

**NR EN-DC B5\_n30 (ANT4), 5MHz, Channel 461500**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2612.50	-51.82	4.71	6.30	-50.23	-40.00	10.23	H
6490.00	-66.90	7.52	10.99	-63.43	-40.00	23.43	H
7772.00	-65.25	8.33	12.42	-61.16	-40.00	21.16	V
9053.50	-63.16	9.06	13.13	-59.09	-40.00	19.09	H
10385.50	-60.29	9.78	13.05	-57.02	-40.00	17.02	V
11676.00	-60.78	9.66	13.06	-57.38	-40.00	17.38	H

**NR EN-DC B5\_n30 (ANT4), 5MHz, Channel 462000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2616.50	-51.80	4.71	6.31	-50.20	-40.00	10.20	V
6488.00	-67.04	7.53	10.99	-63.58	-40.00	23.58	H
7804.00	-65.12	8.29	12.44	-60.97	-40.00	20.97	H
9056.00	-63.44	9.05	13.13	-59.36	-40.00	19.36	H
10371.50	-60.13	9.76	13.05	-56.84	-40.00	16.84	V
11694.50	-60.53	9.62	13.06	-57.09	-40.00	17.09	H

**NR EN-DC B5\_n30 (ANT4), 5MHz, Channel 462500**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2615.00	-51.91	4.71	6.31	-50.31	-40.00	10.31	V
6512.50	-66.86	7.51	11.02	-63.35	-40.00	23.35	V
7809.00	-65.17	8.30	12.45	-61.02	-40.00	21.02	V
9047.50	-62.86	9.07	13.13	-58.80	-40.00	18.80	H
10368.00	-59.88	9.75	13.05	-56.58	-40.00	16.58	V
11679.50	-60.45	9.65	13.06	-57.04	-40.00	17.04	V

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5097.00	-58.82	6.76	10.04	-55.54	-25.00	30.54	H
7638.00	-41.85	8.15	12.31	-37.69	-25.00	12.69	V
10184.00	-51.05	9.33	12.97	-47.41	-25.00	22.41	V
12751.50	-49.59	10.54	13.35	-46.78	-25.00	21.78	H
15246.50	-49.14	11.34	13.85	-46.63	-25.00	21.63	V
17852.00	-44.56	12.81	15.39	-41.98	-25.00	16.98	H

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5189.00	-58.60	6.94	10.16	-55.38	-25.00	30.38	H
7779.00	-50.37	8.32	12.42	-46.27	-25.00	21.27	H
10371.50	-49.28	9.76	13.05	-45.99	-25.00	20.99	H
12993.00	-50.00	10.47	13.50	-46.97	-25.00	21.97	V
15530.00	-48.21	11.52	13.70	-46.03	-25.00	21.03	H
16853.00	-43.18	12.05	13.74	-41.49	-25.00	16.49	V

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5265.50	-59.01	6.99	10.27	-55.73	-25.00	30.73	V
7920.00	-42.74	8.41	12.54	-38.61	-25.00	13.61	V
10543.00	-51.33	9.49	13.11	-47.71	-25.00	22.71	H
13214.00	-48.31	10.51	13.80	-45.02	-25.00	20.02	V
15851.00	-47.97	11.64	13.70	-45.91	-25.00	20.91	H
17157.00	-44.51	12.49	14.15	-42.85	-25.00	17.85	V

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6704.00	-65.72	7.97	11.24	-62.45	-25.00	37.45	V
8040.00	-58.06	8.32	12.63	-53.75	-25.00	28.75	H
9385.00	-62.81	9.05	13.33	-58.53	-25.00	33.53	H
10711.50	-62.12	9.33	13.14	-58.31	-25.00	33.31	H
12068.00	-60.23	10.25	13.03	-57.45	-25.00	32.45	V
13377.50	-58.76	10.57	14.03	-55.30	-25.00	30.30	H

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6487.00	-67.24	7.53	10.99	-63.78	-25.00	38.78	H
7779.00	-59.72	8.32	12.42	-55.62	-25.00	30.62	H
9067.00	-62.96	9.02	13.14	-58.84	-25.00	33.84	V
10400.00	-59.76	9.80	13.06	-56.50	-25.00	31.50	H
11697.50	-60.15	9.61	13.06	-56.70	-25.00	31.70	V
12983.00	-60.53	10.47	13.49	-57.51	-25.00	32.51	H

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6509.00	-67.05	7.51	11.01	-63.55	-25.00	38.55	V
7806.50	-65.07	8.30	12.45	-60.92	-25.00	35.92	V
9045.50	-62.92	9.08	13.13	-58.87	-25.00	33.87	V
10384.50	-60.27	9.78	13.05	-57.00	-25.00	32.00	H
11673.50	-60.41	9.66	13.07	-57.00	-25.00	32.00	V
12942.00	-60.58	10.49	13.47	-57.60	-25.00	32.60	V

**NR n66 (ANT0), 10MHz, Channel 343000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3429.50	-62.17	5.39	8.03	-59.53	-13.00	46.53	V
5144.50	-52.26	6.87	10.10	-49.03	-13.00	36.03	V
6859.50	-64.25	7.81	11.43	-60.63	-13.00	47.63	V
8574.50	-61.23	8.54	13.01	-56.76	-13.00	43.76	H
10303.00	-61.16	9.65	13.02	-57.79	-13.00	44.79	V
11985.50	-60.03	10.12	13.00	-57.15	-13.00	44.15	H

**NR n66 (ANT0), 10MHz, Channel 349000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3489.50	-58.35	5.50	8.17	-55.68	-13.00	42.68	V
5234.50	-59.77	7.00	10.23	-56.54	-13.00	43.54	V
6979.50	-61.91	8.14	11.58	-58.47	-13.00	45.47	V
8724.50	-60.10	8.43	13.04	-55.49	-13.00	42.49	H
10457.00	-60.10	9.72	13.08	-56.74	-13.00	43.74	V
12229.50	-59.56	10.04	13.09	-56.51	-13.00	43.51	H

**NR n66 (ANT0), 10MHz, Channel 355000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3550.00	-67.11	5.82	8.27	-64.66	-13.00	51.66	H
5325.00	-53.02	6.99	10.36	-49.65	-13.00	36.65	H
7099.50	-60.33	8.16	11.72	-56.77	-13.00	43.77	H
8874.50	-61.58	8.80	13.07	-57.31	-13.00	44.31	V
10649.50	-63.30	9.29	13.13	-59.46	-13.00	46.46	H
12424.50	-60.23	10.37	13.17	-57.43	-13.00	44.43	V

**NR EN-DC B5–n66 (ANT4), 10MHz, Channel 343000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3549.50	-69.11	5.82	8.27	-66.66	-13.00	53.66	V
5324.50	-58.63	6.99	10.35	-55.27	-13.00	42.27	H
7095.50	-64.43	8.16	11.71	-60.88	-13.00	47.88	H
8871.50	-63.07	8.79	13.07	-58.79	-13.00	45.79	H
10642.50	-61.76	9.29	13.13	-57.92	-13.00	44.92	V
12439.50	-58.96	10.33	13.18	-56.11	-13.00	43.11	H

**NR EN-DC B5–n66 (ANT4), 10MHz, Channel 349000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3489.50	-67.64	5.50	8.17	-64.97	-13.00	51.97	H
5234.00	-55.13	7.00	10.23	-51.90	-13.00	38.90	H
7000.00	-64.67	8.30	11.60	-61.37	-13.00	48.37	V
8728.00	-63.34	8.44	13.05	-58.73	-13.00	45.73	H
10450.50	-59.25	9.73	13.08	-55.90	-13.00	42.90	V
12198.00	-58.69	10.06	13.08	-55.67	-13.00	42.67	H

**NR EN-DC B5–n66 (ANT4), 10MHz, Channel 355000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3429.50	-68.08	5.39	8.03	-65.44	-13.00	52.44	V
5144.50	-54.91	6.87	10.10	-51.68	-13.00	38.68	V
6850.50	-64.86	7.82	11.42	-61.26	-13.00	48.26	V
8574.00	-62.85	8.54	13.01	-58.38	-13.00	45.38	H
10309.50	-60.24	9.66	13.02	-56.88	-13.00	43.88	V
12024.50	-58.80	10.12	13.01	-55.91	-13.00	42.91	V

**NR n70, 5MHz, Channel 339500**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3395.00	-59.53	5.36	7.95	-56.94	-13.00	43.94	V
5092.50	-49.08	6.75	10.03	-45.80	-13.00	32.80	V
6790.00	-63.83	7.91	11.35	-60.39	-13.00	47.39	H
8487.50	-61.81	8.67	12.99	-57.49	-13.00	44.49	V
10207.50	-62.96	9.33	12.98	-59.31	-13.00	46.31	H
11895.00	-58.70	10.50	13.02	-56.18	-13.00	43.18	V

**NR n70, 5MHz, Channel 340500**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3405.00	-60.94	5.37	7.97	-58.34	-13.00	45.34	H
5107.00	-47.70	6.79	10.05	-44.44	-13.00	31.44	H
6810.00	-63.60	7.88	11.37	-60.11	-13.00	47.11	H
8513.00	-62.27	8.65	13.00	-57.92	-13.00	44.92	V
10236.00	-62.24	9.42	12.99	-58.67	-13.00	45.67	V
11908.00	-58.52	10.48	13.02	-55.98	-13.00	42.98	H

**NR n70, 5MHz, Channel 341500**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3414.50	-62.41	5.37	7.99	-59.79	-13.00	46.79	H
5122.50	-50.32	6.84	10.07	-47.09	-13.00	34.09	H
6830.00	-64.13	7.85	11.40	-60.58	-13.00	47.58	H
8537.00	-61.11	8.61	13.01	-56.71	-13.00	43.71	V
10274.50	-61.47	9.56	13.01	-58.02	-13.00	45.02	V
11936.50	-59.24	10.35	13.01	-56.58	-13.00	43.58	V

**NR n71, 5MHz, Channel 133100**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1331.00	-43.10	3.15	4.62	2.15	-43.78	-13.00	30.78	V
1996.00	-41.52	4.04	4.61	2.15	-43.10	-13.00	30.10	V
2652.50	-37.41	4.74	6.37	2.15	-37.93	-13.00	24.93	V
3327.50	-58.21	5.30	7.79	2.15	-57.87	-13.00	44.87	H
3982.00	-57.02	6.08	8.87	2.15	-56.38	-13.00	43.38	V
4666.50	-58.06	6.48	9.57	2.15	-57.12	-13.00	44.12	V

**NR n71, 5MHz, Channel 136100**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1375.50	-47.05	3.21	4.85	2.15	-47.56	-13.00	34.56	V
2040.50	-41.01	4.14	4.72	2.15	-42.58	-13.00	29.58	V
2715.50	-37.03	4.80	6.49	2.15	-37.49	-13.00	24.49	V
3407.50	-58.88	5.37	7.98	2.15	-58.42	-13.00	45.42	H
4076.50	-56.94	6.04	8.98	2.15	-56.15	-13.00	43.15	H
4778.00	-57.45	6.62	9.68	2.15	-56.54	-13.00	43.54	H

**NR n71, 5MHz, Channel 139100**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1381.50	-46.14	3.21	4.88	2.15	-46.62	-13.00	33.62	H
2082.00	-40.66	4.18	4.85	2.15	-42.14	-13.00	29.14	V
2780.50	-37.00	4.89	6.60	2.15	-37.44	-13.00	24.44	H
3490.00	-58.66	5.50	8.18	2.15	-58.13	-13.00	45.13	V
4166.50	-54.74	6.13	9.07	2.15	-53.95	-13.00	40.95	H
4883.50	-56.29	6.72	9.78	2.15	-55.38	-13.00	42.38	V

**NR n77L (ANT5), HPUE, PI/2 BPSK, Channel 632668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6980.00	-56.53	8.14	11.58	-53.09	-13.00	40.09	V
10470.00	-49.09	9.70	13.09	-45.70	-13.00	32.70	H
12213.00	-60.17	10.05	13.09	-57.13	-13.00	44.13	V
13960.00	-57.01	10.83	14.48	-53.36	-13.00	40.36	H
15698.00	-59.25	11.60	13.70	-57.15	-13.00	44.15	V
17450.00	-49.91	12.61	14.79	-47.73	-13.00	34.73	H

**NR n77L (ANT5), HPUE, PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7000.00	-55.59	8.30	11.60	-52.29	-13.00	39.29	V
8763.00	-64.56	8.55	13.05	-60.06	-13.00	47.06	H
10500.00	-48.68	9.65	13.10	-45.23	-13.00	32.23	V
12223.50	-60.30	10.04	13.09	-57.25	-13.00	44.25	H
14000.00	-45.60	10.85	14.50	-41.95	-13.00	28.95	V
15746.50	-59.20	11.63	13.70	-57.13	-13.00	44.13	H

**NR n77L (ANT5), HPUE, PI/2 BPSK, Channel 634000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7020.00	-54.76	8.27	11.62	-51.41	-13.00	38.41	H
10530.00	-50.42	9.54	13.11	-46.85	-13.00	33.85	V
12269.00	-60.71	10.01	13.11	-57.61	-13.00	44.61	H
14040.00	-44.50	10.94	14.49	-40.95	-13.00	27.95	V
15820.00	-58.63	11.65	13.70	-56.58	-13.00	43.58	H
17550.00	-50.12	12.92	14.97	-48.07	-13.00	35.07	V



**NR n77L (ANT4, SRS), PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6925.50	-52.41	7.72	11.51	-48.62	-13.00	35.62	V
8685.00	-54.77	8.38	13.04	-50.11	-13.00	37.11	H
10395.00	-50.13	9.79	13.06	-46.86	-13.00	33.86	V
12135.00	-49.90	10.25	13.05	-47.10	-13.00	34.10	H
13844.00	-45.39	10.69	14.41	-41.67	-13.00	28.67	V
15586.50	-49.44	11.49	13.70	-47.23	-13.00	34.23	H

**NR n77L (ANT4, SRS), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7007.00	-52.73	8.29	11.61	-49.41	-13.00	36.41	V
8780.50	-53.60	8.60	13.06	-49.14	-13.00	36.14	H
10505.50	-50.64	9.63	13.10	-47.17	-13.00	34.17	V
12255.50	-49.95	10.02	13.10	-46.87	-13.00	33.87	H
14013.00	-46.33	10.88	14.50	-42.71	-13.00	29.71	V
15734.50	-49.25	11.63	13.70	-47.18	-13.00	34.18	H

**NR n77L (ANT4, SRS), PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7089.50	-54.10	8.17	11.71	-50.56	-13.00	37.56	H
8857.50	-54.10	8.77	13.07	-49.80	-13.00	36.80	V
10607.00	-53.11	9.28	13.12	-49.27	-13.00	36.27	V
12370.50	-50.95	10.31	13.15	-48.11	-13.00	35.11	V
14198.00	-49.24	10.88	14.46	-45.66	-13.00	32.66	H
15920.50	-48.50	11.66	13.70	-46.46	-13.00	33.46	H

**NR n77L (ANT7, SRS), PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7008.00	-55.36	8.29	11.61	-52.04	-13.00	39.04	V
8709.50	-55.00	8.39	13.04	-50.35	-13.00	37.35	H
10444.50	-50.11	9.73	13.08	-46.76	-13.00	33.76	H
12241.50	-50.59	10.03	13.10	-47.52	-13.00	34.52	H
13960.50	-49.31	10.83	14.48	-45.66	-13.00	32.66	H
15737.00	-48.86	11.63	13.70	-46.79	-13.00	33.79	H

**NR n77L (ANT7, SRS), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7008.50	-53.43	8.29	11.61	-50.11	-13.00	37.11	H
8711.50	-54.90	8.39	13.04	-50.25	-13.00	37.25	H
10492.50	-51.16	9.66	13.10	-47.72	-13.00	34.72	V
12232.50	-50.13	10.04	13.09	-47.08	-13.00	34.08	V
13982.00	-48.43	10.84	14.49	-44.78	-13.00	31.78	H
15705.00	-48.12	11.61	13.70	-46.03	-13.00	33.03	V

**NR n77L (ANT7, SRS), PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7002.00	-54.06	8.30	11.60	-50.76	-13.00	37.76	V
8740.50	-54.67	8.48	13.05	-50.10	-13.00	37.10	H
10481.00	-50.93	9.68	13.09	-47.52	-13.00	34.52	H
12194.00	-49.06	10.08	13.08	-46.06	-13.00	33.06	V
13987.50	-48.68	10.85	14.49	-45.04	-13.00	32.04	V
15709.50	-48.69	11.61	13.70	-46.60	-13.00	33.60	V

**NR n77L (ANT3, SRS), PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6909.00	-56.14	7.74	11.49	-52.39	-13.00	39.39	H
8625.50	-52.82	8.46	13.03	-48.25	-13.00	35.25	V
10390.00	-50.40	9.79	13.06	-47.13	-13.00	34.13	H
12080.00	-50.55	10.29	13.03	-47.81	-13.00	34.81	H
13812.50	-48.49	10.63	14.39	-44.73	-13.00	31.73	H
15537.00	-50.13	11.52	13.70	-47.95	-13.00	34.95	H

**NR n77L (ANT3, SRS), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7008.50	-53.43	8.29	11.61	-50.11	-13.00	37.11	H
8777.50	-54.49	8.59	13.06	-50.02	-13.00	37.02	V
10486.50	-51.42	9.67	13.09	-48.00	-13.00	35.00	H
12283.00	-50.05	10.01	13.11	-46.95	-13.00	33.95	H
13984.00	-48.74	10.84	14.49	-45.09	-13.00	32.09	V
15755.50	-48.63	11.64	13.70	-46.57	-13.00	33.57	V

**NR n77L (ANT3, SRS), PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7040.50	-55.01	8.24	11.65	-51.60	-13.00	38.60	H
8825.00	-54.42	8.71	13.07	-50.06	-13.00	37.06	V
10593.50	-52.77	9.30	13.12	-48.95	-13.00	35.95	H
12358.00	-50.51	10.25	13.14	-47.62	-13.00	34.62	H
14153.00	-49.01	10.97	14.47	-45.51	-13.00	32.51	V
15898.00	-47.74	11.62	13.70	-45.66	-13.00	32.66	V

**NR EN-DC B66–n77L, PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3918.50	-60.30	6.12	8.79	-57.63	-13.00	44.63	V
5214.00	-58.32	6.98	10.20	-55.10	-13.00	42.10	V
6919.50	-50.06	7.73	11.50	-46.29	-13.00	33.29	V
10379.50	-44.11	9.77	13.05	-40.83	-13.00	27.83	H
13815.00	-47.37	10.64	14.39	-43.62	-13.00	30.62	V
17317.50	-43.60	12.39	14.50	-41.49	-13.00	28.49	V

**NR EN-DC B66–n77L, PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3903.00	-60.16	6.11	8.76	-57.51	-13.00	44.51	H
5214.00	-58.03	6.98	10.20	-54.81	-13.00	41.81	H
7000.00	-48.48	8.30	11.60	-45.18	-13.00	32.18	V
10499.50	-50.88	9.65	13.10	-47.43	-13.00	34.43	H
14020.50	-48.76	10.90	14.50	-45.16	-13.00	32.16	V
17518.00	-44.23	12.79	14.93	-42.09	-13.00	29.09	H

**NR EN-DC B66–n77L, PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3466.00	-60.37	5.46	8.12	-57.71	-13.00	44.71	V
5235.00	-58.15	7.00	10.23	-54.92	-13.00	41.92	H
7080.50	-53.70	8.18	11.70	-50.18	-13.00	37.18	H
10620.00	-48.96	9.29	13.12	-45.13	-13.00	32.13	H
14160.50	-46.14	10.95	14.47	-42.62	-13.00	29.62	V
17687.00	-45.46	12.31	15.16	-42.61	-13.00	29.61	H

