

LTE Band 66+NR n25,BPSK, CH370500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3463.01	-56.68	5.45	8.11	-54.02	-13.00	41.02	V
5237.01	-55.00	7.00	10.23	-51.77	-13.00	38.77	H
6996.01	-53.73	8.27	11.60	-50.40	-13.00	37.40	V
3717.01	-56.25	6.39	8.50	-54.14	-13.00	41.14	V
5562.01	-23.39	7.19	10.59	-19.99	-13.00	6.99	H
7415.01	-54.43	8.16	12.10	-50.49	-13.00	37.49	V

LTE Band 66+NR n25,BPSK, CH376500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3492.01	-56.66	5.51	8.18	-53.99	-13.00	40.99	V
5257.01	-55.75	7.00	10.26	-52.49	-13.00	39.49	V
6981.01	-53.56	8.15	11.58	-50.13	-13.00	37.13	V
3750.01	-56.16	6.29	8.55	-53.90	-13.00	40.90	V
5651.01	-19.16	7.27	10.57	-15.86	-13.00	2.86	V
7516.01	-54.42	8.33	12.21	-50.54	-13.00	37.54	V

LTE Band 66+NR n25,BPSK, CH382500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3495.01	-56.35	5.51	8.19	-53.67	-13.00	40.67	H
5252.01	-55.30	7.00	10.25	-52.05	-13.00	39.05	H
6953.01	-53.74	7.94	11.54	-50.14	-13.00	37.14	V
3825.01	-54.78	6.06	8.66	-52.18	-13.00	39.18	V
5741.01	-18.33	7.28	10.55	-15.06	-13.00	2.06	V
7633.01	-54.74	8.12	12.31	-50.55	-13.00	37.55	V

LTE Band 2+NR n66,QPSK, CH342500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3766.01	-56.23	6.24	8.57	-53.90	-13.00	40.90	V
5625.01	-55.29	7.26	10.57	-51.98	-13.00	38.98	V
7508.01	-54.39	8.36	12.21	-50.54	-13.00	37.54	V
3425.01	-54.68	5.38	8.02	-52.04	-13.00	39.04	H
5143.01	-25.56	6.87	10.10	-22.33	-13.00	9.33	H
6856.01	-38.55	7.82	11.43	-34.94	-13.00	21.94	H

LTE Band 2+NR n66,QPSK, CH347500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3740.01	-56.07	6.32	8.54	-53.85	-13.00	40.85	V
5628.01	-55.72	7.26	10.57	-52.41	-13.00	39.41	V
7502.01	-54.47	8.39	12.20	-50.66	-13.00	37.66	V
3475.01	-54.31	5.47	8.14	-51.64	-13.00	38.64	H
5213.01	-28.29	6.98	10.20	-25.07	-13.00	12.07	V
6956.01	-43.28	7.96	11.55	-39.69	-13.00	26.69	H

LTE Band 2+NR n66,QPSK, CH352500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3748.01	-55.30	6.30	8.55	-53.05	-13.00	40.05	V
5667.01	-54.87	7.28	10.57	-51.58	-13.00	38.58	V
7526.01	-54.25	8.28	12.22	-50.31	-13.00	37.31	H
3525.01	-56.61	5.57	8.24	-53.94	-13.00	40.94	V
5291.01	-27.76	6.99	10.31	-24.44	-13.00	11.44	V
7061.01	-47.35	8.21	11.67	-43.89	-13.00	30.89	V

LTE Band 5+NR n66,QPSK, CH342500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1699.01	-62.07	3.60	5.14	2.15	-62.68	-13.00	49.68	H
2491.00	-54.92	4.61	6.07	2.15	-55.61	-13.00	42.61	H
3327.01	-56.32	5.30	7.78	2.15	-55.99	-13.00	42.99	V
3425.01	-53.73	5.38	8.02	0	-51.09	-13.00	38.09	H
5141.01	-25.53	6.87	10.10	0	-22.30	-13.00	9.30	V
6856.01	-45.87	7.82	11.43	0	-42.26	-13.00	29.26	H

LTE Band 5+NR n66,QPSK, CH347500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1711.01	-61.38	3.61	5.12	2.15	-62.02	-13.00	49.02	H
2540.00	-55.42	4.66	6.17	2.15	-56.06	-13.00	43.06	H
3347.01	-56.35	5.32	7.83	2.15	-55.99	-13.00	42.99	H
3475.01	-54.96	5.47	8.14	0	-52.29	-13.00	39.29	H
5217.01	-27.82	6.99	10.20	0	-24.61	-13.00	11.61	H
6953.01	-43.02	7.94	11.54	0	-39.42	-13.00	26.42	H

LTE Band 5+NR n66,QPSK, CH352500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1695.01	-61.83	3.60	5.15	2.15	-62.43	-13.00	49.43	H
2535.00	-55.76	4.66	6.16	2.15	-56.41	-13.00	43.41	H
3367.01	-56.29	5.33	7.88	2.15	-55.89	-13.00	42.89	H
3525.01	-53.67	5.57	8.24	0	-51.00	-13.00	38.00	V
5291.01	-25.76	6.99	10.31	0	-22.44	-13.00	9.44	V
7058.01	-52.62	8.22	11.67	0	-49.17	-13.00	36.17	H

LTE Band 12+NR n66,QPSK, CH342500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1397.01	-61.29	3.23	4.96	2.15	-61.71	-13.00	48.71	V
2112.00	-44.84	4.20	4.94	2.15	-46.25	-13.00	33.25	H
2853.00	-53.94	4.96	6.74	2.15	-54.31	-13.00	41.31	H
3425.01	-55.40	5.38	8.02	0	-52.76	-13.00	39.76	H
5144.01	-33.86	6.87	10.10	0	-30.63	-13.00	17.63	H
6851.01	-53.86	7.82	11.42	0	-50.26	-13.00	37.26	H

LTE Band 12+NR n66,QPSK, CH347500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1393.01	-61.44	3.23	4.94	2.15	-61.88	-13.00	48.88	V
2137.00	-40.80	4.23	5.01	2.15	-42.17	-13.00	29.17	V
2865.00	-53.77	4.96	6.76	2.15	-54.12	-13.00	41.12	H
3475.01	-51.84	5.47	8.14	0	-49.17	-13.00	36.17	V
5217.01	-28.10	6.99	10.20	0	-24.89	-13.00	11.89	H
6956.01	-49.49	7.96	11.55	0	-45.90	-13.00	32.90	H

LTE Band 12+NR n66,QPSK, CH352500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1394.01	-62.15	3.23	4.95	2.15	-62.58	-13.00	49.58	H
2131.00	-57.95	4.22	4.99	2.15	-59.33	-13.00	46.33	V
2831.00	-54.81	4.95	6.70	2.15	-55.21	-13.00	42.21	H
3525.01	-52.45	5.57	8.24	0	-49.78	-13.00	36.78	V
5291.01	-25.84	6.99	10.31	0	-22.52	-13.00	9.52	V
7060.01	-52.17	8.21	11.67	0	-48.71	-13.00	35.71	V

LTE Band 12+NR n66,QPSK, CH342500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1546.01	-61.58	3.46	5.42	2.15	-61.77	-13.00	48.77	H
2347.00	-56.78	4.45	5.64	2.15	-57.74	-13.00	44.74	V
3138.01	-54.41	5.39	7.33	2.15	-54.62	-13.00	41.62	V
3425.01	-54.34	5.38	8.02	0	-51.70	-13.00	38.70	H
5140.01	-25.36	6.87	10.10	0	-22.13	-13.00	9.13	V
6855.01	-45.86	7.82	11.43	0	-42.25	-13.00	29.25	V

LTE Band 12+NR n66,QPSK, CH347500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1561.01	-62.31	3.47	5.39	2.15	-62.54	-13.00	49.54	H
2348.00	-56.41	4.45	5.64	2.15	-57.37	-13.00	44.37	V
3133.01	-54.91	5.39	7.32	2.15	-55.13	-13.00	42.13	V
3475.01	-55.06	5.47	8.14	0	-52.39	-13.00	39.39	V
5214.01	-28.14	6.98	10.20	0	-24.92	-13.00	11.92	H
6950.01	-49.51	7.91	11.54	0	-45.88	-13.00	32.88	H

LTE Band 12+NR n66,QPSK, CH352500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1558.01	-62.43	3.47	5.40	2.15	-62.65	-13.00	49.65	V
2362.00	-56.61	4.47	5.69	2.15	-57.54	-13.00	44.54	V
3140.01	-54.92	5.38	7.34	2.15	-55.11	-13.00	42.11	V
3525.01	-53.45	5.57	8.24	0	-50.78	-13.00	37.78	V
5290.01	-25.28	6.99	10.31	0	-21.96	-13.00	8.96	V
7050.01	-51.95	8.23	11.66	0	-48.52	-13.00	35.52	H

LTE Band 2+NR n71,BPSK, CH133100

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3738.02	-55.48	6.33	8.53	0.00	-53.28	-13.00	40.28	V
5611.01	-50.19	7.25	10.58	0.00	-46.86	-13.00	33.86	H
7487.51	-52.52	8.36	12.19	0.00	-48.69	-13.00	35.69	V
1341.01	-59.50	3.16	4.67	2	-60.14	-13.00	47.14	H
1983.51	-55.69	4.01	4.63	2	-57.22	-13.00	44.22	V
2648.00	-52.31	4.74	6.37	2	-52.83	-13.00	39.83	V

LTE Band 2+NR n71,BPSK, CH136100

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3737.00	-53.51	4.83	6.53	0.00	-51.81	-13.00	38.81	H
5610.51	-27.17	7.25	10.58	0.00	-23.84	-13.00	10.84	H
7572.01	-54.17	8.09	12.26	0.00	-50.00	-13.00	37.00	H
1356.01	-59.83	3.18	4.75	2.15	-60	-13.00	47.41	H
2056.00	-56.32	4.15	4.77	2.15	-58	-13.00	44.85	H
2724.50	-53.29	4.81	6.50	2.15	-54	-13.00	40.75	H

LTE Band 2+NR n71,BPSK, CH139100

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3753.02	-55.71	6.28	8.55	0.00	-53.44	-13.00	40.44	H
5610.51	-27.07	7.25	10.58	0.00	-23.74	-13.00	10.74	H
7576.01	-52.99	8.07	12.26	0.00	-48.80	-13.00	35.80	H
1397.51	-59.72	3.23	4.97	2.15	-60	-13.00	47.13	H
2108.00	-57.46	4.20	4.92	2.15	-59	-13.00	45.89	H
2790.50	-53.83	4.90	6.62	2.15	-54	-13.00	41.26	V

LTE Band 66+NR n71,BPSK, CH133100

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3528.52	-54.68	5.60	8.24	0.00	-52.04	-13.00	39.04	H
5235.51	-25.61	7.00	10.23	0.00	-22.38	-13.00	9.38	H
6981.01	-45.16	8.15	11.58	0.00	-41.73	-13.00	28.73	H
1372.51	-61.40	3.20	4.84	2.15	-62	-13.00	48.91	V
2143.00	-45.90	4.24	5.03	2.15	-47	-13.00	34.26	H
2783.50	-53.53	4.89	6.61	2.15	-54	-13.00	40.96	V

LTE Band 66+NR n71,BPSK, CH136100

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3568.52	-54.06	6.01	8.30	0.00	-51.77	-13.00	38.77	H
5235.51	-29.06	7.00	10.23	0.00	-25.83	-13.00	12.83	H
6981.01	-47.34	8.15	11.58	0.00	-43.91	-13.00	30.91	V
1393.01	-60.44	3.23	4.94	2.15	-61	-13.00	47.88	V
2143.00	-46.21	4.24	5.03	2.15	-48	-13.00	34.57	V
2758.50	-53.85	4.86	6.57	2.15	-54	-13.00	41.29	H

LTE Band 66+NR n71,BPSK, CH139100

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3606.02	-53.96	6.40	8.35	0.00	-52.01	-13.00	39.01	V
5236.01	-33.05	7.00	10.23	0.00	-29.82	-13.00	16.82	H
7026.01	-51.38	8.26	11.63	0.00	-48.01	-13.00	35.01	V
1401.01	-60.30	3.24	4.99	2.15	-61	-13.00	47.70	V
2144.00	-45.11	4.24	5.03	2.15	-46	-13.00	33.48	H
2783.00	-52.70	4.89	6.61	2.15	-53	-13.00	40.13	H

LTE Band 66+NR n41,BPSK, CH501204

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3499.01	-56.62	5.52	8.20	-53.94	-25.00	28.94	V
5253.01	-55.76	7.00	10.25	-52.51	-25.00	27.51	H
6986.01	-52.92	8.19	11.58	-49.53	-25.00	24.53	H
5014.01	-42.01	6.58	9.92	-38.67	-25	13.67	V
7524.01	-31.28	8.29	12.22	-27.35	-25	2.35	V
10016.01	-51.86	9.23	12.91	-48.18	-25	23.18	H

LTE Band 66+NR n41,BPSK, CH518598

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3498.01	-56.76	5.52	8.20	-54.08	-13.00	41.08	H
5236.01	-42.69	7.00	10.23	-39.46	-13.00	26.46	V
6950.01	-53.51	7.91	11.54	-49.88	-13.00	36.88	V
5166.01	-50.40	6.91	10.13	-47.18	-25	22.18	H
7757.01	-54.16	8.35	12.41	-50.10	-25	25.10	V
10371.01	-50.55	9.76	13.05	-47.26	-25	22.26	V

LTE Band 66+NR n41,BPSK, CH535998

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3512.01	-56.66	5.54	8.22	-53.98	-13.00	40.98	H
5239.01	-40.65	7.00	10.23	-37.42	-13.00	24.42	V
6956.01	-54.33	7.96	11.55	-50.74	-13.00	37.74	V
5362.01	-38.30	6.91	10.41	-34.80	-25	9.80	V
8061.01	-32.46	8.32	12.65	-28.13	-25	3.13	V
10700.00	-51.38	9.31	13.14	-47.55	-25	22.55	V

LTE Band 2+NR n41,BPSK, CH501204

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3764.01	-56.55	6.25	8.57	-54.23	-25.00	29.23	V
5655.01	-55.28	7.27	10.57	-51.98	-25.00	26.98	V
7537.01	-29.20	8.24	12.23	-25.21	-25.00	0.21	V
5017.01	-40.88	6.57	9.92	-37.53	-25	12.53	H
7537.01	-29.20	8.24	12.23	-25.21	-25	0.21	V
10037.01	-51.30	9.28	12.91	-47.67	-25	22.67	V

LTE Band 2+NR n41,BPSK, CH518598

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3758.01	-55.77	6.27	8.56	-53.48	-25.00	28.48	V
5647.01	-54.29	7.27	10.57	-50.99	-25.00	25.99	H
7495.01	-54.43	8.38	12.19	-50.62	-25.00	25.62	V
5188.01	-38.24	6.94	10.16	-35.02	-25	10.02	V
7789.01	-31.66	8.30	12.43	-27.53	-25	2.53	H
10380.01	-51.21	9.77	13.05	-47.93	-25	22.93	V

LTE Band 2+NR n41,BPSK, CH535998

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3769.01	-55.65	6.23	8.58	-53.30	-25.00	28.30	V
5623.01	-54.62	7.26	10.58	-51.30	-25.00	26.30	V
7549.01	-54.65	8.19	12.24	-50.60	-25.00	25.60	V
5366.01	-48.31	6.90	10.41	-44.80	-25	19.80	V
8052.01	-30.84	8.32	12.64	-26.52	-25	1.52	V
10691.00	-51.12	9.30	13.14	-47.28	-25	22.28	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 5.16 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 UXM.

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 UXM, 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 UXM 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 increments from -30°C to +50°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

LTE Band 13+NR n2

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1850.240	1908.640	8.00	0.0043
50					
40					
30					
10					
0					
-10					
-20					
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.240	1908.640	9.80	0.0052
4.4				7.20	0.0038

LTE Band 66+NR n5

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	824.240	847.640	5.70	0.0068
50					
40					
30					
10					
0					
-10					
-20					
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.240	847.640	2.30	0.0027
4.4				4.40	0.0053

LTE Band 66+NR n25

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1850.240	1913.640		
50				-2.20	0.0012
40				5.50	0.0029
30				0.00	0.0000
10				2.90	0.0015
0				-0.90	0.0005
-10				-3.90	0.0021
-20				1.20	0.0006
-30				6.30	0.0033

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.240	1913.640	5.00	0.0027
4.4				-2.00	0.0011

LTE Band 66+NR n41

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	2495.360	2689.240		
50				-6.70	0.0026
40				-12.30	0.0047
30				-0.30	0.0001
10				-8.30	0.0032
0				-15.30	0.0059
-10				-10.90	0.0042
-20				-20.30	0.0078
-30				-7.40	0.0029

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2495.360	2689.240	-19.40	0.0075
4.4				2.30	0.0009

LTE Band 5+NR n66

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1710.240	1778.640		
50				-19.50	0.0112
40				-25.90	0.0148
30				-29.00	0.0166
10				-22.10	0.0127
0				-24.70	0.0142
-10				-19.50	0.0112
-20				-25.40	0.0146
-30				-25.30	0.0145

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.240	1778.640	-24.90	0.0143
4.4				-25.10	0.0144

LTE Band 66+NR n71

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	663.280	696.640		
50				-1.20	0.0018
40				-1.00	0.0015
30				-0.60	0.0009
10				-2.50	0.0037
0				-3.00	0.0044
-10				2.90	0.0043
-20				-1.70	0.0025
-30				-0.10	0.0001

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	663.280	696.640	-3.70	0.0054
4.4				-2.00	0.0029

LTE Band 66+NR n77H
Frequency Error vs Voltage

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	3700.240	3978.480		
50				-12.80	0.0033
40				13.60	0.0035
30				-14.00	0.0036
10				-1.00	0.0003
0				-6.50	0.0017
-10				-23.10	0.0060
-20				0.10	0.0000
-30				8.80	0.0023

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3700.240	3978.480	-6.70	0.0017
4.4				-16.20	0.0042

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.

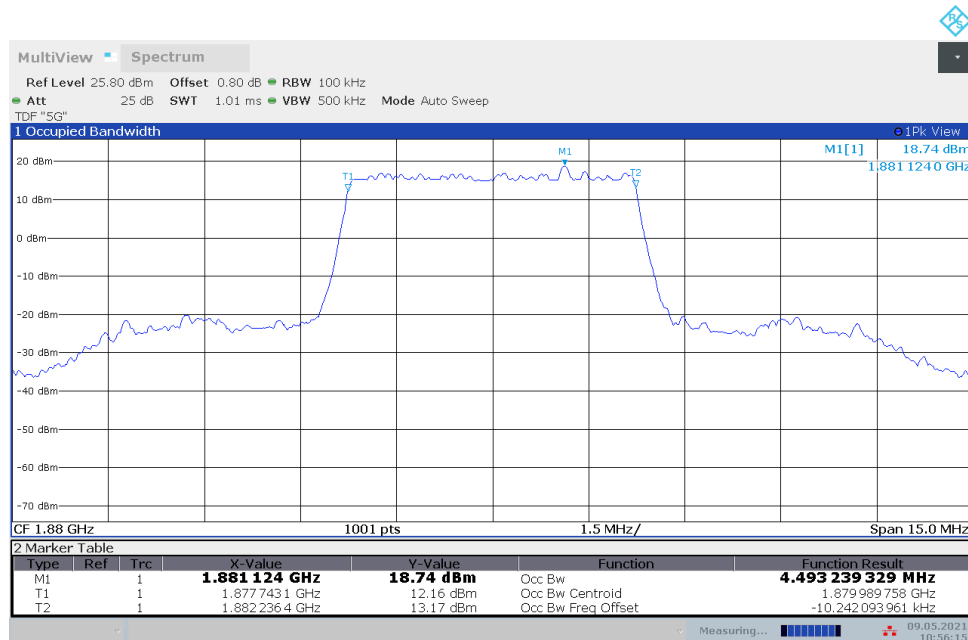
The measurement method is from ANSI C63.26:

- 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 $\geq 3 \times \text{RBW}$.
- 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.

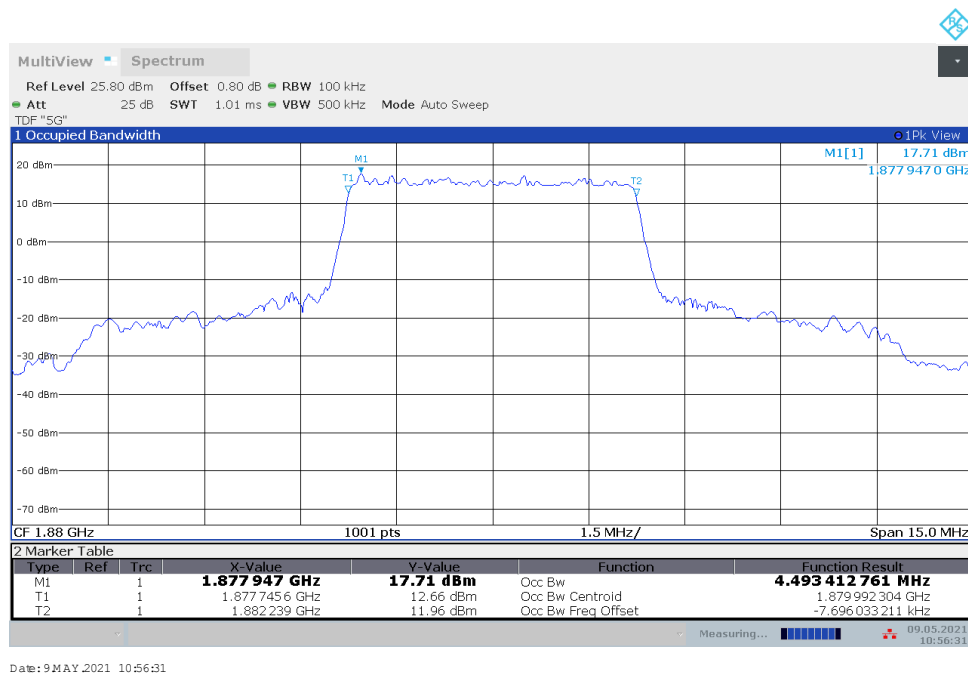
LTE Band 13+NR n2
n2,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	4.493	4.493

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



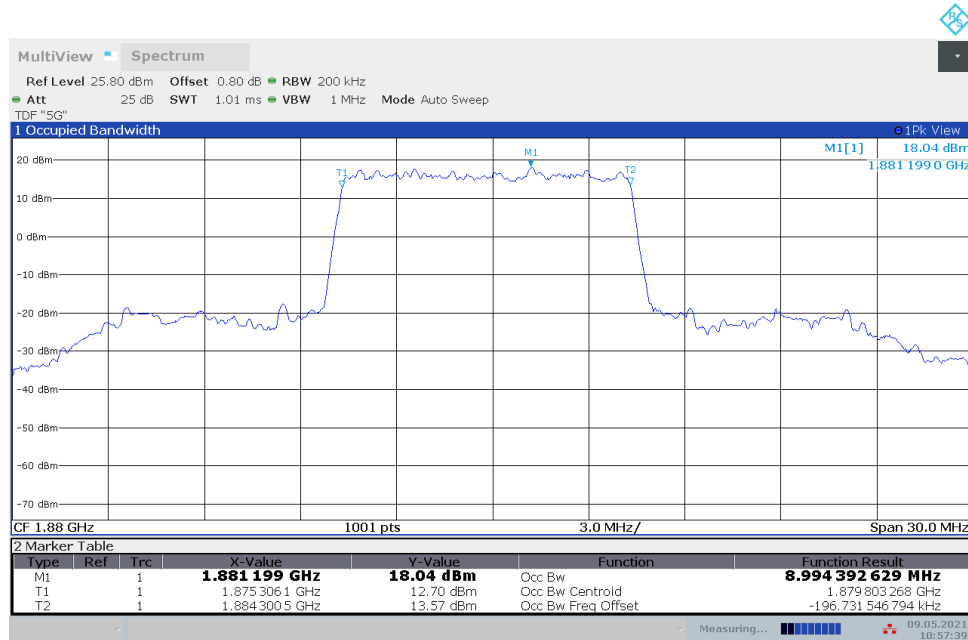
n2, 5MHz Bandwidth,DFT-s-QPSK (99% BW)



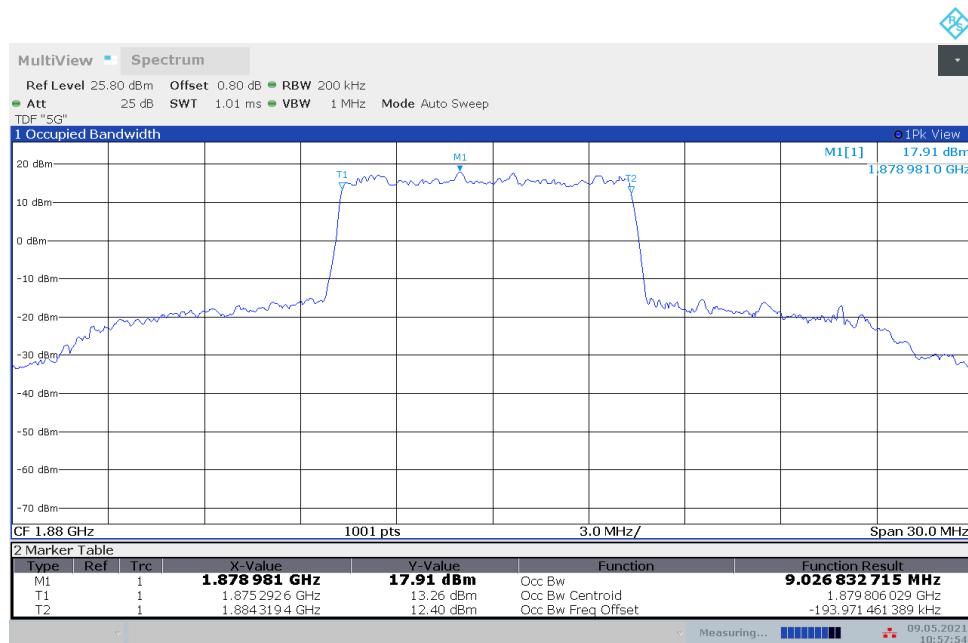
n2,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	8.994	9.027

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



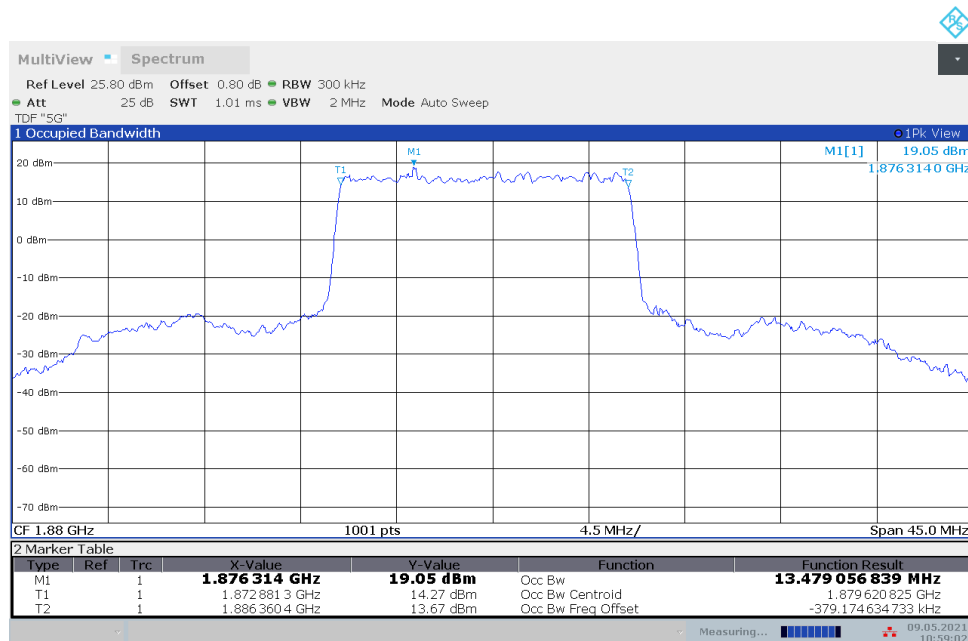
n2, 10MHz Bandwidth,DFT-s-QPSK (99% BW)



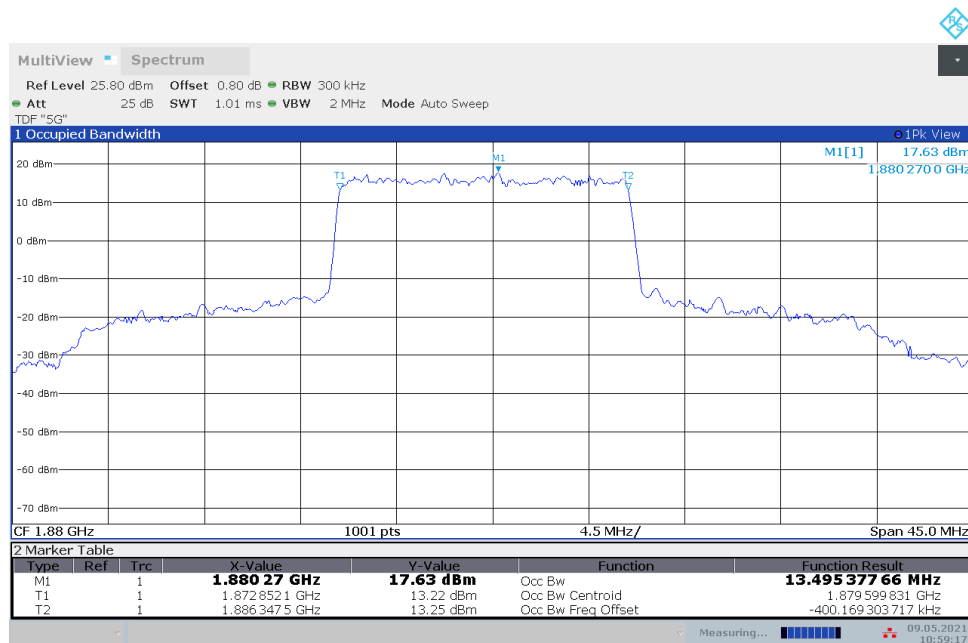
n2,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	13.479	13.495

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



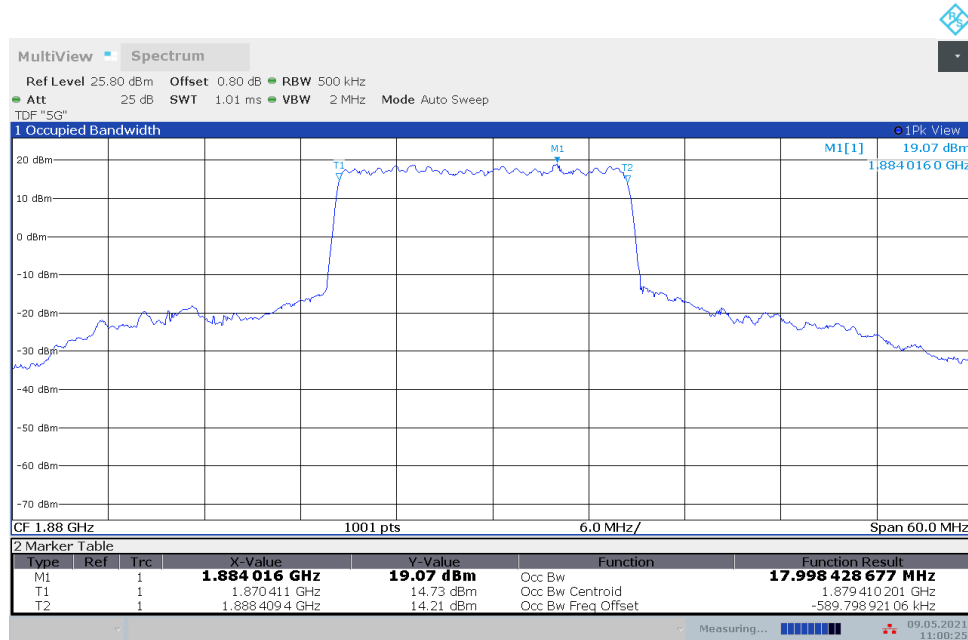
n2, 15MHz Bandwidth,DFT-s-QPSK (99% BW)



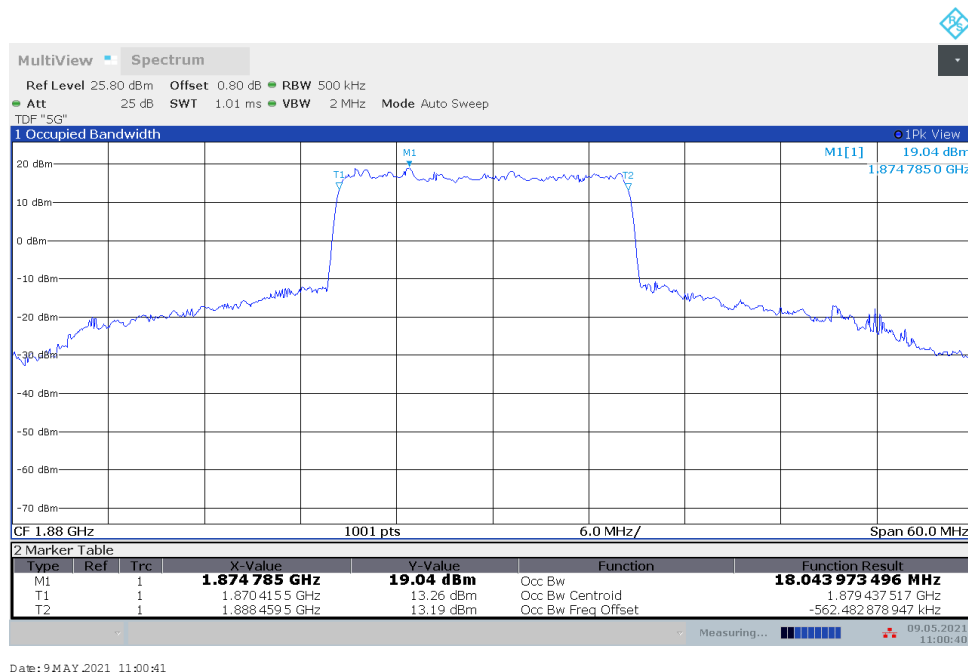
n2,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	17.998	18.044

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



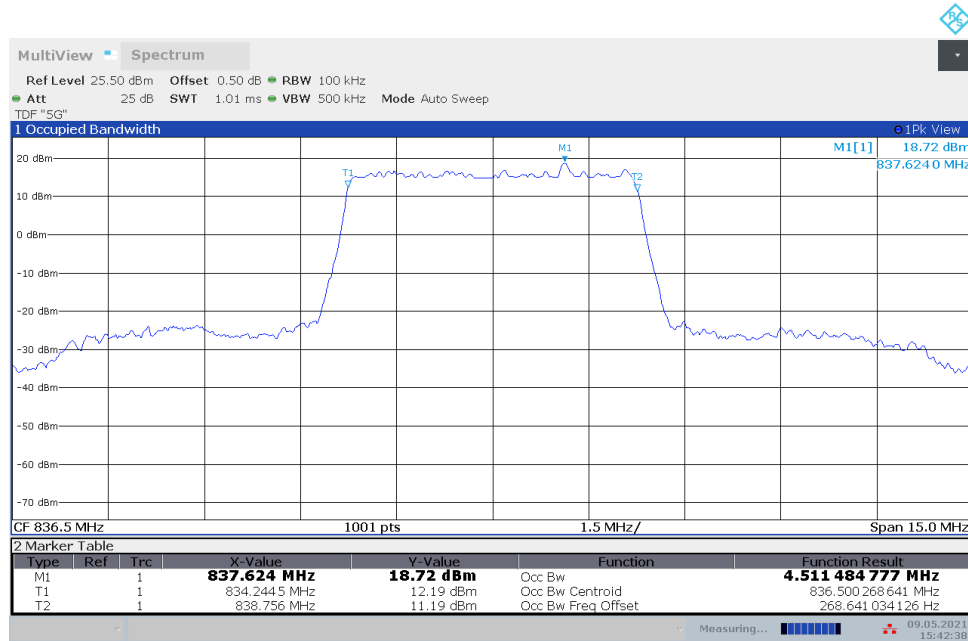
n2, 20MHz Bandwidth,DFT-s-QPSK (99% BW)



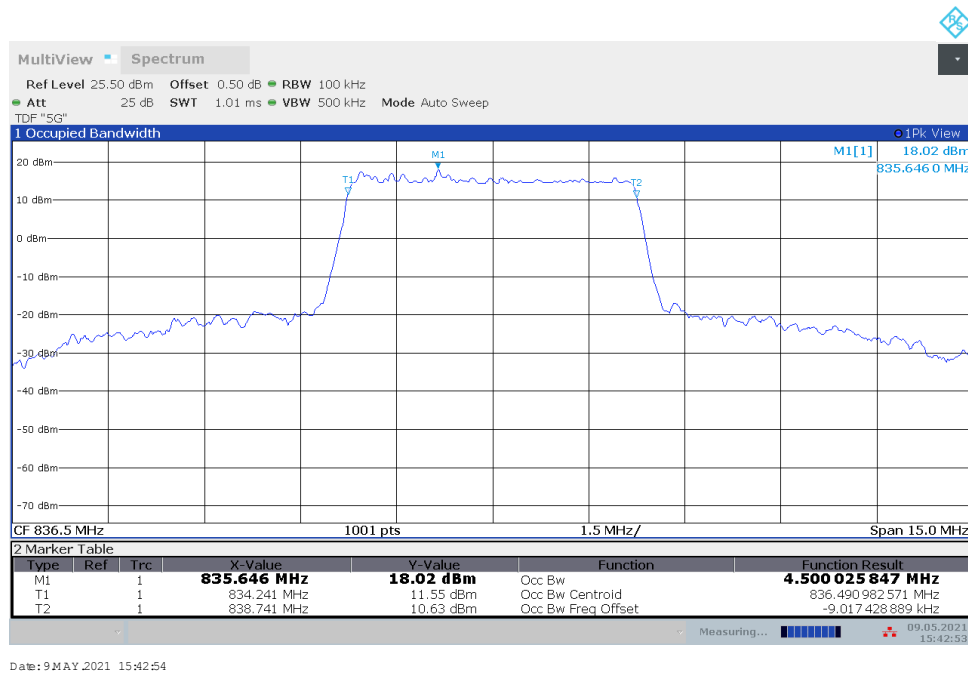
LTE Band 66+NR n5
n5,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	4.511	4.500

