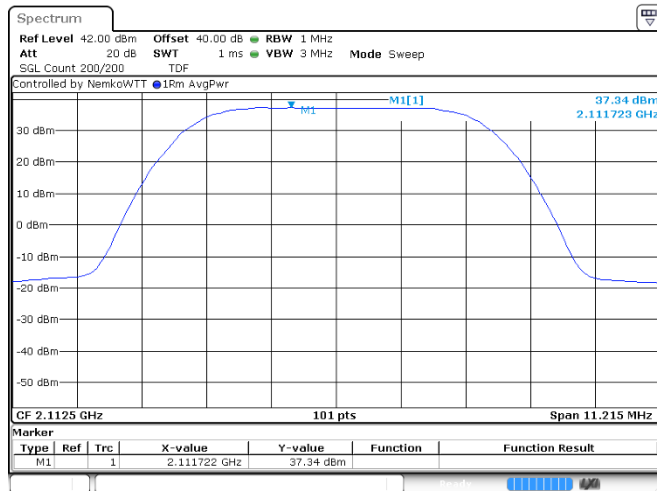
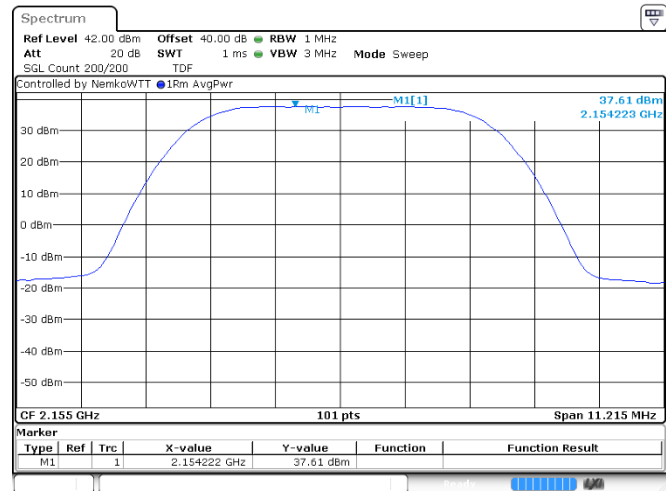


Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2132.5	64QAM	45	27.96	18.00	45.96	6.02	51.98	157.78
2155	64QAM	45	28.25	18.00	46.25	6.02	52.27	168.68
2177.5	64QAM	45	27.96	18.00	45.96	6.02	51.98	157.78
2132.5	256QAM	45	27.93	18.00	45.93	6.02	51.95	156.70
2155	256QAM	45	28.25	18.00	46.25	6.02	52.27	168.68
2177.5	256QAM	45	27.86	18.00	45.86	6.02	51.88	154.19
2132.5	1024QAM	45	27.95	18.00	45.95	6.02	51.97	157.42
2155	1024QAM	45	28.07	18.00	46.07	6.02	52.09	161.83
2177.5	1024QAM	45	27.93	18.00	45.93	6.02	51.95	156.70

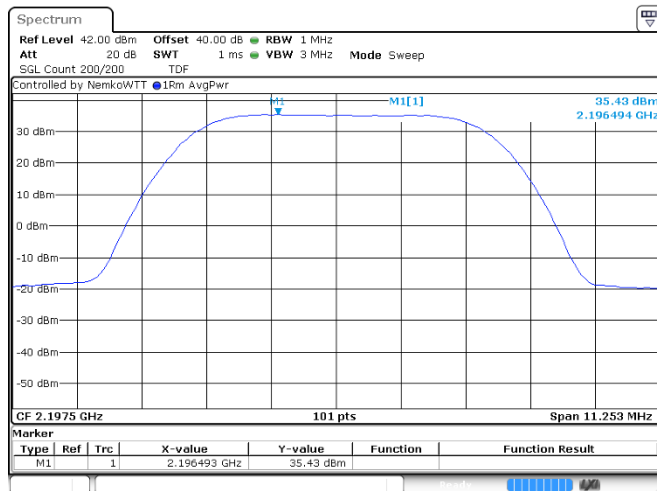
Sample plots; EIRP density, 1024QAM:



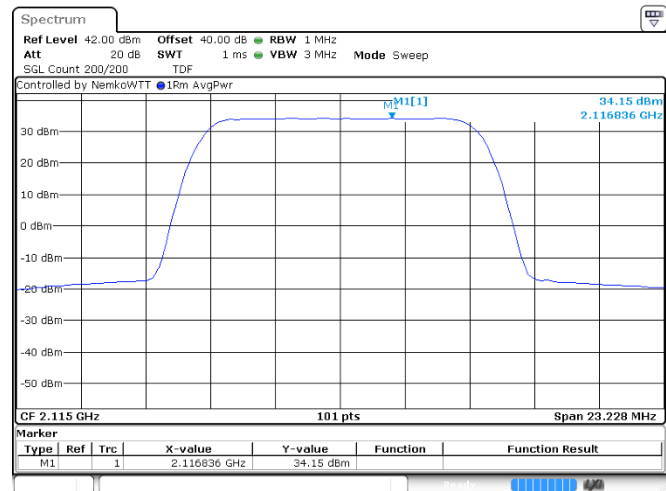
Average PSD, TX 2112.5 MHz, BW: 5MHz, MOD: 1024QAM



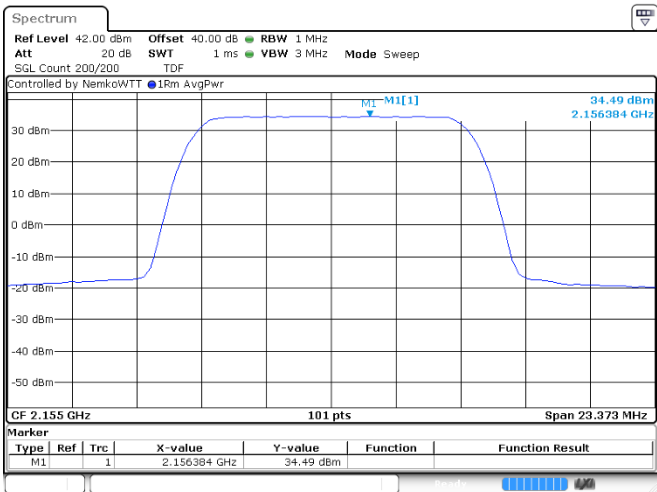
Average PSD, TX 2155 MHz, BW: 5MHz, MOD: 1024QAM



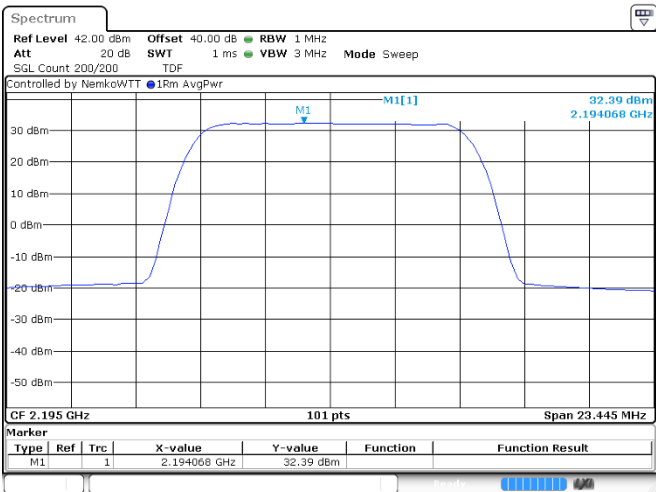
Average PSD, TX 2197.5 MHz, BW: 5MHz, MOD: 1024QAM



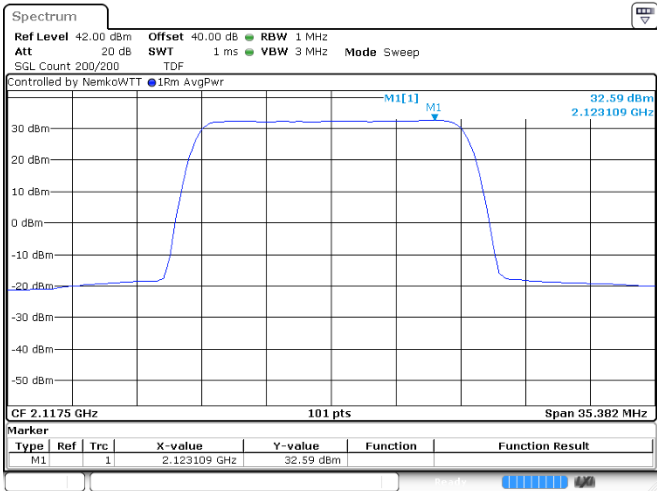
Average PSD, TX 2115 MHz, BW: 10MHz, MOD: 1024QAM



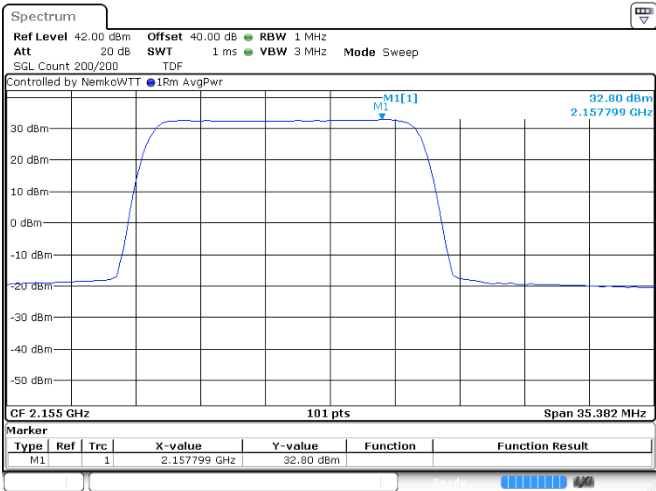
Average PSD, TX: 2155 MHz, BW: 10MHz, MOD: 1024QAM



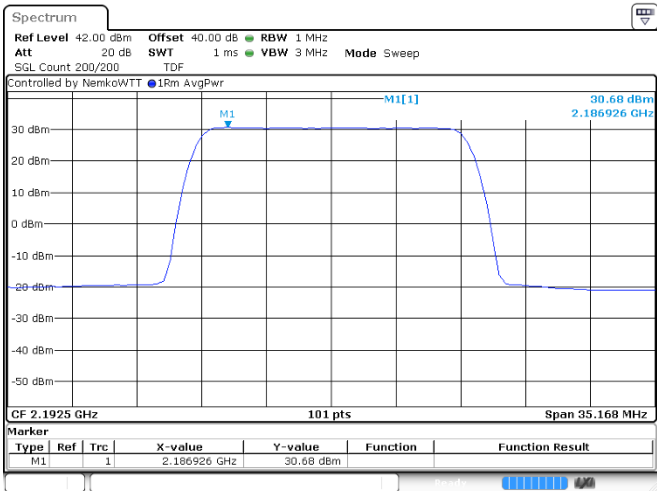
Average PSD, TX: 2195 MHz, BW: 10MHz, MOD: 1024QAM



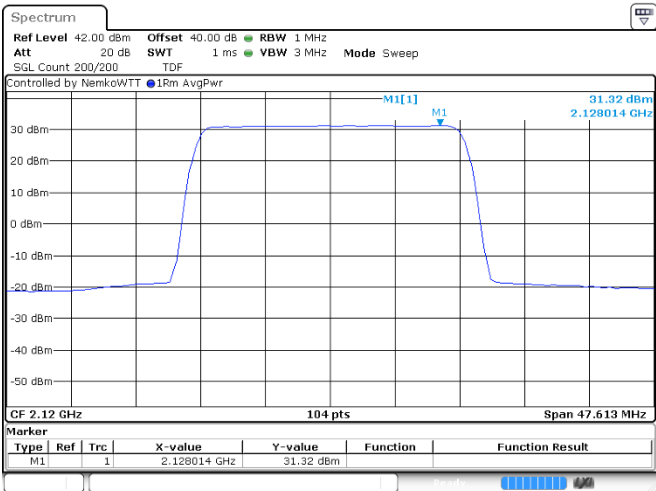
Average PSD, TX: 2117.5 MHz, BW: 15MHz, MOD: 1024QAM



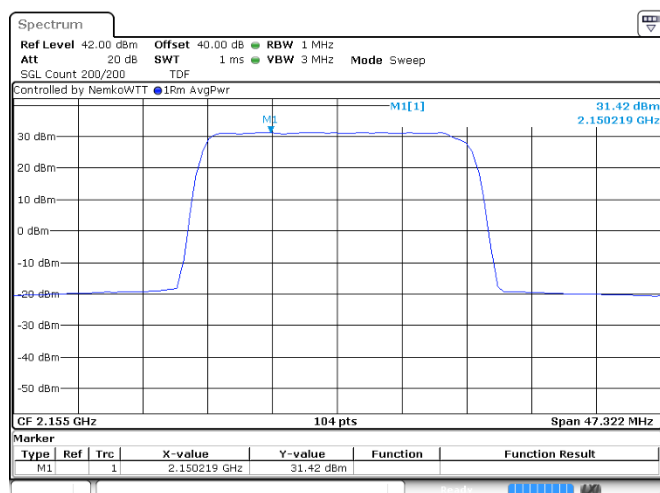
Average PSD, TX: 2155 MHz, BW: 15MHz, MOD: 1024QAM



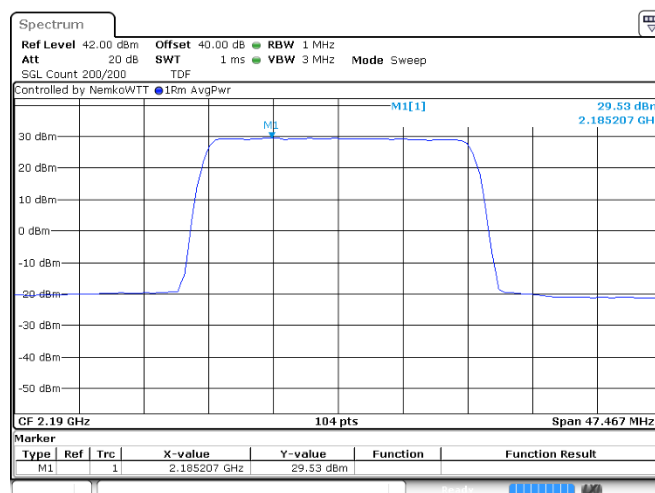
Average PSD, TX: 2192.5 MHz, BW: 15MHz, MOD: 1024QAM



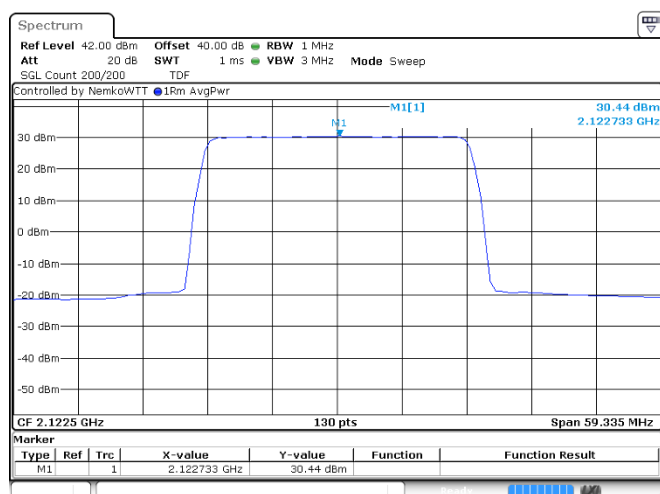
Average PSD, TX: 2120 MHz, BW: 20MHz, MOD: 1024QAM



