

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band II, Frequency:1852.4 MHz								
3704.80	H	66.73	-34.54	12.24	1.54	-23.84	-13.00	10.84
3704.80	V	68.97	-31.75	12.24	1.54	-21.05	-13.00	8.05
5557.20	H	36.27	-60.24	12.88	1.26	-48.62	-13.00	35.62
5557.20	V	36.34	-60.56	12.88	1.26	-48.94	-13.00	35.94
558.61	H	29.74	-73.26	0.00	0.74	-74.00	-13.00	61.00
51.80	V	32.24	-70.23	-14.07	0.21	-84.51	-13.00	71.51
WCDMA Band II, Frequency:1880 MHz								
3760.00	H	65.92	-35.18	12.25	1.53	-24.46	-13.00	11.46
3760.00	V	69.92	-30.89	12.25	1.53	-20.17	-13.00	7.17
5640.00	H	46.27	-50.02	13.00	1.28	-38.30	-13.00	25.30
5640.00	V	47.02	-49.57	13.00	1.28	-37.85	-13.00	24.85
605.12	H	29.85	-72.24	0.00	0.77	-73.01	-13.00	60.01
103.16	V	35.91	-76.69	0.00	0.27	-76.96	-13.00	63.96
WCDMA Band II, Frequency:1907.6MHz								
3815.20	H	65.61	-35.32	12.26	1.51	-24.57	-13.00	11.57
3815.20	V	69.66	-31.23	12.26	1.51	-20.48	-13.00	7.48
5722.80	H	36.24	-59.83	13.11	1.31	-48.03	-13.00	35.03
5722.80	V	36.39	-59.90	13.11	1.31	-48.10	-13.00	35.10
60.52	H	30.01	-77.54	-10.02	0.23	-87.79	-13.00	74.79
95.41	V	31.84	-81.11	0.00	0.31	-81.42	-13.00	68.42

AWS Band (PART 27)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 4 Frequency:1712.4 MHz								
3424.80	H	62.53	-39.51	12.23	1.59	-28.87	-13.00	15.87
3424.80	V	67.61	-33.14	12.23	1.59	-22.50	-13.00	9.50
5137.20	H	36.14	-61.07	12.95	1.39	-49.51	-13.00	36.51
5137.20	V	36.05	-61.04	12.95	1.39	-49.48	-13.00	36.48
66.32	H	30.25	-80.60	-6.95	0.24	-87.79	-13.00	74.79
54.71	V	31.56	-72.66	-12.73	0.22	-85.61	-13.00	72.61
WCDMA Band 4 Frequency:1732.6 MHz								
3465.20	H	65.38	-36.59	12.21	1.60	-25.98	-13.00	12.98
3465.20	V	67.38	-33.19	12.21	1.60	-22.58	-13.00	9.58
5197.80	H	36.51	-60.61	12.92	1.36	-49.05	-13.00	36.05
5197.80	V	36.51	-60.58	12.92	1.36	-49.02	-13.00	36.02
59.57	H	31.26	-75.88	-10.50	0.23	-86.61	-13.00	73.61
55.68	V	32.67	-72.13	-12.29	0.22	-84.64	-13.00	71.64
WCDMA Band 4 Frequency:1752.6 MHz								
3505.20	H	66.31	-35.58	12.20	1.61	-24.99	-13.00	11.99
3505.20	V	68.42	-32.00	12.20	1.61	-21.41	-13.00	8.41
5257.80	H	41.26	-55.77	12.90	1.34	-44.21	-13.00	31.21
5257.80	V	42.34	-54.76	12.90	1.34	-43.20	-13.00	30.20
53.48	H	31.57	-74.06	-13.30	0.22	-87.58	-13.00	74.58
61.39	V	31.63	-76.64	-9.56	0.23	-86.43	-13.00	73.43

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

LTE Band 2 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK,Frequency:1850.7 MHz								
3701.40	H	58.76	-42.53	12.24	1.55	-31.84	-13.00	18.84
3701.40	V	60.21	-40.51	12.24	1.55	-29.82	-13.00	16.82
5552.10	H	36.75	-59.77	12.87	1.26	-48.16	-13.00	35.16
5552.10	V	36.12	-60.80	12.87	1.26	-49.19	-13.00	36.19
7402.80	H	44.25	-48.48	12.92	1.42	-36.98	-13.00	23.98
7402.80	V	45.97	-47.36	12.92	1.42	-35.86	-13.00	22.86
752.00	H	32.65	-67.33	0.00	0.93	-68.26	-13.00	55.26
72.38	V	31.21	-83.50	-3.81	0.27	-87.58	-13.00	74.58
QPSK,Frequency:1880 MHz								
3760.00	H	58.29	-42.81	12.25	1.53	-32.09	-13.00	19.09
3760.00	V	60.99	-39.82	12.25	1.53	-29.10	-13.00	16.10
5640.00	H	37.03	-59.26	13.00	1.28	-47.54	-13.00	34.54
5640.00	V	37.10	-59.49	13.00	1.28	-47.77	-13.00	34.77
7520.00	H	44.37	-48.39	12.81	1.33	-36.91	-13.00	23.91
7520.00	V	46.09	-47.36	12.81	1.33	-35.88	-13.00	22.88
64.38	H	31.63	-78.12	-7.98	0.23	-86.33	-13.00	73.33
61.92	V	32.47	-76.13	-9.28	0.23	-85.64	-13.00	72.64
QPSK,Frequency:1909.3 MHz								
3818.60	H	58.34	-42.58	12.26	1.51	-31.83	-13.00	18.83
3818.60	V	61.39	-39.50	12.26	1.51	-28.75	-13.00	15.75
5727.90	H	37.01	-59.04	13.12	1.31	-47.23	-13.00	34.23
5727.90	V	36.99	-59.28	13.12	1.31	-47.47	-13.00	34.47
7637.20	H	44.78	-47.74	12.85	1.42	-36.31	-13.00	23.31
7637.20	V	46.23	-46.95	12.85	1.42	-35.52	-13.00	22.52
65.47	H	31.58	-78.79	-7.40	0.24	-86.43	-13.00	73.43
54.86	V	32.44	-71.87	-12.66	0.22	-84.75	-13.00	71.75

LTE Band 4 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
3421.40	H	57.09	-44.96	12.23	1.59	-34.32	-13.00	21.32
3421.40	V	60.51	-40.25	12.23	1.59	-29.61	-13.00	16.61
5132.10	H	35.77	-61.45	12.95	1.39	-49.89	-13.00	36.89
5132.10	V	36.30	-60.79	12.95	1.39	-49.23	-13.00	36.23
47.38	H	33.45	-68.37	-17.47	0.21	-86.05	-13.00	73.05
141.56	V	32.47	-80.22	0.00	0.36	-80.58	-13.00	67.58
QPSK, Frequency: 1732.5 MHz								
3465.00	H	57.84	-44.13	12.21	1.60	-33.52	-13.00	20.52
3465.00	V	61.31	-39.26	12.21	1.60	-28.65	-13.00	15.65
5197.50	H	36.24	-60.88	12.92	1.36	-49.32	-13.00	36.32
5197.50	V	36.78	-60.31	12.92	1.36	-48.75	-13.00	35.75
55.78	H	31.29	-74.91	-12.24	0.22	-87.37	-13.00	74.37
63.17	V	30.78	-78.61	-8.62	0.23	-87.46	-13.00	74.46
QPSK, Frequency: 1754.3 MHz								
3508.60	H	60.89	-40.99	12.20	1.61	-30.40	-13.00	17.40
3508.60	V	65.64	-34.78	12.20	1.61	-24.19	-13.00	11.19
5262.90	H	36.48	-60.54	12.89	1.33	-48.98	-13.00	35.98
5262.90	V	36.42	-60.68	12.89	1.33	-49.12	-13.00	36.12
697.20	H	30.28	-71.17	0.00	0.93	-72.10	-13.00	59.10
147.56	V	29.98	-82.60	0.00	0.37	-82.97	-13.00	69.97

LTE Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 824.7 MHz								
1649.40	H	57.05	-47.99	10.45	1.28	-38.82	-13.00	25.82
1649.40	V	57.86	-47.11	10.45	1.28	-37.94	-13.00	24.94
2474.10	H	52.78	-50.92	12.16	1.23	-39.99	-13.00	26.99
2474.10	V	60.17	-44.88	12.16	1.23	-33.95	-13.00	20.95
3298.80	H	59.97	-42.29	12.28	1.57	-31.58	-13.00	18.58
3298.80	V	62.35	-38.97	12.28	1.57	-28.26	-13.00	15.26
137.58	H	32.28	-73.30	0.00	0.35	-73.65	-13.00	60.65
67.48	V	31.47	-80.64	-6.34	0.24	-87.22	-13.00	74.22
QPSK, Frequency: 836.5 MHz								
1673.00	H	57.28	-47.74	10.52	1.27	-38.49	-13.00	25.49
1673.00	V	58.10	-46.85	10.52	1.27	-37.60	-13.00	24.60
2509.50	H	53.00	-50.64	12.20	1.24	-39.68	-13.00	26.68
2509.50	V	60.42	-44.61	12.20	1.24	-33.65	-13.00	20.65
3346.00	H	60.21	-41.97	12.26	1.58	-31.29	-13.00	18.29
3346.00	V	62.60	-38.51	12.26	1.58	-27.83	-13.00	14.83
67.41	H	31.63	-79.84	-6.37	0.24	-86.45	-13.00	73.45
55.24	V	30.54	-73.99	-12.49	0.22	-86.70	-13.00	73.70
QPSK, Frequency: 848.3 MHz								
1696.60	H	57.51	-47.49	10.59	1.26	-38.16	-13.00	25.16
1696.60	V	58.33	-46.60	10.59	1.26	-37.27	-13.00	24.27
2544.90	H	53.21	-50.36	12.22	1.26	-39.40	-13.00	26.40
2544.90	V	60.66	-44.19	12.22	1.26	-33.23	-13.00	20.23
3393.20	H	60.45	-41.65	12.24	1.59	-31.00	-13.00	18.00
3393.20	V	62.85	-38.04	12.24	1.59	-27.39	-13.00	14.39
44.65	H	31.53	-67.24	-20.26	0.21	-87.71	-13.00	74.71
58.33	V	32.45	-73.94	-11.07	0.23	-85.24	-13.00	72.24

LTE Band 12(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 699.7 MHz								
1399.40	H	60.04	-44.42	9.58	1.23	-36.07	-13.00	23.07
1399.40	V	62.11	-42.44	9.58	1.23	-34.09	-13.00	21.09
2099.10	H	41.78	-62.75	11.64	1.15	-52.26	-13.00	39.26
2099.10	V	43.59	-61.17	11.64	1.15	-50.68	-13.00	37.68
2798.80	H	57.37	-45.76	12.32	1.40	-34.84	-13.00	21.84
2798.80	V	61.33	-42.31	12.32	1.40	-31.39	-13.00	18.39
73.54	H	31.54	-82.39	-3.23	0.29	-85.91	-13.00	72.91
65.27	V	30.77	-79.95	-7.51	0.24	-87.70	-13.00	74.70
QPSK, Frequency:707.5 MHz								
1415.00	H	60.57	-44.00	9.64	1.25	-35.61	-13.00	22.61
1415.00	V	62.66	-41.97	9.64	1.25	-33.58	-13.00	20.58
2122.50	H	42.15	-62.33	11.67	1.16	-51.82	-13.00	38.82
2122.50	V	43.98	-60.80	11.67	1.16	-50.29	-13.00	37.29
2830.00	H	57.88	-45.20	12.33	1.41	-34.28	-13.00	21.28
2830.00	V	61.87	-41.62	12.33	1.41	-30.70	-13.00	17.70
772.56	H	29.67	-69.74	0.00	0.93	-70.67	-13.00	57.67
53.48	V	33.05	-70.43	-13.30	0.22	-83.95	-13.00	70.95
QPSK, Frequency: 715.3 MHz								
1430.60	H	60.35	-44.33	9.71	1.27	-35.89	-13.00	22.89
1430.60	V	62.43	-42.29	9.71	1.27	-33.85	-13.00	20.85
2145.90	H	41.99	-62.43	11.70	1.16	-51.89	-13.00	38.89
2145.90	V	43.82	-60.98	11.70	1.16	-50.44	-13.00	37.44
2861.20	H	57.67	-45.36	12.34	1.43	-34.45	-13.00	21.45
2861.20	V	61.64	-41.70	12.34	1.43	-30.79	-13.00	17.79
61.59	H	31.31	-76.85	-9.46	0.23	-86.54	-13.00	73.54
56.31	V	32.67	-72.51	-12.00	0.22	-84.73	-13.00	71.73

LTE Band 17(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 706.5 MHz								
1413.00	H	53.22	-51.33	9.63	1.24	-42.94	-13.00	29.94
1413.00	V	54.26	-50.36	9.63	1.24	-41.97	-13.00	28.97
2119.50	H	43.57	-60.92	11.67	1.16	-50.41	-13.00	37.41
2119.50	V	37.58	-67.20	11.67	1.16	-56.69	-13.00	43.69
2826.00	H	51.64	-51.44	12.33	1.41	-40.52	-13.00	27.52
2826.00	V	55.02	-48.49	12.33	1.41	-37.57	-13.00	24.57
62.59	H	30.29	-78.44	-8.93	0.23	-87.60	-13.00	74.60
56.48	V	31.56	-73.72	-11.92	0.22	-85.86	-13.00	72.86
QPSK, Frequency:710 MHz								
1420.00	H	50.47	-54.13	9.66	1.25	-45.72	-13.00	32.72
1420.00	V	52.85	-51.81	9.66	1.25	-43.40	-13.00	30.40
2130.00	H	46.92	-57.54	11.68	1.16	-47.02	-13.00	34.02
2130.00	V	37.89	-66.90	11.68	1.16	-56.38	-13.00	43.38
2840.00	H	48.36	-54.70	12.34	1.42	-43.78	-13.00	30.78
2840.00	V	51.53	-51.91	12.34	1.42	-40.99	-13.00	27.99
77.42	H	29.68	-85.33	-1.29	0.34	-86.96	-13.00	73.96
63.42	V	30.46	-79.09	-8.49	0.23	-87.81	-13.00	74.81
QPSK, Frequency: 713.5 MHz								
1427.00	H	52.68	-51.97	9.69	1.26	-43.54	-13.00	30.54
1427.00	V	55.18	-49.52	9.69	1.26	-41.09	-13.00	28.09
2140.50	H	50.59	-53.85	11.70	1.16	-43.31	-13.00	30.31
2140.50	V	43.27	-61.53	11.70	1.16	-50.99	-13.00	37.99
2854.00	H	49.87	-53.16	12.34	1.42	-42.24	-13.00	29.24
2854.00	V	53.86	-49.51	12.34	1.42	-38.59	-13.00	25.59
58.62	H	29.55	-77.36	-10.93	0.23	-88.52	-13.00	75.52
66.37	V	31.06	-80.35	-6.92	0.24	-87.51	-13.00	74.51

LTE Band 66(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
3421.40	H	37.85	-64.20	12.23	1.59	-53.56	-13.00	40.56
3421.40	V	39.74	-61.03	12.23	1.59	-50.39	-13.00	37.39
5132.10	H	35.03	-62.19	12.95	1.39	-50.63	-13.00	37.63
5132.10	V	35.65	-61.44	12.95	1.39	-49.88	-13.00	36.88
73.29	H	32.15	-81.71	-3.36	0.29	-85.36	-13.00	72.36
142.36	V	31.46	-81.22	0.00	0.36	-81.58	-13.00	68.58
QPSK, Frequency: 1745 MHz								
3490.00	H	37.94	-63.99	12.20	1.61	-53.40	-13.00	40.4
3490.00	V	40.83	-59.63	12.20	1.61	-49.04	-13.00	36.04
5235.00	H	35.12	-61.94	12.91	1.35	-50.38	-13.00	37.38
5235.00	V	35.74	-61.35	12.91	1.35	-49.79	-13.00	36.79
53.68	H	33.26	-72.42	-13.21	0.22	-85.85	-13.00	72.85
64.71	V	31.40	-78.96	-7.80	0.23	-86.99	-13.00	73.99
QPSK, Frequency: 1779.3 MHz								
3558.60	H	37.69	-64.04	12.21	1.59	-53.42	-13.00	40.42
3558.60	V	38.94	-61.56	12.21	1.59	-50.94	-13.00	37.94
5337.90	H	35.22	-61.69	12.86	1.30	-50.13	-13.00	37.13
5337.90	V	35.72	-61.38	12.86	1.30	-49.82	-13.00	36.82
63.48	H	31.53	-77.70	-8.46	0.23	-86.39	-13.00	73.39
57.33	V	30.87	-74.92	-11.53	0.22	-86.67	-13.00	73.67

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

FCC §22.917(a) & §24.238(a) & §27.53 - BAND EDGES

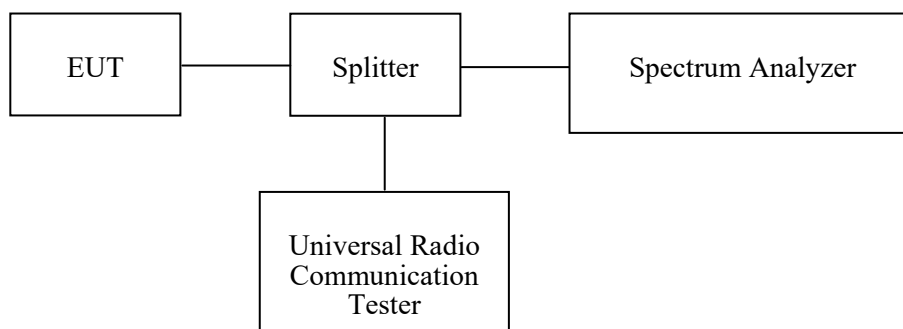
Applicable Standard

FCC § 2.1053, §22.917, § 24.238 and § 27.53

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2020-07-07	2021-07-07
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	N/A
E-Microwave	Blocking Control	EMDCB-00036	0E01201048	Each time	N/A
E-Microwave	Coaxial Attenuators	EMCA10-5RN-6	OE01203239	Each time	N/A
E-Microwave	Two-way Splitter	ODP-1-6-2S	OE0120142	Each time	N/A

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

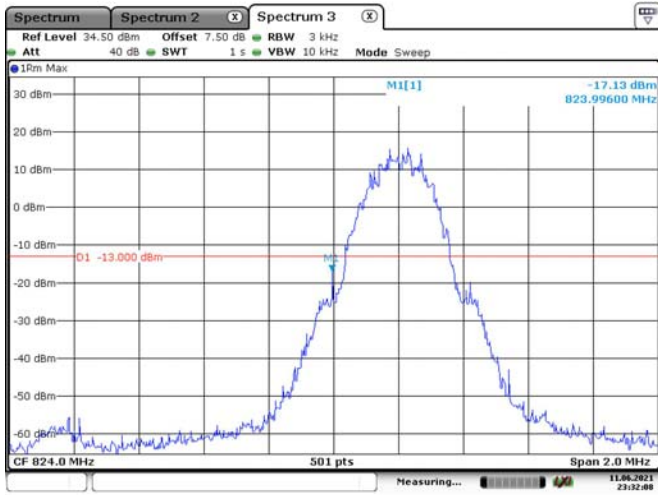
Environmental Conditions

Temperature:	25.8~26.9 °C
Relative Humidity:	42~49%
ATM Pressure:	100~100.7kPa
Tester:	Lay Lei
Test Date:	2021-06-10~2021-06-29

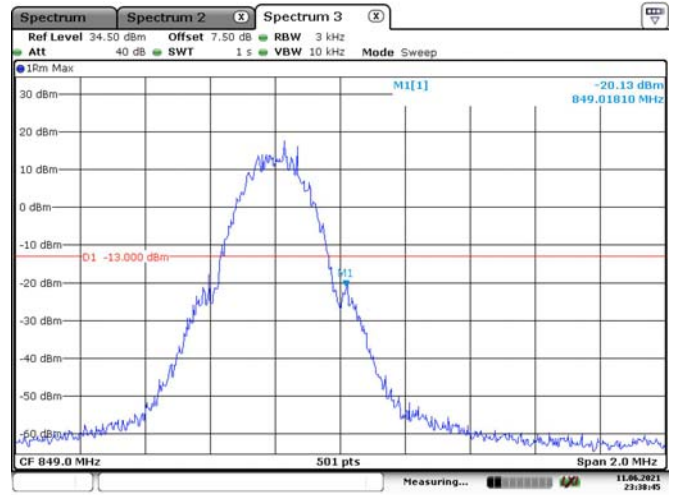
Test Mode: Transmitting

Test Result: Compliance. Please refer to the following plots.