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



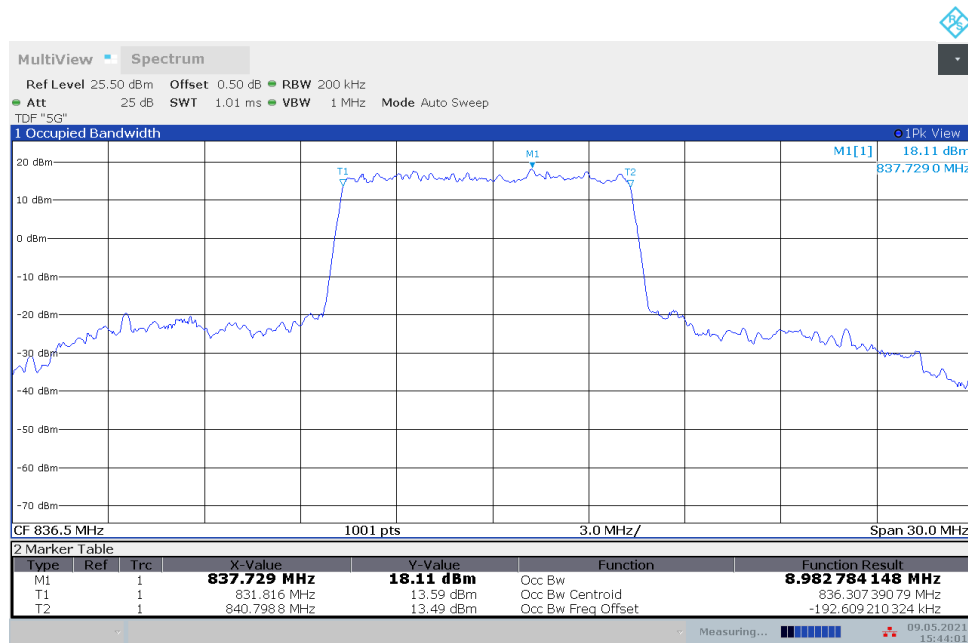
n5, 5MHz Bandwidth,DFT-s-QPSK (99% BW)



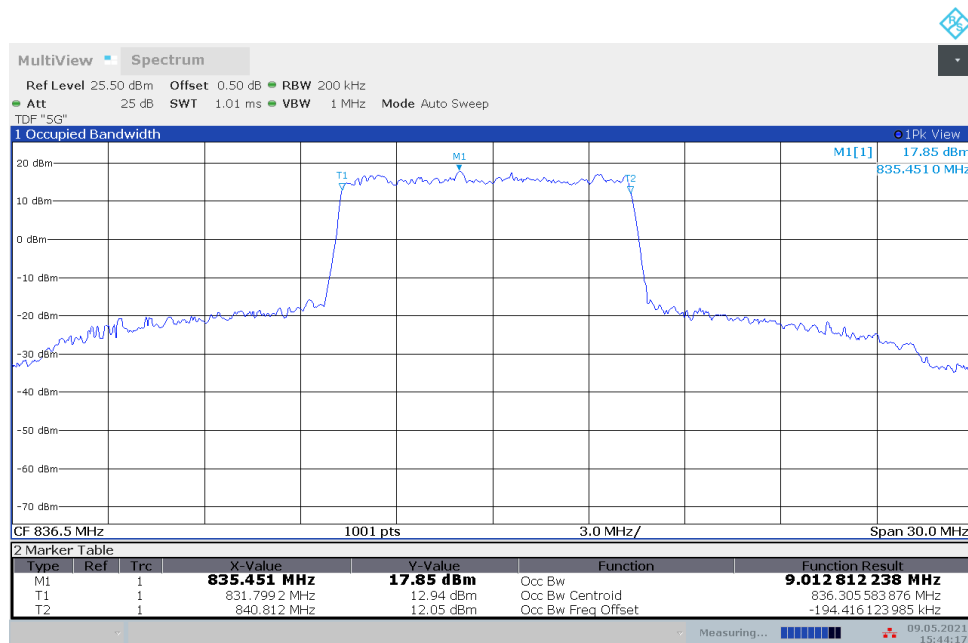
n5,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	8.983	9.013

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



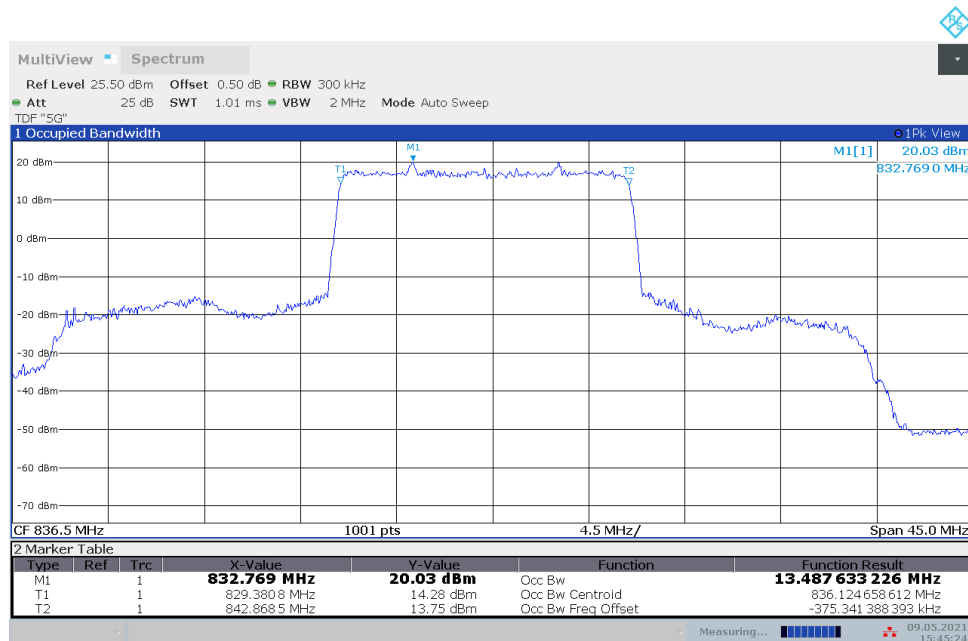
n5, 10MHz Bandwidth,DFT-s-QPSK (99% BW)



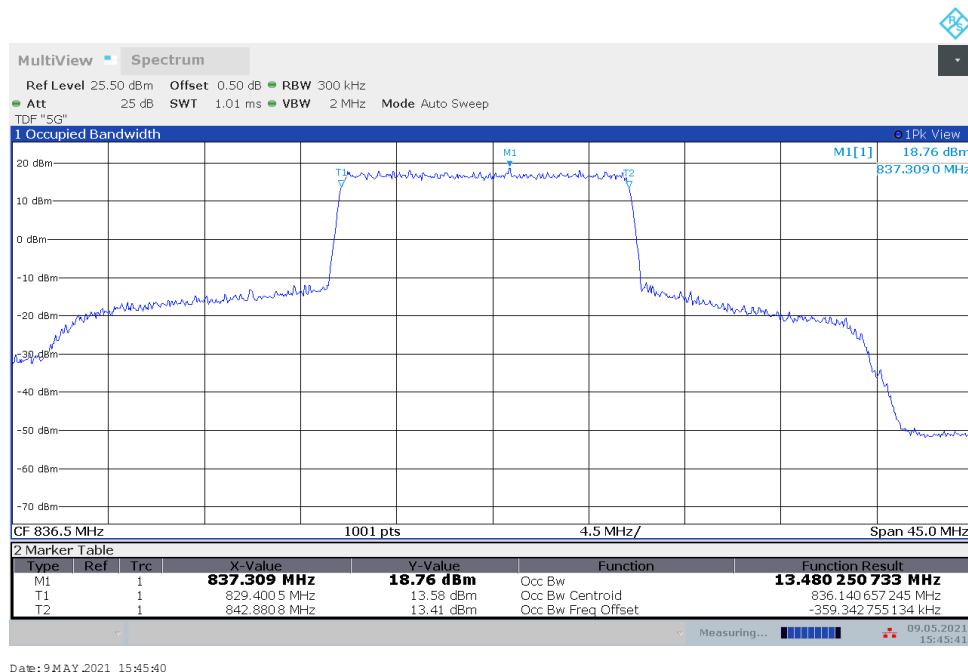
n5,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	13.488	13.480

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



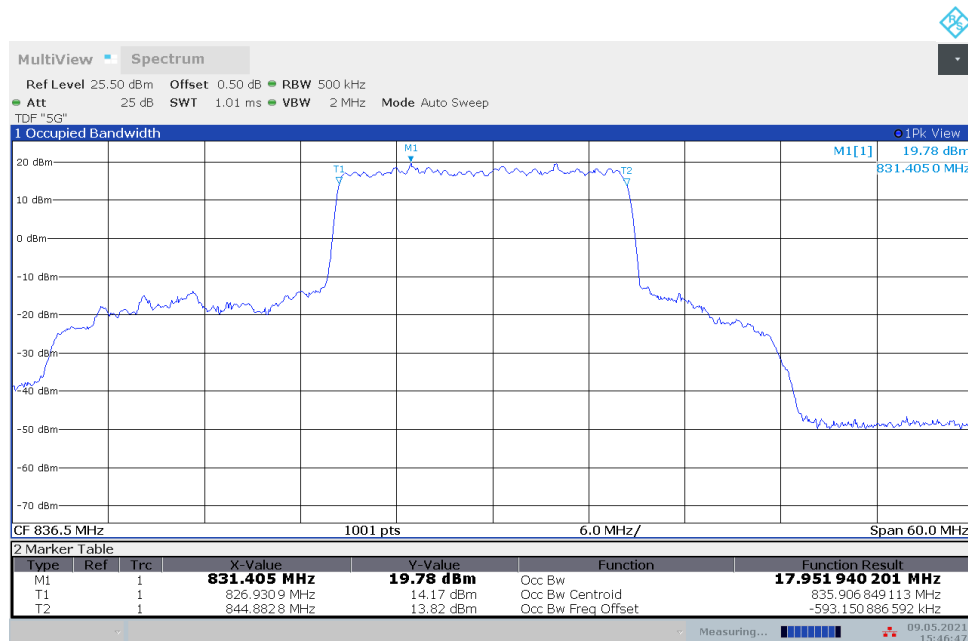
n5, 15MHz Bandwidth,DFT-s-QPSK (99% BW)



n5,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	17.952	18.002

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



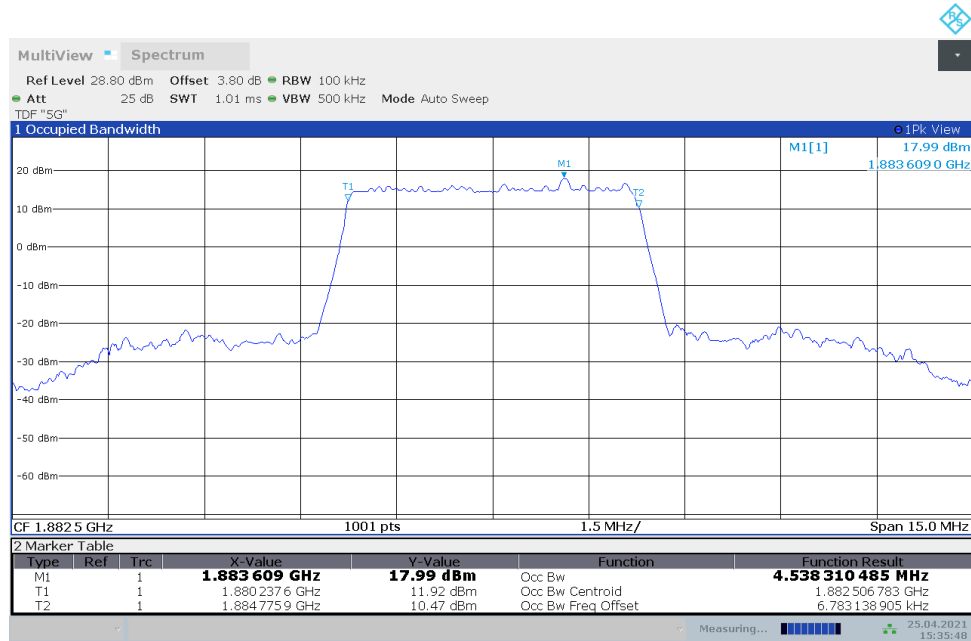
n5, 20MHz Bandwidth,DFT-s-QPSK (99% BW)



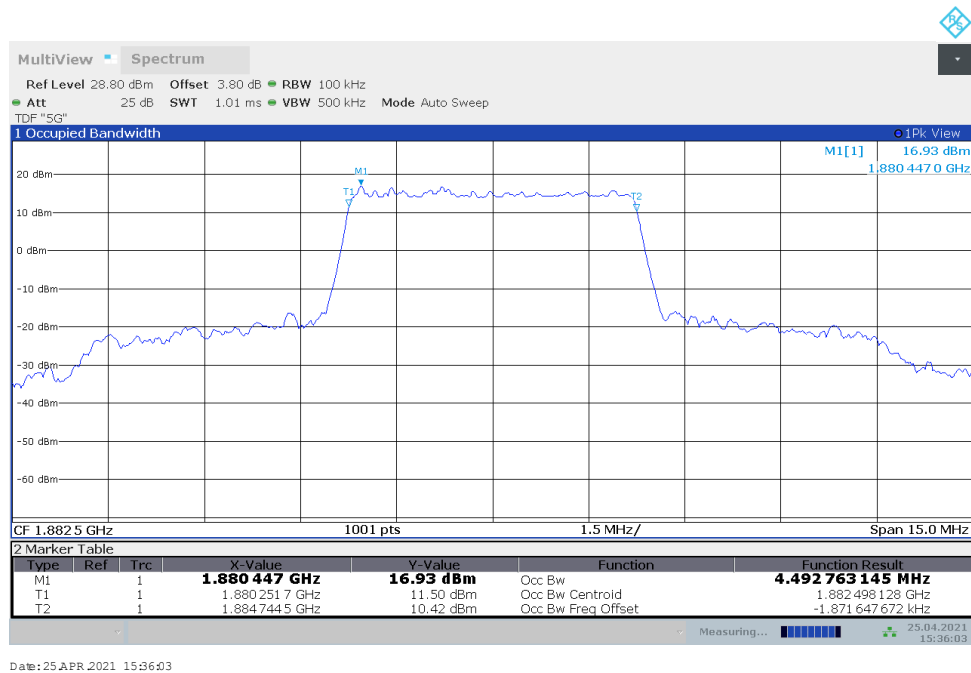
LTE Band 66+NR n25
n25,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	4.538	4.493

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



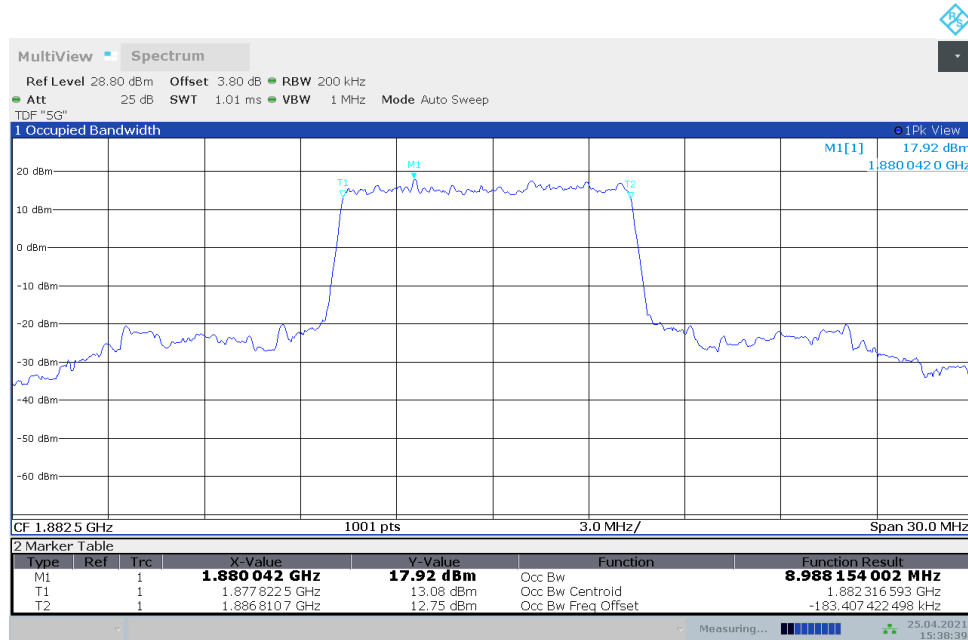
n25, 5MHz Bandwidth,DFT-s-QPSK (99% BW)



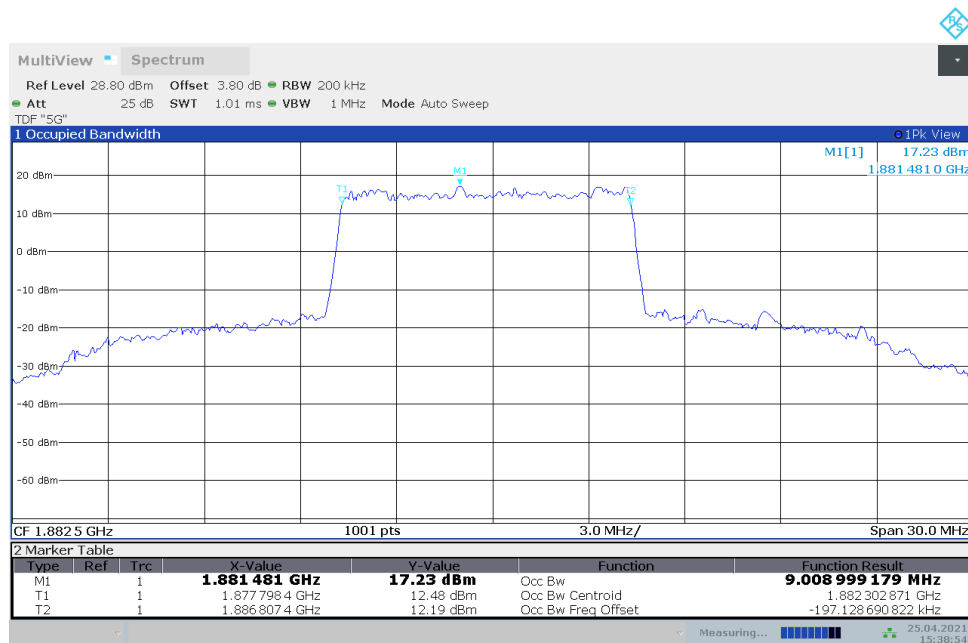
n25,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	8.988	9.009

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



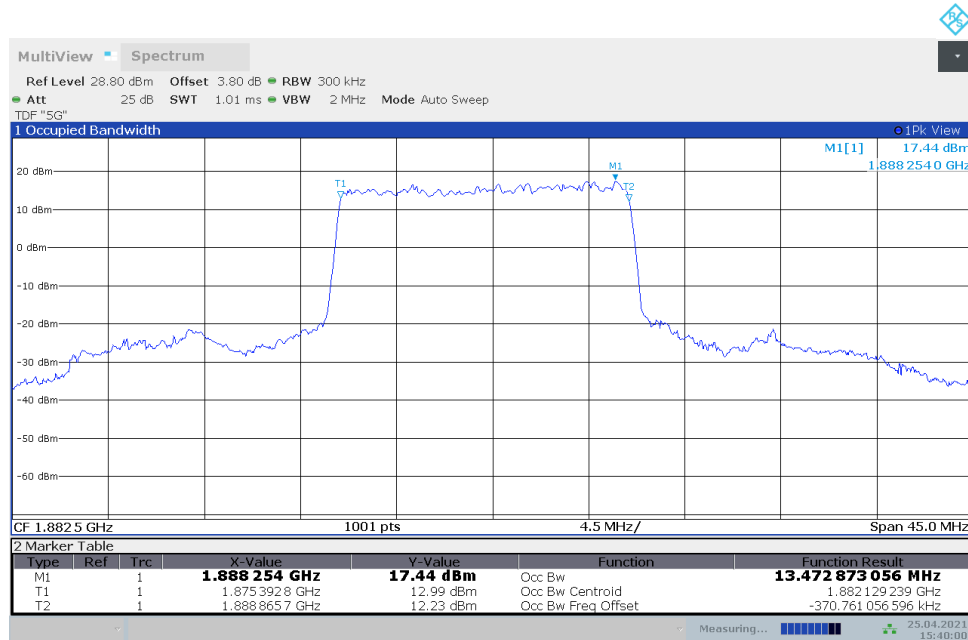
n25, 10MHz Bandwidth,DFT-s-QPSK (99% BW)



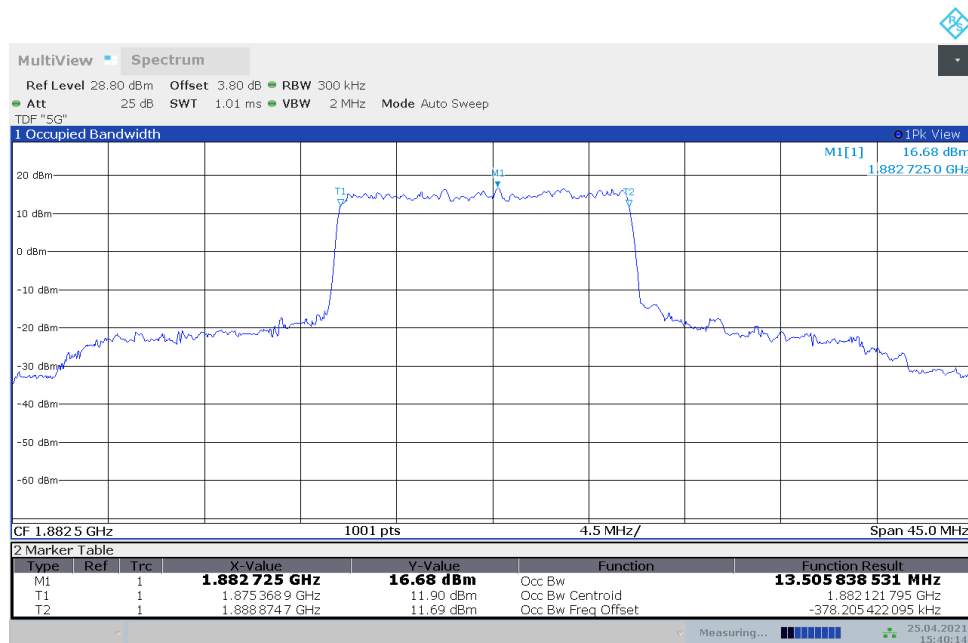
n25,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	13.473	13.506

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



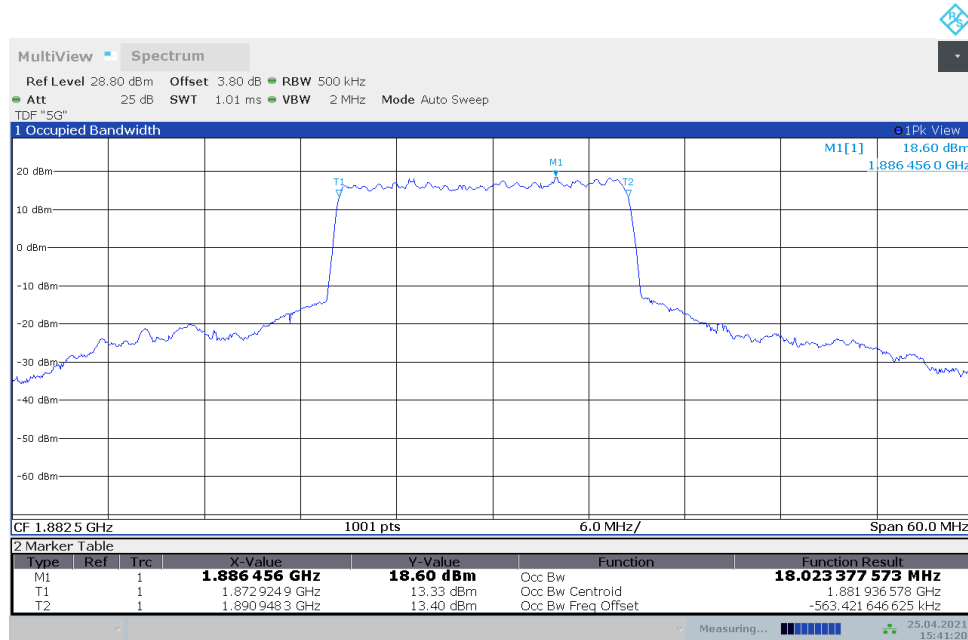
n25, 15MHz Bandwidth,DFT-s-QPSK (99% BW)



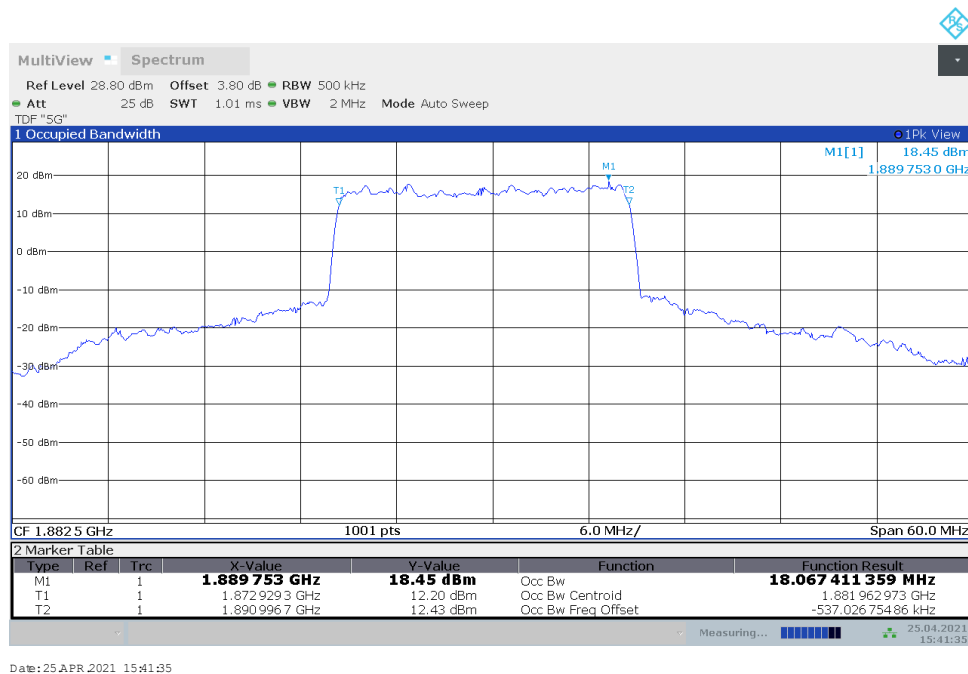
n25,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	18.023	18.067

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



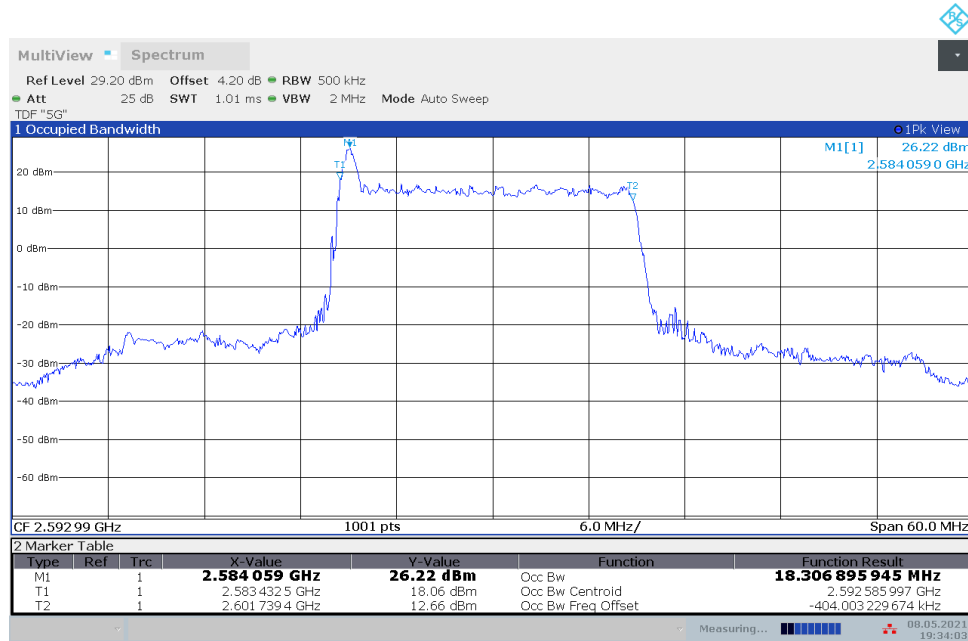
n25, 20MHz Bandwidth,DFT-s-QPSK (99% BW)



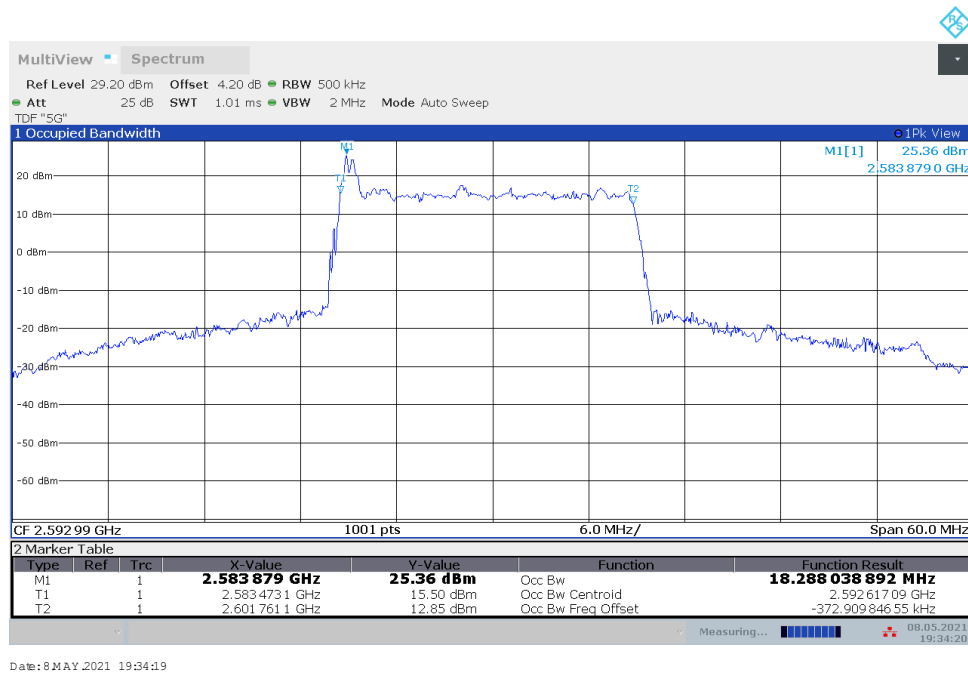
LTE Band 66+NR n41
n41,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	18.307	18.288

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



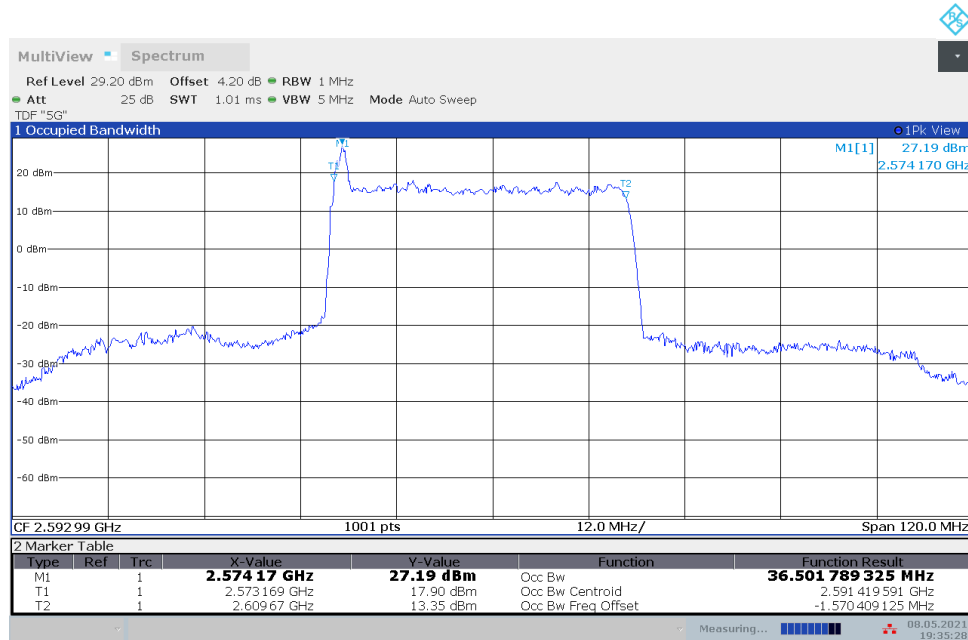
n41, 20MHz Bandwidth,DFT-s-QPSK (99% BW)



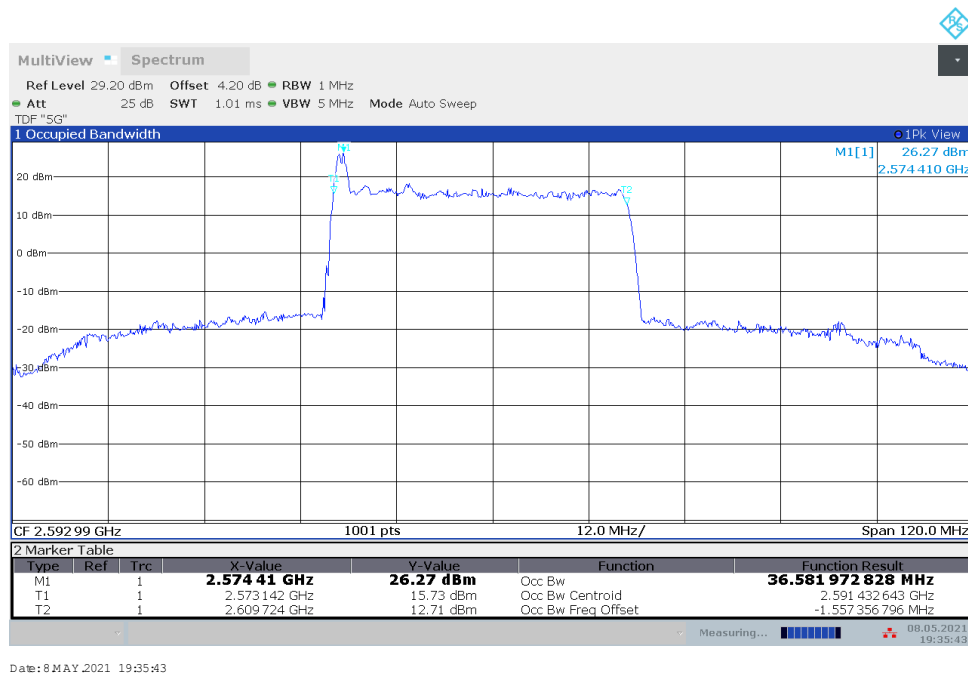
n41,40MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	16QAM
2592.99	36.502	36.582

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



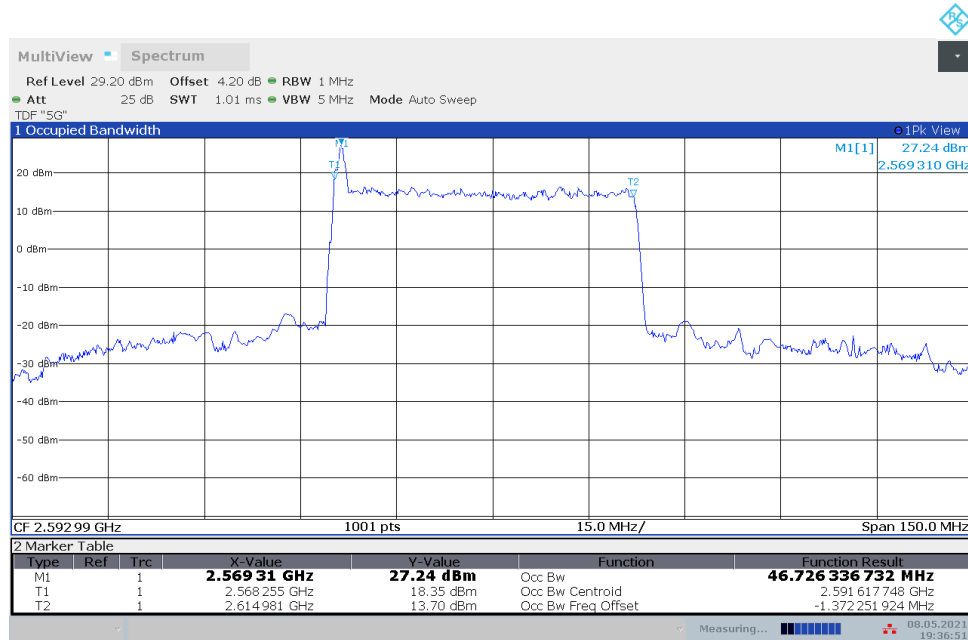
n41, 40MHz Bandwidth,DFT-s-QPSK (99% BW)