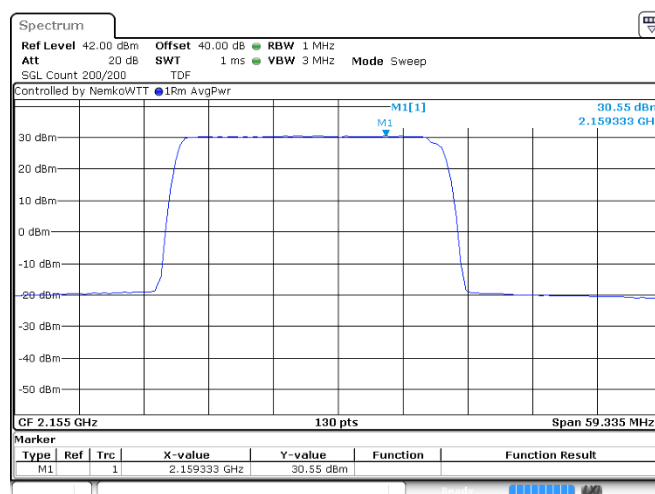
Average PSD, TX: 2155 MHz, BW: 20MHz, MOD: 1024QAM



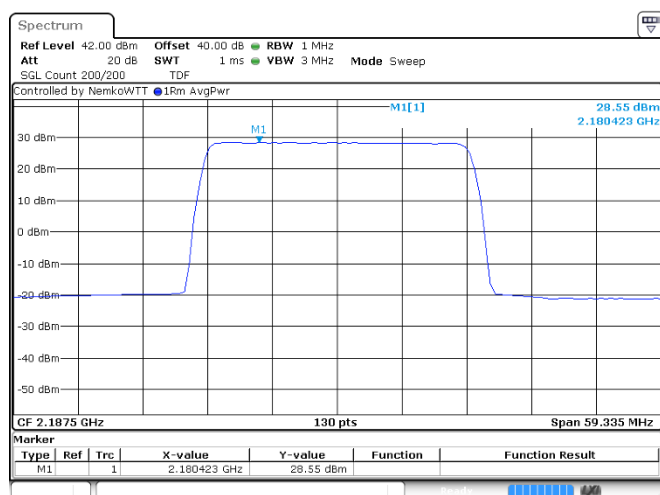
Average PSD, TX: 2190 MHz, BW: 20MHz, MOD: 1024QAM



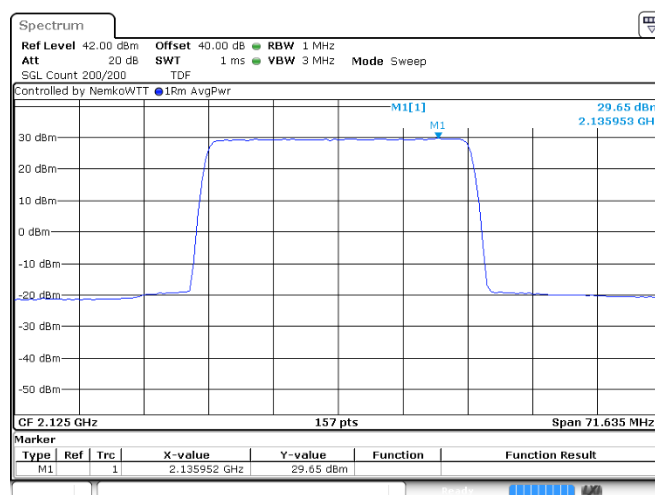
Average PSD, TX: 2122.5 MHz, BW: 25MHz, MOD: 1024QAM



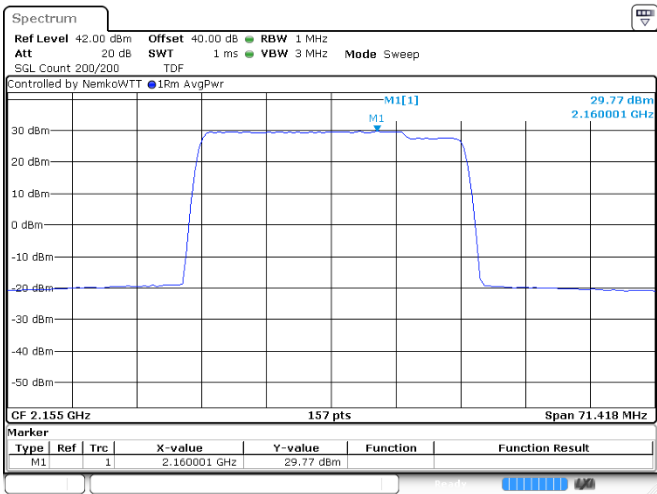
Average PSD, TX: 2155 MHz, BW: 25MHz, MOD: 1024QAM



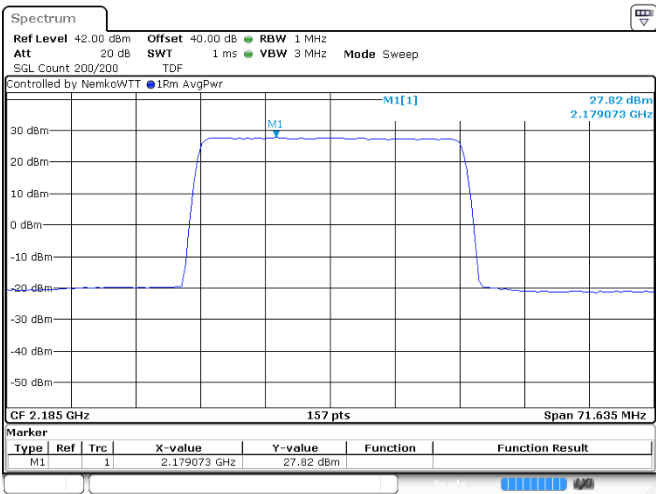
Average PSD, TX: 2187.5 MHz, BW: 25MHz, MOD: 1024QAM



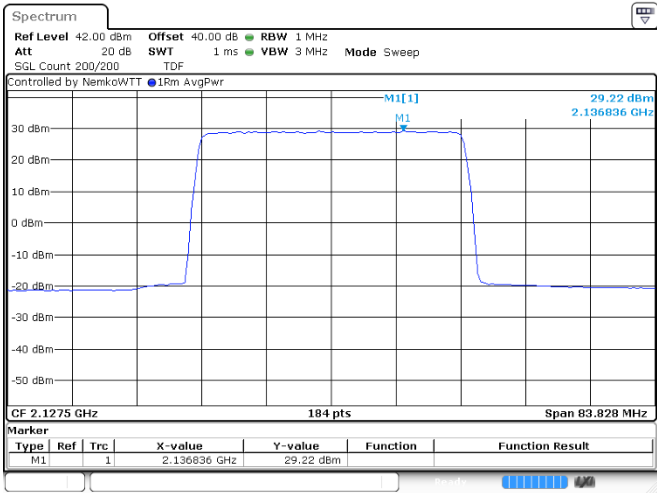
Average PSD, TX: 2125 MHz, BW: 30MHz, MOD: 1024QAM



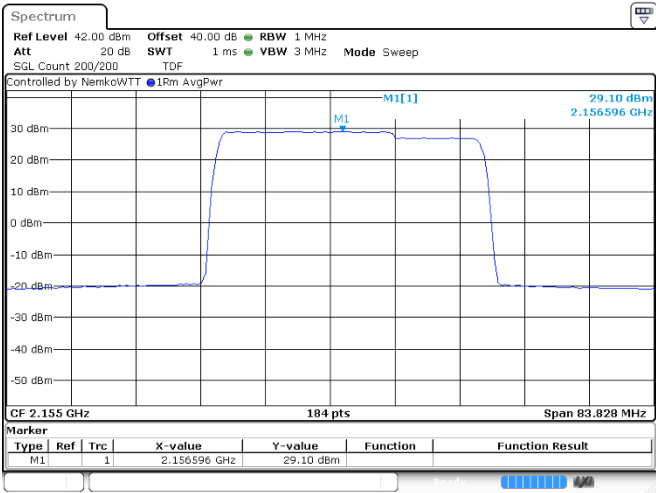
Average PSD, TX: 2155 MHz, BW: 30MHz, MOD: 1024QAM



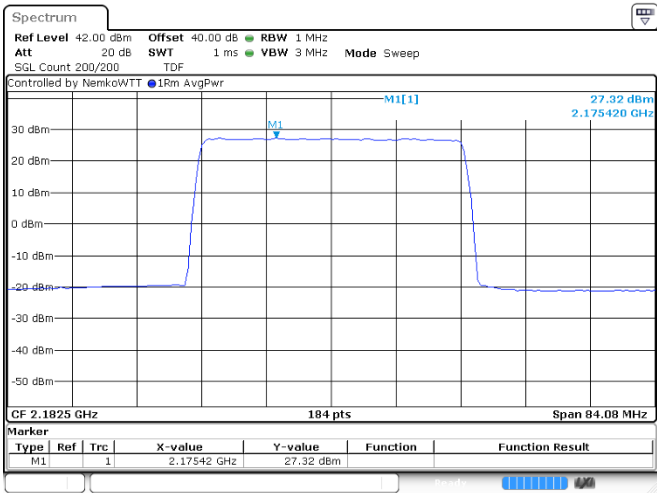
Average PSD, TX: 2185 MHz, BW: 30MHz, MOD: 1024QAM



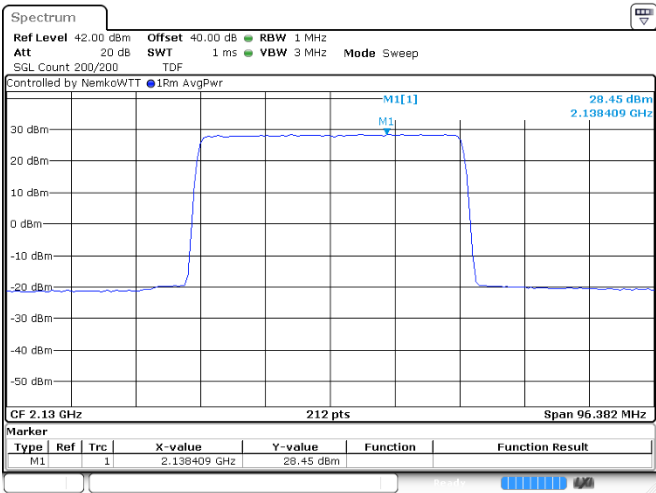
Average PSD, TX: 2127.5 MHz, BW: 35MHz, MOD: 1024QAM



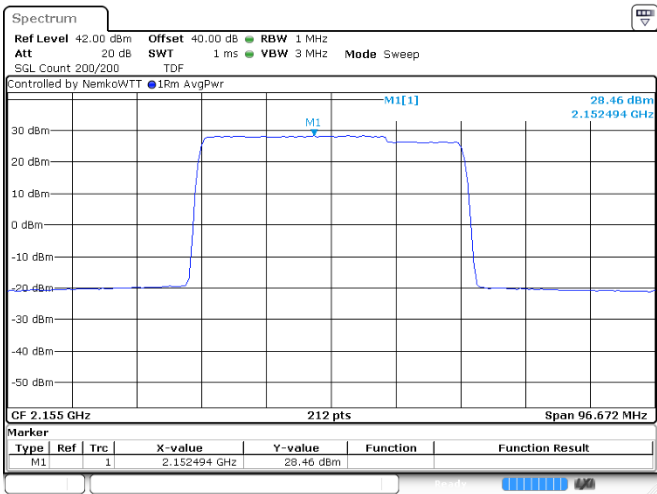
Average PSD, TX: 2155 MHz, BW: 35MHz, MOD: 1024QAM



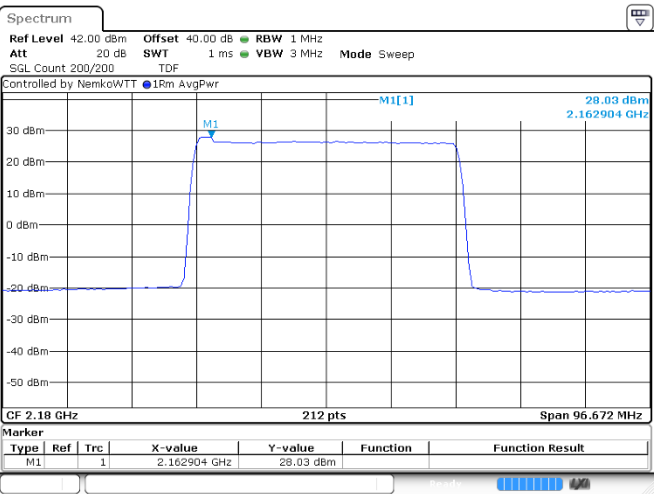
Average PSD, TX: 2182.5 MHz, BW: 35MHz, MOD: 1024QAM



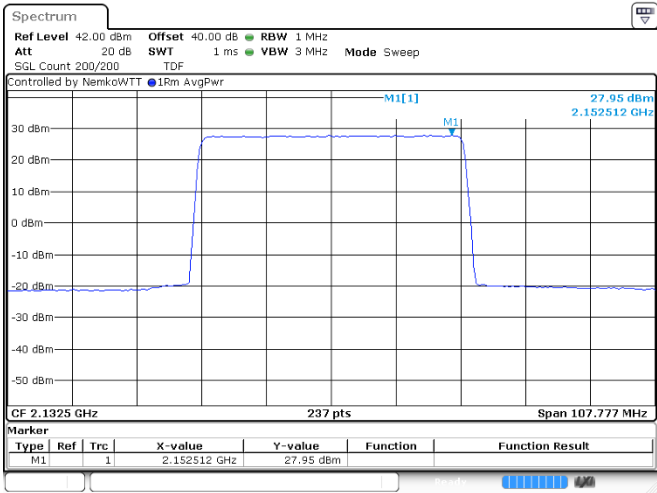
Average PSD, TX: 2130 MHz, BW: 40MHz, MOD: 1024QAM



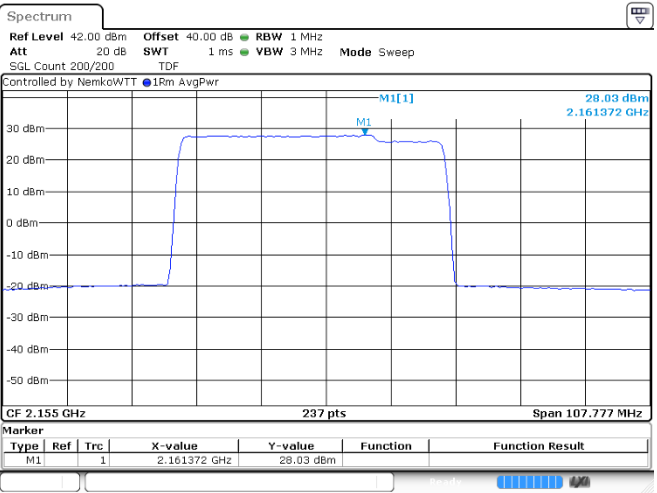
Average PSD, TX: 2155 MHz, BW: 40MHz, MOD: 1024QAM