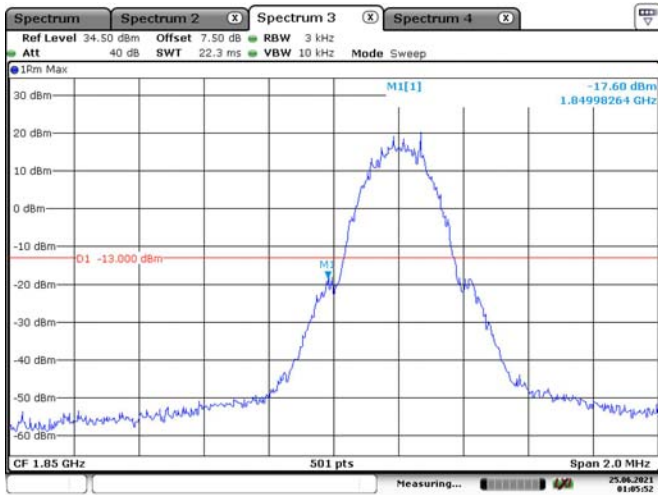
GSM 850, Left Band Edge



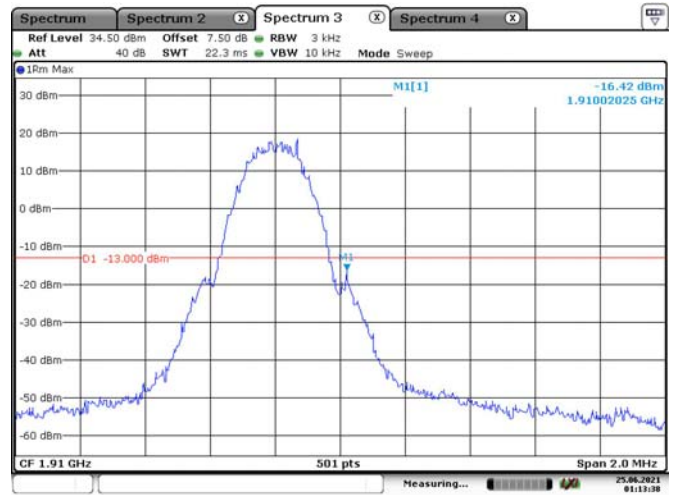
GSM 850, Right Band Edge



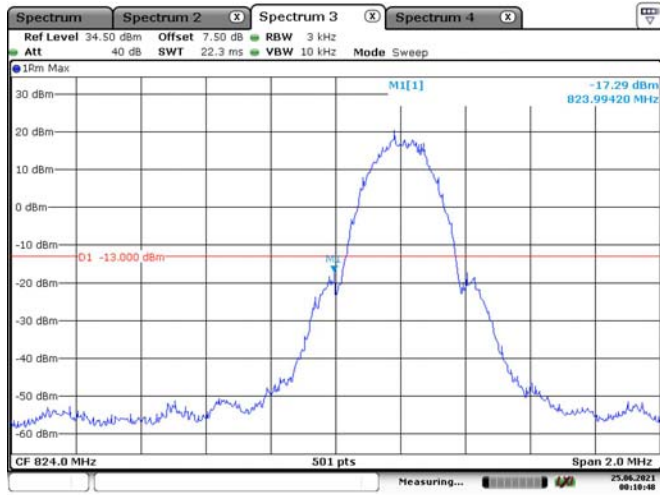
PCS 1900, Left Band Edge



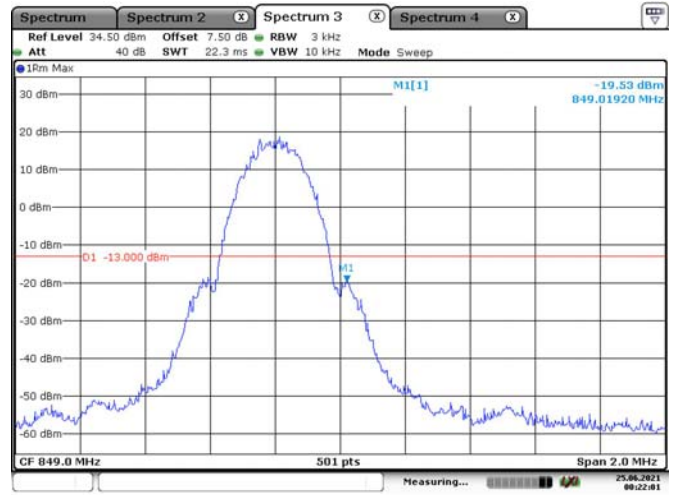
PCS 1900, Right Band Edge



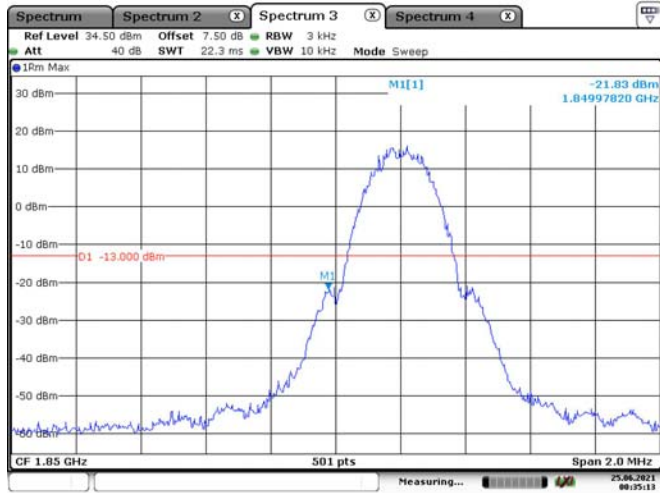
EGPRS 850, Left Band Edge



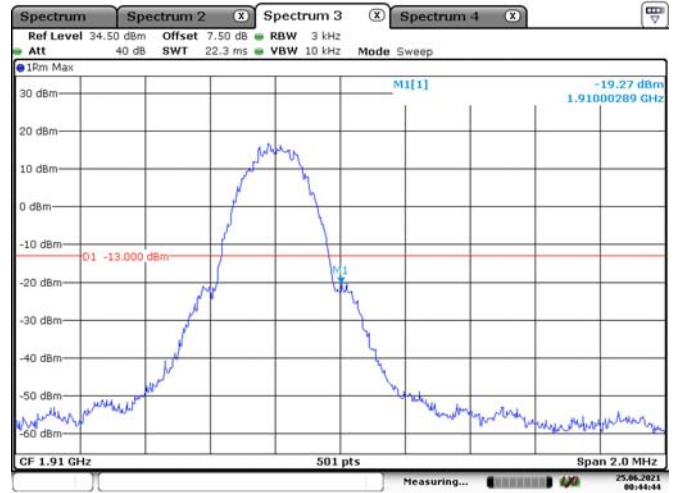
EGPRS 850, Right Band Edge



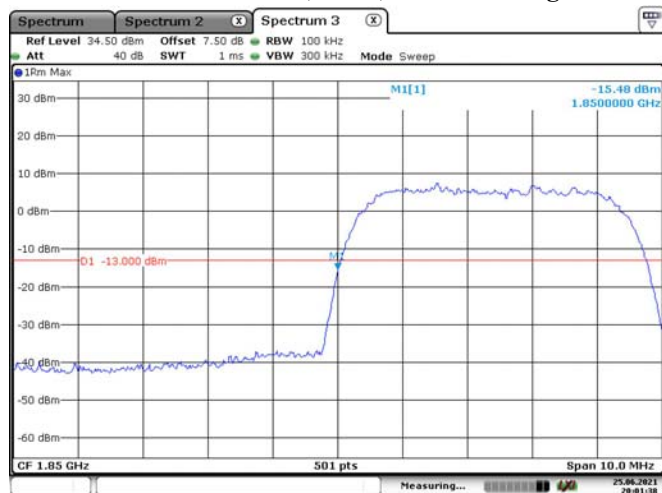
EGPRS 1900, Left Band Edge



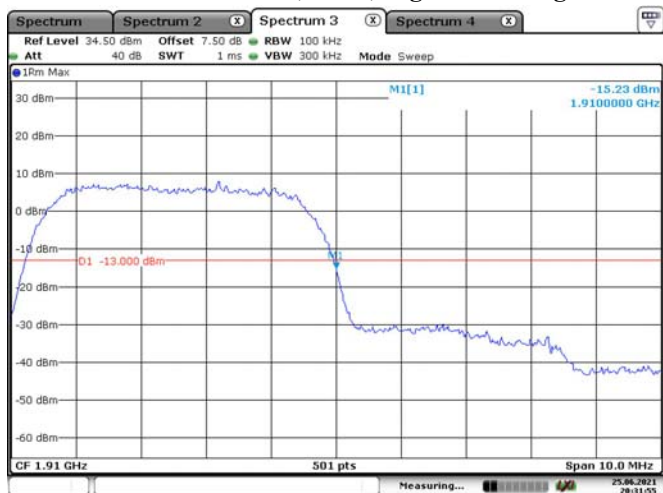
EGPRS 1900, Right Band Edge



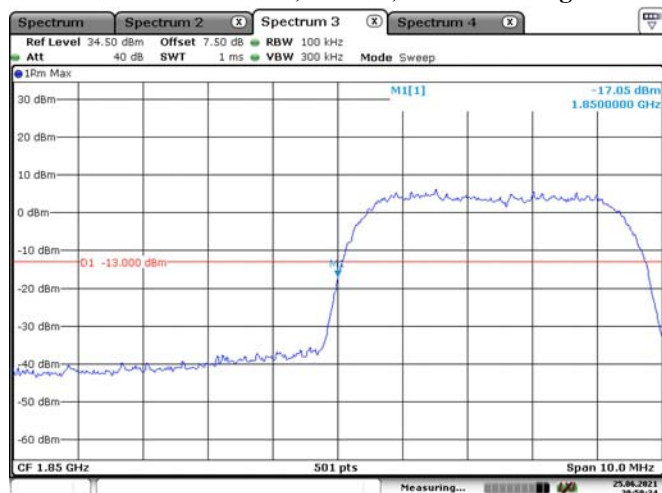
WCDMA Band II, Rel99, Left Band Edge



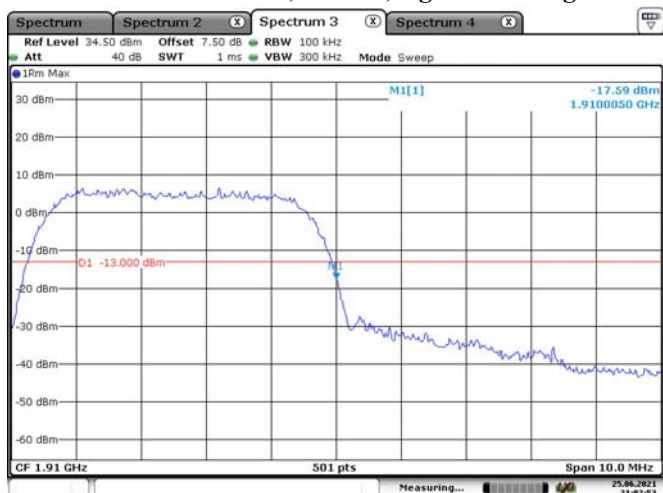
WCDMA Band II, Rel99, Right Band Edge



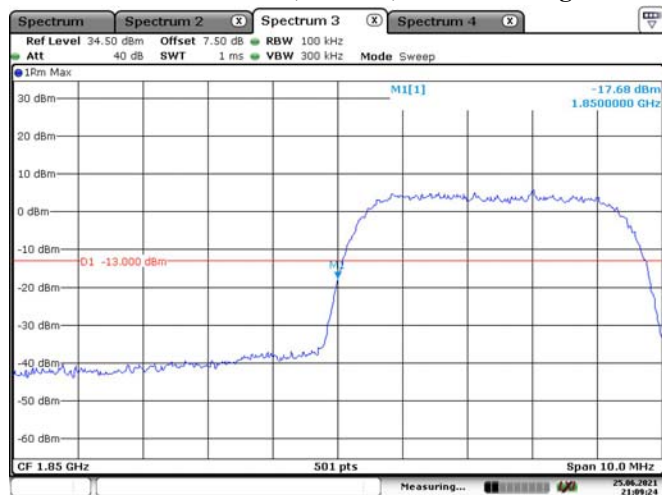
WCDMA Band II, HSDPA, Left Band Edge



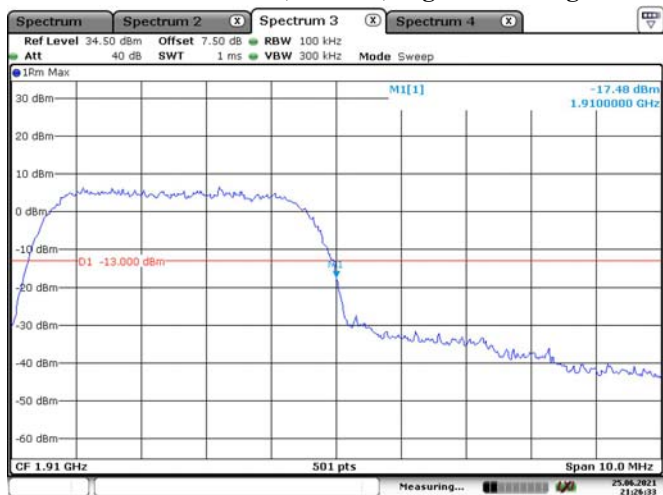
WCDMA Band II, HSDPA, Right Band Edge



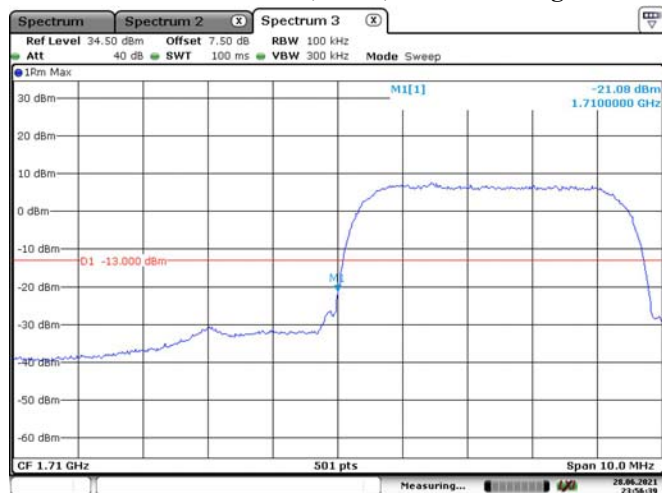
WCDMA Band II, HSUPA, Left Band Edge



WCDMA Band II, HSUPA, Right Band Edge

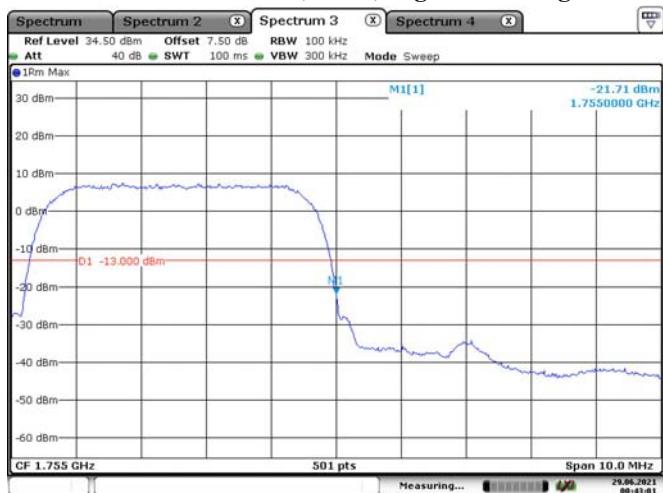


WCDMA Band IV, Rel99, Left Band Edge



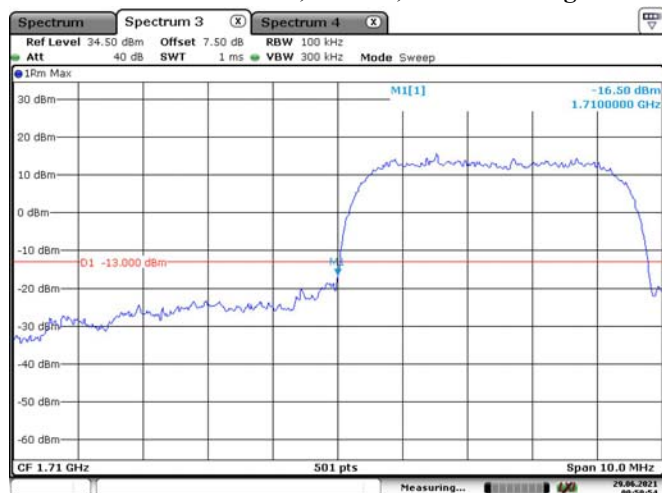
Date: 28.JUN.2021 23:56:40

WCDMA Band IV, Rel99, Right Band Edge



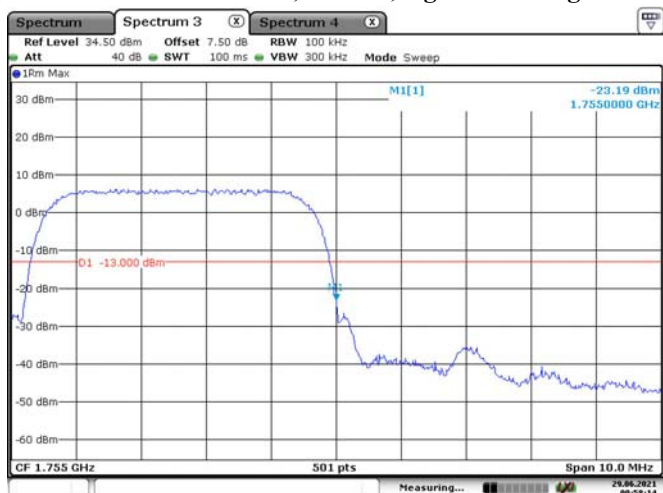
Date: 29.JUN.2021 00:43:01

WCDMA Band IV, HSDPA, Left Band Edge



