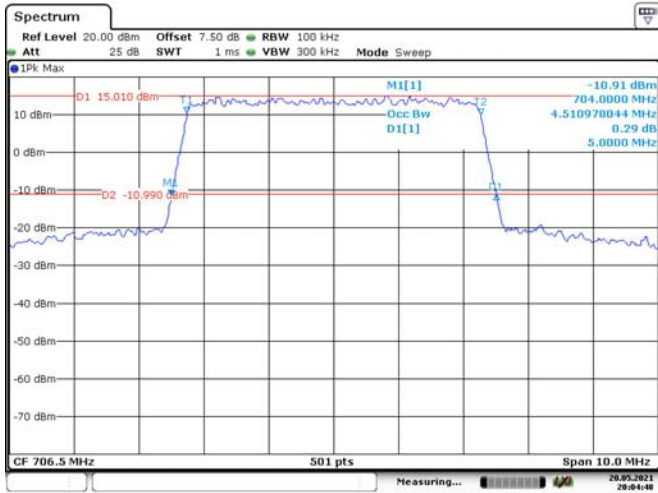
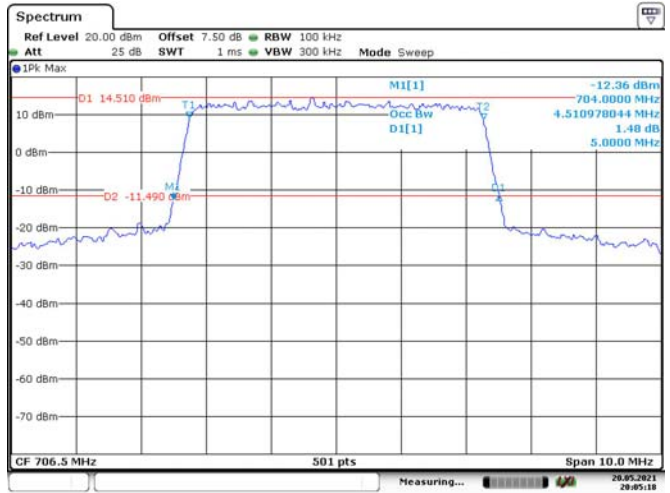


LTE Band 17:

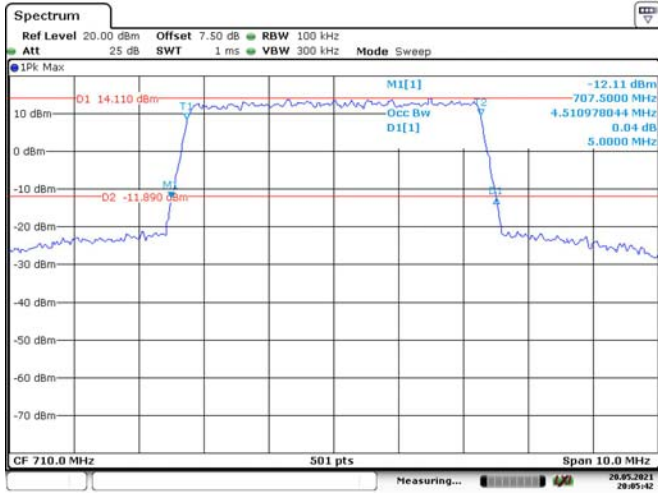
5M, QPSK, Low Channel



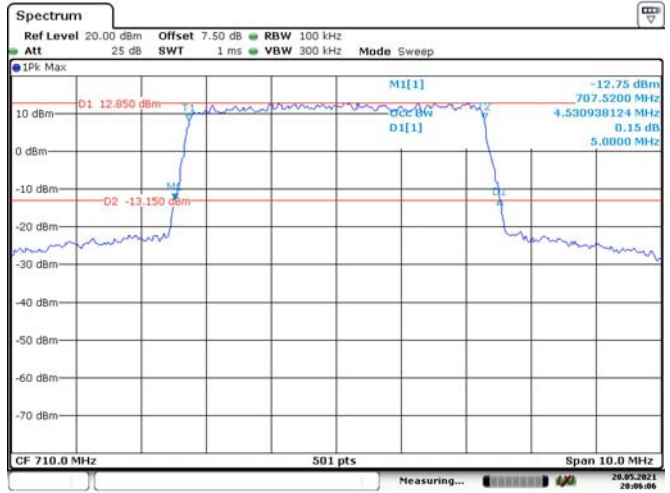
5M, 16QAM, Low Channel



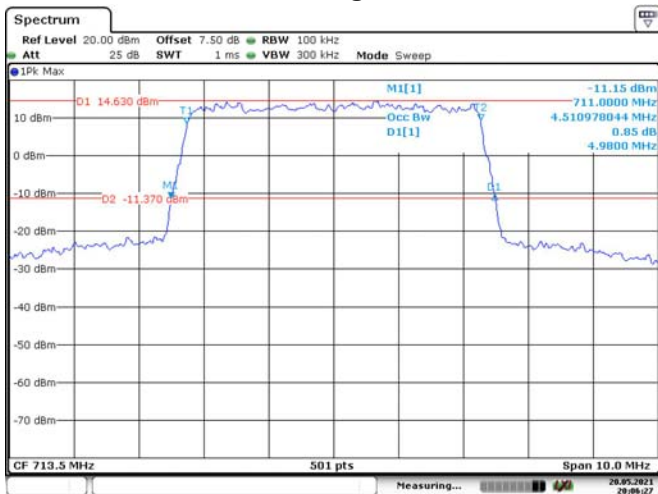
5M, QPSK, Middle Channel



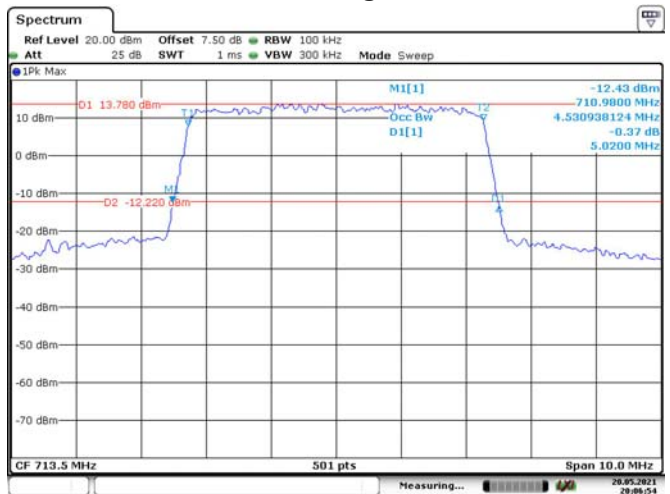
5M, 16QAM, Middle Channel



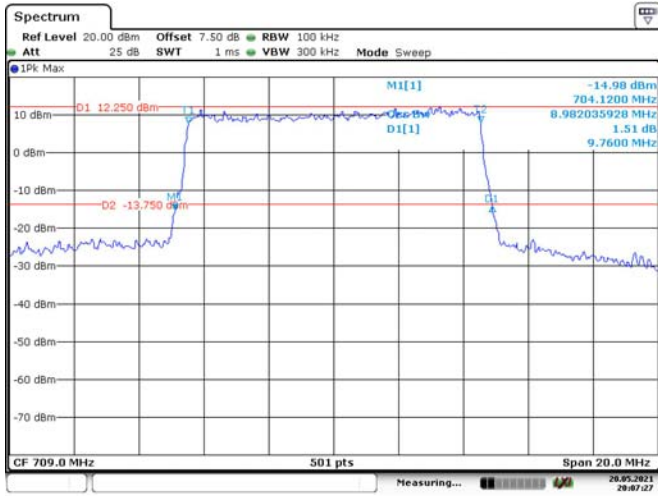
5M, QPSK, High Channel



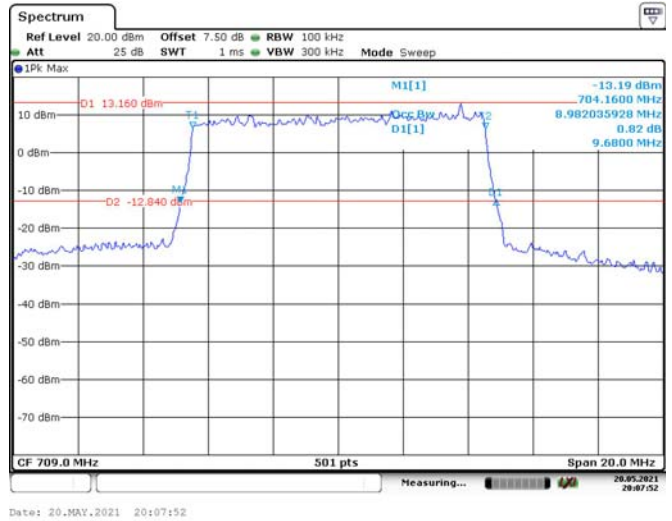
5M, 16QAM, High Channel



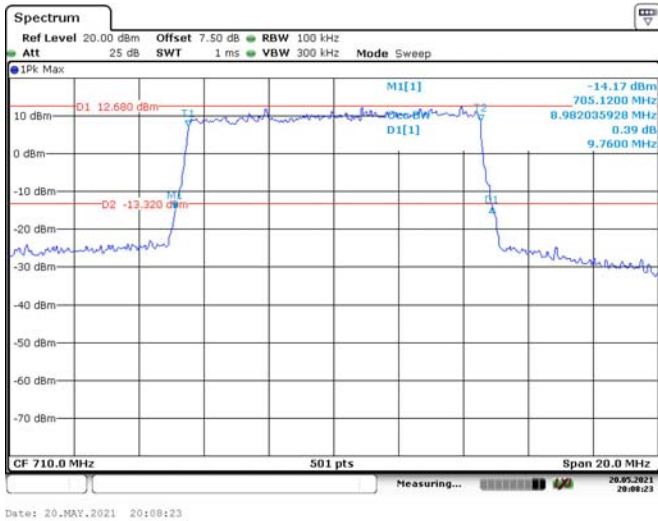
10M, QPSK, Low Channel



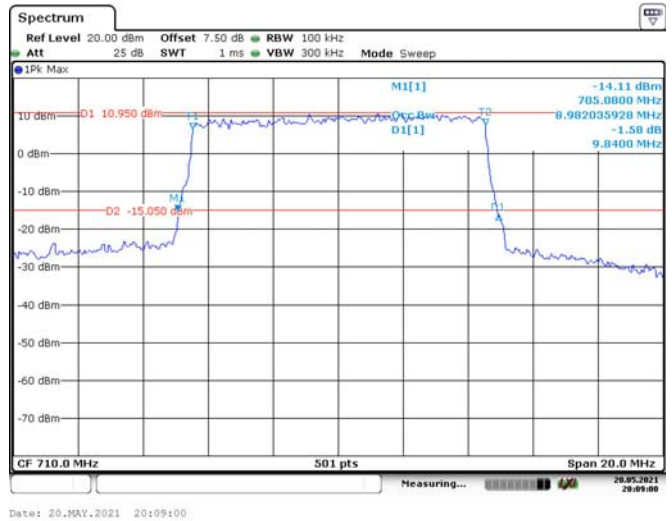
10M, 16QAM, Low Channel



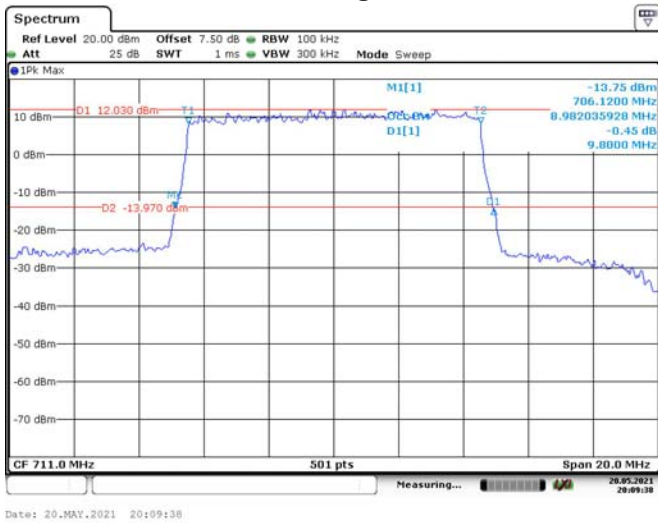
10M, QPSK, Middle Channel



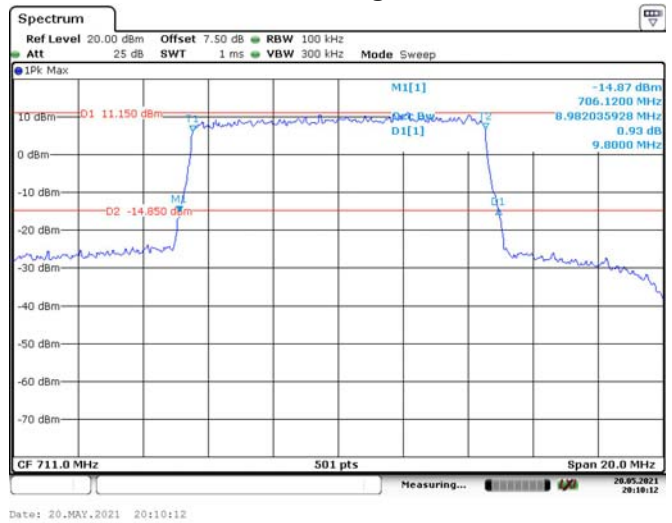
10M, 16QAM, Middle Channel



10M, QPSK, High Channel



10M, 16QAM, High Channel



FCC §2.1051, §22.917(a) & §24.238(a) & §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

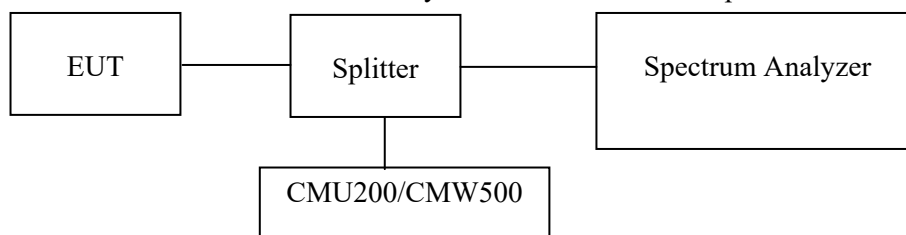
Applicable Standard

FCC §2.1051, §22.917(a), §24.238(a) and §27.53.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2021-01-09	2022-01-09
yzjingcheng	Coaxial Cable	KTRFBU-141-50	41010012	Each time	N/A
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	N/A
E-Microwave	Blocking Control	EMDCB-00036	0E01201047	Each time	N/A
Unknown	Attenuator	UNAT-3+	15529	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).

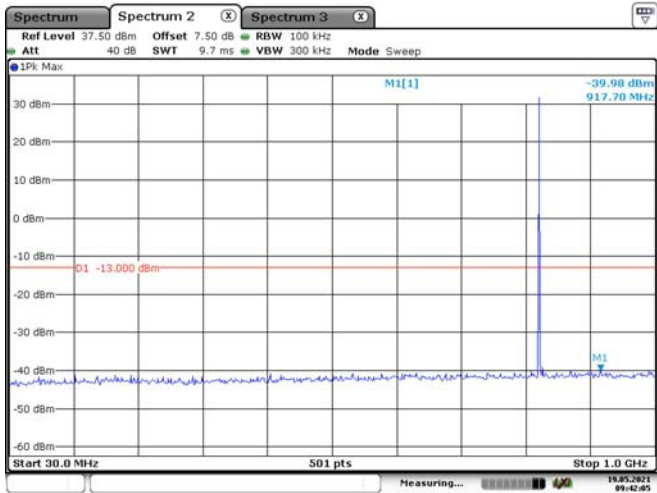
Test Data

Environmental Conditions

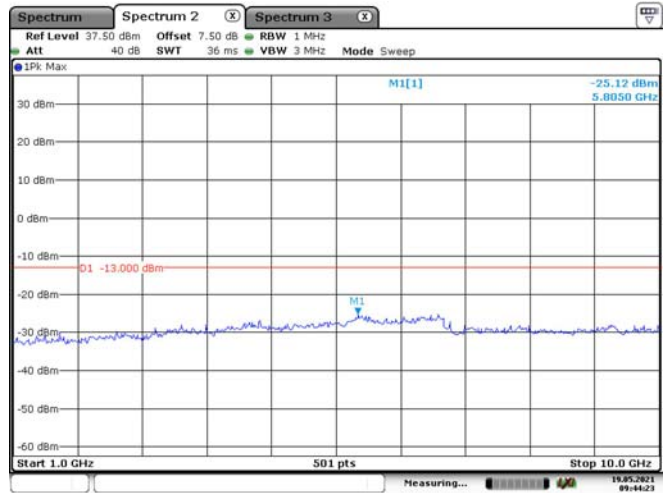
Temperature:	24.2~27.5 °C
Relative Humidity:	47~70 %
ATM Pressure:	100~100.8kPa
Tester:	Lay Lei
Test Date:	2021.05.19~2021-06-07

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

GSM 850, Low Channel

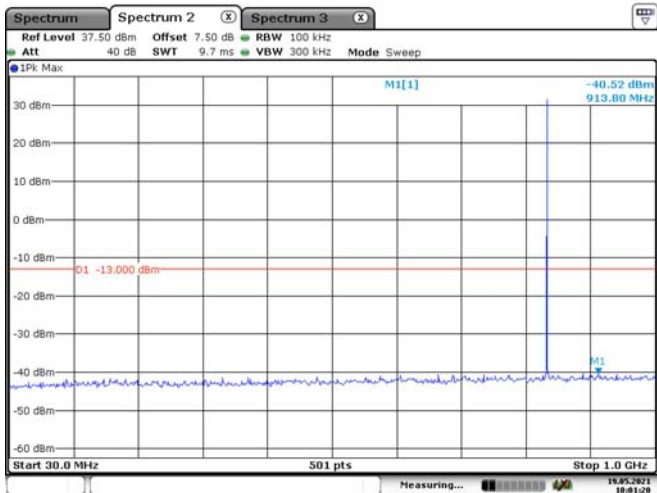


Date: 19.MAY.2021 09:42:05

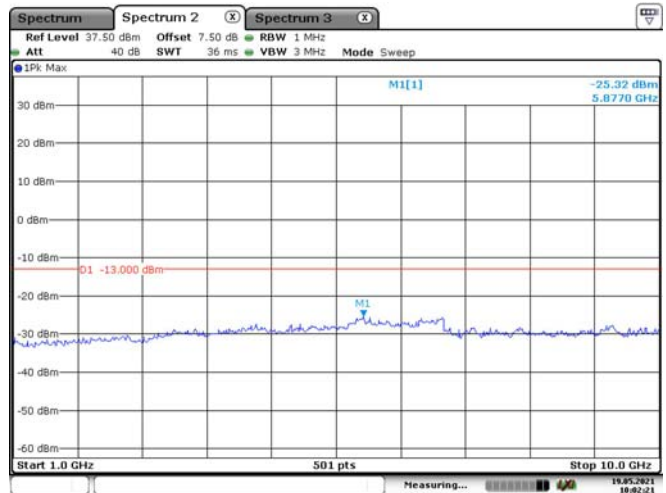


Date: 19.MAY.2021 09:44:23

GSM 850, Middle Channel

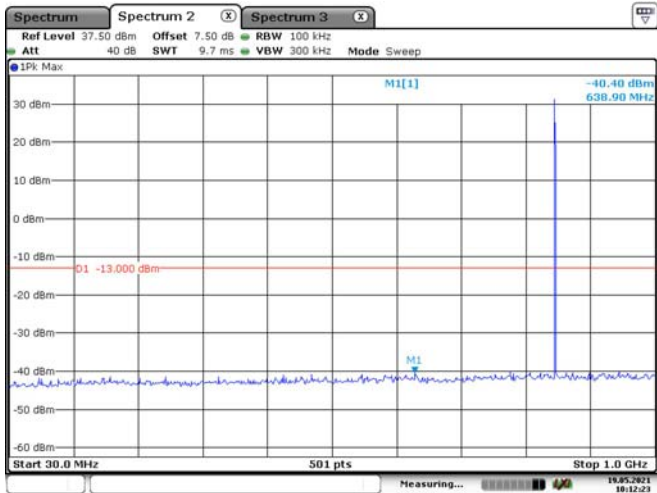


Date: 19.MAY.2021 10:01:20

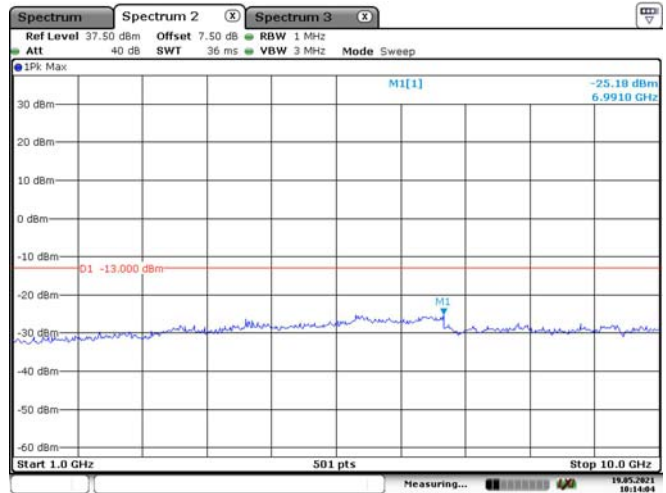


Date: 19.MAY.2021 10:02:22

GSM 850, High Channel

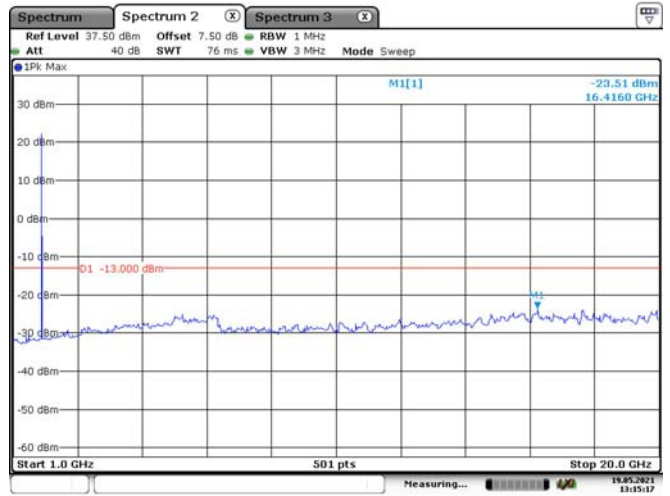
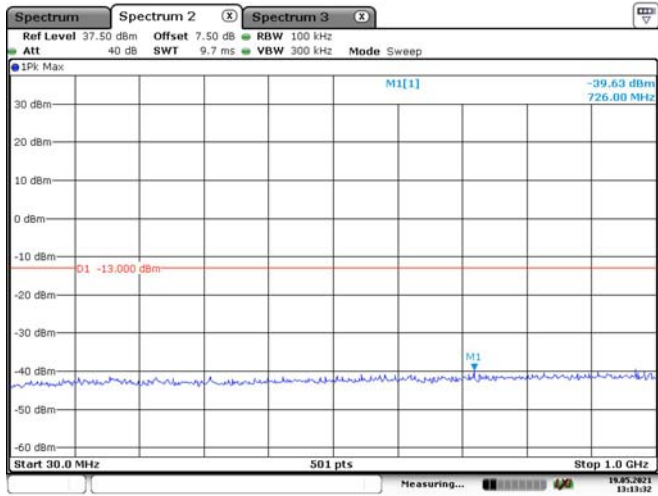


Date: 19.MAY.2021 10:12:24

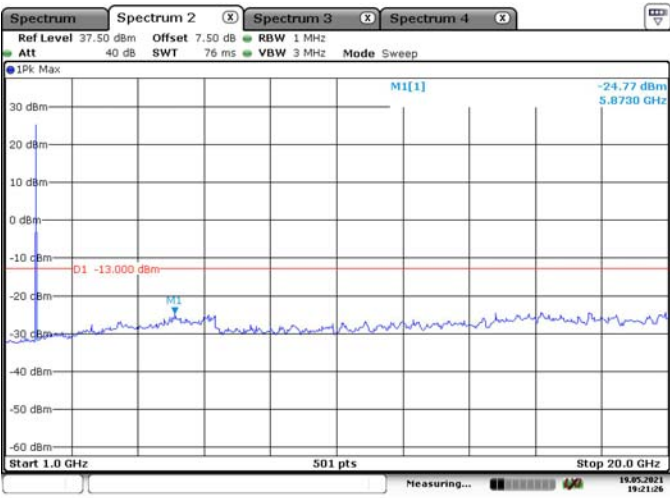
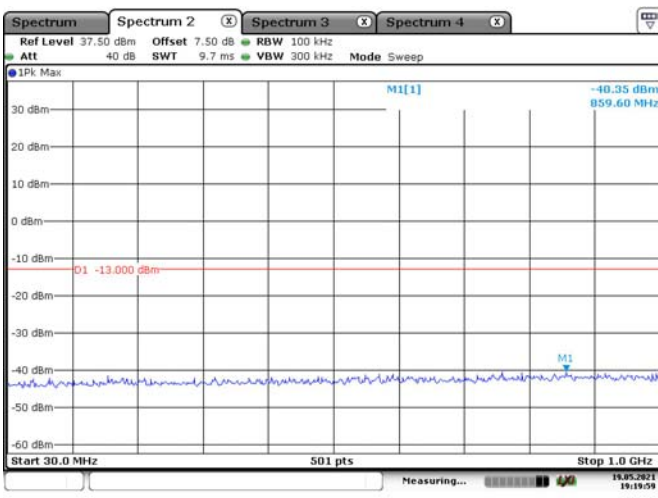