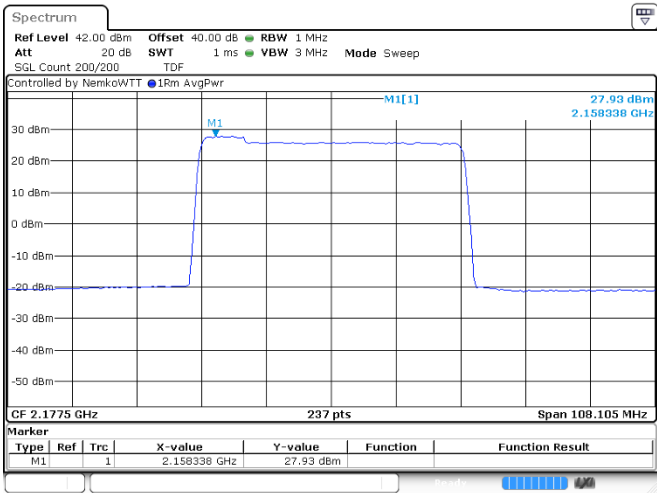
Average PSD, TX: 2180 MHz, BW: 40MHz, MOD: 1024QAM



Average PSD, TX: 2132.5 MHz, BW: 45MHz, MOD: 1024QAM



Average PSD, TX: 2155 MHz, BW: 45MHz, MOD: 1024QAM



Average PSD, TX: 2177.5 MHz, BW: 45MHz, MOD: 1024QAM

8.4.7 Test data – 5G NR multi-carrier operation

5G NR multi-carrier operation was verified in the following operational modes:

Table 8.4-17: 5G NR multi-carrier operating modes

Scenario	# Carrier	Bandwidth (MHz)	F1 (DL MHz)	F2 (DL MHz)	F3 (DL MHz)	Comments
1	2	5/5	2112.5	2117.5	N/A	QPSK modulation, 2 contiguous carriers at lowest channels
2	2	5/5	2192.5	2197.5	N/A	QPSK modulation, 2 contiguous carriers at highest channels
3	2	5/5	2112.5	2197.5	N/A	QPSK modulation, 2 non-contiguous carriers; one at lowest channel, one at highest channel
4	3	5/5/5	2112.5	2117.5	2122.5	QPSK modulation, 3 contiguous carriers at lowest channels
5	3	5/5/5	2112.5	2155.0	2197.5	QPSK modulation, 3 non-contiguous channels; one at lowest channel, one at middle channel, one at highest channel

(5 MHz channel bandwidth selected to maximize the power spectral density)

Table 8.4-18: Scenario 1 – Total channel power / EIRP

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2115.0	QPSK	5/5	39.37	18.00	57.37	6.02	63.39

Table 8.4-19: Scenario 1 – Power spectral density

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2115.0	QPSK	5/5	23.94	18.00	41.94	6.02	47.96	62.5

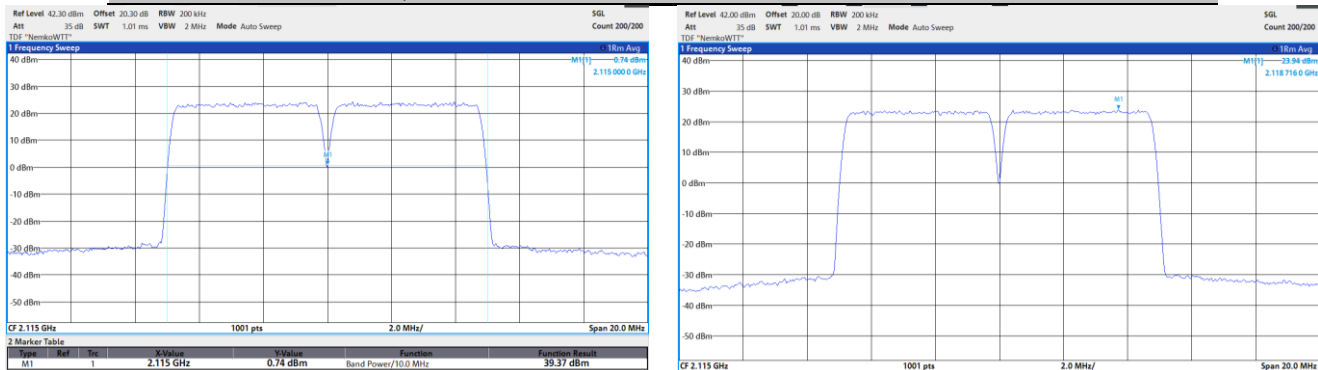


Figure 8.4-18: Scenario 1 – Total channel power / power spectral density

Table 8.4-20: Scenario 2 – Total channel power / EIRP

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2195.0	QPSK	5/5	36.87	18.00	54.87	6.02	60.89

Table 8.4-21: Scenario 2 – Power spectral density

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2195.0	QPSK	5/5	25.98	18.00	43.98	6.02	50.00	100.0

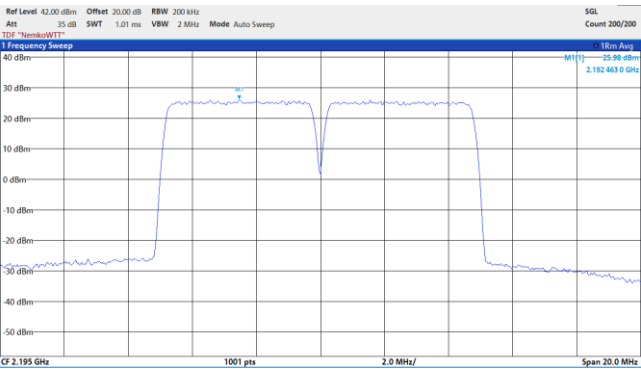
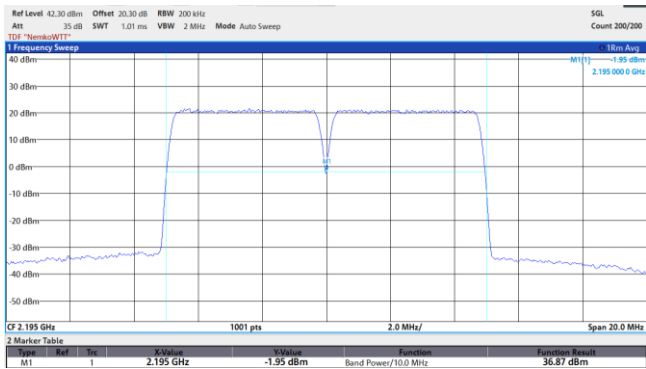


Figure 8.4-19: Scenario 2 – Total channel power / power spectral density

Table 8.4-22: Scenario 3 – Total channel power / EIRP

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2112.5	QPSK	5	36.37	18.00	54.37	6.02	60.39
2197.5	QPSK	5	36.31	18.00	54.31	6.02	60.33

Table 8.4-23: Scenario 3 – Power spectral density

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2112.5	QPSK	5	24.51	18.00	42.51	6.02	48.53	71.3
2197.5	QPSK	5	25.41	18.00	43.41	6.02	49.43	87.7

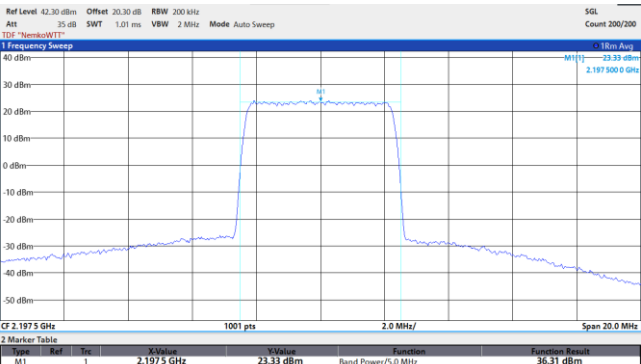
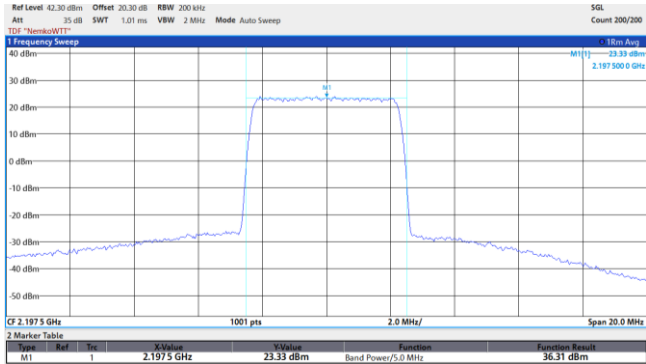
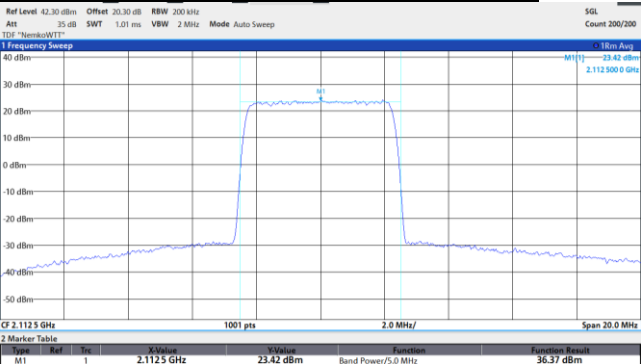
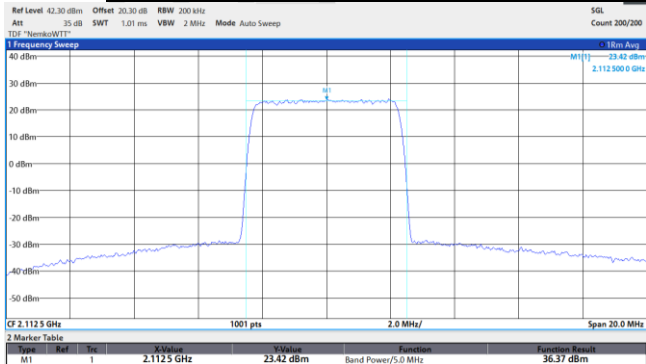


Figure 8.4-20: Scenario 3 – Total channel power / power spectral density

Table 8.4-24: Scenario 4 – Total channel power / EIRP

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2117.5	QPSK	5/5/5	38.78	18.00	56.78	6.02	62.80

Table 8.4-25: Scenario 4 – Power spectral density

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2117.5	QPSK	5/5/5	24.24	18.00	42.24	6.02	48.26	67.0

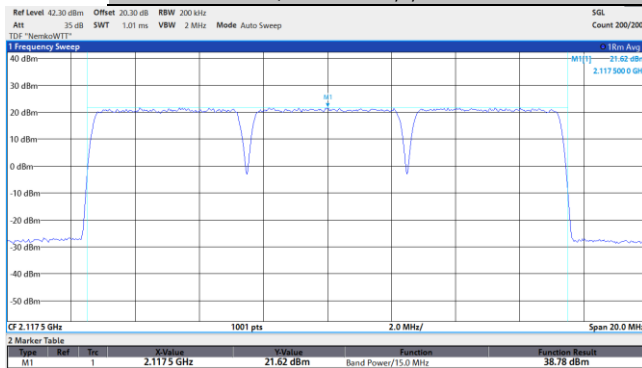


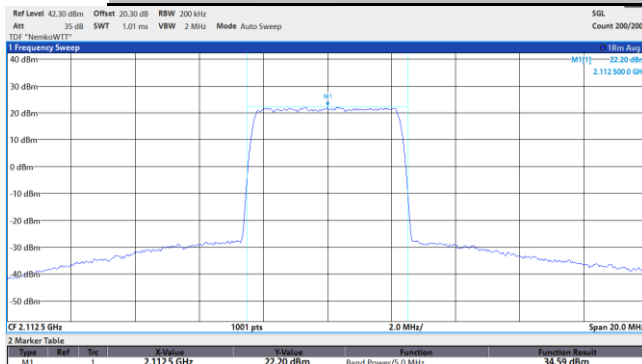
Figure 8.4-21: Scenario 4 – Total channel power / power spectral density

Table 8.4-26: Scenario 5 – Total channel power / EIRP

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2112.5	QPSK	5	34.59	18.00	52.59	6.02	58.61
2155.0	QPSK	5	35.01	18.00	53.01	6.02	59.03
2197.5	QPSK	5	34.61	18.00	52.61	6.02	58.63

Table 8.4-27: Scenario 5 – Power spectral density

Frequency (MHz)	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2112.5	QPSK	5	22.20	18.00	40.20	6.02	46.22	41.9
2155.0	QPSK	5	24.50	18.00	42.50	6.02	48.52	71.1
2197.5	QPSK	5	24.13	18.00	42.13	6.02	48.15	65.3



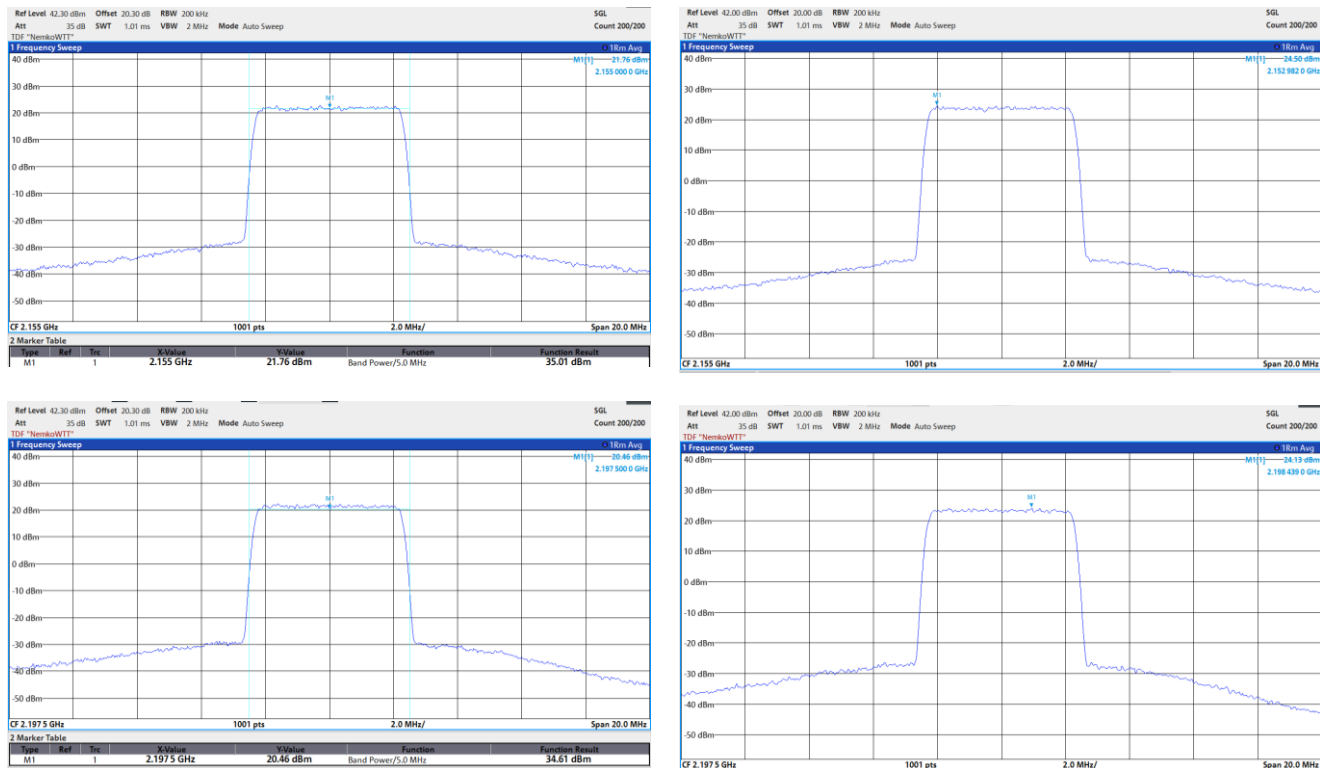


Figure 8.4-22: Scenario 5 – Total channel power / power spectral density

8.4.8 Test data – LTE + 5G NR multi-RAT capability

LTE + 5G NR multi-RAT operation was verified in the following operational modes:

Table 8.4-28: LTE multi-carrier operating modes

Scenario	# Carrier	Bandwidth (MHz)	F1 (DL MHz)	F2 (DL MHz)	F3 (DL MHz)	Comments
1	3	5/5/5	2112.5 (5G NR)	2117.5 (5G NR)	2197.5 (LTE)	QPSK modulation. 2 contiguous 5G NR carriers at the lowest channels, one LTE carrier at highest channel
2	3	5/5/5	2112.5 (5G NR)	2192.5 (LTE)	2197.5 (LTE)	QPSK modulation, 1 5G NR carrier at the lowest channel, 2 contiguous LTE carriers at highest channels

(5 MHz channel bandwidth selected to maximize the power spectral density)

Table 8.4-29: Scenario 1 – Total channel power / EIRP

Frequency (MHz)	RAT	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2115.0	5G NR	QPSK	5/5	37.77	18.00	55.77	6.02	61.79
2197.5	LTE	QPSK	5	34.60	18.00	52.60	6.02	58.62

Table 8.4-30: Scenario 1 – Power spectral density

Frequency (MHz)	RAT	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2115.0	5G NR	QPSK	5/5	23.83	18.00	41.83	6.02	47.85	61.0
2197.5	LTE	QPSK	5	24.17	18.00	42.17	6.02	48.19	65.9

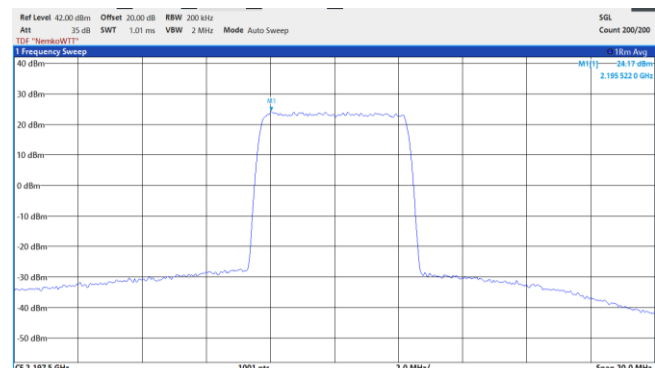
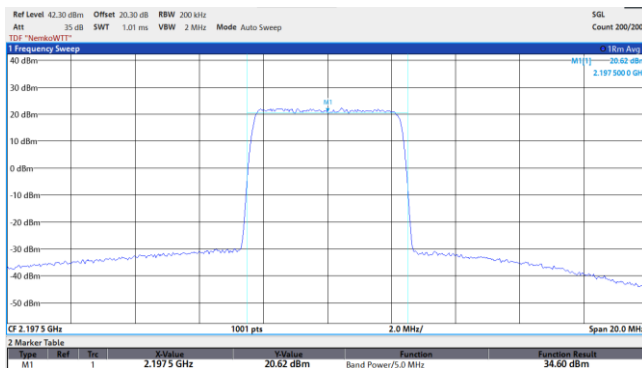
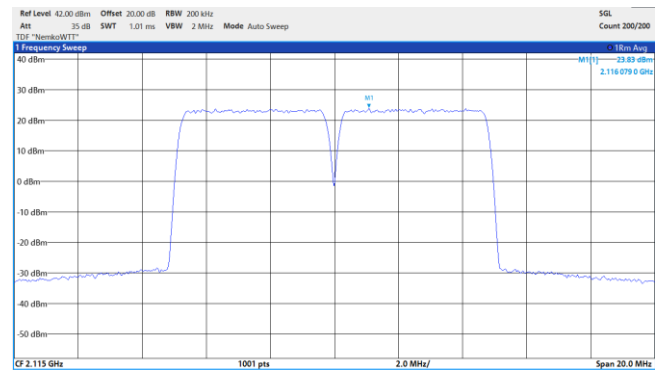
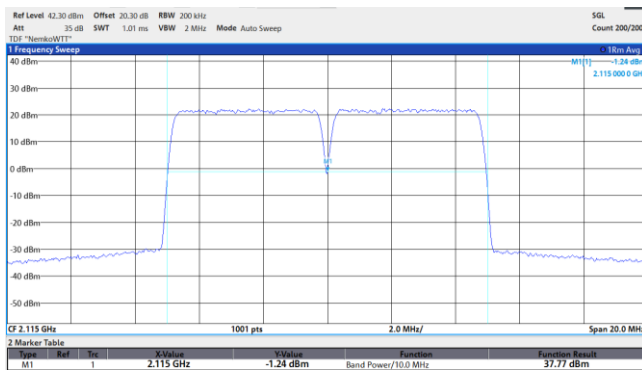


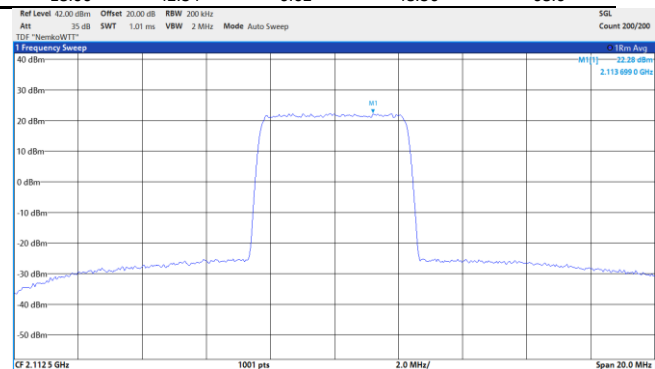
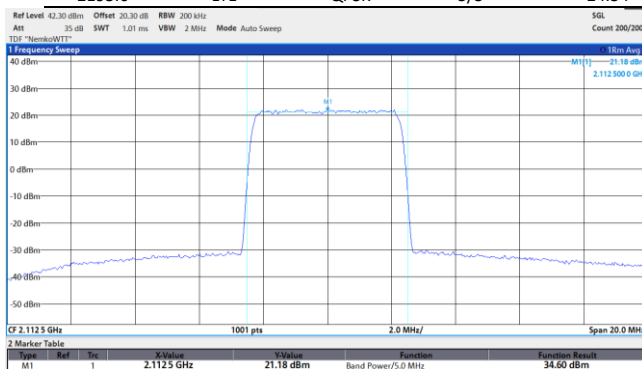
Figure 8.4-23: Scenario 1 – Total channel power / power spectral density

Table 8.4-31: Scenario 2 – Total channel power / EIRP

Frequency (MHz)	RAT	Modulation	Channel Bandwidth (MHz)	Conducted power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MIMO Correction (dB)	EIRP (4 ports) (dBm)
2112.5	5G NR	QPSK	5	34.60	18.00	52.60	6.02	58.62
2195.0	LTE	QPSK	5/5	37.68	18.00	55.68	6.02	61.70

Table 8.4-32: Scenario 2 – Power spectral density

Frequency (MHz)	RAT	Modulation	Channel Bandwidth (MHz)	Conducted power density (dBm/MHz)	Antenna gain (dBi)	EIRP density (dBm/MHz)	MIMO Correction (dB)	EIRP density (4 ports) (dBm/MHz)	EIRP density (4 ports) (W/MHz)
2112.5	5G NR	QPSK	5	22.28	18.00	40.28	6.02	46.30	42.7
2195.0	LTE	QPSK	5/5	24.34	18.00	42.34	6.02	48.36	68.6



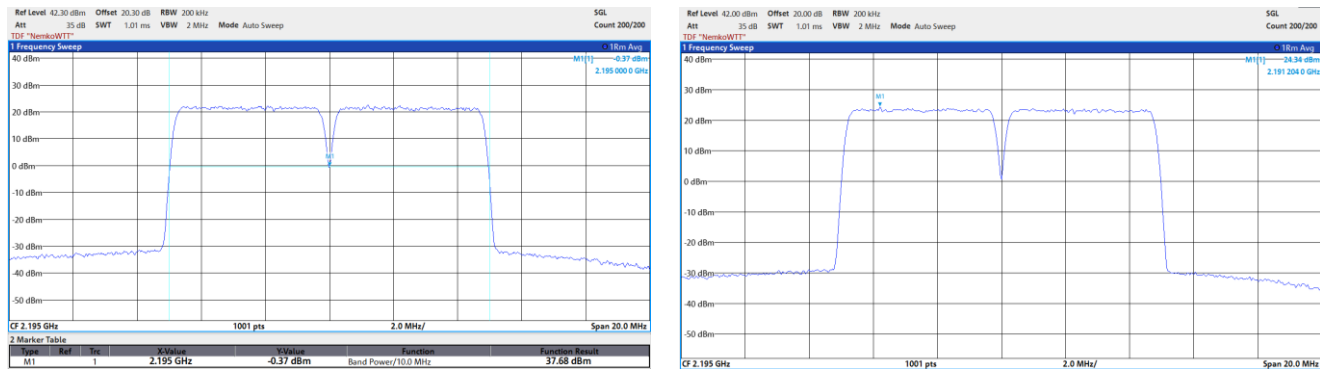


Figure 8.4-24: Scenario 2 – Total channel power / power spectral density

8.5 FCC 27.50(B) Peak to Average Power Ratio

8.5.1 Definitions and limits

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

8.5.2 Test summary

Test date	August 26, 2025	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1005.0 mbar
Verdict	Pass	Relative humidity	59 %

8.5.3 Observations, settings and special notes

Declared occupied bandwidths of 10 MHz or less were tested using the CCDF measurement function of the equipment for the peak to average power ratio. Due to resolution bandwidth limitations in the measurement equipment, declared occupied bandwidths greater than 10 MHz could not be tested with this function. Instead, two plots were measured, one for peak power and another for average power.. The difference between both magnitudes were recorded as peak to average power ratio.

8.5.4 Test data – LTE operation

Table 8.5-1: Peak to average power ratio test results.

Frequency channel (MHz)	Modulation	Occupied Bandwidth Declared (MHz)	PAPR 0.1% (dB)	Limit (dB)
2112.5	QPSK	5	7.01	13
2155	QPSK	5	7.16	13
2197.5	QPSK	5	7.00	13
2112.5	16QAM	5	8.50	13
2155	16QAM	5	8.31	13
2197.5	16QAM	5	8.45	13
2112.5	64QAM	5	7.25	13
2155	64QAM	5	7.35	13
2197.5	64QAM	5	7.73	13
2115	QPSK	10	7.69	13
2155	QPSK	10	7.78	13
2195	QPSK	10	7.54	13
2115	16QAM	10	9.04	13
2155	16QAM	10	9.15	13
2195	16QAM	10	9.08	13

Frequency channel (MHz)	Modulation	Occupied Bandwidth Declared (MHz)	PAPR 0.1% (dB)	Limit (dB)
2115	64QAM	10	7.93	13
2155	64QAM	10	7.90	13
2195	64QAM	10	7.89	13
2117.5	QPSK	15	8.10	13
2155	QPSK	15	8.20	13
2192.5	QPSK	15	8.12	13
2117.5	16QAM	15	9.50	13
2155	16QAM	15	9.38	13
2192.5	16QAM	15	9.34	13
2117.5	64QAM	15	8.37	13
2155	64QAM	15	8.30	13
2192.5	64QAM	15	8.18	13
2120	QPSK	20	8.18	13
2155	QPSK	20	8.17	13
2190	QPSK	20	8.11	13
2120	16QAM	20	9.04	13
2155	16QAM	20	9.13	13
2190	16QAM	20	9.13	13
2120	64QAM	20	8.22	13
2155	64QAM	20	8.18	13
2190	64QAM	20	8.29	13

8.5.5 Test data – 5G NR operation

Table 8.5-2: Peak to average power ratio test results.

Frequency channel (MHz)	Modulation	Occupied Bandwidth Declared (MHz)	PAPR 0.1% (dB)	Limit (dB)
2112.5	QPSK	5	3.54	13
2155	QPSK	5	3.25	13
2197.5	QPSK	5	3.30	13
2112.5	16QAM	5	3.48	13
2155	16QAM	5	3.22	13
2197.5	16QAM	5	3.30	13
2112.5	64QAM	5	3.51	13
2155	64QAM	5	3.25	13
2197.5	64QAM	5	3.33	13
2112.5	256QAM	5	3.54	13
2155	256QAM	5	3.28	13
2197.5	256QAM	5	3.39	13
2112.5	1024QAM	5	3.48	13
2155	1024QAM	5	3.25	13
2197.5	1024QAM	5	3.33	13
2115	QPSK	10	3.80	13
2155	QPSK	10	3.57	13
2195	QPSK	10	3.54	13
2115	16QAM	10	3.62	13
2155	16QAM	10	3.48	13
2195	16QAM	10	3.45	13
2115	64QAM	10	3.77	13
2155	64QAM	10	3.54	13
2195	64QAM	10	3.54	13
2115	256QAM	10	3.80	13
2155	256QAM	10	3.57	13
2195	256QAM	10	3.54	13
2115	1024QAM	10	3.80	13
2155	1024QAM	10	3.57	13
2195	1024QAM	10	3.54	13
2117.5	QPSK	15	8.10	13
2155	QPSK	15	8.14	13
2192.5	QPSK	15	8.06	13
2117.5	16QAM	15	8.15	13

Frequency channel (MHz)	Modulation	Occupied Bandwidth Declared (MHz)	PAPR 0.1% (dB)	Limit (dB)
2155	16QAM	15	8.19	13
2192.5	16QAM	15	8.15	13
2117.5	64QAM	15	7.93	13
2155	64QAM	15	8.10	13
2192.5	64QAM	15	8.02	13
2117.5	256QAM	15	8.11	13
2155	256QAM	15	8.09	13
2192.5	256QAM	15	8.20	13
2117.5	1024QAM	15	8.23	13
2155	1024QAM	15	8.12	13
2192.5	1024QAM	15	8.17	13
2120	QPSK	20	7.94	13
2155	QPSK	20	8.07	13
2190	QPSK	20	7.96	13
2120	16QAM	20	8.14	13
2155	16QAM	20	8.19	13
2190	16QAM	20	8.06	13
2120	64QAM	20	8.08	13
2155	64QAM	20	7.97	13
2190	64QAM	20	8.14	13
2120	256QAM	20	8.22	13
2155	256QAM	20	8.21	13
2190	256QAM	20	8.17	13
2120	1024QAM	20	8.17	13
2155	1024QAM	20	8.18	13
2190	1024QAM	20	8.21	13
2122.5	QPSK	25	8.32	13
2155	QPSK	25	8.34	13
2187.5	QPSK	25	8.29	13
2122.5	16QAM	25	8.26	13
2155	16QAM	25	8.40	13
2187.5	16QAM	25	8.24	13
2122.5	64QAM	25	8.25	13
2155	64QAM	25	8.17	13
2187.5	64QAM	25	8.23	13
2122.5	256QAM	25	8.37	13
2155	256QAM	25	8.42	13
2187.5	256QAM	25	8.45	13
2122.5	1024QAM	25	8.39	13
2155	1024QAM	25	8.44	13
2187.5	1024QAM	25	8.32	13
2125	QPSK	30	8.15	13
2155	QPSK	30	8.27	13
2185	QPSK	30	8.21	13
2125	16QAM	30	8.16	13
2155	16QAM	30	8.30	13
2185	16QAM	30	8.26	13
2125	64QAM	30	8.15	13
2155	64QAM	30	8.11	13
2185	64QAM	30	8.18	13
2125	256QAM	30	8.22	13
2155	256QAM	30	8.34	13
2185	256QAM	30	8.36	13
2125	1024QAM	30	8.22	13
2155	1024QAM	30	8.31	13
2185	1024QAM	30	8.20	13
2127.5	QPSK	35	8.69	13
2155	QPSK	35	8.76	13
2182.5	QPSK	35	8.81	13
2127.5	16QAM	35	8.64	13
2155	16QAM	35	8.66	13
2182.5	16QAM	35	8.66	13