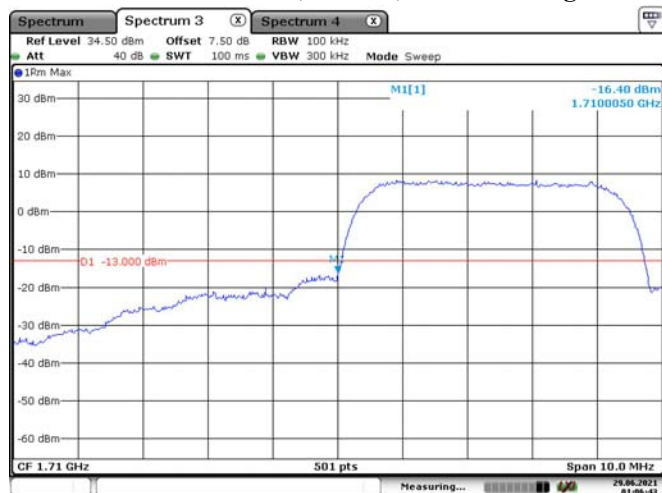
Date: 29.JUN.2021 00:50:54

WCDMA Band IV, HSDPA, Right Band Edge



Date: 29.JUN.2021 00:50:14

WCDMA Band IV, HSUPA, Left Band Edge



Date: 29.JUN.2021 01:06:44

WCDMA Band IV, HSUPA, Right Band Edge



Date: 29.JUN.2021 01:13:22

WCDMA Band V, Rel99, Left Band Edge



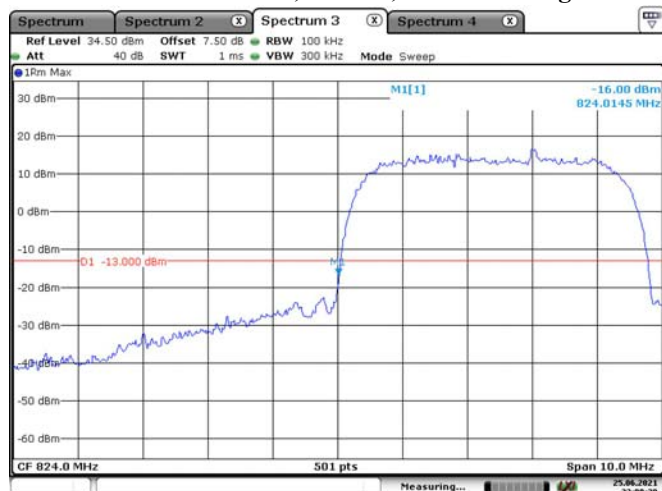
Date: 25 JUN 2021 22:10:45

WCDMA Band V, Rel99, Right Band Edge



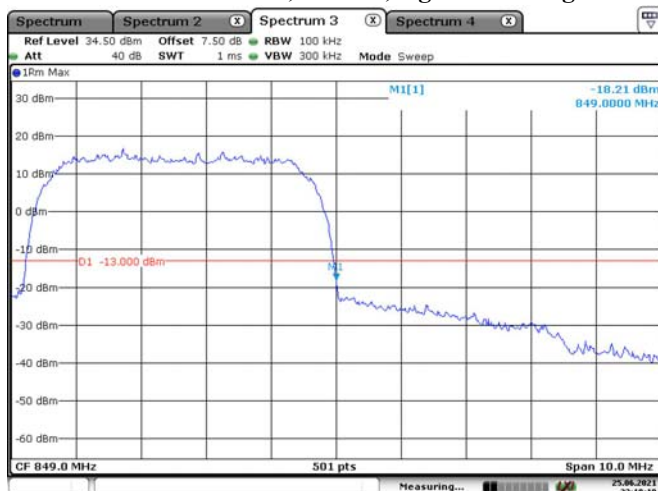
Date: 25 JUN 2021 22:27:29

WCDMA Band V, HSDPA, Left Band Edge



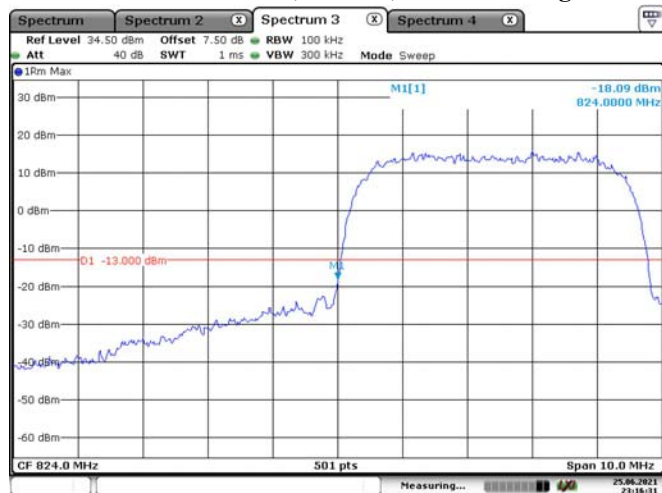
Date: 25 JUN 2021 23:00:38

WCDMA Band V, HSDPA, Right Band Edge



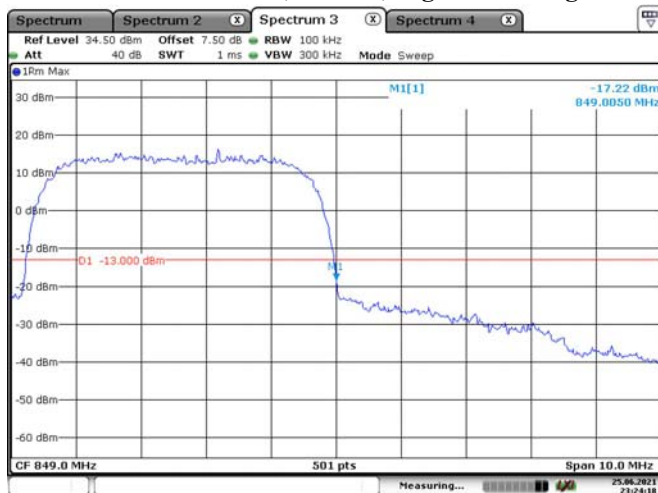
Date: 25 JUN 2021 23:10:18

WCDMA Band V, HSUPA, Left Band Edge

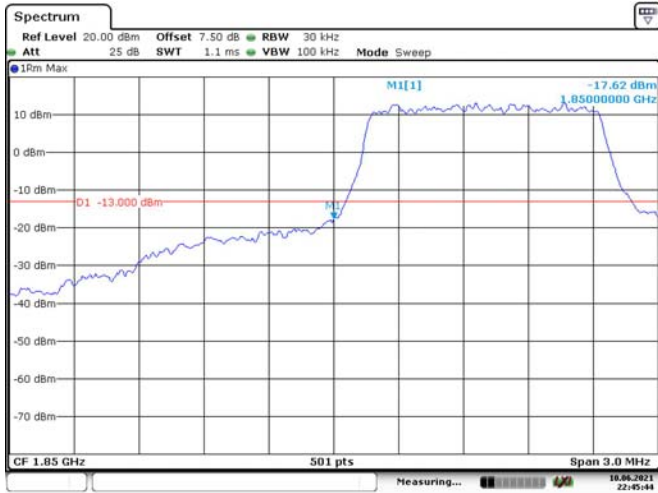
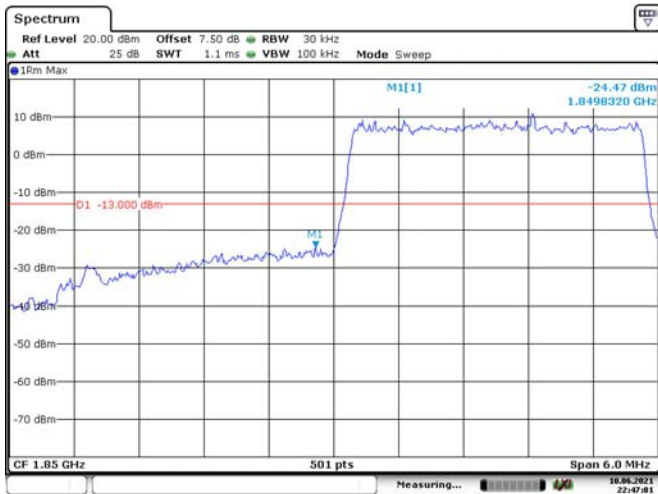
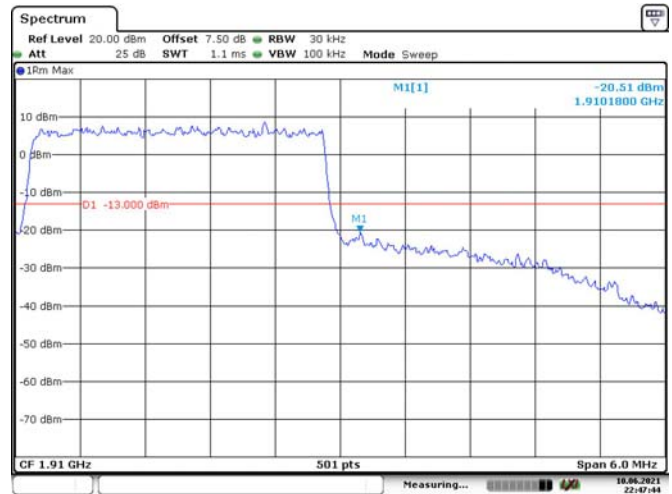
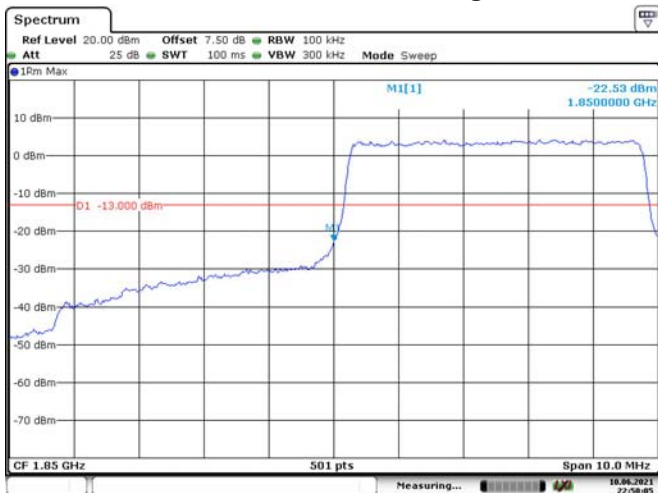


Date: 25 JUN 2021 23:16:31

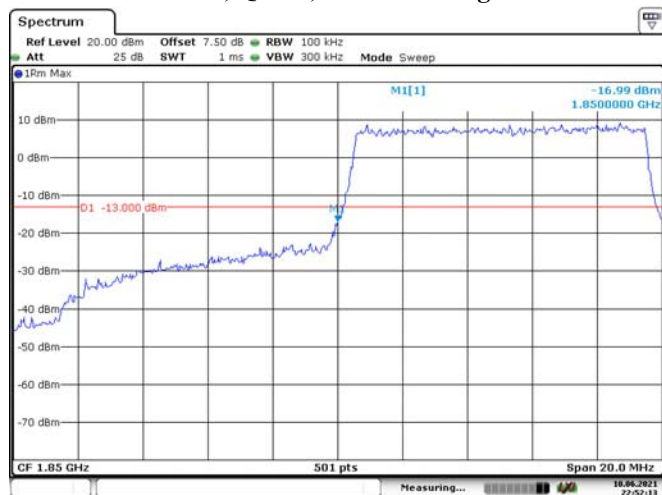
WCDMA Band V, HSUPA, Right Band Edge



Date: 25 JUN 2021 23:24:18

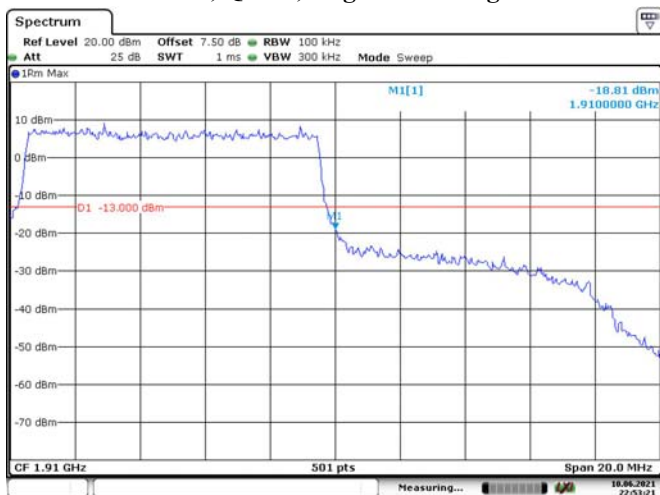
LTE Band 2:**1.4M, QPSK, Left Band Edge****1.4M, QPSK, Right Band Edge****3M, QPSK, Left Band Edge****3M, QPSK, Right Band Edge****5M, QPSK, Left Band Edge****5M, QPSK, Right Band Edge**