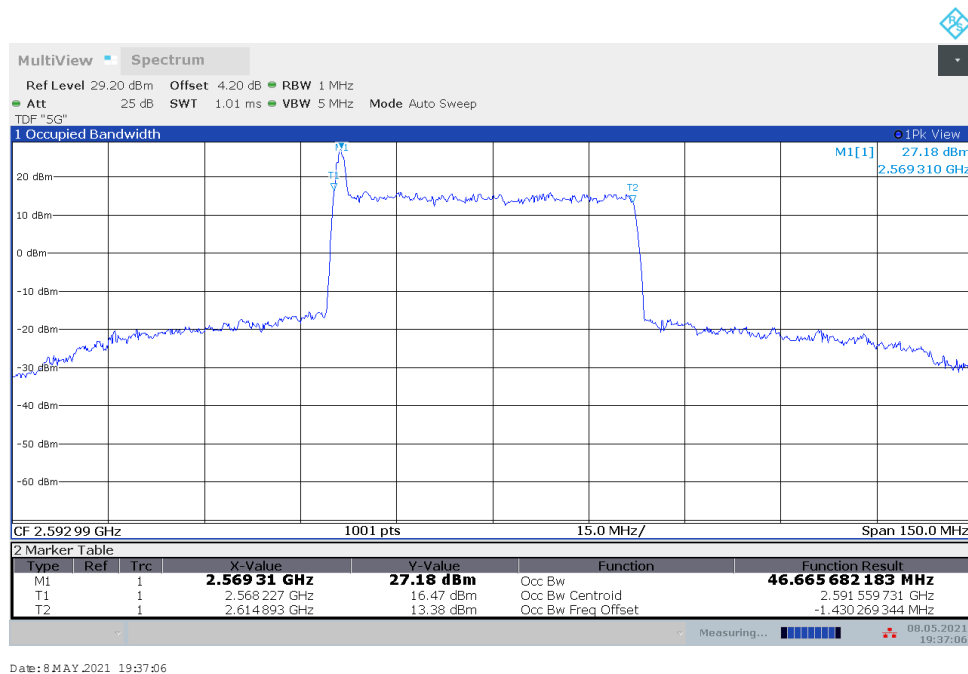
n41,50MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	46.726	46.666

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



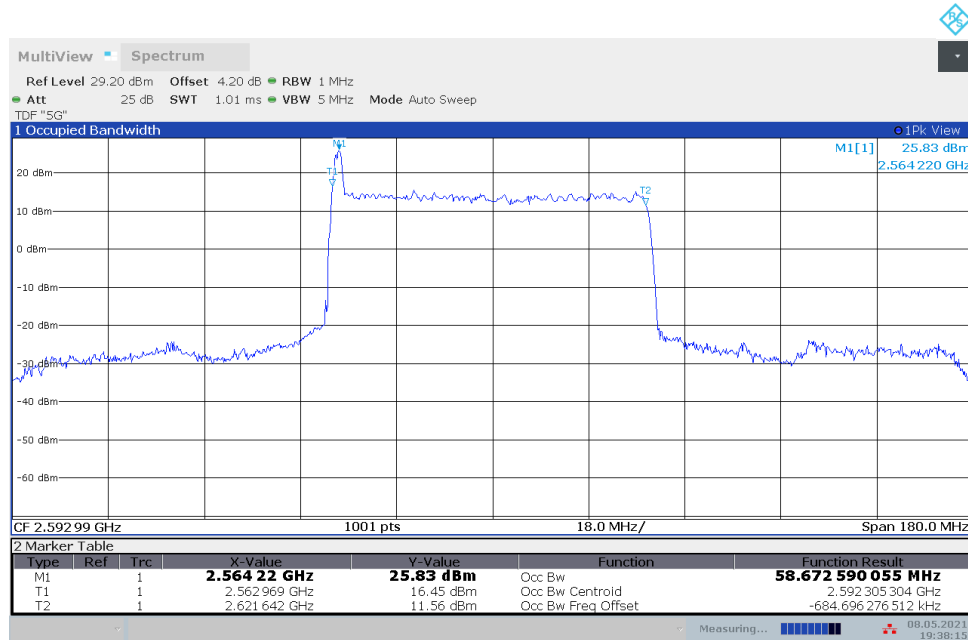
n41, 50MHz Bandwidth,DFT-s-QPSK (99% BW)



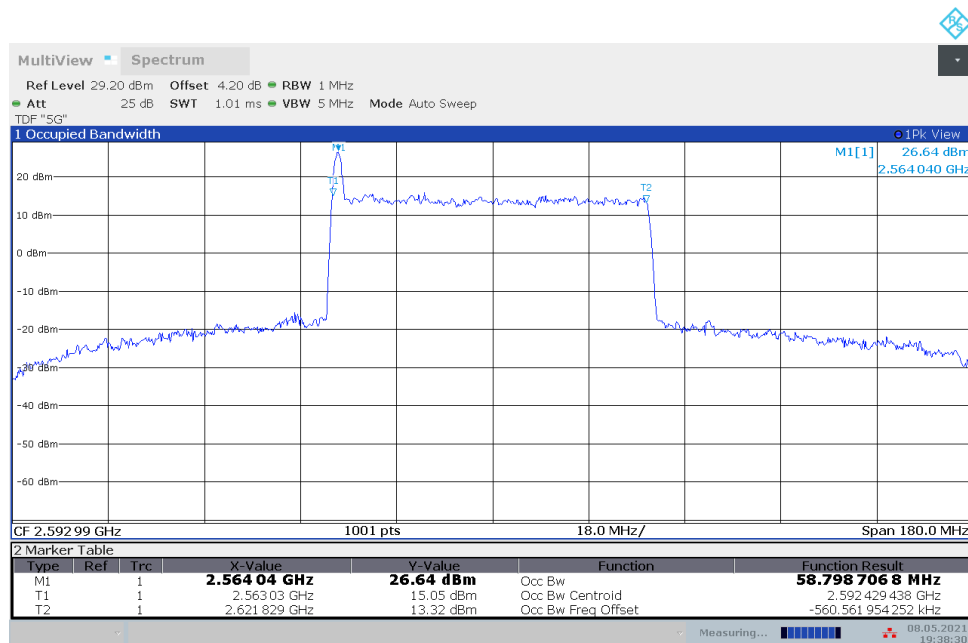
n41,60MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	58.673	58.799

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



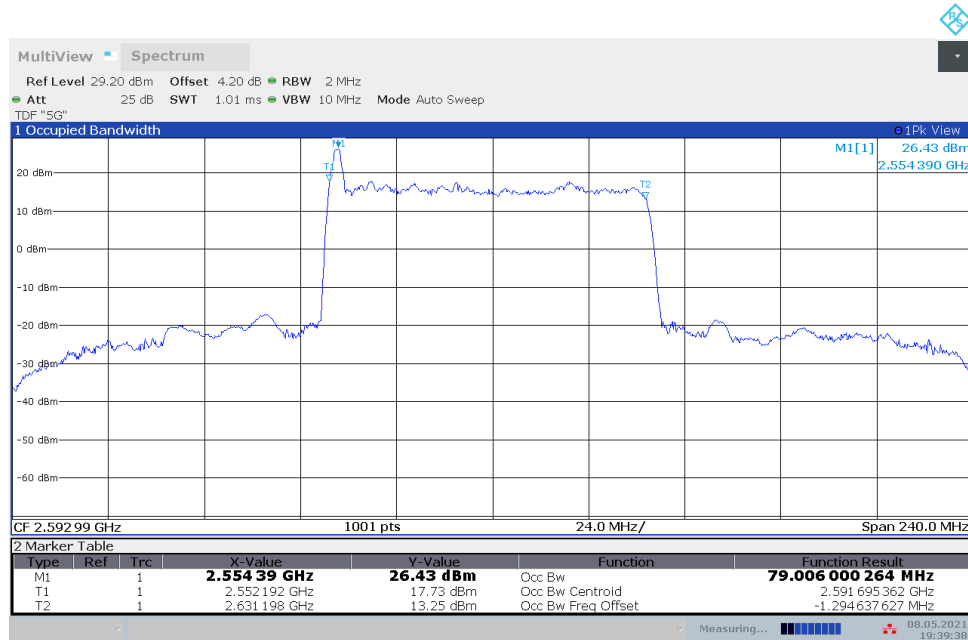
n41, 60MHz Bandwidth,DFT-s-QPSK (99% BW)



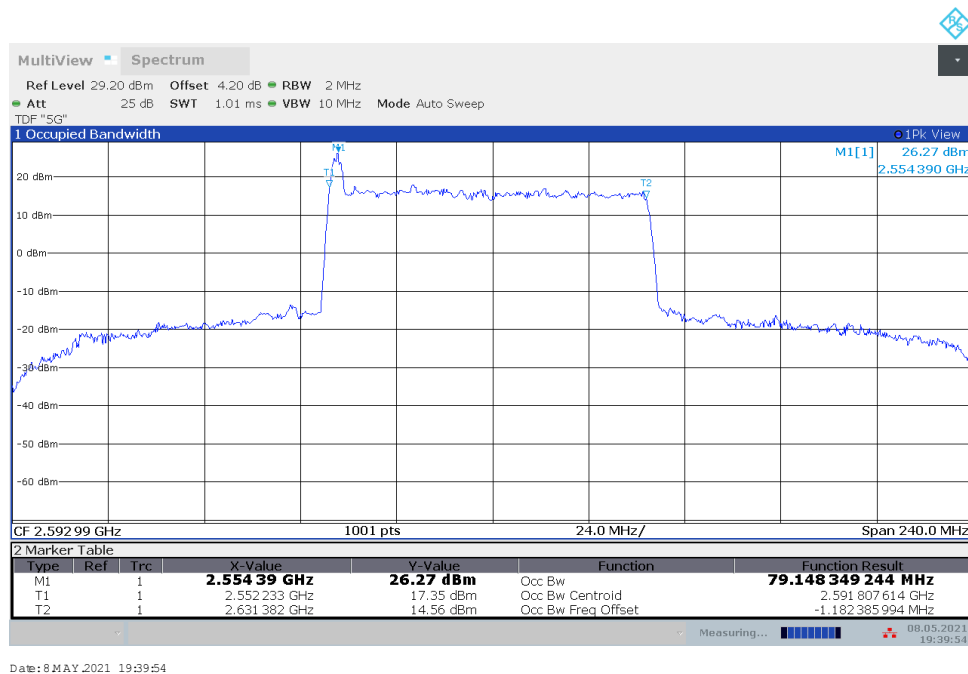
n41,80MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	79.006	79.148

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



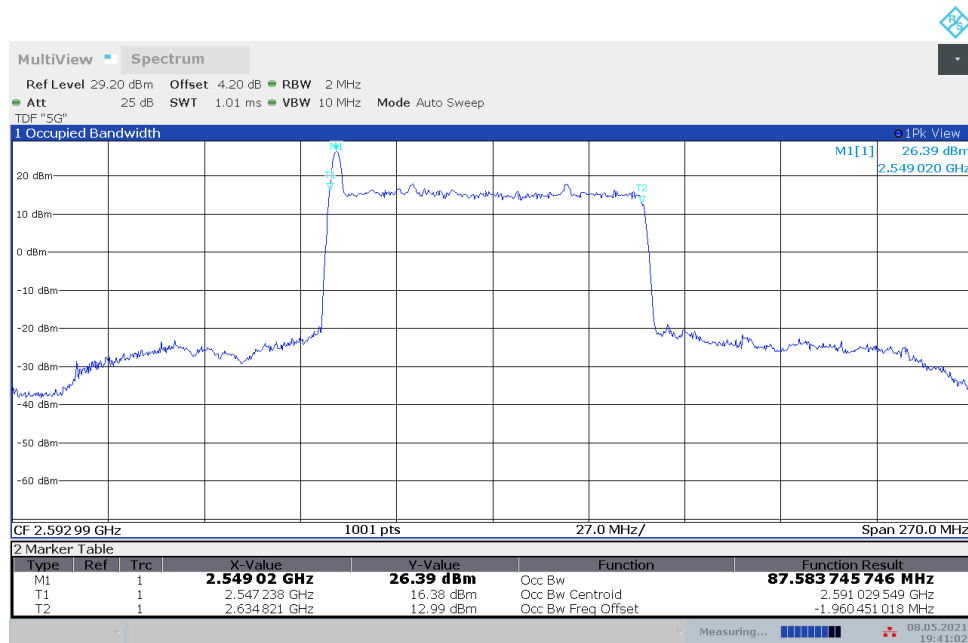
n41, 80MHz Bandwidth,DFT-s-QPSK (99% BW)



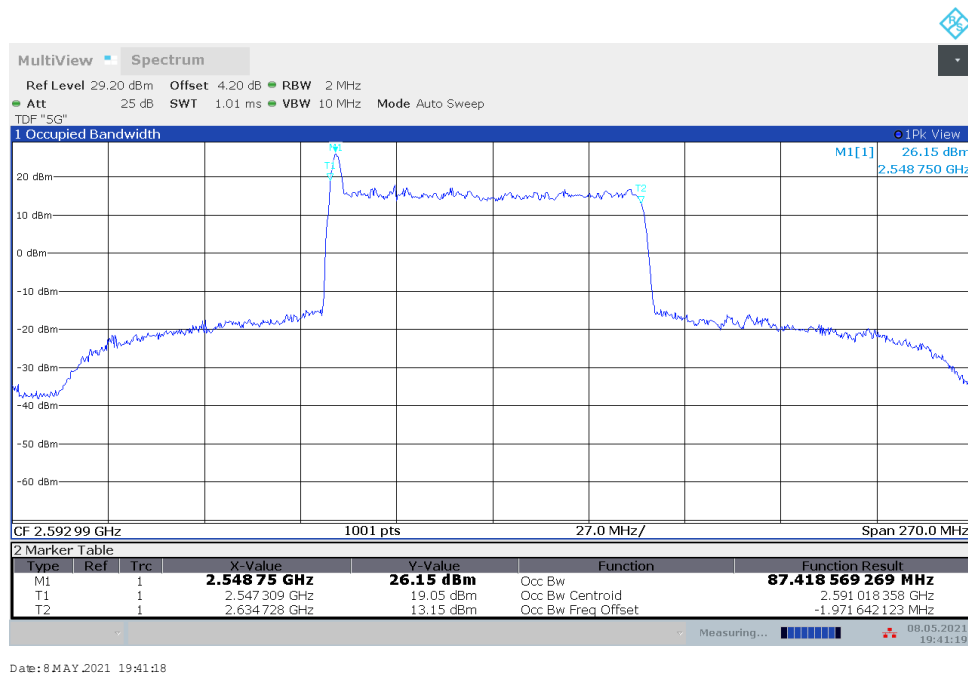
n41,90MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	87.584	87.419

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



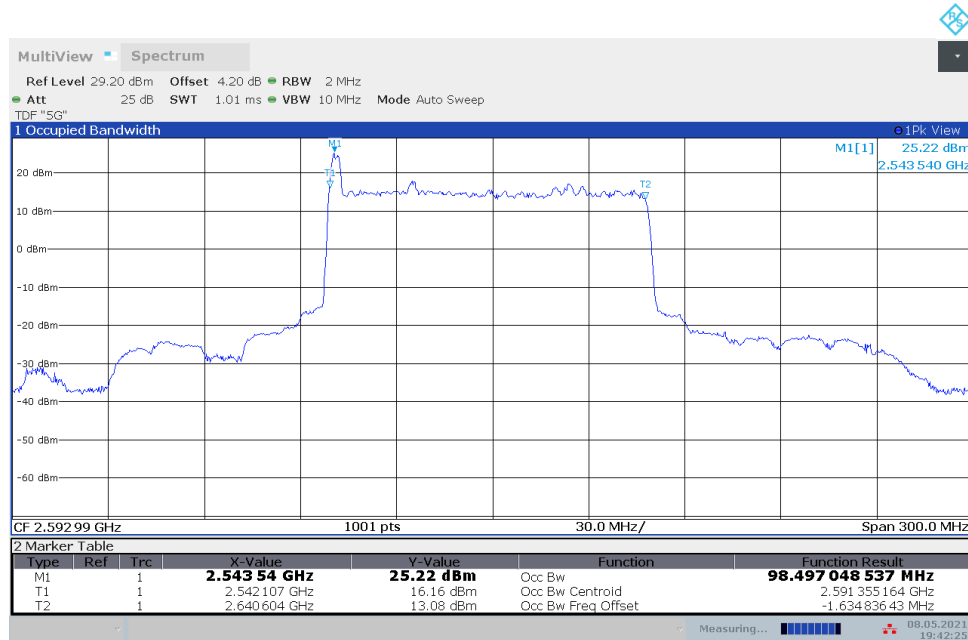
n41, 90MHz Bandwidth,DFT-s-QPSK (99% BW)



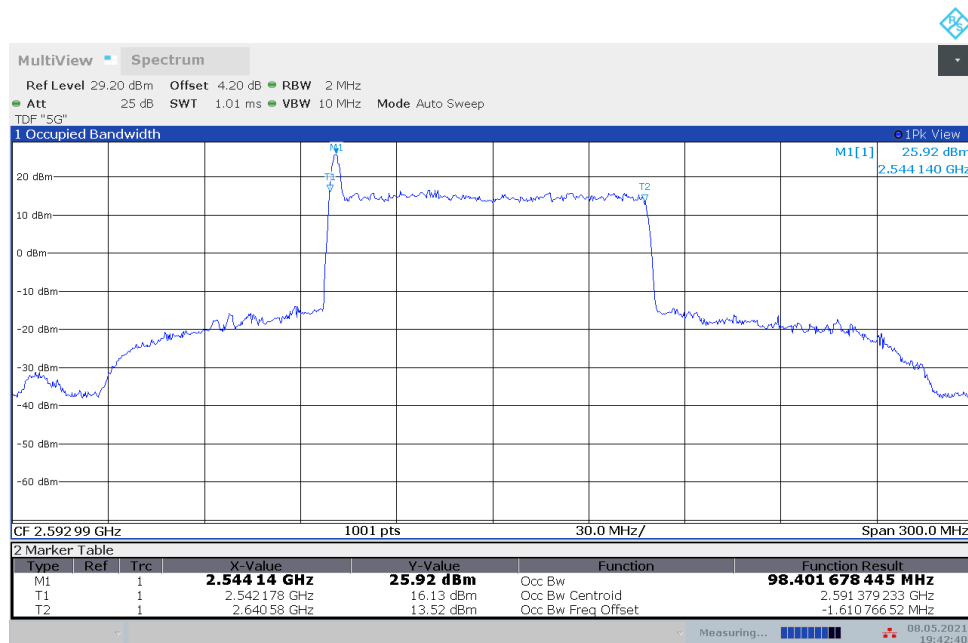
n41,100MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	16QAM
2592.99	98.497	98.402

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



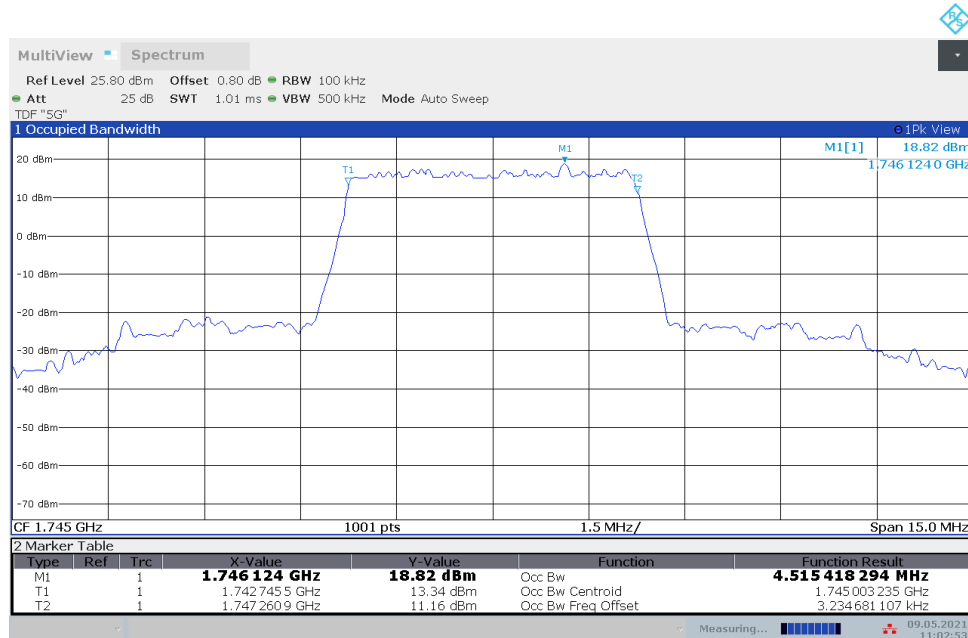
n41, 100MHz Bandwidth,DFT-s-QPSK (99% BW)



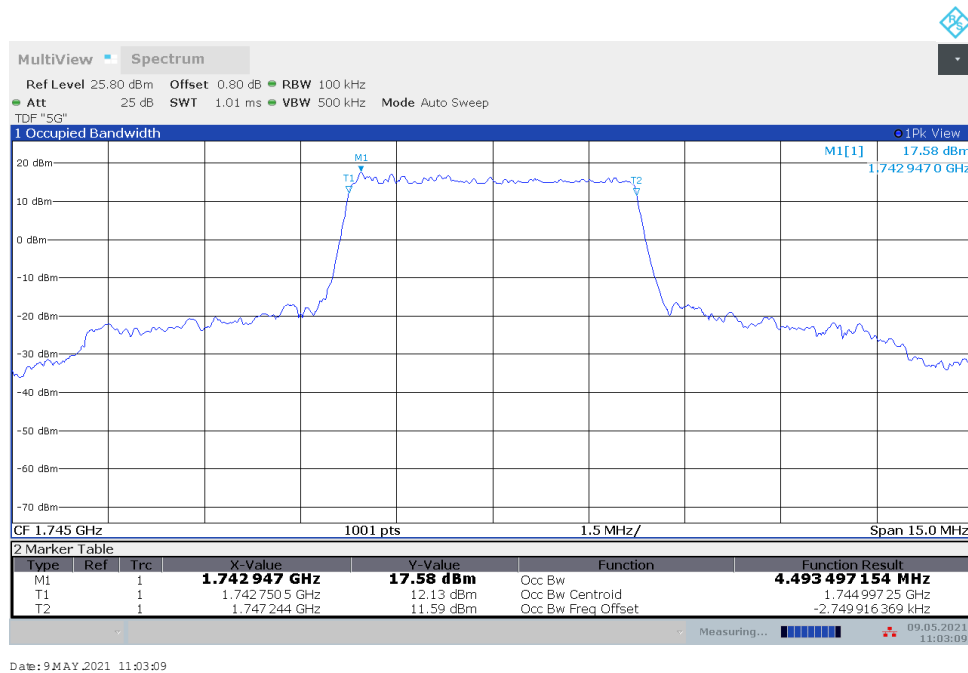
LTE Band 5+NR n66
n66,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	4.515	4.493

n66, 5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



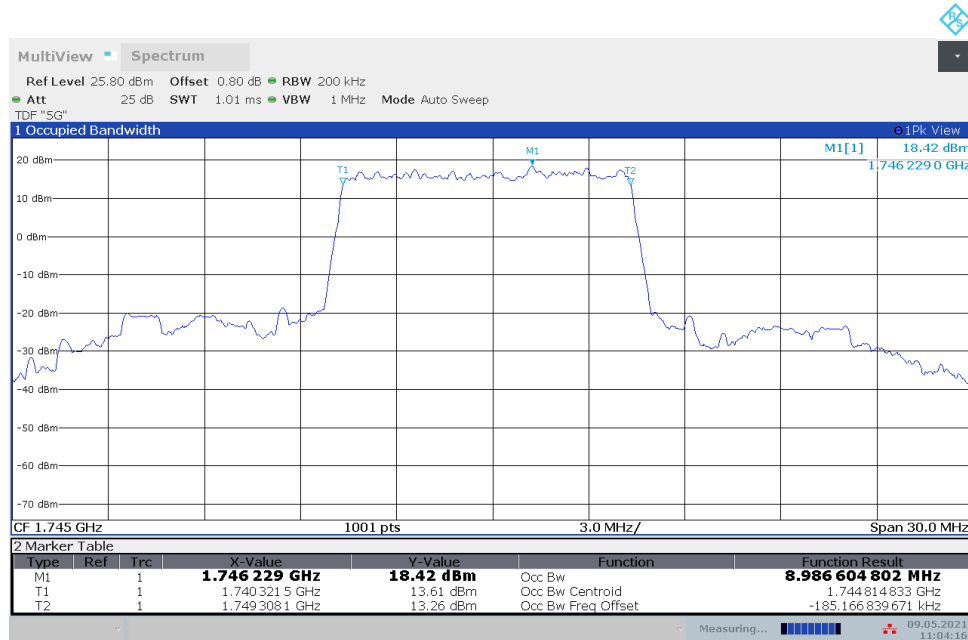
n66, 5MHz Bandwidth,DFT-s-QPSK (99% BW)



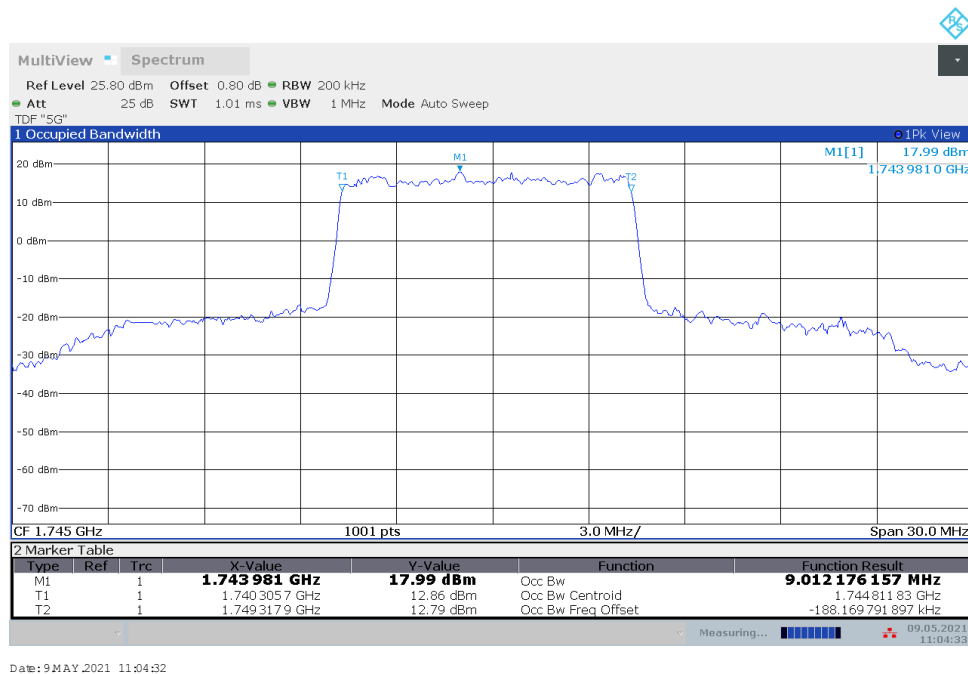
n66,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	8.987	9.012

n66, 10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



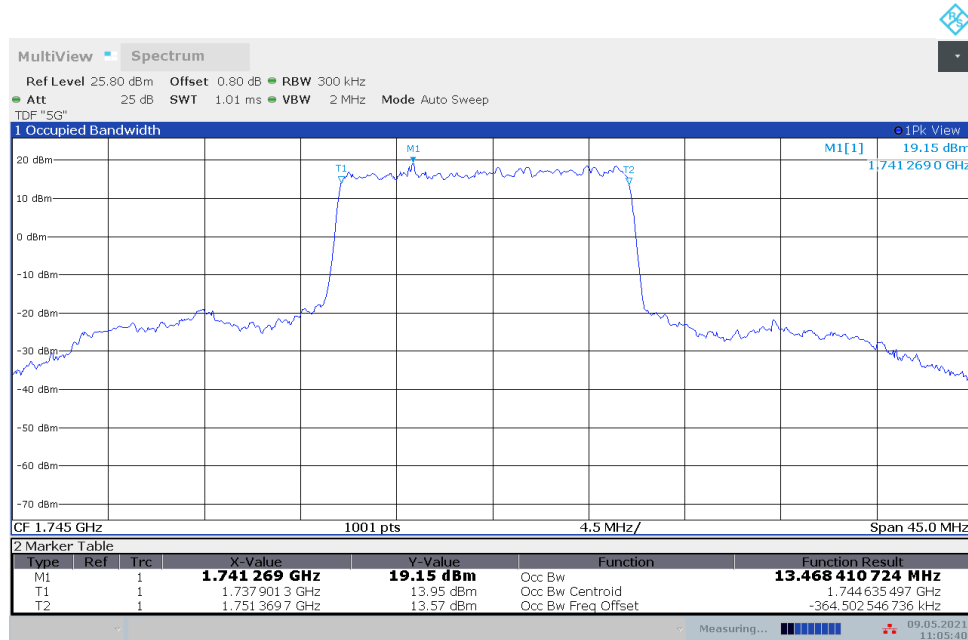
n66, 10MHz Bandwidth,DFT-s-QPSK (99% BW)



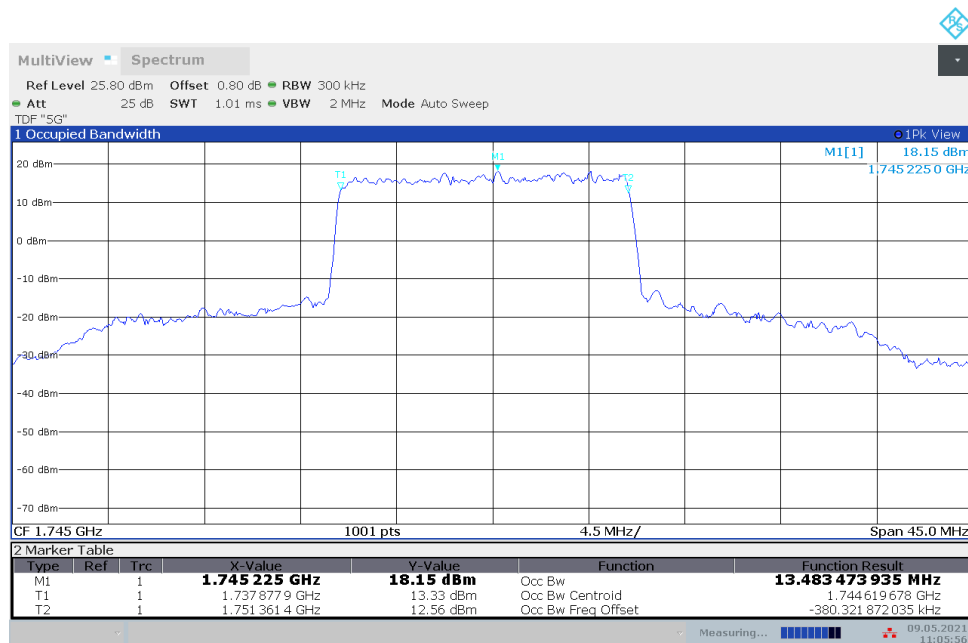
n66,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	13.468	13.483

n66, 15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



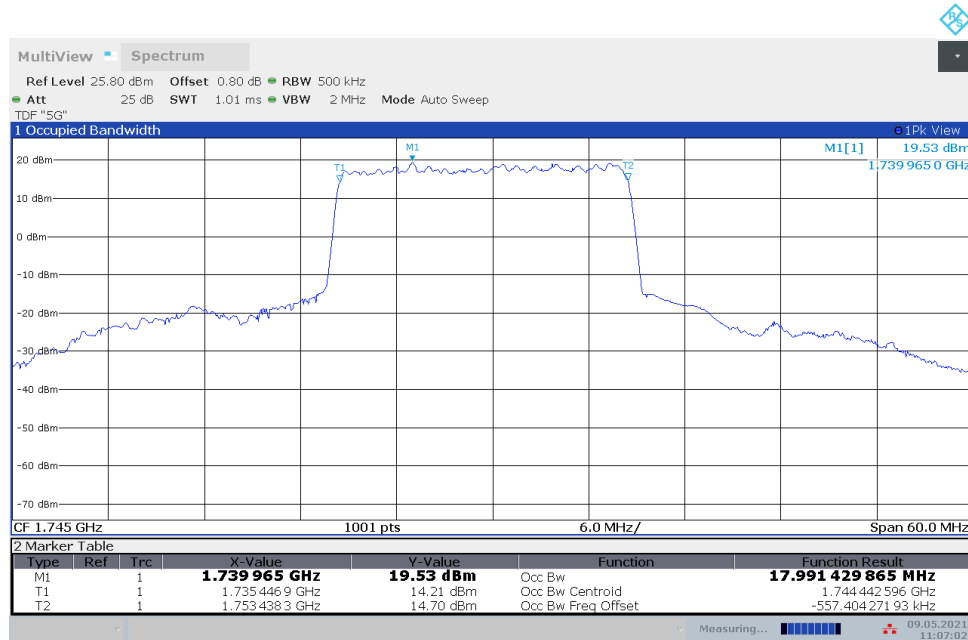
n66, 15MHz Bandwidth,DFT-s-QPSK (99% BW)



n66,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	17.991	18.005

n66, 20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



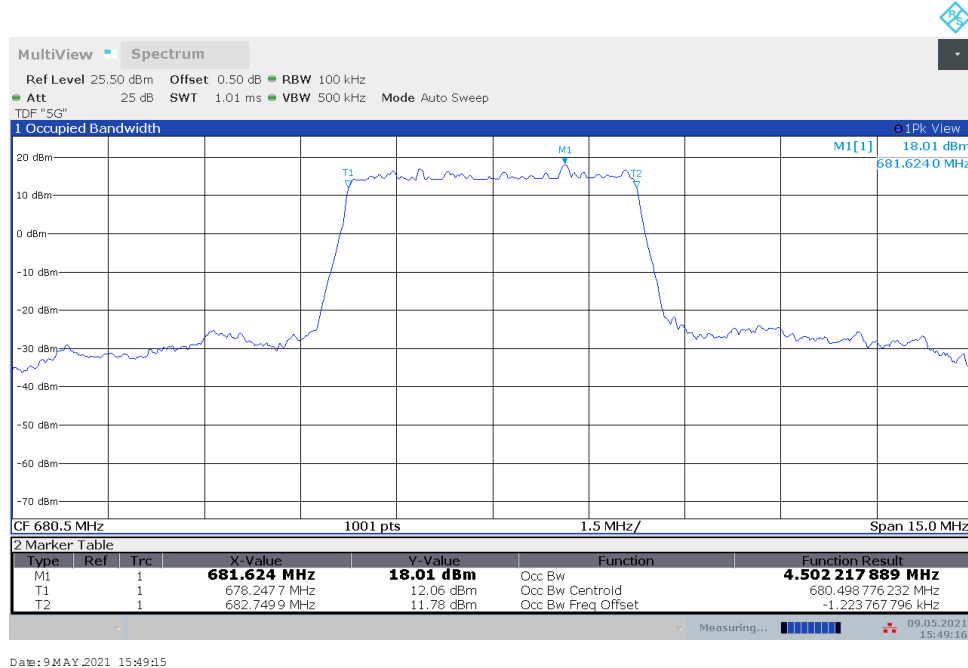
n66, 20MHz Bandwidth,DFT-s-QPSK (99% BW)



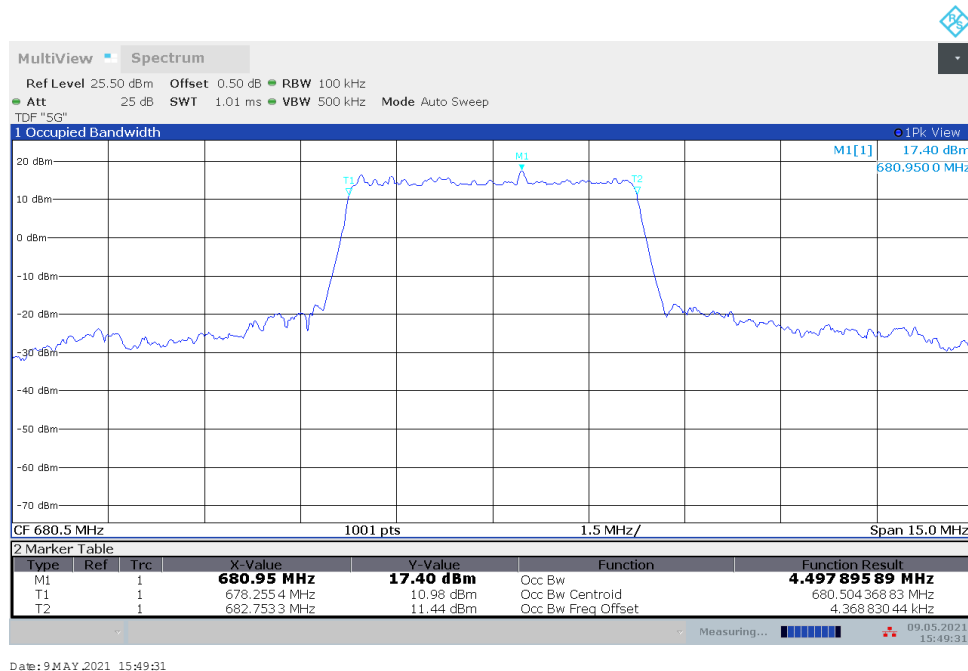
LTE Band 66+NR n71 n71,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	4.502	4.498

n71, 5MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



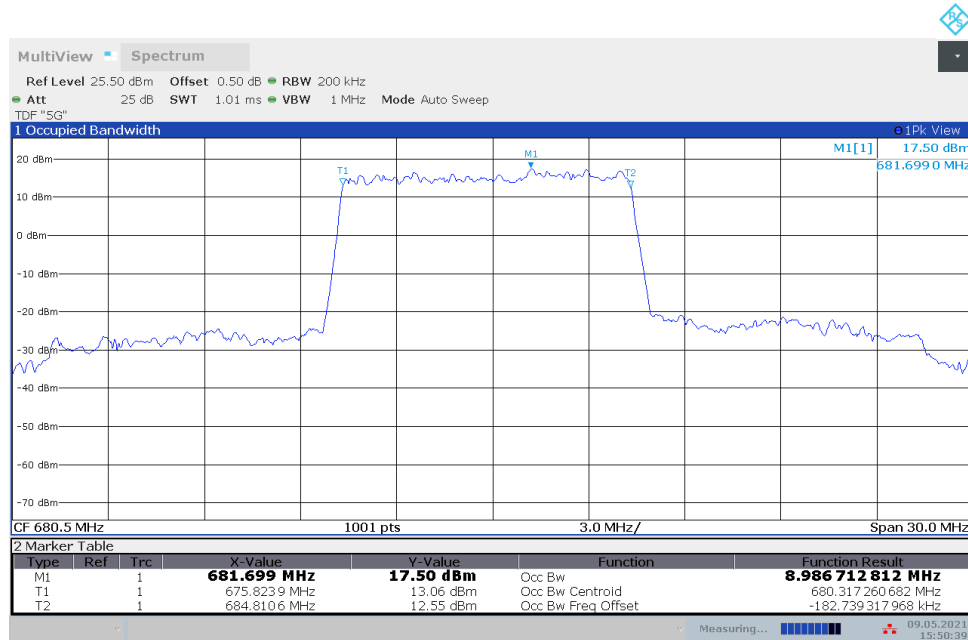
n71, 5MHz Bandwidth,DFT-s-QPSK (99% BW)