Frequency channel (MHz)	Modulation	Occupied Bandwidth Declared (MHz)	PAPR 0.1% (dB)	Limit (dB)
2127.5	64QAM	35	8.56	13
2155	64QAM	35	8.65	13
2182.5	64QAM	35	8.62	13
2127.5	256QAM	35	8.82	13
2155	256QAM	35	8.66	13
2182.5	256QAM	35	8.67	13
2127.5	1024QAM	35	8.74	13
2155	1024QAM	35	8.71	13
2182.5	1024QAM	35	8.69	13
2130	QPSK	40	8.74	13
2155	QPSK	40	8.73	13
2180	QPSK	40	8.71	13
2130	16QAM	40	8.63	13
2155	16QAM	40	8.65	13
2180	16QAM	40	8.84	13
2130	64QAM	40	8.69	13
2155	64QAM	40	8.70	13
2180	64QAM	40	8.66	13
2130	256QAM	40	8.66	13
2155	256QAM	40	8.61	13
2180	256QAM	40	8.77	13
2130	1024QAM	40	8.69	13
2155	1024QAM	40	8.66	13
2180	1024QAM	40	8.86	13
2132.5	QPSK	45	8.61	13
2155	QPSK	45	8.63	13
2177.5	QPSK	45	8.67	13
2132.5	16QAM	45	8.72	13
2155	16QAM	45	8.68	13
2177.5	16QAM	45	8.63	13
2132.5	64QAM	45	8.67	13
2155	64QAM	45	8.70	13
2177.5	64QAM	45	8.60	13
2132.5	256QAM	45	8.65	13
2155	256QAM	45	8.72	13
2177.5	256QAM	45	8.63	13
2132.5	1024QAM	45	8.62	13
2155	1024QAM	45	8.68	13
2177.5	1024QAM	45	8.68	13

Sample plots below for 1024QAM operation:

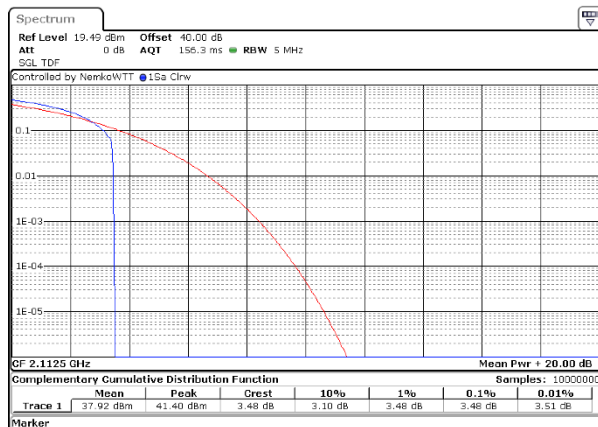


Figure 8.5-1: PAPR, Low CH 2112.5 MHz, 5 MHz, 1024QAM.

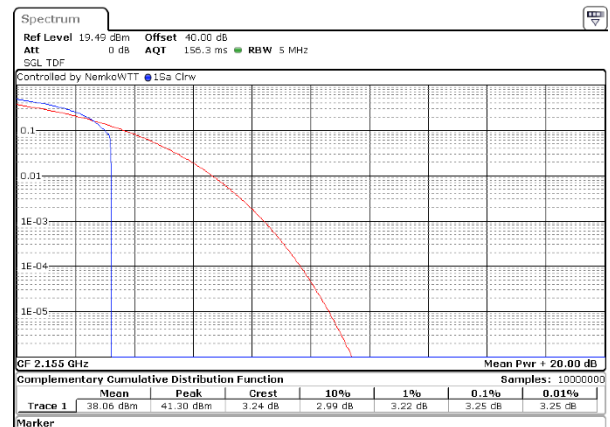
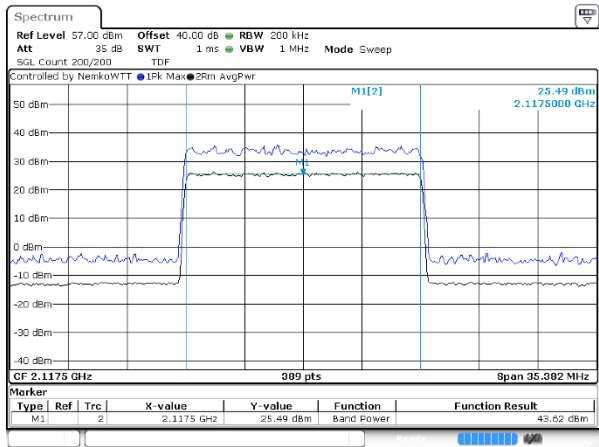
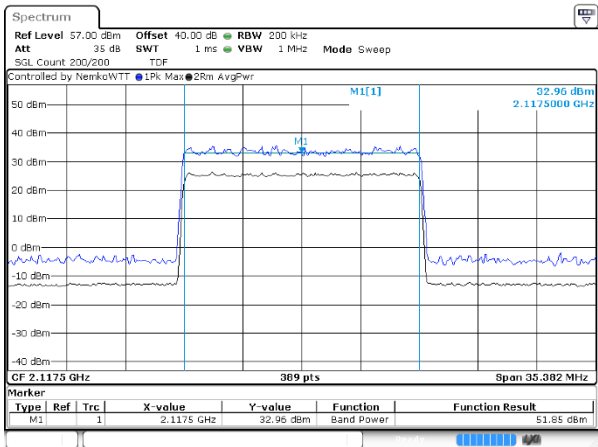
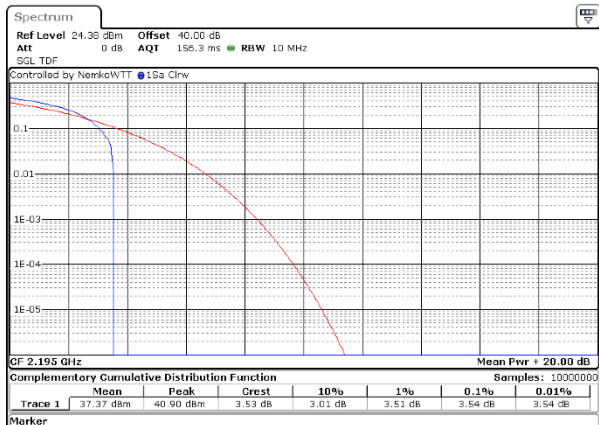
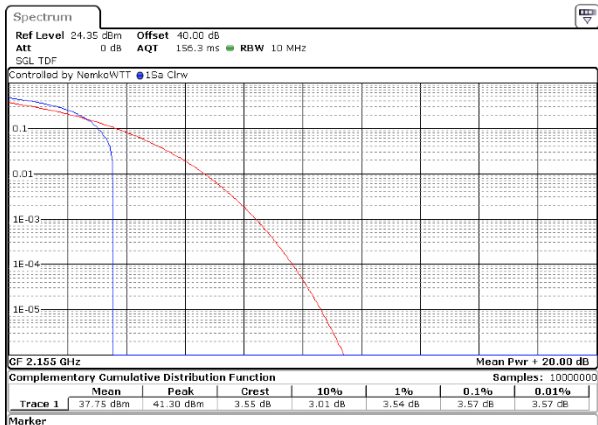
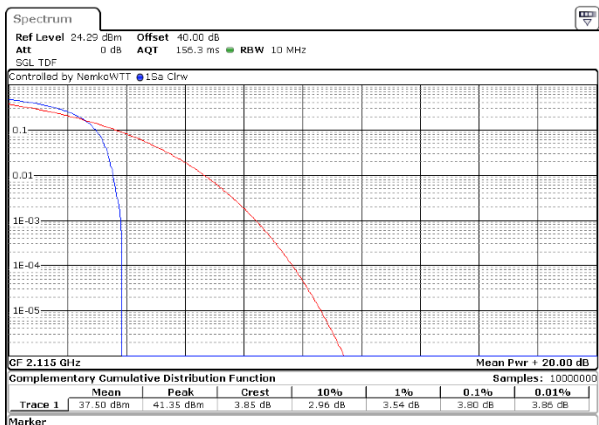
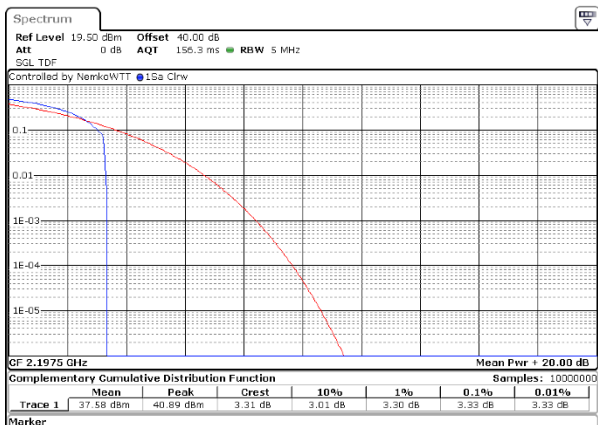
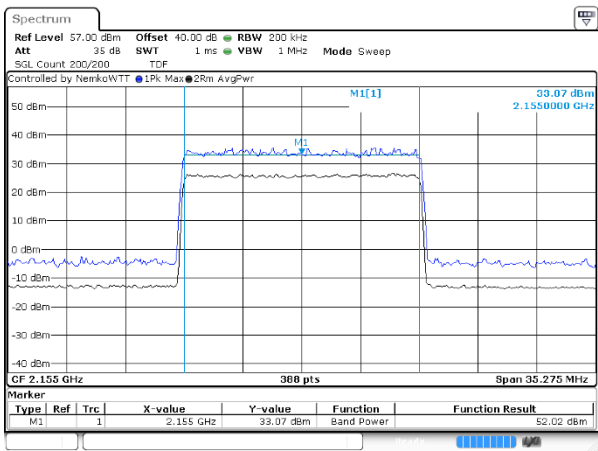
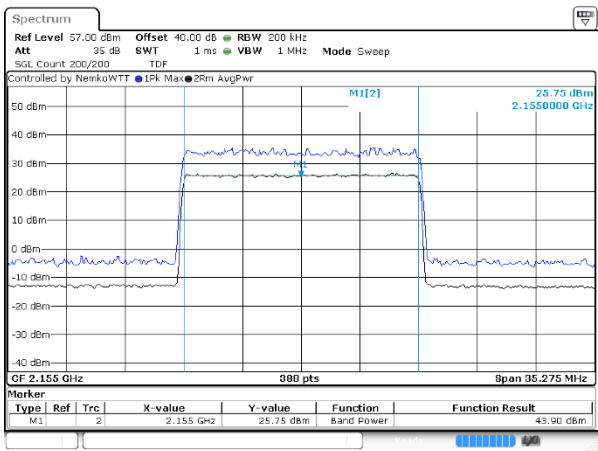


Figure 8.5-2: PAPR, Mid CH 2155 MHz, 5 MHz, 1024QAM.



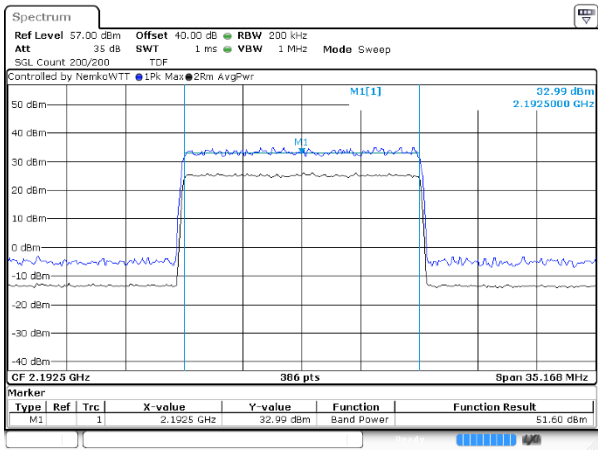


PAPR, TX 2155 MHz, BW: 15MHz, MOD: 1024QAM

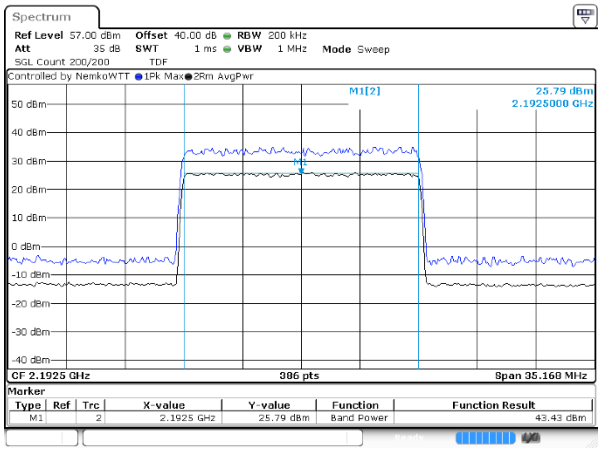


PAPR, TX 2155 MHz, BW: 15MHz, MOD: 1024QAM

Figure 8.5-8: PAPR, Mid CH 2155 MHz, 15 MHz, 1024QAM.

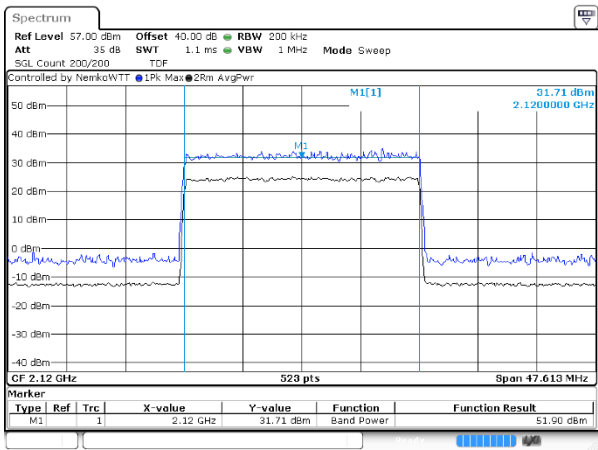


PAPR, TX 2192.5 MHz, BW: 15MHz, MOD: 1024QAM

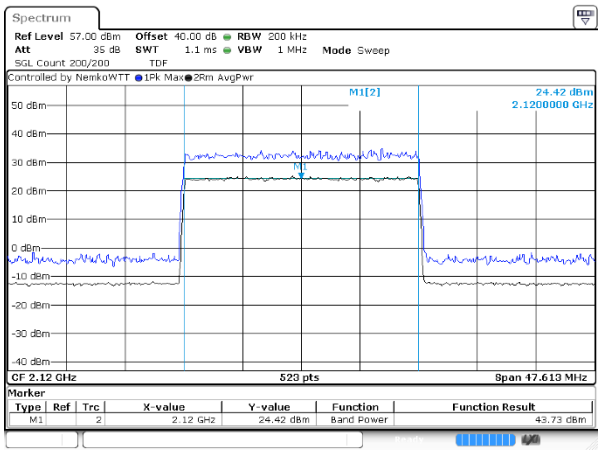


PAPR, TX 2192.5 MHz, BW: 15MHz, MOD: 1024QAM

Figure 8.5-9: PAPR, High CH 2192.5 MHz, 15 MHz, 1024QAM.