**NR n77H (ANT5), HPUE, PI/2 BPSK, Channel 649334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7480.00	-48.88	8.34	12.18	-45.04	-13.00	32.04	V
9341.00	-62.97	9.10	13.30	-58.77	-13.00	45.77	V
11220.00	-50.48	9.52	13.16	-46.84	-13.00	33.84	H
13103.00	-59.61	10.92	13.64	-56.89	-13.00	43.89	H
14980.50	-60.09	11.21	14.02	-57.28	-13.00	44.28	V
16846.00	-54.14	12.06	13.74	-52.46	-13.00	39.46	V

**NR n77H (ANT5), HPUE, PI/2 BPSK, Channel 656000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7680.00	-53.88	8.34	12.34	-49.88	-13.00	36.88	H
9632.00	-63.65	9.06	13.27	-59.44	-13.00	46.44	V
11520.00	-47.06	9.81	13.10	-43.77	-13.00	30.77	H
13450.00	-59.68	10.61	14.13	-56.16	-13.00	43.16	H
15359.00	-58.81	11.35	13.78	-56.38	-13.00	43.38	H
17293.00	-54.15	12.37	14.44	-52.08	-13.00	39.08	V

**NR n77H (ANT5), HPUE, PI/2 BPSK, Channel 662666**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7880.00	-55.22	8.40	12.50	-51.12	-13.00	38.12	H
9842.00	-62.37	9.06	13.06	-58.37	-13.00	45.37	H
11820.00	-50.07	10.20	13.04	-47.23	-13.00	34.23	V
13818.00	-58.96	10.64	14.39	-55.21	-13.00	42.21	V
15760.00	-40.10	11.64	13.70	-38.04	-13.00	25.04	V
17758.00	-55.87	12.50	15.26	-53.11	-13.00	40.11	H

**NR n77H (ANT4, SRS), PI/2 BPSK, Channel 647334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7428.00	-50.48	8.19	12.11	-46.56	-13.00	33.56	V
9294.50	-51.82	9.14	13.28	-47.68	-13.00	34.68	H
11143.00	-51.08	9.65	13.17	-47.56	-13.00	34.56	H
12996.50	-51.41	10.47	13.50	-48.38	-13.00	35.38	H
14821.50	-48.38	11.14	14.14	-45.38	-13.00	32.38	V
16721.50	-46.83	11.81	13.69	-44.95	-13.00	31.95	H

**NR n77H (ANT4, SRS), PI/2 BPSK, Channel 656000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7670.50	-53.09	8.29	12.34	-49.04	-13.00	36.04	V
9629.00	-53.66	9.07	13.27	-49.46	-13.00	36.46	V
11511.00	-50.76	9.81	13.10	-47.47	-13.00	34.47	V
13453.50	-49.32	10.61	14.13	-45.80	-13.00	32.80	H
15379.00	-49.80	11.37	13.77	-47.40	-13.00	34.40	V
17321.00	-43.69	12.40	14.51	-41.58	-13.00	28.58	H

**NR n77H (ANT4, SRS), PI/2 BPSK, Channel 664666**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7930.50	-50.98	8.40	12.54	-46.84	-13.00	33.84	H
9900.50	-52.36	9.09	13.00	-48.45	-13.00	35.45	H
11896.00	-47.62	10.50	13.02	-45.10	-13.00	32.10	V
13875.00	-50.23	10.75	14.43	-46.55	-13.00	33.55	H
15883.50	-48.70	11.62	13.70	-46.62	-13.00	33.62	V
17899.50	-45.08	12.87	15.46	-42.49	-13.00	29.49	H

**NR n77H (ANT7, SRS), PI/2 BPSK, Channel 647334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7410.00	-51.20	8.14	12.09	-47.25	-13.00	34.25	V
9296.00	-52.88	9.14	13.28	-48.74	-13.00	35.74	H
11127.00	-51.19	9.72	13.17	-47.74	-13.00	34.74	H
13016.00	-51.78	10.54	13.52	-48.80	-13.00	35.80	H
14821.50	-48.39	11.14	14.14	-45.39	-13.00	32.39	H
16683.50	-47.50	11.78	13.67	-45.61	-13.00	32.61	V

**NR n77H (ANT7, SRS), PI/2 BPSK, Channel 656000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7688.50	-51.56	8.37	12.35	-47.58	-13.00	34.58	V
9631.00	-52.43	9.07	13.27	-48.23	-13.00	35.23	V
11516.00	-50.93	9.81	13.10	-47.64	-13.00	34.64	V
13460.50	-49.80	10.61	14.14	-46.27	-13.00	33.27	V
15378.00	-47.97	11.37	13.77	-45.57	-13.00	32.57	H
17281.50	-43.92	12.37	14.42	-41.87	-13.00	28.87	V

**NR n77H (ANT7, SRS), PI/2 BPSK, Channel 664666**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7948.50	-50.28	8.38	12.56	-46.10	-13.00	33.10	H
9909.00	-53.19	9.10	12.99	-49.30	-13.00	36.30	H
11924.50	-47.68	10.40	13.02	-45.06	-13.00	32.06	V
13941.00	-50.63	10.82	14.46	-46.99	-13.00	33.99	V
15885.00	-48.87	11.62	13.70	-46.79	-13.00	33.79	V
17913.00	-45.39	12.88	15.48	-42.79	-13.00	29.79	V

**NR n77H (ANT3, SRS), PI/2 BPSK, Channel 647334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7428.00	-52.13	8.19	12.11	-48.21	-13.00	35.21	V
9298.00	-51.95	9.15	13.28	-47.82	-13.00	34.82	V
11159.00	-50.89	9.58	13.17	-47.30	-13.00	34.30	V
12988.50	-52.02	10.47	13.49	-49.00	-13.00	36.00	H
14821.00	-49.14	11.14	14.14	-46.14	-13.00	33.14	H
16713.00	-46.94	11.78	13.69	-45.03	-13.00	32.03	V

**NR n77H (ANT3, SRS), PI/2 BPSK, Channel 656000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7670.50	-53.52	8.29	12.34	-49.47	-13.00	36.47	H
9635.50	-52.60	9.05	13.26	-48.39	-13.00	35.39	V
11522.50	-50.10	9.81	13.10	-46.81	-13.00	33.81	H
13455.50	-48.08	10.61	14.14	-44.55	-13.00	31.55	V
15380.50	-47.74	11.37	13.77	-45.34	-13.00	32.34	V
17332.00	-44.24	12.41	14.53	-42.12	-13.00	29.12	V

**NR n77H (ANT3, SRS), PI/2 BPSK, Channel 664666**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7936.50	-53.90	8.39	12.55	-49.74	-13.00	36.74	H
9908.00	-53.29	9.10	12.99	-49.40	-13.00	36.40	H
11900.00	-49.36	10.52	13.02	-46.86	-13.00	33.86	H
13939.50	-49.96	10.82	14.46	-46.32	-13.00	33.32	V
15878.00	-48.12	11.62	13.70	-46.04	-13.00	33.04	V
17907.50	-45.01	12.88	15.47	-42.42	-13.00	29.42	H



**NR n78L (ANT5), PI/2 BPSK, Channel 631668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6935.50	-66.04	7.80	11.52	-62.32	-13.00	49.32	H
8671.00	-64.52	8.40	13.03	-59.89	-13.00	46.89	H
10425.00	-49.64	9.76	13.07	-46.33	-13.00	33.33	V
12186.00	-60.40	10.10	13.07	-57.43	-13.00	44.43	V
13873.00	-59.45	10.75	14.42	-55.78	-13.00	42.78	H
15661.50	-59.07	11.56	13.70	-56.93	-13.00	43.93	V

**NR n78L (ANT5), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7000.00	-59.51	8.30	11.60	-56.21	-13.00	43.21	V
8756.00	-64.62	8.53	13.05	-60.10	-13.00	47.10	V
10500.00	-58.06	9.65	13.10	-54.61	-13.00	41.61	V
12239.00	-60.17	10.03	13.10	-57.10	-13.00	44.10	V
14000.00	-46.81	10.85	14.50	-43.16	-13.00	30.16	V
15728.00	-58.84	11.62	13.70	-56.76	-13.00	43.76	V

**NR n78L (ANT5), PI/2 BPSK, Channel 635000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7049.50	-64.46	8.23	11.66	-61.03	-13.00	48.03	V
8789.00	-64.41	8.63	13.06	-59.98	-13.00	46.98	V
10575.00	-59.43	9.37	13.12	-55.68	-13.00	42.68	H
12350.00	-60.58	10.22	13.14	-57.66	-13.00	44.66	H
14099.50	-53.07	11.07	14.48	-49.66	-13.00	36.66	V
15853.50	-58.28	11.64	13.70	-56.22	-13.00	43.22	H

**NR n78L (ANT4, SRS), PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6894.50	-55.37	7.76	11.47	-51.66	-13.00	38.66	H
8657.00	-55.05	8.42	13.03	-50.44	-13.00	37.44	H
10376.50	-49.62	9.76	13.05	-46.33	-13.00	33.33	V
12119.00	-50.43	10.29	13.05	-47.67	-13.00	34.67	H
13846.00	-48.48	10.70	14.41	-44.77	-13.00	31.77	V
15541.50	-49.26	11.51	13.70	-47.07	-13.00	34.07	H

**NR n78L (ANT4, SRS), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7009.00	-52.54	8.29	11.61	-49.22	-13.00	36.22	V
8755.00	-54.07	8.53	13.05	-49.55	-13.00	36.55	H
10479.50	-50.49	9.68	13.09	-47.08	-13.00	34.08	H
12216.50	-49.87	10.05	13.09	-46.83	-13.00	33.83	H
14017.00	-48.22	10.89	14.50	-44.61	-13.00	31.61	V
15711.50	-48.82	11.61	13.70	-46.73	-13.00	33.73	H

**NR n78L (ANT4, SRS), PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7089.00	-53.45	8.17	11.71	-49.91	-13.00	36.91	H
8863.50	-54.01	8.78	13.07	-49.72	-13.00	36.72	H
10631.50	-52.52	9.29	13.13	-48.68	-13.00	35.68	V
12362.00	-50.10	10.27	13.14	-47.23	-13.00	34.23	H
14138.50	-48.82	11.00	14.47	-45.35	-13.00	32.35	V
15895.00	-48.31	11.62	13.70	-46.23	-13.00	33.23	H

**NR n78L (ANT7, SRS), PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6473.00	-57.10	7.53	10.97	-53.66	-13.00	40.66	V
7801.00	-54.76	8.29	12.44	-50.61	-13.00	37.61	V
9056.00	-52.82	9.05	13.13	-48.74	-13.00	35.74	H
10352.50	-50.31	9.73	13.04	-47.00	-13.00	34.00	V
11640.50	-50.66	9.72	13.07	-47.31	-13.00	34.31	H
12945.00	-51.35	10.49	13.47	-48.37	-13.00	35.37	H

**NR n78L (ANT7, SRS), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7009.00	-53.97	8.29	11.61	-50.65	-13.00	37.65	H
8727.00	-54.39	8.44	13.05	-49.78	-13.00	36.78	H
10457.00	-50.91	9.72	13.08	-47.55	-13.00	34.55	H
12214.00	-50.41	10.05	13.09	-47.37	-13.00	34.37	V
13981.50	-48.02	10.84	14.49	-44.37	-13.00	31.37	H
15706.50	-49.17	11.61	13.70	-47.08	-13.00	34.08	V

**NR n78L (ANT7, SRS), PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7080.00	-54.75	8.18	11.70	-51.23	-13.00	38.23	H
8857.50	-53.91	8.77	13.07	-49.61	-13.00	36.61	V
10579.00	-52.33	9.36	13.12	-48.57	-13.00	35.57	H
12343.50	-50.52	10.19	13.14	-47.57	-13.00	34.57	H
14141.50	-49.03	10.99	14.47	-45.55	-13.00	32.55	H
15890.50	-47.13	11.62	13.70	-45.05	-13.00	32.05	V

**NR n78L (ANT3, SRS), PI/2 BPSK, Channel 630668**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6910.50	-55.76	7.74	11.49	-52.01	-13.00	39.01	H
8672.00	-54.87	8.40	13.03	-50.24	-13.00	37.24	V
10393.00	-50.15	9.79	13.06	-46.88	-13.00	33.88	H
12127.50	-50.33	10.27	13.05	-47.55	-13.00	34.55	H
13845.50	-48.71	10.70	14.41	-45.00	-13.00	32.00	H
15569.50	-49.62	11.50	13.70	-47.42	-13.00	34.42	H

**NR n78L (ANT3, SRS), PI/2 BPSK, Channel 633334**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7008.50	-52.97	8.29	11.61	-49.65	-13.00	36.65	H
8760.50	-53.22	8.54	13.05	-48.71	-13.00	35.71	V
10465.50	-50.66	9.70	13.09	-47.27	-13.00	34.27	V
12214.50	-50.12	10.05	13.09	-47.08	-13.00	34.08	V
13999.50	-48.80	10.85	14.50	-45.15	-13.00	32.15	H
15713.50	-48.81	11.61	13.70	-46.72	-13.00	33.72	V

**NR n78L (ANT3, SRS), PI/2 BPSK, Channel 636000**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7070.50	-52.64	8.20	11.68	-49.16	-13.00	36.16	V
8849.00	-53.79	8.75	13.07	-49.47	-13.00	36.47	H
10590.50	-52.29	9.32	13.12	-48.49	-13.00	35.49	H
12344.00	-50.74	10.19	13.14	-47.79	-13.00	34.79	H
14127.50	-49.00	11.02	14.47	-45.55	-13.00	32.55	H
15918.00	-47.57	11.65	13.70	-45.52	-13.00	32.52	V

Note: Peak EIRP (dBm) = P<sub>Mea</sub>(dBm) - Path Loss(dB) + Antenna Gain(dBi)

Note: The maximum value of expanded measurement uncertainty for this test item is U = 5.76 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°C.
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°C increments from -30°C to +50°C. 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°C.
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 °C decrements from +50°C to -30°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5°C 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

n2

#### Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1850.256	1908.640		
50				0.90	0.0005
40				-4.80	0.0026
30				-0.90	0.0005
10				-4.20	0.0022
0				4.10	0.0022
-10				0.90	0.0005
-20				6.10	0.0032
-30				4.30	0.0023

#### Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	1850.256	1908.640	0.80	0.0004
4.4				6.20	0.0033

n5

#### Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	824.256	847.640		
50				-0.70	0.0008
40				0.20	0.0002
30				-1.10	0.0013
10				5.30	0.0063
0				4.10	0.0049
-10				3.60	0.0043
-20				3.70	0.0044
-30				2.90	0.0035

#### Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	824.256	847.640	8.30	0.0099
4.4				6.80	0.0081

**n25**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1850.272	1913.640		
50				1.90	0.0010
40				2.80	0.0015
30				-1.00	0.0005
10				5.10	0.0027
0				-2.30	0.0012
-10				-1.00	0.0005
-20				4.30	0.0023
-30				4.10	0.0022

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	1850.272	1913.640	1.60	0.0008
4.4				3.30	0.0018

**n26\_Part22**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	824.256	847.640		
50				0.30	0.0004
40				-0.20	0.0002
30				1.30	0.0016
10				3.10	0.0037
0				7.30	0.0087
-10				5.00	0.0060
-20				7.00	0.0084
-30				4.80	0.0057

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	824.256	847.640	9.30	0.0111
4.4				4.10	0.0049

**n26\_Part90**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	814.208	823.456		
50				-0.80	0.0010
40				0.90	0.0011
30				4.50	0.0055
10				1.70	0.0021
0				2.70	0.0033
-10				2.70	0.0033
-20				1.40	0.0017
-30				4.10	0.0050

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	814.208	823.456	3.30	0.0040
4.4				-0.10	0.0001

**n30**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2305.280	2314.340		
50				-10.20	0.0044
40				-4.20	0.0018
30				-9.10	0.0039
10				-8.10	0.0035
0				-6.90	0.0030
-10				-4.60	0.0020
-20				-10.80	0.0047
-30				-10.40	0.0045

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	2305.280	2314.340	-0.50	0.0002
4.4				-9.00	0.0039



**n41**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2496.720	2688.144		
50				-29.40	0.0113
40				-21.00	0.0081
30				-22.40	0.0086
10				-13.60	0.0052
0				-38.00	0.0147
-10				-46.90	0.0181
-20				-26.60	0.0103
-30				-14.50	0.0056

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	2496.720	2688.144	-38.90	0.0150
4.4				-36.80	0.0142

**n70**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1695.176	1709.088		
50				-5.10	0.0030
40				-5.00	0.0029
30				-5.10	0.0030
10				2.20	0.0013
0				-8.10	0.0048
-10				-2.00	0.0012
-20				-6.40	0.0038
-30				1.70	0.0010

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	1695.176	1709.088	-8.60	0.0051
4.4				-6.10	0.0036

**n71**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	663.432	696.464		
50				0.00	0.0000
40				-0.90	0.0013
30				-0.70	0.0010
10				-4.00	0.0059
0				-2.60	0.0038
-10				2.00	0.0029
-20				-4.60	0.0068
-30				1.90	0.0028

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	663.432	696.464	-0.30	0.0004
4.4				-0.80	0.0012

**n77L**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	3450.784	3548.864		
50				23.10	0.0066
40				2.10	0.0006
30				-3.80	0.0011
10				17.60	0.0050
0				36.90	0.0105
-10				12.60	0.0036
-20				14.00	0.0040
-30				22.80	0.0065

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	3450.784	3548.864	13.40	0.0038
4.4				15.40	0.0044

**n77H**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	3700.368	3978.528		
50				-7.10	0.0018
40				-10.60	0.0028
30				-15.80	0.0041
10				-17.50	0.0046
0				-8.80	0.0023
-10				0.40	0.0001
-20				-9.80	0.0026
-30				-29.30	0.0076

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	3700.368	3978.528	-15.80	0.0041
4.4				-21.10	0.0055

**n78L**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	3450.736	3548.496		
50				-25.40	0.0073
40				-7.40	0.0021
30				-17.40	0.0050
10				-1.60	0.0005
0				8.90	0.0025
-10				-1.50	0.0004
-20				11.10	0.0032
-30				-9.30	0.0027

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	3450.736	3548.496	-6.20	0.0018
4.4				-6.10	0.0017

**LTE Band 5+NR n66**
**Frequency Error vs Voltage**

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1710.096	1779.888		
50				4.50	0.0026
40				11.50	0.0066
30				15.10	0.0087
10				3.90	0.0022
0				5.60	0.0032
-10				1.80	0.0010
-20				13.70	0.0079
-30				2.90	0.0017

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.55	20	1710.096	1779.888	4.30	0.0025
4.4				3.10	0.0018