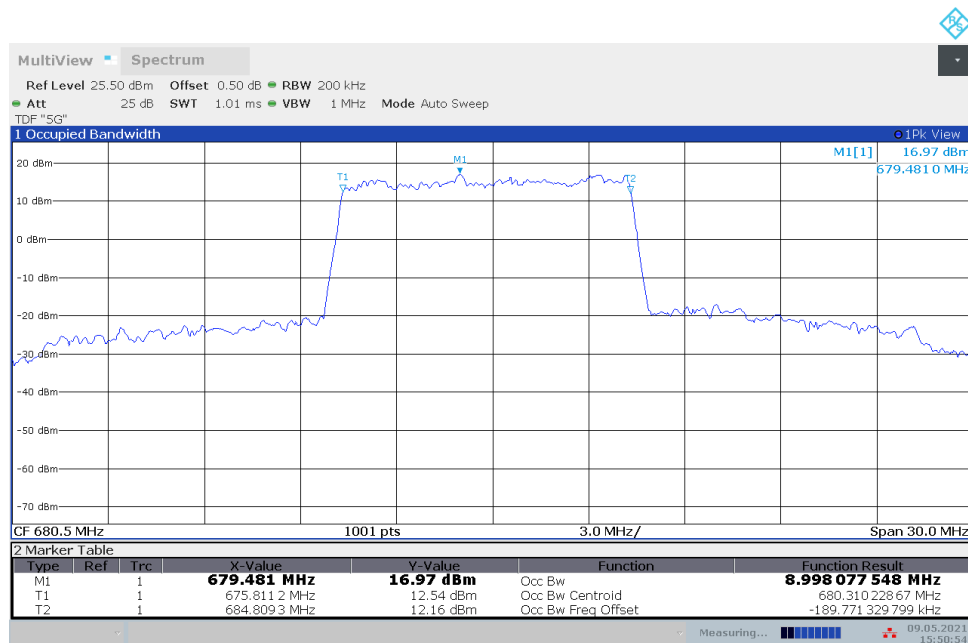
n71,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	8.987	8.998

n71, 10MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



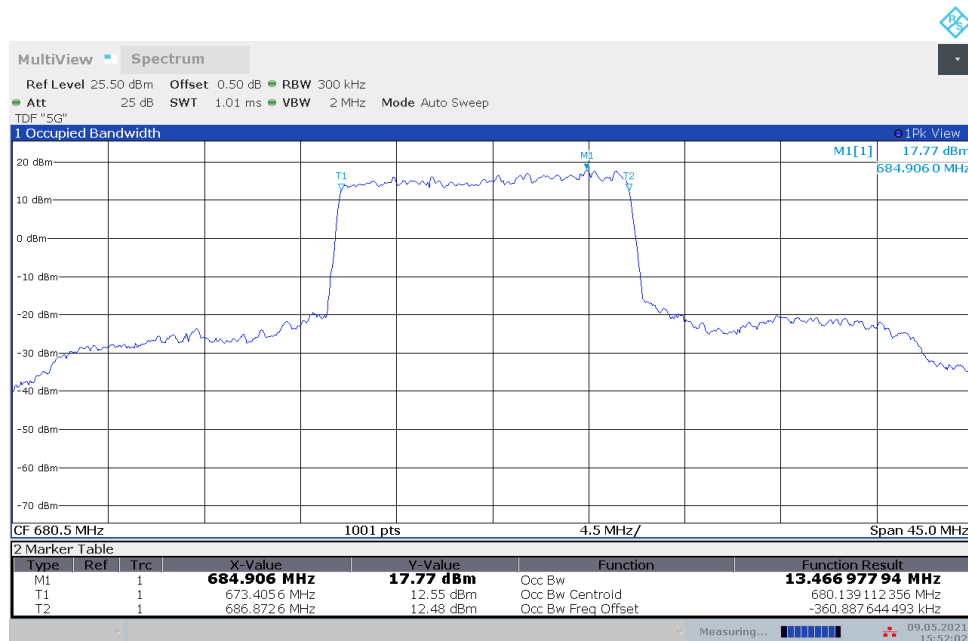
n71, 10MHz Bandwidth,DFT-s-QPSK (99% BW)



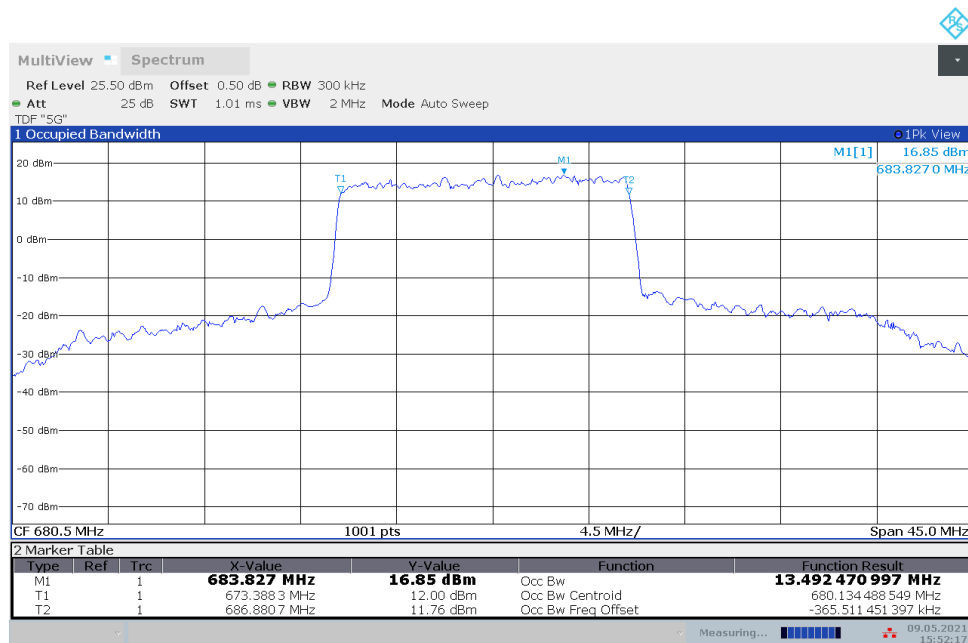
n71,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	13.467	13.492

n71, 15MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



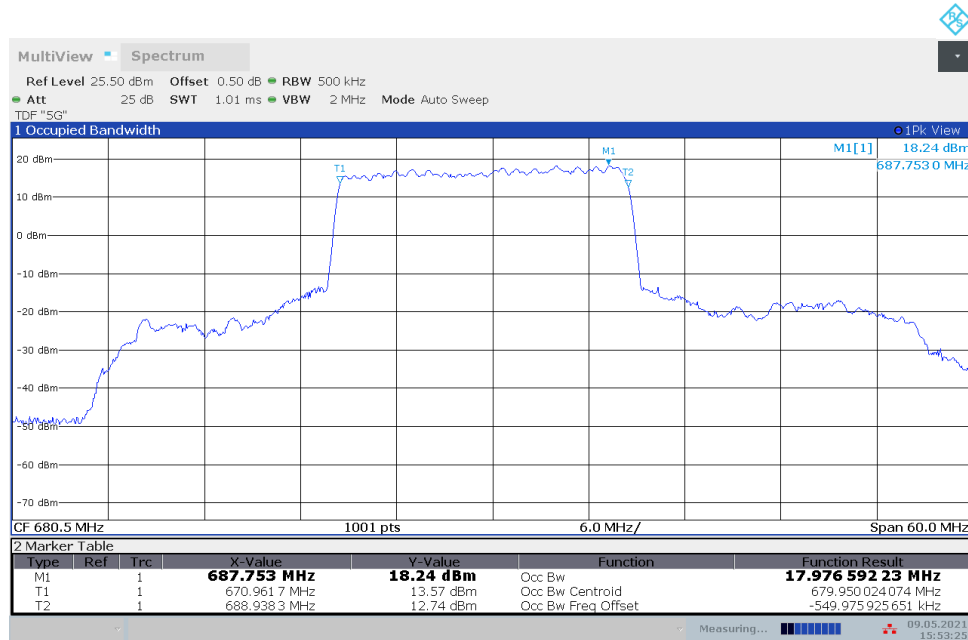
n71, 15MHz Bandwidth,DFT-s-QPSK (99% BW)



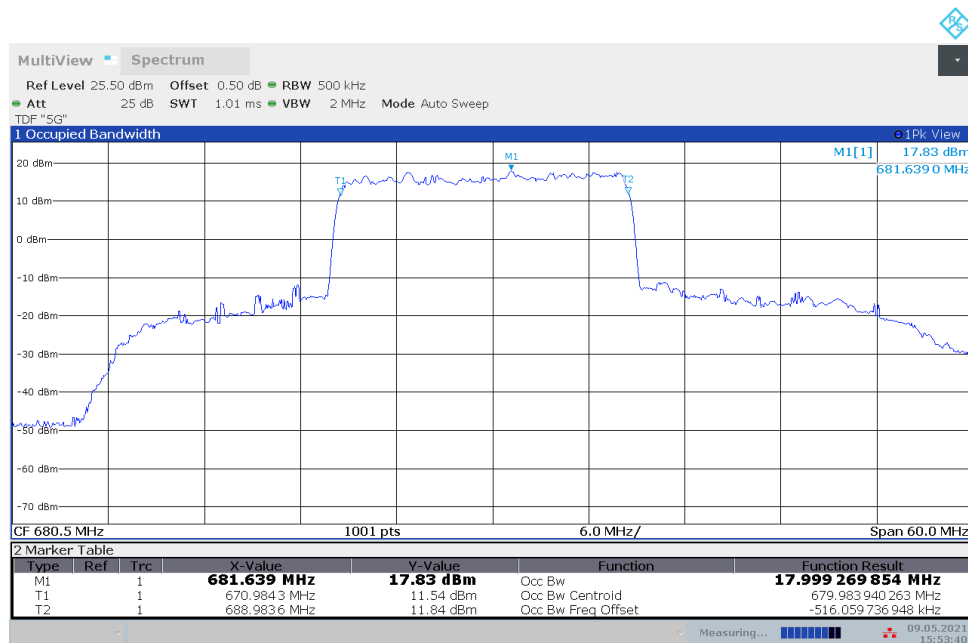
n71,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	17.977	17.999

n71, 20MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



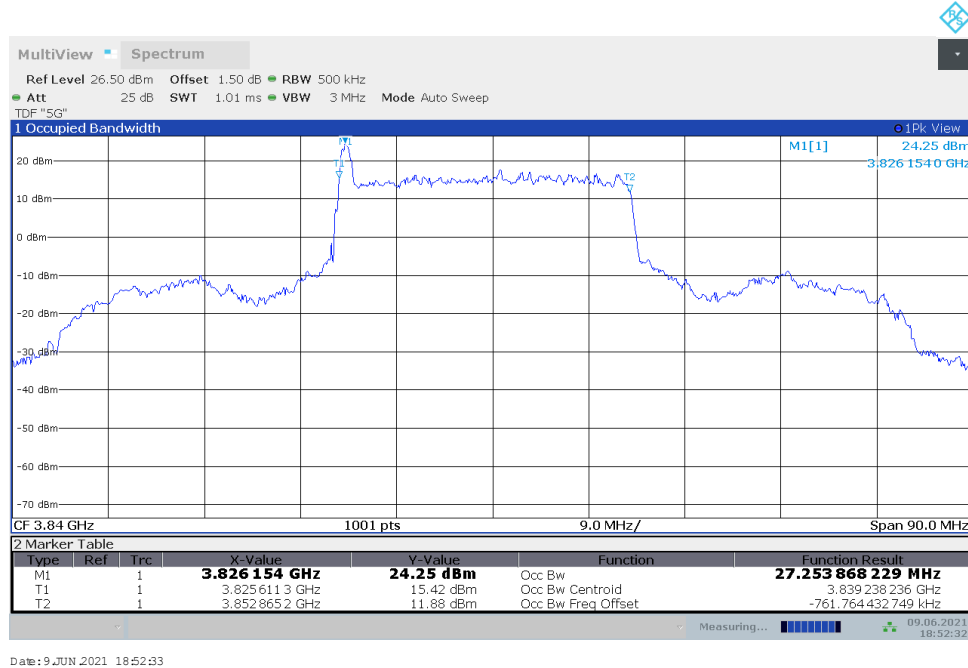
n71, 20MHz Bandwidth,DFT-s-QPSK (99% BW)



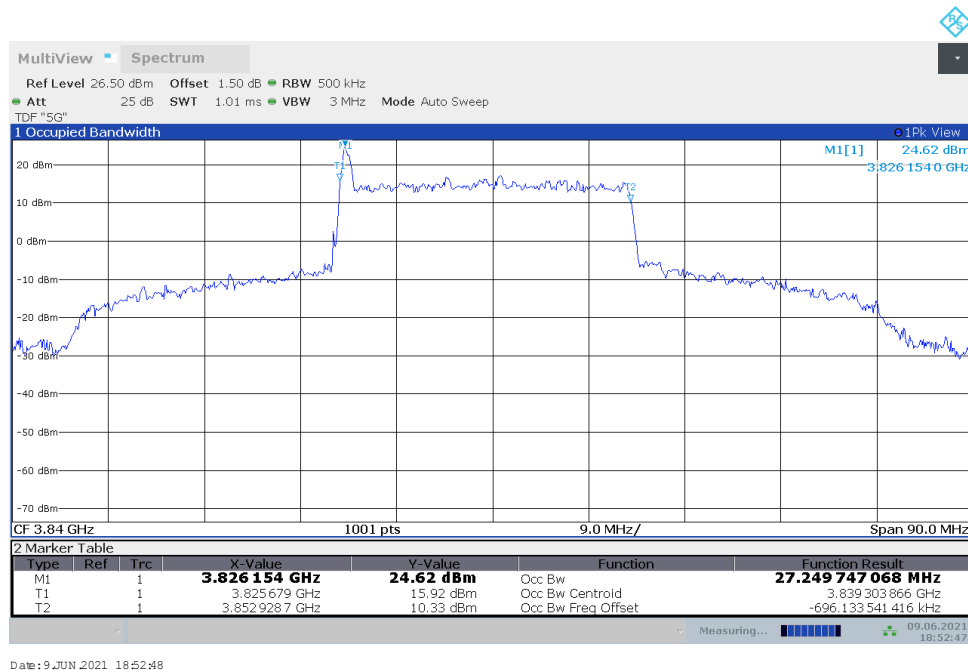
LTE Band 66+NR n77H
n77H,30MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	27.254	27.250

n77H,30MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



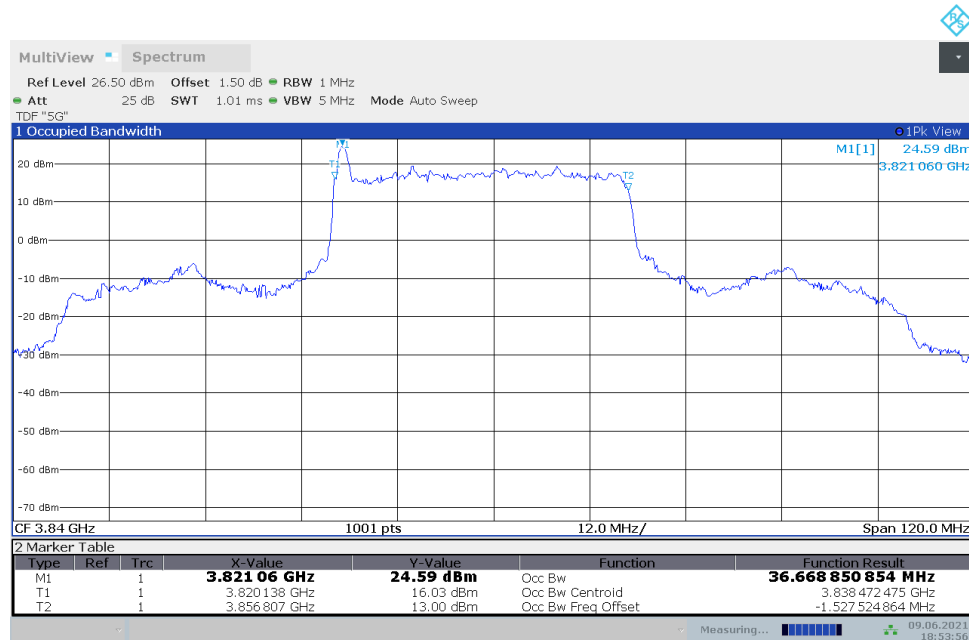
n77H,30MHz Bandwidth,DFT-s-QPSK (99% BW)



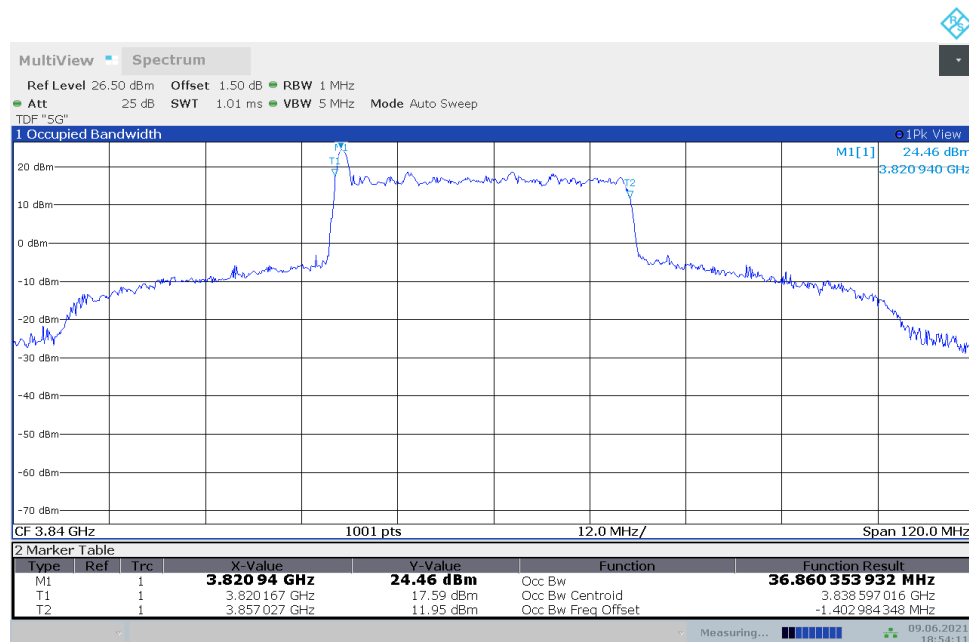
n77H,40MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	36.669	36.860

n77H,40MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



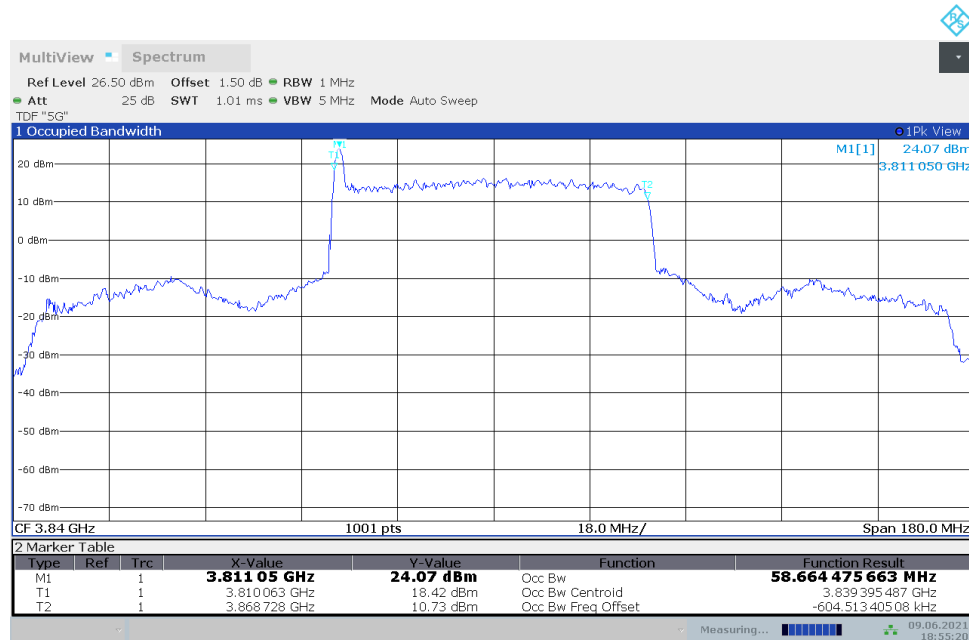
n77H,40MHz Bandwidth,DFT-s-QPSK (99% BW)



n77H,60MHz(99%)

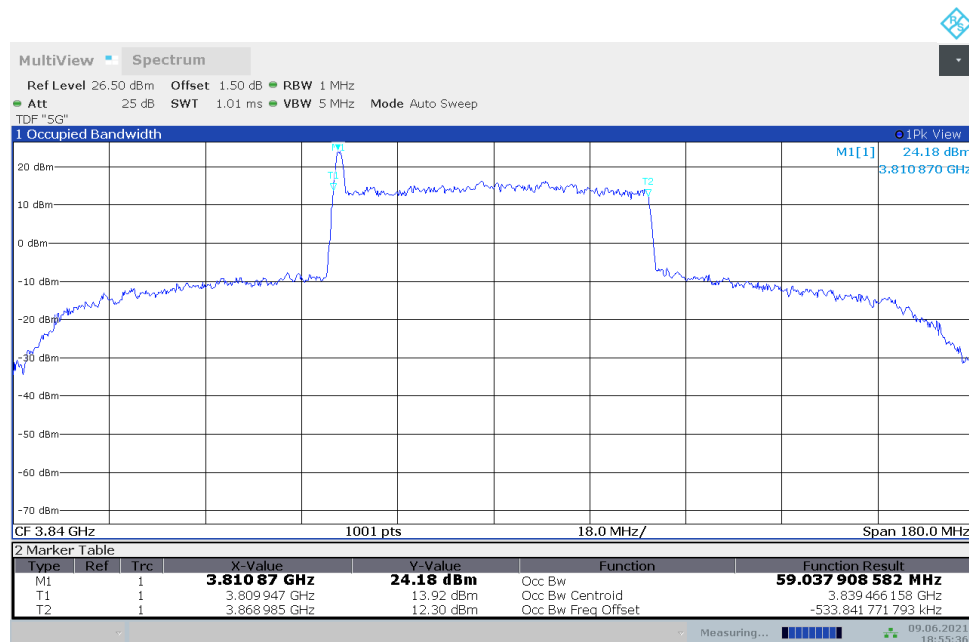
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	58.664	59.038

n77H,60MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



Date: 9 JUN 2021 18:55:20

n77H,60MHz Bandwidth,DFT-s-QPSK (99% BW)

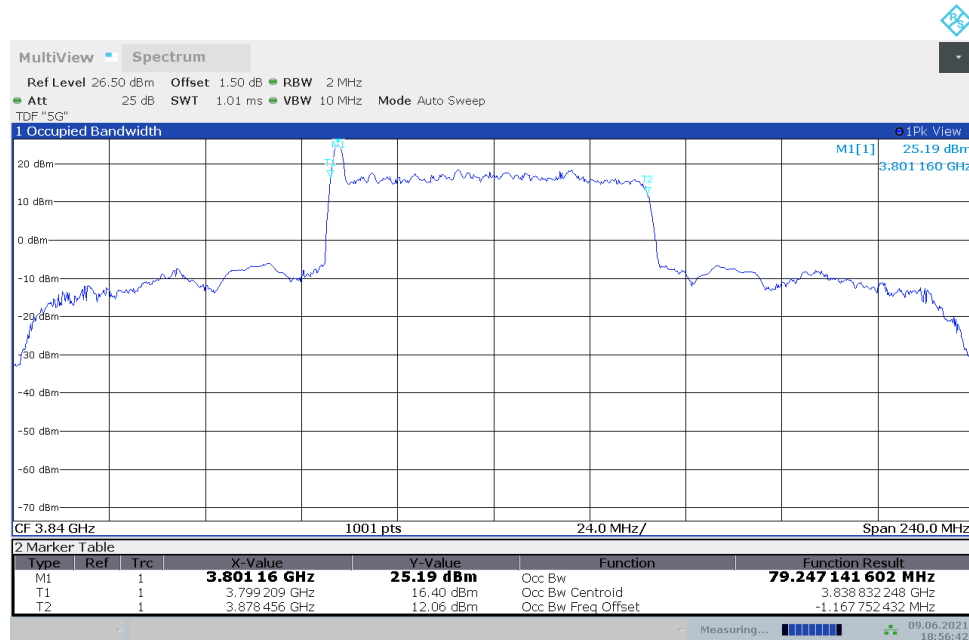


Date: 9 JUN 2021 18:55:36

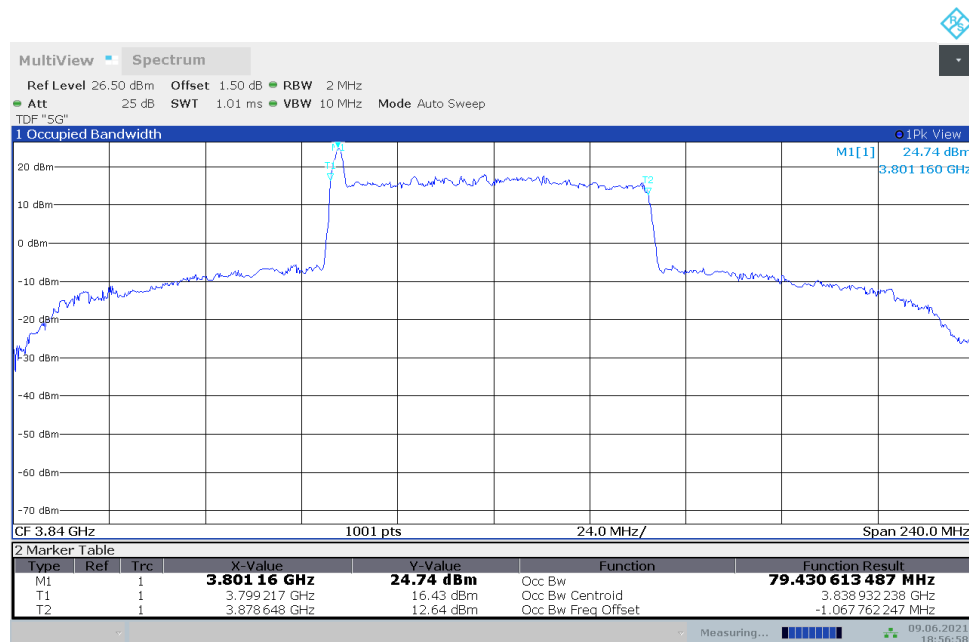
n77H,80MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	79.247	79.431

n77H,80MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



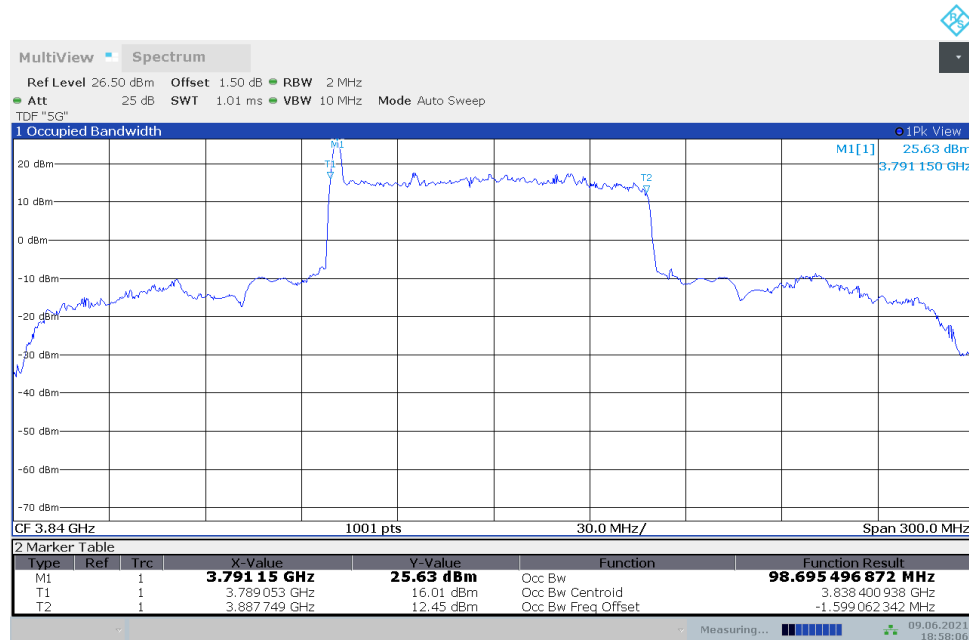
n77H,80MHz Bandwidth,DFT-s-QPSK (99% BW)



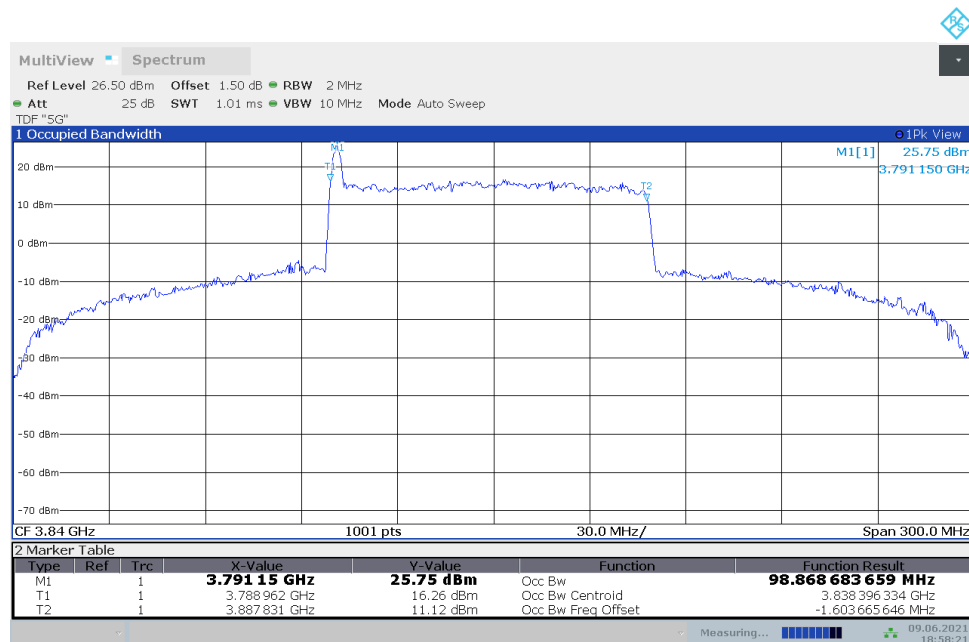
n77H,100MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	98.695	98.869

n77H,100MHz Bandwidth,DFT-s-pi/2 BPSK (99% BW)



n77H,100MHz Bandwidth,DFT-s-QPSK (99% BW)



A.5 Emission Bandwidth

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.

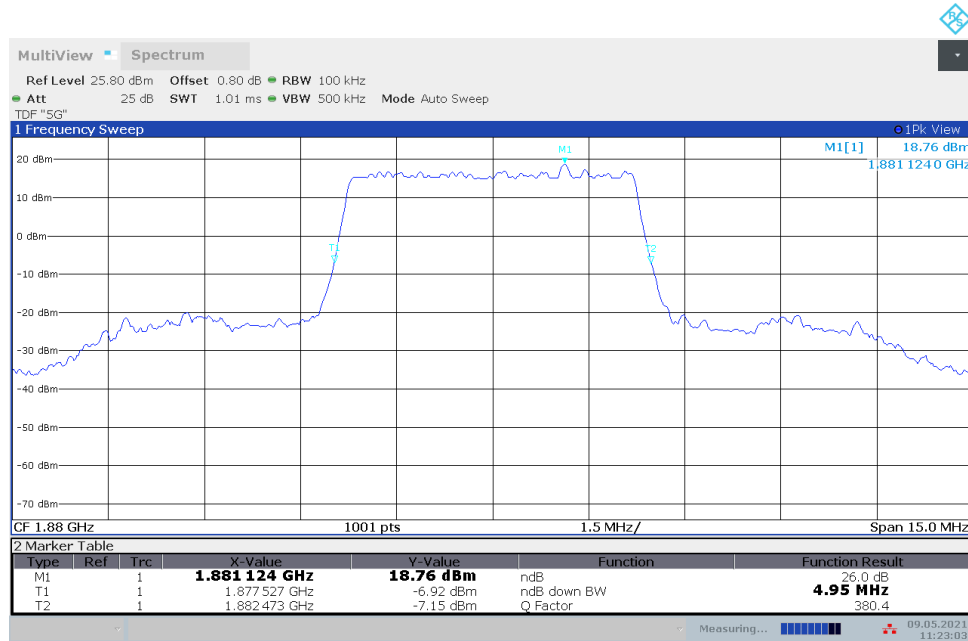
The measurement method is from ANSI C63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- 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) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.