10M, QPSK, Left Band Edge



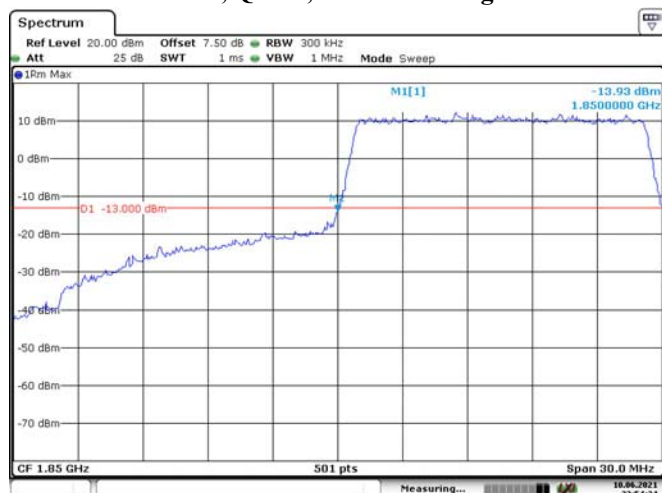
Date: 10 JUN 2021 22:52:13

10M, QPSK, Right Band Edge



Date: 10 JUN 2021 22:53:21

15M, QPSK, Left Band Edge



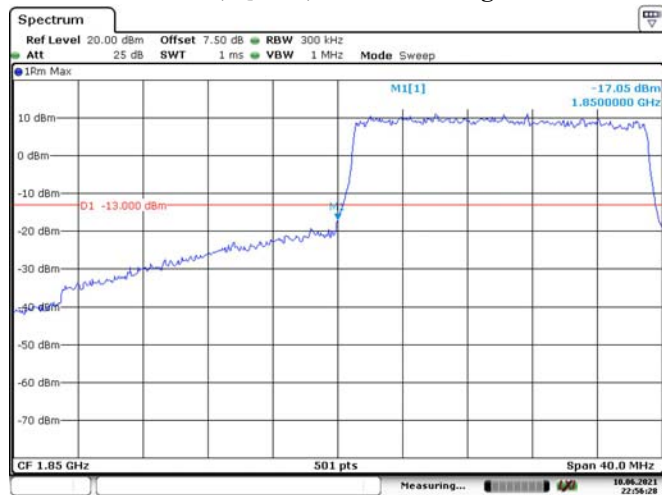
Date: 10 JUN 2021 22:54:24

15M, QPSK, Right Band Edge



Date: 10 JUN 2021 22:55:23

20M, QPSK, Left Band Edge



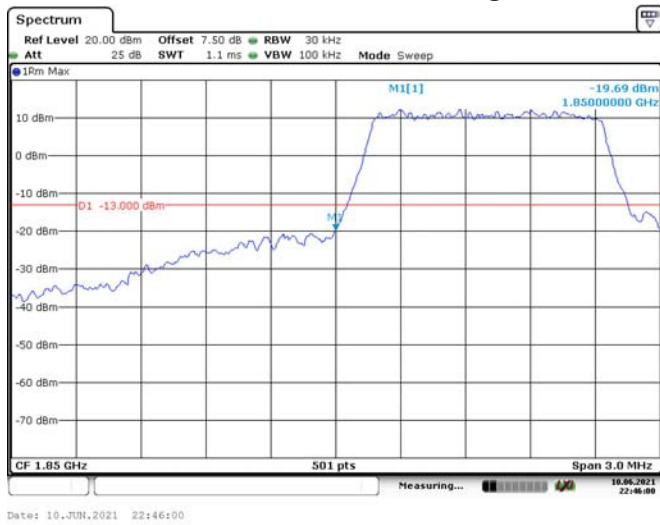
Date: 10 JUN 2021 22:56:28

20M, QPSK, Right Band Edge



Date: 10 JUN 2021 22:57:25

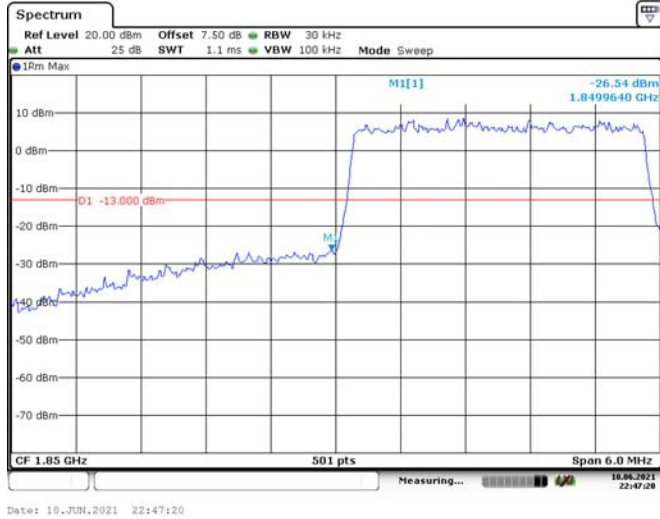
1.4M, 16QAM, Left Band Edge



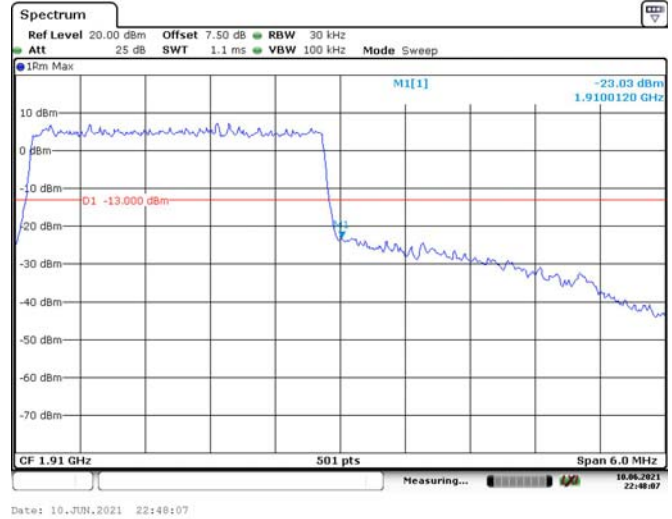
1.4M, 16QAM, Right Band Edge



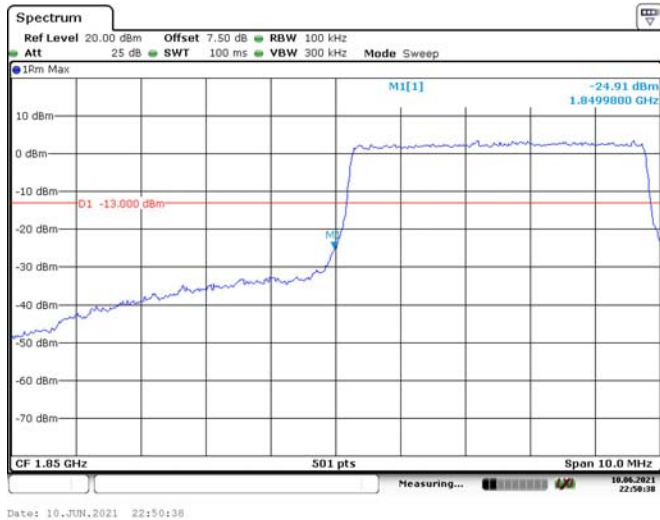
3M, 16QAM, Left Band Edge



3M, 16QAM, Right Band Edge



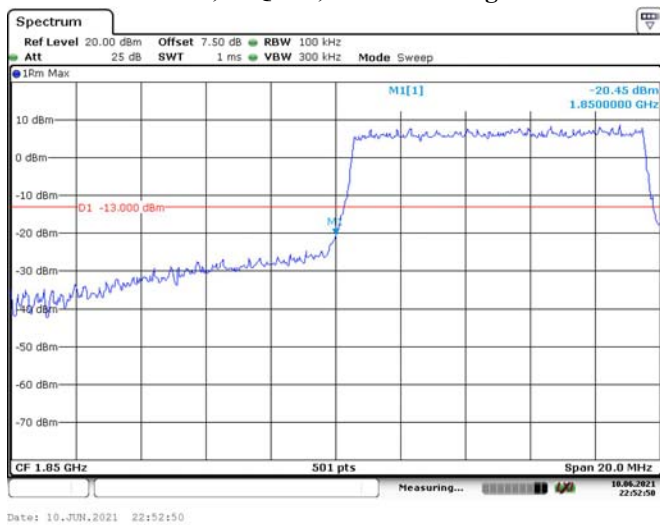
5M, 16QAM, Left Band Edge



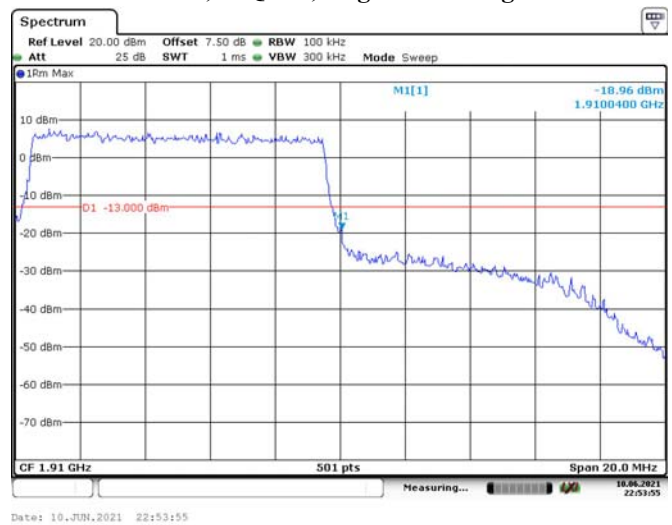
5M, 16QAM, Right Band Edge



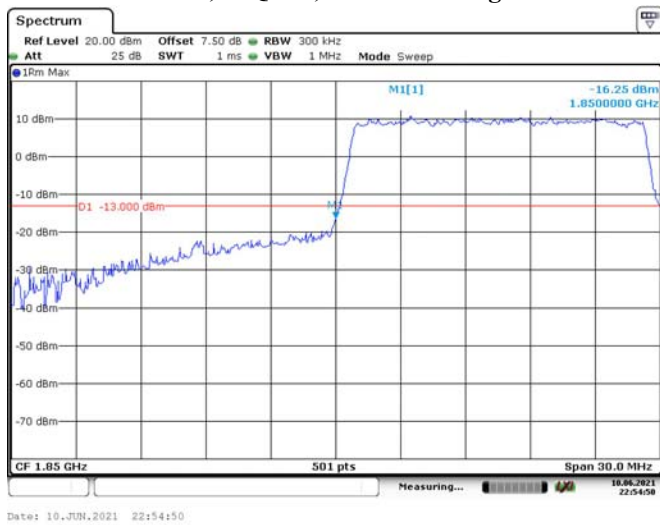
10M, 16QAM, Left Band Edge



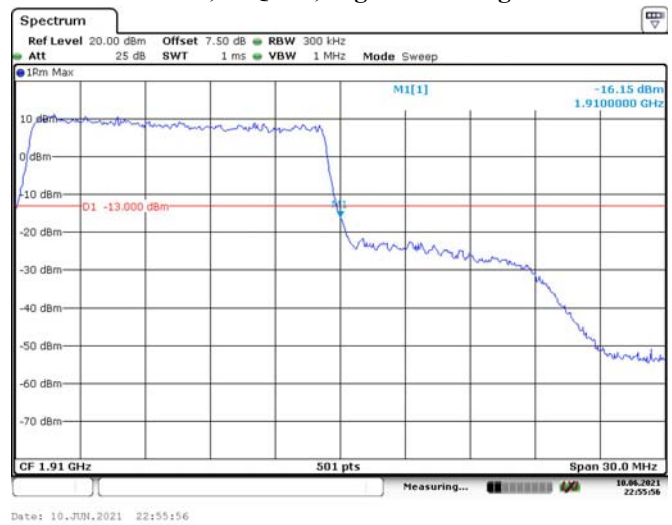
10M, 16QAM, Right Band Edge



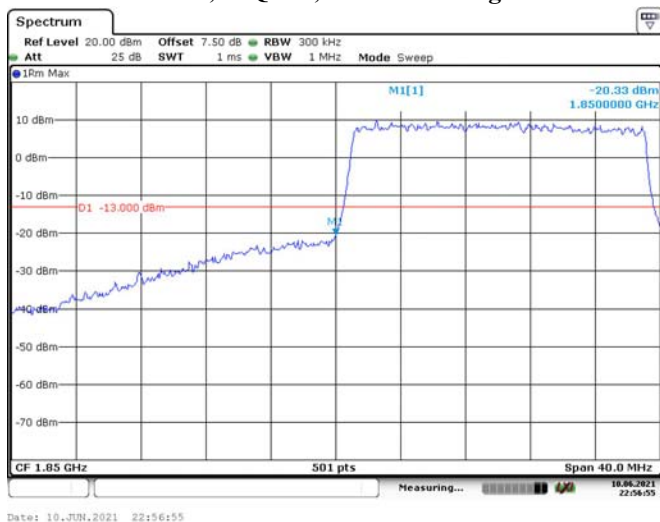
15M, 16QAM, Left Band Edge



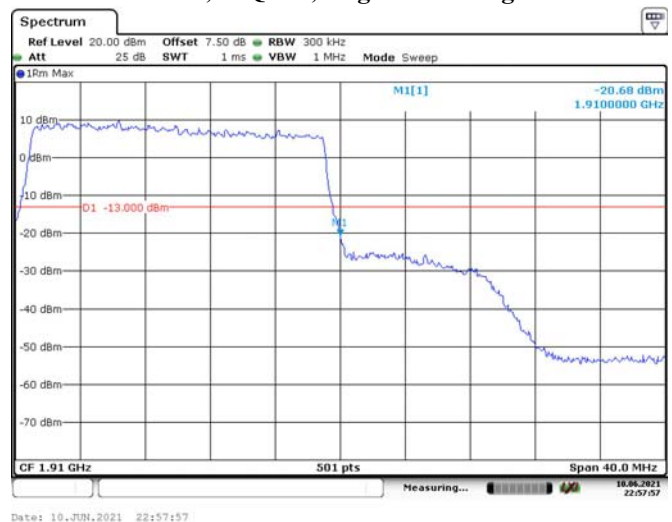
15M, 16QAM, Right Band Edge

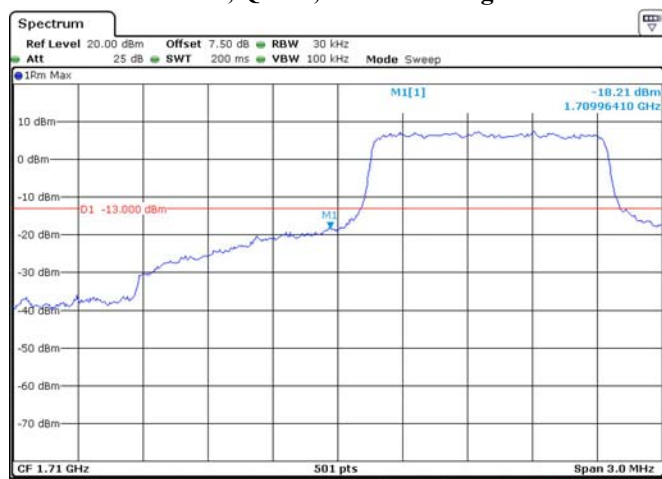


20M, 16QAM, Left Band Edge

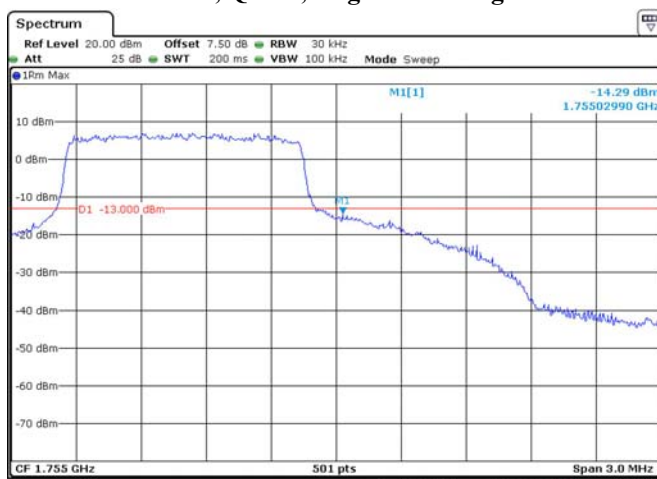


20M, 16QAM, Right Band Edge

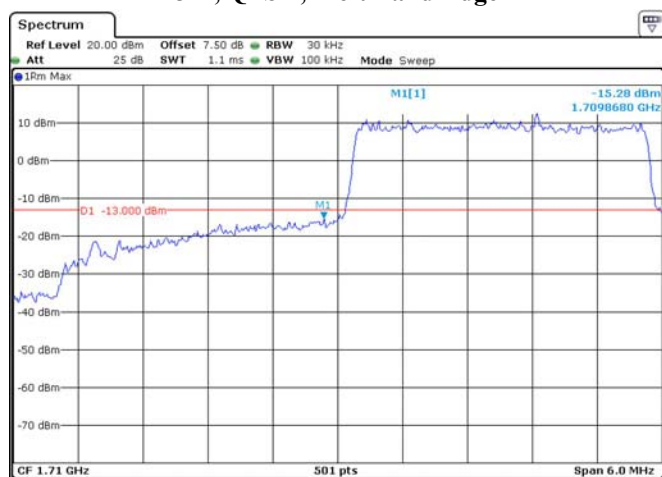


LTE Band 4:**1.4M, QPSK, Left Band Edge**

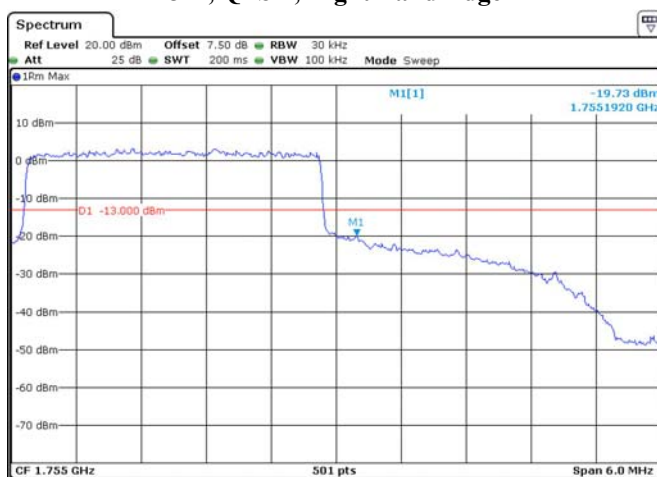
Date: 10.JUN.2021 23:14:00

1.4M, QPSK, Right Band Edge

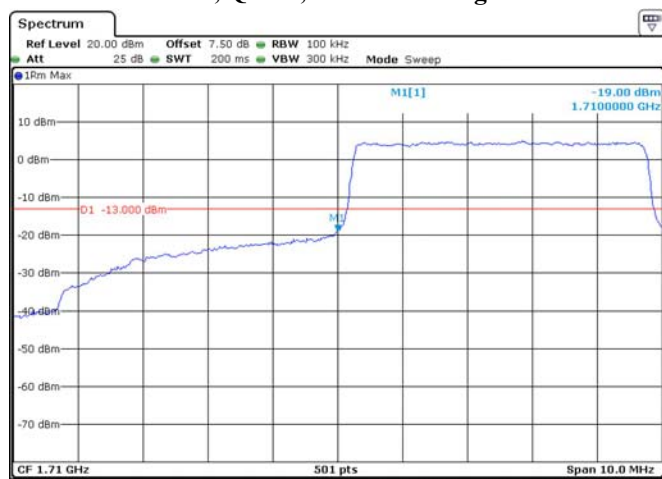
