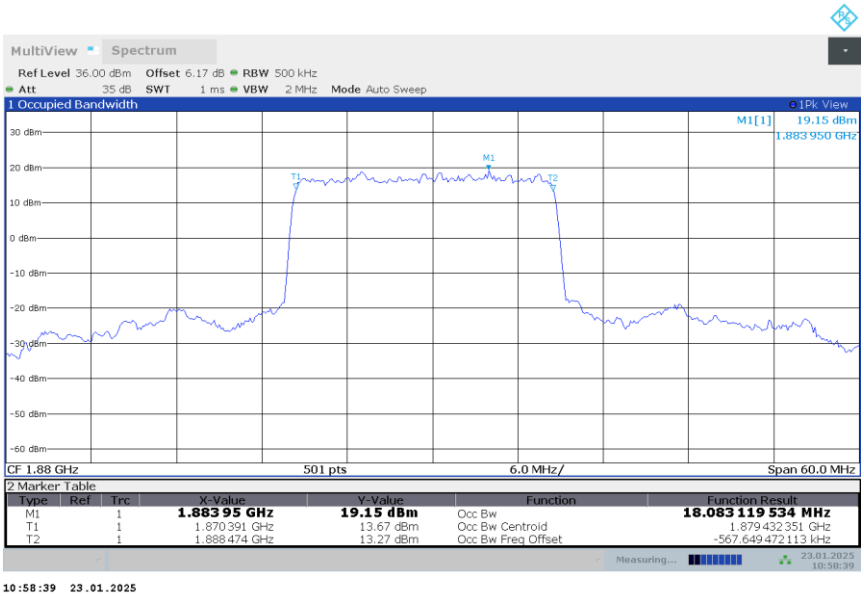
n2

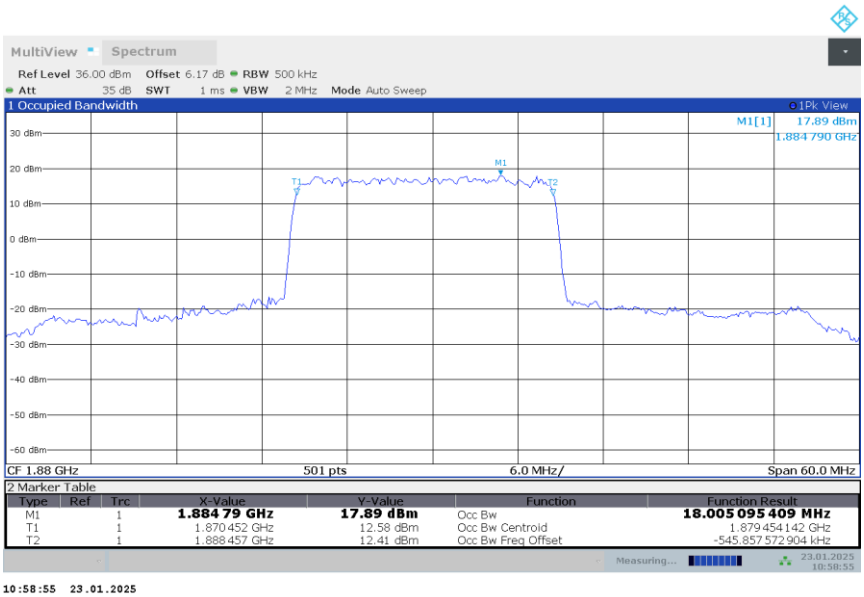
n2,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	18.083	18.005	18.036

n2,20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,20MHz Bandwidth,DFT-s-QPSK (99% BW)



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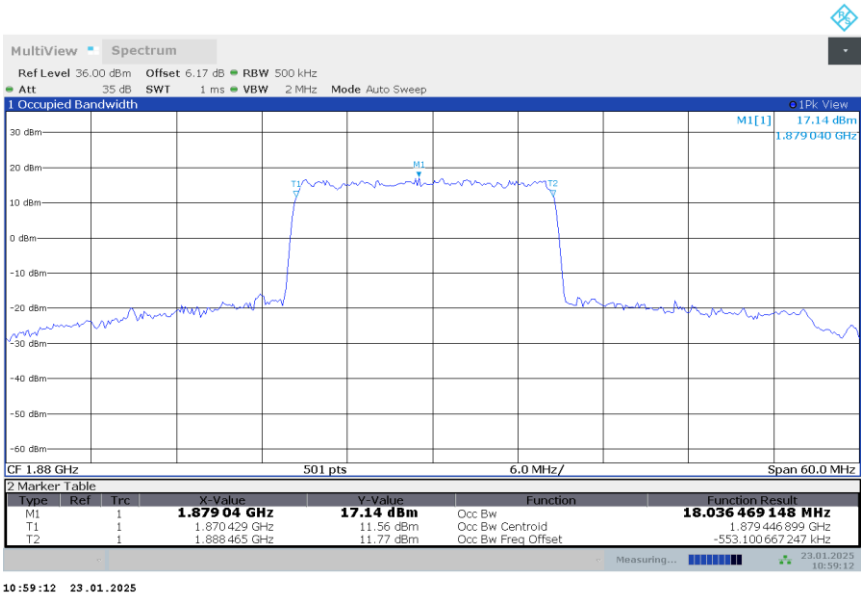
n2,20MHz Bandwidth,DFT-s-16QAM (99% BW)



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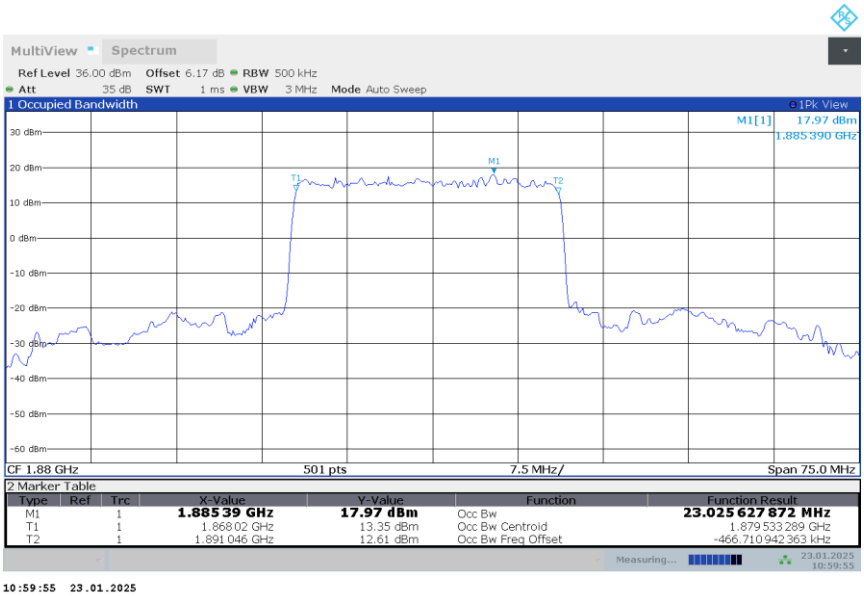
n2

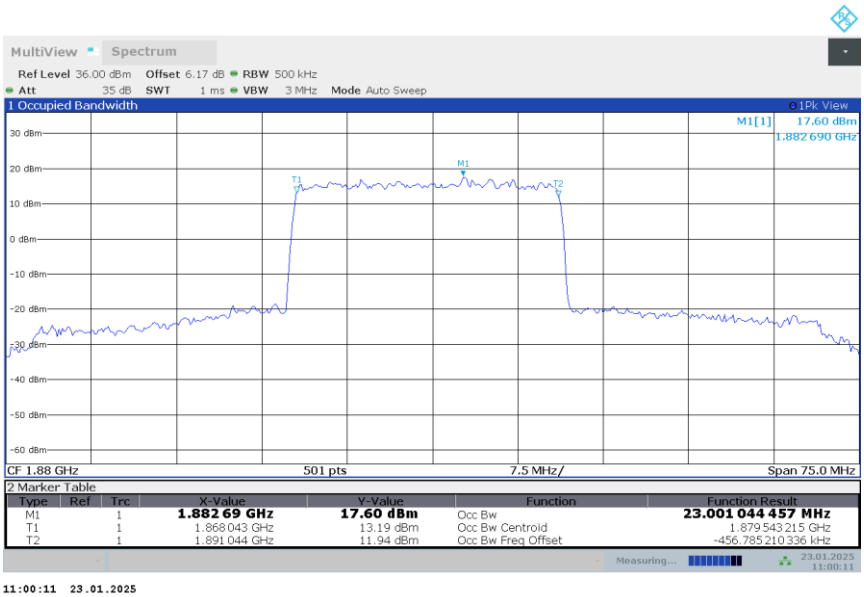
n2,25MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	23.026	23.001	22.965

n2,25MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,25MHz Bandwidth,DFT-s-QPSK (99% BW)