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

#### **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.

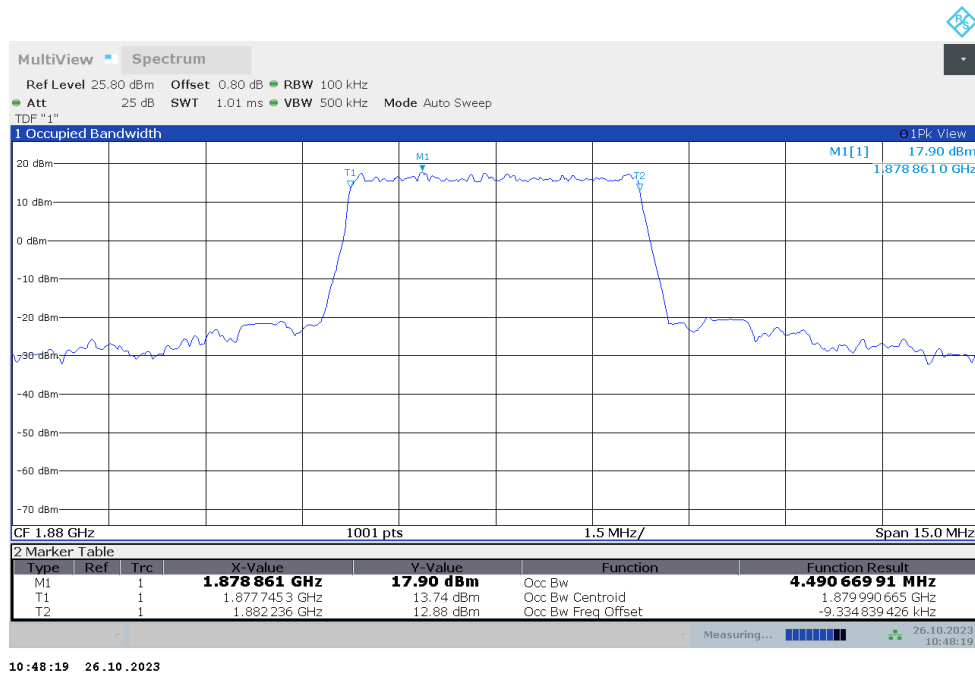
The measurement method is from ANSI C63.26:

- 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  $\geq 3 \times$  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.

n2  
n2,5MHz(99%)

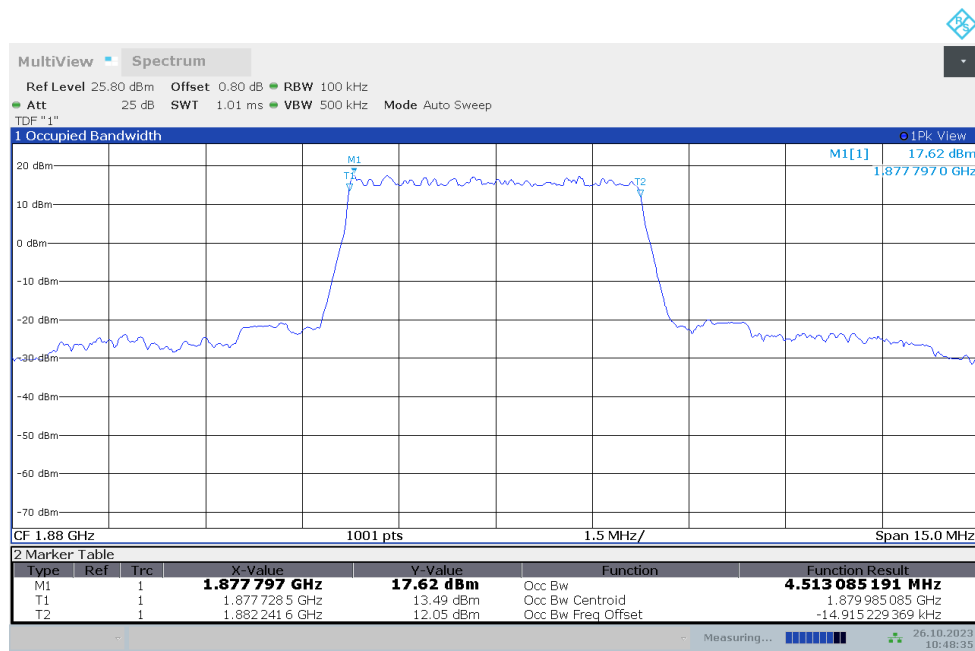
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	4.491	4.513

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



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

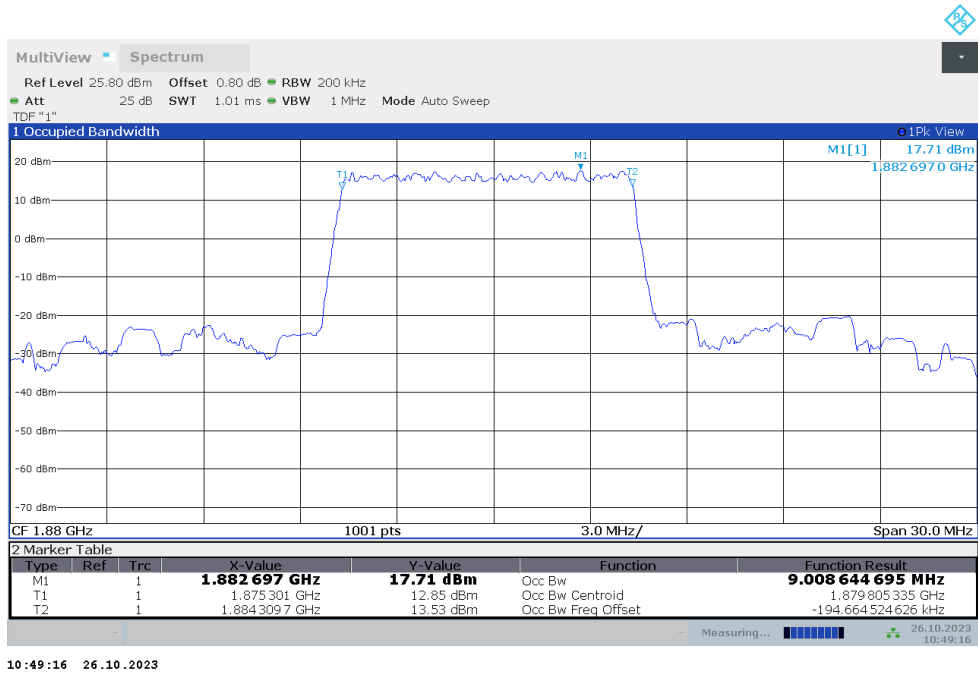


10:48:36 26.10.2023

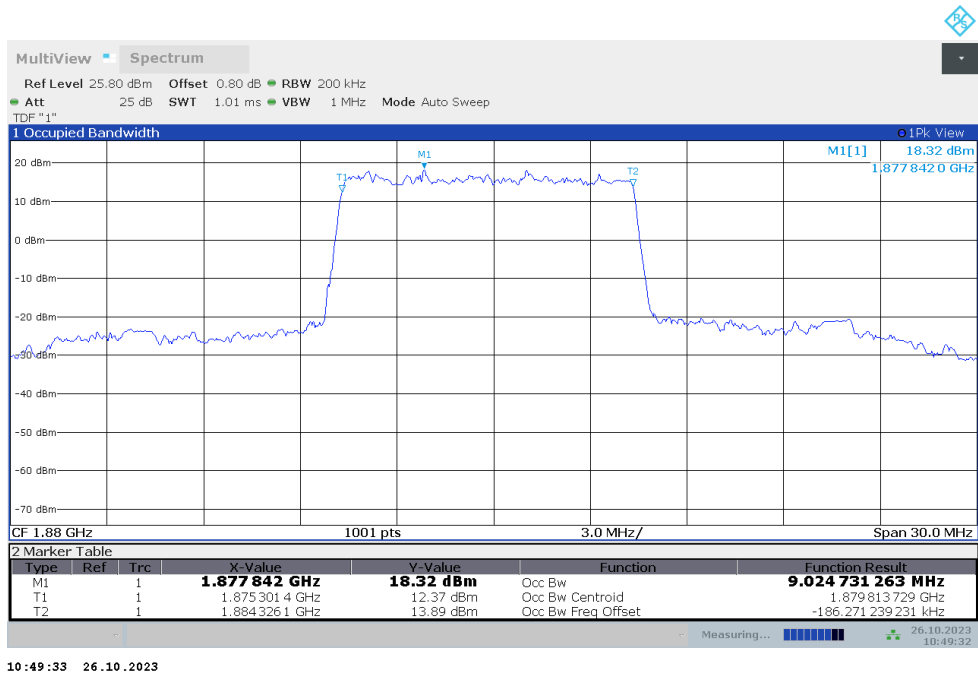
n2  
n2,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	9.009	9.025

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



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

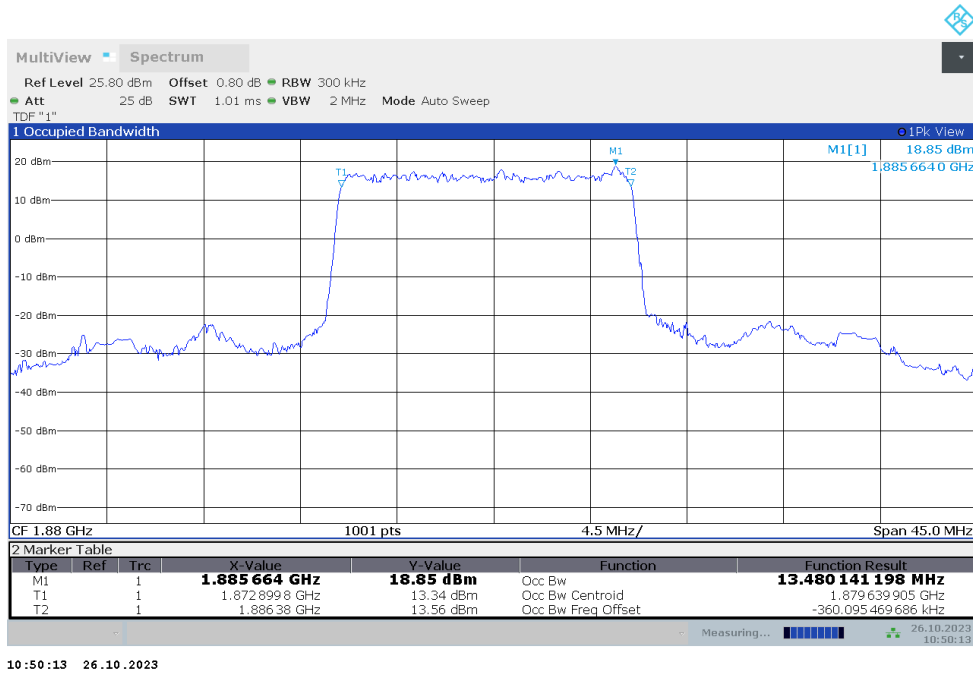


n2

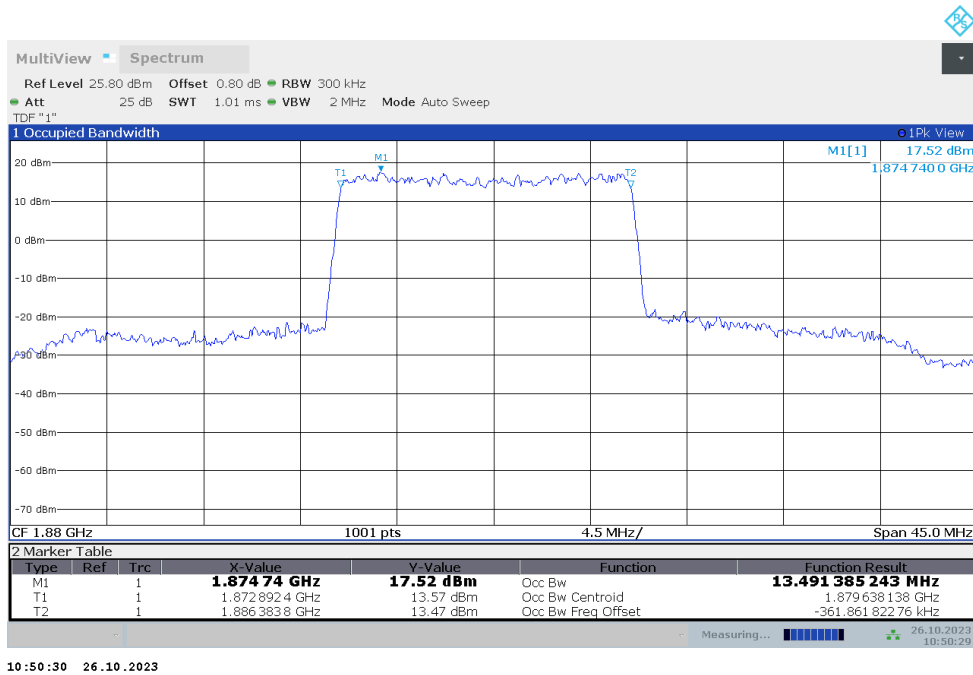
n2,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	13.480	13.491

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



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

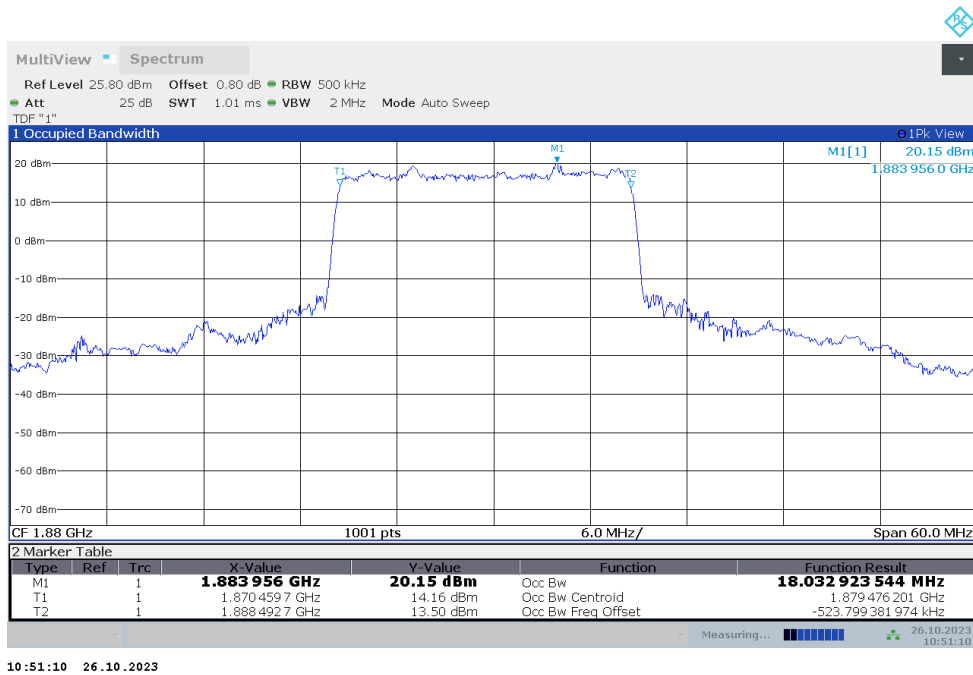




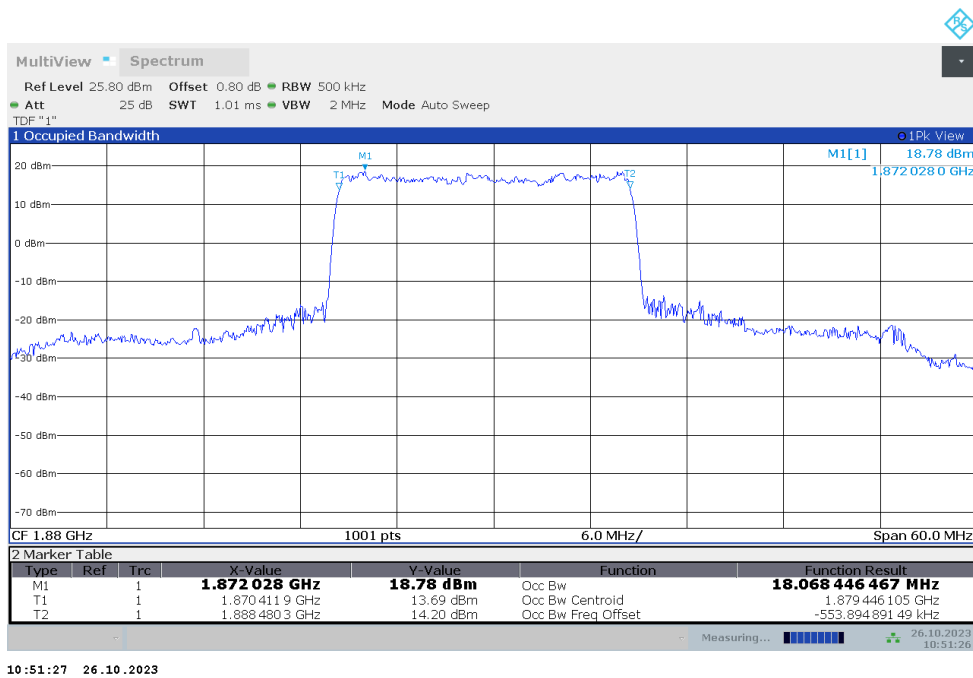
n2  
n2,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	18.033	18.068

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



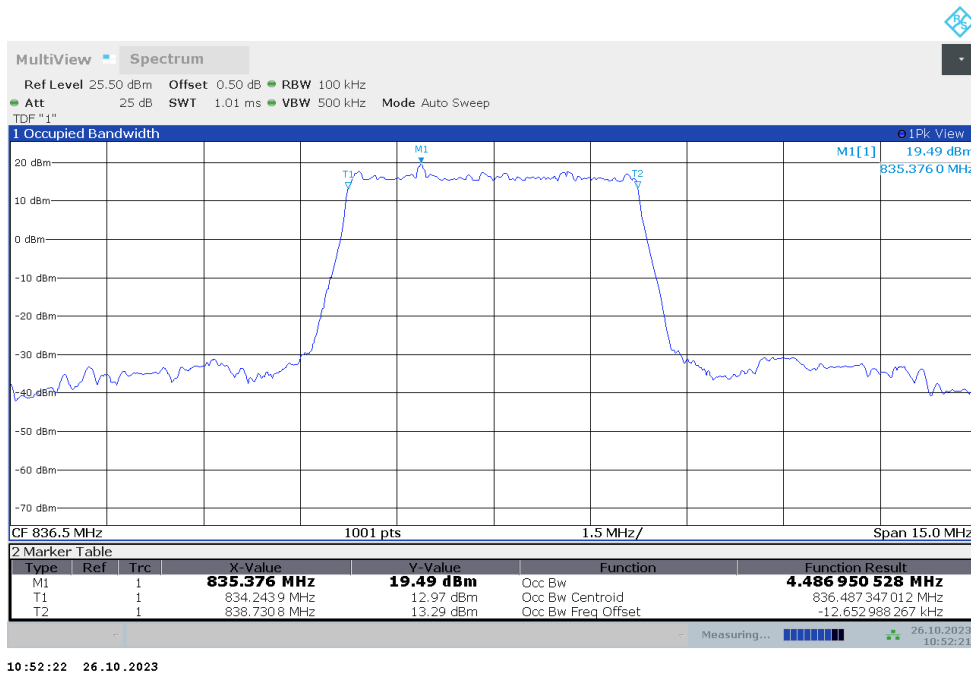
n2,20MHz Bandwidth,DFT-s-QPSK (99% BW)



