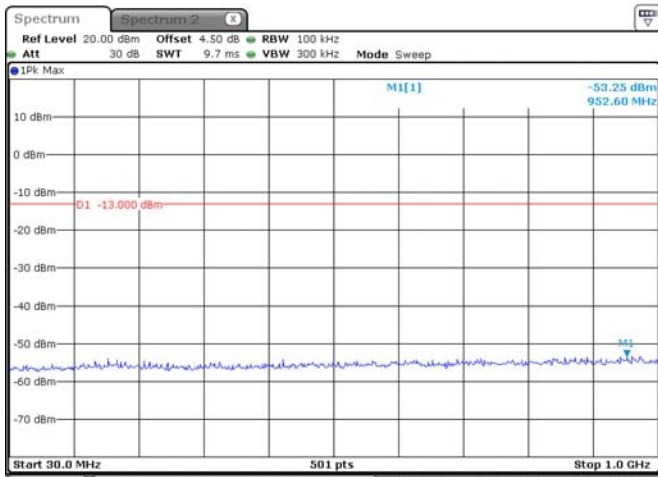
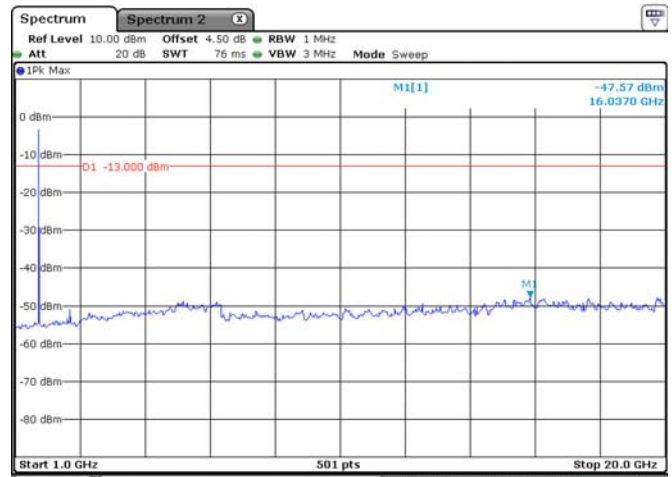


LTE Band 66:

1.4M, QPSK, Low Channel

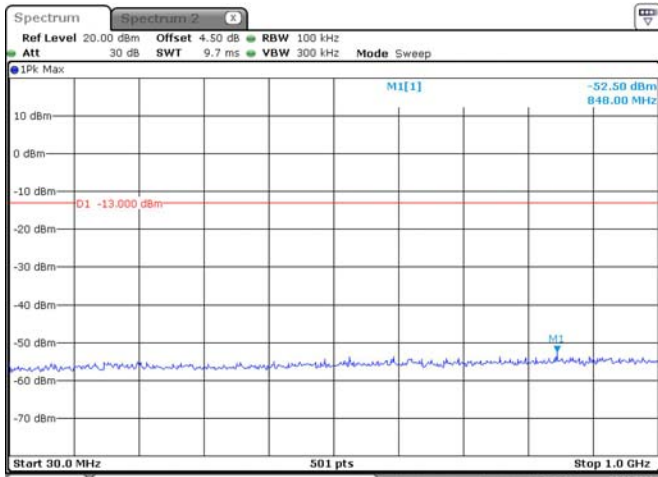


Date: 21.JAN.2021 00:19:58

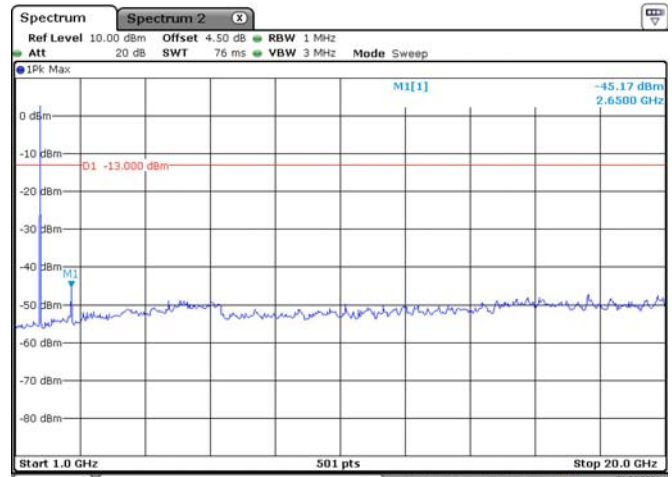


Date: 21.JAN.2021 00:20:20

1.4M, QPSK, Middle Channel

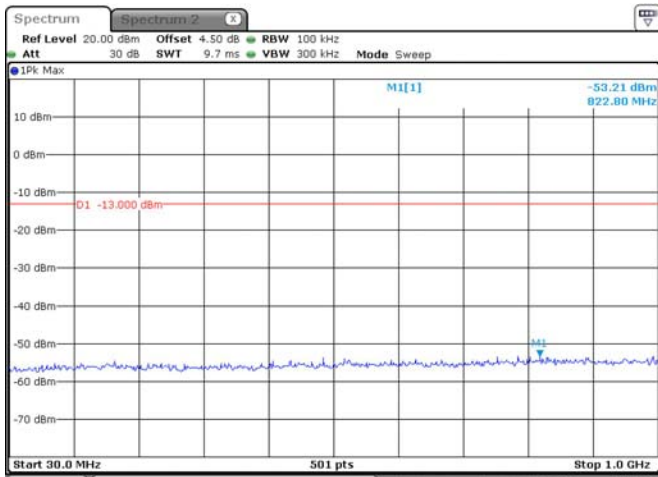


Date: 21.JAN.2021 00:21:14

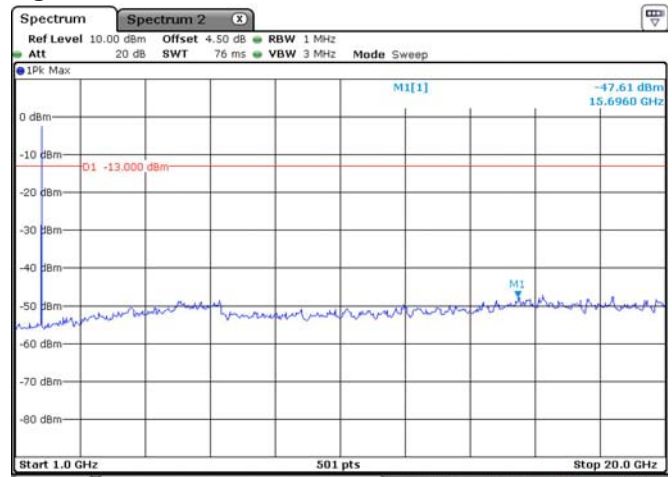


Date: 21.JAN.2021 00:21:33

1.4M, QPSK, High Channel

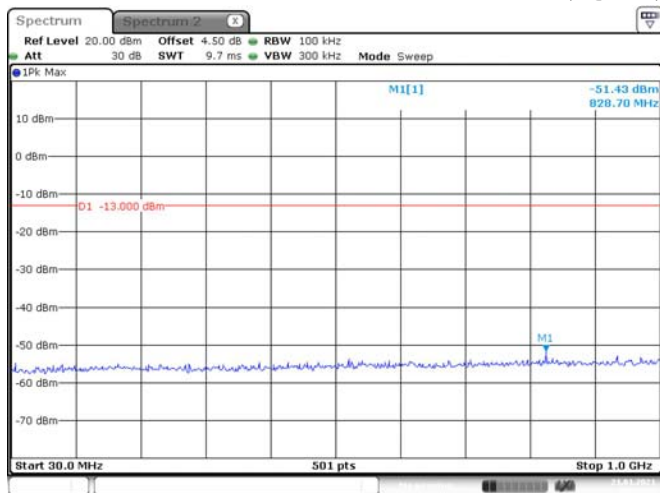


Date: 21.JAN.2021 00:22:14

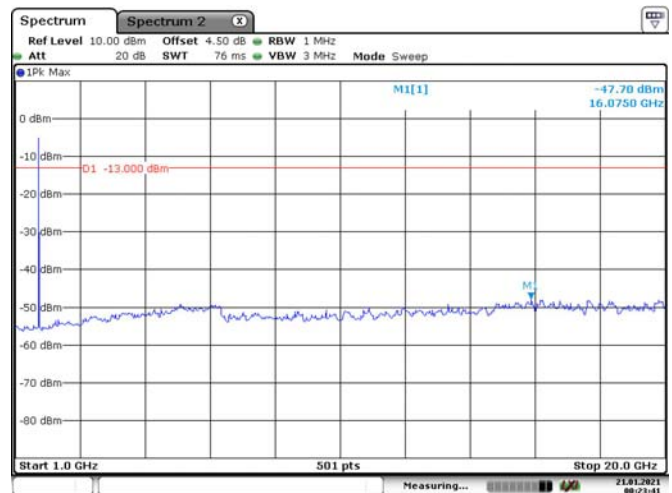


Date: 21.JAN.2021 00:22:36

3M, QPSK, Low Channel

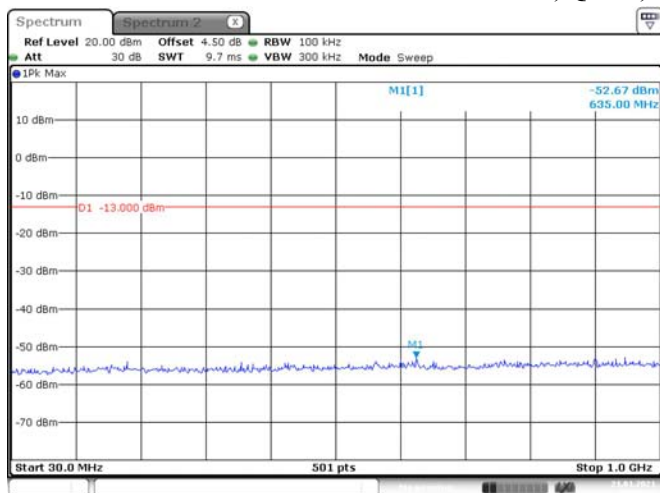


Date: 21.JAN.2021 00:23:19

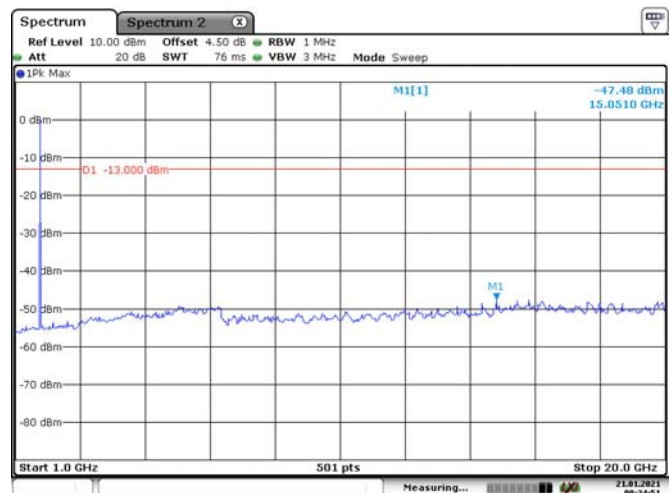


Date: 21.JAN.2021 00:23:41

3M, QPSK, Middle Channel

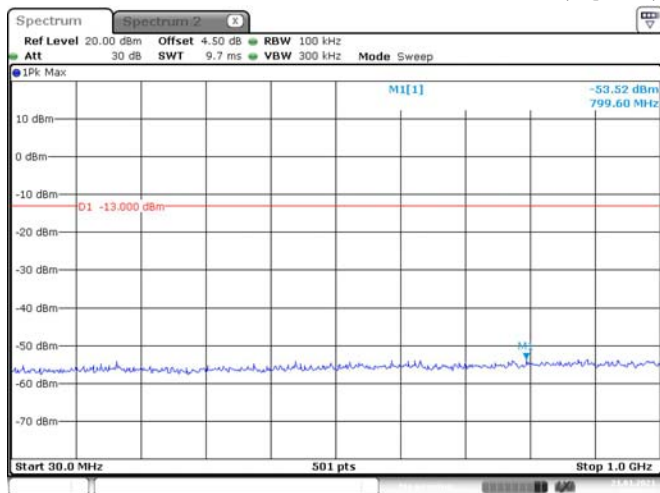


Date: 21.JAN.2021 00:24:29

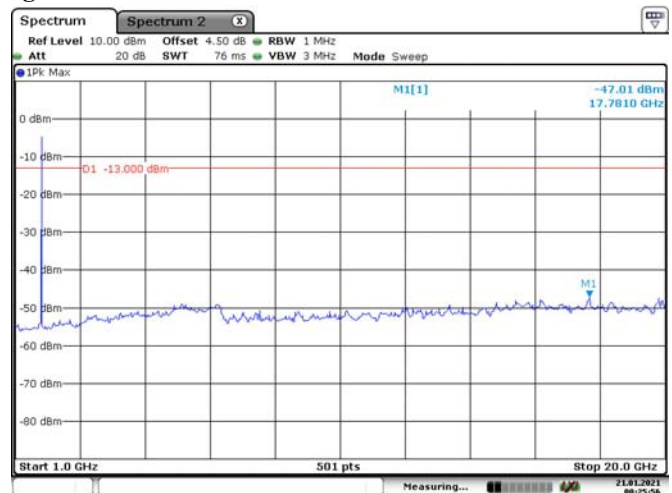


Date: 21.JAN.2021 00:24:51

3M, QPSK, High Channel

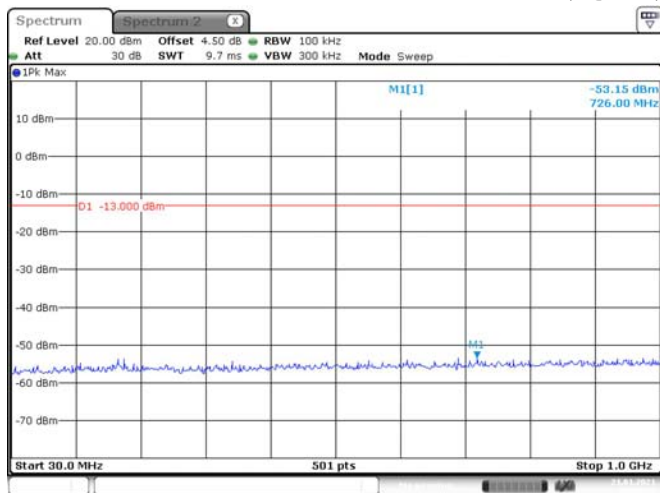


Date: 21.JAN.2021 00:25:31

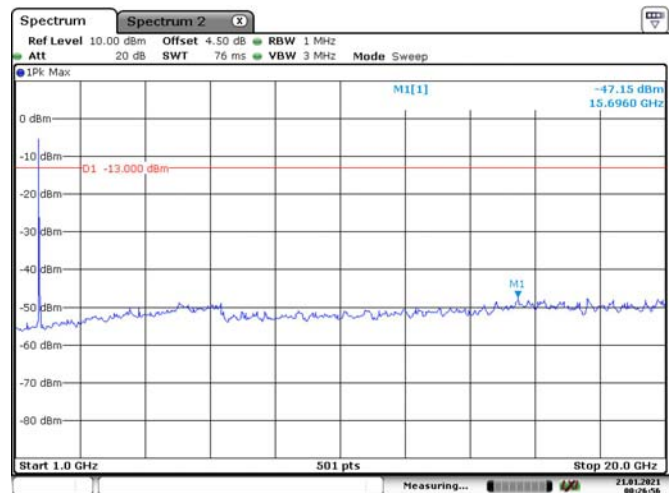


Date: 21.JAN.2021 00:25:56

5M, QPSK, Low Channel

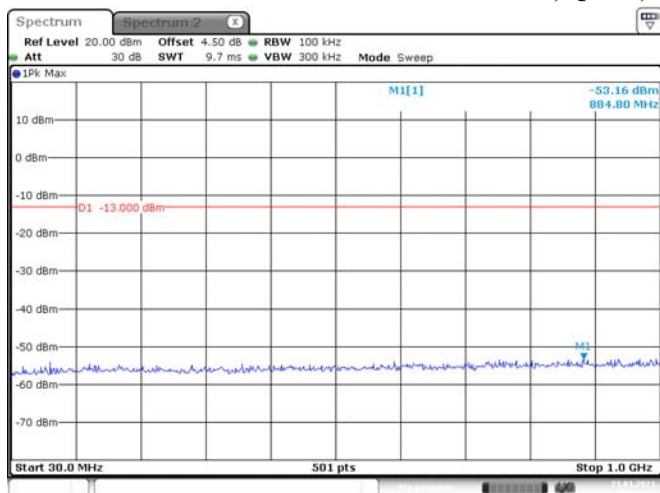


Date: 21.JAN.2021 00:26:32

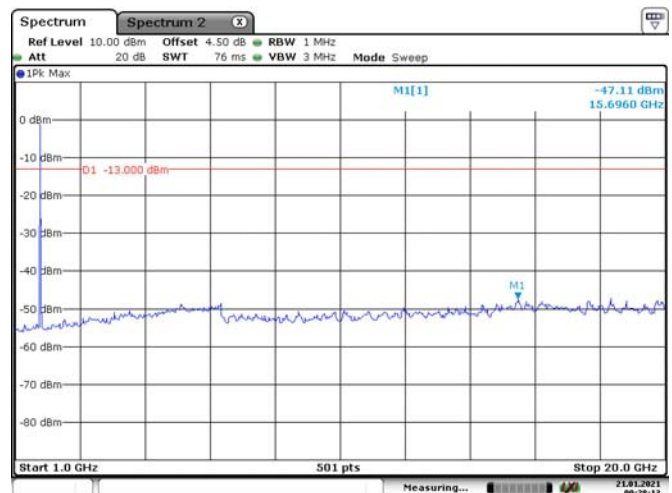


Date: 21.JAN.2021 00:26:57

5M, QPSK, Middle Channel

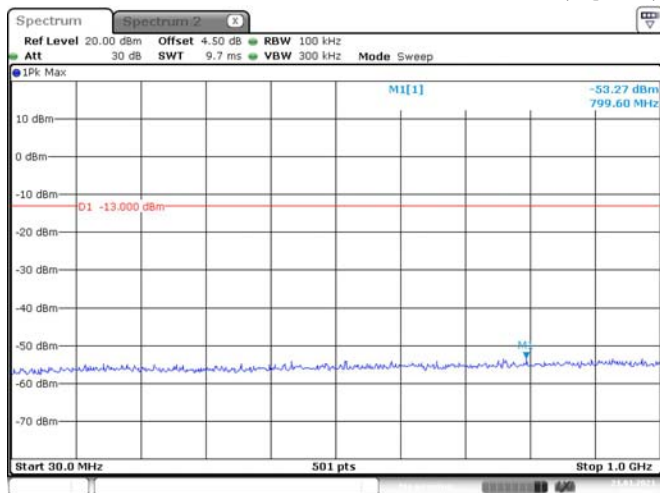


Date: 21.JAN.2021 00:27:42

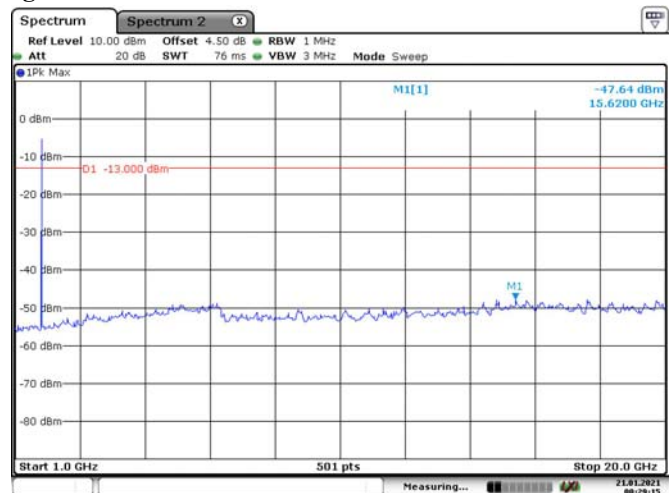


Date: 21.JAN.2021 00:28:13

5M, QPSK, High Channel

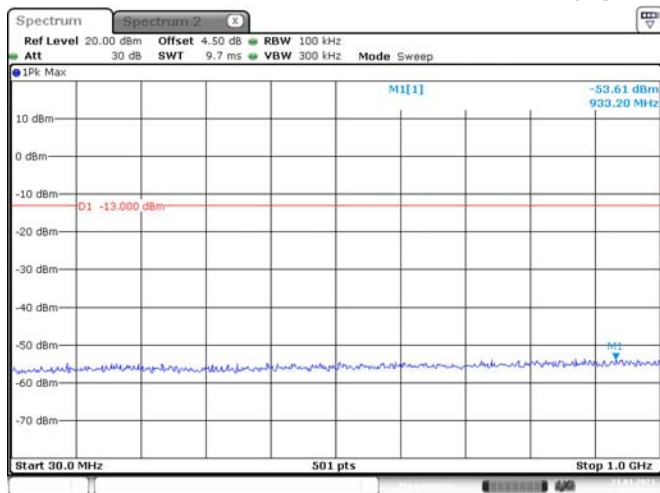


Date: 21.JAN.2021 00:28:51

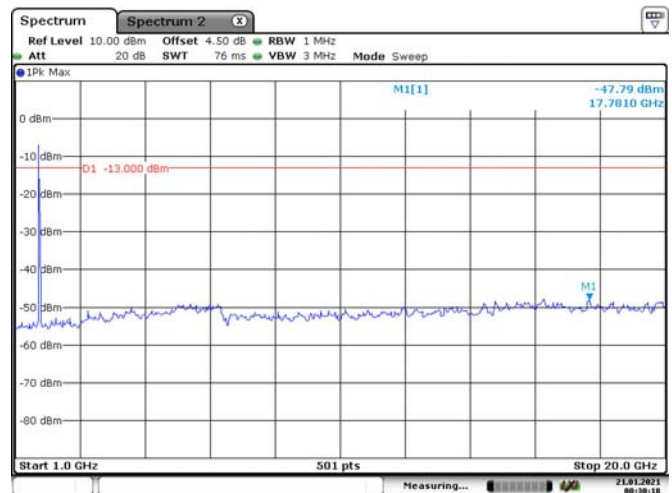


Date: 21.JAN.2021 00:29:16

10M, QPSK, Low Channel

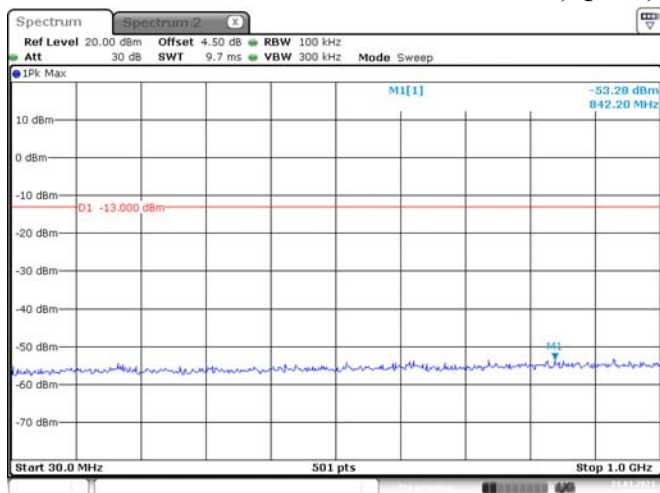


Date: 21.JAN.2021 00:29:54

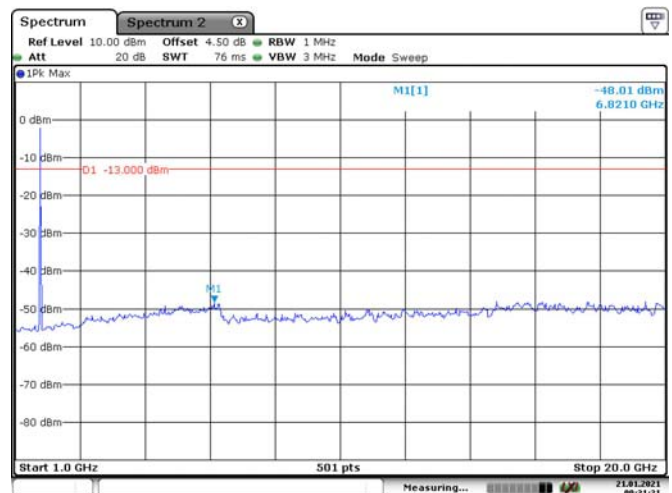


Date: 21.JAN.2021 00:30:19

10M, QPSK, Middle Channel

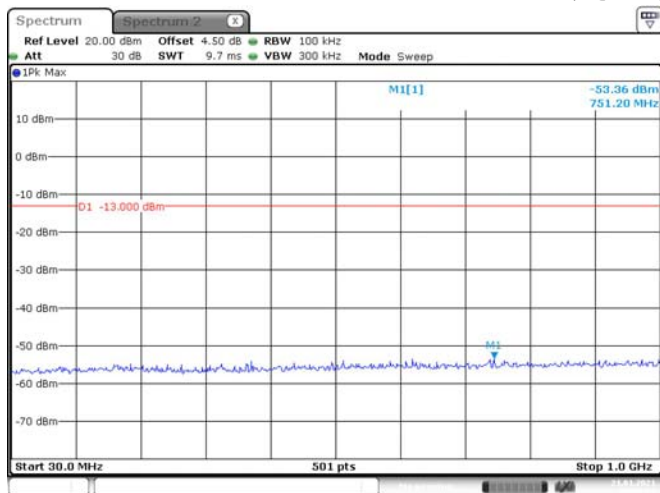


Date: 21.JAN.2021 00:30:56

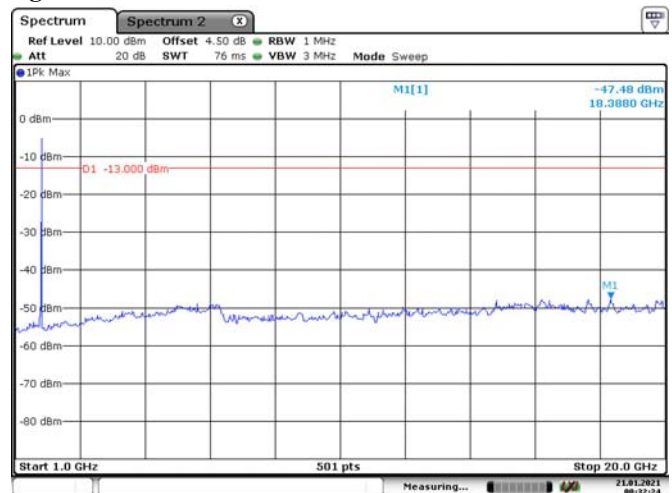


Date: 21.JAN.2021 00:31:21

10M, QPSK, High Channel

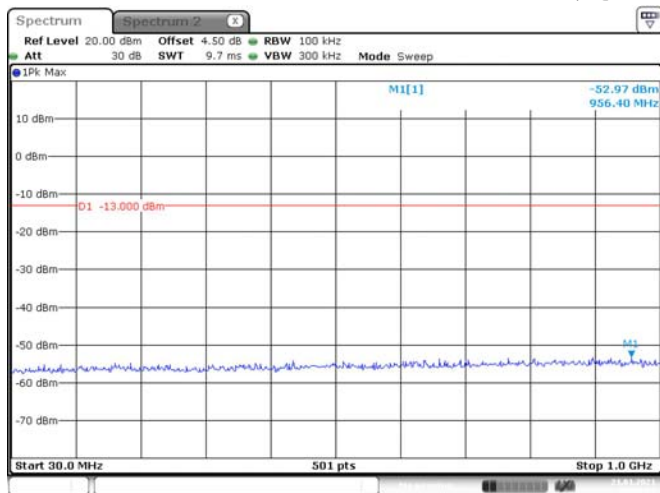


Date: 21.JAN.2021 00:32:02

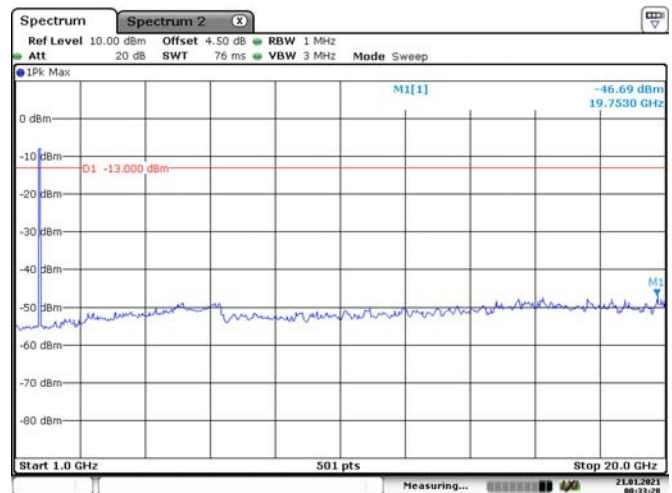


Date: 21.JAN.2021 00:32:24

15M, QPSK, Low Channel

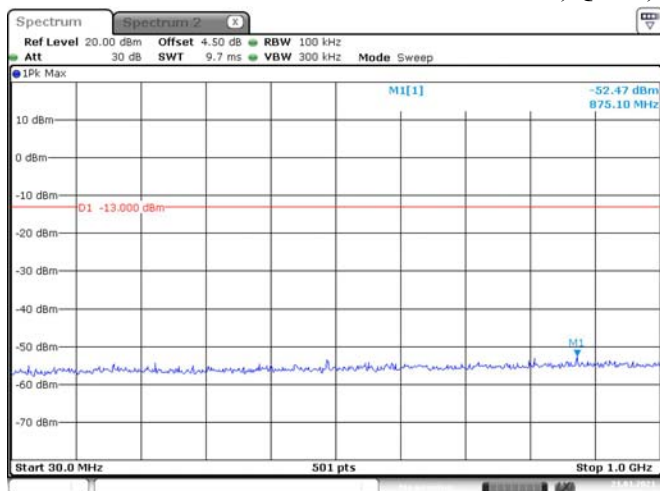


Date: 21.JAN.2021 00:33:03

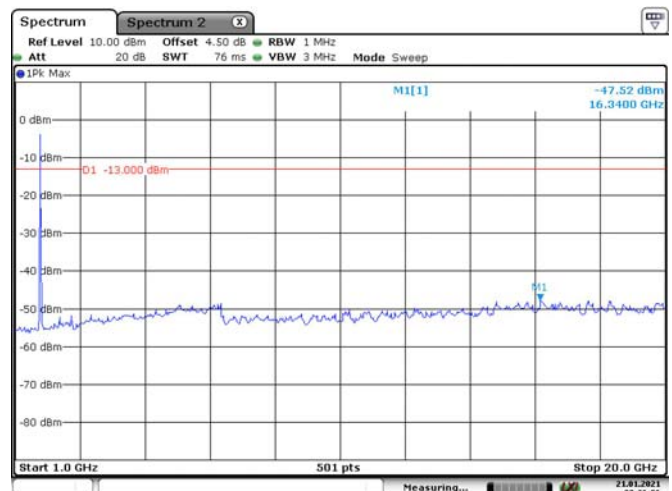


Date: 21.JAN.2021 00:33:28

15M, QPSK, Middle Channel

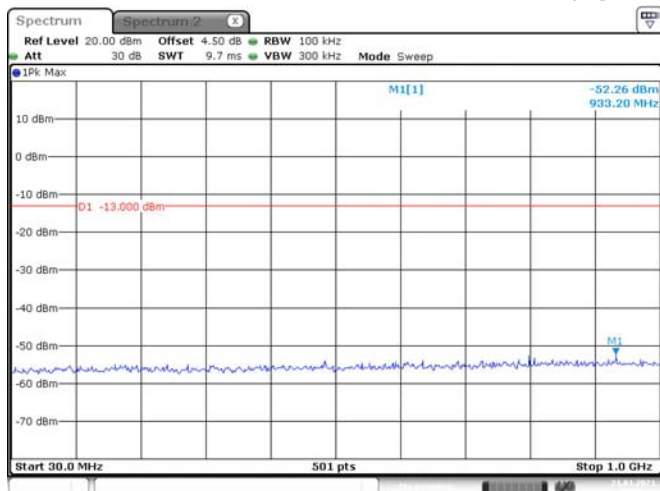


Date: 21.JAN.2021 00:35:45

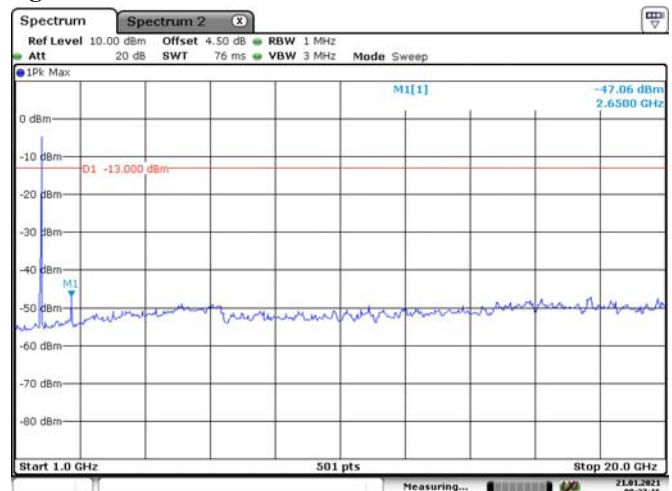


Date: 21.JAN.2021 00:36:07

15M, QPSK, High Channel

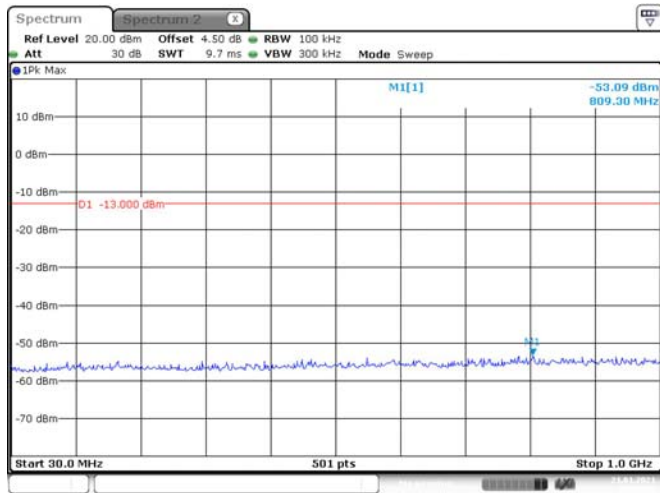


Date: 21.JAN.2021 00:36:48

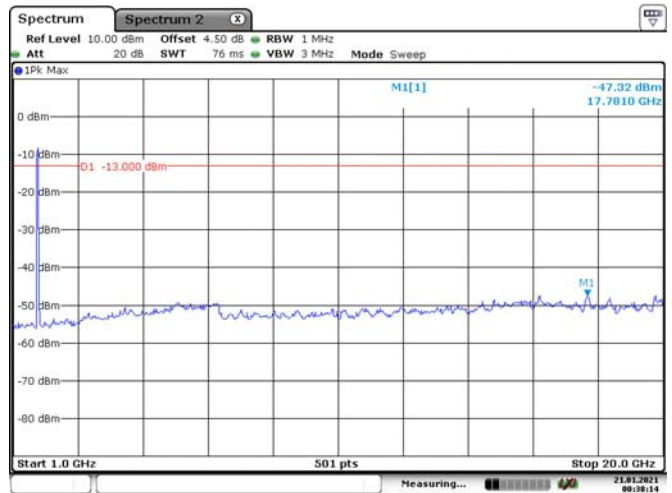


Date: 21.JAN.2021 00:37:17

20M, QPSK, Low Channel

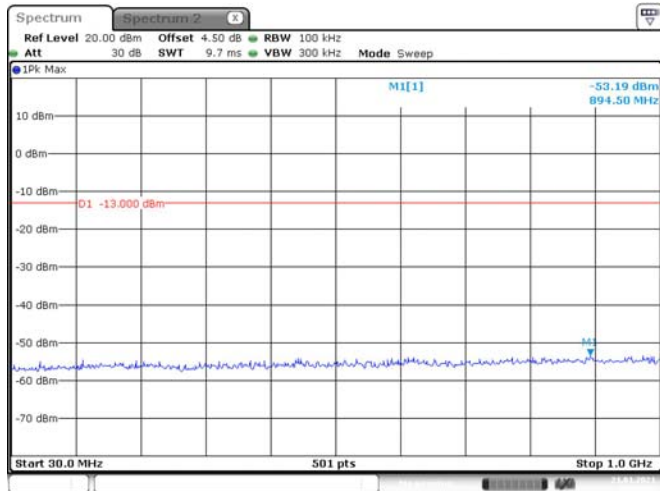


Date: 21.JAN.2021 00:37:56

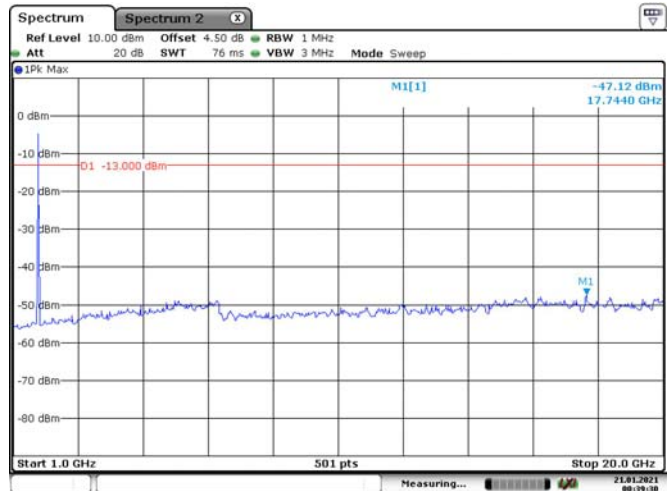


Date: 21.JAN.2021 00:38:15

20M, QPSK, Middle Channel

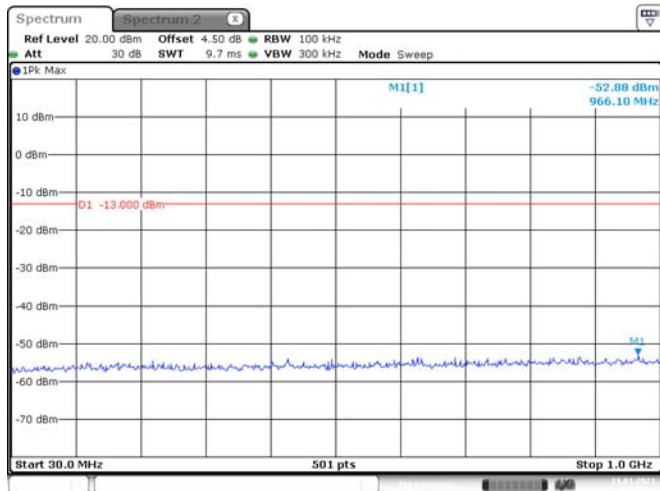


Date: 21.JAN.2021 00:39:08

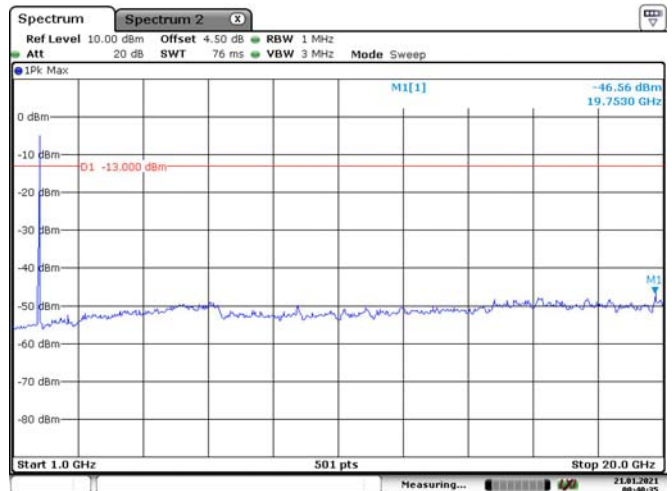


Date: 21.JAN.2021 00:39:30

20M, QPSK, High Channel



Date: 21.JAN.2021 00:40:10



Date: 21.JAN.2021 00:40:35

FCC §2.1053, §22.917 & §24.238 & §27.53- SPURIOUS RADIATED EMISSIONS

Applicable Standard

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

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = $10 \lg (\text{TXpwr in Watts}/0.001)$ – the absolute level

Spurious attenuation limit in dB = $43 + 10 \text{Log}_{10} (\text{power out in Watts})$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB3	A060611-2	2020-08-25	2023-08-25
R&S	EMI Test Receiver	ESCI	100224	2020-09-12	2021-09-12
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-02	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2020-09-24	2021-09-24
Sonoma	Amplifier	310N	185914	2020-10-13	2021-10-13
ETS-Lindgren	Horn Antenna	3115	000 527 35	2018-10-12	2021-10-12
TDK RF	Horn Antenna	HRN-0118	130 084	2018-10-12	2021-10-12
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-01 1304	2018-12-06	2021-12-05
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2018-12-06	2021-12-05
Agilent	Spectrum Analyzer	E4440A	SG43360054	2020-07-07	2021-07-07
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-2.4J2.4J-50	C-0700-02	2020-06-27	2021-06-27
Mini-Circuit	Amplifier	ZVA-213-S+	54201245	2020-09-05	2021-09-05
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2020-06-27	2021-06-27
Sinoscite	Band-stop filter	BSF1850-1910MS-0935V2	0935V2	2020-06-16	2021-06-16
Sinoscite	Band-stop filter	BSF2500-2750MS-1439-001	1437001	2020-06-16	2021-06-16
Micro-tronics	High Pass Filter	HPM50111	S/N-G217	2020-06-16	2021-06-16
Agilent	Signal Generator	E8247C	MY43321350	2019-12-10	2020-12-10
				2020-12-09	2021-12-08
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2020-09-05	2021-09-05
EMCO	Adjustable Dipole Antenna	3121C	9109-753	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**

Test Items	Radiation Below 1GHz	Radiation Above 1GHz
Temperature:	17.8~27.5°C	18.1~25.3°C
Relative Humidity:	29~60%	29~46%
ATM Pressure:	101.2~102.1kPa	100.9~101.2kPa
Tester:	Jalon Liu	Felix Wang
Test Date:	2020-11-22~2020-01-11	2020-11-24~2021-01-14

Test Result: Compliance.

EUT Operation Mode: Transmitting

Cellular Band (PART 22H)

30 MHz-10 GHz:

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)			
GSM850 Frequency:824.2MHz								
1648.40	H	43.52	-60.66	10.44	0.71	-50.93	-13.00	37.93
1648.40	V	44.96	-59.82	10.44	0.71	-50.09	-13.00	37.09
2472.60	H	41.19	-61.59	12.88	1.25	-49.96	-13.00	36.96
2472.60	V	44.19	-58.64	12.88	1.25	-47.01	-13.00	34.01
3296.80	H	37.23	-62.55	13.60	1.59	-50.54	-13.00	37.54
3296.80	V	37.27	-62.52	13.60	1.59	-50.51	-13.00	37.51
597.80	H	54.28	-47.90	0.00	0.76	-48.66	-13.00	35.66
597.80	V	60.07	-45.36	0.00	0.76	-46.12	-13.00	33.12
GSM850 Frequency:836.6MHz								
1673.20	H	42.30	-61.64	10.61	0.73	-51.76	-13.00	38.76
1673.20	V	44.63	-59.91	10.61	0.73	-50.03	-13.00	37.03
2509.80	H	43.89	-59.02	13.11	1.25	-47.16	-13.00	34.16
2509.80	V	49.11	-53.83	13.11	1.25	-41.97	-13.00	28.97
3346.40	H	37.22	-62.46	13.83	1.61	-50.24	-13.00	37.24
3346.40	V	37.51	-62.21	13.83	1.61	-49.99	-13.00	36.99
597.80	H	53.82	-48.36	0.00	0.76	-49.12	-13.00	36.12
597.80	V	58.49	-46.94	0.00	0.76	-47.70	-13.00	34.70
GSM850 Frequency:848.8MHz								
1697.60	H	46.17	-57.53	10.78	0.75	-47.50	-13.00	34.50
1697.60	V	44.06	-60.24	10.78	0.75	-50.21	-13.00	37.21
2546.40	H	42.40	-60.55	13.15	1.27	-48.67	-13.00	35.67
2546.40	V	45.73	-57.36	13.15	1.27	-45.48	-13.00	32.48
3395.20	H	36.72	-62.80	14.08	1.64	-50.36	-13.00	37.36
3395.20	V	36.83	-62.79	14.08	1.64	-50.35	-13.00	37.35
597.80	H	54.59	-47.59	0.00	0.76	-48.35	-13.00	35.35
597.80	V	60.19	-45.24	0.00	0.76	-46.00	-13.00	33.00

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 5 Frequency:826.4 MHz								
1652.80	H	39.41	-64.72	10.47	0.72	-54.97	-13.00	41.97
1652.80	V	39.17	-65.56	10.47	0.72	-55.81	-13.00	42.81
2479.20	H	37.20	-65.61	12.93	1.25	-53.93	-13.00	40.93
2479.20	V	37.89	-64.96	12.93	1.25	-53.28	-13.00	40.28
3305.60	H	36.66	-63.14	13.63	1.59	-51.10	-13.00	38.10
3305.60	V	37.23	-62.58	13.63	1.59	-50.54	-13.00	37.54
873.00	H	55.37	-42.18	0.00	1.02	-43.20	-13.00	30.20
871.60	V	51.17	-48.91	0.00	1.02	-49.93	-13.00	36.93
WCDMA Band 5 Frequency:836.6MHz								
1673.20	H	39.21	-64.73	10.61	0.73	-54.85	-13.00	41.85
1673.20	V	40.34	-64.20	10.61	0.73	-54.32	-13.00	41.32
2509.80	H	37.62	-65.29	13.11	1.25	-53.43	-13.00	40.43
2509.80	V	37.87	-65.07	13.11	1.25	-53.21	-13.00	40.21
3346.40	H	36.71	-62.97	13.83	1.61	-50.75	-13.00	37.75
3346.40	V	36.80	-62.92	13.83	1.61	-50.70	-13.00	37.70
880.00	H	57.54	-39.90	0.00	1.03	-40.93	-13.00	27.93
881.40	V	59.32	-40.44	0.00	1.03	-41.47	-13.00	28.47
WCDMA Band 5 Frequency:846.6MHz								
1693.20	H	39.59	-64.16	10.75	0.75	-54.16	-13.00	41.16
1693.20	V	41.20	-63.15	10.75	0.75	-53.15	-13.00	40.15
2539.80	H	37.63	-65.31	13.14	1.27	-53.44	-13.00	40.44
2539.80	V	37.54	-65.52	13.14	1.27	-53.65	-13.00	40.65
3386.40	H	36.32	-63.23	14.03	1.63	-50.83	-13.00	37.83
3386.40	V	36.57	-63.07	14.03	1.63	-50.67	-13.00	37.67
889.80	H	61.41	-35.88	0.00	1.04	-36.92	-13.00	23.92
891.20	V	62.19	-37.25	0.00	1.04	-38.29	-13.00	25.29

PCS Band (PART 24E)**30 MHz-20 GHz:**

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)			
GSM1900 Frequency:1850.2MHz								
3700.40	H	37.16	-60.83	14.00	1.83	-48.66	-13.00	35.66
3700.40	V	36.91	-61.06	14.00	1.83	-48.89	-13.00	35.89
5550.60	H	36.41	-57.56	13.95	1.27	-44.88	-13.00	31.88
5550.60	V	35.88	-57.94	13.95	1.27	-45.26	-13.00	32.26
597.80	H	53.48	-48.70	0.00	0.76	-49.46	-13.00	36.46
597.80	V	61.16	-44.27	0.00	0.76	-45.03	-13.00	32.03
GSM 1900 Frequency:1880MHz								
3760.00	H	35.94	-61.70	13.76	1.63	-49.57	-13.00	36.57
3760.00	V	36.83	-60.67	13.76	1.63	-48.54	-13.00	35.54
5640.00	H	35.07	-58.52	14.02	1.31	-45.81	-13.00	32.81
5640.00	V	35.19	-58.29	14.02	1.31	-45.58	-13.00	32.58
597.80	H	52.69	-49.49	0.00	0.76	-50.25	-13.00	37.25
597.80	V	60.41	-45.02	0.00	0.76	-45.78	-13.00	32.78
GSM 1900 Frequency:1909.8MHz								
3819.60	H	36.74	-60.51	13.56	1.50	-48.45	-13.00	35.45
3819.60	V	36.26	-60.81	13.56	1.50	-48.75	-13.00	35.75
5729.40	H	34.75	-58.96	13.96	1.31	-46.31	-13.00	33.31
5729.40	V	35.07	-58.61	13.96	1.31	-45.96	-13.00	32.96
597.80	H	52.78	-49.40	0.00	0.76	-50.16	-13.00	37.16
597.80	V	60.92	-44.51	0.00	0.76	-45.27	-13.00	32.27

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 II, Frequency:1852.4 MHz								
3704.80	H	36.64	-61.32	13.98	1.81	-49.15	-13.00	36.15
3704.80	V	35.92	-62.01	13.98	1.81	-49.84	-13.00	36.84
5557.20	H	34.61	-59.28	13.97	1.27	-46.58	-13.00	33.58
5557.20	V	35.76	-57.98	13.97	1.27	-45.28	-13.00	32.28
800.00	H	53.85	-44.80	0.00	0.93	-45.73	-13.00	32.73
800.00	V	50.66	-51.75	0.00	0.93	-52.68	-13.00	39.68
WCDMA Band II, Frequency:1880 MHz								
3760.00	H	36.52	-61.12	13.76	1.63	-48.99	-13.00	35.99
3760.00	V	36.57	-60.93	13.76	1.63	-48.80	-13.00	35.80
5640.00	H	34.65	-58.94	14.02	1.31	-46.23	-13.00	33.23
5640.00	V	34.82	-58.66	14.02	1.31	-45.95	-13.00	32.95
800.00	H	53.56	-45.09	0.00	0.93	-46.02	-13.00	33.02
800.00	V	51.50	-50.91	0.00	0.93	-51.84	-13.00	38.84
WCDMA Band II, Frequency:1907.6MHz								
3815.20	H	36.43	-60.85	13.57	1.50	-48.78	-13.00	35.78
3815.20	V	35.89	-61.21	13.57	1.50	-49.14	-13.00	36.14
5722.80	H	34.67	-59.09	13.95	1.32	-46.46	-13.00	33.46
5722.80	V	35.41	-58.31	13.95	1.32	-45.68	-13.00	32.68
800.00	H	53.94	-44.71	0.00	0.93	-45.64	-13.00	32.64
374.60	V	56.69	-51.94	0.00	0.59	-52.53	-13.00	39.53

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):

EFE Band 2 (50MHz - 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	36.05	-61.93	13.99	1.83	-49.77	-13.00	36.77
3701.40	V	36.10	-61.86	13.99	1.83	-49.70	-13.00	36.70
5552.10	H	35.95	-58.00	13.96	1.27	-45.31	-13.00	32.31
5552.10	V	35.37	-58.43	13.96	1.27	-45.74	-13.00	32.74
800.00	H	55.59	-43.06	0.00	0.93	-43.99	-13.00	30.99
800.00	V	52.44	-49.97	0.00	0.93	-50.90	-13.00	37.90
QPSK, Frequency: 1880 MHz								
3760.00	H	36.15	-61.49	13.76	1.63	-49.36	-13.00	36.36
3760.00	V	36.28	-61.22	13.76	1.63	-49.09	-13.00	36.09
5640.00	H	35.39	-58.20	14.02	1.31	-45.49	-13.00	32.49
5640.00	V	35.31	-58.17	14.02	1.31	-45.46	-13.00	32.46
800.00	H	55.14	-43.51	0.00	0.93	-44.44	-13.00	31.44
800.00	V	51.85	-50.56	0.00	0.93	-51.49	-13.00	38.49
QPSK, Frequency: 1909.3 MHz								
3818.60	H	35.18	-62.08	13.56	1.50	-50.02	-13.00	37.02
3818.60	V	36.21	-60.86	13.56	1.50	-48.80	-13.00	35.80
5727.90	H	34.31	-59.41	13.96	1.31	-46.76	-13.00	33.76
5727.90	V	35.16	-58.53	13.96	1.31	-45.88	-13.00	32.88
800.00	H	55.52	-43.13	0.00	0.93	-44.06	-13.00	31.06
800.00	V	52.37	-50.04	0.00	0.93	-50.97	-13.00	37.97

LTE Band 4 (30MHz-20GHz):

EPE Band 4 (36MHz - 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	37.19	-62.21	14.04	1.63	-49.80	-13.00	36.80
3421.40	V	37.15	-62.33	14.04	1.63	-49.92	-13.00	36.92
5132.10	H	34.98	-59.70	13.93	1.37	-47.14	-13.00	34.14
5132.10	V	35.78	-58.81	13.93	1.37	-46.25	-13.00	33.25
800.00	H	55.94	-42.71	0.00	0.93	-43.64	-13.00	30.64
800.00	V	50.76	-51.65	0.00	0.93	-52.58	-13.00	39.58
QPSK,Frequency:1732.5 MHz								
3465.00	H	37.26	-61.93	13.91	1.62	-49.64	-13.00	36.64
3465.00	V	37.03	-62.19	13.91	1.62	-49.90	-13.00	36.90
5197.50	H	35.79	-58.90	14.00	1.52	-46.42	-13.00	33.42
5197.50	V	35.11	-59.65	14.00	1.52	-47.17	-13.00	34.17
800.00	H	55.20	-43.45	0.00	0.93	-44.38	-13.00	31.38
800.00	V	52.37	-50.04	0.00	0.93	-50.97	-13.00	37.97
QPSK,Frequency:1754.3 MHz								
3508.60	H	37.93	-61.08	13.83	1.60	-48.85	-13.00	35.85
3508.60	V	37.58	-61.43	13.83	1.60	-49.20	-13.00	36.20
5262.90	H	35.63	-59.46	14.19	1.29	-46.56	-13.00	33.56
5262.90	V	35.22	-59.95	14.19	1.29	-47.05	-13.00	34.05
800.00	H	55.24	-43.41	0.00	0.93	-44.34	-13.00	31.34
800.00	V	50.69	-51.72	0.00	0.93	-52.65	-13.00	39.65

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	45.85	-58.32	10.45	0.71	-48.58	-13.00	35.58
1649.40	V	48.33	-56.44	10.45	0.71	-46.70	-13.00	33.70
2474.10	H	37.22	-65.57	12.89	1.25	-53.93	-13.00	40.93
2474.10	V	37.45	-65.39	12.89	1.25	-53.75	-13.00	40.75
3298.80	H	38.31	-61.50	13.60	1.59	-49.49	-13.00	36.49
3298.80	V	37.24	-62.57	13.60	1.59	-50.56	-13.00	37.56
800.00	H	55.21	-43.44	0.00	0.93	-44.37	-13.00	31.37
870.20	V	50.84	-49.28	0.00	1.01	-50.29	-13.00	37.29
QPSK, Frequency: 836.5 MHz								
1673.00	H	44.41	-59.53	10.61	0.73	-49.65	-13.00	36.65
1673.00	V	46.59	-57.95	10.61	0.73	-48.07	-13.00	35.07
2509.50	H	40.83	-62.08	13.11	1.25	-50.22	-13.00	37.22
2509.50	V	42.79	-60.15	13.11	1.25	-48.29	-13.00	35.29
3346.00	H	37.18	-62.50	13.83	1.61	-50.28	-13.00	37.28
3346.00	V	37.20	-62.52	13.83	1.61	-50.30	-13.00	37.30
881.40	H	64.32	-33.10	0.00	1.03	-34.13	-13.00	21.13
881.40	V	63.61	-36.15	0.00	1.03	-37.18	-13.00	24.18
QPSK, Frequency: 848.3 MHz								
1696.60	H	43.51	-60.20	10.78	0.75	-50.17	-13.00	37.17
1696.60	V	43.89	-60.42	10.78	0.75	-50.39	-13.00	37.39
2544.90	H	37.90	-65.05	13.14	1.27	-53.18	-13.00	40.18
2544.90	V	37.27	-65.81	13.14	1.27	-53.94	-13.00	40.94
3393.20	H	36.67	-62.86	14.07	1.64	-50.43	-13.00	37.43
3393.20	V	36.40	-63.22	14.07	1.64	-50.79	-13.00	37.79
894.00	H	64.71	-32.52	0.00	1.04	-33.56	-13.00	20.56
894.00	V	65.91	-33.44	0.00	1.04	-34.48	-13.00	21.48

LTE Band 7(30MHz-26.5GHz):

ETP Band 1 (500.10 to 566.90 MHz)			Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 2502.5 MHz								
5005.00	H	35.13	-60.94	14.00	1.43	-48.37	-25.00	23.37
5005.00	V	35.77	-60.06	14.00	1.43	-47.49	-25.00	22.49
7507.50	H	35.28	-53.36	13.20	1.33	-41.49	-25.00	16.49
7507.50	V	35.34	-53.78	13.20	1.33	-41.91	-25.00	16.91
550.10	H	49.21	-53.97	0.00	0.74	-54.71	-25.00	29.71
566.90	V	46.26	-59.75	0.00	0.74	-60.49	-25.00	35.49
QPSK, Frequency: 2535 MHz								
5070.00	H	36.33	-58.78	13.93	1.34	-46.19	-25.00	21.19
5070.00	V	36.03	-58.89	13.93	1.34	-46.30	-25.00	21.30
7605.00	H	35.63	-53.25	13.21	1.40	-41.44	-25.00	16.44
7605.00	V	35.69	-53.59	13.21	1.40	-41.78	-25.00	16.78
548.70	H	49.37	-53.84	0.00	0.73	-54.57	-25.00	29.57
558.50	V	46.23	-59.94	0.00	0.74	-60.68	-25.00	35.68
QPSK, Frequency: 2567.5 MHz								
5135.00	H	35.22	-59.46	13.94	1.38	-46.90	-25.00	21.90
5135.00	V	35.48	-59.11	13.94	1.38	-46.55	-25.00	21.55
7702.50	H	35.67	-53.45	13.40	1.47	-41.52	-25.00	16.52
7702.50	V	35.23	-54.21	13.40	1.47	-42.28	-25.00	17.28
547.30	H	49.44	-53.80	0.00	0.73	-54.53	-25.00	29.53
554.30	V	46.16	-60.08	0.00	0.74	-60.82	-25.00	35.82

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	45.89	-57.50	9.00	1.20	-49.70	-13.00	36.70
1399.40	V	45.59	-58.40	9.00	1.20	-50.60	-13.00	37.60
2099.10	H	38.45	-63.62	11.41	1.10	-53.31	-13.00	40.31
2099.10	V	38.34	-63.73	11.41	1.10	-53.42	-13.00	40.42
2798.80	H	39.14	-62.58	13.10	1.36	-50.84	-13.00	37.84
2798.80	V	39.25	-62.67	13.10	1.36	-50.93	-13.00	37.93
561.30	H	48.56	-54.38	0.00	0.74	-55.12	-13.00	42.12
531.80	V	45.75	-60.92	0.00	0.73	-61.65	-13.00	48.65
QPSK, Frequency: 707.5 MHz								
1415.00	H	47.61	-56.00	9.08	1.22	-48.14	-13.00	35.14
1415.00	V	47.67	-56.46	9.08	1.22	-48.60	-13.00	35.60
2122.50	H	40.83	-61.18	11.27	1.11	-51.02	-13.00	38.02
2122.50	V	39.91	-62.08	11.27	1.11	-51.92	-13.00	38.92
2830.00	H	39.63	-61.79	13.34	1.36	-49.81	-13.00	36.81
2830.00	V	40.65	-61.00	13.34	1.36	-49.02	-13.00	36.02
558.50	H	49.03	-53.97	0.00	0.74	-54.71	-13.00	41.71
549.50	V	48.01	-58.32	0.00	0.73	-59.05	-13.00	46.05
QPSK, Frequency: 715.3 MHz								
1430.60	H	49.97	-53.87	9.15	1.25	-45.97	-13.00	32.97
1430.60	V	51.08	-53.20	9.15	1.25	-45.30	-13.00	32.30
2145.90	H	38.80	-63.16	11.12	1.12	-53.16	-13.00	40.16
2145.90	V	39.94	-61.98	11.12	1.12	-51.98	-13.00	38.98
2861.20	H	39.50	-61.61	13.59	1.35	-49.37	-13.00	36.37
2861.20	V	42.88	-58.49	13.59	1.35	-46.25	-13.00	33.25
562.70	H	49.03	-53.88	0.00	0.74	-54.62	-13.00	41.62
564.10	V	47.29	-58.77	0.00	0.74	-59.51	-13.00	46.51