Date: 19.MAY.2021 10:14:04

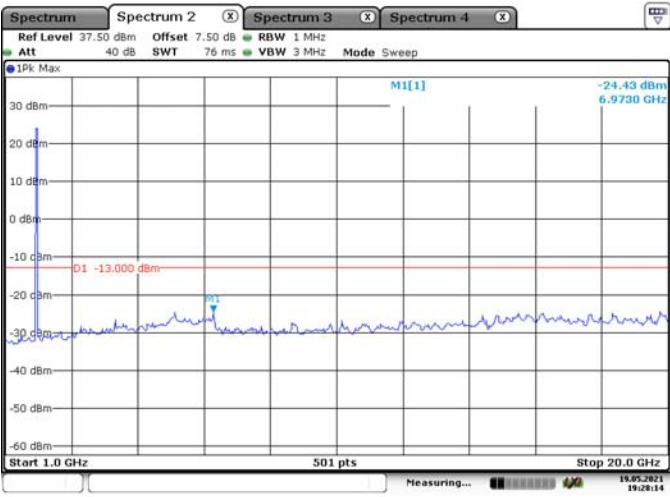
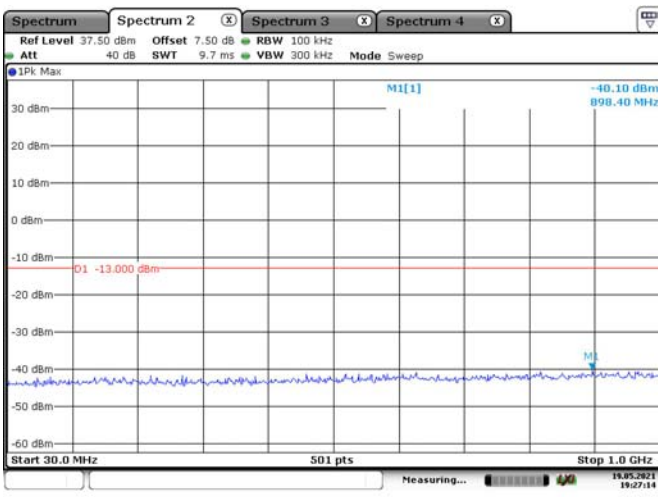
GSM 1900, Low Channel



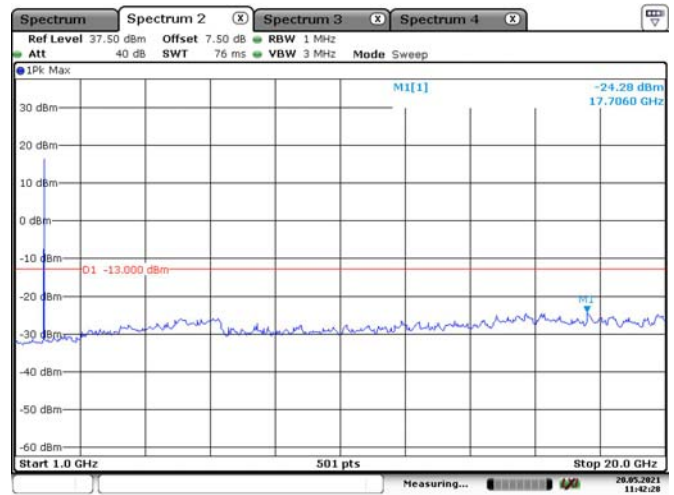
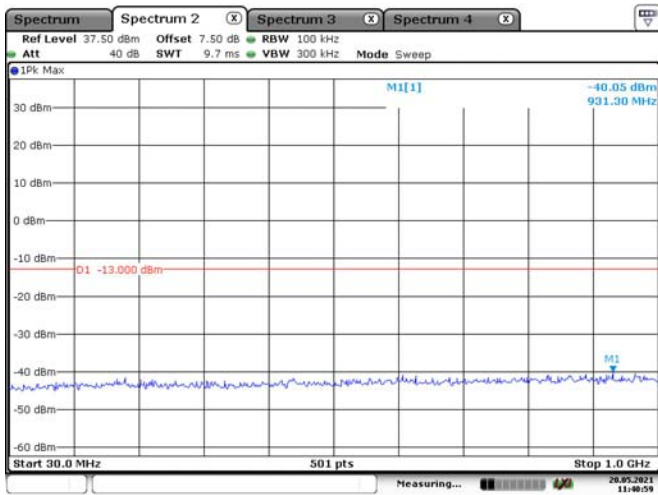
GSM 1900, Middle Channel



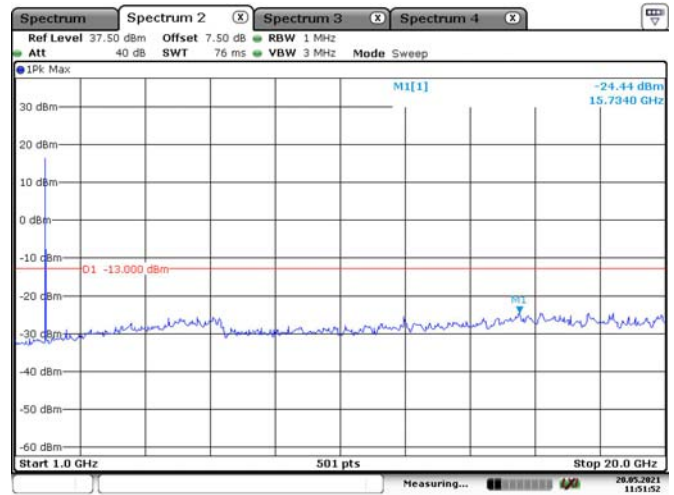
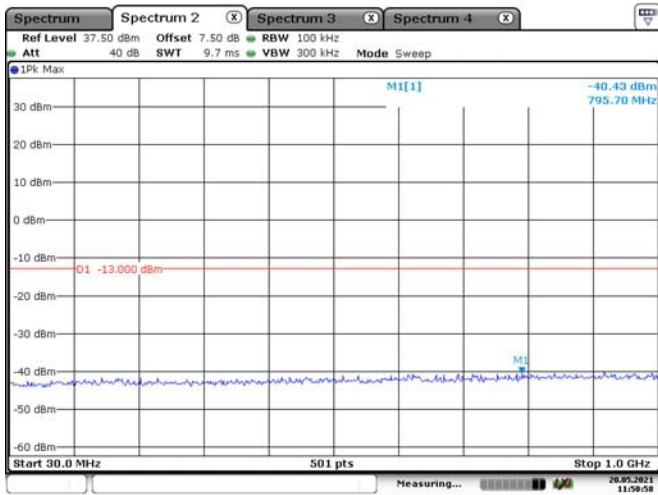
GSM 1900, High Channel



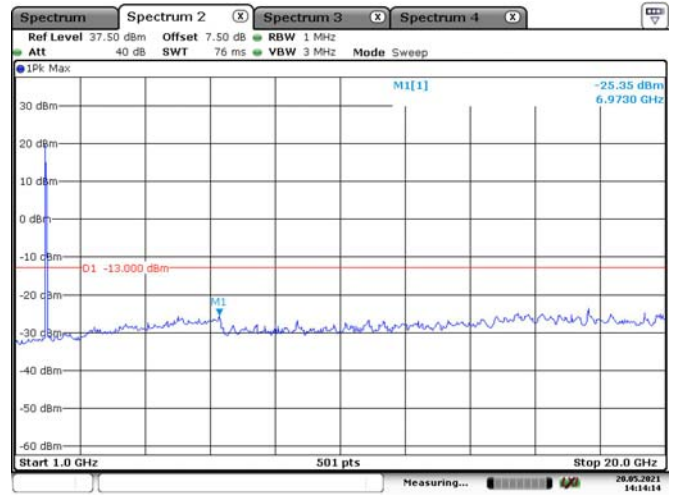
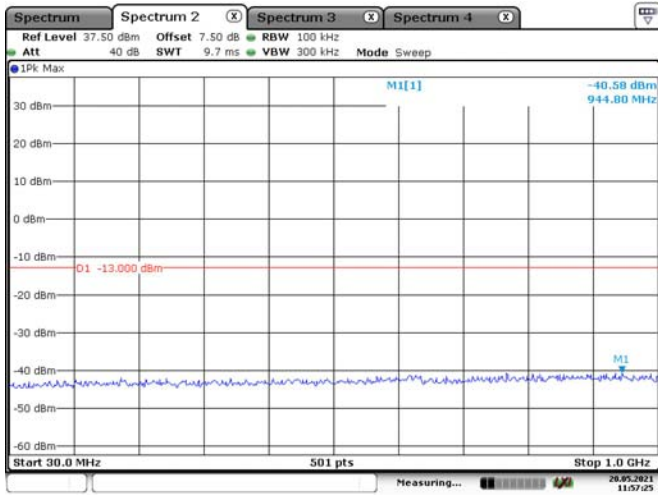
WCDMA Band II, R99, Low Channel



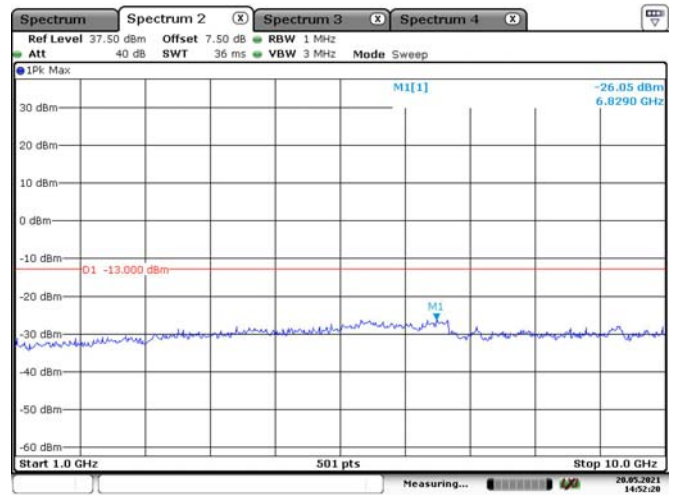
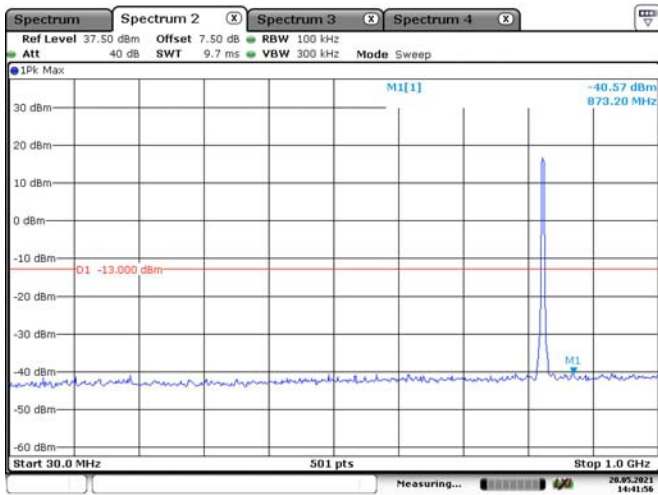
WCDMA Band II, R99, Middle Channel



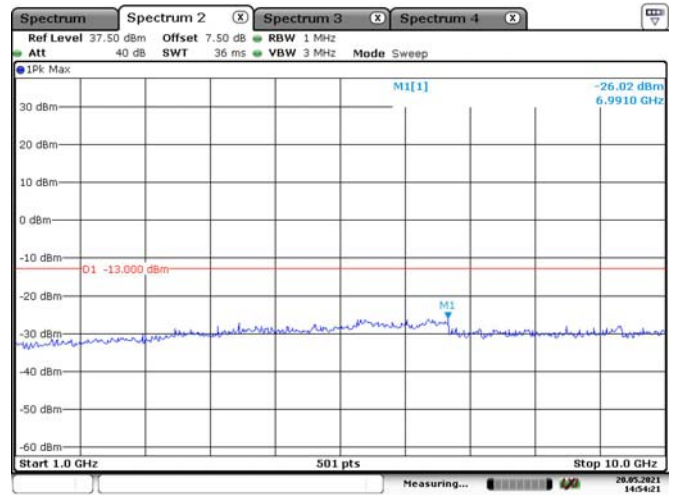
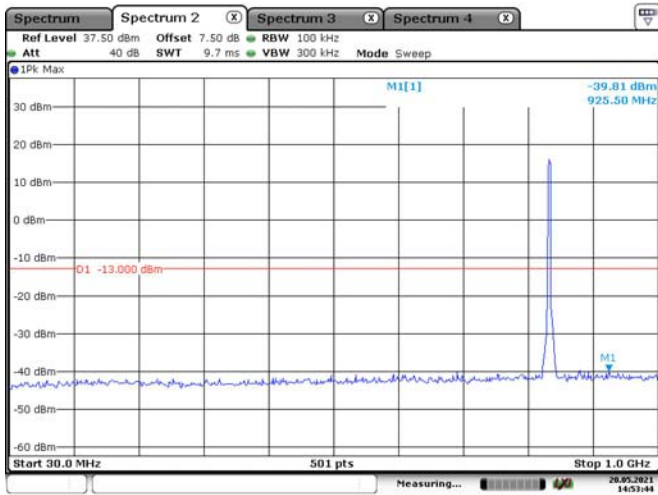
WCDMA Band II, R99, High Channel



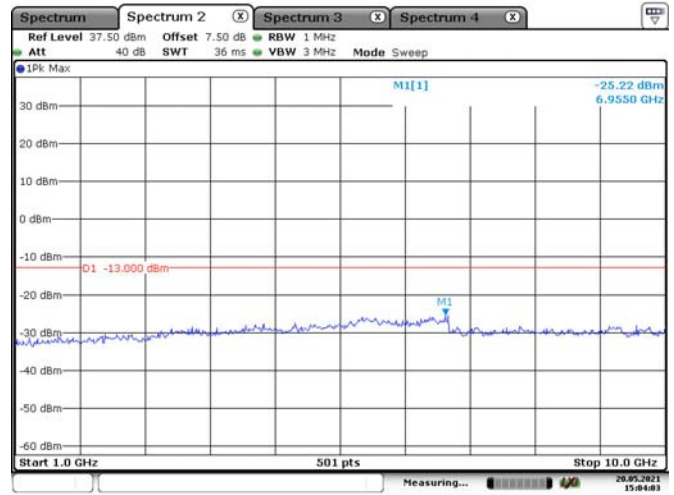
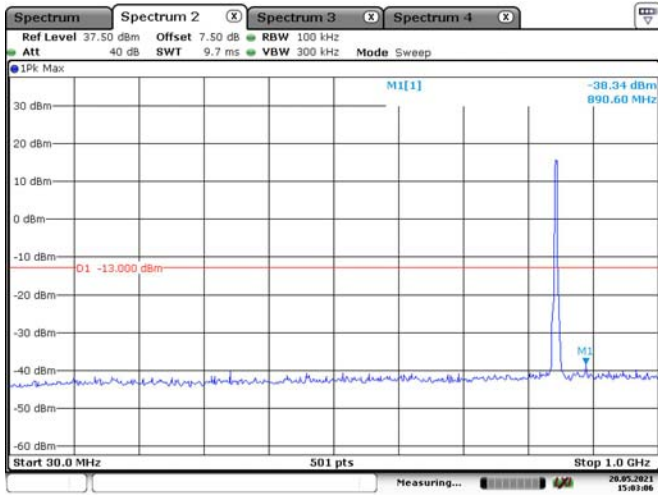
WCDMA Band V, R99, Low Channel



WCDMA Band V, R99, Middle Channel

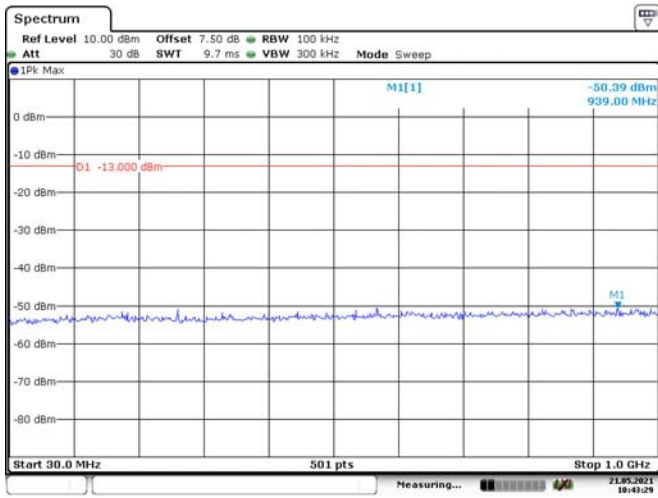


WCDMA Band V, R99, High Channel

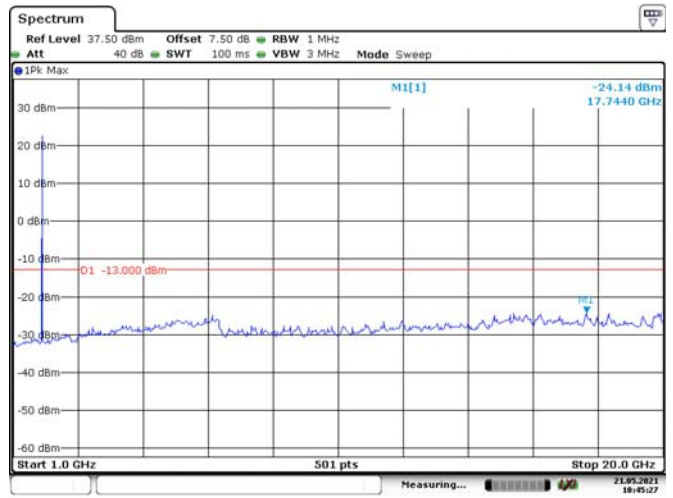


LTE Band 2:

1.4M, QPSK, Low Channel

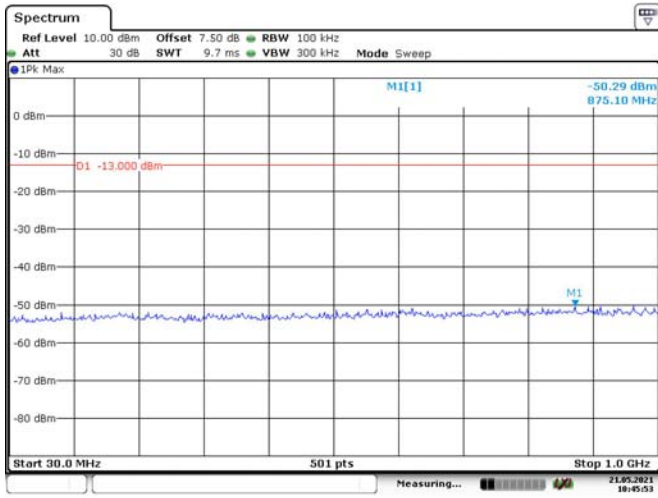


Date: 21.MAY.2021 10:43:29

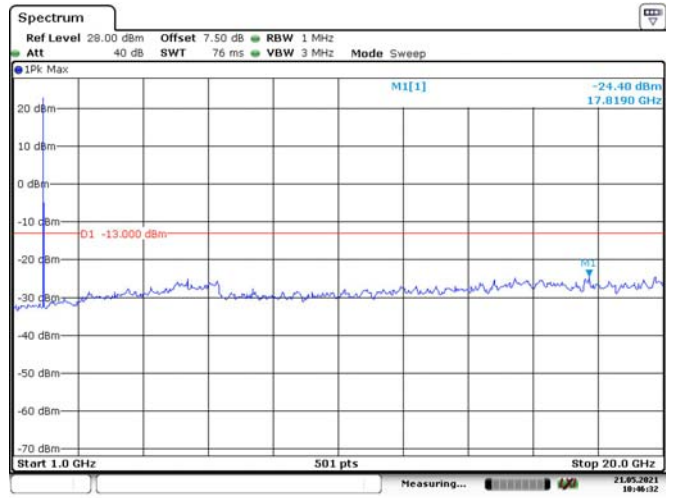


Date: 21.MAY.2021 10:45:27

1.4M, QPSK, Middle Channel

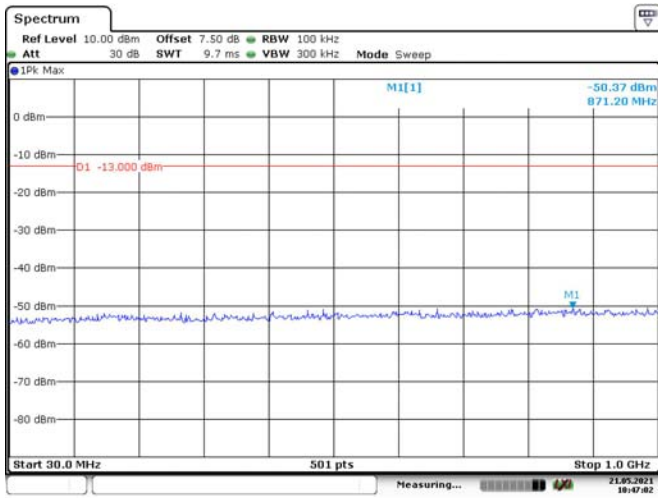


Date: 21.MAY.2021 10:45:53

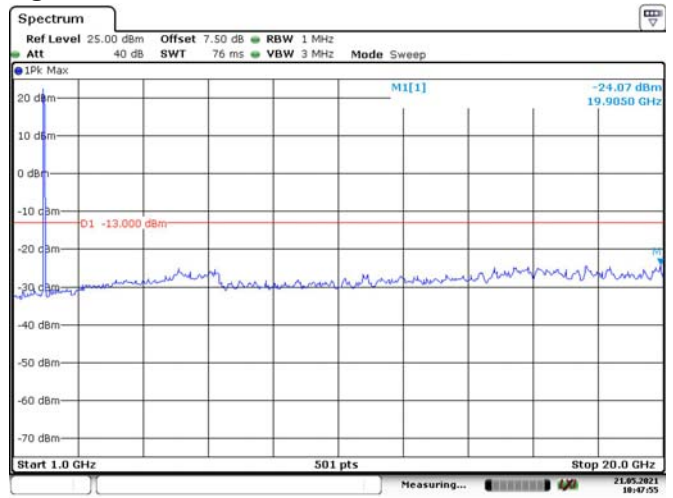


Date: 21.MAY.2021 10:46:32

1.4M, QPSK, High Channel

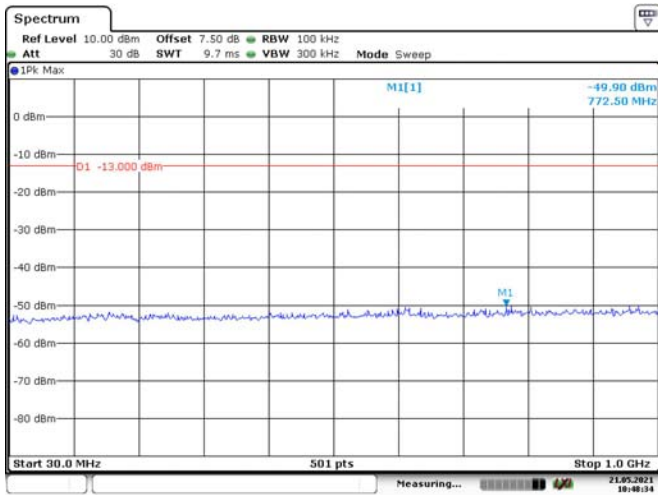


Date: 21.MAY.2021 10:47:02

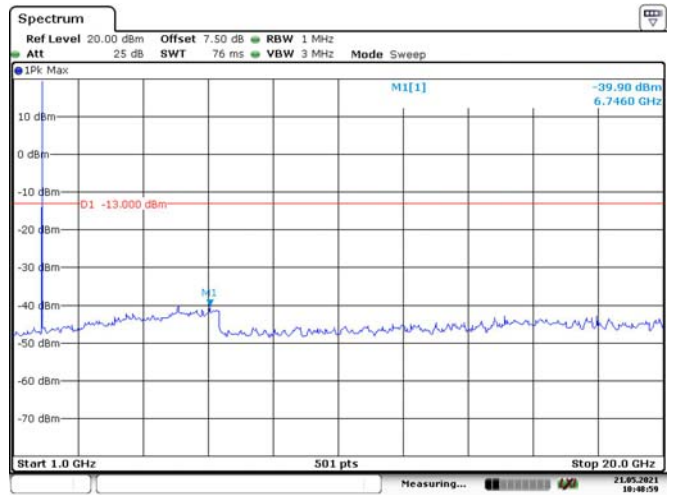


Date: 21.MAY.2021 10:47:55

3M, QPSK, Low Channel

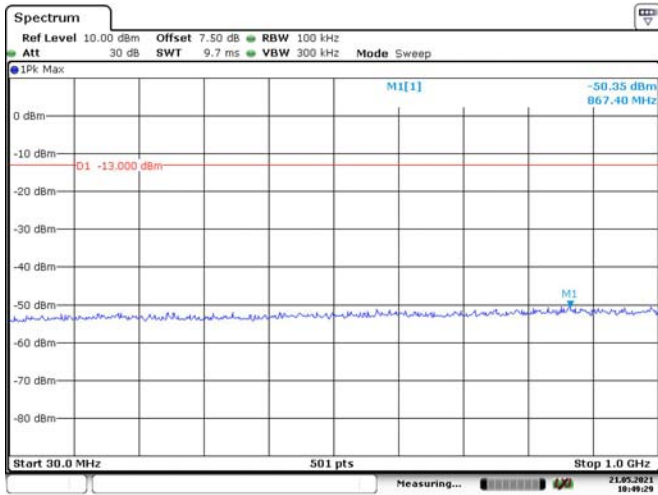


Date: 21.MAY.2021 10:48:34

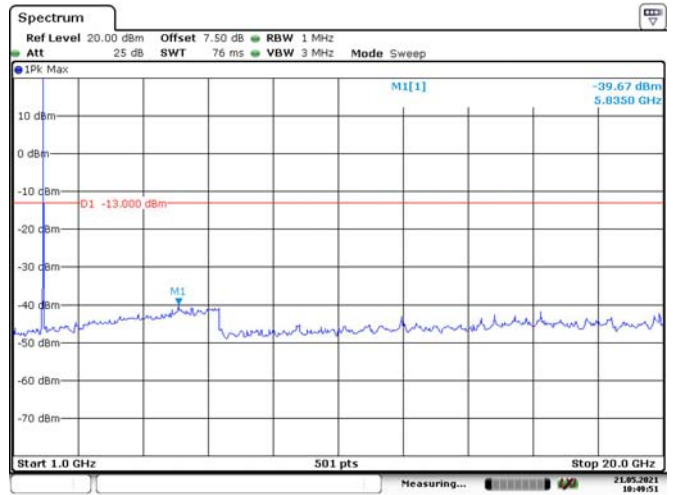


Date: 21.MAY.2021 10:48:59

3M, QPSK, Middle Channel

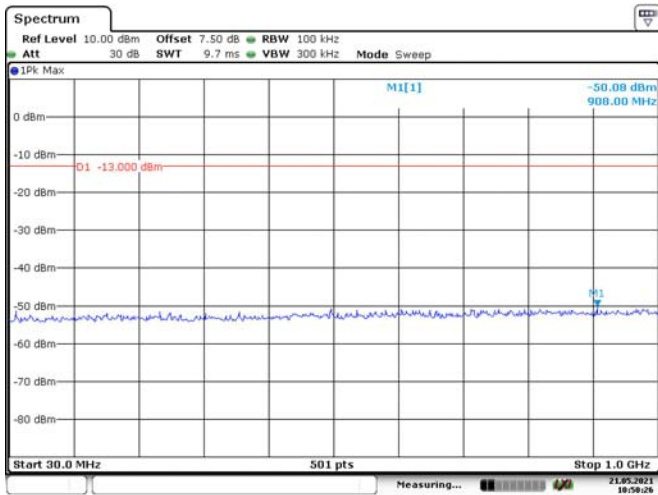


Date: 21.MAY.2021 10:49:29

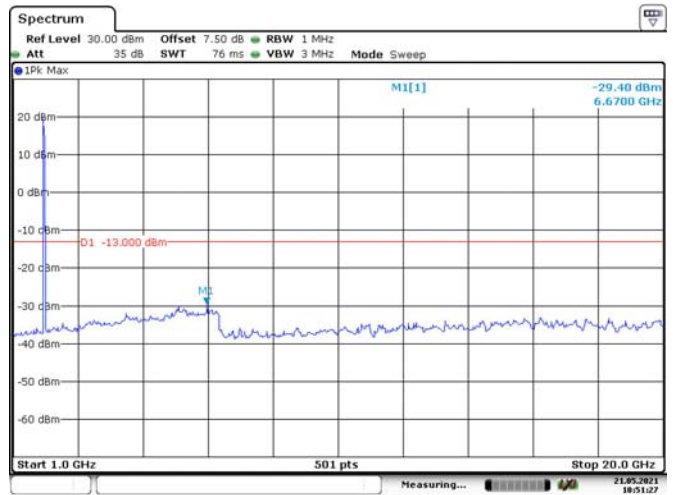


Date: 21.MAY.2021 10:49:51

3M, QPSK, High Channel

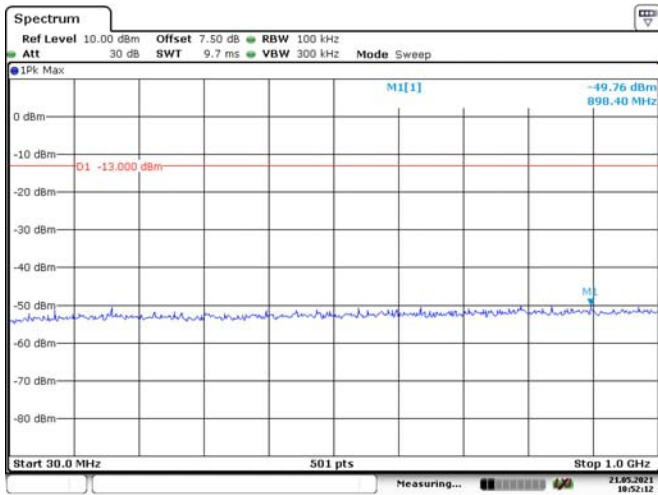


Date: 21.MAY.2021 10:50:26

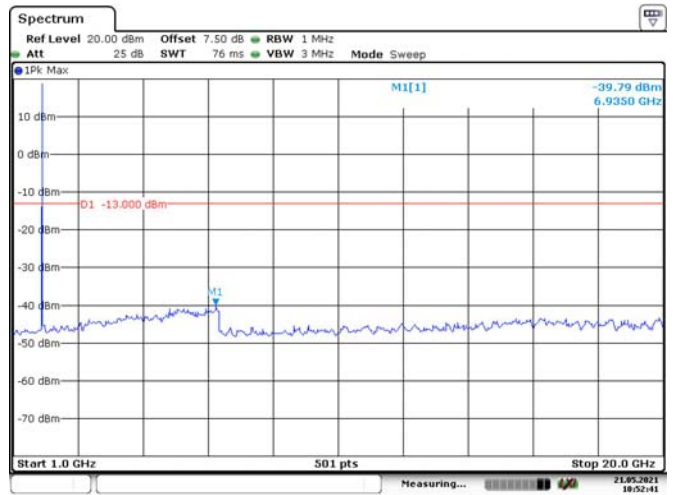


Date: 21.MAY.2021 10:51:27

5M, QPSK, Low Channel

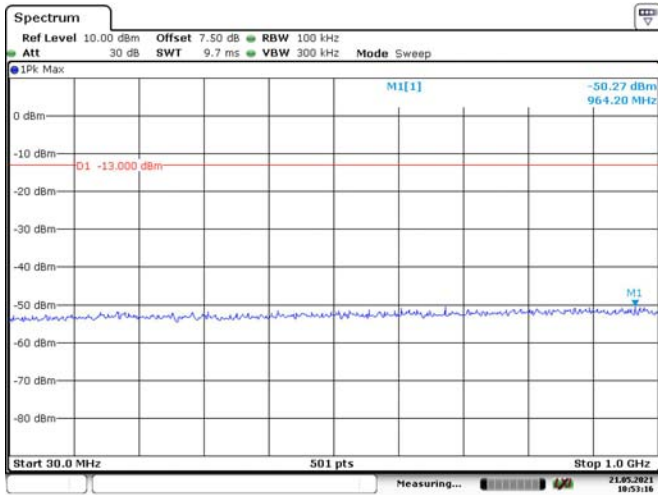


Date: 21.MAY.2021 10:52:12

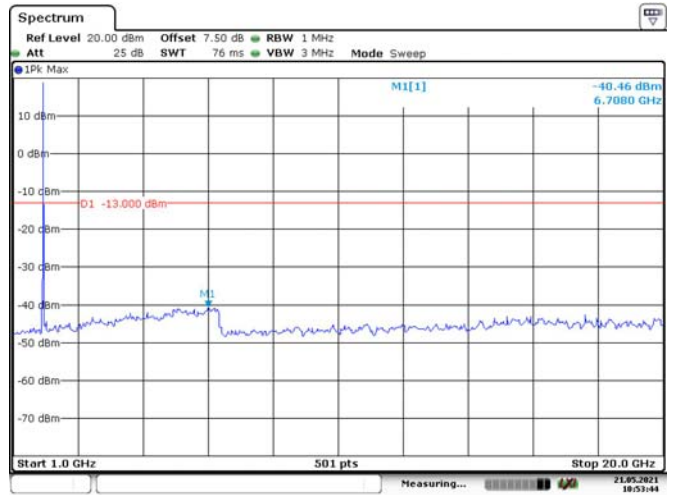


Date: 21.MAY.2021 10:52:40

5M, QPSK, Middle Channel

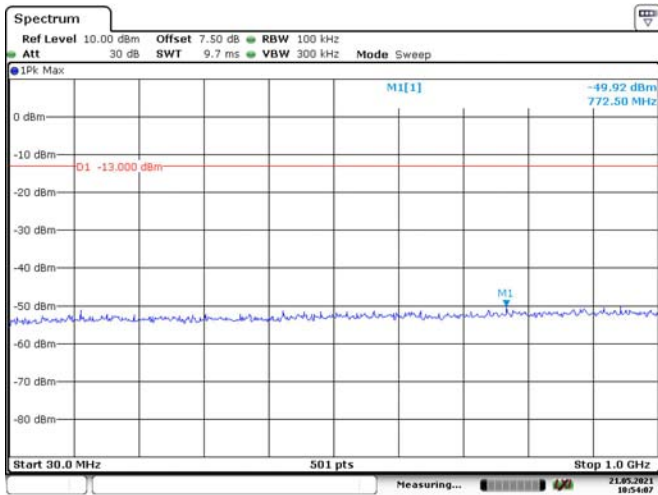


Date: 21.MAY.2021 10:53:16

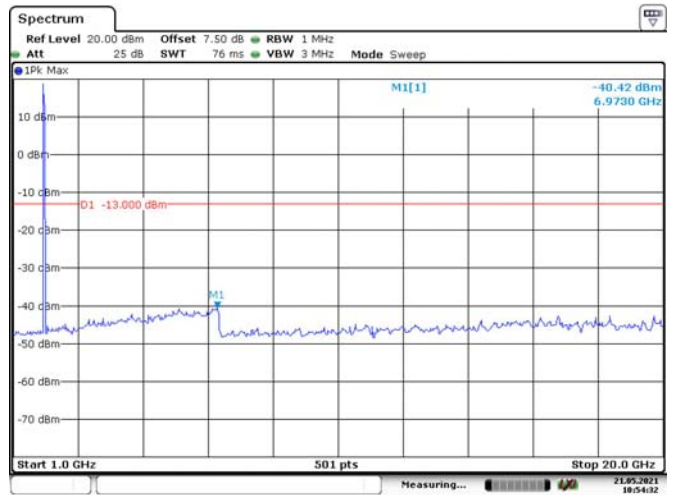


Date: 21.MAY.2021 10:53:44

5M, QPSK, High Channel

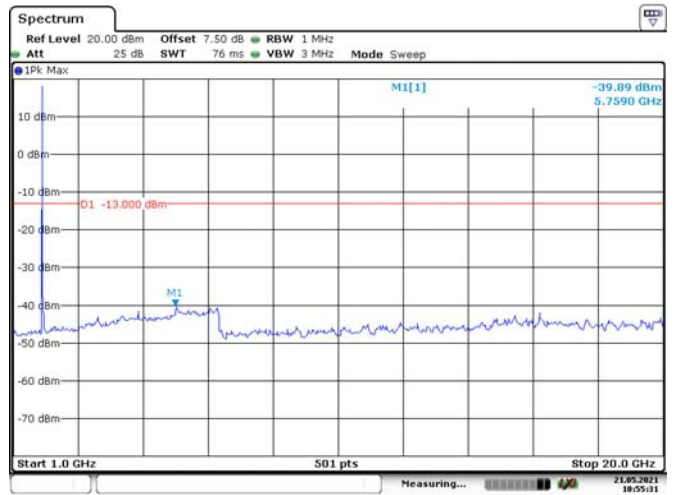
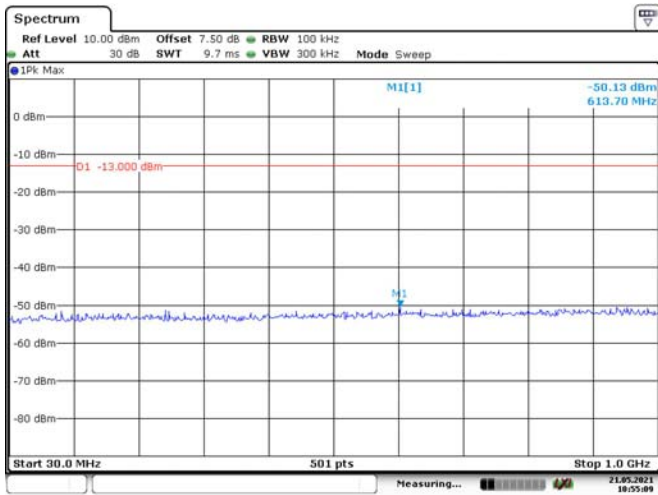


Date: 21.MAY.2021 10:54:07

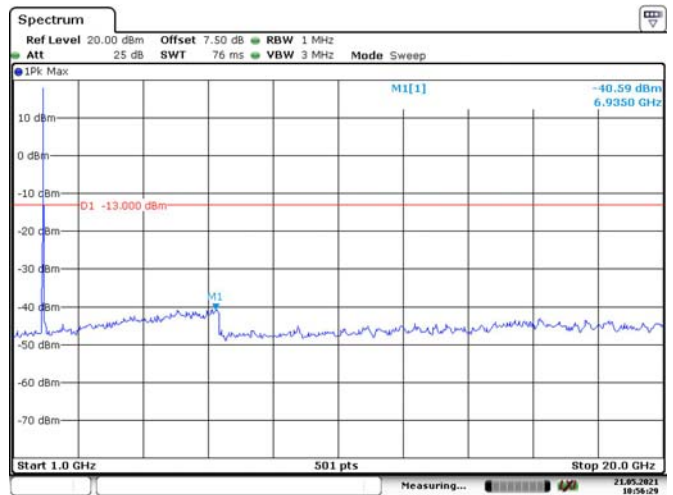
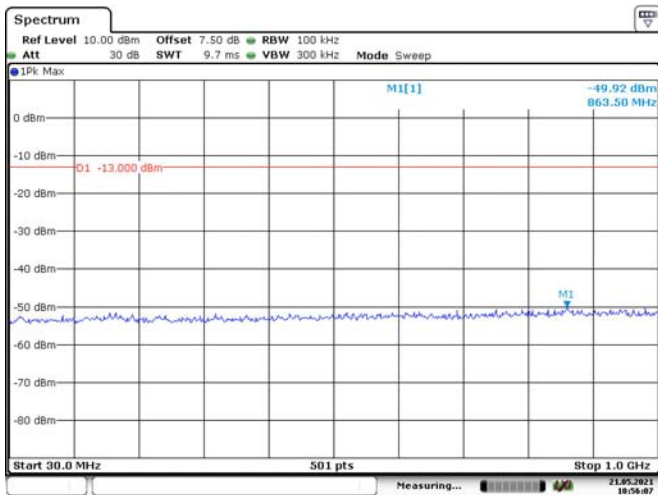


Date: 21.MAY.2021 10:54:32

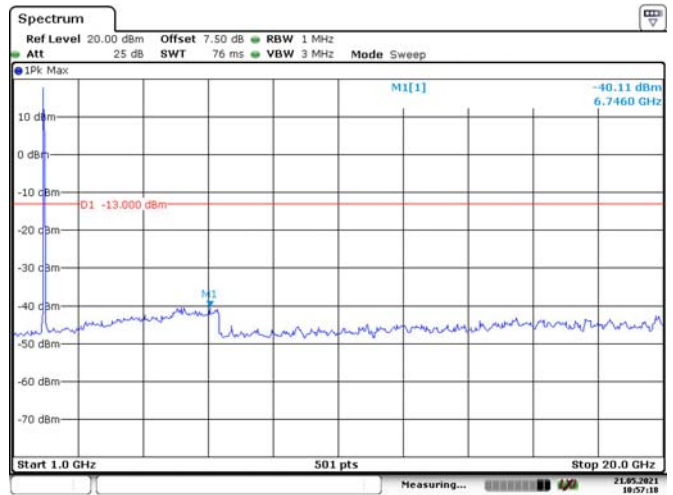
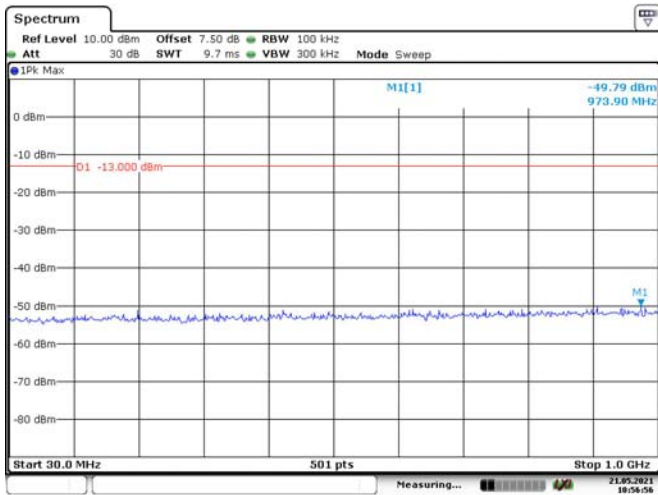
10M, QPSK, Low Channel



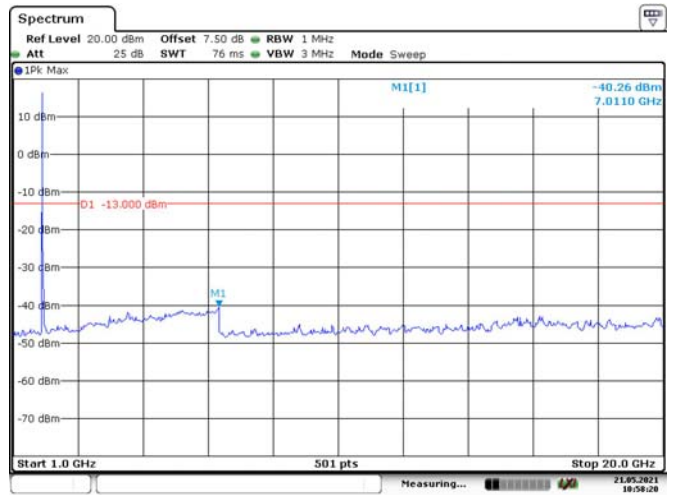
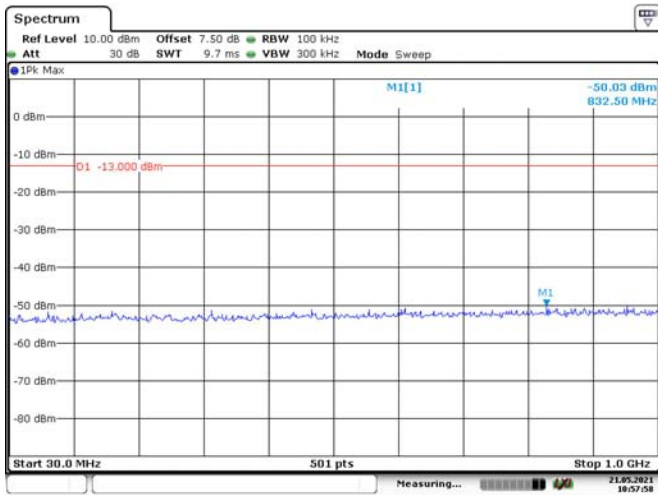
10M, QPSK, Middle Channel



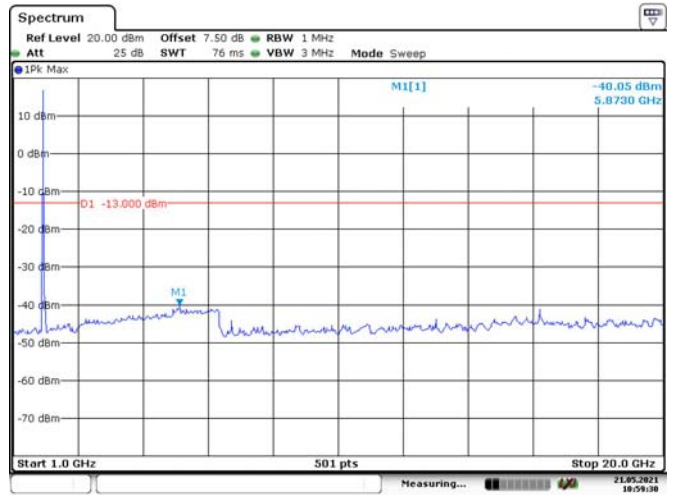
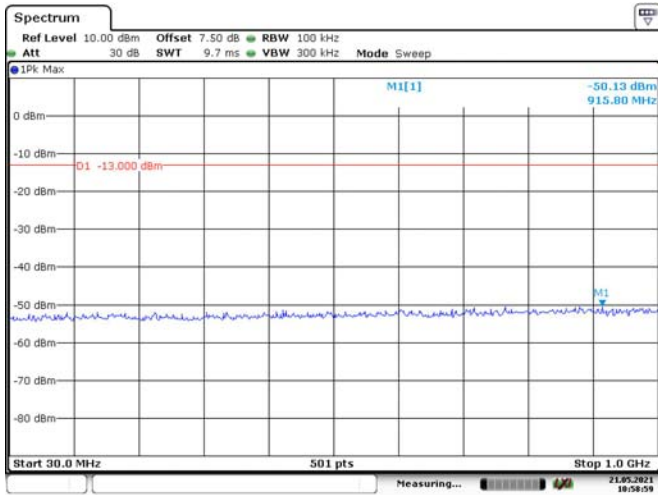
10M, QPSK, High Channel



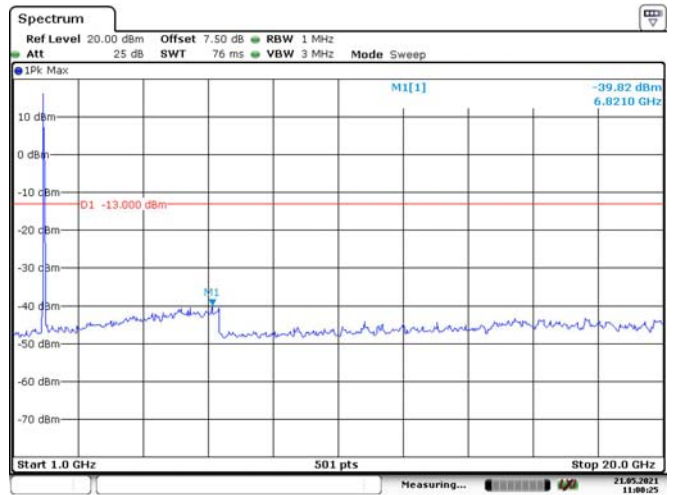
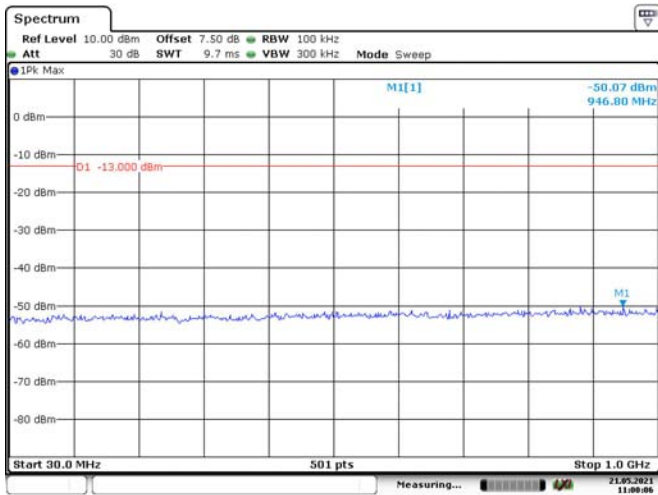
15M, QPSK, Low Channel