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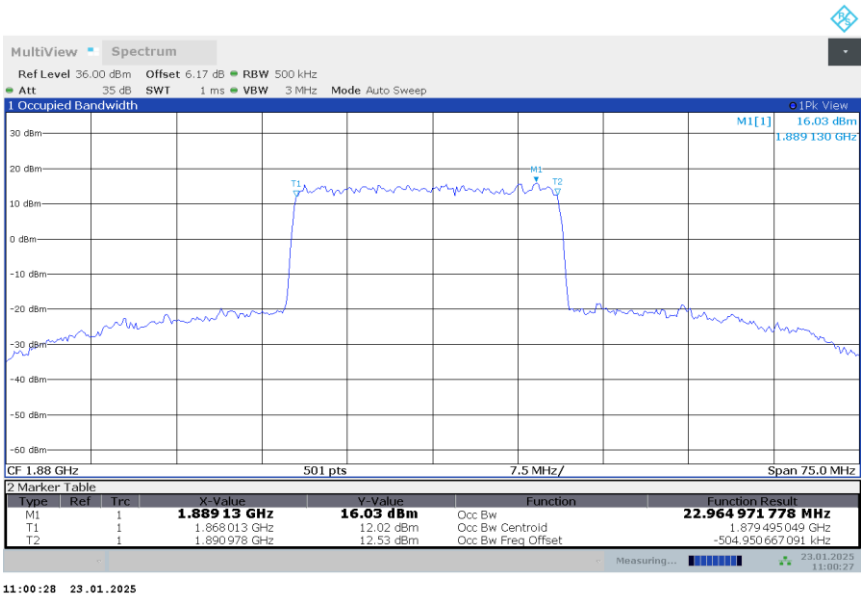
n2,25MHz Bandwidth,DFT-s-16QAM (99% BW)



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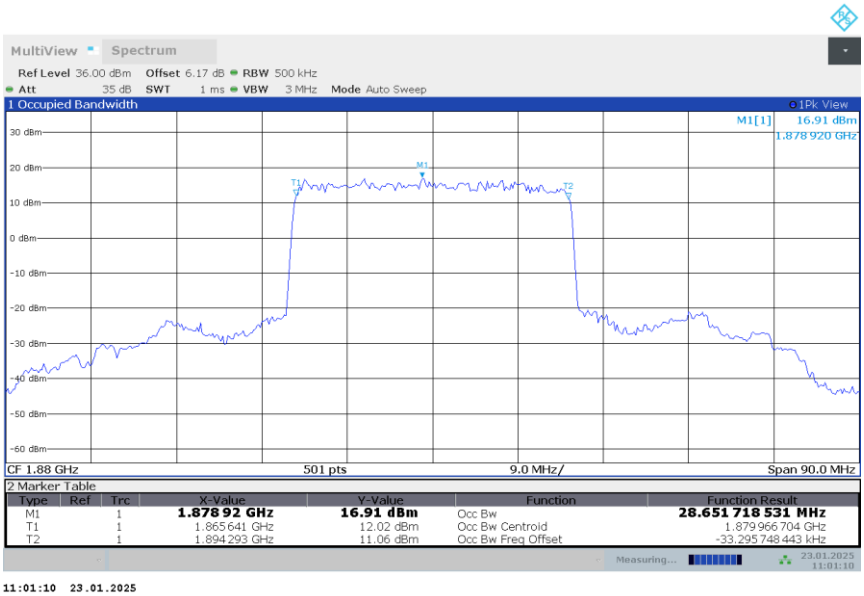
n2

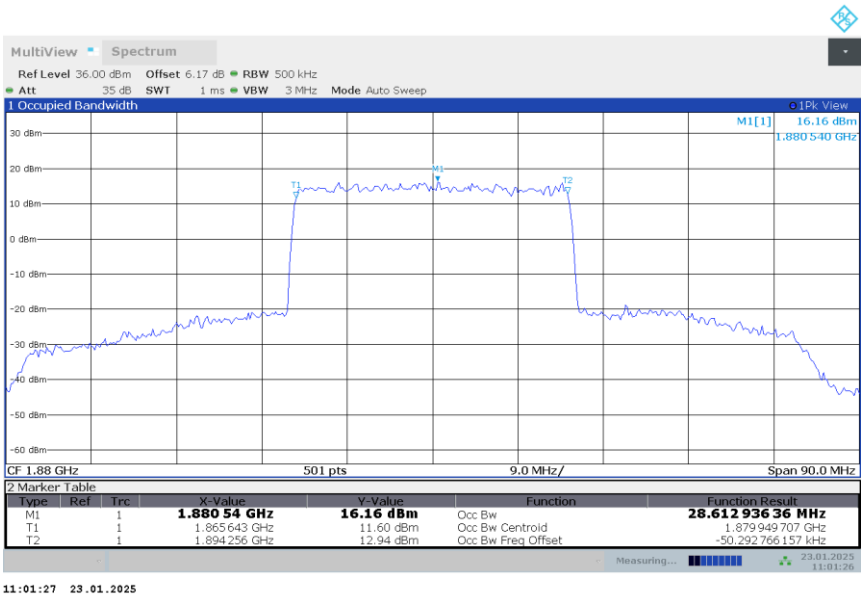
n2,30MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	28.652	28.613	28.670

n2,30MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,30MHz Bandwidth,DFT-s-QPSK (99% BW)



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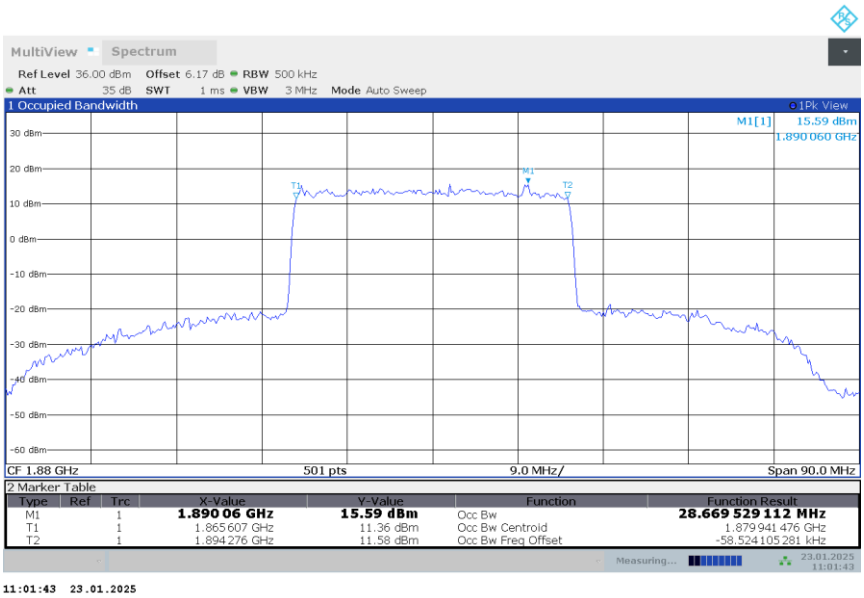
n2,30MHz Bandwidth,DFT-s-16QAM (99% BW)



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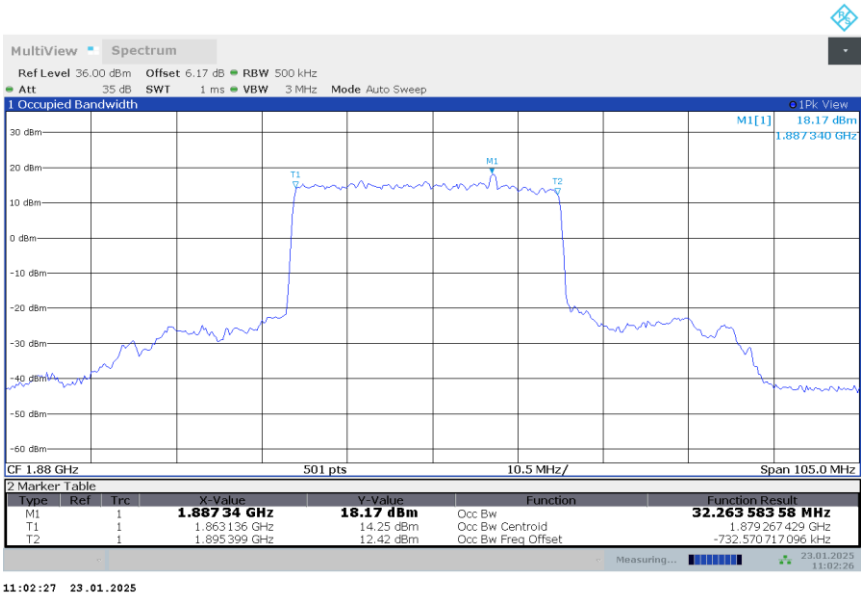
n2