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	48.98	-54.60	9.07	1.22	-46.75	-13.00	33.75
1413.00	V	46.41	-57.70	9.07	1.22	-49.85	-13.00	36.85
2119.50	H	41.96	-60.06	11.28	1.11	-49.89	-13.00	36.89
2119.50	V	42.09	-59.91	11.28	1.11	-49.74	-13.00	36.74
2826.00	H	38.95	-62.51	13.31	1.36	-50.56	-13.00	37.56
2826.00	V	40.96	-60.73	13.31	1.36	-48.78	-13.00	35.78
551.50	H	49.43	-53.72	0.00	0.74	-54.46	-13.00	41.46
551.50	V	47.25	-59.05	0.00	0.74	-59.79	-13.00	46.79
QPSK, Frequency:710 MHz								
1420.00	H	42.79	-60.89	9.10	1.23	-53.02	-13.00	40.02
1420.00	V	43.92	-60.26	9.10	1.23	-52.39	-13.00	39.39
2130.00	H	40.63	-61.37	11.22	1.11	-51.26	-13.00	38.26
2130.00	V	38.31	-63.66	11.22	1.11	-53.55	-13.00	40.55
2840.00	H	39.54	-61.78	13.42	1.36	-49.72	-13.00	36.72
2840.00	V	41.59	-59.97	13.42	1.36	-47.91	-13.00	34.91
543.10	H	49.30	-54.02	0.00	0.73	-54.75	-13.00	41.75
552.90	V	47.31	-58.96	0.00	0.74	-59.70	-13.00	46.70
QPSK, Frequency: 713.5 MHz								
1427.00	H	51.27	-52.51	9.14	1.24	-44.61	-13.00	31.61
1427.00	V	52.41	-51.84	9.14	1.24	-43.94	-13.00	30.94
2140.50	H	40.70	-61.27	11.16	1.12	-51.23	-13.00	38.23
2140.50	V	39.95	-61.98	11.16	1.12	-51.94	-13.00	38.94
2854.00	H	38.90	-62.28	13.53	1.35	-50.10	-13.00	37.10
2854.00	V	40.09	-61.34	13.53	1.35	-49.16	-13.00	36.16
544.50	H	48.69	-54.61	0.00	0.73	-55.34	-13.00	42.34
545.90	V	48.01	-58.39	0.00	0.73	-59.12	-13.00	46.12

LTE Band 38(30MHz-26.5GHz):

ETP Band 36(30MHz 26.5 GHz):

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: 2572.5 MHz								
5145.00	H	35.66	-59.02	13.95	1.40	-46.47	-25.00	21.47
5145.00	V	35.17	-59.45	13.95	1.40	-46.90	-25.00	21.90
7717.50	H	34.82	-54.34	13.38	1.48	-42.44	-25.00	17.44
7717.50	V	34.67	-54.79	13.38	1.48	-42.89	-25.00	17.89
565.50	H	45.82	-57.03	0.00	0.74	-57.77	-25.00	32.77
558.50	V	48.63	-57.54	0.00	0.74	-58.28	-25.00	33.28
QPSK, Frequency: 2595 MHz								
5190.00	H	35.57	-59.12	13.99	1.51	-46.64	-25.00	21.64
5190.00	V	35.30	-59.44	13.99	1.51	-46.96	-25.00	21.96
7785.00	H	35.29	-54.03	13.32	1.53	-42.24	-25.00	17.24
7785.00	V	35.88	-53.69	13.32	1.53	-41.90	-25.00	16.90
552.90	H	45.08	-58.04	0.00	0.74	-58.78	-25.00	33.78
557.10	V	46.38	-59.81	0.00	0.74	-60.55	-25.00	35.55
QPSK, Frequency: 2617.5 MHz								
5235.00	H	35.04	-59.87	14.11	1.40	-47.16	-25.00	22.16
5235.00	V	35.11	-59.88	14.11	1.40	-47.17	-25.00	22.17
7852.50	H	35.69	-53.80	13.25	1.58	-42.13	-25.00	17.13
7852.50	V	35.82	-53.86	13.25	1.58	-42.19	-25.00	17.19
555.70	H	49.92	-53.14	0.00	0.74	-53.88	-25.00	28.88
559.90	V	47.40	-58.74	0.00	0.74	-59.48	-25.00	34.48

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	35.67	-63.73	14.04	1.63	-51.32	-13.00	38.32
3421.40	V	36.11	-63.37	14.04	1.63	-50.96	-13.00	37.96
5132.10	H	35.29	-59.39	13.93	1.37	-46.83	-13.00	33.83
5132.10	V	36.25	-58.34	13.93	1.37	-45.78	-13.00	32.78
547.30	H	50.78	-52.46	0.00	0.73	-53.19	-13.00	40.19
547.30	V	48.38	-58.00	0.00	0.73	-58.73	-13.00	45.73
QPSK, Frequency:1745 MHz								
3490.00	H	36.28	-62.78	13.83	1.61	-50.56	-13.00	37.56
3490.00	V	36.42	-62.65	13.83	1.61	-50.43	-13.00	37.43
5235.00	H	36.88	-58.03	14.11	1.40	-45.32	-13.00	32.32
5235.00	V	36.79	-58.20	14.11	1.40	-45.49	-13.00	32.49
545.90	H	50.44	-52.83	0.00	0.73	-53.56	-13.00	40.56
534.70	V	47.29	-59.32	0.00	0.73	-60.05	-13.00	47.05
QPSK, Frequency: 1779.3 MHz								
3558.60	H	35.62	-63.40	13.98	1.55	-50.97	-13.00	37.97
3558.60	V	35.73	-63.29	13.98	1.55	-50.86	-13.00	37.86
5337.90	H	36.22	-58.60	14.22	1.26	-45.64	-13.00	32.64
5337.90	V	35.96	-58.89	14.22	1.26	-45.93	-13.00	32.93
548.70	H	50.75	-52.46	0.00	0.73	-53.19	-13.00	40.19
545.90	V	47.38	-59.02	0.00	0.73	-59.75	-13.00	46.75

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

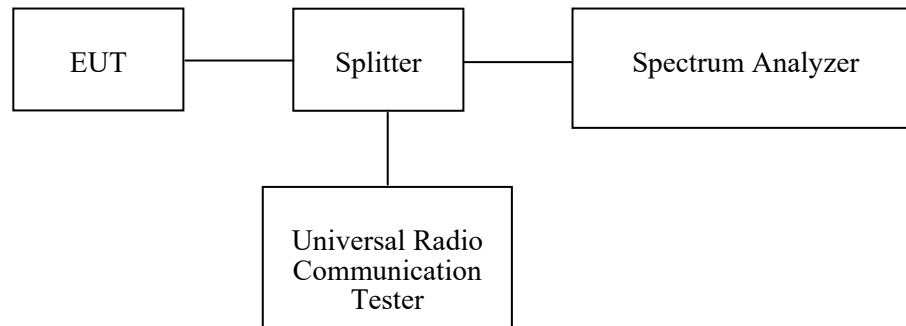
Applicable Standard

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	FSU 26	200256	2020-07-07	2021-07-07
R&S	Spectrum Analyzer	FSV40	101474	2020-07-07	2021-07-07
R&S	Spectrum Analyzer	FSP 38	100478	2020-07-07	2021-07-07
Unknown	Coaxial Cable	C-SJ00-0010	C0010/04	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

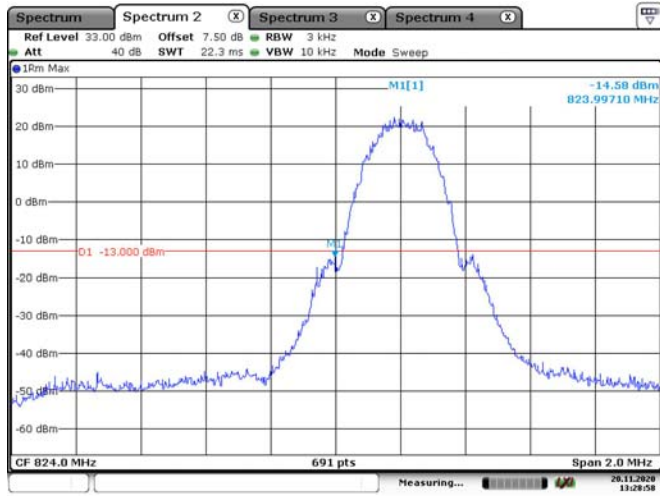
Environmental Conditions

Temperature:	23.7~28.7 °C
Relative Humidity:	32~57%
ATM Pressure:	101.2~101.8kPa
Tester:	Theshy Xie
Test Date:	2020-11-20~2021-01-30