n5  
n5,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	4.487	4.512

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



10:52:22 26.10.2023

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

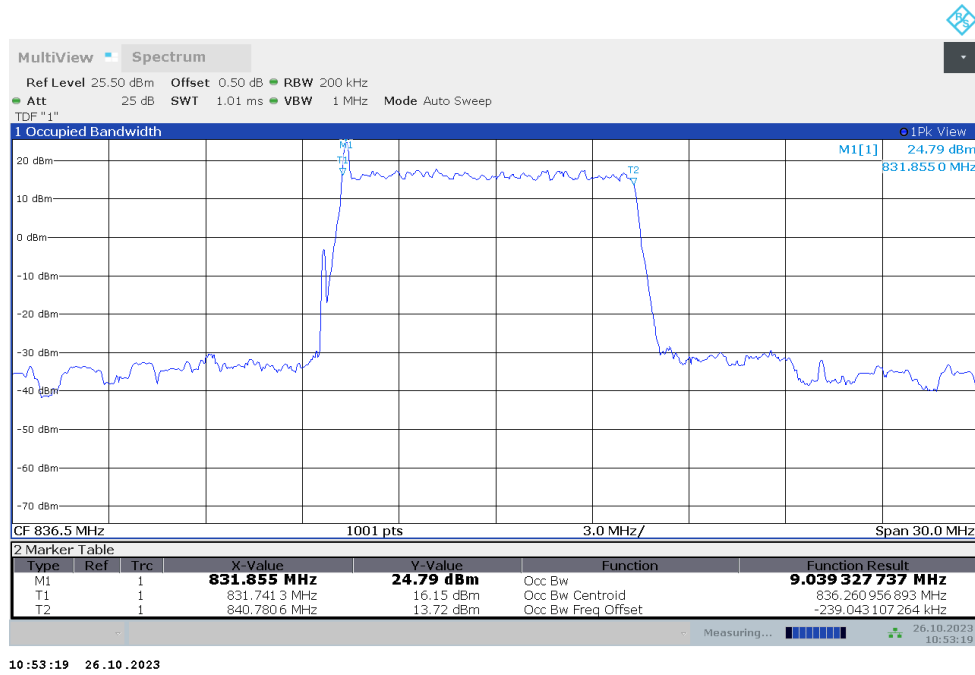


10:52:38 26.10.2023

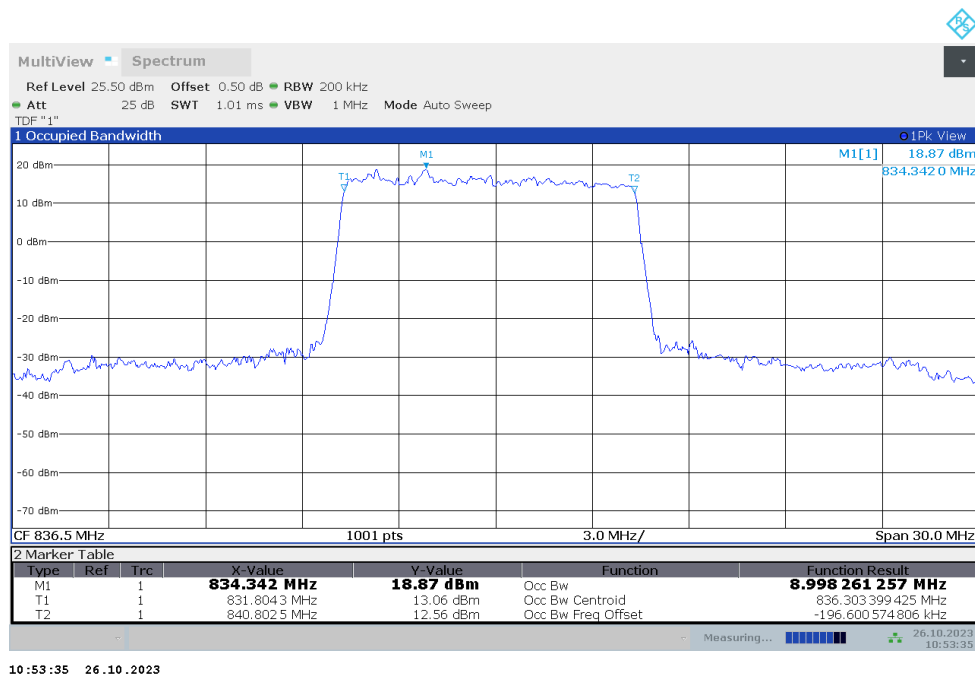
n5  
n5,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	9.039	8.998

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



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

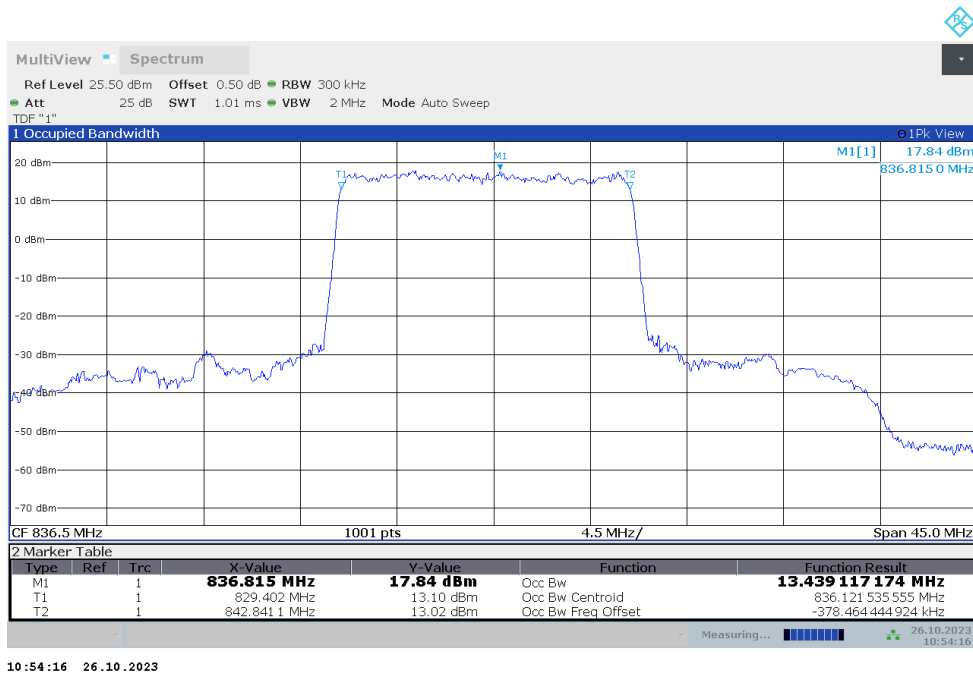


n5

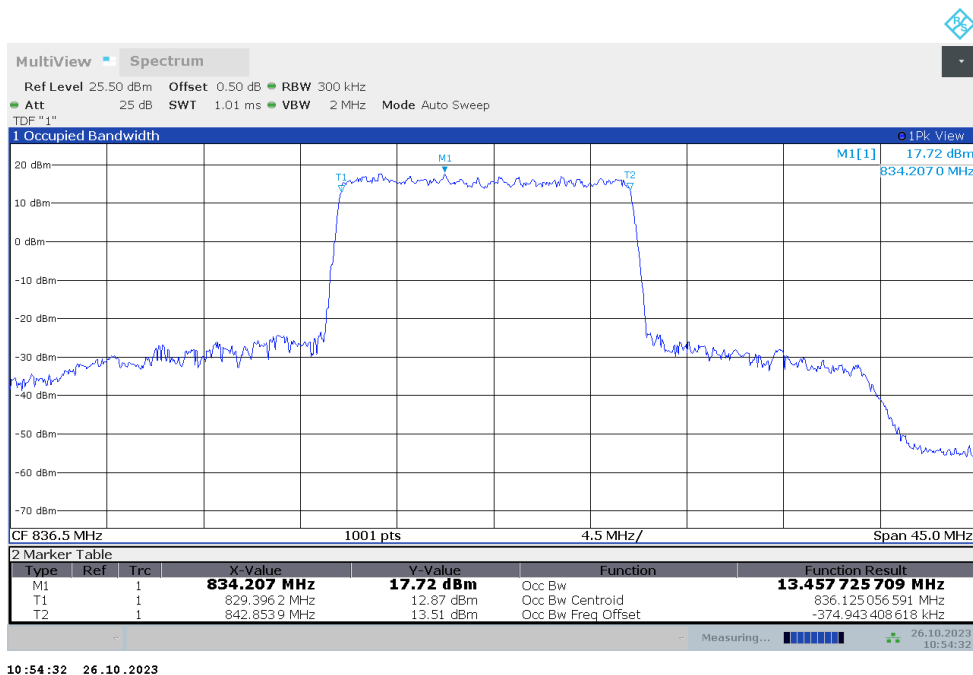
n5,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	13.439	13.458

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



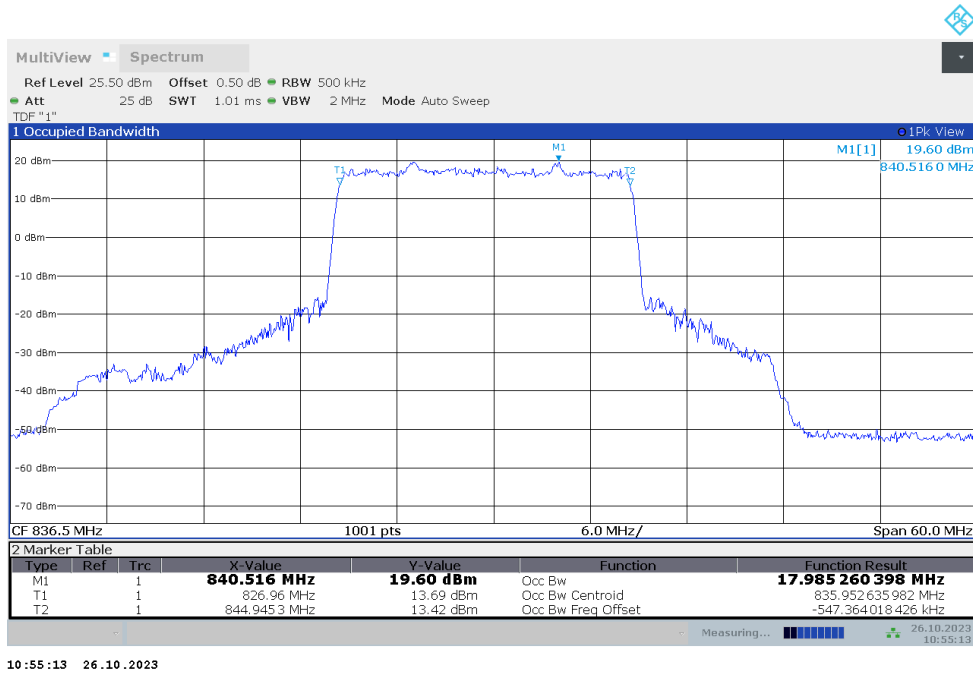
n5,15MHz Bandwidth,DFT-s-QPSK (99% BW)



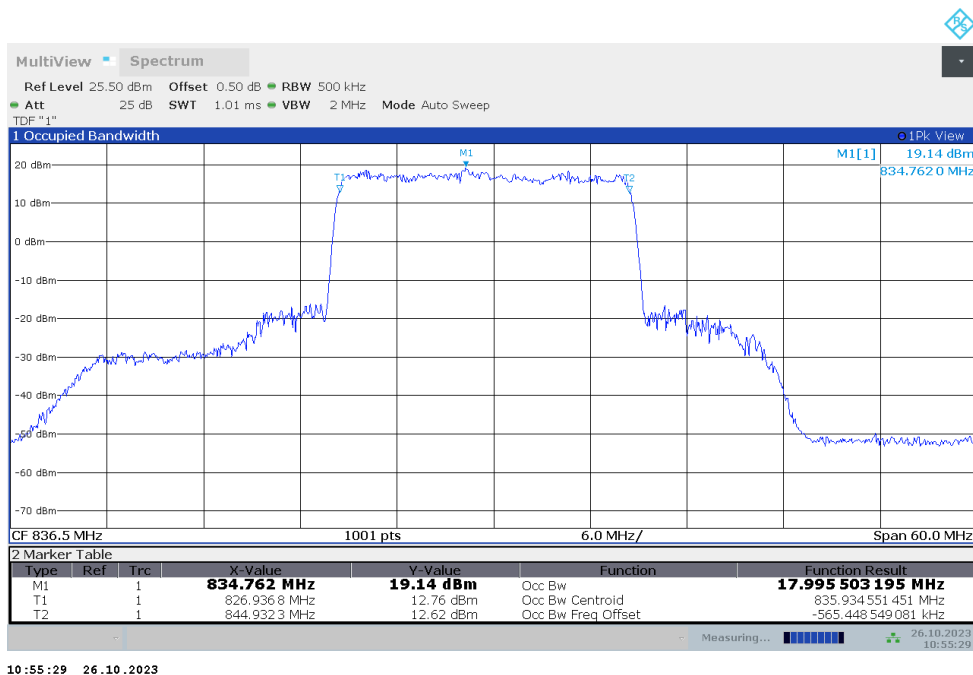
n5  
n5,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	17.985	17.996

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



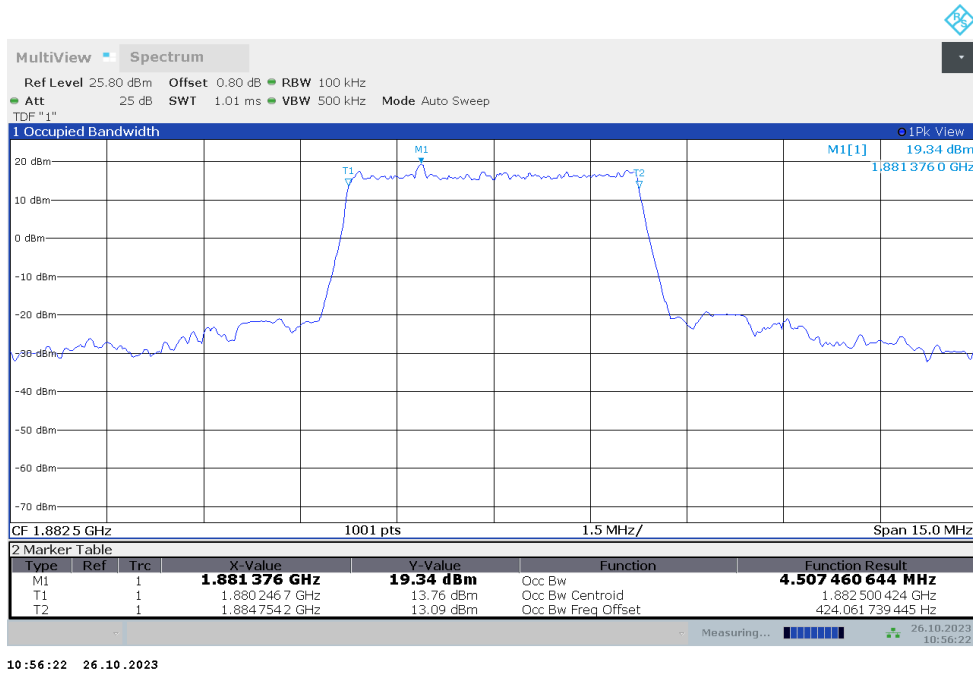
n5,20MHz Bandwidth,DFT-s-QPSK (99% BW)



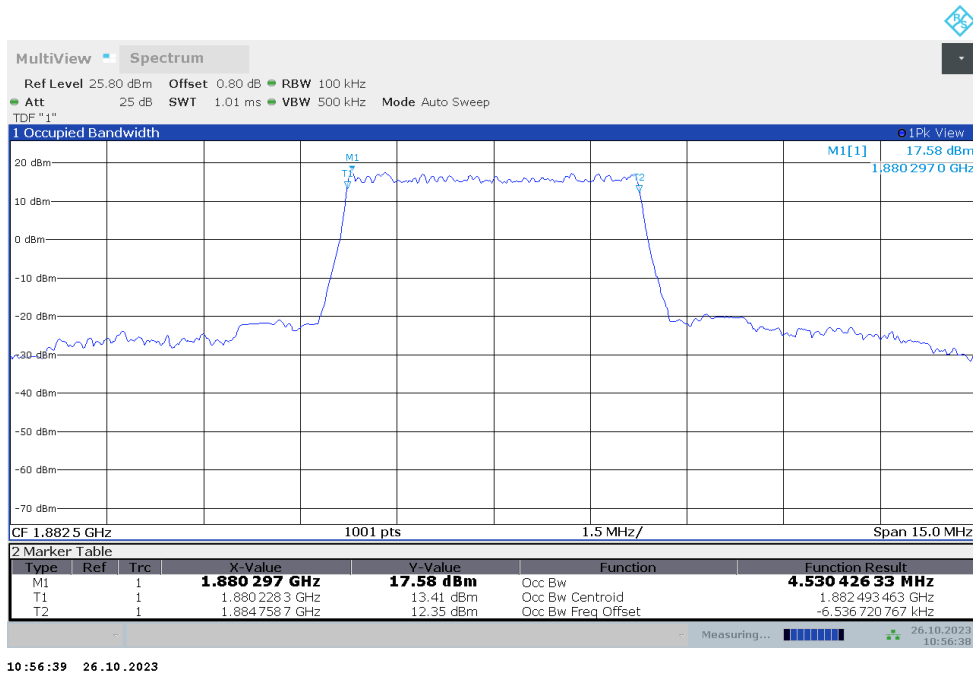
n25  
n25,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	4.507	4.530

n25,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n25,5MHz Bandwidth,DFT-s-QPSK (99% BW)



n25

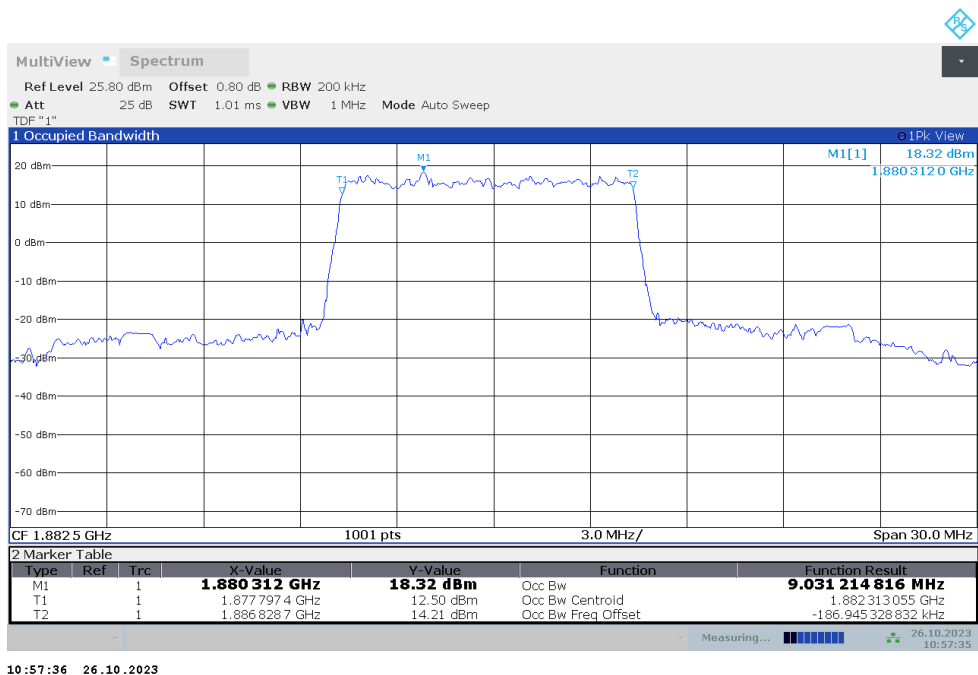
n25,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	8.997	9.031

n25,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n25,10MHz Bandwidth,DFT-s-QPSK (99% BW)