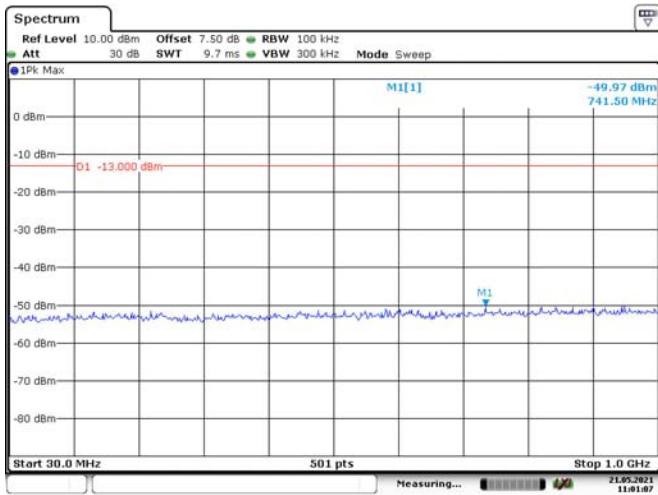
15M, QPSK, Middle Channel



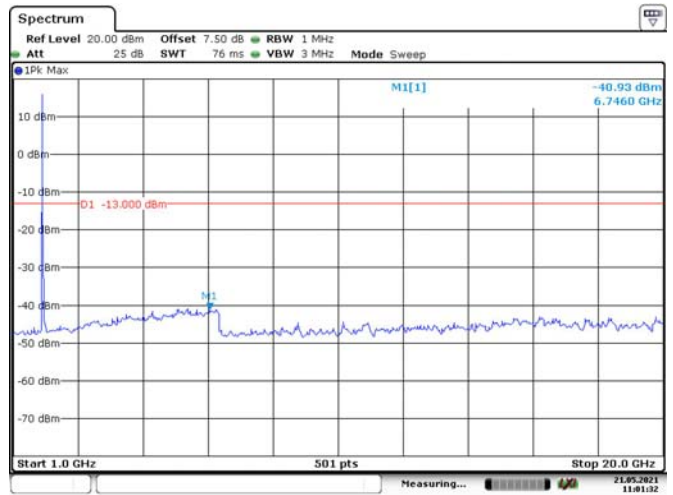
15M, QPSK, High Channel



20M, QPSK, Low Channel

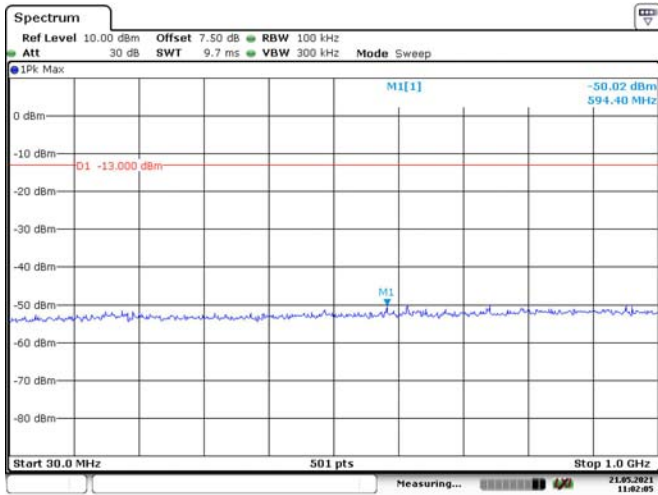


Date: 21.MAY.2021 11:01:07

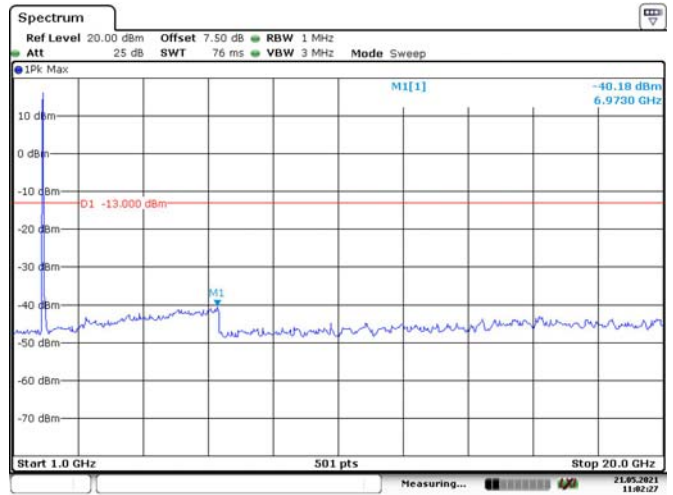


Date: 21.MAY.2021 11:01:33

20M, QPSK, Middle Channel

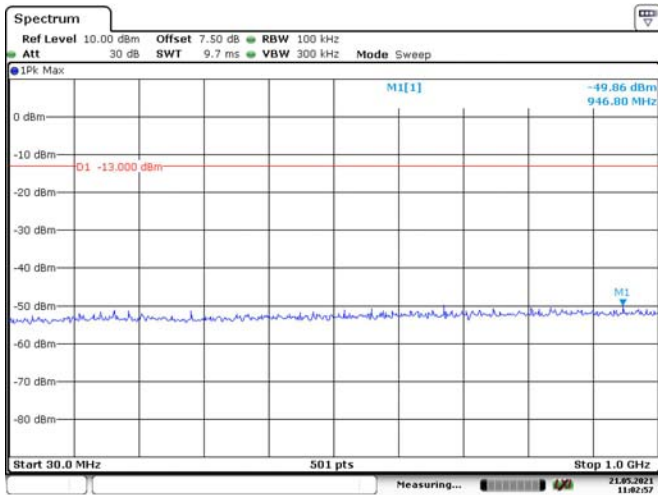


Date: 21.MAY.2021 11:02:05

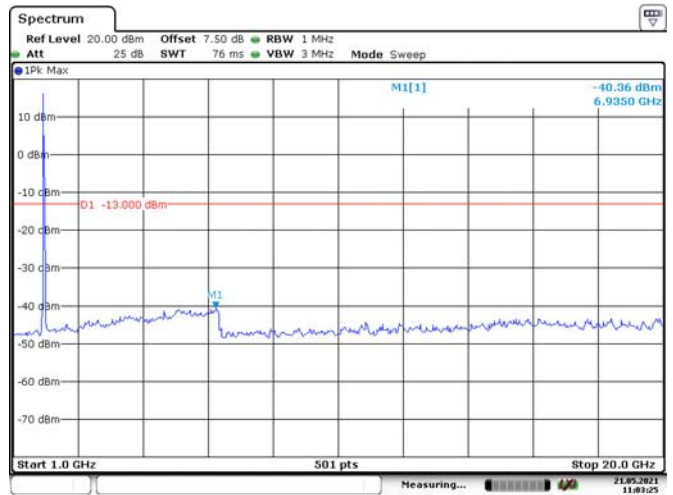


Date: 21.MAY.2021 11:02:27

20M, QPSK, High Channel



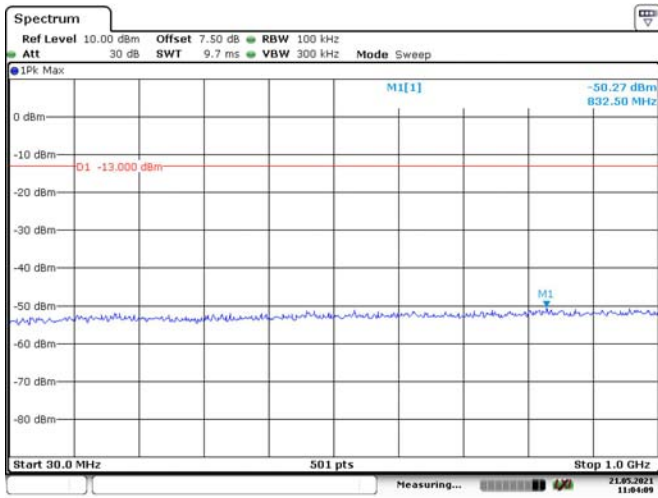
Date: 21.MAY.2021 11:02:57



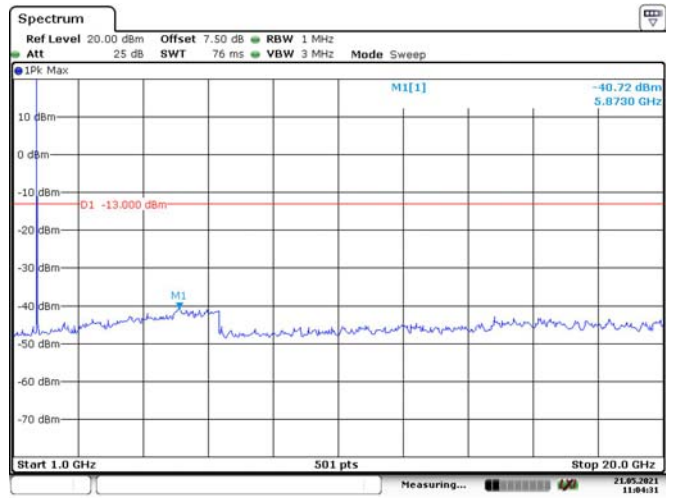
Date: 21.MAY.2021 11:03:25

LTE Band 4:

1.4M, QPSK, Low Channel

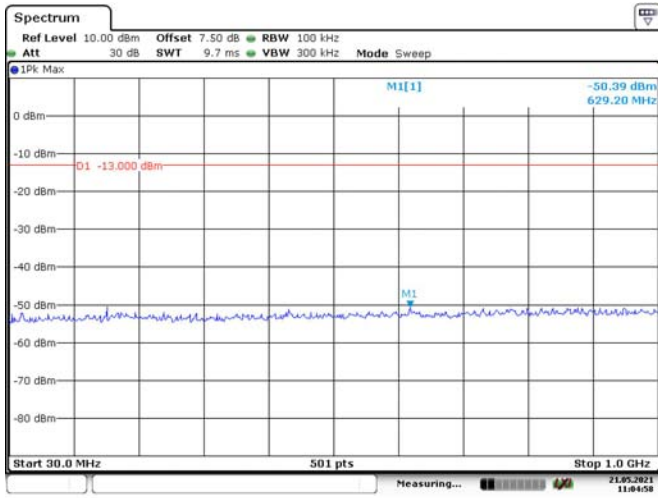


Date: 21.MAY.2021 11:04:09

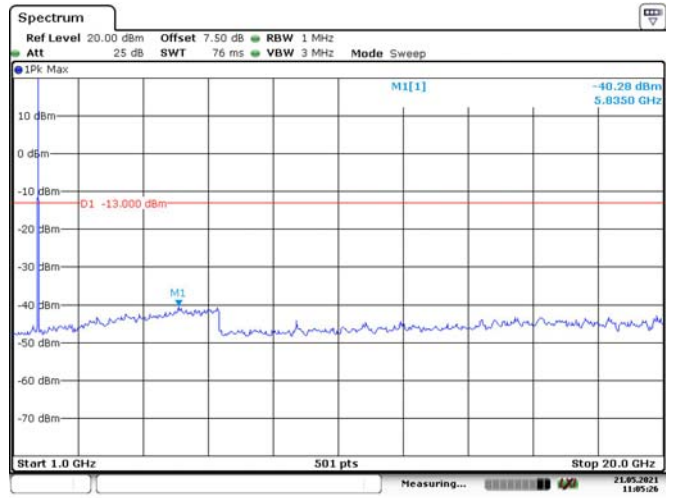


Date: 21.MAY.2021 11:04:31

1.4M, QPSK, Middle Channel

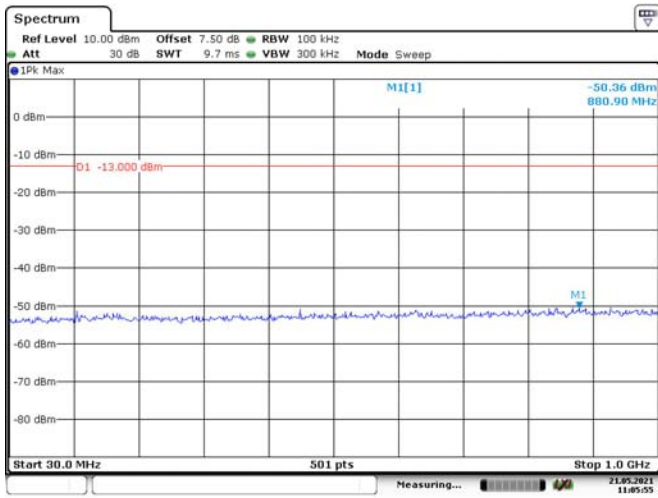


Date: 21.MAY.2021 11:04:58

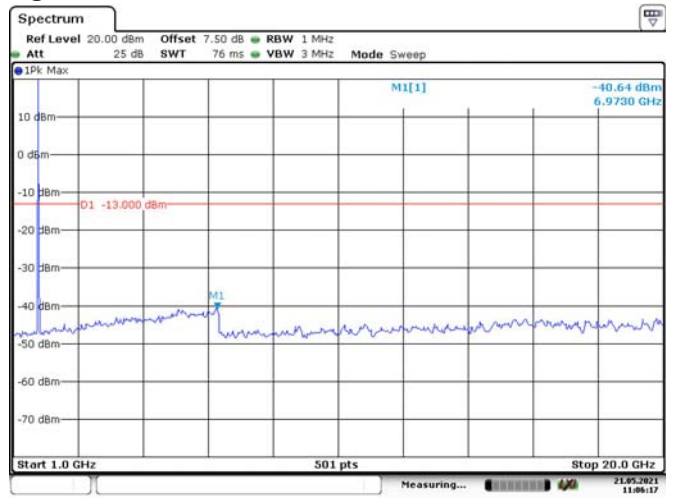


Date: 21.MAY.2021 11:05:26

1.4M, QPSK, High Channel

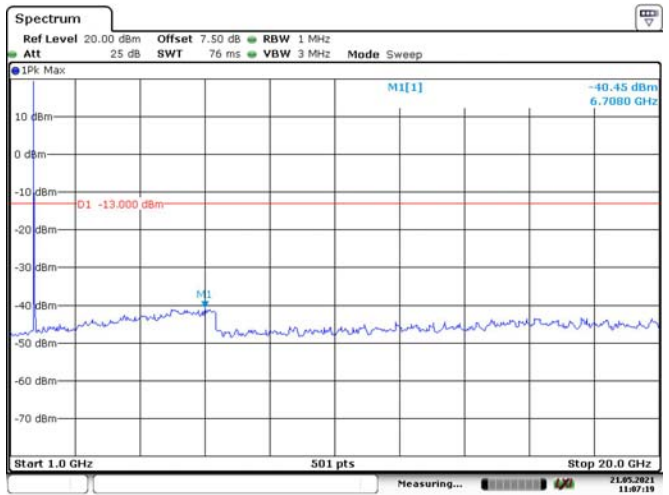
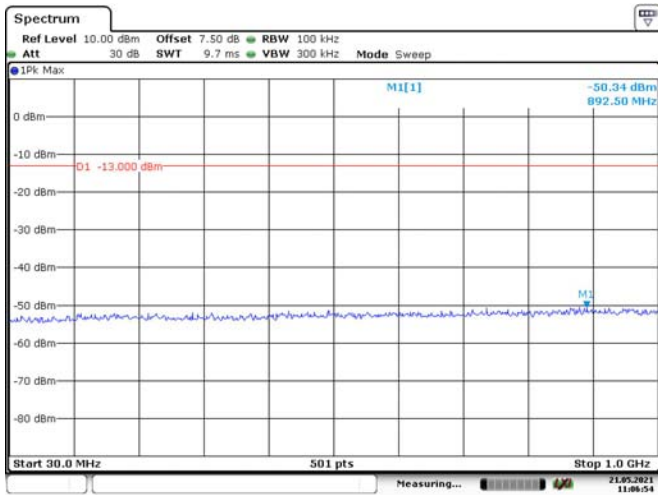


Date: 21.MAY.2021 11:05:56

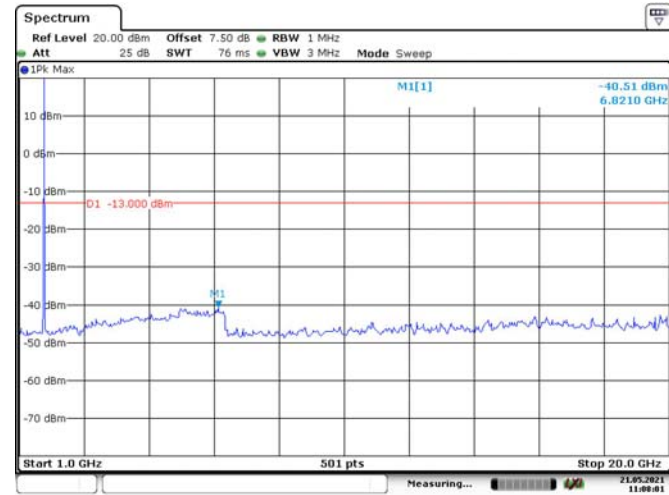
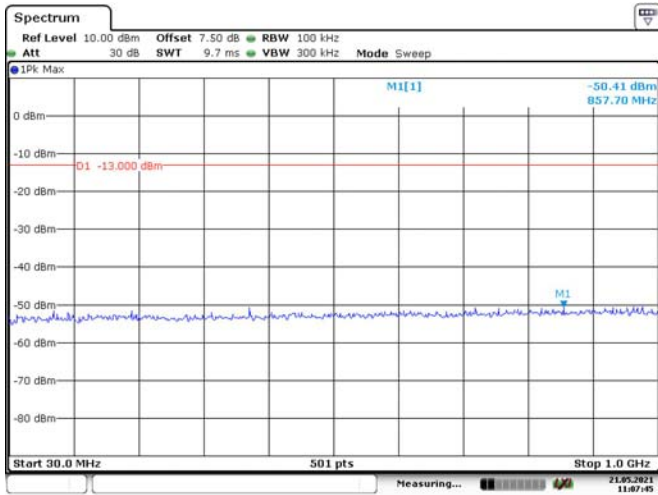


Date: 21.MAY.2021 11:06:18

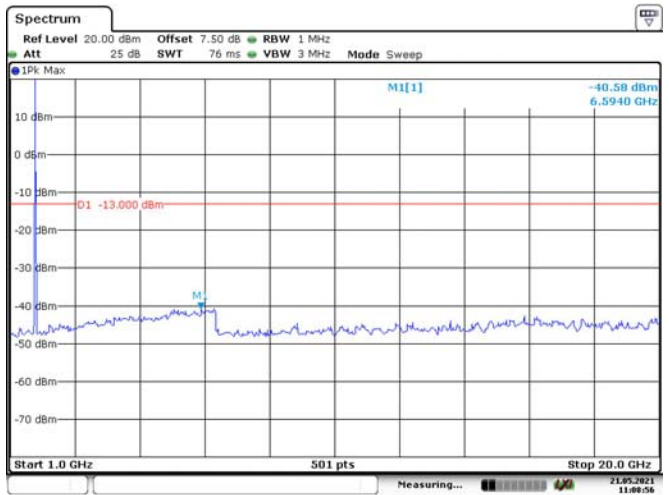
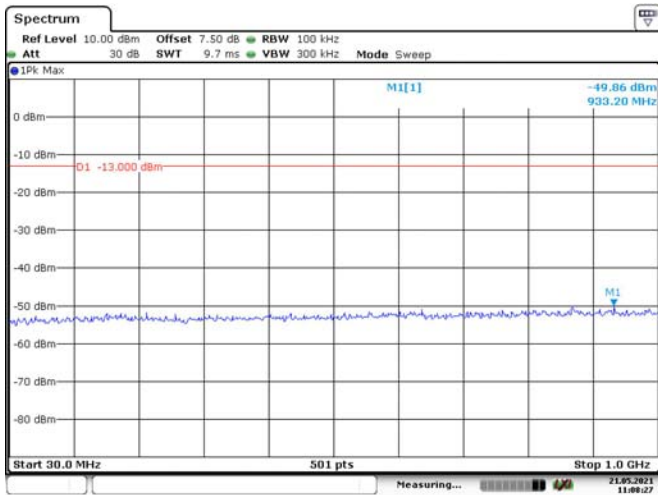
3M, QPSK, Low Channel