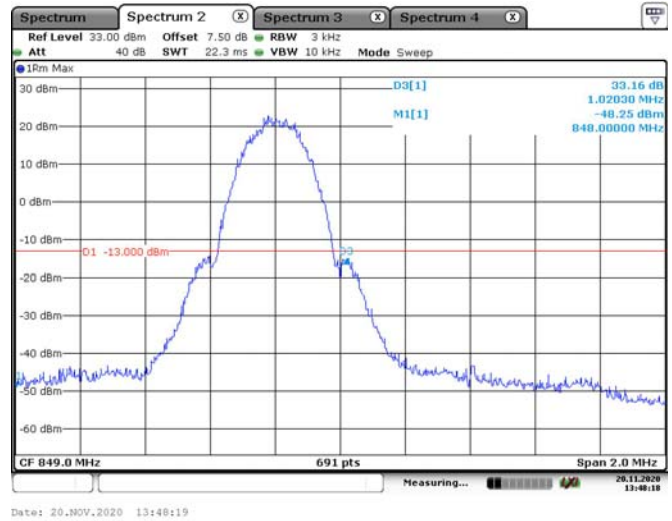
Test Mode: Transmitting

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

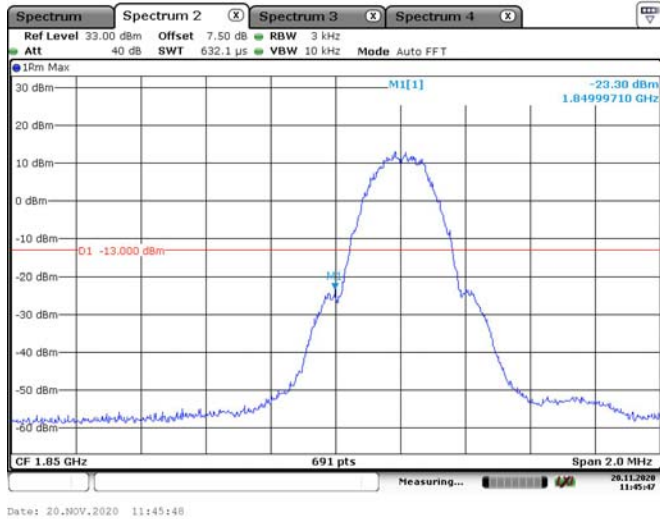
GSM 850, Left Band Edge



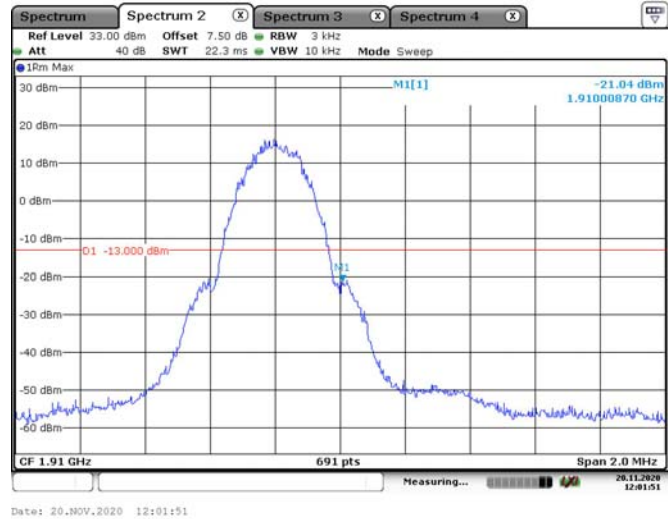
GSM 850, Right Band Edge



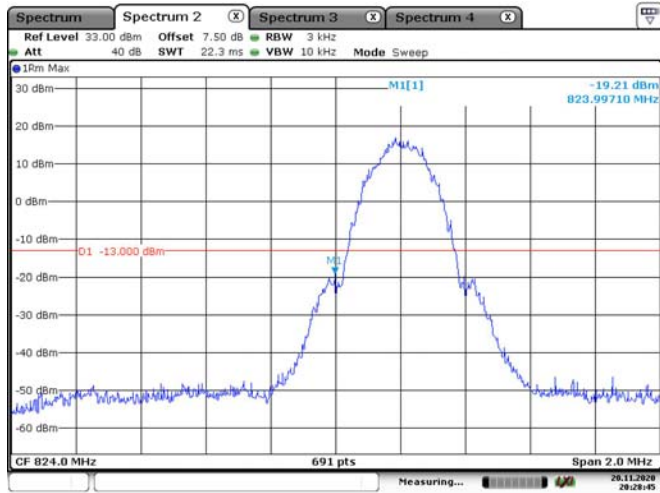
PCS 1900, Left Band Edge



PCS 1900, Right Band Edge

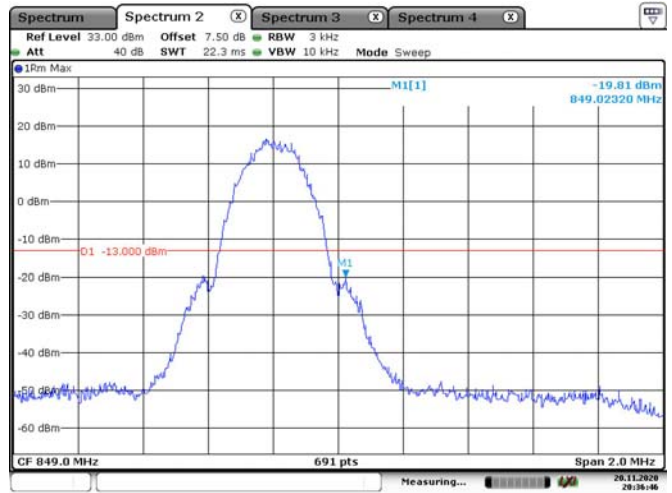


EGPRS 850, Left Band Edge



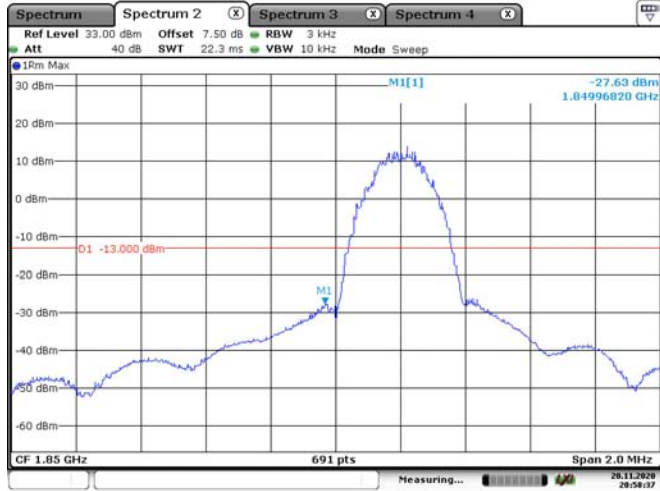
Date: 20.NOV.2020 20:28:45

EGPRS 850, Right Band Edge



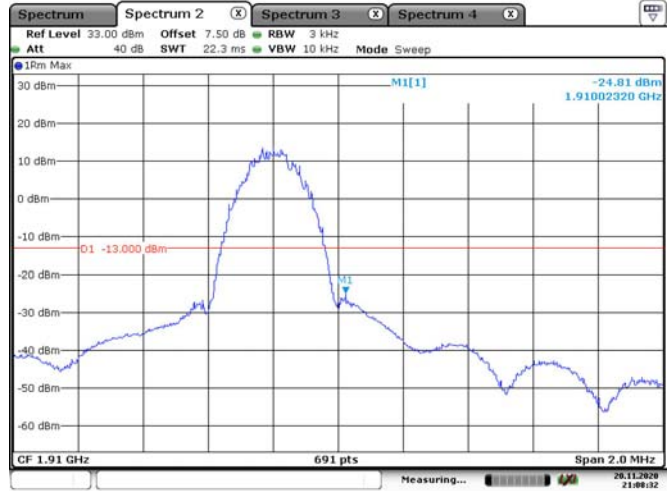
Date: 20.NOV.2020 20:36:47

EGPRS 1900, Left Band Edge



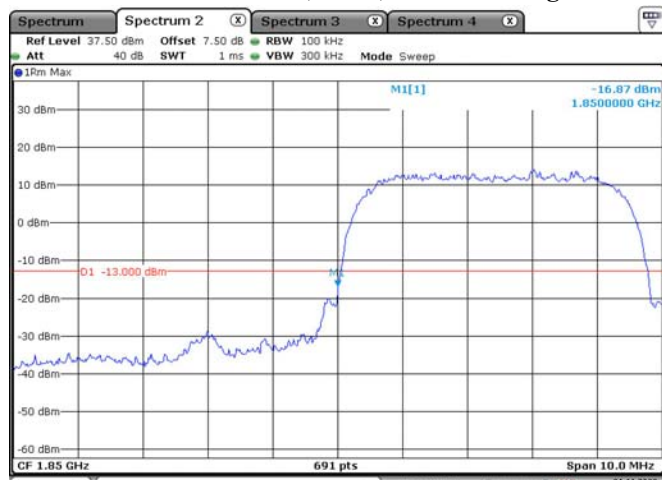
Date: 20.NOV.2020 20:58:38

EGPRS 1900, Right Band Edge



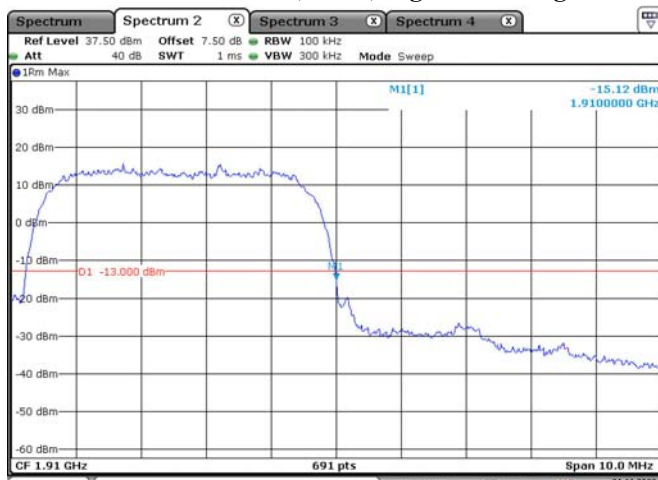
Date: 20.NOV.2020 21:08:32

WCDMA Band II, Rel99, Left Band Edge



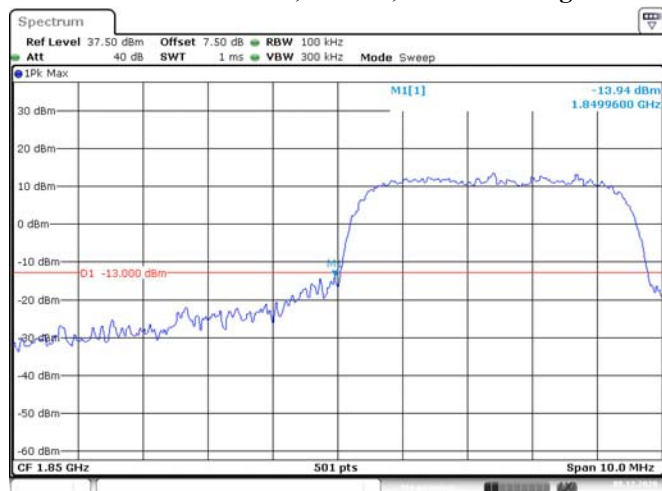
Date: 21.NOV.2020 15:25:20

WCDMA Band II, Rel99, Right Band Edge



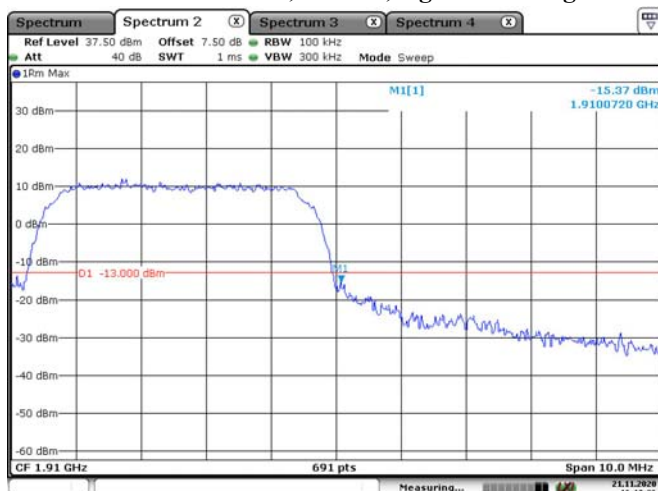
Date: 21.NOV.2020 15:35:19

WCDMA Band II, HSDPA, Left Band Edge



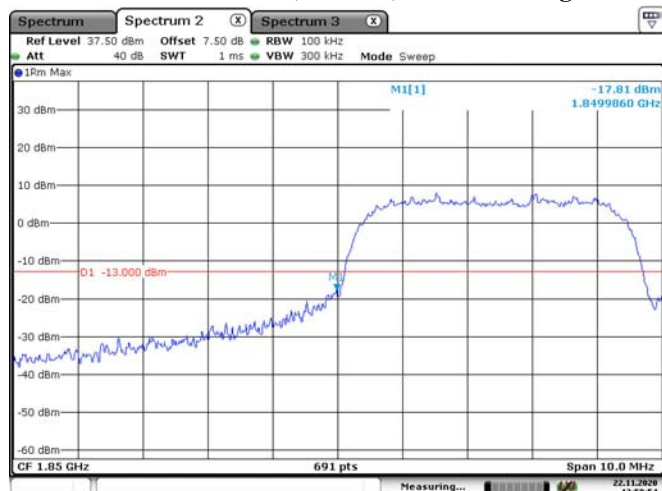
Date: 8.DEC.2020 10:27:27

WCDMA Band II, HSDPA, Right Band Edge



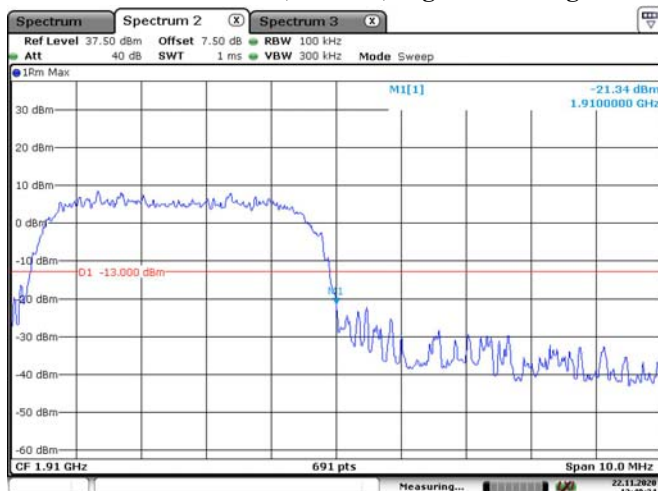
Date: 21.NOV.2020 16:18:36

WCDMA Band II, HSUPA, Left Band Edge



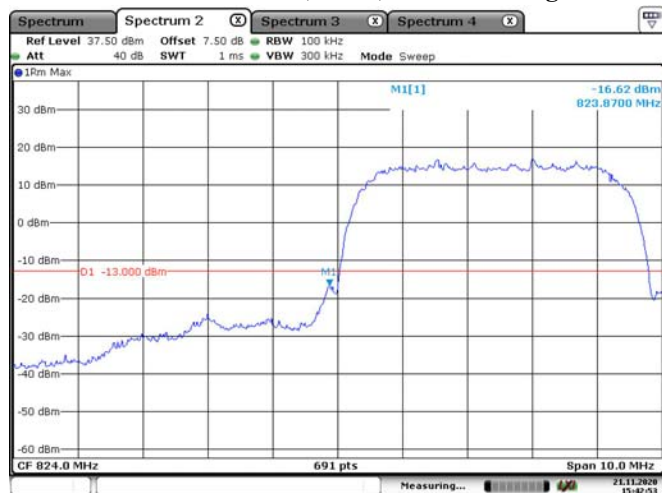
Date: 22.NOV.2020 13:50:54

WCDMA Band II, HSUPA, Right Band Edge

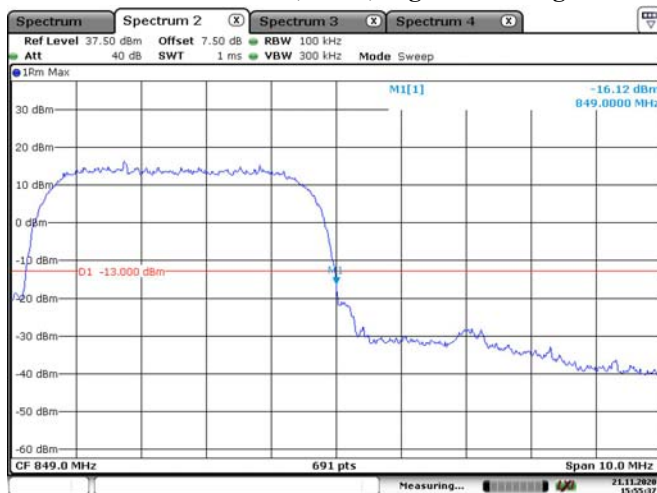


Date: 22.NOV.2020 13:48:34

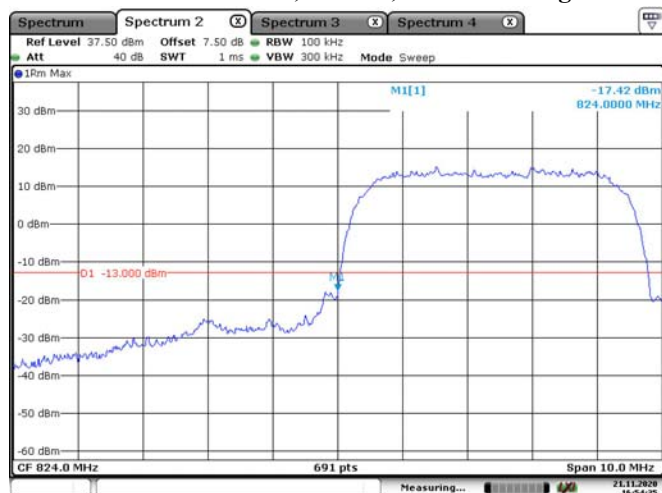
WCDMA Band V, Rel99, Left Band Edge



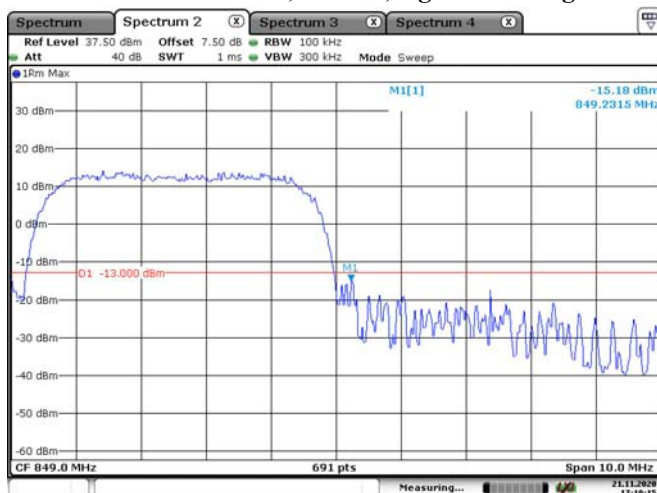
WCDMA Band V, Rel99, Right Band Edge



WCDMA Band V, HSDPA, Left Band Edge



WCDMA Band V, HSDPA, Right Band Edge

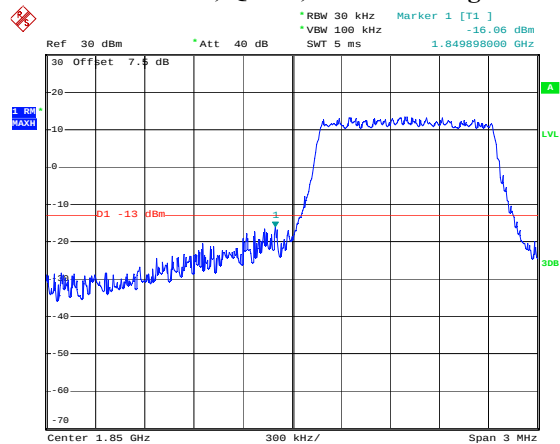


WCDMA Band V, HSUPA, Left Band Edge

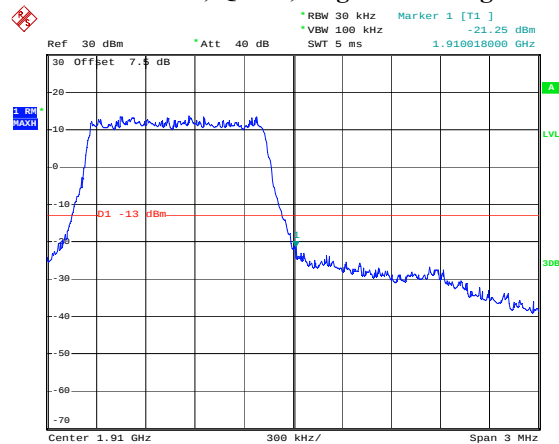


WCDMA Band V, HSUPA, Right Band Edge

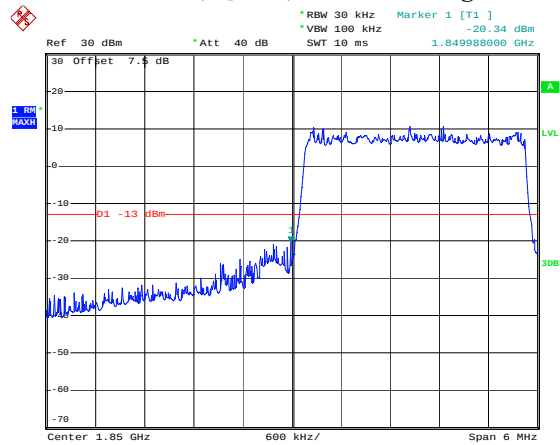


LTE Band 2:**1.4M, QPSK, Left Band Edge**

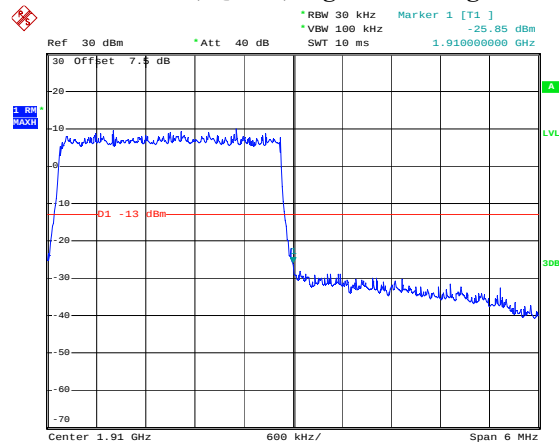
Date: 20.NOV.2020 08:44:43

1.4M, QPSK, Right Band Edge

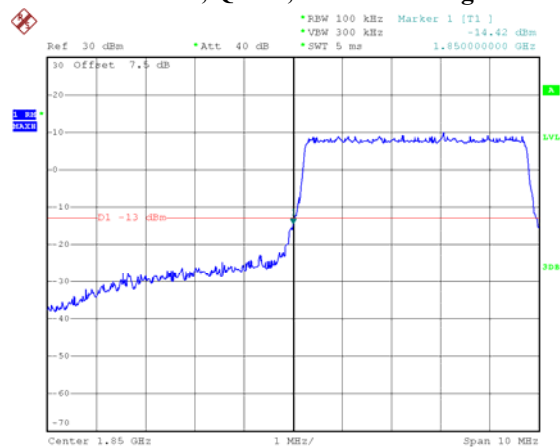
Date: 20.NOV.2020 08:45:27

3M, QPSK, Left Band Edge

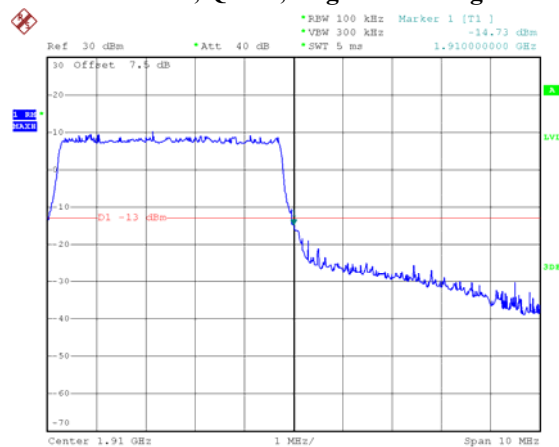
Date: 20.NOV.2020 08:46:14

3M, QPSK, Right Band Edge

Date: 20.NOV.2020 08:46:55

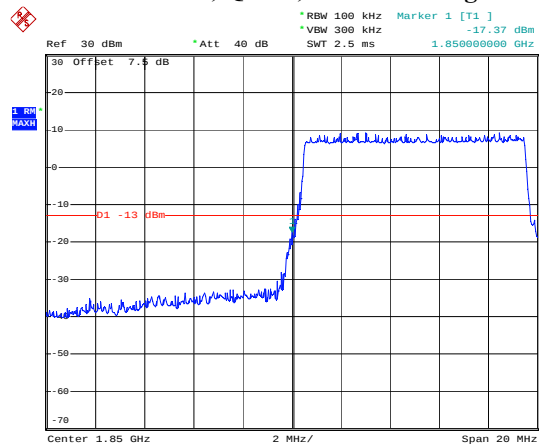
5M, QPSK, Left Band Edge

Date: 8.DEC.2020 08:03:47

5M, QPSK, Right Band Edge

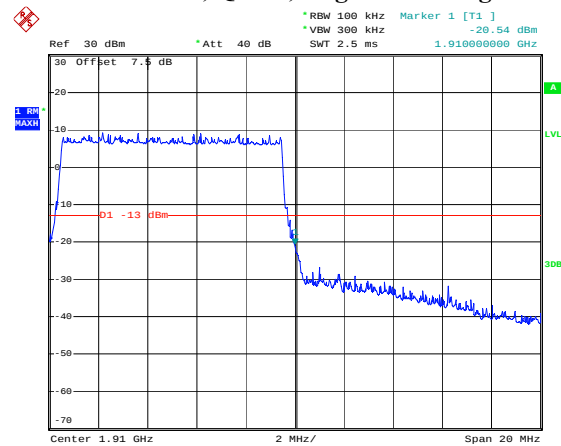
Date: 8.DEC.2020 08:06:57

10M, QPSK, Left Band Edge



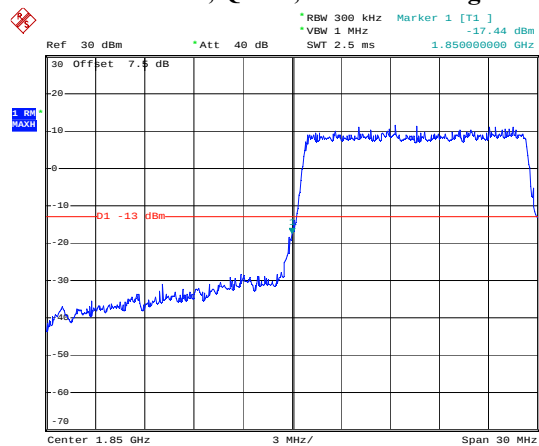
Date: 20.NOV.2020 08:48:59

10M, QPSK, Right Band Edge



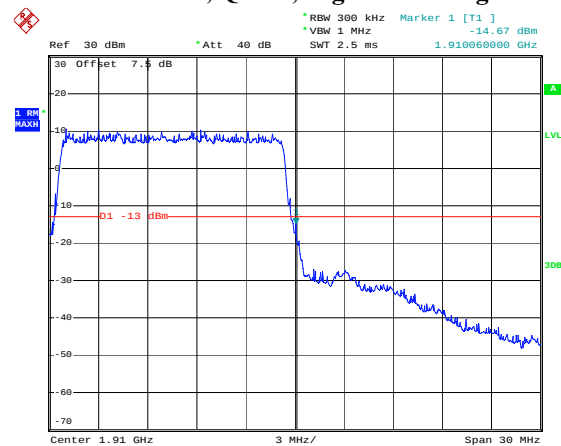
Date: 20.NOV.2020 08:49:42

15M, QPSK, Left Band Edge



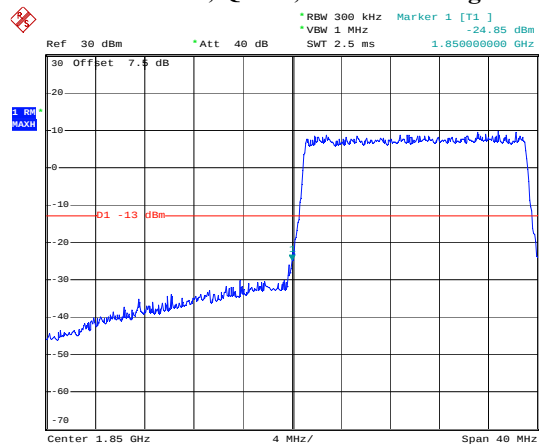
Date: 20.NOV.2020 08:50:27

15M, QPSK, Right Band Edge



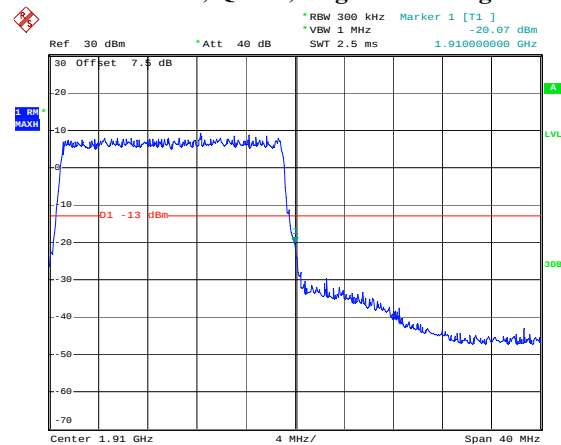
Date: 20.NOV.2020 08:51:09

20M, QPSK, Left Band Edge



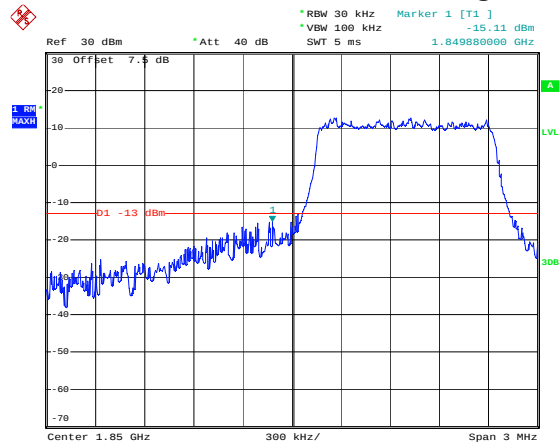
Date: 20.NOV.2020 08:51:56

20M, QPSK, Right Band Edge



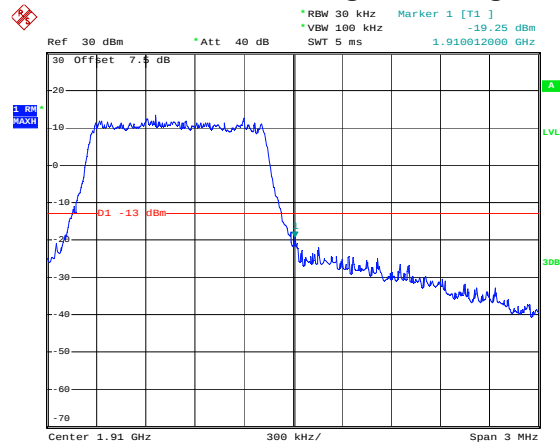
Date: 20.NOV.2020 08:52:38

1.4M, 16QAM, Left Band Edge



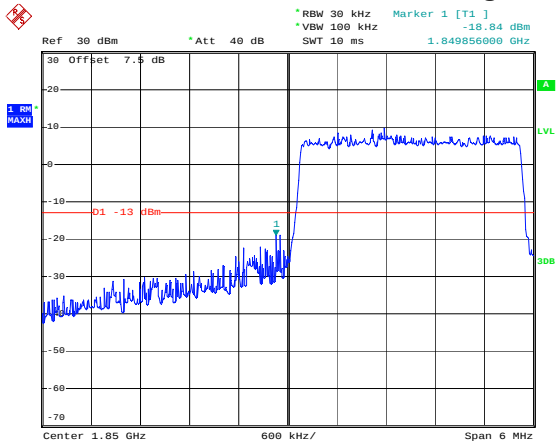
Date: 20.NOV.2020 08:45:07

1.4M, 16QAM, Right Band Edge



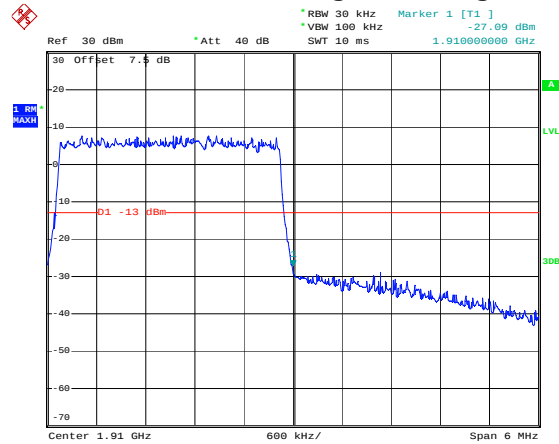
Date: 20.NOV.2020 08:45:48

3M, 16QAM, Left Band Edge



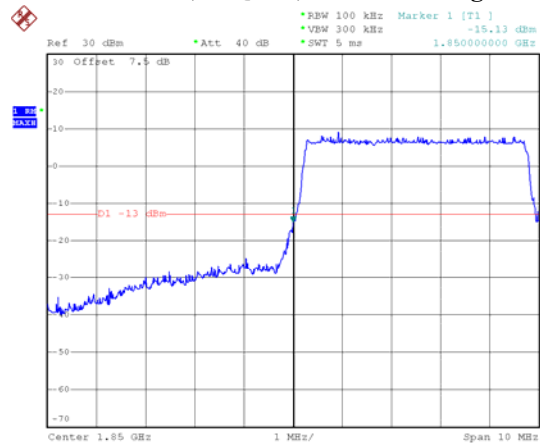
Date: 20.NOV.2020 08:46:34

3M, 16QAM, Right Band Edge



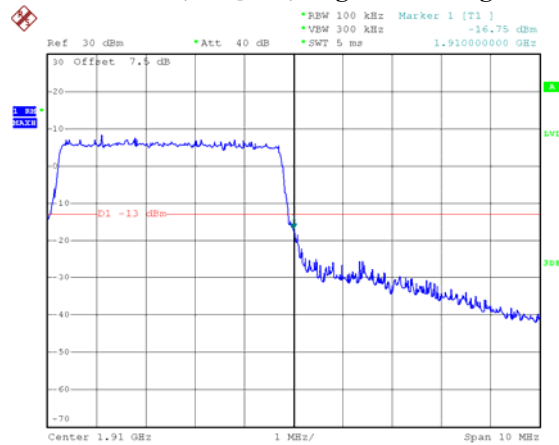
Date: 20.NOV.2020 08:47:12

5M, 16QAM, Left Band Edge



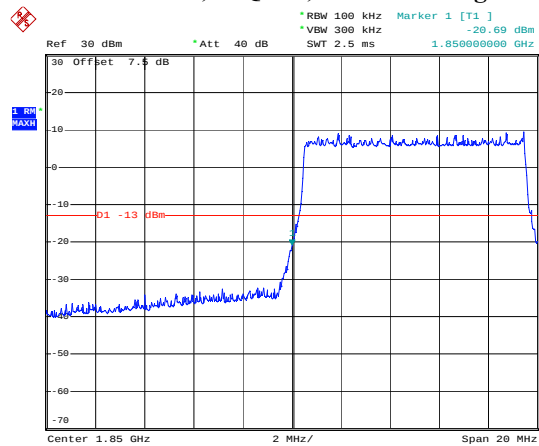
Date: 8.DEC.2020 08:04:32

5M, 16QAM, Right Band Edge



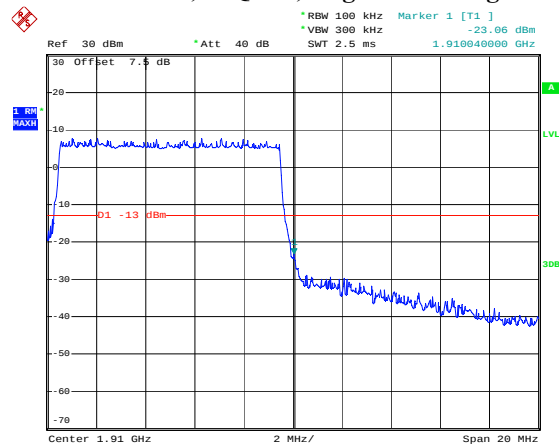
Date: 8.DEC.2020 08:07:44

10M, 16QAM, Left Band Edge



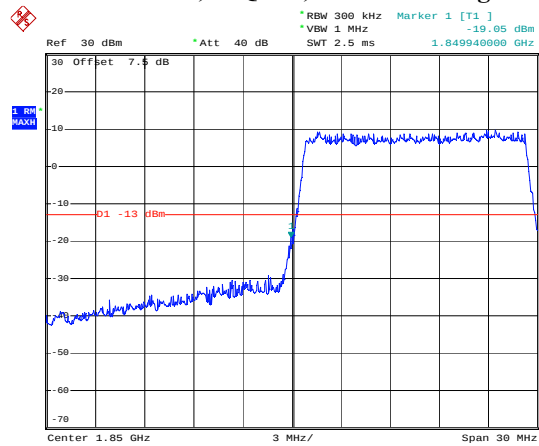
Date: 20.NOV.2020 08:49:20

10M, 16QAM, Right Band Edge



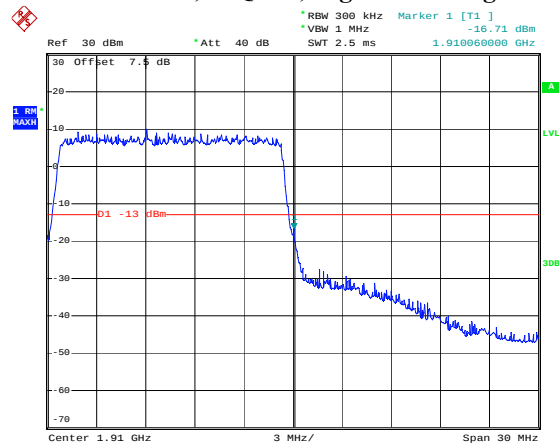
Date: 20.NOV.2020 08:50:00

15M, 16QAM, Left Band Edge



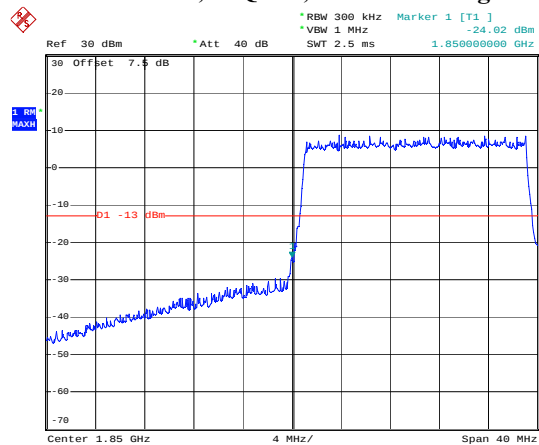
Date: 20.NOV.2020 08:50:48

15M, 16QAM, Right Band Edge



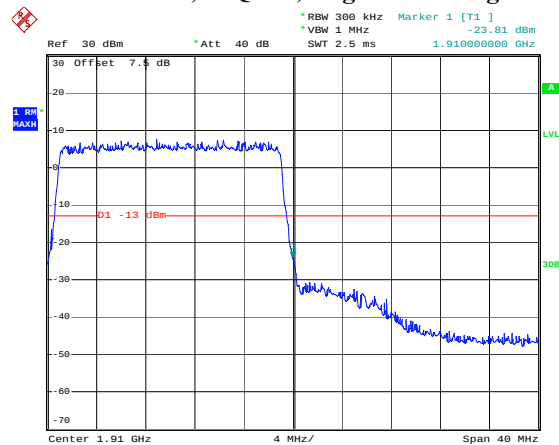
Date: 20.NOV.2020 08:51:29

20M, 16QAM, Left Band Edge

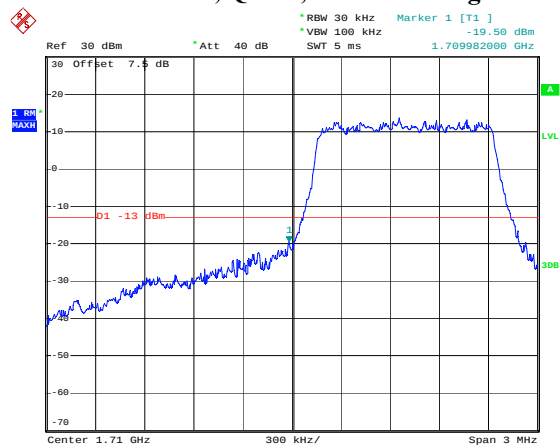