Date: 10.JUN.2021 23:14:51

3M, QPSK, Left Band Edge

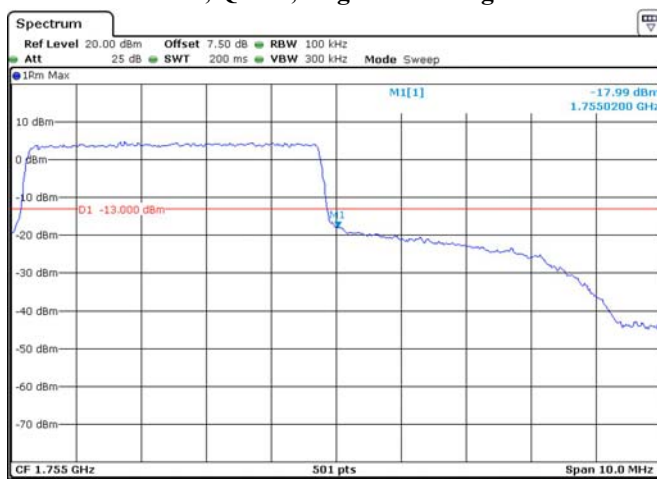
Date: 10.JUN.2021 23:15:45

3M, QPSK, Right Band Edge

Date: 10.JUN.2021 23:16:38

5M, QPSK, Left Band Edge

Date: 10.JUN.2021 23:17:29

5M, QPSK, Right Band Edge

Date: 10.JUN.2021 23:18:25

10M, QPSK, Left Band Edge



10M, QPSK, Right Band Edge



15M, QPSK, Left Band Edge



15M, QPSK, Right Band Edge



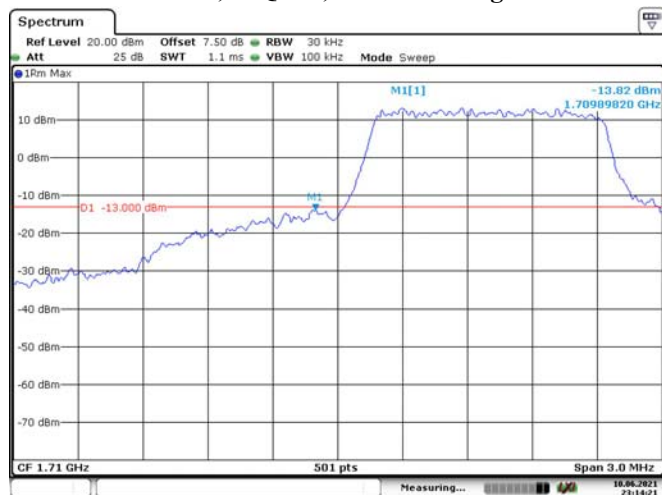
20M, QPSK, Left Band Edge



20M, QPSK, Right Band Edge



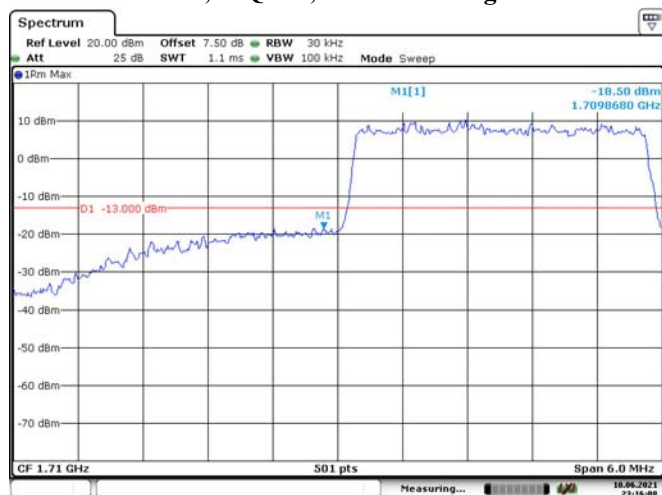
1.4M, 16QAM, Left Band Edge



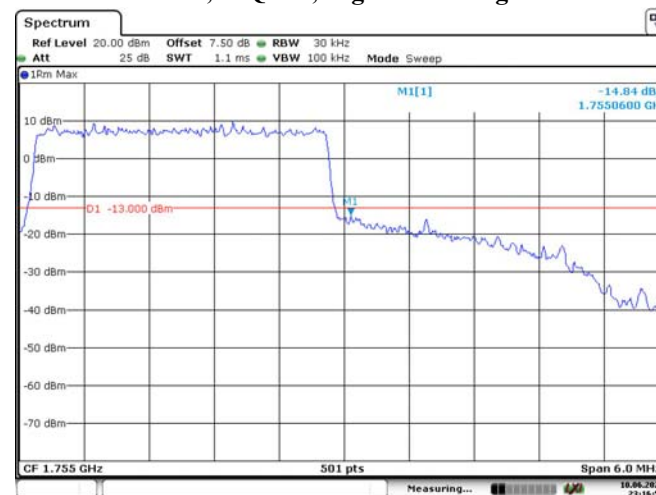
1.4M, 16QAM, Right Band Edge



3M, 16QAM, Left Band Edge



3M, 16QAM, Right Band Edge



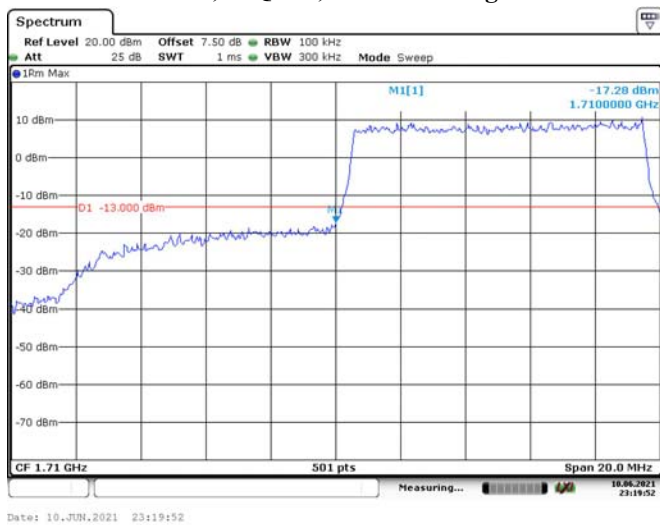
5M, 16QAM, Left Band Edge



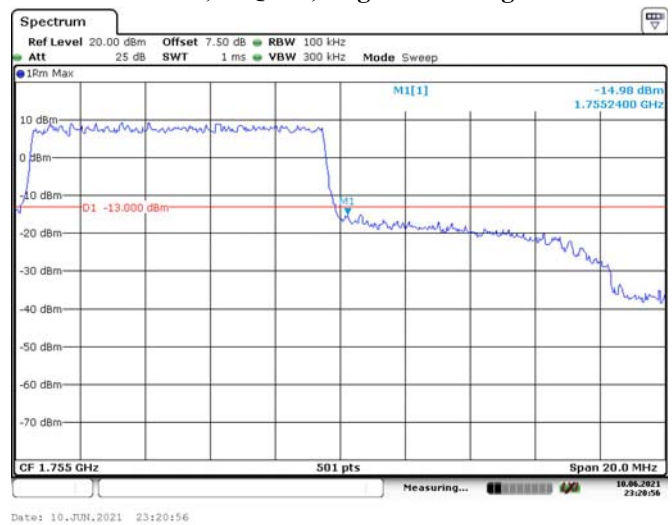
5M, 16QAM, Right Band Edge



10M, 16QAM, Left Band Edge



10M, 16QAM, Right Band Edge



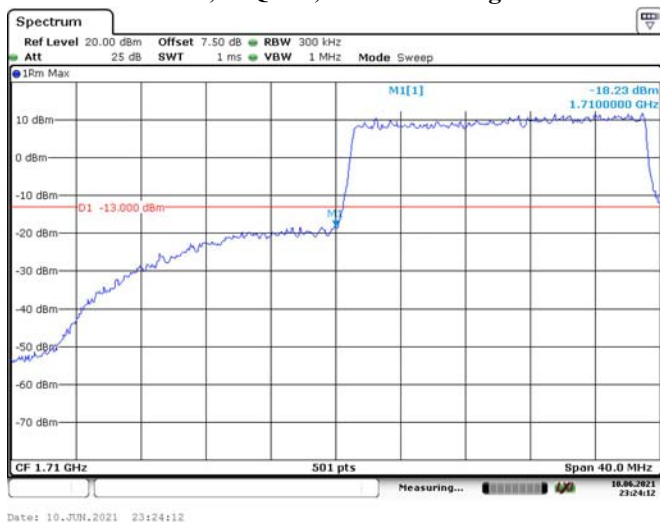
15M, 16QAM, Left Band Edge



15M, 16QAM, Right Band Edge

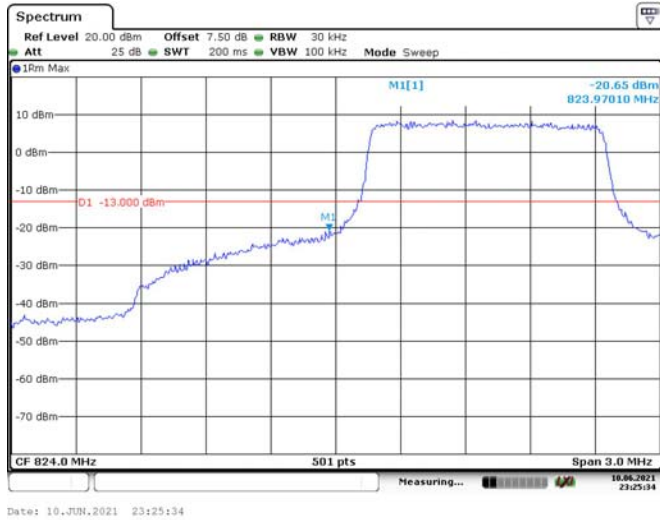
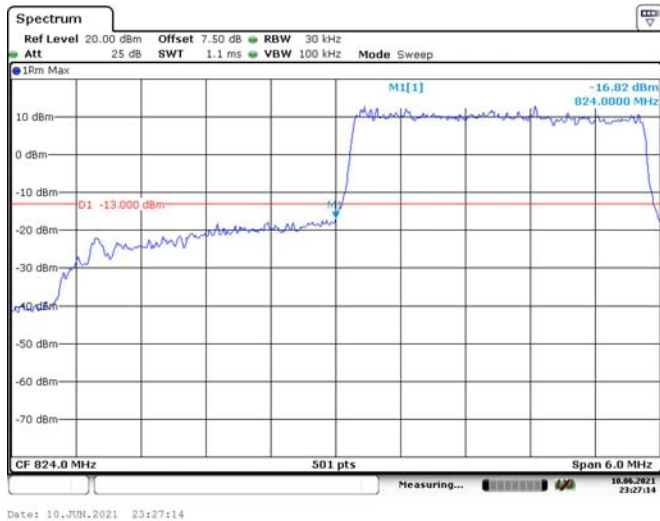
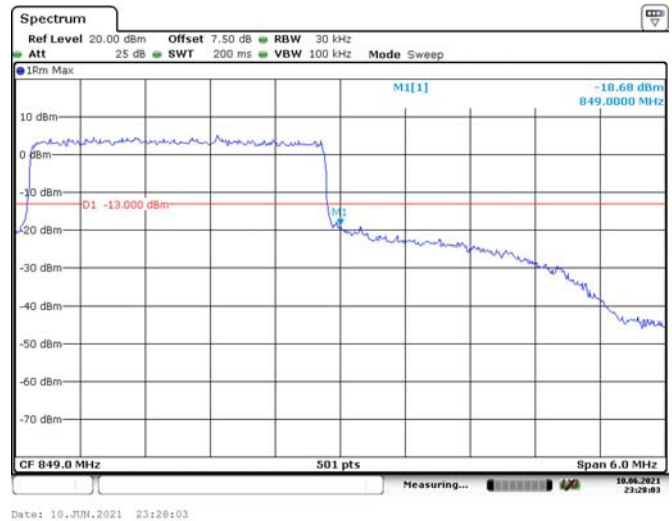
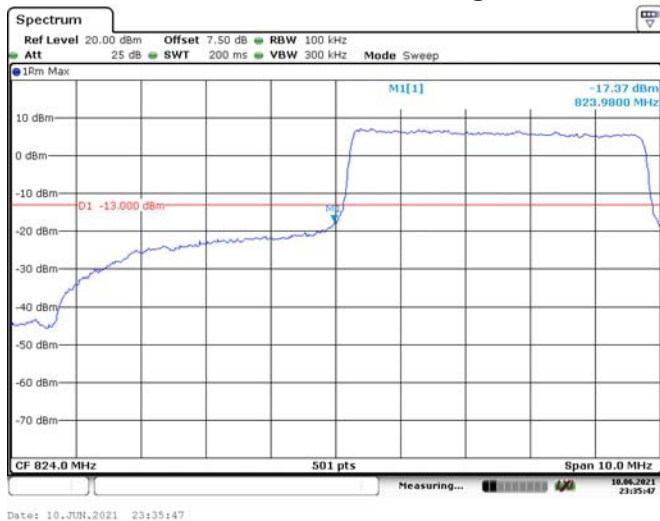


20M, 16QAM, Left Band Edge



20M, 16QAM, Right Band Edge



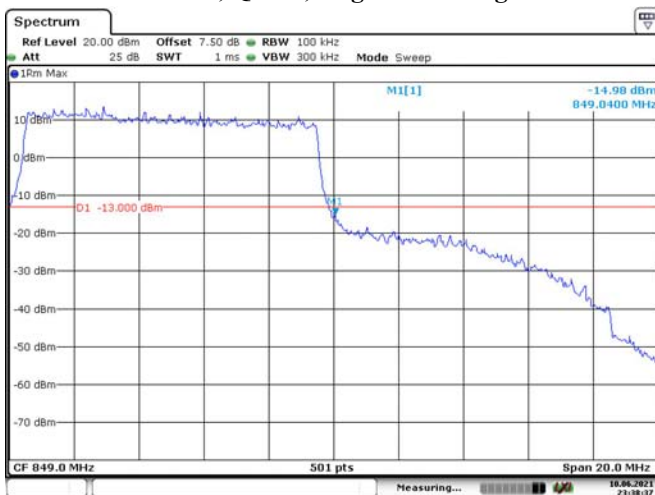
LTE Band 5:**1.4M, QPSK, Left Band Edge****1.4M, QPSK, Right Band Edge****3M, QPSK, Left Band Edge****3M, QPSK, Right Band Edge****5M, QPSK, Left Band Edge****5M, QPSK, Right Band Edge**