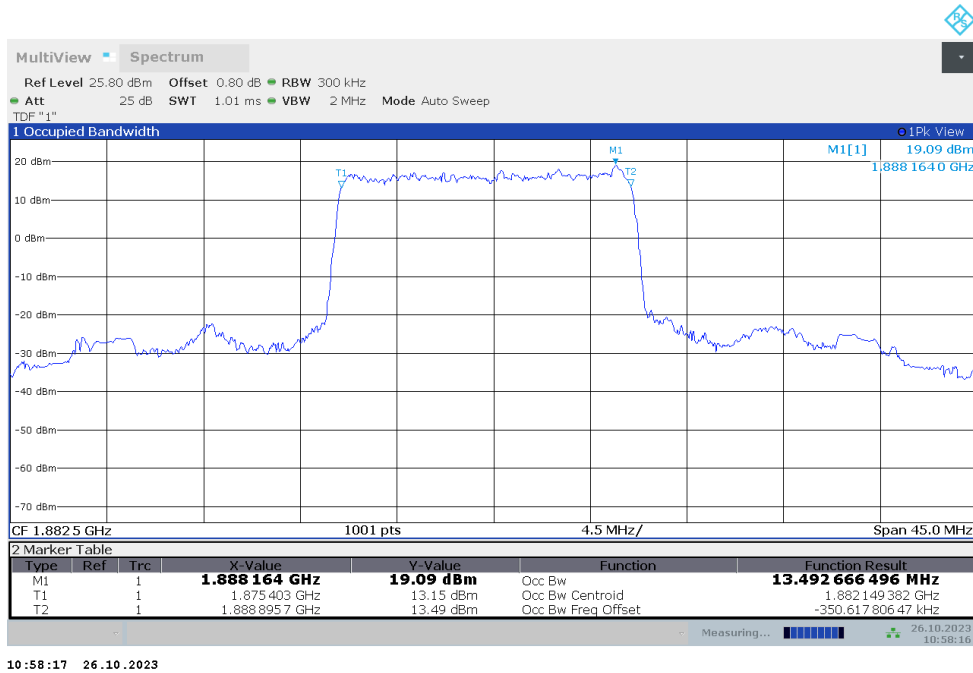


n25

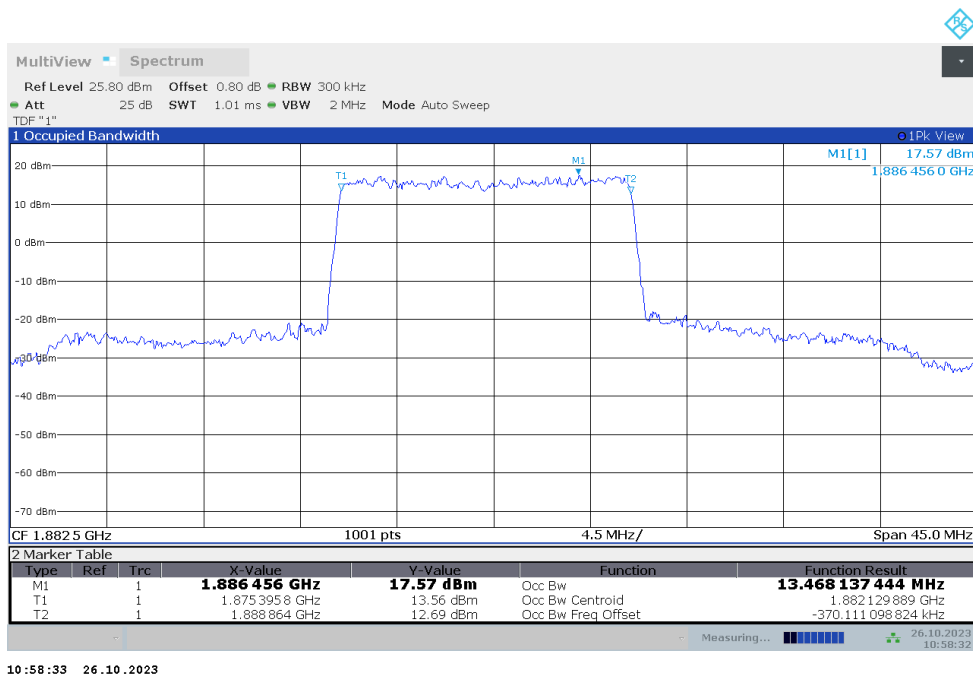
n25,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	13.493	13.468

n25,15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n25,15MHz Bandwidth,DFT-s-QPSK (99% BW)



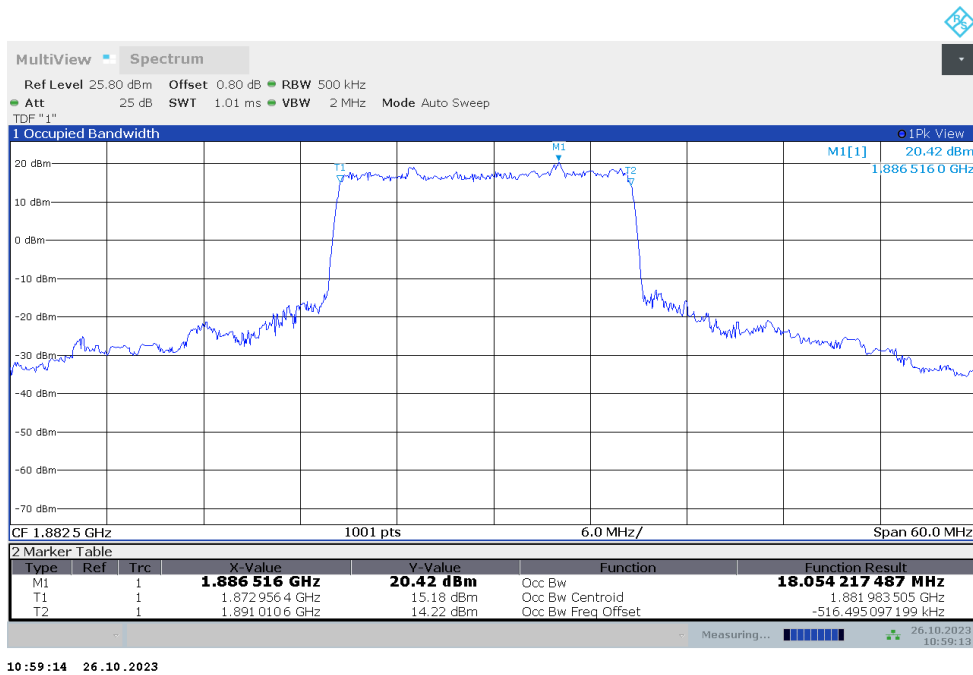


n25

n25,20MHz(99%)

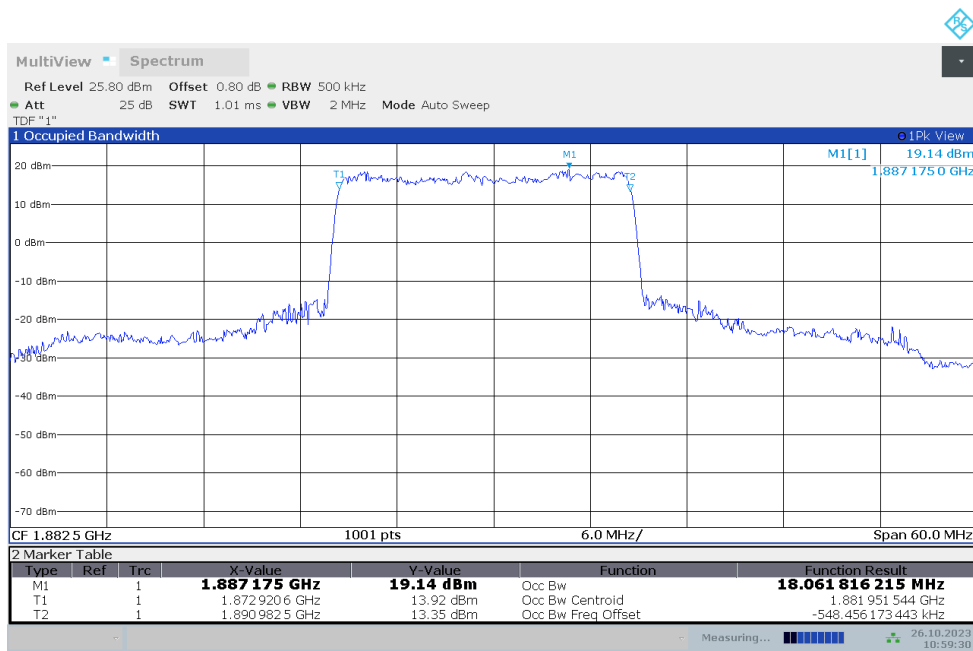
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	18.054	18.062

n25,20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



10:59:14 26.10.2023

n25,20MHz Bandwidth,DFT-s-QPSK (99% BW)



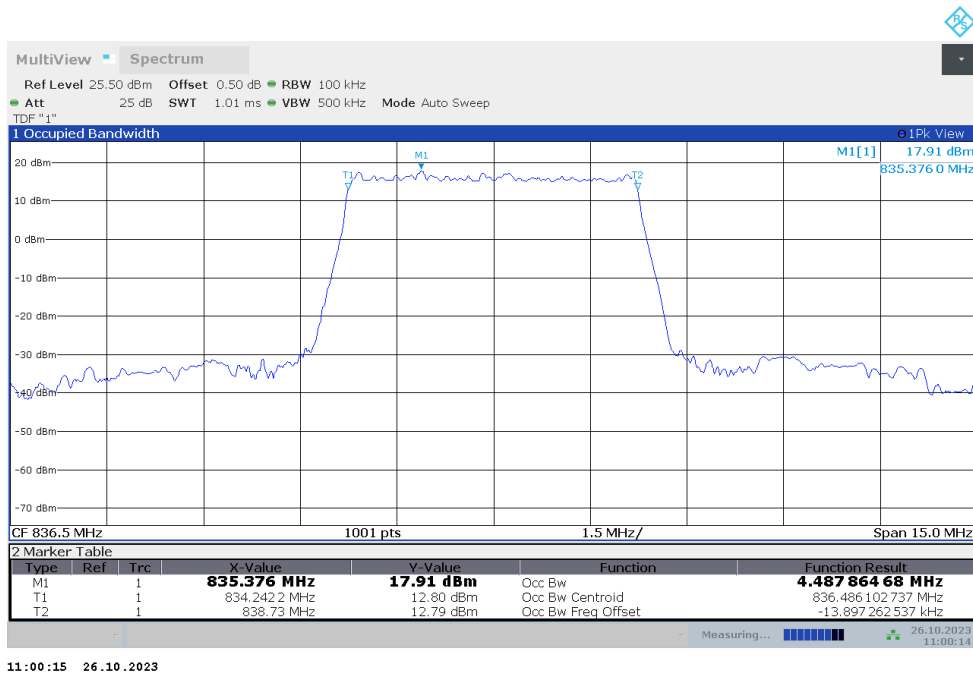
10:59:30 26.10.2023

n26\_Part22

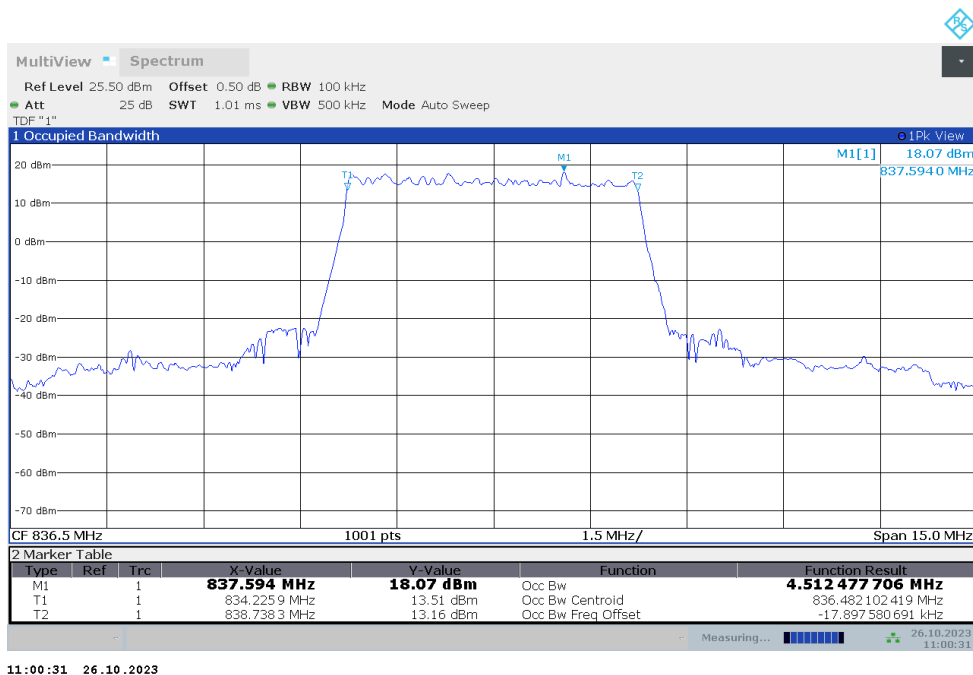
n26\_Part22,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	4.488	4.512

n26\_Part22,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n26\_Part22,5MHz Bandwidth,DFT-s-QPSK (99% BW)

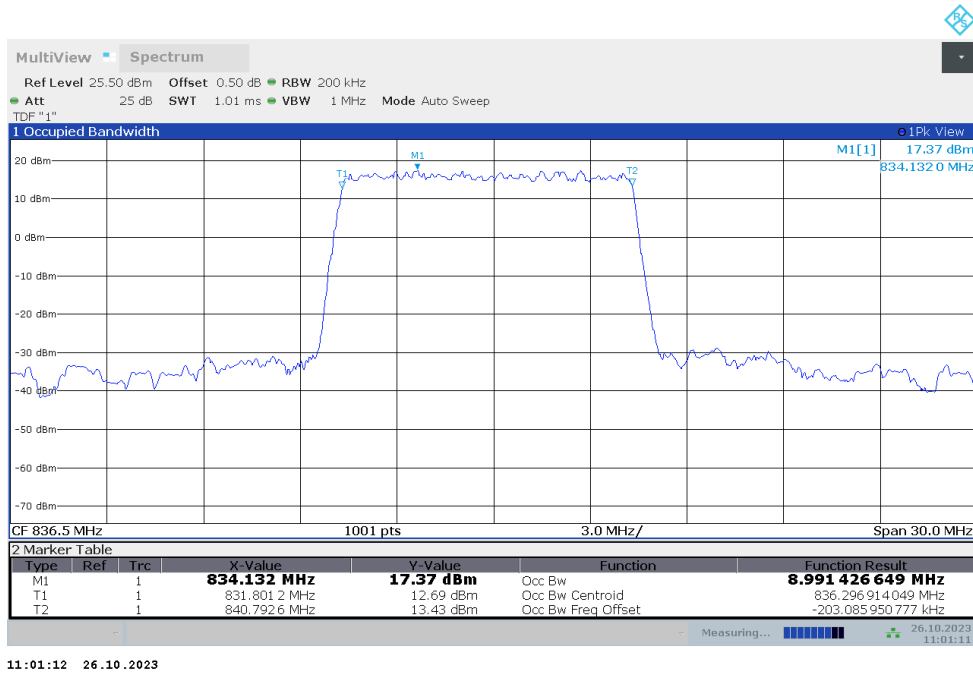


## n26\_Part22

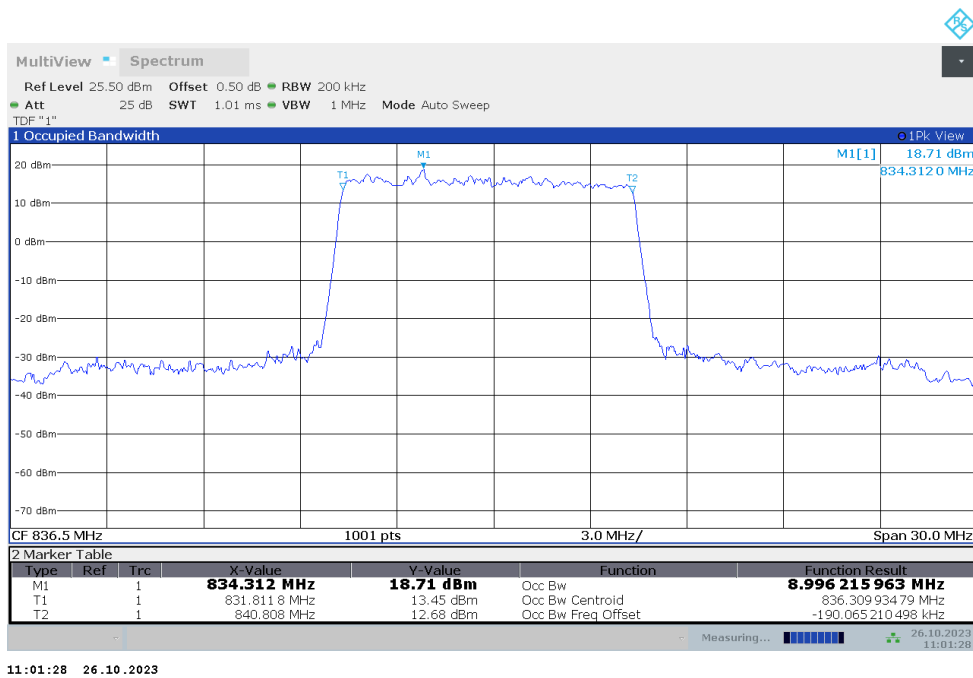
## n26\_Part22,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	8.991	8.996

## n26\_Part22,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



## n26\_Part22,10MHz Bandwidth,DFT-s-QPSK (99% BW)

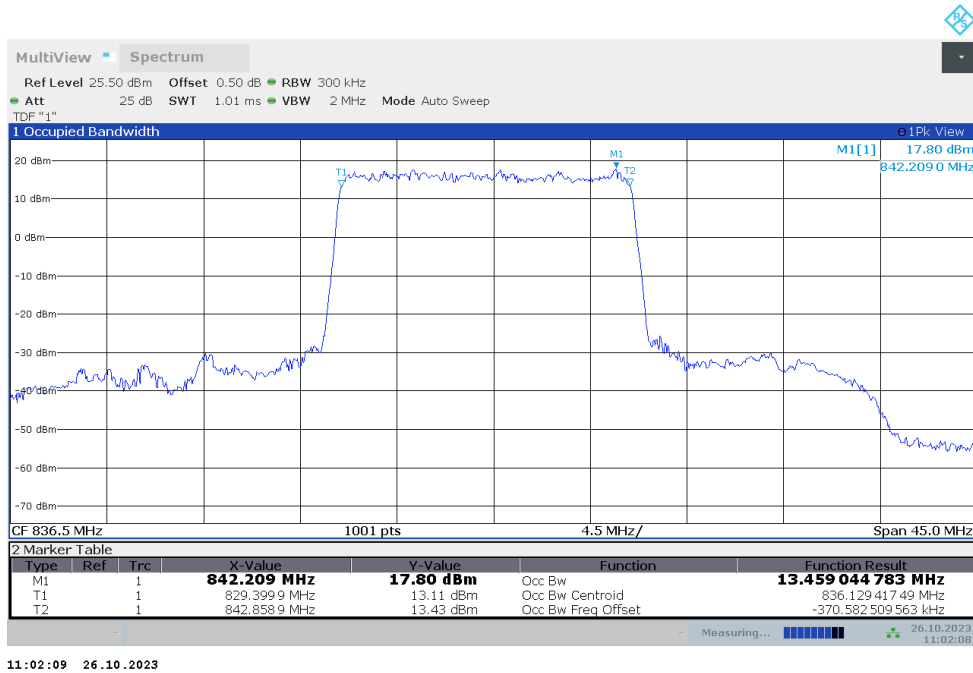


n26\_Part22

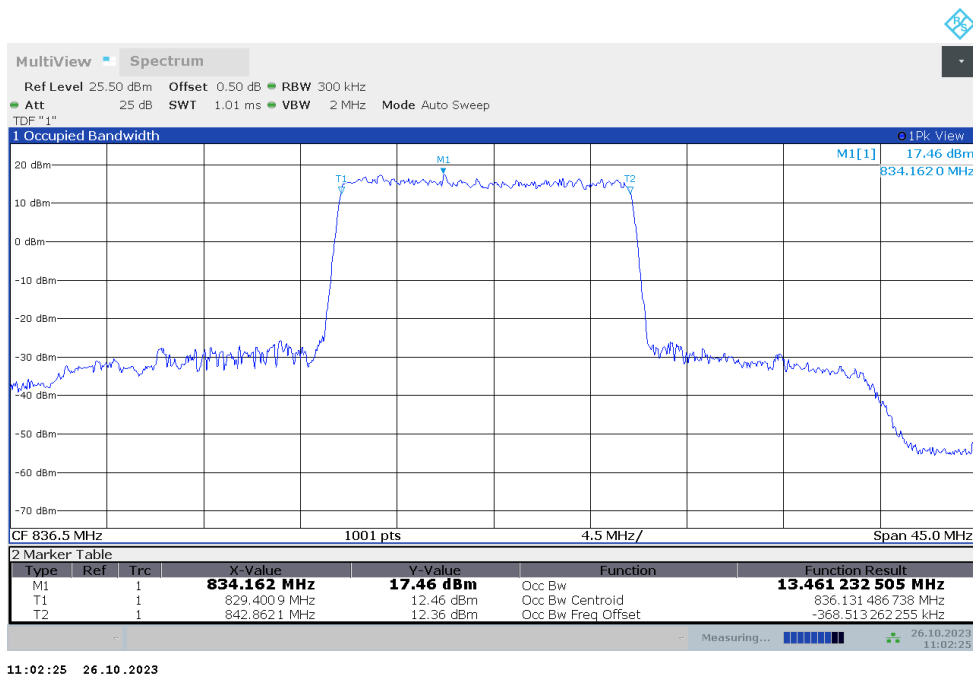
n26\_Part22,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	13.459	13.461

n26\_Part22,15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n26\_Part22,15MHz Bandwidth,DFT-s-QPSK (99% BW)