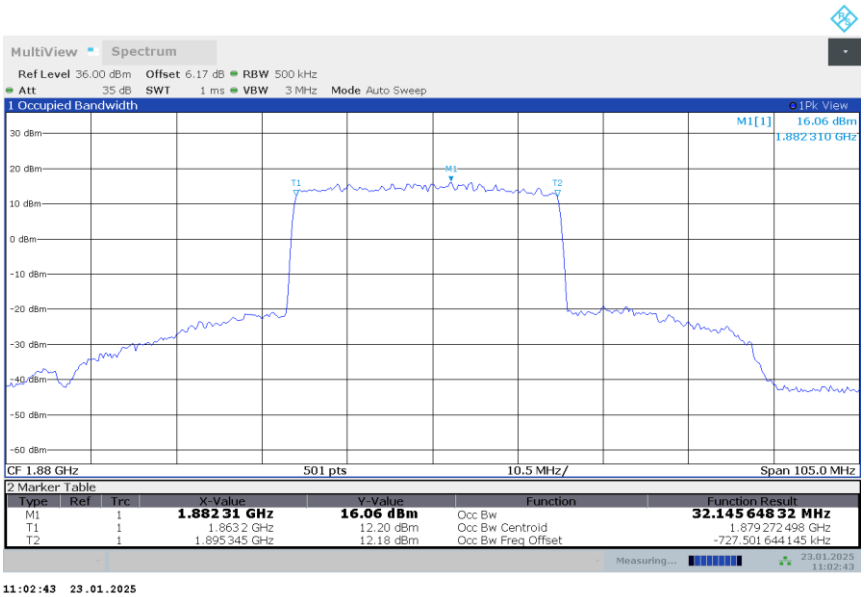
n2,35MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	32.264	32.146	32.187

n2,35MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n2,35MHz Bandwidth,DFT-s-QPSK (99% BW)



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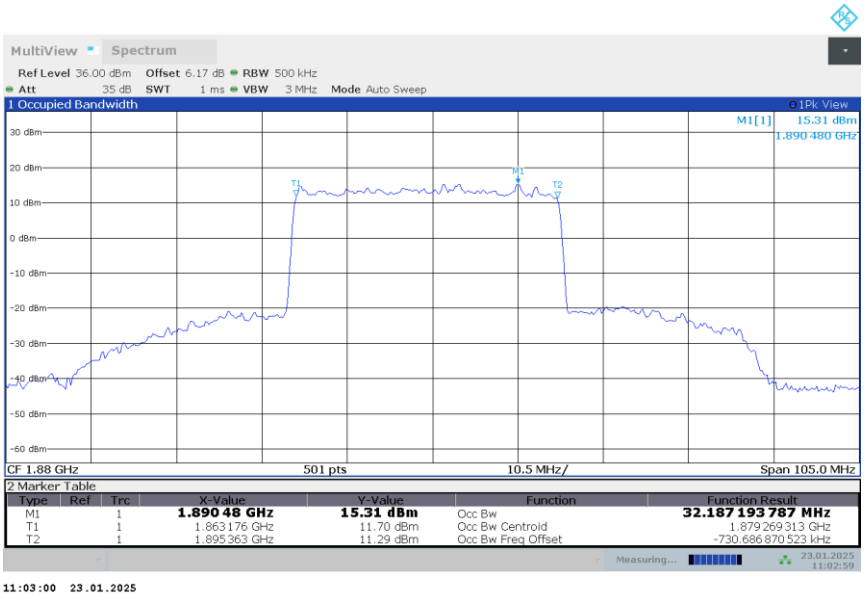
n2,35MHz Bandwidth,DFT-s-16QAM (99% BW)



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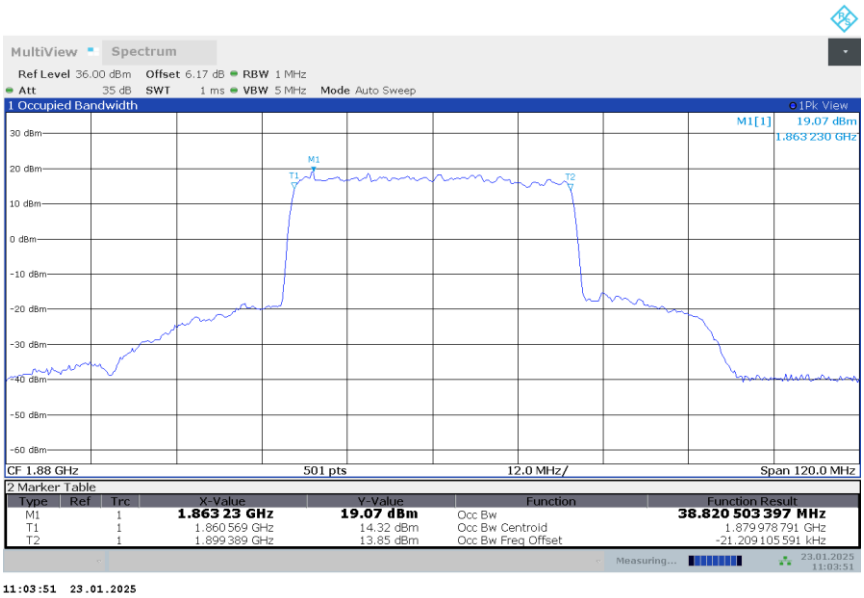
n2

n2,40MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
1880	38.936	38.821	38.866

n2,40MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)

n2,40MHz Bandwidth,DFT-s-QPSK (99% BW)



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n2,40MHz Bandwidth,DFT-s-16QAM (99% BW)

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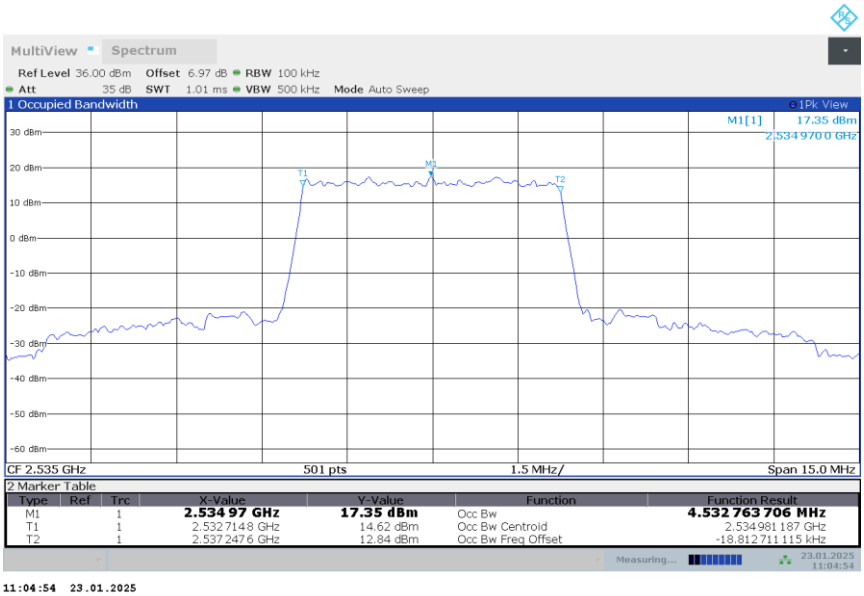
n7

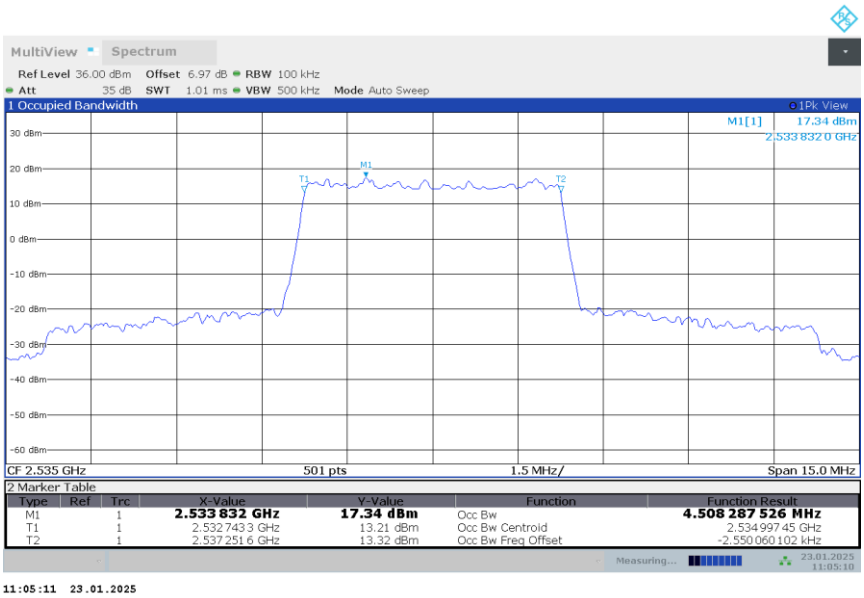
n7,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	4.533	4.508	4.520

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



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



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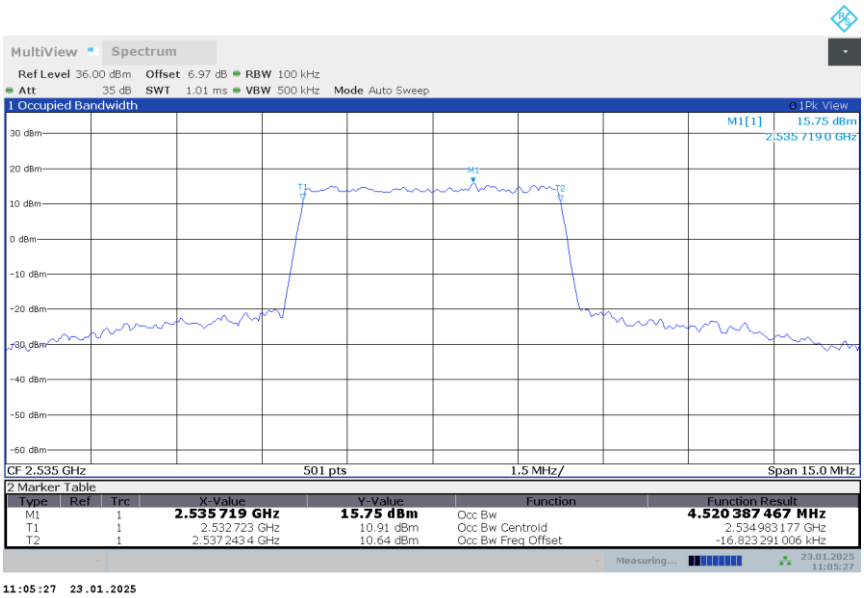
n7,5MHz Bandwidth,DFT-s-16QAM (99% BW)