10M, QPSK, Left Band Edge



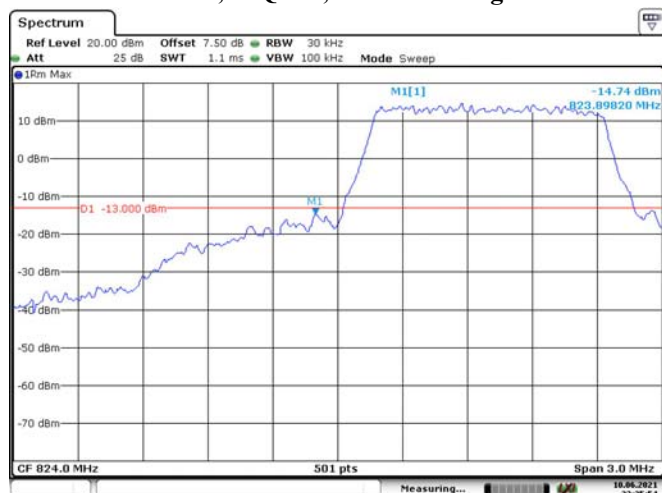
Date: 10 JUN 2021 23:37:36

10M, QPSK, Right Band Edge



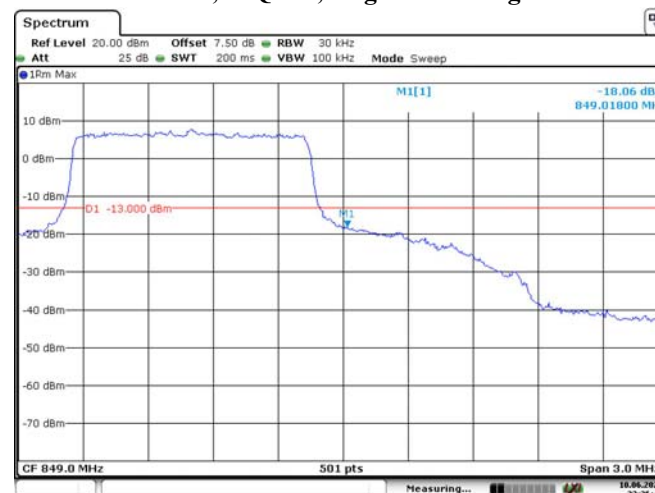
Date: 10 JUN 2021 23:38:37

1.4M, 16QAM, Left Band Edge



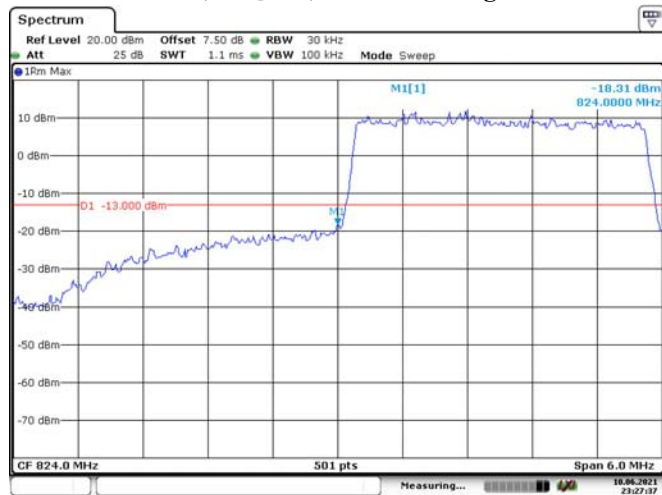
Date: 10 JUN 2021 23:25:54

1.4M, 16QAM, Right Band Edge



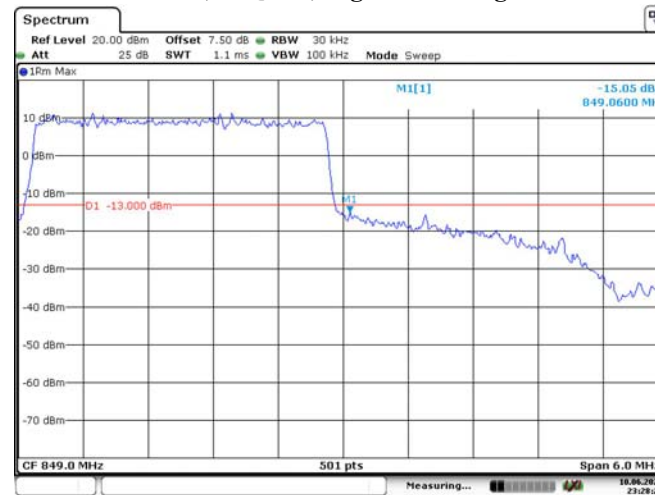
Date: 10 JUN 2021 23:26:49

3M, 16QAM, Left Band Edge



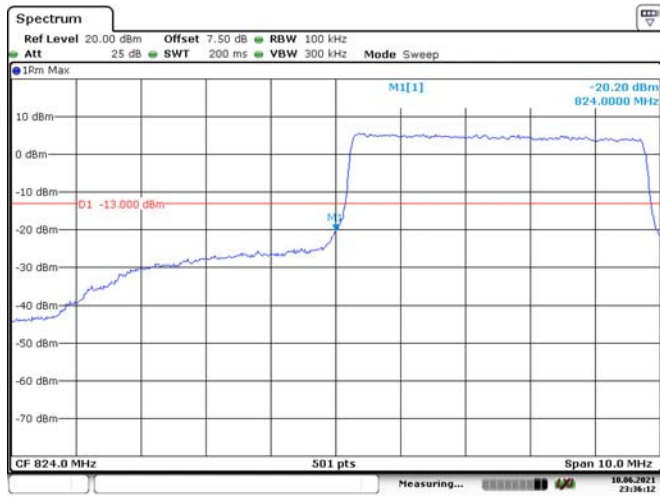
Date: 10 JUN 2021 23:27:37

3M, 16QAM, Right Band Edge



Date: 10 JUN 2021 23:28:23

5M, 16QAM, Left Band Edge



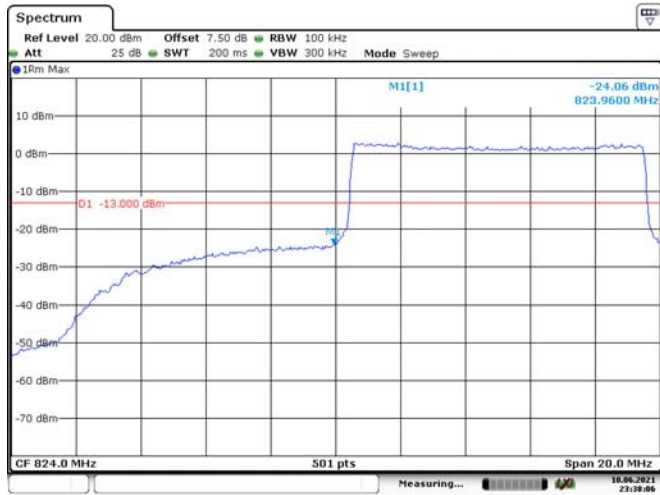
Date: 10.JUN.2021 23:36:12

5M, 16QAM, Right Band Edge



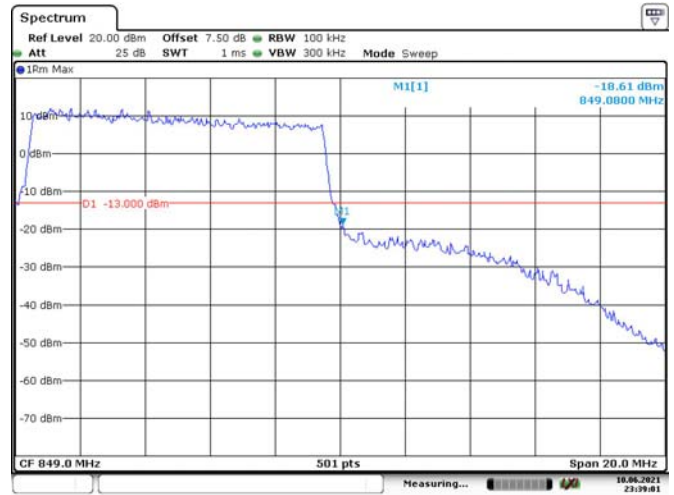
Date: 10.JUN.2021 23:37:01

10M, 16QAM, Left Band Edge

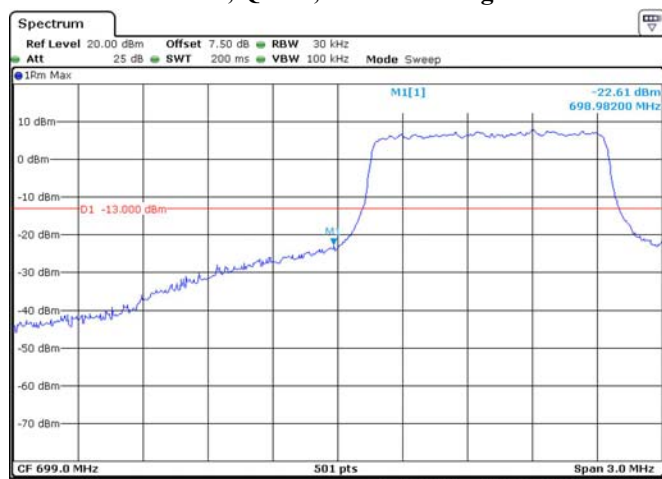
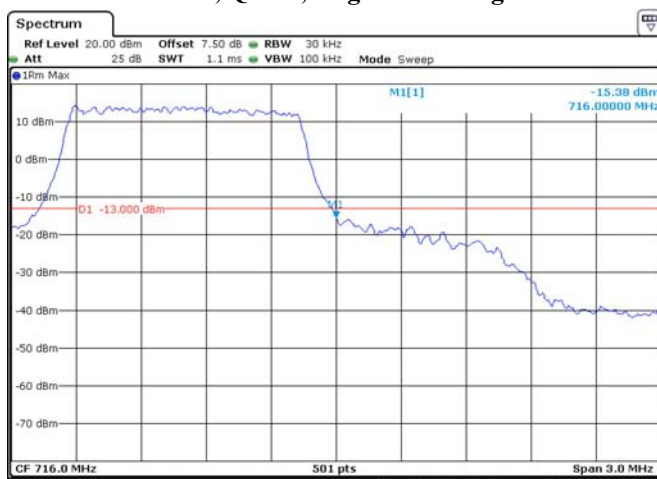
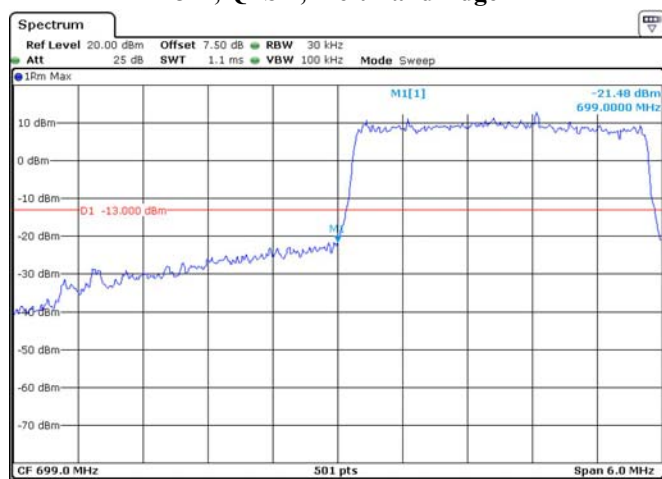
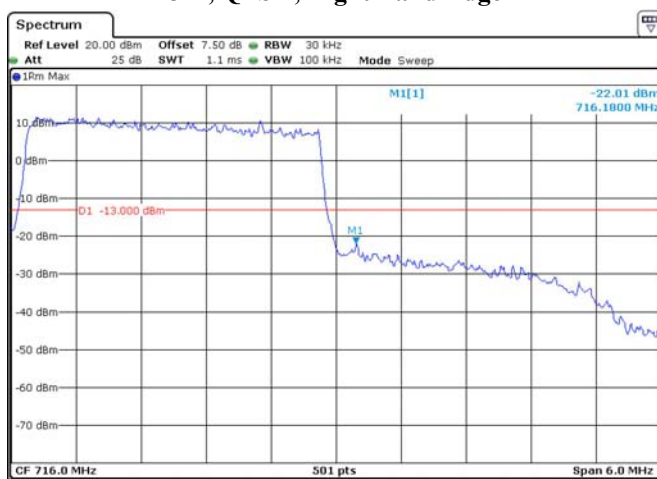
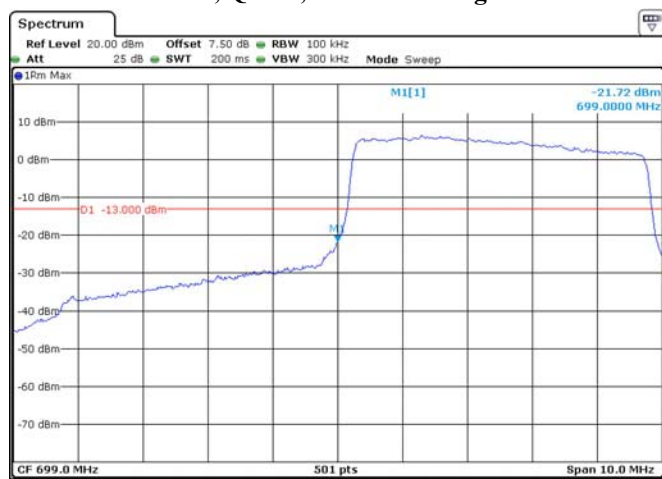
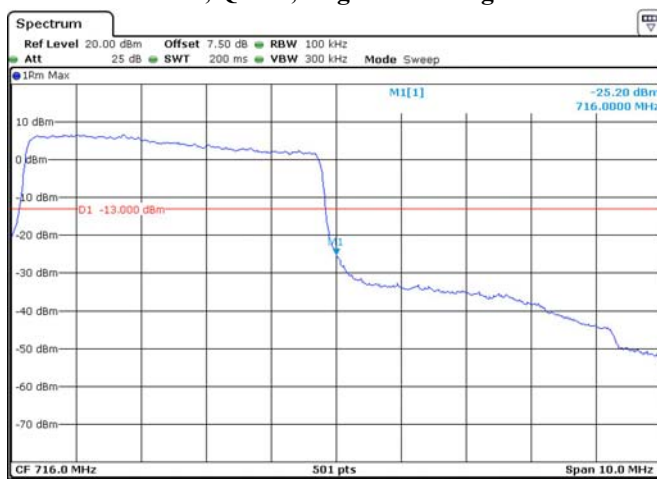


Date: 10.JUN.2021 23:38:06

10M, 16QAM, Right Band Edge



Date: 10.JUN.2021 23:39:01

LTE Band 12:**1.4M, QPSK, Left Band Edge****1.4M, QPSK, Right Band Edge****3M, QPSK, Left Band Edge****3M, QPSK, Right Band Edge****5M, QPSK, Left Band Edge****5M, QPSK, Right Band Edge**