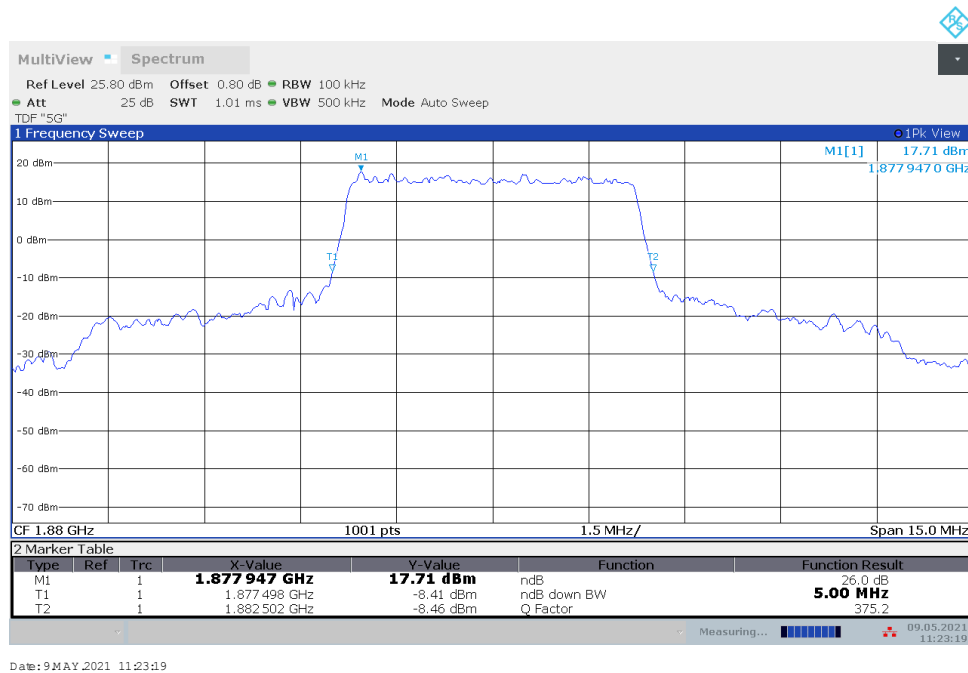
LTE Band 13+NR n2 n2 ,5MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	4.945	5.005

n2 ,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



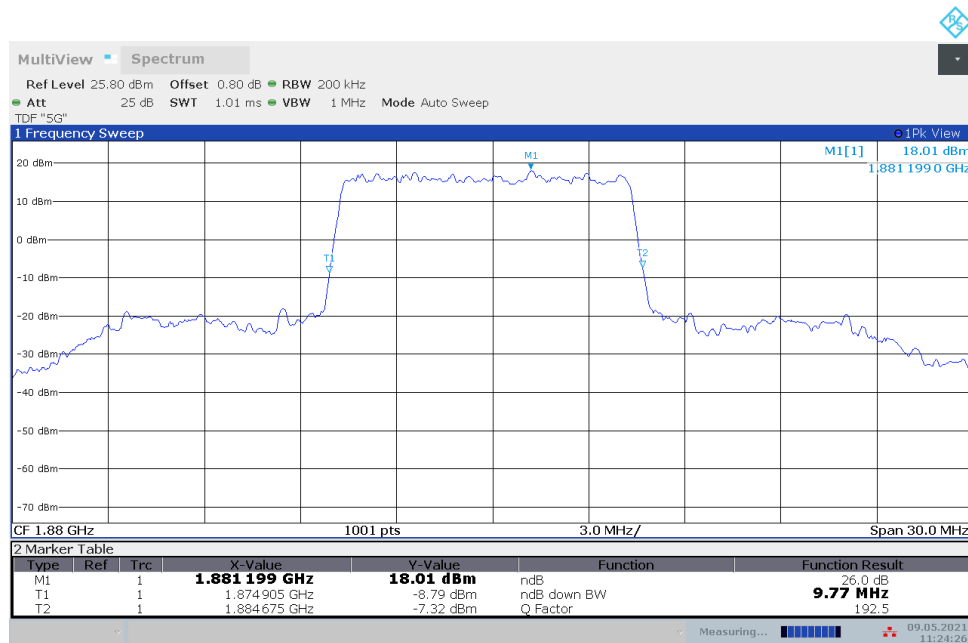
n2 ,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



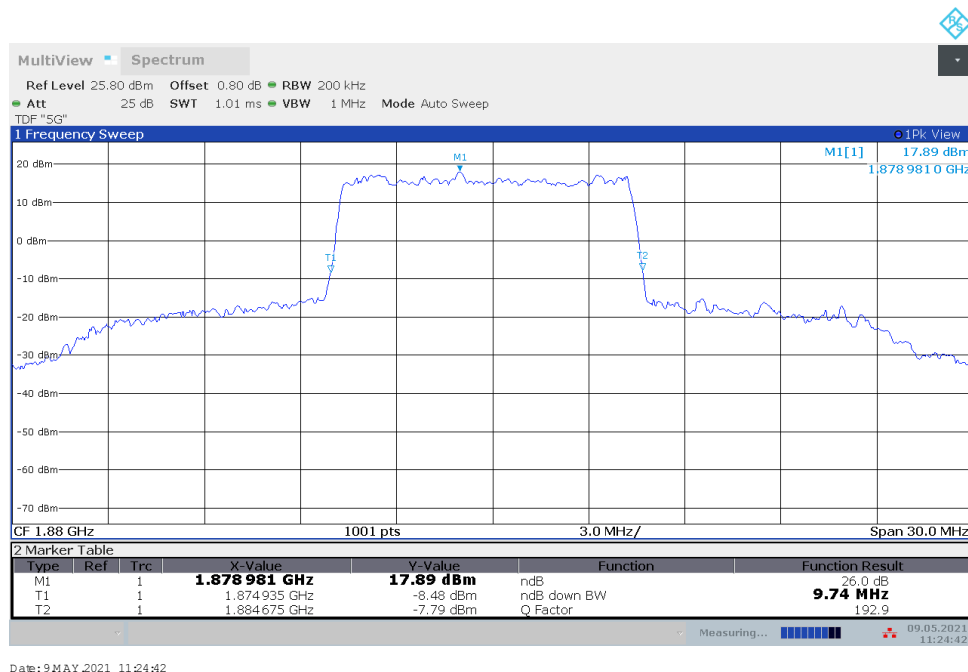
n2 ,10MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	9.770	9.740

n2 ,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



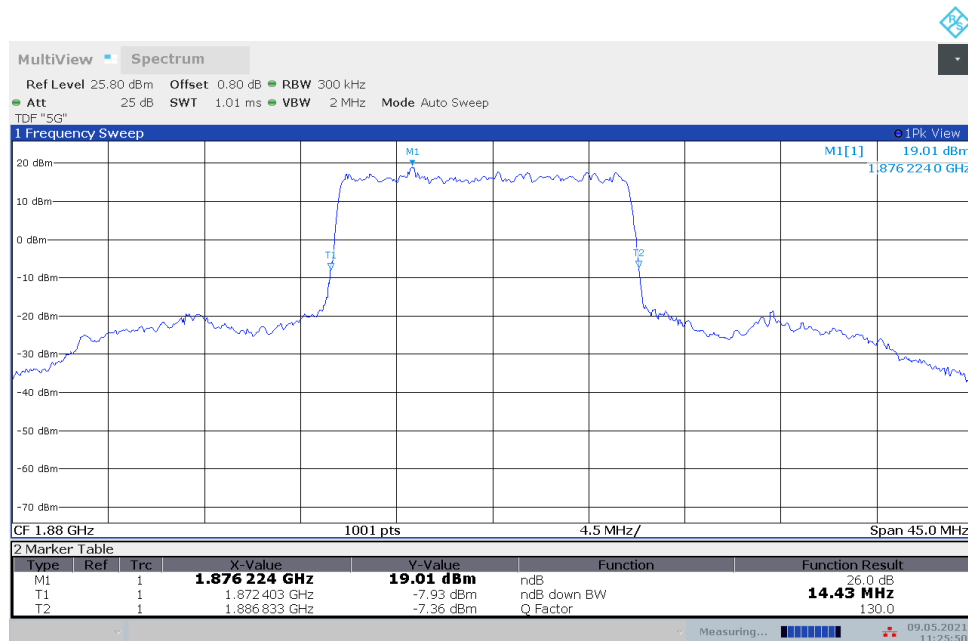
n2 ,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



n2 ,15MHz(-26dBc)

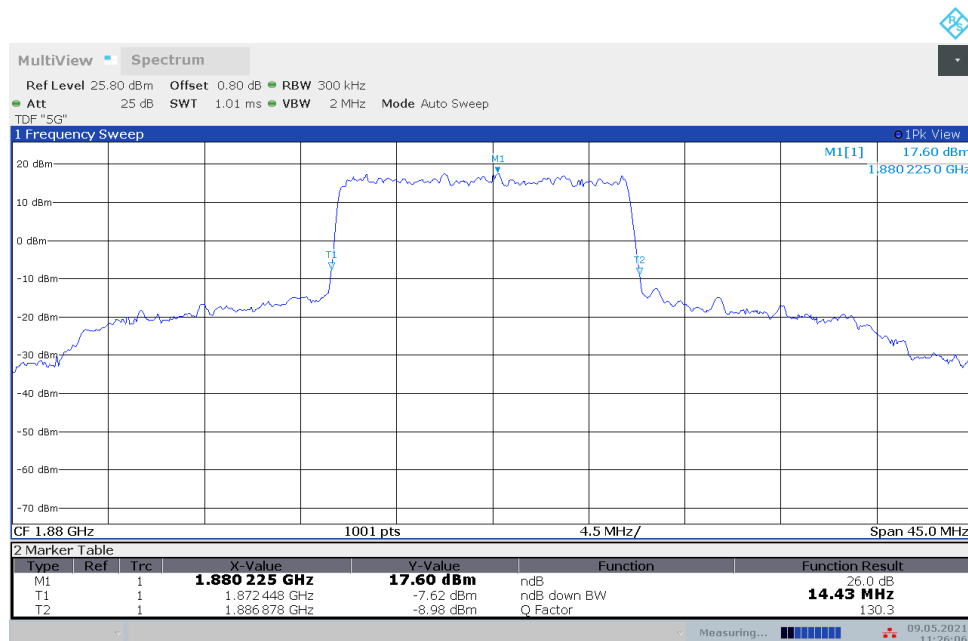
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	14.431	14.431

n2 ,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 11:25:50

n2 ,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

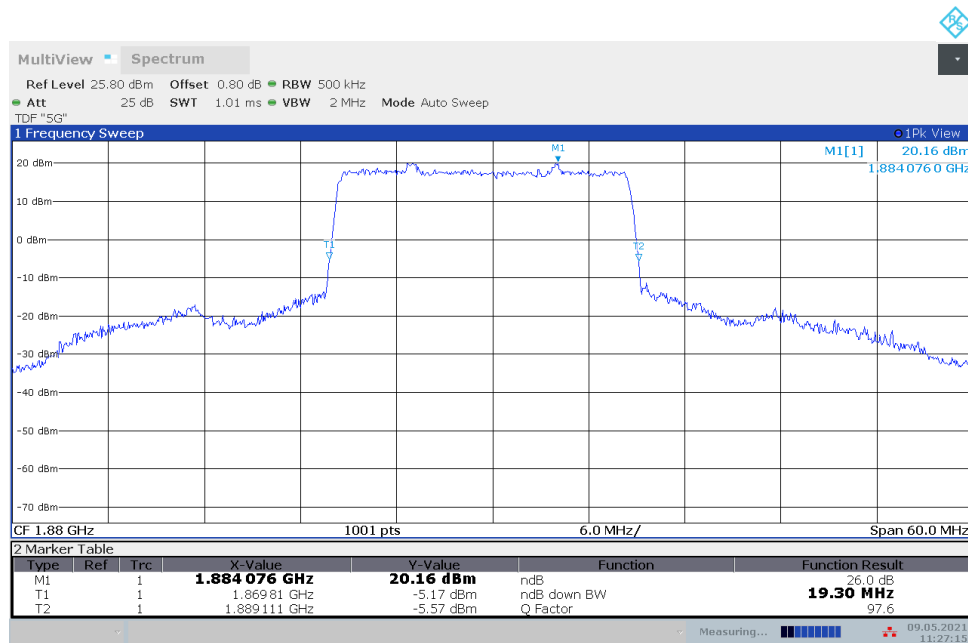


Date: 9 MAY.2021 11:26:07

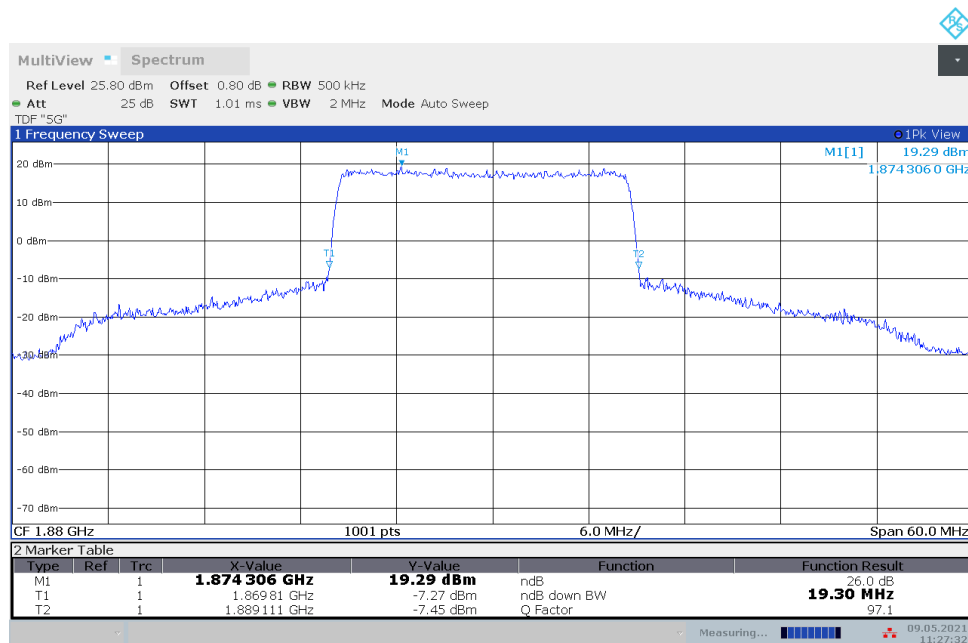
n2 ,20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1880	19.301	19.301

n2 ,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



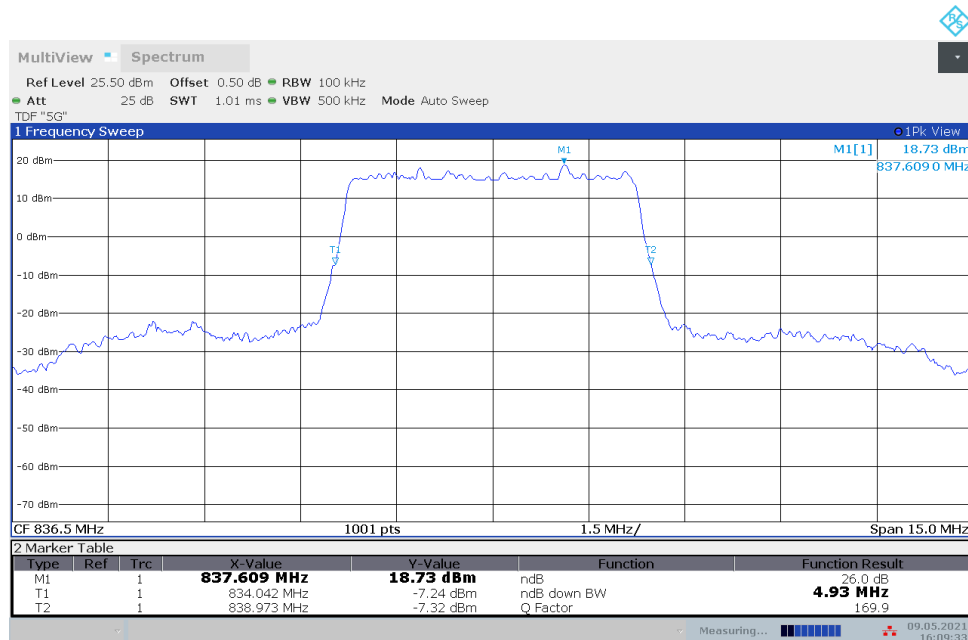
n2 ,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



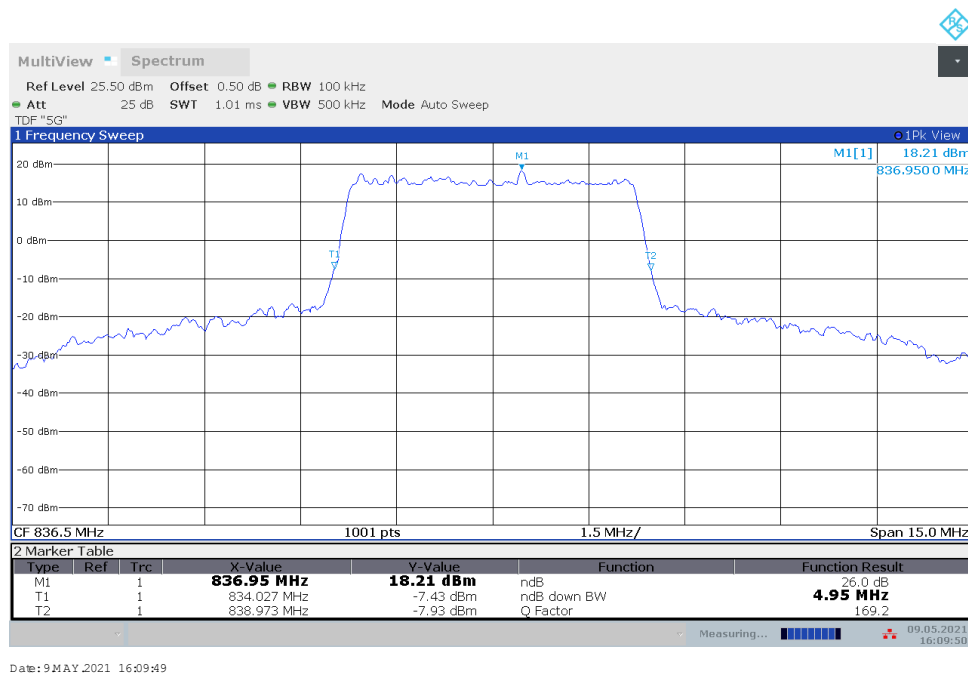
LTE Band 66+NR n5 n5 ,5MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	4.930	4.945

n5 ,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



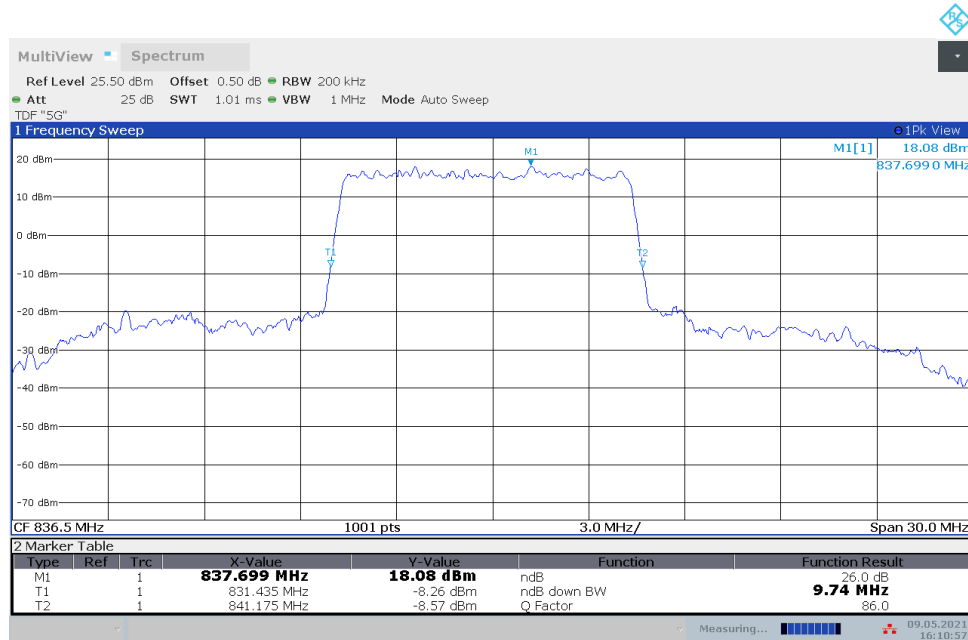
n5 ,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



n5 ,10MHz(-26dBc)

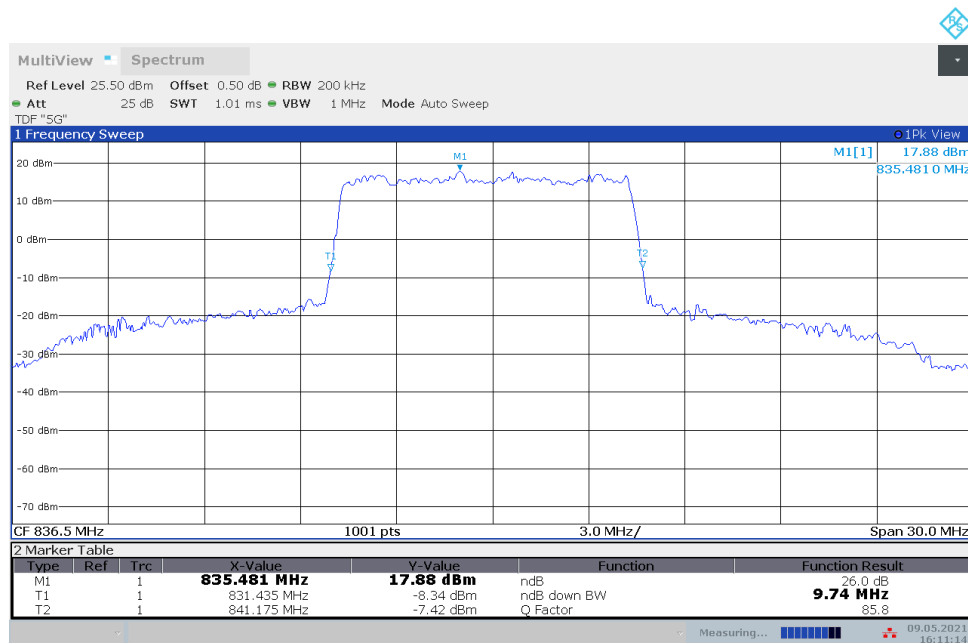
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	9.740	9.740

n5 ,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY 2021 16:10:58

n5 ,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

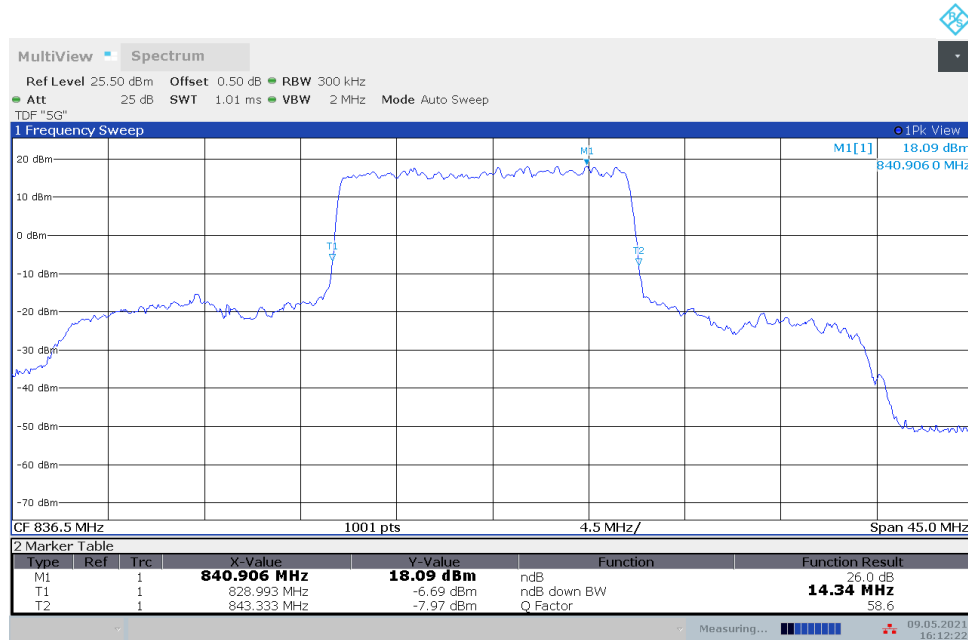


Date: 9 MAY 2021 16:11:14

n5 ,15MHz(-26dBc)

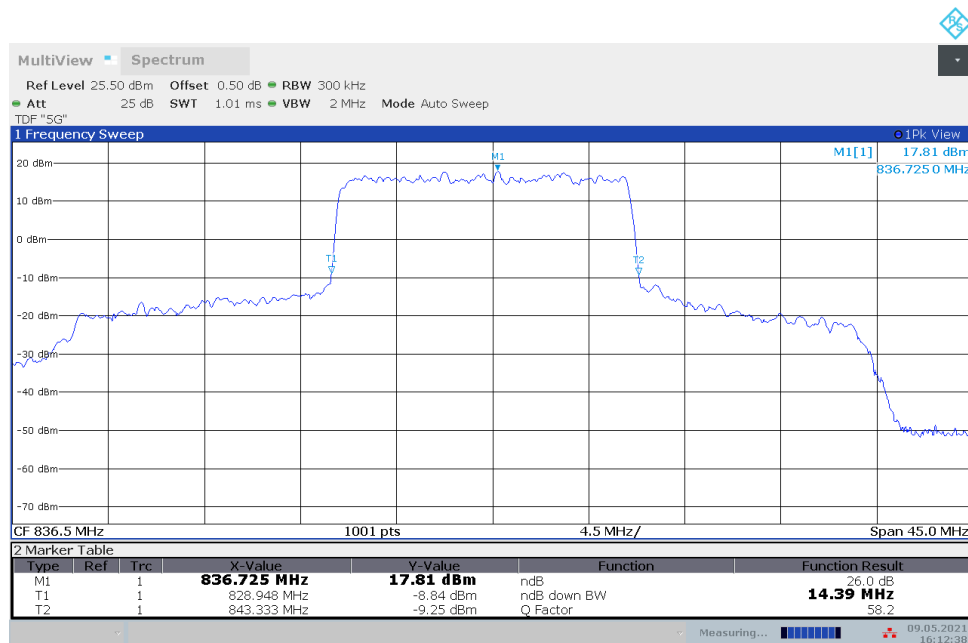
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	14.341	14.386

n5 ,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY 2021 16:12:22

n5 ,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

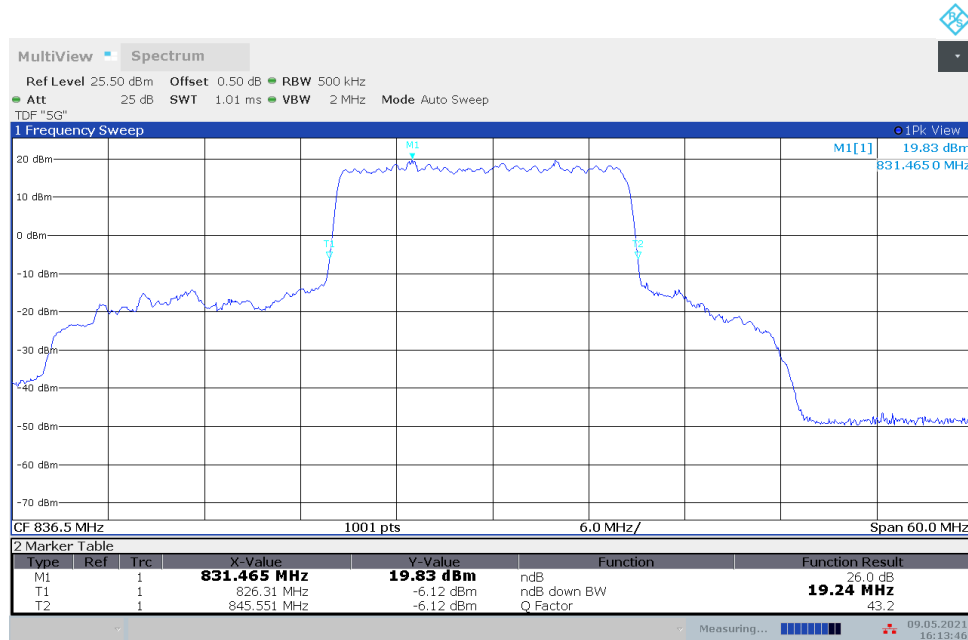


Date: 9 MAY 2021 16:12:38

n5 ,20MHz(-26dBc)

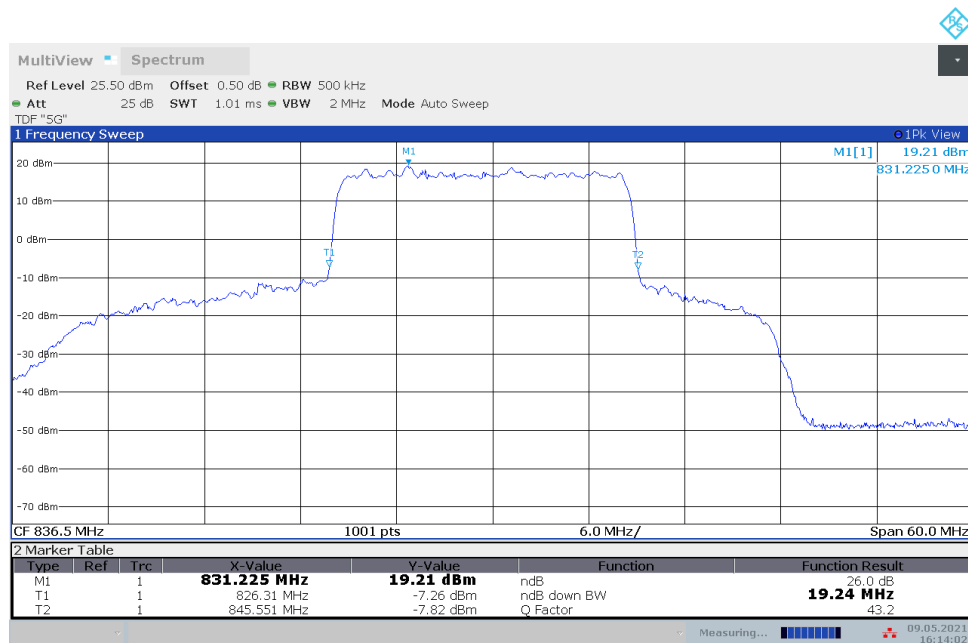
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	19.241	19.241

n5 ,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY 2021 16:13:46

n5 ,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

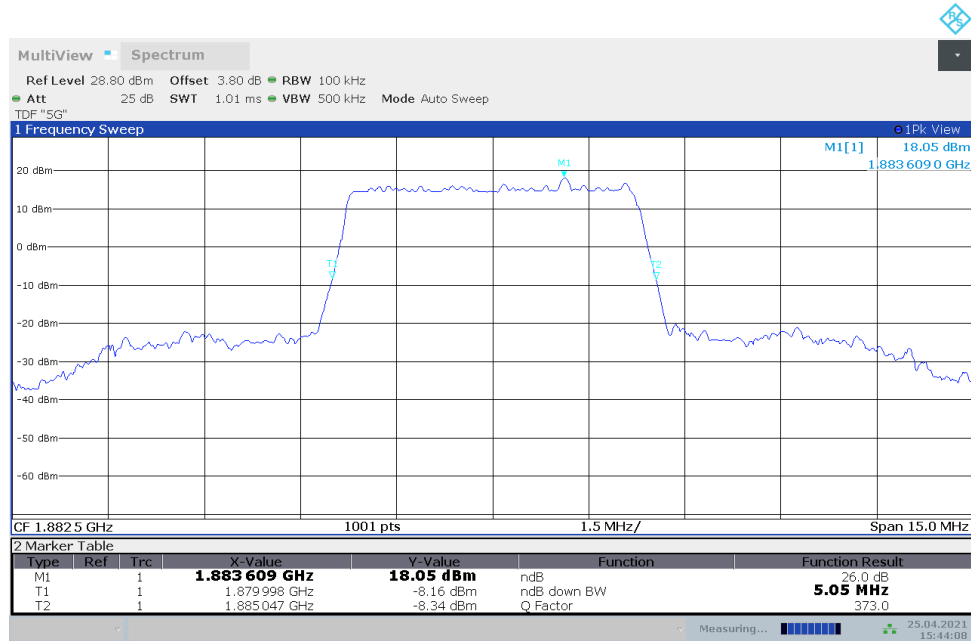


Date: 9 MAY 2021 16:14:02

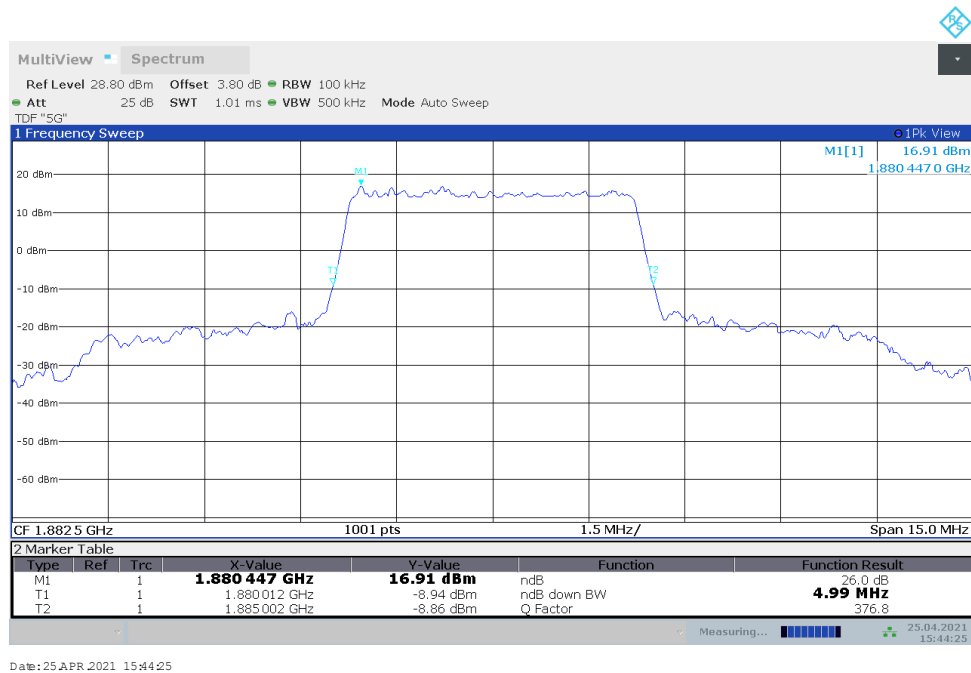
LTE Band 66+NR n25
n25 ,5MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	5.050	4.990

n25 ,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



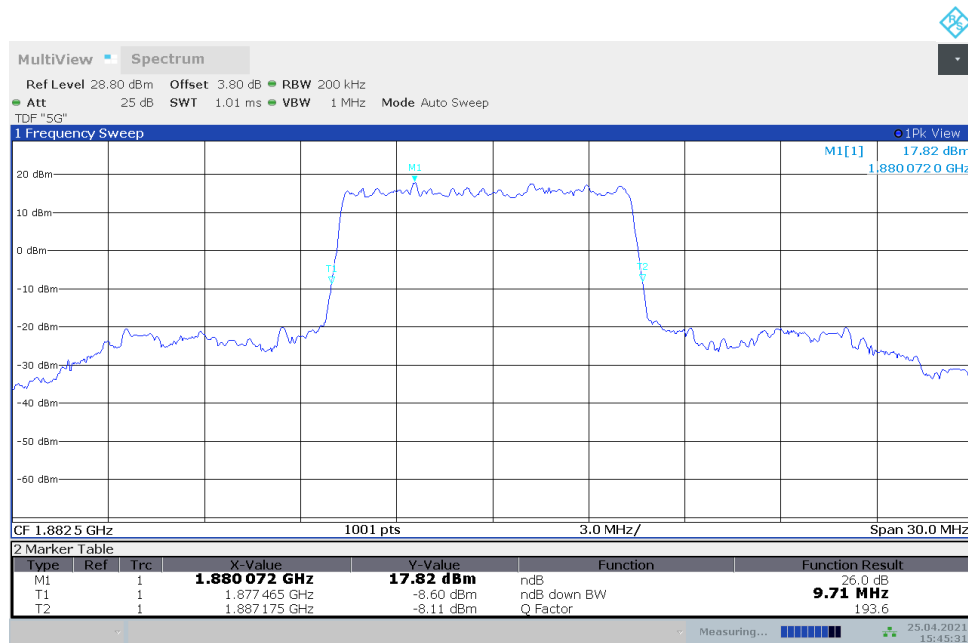
n25 ,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



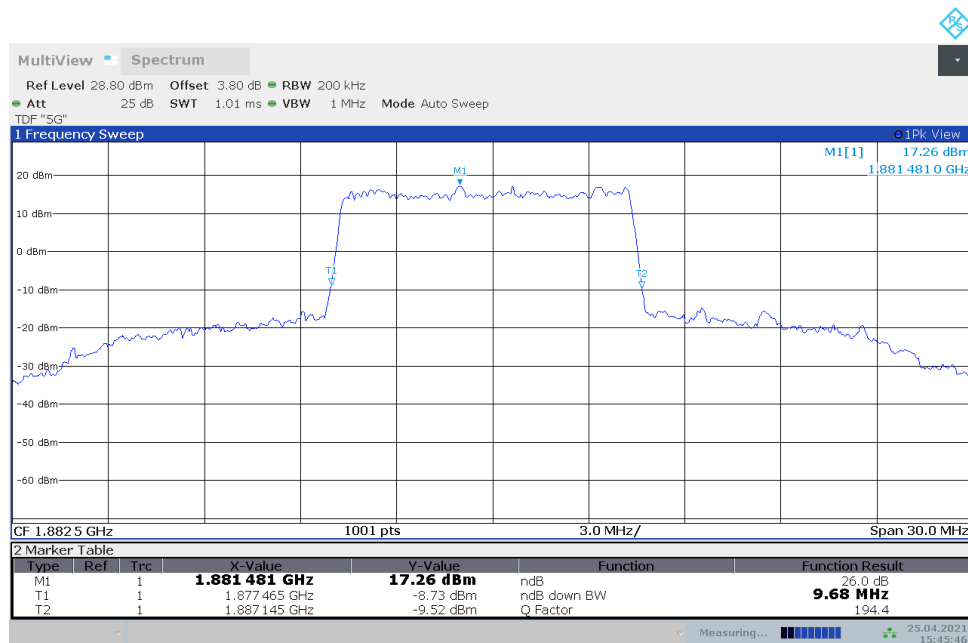
n25 ,10MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	9.710	9.680

n25 ,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



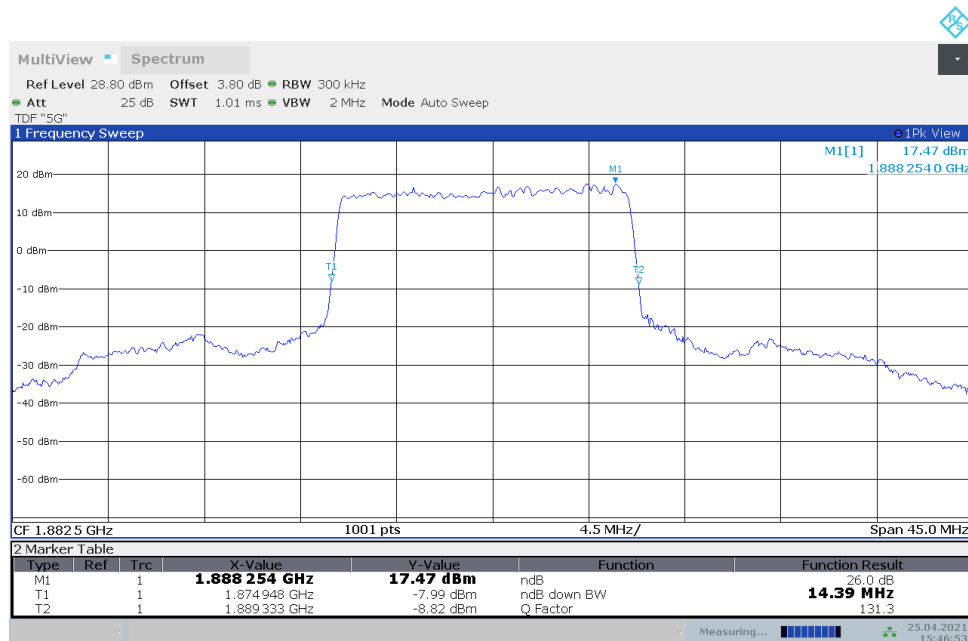
n25 ,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