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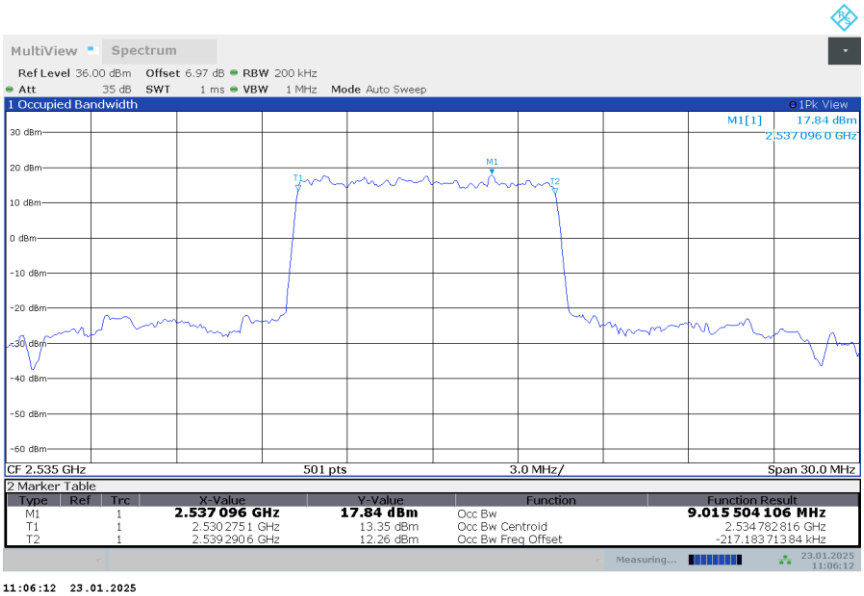
n7

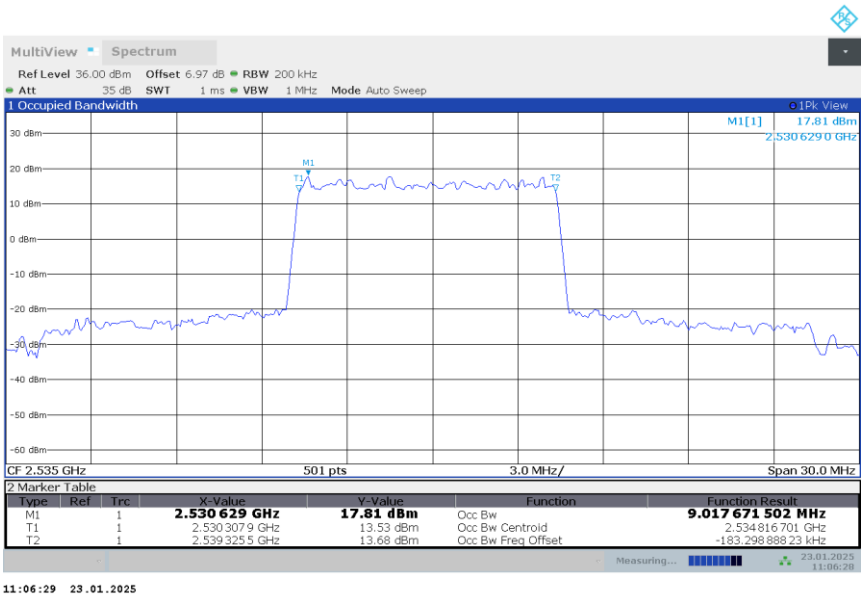
n7,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	9.016	9.018	9.011

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



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



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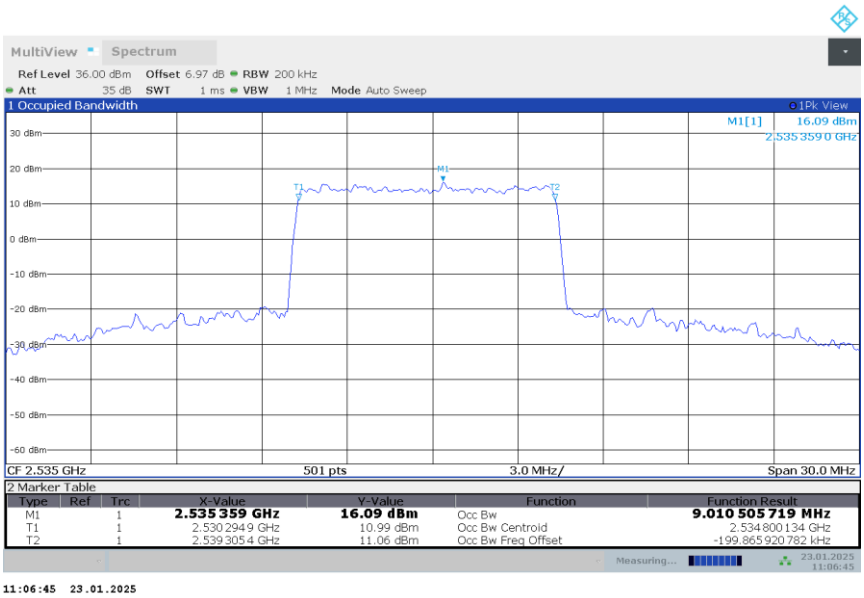
n7,10MHz Bandwidth,DFT-s-16QAM (99% BW)



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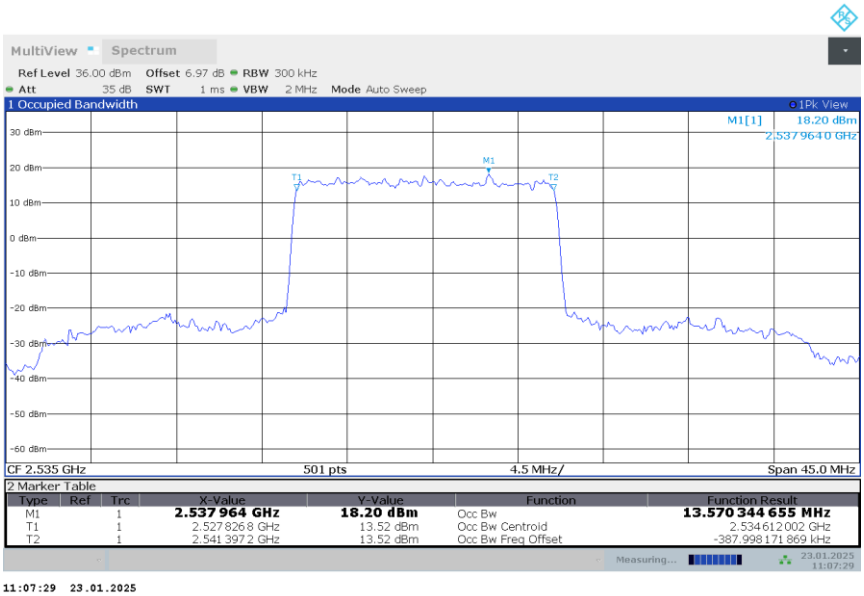
n7

n7,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	13.570	13.500	13.493

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



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

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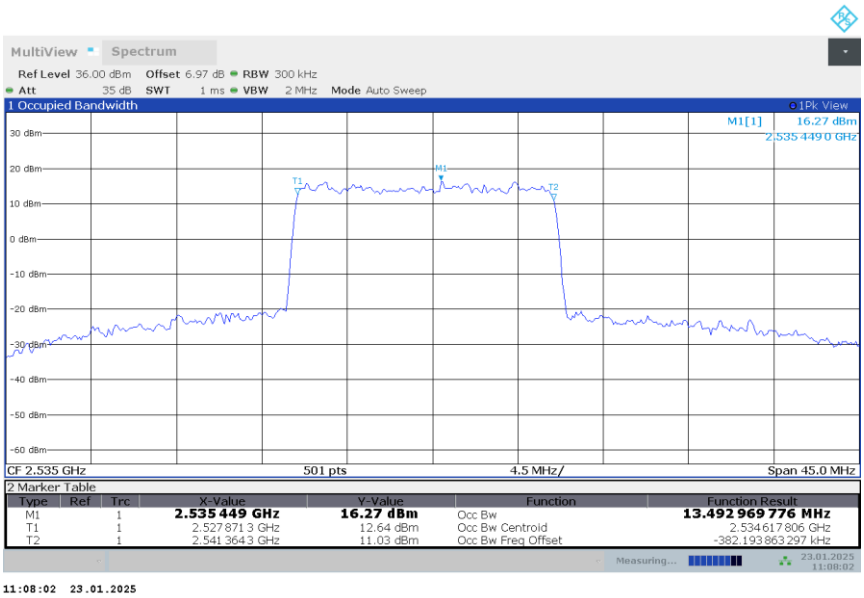
n7,15MHz Bandwidth,DFT-s-16QAM (99% BW)