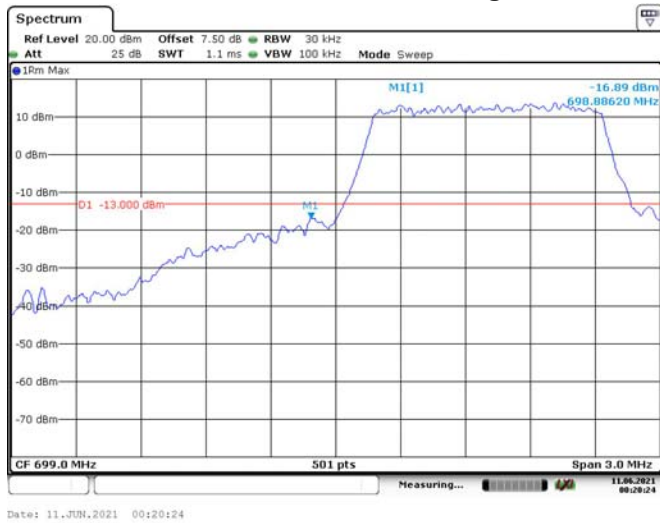
10M, QPSK, Left Band Edge



10M, QPSK, Right Band Edge



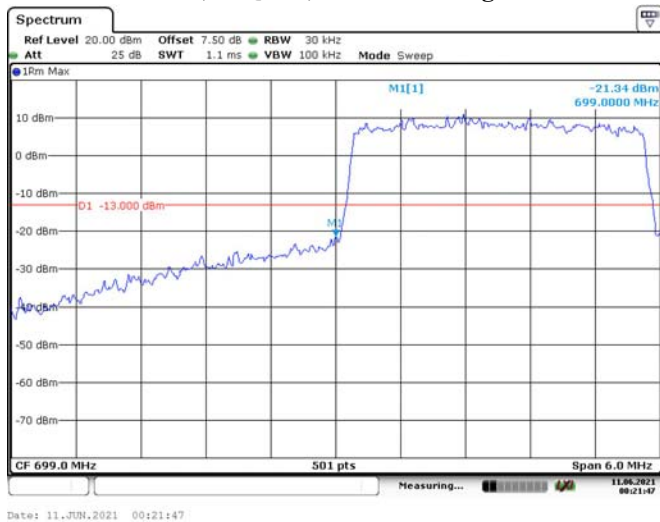
1.4M, 16QAM, Left Band Edge



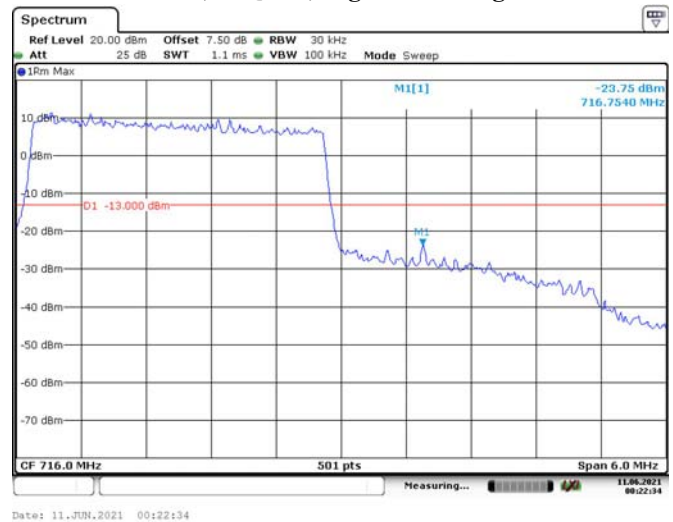
1.4M, 16QAM, Right Band Edge



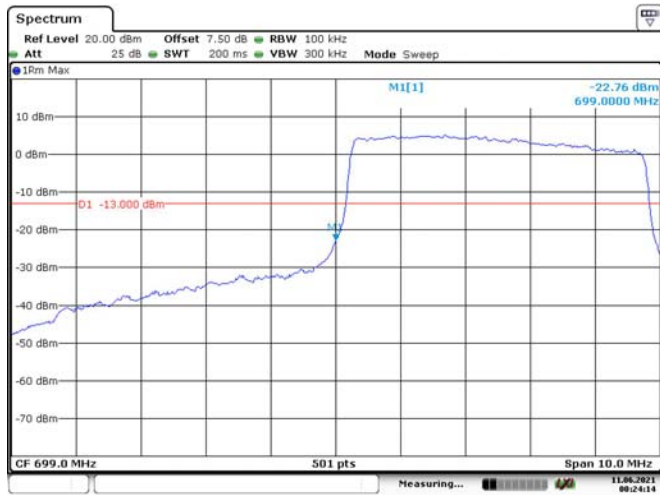
3M, 16QAM, Left Band Edge



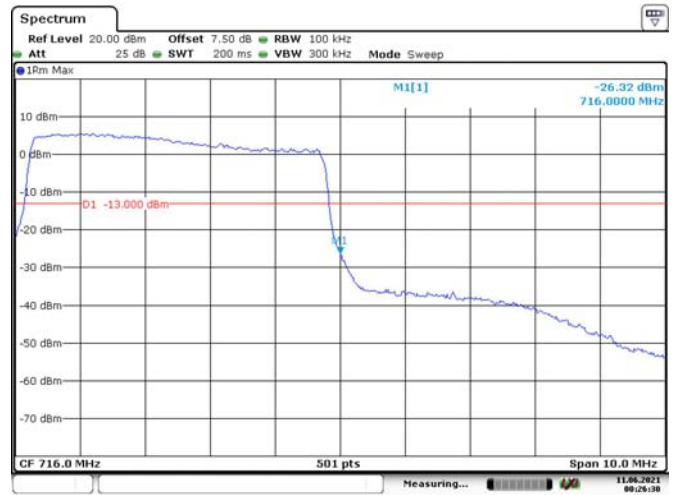
3M, 16QAM, Right Band Edge



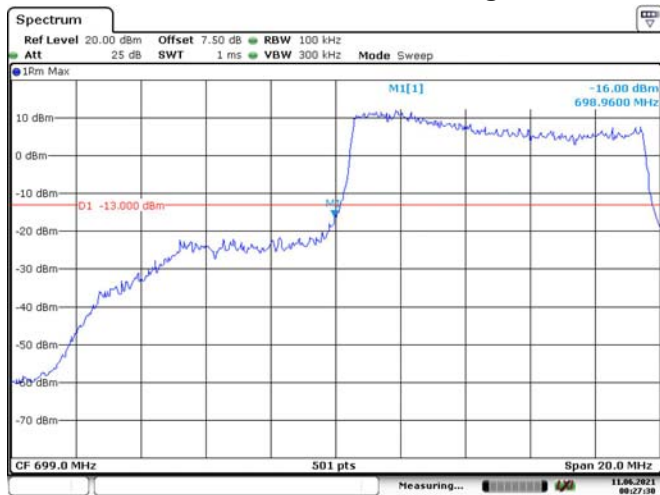
5M, 16QAM, Left Band Edge



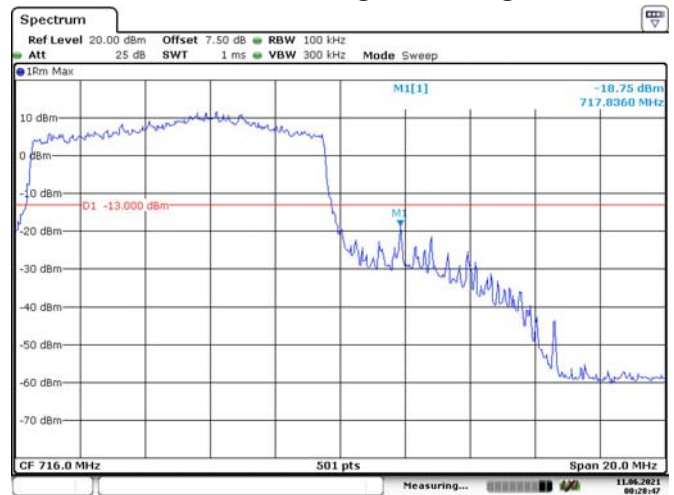
5M, 16QAM, Right Band Edge

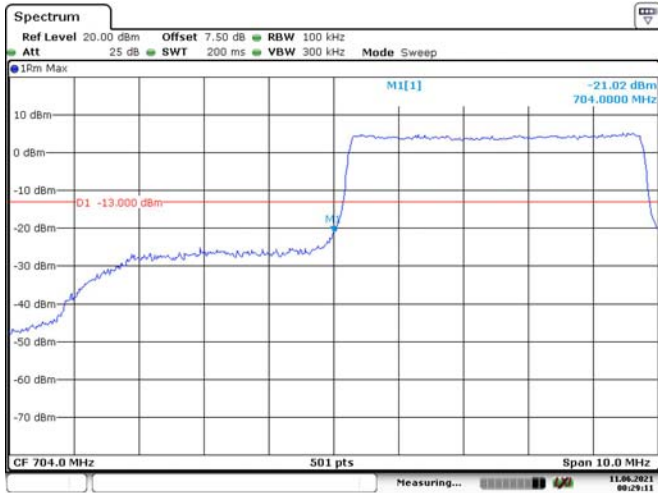
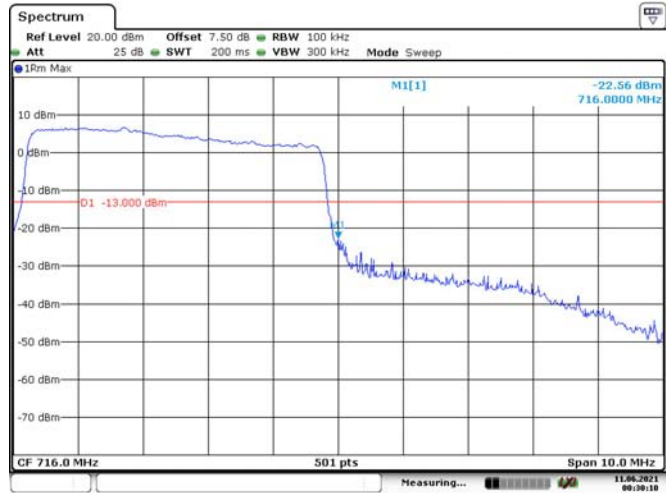
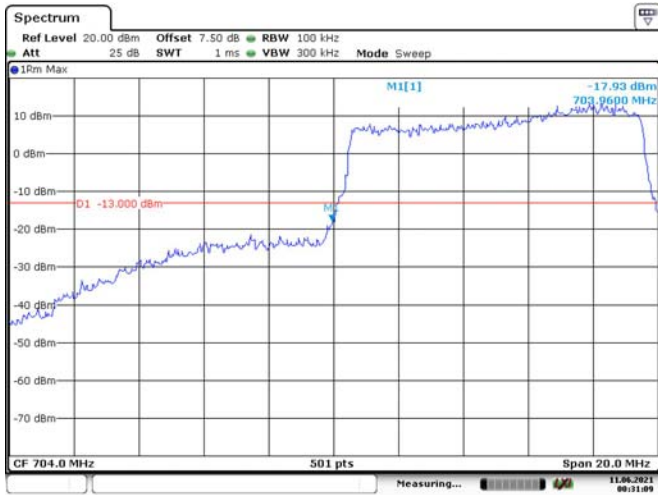
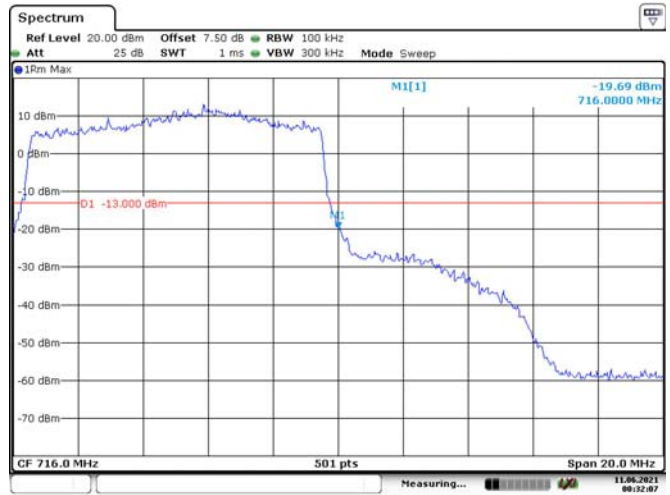
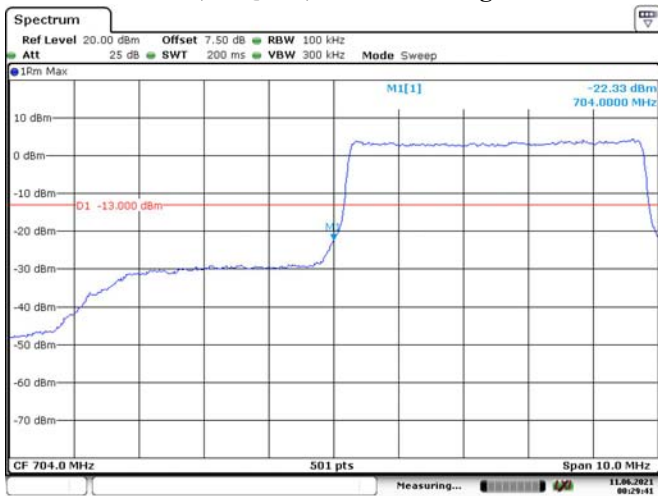


10M, 16QAM, Left Band Edge

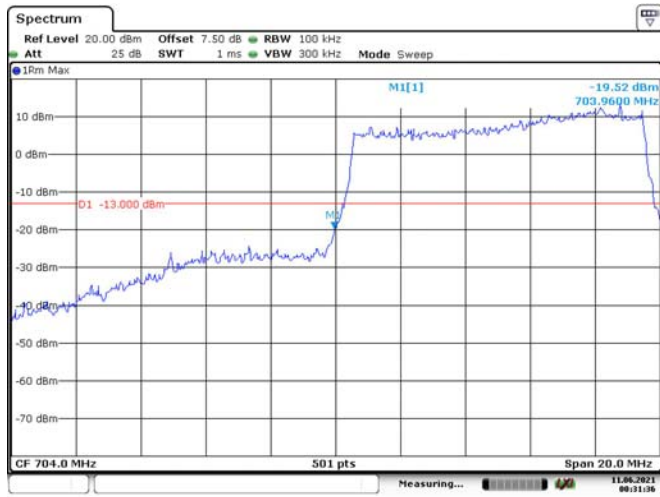


10M, 16QAM, Right Band Edge



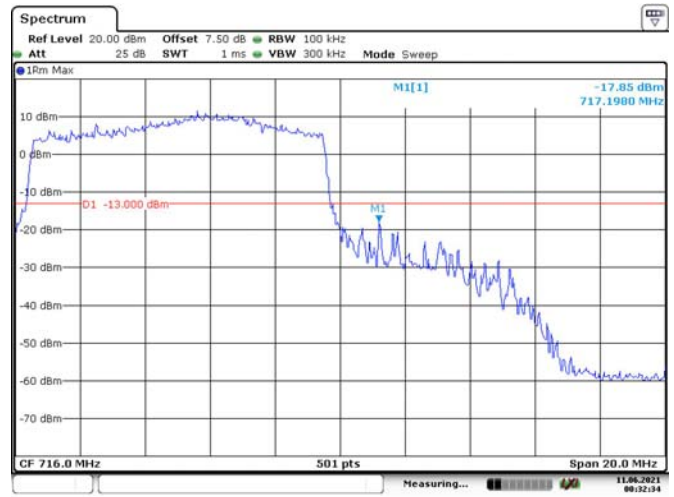
LTE Band 17:**5M, QPSK, Left Band Edge****5M, QPSK, Right Band Edge****10M, QPSK, Left Band Edge****10M, QPSK, Right Band Edge****5M, 16QAM, Left Band Edge****5M, 16QAM, Right Band Edge**

10M, 16QAM, Left Band Edge

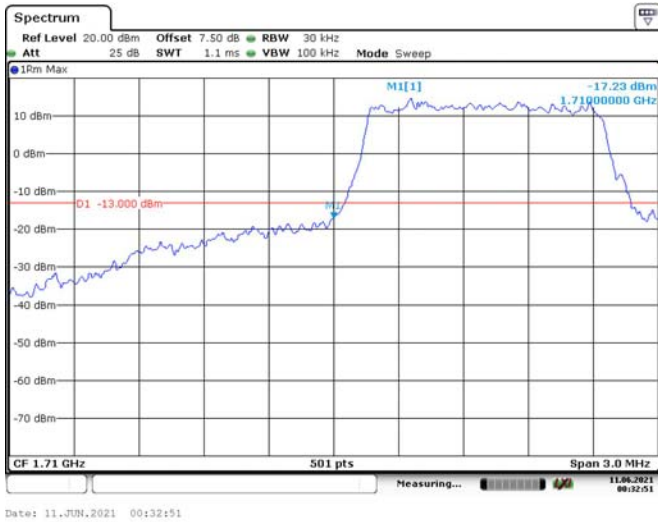
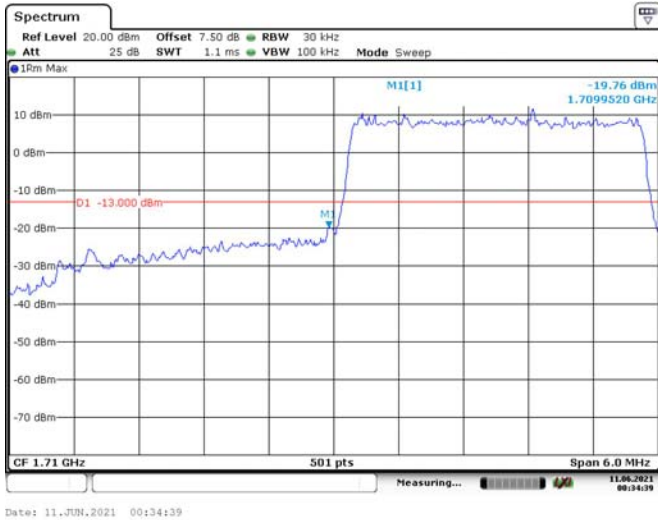
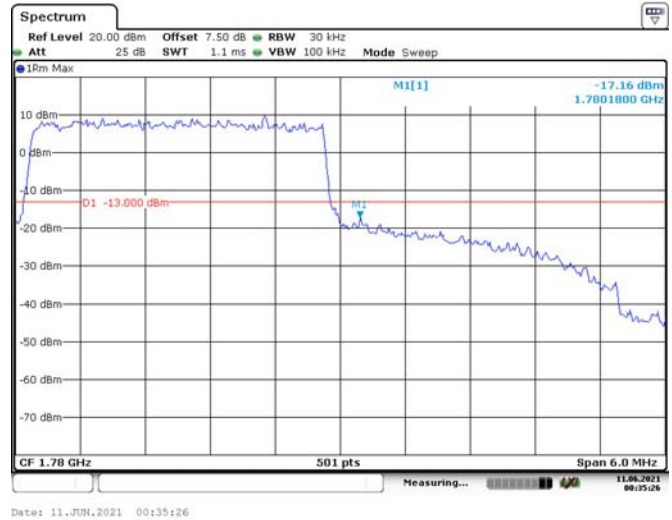


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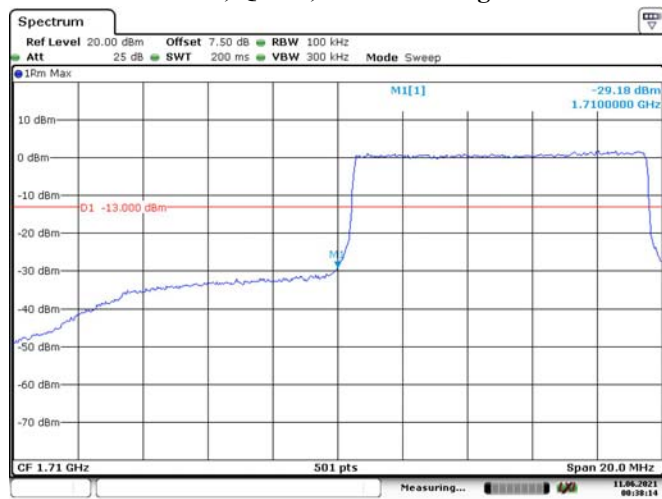
10M, 16QAM, Right Band Edge



Date: 11.JUN.2021 00:32:34

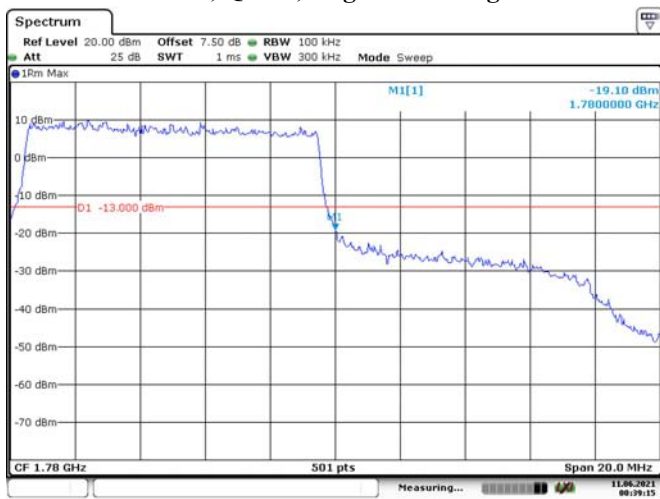
LTE Band 66:**1.4M, QPSK, Left Band Edge****1.4M, QPSK, Right Band Edge****3M, QPSK, Left Band Edge****3M, QPSK, Right Band Edge****5M, QPSK, Left Band Edge****5M, QPSK, Right Band Edge**