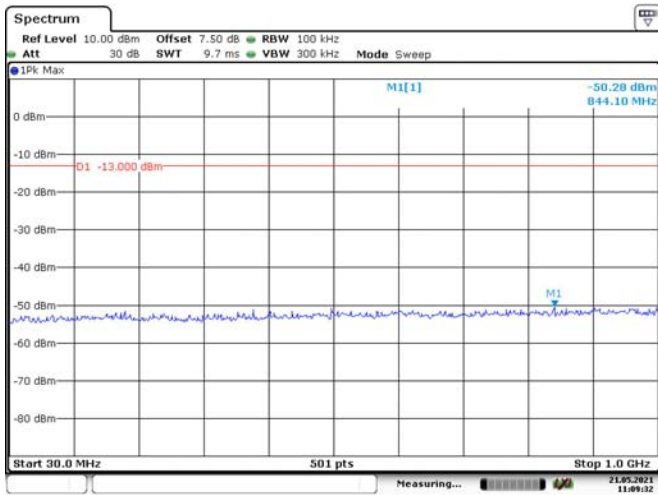
3M, QPSK, Middle Channel



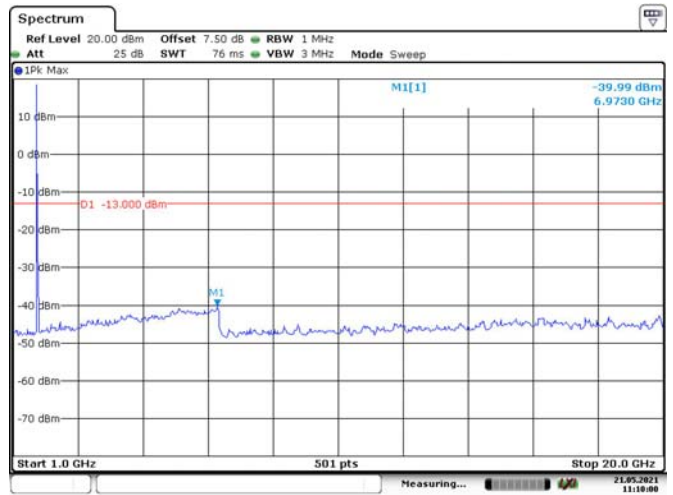
3M, QPSK, High Channel



5M, QPSK, Low Channel

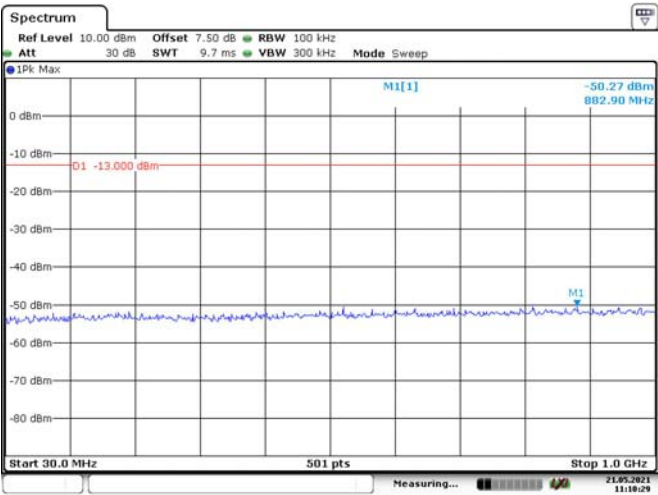


Date: 21.MAY.2021 11:09:32

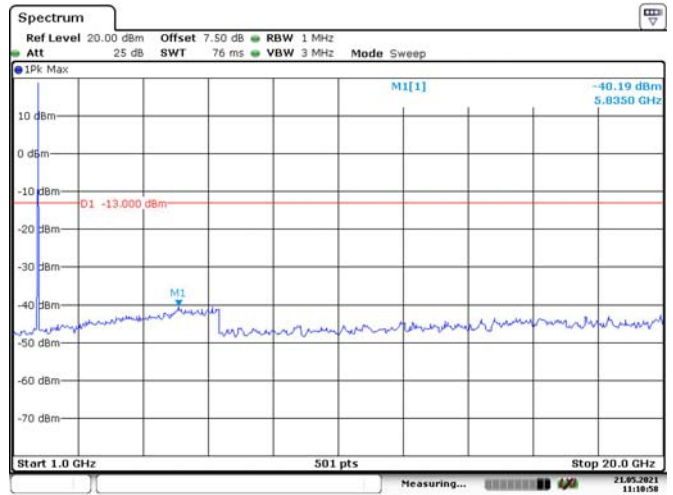


Date: 21.MAY.2021 11:10:00

5M, QPSK, Middle Channel

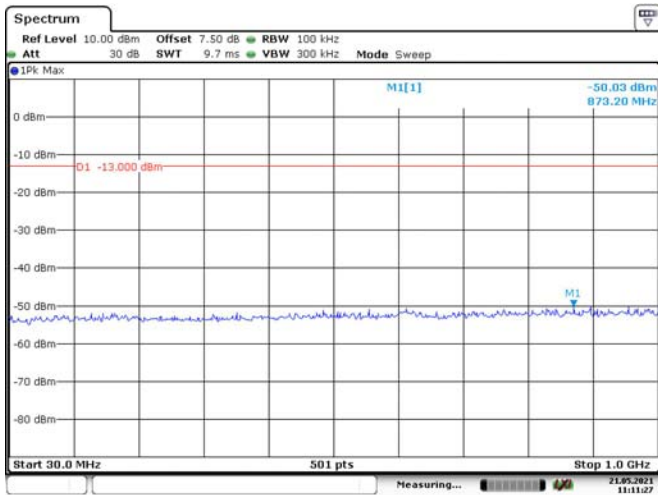


Date: 21.MAY.2021 11:10:29

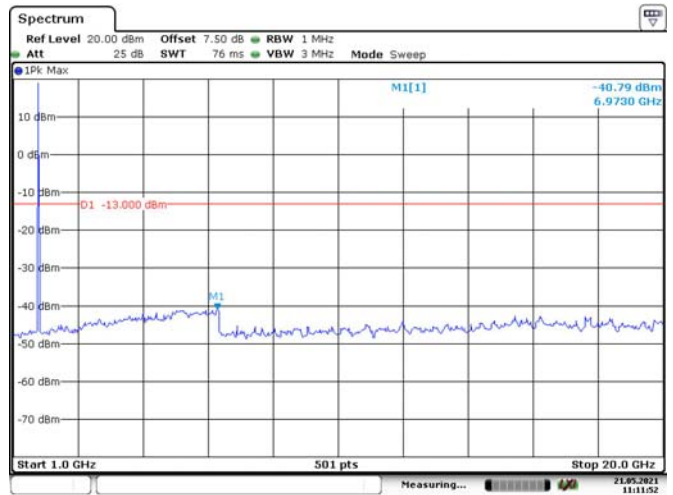


Date: 21.MAY.2021 11:10:58

5M, QPSK, High Channel

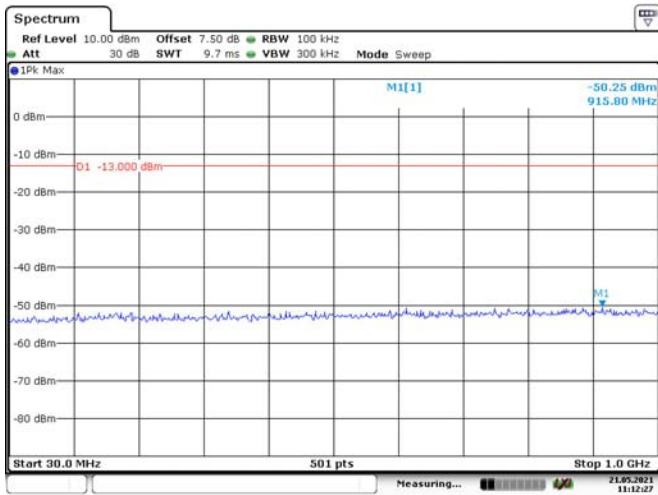


Date: 21.MAY.2021 11:11:27

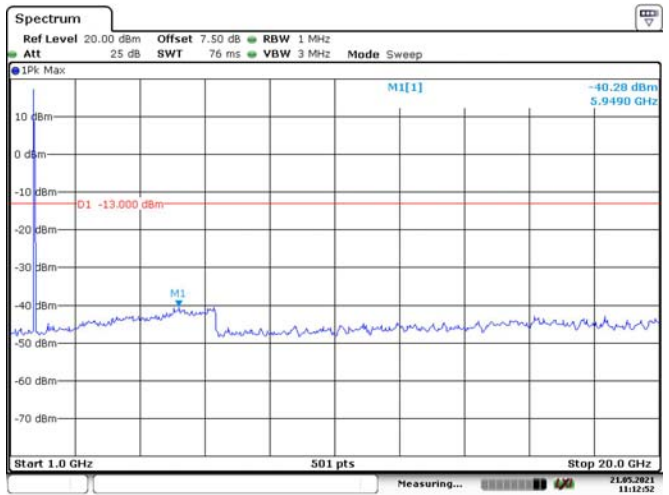


Date: 21.MAY.2021 11:11:52

10M, QPSK, Low Channel

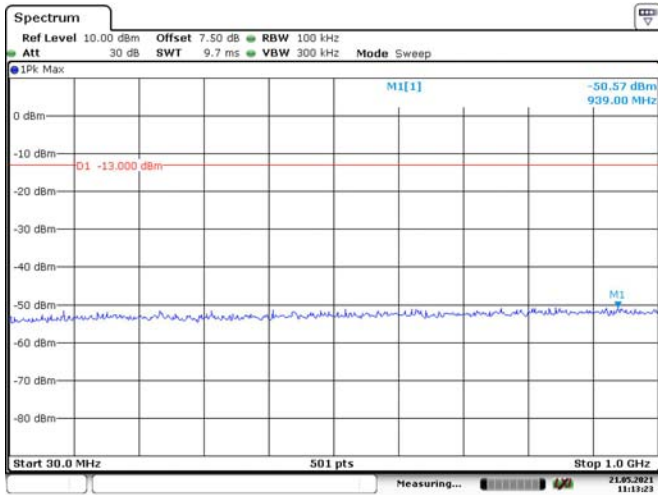


Date: 21.MAY.2021 11:12:27

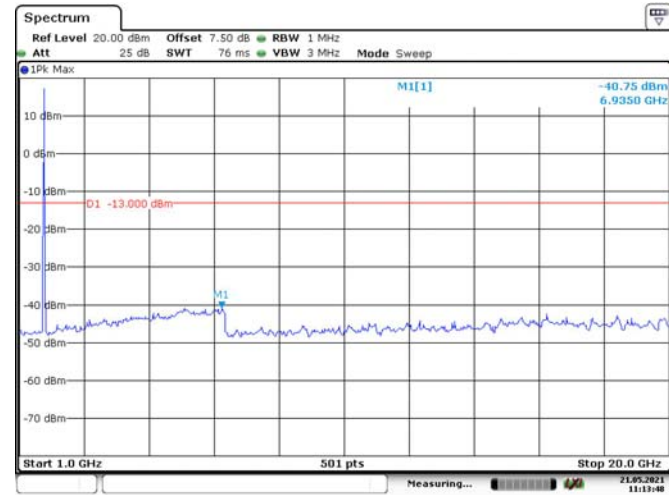


Date: 21.MAY.2021 11:12:52

10M, QPSK, Middle Channel

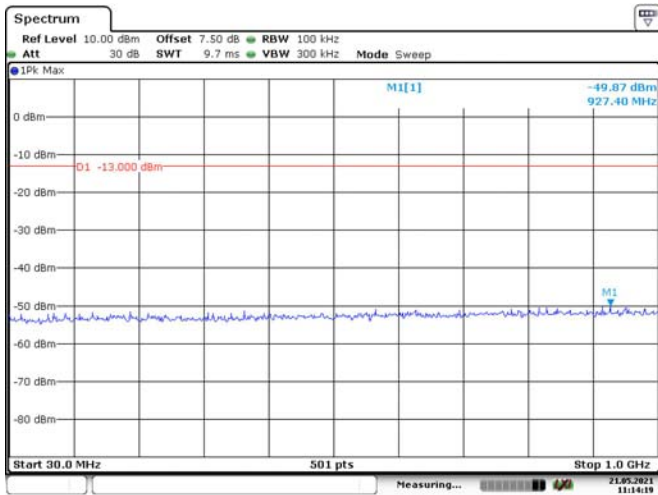


Date: 21.MAY.2021 11:13:23

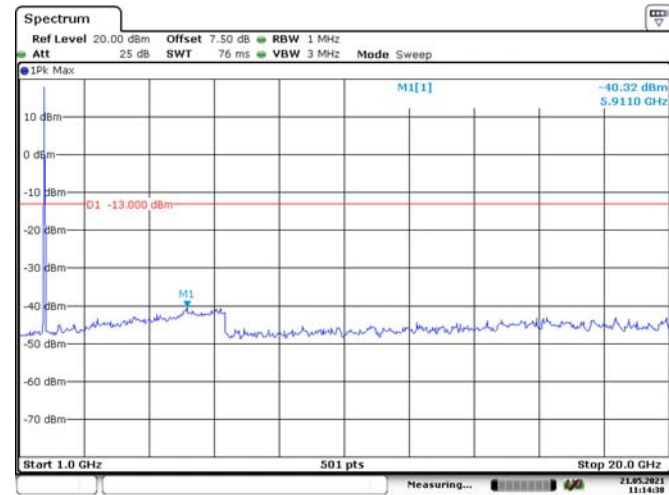


Date: 21.MAY.2021 11:13:48

10M, QPSK, High Channel

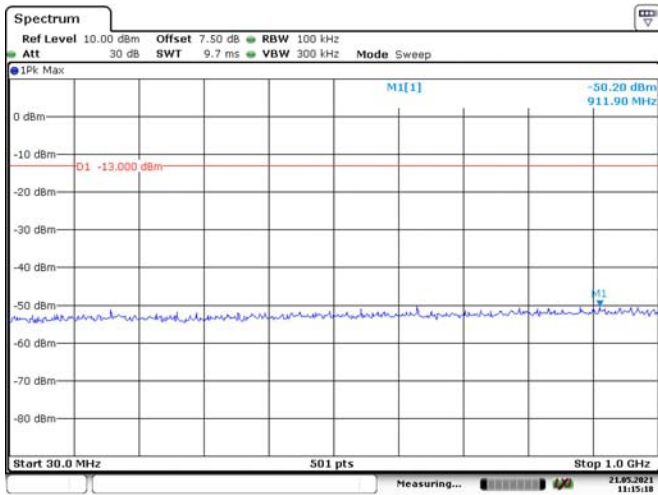


Date: 21.MAY.2021 11:14:19

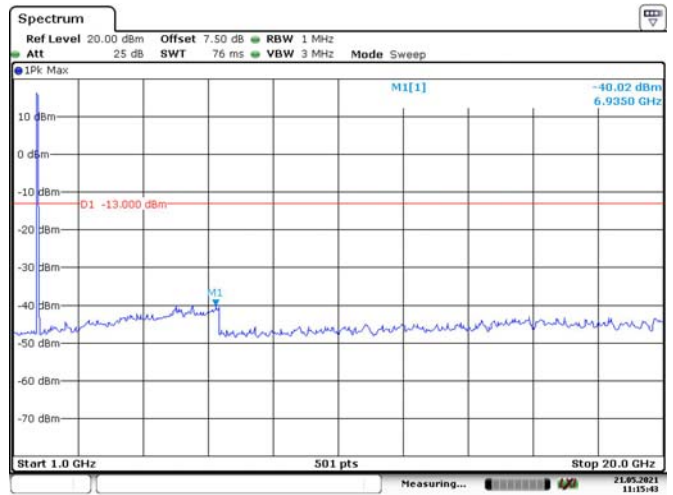


Date: 21.MAY.2021 11:14:38

15M, QPSK, Low Channel

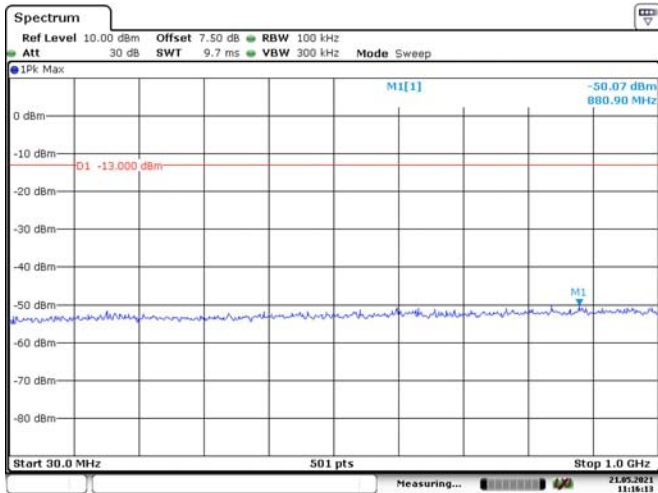


Date: 21.MAY.2021 11:15:18

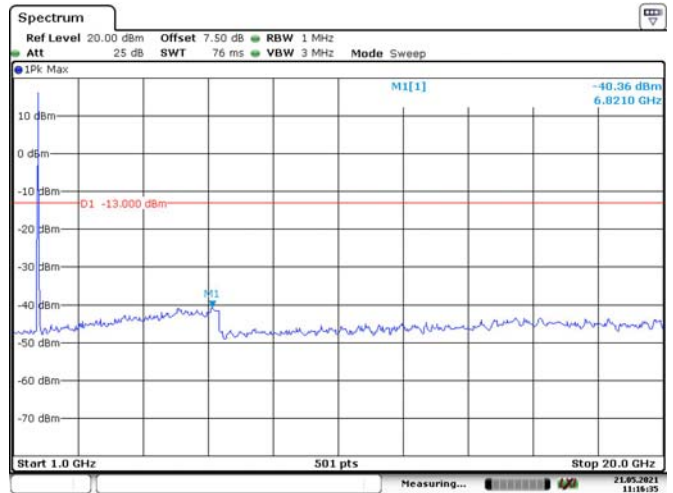


Date: 21.MAY.2021 11:15:43

15M, QPSK, Middle Channel

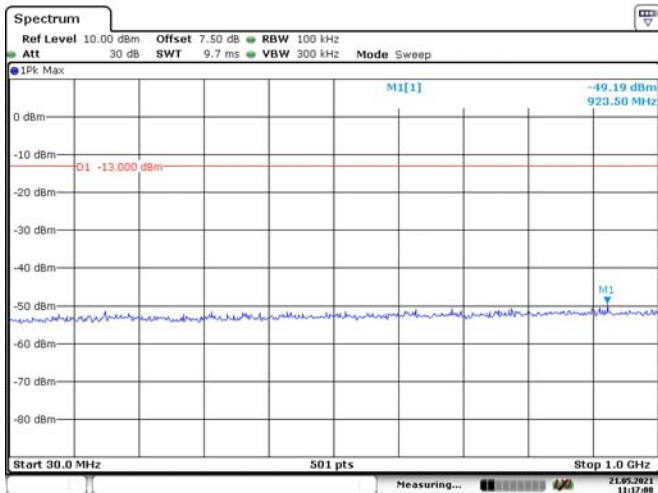


Date: 21.MAY.2021 11:16:13

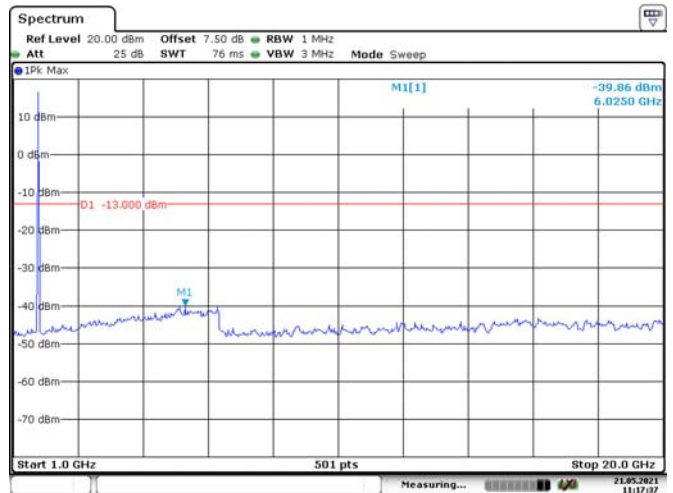


Date: 21.MAY.2021 11:16:35

15M, QPSK, High Channel

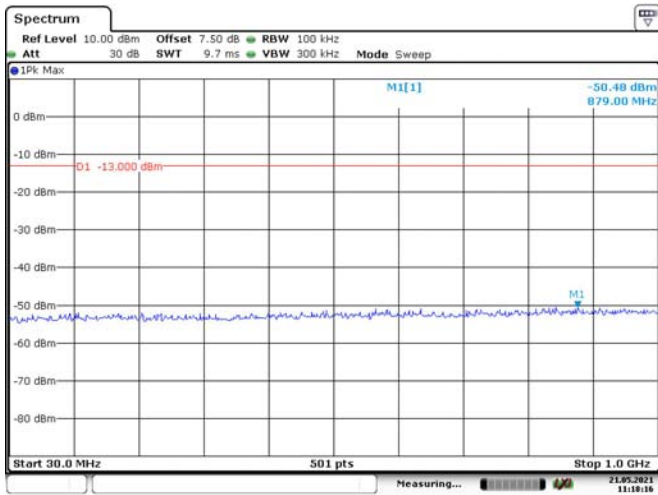


Date: 21.MAY.2021 11:17:08

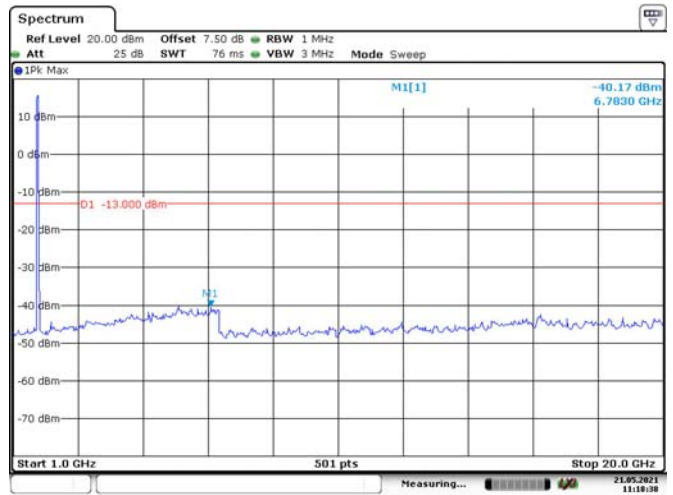


Date: 21.MAY.2021 11:17:37

20M, QPSK, Low Channel

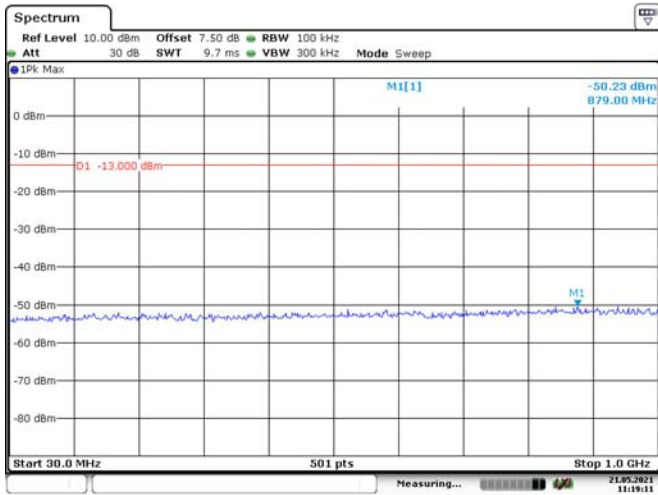


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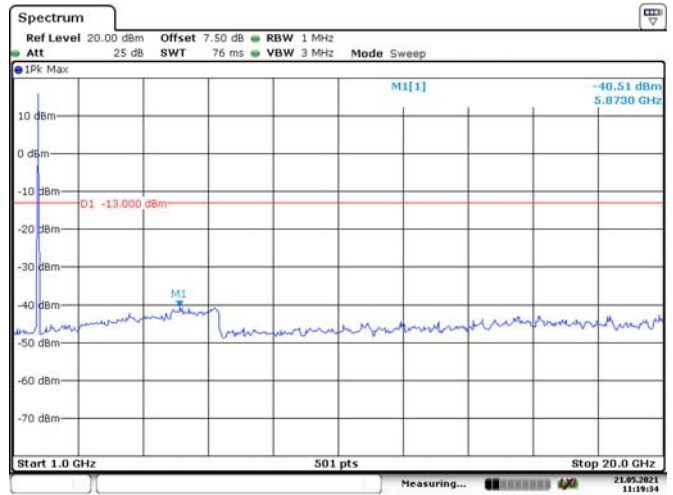


Date: 21.MAY.2021 11:18:38

20M, QPSK, Middle Channel

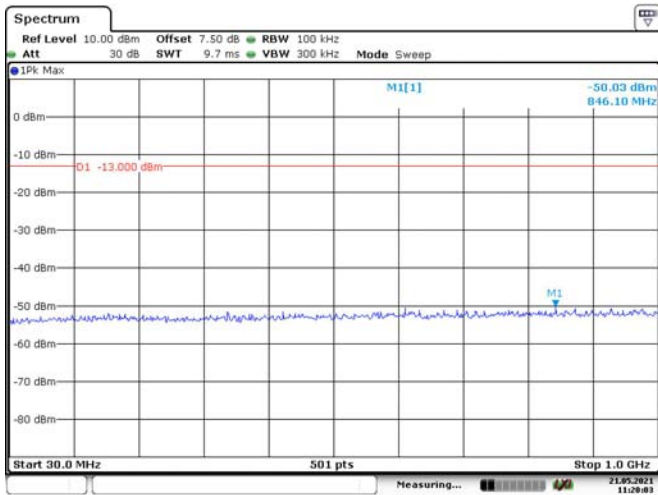


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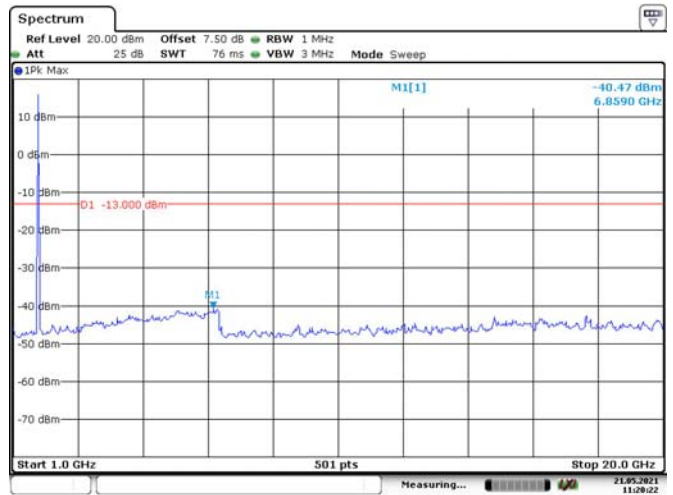


Date: 21.MAY.2021 11:19:34

20M, QPSK, High Channel



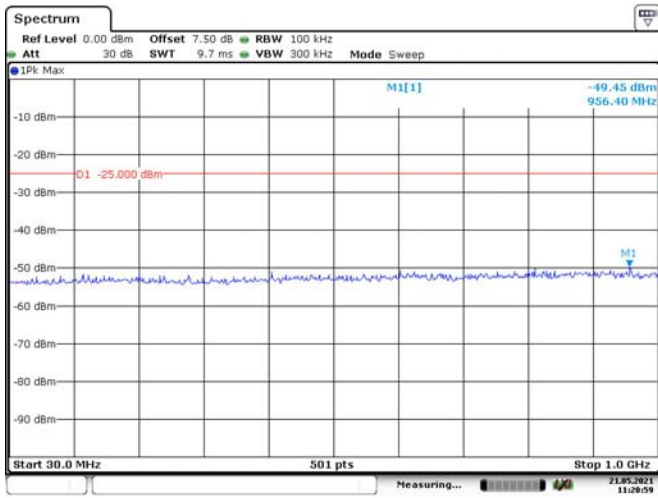
Date: 21.MAY.2021 11:20:03



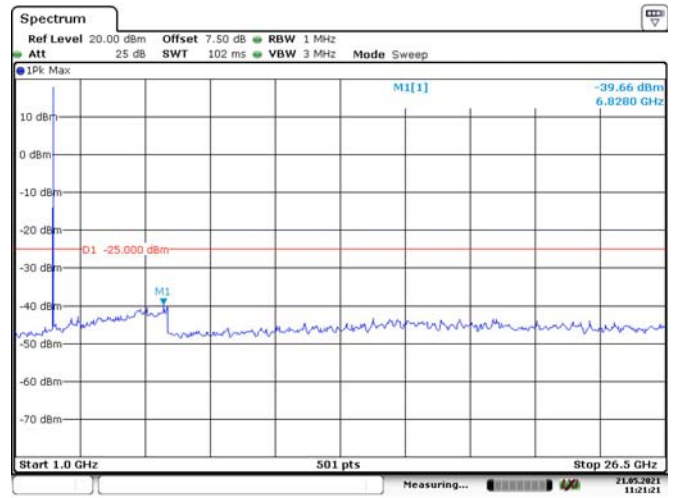
Date: 21.MAY.2021 11:20:23

LTE Band 7:

5M, QPSK, Low Channel

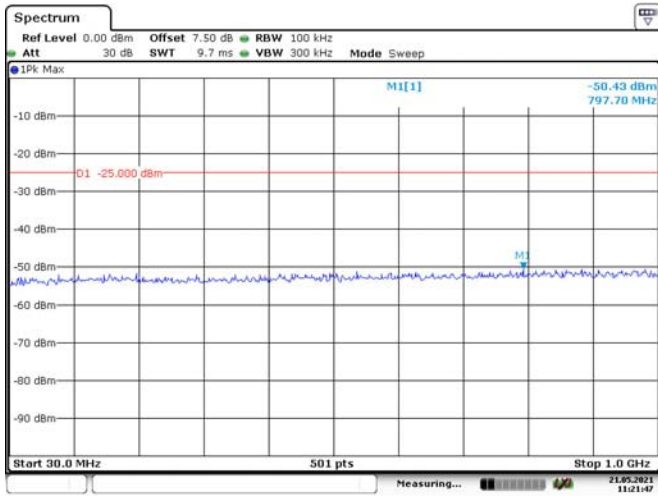


Date: 21.MAY.2021 11:20:59

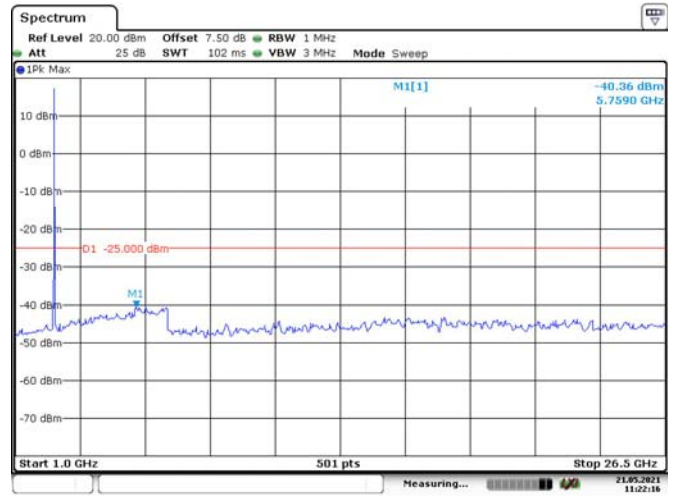


Date: 21.MAY.2021 11:21:21

5M, QPSK, Middle Channel

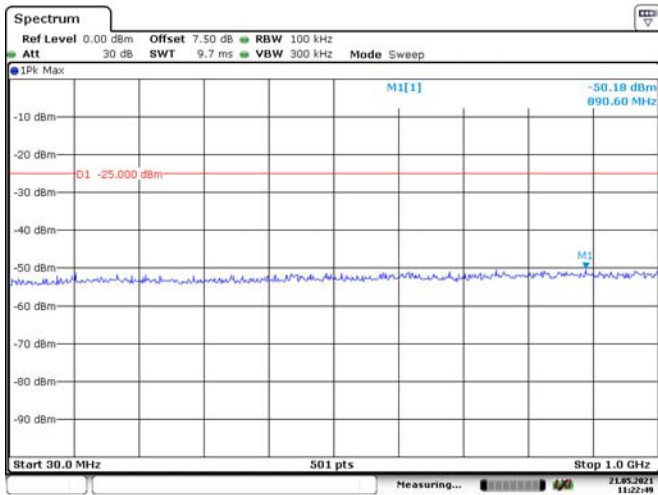


Date: 21.MAY.2021 11:21:48

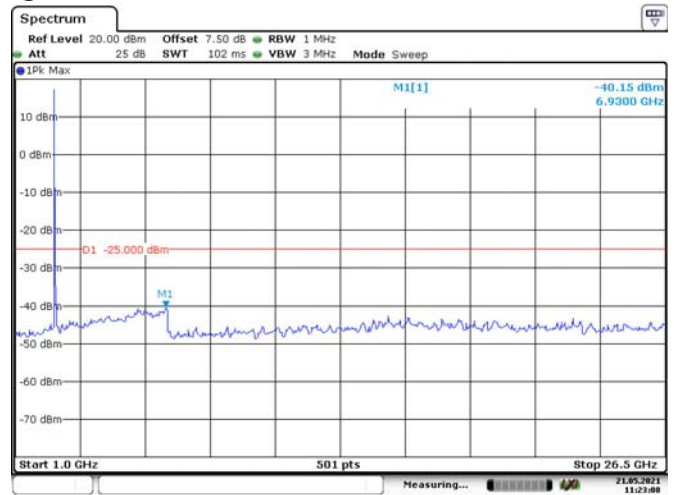


Date: 21.MAY.2021 11:22:16

5M, QPSK, High Channel

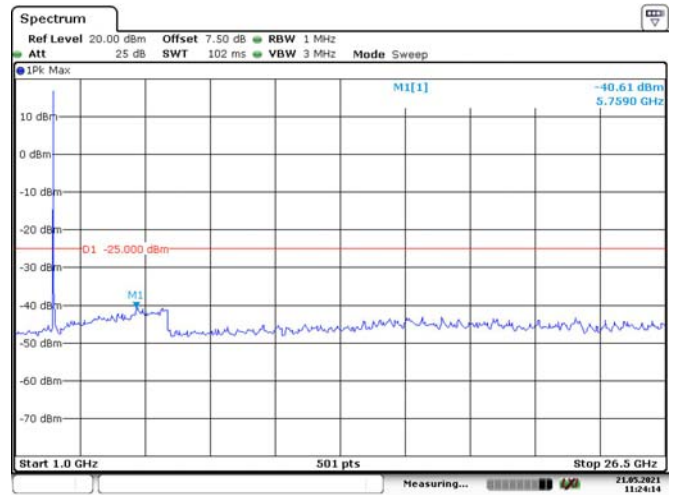
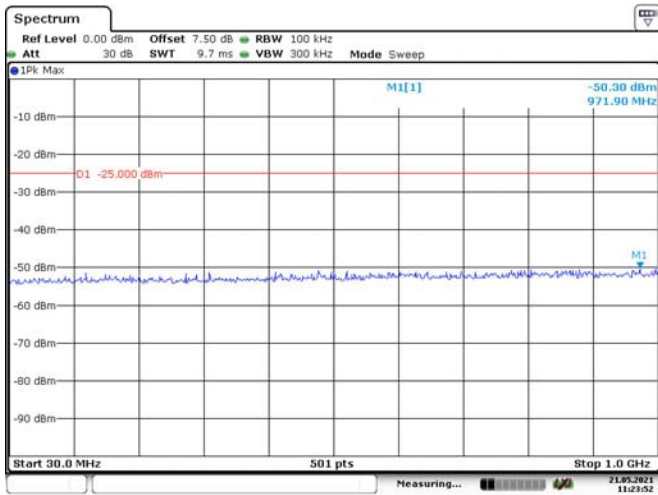