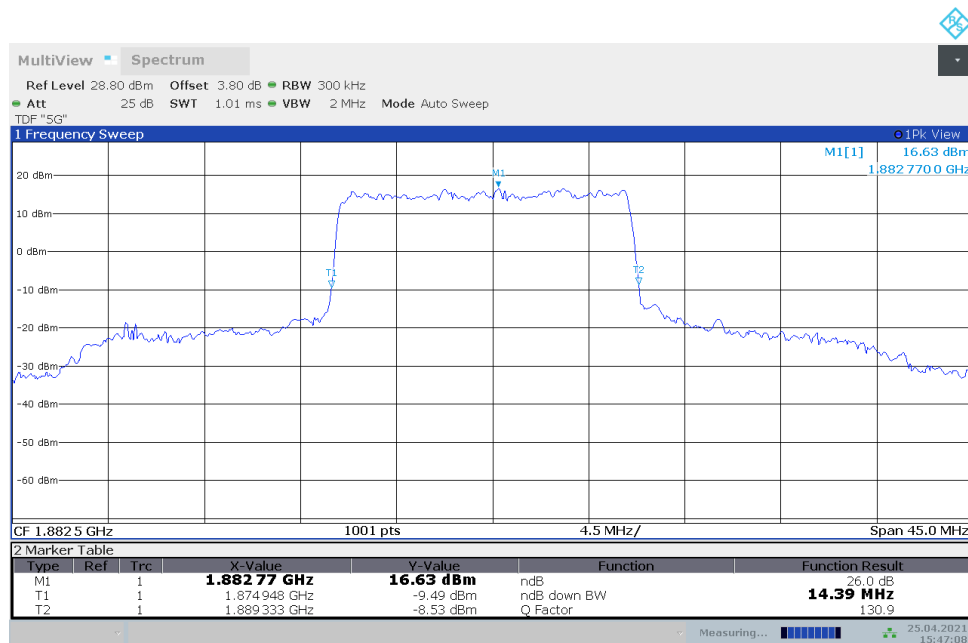
n25 ,15MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	14.386	14.386

n25 ,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



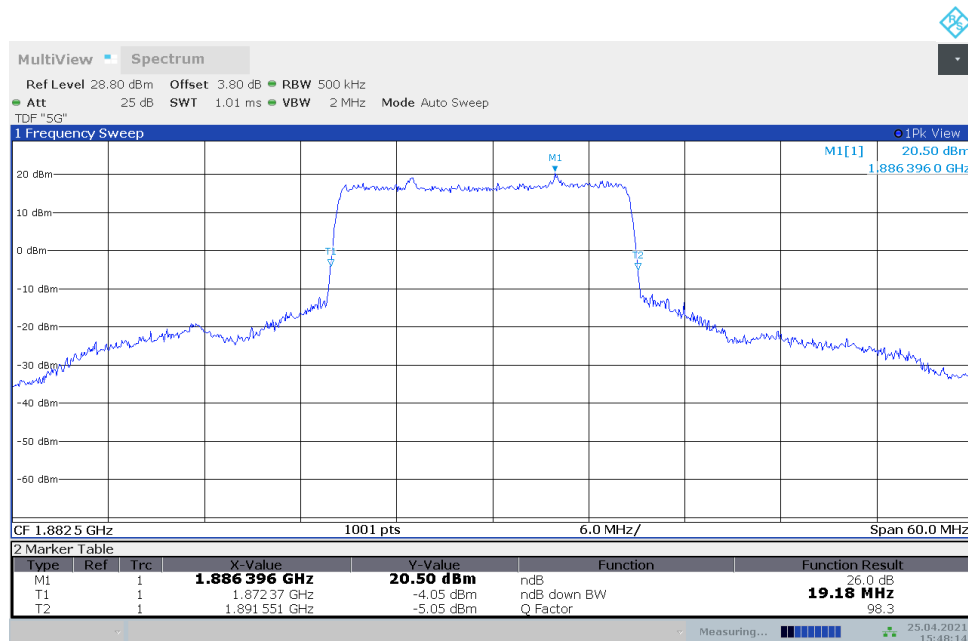
n25 ,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



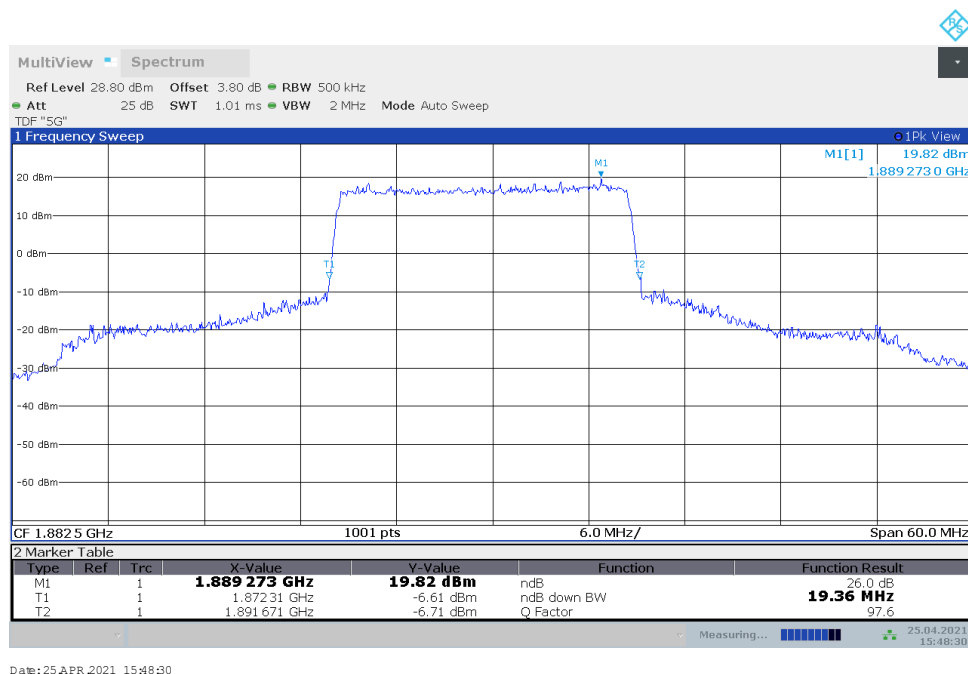
n25 ,20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1882.5	19.181	19.361

n25 ,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



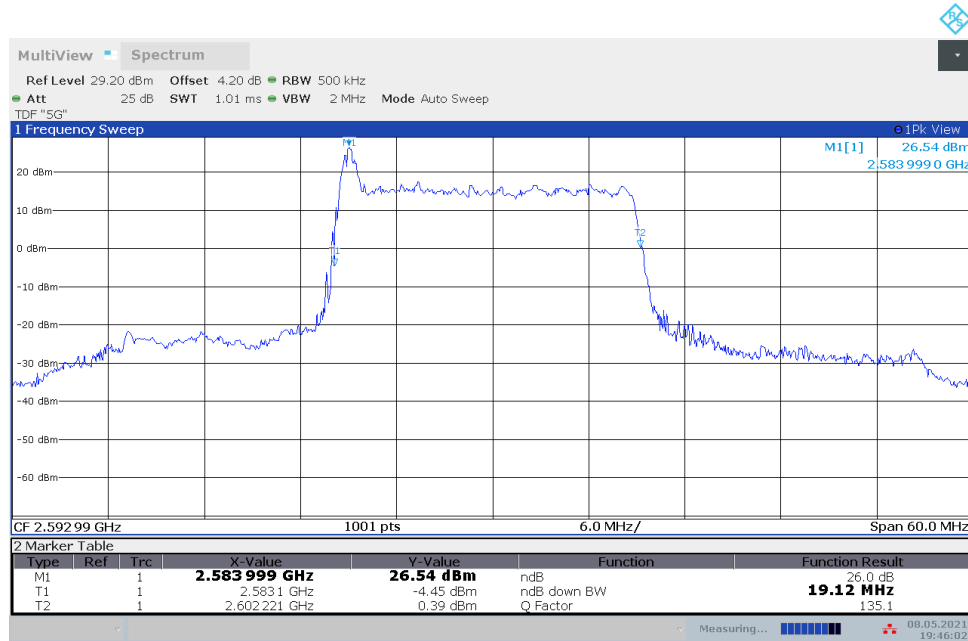
n25 ,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



LTE Band 66+NR n41
n41 ,20MHz(-26dBc)

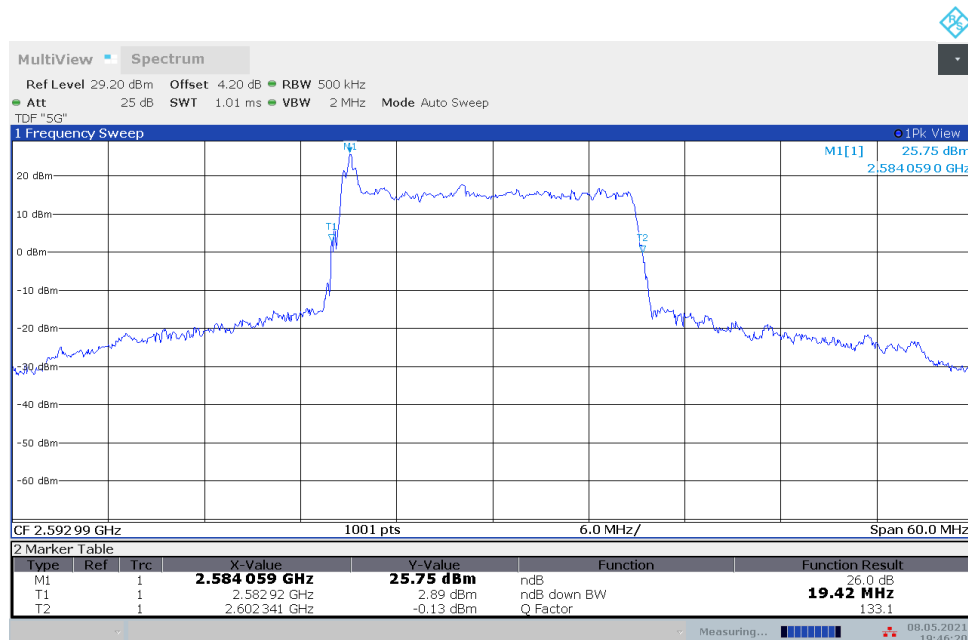
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	19.121	19.421

n41 ,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 8 MAY 2021 19:46:03

n41 ,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

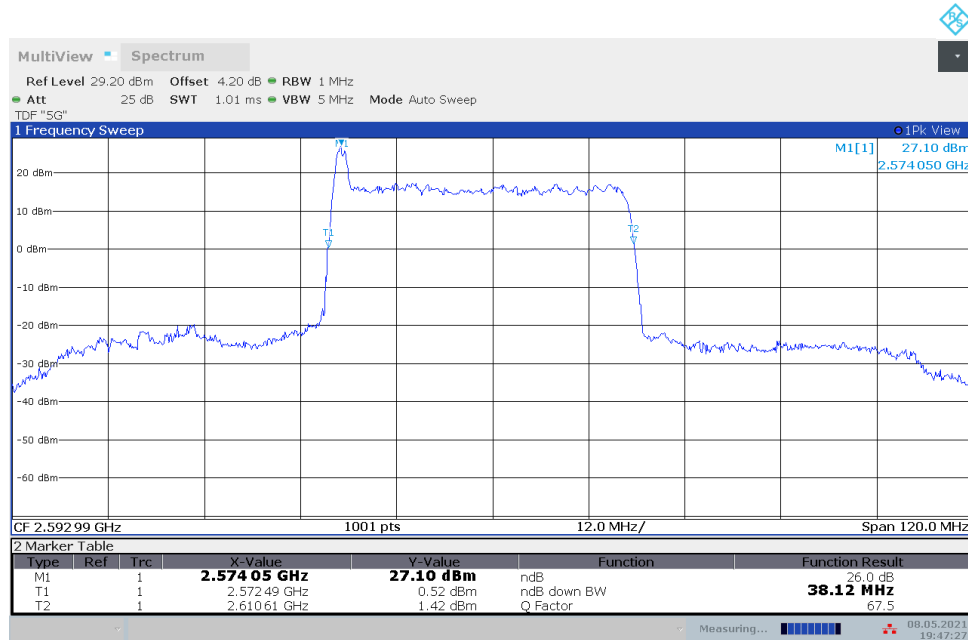


Date: 8 MAY 2021 19:46:19

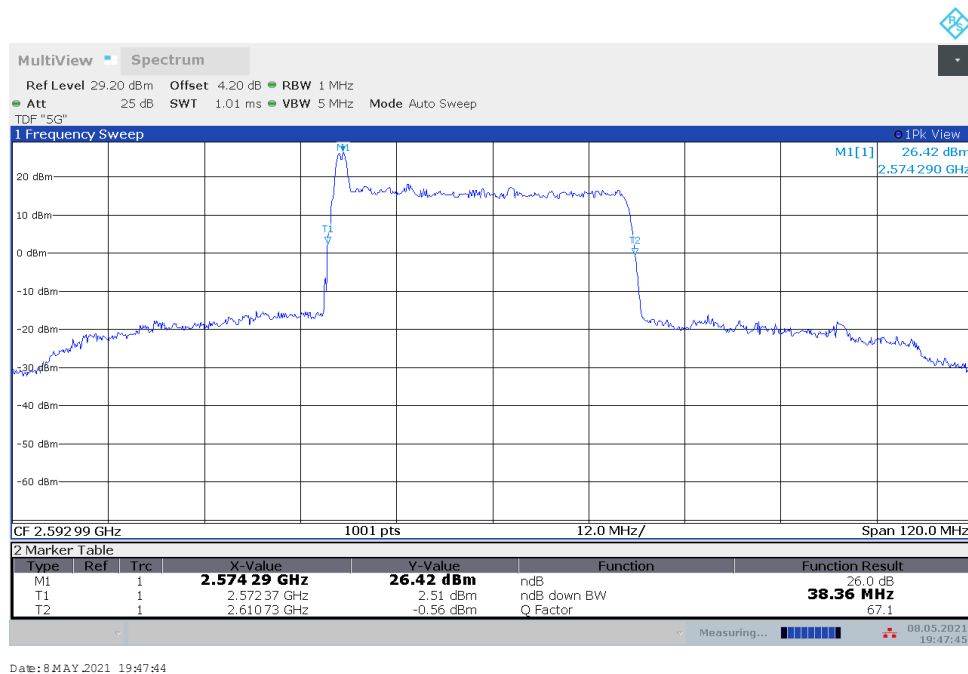
n41 ,40MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	38.120	38.360

n41 ,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



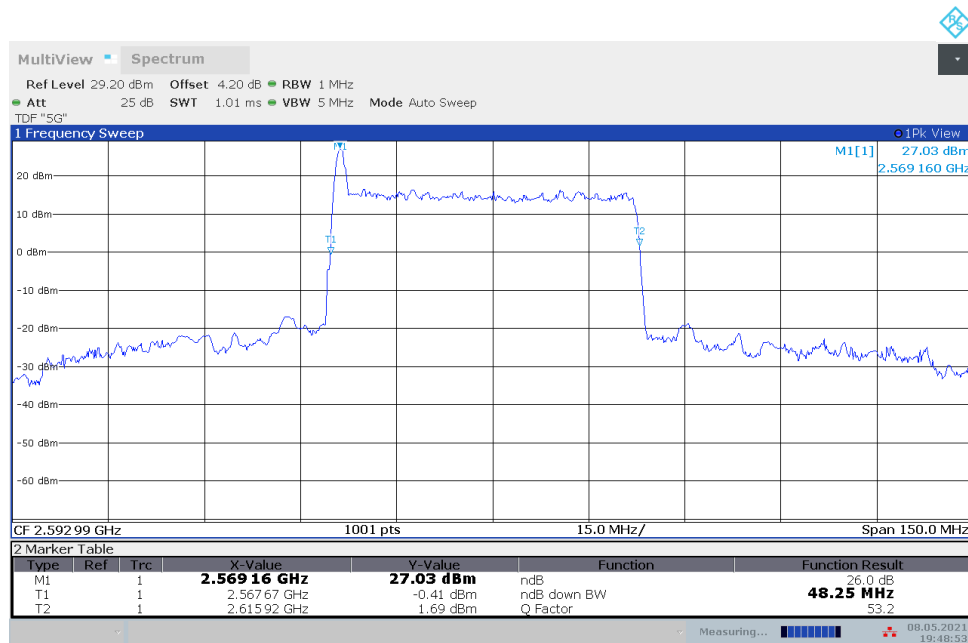
n41 ,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



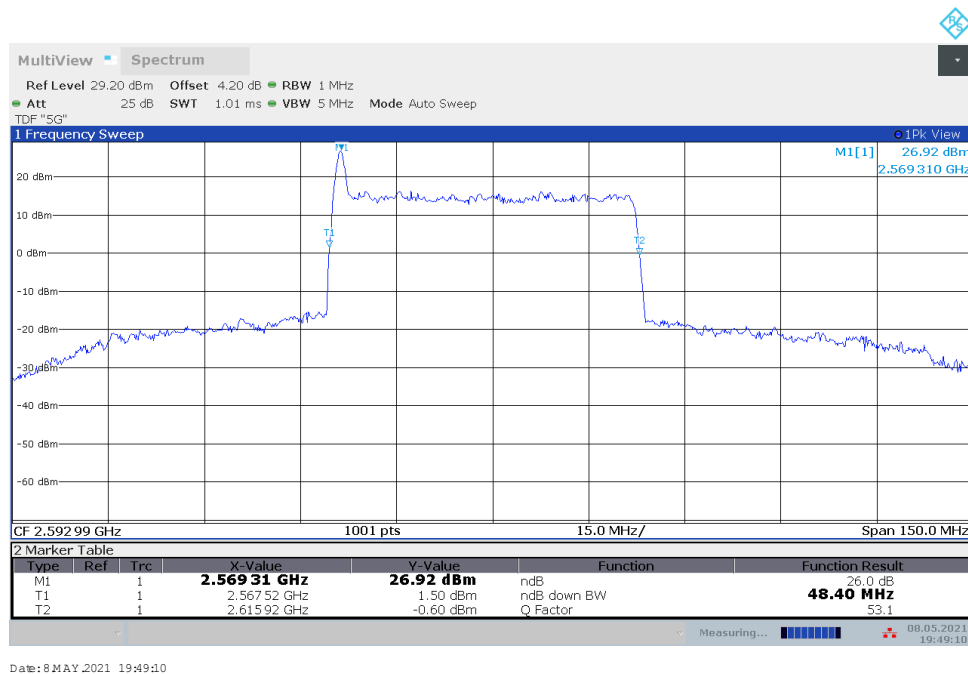
n41 ,50MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	48.250	48.400

n41 ,50MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



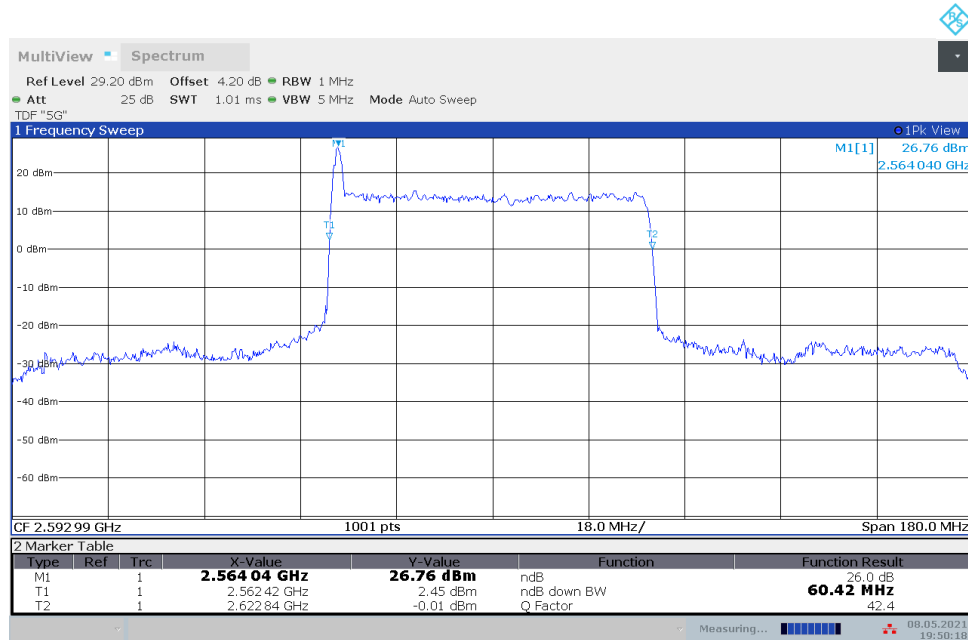
n41 ,50MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



n41 ,60MHz(-26dBc)

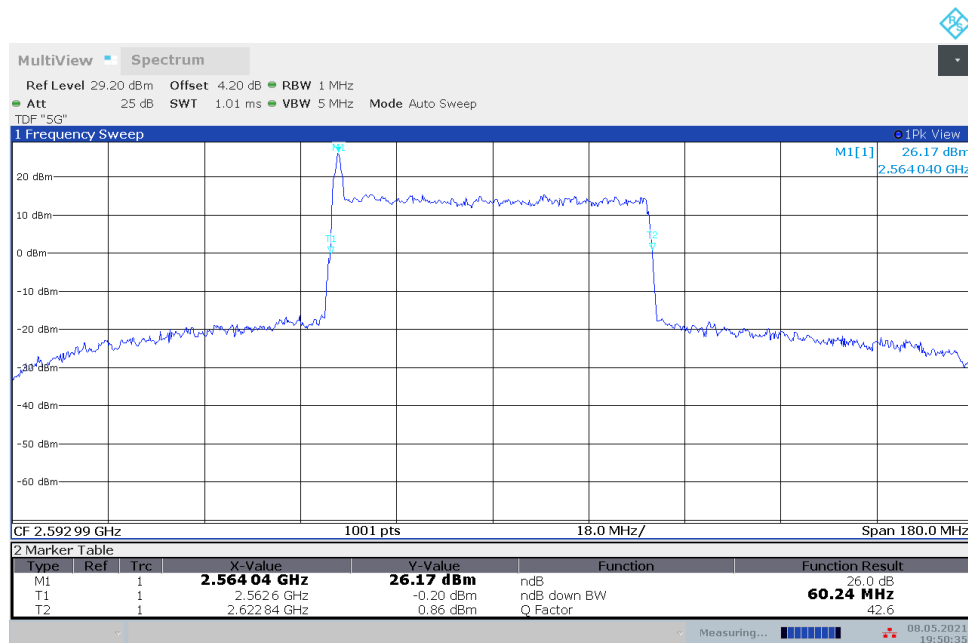
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	60.420	60.240

n41 ,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 8 MAY 2021 19:50:18

n41 ,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

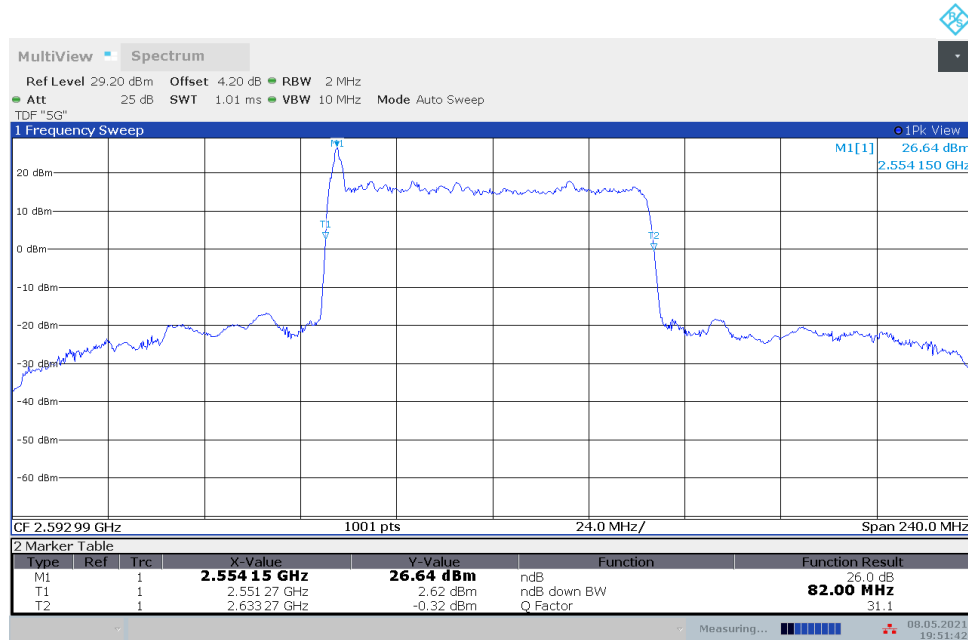


Date: 8 MAY 2021 19:50:35

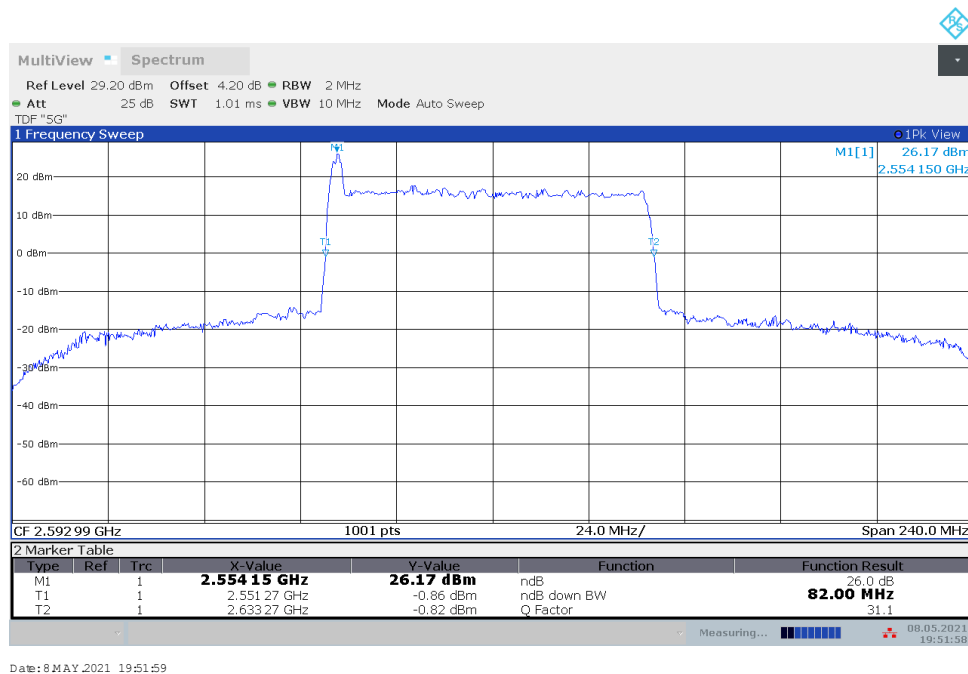
n41 ,80MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	82.000	82.000

n41 ,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



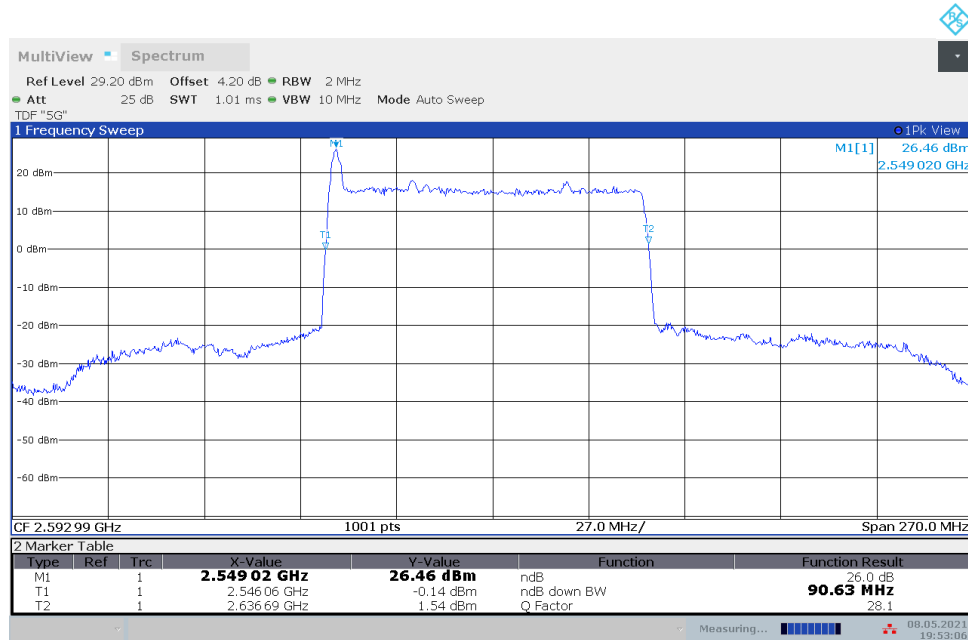
n41 ,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



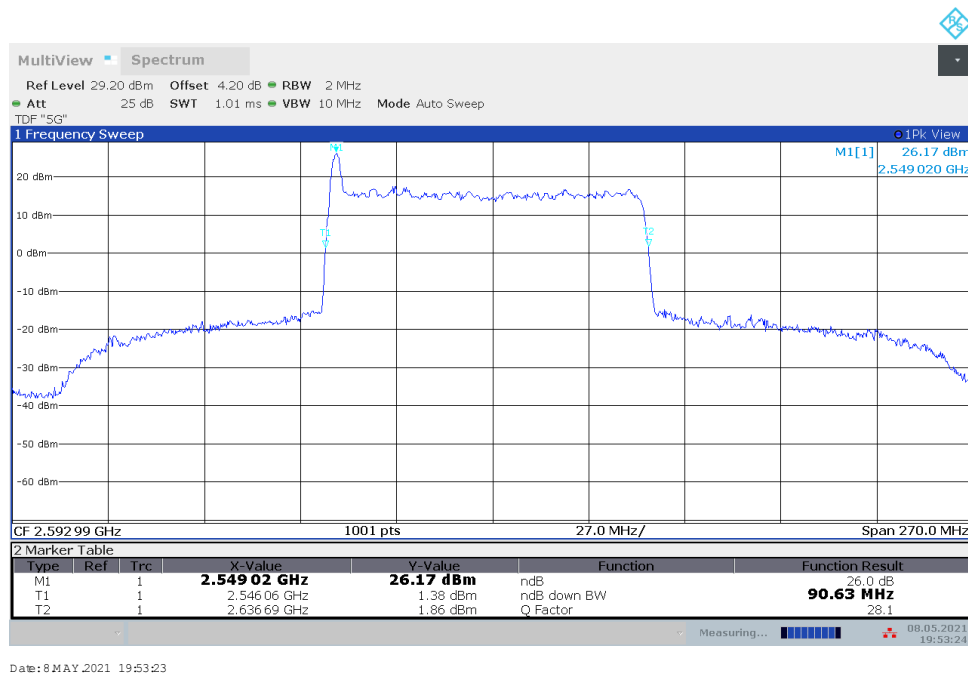
n41 ,90MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	90.630	90.630

n41 ,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



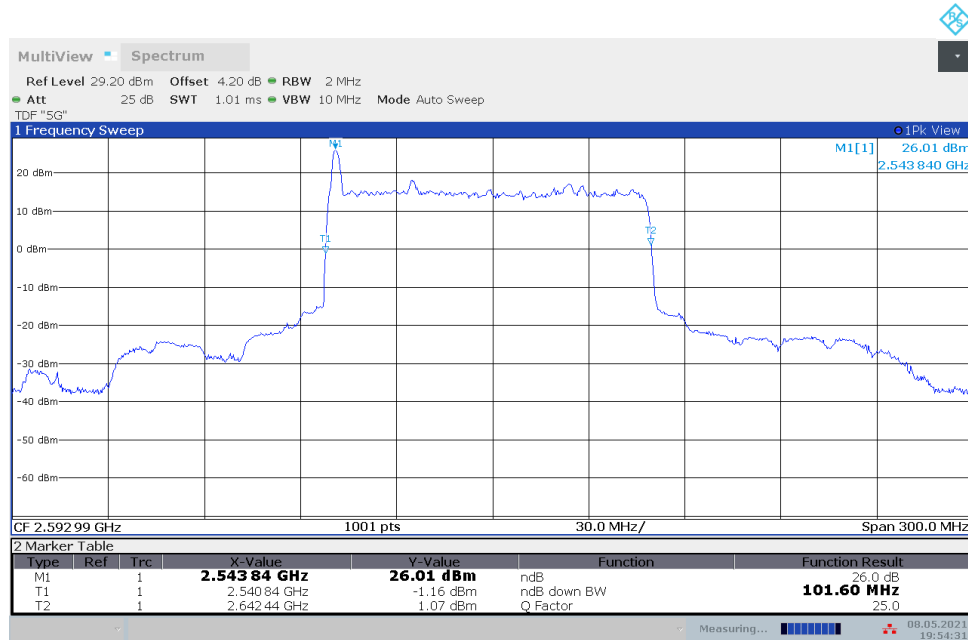
n41 ,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



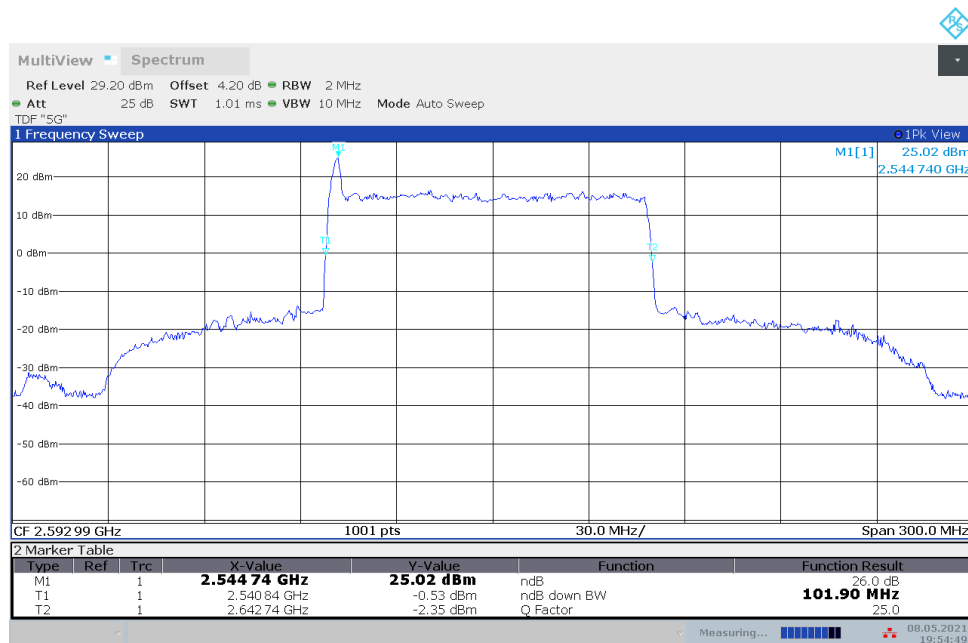
n41 ,100MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2592.99	101.600	101.900

n41 ,100MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



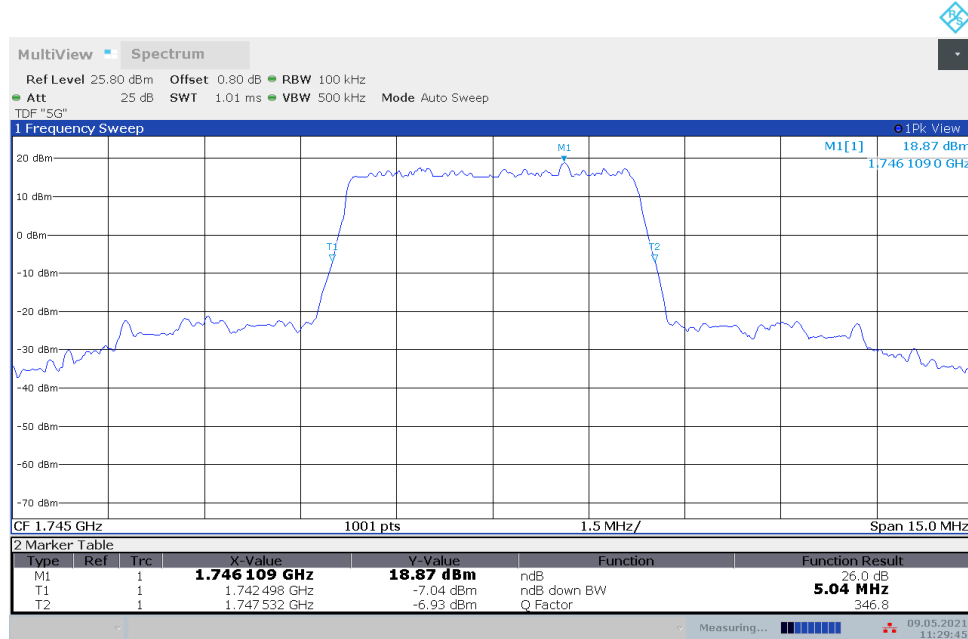
n41 ,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



LTE Band 5+NR n66 n66 ,5MHz(-26dBc)