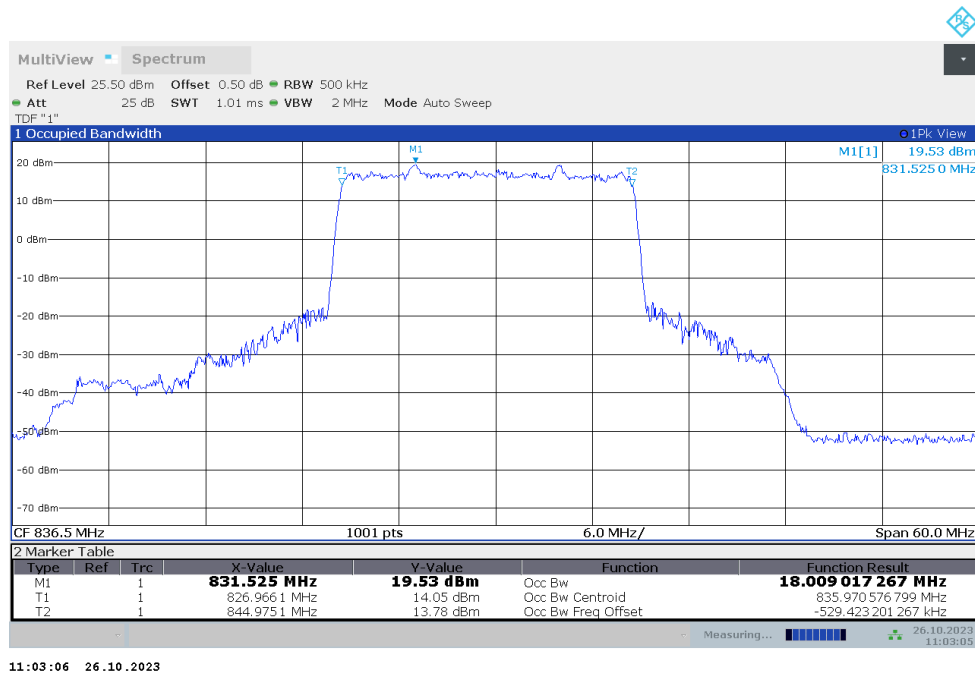


n26\_Part22

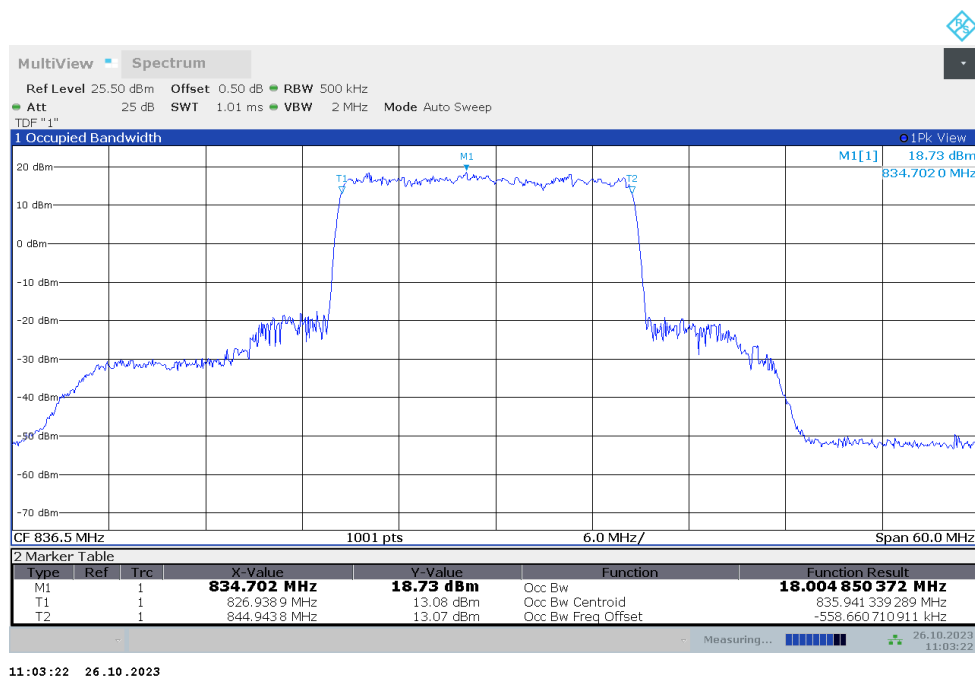
n26\_Part22,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	18.009	18.005

n26\_Part22,20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n26\_Part22,20MHz Bandwidth,DFT-s-QPSK (99% BW)

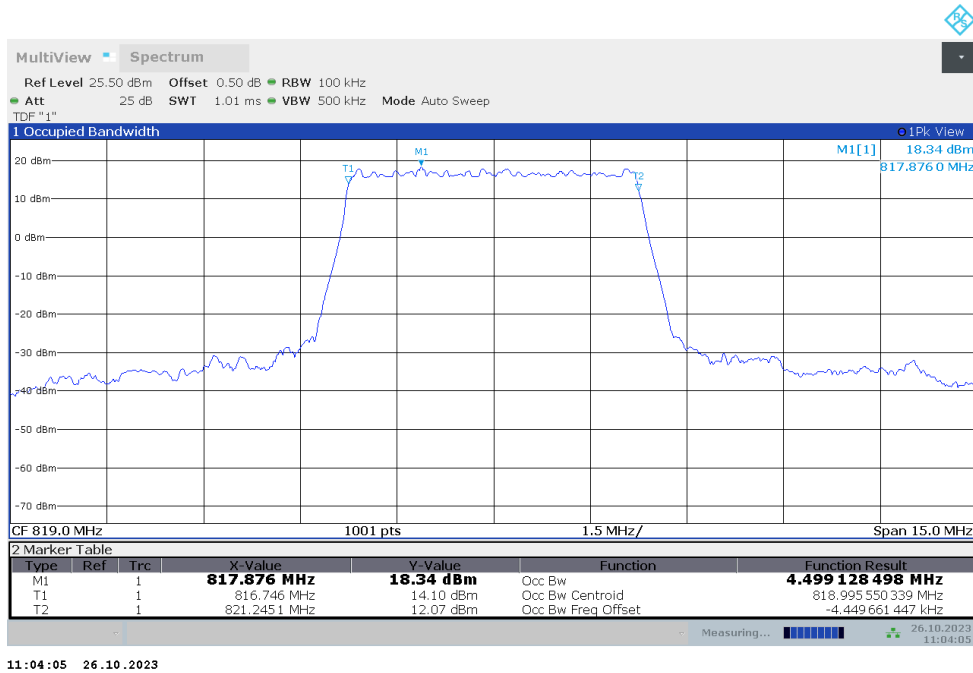


## n26\_Part90

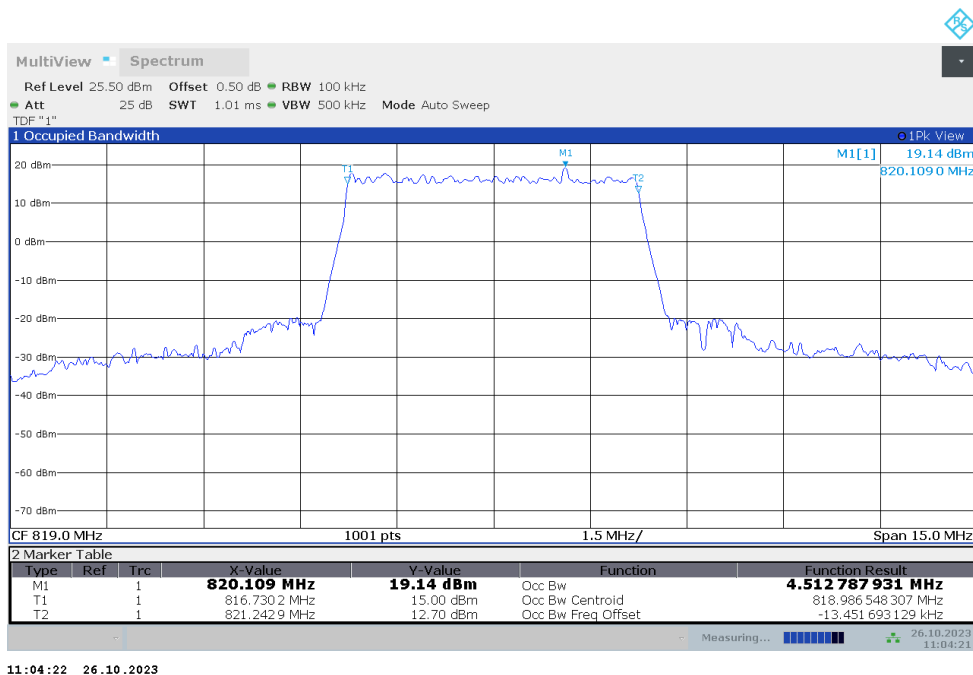
## n26\_Part90,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
819	4.499	4.513

## n26\_Part90,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



## n26\_Part90,5MHz Bandwidth,DFT-s-QPSK (99% BW)

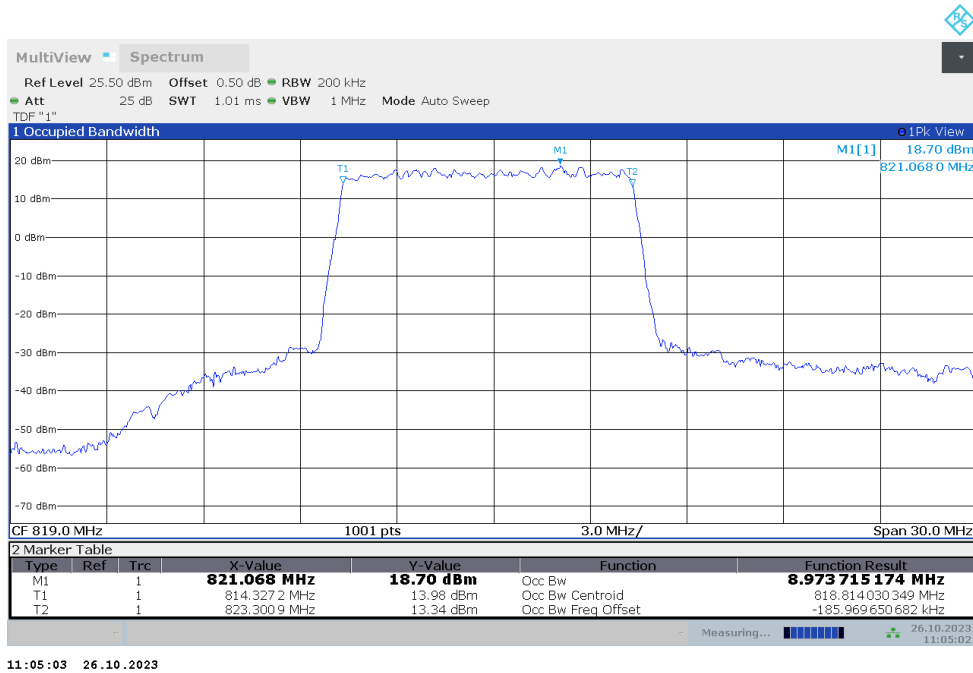


n26\_Part90

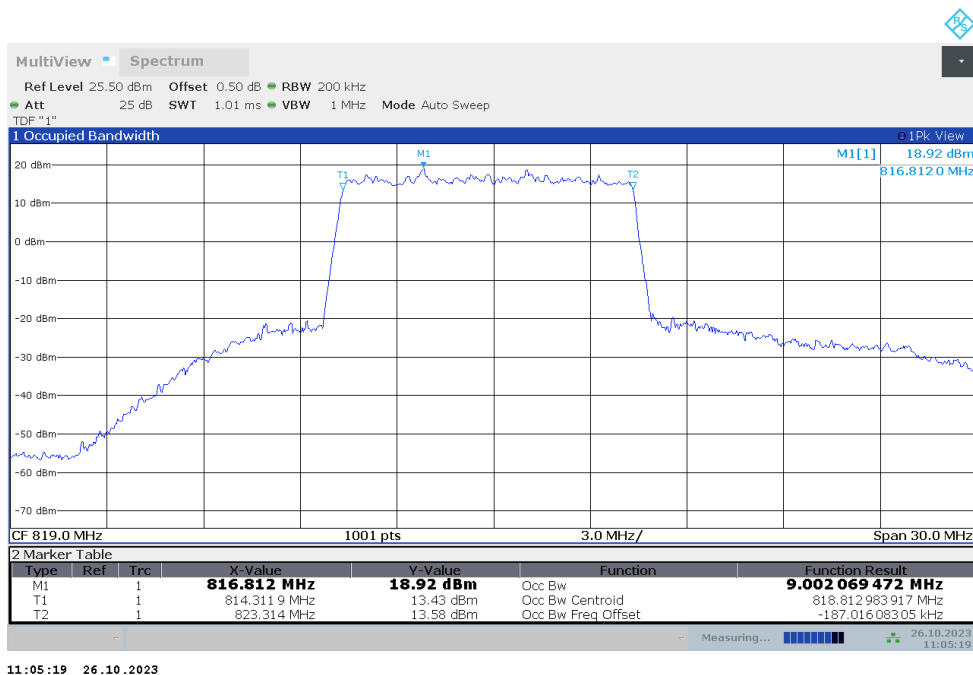
n26\_Part90,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
819	8.974	9.002

n26\_Part90,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



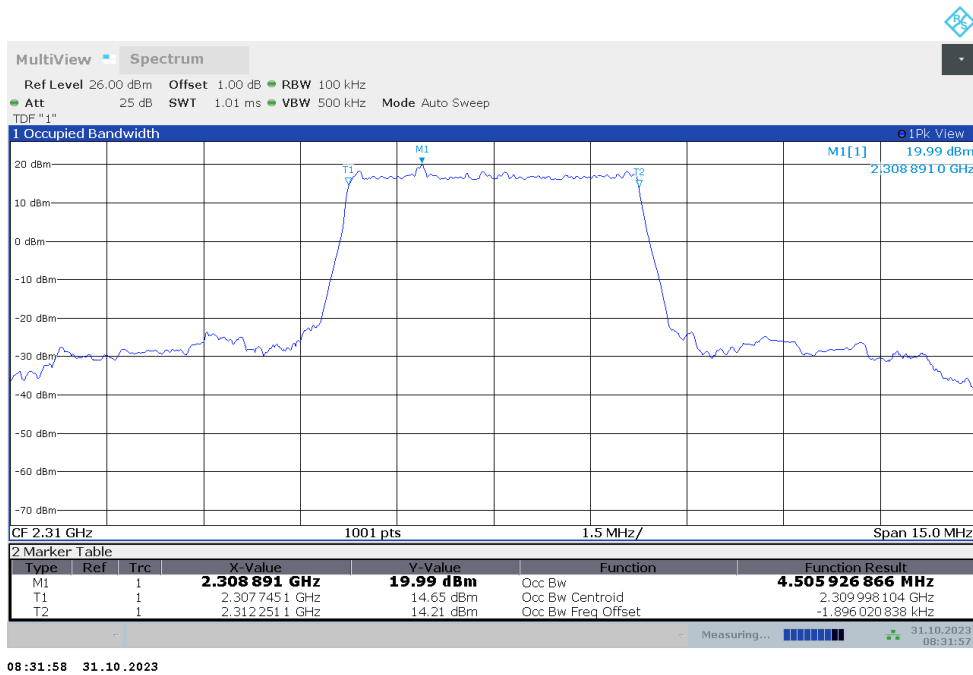
n26\_Part90,10MHz Bandwidth,DFT-s-QPSK (99% BW)



n30  
n30,5MHz(99%)

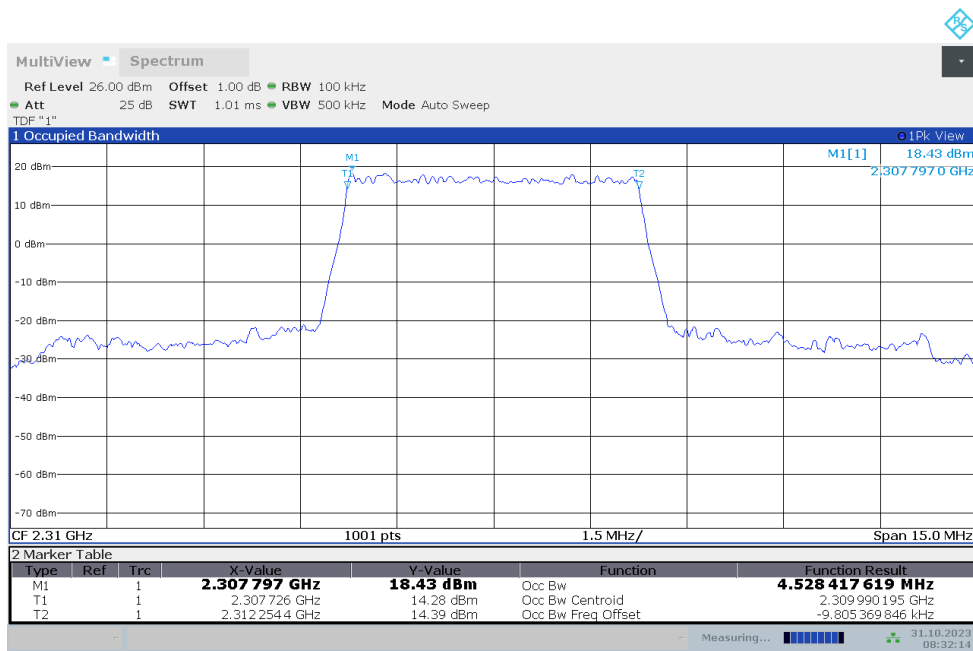
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2310	4.506	4.528

n30,5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



08:31:58 31.10.2023

n30,5MHz Bandwidth,DFT-s-QPSK (99% BW)