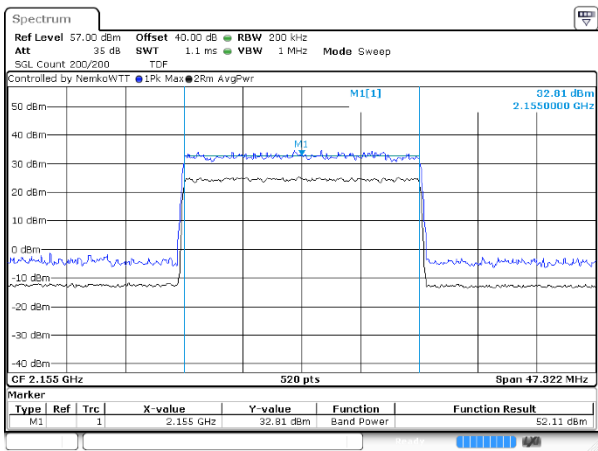


PAPR, TX 2120 MHz, BW: 20MHz, MOD: 1024QAM

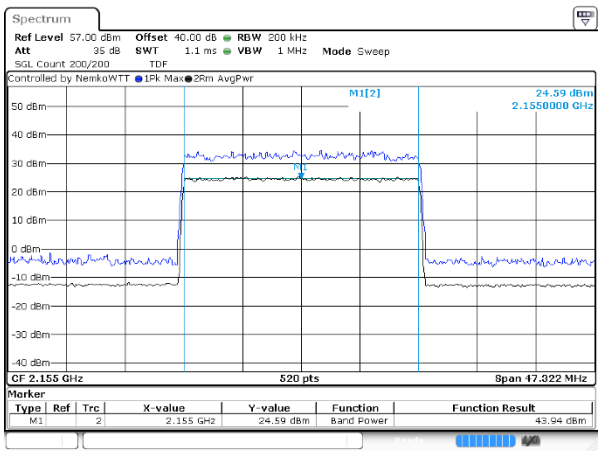


PAPR, TX 2120 MHz, BW: 20MHz, MOD: 1024QAM

Figure 8.5-10: PAPR, Low CH 2120 MHz, 20 MHz, 1024QAM.

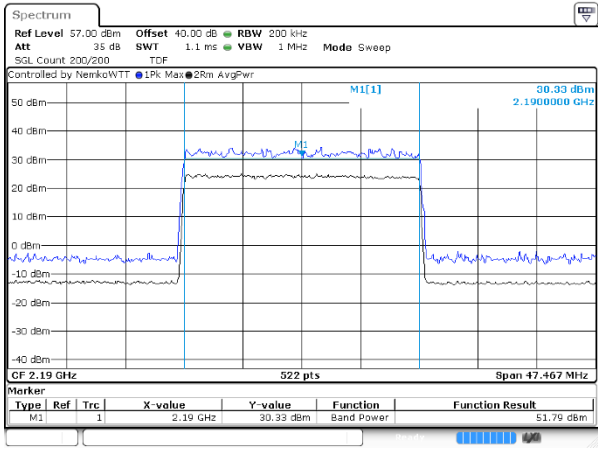


PAPR, TX 2155 MHz, BW: 20MHz, MOD: 1024QAM

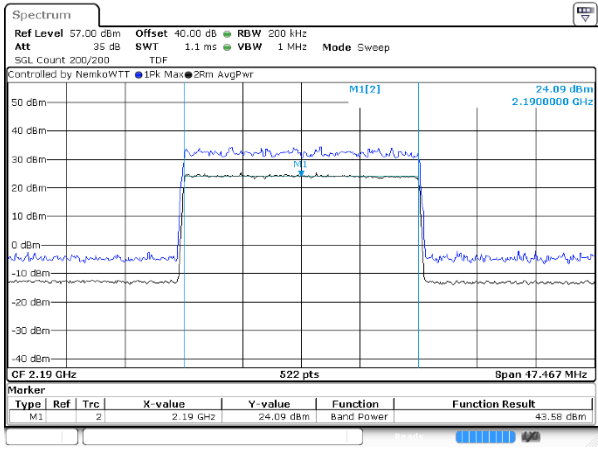


PAPR, TX 2155 MHz, BW: 20MHz, MOD: 1024QAM

Figure 8.5-11: PAPR, Mid CH 2155 MHz, 20 MHz, 1024QAM.

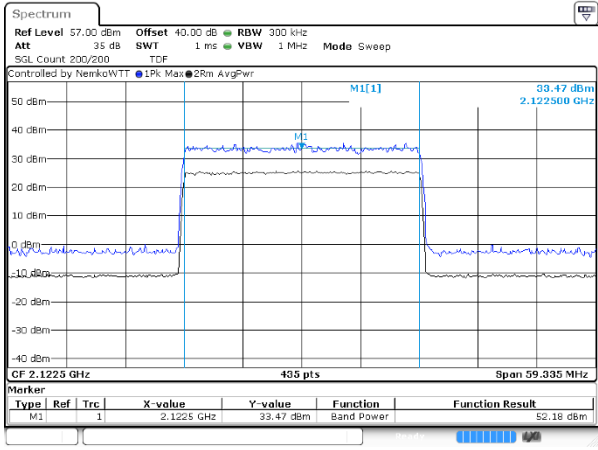


PAPR, TX 2190 MHz, BW: 20MHz, MOD: 1024QAM

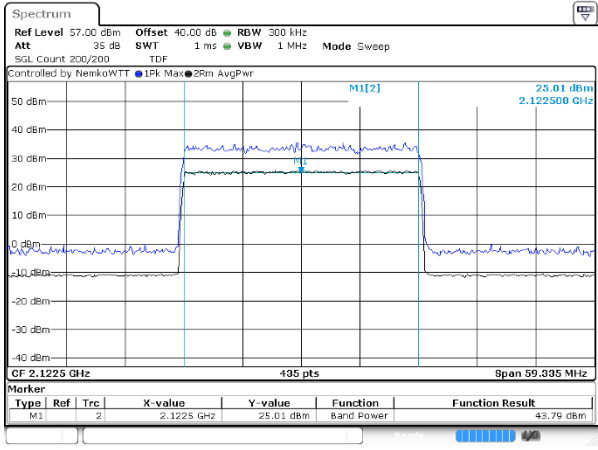


PAPR, TX 2190 MHz, BW: 20MHz, MOD: 1024QAM

Figure 8.5-12: PAPR, High CH 2190 MHz, 20 MHz, 1024QAM.

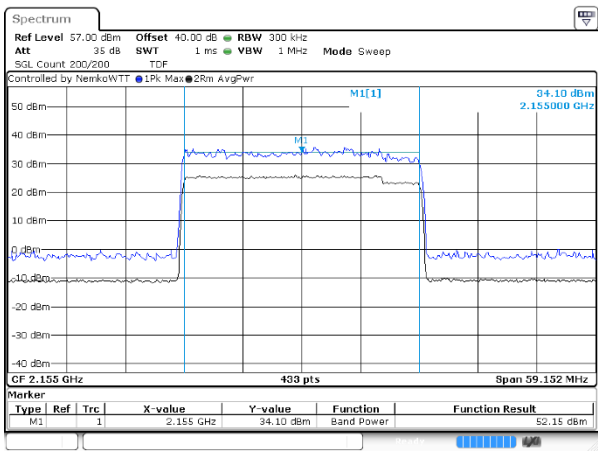


PAPR, TX 2122.5 MHz, BW: 25MHz, MOD: 1024QAM

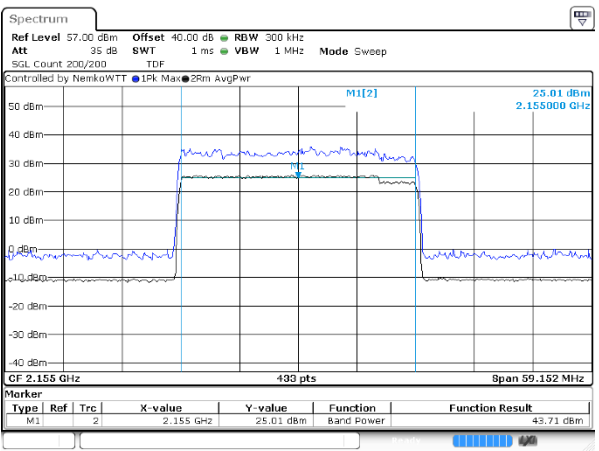


PAPR, TX 2122.5 MHz, BW: 25MHz, MOD: 1024QAM

Figure 8.5-13: PAPR, Low CH 2122.5 MHz, 25 MHz, 1024QAM.

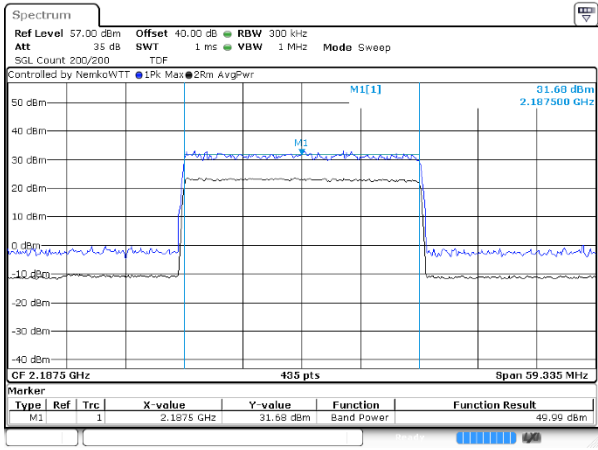


PAPR, TX 2155 MHz, BW: 25MHz, MOD: 1024QAM

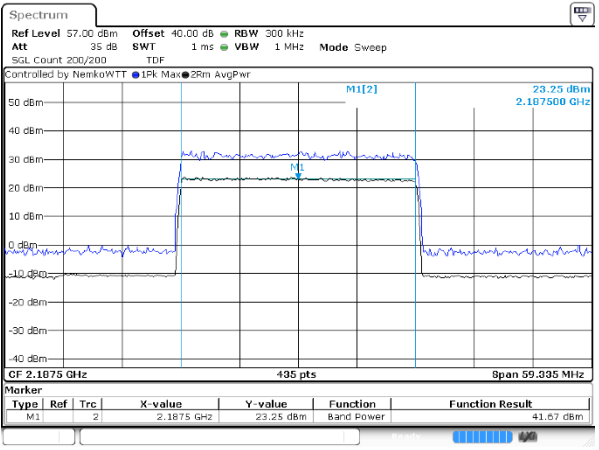


PAPR, TX 2155 MHz, BW: 25MHz, MOD: 1024QAM

Figure 8.5-14: PAPR, Mid CH 2155 MHz, 25 MHz, 1024QAM.

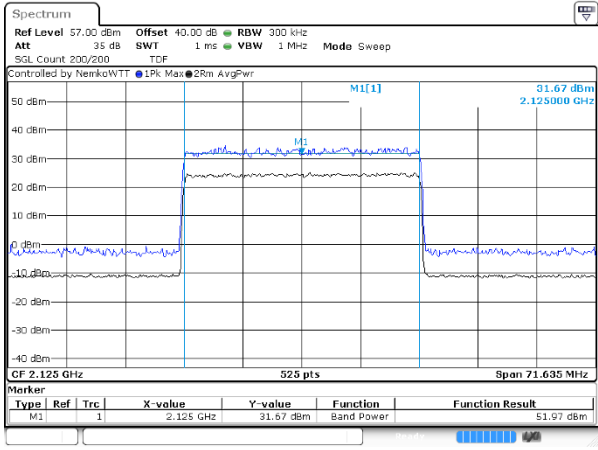


PAPR, TX 2187.5 MHz, BW: 25MHz, MOD: 1024QAM

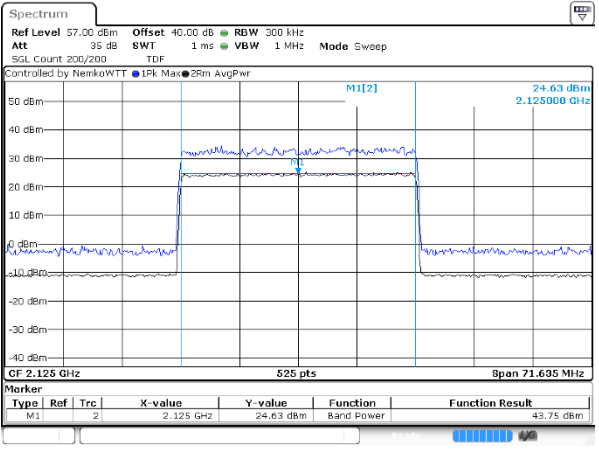


PAPR, TX 2187.5 MHz, BW: 25MHz, MOD: 1024QAM

Figure 8.5-15: PAPR, High CH 2187.5 MHz, 25 MHz, 1024QAM.

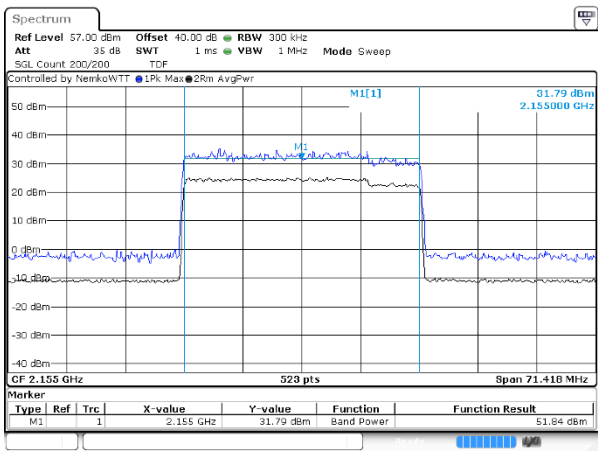


PAPR, TX 2125 MHz, BW: 30MHz, MOD: 1024QAM

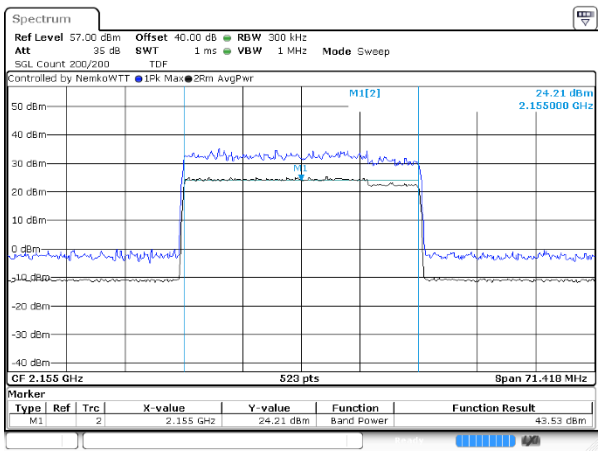


PAPR, TX 2125 MHz, BW: 30MHz, MOD: 1024QAM

Figure 8.5-16: PAPR, Low CH 2125 MHz, 30 MHz, 1024QAM.