Date: 20.NOV.2020 08:52:17

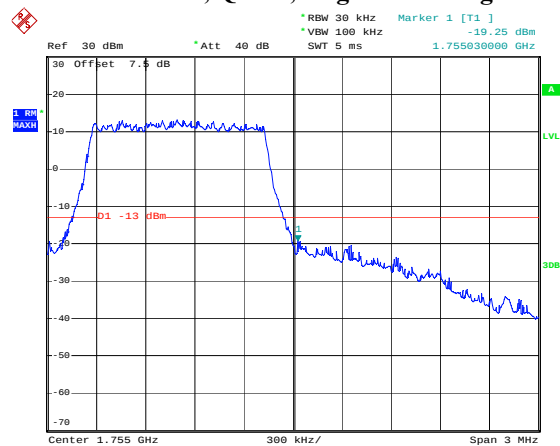
20M, 16QAM, Right Band Edge



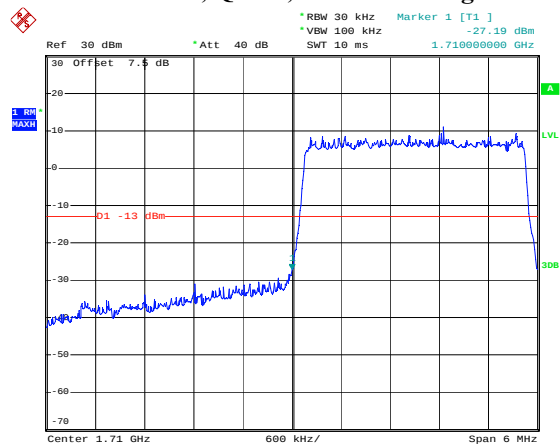
Date: 20.NOV.2020 08:52:58

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

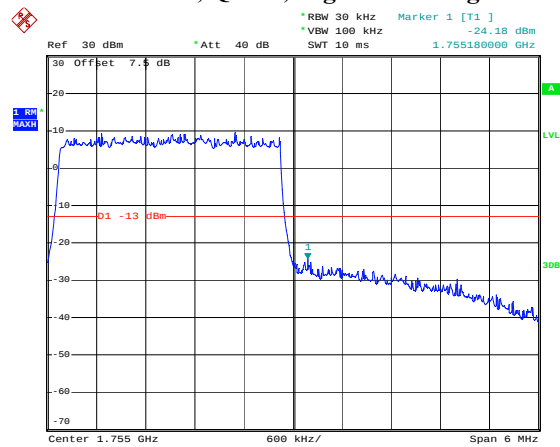
Date: 20.NOV.2020 08:53:21

1.4M, QPSK, Right Band Edge

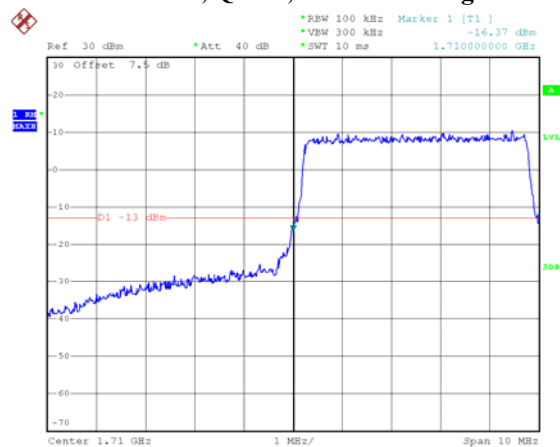
Date: 20.NOV.2020 08:54:02

3M, QPSK, Left Band Edge

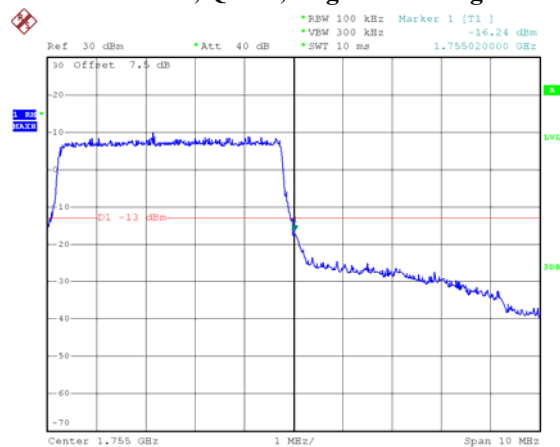
Date: 20.NOV.2020 08:54:40

3M, QPSK, Right Band Edge

Date: 20.NOV.2020 08:55:17

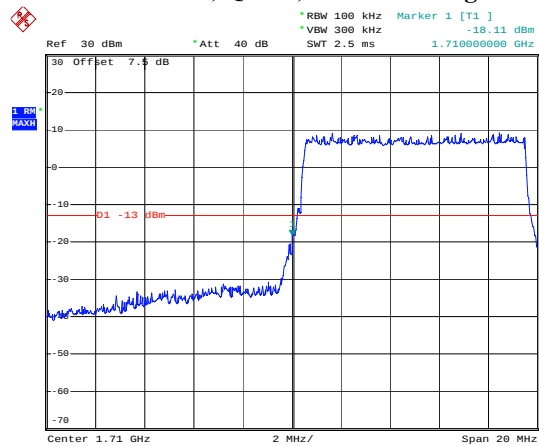
5M, QPSK, Left Band Edge

Date: 8.DEC.2020 08:14:03

5M, QPSK, Right Band Edge

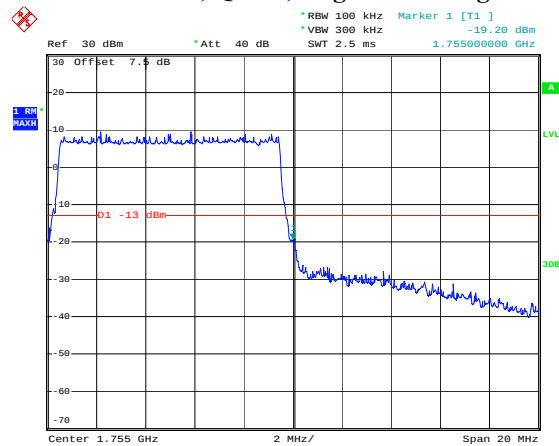
Date: 8.DEC.2020 08:18:23

10M, QPSK, Left Band Edge



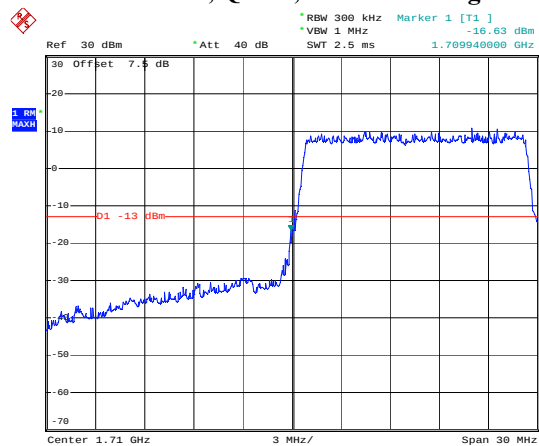
Date: 20.NOV.2020 08:57:20

10M, QPSK, Right Band Edge



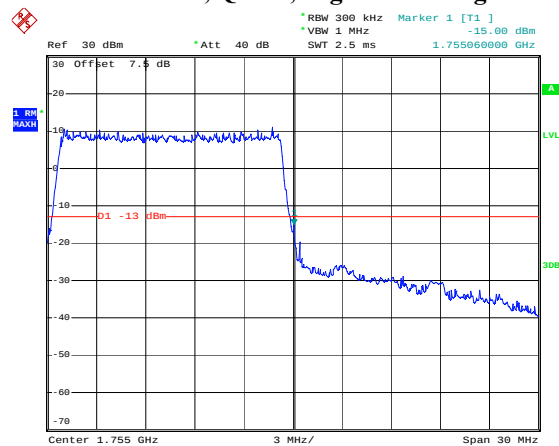
Date: 20.NOV.2020 08:57:57

15M, QPSK, Left Band Edge



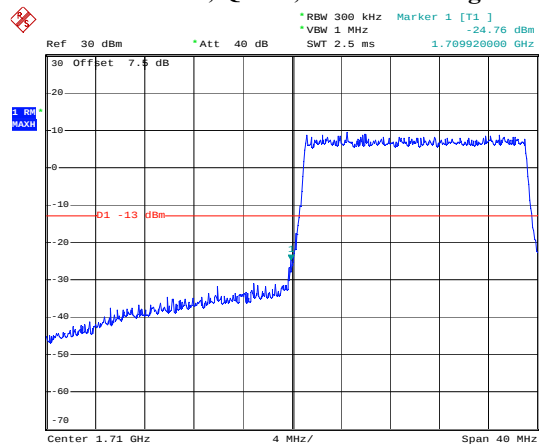
Date: 20.NOV.2020 08:58:42

15M, QPSK, Right Band Edge



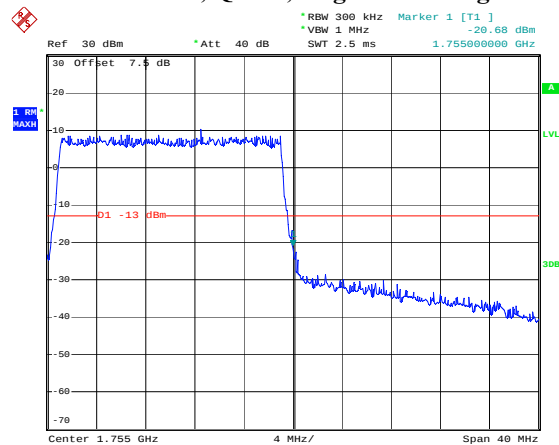
Date: 20.NOV.2020 08:59:27

20M, QPSK, Left Band Edge



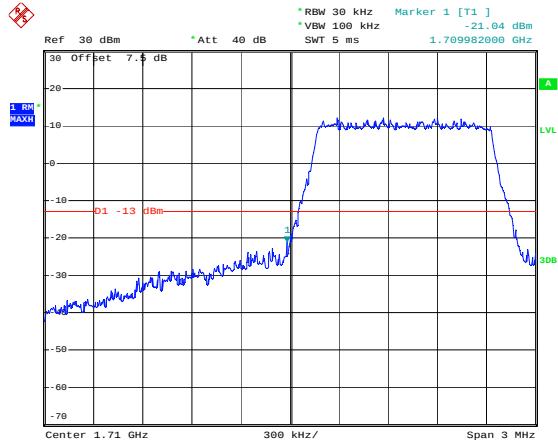
Date: 20.NOV.2020 09:00:13

20M, QPSK, Right Band Edge



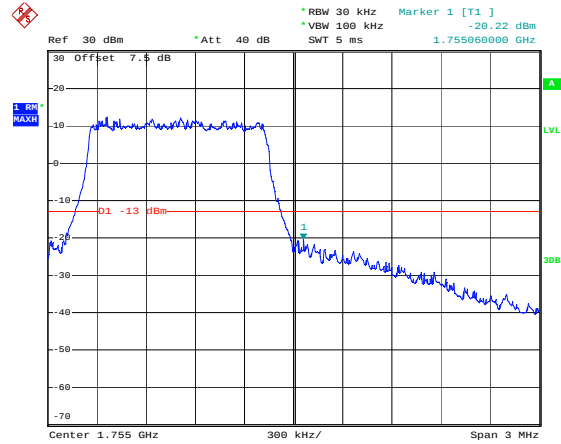
Date: 20.NOV.2020 09:00:58

1.4M, 16QAM, Left Band Edge



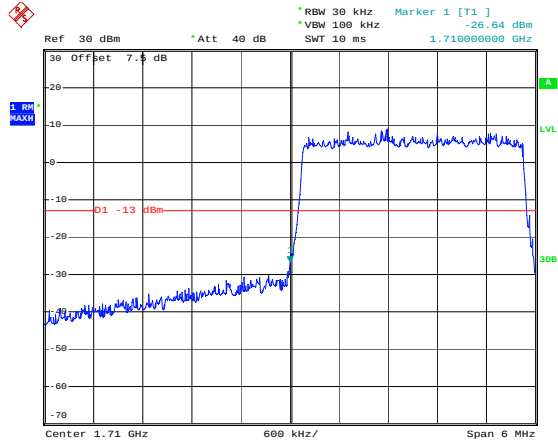
Date: 20.NOV.2020 08:53:41

1.4M, 16QAM, Right Band Edge



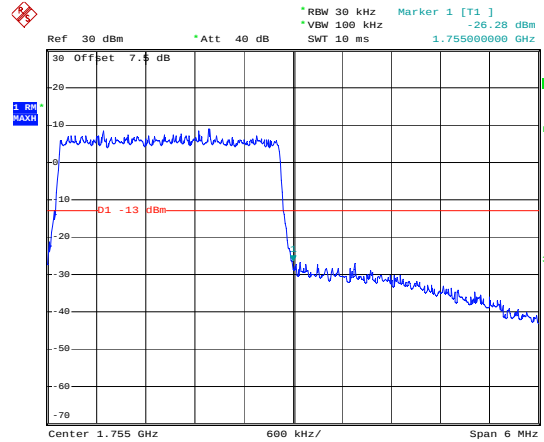
Date: 20.NOV.2020 08:54:19

3M, 16QAM, Left Band Edge



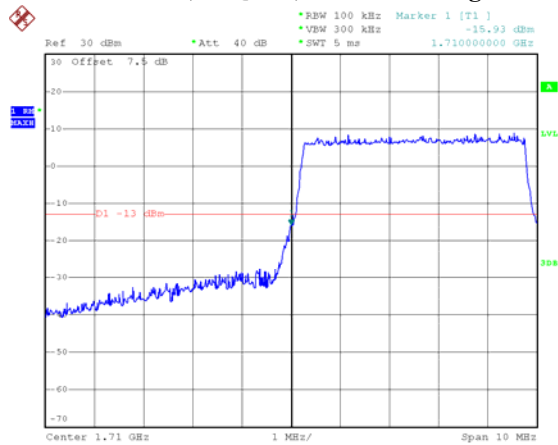
Date: 20.NOV.2020 08:54:56

3M, 16QAM, Right Band Edge



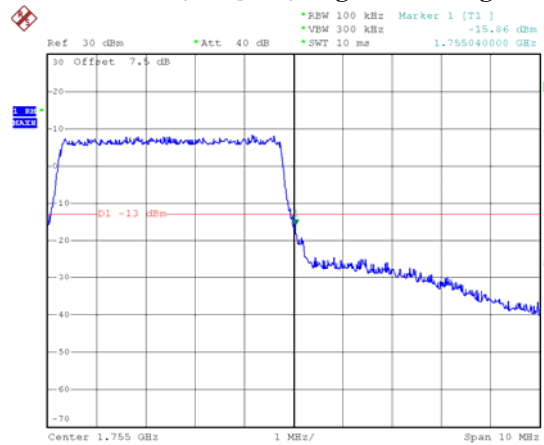
Date: 20.NOV.2020 08:55:34

5M, 16QAM, Left Band Edge



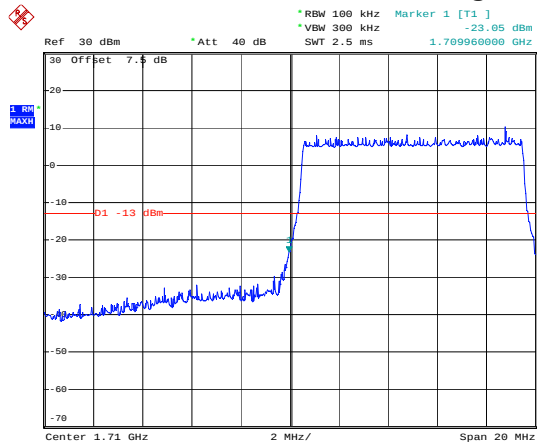
Date: 8.DEC.2020 08:15:53

5M, 16QAM, Right Band Edge



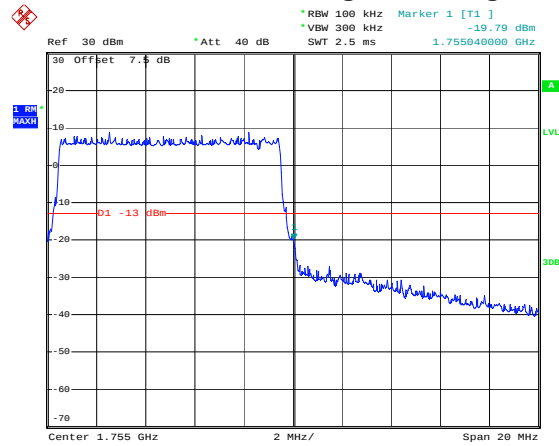
Date: 8.DEC.2020 08:20:07

10M, 16QAM, Left Band Edge



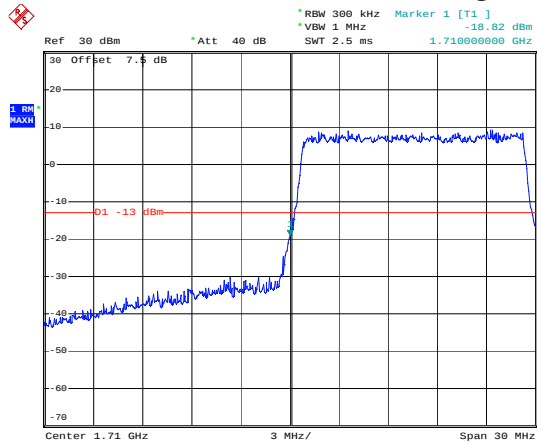
Date: 20.NOV.2020 08:57:39

10M, 16QAM, Right Band Edge



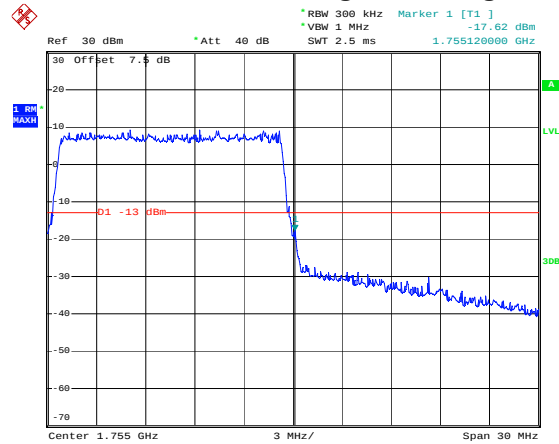
Date: 20.NOV.2020 08:58:19

15M, 16QAM, Left Band Edge



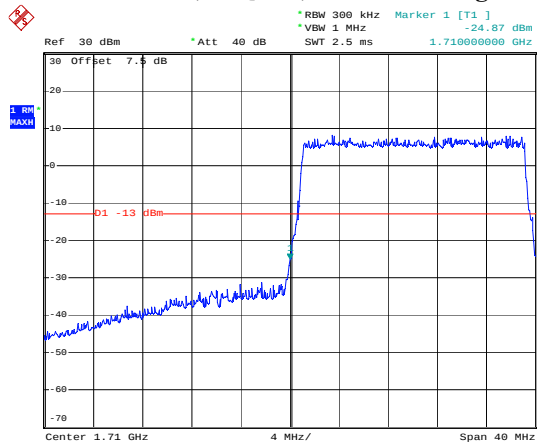
Date: 20.NOV.2020 08:59:06

15M, 16QAM, Right Band Edge



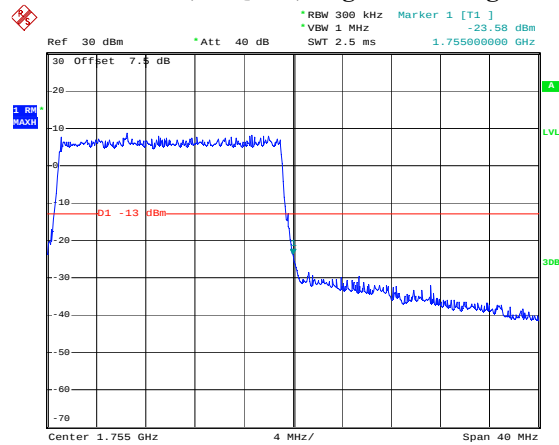
Date: 20.NOV.2020 08:59:47

20M, 16QAM, Left Band Edge

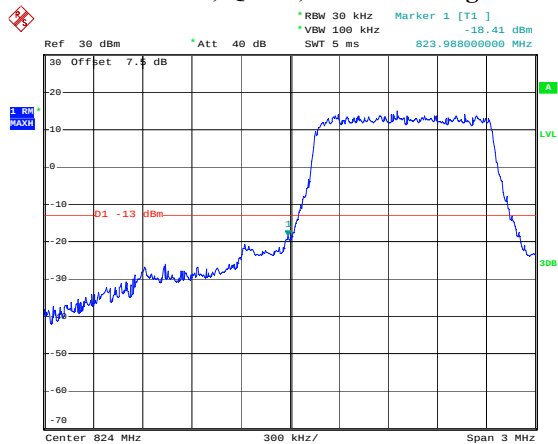


Date: 20.NOV.2020 09:00:37

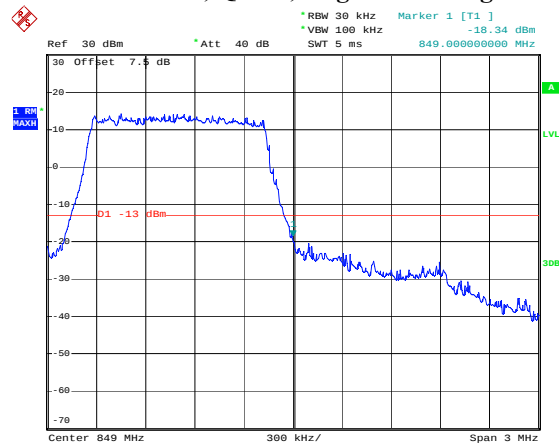
20M, 16QAM, Right Band Edge



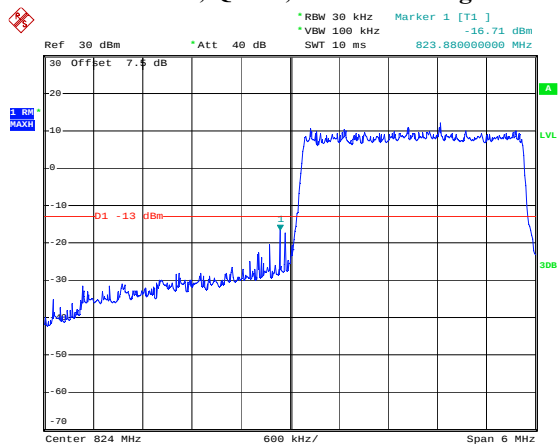
Date: 20.NOV.2020 09:01:21

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

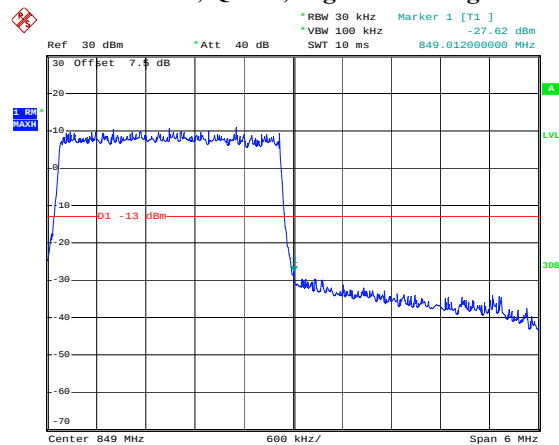
Date: 20.NOV.2020 09:01:44

1.4M, QPSK, Right Band Edge

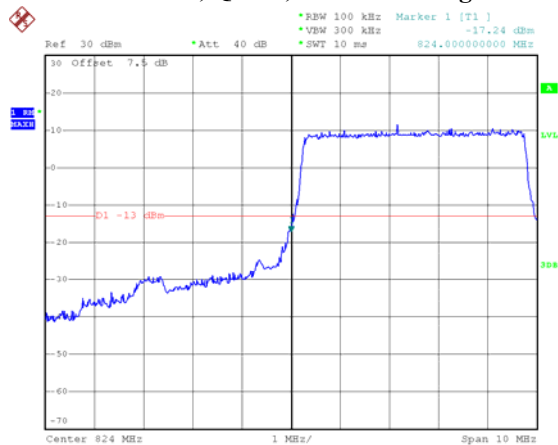
Date: 20.NOV.2020 09:02:25

3M, QPSK, Left Band Edge

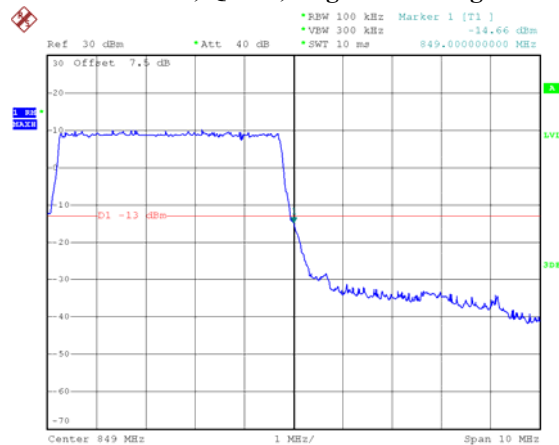
Date: 20.NOV.2020 09:03:05

3M, QPSK, Right Band Edge

Date: 20.NOV.2020 09:03:39

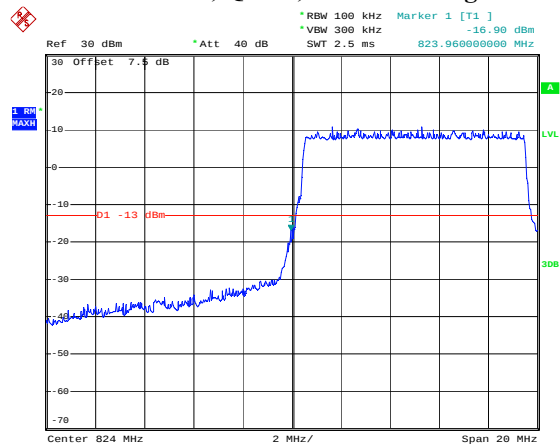
5M, QPSK, Left Band Edge

Date: 8.DEC.2020 08:28:30

5M, QPSK, Right Band Edge

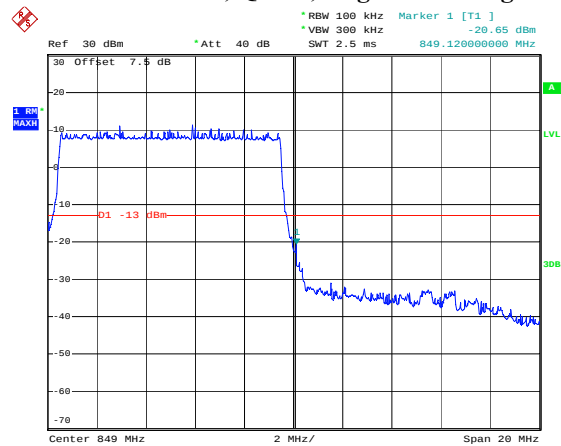
Date: 8.DEC.2020 08:29:57

10M, QPSK, Left Band Edge



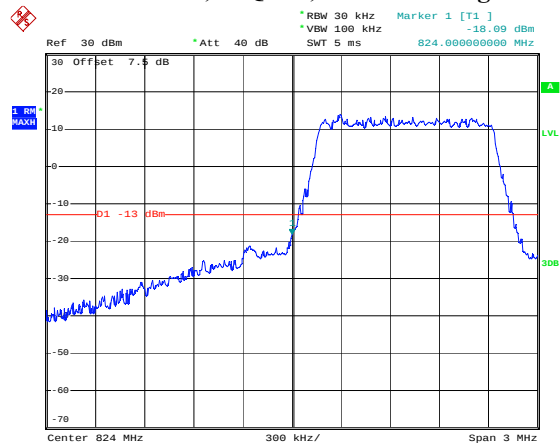
Date: 20.NOV.2020 09:05:44

10M, QPSK, Right Band Edge



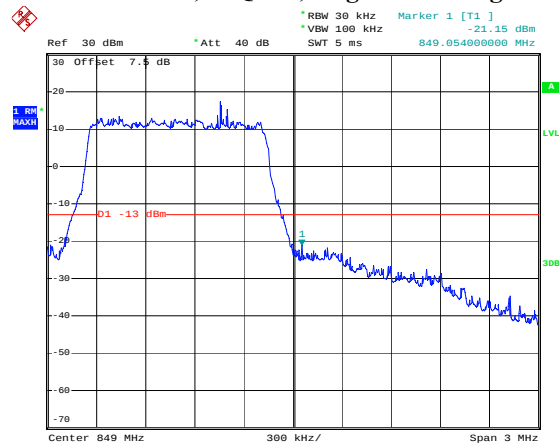
Date: 20.NOV.2020 09:06:21

1.4M, 16QAM, Left Band Edge



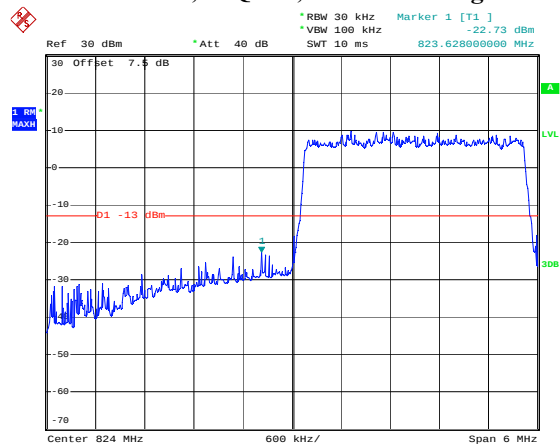
Date: 20.NOV.2020 09:02:04

1.4M, 16QAM, Right Band Edge



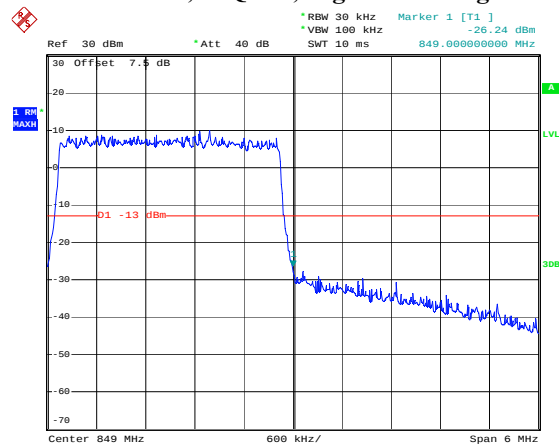
Date: 20.NOV.2020 09:02:42

3M, 16QAM, Left Band Edge



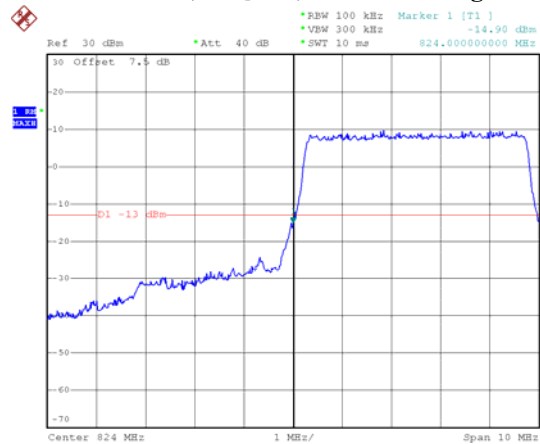
Date: 20.NOV.2020 09:03:22

3M, 16QAM, Right Band Edge



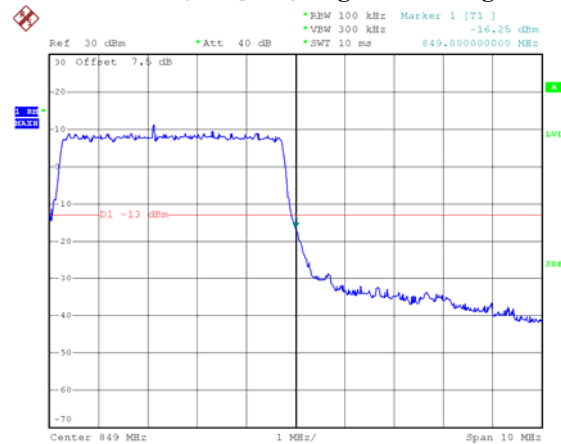
Date: 20.NOV.2020 09:03:56

5M, 16QAM, Left Band Edge



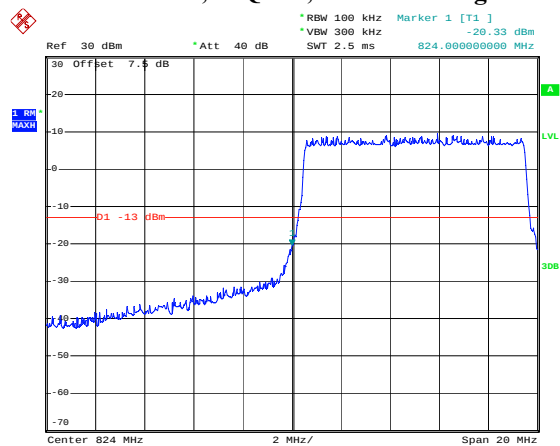
Date: 8.DEC.2020 08:27:53

5M, 16QAM, Right Band Edge



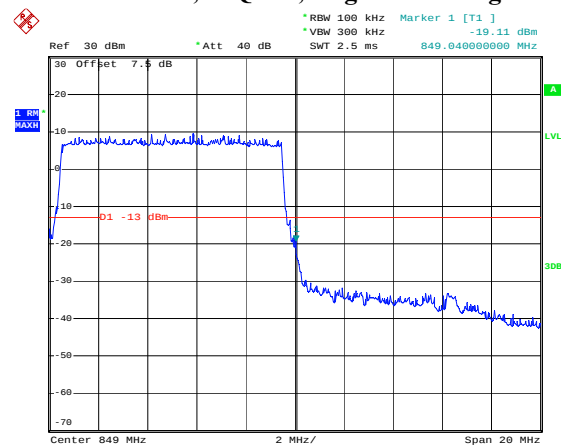
Date: 8.DEC.2020 08:30:34

10M, 16QAM, Left Band Edge



Date: 20.NOV.2020 09:06:02

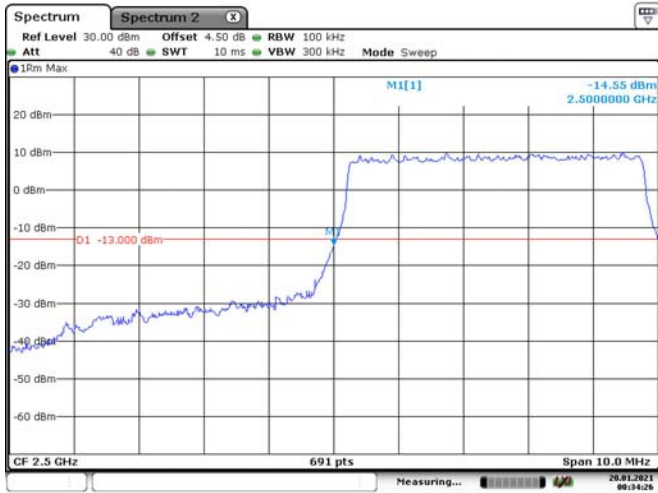
10M, 16QAM, Right Band Edge



Date: 20.NOV.2020 09:06:39

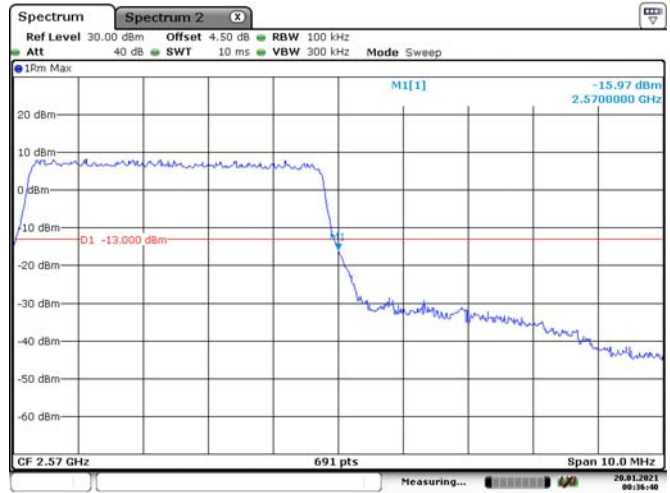
LTE Band 7:

5M, QPSK, Left Band Edge



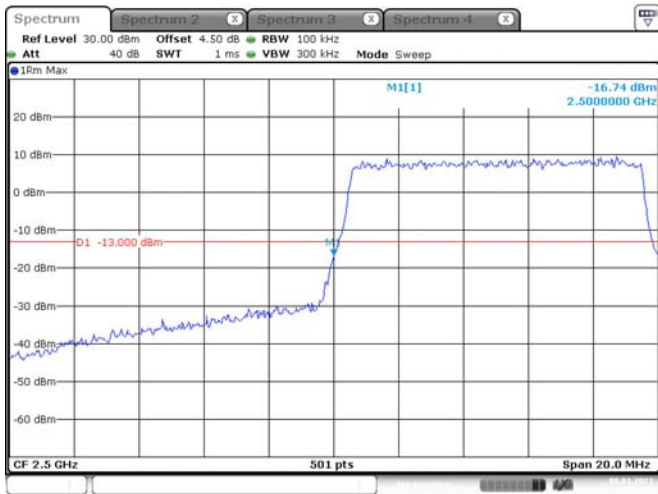
Date: 20.JAN.2021 00:34:26

5M, QPSK, Right Band Edge



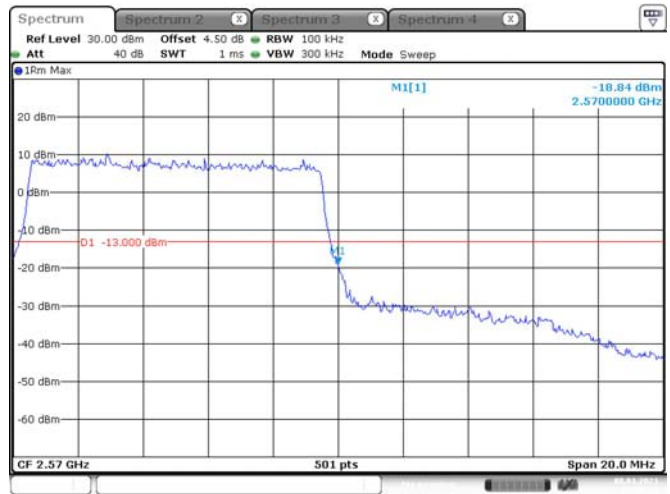
Date: 20.JAN.2021 00:36:40

10M, QPSK, Left Band Edge



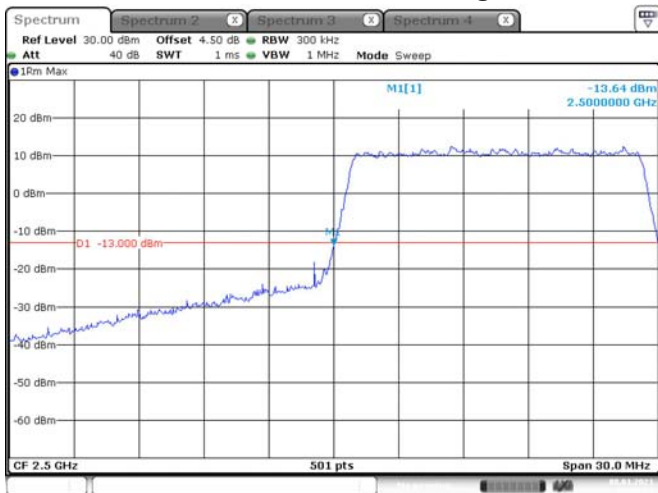
Date: 8.JAN.2021 00:59:07

10M, QPSK, Right Band Edge



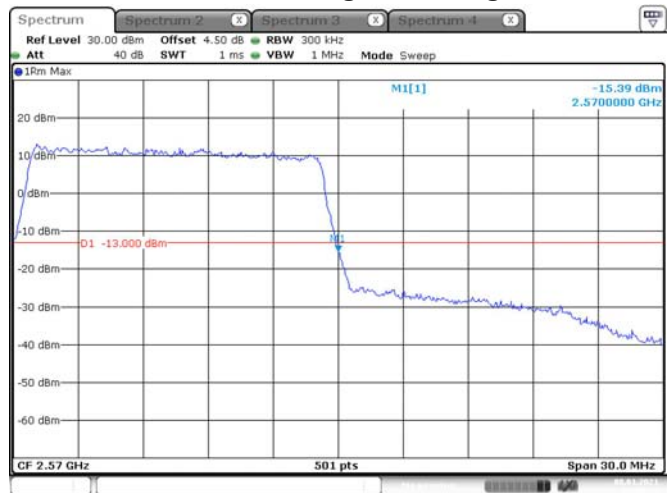
Date: 8.JAN.2021 01:00:15

15M, QPSK, Left Band Edge



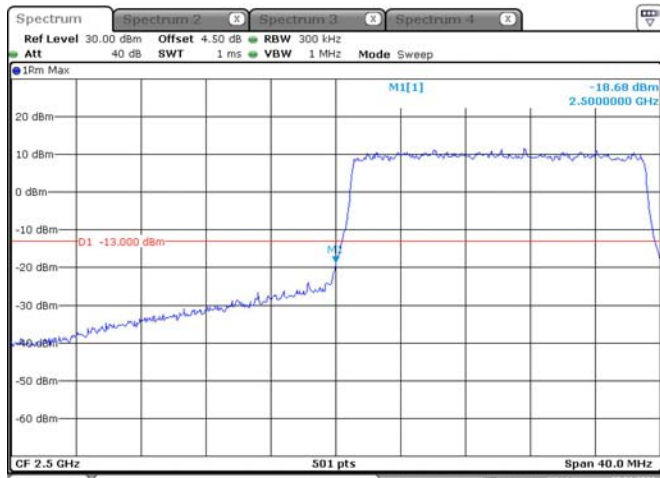
Date: 8.JAN.2021 01:01:21

15M, QPSK, Right Band Edge



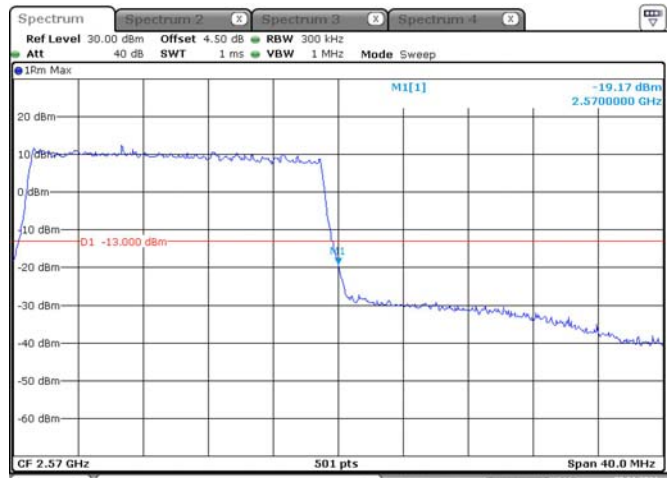
Date: 8.JAN.2021 01:02:24

20M, QPSK, Left Band Edge



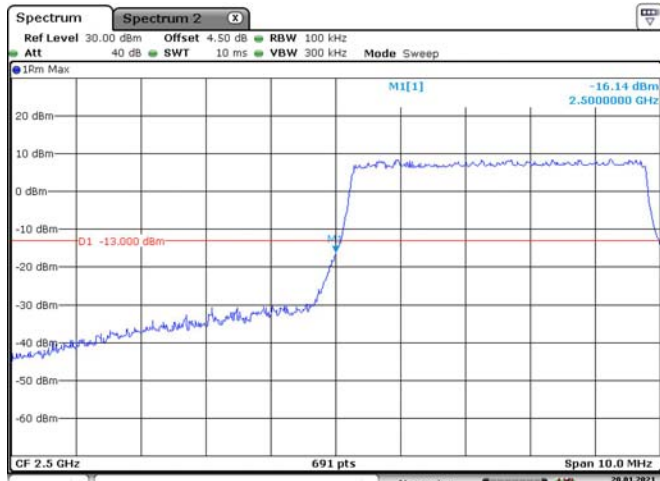
Date: 8, JAN, 2021 01:03:36

20M, QPSK, Right Band Edge



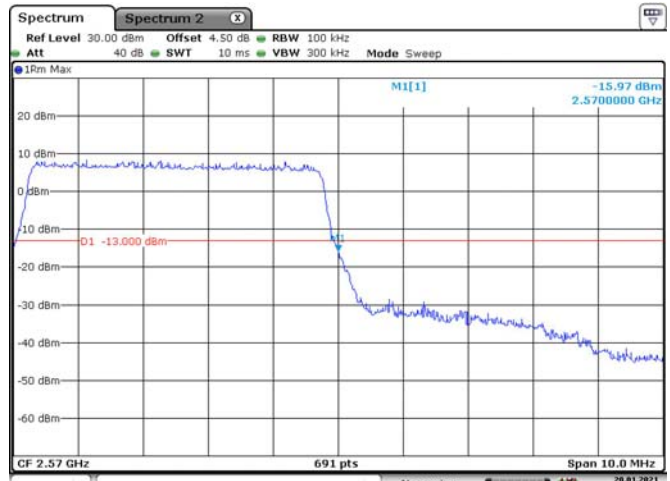
Date: 8, JAN, 2021 01:04:45

5M, 16QAM, Left Band Edge



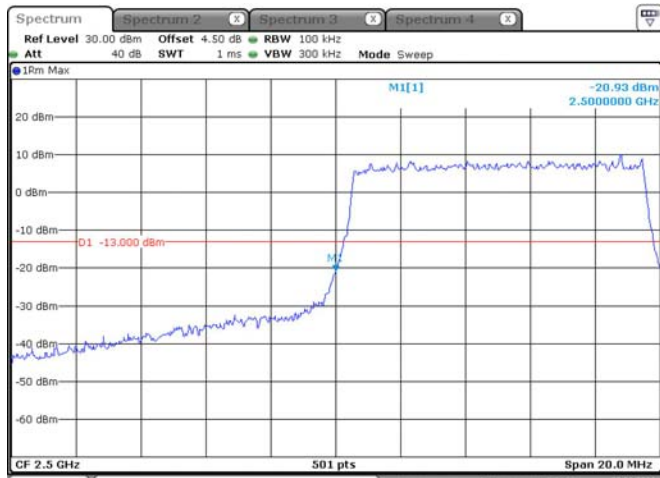
Date: 20, JAN, 2021 00:35:11

5M, 16QAM, Right Band Edge



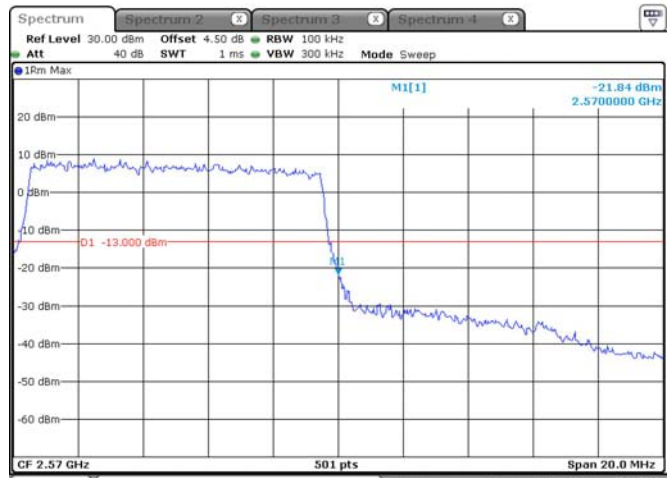
Date: 20, JAN, 2021 00:36:28

10M, 16QAM, Left Band Edge



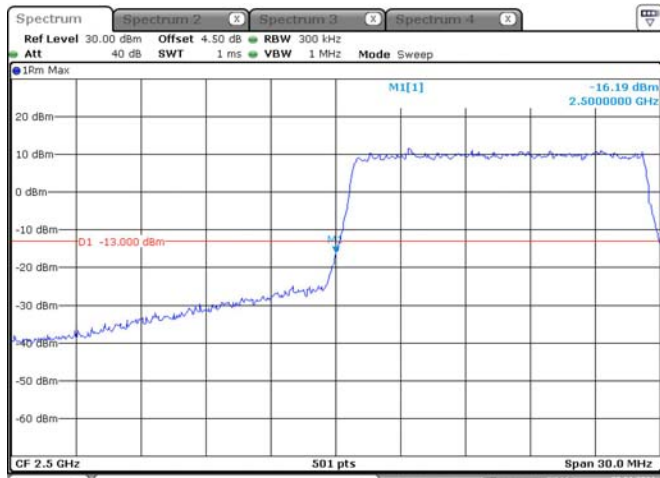
Date: 8, JAN, 2021 00:59:45

10M, 16QAM, Right Band Edge



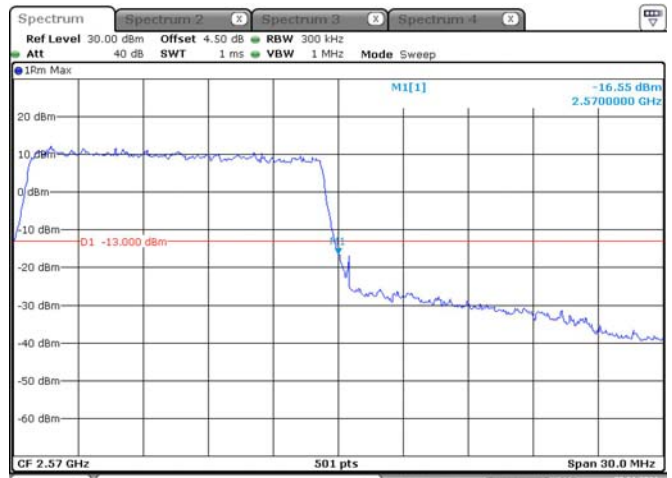
Date: 8, JAN, 2021 01:00:47

15M, 16QAM, Left Band Edge



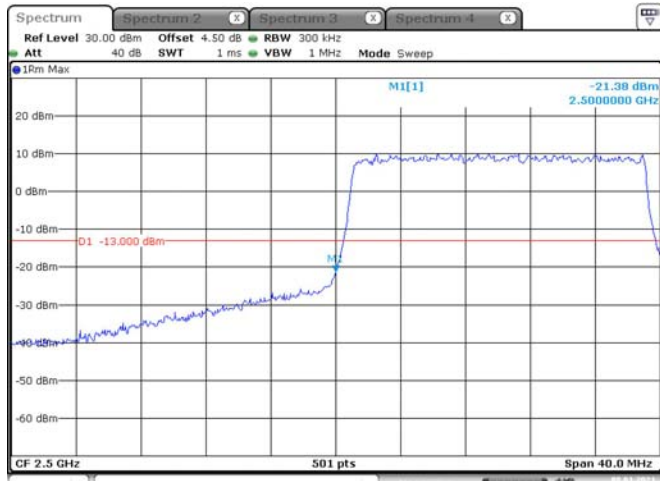
Date: 8,JAN,2021 01:01:52

15M, 16QAM, Right Band Edge



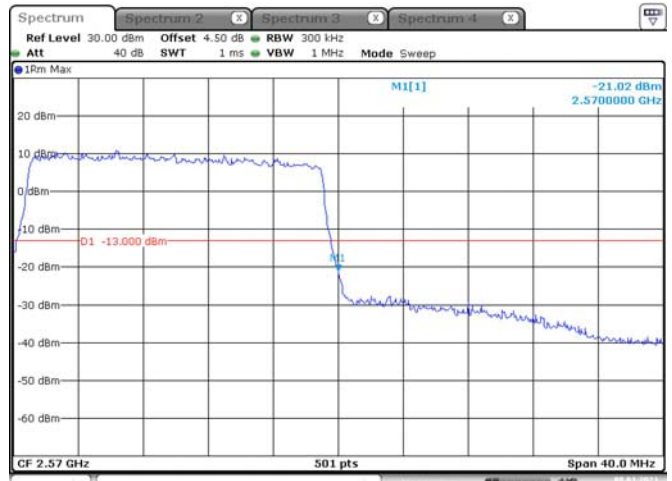
Date: 8,JAN,2021 01:02:58

20M, 16QAM, Left Band Edge

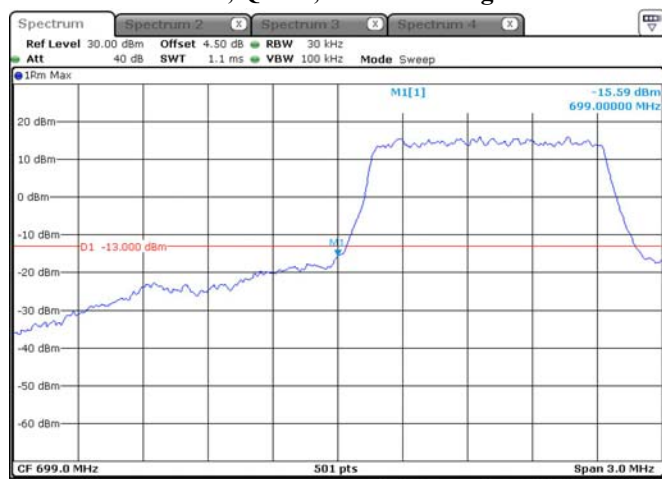


Date: 8,JAN,2021 01:04:10

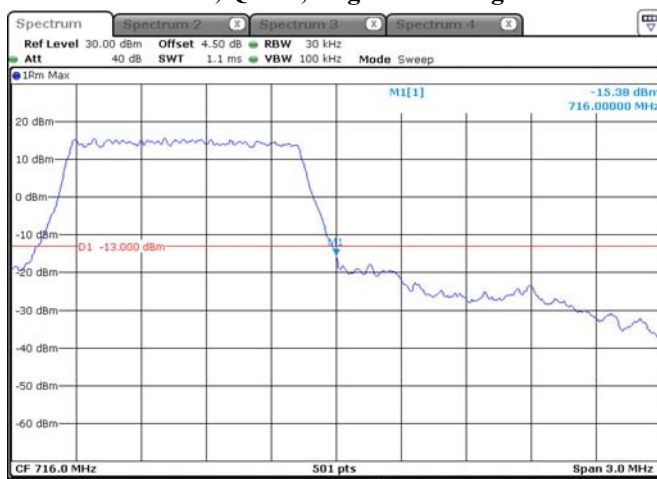
20M, 16QAM, Right Band Edge



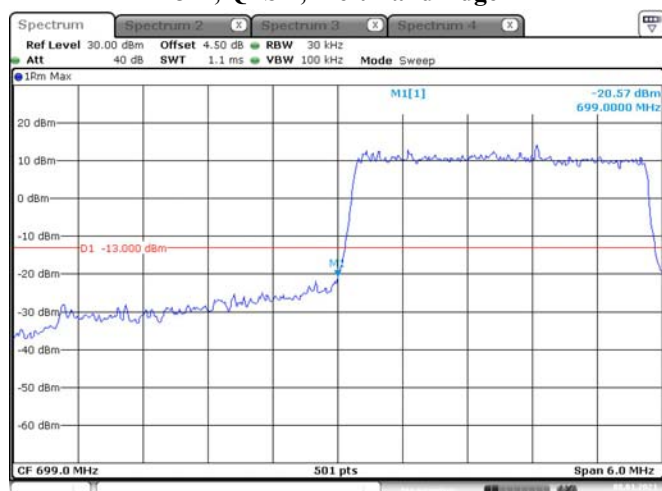
Date: 8,JAN,2021 01:05:15

LTE Band 12:**1.4M, QPSK, Left Band Edge**

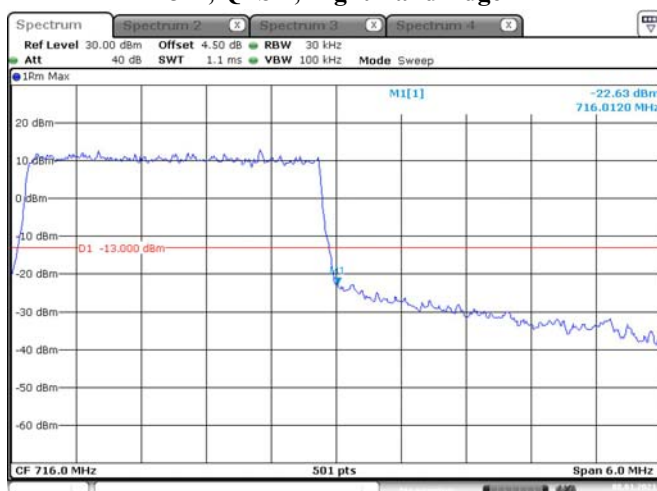
Date: 8, JAN, 2021 01:05:17

1.4M, QPSK, Right Band Edge

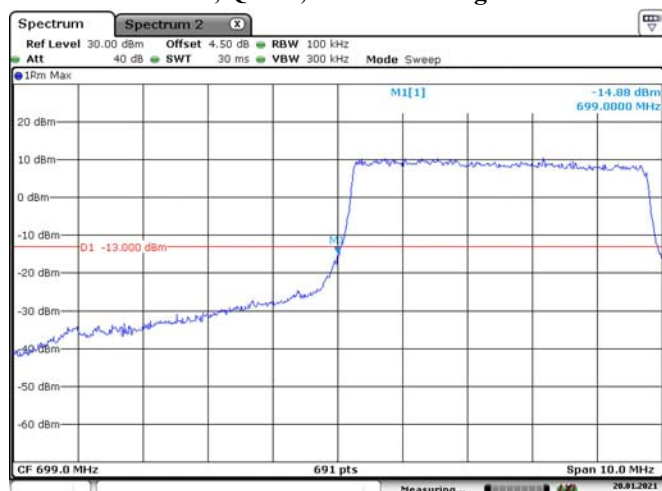
Date: 8, JAN, 2021 01:06:17

3M, QPSK, Left Band Edge

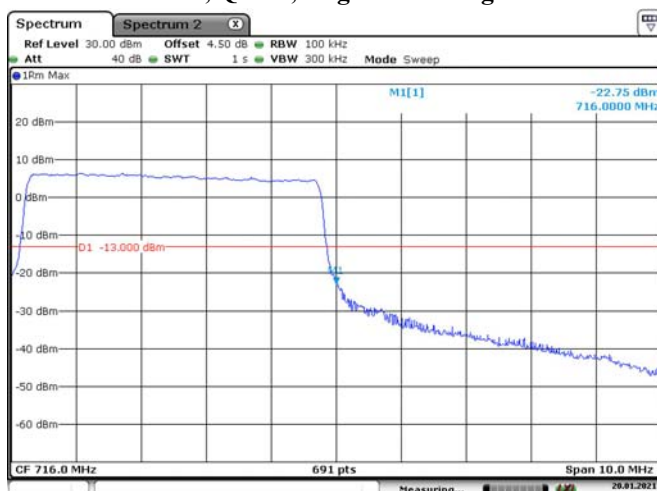
Date: 8, JAN, 2021 01:07:03

3M, QPSK, Right Band Edge

Date: 8, JAN, 2021 01:07:50

5M, QPSK, Left Band Edge

Date: 20, JAN, 2021 00:38:43

5M, QPSK, Right Band Edge

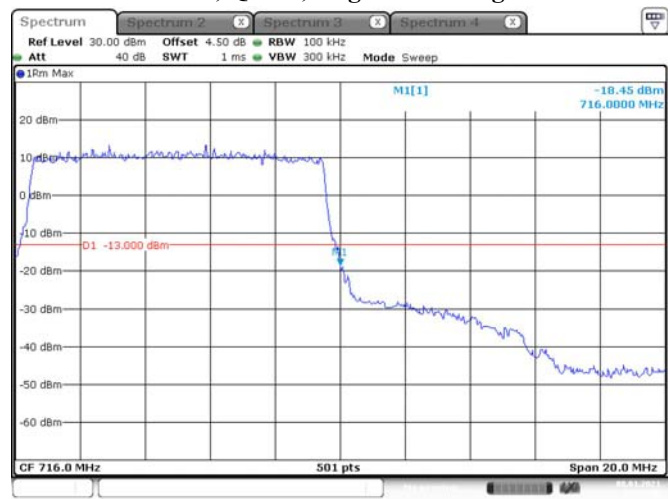
Date: 20, JAN, 2021 00:40:22

10M, QPSK, Left Band Edge



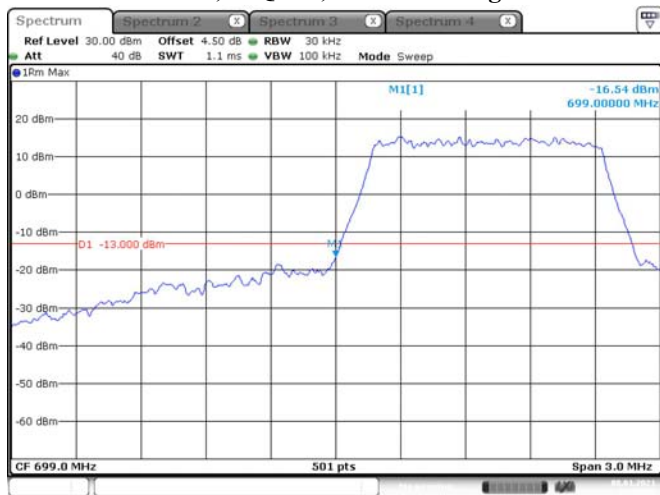
Date: 20.JAN.2021 00:42:07

10M, QPSK, Right Band Edge



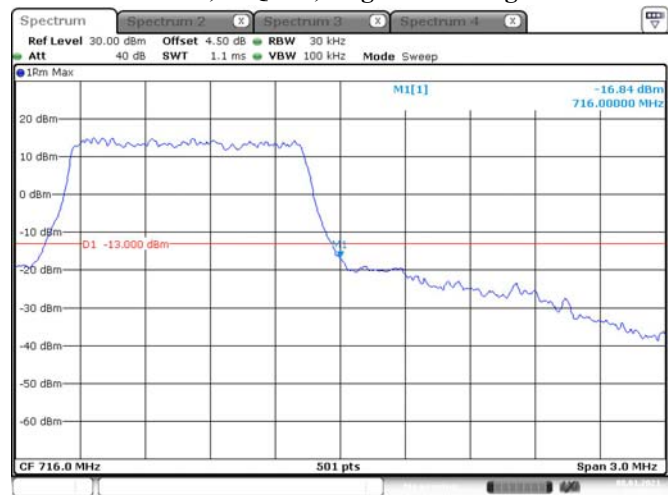
Date: 8.JAN.2021 01:12:06

1.4M, 16QAM, Left Band Edge



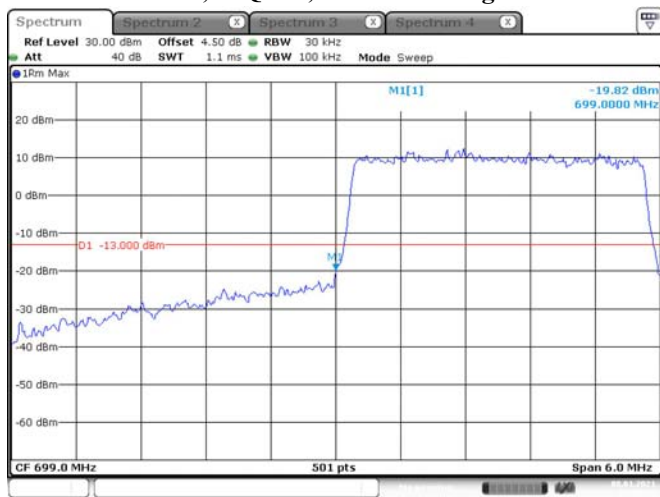
Date: 8.JAN.2021 01:05:55

1.4M, 16QAM, Right Band Edge



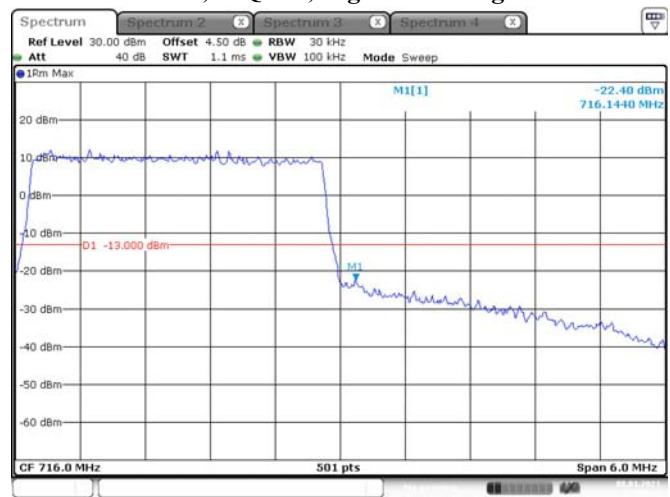
Date: 8.JAN.2021 01:06:36

3M, 16QAM, Left Band Edge



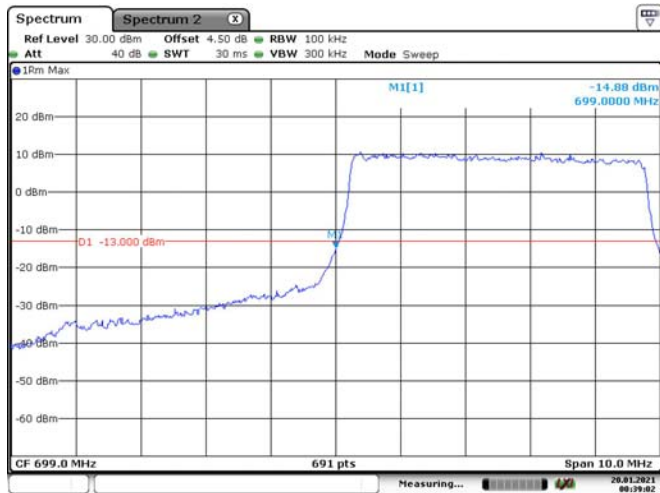
Date: 8.JAN.2021 01:07:27

3M, 16QAM, Right Band Edge

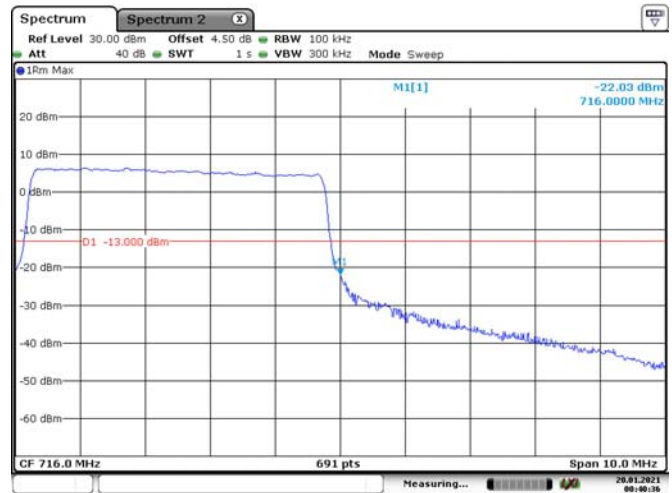


Date: 8.JAN.2021 01:08:14

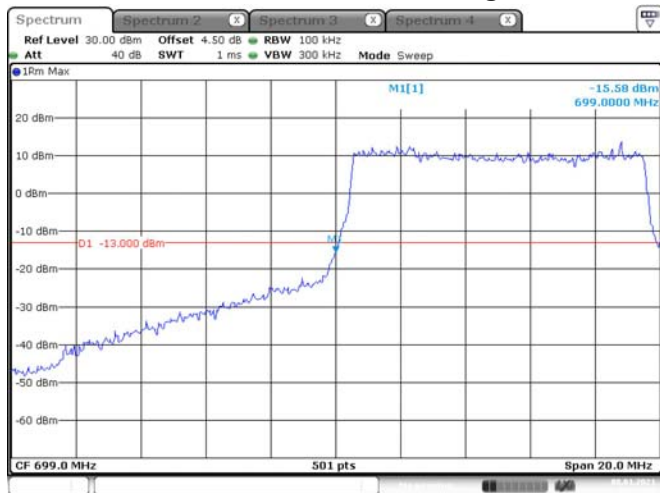
5M, 16QAM, Left Band Edge



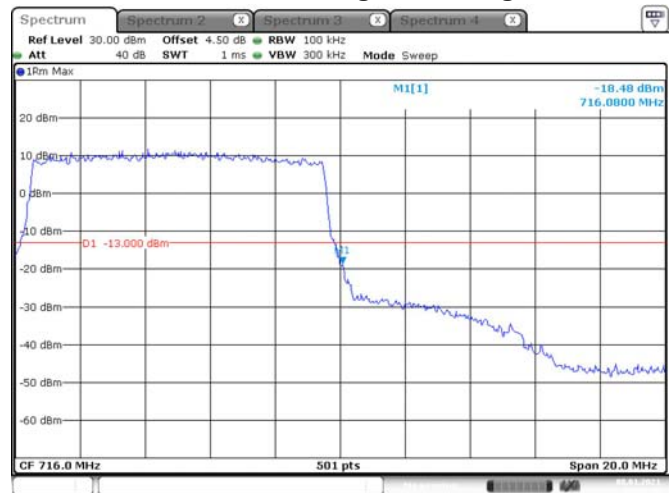
5M, 16QAM, Right Band Edge



10M, 16QAM, Left Band Edge

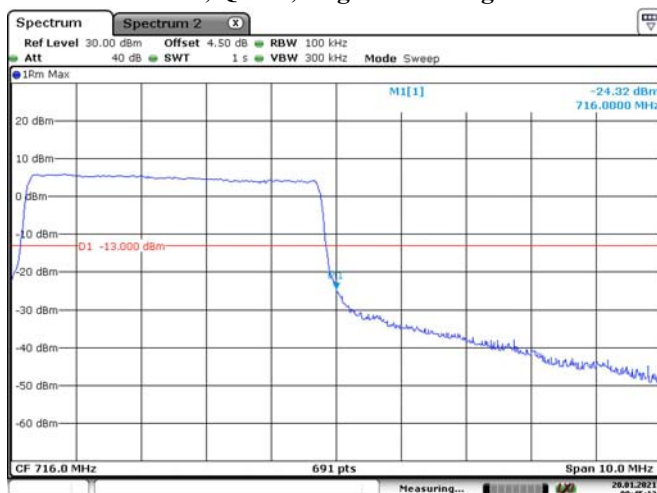


10M, 16QAM, Right Band Edge

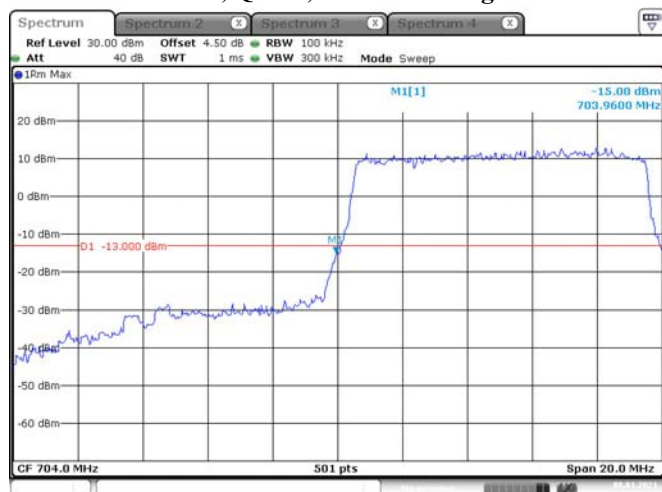


LTE Band 17:**5M, QPSK, Left Band Edge**

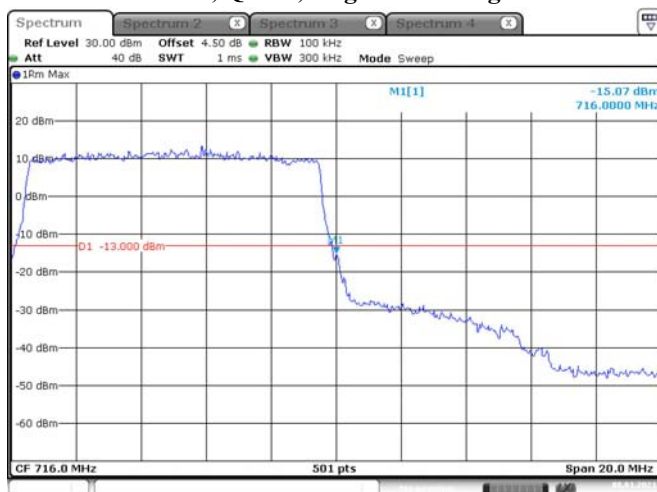
Date: 20.JAN.2021 00:43:30

5M, QPSK, Right Band Edge

Date: 20.JAN.2021 00:45:12

10M, QPSK, Left Band Edge

Date: 8.JAN.2021 01:15:16

10M, QPSK, Right Band Edge

Date: 8.JAN.2021 01:16:23

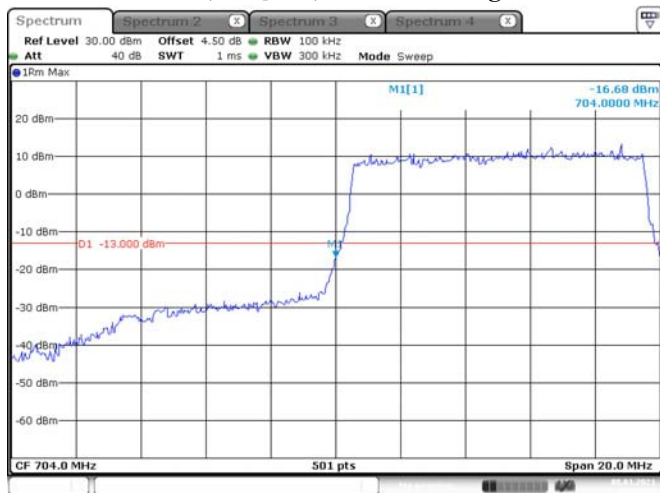
5M, 16QAM, Left Band Edge

Date: 20.JAN.2021 00:44:29

5M, 16QAM, Right Band Edge

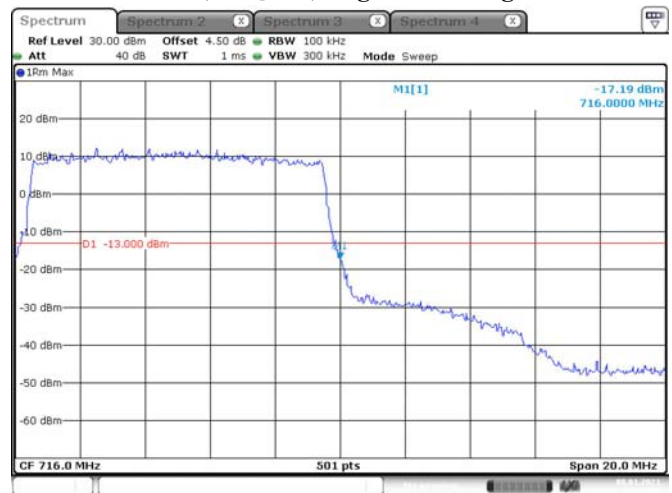
Date: 20.JAN.2021 00:45:42

10M, 16QAM, Left Band Edge

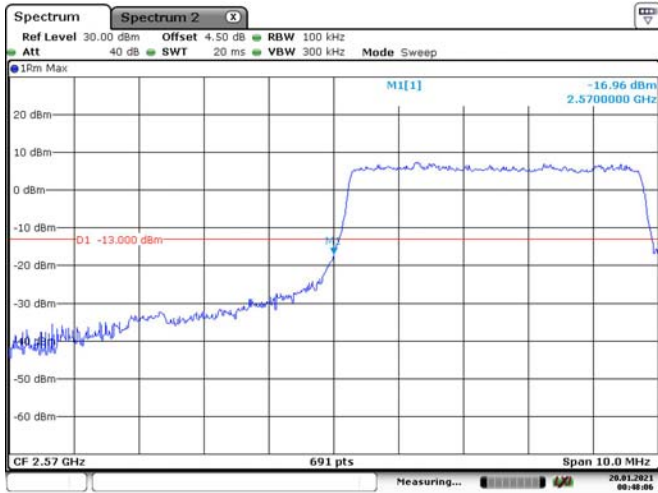


Date: 8, JAN, 2021 01:15:44

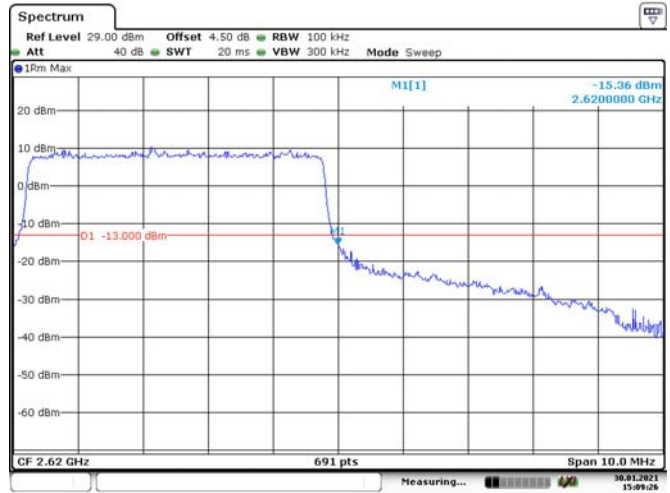
10M, 16QAM, Right Band Edge



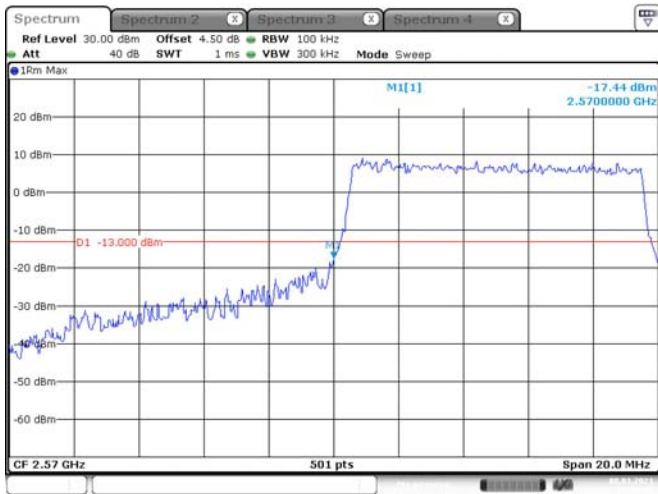
Date: 8, JAN, 2021 01:16:58

LTE Band 38:**5M, QPSK, Left Band Edge**

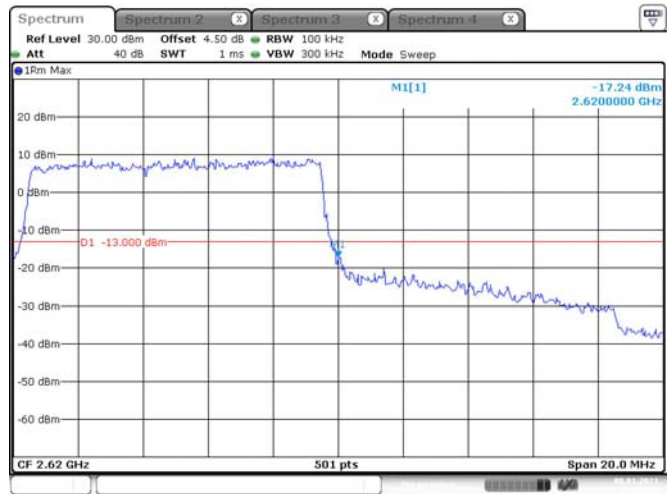
Date: 20.JAN.2021 00:48:06

5M, QPSK, Right Band Edge

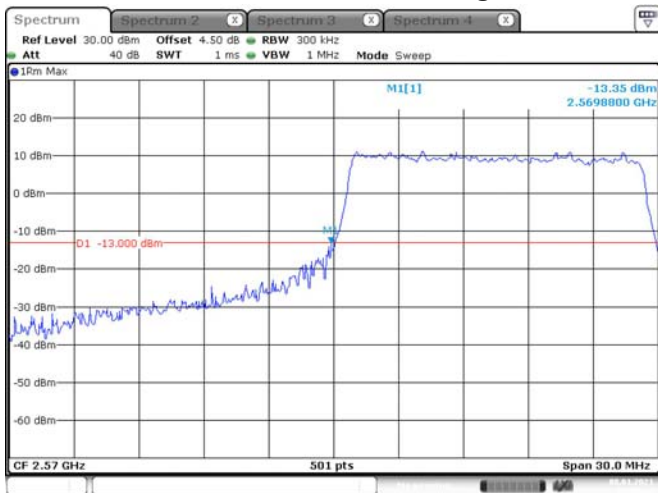
Date: 30.JAN.2021 15:09:26

10M, QPSK, Left Band Edge

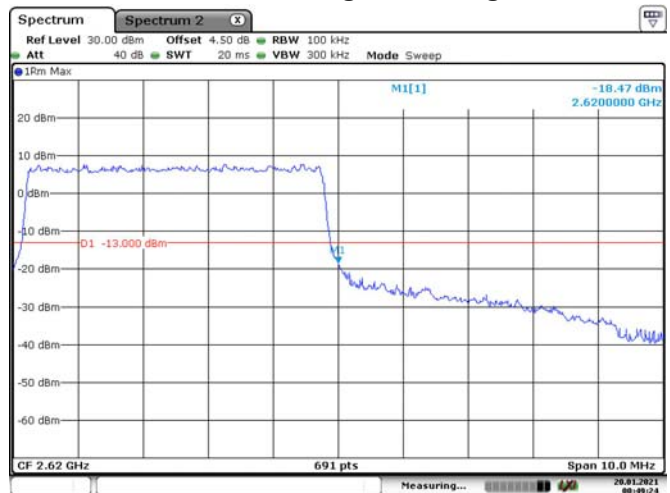
Date: 8.JAN.2021 01:32:45

10M, QPSK, Right Band Edge

Date: 8.JAN.2021 01:33:58

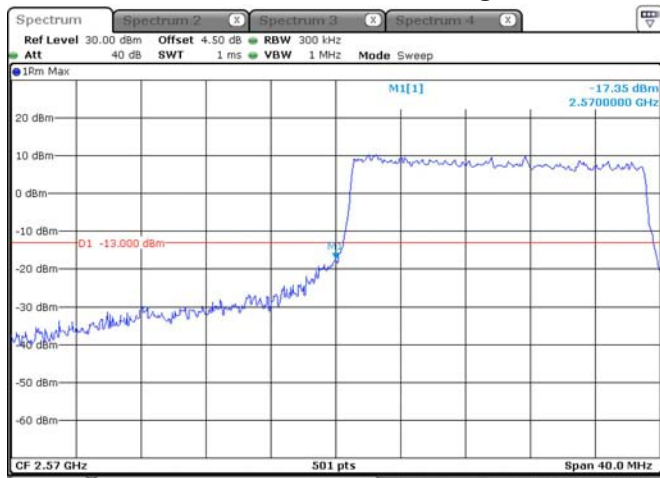
15M, QPSK, Left Band Edge

Date: 8.JAN.2021 01:35:14

15M, QPSK, Right Band Edge

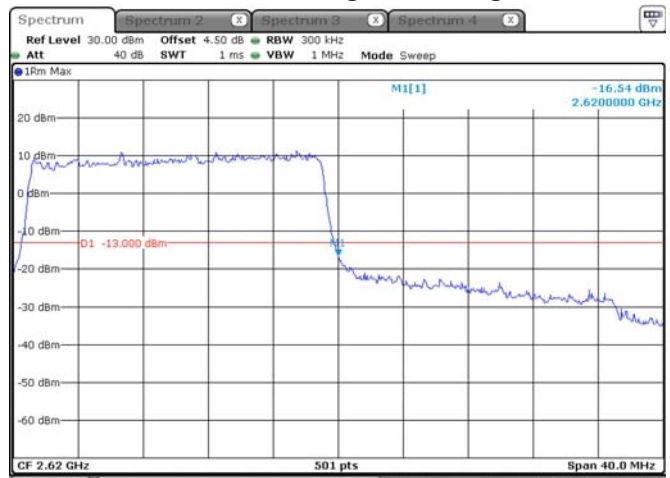
Date: 20.JAN.2021 00:49:24

20M, QPSK, Left Band Edge



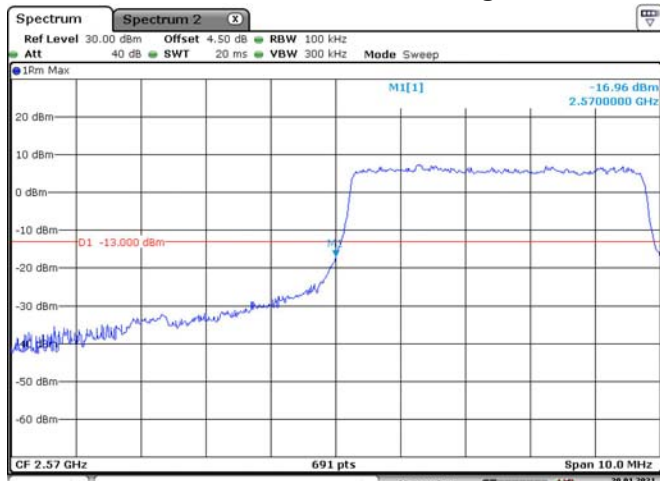
Date: 8, JAN, 2021 01:37:53

20M, QPSK, Right Band Edge



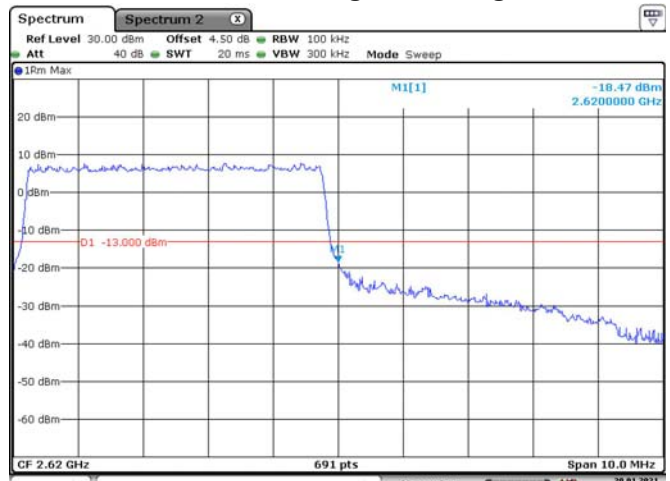
Date: 8, JAN, 2021 01:39:05

5M, 16QAM, Left Band Edge



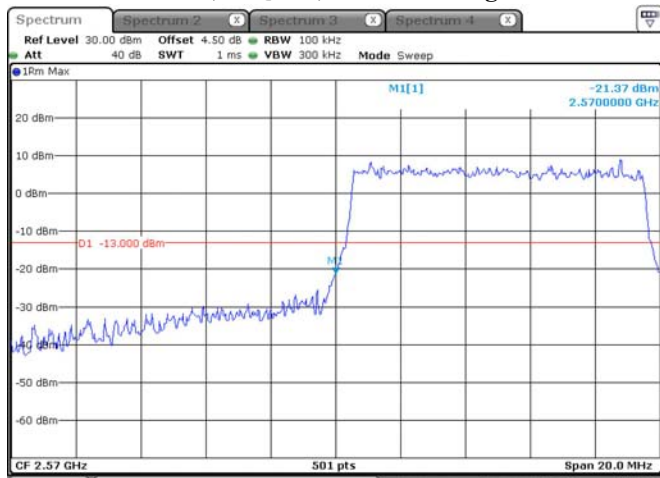
Date: 20, JAN, 2021 00:48:19

5M, 16QAM, Right Band Edge



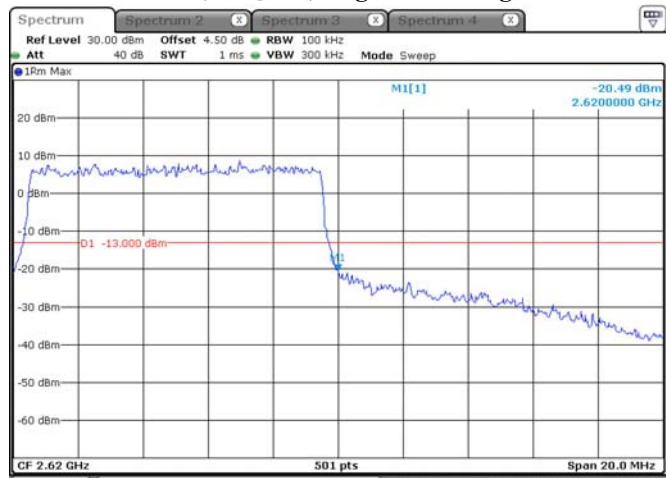
Date: 20, JAN, 2021 00:49:16

10M, 16QAM, Left Band Edge



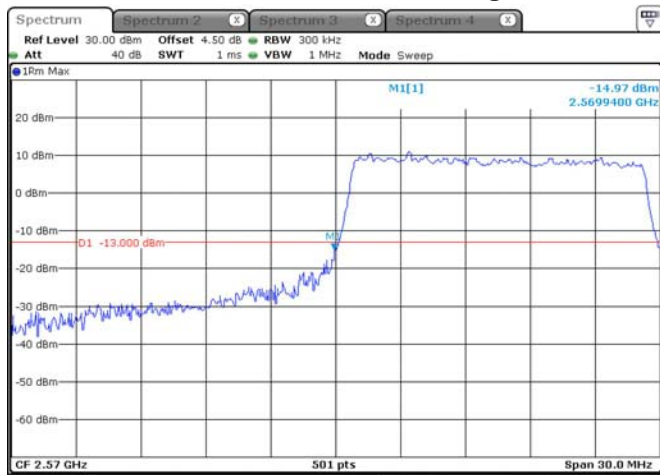
Date: 8, JAN, 2021 01:33:20

10M, 16QAM, Right Band Edge



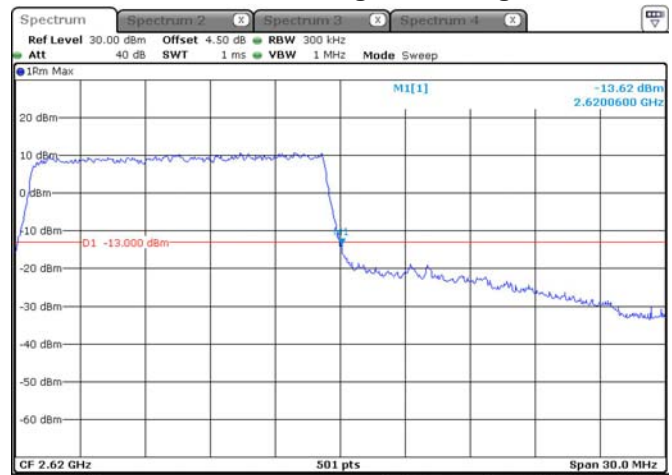
Date: 8, JAN, 2021 01:34:30

15M, 16QAM, Left Band Edge



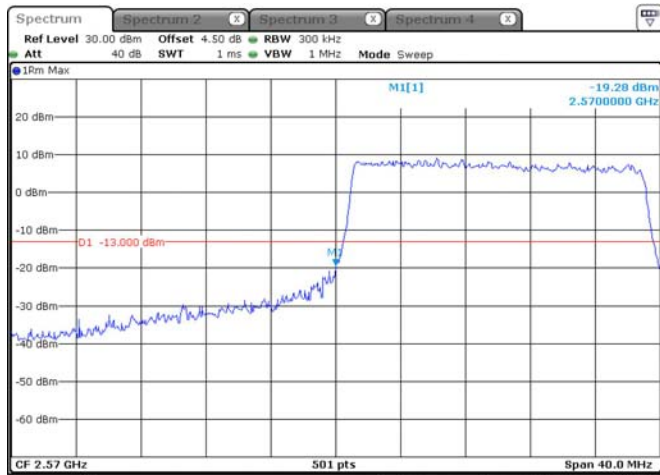
Date: 8, JAN, 2021 01:36:00

15M, 16QAM, Right Band Edge