Date: 21.MAY.2021 11:22:49

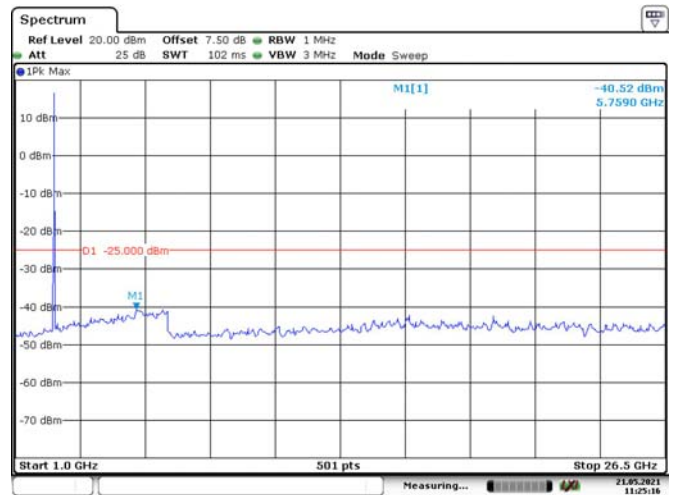
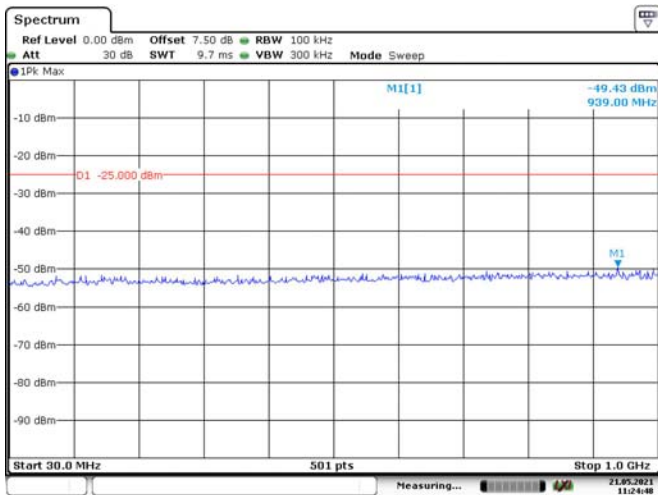


Date: 21.MAY.2021 11:23:08

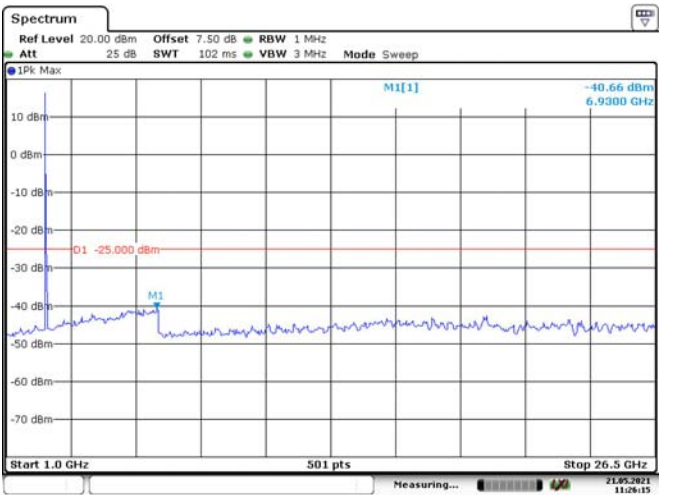
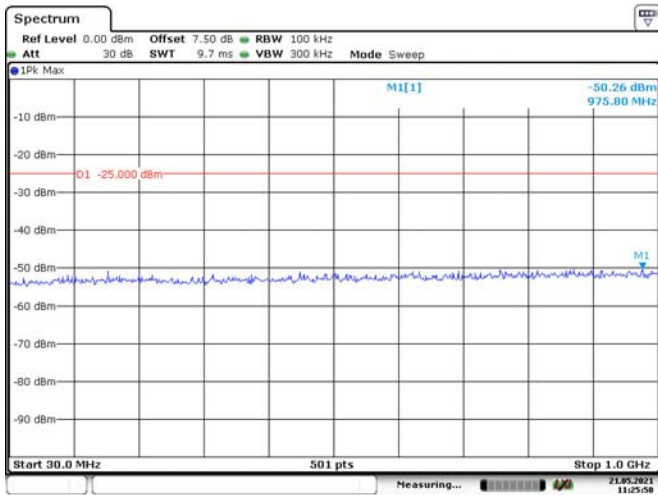
10M, QPSK, Low Channel



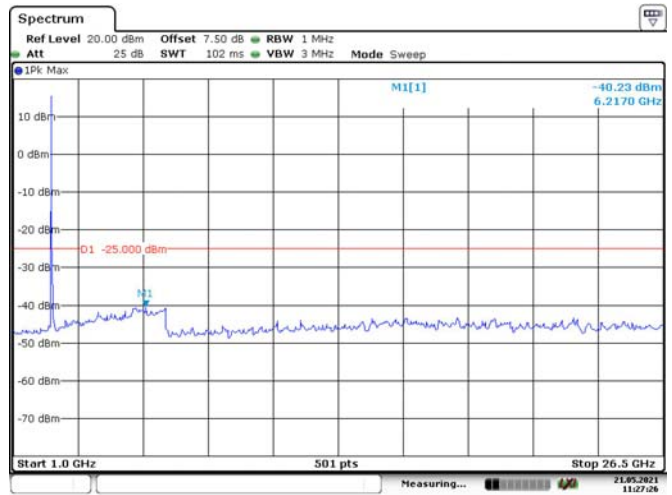
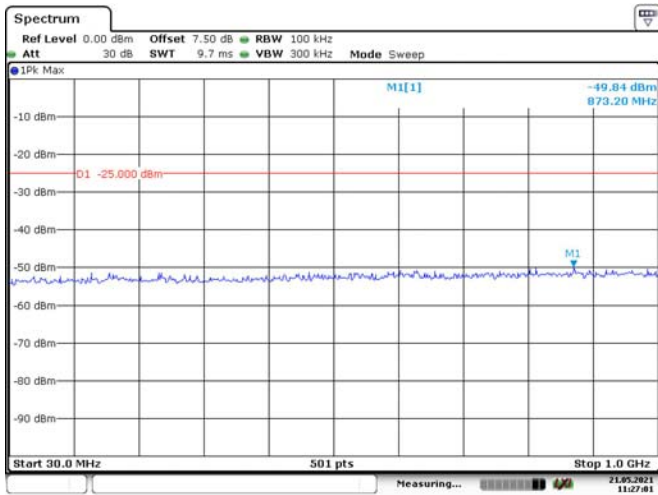
10M, QPSK, Middle Channel



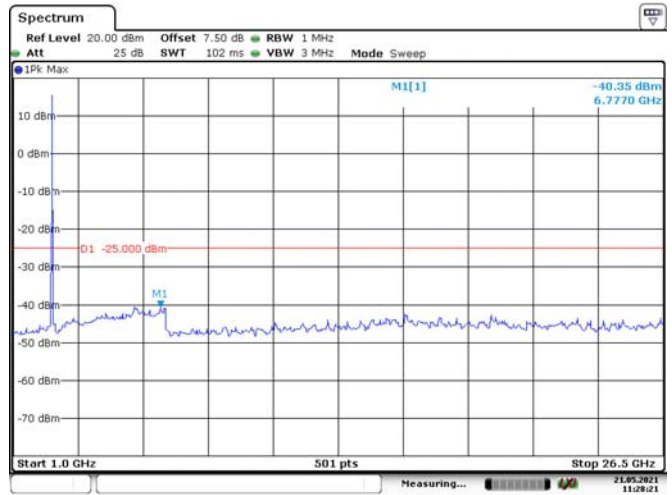
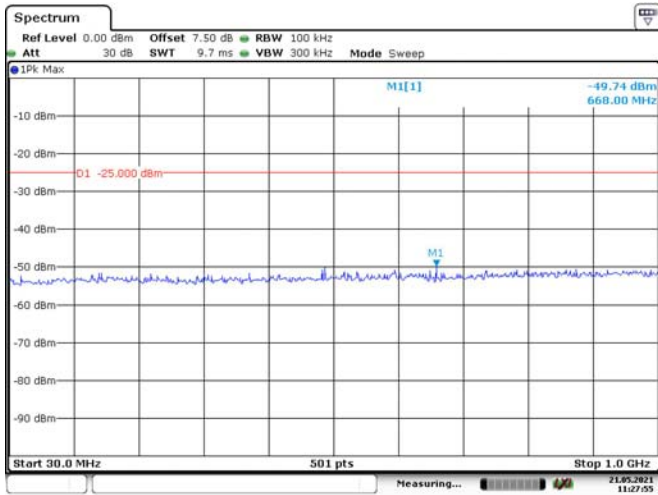
10M, QPSK, High Channel



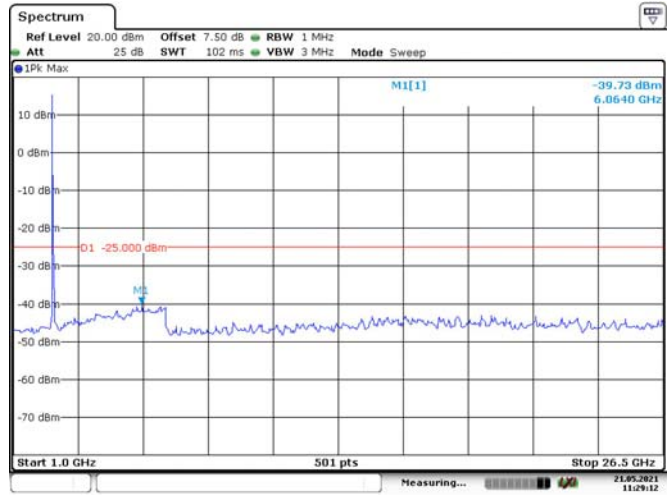
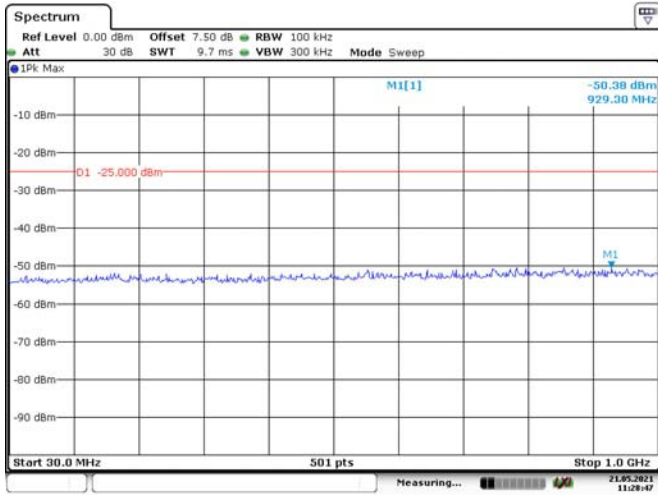
15M, QPSK, Low Channel



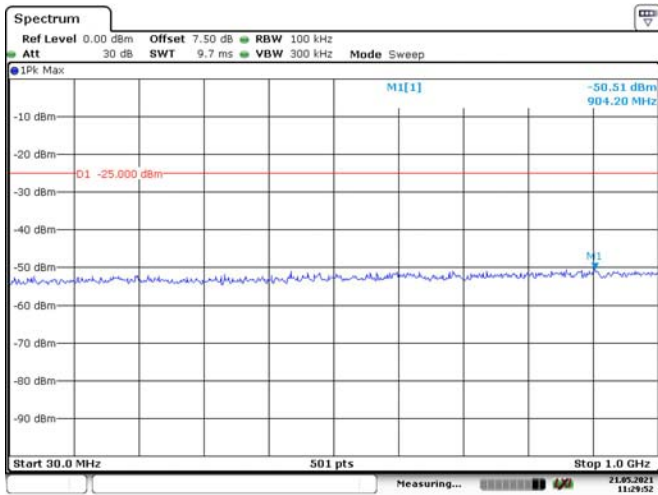
15M, QPSK, Middle Channel



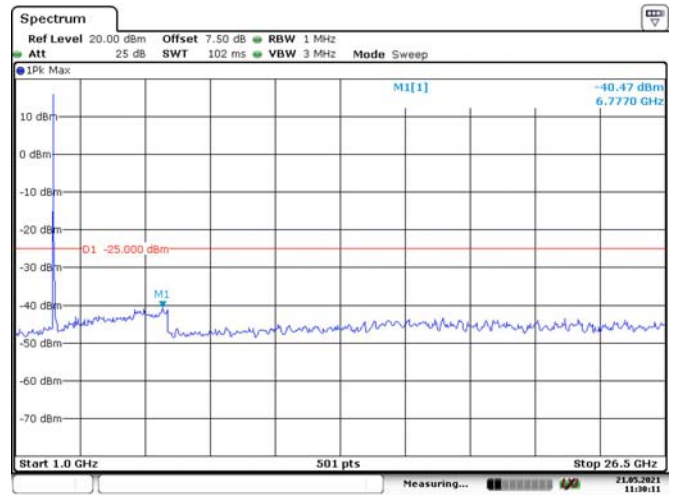
15M, QPSK, High Channel



20M, QPSK, Low Channel

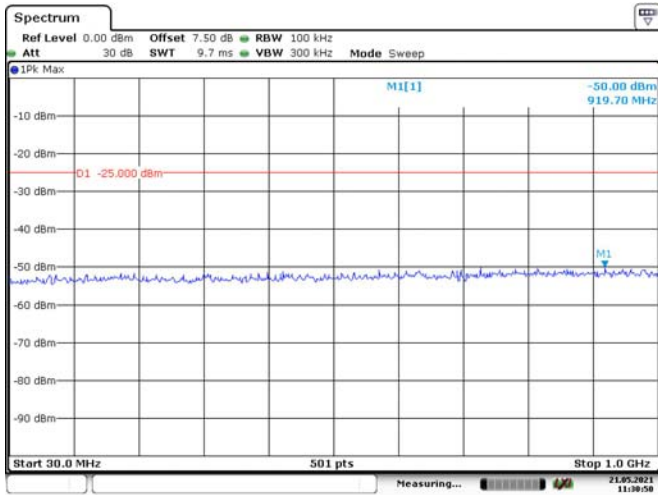


Date: 21.MAY.2021 11:29:52

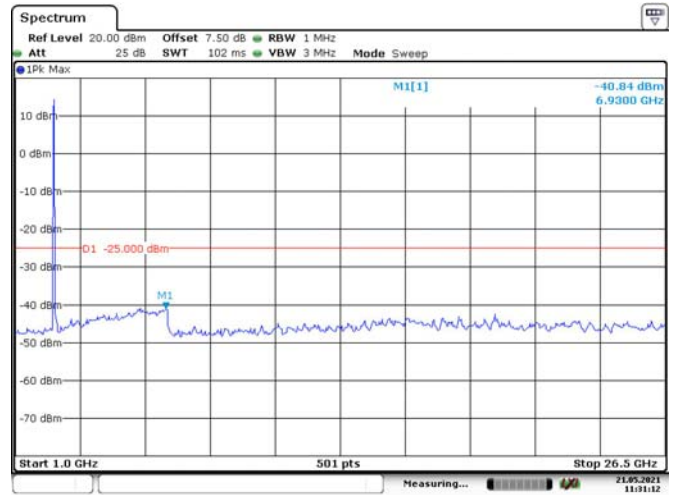


Date: 21.MAY.2021 11:30:11

20M, QPSK, Middle Channel

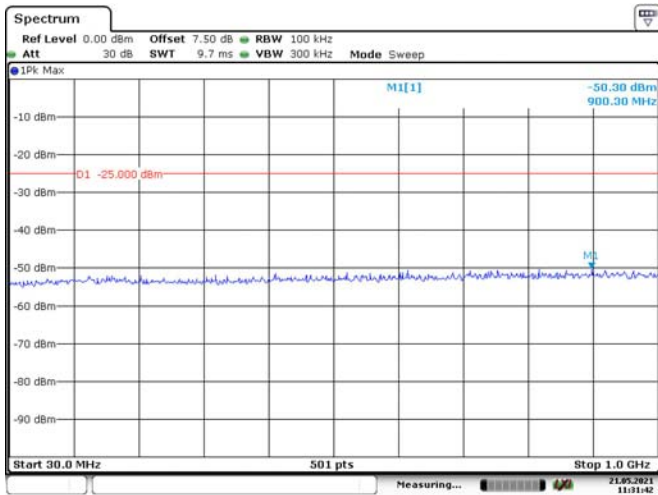


Date: 21.MAY.2021 11:30:50

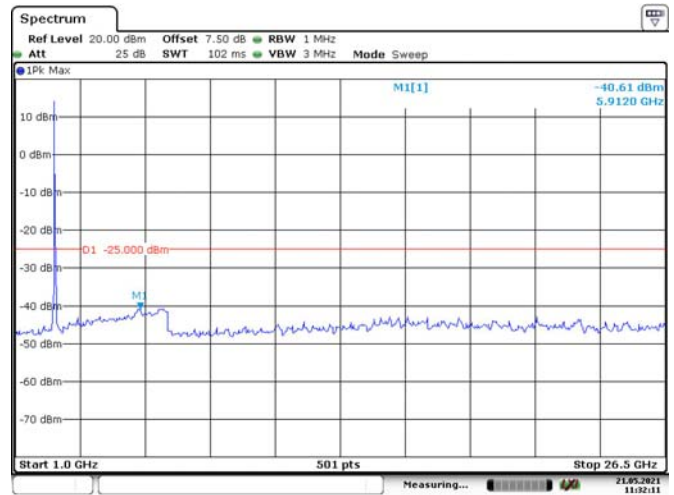


Date: 21.MAY.2021 11:31:12

20M, QPSK, High Channel



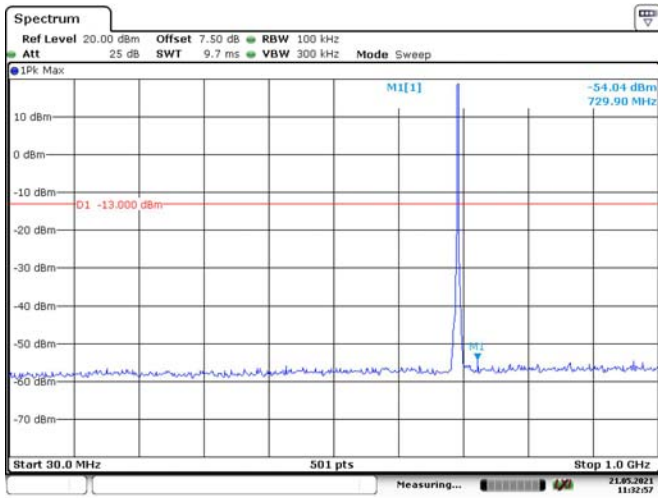
Date: 21.MAY.2021 11:31:42



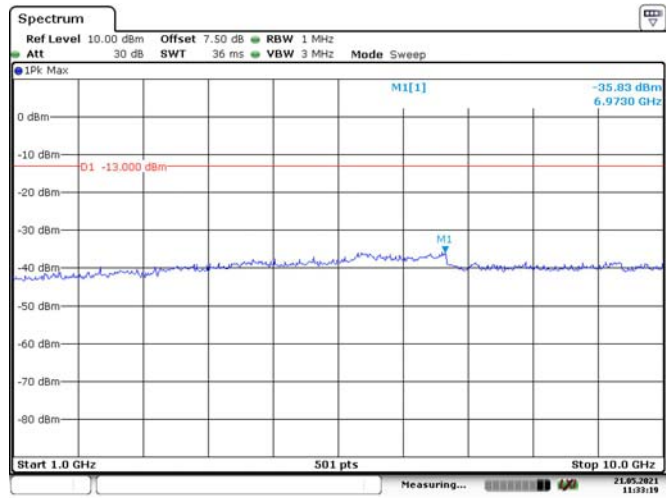
Date: 21.MAY.2021 11:32:11

LTE Band 12:

1.4M, QPSK, Low Channel

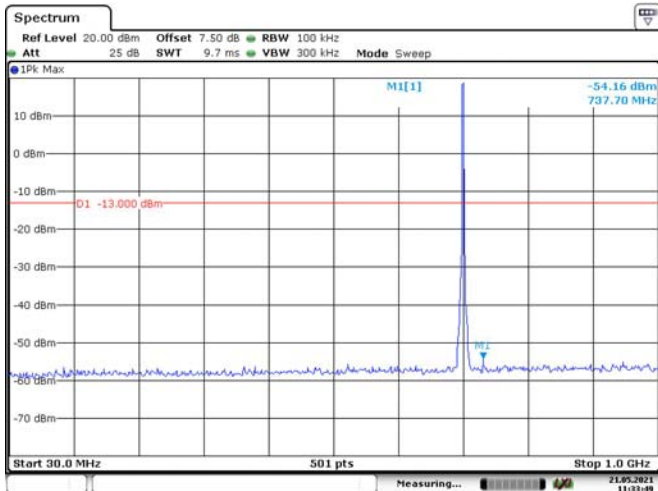


Date: 21.MAY.2021 11:32:57

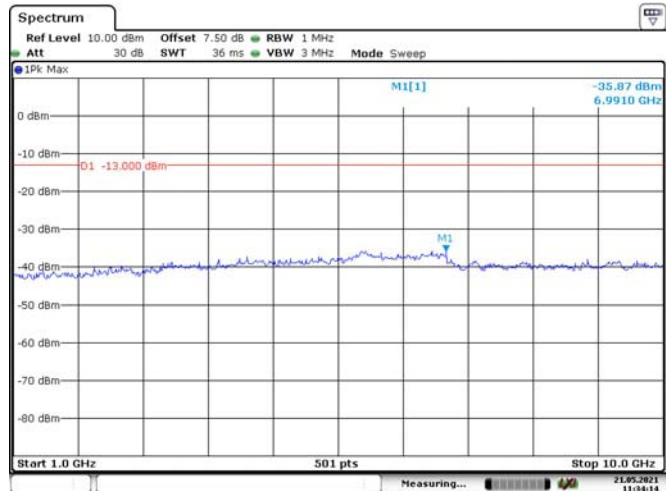


Date: 21.MAY.2021 11:33:19

1.4M, QPSK, Middle Channel

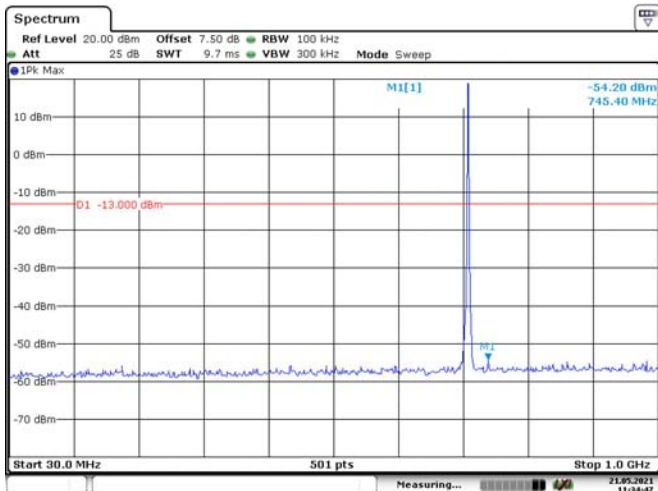


Date: 21.MAY.2021 11:33:49

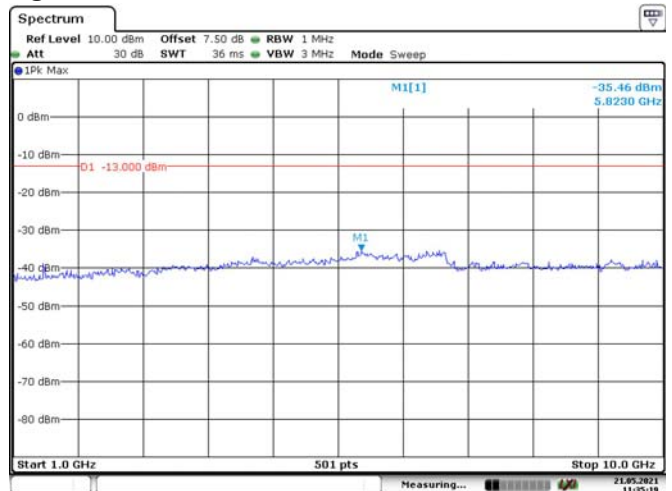


Date: 21.MAY.2021 11:34:15

1.4M, QPSK, High Channel

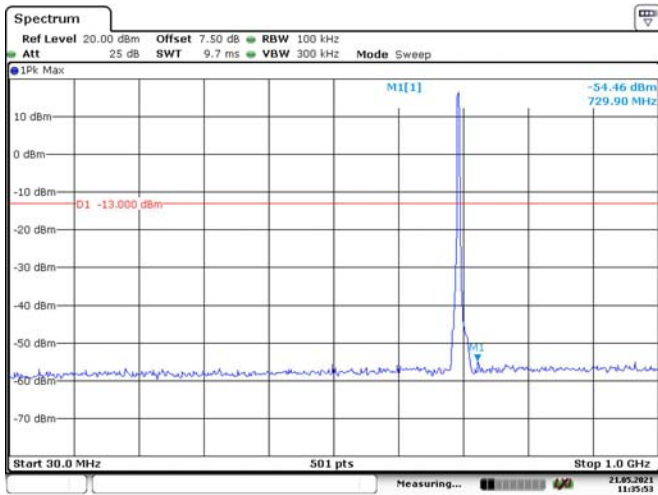


Date: 21.MAY.2021 11:34:47

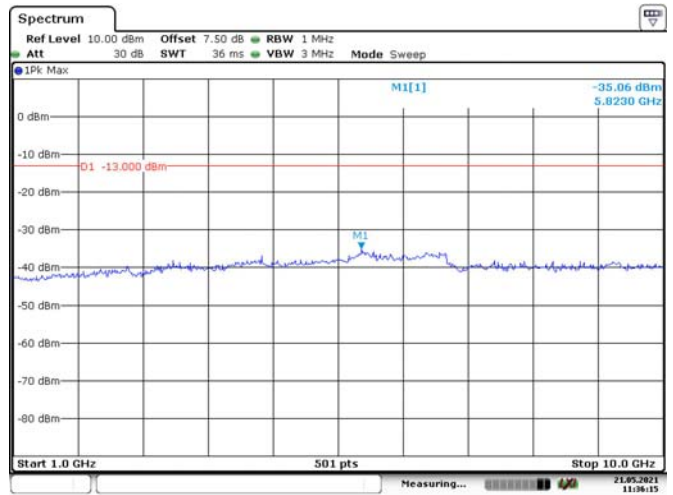


Date: 21.MAY.2021 11:35:19

3M, QPSK, Low Channel

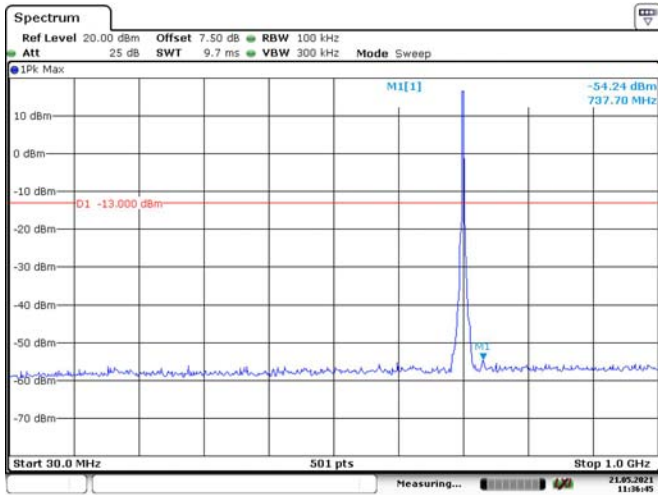


Date: 21.MAY.2021 11:35:53

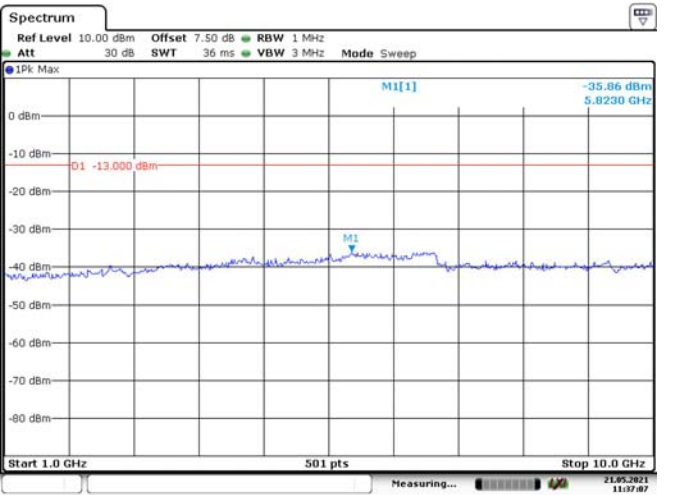


Date: 21.MAY.2021 11:36:15

3M, QPSK, Middle Channel

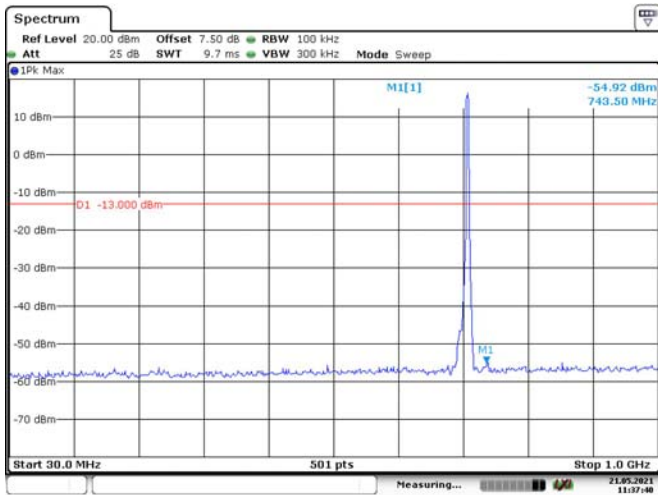


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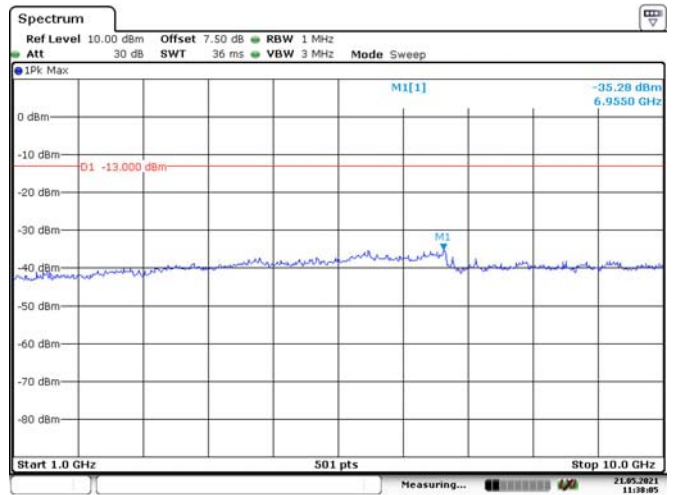


Date: 21.MAY.2021 11:37:07

3M, QPSK, High Channel

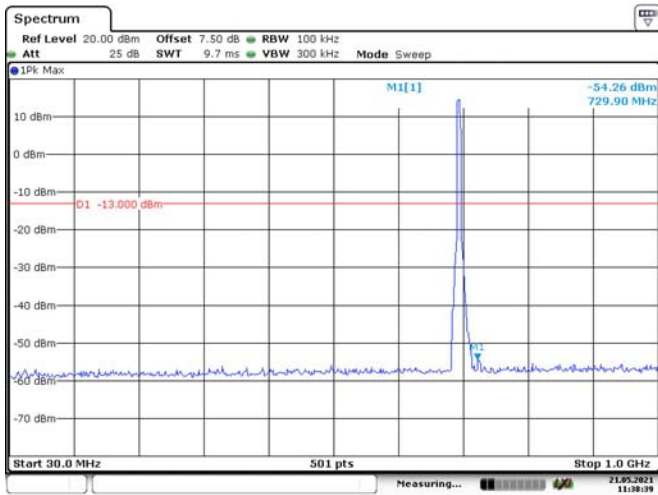


Date: 21.MAY.2021 11:37:40

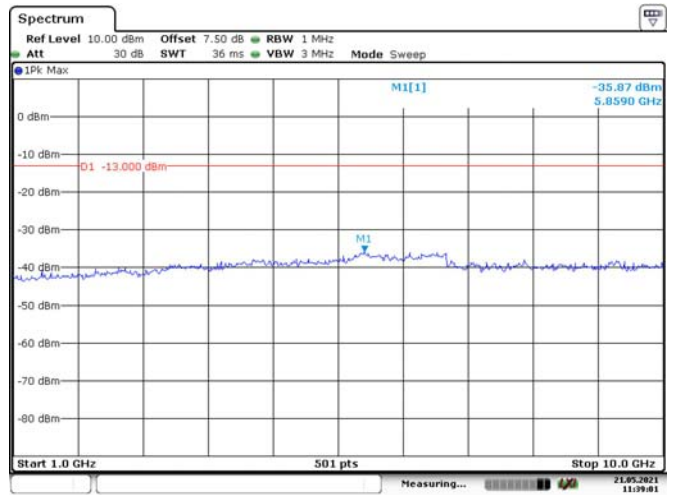


Date: 21.MAY.2021 11:38:05

5M, QPSK, Low Channel

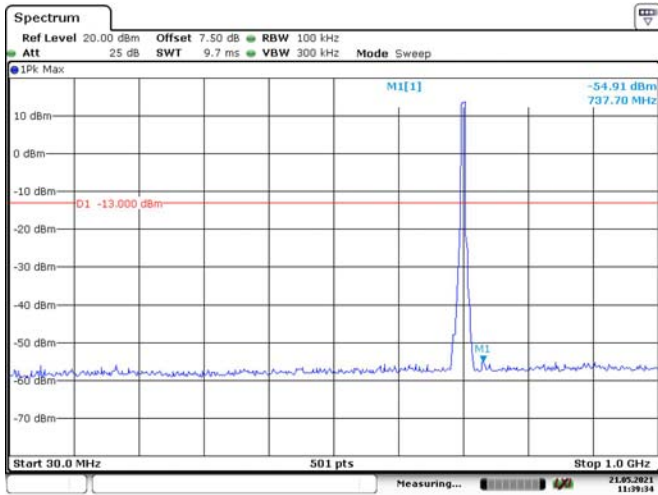


Date: 21.MAY.2021 11:38:39

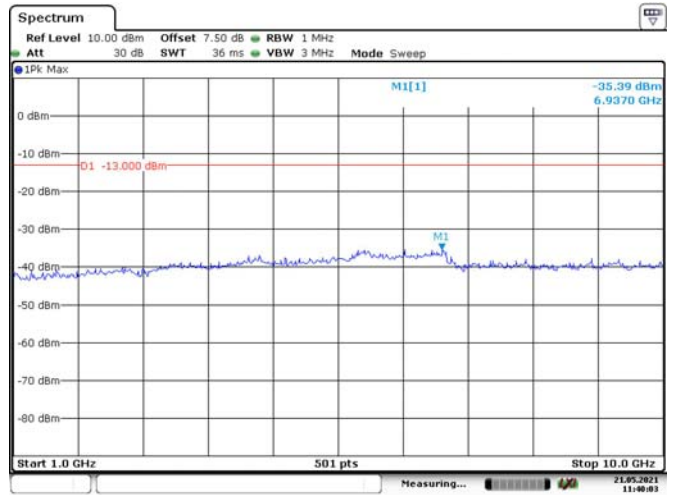


Date: 21.MAY.2021 11:39:01

5M, QPSK, Middle Channel

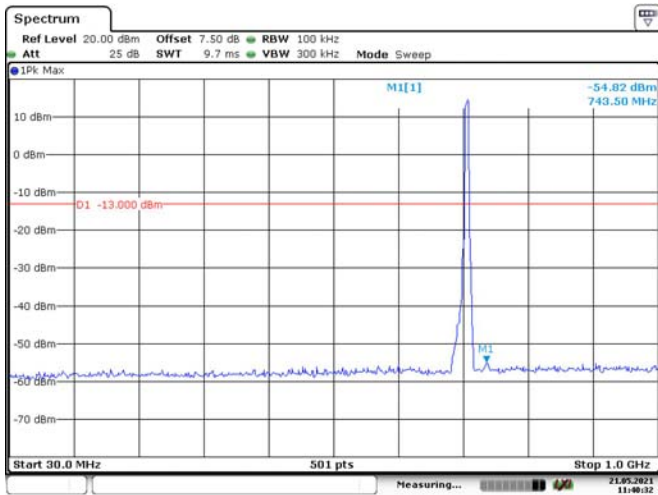


Date: 21.MAY.2021 11:39:34

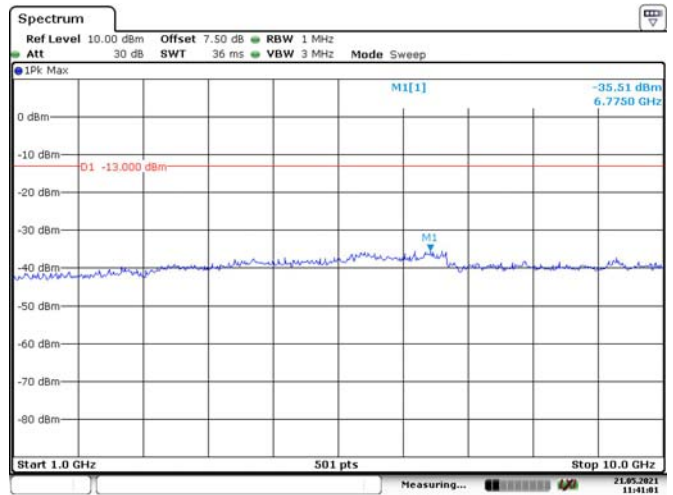


Date: 21.MAY.2021 11:40:03

5M, QPSK, High Channel

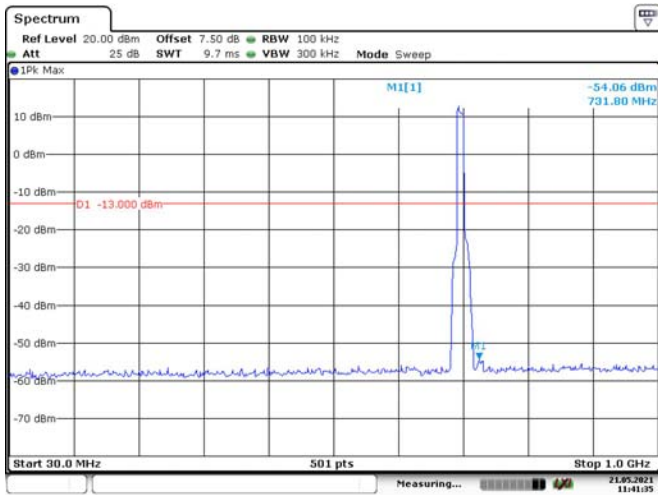


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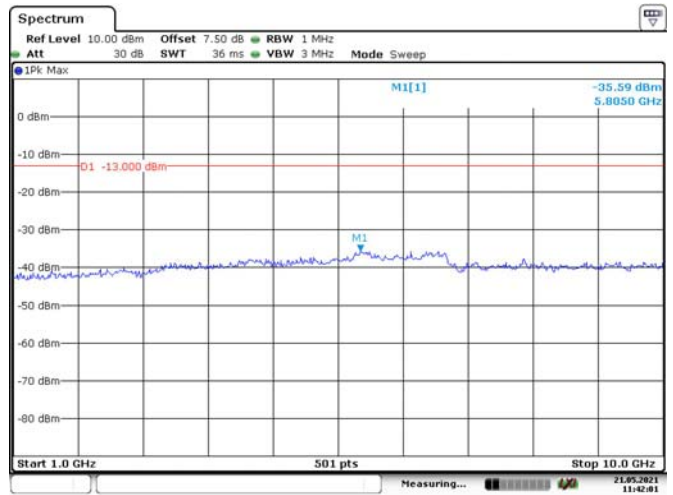


Date: 21.MAY.2021 11:41:01

10M, QPSK, Low Channel

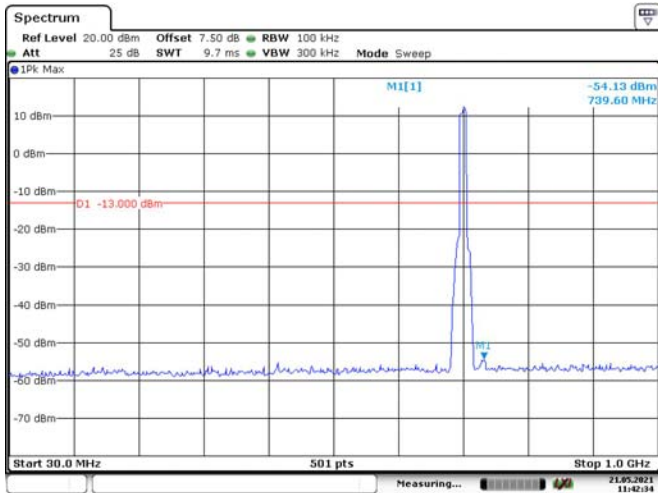


Date: 21.MAY.2021 11:41:35

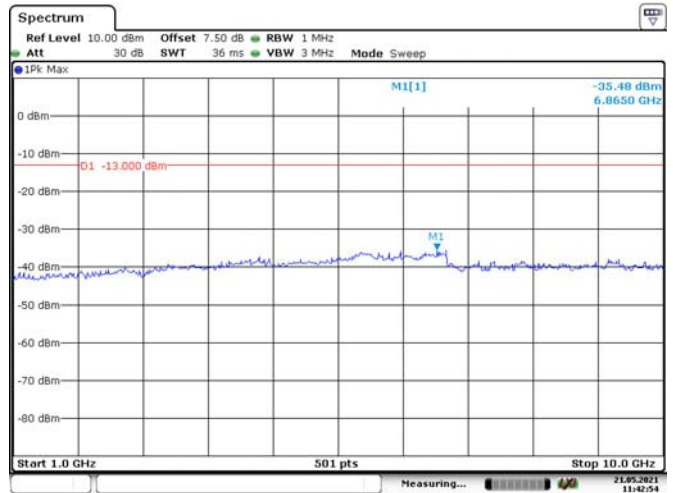


Date: 21.MAY.2021 11:42:01

10M, QPSK, Middle Channel

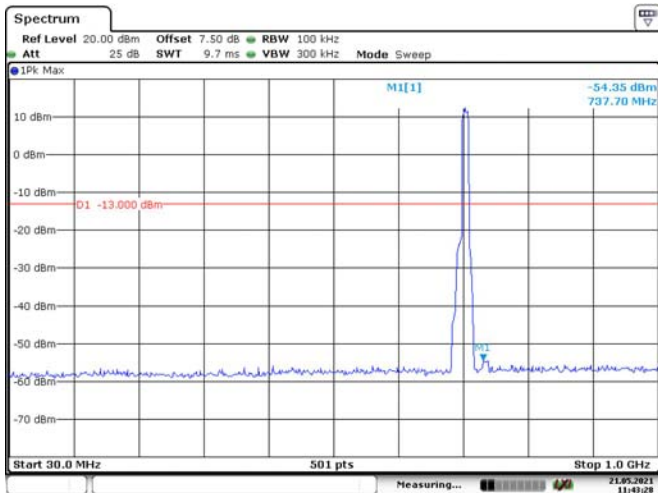


Date: 21.MAY.2021 11:42:35

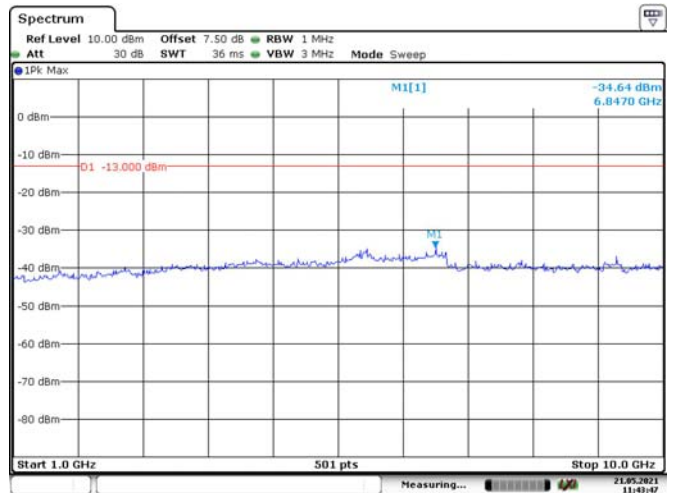


Date: 21.MAY.2021 11:42:54

10M, QPSK, High Channel



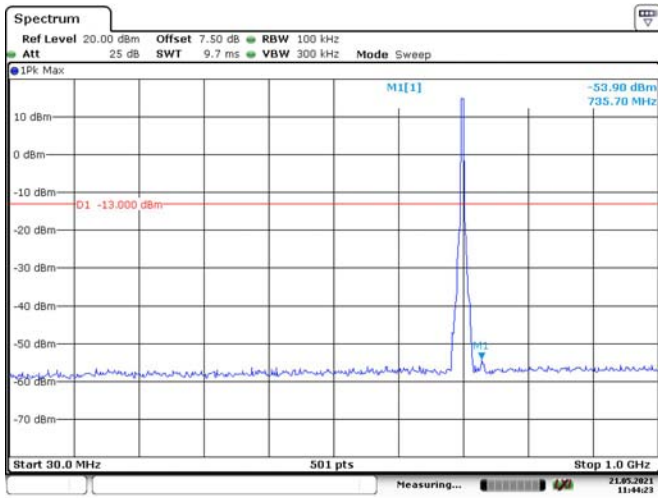
Date: 21.MAY.2021 11:43:28



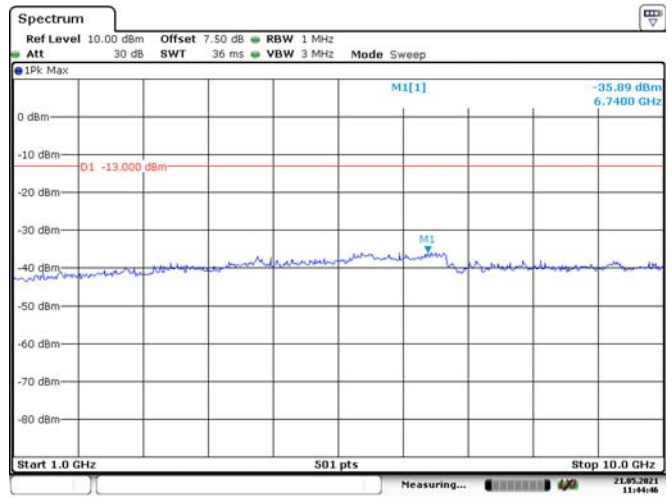
Date: 21.MAY.2021 11:43:47

LTE Band 17:

5M, QPSK, Low Channel

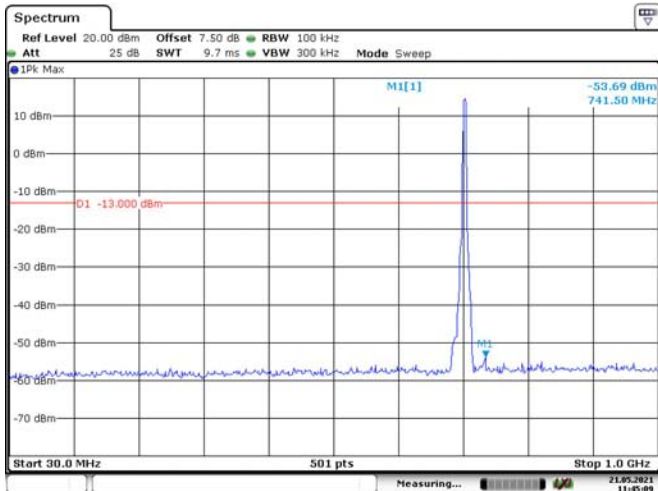


Date: 21.MAY.2021 11:44:23

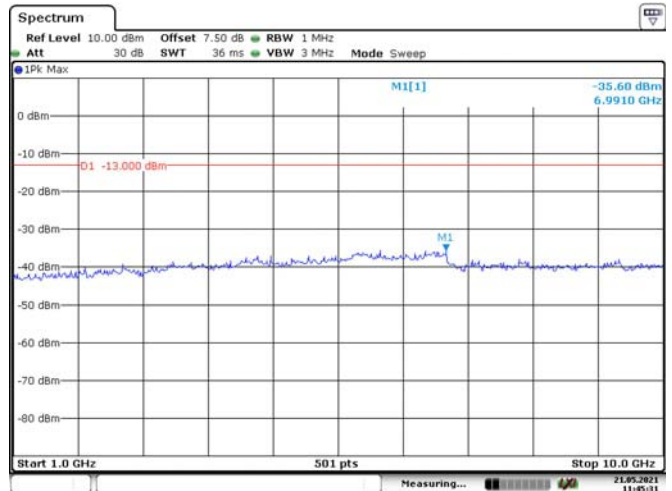


Date: 21.MAY.2021 11:44:46

5M, QPSK, Middle Channel

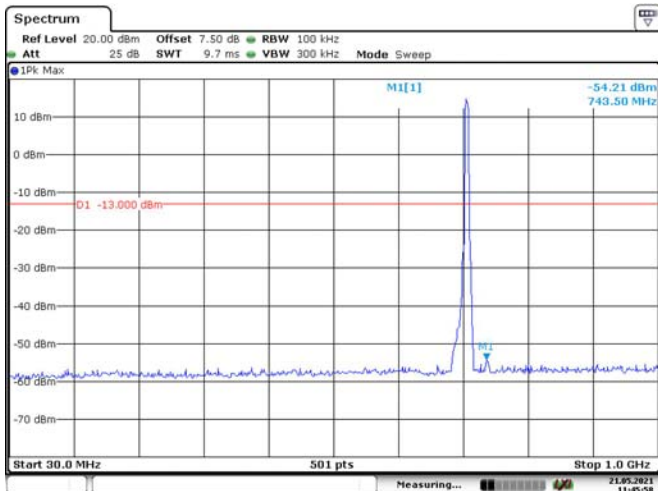


Date: 21.MAY.2021 11:45:09

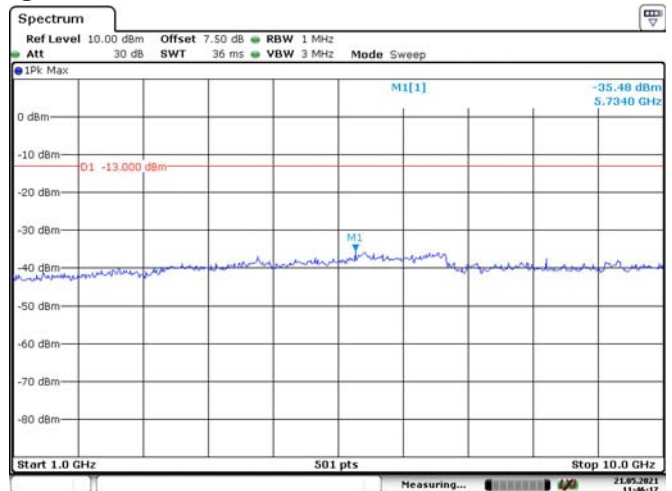


Date: 21.MAY.2021 11:45:32

5M, QPSK, High Channel

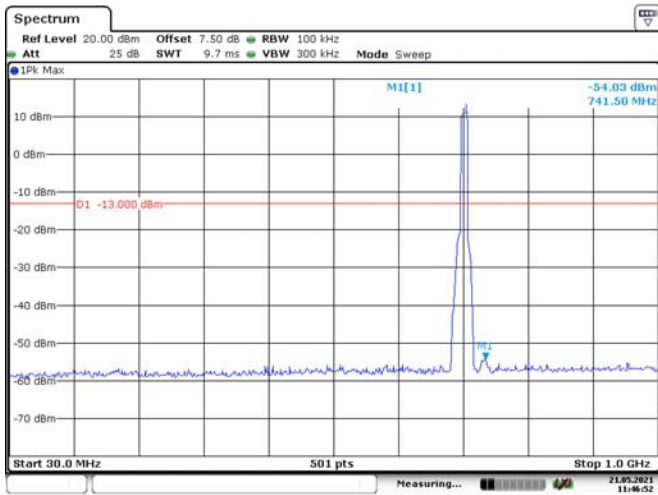


Date: 21.MAY.2021 11:45:58

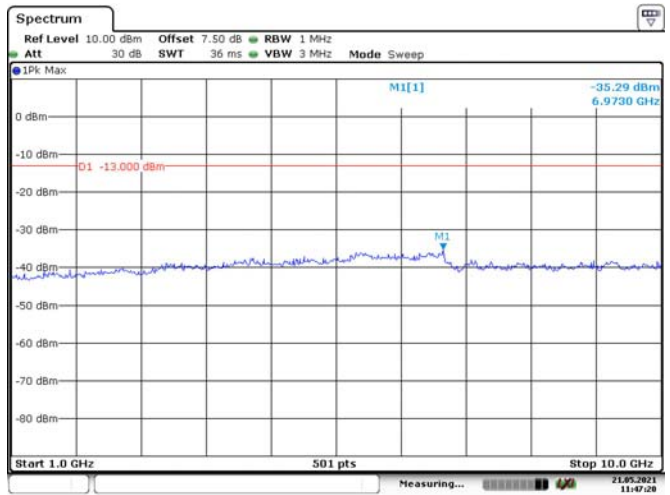


Date: 21.MAY.2021 11:46:17

10M, QPSK, Low Channel

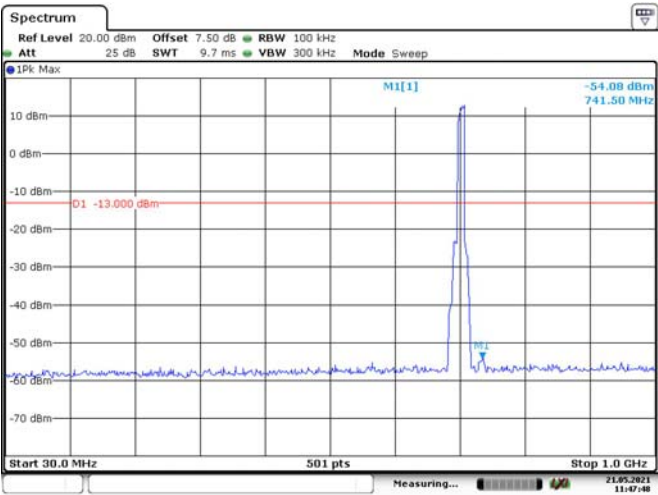


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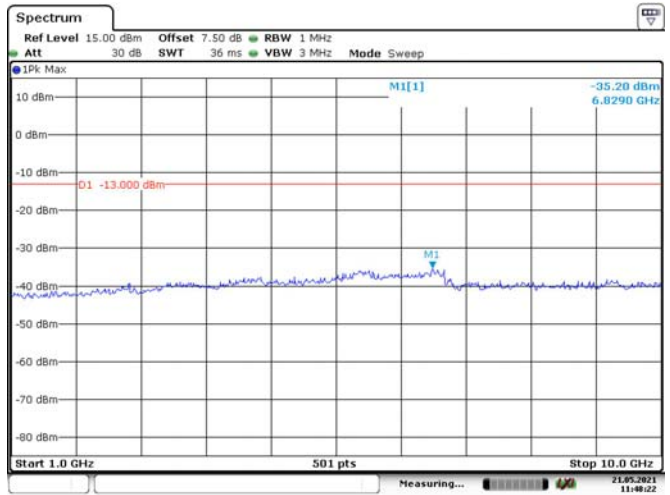