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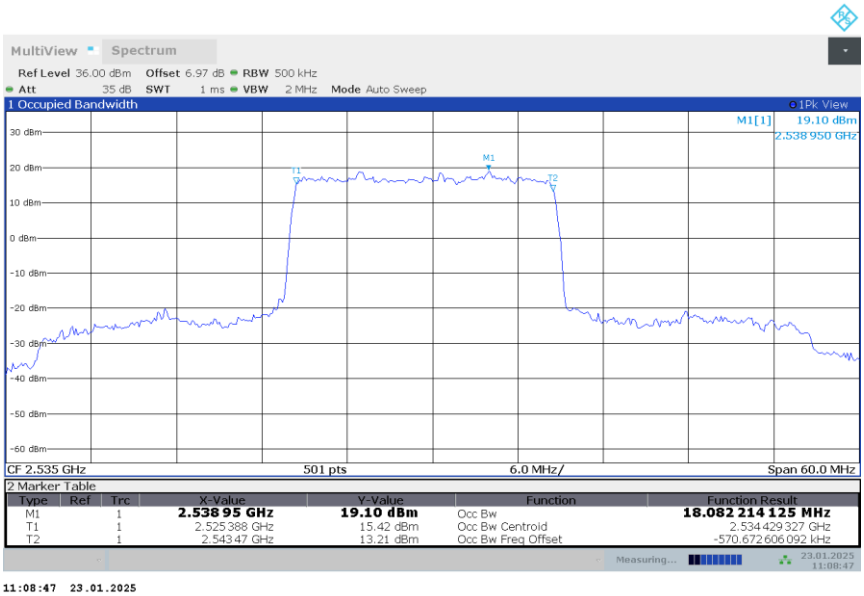
n7

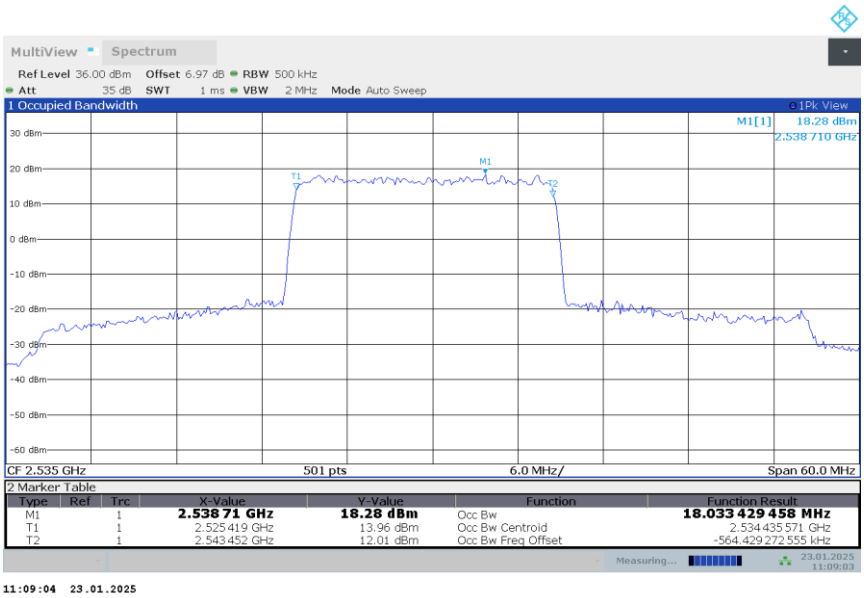
n7,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	18.082	18.033	18.039

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



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



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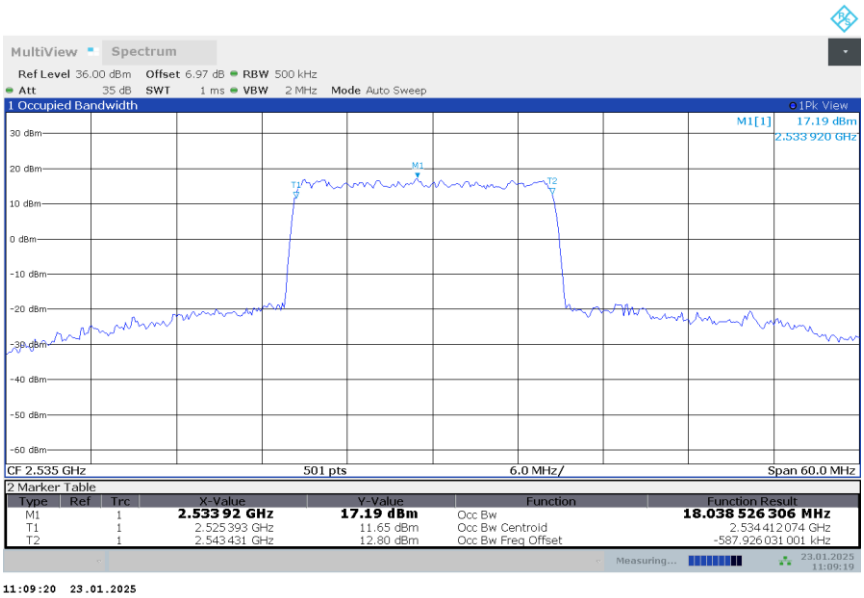
n7,20MHz Bandwidth,DFT-s-16QAM (99% BW)



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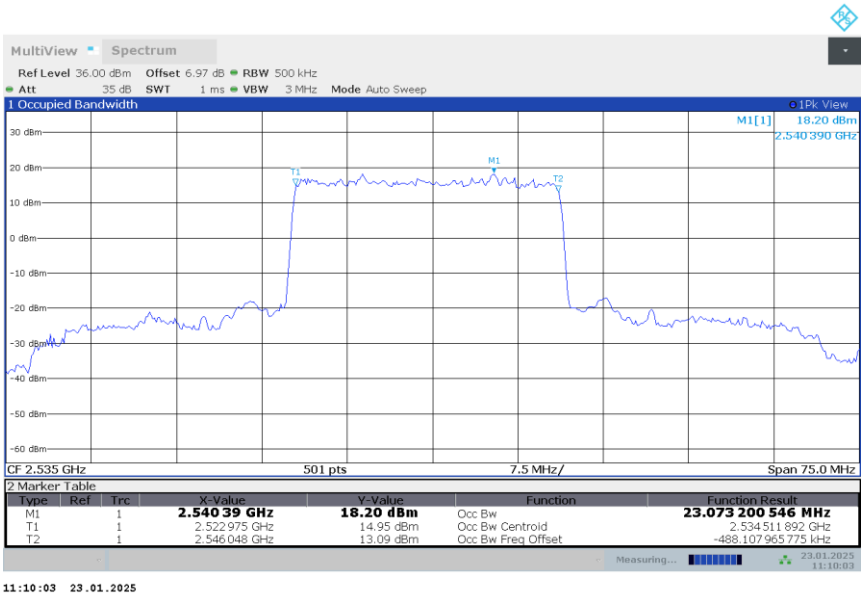
n7

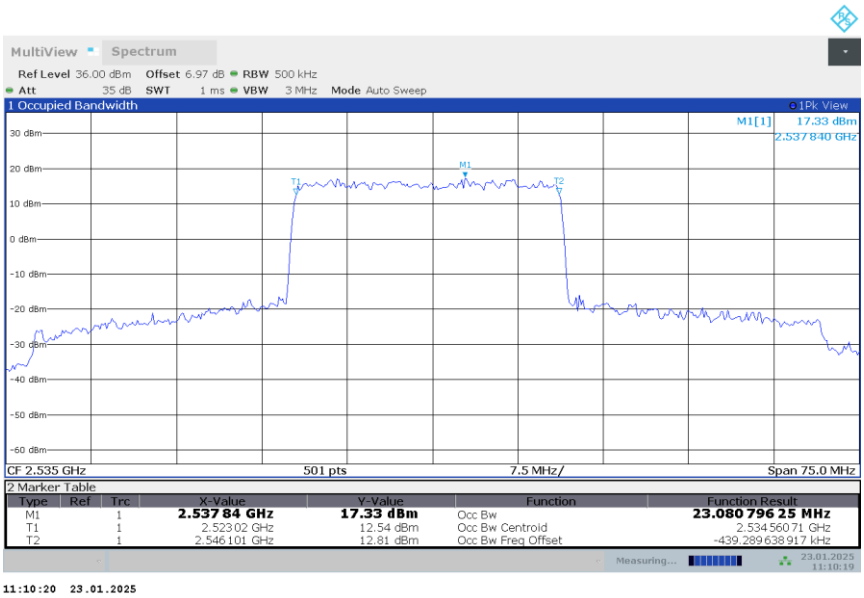
n7,25MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	23.073	23.081	22.966