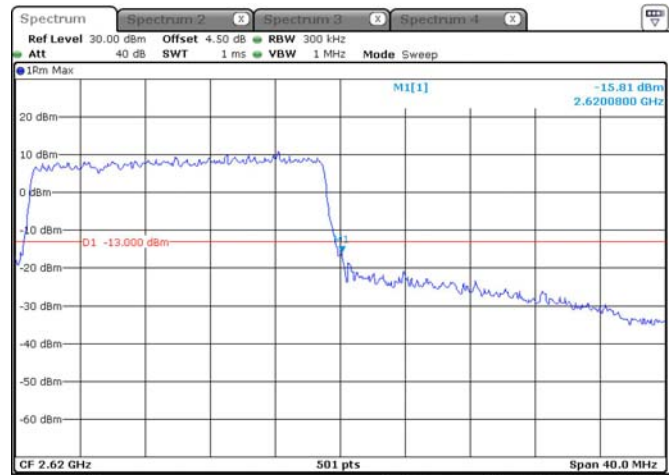
Date: 8, JAN, 2021 01:37:12

20M, 16QAM, Left Band Edge

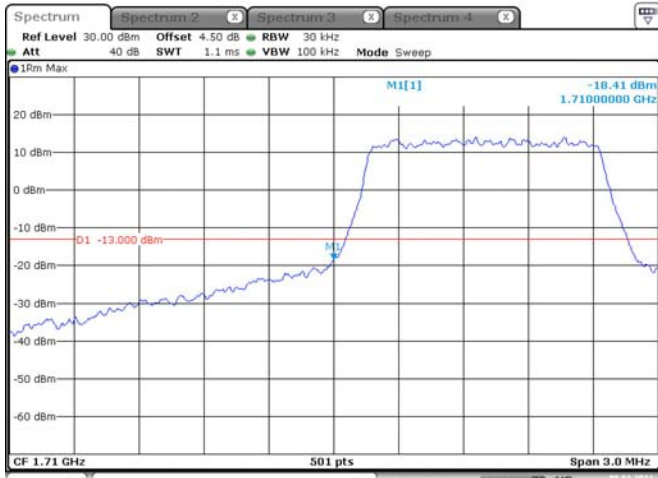


Date: 8, JAN, 2021 01:38:30

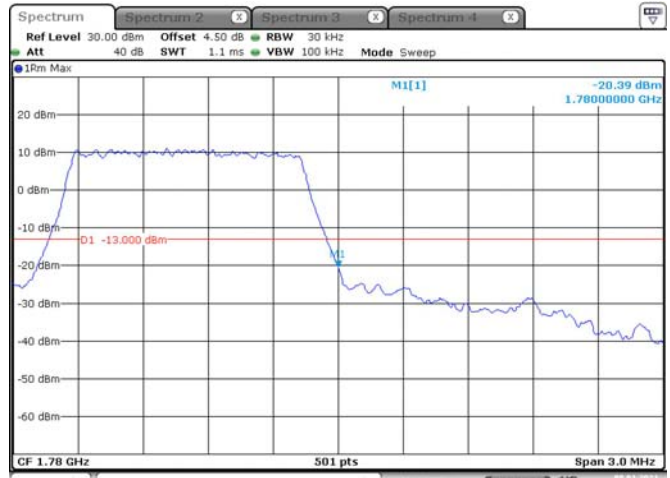
20M, 16QAM, Right Band Edge



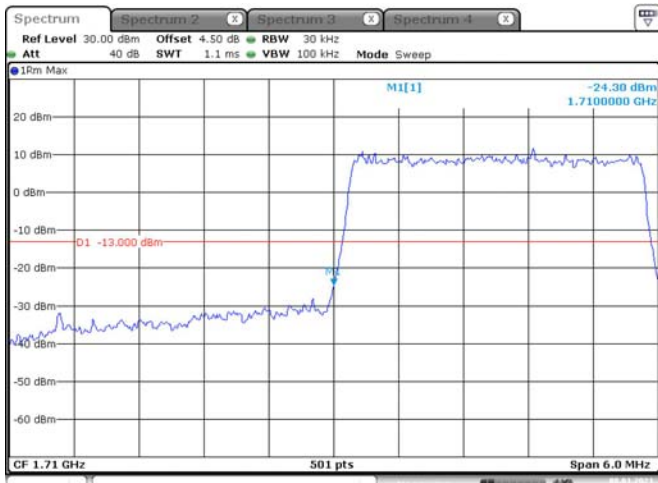
Date: 8, JAN, 2021 01:39:39

LTE Band 66:**1.4M, QPSK, Left Band Edge**

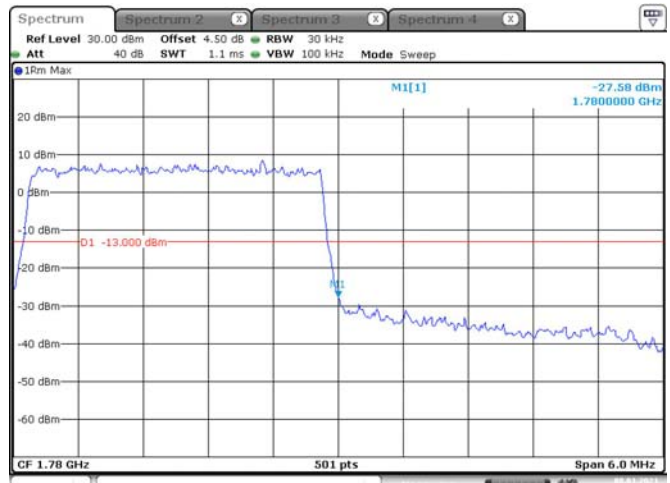
Date: 8, JAN, 2021 01:17:29

1.4M, QPSK, Right Band Edge

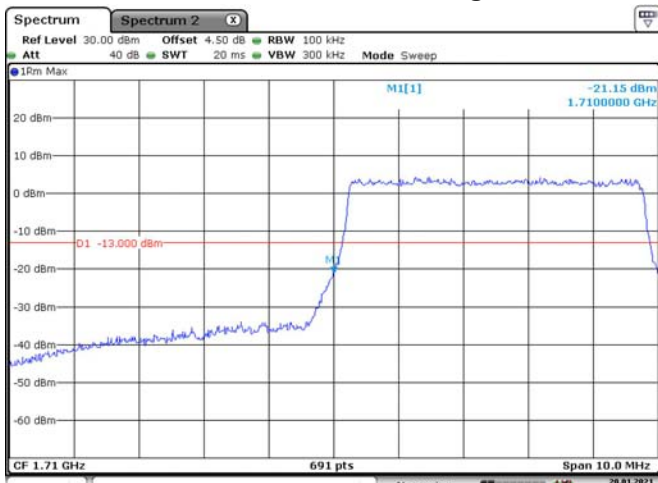
Date: 8, JAN, 2021 01:18:19

3M, QPSK, Left Band Edge

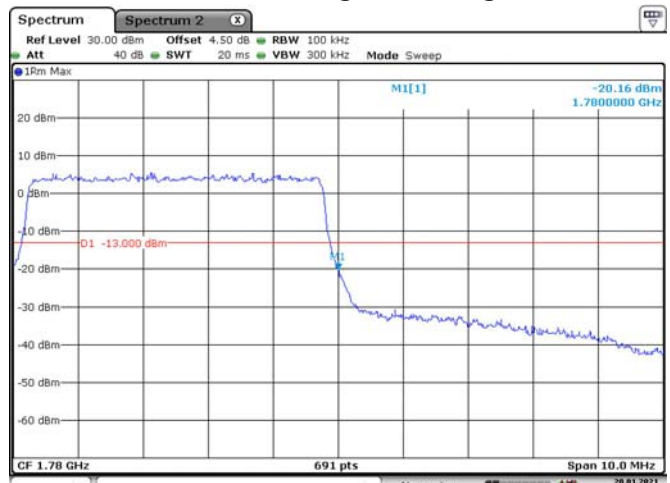
Date: 8, JAN, 2021 01:19:02

3M, QPSK, Right Band Edge

Date: 8, JAN, 2021 01:19:55

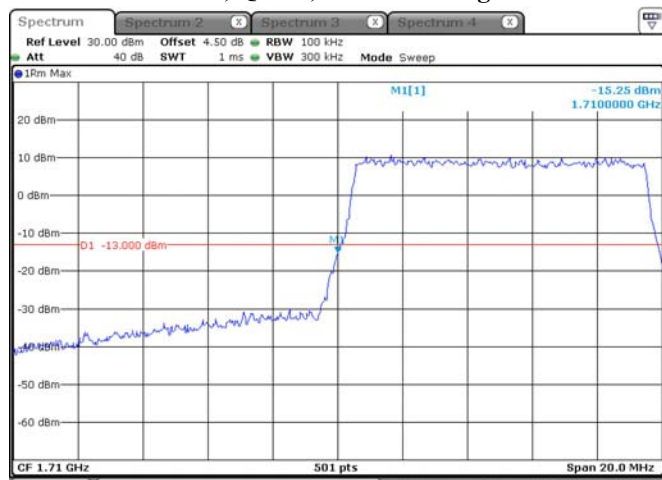
5M, QPSK, Left Band Edge

Date: 20, JAN, 2021 00:50:34

5M, QPSK, Right Band Edge

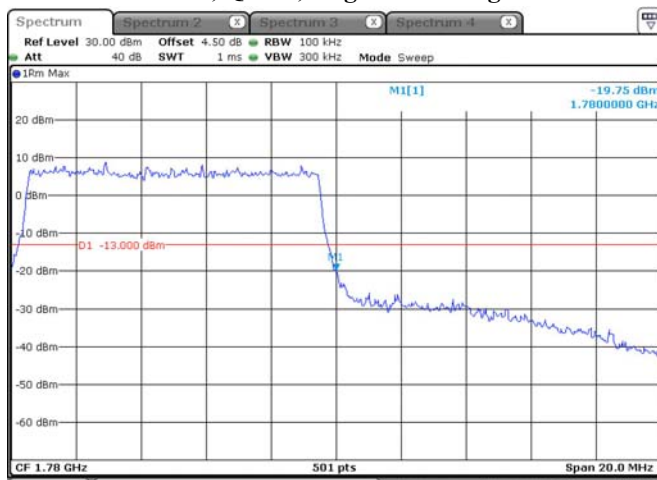
Date: 20, JAN, 2021 00:52:26

10M, QPSK, Left Band Edge



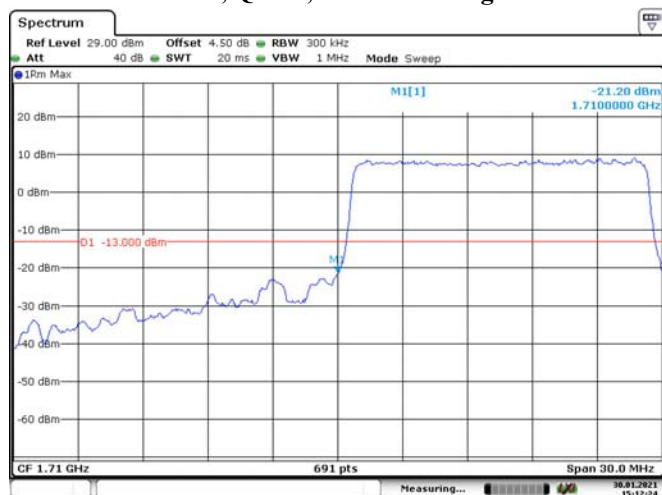
Date: 8,JAN,2021 01:23:04

10M, QPSK, Right Band Edge



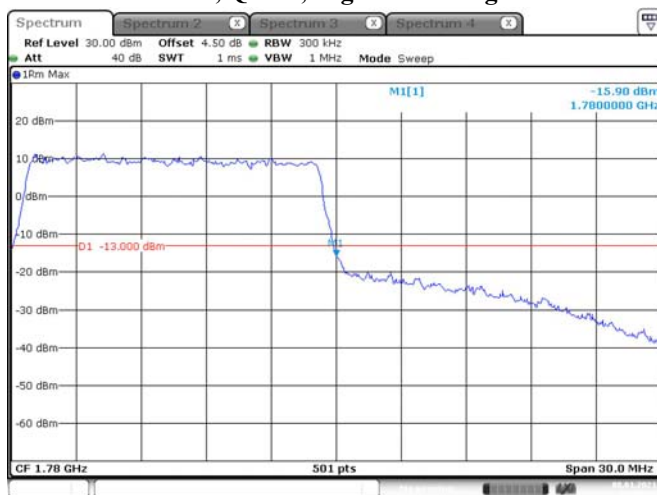
Date: 8,JAN,2021 01:23:59

15M, QPSK, Left Band Edge



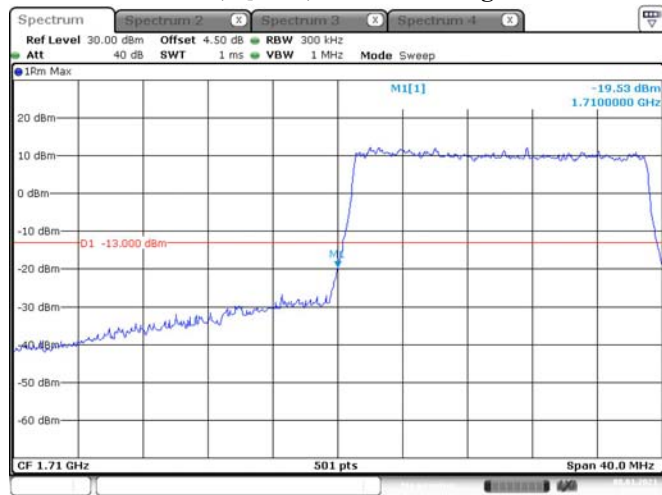
Date: 30,JAN,2021 15:12:24

15M, QPSK, Right Band Edge



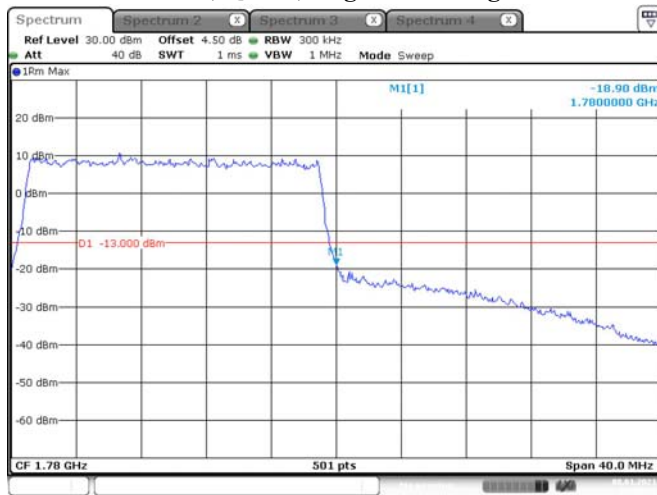
Date: 8,JAN,2021 01:26:26

20M, QPSK, Left Band Edge



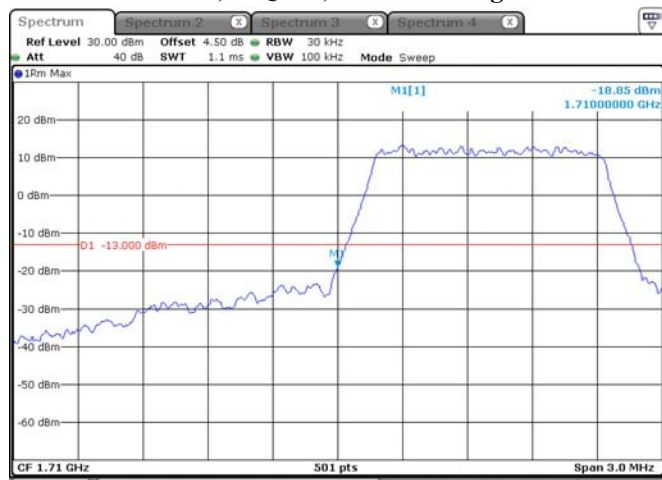
Date: 8,JAN,2021 01:27:32

20M, QPSK, Right Band Edge



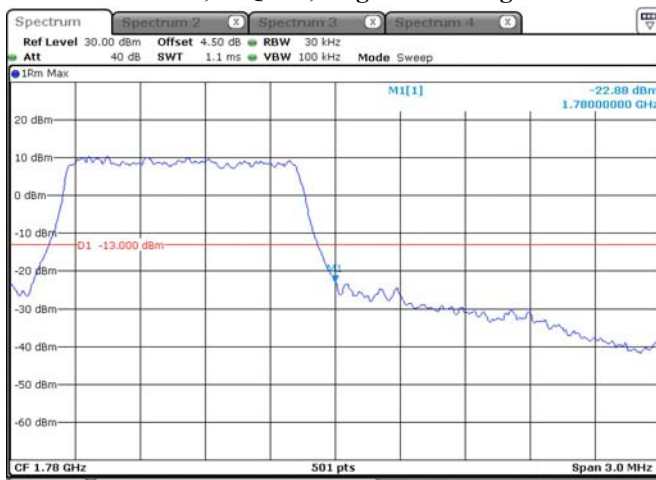
Date: 8,JAN,2021 01:28:35

1.4M, 16QAM, Left Band Edge



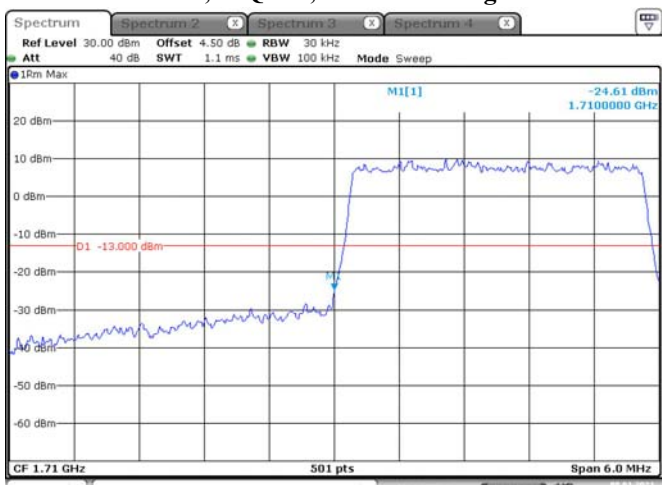
Date: 8,JAN,2021 01:17:54

1.4M, 16QAM, Right Band Edge



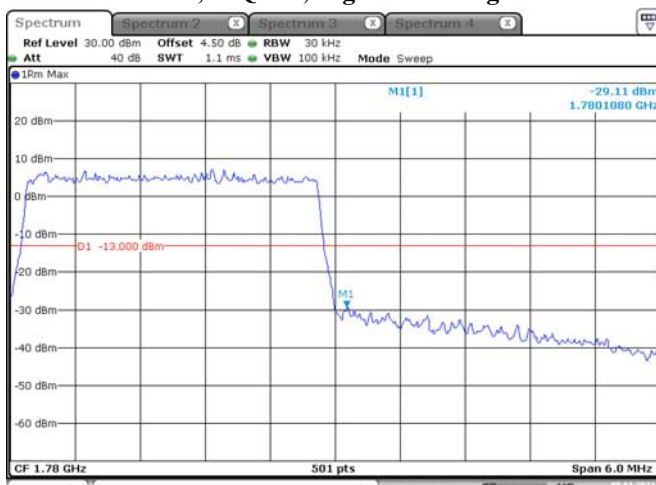
Date: 8,JAN,2021 01:18:40

3M, 16QAM, Left Band Edge



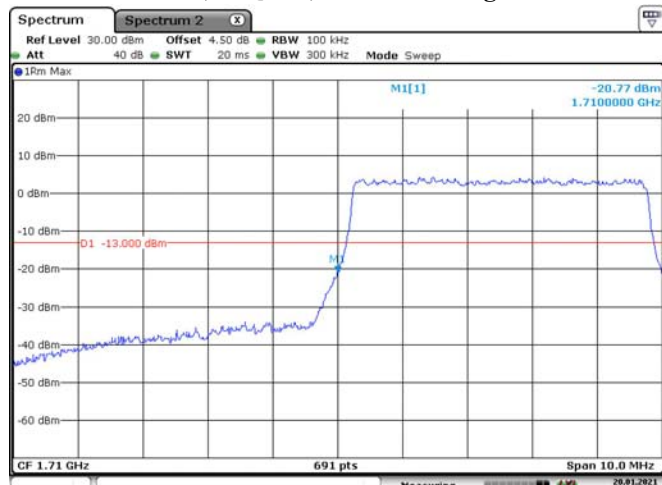
Date: 8,JAN,2021 01:19:26

3M, 16QAM, Right Band Edge



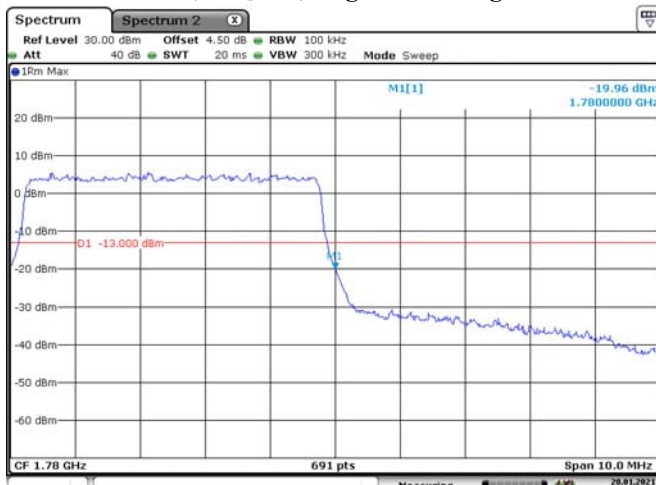
Date: 8,JAN,2021 01:20:16

5M, 16QAM, Left Band Edge



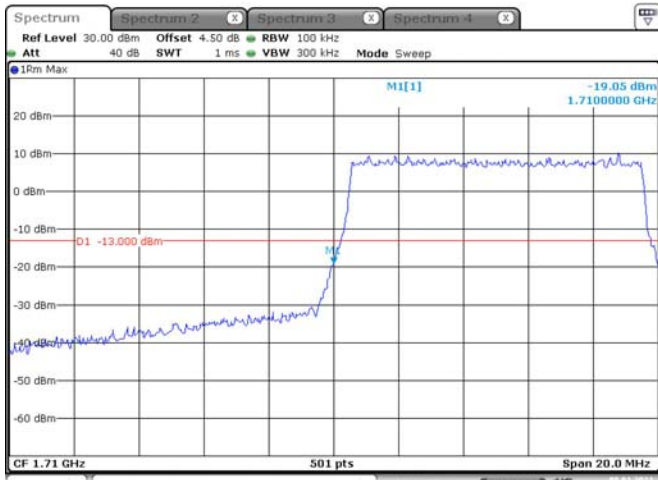
Date: 20,JAN,2021 00:50:43

5M, 16QAM, Right Band Edge



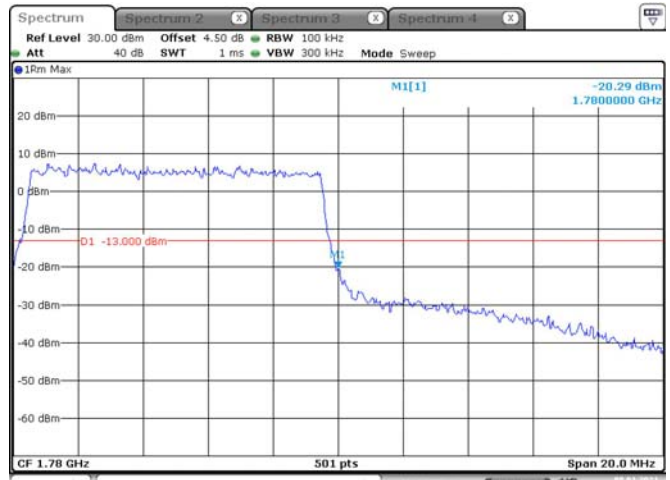
Date: 20,JAN,2021 00:52:34

10M, 16QAM, Left Band Edge



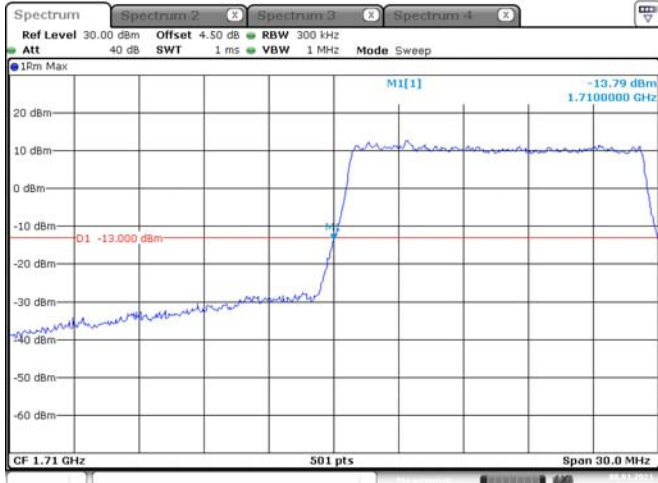
Date: 8,JAN,2021 01:23:30

10M, 16QAM, Right Band Edge



Date: 8,JAN,2021 01:24:43

15M, 16QAM, Left Band Edge



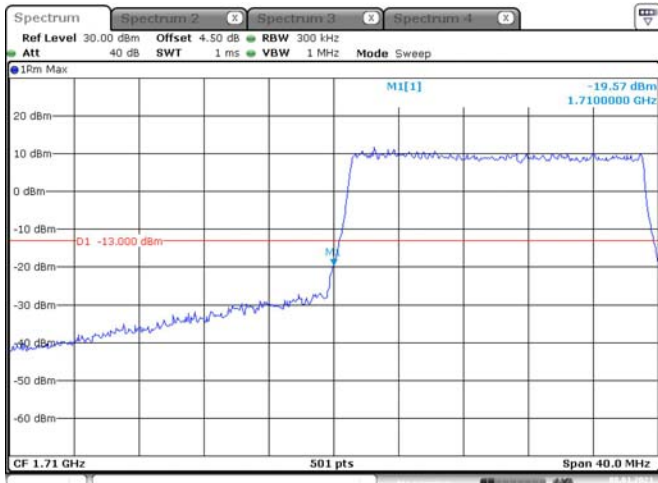
Date: 8,JAN,2021 01:25:55

15M, 16QAM, Right Band Edge



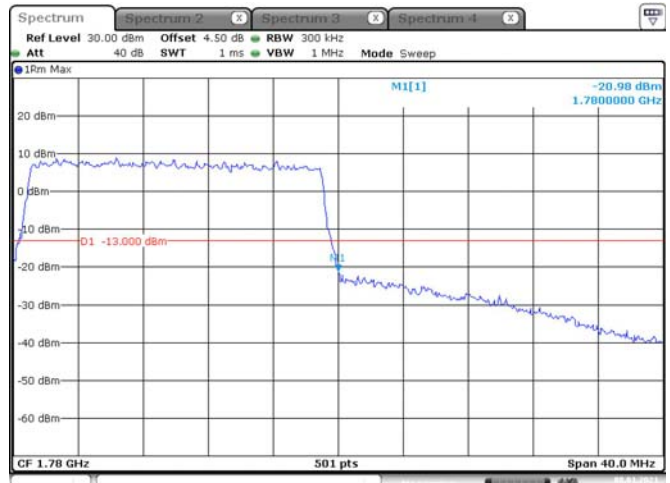
Date: 8,JAN,2021 01:26:57

20M, 16QAM, Left Band Edge



Date: 8,JAN,2021 01:28:03

20M, 16QAM, Right Band Edge



Date: 8,JAN,2021 01:29:09

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

Applicable Standard

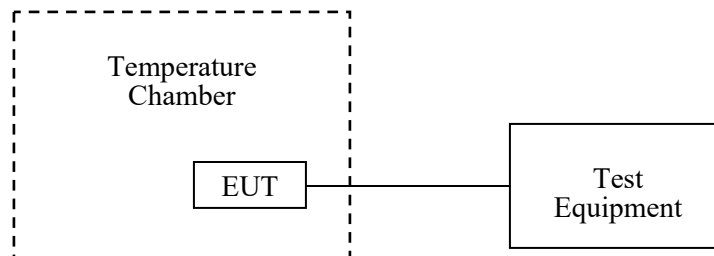
FCC § 2.1055 (a), § 2.1055 (d), §22.355, §24.235, §27.54

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	FSU 26	200256	2020-07-07	2021-07-07
R&S	Spectrum Analyzer	FSV40	101474	2020-07-07	2021-07-07
Unknown	Coaxial Cable	C-SJ00-0010	C0010/04	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	2020-03-10	2021-03-09
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:	20.2~27.6 °C
Relative Humidity:	35~52%
ATM Pressure:	101.7~102.2kPa
Tester:	Theshy Xie
Test Date:	2020-11-26~2021-01-19

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	24	12	0.01434	2.5
-20		8	0.00956	
-10		5	0.00598	
0		5	0.00598	
10		2	0.00239	
20		8	0.00956	
30		-2	-0.00239	
40		1	0.00120	
50		3	0.00359	
20	9	6	0.00717	
20	36	7	0.00837	

GMSK, Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	24	8	0.00426	Pass
-20		6	0.00319	
-10		4	0.00213	
0		3	0.00160	
10		-1	-0.00053	
20		4	0.00213	
30		-1	-0.00053	
40		3	0.00160	
50		5	0.00266	
20	9	7	0.00372	
20	36	12	0.00638	

WCDMA Band II: R99

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	24	5	0.00266	Pass
-20		-2	-0.00106	
-10		-5	-0.00266	
0		-6	-0.00319	
10		-6	-0.00319	
20		11	0.00585	
30		-4	-0.00213	
40		-1	-0.00053	
50		6	0.00319	
20	9	9	0.00479	
20	36	-2	-0.00106	

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	24	-4	-0.00478	2.5
-20		3	0.00359	
-10		4	0.00478	
0		8	0.00956	
10		15	0.01793	
20		2	0.00239	
30		-7	-0.00837	
40		-3	-0.00359	
50		-4	-0.00478	
20	9	2	0.00239	
20	36	3	0.00359	

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	24	-3.02	-0.0016	Pass
-20		-5.24	-0.0028	
-10		-9.52	-0.0051	
0		9.06	0.0048	
10		7.21	0.0038	
20		-7.85	-0.0042	
30		7.29	0.0039	
40		-6.58	-0.0035	
50		-9.26	-0.0049	
20	9	-9.58	-0.0051	
20	36	6.52	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	24	-8.00	-0.0043	Pass
-20		8.84	0.0047	
-10		-8.44	-0.0045	
0		6.54	0.0035	
10		-5.55	-0.003	
20		-6.90	-0.0037	
30		9.98	0.0053	
40		-7.95	-0.0042	
50		6.30	0.0034	
20	9	-7.76	-0.0041	
20	36	-8.10	-0.0043	

LTE Band 4

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	1710.880000	1710	1754.230000	1755
	-20	1710.300000		1754.660000	
	-10	1710.560000		1754.250000	
	0	1710.560000		1754.360000	
	10	1710.330000		1754.990000	
	20	1710.920000		1754.480000	
	30	1710.058000		1754.380000	
	40	1710.250000		1754.330000	
	50	1710.560000		1754.290000	
9	20	1710.560000	1710	1754.320000	1755