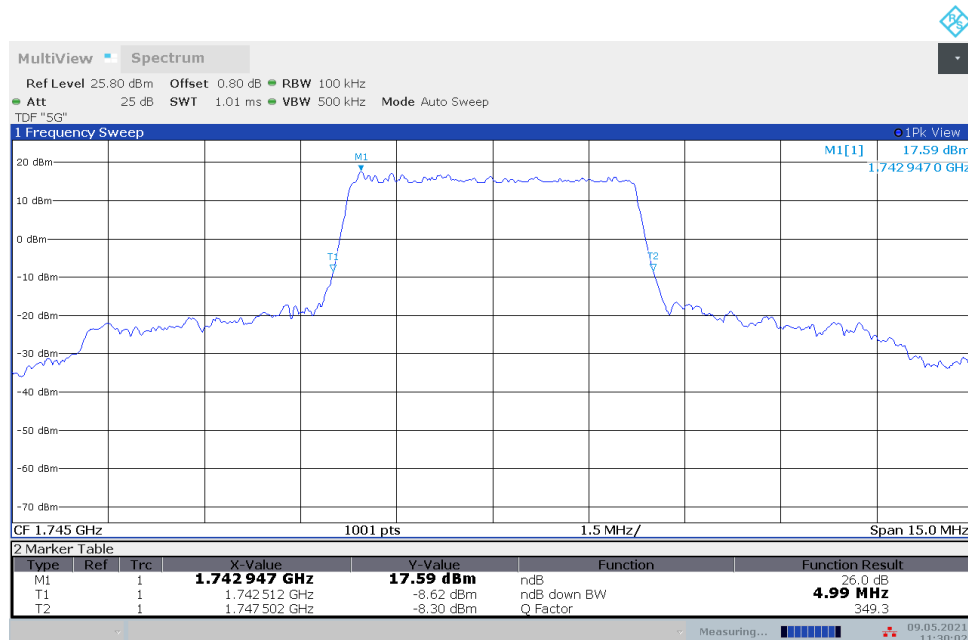
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	5.035	4.990

n66 ,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 11:29:46

n66 ,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

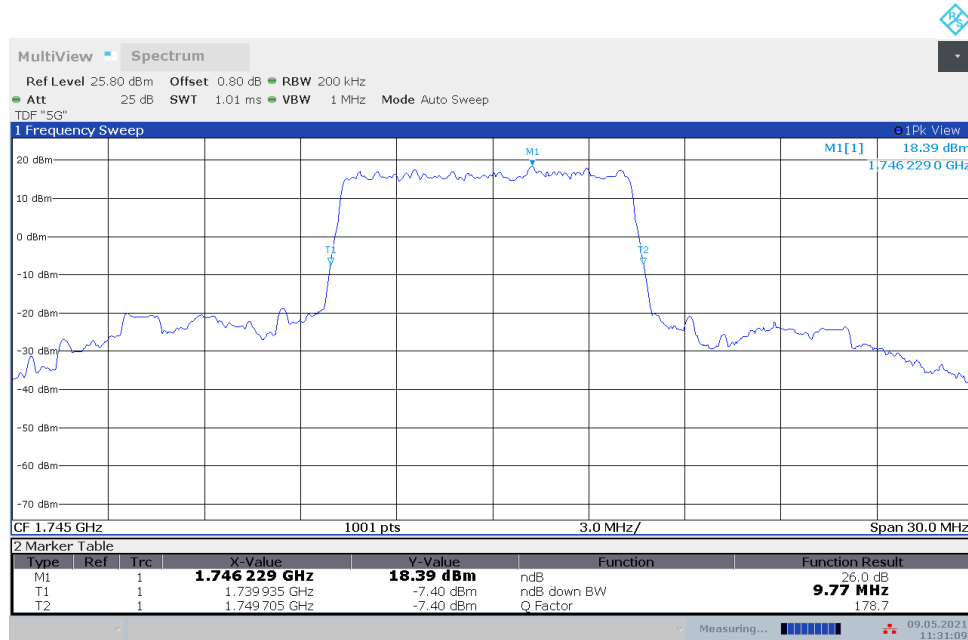


Date: 9 MAY.2021 11:30:02

n66 ,10MHz(-26dBc)

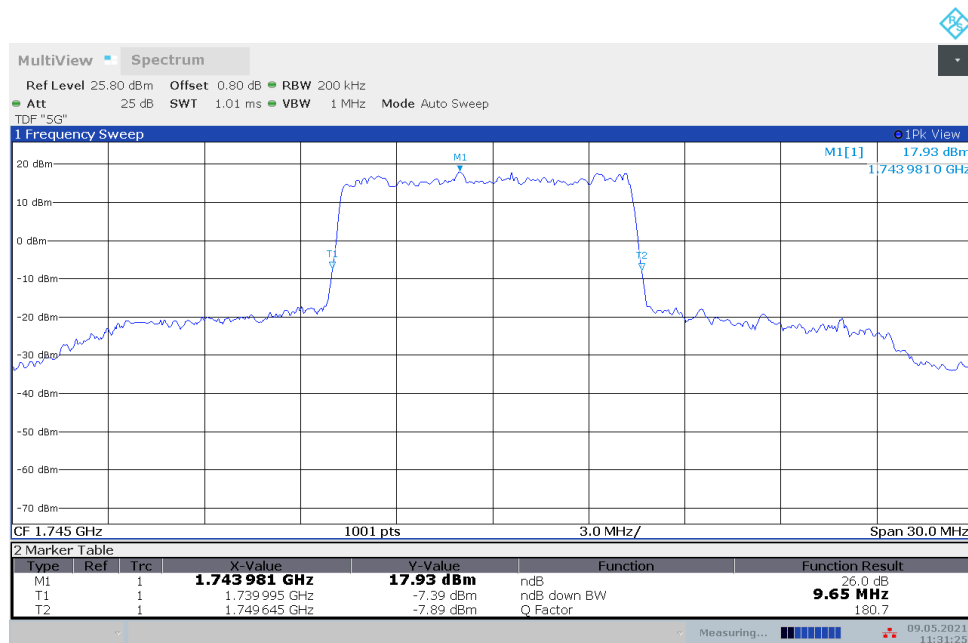
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	9.770	9.650

n66 ,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 11:31:09

n66 ,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

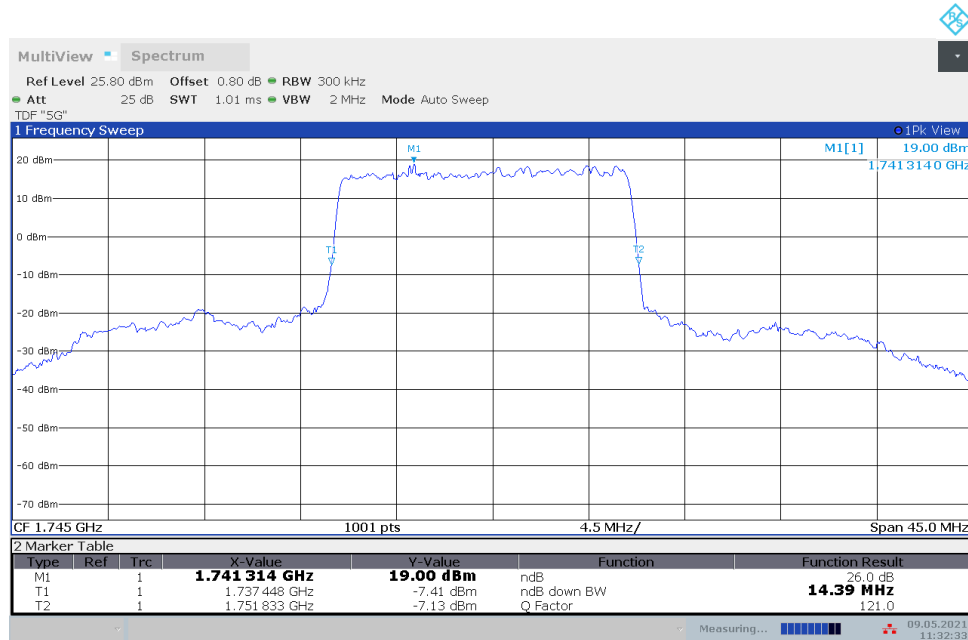


Date: 9 MAY.2021 11:31:25

n66 ,15MHz(-26dBc)

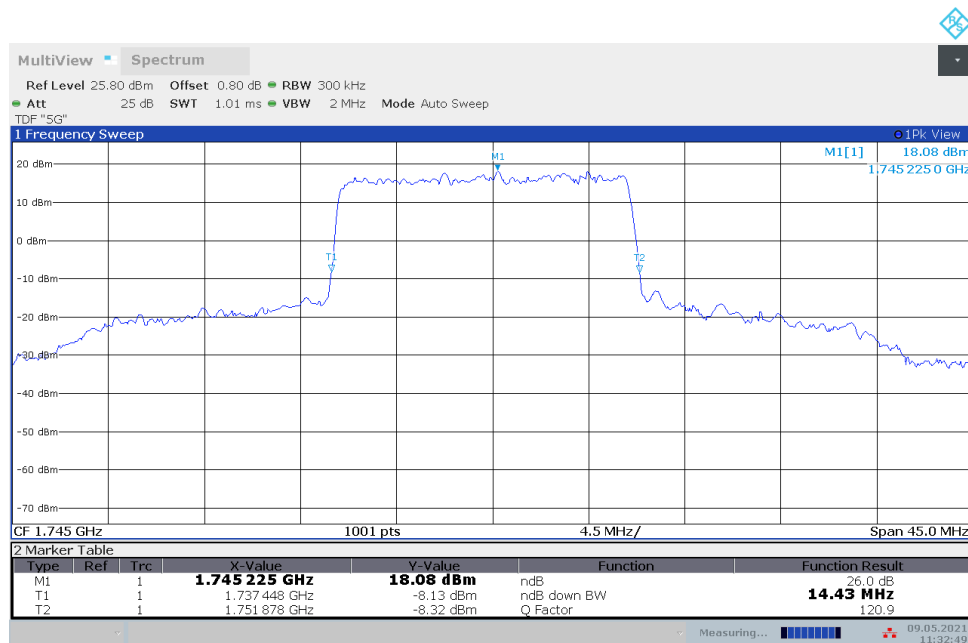
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	14.386	14.431

n66 ,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 11:32:32

n66 ,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

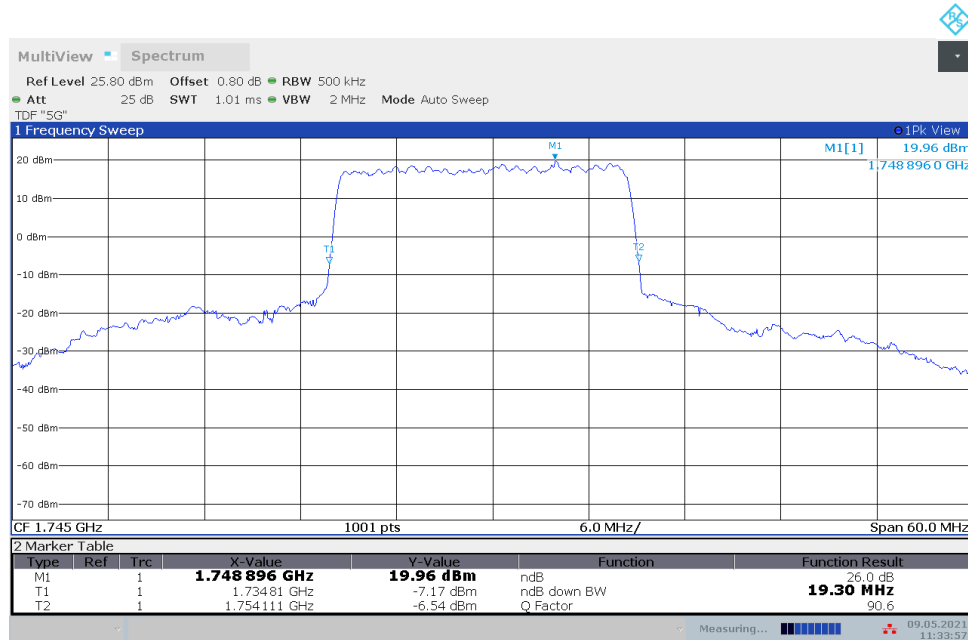


Date: 9 MAY.2021 11:32:49

n66 ,20MHz(-26dBc)

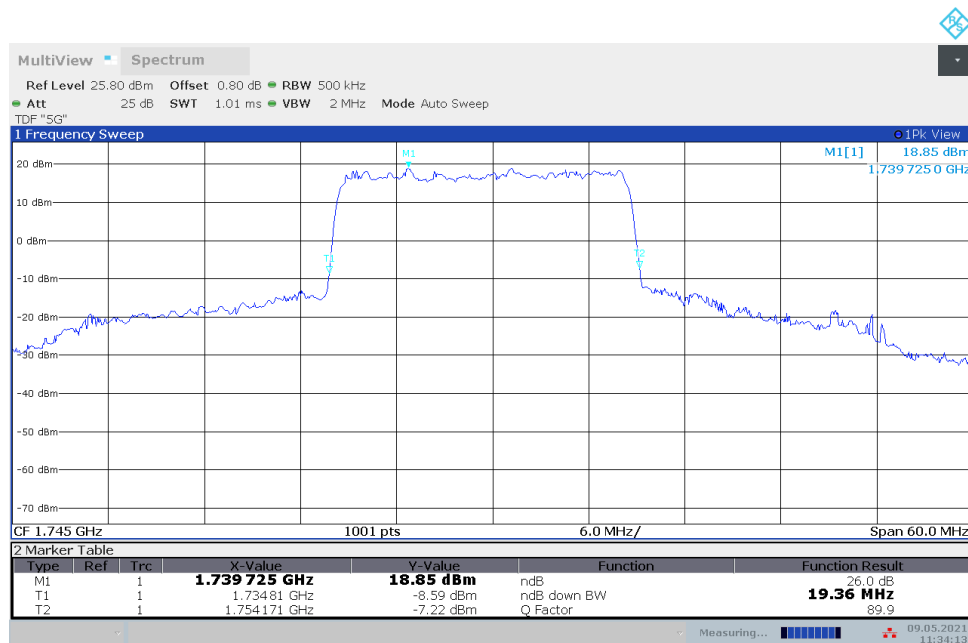
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	19.301	19.361

n66 ,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 11:33:57

n66 ,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

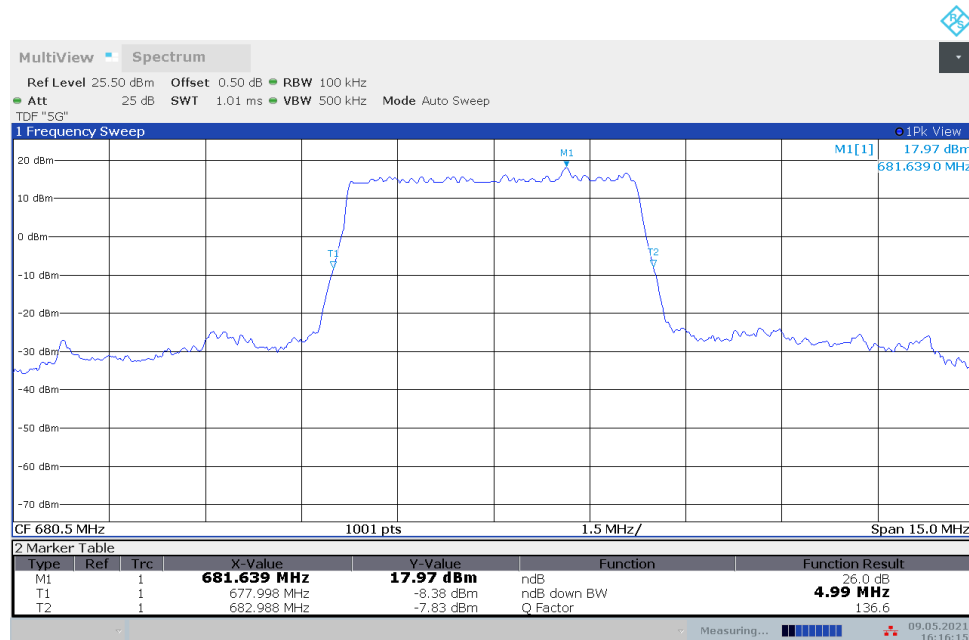


Date: 9 MAY.2021 11:34:13

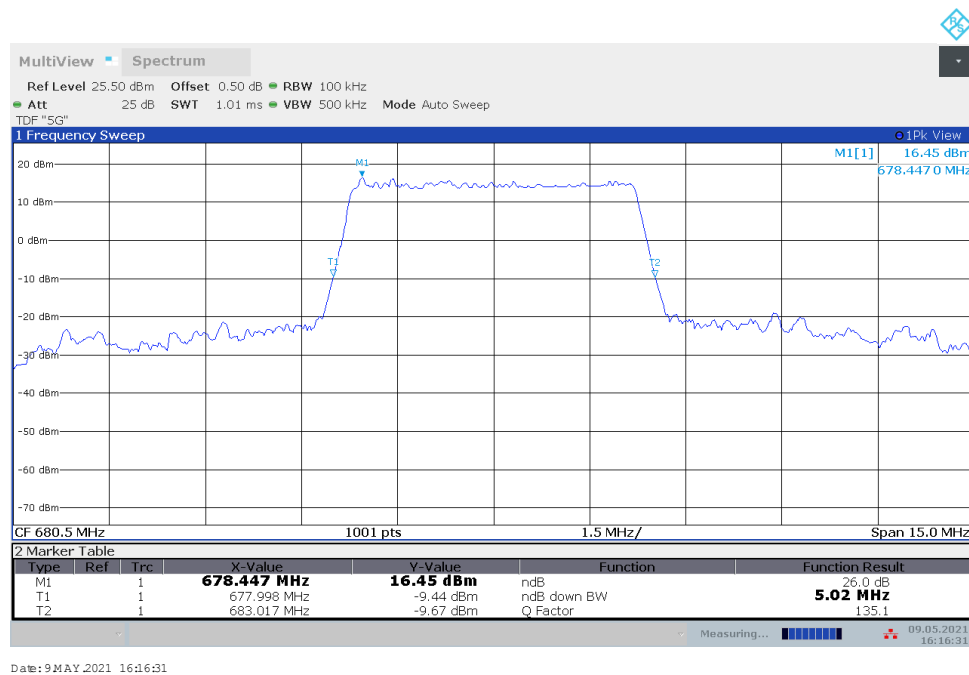
LTE Band 66+NR n71 n71 ,5MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	4.990	5.020

n71 ,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



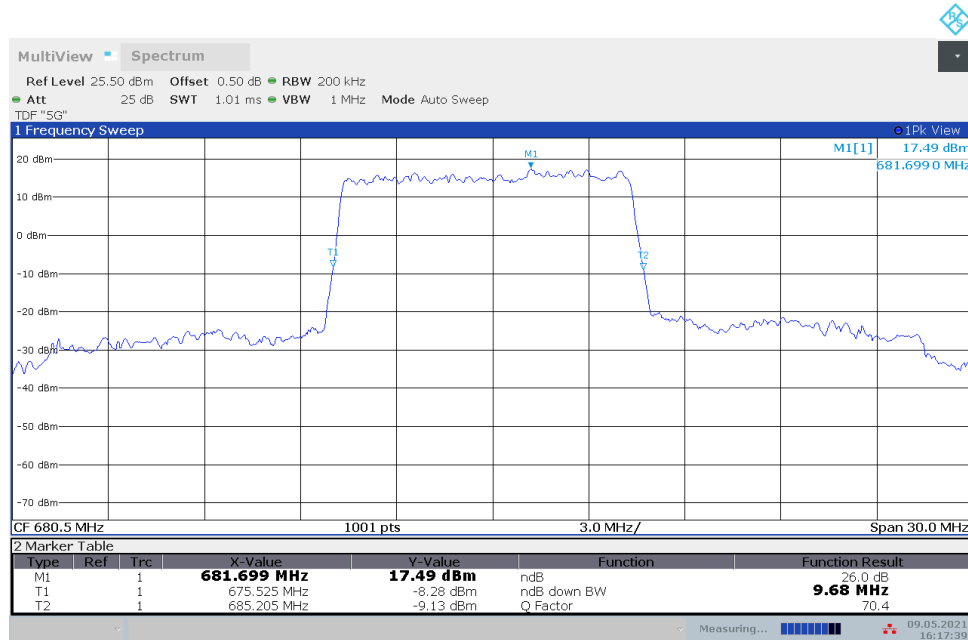
n71 ,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



n71 ,10MHz(-26dBc)

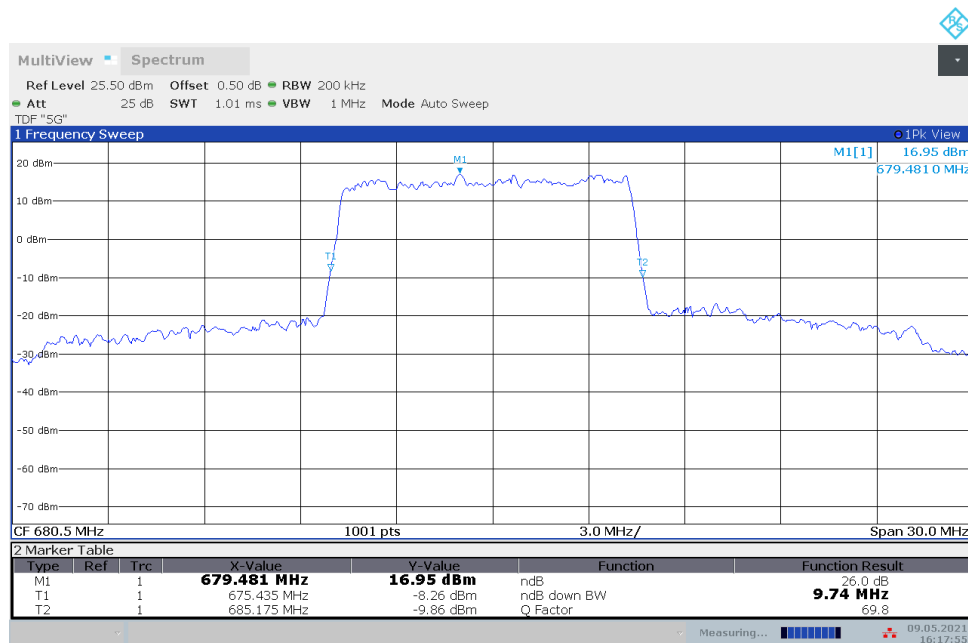
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	9.680	9.740

n71 ,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 16:17:39

n71 ,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

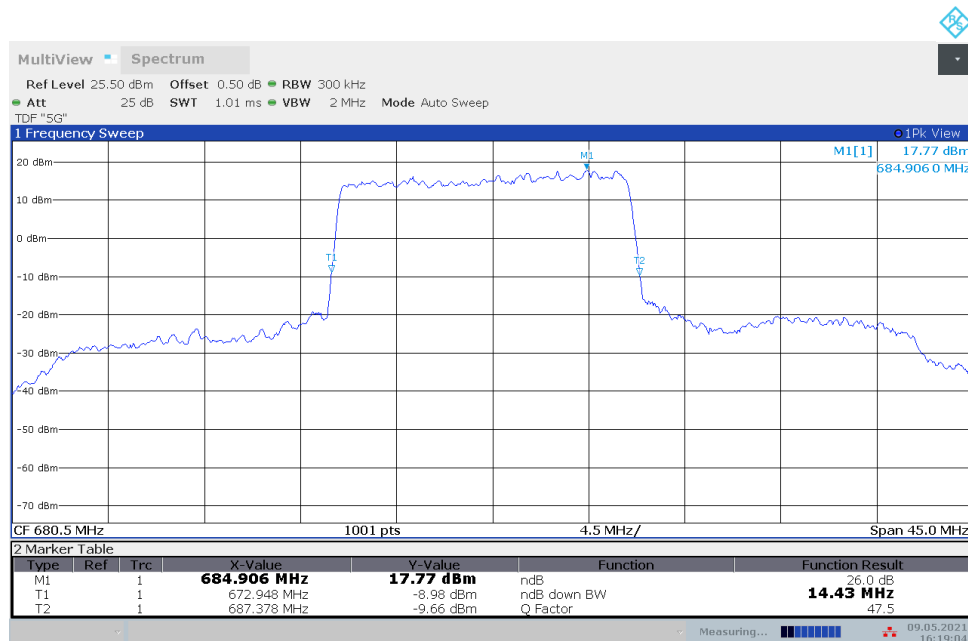


Date: 9 MAY.2021 16:17:56

n71 ,15MHz(-26dBc)

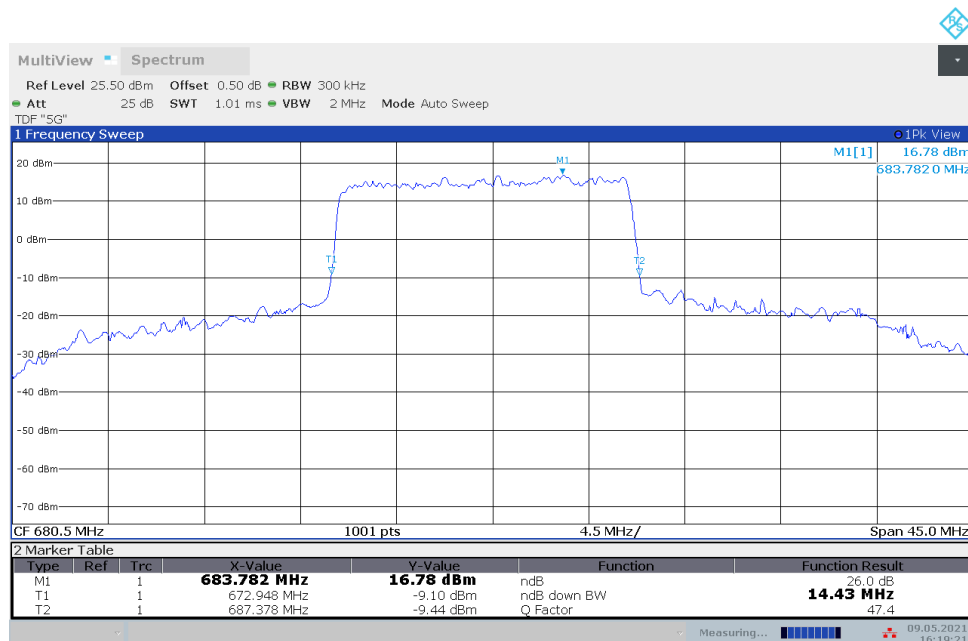
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	14.431	14.431

n71 ,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY 2021 16:19:04

n71 ,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

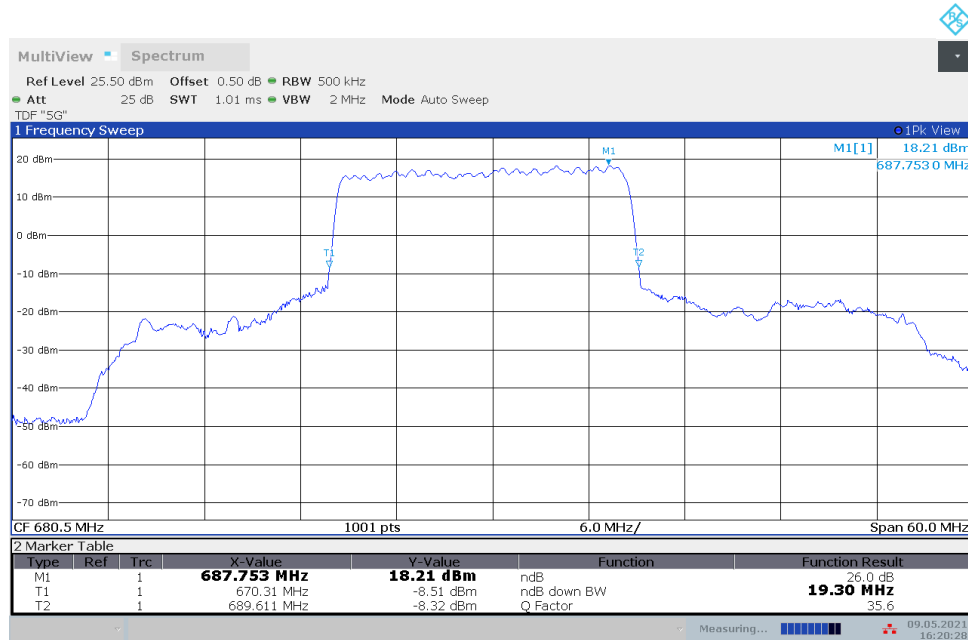


Date: 9 MAY 2021 16:19:20

n71 ,20MHz(-26dBc)

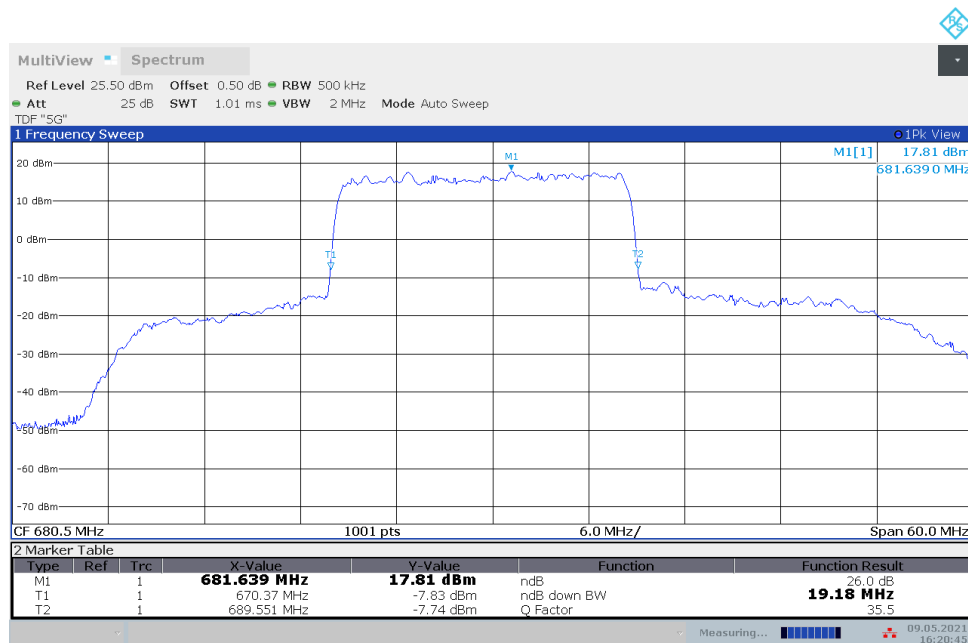
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
680.5	19.301	19.181

n71 ,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 MAY.2021 16:20:29

n71 ,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

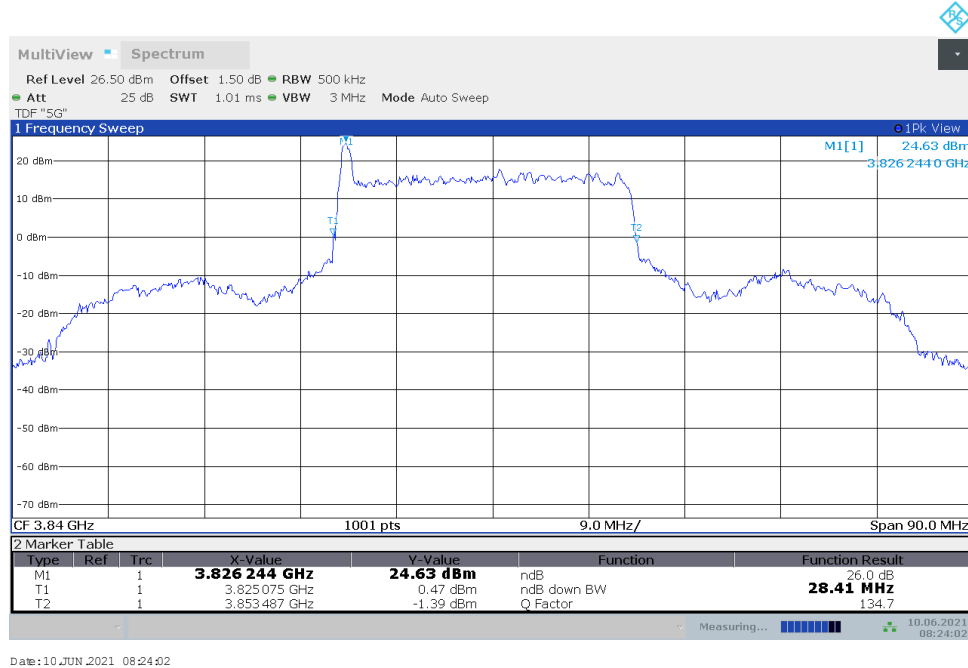


Date: 9 MAY.2021 16:20:45

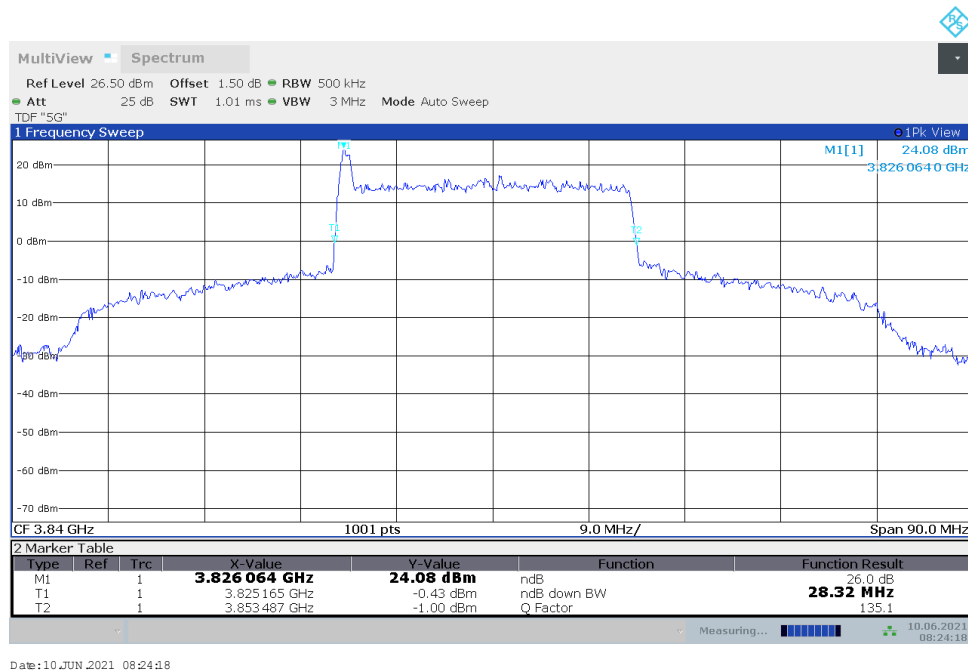
LTE Band 66+NR n77H
n77H,30MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	28.412	28.322

n77H,30MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



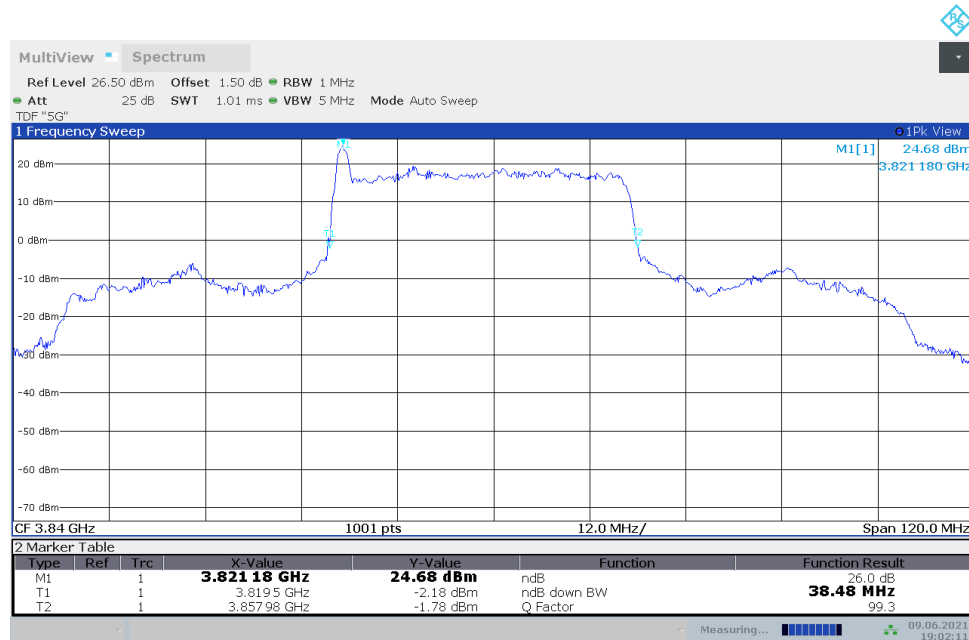
n77H,30MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