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



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



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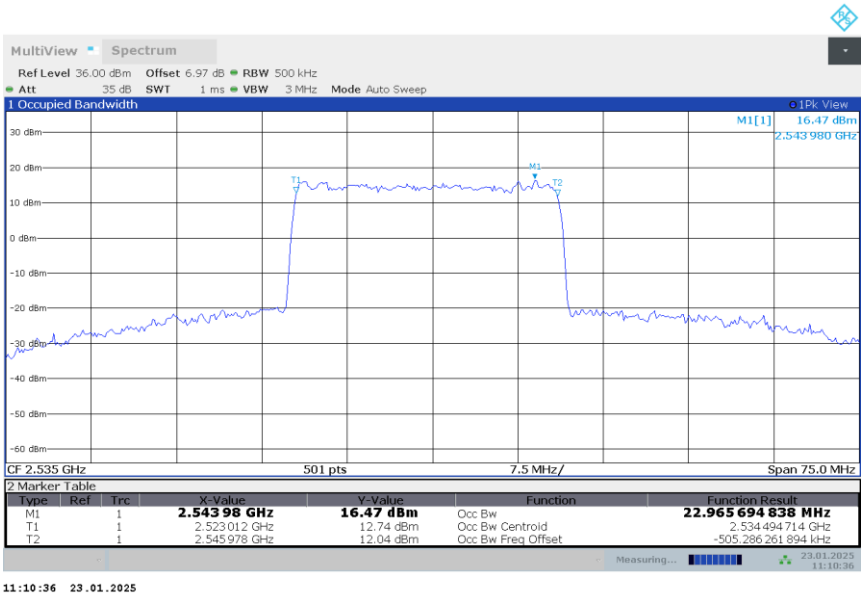
n7,25MHz Bandwidth,DFT-s-16QAM (99% BW)



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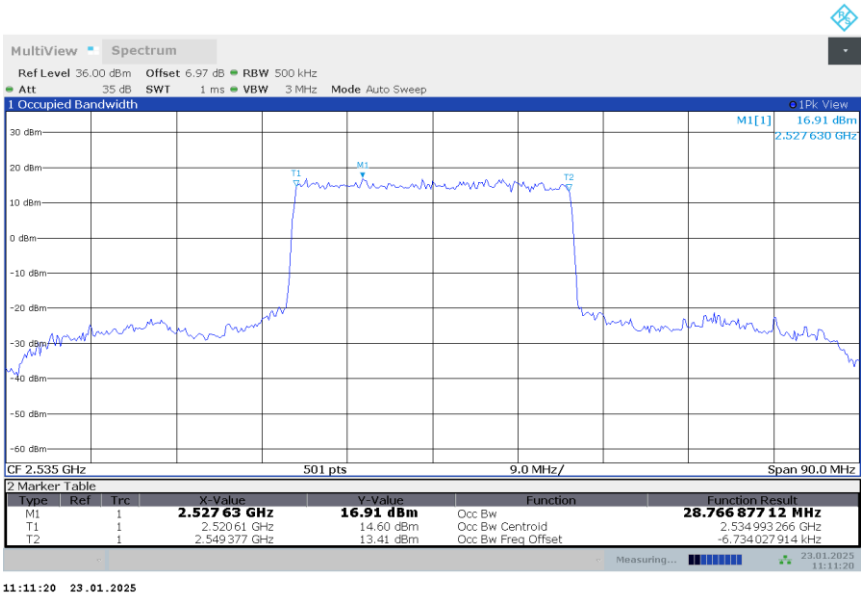
n7

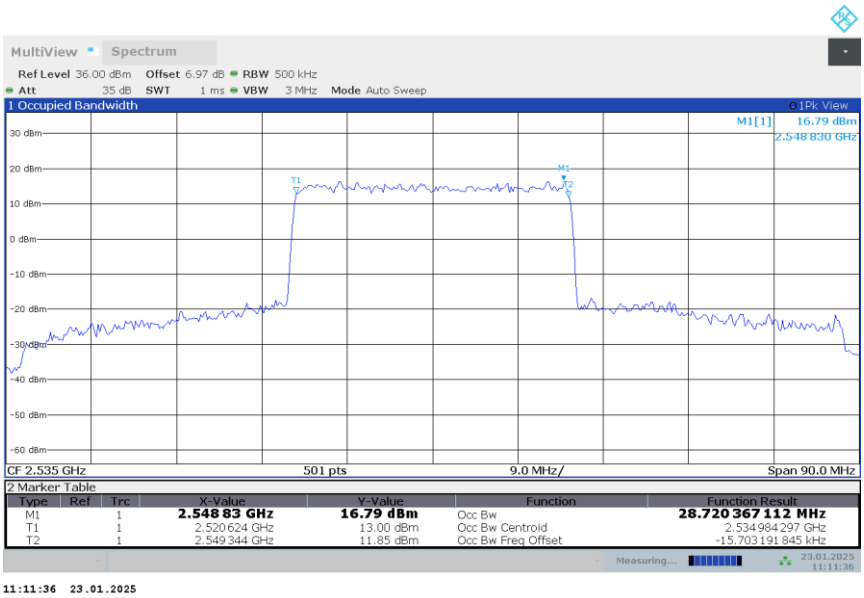
n7,30MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	28.767	28.720	28.731

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



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



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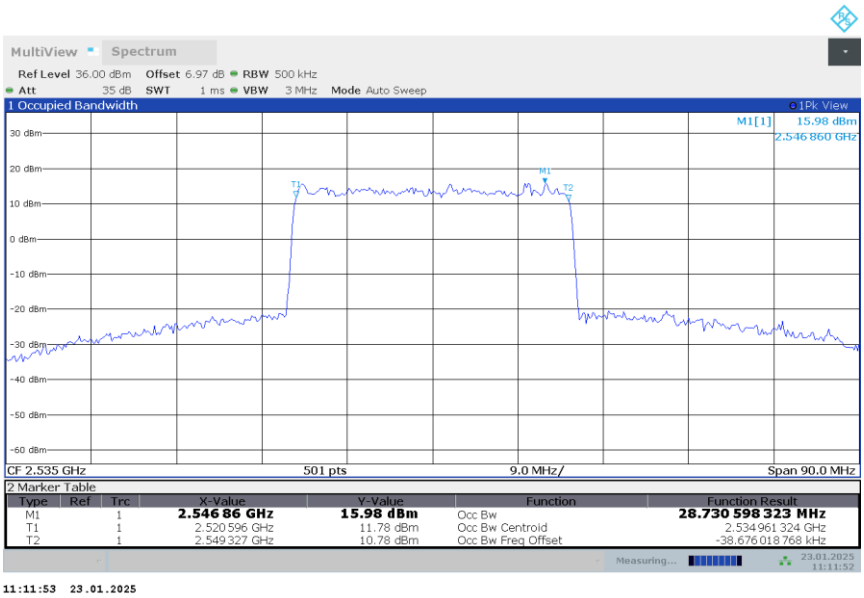
n7,30MHz Bandwidth,DFT-s-16QAM (99% BW)



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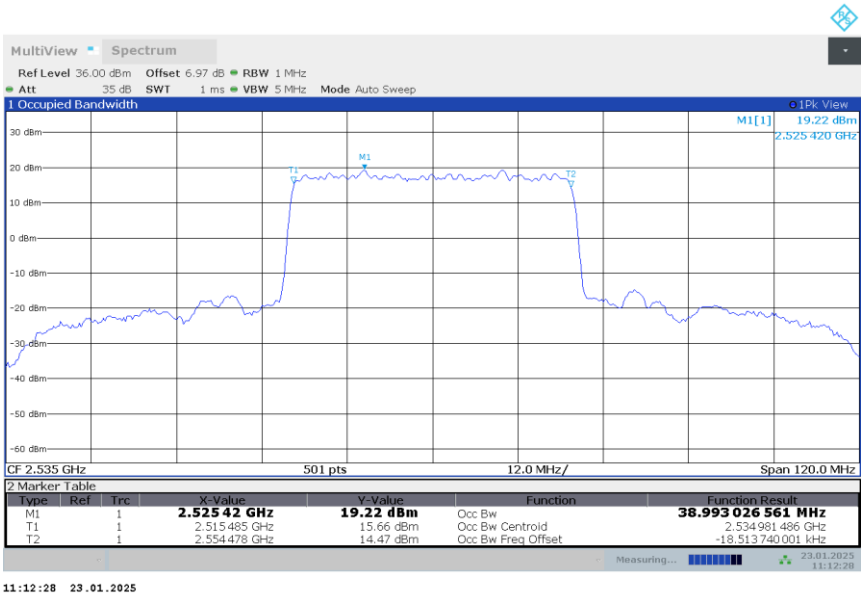
n7

n7,40MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
2535	38.993	38.891	38.935

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



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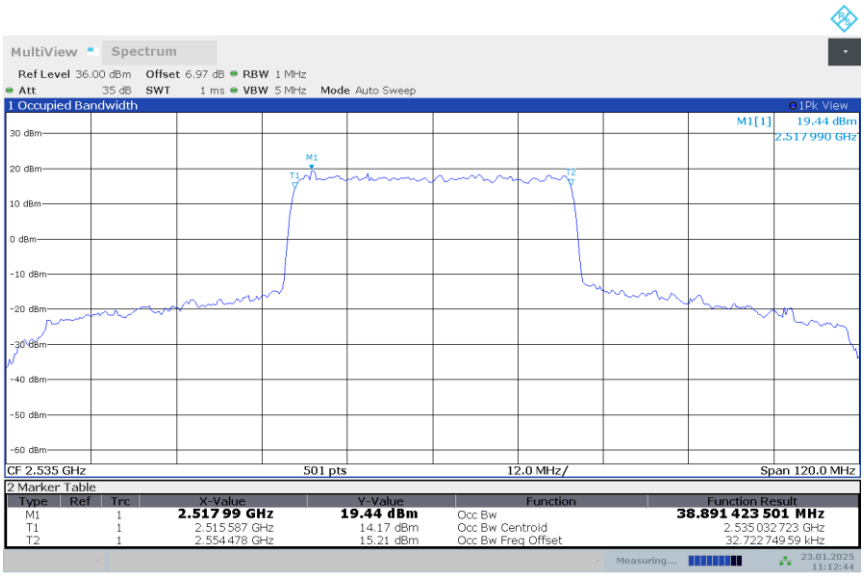
n7,40MHz Bandwidth,DFT-s-QPSK (99% BW)