36	20	1710.450000		1754.280000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	1710.220000	1710	1754.260000	1755
	-20	1710.380000		1754.280000	
	-10	1710.280000		1754.810000	
	0	1710.290000		1754.650000	
	10	1710.840000		1754.980000	
	20	1710.120000		1754.520000	
	30	1710.820000		1754.580000	
	40	1710.650000		1754.260000	
	50	1710.990000		1754.580000	
9	20	1710.450000	1710	1754.870000	1755
36	20	1710.180000		1754.310000	

LTE Band 5:

Middle Channel, $f_c = 836.5$ MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	24	-4.48	-0.0054	2.5
-20		-7.03	-0.0084	
-10		-6.54	-0.0078	
0		-5.02	-0.006	
10		-8.40	-0.01	
20		-9.05	-0.0108	
30		-8.99	-0.0107	
40		-9.34	-0.0112	
50		7.31	0.0087	
20	9	-9.44	-0.0113	
20	36	8.59	0.0103	

Middle Channel, $f_c = 836.5$ MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	24	-0.53	-0.0006	2.5
-20		-5.59	-0.0067	
-10		8.19	0.0098	
0		-5.34	-0.0064	
10		7.72	0.0092	
20		5.50	0.0066	
30		-9.98	-0.0119	
40		-5.15	-0.0062	
50		-9.24	-0.011	
20	9	9.76	0.0117	
20	36	-9.78	-0.0117	

LTE Band 7

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	2500.150000	2500	2569.940000	2570
	-20	2500.100000		2569.700000	
	-10	2500.100000		2569.820000	
	0	2500.100000		2569.760000	
	10	2500.200000		2569.760000	
	20	2500.050000		2569.700000	
	30	2500.300000		2569.820000	
	40	2500.150000		2569.700000	
	50	2500.250000		2569.700000	
9	20	2500.250000		2569.880000	
36	20	2500.200000		2569.700000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	2500.250000	2500	2569.700000	2570
	-20	2500.250000		2569.940000	
	-10	2500.200000		2569.700000	
	0	2500.300000		2569.700000	
	10	2500.250000		2569.820000	
	20	2500.150000		2569.760000	
	30	2500.150000		2569.700000	
	40	2500.300000		2569.940000	
	50	2500.250000		2569.700000	
9	20	2500.250000		2569.820000	
36	20	2500.250000		2569.820000	

LTE Band 12

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	699.350000	699	715.800000	716
	-20	699.200000		715.920000	
	-10	699.350000		715.720000	
	0	699.400000		715.720000	
	10	699.050000		715.960000	
	20	699.400000		715.920000	
	30	699.100000		715.880000	
	40	699.250000		715.840000	
	50	699.300000		715.920000	
9	20	699.050000	699	715.920000	716
36	20	699.400000		715.800000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	699.150000	699	715.920000	716
	-20	699.350000		715.840000	
	-10	699.350000		715.960000	
	0	699.350000		715.920000	
	10	699.400000		715.800000	
	20	699.100000		715.840000	
	30	699.150000		715.760000	
	40	699.300000		715.920000	
	50	699.150000		715.800000	
9	20	699.300000	699	715.800000	716
36	20	699.150000		715.920000	

LTE Band 17

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	704.240000	704	715.920000	716
	-20	704.400000		715.520000	
	-10	704.160000		715.920000	
	0	704.400000		715.840000	
	10	704.320000		715.920000	
	20	704.240000		715.840000	
	30	704.160000		715.520000	
	40	704.080000		715.840000	
	50	704.240000		715.680000	
9	20	704.080000		715.680000	
36	20	704.320000		715.680000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	704.320000	704	715.600000	716
	-20	704.160000		715.600000	
	-10	704.160000		715.520000	
	0	704.320000		715.520000	
	10	704.080000		715.920000	
	20	704.400000		715.840000	
	30	704.320000		715.680000	
	40	704.080000		715.840000	
	50	704.160000		715.840000	
9	20	704.400000		715.680000	
36	20	704.080000		715.840000	

LTE Band 38

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	2570.200000	2570	2619.650000	2620
	-20	2570.120000		2619.930000	
	-10	2570.040000		2619.650000	
	0	2570.040000		2619.930000	
	10	2570.280000		2619.930000	
	20	2570.160000		2619.720000	
	30	2570.320000		2619.790000	
	40	2570.080000		2619.580000	
	50	2570.200000		2619.930000	
9	20	2570.280000		2619.860000	
36	20	2570.200000		2619.790000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	2570.160000	2570	2619.790000	2620
	-20	2570.280000		2619.650000	
	-10	2570.040000		2619.580000	
	0	2570.360000		2619.930000	
	10	2570.320000		2619.930000	
	20	2570.120000		2619.790000	
	30	2570.360000		2619.580000	
	40	2570.320000		2619.930000	
	50	2570.320000		2619.580000	
9	20	2570.120000		2619.720000	
36	20	2570.040000		2619.580000	

LTE Band 66:

QPSK, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	1710.320000	1710	1779.640000	1780
	-20	1710.640000		1779.880000	
	-10	1710.480000		1779.880000	
	0	1710.160000		1779.700000	
	10	1710.400000		1779.760000	
	20	1710.320000		1779.880000	
	30	1710.560000		1779.760000	
	40	1710.320000		1779.640000	
	50	1710.480000		1779.700000	
9	20	1710.320000		1779.940000	
36	20	1710.640000		1779.880000	

16-QAM, Channel Bandwidth:10MHz					
Power Supplied	Temperature	F_L	Limit	F_H	Limit
Vdc	°C	MHz	MHz	MHz	MHz
24	-30	1710.080000	1710	1779.580000	1780
	-20	1710.320000		1779.580000	
	-10	1710.320000		1779.580000	
	0	1710.160000		1779.760000	
	10	1710.080000		1779.940000	
	20	1710.160000		1779.940000	
	30	1710.240000		1779.640000	
	40	1710.320000		1779.640000	
	50	1710.080000		1779.940000	
9	20	1710.080000		1779.700000	
36	20	1710.640000		1779.700000	

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** *****