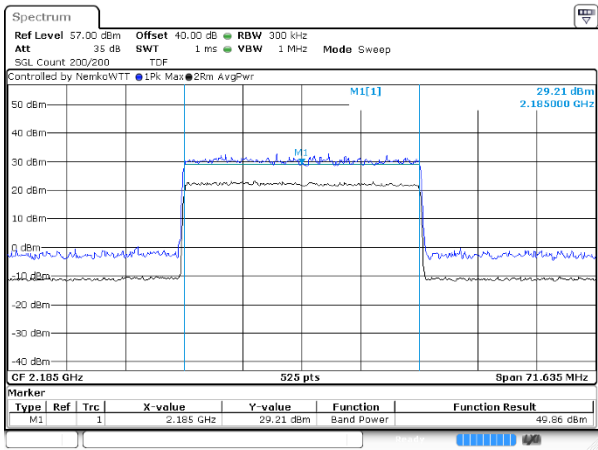


PAPR, TX 2155 MHz, BW: 30MHz, MOD: 1024QAM

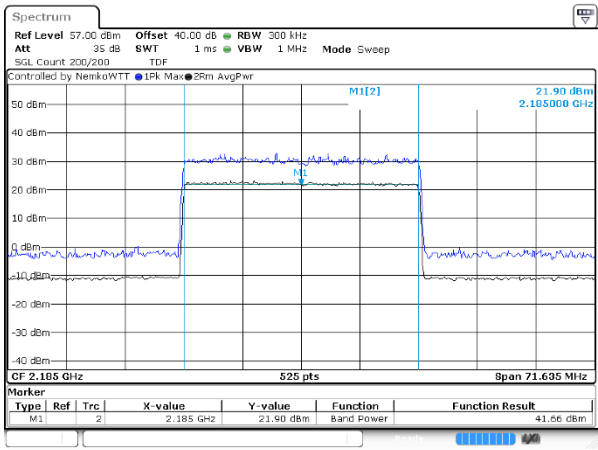


PAPR, TX 2155 MHz, BW: 30MHz, MOD: 1024QAM

Figure 8.5-17: PAPR, Mid CH 2155 MHz, 30 MHz, 1024QAM.

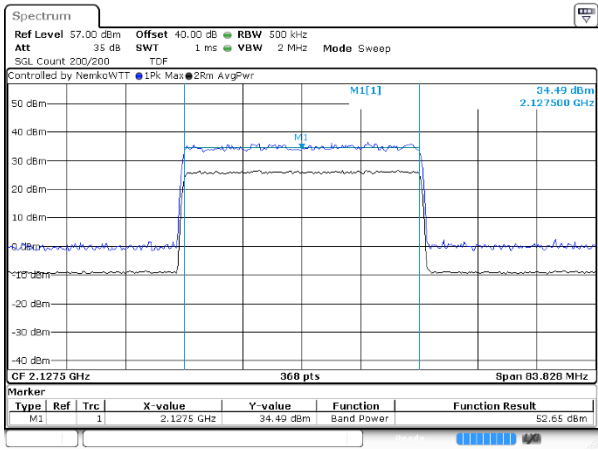


PAPR, TX 2185 MHz, BW: 30MHz, MOD: 1024QAM

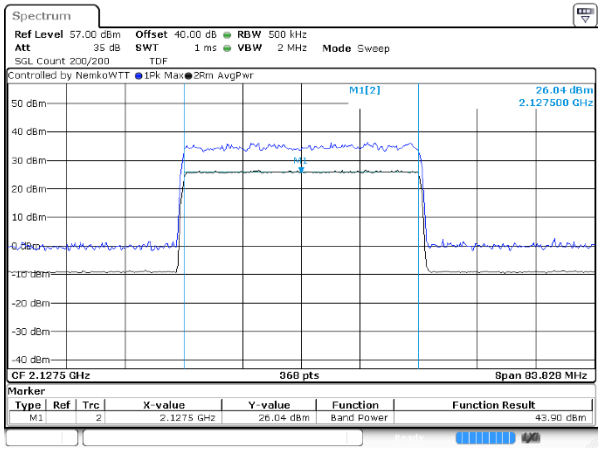


PAPR, TX 2185 MHz, BW: 30MHz, MOD: 1024QAM

Figure 8.5-18: PAPR, High CH 2185 MHz, 30 MHz, 1024QAM.

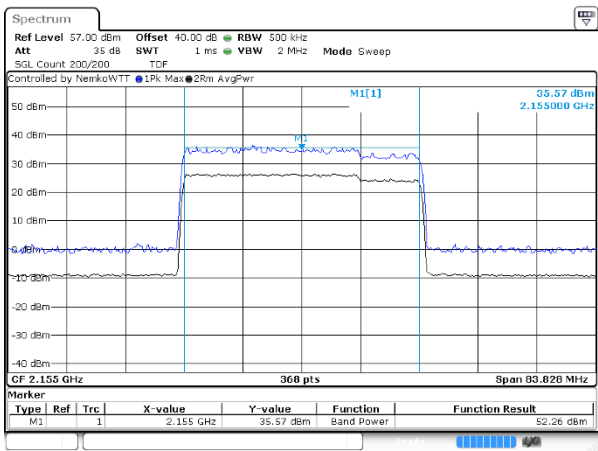


PAPR, TX 2127.5 MHz, BW: 35MHz, MOD: 1024QAM

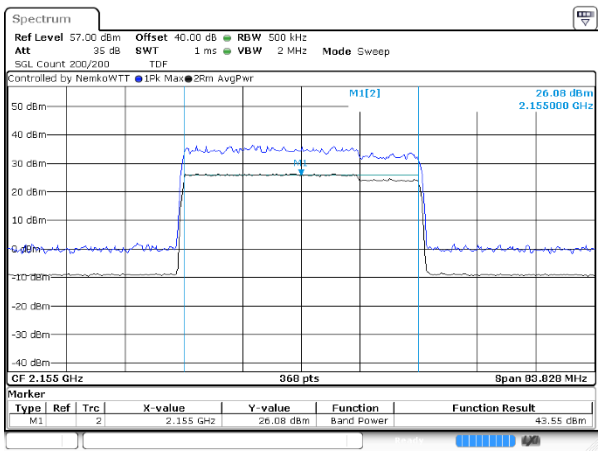


PAPR, TX 2127.5 MHz, BW: 35MHz, MOD: 1024QAM

Figure 8.5-19: PAPR, Low CH 2127.5 MHz, 35 MHz, 1024QAM.

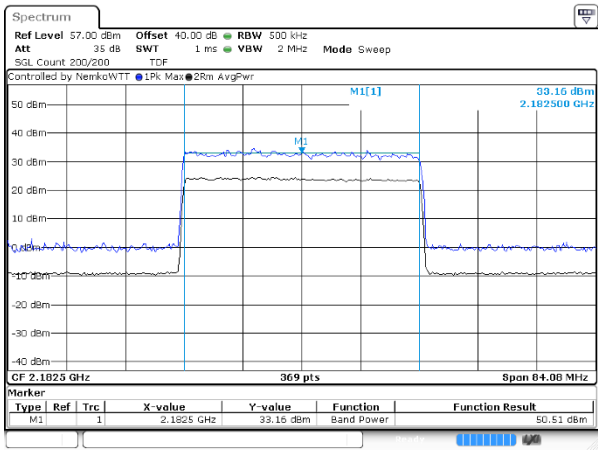


PAPR, TX 2155 MHz, BW: 35MHz, MOD: 1024QAM

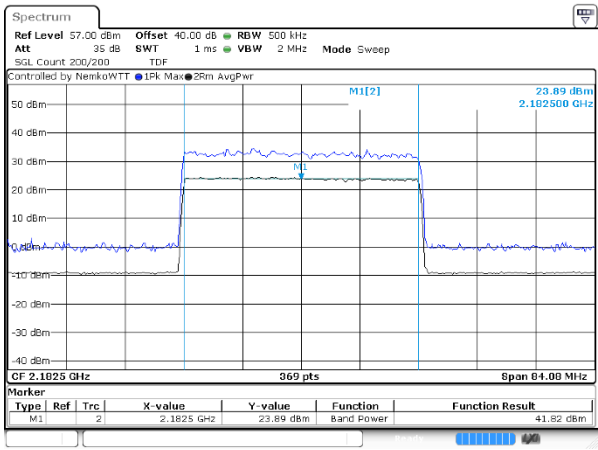


PAPR, TX 2155 MHz, BW: 35MHz, MOD: 1024QAM

Figure 8.5-20: PAPR, Mid CH 2155 MHz, 35 MHz, 1024QAM.

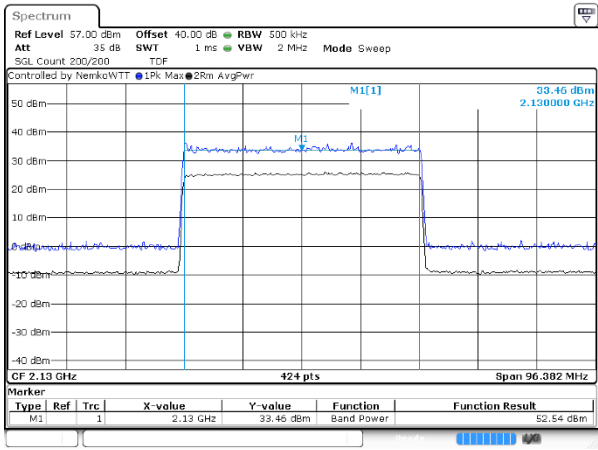


PAPR, TX 2182.5 MHz, BW: 35MHz, MOD: 1024QAM

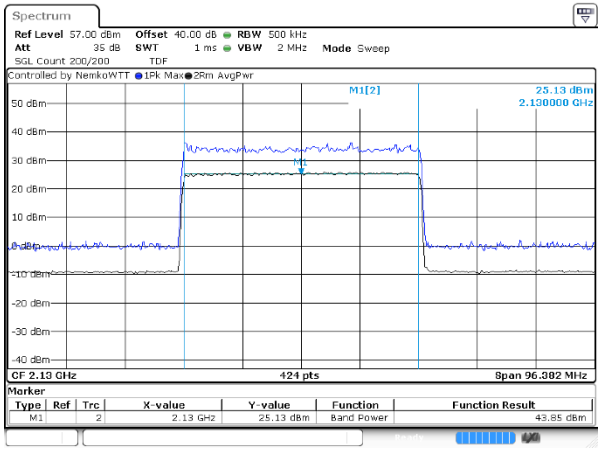


PAPR, TX 2182.5 MHz, BW: 35MHz, MOD: 1024QAM

Figure 8.5-21: PAPR, High CH 2182.5 MHz, 35 MHz, 1024QAM.

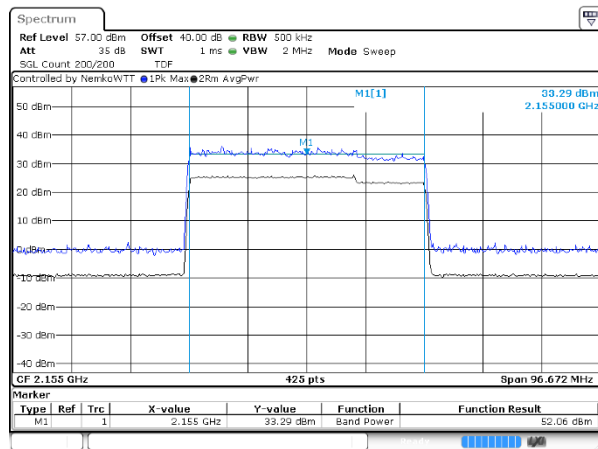


PAPR, TX 2130 MHz, BW: 40MHz, MOD: 1024QAM

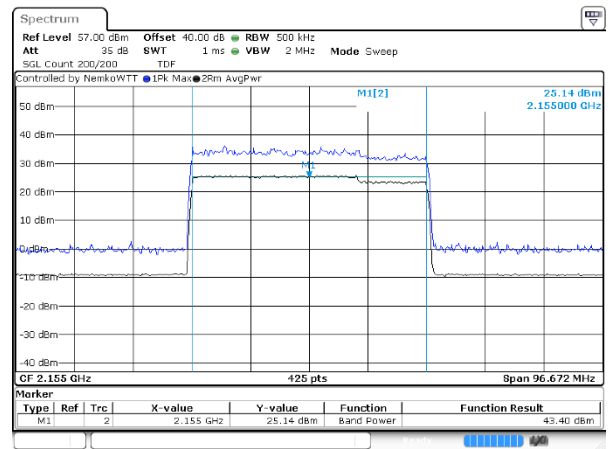


PAPR, TX 2130 MHz, BW: 40MHz, MOD: 1024QAM

Figure 8.5-22: PAPR, Low CH 2130 MHz, 40 MHz, 1024QAM.

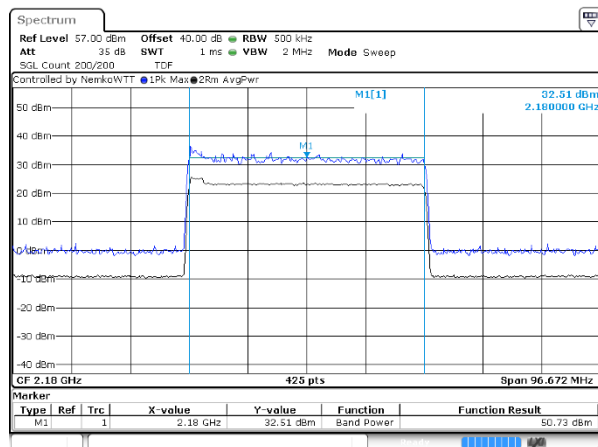


PAPR, TX 2155 MHz, BW: 40MHz, MOD: 1024QAM

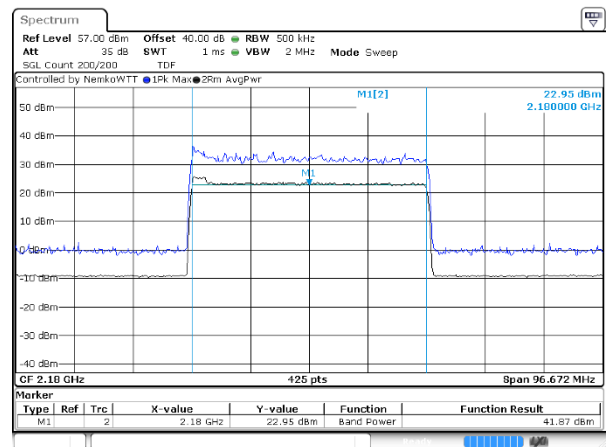


PAPR, TX 2155 MHz, BW: 40MHz, MOD: 1024QAM

Figure 8.5-23: PAPR, Mid CH 2155 MHz, 40 MHz, 1024QAM.

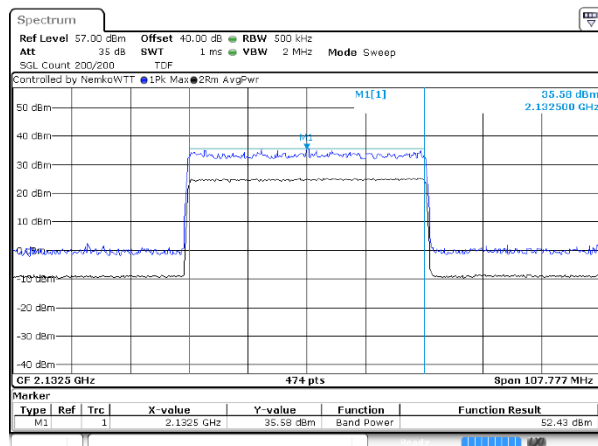


PAPR, TX 2180 MHz, BW: 40MHz, MOD: 1024QAM

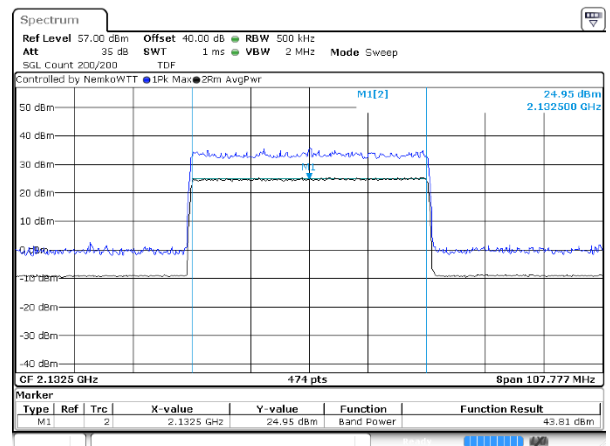


PAPR, TX 2180 MHz, BW: 40MHz, MOD: 1024QAM

Figure 8.5-24: PAPR, High CH 2180 MHz, 40 MHz, 1024QAM.