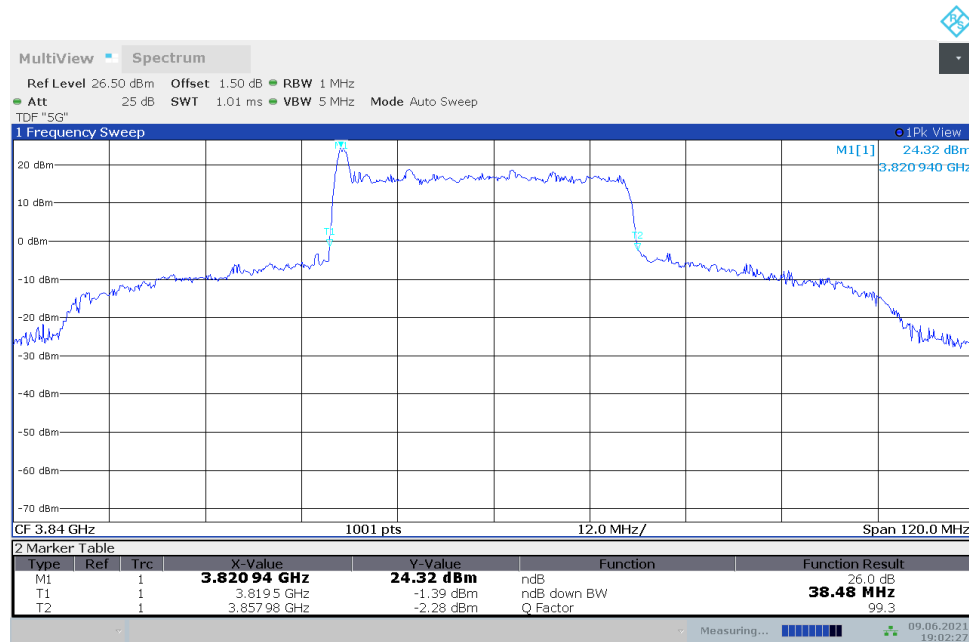
n77H,40MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	38.480	38.480

n77H,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



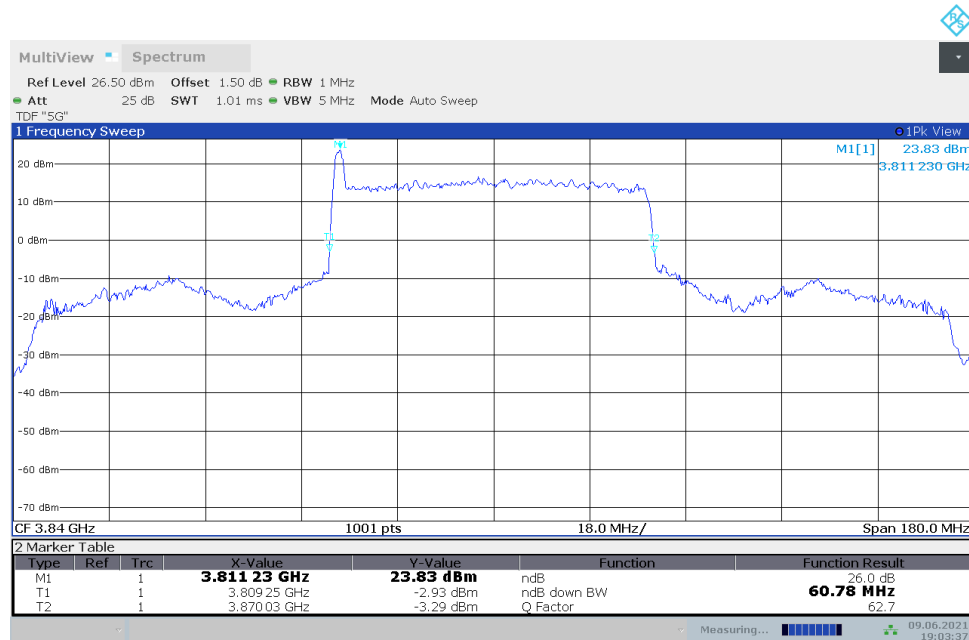
n77H,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



n77H,60MHz(-26dBc)

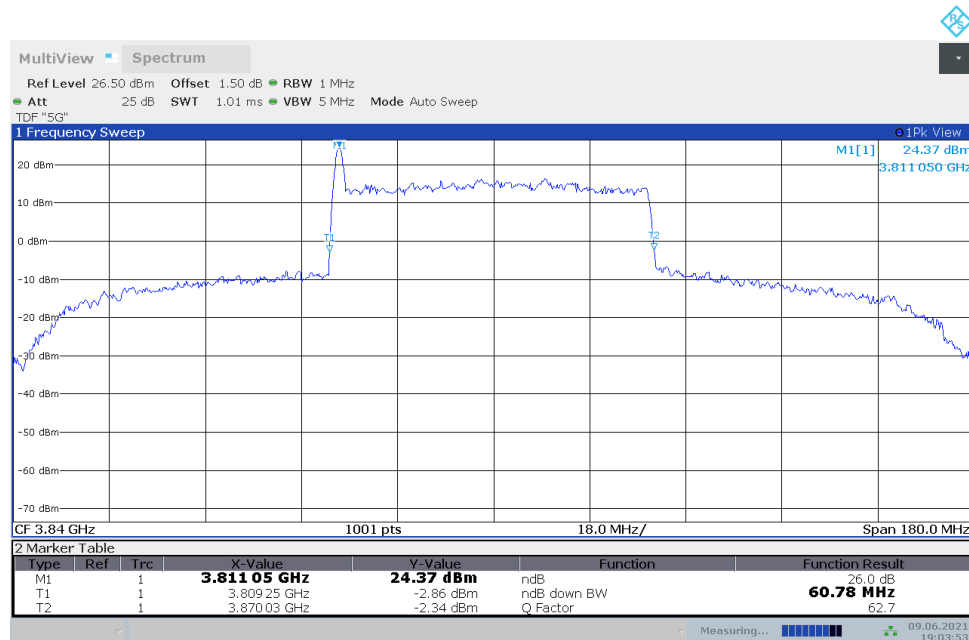
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	60.780	60.780

n77H,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 JUN 2021 19:03:37

n77H,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

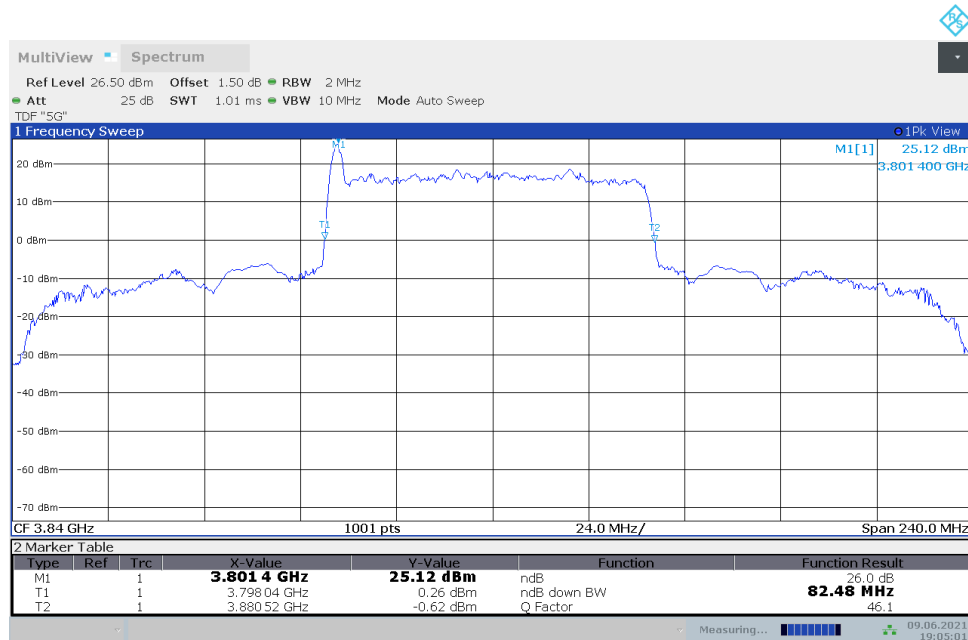


Date: 9 JUN 2021 19:03:53

n77H,80MHz(-26dBc)

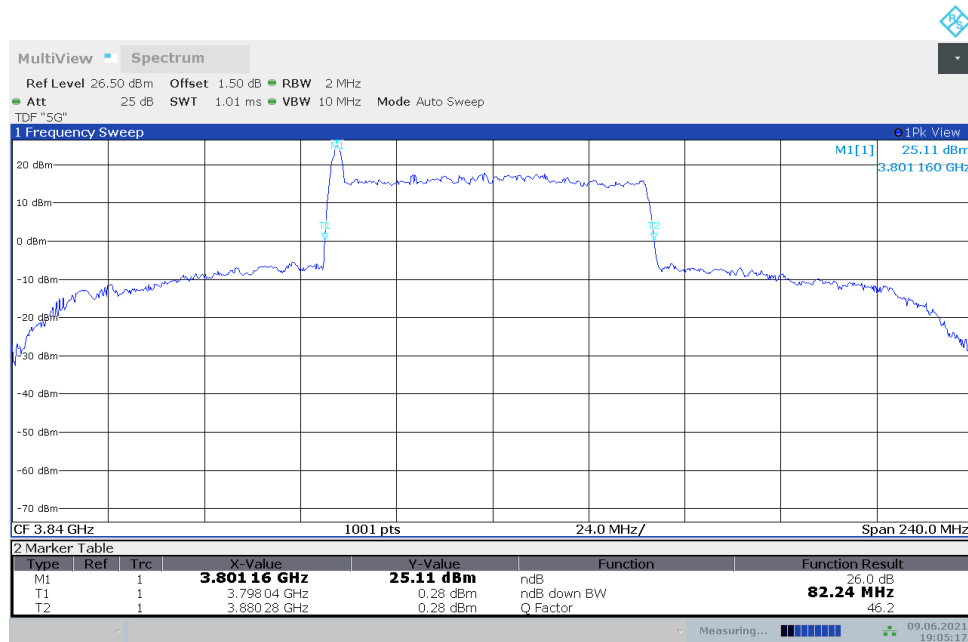
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	82.480	82.240

n77H,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 JUN 2021 19:05:01

n77H,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

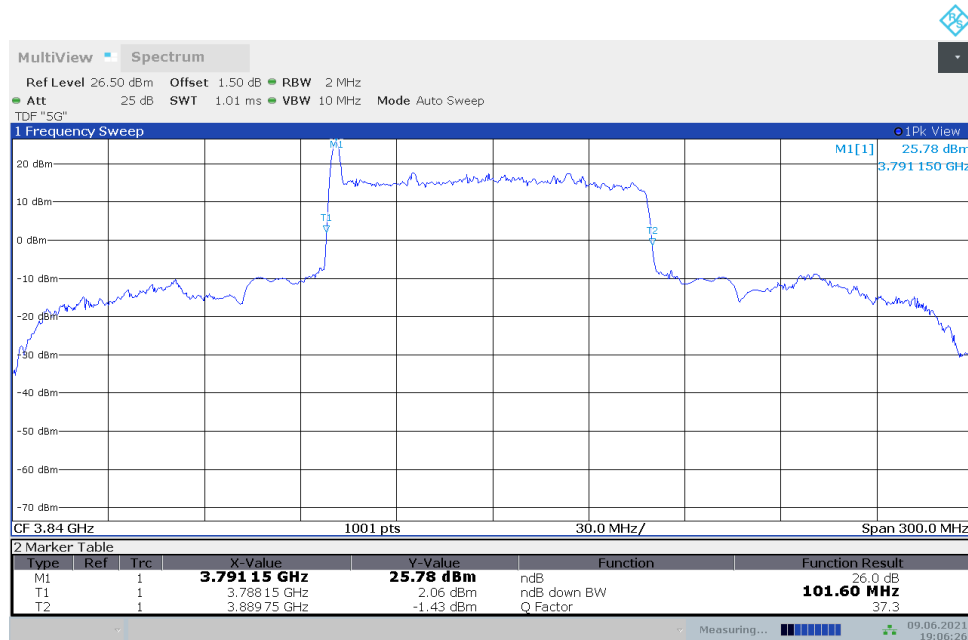


Date: 9 JUN 2021 19:05:17

n77H,100MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	101.600	101.600

n77H,100MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



Date: 9 JUN 2021 19:06:26

n77H,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



Date: 9 JUN 2021 19:06:42

A.6 Band Edge Compliance

A.6.1 Measurement limit

Part 22.917, Part 24.238 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

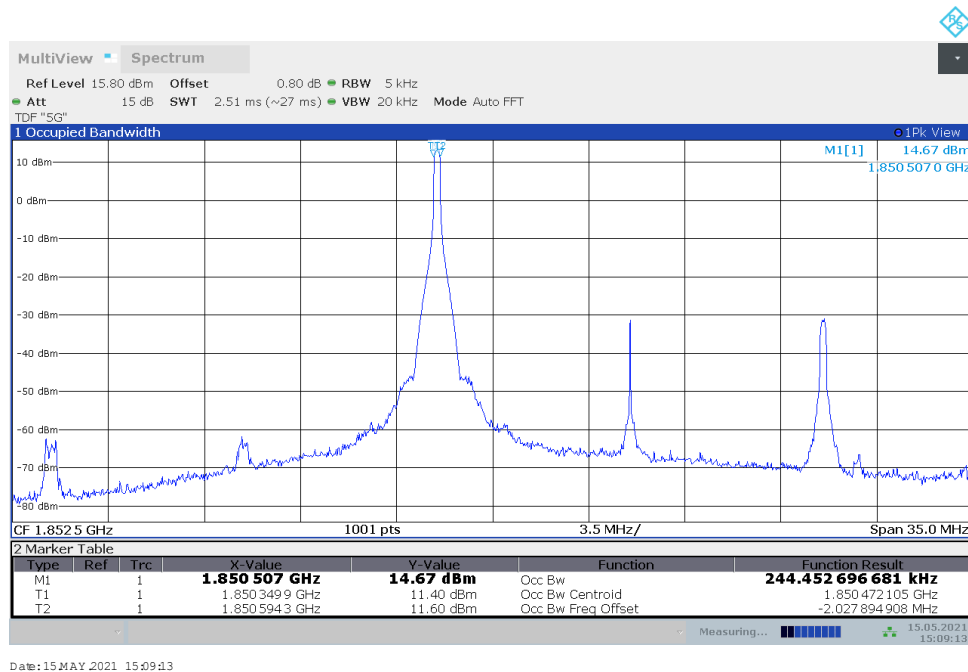
Part 27.53(m) specifies for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Part 27.53(l) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The spectrum analyzer readings are corrected by $[10 \log(1/\text{duty cycle})]$ for the non-continuous transmitting scenario.

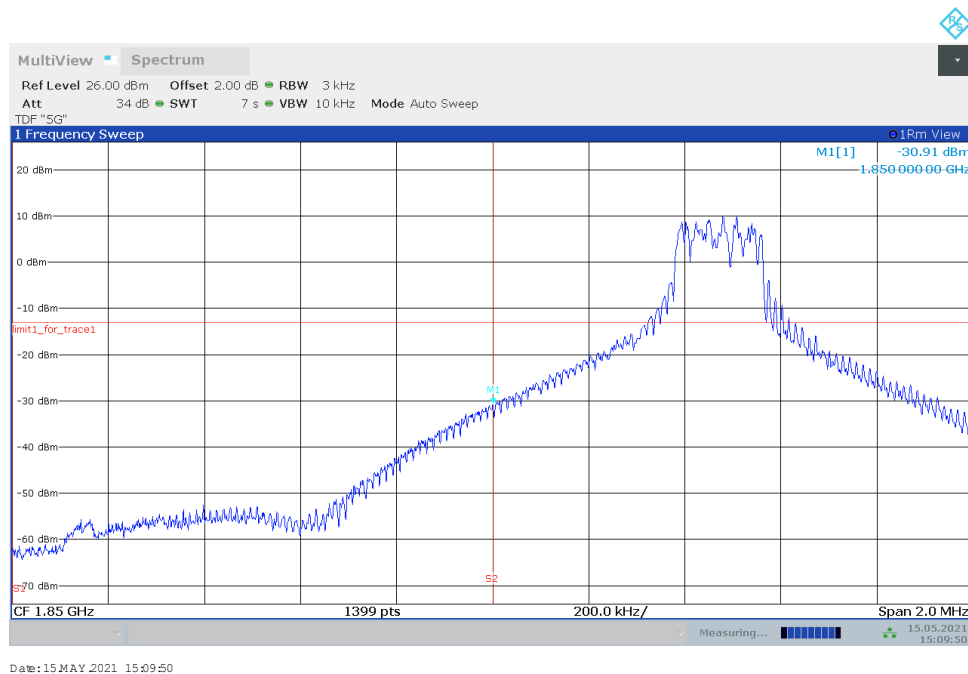
A.6.2 Measurement result

LTE Band 13+NR n2

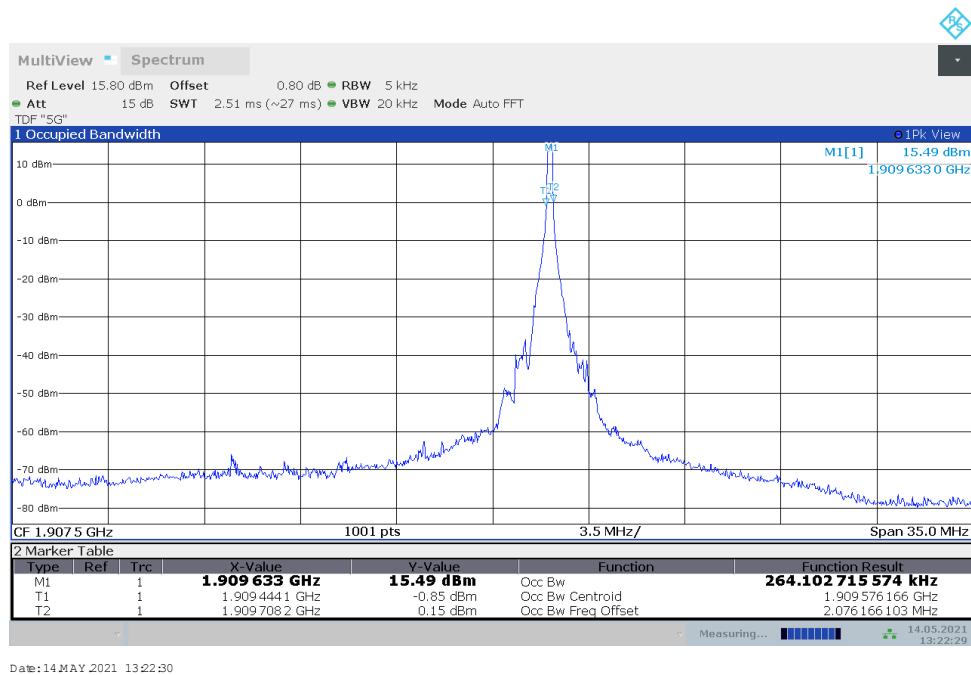
OBW: 1RB-LOW_offset



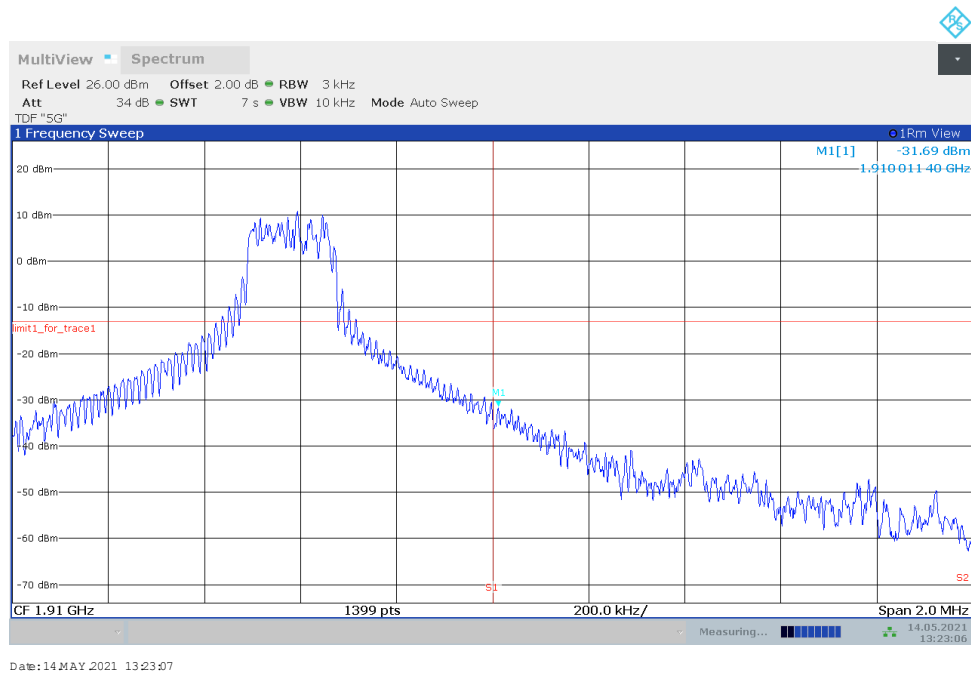
LOW BAND EDGE BLOCK-1RB-LOW_offset



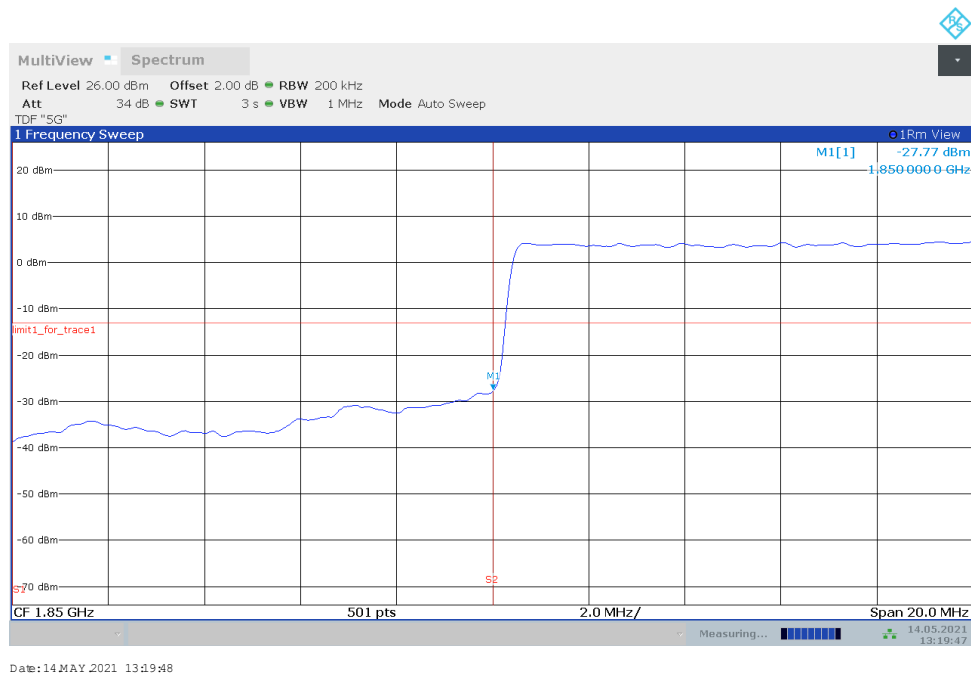
OBW: 1RB-HIGH_offset



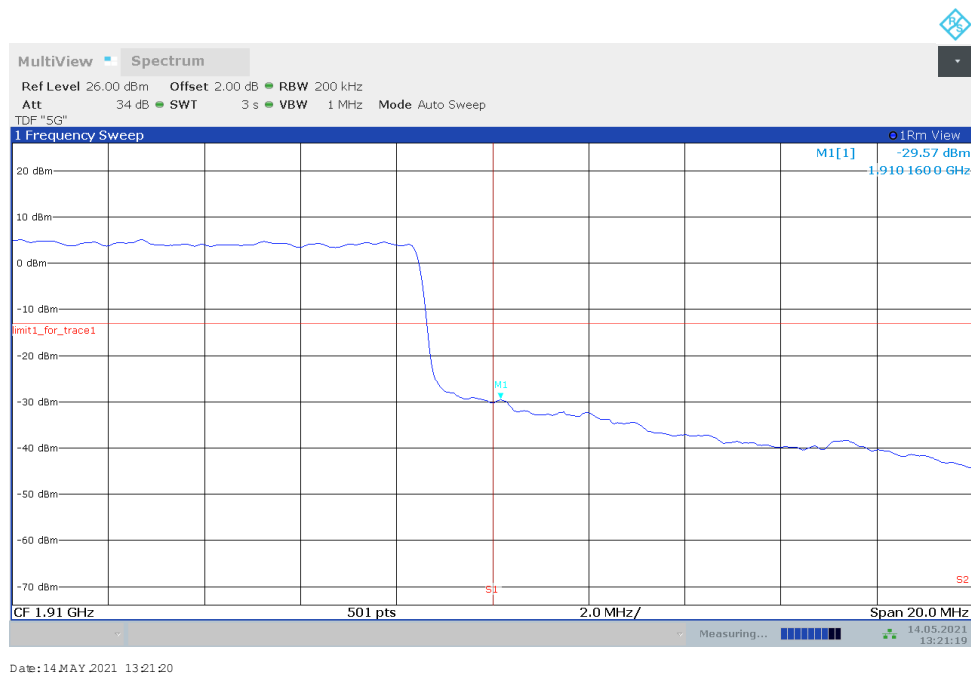
HIGH BAND EDGE BLOCK-1RB-HIGH_offset



LOW BAND EDGE BLOCK-20M-100%RB

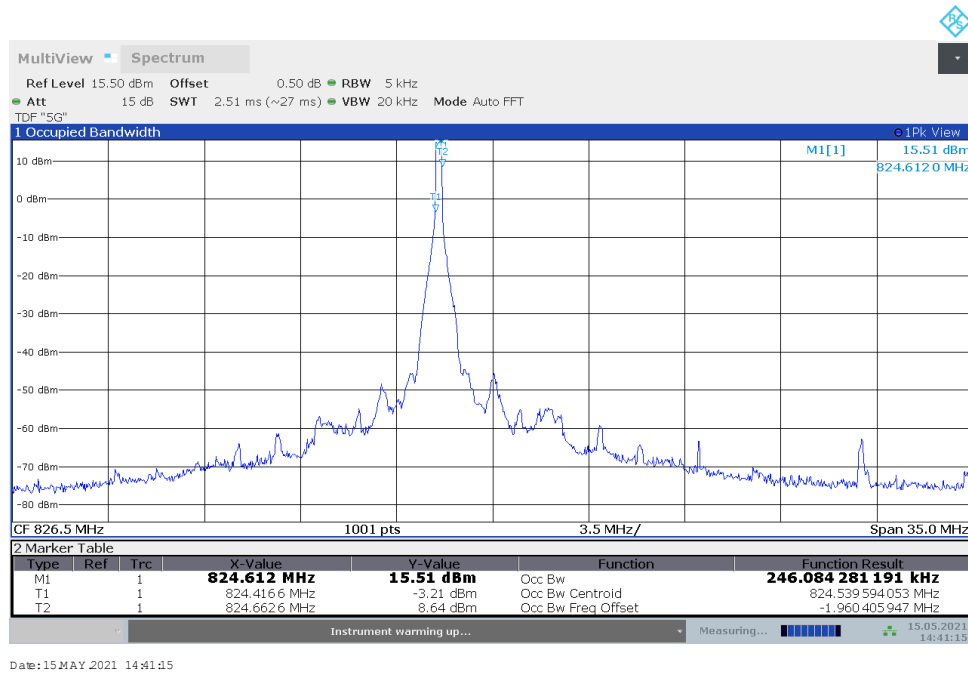


HIGH BAND EDGE BLOCK-20M-100%RB

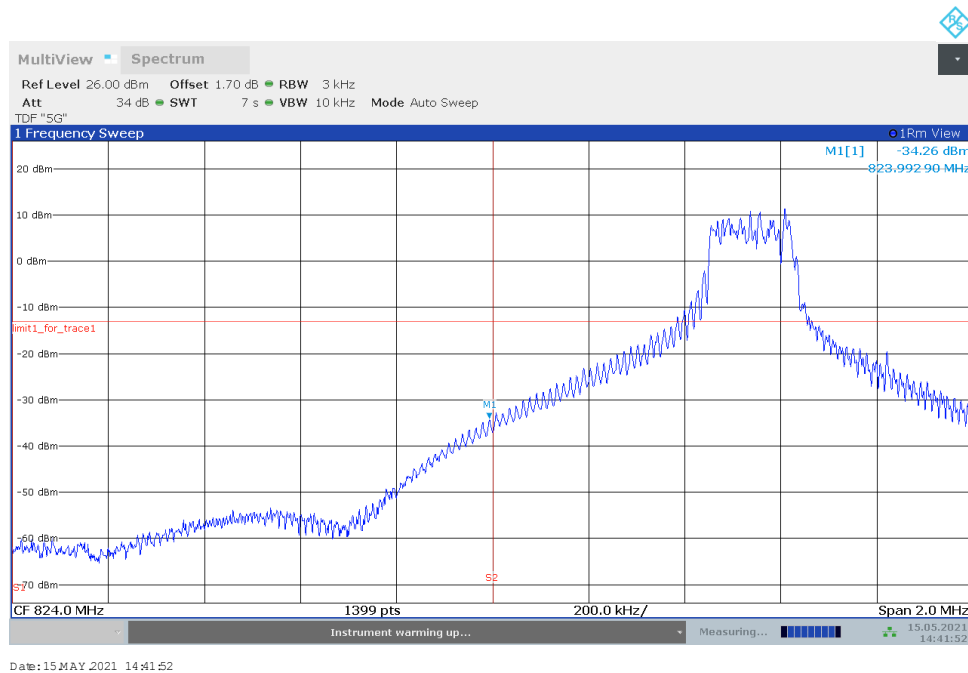


LTE Band 66+NR n5

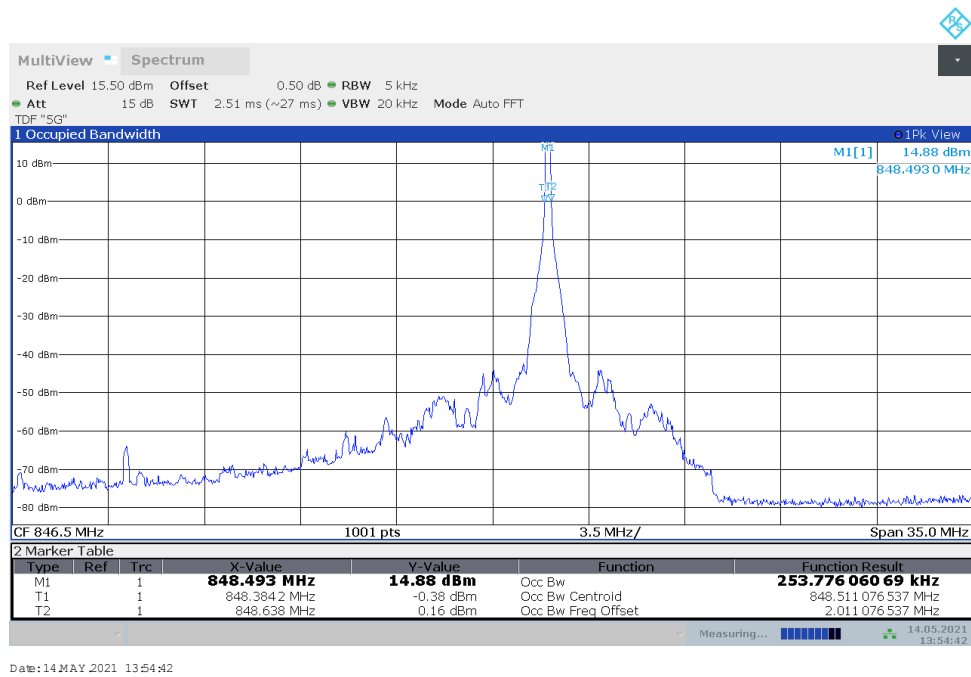
OBW: 1RB-LOW_offset



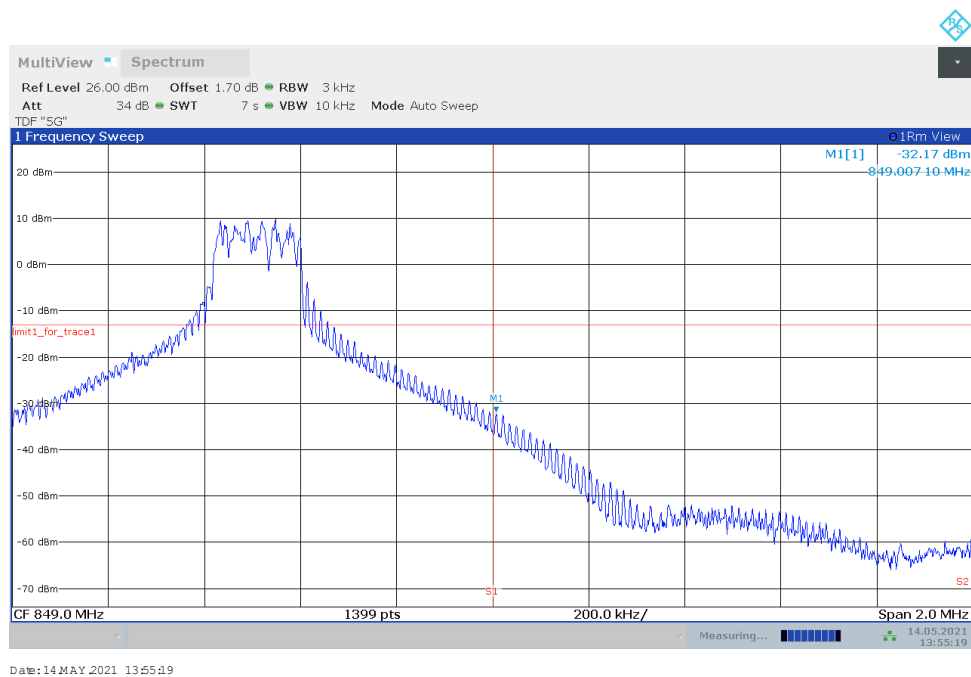
LOW BAND EDGE BLOCK-1RB-LOW_offset



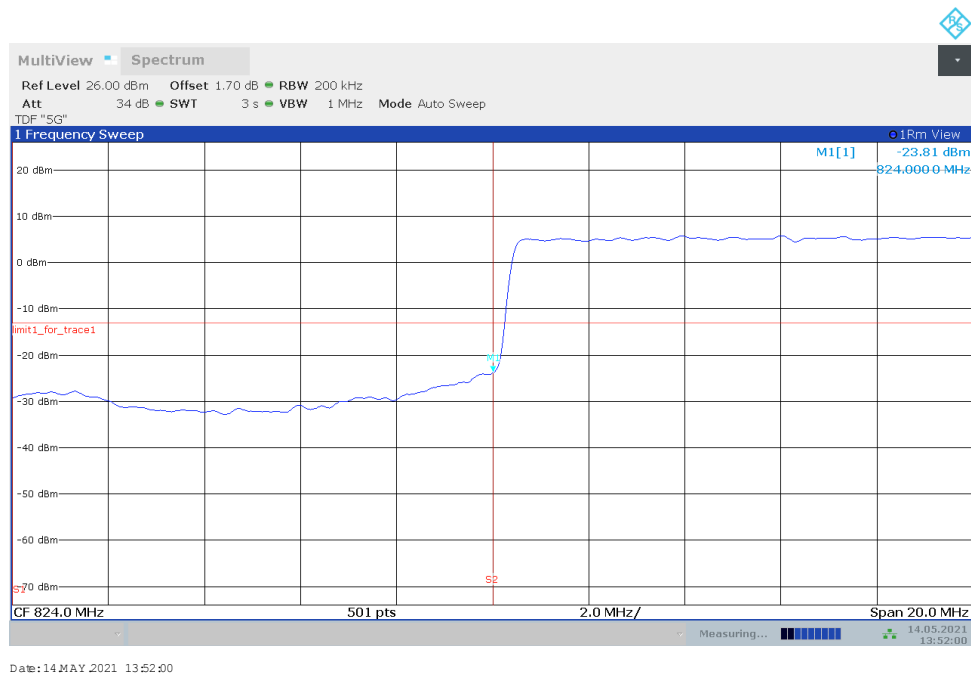
OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-HIGH_offset



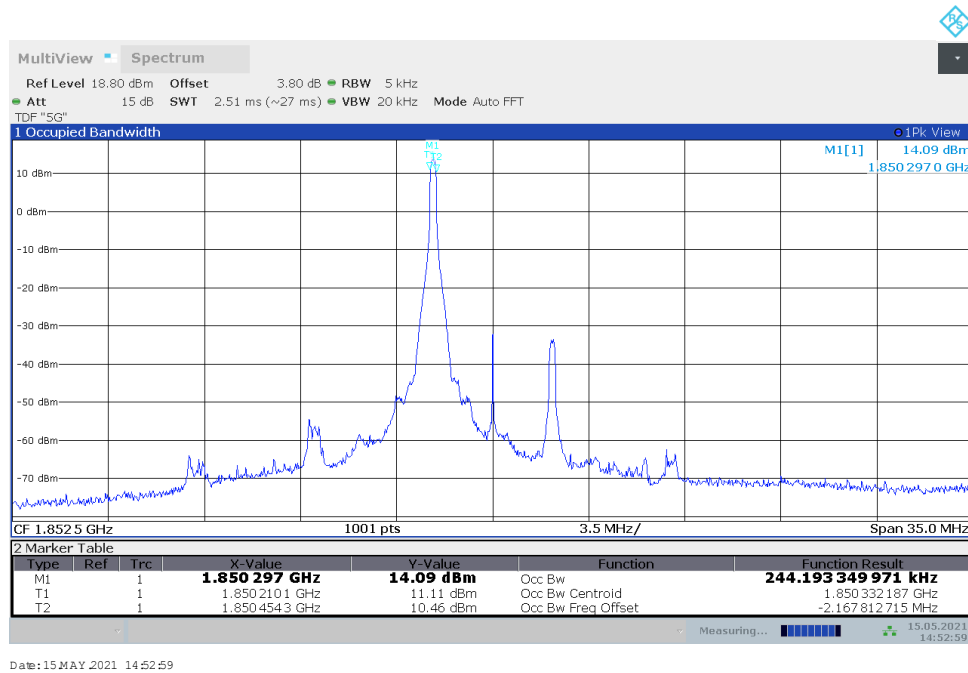
LOW BAND EDGE BLOCK-20M-100%RB



HIGH BAND EDGE BLOCK-20M-100%RB



LTE Band 66+NR n25 OBW: 1RB-LOW_offset



LOW BAND EDGE BLOCK-1RB-LOW_offset