10M, QPSK, Left Band Edge



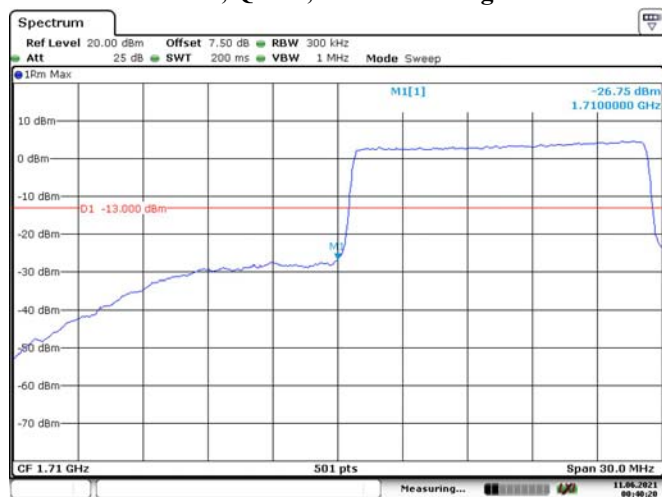
Date: 11.JUN.2021 00:38:13

10M, QPSK, Right Band Edge



Date: 11.JUN.2021 00:39:15

15M, QPSK, Left Band Edge



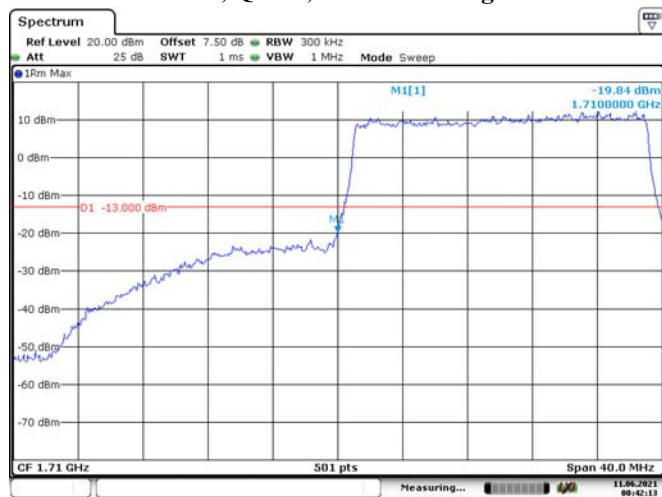
Date: 11.JUN.2021 00:40:19

15M, QPSK, Right Band Edge



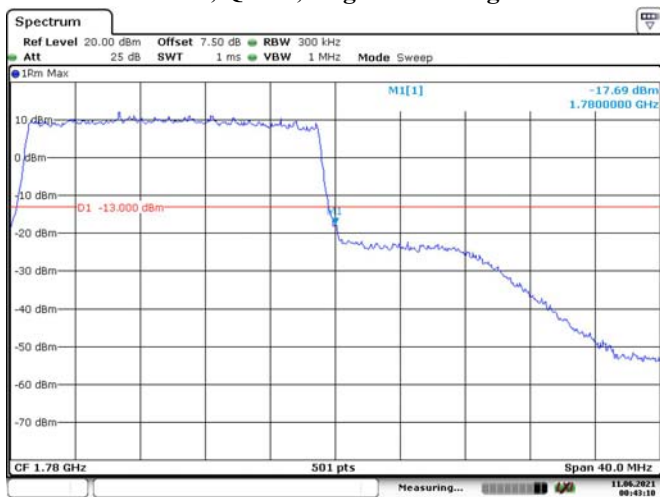
Date: 11.JUN.2021 00:41:13

20M, QPSK, Left Band Edge



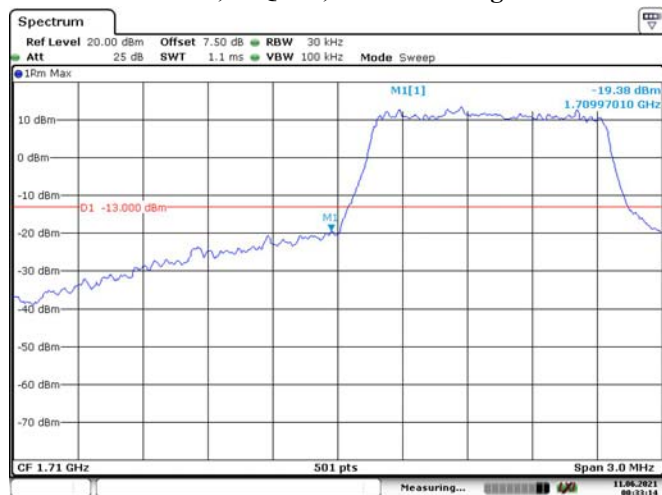
Date: 11.JUN.2021 00:42:13

20M, QPSK, Right Band Edge



Date: 11.JUN.2021 00:43:10

1.4M, 16QAM, Left Band Edge



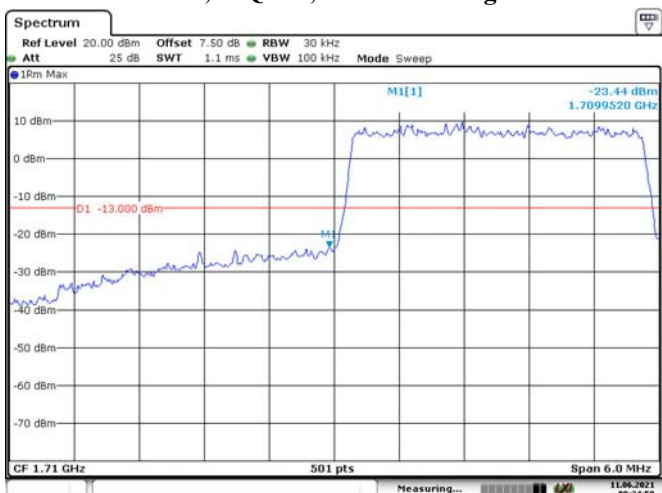
Date: 11 JUN 2021 00:33:14

1.4M, 16QAM, Right Band Edge



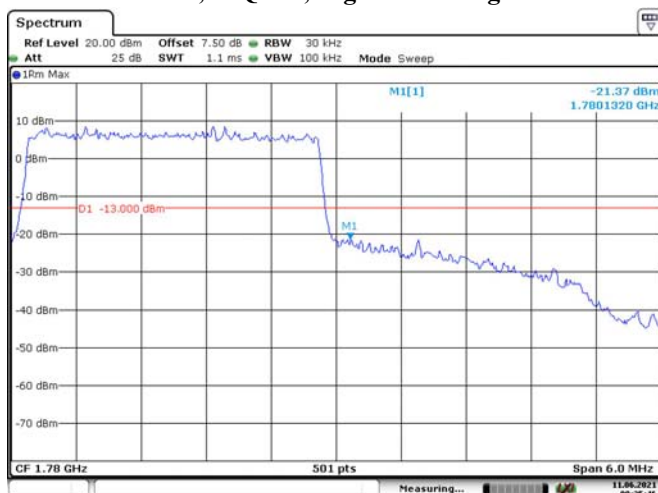
Date: 11 JUN 2021 00:34:14

3M, 16QAM, Left Band Edge



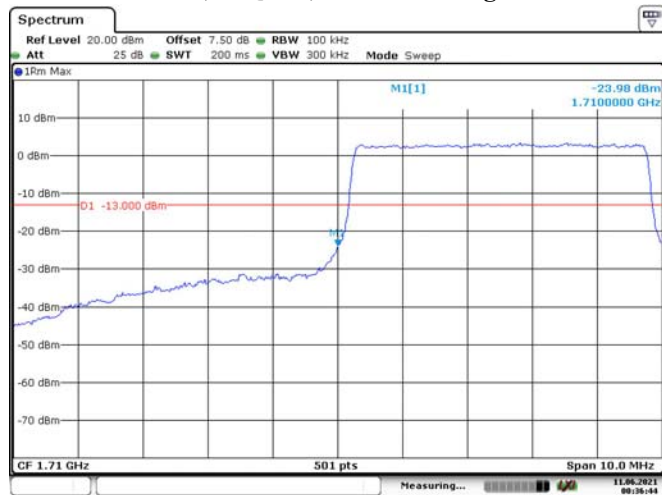
Date: 11 JUN 2021 00:34:59

3M, 16QAM, Right Band Edge



Date: 11 JUN 2021 00:35:46

5M, 16QAM, Left Band Edge



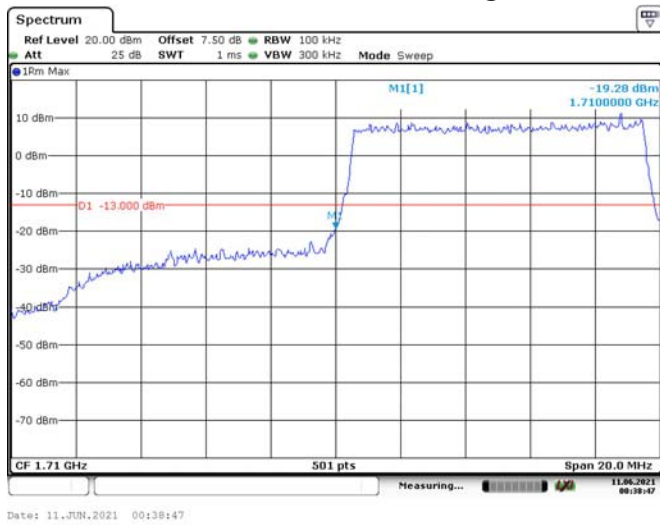
Date: 11 JUN 2021 00:36:44

5M, 16QAM, Right Band Edge

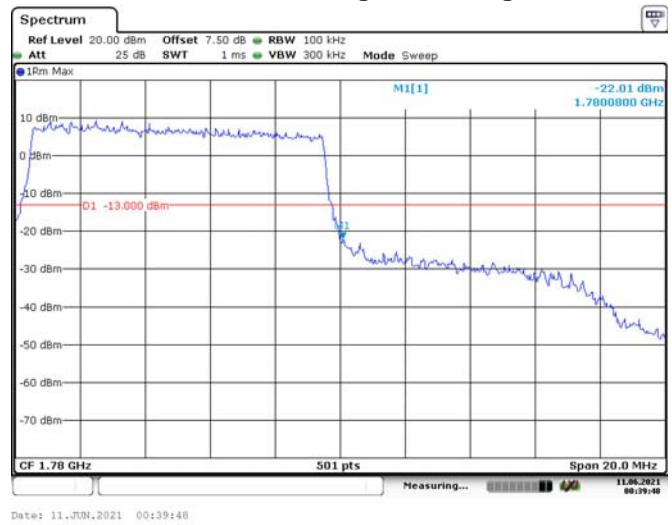


Date: 11 JUN 2021 00:37:37

10M, 16QAM, Left Band Edge



10M, 16QAM, Right Band Edge



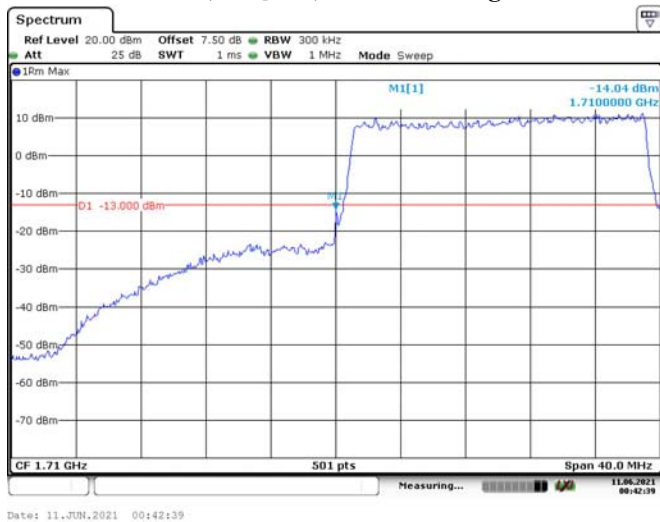
15M, 16QAM, Left Band Edge



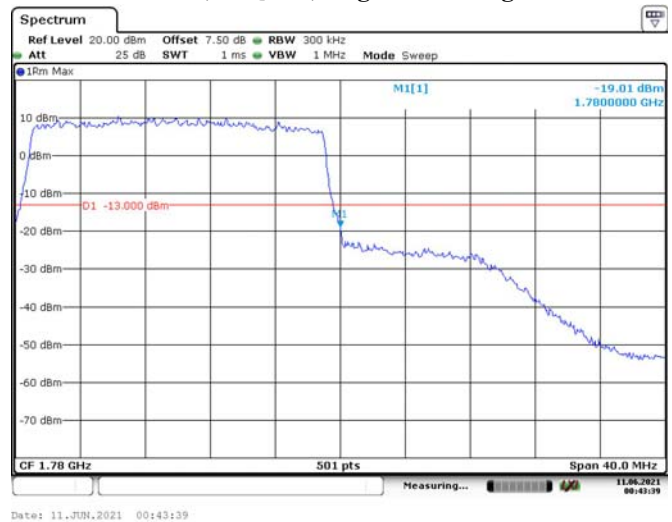
15M, 16QAM, Right Band Edge



20M, 16QAM, Left Band Edge



20M, 16QAM, Right Band Edge



FCC §2.1055, §22.355 & §24.235 & §27.54 - FREQUENCY STABILITY

Applicable Standard

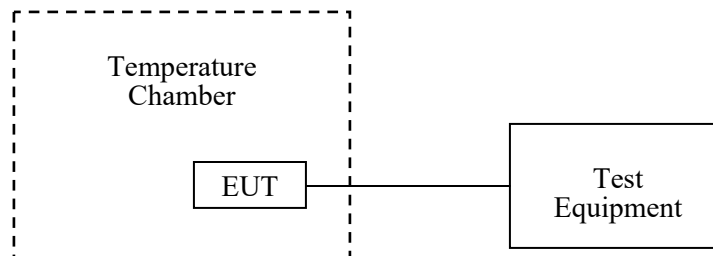
FCC § 2.1055 (a), § 2.1055 (d), §22.355, §24.235, §27.54

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set from 85% to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2020-07-07	2021-07-07
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	N/A
E-Microwave	Blocking Control	EMDCB-00036	0E01201048	Each time	N/A
E-Microwave	Coaxial Attenuators	EMCA10-5RN-6	OE01203239	Each time	N/A
R&S	Universal Radio Communication Tester	CMU200	106 891	2020-09-12	2021-09-12
R&S	Wideband Radio Communication Tester	CMW500	149216	2020-09-12	2021-09-12
ESPEC	Constant temperature and humidity Tester	ESX-4CA	018 463	2021-03-10	2022-03-09
UNI-T	Multimeter	UT39A	M130199938	2020-07-24	2021-07-24
Pro instrument	DC Power Supply	pps3300	3300012	N/A	N/A

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	25.8~26.9 °C
Relative Humidity:	42~49%
ATM Pressure:	100~100.7kPa
Tester:	Lay Lei
Test Date:	2021-06-10~2021-06-29

Test Result: Compliance.

GMSK, Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.7	12	0.01434	2.5
-20		8	0.00956	
-10		11	0.01315	
0		-6	-0.00717	
10		-12	-0.01434	
20		10	0.01195	
30		-8	-0.00956	
40		12	0.01434	
50		14	0.01673	
20	3.5	6	0.00717	
20	4.2	10	0.01195	

GMSK, Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	3.7	8	0.00426	Pass
-20		12	0.00638	
-10		15	0.00798	
0		16	0.00851	
10		15	0.00798	
20		18	0.00957	
30		-6	-0.00319	
40		11	0.00585	
50		10	0.00532	
20	3.5	13	0.00691	
20	4.2	10	0.00532	

8PSK, Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.7	8	0.00956	2.5
-20		12	0.01434	
-10		-14	-0.01673	
0		6	0.00717	
10		12	0.01434	
20		14	0.01673	
30		-8	-0.00956	
40		10	0.01195	
50		16	0.01913	
20	3.5	-6	-0.00717	
20	4.2	-14	-0.01673	

8PSK, Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	3.7	8	0.00426	Pass
-20		-6	-0.00319	
-10		8	0.00426	
0		22	0.01170	
10		18	0.00957	
20		24	0.01277	
30		14	0.00745	
40		10	0.00532	
50		16	0.00851	
20	3.5	12	0.00638	
20	4.2	16	0.00851	

WCDMA Band II: R99

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	3.7	-14	-0.00745	Pass
-20		16	0.00851	
-10		17	0.00904	
0		-18	-0.00957	
10		-26	-0.01383	
20		-22	-0.01170	
30		-16	-0.00851	
40		8	0.00426	
50		10	0.00532	
20	3.5	-12	-0.00638	
20	4.2	-18	-0.00957	

WCDMA Band IV: R99

Temperature	Voltage	F _L	Limit	F _H	Limit
°C	V _{DC}	MHz	MHz	MHz	MHz
-30	3.7	1710.535600	1710	1754.472800	1755
-20		1710.536300		1754.470700	
-10		1710.537400		1754.473600	
0		1710.534900		1754.477800	
10		1710.533700		1754.471600	
20		1710.534600		1754.477200	
30		1710.537600		1754.473700	
40		1710.532800		1754.471900	
50		1710.538700		1754.472900	
20	3.5	1710.534300		1754.471700	
20	4.2	1710.531400		1754.473800	

WCDMA Band V: R99

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.7	8	0.00956	2.5
-20		-10	-0.01195	
-10		-12	-0.01434	
0		-14	-0.01673	
10		-10	-0.01195	
20		-16	-0.01913	
30		-18	-0.02152	
40		-14	-0.01673	
50		10	0.01195	
20	3.5	12	0.01434	
20	4.2	-15	-0.01793	

LTE Band 2:

QPSK, Channel Bandwidth:10MHz				
Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V_{DC}	Hz	ppm	
-30	3.7	2.02	0.0011	Pass
-20		9.68	0.0051	
-10		5.02	0.0027	
0		8.24	0.0044	
10		6.96	0.0037	
20		7.34	0.0039	
30		9.00	0.0048	
40		9.80	0.0052	
50		-7.47	-0.004	
20	3.5	6.62	0.0035	
20	4.2	6.65	0.0035	

16QAM, Channel Bandwidth:10MHz				
Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V_{DC}	Hz	ppm	
-30	3.7	-5.31	-0.0028	Pass
-20		9.27	0.0049	
-10		-5.53	-0.0029	
0		6.07	0.0032	
10		7.40	0.0039	
20		-6.42	-0.0034	
30		-7.97	-0.0042	
40		-7.15	-0.0038	
50		7.90	0.0042	
20	3.5	-8.03	-0.0043	
20	4.2	-7.03	-0.0037	

LTE Band 4

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	1710.534100	1710	1754.474100	1755
	-20	1710.531800		1754.476400	
	-10	1710.529500		1754.471800	
	0	1710.534100		1754.476400	
	10	1710.534100		1754.471800	
	20	1710.529000		1754.471000	
	30	1710.531800		1754.474100	
	40	1710.534100		1754.474100	
	50	1710.536400		1754.478700	
3.5	20	1710.534100	1710	1754.471800	1755
4.2	20	1710.536400		1754.476400	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	1710.531700	1710	1754.477900	1755
	-20	1710.531700		1754.477900	
	-10	1710.529400		1754.471000	
	0	1710.536300		1754.473300	
	10	1710.529400		1754.473300	
	20	1710.529000		1754.471000	
	30	1710.534000		1754.475600	
	40	1710.531700		1754.473300	
	50	1710.531700		1754.477900	
3.5	20	1710.536300	1710	1754.471000	1755
4.2	20	1710.529400		1754.475600	

LTE Band 5:

QPSK, Middle Channel, $f_c = 836.5$ MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V_{DC}	Hz	ppm	ppm
-30	3.7	-3.69	-0.0044	2.5
-20		-6.69	-0.008	
-10		-6.38	-0.0076	
0		-7.06	-0.0084	
10		-8.42	-0.0101	
20		7.52	0.009	
30		-9.27	-0.0111	
40		-6.23	-0.0074	
50		-9.56	-0.0114	
20	3.5	7.89	0.0094	
20	4.2	-9.21	-0.011	

16-QAM,Middle Channel, $f_c = 836.5$ MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V_{DC}	Hz	ppm	ppm
-30	3.7	-3.46	-0.0041	2.5
-20		6.56	0.0078	
-10		5.07	0.0061	
0		9.11	0.0109	
10		7.37	0.0088	
20		-9.83	-0.0118	
30		7.09	0.0085	
40		8.07	0.0096	
50		-7.48	-0.0089	
20	3.5	-8.21	-0.0098	
20	4.2	9.75	0.0117	

LTE Band 12

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	699.534400	699	715.518200	716
	-20	699.536800		715.513400	
	-10	699.536800		715.518200	
	0	699.532000		715.513400	
	10	699.534400		715.518200	
	20	699.529000		715.511000	
	30	699.534400		715.511000	
	40	699.536800		715.513400	
	50	699.534400		715.513400	
3.5	20	699.536800		715.518200	
4.2	20	699.529600		715.511000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	699.533200	699	715.475200	716
	-20	699.529000		715.475800	
	-10	699.529000		715.471000	
	0	699.531100		715.473100	
	10	699.529000		715.471000	
	20	699.529000		715.471000	
	30	699.535300		715.471000	
	40	699.531400		715.478200	
	50	699.537400		715.475200	
3.5	20	699.535300		715.475200	
4.2	20	699.533200		715.477300	

LTE Band 17

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	704.533200	704	715.477300	716
	-20	704.531400		715.468600	
	-10	704.533200		715.479400	
	0	704.529000		715.471000	
	10	704.537400		715.471000	
	20	704.529000		715.471000	
	30	704.531100		715.471000	
	40	704.536200		715.466200	
	50	704.531100		715.479400	
3.5	20	704.531100		715.468900	
4.2	20	704.537400		715.473100	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	704.533200	704	715.473100	716
	-20	704.531400		715.468600	
	-10	704.531100		715.473100	
	0	704.526900		715.471000	
	10	704.535300		715.477300	
	20	704.529000		715.471000	
	30	704.535300		715.468900	
	40	704.536200		715.471000	
	50	704.531100		715.471000	
3.5	20	704.531100		715.473100	
4.2	20	704.524800		715.466800	

LTE Band 66

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	1710.531100	1710	1779.468900	1780
	-20	1710.533800		1779.468600	
	-10	1710.529000		1779.466800	
	0	1710.524800		1779.473100	
	10	1710.529000		1779.479400	
	20	1710.529000		1779.471000	
	30	1710.535300		1779.466800	
	40	1710.526600		1779.468600	
	50	1710.529000		1779.479400	
3.5	20	1710.529000		1779.473100	
4.2	20	1710.535300		1779.473100	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
3.7	-30	1710.524800	1710	1779.471000	1780
	-20	1710.536200		1779.471000	
	-10	1710.531100		1779.473100	
	0	1710.533200		1779.471000	
	10	1710.524800		1779.479400	
	20	1710.529000		1779.471000	
	30	1710.535300		1779.468900	
	40	1710.536200		1779.468600	
	50	1710.524800		1779.475200	
3.5	20	1710.535300		1779.468900	
4.2	20	1710.537400		1779.479400	

Note: The fundamental emissions stay within the authorized bands of operation based on the frequency deviation measured is small, the extreme voltage was declared by applicant.

******* END OF REPORT *******