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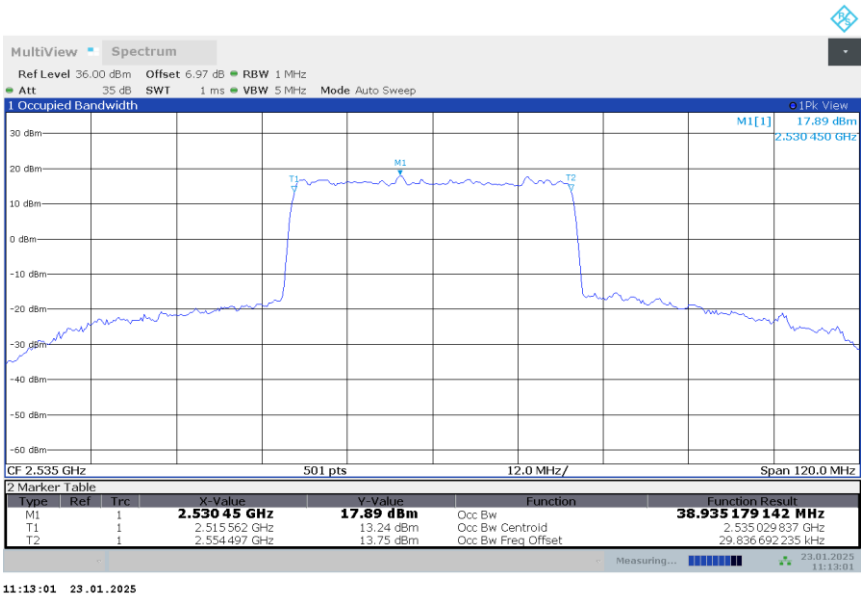
n7,40MHz Bandwidth,DFT-s-16QAM (99% BW)



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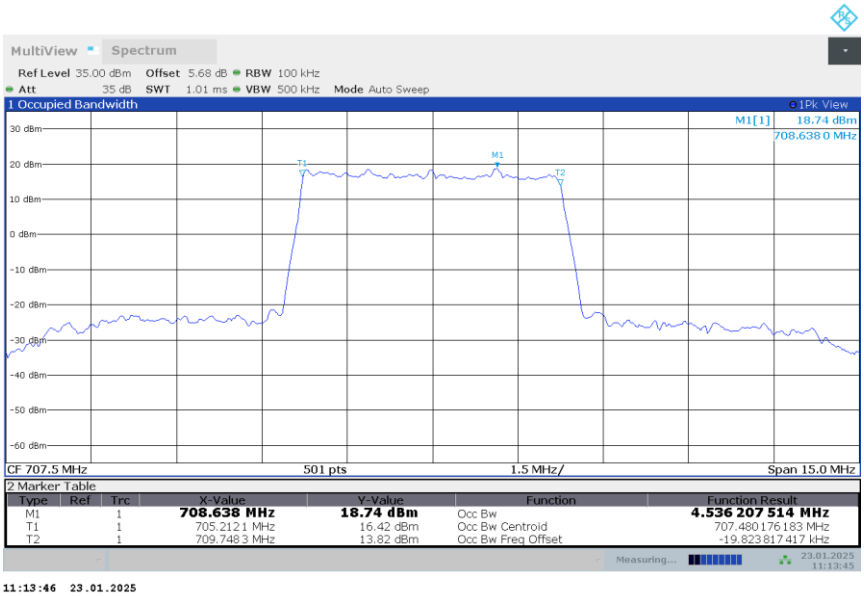
n12

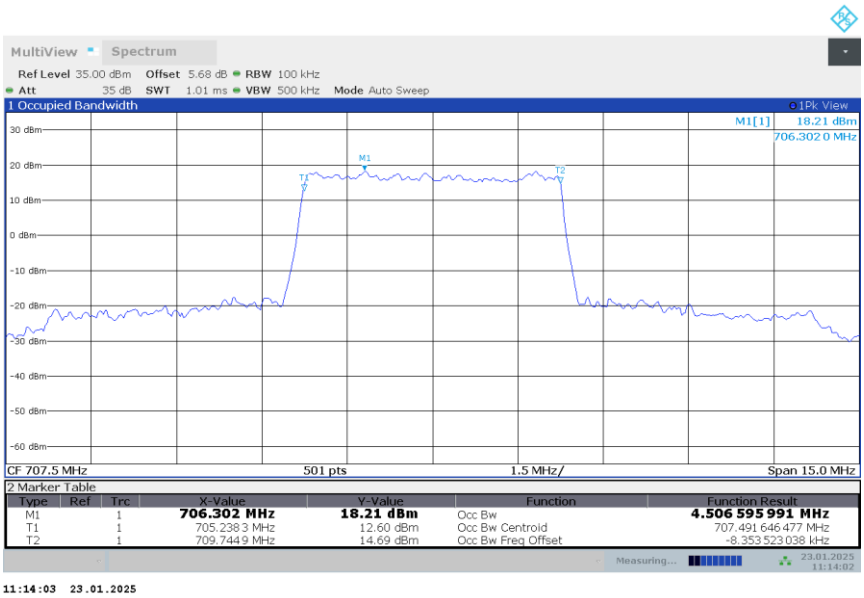
n12,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
707.5	4.536	4.507	4.520

n12,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n12,5MHz Bandwidth,DFT-s-QPSK (99% BW)



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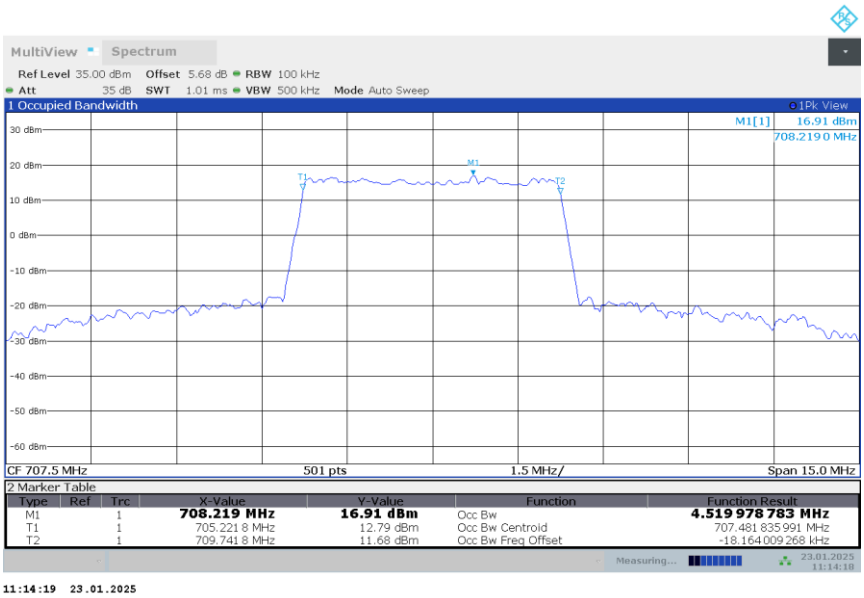
n12,5MHz Bandwidth,DFT-s-16QAM (99% BW)



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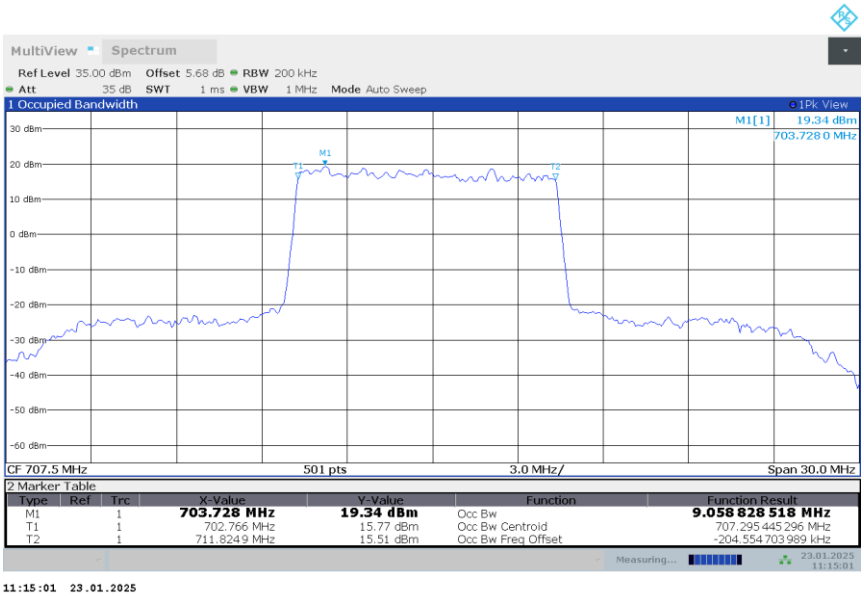
n12