08:32:14 31.10.2023

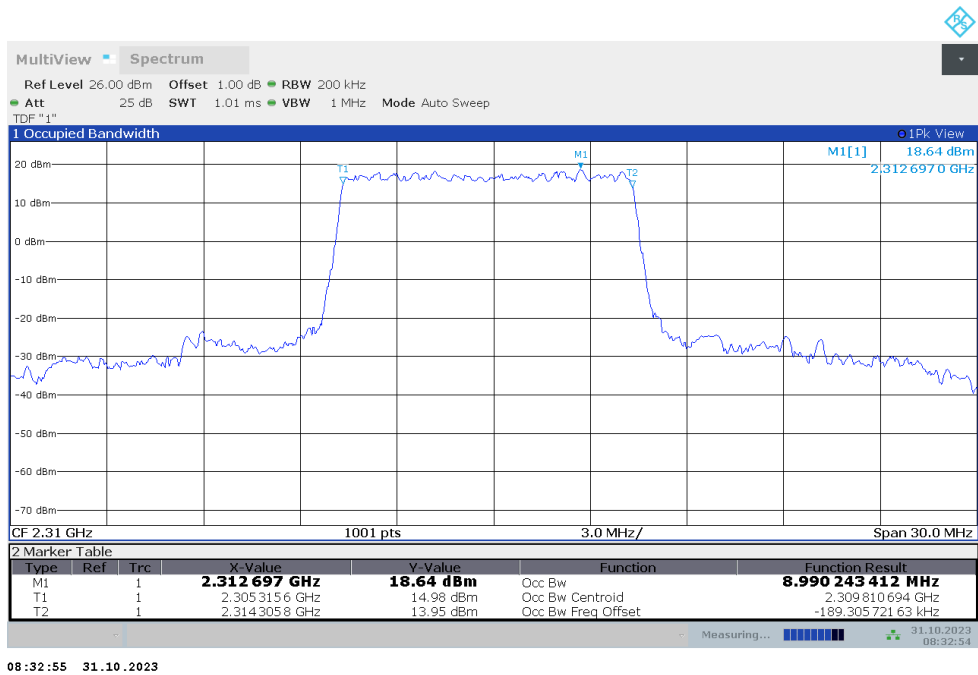


n30

n30,10MHz(99%)

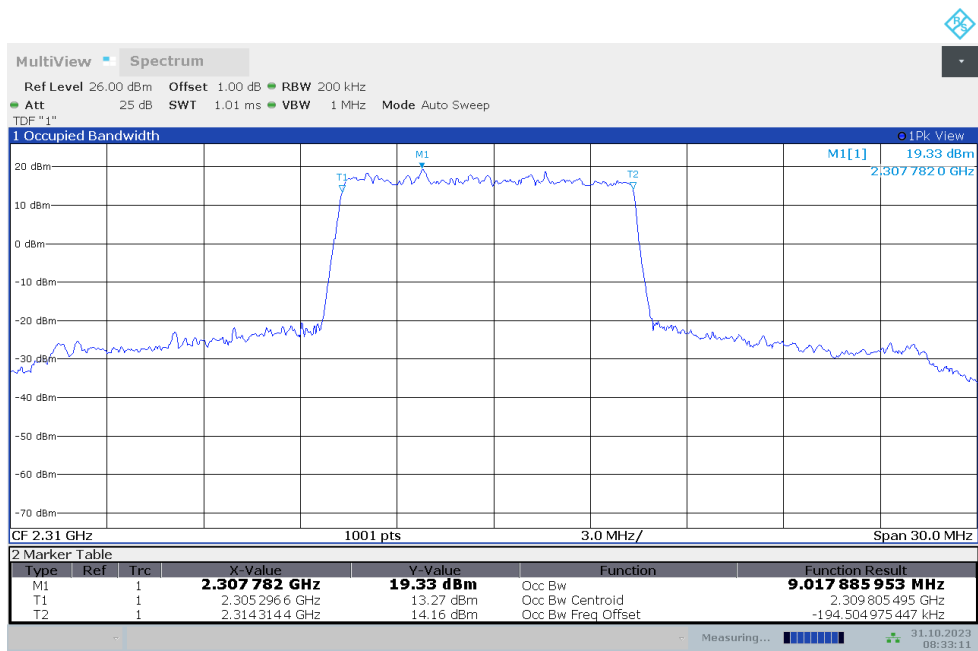
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2310	8.990	9.018

n30,10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



08:32:55 31.10.2023

n30,10MHz Bandwidth,DFT-s-QPSK (99% BW)



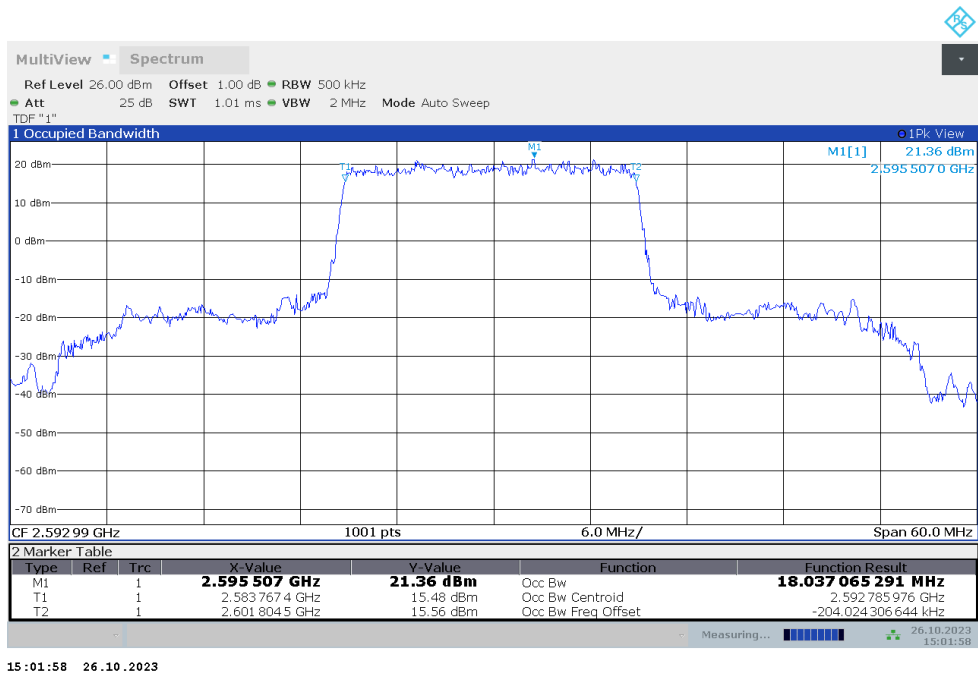
08:33:11 31.10.2023

n41

n41,20MHz(99%)

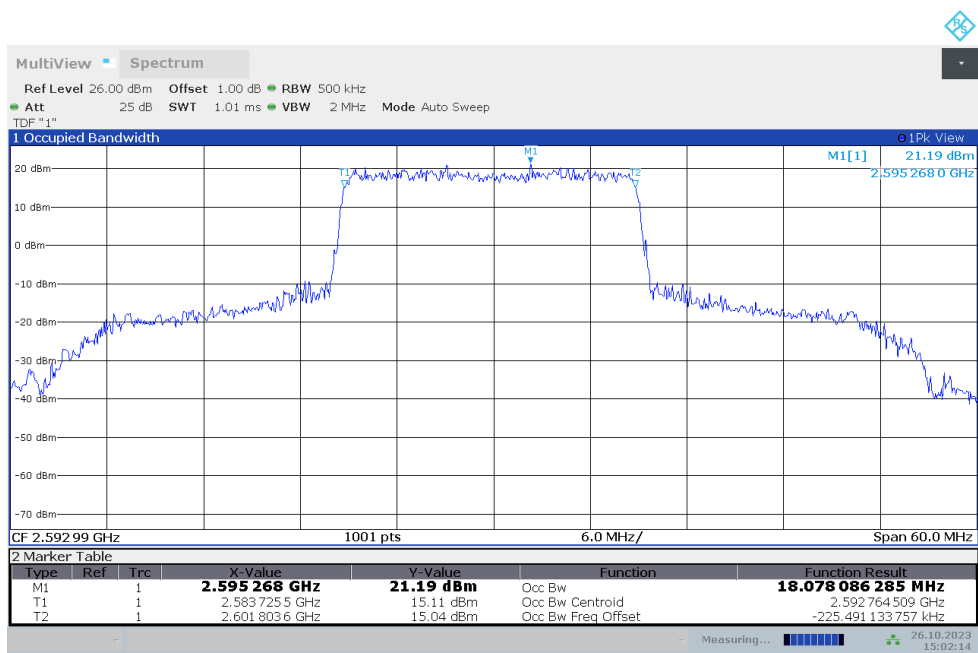
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	18.037	18.078

n41,20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



15:01:58 26.10.2023

n41,20MHz Bandwidth,DFT-s-QPSK (99% BW)



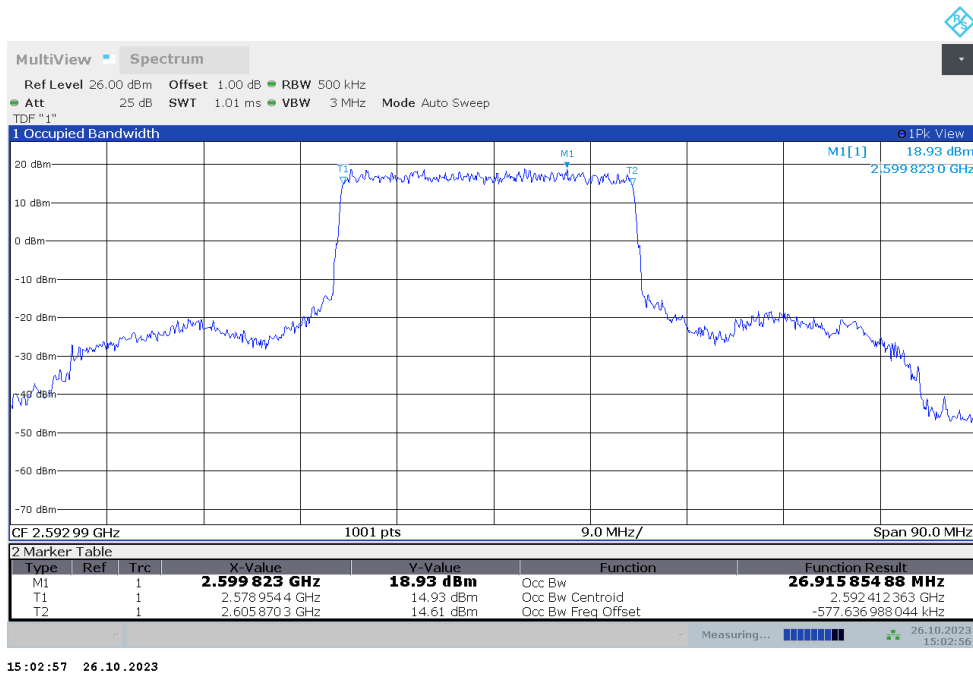
15:02:15 26.10.2023

n41

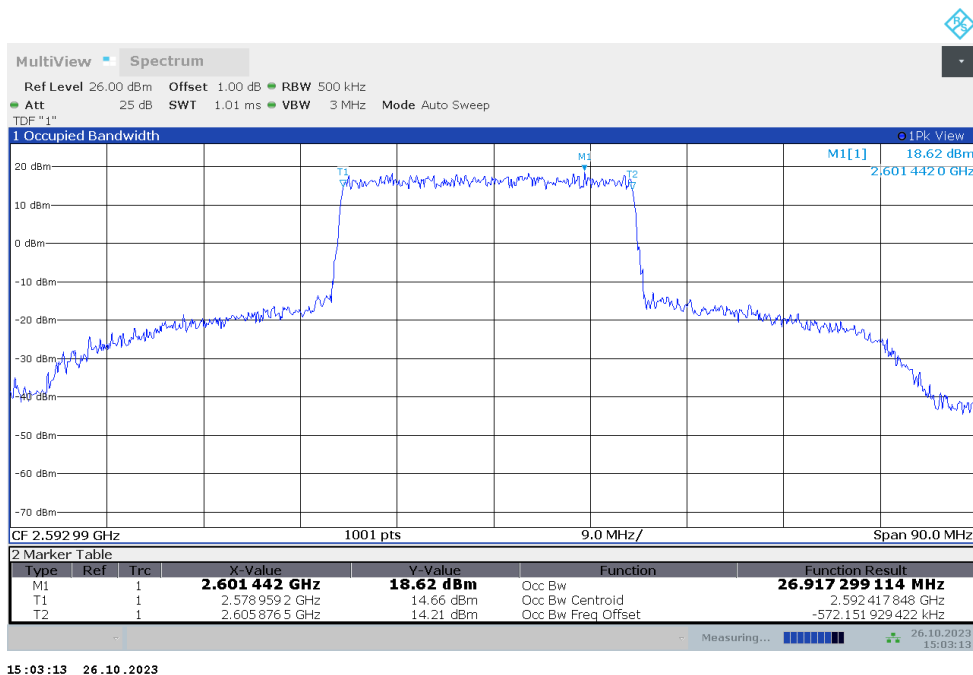
n41,30MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	26.916	26.917

n41,30MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n41,30MHz Bandwidth,DFT-s-QPSK (99% BW)

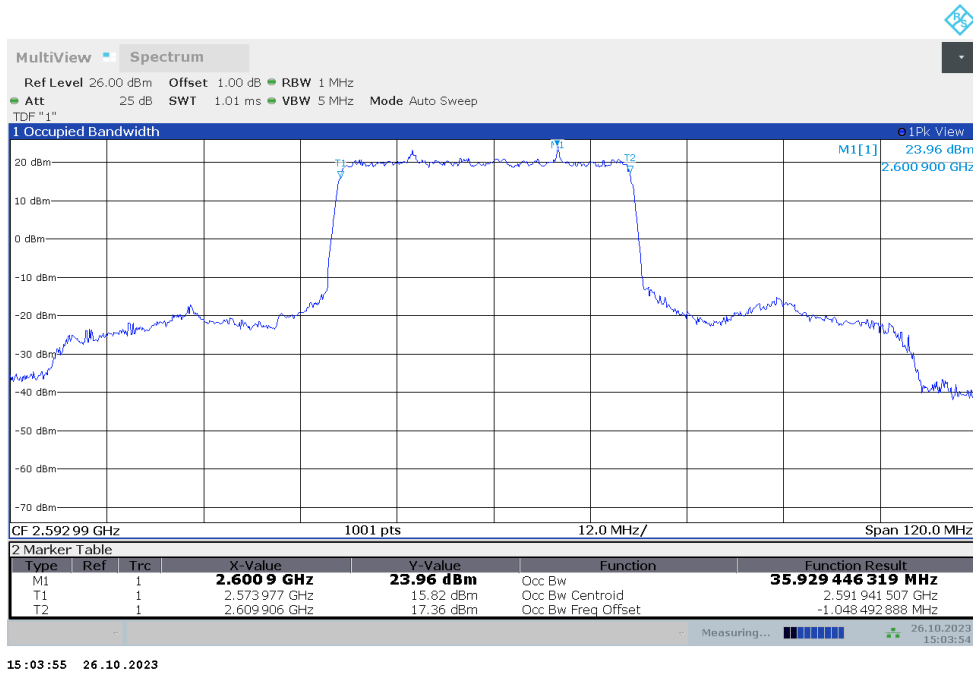


n41

n41,40MHz(99%)

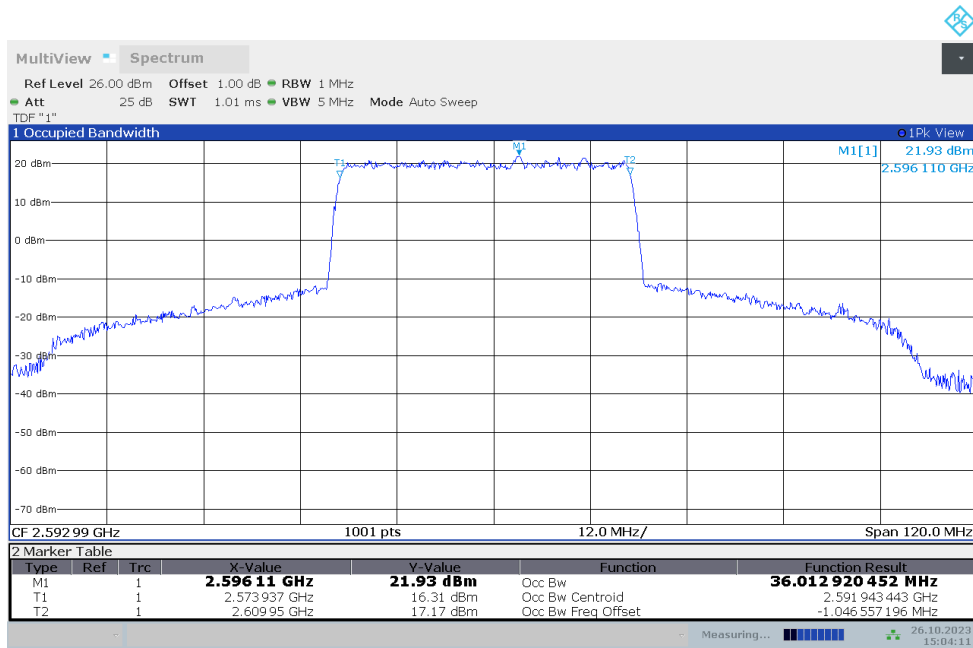
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	35.929	36.013

n41,40MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



15:03:55 26.10.2023

n41,40MHz Bandwidth,DFT-s-QPSK (99% BW)



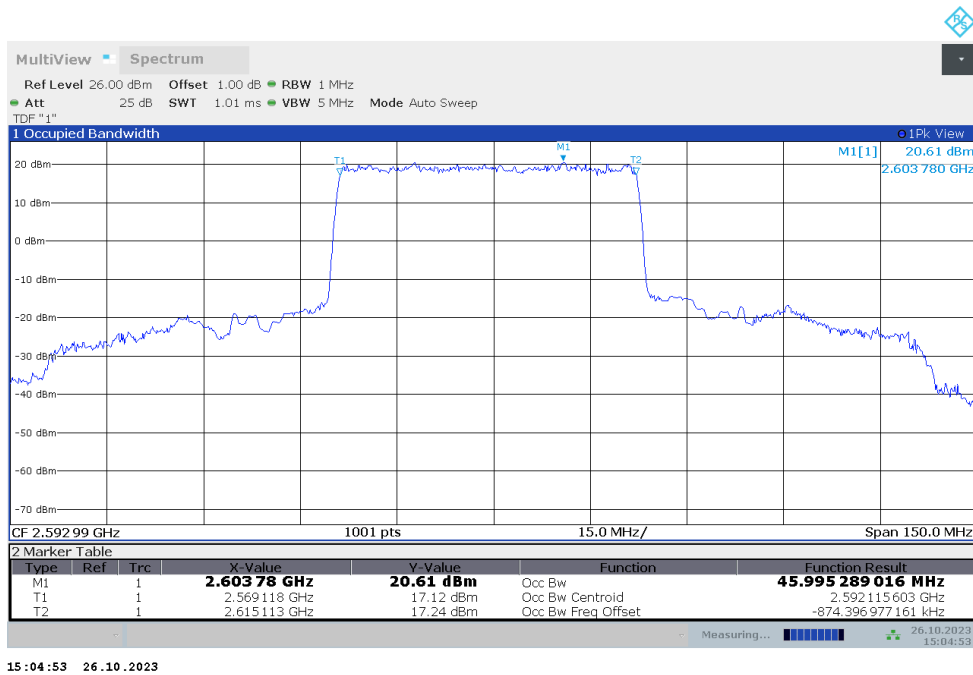
15:04:11 26.10.2023

n41

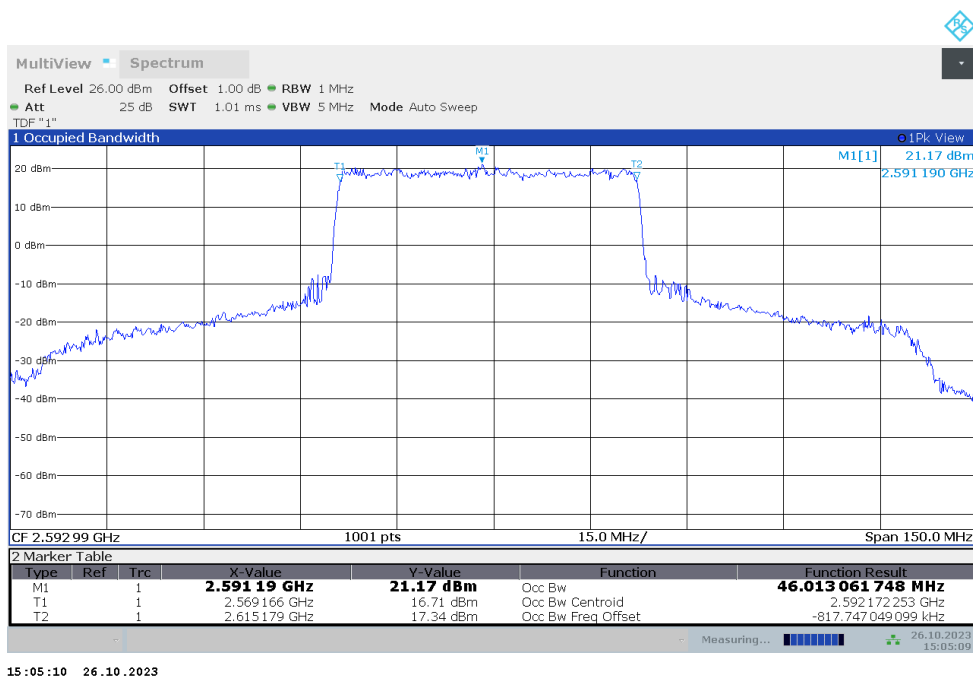
n41,50MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	45.995	46.013

n41,50MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n41,50MHz Bandwidth,DFT-s-QPSK (99% BW)