Date: 21.MAY.2021 11:47:20

10M, QPSK, Middle Channel

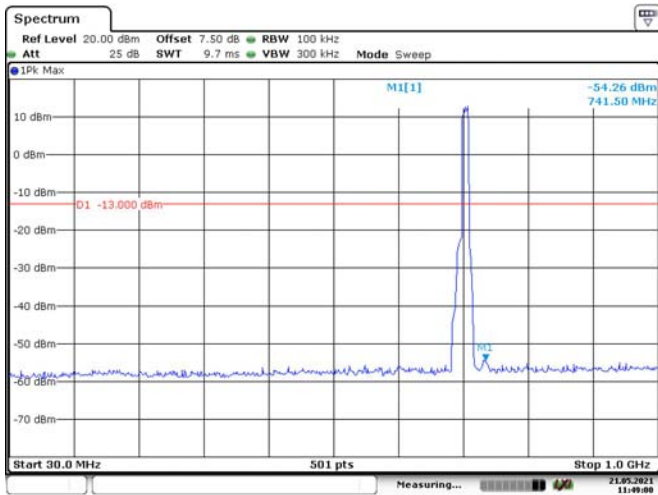


Date: 21.MAY.2021 11:47:48

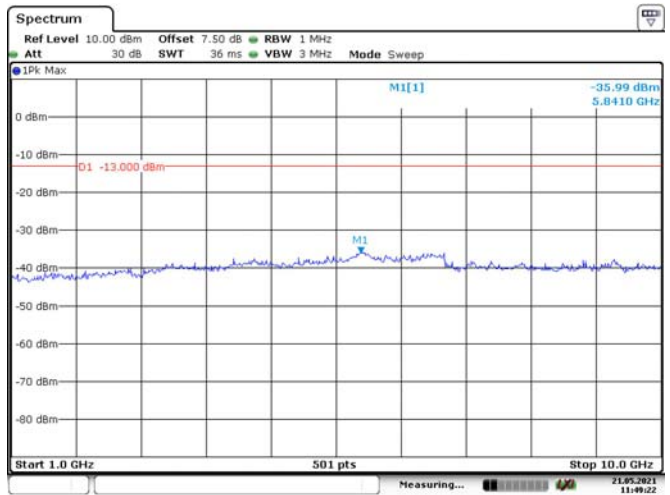


Date: 21.MAY.2021 11:48:22

10M, QPSK, High Channel



Date: 21.MAY.2021 11:49:00



Date: 21.MAY.2021 11:49:22

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
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2020-09-05	2021-09-05
Agilent	Signal Generator	E8247C	MY43321350	2021-04-25	2022-04-24
ETS-Lindgren	Horn Antenna	3115	000 527 35	2018-10-12	2021-10-12
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-01 1304	2020-12-05	2023-12-04
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
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020-10-13	2023-10-12
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2020-12-05	2023-12-04
Sinoscite	Band-stop filter	BSF1710- 1785MN-0383- 003	0383003	2020-06-16	2021-06-16
Sinoscite	Band-stop filter	BSF1850- 1910MS-0935V2	0935V2	2020-06-16	2021-06-16
Sinoscite	Band-stop filter	BSF824-862MS- 1438-001	1438001	2020-06-16	2021-06-16

* **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:	24.2°C	29.9°C
Relative Humidity:	53.9 %	44%
ATM Pressure:	100.2kPa	100kPa
Tester:	Joker Chen	Jeremy Liang
Test Date:	2021-06-20	2021-06-20

Test Result: Compliance.
EUT Operation Mode: Transmitting

Cellular Band (PART 22H)**30 MHz-10 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850 Frequency:824.2MHz								
1648.40	H	48.08	-56.10	10.44	0.71	-46.37	-13.00	33.37
1648.40	V	47.28	-57.50	10.44	0.71	-47.77	-13.00	34.77
2472.60	H	44.26	-58.52	12.88	1.25	-46.89	-13.00	33.89
2472.60	V	43.15	-59.68	12.88	1.25	-48.05	-13.00	35.05
3296.80	H	37.16	-62.62	13.60	1.59	-50.61	-13.00	37.61
3296.80	V	36.75	-63.04	13.60	1.59	-51.03	-13.00	38.03
365.70	H	65.10	-42.33	0.00	0.36	-42.69	-13.00	29.69
472.15	V	64.23	-38.88	0.00	0.36	-39.24	-13.00	26.24
GSM 850 Frequency:836.6MHz								
1673.20	H	48.69	-55.25	10.61	0.73	-45.37	-13.00	32.37
1673.20	V	47.95	-56.59	10.61	0.73	-46.71	-13.00	33.71
2509.80	H	44.65	-58.26	13.11	1.25	-46.40	-13.00	33.40
2509.80	V	43.75	-59.19	13.11	1.25	-47.33	-13.00	34.33
3346.40	H	36.95	-62.73	13.83	1.61	-50.51	-13.00	37.51
3346.40	V	36.23	-63.49	13.83	1.61	-51.27	-13.00	38.27
476.99	H	69.27	-36.46	0.00	0.36	-36.82	-13.00	23.82
556.83	V	63.55	-37.63	0.00	0.36	-37.99	-13.00	24.99
GSM 850 Frequency:848.8MHz								
1697.60	H	49.93	-53.77	10.78	0.75	-43.74	-13.00	30.74
1697.60	V	47.61	-56.69	10.78	0.75	-46.66	-13.00	33.66
2546.40	H	44.15	-58.80	13.15	1.27	-46.92	-13.00	33.92
2546.40	V	43.97	-59.12	13.15	1.27	-47.24	-13.00	34.24
3395.20	H	36.65	-62.87	14.08	1.64	-50.43	-13.00	37.43
3395.20	V	36.19	-63.43	14.08	1.64	-50.99	-13.00	37.99
105.35	H	68.11	-42.93	0.00	0.13	-43.06	-13.00	30.06
201.74	V	60.52	-46.01	0.00	0.18	-46.19	-13.00	33.19

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	41.51	-63.52	10.46	1.28	-54.34	-13.00	41.34
1652.80	V	37.87	-67.10	10.46	1.28	-57.92	-13.00	44.92
2479.20	H	43.91	-59.79	12.17	1.24	-48.86	-13.00	35.86
2479.20	V	46.79	-58.26	12.17	1.24	-47.33	-13.00	34.33
3305.60	H	42.39	-59.86	12.28	1.57	-49.15	-13.00	36.15
3305.60	V	40.94	-60.35	12.28	1.57	-49.64	-13.00	36.64
117.99	H	60.77	-49.04	0.00	0.20	-49.24	-13.00	36.24
123.58	V	58.29	-46.01	0.00	0.21	-46.22	-13.00	33.22
WCDMA Band 5 Frequency:836.6MHz								
1673.20	H	44.19	-60.83	10.52	1.27	-51.58	-13.00	38.58
1673.20	V	39.74	-65.21	10.52	1.27	-55.96	-13.00	42.96
2509.80	H	37.14	-66.49	12.20	1.25	-55.54	-13.00	42.54
2509.80	V	41.39	-63.63	12.20	1.25	-52.68	-13.00	39.68
3346.40	H	37.68	-64.50	12.26	1.58	-53.82	-13.00	40.82
3346.40	V	37.04	-64.06	12.26	1.58	-53.38	-13.00	40.38
174.36	H	61.53	-49.57	0.00	0.24	-49.81	-13.00	36.81
302.58	V	59.28	-47.64	0.00	0.31	-47.95	-13.00	34.95
WCDMA Band 5 Frequency:846.6MHz								
1693.20	H	41.99	-63.01	10.58	1.26	-53.69	-13.00	40.69
1693.20	V	38.71	-66.23	10.58	1.26	-56.91	-13.00	43.91
2539.80	H	44.77	-58.81	12.22	1.26	-47.85	-13.00	34.85
2539.80	V	44.74	-60.14	12.22	1.26	-49.18	-13.00	36.18
3386.40	H	39.00	-63.11	12.25	1.59	-52.45	-13.00	39.45
3386.40	V	38.02	-62.90	12.25	1.59	-52.24	-13.00	39.24
203.59	H	64.31	-45.84	0.00	0.19	-46.03	-13.00	33.03
317.82	V	60.88	-45.60	0.00	0.32	-45.92	-13.00	32.92

PCS Band (PART 24E)

30 MHz-20 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
3700.40	H	39.68	-58.31	14.00	1.83	-46.14	-13.00	33.14
3700.40	V	38.96	-59.01	14.00	1.83	-46.84	-13.00	33.84
5550.60	H	37.01	-56.96	13.95	1.27	-44.28	-13.00	31.28
5550.60	V	34.59	-59.23	13.95	1.27	-46.55	-13.00	33.55
7400.80	H	33.86	-55.13	13.30	1.42	-43.25	-13.00	30.25
7400.80	V	34.35	-55.00	13.30	1.42	-43.12	-13.00	30.12
203.54	H	65.11	-45.04	0.00	0.19	-45.23	-13.00	32.23
196.22	V	61.35	-45.52	0.00	0.19	-45.71	-13.00	32.71
GSM 1900 Frequency:1880MHz								
3760.00	H	40.81	-56.83	13.76	1.63	-44.70	-13.00	31.70
3760.00	V	39.26	-58.24	13.76	1.63	-46.11	-13.00	33.11
5640.00	H	36.64	-56.95	14.02	1.31	-44.24	-13.00	31.24
5640.00	V	36.33	-57.15	14.02	1.31	-44.44	-13.00	31.44
7520.00	H	34.39	-54.28	13.20	1.33	-42.41	-13.00	29.41
7520.00	V	34.16	-54.98	13.20	1.33	-43.11	-13.00	30.11
204.79	H	70.22	-39.91	0.00	0.19	-40.10	-13.00	27.10
405.19	V	61.77	-42.29	0.00	0.38	-42.67	-13.00	29.67
GSM 1900 Frequency:1909.8MHz								
3819.60	H	43.57	-53.68	13.56	1.50	-41.62	-13.00	28.62
3819.60	V	40.25	-56.82	13.56	1.50	-44.76	-13.00	31.76
5729.40	H	38.41	-55.30	13.96	1.31	-42.65	-13.00	29.65
5729.40	V	36.51	-57.17	13.96	1.31	-44.52	-13.00	31.52
7639.20	H	35.56	-53.40	13.28	1.42	-41.54	-13.00	28.54
7639.20	V	35.39	-53.95	13.28	1.42	-42.09	-13.00	29.09
105.11	H	65.44	-45.62	0.00	0.13	-45.75	-13.00	32.75
102.37	V	62.11	-45.13	0.00	0.11	-45.24	-13.00	32.24

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	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	43.57	-57.71	12.24	1.54	-47.01	-13.00	34.01
3704.80	V	38.49	-62.23	12.24	1.54	-51.53	-13.00	38.53
5557.20	H	37.47	-59.04	12.88	1.26	-47.42	-13.00	34.42
5557.20	V	38.24	-58.66	12.88	1.26	-47.04	-13.00	34.04
117.99	H	61.06	-48.75	0.00	0.20	-48.95	-13.00	35.95
317.82	V	59.77	-46.71	0.00	0.32	-47.03	-13.00	34.03
WCDMA Band II, Frequency:1880 MHz								
3760.00	H	37.54	-63.56	12.25	1.53	-52.84	-13.00	39.84
3760.00	V	36.97	-63.84	12.25	1.53	-53.12	-13.00	40.12
5640.00	H	36.43	-59.86	13.00	1.28	-48.14	-13.00	35.14
5640.00	V	37.36	-59.23	13.00	1.28	-47.51	-13.00	34.51
302.76	H	65.11	-43.49	0.00	0.31	-43.80	-13.00	30.80
410.44	V	60.32	-43.66	0.00	0.38	-44.04	-13.00	31.04
WCDMA Band II, Frequency:1907.6MHz								
3815.20	H	37.11	-63.82	12.26	1.51	-53.07	-13.00	40.07
3815.20	V	36.61	-64.28	12.26	1.51	-53.53	-13.00	40.53
5722.80	H	36.52	-59.55	13.11	1.31	-47.75	-13.00	34.75
5722.80	V	35.65	-60.64	13.11	1.31	-48.84	-13.00	35.84
419.89	H	60.28	-46.24	0.00	0.37	-46.61	-13.00	33.61
402.66	V	59.13	-44.96	0.00	0.38	-45.34	-13.00	32.34

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 (dB μ V)	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	52.00	-49.29	12.24	1.55	-38.60	-13.00	25.60
3701.40	V	43.83	-56.89	12.24	1.55	-46.20	-13.00	33.20
5552.10	H	52.28	-44.24	12.87	1.26	-32.63	-13.00	19.63
5552.10	V	54.55	-42.37	12.87	1.26	-30.76	-13.00	17.76
221.77	H	62.53	-47.28	0.00	0.22	-47.50	-13.00	34.50
101.53	V	61.77	-45.62	0.00	0.11	-45.73	-13.00	32.73
QPSK, Frequency: 1880 MHz								
3760.00	H	42.70	-58.40	12.25	1.53	-47.68	-13.00	34.68
3760.00	V	38.64	-62.17	12.25	1.53	-51.45	-13.00	38.45
5640.00	H	49.78	-46.51	13.00	1.28	-34.79	-13.00	21.79
5640.00	V	49.42	-47.17	13.00	1.28	-35.45	-13.00	22.45
325.22	H	59.73	-48.45	0.00	0.33	-48.78	-13.00	35.78
127.52	V	59.02	-45.36	0.00	0.22	-45.58	-13.00	32.58
QPSK, Frequency: 1909.3 MHz								
3818.60	H	40.45	-60.47	12.26	1.51	-49.72	-13.00	36.72
3818.60	V	37.39	-63.50	12.26	1.51	-52.75	-13.00	39.75
5727.90	H	44.34	-51.71	13.12	1.31	-39.90	-13.00	26.90
5727.90	V	49.31	-46.96	13.12	1.31	-35.15	-13.00	22.15
301.77	H	58.19	-50.43	0.00	0.31	-50.74	-13.00	37.74
302.92	V	60.11	-46.80	0.00	0.31	-47.11	-13.00	34.11

LTE Band 4 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	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	48.24	-53.81	12.23	1.59	-43.17	-13.00	30.17
3421.40	V	47.58	-53.19	12.23	1.59	-42.55	-13.00	29.55
5132.10	H	52.44	-44.78	12.95	1.39	-33.22	-13.00	20.22
5132.10	V	53.81	-43.28	12.95	1.39	-31.72	-13.00	18.72
457.92	H	61.19	-44.80	0.00	0.36	-45.16	-13.00	32.16
306.95	V	59.23	-47.56	0.00	0.31	-47.87	-13.00	34.87
QPSK, Frequency: 1732.5 MHz								
3465.00	H	45.40	-56.57	12.21	1.60	-45.96	-13.00	32.96
3465.00	V	49.18	-51.39	12.21	1.60	-40.78	-13.00	27.78
5197.50	H	46.30	-50.82	12.92	1.36	-39.26	-13.00	26.26
5197.50	V	53.76	-43.33	12.92	1.36	-31.77	-13.00	18.77
441.15	H	60.83	-45.39	0.00	0.37	-45.76	-13.00	32.76
309.24	V	61.12	-45.61	0.00	0.32	-45.93	-13.00	32.93
QPSK, Frequency: 1754.3 MHz								
3508.60	H	53.57	-48.31	12.20	1.61	-37.72	-13.00	24.72
3508.60	V	54.70	-45.72	12.20	1.61	-35.13	-13.00	22.13
5262.90	H	57.03	-39.99	12.89	1.33	-28.43	-13.00	15.43
5262.90	V	55.84	-41.26	12.89	1.33	-29.70	-13.00	16.70
8771.50	V	48.15	-43.91	12.70	1.85	-33.06	-13.00	20.06
413.07	H	61.19	-45.42	0.00	0.38	-45.80	-13.00	32.80
285.26	V	63.32	-43.96	0.00	0.30	-44.26	-13.00	31.26

LTE Band 7(30MHz-26.5GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 2502.5 MHz								
5005.00	H	36.26	-61.15	13.00	1.44	-49.59	-25.00	24.59
5005.00	V	36.21	-60.87	13.00	1.44	-49.31	-25.00	24.31
7507.50	H	36.09	-56.69	12.80	1.33	-45.22	-25.00	20.22
7507.50	V	35.52	-57.96	12.80	1.33	-46.49	-25.00	21.49
166.25	H	57.35	-53.58	0.00	0.24	-53.82	-25.00	28.82
313.78	V	56.11	-50.49	0.00	0.32	-50.81	-25.00	25.81
QPSK, Frequency: 2535 MHz								
5070.00	H	36.75	-60.56	12.97	1.41	-49.00	-25.00	24.00
5070.00	V	36.00	-61.08	12.97	1.41	-49.52	-25.00	24.52
7605.00	H	36.25	-56.34	12.84	1.40	-44.90	-25.00	19.90
7605.00	V	36.72	-56.54	12.84	1.40	-45.10	-25.00	20.10
441.93	H	58.39	-47.82	0.00	0.37	-48.19	-25.00	23.19
405.79	V	56.60	-47.45	0.00	0.38	-47.83	-25.00	22.83
QPSK, Frequency: 2567.5 MHz								
5135.00	H	36.08	-61.13	12.95	1.39	-49.57	-25.00	24.57
5135.00	V	35.65	-61.44	12.95	1.39	-49.88	-25.00	24.88
7702.50	H	36.57	-55.82	12.88	1.47	-44.41	-25.00	19.41
7702.50	V	36.51	-56.52	12.88	1.47	-45.11	-25.00	20.11
105.79	H	58.16	-52.84	0.00	0.13	-52.97	-25.00	27.97
106.72	V	56.28	-50.22	0.00	0.14	-50.36	-25.00	25.36

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	63.03	-41.43	9.58	1.23	-33.08	-13.00	20.08
1399.40	V	60.85	-43.70	9.58	1.23	-35.35	-13.00	22.35
2099.10	H	76.42	-28.11	11.64	1.15	-17.62	-13.00	4.62
2099.10	V	75.21	-29.56	11.64	1.15	-19.07	-13.00	6.07
2798.80	H	51.49	-51.64	12.32	1.40	-40.72	-13.00	27.72
2798.80	V	56.49	-47.15	12.32	1.40	-36.23	-13.00	23.23
3498.50	H	66.39	-35.52	12.20	1.61	-24.93	-13.00	11.93
3498.50	V	65.47	-34.95	12.20	1.61	-24.36	-13.00	11.36
442.39	H	59.17	-47.04	0.00	0.37	-47.41	-13.00	34.41
437.69	V	58.37	-45.23	0.00	0.37	-45.60	-13.00	32.60
QPSK, Frequency: 707.5 MHz								
1415.00	H	54.69	-49.88	9.64	1.25	-41.49	-13.00	28.49
1415.00	V	53.21	-51.42	9.64	1.25	-43.03	-13.00	30.03
2122.50	H	58.52	-45.96	11.67	1.16	-35.45	-13.00	22.45
2122.50	V	62.21	-42.57	11.67	1.16	-32.06	-13.00	19.06
2830.00	H	48.12	-54.96	12.33	1.41	-44.04	-13.00	31.04
2830.00	V	51.64	-51.85	12.33	1.41	-40.93	-13.00	27.93
3537.50	H	53.39	-48.40	12.21	1.60	-37.79	-13.00	24.79
3537.50	V	53.25	-47.22	12.21	1.60	-36.61	-13.00	23.61
455.38	H	60.54	-45.49	0.00	0.36	-45.85	-13.00	32.85
447.39	V	58.39	-45.07	0.00	0.37	-45.44	-13.00	32.44
QPSK, Frequency: 715.3 MHz								
1430.60	H	51.09	-53.59	9.71	1.27	-45.15	-13.00	32.15
1430.60	V	48.50	-56.22	9.71	1.27	-47.78	-13.00	34.78
2145.90	H	51.03	-53.40	11.70	1.16	-42.86	-13.00	29.86
2145.90	V	57.46	-47.34	11.70	1.16	-36.80	-13.00	23.80
2861.20	H	39.82	-63.20	12.34	1.43	-52.29	-13.00	39.29
2861.20	V	46.18	-57.16	12.34	1.43	-46.25	-13.00	33.25
3576.50	H	47.17	-54.50	12.22	1.59	-43.87	-13.00	30.87
3576.50	V	46.04	-54.49	12.22	1.59	-43.86	-13.00	30.86
467.44	H	61.33	-44.53	0.00	0.36	-44.89	-13.00	31.89
464.27	V	57.15	-46.07	0.00	0.36	-46.43	-13.00	33.43

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	47.60	-56.95	9.63	1.24	-48.56	-13.00	35.56
1413.00	V	49.10	-55.52	9.63	1.24	-47.13	-13.00	34.13
2119.50	H	48.35	-56.14	11.67	1.16	-45.63	-13.00	32.63
2119.50	V	52.50	-52.28	11.67	1.16	-41.77	-13.00	28.77
2826.00	H	38.90	-64.18	12.33	1.41	-53.26	-13.00	40.26
2826.00	V	42.28	-61.23	12.33	1.41	-50.31	-13.00	37.31
3532.50	H	45.01	-56.80	12.21	1.60	-46.19	-13.00	33.19
3532.50	V	45.41	-55.05	12.21	1.60	-44.44	-13.00	31.44
473.91	H	61.77	-44.00	0.00	0.36	-44.36	-13.00	31.36
402.85	V	59.24	-44.85	0.00	0.38	-45.23	-13.00	32.23
QPSK, Frequency:710 MHz								
1420.00	H	51.53	-53.07	9.66	1.25	-44.66	-13.00	31.66
1420.00	V	49.65	-55.01	9.66	1.25	-46.60	-13.00	33.60
2130.00	H	55.31	-49.15	11.68	1.16	-38.63	-13.00	25.63
2130.00	V	58.50	-46.29	11.68	1.16	-35.77	-13.00	22.77
2840.00	H	44.35	-58.71	12.34	1.42	-47.79	-13.00	34.79
2840.00	V	45.97	-57.47	12.34	1.42	-46.55	-13.00	33.55
3550.00	H	51.64	-50.12	12.21	1.59	-39.50	-13.00	26.50
3550.00	V	48.15	-52.34	12.21	1.59	-41.72	-13.00	28.72
491.36	H	62.05	-43.48	0.00	0.35	-43.83	-13.00	30.83
462.15	V	60.31	-42.94	0.00	0.36	-43.30	-13.00	30.30
QPSK, Frequency:713.5 MHz								
1427.00	H	50.28	-54.37	9.69	1.26	-45.94	-13.00	32.94
1427.00	V	49.17	-55.53	9.69	1.26	-47.10	-13.00	34.10
2140.50	H	49.87	-54.57	11.70	1.16	-44.03	-13.00	31.03
2140.50	V	51.69	-53.11	11.70	1.16	-42.57	-13.00	29.57
2854.00	H	39.45	-63.58	12.34	1.42	-52.66	-13.00	39.66
2854.00	V	45.70	-57.67	12.34	1.42	-46.75	-13.00	33.75
3567.50	H	47.20	-54.50	12.21	1.59	-43.88	-13.00	30.88
3567.50	V	43.54	-56.97	12.21	1.59	-46.35	-13.00	33.35
503.63	H	63.77	-41.53	0.00	0.35	-41.88	-13.00	28.88
485.79	V	61.37	-41.55	0.00	0.35	-41.90	-13.00	28.90

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