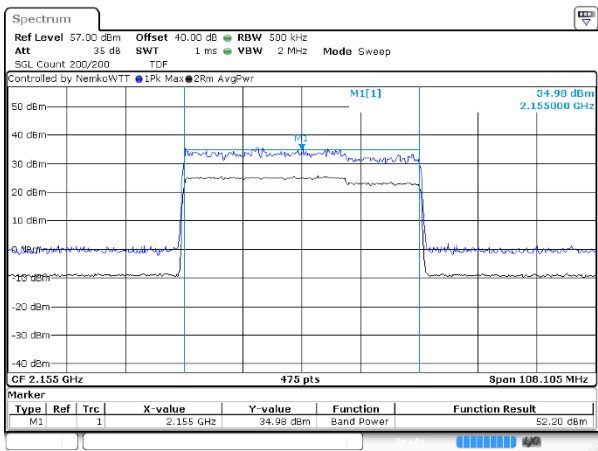


PAPR, TX 2132.5 MHz, BW: 45MHz, MOD: 1024QAM

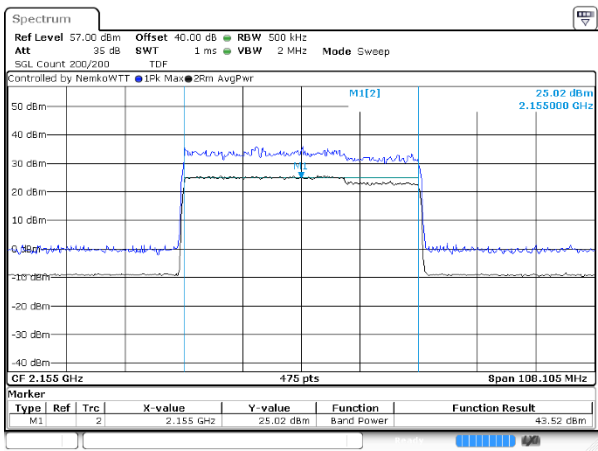


PAPR, TX 2132.5 MHz, BW: 45MHz, MOD: 1024QAM

Figure 8.5-25: PAPR, Low CH 2132.5 MHz, 45 MHz, 1024QAM.

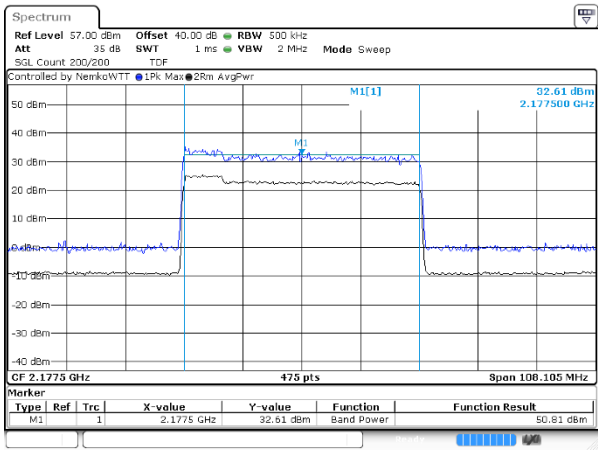


PAPR, TX 2155 MHz, BW: 45MHz, MOD: 1024QAM

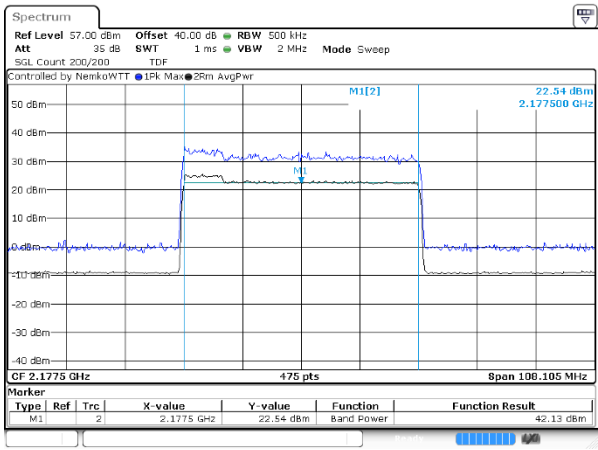


PAPR, TX 2155 MHz, BW: 45MHz, MOD: 1024QAM

Figure 8.5-26: PAPR, Mid CH 2155 MHz, 45 MHz, 1024QAM.



PAPR, TX 2177.5 MHz, BW: 45MHz, MOD: 1024QAM



PAPR, TX 2177.5 MHz, BW: 45MHz, MOD: 1024QAM

Figure 8.5-27: PAPR, High CH 2177.5 MHz, 45 MHz, 1024QAM.

8.6 FCC 27.53(l)(1) Emission Limits

8.6.1 Definitions and limits

(1) For base station 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)(1) 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, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. 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.

8.6.2 Test summary

Test date	September 2, 2025	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1004.0
Verdict	Pass	Relative humidity	59%

8.6.3 Observations, settings and special notes

EUT setup configuration	Table top
Test facility	3 m Semi anechoic chamber
Measuring distance	3m
Antenna height variation	1-4 m
Turn table position	0-360°
Measurement details	A preview measurement was generated with receiver in continuous scan or sweep mode while the EUT was rotated and antenna adjusted to maximize radiated emission. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.

Receiver/spectrum analyzer settings for frequencies below 1 GHz:

Resolution bandwidth	120 kHz
Video bandwidth	300 kHz
Detector mode	- Peak (Preview measurement) - Quasi-peak (Final measurement)
Trace mode	Max Hold
Measurement time	100 ms (Peak preview measurement) 5000 ms (Quasi-peak final measurement)

Receiver/spectrum analyzer settings for frequencies above 1 GHz:

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Detector mode	- Peak (Preview measurement) - Peak and CAverage (Final measurement)
Trace mode	Max Hold
Measurement time	100 ms (Peak preview measurement) 5000 ms (Peak and CAverage final measurement)

Spectrum analyzer settings (conducted test):

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Frequency span	Sufficient for making an accurate measurement
Detector mode	RMS
Trace mode	Max Hold

This test was realized in two parts: one with a conducted setup and another one with a radiated setup.

The conducted test was made on one antenna port, transmitting at max power and with the other three ports loaded with 50 Ω loads. Transducer factors to compensate the losses caused by a cable and attenuator used to protect the test equipment. Additional to this number, a 6.02 dB correlation factor was added to evaluate the complete power across the four ports, considering the ranges where harmonic can be observed. The evaluation was made using the three channels and all the modulations.

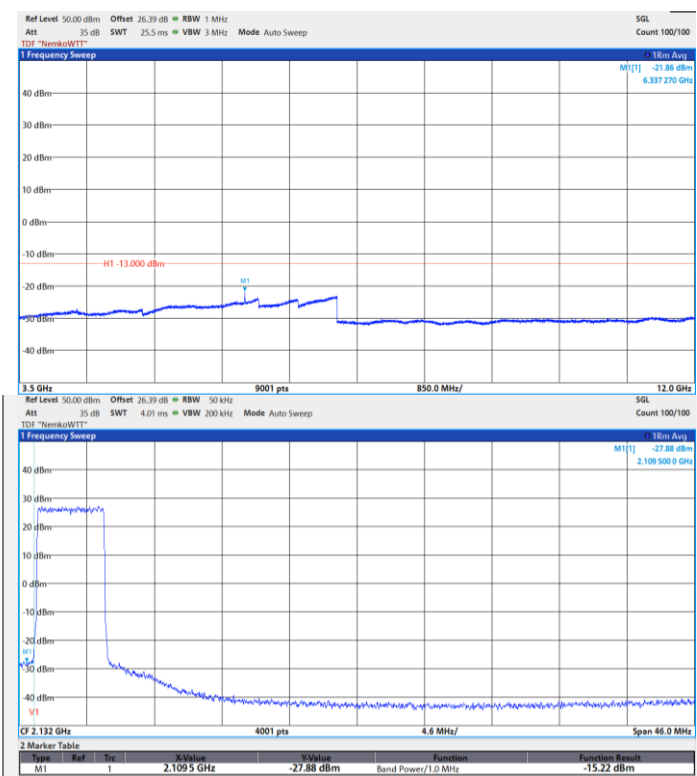
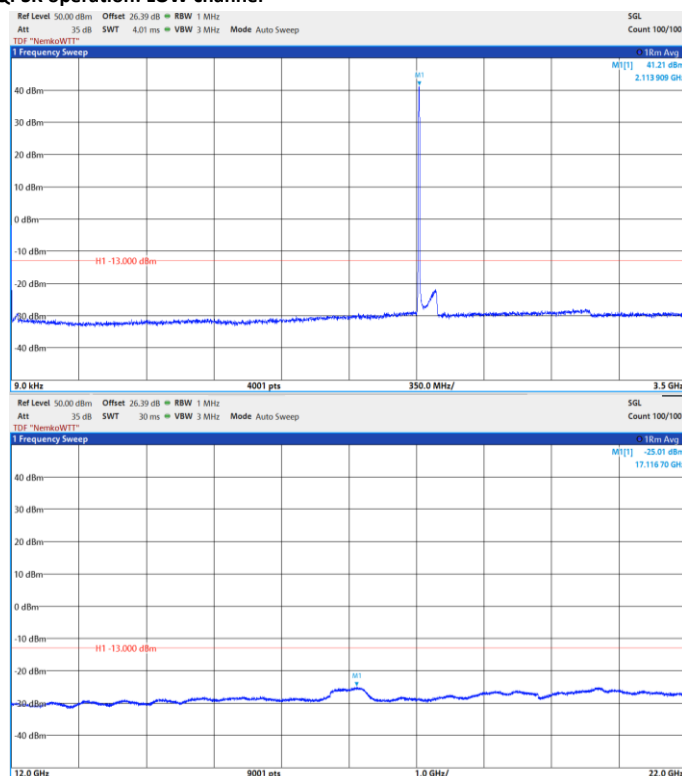
The radiated test was made transmitting at maximum power with the four ports terminated with 50 Ω loads. The scans were made from 30 MHz to 40 GHz considering all the channels. Only the worst case modulation with the highest power, is reported below.

The emission limit is -13 dBm/MHz (conducted and radiated test) or the equivalent field strength at 3m: 82.23 dB μ V/m above 1 GHz and 84.38 dB μ V/m below 1 GHz.

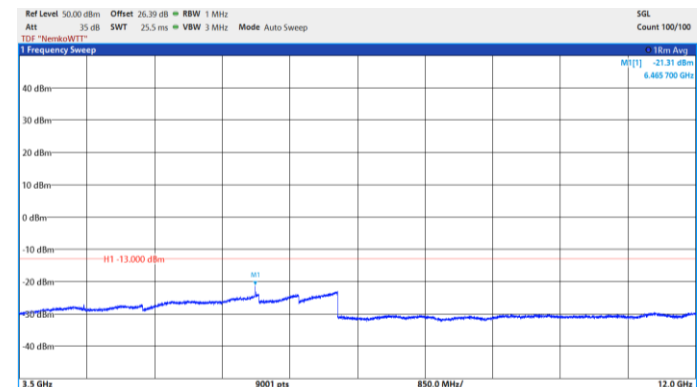
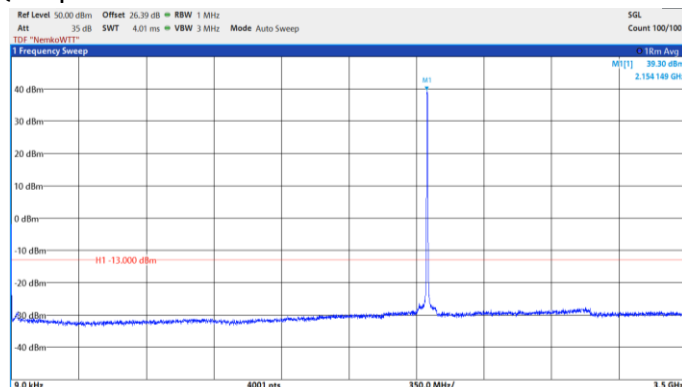
The band edges testing is included. The RBW for this testing was made around the 1% of the bandwidth under test and then integrated over 1 MHz.

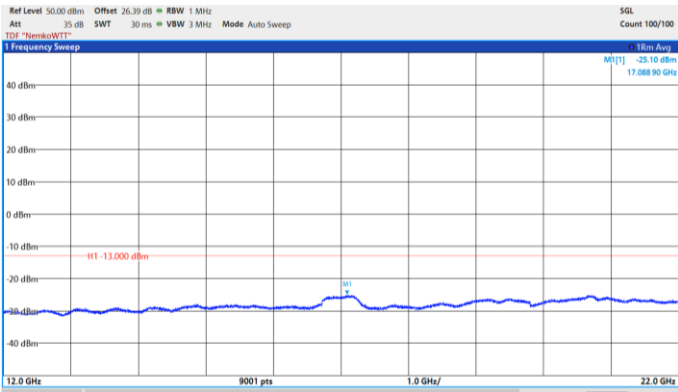
8.6.4 Test data (conducted spurious emissions – LTE 5 MHz)

QPSK operation: LOW channel

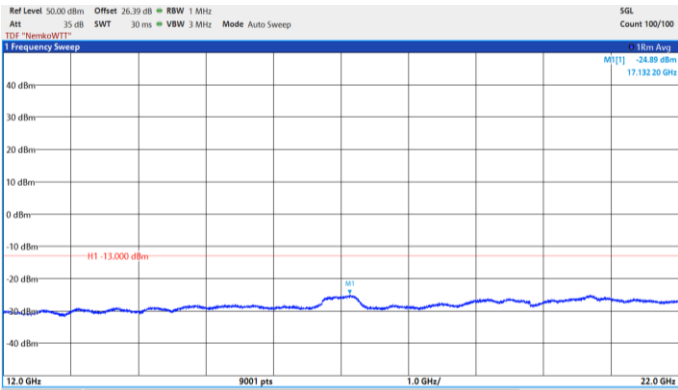
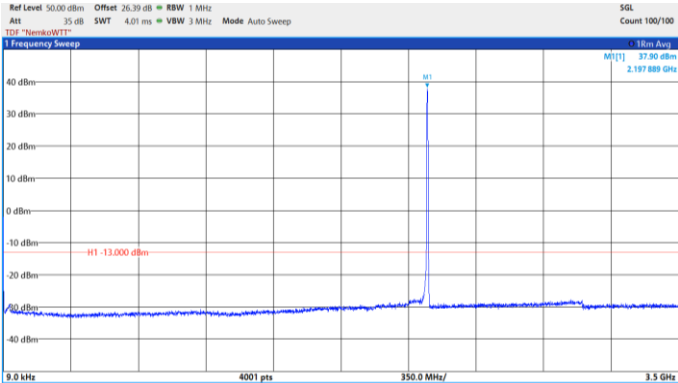


QPSK operation: MID channel





QPSK operation: HIGH channel



16QAM operation: LOW channel