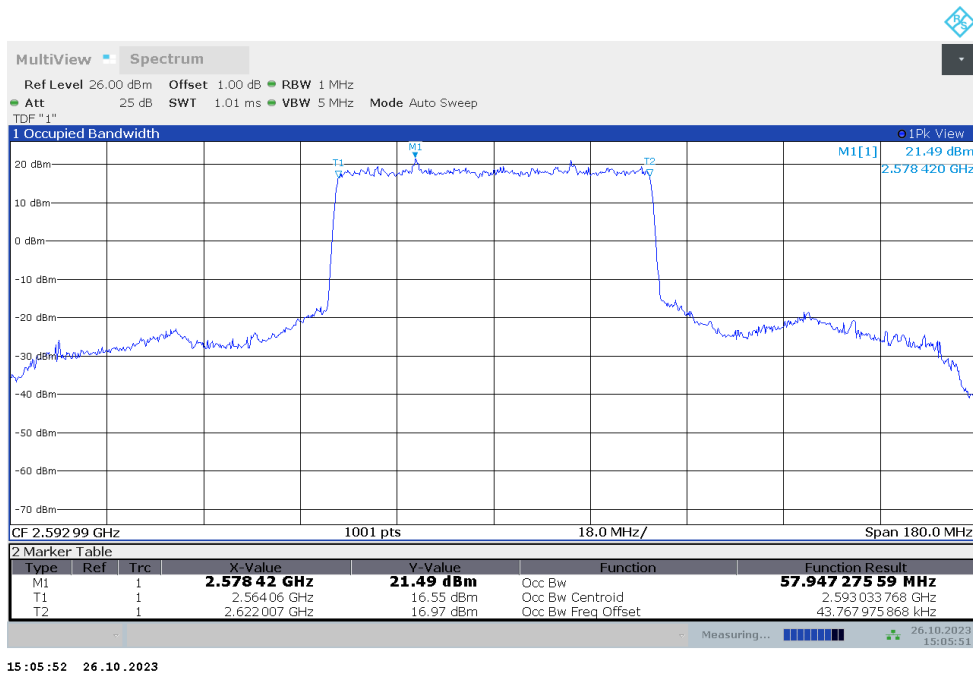


n41

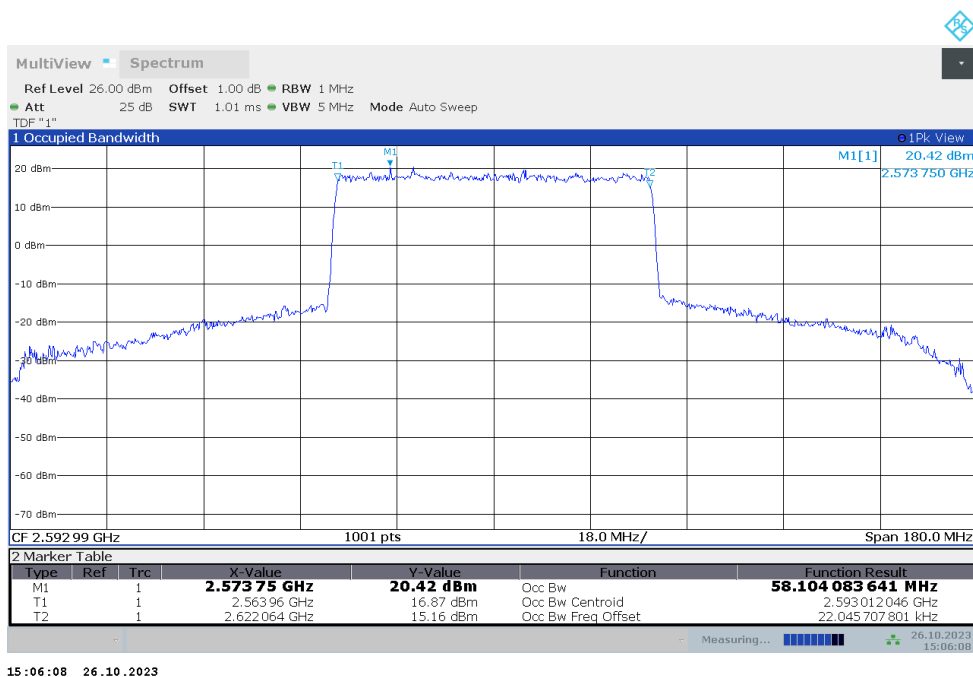
n41,60MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	57.947	58.104

n41,60MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n41,60MHz Bandwidth,DFT-s-QPSK (99% BW)

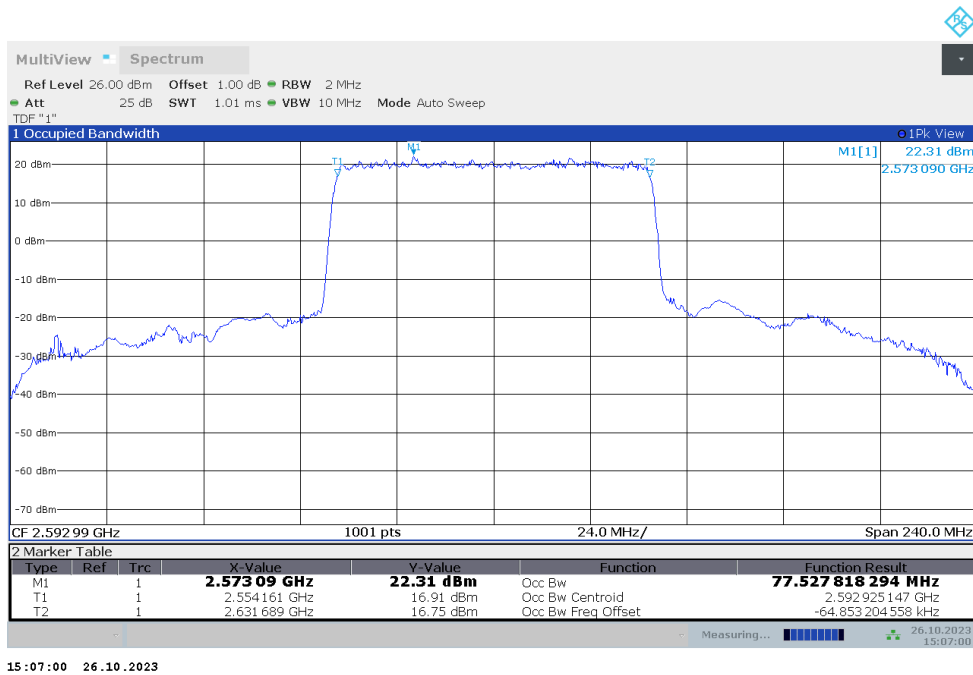


n41

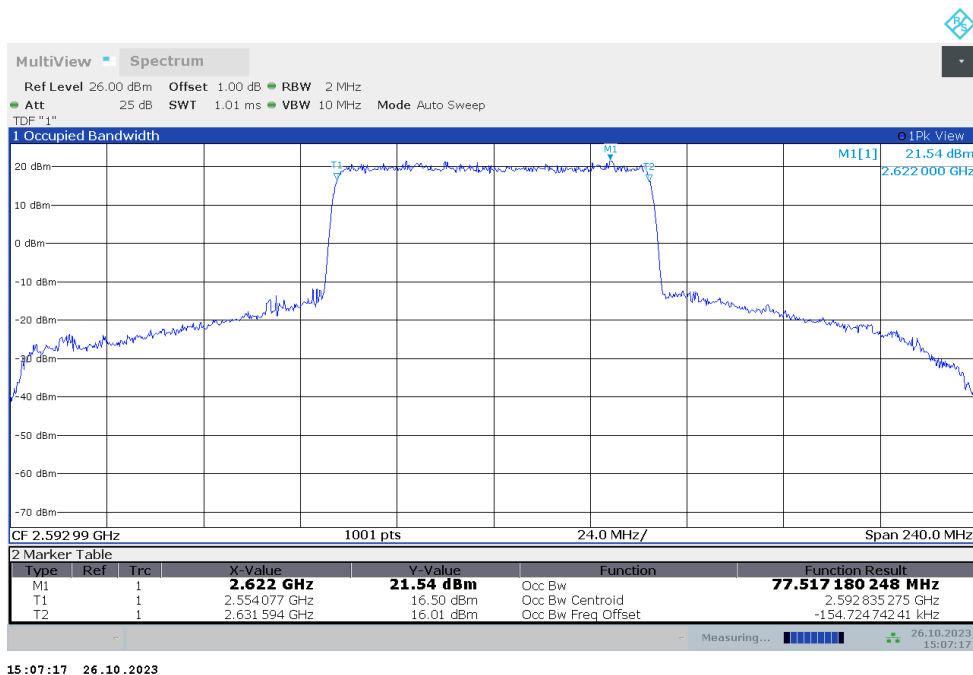
n41,80MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	77.528	77.517

n41,80MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n41,80MHz Bandwidth,DFT-s-QPSK (99% BW)

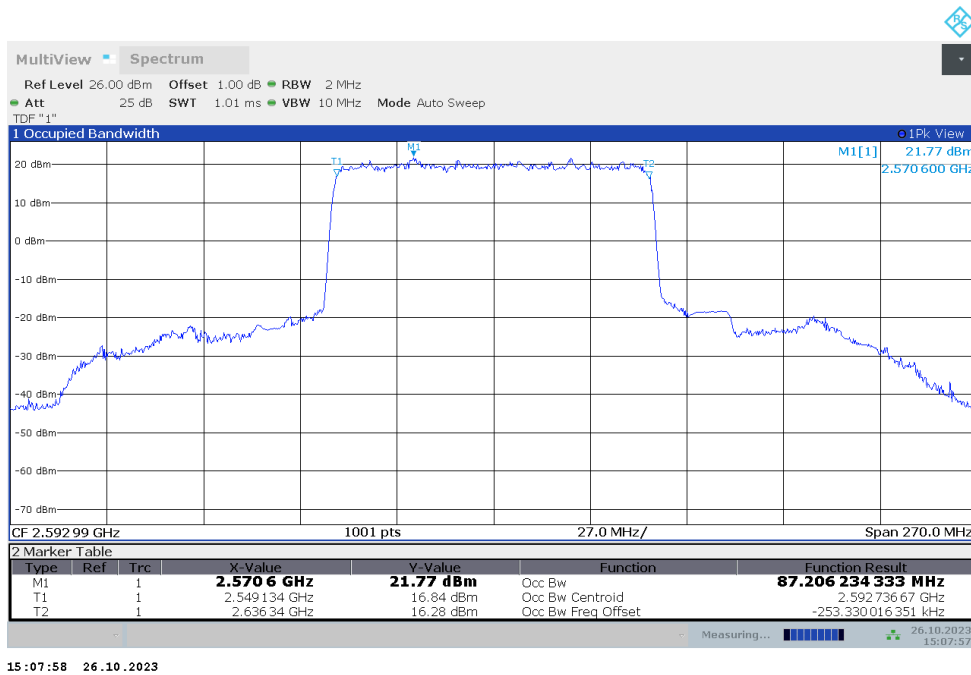


n41

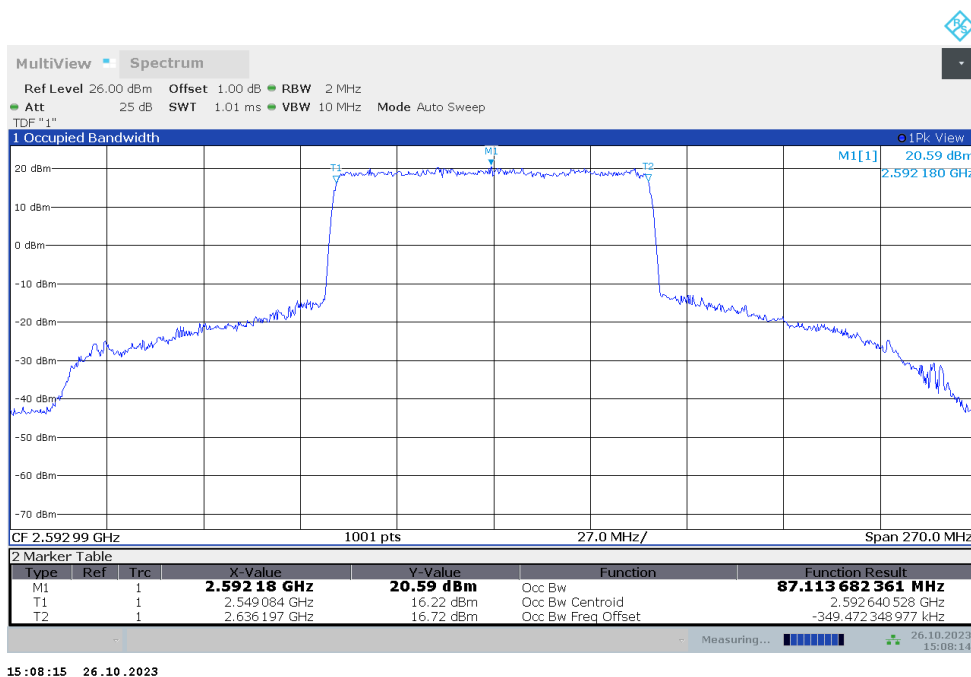
n41,90MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	87.206	87.114

n41,90MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n41,90MHz Bandwidth,DFT-s-QPSK (99% BW)



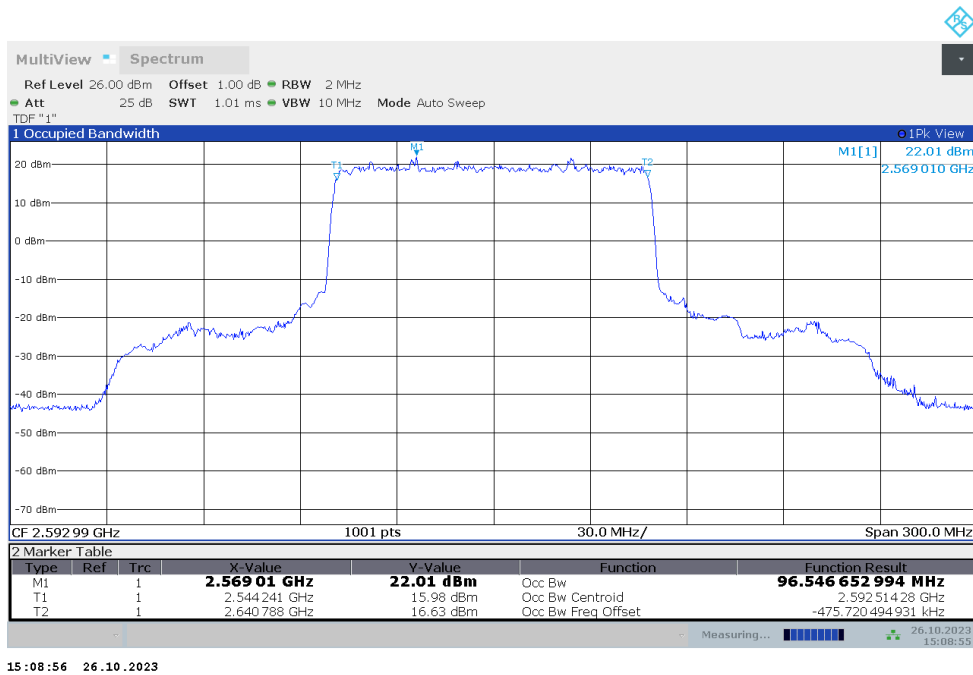


n41

n41,100MHz(99%)

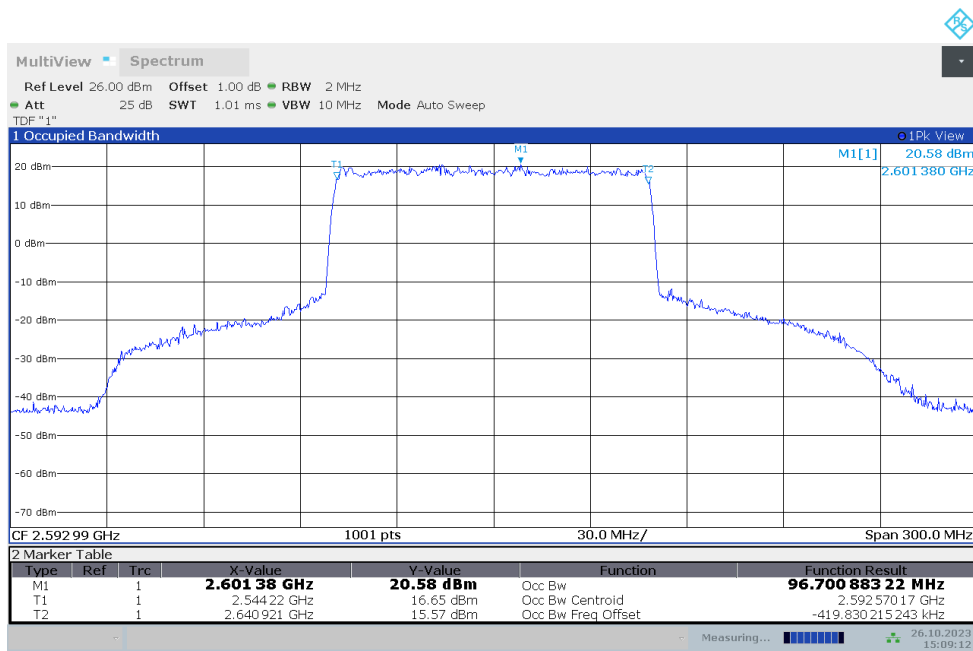
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	96.547	96.701

n41,100MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



15:08:56 26.10.2023

n41,100MHz Bandwidth,DFT-s-QPSK (99% BW)



15:09:13 26.10.2023