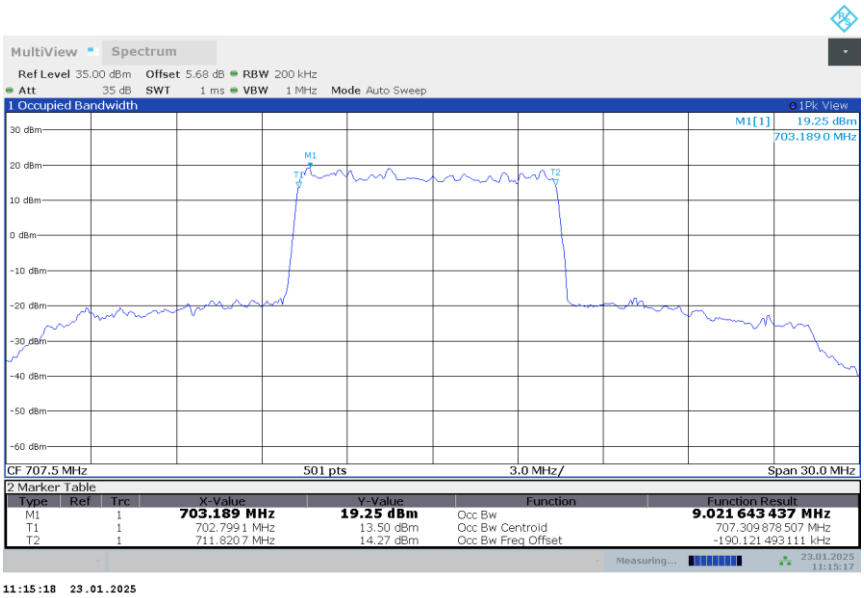
n12,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
707.5	9.059	9.022	9.023

n12,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n12,10MHz Bandwidth,DFT-s-QPSK (99% BW)



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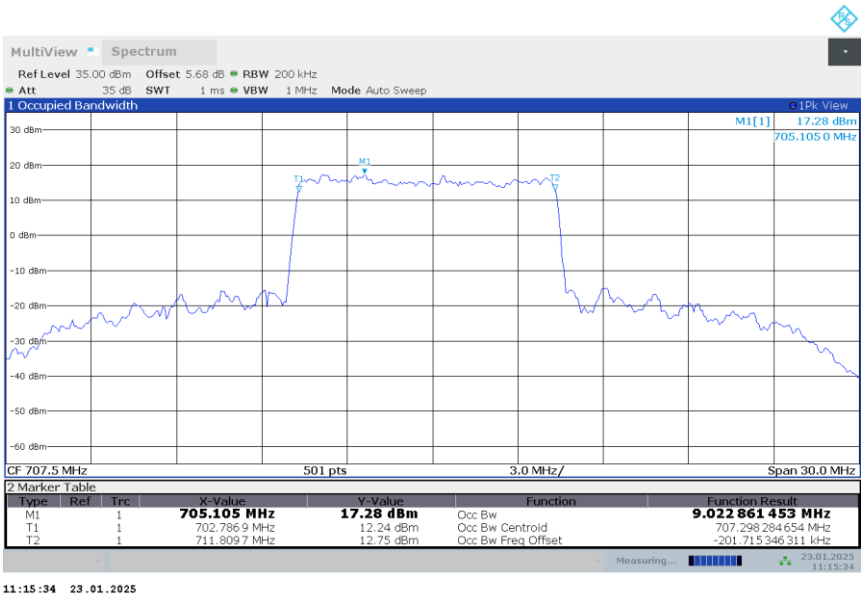
n12,10MHz Bandwidth,DFT-s-16QAM (99% BW)



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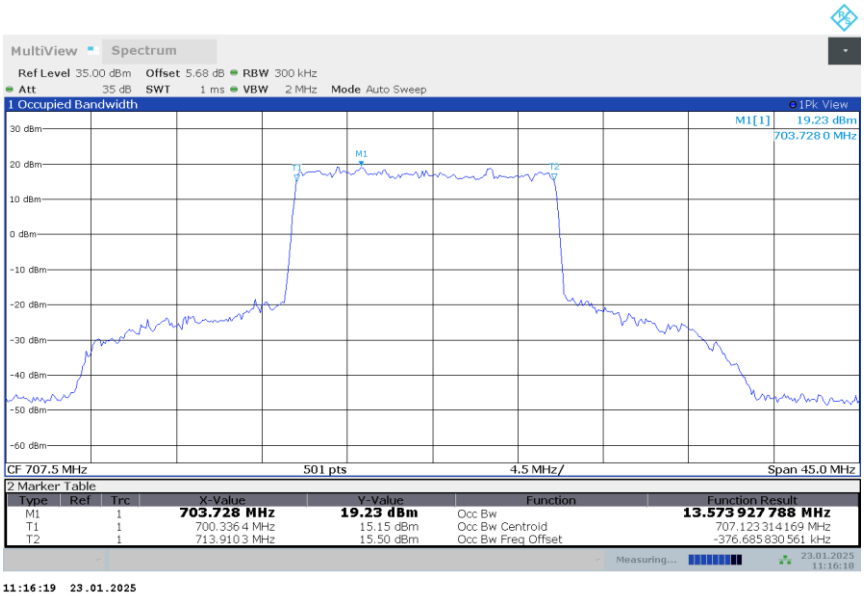
n12

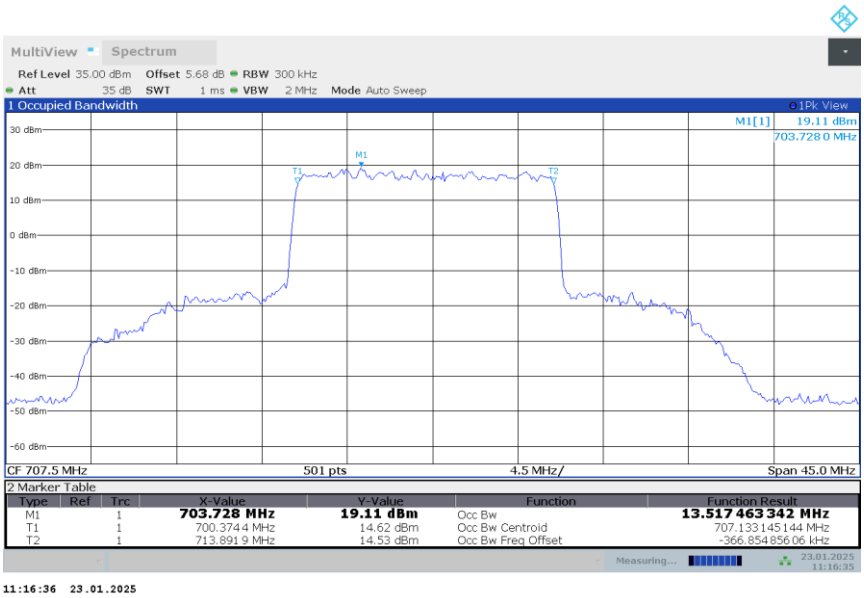
n12,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)		
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM
707.5	13.574	13.517	13.516

n12,15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n12,15MHz Bandwidth,DFT-s-QPSK (99% BW)



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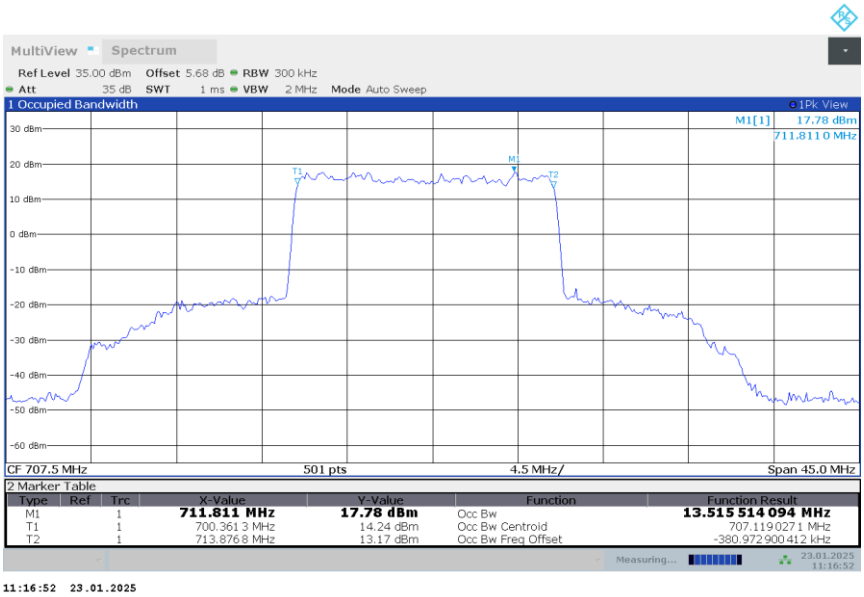
n12,15MHz Bandwidth,DFT-s-16QAM (99% BW)



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